

ENGINEERING STANDARDS FOR PUBLIC WORKS CONSTRUCTION



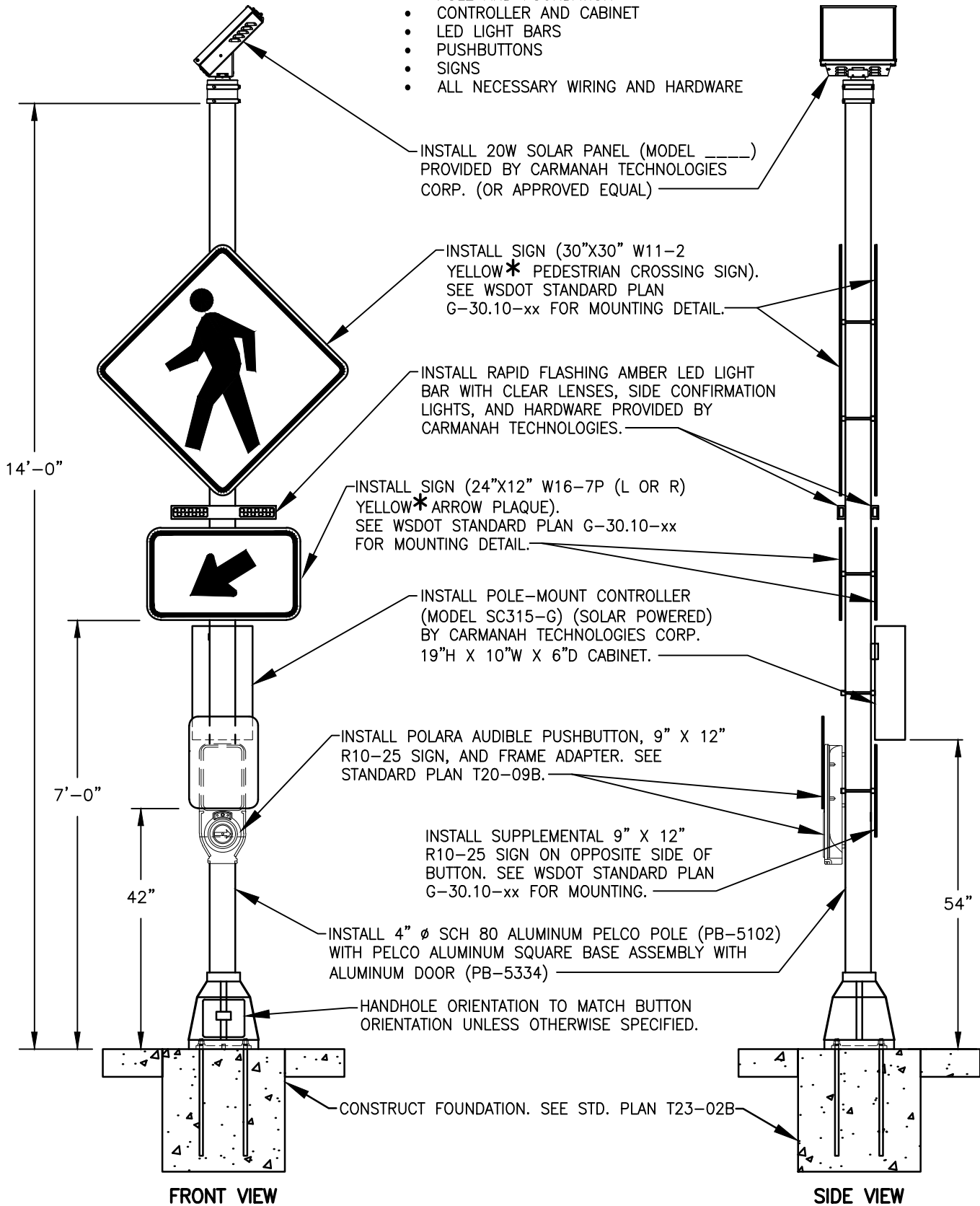
APPENDIX C Special Details

***Approved by Ridgefield City Council, Resolution 655
October 10, 2024***

***Technical Changes Approved by Public Works Director/City Engineer
February 6, 2025 and June 26, 2025***

RRFB COMPLETE ASSEMBLY TO INCLUDE:

- POLE AND FOUNDATION
- CONTROLLER AND CABINET
- LED LIGHT BARS
- PUSHBUTTONS
- SIGNS
- ALL NECESSARY WIRING AND HARDWARE



*"YELLOW" SIGNS IN SCHOOL ZONE ARE FLUORESCENT YELLOW-GREEN.

