

TYPICAL SECTIONS

TYPE 446

CUYAHOGA COUNTY
CUI-90-18.63

OHIO

FHWA
REGION 5

FEDERAL
PROJECT

5
130

I-90 PROPOSED LEGEND

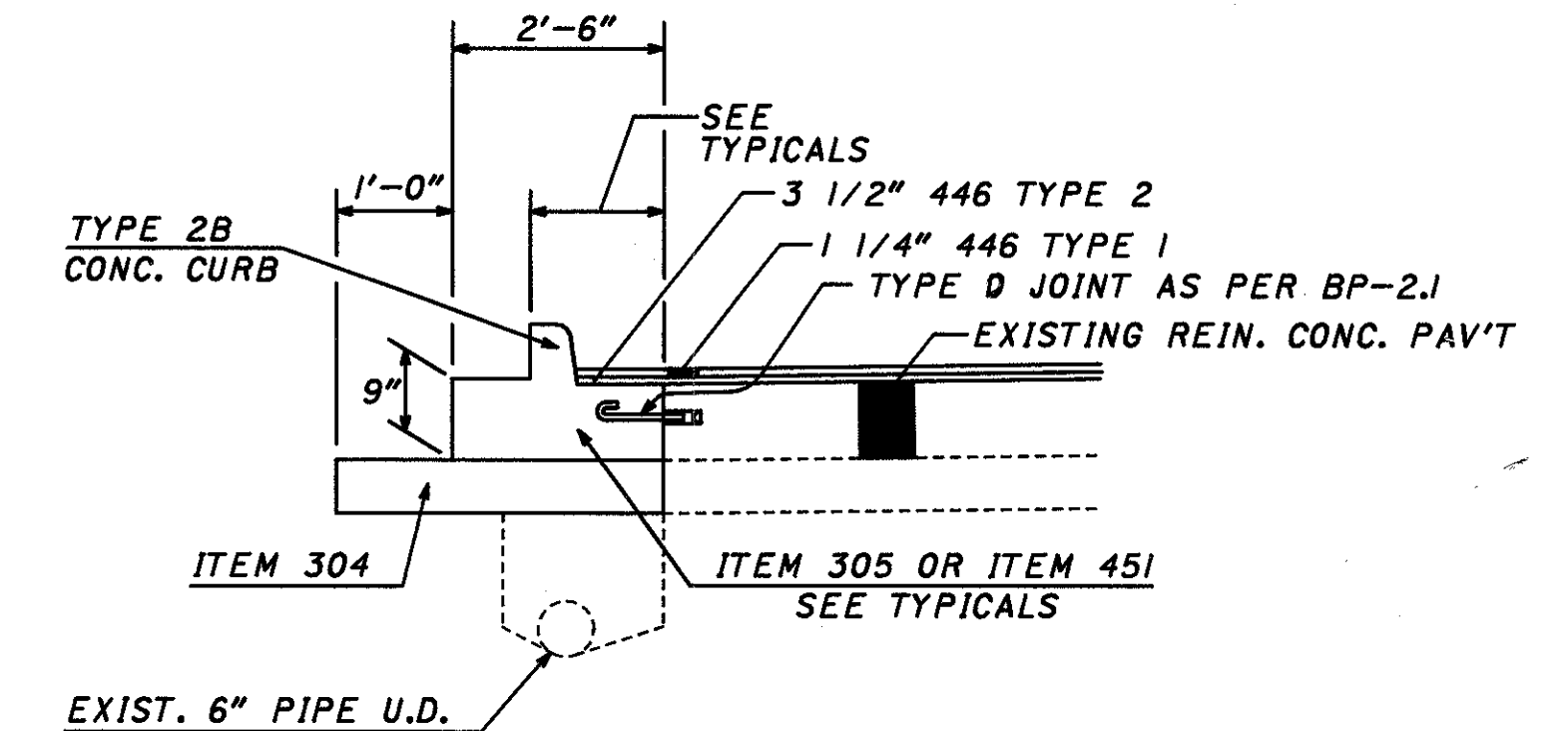
NO.	ITEM	DESCRIPTION
①	446	1 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, AC-20, AS PER PLAN
②	446	3 1/2" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, AC-20
③	407	TACK COAT
④	202	WEARING COURSE REMOVED, AS PER PLAN (VARIABLE THICKNESS 3" NOMINAL)
⑤	305	9" CONCRETE BASE, AS PER PLAN
⑥	304	AGGREGATE BASE, AS PER PLAN
⑦	203	LINEAR GRADING, AS PER PLAN
⑧	659	SEEDING AND MULCHING
⑨	448	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (UNDER GUARDRAIL), AS PER PLAN
⑩	605	6" SHALLOW PIPE UNDERDRAIN
⑪	606	GUARDRAIL, TYPE 5
⑫	609	CURB, TYPE 6 OR CURB, TYPE 2B, AS PER PLAN
⑬	622	CONCRETE BARRIER, TYPE B-50, AS PER PLAN
⑭	622	CONCRETE GLARE SCREEN, AS PER PLAN
⑮	451	9" REINFORCED CONCRETE PAVEMENT, AS PER PLAN
⑯	202*	WEARING COURSE REMOVED, AS PER PLAN (VARIABLE THICKNESS 1 1/4" NOMINAL)
⑰**	446	VAR. ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, AC-20
⑱	203	EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION
⑲	202	CURB REMOVED
⑳	446*	VAR. ASPHALT CONCRETE SURFACE COURSE, TYPE 1, AC-20, AS PER PLAN
㉑	203	LINEAR GRADING
㉒	301	9" BITUMINOUS AGGREGATE BASE, AC-20
㉓		TYPE D (DRILLED TIED LONGITUDINAL) JOINT AS PER STD. DWG. BP-2.1
㉔	202	PAVEMENT REMOVED (NOT USED)
㉕	605	SHALLOW UNDERDRAIN, AS PER PLAN, (SEE SHEET 74A)
㉖	203	SUBGRADE COMPACTION

I-90 EXISTING LEGEND

NO.	DESCRIPTION
Ⓐ	REINFORCED CONCRETE PAVEMENT 9" THICK
Ⓑ	SUBBASE
Ⓒ	AGGREGATE BASE
Ⓓ	BITUMINOUS AGGREGATE BASE
Ⓔ	UNDERDRAIN
Ⓕ	CURB
Ⓖ	GUARDRAIL
Ⓗ	CONCRETE BARRIER
Ⓘ	ASPHALT OVERLAY (3+/-)
Ⓙ	MACADAM BASE
Ⓚ	ASPHALT BASE
Ⓛ	REINFORCED CONCRETE PAVEMENT 10" THICK
Ⓜ	CONCRETE PAVEMENT
Ⓝ	CONCRETE MEDIAN
Ⓞ	EXPANSION BOLT, JOINT
Ⓟ	SUPERPLASTICIZED DENSE CONCRETE
Ⓠ	FLEXIBLE BASE
Ⓡ	EXISTING STANDARD LONGITUDINAL JOINT
Ⓢ	POROUS BASE COURSE

* USED ON SHT. 75B, 75D

** USED ON SHT. 24, 75A, 75B, 75C, 75D



TRANSITION CURB DETAIL
OFFSET VARIES 0' TO 2'

NOTES:

APPLY TO THE FOLLOWING TYPICAL SECTIONS.

DRAWINGS NOT TO SCALE.

TYPICAL SECTIONS ARE INTENDED TO SHOW
GENERAL ROADWAY AND PAVEMENT FEATURES
ONLY. FOR DETAILS SEE THE PLAN & PROFILE
SHEETS.

SEE PLAN SHEETS FOR LIMITS OF PROPOSED
GUARDRAIL, PROPOSED CURB, AND PROPOSED
UNDERDRAINS.

CONCRETE BARRIER REPLACEMENT DETAILS

CONSTRUCTION LEGEND

- * - Optional Construction Joint
- * - Grout proposed reinforcing bars into holes drilled into existing concrete in accordance with Supplemental Specifications 852. Holes shall have a maximum diameter of 1" and shall be 0'-6" deep. (Optional)
- ** - Grout proposed reinforcing bars into holes drilled into existing concrete in accordance with Supplemental Specifications 852. Holes shall have a maximum diameter of 1 1/2" and shall be 0'-6" deep. (Optional)

NOTES:

Drawing not to scale.

Horizontal reinforcing bars shall not extend through the Expansion Joint. Clearances between Expansion Joints and vertical reinforcing bars shall be a minimum of 2 1/2" unless otherwise noted. Also all other bars shall maintain a 2" minimum clearance from the outside edge of Barrier. Verticals bars shall be placed with 4' or less spacing between bars.

Refer to Standard Drawing MC-9.3 and MC-9.4 for further details and additional notes.

Concrete Barrier shall be placed in alternate sections by the use of Bulkheads. Closing sections shall be placed after the removal of Bulkheads and after placement of Expansion Joint Filler. Exposed edges of the filler shall be flush with the surface of concrete and shall be free of mortar.

Station marking as per MC-9.3 and MC-9.4 shall be included under this item of work.

Concrete Barrier, Type B-50, As Per Plan "A" shall include the cost of the 9" concrete base in Item 622. Concrete Barrier, Type B-50, As Per Plan "B" shall pay for the concrete base separately under Item 305, 9" Concrete Base, As Per Plan "A".

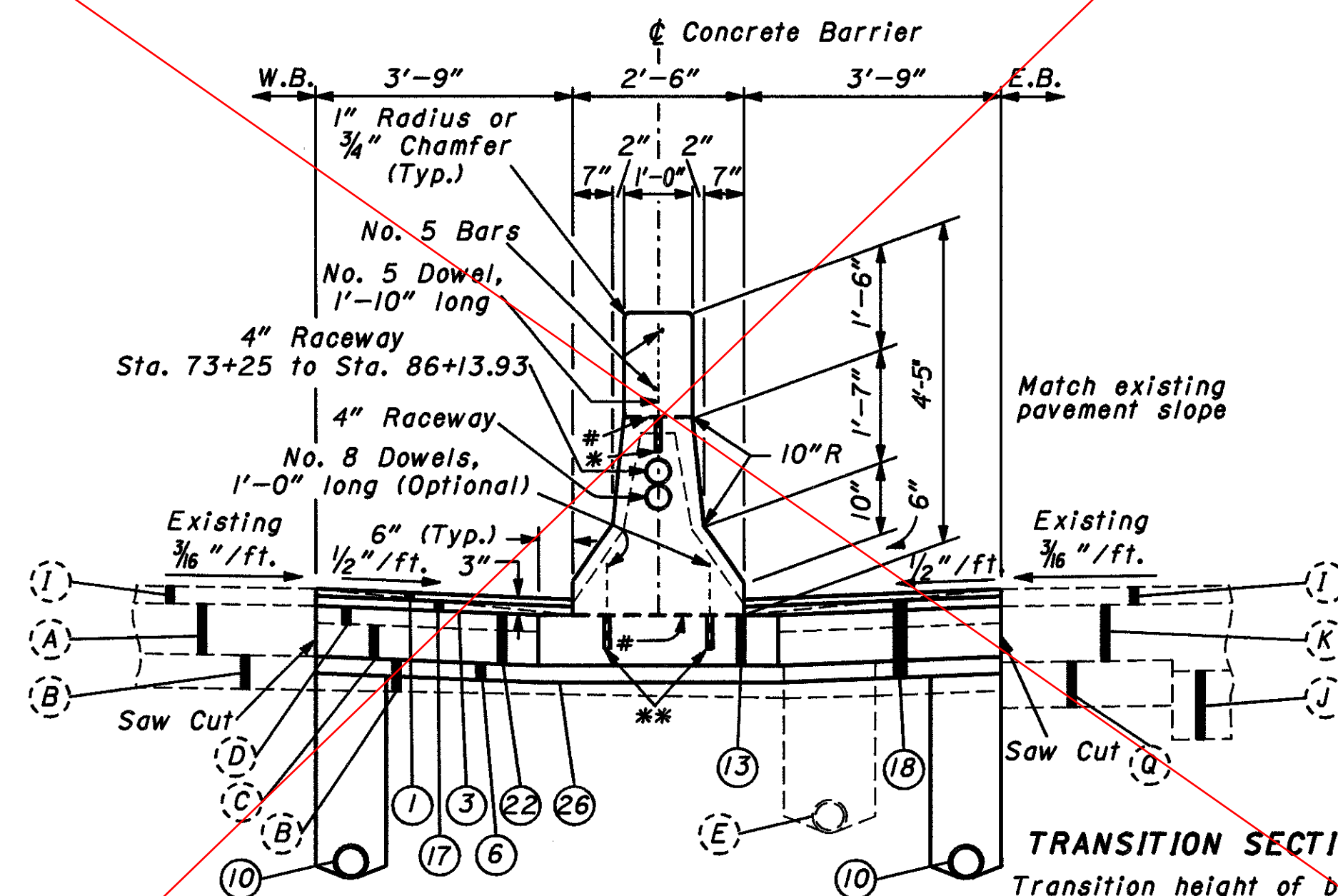
All labor and materials described and detailed on the concrete barrier sheets shall be included in the overall cost of Item 622 Concrete Barrier, Type B-50, As Per Plan "A" or "B"

Refer to Shts. 41 for Barrier Quantities.
Refer to Shts. 5 for Typical Legend.

Preformed Expansion Joint Filler in the Barrier Expansion Joints shall be 3/4" min., in accordance with 705.03. Typically 20' spacing between joints. 3/4" P.E.J.F. is required around each pier also.

