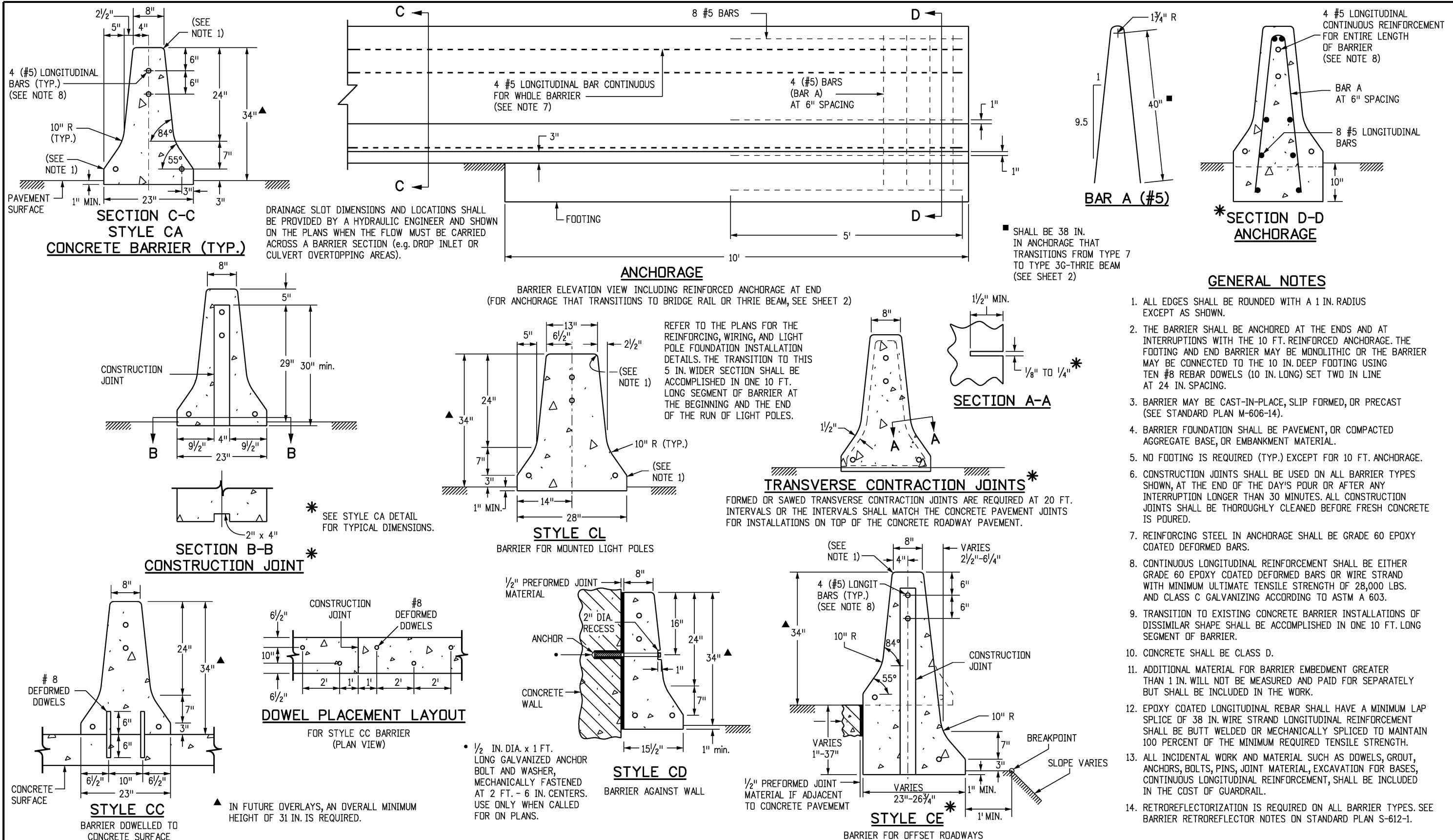
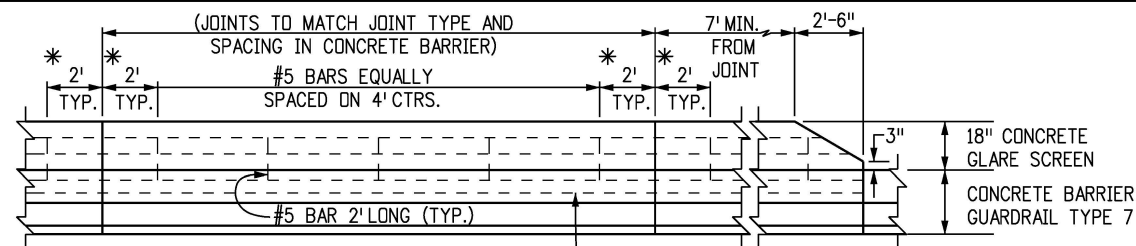