RECTANGULAR RAPID FLASHING BEACON (RRFB) ASSEMBLY WITH SOLAR MOUNTED POWER SOURCE



CITY OF VANCOUVER
DEPARTMENT OF PUBLIC WORKS
TRANSPORTATION DIVISION

DRAWN BY	APPROVED BY	APPROVAL DATE
CDC		7/19
REVISION	APPROVED BY	APPROVAL DATE
3		3/24

STD. PLAN NO.
T23-03

Pedestrian Crosswalk System

Solar-Powered BlinkerSign®

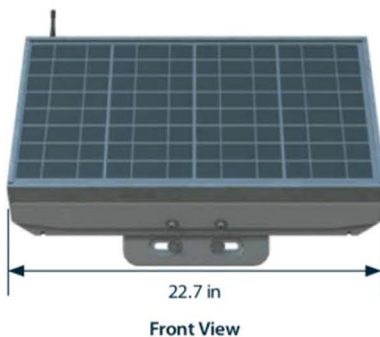


TRAFFIC SAFETY
SUPPLY COMPANY



20W/44AH TOP-OF-POLE SELF-CONTAINED CONTROL CABINET

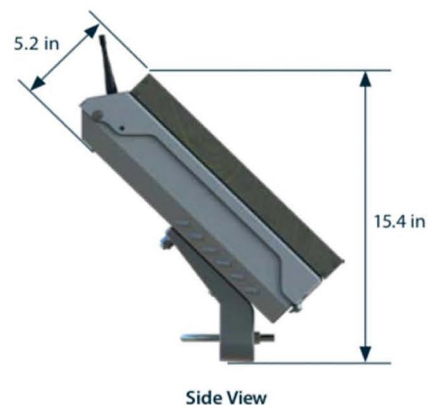
Housing	NEMA 3R type aluminum
Solar Panel	20 watt
Battery	12V, up to 44Ah
Battery Lifespan	3 to 5 years, field replaceable
Mounting Options	Round Poles: 2 3/8" up to 4 1/2"; Square posts: 1 3/4" up to 2 1/2"
Mounting Hardware	Stainless steel hardware
Warranty	3-year limited battery warranty 5-year limited battery warranty 10-year limited solar panel warranty



Front View



Back View



Side View

Note: Specifications are approximate and subject to change.
Some parts shown may be for illustration purposes only.

Pedestrian Crosswalk System

Solar-Powered BlinkerSign®



TRAFFIC SAFETY
SUPPLY COMPANY

BLINKERSIGN®	
Sign Legend	W11-2, W11-15 and S1-1 options available
Sign Substrate	.080" highway grade aluminum
Reflective Sheeting	3M DG3 with anti-graffiti overlay
Dimming	Variable based on photocell sensor input
Flash Pattern	MUTCD section 2A.07 compliant
LED Type	Environmentally-sealed, high-power 1 watt
LED Color	Amber
LED Quantity	8
LED Life Expectancy	100,000 hours
Visibility	Daytime: more than 1,000 feet Nighttime: more than 1 mile
Enclosed Channels	Protecting wiring against inclement weather, tampering and vandalism
Mounting Brackets	Single post standard. Double post or Z-bar available
Mounting Hardware	Various options available
Wind Load Rating	Up to 90mph*
Operating Temperature Range	-40°F to 122°F (-40°C to 50°C)
Dimensions	24"W x 24"H x 1"D 30"W x 30"H x 1"D 36"W x 36"H x 1"D
BLINKERBEAM® WIRELESS COMMUNICATION	
Frequency	900 MHz FHSS (Frequency Hopping Spread Spectrum)
Range	90 feet (radio site survey recommended)
Connectivity	Crosswalk and optional advanced warning LEDs activate concurrently
ACTIVATIONS	
Push Button Activation	ADA push button, typical (<120 millisecond)
User-Actuated Push Button	XAV2-LED or Bulldog 300, 20-second daily activations minimum
Passive Detection	Wireless bollards
Autonomy	23-day minimum
BLINKERBEAM® WIRELESS	
BlinkLink	Optional cloud software with cellular modem**



