

Standard Details

Table of Contents

June 1, 2023

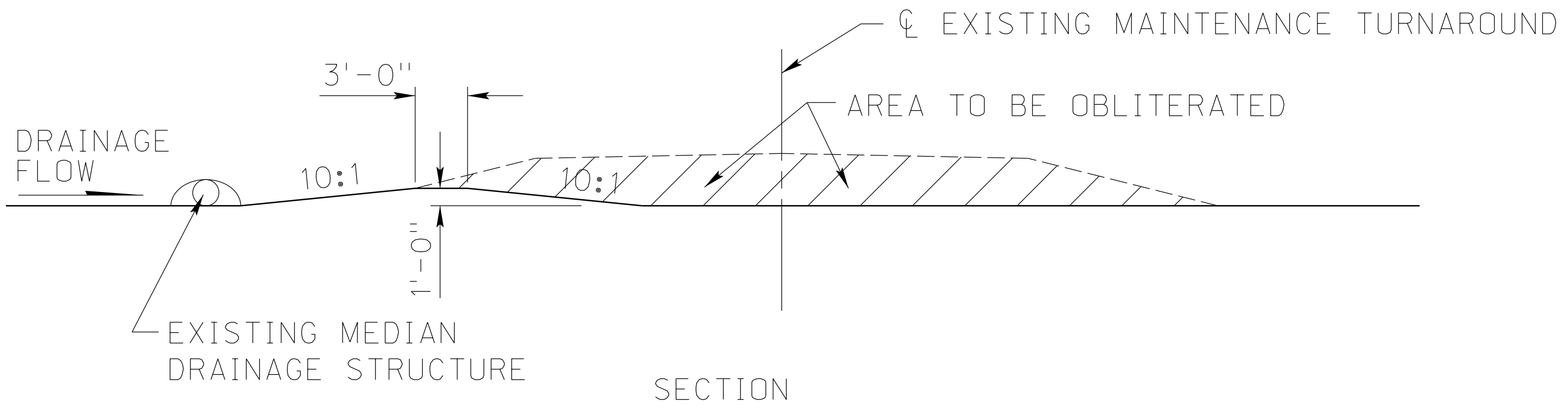
Plan No.	Title	Comments
1111 5 R0	Obliteration of Existing Maintenance Turnaround	
1380 5 R1	Curb Removal Detail	
1400 5 R2	Grading for Box Culvert Extensions	
1401 5 R2	Grading for Culvert Extensions	
1731 5 R3	Surfacing Around Guardrail	
1920 5 R0	Design of Intercepting Dikes	
3290 5 R5	Concrete Pavement Repair	
3810 5 R1	Detail of Precast Concrete Curb Stop	
4180 5 R3	Slotted Pipe Detail	
4220 5 R0	Precast Concrete Box Culvert End Section	
4230 5 R1	Preparation of Existing Box Culvert for Extension	
4340 5 R1	Details for Drop Curb for Drainage	
4430 5 R0	Curb Inlet Depression	
4440 5 R0	MSE Wall V-Ditch Drain	
4500 5 R1	Details of Rock Riprap	
4505 5 R0	Roadside Sediment Trap and Outlet	
4510 5 R2	Details of Rock Riprap Scour Hole	
4520 5 R1	Bridge Drainage Basin	
4810 5 R0	Pipe Bedding Detail	
5400 5 R0	Metal Diaphragm Detail	
5480 5 R1	Inlet Liner Details	
6200 5 R1	Mechanically Stabilized Earth (MSE) Wall	
7038 5 R0	31" Transition to 27 5/8" Guardrail	
7046 5 R2	Curved Beam Design Guide	
7049 5 R0	MGS For Long Span	
7390 5 R0	25 Ft. Transition Section 31" to Existing 27 5/8"	
8350 5 R1	Sections of Timber Plank and Rubberized Crossing	

ROADWAY DESIGN DIVISION

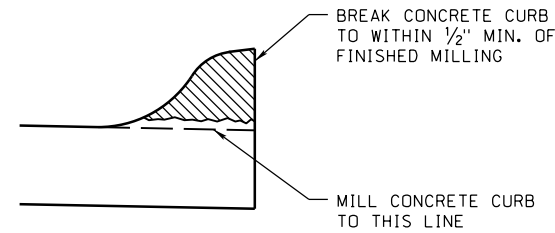
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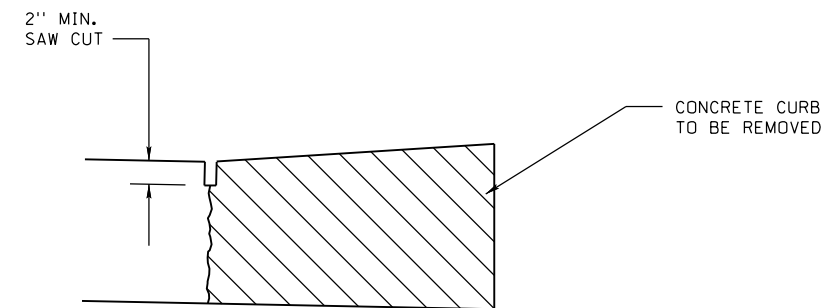
OBLITERATION OF EXISTING MAINTENANCE TURNAROUND



CURB REMOVAL DETAIL

VIEW 1

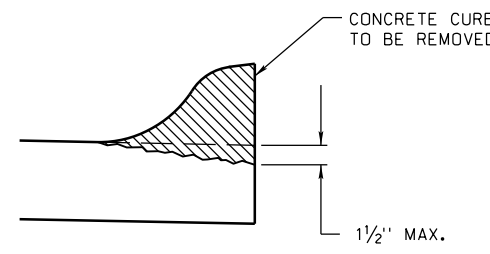
(THIS SKETCH IS TO BE USED WHEN SURFACE WILL NOT BE OVERLAYED)



CURB REMOVAL DETAIL

VIEW 3

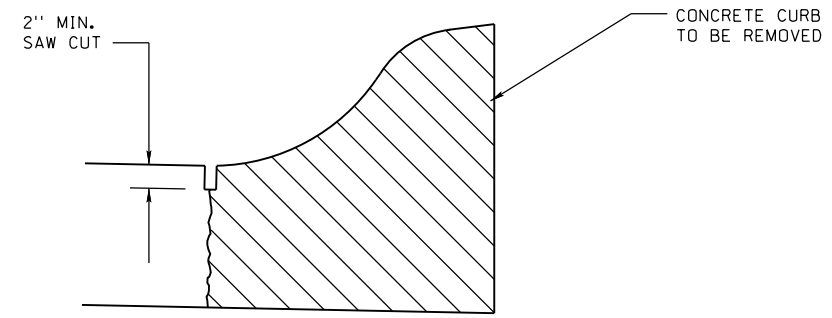
(THIS CAN ALSO BE REMOVED AS PAVEMENT)



CURB REMOVAL DETAIL

VIEW 2

(THIS SKETCH IS TO BE USED WHEN SURFACE WILL BE OVERLAYED)



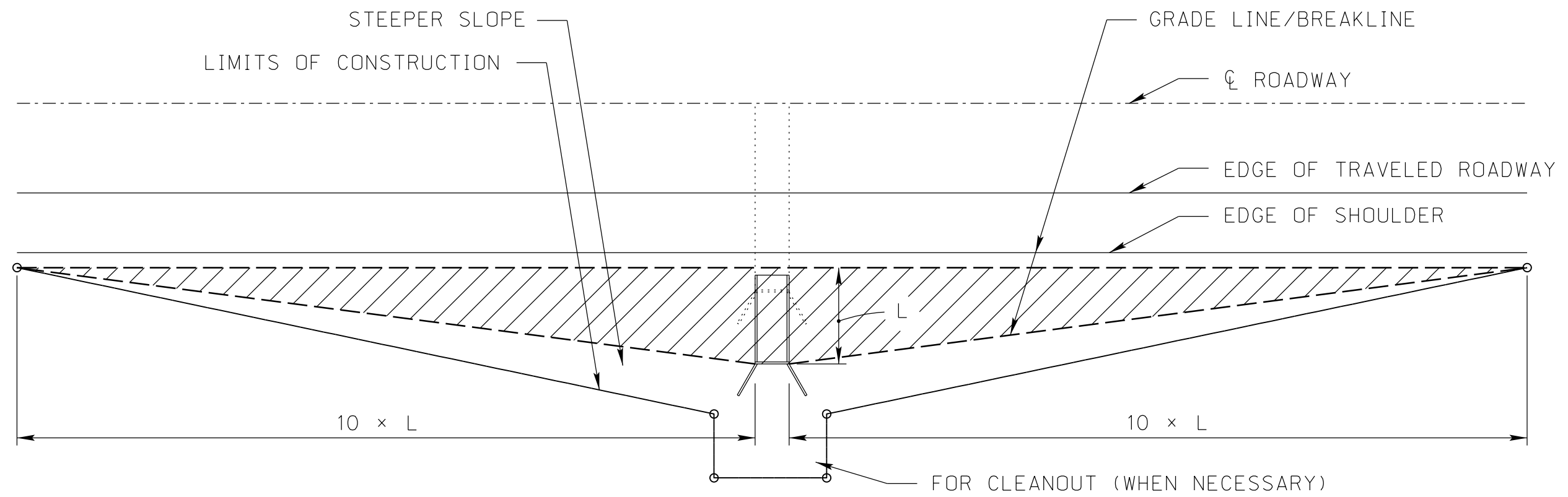
CURB REMOVAL DETAIL

VIEW 4

NOTE:
THIS SKETCH IS NORMALLY NOT REQUIRED AS IT IS COVERED IN THE SPECS. HOWEVER IF THE CURB IS TO BE REMOVED MORE THAN 1 WAY ON A PROJECT EACH SHOULD HAVE A SKETCH AND IDENTIFY WHERE IT IS APPLICABLE

(THIS CAN ALSO BE REMOVED AS PAVEMENT)

NOTE: FOR ADDITIONAL DETAILS SEE DRAINAGE CROSS-SECTIONS.

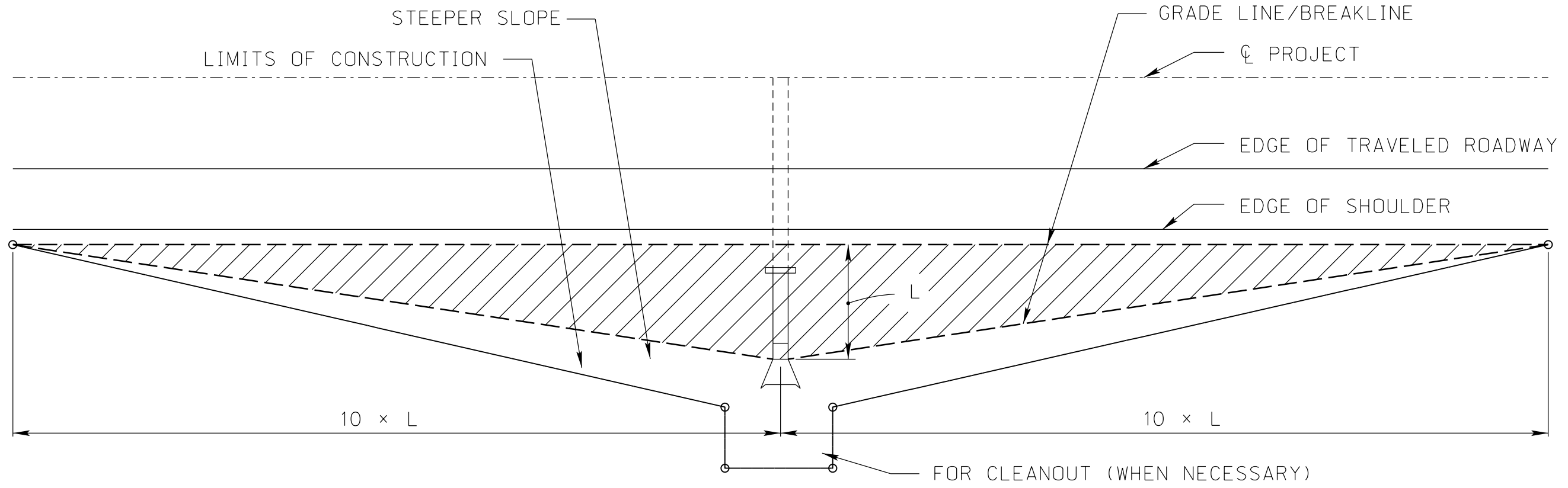


PLAN

GRADING FOR BOX CULVERT EXTENSIONS

L = LENGTH FROM SHOULDER TO END OF EXTENSION

NOTE: FOR ADDITIONAL DETAILS SEE DRAINAGE CROSS-SECTIONS.

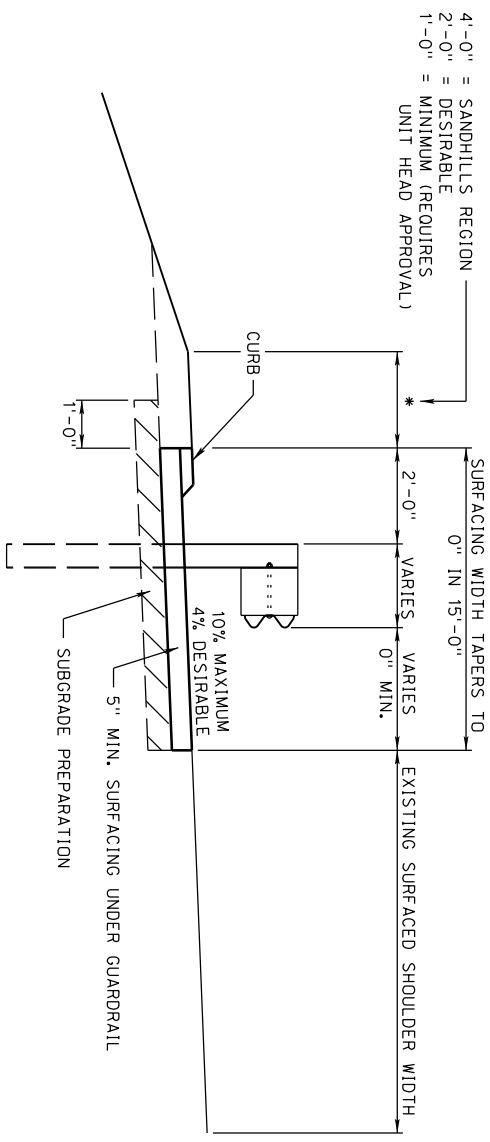


PLAN

GRADING FOR CULVERT EXTENSIONS

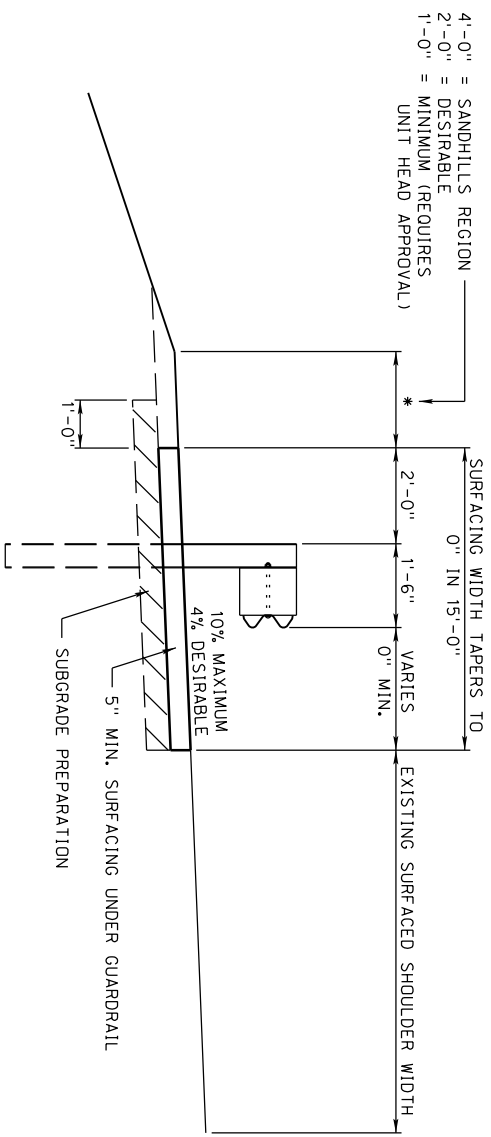
L = LENGTH FROM SHOULDER TO END OF EXTENSION

VIEW 1



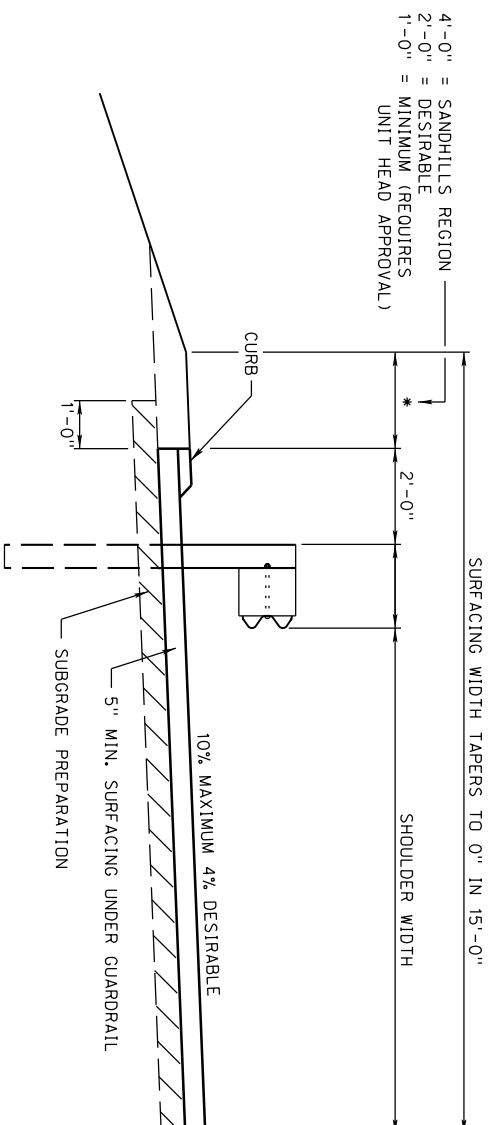
**SURFACE UNDER GUARDRAIL
(SURFACED SHOULDER WIDENING WITH CURB AT GUARDRAIL LOCATIONS)**

VIEW 2



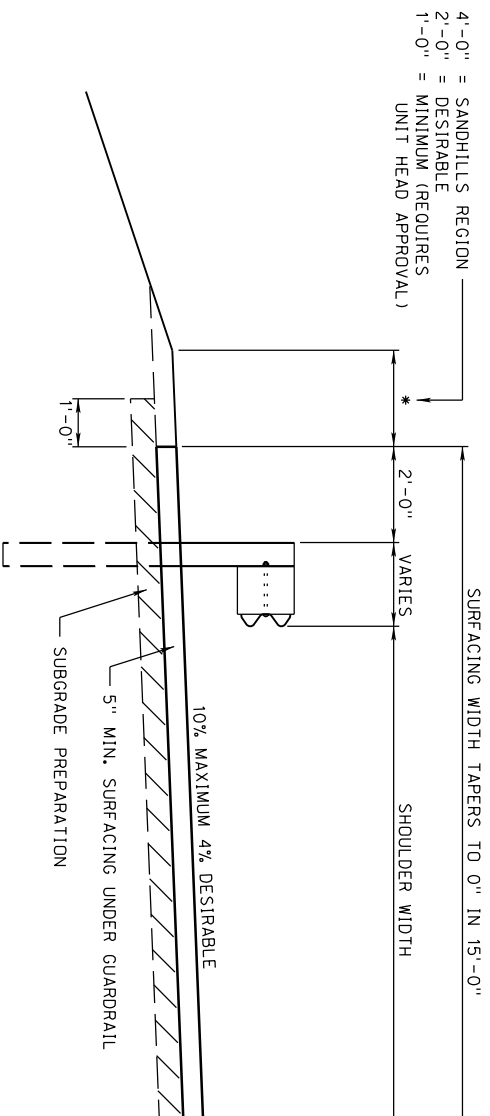
**SURFACE UNDER GUARDRAIL
(SURFACED SHOULDER WIDENING AT GUARDRAIL LOCATIONS)**

VIEW 3



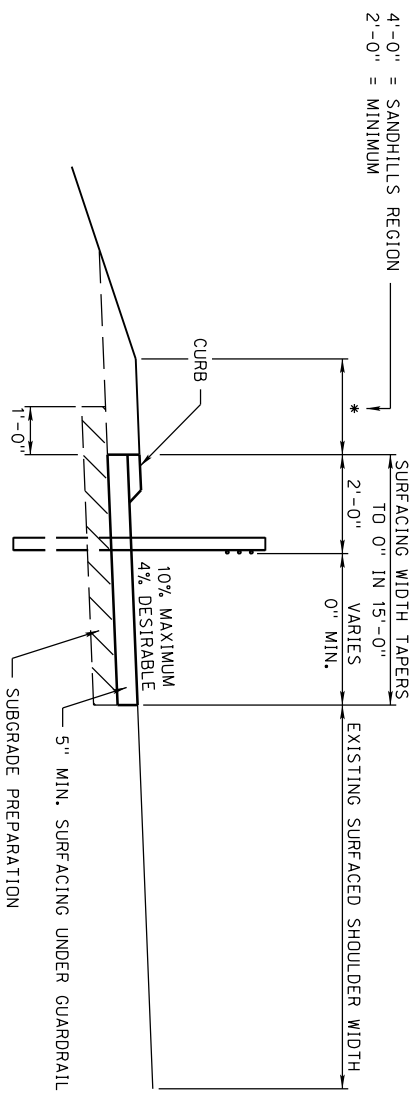
**SURFACE UNDER GUARDRAIL
 NON-SURFACED SHOULDER WITH CURB AT GUARDRAIL LOCATIONS**

VIEW 4



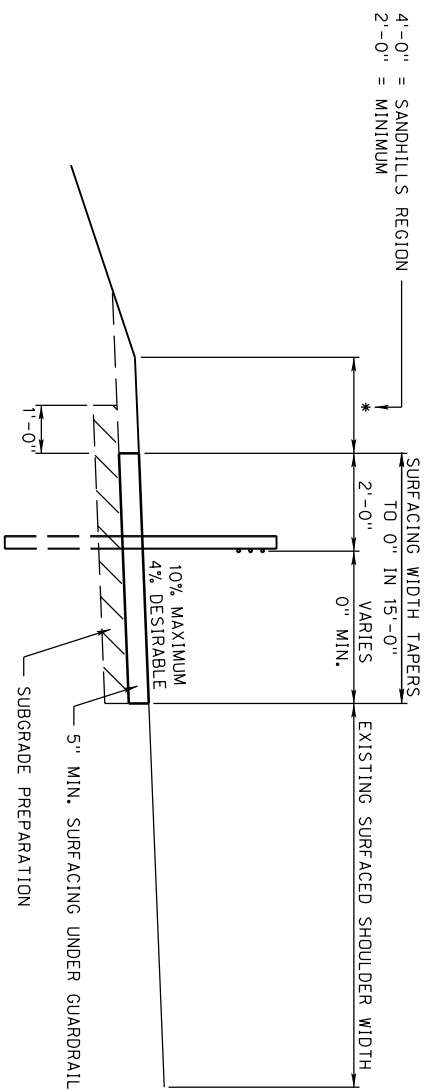
**SURFACE UNDER GUARDRAIL
 NON-SURFACED SHOULDER AT GUARDRAIL LOCATIONS**

VIEW 5



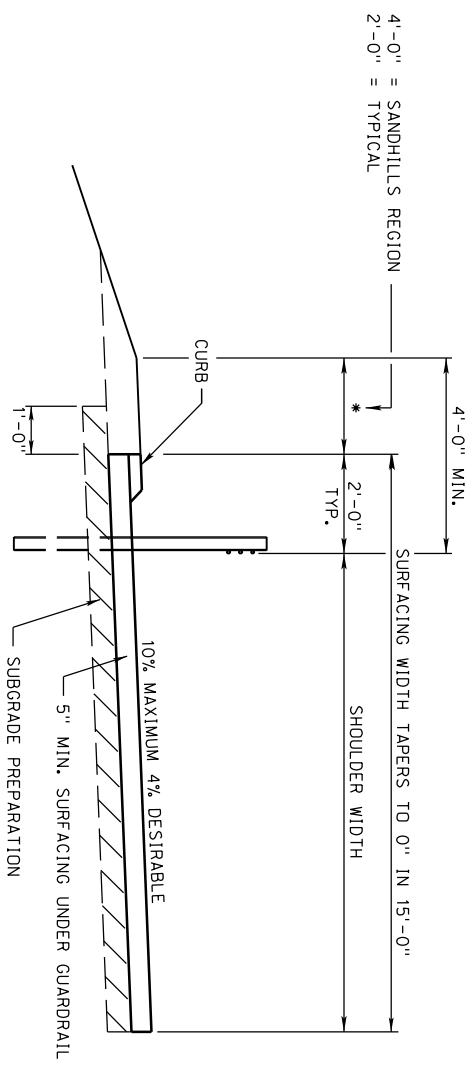
SURFACE UNDER GUARDRAIL
SURFACED SHOULDER WIDENING WITH CURB AT CABLE GUARDRAIL LOCATIONS

