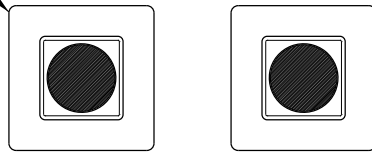
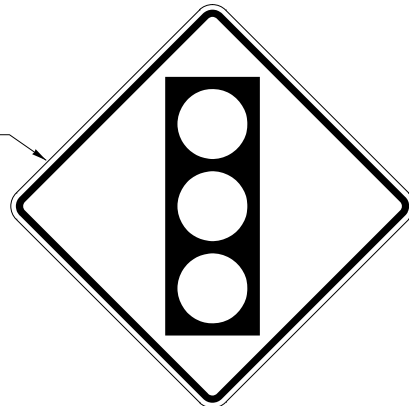


12" YELLOW SIGNAL
DISPLAY WITH
BACKPLATE (TYP.)



SIGN W3-3
48" (IN) x 48" (IN)



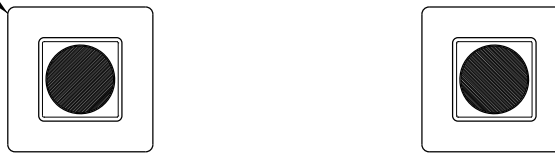
6" C
8" D
6" C



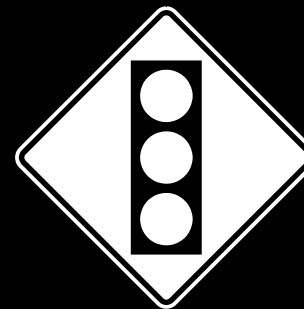
SIGN W3-601
60" (IN) x 36" (IN)

BASIC GROUND SIGN

12" YELLOW SIGNAL
DISPLAY WITH
BACKPLATE (TYP.)



36" x 36"
W3-3 SIGN
OVERLAY



8" D
8" D



4'-6"
BLACK BACKGROUND
3'-6"
YELLOW BACKGROUND
8'-0"

8'-0"

ENHANCED GROUND SIGN

NOTES

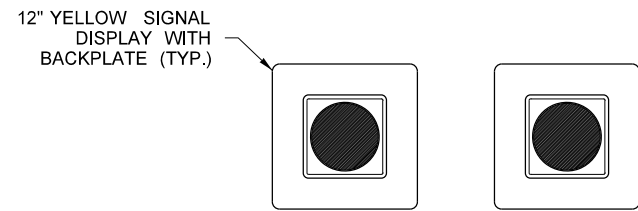
1. SEE PTSWF - TYPE FB STD DETAILS SHEET FOR BASIC GROUND SIGN INSTALLATION.
2. SEE STANDARD PLAN J-40.35 FOR ENHANCED GROUND SIGN INSTALLATION DETAILS. INSTALL BEACONS ABOVE OUTERMOST SIGN POSTS.
3. USE GATED (LEFT AND RIGHT SIDE INSTALLATION) STANDARD GROUND SIGNS WHEN DIRECTED BY THE REGION TRAFFIC ENGINEER.
4. USE ENHANCED GROUND SIGN WHERE DIRECTED BY THE REGION TRAFFIC ENGINEER. TYPICAL APPLICATIONS INCLUDE NEED FOR INCREASED VISIBILITY OR POOR BACKGROUND CONTRAST FOR STANDARD SIGN.

USAGE CASES

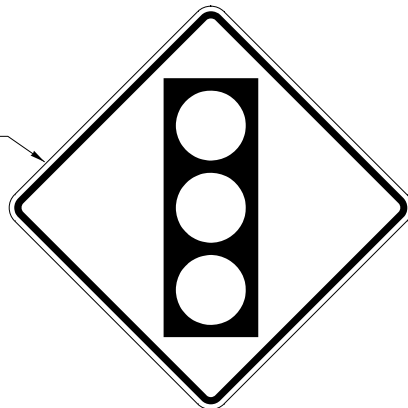
1. SINGLE LANE APPROACH
2. SINGLE LANE APPROACH WITH TWO-WAY LEFT TURN LANE
3. MULTILANE APPROACH WITH MEDIAN. LOCATIONS WITH MEDIAN BARRIER REQUIRE APPROVAL FROM THE REGION TRAFFIC ENGINEER.