SECTION THRU PROPOSED EXPANSION JOINT

ITEM 622 - CONCRETE BARRIER, TYPE B-50, AS PER PLAN "A"

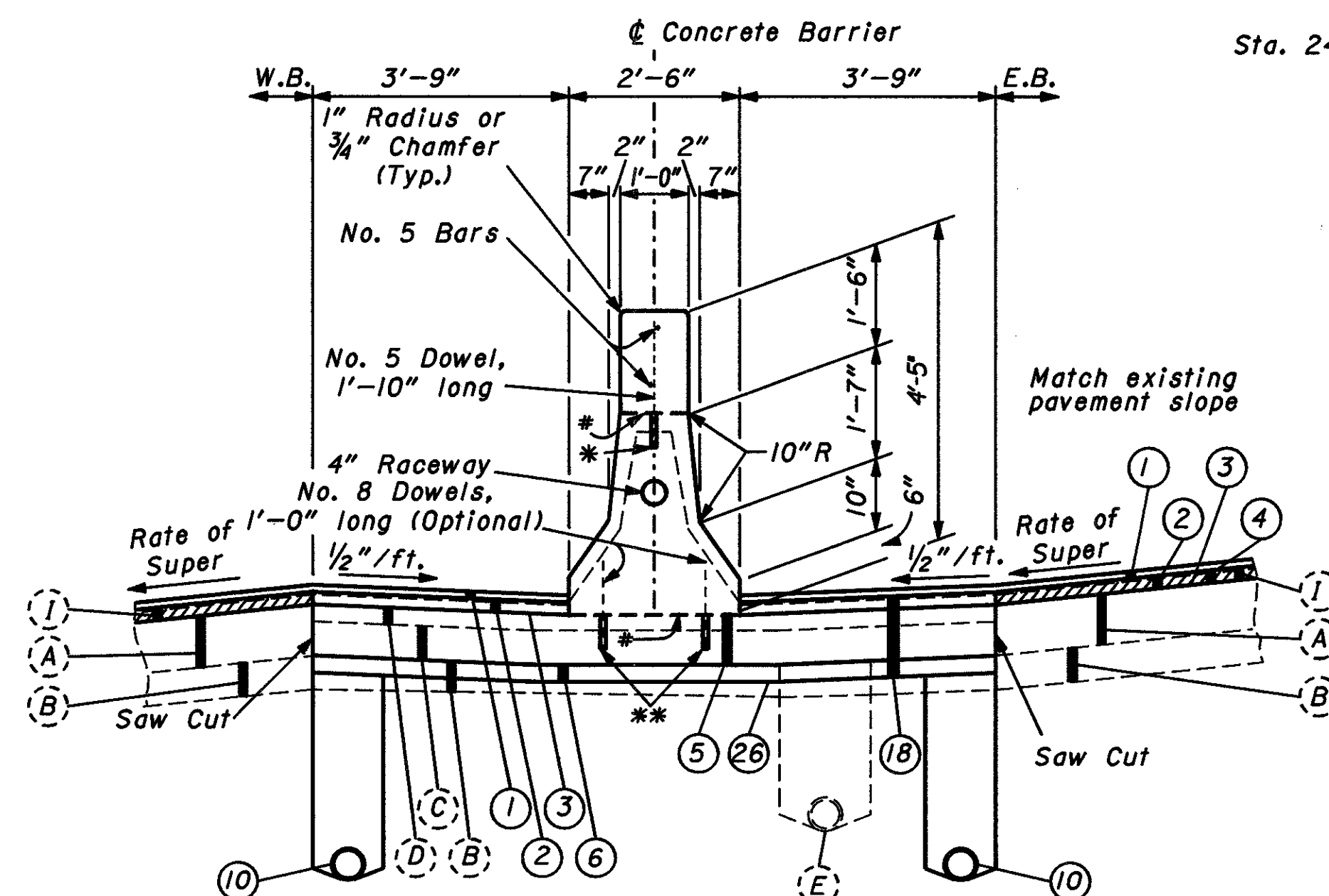


SECTION A-A PROPOSED MEDIAN BARRIER

Normal Section:
Sta. 69+05 To Sta. 73+25 (One Raceway)
Sta. 73+25 To Sta. 86+13.93 (Two Raceways)
* Note transition height

TRANSITION SECTIONS:
Transition height of barrier only
from Plan "A-A" to Plan "B-B"
Sta. 85+38.93 To Sta. 86+13.93

ITEM 622 - CONCRETE BARRIER, TYPE B-50, AS PER PLAN "B"

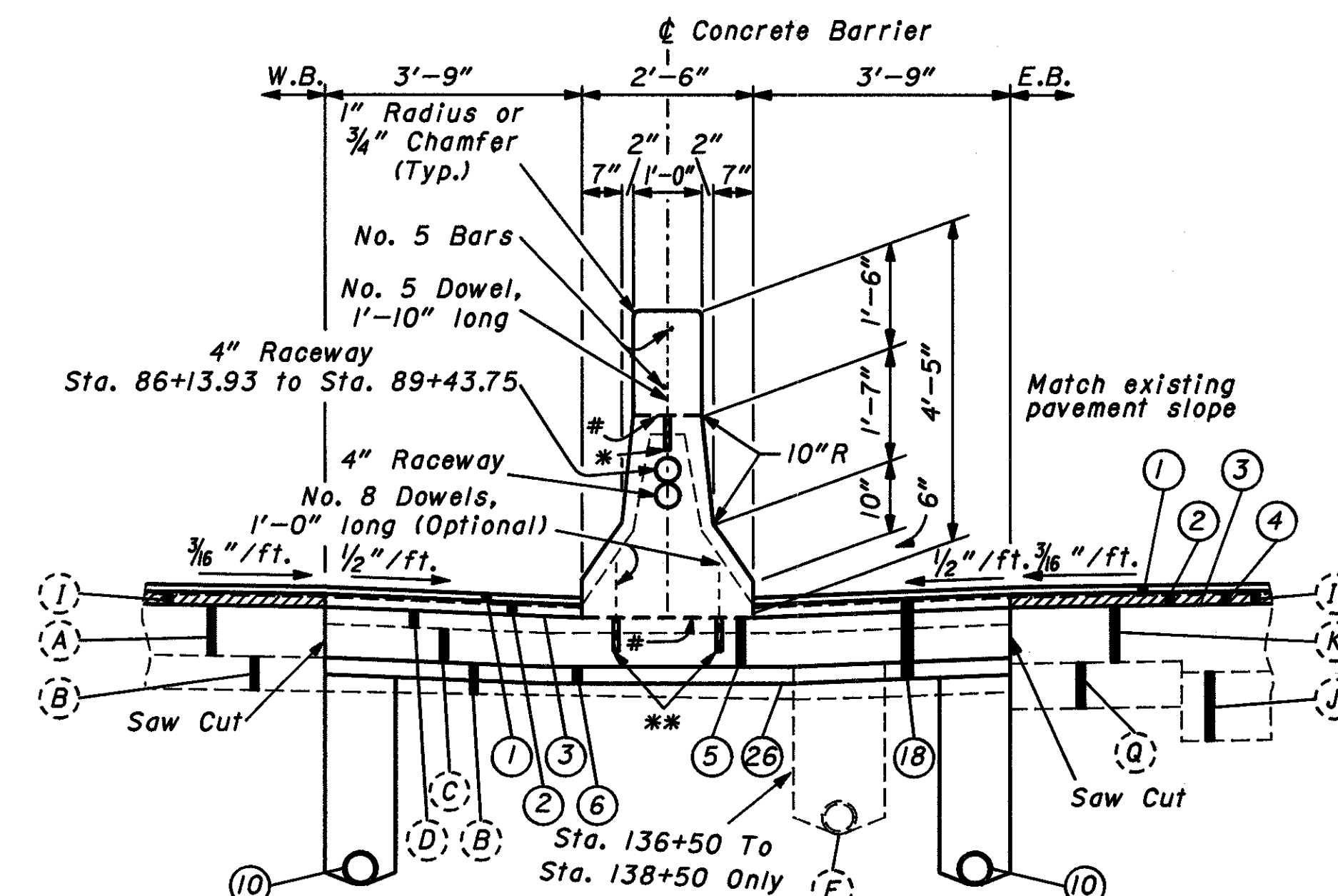


SECTION C-C PROPOSED MEDIAN BARRIER

Superelevated Section:
Sta. 143+60 To Sta. 151+40
Sta. 162+22 To Sta. 164+67
Sta. 215+25 To Sta. 228+20 E.B.
Sta. 214+00 To Sta. 228+20 W.B.
Sta. 240+75 To Sta. 247+75
E 72nd St. Bridge (2069) Deduction:
Sta. 218+94.27 To Sta. 220+00.41

Sta. 247+75 To Sta. 252+68.80 (End Proposed Barrier)
E. 55th St. Bridge (1976) Deduction:
Sta. 139+55.00 To Sta. 140+41.00
M.L.K. Blvd. Bridge (2105) Deduction:
Sta. 237+82.67 To Sta. 238+78.72

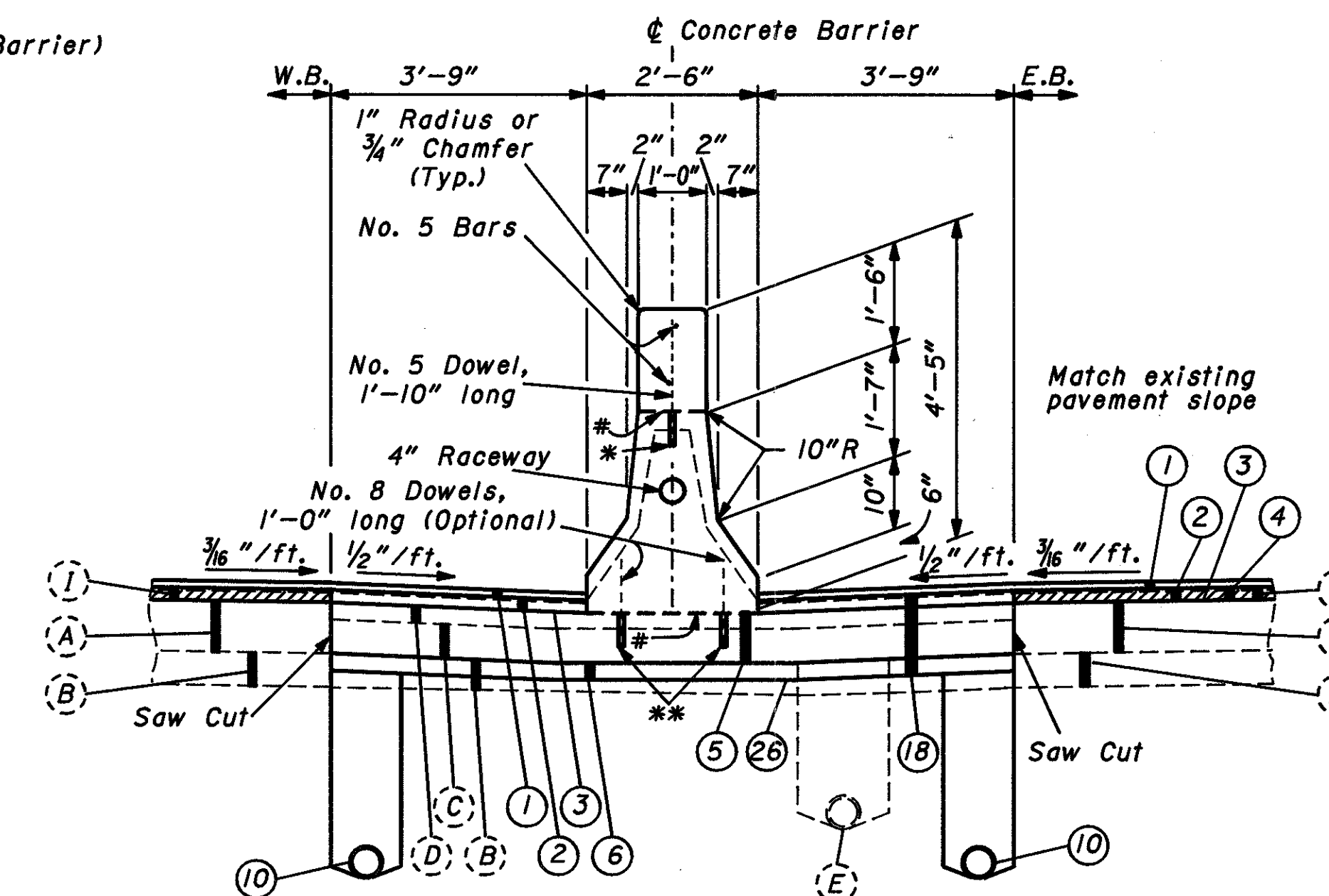
ITEM 622 - CONCRETE BARRIER, TYPE B-50, AS PER PLAN "B"



SECTION B-B PROPOSED MEDIAN BARRIER

Normal Section:
Sta. 86+13.93 To Sta. 89+43.75 (Two Raceways)
Sta. 89+43.75 To Sta. 136+50 (One Raceway)
Sta. 136+50 To Sta. 138+50 (One Raceway) E.B. Pavement buildup same as W.B.

