

BRIDGE APPROACH CURB & GUTTER, DETAIL 5

NOTE:
FOR USE WITH GUARDRAIL ANCHORAGE, BRIDGE, DETAIL M- , AND THE REQUIRED
NUMBER OF DRAINAGE STRUCTURES BASED ON A HYDROLOGICAL ANALYSIS OF THE
AREA AND THE SIZE OF THE BRIDGE DECK.
FOR USE ALSO ON DEPARTING ENDS WITH OR WITHOUT GUARDRAIL.

APPROVED BY: _____
DIRECTOR, BUREAU OF FIELD SERVICES

APPROVED BY: _____
DIRECTOR, BUREAU OF DEVELOPMENT



DEPARTMENT DIRECTOR
BRADLEY C. WIEFERICH, PE

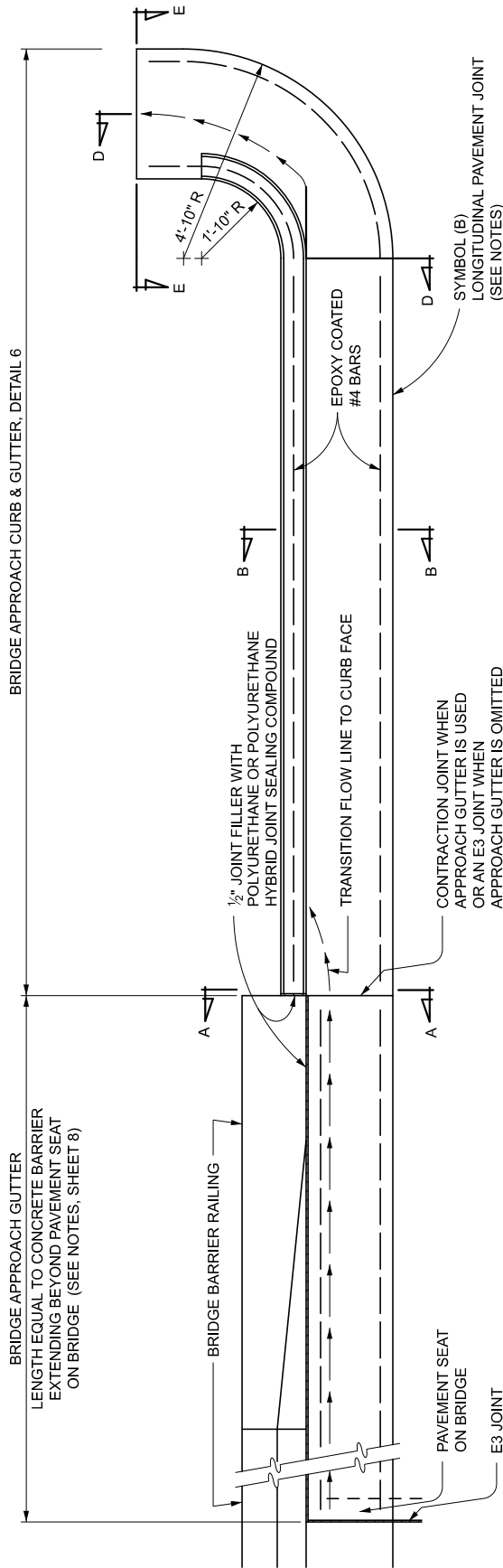
STANDARD PLAN FOR
APPROACH CURB & GUTTER DOWNSPOUTS
(FOR BRIDGE BARRIER ON RURAL HIGHWAYS)

