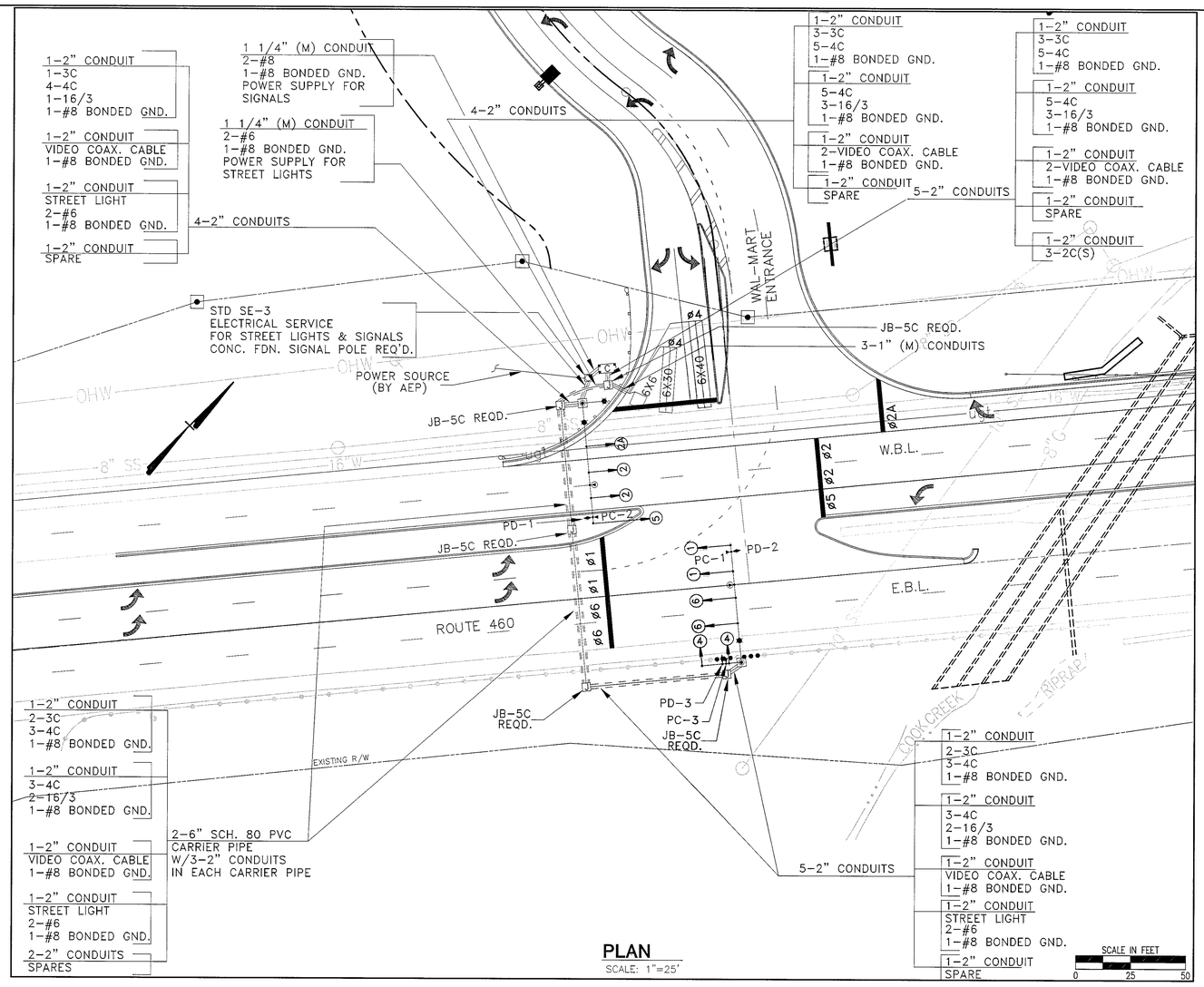
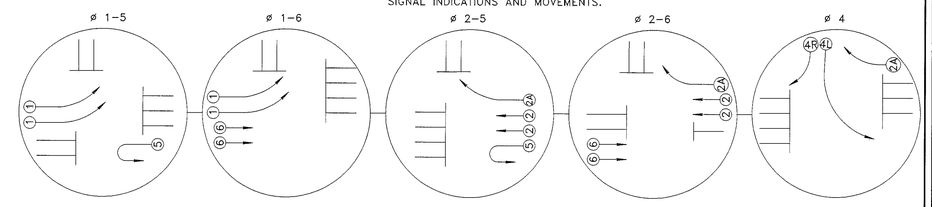


PLAN

SCALE: 1"=25'

PHASING DIAGRAM

PHASING DIAGRAM SHOWS ONLY VEHICULAR SIGNAL INDICATIONS AND MOVEMENTS.



