TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
UTILITY	2014	NHTSA-HE-168(9)	6
CONST.	2015	PHSIP-168(10)	8

S.R. 168 KNOX CO.

BASIC TIMING (SECS)

PHASE	MINIMUM INITIAL	VEHICLE INTERVAL	MAX I	MAX II	CLEARANCE YELLOW	CLEARANCE ALL RED	PEDESTRIAN WALK	PEDESTRIAN FLASHING DON'T WALK	RECALL TO	MEMORY POSITION	LEFT TURN OPERATION
1	6.0	1.0	25	25	4.0	1.5				OFF	PROT/PERM
2	15.0	2.5	45	45	5.0	1.0			MIN	OFF	
4	8.0	1.0	20	20	4.0	2.0				OFF	
6	15.0	2.5	45	45	5.0	1.0			MIN	OFF	

CONTROLLER SHALL BE PEEK 3000E.

CABINET SHALL INCLUDE A PSI UNINTERRUPTIBLE POWER SUPPLY.

SIGNAL SUPPORT POLE MAST ARM DATA

POLE NO.	STATION	OFFSET (FT.)	NORTHING	EASTING	GROUND ELEV.	ARM LENGTH (FT.)	FOOTING DEPTH (FT.)	FOOTING DIAMETER (FT.)
A	107+42.50	49.0' L	580752.91	2608972.43	975.05	45' 50'	15'	3'
B	108+29.00	63.0' R	580720.82	2609110.42	976.27	65'	15'	4'

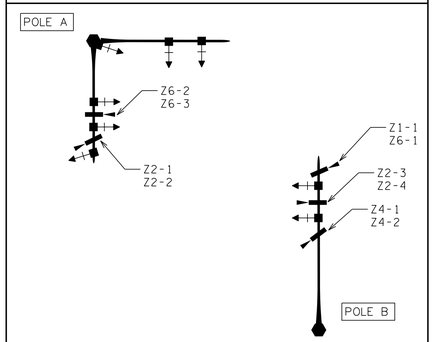
DETECTION ZONE SCHEDULE

ZONE NO.	ZONE DIMENIONS (FT.)	ASSOC. PHASE	AMP MODE	COMMENTS
1-1	8 X 100	1	PRES.	DELAY/NORMAL W/ 3 SEC. DELAY**
2-1	8 X 50	2	PRES.	DELAY W/ 10 SEC. DELAY
2-2	8 X 50	2	PRES.	DELAY W/ 5 SEC. DELAY
2-3	6 X 6	2	PRES.	NORMAL
2-4	6 X 6	2	PRES.	NORMAL
4-1	8 X 100	4	PRES.	DELAY/NORMAL W/ 3 SEC. DELAY**
4-2	8 X 100	4	PRES.	DELAY/NORMAL W/ 10 SEC. DELAY**
6-1	8 X 50	6	PRES.	DELAY W/ 5 SEC. DELAY
6-2	6 X 6	6	PRES.	NORMAL
6-3	6 X 6	6	PRES.	NORMAL

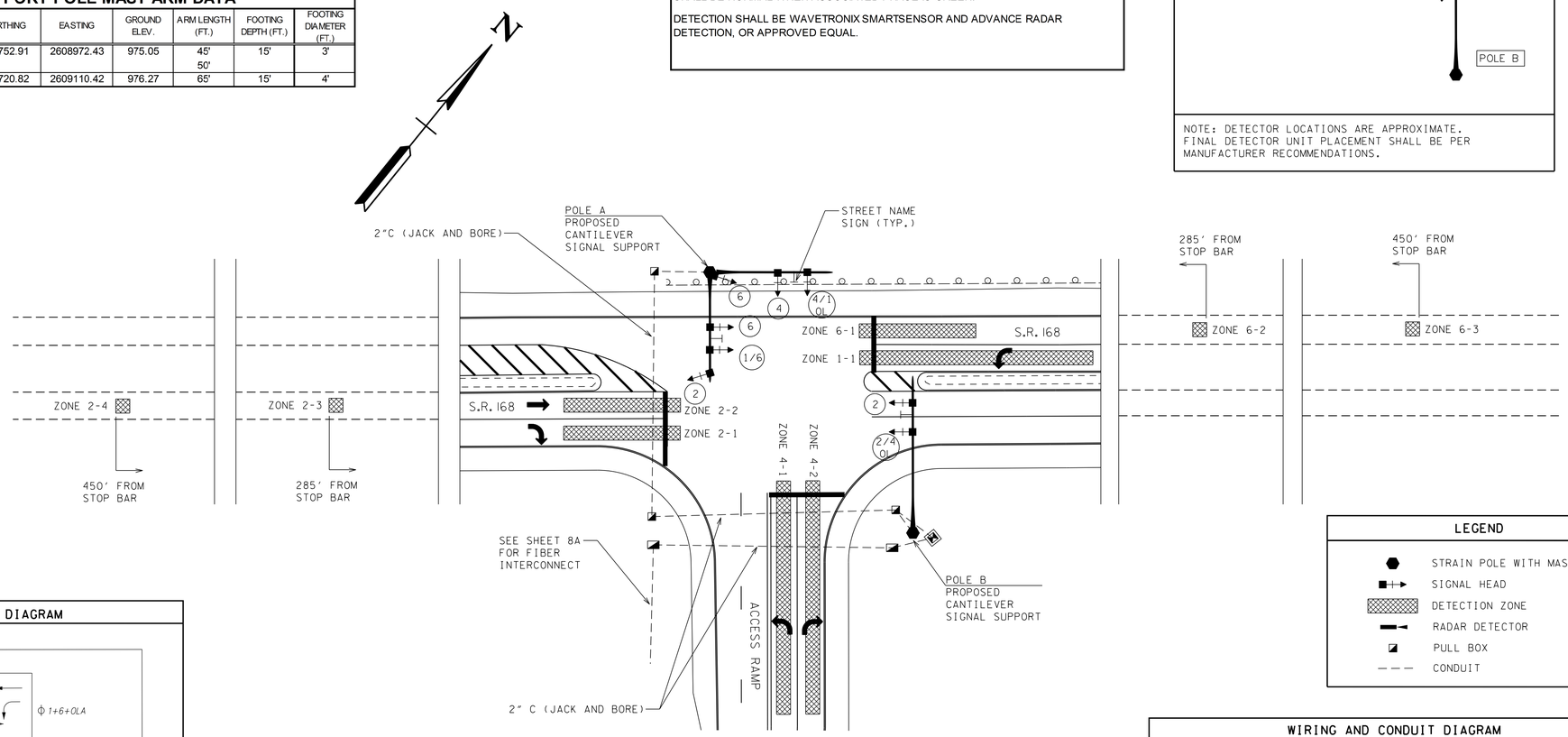
** DETECTORS SPECIFIED AS DELAY/NORMAL SHALL HAVE A TIME DELAYED OUTPUT WHEN ASSOCIATED PHASE NOT GREEN. DELAY SETTINGS AS SPECIFIED. OUTPUT SHALL BE NORMAL WHEN ASSOCIATED PHASE IS GREEN.