W11-2 BLINKERSIGN®



BLINKERBEAM®
WIRELESS RADIO



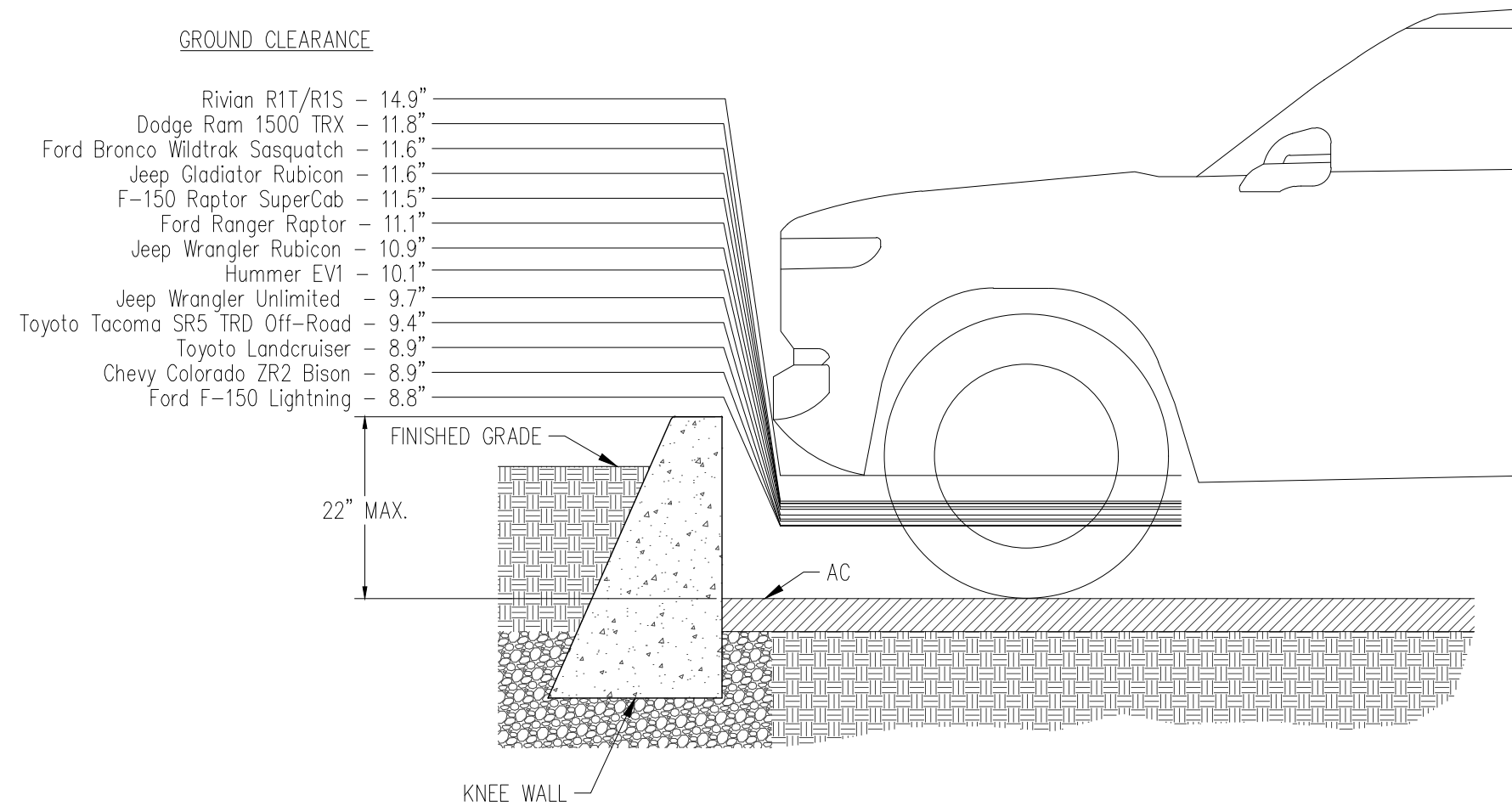
XAV2-LED
PUSH BUTTON



BULLDOG
PUSH BUTTON

Note: Specifications are approximate and subject to change. Some parts shown may be for illustration purposes only.

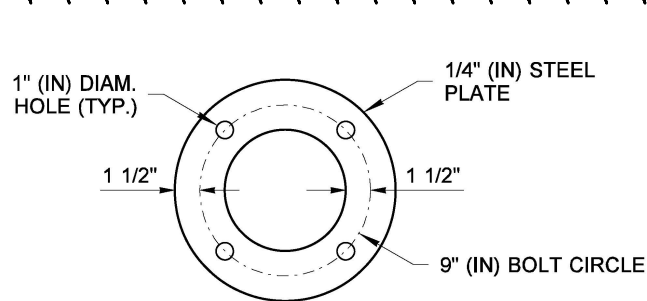
DWG: 8098 20240318 KNEE WALL | LAYOUT1



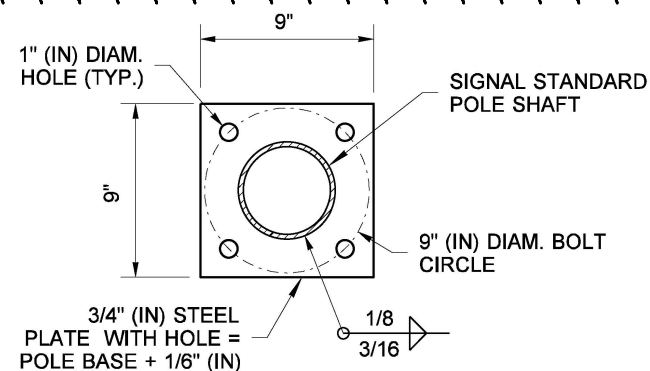
DATE: 3/18/24

GROUND CLEARANCE AND KNEE WALL NTS		EXHIBIT
UNION RIDGE		A
AKS ENGINEERING & FORESTRY, LLC 9600 NE 126TH AVE, STE 2520 VANCOUVER, WA 98682 360.882.0419 WWW.AKS-ENG.COM		DRWN: DJL CHKD: JMM AKS JOB: 8098





