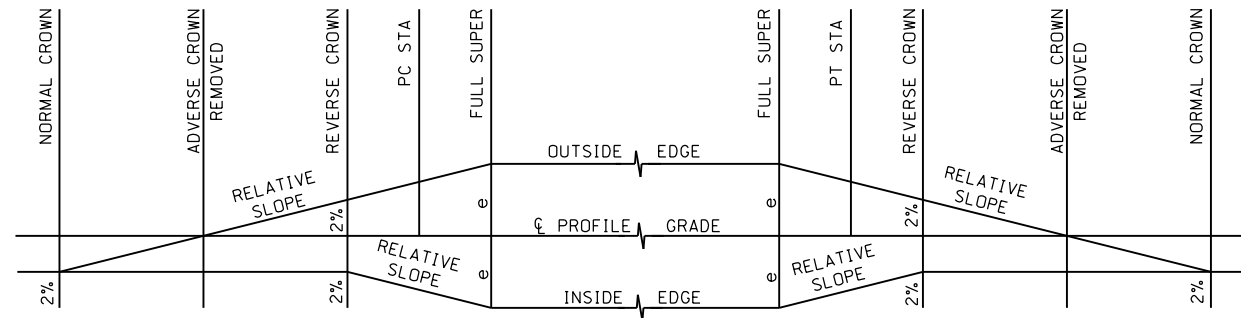


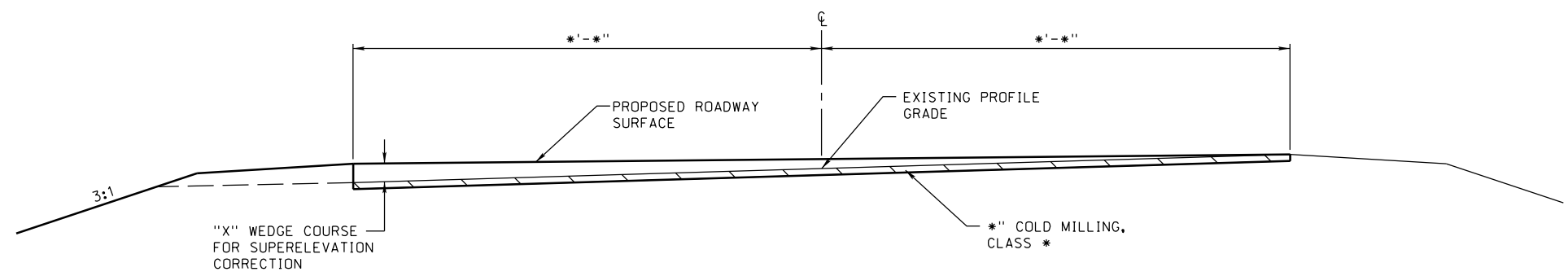
# GENERAL INFORMATION



SUPERELEVATION													
P.I. STATION	RADIUS OF CURVE	SUPERELEVATION e %	RELATIVE SLOPE	NORMAL CROWN STATION	ADVERSE CROWN REMOVED STATION	REVERSE CROWN STATION	P.C. STATION	FULL SUPER STATION	FULL SUPER STATION	P.T. STATION	REVERSE CROWN STATION	ADVERSE CROWN REMOVED STATION	NORMAL CROWN STATION
*	*	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*	*

FOR DETAILS NOT SHOWN SEE PLAN ---R---

### SUPERELEVATION DIAGRAM



**WEDGE COURSE FOR SUPERELEVATION CORRECTION**  
STA. ---+--- TO STA. ---+---

SUPERELEVATION CORRECTION			
STATION TO STATION	QUANTITY (TONS)	TYPE	MAXIMUM "X" CORRECTION DEPTH
* - *	*	*	"

FOR INFORMATION ONLY

DELETE THIS  
PORTION  
IF NOT  
NEEDED

# GENERAL INFORMATION

ROADWAY DESIGN DIVISION

Computer: NDOTDESIGN134

Date: 25-JAN-2019 10:42

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SHEET 1 OF 2 30103e00

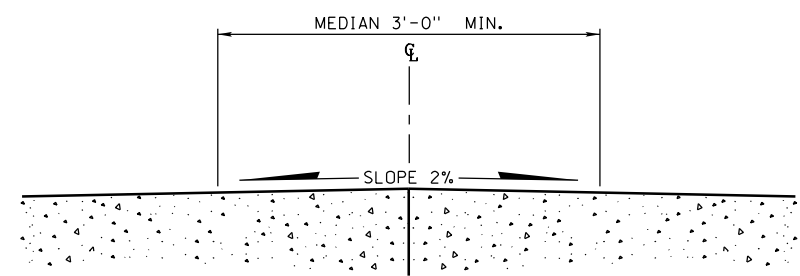
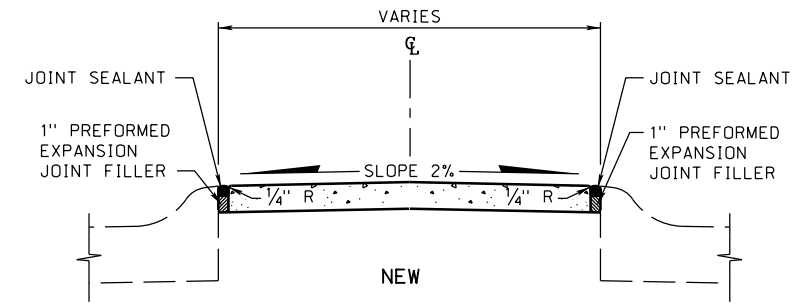
PARAGRAPHS 8.a., b., c. AND d. OF SUBSECTION 605.04 ARE VOID AND SUPERCEDED BY THE FOLLOWING:

- 8.a. THE SURFACE OF THE MILLED CONCRETE SHALL BE FREE FROM LOOSE CONCRETE, SAND, AND OTHER DEBRIS AND SHALL BE MAINTAINED IN A DRY AND CLEAN CONDITION BEFORE APPLYING EPOXY.
- 8.b. THE CLEAN, DRY SURFACE SHALL BE COATED WITH GRADE 2 EPOXY ADHESIVE FROM THE NDOR APPROVED PRODUCTS LIST, JUST BEFORE PLACING THE NEW CONCRETE.
- 8.c. THE EPOXY ADHESIVE SHALL BE APPLIED TO THE VERTICAL AND HORIZONTAL FACES OF THE REPAIR WITH A BRUSH. TRANSVERSE AND LONGITUDINAL JOINTS AND CRACKS SHALL NOT BE COATED WITH EPOXY.
- 8.d. THE EPOXY APPLICATION RATE SHALL BE LIMITED SO THE EPOXY ADHESIVE DOES NOT BECOME DRY BEFORE IT IS COVERED WITH NEW CONCRETE.

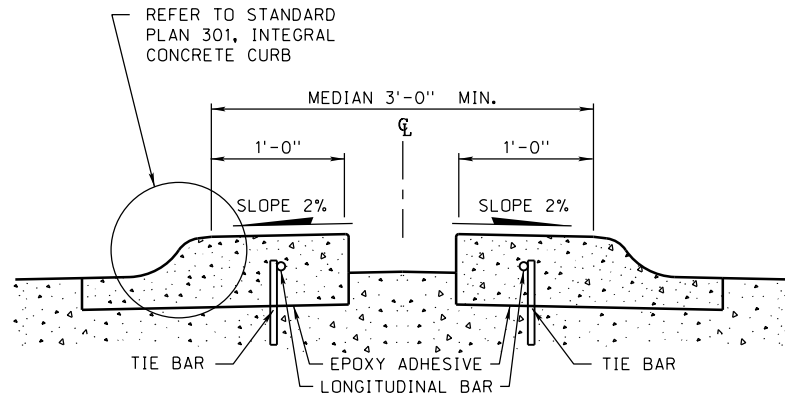
ONE INCH PREFORMED EXPANSION JOINT FILLER SHALL BE PLACED ACROSS THE FULL WIDTH OF THE MEDIAN SURFACING AT INTERVALS OF NOT MORE THAN 49'-0".

LONGITUDINAL JOINTS ONE INCH DEEP SHALL BE MADE IN ALL MEDIANS WHEN SURFACING WIDTH IS 16'-0" OR GREATER.

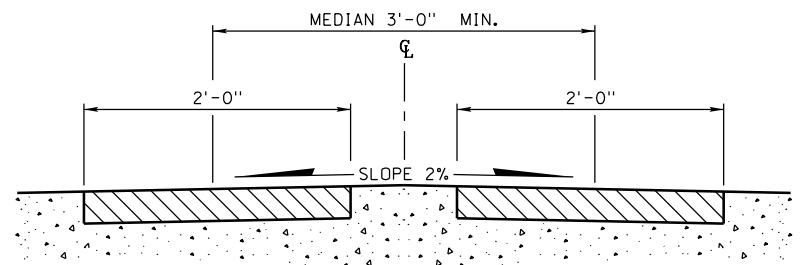
TRANSVERSE JOINTS ONE INCH DEEP SHALL BE MADE IN ALL MEDIANS AT INTERVALS OF NOT MORE THAN 8'-0". JOINT THE CURB TO MATCH THE PAVEMENT JOINTS.



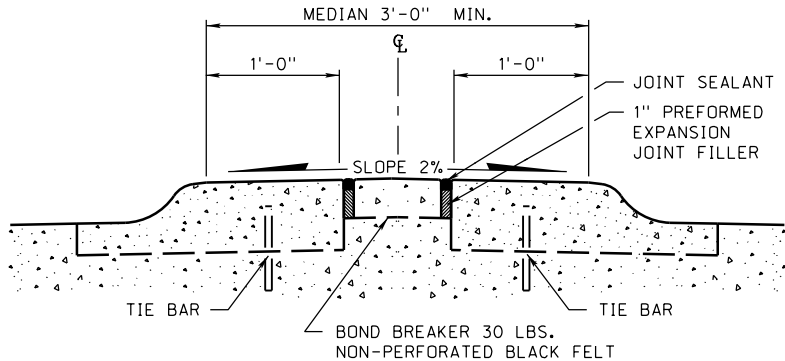
STEP I - BUILD TRAFFIC LANE (FULL DEPTH)



STEP III - BUILD CURB, WITH #5 x 8" TIE BAR AT 5'-0" CENTERS TO BE DRILLED AND GROUT AND #4 LONGITUDINAL BAR GAPPED AT CONTRACTION JOINT LOCATIONS: 3" MIN, 6" MAX.



