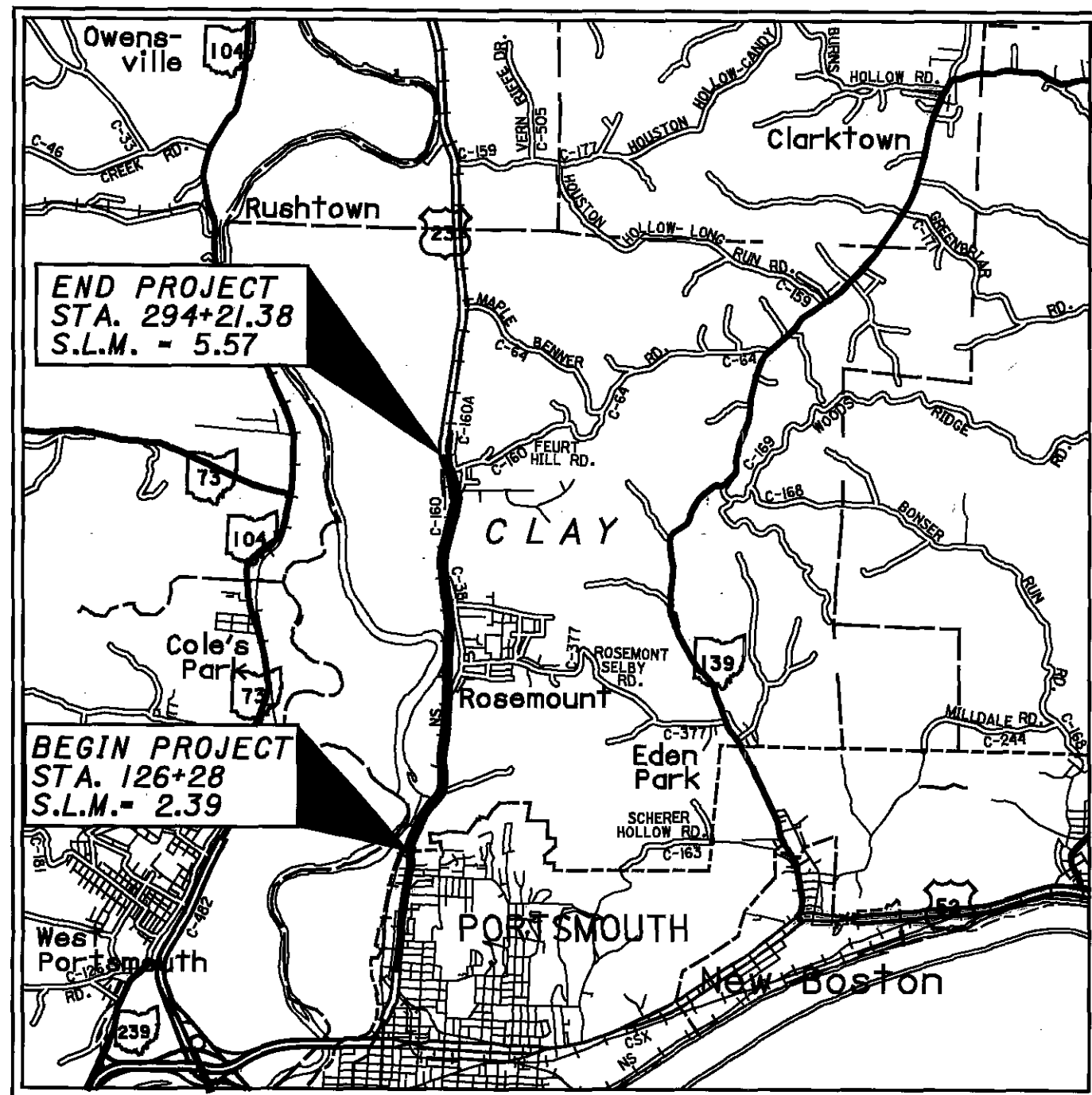
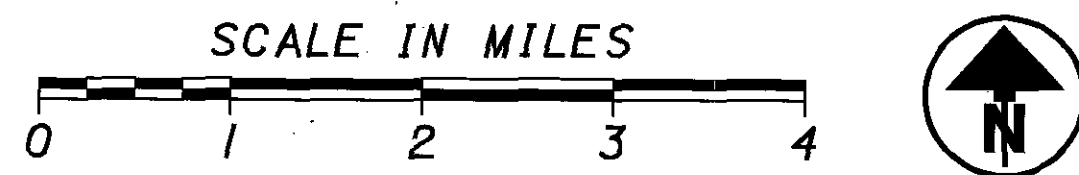


STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
SCI-23-2.39
CLAY TOWNSHIP
SCIOTO COUNTY



LOCATION MAP

LATITUDE: 38° 45' 43" N LONGITUDE: 82° 59' 25" W



PORTION TO BE IMPROVED.....
INTERSTATE & DIVIDED HIGHWAY.....
UNDIVIDED STATE & FEDERAL ROUTES.....
OTHER ROADS.....

DESIGN DESIGNATION

CURRENT ADT (2002).....16,100
TRUCKS (24 HOUR B&C).....9%
DESIGN SPEED.....3R PROJECT
LEGAL SPEED.....45/55 MPH

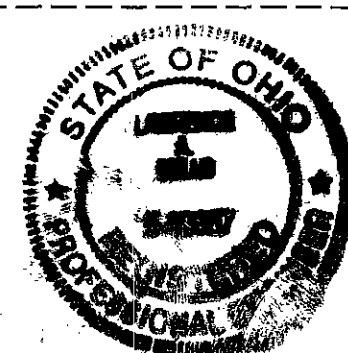
DESIGN FUNCTIONAL CLASSIFICATION - RURAL PRINCIPLE ARTERIAL

DESIGN EXCEPTIONS: NONE REQUIRED

UNDERGROUND UTILITIES
TWO WORKING DAYS
BEFORE YOU DIG
CALL 1-800-362-2764 (TOLL FREE)
OHIO UTILITIES PROTECTION SERVICE
NON-MEMBERS
MUST BE CALLED DIRECTLY

PLAN PREPARED BY:
DISTRICT NO. 9
OHIO DEPARTMENT OF
TRANSPORTATION

SIGNED *Therese A. Wells*
DATE 9/9/2005



SEAL

INDEX OF SHEETS:

TITLE SHEET	1
SCHEMATIC PLAN	2
TYPICAL SECTIONS AND DETAILS	3-9
GENERAL NOTES	10-13
MAINTENANCE OF TRAFFIC	14-25
GENERAL SUMMARY	26-28
PAVEMENT CALCULATIONS	29-31
DRAINAGE SUB-SUMMARY	32-33
GUARDRAIL SUB-SUMMARY	34
PAVEMENT MARKING SUB-SUMMARY	35
PLAN AND PAVEMENT MARKING	36-54
TRENCH DRAIN PROFILE	55-58
CROSS SECTIONS	59-77
STRUCTURES UNDER 20' SPAN (SCI-23-0519)	78-86
STRUCTURES OVER 20' SPAN (SCI-23-0523)	87-110

PROJECT DESCRIPTION

IMPROVEMENT OF 3.18 MILES OF US ROUTE 23 IN SCIOTO COUNTY BY REMOVING THE ASPHALT SURFACE COURSE AND REPLACING IT WITH AN ASPHALT INTERMEDIATE COURSE AND AN ASPHALT SURFACE COURSE. ALL EXISTING CURB AND GUTTER, ALONG WITH THE GUARDRAIL, WILL BE REPLACED BY THIS PROJECT. THE STRUCTURE SCI-23-0519 WILL BE IMPROVED WITH THE ADDITION OF CONCRETE PARAPETS. THE STRUCTURE SCI-23 0535 WILL RECEIVE A NEW WEARING SURFACE AFTER HYDRO-DEMOLITION; THE CENTER MEDIAN WILL BE REMOVED, AND IT WILL ALSO RECEIVE UPGRADED PARAPETS. ALL OF THE EXISTING CONCRETE MEDIAN WILL BE REMOVED AND REPLACED WITH TRENCH DRAIN.

MAINTENANCE PROJECT

PROJECT EDA =	N/A
CONTRACTOR EDA =	N/A
NOI EDA =	N/A

2005 SPECIFICATIONS

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY, AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH IN THE PLANS AND ESTIMATES.

UNDER AUTHORITY OF SECTION 4511.21, DIVISION (I) OF THE REVISED CODE OF OHIO, THE REVISED PRIMA FACIE SPEED LIMITS AS INDICATED HEREIN ARE DETERMINED TO BE REASONABLE AND SAFE, AND ARE HEREBY ESTABLISHED FOR THE DURATION OF THIS PROJECT. THE PRIMA FACIE SPEED LIMIT OR LIMITS HEREBY ESTABLISHED SHALL BECOME EFFECTIVE WHEN APPROPRIATE SIGNS GIVING NOTICE THEREOF ARE ERECTED.

STANDARD CONSTRUCTION DRAWINGS						SUPPLEMENTAL SPECIFICATIONS	
BP-3.1	7-16-04	RM-4.2	4-18-03	MT-35.10	4-20-01	800	10-21-05
BP-4.1	7-16-04	RM-4.5	4-18-03	MT-95.31	7-16-04	802	4-15-05
BP-5.1	7-28-00	RM-4.6	1-16-04	MT-95.32	7-16-04	832	4-17-04
BP-9.1	4-15-05			TC-18.24	1-18-02	833	2-12-03
		CB-2.1	7-15-05	TC-22.20	1-19-01	848	4-15-05
GR-1.1	7-16-04	CB-2.3	7-15-05	MT-95.41	7-16-04	873	10-30-03
GR-2.1	1-16-04			TC-41.20	1-19-01		
GR-3.1	4-18-03	HW-2.1	7-15-05	TC-42.20	7-16-04		
GR-3.2	4-18-03	HW-2.2	7-15-05	TC-52.10	4-20-01		
GR-4.1	4-18-03			TC-52.20	4-20-01		
GR-4.2	4-15-05	DM-1.1	1-21-05	TC-65.10	1-21-05		
GR-5.1	4-18-03	DM-1.4	1-21-05	TC-65.11	1-21-05		
GR-5.2	1-16-04	DM-4.1	7-19-02	TC-71.10	1-21-05		
GR-5.3	1-16-04	DM-4.3	7-19-02	TC-73.10	1-19-01		
GR-6.1	4-18-03	DM-4.4	7-19-02	TC-82.10	4-19-02		
				MT-101.20	10-18-02		
				MT-101.60	10-18-02		
				MT-101.70	10-18-02		
				MT-105.10	10-18-02		
				MT-105.11	10-18-02		

SPECIAL PROVISIONS

APPROVED *Harry Jay*
DATE 9/9/05 DISTRICT DEPUTY DIRECTOR

APPROVED *Jordan Proctor*
DATE 10-7-05 DIRECTOR, DEPARTMENT OF TRANSPORTATION

FEDERAL PROJECT NO. E051(264)

PID NO. 19883

CONSTRUCTION PROJECT NO.

RAILROAD INVOLVEMENT
NORFOLK SOUTHERN RAILWAY COMPANY

SCI-23-2.39

1/110

EX. SPIRAL DATA

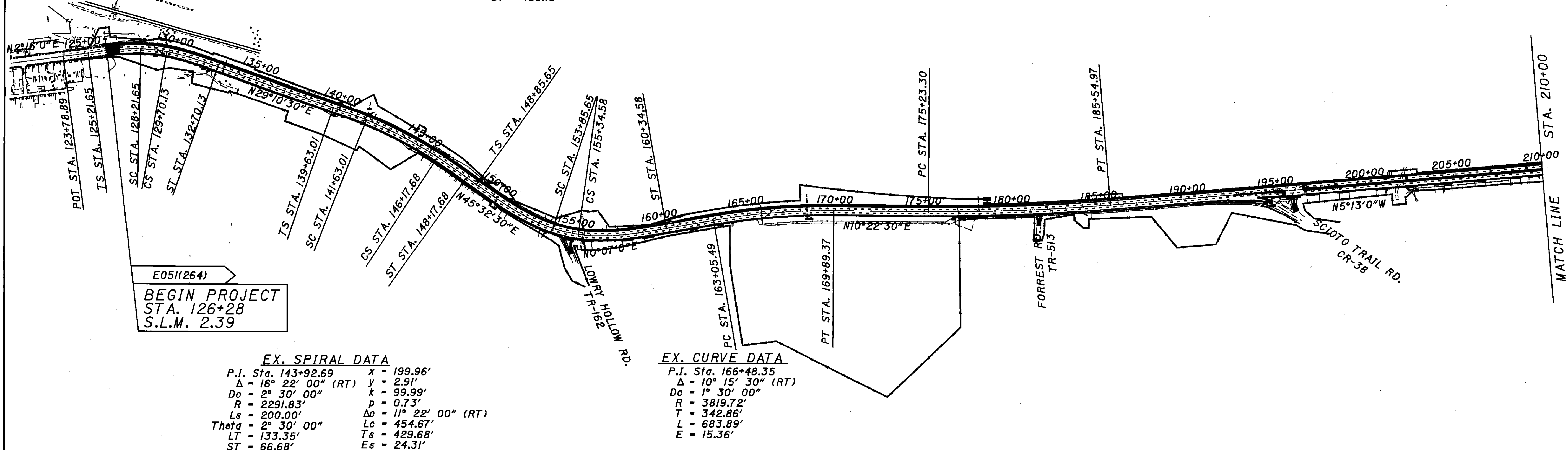
P.I. Sta. 129+00.92	x = 299.26'
Δ = 26° 54' 30" (RT)	y = 15.68'
Dc = 6° 00' 00"	k = 149.88'
R = 954.93'	p = 3.92'
Ls = 300.00'	Δc = 8° 54' 30" (RT)
Theta = 9° 00' 00"	Lc = 148.47'
LT = 200.26'	Ts = 379.27'
ST = 100.24'	Es = 30.98'

EX. SPIRAL DATA

P.I. Sta. 154+82.78	x = 495.36'
Δ = 45° 25' 30" (LT)	y = 50.57'
Dc = 7° 00' 00"	k = 249.22'
R = 818.51'	p = 12.68'
Ls = 500.00'	Δc = 10° 25' 30" (LT)
Theta = 17° 30' 00"	Lc = 148.93'
LT = 334.98'	Ts = 597.13'
ST = 168.16'	Es = 82.56'

EX. CURVE DATA

P.I. Sta. 180+39.48	x = 399.22'
Δ = 5° 9' 30" (LT)	y = 18.59'
Dc = 0° 30' 00"	k = 199.87'
R = 11459.16'	p = 4.65'
T = 516.18'	Δc = 22° 00' 00" (LT)
L = 1031.67'	Lc = 550.00'
E = 11.62'	Ts = 694.68'
	Es = 87.45'



E051(264)
BEGIN PROJECT
 STA. 126+28
 S.L.M. 2.39

EX. SPIRAL DATA

P.I. Sta. 143+92.69	x = 199.96'
Δ = 16° 22' 00" (RT)	y = 2.91'
Dc = 2° 30' 00"	k = 99.99'
R = 2291.83'	p = 0.73'
Ls = 200.00'	Δc = 11° 22' 00" (RT)
Theta = 2° 30' 00"	Lc = 454.67'
LT = 133.35'	Ts = 429.68'
ST = 66.68'	Es = 24.31'

EX. CURVE DATA

P.I. Sta. 166+48.35	x = 399.22'
Δ = 10° 15' 30" (RT)	y = 18.59'
Dc = 1° 30' 00"	k = 199.87'
R = 3819.72'	p = 4.65'
T = 342.86'	Δc = 22° 00' 00" (LT)
L = 683.89'	Lc = 550.00'
E = 15.36'	Ts = 694.68'
	Es = 87.45'

EX. SPIRAL DATA

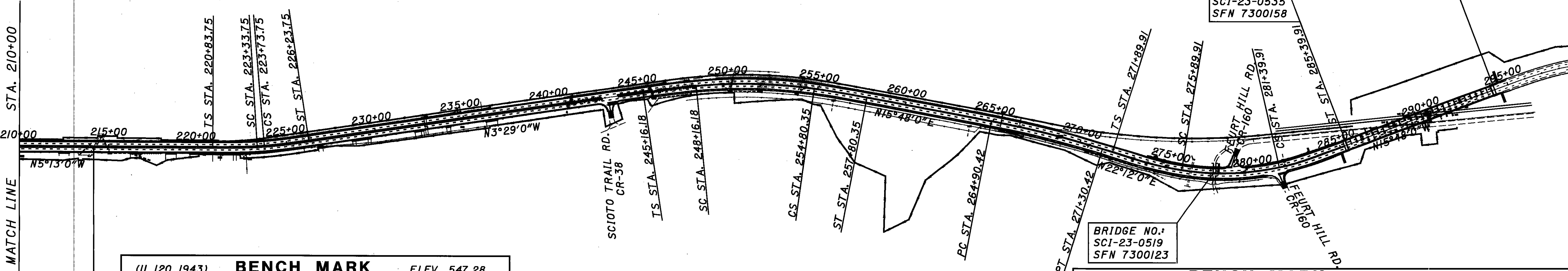
P.I. Sta. 223+54.12	x = 249.89'
Δ = 8° 42' 00" (LT)	y = 5.45'
Dc = 3° 00' 00"	k = 124.98'
R = 1909.86'	p = 1.36'
Ls = 250.00'	Δc = 1° 12' 00" (LT)
Theta = 3° 45' 00"	Lc = 40.00'
LT = 166.70'	Ts = 270.37'
ST = 83.37'	Es = 6.88'

(J 311 1967) **BENCH MARK** ELEV. 560.87
 ABOUT 4.2 MILES NORTH ALONG THE NORFOLK AND SOUTHERN RAILWAY FROM THE STATION AT PORTSMOUTH, NEAR THE SOUTH END OF THE U.S. HIGHWAY 23 OVERPASS, ABOUT 5.35 MILES SOUTH ALONG THE NORFOLK AND SOUTHERN RAILWAY FROM THE STATION AT LUCASVILLE, SET VERTICALLY IN THE CENTER OF THE SOUTH END OF A 12 FOOT LONG BY 2-1/2 FOOT WIDE AND 8 FOOT HIGH CONCRETE WALL, 305 FEET SOUTH OF MILE POST N 612, 9.5 FEET EAST OF THE EAST RAIL OF THE EAST TRACK, AND 3 FEET ABOVE THE LEVEL OF THE GROUND.

EX. SPIRAL DATA

P.I. Sta. 278+84.59	x = 399.22'
Δ = 38° 00' 00" (LT)	y = 18.59'
Dc = 4° 00' 00"	k = 199.87'
R = 1432.39'	p = 4.65'
Ls = 400.00'	Δc = 22° 00' 00" (LT)
Theta = 8° 00' 00"	Lc = 550.00'
LT = 266.94'	Ts = 694.68'
ST = 133.58'	Es = 87.45'

E051(264)
END PROJECT
 STA. 294+21.38
 S.L.M. = 5.57



(U 120 1943) **BENCH MARK** ELEV. 547.28
 ABOUT 3.6 MILES NORTH ALONG THE NORFOLK AND SOUTHERN RAILWAY FROM THE STATION AT PORTSMOUTH, 0.2 MILE NORTH OF THE NORTH JUNCTION OF OLD SCIOTO TRAIL AND U.S. HIGHWAY 23, 0.6 MILE NORTH OF A FARM ROAD CROSSING, SET ON THE TOP OF THE NORTH END OF THE EAST HEADWALL OF A 2 FOOT BY 3 FOOT CONCRETE BOX CULVERT WITH WING WALLS, 58 FEET WEST OF THE CENTER LINE OF THE SOUTHBOUND LANE OF THE U.S. HIGHWAY, 15 FEET EAST OF THE EAST RAIL OF THE EAST TRACK, AND ABOUT 6 FEET BELOW THE LEVEL OF THE TRACK

EX. SPIRAL DATA

P.I. Sta. 251+53.07	x = 299.92'
Δ = 19° 17' 00" (RT)	y = 5.23'
Dc = 2° 00' 00"	k = 149.99'
R = 2864.79'	p = 1.31'
Ls = 300.00'	Δc = 13° 17' 00" (RT)
Theta = 3° 00' 00"	Lc = 664.17'
LT = 200.03'	Ts = 636.89'
ST = 100.03'	Es = 42.37'

EX. CURVE DATA

P.I. Sta. 268+10.75	x = 399.22'
Δ = 6° 24' 00" (RT)	y = 18.59'
Dc = 1° 00' 00"	k = 199.87'
R = 5729.58'	p = 4.65'
T = 320.33'	Δc = 22° 00' 00" (LT)
L = 640.00'	Lc = 550.00'
E = 8.95'	Ts = 694.68'
	Es = 87.45'

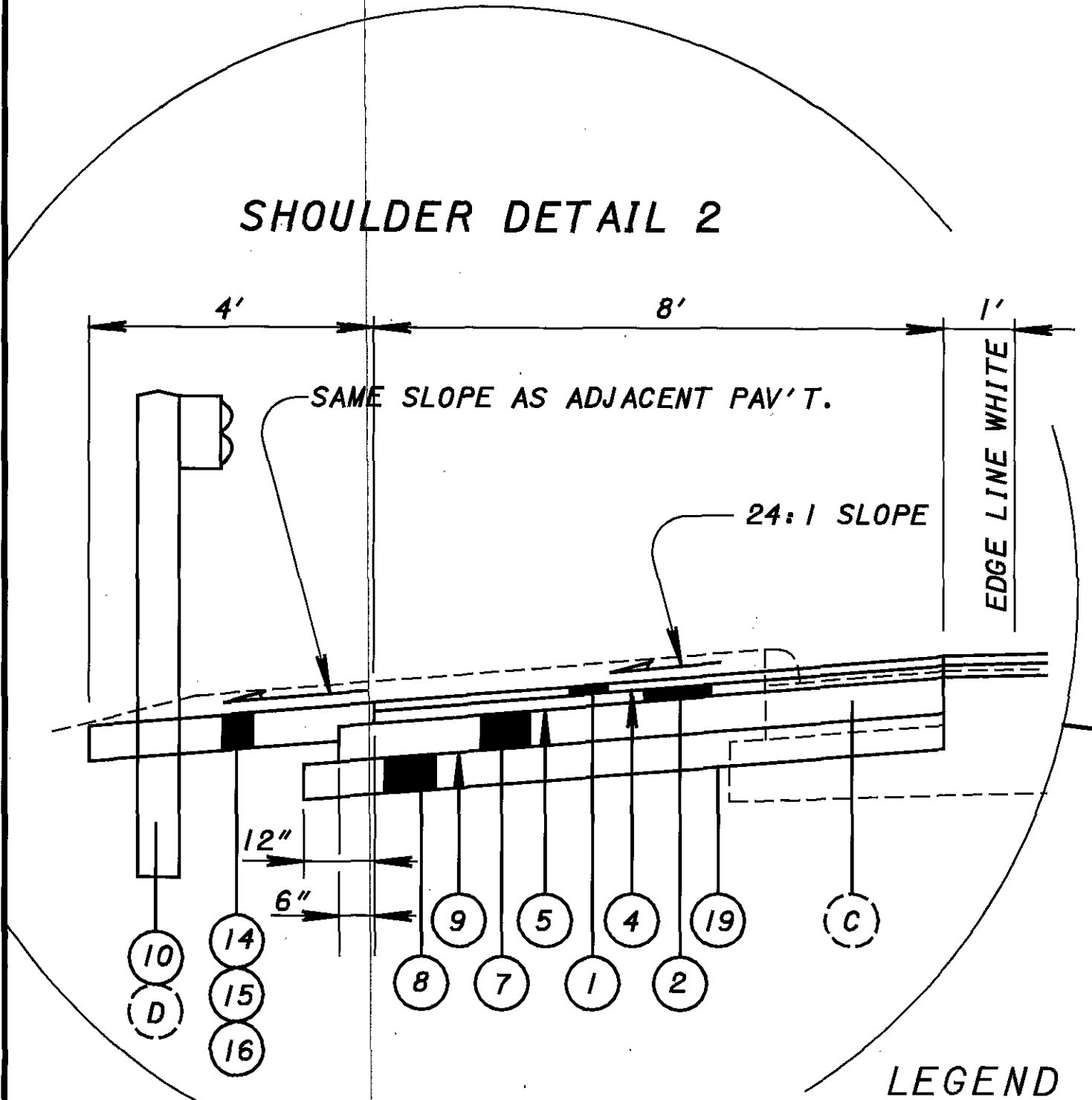
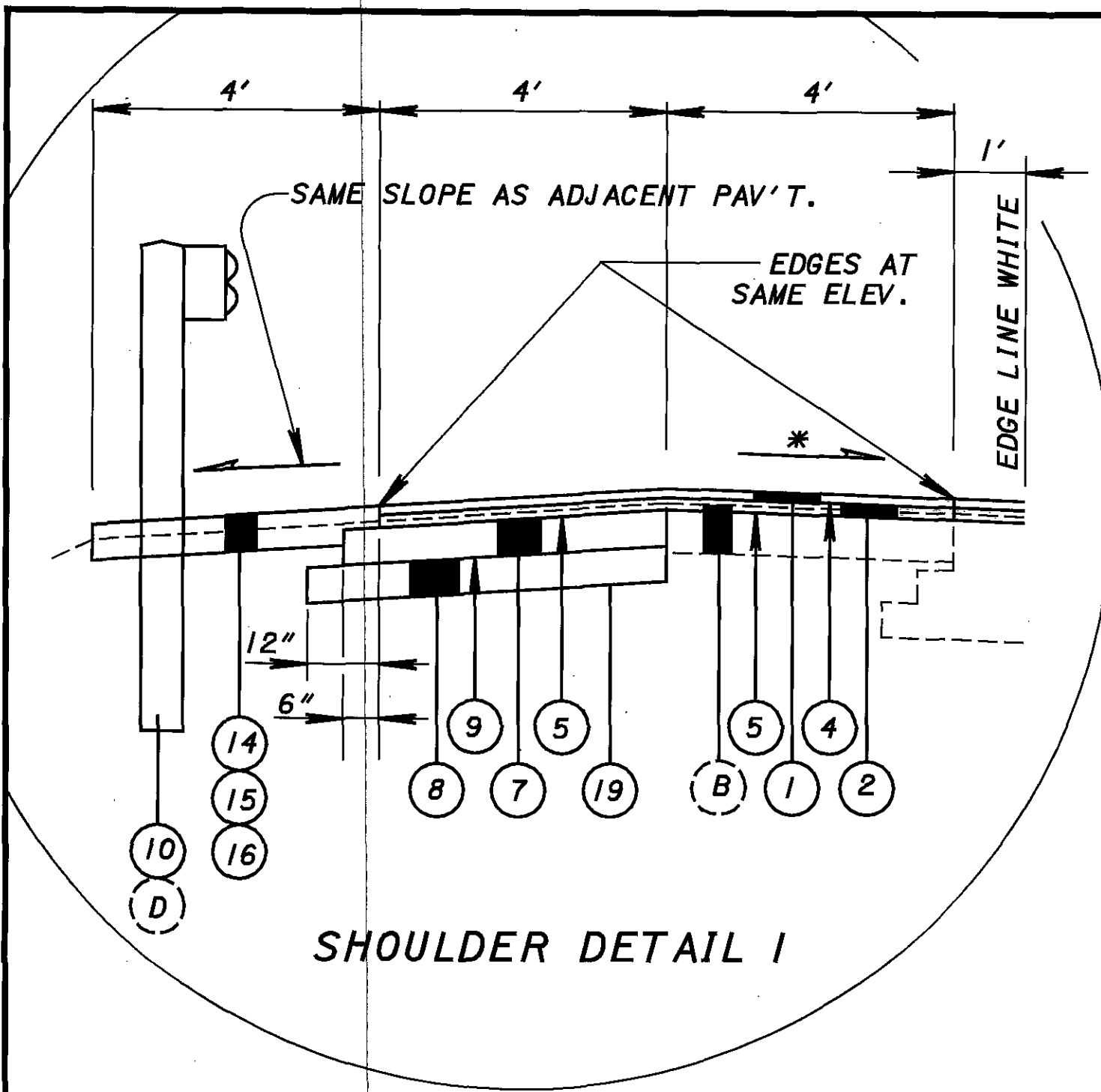
(M 311 1967) **BENCH MARK** ELEV. 559.62
 ABOUT 5.0 MILES SOUTH ALONG THE NORFOLK AND SOUTHERN RAILWAY FROM THE STATION AT LUCASVILLE, 0.25 MILE NORTH OF THE NORTH END OF THE U.S. HIGHWAY 23 OVERPASS OVER THE TRACKS, NEAR THE WEST END OF A GUARDRAIL, 46 FEET EAST OF THE EAST RAIL OF THE EAST TRACK, 35 FEET WEST OF THE CENTER LINE OF OLD U.S. HIGHWAY 23, 37 FEET NORTHEAST OF THE 12TH TELEPHONE POLE NORTH OF MILEPOST N 612, 3 FEET EAST OF THE WEST END OF THE GUARDRAIL, 1.2 FEET NORTH OF THE GUARDRAIL, 2 FEET SOUTH OF A METAL WITNESS POST, ABOUT LEVEL WITH THE TRACK AND IS A DISK ON THE TOP OF A COPPER COATED STEEL ROD 1/2 FOOT UNDERGROUND AND PROTECTED BY A 6 INCH METAL PIPE WHICH PROJECTS 2 INCHES ABOVE THE LEVEL OF THE GROUND. THE ROD WAS DRIVEN TO REFUSAL AT A DEPTH OF 16 FEET.