VIEW 6



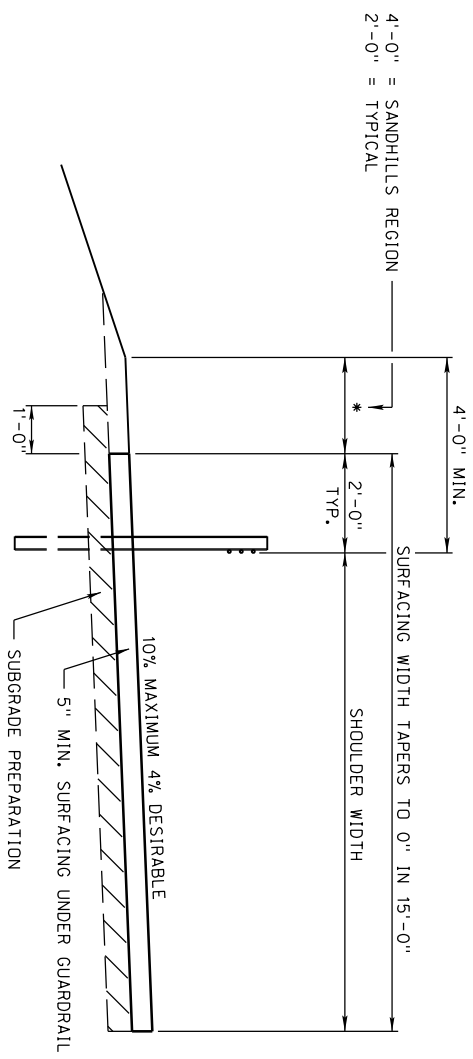
SURFACE UNDER GUARDRAIL
SURFACED SHOULDER WIDENING AT CABLE GUARDRAIL LOCATIONS

VIEW 7

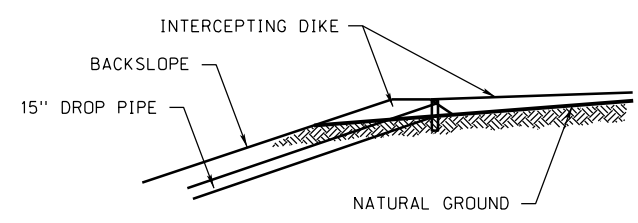


SURFACE UNDER GUARDRAIL
NON-SURFACED SHOULDER WITH CURB AT CABLE GUARDRAIL LOCATIONS

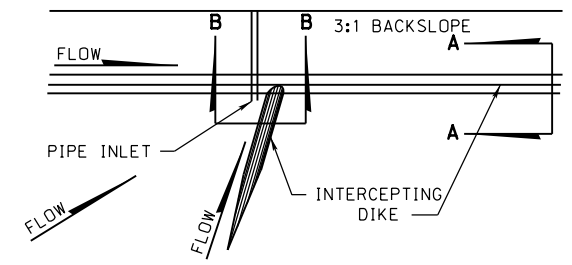
VIEW 8



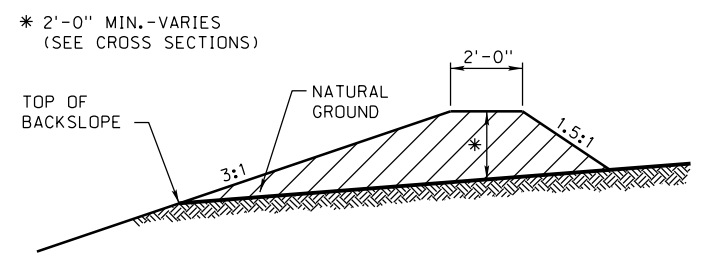
SURFACE UNDER GUARDRAIL
NON-SURFACED SHOULDER AT CABLE GUARDRAIL LOCATIONS



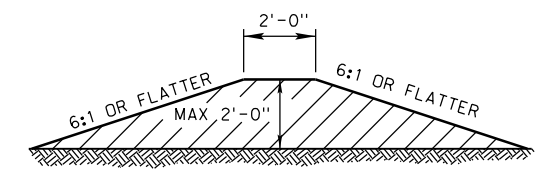
ELEVATION OF INTERCEPTING DIKES



PLAN VIEW OF INTERCEPTING DIKES



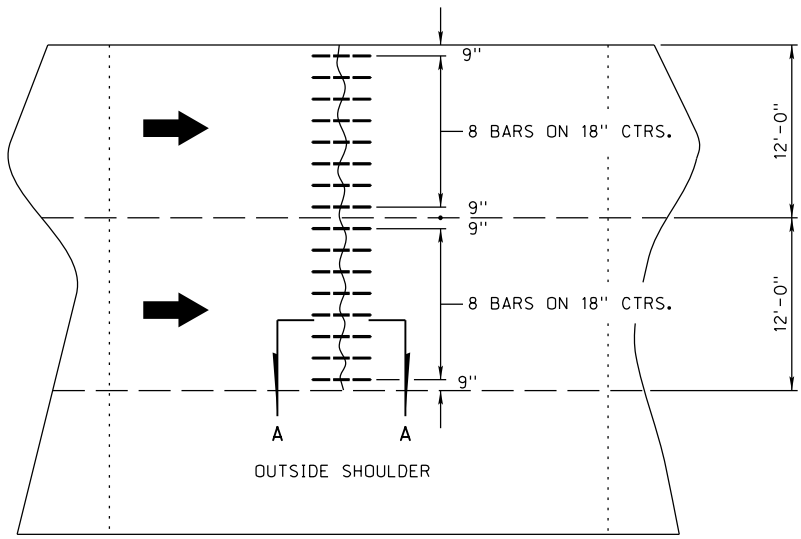
SECTION A-A OF INTERCEPTING DIKE



SECTION B-B OF INTERCEPTING DIKE

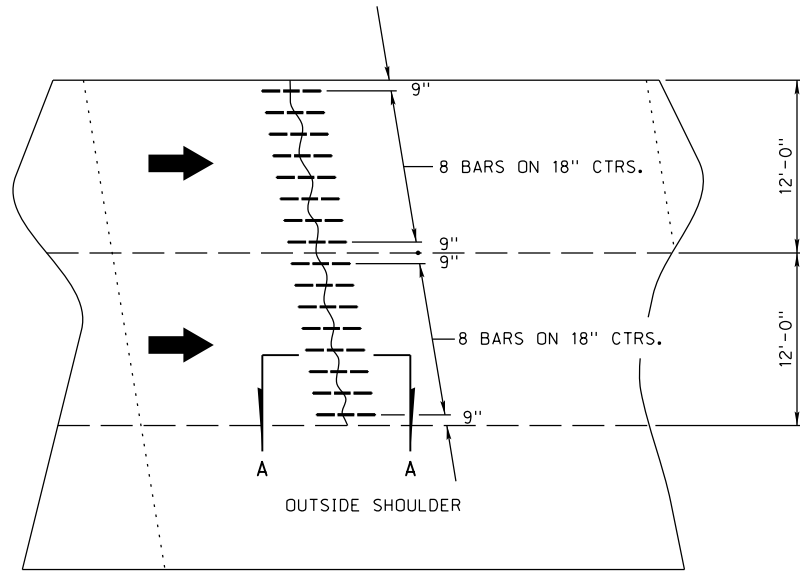
DESIGN OF INTERCEPTING DIKES

ROADWAY DESIGN DIVISION



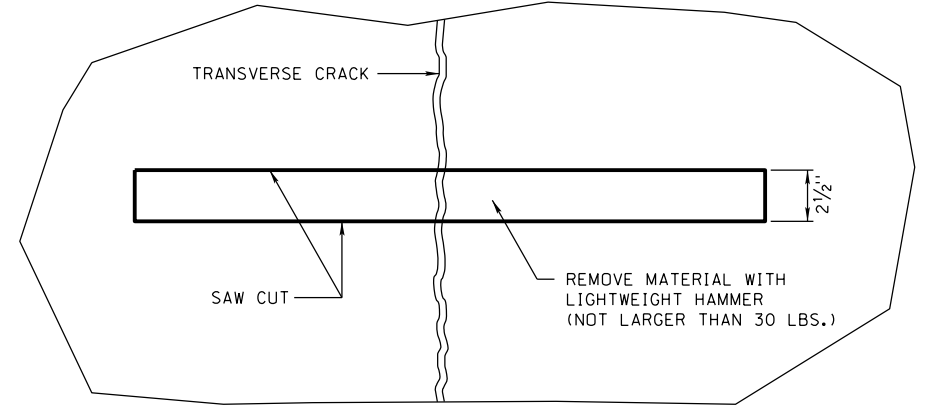
NOTE: TRANSVERSE JOINT SPACING AT 16'-6"

**DEFORMED BAR SPACING
(DOWELED CONCRETE PAVEMENT)**

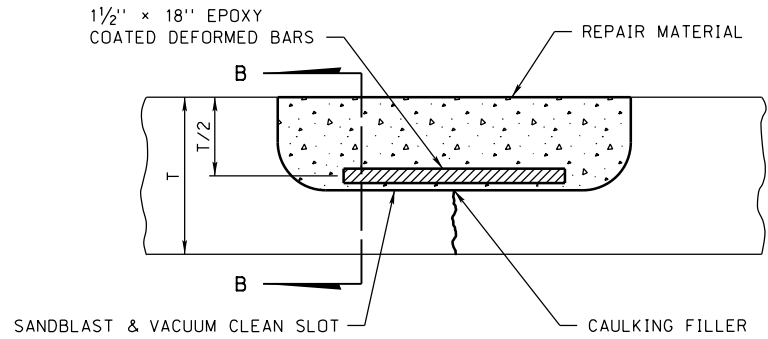


NOTE: SKEWED TRANSVERSE JOINT SPACING AT 16'-6"

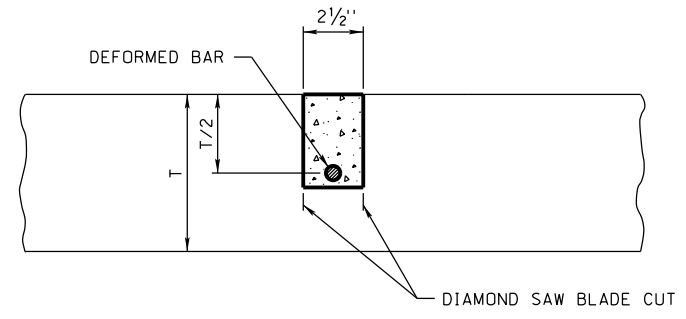
**DEFORMED BAR SPACING
(PLAIN CONCRETE PAVEMENT)**



PLAN VIEW DEFORMED BAR SLOT MATERIAL REMOVAL



SECTION A-A



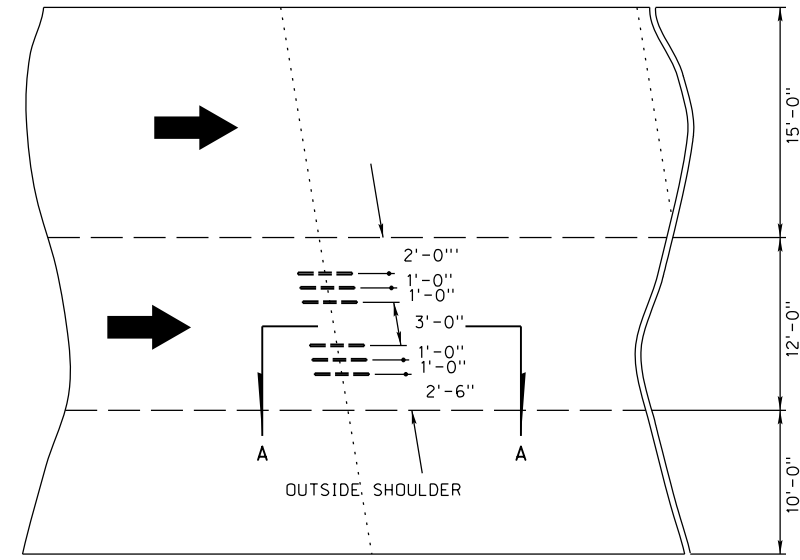
SECTION B-B

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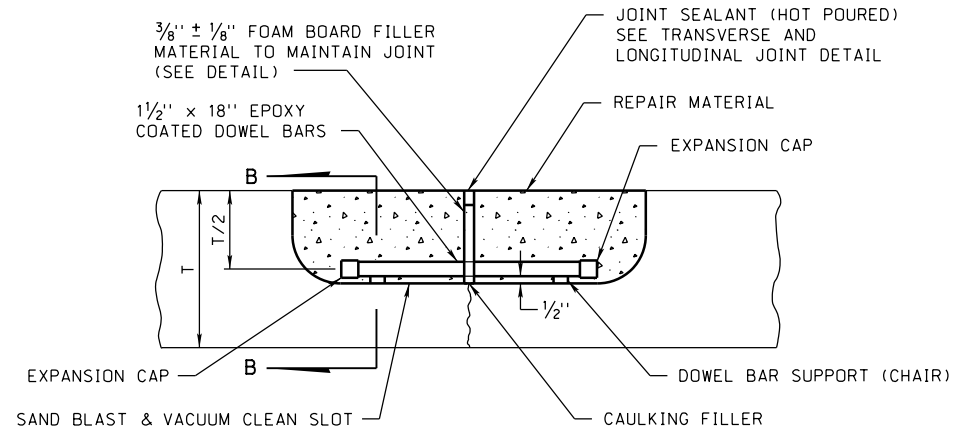
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ROADWAY DESIGN DIVISION

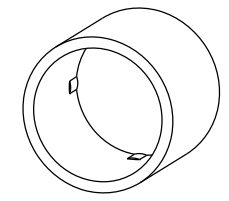


NOTE: SKEWED TRANSVERSE JOINT SPACING AT 16'-6"

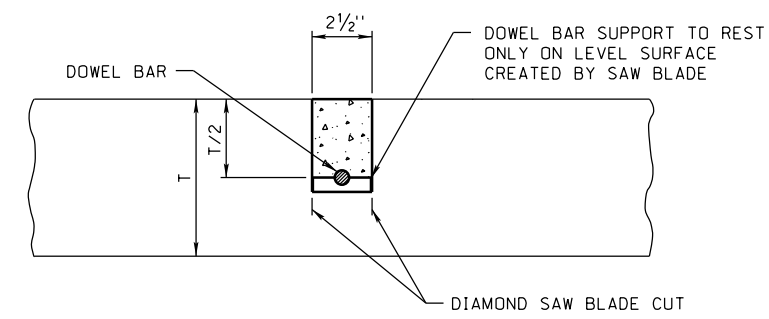
RETROFIT DOWEL BAR SPACING



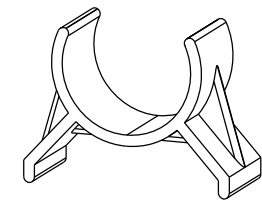
SECTION A-A



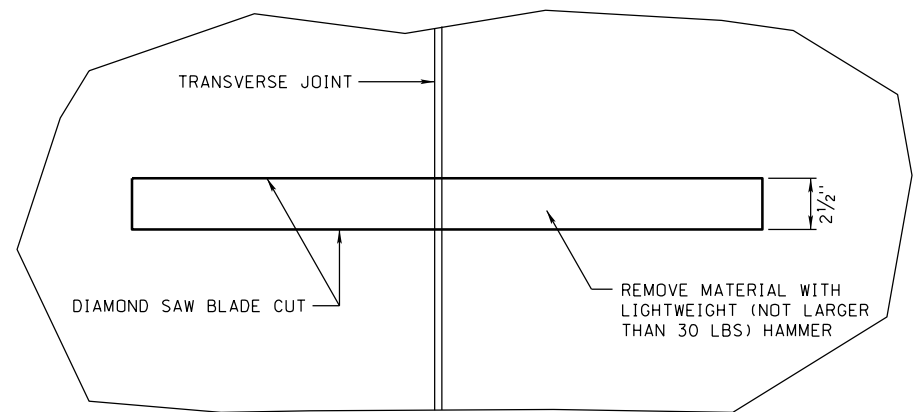
EXPANSION CAP



SECTION B-B

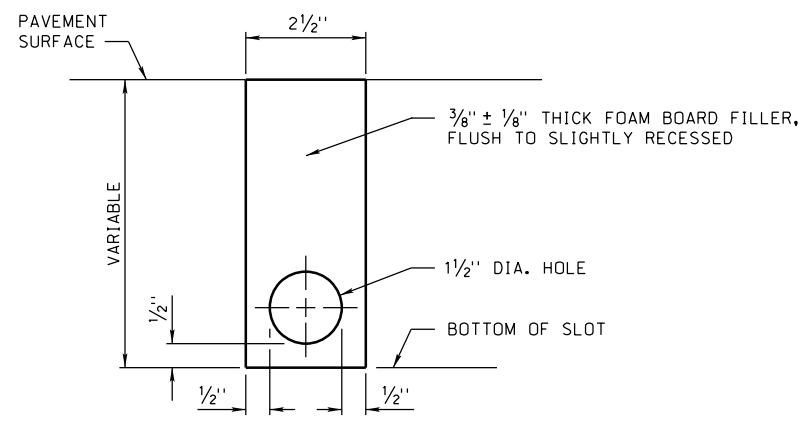


DOWEL BAR SUPPORT (CHAIR)



PLAN VIEW DOWEL BAR RETROFIT SLOT MATERIAL REMOVAL

NOTE:
THE 12'-0" DRIVING LANE WHERE THE DOWEL BAR RETROFIT IS PLACED SHALL BE SAWED AND SEALED ACCORDING TO THE TRANSVERSE JOINT DETAIL.



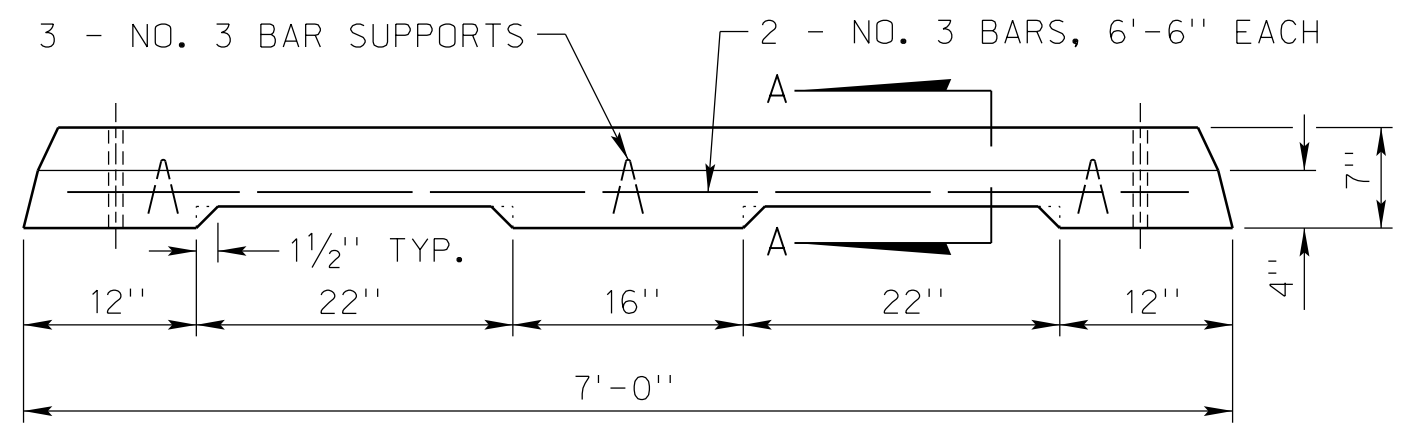
FOAM BOARD FILLER DETAIL

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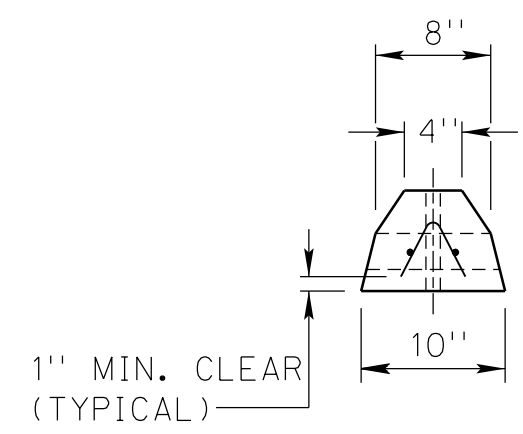
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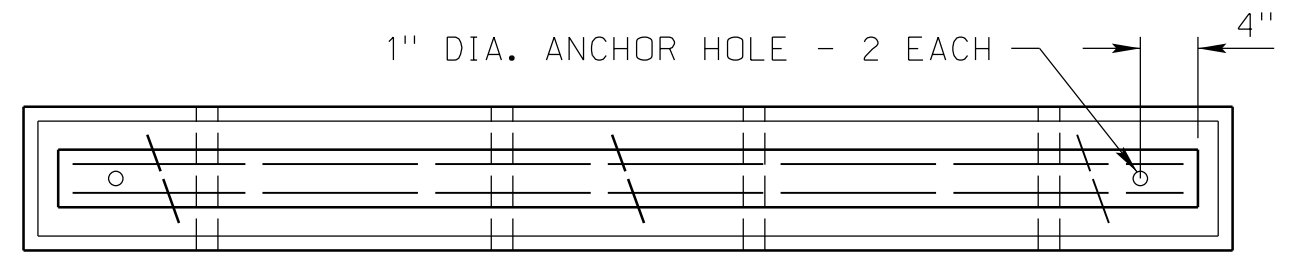
ROADWAY DESIGN DIVISION



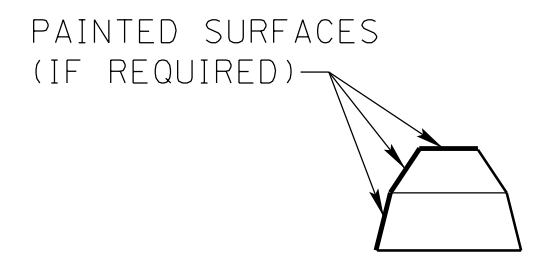
ELEVATION



SECTION A-A



PLAN



PAINTING DETAIL

NOTE: PRECAST CONCRETE CURB STOP SHALL BE ANCHORED WITH NO. 7 BARS 18" IN LENGTH

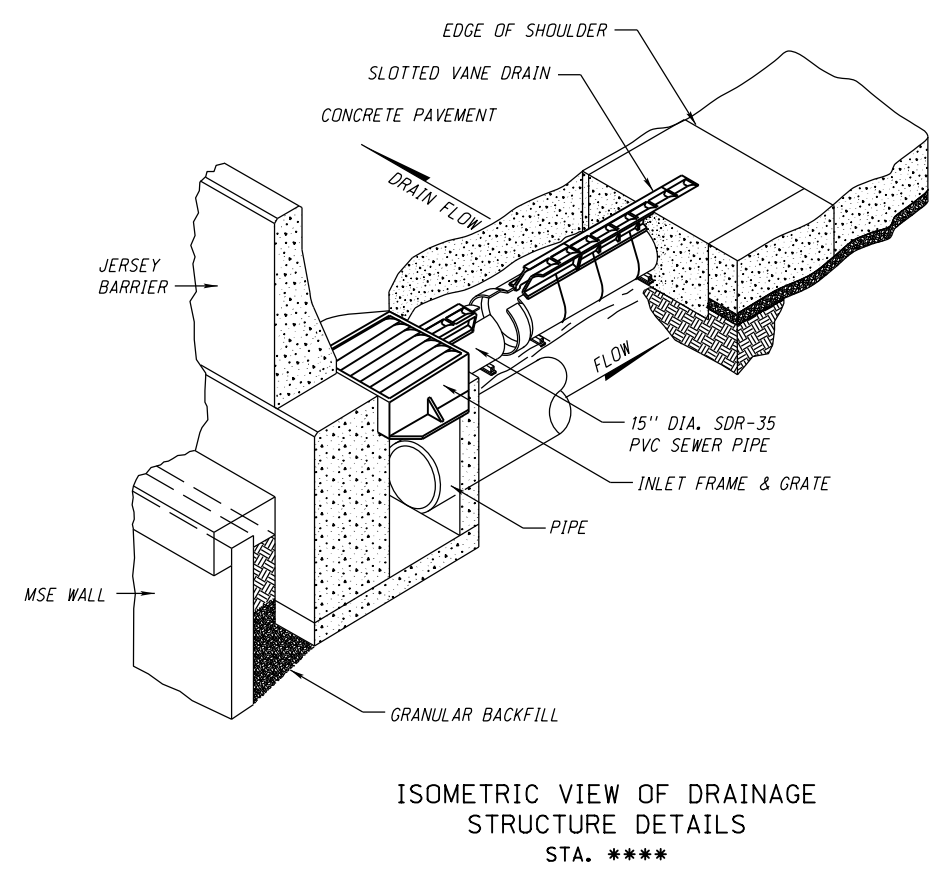
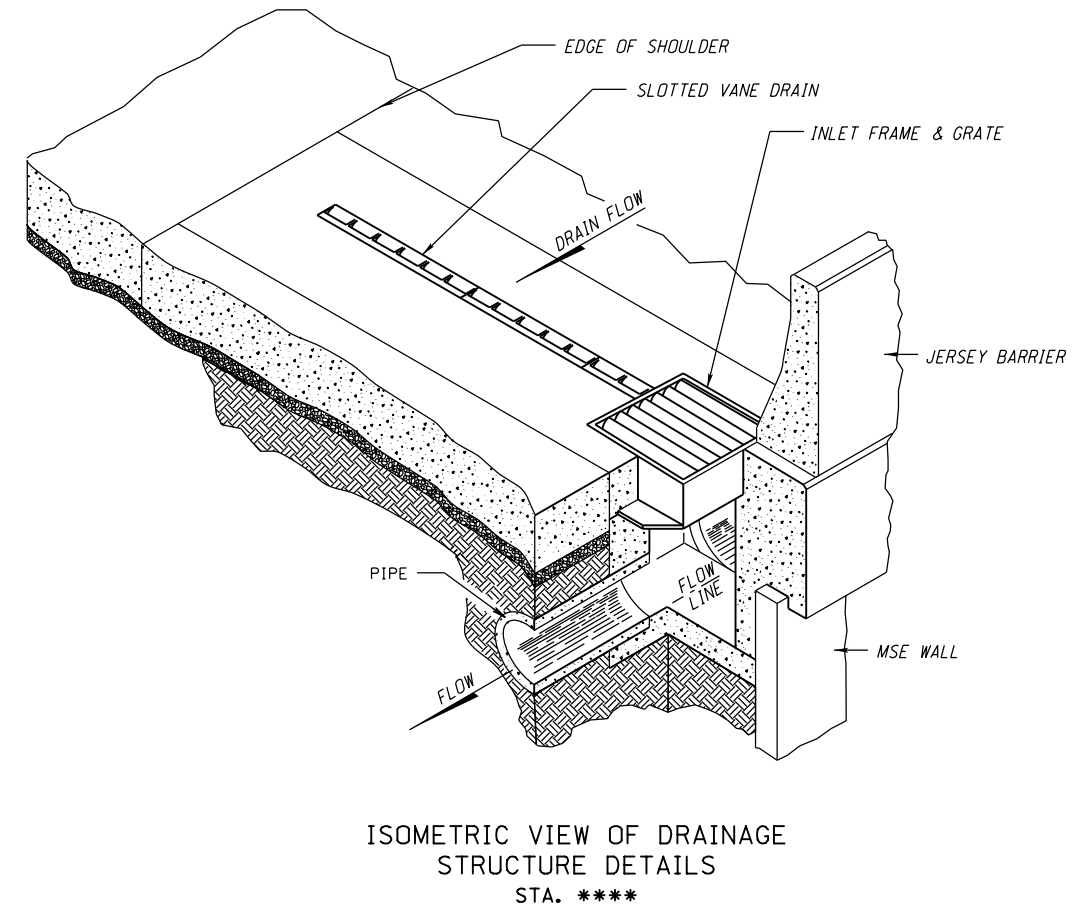
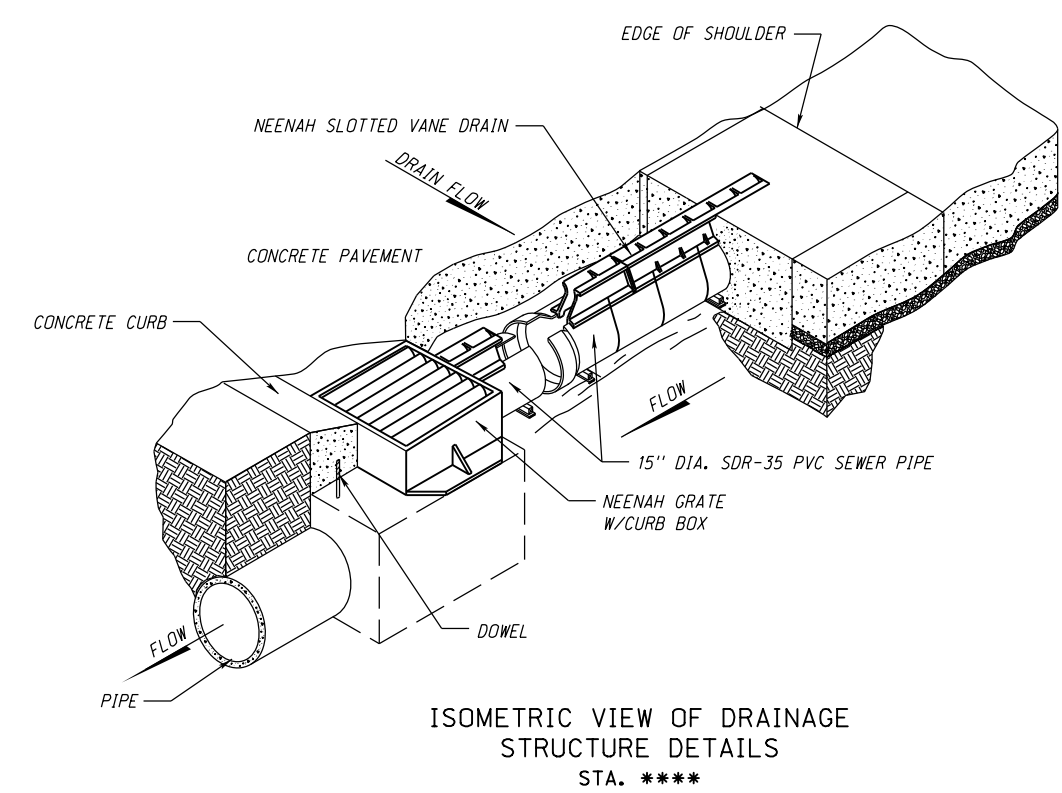
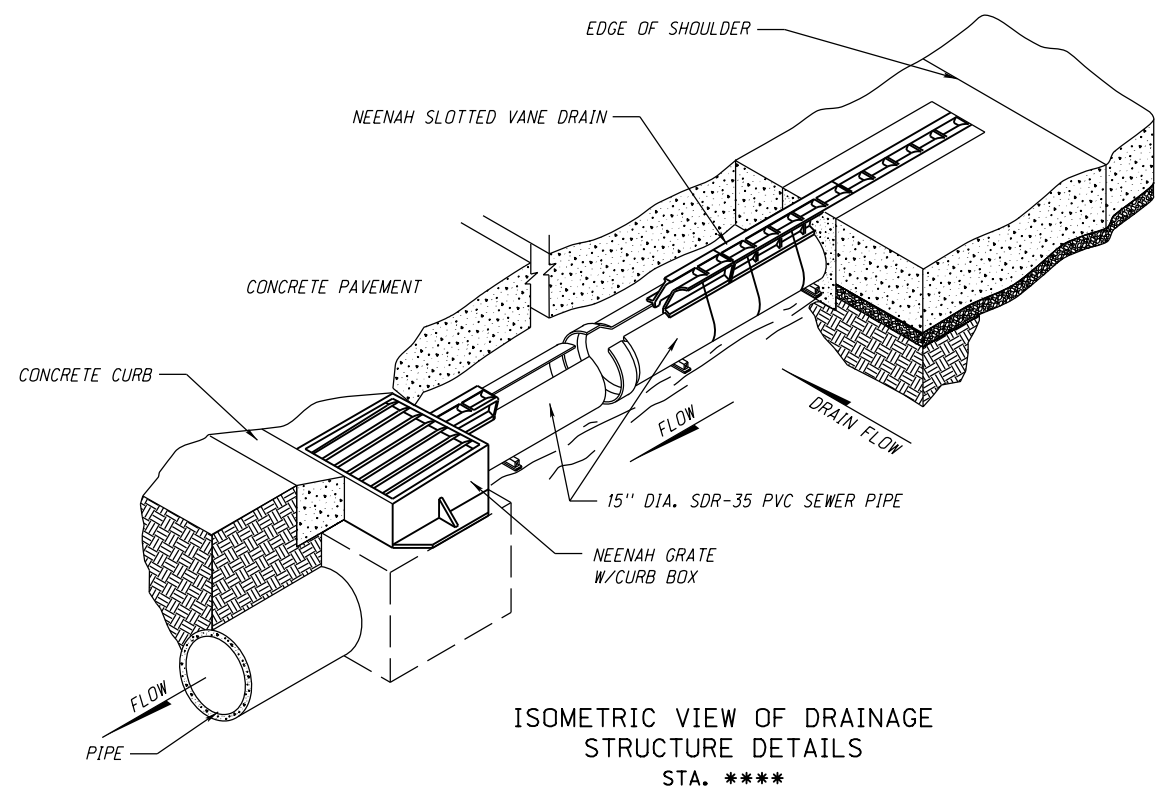
DETAIL OF PRECAST CONCRETE CURB STOP