(SPECIAL DETAIL)
FHWA APPROVAL

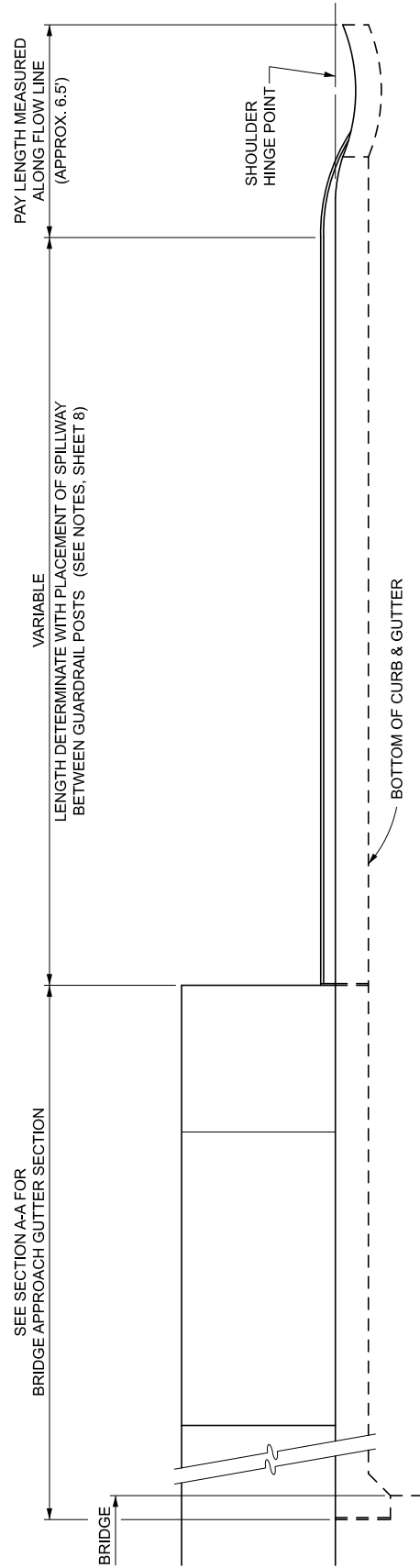
09/20/2022
PLAN DATE

R-32-F

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PLAN



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STANDARD PLAN FOR
APPROACH CURB & GUTTER DOWNSPOUTS
