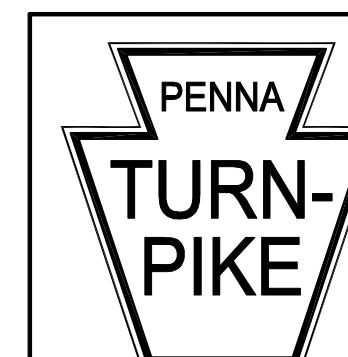


# PENNSYLVANIA TURNPIKE COMMISSION

## INDEX OF STANDARDS FOR MAINTENANCE AND PROTECTION OF TRAFFIC

### CONSTRUCTION

<u>STANDARD DRAWING NUMBER</u>	<u>SHEET DATE</u>	<u>SHEET NUMBERS</u>	<u>DESCRIPTION</u>	<u>STANDARD DRAWING NUMBER</u>	<u>DRAWING DATE</u>	<u>SHEET NUMBERS</u>	<u>DESCRIPTION</u>
<b><u>CONSTRUCTION</u></b>				<b><u>CONSTRUCTION AND MAINTENANCE</u></b>			
PTS-900 (9 SHEETS)	OCTOBER 2006	SHT. 1 OF 9	GENERAL NOTES AND ADVANCE SIGNING	PTS-960 (4 SHEETS)	OCTOBER 2006	SHT. 1 OF 4	SIGN FABRICATION
	OCTOBER 2006	SHT. 2 OF 9	DETAILS		OCTOBER 2006	SHT. 2 OF 4	SIGN FABRICATION
	OCTOBER 2006	SHT. 3 OF 9	MOBILE OPERATION		OCTOBER 2006	SHT. 3 OF 4	SIGN FABRICATION
	OCTOBER 2006	SHT. 4 OF 9	SINGLE LANE TRAFFIC PATTERNS		OCTOBER 2006	SHT. 4 OF 4	GENERAL NOTES AND TABULATION OF SIGNS
	OCTOBER 2006	SHT. 5 OF 9	LANE CLOSURE TRAFFIC PATTERN FOR INTERCHANGE AND SERVICE PLAZA AREAS				
	OCTOBER 2006	SHT. 6 OF 9	SINGLE LANE TRAFFIC PATTERN FOR THREE LANE SECTION (RIGHT AND CENTER LANE WORK AREA)	PTS-980 (2 SHEETS)	OCTOBER 2006	SHT. 1 OF 2	STRIPING DETAILS FOR GORES AND SHOULDERS
	OCTOBER 2006	SHT. 7 OF 9	SHOULDER OPERATIONS		OCTOBER 2006	SHT. 2 OF 2	MISCELLANEOUS DETAILS
	OCTOBER 2006	SHT. 8 OF 9	TUNNEL CROSSOVER TRAFFIC PATTERN (ALLEGHENY TUNNEL, TUSCARORA TUNNEL, BLUE MOUNTAIN - KITTATINNY TUNNELS AND LEHIGH TUNNEL)				
	OCTOBER 2006	SHT. 9 OF 9	CROSSOVER TRAFFIC PATTERNS				
<b><u>CONSTRUCTION SHORT TERM</u></b>							
PTS-910 (6 SHEETS)	OCTOBER 2006	SHT. 1 OF 6	GENERAL NOTES				
	OCTOBER 2006	SHT. 2 OF 6	MOBILE OPERATION				
	OCTOBER 2006	SHT. 3 OF 6	SINGLE LANE TRAFFIC PATTERN				
	OCTOBER 2006	SHT. 4 OF 6	LANE CLOSURE TRAFFIC PATTERN FOR INTERCHANGE AND SERVICE PLAZA AREAS				
	OCTOBER 2006	SHT. 5 OF 6	SINGLE LANE TRAFFIC PATTERN FOR THREE LANE SECTION (RIGHT AND CENTER LANE WORK AREA)				
	OCTOBER 2006	SHT. 6 OF 6	SHOULDER OPERATIONS				



OCTOBER 2006 EDITION

GENERAL NOTES

- THIS WORK CONSISTS OF THE MAINTENANCE OF TRAFFIC AND THE PROTECTION OF THE TRAVELING PUBLIC APPROACHING THE CONSTRUCTION AREA AND WITHIN THE LIMITS OF CONSTRUCTION.
- THE CONTRACTOR IS CAUTIONED THAT OTHER COMMISSION CONTRACTOR(S) AND/OR COMMISSION MAINTENANCE PERSONNEL MAY BE WORKING ADJACENT TO THE WORK AREA(S) DURING PORTIONS OF THIS CONTRACT PERIOD. THE REPRESENTATIVE WILL SPECIFY THE WORKING SEQUENCE OF THE CONTRACTS IN ORDER TO FACILITATE COORDINATED TRAFFIC CONTROL OPERATION.
- THE R22-1, W21-19 AND W21-20 SIGNS, THE WHITE TYPE B HIGH-INTENSITY FLASHING LIGHT AND THE SPEED DISPLAY SIGN HAVE BEEN CREATED BY PENNDOT IN RESPONSE TO THE REQUIREMENTS OF ACT 229. THESE SIGNS AND DEVICES, AS WELL AS THE ASSOCIATED GUIDELINES, CAN BE FOUND IN THE 67 PA CODE, CHAPTER 212, OFFICIAL TRAFFIC CONTROL DEVICES. REVIEW, FAMILIARIZE, AND APPLY THESE GUIDELINES AND ALL ITS SUPPLEMENTS AS REQUIRED BY ACT 229.
- FURNISH, ERECT, PLACE AND MAINTAIN TRAFFIC CONTROL SIGNS AND DEVICES AND MAINTAIN TRAFFIC ACCORDING TO THE CONTRACT DOCUMENTS.
- REMOVE ALL TRAFFIC CONTROL SIGNS AND DEVICES IMMEDIATELY UPON THE COMPLETION OF THE WORK UNLESS OTHERWISE SPECIFIED IN THE SPECIAL PROVISIONS.
- PLACE ALL TRAFFIC CONTROL DEVICES AND HAVE THEM INSPECTED BY THE REPRESENTATIVE BEFORE WORK BEGINS.
- MEDIAN AREAS 10 FEET OR LESS, USE RECTANGULAR CONSTRUCTION SIGNS.
- MEDIAN AREAS GREATER THAN 10 FEET, USE DIAMOND CONSTRUCTION SIGNS.
- COVER OR REMOVE FROM THE SITE ALL SIGNS NOT IN USE. REMOVE FROM THE TURNPIKE RIGHT-OF-WAY CONSTRUCTION SIGNS NOT NEEDED OR USED FOR A PERIOD OF TWO (2) OR MORE WEEKS.
- MAINTAIN A MINIMUM SPACING OF 200 FEET BETWEEN ALL REGULATORY, WARNING AND DESTINATION SIGNS.
- PROVIDE AT MINIMUM A 40 FOOT AREA BEYOND THE EDGE OF THE TRAVEL LANE FREE OF OBSTACLES AND DROP-OFFS GREATER THAN 2 INCHES IN DEPTH IN WORK AREA(S) DURING NON-WORKING HOURS OR PROTECT WORK AREA(S) WITH TEMPORARY CONCRETE BARRIER. PROTECTION OF WORK AREA(S) IS INCIDENTAL TO THE MPT.
- DETAILS FOR THE SIGNS AND DEVICES CAN BE FOUND IN THESE PLANS, PENNDOT PUBLICATION 236M, PENNDOT PUBLICATION 212 AND ARE TO BE MANUFACTURED BY A DEPARTMENT OF TRANSPORTATION APPROVED MANUFACTURER AS LISTED IN PENNDOT PUBLICATION 35.
- USE PENNDOT APPROVED TYPE VII REFLECTORIZED MATERIAL FOR SIGNS.

- THESE PLANS ARE NOT INTENDED TO RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY FOR THE PROTECTION OF THE PUBLIC AND THE CONSTRUCTION PERSONNEL. THE STANDARDS PRESCRIBED ARE MINIMUM AND ADDITIONAL PROTECTION MAY BE NEEDED IF PROBLEMS ARE ENCOUNTERED DURING THE TERM OF THE CONTRACT. THE CONTRACTOR WILL BE EXPECTED TO CONSTANTLY REVIEW THIS PLAN FOR ADEQUACY AND TO RECOMMEND CHANGES FOR THE REPRESENTATIVE'S APPROVAL WHEN INADEQUACIES ARE DISCOVERED.
- HAVE A SUFFICIENT AMOUNT OF THE FOLLOWING SIGNS AVAILABLE IN CASE THEIR USE BECOMES NECESSARY; ADDITIONAL W3-4 "BE PREPARED TO STOP", W8-11 "UNEVEN LANES", R4-12 "TRUCKS BUSES..." AND MPT-35 "AHEAD". IT IS NOT INTENDED THAT THESE SIGNS BE PART OF THE NORMAL TRAFFIC CONTROL OR A SUPPLEMENT THERETO.
- COMPUTE THE MINIMUM DESIRABLE TAPER LENGTH FOR REDUCTION IN LANES USING THE FOLLOWING FORMULA:  

$$L = S \times W$$

WHERE L = MINIMUM DESIRABLE TAPER LENGTH IN FEET  
W = WIDTH OF OFFSET IN FEET  
S = NORMAL SPEED LIMIT IN MILES PER HOUR
- SIGNS AND DEVICES MAY BE ADJUSTED TO FIT FIELD CONDITIONS.
- CHANNELIZING DEVICES MAY BE TEMPORARILY RELOCATED, AS APPROVED BY THE REPRESENTATIVE, TO ALLOW FOR WORK TO BE PERFORMED. THE CHANNELIZING DEVICES MUST REMAIN BETWEEN TRAFFIC AND THE WORK AREA.
- CONCRETE BARRIER DETAILS ARE TO BE ACCORDING TO PENNSYLVANIA DEPARTMENT OF TRANSPORTATION STANDARDS FOR ROADWAY CONSTRUCTION, RC-57M AND PTC STANDARDS FOR ROADWAY CONSTRUCTION.
- WHEN A WORK AREA SPEED LIMIT IS ESTABLISHED, SPACE WORK AREA SPEED LIMIT SIGNS, R2-2-2, AT 1/2 MILE INTERVALS TO THE RIGHT OF TRAFFIC THROUGH THE REQUIRED AREA.
- ESTABLISH WORK AREA SPEED LIMIT (40 MPH)**
  - DURING ACTIVE WORK HOURS IN CONSTRUCTION ZONES WITH LANE CLOSURES, WITHOUT BARRIER PROTECTING THE WORK AREA.
  - WHEN CONSTRUCTION VEHICLES ARE ENTERING OR DEPARTING THE WORK AREA TO OR FROM THE TRAVEL LANES.
  - WHEN USING A TUNNEL CROSS-OVER TRAFFIC PATTERN.
  - WHEN LESS THAN 11 FOOT LANE(S) ARE MAINTAINED BETWEEN BARRIER.

POST MOUNT 55 MPH SIGNS ON THE RIGHT SHOULDER AT 1/2-MILE INTERVALS THROUGH THE WORK AREA WHEN 40 MPH SIGNS ARE NOT WARRANTED AND 65 MPH SIGNS, IN AREAS WITH A NORMAL POSTED SPEED LIMIT OF 65 MPH, ARE ALSO NOT WARRANTED. EXISTING R2-2-2 SIGNS MAY BE OVERLAID FOR 55 MPH IN LIEU OF COVERING/UNCOVERING SIGNS. 40 MPH SIGNS LOCATED AT THE INTERCHANGE AND SERVICE PLAZA ACCELERATION RAMP ARE TO BE REPLACED WITH 55 MPH SIGNS WHEN 40 MPH SIGNS ARE NOT WARRANTED AND 65 MPH SIGNS, IN AREAS WITH A NORMAL POSTED SPEED LIMIT OF 65 MPH, ARE ALSO NOT WARRANTED.

COVER OR REMOVE WORK AREA SPEED LIMIT SIGNS (OR 55 MPH SIGNS IN AREAS WITH NORMAL POSTED SPEED LIMIT OF 65 MPH) WHEN ALL NORMAL LANES AND SHOULDERS ARE AVAILABLE AND ARE AT THE SAME ELEVATION FOR THE EFFECTED DIRECTION(S).

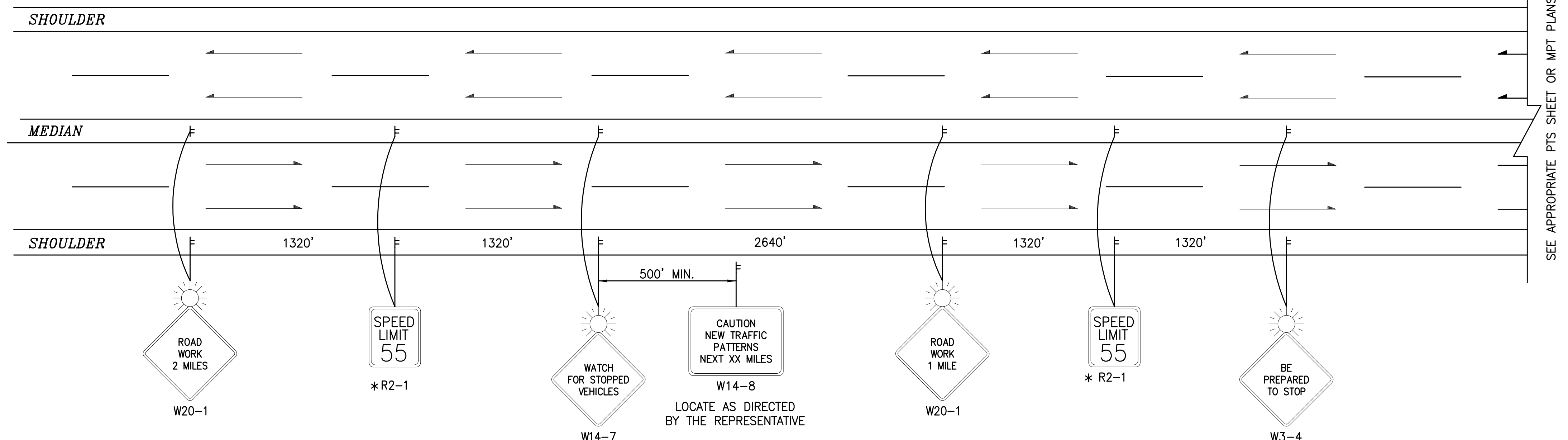
- CHANNELIZING DEVICES ARE TO BE PENNDOT APPROVED VERTICAL PANELS WITH SELF-BALLASTED BASES UNLESS OTHERWISE SPECIFIED.
- WHENEVER THE ROADWAY IS OPENED TO TRAFFIC PRIOR TO THE COMPLETION OF THE OVERLAY APPLICATION, AS MAY BE ALLOWED OR DIRECTED BY THE REPRESENTATIVE, ACCOMPLISH PROPER TRANSITION BETWEEN THE SURFACE DIFFERENTIALS BEFORE THE TRAFFIC IS ROUTED ONTO THE UNCOMPLETED LANE.

IF BOTH LANES IN ONE DIRECTION ARE OPEN TO TRAFFIC AND A DIFFERENTIAL BETWEEN RIGHT AND LEFT LANE PAVEMENT EXIST, INSTALL A W8-11 (UNEVEN LANES) SIGN ON THE RIGHT SHOULDER 500 FEET IN ADVANCE OF WHERE THE PAVEMENT DIFFERENTIAL BEGINS. IN ADDITION, LOCATE W8-11 SIGNS ON THE RIGHT SHOULDER AT 1/2 MILE INTERVALS THROUGHOUT THE AREA WHERE THE PAVEMENT DIFFERENTIAL EXISTS, AS DIRECTED BY THE REPRESENTATIVE.

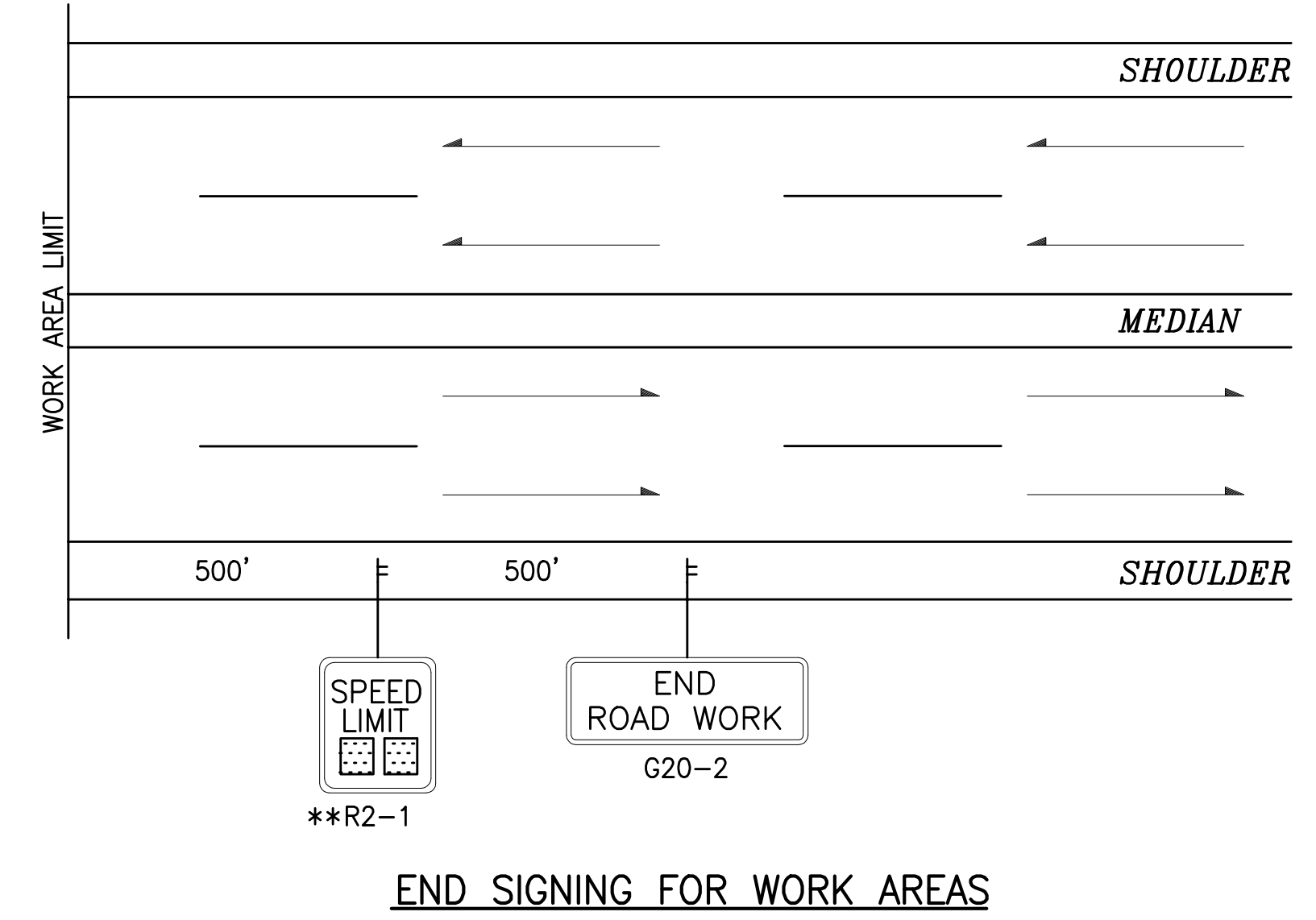
IF THE RIGHT LANE IS OPEN TO TRAFFIC AND A DIFFERENTIAL BETWEEN THE RIGHT LANE AND SHOULDER PAVEMENT EXISTS, INSTALL A W8-9 (LOW SHOULDER) SIGN ON THE RIGHT SHOULDER 500 FEET IN ADVANCE OF WHERE THE PAVEMENT DIFFERENTIAL BEGINS. IN ADDITION, LOCATE W8-9 SIGNS ON THE RIGHT SHOULDER AT 1/2 MILE INTERVALS THROUGHOUT THE AREA WHERE THE PAVEMENT DIFFERENTIAL EXISTS, AS DIRECTED BY THE REPRESENTATIVE.
- INSTALL, RESET, RELOCATE, AND REMOVE ANY PERMANENT AND/OR TEMPORARY CONCRETE BARRIER SO THAT NO BLUNT END OF THE BARRIER IS EXPOSED TO ONCOMING TRAFFIC.
- ENSURE THAT ALL EQUIPMENT APPROACHES, ENTERS, AND DEPARTS FROM WORKING AREAS IN THE DIRECTION OF AND WITH THE NORMAL ADJACENT TRAFFIC FLOW.
- IN AREAS WITH A NORMAL POSTED SPEED LIMIT OF 65 MPH, INSTALL 55 MPH SIGNS 1320 FEET BEYOND THE ROAD WORK 2 MILE AND ROAD WORK 1 MILE SIGNS.
- POST NORMAL SPEED LIMIT FOR THE AREA (55 MPH OR 65 MPH).

LEGEND

- PORTABLE ROAD LIGHT & POWER UNIT
- ARROW PANEL
- SIGN & SUPPORT
- TYPE B LIGHT
- TEMPORARY CONCRETE BARRIER 12'-0" (MIN.) SECTION
- TEMPORARY CONCRETE BARRIER 12'-0" (MIN.) SECTION WITH GLARE SCREEN
- CONCRETE BARRIER 7'-0" END SECTION
- CHANNELIZING DEVICE
- IMPACT ATTENUATORS (AS REQUIRED)
- WORK AREA
- TRAFFIC FLOW

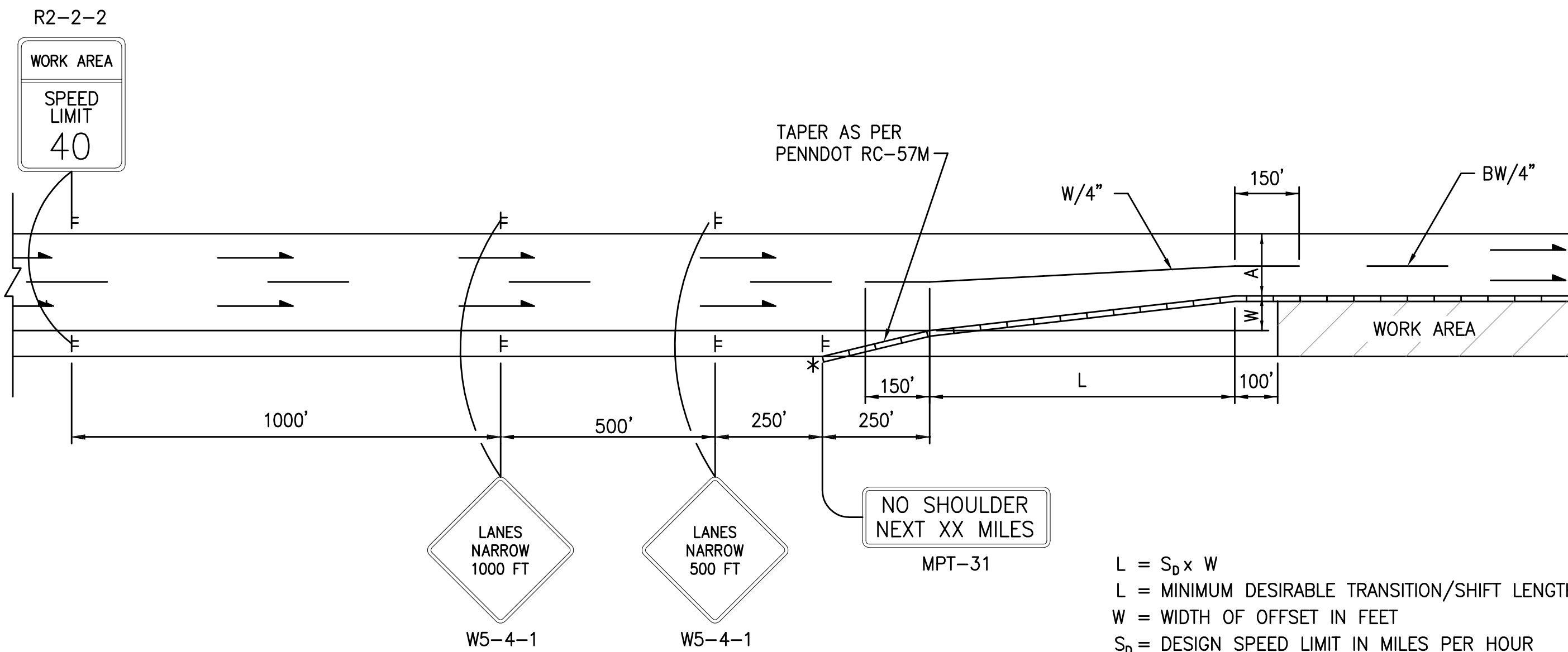


2 MILE ADVANCED SIGNING  
ADVANCED SIGNING FOR WORK AREAS



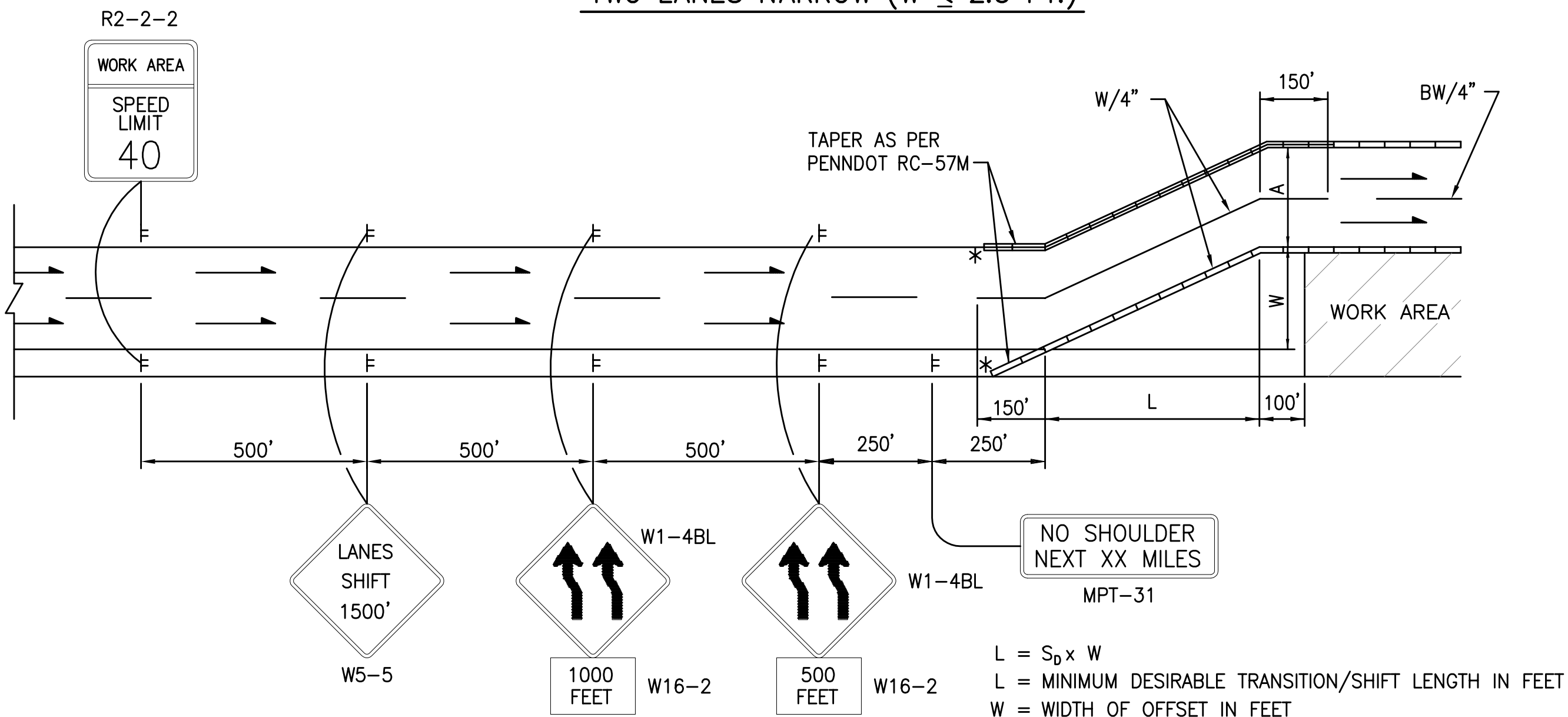
	RECOMMENDED: OCTOBER 6, 2006	<p align="center"><b>CONSTRUCTION</b></p> <p align="center"><b>MAINTENANCE AND PROTECTION OF TRAFFIC</b></p> <p align="center"><b>GENERAL NOTES AND ADVANCED SIGNING</b></p>	<p align="center"><b>PENNSYLVANIA TURNPIKE COMMISSION</b></p> <p align="center"><b>STANDARD DRAWING</b></p>		
	<p>ASSISTANT CHIEF ENGINEER - DESIGN</p>		<p>CHIEF ENGINEER</p>	FILE NAME: PTS-900-1.dwg DRAWING TYPE: 5A	SHEET 1 OF 9
	APPROVED: OCTOBER 6, 2006		DATE: OCTOBER 2006	PTS-900	

SEE ADVANCED SIGNING PTS-900 SHEET 1 OF 9

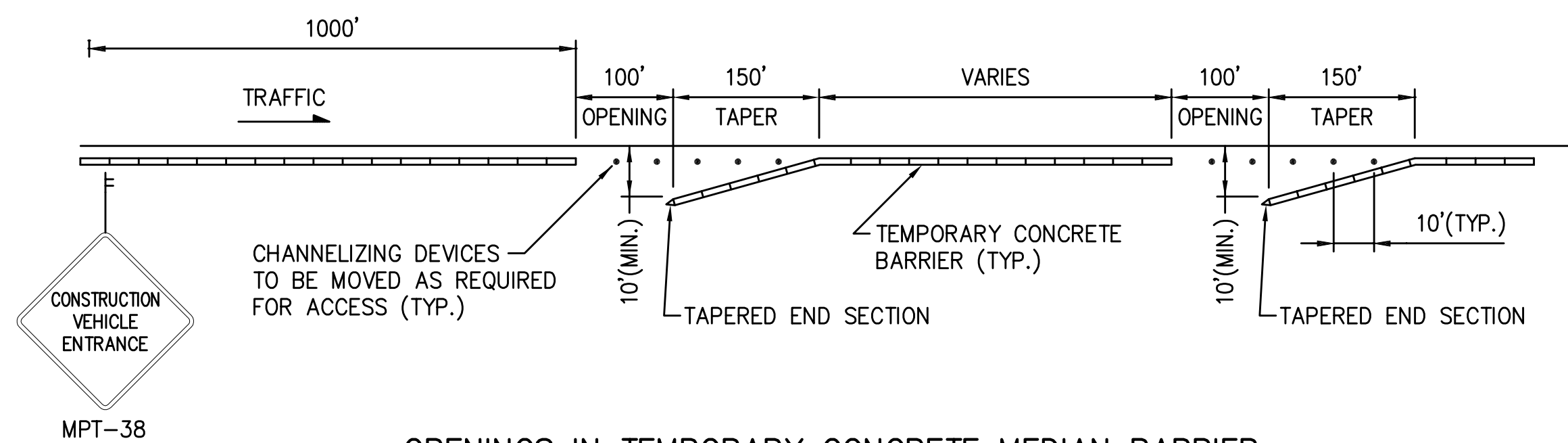


**TWO LANES NARROW ( $W \leq 2.5$  FT.)**

SEE ADVANCED SIGNING PTS-900 SHEET 1 OF 9



**TWO LANES SHIFT ( $W > 2.5$  FT.)**



**OPENINGS IN TEMPORARY CONCRETE MEDIAN BARRIER FOR ACCESS TO CONSTRUCTION AREA**

$L = S_D \times W$   
 $L$  = MINIMUM DESIRABLE TRANSITION/SHIFT LENGTH IN FEET  
 $W$  = WIDTH OF OFFSET IN FEET  
 $S_D$  = DESIGN SPEED LIMIT IN MILES PER HOUR  
 $A$  = WIDTH OF TRAVEL WAY

$L = S_D \times W$   
 $L$  = MINIMUM DESIRABLE TRANSITION/SHIFT LENGTH IN FEET  
 $W$  = WIDTH OF OFFSET IN FEET  
 $S_D$  = DESIGN SPEED LIMIT IN MILES PER HOUR  
 $A$  = WIDTH OF TRAVEL WAY

**NOTES:**

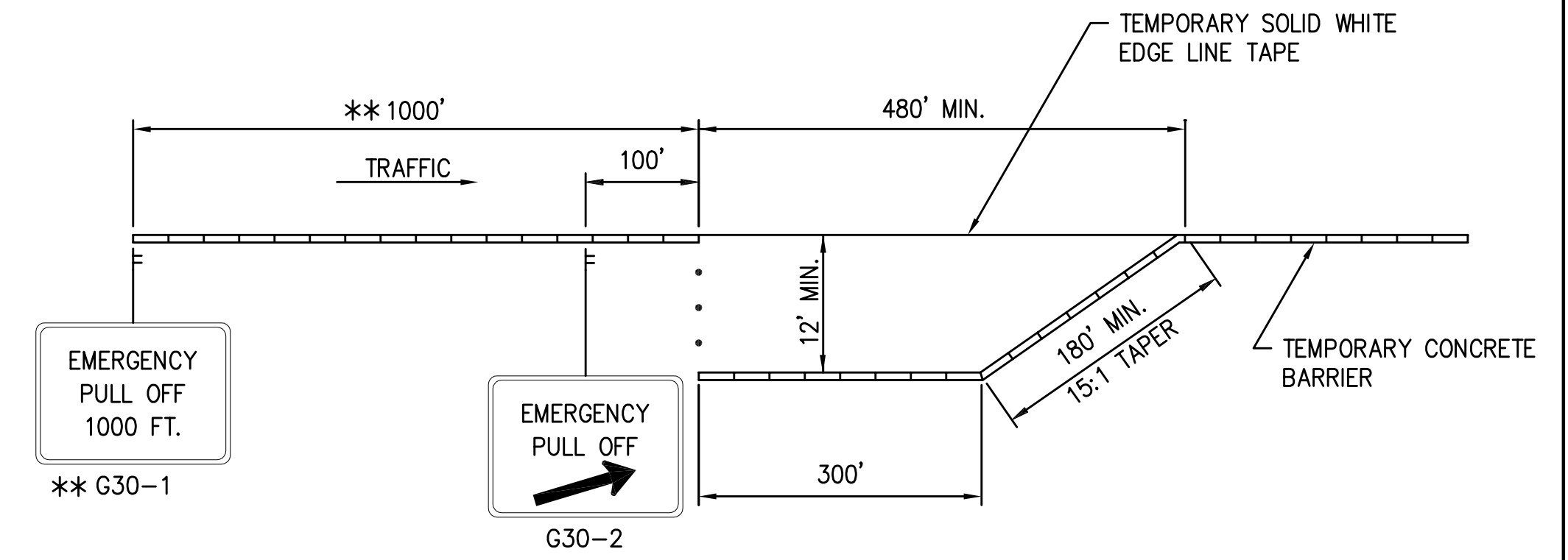
- USE THIS DETAIL WHEN  $W \leq 2.5$  FT., AND  $A < 24$  FT.
- WHEN LANES NARROW TO THE RIGHT, ELIMINATE MPT-31.
- WHEN LANES NARROW WITHIN A WORK AREA, USE ONLY W5-4-1 (1000'), AND W5-4-1 (500').
- TYPE OF PAVEMENT MARKINGS ARE INDICATED ON THE PLANS.
- PROVIDE END SIGNING AT END OF CONSTRUCTION AREA PER PTS-900 SHEET 1 OF 9.
- PROVIDE EMERGENCY PULL-OFFS AT A SPACING OF APPROXIMATELY 1 MILE EACH DIRECTION THROUGH WORK AREA.
- ESTABLISH WORK AREA SPEED LIMIT AS INDICATED IN NOTE 21, PTS-900 SHEET 1 OF 9.
- PROVIDE PROPER END TREATMENT FOR BARRIER, BY TAPERING BARRIER AND BURYING, TAPERING BARRIER AND CONNECT TO GUIDE RAIL OR BARRIER, OR TAPERING BARRIER AND PROVIDE TEMPORARY IMPACT ATTENUATOR.

