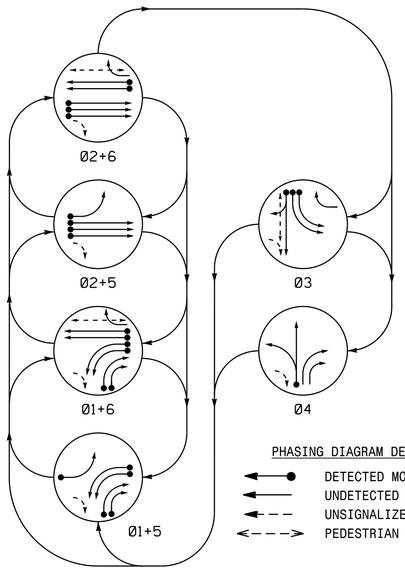
PROJECT REFERENCE NO.	SHEET NO.
W-5601J	Sig. 1.1

PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

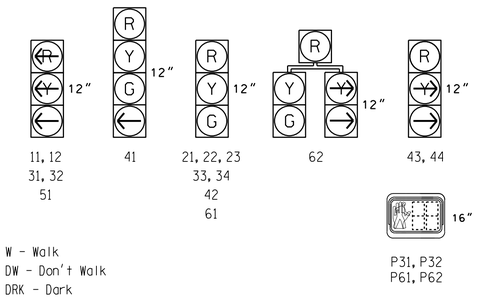
- DETECTED MOVEMENT
- UNDETECTED MOVEMENT (OVERLAP)
- UNSIGNALIZED MOVEMENT
- PEDESTRIAN MOVEMENT

TABLE OF OPERATION

SIGNAL FACE	PHASE 01+5	01+6	02+5	02+6	03	04	FLASH
11, 12	←	←	↛	↛	↛	↛	↛
21, 22, 23	R	R	G	G	R	R	Y
31, 32	↛	↛	↛	↛	←	↛	↛
33, 34	R	R	R	R	G	R	R
41	R	R	R	R	R	G ←	R
42	R	R	R	R	R	G	R
43, 44	→	→	R	R	R	→	R
51	←	↛	←	↛	↛	↛	↛
61	R	G	R	G	R	R	Y
62	R	G	R	G	R ↗	R	Y
P31, P32	DW	DW	DW	DW	W	DW	DRK
P61, P62	DW	W	DW	W	DW	DW	DRK

SIGNAL FACE I.D.

All Heads L.E.D.