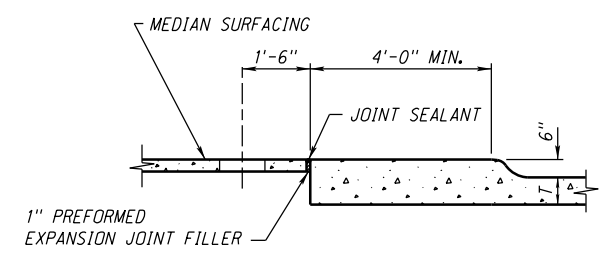
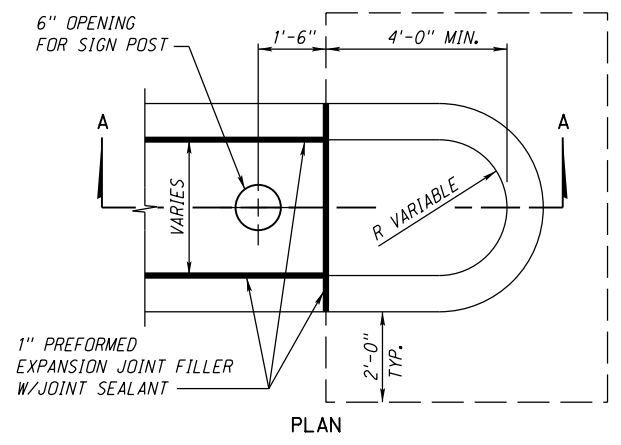
STEP II - MILL 2" x 2'-0"



STEP IV - BUILD MEDIAN SURFACING ON EXISTING SURFACE

## CONCRETE MEDIAN SURFACING

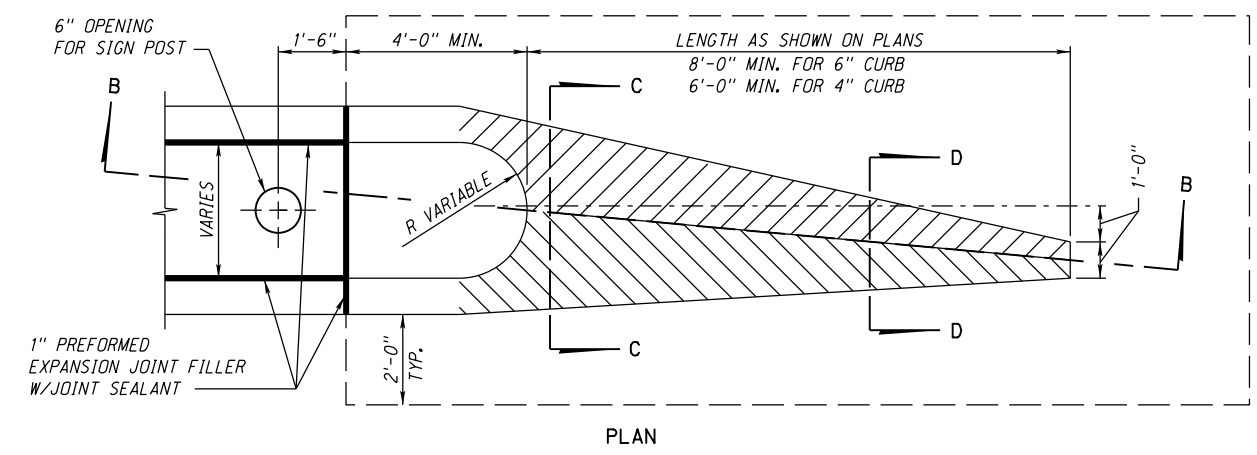
# GENERAL INFORMATION



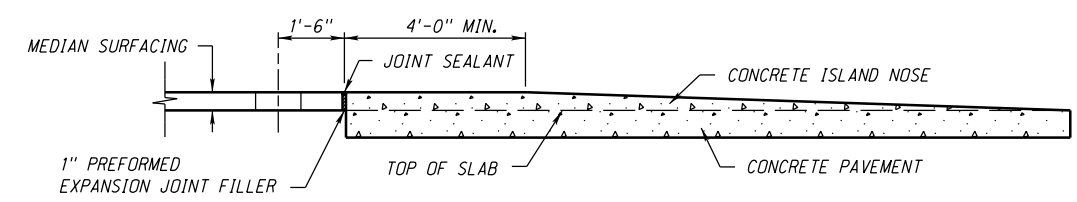
PLAN

SECTION A-A

## END OF MEDIAN ISLAND



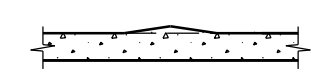
PLAN



SECTION B-B



SECTION C-C



SECTION D-D

## CONCRETE ISLAND NOSE FOR RETROFIT

NOTE:  
EXISTING CONCRETE PAVEMENT IS TO BE REMOVED TO BUILD CONCRETE ISLAND NOSE.

ROADWAY DESIGN DIVISION

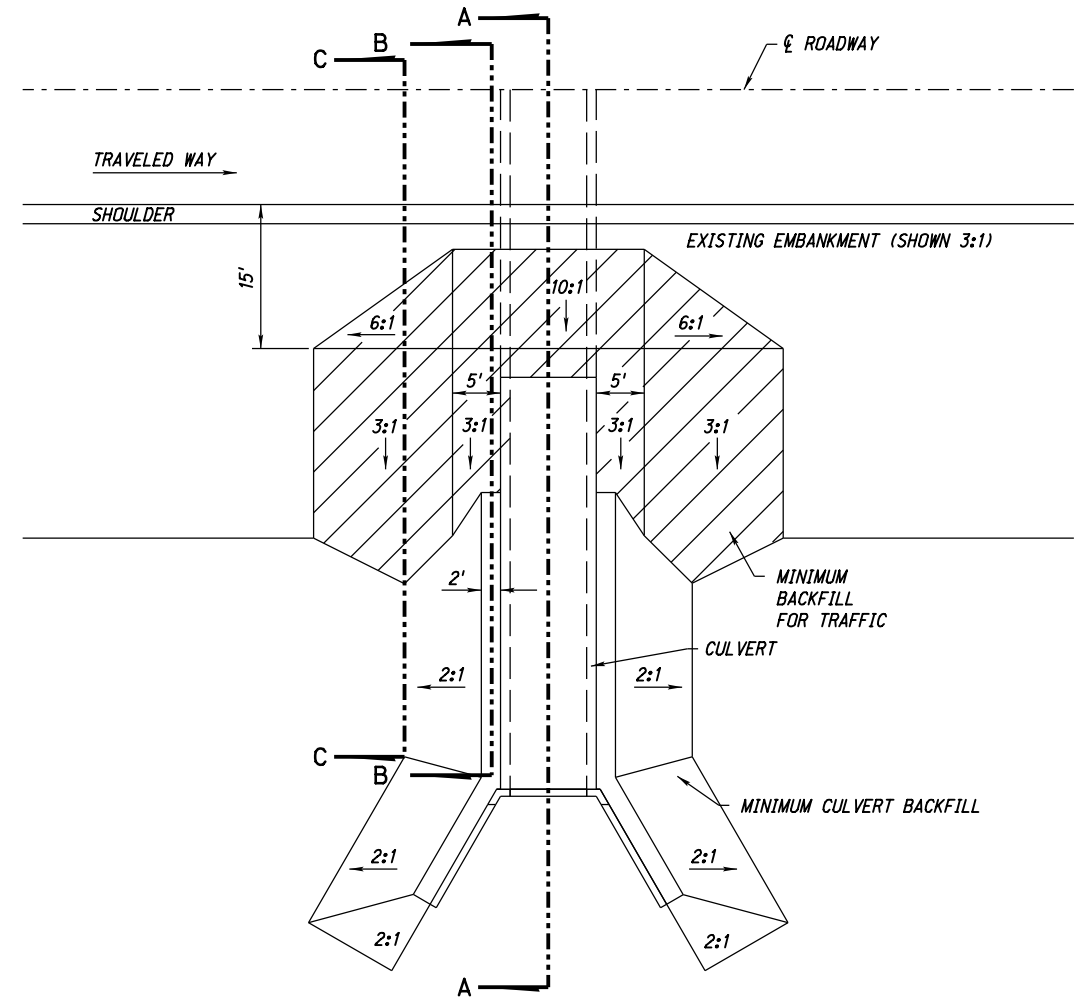
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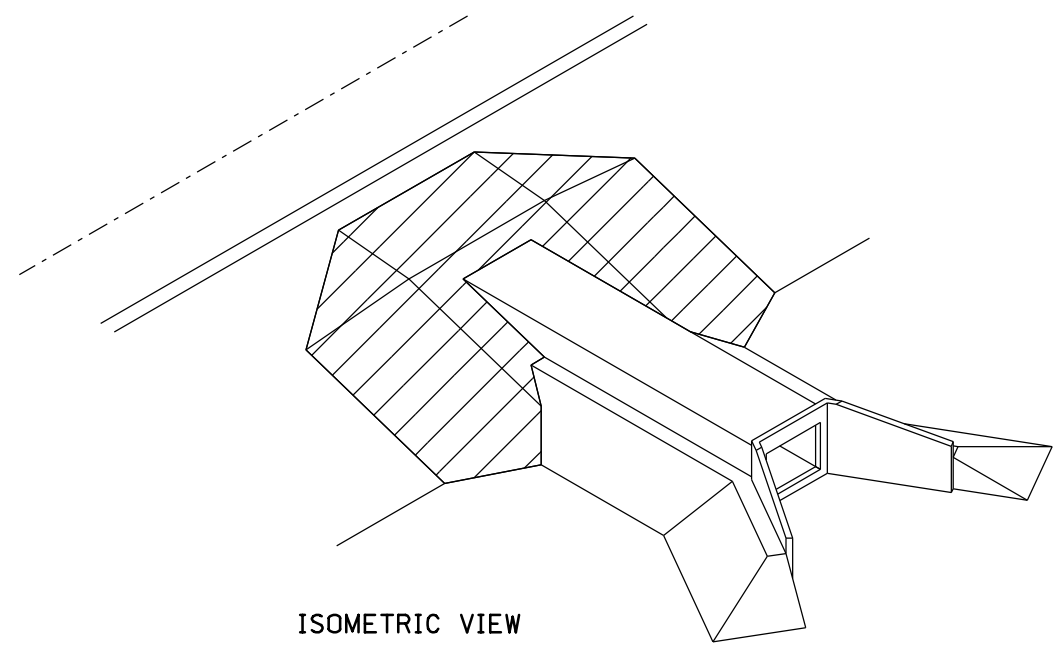
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SHEET 2 OF 2

# GENERAL INFORMATION

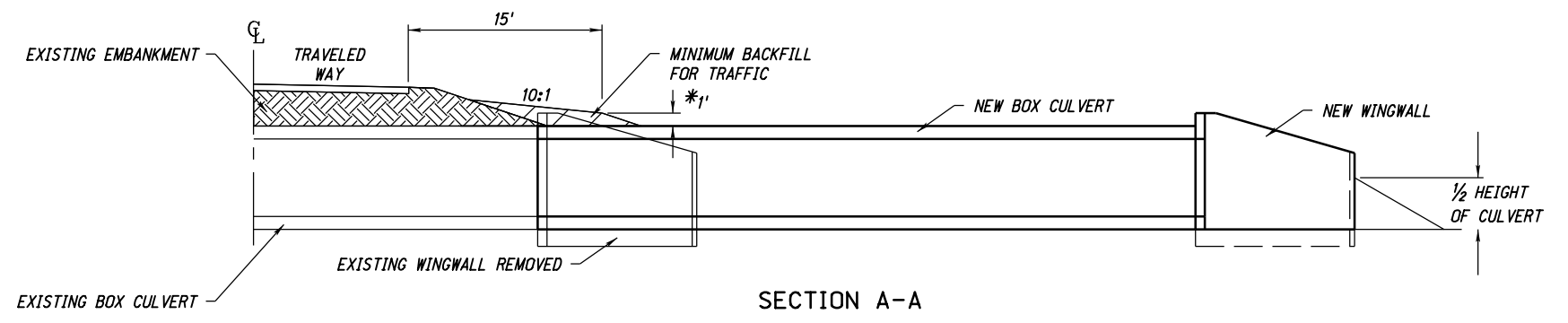
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SHEET 1 OF 1  
4000-3-E-00