(FOR BRIDGE BARRIER ON RURAL HIGHWAYS)

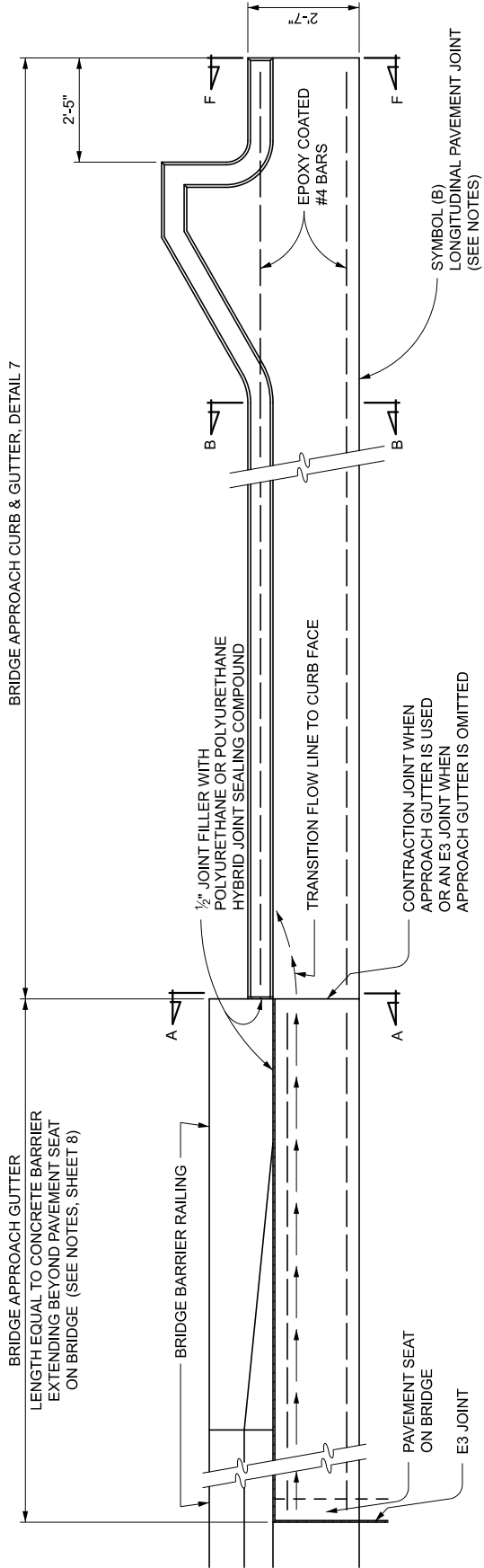
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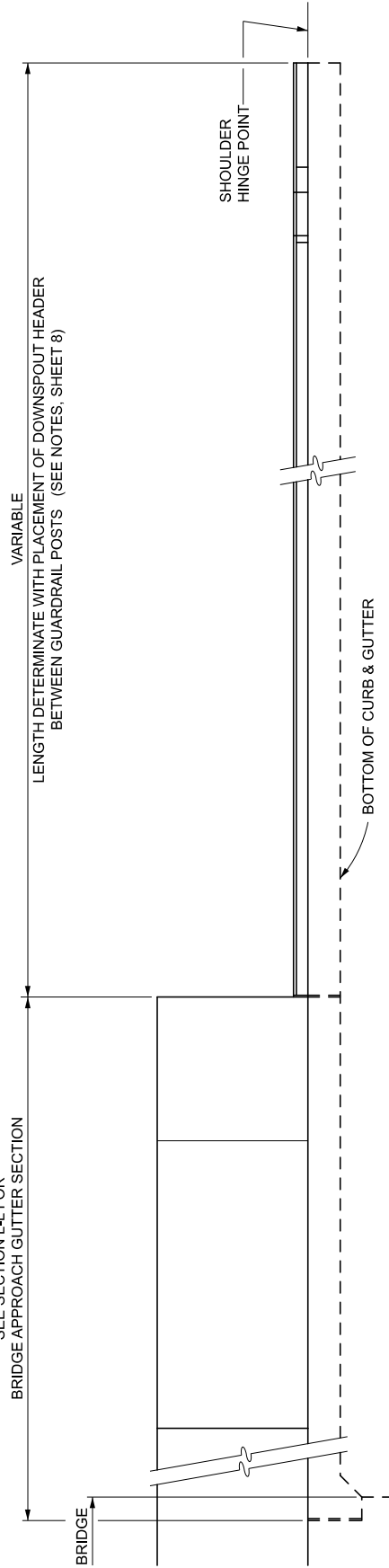
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BRIDGE APPROACH CURB & GUTTER, DETAIL 7



