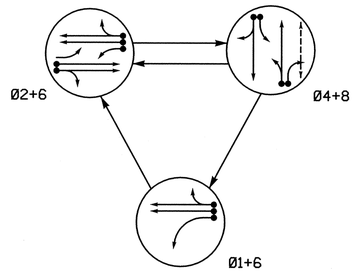
PROJECT REFERENCE NO.	SHEET NO.
TR 2006-C	Sig. 3-336

PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

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

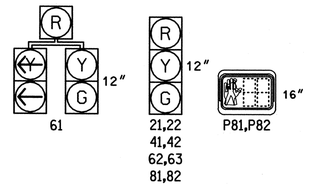
TABLE OF OPERATION

SIGNAL FACE	PHASE Ø1+6	Ø2+6	Ø4+8	FLASH
21,22	R	G	R	Y
41,42	R	R	G	R
61	G	G	R	Y
62,63	G	G	R	Y
81,82	R	R	G	R
P81,P82	DW	DW	W	DRK

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

SIGNAL FACE I.D.

All Heads L.E.D.

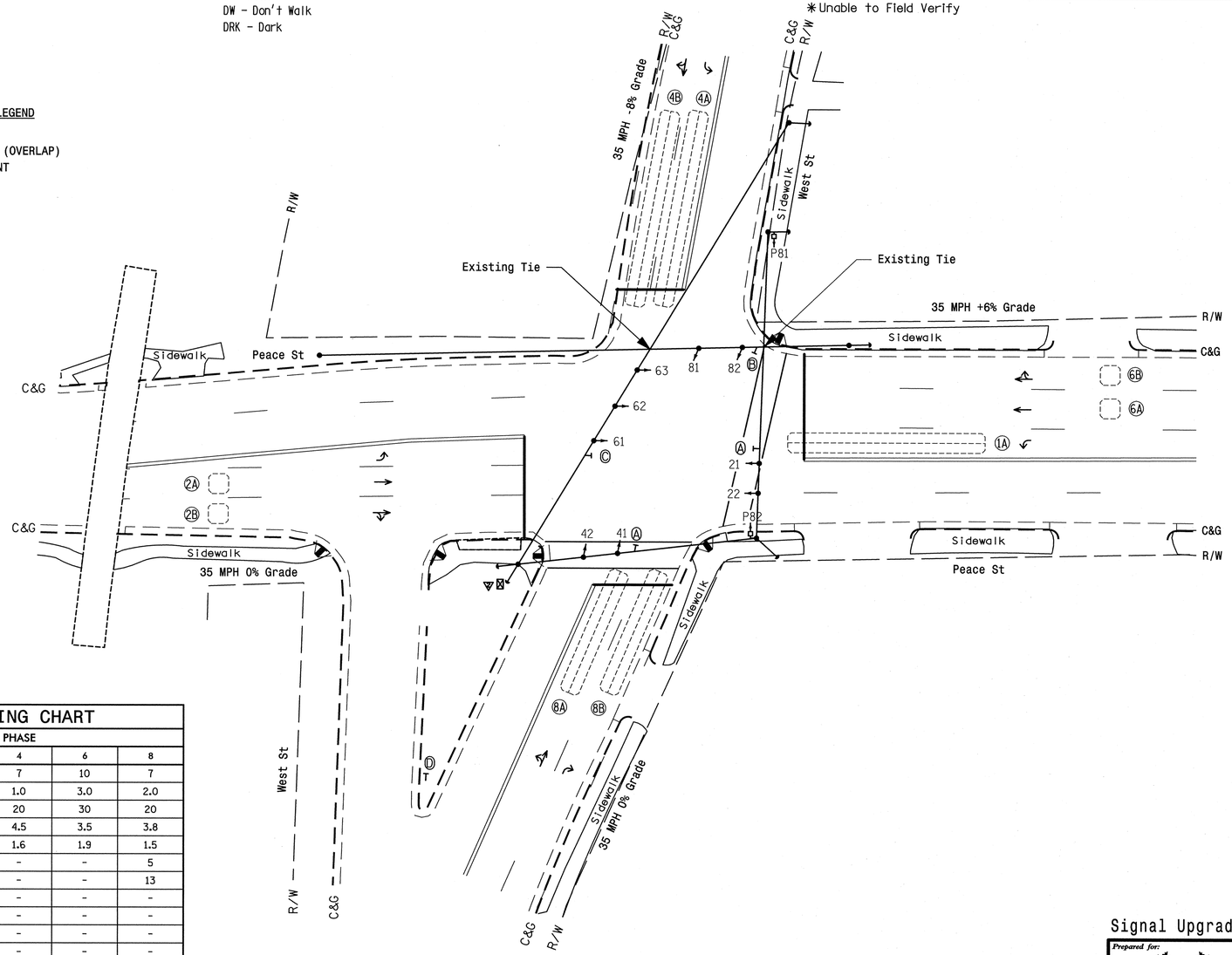


LOOP & DETECTOR UNIT INSTALLATION CHART

SE-PAC 2070 CONTROLLER WITH 170 CABINET

INDUCTIVE LOOPS						DETECTOR PROGRAMMING															
								OPERATION MODE										STATUS	
LOOP NO.	SIZE (ft)	TURNS	DIST. FROM STOPBAR (ft)	NEW	EXISTING	ASSIGNED PHASE	TIMING DELAY	TIMING EXTEND (STRETCH)	0 VEHICLE	1 PEDESTRIAN	2 1 CALL	3 STOP A	4 STOP B	5 PROTPER LEFT PROTPER THROUGH	6 AND	7 SWITCH	SYSTEM LOOPS	NEW	EXISTING
1A	6X60	EXIST	+5	-	X	1	10 SEC.	- SEC.	X	-	-	-	-	-	-	-	-	X	-
						6	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	X	-
2A,2B	6X6	EXIST	90	-	X	2	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	X	-
4A	✳	EXIST	✳	-	X	4	3 SEC.	- SEC.	X	-	-	-	-	-	-	-	-	X	-
4B	✳	EXIST	✳	-	X	4	10 SEC.	- SEC.	X	-	-	-	-	-	-	-	-	X	-
6A,6B	6X6	EXIST	90	-	X	6	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	X	-
8A	6X40	EXIST	+4	-	X	8	3 SEC.	- SEC.	X	-	-	-	-	-	-	-	-	X	-
8B	6X40	EXIST	+4	-	X	8	15 SEC.	- SEC.	X	-	-	-	-	-	-	-	-	X	-

✳Unable to Field Verify



SE-PAC 2070 TIMING CHART

FEATURE	PHASE 1	2	4	6	8
Min Green *	7	10	7	10	7
Passage Gap *	2.0	3.0	1.0	3.0	2.0
Maximum Green *	15	30	20	30	20
Yellow Change	3.0	3.8	4.5	3.5	3.8
Red Clear	2.4	1.3	1.6	1.9	1.5
Walk *	-	-	-	-	5
Pedestrian Clear	-	-	-	-	13
Added Initial *	-	-	-	-	-
Maximum Initial *	-	-	-	-	-
Time Before Reduction *	-	-	-	-	-
Time To Reduce *	-	-	-	-	-
Minimum Gap	-	-	-	-	-
Recall Mode	-	MIN RECALL	-	MIN RECALL	-