**NOTES:**

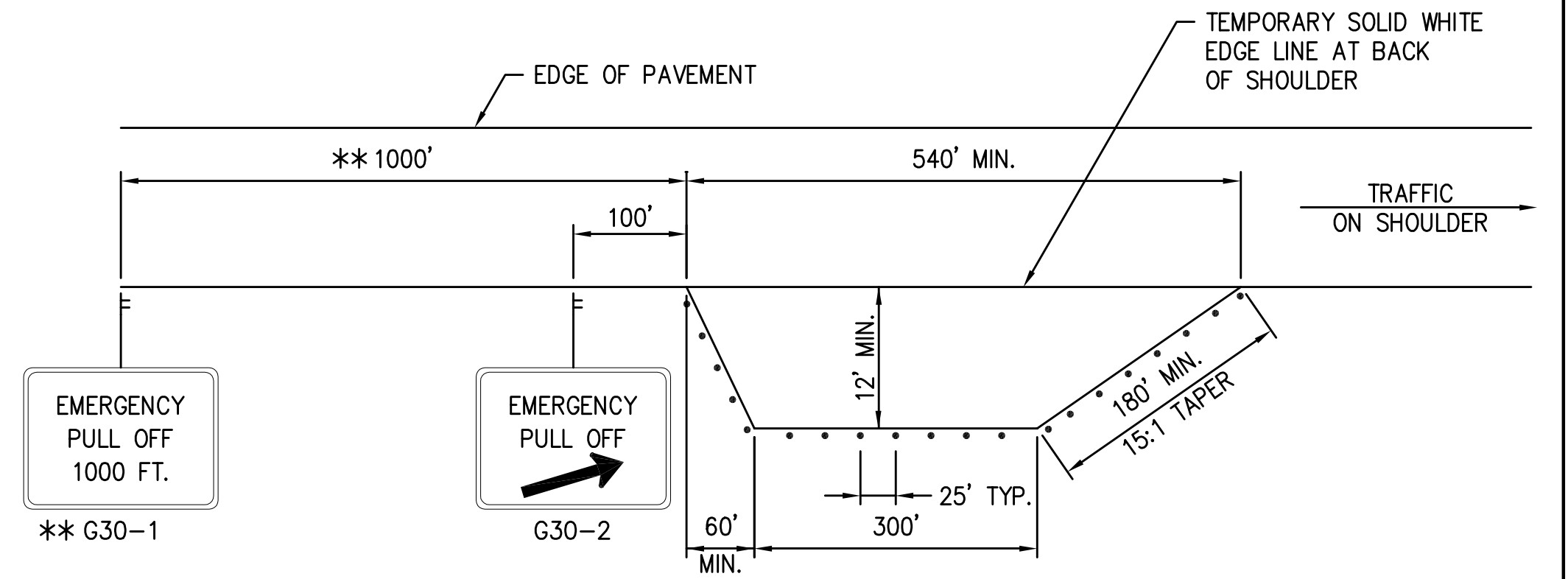
- USE THIS DETAIL WHEN  $W > 2.5$  FT. OR  $W < 2.5$  FT. AND  $A = 24$  FT. SHIFT TRAFFIC PRIOR TO AND AFTER WORK AREA.
- WHEN LANES SHIFT TO THE RIGHT, REPLACE W1-4BL WITH W1-4BR.
- WHEN LANES SHIFT WITHIN A WORK AREA, USE ONLY W5-5 (1500'), W1-4BL (BR) WITH W16-2 (1000') AND W1-4BL (BR) WITH W16-2 (500').
- TYPE OF PAVEMENT MARKINGS ARE INDICATED ON THE PLANS.
- PROVIDE LANE SHIFT SIGNING, OPPOSITE OF LANE SHIFT SIGNING ENTERING WORK AREA, WHEN MOVING TRAFFIC BACK TO NORMAL LANES.
- W24-1AL AND W24-1AR SIGNS MAY BE USED IN LIEU OF THE W1-4BL AND W1-4BR SIGNS WHEN THE TANGENT DISTANCE FOR THE SHIFTED TRAFFIC MAKES IT DIFFICULT TO INSTALL A SECOND SET OF TWO LANE REVERSE CURVE SIGNS (W1-4B SERIES).
- PROVIDE END SIGNING AT END OF CONSTRUCTION AREA PER PTS-900 SHEET 1 OF 9.
- PROVIDE EMERGENCY PULL-OFFS AT A SPACING OF APPROXIMATELY 1 MILE EACH DIRECTION THROUGH WORK AREA WHEN SHOULDER IS NOT AVAILABLE.
- ESTABLISH WORK AREA SPEED LIMIT AS INDICATED IN NOTE 21, PTS-900, SHEET 1 OF 9.
- PROVIDE PROPER END TREATMENT FOR BARRIER, BY TAPERING BARRIER AND BURYING, TAPERING BARRIER AND CONNECT TO GUIDE RAIL OR BARRIER, OR TAPERING BARRIER AND PROVIDE TEMPORARY IMPACT ATTENUATOR.

**NOTES:**

- CLOSE CONSTRUCTION OPENINGS WITH TEMPORARY CONCRETE BARRIER WHEN NOT REQUIRED FOR MORE THAN THREE DAYS. THIS WORK IS INCIDENTAL TO THE MPT.
- LOCATION SUBJECT TO APPROVAL BY REPRESENTATIVE.
- STATION FLAGGER AT ACCESS POINTS WHEN ACCESS AREA IS ACTIVE. EQUIP FLAGGER WITH PENNDOT APPROVED, LIKE NEW, STOP/SLOW PADDLE WITH "STOP" COVERED.
- INSTALL MPT-38 "CONSTRUCTION VEHICLE ENTRANCE" 1000' IN ADVANCE OF CONSTRUCTION AREA ACCESS OPENINGS.



**EMERGENCY PULL OFF - TYPE I IN TEMPORARY CONCRETE BARRIER**



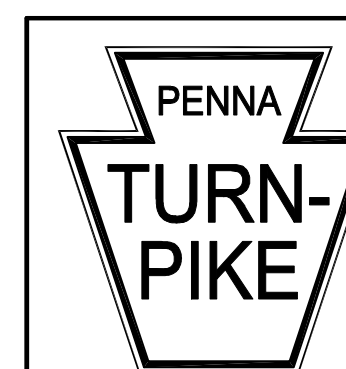
**EMERGENCY PULL OFF - TYPE III**

**NOTES:**

- SPACE EMERGENCY PULL OFFS AT APPROXIMATELY 1 MILE EACH DIRECTION.
- EMERGENCY PULL OFF - TYPE II USES AN EXISTING WIDE AREA WITH A MINIMUM SIZE AS INDICATED FOR TYPE III. SIGN ACCORDING TO EMERGENCY PULL OFF - TYPE III REQUIREMENTS.
- DO NOT USE EMERGENCY PULL OFFS FOR ACCESS TO CONSTRUCTION AREAS. LIKEWISE, DO NOT USE ACCESS TO CONSTRUCTION AREAS AS EMERGENCY PULL OFFS.
- SHOW THE ACTUAL DISTANCE, BASED ON FIELD CONDITIONS, ON THE SIGN.

**LEGEND**

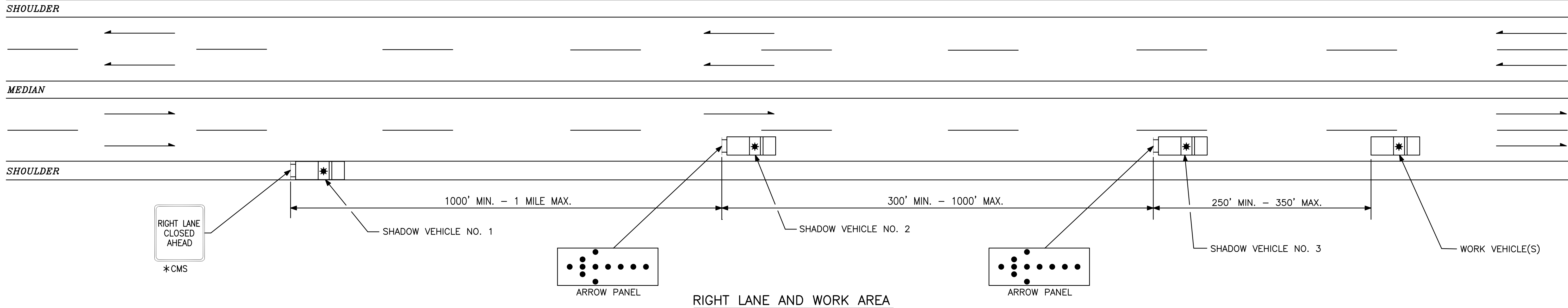
- ⊙ PORTABLE ROAD LIGHT & POWER UNIT
- ⊗ ARROW PANEL
- F SIGN & SUPPORT
- ☀ TYPE B LIGHT
- ▭ TEMPORARY CONCRETE BARRIER 12'-0"(MIN.) SECTION
- ▨ TEMPORARY CONCRETE BARRIER 12'-0"(MIN.) SECTION WITH GLARE SCREEN
- ▴ CONCRETE BARRIER 7'-0" END TRANSITION
- CHANNELIZING DEVICE
- ≡≡≡ IMPACT ATTENUATORS (AS REQUIRED)
- ▨ WORK AREA
- ← TRAFFIC FLOW



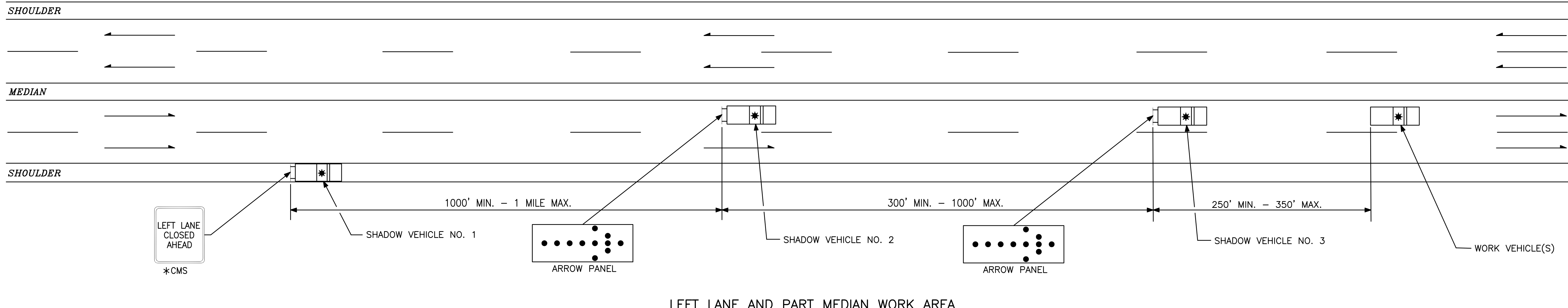
RECOMMENDED: OCTOBER 6, 2006  
*Mark Berg*  
 ASSISTANT CHIEF ENGINEER - DESIGN  
 APPROVED: OCTOBER 6, 2006  
*Alphonse...*  
 CHIEF ENGINEER

**CONSTRUCTION  
 MAINTENANCE AND PROTECTION OF TRAFFIC  
 DETAILS**

**PENNSYLVANIA TURNPIKE COMMISSION  
 STANDARD DRAWING**  
 FILE NAME: PTS-900-2.dwg SHEET 2 OF 9  
 DRAWING TYPE: 5A  
 DATE: OCTOBER 2006 **PTS-900**




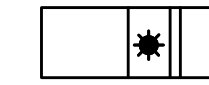
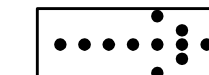
RIGHT LANE AND WORK AREA



LEFT LANE AND PART MEDIAN WORK AREA

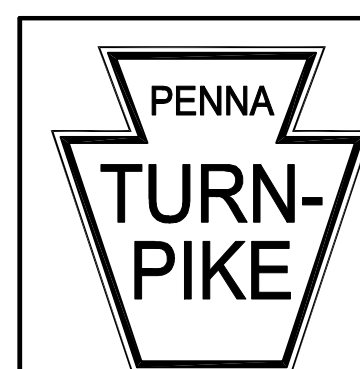
**MOBILE OPERATION**

**LEGEND**

-  SHADOW VEHICLE WITH AN ACTIVATED AMBER WARNING LIGHT.
-  WORK VEHICLE WITH AN ACTIVATED AMBER WARNING LIGHT.
-  ARROW PANEL

**NOTES:**

1. THIS FIGURE APPLIES WHERE THE OPERATION MOVES INTERMITTENTLY OR CONTINUOUSLY AT AN AVERAGE SPEED OF MORE THAN 1 M.P.H. (88 FT./MIN.). THE OPERATOR IS TO BE THE ONLY OCCUPANT OF SHADOW VEHICLE NO. 2. WHEN THE OPERATION MOVES INTERMITTENTLY, THE MAXIMUM TIME OF STATIONARY WORK IS 15 MINUTES. IF THESE CONDITIONS CAN NOT BE MET, USE A SINGLE LANE PATTERN AS SHOWN ON PTS-900, SHEET 4 OF 9.
2. POSITION SHADOW VEHICLE NO. 1 SO THAT IT IS VISIBLE FROM BEHIND FOR A MINIMUM DISTANCE OF 700 FEET.
3. HAVE ALL SHADOW VEHICLES MEET PENNDOT AND PENNSYLVANIA TURNPIKE COMMISSION REQUIREMENTS.
4. ALL ARROW PANELS ARE TO BE TRUCK MOUNTED.
5. EQUIP SHADOW VEHICLE NO. 2 WITH A TRUCK MOUNTED ATTENUATOR.
- \* 6. MESSAGE FOR THE CHANGEABLE MESSAGE SIGN (CMS) MAY BE CHANGED AS DIRECTED BY REPRESENTATIVE.
7. THE SPACING BETWEEN THE WORK VEHICLES AND THE SHADOW VEHICLES, AND BETWEEN EACH SHADOW SHADOW VEHICLE SHOULD BE MINIMIZED TO DETER ROAD USERS FROM DRIVING IN BETWEEN, BASED ON FIELD CONDITIONS.

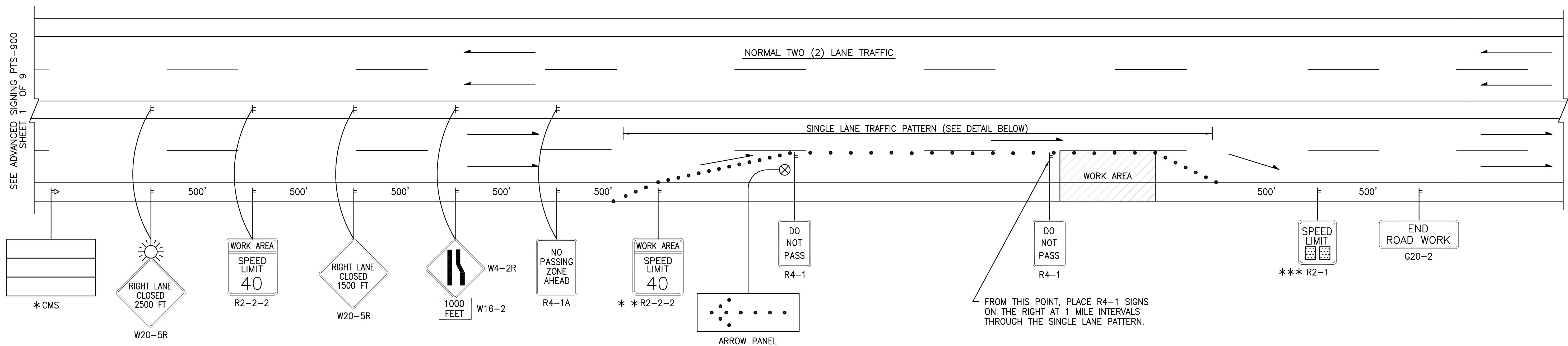


RECOMMENDED: OCTOBER 6, 2006  
*Mark Berg*  
 ASSISTANT CHIEF ENGINEER - DESIGN  
 APPROVED: OCTOBER 6, 2006  
*Alphonse R. Jones*  
 CHIEF ENGINEER

**MAINTENANCE AND PROTECTION OF TRAFFIC  
MOBILE OPERATION**

**PENNSYLVANIA TURNPIKE COMMISSION  
STANDARD DRAWING**

FILE NAME: PTS-900-3.dwg	SHEET 3 OF 9
DRAWING TYPE: 5A	
DATE: OCTOBER 2006	PTS-900



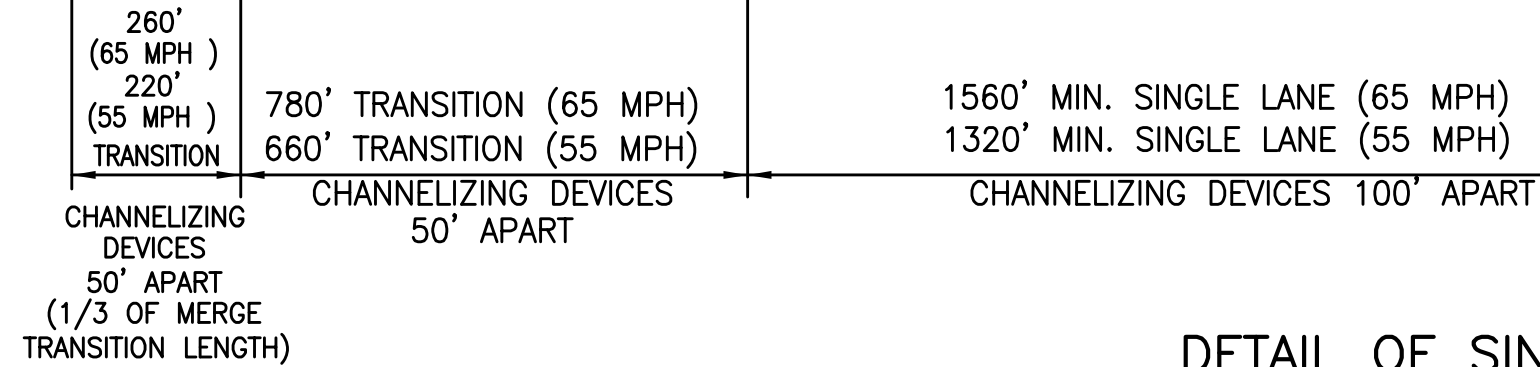
SHOULDER

MEDIAN

SHOULDER

NORMAL TWO (2) LANE TRAFFIC

WORK AREA (FOUR(4) MILES MAXIMUM)  
SPACE CHANNELIZING DEVICES 100' APART SINGLE LANE



DETAIL OF SINGLE LANE TRAFFIC PATTERN

SINGLE LANE TRAFFIC PATTERN FOR WORK AREAS

LEGEND

- ⊙ PORTABLE ROAD LIGHT & POWER UNIT
- ⊗ ARROW PANEL
- F SIGN & SUPPORT
- ☀ TYPE B LIGHT
- ▭ TEMPORARY CONCRETE BARRIER 12'-0" (MIN.) SECTION
- ▨ TEMPORARY CONCRETE BARRIER 12'-0" (MIN.) SECTION WITH GLARE SCREEN
- ▷ CONCRETE BARRIER 7'-0" END TRANSITION
- CHANNELIZING DEVICE
- ≪≪≪ IMPACT ATTENUATORS (AS REQUIRED)
- ▨ WORK AREA
- TRAFFIC FLOW
- Ⓐ CHANGEABLE MESSAGE SIGN (CMS)

NOTES:

1. FOR LEFT LANE WORK AREA, USE THE SAME SIGN SPACING AND PATTERN BUT WITH THE SIGNS INDICATING A LEFT LANE CLOSURE.
2. USE CHANNELIZING DEVICES WITH TYPE C LIGHTS IN THE TRANSITION AREAS FOR PATTERNS USED DURING HOURS OF DARKNESS.
- \* 3. REFER TO THE MAINTENANCE AND PROTECTION OF TRAFFIC SPECIAL PROVISION FOR APPROPRIATE USE.
4. ESTABLISH WORK AREA SPEED LIMIT AS INDICATED IN NOTE 21, PTS-900, SHEET 1 OF 9.
5. ESTABLISH SINGLE LANE TRAFFIC PATTERN ONLY DURING ACTIVE WORK PERIODS.
6. LIMIT LENGTH OF SINGLE LANE PATTERN TO ONLY THE LENGTH NEEDED FOR CONSTRUCTION OPERATION.
7. SINGLE LANE SHOULD BE ESTABLISHED A MINIMUM OF 1000' IN ADVANCE OR BEYOND RAMP AT INTERCHANGES AND SERVICE PLAZAS.
- \*\* 8. FROM THIS POINT, PLACE R2-2-2 SIGNS TO THE RIGHT OF TRAFFIC AT 1/2 MILE MAXIMUM INTERVALS THROUGH THE SINGLE LANE PATTERN.
- \*\*\* 9. POST NORMAL SPEED LIMIT FOR THE AREA. (55 MPH OR 65 MPH)



RECOMMENDED: OCTOBER 6, 2006

Assistant Chief Engineer - Design

APPROVED: OCTOBER 6, 2006

Chief Engineer

CONSTRUCTION  
MAINTENANCE AND PROTECTION OF TRAFFIC  
SINGLE LANE TRAFFIC PATTERNS

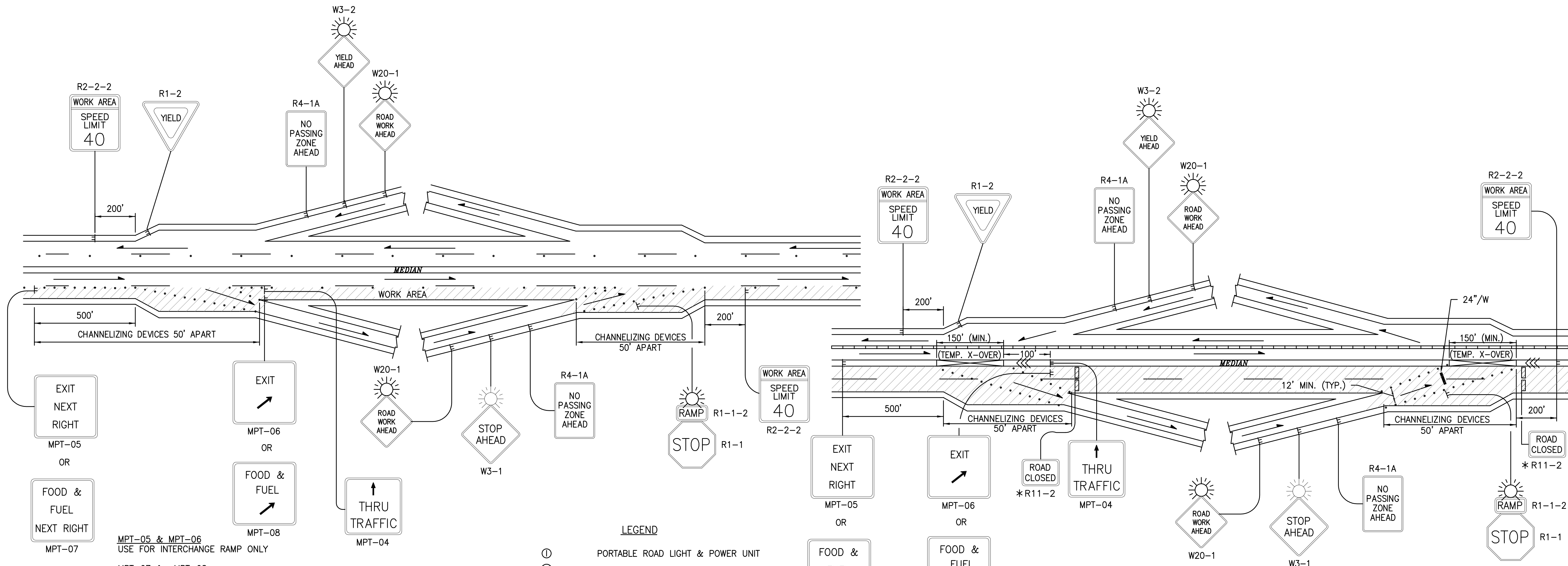
PENNSYLVANIA TURNPIKE COMMISSION  
STANDARD DRAWING

FILE NAME: PTS-900-4.dwg  
DRAWING TYPE: 5A

SHEET 4 OF 9

DATE: OCTOBER 2006

PTS-900



**TYPICAL INTERCHANGE & SERVICE PLAZA SIGNING FOR SINGLE LANE TRAFFIC PATTERNS**

**TYPICAL CROSSOVER TRAFFIC PATTERN SIGNING WITHIN WORK AREAS FOR INTERCHANGE AND SERVICE PLAZA RAMPS**

MPT-05 & MPT-06  
USE FOR INTERCHANGE RAMP ONLY

MPT-07 & MPT-08  
USE FOR SERVICE PLAZA RAMP ONLY

MPT-05 & MPT-06  
USE FOR INTERCHANGE RAMP ONLY

MPT-07 & MPT-08  
USE FOR SERVICE PLAZA RAMP ONLY

**LEGEND**

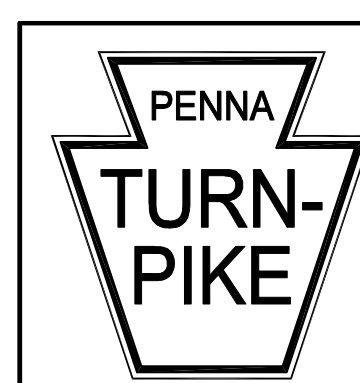
- ⊙ PORTABLE ROAD LIGHT & POWER UNIT
- ⊗ ARROW PANEL
- F SIGN & SUPPORT
- ☀ TYPE B LIGHT
- ☀ (with red center) RED TYPE B LIGHT
- ▭ TEMPORARY CONCRETE BARRIER 12'-0"(MIN.) SECTION
- ▭ (with red center) TEMPORARY CONCRETE BARRIER 12'-0"(MIN.) SECTION WITH GLARE SCREEN
- ▵ CONCRETE BARRIER 7'-0" END SECTION
- CHANNELIZING DEVICE
- ≡≡≡ IMPACT ATTENUATORS (AS REQUIRED)
- ▨ WORK AREA
- ← TRAFFIC FLOW
- ▨ (with red center) TYPE III BARRICADE

**NOTES:**

1. SINGLE LANE SHOULD BE ESTABLISHED A MINIMUM OF 1000' IN ADVANCE OR BEYOND RAMP.
2. COVER R2-2-2 SIGNS DURING NON-WORK HOURS WHEN NO WORKERS ARE PRESENT. SEE NOTE 21, PTS-900, SHEET 1 OF 9.
3. IN AREAS WITH 65 MPH SPEED LIMIT, COVER 65 MPH SPEED LIMIT SIGNS AND INSTALL 55 MPH SPEED LIMIT SIGNS WITHIN 1500 FT. OF ON RAMP.

**NOTES:**

1. PROVIDE EMERGENCY PULL-OFFS AT A SPACING OF APPROXIMATELY 1 MILE EACH DIRECTION THROUGH THE WORK AREA, WHEN SHOULDER IS NOT AVAILABLE.
2. ESTABLISH WORK AREA SPEED LIMIT AS INDICATED IN NOTE 21, PTS-900, SHEET 1 OF 9.
3. IN AREAS WITH 65 MPH SPEED LIMIT, COVER 65 MPH SPEED LIMIT SIGNS AND INSTALL 55 MPH SPEED LIMIT SIGNS WITHIN 1500 FT. OF ON RAMP.
- \* 4. PROVIDE SUFFICIENT TYPE III BARRICADES TO CLOSE OFF THE ENTIRE ROAD.



RECOMMENDED: OCTOBER 6, 2006

*Mark Berg*

ASSISTANT CHIEF ENGINEER - DESIGN

APPROVED: OCTOBER 6, 2006

*Alphonse R. ...*

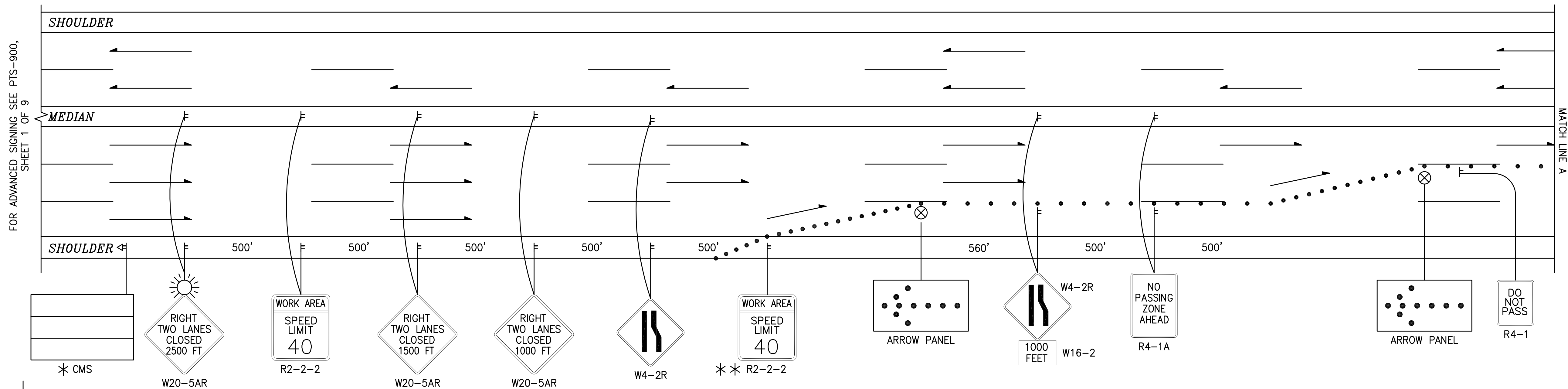
CHIEF ENGINEER

**MAINTENANCE AND PROTECTION OF TRAFFIC**

**LANE CLOSURE TRAFFIC PATTERN FOR**

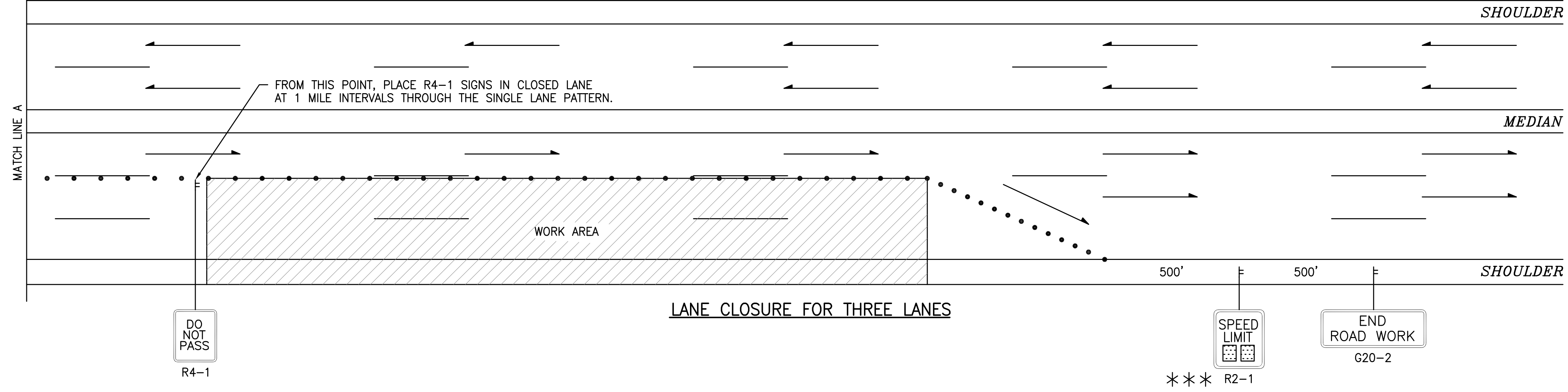
**INTERCHANGE AND SERVICE PLAZA AREAS**

PENNSYLVANIA TURNPIKE COMMISSION STANDARD DRAWING	
FILE NAME: PTS-900-5.dwg	SHEET 5 OF 9
DRAWING TYPE: 5A	
DATE: OCTOBER 2006	PTS-900

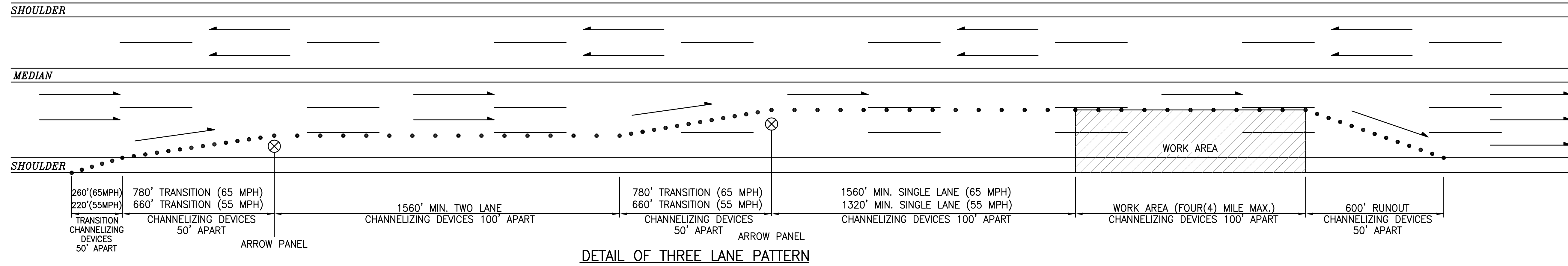


**LEGEND**

- ⊙ PORTABLE ROAD LIGHT & POWER UNIT
- ⊗ ARROW PANEL
- F SIGN & SUPPORT
- ☀ TYPE B LIGHT
- ▭ TEMPORARY CONCRETE BARRIER 12'-0"(MIN.) SECTION
- ▨ TEMPORARY CONCRETE BARRIER 12'-0"(MIN.) SECTION WITH GLARE SCREEN
- ▷ CONCRETE BARRIER 7'-0" END TRANSITION
- CHANNELIZING DEVICE
- ≡≡≡ IMPACT ATTENUATORS (AS REQUIRED)
- ▨ WORK AREA
- ← TRAFFIC FLOW
- ⊳ CHANGEABLE MESSAGE SIGN (CMS)

