

✓*	SHEET NO.	TITLE	APPROVAL DATE**
	HW-211_01	ANTI-TRACKING PAD	11-09-22
	HW-286_01	DRAINAGE TRENCH EXCAVATION	11-09-22
	HW-505_01a	STRAIGHT ENDWALLS	01-21-25
	HW-505_01b	STEEL REINFORCING FOR STRAIGHT ENDWALLS (2" DIFF BASE TO FLOW LINE)	01-05-24
	HW-505_01c	STEEL REINFORCING FOR STRAIGHT ENDWALLS (STANDARD RIPRAP APPLICATION)	01-05-24
	HW-505_02	TYPE "D-G" & "L" ENDWALLS	01-05-24
	HW-586_01	CATCH BASIN AND DROP INLET TYPES "C" AND "C-L" STRUCTURES	01-05-24
	HW-586_02	CATCH BASIN ( TYPES "C" AND "C-L" ) FOR DOUBLE GRATE TYPE I STRUCTURES	01-05-24
	HW-586_03	CATCH BASIN ( TYPES "C" AND "C-L" ) FOR DOUBLE GRATE TYPE II STRUCTURES	01-05-24
	HW-586_04	PRECAST CATCH BASIN AND ROUND STRUCTURE	10-17-24
	HW-586_05	PRECAST CATCH BASIN TYPES FOR DOUBLE GRATE TYPE I	10-17-24
	HW-586_06	PRECAST CATCH BASIN TYPES FOR DOUBLE GRATE TYPE II	10-17-24
	HW-586_07a	CATCH BASIN TYPE "C" AND "C-L" TOPS	01-05-24
	HW-586_07b	CATCH BASIN TYPE "C" AND "C-L" DOUBLE GRATE TYPE I TOPS	11-09-22
	HW-586_07c	CATCH BASIN TYPE "C" AND "C-L" DOUBLE GRATE TYPE II TOPS	11-08-22
	HW-586_07d	CATCH BASIN TYPE "C-G" AND "C-M" BARRIER CURB TOPS	11-09-22
	HW-586_08	CATCH BASIN FRAMES AND GRATES	11-09-22
	HW-586_09	CATCH BASIN LOCK DOWN TOPS	11-09-22
	HW-586_10a	MANHOLE FRAME AND COVER	01-05-24
	HW-586_10b	MANHOLE FRAME AND GRATE	01-05-24
	HW-586_10c	REINFORCED PRECAST CONCRETE MANHOLE	11-08-22
	HW-586_10d	MANHOLE NON-PRECAST CONCRETE UNIT	11-08-22
	HW-686_01a	CONCRETE PIPE CONNECTION SHEET 1	11-08-22
	HW-686_01b	CONCRETE PIPE CONNECTION SHEET 2	11-08-22
	HW-686_02a	DRAINANGE PIPE ENDS SHEET 1 [ CORRUGATED METAL PIPE ]	11-08-22
	HW-686_02b	DRAINAGE PIPE ENDS SHEET 2 [ CONCRETE PIPE ]	11-08-22
	HW-751_01	UNDERDRAINS AND UNDERDRAIN OUTLETS	10-17-24
	HW-803_01	PAVED APRONS	11-08-22
	HW-811_01	CONCRETE CURBING	11-08-22
	HW-813_01	GRANITE STONE TRANSITION CURBING	11-08-22
	HW-813_02	STONE CURBING	11-08-22
✓	HW-815_01	BITUMINOUS CONCRETE CURBING	11-08-22

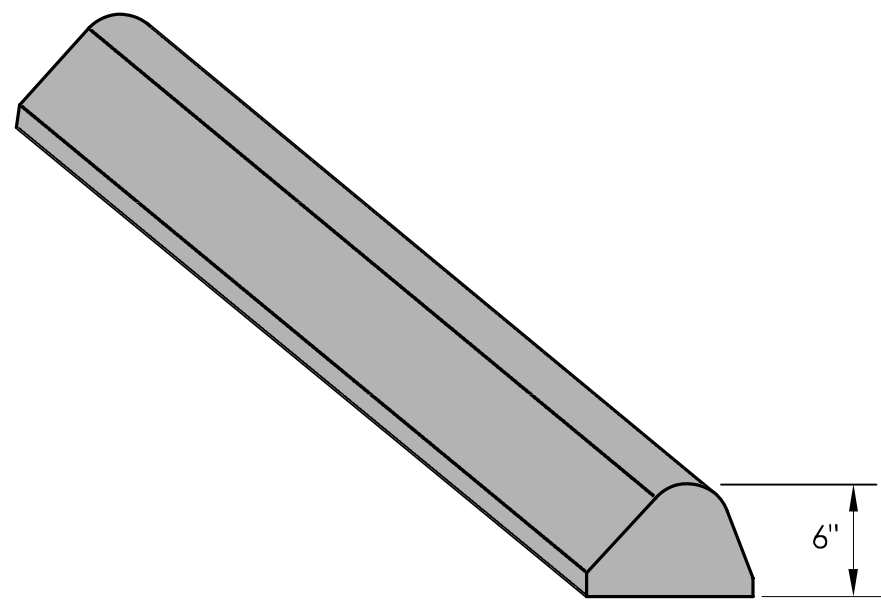
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	HW-821_01a	TRANSITION - 45" F-SHAPE TO 45" VERTICAL SHAPE SHEET 1	11-08-22
	HW-821_01b	TRANSITION - 45" F-SHAPE TO 45" VERTICAL SHAPE SHEET 2	11-08-22
	HW-821_01c	TRANSITION - 45" F-SHAPE TO 45" VERTICAL SHAPE SHEET 3	11-08-22
	HW-821_02a	45" F-SHAPE PRECAST CONCRETE BARRIER CURB SHEET 1	11-08-22
	HW-821_02b	45" F-SHAPE PRECAST CONCRETE BARRIER CURB SHEET 2	11-08-22
	HW-821_03a	TRANSITION - 32" JERSEY SHAPE TO 45" VERTICAL SHAPE SHEET 1	11-08-22
	HW-821_03b	TRANSITION - 32" JERSEY SHAPE TO 45" VERTICAL SHAPE SHEET 2	11-08-22
	HW-821_03c	TRANSITION - 32" JERSEY SHAPE TO 45" VERTICAL SHAPE SHEET 3	11-08-22
	HW-821_03d	TRANSITION - 32" JERSEY SHAPE TO 45" VERTICAL SHAPE SHEET 4	11-08-22
	HW-821_03e	TRANSITION - 32" JERSEY SHAPE TO 45" F-SHAPE	11-08-22
	HW-821_04a	MERRITT PARKWAY NARROW MEDIAN BARRIER	11-08-22
	HW-821_04b	MERRITT PARKWAY - 2' WIDE MEDIAN BARRIER AND ROADSIDE BARRIER	11-08-22
	HW-821_05a	TRANSITION - 45" F-SHAPE TO 54" VERTICAL SHAPE SHEET 1	11-08-22
	HW-821_05b	TRANSITION - 45" F-SHAPE TO 54" VERTICAL SHAPE SHEET 2	11-08-22
	HW-821_06	54" VERTICAL SHAPE BARRIER	11-08-22
	HW-821_07	MISCELLANOUS DETAILS FOR BARRIER TRANSITIONS	11-08-22
	HW-821_08a	F-SHAPE CONC. BARRIER CURB (21"x45") TRANSITION FOR THRIE-BEAM	10-17-24
	HW-821_08b	F-SHAPE CONC. BARRIER CURB (21"x45") TRANSITION FOR THRIE-BEAM - REINF.	11-08-22
	HW-821_09a	SINGLE SLOPE CONC. BARRIER CURB (20"x42") TRANS. FOR THRIE-BEAM	11-08-22
	HW-821_09b	SINGLE SLOPE CONC. BARRIER CURB (20"x42") TRANS. FOR THRIE-BEAM - REINF.	11-08-22
	HW-821_10a	VERTICAL FACE CONC. (21"x54") TRANSITION FOR THRIE-BEAM	11-08-22
	HW-821_10b	VERTICAL FACE CONC. (21"x54") TRANSITION FOR THRIE-BEAM REINF.	11-08-22
	HW-821_11a	42" SINGLE SLOPE PRECAST CONCRETE BARRIER CURB -SHEET 1	01-05-24
	HW-821_11b	42" SINGLE SLOPE PRECAST CONCRETE BARRIER CURB -SHEET 2	01-05-24
	HW-822_01	TEMPORARY PRECAST CONCRETE BARRIER CURB	11-08-22
✓	HW-822_02a	TEMPORARY TRAFFIC BARRIER - DETAILS	11-08-22
	HW-822_02b	TEMPORARY TRAFFIC BARRIER (BOLTED)	01-23-25
	HW-822_02c	TEMPORARY TRAFFIC BARRIER & TEMPORARY TRAFFIC BARRIER (PINNED)	01-23-25
	HW-905_01	STONE WALL FENCE	11-09-22
	HW-906_01	WIRE FENCE	11-08-22

\*ONLY STANDARD SHEETS MARKED WITH AN " ✓ " ARE IN THIS PROJECT #0111-0125\*\*REVISED OR ADDED

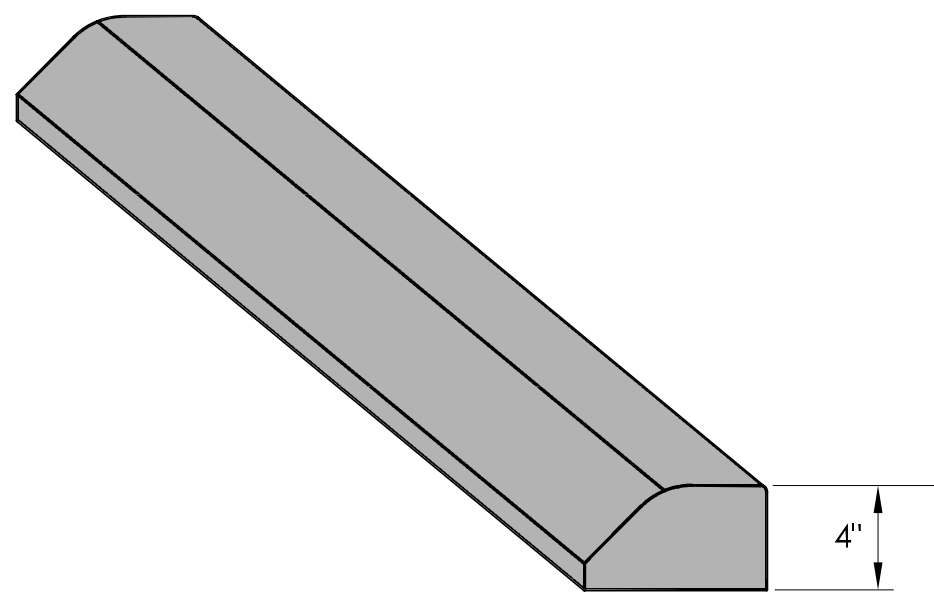
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	HW-910_01	W-BEAM METAL BEAM RAIL HARDWARE	11-08-22
	HW-910_02	METAL BEAM RAIL (TYPE R-B 350) GUIDERAIL	11-08-22
	HW-910_03	METAL BEAM RAIL (TYPE MD-B 350) GUIDERAIL	11-08-22
	HW-910_04	METAL BEAM RAIL (TYPE R-B 350) SYSTEMS 5, 5A, & 6	11-08-22
	HW-910_05	METAL BEAM RAIL R-B 350 SPAN TYPE I, II, III SECTIONS	11-08-22
	HW-910_06	R-B 350 BRIDGE ATTACHMENT SAFETY SHAPE PARAPET	11-08-22
	HW-910_07	R-B 350 BRIDGE ATTACHMENT VERTICAL SHAPE PARAPET	11-08-22
	HW-910 09a	MISCELLANEOUS GUIDERAIL TRANSITIONS SHEET 1	11-08-22
	HW-910 09b	MISCELLANEOUS GUIDERAIL TRANSITIONS SHEET 2	11-08-22
	HW-910 10	METAL BEAM RAIL 8" x 6" BOX BEAM	11-08-22
	HW-910 11	CURVED GUIDERAIL TREATMENT DETAIL	11-08-22
	HW-910_12a	MERRITT PARKWAY GUIDERAIL LEADING END ATTACHMENTS AND SYSTEMS 2&3	11-08-22
	HW-910_12b	MERRITT PARKWAY GUIDERAIL HARDWARE DETAILS	11-08-22
	HW-910_12c	MERRITT PARKWAY GUIDERAIL TRAILING END ATTACHMENTS	11-02-22
	HW-910_12d	MERRITT PARKWAY MEDIAN GUIDERAIL AND END ANCHOR	10-17-24
	HW-910_13a	THRIE-BEAM METAL BEAM RAIL HARDWARE	11-08-22
	HW-910_13b	THRIE-BEAM TRANSITIONS	11-08-22
	HW-910_14a	THRIE-BEAM 350 BRIDGE ATTACHMENT	11-08-22
	HW-910_14b	THRIE-BEAM 350 GUIDERAIL TRANSITION TO R-B 350 GUIDERAIL	11-08-22
	HW-910_15	MD-B 350 MEDIAN BARRIER SAFETY SHAPE ATTACHMENT TYPE I	11-08-22
	HW-910_16	MD-B 350 MEDIAN BARRIER SAFETY SHAPE ATTACHMENT TYPE II	11-08-22
✓	HW-910_17	R-B TERMINAL SECTION	11-08-22
	HW-910_18	METAL BEAM RAIL (TYPE MD-I) GUIDERAIL	11-08-22
	HW-910_19a	METAL BEAM RAIL (MODIFIED TYPE R-I) AND END ANCHORAGE TYPE I	10-17-24
	HW-910_19b	METAL BEAM RAIL (MODIFIED TYPE R-I) AND END ANCHORAGE TYPE II	10-17-24
	HW-910_19c	METAL BEAM RAIL (MODIFIED TYPE R-I) SYSTEMS 2 AND 3	11-08-22
✓	HW-910_20	MASH W-BEAM HARDWARE	10-17-24
✓	HW-910_21	METAL BEAM RAIL ( R-B MASH ) GUIDERAIL	01-05-24
	HW-910_22	METAL BEAM RAIL ( MD-B MASH) GUIDERAIL	11-08-22
	HW-910_23	METAL BEAM RAIL (R-B MASH) HALF & QUARTER POST SPACING GUIDERAIL	11-08-22
	HW-910_24	METAL BEAM RAIL SPAN SECTION TYPES II AND III	11-08-22

✓*	SHEET NO.	TITLE	APPROVAL DATE**
	HW-910_25a	METAL BEAM RAIL TRANSITION 350 TO MASH	10-17-24
	HW-910_25b	METAL BEAM RAIL MEDIAN APPLICATION TRANSITION 350 TO MASH GUIDERAIL	01-05-24
✓	HW-910_26	THRIE-BEAM ATTACHMENT HARDWARE	11-08-22
✓	HW-910_27	THRIE-BEAM ATTACHMENT	11-08-22
	HW-910_29	THRIE-BEAM BRIDGE ATTACHMENT TRAILING END	02-02-24
✓	HW-911_01	R-B END ANCHORAGE TYPE I AND II	10-17-24
	HW-911_02	MD-B END ANCHORAGE TYPE I	10-17-24
	HW-911_03	ANCHOR IN EARTH CUT SLOPE & ANCHOR IN ROCK CUT SLOPE	01-05-24
	HW-911_05	MERRITT PARKWAY GUIDERAIL END ANCHORS	11-08-22
	HW-913_01a	CHAIN LINK FENCE	11-08-22
	HW-913_01b	CHAIN LINK FENCE HARDWARE	11-08-22
	HW-913_02	CHAIN LINK FENCE GATES	11-08-22
	HW-918_01a	THREE CABLE GUIDERAIL (I-BEAM POSTS) SHEET 1	11-08-22
	HW-918_01b	THREE CABLE GUIDERAIL (I-BEAM POSTS) SHEET 2	11-08-22
	HW-918_01c	THREE CABLE GUIDERAIL (I-BEAM POSTS) SHEET 3	11-08-22
	HW-921_01	CONCRETE SIDEWALKS	11-08-22
✓	HW-922_01	BITUMINOUS CONCRETE SIDEWALK AND BITUMINOUS CONCRETE DRIVEWAY	11-08-22
	HW-924_01	CONCRETE DRIVEWAY RAMPS	10-17-24
	HW-930_01	OBJECT MARKER ( MAINTENANCE )	10-17-24
✓	HW-949_01a	LANDSCAPE PLANTING	11-09-22
	HW-949_01b	TREE STAKING	11-02-22
	HW-1800_01	GRADING PLAN FOR IMPACT ATTENUATION SYSTEMS (FLARED AND TANGENTIAL)	10-17-24
	HW-1800 02	GRADING PLAN FOR IMPACT ATTENUATION SYSTEMS (MEDIAN/GORE)	10-17-24

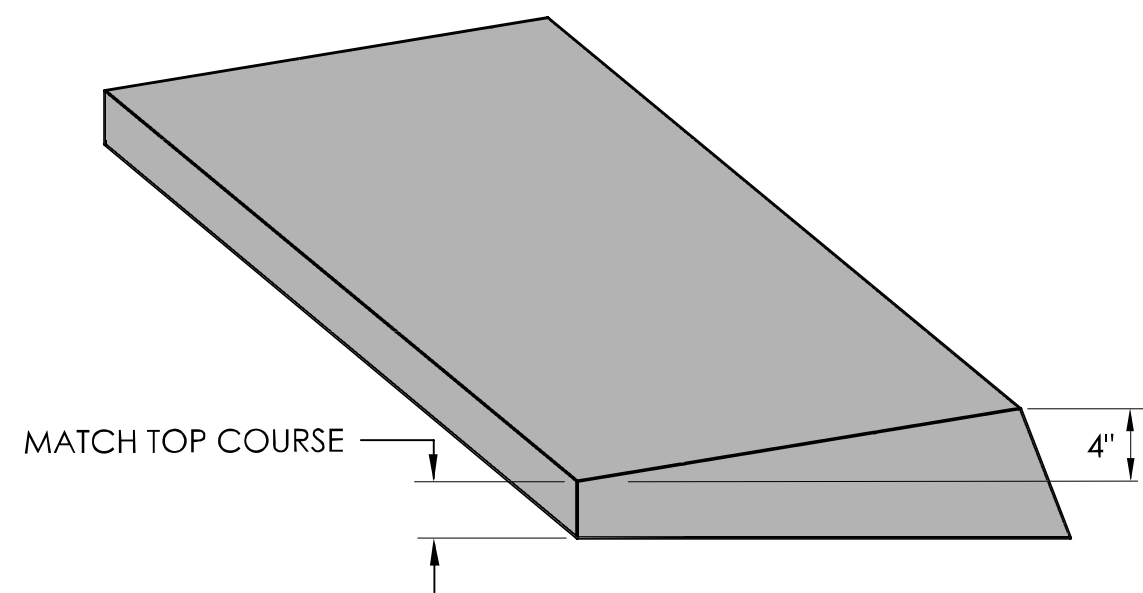




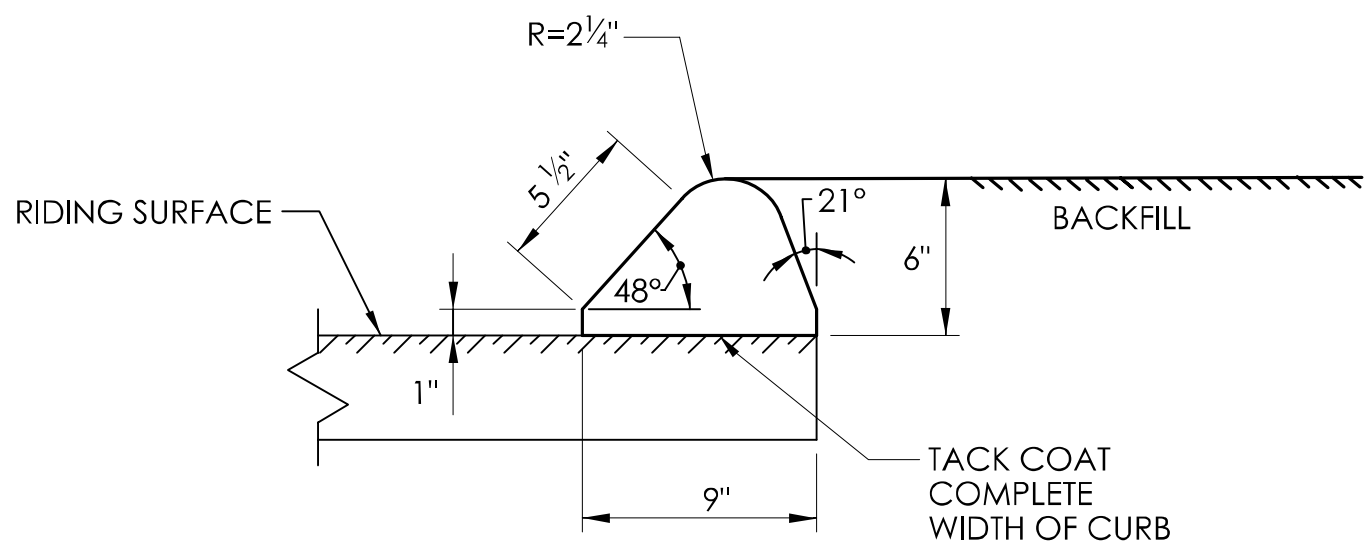
BITUMINOUS CONCRETE LIP CURBING  
(6" HIGH)



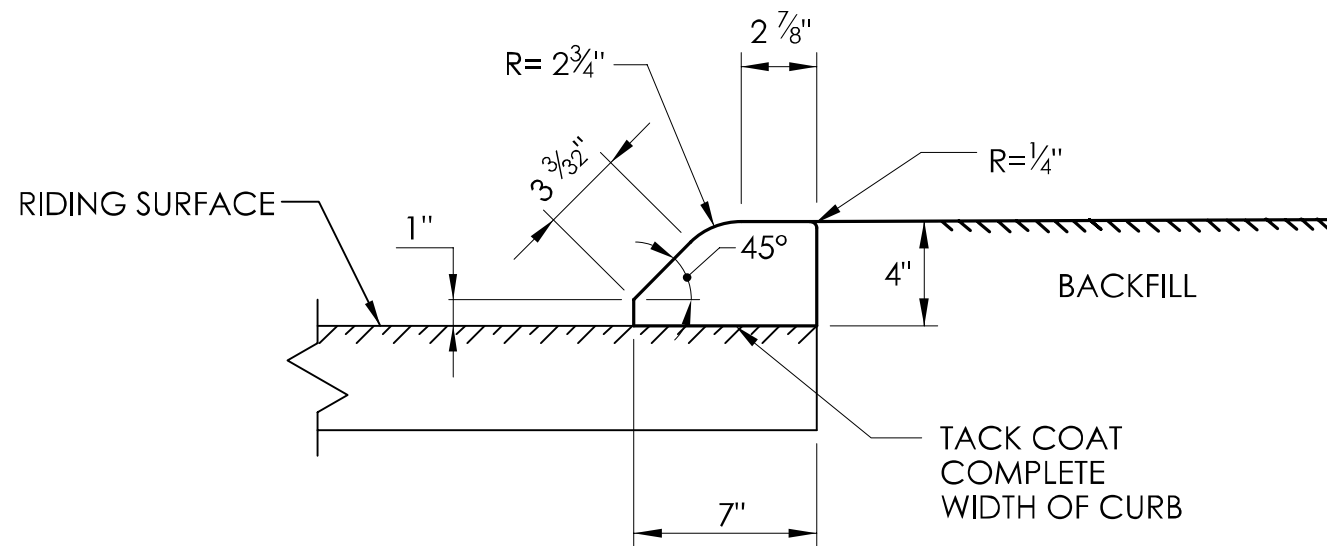
BITUMINOUS CONCRETE PARK CURBING  
(4" HIGH)



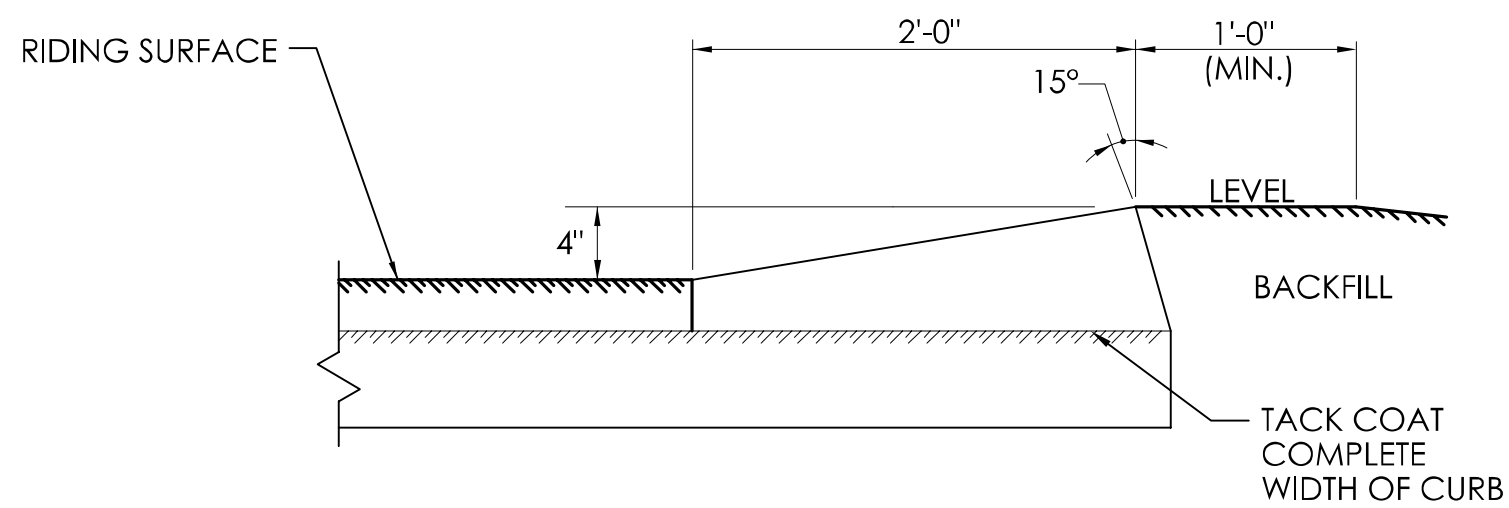
BITUMINOUS CONCRETE BERM CURBING  
(4" HIGH)