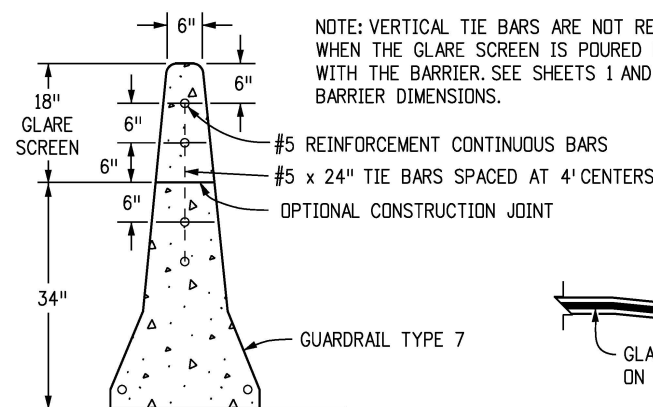
Computer File Information		Sheet Revisions		Colorado Department of Transportation 2829 West Howard Place CDOT HQ, 3rd Floor Denver, CO 80204 Phone: 303-757-9021 FAX: 303-757-9868 Project Development Branch JBK	GUARDRAIL TYPE 7 F-SHAPE BARRIER Issued by the Project Development Branch: July 31, 2019	STANDARD PLAN NO.	
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Designer Initials: JBK	(R-X)					Standard Sheet No. 1 of 4	
Last Modification Date: 07/31/19	(R-X)					Project Sheet Number:	
Detailer Initials: LTA	(R-X)						
CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English	(R-X)						



ELEVATION

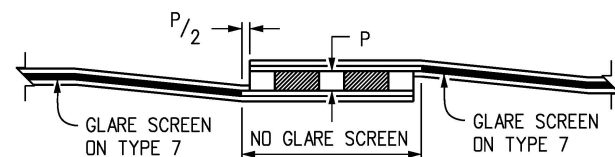
#5 REINFORCEMENT CONTINUOUS BARS

* 2 FT. IS TYPICAL FOR CAST-IN-PLACE BARRIERS.
1 FT. IS TYPICAL FOR PRECAST BARRIERS.
THE MINIMUM ACCEPTABLE DIMENSION IS 6 IN.

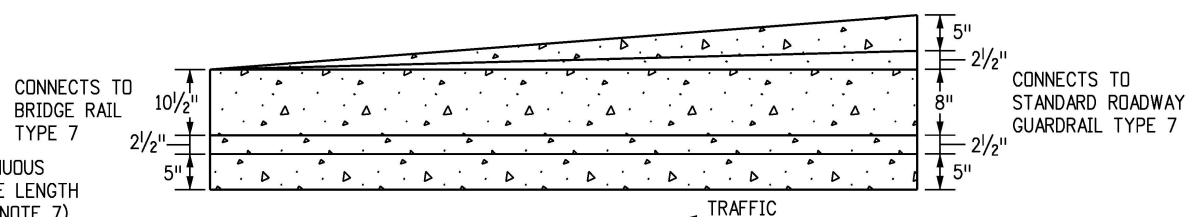


CONCRETE GLARE SCREEN

NOTE: VERTICAL TIE BARS ARE NOT REQUIRED WHEN THE GLARE SCREEN IS POURED MONOLITHICALLY WITH THE BARRIER. SEE SHEETS 1 AND 2 FOR BARRIER DIMENSIONS.