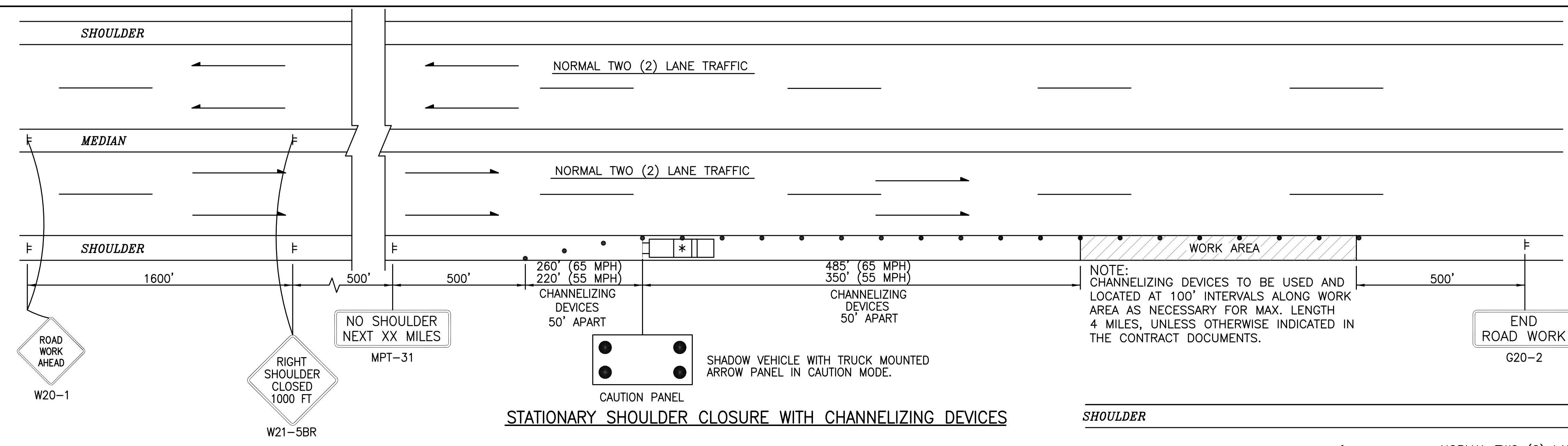


- NOTES:**
1. FOR LEFT LANE WORK AREA, USE THE SAME SPACING AND PATTERN BUT WITH THE SIGNS INDICATING A LEFT LANE CLOSURE.
  2. USE CHANNELIZING DEVICES WITH TYPE C LIGHTS IN THE TRANSITION AREA FOR PATTERNS USED DURING HOURS OF DARKNESS.
  3. ESTABLISH WORK AREA SPEED LIMIT AS INDICATED IN NOTE 21, PTS-900, SHEET 1 OF 9.
  - \* 4. REFER TO THE MAINTENANCE AND PROTECTION OF TRAFFIC SPECIAL PROVISION FOR APPROPRIATE USE.
  5. ESTABLISH SINGLE LANE PATTERN ONLY DURING ACTIVE WORK PERIODS.
  6. LIMIT LENGTH OF SINGLE LANE PATTERN TO ONLY THE LENGTH NEEDED FOR THE CONSTRUCTION OPERATION.
  7. SINGLE LANE SHOULD BE ESTABLISHED A MINIMUM OF 1000' IN ADVANCE OR BEYOND RAMPS AT INTERCHANGES AND SERVICE PLAZAS.
  - \*\* 8. FROM THIS POINT PLACE R2-2-2 SIGNS TO THE RIGHT OF TRAFFIC AT 1/2 MILE INTERVALS THROUGH THE LANE CLOSURE PATTERN.
  - \*\*\* 9. POST NORMAL SPEED LIMIT FOR THE AREA. (55 MPH OR 65 MPH)



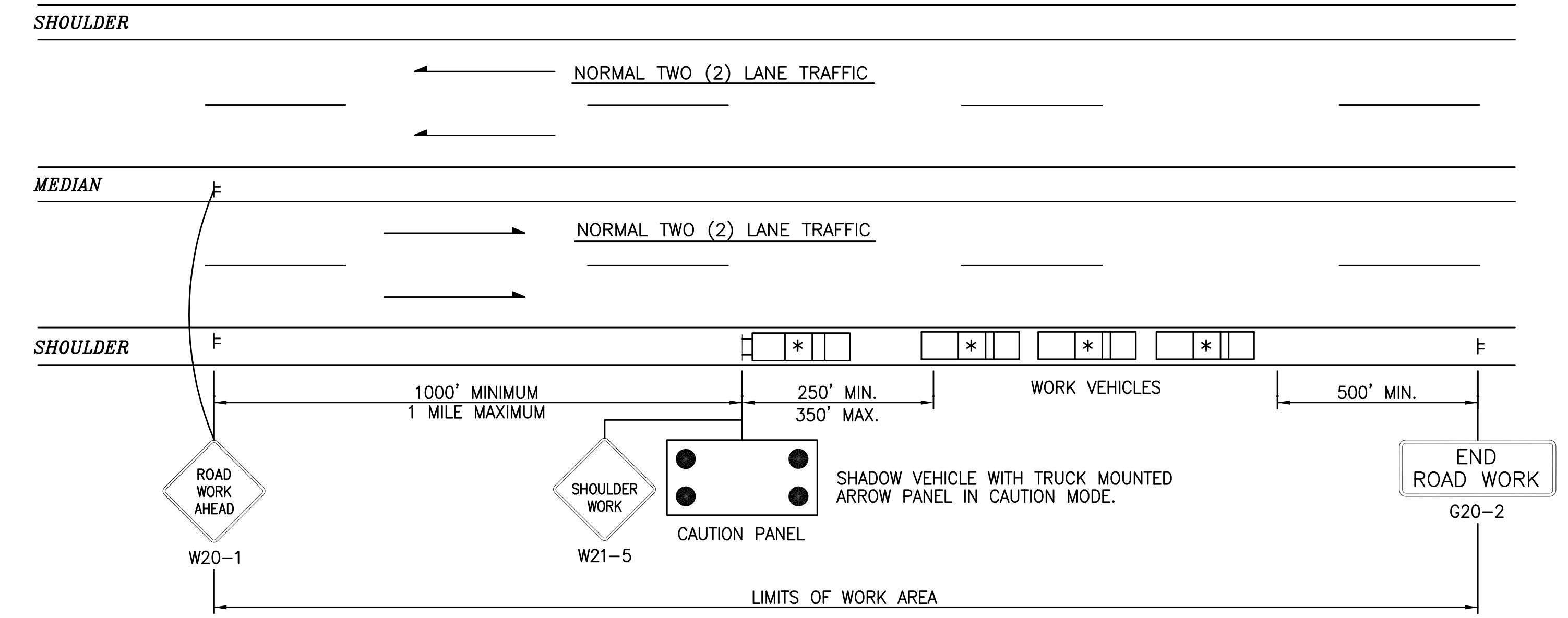
**RIGHT AND CENTER LANE CLOSURE PATTERN FOR WORK AREAS**

	RECOMMENDED: OCTOBER 6, 2006	<p><b>CONSTRUCTION</b></p> <p><b>MAINTENANCE AND PROTECTION OF TRAFFIC</b></p> <p><b>SINGLE LANE TRAFFIC PATTERN FOR 3 LANE</b></p> <p><b>SECTION RIGHT AND CENTER LANE WORK</b></p>	<p><b>PENNSYLVANIA TURNPIKE COMMISSION</b></p> <p><b>STANDARD DRAWING</b></p>	
	ASSISTANT CHIEF ENGINEER - DESIGN APPROVED: OCTOBER 6, 2006 CHIEF ENGINEER		FILE NAME: PTS-900-6.dwg DRAWING TYPE: 5A	SHEET 6 OF 9



STATIONARY SHOULDER CLOSURE WITH CHANNELIZING DEVICES

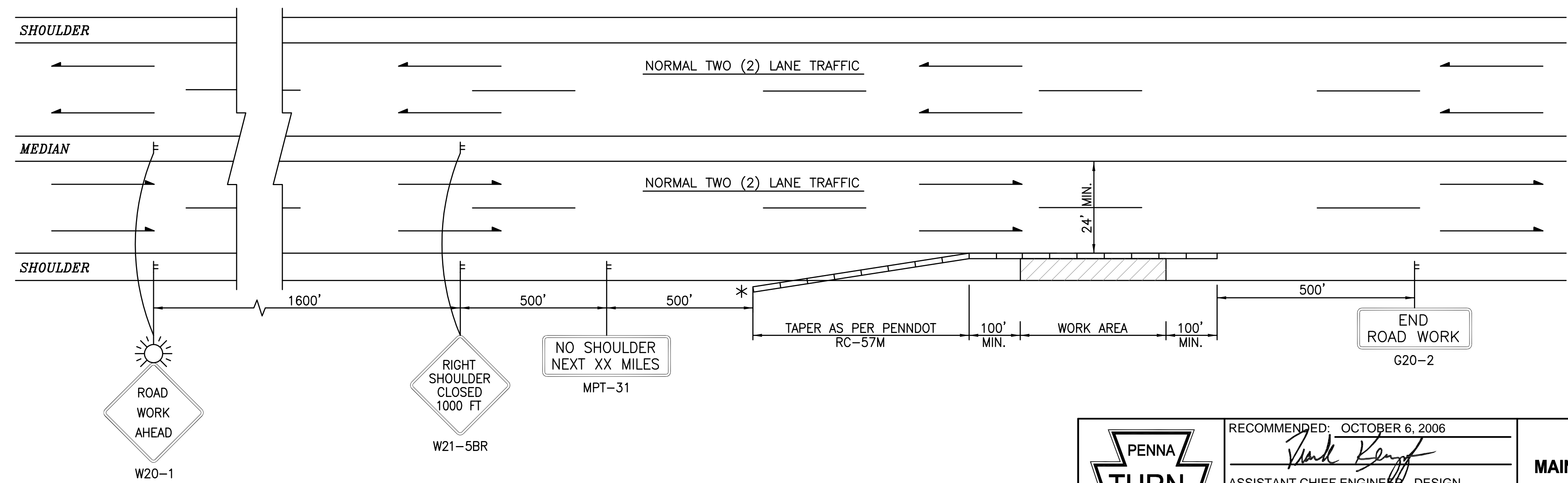
- NOTES:
- ARROW PANEL TO BE USED WHEN MEN ARE WORKING ON THE SHOULDER. CHANNELIZING DEVICES TO REMAIN IN PLACE UNTIL SHOULDER WORK IS COMPLETED. MAINTAIN NORMAL TWO (2) LANE TRAFFIC.
  - FOR MEDIAN OPERATIONS USE SINGLE LANE TRAFFIC PATTERN. PER PTS-900, SHEET 4 OF 9, LEFT LANES CLOSED BOTH DIRECTIONS. USE VERTICAL PANEL WITH TYPE "A" LIGHT TO PROVIDE IDENTIFICATION AND WARNING OF HAZARD. SINGLE LANE PATTERN TO REMAIN IN PLACE UNTIL WORK IS COMPLETED.
  - PROVIDE PROPER END TREATMENT FOR BARRIER, BY TAPERING BARRIER AND BURYING, TAPERING BARRIER AND CONNECT TO GUIDE RAIL OR BARRIER, OR TAPERING BARRIER AND PROVIDE TEMPORARY IMPACT ATTENUATOR.
  - IN AREAS WHERE THE NORMAL SPEED LIMIT IS 65 MPH, INSTALL 55 MPH SIGNS ON BOTH SIDES OF THE ROAD 1 MILE AND 1/2 MILE IN ADVANCE OF THE ROAD WORK AHEAD SIGNS.
  - IN AREAS WHERE THE NORMAL SPEED LIMIT IS 65 MPH, INSTALL 65 MPH SIGN 500' BEYOND THE END OF THE WORK AREA. INSTALL END ROAD WORK SIGN, G20-2, A MINIMUM OF 500' BEYOND THE 65 MPH SIGNS.
  - ALL ARROW PANELS ARE TO BE TRUCK MOUNTED.
  - HAVE ALL SHADOW VEHICLES MEET PENNDOT AND PENNSYLVANIA TURNPIKE COMMISSION REQUIREMENTS.
  - THIS FIGURE APPLIES WHERE THE OPERATION MOVES INTERMITTENTLY OR CONTINUOUSLY AT AN AVERAGE SPEED OF MORE THAN 1 M.P.H. (88 FT./MIN.). THE OPERATOR IS TO BE THE ONLY OCCUPANT OF SHADOW VEHICLE NO. 2. WHEN THE OPERATION MOVES INTERMITTENTLY, THE MAXIMUM TIME OF STATIONARY WORK IS 15 MINUTES. IF THESE CONDITIONS CAN NOT BE MET, USE EITHER A STATIONARY SHOULDER CLOSURE AS SHOWN ON PTS-900, SHEET 7 OF 9 OR A SINGLE LANE PATTERN AS SHOWN ON PTS-900, SHEET 4 OF 9.



\*\* MOBILE SHOULDER OPERATIONS

LEGEND

- SIGN & SUPPORT
- TYPE B LIGHT
- TEMPORARY CONCRETE BARRIER 12'-0"(MIN.) SECTION
- CHANNELIZING DEVICE
- WORK AREA
- TRAFFIC FLOW
- SHADOW VEHICLE WITH AN ACTIVATED AMBER WARNING LIGHT
- WORK VEHICLE WITH AN ACTIVATED AMBER WARNING LIGHT
- ARROW PANEL



STATIONARY SHOULDER CLOSURE WITH TEMPORARY CONCRETE BARRIER



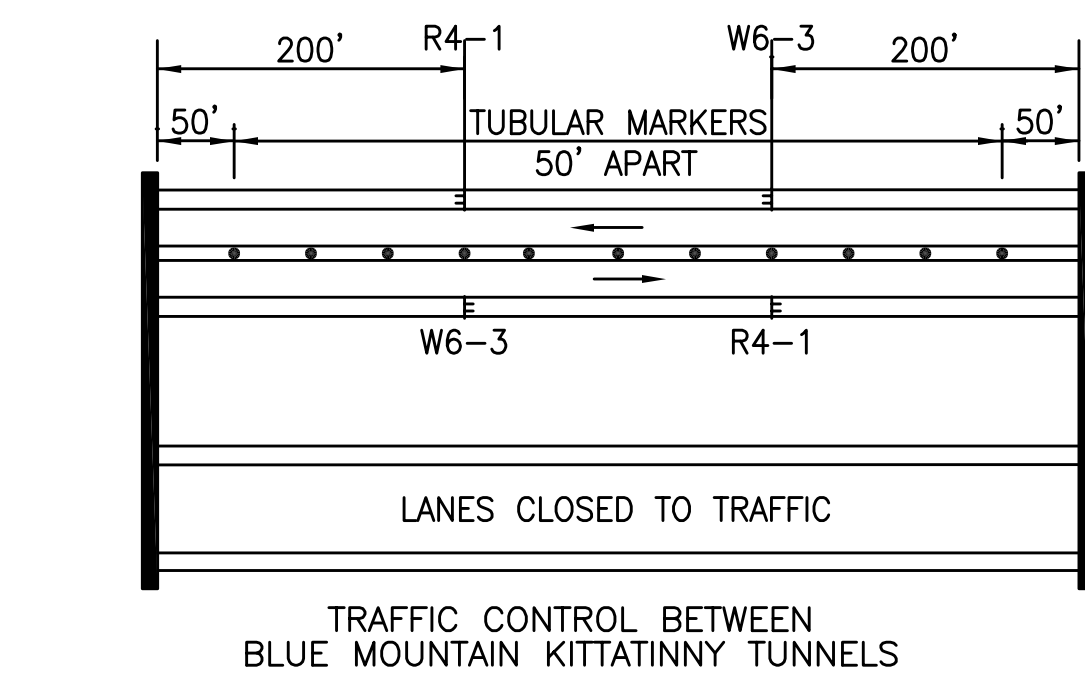
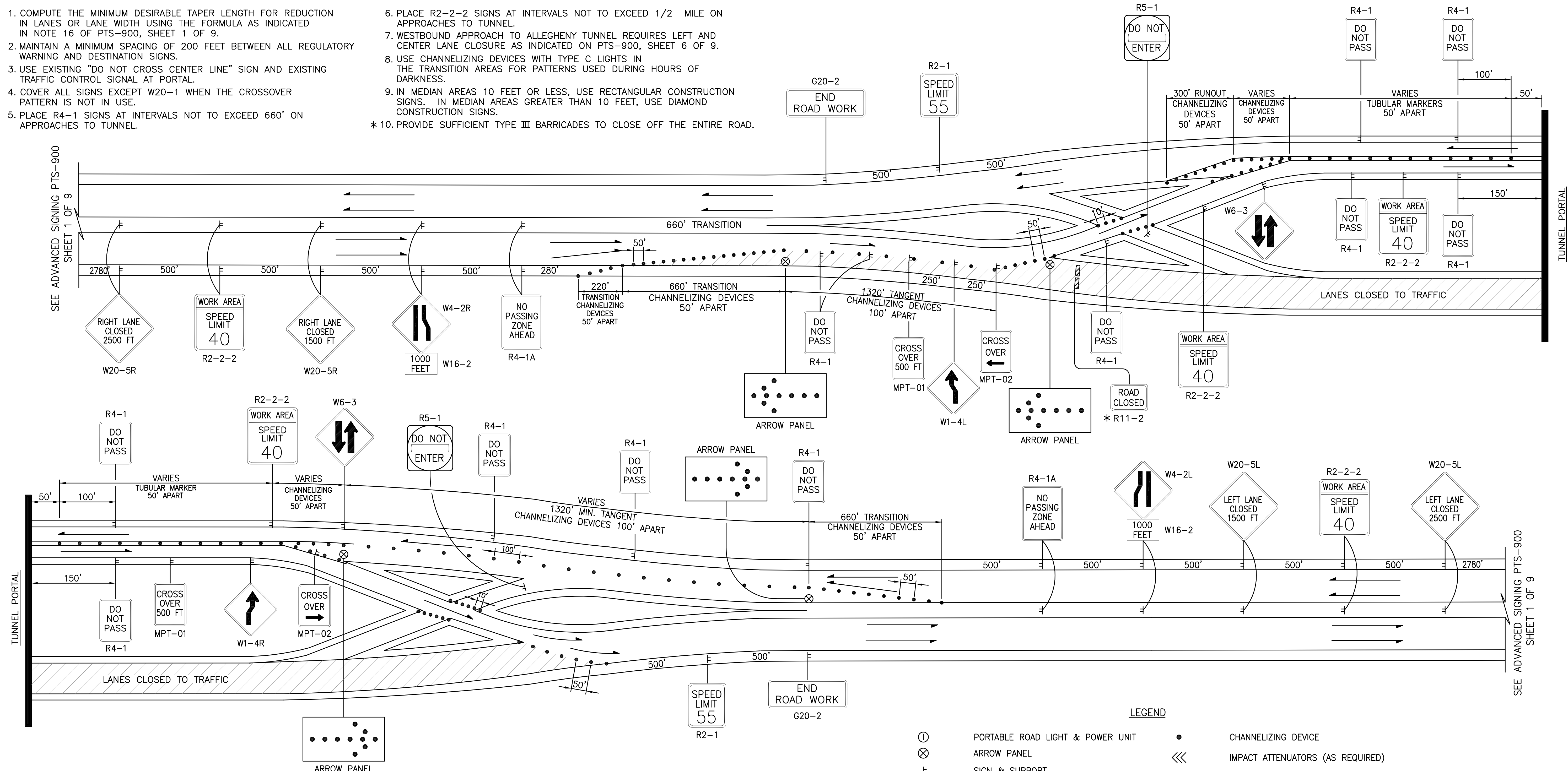
RECOMMENDED: OCTOBER 6, 2006  
 ASSISTANT CHIEF ENGINEER - DESIGN  
 APPROVED: OCTOBER 6, 2006  
 CHIEF ENGINEER

MAINTENANCE AND PROTECTION OF TRAFFIC  
 SHOULDER OPERATIONS

PENNSYLVANIA TURNPIKE COMMISSION  
 STANDARD DRAWING  
 FILE NAME: PTS-900-7.dwg  
 DRAWING TYPE: 5A  
 SHEET 7 OF 9  
 DATE: OCTOBER 2006  
 PTS-900

**NOTES:**

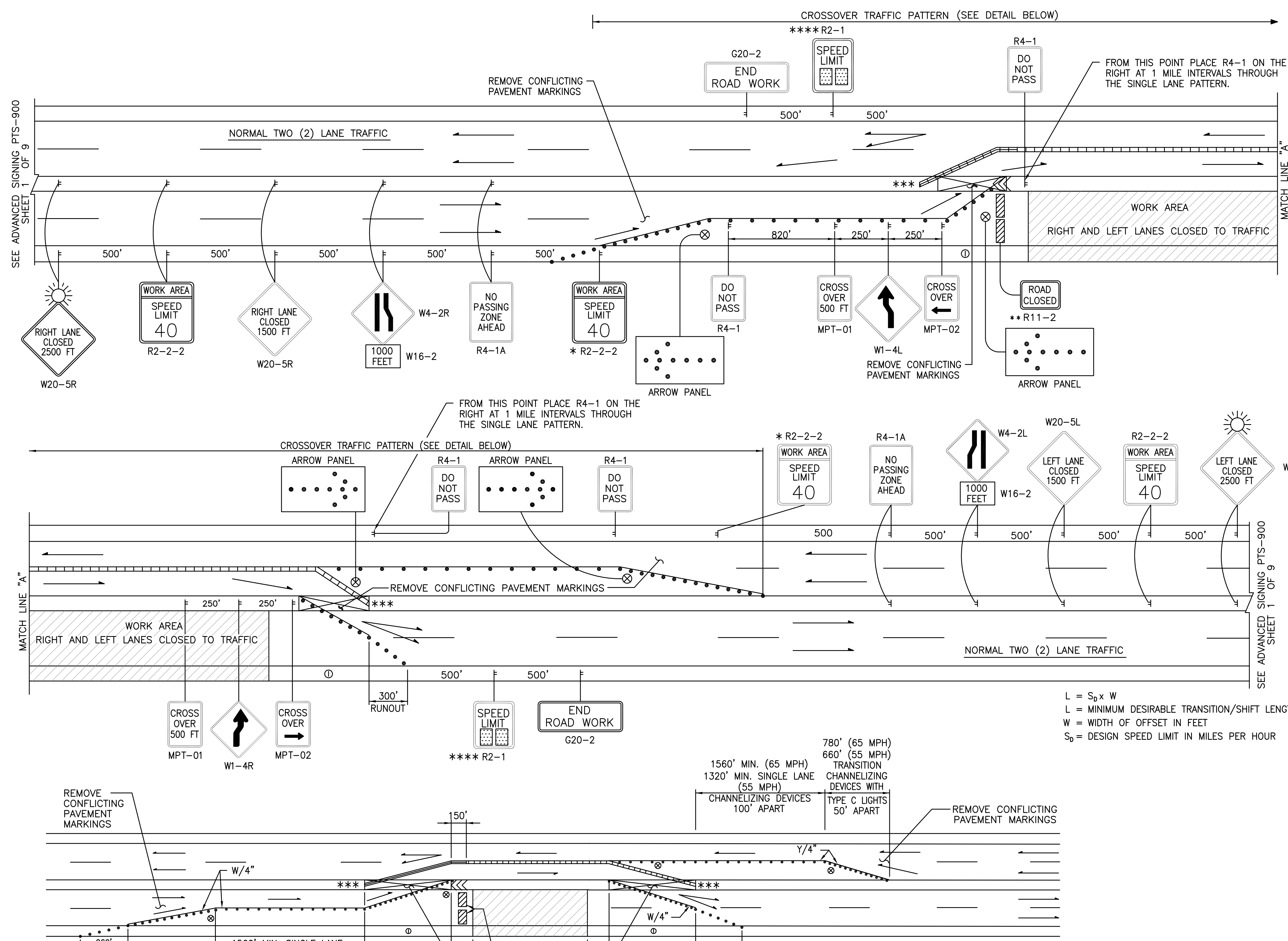
1. COMPUTE THE MINIMUM DESIRABLE TAPER LENGTH FOR REDUCTION IN LANES OR LANE WIDTH USING THE FORMULA AS INDICATED IN NOTE 16 OF PTS-900, SHEET 1 OF 9.
2. MAINTAIN A MINIMUM SPACING OF 200 FEET BETWEEN ALL REGULATORY WARNING AND DESTINATION SIGNS.
3. USE EXISTING "DO NOT CROSS CENTER LINE" SIGN AND EXISTING TRAFFIC CONTROL SIGNAL AT PORTAL.
4. COVER ALL SIGNS EXCEPT W20-1 WHEN THE CROSSOVER PATTERN IS NOT IN USE.
5. PLACE R4-1 SIGNS AT INTERVALS NOT TO EXCEED 660' ON APPROACHES TO TUNNEL.
6. PLACE R2-2-2 SIGNS AT INTERVALS NOT TO EXCEED 1/2 MILE ON APPROACHES TO TUNNEL.
7. WESTBOUND APPROACH TO ALLEGHENY TUNNEL REQUIRES LEFT AND CENTER LANE CLOSURE AS INDICATED ON PTS-900, SHEET 6 OF 9.
8. USE CHANNELIZING DEVICES WITH TYPE C LIGHTS IN THE TRANSITION AREAS FOR PATTERNS USED DURING HOURS OF DARKNESS.
9. IN MEDIAN AREAS 10 FEET OR LESS, USE RECTANGULAR CONSTRUCTION SIGNS. IN MEDIAN AREAS GREATER THAN 10 FEET, USE DIAMOND CONSTRUCTION SIGNS.
- \* 10. PROVIDE SUFFICIENT TYPE III BARRICADES TO CLOSE OFF THE ENTIRE ROAD.



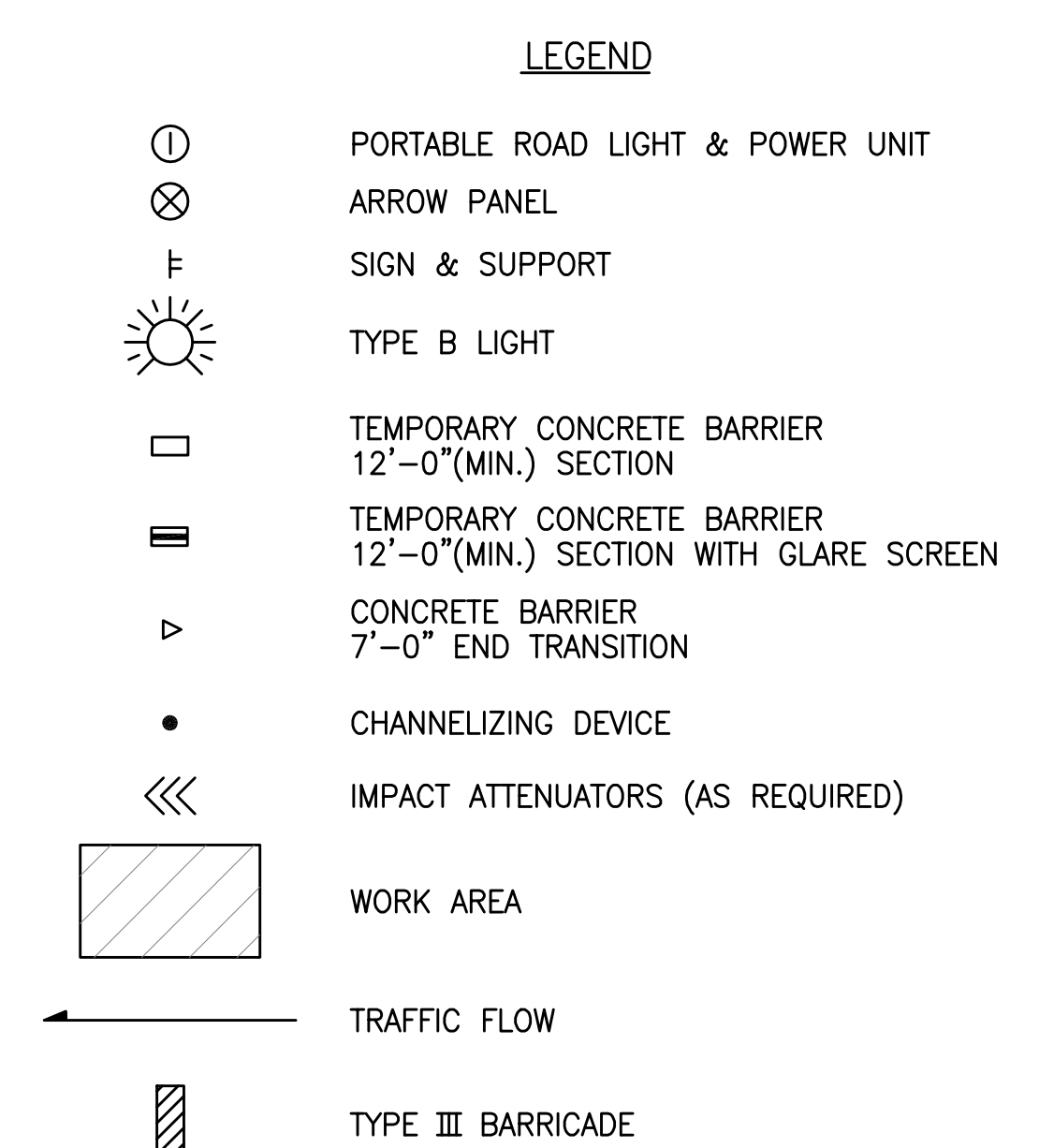
**LEGEND**

⊙	PORTABLE ROAD LIGHT & POWER UNIT	•	CHANNELIZING DEVICE
⊗	ARROW PANEL	≡≡≡	IMPACT ATTENUATORS (AS REQUIRED)
F	SIGN & SUPPORT	▨	WORK AREA
☀	TYPE B LIGHT	→	TRAFFIC FLOW
▭	TEMPORARY CONCRETE BARRIER 12'-0" (MIN.) SECTION	▨	TYPE III BARRICADE
▬	TEMPORARY CONCRETE BARRIER 12'-0" (MIN.) SECTION WITH GLARE SCREEN		
▷	CONCRETE BARRIER 7'-0" END TRANSITION		

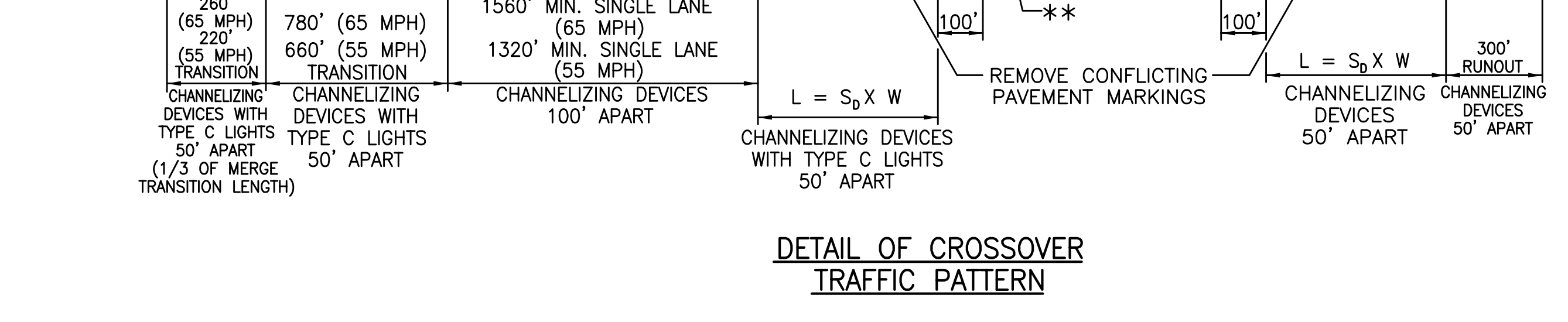
	RECOMMENDED: OCTOBER 6, 2006	<p><b>CONSTRUCTION</b></p> <p><b>MAINTENANCE AND PROTECTION OF TRAFFIC</b></p> <p><b>TUNNEL CROSSOVER TRAFFIC PATTERN</b></p>	<p><b>PENNSYLVANIA TURNPIKE COMMISSION</b></p> <p><b>STANDARD DRAWING</b></p>		
	ASSISTANT CHIEF ENGINEER - DESIGN APPROVED: OCTOBER 6, 2006		FILE NAME: PTS-900-8.dwg DRAWING TYPE: 5A	SHEET 8 OF 9	
	CHIEF ENGINEER		DATE: OCTOBER 2006	PTS-900	



- NOTES:
1. ESTABLISH WORK AREA SPEED LIMIT AS INDICATED IN NOTE 21, PTS-900, SHEET 1 OF 9.
  - \* 2. FROM THIS POINT PLACE R2-2-2 SIGNS TO THE RIGHT OF TRAFFIC AT 1/2 MILE MAXIMUM INTERVALS THROUGH THE CROSSOVER PATTERN.
  - \*\* 3. PROVIDE SUFFICIENT TYPE III BARRICADES TO CLOSE OFF THE ENTIRE ROAD.
  - \*\*\* 4. PROVIDE PROPER END TREATMENT FOR BARRIER, BY TAPERING BARRIER AND BURYING, TAPERING BARRIER AND CONNECT TO GUIDE RAIL OR BARRIER, OR TAPERING BARRIER AND PROVIDE TEMPORARY IMPACT ATTENUATOR.
  - \*\*\*\* 5. POST THE NORMAL SPEED LIMIT FOR THE AREA. (55 MPH OR 65 MPH)



$L = S_0 \times W$   
 L = MINIMUM DESIRABLE TRANSITION/SHIFT LENGTH IN FEET  
 W = WIDTH OF OFFSET IN FEET  
 $S_0$  = DESIGN SPEED LIMIT IN MILES PER HOUR