**PREPARE TO STOP
WHEN FLASHING (PTSWF)
BASIC HIGHWAY SIGNING**

FILE NAME	C:\Storage\01 Manual Revisions\05 Operations\IP2 - AWS\WSDOT_PTSWF_Sign_Details_2021-09-30.dgn				REGION NO.	STATE	FED.AID PROJ.NO.	Washington State Department of Transportation	WSDOT ADVANCE WARNING SYSTEMS PTSWF SIGNING DETAILS	Plot 1
TIME	16:32:02	10	WASH				PLAN REF NO PSD1			
DATE	09/30/21									SHEET
PLOTTED BY	Jacksfl									OF
DESIGNED BY	F. JACKSON									SHEETS
ENTERED BY	F. JACKSON									
CHECKED BY										
PROJ. ENGR.										
REGIONAL ADM.		REVISION	DATE	BY						



12" YELLOW SIGNAL DISPLAY WITH BACKPLATE (TYP.)



SIGN W3-3
48" (IN) x 48" (IN)



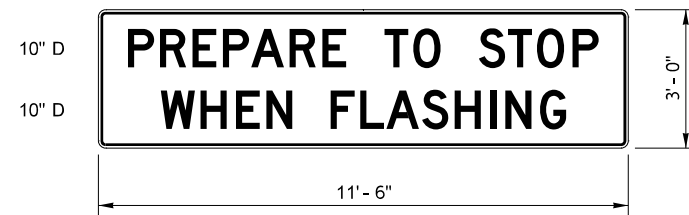
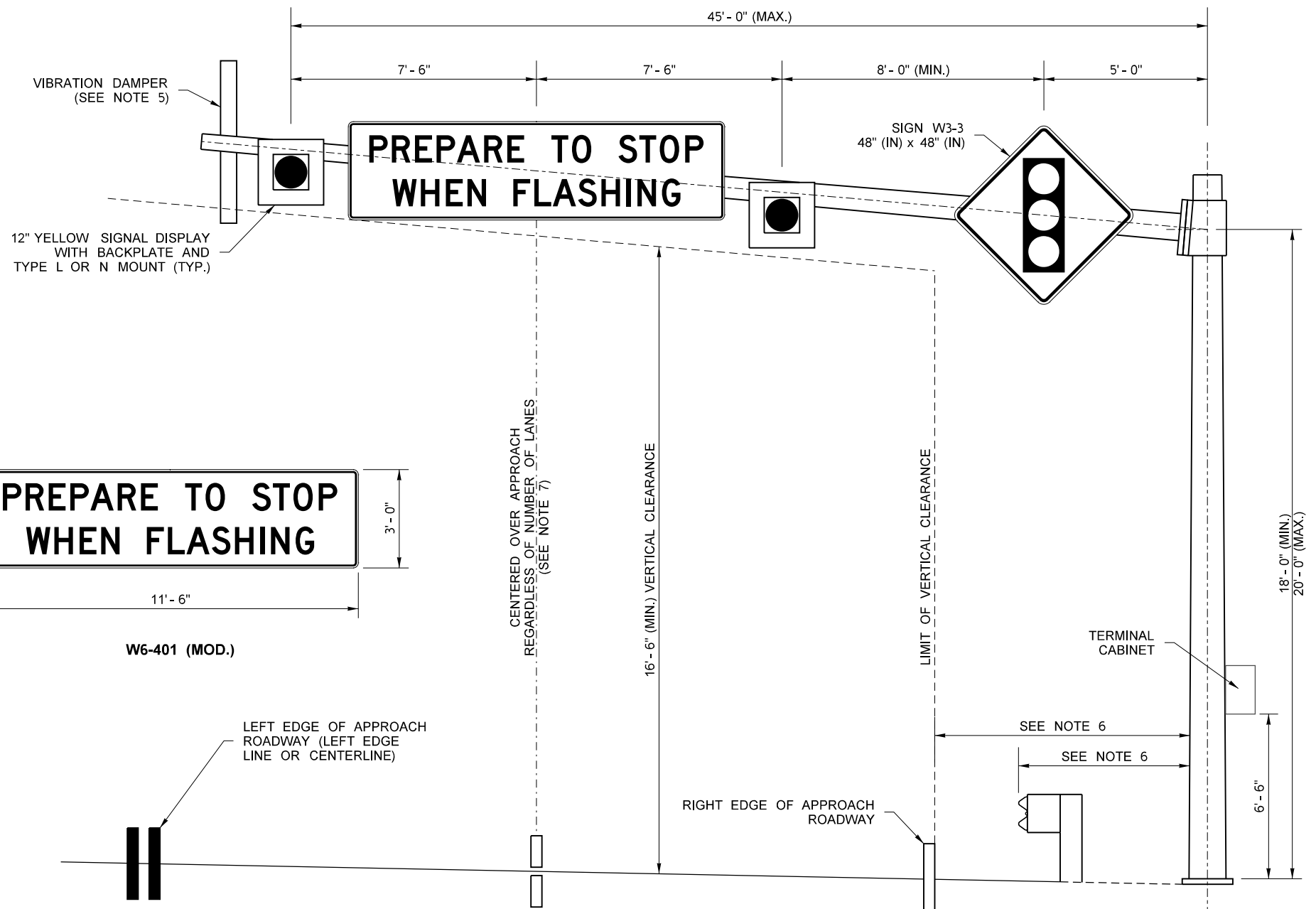
SIGN W3-601
60" (IN) x 36" (IN)

BASIC GROUND SIGN

USAGE CASES

- MULTILANE HIGHWAY THAT IS NOT A FREEWAY OR EXPRESSWAY.