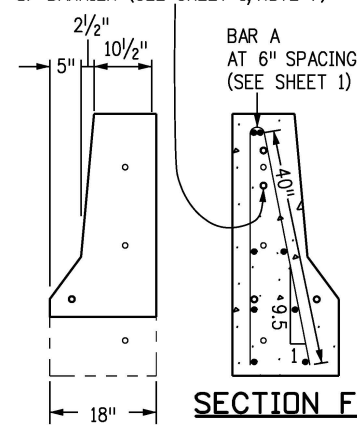


GLARE SCREEN AT MEDIAN OBSTRUCTIONS

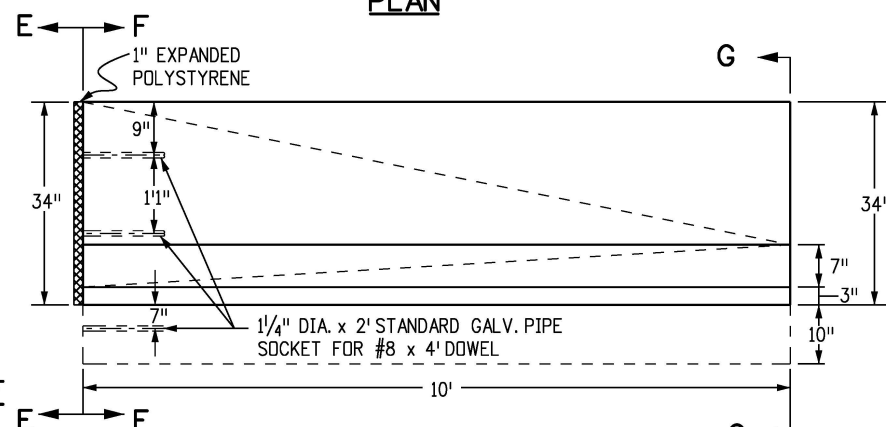


PLAN

4 #5 LONGITUDINAL CONTINUOUS REINFORCEMENT FOR ENTIRE LENGTH OF BARRIER (SEE SHEET 1, NOTE 7)



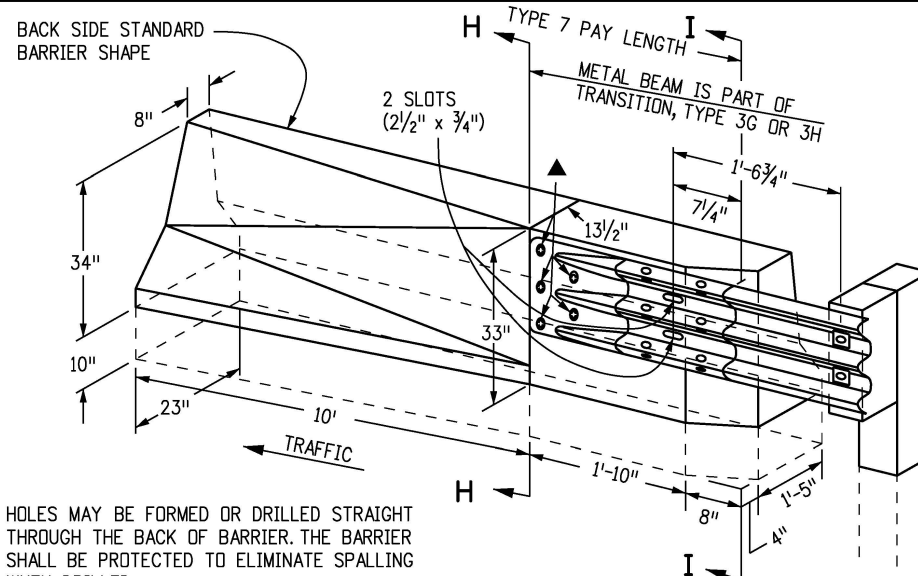
SECTION E-E



ELEVATION

THIS SECTION PROVIDES A TRANSITION FOR THE SHAPE OF THE BRIDGE RAIL TYPE 7 TO THE ROADWAY GUARDRAIL TYPE 7. MEASURED AND PAID FOR AS GUARDRAIL TYPE 7. (SEE ANCHORAGE DETAIL ON SHEET 1 FOR REINFORCEMENT INFORMATION)