PLAN

SEE SECTION L-L FOR
BRIDGE APPROACH GUTTER SECTION



ELEVATION
BRIDGE APPROACH CURB & GUTTER, DETAIL 7

NOTE: FOR USE WITH GUARDRAIL ANCHORAGE, BRIDGE, DETAIL M-1, AND THE REQUIRED NUMBER OF DRAINAGE STRUCTURES BASED ON A HYDROLOGICAL ANALYSIS OF THE AREA AND THE SIZE OF THE BRIDGE DECK.



DEPARTMENT DIRECTOR
BRADLEY C. WIEFERICH, PE

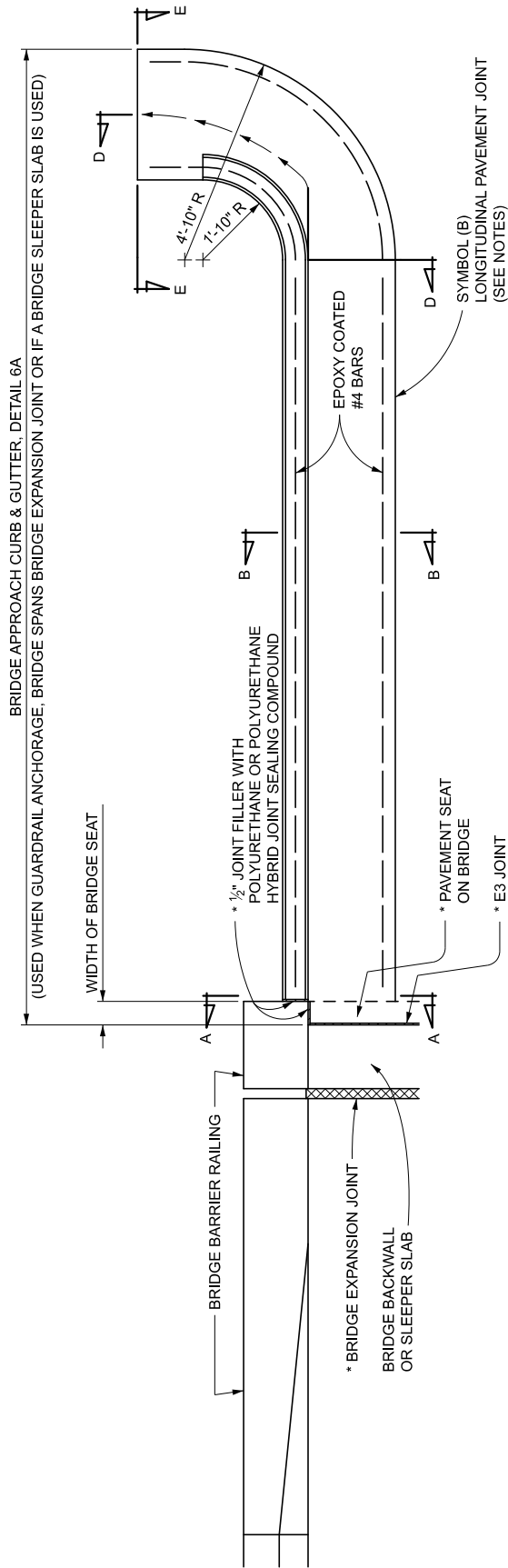
STANDARD PLAN FOR
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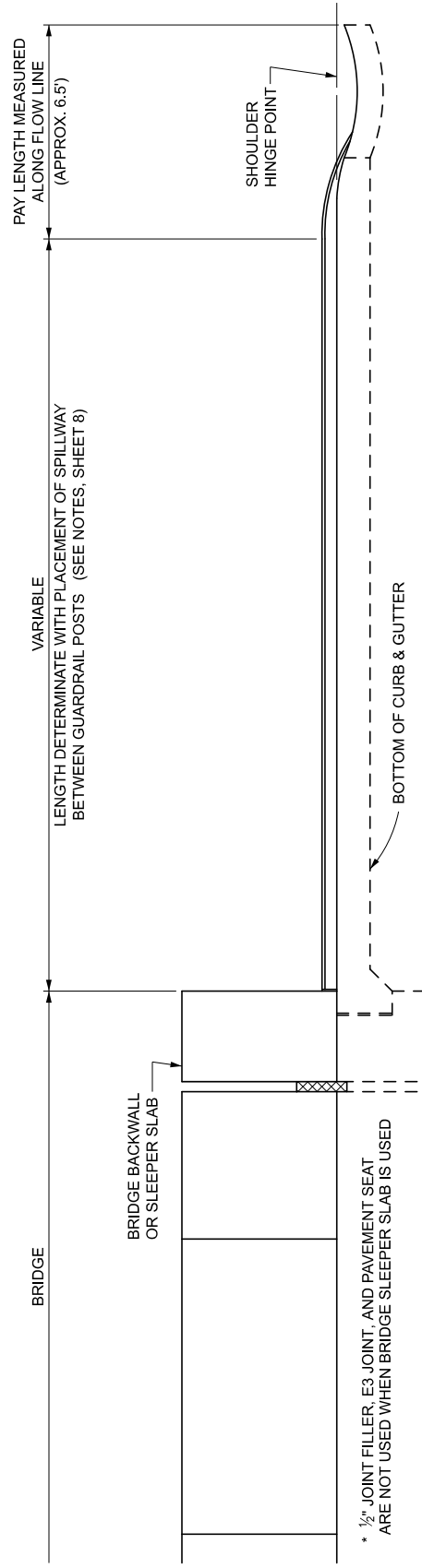
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ELEVATION
BRIDGE APPROACH CURB & GUTTER, DETAIL 6A