CALCULATED
 CER
 CHECKED
 LAW

SCHEMATIC PLAN

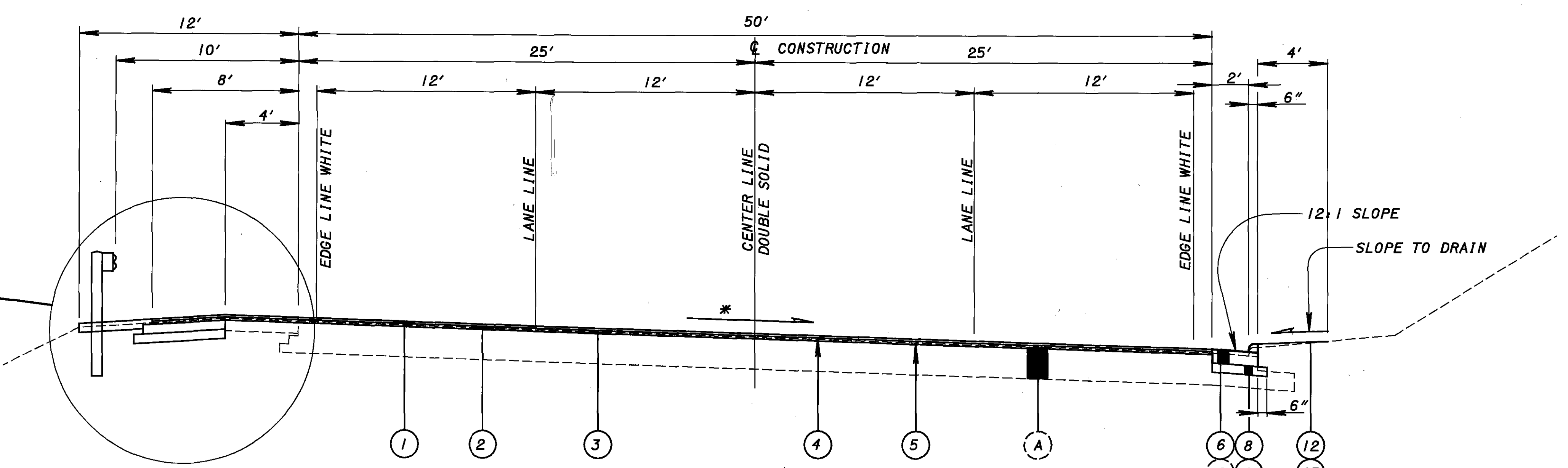
SCI-23-2.39

Drawing: I:\projects\23a0228\SCHEMATIC.DGN Plotted by: erice 12-SEP-2005 10:3

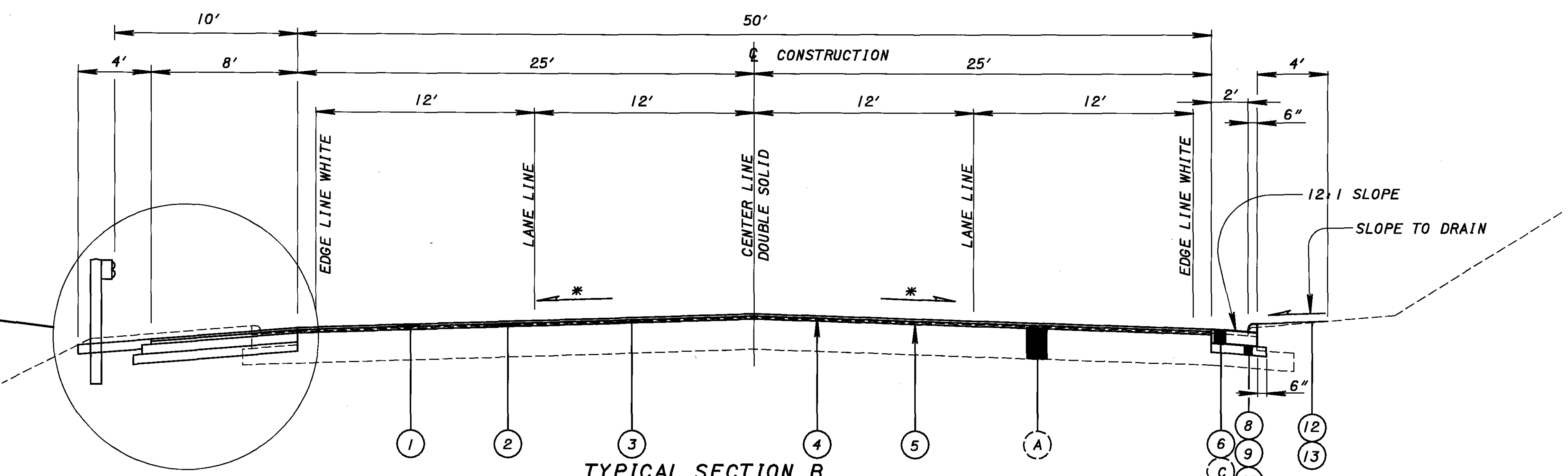


LEGEND

- | | |
|---|--|
| ① 442 1½" ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (446) WITH SUPPLEMENT 1059 WARRANTY | ⑪ SPECIAL TRENCH DRAIN |
| ② 442 2" ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A (446) | ⑫ 659 SEEDING AND MULCHING |
| ③ 254 1" PAVEMENT PLANING, ASPHALT CONCRETE (SEE GENERAL NOTE) | ⑬ 203 EMBANKMENT |
| ④ 407 TACK COAT FOR INTERMEDIATE COURSE @ 0.075 GAL. PER SQ. YD. | ⑭ 617 SHOULDER RECONDITIONING MISC.: COMPACTED ASPHALT CONCRETE GRINDINGS (SEE GENERAL NOTE) |
| ⑤ 407 TACK COAT @ 0.075 GAL. PER SQ. YD. | ⑮ 209 6" DEEP - PREPARING SUBGRADE FOR SHOULDER PAVING AND ITEM SPECIAL - SOIL STERILANT |
| ⑥ 609 COMBINATION CURB AND GUTTER, TYPE 2 | ⑯ 422 CHIP SEAL WITH POLYMER BINDER, MISC.: SEALING COMPACTED ASPHALT CONCRETE GRINDINGS UNDER GUARDRAIL WITHOUT COVER AGGREGATE, AS PER PLAN (SEE GENERAL NOTE) |
| ⑦ 301 6" ASPHALT CONCRETE BASE, P664-22 | ⑰ 617 COMPACTED ASPHALT CONCRETE GRINDINGS (SEE GENERAL NOTE) |
| ⑧ 304 6" AGGREGATE BASE | ⑱ 301 8½" ASPHALT CONCRETE BASE, P664-22 |
| ⑨ 408 PRIME COAT @ 0.40 GAL. PER SQ. YD. | ⑲ 204 SUBGRADE COMPACTION |
| ⑩ 605 GUARDRAIL, TYPE 5 | ⑳ 203 EXCAVATION (6" DEEP) |



THE ABOVE TYPICAL SECTION APPLIES BETWEEN THE FOLLOWING STATIONS:
STA. 126+28 TO STA. 132+70.13 = 642.13 FT.
STA. 140+55.79 TO STA. 148+85.65 = 829.86 FT.
TOTAL 1471.99 FT.

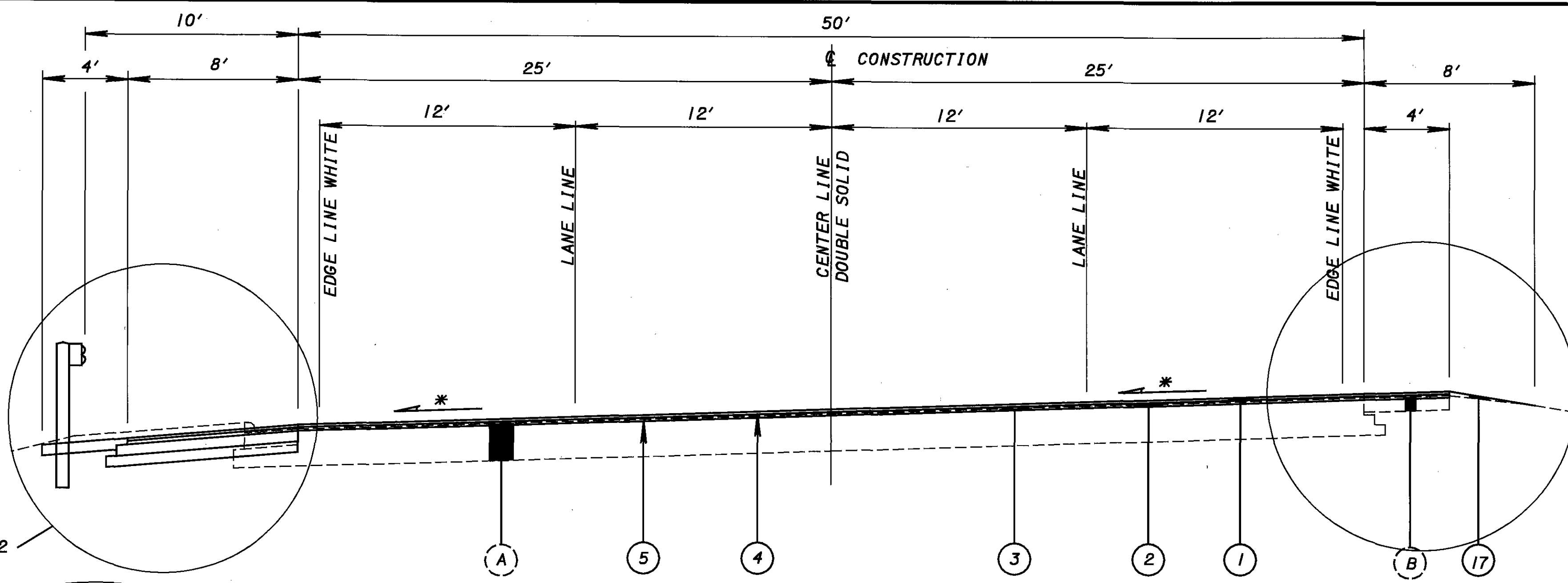


THE ABOVE TYPICAL SECTION APPLIES BETWEEN THE FOLLOWING STATIONS:
STA. 132+70.13 TO STA. 140+55.79 = 785.56 FT.

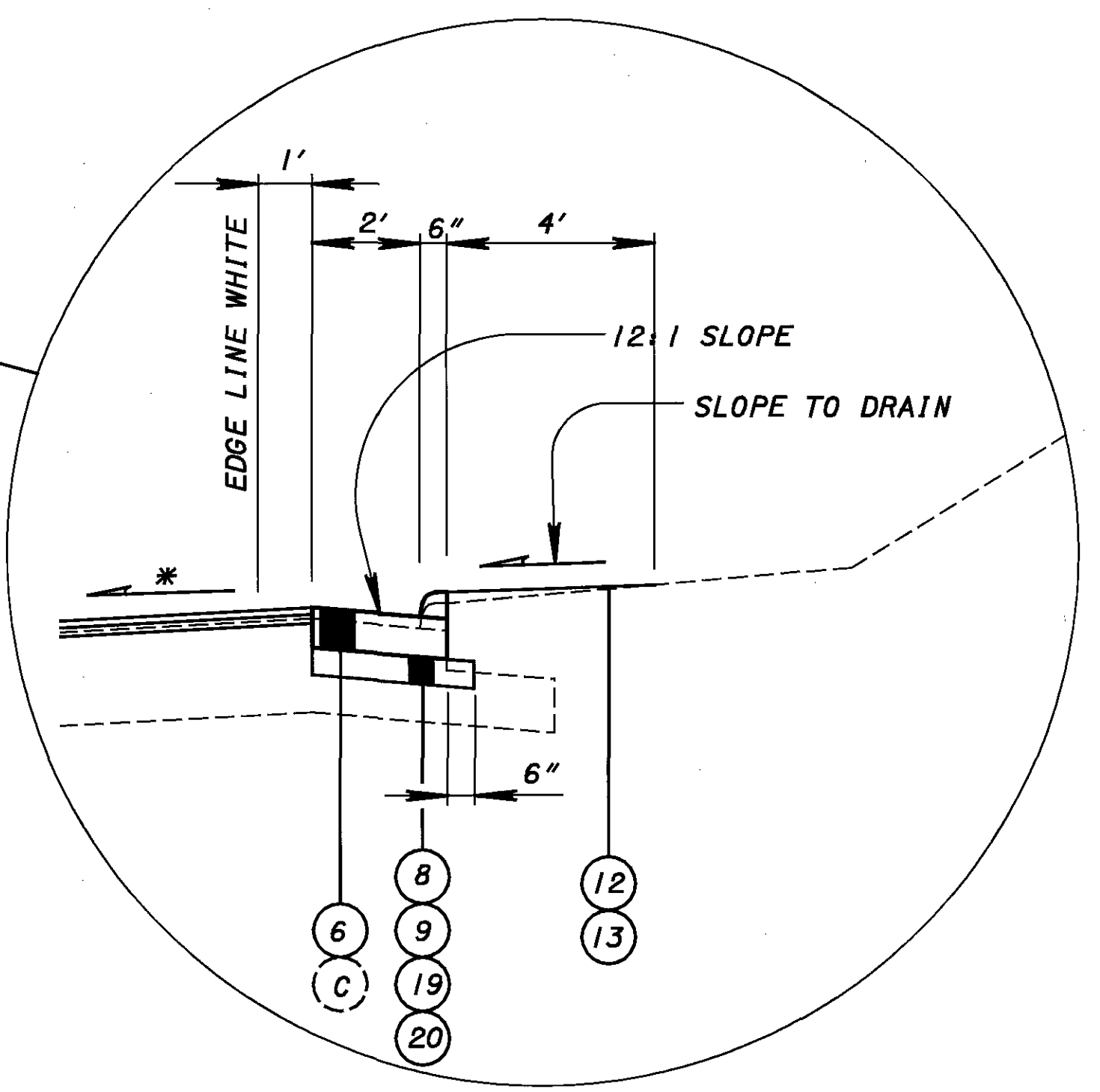
- | |
|---|
| Ⓐ EXISTING ASPHALT CONCRETE PAVEMENT |
| Ⓑ EXISTING PAVED BERM (ASPHALT CONCRETE) |
| Ⓒ EXISTING CONCRETE CURB AND GUTTER (TO BE REMOVED) |
| Ⓓ EXISTING GUARDRAIL, TYPE 5 (TO BE REMOVED) |
| Ⓔ EXISTING CONCRETE MEDIAN (TO BE REMOVED) |

NOTES:
* MATCH EXISTING PAVEMENT SLOPE
** OR AS SHOWN ON CROSS SECTIONS
THE PROPOSED PROFILE SHALL BE DETERMINED (UNLESS OTHERWISE SHOWN IN THE PLANS) BY PLANING THE EXISTING ASPHALT PAVEMENT 1" AND ADDING 3.5" TO OBTAIN THE FINAL PROFILE ELEVATION.
NOTES FOR SHOULDER PAVING AT GUARDRAIL LOCATIONS
SLOPE OF SHOULDER RECONDITIONING MISC.: COMPACTED ASPHALT CONCRETE GRINDINGS SHALL MATCH SLOPE OF ADJACENT

COMPLETED PAVED SHOULDER AND THEIR SURFACES SHALL BE FLUSH WHERE THEY MEET.
THE 4' (OR GREATER) WIDTH IS TYPICAL FOR THE SHOULDER RECONDITIONING MISC.: COMPACTED ASPHALT CONCRETE GRINDINGS EXCEPT FOR LOCATIONS FOR THE ITEM 606 ANCHOR ASSEMBLY, TYPE E-98 AND B-98. THE ACTUAL LOCATION FOR THE ANCHOR ASSEMBLY WILL NEED TO BE FIELD ADJUSTED BY INCREASING THE ACTUAL LENGTH OF THE GUARDRAIL RUN AND THE 4' (OR GREATER) WIDTH WILL NEED TO BE INCREASED AS REQUIRED TO MEET THE SLOPE GRADING REQUIREMENTS OF STANDARD DRAWING GR-5.3 TO INTRODUCE THE GUARDRAIL USING THE OFFSET DESIGN. THE SLOPES LABELED B IN THE STANDARD DRAWING SHALL BE 3:1 OR FLATTER.
THE 5' MAX. WIDTH IS USED TO ESTABLISH A WORK LIMIT FOR THE SHOULDER WORK AND TO ESTIMATE THE SEEDING AND MULCHING QUANTITY REQUIRED FOR THIS WORK
LENGTH AND LOCATION OF GUARDRAIL RUN SHALL BE ADJUSTED IN THE FIELD AS REQUIRED TO PROVIDE 3:1 OR FLATTER SLOPE BEHIND THE GUARDRAIL RUN FOR THE "L" DISTANCE NEEDED TO INTRODUCE THE GUARDRAIL RUN ON OUTSIDE SHOULDERS AS SHOWN ON STANDARD DRAWINGS GR-5.3 WITH "OFFSET DESIGN"



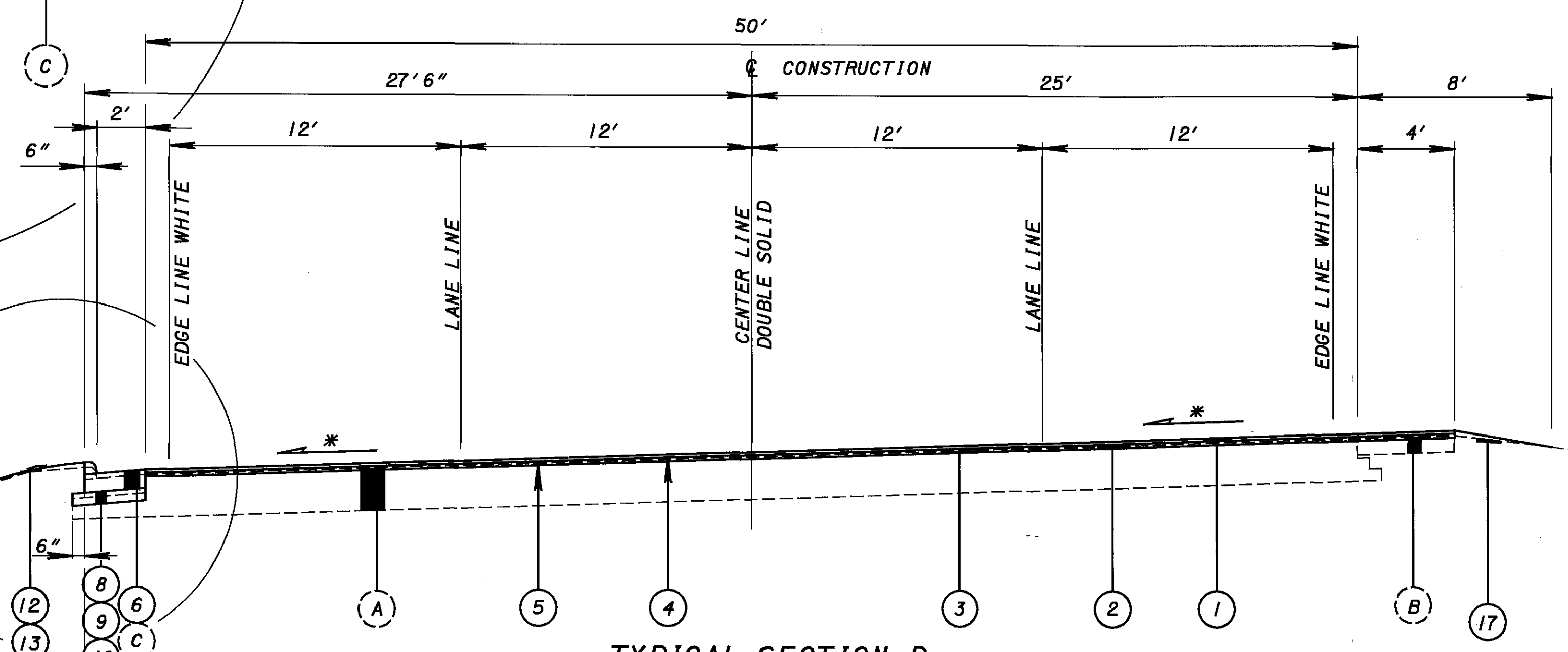
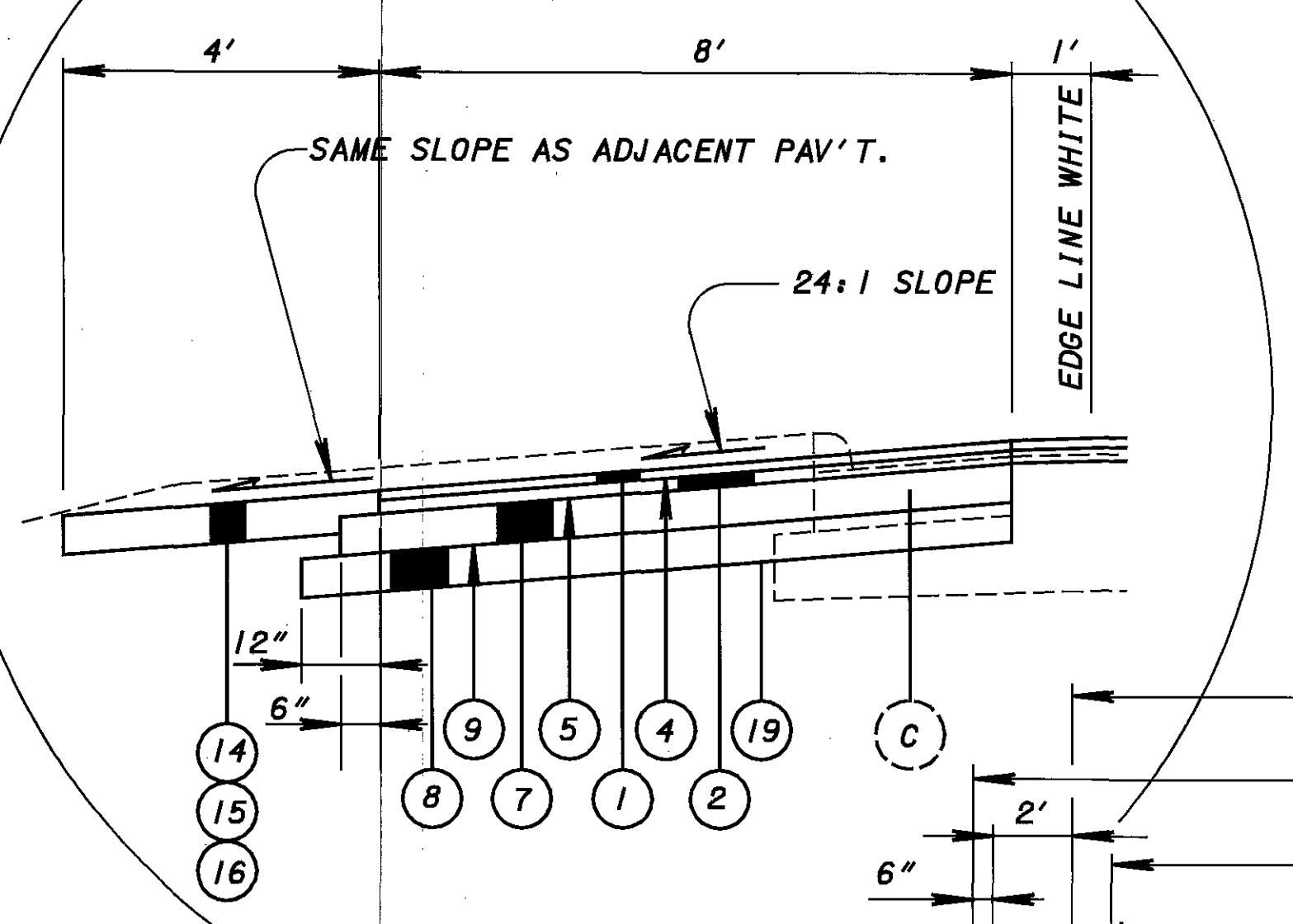
THE DETAIL BELOW APPLIES TO THE RIGHT SIDE OF TYPICAL SECTION C BETWEEN STA. 148+85.65 AND STA. 149+50 = 64.35'



SEE SHOULDER DETAIL 2 ON SHEET 3

TYPICAL SECTION C
 THE ABOVE TYPICAL SECTION APPLIES BETWEEN THE FOLLOWING STATIONS:
 STA. 148+85.65 TO STA. 150+89.35 = 203.70 FT. (139.35)
 (RIGHT SIDE DETAIL STA. 148+85.65 TO STA. 149+50 = 64.35 FT.)

THE DETAIL BELOW APPLIES TO THE LEFT SIDE OF TYPICAL SECTION D BETWEEN STA. 160+16 AND STA. 160+34.58 = 18.58'



TYPICAL SECTION D
 THE ABOVE TYPICAL SECTION APPLIES BETWEEN THE FOLLOWING STATIONS:
 STA. 150+89.35 TO STA. 160+34.58 = 945.23 FT.
 (LEFT SIDE DETAIL STA. 160+16 TO STA. 160+34.58 = 18.58 FT.)

NOTES:

* MATCH EXISTING PAVEMENT SLOPE

THE PROPOSED PROFILE SHALL BE DETERMINED (UNLESS OTHERWISE SHOWN IN THE PLANS) BY PLANING THE EXISTING ASPHALT PAVEMENT 1" AND ADDING 3.5" TO OBTAIN THE FINAL PROFILE ELEVATION.

FOR LEGEND SEE SHEET 3

NOTES FOR SHOULDER PAVING AT GUARDRAIL LOCATIONS

SLOPE OF SHOULDER RECONDITIONING MISC.: COMPACTED ASPHALT CONCRETE GRINDINGS SHALL MATCH SLOPE OF ADJACENT COMPLETED PAVED SHOULDER AND THEIR SURFACES SHALL BE FLUSH WHERE THEY MEET.

THE 4' (OR GREATER) WIDTH IS TYPICAL FOR THE SHOULDER RECONDITIONING MISC.: COMPACTED ASPHALT CONCRETE GRINDINGS EXCEPT FOR LOCATIONS FOR THE ITEM 606 ANCHOR ASSEMBLY, TYPE E-98 AND B-98. THE ACTUAL LOCATION FOR THE ANCHOR ASSEMBLY WILL NEED TO BE FIELD ADJUSTED BY INCREASING THE ACTUAL LENGTH OF THE GUARDRAIL RUN AND THE 4' (OR GREATER) WIDTH WILL NEED TO BE INCREASED AS REQUIRED TO MEET THE SLOPE GRADING REQUIREMENTS OF STANDARD DRAWING GR-5.3 TO INTRODUCE THE GUARDRAIL USING THE OFFSET DESIGN. THE SLOPES LABELED B IN THE STANDARD DRAWING SHALL BE 3:1 OR FLATTER.