CROSSOVER TRAFFIC PATTERN FOR WORK AREAS

	RECOMMENDED: OCTOBER 6, 2006	<b>CONSTRUCTION</b> <b>MAINTENANCE AND PROTECTION OF TRAFFIC</b> <b>CROSS OVER TRAFFIC PATTERNS</b>	<b>PENNSYLVANIA TURNPIKE COMMISSION</b> <b>STANDARD DRAWING</b>		
	 ASSISTANT CHIEF ENGINEER - DESIGN APPROVED: OCTOBER 6, 2006		FILE NAME: PTS-900-9.dwg DRAWING TYPE: 5A	SHEET 9 OF 9	
	 CHIEF ENGINEER		DATE: OCTOBER 2006	PTS-900	

## GENERAL NOTES

1. THIS WORK CONSISTS OF THE MAINTENANCE OF TRAFFIC AND THE PROTECTION OF THE TRAVELING PUBLIC APPROACHING THE CONSTRUCTION AREA AND WITHIN THE LIMITS OF CONSTRUCTION.
2. THE CONTRACTOR IS CAUTIONED THAT OTHER COMMISSION CONTRACTOR(S) AND/OR COMMISSION MAINTENANCE PERSONNEL MAY BE WORKING ADJACENT TO THE WORK AREA(S) DURING PORTIONS OF THIS CONTRACT PERIOD. THE REPRESENTATIVE WILL SPECIFY THE WORKING SEQUENCE OF THE CONTRACTS IN ORDER TO FACILITATE COORDINATE TRAFFIC CONTROL OPERATION.
3. THE R22-1, W21-19 AND W21-20 SIGNS, THE WHITE TYPE B HIGH-INTENSITY FLASHING LIGHT AND THE SPEED DISPLAY SIGN HAVE BEEN CREATED BY PENNDOT IN RESPONSE TO THE REQUIREMENTS OF ACT 229. THESE SIGNS AND DEVICES, AS WELL AS THE ASSOCIATED GUIDELINES, CAN BE FOUND IN THE 67 PA CODE, CHAPTER 212, OFFICIAL TRAFFIC CONTROL DEVICES. REVIEW, FAMILIARIZE, AND APPLY THESE GUIDELINES AND ALL ITS SUPPLEMENTS AS REQUIRED BY ACT 229.
4. FURNISH, ERECT, PLACE AND MAINTAIN TRAFFIC CONTROL SIGNS AND DEVICES AND MAINTAIN TRAFFIC ACCORDING TO THE CONTRACT DOCUMENTS.
5. REMOVE ALL TRAFFIC CONTROL SIGNS AND DEVICES IMMEDIATELY UPON THE COMPLETION OF THE WORK UNLESS OTHERWISE SPECIFIED IN THE SPECIAL PROVISIONS.
6. PLACE ALL TRAFFIC CONTROL DEVICES AND HAVE THEM INSPECTED BY THE REPRESENTATIVE BEFORE WORK BEGINS.
7. MEDIAN AREAS 10 FEET OR LESS, USE RECTANGULAR CONSTRUCTION SIGNS.
8. MEDIAN AREAS GREATER THAN 10 FEET, USE DIAMOND CONSTRUCTION SIGNS.
9. COVER OR REMOVE FROM THE SITE ALL SIGNS NOT IN USE. REMOVE FROM THE TURNPIKE RIGHT-OF-WAY CONSTRUCTION SIGNS NOT NEEDED OR USED FOR A PERIOD OF TWO (2) OR MORE WEEKS.
10. MAINTAIN A MINIMUM SPACING OF 200 FEET BETWEEN ALL REGULATORY, WARNING AND DESTINATION SIGNS.
11. PROVIDE AT MINIMUM A 40 FOOT AREA BEYOND THE EDGE OF THE TRAVEL LANE FREE OF OBSTACLES AND DROP-OFFS GREATER THAN 2 INCHES IN DEPTH IN WORK AREA(S) DURING NON-WORKING HOURS OR PROTECT WORK AREA(S) WITH TEMPORARY CONCRETE BARRIER. PROTECTION OF WORK AREA(S) IS INCIDENTAL TO THE MPT.
12. DETAILS FOR THE SIGNS AND DEVICES CAN BE FOUND IN THESE PLANS, PENNDOT PUBLICATION 236M, PENNDOT PUBLICATION 212 AND ARE TO BE MANUFACTURED BY A DEPARTMENT OF TRANSPORTATION APPROVED MANUFACTURER AS LISTED IN PENNDOT PUBLICATION 35.
13. USE PENNDOT APPROVED TYPE VII REFLECTORIZED MATERIAL FOR SIGNS.
14. THESE PLANS ARE NOT INTENDED TO RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY FOR THE PROTECTION OF THE PUBLIC AND THE CONSTRUCTION PERSONNEL. THE STANDARDS PRESCRIBED ARE MINIMUM AND ADDITIONAL PROTECTION MAY BE NEEDED IF PROBLEMS ARE ENCOUNTERED DURING THE TERM OF THE CONTRACT. THE CONTRACTOR WILL BE EXPECTED TO CONSTANTLY REVIEW THIS PLAN FOR ADEQUACY AND TO RECOMMEND CHANGES FOR REPRESENTATIVE'S APPROVAL WHEN INADEQUACIES ARE DISCOVERED.
15. HAVE A SUFFICIENT AMOUNT OF THE FOLLOWING SIGNS AVAILABLE IN CASE THEIR USE BECOMES NECESSARY; ADDITIONAL W3-4 "BE PREPARED TO STOP", W8-11 "UNEVEN LANES", R4-12 "TRUCKS BUSES..." AND MPT-35 "AHEAD". IT IS NOT INTENDED THAT THESE SIGNS BE PART OF THE NORMAL TRAFFIC CONTROL OR A SUPPLEMENT THERETO.
16. COMPUTE THE MINIMUM DESIRABLE TAPER LENGTH FOR REDUCTION IN LANES USING THE FOLLOWING FORMULA:  

$$L = S \times W$$

WHERE L = MINIMUM DESIRABLE TAPER LENGTH IN FEET  
W = WIDTH OF OFFSET IN FEET  
S = NORMAL SPEED LIMIT IN MILES PER HOUR
17. SIGNS AND DEVICES MAY BE ADJUSTED TO FIT FIELD CONDITIONS.
18. CHANNELIZING DEVICES MAY BE TEMPORARILY RELOCATED, AS APPROVED BY THE REPRESENTATIVE, TO ALLOW FOR WORK TO BE PERFORMED. THE CHANNELIZING DEVICES MUST REMAIN BETWEEN TRAFFIC AND THE WORK AREA.
19. CONCRETE BARRIER DETAILS ARE TO BE ACCORDING TO PENNSYLVANIA DEPARTMENT OF TRANSPORTATION STANDARDS FOR ROADWAY CONSTRUCTION, RC-57M AND PTC STANDARDS FOR ROADWAY CONSTRUCTION.
20. WHEN A WORK AREA SPEED LIMIT IS ESTABLISHED, SPACE WORK AREA SPEED LIMIT SIGNS, R2-2-2, AT 1/2 MILE INTERVALS TO THE RIGHT OF TRAFFIC THROUGH THE REQUIRED AREA.
21. ESTABLISH WORK AREA SPEED LIMIT (40 MPH)
  - A. DURING ACTIVE WORK HOURS IN CONSTRUCTION ZONES WITH LANE CLOSURES, WITHOUT BARRIER PROTECTING THE WORK AREA.
  - B. WHEN CONSTRUCTION VEHICLES ARE ENTERING OR DEPARTING THE WORK AREA TO OR FROM THE TRAVEL LANES.
  - C. WHEN USING A TUNNEL CROSS-OVER TRAFFIC PATTERN.
  - D. WHEN LESS THAN 11 FOOT LANE(S) ARE MAINTAINED BETWEEN BARRIER.

POST MOUNT 55 MPH SIGNS ON THE RIGHT SHOULDER AT 1/2-MILE INTERVALS THROUGH THE WORK AREA WHEN 40 MPH SIGNS ARE NOT WARRANTED AND 65 MPH SIGNS, IN AREAS WITH A NORMAL POSTED SPEED LIMIT OF 65 MPH, ARE ALSO NOT WARRANTED. EXISTING R2-2-2 SIGNS MAY BE OVERLAID FOR 55 MPH IN LIEU OF COVERING/UNCOVERING SIGNS. 40 MPH SIGNS LOCATED AT THE INTERCHANGE AND SERVICE PLAZA ACCELERATION RAMP ARE TO BE REPLACED WITH 55 MPH SIGNS WHEN 40 MPH SIGNS ARE NOT WARRANTED AND 65 MPH SIGNS, IN AREAS WITH A NORMAL POSTED SPEED LIMIT OF 65 MPH, ARE ALSO NOT WARRANTED.

COVER OR REMOVE WORK AREA SPEED LIMIT SIGNS (OR 55 MPH SIGNS IN AREAS WITH NORMAL POSTED SPEED LIMIT OF 65 MPH) WHEN ALL NORMAL LANES AND SHOULDERS ARE AVAILABLE AND ARE AT THE SAME ELEVATION FOR THE EFFECTED DIRECTION(S).
22. CHANNELIZING DEVICES ARE TO BE PENNDOT APPROVED VERTICAL PANELS WITH SELF-BALLASTED BASES UNLESS OTHERWISE SPECIFIED.
23. WHENEVER THE ROADWAY IS OPENED TO TRAFFIC PRIOR TO THE COMPLETION OF THE OVERLAY APPLICATION, AS MAY BE ALLOWED OR DIRECTED BY THE REPRESENTATIVE, ACCOMPLISH PROPER TRANSITION BETWEEN THE SURFACE DIFFERENTIALS BEFORE THE TRAFFIC IS ROUTED ONTO THE UNCOMPLETED LANE.

IF BOTH LANES IN ONE DIRECTION ARE OPEN TO TRAFFIC AND A DIFFERENTIAL BETWEEN RIGHT AND LEFT LANE PAVEMENT EXIST, INSTALL A W8-11 (UNEVEN LANES) SIGN ON THE RIGHT SHOULDER 500 FEET IN ADVANCE OF WHERE THE PAVEMENT DIFFERENTIAL BEGINS. IN ADDITION, LOCATE W8-11 SIGNS ON THE RIGHT SHOULDER AT 1/2 MILE INTERVALS THROUGHOUT THE AREA WHERE THE PAVEMENT DIFFERENTIAL EXISTS, AS DIRECTED BY THE REPRESENTATIVE.

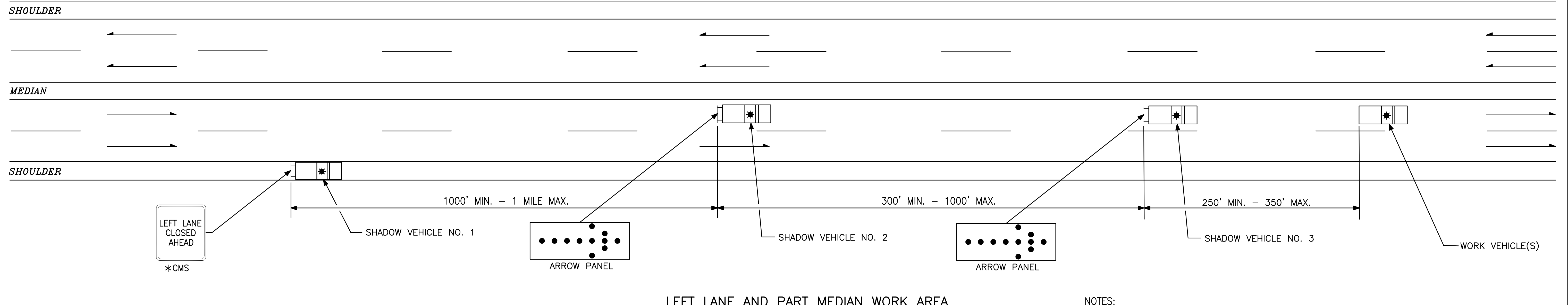
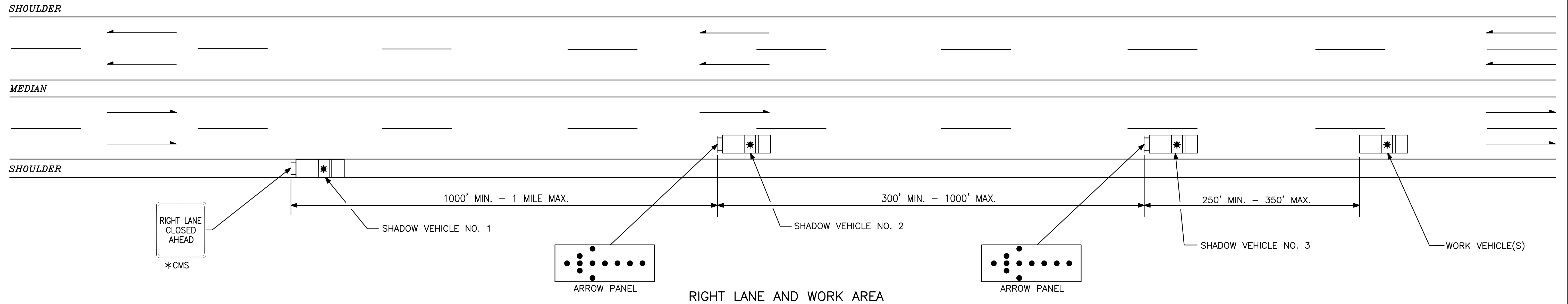
IF THE RIGHT LANE IS OPEN TO TRAFFIC AND A DIFFERENTIAL BETWEEN THE RIGHT LANE AND SHOULDER PAVEMENT EXISTS, INSTALL A W8-9 (LOW SHOULDER) SIGN ON THE RIGHT SHOULDER 500 FEET IN ADVANCE OF WHERE THE PAVEMENT DIFFERENTIAL BEGINS. IN ADDITION, LOCATE W8-9 SIGNS ON THE RIGHT SHOULDER AT 1/2 MILE INTERVALS THROUGHOUT THE AREA WHERE THE PAVEMENT DIFFERENTIAL EXISTS, AS DIRECTED BY THE REPRESENTATIVE.
24. INSTALL, RESET, RELOCATE, AND REMOVE ANY PERMANENT AND/OR TEMPORARY CONCRETE BARRIER SO THAT NO BLUNT END OF THE BARRIER IS EXPOSED TO ONCOMING TRAFFIC.
25. ENSURE THAT ALL EQUIPMENT APPROACHES, ENTERS, AND DEPARTS FROM WORKING AREAS IN THE DIRECTION OF AND WITH THE NORMAL ADJACENT TRAFFIC FLOW.
26. IN AREAS WITH A NORMAL POSTED SPEED LIMIT OF 65 MPH, INSTALL 55 MPH SIGNS 1320 FEET BEYOND THE ROAD WORK 2 MILE AND ROAD WORK 1 MILE SIGNS.
27. POST NORMAL SPEED LIMIT FOR THE AREA (55 MPH OR 65 MPH) AT THE END OF THE WORK AREA.



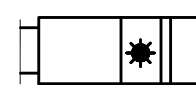
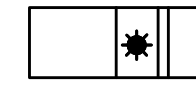
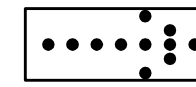
RECOMMENDED: OCTOBER 6, 2006  
*Mark Berg*  
ASSISTANT CHIEF ENGINEER - DESIGN  
APPROVED: OCTOBER 6, 2006  
*Alphonse R. Jones*  
CHIEF ENGINEER

**CONSTRUCTION - SHORT TERM  
MAINTENANCE AND PROTECTION OF TRAFFIC  
GENERAL NOTES**

PENNSYLVANIA TURNPIKE COMMISSION STANDARD DRAWING	
FILE NAME: PTS-910-1.dwg	SHEET 1 OF 6
DRAWING TYPE: 5A	
<b>DATE: OCTOBER 2006</b>	<b>PTS-910</b>




**LEGEND**

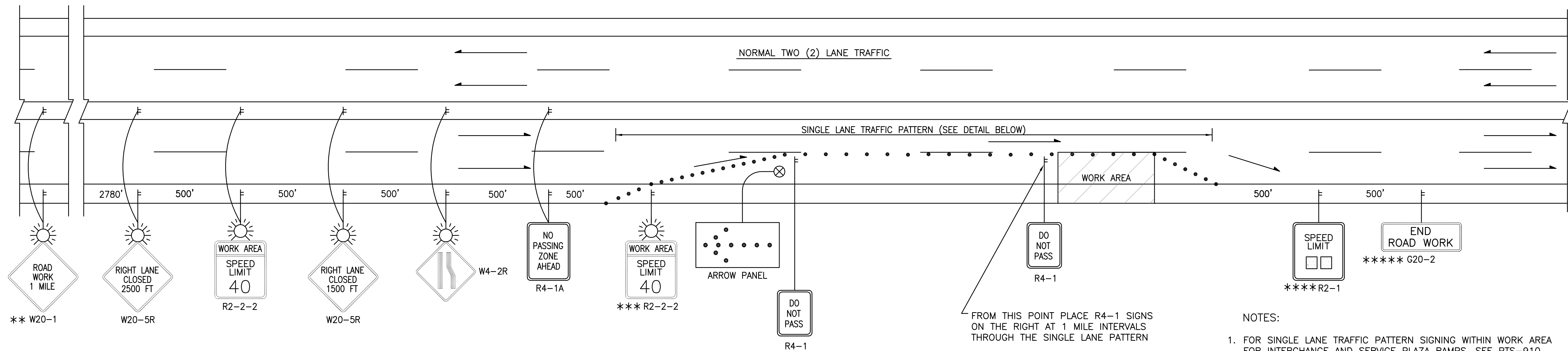
-  SHADOW VEHICLE WITH AN ACTIVATED AMBER WARNING LIGHT.
-  WORK VEHICLE WITH AN ACTIVATED AMBER WARNING LIGHT.
-  ARROW PANEL

**NOTES:**

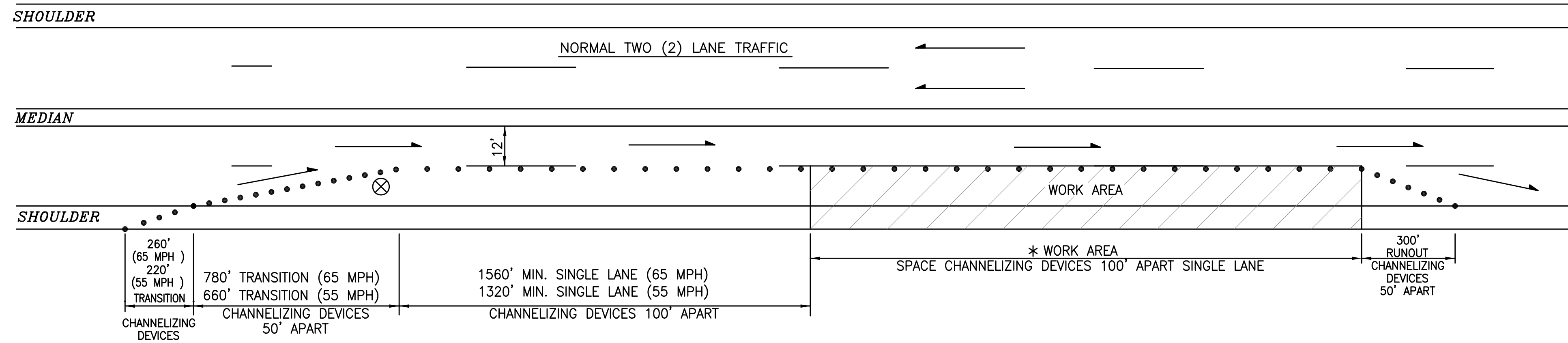
1. THIS FIGURE APPLIES WHERE THE OPERATION MOVES INTERMITTENTLY OR CONTINUOUSLY AT AN AVERAGE SPEED OF MORE THAN 1 M.P.H. (88 FT./MIN.). THE OPERATOR IS TO BE THE ONLY OCCUPANT OF SHADOW VEHICLE NO. 2. WHEN THE OPERATION MOVES INTERMITTENTLY, THE MAXIMUM TIME OF STATIONARY WORK IS 15 MINUTES. IF THESE CONDITIONS CAN NOT BE MET, USE A SINGLE LANE PATTERN AS SHOWN ON PTS-910, SHEET 3 OF 6.
2. POSITION SHADOW VEHICLE NO. 1 SO THAT IT IS VISIBLE FROM BEHIND FOR A MINIMUM DISTANCE OF 700 FEET.
3. HAVE ALL SHADOW VEHICLES MEET PENNDOT AND PENNSYLVANIA TURNPIKE COMMISSION REQUIREMENTS.
4. ALL ARROW PANELS ARE TO BE TRUCK MOUNTED.
5. EQUIP SHADOW VEHICLE NO. 2 WITH A TRUCK MOUNTED ATTENUATOR.
- \* 6. MESSAGE FOR THE CHANGEABLE MESSAGE SIGN (CMS) MAY BE CHANGED AS DIRECTED BY REPRESENTATIVE.
7. THE SPACING BETWEEN THE WORK VEHICLES AND THE SHADOW VEHICLES, AND BETWEEN EACH SHADOW VEHICLE SHOULD BE MINIMIZED TO DETER ROAD USERS FROM DRIVING IN BETWEEN, BASED ON FIELD CONDITIONS.

**MOBILE OPERATION**

	RECOMMENDED: OCTOBER 6, 2006	<b>CONSTRUCTION - SHORT TERM MAINTENANCE AND PROTECTION OF TRAFFIC MOBILE OPERATION</b>	<b>PENNSYLVANIA TURNPIKE COMMISSION STANDARD DRAWING</b>	
	ASSISTANT CHIEF ENGINEER - DESIGN APPROVED: OCTOBER 6, 2006 CHIEF ENGINEER		FILE NAME: PTS-910-2.dwg DRAWING TYPE: 5A	SHEET 2 OF 6



- NOTES:
1. FOR SINGLE LANE TRAFFIC PATTERN SIGNING WITHIN WORK AREA FOR INTERCHANGE AND SERVICE PLAZA RAMP, SEE PTS-910, SHEET 4 OF 6.
  2. IN AREAS WHERE THE NORMAL SPEED LIMIT IS 65 MPH, INSTALL 55 MPH SIGNS IN THE MEDIAN AND SHOULDER 1 MILE AND 1/2 MILE IN ADVANCE OF THE W20-1 (ROAD WORK) SIGN.
  3. FOR LEFT LANE WORK AREA USE THE SAME SIGN SPACING AND PATTERN BUT WITH THE SIGNS INDICATING A LEFT LANE CLOSURE.
  - \* 4. WORK AREA SHOULD NOT EXCEED THREE (3) MILES IN LENGTH.
  5. THIS PATTERN IS TO BE USED FOR SHORT-TERM OPERATIONS WHICH OCCUPY A LOCATION FOR LESS THAN 12 HOURS FOR THREE (3) OR LESS CONSECUTIVE DAYS.
  6. PROVIDE A CHANGEABLE MESSAGE SIGN (CMS) APPROXIMATELY 2 MILES IN ADVANCE OF THE 1ST LANE CLOSURE. MESSAGE AS DIRECTED BY THE REPRESENTATIVE.
  7. SOME SIGNS MAY BE MOUNTED ON PENNDOT APPROVED PORTABLE SIGN SUPPORTS, X-FRAME, WITH A MINIMUM HEIGHT OF 5 FEET FROM THE PAVEMENT SURFACE TO THE BOTTOM OF THE SIGNS. REFER TO THE MAINTENANCE AND PROTECTION OF TRAFFIC SPECIAL PROVISION FOR APPROPRIATE USE. PORTABLE SUPPORTS AND SIGNS MUST BE REMOVED FROM THE ROADWAY DURING NON-WORKING HOURS.
  - \*\* 8. W20-1 SIGN NOT REQUIRED FOR 2ND WORK AREA.
  - \*\*\* 9. FROM THIS POINT, PLACE R2-2-2 SIGNS TO THE RIGHT OF TRAFFIC AT 1/2 MILE MAXIMUM INTERVALS THROUGH THE SINGLE LANE PATTERN.
  10. USE CHANNELIZING DEVICES WITH TYPE C LIGHTS IN THE TRANSITION AREAS FOR PATTERNS USED DURING HOURS OF DARKNESS.
  11. SINGLE LANE SHOULD BE ESTABLISHED A MINIMUM OF 1000' IN ADVANCE OR BEYOND RAMP AT INTERCHANGES AND SERVICE PLAZAS.
  - \*\*\*\* 12. 55 MPH BETWEEN WORK AREAS.
  - \*\*\*\*\* 13. USE AT END OF FINAL WORK AREA ONLY.
  14. LIMIT LENGTH OF SINGLE LANE PATTERN TO ONLY THE LENGTH NEEDED FOR THE CONSTRUCTION OPERATION.
  15. ESTABLISH SINGLE LANE TRAFFIC PATTERN ONLY DURING ACTIVE WORK PERIODS.

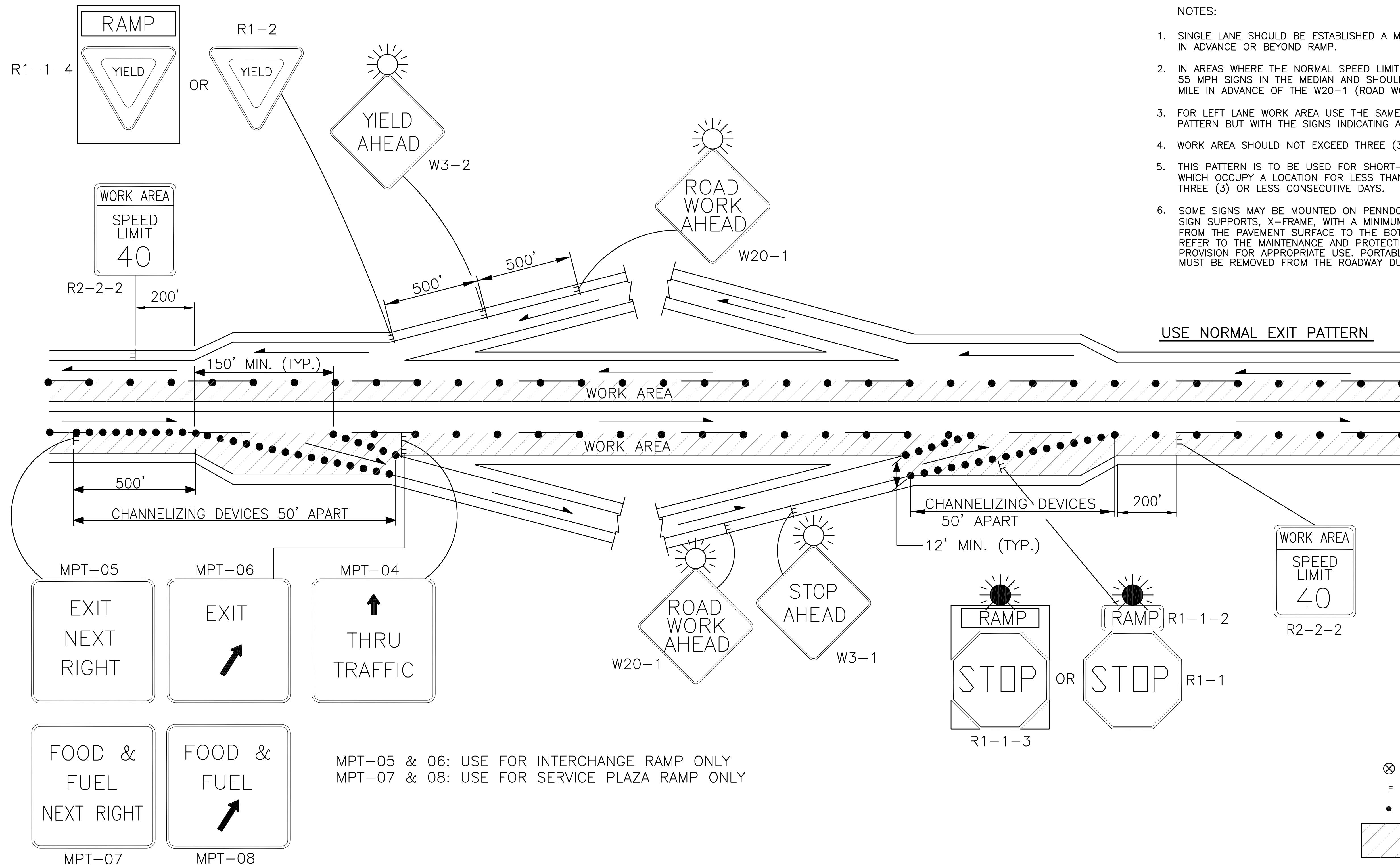


DETAIL OF SINGLE LANE TRAFFIC PATTERN

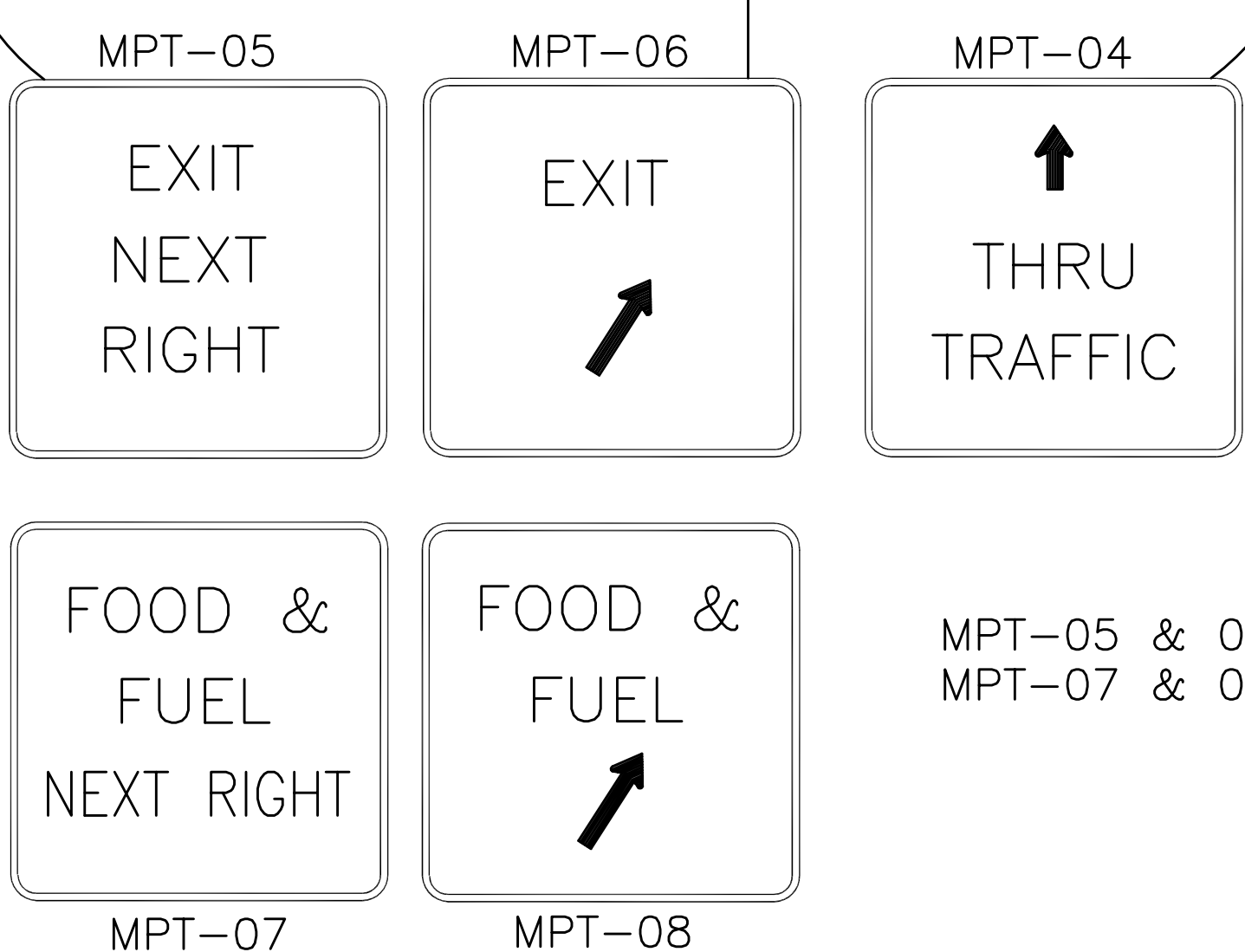
SINGLE LANE TRAFFIC PATTERN FOR WORK AREAS

- LEGEND
- ⊗ ARROW PANEL
  - ⊥ SIGN & SUPPORT
  - CHANNELIZING DEVICE
  - ▨ WORK AREA
  - ← TRAFFIC FLOW
  - ☀ TYPE B LIGHT

	RECOMMENDED: OCTOBER 6, 2006	<b>CONSTRUCTION - SHORT TERM MAINTENANCE AND PROTECTION OF TRAFFIC SINGLE LANE TRAFFIC PATTERN</b>	<b>PENNSYLVANIA TURNPIKE COMMISSION STANDARD DRAWING</b>		
	 ASSISTANT CHIEF ENGINEER - DESIGN		FILE NAME: PTS-910-3.dwg	SHEET 3 OF 6	
	 APPROVED: OCTOBER 6, 2006 CHIEF ENGINEER		DRAWING TYPE: 5A	DATE: OCTOBER 2006	
			PTS-910		

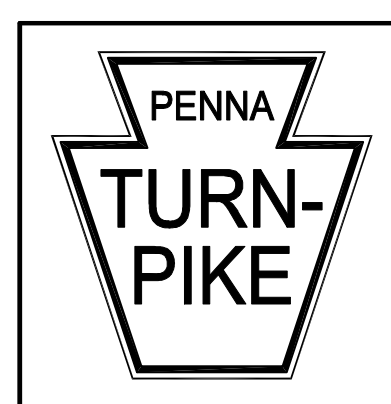
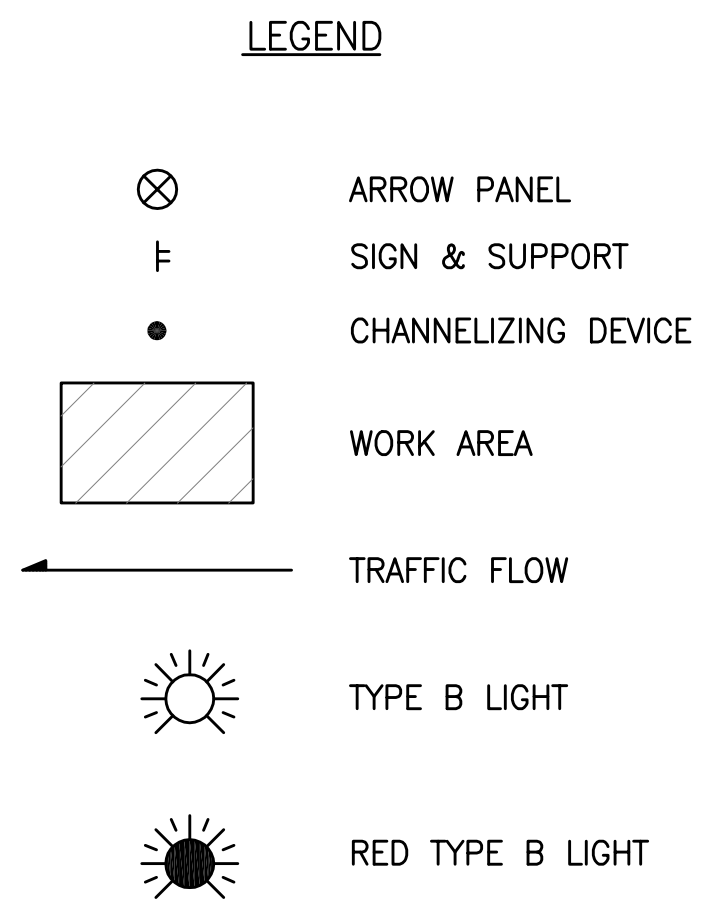


- NOTES:
1. SINGLE LANE SHOULD BE ESTABLISHED A MINIMUM OF 1,000' IN ADVANCE OR BEYOND RAMP.
  2. IN AREAS WHERE THE NORMAL SPEED LIMIT IS 65 MPH, INSTALL 55 MPH SIGNS IN THE MEDIAN AND SHOULDER 1 MILE AND 1/2 MILE IN ADVANCE OF THE W20-1 (ROAD WORK) SIGN.
  3. FOR LEFT LANE WORK AREA USE THE SAME SIGN SPACING AND PATTERN BUT WITH THE SIGNS INDICATING A LEFT LANE CLOSURE.
  4. WORK AREA SHOULD NOT EXCEED THREE (3) MILES IN LENGTH.
  5. THIS PATTERN IS TO BE USED FOR SHORT-TERM OPERATIONS WHICH OCCUPY A LOCATION FOR LESS THAN 12 HOURS FOR THREE (3) OR LESS CONSECUTIVE DAYS.
  6. SOME SIGNS MAY BE MOUNTED ON PENNDOT APPROVED PORTABLE SIGN SUPPORTS, X-FRAME, WITH A MINIMUM HEIGHT OF 5 FEET FROM THE PAVEMENT SURFACE TO THE BOTTOM OF THE SIGNS. REFER TO THE MAINTENANCE AND PROTECTION OF TRAFFIC SPECIAL PROVISION FOR APPROPRIATE USE. PORTABLE SUPPORTS AND SIGNS MUST BE REMOVED FROM THE ROADWAY DURING NON-WORKING HOURS.