PREPARE TO STOP WHEN FLASHING (PTSWF) MULTILANE HIGHWAY SIGNING



W6-401 (MOD.)

LEFT EDGE OF APPROACH ROADWAY (LEFT EDGE LINE OR CENTERLINE)

RIGHT EDGE OF APPROACH ROADWAY

MULTILANE OVERHEAD INSTALLATION

NOTES

- SEE **PTSWF - TYPE FB STD DETAILS SHEET** FOR BASIC GROUND SIGN INSTALLATION.
- USE **STANDARD DETAIL IS-13** FOR MAST ARM INSTALLATIONS. MAST ARM LENGTH SHALL BE EITHER 40 OR 50 FEET IN LENGTH AS NEEDED.
- GROUND INSTALLATIONS MAY BE USED ON TWO-LANE APPROACHES WHERE SIGNS CAN BE INSTALLED ON BOTH THE LEFT AND RIGHT SIDE OF THE APPROACH. ENHANCED GROUND SIGNS MAY BE USED IN PLACE OF BASIC GROUND SIGNS WHEN DIRECTED BY THE REGION TRAFFIC ENGINEER.
- OVERHEAD INSTALLATION IS REQUIRED WHERE THERE ARE THREE OR MORE LANES ON THE APPROACH OR WHEN DIRECTED BY THE REGION TRAFFIC ENGINEER.
- VIBRATION DAMPER SHALL BE VALMONT MITIGATOR TR-1 OR APPROVED EQUAL.
- POLE PLACEMENT IS DEPENDENT ON SITE CONDITIONS. THE ROADSIDE FACE OF POLE SHALL BE NO LESS THAN:
- 6'-0" FROM FACE OF CURB OR EDGE OF SHOULDER
- 3'-0" FROM FACE OF GUARDRAIL
- 4'-0" FROM ROADSIDE TOE OF TYPE 2 CONCRETE BARRIER
BARRIER PROTECTION IS REQUIRED IN ACCORDANCE WITH **DESIGN MANUAL CHAPTER 1600** REQUIREMENTS FOR CANTILEVER SIGN SUPPORTS.
- WHERE CENTERING THE W6-401 SIGN OVER THE APPROACH WOULD EXCEED THE MAXIMUM ALLOWABLE MAST ARM LENGTH, CENTER THE SIGN AS CLOSE TO THE CENTER OF THE APPROACH AS POSSIBLE.

FILE NAME	C:\Storage\01 Manual Revisions\05 Operations\IP2 - AWS\WSDOT_PTSWF_Sign_Details_2021-09-30.dgn				REGION NO.	STATE	FED.AID PROJ.NO.
TIME	16:32:27						
DATE	09/30/21				10	WASH	
PLOTTED BY	Jacksff				JOB NUMBER		
DESIGNED BY	F. JACKSON				CONTRACT NO.		
ENTERED BY	F. JACKSON				LOCATION NO.		
CHECKED BY							
PROJ. ENGR.							
REGIONAL ADM.	REVISION	DATE	BY				