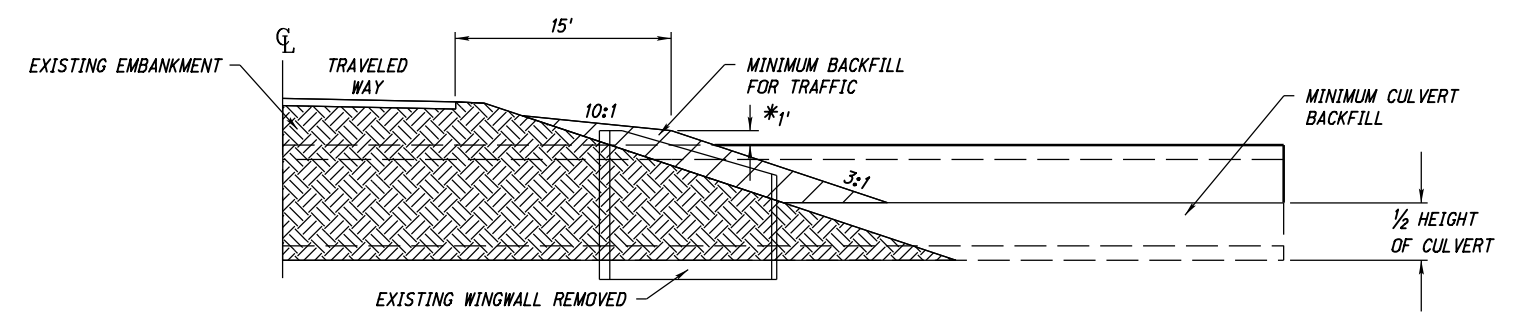
MINIMUM BACKFILL FOR TRAFFIC



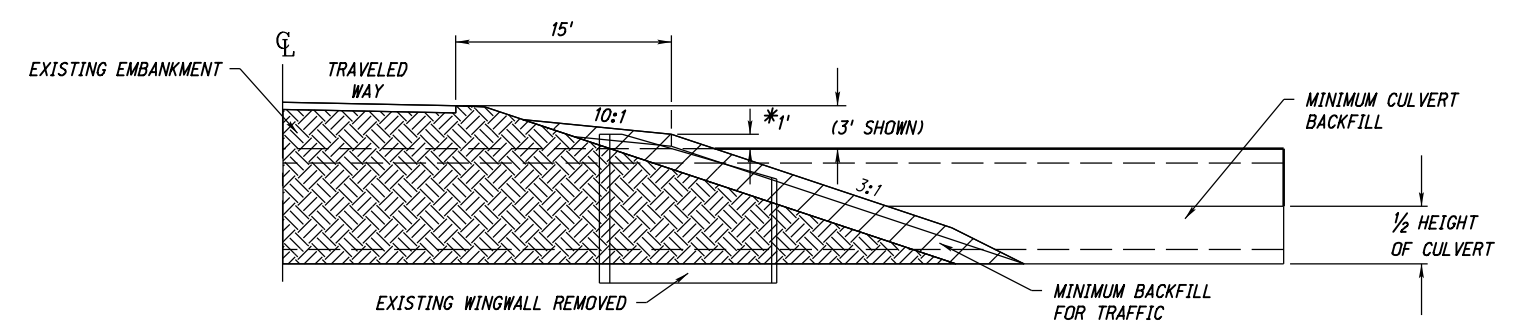
ISOMETRIC VIEW



SECTION A-A



SECTION B-B



SECTION C-C

**NOTE:**  
REFER TO STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION SECTION 702 FOR MORE INFORMATION.  
\* TO PROTECT THE PIPE AND BACKFILL DURING CONSTRUCTION, PROVIDE A MINIMUM OF 36" OF COMPACTED FILL MATERIAL OVER THE TOP OF THE PIPE BEFORE ALLOWING ANY HEAVY EQUIPMENT TO TRAVERSE OVER THE PIPE. EXTREMELY HEAVY EQUIPMENT MAY REQUIRE LARGER COVER AS DETERMINED BY THE CONTRACTOR.

MINIMUM BACKFILL FOR TRAFFIC

# GENERAL INFORMATION

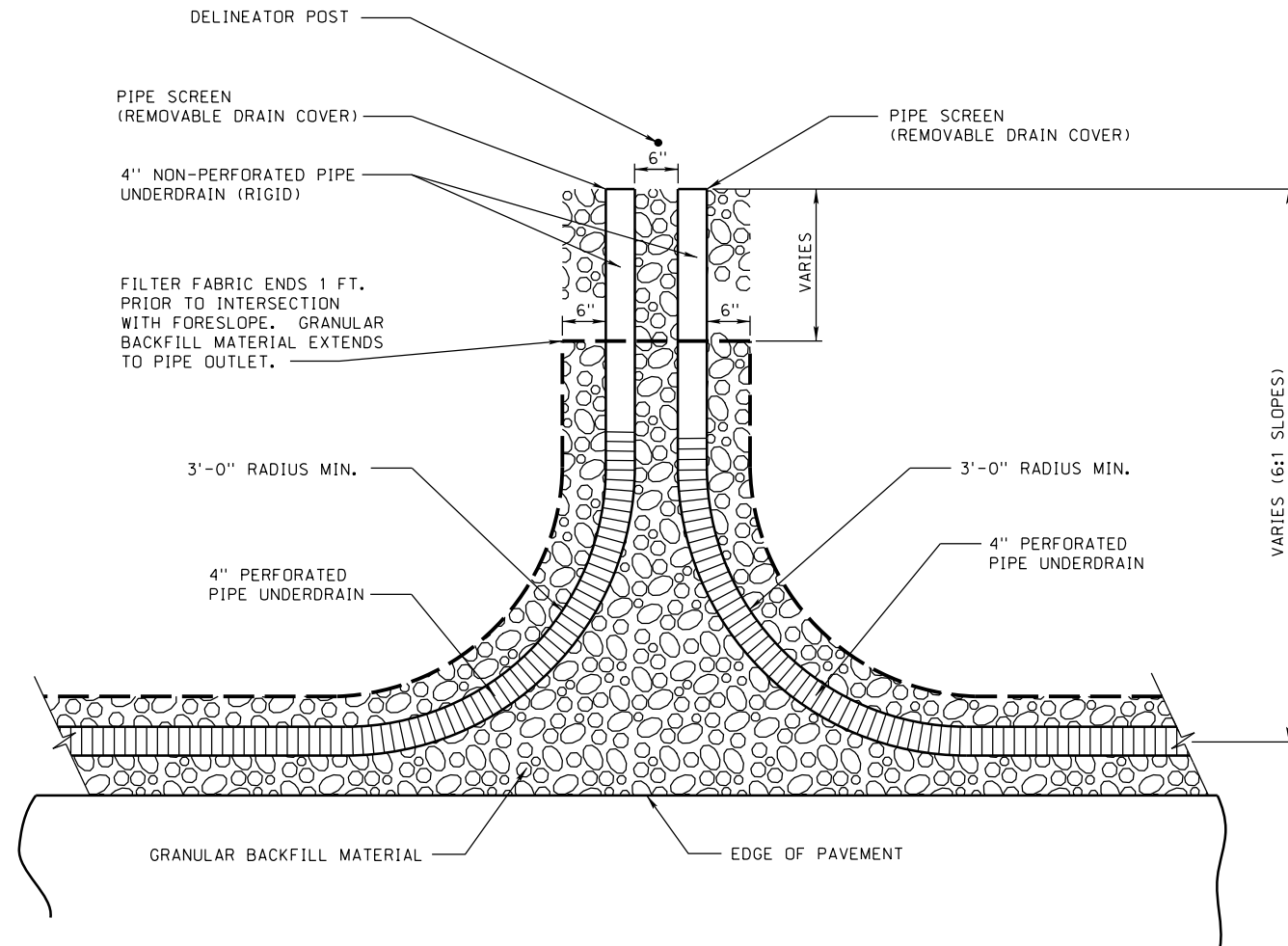
ROADWAY DESIGN DIVISION

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 SHEET 1 OF 4  
 4300-3-E-00

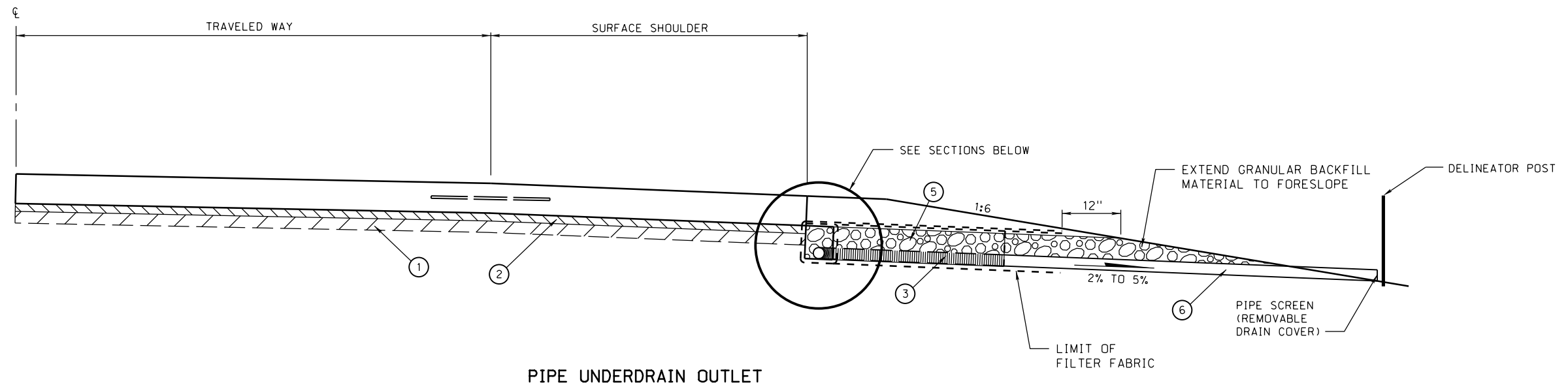
BUILD 4" PIPE UNDERDRAIN						
STATION	TO	STATION	SIDE	DESCRIPTION	PERFORATED LIN. FT.	NONPERFORATED LIN. FT.
*		*	*	*	*	*
*		*	*	*	*	*