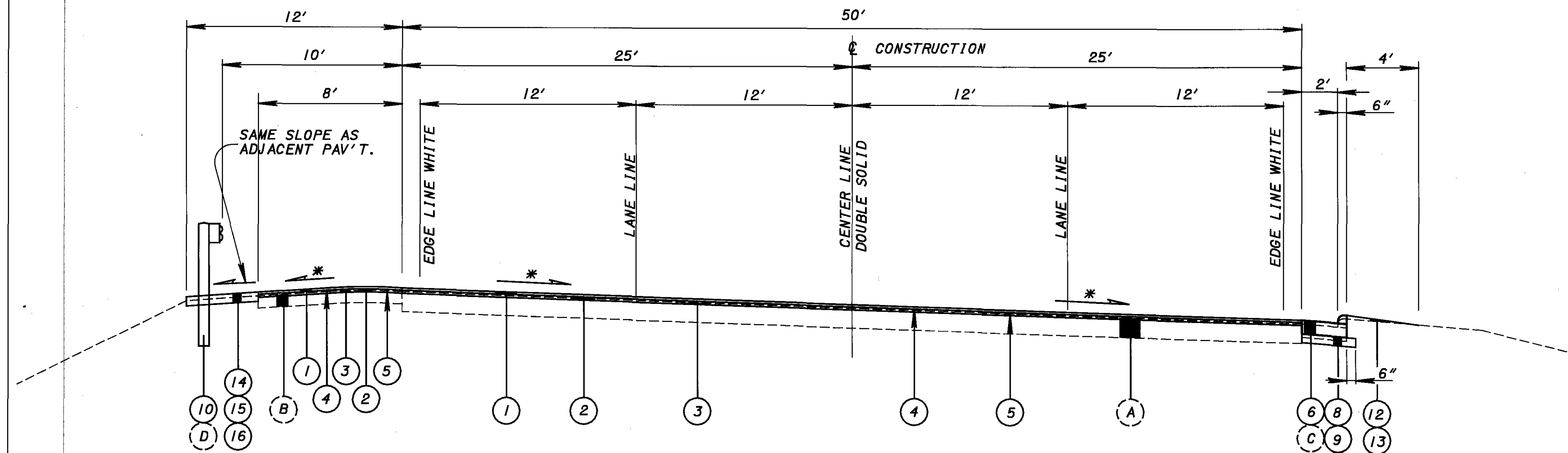
THE 5' MAX. WIDTH IS USED TO ESTABLISH A WORK LIMIT FOR THE SHOULDER WORK AND TO ESTIMATE THE SEEDING AND MULCHING QUANTITY REQUIRED FOR THIS WORK

LENGTH AND LOCATION OF GUARDRAIL RUN SHALL BE ADJUSTED IN THE FIELD AS REQUIRED TO PROVIDE 3:1 OR FLATTER SLOPE BEHIND THE GUARDRAIL RUN FOR THE "L" DISTANCE NEEDED TO INTRODUCE THE GUARDRAIL RUN ON OUTSIDE SHOULDERS AS SHOWN ON STANDARD DRAWINGS GR-5.3 WITH "OFFSET DESIGN"

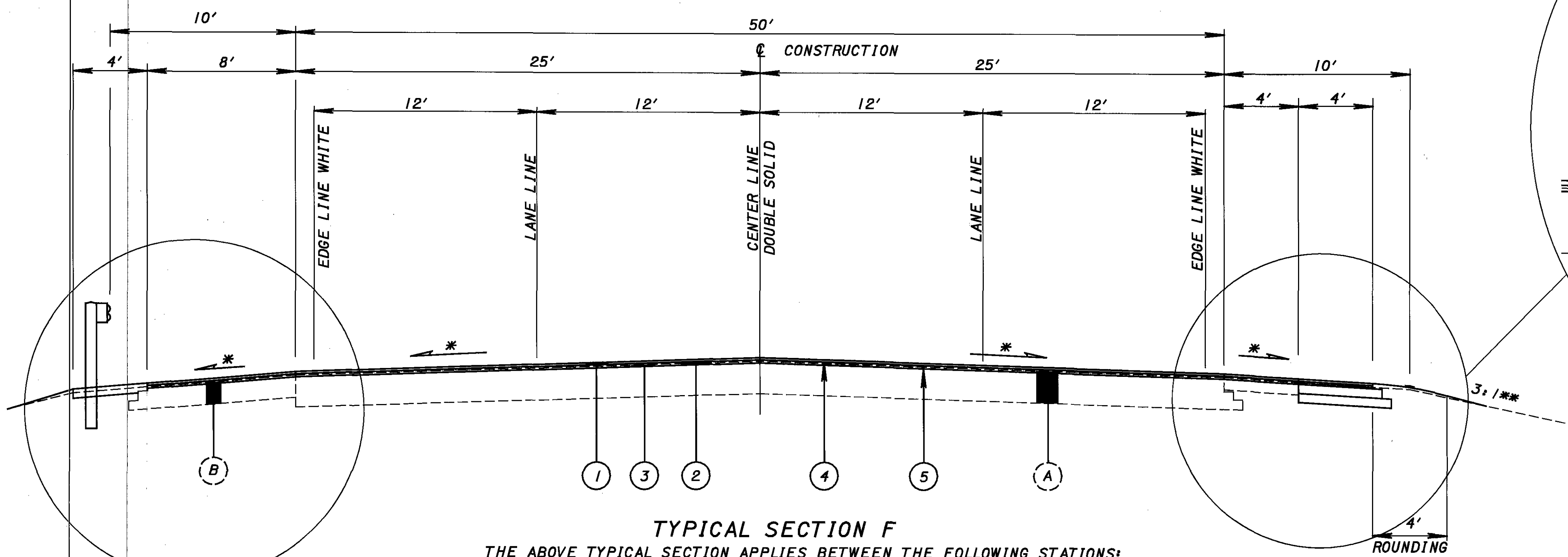
CALCULATED
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TYPICAL SECTIONS AND DETAILS

SCI-23-2.39



TYPICAL SECTION E
 THE ABOVE TYPICAL SECTION APPLIES BETWEEN THE FOLLOWING STATIONS:
 STA. 160+34.58 TO STA. 183+35.11 - 2300.53 FT.



TYPICAL SECTION F
 THE ABOVE TYPICAL SECTION APPLIES BETWEEN THE FOLLOWING STATIONS:
 STA. 183+35.11 TO STA. 192+50 - 914.89 FT.

USE SAME TREATMENT AS TYPICAL SECTION "E" ABOVE FOR LEFT SHOULDER.

NOTES:

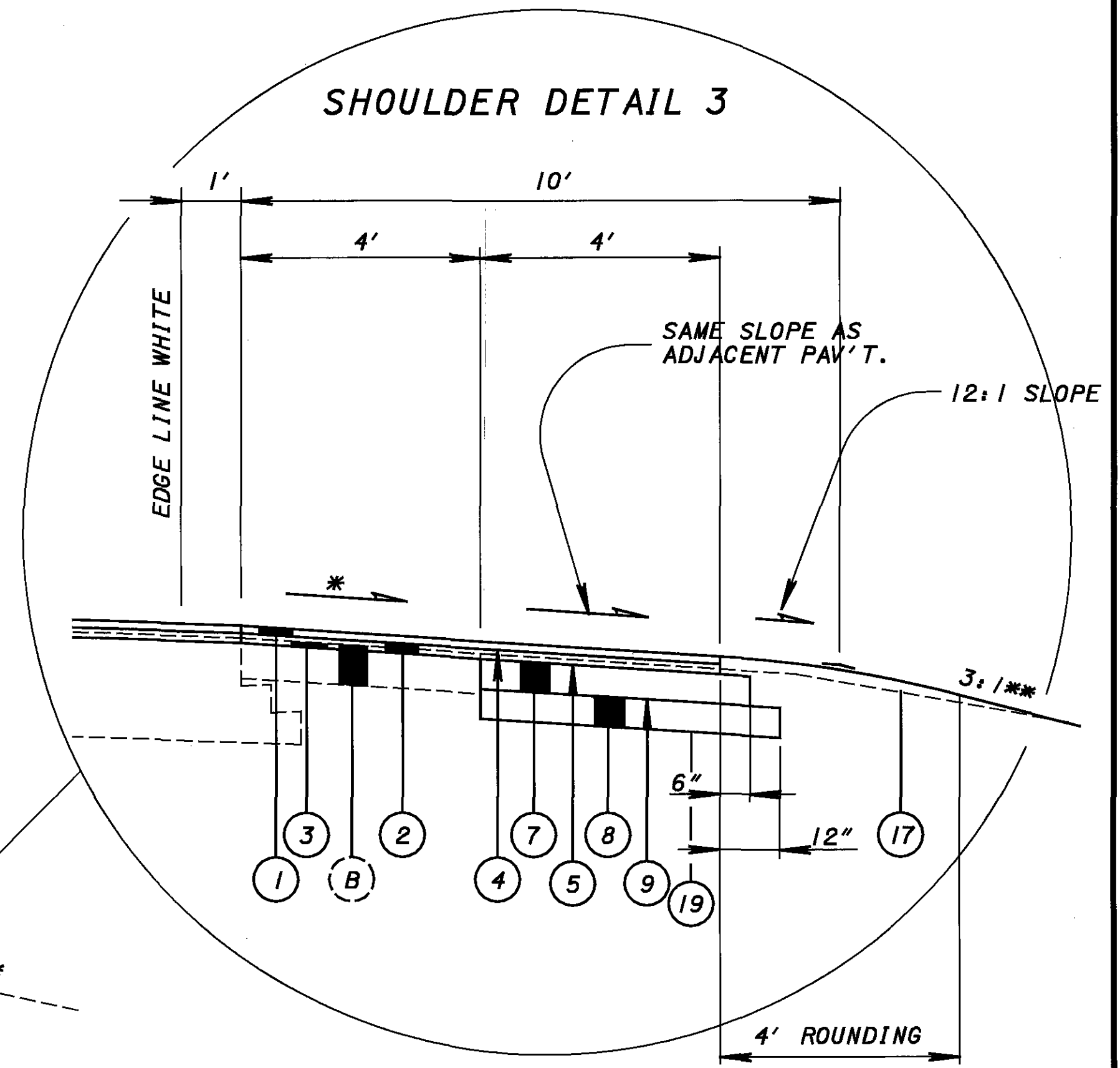
* MATCH EXISTING PAVEMENT SLOPE

THE PROPOSED PROFILE SHALL BE DETERMINED (UNLESS OTHERWISE SHOWN IN THE PLANS) BY PLANING THE EXISTING ASPHALT PAVEMENT 1" AND ADDING 3.5" TO OBTAIN THE FINAL PROFILE ELEVATION.

FOR LEGEND SEE SHEET 3

NOTES FOR SHOULDER PAVING AT GUARDRAIL LOCATIONS

SLOPE OF SHOULDER RECONDITIONING MISC.: COMPACTED ASPHALT CONCRETE GRINDINGS SHALL MATCH SLOPE OF ADJACENT COMPLETED PAVED SHOULDER AND THEIR SURFACES SHALL BE FLUSH WHERE THEY MEET.



NOTES: (CONTINUED)

THE 4' (OR GREATER) WIDTH IS TYPICAL FOR THE SHOULDER RECONDITIONING MISC.: COMPACTED ASPHALT CONCRETE GRINDINGS EXCEPT FOR LOCATIONS FOR THE ITEM 606 ANCHOR ASSEMBLY, TYPE E-98 AND B-98. THE ACTUAL LOCATION FOR THE ANCHOR ASSEMBLY WILL NEED TO BE FIELD ADJUSTED BY INCREASING THE ACTUAL LENGTH OF THE GUARDRAIL RUN AND THE 4' (OR GREATER) WIDTH WILL NEED TO BE INCREASED AS REQUIRED TO MEET THE SLOPE GRADING REQUIREMENTS OF STANDARD DRAWING GR-5.3 TO INTRODUCE THE GUARDRAIL USING THE OFFSET DESIGN. THE SLOPES LABELED B IN THE STANDARD DRAWING SHALL BE 3:1 OR FLATTER.

THE 5' MAX. WIDTH IS USED TO ESTABLISH A WORK LIMIT FOR THE SHOULDER WORK AND TO ESTIMATE THE SEEDING AND MULCHING QUANTITY REQUIRED FOR THIS WORK

LENGTH AND LOCATION OF GUARDRAIL RUN SHALL BE ADJUSTED IN THE FIELD AS REQUIRED TO PROVIDE 3:1 OR FLATTER SLOPE BEHIND THE GUARDRAIL RUN FOR THE "L" DISTANCE NEEDED TO INTRODUCE THE GUARDRAIL RUN ON THE OUTSIDE SHOULDERS AS SHOWN ON STANDARD DRAWINGS GR-5.3 WITH "OFFSET DESIGN"

CALCULATED
 CER
 CHECKED
 LAW

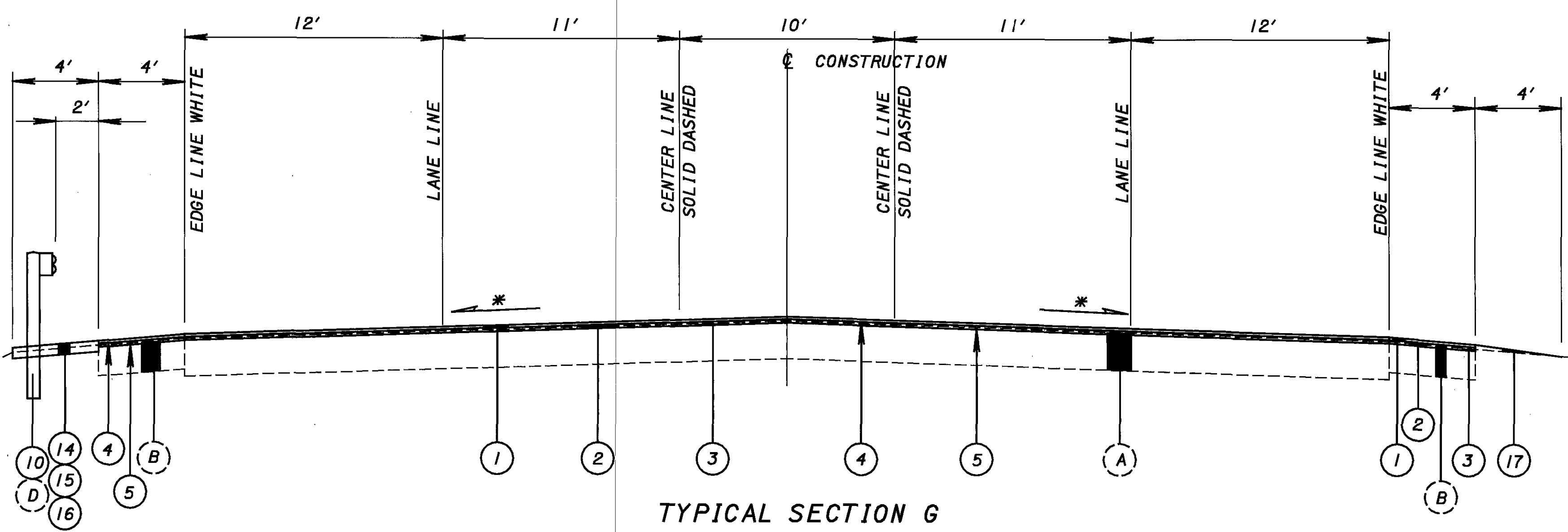
TYPICAL SECTIONS AND DETAILS

SCI-23-2.39

CALCULATED
CER
CHECKED
LAW

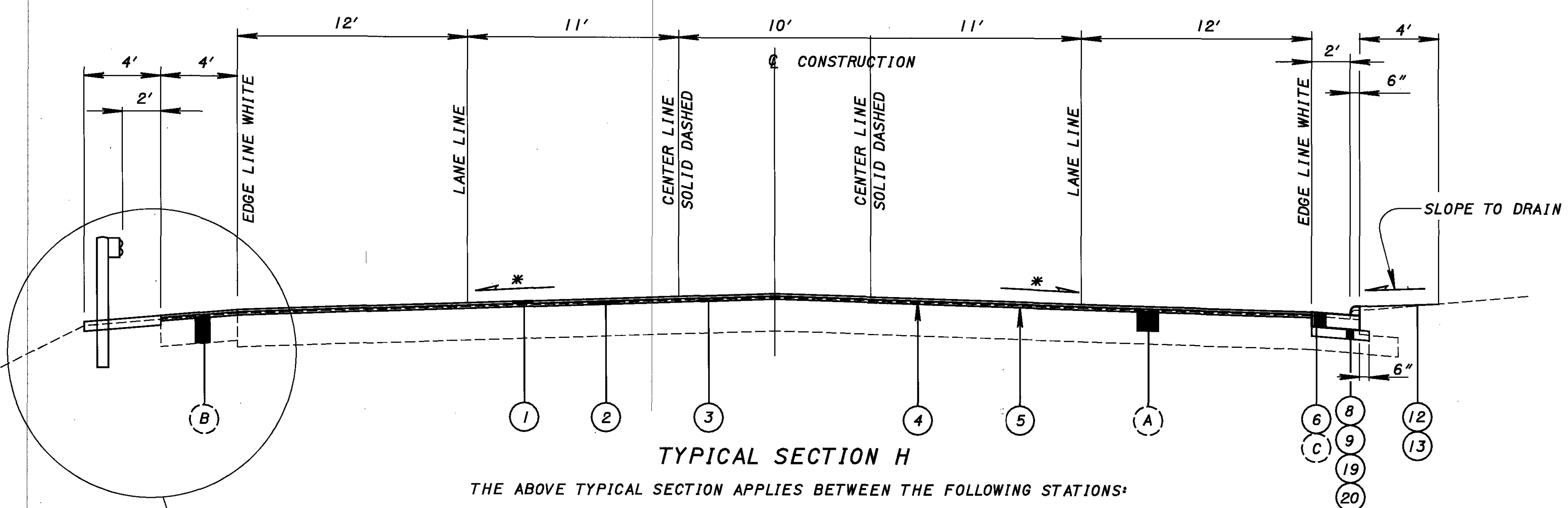
TYPICAL SECTIONS AND DETAILS

SCI-23-2.39



TYPICAL SECTION G

THE ABOVE TYPICAL SECTION APPLIES BETWEEN THE FOLLOWING STATIONS:
STA. 192+50 TO STA. 243+31.87 - 5081.87 FT.



TYPICAL SECTION H

THE ABOVE TYPICAL SECTION APPLIES BETWEEN THE FOLLOWING STATIONS:
STA. 243+31.87 TO STA. 245+45.40 - 213.53 FT.

TOTAL 213.53 FT.

USE SAME TREATMENT AS
TYPICAL SECTION "G" ABOVE
FOR LEFT SHOULDER

NOTES:

* MATCH EXISTING PAVEMENT SLOPE

THE PROPOSED PROFILE SHALL BE DETERMINED (UNLESS OTHERWISE SHOWN IN THE PLANS) BY PLANING THE EXISTING ASPHALT PAVEMENT 1" AND ADDING 3.5" TO OBTAIN THE FINAL PROFILE ELEVATION.

FOR LEGEND SEE SHEET 3

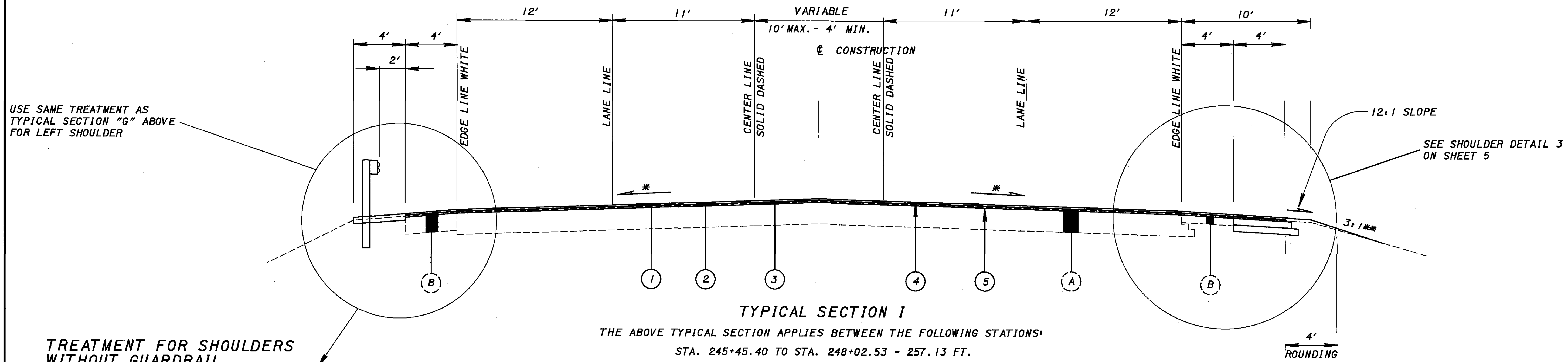
NOTES FOR SHOULDER PAVING AT GUARDRAIL LOCATIONS

SLOPE OF SHOULDER RECONDITIONING MISC.: COMPACTED ASPHALT CONCRETE GRINDINGS SHALL MATCH SLOPE OF ADJACENT COMPLETED PAVED SHOULDER AND THEIR SURFACES SHALL BE FLUSH WHERE THEY MEET.

THE 4' (OR GREATER) WIDTH IS TYPICAL FOR THE SHOULDER RECONDITIONING MISC.: COMPACTED ASPHALT CONCRETE GRINDINGS EXCEPT FOR LOCATIONS FOR THE ITEM 606 ANCHOR ASSEMBLY, TYPE E-98 AND B-98. THE ACTUAL LOCATION FOR THE ANCHOR ASSEMBLY WILL NEED TO BE FIELD ADJUSTED BY INCREASING THE ACTUAL LENGTH OF THE GUARDRAIL RUN AND THE 4' (OR GREATER) WIDTH WILL NEED TO BE INCREASED AS REQUIRED TO MEET THE SLOPE GRADING REQUIREMENTS OF STANDARD DRAWING GR-5.3 TO INTRODUCE THE GUARDRAIL USING THE OFFSET DESIGN. THE SLOPES LABELED B IN THE STANDARD DRAWING SHALL BE 3:1 OR FLATTER.

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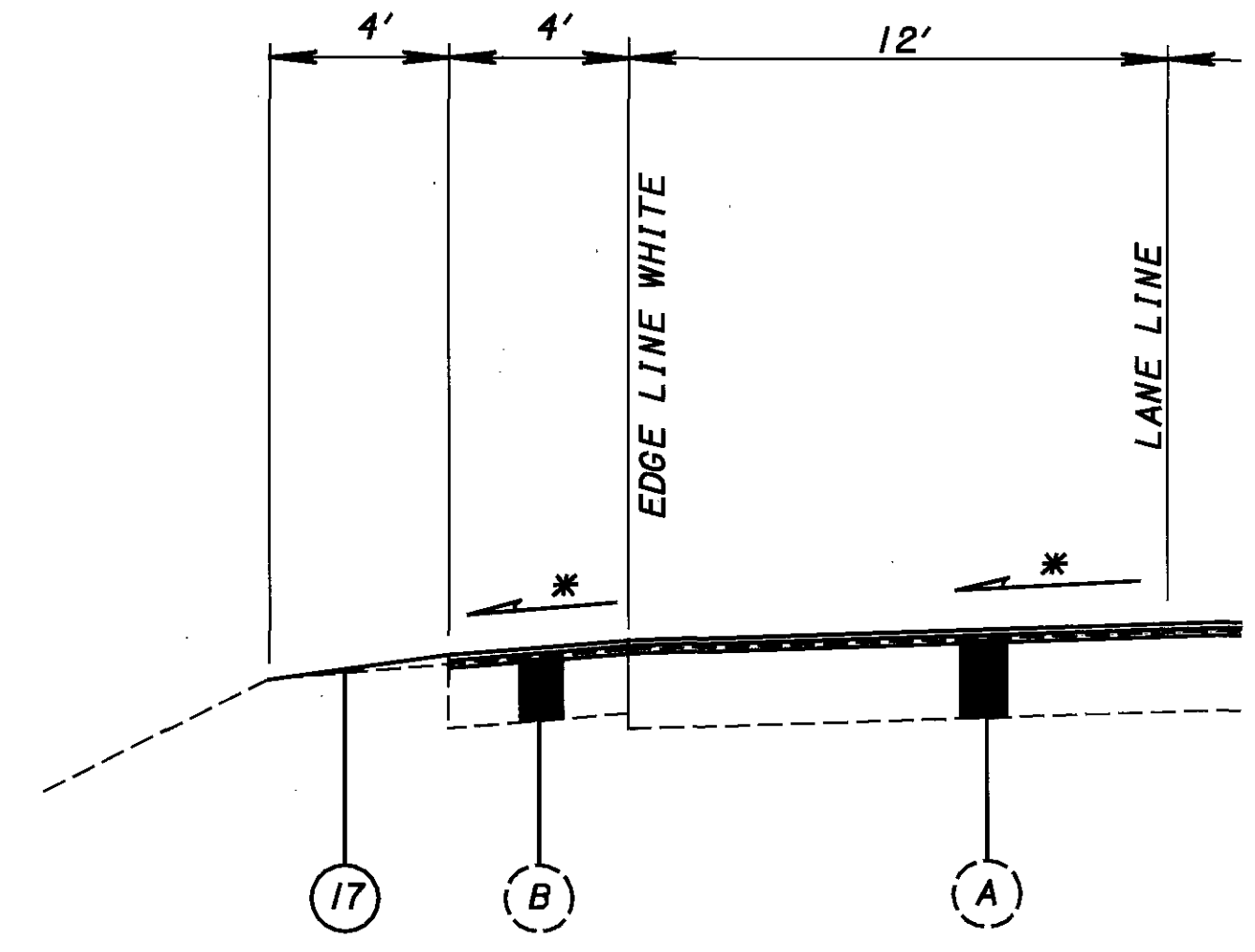
TYPICAL SECTION I

THE ABOVE TYPICAL SECTION APPLIES BETWEEN THE FOLLOWING STATIONS:
 STA. 245+45.40 TO STA. 248+02.53 = 257.13 FT.

USE SAME TREATMENT AS TYPICAL SECTION "G" ABOVE FOR LEFT SHOULDER

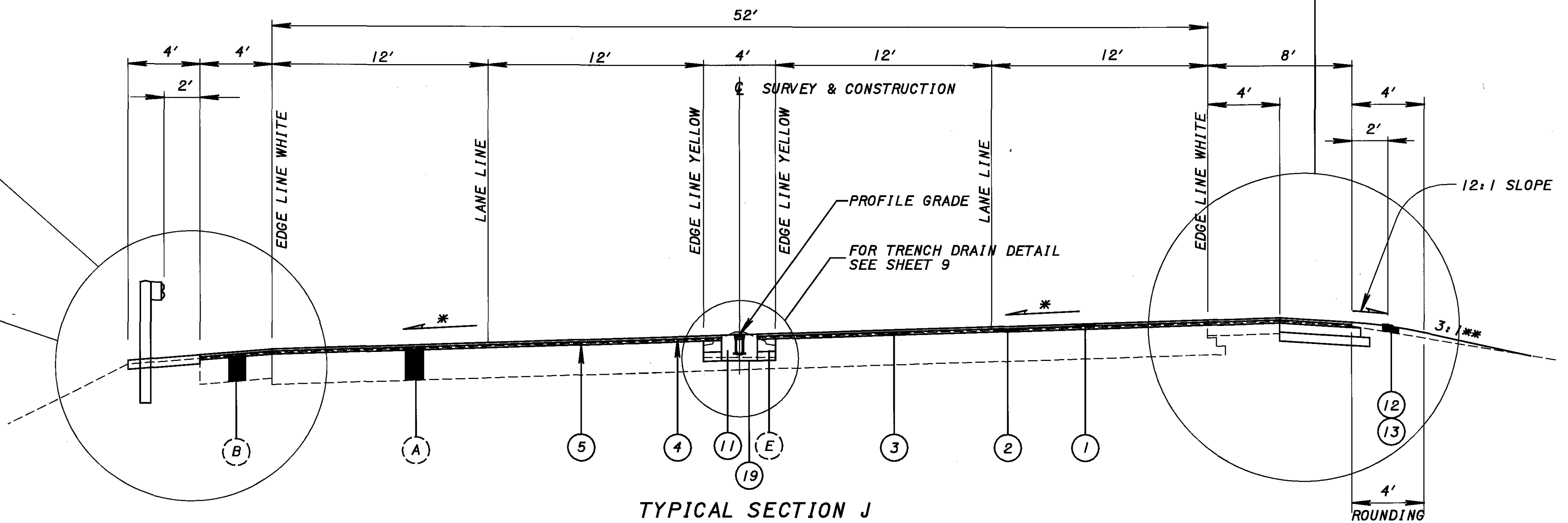
SEE SHOULDER DETAIL 3 ON SHEET 5

TREATMENT FOR SHOULDERS WITHOUT GUARDRAIL



USE SAME TREATMENT AS TYPICAL SECTION "G" ABOVE FOR LEFT SHOULDER

SEE SHOULDER DETAIL 1 ON SHEET 3



TYPICAL SECTION J

THE ABOVE TYPICAL SECTION APPLIES BETWEEN THE FOLLOWING STATIONS:
 STA. 248+02.53 TO STA. 274+75.75 = 2673.22 FT.

- NOTES:**
- * MATCH EXISTING PAVEMENT SLOPE
 - ** OR AS SHOWN ON CROSS SECTIONS

THE PROPOSED PROFILE SHALL BE DETERMINED (UNLESS OTHERWISE SHOWN IN THE PLANS) BY PLANING THE EXISTING ASPHALT PAVEMENT 1" AND ADDING 3.5" TO OBTAIN THE FINAL PROFILE ELEVATION.