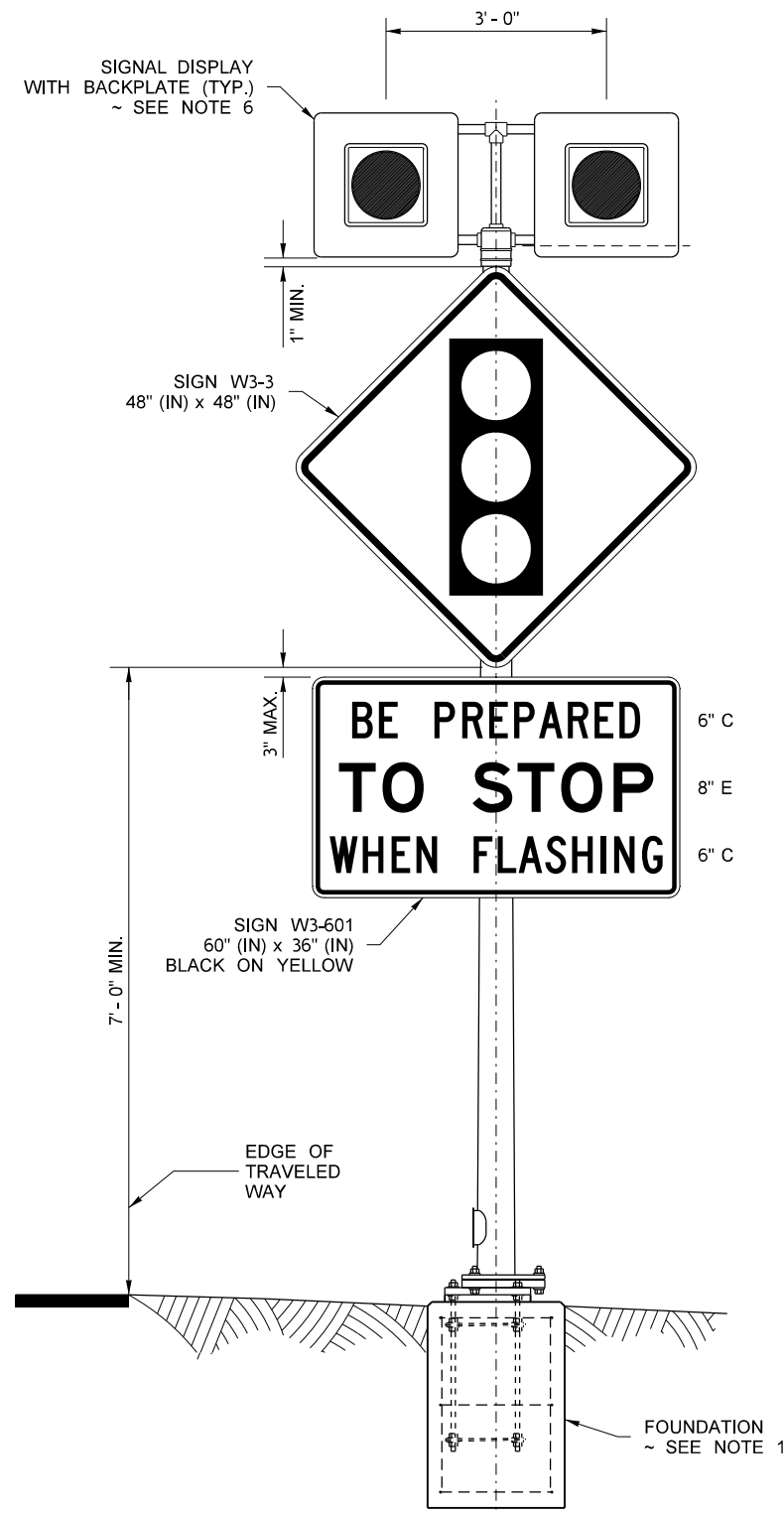
DATE	DATE
P.E. STAMP BOX	P.E. STAMP BOX



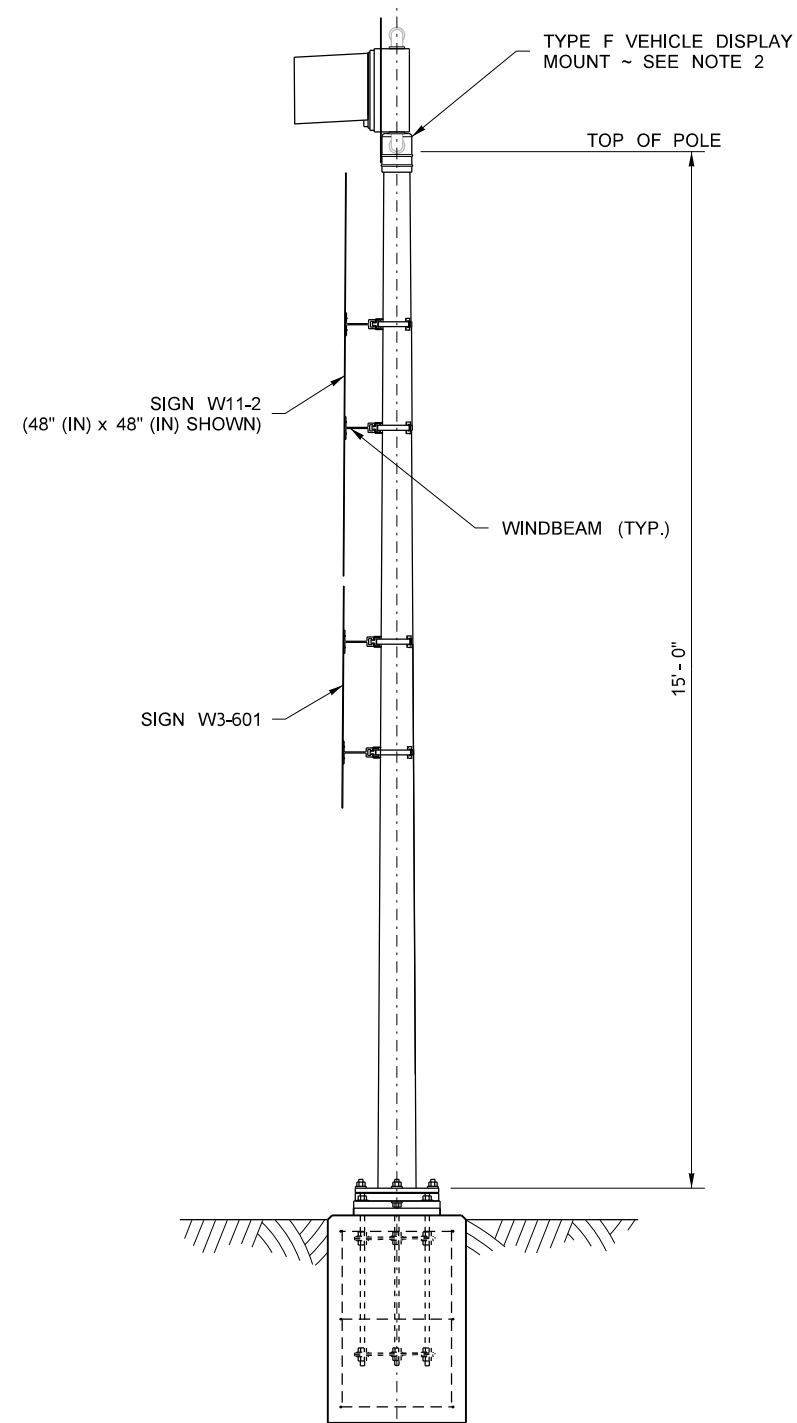
Plot 2
PLAN REF NO
PSD2
SHEET
OF
SHEETS

WSDOT
ADVANCE WARNING SYSTEMS
PTSWF SIGNING DETAILS

PTSWF SIGNING - MULTILANE HWY



FRONT ELEVATION VIEW



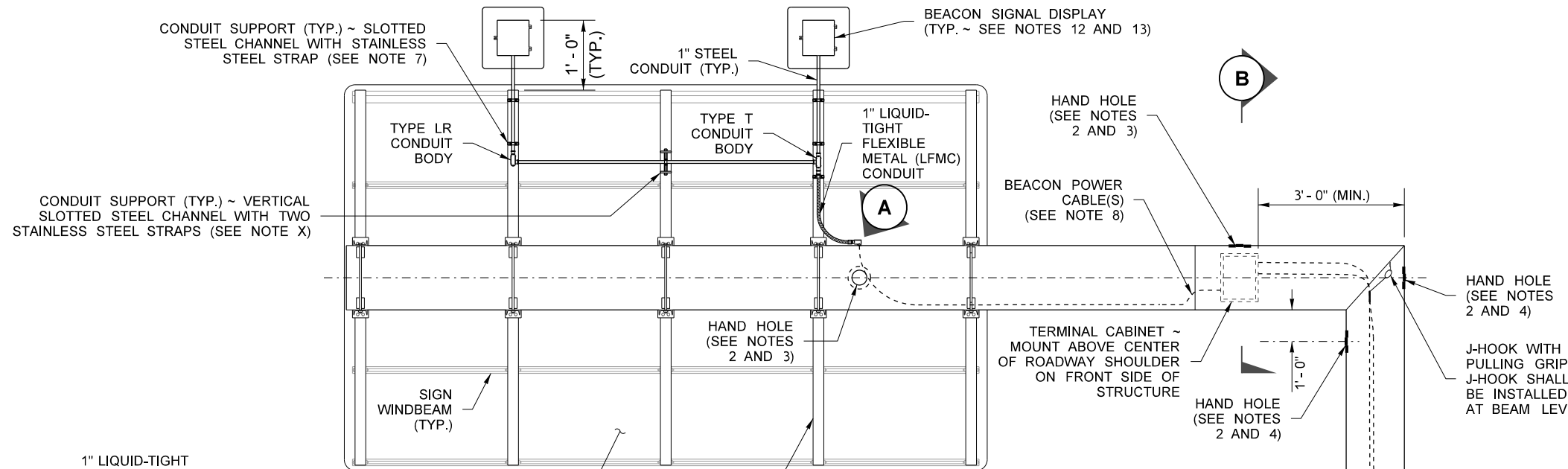
SIDE ELEVATION VIEW

NOTES

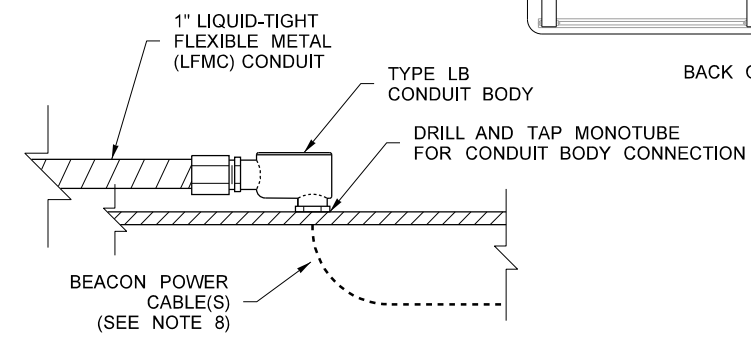
1. USE SLIP BASE FOUNDATION UNLESS OTHERWISE SPECIFIED. SEE **STANDARD PLAN J-21.10** FOR FOUNDATION DETAILS.
2. SEE **STANDARD PLAN J-21.16** FOR TYPE FB SIGNAL STANDARD DETAILS NOT SHOWN. SIGNAL DISPLAYS SHALL USE TYPE F MOUNTS AS SHOWN IN **STANDARD PLAN J-75.10**. FLASHER MODULE SHALL BE INSTALLED