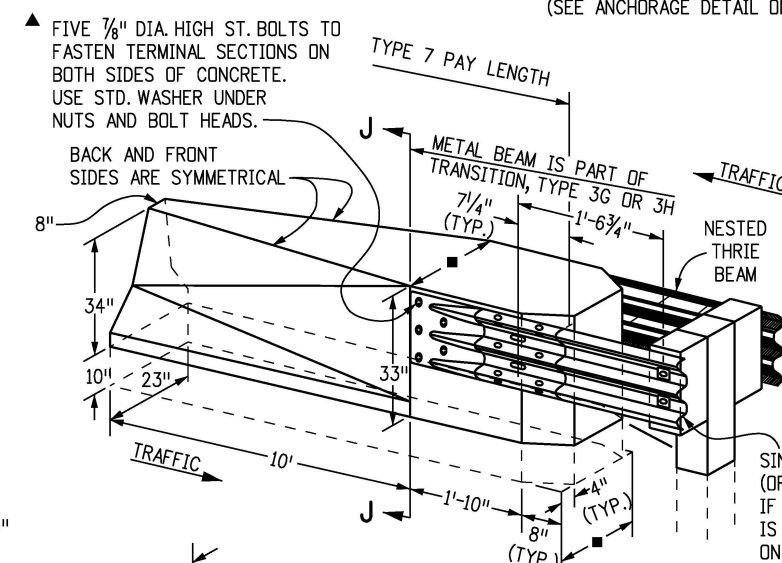
BRIDGE RAIL TYPE 7 TO ROADWAY SHOULDER TYPE 7 TRANSITION AND ANCHORAGE



SECTION H-H

TYPE 7 TO SINGLE TYPE 3G TRANSITION AND ANCHORAGE

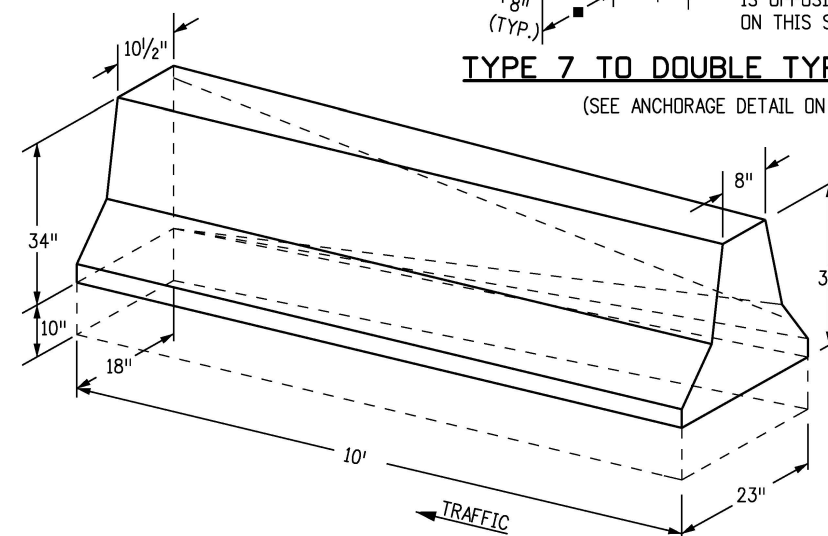
(SEE ANCHORAGE DETAIL ON SHEET 1 FOR REINFORCEMENT INFORMATION)



SECTION J-J

TYPE 7 TO DOUBLE TYPE 3G TRANSITION AND ANCHORAGE

(SEE ANCHORAGE DETAIL ON SHEET 1 FOR REINFORCEMENT INFORMATION)

