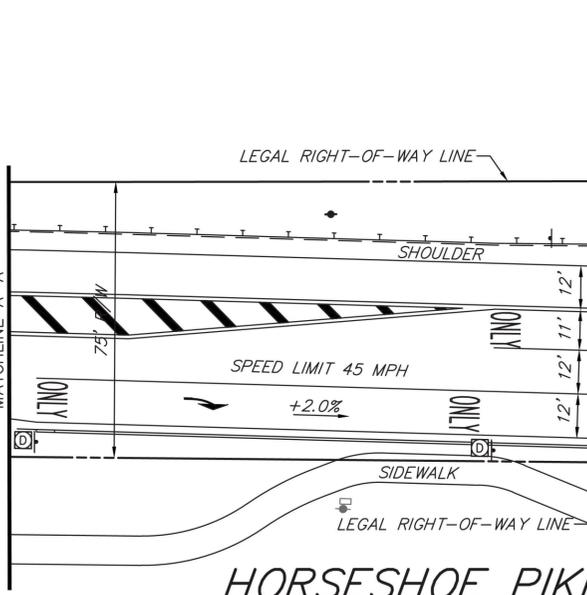


TIME	1	2	3	4	5	6	7	8	9	10	11	12	TOTALS
7:00AM TO 8:00AM													
8:00AM TO 9:00AM													
9:00AM TO 10:00AM													
10:00AM TO 11:00AM													
11:00AM TO 12:00PM													
12:00PM TO 1:00PM													
1:00PM TO 2:00PM													
2:00PM TO 3:00PM													
3:00PM TO 4:00PM													
4:00PM TO 5:00PM													
5:00PM TO 6:00PM													
6:00PM TO 7:00PM													
TOTALS													



MOVEMENT, SEQUENCE AND TIMING DIAGRAM

PHASE	INTERVAL	1+6	2+6	4+8	FLASH
1,2		R R R R	G G Y R R R R R	R R R R R R	Y
3		G G Y R R R R R	G G Y R R R R R	R R R R R R	Y
4		G G Y R R R R R	G G Y R R R R R	R R R R R R	Y
5,6,7		R R R R R R R R	R R R R R R R R	G G Y R R R	R
8,9,10		R R R R R R R R	R R R R R R R R	G G Y R R R	R
11,12		H H H H H H H H	M FH H H H H H H	H H H H H H	OFF
13,14		M FH H H H H H H	M FH H H H H H H	H H H H H H	OFF
15,16		H H H H H H H H	H H H H H H H H	M FH H H H H	OFF

OPERATION NOTES:

- G/Y IF FOLLOWED BY PHASE 2+6
- G IF FOLLOWED BY PHASE 2+6
- M IF FOLLOWED BY PHASE 2+6
- TIMING TO BE AS SHOWN IN PHASE 2+6. IT MAY TIME OUT IN THIS PHASE OR MAY BE COMPLETED IN PHASE 2+6.

RADAR DETECTION SYSTEM NOTES

EST. TIME OF ARRIVAL: MIN. 2.5 - MAX. 5.5 SEC.
 RANGE OF PROTECTION: MIN. 0 - MAX. 450 FEET FROM STOP BAR
 SPEED BOUNDARY: MIN. 27 MPH - MAX. 100 MPH

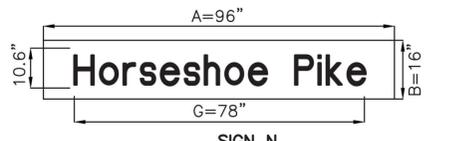
DENSITY ZONE NOTES

RANGE OF DETECTION: 0 - 100 FEET FROM STOP BAR
 MINIMUM SPEED BOUNDARY: MIN. 5 MPH - MAX. 30 MPH

* UPON PEDESTRIAN ACTUATION ONLY, OTHERWISE HAND SYMBOL AT ALL TIMES.