MPT-05 & 06: USE FOR INTERCHANGE RAMP ONLY  
 MPT-07 & 08: USE FOR SERVICE PLAZA RAMP ONLY

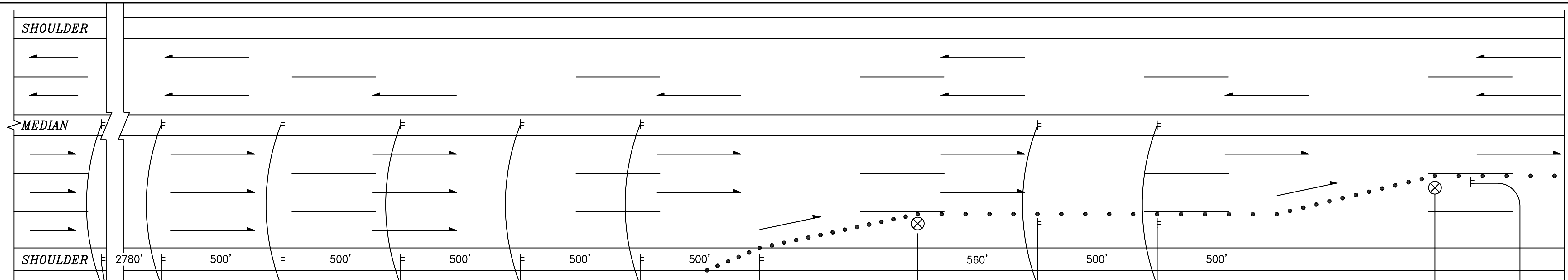
**SINGLE LANE TRAFFIC PATTERN  
 SIGNING WITHIN WORK AREAS FOR  
 INTERCHANGE & SERVICE PLAZA RAMPS**



RECOMMENDED: OCTOBER 6, 2006  
 ASSISTANT CHIEF ENGINEER - DESIGN  
 APPROVED: OCTOBER 6, 2006  
 CHIEF ENGINEER

**CONSTRUCTION - SHORT TERM  
 MAINTENANCE AND PROTECTION OF TRAFFIC  
 LANE CLOSURE TRAFFIC PATTERN FOR  
 INTERCHANGE & SERVICE PLAZA AREAS**

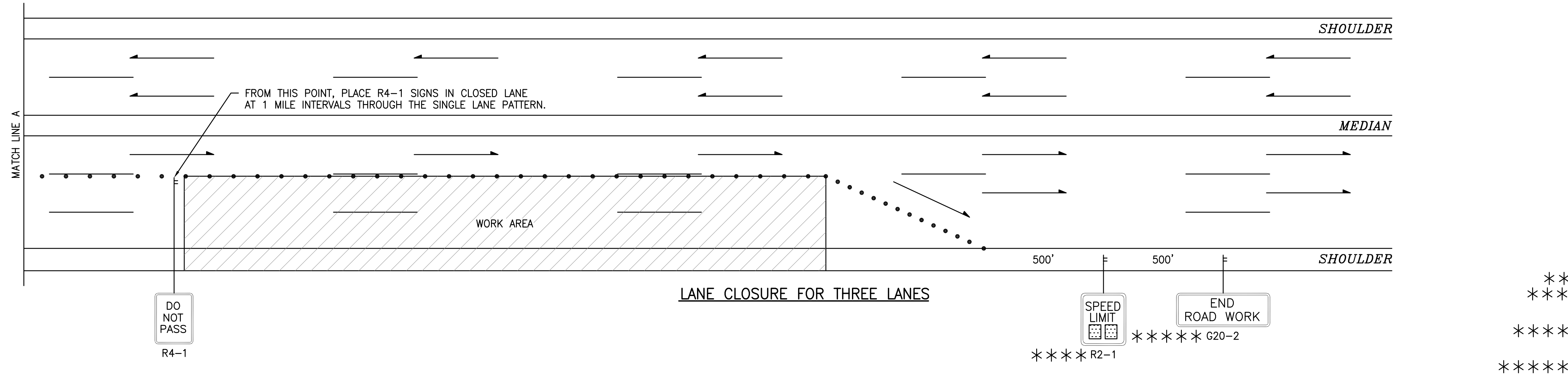
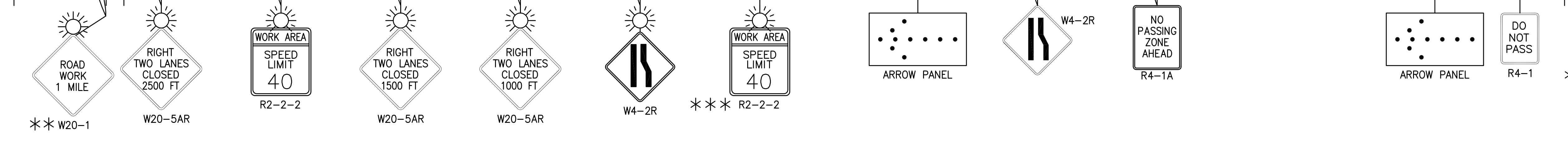
PENNSYLVANIA TURNPIKE COMMISSION STANDARD DRAWING	
FILE NAME: PTS-910-4.dwg	SHEET 4 OF 6
DRAWING TYPE: 5A	
DATE: OCTOBER 2006	PTS-910



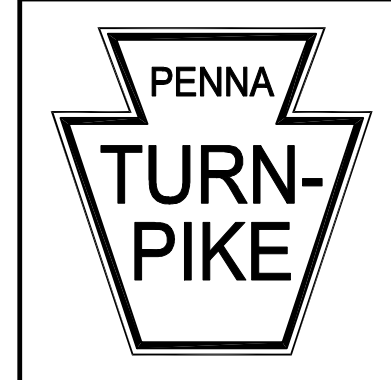
**LEGEND**

- ⊗ ARROW PANEL
- F SIGN & SUPPORT
- ☀ TYPE B LIGHT
- CHANNELIZING DEVICE
- ▨ WORK AREA
- ← TRAFFIC FLOW

- NOTES:**
1. ESTABLISH WORK AREA SPEED LIMIT AS INDICATED IN NOTE 21, PTS-910, SHEET 1 OF 6.
  2. IN THE AREAS WHERE THE NORMAL SPEED LIMIT IS 65 MPH, INSTALL 55 MPH SIGNS IN THE MEDIAN AND SHOULDER 1 MILE AND 1/2 MILE IN ADVANCE OF THE W20-1 (ROAD WORK) SIGN.
  - \* 3. WORK AREA SHOULD NOT EXCEED THREE (3) MILES IN LENGTH.
  4. THIS PATTERN IS TO BE USED FOR SHORT TERM OPERATIONS WHICH OCCUPY A LOCATION FOR LESS THAN 12 HOURS FOR THREE (3) OR LESS CONSECUTIVE DAYS.
  5. FOR LEFT LANE WORK AREA, USE THE SAME SPACING AND PATTERN BUT WITH THE SIGNS INDICATING A LEFT LANE CLOSURE.
  6. PROVIDE A CHANGEABLE MESSAGE SIGN (CMS) APPROXIMATELY 2 MILES IN ADVANCE OF THE 1ST LANE CLOSURE. MESSAGE AS DIRECTED BY THE REPRESENTATIVE.
  7. SOME SIGNS MAY BE MOUNTED ON PENNDOT APPROVED PORTABLE SIGN SUPPORTS, X-FRAME, WITH A MINIMUM HEIGHT OF 5 FEET FROM THE PAVEMENT SURFACE TO THE BOTTOM OF THE SIGNS. REFER TO THE MAINTENANCE AND PROTECTION OF TRAFFIC SPECIAL PROVISION FOR APPROPRIATE USE. PORTABLE SUPPORTS AND SIGNS MUST BE REMOVED FROM THE ROADWAY DURING NON-WORKING HOURS.
  8. USE CHANNELIZING DEVICES WITH TYPE C LIGHTS IN THE TRANSITION AREA FOR PATTERNS USED DURING HOURS OF DARKNESS.
  9. LIMIT LENGTH OF SINGLE LANE PATTERN TO ONLY THE LENGTH NEEDED FOR THE CONSTRUCTION OPERATION.
  10. SINGLE LANE SHOULD BE ESTABLISHED A MINIMUM OF 1000' IN ADVANCE OR BEYOND RAMP AT INTERCHANGES AND SERVICE PLAZAS.
  - \*\*\* 11. W20-1 SIGN NOT REQUIRED FOR 2ND WORK AREA.
  - \*\*\* 12. FROM THIS POINT, PLACE R2-2-2 SIGNS TO THE RIGHT OF TRAFFIC AT 1/2 MILE INTERVALS THROUGH THE LANE CLOSURE PATTERN.
  - \*\*\*\* 13. POST NORMAL SPEED LIMIT AT THE END OF THE FINAL WORK AREA (55 MPH OR 65 MPH). POST 55 MPH BETWEEN WORK AREAS.
  - \*\*\*\* 14. USE AT END OF FINAL WORK AREA ONLY.



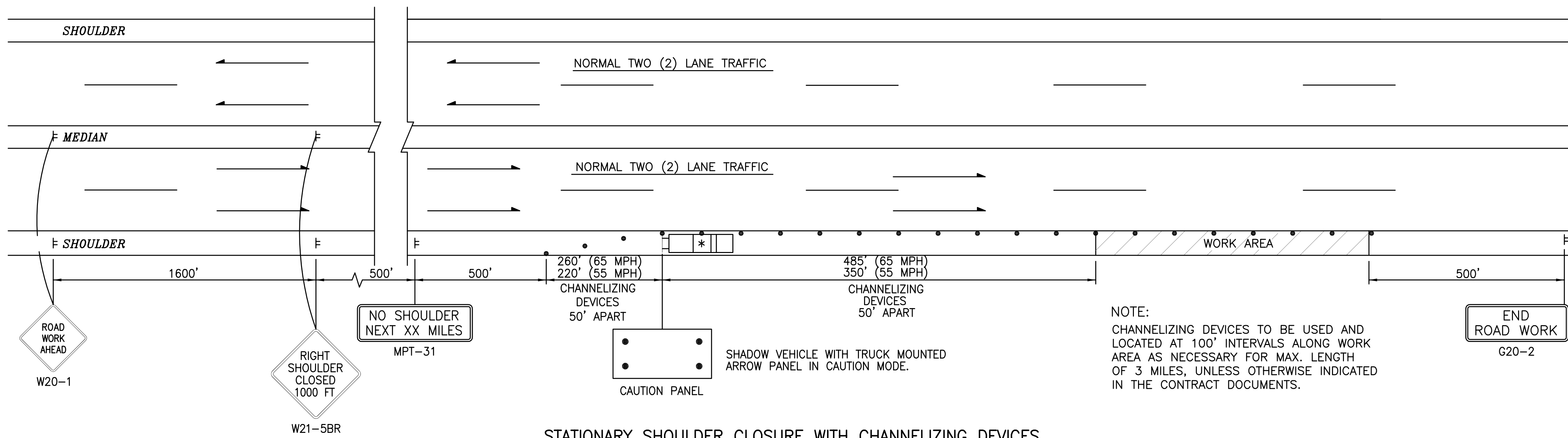
**RIGHT AND CENTER LANE CLOSURE PATTERN FOR WORK AREAS**



RECOMMENDED: OCTOBER 6, 2006  
*Mark Berg*  
 ASSISTANT CHIEF ENGINEER - DESIGN  
 APPROVED: OCTOBER 6, 2006  
*Alphonse...*  
 CHIEF ENGINEER

**CONSTRUCTION - SHORT TERM  
 MAINTENANCE AND PROTECTION OF TRAFFIC  
 SINGLE LANE TRAFFIC PATTERN FOR 3 LANE  
 SECTION RIGHT AND CENTER LANE WORK AREA**

PENNSYLVANIA TURNPIKE COMMISSION STANDARD DRAWING	
FILE NAME: PTS-910-5.dwg	SHEET 5 OF 6
DRAWING TYPE: 5A	
DATE: OCTOBER 2006	PTS-910

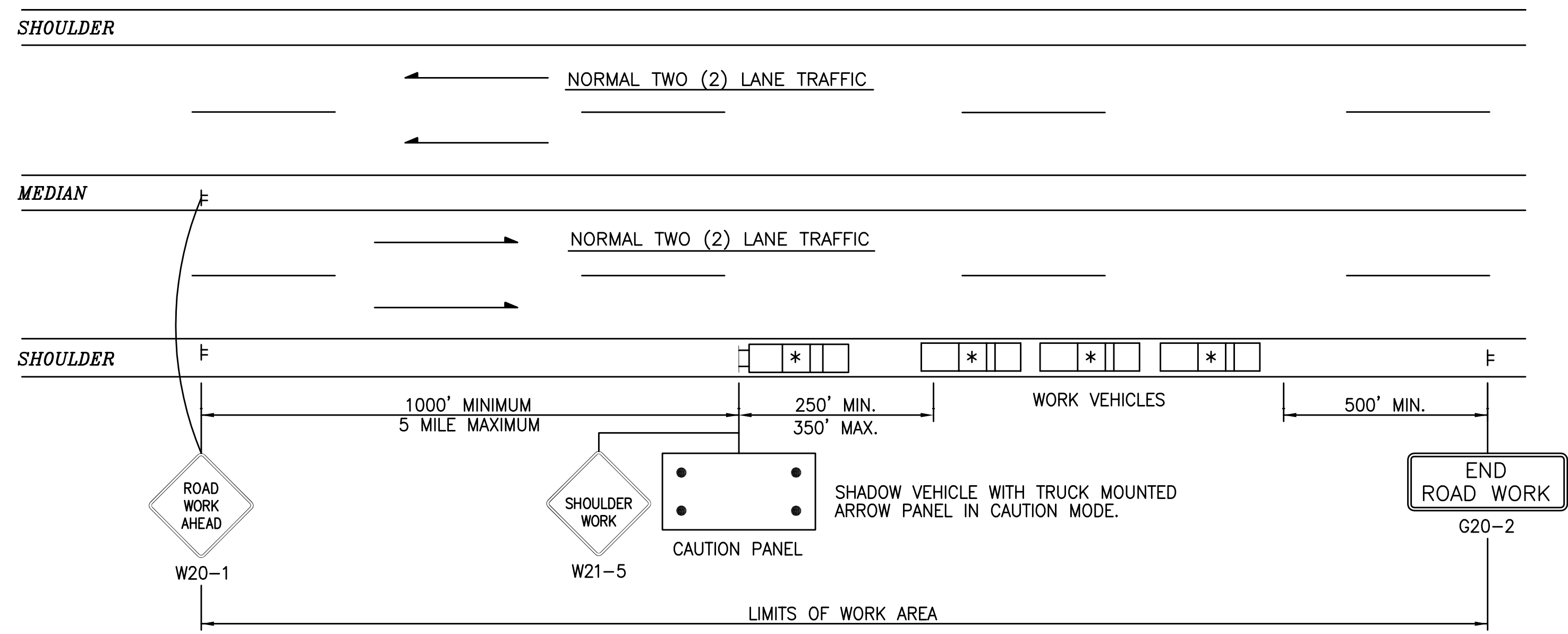


**STATIONARY SHOULDER CLOSURE WITH CHANNELIZING DEVICES**

NOTE:  
CHANNELIZING DEVICES TO BE USED AND LOCATED AT 100' INTERVALS ALONG WORK AREA AS NECESSARY FOR MAX. LENGTH OF 3 MILES, UNLESS OTHERWISE INDICATED IN THE CONTRACT DOCUMENTS.

**NOTES:**

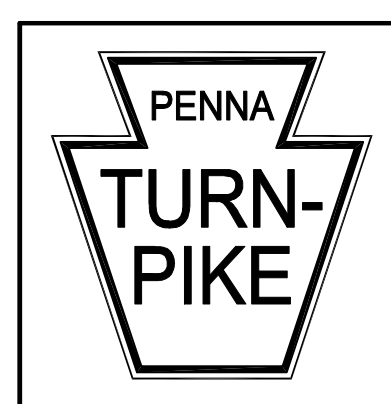
1. ARROW PANEL TO BE USED WHEN MEN ARE WORKING ON THE SHOULDER. CHANNELIZING DEVICES TO REMAIN IN PLACE UNTIL SHOULDER WORK IS COMPLETED. MAINTAIN NORMAL TWO (2) LANE TRAFFIC.
2. FOR MEDIAN OPERATIONS USE SINGLE LANE TRAFFIC PATTERN, PER PTS-910, SHEET 3 OF 6. LEFT LANES CLOSED BOTH DIRECTIONS. USE VERTICAL PANEL WITH TYPE "A" LIGHT TO PROVIDE IDENTIFICATION AND WARNING OF HAZARD. SINGLE LANE PATTERN TO REMAIN IN PLACE UNTIL WORK IS COMPLETED.
3. THIS PATTERN IS TO BE USED FOR SHORT-TERM OPERATIONS WHICH OCCUPY A LOCATION FOR LESS THAN 12 HOURS FOR THREE (3) OR LESS CONSECUTIVE DAYS.
4. IN AREAS WHERE THE NORMAL SPEED LIMIT IS 65 MPH, INSTALL 55 MPH SIGNS ON BOTH SIDES OF THE ROAD 1 MILE AND 1/2 MILE IN ADVANCE OF THE ROAD WORK AHEAD SIGNS.
5. IN AREAS WHERE THE NORMAL SPEED LIMIT IS 65 MPH, INSTALL 65 MPH SIGN 500' BEYOND THE END OF THE WORK AREA. INSTALL END ROAD WORK SIGN, G20-2, A MINIMUM OF 500' BEYOND THE 65 MPH SIGNS.
6. ALL ARROW PANELS ARE TO BE TRUCK MOUNTED.
7. HAVE ALL SHADOW VEHICLES MEET PENNDOT AND PENNSYLVANIA TURNPIKE COMMISSION REQUIREMENTS.
8. SOME SIGNS MAY BE MOUNTED ON PENNDOT APPROVED PORTABLE SIGN SUPPORTS, X-FRAME, WITH A MINIMUM HEIGHT OF 5 FEET FROM THE PAVEMENT SURFACE TO THE BOTTOM OF THE SIGNS. REFER TO MAINTENANCE AND PROTECTION OF TRAFFIC SPECIAL PROVISION FOR APPROPRIATE USE, PORTABLE SUPPORTS AND SIGNS MUST BE REMOVED FROM THE ROADWAY DURING NON-WORKING HOURS.
- \* 9. THIS FIGURE APPLIES WHERE THE OPERATION MOVES INTERMITTENTLY OR CONTINUOUSLY AT AN AVERAGE SPEED OF MORE THAN 1 M.P.H. (88 FT./MIN.). THE OPERATOR IS TO BE THE ONLY OCCUPANT OF SHADOW VEHICLE NO. 2. WHEN THE OPERATION MOVES INTERMITTENTLY, THE MAXIMUM TIME OF STATIONARY WORK IS 15 MINUTES. IF THESE CONDITIONS CAN NOT BE MET, EITHER USE A STATIONARY SHOULDER CLOSURE AS SHOWN ON PTS-910, SHEET 6 OF 6, OR USE A SINGLE LANE PATTERN AS SHOWN ON PTS-910, SHEET 3 OF 6.



**\* MOBILE SHOULDER OPERATIONS**

**LEGEND**

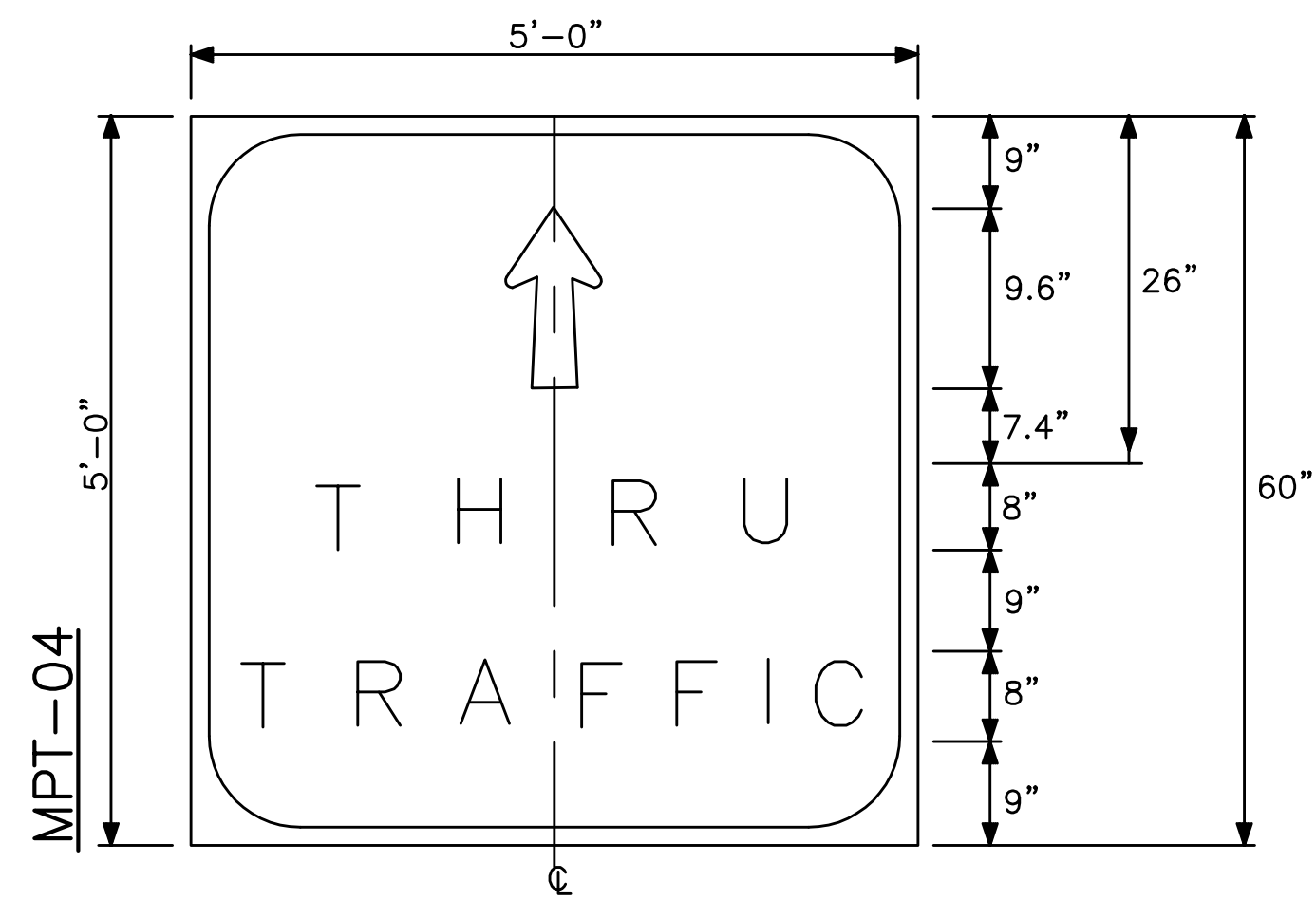
- F SIGN & SUPPORT
- ☀ TYPE B LIGHT
- TEMPORARY CONCRETE BARRIER 12'-0"(MIN.) SECTION
- CHANNELIZING DEVICE
- ▨ WORK AREA
- ← TRAFFIC FLOW
- ☐\* ARROW PANEL WITH ACTIVATED AMBER WARNING LIGHT
- ☐\* WORK VEHICLE WITH AN ACTIVATED AMBER WARNING LIGHT
- ☐ ARROW PANEL



RECOMMENDED: OCTOBER 6, 2006  
*Mark Berg*  
 ASSISTANT CHIEF ENGINEER - DESIGN  
 APPROVED: OCTOBER 6, 2006  
*Alphonse...*  
 CHIEF ENGINEER

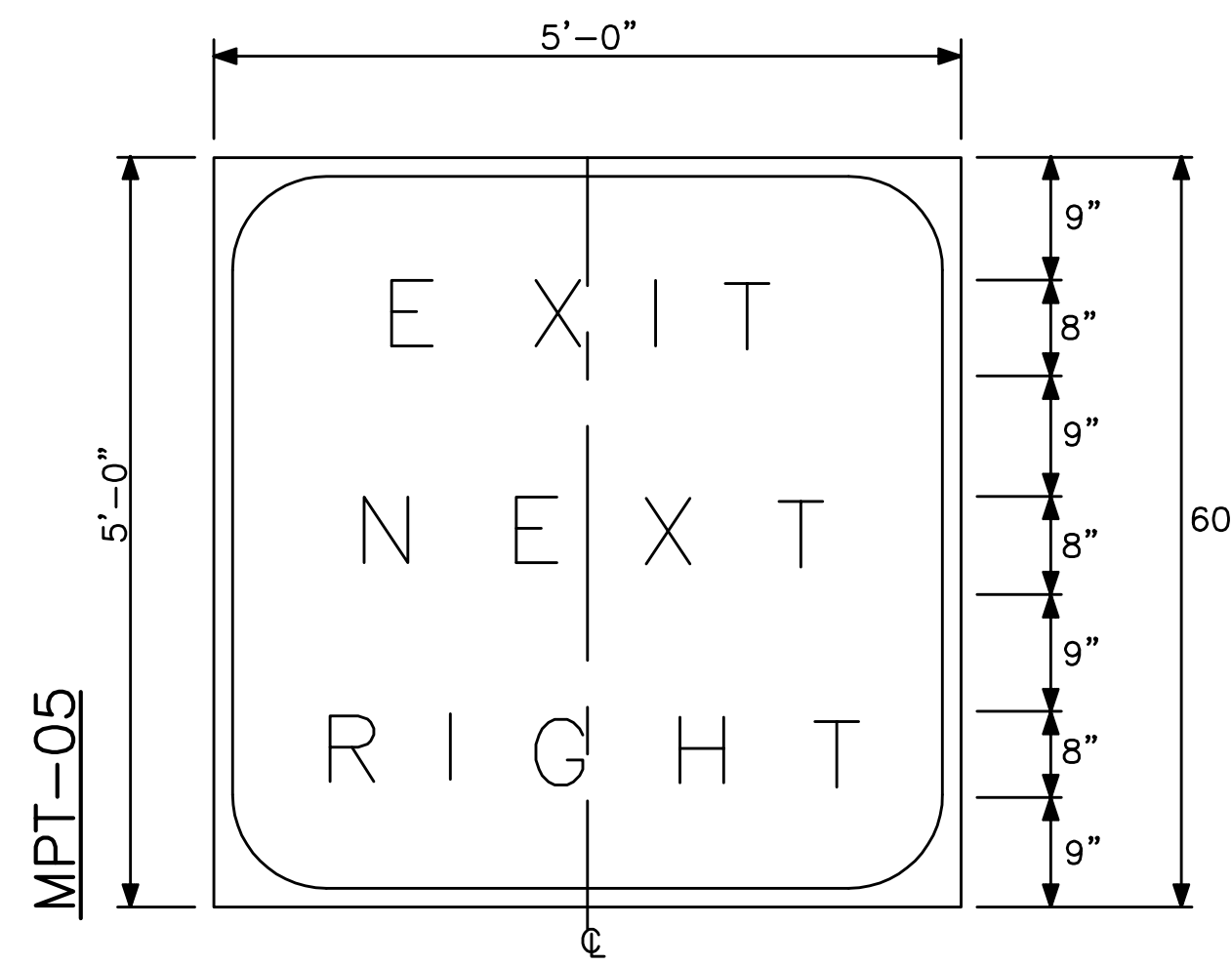
**CONSTRUCTION - SHORT TERM  
 MAINTENANCE AND PROTECTION OF TRAFFIC  
 SHOULDER OPERATIONS**

PENNSYLVANIA TURNPIKE COMMISSION STANDARD DRAWING	
FILE NAME: PTS-910-6.dwg	SHEET 6 OF 6
DRAWING TYPE: 5A	
DATE: OCTOBER 2006	PTS-910



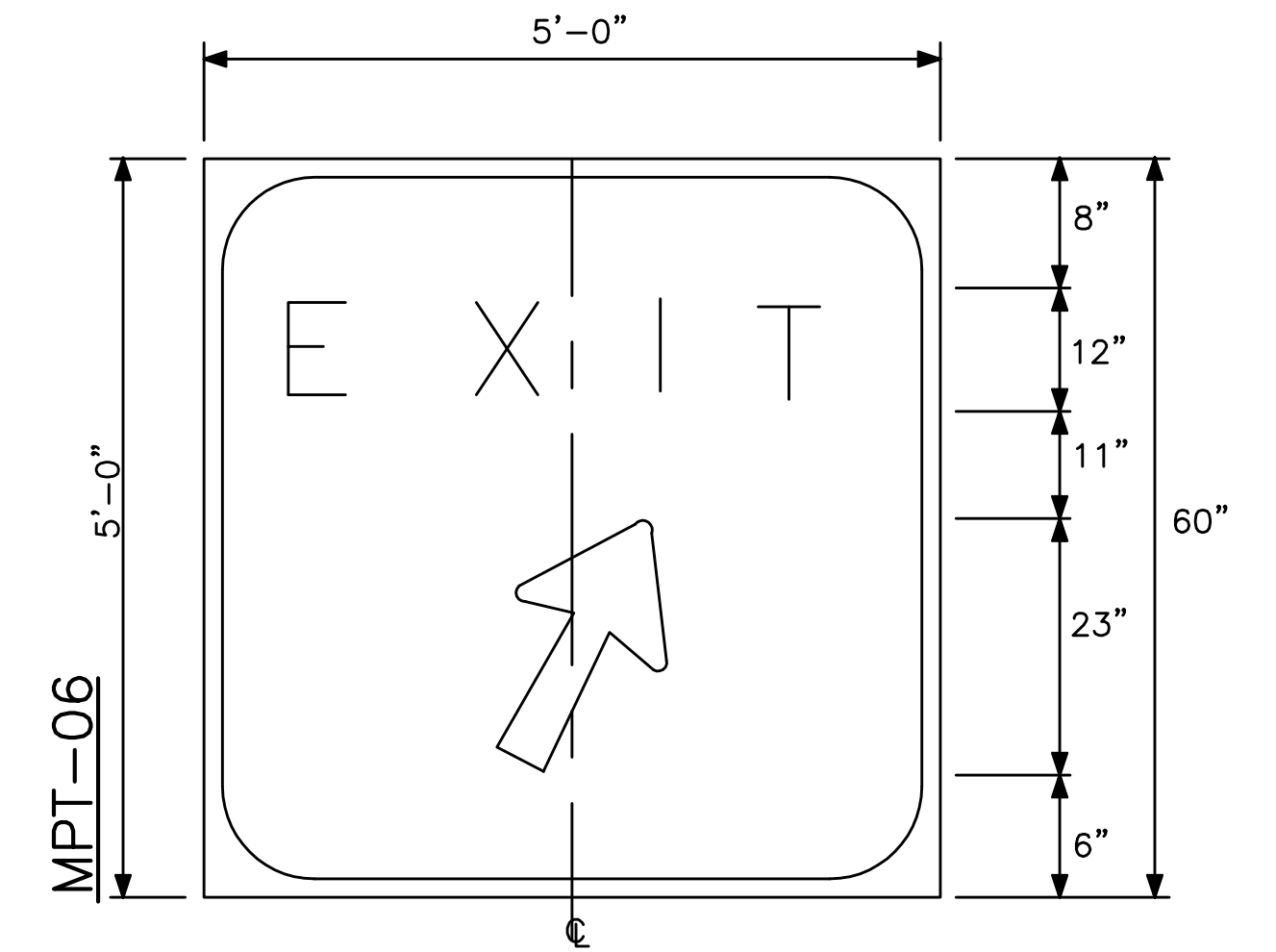
1.25" BORDER WITH 6" CORNER RADII

<u>ARROW</u>	<u>8" UC LTR. SERIES E</u>	<u>8" UC LTR. SERIES E</u>
25.8 -	14.7 -	5.0 -
8.5 - TYPE K ARROW	7.5 -T	7.5 -T
25.7 -	8.4 -H	8.0 -R
<u>60.0</u>	8.4 -R	9.7 -A
	6.4 -U	7.5 -F
	14.6 -	7.5 -F
	<u>60.0</u>	3.4 -I
		6.4 -C
		5.0 -
		<u>60.0</u>