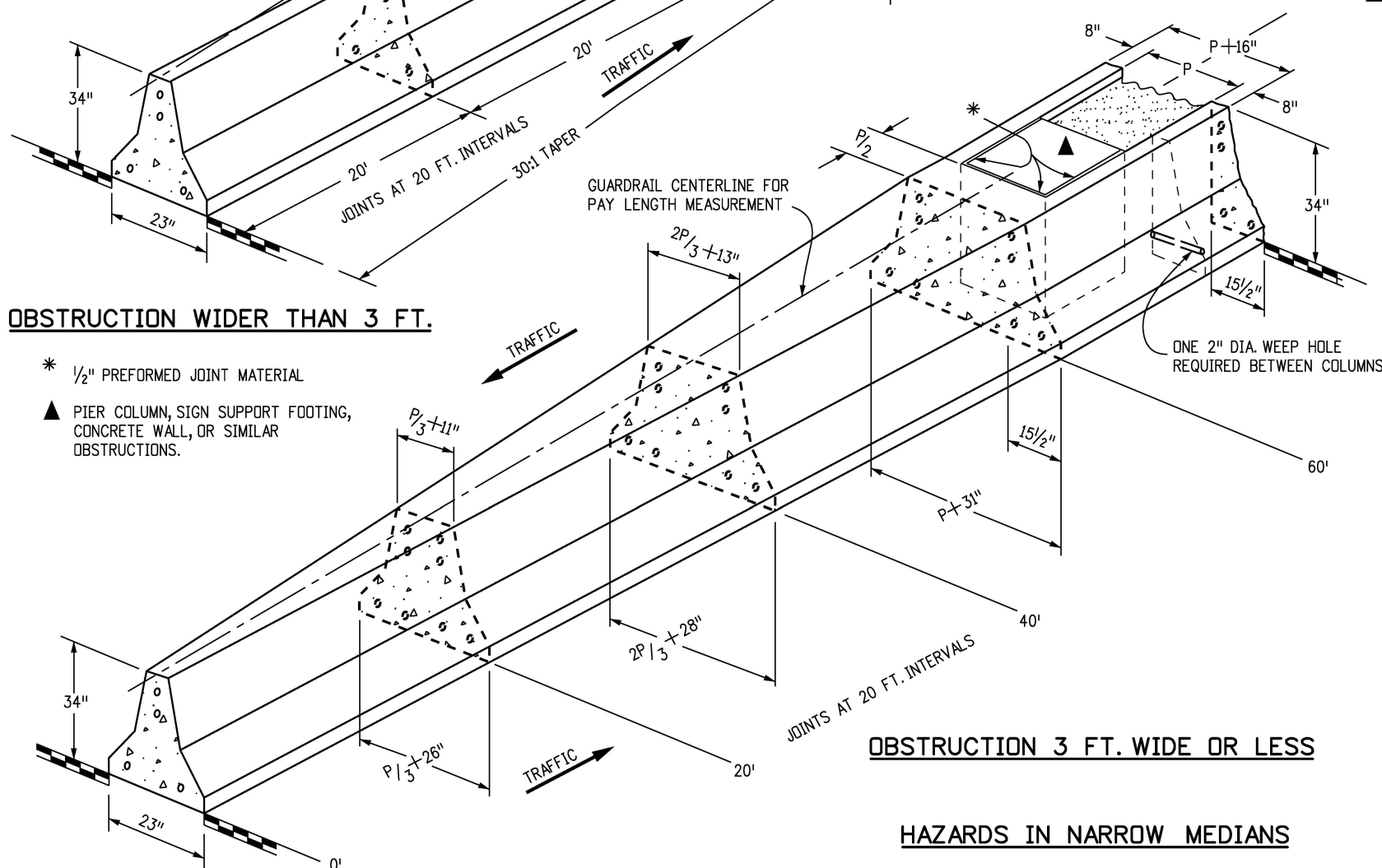


SECTION G-G

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CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English							



▲ PIER COLUMN, SIGN SUPPORT FOOTING,
CONCRETE WALL, OR SIMILAR
OBSTRUCTIONS.



OBSTRUCTION 3 FT. WIDE OR LESS

HAZARDS IN NARROW MEDIANS

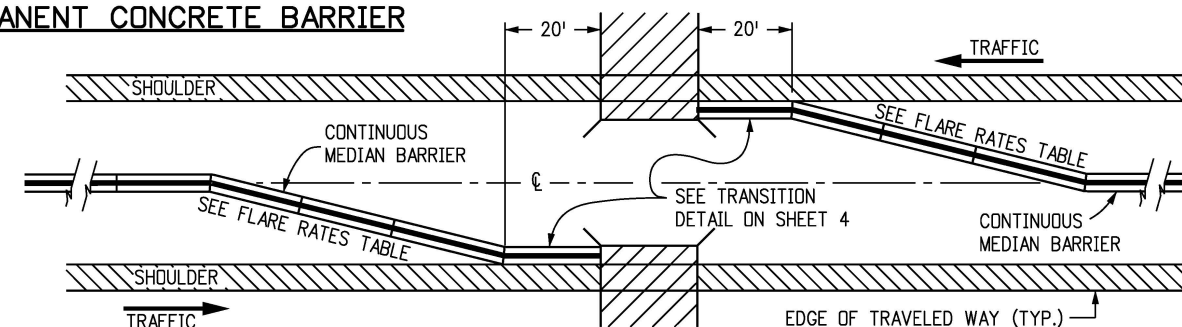
DESIGN SPEED (MPH)	SHY LINE OFFSET (FT.)*	FLARE RATE FOR BARRIER INSIDE SHY LINE	FLARE RATE FOR BARRIER OUTSIDE SHY LINE
80	12	30:1	20:1
75	10	30:1	20:1
70	9	30:1	20:1
60	8	26:1	18:1
55	7	24:1	16:1
50	6.5	21:1	14:1
45	6	18:1	12:1
40	5	16:1	10:1
30	4	13:1	8:1

* THE SHY LINE OFFSET IS MEASURED FROM THE EDGE OF THE TRAVELED WAY.