FOR LEGEND SEE SHEET 3

NOTES FOR SHOULDER PAVING AT GUARDRAIL LOCATIONS

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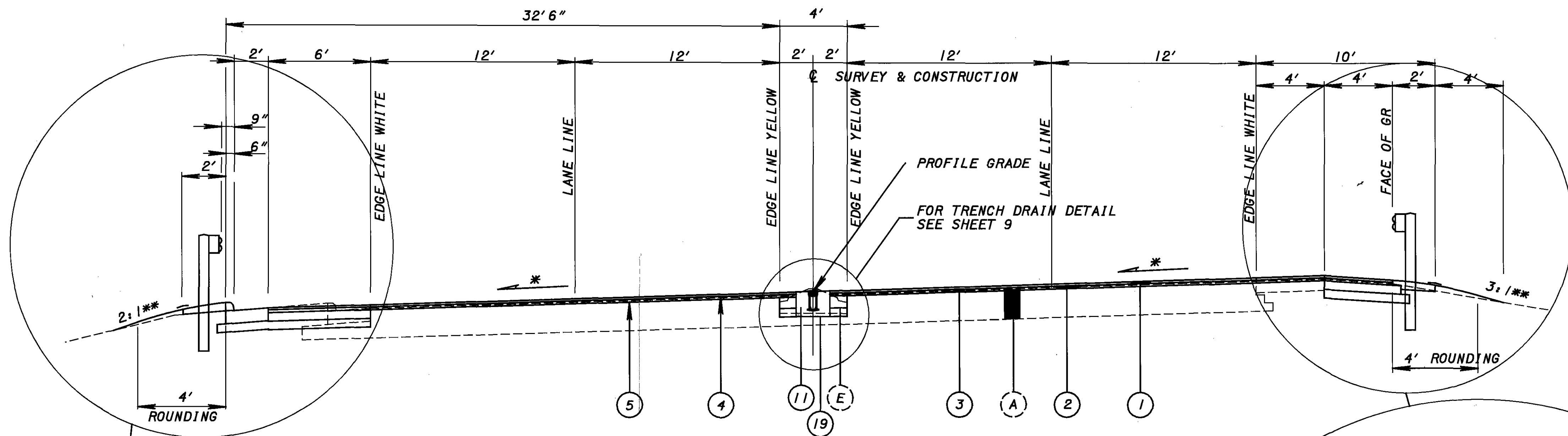
NOTES: (CONTINUED)

LENGTH AND LOCATION OF GUARDRAIL RUN SHALL BE ADJUSTED IN THE FIELD AS REQUIRED TO PROVIDE 3:1 OR FLATTER SLOPE BEHIND THE GUARDRAIL RUN FOR THE "L" DISTANCE NEEDED TO INTRODUCE THE GUARDRAIL RUN ON OUTSIDE SHOULDERS AS SHOWN ON STANDARD DRAWINGS GR-5.3 WITH "OFFSET DESIGN"

CALCULATED
 CER
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TYPICAL SECTIONS AND DETAILS

SCI-23-2.39

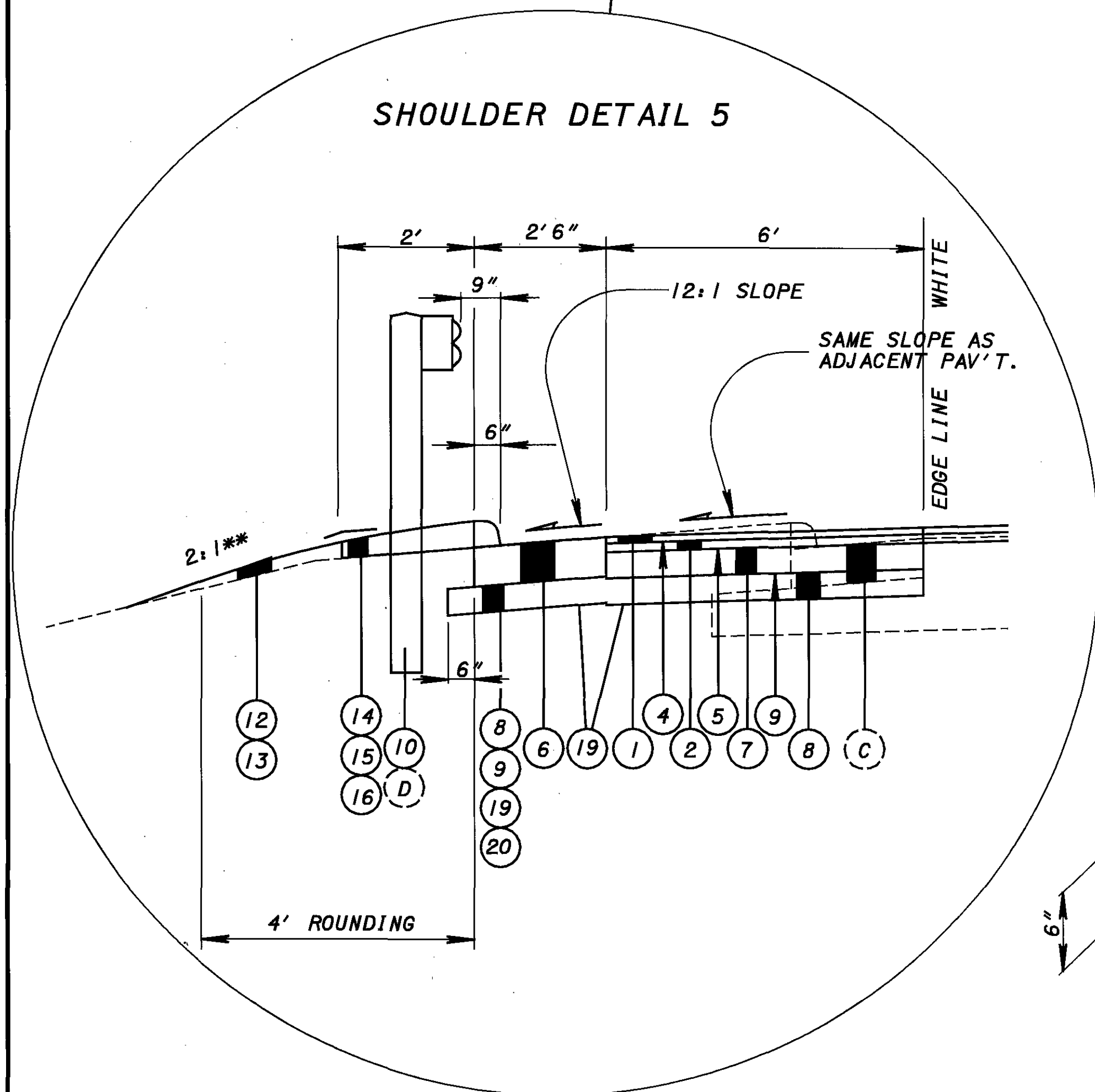


TYPICAL SECTION K

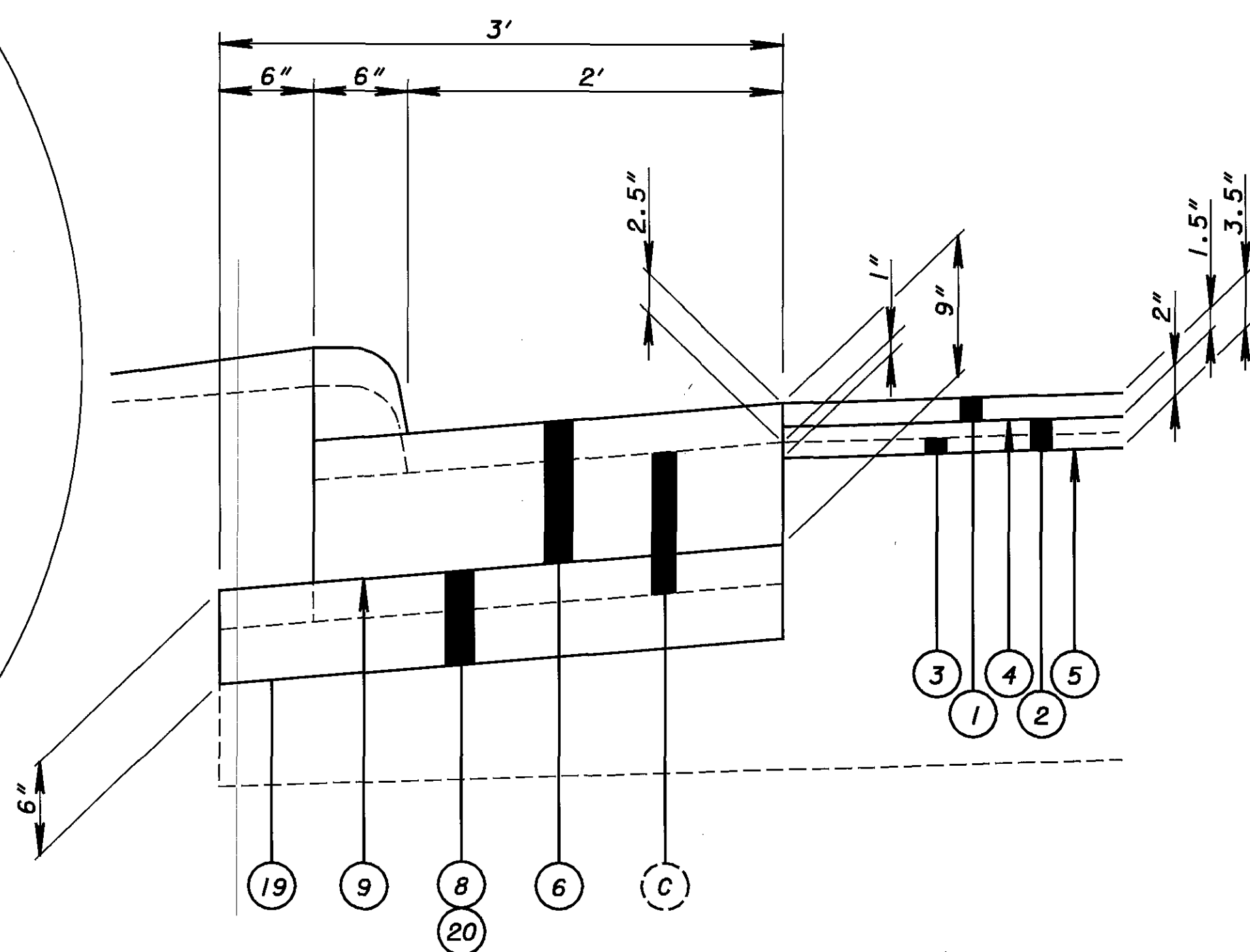
THE ABOVE TYPICAL SECTION APPLIES BETWEEN THE FOLLOWING STATIONS:

STA. 274+75.75 TO STA. 285+23.95 = 1048.20 FT.

SHOULDER DETAIL 5



CURB AND GUTTER DETAIL



NOTES:

* MATCH EXISTING PAVEMENT SLOPE

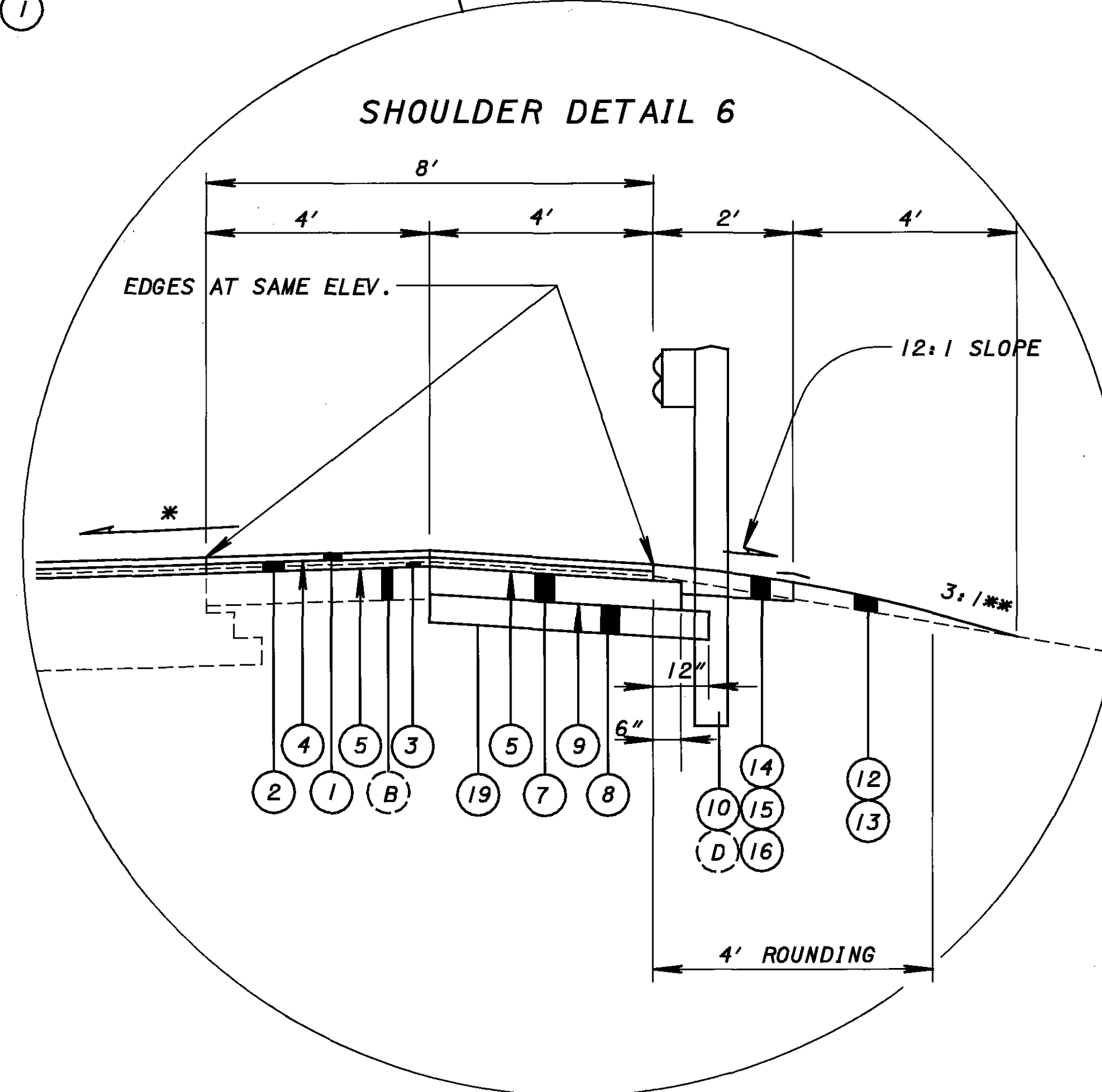
THE PROPOSED PROFILE SHALL BE DETERMINED (UNLESS OTHERWISE SHOWN IN THE PLANS) BY PLANING THE EXISTING ASPHALT PAVEMENT 1" AND ADDING 3.5" TO OBTAIN THE FINAL PROFILE ELEVATION.

FOR LEGEND SEE SHEET 3

NOTES FOR SHOULDER PAVING AT GUARDRAIL LOCATIONS

SLOPE OF SHOULDER RECONDITIONING MISC.: COMPACTED ASPHALT CONCRETE GRINDINGS SHALL MATCH SLOPE OF ADJACENT COMPLETED PAVED SHOULDER AND THEIR SURFACES SHALL BE FLUSH WHERE THEY MEET.

SHOULDER DETAIL 6



NOTES: (CONTINUED)

THE 4' (OR GREATER) WIDTH IS TYPICAL FOR THE SHOULDER RECONDITIONING MISC.: COMPACTED ASPHALT CONCRETE GRINDINGS EXCEPT FOR LOCATIONS FOR THE ITEM 606 ANCHOR ASSEMBLY, TYPE E-98 AND B-98. THE ACTUAL LOCATION FOR THE ANCHOR ASSEMBLY WILL NEED TO BE FIELD ADJUSTED BY INCREASING THE ACTUAL LENGTH OF THE GUARDRAIL RUN AND THE 4' (OR GREATER) WIDTH WILL NEED TO BE INCREASED AS REQUIRED TO MEET THE SLOPE GRADING REQUIREMENTS OF STANDARD DRAWING GR-5.3 TO INTRODUCE THE GUARDRAIL USING THE OFFSET DESIGN. THE SLOPES LABELED B IN THE STANDARD DRAWING SHALL BE 3:1 OR FLATTER.

THE 5' MAX. WIDTH IS USED TO ESTABLISH A WORK LIMIT FOR THE SHOULDER WORK AND TO ESTIMATE THE SEEDING AND MULCHING QUANTITY REQUIRED FOR THIS WORK

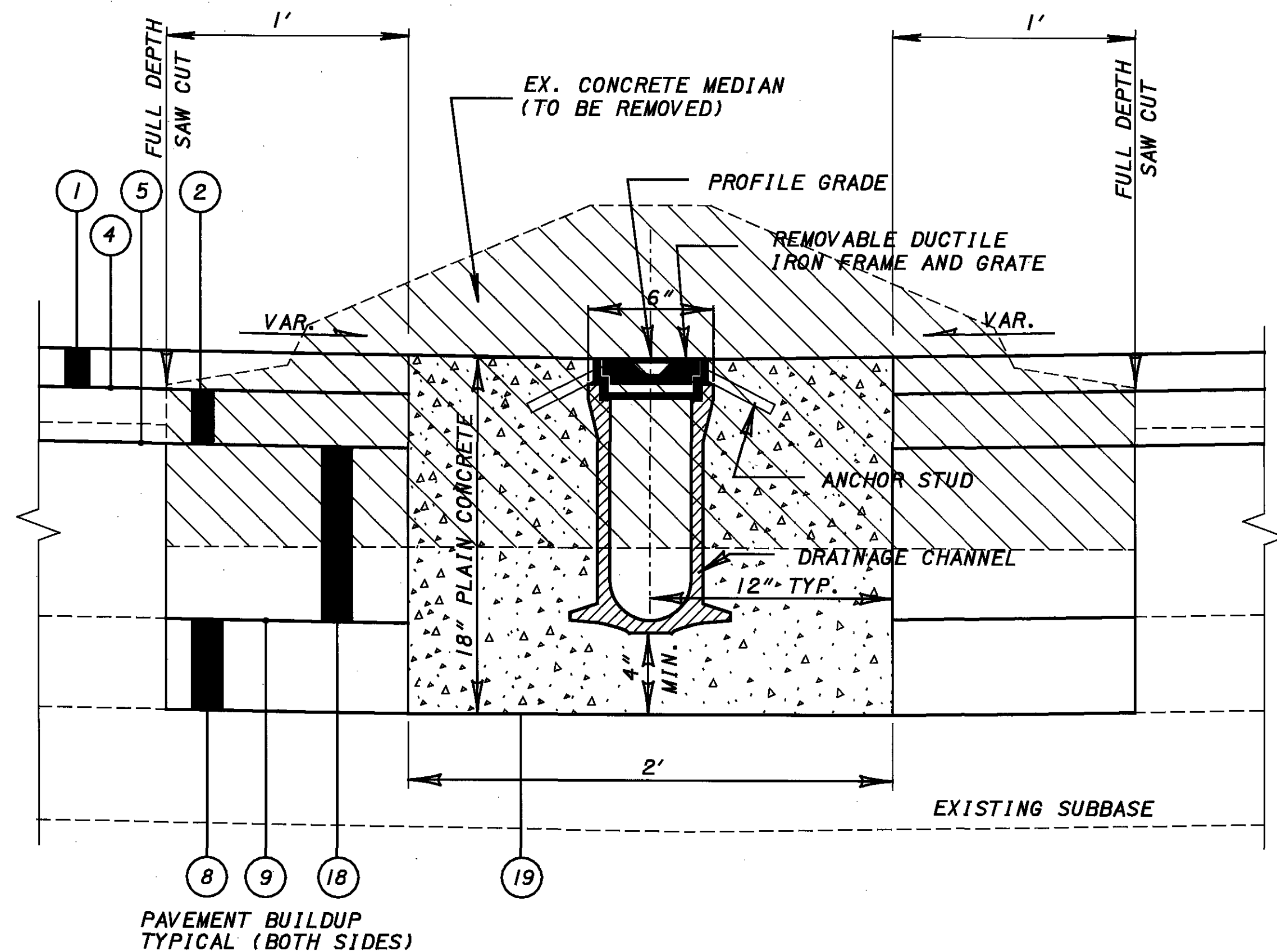
LENGTH AND LOCATION OF GUARDRAIL RUN SHALL BE ADJUSTED IN THE FIELD AS REQUIRED TO PROVIDE 3:1 OR FLATTER SLOPE BEHIND THE GUARDRAIL RUN FOR THE "L" DISTANCE NEEDED TO INTRODUCE THE GUARDRAIL RUN ON OUTSIDE SHOULDERS AS SHOWN ON STANDARD DRAWINGS GR-5.3 WITH "OFFSET DESIGN"

CALCULATED
CER
CHECKED
LAW

TYPICAL SECTIONS AND DETAILS

SCI-23-2.39

8
110



PAVEMENT BUILDUP
TYPICAL (BOTH SIDES)

TRENCH DRAIN DETAIL

NOTE: THE DETAIL SHOWN IS POLYDRAIN DRAINAGE CHANNEL WITH INTERCEPTOR A-67 FRAME AND GRATE FROM ABT. INC., 259 MURDOCK ROAD, P.O. BOX 837, TROUTMAN, NC 28166, PHONE(800) 438-6057. DIMENSIONS SHOWN MAY BE ADJUSTED AS NEEDED TO FIT DIFFERENT TRENCH DRAIN MAUNFACTURER'S REQUIREMENTS.

ITEM SPECIAL, TRENCH DRAIN

THIS SHALL BE A PRECAST TRENCH DRAIN SYSTEM WITH FRAME AND GRATE ENCASED IN THE 18 INCHES OF PLAIN CONCRETE PAVEMENT AS SHOWN IN THE PLAN.

TRENCH DRAIN REQUIREMENTS:
DRAINAGE CHANNEL SHALL BE:

POLYDRAIN DRAINAGE CHANNEL AS MANUFACTURED BY ABT. INC.,
POLYCAST SERIES 900 AS MANUFACTURED BY QUAZITE,
ACO DRAIN HW100 AS MANUFACTURED BY ACO DRAIN, INC.,
OR APPROVED EQUAL.

CHANNELS SHALL HAVE INTERLOCKING JOINTS, PROPERLY FITTING OUTLETS, AND END CAPS. THE 6 INCH PVC PIPE AND SPECIALS, IN ACCORDANCE WITH SECTION 707.43, NEEDED TO OUTLET THE DRAINAGE CHANNEL INTO THE PROPOSED CATCH BASIN SHALL BE INCLUDED WITH THE DRAINAGE CHANNEL.

FRAME AND GRATE REQUIREMENTS:

SHALL BE DESIGNED USING AASHTO-HS25 LOADING
SHALL BE DUCTILE IRON (ASTM-A536)
SHALL BE MOTORCYCLE AND BICYCLE SAFE

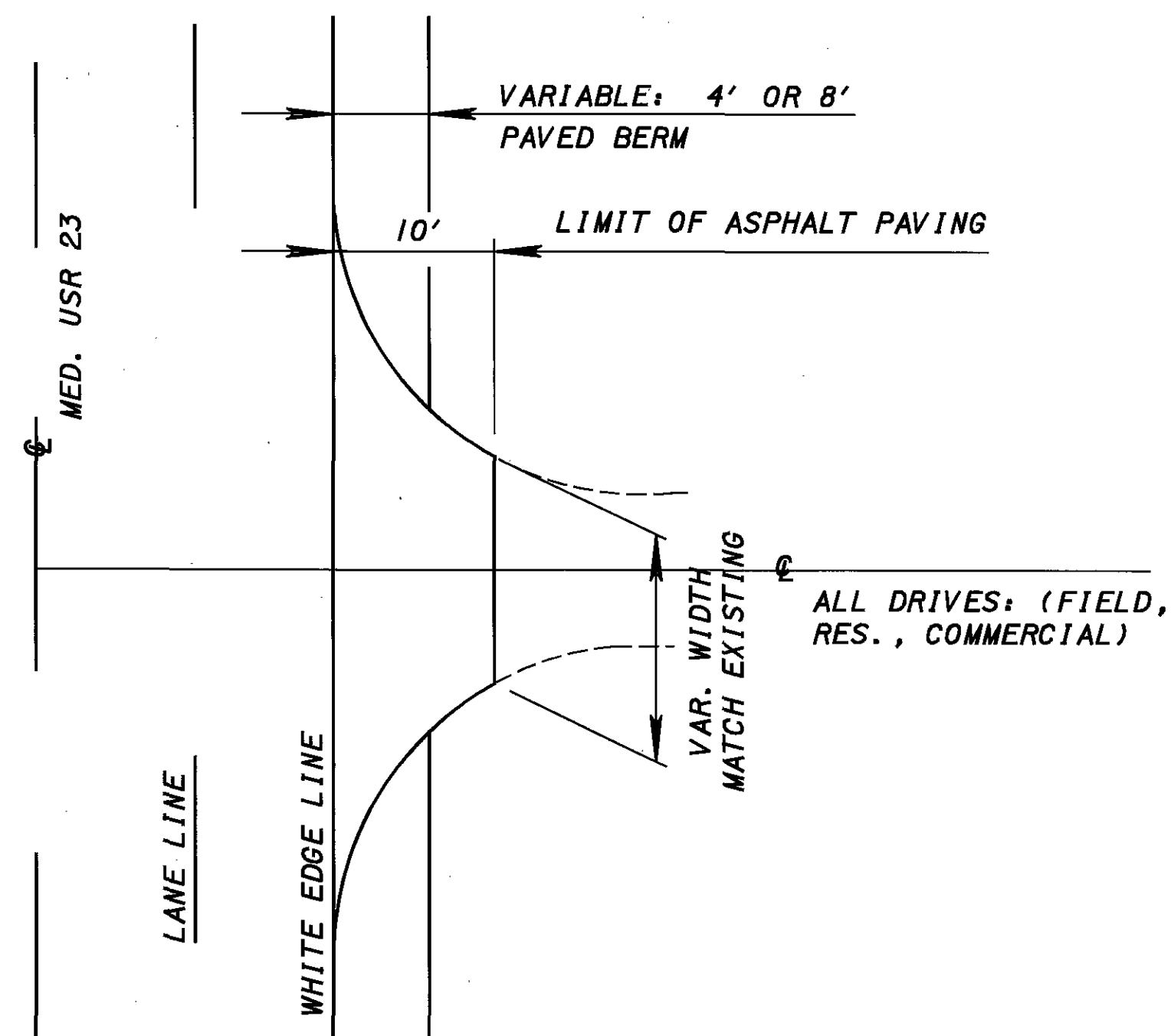
FRAME AND GRATE MAY BE EITHER A ONE PIECE UNIT OR A TWO PIECE UNIT WITH REMOVABLE GRATES. THERE SHALL BE REMOVABLE GRATES LOCATED AT THE BEGINNING AND END OF THE RUN AND SPACED AT 100 FOOT INTERVALS IN BETWEEN FOR CLEANOUTS. THE REMOVABLE GRATES SHALL BE SUPPLIED WITH LOCKING OR LATCHING MECHANISMS.

THE TRENCH DRAIN NEEDED FOR THIS PROJECT CAN BE THE NEUTRAL SLOPE DESIGN EXCEPT FOR THE SPECIFIC LOCATIONS SHOWN ON SHEETS 55-58. THESE SPECIFIC LOCATIONS SHALL USE THE PRE-SLOPE DESIGN DRAINAGE CHANNEL TO ENSURE PROPER FLOW.

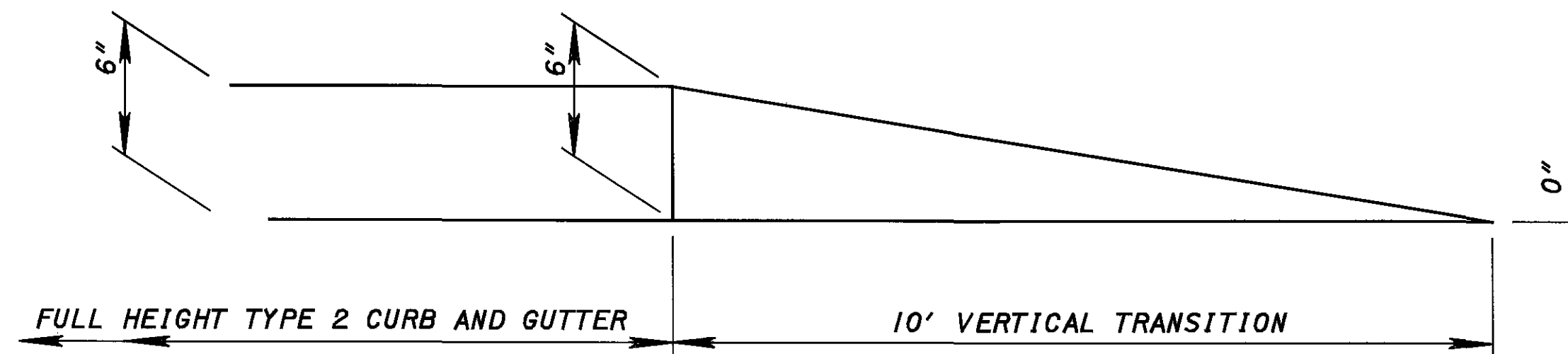
THE TRENCH DRAIN SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS. ALL MATERIALS AND INCIDENTALS NEEDED TO HOLD THE CHANNELS TO LINE AND GRADE, PREVENT FLOATATION AND ENSURE PROPER CONCRETE ENCASEMENT SHALL BE INCLUDED WITH THE TRENCH DRAINS.

THE DEPARTMENT WILL MEASURE THE TRENCH DRAIN BY NUMBER OF FEET, MEASURED FROM CENTER-TO-CENTER OF CATCH BASINS OR BETWEEN OPEN ENDS INCLUSIVE OF LENGTHS OF PIPE, BENDS, AND SPECIALS REQUIRED TO CONNECT THE TRENCH DRAIN TO THE CATCH BASINS OR TO OUTLET THE TRENCH DRAIN.