SIGN DETAILS

NOT TO SCALE



SIGN N
 FONT: HIGHWAY GOTHIC SERIES C
 10.6" UPPER CASE
 8" LOWER CASE



SIGN R
 FONT: HIGHWAY GOTHIC SERIES B
 10.6" UPPER CASE
 8" LOWER CASE



SIGN S
 FONT: HIGHWAY GOTHIC SERIES B
 10.6" UPPER CASE
 8" LOWER CASE

SIGN TABULATION

PLAN SYMBOL	SERIES NUMBER	SIZE	REMARKS
A	R10-3E(L)	9X15	EDUC PBN FOR WALK SIGNAL W/COUNTDOWN TIMER
B	R10-3E(R)	9X15	EDUC PBN FOR WALK SIGNAL W/COUNTDOWN TIMER
D	R3-8A(L-S-R)	30X30	LANE USE CONTROL
F	R3-7L	30X30	LEFT LANE MUST TURN LEFT
M	R9-3	18X18	NO PEDESTRIAN CROSSING
N	D3-4	96X16	OVERHEAD STREET NAME SIGN (SEE DETAIL)
R	D3-5	96X32	OVERHEAD STREET NAME SIGN (SEE DETAIL)
S	D3-5	96X32	OVERHEAD STREET NAME SIGN (SEE DETAIL)
T	R10-6AL	24X30	STOP HERE ON RED, (LEFT)
W	R10-12	30X36	LEFT TURN YIELD ON GREEN

GENERAL NOTES

NO MODIFICATIONS OF THIS INSTALLATION ARE PERMITTED UNLESS PRIOR APPROVAL IS GRANTED IN WRITING BY A REPRESENTATIVE OF THE DEPARTMENT OF TRANSPORTATION.

ALL MAINTENANCE WORK INCLUDING TRIMMING OF TREES, NECESSARY FOR PROPER VISIBILITY OF THE SIGNALS IS THE RESPONSIBILITY OF THE PERMITTEE.

ALL SIGNS AND PAVEMENT MARKINGS INDICATED ON THIS DRAWING ARE CONSIDERED PART OF THE PERMIT AND SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH PUBLICATION NO. 212.

POST MOUNTED SIGNALS SHALL BE INSTALLED WITH THE SIGNAL HEADS A MINIMUM OF 2 FEET BEHIND THE FACE OF CURB OR THE EDGE OF THE SHOULDER. SUPPORT POLES FOR OVERHEAD SIGNALS SHALL ALSO HAVE A MINIMUM CLEARANCE HORIZONTALLY OF 2 FEET.

SIGNALS ERECTED OVER THE ROADWAY SHALL HAVE A MINIMUM VERTICAL CLEARANCE OF 16 FT. ABOVE THE ROADWAY. POST MOUNTED SIGNALS SHALL BE A MINIMUM OF 8 FT. ABOVE THE SIDEWALK OR PAVEMENT.

ALL OVERHEAD SIGNALS MUST BE RIGIDLY MOUNTED, TOP AND BOTTOM, AND EQUIPPED WITH BACKPLATES.

THE MINIMUM HORIZONTAL DISTANCE BETWEEN SIGNALS MEASURED AT RIGHT ANGLES TO THE APPROACH SHALL BE 8 FEET.

EXACT LOCATION OF DETECTORS SHALL BE DETERMINED PRIOR TO INSTALLATION BY A REPRESENTATIVE OF PENNDOT.

CURBING TO BE INSTALLED BY MUNICIPALITY AND WHERE NOTED, SHALL BE PLAIN CEMENT CONCRETE CURB OR GRANITE CURB, INSTALLED IN ACCORDANCE WITH DEPARTMENT SPECIFICATIONS FORM 408.

PRIOR TO INSTALLATION THE CONTRACTOR SHALL CONSULT WITH THE LOCAL OFFICIALS AND UTILITY COMPANIES TO RESOLVE ANY PROBLEMS WHICH MAY BE CREATED DUE TO THE LOCATION OF UTILITIES.