ITEM 622 - CONCRETE BARRIER, TYPE B-50, AS PER PLAN "B"



SECTION D-D PROPOSED MEDIAN BARRIER

Normal Section:
Sta. 200+83.36 To Sta. 208+65.10
CEI Intake Bridge (2035 L&R) Deduction:
Sta. 200+98.36 To Sta. 202+82.02
CEI Bridge (2046 L&R) Deduction:
Sta. 206+81.44 To Sta. 208+65.10

PLOT SUBMITTED: 12-JAN-1993 14:40

PLOT SUBMITTED BY: DPC5
PLOTTED FROM: c:\dgn\05553\typical\05553.dgn

CONCRETE GLARE SCREEN DETAILS

CALC BY DATE	CUYAHOGA COUNTY	OHIO	24A 130
CHKD BY DATE	CUY-90-18.63	FHWA REGION 5	
		FEDERAL PROJECT	

CONSTRUCTION LEGEND

* - Grout proposed reinforcing bars into holes drilled into existing concrete in accordance with Supplemental Specifications 852. Holes shall have a maximum diameter of 1" and shall be 0'-8" deep. (Optional)

Drawing not to scale.

NOTES:

Horizontal reinforcing bars shall not extend through the Expansion Joint. Clearances between Expansion Joints and vertical reinforcing bars shall be a minimum of 2 1/2" unless otherwise noted. Also all other bars shall maintain a 2" minimum clearance from the outside edge of Barrier. Verticals bars shall be placed with 4' or less spacing between bars.

Refer to Standard Drawing MC-9.3 and MC-9.4 for further details and additional notes.

Concrete Barrier shall be placed in alternate sections by the use of Bulkheads. Closing sections shall be placed after the removal of Bulkheads and after placement of Expansion Joint Filler. Exposed edges of the filler shall be flush with the surface of concrete and shall be free of mortar.

Station marking as per MC-9.3 and MC-9.4 shall be included under this item of work.

All labor and materials described and detailed on the concrete barrier sheets shall be included in the overall cost of Item 622 Concrete Glare Screen, As Per Plan "A" or "B"

Refer to Shts. 41 for Barrier Quantities.
Refer to Shts. 5 for Typical Legend.

TRANSITION SECTIONS

Sta. 252+68.80 (Begin Glare Screen) To Sta. 252+75
Sta. 252+75 To Sta. 252+98.80 BK. (10' To 9' Width Transition)
= Sta. 301+99.84 AH.
Sta. 301+99.84 AH. To Sta. 303+76.04

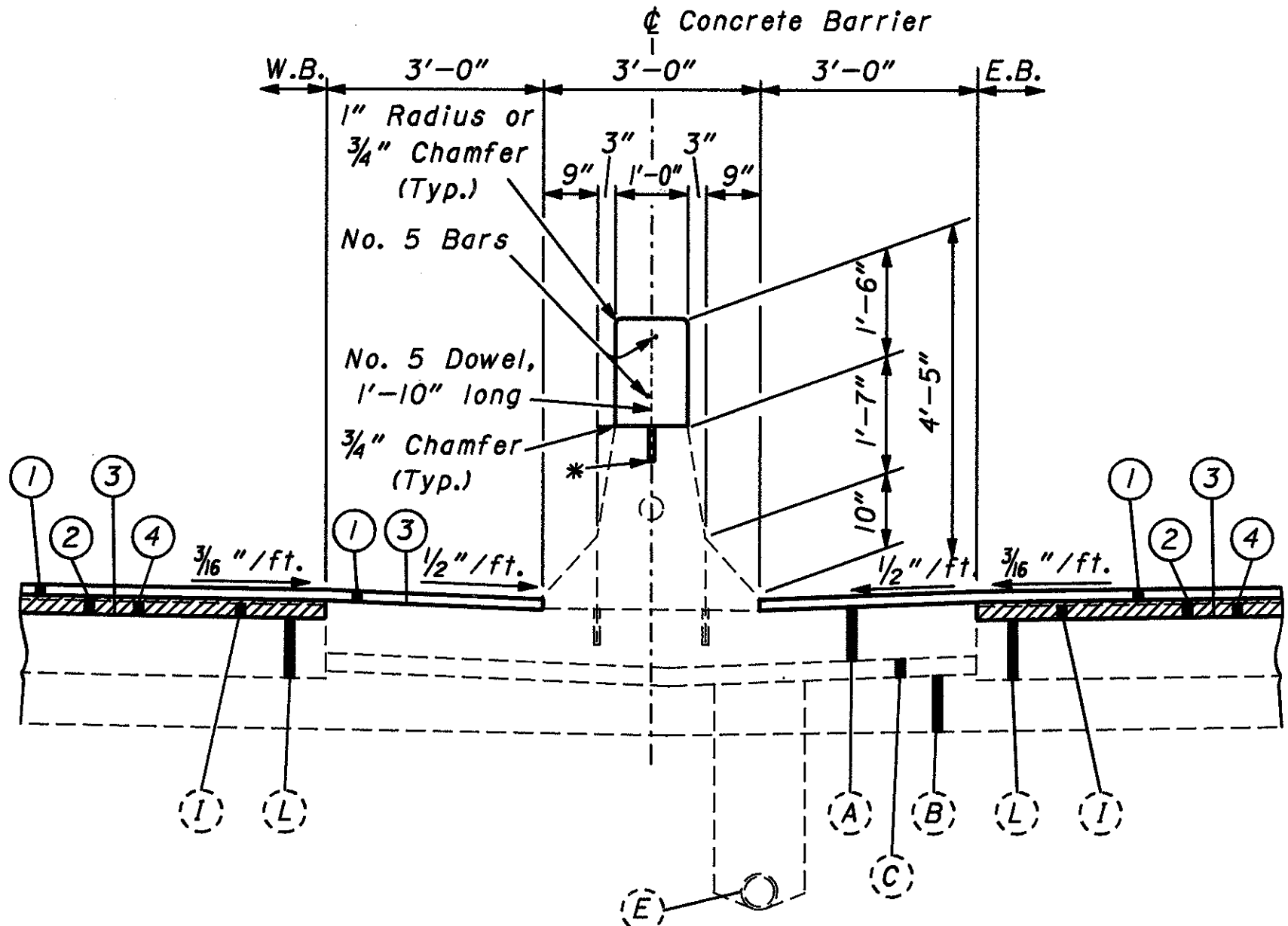
Preformed Expansion Joint Filler in the Barrier Expansion Joints shall be 3/4" min., in accordance with 705.03. 3/4" P.E.J.F. is required around each pier also.

Proposed Expansion Joints shall be matched flush with the existing Expansion Joints.

Existing Expansion Joint

SECTION THRU EXISTING EXPANSION JOINT

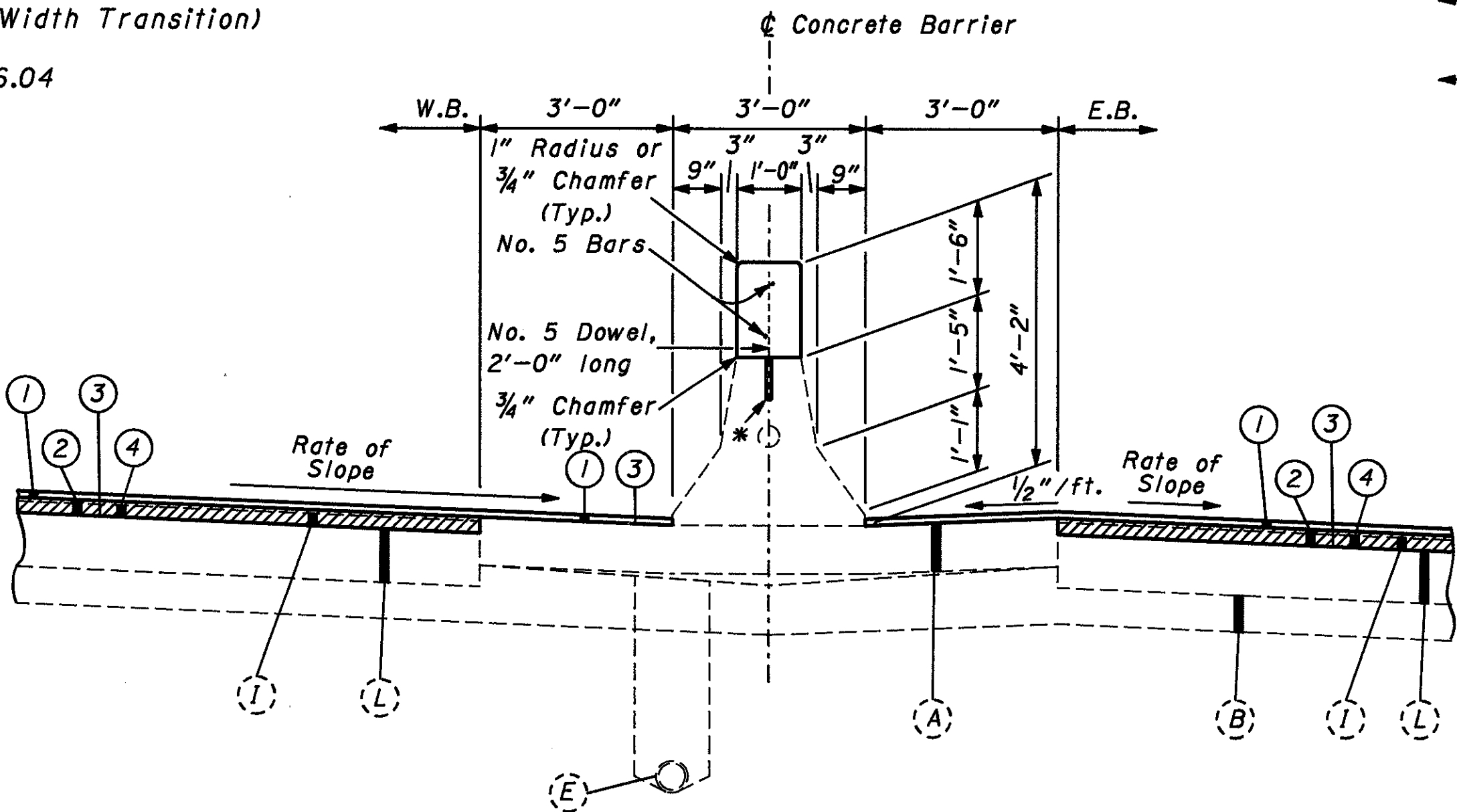
ITEM 622 - CONCRETE GLARE SCREEN, AS PER PLAN "A"



SECTION E-E PROPOSED MEDIAN GLARE SCREEN

Normal Section:
Sta. 303+76.04 To Sta. 388+50
E. 105th St. Bridge (2200) Deduction:
Sta. 337+04.43 To Sta. 337+84.85

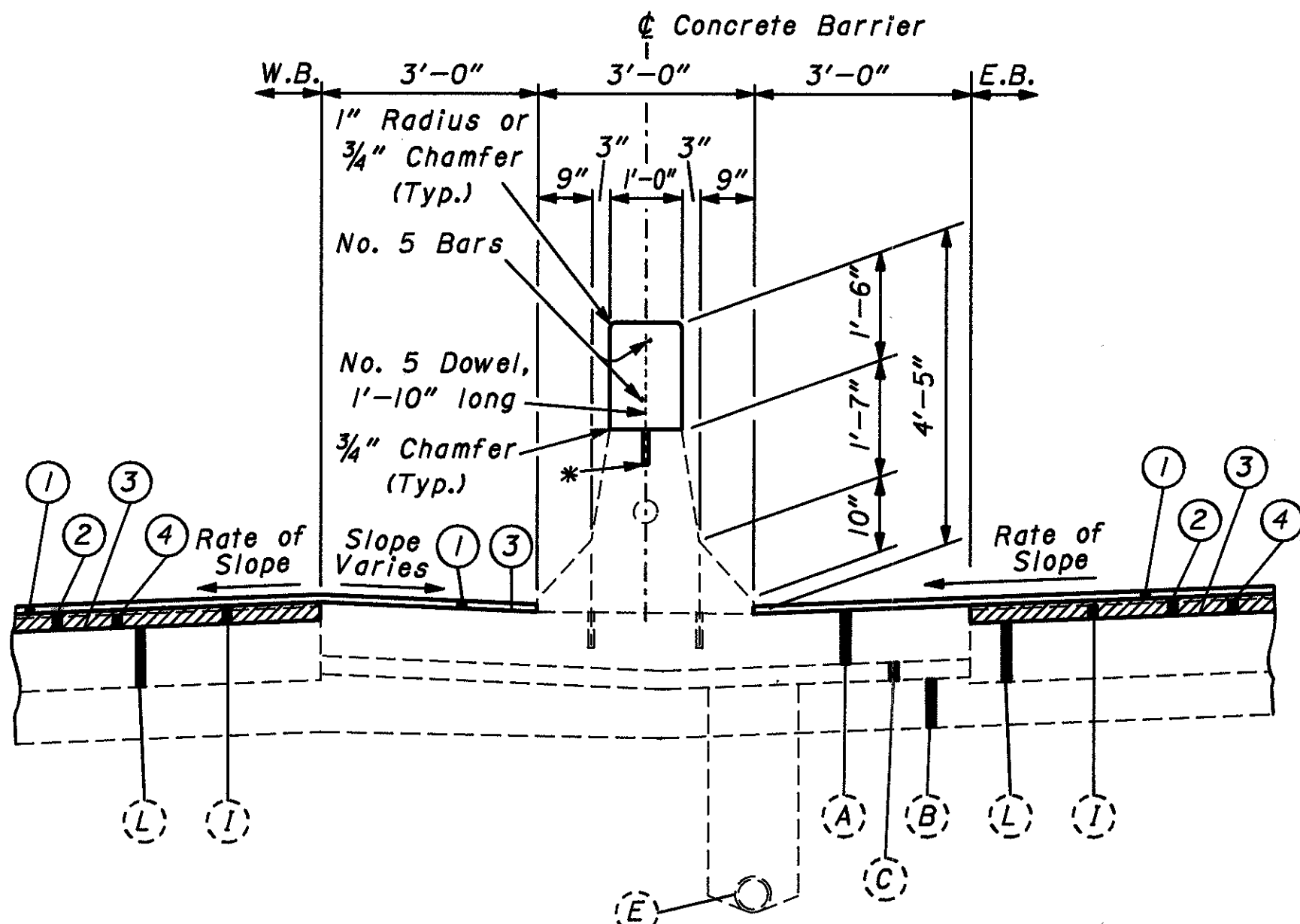
ITEM 622 - CONCRETE GLARE SCREEN, AS PER PLAN "A"