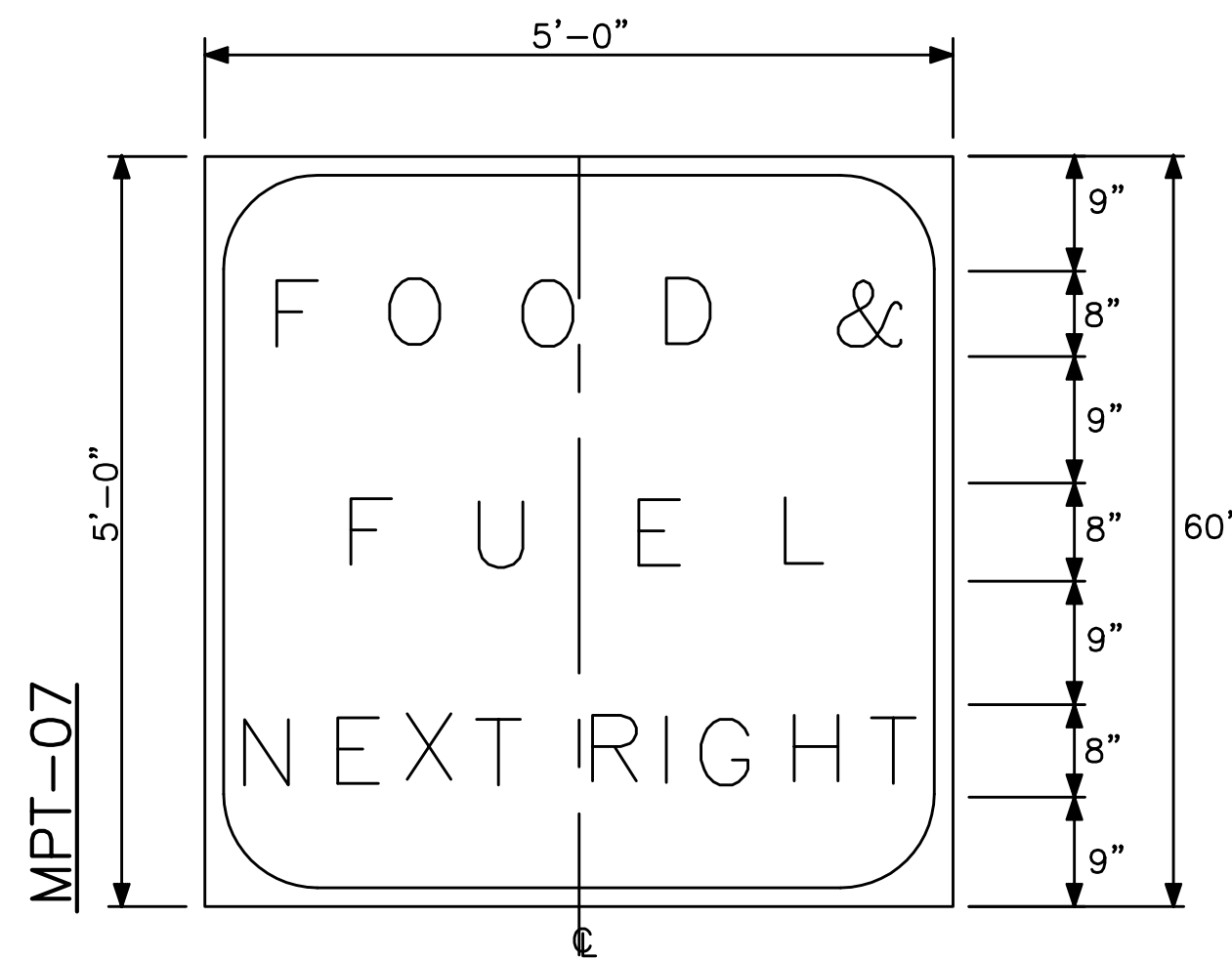
1.25" BORDER WITH 6" CORNER RADII

<u>8" UC LTR. SERIES E</u>	<u>8" UC LTR. SERIES E</u>	<u>8" UC LTR. SERIES E</u>
17.6 -	15.1 -	13.0 -
7.5 -E	8.4 -N	8.4 -R
8.5 -X	7.5 -E	3.4 -I
3.0 -I	8.0 -X	8.4 -G
5.9 -T	5.9 -T	8.0 -H
17.5 -	15.1 -	5.9 -T
<u>60.0</u>	<u>60.0</u>	<u>12.9 -</u>
		<u>60.0</u>



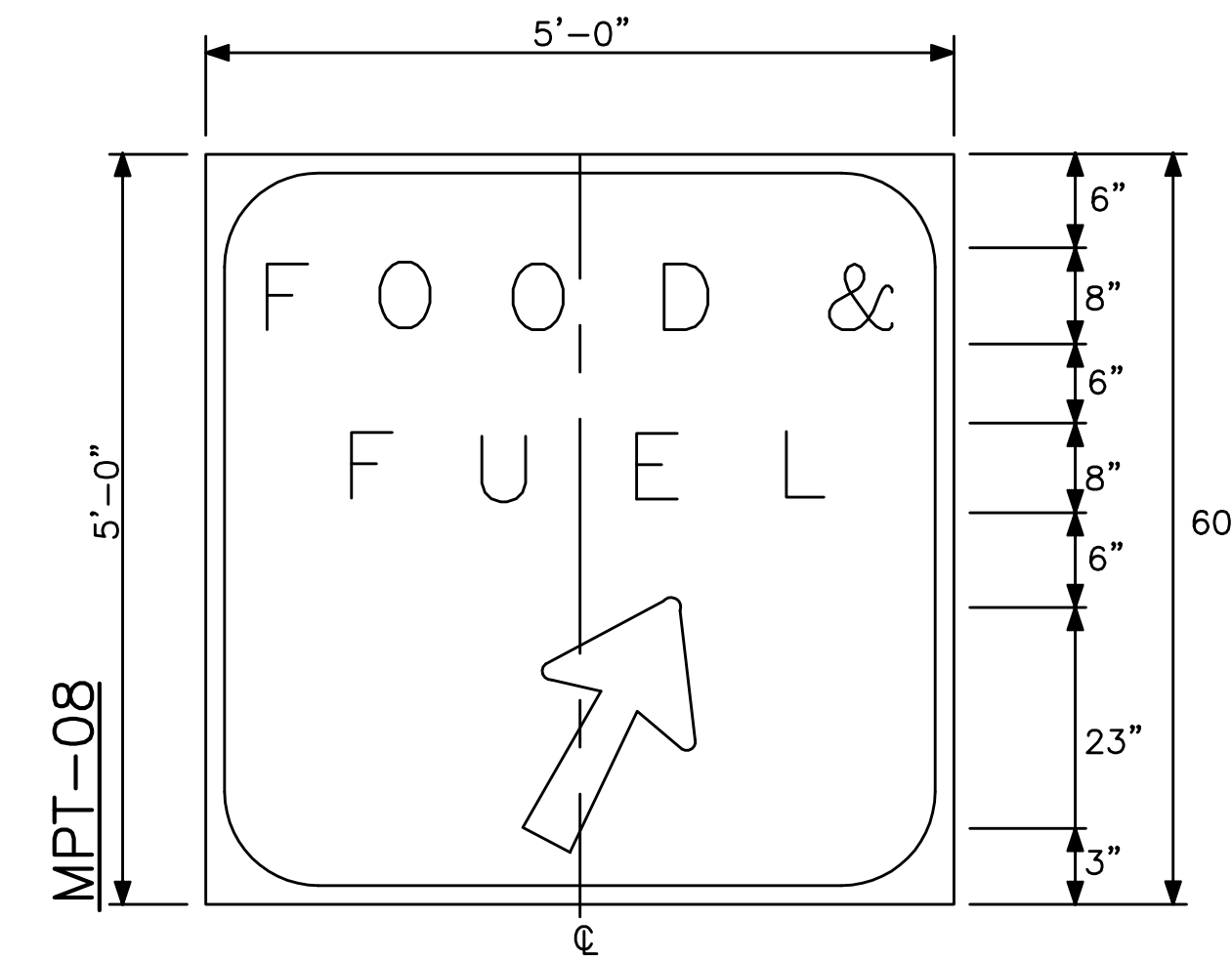
2" BORDER WITH 12" CORNER RADII

<u>12" UC LTR. SERIES E</u>	<u>ARROW</u>
11.3 -	18.5 -
11.3 -E	23.0 - TYPE N ARROW
12.8 -X	18.5 -
4.5 -I	<u>60.0</u>
8.8 -T	
11.3 -	
<u>60.0</u>	



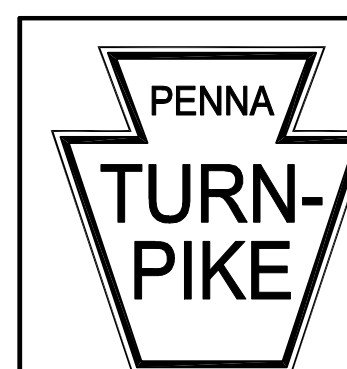
1.25" BORDER WITH 6" CORNER RADII

<u>8" UC LTR. SERIES E</u>	<u>8" UC LTR. SERIES E</u>	<u>8" UC LTR. SERIES E</u>
7.6 -	15.4 -	4.2 -
7.5 -F	7.5 -F	6.1 -N
8.3 -O	8.4 -U	5.3 -E
8.7 -O	7.5 -E	5.6 -X
6.4 -D	5.9 -L	4.0 -T
6.0 -	15.3 -	4.0 -
8.0 -&	<u>60.0</u>	6.1 -R
7.5 -		2.8 -I
<u>60.0</u>		6.1 -G
		5.7 -H
		4.0 -T
		5.1 -
		<u>60.0</u>



1.25" BORDER WITH 6" CORNER RADII

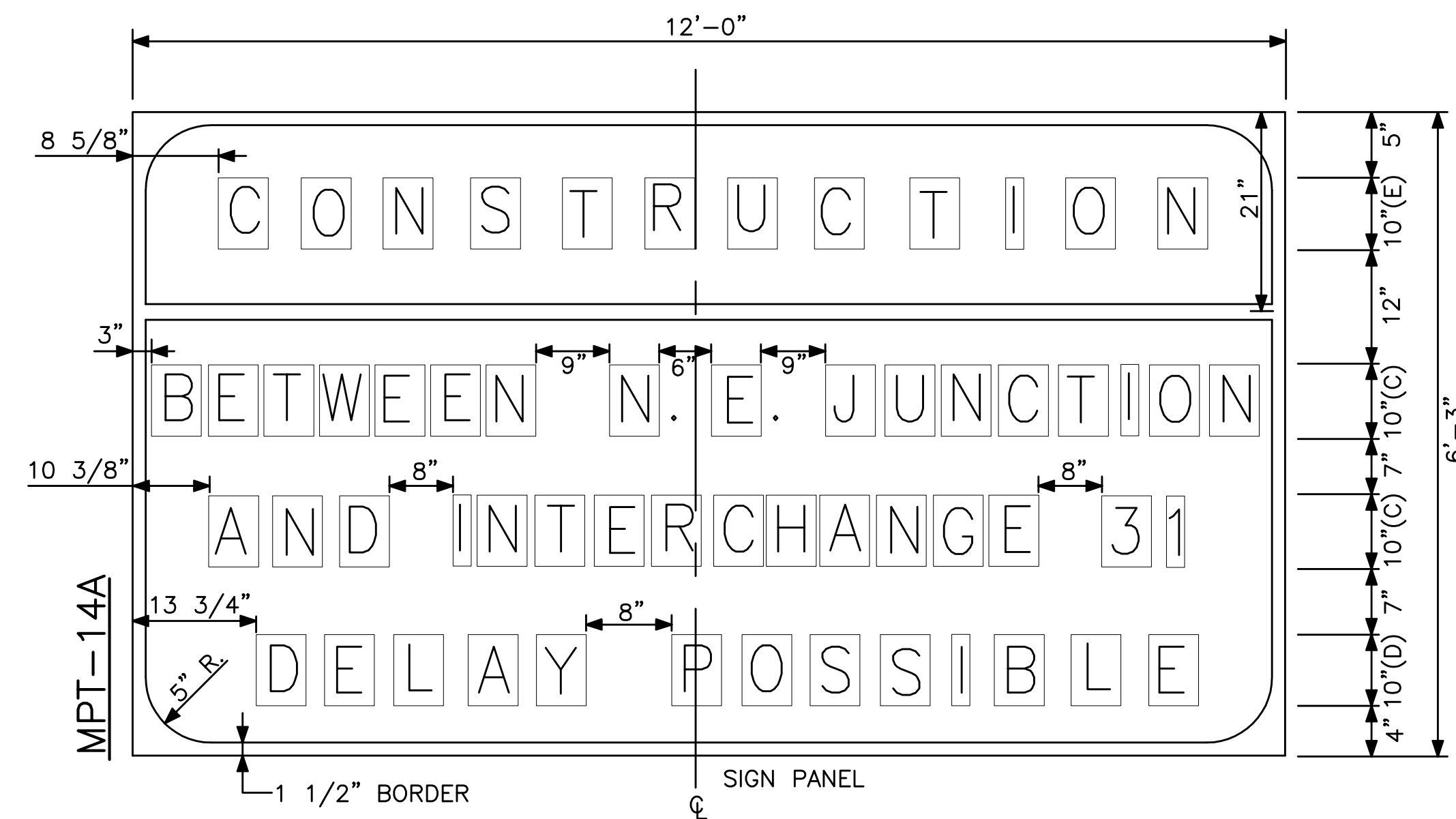
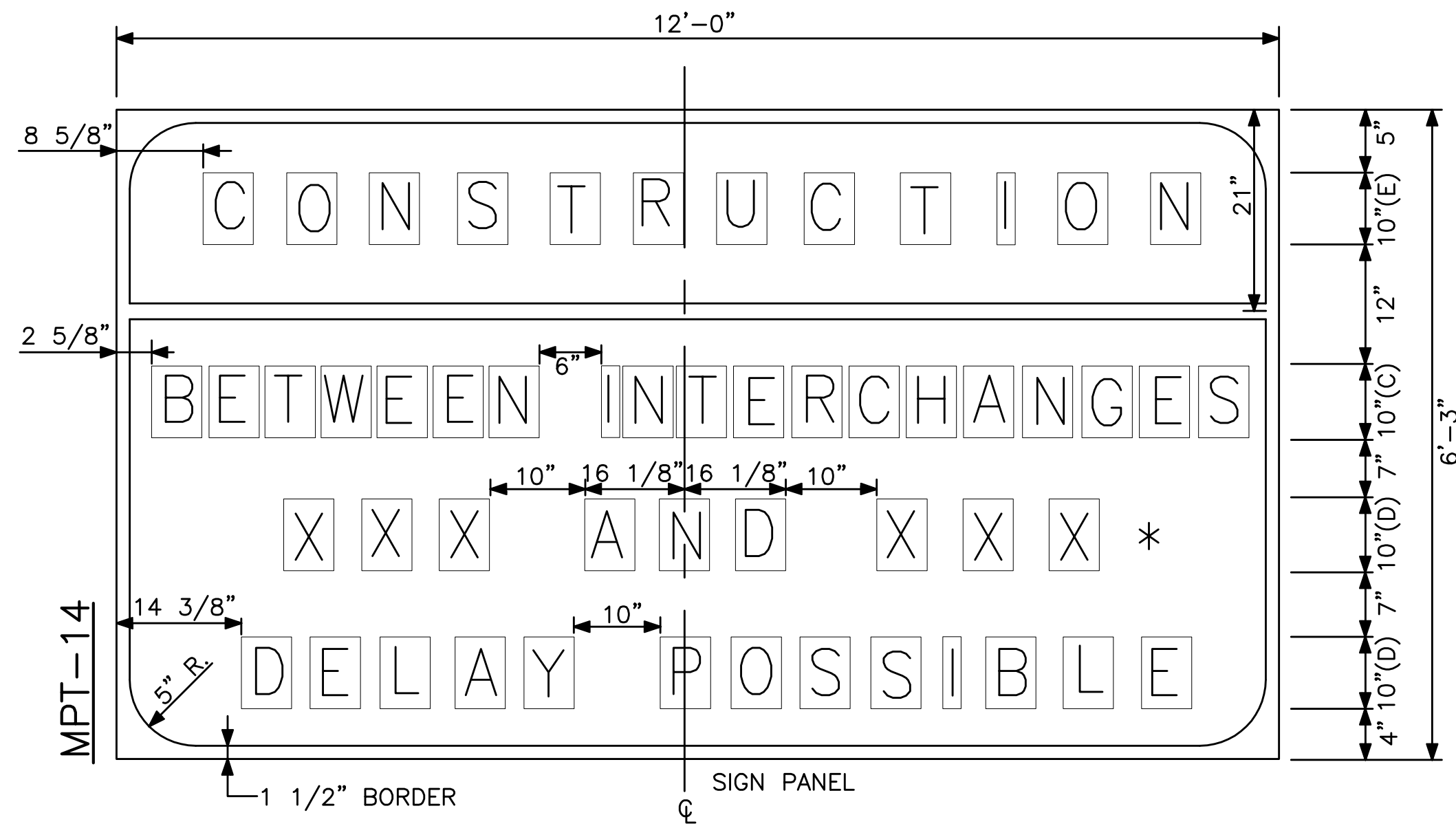
<u>8" UC LTR. SERIES E</u>	<u>8" UC LTR. SERIES E</u>	<u>ARROW</u>
7.6 -	15.4 -	18.5 -
7.5 -F	7.5 -F	23.0 - TYPE N ARROW
8.3 -O	8.4 -U	18.5 -
8.7 -O	7.5 -E	<u>60.0</u>
6.4 -D	5.9 -L	
6.0 -	15.3 -	
8.0 -&	<u>60.0</u>	
7.5 -		
<u>60.0</u>		



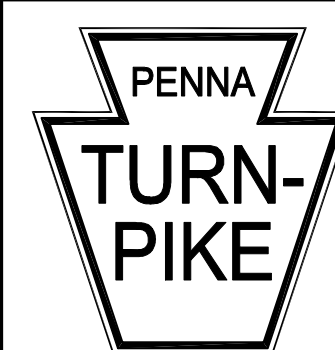
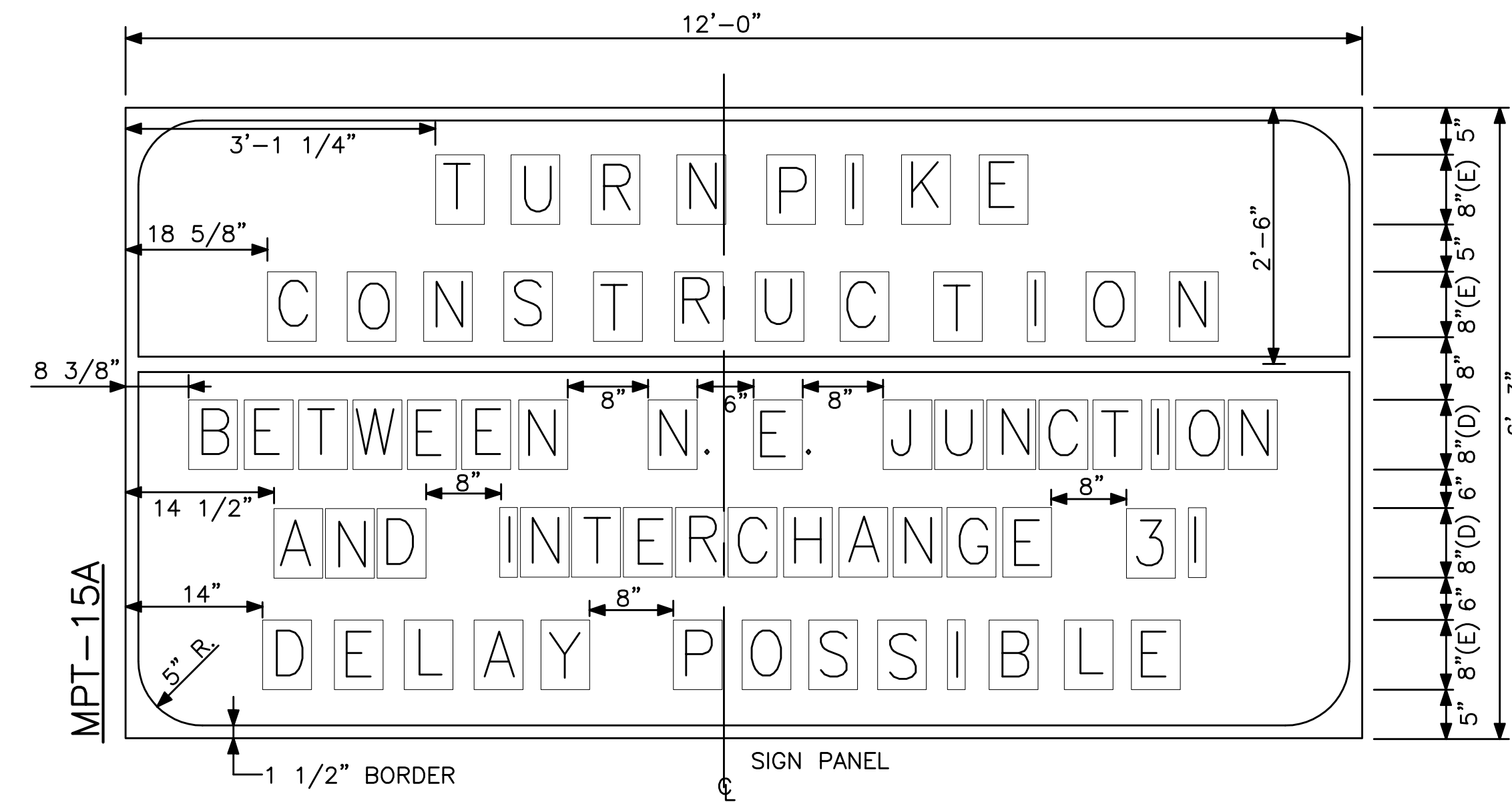
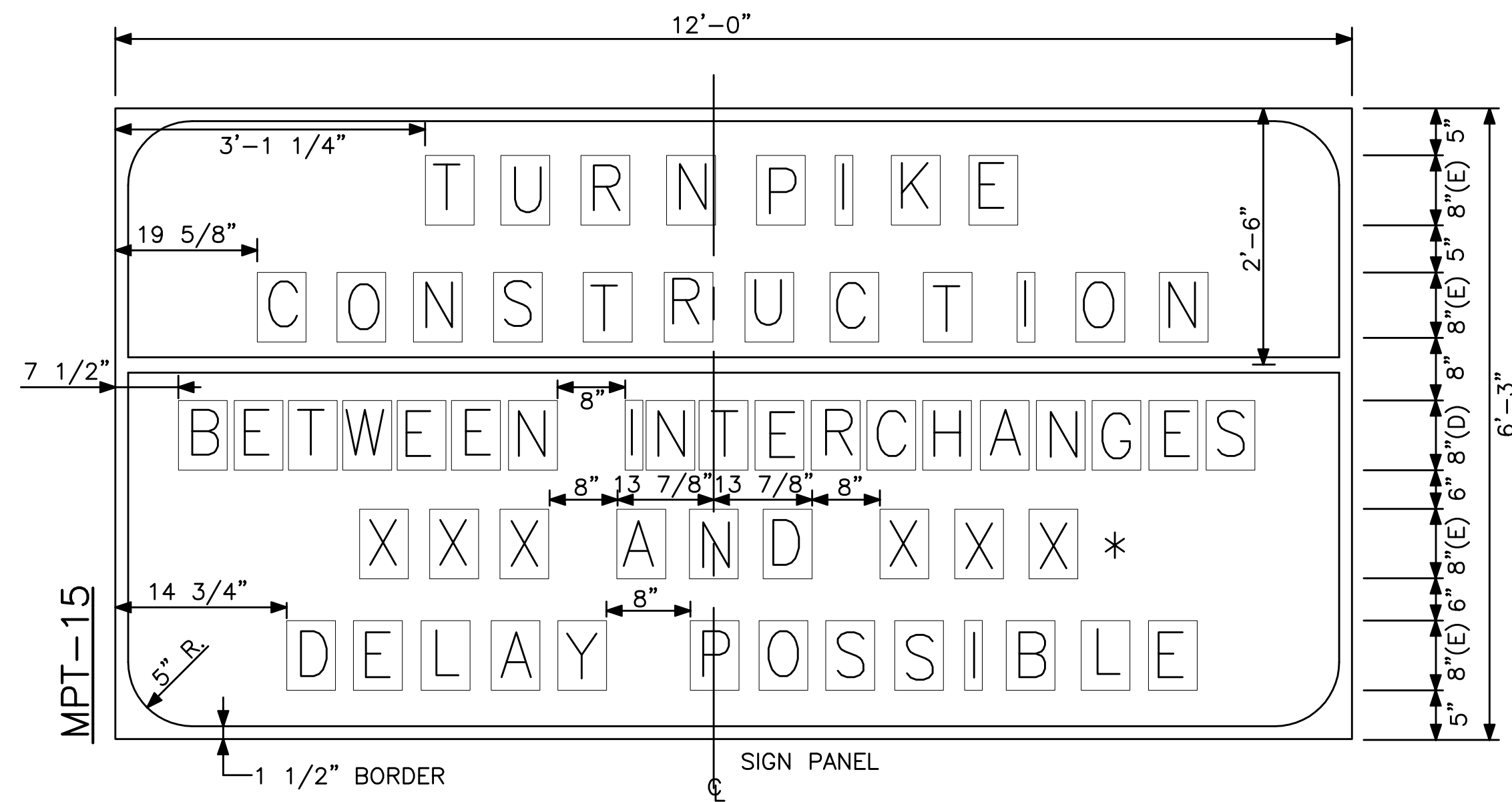
RECOMMENDED: OCTOBER 6, 2006  
*Mark Berg*  
 ASSISTANT CHIEF ENGINEER - DESIGN  
 APPROVED: OCTOBER 6, 2006  
*Alphonse...*  
 CHIEF ENGINEER

**CONSTRUCTION AND MAINTENANCE  
 MAINTENANCE AND PROTECTION OF TRAFFIC  
 SIGN FABRICATION**

**PENNSYLVANIA TURNPIKE COMMISSION  
 STANDARD DRAWING**  
 FILE NAME: PTS-960-1.dwg  
 DRAWING TYPE: 5A  
 SHEET 1 OF 4  
 DATE: OCTOBER 2006  
 PTS-960



\* XXX = INTERCHANGE EXIT NUMBER



RECOMMENDED: OCTOBER 6, 2006

*Mark Berg*  
ASSISTANT CHIEF ENGINEER - DESIGN  
APPROVED: OCTOBER 6, 2006

*Alphonse R. ...*  
CHIEF ENGINEER

**CONSTRUCTION AND MAINTENANCE  
MAINTENANCE AND PROTECTION OF TRAFFIC  
SIGN FABRICATION**

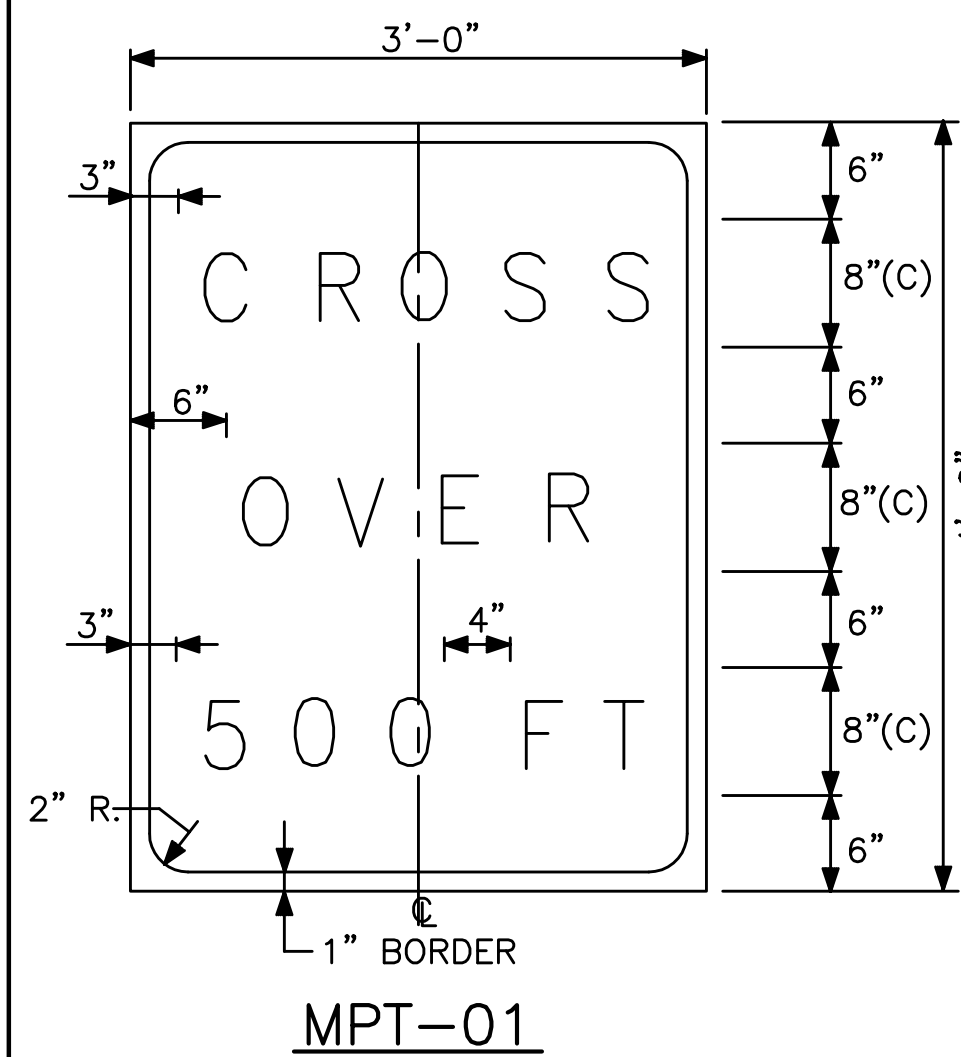
**PENNSYLVANIA TURNPIKE COMMISSION  
STANDARD DRAWING**

FILE NAME: PTS-960-2.dwg  
DRAWING TYPE: 5A

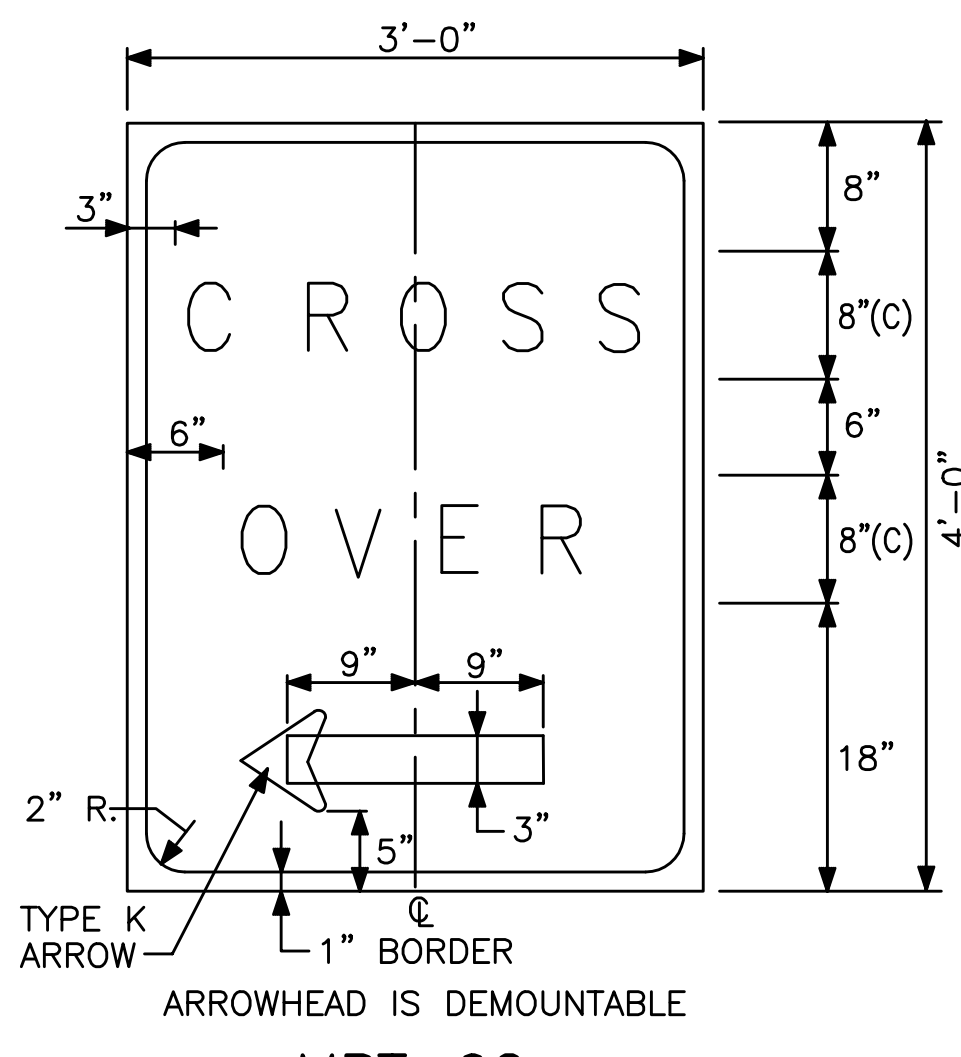
SHEET 2 OF 4

DATE: OCTOBER 2006

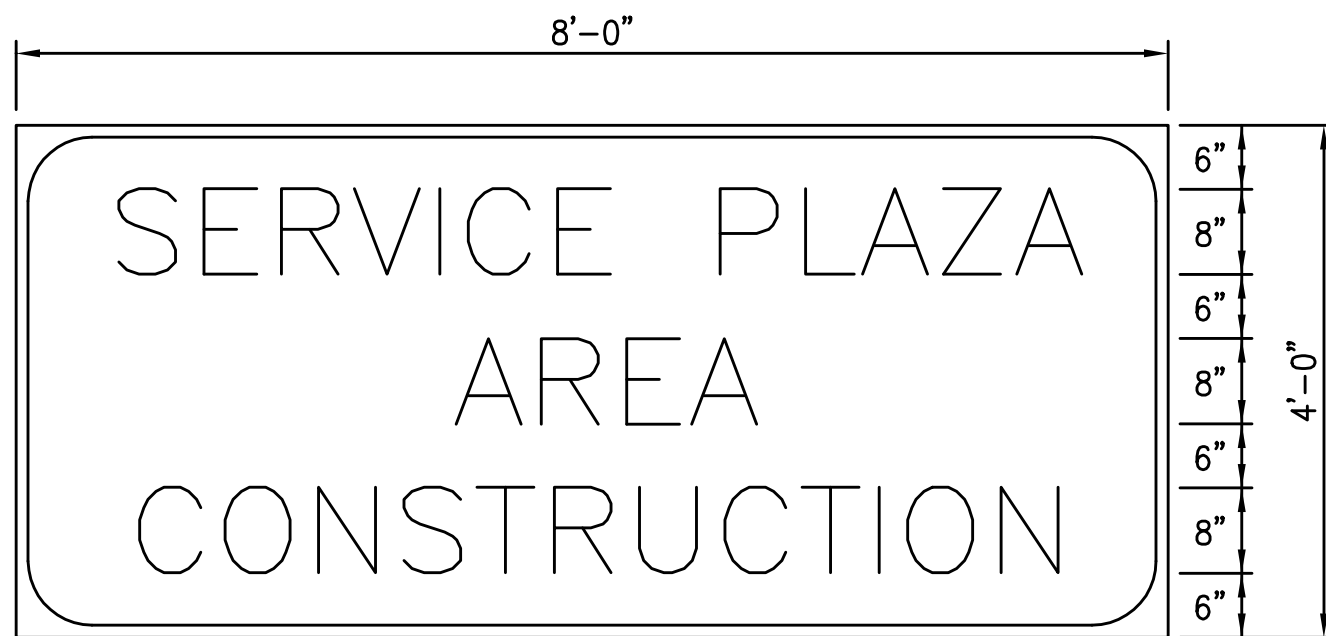
PTS-960



MPT-01



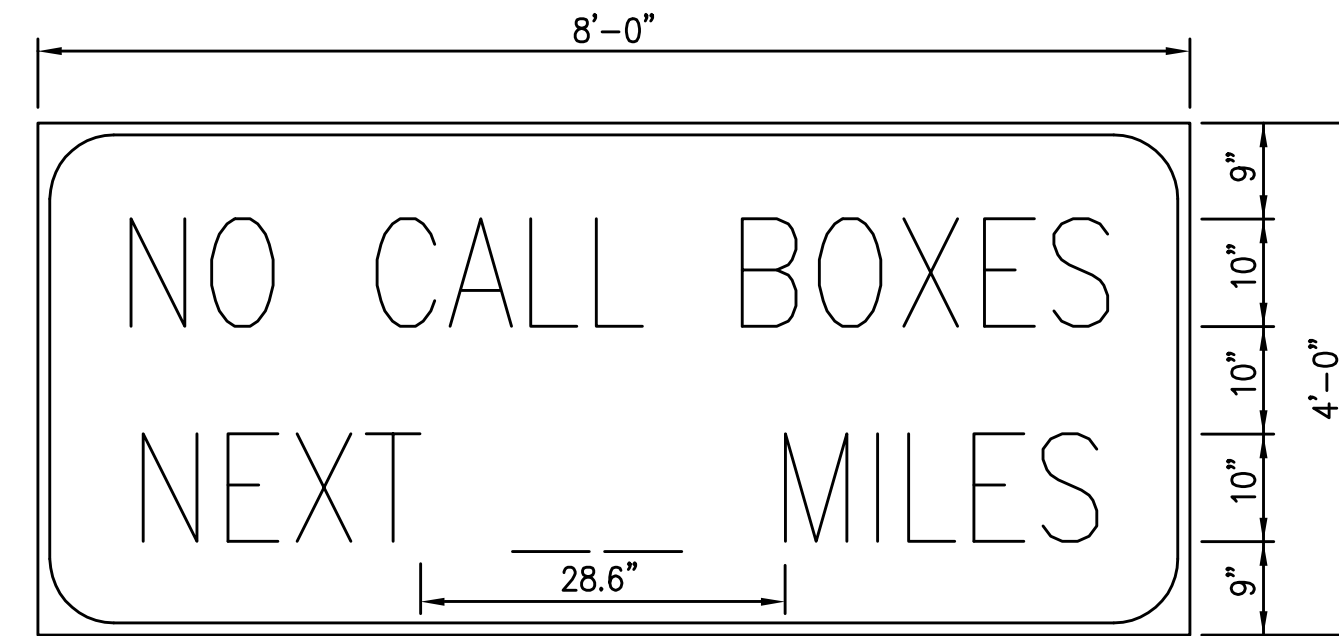
MPT-02



MPT-11

1 1/2" BORDER WITH 5" RADIUS ON CORNERS  
8" UC LTR.      8" UC LTR.      8" UC LTR.