NOTE: FOR USE WITH GUARDRAIL ANCHORAGE, BRIDGE, DETAIL M-1, AND THE REQUIRED NUMBER OF DRAINAGE STRUCTURES BASED ON A HYDROLOGICAL ANALYSIS OF THE AREA AND THE SIZE OF THE BRIDGE DECK.



DEPARTMENT DIRECTOR
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STANDARD PLAN FOR
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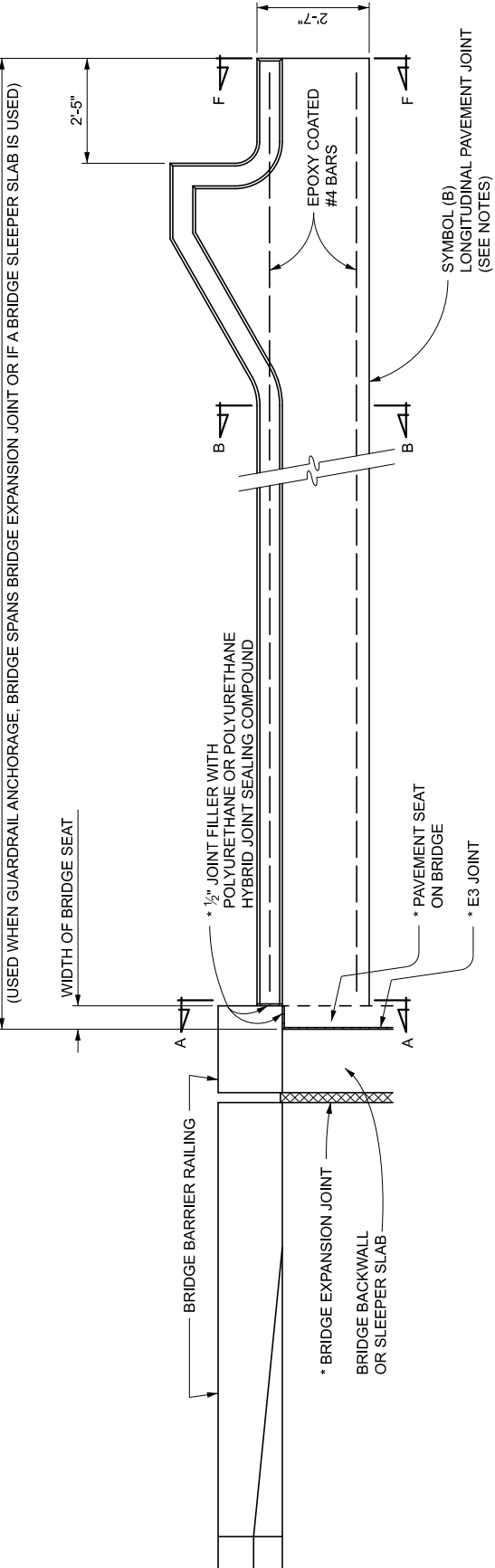
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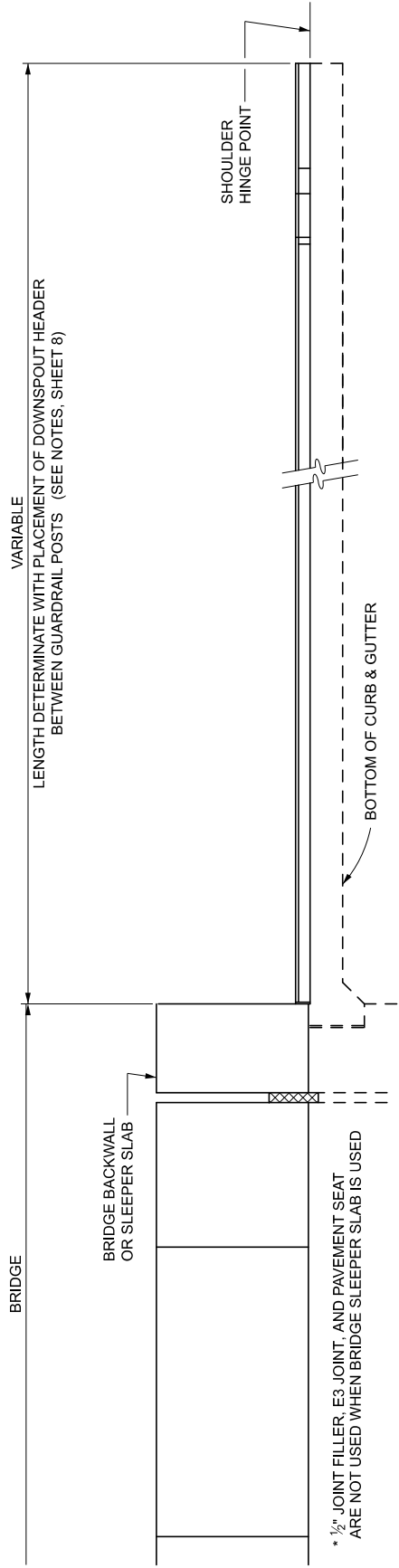
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BRIDGE APPROACH CURB & GUTTER, DETAIL 7A