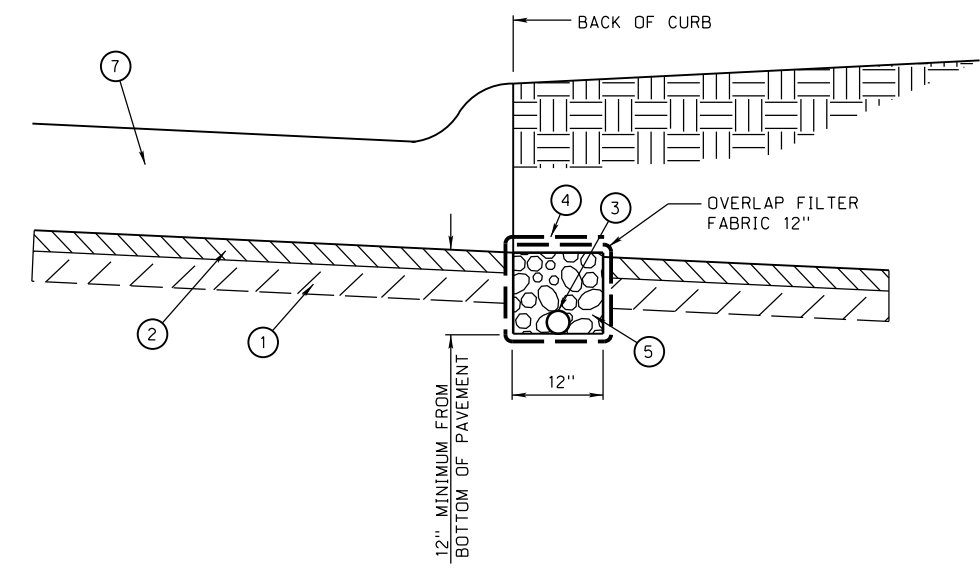
PLAN

PLAN VIEW OF PIPE UNDERDRAIN OUTLET

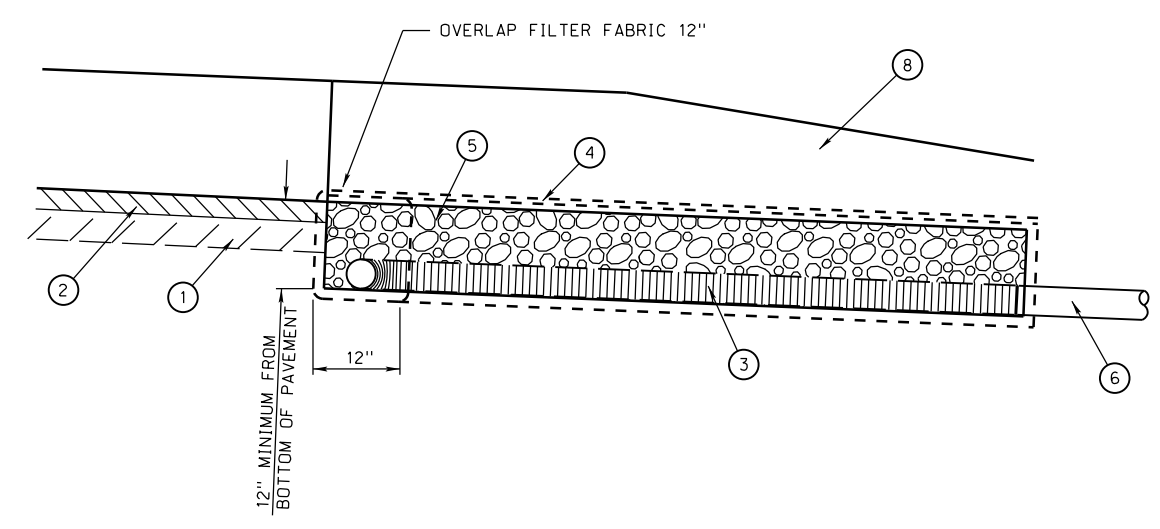
# GENERAL INFORMATION



PIPE UNDERDRAIN OUTLET



PIPE UNDERDRAIN DETAIL



SECTION OF PIPE UNDERDRAIN OUTLET

NOTE:  
SHOULDER CONSTRUCTION TO BE PERFORMED  
PRIOR TO CONSTRUCTING PIPE UNDERDRAINS.

- ① SUBGRADE PREPARATION
- ② FOUNDATION COURSE
- ③ 4" PERFORATED PIPE UNDERDRAIN
- ④ FILTER FABRIC (SUBSIDIARY)
- ⑤ GRANULAR BACKFILL MATERIAL (SUBSIDIARY)
- ⑥ 4" NON-PERFORATED PIPE UNDERDRAIN (RIGID)
- ⑦ CONCRETE PAVEMENT
- ⑧ COHESIVE SOIL

ROADWAY DESIGN DIVISION

Computer: NDOTDESIGN134

Date: 25-JAN-2019 10:43

File: 43003e00.dgn  
 Scale: 1/2" = 1'-0"  
 SHEET 2 OF 4

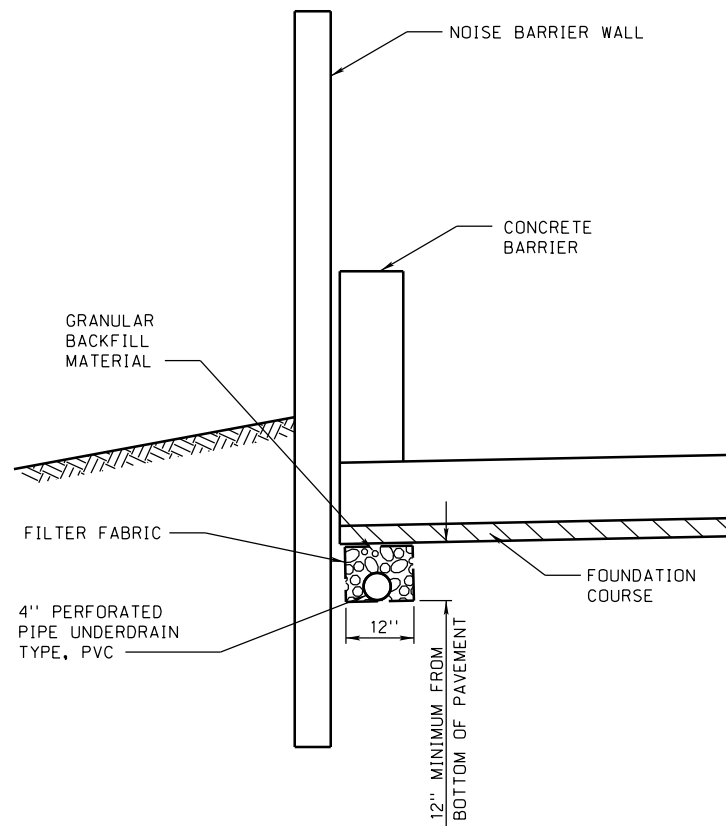
# GENERAL INFORMATION

ROADWAY DESIGN DIVISION

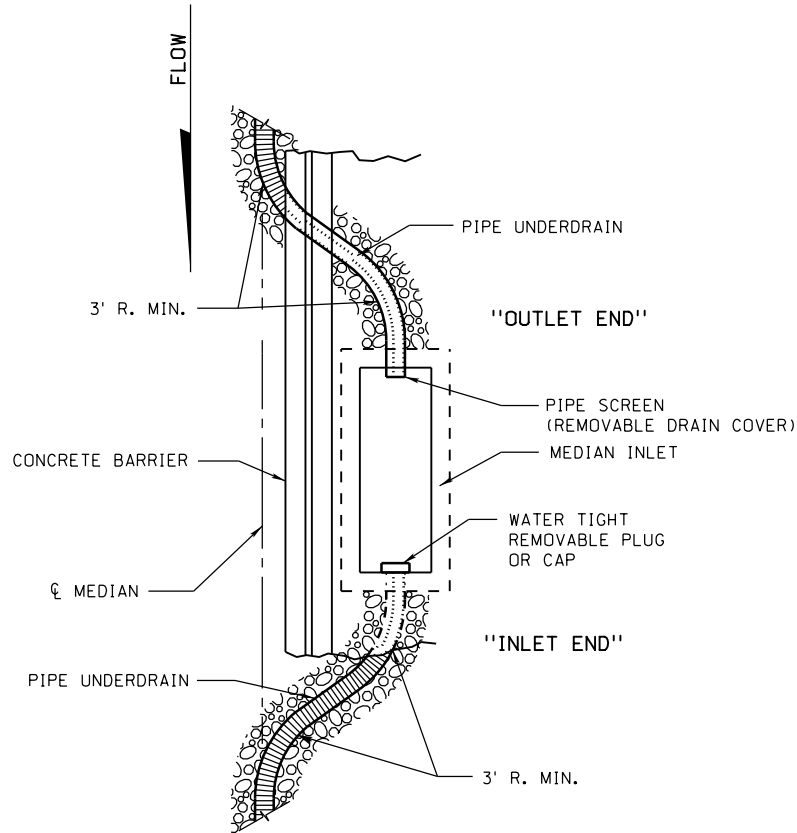
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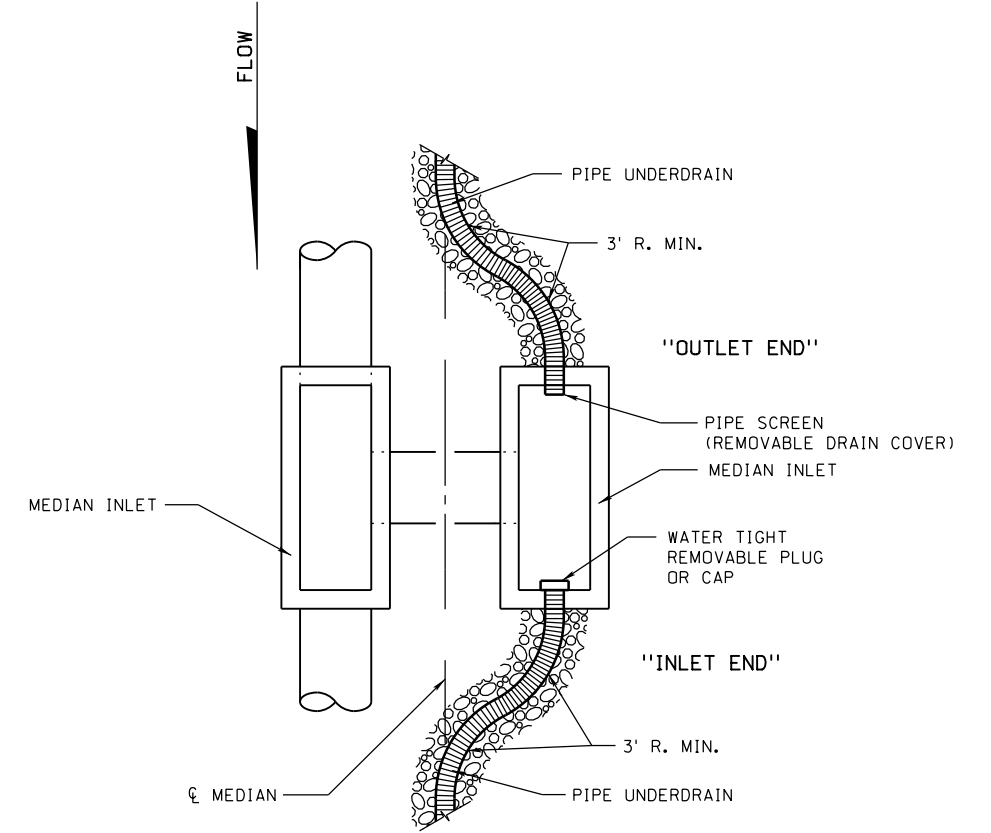
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 SHEET 3 OF 4