IN TERMINAL COMPARTMENT. ~ OPTION: INSTALLATION MAY USE TYPE F MOUNT WITHOUT TERMINAL COMPARTMENT WHERE CAP FLASHER INSTALLATION IS USED.
3. SEE **STANDARD PLAN J-21.17** FOR WIRING DETAILS NOT SHOWN.
4. SEE **STANDARD PLAN G-30.10** FOR SIGN INSTALLATION ON SIGNAL STANDARD DETAILS.
5. TOP OF POLE MOUNT SHALL MEET THE REQUIREMENTS OF **STANDARD SPECIFICATION 9-29.17**.
6. SIGNAL DISPLAYS SHALL BE 12 INCH DIAMETER YELLOW LED TYPE MEETING THE REQUIREMENTS OF **STANDARD SPECIFICATION 9-29.21**, INCLUDING DIMMING, HOUSING, VISORS, AND BACKPLATES SHALL BE ALUMINUM. VISORS SHALL BE TUNNEL TYPE. BACKPLATES SHALL BE 5 INCHES WIDE AND SHALL NOT HAVE REFLECTIVE TAPE.

**PREPARE TO STOP
WHEN FLASHING (PTSWF)
TYPE FB SIGNAL STANDARD**

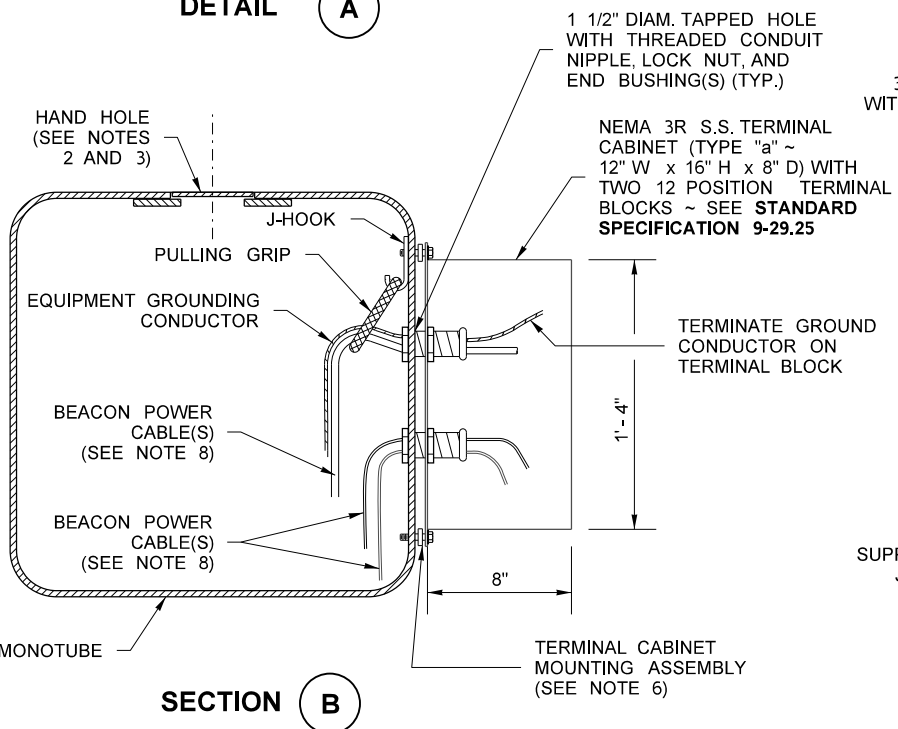
FILE NAME C:\Storage\01 Manual Revisions\05 Operations\IP2 - AWS\WSDOT_PTSWF_Sign_Details_2021-09-30.dgn		REGION NO.		STATE	FED.AID PROJ.NO.		Washington State Department of Transportation	WSDOT ADVANCE WARNING SYSTEMS PTSWF SIGNING DETAILS		Plot 4
TIME	16:33:15	10	WASH					PTSWF - TYPE FB STD DETAILS		PLAN REF NO PSD4
DATE	09/30/21	JOB NUMBER		LOCATION NO.						SHEET
PLOTTED BY	Jacksfl	CONTRACT NO.								OF
DESIGNED BY	F. JACKSON	DATE		BY						SHEETS
ENTERED BY	F. JACKSON	P.E. STAMP BOX		DATE						
CHECKED BY		P.E. STAMP BOX		DATE						
PROJ. ENGR.										
REGIONAL ADM.										