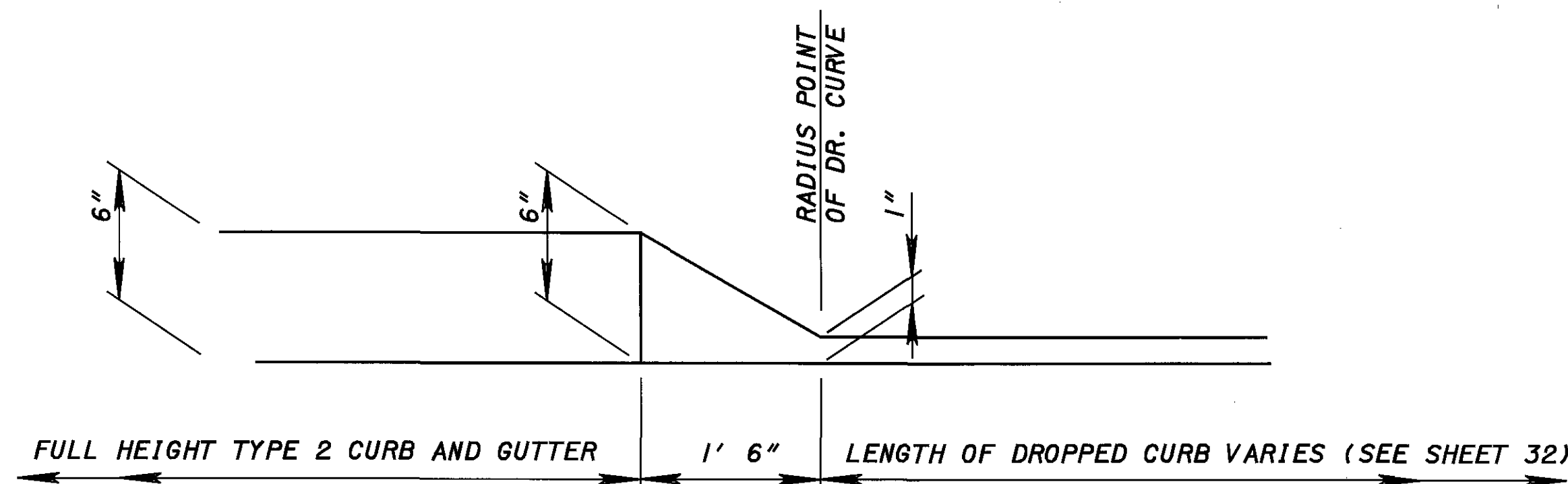
PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS TO PERFORM THIS WORK SHALL BE INCLUDED IN THE UNIT CONTRACT PRICE FOR ITEM SPECIAL, TRENCH DRAIN.



PAVING LIMIT DETAIL FOR DRIVES



CURB HEIGHT TRANSITIONS AT BEGINNING AND ENDS OF CURB SECTIONS



CURB HEIGHT TRANSITIONS AT DRIVEWAY OPENINGS

CALCULATED
CER
CHECKED
LAW

TYPICAL SECTIONS AND DETAILS

SCI-23-2.39

9
110

SEEDING AND MULCHING

THE FOLLOWING QUANTITIES ARE PROVIDED TO PROMOTE GROWTH AND CARE OF PERMANENT SEEDED AREAS:

659, SEEDING AND MULCHING	9260 SQ. YD. *
(THIS ESTIMATED QUANTITY IS IN ADDITION TO THE QUANTITY FROM CROSS SECTION SHEET 56 AND IS TO BE USED TO RESTORE SLOPES AFTER GUARDRAIL AND CURB AND GUTTER INSTALLATION AS DIRECTED BY THE ENGINEER. (10650' x 5' x 1/9; FOR GR RUNS NOT COVERED ON CROSS SECTIONS) - 5917 SQ. YD. (6016' x 5' x 1/9; (FOR CURB AND GUTTER RUNS MINUS DRIVE OPENINGS) - 3343 SQ. YD.)	
PROJECT TOTAL	- 22,012 SQ. YD.
659, COMMERCIAL FERTILIZER	2.97 TON *
(FIRST APPLICATION @ 20 POUNDS PER 1000 SQ. FT. AND SECOND APPLICATION @ 10 POUNDS PER 1000 SQ. FT.)	
659, LIME	4.55 ACRE *
659, REPAIR SEEDING AND MULCHING	1100 SQ. YD. *
(5% OF PERMANENT SEEDING AND MULCHING)	
659, WATER	120 M. GAL. *
TWO APPLICATION @ 300 GALLONS PER 1000 SQ. FT.)	

SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS OF EXPOSED SOIL BETWEEN THE RIGHT-OF-WAY LINES, AND WITHIN THE CONSTRUCTION LIMITS FOR AREAS OUTSIDE THE RIGHT-OF-WAY LINES COVERED BY WORK AGREEMENT OR SLOPE EASEMENT. QUANTITY CALCULATIONS FOR SEEDING AND MULCHING ARE BASED ON THESE LIMITS.

CONVERSION OF STANDARD CONSTRUCTION DRAWING

CONVERT THE METRIC STANDARD DRAWING REFERENCED IN THIS PLAN TO ENGLISH UNITS USING THE SI (METRIC) TO ENGLISH CONVERSION FACTORS PROVIDED IN SECTION 109.02 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS.

CONVERSIONS WILL BE APPROPRIATELY PRECISE AND REFLECT STANDARD INDUSTRY ENGLISH VALUES WHERE SUITABLE.

CLEARING AND GRUBBING

ALTHOUGH THERE ARE NO TREES OR STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE LIMITS OF THE PROJECT, A LUMP SUM QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY FOR ITEM 201 CLEARING AND GRUBBING. ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER THIS ITEM SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 201, CLEARING AND GRUBBING.

ROUNDING

THE ROUNDING AT SLOPE BREAKPOINTS SHOWN ON THE TYPICAL SECTIONS APPLY TO ALL CROSS SECTIONS EVEN THOUGH OTHERWISE SHOWN.

CONNECTION BETWEEN EXISTING AND PROPOSED GUARDRAIL

WHEN IT BECOMES NECESSARY TO SPLICE PROPOSED GUARDRAIL TO EXISTING GUARDRAIL, ONLY THE EXISTING GUARDRAIL SHALL BE CUT, DRILLED, OR PUNCHED. THE CONNECTION SHALL BE MADE USING A "W-BEAM RAIL SPLICE" AS SHOWN IN AASHTO M180. PAYMENT SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE RESPECTIVE GUARDRAIL ITEMS.

UTILITIES

LISTED BELOW ARE ALL UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS TOGETHER WITH THEIR RESPECTIVE OWNERS:

ELECTRIC:

AMERICAN ELECTRIC POWER (DISTRIBUTION)
850 TECH CENTER DRIVE
GAHANNA, OH 43230
614-883-6829

AMERICAN ELECTRIC POWER (TRANSMISSION)
700 MORRISON RD.
GAHANNA, OH 43230
614-552-1180

GAS:

COLUMBIA GAS OF OHIO
843 PIATT AVENUE
CHILLICOTHE, OHIO 45601
740-772-9131

TELEPHONE:

VERIZON
1315 ALBERT ST.
PORTSMOUTH, OH 45662
740-354-0513

CABLE:

ADELPHIA
5900 ROCHE DRIVE, SUITE 600
COLUMBUS, OH 43229
614-431-4779

WATER:

CITY OF PORTSMOUTH
ATTN: MR. SAM SUTHERLAND
728 SECOND STREET, ROOM 25
PORTSMOUTH, OH 45662
740-456-4946

SANITARY:

SCIOTO COUNTY SANITARY SEWER DEPT.
602 7th STREET
PORTSMOUTH, OH 45662
740-355-8249

SANITARY:

CITY OF PORTSMOUTH
ATTN: MR. RICK DUNCAN
728 SECOND STREET, ROOM 25
PORTSMOUTH, OH 45662
740-353-0241

THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS AS REQUIRED BY SECTION 153.64 O.R.C.

PROFILE AND ALIGNMENT

PLACE THE PROPOSED PAVEMENT TO FOLLOW THE ALIGNMENT AND PROFILE OF THE EXISTING PAVEMENT. PLACE THE PROPOSED ASPHALT CONCRETE OVERLAY WITH A UNIFORM THICKNESS OF 3-1/2 INCHES (2 INCH INTERMEDIATE COURSE AND 1-1/2 INCH SURFACE COURSE AFTER LEVELING EXISTING PAVEMENT BY PLANING) AS SHOWN ON THE TYPICAL SECTIONS.

ITEM 204 - PROOF ROLLING

THE FOLLOWING QUANTITY IS PROVIDED IN THE GENERAL SUMMARY TO ADDRESS LOCATIONS REQUIRING PROOF ROLLING.

ITEM 204 - PROOF ROLLING	5 HOUR
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WORK LIMITS

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. THE INSTALLATION AND OPERATION OF ALL TEMPORARY TRAFFIC CONTROL AND TEMPORARY TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS SHALL BE PROVIDED BY THE CONTRACTOR WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

EXISTING PLANS

THE FOLLOWING IS A LIST OF PLANS PERTAINING TO THIS PROJECT. THEY MAY BE INSPECTED IN THE ODOT DISTRICT 9 OFFICE IN CHILLICOTHE:

SCI-23-1.40	SCI-23-4.76
SCI-23-2.28	SCI-23-3.36
SCI-23-3.55	

ITEM 617, SHOULDER RECONDITIONING, MISC.: COMPACTED ASPHALT CONCRETE GRINDINGS

THIS ITEM OF WORK SHALL CONFORM TO ITEM 617 IN THE CONSTRUCTION AND MATERIALS SPECIFICATIONS WITH EXCEPTION OF 617.02 (MATERIALS) AND 617.06 (METHOD OF MEASUREMENT).

THE MATERIAL FOR THIS ITEM SHALL BE THE ASPHALT CONCRETE GRINDINGS RESULTING FROM ITEM 254. THE GRINDINGS SHALL BE PLACED AT THE EDGE OF THE PAVED SHOULDERS, APPROXIMATELY FOUR FEET WIDE THROUGHOUT THE LENGTH OF THE PROJECT IN BOTH THE NORTHBOUND AND SOUTHBOUND LANES.

IN THE AREAS WHERE GUARDRAIL IS TO BE INSTALLED, THE GRINDINGS SHALL HAVE A MINIMUM COMPACTED THICKNESS OF SIX INCHES. THE GRINDINGS SHALL EXTEND A MINIMUM OF ONE FOOT BEHIND THE GUARDRAIL POST, OR AS MUCH AS THE EXISTING SHOULDER WILL ALLOW, AT THE SAME SLOPE AS THE ADJACENT PAVED SHOULDER BEFORE THE GRADE BREAK TO MEET THE EXISTING ROADWAY SLOPE.

ONLY THE GRINDINGS IN THE AREAS WHERE GUARDRAIL IS BEING INSTALLED SHALL BE SEALED WITH ITEM 422 CHIP SEAL WITH POLYMER BINDER, MISC.: SEALING COMPACTED ASPHALT CONCRETE GRINDINGS UNDER GUARDRAIL WITHOUT COVER AGGREGATE.

IN THE AREAS WHERE GUARDRAIL IS NOT BEING INSTALLED, THE GRINDINGS SHALL HAVE AN AVERAGE COMPACTED THICKNESS OF 2.50 INCHES.

THIS ITEM SHALL BE COMPACTED AS PER 617.05. 100% OF THIS MATERIAL SHALL PASS A 1-1/4 INCH SIEVE AS JUDGED BY THE ENGINEER. THE CONTRACTOR SHALL TAKE SPECIAL CARE TO MEET THE ABOVE CONDITIONS AND THE TYPICAL SECTIONS SHOWN IN THESE PLANS.

PAYMENT FOR THE ABOVE WORK SHALL BE INCLUDED IN THE PRICE BID PER SQ. YARD OF 617 SHOULDER RECONDITIONING, MISC.: COMPACTED ASPHALT CONCRETE GRINDINGS.

REVIEW OF DRAINAGE FACILITIES

BEFORE ANY WORK IS STARTED ON THE PROJECT AND AGAIN BEFORE FINAL ACCEPTANCE BY THE STATE, REPRESENTATIVES OF THE STATE AND THE CONTRACTOR, ALONG WITH LOCAL REPRESENTATIVES, SHALL MAKE AN INSPECTION OF ALL EXISTING SEWERS WHICH ARE TO REMAIN IN SERVICE AND WHICH MAY BE AFFECTED BY THE WORK. THE CONDITION OF THE EXISTING CONDUITS AND THEIR APPURTENANCE SHALL BE DETERMINED FROM FIELD OBSERVATIONS. RECORDS OF THE INSPECTION SHALL BE KEPT IN WRITING BY THE STATE.

ALL NEW CONDUITS, INLETS, CATCH BASINS, AND MANHOLES CONSTRUCTED AS A PART OF THE PROJECT SHALL BE FREE OF ALL FOREIGN MATTER AND IN A CLEAN CONDITION BEFORE THE PROJECT WILL BE ACCEPTED BY THE STATE.

ALL EXISTING SEWERS INSPECTED INITIALLY BY THE ABOVE MENTIONED PARTIES SHALL BE MAINTAINED AND LEFT IN A CONDITION REASONABLY COMPARABLE TO THAT DETERMINED BY THE ORIGINAL INSPECTION. ANY CHANGE IN THE CONDITION RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE CORRECTED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 603 CONDUIT ITEMS.

ELEVATION DATUM

ALL ELEVATIONS ARE BASED ON U.S.G.S. DATUM.

* QUANTITY CARRIED TO GENERAL SUMMARY SHEET

CALCULATED BY CHECKED LAW	GENERAL NOTES	SCI-23-2.39	10 110
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ITEM SPECIAL -SOIL STERILANT

USE ONE OF THE SOIL STERILANT PRODUCTS LISTED BELOW OR AN APPROVED EQUAL. APPLY THE SOIL STERILANT TO LOCATIONS WHERE IN-ROAD VEGETATION EXISTS AS DETERMINED BY THE ENGINEER. THIS SHOULD BE DONE IMMEDIATELY PRIOR TO PLACING THE PROPOSED ITEM 617, SHOULDER RECONDITIONING MISC.: COMPACTED ASPHALT GRINDINGS.

PRAMITOL 25E
GIBA SPECIALTY CHEMICALS
MCINTOSH, ALABAMA 36553

ROUNDUP PRO L
MONSANTO COMPANY
800 N. LINDBERGH BLVD.
ST. LOUIS, MO. 63167

HYVAR XL
DUPONT CORPORATION
1007 MARKET STREET
WILMINGTON, DELAWARE 19898

COMPACT THE SITE FOLLOWING PLOWING OR DISKING. APPLY THE SOIL STERILANT AT THE SUGGESTED MANUFACTURER'S RATE.

THE PREFERRED TIME FRAME TO APPLY THE SOIL STERILANT IS BETWEEN JUNE 15 AND OCTOBER 15. VERY DRY SOIL CONDITIONS MAY RESULT IN POOR WEED CONTROL. DO NOT APPLY THE SOIL STERILANT TO SOIL OR BALLAST MATERIAL WHICH IS SATURATED WITH WATER. CONSULT WITH MANUFACTURER IN REGARD TO THE HANDLING AND PHYSICAL CHEMICAL HAZARDS ASSOCIATED WITH THE SOIL STERILANT.

PAYMENT FOR THE ABOVE REFERENCED ITEM IS INCLUDED IN THE PRICE PER SQUARE YARD OF ITEM SPECIAL, SOIL STERILANT. A QUANTITY OF 6659 SQUARE YARDS IS INCLUDED IN THE GENERAL SUMMARY TO BE USED AT LOCATIONS AS DETERMINED BY THE ENGINEER.

EACH SUCCESSFUL BIDDER MUST BE LICENSED BY THE STATE OF OHIO DEPARTMENT OF AGRICULTURE AS A COMMERCIAL APPLICATOR. IN ADDITION, ALL PERSONS INVOLVED IN THE ACTUAL SPRAYING OF HERBICIDE WILL BE LICENSED AS COMMERCIAL OPERATORS IN THE APPROPRIATE SPRAY CATEGORY. SUBMIT APPROPRIATE LICENSES TO THE PROJECT ENGINEER, PRIOR TO COMMENCING WORK, FOR VERIFICATION.

ITEM 254 - PATCHING PLANED SURFACE

THE FOLLOWING ESTIMATED QUANTITY OF 20% OF THE PLANED SURFACE HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR PATCHING PLANED SURFACE AS DESIGNATED BY THE ENGINEER:

254 PATCHING PLANED SURFACE 21,350 SQ. YD. *

ITEM 604 - CATCH BASIN MISC.: CATCH BASIN CLEANOUT

THIS WORK SHALL CONSIST OF REMOVING SEDIMENT AND DEBRIS FROM THE EXISTING CATCH BASINS SPECIFIED IN THE PLAN. ALL MATERIAL REMOVED SHALL BE DISPOSED OF AS PER 105.16 AND 105.17. ALL CATCH BASINS SHALL BE CLEANED OUT TO THE SATISFACTION OF THE ENGINEER.

CLEAN OUT OF THE CATCH BASIN SHALL BE PAID FOR AT THE EACH UNIT PRICE BID FOR ITEM 604, CATCH BASIN MISC.: CATCH BASIN CLEANOUT. THIS PRICE SHALL INCLUDE THE COST FOR MATERIAL, EQUIPMENT, LABOR, AND ALL INCIDENTALS REQUIRED TO COMPLETE THE CLEANOUT.

ITEM 422 - CHIP SEAL WITH POLYMER BINDER, MISC.: SEALING COMPACTED ASPHALT CONCRETE GRINDINGS UNDER GUARDRAIL WITHOUT COVER AGGREGATE

SEALING UNDER GUARDRAIL SHALL CONSIST OF A SINGLE COAT APPLICATION OF POLYMER BINDER TO ITEM 617, SHOULDER RECONDITIONING MISC.: COMPACTED ASPHALT CONCRETE GRINDINGS AT AN APPLICATION RATE OF 0.37 GAL. PER SQUARE YARD IN THE AREAS WHERE GUARDRAIL HAS BEEN INSTALLED, AS SPECIFIED IN THE TYPICAL SECTIONS AND AS FOLLOWS:

- 1) PREPARE GRADED SHOULDER WITH ITEM 209, PREPARING SUBGRADE FOR SHOULDER PAVING, ITEM SPECIAL - SOIL STERILANT, AND ITEM 617, SHOULDER RECONDITIONING MISC.: COMPACTED ASPHALT CONCRETE GRINDINGS.
- 2) SET GUARDRAIL POSTS.
- 3) PATCH AROUND POSTS USING ADDITIONAL ASPHALT CONCRETE GRINDINGS TO THE SATISFACTION OF THE ENGINEER. PATCHED AREAS SHALL BE COMPACTED USING EITHER HAND OR MECHANICAL METHODS. FINISHED SURFACES SHALL BE SMOOTH AND SLOPED TO DRAIN AWAY FROM THE POSTS.
- 4) PLACE ITEM 422, CHIP SEAL WITH POLYMER BINDER, MISC.: SEALING COMPACTED ASPHALT CONCRETE GRINDINGS UNDER GUARDRAIL WITHOUT COVER AGGREGATE. THE SEALING SHALL EXTEND A MINIMUM OF 25 FEET PRIOR TO THE BEGINNING OF THE GUARDRAIL ANCHOR ASSEMBLY OR IMPACT ATTENUATOR USED TO INTRODUCE THE GUARDRAIL RUN.
- 5) REMOVE ANY POLYMER BINDER FROM THE FRONT FACE OF GUARDRAIL RUN.

THIS ITEM SHALL CONFORM TO THE REQUIREMENTS OF 422 WITH THE EXCEPTION THAT 422.08 COVER AGGREGATE AND 422.09 AGGREGATE SPREADER AND ROLLER ARE NOT REQUIRED.

ALL EQUIPMENT, MATERIALS AND LABOR REQUIRED TO PERFORM THE SEALING UNDER GUARDRAIL AFTER PLACEMENT OF GUARDRAIL INCLUDING PATCHING AS OUTLINED ABOVE SHALL BE INCLUDED IN THE PAYMENT FOR ITEM 422, CHIP SEAL WITH POLYMER BINDER, MISC.: SEALING COMPACTED ASPHALT CONCRETE GRINDINGS UNDER GUARDRAIL WITHOUT COVER AGGREGATE.

CROSSINGS AND CONNECTIONS TO EXISTING PIPES AND UTILITIES

WHERE PLANS PROVIDE FOR A PROPOSED CONDUIT TO BE CONNECTED TO, OR CROSS OVER OR UNDER AN EXISTING SEWER OR UNDERGROUND UTILITY, THE CONTRACTOR SHALL LOCATE THE EXISTING PIPES OR UTILITIES BOTH AS TO LINE AND GRADE BEFORE STARTING TO LAY THE PROPOSED CONDUIT.

IF IT IS DETERMINED THAT THE ELEVATION OF THE EXISTING CONDUIT, OR EXISTING APPURTENANCE TO BE CONNECTED, DIFFERS FROM THE PLAN ELEVATION OR RESULTS IN A CHANGE IN THE PLAN CONDUIT SLOPE, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WILL BE AFFECTED BY THE VARIANCE IN THE EXISTING ELEVATIONS.

IF IT IS DETERMINED THAT THE PROPOSED CONDUIT WILL INTERSECT AN EXISTING SEWER OR UNDERGROUND UTILITY IF CONSTRUCTED AS SHOWN ON THE PLAN, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WOULD BE AFFECTED BY THE INTERFERENCE WITH AN EXISTING FACILITY.

PAYMENT FOR ALL THE OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 603 CONDUIT ITEM.

PART-WIDTH CONSTRUCTION

BECAUSE OF THE NECESSITY TO BUILD THIS PROJECT UNDER TRAFFIC AND TO CONSTRUCT THE FULL PAVEMENT WIDTH IN STAGES, EXTREME CARE SHALL BE TAKEN TO PREVENT THE CONSTRUCTION OF A BUTT JOINT IN THE BASE COURSES. LONGITUDINAL JOINTS SHALL BE LAPPED AS SHOWN ON STANDARD CONSTRUCTION DRAWING BP-3.I.

ITEM SPECIAL - PIPE CLEANOUT

THIS WORK SHALL CONSIST OF REMOVING SEDIMENT AND DEBRIS FROM THE EXISTING DRAINAGE CONDUITS SPECIFIED IN THE PLANS. ALL MATERIAL REMOVED SHALL BE DISPOSED OF AS PER 105.16 AND 105.17. ALL SEWERS SHALL BE CLEANED OUT TO THE SATISFACTION OF THE ENGINEER.

CLEAN OUT OF THE PIPE SHALL BE PAID FOR AT THE UNIT PRICE BID FOR ITEM SPECIAL - PIPE CLEANOUT. THIS PRICE SHALL INCLUDE THE COST FOR MATERIAL, EQUIPMENT, LABOR, AND ALL INCIDENTALS REQUIRED TO COMPLETE THE CLEANOUT.

RESIDENTIAL AND COMMERCIAL DRAINAGE CONNECTIONS

EXISTING ROOF DRAINS, FOOTER DRAINS, OR YARD DRAINS, DISTURBED BY THE WORK, SHALL BE PROVIDED WITH UNOBSTRUCTED OUTLETS BY CONNECTING A CONDUIT THROUGH THE CURB OR INTO A DRAINAGE STRUCTURE. THE LOCATION, TYPE, SIZE AND GRADE OF THE NEW CONDUIT REQUIRED TO REPLACE OR EXTEND THE EXISTING DRAIN WILL BE DETERMINED BY THE ENGINEER.

THE FOLLOWING CONDUIT TYPES MAY BE USED: 707.33, 707.41, NON-PERFORATED, 707.42, 707.43, 707.45, 707.46, 707.47, 707.51, 707.52 SDR35.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER FOR THE WORK NOTED ABOVE:

603, 4" CONDUIT, TYPE E	200 FT. *
603, 4" CONDUIT, TYPE F	100 FT. *

SPRING DRAINS

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER FOR DRAINING ANY SPRINGS SHOWN IN THE PLAN OR ENCOUNTERED DURING CONSTRUCTION. THE FOLLOWING TYPES OF PIPES MAY BE USED: 707.33, 707.41, 707.42 OR 707.45 PERFORATED PER 707.31.

SPRING DRAINS SHALL BE CONSTRUCTED AS SHOWN ON STANDARD CONSTRUCTION DRAWING DM-1.I AND PAID FOR AT THE CONTRACT PRICE FOR:

605, 6" UNCLASSIFIED PIPE UNDERDRAINS (FOR SPRINGS)	200 FT. *
605, AGGREGATE DRAINS FOR SPRINGS	100 FT. *
604, PRECAST REINFORCED CONCRETE OUTLET	4 EACH *

PIPE CONNECTIONS TO CORRUGATED METAL STRUCTURES

CONNECTIONS OF PROPOSED LONGITUDINAL DRAINAGE TO CORRUGATED METAL STRUCTURES SHALL BE MADE BY MEANS OF A SHOP FABRICATED OR FIELD WELDED STUB ON THE STRUCTURE. THE STUB SHALL MEET THE REQUIREMENTS OF 707 AND HAVE A MINIMUM LENGTH OF 2 FEET AND A MINIMUM WALL THICKNESS OF 0.064 INCHES.

THE LOCATION AND ELEVATION OF THE STUB ARE TO BE CONSIDERED APPROXIMATE AND MAY BE ADJUSTED BY THE ENGINEER TO AVOID CUTTING THROUGH JOINTS IN THE STRUCTURE.

THE FIELD WELDED JOINT, IF USED, SHALL BE THOROUGHLY CLEANED AND RE-GALVANIZED OR OTHERWISE SUITABLY REPAIRED. WELDING SHALL MEET THE REQUIREMENTS OF 513.21.

A MASONRY COLLAR, AS PER STANDARD DRAWING DM-1.I, WILL BE REQUIRED TO CONNECT THE LONGITUDINAL DRAINAGE TO THE STUB, WHEN PIPE OTHER THAN CORRUGATED METAL IS PROVIDED FOR THE LONGITUDINAL DRAINAGE.

PAYMENT FOR CUTTING INTO THE STRUCTURE AND PROVIDING THE CONNECTION DESCRIBED, SHALL BE INCLUDED IN THE CONTRACT PRICE FOR ITEM 603 OR 522.

* QUANTITY CARRIED TO GENERAL SUMMARY SHEET

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GENERAL NOTES

SCI-23-2.39

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ITEM 606 - ANCHOR ASSEMBLY, TYPE E-98

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING EITHER OF THE FOLLOWING GUARDRAIL END TERMINALS.

- 1) THE ET-2000 (1997) MANUFACTURED BY TRINITY INDUSTRY, 1170 N. STATE STREET, GIRARD, OHIO 44420 (TELEPHONE: 330-545-4373).

THE LENGTH OF THE ET-2000 (1997) SYSTEM IS CONSIDERED TO BE 50'-0", INCLUSIVE OF TWO 25'-0" LONG RAIL ELEMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

DWG. #	DRAWING NAME	DWG./REV. DATE	ODOT APPROVAL DATE
SS265M	ET-2000 (1997) PLAN, ELEVATION & SECTIONS	6/20/97	3/6/98
SSI42	ET2000 PLUS 50'-0" PLAN, ELEVATION & SECTION 25'-0" RAIL, SLEEVE W/PL POSTS 1-4	4/12/00	7/31/00
SSI41	ET2000 PLUS PLAN, ELEVATION & SECTION 25'-0" RAIL, HBA POSTS 1-4	2/29/00	7/31/00
SSI58	ET2000 PLUS 50'-0" WITH 12'-6" PANELS & HBA POSTS 1-4 PLAN, ELEVATION & SECTION	5/22/00	7/31/00

- 2) THE SKT-350 MANUFACTURED BY ROAD SYSTEMS, INC., 2516 MALLORY LANE, STOW, OHIO, 44224, (TELEPHONE: 330-346-0721).

THE LENGTH OF THE SKT-350 SYSTEM IS CONSIDERED TO BE 50'-0", INCLUSIVE OF FOUR 12'-6" LONG RAIL ELEMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

DWG. #	DRAWING NAME	DWG./REV. DATE	ODOT APPROVAL DATE
SKT-4M	SEQUENTIAL KINKING TERMINAL (SKT-350) ASSEMBLY WITH 4 FOUNDATION TUBES	12/11/97	3/6/98

THE FACE OF THE TYPE E-98 IMPACT HEAD SHALL BE COVERED WITH A SHEET OF TYPE G REFLECTIVE SHEETING, PER CMS 730.19, APPROXIMATELY 18" X 18".

REFER TO THE MANUFACTURER'S INSTRUCTION REGARDING THE INSTALLATION OF, AND THE GRADING AROUND, THE FOUNDATION TUBES AND GROUND STRUT. THE TOP OF ANY FOUNDATION TUBE SHOULD BE LESS THAN 4-INCHES ABOVE THE GROUND. THE PLACEMENT OF THE FOUNDATION TUBES SHOULD BE AN APPROPRIATE DEPTH BELOW THE LEVEL LINE IN ORDER TO MAINTAIN THE FINISHED GUARDRAIL HEIGHT OF 27-3/4-INCHES FROM THE EDGE OF THE SHOULDER.

ON-SITE GRADING IS REQUIRED IF THE TOP OF THE FOUNDATION TUBES OR TOP OF THE GROUND STRUT DOES PROJECT MORE THAN 4-INCHES ABOVE THE GROUND LINE.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, ANCHOR ASSEMBLY, TYPE E-98, EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL ANCHOR ASSEMBLY SYSTEM, INCLUDING ALL RELATED TRANSITIONS, REFLECTIVE SHEETING, HARDWARE, GRADING, EMBANKMENT AND EXCAVATION NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

ITEM 606, ANCHOR ASSEMBLY, TYPE B-98:

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING EITHER OF THE FOLLOWING GUARDRAIL END TERMINALS.

- 1) THE SRT-350, GUARDRAIL END TERMINAL AS MANUFACTURED BY TRINITY INDUSTRY, 1170 N. STATE STREET, GIRARD, OHIO 44420 (TELEPHONE: 330-545-4373).