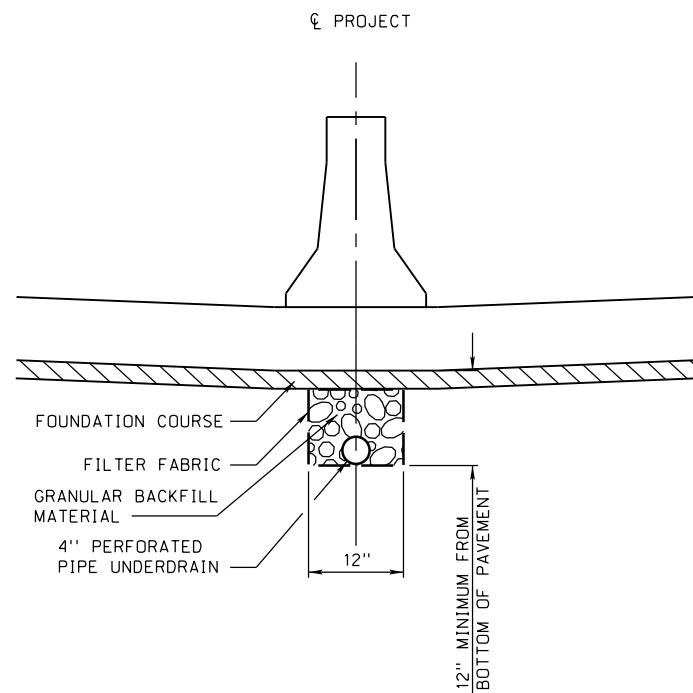
SECTION



PLAN

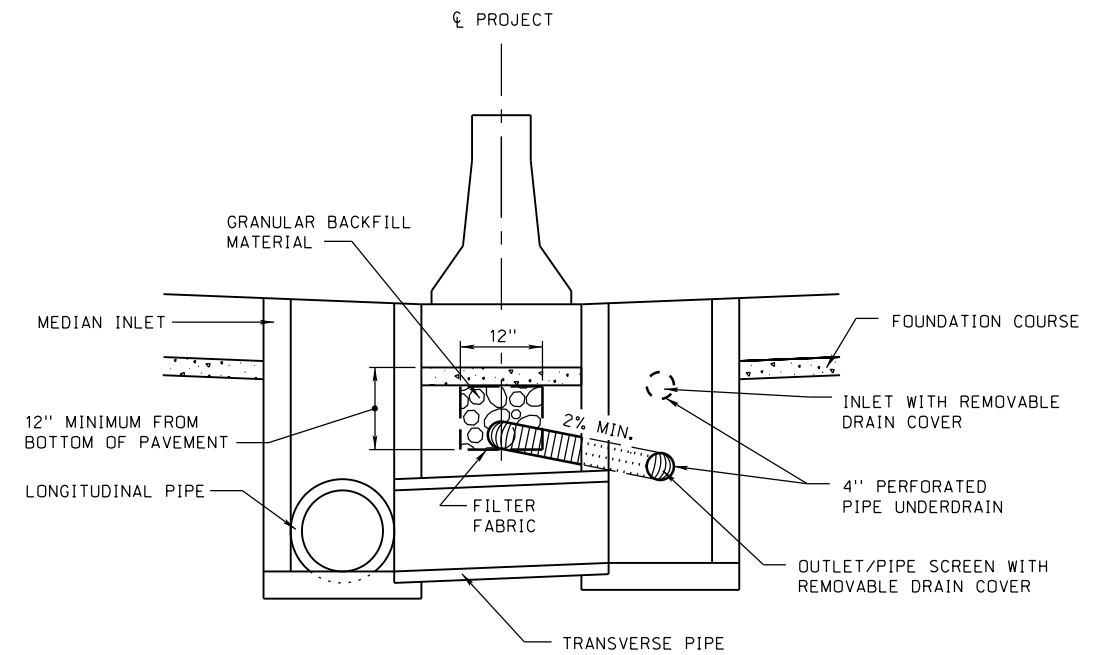


PLAN



SECTION

DETAILS OF PIPE UNDERDRAIN PLACEMENT

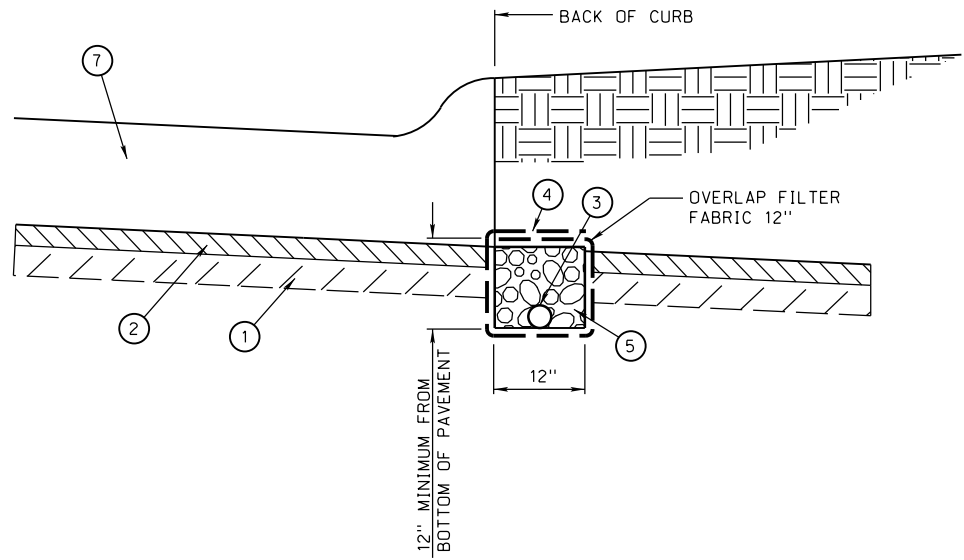


SECTION

DETAILS OF PIPE UNDERDRAIN CONNECTION TO MEDIAN INLETS & GRATE INLETS

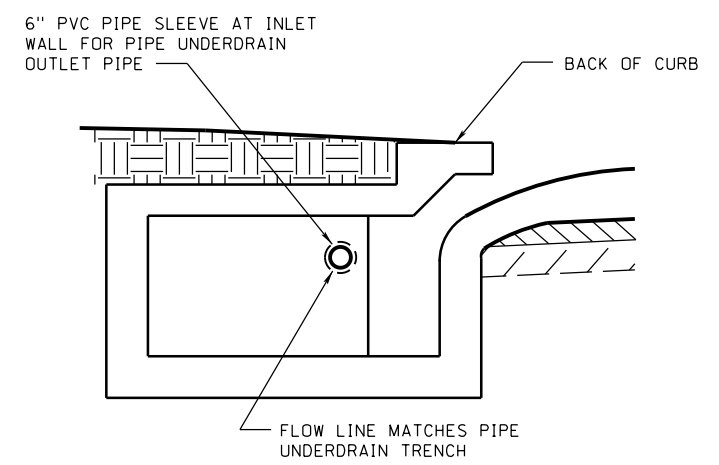
# GENERAL INFORMATION

ROADWAY DESIGN DIVISION

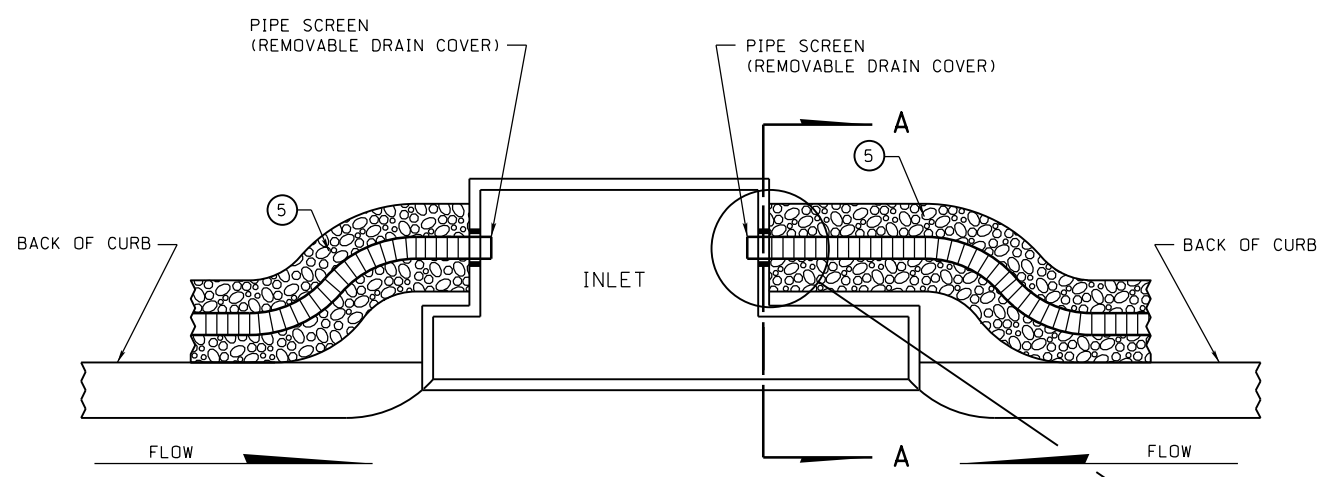


PIPE UNDERDRAIN DETAIL

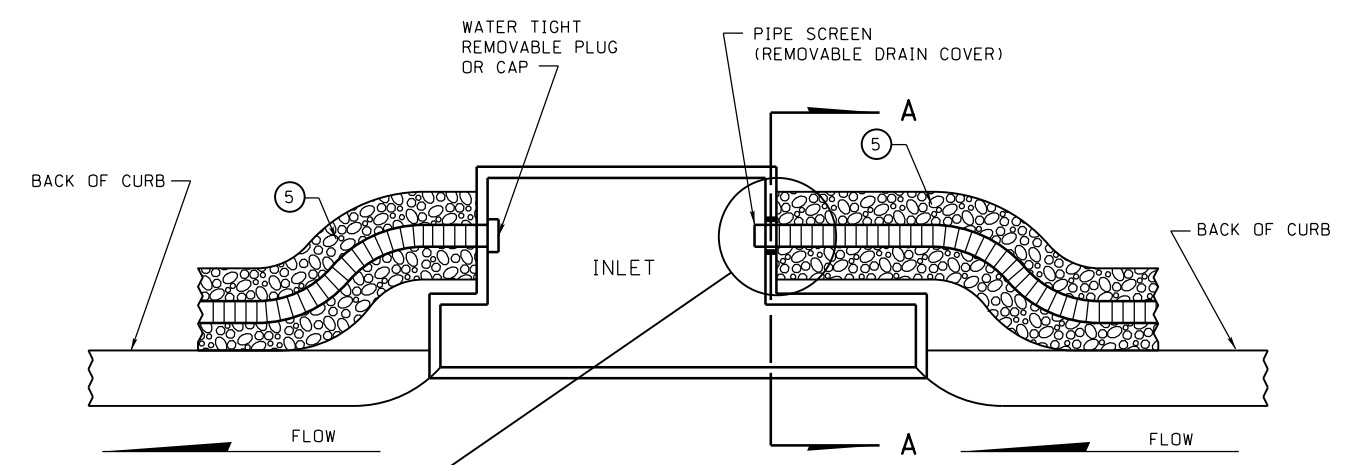
- ① SUBGRADE PREPARATION
- ② FOUNDATION COURSE
- ③ 4" PERFORATED PIPE UNDERDRAIN
- ④ FILTER FABRIC (SUBSIDIARY)
- ⑤ GRANULAR BACKFILL MATERIAL (SUBSIDIARY)
- ⑥ 4" NON-PERFORATED PIPE UNDERDRAIN (RIGID)
- ⑦ CONCRETE PAVEMENT
- ⑧ COHESIVE SOIL



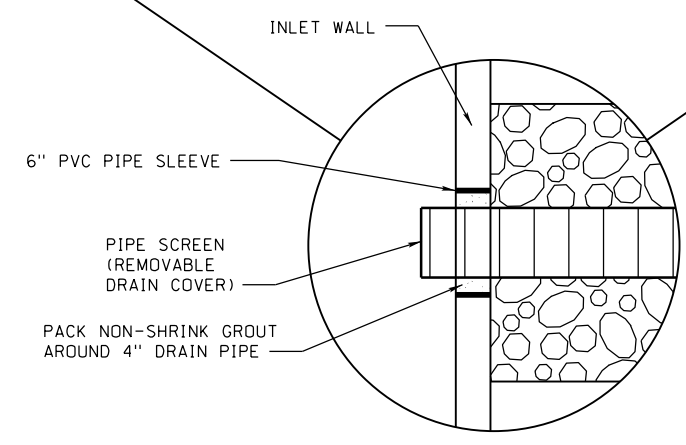
SECTION A-A



PLAN (SAG CONDITION)



PLAN (ON GRADE)



DETAIL OF PIPE UNDERDRAIN AT INLET

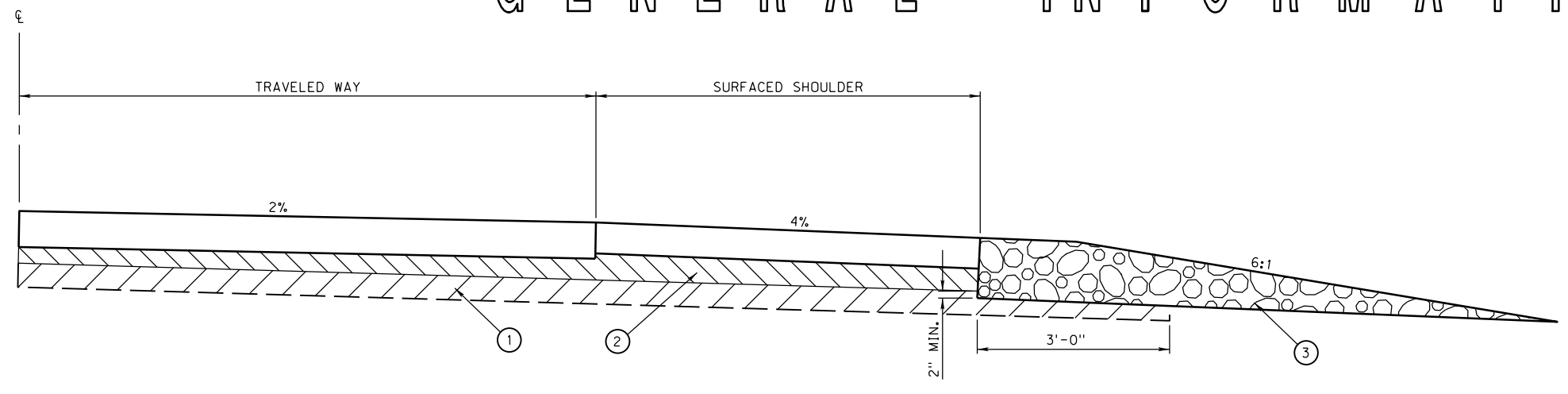
IN URBAN SETTINGS WITH FLAT TOPOGRAPHY WHERE BACK FLOW INTO PIPE UNDER DRAWS IS POSSIBLE, CONTACT PAVEMENT DESIGN TO REVIEW OPTIONS.