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ROADWAY DESIGN DIVISION

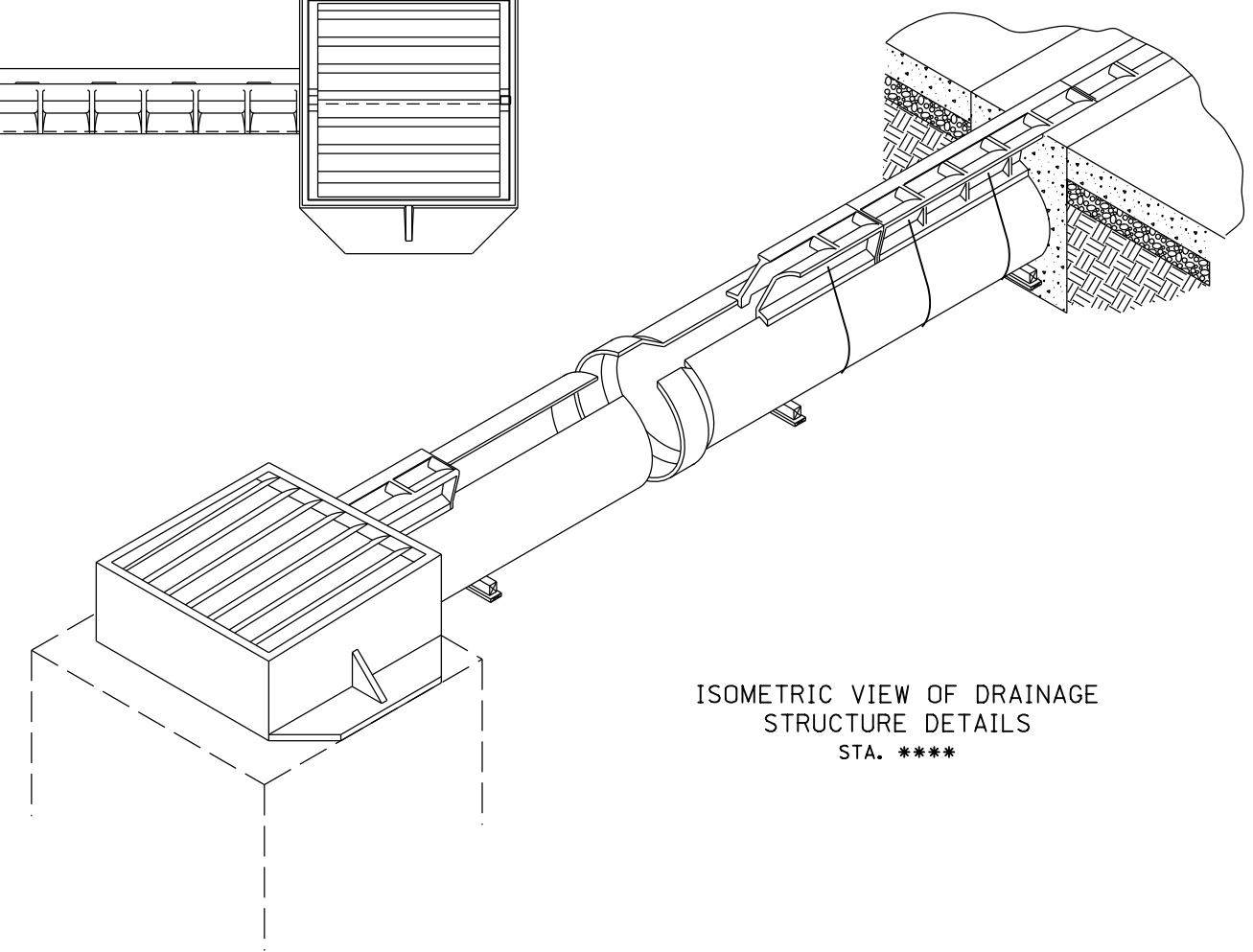
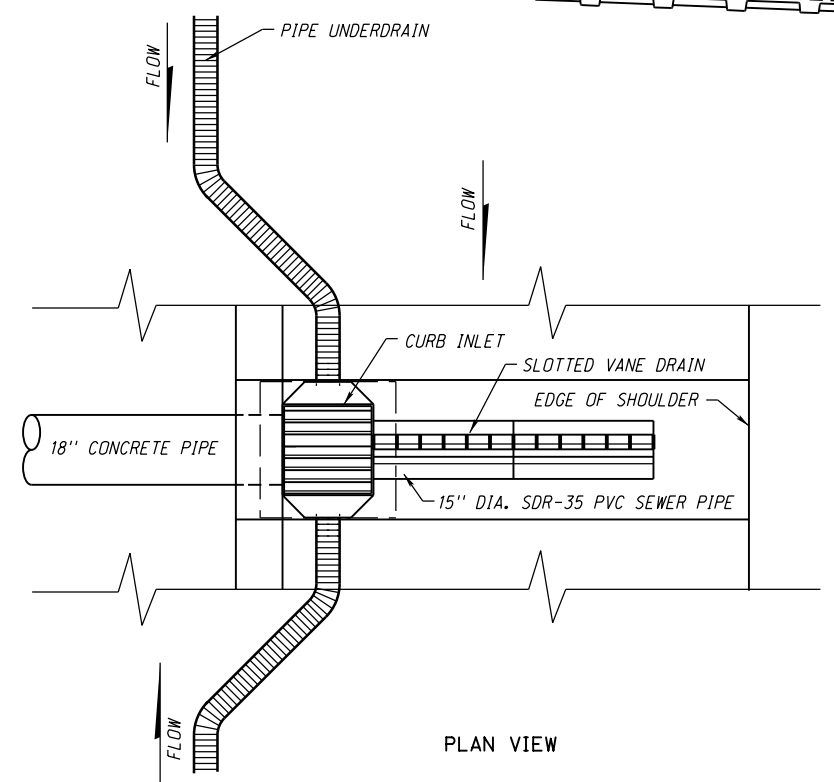
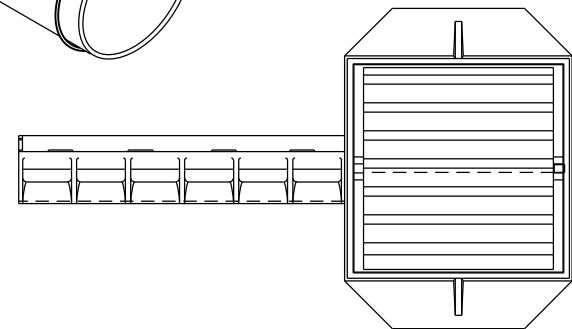
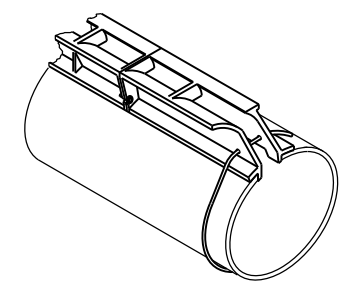
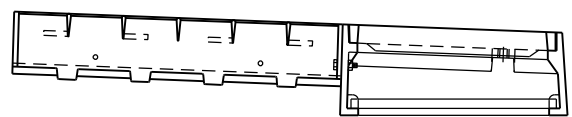
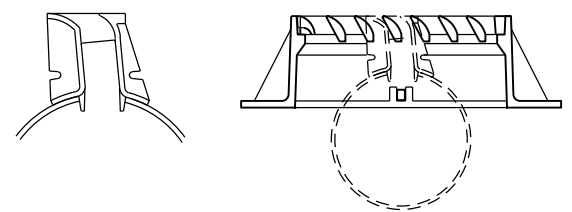
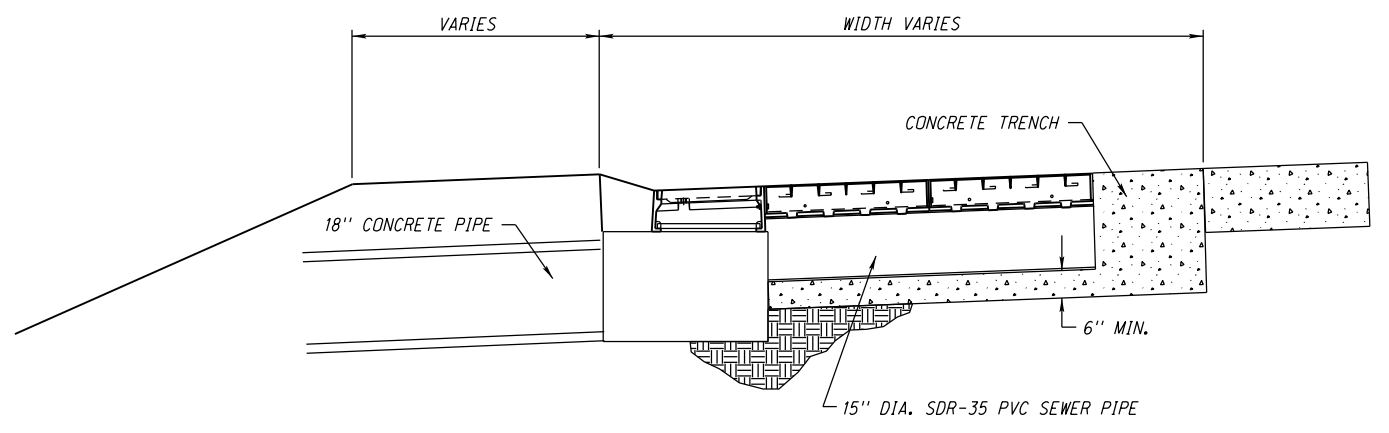
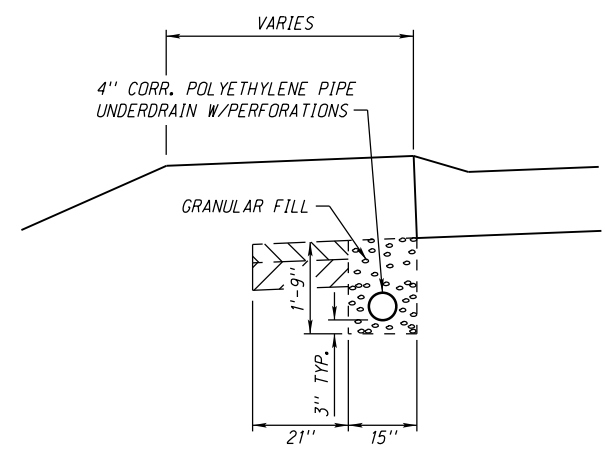


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ROADWAY DESIGN DIVISION



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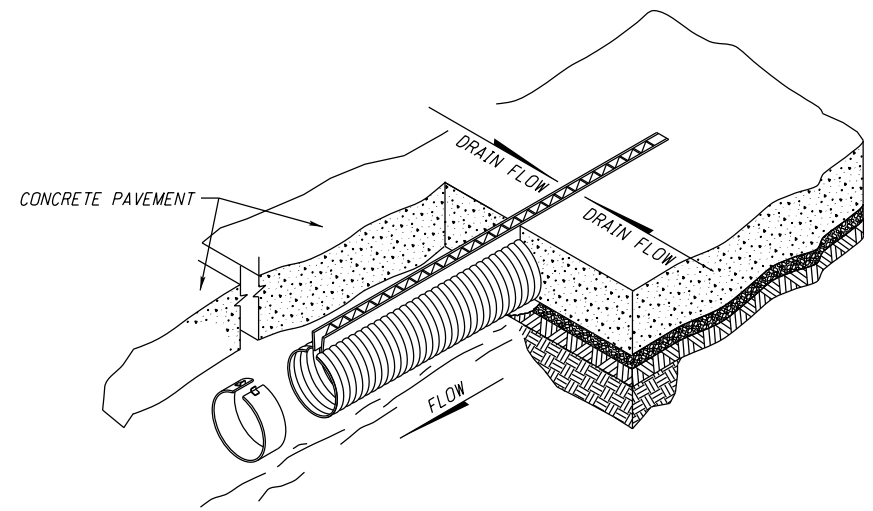
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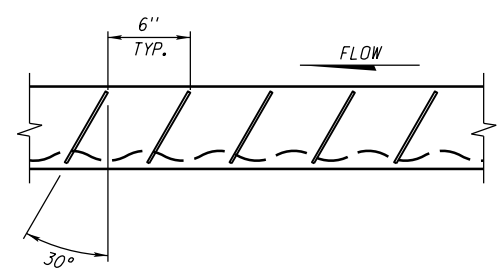
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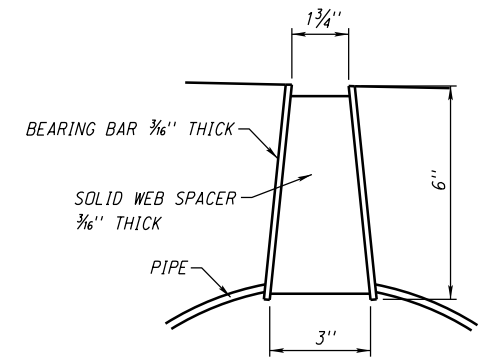
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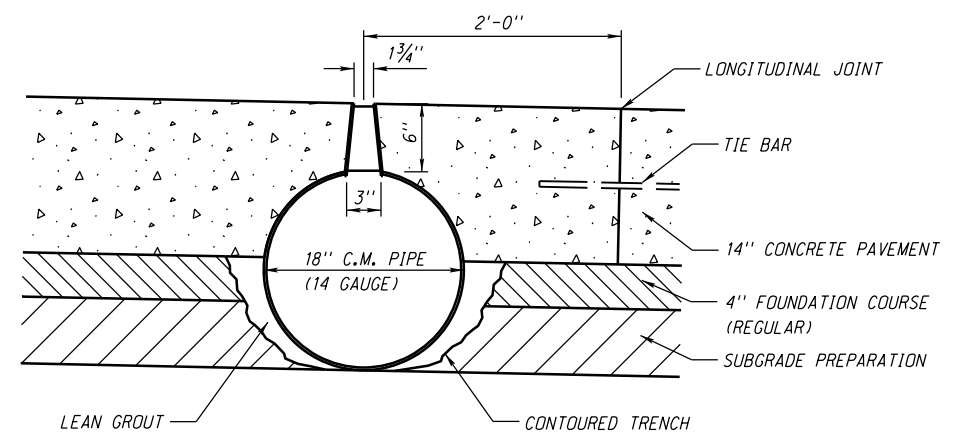
ISOMETRIC VIEW OF DRAINAGE
STRUCTURE DETAILS
STA. ****



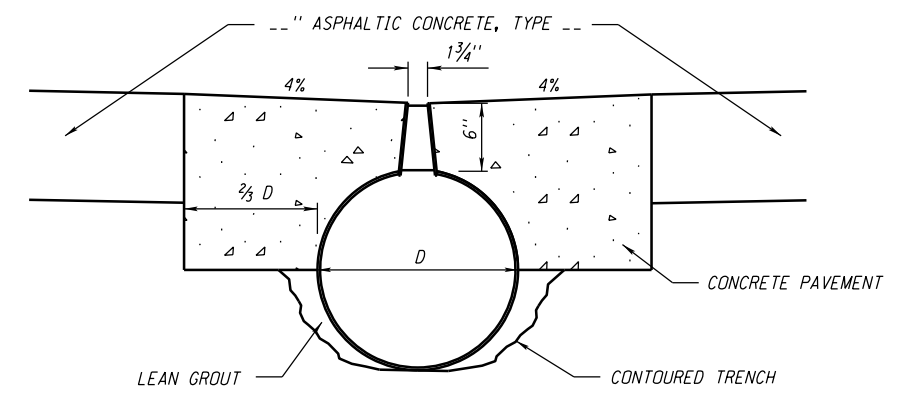
LONGITUDINAL SECTION
(THRU SLOT)



GRATE DETAIL

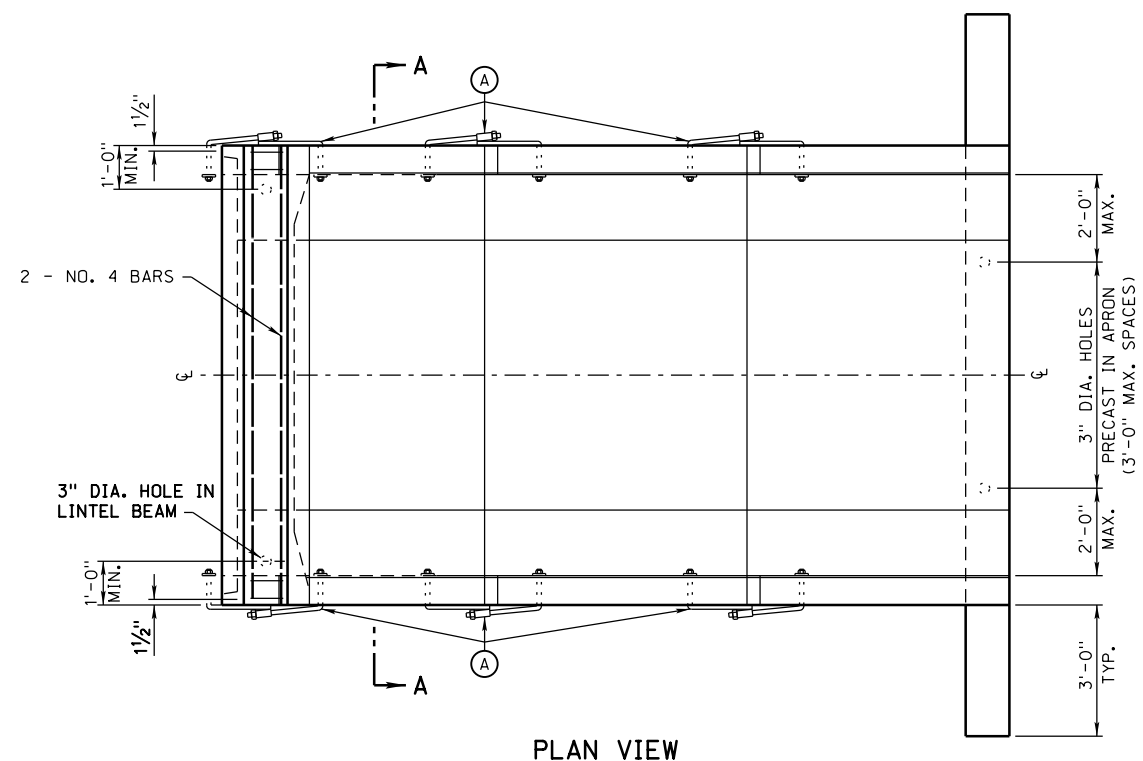


CORRUGATED METAL SLOTTED PIPE DETAIL
(CONCRETE PAVEMENT APPLICATION)

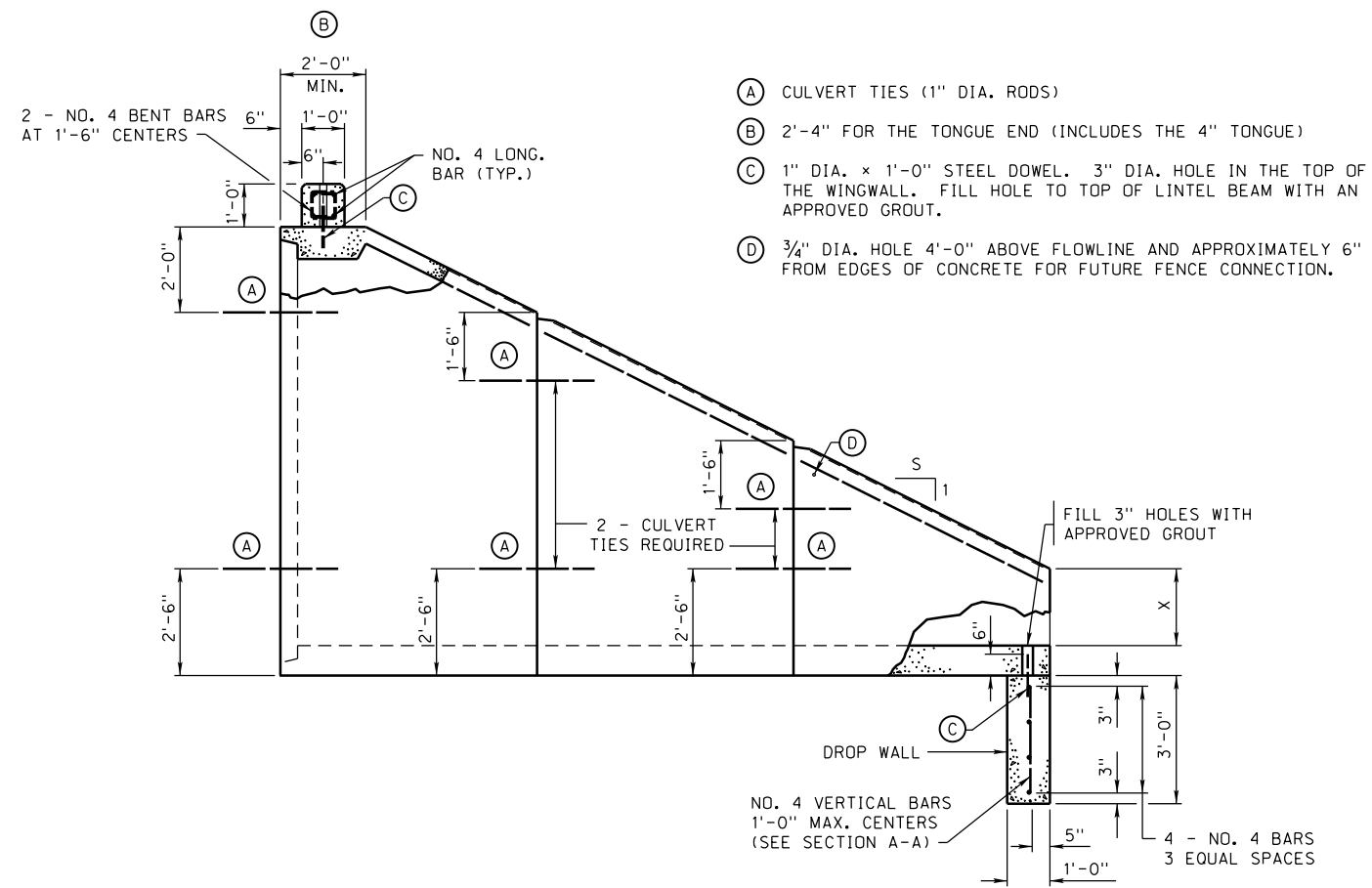


CORRUGATED METAL SLOTTED PIPE DETAIL
(ASPHALTIC CONCRETE PAVEMENT APPLICATION)

ROADWAY DESIGN DIVISION



PLAN VIEW



SIDE ELEVATION

- (A) CULVERT TIES (1" DIA. RODS)
- (B) 2'-4" FOR THE TONGUE END (INCLUDES THE 4" TONGUE)
- (C) 1" DIA. x 1'-0" STEEL DOWEL. 3" DIA. HOLE IN THE TOP OF THE WINGWALL. FILL HOLE TO TOP OF LINTEL BEAM WITH AN APPROVED GROUT.
- (D) 3/4" DIA. HOLE 4'-0" ABOVE FLOWLINE AND APPROXIMATELY 6" FROM EDGES OF CONCRETE FOR FUTURE FENCE CONNECTION.

NOTES:

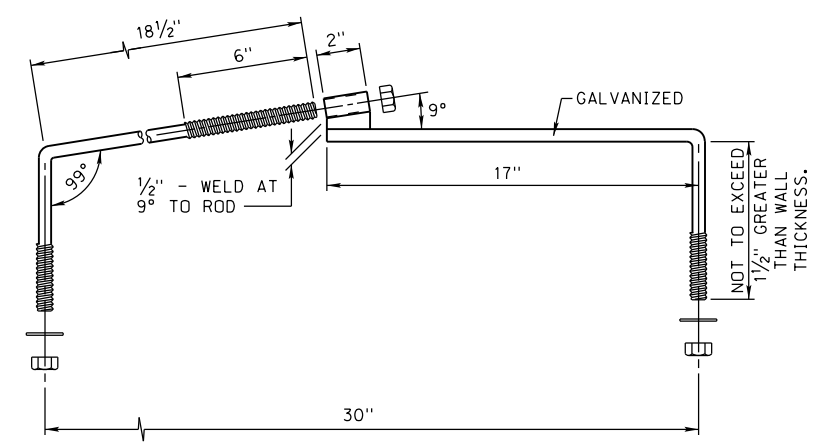
THE NUMBER OF INDIVIDUAL SECTIONS USED TO MAKE UP A COMPLETE END SECTION MAY VARY, HOWEVER, NO ONE INDIVIDUAL SECTION WILL BE LESS THAN 4'-6" IN LENGTH.

S = 2.5 FOR BOX RISES UP TO 8', AND S = 2 FOR RISES IN EXCESS OF 8'.

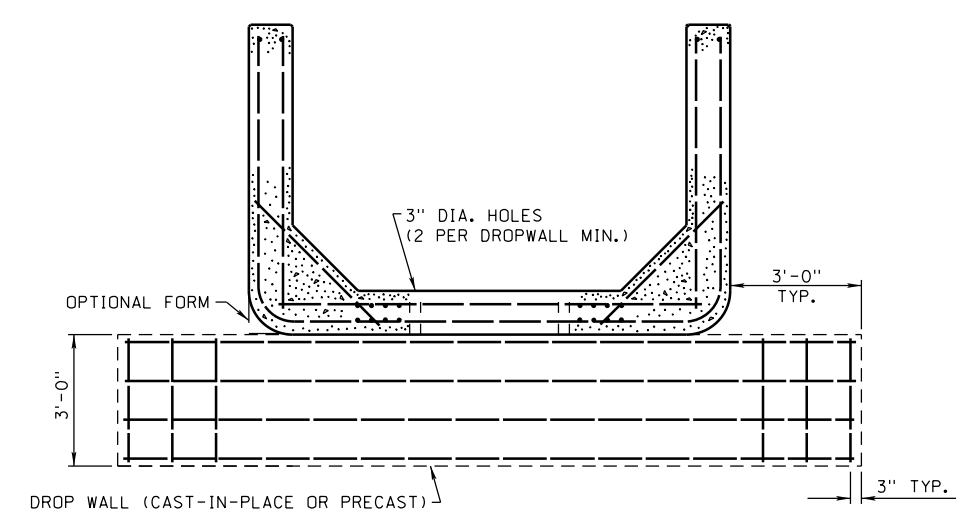
X = 2'-0" FOR BOX RISES UP TO 8', AND X = 3'-0" FOR RISES IN EXCESS OF 8'.

THE STATE WILL BE FURNISHED, PRIOR TO FABRICATION, FIVE SETS OF ENGINEER APPROVED DRAWINGS. THE DRAWINGS WILL SHOW THE SHAPE, PLACEMENT AND SIZE OF STEEL.

CABLE LOOPS WILL BE PROVIDED, WHERE NECESSARY, FOR HANDLING PURPOSES.