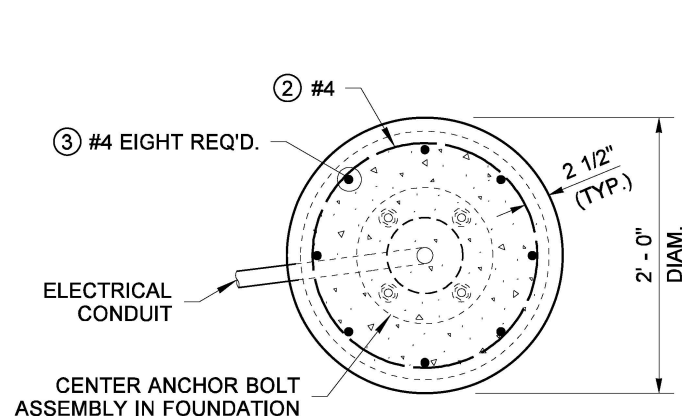
ANCHOR BOLT TEMPLATE



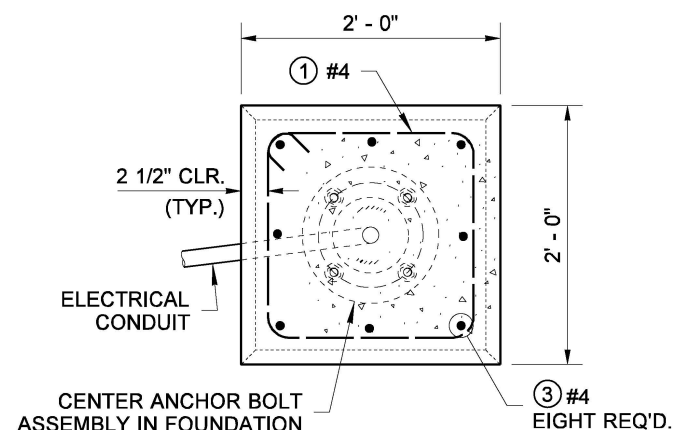
BASE PLATE DETAIL

NOTES

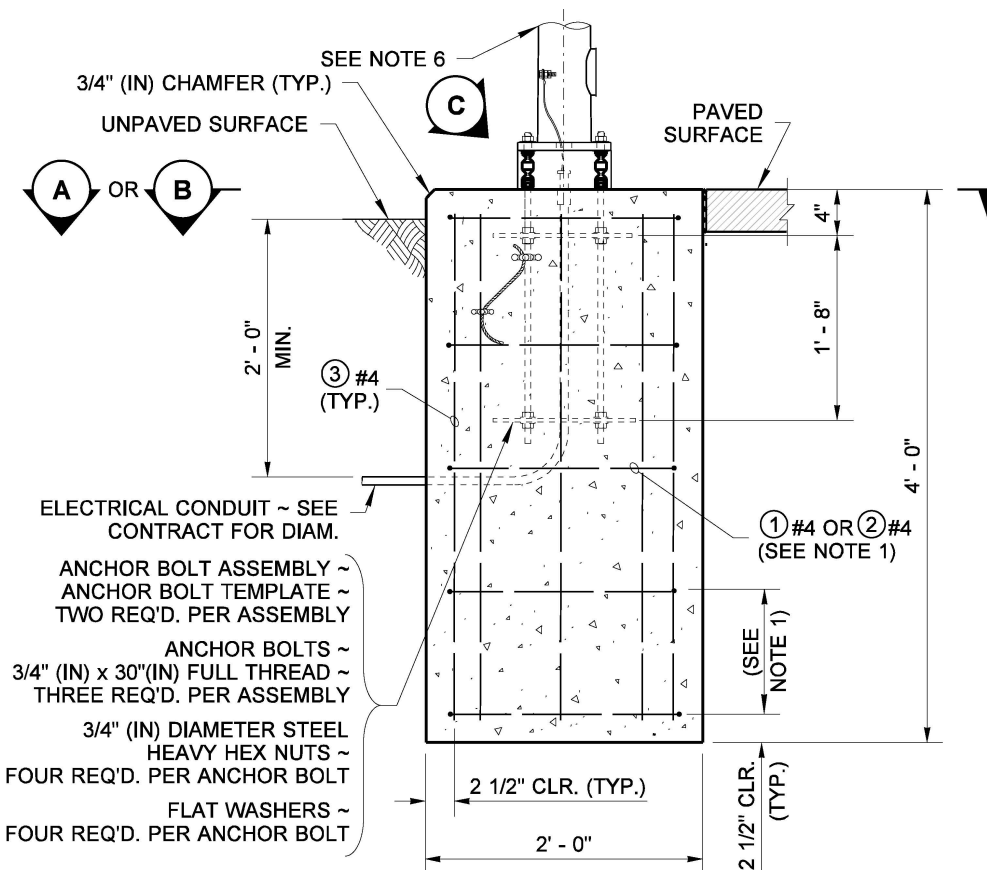
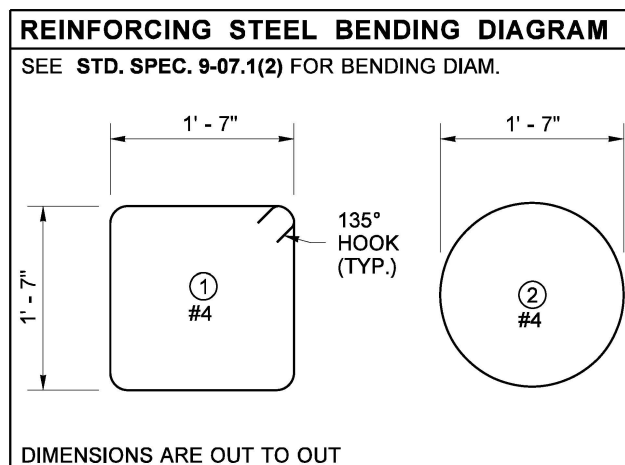
1. Round foundations require five reinforcing steel hoops at ~ 10" spacing. Square foundations require three reinforcing steel hoops at ~ 1' - 3 1/2" spacing.
2. Nuts for anchor bolts shall be **ASTM A563** Grade A, D, or DH. Washers for anchor bolts shall meet ASTM F436.
3. Supplemental grounding conductor shall be non-insulated #4 AWG stranded copper and shall be clamped to vertical rebar and anchor bolt with connectors suitable for use embedded in concrete. Supplemental ground shall be verified intact by Contracting Agency Inspector before placing concrete.
4. Junction box serving the Standard shall preferably be located 5' - 0" (10' - 0" Max.) from the Standard.
5. Provide cable tie at wiring entering the junction box ~ See **Detail A, Standard Plan J-28.70**.
6. See **Standard Plan J-20.16, J-21.15, J-21.16, or J-22.15** as applicable for pole details above this point.