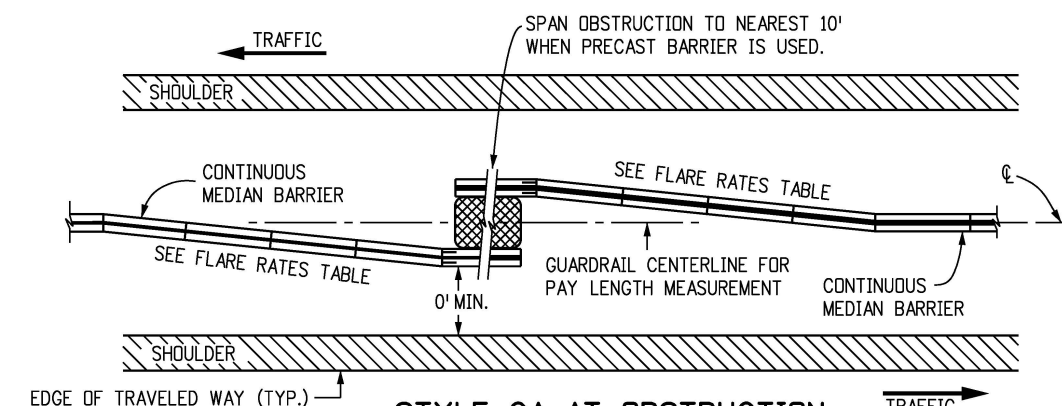
TABLE OF FLARE RATES FOR PERMANENT CONCRETE BARRIER

NOTES

1. THE MEDIAN IN THESE APPLICATIONS SHALL BE PAVED ON A SLOPE CONTINUED FROM THE ADJACENT PAVED SHOULDER OR A 10:1 OR FLATTER SLOPE.
2. THE PAY LENGTH FOR BARRIER ON BOTH SIDES OF AN OBSTRUCTION WILL BE DETERMINED BY ONE LINEAR MEASUREMENT ALONG THE GUARDRAIL CENTERLINE. THE BACKFILL AND CAP BETWEEN COLUMNS OR OBSTRUCTIONS WILL NOT BE MEASURED AND PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE WORK.
3. GUARDRAIL BETWEEN COLUMNS OR OBSTRUCTIONS MAY BE STYLES CD OR CA AS SHOWN ON THE PLANS.