DETECTION SHALL BE WAVETRONIX SMARTSENSOR AND ADVANCE RADAR DETECTION, OR APPROVED EQUAL.

RADAR DETECTOR LOCATIONS



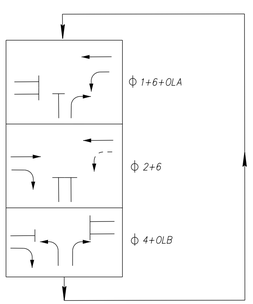
NOTE: DETECTOR LOCATIONS ARE APPROXIMATE. FINAL DETECTOR UNIT PLACEMENT SHALL BE PER MANUFACTURER RECOMMENDATIONS.



LEGEND

- STRAIN POLE WITH MAST ARM
- SIGNAL HEAD
- DETECTION ZONE
- RADAR DETECTOR
- PULL BOX
- CONDUIT

PHASING DIAGRAM



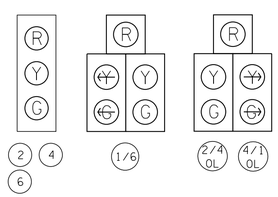
NOTES:

1. PERMITTED, BUT NOT PROTECTED VEHICULAR MOVEMENT.
2. OLA = PHASES 4+1
   OLB = PHASES 2+4
3. ALL CLEARANCES SHALL BE IN ACCORDANCE WITH THE MUTCD.
4. FLASHING OPERATION:
   YELLOW HEADS - 1/6 2 6 2/4 OL
   RED HEADS - 4 4/1 OL

CONTROLLER RING DIAGRAM

1	2	BARRIER	3 NOT USED	4	
5 NOT USED	6		7 NOT USED	8 NOT USED	

SIGNAL HEAD DETAILS



ALL SIGNAL HEADS SHALL BE BLACK ALUMINUM WITH 12-INCH COLOR LED DISPLAYS, CLEAR LENSES, AND BLACK LOUVERED BACKPLATES.

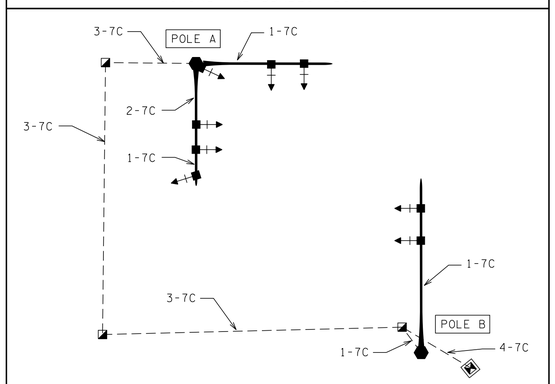
BACKPLATES SHALL INCLUDE A 1-INCH MINIMUM YELLOW RETROREFLECTIVE BORDER AROUND THE PERIMETER OF THE FACE OF BACKPLATE.

PROPOSED SIGNS

SEE SHEET NO. 7 FOR DETAILS OF PROPOSED SIGNS, WHICH SHALL BE INSTALLED PRIOR TO ACTIVATION OF TRAFFIC SIGNAL STOP-AND-GO OPERATION.

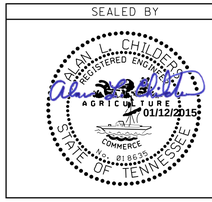
OVERHEAD STREET NAME SIGNS SHALL BE INSTALLED ON SIGNAL MAST ARMS AS SHOWN ON THIS SHEET. SIGNS SHALL POSSESS MINIMUM 12" UPPERCASE AND 9" LOWERCASE LETTERS, WITH FINAL STREET NAME SIGN LEGEND DESIGN COORDINATED WITH KNOX COUNTY.

WIRING AND CONDUIT DIAGRAM



NOTES:
1) ALL CONDUIT SHALL BE SCHEDULE 40 PVC UNLESS OTHERWISE NOTED.
2) POWER SERVICE AND GROUND CONDUITS AND CABLE NOT SHOWN.
3) SEE SHEET 8A FOR FIBER OPTIC CABLE AND CONDUIT.

SEALED BY



COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00009 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED SIGNAL LAYOUT

JOHN SEVIER HWY.
AT CHAPMAN HWY.
ACCESS RAMPS

SCALE: 1"=30 '

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