THE LENGTH OF THE SRT-350 SYSTEM IS CONSIDERED TO BE 37'-6", INCLUSIVE OF THREE 12'-6" LONG RAIL ELEMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PREAPPROVED SHOP DRAWINGS:

DWG. #	DRAWING NAME	DWG./REV. DATE	ODOT APPROVAL
SS444 SS444M	SLOTTED RAIL TERMINAL POST LAYOUT AND ERECTION DETAILS SRT-350 (12.5, 8 POST)	7/12/99 REV. 1 7/12/99	8/27/99
SS425M	SLOTTED RAIL TERMINAL SRT-350 POST LAYOUT AND ERECTION DETAILS (12.5, 9 POST)	6/21/97 REV. 1	3/6/98

- 2) THE FLEAT-350 MANUFACTURED BY ROAD SYSTEMS, INC., 2516 MALLORY LANE, STOW, OHIO, 44224 (TELEPHONE: 330-346-0721).

THE LENGTH OF THE FLEAT-350 IS CONSIDERED TO BE 37'-6", INCLUSIVE OF THREE 12'-6" LONG RAIL ELEMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

DWG. #	DRAWING NAME	DWG./REV. DATE	ODOT APPROVAL
FLT-M	FLARED ENERGY ABSORBING TERMINAL (FLEAT-350) ASSEMBLY	4/16/98	7/31/98

REFER TO THE MANUFACTURER'S INSTRUCTION REGARDING THE INSTALLATION OF, AND THE GRADING AROUND, THE FOUNDATION TUBES AND GROUND STRUT. THE TOP OF ANY FOUNDATION TUBE SHOULD BE LESS THAN 4-INCHES ABOVE THE GROUND. THE PLACEMENT OF THE FOUNDATION TUBES SHOULD BE AN APPROPRIATE DEPTH BELOW THE LEVEL LINE IN ORDER TO MAINTAIN THE FINISHED GUARDRAIL HEIGHT OF 27-3/4 INCHES FROM THE EDGE OF THE SHOULDER.

ON-SITE GRADING IS REQUIRED IF THE TOP OF THE FOUNDATION TUBES OR TOP OF THE GROUND STRUT DOES PROJECT MORE THAN 4-INCHES ABOVE THE GROUND LINE.

THE FACE OF THE TYPE B-98 IMPACT HEAD SHALL BE COVERED WITH TYPE G REFLECTIVE SHEETING, PER CMS 730.19: APPROXIMATELY 36" W X 12" H FOR THE SRT-350 AND 14" W X 20" H FOR THE FLEAT.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, ANCHOR ASSEMBLY, TYPE B-98, EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL ANCHOR ASSEMBLY SYSTEM, INCLUDING REFLECTIVE SHEETING AND ALL RELATED HARDWARE, GRADING, EMBANKMENT AND EXCAVATION NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

ITEM 254-PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN

THE REQUIREMENTS OF 254 SHALL APPLY EXCEPT:

THE INTENT OF THE PLANING IS TO MILL TO A 1" DEPTH AT THE EDGE LINES AND LANE LINES OF THE THRU LANES AND 1/4" (MIN.) DEPTH IN BOTTOM OF WHEEL RUTS. THE PAVEMENT CROSS SLOPE MAY VARY BETWEEN 3/16" AND 3/8" PER FOOT CONTINUOUS FOR THE LANE WIDTHS. THE MILLING DEPTH SHALL BE CONTROLLED FROM THE EDGE LINES OR LANE LINES, TO PRODUCE THE LEAST AMOUNT OF MILLING IN CONFORMANCE WITH THE ABOVE LIMITS TO LEVEL THE EXISTING PAVEMENT PROFILE AND CROSS SLOPES. FIELD WORK FOR ITEM 623, CONSTRUCTION LAYOUT STAKES AS NECESSARY FOR PROPER CONTROL WITHIN PLAN INTENT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

AN AUTOMATIC MILLING HEAD PROFILE CONTROL HAVING A MINIMUM OF 30 FOOT SKI-ARM SHALL BE USED DURING THE MILLING OPERATION.

ABOVE CONDITIONS DO NOT APPLY TO PLANING PERFORMED IN AREAS AS DIRECTED BY THE ENGINEER TO ELIMINATE ADVERSE SURFACE DISTORTION, OR TO PROVIDE A SATISFACTORY GRADE AT CASTINGS. THESE AREAS INCLUDE MATERIAL DISPLACED BY PERFORMED THROUGHOUT THE PROJECT PRIOR TO PAVING. AREAS TO BE PLANED WILL BE DESIGNATED BY THE ENGINEER.

THE PROGRESSION OF THE PLANING SHALL PROCEED IN SUCH A MANNER THAT NORMAL TRAFFIC WILL NOT BE REQUIRED TO RUN OVER THE PLANED ROADWAY SURFACE MORE THAN TWENTY-ONE (21) CALENDAR DAYS. THE 21 CALENDAR DAYS SHALL BE CONSIDERED AN INTERIM COMPLETION DATE (SECTION 108) AND FOR EACH CALENDAR DAY BEYOND THE 21 DAYS THAT THE TRAFFIC REMAINS EXPOSED TO THE PLANED SURFACE, THE CONTRACTOR WILL BE ASSESSED LIQUIDATED DAMAGES AS PER 108.07. PLANED AREAS WHICH CREATE A LONGITUDINAL JOINT BETWEEN TRAVELED LANES SHALL BE COMPLETED IN SUCH A MANNER SO AS TO REMOVE THE JOINT BEFORE THE END OF EACH DAY'S WORK. BEFORE THIS JOINT IS EXPOSED TO TRAFFIC, THE CONTRACTOR SHALL ERECT OW-171 SIGNS (UNEVEN PAVEMENT). THESE SIGNS SHALL REMAIN ONLY WHEN THE CONDITION EXISTS.

DISPOSAL OF CUTTINGS:

A PORTION OF THE GRINDINGS ARE TO BE USED FOR ITEM 617 SHOULDER RECONDITIONING, MISC.: COMPACTED ASPHALT CONCRETE GRINDINGS. ALL ADDITIONAL ASPHALT GRINDINGS FROM THIS PROJECT ARE TO BECOME THE PROPERTY OF THE CONTRACTOR.

EQUIPMENT, MATERIALS AND LABOR REQUIRED TO PERFORM THE WORK OUTLINED ABOVE, WITH EXCEPTION OF ITEMS SEPARATELY ITEMIZED, SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 254, PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN.

GENERAL NOTES

SCI-23-2.39

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ITEM SPECIAL-MAILBOX SUPPORT

THIS WORK SHALL CONSIST OF FURNISHING AND ERECTING MAILBOX SUPPORTS AND ANY ASSOCIATED MOUNTING HARDWARE IN ACCORDANCE WITH PLAN DETAILS, AND ATTACHING AN OWNER-SUPPLIED MAILBOX AT LOCATIONS SPECIFIED IN THE PLAN, OR OTHERWISE ESTABLISHED BY THE ENGINEER.

WOOD POSTS SHALL BE NOMINAL 4" BY 4" SQUARE OR 4.5" DIAMETER ROUND, AND CONFORM TO 710.14.

STEEL POSTS SHALL BE NOMINAL PIPE SIZE 2" I.D., AND CONFORM TO AASHTO M 181.

HARDWARE (PLATES, SCREWS, BOLTS, ETC.) SHALL BE COMMERCIAL-GRADE GALVANIZED STEEL.

POSTS SHALL BE SET PER THE FIRST PARAGRAPH OF 606.03, AND SHALL IN NO INSTANCE BE ENCASED IN CONCRETE.

SUPPORT HARDWARE SHALL ACCOMMODATE EITHER A SINGLE OR A DOUBLE MAILBOX INSTALLATION, AND NO MORE THAN TWO BOXES MAY BE MOUNTED ON A SINGLE POST.

THE MAILBOX SHALL BE SECURELY AND NEATLY ATTACHED BY THE CONTRACTOR TO THE NEW SUPPORT. THE CONTRACTOR SHALL FURNISH ALL NECESSARY ATTACHMENT HARDWARE (NUTS, BOLTS, PLATES, SPACERS AND WASHERS) AS NECESSARY TO ACCOMODATE THE COMPLETE INSTALLATION.

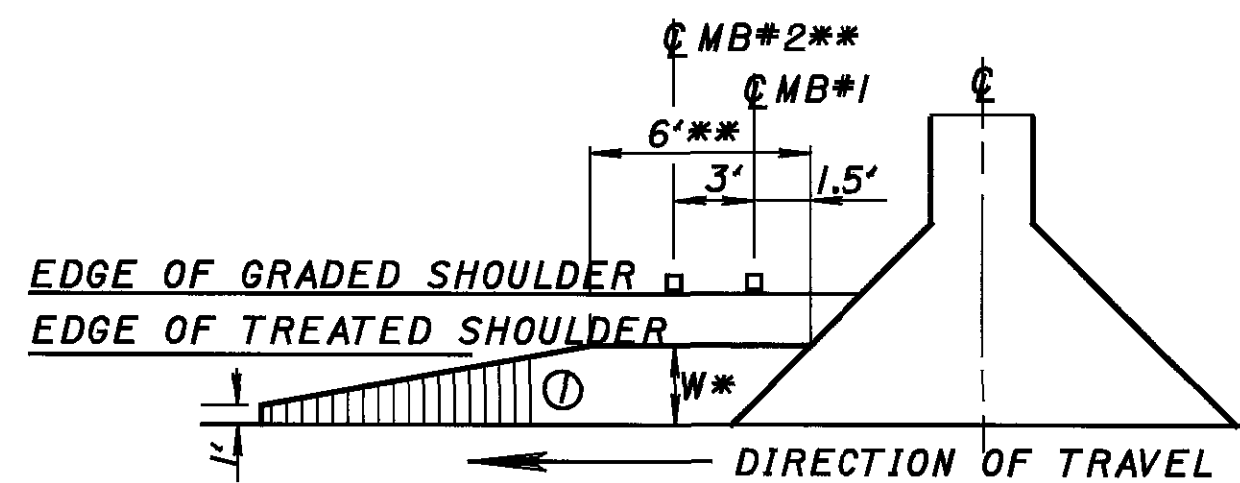
IN THE ABSENCE OF A NEW BOX SUPPLIED BY THE OWNER, THE CONTRACTOR SHALL SALVAGE THE EXISTING BOX AND PLACE IT ON THE NEW SUPPORT. DUE CARE SHALL BE EXERCISED IN SUCH AN OPERATION, AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING OR REPLACING ANY BOX DAMAGED BY IMPROPER HANDLING ON HIS PART, AS JUDGED AND DIRECTED BY THE ENGINEER.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE LOCAL POST MASTER REGARDING THE TIMING OF THE MOVEMENT OF ANY MAILBOX TO A NEW LOCATION.

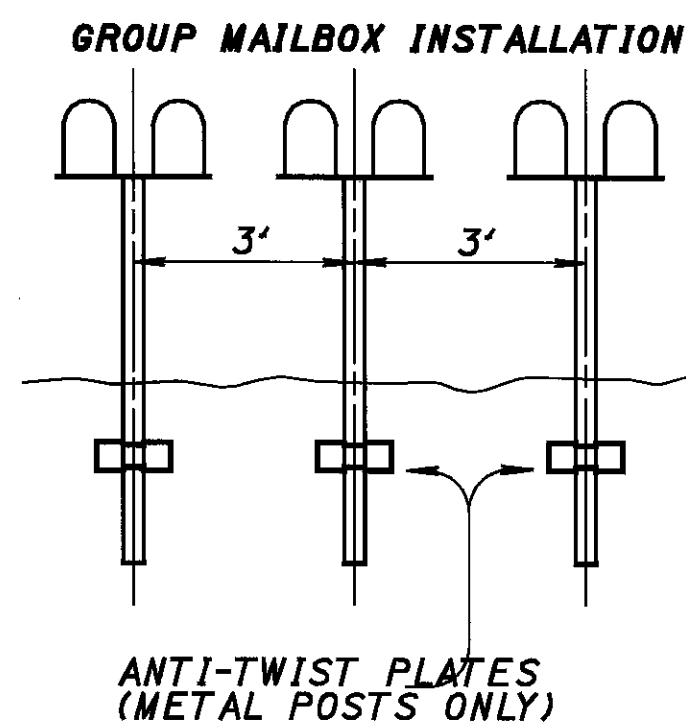
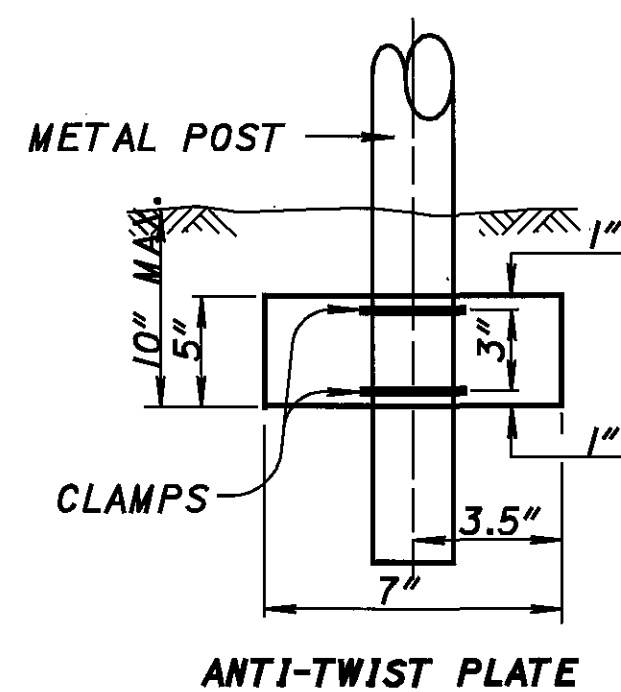
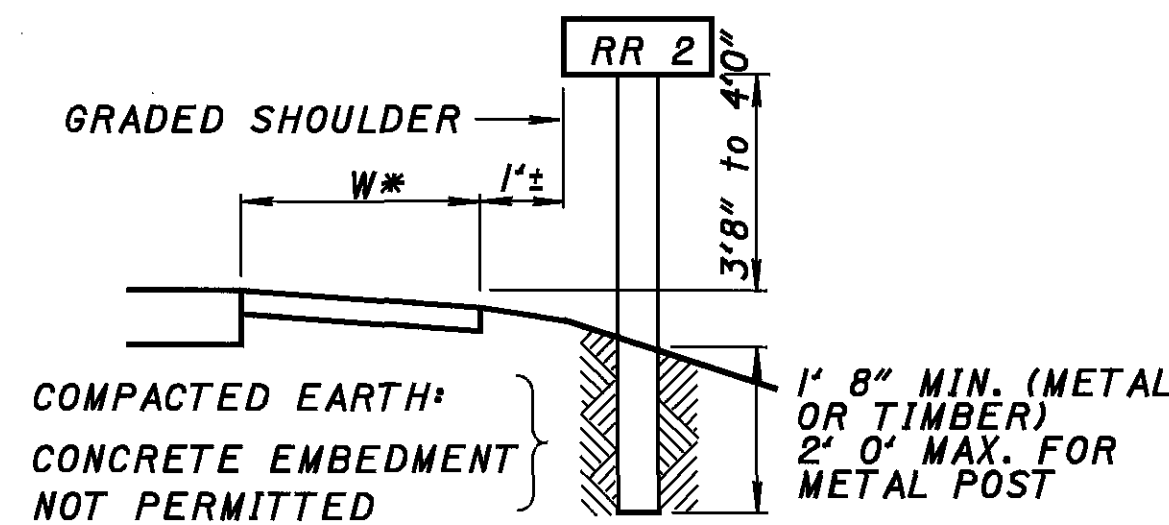
PAYMENT UNDER THIS ITEM SHALL BE LIMITED TO FINAL PERMANENT INSTALLATIONS. TEMPORARY INSTALLATIONS SHALL BE IN ACCORDANCE WITH 107.10. HOWEVER, THE SAME MATERIAL AND SIZE LIMITATIONS AS FOR PERMANENT INSTALLATIONS SHALL APPLY.

MAILBOX SUPPORTS, COMPLETE IN PLACE, WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER EACH, FOR ITEM SPECIAL MAILBOX SUPPORT.

ITEM SPECIAL MAILBOX SUPPORT 3 EACH *



- ① END MAILBOX TURNOUT AT EDGE OF TREATED SHOULDER OR 1' WHICH EVER IS GREATER.
- * WHERE POSTS ARE BEHIND GUARDRAIL, TURNOUT SHALL EXTEND TO FACE OF GUARDRAIL. WHERE NO GUARDRAIL IS REQUIRED, TURNOUT WIDTH SHALL BE 6' MINIMUM.
- ** ADD 3' FOR EACH ADDITIONAL MAILBOX.



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GENERAL NOTES

SCI-23-2.39

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* QUANTITY CARRIED TO GENERAL SUMMARY SHEET

ITEM 614, MAINTAINING TRAFFIC

A MINIMUM OF ONE LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES BY USE OF THE EXISTING PAVEMENT, THE COMPLETED PAVEMENT AND TEMPORARY SURFACES USING ITEMS 410 AND 614.

LENGTH AND DURATION OF LANE CLOSURES AND RESTRICTIONS SHALL BE AT THE APPROVAL OF THE ENGINEER. IT IS THE INTENT TO MINIMIZE THE IMPACT TO THE TRAVELING PUBLIC. LANE CLOSURES OR RESTRICTIONS OVER SEGMENTS OF THE PROJECT IN WHICH NO WORK IS ANTICIPATED WITHIN A REASONABLE TIME FRAME, AS DETERMINED BY THE ENGINEER, SHALL NOT BE PERMITTED. THE LEVEL OF UTILIZATION OF MAINTENANCE OF TRAFFIC DEVICES SHALL BE COMMENSURATE WITH THE WORK IN PROGRESS.

BEFORE THE WORK BEGINS, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER THE NAMES AND TELEPHONE NUMBERS OF A PERSON OR PERSONS WHO CAN BE CONTACTED TWENTY-FOUR (24) HOURS PER DAY BY THE OHIO DEPARTMENT OF TRANSPORTATION AND ALL INTERESTED POLICE AGENCIES. THIS PERSON OR PERSONS SHALL BE RESPONSIBLE FOR PLACING OR REPLACING NECESSARY TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

THE MAINTENANCE OF TRAFFIC THROUGH THE BRIDGE WORK ZONES AT BRIDGE NO. SCI-23-0519 AND BRIDGE NO. SCI-23-0535 SHALL PROVIDE FOR ONE LANE OF TRAFFIC IN EACH DIRECTION. SEE SHEETS 22 AND 23 FOR PHASE I BRIDGE WORK ZONE DETAILS AND SHEETS 24 AND 25 FOR PHASE II BRIDGE WORK ZONE DETAILS BETWEEN STA. 247+86 TO STA. 294+31.13. SEE SHEET 18 FOR QUANTITIES ASSOCIATED WITH THE PHASE I AND PHASE II BRIDGE WORK ZONES.

SUGGESTED PHASING FOR PROJECT CONSTRUCTION:

PHASE I SET UP TRAFFIC CONTROL TO CLOSE THE RIGHT (DRIVING) LANES AND TO MAINTAIN TRAFFIC IN 11 FOOT MINIMUM LANES IN LEFT (PASSING) LANES AS SHOWN ON SHEETS 22, 23, 81, AND 90. COMPLETE ALL BRIDGE AND PAVEMENT WORK BETWEEN STA. 247+86 TO STA. 294+31.13 IN AREAS SHOWN ON SHEETS 22 AND 23 FOR CONSTRUCTION DURING THIS PHASE WITH THE EXCEPTION OF THE PLACEMENT OF THE 1-1/2" OF ITEM 442, ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (446) WITH SUPPLEMENTAL 1059 WARRANTY.

THE ROADWAY UNDER BRIDGE NO. SCI-23-0519 SHALL BE CLOSED TO TRAFFIC DURING BOTH PHASE I AND PHASE II. GATES AND BARRICADES, AS SHOWN ON SHEETS 23 AND 25 SHALL BE ERECTED AND MAINTAINED AT ALL TIMES.

A PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN, SHALL BE LOCATED IN THE VICINITY OF THE 11.6 MILE MARKER ON U.S. ROUTE 23, JUST NORTH OF THE INTERSECTION OF U.S. ROUTE 23, STATE ROUTE 348 AND STATE ROUTE 728. IT SHALL BE AVAILABLE FOR THE DURATION OF THIS PROJECT. FOR PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN REQUIREMENTS, SEE SHEET 16.

PHASE II MOVE TRAFFIC CONTROL TO CLOSE THE LEFT (PASSING) LANES AND TO MAINTAIN TRAFFIC IN 10.5 FOOT MINIMUM LANES IN RIGHT (DRIVING) LANES SHIFTED RIGHT 4.5 FEET ONTO PAVED SHOULDERS AS SHOWN ON SHEETS 24, 25, 81, AND 90 AND USING TRANSITION AREA DELINEATION FOR LANE EDGE LINES IN ACCORDANCE WITH THE PLAN NOTE FOR WORK ZONE DELINEATION FOR THE LENGTH OF BOTH TRANSITION AREAS. COMPLETE ALL BRIDGE AND PAVEMENT WORK BETWEEN STA. 247+86 TO STA. 294+31.13 IN AREAS SHOWN ON SHEETS 24 AND 25 FOR CONSTRUCTION DURING THIS PHASE WITH THE EXCEPTION OF THE PLACEMENT OF THE 1-1/2" OF ITEM 442, ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (446) WITH SUPPLEMENTAL 1059 WARRANTY.

PHASE III MOVE TRAFFIC CONTROL TO CLOSE THE RIGHT (DRIVING) LANE IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWING MT-95.31 OR TO CLOSE THE LEFT (PASSING) LANE IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWING MT-95.32 AS REQUIRED TO COMPLETE DRAINAGE WORK, GUARDRAIL WORK AND PAVEMENT WORK BETWEEN STA. 126+28 TO STA. 247+86 AND BETWEEN STA. 294+21.38 TO STA. 296+00 WITH THE EXCEPTION OF THE PLACEMENT OF THE 1-1/2" OF ITEM 442, ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (446) WITH SUPPLEMENTAL 1059 WARRANTY.

MOVE TRAFFIC CONTROL TO CLOSE THE RIGHT (DRIVING) LANE IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWING MT-95.31 OR TO CLOSE THE LEFT (PASSING) LANE IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWING MT-95.32 AS REQUIRED TO COMPLETE PLACEMENT OF THE 1-1/2" OF ITEM 442, ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (446) WITH SUPPLEMENTAL 1059 WARRANTY BETWEEN STA. 126+28 TO STA. 296+00 AND ALL REMAINING WORK NECESSARY TO COMPLETE THE PROJECT.

NO WORK SHALL BE PERFORMED AND ALL EXISTING LANES SHALL BE OPEN TO TRAFFIC (EXCEPT FOR THE LANE CLOSURES FOR THE BRIDGE WORK ZONES) DURING THE FOLLOWING DESIGNATED HOLIDAYS OR EVENTS:

MEMORIAL DAY	FOURTH OF JULY
LABOR DAY	THANKSGIVING
LOCAL SPECIAL EVENTS	

THE PERIOD OF TIME THAT THE LANES ARE TO BE OPEN DEPENDS ON THE DAY OF THE WEEK ON WHICH THE HOLIDAY OR EVENT FALLS. THE FOLLOWING SCHEDULE SHALL BE USED TO DETERMINE THIS PERIOD:

DAY OF THE WEEK	TIME ALL LANES MUST BE OPEN TO TRAFFIC
SUNDAY	12:00N FRIDAY THROUGH 12:00N MONDAY
MONDAY	12:00N FRIDAY THROUGH 12:00N TUESDAY
TUESDAY	12:00N MONDAY THROUGH 12:00N WEDNESDAY
WEDNESDAY	12:00N TUESDAY THROUGH 12:00N THURSDAY
THURSDAY	12:00N WEDNESDAY THROUGH 12:00N MONDAY
FRIDAY	12:00N THURSDAY THROUGH 12:00N MONDAY
SATURDAY	12:00N FRIDAY THROUGH 12:00N MONDAY

NO EXTENSIONS OF TIME SHALL BE GRANTED FOR DELAYS IN MATERIAL DELIVERIES, UNLESS SUCH DELAYS ARE INDUSTRY-WIDE, OR FOR LABOR STRIKES, UNLESS SUCH STRIKES ARE AREA-WIDE.

SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THESE REQUIREMENTS, THE CONTRACTOR SHALL BE ASSESSED LIQUIDATED DAMAGES IN ACCORDANCE WITH CMS 108.07.

THE CONTRACTOR SHALL ARRANGE FOR ALL MAINTENANCE OF TRAFFIC OPERATIONS SUCH THAT THERE WILL BE NO OBSTRUCTION TO THE CONTINUOUS FLOW OF TRAFFIC. ALL INTERSECTIONS AND CROSS-OVERS SHALL BE OPEN TO TRAFFIC AT ALL TIMES UNLESS OTHERWISE STATED IN THE PLAN.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER FOR THE MAINTENANCE OF TRAFFIC:

ITEM 410 - TRAFFIC COMPACTED SURFACE, TYPE A OR B 100 CU. YD.
 ITEM 614 - ASPHALT CONCRETE FOR MAINTAINING TRAFFIC 200 CU. YD.

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH CMS 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614 MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLANS.

ITEM 614 BARRIER REFLECTORS AND/OR OBJECT MARKERS

BARRIER REFLECTORS AND/OR OBJECT MARKERS SHALL BE INSTALLED ON ALL PORTABLE CONCRETE BARRIER USED FOR TRAFFIC CONTROL. BARRIER REFLECTORS, OBJECT MARKERS AND THEIR INSTALLATION SHALL CONFORM TO CMS 626, EXCEPT THAT THE SPACING SHALL BE 50 FEET.

DROP-OFFS

THERE SHALL BE NO OVERNIGHT DROP-OFFS OF GREATER THAN 2". REFER TO SHEET 21 FOR DETAILED INFORMATION ON MAINTENANCE AND PROTECTIN OF TRAFFIC FOR DROP-OFFS.

ITEM 614 LAW ENFORCEMENT OFFICER WITH PATROL CAR

IN ADDITION TO THE REQUIREMENTS OF CMS 614 AND THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (OMUTCD), A UNIFORMED LAW ENFORCEMENT OFFICER AND OFFICIAL PATROL CAR WITH WORKING TOP-MOUNTED EMERGENCY FLASHING LIGHTS SHALL BE PROVIDED FOR CONTROLLING TRAFFIC FOR THE FOLLOWING TASKS:

FOR LANE CLOSURES: DURING INITIAL SET UP PERIODS, TEAR DOWN PERIODS, SUBSTANTIAL SHIFTS OF A CLOSURE POINT OR WHEN NEW LANE CLOSURE ARRANGEMENTS ARE INITIATED.

LAW ENFORCEMENT OFFICERS (LEOS) SHOULD NOT BE USED WHERE THE OMUTCD INTENDS THAT FLAGGERS BE USED. THE LEOS ARE CONSIDERED TO BE EMPLOYED BY THE CONTRACTOR AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR THEIR ACTIONS. ALTHOUGH THEY ARE EMPLOYED BY THE CONTRACTOR, THE ENGINEER SHALL HAVE CONTROL OVER THEIR PLACEMENT. THE OFFICIAL PATROL CAR SHALL BE A PUBLIC SAFETY VEHICLE AS REQUIRED BY THE OHIO REVISED CODE. THE CONTRACTOR SHALL MAKE ARRANGEMENTS FOR THESE SERVICES WITH: OHIO STATE HIGHWAY PATROL, 660 EAST MAIN STREET, COLUMBUS, OHIO 43205, PHONE: 614-466-2660.

LAW ENFORCEMENT OFFICERS WITH PATROL CARS REQUIRED BY THE TRAFFIC MAINTENANCE TASKS ABOVE SHALL BE PAID AT THE UNIT PRICE (HOURLY) BASIS UNDER ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 614 LAW ENFORCEMENT OFFICER WITH PATROL CAR 100 HOUR

THE HOURS PAID SHALL INCLUDE MINIMUM SHOW-UP TIME REQUIRED BY THE LAW ENFORCEMENT AGENCY INVOLVED.

IF CONTRACTORS WISH TO UTILIZE LEOS FOR FLAGGING AND TRAFFIC CONTROL OTHER THAN THAT REQUIRED IN THESE PLANS, THEY MAY DO SO AT THEIR OWN EXPENSE. PAYMENT FOR THE EXCESS ABOVE THE CONTRACT REQUIREMENTS WILL BE INCLUDED UNDER ITEM 614, MAINTAINING TRAFFIC.

ITEM 614, REPLACEMENT DRUM

DRUMS FURNISHED BY THE CONTRACTOR IN ACCORDANCE WITH THE REQUIREMENTS OF THE PLANS, SPECIFICATIONS AND PROPOSAL WHICH BECOME DAMAGED BY TRAFFIC FOR REASONS BEYOND THE CONTROL OF THE CONTRACTOR SHALL BE REPLACED IN KIND WHEN ORDERED BY THE ENGINEER. REPLACEMENT DRUMS SHALL BE NEW.