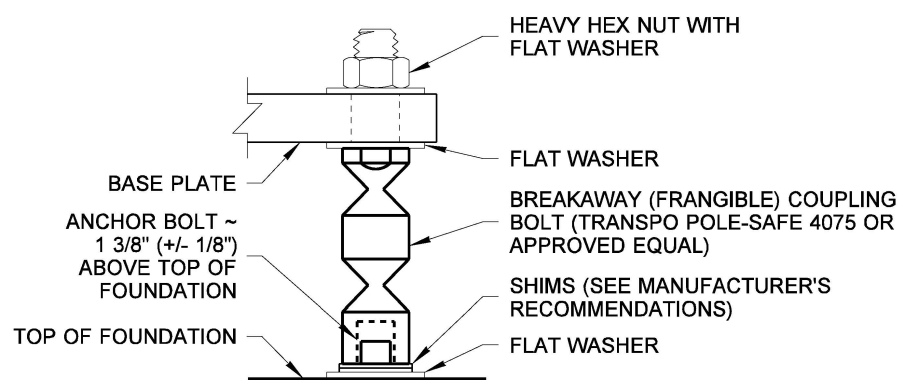
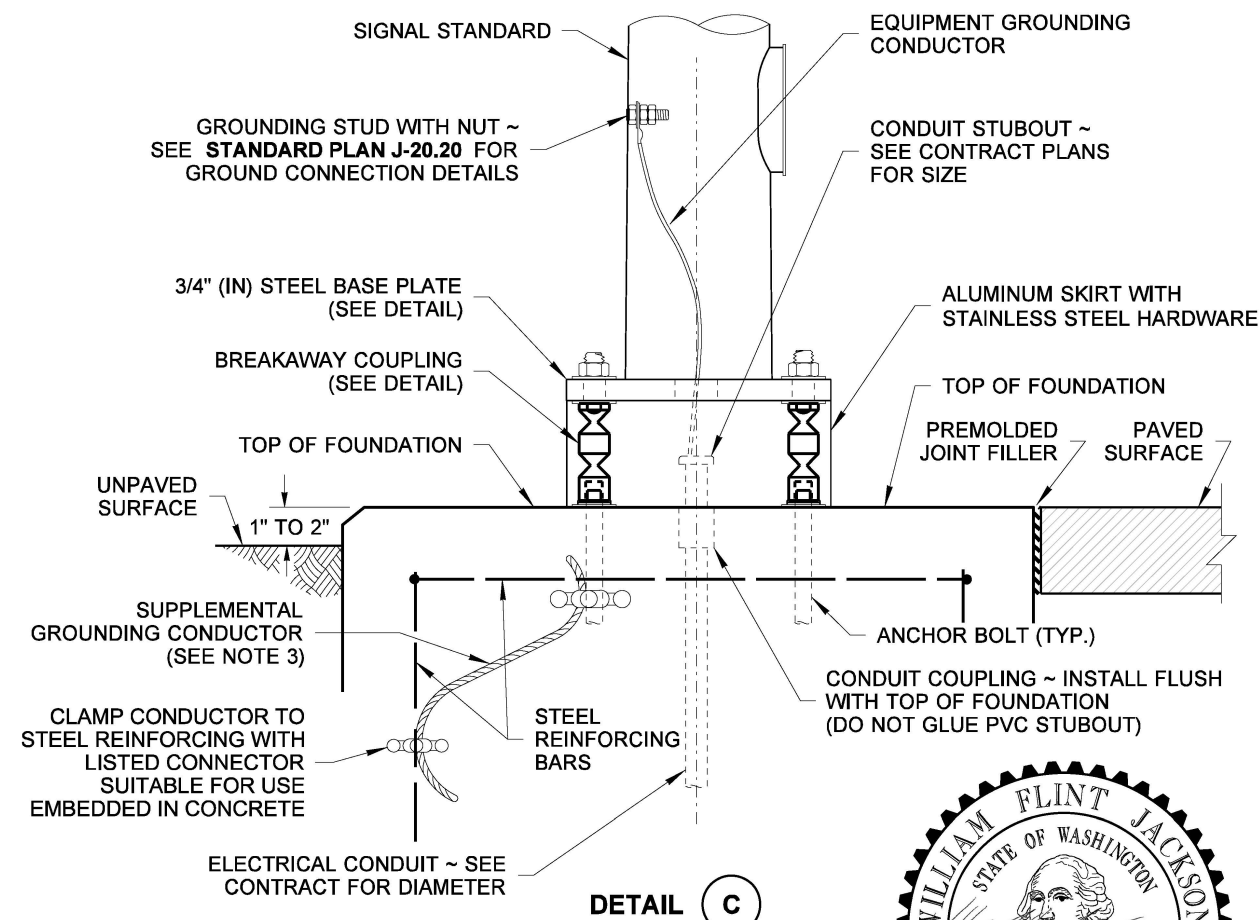
SECTION A
ROUND FOUNDATION - PLAN VIEW