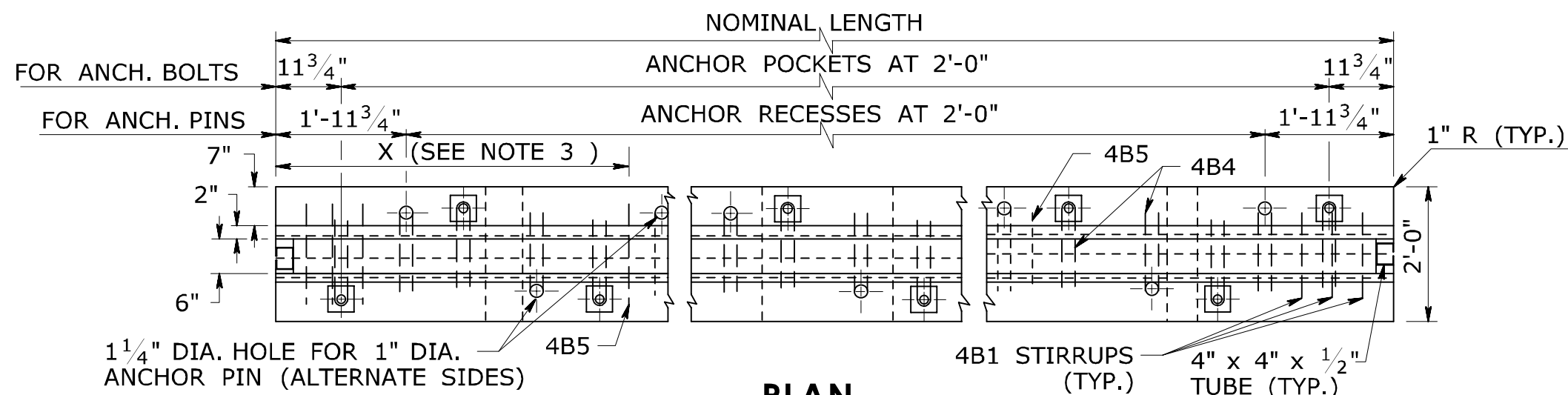
SECTION



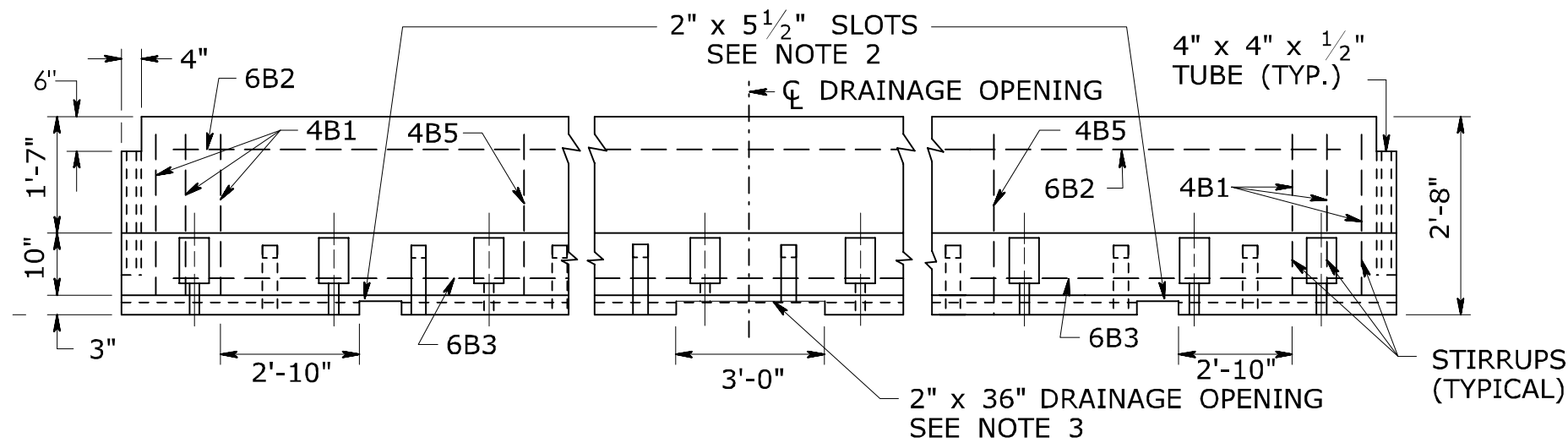
SECTION



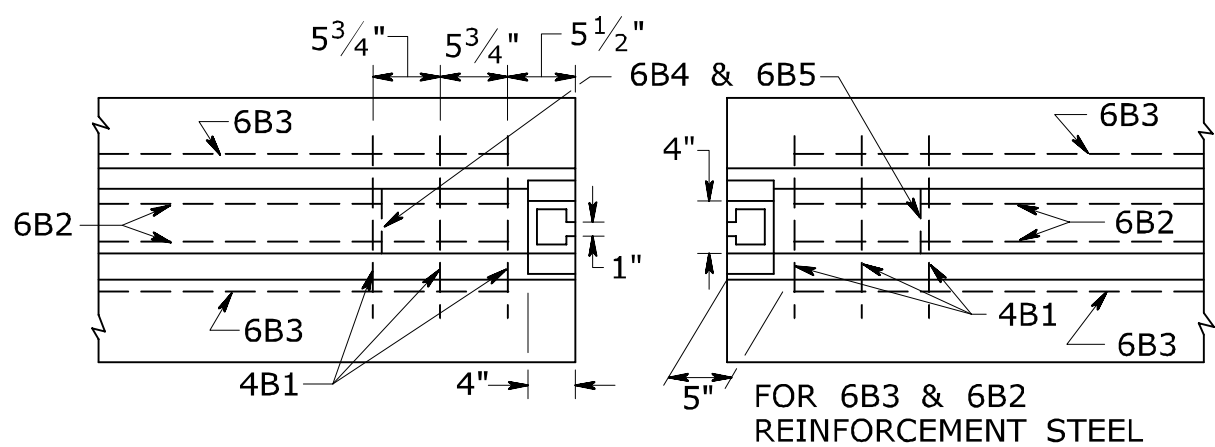
SECTION



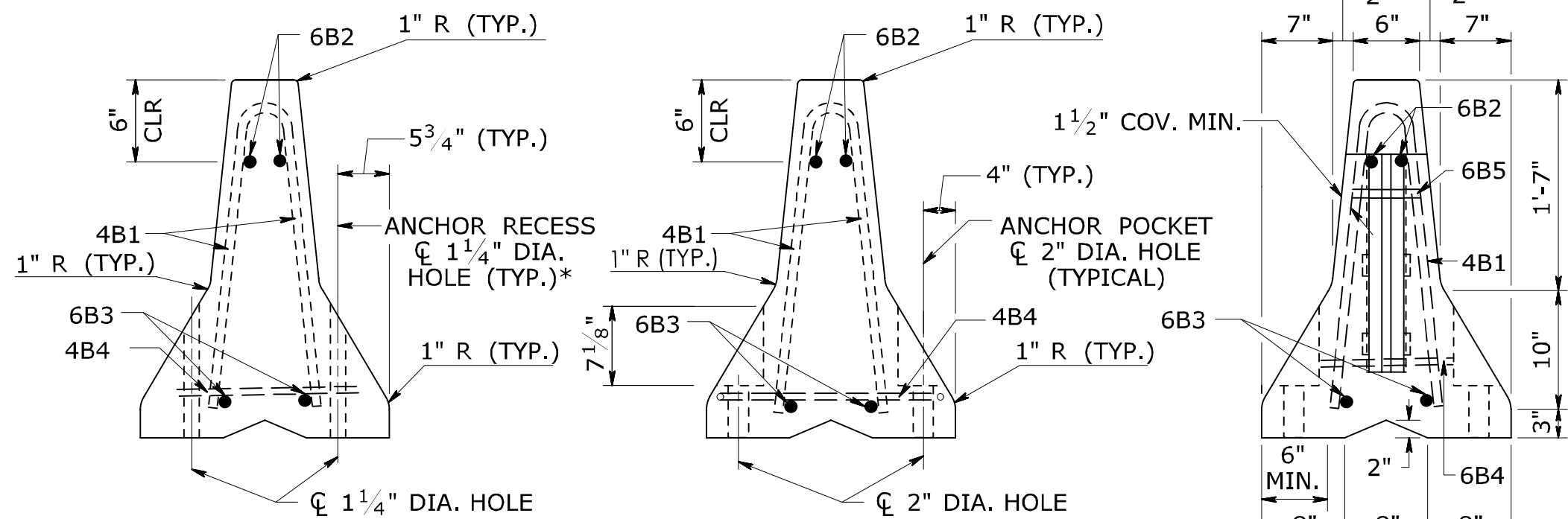
PLAN



ELEVATION



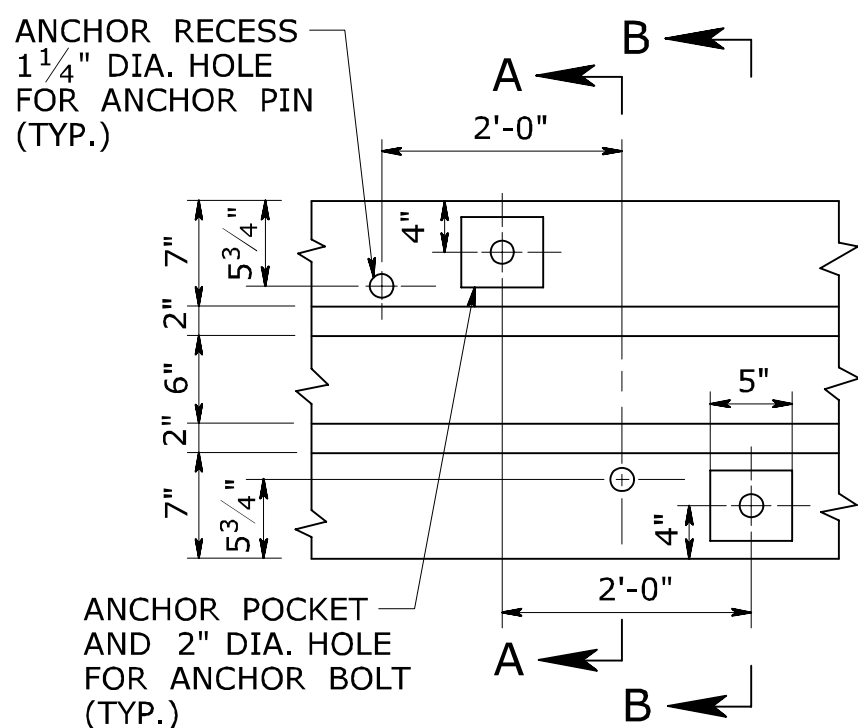
PLAN - BARRIER END



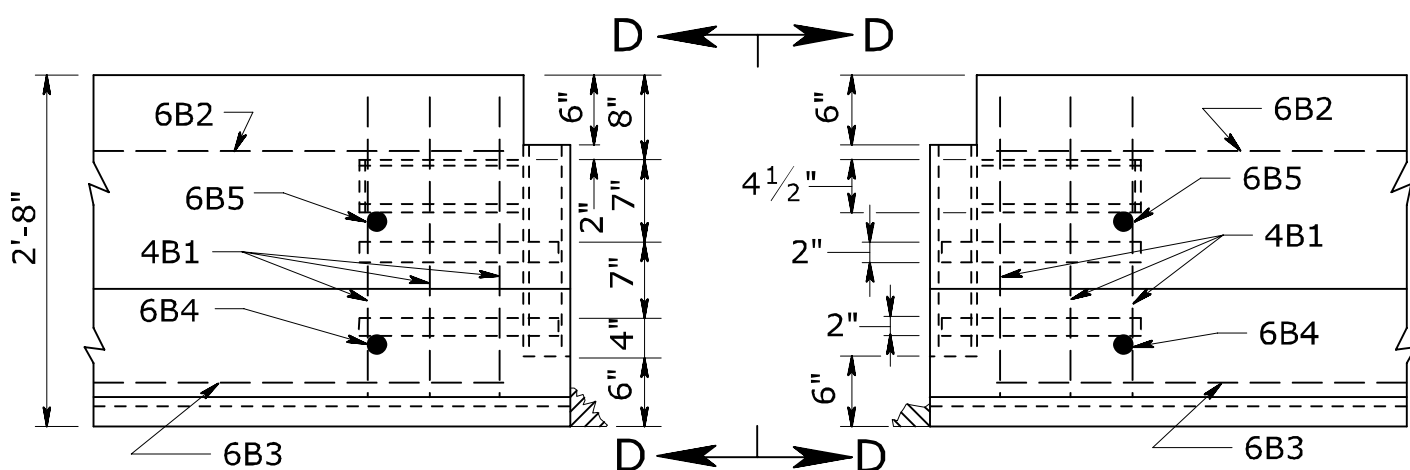
SECTION A-A

SECTION B-B

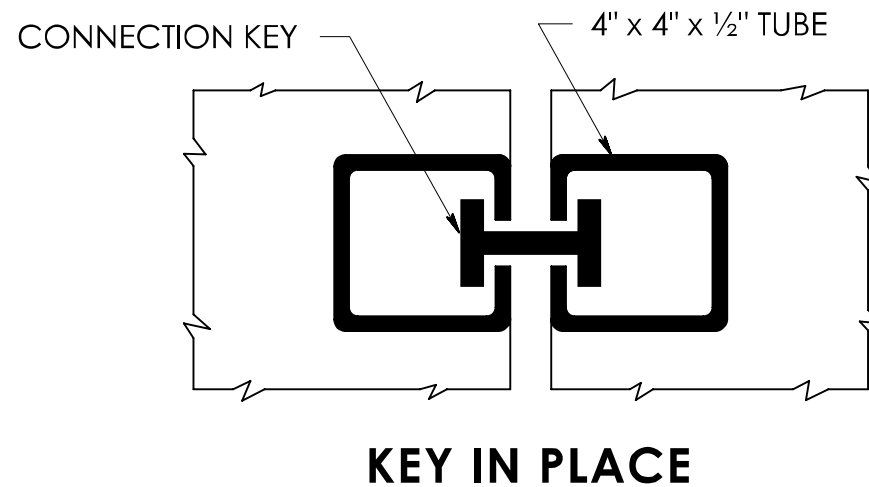
SECTION D-D



PLAN - ANCHOR RECESS/POCKET  
SEE NOTE 5



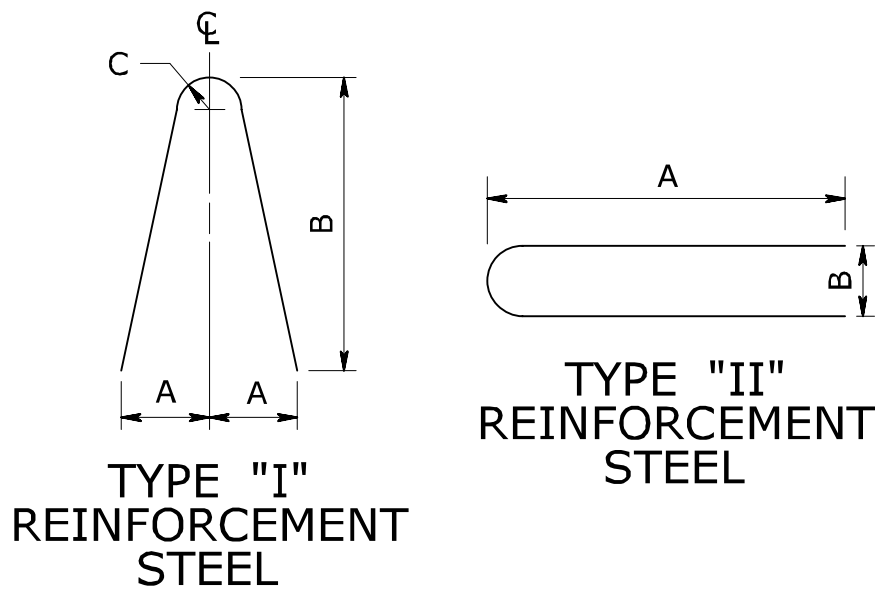
ELEVATION



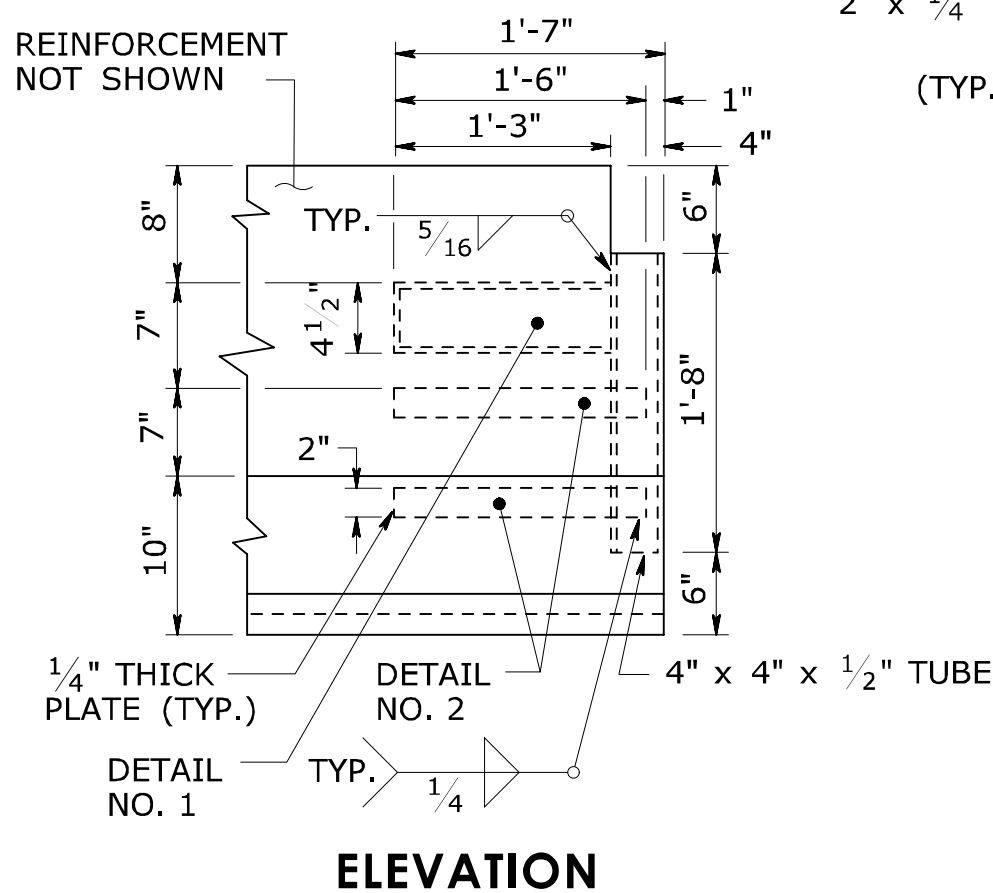
KEY IN PLACE

TABLE OF VARIABLE REINFORCEMENT STEEL			
NOMINAL LENGTH OF BARRIER UNIT	MARK	"X"	NO. EACH SECTION
20'	4B4	N.A.	19
20'	4B5	6'-11"	2
18'	4B4	N.A.	17
18'	4B5	6'-5"	2
16'	4B4	N.A.	15
16'	4B5	5'-11"	2
14'	4B4	N.A.	13
14'	4B5	7'-0"	1
12'	4B4	N.A.	11
12'	4B5	6'-0"	1
10'	4B4	N.A.	9
10'	4B5	5'-0"	1
8'	4B4	N.A.	7
8'	4B5	-	0
"X" DISTANCE FROM END OF BARRIER TO 4B5 REINFORCEMENT STEEL			

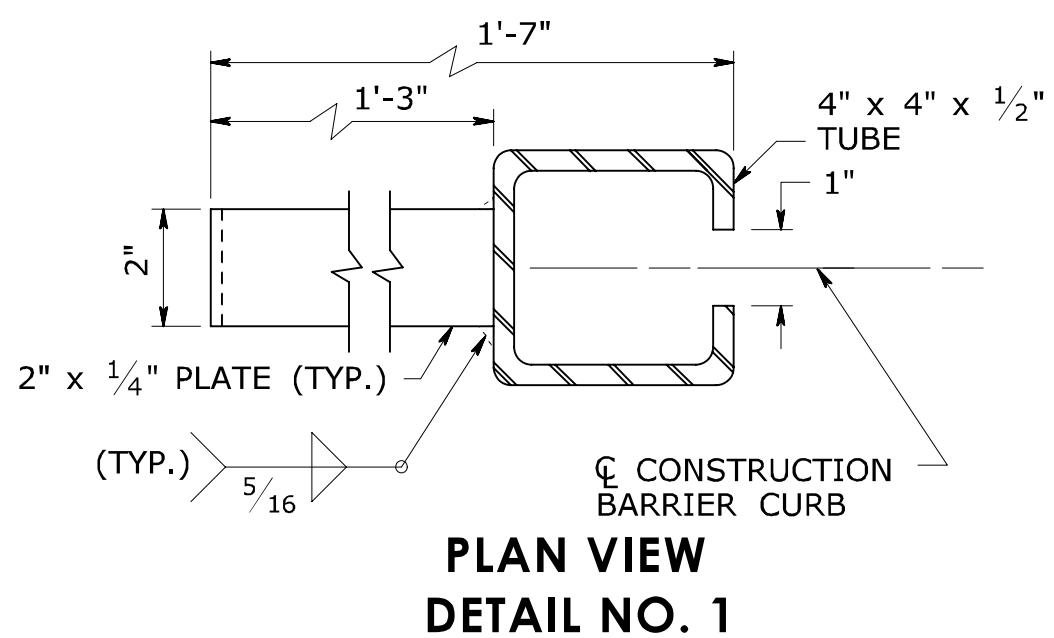
### TEMPORARY TRAFFIC BARRIER



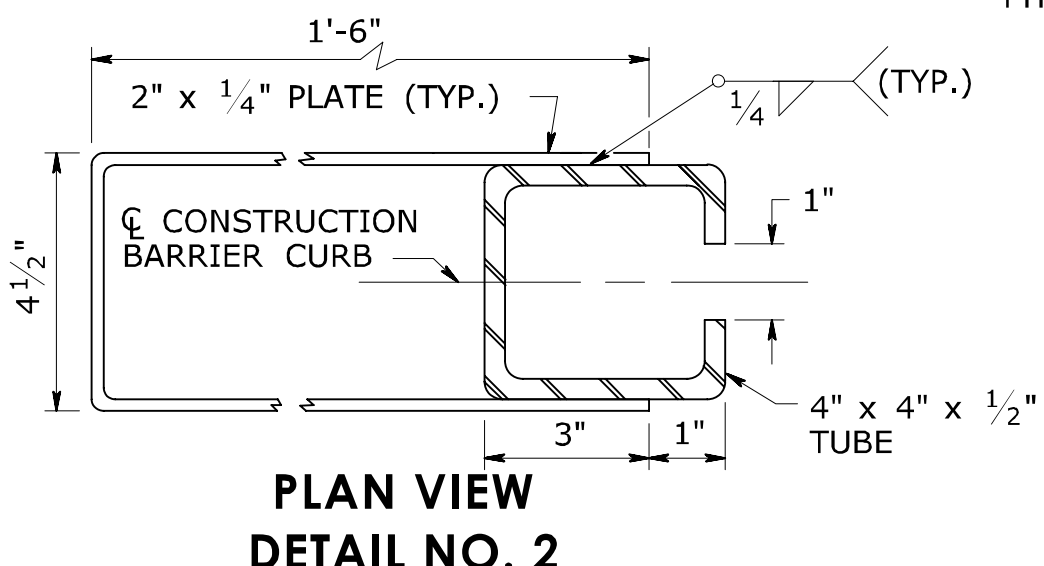
REINFORCEMENT STEEL LIST (EACH BARRIER SECTION)							
MARK	SIZE	NUMBER IN EACH SECTION	LENGTH	TYPE	A	B	C
4B1	#4	6	4'-11"	I	5"	26"	2"
4B4	#4	SEE NOTE 4	3'-1"	II	15 1/2"	4"	
4B5	#4	SEE NOTE 4	4'-11"	I	5"	26"	2"
6B2	#6	2	SEE NOTE 4	STR.			
6B3	#6	2	SEE NOTE 4	STR.			
6B4	#6	2	1'-2"	STR.			
6B5	#6	2	0'-6"	STR.			



ELEVATION

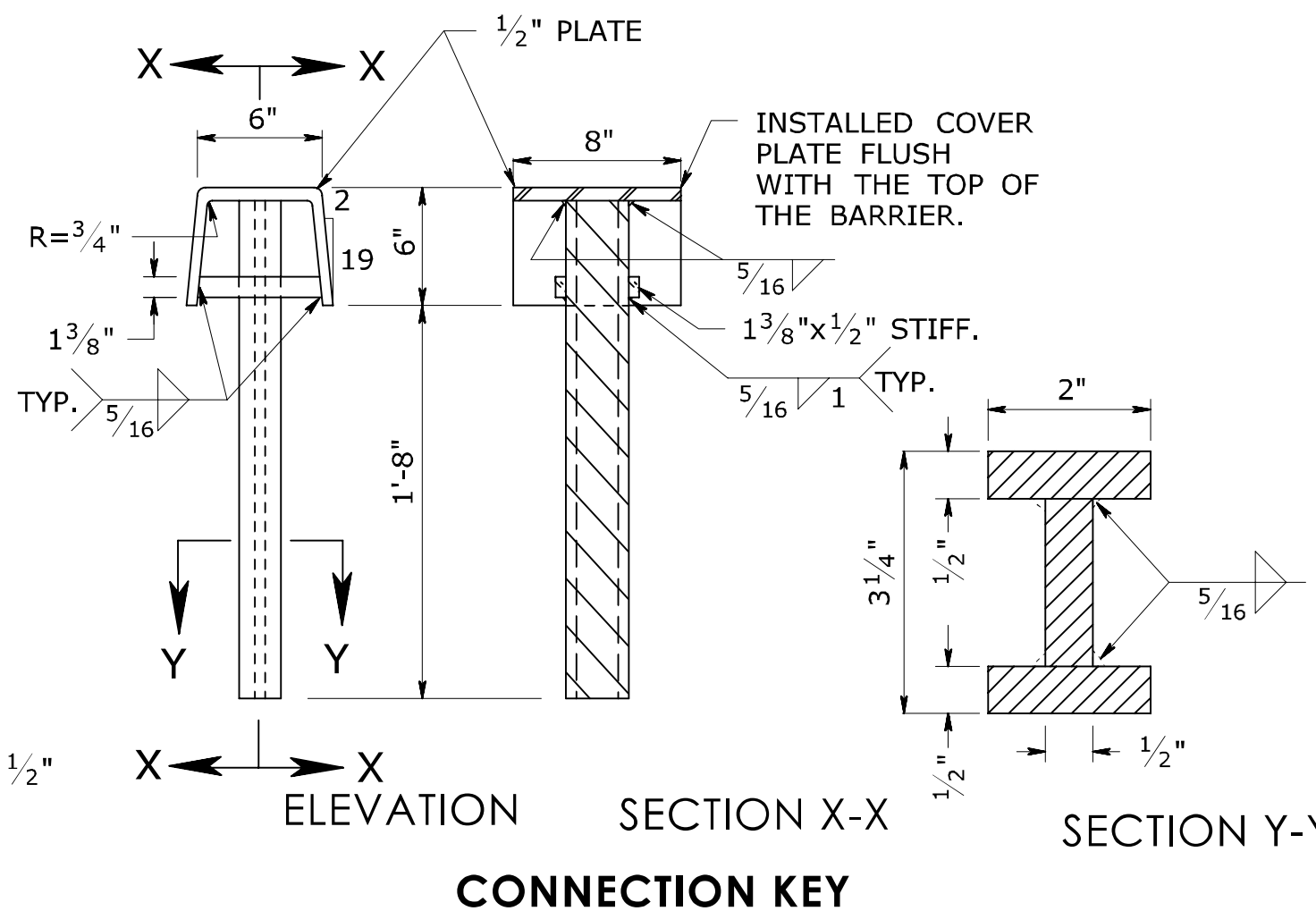


PLAN VIEW  
DETAIL NO. 1



PLAN VIEW  
DETAIL NO. 2

### TEMPORARY TRAFFIC BARRIER CONNECTION DETAILS



SECTION X-X

SECTION Y-Y

NOT TO SCALE

SIGNATURE BLOCK:  
OFFICE OF ENGINEERING  
2800 BERLIN TURNPIKE  
NEWINGTON, CT 06111

SUBMITTED BY:  
*Michael N. Calabrese*  
Digitally signed by  
Michael N. Calabrese, P.E.  
Date: 2024.12.16  
14:21:13-05'00'

APPROVED BY:  
*Michael N. Calabrese*  
Digitally signed by  
Michael N. Calabrese, P.E.  
Date: 2025.01.21  
13:41:21-05'00'



CONNECTICUT  
DEPARTMENT OF  
TRANSPORTATION

CTDOT  
STANDARD SHEET

STANDARD SHEET TITLE:

