

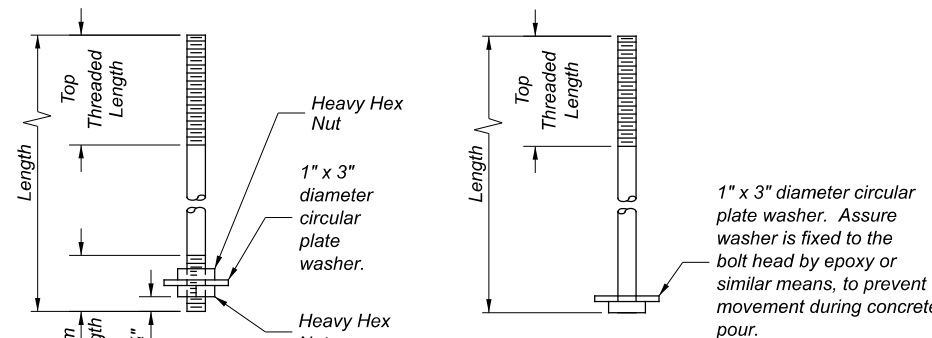
* Reinforcement Schedule for TC-21.11 Tie Beam and TC-21.50 - 42" Wall (For Each Foundation)

MARK	No.	LENGTH	TYPE
401/501	12" c/c + 1	7'-6"	Bent
402	12" c/c	11'-0"	Bent
601	8	2'-0"	Straight
602	3	C + 4'-0"	Bent
603	6	C + 2'-0"	Bent

* Reinforcement Schedule for TC-21.50 - 57" Wall (For Each Foundation)

MARK	No.	LENGTH	TYPE
401/501	12" c/c + 1	7'-6"	Bent
402	12" c/c	13'-2"	Bent
601	8	2'-0"	Straight
602	4	C + 4'-0"	Bent
603	8	C + 2'-0"	Bent

* Length of Vertical Steel = $D_{min} - 5"$ (all bar sizes)
(See table below for number and diameter of bars)