Vehicle Call Memory	NON-LOCK	LOCK	NON-LOCK	LOCK	NON-LOCK
Dual Entry	-	-	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
(Raleigh City Signal System)

NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated July 2006 and "Standard Specifications for Roads and Structures" dated July 2006.
2. Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
3. Omit phase 1 during phase 2 on.
4. Program controller to clear from phase 2+6 to phase 1+6 by progressing through phase 4+8 (see Electrical Details).
5. Set all detector units to presence mode.
6. In the event of loop replacement, refer to the current NCDOT ITS and Signals Design Manual and submit a Plan of Record to the City of Raleigh.
7. Locate new cabinet so as not to obstruct sight distance of vehicles turning right on red.

▽8. Omit "Walk" and flashing "Don't Walk" with no pedestrian calls.

▽9. Program pedestrian heads to countdown the flashing "Don't Walk" time only.

10. Pavement markings are existing.
11. 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 with Marker	—△—
→	Directional Arrow	→
→	Pavement Marking Arrow	→
N/A	Fire Hydrant	⊙
N/A	Wheelchair Ramp	◪
N/A	Left Arrow "ONLY" Sign (R3-5L)	Ⓐ
N/A	Right Arrow "ONLY" Sign (R3-5R)	Ⓑ
N/A	"LEFT TURN YIELD ON GREEN" Sign (R10-12)	Ⓒ
N/A	"YIELD" Sign (R1-2)	Ⓓ

Signal Upgrade

Prepared for: CITY OF RALEIGH NORTH CAROLINA
Public Works Department

Peace St
at
West St

Division 05 | Wake County | Raleigh

PLAN DATE: August 2007 | REVIEWED BY: S.T. Franklin
PREPARED BY: B.A. Reynolds | REVIEWED BY: N.M. Rodevick

SCALE 0 20 1"=20'

REVISIONS	INIT.	DATE
▽Added pedestrian heads,	NMR	02-2011
▽Changed to base mount.	NMR	03-2011

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 031464 ENGINEER NATASHA M. RODEVICK
Natasha M. Rodevick 3-2-11
SIGNATURE DATE
SIG. INVENTORY NO. 046

HNTB
HNTB NORTH CAROLINA, P.C.
343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1554