PAYMENT FOR THE NEW DRUMS SHALL BE MADE AT THE CONTRACT PRICE PER EACH FOR ITEM 614, REPLACEMENT DRUM, AND SHALL INCLUDE THE COST OF REMOVING AND DISPOSING OF THE DAMAGED DRUM, AND PROVIDING AND MAINTAINING THE REPLACEMENT DRUM IN ACCORDANCE WITH THE CONTRACT REQUIREMENTS FOR THE ORIGINAL DRUM.

AN ESTIMATED QUANTITY OF 150 EACH HAS BEEN PROVIDED IN THE GENERAL SUMMARY.

CALCULATED
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MAINTENANCE OF TRAFFIC GENERAL NOTES

SCI-23-2-39

ITEM 614-WORK ZONE SPEED LIMIT SIGN

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN, COVER DURING SUSPENSION OF WORK, AND SUBSEQUENTLY REMOVE WORK ZONE SPEED LIMIT (R2-1) (45 MPH AND 35 MPH SPEED LIMIT) SIGNS AND SUPPORTS WITHIN THE WORK LIMITS IN ACCORDANCE WITH THE FOLLOWING REQUIREMENTS:

THE CONTRACTOR SHALL COVER OR REMOVE ANY EXISTING SPEED LIMIT SIGNS WITHIN THE REDUCED SPEED ZONE. THESE SIGNS SHALL BE RESTORED DURING SUSPENSION OR TERMINATION OF THE REDUCED SPEED LIMIT. THE EXPENSE OF COVERING OR REMOVAL AND RESTORATION OF EXISTING SPEED LIMIT OR MINIMUM SPEED LIMIT SIGNS SHALL BE INCLUDED IN THE PAY ITEM FOR THE WORK ZONE SPEED LIMIT SIGNS.

THE WORK ZONE SPEED LIMIT SIGNS MAY BE ERECTED OR UNCOVERED NO MORE THAN FOUR HOURS BEFORE THE ACTUAL START OF WORK. THE SIGNS SHALL BE REMOVED OR COVERED NO LATER THAN FOUR HOURS FOLLOWING RESTORATION OF ALL LANES TO TRAFFIC WITH NO RESTRICTIONS, OR SOONER AS DIRECTED BY THE ENGINEER. TEMPORARY SIGN COVERING AND UNCOVERING DUE TO TEMPORARY LANE RESTORATIONS SHALL BE GUIDED BY THE FOUR-HOUR LIMITATIONS STATED ABOVE. SUCH LANE RESTORATIONS SHOULD BE EXPECTED TO REMAIN IN EFFECT FOR 30 OR MORE DAYS, SUCH AS DURING WINTER SHUT-DOWNS.

CONSTRUCTION AND MATERIAL SPECIFICATIONS, ITEM 614, PARAGRAPH 614.02(B) INDICATES THAT THE TWO DIRECTIONS OF A DIVIDED HIGHWAY ARE CONSIDERED SEPARATE HIGHWAY SECTIONS. THEREFORE, IF THE WORK ON A MULTI-LANE DIVIDED HIGHWAY IS LIMITED TO ONLY ONE DIRECTION, SPEED REDUCTION IN THE DIRECTION OF WORK DOES NOT AUTOMATICALLY CONSTITUTE SPEED REDUCTION IN THE OPPOSITE DIRECTION. SPEED LIMIT REDUCTION IN THE OPPOSITE DIRECTION, IN SUCH CASE, IS APPROPRIATE ONLY IF CONDITIONS ARE EXPECTED TO HAVE AN IMPACT ON THE DIRECTIONAL TRAFFIC FLOW, AS DIRECTED BY THE ENGINEER.

THE CONTRACTOR SHALL ERECT A WORK ZONE SPEED LIMIT SIGN IN ADVANCE OF ANY LANE RESTRICTION EXPECTED TO LAST AT LEAST 30 CONSECUTIVE CALENDAR DAYS, OR AS DIRECTED BY THE ENGINEER. THE SIGN SHALL BE MOUNTED ON BOTH SIDES OF DIVIDED HIGHWAYS. THE FIRST WORK ZONE SPEED LIMIT SIGN SHALL BE PLACED 500 FEET IN ADVANCE OF THE LANE REDUCTION TAPER OR AT A POINT WHEREVER CONSTRUCTION BEGINS, WHICHEVER COMES FIRST. THE SIGN SHALL BE MOUNTED ON THE RIGHT SIDE, 250 FEET IN ADVANCE OF THE LANE REDUCTION TAPER ON UNDIVIDED HIGHWAYS. THE SIGN SHALL BE REPEATED, ON THE SIDE NEAREST TRAFFIC, EVERY 1 MILE FOR 55 MPH ZONES AND EVERY 1/2 MILE FOR 50 AND 45 MPH ZONES. THESE SIGNS SHALL ALSO BE ERECTED IMMEDIATELY AFTER EACH OPEN ENTRANCE RAMP WITHIN THE ZONE.

REDUCED SPEED AHEAD SIGNS SHALL BE ERECTED IN ADVANCE OF THE SPEED REDUCTION, APPROXIMATELY 1300 FEET ON MULTI-LANE HIGHWAYS AND 500 FEET ON 2-LANE HIGHWAYS.

A SIGN TO INDICATE THE RESUMPTION OF THE STATUTORY SPEED LIMIT SHALL BE ERECTED AT THE END OF ANY REDUCED SPEED ZONE. R2-1 (SPEED LIMIT) SIGNS SHALL BE USED ON UNDIVIDED ROADWAYS. R2-1(SPEED LIMIT) AND R2-H2A SIGNS SHALL BE USED ON DIVIDED ROADWAYS. WHEN USED THE R2-1 AND 2-H2A SIGNS SHALL BE MOUNTED SIDE-BY-SIDE ON SEPARATE SUPPORTS. THE CONTRACTOR MAY USE SIGNS AND SUPPORTS IN USED, BUT GOOD, CONDITION PROVIDED THE SIGNS MEET CURRENT ODOT SPECIFICATIONS. SIGN FACES SHALL BE REFLECTORIZED WITH TYPE G SHEETING COMPLYING WITH THE REQUIREMENTS OF CMS 730.19.

WORK ZONE SPEED LIMIT SIGNS SHALL BE MOUNTED ON TWO ITEM 630 GROUND MOUNTED SUPPORTS, NO. 3 POSTS.

WORK ZONE SPEED LIMIT SIGNS AND SUPPORTS WILL BE MEASURED AS THE NUMBER OF SIGN INSTALLATIONS, INCLUDING THE SIGNS AND NECESSARY SUPPORTS. IF A SIGN AND SUPPORT COMBINATION IS REMOVED AND REERECTED AT ANOTHER LOCATION WITHIN THE PROJECT DUE TO CHANGES IN THE SPEED ZONE DIRECTED BY THE ENGINEER, IT SHALL BE CONSIDERED ANOTHER UNIT.

PAYMENT FOR ACCEPTED QUANTITIES, COMPLETE IN PLACE, WILL BE MADE AT THE CONTRACT UNIT PRICE. PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIALS, LABOR, INCIDENTALS AND EQUIPMENT FOR FURNISHING, ERECTING, MAINTAINING, COVERING DURING SUSPENSION OF WORK, AND REMOVING THE SIGNS AND SUPPORTS. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 614 WORK ZONE SPEED LIMIT SIGN 14 EA.

ITEM 614 - WORK ZONE IMPACT ATTENUATOR FOR 24" WIDE HAZARDS (BIDIRECTIONAL)

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ONE OF THE FOLLOWING IMPACT ATTENUATORS:

- 1) THE QUADGUARD CZ, (24" WIDE 6-BAY) WORK ZONE IMPACT ATTENUATOR MANUFACTURED BY ENERGY ABSORPTION SYSTEMS, INC., 35 EAST WACKER DRIVE, CHICAGO, IL 60601 (TELEPHONE: 312-467-6750)

THE LENGTH OF THE 6-BAY QUADGUARD CZ IS 20'-9". INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

DWG. NO.	DRAWING NAME	DWG./REV. DATE	ODOT APPROVAL DATE
QSCZCVR-T4	QUADGUARD CZ SYSTEM FOR CONSTRUCTION ZONES	5/13/99 Rev. J	8/27/99
35-40-10	QUADGUARD SYSTEM CONCRETE PAD, CZ, QG	11/19/97 Rev. D	8/27/99
35-40-16	QUADGUARD SYSTEM BACKUP ASSEMBLY, CZ, QG	7/30/99 Rev. F	8/27/99
354051Z	QUADGUARD CZ SYSTEM NOSE ASSEMBLY, CZ, QG, 24, 30, 36	5/17/99	8/27/99
35-40-18	TRANSITION ASSEMBLY, 4 OFFSET, QG	6/25/99 Rev. F	8/27/99
35400260	QUADGUARD SYSTEM PCMB ANCHOR ASSEMBLY	11/19/97 Rev. C	8/27/99

- 2) THE TRACC (TRINITY ATTENUATING CRASH CUSHION) MANUFACTURED BY TRINITY INDUSTRY, 1170 N. STATE STREET, GIRARD, OHIO 44420 (TELEPHONE: 330-545-4373).

THE TRACC IS 21'-0" LONG AND 2'-7" WIDE. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

DWG. NO.	DRAWING NAME	DWG./REV. DATE	ODOT APPROVAL DATE
SS450	CRASH-CUSHION ATTENUATING TERMINAL PLAN, ELEVATION & SECTIONS	3/12/99 Rev. I	8/27/99
SS455	TRACC TRANSITION TO W-BEAM MEDIAN BARRIER PLAN, ELEVATION & SECTIONS	2/18/99	8/27/99
SS461	TRACC TRANSITION TO CONCRETE SAFETY SHAPE BARRIER PLAN, ELEVATION & SECTIONS	6/30/99 Rev. I	8/27/99
SS462	TRACC TRANSITION TO CONCRETE BARRIER SINGLE SLOPE PLAN, ELEVATION & SECTIONS	6/30/99	8/27/99

- 3) THE BARRIER SYSTEMS, INC. TAU-II IMPACT ATTENUATOR, DISTRIBUTED BY ROAD SYSTEMS, INC., SALES SUPPORT, 2183 ELM TRACE, AUSTINTOWN, OH 44515, (TELEPHONE: 330-799-9291).

THE TAU-II FOR THIS NOTE IS A PARALLEL 8-BAY UNIT 24' LONG AND 35' WIDE. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

DWG. NO.	DRAWING NAME	DWG./REV. DATE	ODOT APPROVAL DATE
A040416	UNIVERSAL TAU-II PARTS LIST	4/22/04	10/16/04
A040420	UNIVERSAL TAU-II FOUNDATION, FLUSH MOUNT BACKSTOP	4/28/04	10/16/04
A040105	UNIVERSAL TAU-II FOUNDATION, PCB BACKSTOP (REFERENCED ON A04020)	1/07/04	10/16/04
B040239	APPLICATION, FLUSH MOUNT BACKSTOP (TYPICAL FOR PARALLEL 60 MPH UNIT)	4/21/04	10/16/04

- 4) THE GREAT CZ IMPACT ATTENUATOR MANUFACTURED BY ENERGY ABSORPTION SYSTEMS INC. THIS ATTENUATOR MAY BE USED UNTIL JANUARY 1, 2007 IF THE ITEM WAS PURCHASED BEFORE OCTOBER 1, 1998 AND IS IN THE CONTRACTOR'S INVENTORY.

THE CONTRACTOR SHALL PROVIDE A REPLACEMENT UNIT WHEN AN IMPACT IS SEVERE ENOUGH TO REQUIRE COMPLETE REPLACEMENT OF THE ATTENUATOR. THE CONTRACTOR SHALL HAVE A SPARE PARTS PACKAGE AVAILABLE ON THE PROJECT SITE AT ALL TIMES WHEN AN ATTENUATOR IS IN PLACE. THE CONTRACTOR SHALL PROVIDE A MINIMUM OF ONE COMPLETE SPARE PARTS PACKAGE FOR EVERY ONE TO SIX UNITS INSTALLED ON THE PROJECT SITE. FOR EXAMPLE, FIVE INSTALLED UNITS REQUIRE ONE SPARE PARTS PACKAGE AND SEVEN INSTALLED UNITS REQUIRE TWO SPARE PARTS PACKAGES.

WHEN BI-DIRECTIONAL DESIGNS ARE SPECIFIED, THE CONTRACTOR SHALL SUPPLY APPROPRIATE TRANSITIONS. PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 614, WORK ZONE IMPACT ATTENUATOR FOR 24" WIDE HAZARDS, (BIDIRECTIONAL), EACH AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT, MAINTAIN, REPAIR, REPLACE OR RELOCATE A COMPLETE AND FUNCTIONAL IMPACT ATTENUATOR SYSTEM, INCLUDING ALL RELATED BACKUPS, TRANSITIONS, LEVELING PADS, HARDWARE AND GRADING, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

ITEM 614, REPLACEMENT SIGN

FLATSHEET SIGNS FURNISHED BY THE CONTRACTOR IN ACCORDANCE WITH THE REQUIREMENTS OF THE PLANS, SPECIFICATIONS AND PROPOSAL WHICH BECOME DAMAGED BY TRAFFIC FOR REASONS BEYOND THE CONTROL OF THE CONTRACTOR, SHALL BE REPLACED IN KIND WHEN ORDERED BY THE ENGINEER. REPLACEMENT SIGNS SHALL BE NEW. OTHER MATERIALS MAY BE IN USED, BUT GOOD CONDITION SUBJECT TO THE APPROVAL OF THE ENGINEER.

PAYMENT FOR THE NEW SIGNS SHALL BE MADE AT THE CONTRACT PRICE PER SQUARE FOOT FOR ITEM 614, REPLACEMENT SIGN, AND SHALL INCLUDE THE COST OF REMOVING AND DISPOSING OF DAMAGED SIGNS, HARDWARE AND SUPPORTS, AND PROVIDING THE NECESSARY REPLACEMENT HARDWARE, SUPPORTS, ETC.

AN ESTIMATED QUANTITY OF 40 SQUARE FEET HAS BEEN PROVIDED IN THE GENERAL SUMMARY.

OVERNIGHT TRENCH CLOSING

THE BASE WIDENING SHALL BE COMPLETED TO A DEPTH OF NO MORE THAN THREE INCHES (3") BELOW THE EXISTING PAVEMENT BY THE END OF EACH WORK DAY. NO TRENCH SHALL BE LEFT OPEN OVERNIGHT EXCEPT FOR A SHORT LENGTH (25 FEET OR LESS) OF A WORK SECTION AT THE END OF THE TRENCH. IN CASE WORK MUST BE SUSPENDED BECAUSE OF INCLEMENT WEATHER OR OTHER REASONS, THE TRENCH FOR THE UNCOMPLETED BASE WIDENING SHALL BE BACKFILLED AT THE DIRECTION OF THE ENGINEER.

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MAINTENANCE OF TRAFFIC GENERAL NOTES

SCI-23-2.39

WORK ZONE INCREASED PENALTIES SIGN

R11-H5a-48 SIGNS SHALL BE FURNISHED, ERECTED, AND MAINTAINED IN GOOD CONDITION AND/OR REPLACED AS NECESSARY AND SUBSEQUENTLY REMOVED BY THE CONTRACTOR. SIGNS SHALL BE MOUNTED AT THE APPROPRIATE OFFSETS AND ELEVATIONS AS PRESCRIBED BY THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. THEY SHALL BE MAINTAINED ON SUPPORTS MEETING CURRENT SAFETY CRITERIA.

THE SIGNS MAY BE ERECTED OR UNCOVERED NO MORE THAN FOUR HOURS BEFORE THE ACTUAL START OF WORK. THE SIGNS SHALL BE REMOVED OR COVERED NO LATER THAN FOUR HOURS FOLLOWING RESTORATION OF ALL LANES TO TRAFFIC WITH NO RESTRICTIONS, OR SOONER AS DIRECTED BY THE ENGINEER. TEMPORARY SIGN COVERING AND UNCOVERING DUE TO TEMPORARY LANE RESTORATIONS SHALL BE GUIDED BY THE FOUR-HOUR LIMITATIONS STATED ABOVE. SUCH LANE RESTORATIONS SHOULD BE EXPECTED TO REMAIN IN EFFECT FOR 30 OR MORE CONSECUTIVE CALENDAR DAYS, SUCH AS DURING WINTER SHUT-DOWNS.

THE SIGNS SHALL BE DUAL MOUNTED. THE FIRST SIGN SHALL BE PLACED BETWEEN THE "ROAD WORK AHEAD"(W20-1) SIGN AND THE NEXT SIGN IN THE SEQUENCE. SIGNS SHALL BE ERECTED ON EACH ENTRANCE RAMP AND EVERY TWO MILES THROUGH THE CONSTRUCTION WORK LIMITS.

THE CONTRACTOR MAY USE SIGNS AND SUPPORTS IN USED, BUT GOOD, CONDITION PROVIDED THE SIGNS MEET CURRENT ODOT SPECIFICATIONS. SIGN FACES SHALL BE REFLECTORIZED WITH TYPE G SHEETING COMPLYING WITH THE REQUIREMENTS OF CMS 730.19.

WORK ZONE INCREASED PENALTIES SIGNS AND SUPPORTS WILL BE MEASURED AS THE NUMBER OF SIGN INSTALLATIONS, INCLUDING THE SIGN AND NECESSARY SUPPORTS. IF A SIGN AND SUPPORT COMBINATION IS REMOVED AND REERECTED AT ANOTHER LOCATION AS DIRECTED BY THE ENGINEER, IT SHALL BE CONSIDERED ANOTHER UNIT.

PAYMENT FOR ACCEPTED QUANTITIES, COMPLETE, IN PLACE WILL BE MADE AT THE CONTRACT UNIT PRICE. PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIALS, LABOR, INCIDENTALS AND EQUIPMENT FOR FURNISHING, ERECTING, MAINTAINING, COVERING DURING SUSPENSION OF WORK, AND REMOVAL OF THE SIGN AND SUPPORT.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 614 - WORK ZONE INCREASED PENALTIES SIGN	8 EACH
ITEM 614 - RESUME LEGAL SPEED SIGN	4 EACH

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGNS, AS PER PLAN

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN AND REMOVE, WHEN NO LONGER NEEDED, A CHANGEABLE MESSAGE SIGN, ON SITE, FOR THE DURATION OF THE PROJECT. THE SIGN SHALL BE OF A TYPE SHOWN ON A LIST OF APPROVED PCMS UNITS MAINTAINED BY THE DIRECTOR (OFFICE OF MATERIALS MANAGEMENT). THIS LIST IS AVAILABLE ON THE ODOT WEBSITE AT [HTTP://WWW.DOT.STATE.OH.US/TESTLAB/APPLISTS/MISC/PCMS.HTM](http://www.dot.state.oh.us/testlab/applists/misc/pcms.htm). THE LIST CURRENTLY CONTAINS CLASS I, II, AND III UNITS WITH MINIMUM LEGIBILITY DISTANCES OF 1250 FT., 850 FT. AND 650 FT. RESPECTIVELY.

EACH SIGN SHALL BE TRAILER-MOUNTED AND EQUIPPED WITH A FUNCTIONAL DIMMING MECHANISM, TO DIM THE SIGN DURING DARKNESS, AND A TAMPER AND VANDAL PROOF ENCLOSURE. EACH SIGN SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ON-SITE PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT.

THE PROBABLE PCMS LOCATIONS AND WORK LIMITS FOR THOSE LOCATIONS ARE SHOWN ON SHEET 14 OF THE PLAN. PLACEMENT, OPERATION, MAINTENANCE AND ALL ACTIVATION OF THE SIGNS BY THE CONTRACTOR SHALL BE AS DIRECTED BY THE ENGINEER. THE PCMS SHALL BE LOCATED IN A HIGHLY VISIBLE POSITION YET PROTECTED FROM TRAFFIC. THE CONTRACTOR SHALL, AT THE DIRECTION OF THE ENGINEER, RELOCATE THE PCMS TO IMPROVE VISIBILITY OR ACCOMMODATE CHANGED CONDITIONS. WHEN NOT IN USE, THE PCMS SHALL BE TURNED OFF. ADDITIONALLY, WHEN NOT IN USE FOR EXTENDED PERIODS OF TIME, THE PCMS SHALL BE TURNED, FACING AWAY FROM ALL TRAFFIC, AND SHALL DISPLAY ONE OR MORE HIGH-INTENSITY YELLOW REFLECTIVE SHEETING SURFACES OF 9-INCH BY 15-INCH MINIMUM SIZE FACING TRAFFIC.

THE ENGINEER SHALL BE PROVIDED ACCESS TO EACH SIGN UNIT AND SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ODOT PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT, AND TO REVISE SIGN MESSAGES, IF NECESSARY.

ALL MESSAGES TO BE DISPLAYED ON THE SIGN WILL BE PROVIDED BY THE ENGINEER. A LIST OF ALL REQUIRED PRE-PROGRAMMED MESSAGES WILL BE GIVEN TO THE CONTRACTOR AT THE PROJECT PRECONSTRUCTION CONFERENCE. THE SIGN SHALL HAVE THE CAPABILITY TO STORE UP TO 99 MESSAGES. MESSAGE MEMORY OR PRE-PROGRAMMED DISPLAYS SHALL NOT BE LOST AS A RESULT OF POWER FAILURES TO THE ON-BOARD COMPUTER. THE SIGN LEGEND SHALL BE CAPABLE OF BEING CHANGED IN THE FIELD. THREE-LINE PRE-SENTATION FORMATS WITH UP TO SIX MESSAGE PHASES SHALL BE SUPPORTED. PCMS FORMAT SHALL PERMIT THE COMPLETE MESSAGE FOR EACH PHASE TO BE READ AT LEAST ONCE.

THE PCMS SHALL CONTAIN AN ACCURATE CLOCK AND PROGRAMMING LOGIC WHICH WILL ALLOW THE SIGN TO BE ACTIVATED, DEACTIVATED OR MESSAGES CHANGED AUTOMATICALLY AT DIFFERENT TIMES OF THE DAY FOR DIFFERENT DAYS OF THE WEEK.

THE PCMS UNIT SHALL BE MAINTAINED IN GOOD WORKING ORDER BY THE CONTRACTOR IN ACCORDANCE WITH THE PROVISIONS OF CMS 614.07. THE CONTRACTOR SHALL, PRIOR TO ACTIVATING THE UNIT, MAKE ARRANGEMENTS, WITH AN AUTHORIZED SERVICE AGENT FOR THE PCMS, TO ASSURE PROMPT SERVICE IN THE EVENT OF FAILURE. ANY FAILURE SHALL NOT RESULT IN THE SIGN BEING OUT OF SERVICE FOR MORE THAN 12 HOURS, INCLUDING WEEKENDS. FAILURE TO COMPLY MAY RESULT IN AN ORDER TO STOP WORK AND OPEN ALL TRAFFIC LANES AND/OR IN THE DEPARTMENT TAKING APPROPRIATE ACTION TO SAFELY CONTROL TRAFFIC. THE ENTIRE COST TO CONTROL TRAFFIC, ACCRUED BY THE DEPARTMENT DUE TO THE CONTRACTOR'S NONCOMPLIANCE, WILL BE DEDUCTED FROM MONEYS DUE, OR TO BECOME DUE THE CONTRACTOR ON HIS CONTRACT.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR 24-HOUR-PER DAY OPERATION AND MAINTENANCE OF THESE SIGNS ON THE PROJECT FOR THE DURATION OF THE PHASES WHEN THE PLAN REQUIRES THEIR USE.

PAYMENT FOR THE ABOVE DESCRIBED ITEM SHALL BE AT THE CONTRACT UNIT PRICE. PAYMENT SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, FUELS, LUBRICATING OILS, SOFTWARE, HARDWARE AND INCIDENTALS TO PERFORM THE ABOVE DESCRIBED WORK.

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN
9 SIGN-MONTH

ITEM 622, PORTABLE CONCRETE BARRIER, 50", AS PER PLAN

THIS WORK SHALL CONSIST OF FURNISHING, INSTALLING, MAINTAINING, AND SUBSEQUENTLY REMOVING A 50 INCH PORTABLE CONCRETE BARRIER AT THE LOCATIONS SHOWN ON THE PLANS.

PORTABLE CONCRETE BARRIER, 32 INCHES HIGH IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWING RM-4.2 WITH AN 18 INCH MINIMUM HEIGHT GLARE SCREEN. THE GLARE SCREEN SHALL BE CONSTRUCTED USING ONE OF THE FOLLOWING SYSTEMS OR AN APPROVED EQUAL:

CARSONITE MODULAR GLARE SCREEN
CARSONITE INTERNATIONAL
605 BOB GIFFORD BLVD.
EARLY BRANCH, SOUTH CAROLINA 29916
TELEPHONE: 702-883-5104 OR 800-648-7974

TRINITY GLAREFOIL
TRINITY INDUSTRY
1170 N. STATE ST.
GIRARD, OHIO 44420
TELEPHONE: 330-545-4373

PADDLE OR INTERMITTENT TYPE GLARE SCREENS SHALL BE DESIGNED USING A 20 DEGREE CUT-OFF ANGLE BASED ON TANGENT ALIGNMENT. THAT SPACING SHALL BE USED THROUGHOUT THE BARRIER LENGTH WITHOUT REGARD TO BARRIER CURVATURE.

THE GLARE SCREEN SYSTEM SHALL BE SECURELY FASTENED TO THE 32-INCH PORTABLE CONCRETE BARRIER USING THE HARDWARE AND PROCEDURES SPECIFIED BY THE MANUFACTURER.

PAYMENT SHALL INCLUDE ALL LABOR, MATERIAL, AND EQUIPMENT NECESSARY TO PERFORM THE WORK AND SHALL BE PAID FOR AT THE CONTRACT PRICE PER FOOT FOR ITEM 622, PORTABLE CONCRETE BARRIER, 50 INCH, AS PER PLAN.

DUST CONTROL

THE CONTRACTOR SHALL FURNISH AND APPLY WATER FOR DUST CONTROL AS DIRECTED BY THE ENGINEER. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED FOR DUST CONTROL PURPOSES:

616, WATER 41 M. GAL.

TRENCH FOR WIDENING

TRENCH EXCAVATION FOR BASE WIDENING SHALL BE ONLY ON ONE SIDE OF THE PAVEMENT AT A TIME. THE OPEN TRENCH SHALL BE ADEQUATELY MAINTAINED AND PROTECTED WITH DRUMS OR BARRICADES AT ALL TIMES. PLACEMENT OF PROPOSED SUBBASE AND BASE MATERIAL SHALL FOLLOW AS CLOSELY AS POSSIBLE BEHIND EXCAVATION OPERATIONS. THE LENGTH OF WIDENING TRENCH WHICH IS OPEN AT ANY ONE TIME SHALL BE HELD A MINIMUM AND SHALL AT ALL TIMES BE SUBJECT TO APPROVAL OF THE ENGINEER.

WORK ZONE MARKINGS AND SIGNS

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AT LOCATIONS IDENTIFIED BY THE ENGINEER FOR WORK ZONE PAVEMENT MARKINGS AND SIGNS PER THE REQUIREMENTS OF CMS 614.04 AND 614.11.

ITEM 614	WORK ZONE LANE LINE, CLASS II	19.08 MI.
ITEM 614	WORK ZONE CENTER LINE, CLASS II	10.02 MI.
ITEM 614	WORK ZONE MARKING SIGN	10 EACH

ITEM 622, PORTABLE CONCRETE BARRIER, 50" BRIDGE, MOUNTED, AS PER PLAN

THIS WORK SHALL CONSIST OF FURNISHING, INSTALLING, MAINTAINING, AND SUBSEQUENTLY REMOVING A 50 INCH PORTABLE CONCRETE BARRIER AT THE LOCATIONS SHOWN ON THE PLANS.

PORTABLE CONCRETE BARRIER, 32 INCHES HIGH IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWING PCB-91 WITH AN 18 INCH MINIMUM HEIGHT GLARE SCREEN. THE GLARE SCREEN SHALL BE CONSTRUCTED USING ONE OF THE FOLLOWING SYSTEMS OR AN APPROVED EQUAL:

CARSONITE MODULAR GLARE SCREEN
CARSONITE INTERNATIONAL
605 BOB GIFFORD BLVD.
EARLY BRANCH, SOUTH CAROLINA 29916
TELEPHONE: 702-883-5104 OR 800-648-7974

TRINITY GLAREFOIL
TRINITY INDUSTRY
1170 N. STATE ST.
GIRARD, OHIO 44420
TELEPHONE: 330-545-4373

PADDLE OR INTERMITTENT TYPE GLARE SCREENS SHALL BE DESIGNED USING A 20 DEGREE CUT-OFF ANGLE BASED ON TANGENT ALIGNMENT. THAT SPACING SHALL BE USED THROUGHOUT THE BARRIER LENGTH WITHOUT REGARD TO BARRIER CURVATURE.

THE GLARE SCREEN SYSTEM SHALL BE SECURELY FASTENED TO THE 32-INCH PORTABLE CONCRETE BARRIER USING THE HARDWARE AND PROCEDURES SPECIFIED BY THE MANUFACTURER.

