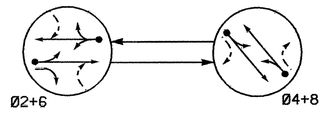
PROJECT REFERENCE NO.	SHEET NO.
37652	Sig. 2

PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

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

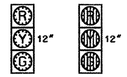
TABLE OF OPERATION

SIGNAL FACE	PHASE Ø2+6	PHASE Ø4+8	FLASH
21, 22	G	R	Y
41, 42	R	G	R
61, 62	G	R	Y
81, 82	R	G	R

SIGNAL FACE I.D.

Denotes L.E.D.

Denotes Louver



21, 22 61, 62 — 41, 42 81, 82

LOOP & DETECTOR UNIT INSTALLATION CHART
170 CONTROLLER AND CABINET

INDUCTIVE LOOPS						DETECTOR PROGRAMMING															
							TIMING		ATTRIBUTES										STATUS	
LOOP NO.	SIZE (ft)	TURNS	DIST. FROM STOPBAR (ft)	NEW	EXISTING	NEMA PHASE	DELAY	CARRY (STRETCH)	1 FULL TIME PEDESTRIAN CALL	2 PEDESTRIAN CALL	3 RESERVED	4 COUNT	5 EXTENSION	6 TYPE 3	7 CALLING	8 ALTERNATE	SYSTEM LOOPS	NEW	EXISTING
2A	6X6	5	300	X		2	— SEC.	— SEC.				X	X		X				X
4A	6X40	2-4-2	0	X		4	3 SEC.	— SEC.					X		X				X
6A	6X6	5	300	X		6	— SEC.	— SEC.				X	X		X				X
8A	6X40	2-4-2	0	X		8	3 SEC.	— SEC.					X		X				X