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SHEET 4 OF 4  
Computer: NDOTDESIGN134  
Date: 25-JAN-2019 10:43

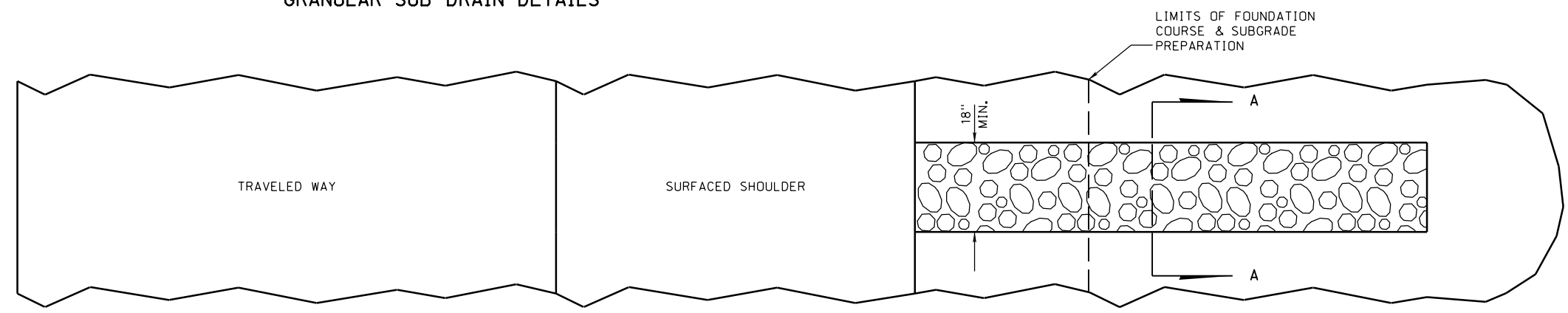


# GENERAL INFORMATION

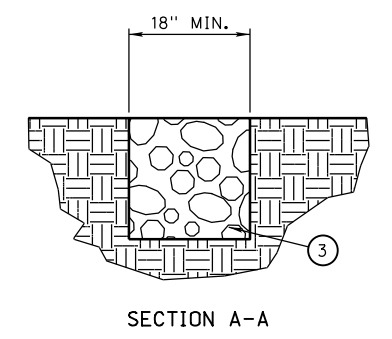
ROADWAY DESIGN DIVISION



GRANULAR SUB-DRAIN DETAILS



GRANULAR SUB-DRAIN DETAILS



- ① SUBGRADE PREPARATION
- ② FOUNDATION COURSE
- ③ GRANULAR BACKFILL MATERIAL (SUBSIDIARY)

**CONSTRUCTION NOTES:**

THE GRANULAR SUB-DRAIN SHALL BE CONSTRUCTED WITH POSITIVE DRAINAGE.

GRANULAR SUB-DRAIN SHALL BE INSTALLED AFTER ALL SHOULDERING & EARTH WORK IS COMPLETED AND PRIOR TO SEEDING.

GRANULAR SUB-DRAINS SHALL BE CONSTRUCTED AT INTERVALS OF 200'-0" WHERE THE GRADE IS 1% OR OVER AND AT INTERVALS OF 100 FT. ON GRADES UNDER 1%.

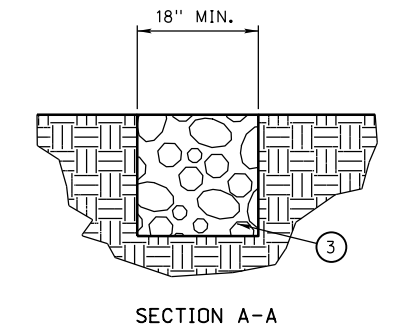
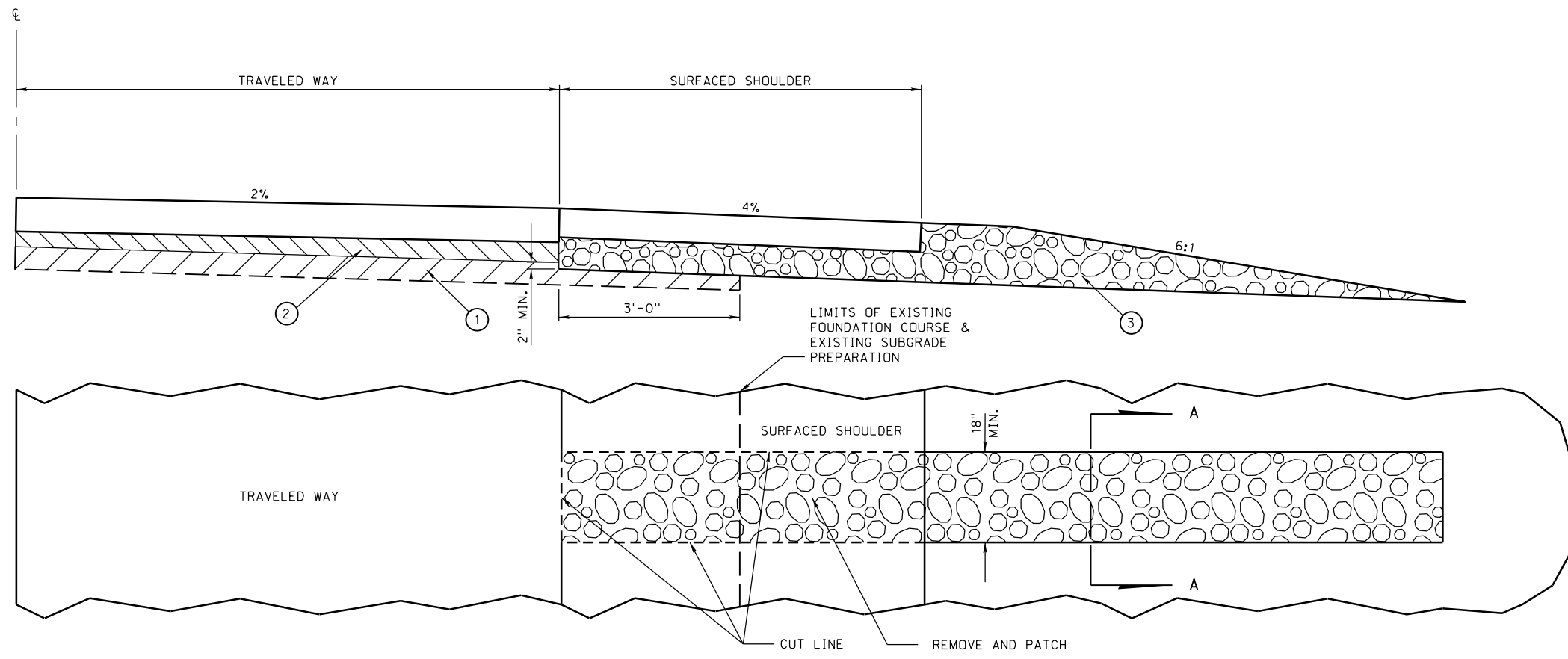
GRANULAR SUB-DRAINS SHALL BE BUILT PERPENDICULAR TO THE CENTER LINE.

BUILD GRANULAR SUB-DRAIN					
STATION	TO	STATION	SIDE	EACH	SPACING
*	-	*	*	*	*

## View 1 - NEW CONSTRUCTION

File: 43103e00.dgn  
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 SHEET 1 OF 2  
 Date: 25-JAN-2019 10:43  
 Computer: NDOTDESIGN134  
 4310-3-E-00

# GENERAL INFORMATION



GRANULAR SUB-DRAIN DETAILS

- ① SUBGRADE PREPARATION
- ② FOUNDATION COURSE
- ③ GRANULAR BACKFILL MATERIAL (SUBSIDIARY)

CONSTRUCTION NOTES:

THE GRANULAR SUB-DRAIN SHALL BE CONSTRUCTED WITH POSITIVE DRAINAGE.  
 GRANULAR SUB-DRAIN SHALL BE INSTALLED AFTER ALL SHOULDERING & EARTH WORK IS COMPLETED AND PRIOR TO SEEDING.  
 GRANULAR SUB-DRAINS SHALL BE CONSTRUCTED AT INTERVALS OF 200 FT. WHERE THE GRADE IS 1% OR OVER AND AT INTERVALS OF 100 FT. ON GRADES UNDER 1%.  
 GRANULAR SUB-DRAINS SHALL BE BUILT PERPENDICULAR TO THE CENTER LINE.