SECTION G-G PROPOSED MEDIAN GLARE SCREEN

Superelevated Section:
Sta. 417+04.19 To Sta. 429+00

ITEM 622 - CONCRETE GLARE SCREEN, AS PER PLAN "A"



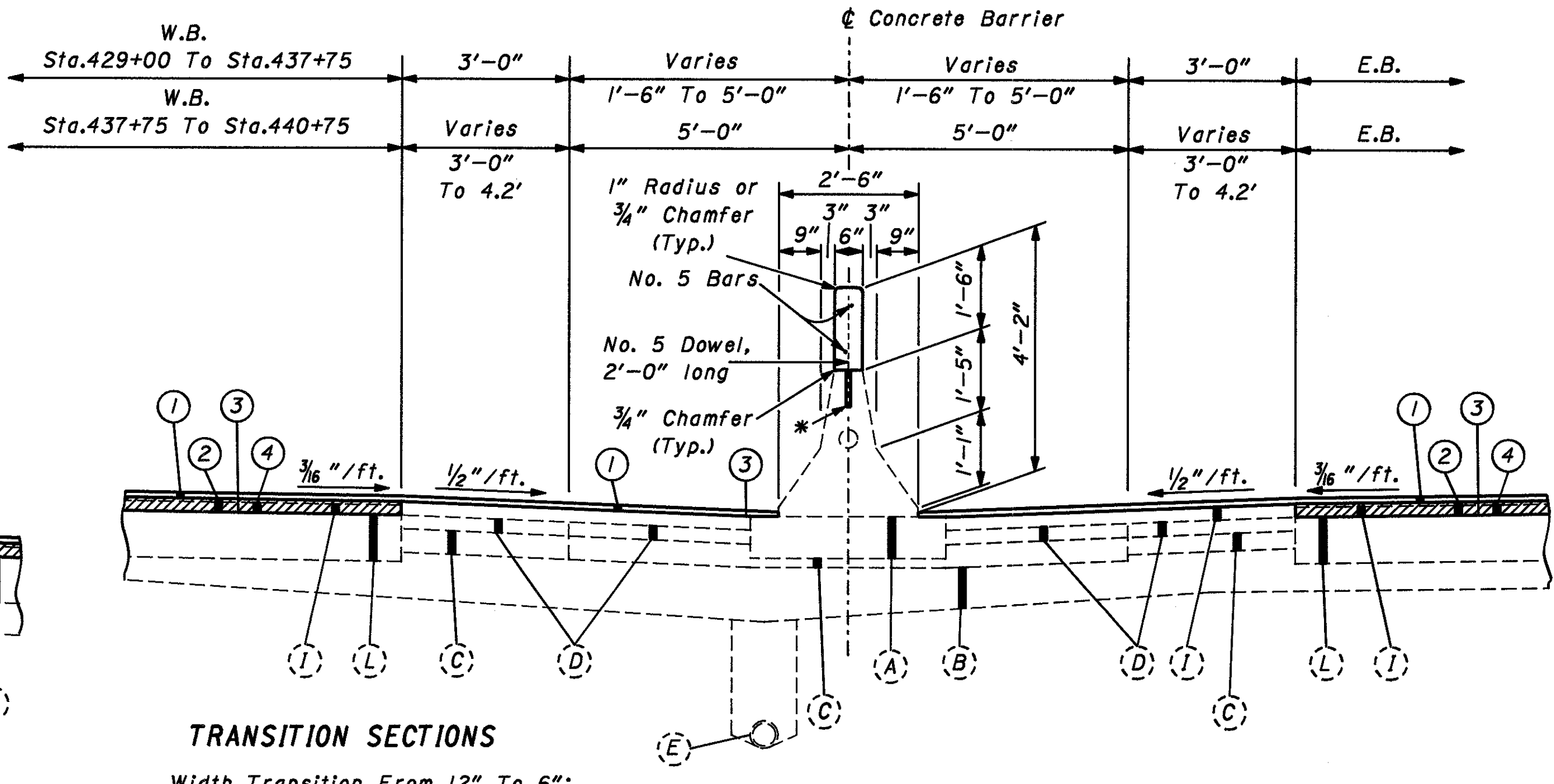
TRANSITION SECTIONS

Sta. 388+50 To Sta. 390+52.88
Sta. 413+44.53 To Sta. 417+04.19

SECTION F-F PROPOSED MEDIAN GLARE SCREEN

Superelevated Section:
Sta. 390+52.88 To Sta. 413+44.53

ITEM 622 - CONCRETE GLARE SCREEN, AS PER PLAN "B"



TRANSITION SECTIONS

Width Transition From 12" To 6":
Sta. 428+90 To Sta. 429+00

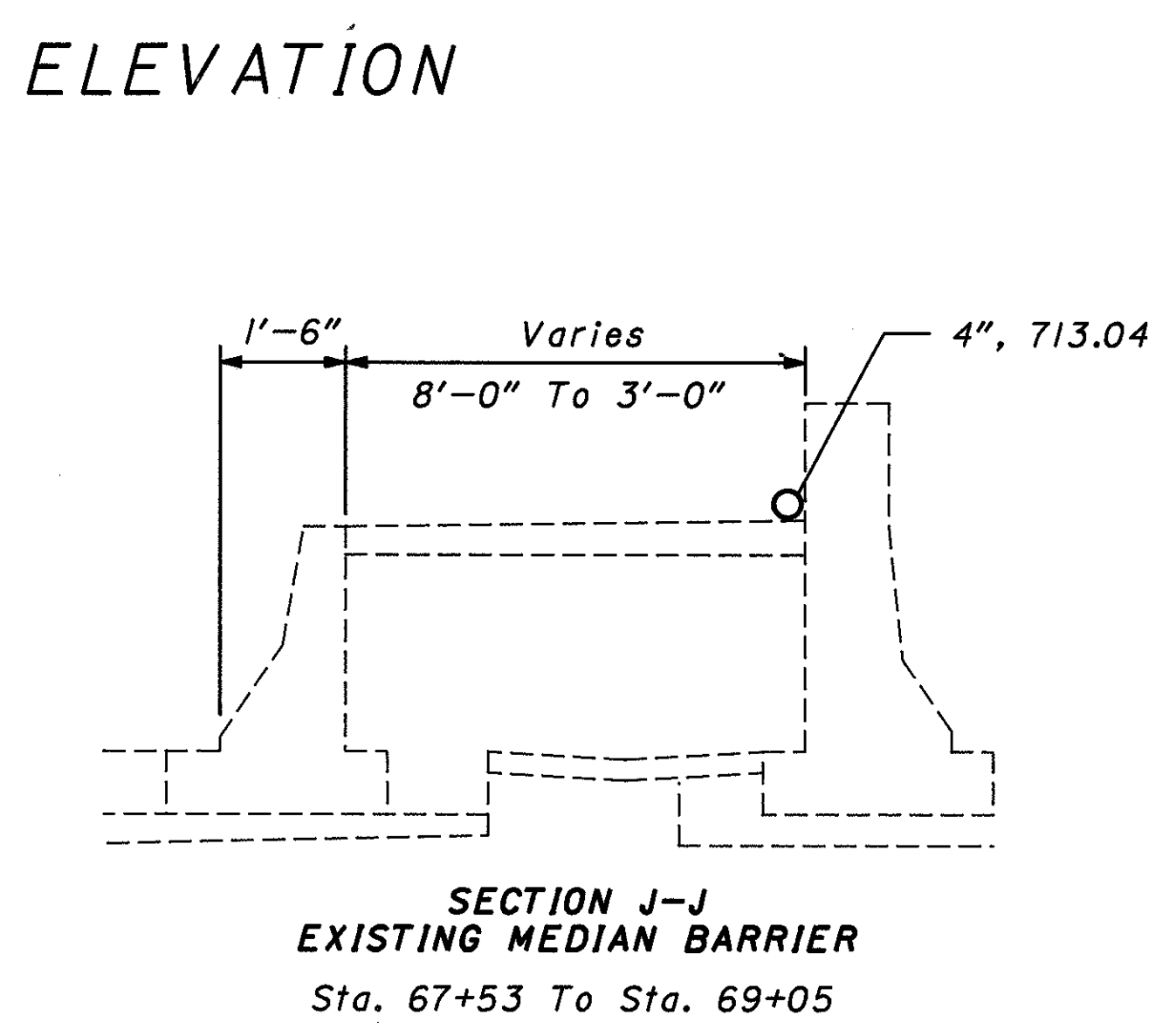
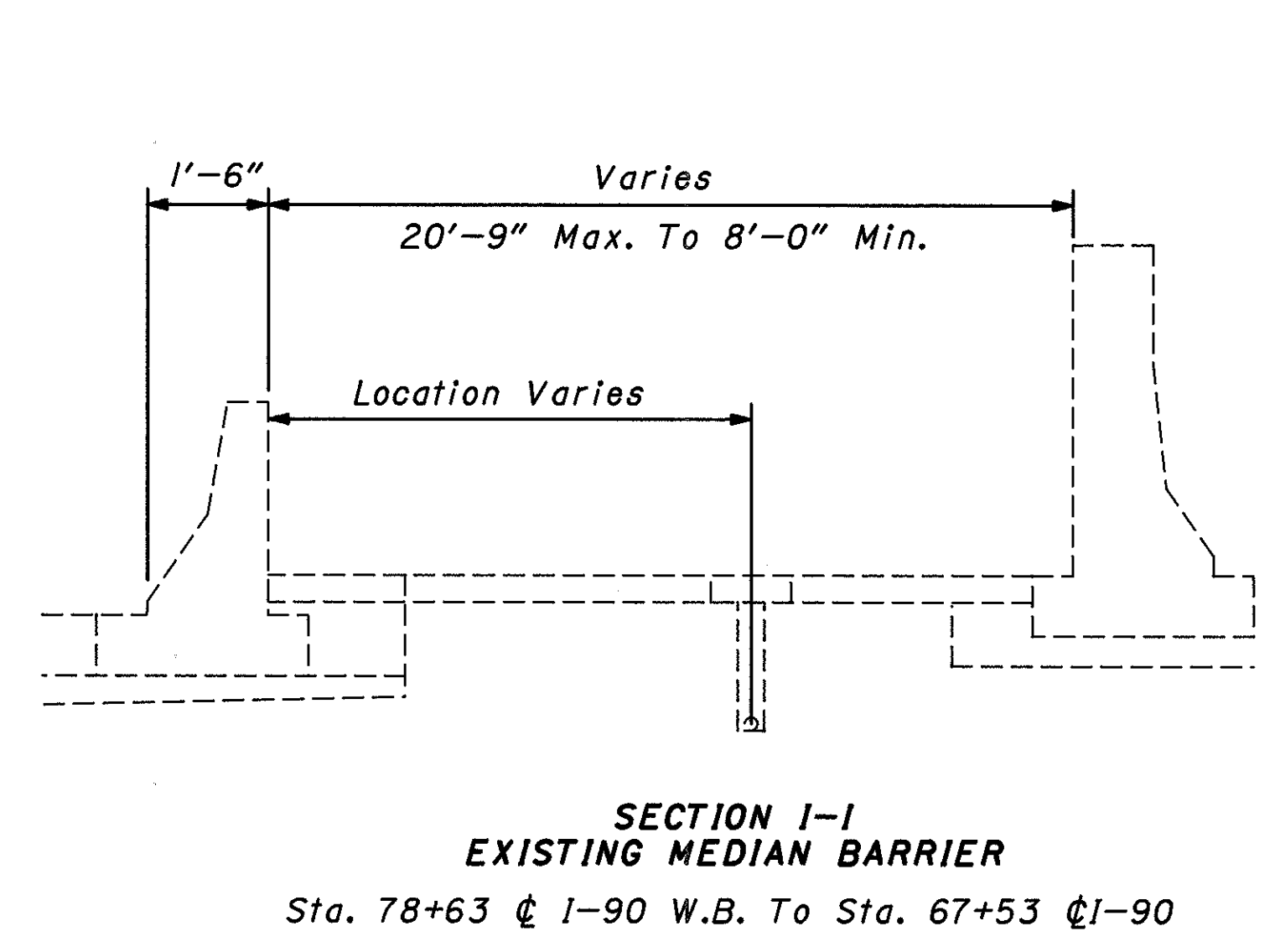
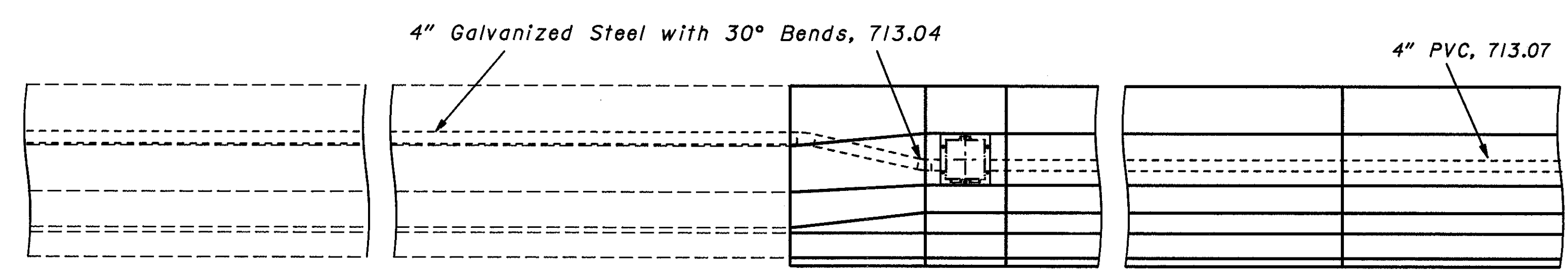
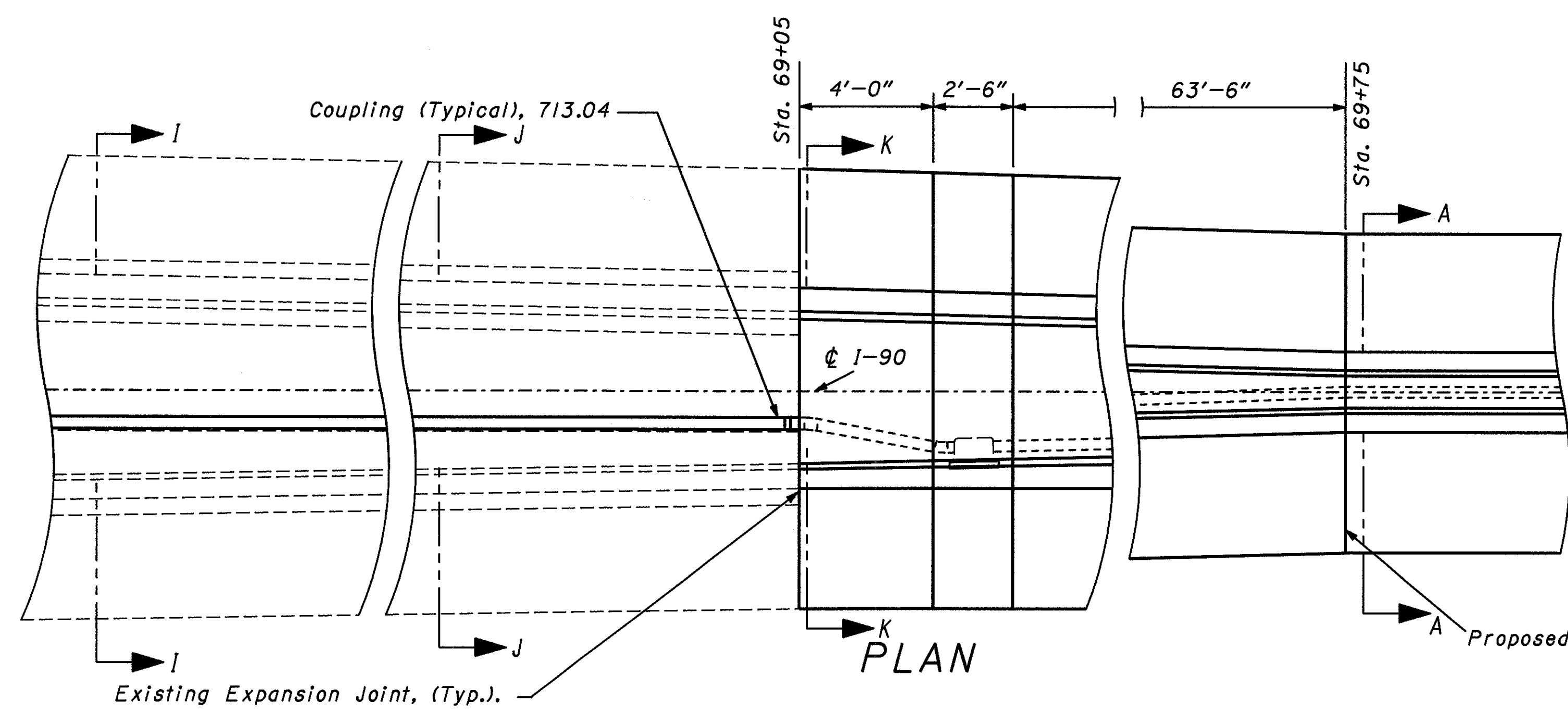
SECTION H-H PROPOSED MEDIAN GLARE SCREEN