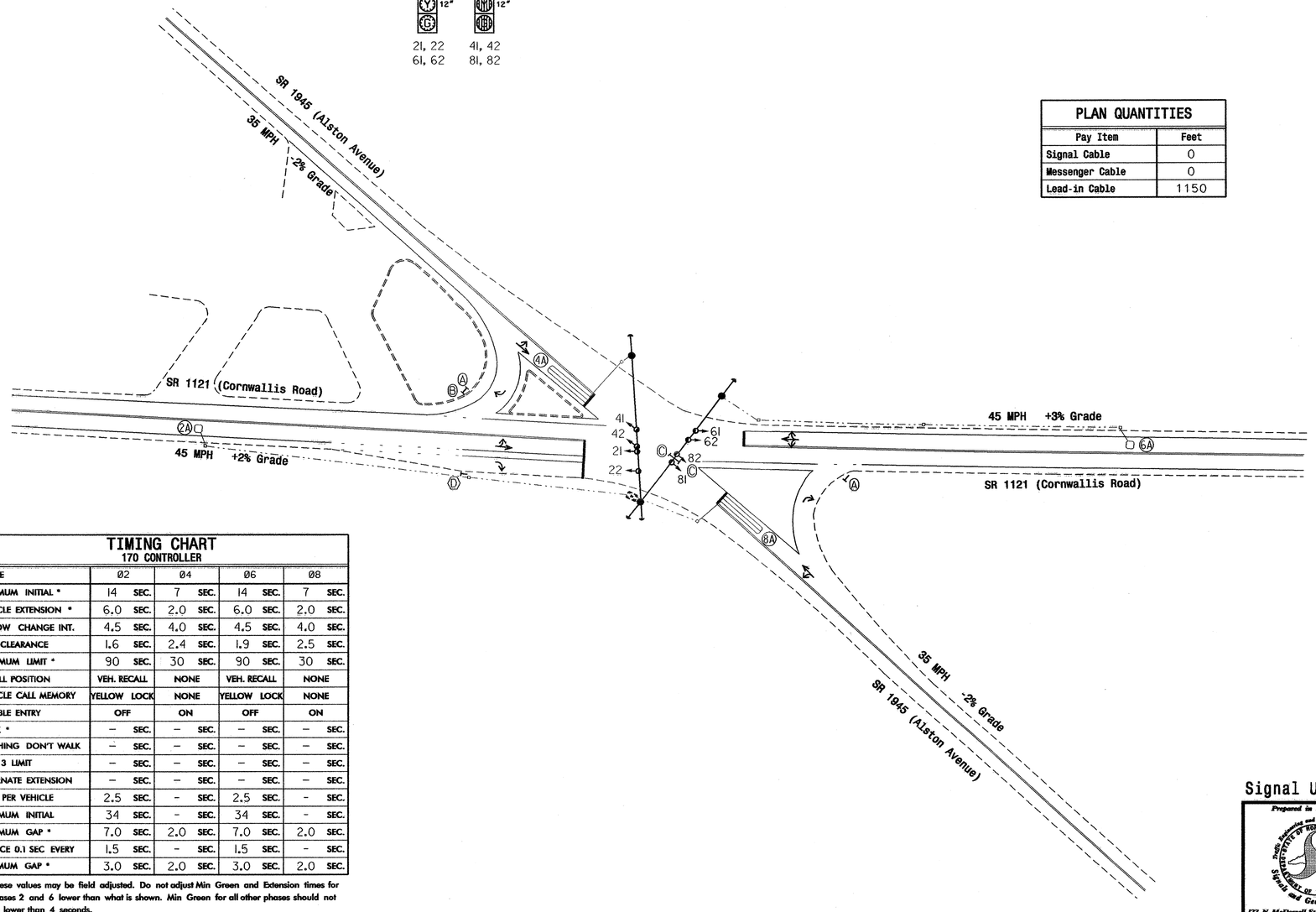
PLAN QUANTITIES

Pay Item	Feet
Signal Cable	0
Messenger Cable	0
Lead-in Cable	1150

2 Phase
Fully Actuated
(Durham Signal System)

NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated January 2002 and "Standard Specifications for Roads and Structures" dated January 2002.
2. Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
3. Set all detector units to presence mode.
4. Program all timing information into phase banks 1, 2, and 3 unless otherwise noted.
5. Set phase bank 3 maximum limit to 250 seconds for phases used.
6. Pavement markings are existing.
7. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.



TIMING CHART
170 CONTROLLER

PHASE	02	04	06	08
MINIMUM INITIAL *	14 SEC.	7 SEC.	14 SEC.	7 SEC.
VEHICLE EXTENSION *	6.0 SEC.	2.0 SEC.	6.0 SEC.	2.0 SEC.
YELLOW CHANGE INT.	4.5 SEC.	4.0 SEC.	4.5 SEC.	4.0 SEC.
RED CLEARANCE	1.6 SEC.	2.4 SEC.	1.9 SEC.	2.5 SEC.
MAXIMUM LIMIT *	90 SEC.	30 SEC.	90 SEC.	30 SEC.
RECALL POSITION	VEH. RECALL	NONE	VEH. RECALL	NONE
VEHICLE CALL MEMORY	YELLOW LOCK	NONE	YELLOW LOCK	NONE
DOUBLE ENTRY	OFF	ON	OFF	ON
WALK *	— SEC.	— SEC.	— SEC.	— SEC.
FLASHING DON'T WALK	— SEC.	— SEC.	— SEC.	— SEC.
TYPE 3 LIMIT	— SEC.	— SEC.	— SEC.	— SEC.
ALTERNATE EXTENSION	— SEC.	— SEC.	— SEC.	— SEC.
ADD PER VEHICLE	2.5 SEC.	- SEC.	2.5 SEC.	- SEC.
MAXIMUM INITIAL	34 SEC.	- SEC.	34 SEC.	- SEC.
MAXIMUM GAP *	7.0 SEC.	2.0 SEC.	7.0 SEC.	2.0 SEC.
REDUCE 0.1 SEC EVERY	1.5 SEC.	- SEC.	1.5 SEC.	- SEC.
MINIMUM GAP *	3.0 SEC.	2.0 SEC.	3.0 SEC.	2.0 SEC.

* 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 with Marker	—△—
→	Directional Arrow	→
Ⓐ	"YIELD" Sign (R1-2)	Ⓐ
Ⓑ	"DO NOT ENTER" Sign (R5-1)	Ⓑ
Ⓒ	"Cornwallis Rd" Street Sign	Ⓒ
Ⓓ	"BEGIN RIGHT TURN LANE - YIELD TO BIKES" Sign (R4-4)	Ⓓ

Signal Upgrade

Prepared in the Offices of:
North Carolina Department of Transportation, Traffic Engineering and Safety Systems Branch, Signals and Geometrics Section
1722 N. McDowell St., Raleigh, NC 27603

SR 1121 (Cornwallis Road) at SR 1945 (Alston Avenue)

Division 5 Durham County Durham

PLAN DATE: November 2004 REVIEWED BY:

PREPARED BY: AB Hambright REVIEWED BY:

REVISIONS	INIT.	DATE

SCALE 0 50 1"=50'

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 026486 ENGINEER ROBERT J. ZIEMBA

SIGNATURE Robert J. Ziemba 3/2/05 DATE

SIG. INVENTORY NO. 05-1071

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