COLOR SEQUENCE CHART

SIGNAL	ø1-5 R/W	CLEAR TO ø1-6		CLEAR TO ø2-5		CLEAR TO ø2-6		CLEAR TO ø4		ø1-6 R/W	CLEAR TO ø1-5		CLEAR TO ø2-5		CLEAR TO ø2-6		CLEAR TO ø4		ø2-5 R/W	CLEAR TO ø1-5		CLEAR TO ø1-6		CLEAR TO ø2-6		CLEAR TO ø4		FLASH
		1	2	1	2	1	2	1	2		1	2	1	2	1	2	1	2		1	2	1	2	1	2	1	2	
1	~~G~~	~~G~~	~~G~~	~~A~~	R	~~A~~	R	~~A~~	R	~~G~~	~~G~~	~~G~~	~~A~~	R	~~A~~	R	~~A~~	R	R	R	R	R	R	R	R	R	R	R	R
2	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G	A	R	A	R	G	G	A	R	A
2A	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	~~G~~	~~A~~	R	~~A~~	R	~~G~~	~~G~~	~~G~~	~~G~~	R
4L,4R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
5	~~G~~	~~A~~	R	~~G~~	~~G~~	~~A~~	R	~~A~~	R	R	R	R	R	R	R	R	R	R	~~G~~	~~G~~	~~G~~	~~A~~	R	~~A~~	R	~~A~~	R	R
6	R	R	R	R	R	R	R	R	R	G	A	R	A	R	G	G	A	R	R	R	R	R	R	R	R	R	R	A

SIGNAL	ø2-6 R/W	CLEAR TO ø1-5		CLEAR TO ø1-6		CLEAR TO ø2-5		CLEAR TO ø4		ø4 R/W	CLEAR TO ø1-5		CLEAR TO ø1-6		CLEAR TO ø2-5		CLEAR TO ø2-6		FLASH
		1	2	1	2	1	2	1	2		1	2	1	2	1	2	1	2	
1	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
2	G	A	R	A	R	G	G	A	R	R	R	R	R	R	R	R	R	R	A
2A	~~G~~	~~A~~	R	~~A~~	R	~~G~~	~~G~~	~~G~~	~~G~~	~~G~~	~~A~~	R	~~A~~	R	~~G~~	~~G~~	~~G~~	~~G~~	R
4L,4R	R	R	R	R	R	R	R	R	R	*G	*A	R	*A	R	*A	R	*A	R	R
5	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
6	G	A	R	G	G	A	R	A	R	R	R	R	R	R	R	R	R	R	A

NOTE:

* DIRECTIONAL ARROW AS REQD.

NOTES

1. COMBINATION LUMINARIE MAST ARM POLES SHALL BE STD. MP-1. THE NUMBER OF ANCHOR BOLTS SHALL BE AS REQUIRED BY MANUFACTURER.
2. SIGNAL HEADS SHALL BE MOUNTED IN ACCORDANCE WITH STD. SM-3.
3. ELECTRICAL SERVICE FOR SIGNALS SUMMARY NOTE 2, SHEET TS-1.
4. ALL JUNCTION BOXES SHALL BE STD. JB-3C UNLESS OTHERWISE NOTED.
5. LOOP DETECTORS SHALL BE STANDARD TD-1C 6'X40' & 6'X30' AND TD-1B, 6'X6' MODIFIED TO ALLOW CORNER DRILLING ONLY AND EXTEND 2' IN FRONT OF STOP LINE.
6. ALL SIGNALS SHALL HAVE BLACK BACKPLATES AND STANDARD VISORS, UNLESS NOTED OTHERWISE.
7. (M) DENOTES METAL CONDUIT AND (S) DENOTES SHIELDED CABLE.
8. TOPS OF ALL STD. JB-5C SHALL MATCH FINISHED GRADE.
9. THE CONTRACTOR SHALL FURNISH SIGNAL POLE FOUNDATION DESIGN. SEE SUMMARY NOTE 4, SHT. TS-1
10. ALL CONDUITS UNDER PAVED AREAS SHALL BE BORED.
11. ADD OPTICOM EMERGENCY PREEMPTION TO ALL APPROACHES:

    3M OPTICOM DISTRIBUTOR: J. O. HERBERT
    P.O. BOX 2620
    CHESTERFIELD, VIRGINIA 23832
    PHONE: (804) 794-8385

    REQUIRED EQUIPMENT:

    1 SPECIAL RELAY & TERMINATION PANEL – 10 1/2"W X 10 1/2"W X 5" PROTRUSIVE TO BE LOCATED IN CABINET UPPER LEFT SIDE.

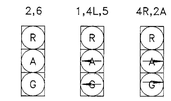
    3 511 DETECTORS MOUNTED ON MAST ARMS TO BE LOCATED AT TIME OF INSTALLATION WITH INPUT FROM VDOT. CALL 387-5449 FOR INSTRUCTIONS. FIELD WIRE TO BE 3 CONDUCTOR 3M MODEL 138.

    2 752 RACK MOUNT PHASE SELECTORS (SHALL BE 3M) WITH NECESSARY MODULES AND HARNESSES.