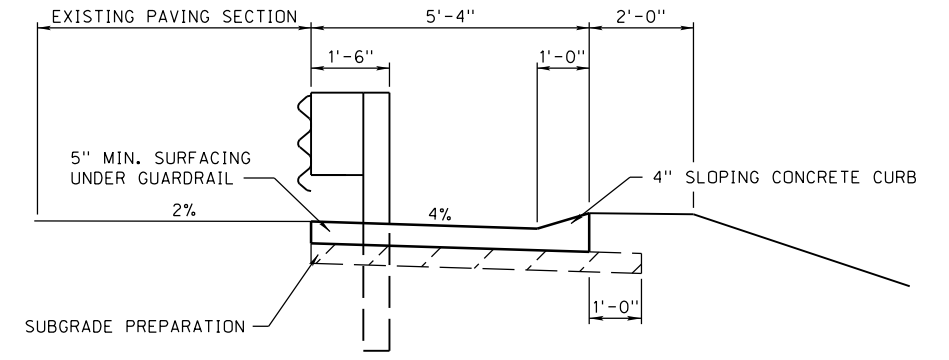
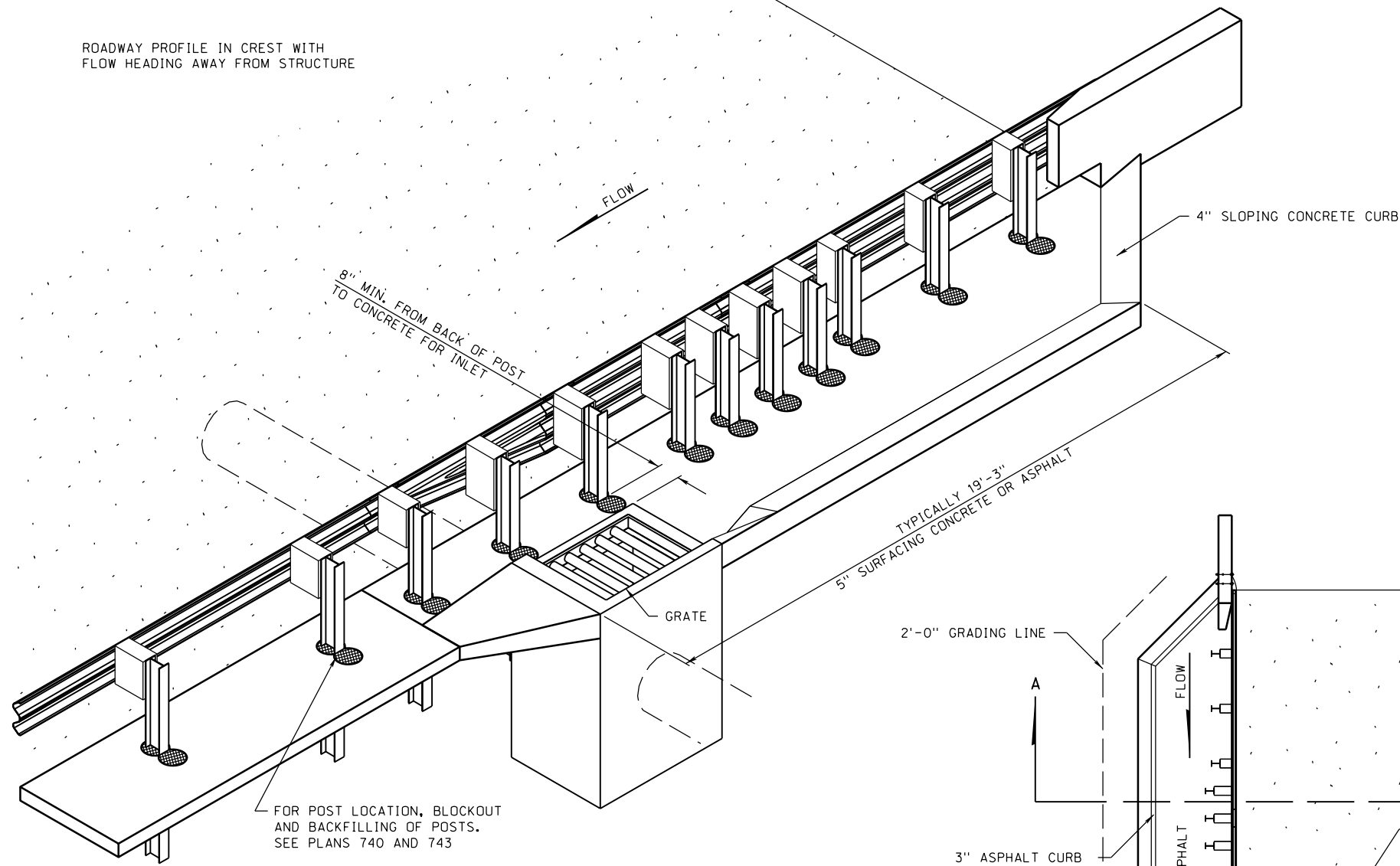
BUILD GRANULAR SUB-DRAIN					
STATION	TO	STATION	SIDE	EACH	SPACING
*	-	*	*	*	*

## View 2 - RETROFIT

# GENERAL INFORMATION

ROADWAY DESIGN DIVISION  
 Computer: NDOTDESIGN134  
 Date: 25-JAN-2019 10:43  
 File: 43353e02.dgn  
 SHEET 1 OF 2  
 4335-3-E-02