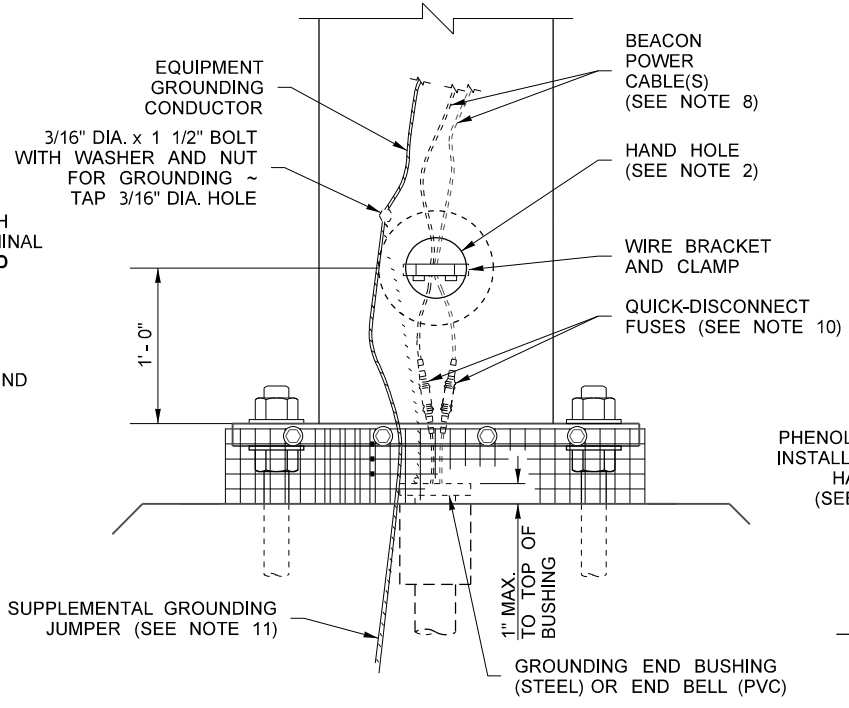
- NOTES**
- SEE MONOTUBE SIGN STRUCTURE DETAILS FOR DETAILS NOT SHOWN HERE.
 - HAND HOLES INSTALLED AT TIME OF FABRICATION. HAND HOLES SHALL BE 6 INCHES IN DIAMETER WITH GASKET AND REINFORCING RING. ONLY CONDUIT AND TERMINAL CABINET MOUNTING HOLES MAY BE FIELD INSTALLED. PROPER REPAIRS SHALL BE MADE TO THE STRUCTURE FOR ANY FIELD DRILLING PERFORMED.
 - HAND HOLES SHALL BE INSTALLED ON THE TOP OR REAR OF THE BEAM AND IN LINE WITH ANY CONDUIT CONNECTION OR NEMA ENCLOSURE.
 - HAND HOLES AT THE TOP OF THE COLUMN SHALL BE INSTALLED AT THE LOCATIONS SHOWN, WITH THE OUTSIDE HAND HOLE CENTERED ON THE HORIZONTAL CENTERLINE OF THE BEAM.
 - PHENOLIC TAG SHALL INCLUDE HIGHEST OPERATING VOLTAGE AND IDENTIFICATION NUMBER OF SUPPLYING CABINET. THIS TAG IS SEPARATE FROM THE SIGN STRUCTURE ID TAG.
 - TERMINAL CABINET SHALL BE INSTALLED USING 3/8 INCH DIA. x 1 1/2 INCH LONG BOLTS WITH WASHERS AND 1/4 INCH THICK NYLON BUSHING WASHERS AS SPACERS BETWEEN CABINET AND MONOTUBE - FOUR PLACES. ALL HARDWARE SHALL BE ASTM F593 OR A193 TYPE 304 OR TYPE 316 STAINLESS STEEL.
 - SECURE CONDUIT TO SIGN SUPPORT W BEAM USING STAINLESS STEEL STRAPS AND CONDUIT SUPPORTING HARDWARE (CHANNEL STEEL OR SIMILAR MOUNT).
 - WIRING FOR BEACON SYSTEMS MAY BE 2C, 2CS, OR TWO #10 AWG MEETING THE REQUIREMENTS OF THE APPLICABLE SECTION OF **STANDARD SPECIFICATION 9-29.3**. ONE OR TWO SETS OF WIRES/CABLES MAY BE REQUIRED, DEPENDING ON THE LOCATION OF THE FLASHER CONTROL - SEE CONTRACT PLANS.
 - TERMINATE EQUIPMENT GROUNDING CONDUCTOR ON TERMINAL BLOCK IN NEMA CABINET.
 - INSTALL QUICK DISCONNECT FUSES FOR ALL POWER CONDUCTORS (SEE **STANDARD SPECIFICATION 9-29.7**). FUSES SHALL BE SIZED AT 200% OF TOTAL CIRCUIT LOAD.
 - SUPPLEMENTAL GROUNDING JUMPER SHALL BE # 4 AWG NON-INSULATED COPPER WITH 3 FT (MIN.) OF SLACK. CLAMP TO VERTICAL REINFORCING STEEL IN FOUNDATION USING A LISTED CONNECTOR SUITABLE FOR USE EMBEDDED IN CONCRETE.
 - SIGNAL DISPLAYS SHALL BE 12 INCH DIAMETER YELLOW LED TYPE, MEETING THE REQUIREMENTS OF **STANDARD SPECIFICATION 9-29.21**, INCLUDING DIMMING. SIGNAL DISPLAYS SHALL USE TUNNEL VISORS, HOUSINGS, VISORS, AND BACKPLATES SHALL BE ALUMINUM. BACKPLATES SHALL BE 5 INCHES WIDE AND SHALL NOT HAVE REFLECTIVE TAPE.
 - BEACON PLACEMENT IS DEPENDENT ON THE NUMBER OF W BEAMS USED TO SUPPORT THE OVERHEAD SIGN. WHERE FOUR OR FEWER W BEAMS ARE USED, INSTALL BEACONS ON THE OUTERMOST W BEAMS. WHERE FIVE OR MORE W BEAMS ARE USED, INSTALL BEACONS ON THE SECOND TO LAST W BEAM AT EACH SIDE OF THE SIGN.