    3 75 WATT INDICATOR FLOOD LIGHTS MOUNTED ON MAST ARMS WITH #14-3 CONDUCTOR SIGNAL CABLE TO BE LOCATED AT TIME OF INSTALLATION.

    ABOVE TO BE DESIGNED AND INSTALLED WITH (2) COPIES OF DOCUMENTATION. SUPPLIER TO PROVIDE CERTIFICATION OF PROPER OPERATION.
12. STANDARD CARD RACK FOR PLUG IN OPTICOM PHASE SELECTORS, REQUIRED.
13. 16/3 CONDUCTOR IS FOR VIDEO POWER SUPPLY.

SIGNALS



ALL SECTIONS 12"
(L DENOTES LEFT)
(R DENOTES RIGHT)

NOTE:
RED BALL & GREEN BALL ONLY SHALL BE LIGHT EMITTING DIODE (LED) TRAFFIC SIGNAL DISPLAY.
HEADS 1, 4L, 4R, 5 & 2A SHALL BE EQUIPPED WITH TUNNEL VISORS.

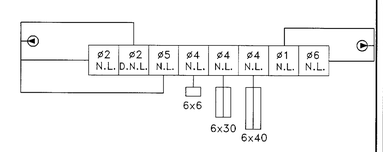
SIGNAL HEAD WIRING

1-4C FOR HEAD 1
1-4C FOR HEADS 2
1-4C FOR HEADS 4L, 4R
1-4C FOR HEADS 5
1-4C FOR HEADS 6
1-4C FOR HEAD 2A

EMERGENCY PREEMPTION 3 WAY

CHANNEL 1 E.B. CALLS ø1 & ø6
CHANNEL 2 W.B. CALLS ø5 & ø2
CHANNEL 3 ENTR. CALLS ø4

DETECTOR SYSTEM CHART

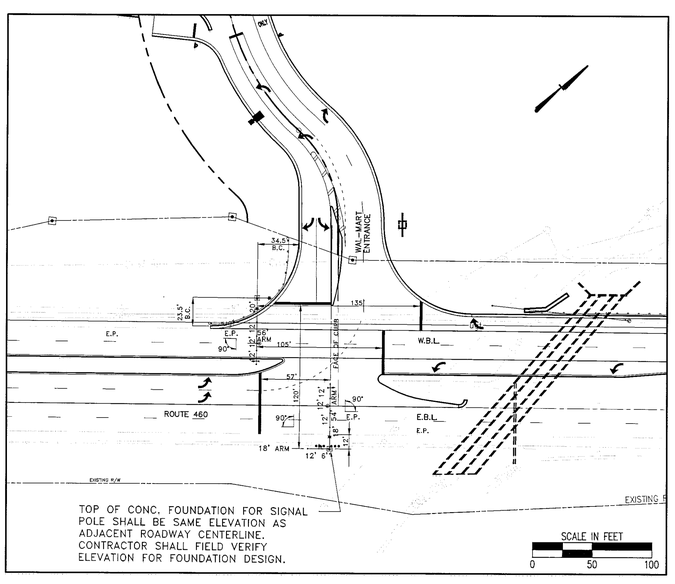


N.L. DENOTES NON LOCK PRESENCE
D.N.L. DENOTES NON LOCK DELAYED PRESENCE

LEGEND

- JUNCTION BOX
- OPTICOM DETECTOR (3M DETECTOR CABLE)
- 75 WATT INDICATOR FLOOD LIGHT 3C IMSA #14
- VIDEO DETECTOR
- LUMINARIE

PD-1 DENOTES PREEMPT DETECTOR 1
PC-1 DENOTES PREEMPT CONFORMATION LAMP 1



TOP OF CONC. FOUNDATION FOR SIGNAL POLE SHALL BE SAME ELEVATION AS ADJACENT ROADWAY CENTERLINE. CONTRACTOR SHALL FIELD VERIFY ELEVATION FOR FOUNDATION DESIGN.

MAST ARM AND POLE PLACEMENT DETAILS

SCALE: 1"=50'

CONTRACTOR SHALL CONTACT MISS UTILITY @ 1-800-552-7001 FOR LOCATION OF ALL UTILITIES, AT LEAST 72 HOURS PRIOR TO BEGINNING CONSTRUCTION

COMMONWEALTH OF VIRGINIA
WM. THOMAS AUSTIN
No. 030907
PROFESSIONAL ENGINEER

Revisions | Date

Commission No.: 1823
Drawn By: JPR
Checked By: WTA
Date: 9/28/01
Project Coordinator: WTA

Mattern & Craig
CONSULTING ENGINEERS • SURVEYORS
701 FIRST STREET
ROANOKE, VIRGINIA 24012
(540) 345-9402
FAX (540) 345-7891

WAL-MART STORE #3243-00
TRAFFIC SIGNAL PLAN
CHALLENGER AVENUE (ROUTE 460)
ROANOKE COUNTY, VIRGINIA

Vertical Scale: AS NOTED
Horizontal Scale: AS NOTED
Issue Date: 9/28/01
Sheet No.: TS-2

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