HEADED ANCHOR BOLT OPTION

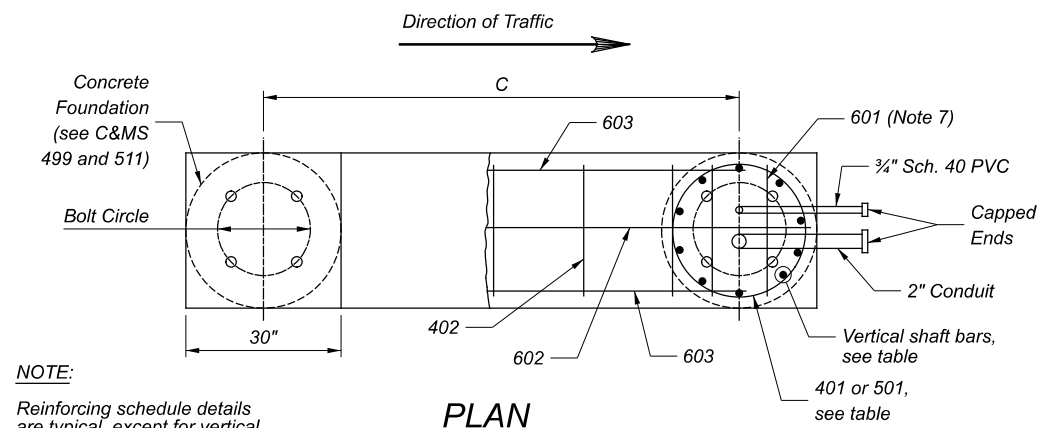
NUTTED ANCHOR BOLT OPTION

ALL DIMENSIONS IN INCHES, UNLESS OTHERWISE NOTED

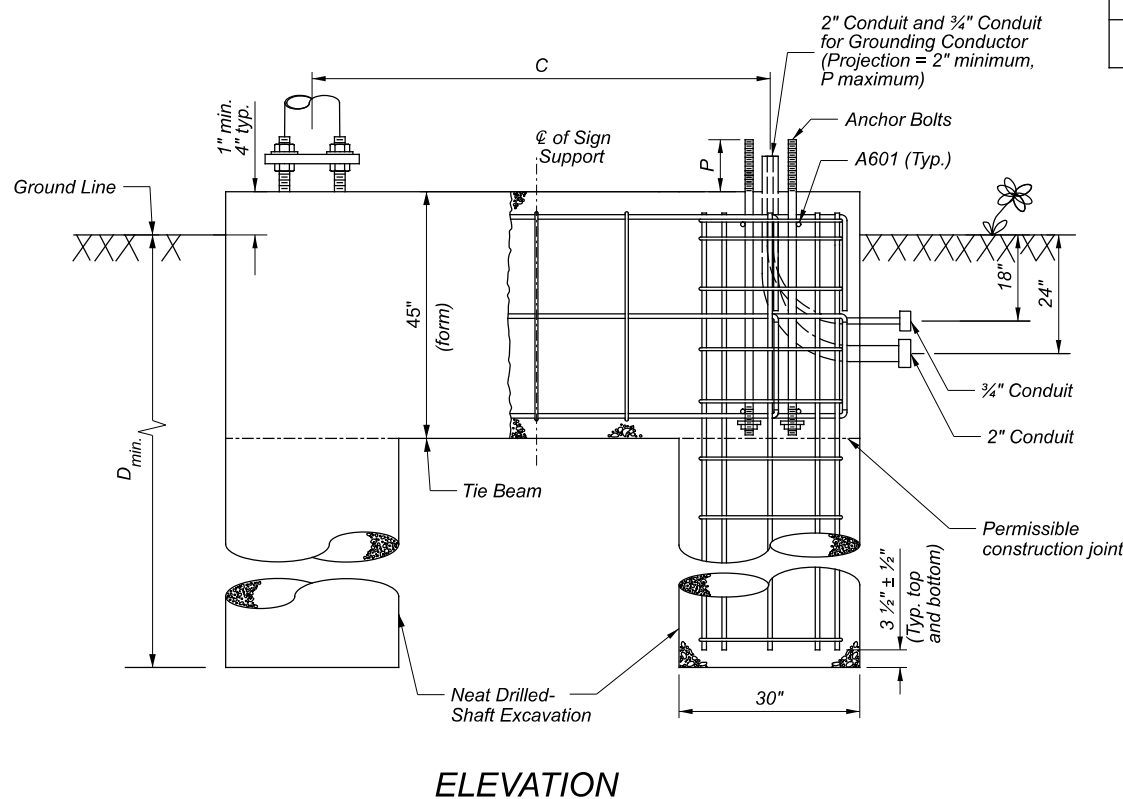
SUPPORT TYPE	TRUSS TYPE	TRUSS BOX SIZE	C	D_{min}	ANCHOR BOLTS						VERTICAL SHAFT BARS	TIES
					CIRCLE	DIA.	LENGTH	TOP THREAD LENGTH	P	THREADS PER INCH		
15.116 Design 1	Steel	3'-0"	5'-0"	12'-0"	17	1 1/4	54	12	9	7	10 - #8	401
15.116 Design 2	Steel	5'-0"	7'-0"	14'-0"	17	1 1/4	54	12	9	7	11 - #8	401
15.116 Design 3	Steel	5'-0"	7'-0"	18'-0"	17	1 1/2	54	12	9	6	12 - #9	501

NOTES:

- The design of the Sign Support Foundations presented on this drawing meet the requirements of the AASHTO LRFD Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals, First Edition 2015 (LRFDLTS-1) and all interim releases prior to the bid date of the project.
- Tie anchor bolts to rebar cage near the top and bottom of the anchor bolts.
- D_{min} may be deeper as required in the plans.
- When required by local conditions and approved by the Engineer, alternate foundation designs are acceptable. Alternate foundation design calculations and drawings shall be stamped by a Professional Engineer registered in the State of Ohio and shall be submitted to the Engineer for review and approval.
- Anchor bolts shall meet the requirements of C&MS 630, 711.02, 730.02 and 732.11 except that 730.02 shall be modified to require the galvanizing limits to be full length of the anchor bolts not at least 2 inches beyond the threads. Threads shall be UNC-2A, and may be either rolled or cut, and coarse threaded. The embedded end of the anchor bolt shall be headed or threaded with a heavy hex nut. Provide smooth steel rod anchor bolt material threaded at the ends or over its entire length. Hex nuts shall be ASTM A563, American Standard heavy hex, Grade DH or A 194 Grade 2H, with UNC-2B threads. Plate washers shall be A709 Grade 36 or Grade 50. All nuts and plate washers shall be galvanized per C&MS 711.02. Anchor bolt washers shall meet the requirements of ASTM F 436 Type 1 (hot-dip galvanized) according to ASTM A 153.
- At locations where the existing slope is 6:1 or greater, the buried depth of foundation shall apply to the low side of the slope. Set the top of the foundation 2" above the existing surface on the high side of the slope. The additional depth of foundation necessary to meet these requirements shall be added to the formed top.
- Use 601 bars to tie the anchor bolts to the 603 bars.
- A special foundation design will be required when cohesive soil with an undrained shear strength of less than 2000 lb./sq.ft. or granular soil with an angle of internal friction less than 30 degrees and a wet density less than 120 lb./cu.ft. is encountered. Special foundation designs shall meet the requirements of Note 4.
- All reinforcing steel shall be epoxy coated and comply with and be placed in accordance with C&MS 509. Lap all rebar per the lap length table in C&MS 509. Rebar end hooks not required.



NOTE:
Reinforcing schedule details are typical, except for vertical steel. See "Vertical Rebar" diagrams on SCD TC-21.21.



ELEVATION