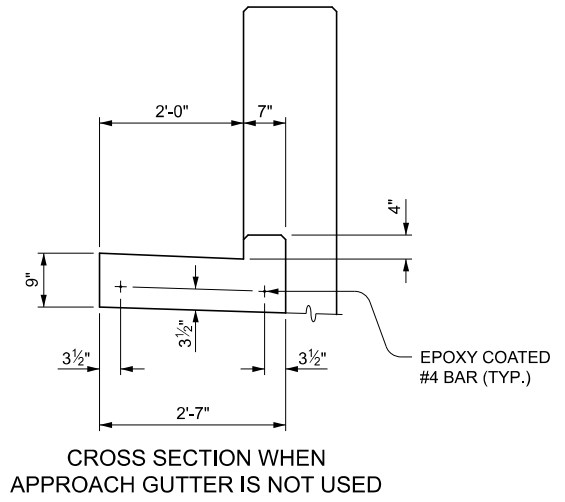
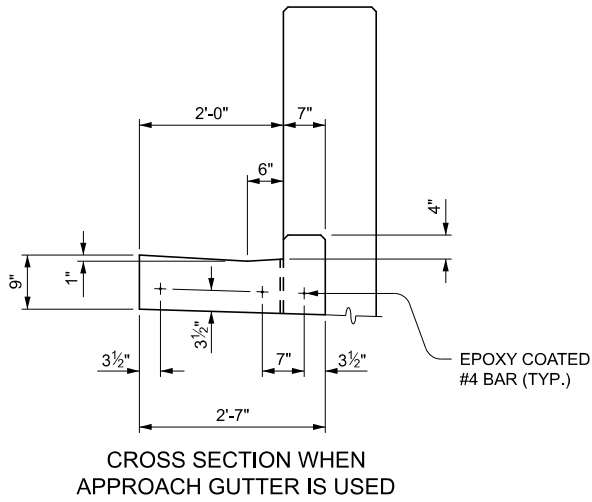
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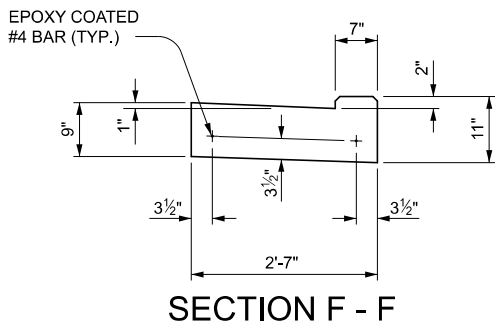
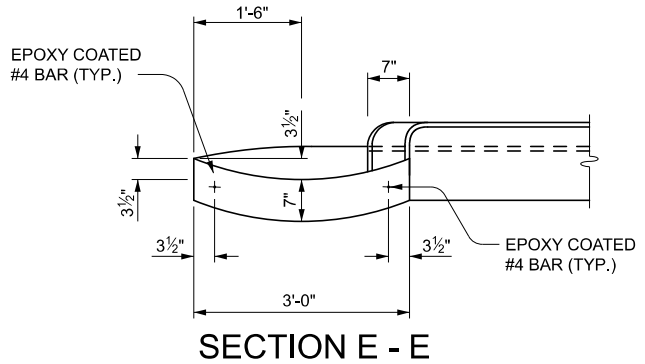
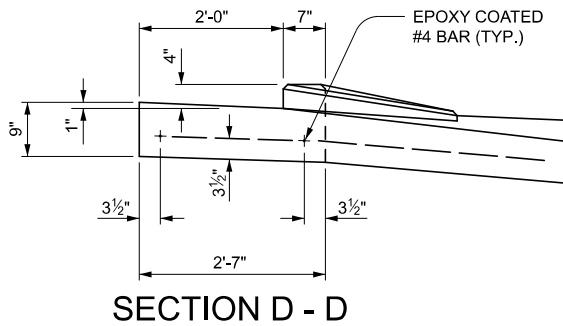
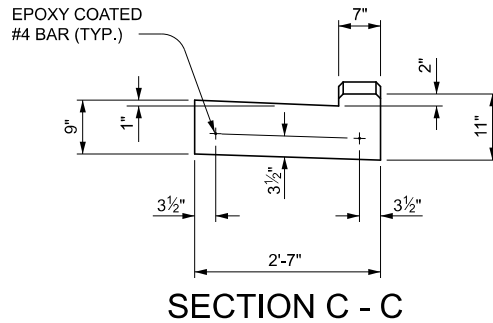
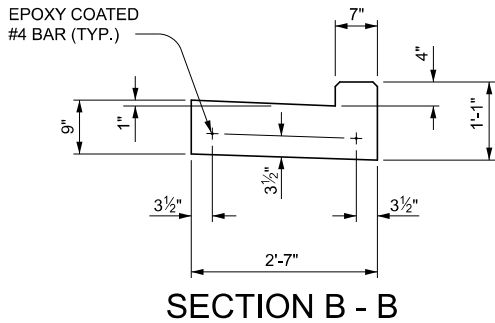
ELEVATION
BRIDGE APPROACH CURB & GUTTER, DETAIL 7A

NOTE: FOR USE WITH GUARDRAIL ANCHORAGE, BRIDGE, DETAIL M-1, AND THE REQUIRED NUMBER OF DRAINAGE STRUCTURES BASED ON A HYDROLOGICAL ANALYSIS OF THE AREA AND THE SIZE OF THE BRIDGE DECK.