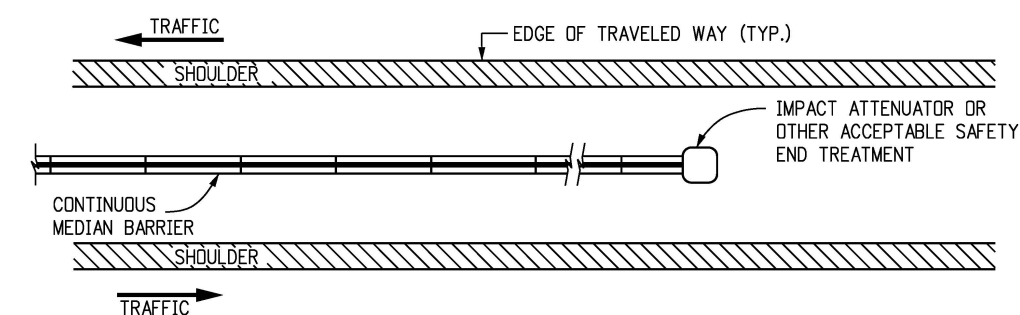


BRIDGE APPROACH



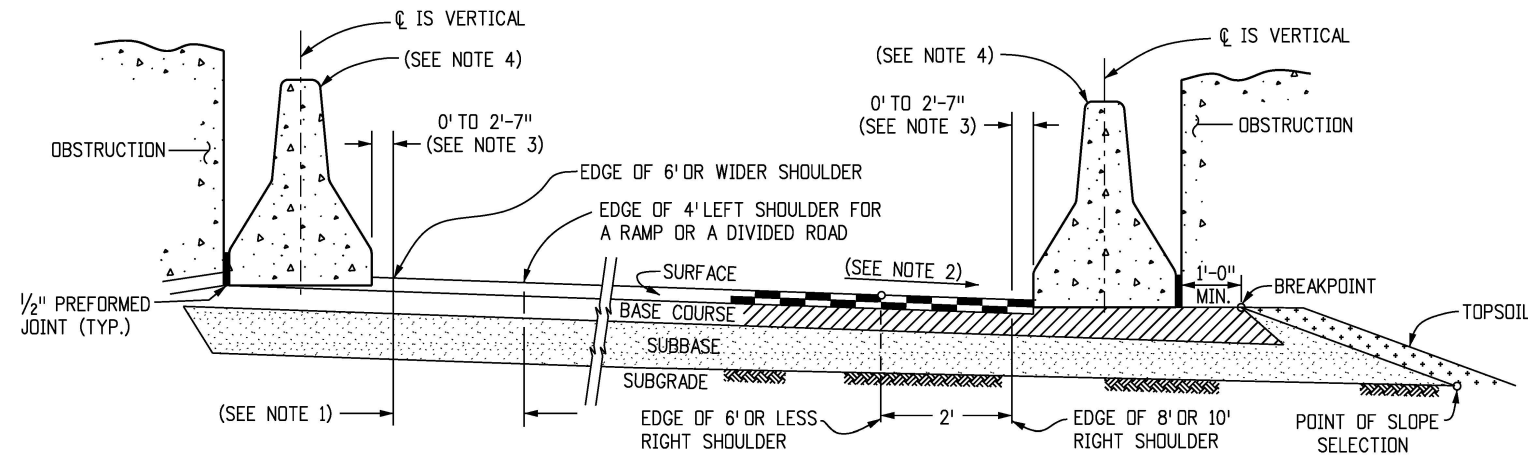
STYLE CA AT OBSTRUCTION

(OBSTRUCTION NOT SUITABLE FOR TYPE CD)

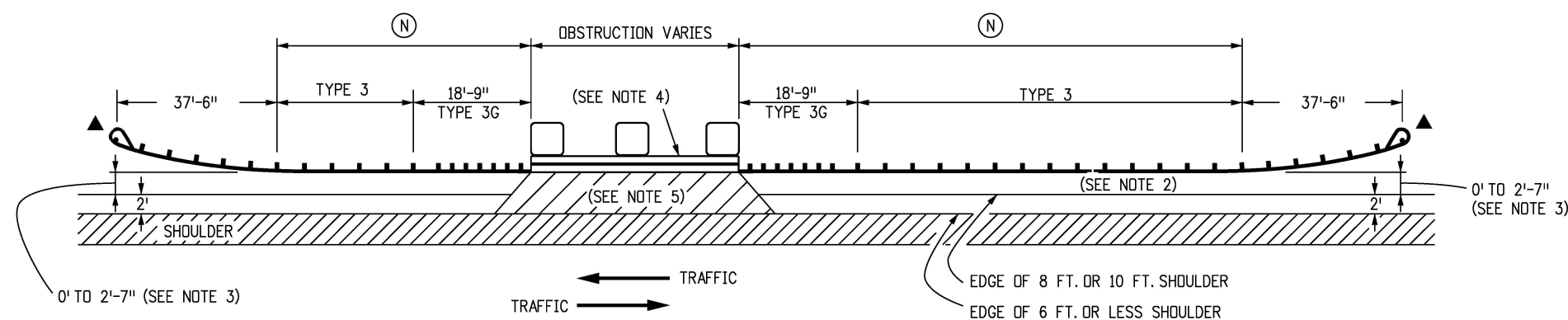


MEDIAN BARRIER END TREATMENT

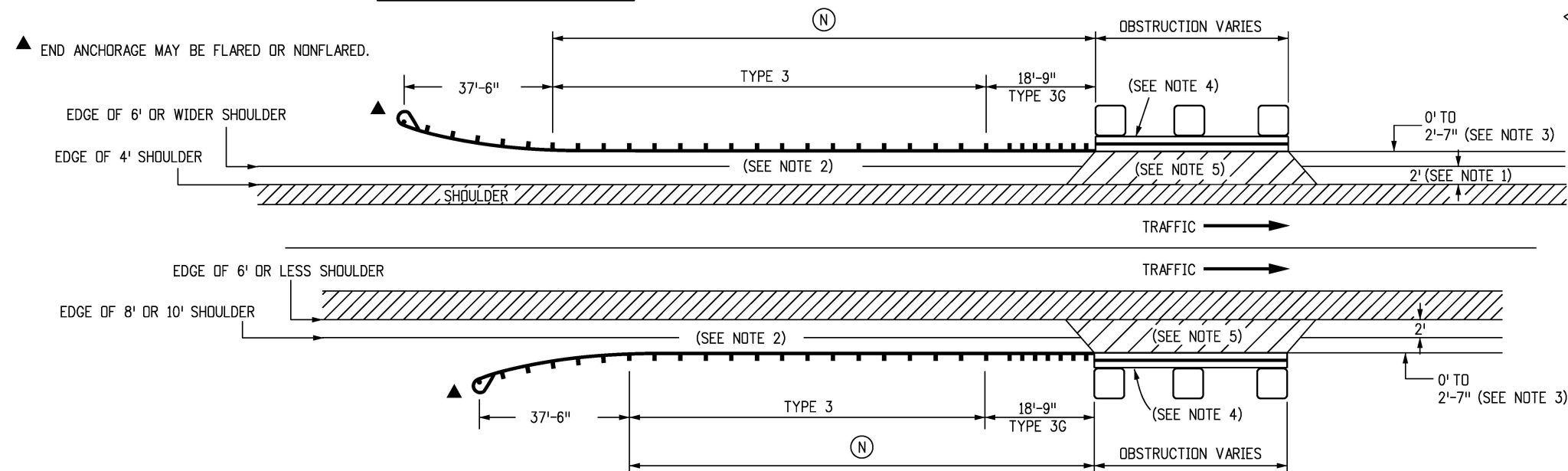
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TYPE 7 ON LEFT AND RIGHT SHOULDERS AT OBSTRUCTIONS