SECTION B
SQUARE FOUNDATION - PLAN VIEW



ELEVATION
FLAT FOUNDATION DETAIL



BREAKAWAY COUPLING DETAIL



Jun 20, 2024

TYPE PS, TYPE 1, RM & FB SIGNAL STANDARD FOUNDATION DETAILS

STANDARD PLAN J-21.10-05

SHEET 1 OF 2 SHEETS

APPROVED FOR PUBLICATION

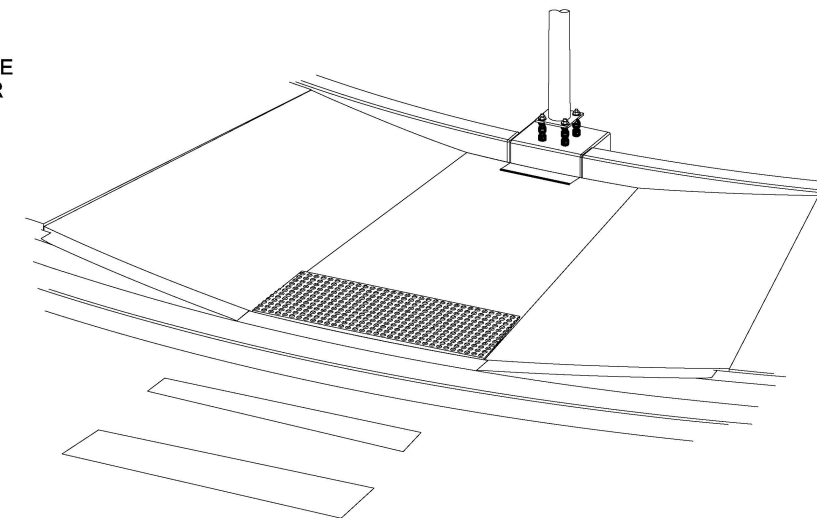
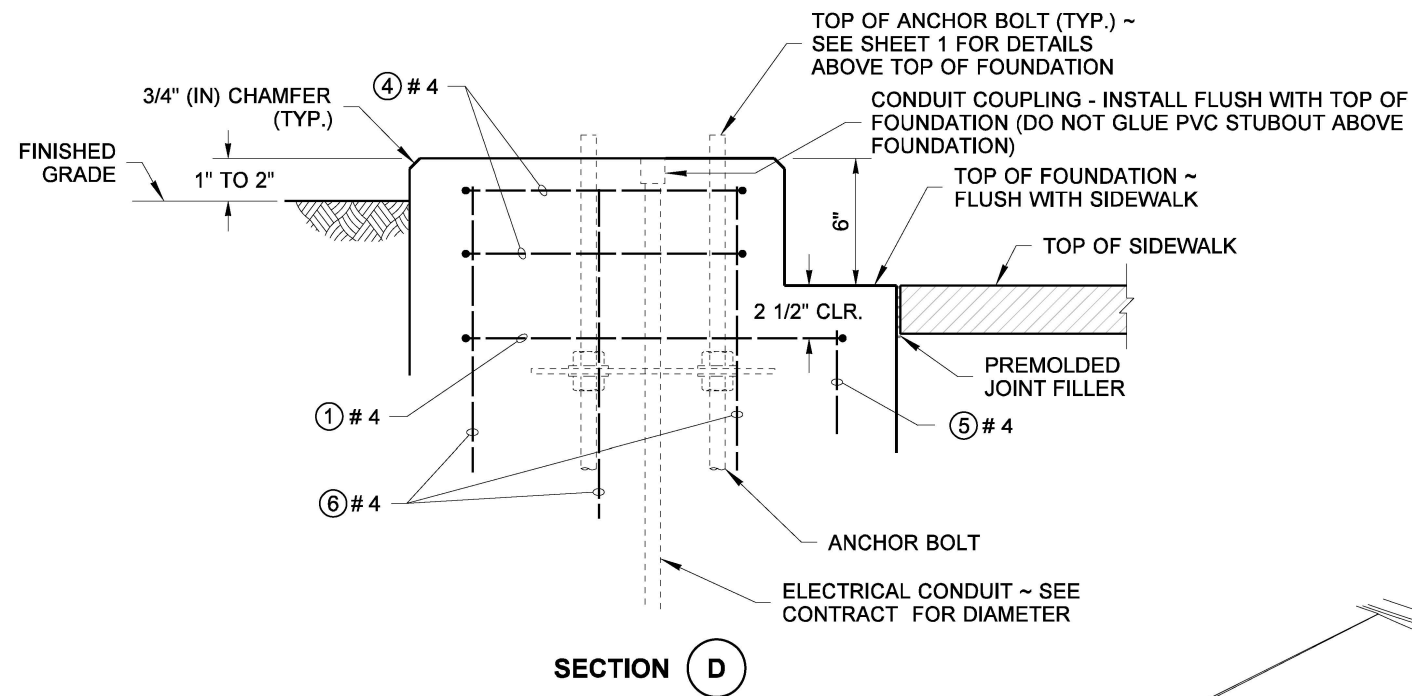
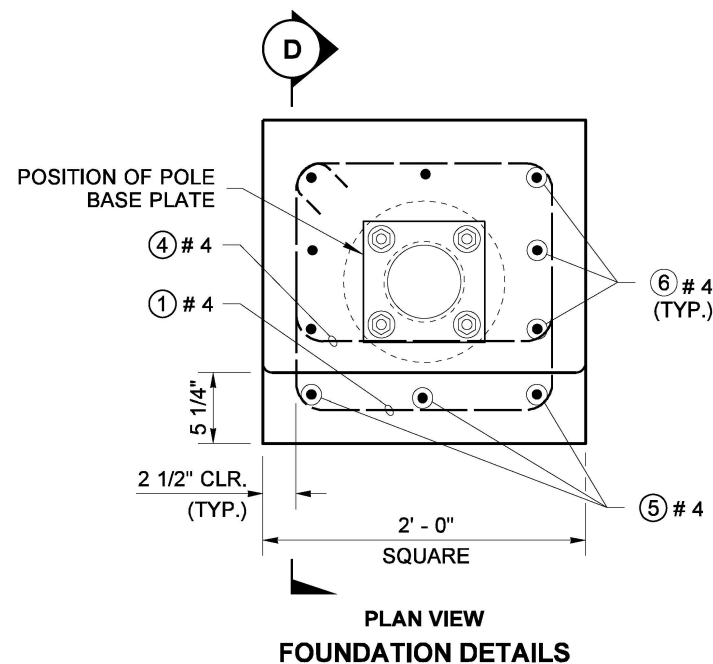
Mark A. Poirer