<p>DEPARTMENT DIRECTOR BRADLEY C. WIEFERICH, PE</p>	STANDARD PLAN FOR APPROACH CURB & GUTTER DOWNSPOUTS (FOR BRIDGE BARRIER ON RURAL HIGHWAYS)		R-32-F	SHEET 5 OF 8
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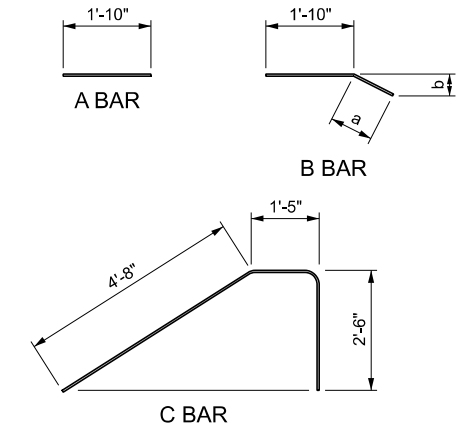
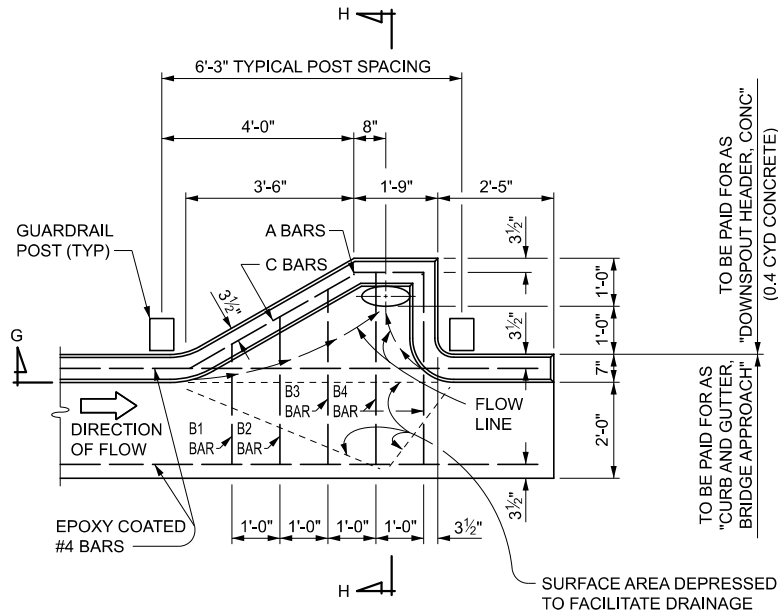


SECTION A - A
(SEE NOTES, SHEET 8)

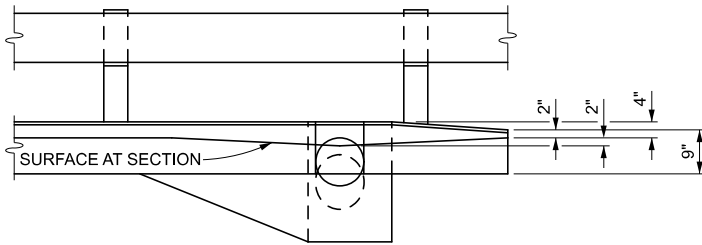


NOTE: ALL BARS ARE EPOXY COATED

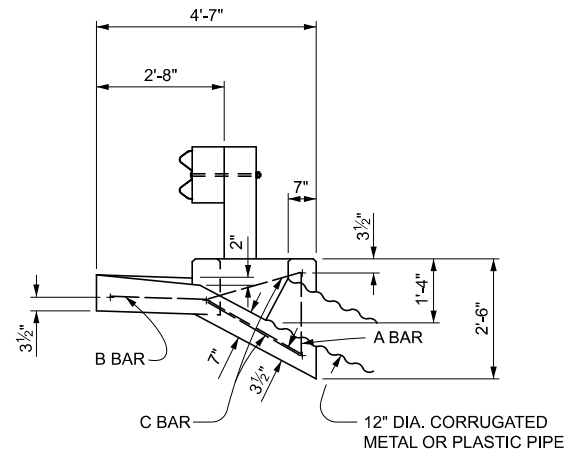
BAR	DIMENSIONS		BAR SIZE	NUMBER REQUIRED	TOTAL LENGTH
	a	b			
A			#4	2	3'-8"
B1	11"	5"	#4	1	2'-9"
B2	1'-7"	8½"	#4	1	3'-5"
B3	2'-3"	1'-0"	#4	1	4'-1"
B4	2'-7"	1'-2"	#4	2	8'-10"
C			#4	2	17'-2"
TOTAL WEIGHT OF STEEL 26.7 LBS					