Superelevated Section:
Sta. 429+00 To Sta. 437+75
Sta. 437+75 To Sta. 440+75

CONCRETE BARRIER REPLACEMENT DETAILS

CALC BY	CUYAHOGA COUNTY	OHIO
DATE	CUY-90-18.63	
CHKD BY		FHWA REGION 5
DATE		FEDERAL PROJECT

24B
130



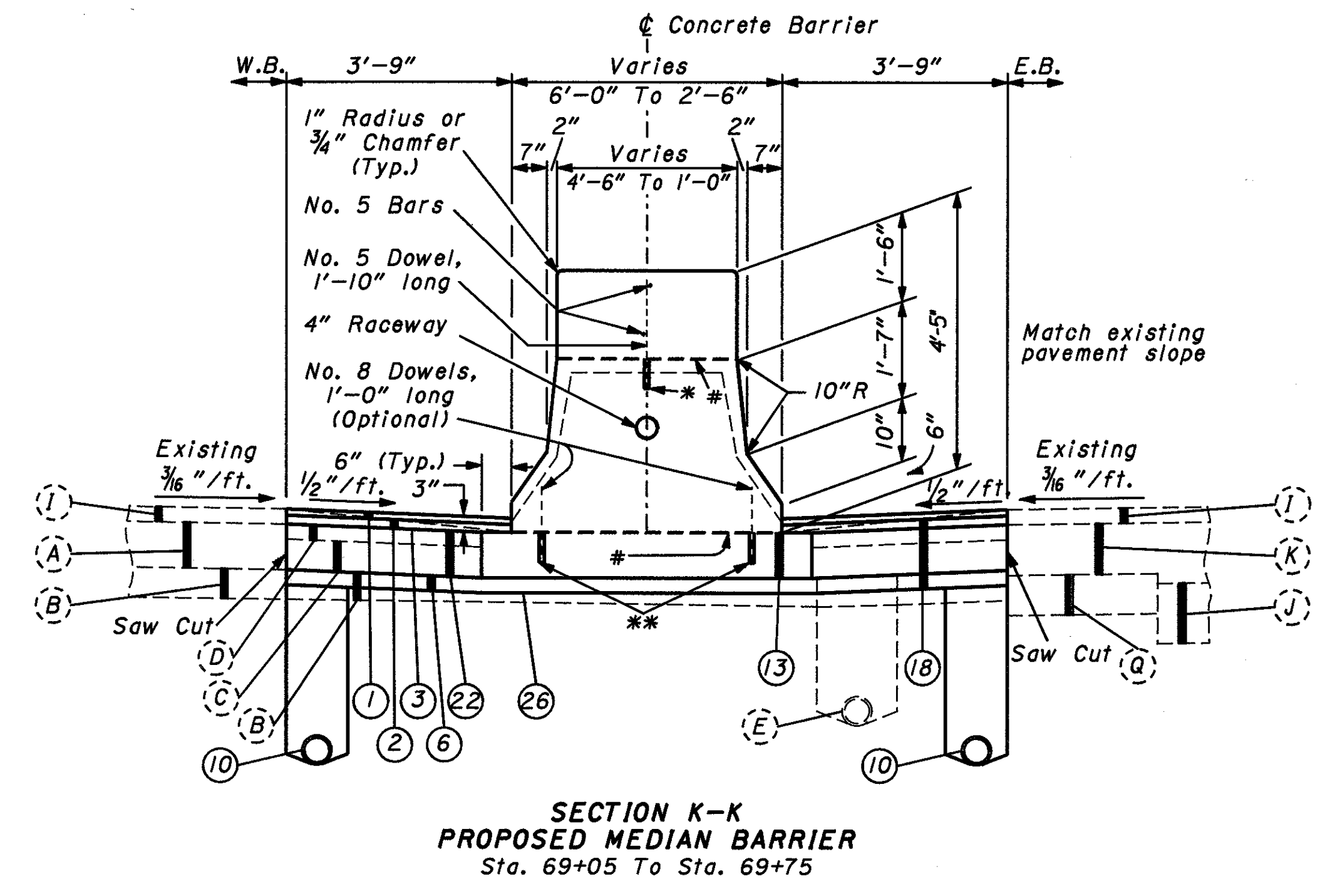
LIGHTING

- Light Towers @
Sta. 135+65
Sta. 168+90
Sta. 204+68
Sta. 210+12.5

WIDTH TRANSITIONS

Transition from section "B-B, C-C or D-D" to a 3' wide top.
Base of tower is 10' long
Sta. 131+60 To Sta. 131+70
Sta. 168+85 To Sta. 168+95
Sta. 204+63 To Sta. 204+73
Sta. 210+07.5 To Sta. 210+17.5
Transitions:
Sta. 131+40 To Sta. 131+60 (20:1) Taper
Sta. 131+70 To Sta. 131+90 (20:1) Taper
Sta. 168+45 To Sta. 168+85 (40:1) Taper
Sta. 168+95 To Sta. 169+15 (20:1) Taper
Sta. 204+43 To Sta. 204+63 (20:1) Taper
Sta. 204+73 To Sta. 204+93 (20:1) Taper
Sta. 209+67.5 To Sta. 210+07.5 (40:1) Taper
Sta. 210+17.5 To Sta. 210+37.5 (20:1) Taper
Transition at structures CUY-90-2069 & CUY-90-2105 transition from section "C-C" on sheet 24 to section on sheet 82D in 10 feet. 2'-6" width to 3'-0" width is 40:1 taper.
Note: Conduit is transitioning also.
Sta. 218+84.27 To Sta. 218+94.27
Sta. 220+00.41 To Sta. 220+10.41
Sta. 237+72.67 To Sta. 237+82.67
Sta. 238+78.72 To Sta. 238+88.72

ITEM 622 - CONCRETE BARRIER, TYPE B-50, AS PER PLAN "A"



For Section
A-A Proposed median
barrier see sheet 24.
Note: Drawing Not To Scale.

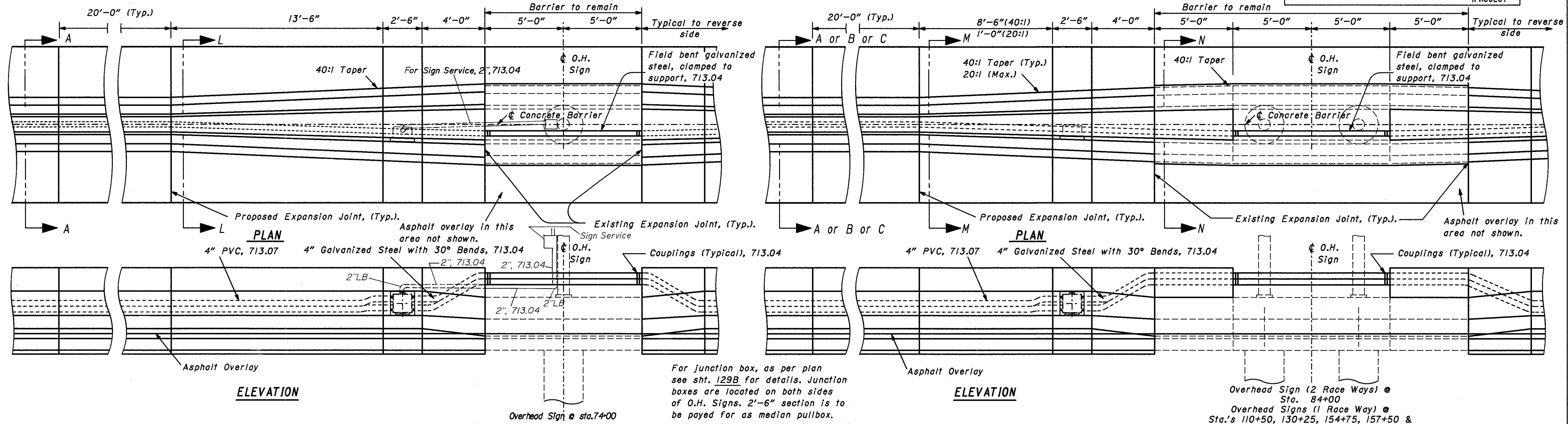
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PLOTTED BY: DPC5
PLOT FROM: c:\dgn\05553\typical\05553gvy.