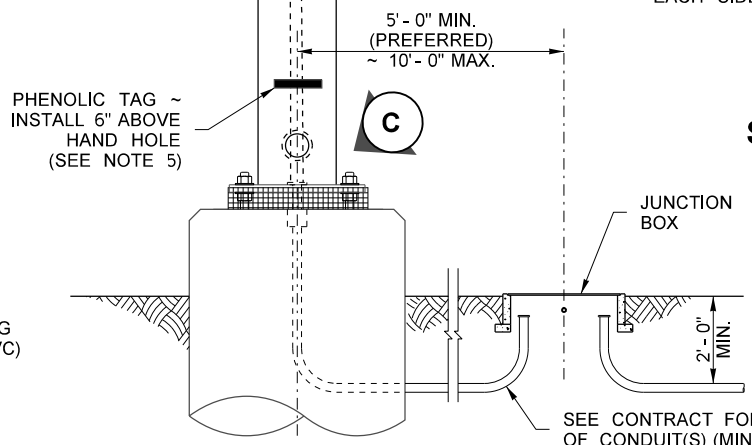
DETAIL A



SECTION B



DETAIL C



SECTION C

PREPARE TO STOP WHEN FLASHING (PTSWF) SIGN STRUCTURE INSTALLATION (CANTILEVER SHOWN)

FILE NAME	C:\Storage01 Manual Revisions\05 Operations\IP2 - AWS\WSDOT_PTSWF_Sign_Details_2021-09-30.dgn			REGION NO.	STATE	FED.AID PROJ.NO.	Washington State Department of Transportation	WSDOT ADVANCE WARNING SYSTEMS PTSWF SIGNING DETAILS	Plot 5
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DATE	09/30/21			JOB NUMBER				SHEET	
PLOTTED BY	Jacksff			CONTRACT NO.		LOCATION NO.		OF	
DESIGNED BY	F. JACKSON							SHEETS	
ENTERED BY	F. JACKSON								
CHECKED BY									
PROJ. ENGR.									
REGIONAL ADM.	REVISION	DATE	BY						