6.5 -	34.0 -	8.8 -
7.3 - S	8.2 - A	6.9 - C
6.4 - E	7.3 - R	7.5 - O
6.9 - R	5.9 - E	7.3 - N
7.5 - V	6.7 - A	6.9 - S
3.1 - I	33.9 -	6.4 - T
6.9 - C	96.0	7.3 - R
4.9 - E		7.3 - U
6.0 -		6.4 - C
7.3 - P		6.4 - T
5.4 - L		3.1 - I
8.2 - A		7.5 - O
6.4 - Z		5.4 - N
6.7 - A		8.8 -
6.5 -		96.0
96.0		

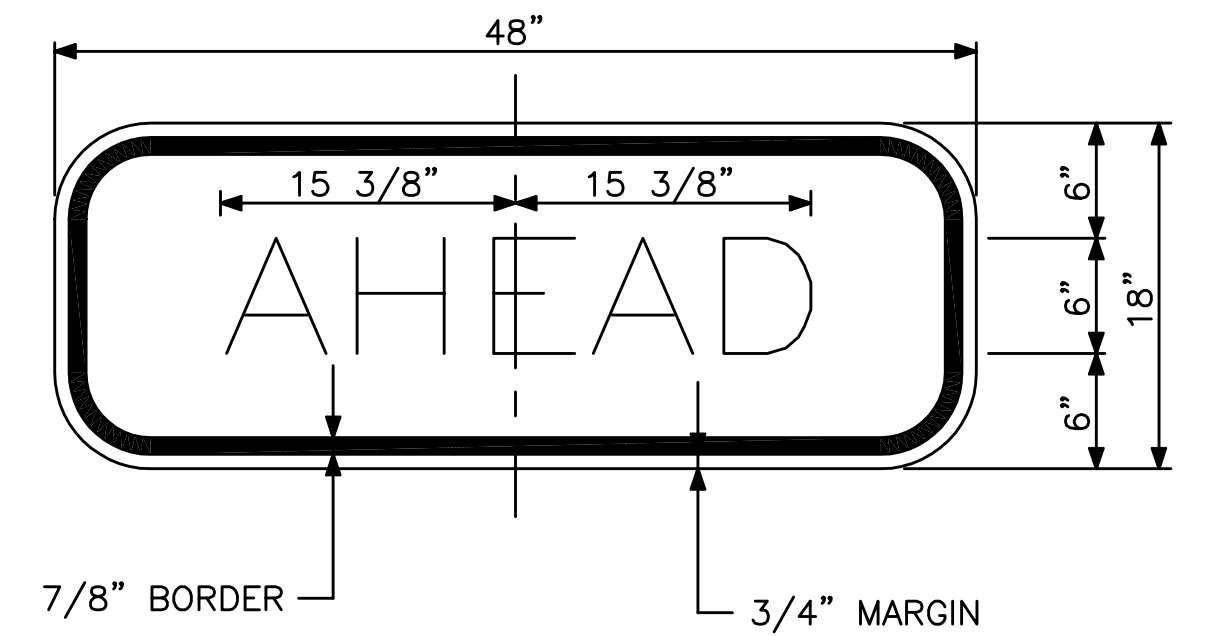


MPT-21

1 1/2" BORDER WITH 5" RADIUS ON CORNERS  
10" CAP. LTR.      10" CAP. LTR.

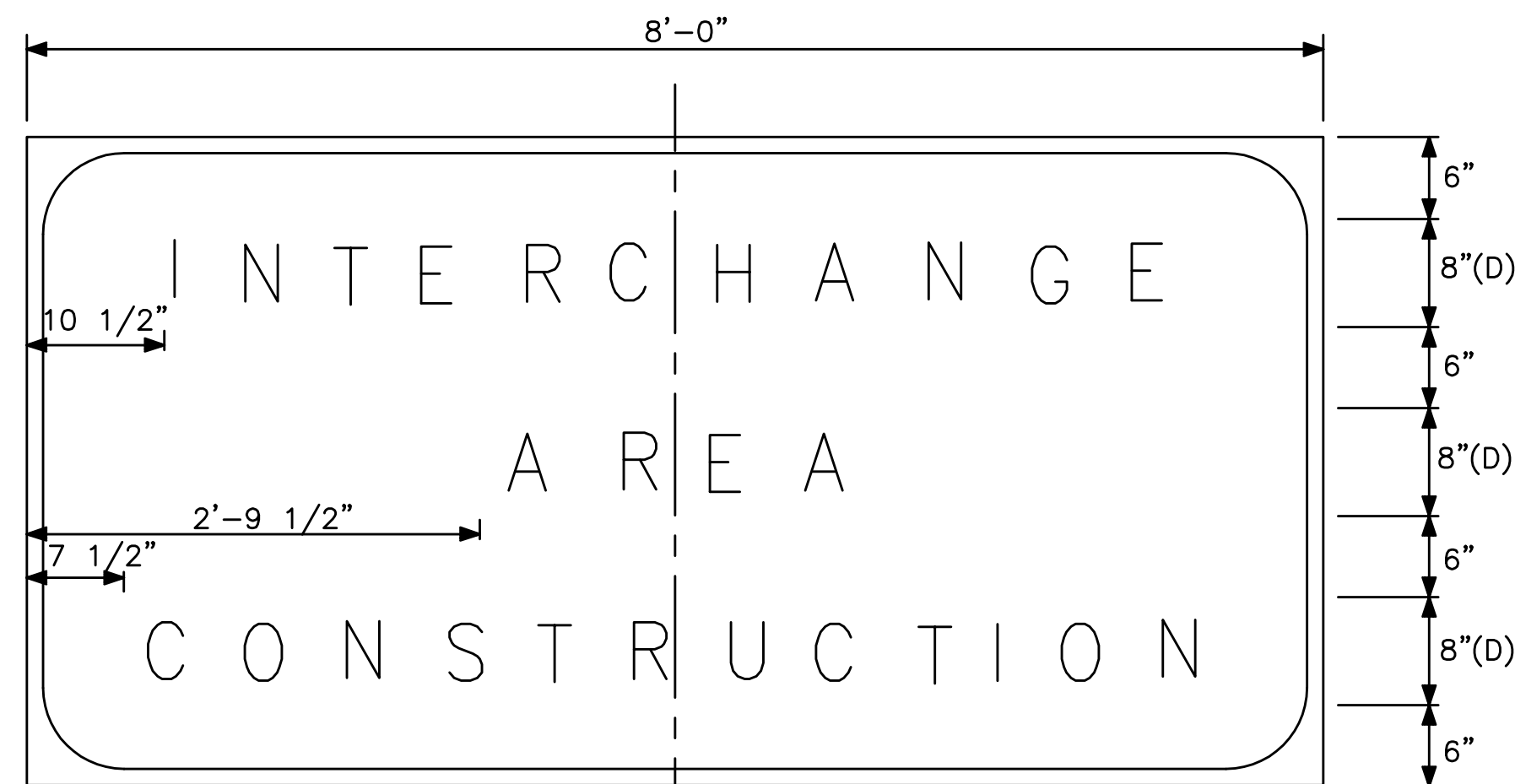
SERIES C		SERIES C	
-	4.3	-	5.1
N -	7.6	N -	7.6
O -	5.8	E -	6.7
-	7.5	X -	7.0
C -	6.6	T -	5.0
A -	7.9	-	7.0 *
L -	6.7	-	14.6
L -	5.0	-	7.0 *
-	7.5	M -	8.6
B -	7.2	I -	3.5
O -	7.5	L -	6.7
X -	5.9	E -	6.7
E -	6.7	S -	5.5
S -	5.5	-	5.0
-	4.3		
	96.0"		96.0"

\* - INDICATES MINIMUM SPACING

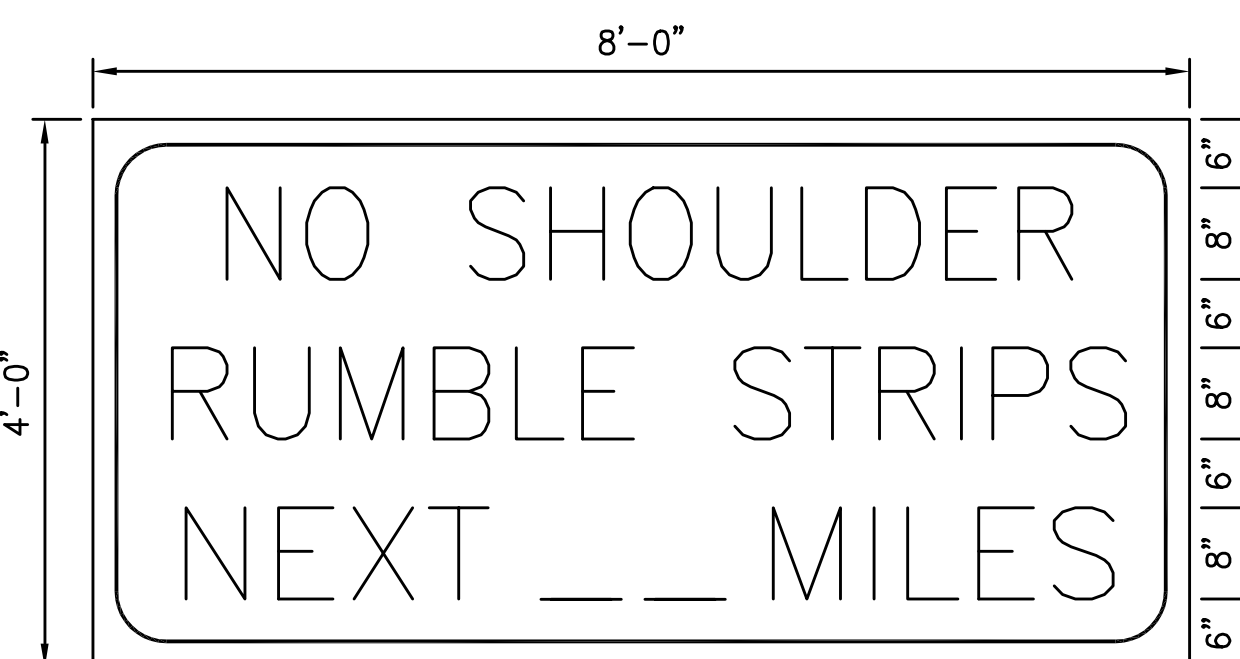


MPT-35

SERIES E LETTERS



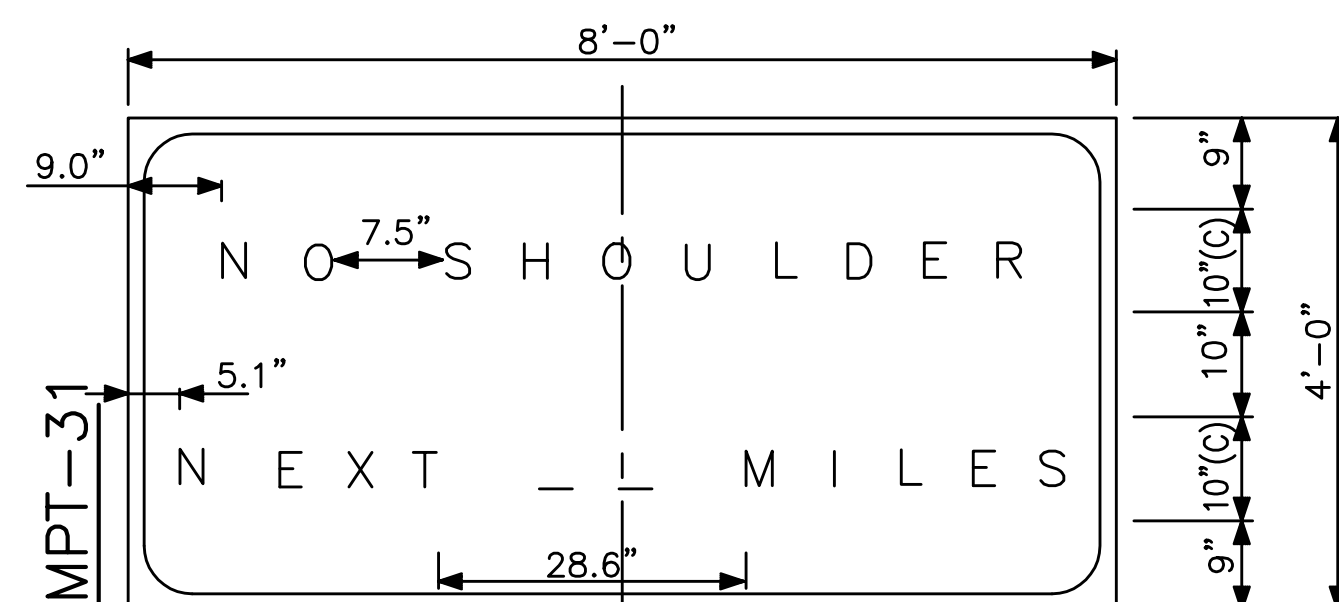
MPT-09



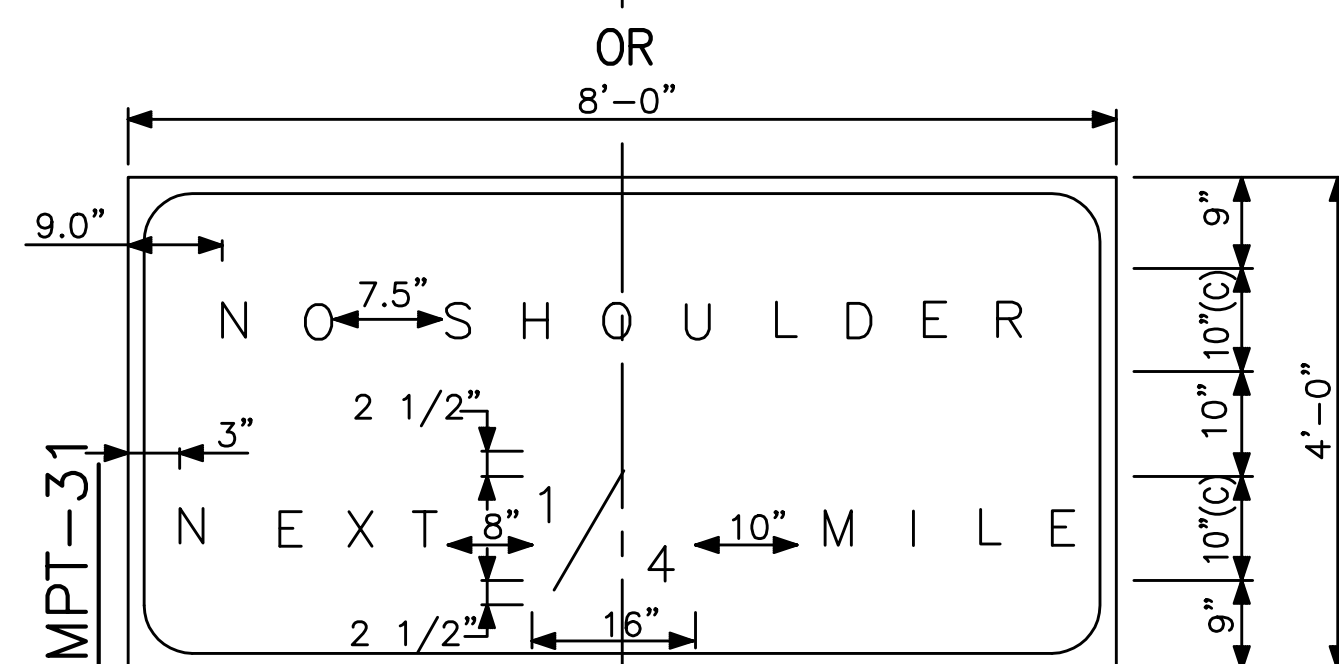
MPT-22

1 1/2" BORDER WITH 5" RADIUS ON CORNERS  
8" CAP. LTR.      8" CAP. LTR.      8" CAP. LTR.

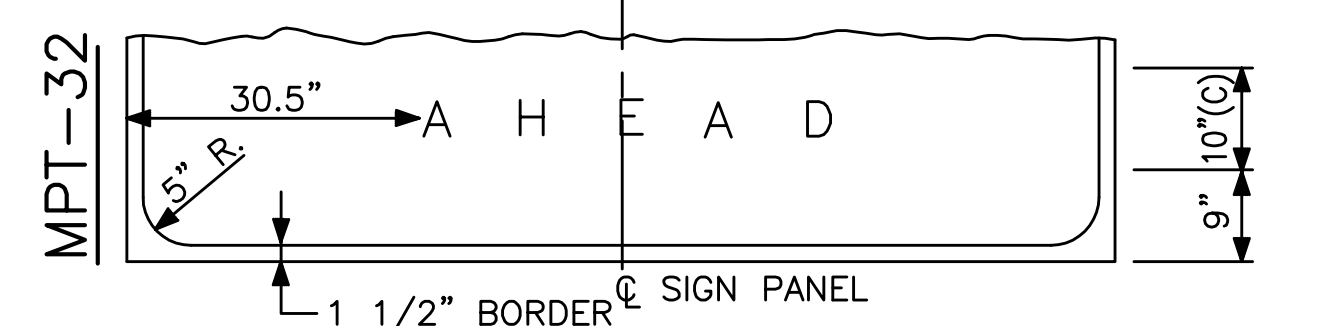
SERIES D		SERIES D		SERIES D	
-	10.4	-	5.6	-	6.7
N -	7.3	R -	7.3	N -	7.3
O -	5.6	U -	7.3	E -	6.4
-	7.5	M -	8.1	X -	6.4
S -	7.3	B -	7.3	T -	4.9
H -	7.3	L -	6.4	-	7.5
O -	7.5	E -	4.9	-	13.2
U -	7.3	-	7.5	-	7.5
L -	6.4	S -	6.9	M -	8.1
D -	7.3	T -	6.4	I -	3.1
E -	6.4	R -	7.3	L -	6.4
R -	5.4	I -	3.1	E -	6.4
-	10.3	P -	6.9	S -	5.4
	96.0"	S -	5.4	-	6.7
		-	5.6		
			96.0"		96.0"



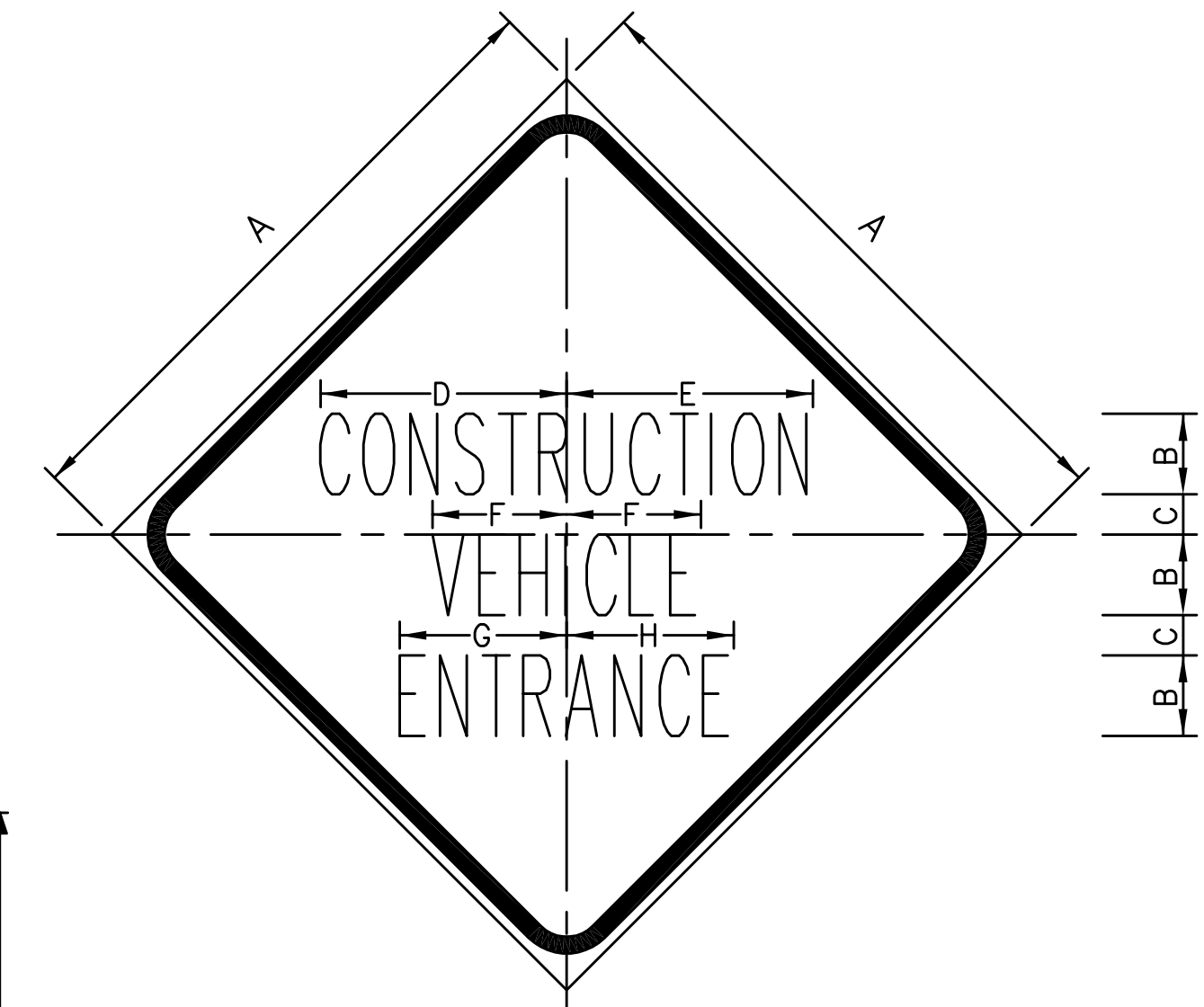
MPT-31



MPT-31



MPT-32



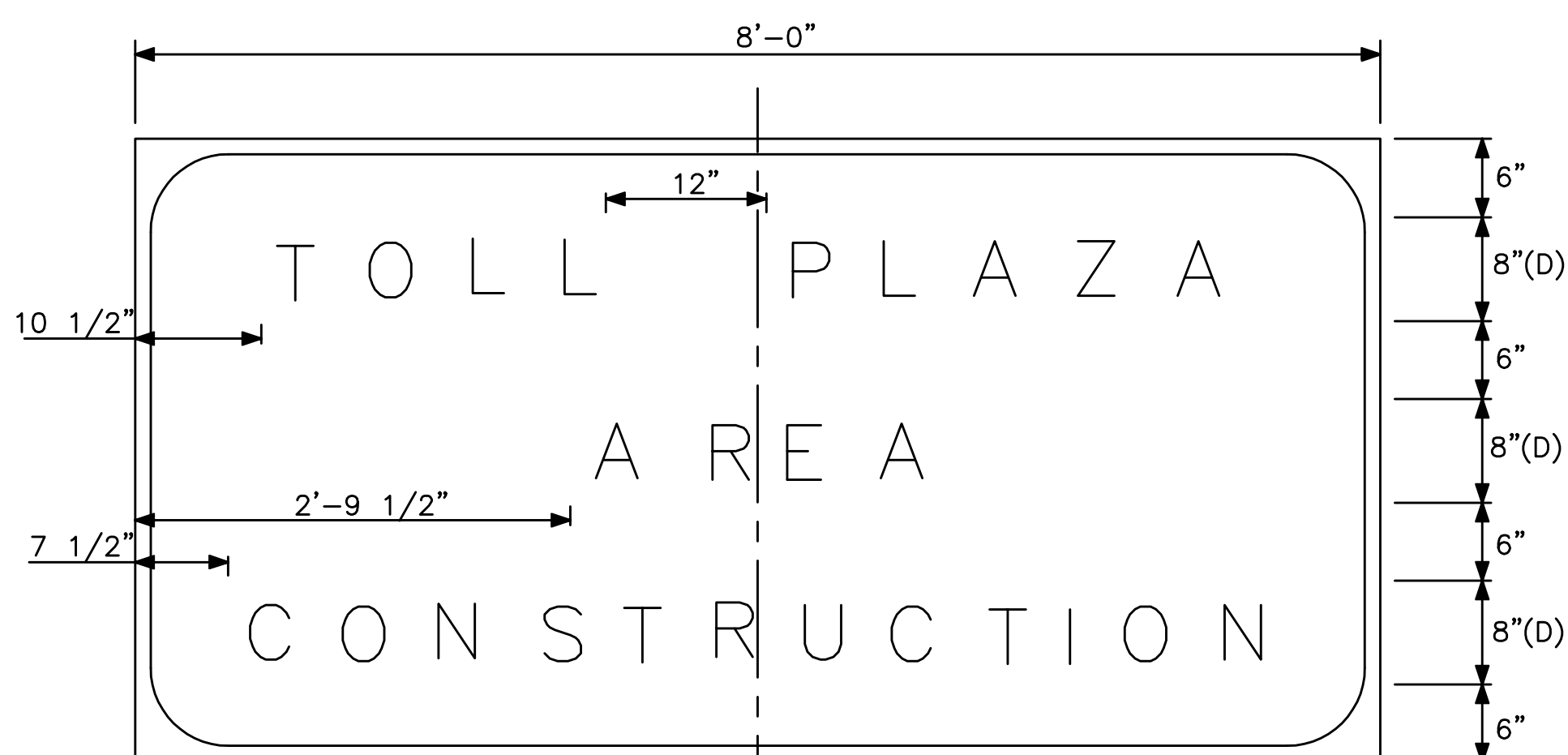
MPT-38

SIGN SIZE	DIMENSIONS							
	A	B	C	D	E	F	G	H
48X48	48	6	3	18 3/10	18 2/5	10	12 2/5	12 1/5

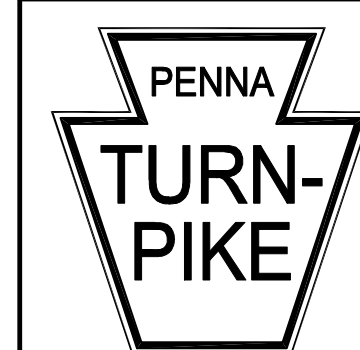
SIGN SIZE	SERIES LINES			MARGIN	BORDER	BLANK STD.
	1	2	3			
48X48	C	C	C	3/4	1 1/4	B3-48

NOTE: SPACE REDUCED 25% FROM STANDARD SPACING

3.2 - C	3.5 - V	3.0 - E
3.5 - O	3.0 - E	3.2 - N
3.4 - N	3.4 - H	3.0 - T
3.2 - S	1.6 - I	3.2 - R
3.0 - T	3.2 - C	3.6 - A
3.4 - R	3.0 - L	3.4 - N
3.4 - U	2.3 - E	3.2 - C
3.0 - C	20.0	2.3 - E
3.0 - T		24.9
1.6 - I		
3.5 - O		
2.5 - N		
36.7		



MPT-10



RECOMMENDED: OCTOBER 6, 2006

Assistant Chief Engineer - Design

APPROVED: OCTOBER 6, 2006

Chief Engineer

CONSTRUCTION AND MAINTENANCE  
MAINTENANCE AND PROTECTION OF TRAFFIC  
SIGN FABRICATION

PENNSYLVANIA TURNPIKE COMMISSION  
STANDARD DRAWING

FILE NAME: PTS-960-3.dwg  
DRAWING TYPE: 5A

SHEET 3 OF 4

DATE: OCTOBER 2006  
PTS-960

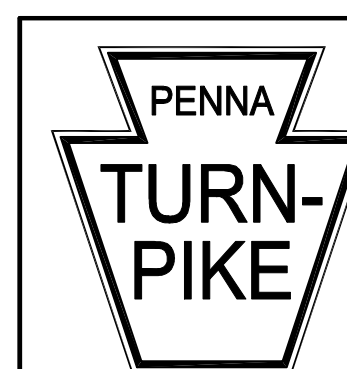
**TABULATION OF MPT SIGNS**

SIGN	SIZE	LEGEND	BACK-GROUND	COPY	BORDER	ARROWS
MPT-01	3'x4'	CROSSOVER 500 FT.	ORANGE	BLACK	BLACK	————
MPT-02	3'x4'	CROSS OVER ←	ORANGE	BLACK	BLACK	BLACK
MPT-04	5'x5'	↑ THRU TRAFFIC	GREEN	WHITE	WHITE	WHITE
MPT-05	5'x5'	EXIT NEXT RIGHT	GREEN	WHITE	WHITE	————
MPT-06	5'x5'	EXIT ↗	GREEN	WHITE	WHITE	WHITE
MPT-07	5'x5'	FOOD & FUEL NEXT RIGHT	BLUE	WHITE	WHITE	————
MPT-08	5'x5'	FOOD & FUEL ↗	BLUE	WHITE	WHITE	WHITE
MPT-09	8'x4'	INTERCHANGE AREA CONSTRUCTION	ORANGE	BLACK	BLACK	————
MPT-10	8'x4'	TOLL PLAZA AREA CONSTRUCTION	ORANGE	BLACK	BLACK	————
MPT-11	8'x4'	SERVICE PLAZA AREA CONSTRUCTION	ORANGE	BLACK	BLACK	————

SIGN	SIZE	LEGEND	BACK-GROUND	COPY	BORDER	ARROWS
MPT-14	12"x6'-3"	CONSTRUCTION BETWEEN INT. XXX & XXX DELAY POSSIBLE	ORANGE	BLACK	BLACK	————
MPT-14A	12"x6'-3"	CONSTRUCTION BETWEEN N.E. JUNC. & INTERCHANGE XX DELAY POSSIBLE	ORANGE	BLACK	BLACK	————
MPT-15	12"x6'-3"	TURNPIKE CONSTRUCTION BETWEEN INTER. XXX & XXX DELAY POSSIBLE	ORANGE	BLACK	BLACK	————
MPT-15A	12"x6'-3"	TURNPIKE CONSTRUCTION BETWEEN N.E. JUNC. & INTERCHANGE XX DELAY POSSIBLE	ORANGE	BLACK	BLACK	————
MPT-21	8'x4'	NO CALL BOXES NEXT XX MILES	ORANGE	BLACK	BLACK	————
MPT-22	8'x4'	NO SHOULDER RUMBLE STRIPS NEXT XX MILES	ORANGE	BLACK	BLACK	————
MPT-31	8'x4'	NO SHOULDER NEXT XX MILES  OR  NO SHOULDER NEXT 1/4 MILE	ORANGE	BLACK	BLACK	————
MPT-32	8'x4'	NO SHOULDER AHEAD	ORANGE	BLACK	BLACK	————
MPT-35	48"x18"	AHEAD	ORANGE	BLACK	BLACK	————
MPT-38	48"x48"	CONSTRUCTION VEHICLE ENTRANCE	ORANGE	BLACK	BLACK	————

GENERAL NOTES:

1. PROVIDE ALL OTHER SIGNS PER PENNDOT PUB. 236M AND SIZED AS INDICATED FOR EXPRESSWAYS AND INTERSTATES.
2. PROVIDE SIGNS WITH PENNDOT TYPE VI OR VII REFLECTIVE SHEETING MATERIAL. BLACK LEGEND AND BORDER IS NON-REFLECTIVE.
3. EXISTING MPT-04, MPT-05, MPT-06, MPT-07 AND MPT-08 SIGNS MAY ONLY BE USED FOR THE REMAINDER OF THEIR SERVICEABLE LIFE.