PLAN OF CONCRETE DOWNSPOUT HEADER

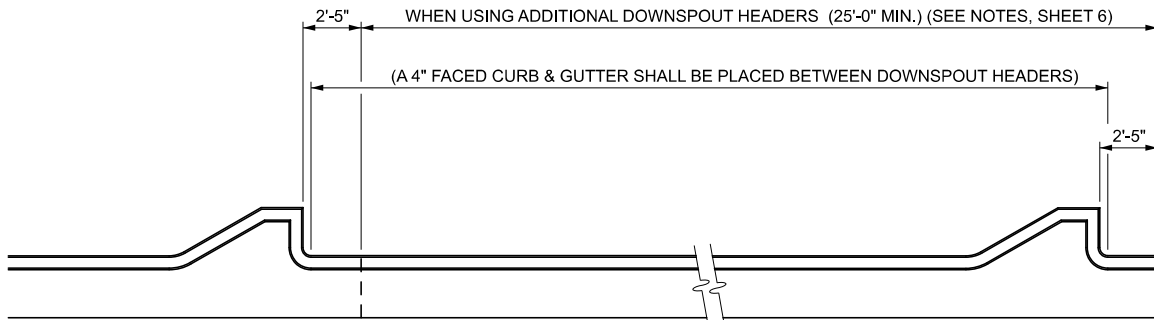


SECTION G - G



SECTION H - H

DETAIL SHOWS RELATIONSHIP OF GUARDRAIL WITH DOWNSPOUT HEADER



PLAN OF ADDITIONAL CONCRETE DOWNSPOUT HEADERS

MDOT
Michigan Department of Transportation

DEPARTMENT DIRECTOR
BRADLEY C. WIEFERICH, PE

STANDARD PLAN FOR
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(FOR BRIDGE BARRIER ON RURAL HIGHWAYS)

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NOTES:

ALL MATERIALS AND WORKMANSHIP SHALL BE ACCORDING TO THE CURRENT STANDARD SPECIFICATIONS FOR CONCRETE CURB AND GUTTER.

FOR TYPE OF BRIDGE APPROACH CURB AND GUTTER TO USE AT A SPECIFIC LOCATION, SEE BRIDGE APPROACH PLANS.

SEE STANDARD PLAN R-27-SERIES FOR BRIDGE APPROACH CURB AND GUTTER USING EXISTING CATCH BASIN.

THE LENGTH OF BRIDGE APPROACH GUTTER (USED WHEN THE BRIDGE BARRIER RAILING EXTENDS BEYOND PAVEMENT SEAT ON BRIDGE) SHALL BE INCLUDED IN THE PAY ITEM "CURB AND GUTTER, BRIDGE APPROACH". OMIT BRIDGE APPROACH GUTTER WHEN CONCRETE BARRIER ENDS AT PAVEMENT SEAT ON BRIDGE OR AT A SLEEPER SLAB. (SEE SECTION A-A)

THE CURB AND GUTTER SHALL BE ALIGNED WITH THE BEAM GUARDRAIL AS SPECIFIED ON STANDARD PLAN R-67-SERIES. THE LOCATION OF GUARDRAIL POSTS SHOULD BE DETERMINED PRIOR TO LOCATING THE SPILLWAY OR DOWNSPOUT HEADER.

THE AREA BETWEEN THE EDGE OF THE PAVEMENT AND THE GUTTER SHALL BE SURFACED WITH THE SAME MATERIAL AS THE SHOULDERS, EXCEPT IN THE CASE OF AGGREGATE SHOULDERS, WHERE A BITUMINOUS TREATMENT WILL BE REQUIRED.

ALL EXPANSION JOINTS REQUIRED WILL BE INCLUDED IN THE PAY ITEM FOR BRIDGE APPROACH CURB AND GUTTER.

JOINTS SHALL BE AS SPECIFIED ON STANDARD PLAN R-30-SERIES.

ALL EXPOSED EDGES SHALL BE CHAMFERED $\frac{3}{4}$ ".

THE CONCRETE DOWNSPOUT HEADER SHALL BE USED IN CONJUNCTION WITH BRIDGE APPROACH CURB AND GUTTER, DETAILS 7 AND 7A.

CORRUGATED PIPE WILL BE PAID FOR SEPARATELY.

WHEN THE DRAINAGE AREA REQUIRES ADDITIONAL CONCRETE DOWNSPOUT HEADERS, SPACING OF THE SECOND AND/OR ADDITIONAL DOWNSPOUT HEADERS SHOULD BE DETERMINED ACCORDING TO THEIR INDIVIDUAL DRAINAGE AREAS. ADDITIONAL DOWNSPOUT HEADERS ARE TO BE LOCATED BETWEEN GUARDRAIL POSTS AS SPECIFIED ON THE PLAN OF CONCRETE DOWNSPOUT HEADER.

A SYMBOL (B) JOINT SHALL BE PLACED BETWEEN CURB OR CURB AND GUTTER AND ADJACENT CONCRETE PAVEMENT AS SPECIFIED ON STANDARD PLAN R-41-SERIES.



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