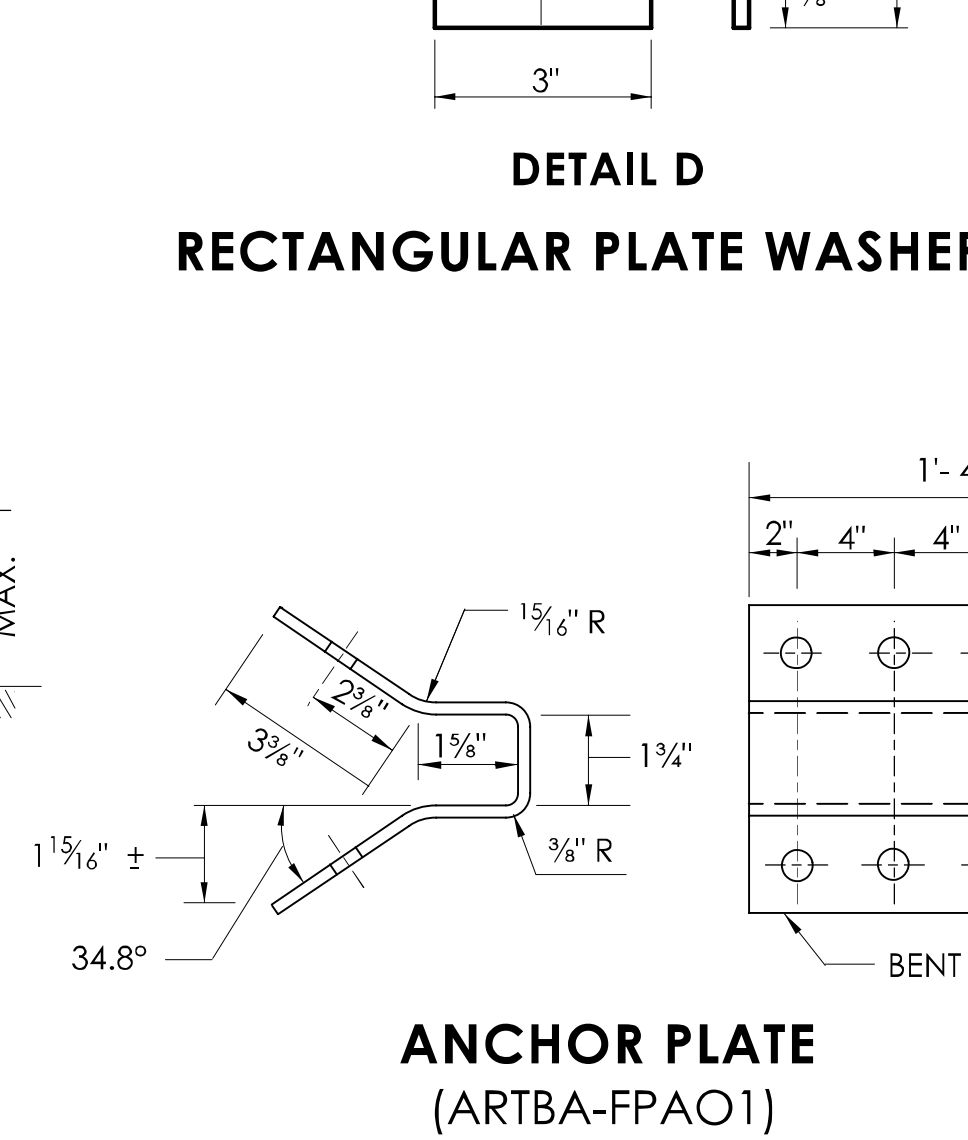
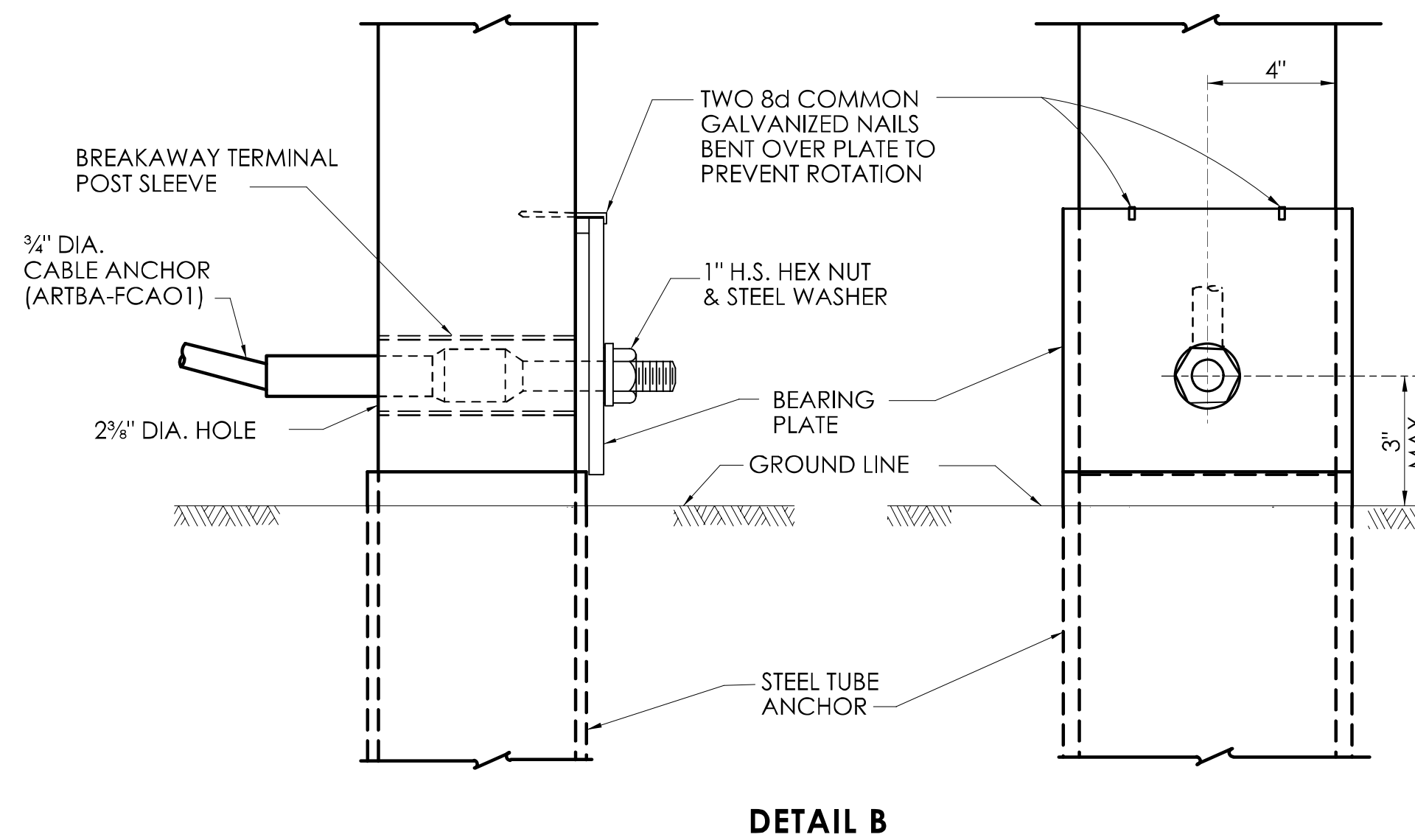
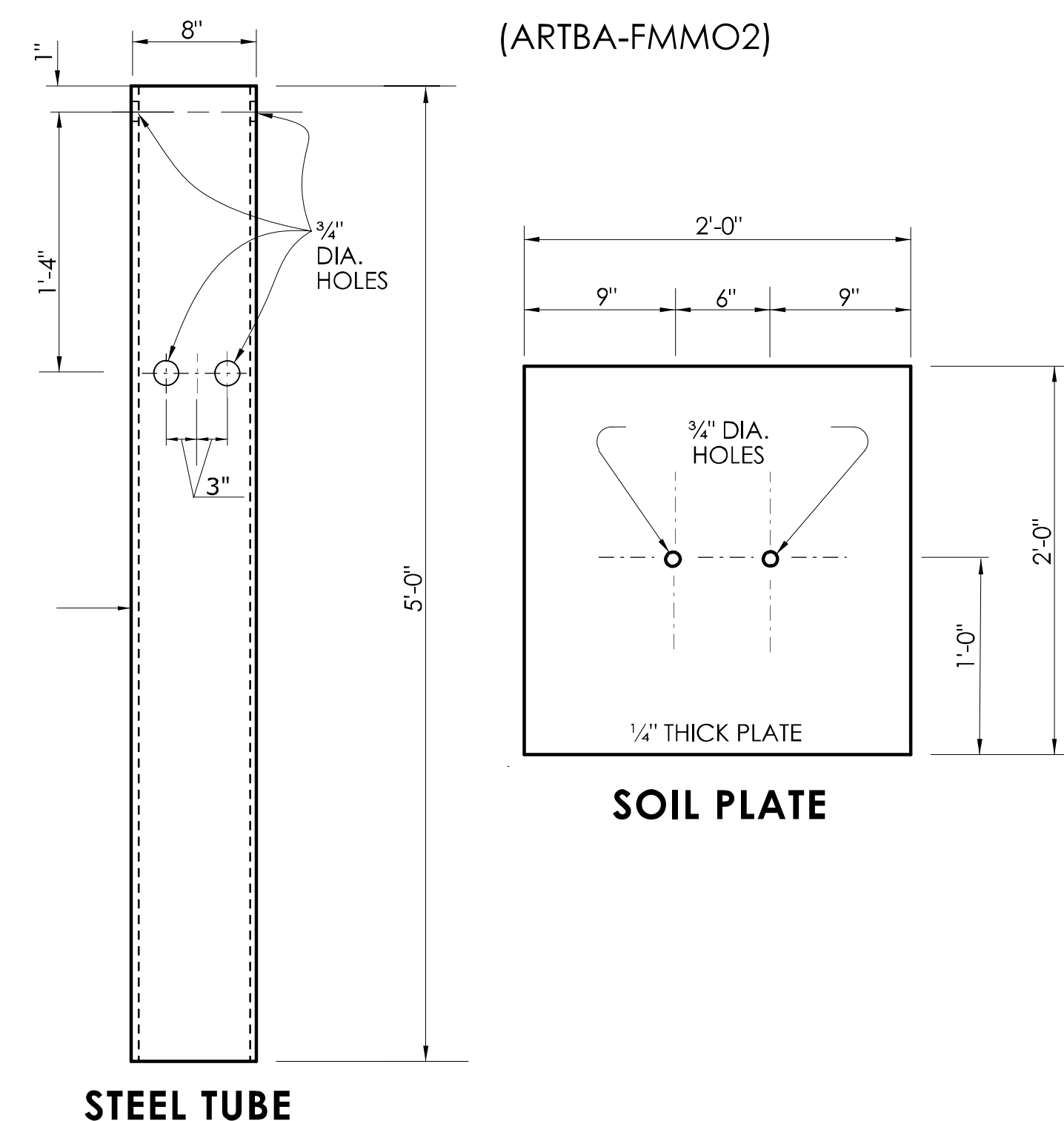
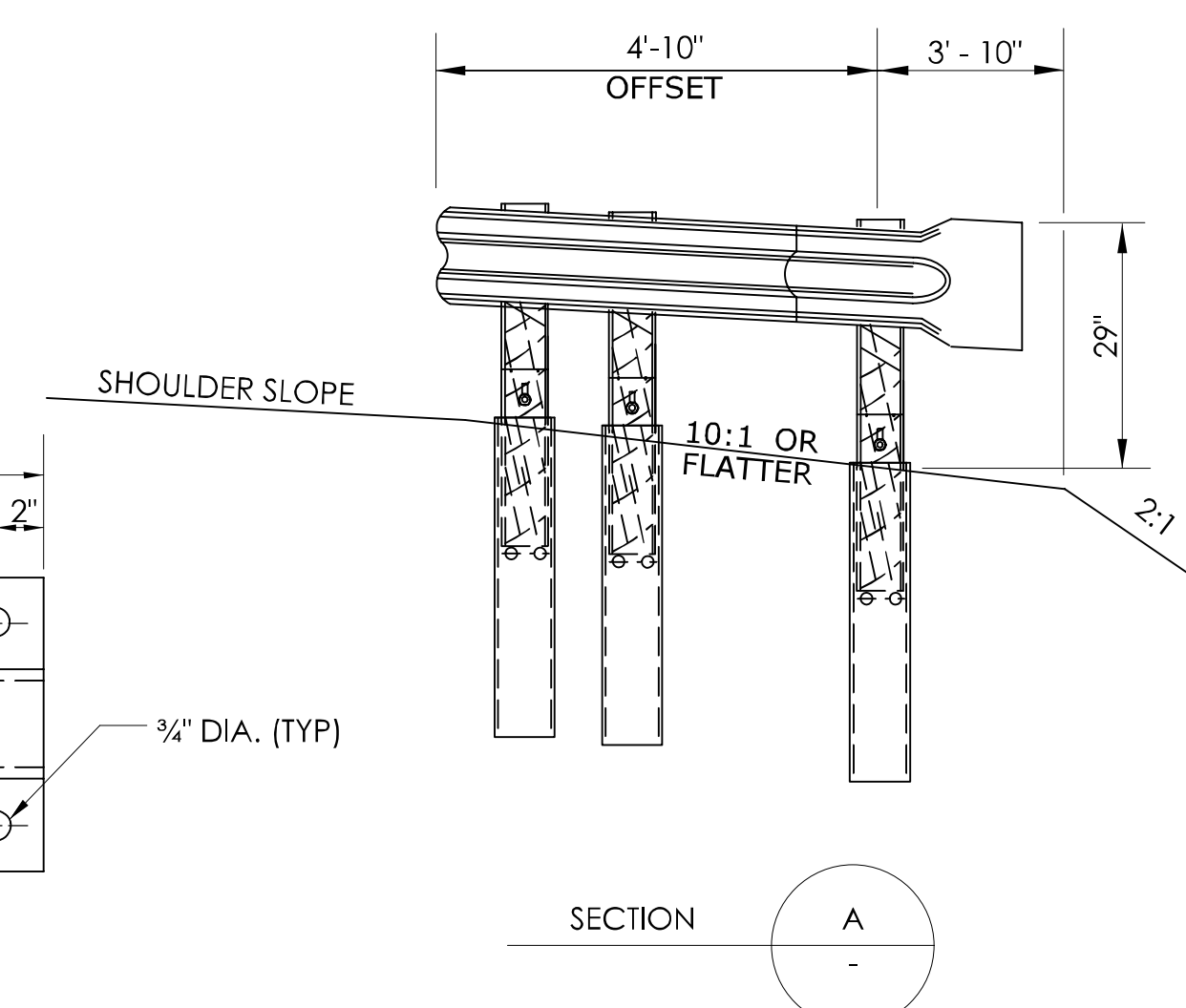
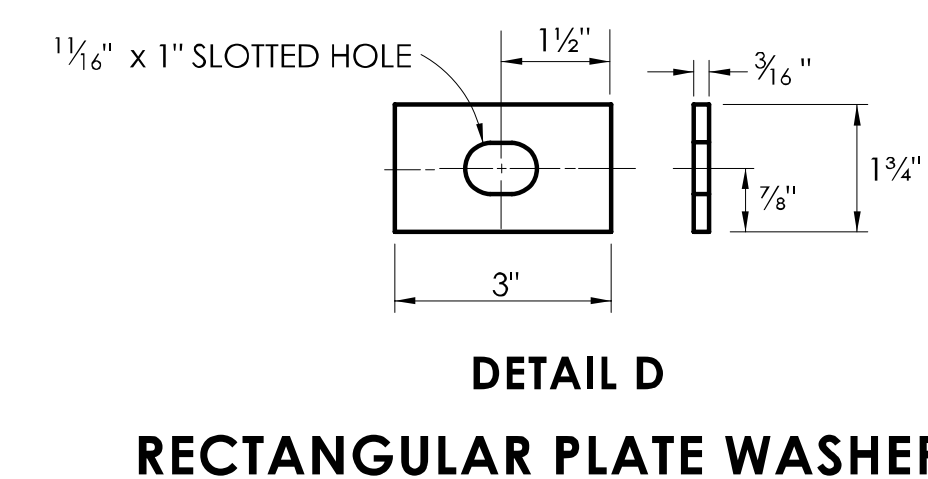
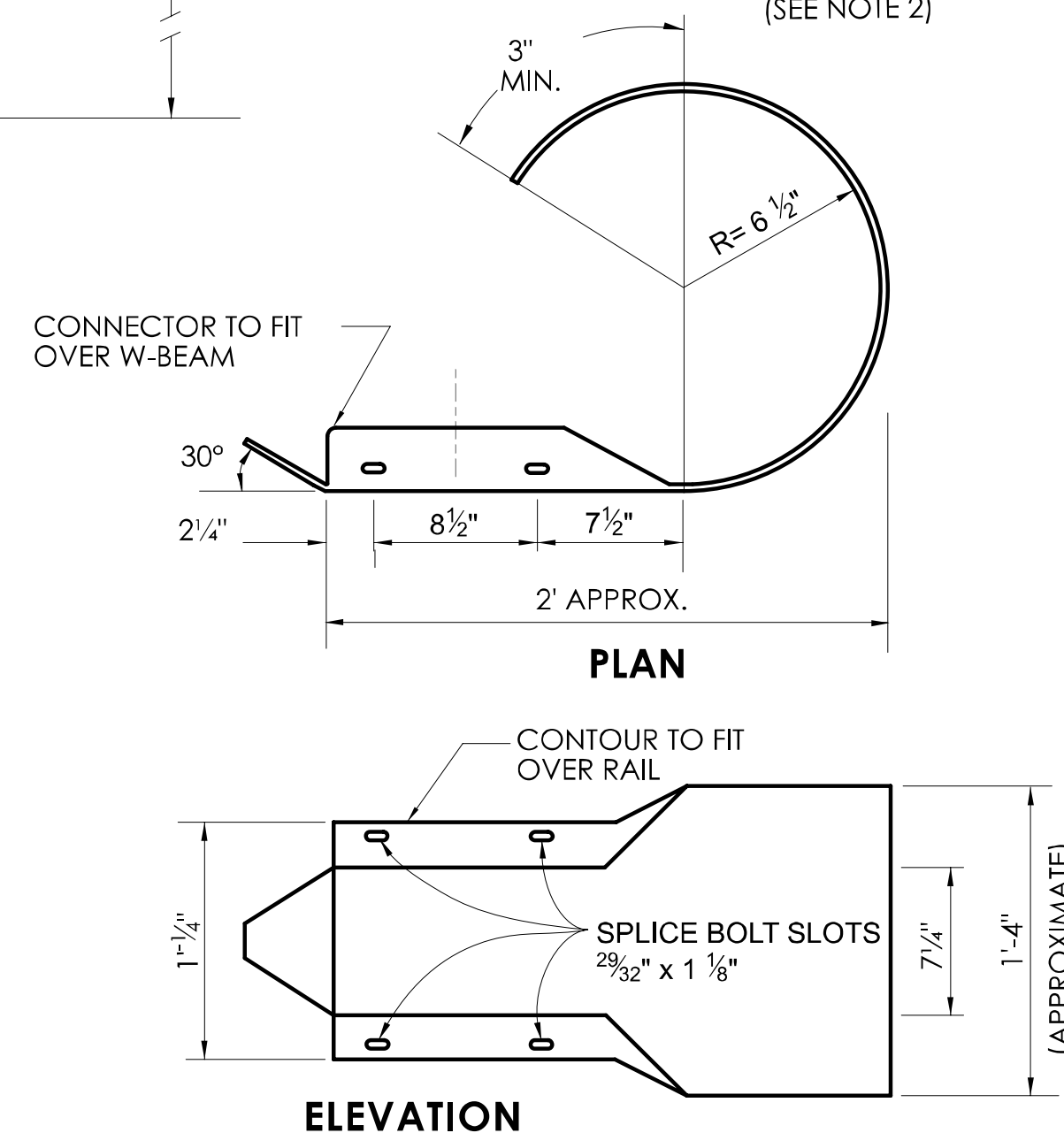
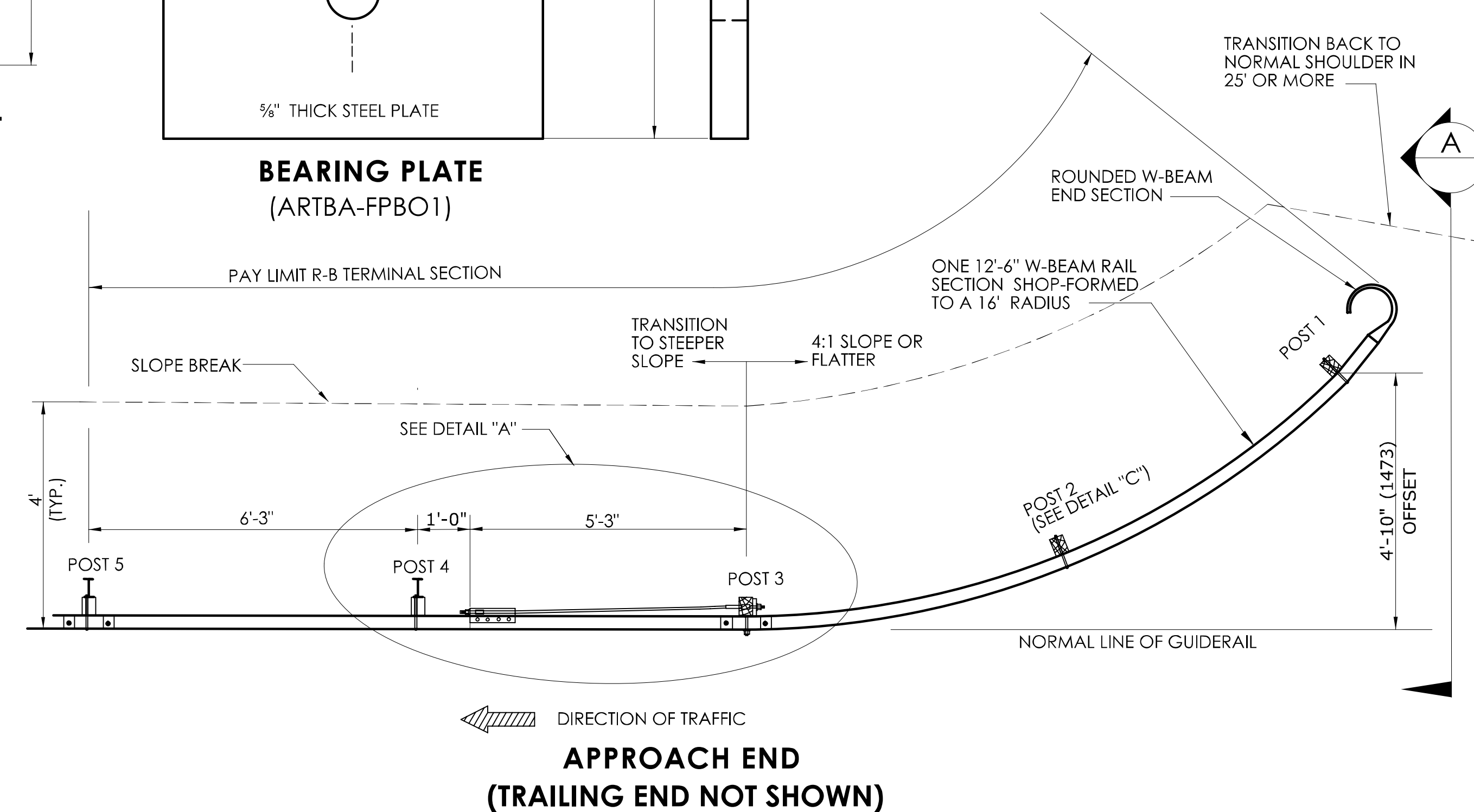
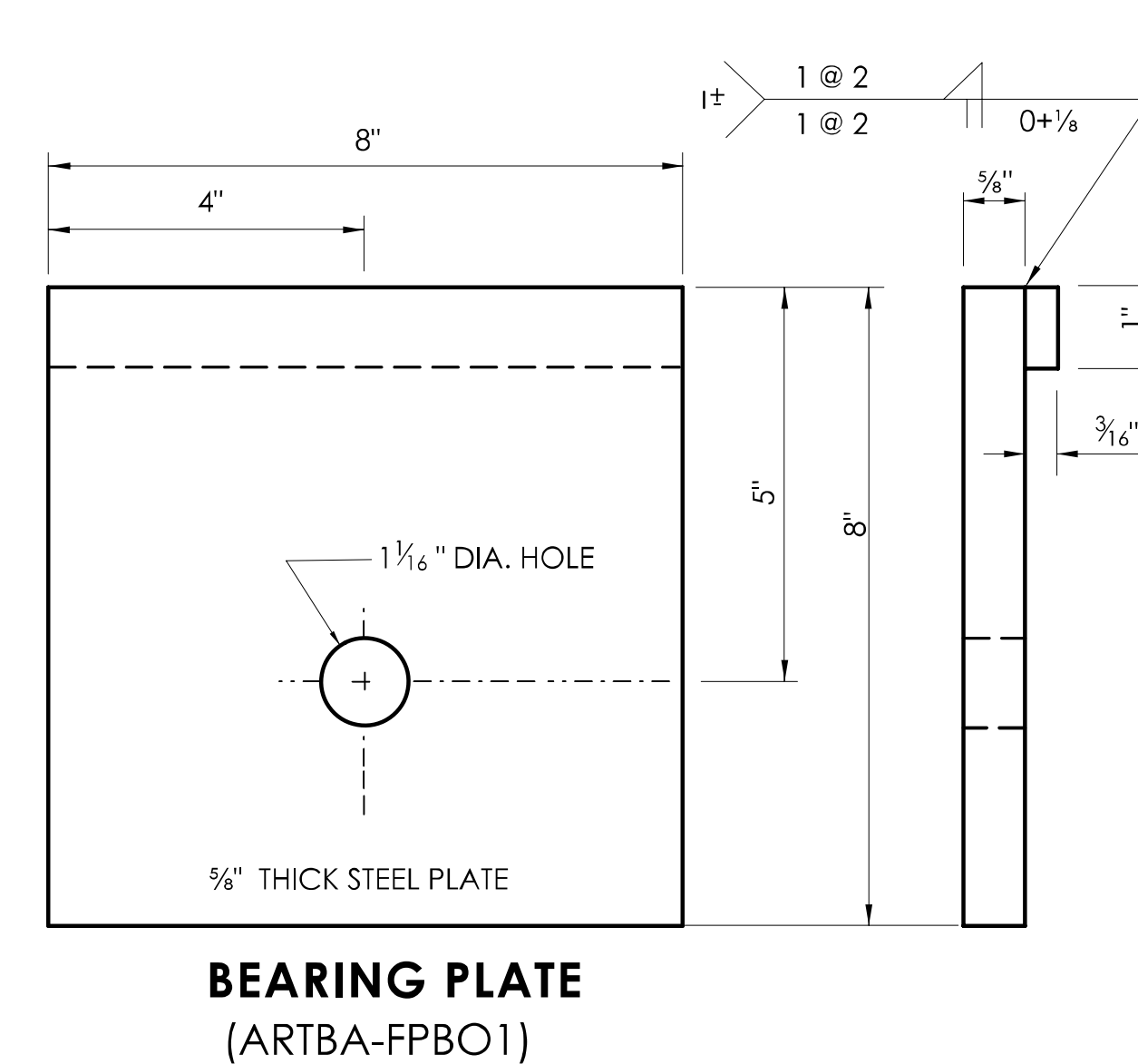
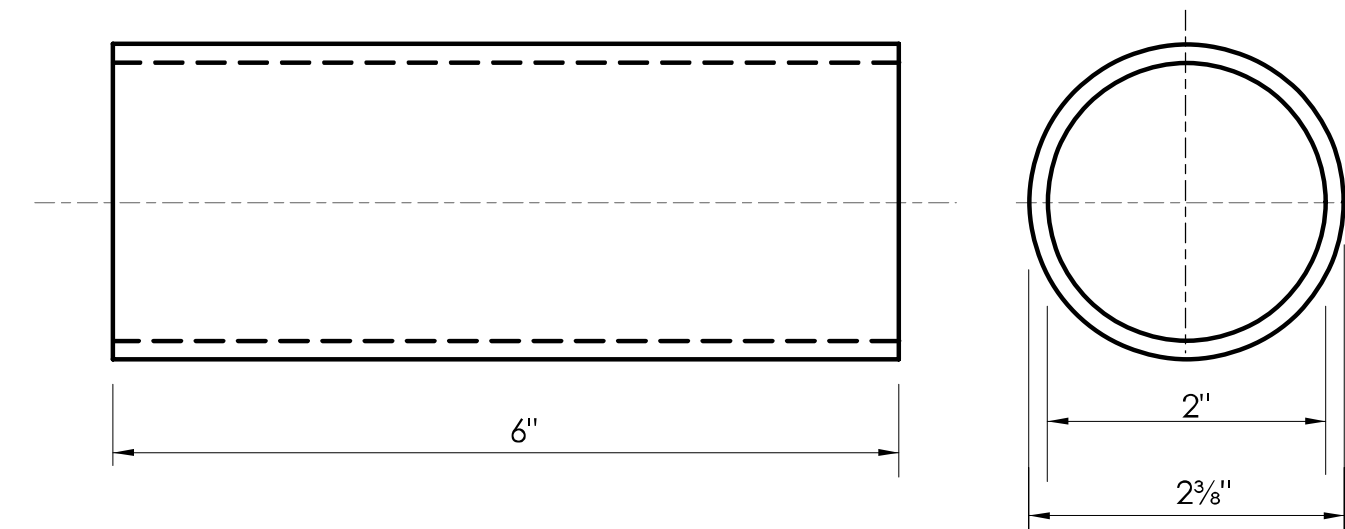
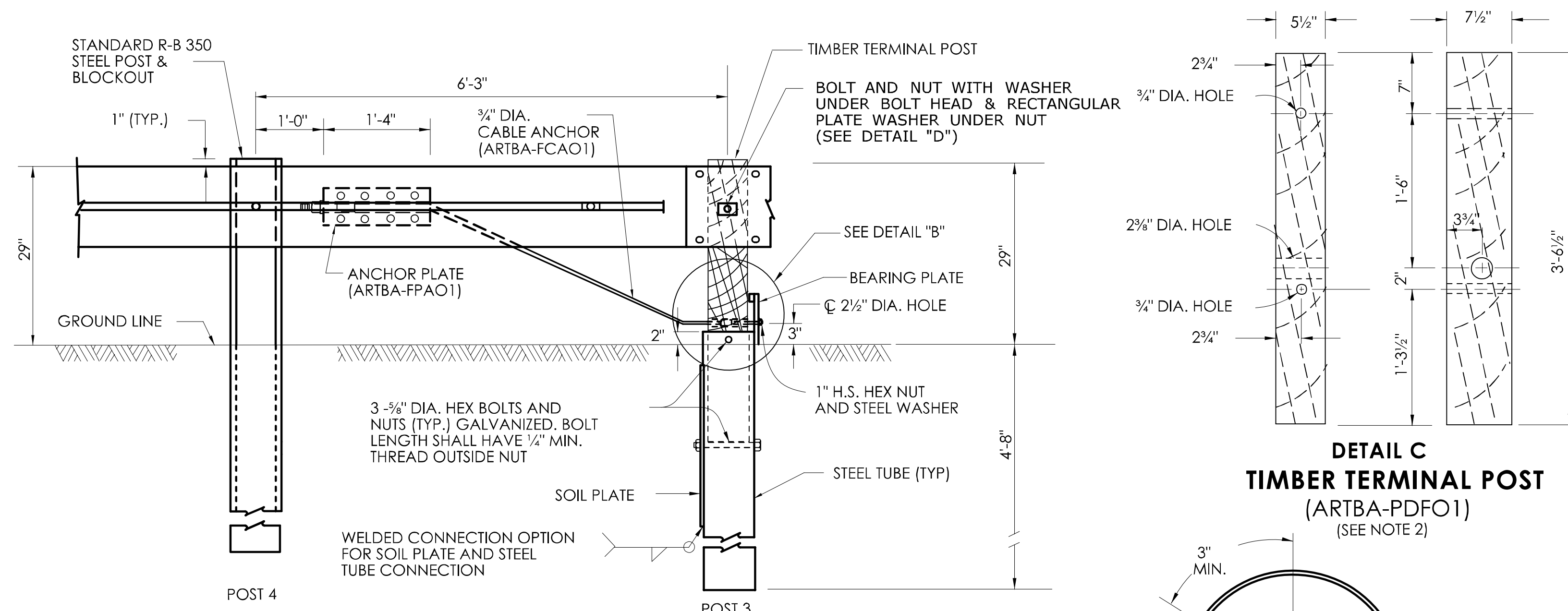
TEMPORARY TRAFFIC BARRIER - DETAILS

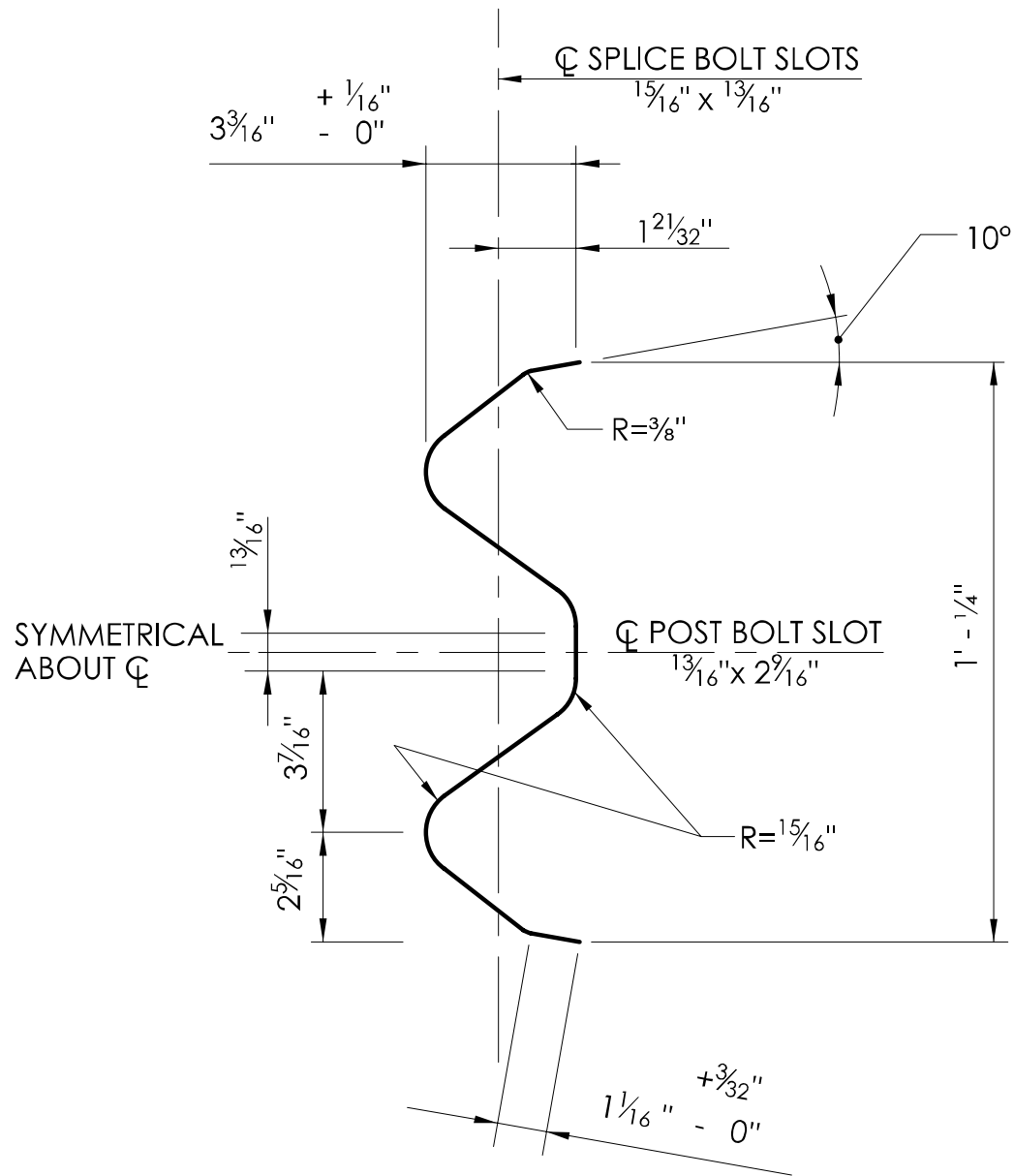
MASH 2016 COMPLIANT  
APPROVAL ID: 2021-01

STANDARD SHEET NO.:

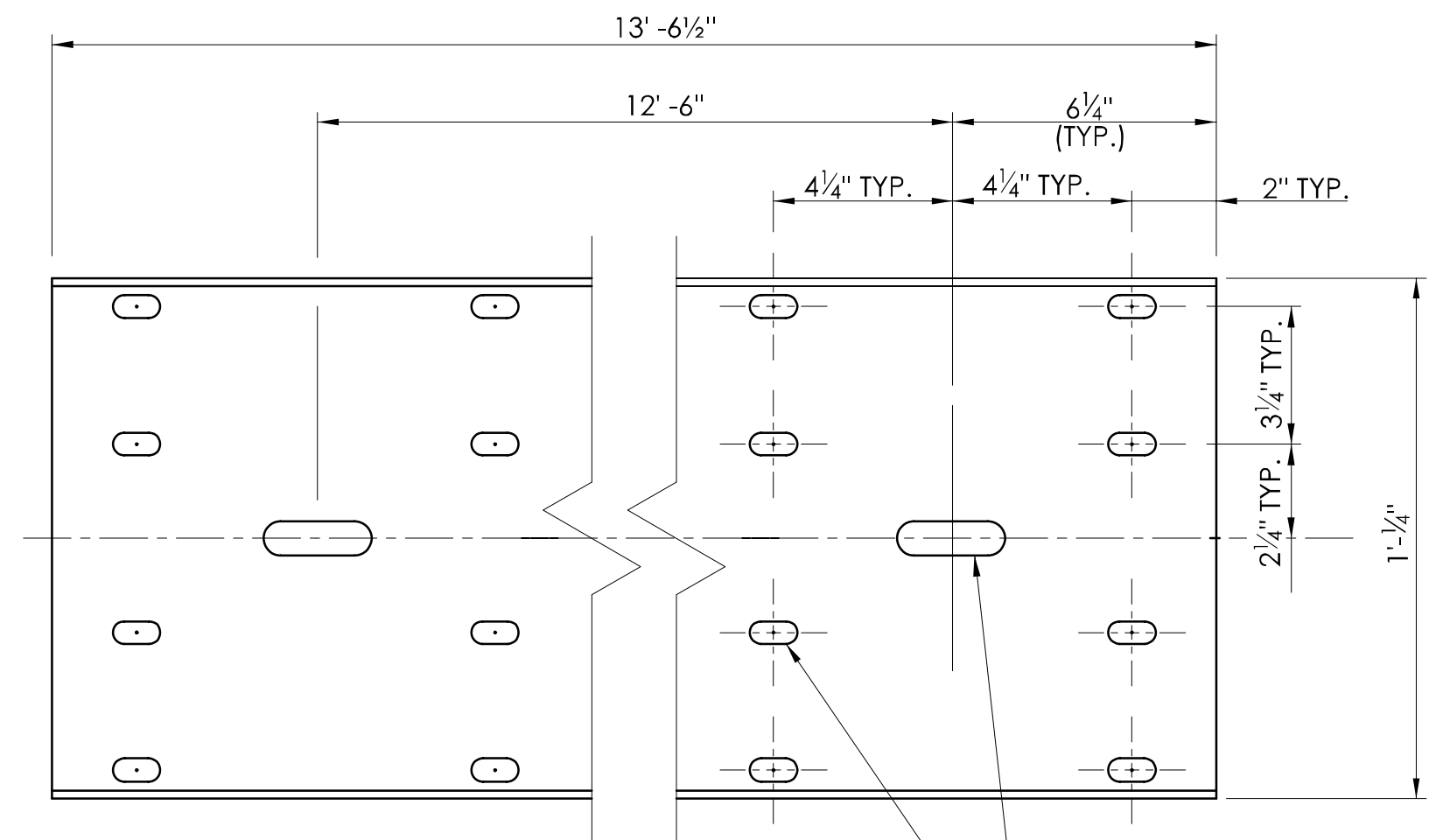
HW-822\_02a



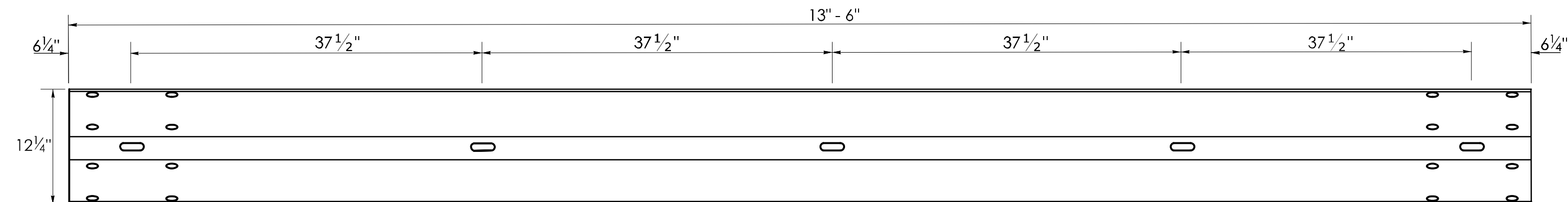




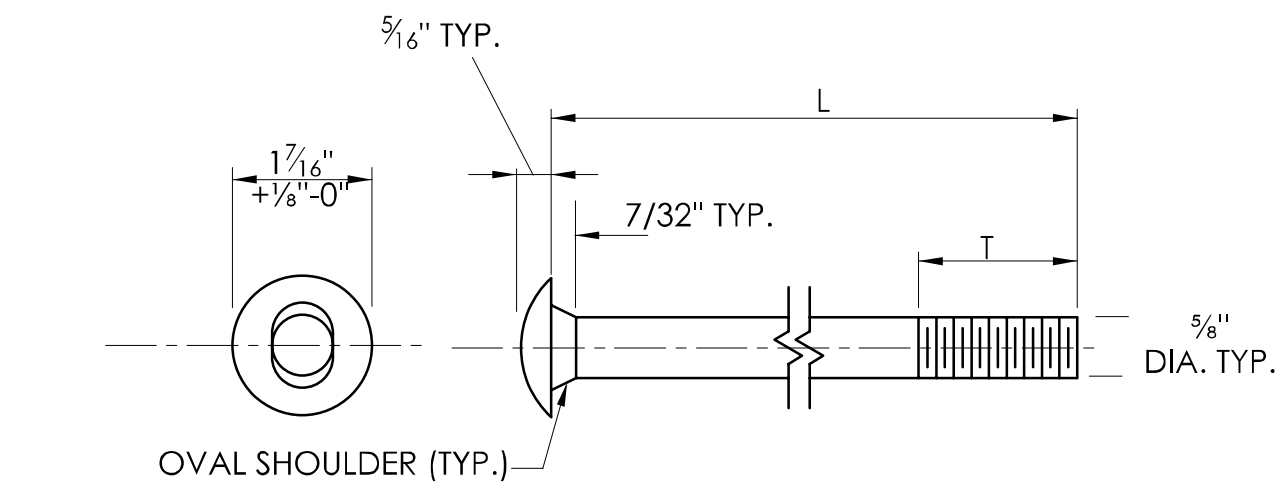
SECTION VIEW



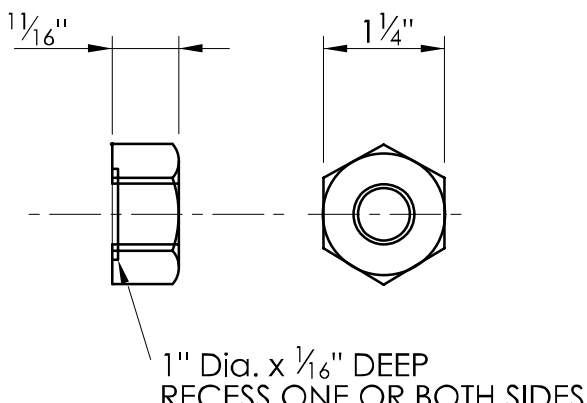
ELEVATION VIEW



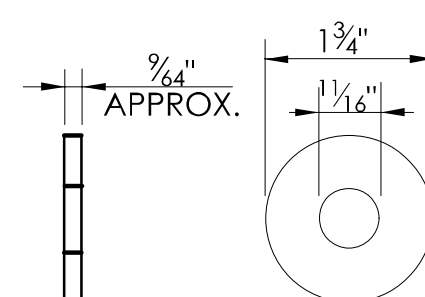
TYPICAL W-BEAM RAIL ELEMENT



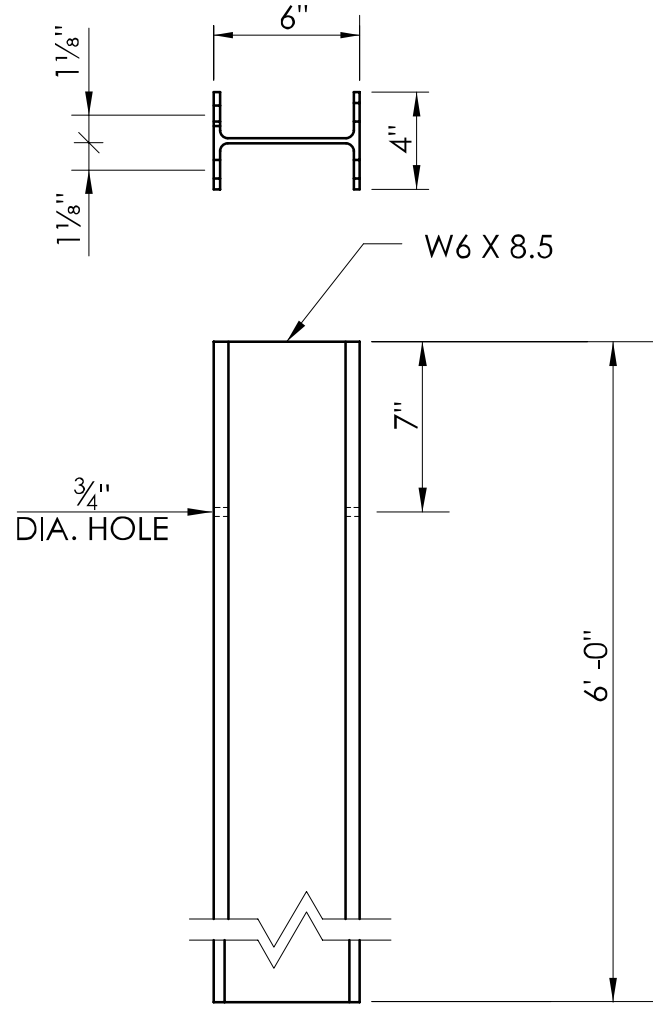
BUTTONHEAD BOLT



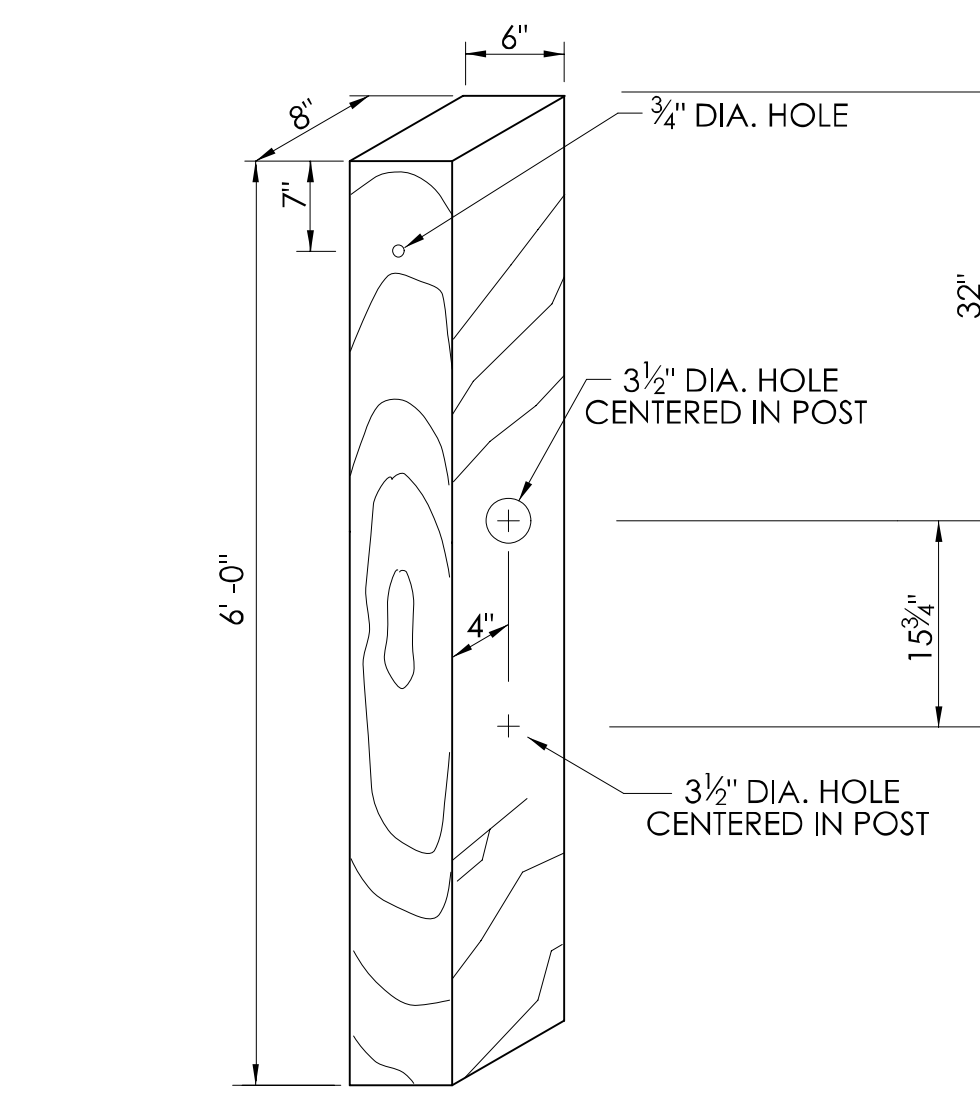
HEX NUT



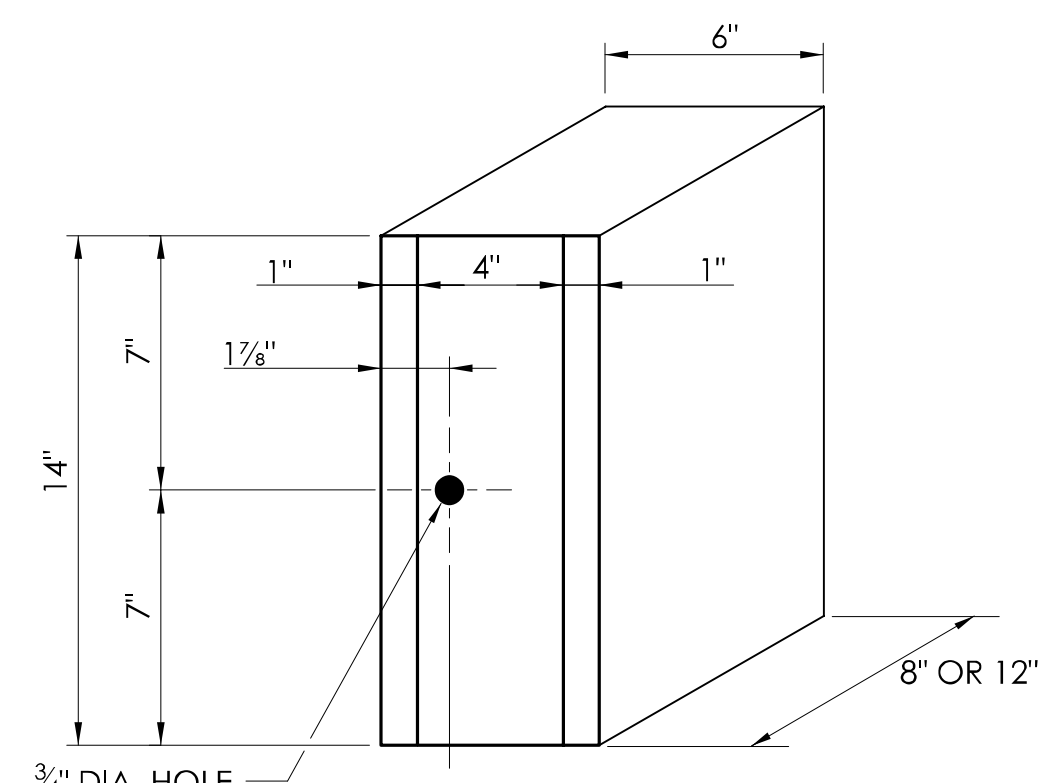
WASHER  
[ FWC16a ]



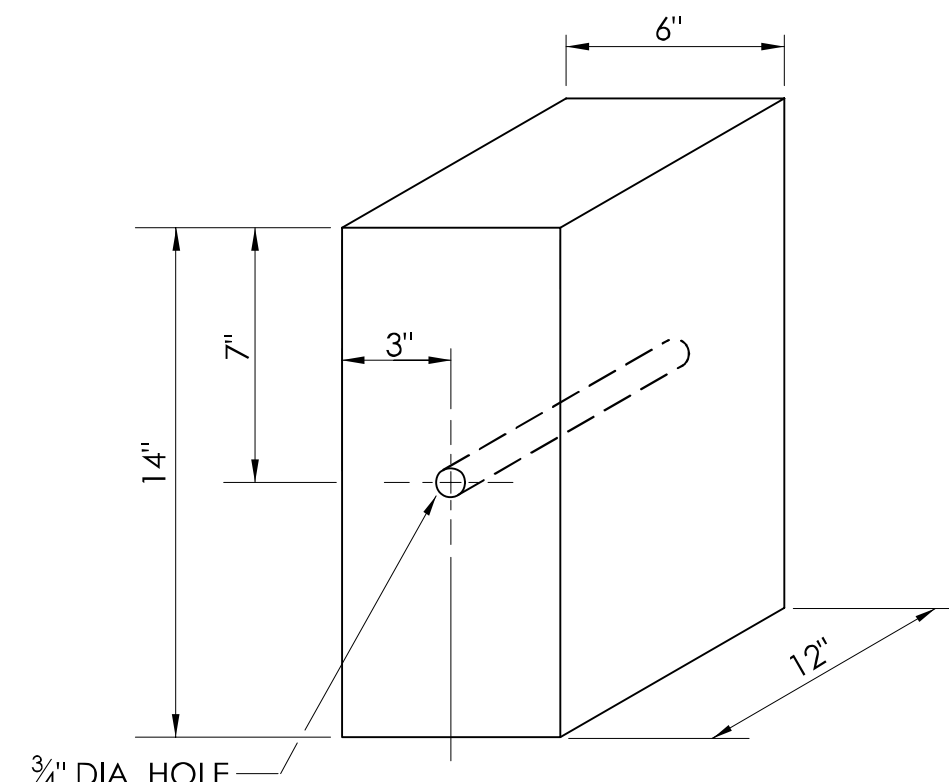
STEEL POST  
6' - 0" LONG



CONTROL RELEASE TIMBER (CRT) POST  
6' - 0" LONG

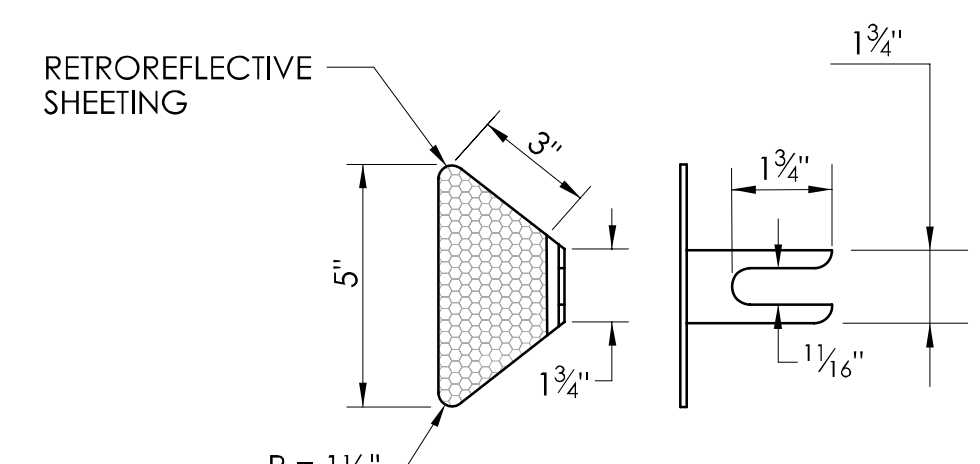


8" or 12" PLASTIC BLOCKOUT  
NOMINAL DIMENSIONS



12" WOOD BLOCKOUT

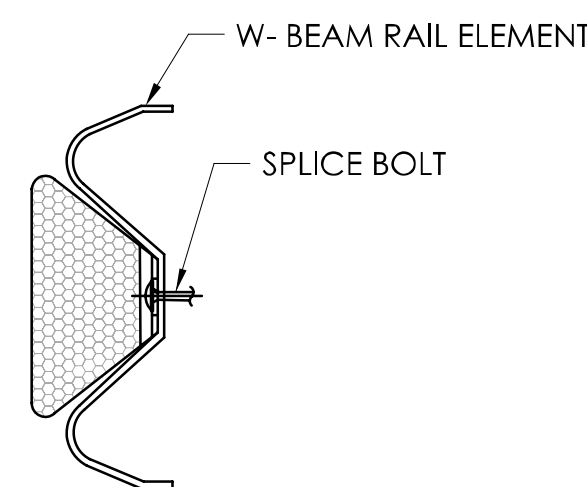
- GENERAL NOTES:**
- W6 x 9 POSTS MAY BE USED IN PLACE OF W6 x 8.5 POSTS.
  - W-BEAM GUIDERAIL SHALL USE CLASS A (12 GAUGE), TYPE II W-BEAM RAIL ELEMENTS.
  - SEVEN FOOT LONG STEEL POSTS (W6 X 8.5) ARE TO BE INSTALLED WHERE INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
  - ALL DIMENSIONS SUBJECT TO MANUFACTURING TOLERANCES



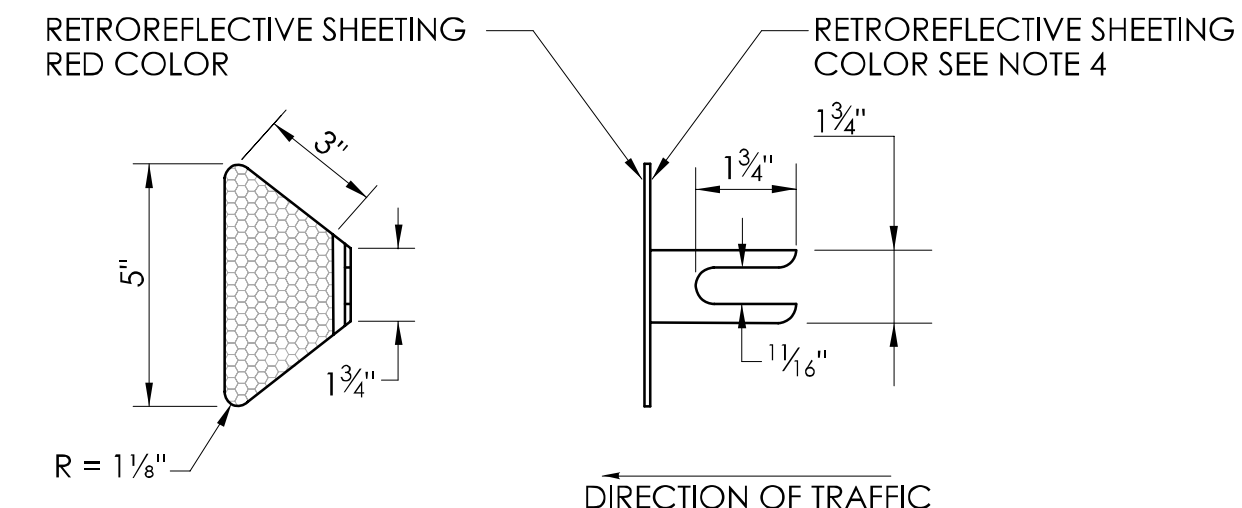
W-BEAM DELINEATOR

**INSTALLATION NOTES:**

- INSTALL W-BEAM DELINEATORS ON RAIL THAT IS PARALLEL TO AND NOT GREATER THAN 8' FROM THE EDGE OF THE ROADWAY. A MINIMUM OF THREE W-BEAM DELINEATORS SHALL BE INSTALLED ON ANY LENGTH OF GUIDERAIL.
- THE SPACING OF W-BEAM DELINEATORS IS 50 FEET, INSTALLED AT RAIL SPLICE LOCATIONS. SPACING IS 25 FEET ON RADII LESS THAN 300 FEET.
- NO W-BEAM DELINEATORS ARE PERMITTED WITHIN 75 FEET OF THE IMPACT HEAD OF ANY TANGENTIAL OR FLARED IMPACT ATTENUATION SYSTEM.
- RETROREFLECTIVE SHEETING SHALL BE WHITE EXCEPT ON THE LEFT SIDE OF DIVIDED STREETS, HIGHWAYS, RAMPS, AND ONE WAY ROADS IN THE DIRECTION OF TRAVEL WHERE IT SHALL BE YELLOW.
- FOR HIGHWAY OFF RAMP, INSTALL W-BEAM DOUBLE SIDED DELINEATORS ACCORDING TO INSTALLATION REQUIREMENTS STATED BELOW FOR W-BEAM DOUBLE SIDED DELINEATORS.



W-BEAM DELINEATOR  
INSTALLATION

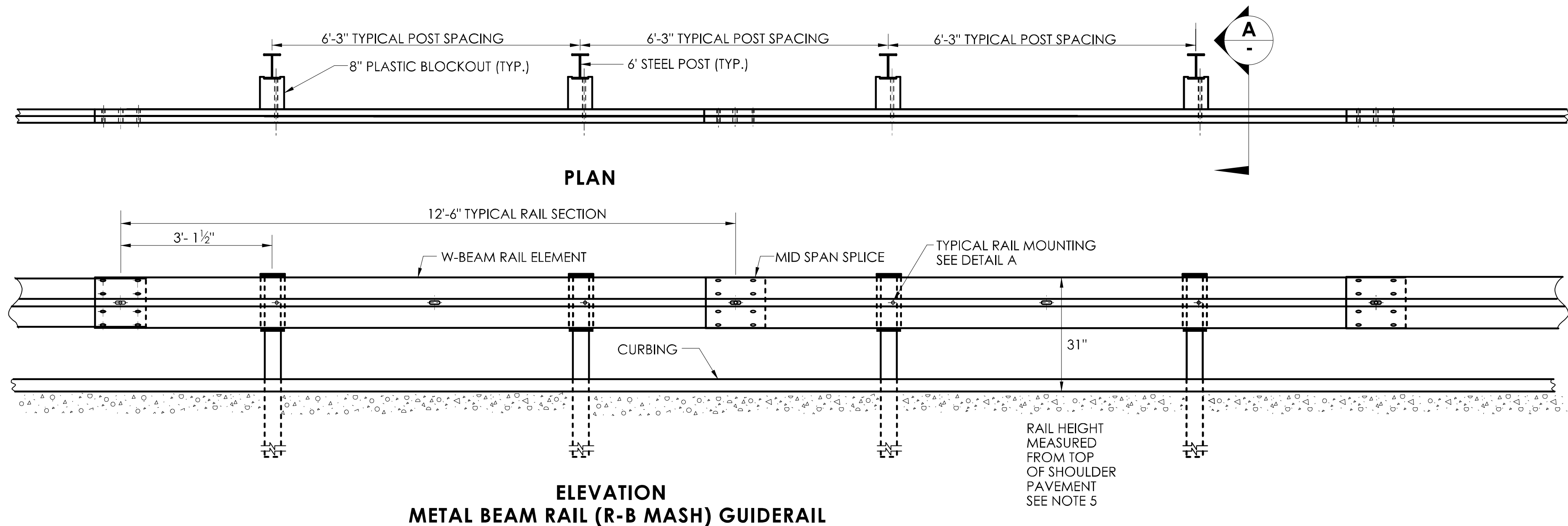


W-BEAM DOUBLE SIDED DELINEATOR  
FOR HIGHWAY OFF RAMPS

**INSTALLATION NOTES:**

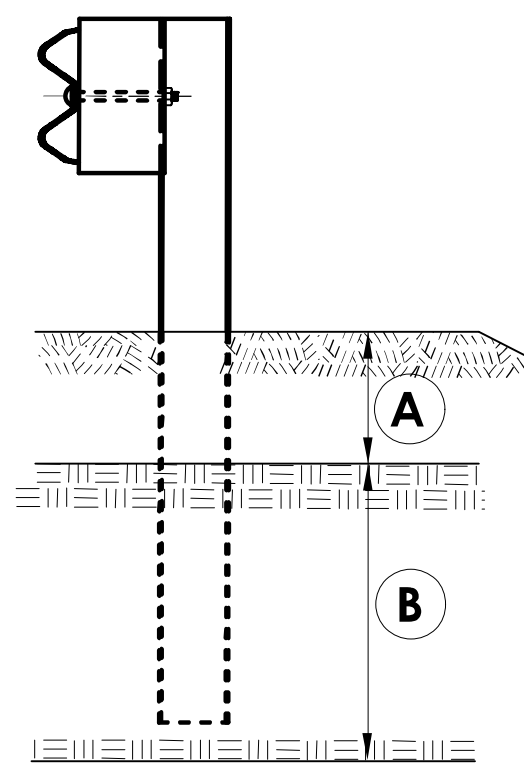
- INSTALL W-BEAM DOUBLE SIDED DELINEATORS ON HIGHWAY OFF RAMP'S W-BEAM GUIDERAIL BETWEEN THE PAINTED TRAFFIC STOP LINE TO THE FARTHEST "WRONG WAY" SIGNS FROM THE INTERSECTION.
- INSTALL THE W-BEAM DOUBLE SIDED DELINEATORS AT 6'-3" SPACING.
- NO W-BEAM DOUBLE SIDED DELINEATORS ARE PERMITTED WITHIN 75 FEET OF THE IMPACT HEAD OF ANY TANGENTIAL OR FLARED IMPACT ATTENUATION SYSTEM.
- RETROREFLECTIVE SHEETING COLOR SHALL BE RED ON BACKSIDE ( NOT FACING NORMAL DIRECTION OF TRAFFIC) WITH FRONT SIDE HAVING WHITE EXCEPT ON THE LEFT SIDE OF RAMPS WHERE IT SHALL BE YELLOW.





GENERAL NOTES:

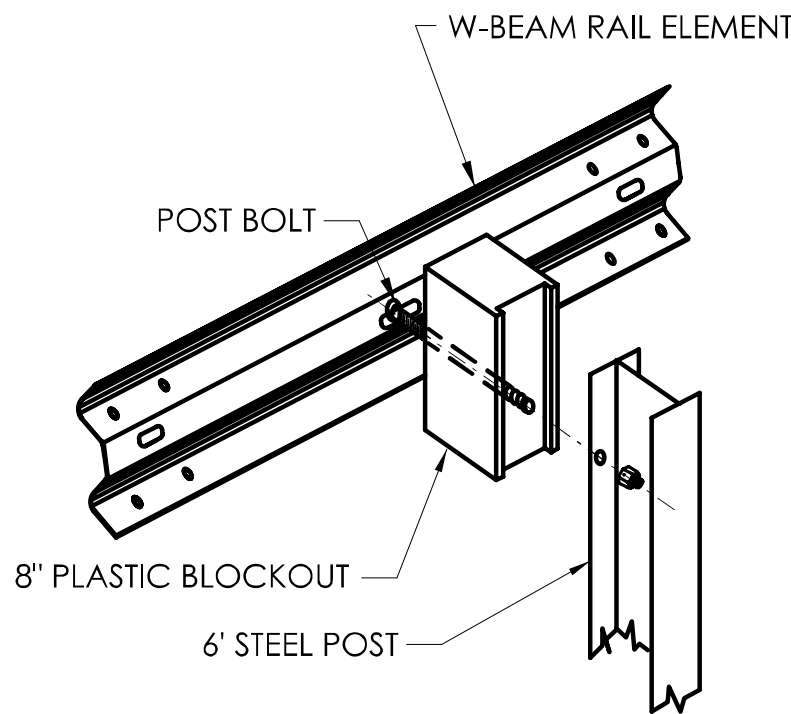
1. SEE SHEET HW-910\_20 FOR MASH W-BEAM HARDWARE AND W-BEAM DELINEATOR DETAILS.
2. THREE BLOCKOUTS MAY BE USED FOR ONE POST ONLY. TWO BLOCKOUTS MAY BE USED FOR A SERIES OF POSTS. THE COST OF ADDITIONAL BLOCKOUTS AND LONGER BOLTS SHALL BE INCLUDED IN THE PRICE PER FOOT OF GUIDERAIL. EXTRA BLOCKOUTS AT TRANSITIONS TO BRIDGE PARAPETS SHOULD BE AVOIDED. DO NOT USE ADDITIONAL BLOCKS IF IT CAUSES THE POST TO BE DRIVEN BEYOND AN EMBANKMENT HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.
3. IF BLOCKOUTS DO NOT AVOID POST FROM OBSTRUCTION, ONE POST MAY BE OMITTED IF 50 FEET OF GUIDERAIL EXISTS ON BOTH SIDES OF LOCATION. USE METAL BEAM RAIL SPAN SECTION TYPE II OR III FOR MORE THAN ONE CONSECUTIVE OMITTED POST, SEE SHEET HW-910\_24.
4. W-BEAM GUIDERAIL MAY BE PLACED 1' OR MORE FROM THE EDGE OF PAVEMENT ONLY ON SLOPES 10:1 OR FLATTER AND WITHOUT CURBING.
5. IF THE RAIL IS INSTALLED WITHIN 2' OF THE EDGE OF PAVEMENT, THE RAIL HEIGHT IS MEASURED FROM THE SHOULDER SLOPE EXTENDED TO THE RAIL. IF THE RAIL IS INSTALLED BEYOND 2' FROM THE EDGE OF PAVEMENT, THE RAIL HEIGHT IS MEASURED FROM THE GROUND DIRECTLY BELOW THE RAIL.
6. RAIL HEIGHT CONSTRUCTION TOLERANCE IS +/- 1 INCH.
7. FOR NEW CONSTRUCTION, PLACE 6 INCH LAYER OF PROCESSED AGGREGATE. FOR CONSTRUCTION PROJECTS WITH GUIDERAIL UPGRADE, THE CONTRACT PLANS MAY CALL OUT PROCESSED AGGREGATE ONLY TO BE PLACE IN LOCATION(S) OF EXISTING VERTICAL PAVEMENT EDGE DROP OFF AS A LEVELING MATERIAL, FILLING IN DEPRESSED AREAS.



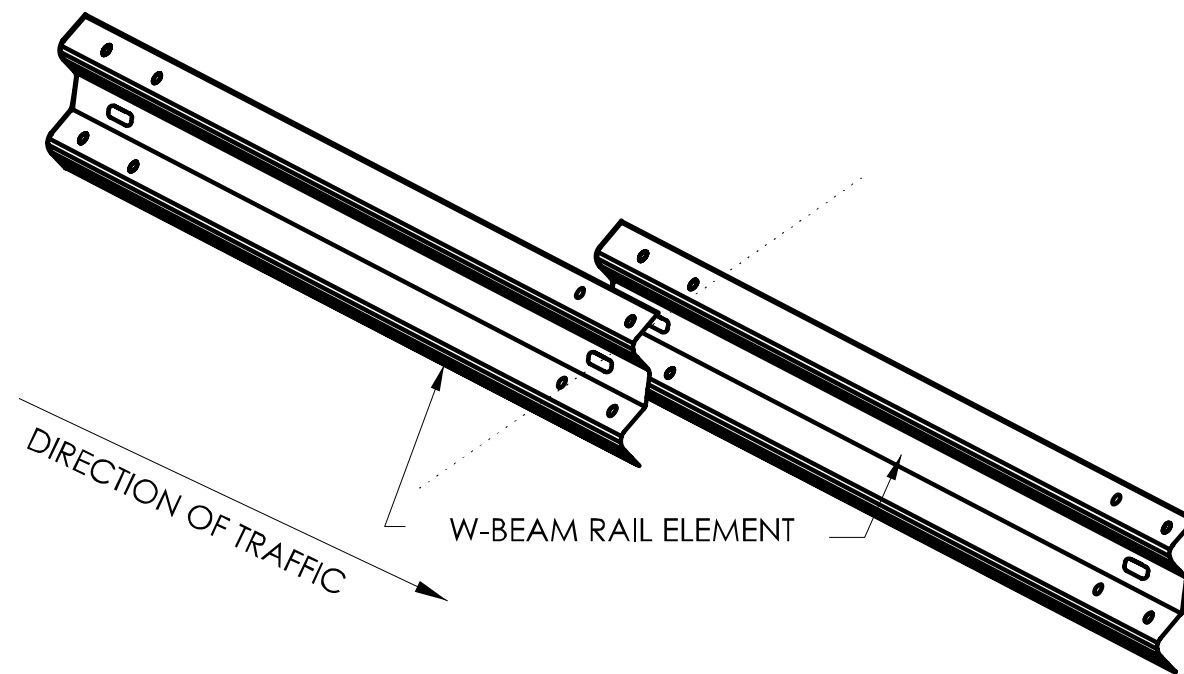
ELEVATION

CONDITION 1:  
IF SOIL DEPTH  
IS  $\leq$  18" DEEP (A)  
DRILL 20" DIA.  
HOLE 24" INTO  
LEDGE. (B)

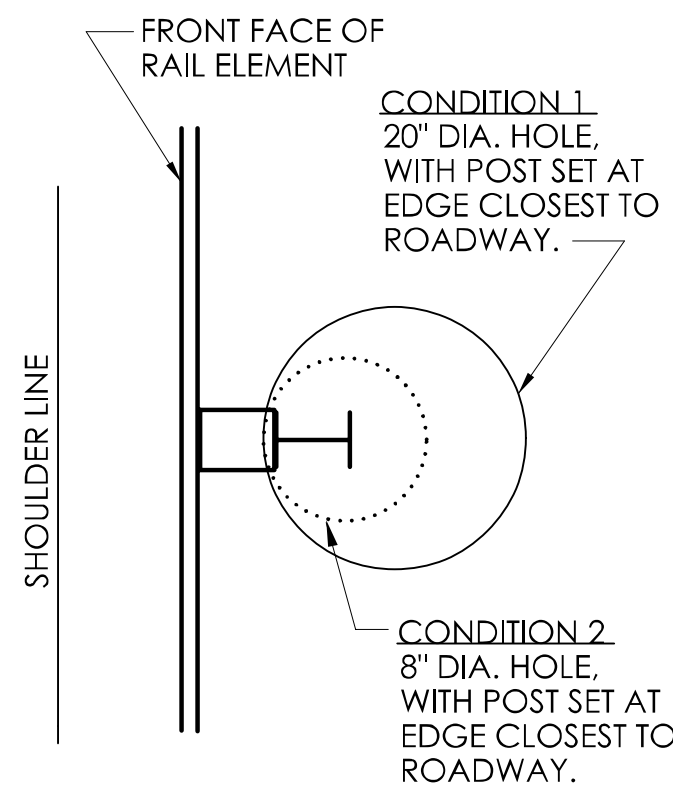
CONDITION 2:  
IF SOIL DEPTH  
IS > 18" DEEP (A)  
DRILL 8" DIA. HOLE  
12" INTO LEDGE (B) OR TO  
THE DEPTH OF FULL  
EMBEDMENT  
WHICHEVER IS LESS.