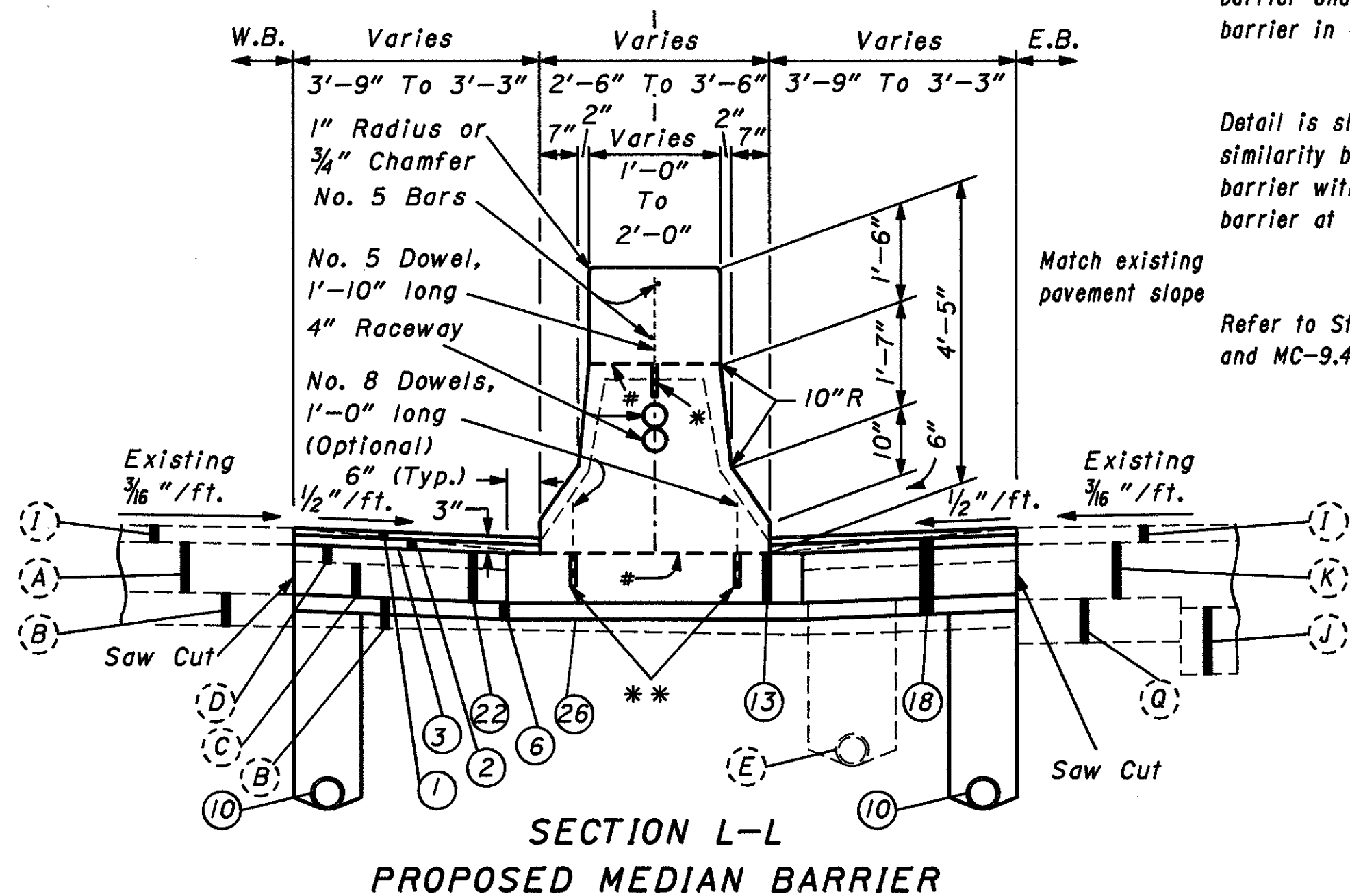
CONCRETE BARRIER REPLACEMENT DETAILS

CALC BY	CUYAHOGA COUNTY	OHIO
DATE	CUY-90-18.63	REGION 5
CHKD BY		FHWA PROJECT
DATE		

24C
130



ITEM 622 - CONCRETE BARRIER, TYPE B-50, AS PER PLAN "A"



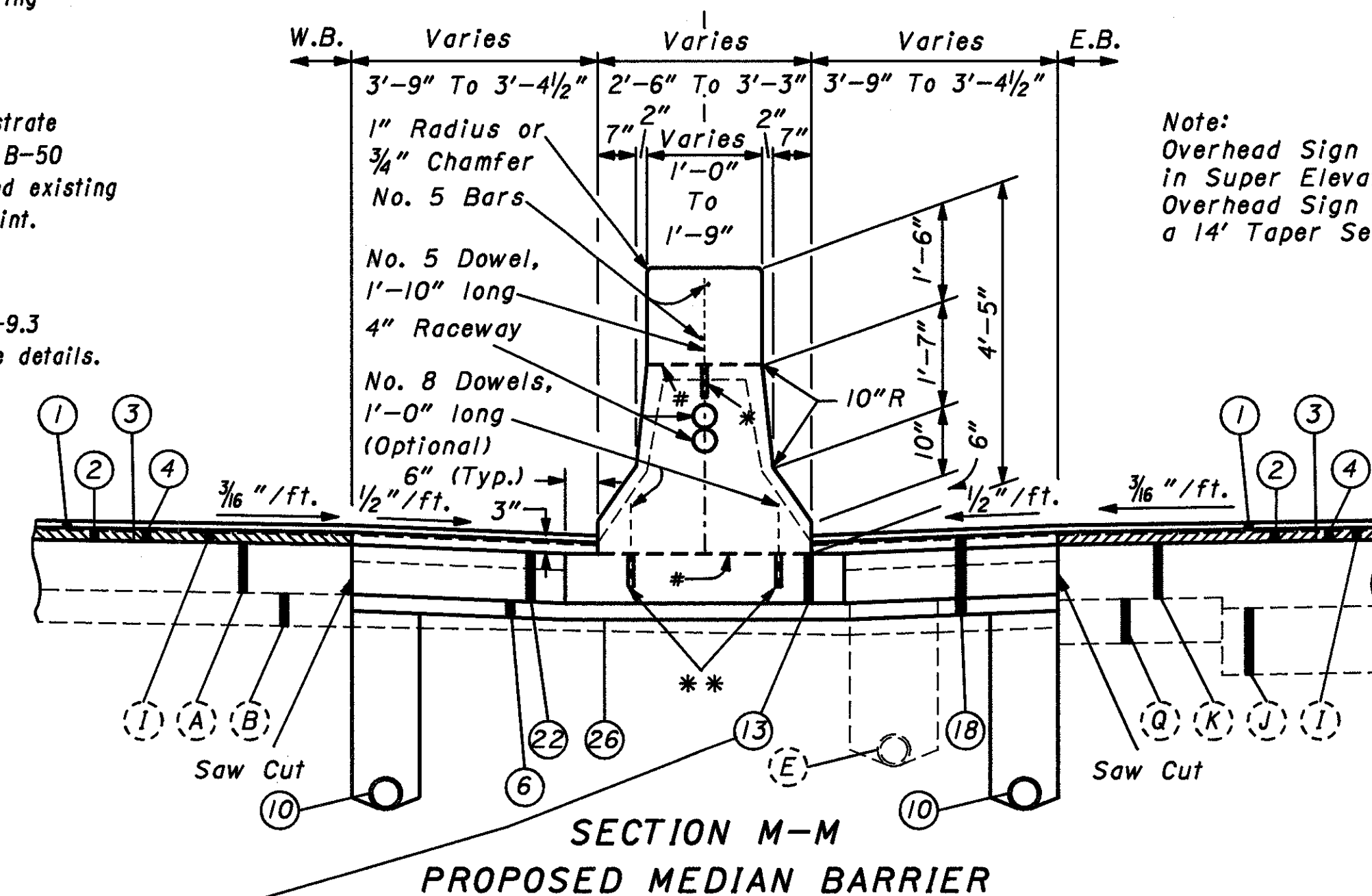
SECTION L-L
PROPOSED MEDIAN BARRIER

Applies At:
Sta. 73+75 To Sta. 73+95
Sta. 74+05 To Sta. 74+25

Note:
For sections A-A, B-B, C-C proposed median barrier see sheet 24.

Note: M-M represents an extension of A-A.
Item (5) extends to mainline edge of pavement when in section B-B or C-C.

ITEM 622 - CONCRETE BARRIER, TYPE B-50, AS PER PLAN "A"

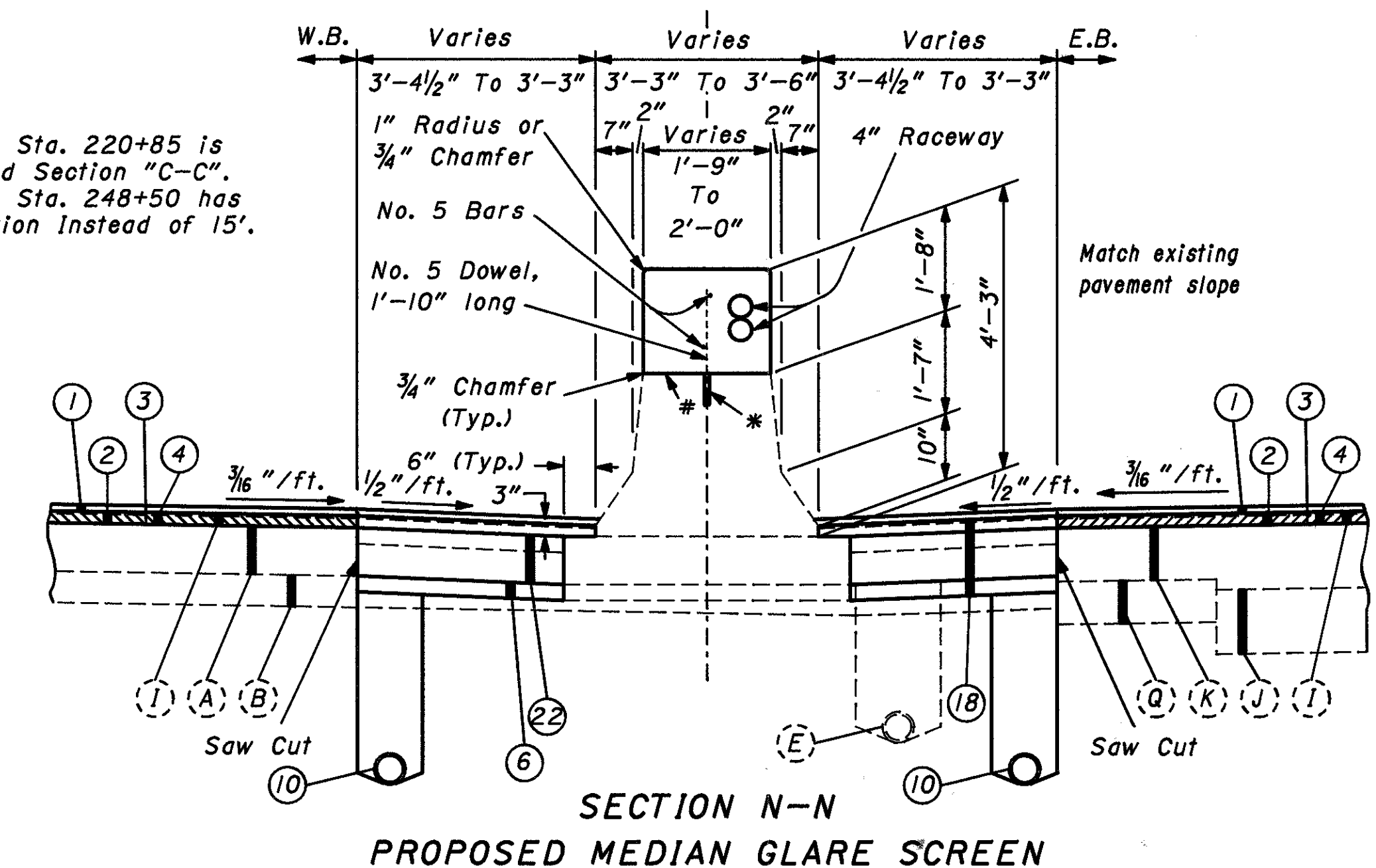


SECTION M-M
PROPOSED MEDIAN BARRIER

Applies At: (2 Race Ways) Junction Box, As Per Plan
Sta. 83+75 To Sta. 83+90
Sta. 84+10 To Sta. 84+25
Applies At: (1 Race Way) Junction Box
Sta. 110+25 To Sta. 110+40
Sta. 110+60 To Sta. 110+75
Sta. 130+00 To Sta. 130+15
Sta. 130+35 To Sta. 130+42.5
Sta. 154+50 To Sta. 154+65
Sta. 154+85 To Sta. 155+00
Sta. 157+25 To Sta. 157+40
Sta. 157+60 To Sta. 157+75
Sta. 210+57.5 To Sta. 210+65 (20:1 Taper)
Sta. 210+85 To Sta. 211+00
Sta. 220+60 To Sta. 220+75
Sta. 220+95 To Sta. 221+10
Sta. 231+15 To Sta. 231+30
Sta. 231+50 To Sta. 231+65
Sta. 248+25 To Sta. 248+40
Sta. 248+60 To Sta. 248+67.5 (20:1 Taper)

Note: All tapers are 40:1 unless noted otherwise.