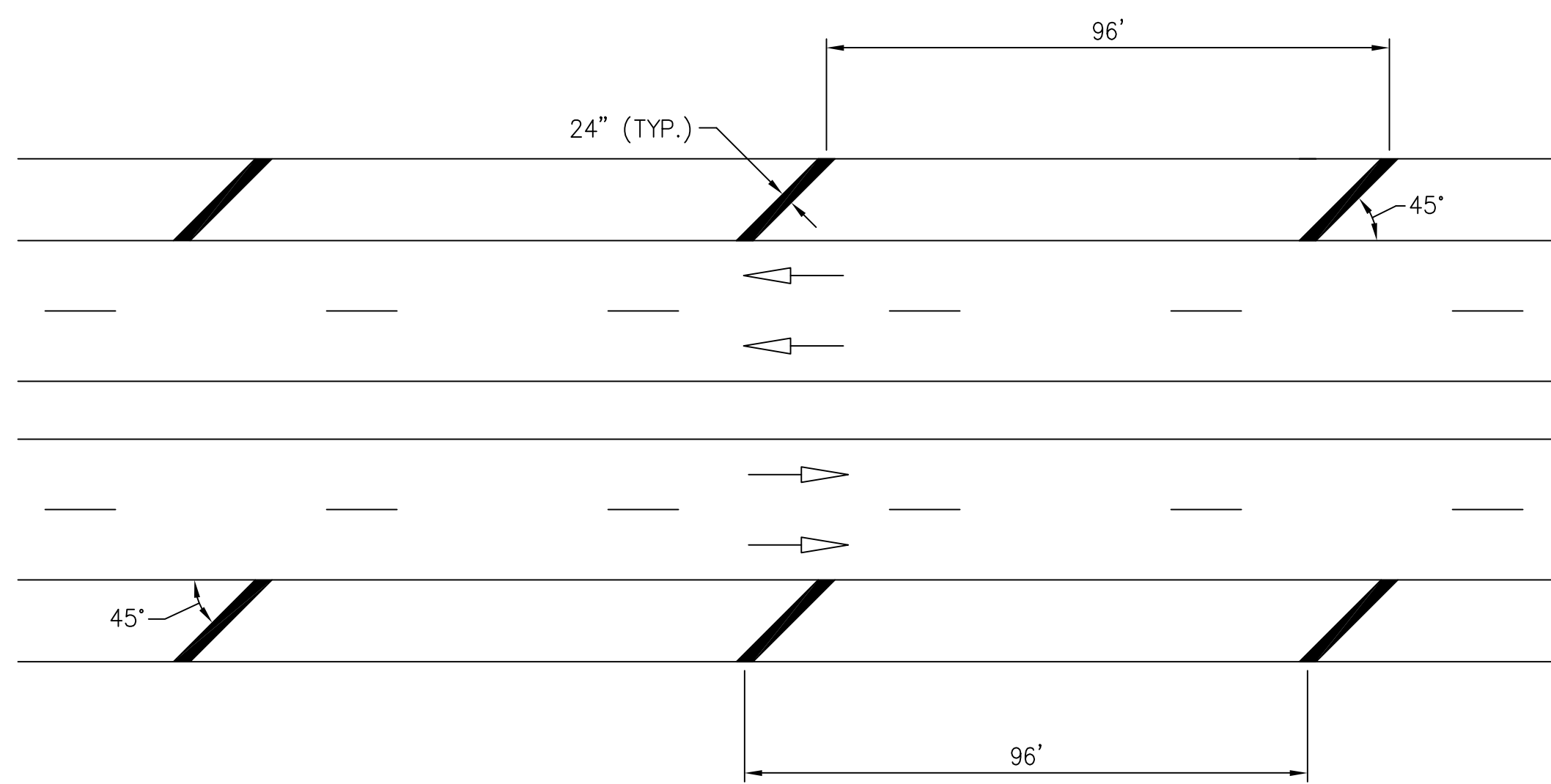


RECOMMENDED: OCTOBER 6, 2006  
*Mark Berg*  
 ASSISTANT CHIEF ENGINEER - DESIGN  
 APPROVED: OCTOBER 6, 2006  
*Alphonse R. Jones*  
 CHIEF ENGINEER

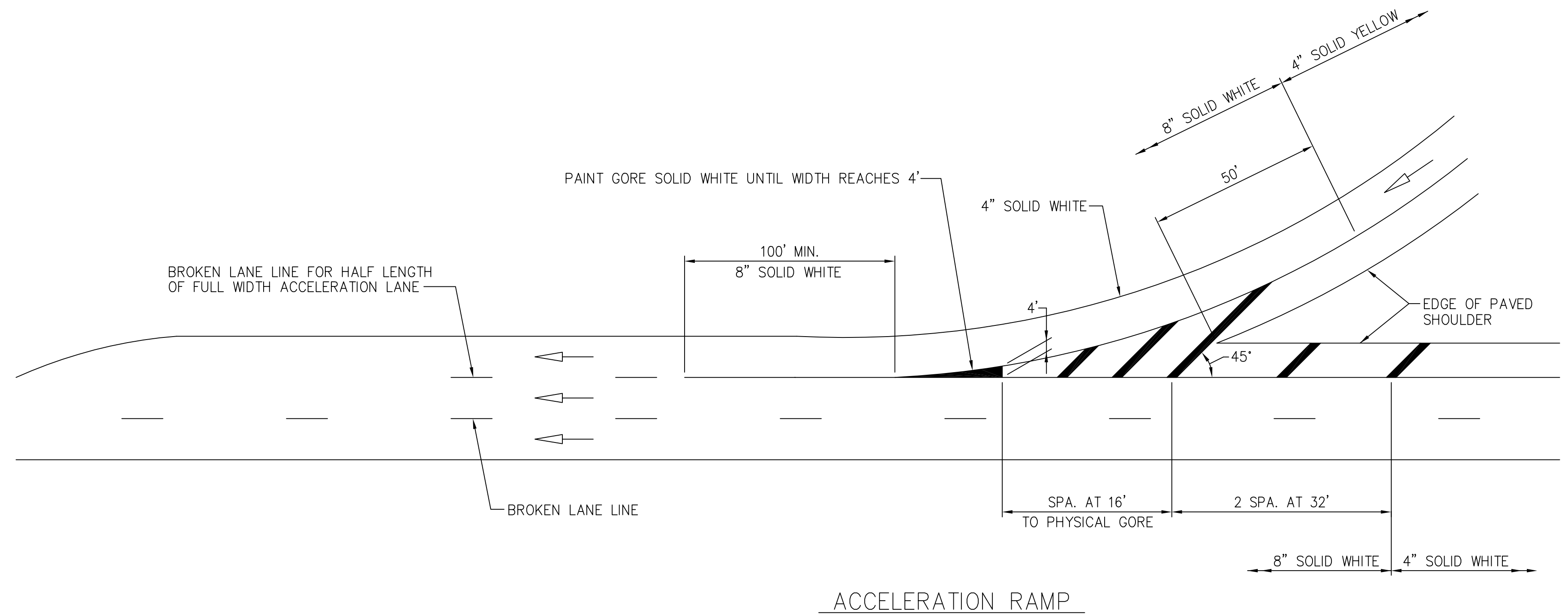
**CONSTRUCTION AND MAINTENANCE  
 MAINTENANCE AND PROTECTION OF TRAFFIC  
 TABULATION OF SIGNS**

**PENNSYLVANIA TURNPIKE COMMISSION  
 STANDARD DRAWING**

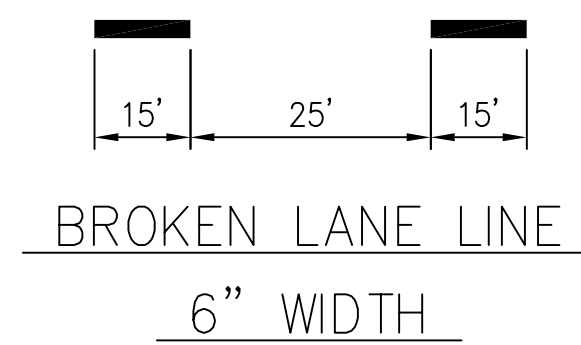
FILE NAME: PTS-960-4.dwg	SHEET 4 OF 4
DRAWING TYPE: 5A	
DATE: OCTOBER 2006	PTS-960



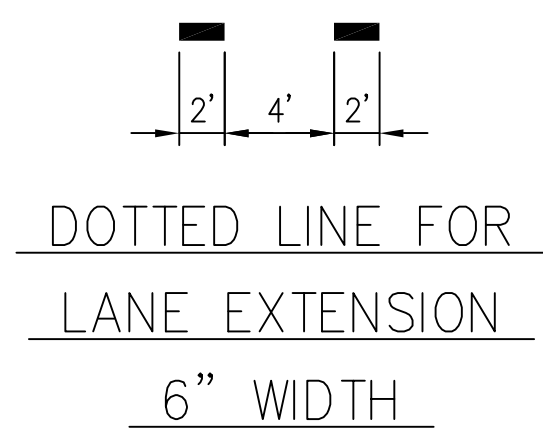
SHOULDER CROSSHATCHING FOR EXTRA WIDE SHOULDERS (>18')



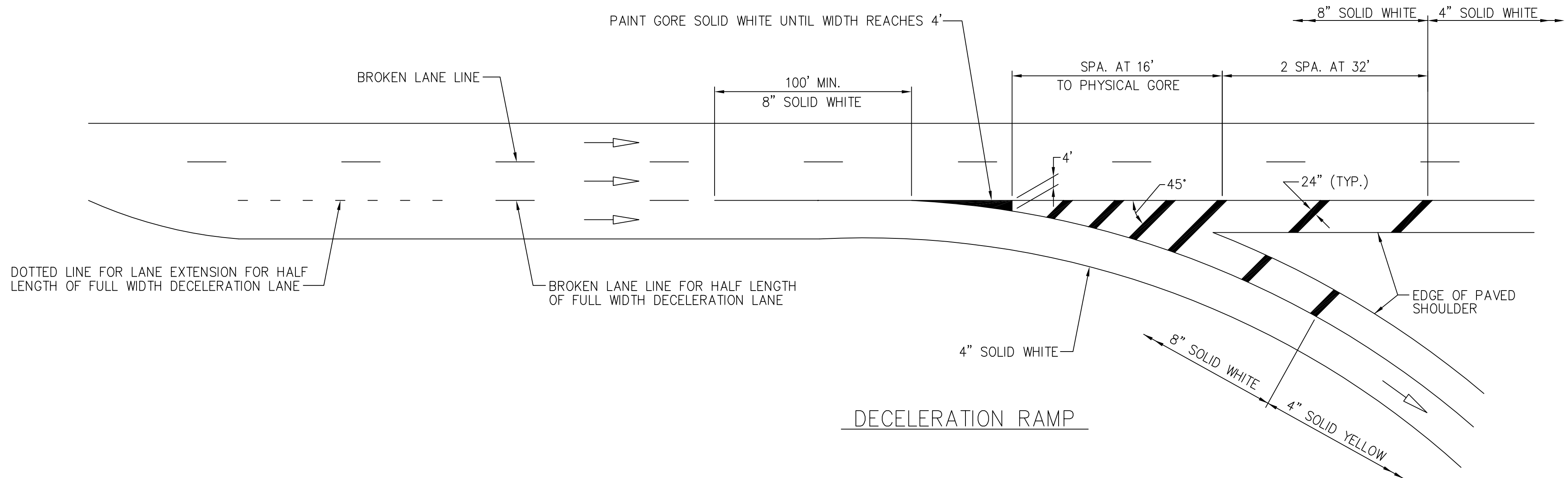
ACCELERATION RAMP



BROKEN LANE LINE  
6" WIDTH



DOTTED LINE FOR  
LANE EXTENSION  
6" WIDTH

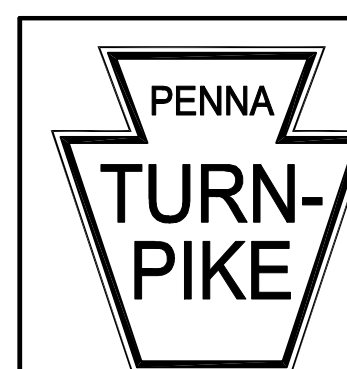


DECELERATION RAMP

GORE STRIPING DETAILS

NOTES:

1. THE REPRESENTATIVE WILL APPROVE THE EXACT LOCATIONS OF THE PAVEMENT MARKINGS PRIOR TO INSTALLATION.
2. ALL GORE AND SHOULDER CROSSHATCHING ARE WHITE.

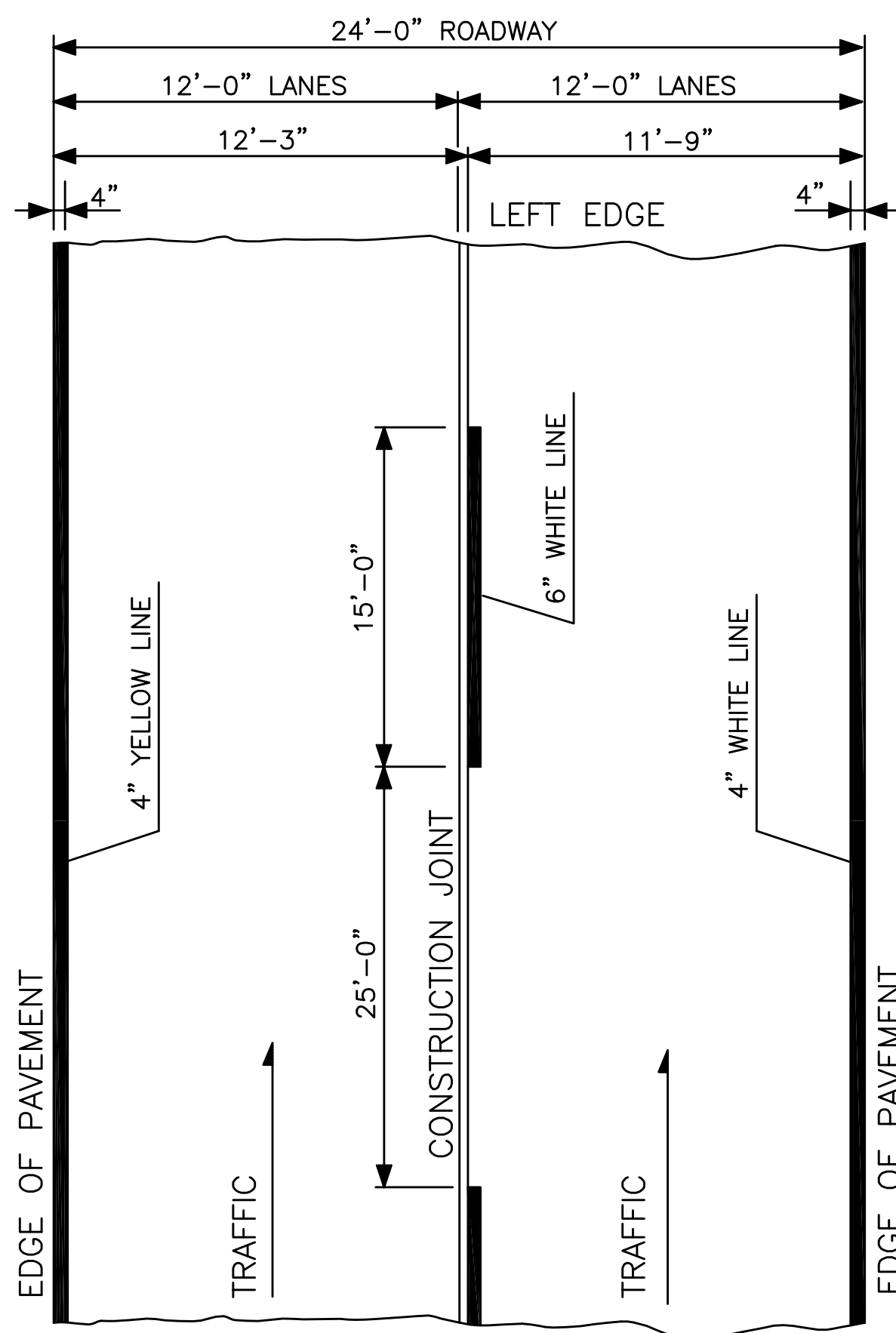


RECOMMENDED: OCTOBER 6, 2006  
*Mark Berg*  
 ASSISTANT CHIEF ENGINEER - DESIGN  
 APPROVED: OCTOBER 6, 2006  
*Alphonse R. Jones*  
 CHIEF ENGINEER

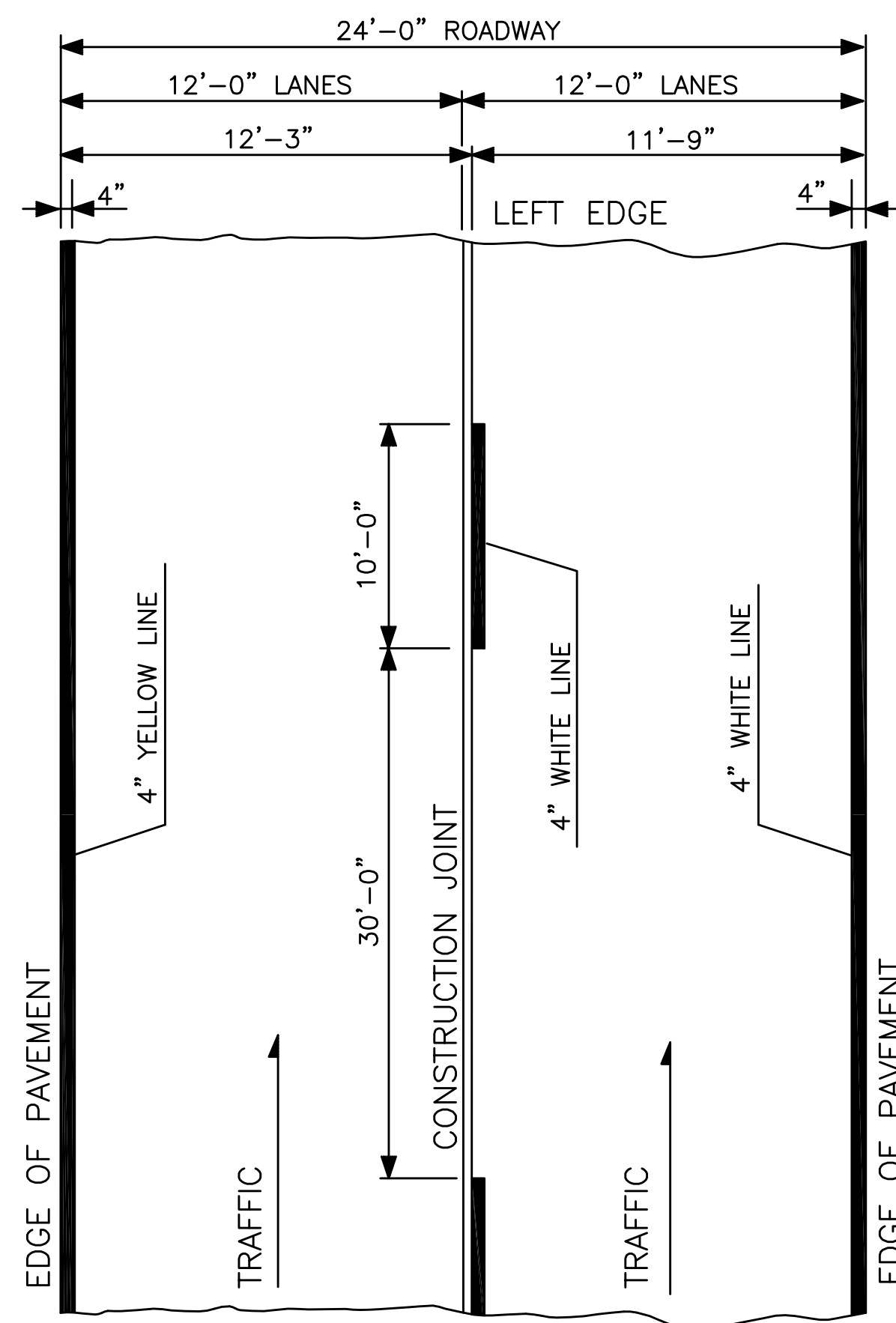
CONSTRUCTION AND MAINTENANCE  
 STRIPING DETAILS FOR  
 GORES AND SHOULDERS

PENNSYLVANIA TURNPIKE COMMISSION  
 STANDARD DRAWING

FILE NAME: PTS-980-1.dwg  
 DRAWING TYPE: 5A  
 SHEET 1 OF 2  
 DATE: OCTOBER 2006  
 PTS-980



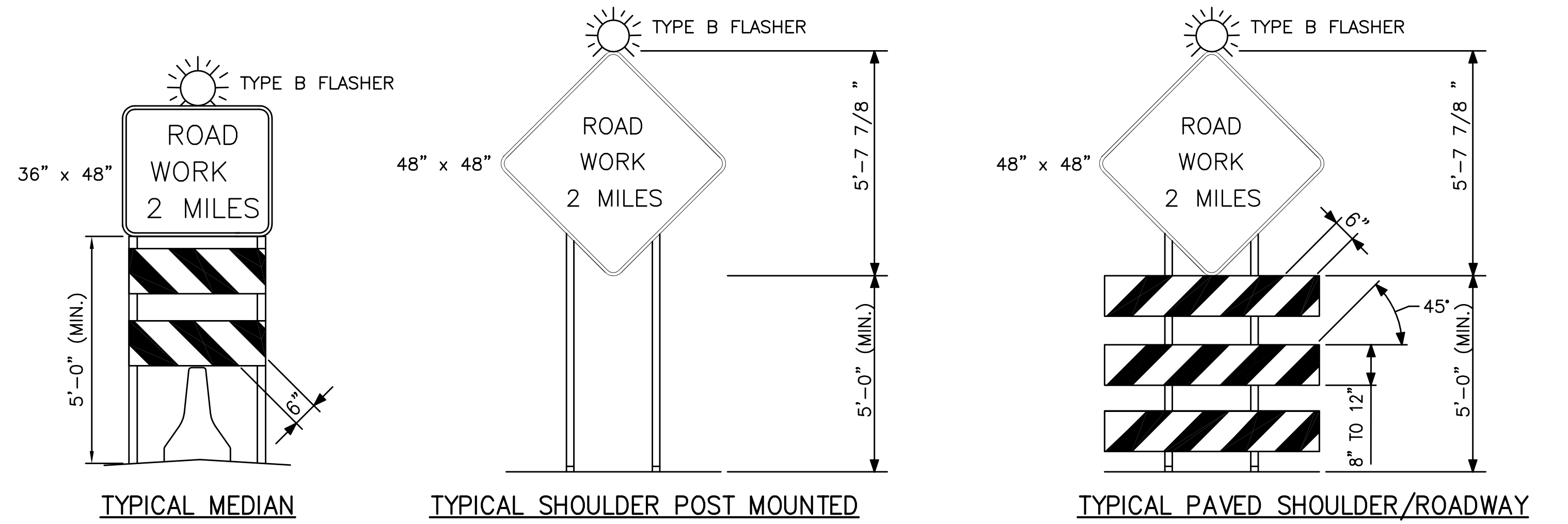
PERMANENT



\* TEMPORARY

\* NOTE - LOCATION OF TEMPORARY PAVEMENT MARKINGS AND WORK ZONE LANE WIDTHS ARE PROJECT DEPENDENT. REFER TO THE MAINTENANCE AND PROTECTION OF TRAFFIC SPECIAL PROVISION AND THE PROJECT PLANS.

TRAFFIC LINE PAINTING



TYPICAL MEDIAN

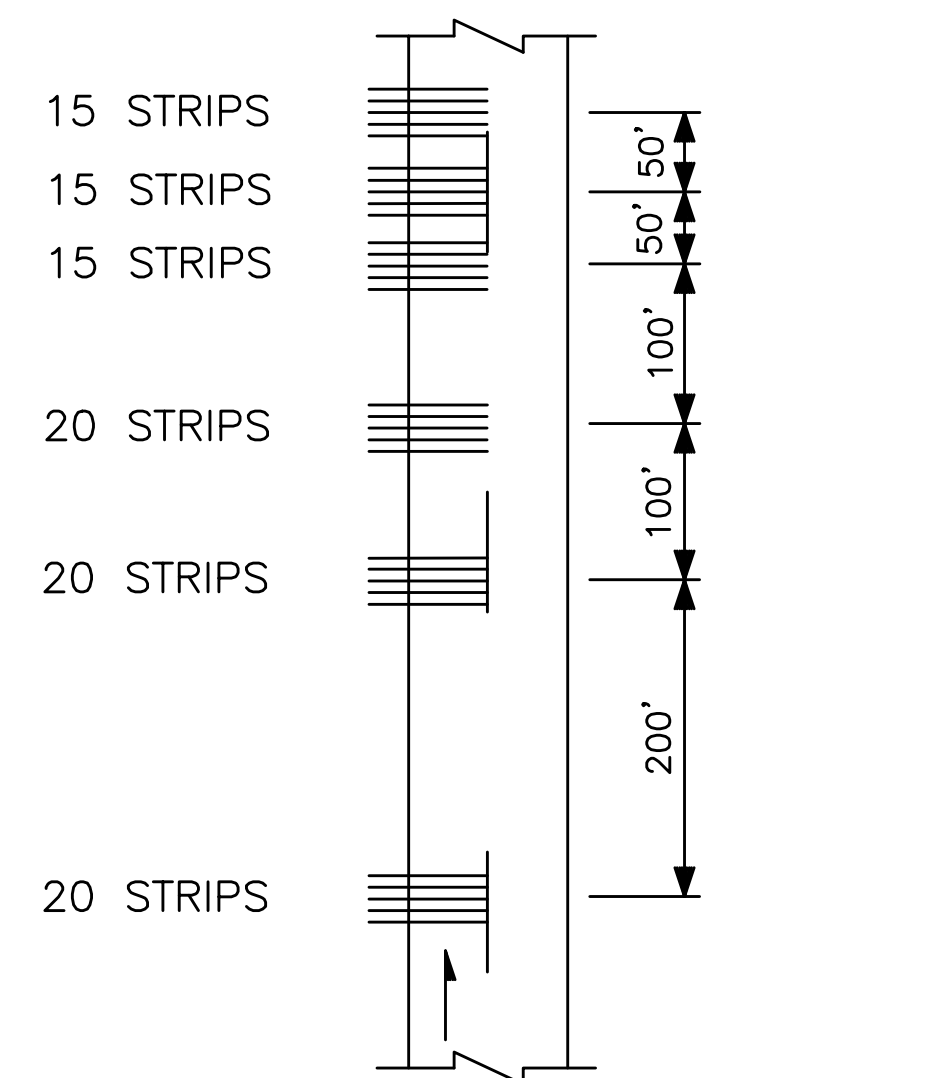
TYPICAL SHOULDER POST MOUNTED

TYPICAL PAVED SHOULDER/ROADWAY

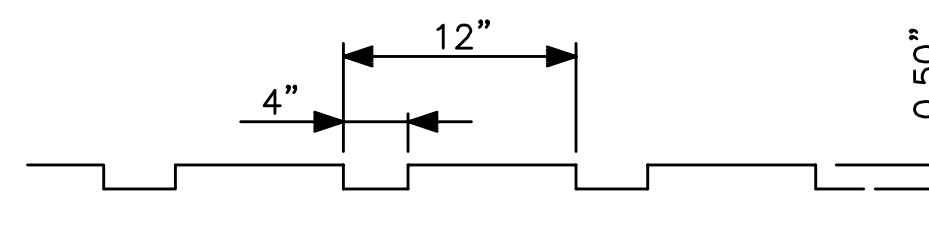
NOTES:

1. DISTANCE BETWEEN THE SIGN AND BARRICADE MAY VARY.
2. SHOULDER SIGNS ARE TO BE POST MOUNTED OFF THE PAVED SHOULDER UNLESS CONDITIONS WARRANT OTHERWISE.
3. THE LENGTH OF BARRICADE MAY NOT EQUAL OR EXCEED THE WIDEST HORIZONTAL DIMENSION OF THE WIDEST SIGN INSTALLED ON THE BARRICADE.

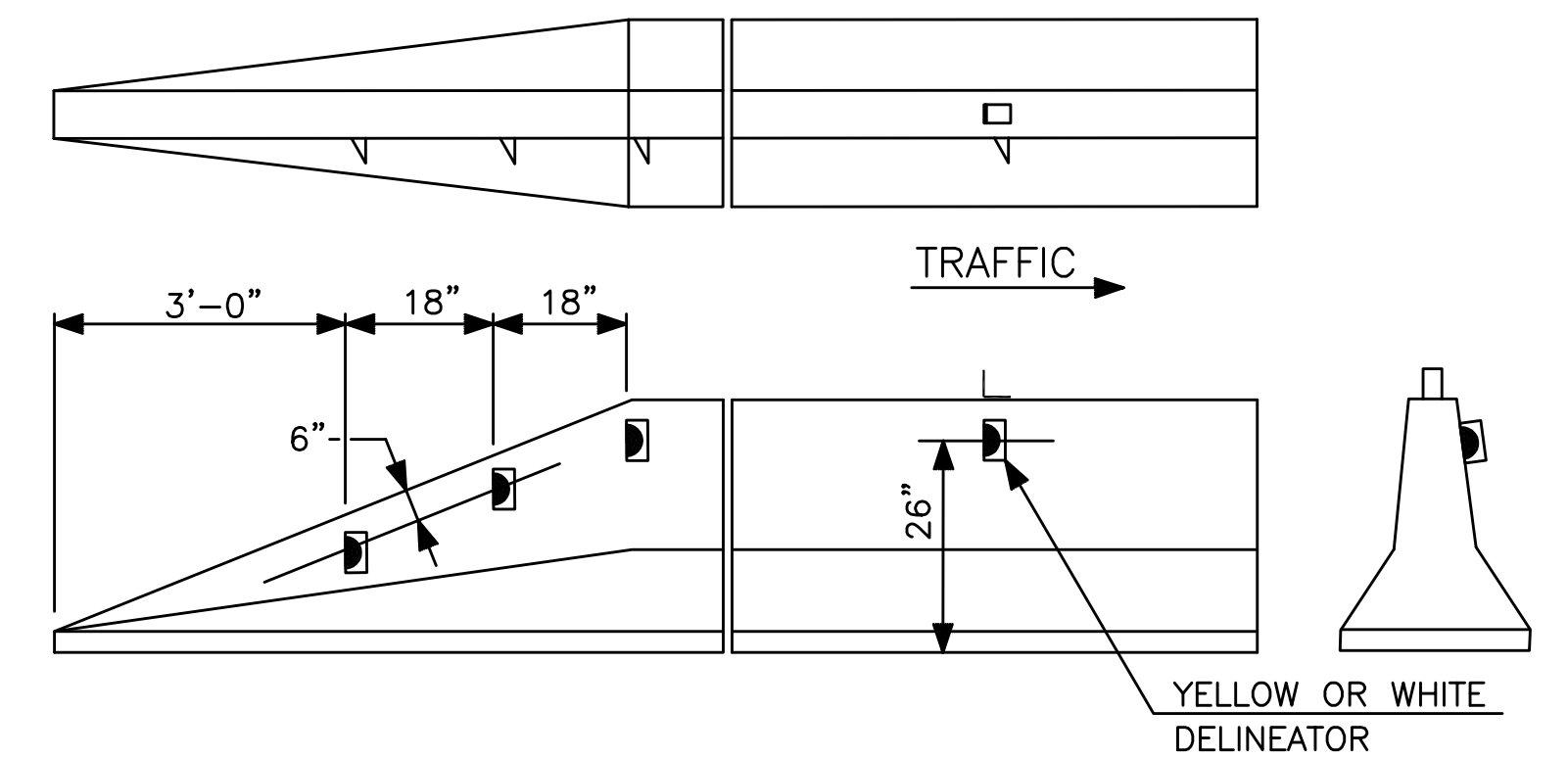
TYPICAL SIGN INSTALLATION



RUMBLE STRIP PATTERN



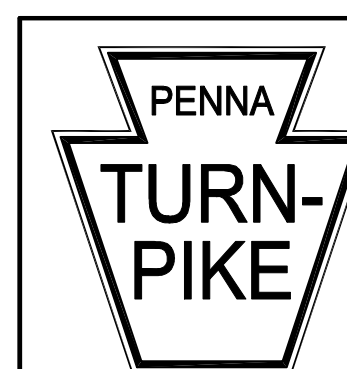
RUMBLE STRIP LONGITUDINAL CROSS SECTION  
RUMBLE STRIP DETAIL



NOTES:

1. PLACE ONE (1) YELLOW OR WHITE DELINEATOR ON THE SIDE AND ON THE TOP OF THE BARRIER AT THE MIDPOINT OF EACH CONCRETE BARRIER SECTION, FACING TRAFFIC UNLESS PERMANENT BARRIER IS USED IN CONSTRUCTION. FOR PERMANENT BARRIER USED IN CONSTRUCTION, INSTALL DELINEATORS AT FINAL SPACING. FOR SINGLE FACE CONCRETE BARRIER, INSTALL DELINEATORS AS DESCRIBED ABOVE FOR TEMPORARY CONCRETE BARRIER.
2. FOR CONNECTION OF GUIDE RAIL OR MEDIAN GUIDE RAIL TO TEMPORARY CONCRETE BARRIER, SEE PTS-135.

PLACING OF DELINEATORS ON TEMPORARY CONCRETE BARRIER



RECOMMENDED: OCTOBER 6, 2006

ASSISTANT CHIEF ENGINEER - DESIGN  
APPROVED: OCTOBER 6, 2006

CHIEF ENGINEER

**CONSTRUCTION AND MAINTENANCE  
MISCELLANEOUS DETAILS**

**PENNSYLVANIA TURNPIKE COMMISSION  
STANDARD DRAWING**

FILE NAME: PTS-980-2.dwg  
DRAWING TYPE: 5A  
SHEET 2 OF 2

DATE: OCTOBER 2006  
PTS-980