DETAIL A  
RAIL MOUNTING

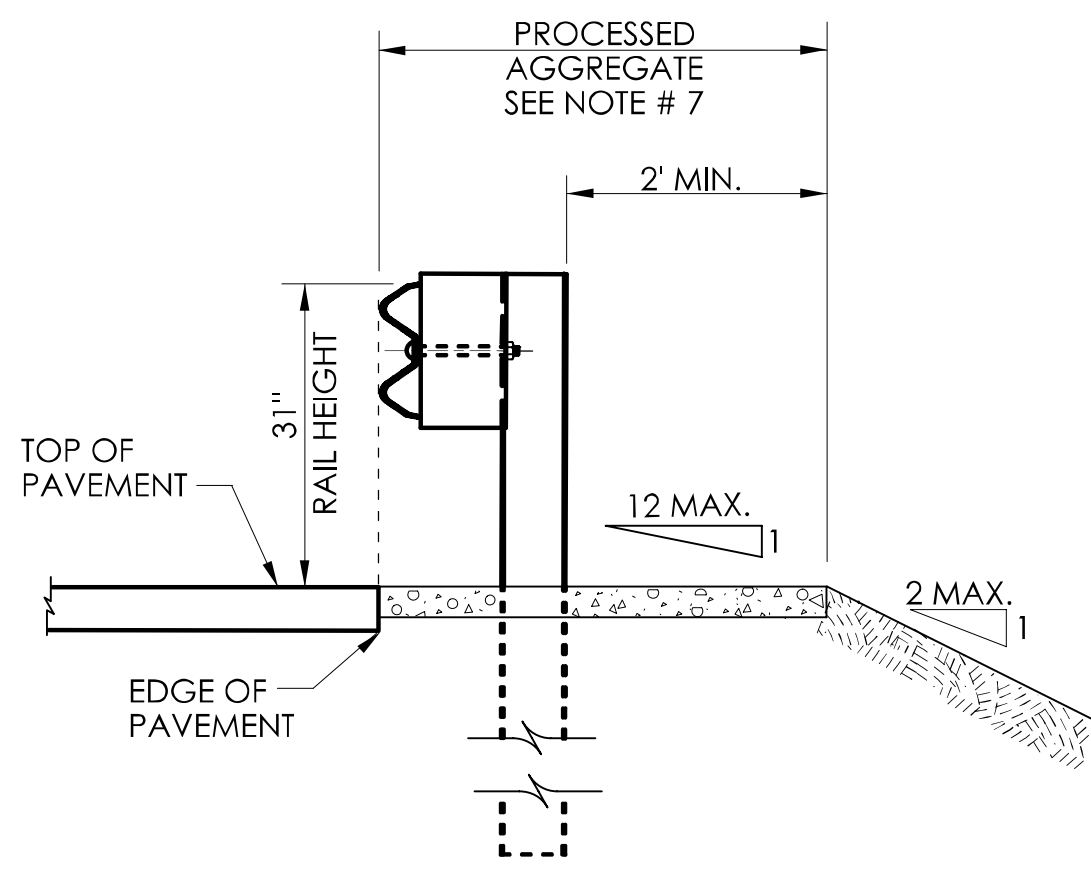


LAP W-BEAM RAIL SECTIONS  
NOTE: EIGHT (8) SPICE BOLTS PER JOINT



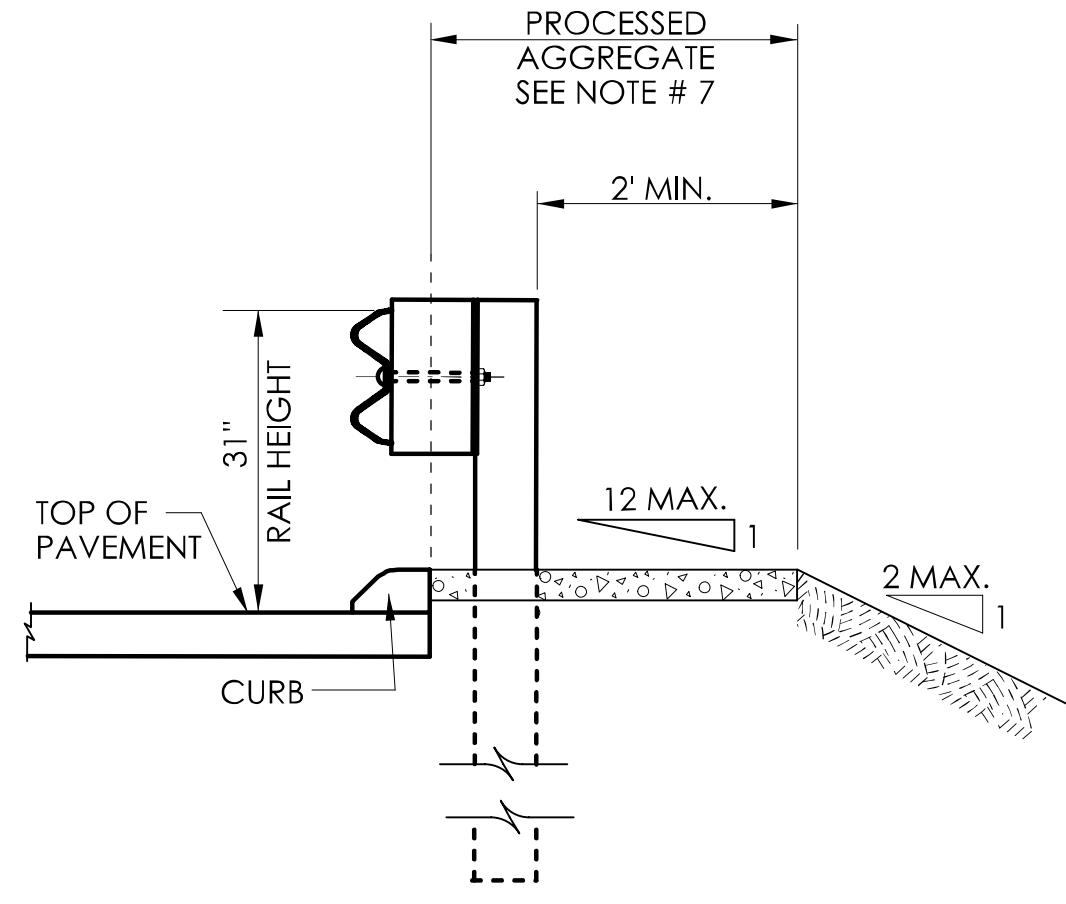
PLAN

GUIDERAIL POSTS IN ROCK



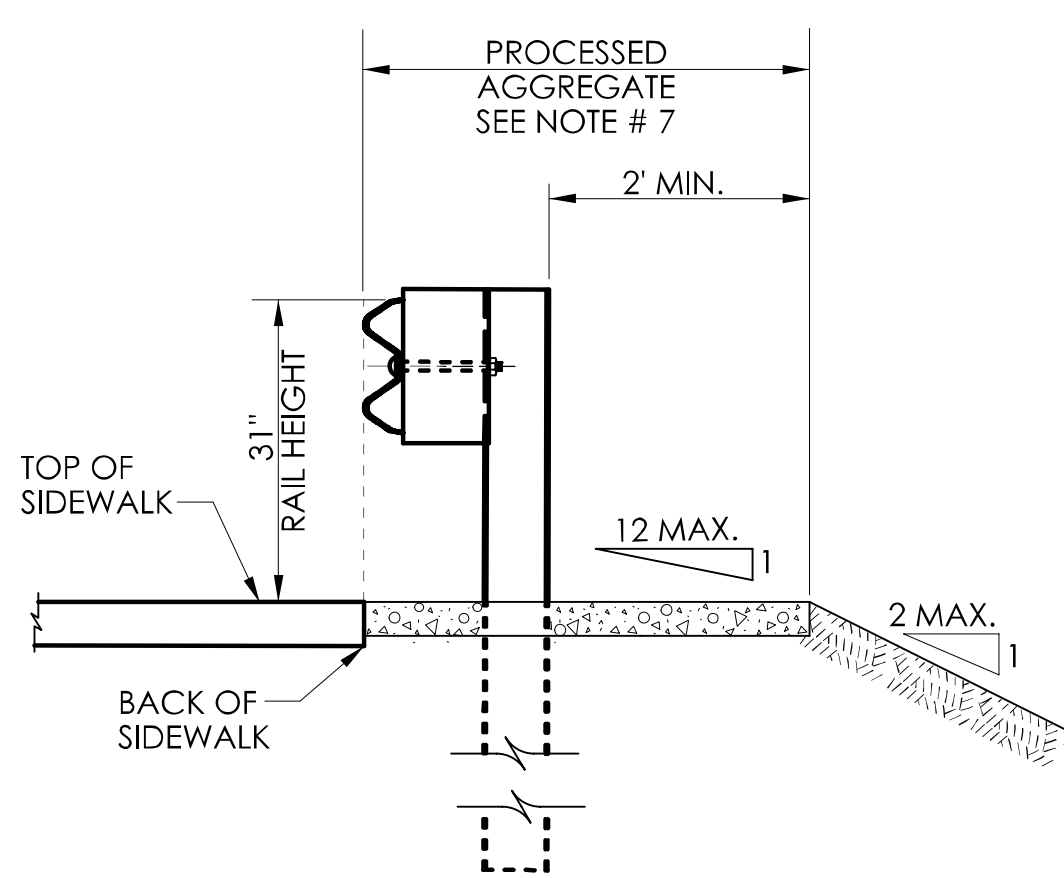
SECTION A

NO CURB APPLICATION



SECTION A

CURB APPLICATION



SECTION A

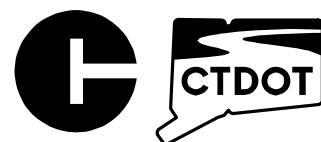
SIDEWALK APPLICATION

NOT TO SCALE

SIGNATURE BLOCK:  
OFFICE OF ENGINEERING  
2800 BERLIN TURNPIKE  
NEWINGTON, CT 06111

SUBMITTED BY:  
Digitally signed by  
Leo Fontaine, P.E.  
Date: 2024.12.19  
15:04:27-05'00'

APPROVED BY:  
Digitally signed by  
Michael N. Calabrese, P.E.  
Date: 2025.01.29  
12:32:15-05'00'



CONNECTICUT  
DEPARTMENT OF  
TRANSPORTATION

CTDOT  
STANDARD SHEET

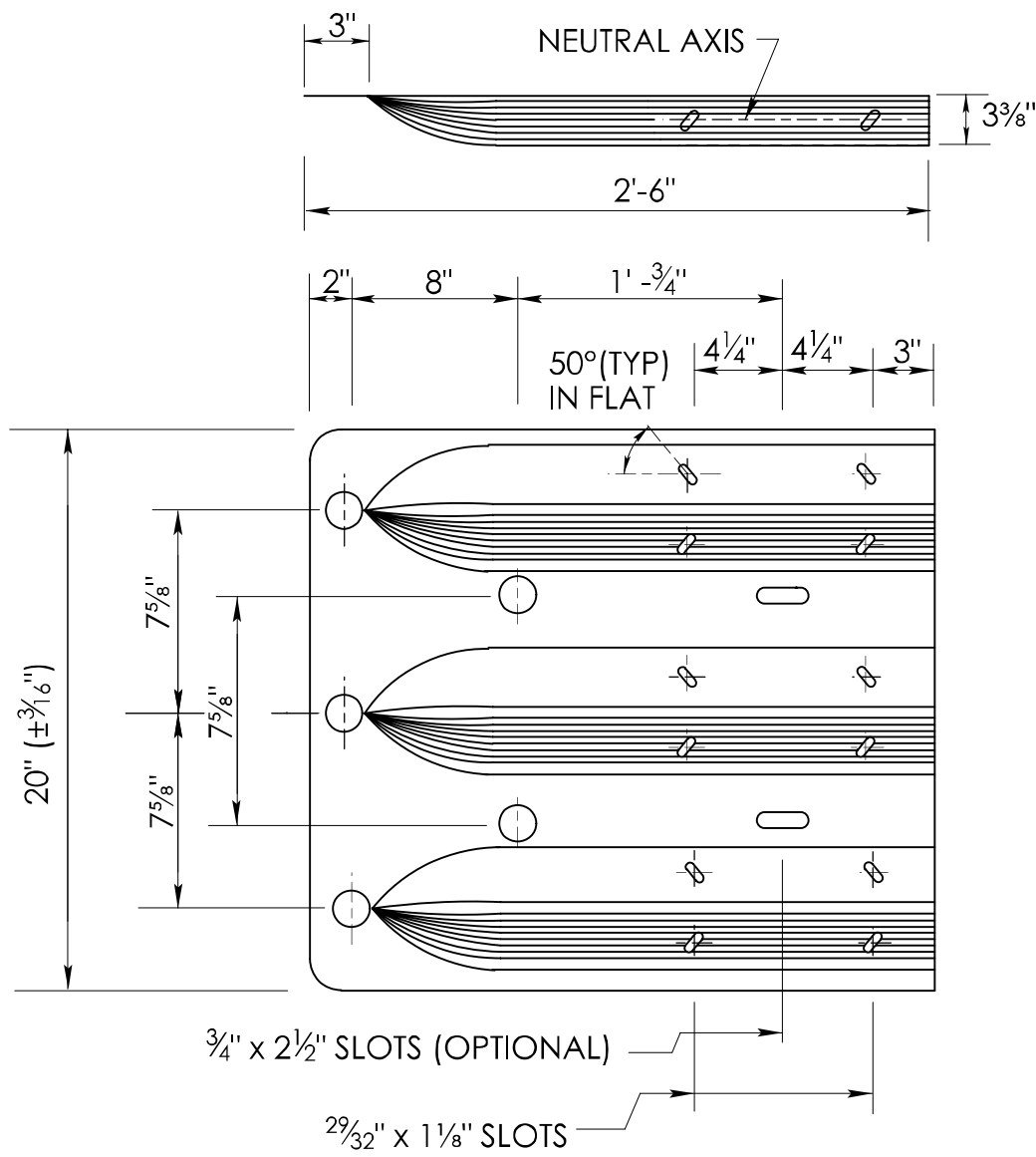
STANDARD SHEET TITLE:

METAL BEAM RAIL (R-B MASH) GUIDERAIL

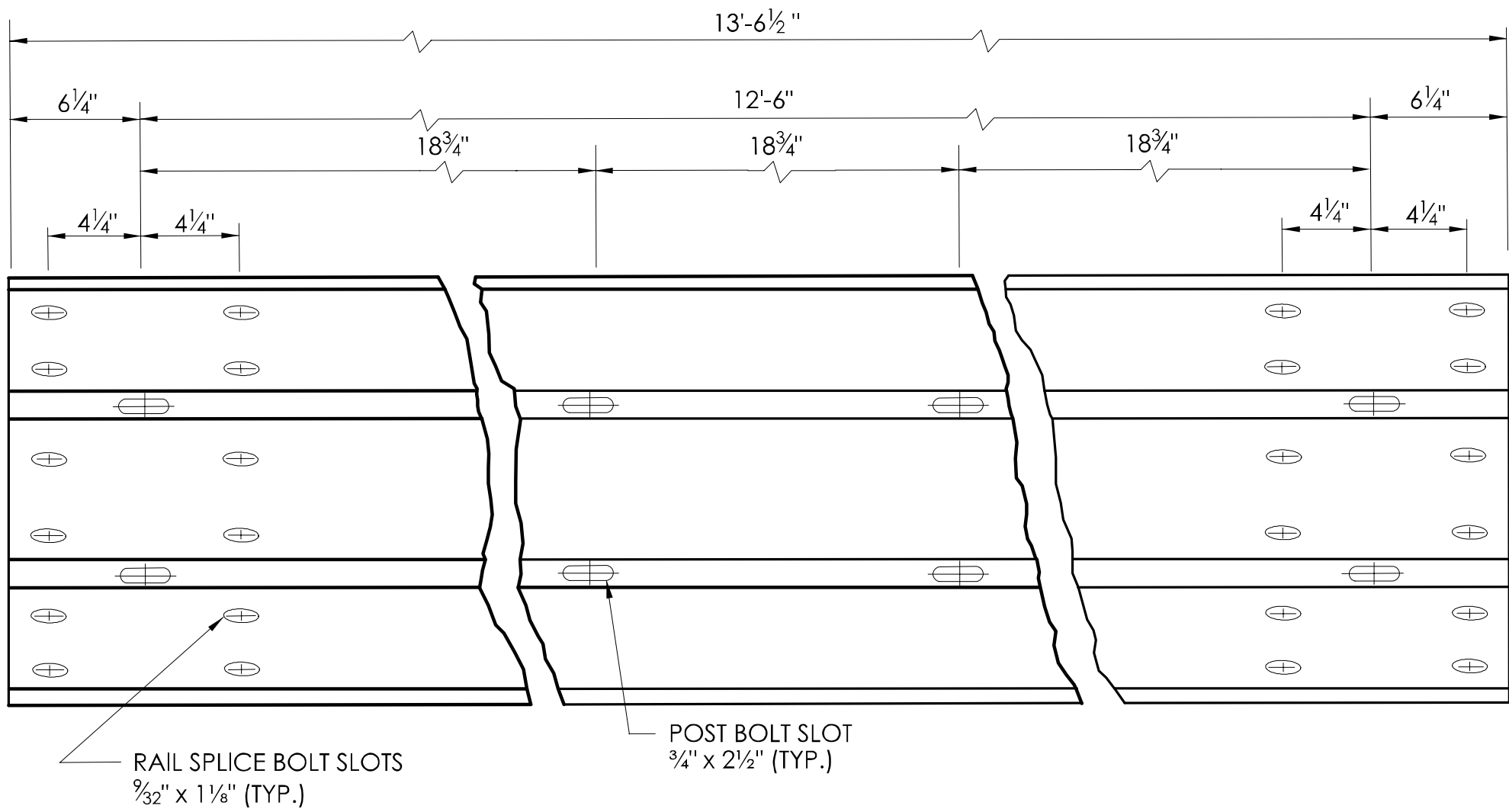
STANDARD SHEET NO.:

HW-910\_21

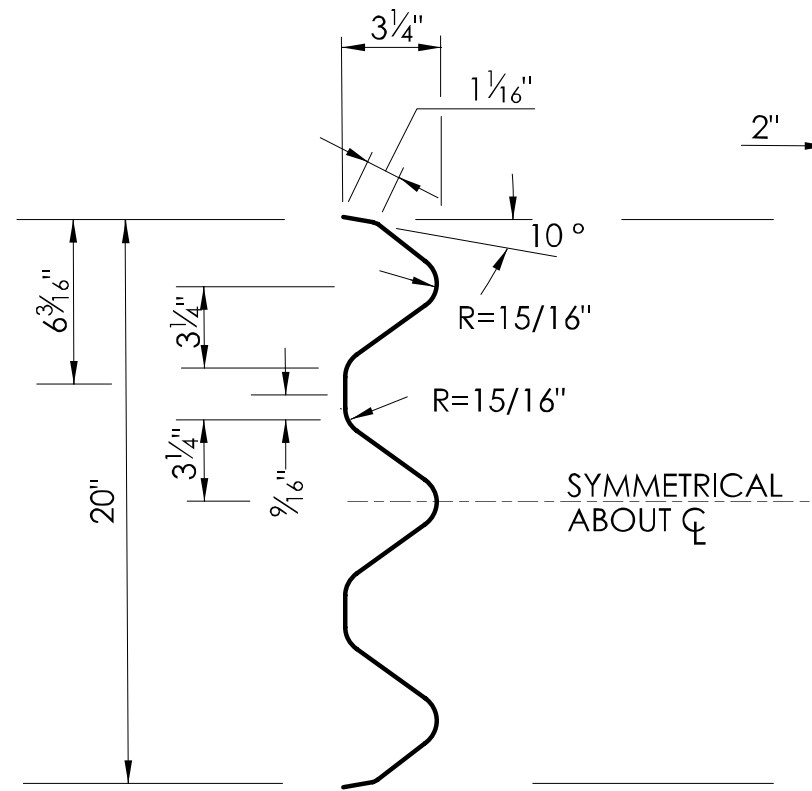
GENERAL NOTE:  
1. ALL DIMENSIONS SUBJECT TO MANUFACTURING TOLERANCES



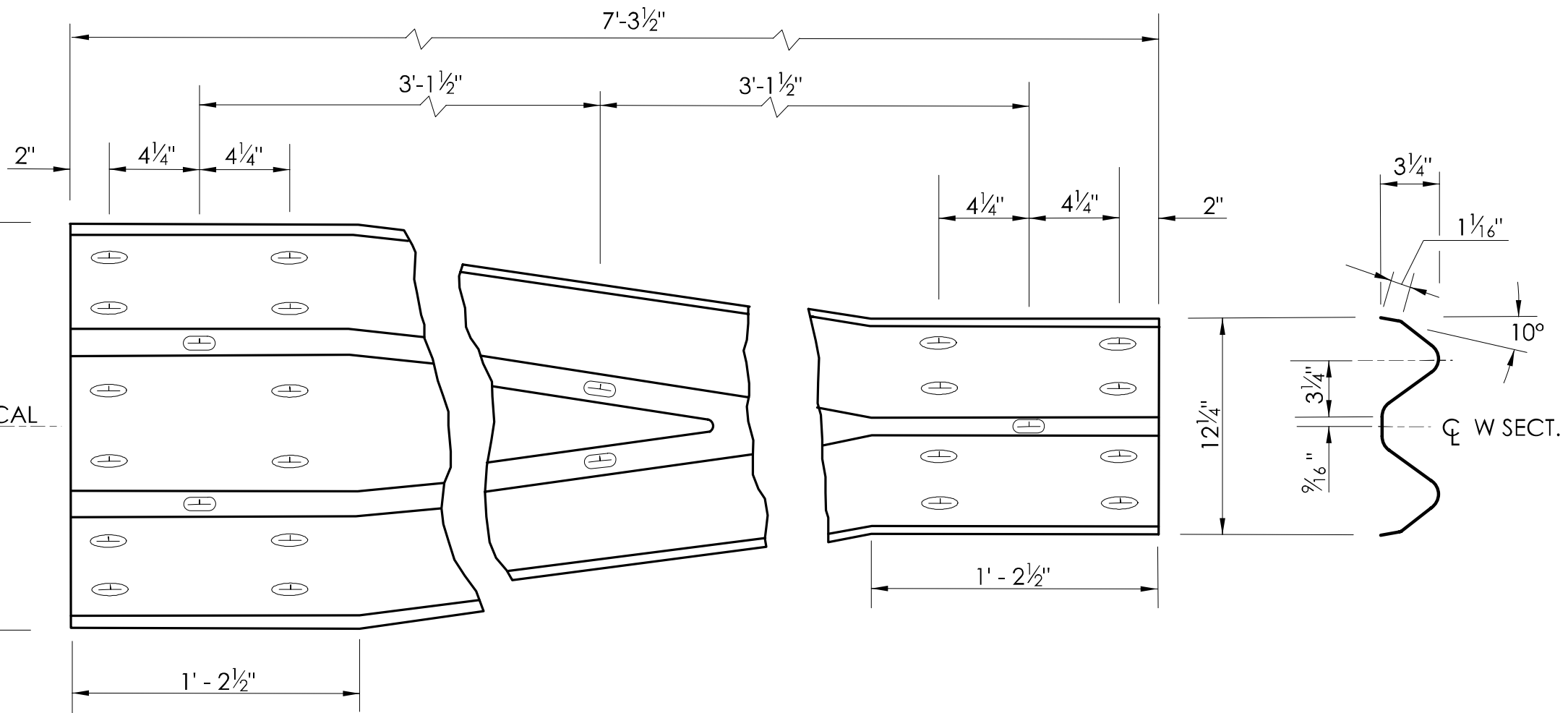
**THRIE-BEAM TERMINAL CONNECTOR**  
[ RTE01b ]  
( 10 GAUGE )



**TYPICAL THRIE-BEAM RAIL ELEMENT**  
[ RTM19a FOR 6'-3" AND RTM08a FOR 12'-6" THRIE-BEAM LENGTHS ]  
( 12 GAUGE )

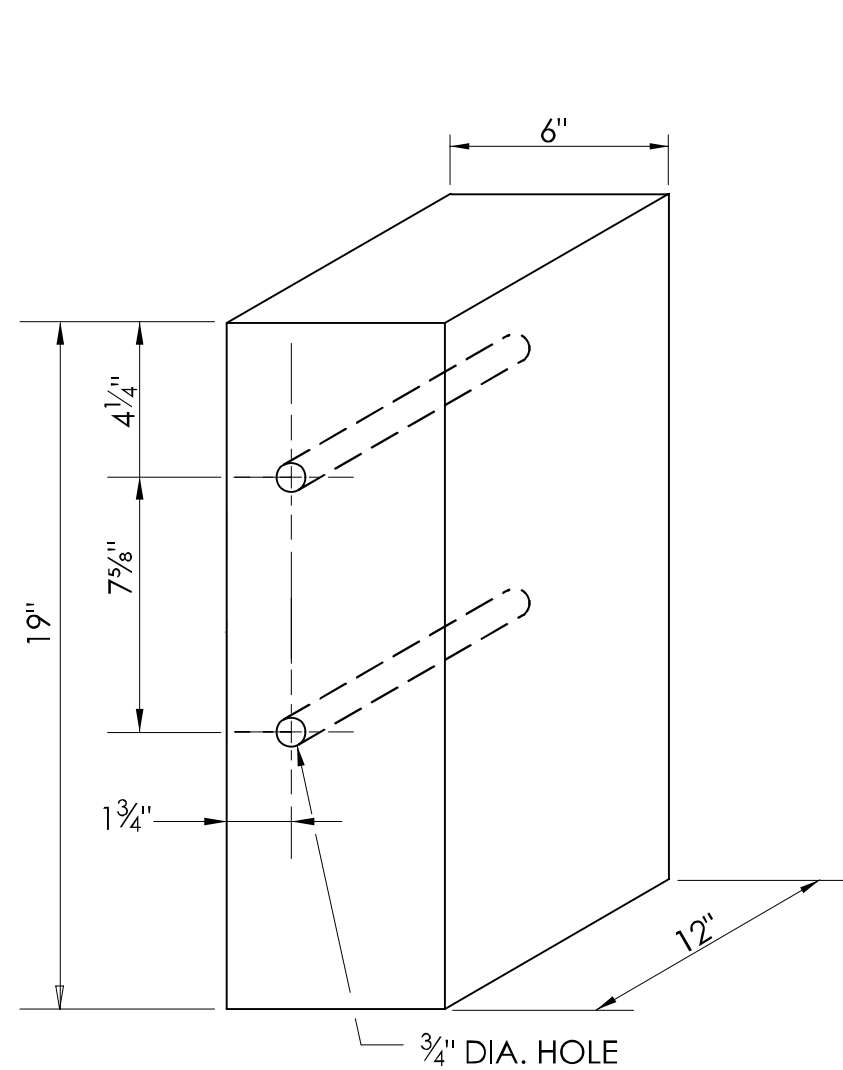


**END VIEW OF TRANSITION**

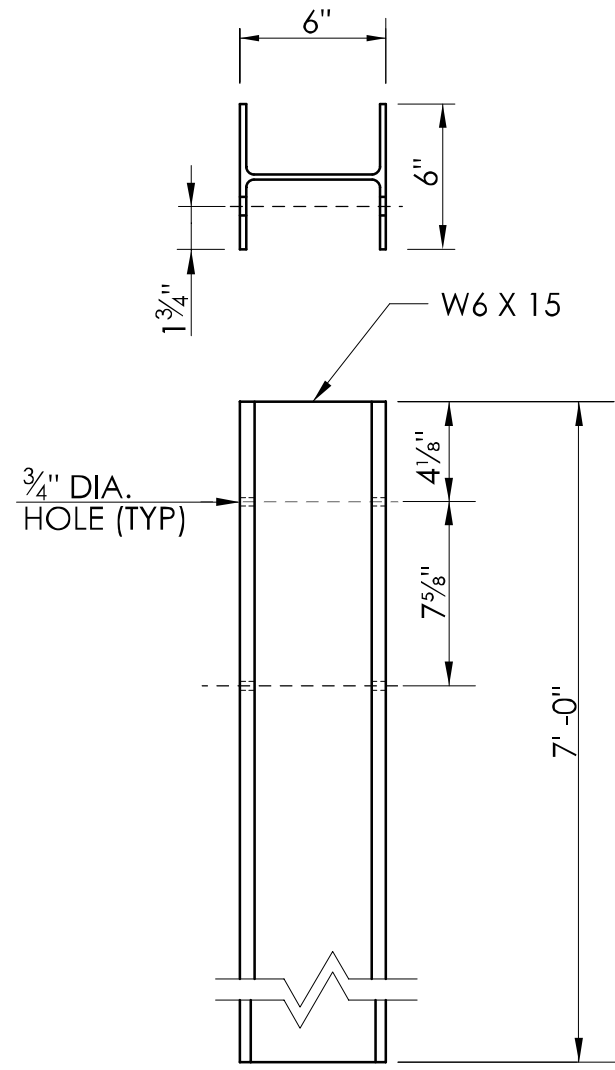


**TYPICAL THRIE-BEAM TRANSITION ELEMENT**  
[ RW01b ]  
( 10 GAUGE )

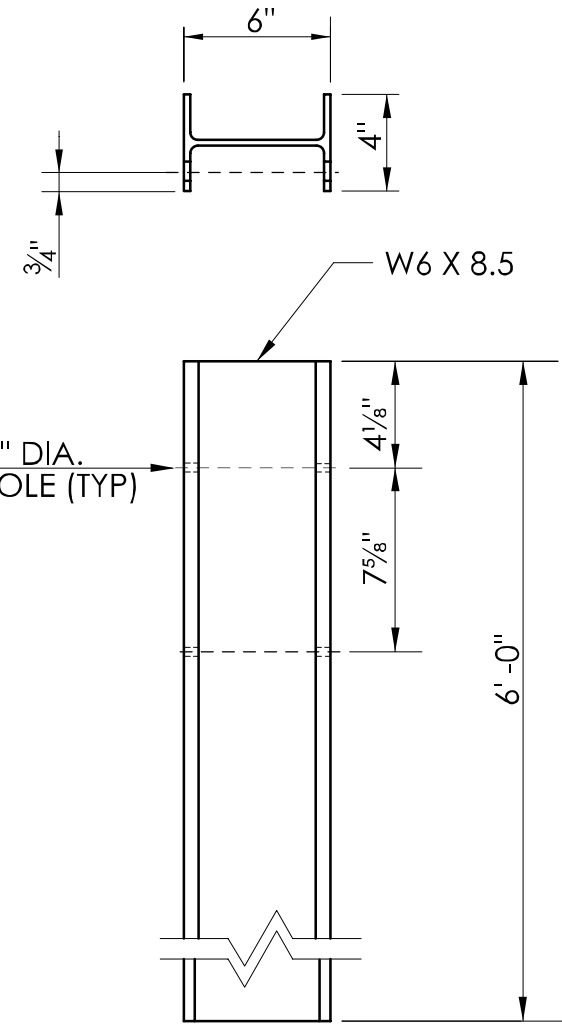
**END VIEW OF TRANSITION**



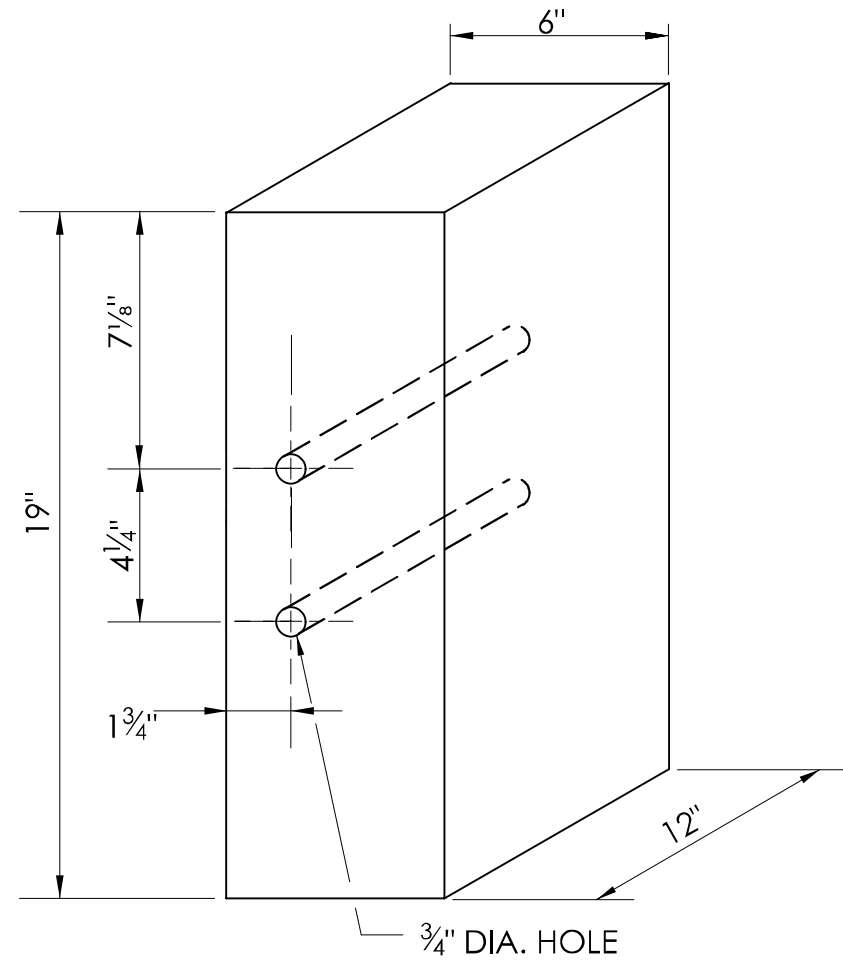
**12" WOOD BLOCKOUT**  
[ PDB18 ]  
( FOR POSTS 1 TO 8 )



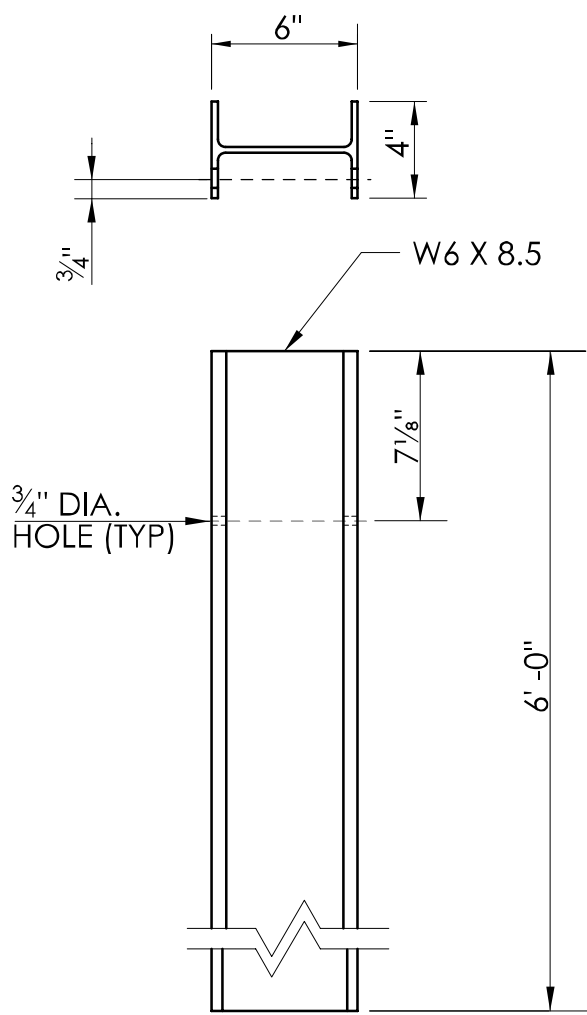
**STEEL POST 7' - 0" LONG**  
[ PDB18 ]  
( FOR POSTS 1 TO 3 )



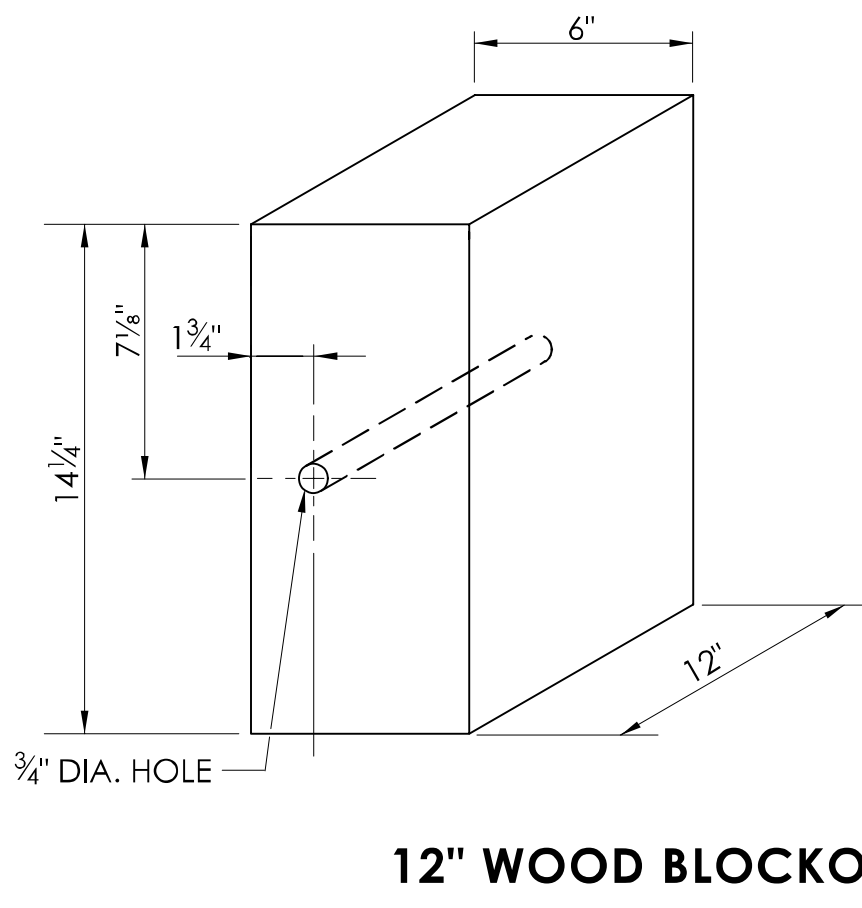
**STEEL POST 6' - 0" LONG**  
[ PDB18 ]  
( FOR POSTS 4 TO 8 )