ITEM 622 - CONCRETE GLARE SCREEN, AS PER PLAN "A"

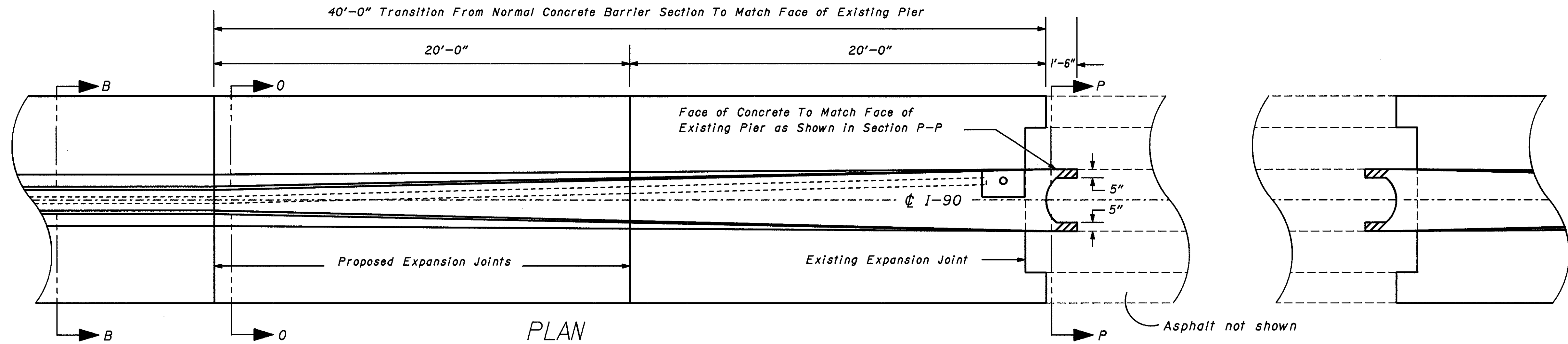


SECTION N-N
PROPOSED MEDIAN GLARE SCREEN

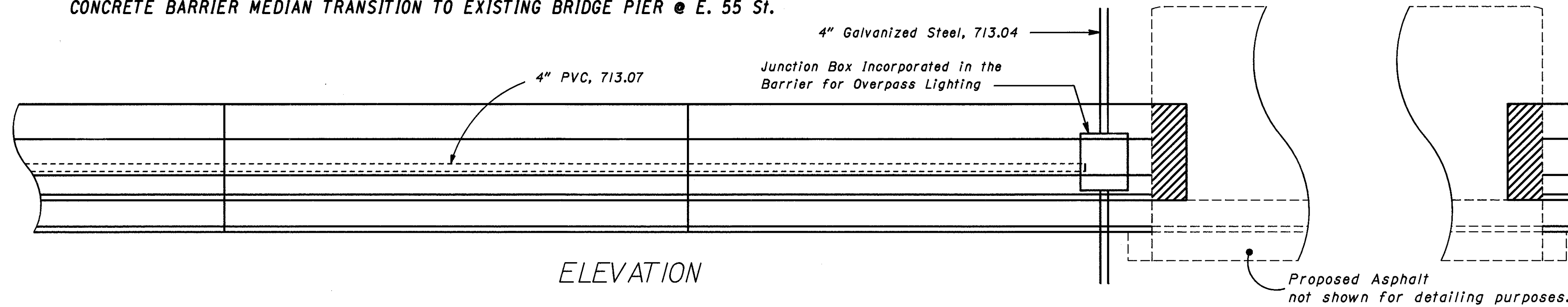
Applies At: (2 Race Ways) Junction Box, As Per Plan
Sta. 83+90 To Sta. 83+95
Sta. 84+05 To Sta. 84+10
Applies At: (1 Race Way) Junction Box
Sta. 110+40 To Sta. 110+45
Sta. 110+55 To Sta. 110+60
Sta. 130+15 To Sta. 130+20
Sta. 130+30 To Sta. 130+35
Sta. 154+65 To Sta. 154+70
Sta. 154+80 To Sta. 154+85
Sta. 157+40 To Sta. 157+45
Sta. 157+55 To Sta. 157+60
Sta. 210+65 To Sta. 210+70
Sta. 210+80 To Sta. 210+85
Sta. 220+75 To Sta. 220+80
Sta. 220+90 To Sta. 220+95
Sta. 231+30 To Sta. 231+35
Sta. 231+45 To Sta. 231+50
Sta. 248+40 To Sta. 248+45
Sta. 248+55 To Sta. 248+60

CONCRETE BARRIER REPLACEMENT DETAILS

CALC BY DATE	CUYAHOGA COUNTY CUI-90-18.63	OHIO FHWA REGION 5	24D 130
CHKD BY DATE		FEDERAL PROJECT	

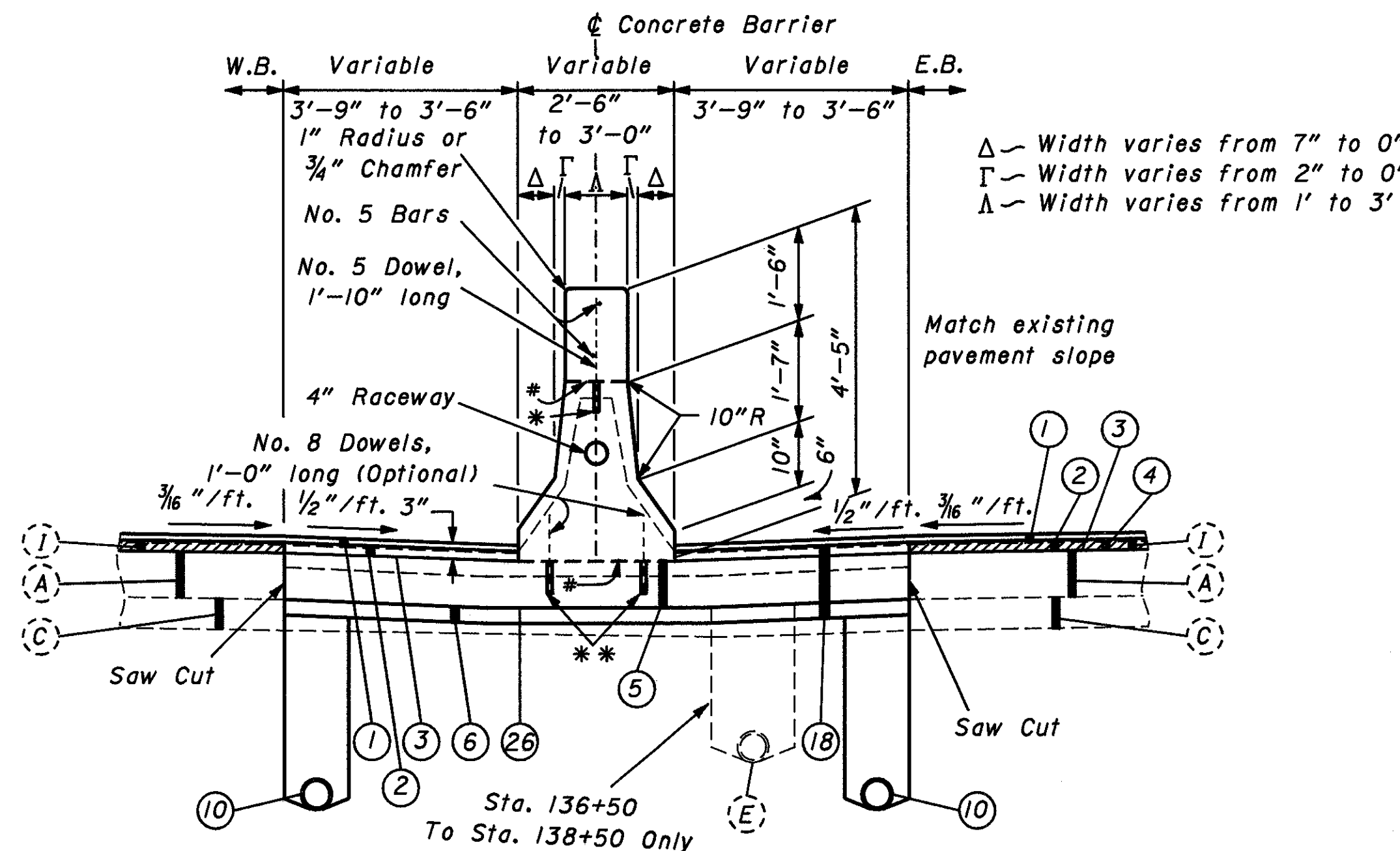


CONCRETE BARRIER MEDIAN TRANSITION TO EXISTING BRIDGE PIER @ E. 55 St.



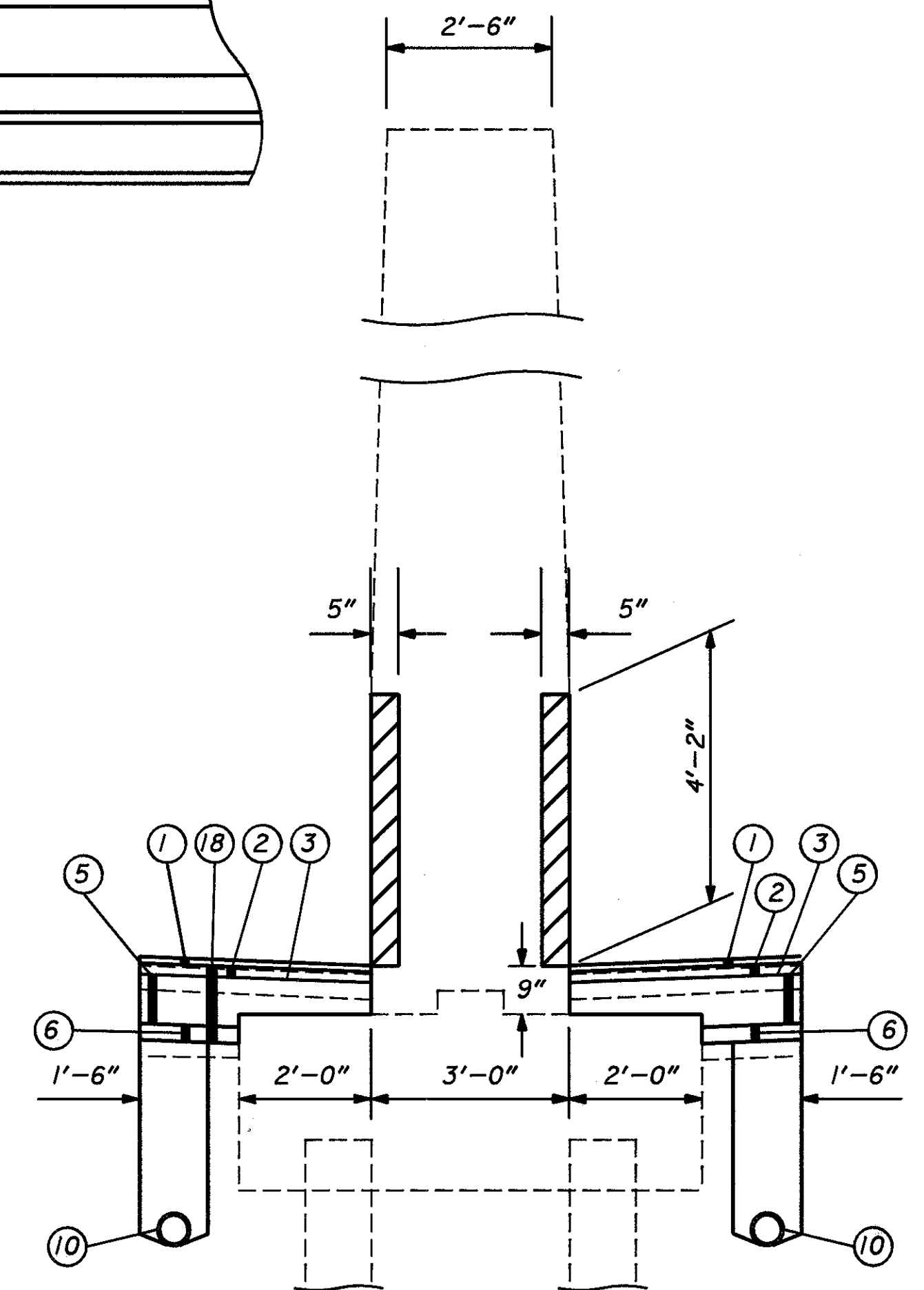
ITEM 622 - CONCRETE BARRIER, TYPE B-50, AS PER PLAN "B"

NOTE: Only Concrete Portions of the Existing Pier Are To Be Removed. Any Existing Reinforcing Steel Which Is Encountered during Removal Operations Shall Be Carefully Exposed but Shall Otherwise Remain Undisturbed. All Materials and Labor Shall Be Included in the Cost of Item 622 - Concrete Barrier, Type B-50, As Per Plan "B".



SECTION 0-0
PROPOSED MEDIAN BARRIER

Normal Section:
Sta. 139+15.00 To Sta. 139+55.00
Sta. 140+41.00 To Sta. 140+81.00 (No Raceway)