DETAIL OF CULVERT TIES
(OR APPROVED EQUAL)



SECTION A-A

PRECAST CONCRETE BOX CULVERT END SECTION

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SHEET 1 OF 1

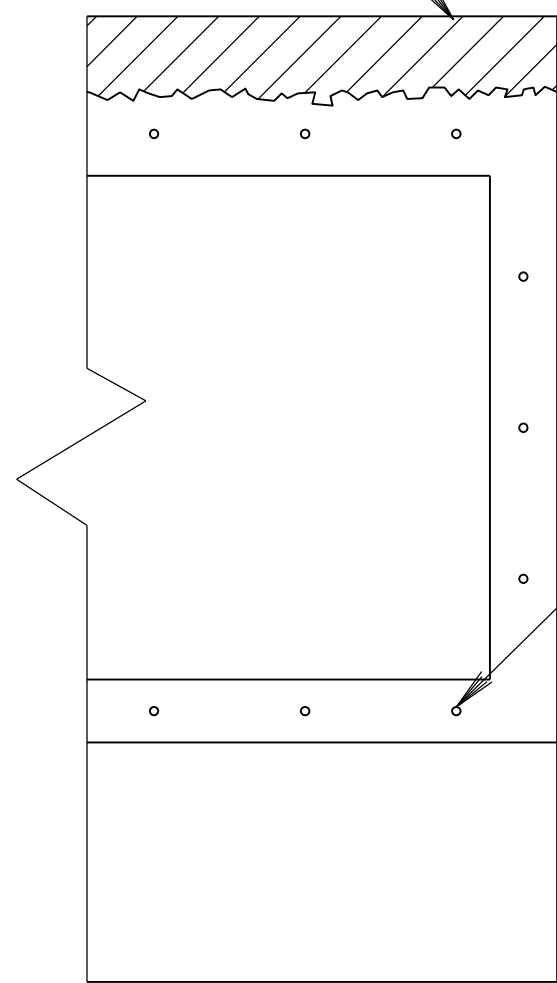
ROADWAY DESIGN DIVISION

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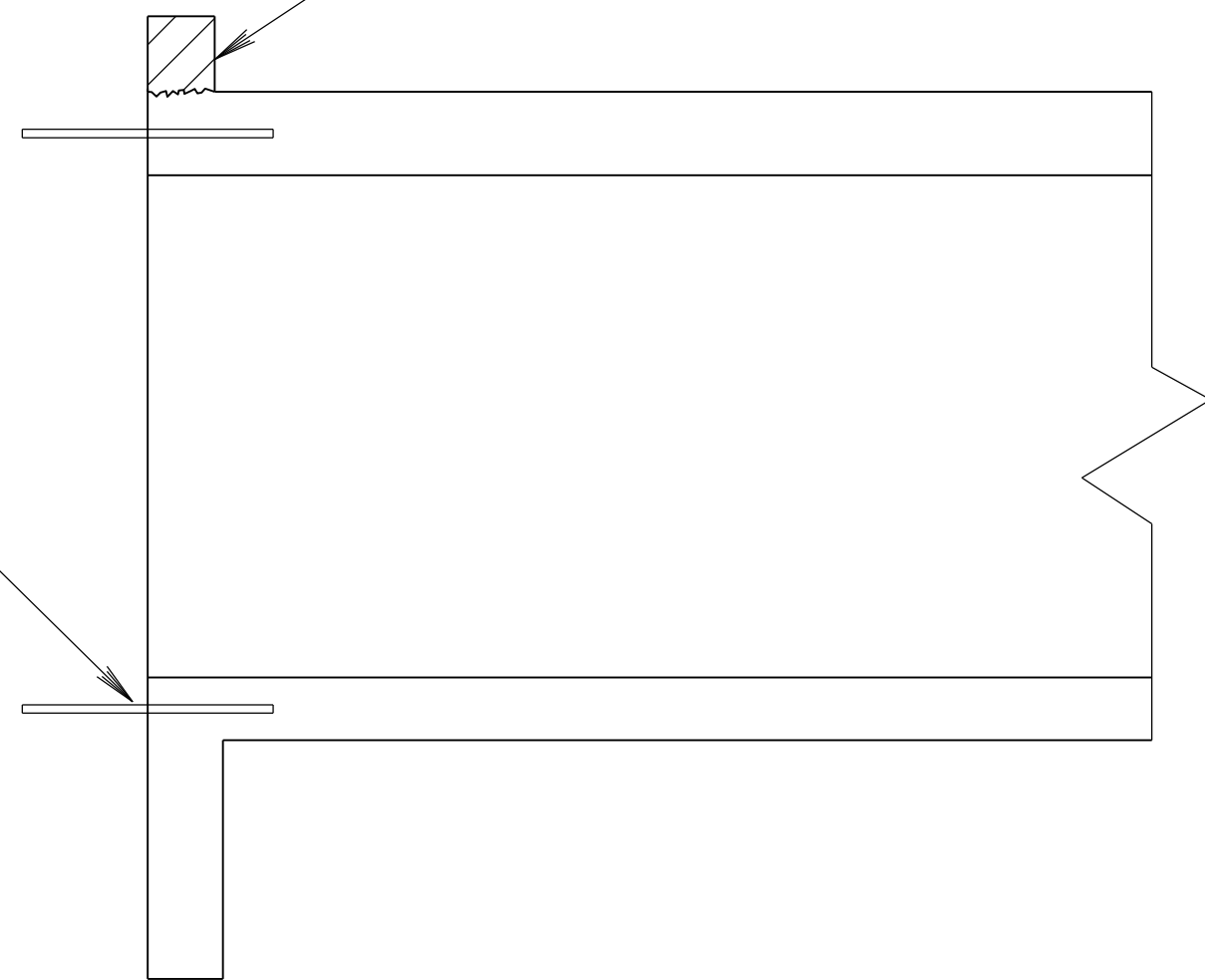
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SHEET 1 OF 1

REMOVE PARAPET



REMOVE PARAPET

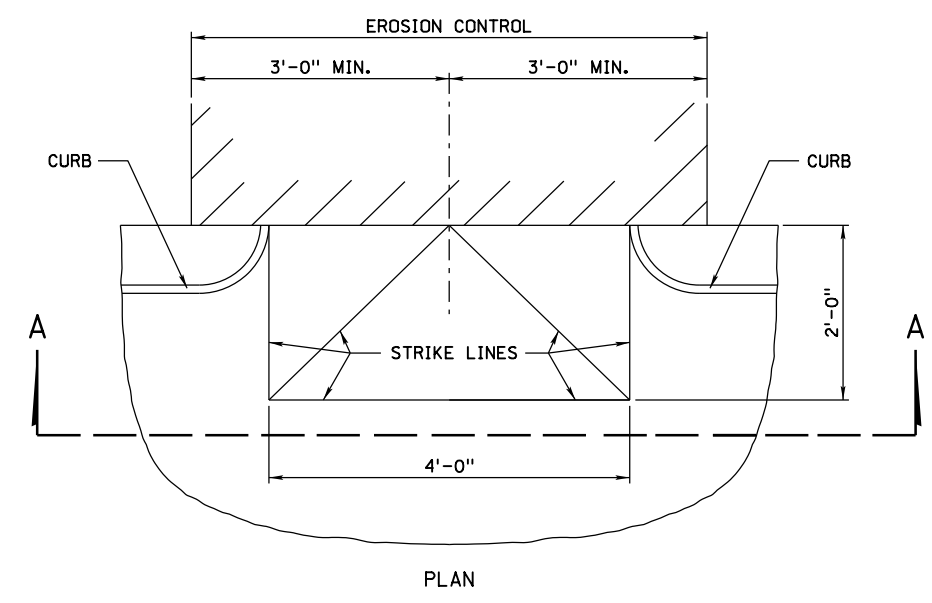
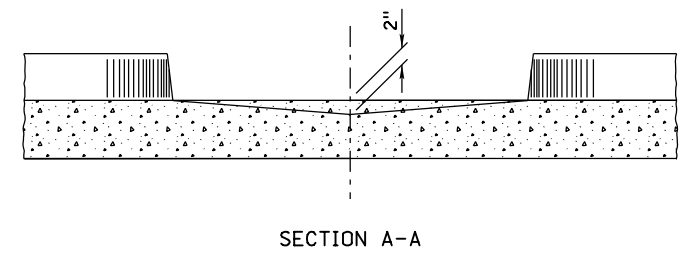
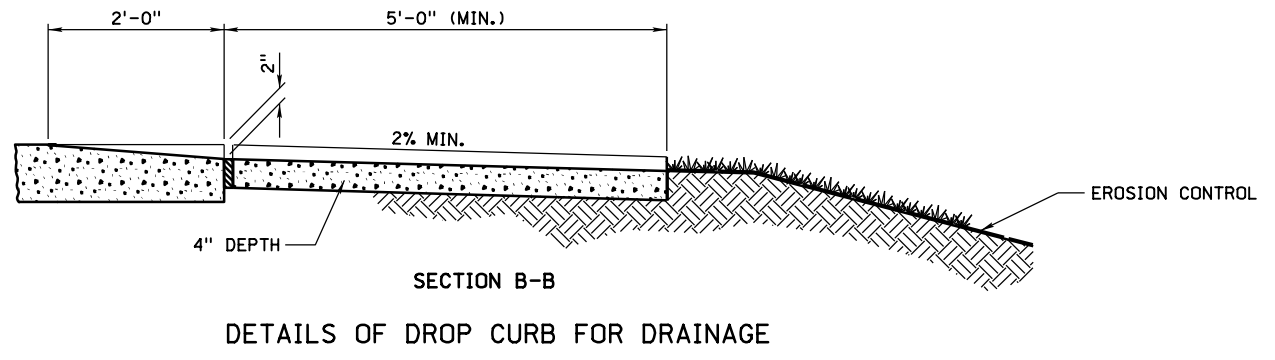
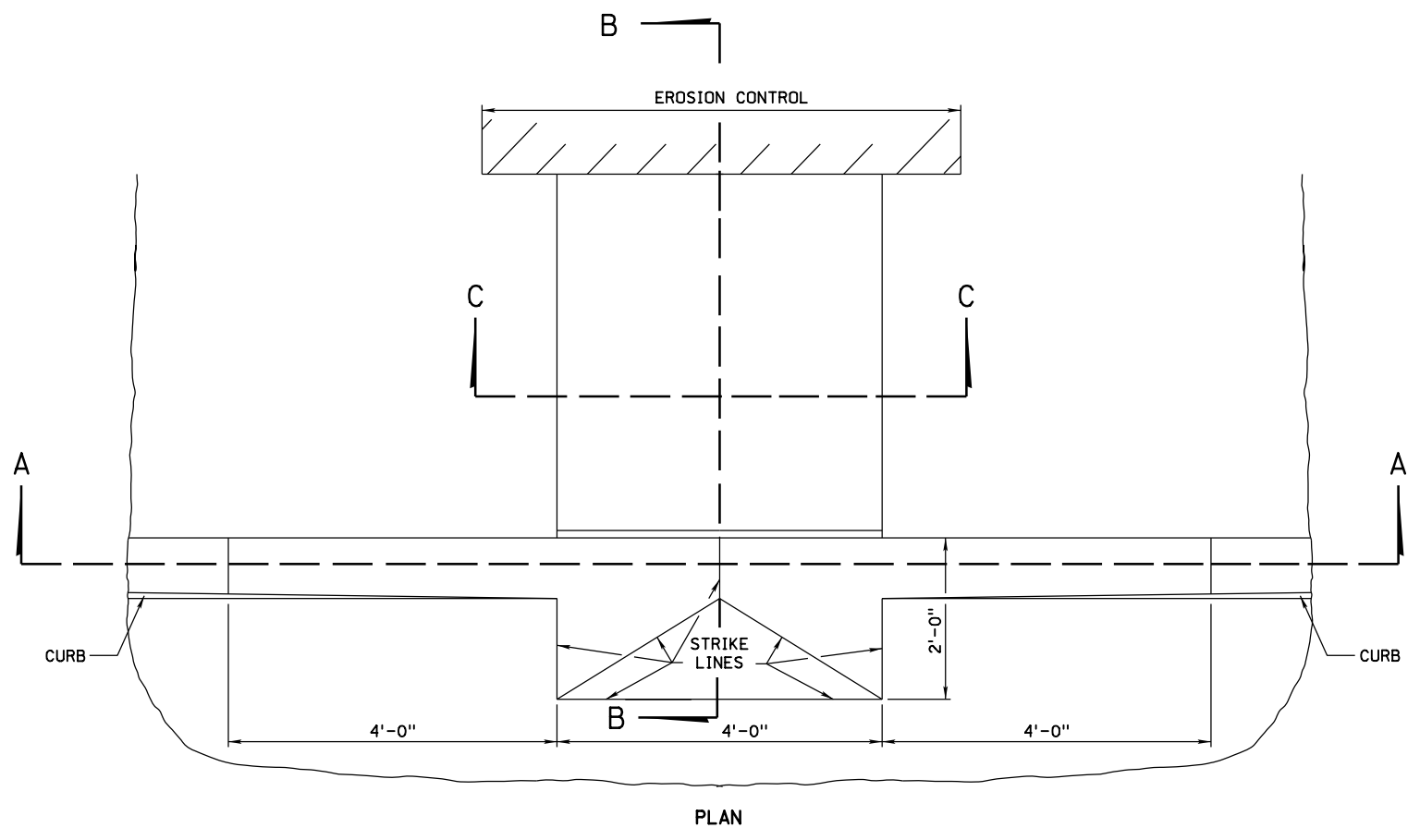
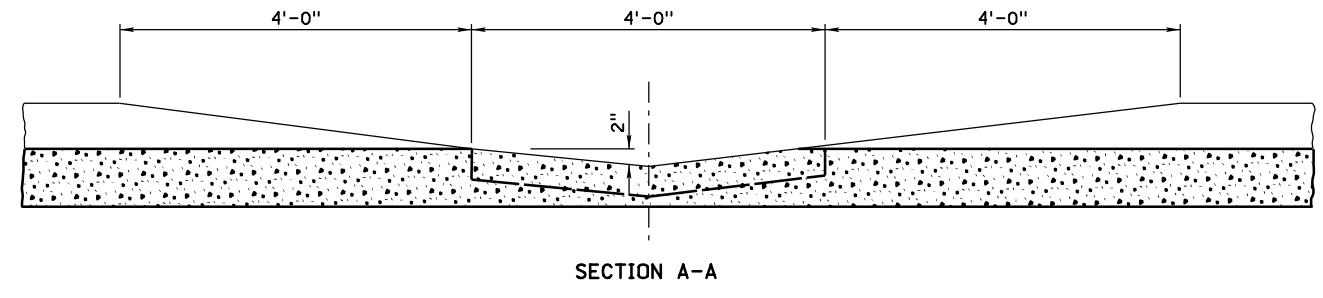
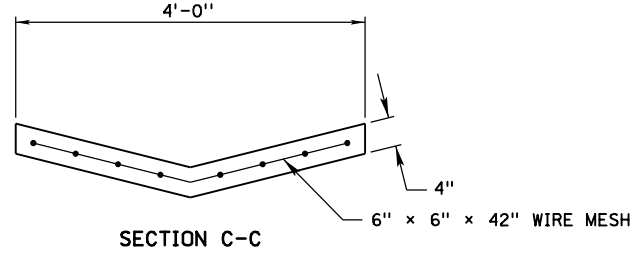


DOWEL BAR

Note: All Dowel Bars are No. 6 Bars x 2'-6" Placed at 18" Centers and Perpendicular to the Surface to be Extended. Place Dowels in 1 1/2" Holes and Grout Full.

PREPARATION OF EXISTING BOX CULVERT FOR EXTENTION

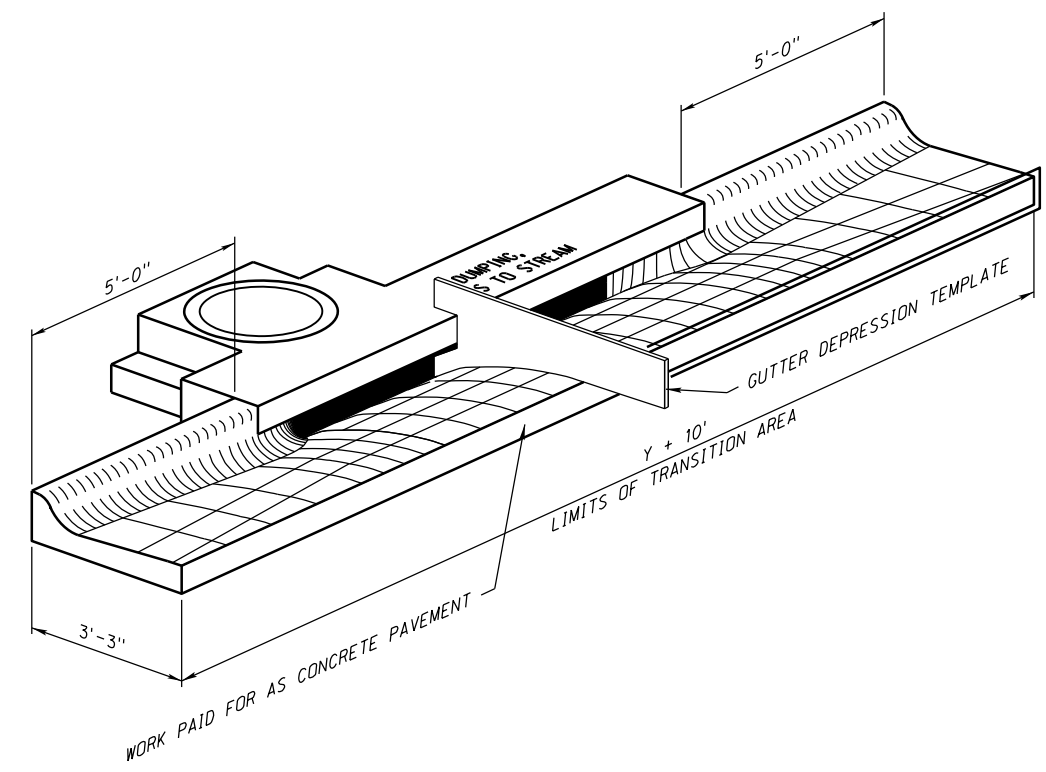
View 1



DETAILS OF DROP CURB FOR DRAINAGE

View 2

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 SHEET 1 OF 1



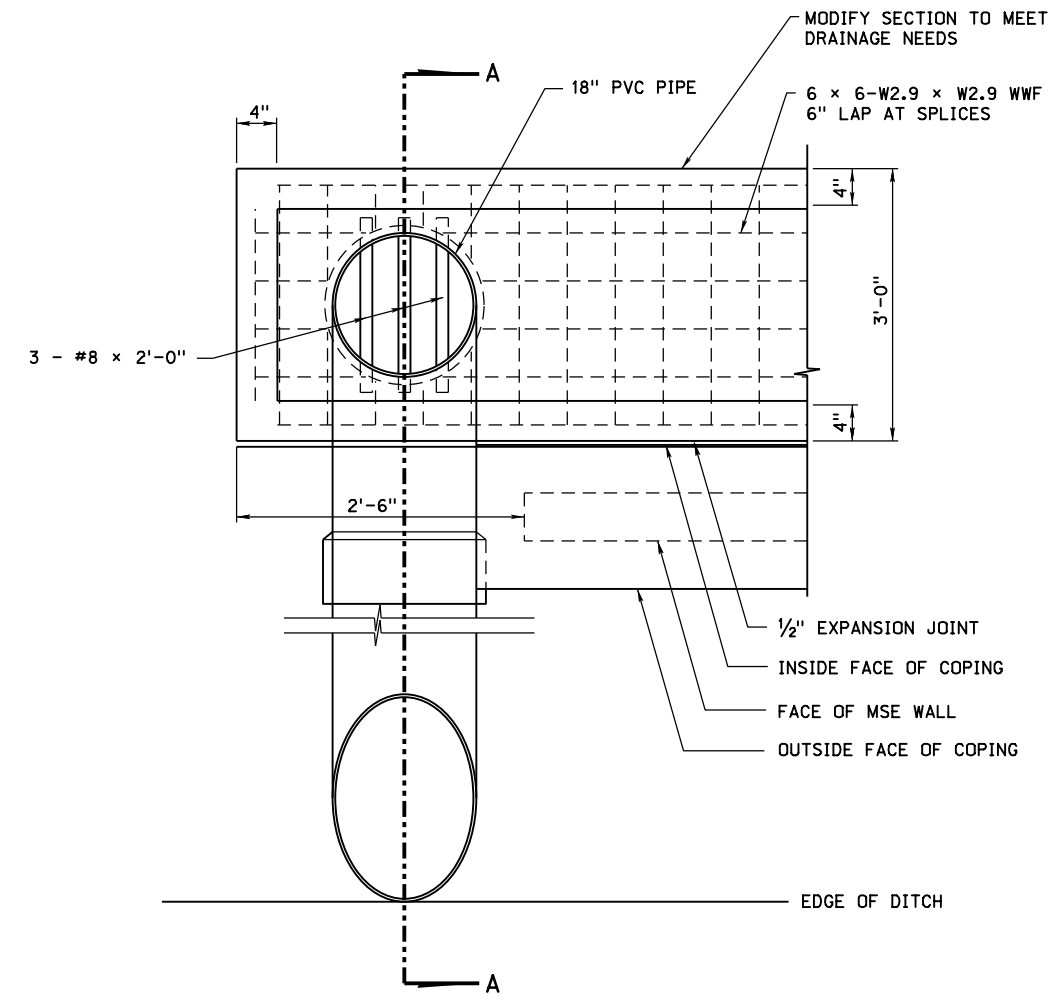
CURB INLET DEPRESSION

ROADWAY DESIGN DIVISION

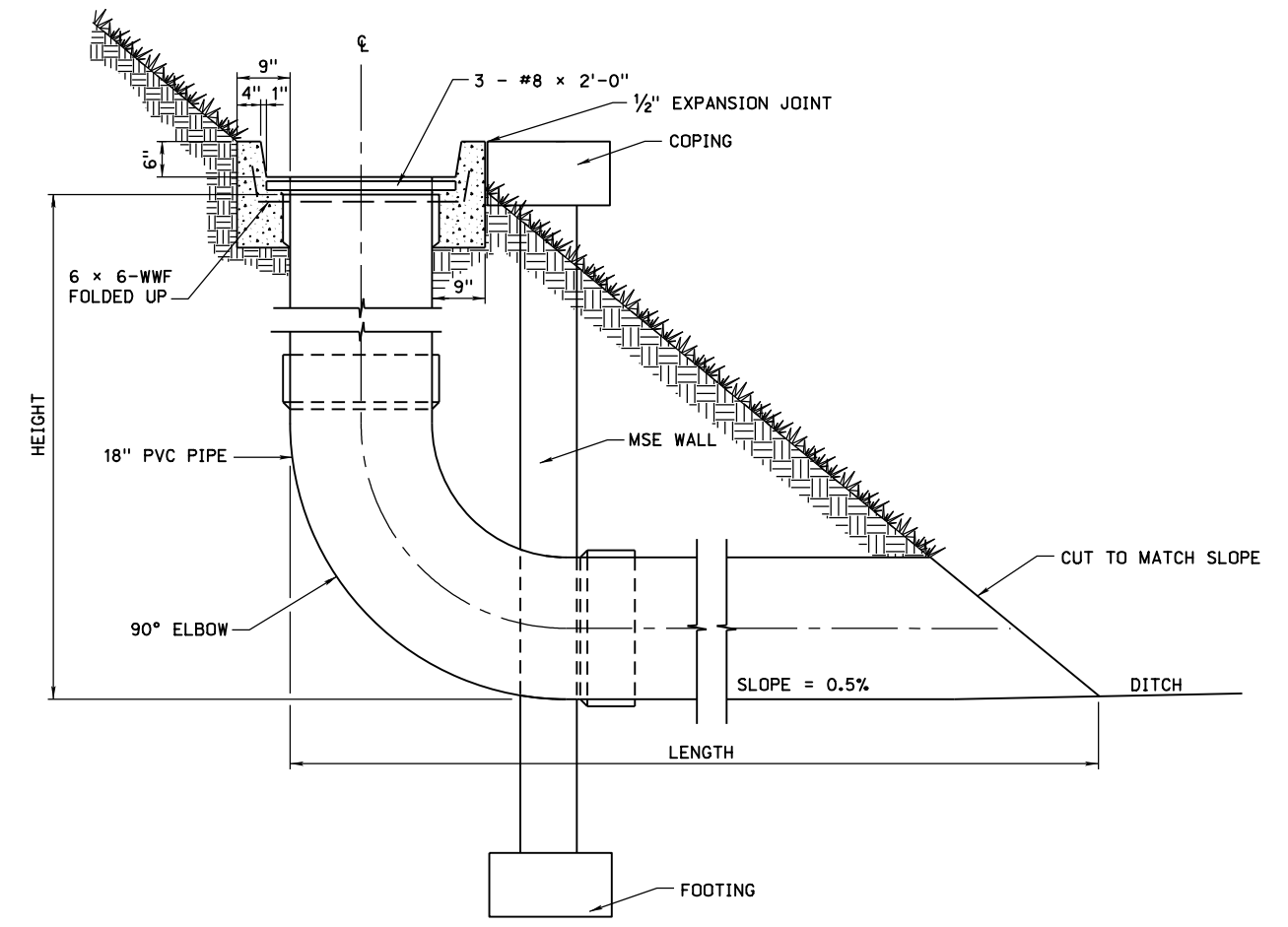
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Date: 13-APR-2020 14:56

File: 44705e00.dgn
SHEET 1 OF 1



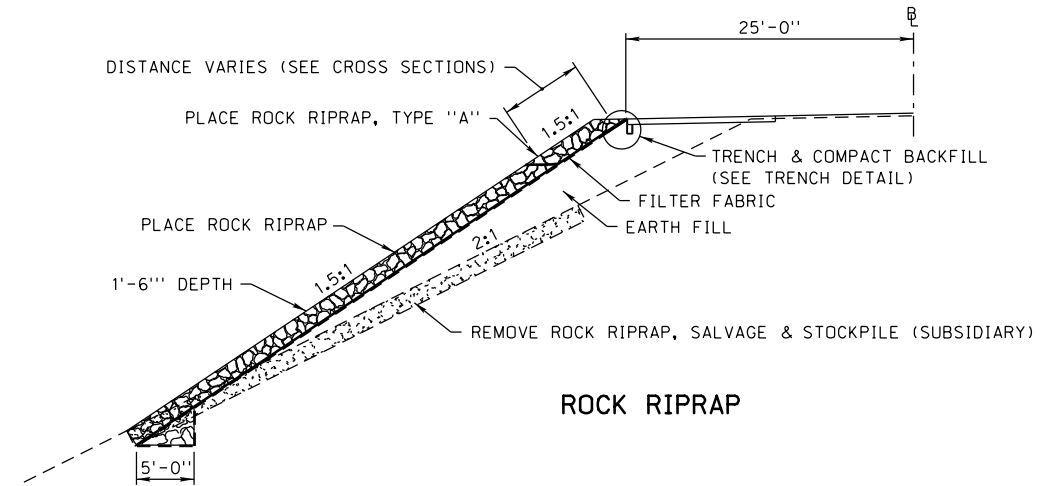
CONCRETE FLUME AT END OF MSE WALL DETAIL



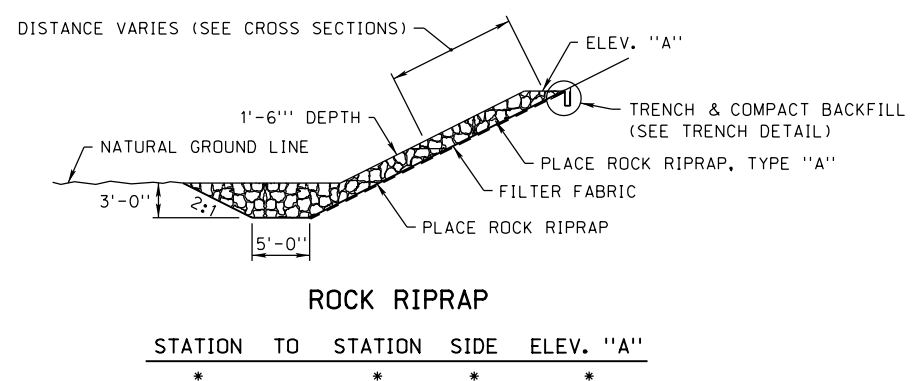
CONCRETE FLUME SECTION A-A

MSE WALL V-DITCH DRAIN

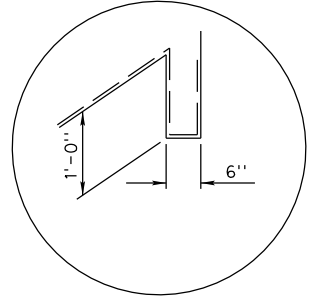
ROADWAY DESIGN DIVISION



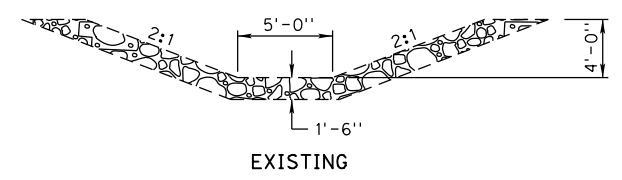
ROCK RIPRAP



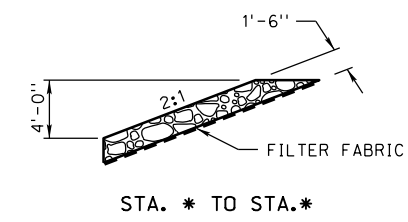
ROCK RIPRAP



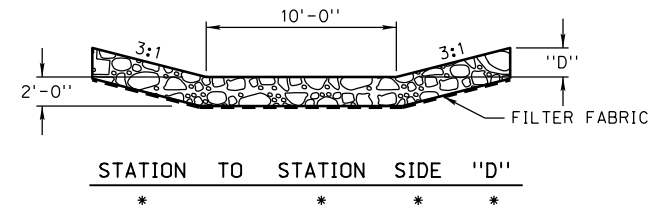
TRENCH DETAIL



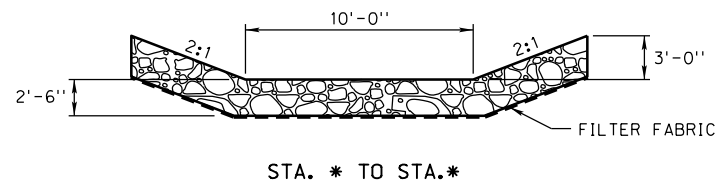
EXISTING



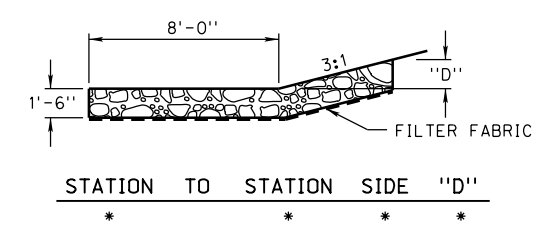
STA. * TO STA.*



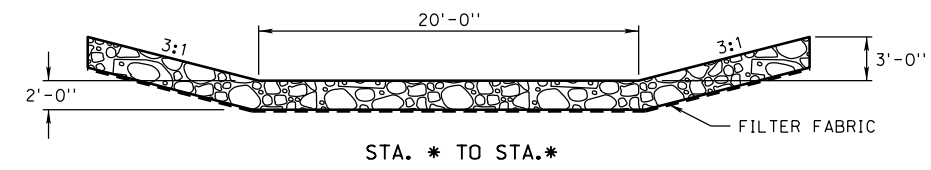
STA. * TO STA.* SIDE 'D'



STA. * TO STA.*



STA. * TO STA.* SIDE 'D'