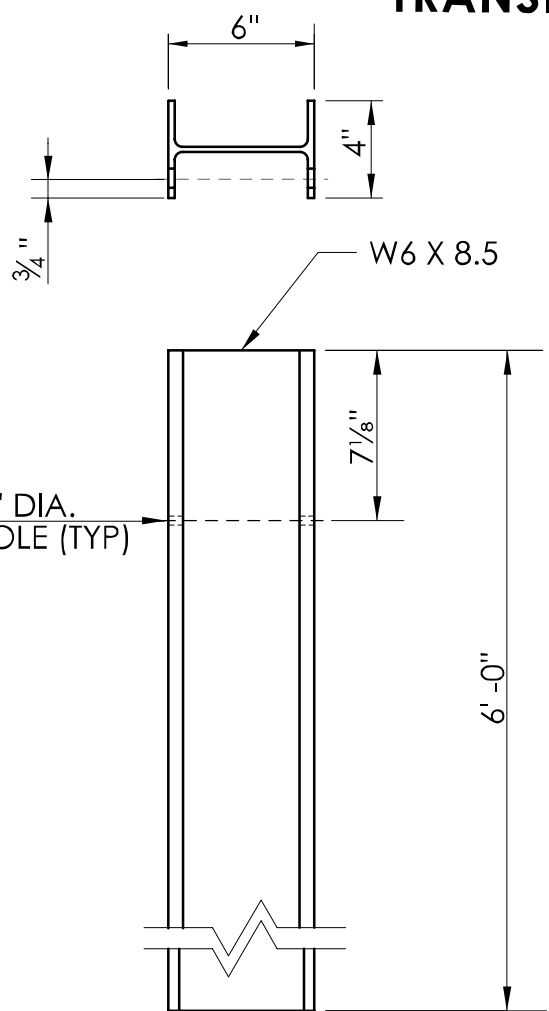
**12" WOOD BLOCKOUT**  
[ PDB18 ]  
( FOR POST 9 ONLY )



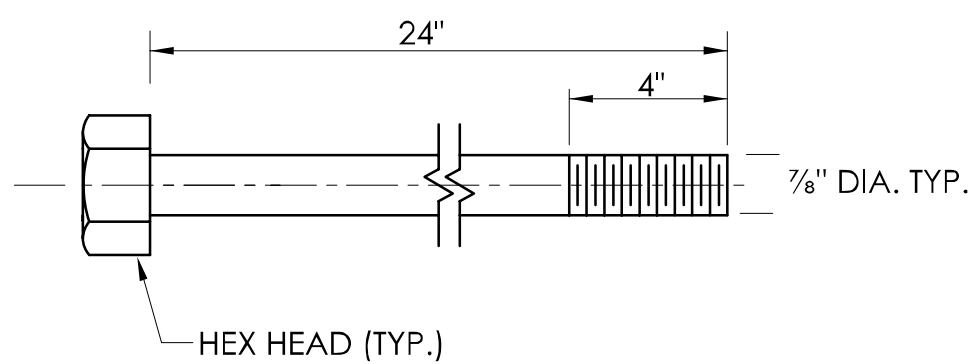
**STEEL POST 6' - 0" LONG**  
[ PDB18 ]  
( FOR POST 9 ONLY )



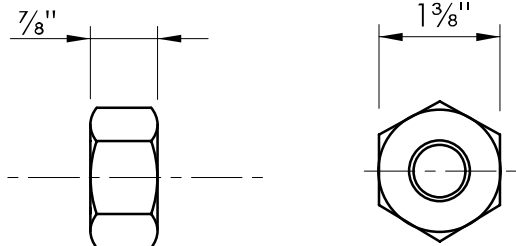
**12" WOOD BLOCKOUT**  
[ PDB10a ]  
( FOR POSTS 10 TO 12 )



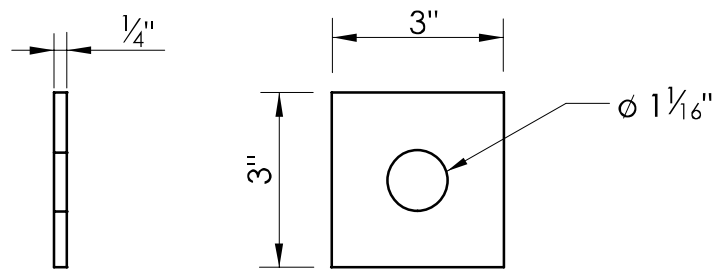
**STEEL POST 6' - 0" LONG**  
[ PDB18 ]  
( POSTS 10 TO 12 )



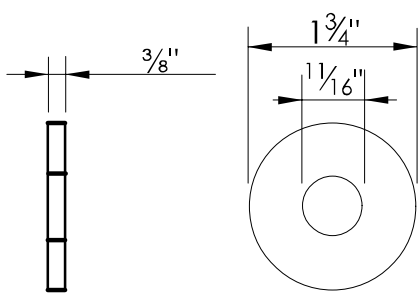
**LONG HEAVY HEX HEAD BOLT**  
[ FBX22b ]  
( FOR THRIE-BEAM TERMINAL CONNECTOR )



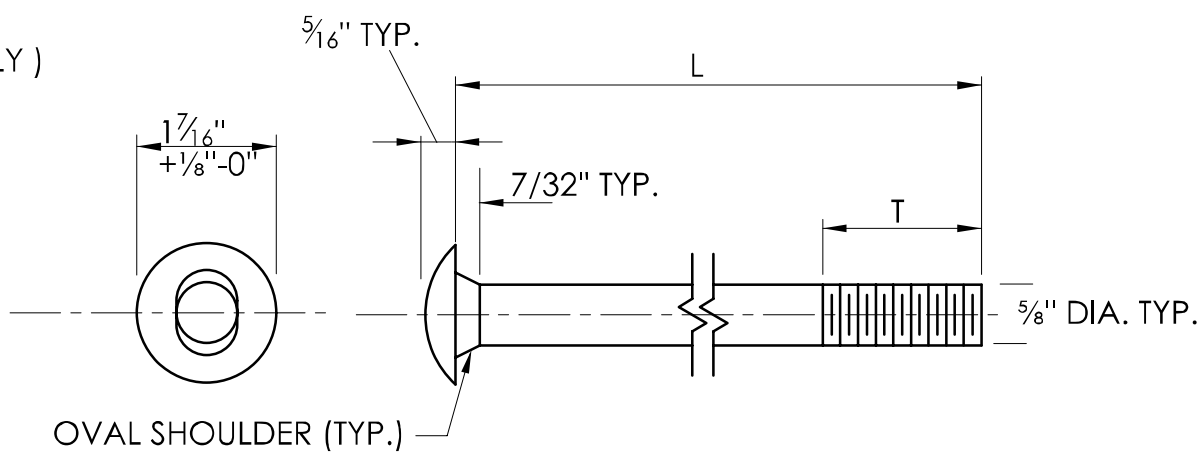
**HEX NUT**



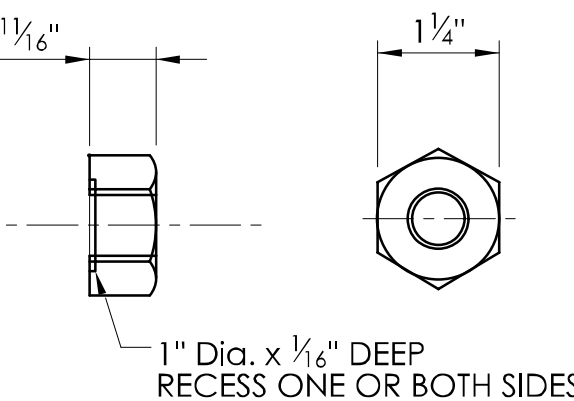
**SQUARE PLATE WASHER**  
[ FWR10 ]  
( For THRIE-BEAM TERMINAL CONNECTOR, PLACED BETWEEN HEX NUT AND BACKSIDE OF CONCRETE STRUCTURE )



**WASHER**  
[ FWC16a ]  
( FOR WASHERS PLACED BETWEEN SPICE NUT AND THRIE-BEAM TERMINAL CONNECTOR )



**BUTTONHEAD BOLT**



**HEX NUT**

DESIGNATOR	L	T	INTENDED USE
FB02	2"	1 7/8"	RAIL SPICE BOLTS
FB06	14"	4"	POST BOLT ( 12" BLOCK OUTS )

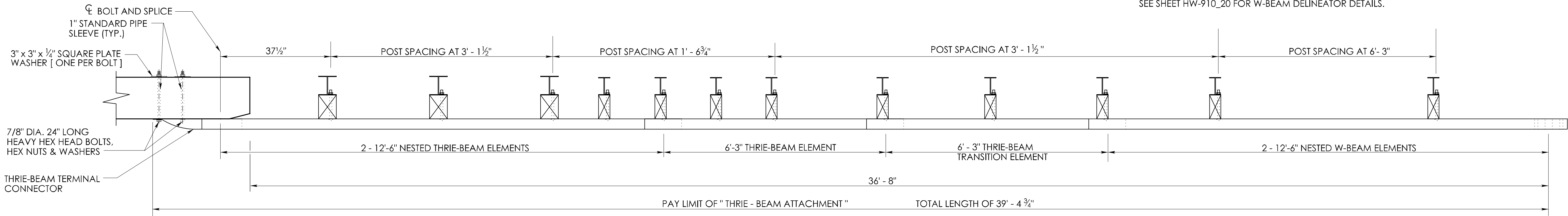
**5/8" BUTTON HEAD BOLT(S) AND RECESSED NUT(S)**

NOTE: AFTER GALVANIZING, THE NUT SHALL BE FREE RUNNING ON THE BOLT. DIAMETER SHOWN IS TYPICAL FOR ALL GUIDERAIL BOLTS. SEE DETAILS ABOVE FOR SPECIFIC LENGTHS.

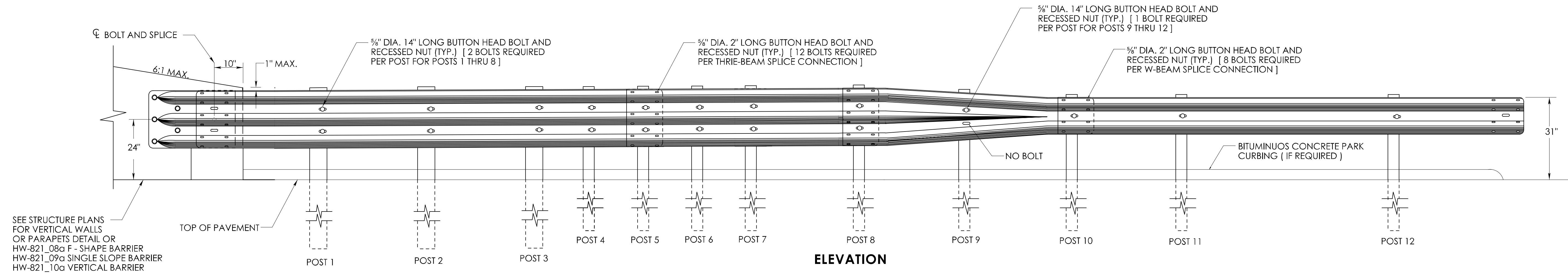


GENERAL NOTES:

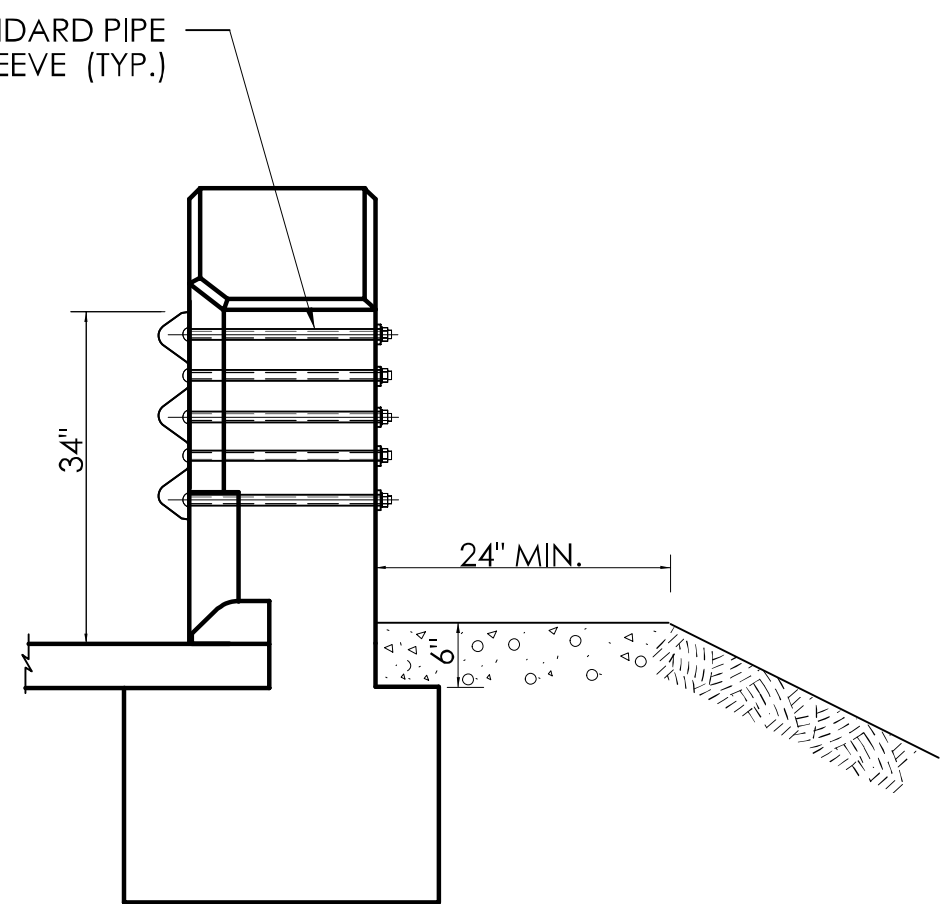
1. PROVIDE 2 FOOT MINIMUM EMBANKMENT BETWEEN THE BACK OF THE GUIDERAIL POST(S) / CONCRETE BARRIER AND THE BREAK IN THE FILL SLOPE.
2. INSTALL THRIE - BEAM TERMINAL CONNECTOR BETWEEN NESTED GUIDERAIL ELEMENTS, EXCEPT FOR SINGLE DIRECTION ROADWAY APPLICATION ONLY WHERE THE THRIE - BEAM TERMINAL CONNECTOR IS INSTALLED OUTSIDE OF NESTED GUIDERAIL ELEMENTS ON THE TRAILING END.
3. DELINEATORS SHALL BE INSTALLED ON THE POST CLOSEST TO THE DESIGNATED SPACING. SEE SHEET HW-910\_20 FOR W-BEAM DELINEATOR DETAILS.



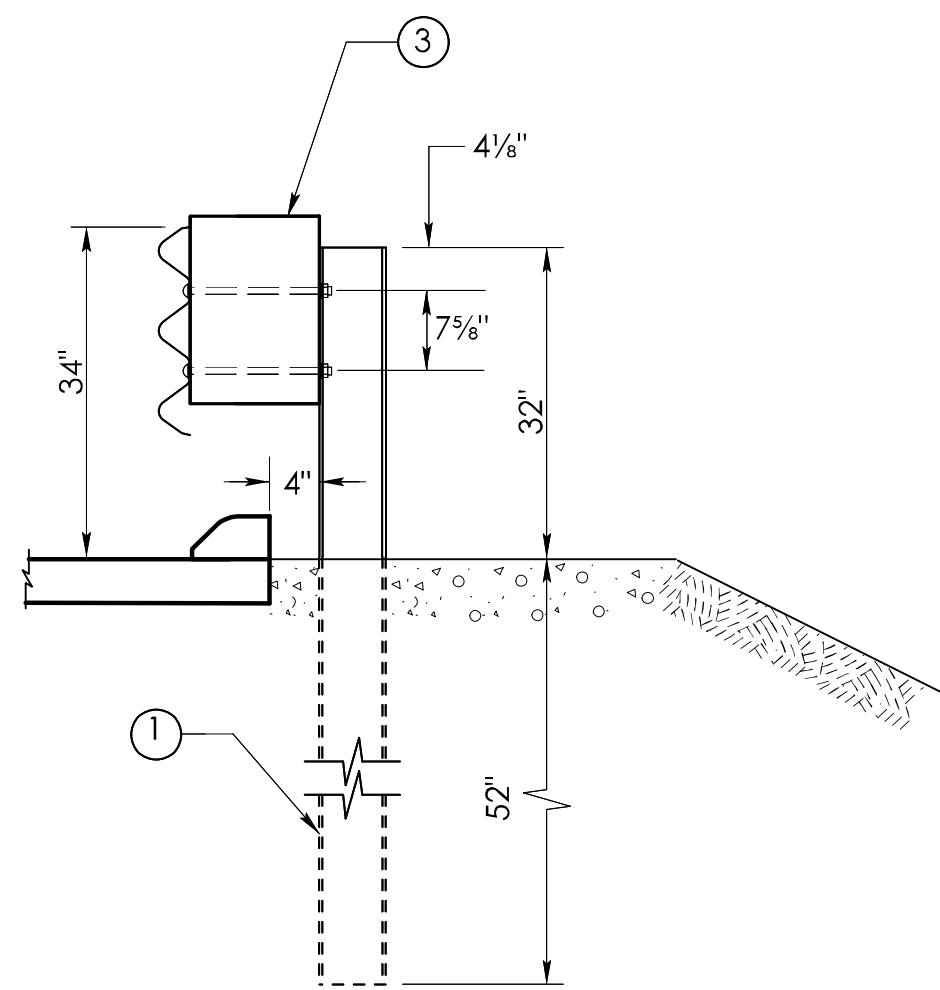
PLAN



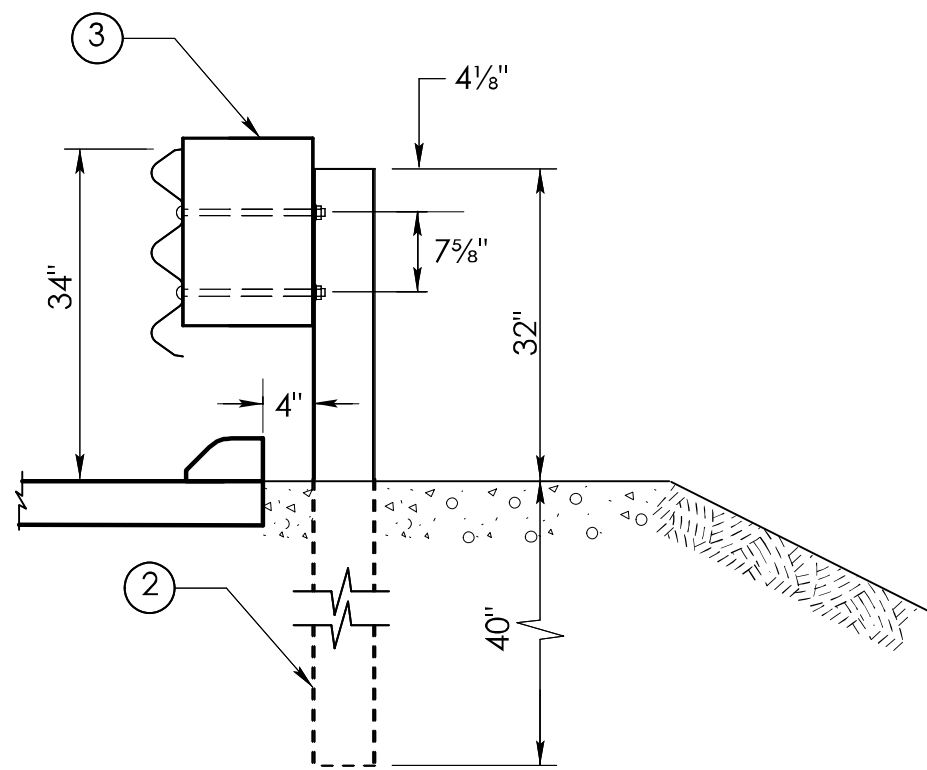
ELEVATION



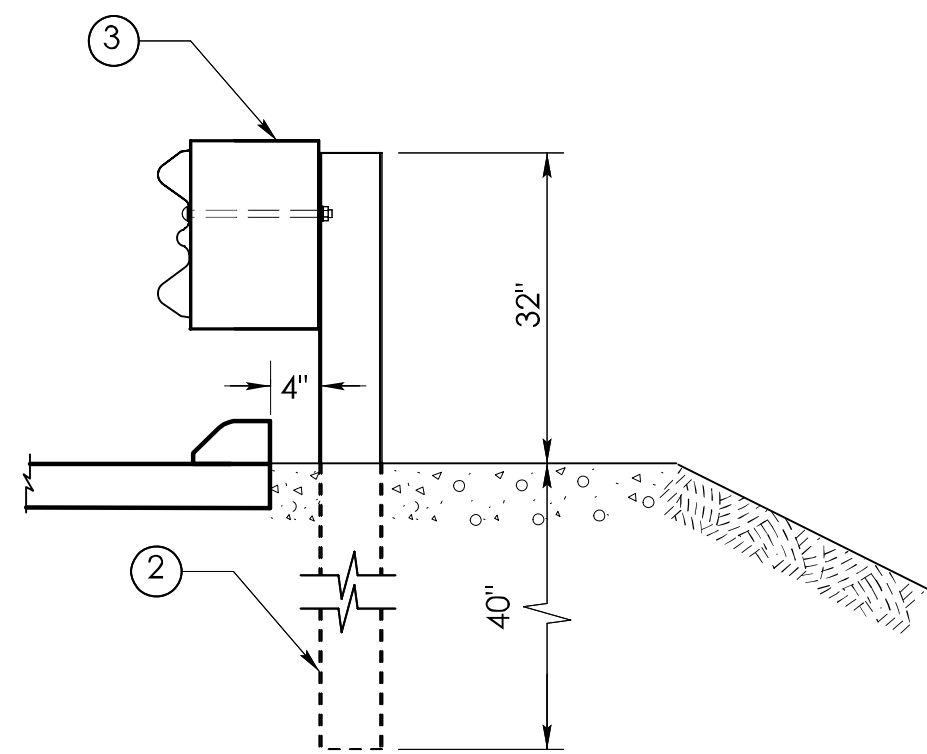
THRIE BEAM CONNECTION



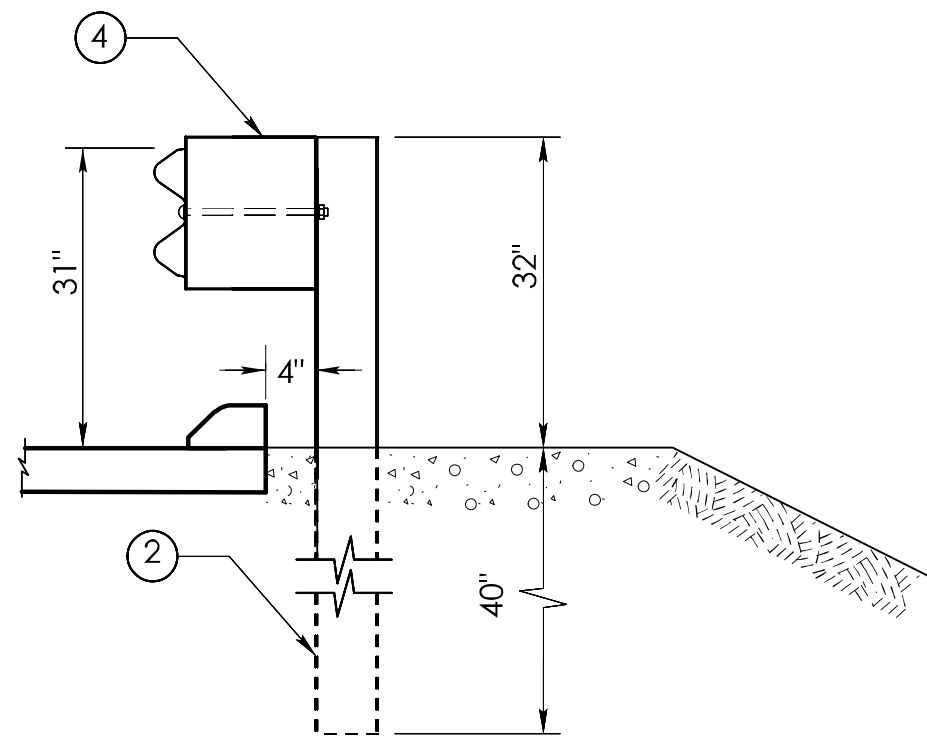
POST 1, 2 & 3



POST 4, 5, 6, 7 & 8



POST 9



POST 10, 11 & 12

LEGEND

- ① W6 x 15, 7 FOOT LONG STEEL POST
- ② W6 x 8.5 OR W6 x 9, 6 FOOT LONG STEEL POST
- ③ 6" x 12" x 19" TREATED TIMBER BLOCKOUT
- ④ 6" x 12" x 14 1/4" TREATED TIMBER BLOCKOUT

NOT TO SCALE

SIGNATURE BLOCK:  
OFFICE OF ENGINEERING  
2800 BERLIN TURNPIKE  
NEWINGTON, CT 06111

SUBMITTED BY:  
*Leo Fontaine*  
Digitally signed by  
Leo Fontaine, P.E.  
Date: 2024.12.19  
15:06:03-05'00'

APPROVED BY:  
*Michael N. Calabrese*  
Digitally signed by  
Michael N.  
Calabrese, P.E.  
Date: 2025.01.29  
12:37:54-05'00'



CONNECTICUT  
DEPARTMENT OF  
TRANSPORTATION

CTDOT  
STANDARD SHEET

STANDARD SHEET TITLE:

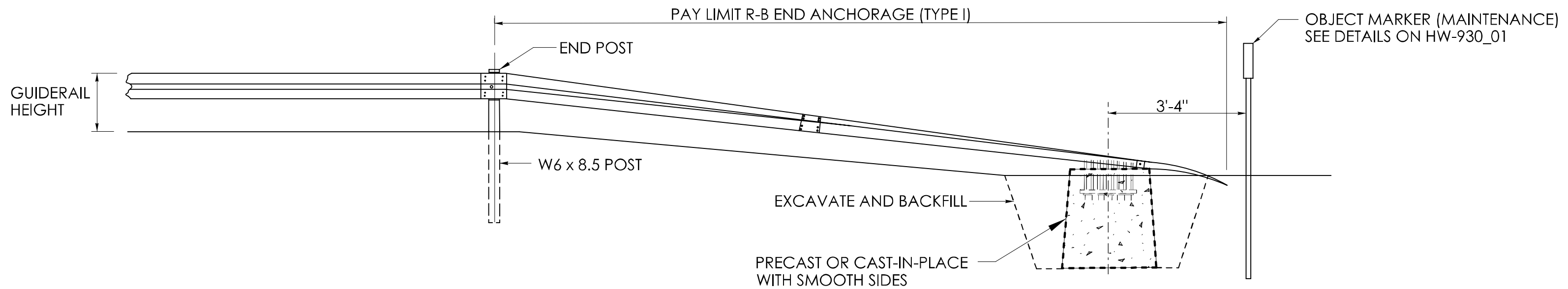
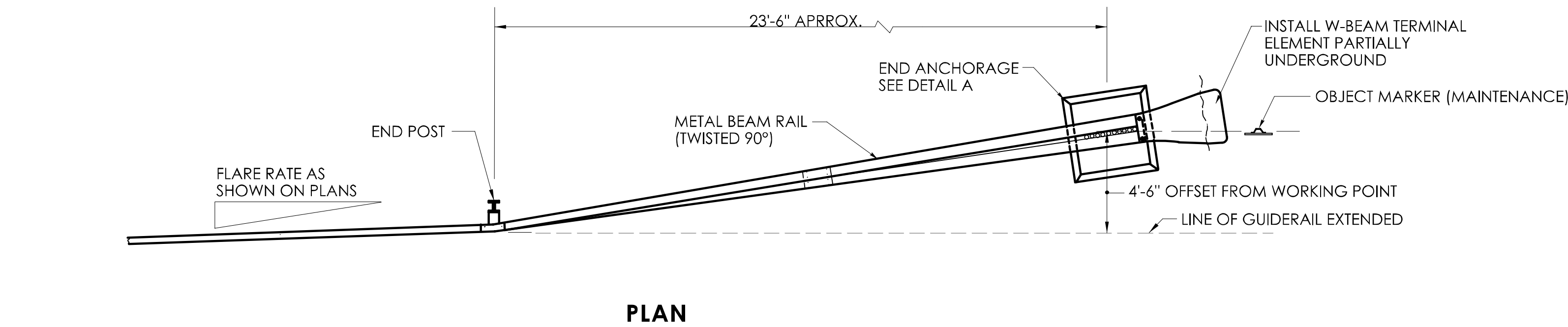
THRIE-BEAM ATTACHMENT

MASH 2016 COMPLIANT  
APPROVAL ID: 2019-01

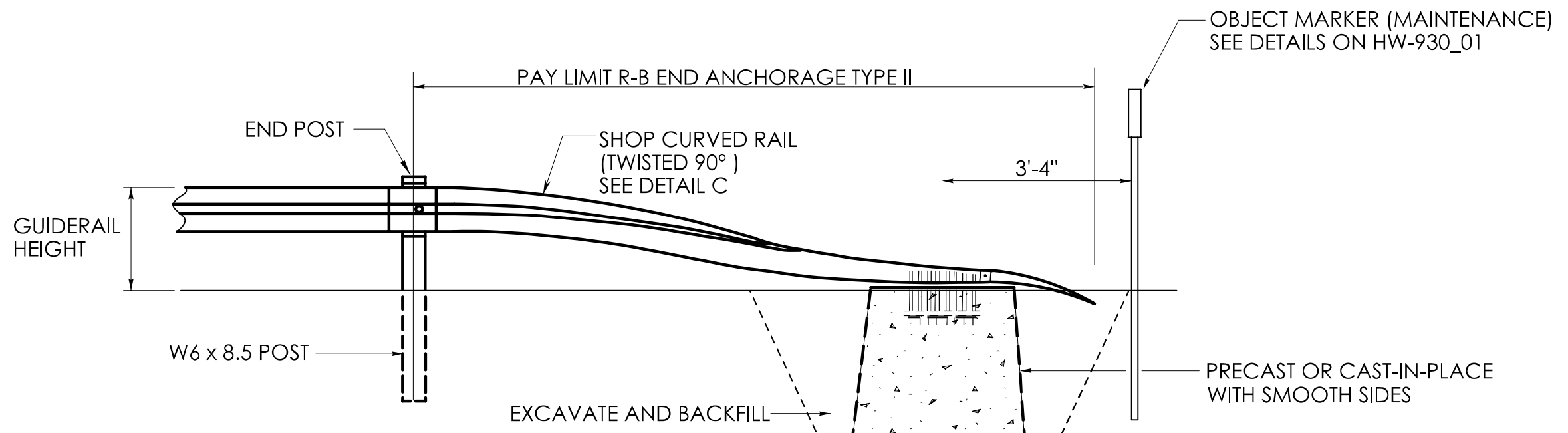
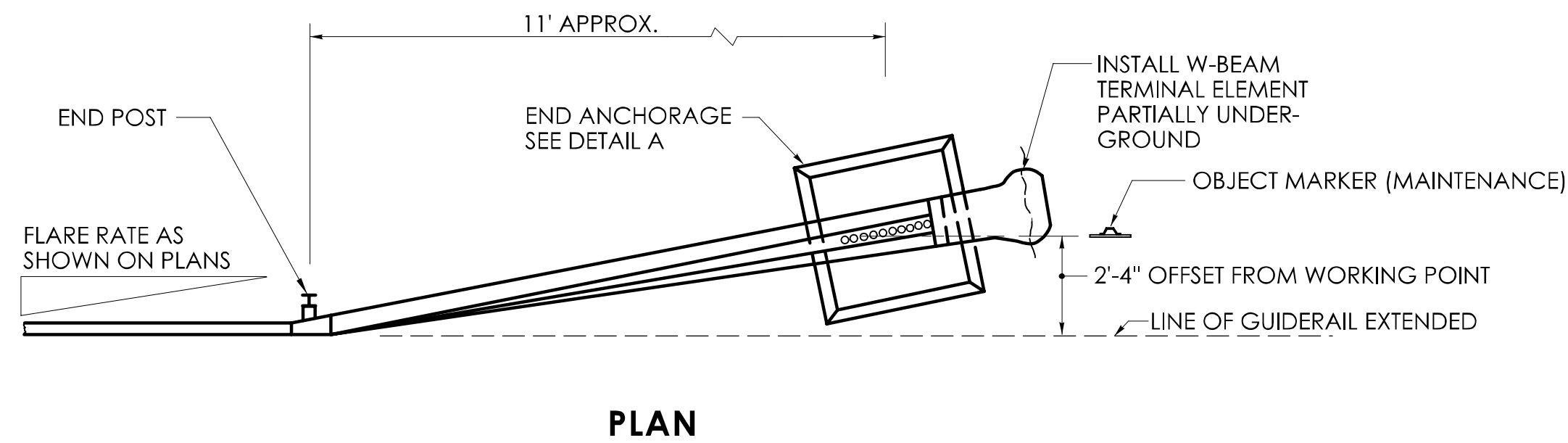
STANDARD SHEET NO.:

HW-910\_27

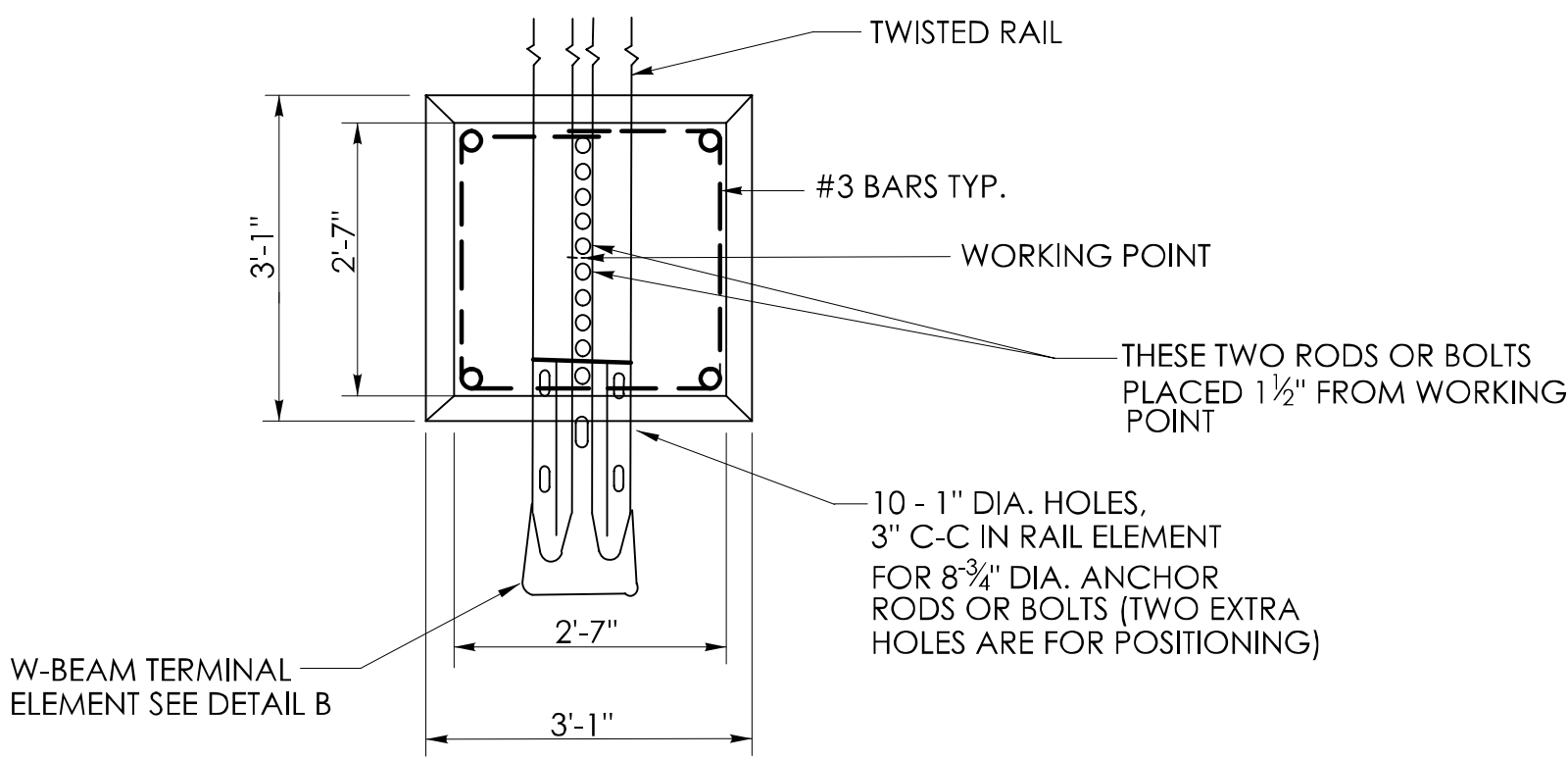
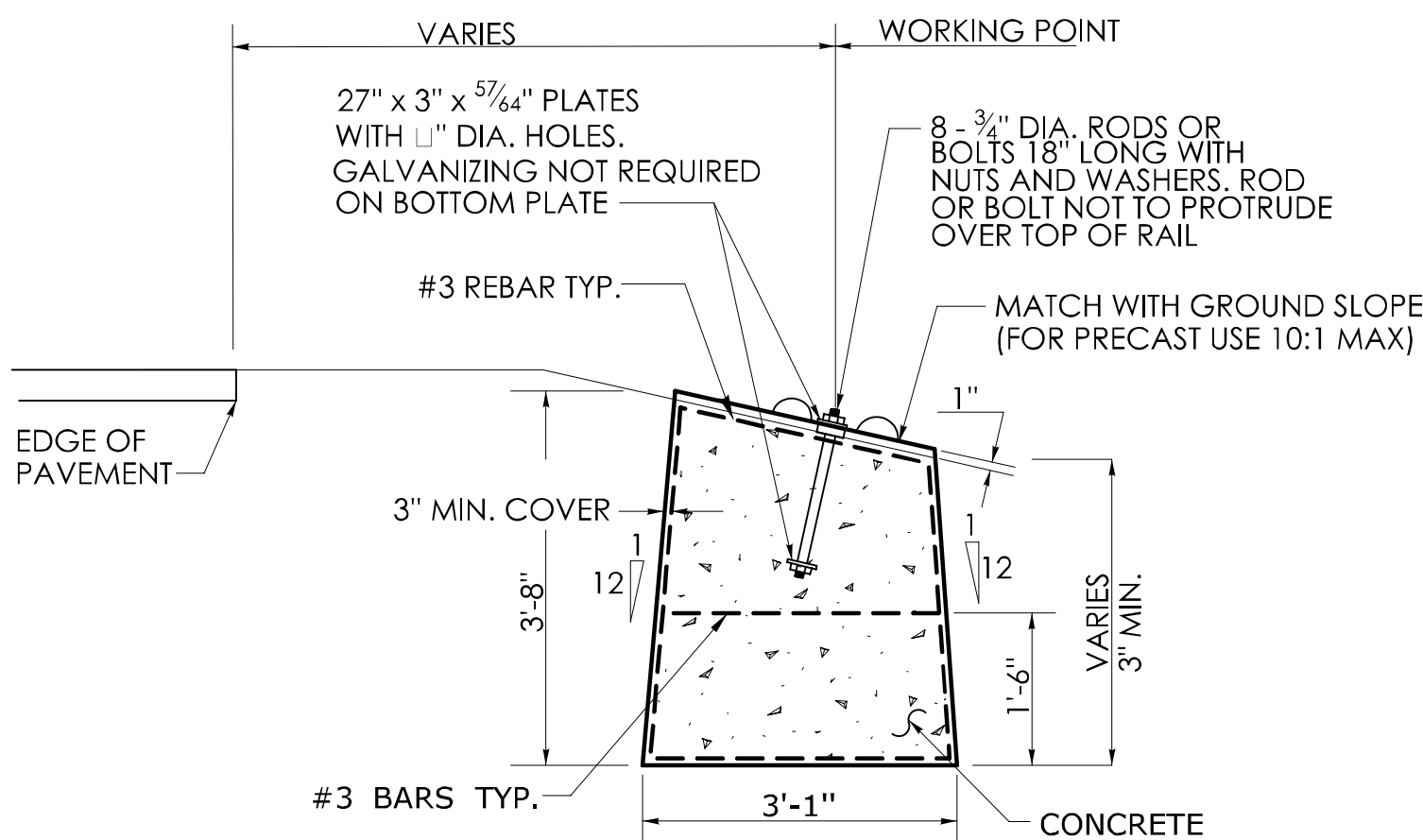
- GENERAL NOTES:**
- J-HOOK BOLTS MAY BE SUBSTITUTED FOR BOTTOM PLATE ANCHORAGE IN CONCRETE END ANCHORS USING THE SAME SIZE, STRENGTH, AND LENGTH AS NOTED ON THE PLANS.
  - INSTALLATION OF RADII DIFFERENT THAN WHAT IS SHOWN IN DETAIL "C" FOR R-B END ANCHORAGE TYPE II MUST BE APPROVED BY THE ENGINEER.



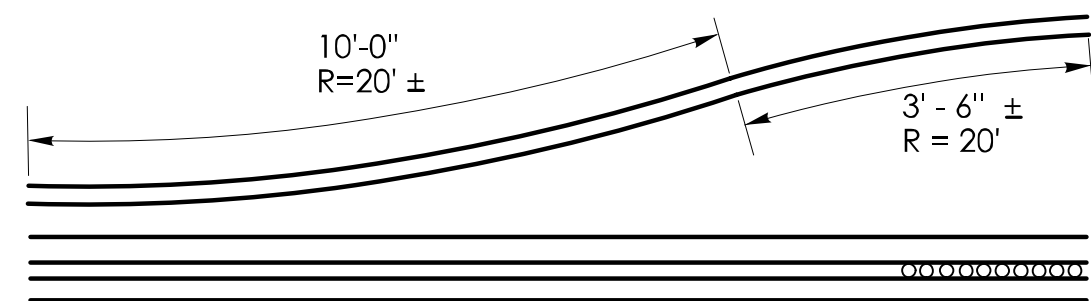
**ELEVATION**  
**R-B END ANCHORAGE TYPE I**



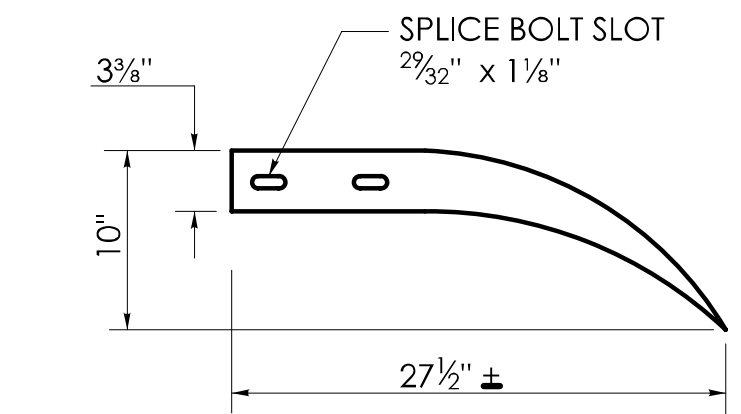
**ELEVATION**  
**R-B END ANCHORAGE TYPE II**