W - Walk
DW - Don't Walk
DRK - Dark

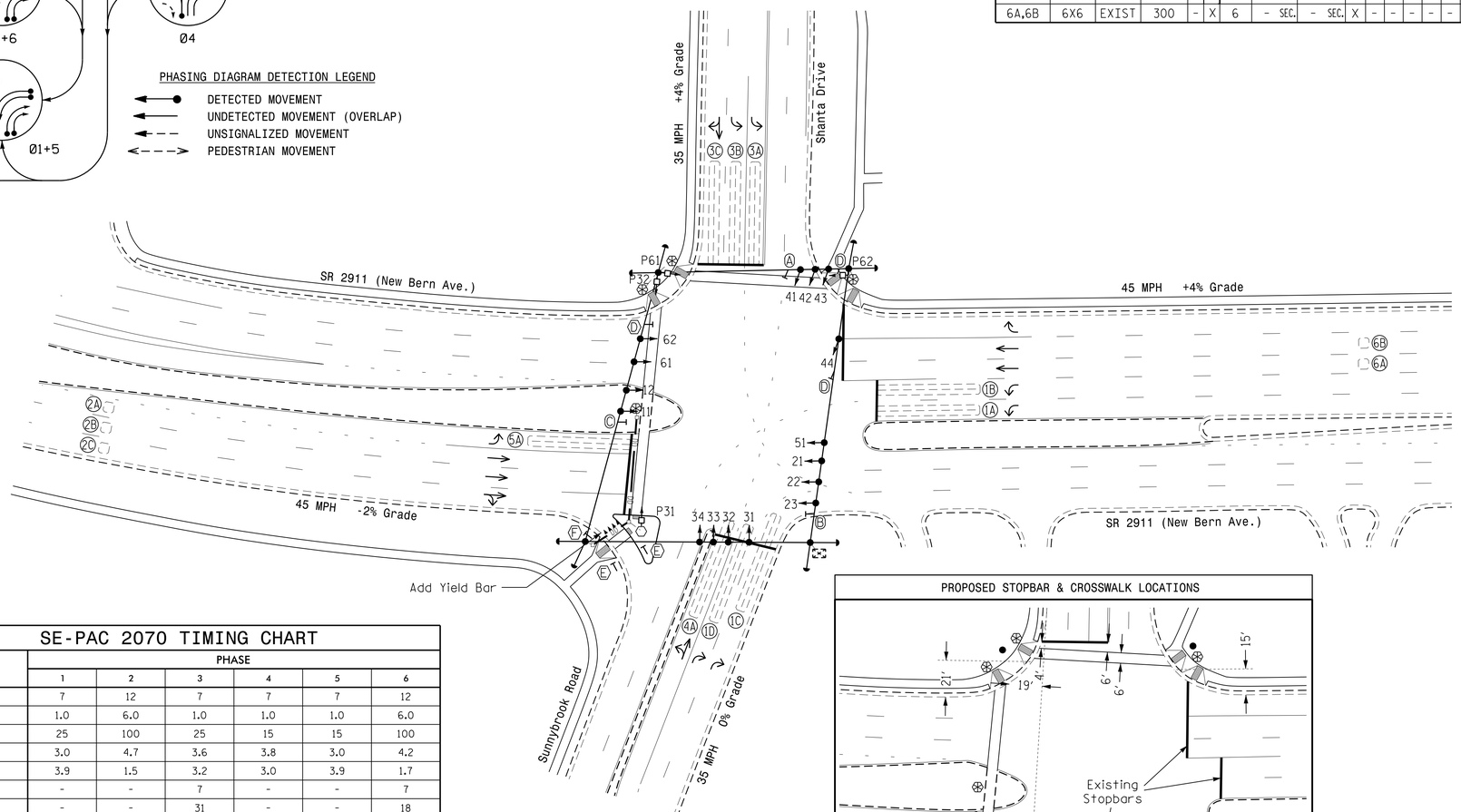
SE-PAC 2070 LOOP & DETECTOR UNIT INSTALLATION CHART

INDUCTIVE LOOPS						DETECTOR PROGRAMMING															
							TIMING		OPERATION MODE									STATUS	
LOOP NO.	SIZE (ft)	TURNS	DIST. FROM STOPBAR (ft)	NEW	EXISTING	ASSIGNED PHASE	DELAY	EXTEND (STRETCH)	0 VEHICLE	1 PEDESTRIAN	2 1 CALL	3 STOP A	4 STOP B	5 PROTPER LEFT	6 PROTPER THROUGH	7 AND	SWITCH	SYSTEM LOOPS	NEW	EXISTING
1A	6X60	EXIST	0	-	X	1	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	-	-	X
1B	6X60	EXIST	0	-	X	1	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	-	-	X
1C	6X60	EXIST	+20	-	X	1	15 SEC.	- SEC.	X	-	-	-	-	-	-	-	-	-	-	X
1D	6X60	EXIST	+10	-	X	1	15 SEC.	- SEC.	X	-	-	-	-	-	-	-	-	-	-	X
2A	6X6	EXIST	300	-	X	2	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	-	-	X
2B	6X6	EXIST	300	-	X	2	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	-	-	X
2C	6X6	EXIST	300	-	X	2	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	-	-	X
3A	6X60	EXIST	0	-	X	3	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	-	-	X
3B	6X60	EXIST	0	-	X	3	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	-	-	X
3C	6X60	EXIST	0	-	X	3	10 SEC.	- SEC.	X	-	-	-	-	-	-	-	-	-	-	X
4A	6X60	EXIST	+10	-	X	4	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	-	-	X
5A	6X60	EXIST	0	-	X	5	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	-	-	X
6A,6B	6X6	EXIST	300	-	X	6	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	-	-	X