STA. * TO STA.*

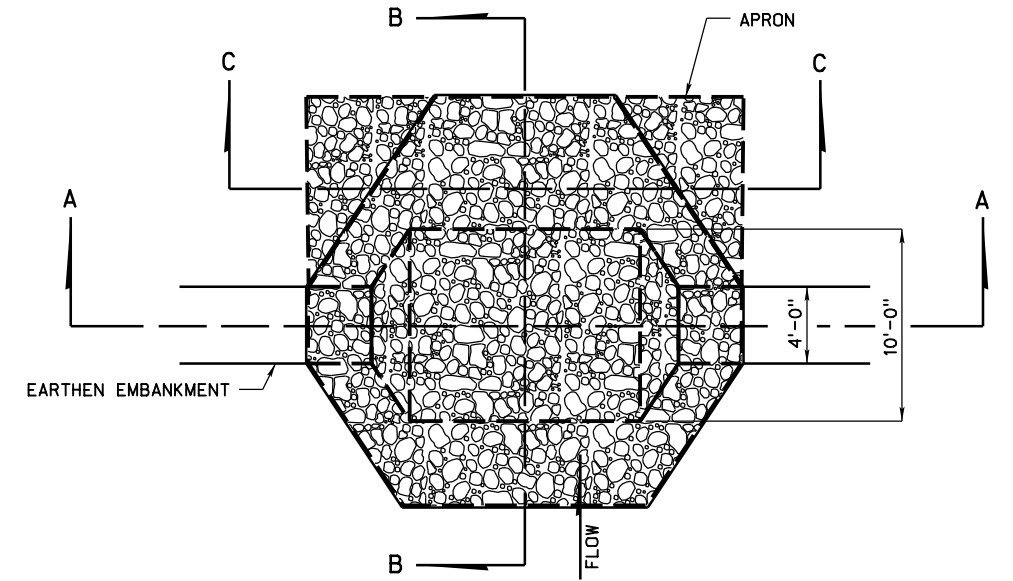
DETAILS OF ROCK RIPRAP

Computer: NDOTDESIGN134

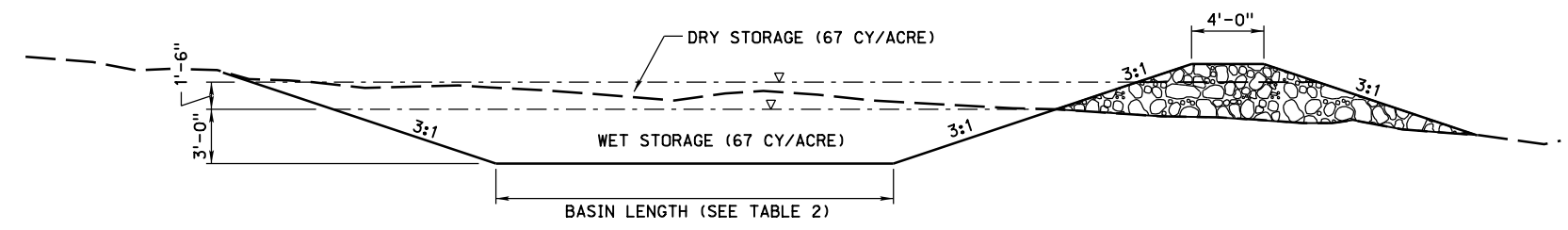
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SHEET 1 OF 1

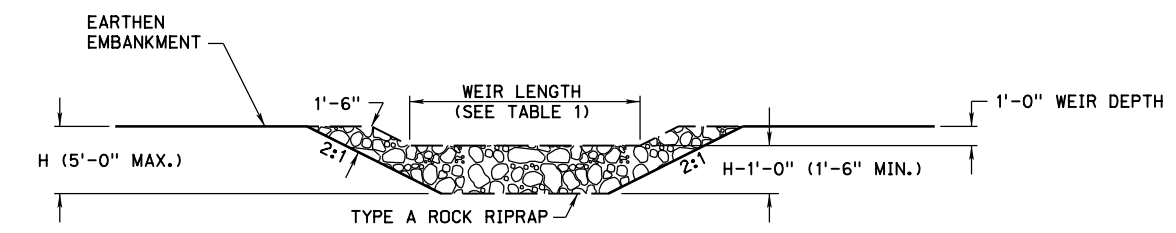
ROADWAY DESIGN DIVISION



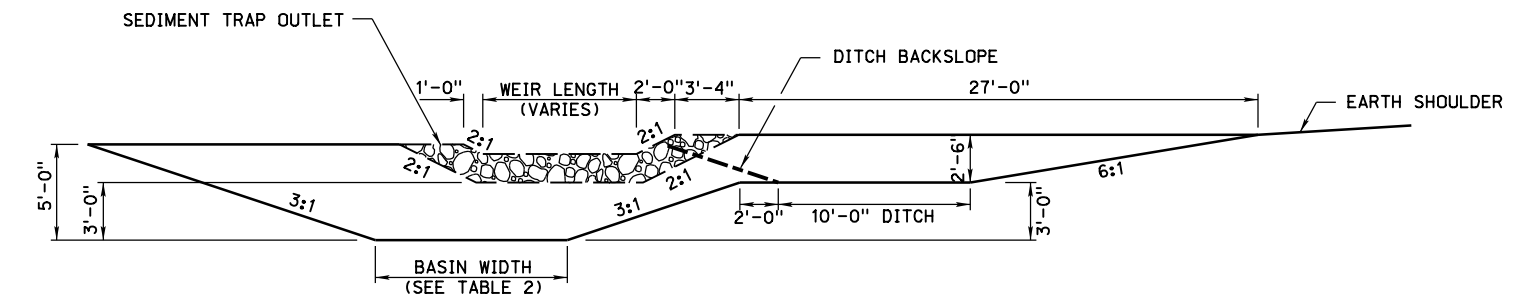
PLAN VIEW



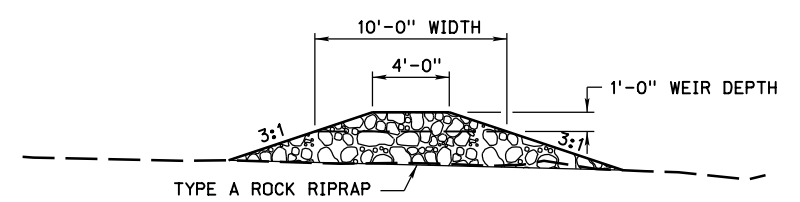
SECTION D-D



SECTION A-A
(3'-0" DEPTH SHOWN)



SECTION E-E

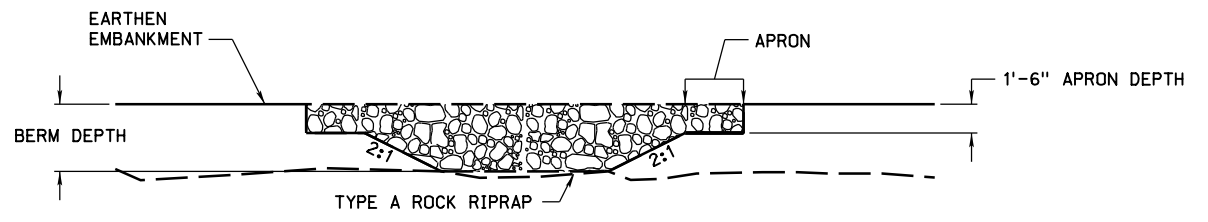


SECTION B-B

CONTRIBUTING DRAINAGE AREA	BASIN LENGTH (FT.)	BASIN WIDTH (FT.)
1 ACRE	22	10
2 ACRE	40	16
3 ACRE	58	23
4 ACRE	73	28
5 ACRE	85	34

TABLE 2

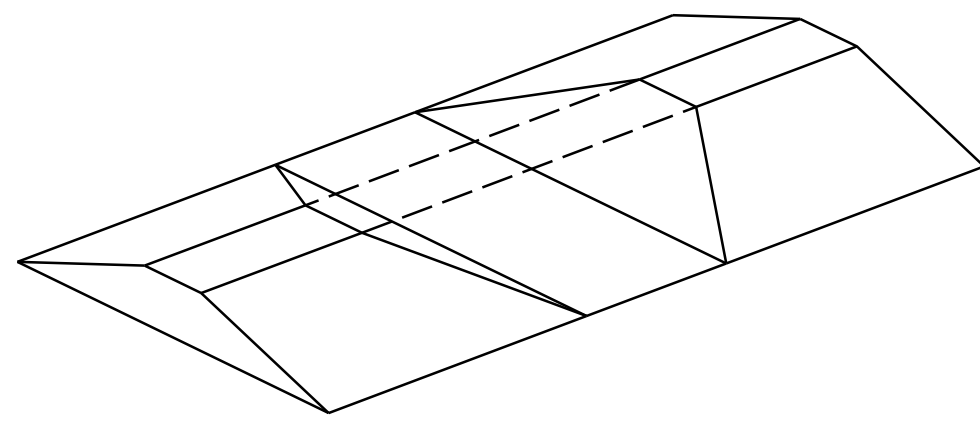
TYPICAL ROADSIDE DITCH SEDIMENT TRAP BASIN



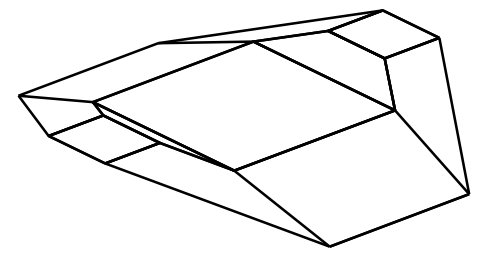
SECTION C-C

CONTRIBUTING DRAINAGE AREA	WEIR LENGTH (FT.)
1 ACRE	4
2 ACRE	5
3 ACRE	6
4 ACRE	10
5 ACRE	12

TABLE 1
SEDIMENT TRAP OUTLET



DITCH DIKE WITH CUTOUT FOR OUTLET



ROCK RIPRAP OUTLET

ROADSIDE SEDIMENT TRAP AND OUTLET

Computer: NDOTDESIGN134

Date: 13-APR-2020 14:56

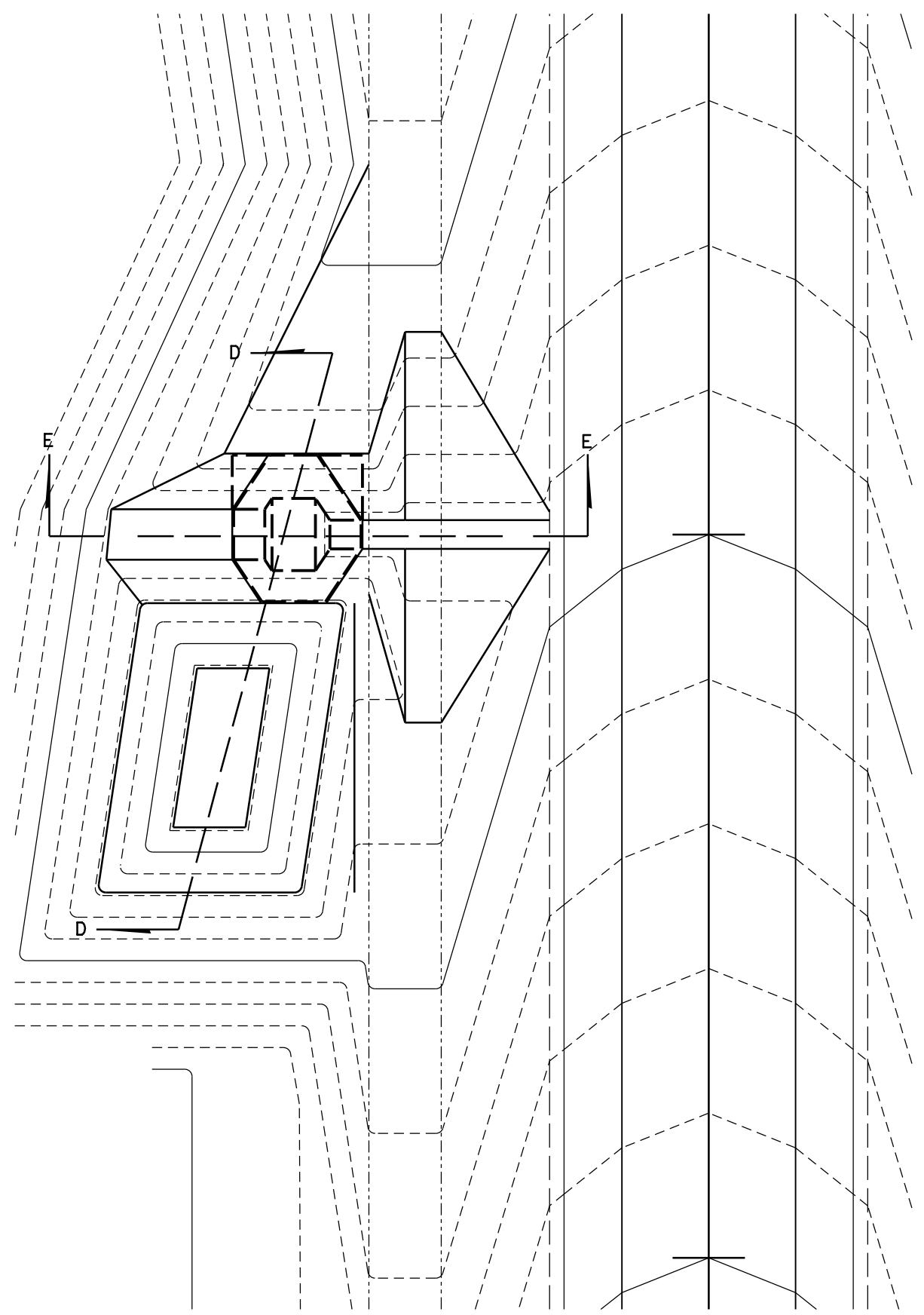
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ROADWAY DESIGN DIVISION

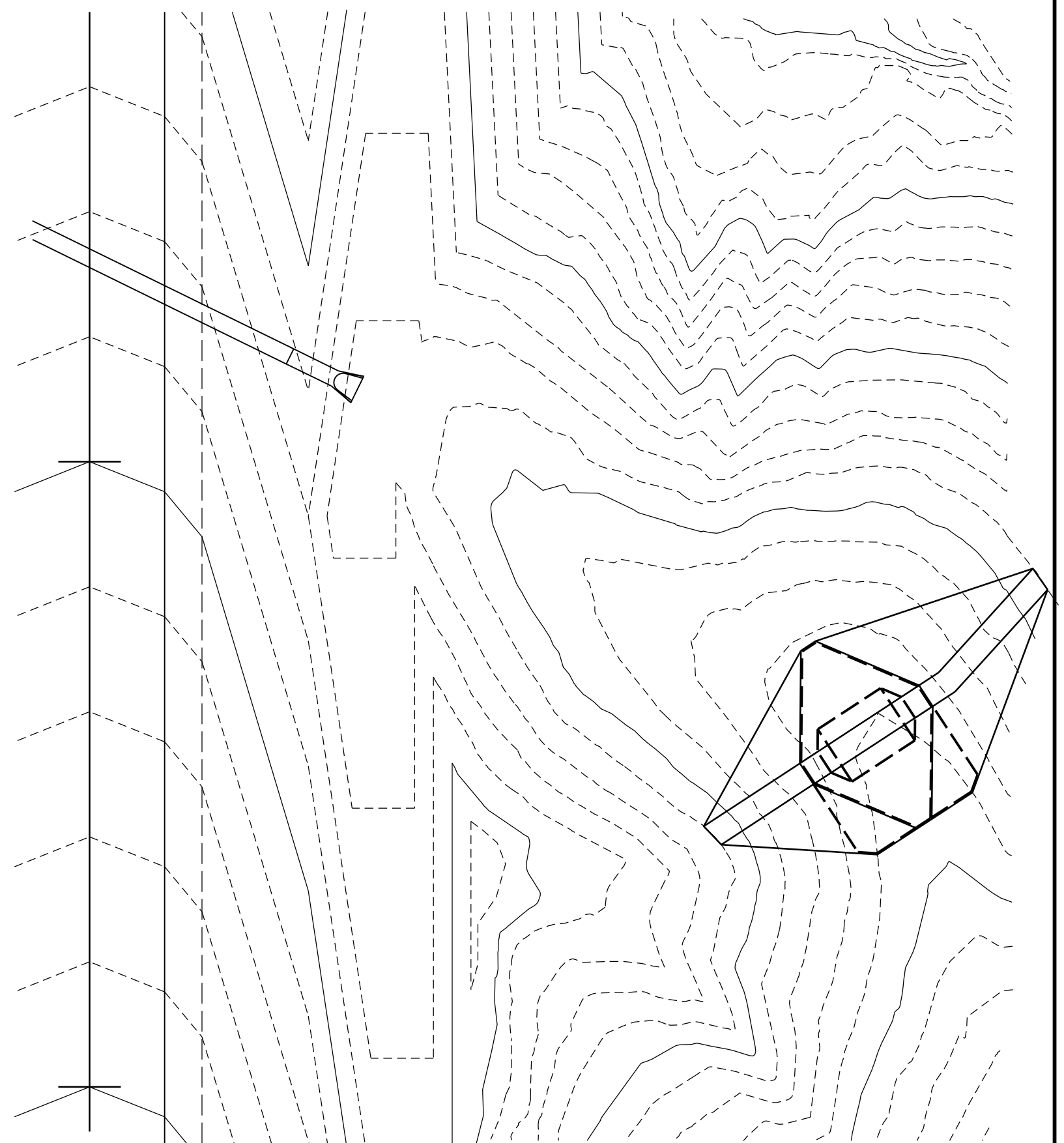
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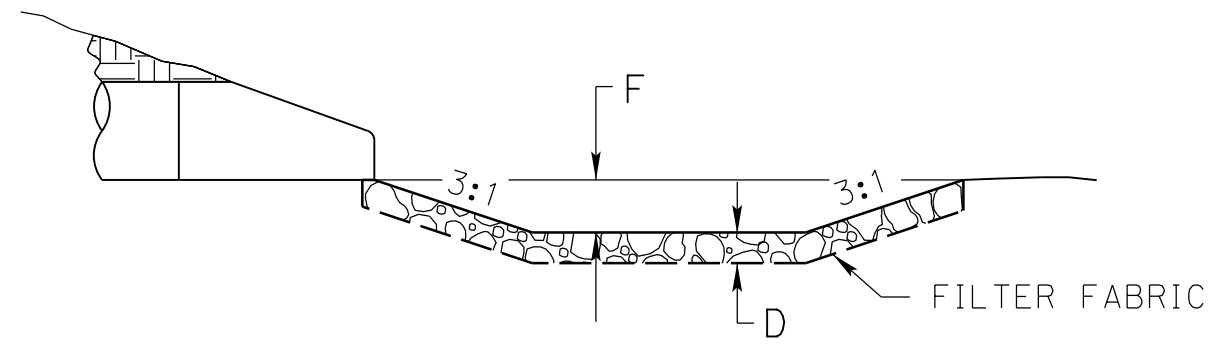


TYPICAL ROADSIDE DITCH APPLICATION

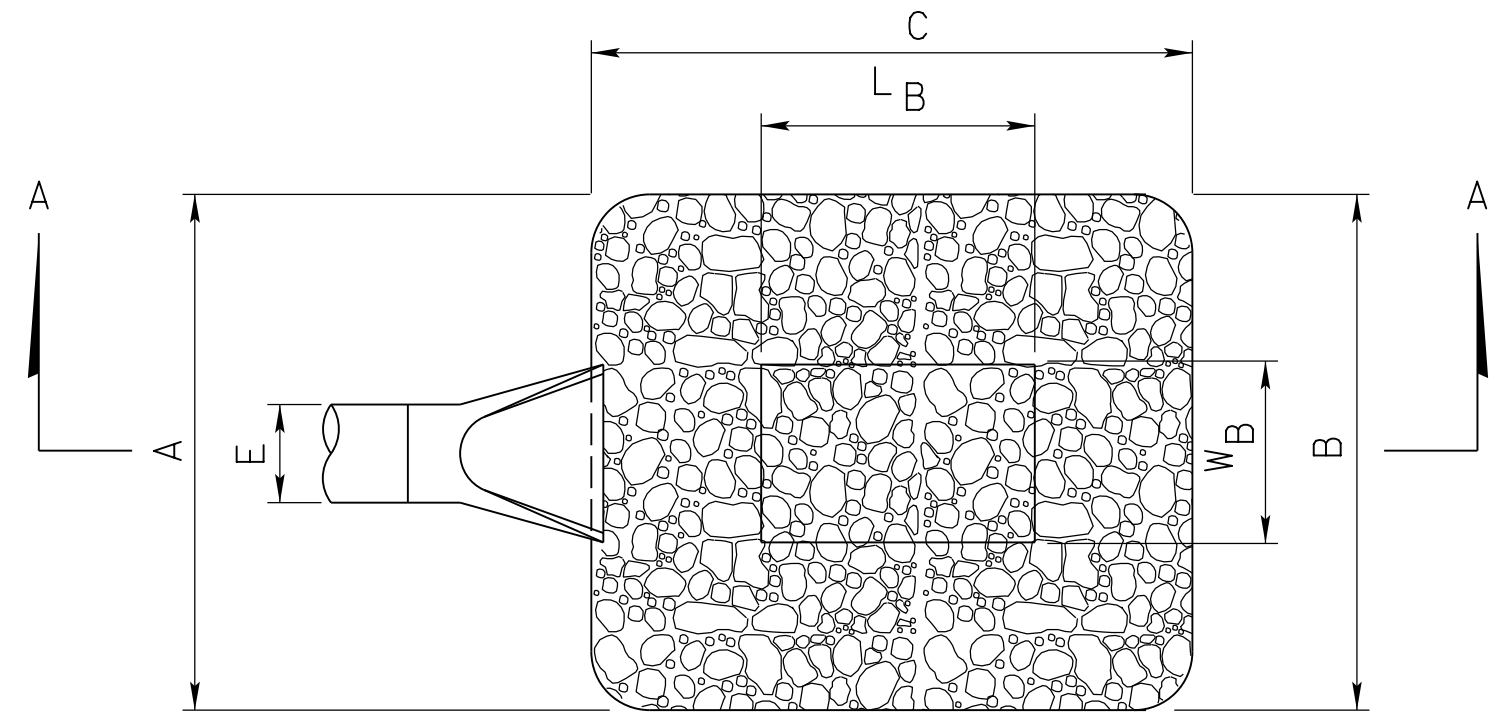


TYPICAL OUTLET SWALE APPLICATION

ROADSIDE SEDIMENT TRAP AND OUTLET



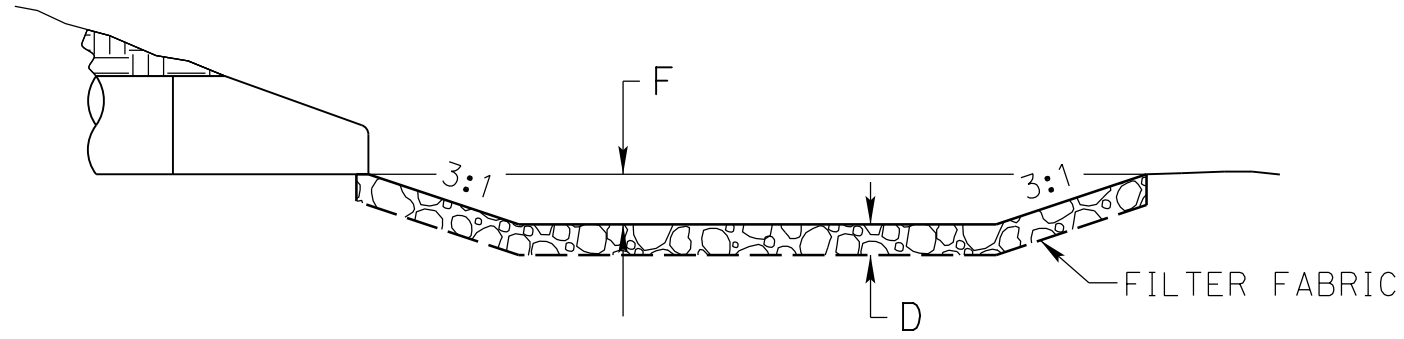
SECTION A-A



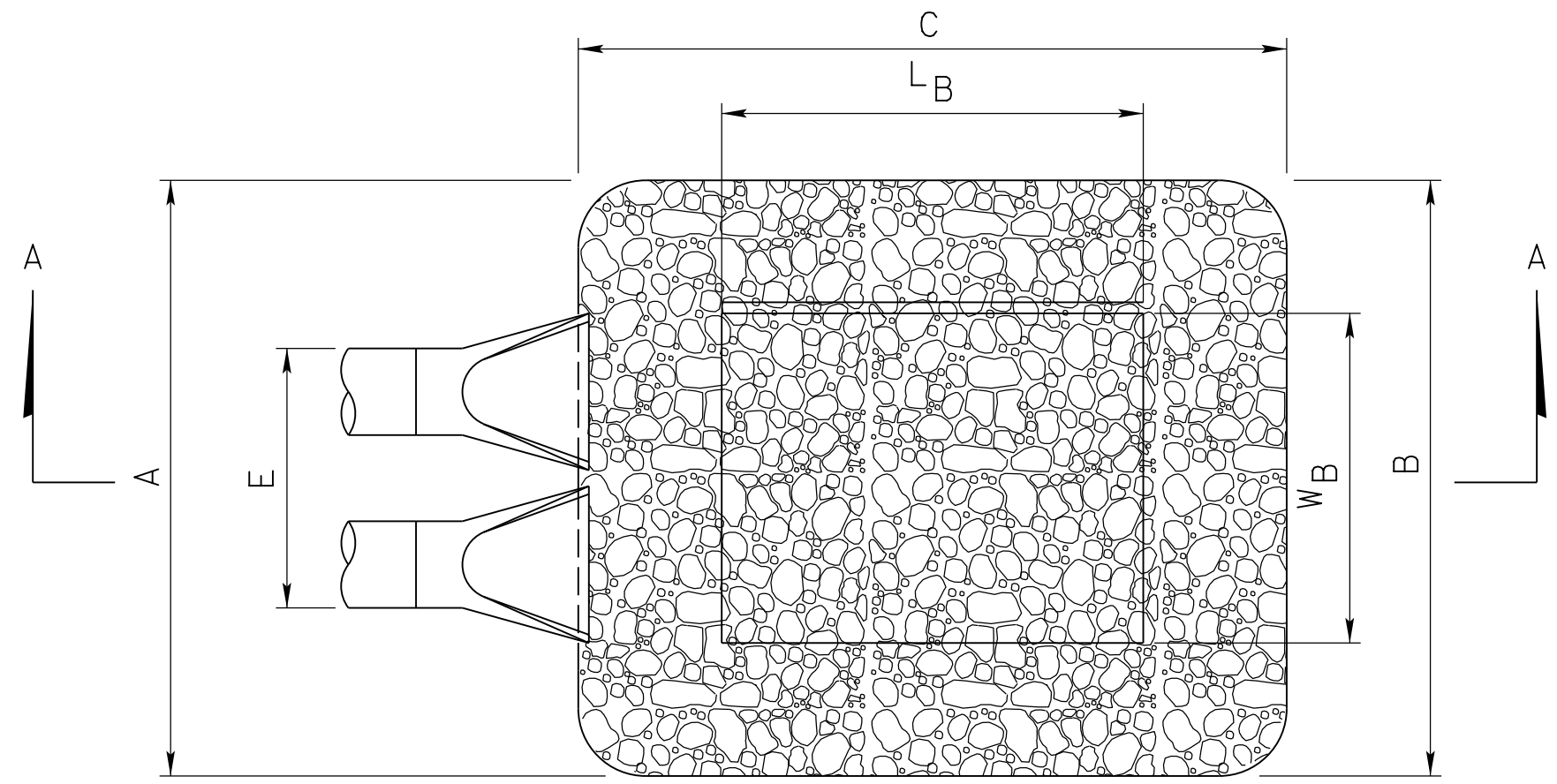
PLAN

DETAIL OF ROCK RIPRAP SCOUR HOLE

BUILD ROCK RIPRAP SCOUR HOLE											
STATION	A	B	C	D	E	F	W _B	L _B	TONS	RIPRAP TYPE	FILTER FABRIC SQ. YDS.
*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*



SECTION A-A

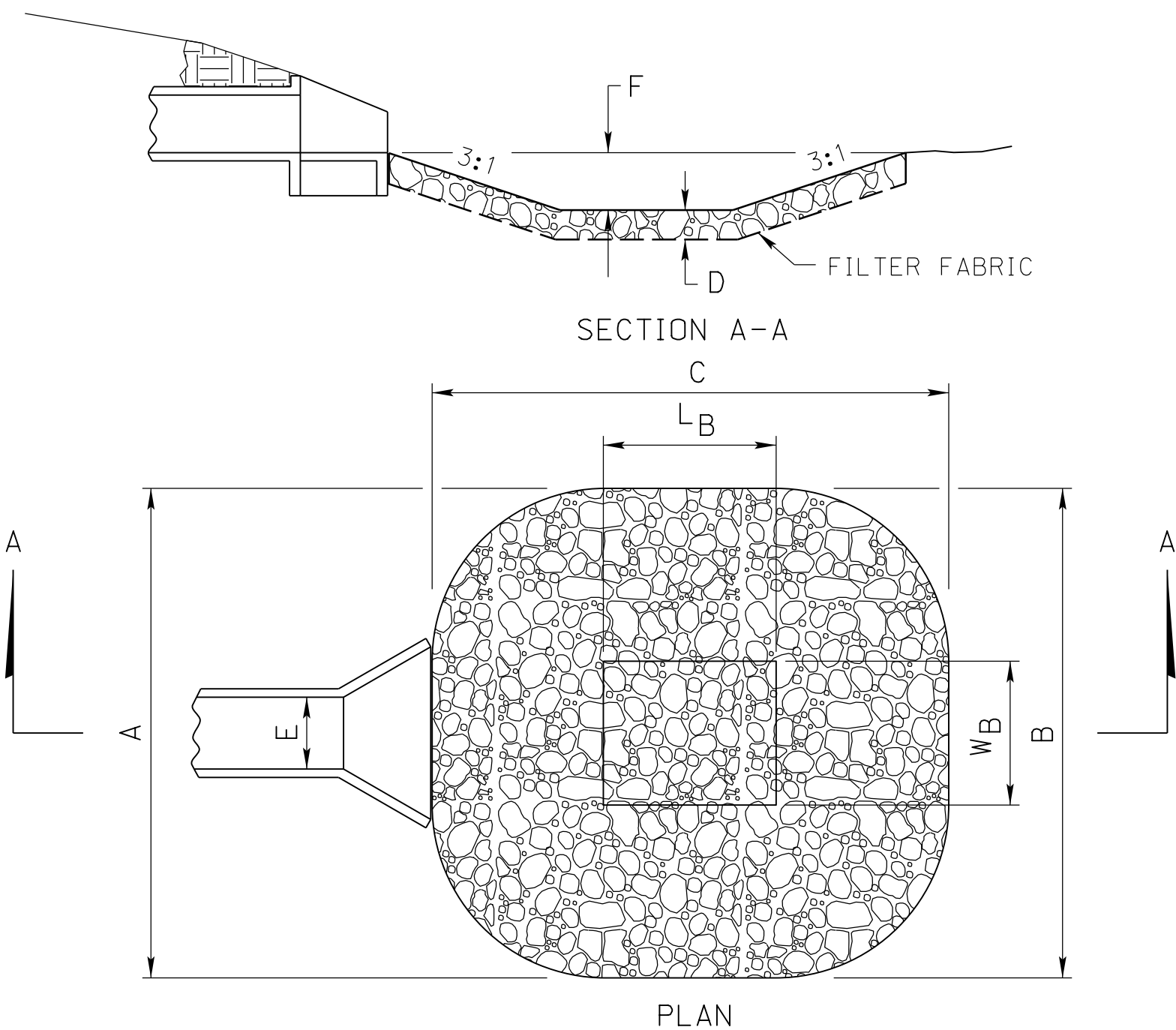


PLAN

NOTES:
 WHEN MULTIPLE PIPES W/FLARED END SECTIONS ARE USED, WIDTH OF BASIN (W_B) MUST BE AT LEAST EQUAL TO THE DISTANCE BETWEEN THE OUTSIDE EDGES OF THE FLARED END SECTIONS.