SECTION P-P

ITEM 202 - Portions of Existing Structure Removed

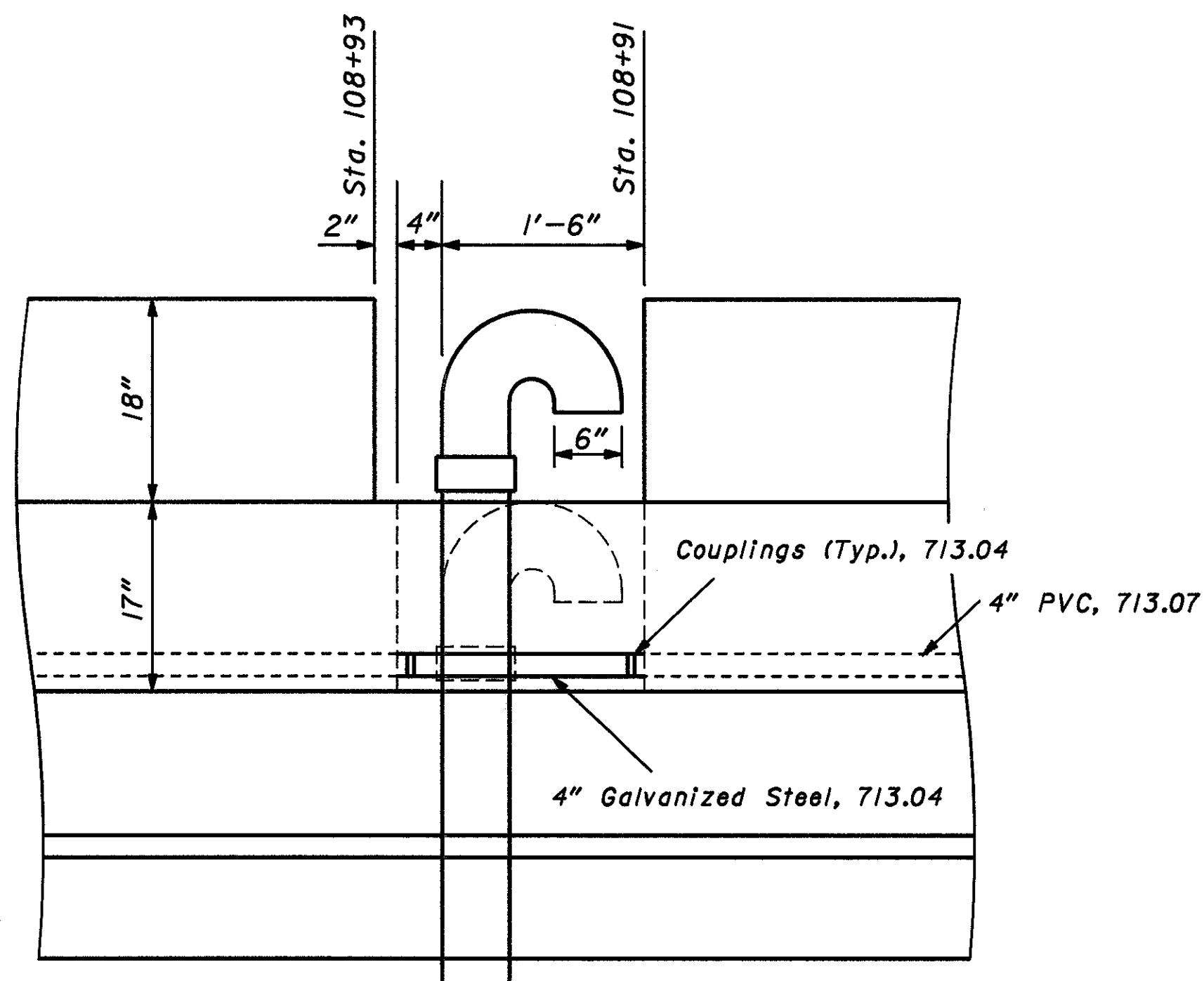
Note: For Section B-B Proposed Median Barrier and Other Barrier Information Refer to Sheet 24.

CONCRETE BARRIER DETAILS

CALC BY	CUYAHOGA COUNTY	OHIO
DATE	CUY-90-18.63	
CHKD BY		FHWA REGION 5
DATE		FEDERAL PROJECT

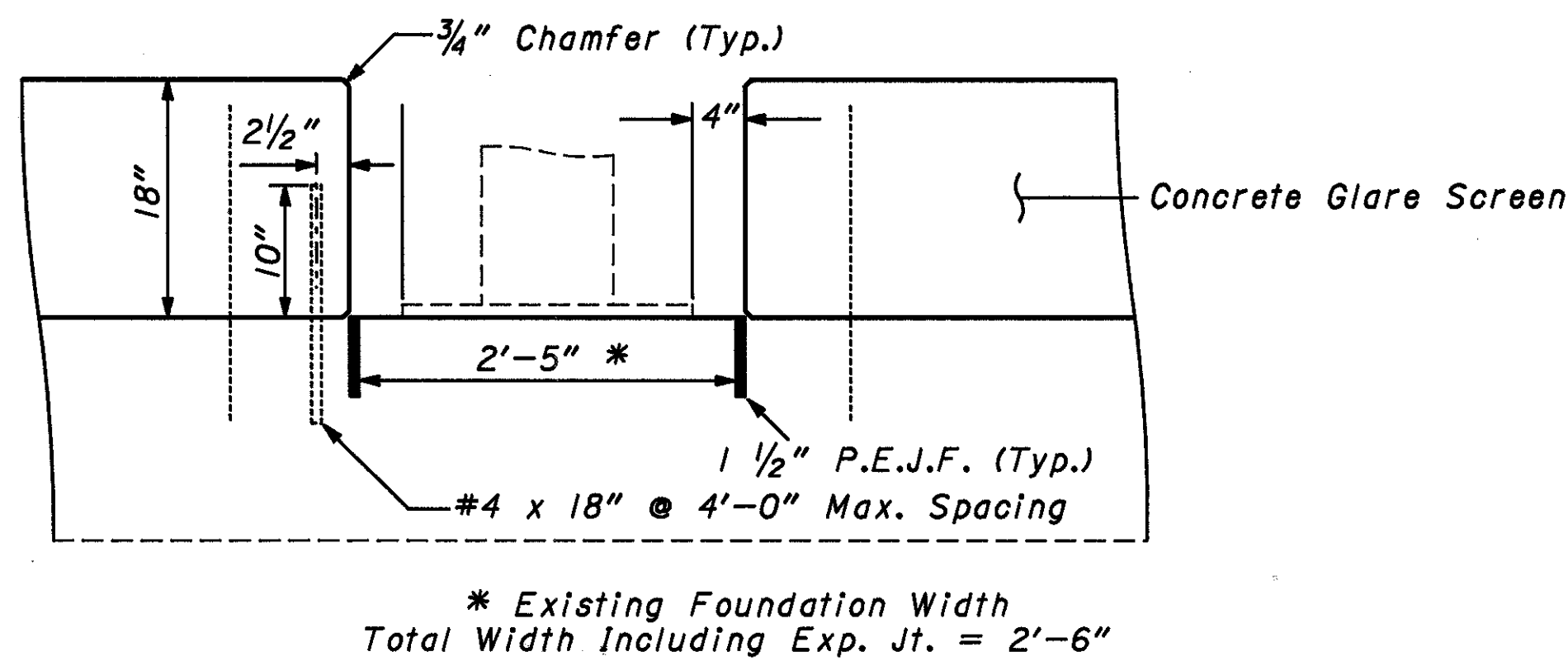
24E
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ITEM 622 - CONCRETE BARRIER, TYPE B-50, AS PER PLAN "B"
MEDIAN GAP FOR VENT PIPE DETAIL



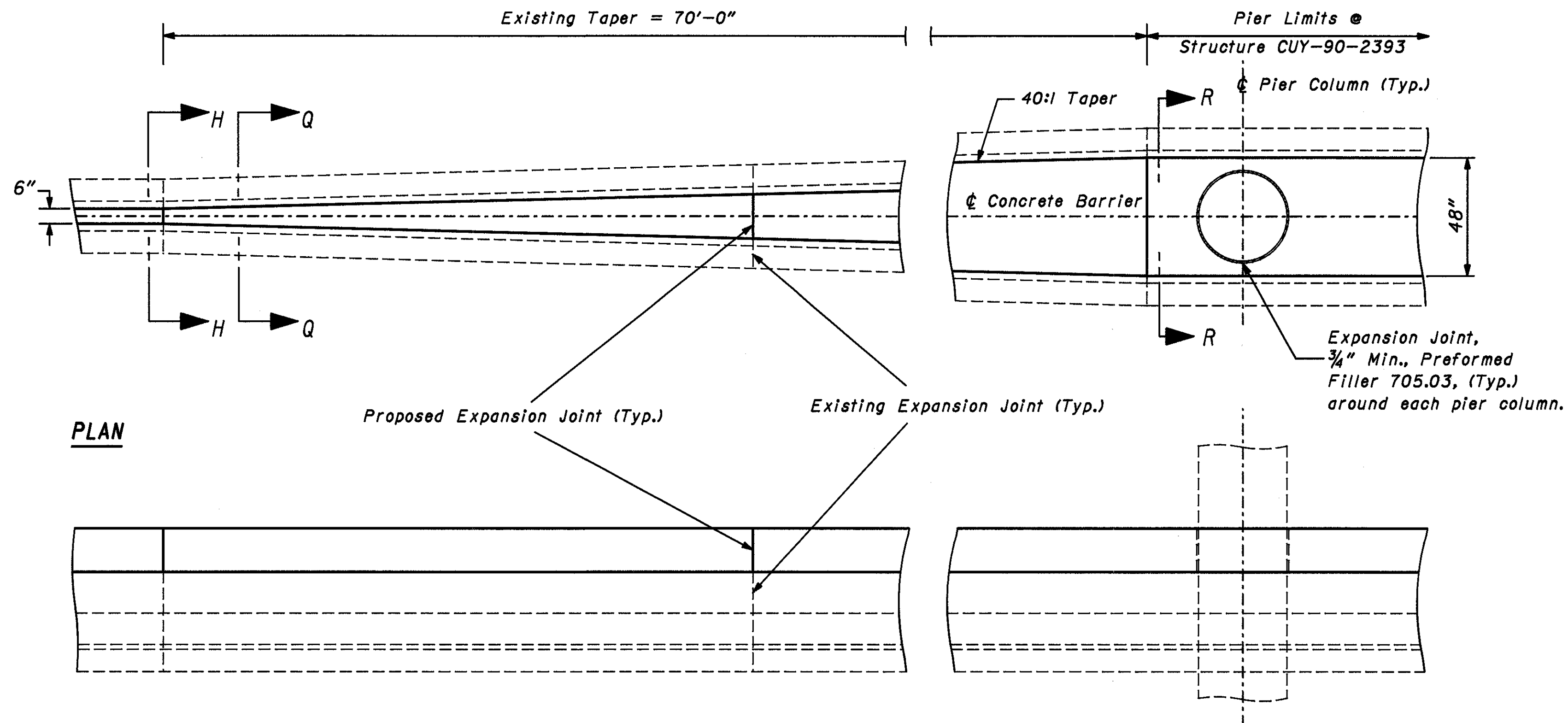
Note: Cost to rebuild or construct new vent pipe shall be included in the cost of Item 622 - Concrete Barrier, Type B-50, As Per Plan "B". Vent pipe material shall be of equal or greater quality of existing vent to be approved by the engineer.

MEDIAN GAP FOR LIGHT POLE DETAIL



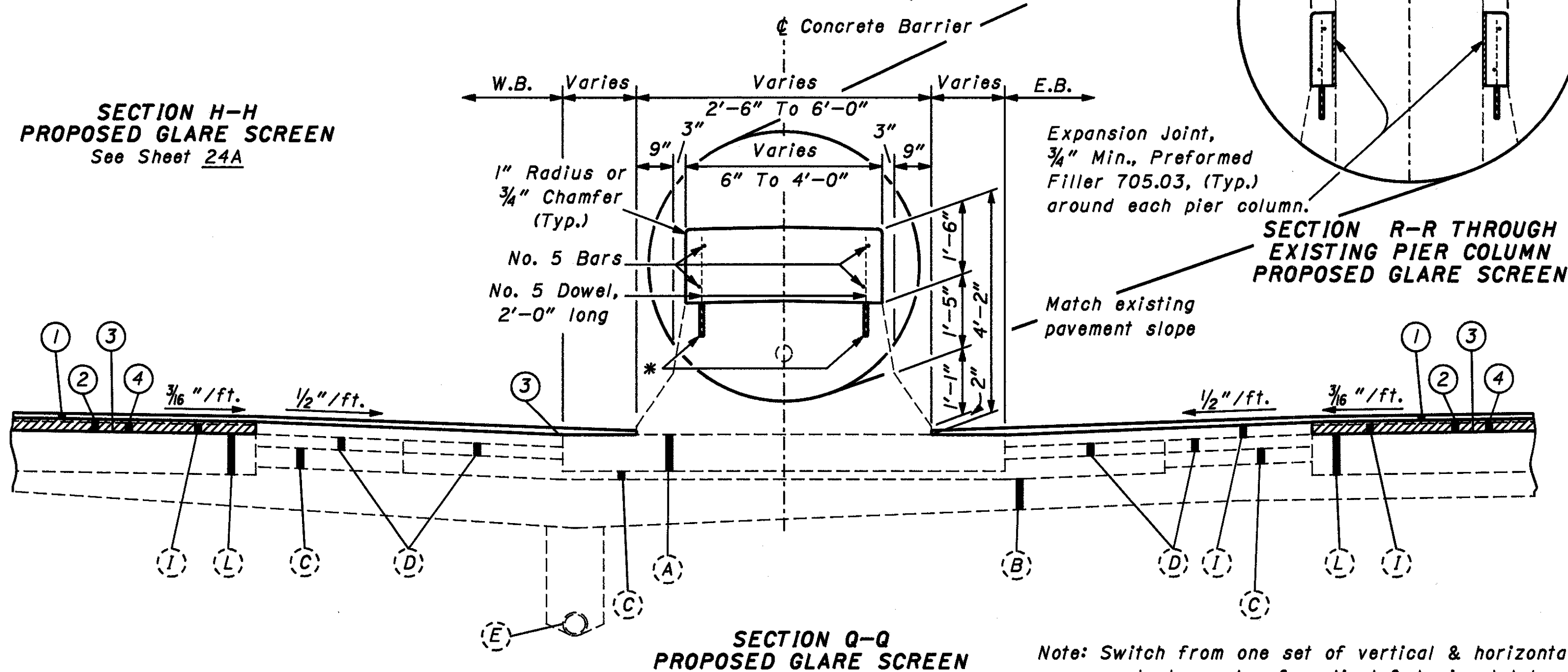
* Existing Foundation Width
Total Width Including Exp. Jt. = 2'-6"

ITEM 622 - CONCRETE GLARE SCREEN, AS PER PLAN "B"



ELEVATION

ITEM 622 - CONCRETE GLARE SCREEN, AS PER PLAN "A"



SECTION Q-Q
PROPOSED GLARE SCREEN
Sta. 438+56.63 To Sta. 439+26.63
Sta. 439+79.05 To Sta. 440+49.05

Note: Switch from one set of vertical & horizontal bars up to two sets of vertical & horizontal bars (One on each side of glare screen when the glare screen width exceeds 2'-0". This applies to all glare screen width transitions).