THIS DRAWING CANNOT BE USED AS A CONSTRUCTION DRAWING UNLESS THE PERMITTEE COMPLIES WITH THE PROVISIONS OF THE LATEST AMENDMENT TO ACT 287, PREVENTION OF DAMAGE TO UNDERGROUND UTILITIES, DATED DECEMBER 20, 1974.

WHEN LIQUID FUELS MONEY IS USED, SIGNAL INSTALLATION MUST CONFORM TO FORM 408 AND A COPY OF THE PROPOSED SPECIFICATIONS MUST BE SUBMITTED TO THE DISTRICT TRAFFIC UNIT, FOR REVIEW, PRIOR TO BIDDING.

PERMITTEE SHALL OBTAIN A HIGHWAY OCCUPANCY PERMIT FOR ANY CHANGES IN INTERSECTION GEOMETRY REGARDING EXCAVATION.

CONDUIT INSTALLED IN BITUMINOUS ROADWAY LESS THAN 5 YEARS OLD, OR CONCRETE ROADWAY REGARDLESS OF AGE, MUST BE BORED OR JACKED UNDER THE ROADWAY. INSTALL IN ACCORDANCE WITH TRAFFIC SIGNAL STANDARDS TC-8800 SERIES.

SYSTEM PERMIT# I-0305

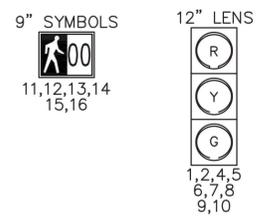
PENNSYLVANIA DEPARTMENT OF TRANSPORTATION
 ENGINEERING DISTRICT 6-0

COUNTY: CHESTER
 MUNICIPALITY: EAST BRANDYWINE TOWNSHIP
 INTERSECTION: HORSESHOE PIKE (S.R. 0322) AND BOLLINGER ROAD (T-401) / WARREN LANE

REVIEWED: _____ DATE _____
 MUNICIPAL OFFICIAL: _____ DATE _____
 RECOMMENDED: _____ DATE _____
 DISTRICT TRAFFIC ENGINEER: _____ DATE _____

NO.	REVISION	DES./REVW.	DATE	REVW.	DATE	RECOM.	DATE
1	ADDED 4TH APPROACH; MODIFIED SIGNAL EQUIPMENT	MCM					
2							
3							
4							
5							
6							
7							
8							

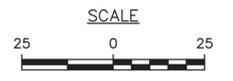
SIGNAL INDICATIONS



UNDER PENNDOT REVIEW
 PLANS SUBJECT TO CHANGE
 DATE: 2018-04-21

NOT FOR CONSTRUCTION

SIGNALS TO BE EQUIPPED WITH TUNNEL VISORS 7 & 10



LEGEND

- MAST ARM/IDENTIFYING LENGTH
- VEHICULAR SIGNAL HEAD/BACKPLATE/VISORS/DIRECTIONAL ARROW/IDENTIFYING NUMBER
- PEDESTRIAN SIGNAL HEAD/IDENTIFYING NUMBER
- PEDESTRIAN PUSHBUTTON/SIGN
- SIGN/IDENTIFYING LETTER
- VIDEO DETECTOR
- CONTROLLER CABINET
- LUMINAIRE
- LOOP SENSOR/SIZE
- ZONE OF DETECTION
- MICROWAVE PRESENCE DETECTOR
- EMERGENCY PRE-EMPTION FLASHING BEACON
- EMERGENCY PRE-EMPTION DEVICE
- CURB RAMP
- UTILITY POLE
- PHASE NUMBER
- INLET
- DILEMMA ZONE DETECTOR

SYSTEM NOTE:
 REFER TO SYSTEM PERMIT #I-0305 FOR PROGRAM TIMES AND WEEKLY PROGRAM CHART.