Jun 21, 2024

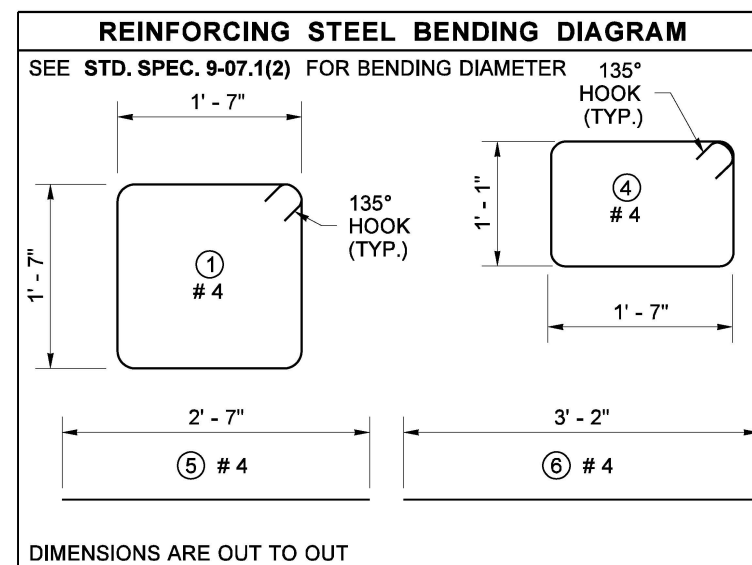
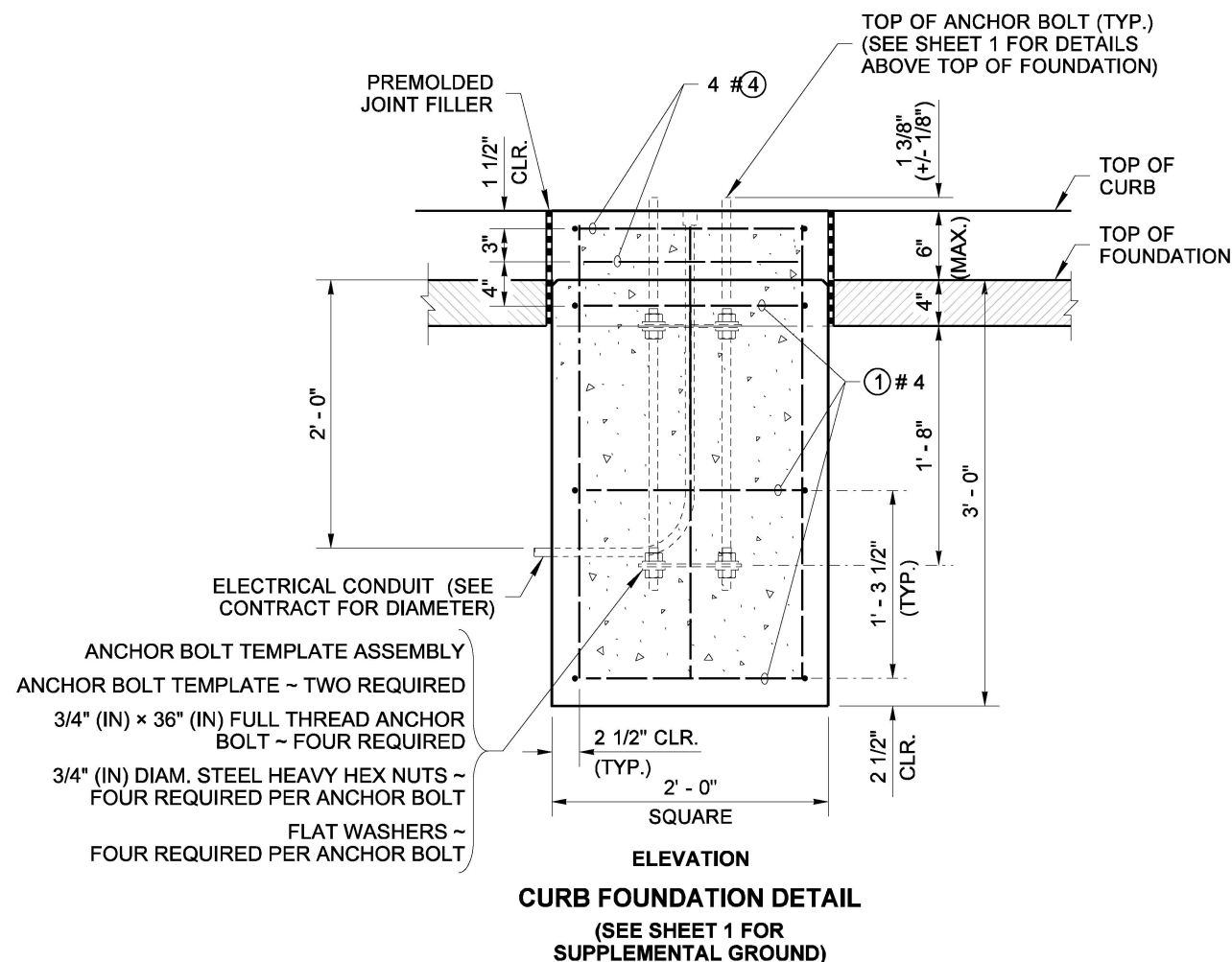
STATE DESIGN ENGINEER



Washington State Department of Transportation



REINFORCING STEEL QUANTITIES LIST				
MARK	①	④	⑤	⑥
QTY.	3	2	3	7



Jun 20, 2024

**TYPE PS, TYPE 1, RM
& FB SIGNAL STANDARD
FOUNDATION DETAILS
STANDARD PLAN J-21.10-05**

SHEET 2 OF 2 SHEETS

APPROVED FOR PUBLICATION

Mark A. Davis

Jun 21, 2024

STATE DESIGN ENGINEER



Washington State Department of Transportation