DETAIL OF ROCK RIPRAP SCOUR HOLE

BUILD ROCK RIPRAP SCOUR HOLE											
STATION	A	B	C	D	E	F	W_B	L_B	TONS	RIPRAP TYPE	FILTER FABRIC SQ. YDS.
*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*

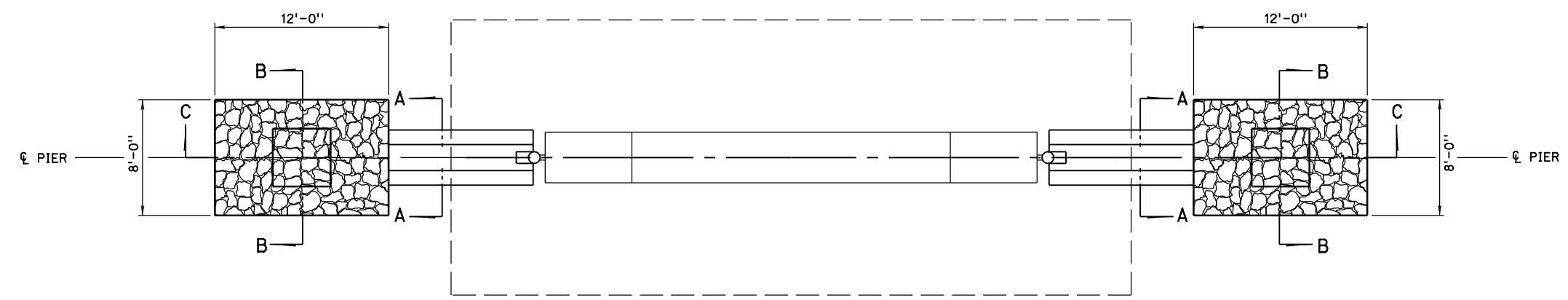


NOTES:
 WHEN PLACING RIPRAP BASIN AT OUTLET OF BOX CULVERT, PAVE THE APRON BETWEEN THE WINGWALLS W/3-5 FOOT CUTOFF WALL/FOOTING.

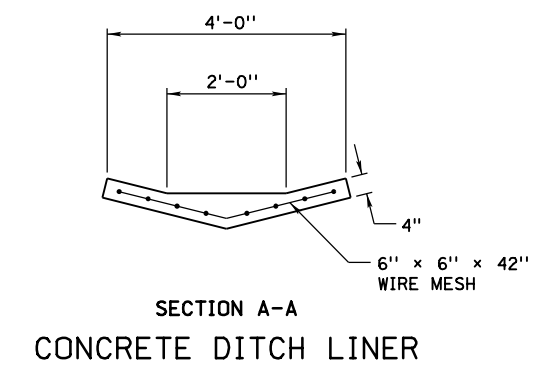
DETAILS OF ROCK RIPRAP SCOUR HOLE

BUILD ROCK RIPRAP SCOUR HOLE											
STATION	A	B	C	D	E	F	W _B	L _B	TONS	RIPRAP TYPE	FILTER FABRIC SQ. YDS.
*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*

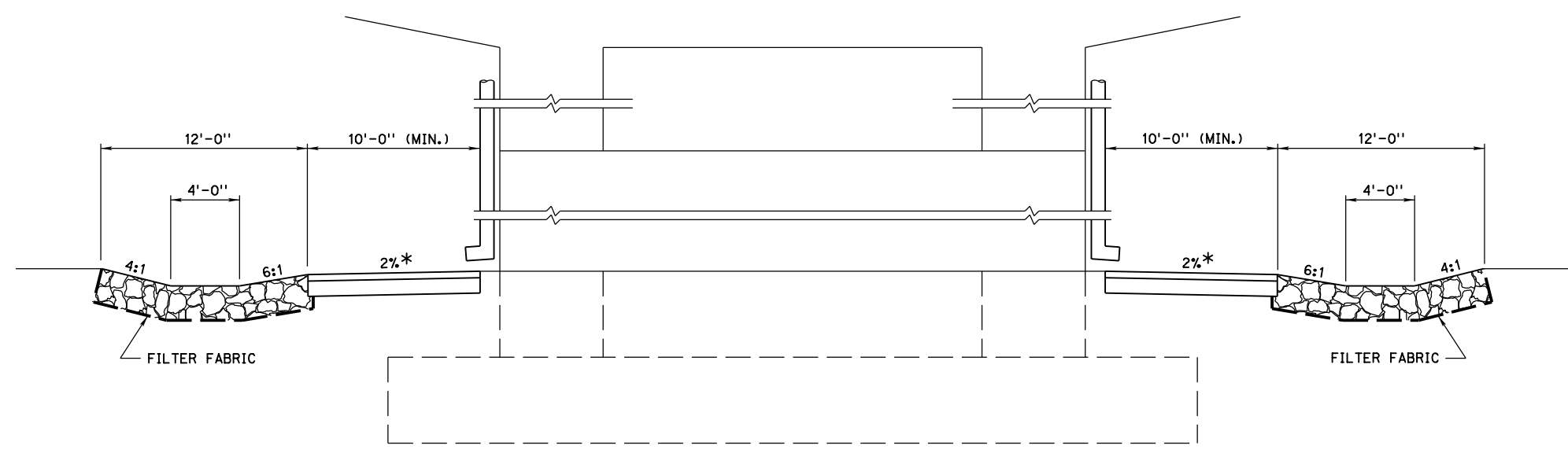
ROADWAY DESIGN DIVISION



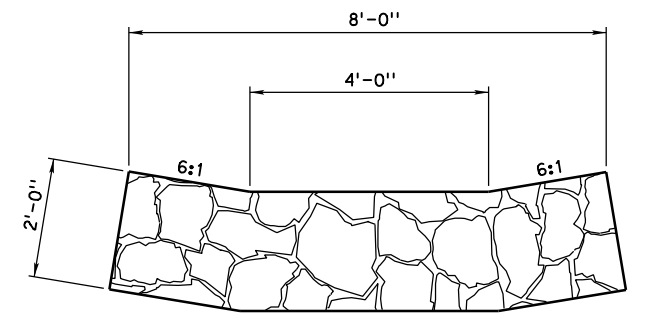
PLAN VIEW



SECTION A-A
CONCRETE DITCH LINER



SECTION C-C



SECTION B-B
DETAIL OF BROKEN CONCRETE RIPRAP

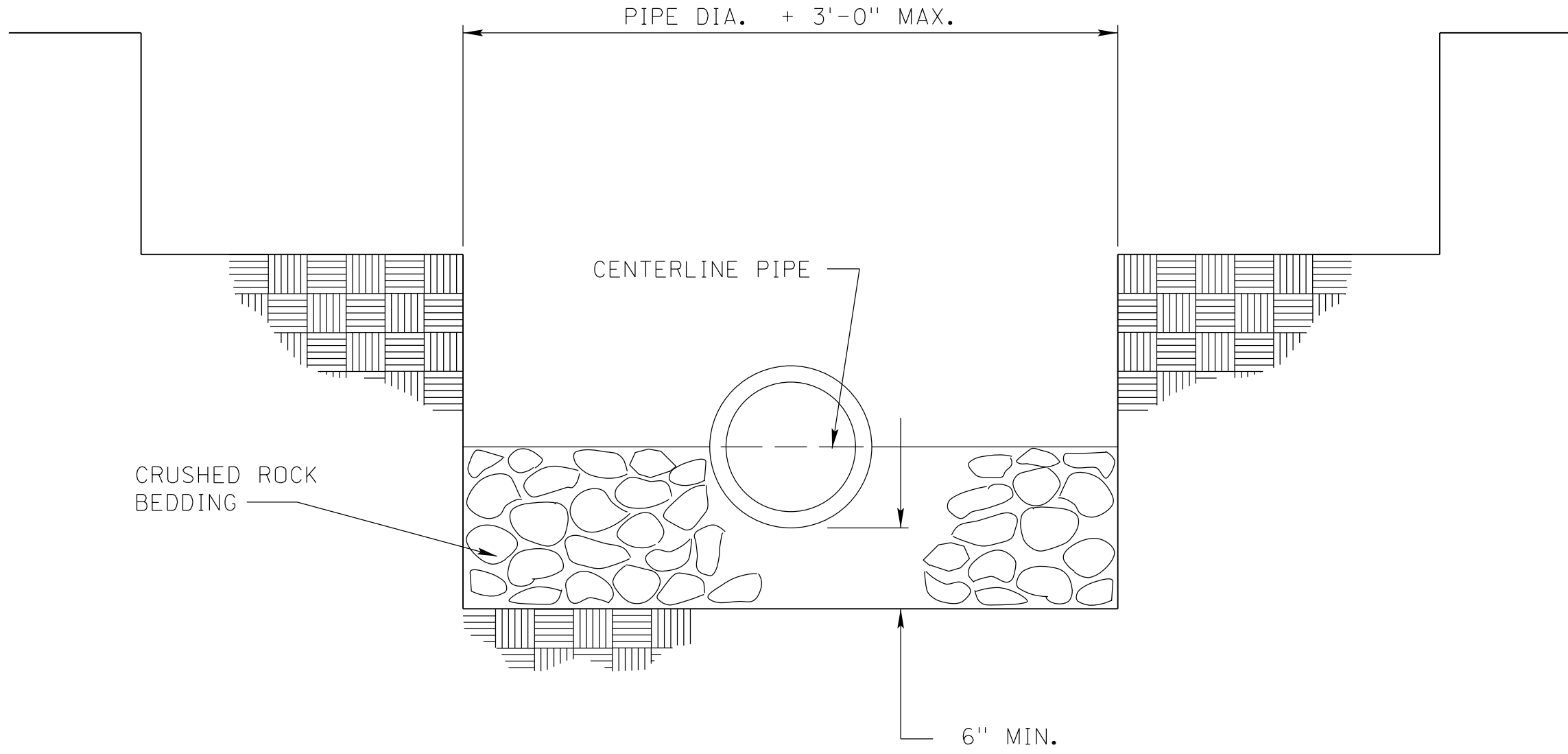
*AT SLOPES STEEPER THAN 2% THE DITCH LINER WILL EXTEND TO THE BREAK IN THE GRADE.

QUANTITIES PER DRAINAGE BASIN
BROKEN CONCRETE RIPRAP = 9.6 TON

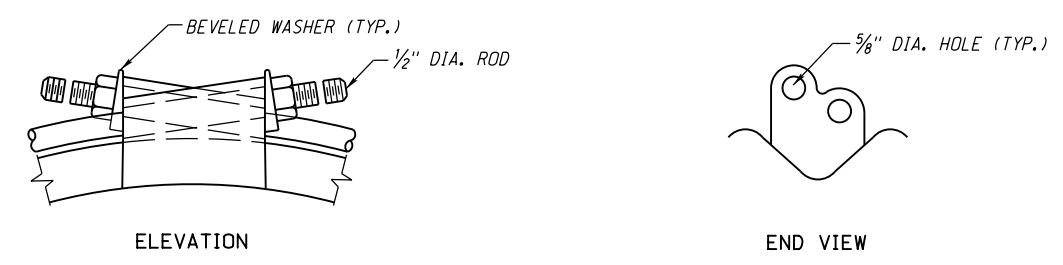
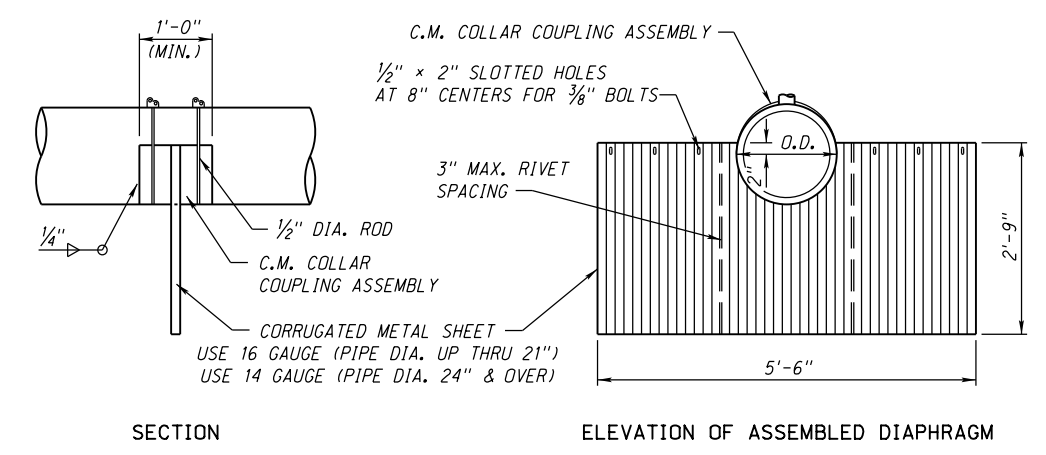
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SHEET 1 OF 1



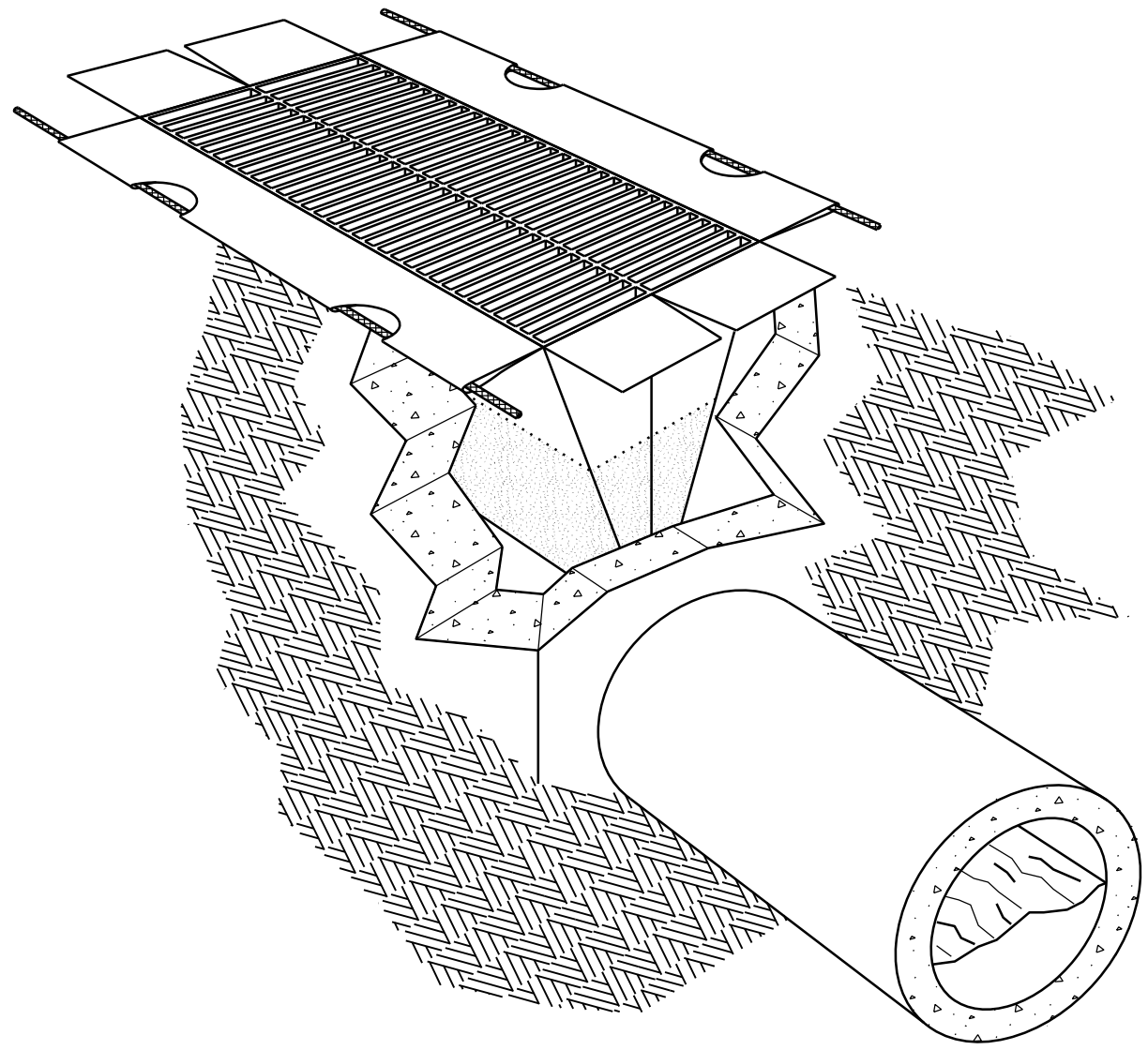
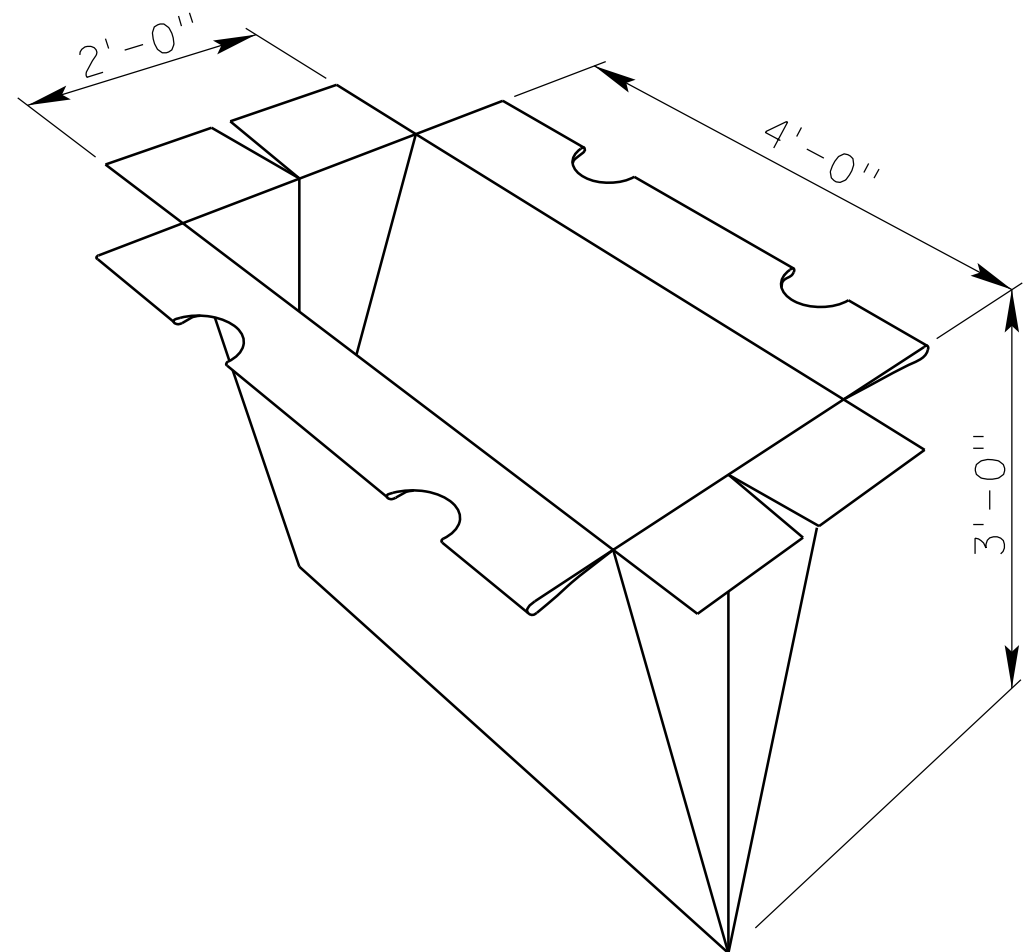
PIPE BEDDING DETAIL
FOR PIPES LARGER THAN 15" DIAMETER



STANDARD TANK LUG DETAILS

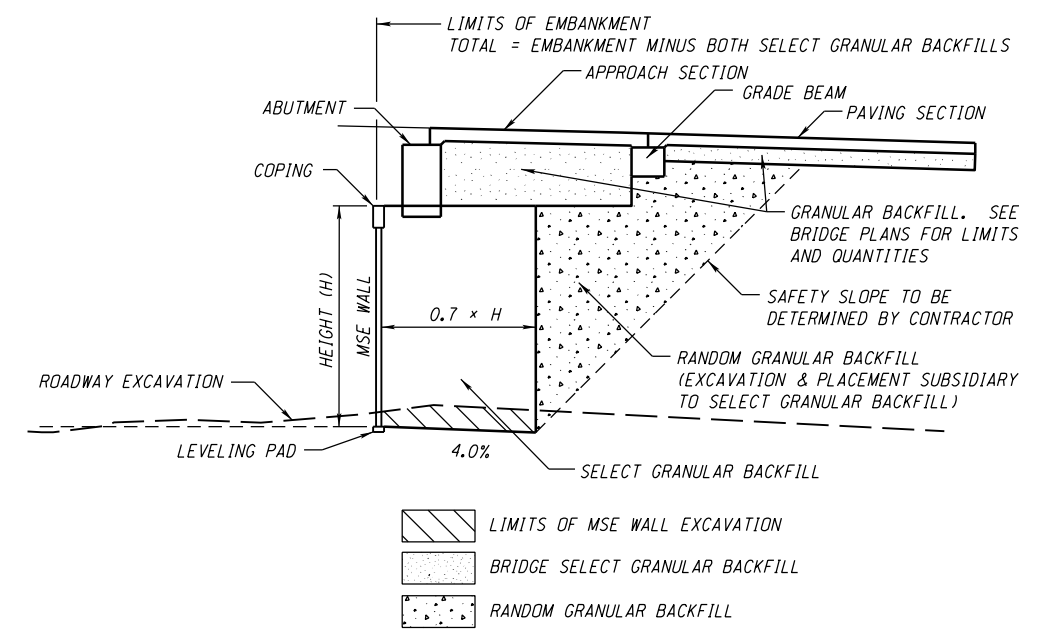
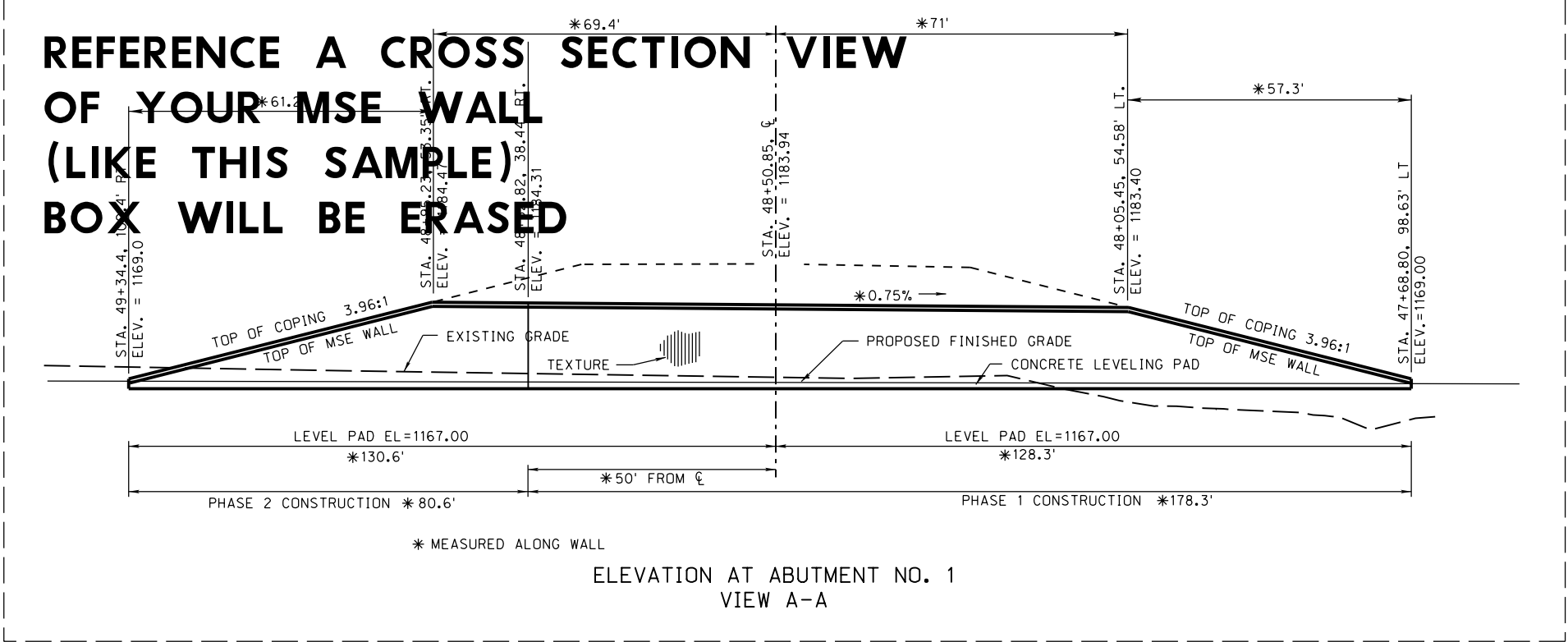
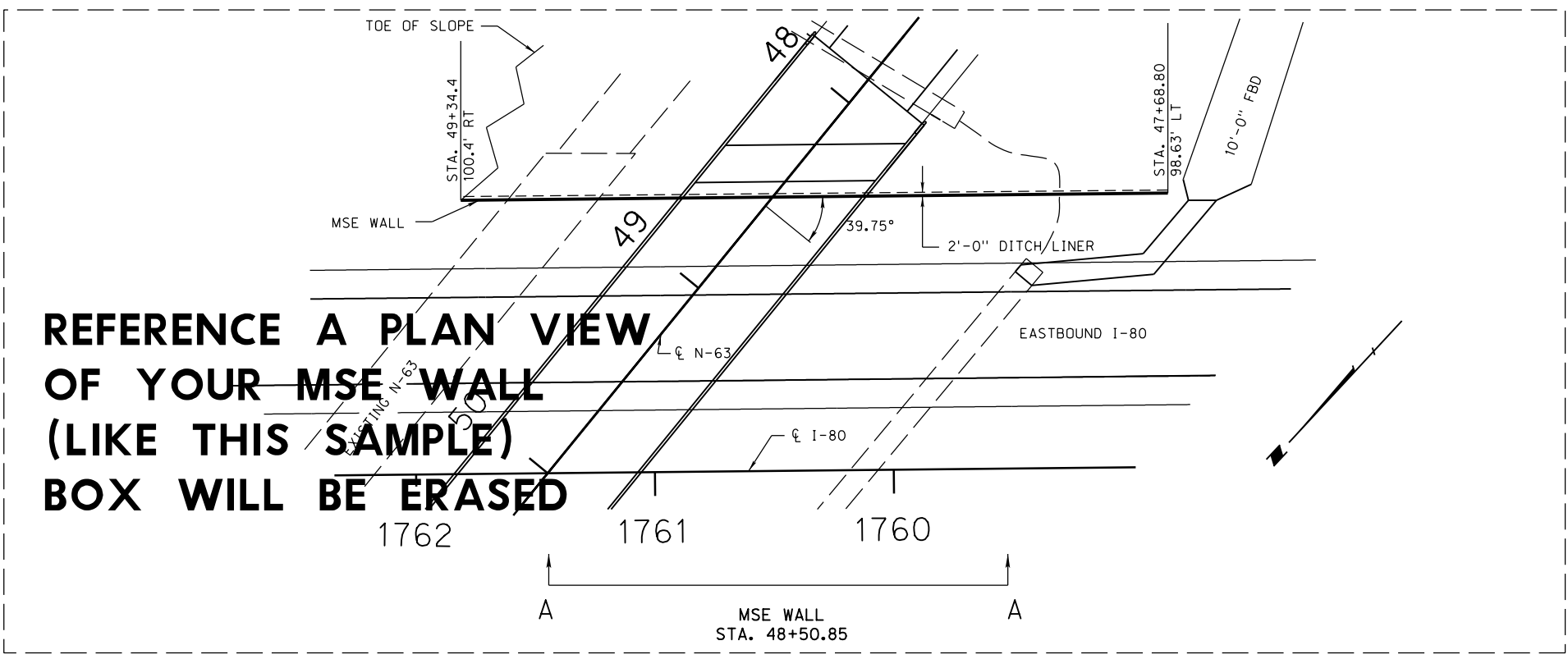
METAL DIAPHRAGM DETAILS

ROADWAY DESIGN DIVISION
Computer: NDOTDESIGN134
Date: 13-APR-2020 14:56
SHEET F:\01-54605e01.dgn



INLET LINER DETAILS

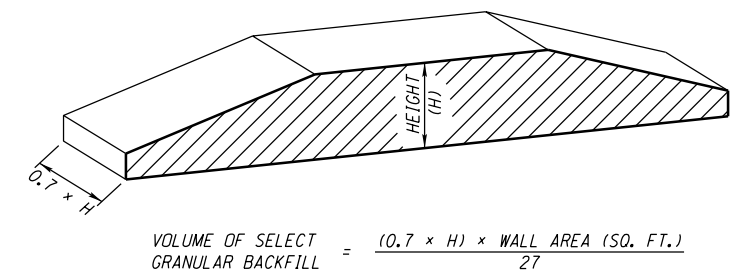
ROADWAY DESIGN DIVISION



TYPICAL SECTION OF BACKFILL AT ABUTMENT (NOT TO SCALE)

- LIMITS OF MSE WALL EXCAVATION
- BRIDGE SELECT GRANULAR BACKFILL
- RANDOM GRANULAR BACKFILL

WARP FILL SLOPE AROUND BLUNT ENDS OF WALL.
 GRANULAR BACKFILL SHALL BE CAPPED WITH 1 FOOT OF COHESIVE SOIL.
 MSE WALL TEXTURE:
 THE FRONT FACE OF THE MSE WALL SHALL BE TEXTURED USING SYMONS FORM LINERS FRACTURED GRANITE PATTERN (P/C30611 OR P/C30907), OR FITZGERALD FORM LINERS PATTERN NO. 16980 OR AN APPROVED EQUAL.