ROADWAY PROFILE IN CREST WITH  
FLOW HEADING AWAY FROM STRUCTURE

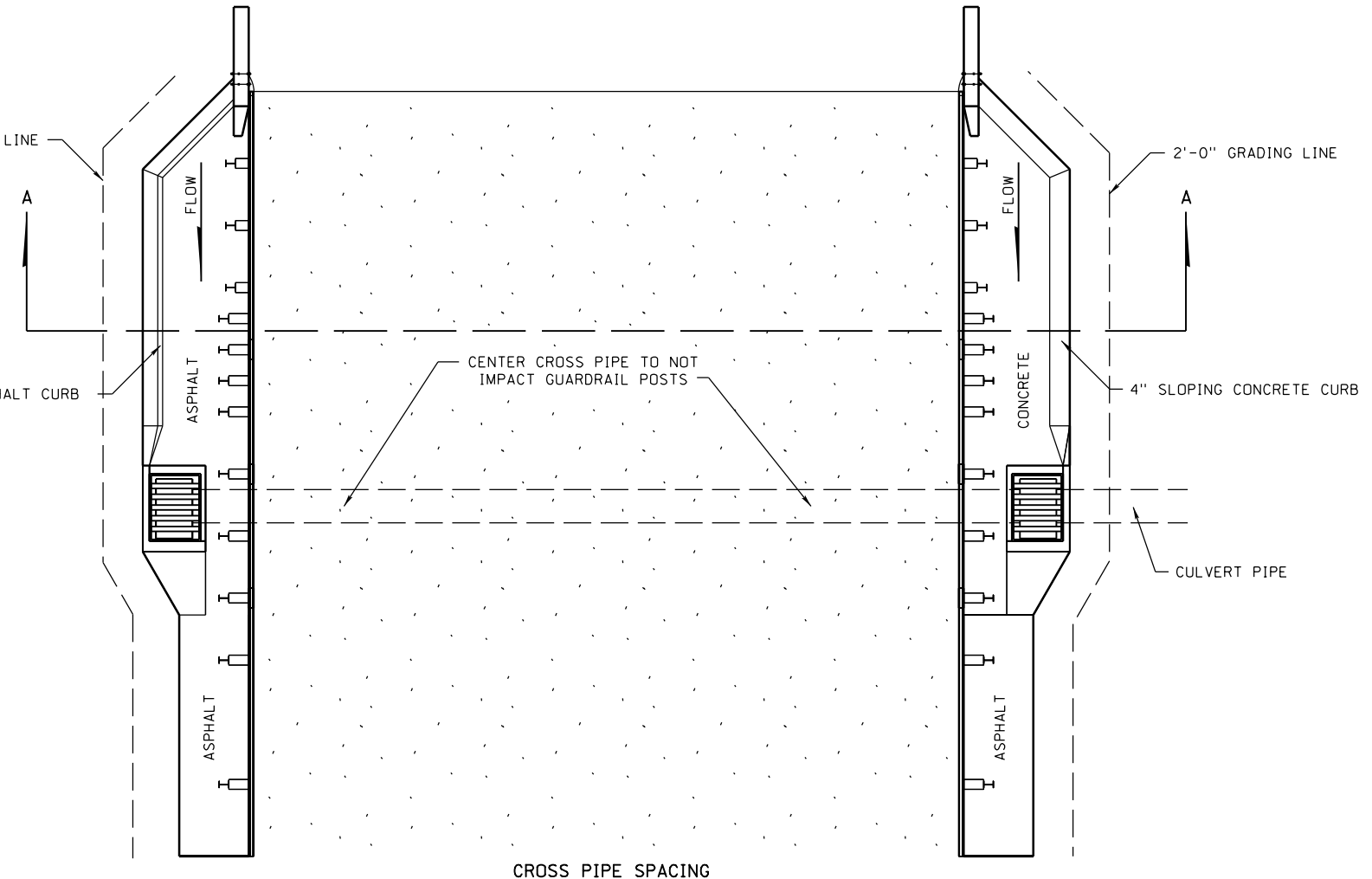


SECTION A-A

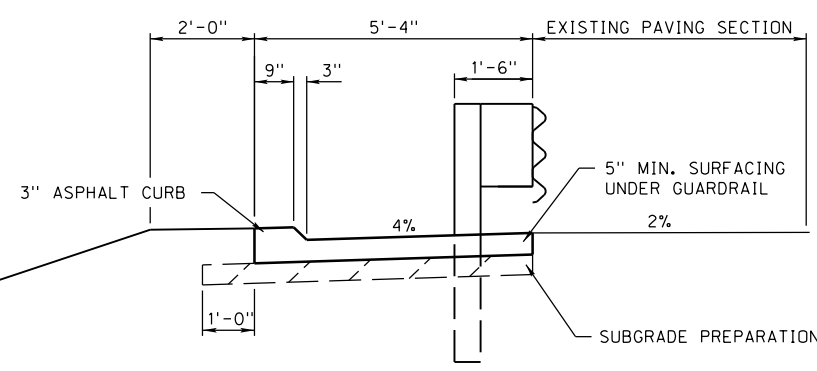
FOR POST LOCATION, BLOCKOUT  
AND BACKFILLING OF POSTS.  
SEE PLANS 740 AND 743

2'-0" GRADING LINE

3" ASPHALT CURB



CROSS PIPE SPACING



SECTION A-A

BRIDGE INLET BEHIND GUARDRAIL FOR CREST CONDITION

APPROACH SLAB DRAINAGE INLETS

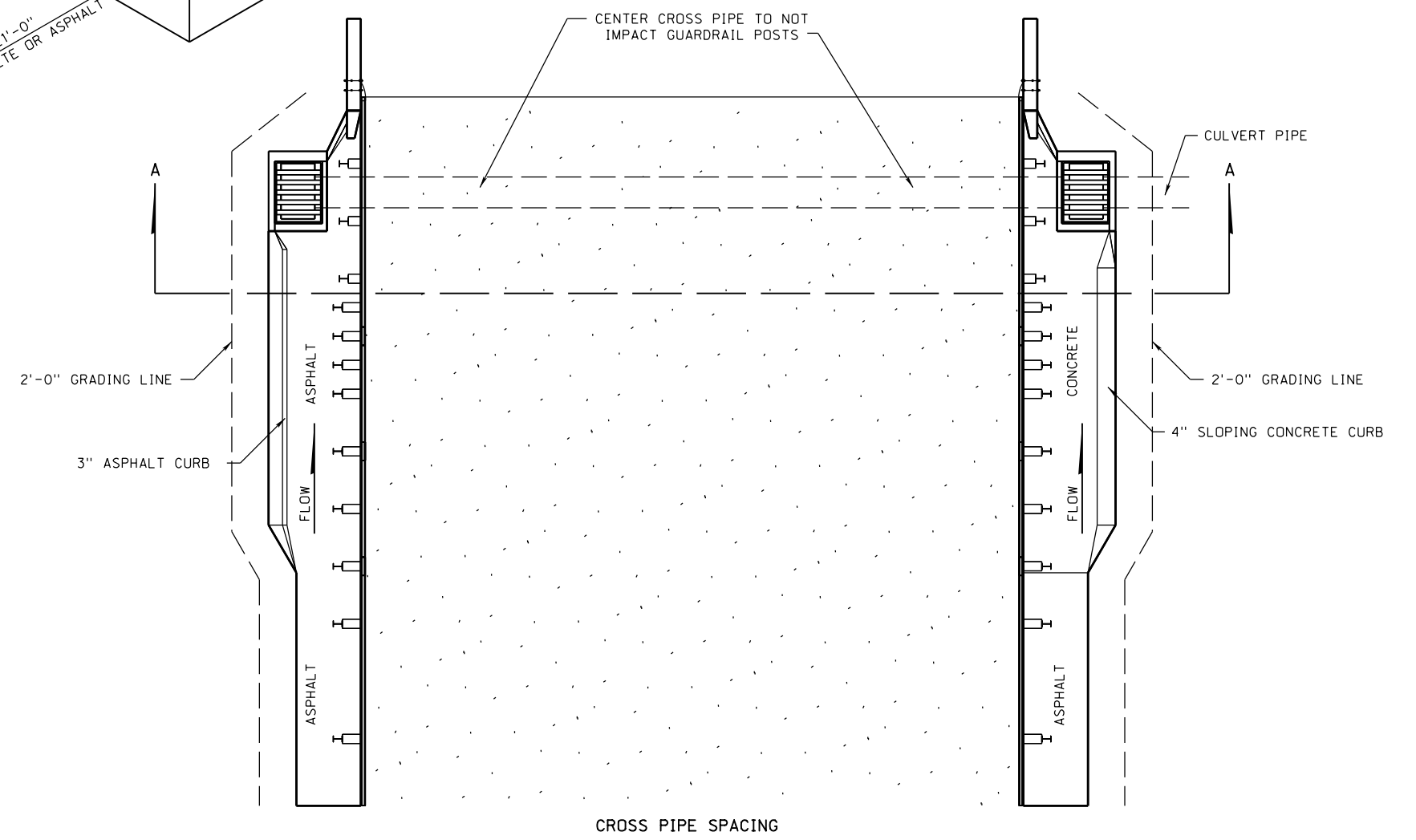
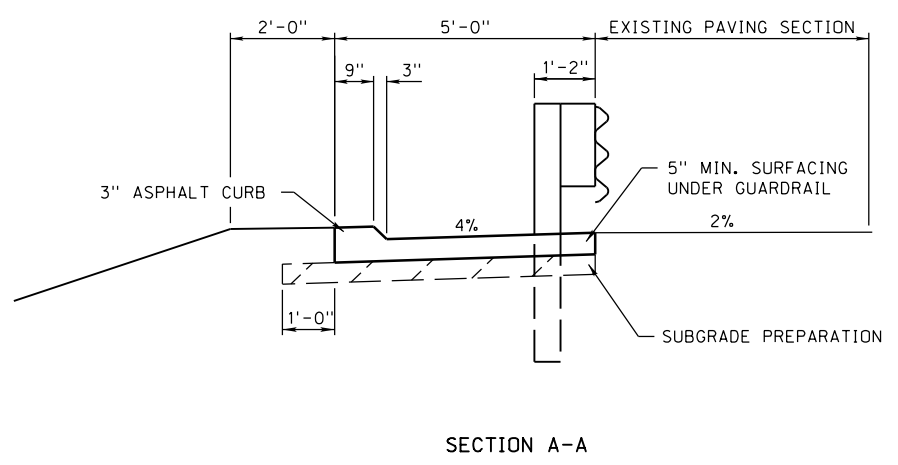
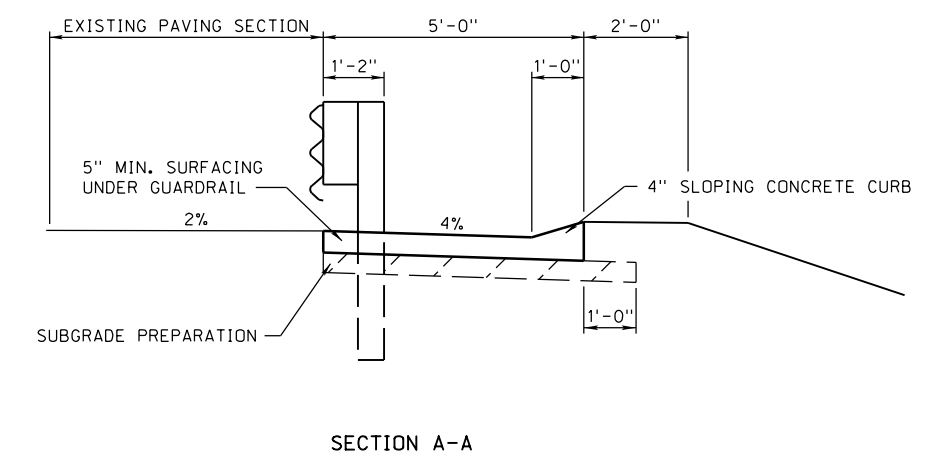
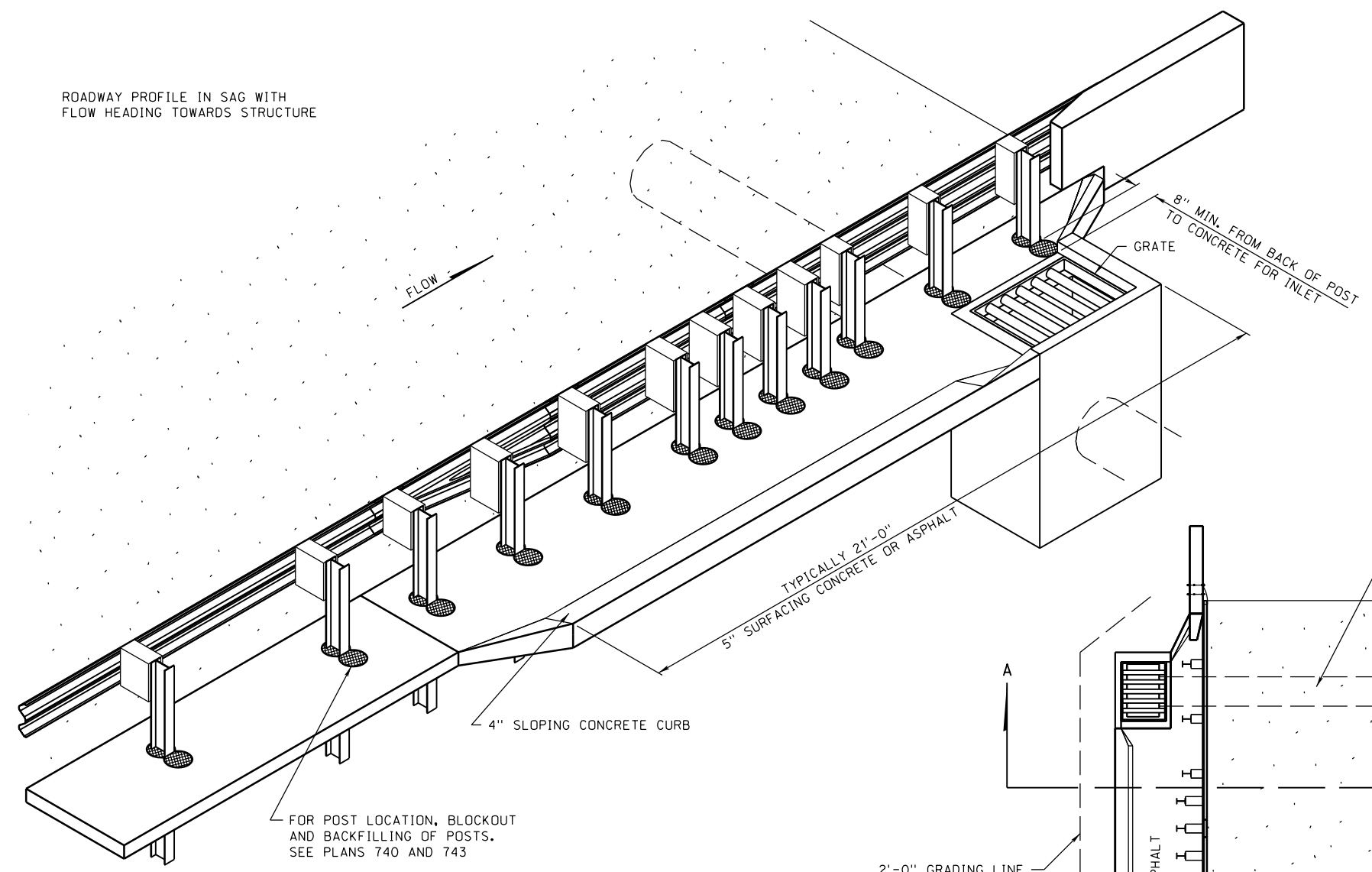
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SHEET 2 OF 2



BRIDGE INLET BEHIND GUARDRAIL FOR SAG CONDITION

APPROACH SLAB DRAINAGE INLETS

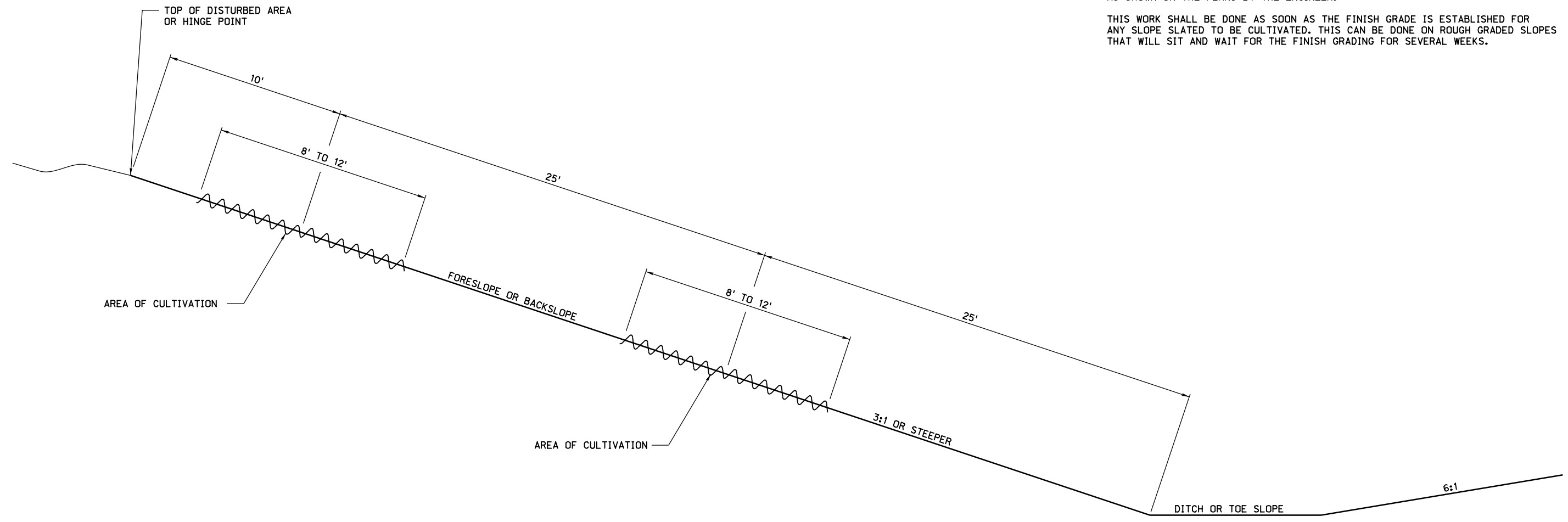
# GENERAL INFORMATION

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SHEET 1 OF 1



**NOTES:**

A FIELD CULTIVATOR SHALL BE USED TO PRODUCE PARALLEL, ON THE CONTOUR, 8' TO 12' WIDE CULTIVATION STRIPS. THESE AREAS SHALL BE TILLED TO A DEPTH OF THREE (3) TO FOUR (4) INCHES DEEP.

THE CULTIVATED STRIPS SHALL BE DONE ON A SPACING OF 25' ON CENTER AND AS SHOWN ON THE PLANS BY THE ENGINEER.

THIS WORK SHALL BE DONE AS SOON AS THE FINISH GRADE IS ESTABLISHED FOR ANY SLOPE SLATED TO BE CULTIVATED. THIS CAN BE DONE ON ROUGH GRADED SLOPES THAT WILL SIT AND WAIT FOR THE FINISH GRADING FOR SEVERAL WEEKS.



CONTOUR CULTIVATION