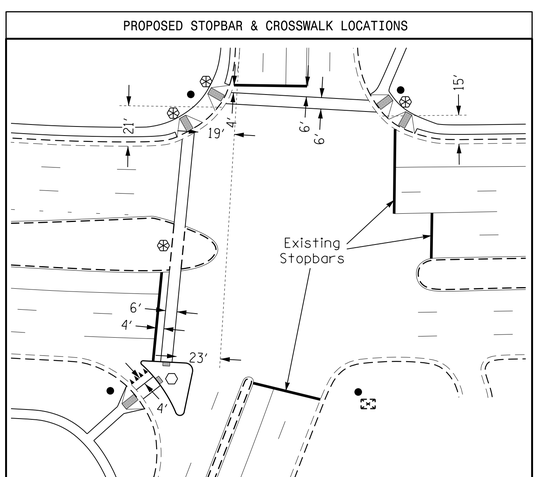
6 Phase
Fully Actuated
(Raleigh Signal System)

NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated January 2012 and "Standard Specifications for Roads and Structures" dated January 2012.
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. In the event of loop replacement, refer to the current ITS and Signals Design Manual and submit a Plan of Record to the Signal Design Section.
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. Pedestrian pedestals are conceptual and shown for reference only. See sheets P1-P3 for pushbutton location details.
10. Pavement markings are existing unless otherwise shown.
11. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.



PROPOSED STOPBAR & CROSSWALK LOCATIONS



SE-PAC 2070 TIMING CHART

FEATURE	PHASE 1	2	3	4	5	6
Min Green *	7	12	7	7	7	12
Passage Gap *	1.0	6.0	1.0	1.0	1.0	6.0
Maximum Green *	25	100	25	15	15	100
Yellow Change	3.0	4.7	3.6	3.8	3.0	4.2
Red Clear	3.9	1.5	3.2	3.0	3.9	1.7
Walk *	-	-	7	-	-	7
Pedestrian Clear	-	-	31	-	-	18
Added Initial *	-	1.0	-	-	-	1.5
Maximum Initial *	-	34	-	-	-	34
Time Before Reduction *	-	20	-	-	-	20
Time To Reduce *	-	35	-	-	-	35
Minimum Gap	-	3.0	-	-	-	3.0
Recall Mode	-	MIN RECALL	-	-	-	MIN RECALL
Vehicle Call Memory	NON-LOCK	LOCK	NON-LOCK	NON-LOCK	NON-LOCK	LOCK
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.

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	
N/A	Wheelchair Ramp	
	Type I Pushbutton Post	
	Type II Signal Pedestal	
DD	Directional Drill	N/A
A	Combined Through and Left Arrow Sign (R3-6L)	A
B	Combined Through and Right Arrow Sign (R3-6R)	B
C	U-Turn "MUST YIELD" Sign (R3-27)	C
D	Right Arrow "ONLY" Sign (R3-5R)	D
E	"YIELD" Sign (R1-2)	E
F	Pedestrian Crossing Sign (W11-2)	F

Signal Upgrade

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

SR 2911 (New Bern Ave.)
at
Sunnybrook Road and
Shanta Drive

Division 5 Wake County Raleigh

PLAN DATE: October 2014 REVIEWED BY:
PREPARED BY: R.N. Zinser REVIEWED BY:

SCALE 0 40 1"=40'

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 026486 ENGINEER ROBERT J. TIEMEJER

DocuSigned by: 12/9/2014
ISSUE SIGNATURE DATE
SIG. INVENTORY NO. 05-0297

09-DEC-2014 13:18
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