SUMMARY OF QUANTITIES						
LOCATION	* CONCRETE FACE PANELS SQ. FT.	SELECT GRANULAR BACKFILL CU. YD.	COPING LIN. FT.	LEVELING PAD LIN. FT.	** 24" CORRUGATED METAL PIPE SLEEVES	MSE WALL EXC. CU. YD.
ABUT. #1	*	*	*	*	*	*

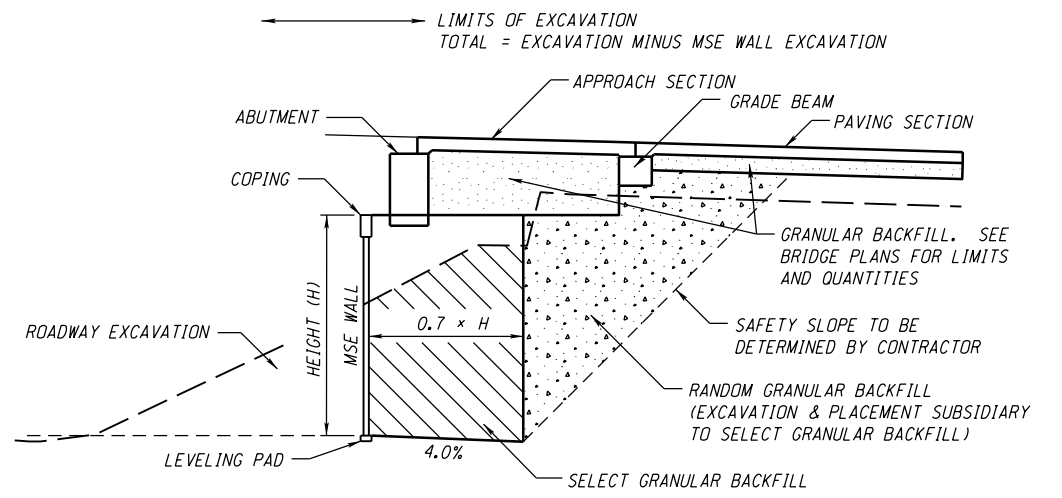
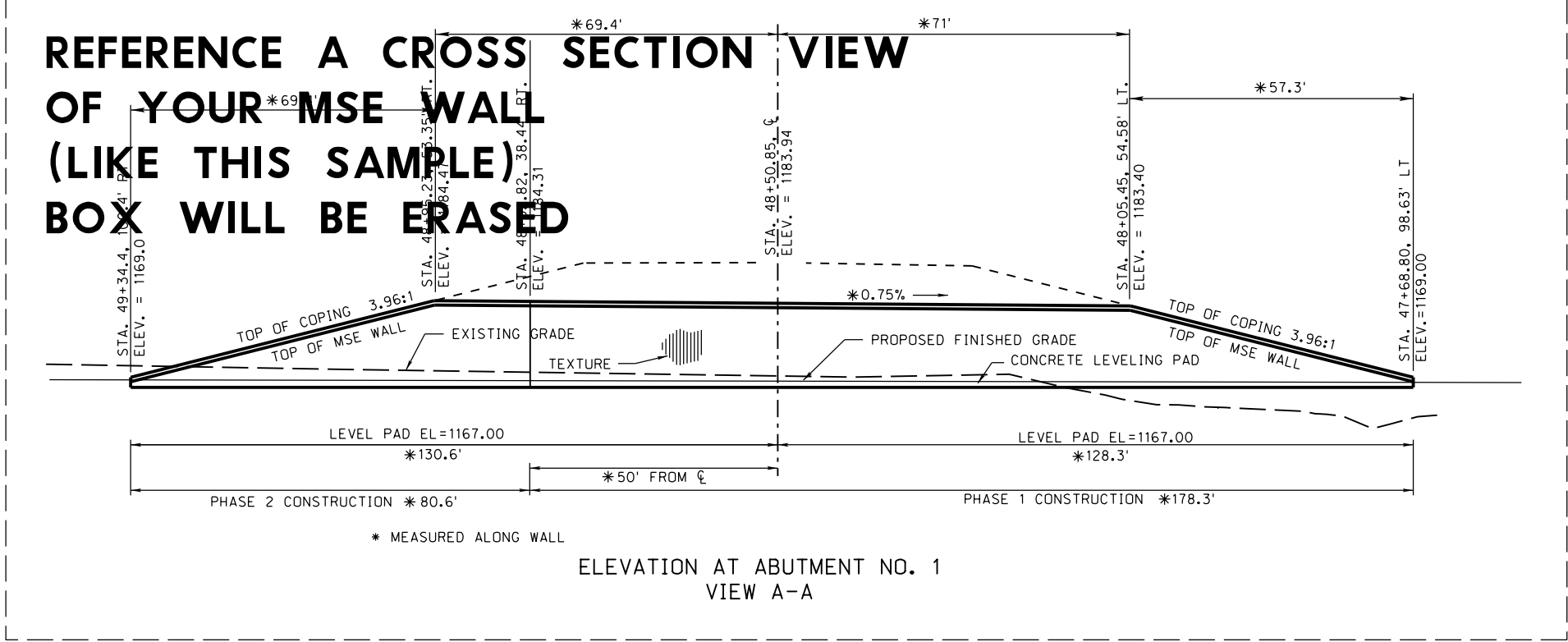
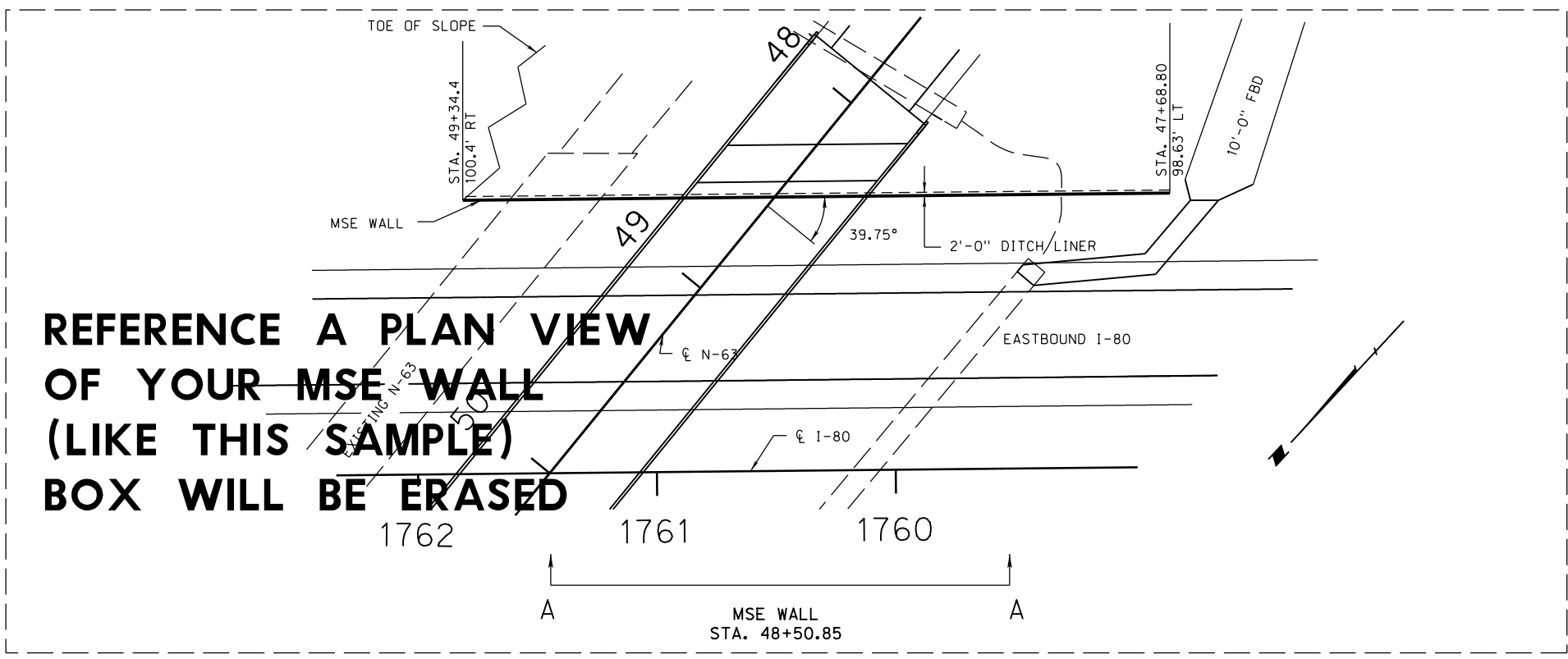
* MEASURED FROM CONCRETE LEVELING PAD TO TOP OF COPING
 ** SEE BRIDGE PLANS FOR CORRUGATED METAL PIPE LAYOUT

Computer: NDOTDESIGN134

Date: 17-APR-2020 10:36

File: 62005e01.dgn

ROADWAY DESIGN DIVISION



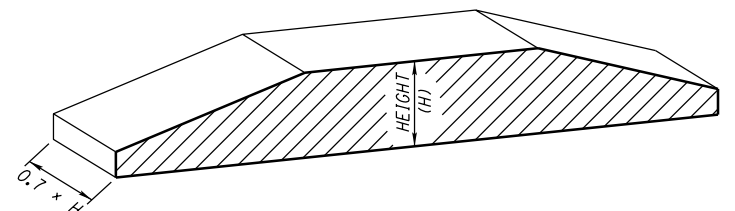
- LIMITS OF MSE WALL EXCAVATION
- BRIDGE SELECT GRANULAR BACKFILL
- RANDOM GRANULAR BACKFILL

TYPICAL SECTION OF BACKFILL AT ABUTMENT (NOT TO SCALE)

WARP FILL SLOPE AROUND BLUNT ENDS OF WALL.

GRANULAR BACKFILL SHALL BE CAPPED WITH 1 FOOT OF COHESIVE SOIL.

MSE WALL TEXTURE:
THE FRONT FACE OF THE MSE WALL SHALL BE TEXTURED USING SYMONS FORM LINERS FRACTURED GRANITE PATTERN (P/C30611 OR P/C30907), OR FITZGERALD FORM LINERS PATTERN NO. 16980 OR AN APPROVED EQUAL.



VOLUME OF SELECT GRANULAR BACKFILL = $\frac{(0.7 \times H) \times \text{WALL AREA (SQ. FT.)}}{27}$

SUMMARY OF QUANTITIES						
LOCATION	* CONCRETE FACE PANELS SQ. FT.	SELECT GRANULAR BACKFILL CU. YD.	COPING (LIN. FT.)	LEVELING PAD LIN. FT.	** 24" CORRUGATED METAL PIPE SLEEVES	MSE WALL EXC. CU. YD.
ABUT. #1	*	*	*	*	*	*

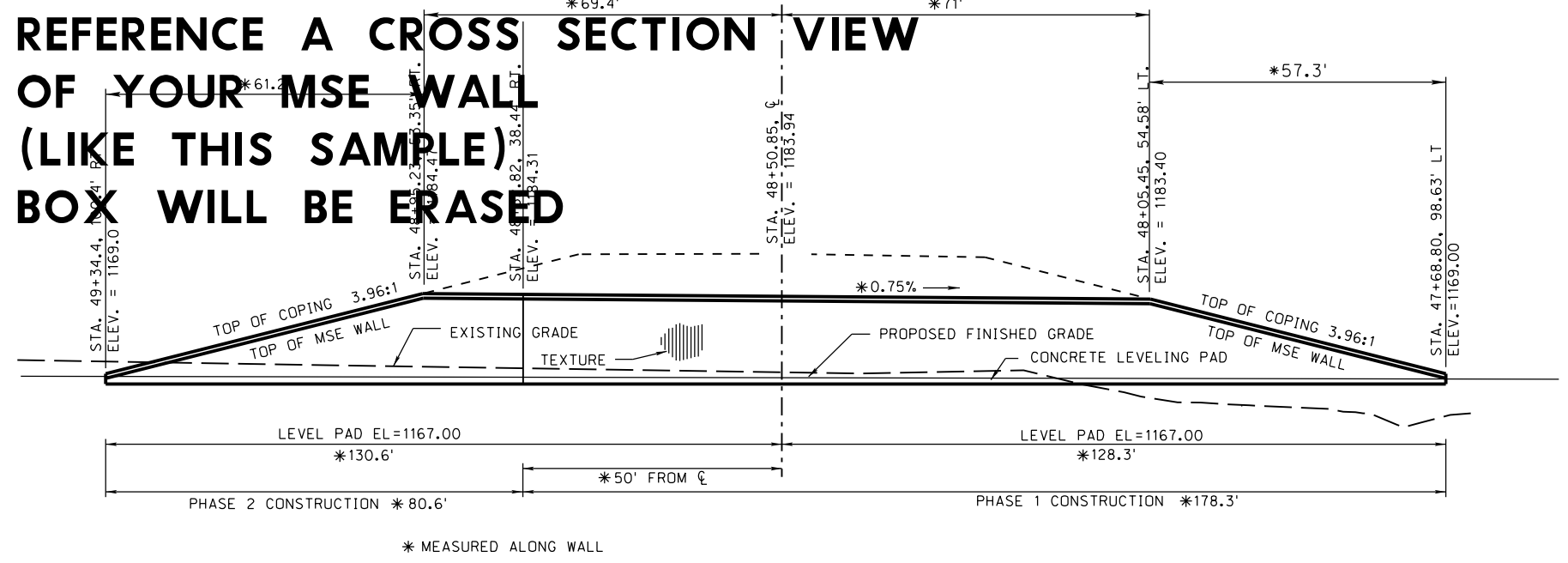
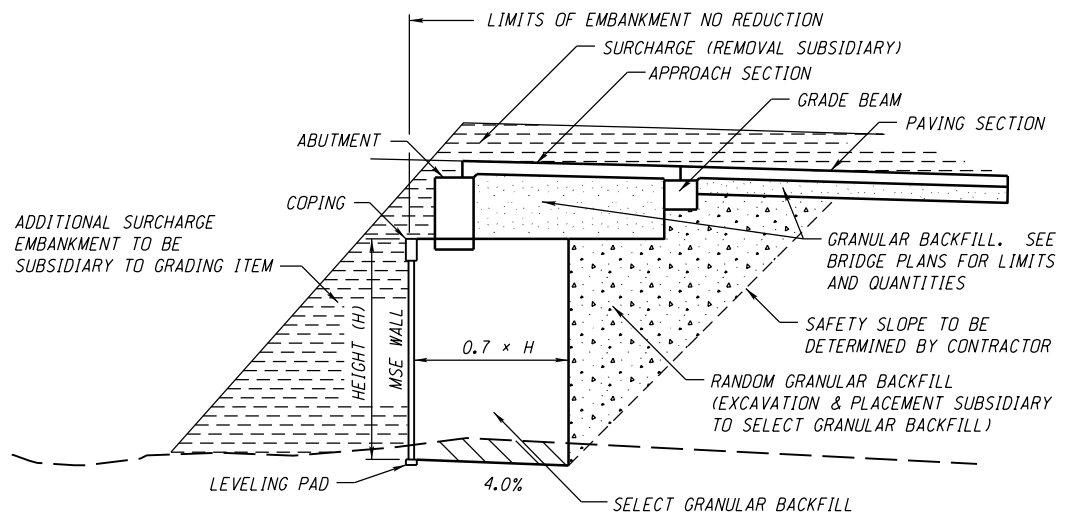
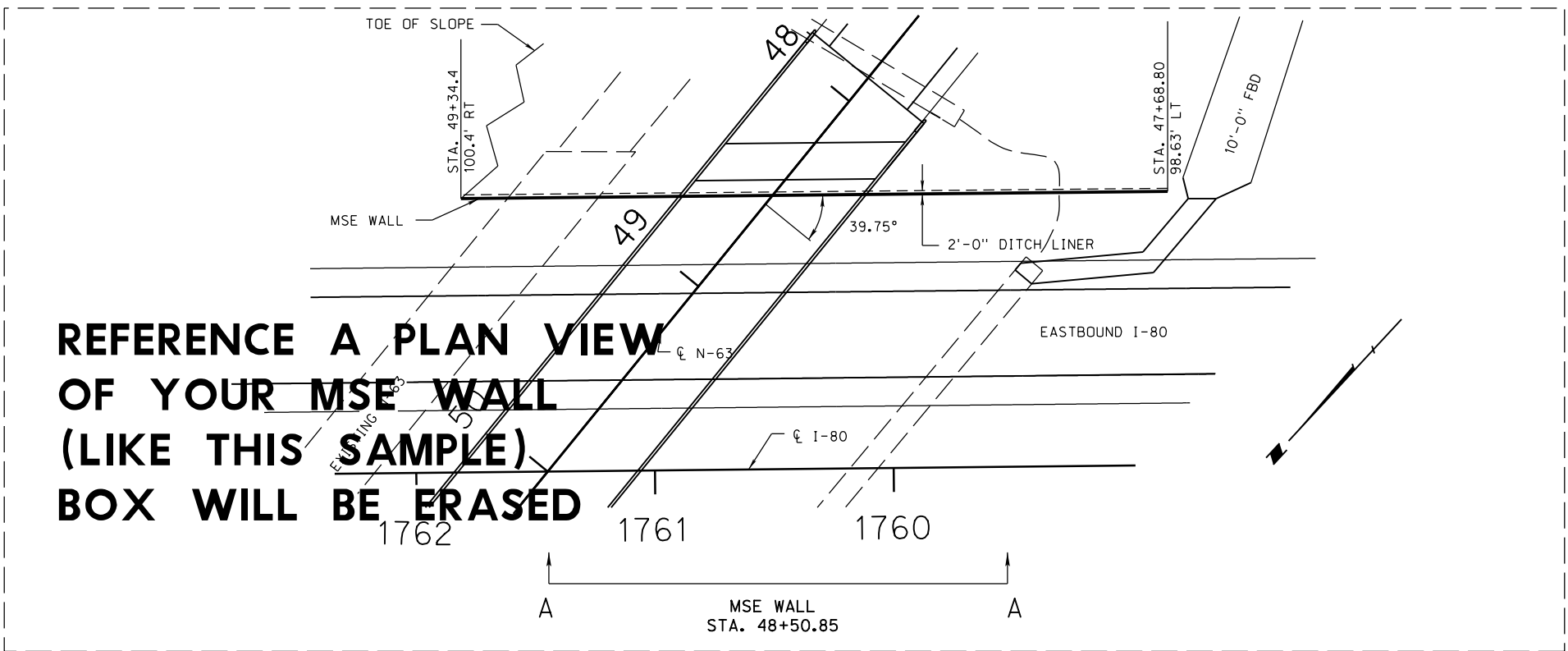
* MEASURED FROM CONCRETE LEVELING PAD TO TOP OF COPING
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Computer: NDOTDESIGN134

Date: 17-APR-2020 10:36

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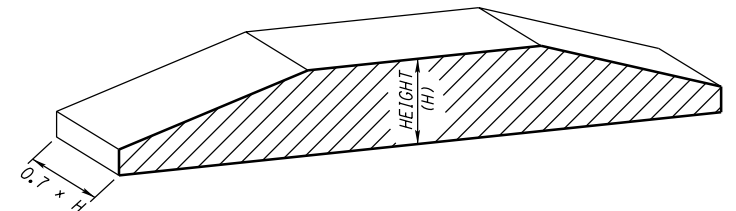
ROADWAY DESIGN DIVISION



- LIMITS OF MSE WALL EXCAVATION
- BRIDGE SELECT GRANULAR BACKFILL
- RANDOM GRANULAR BACKFILL
- LIMITS OF SURCHARGE

TYPICAL SECTION OF BACKFILL AT ABUTMENT (NOT TO SCALE)

WARP FILL SLOPE AROUND BLUNT ENDS OF WALL.
 GRANULAR BACKFILL SHALL BE CAPPED WITH 1 FOOT OF COHESIVE SOIL.
 MSE WALL TEXTURE:
 THE FRONT FACE OF THE MSE WALL SHALL BE TEXTURED USING SYMONS FORM LINERS FRACTURED GRANITE PATTERN (P/C30611 OR P/C30907), OR FITZGERALD FORM LINERS PATTERN NO. 16980 OR AN APPROVED EQUAL.



VOLUME OF SELECT GRANULAR BACKFILL = $\frac{(0.7 \times H) \times \text{WALL AREA (SQ. FT.)}}{27}$

SUMMARY OF QUANTITIES						
LOCATION	* CONCRETE FACE PANELS (SQ. FT.)	SELECT GRANULAR BACKFILL (CU. YD.)	COPING (LIN. FT.)	LEVELING PAD (LIN. FT.)	** 24" CORRUGATED METAL PIPE SLEEVES	MSE WALL EXC. (CU. YD.)
ABUT. #1	*	*	*	*	*	*

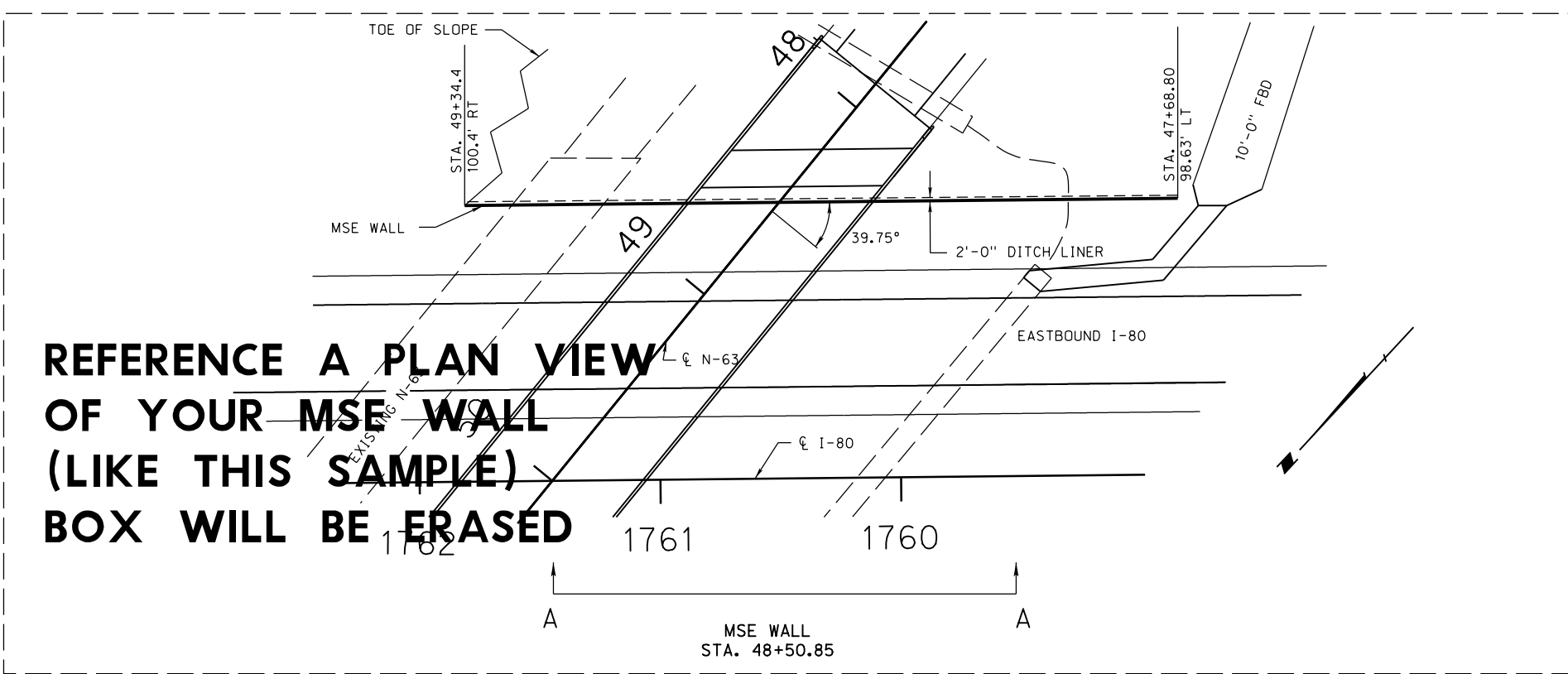
* MEASURED FROM CONCRETE LEVELING PAD TO TOP OF COPING
 ** SEE BRIDGE PLANS FOR CORRUGATED METAL PIPE LAYOUT

Computer: NDOTDESIGN134

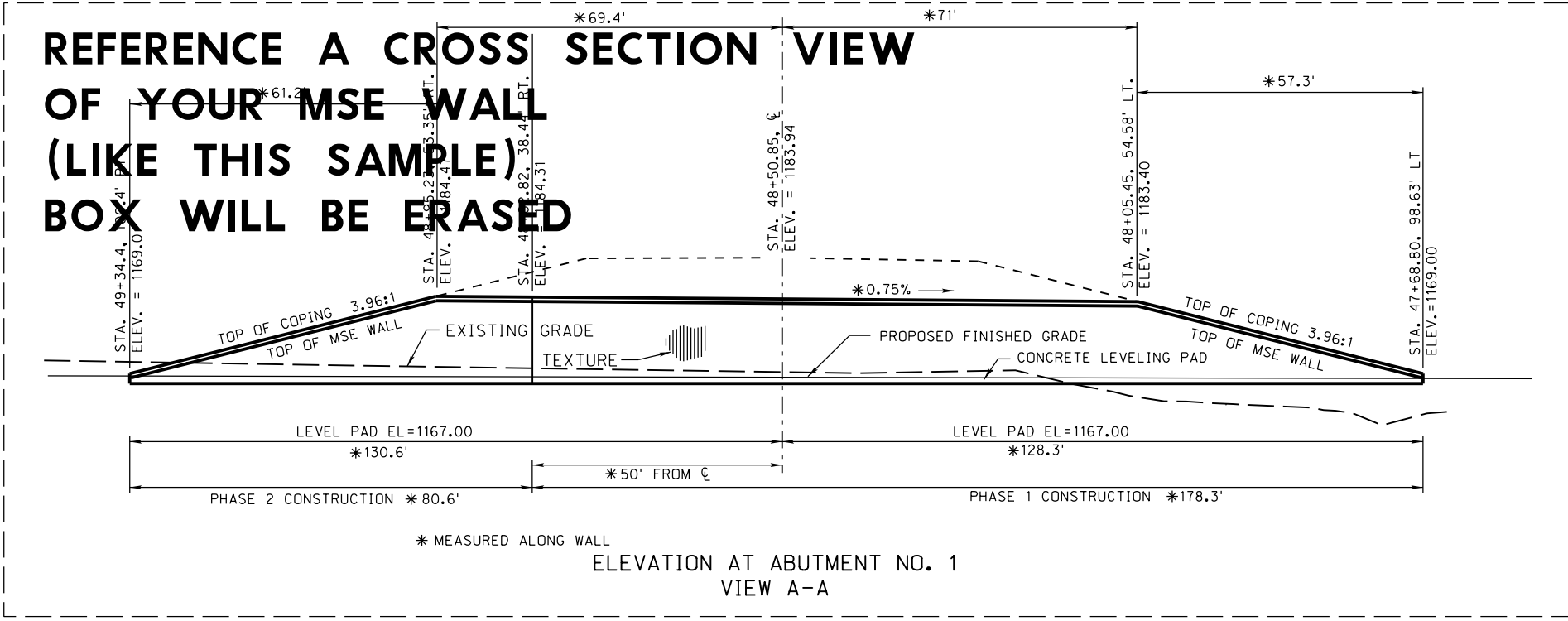
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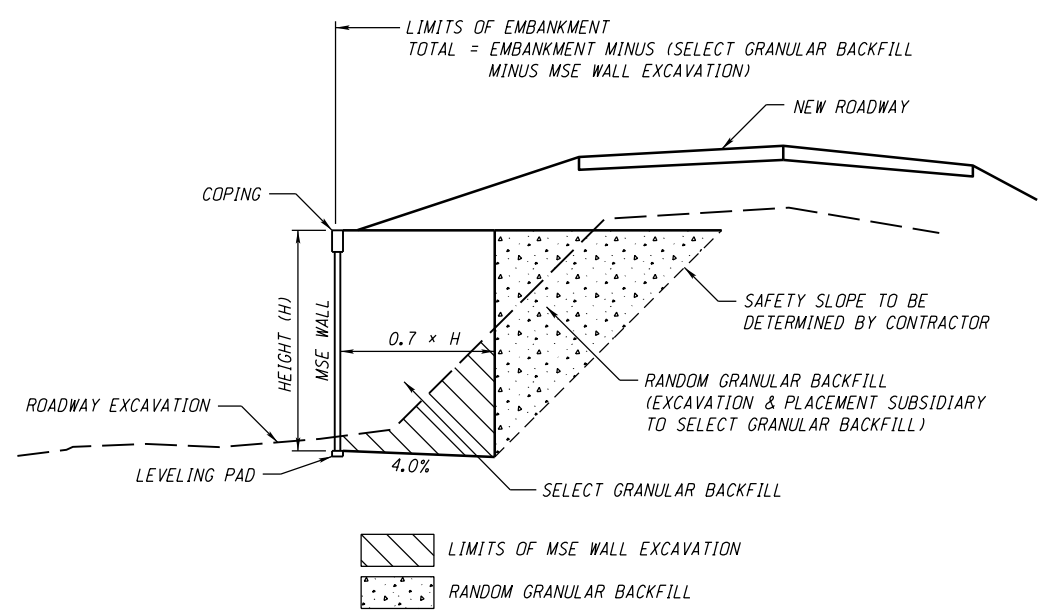
ROADWAY DESIGN DIVISION



**REFERENCE A PLAN VIEW
OF YOUR MSE WALL
(LIKE THIS SAMPLE)
BOX WILL BE ERASED**



**REFERENCE A CROSS SECTION VIEW
OF YOUR MSE WALL
(LIKE THIS SAMPLE)
BOX WILL BE ERASED**



TYPICAL SECTION OF BACKFILL
(NOT TO SCALE)

WARP FILL SLOPE AROUND BLUNT ENDS OF WALL.