2-LANE 2-WAY ROADS



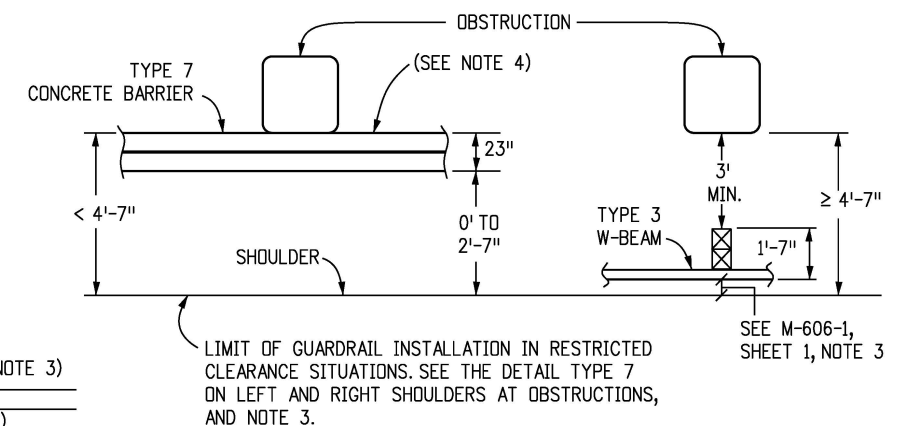
DIRECTIONAL ROADWAYS AND RAMP

HAZARDS ON ROADSIDES

NOTES

- TWO FT. IS DESIRABLE FOR THIS DIMENSION WITH A 4 FT. LEFT SHOULDER. THE MINIMUM IS 0 FT., WHICH IS ACCEPTABLE FOR 6 FT. OR WIDER SHOULDERS.
- RATE OF SLOPE DEPENDS ON GUARDRAIL LOCATION:
 - FOR GUARDRAIL FACE 2 FT. OR LESS FROM THE NORMAL EDGE OF PAVED SHOULDER, CONTINUE THE RATE OF SLOPE OF THE NORMAL PAVED SHOULDER TO THE BREAKPOINT.
 - FOR GUARDRAIL FACE MORE THAN 2 FT. FROM THE NORMAL EDGE OF THE PAVED SHOULDER, THE SLOPE SHALL BE 10:1 OR FLATTER.
- IF THE DISTANCE FROM THE EDGE OF SHOULDER TO THE OBSTRUCTION EXCEEDS 4 FT.-7 IN., TYPE 3-W BEAM GUARDRAIL MAY BE SPECIFIED ON THE PLANS INSTEAD OF TYPE 7 (SEE PLANS, AND DETAIL BELOW).
- STYLE CA BARRIERS ARE SHOWN. STYLE CD MAY BE USED AS APPROPRIATE. SEE SHEET 2 FOR TYPE 7 TO SINGLE TYPE 3G TRANSITION.
- THE AREA BETWEEN SHOULDER AND THE TYPE 7 SHALL BE PAVED. PAYMENT FOR THE PAVED SURFACE WILL BE MADE UNDER A PAVEMENT PAY ITEM, HMA OR CONCRETE, WITH QUANTITIES SHOWN ON THE PLANS.

(N) THE GUARDRAIL LENGTH DIMENSION "N" IS THE LENGTH AS DETERMINED BY THE LENGTH OF NEED COMPUTATION AND AS SHOWN ON THE PLANS. MINIMUM SHALL BE 12 FT.-6 IN. WHERE SITE CONDITIONS ALLOW.



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CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English	(R-X)			Project Development Branch	JBK	Project Sheet Number:
Issued by the Project Development Branch: July 31, 2019						