**DETAIL A**  
**ROADSIDE CONCRETE END ANCHOR**  
SEE NOTE 2

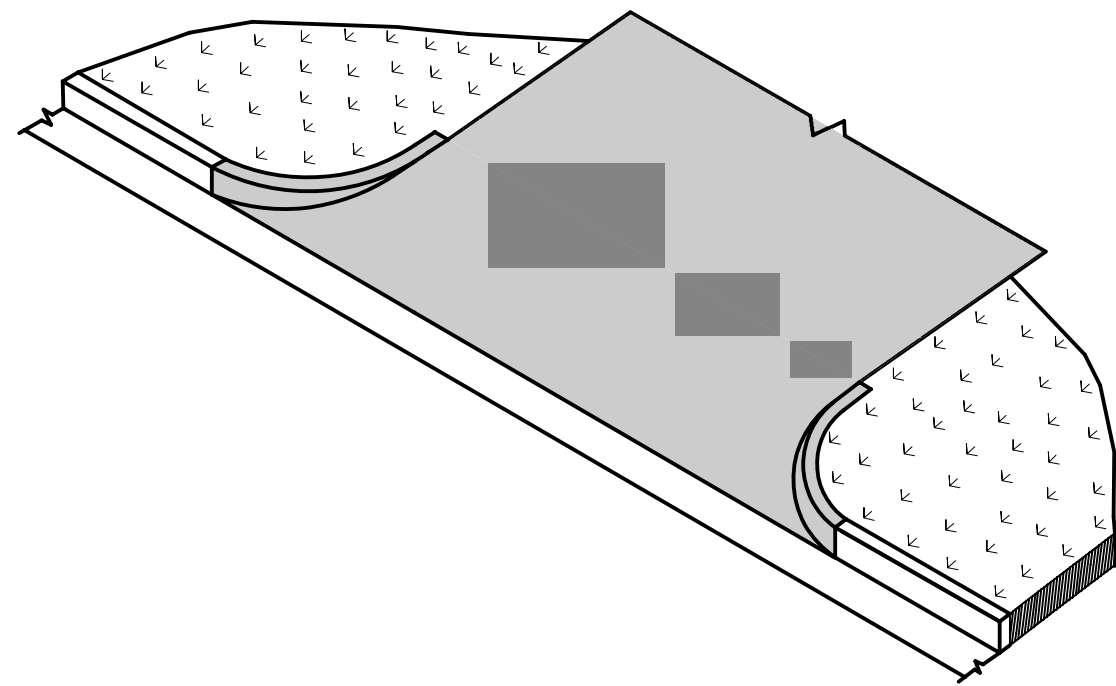


**DETAIL C**  
**SHOP CURVED RAIL**  
SEE NOTE 2

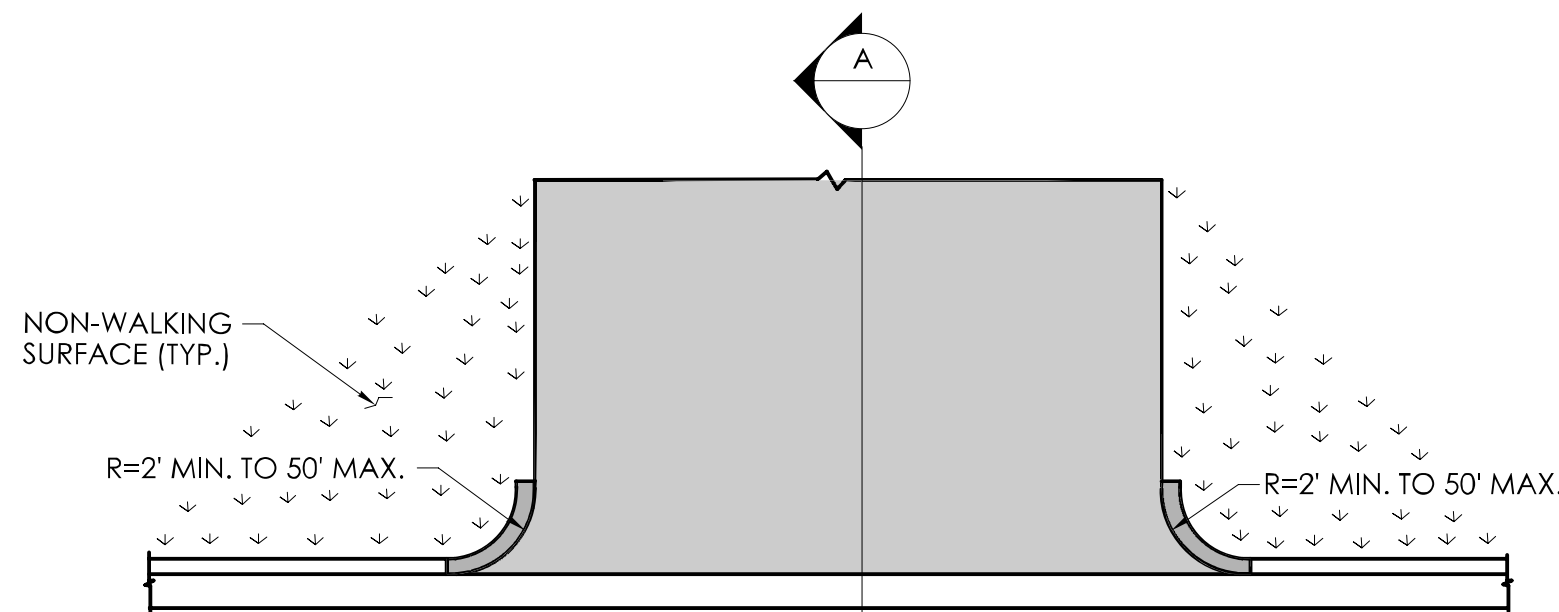


**DETAIL B**  
**W-BEAM TERMINAL ELEMENT**

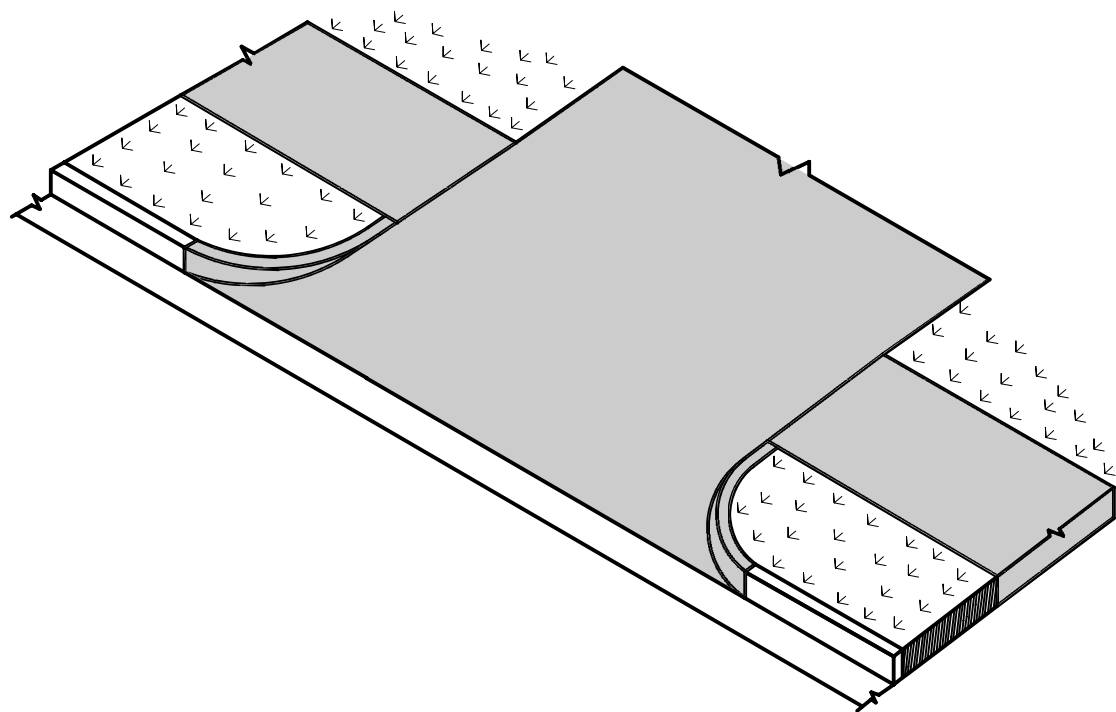




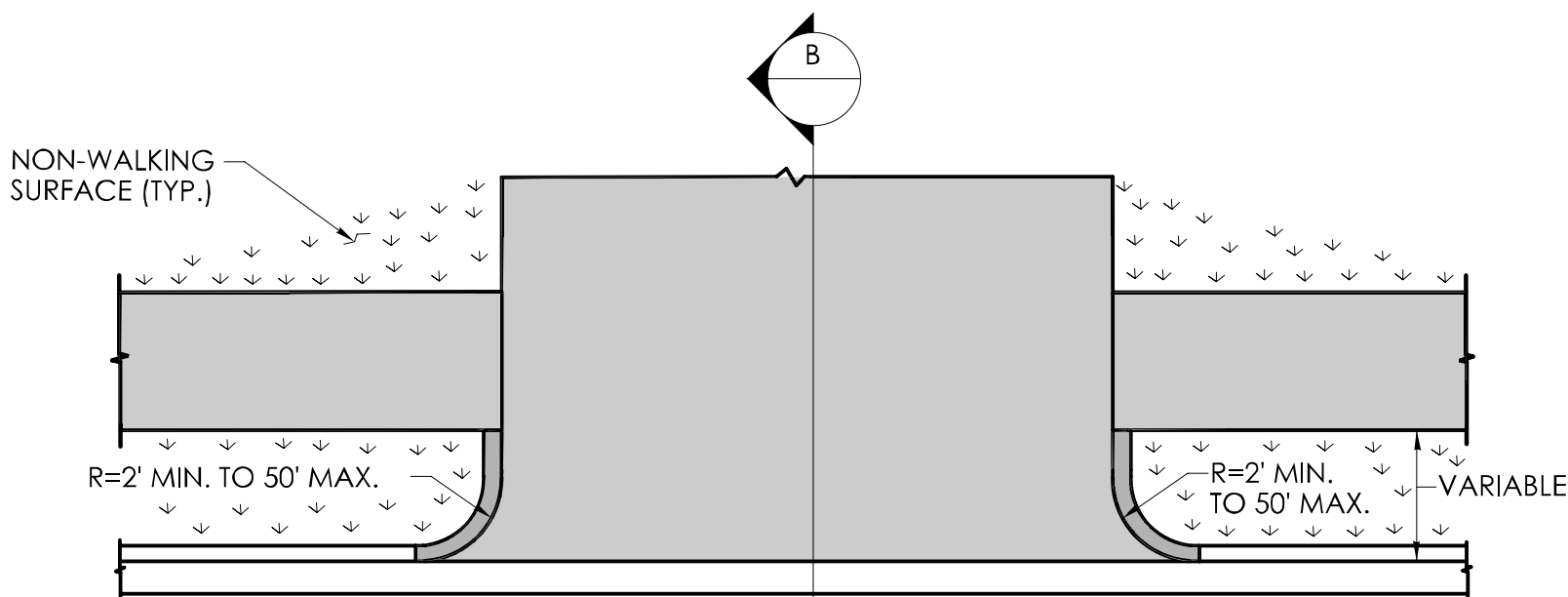
BITUMINOUS CONCRETE DRIVEWAY



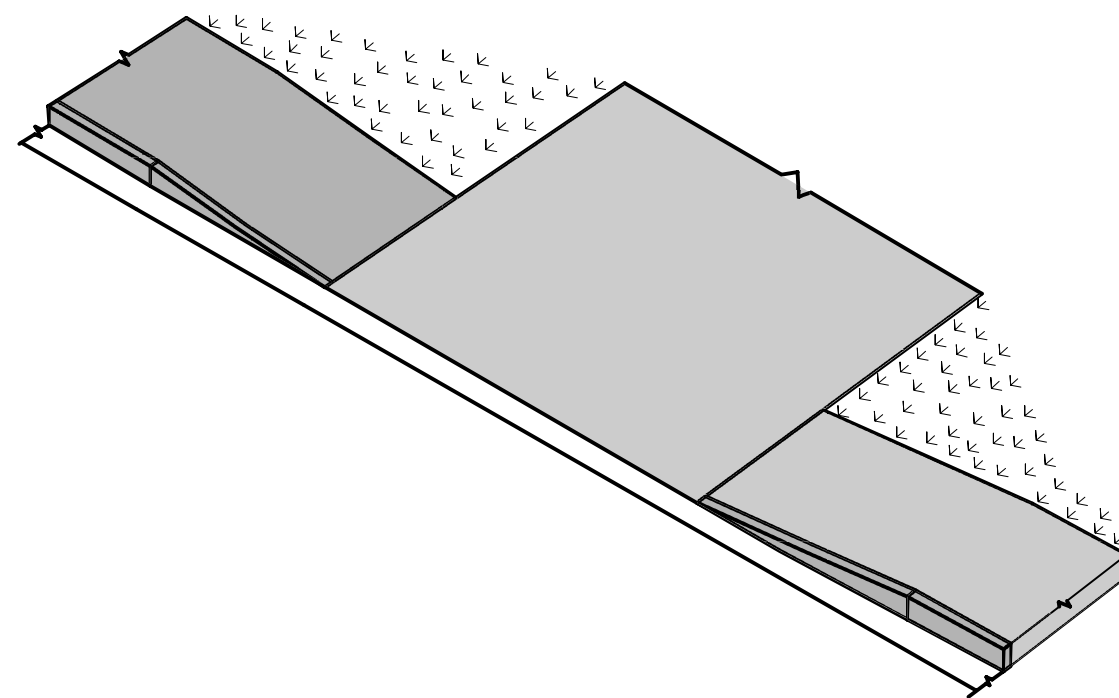
PLAN



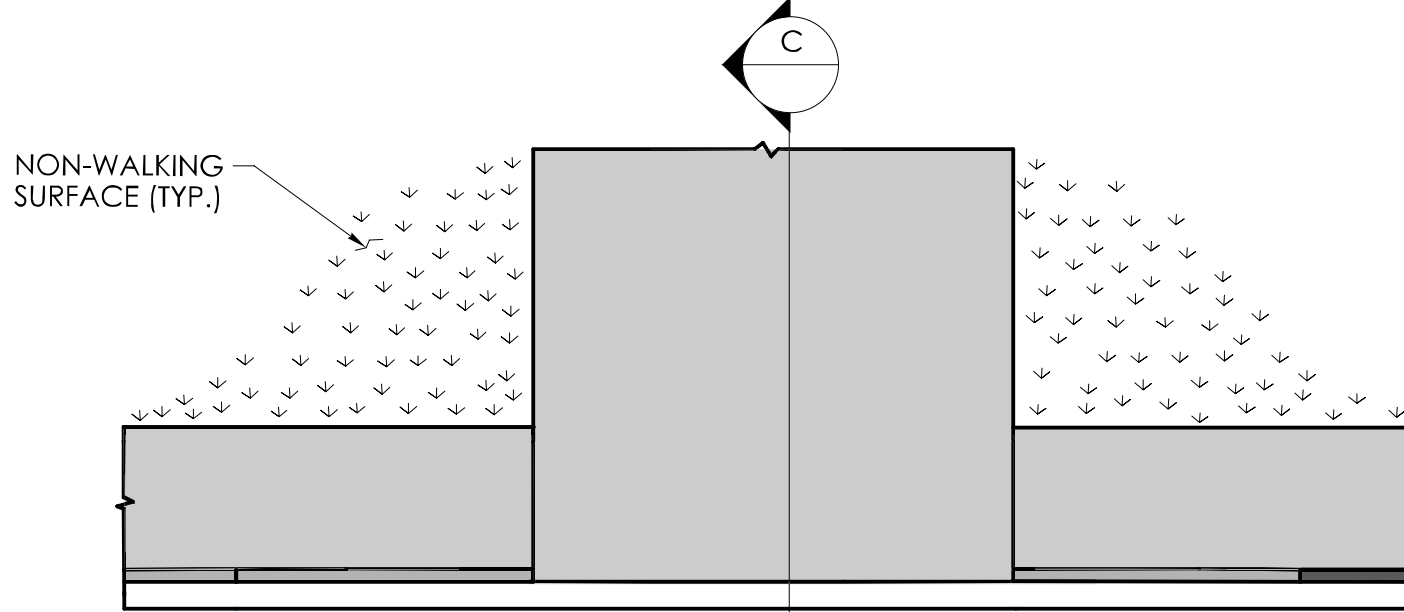
BITUMINOUS CONCRETE DRIVEWAY  
WITH A PEDESTRIAN SIDEWALK SETBACK



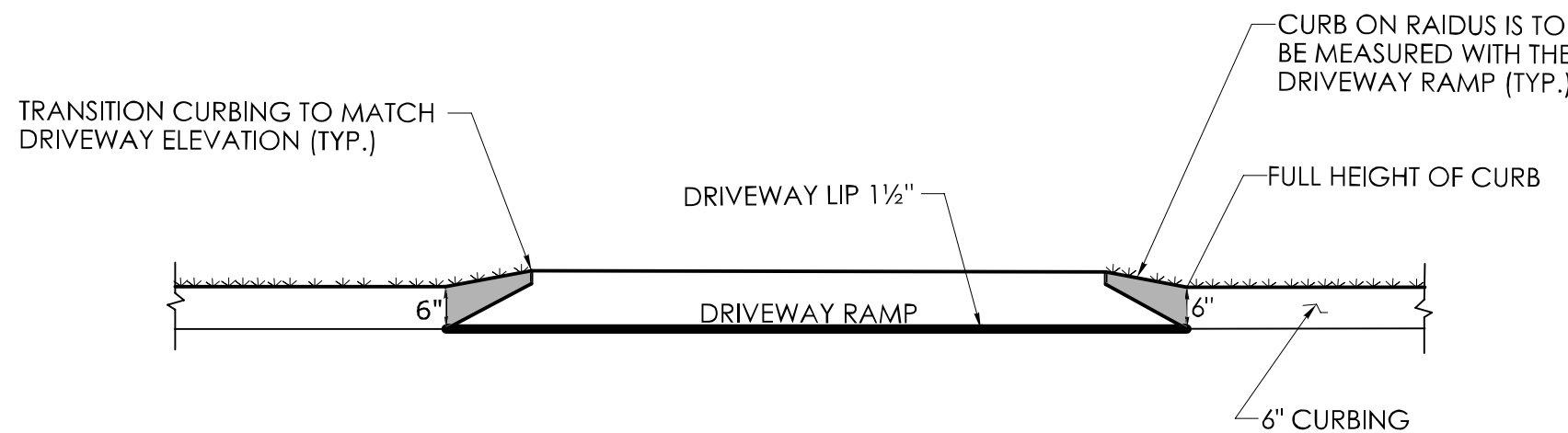
PLAN



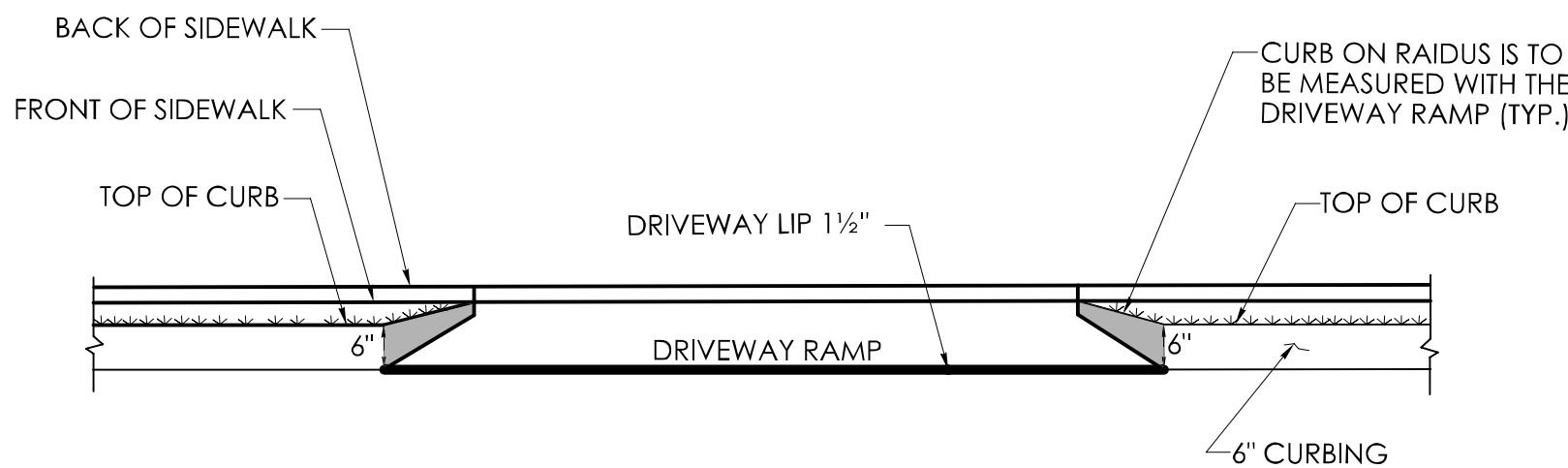
BITUMINOUS CONCRETE DRIVEWAY  
WITH PEDESTRIAN SIDEWALK AT THE CURB



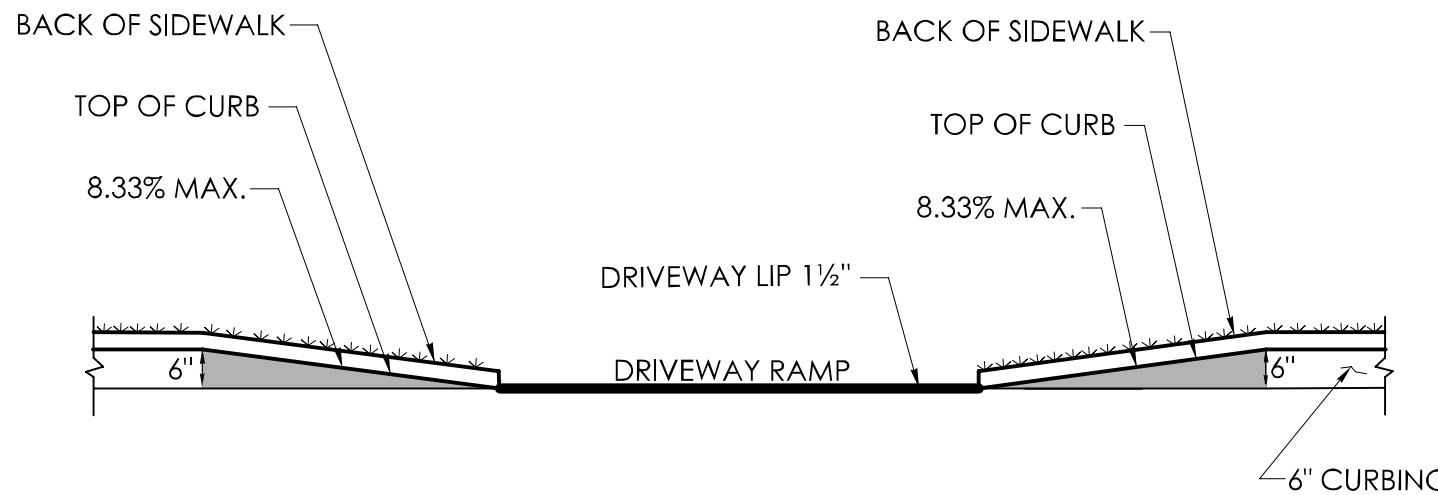
PLAN



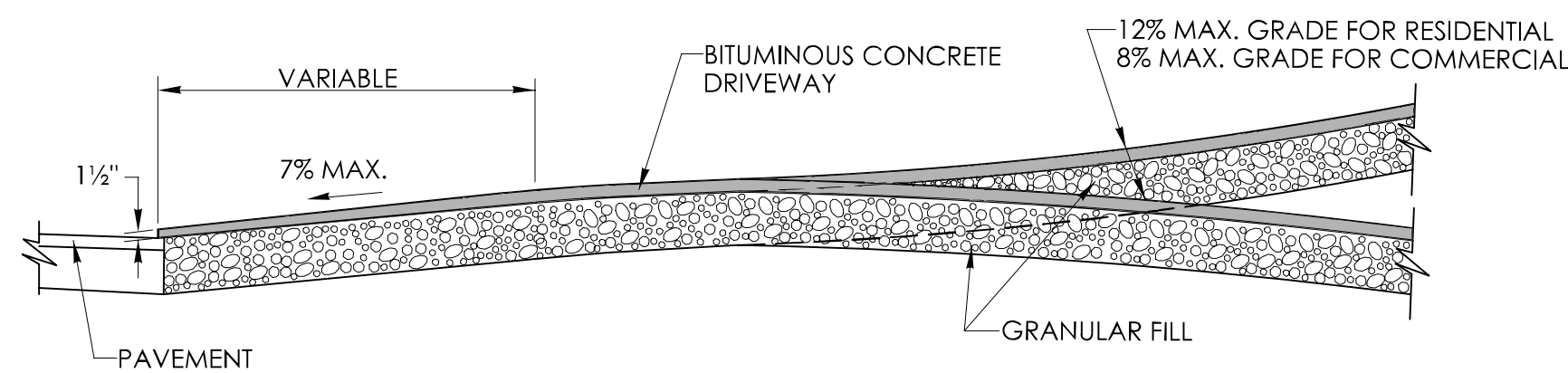
ELEVATION



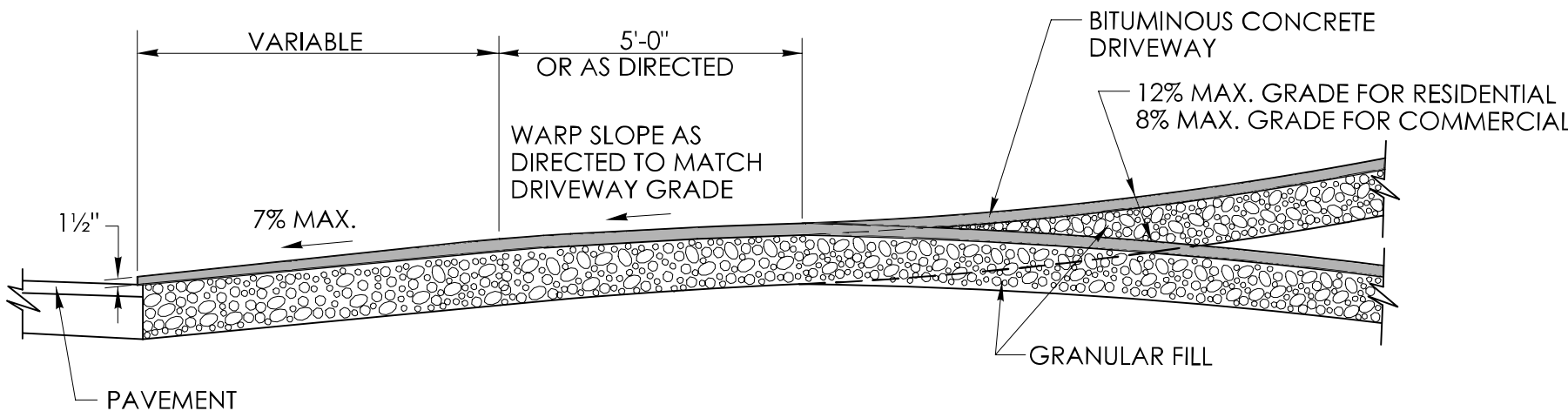
ELEVATION



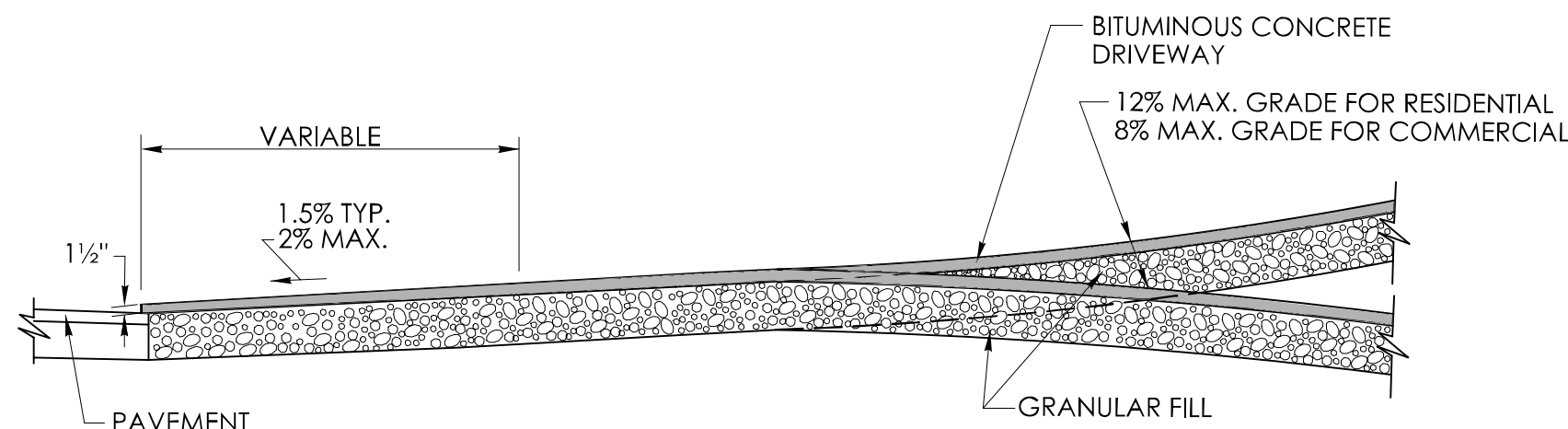
ELEVATION



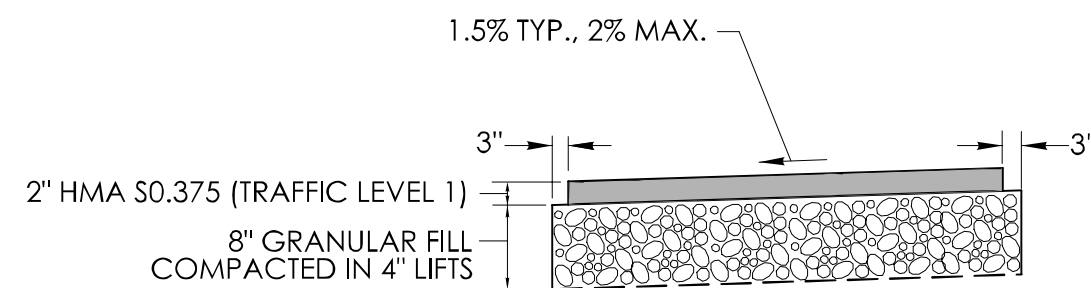
SECTION A



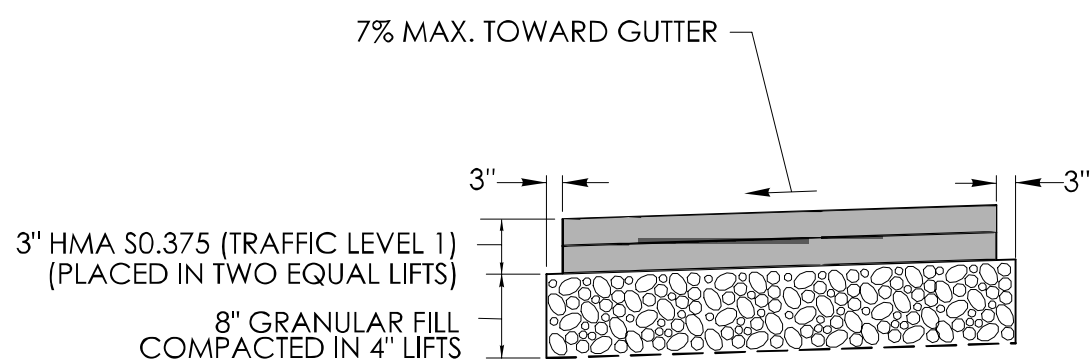
SECTION B



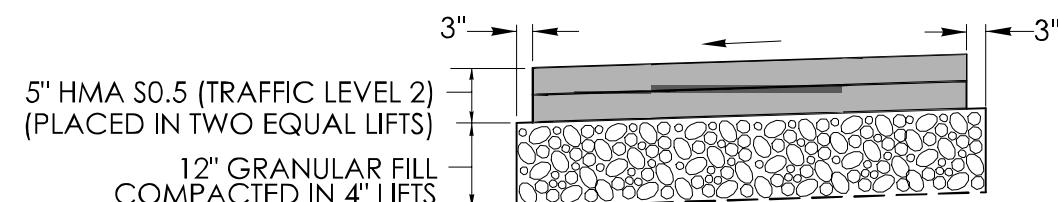
SECTION C



BITUMINOUS CONCRETE SIDEWALK



BITUMINOUS CONCRETE DRIVEWAY

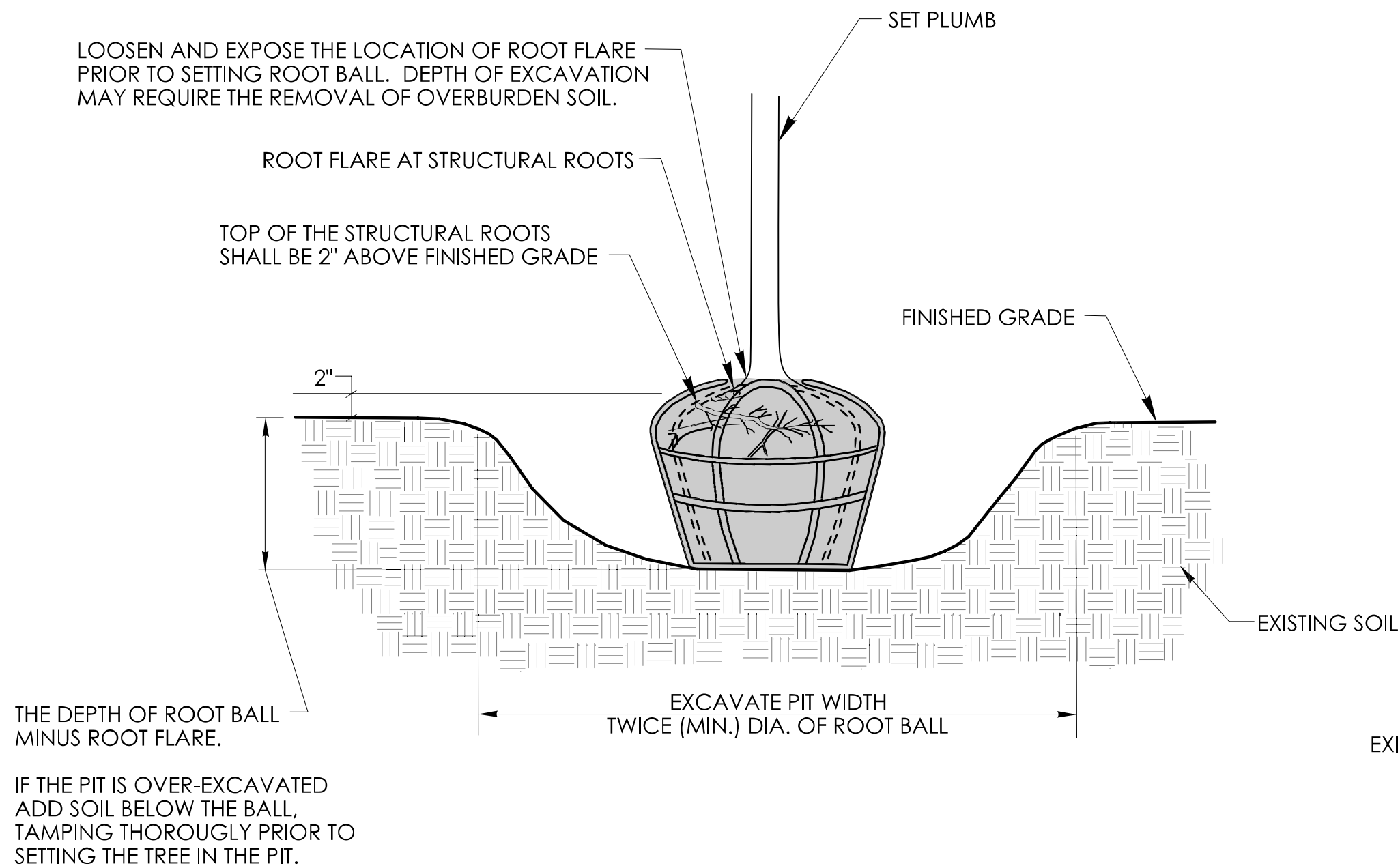


COMMERCIAL  
BITUMINOUS CONCRETE DRIVEWAY

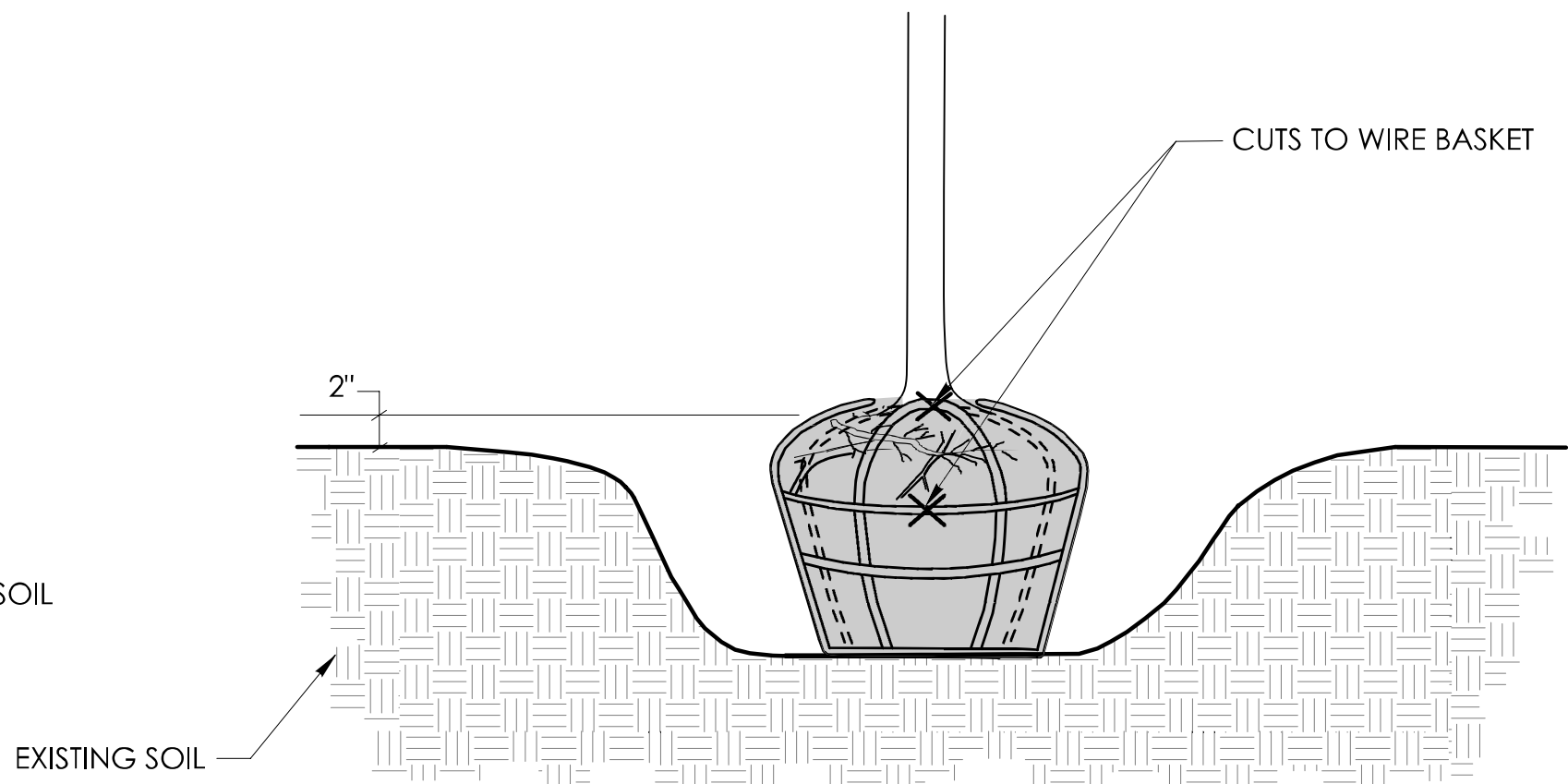


GENERAL NOTES:

1. ALL EXTERIOR PACKAGING MATERIAL APPLIED TO PLANTS SHALL BE REMOVED AFTER THE PLANT IS LOCATED IN THE PIT EXCAVATION. CUT AND REMOVE TWINE, BURLAP OR WIRE BASKETS FROM THE TOP TWO-THIRDS OF THE ROOT BALL.
2. PLANT MALUS SPECIES (DECIDUOUS APPLE TREES OR SHRUBS) DEEP ENOUGH IN PIT TO COVER THE GRAFT TO PREVENT SPROUTING FROM THE ROOT STOCK.

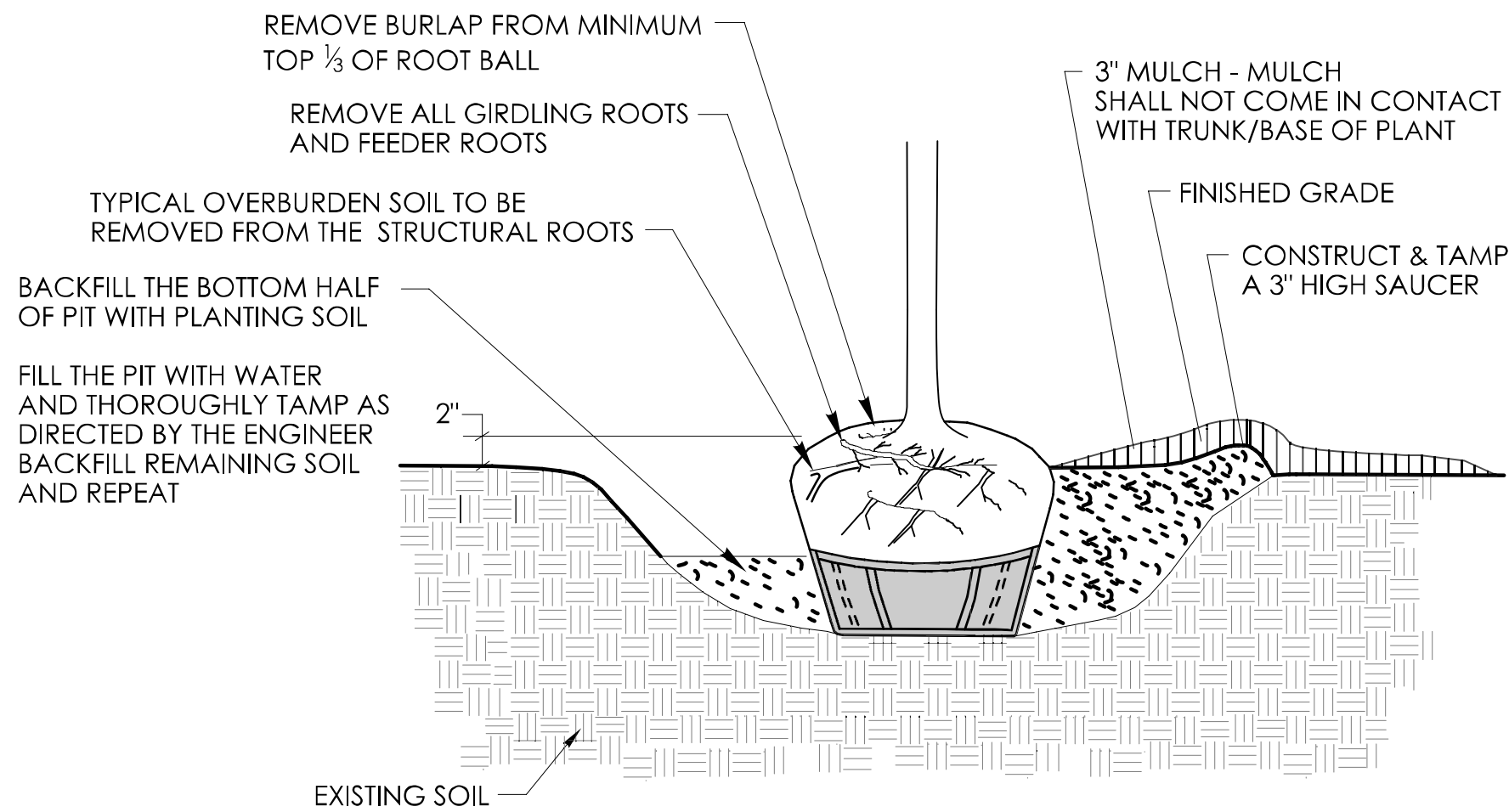


PIT EXCAVATION AND SETTING OF PLANTING

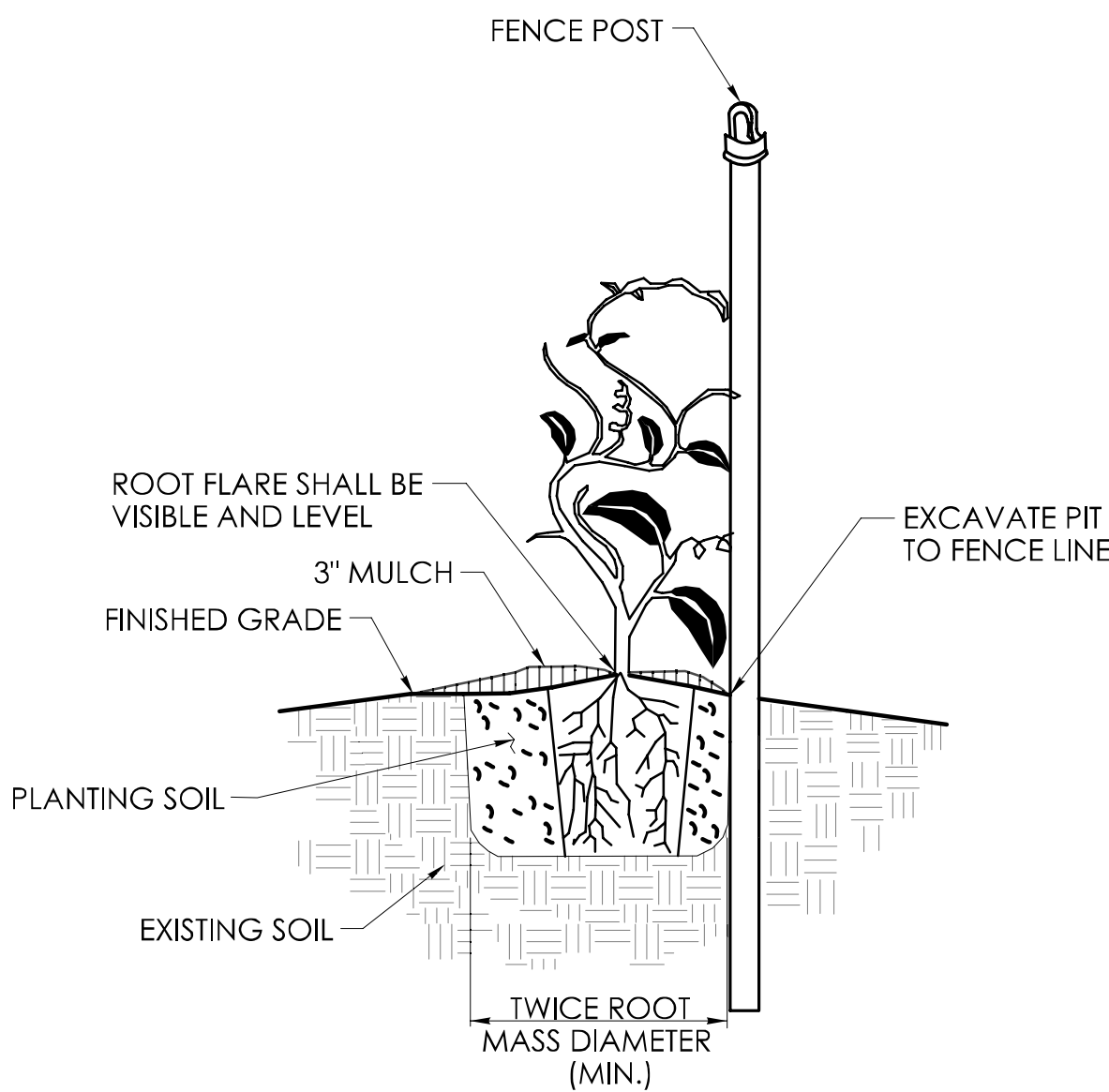


WIRE BASKET REMOVAL

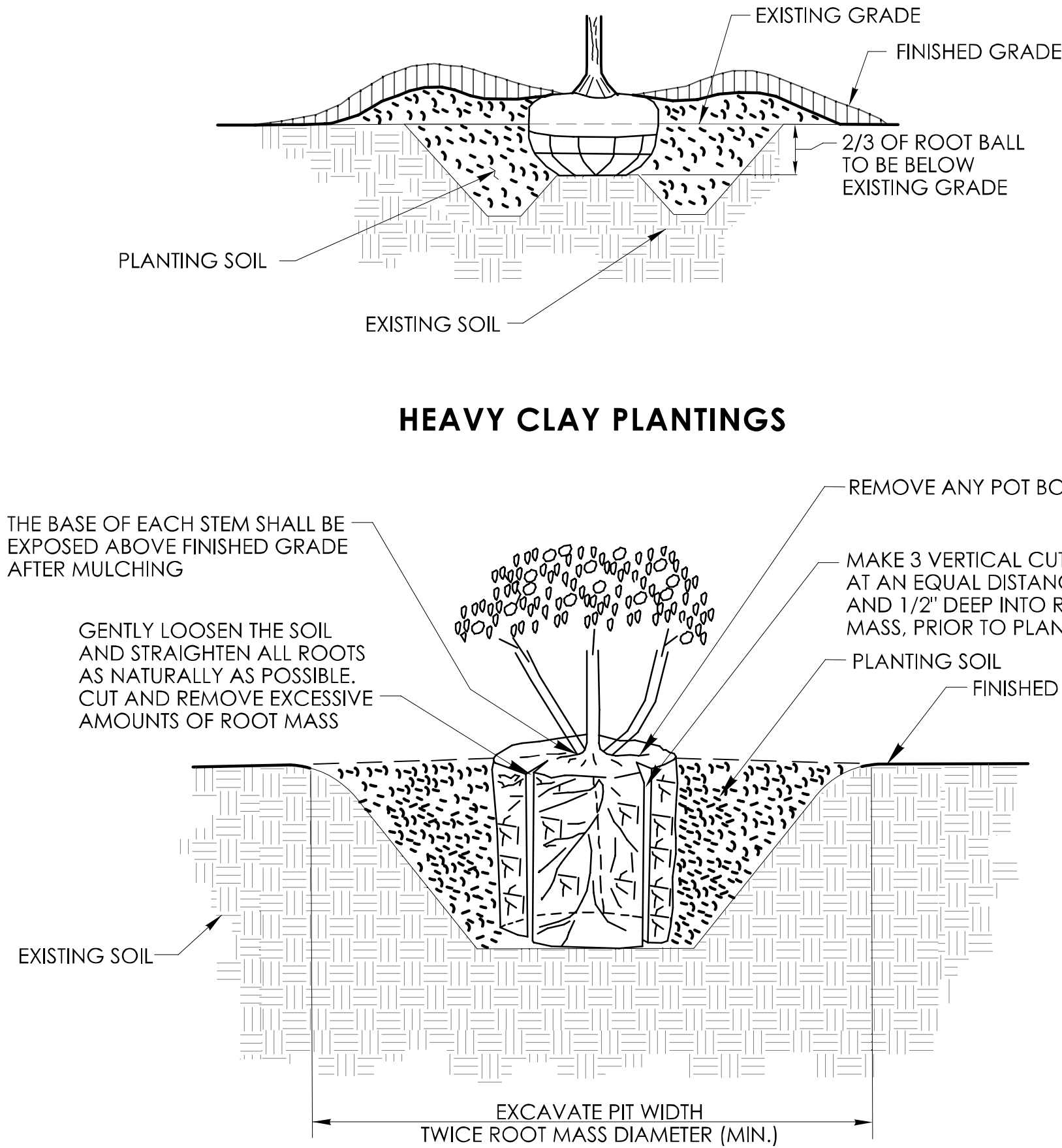
NOTE: IF WIRE BASKETS ARE USED, THE CONTRACTOR SHALL CUT ALL OF THE HORIZONTAL WIRES IN THE TOP 2/3 OF THE ROOT BALL AND BEND DOWN OR REMOVE THE TOP 1/3 OF THE WIRE BASKET



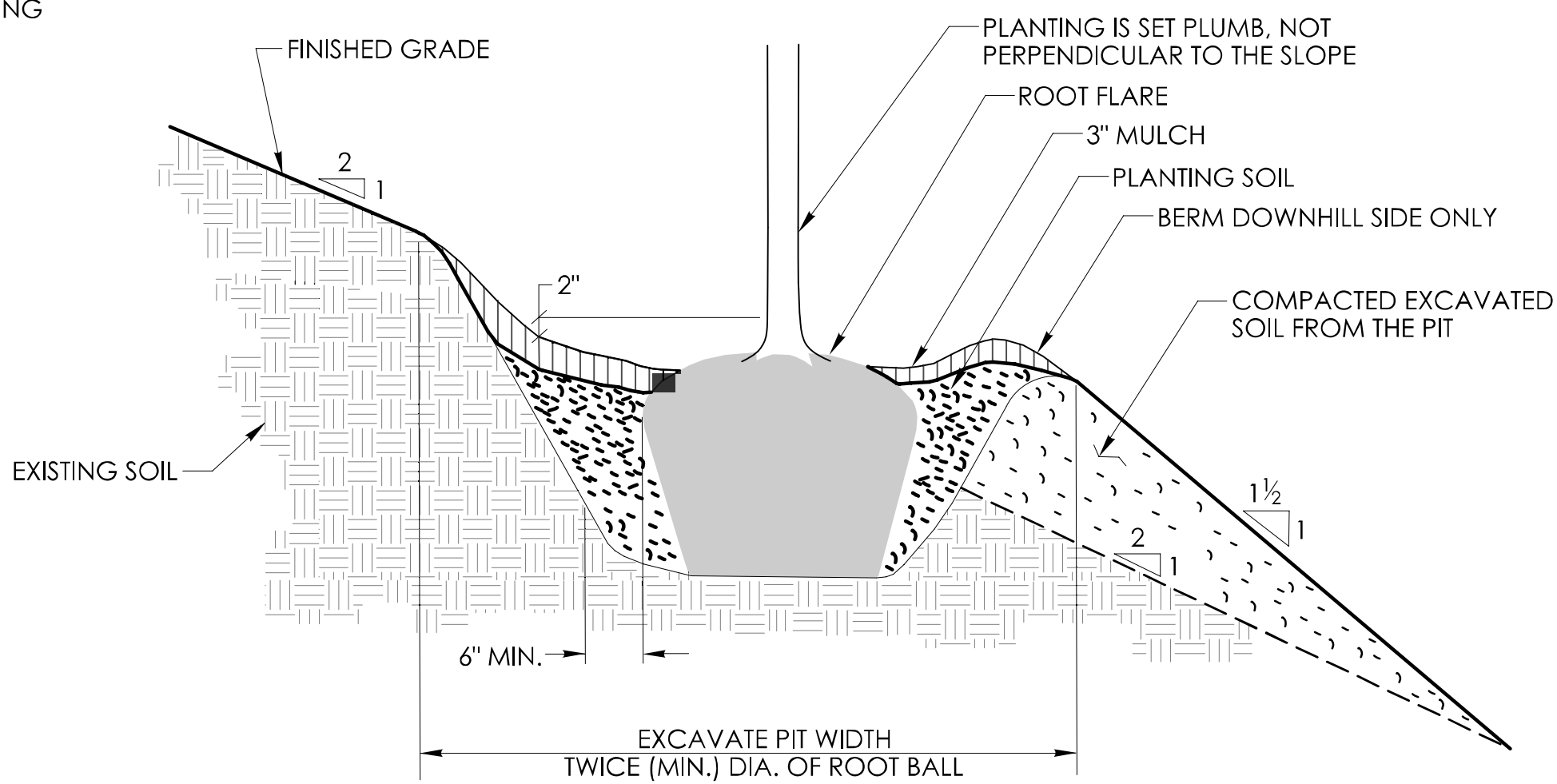
BACKFILL AND MULCH FOR PLANTING



VINE PLANTING



CONTAINER GROWN PLANTING



SLOPE PLANTING