GRANULAR BACKFILL SHALL BE CAPPED WITH 3 FEET OF SOIL.

MSE WALL TEXTURE:
THE FRONT FACE OF THE MSE WALL SHALL BE TEXTURED USING SYMONS FORM LINERS FRACTURED GRANITE PATTERN (P/C30611 OR P/C30907), OR FITZGERALD FORM LINERS PATTERN NO. 16980 OR AN APPROVED EQUAL.

$$VOLUME\ OF\ SELECT\ GRANULAR\ BACKFILL = \sum \left(\frac{(0.7 \times H1) \times A1 (SQ. FT.)}{27} + \frac{(0.7 \times H2) \times A2 (SQ. FT.)}{27} + \frac{(0.7 \times H3) \times A3 (SQ. FT.)}{27} + \frac{(0.7 \times H4) \times A4 (SQ. FT.)}{27} \right)$$

SUMMARY OF QUANTITIES						
LOCATION	* CONCRETE FACE PANELS (SQ. FT.)	SELECT GRANULAR BACKFILL (CU. YD.)	COPING (LIN. FT.)	LEVELING PAD (LIN. FT.)	** 24" CORRUGATED METAL PIPE SLEEVES	MSE WALL EXC. (CU. YD.)
ABUT. #1	*	*	*	*	*	*

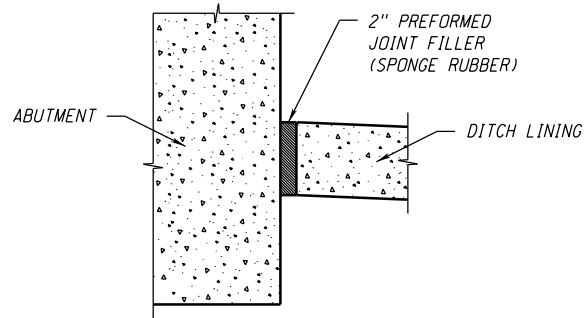
* MEASURED FROM CONCRETE LEVELING PAD TO TOP OF COPING
** SEE BRIDGE PLANS FOR CORRUGATED METAL PIPE LAYOUT

Computer: NDOTDESIGN134

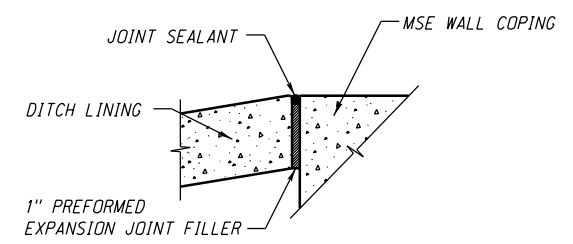
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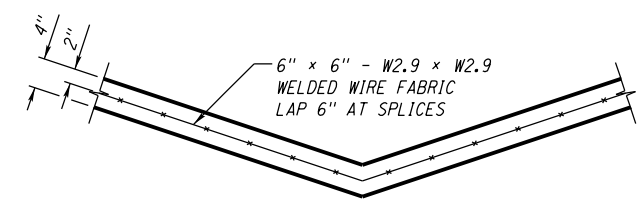
ROADWAY DESIGN DIVISION



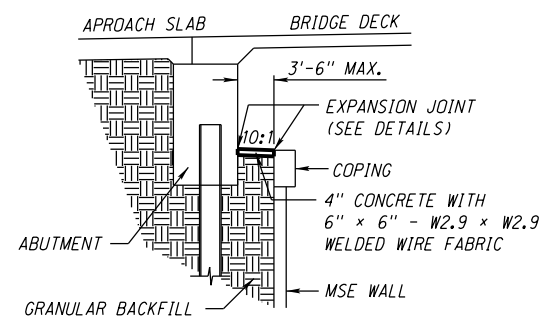
EXPANSION JOINT DETAIL



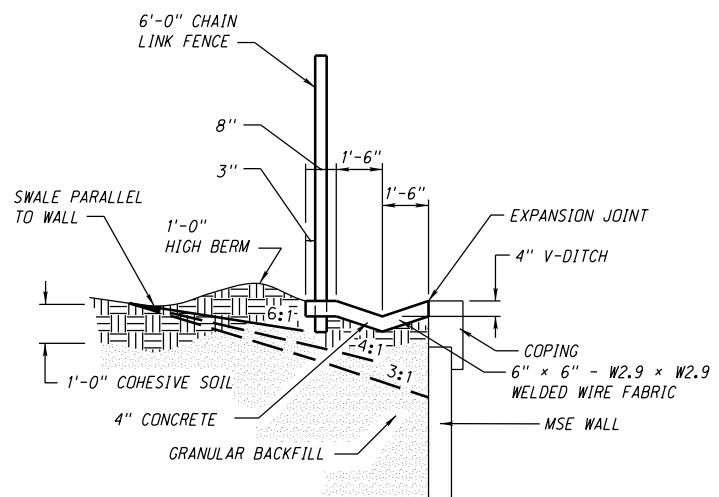
EXPANSION JOINT DETAIL



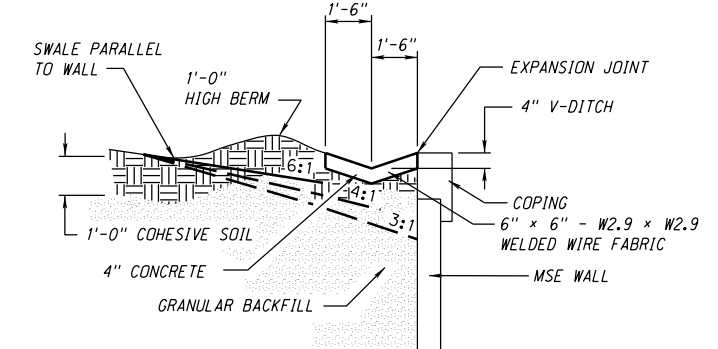
WELDED WIRE FABRIC DETAIL



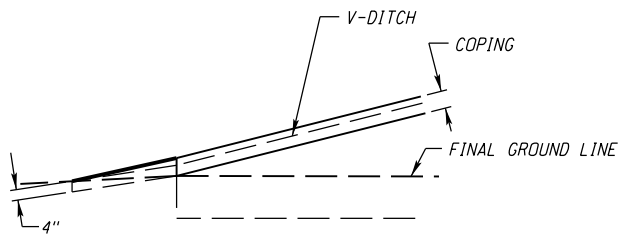
CONCRETE COPING/DITCH LINER DETAIL (ADJACENT TO ABUTMENT)



CONCRETE DITCH LINER DETAIL WITH FENCE (ALONG FORESLOPES)

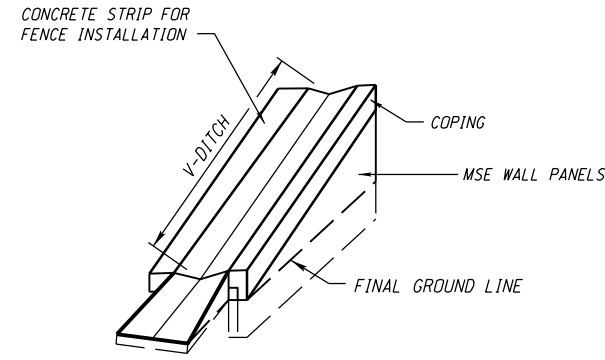


CONCRETE DITCH LINER DETAIL (ALONG FORESLOPES)



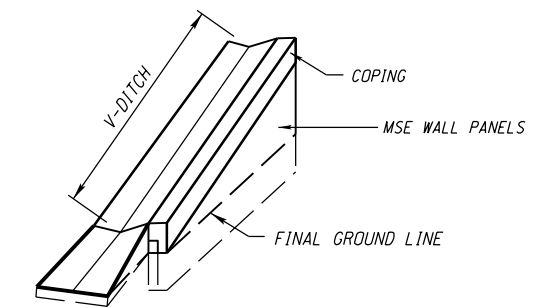
NOTE:
FIELD ENGINEER TO
PLACE AS NEEDED

PLAN
CONCRETE DITCH FLUME DETAIL
(SUBSIDIARY)



NOTE:
FIELD ENGINEER TO
PLACE AS NEEDED

ELEVATION
CONCRETE DITCH FLUME
DETAIL WITH FENCE
(SUBSIDIARY)



NOTE:
FIELD ENGINEER TO
PLACE AS NEEDED

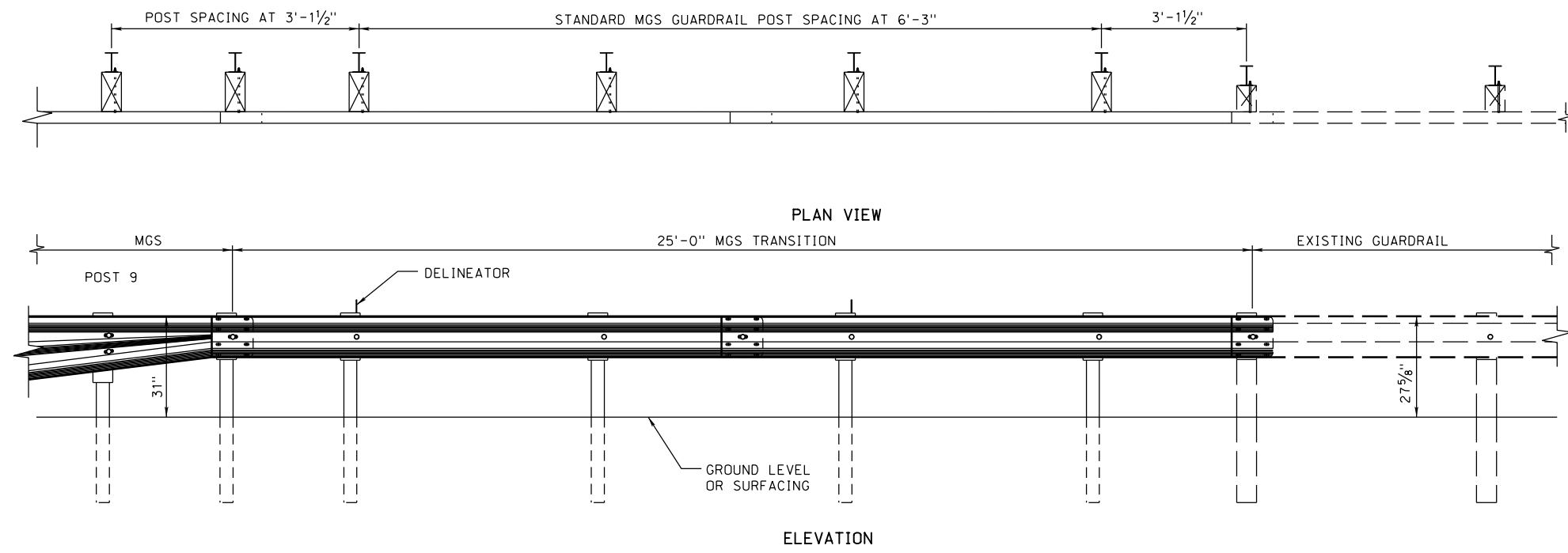
ELEVATION
CONCRETE DITCH FLUME DETAIL
(SUBSIDIARY)

Computer: NDOTDESIGN134

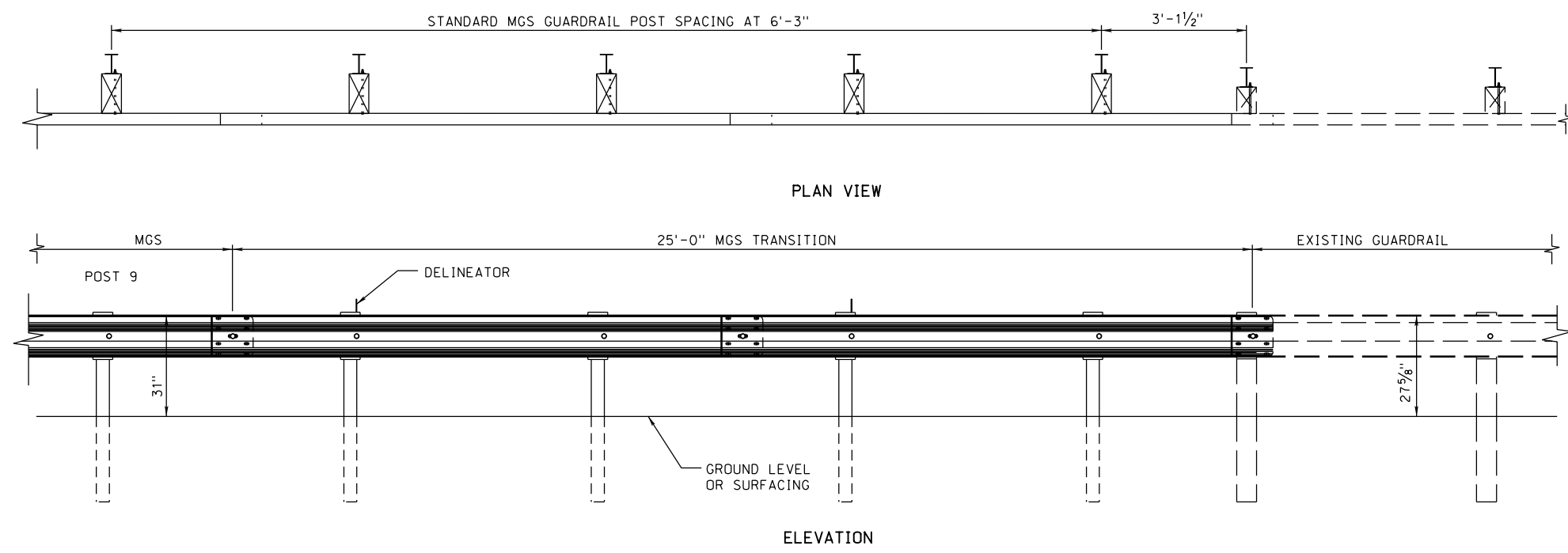
Date: 17-APR-2020 10:36

File: 62005e01.dgn

ROADWAY DESIGN DIVISION



VIEW 1 - 31" BAS FOR MGS TRANSITION TO W-BEAM



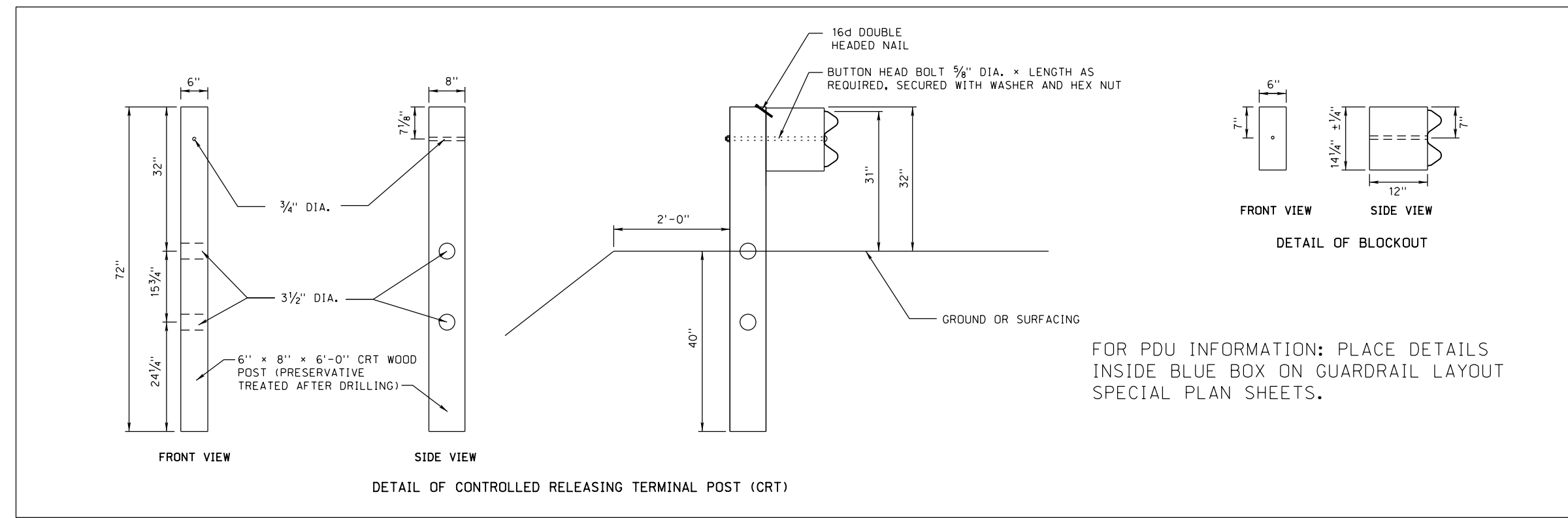
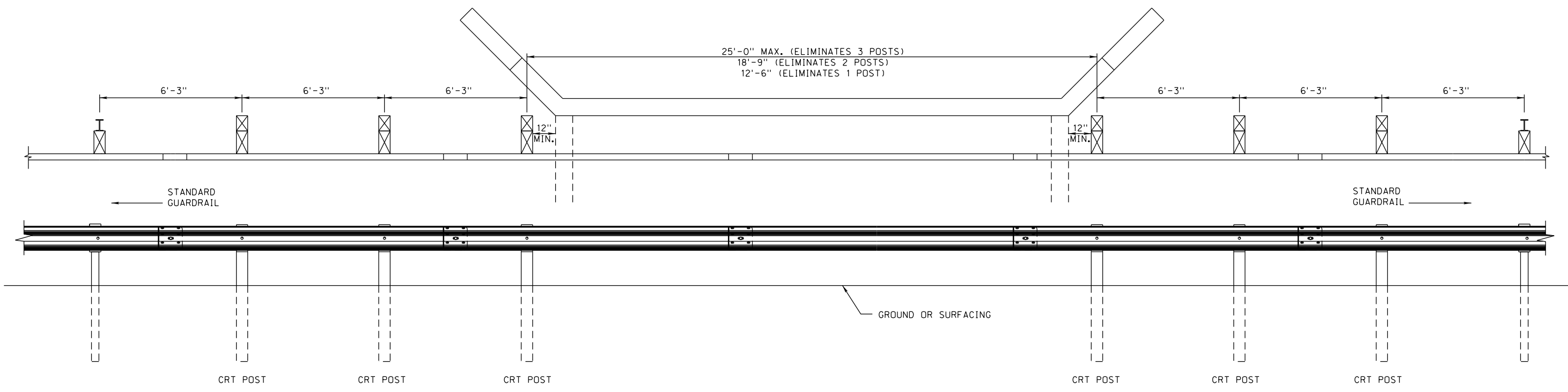
VIEW 2 - MGS TRANSITION TO W-BEAM

Computer: NDOTDESIGN134

Date: 13-APR-2020 14:56

File: 70385e00.dgn

ROADWAY DESIGN DIVISION

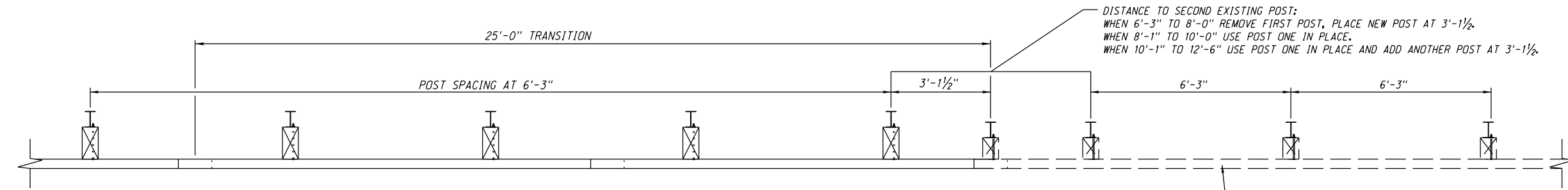


FOR PDU INFORMATION: PLACE DETAILS INSIDE BLUE BOX ON GUARDRAIL LAYOUT SPECIAL PLAN SHEETS.

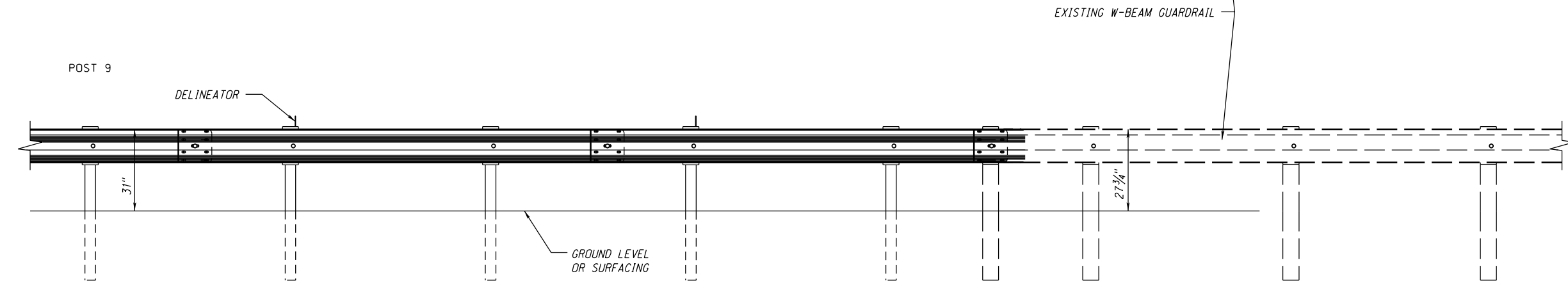
MGS FOR LONG SPAN

Date: 13-APR-2020 14:56 Computer: NDOTDESIGN134 SHEET F:\095e00.dgn

ROADWAY DESIGN DIVISION



PLAN VIEW



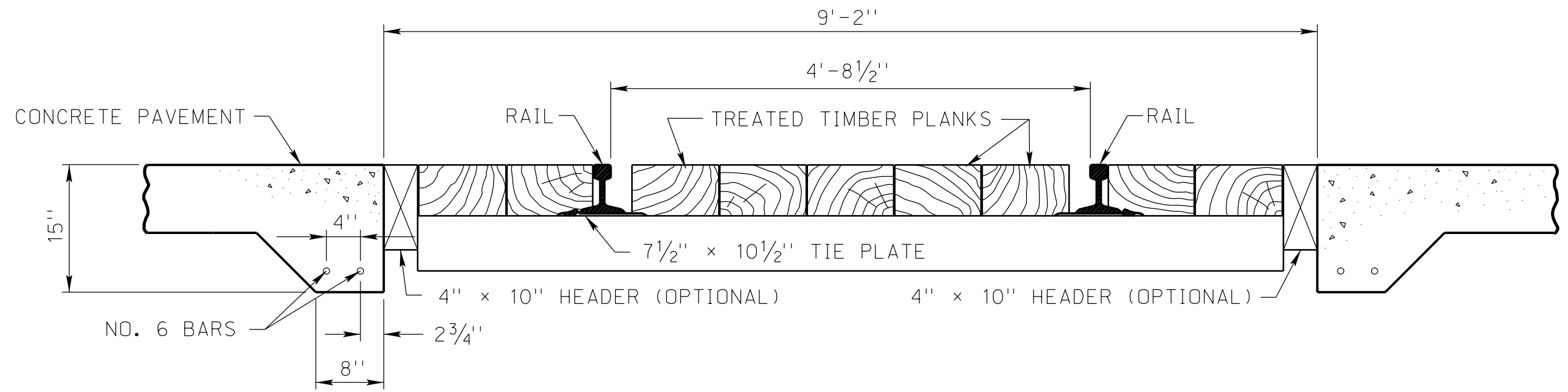
ELEVATION

W-BEAM TRANSITION 31" TO 27 3/4"

Computer: NDOTDESIGN134

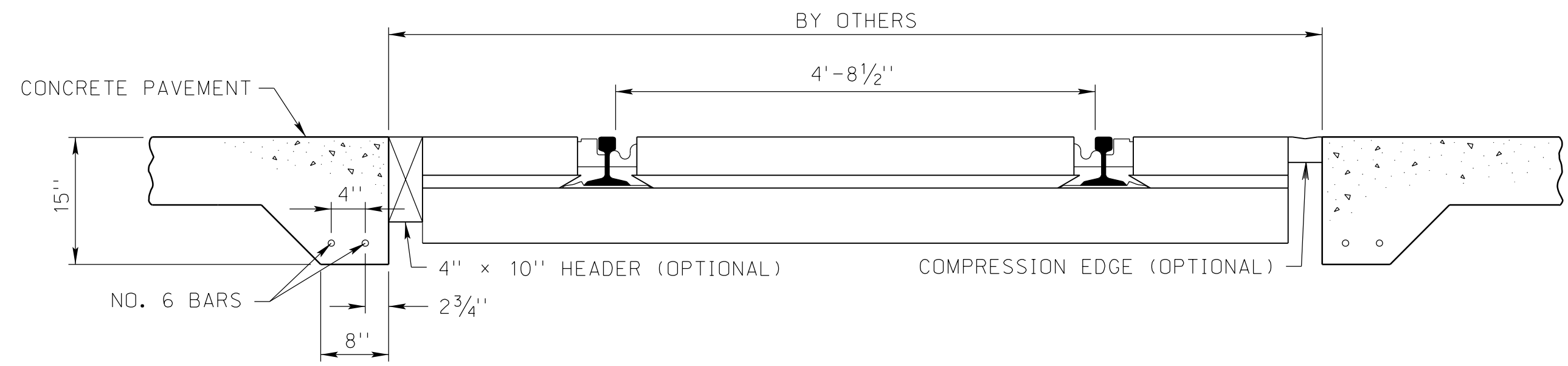
Date: 13-APR-2020 14:56

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 SHEET 1 OF 1



SECTION OF TIMBER PLANK CROSSING (TYPICAL)

WIDER TREATED TIMBER PLANK MAY BE SUBSTITUTED FOR THE OPTIONAL 4" x 10" HEADER AND ADJACENT PLANK WHEN 9'-0" TIES ARE USED IN CROSSING CONSTRUCTION.



SECTION OF RUBBERIZED CROSSING

NOTE: DROP INTEGRAL CURB 6'-0" FROM RAILROAD CROSSING