PAYMENT SHALL INCLUDE ALL LABOR, MATERIAL, AND EQUIPMENT NECESSARY TO PERFORM THE WORK AND SHALL BE PAID FOR AT THE CONTRACT PRICE PER FOOT FOR ITEM 622, PORTABLE CONCRETE BARRIER, 50 INCH BRIDGE MOUNTED, AS PER PLAN.

WORK ZONE DELINEATION

IN TRANSITION AREAS FOR LANE SHIFTS EQUAL TO OR GREATER THAN 4 FEET AND FOR CROSSOVERS, THE CONTRACTOR SHALL PROVIDE DELINEATION AS FOLLOWS:

1. ON ASPHALT SURFACES, DELINEATION SHALL BE BY USE OF 642 TYPE 2 ALKYD PAINT OR 643 POLYESTER, WITH 621 PERMANENT RAISED PAVEMENT MARKERS. THIS MARKING SHALL CONSIST OF 4 INCH EDGE LINES, 8 INCH CHANNELIZING LINES, AND RAISED PAVEMENT MARKERS. IN THE TRANSITION AREA, THE RAISED PAVEMENT MARKERS SHALL BE LOCATED AT 20 FT. SPACING ALONG THE EDGE LINES AND THE CHANNELIZING LINES. IN THE TANGENT AREAS, THE RAISED PAVEMENT MARKERS SHALL BE LOCATED AT 120 FT. SPACING ALONG THE LANE LINES.

REMOVAL OF RAISED PAVEMENT MARKERS, WHEN NO LONGER NEEDED, SHALL BE AS PER 202.10. REMOVAL OF THE EXISTING SURFACE COURSE WITHIN THE TRANSITION AREA SHALL BE MADE AS PER 202.05, TO A DEPTH NECESSARY TO MATCH THE LEVEL OF THE INTERMEDIATE COURSE OF THE PROPOSED PAVEMENT. THE TRANSITION AREA SHALL BE RESURFACED AT THE TIME THAT THE SURFACE COURSE IS BEING APPLIED, USING THE SAME MATERIAL USED FOR THE SURFACE COURSE FOR THE PROJECT. FOR DETAILS ON THIS DELINEATION SCHEME SEE PLAN INSERT SHEET 19.

2. ON CONCRETE PAVEMENT, DELINEATION IN THE TRANSITION AREA DURING THE CONSTRUCTION SEASON SHALL BE BY USE OF 873 WET REFLECTIVE REMOVABLE TAPE. DURING THE WINTER SEASON (DECEMBER 1 THROUGH MARCH 31) DELINEATION IN THE TRANSITION AREA SHALL BE BY USE OF 643 POLYESTER. IN THE WINTER, PIECES (4 x 12 INCHES) OF 873 WET REFLECTIVE REMOVABLE TAPE SHALL ALSO BE PROVIDED AT 20 FT. INCREMENTS, OFFSET FROM EACH OF THE CHANNELIZING LINES.

IN THE TANGENT AREA, DELINEATION SHALL BE PROVIDED BY USE OF 643 POLYESTER FOR LONG LINE MARKING, WITH PIECES OF 873 WET REFLECTIVE REMOVABLE TAPE (4" x 12") TO BE PROVIDED AT 80 FT. INCREMENTS, ALONG THE LANE LINES. FOR DETAILS SEE PLAN INSERT SHEET 20.

ALL MATERIAL FURNISHED FOR 873 WET REFLECTIVE TAPE SHALL BE LISTED ON THE DEPARTMENT'S PREQUALIFIED LISTS. THE INSTALLATION OF ALL MATERIALS SHALL MEET OR EXCEED THE MANUFACTURERS' RECOMMENDATIONS.

AFTER REMOVABLE PAVEMENT MARKINGS HAVE BEEN INSTALLED, THEY SHALL BE CUT AT 10 FOOT OR SHORTER INTERVALS.

THE TRANSITION AREA FOR SHIFT TAPERS IS GENERALLY CONSIDERED TO BEGIN 300 FT IN ADVANCE OF THE BEGINNING OF THE SHIFT TAPER AND TO END 300 FT BEYOND THE TERMINATION OF THE SHIFT TAPER. THE TRANSITIONS AREA FOR CROSSOVERS IS GENERALLY CONSIDERED TO BEGIN 300 FT IN ADVANCE OF THE BEGINNING OF THE CROSSOVER GEOMETRICS AND TO END 300 FT BEYOND THE TERMINATION OF THE CROSSOVER GEOMETRICS.

PAYMENT FOR ALL WORK ZONE DELINEATION SHALL BE MADE AS TRANSITION AREA DELINEATION. PAYMENT SHALL BE MADE AT THE CONTRACT BID PRICE PER FOOT OF TRANSITION AREA AND SHALL INCLUDE THE COST OF FURNISHING, INSTALLING, MAINTAINING AND REMOVING, IF NECESSARY, THE APPROPRIATE DELINEATION SCHEME SPECIFIED ABOVE. PAYMENT SHALL ALSO INCLUDE THE COST OF REMOVAL OF THE SURFACE COURSE WITHIN THE TRANSITION AREA AND RESURFACING OF THE AREA.

PAYMENT FOR ITEM 614 TANGENT AREA DELINEATION SHALL BE MADE AT THE CONTRACT BID PRICE PER FOOT OF TANGENT AREA AND SHALL INCLUDE THE COST OF FURNISHING, INSTALLING, MAINTAINING AND REMOVING, IF NECESSARY, ONE OF THE DELINEATION SCHEME SPECIFIED ABOVE.

PAYMENT SHALL ALSO INCLUDE REPLACEMENT, AS PER 614.11.A (CONSTRUCTION AND MATERIALS SPECIFICATIONS) OR 614.115.D (PROPOSAL NOTE 101-2002), OF ANY PART OF THE DELINEATION SYSTEM WHICH, IN THE JUDGMENT OF THE ENGINEER, FAILS. LANE CLOSURES REQUIRED TO REPAIR OR REPLACE MISSING TAPE OR RAISED PAVEMENT MARKERS WILL BE AT THE ENGINEER'S APPROVAL AND AT THE CONTRACTOR'S COST.

THE DEPARTMENT WILL PAY FOR ACCEPTED QUANTITIES AT THE CONTRACT PRICE AS FOLLOWS:

ITEM	UNIT	DESCRIPTION
614	FOOT	TRANSITION AREA DELINEATION

CALCULATED
CER
CHECKED
LAW

MAINTENANCE OF TRAFFIC
GENERAL NOTES

SCI-23-2.39

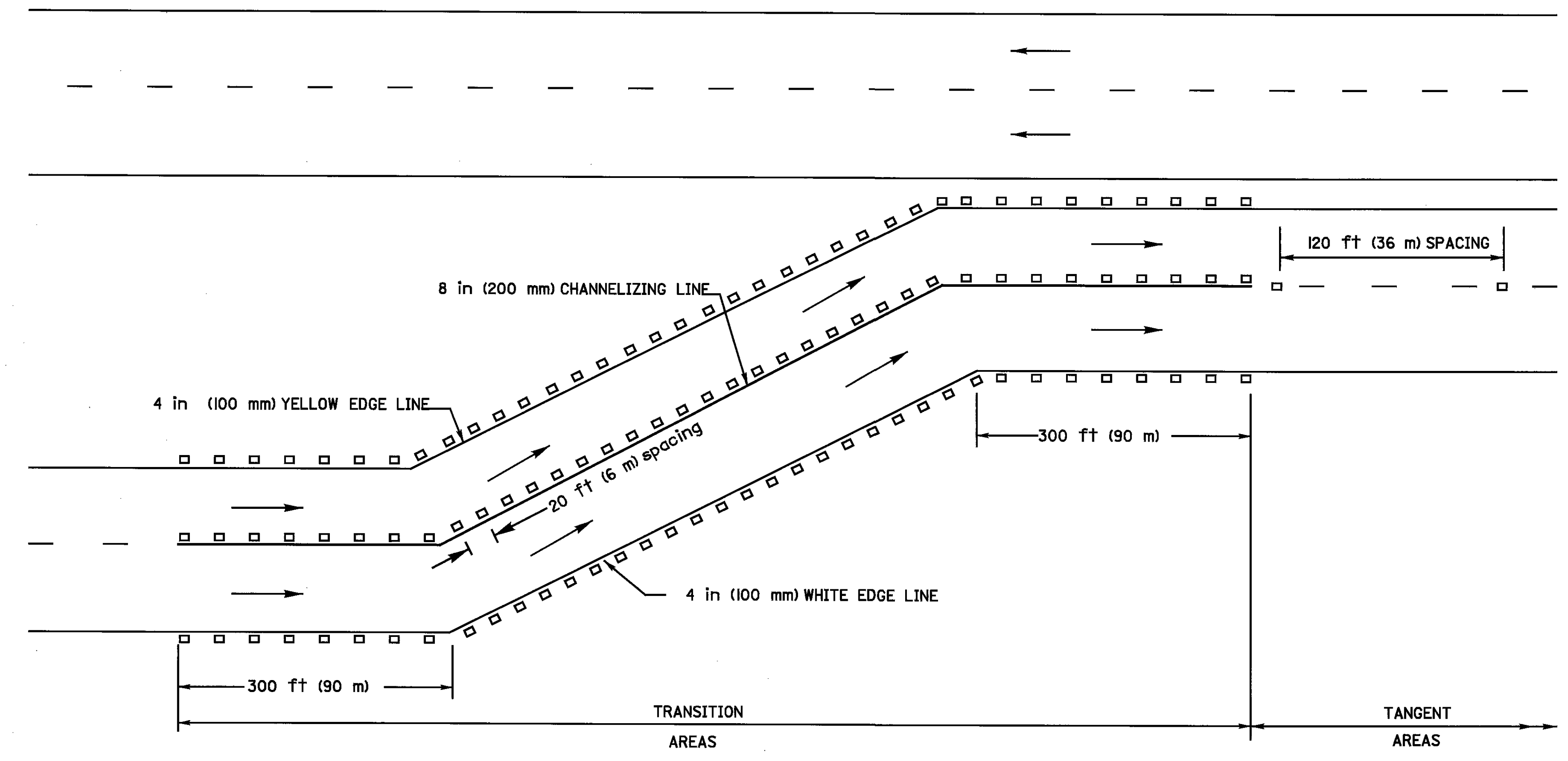
MAINTENANCE OF TRAFFIC
SUB-SUMMARY

SCI-23-2.39

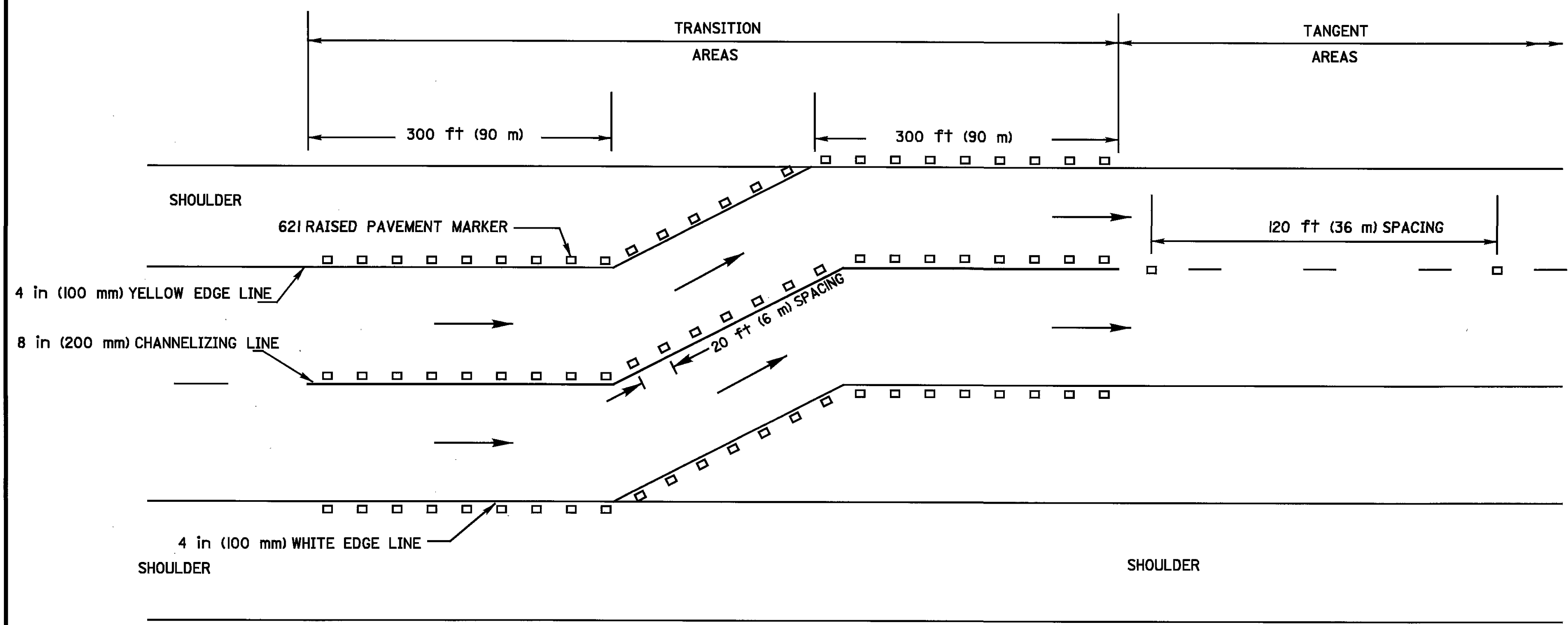
STATION			622			614				WORK ZONE EDGE LINE, CLASS I
			PORTABLE CONCRETE BARRIER 32"	PORTABLE CONCRETE BARRIER 50", AS PER PLAN	PORTABLE CONCRETE BARRIER 50" BRIDGE MOUNTED, AS PER PLAN	WORK ZONE IMPACT ATTENUATOR FOR 24" WIDE HAZARDS (BIDIRECTIONAL) (50 MPH DESIGN)	BARRIER REFLECTOR, TYPE B	OBJECT MARKER ONE-WAY	TRANSITION AREA DELINEATION	
FROM	TO	SIDE	FT			EACH	EACH	EACH	FT	MILE
PHASE I										
236+09	294+84	NB								1.12
245+83	246+04					/				
246+04	261+29			1525			31	31		
261+29	263+79		250				5	5		
263+79	264+00					/				
265+50	265+71					/				
265+71	277+79			1208			25	25		
277+79	280+29		250				5	5		
280+29	280+50					/				
281+91	282+12					/				
282+12	285+23.95			311.95			7	7		
285+23.95	294+63				939.05		19	19		
294+63	294+84					/				
PHASE I										
247+34	305+21	SB								1.10
247+34	247+55					/				
247+55	260+79			1324			27	27		
260+79	261+00					/				
262+50	262+71					/				
262+71	265+21		250				5	5		
265+21	277+02			1181			24	24		
277+02	277+23					/				
279+26	279+47					/				
279+47	282+97		350				7	7		
282+97	285+23.95			226.95			5	5		
285+23.95	294+31.13				907.18		19	19		
294+31.13	295+26			94.87			2	2		
295+26	295+47					/				
PHASE II										
233+55	250+86	NB							1731	
291+31.38	298+00								669	
246+29	246+50					/				
246+50	260+50			1400			28	28		
260+50	263+00		250				5	5		
264+50	264+71					/				
264+71	275+75			1104			23	23		
275+75	278+25		250				5	5		
279+75	279+96					/				
279+96	285+23.95			527.95			11	11		
285+23.95	294+31.38				907.43		19	19		
294+31.38	295+00			68.62			2	2		
PHASE II										
244+17	250+86	SB							669	
291+21.38	308+46								1725	
247+17	261+29			1412			29	29		
261+29	261+50					/				
263+00	265+50		250				5	5		
265+50	280+79			1529			31	31		
280+79	281+00					/				
282+50	285+23.95			273.95			6	6		
285+23.95	294+21.38				897.43		18	18		
294+21.38	295+51			129.62			3	3		
295+51	295+72					/				
TO GENERAL SUMMARY			1850	12316.91	3651.09	18	366	366	4794	2.22
			1850	12317	3652	18	366	366	4794	2.22

NOTES

1. All material furnished shall be listed on the Department's Prequalified Lists.
2. All edge lines shall be 4 inches (100 mm) wide. All lines between adjacent lanes shall be 8 inches (200 mm) channelizing lines.
3. The geometrics of the crossover shall be as shown in the plans.
4. See Standard Construction Drawings MT-102.10 and MT-102.20 for more details concerning lane shifts.
5. Pavement marking material shall consist of 642 Type 2 Alkyd Paint or 643 Polyester, with Permanent Raised Pavement Markers.
6. Spacing of 621 raised pavement markers shall be at 20 feet (6 m) center-to-center within the transition areas and at 120 feet (36m) center-to-center within tangent areas.
7. The 621 raised pavement markers on the edge lines shall be 1-way white or yellow and shall match the edge line.
8. The 621 raised pavement markers on the channelizing line shall be 1-way white facing oncoming traffic.
9. Resurfacing of the transition area shall be performed prior to project completion. The pavement shall be removed to a depth of 1/4 to 1/2 inch and resurfaced using the same material as used for the permanent surface course.
10. The RPMs shall be removed when they are no longer appropriate. The resulting holes shall be filled as per 202.10.



WORK ZONE DELINEATION FOR CROSSOVERS



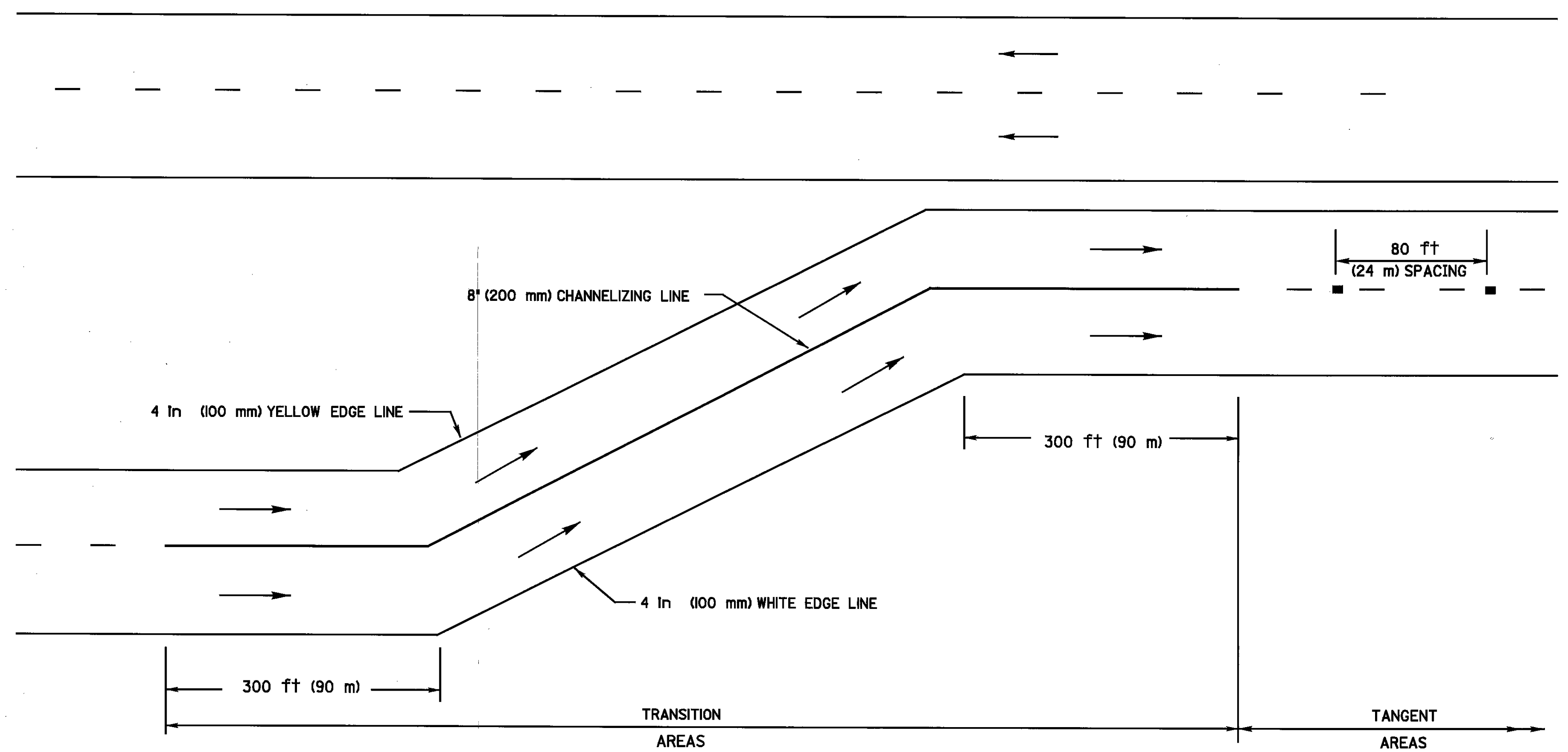
WORK ZONE DELINEATION FOR LANE SHIFTS \geq 4 FT. (1.2 M)

LEGEND

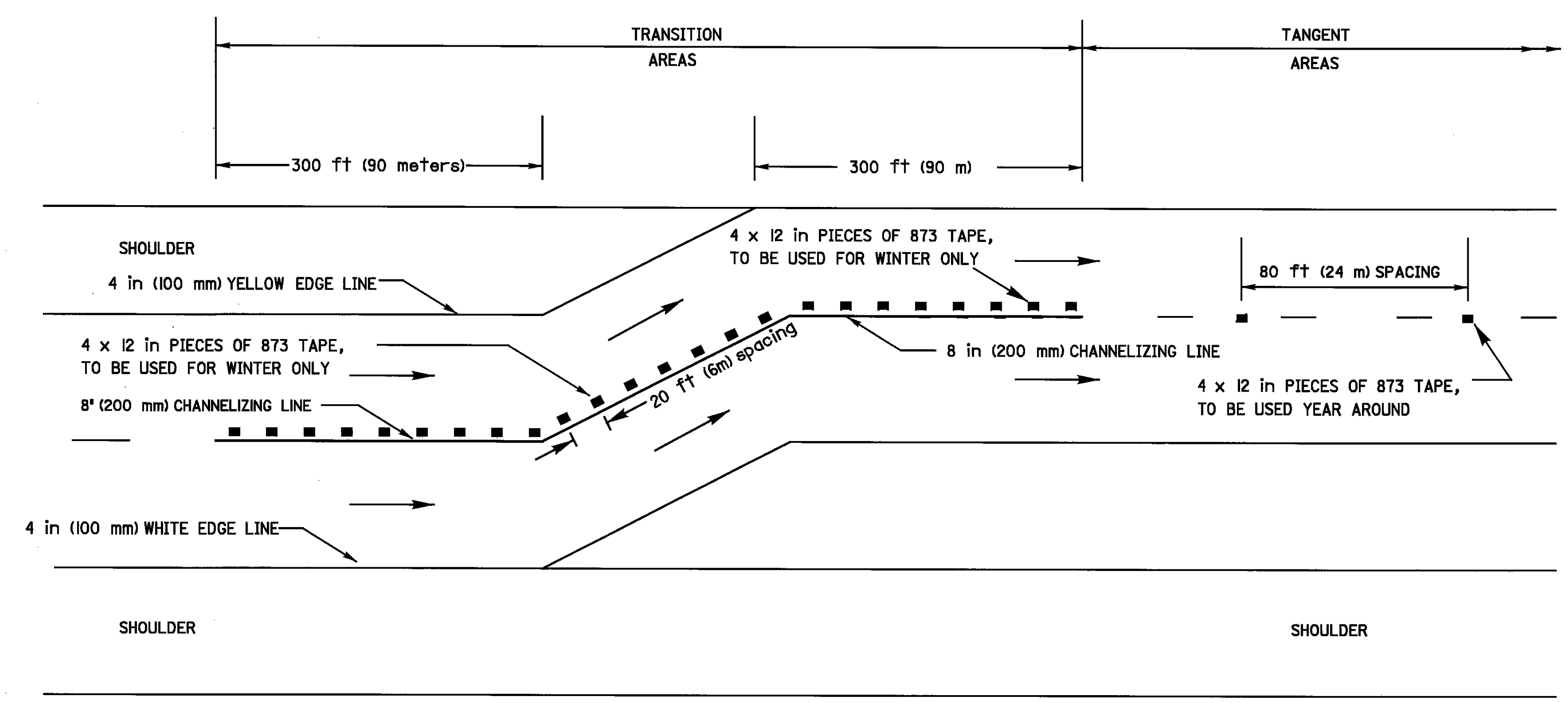
- DIRECTION OF TRAVEL
- RAISED PAVEMENT MARKER

NOTES

1. All material furnished shall be listed on the Department's Prequalified Lists.
2. All edge lines shall be 4 inches (100 mm) wide. All lines between adjacent lanes shall be 8 inches (200 mm) channelizing lines.
3. The geometrics of the crossover shall be as shown in the plans.
4. See Standard Construction Drawings MT-102.10 and MT-102.20 for additional details concerning lane shifts.
5. During the construction season (non winter season) 873 Wet Reflective tape shall be used for all long line markings within the transition area. Within the tangent areas, long line marking shall be 643 polyester. Additionally, within the tangent areas provide pieces of 873 tape, 12 x 4 inches along the lane lines, spaced at 80 feet intervals.
6. During the winter season, all long line marking shall be 643 Polyester. The 873 Wet Reflective Tape used for long line marking during the construction season shall be removed and replaced with 643 Polyester. Additionally, within the transition area, provide pieces of 873 tape 12 x 4 inches along the channelizing lines at 20 foot spacing.
7. The winter season is considered to be from December 1 through March 31. The contractor shall remove all 873 long line marking by November 30 except when permitted to do otherwise by the Project Engineer. The minimum temperature for placement of polyester is 50 degrees. It may be necessary to place the polyester prior to November 30 to assure that it is placed at the proper temperature. If the temperature remains below 50 degrees prior to placement of the polyester, the contractor shall provide marking using 642 alkyd paint. The project engineer shall review the condition of the alkyd paint throughout the winter and shall require the contractor to re-stripe the marking as necessary in order to maintain acceptable deliniation throught the winter season. All other long line marking shall be paid for as per the associated bid item.
8. Where a construction phase unexpectedly will extend into the winter season, it shall be the District's responsibility to initiate a change order if deemed appropriate, in order to provide necessary marking for the winter season. Unexpected delays shall be as discussed in CMS 108.06.D. If liquidated damages are being assessed the contractor for failure to meet an interum or final completion date, the cost of removing and replacing the markings shall be borne by the contractor.



WORK ZONE DELINEATION FOR CROSSOVERS



WORK ZONE DELINEATION FOR LANE SHIFTS \geq 4 FT. (1.2 M)

LEGEND

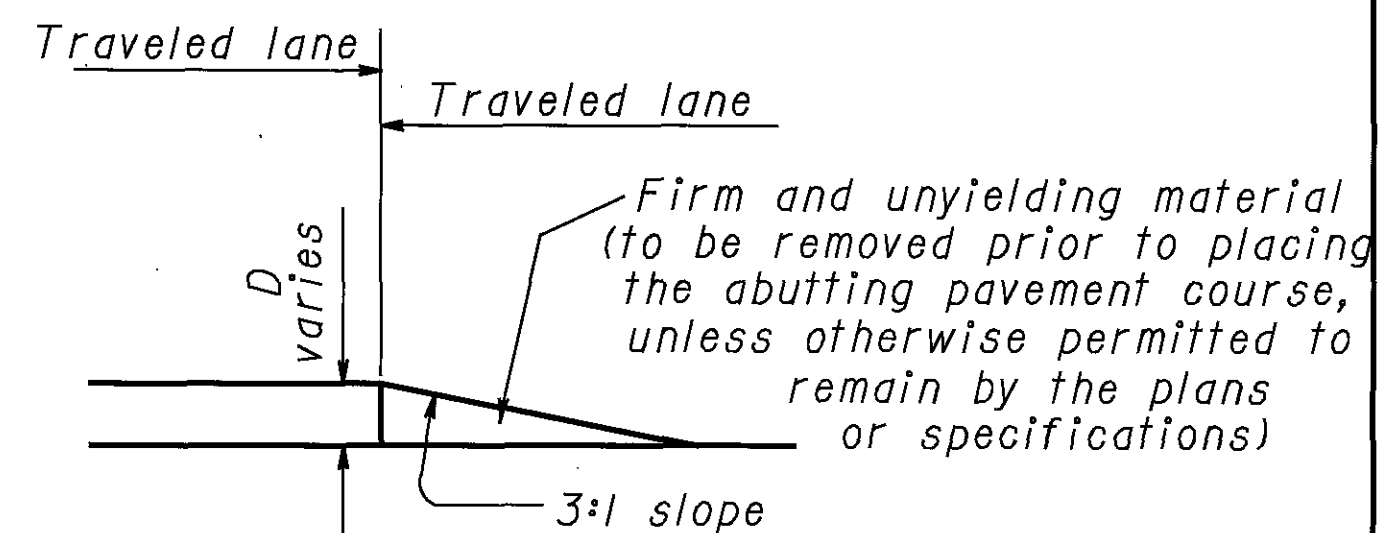
- DIRECTION OF TRAVEL
- 873 WET REFLECTIVE TAPE
12 X 4 in (300 X 100 mm)

GENERAL NOTES

- It is intended that this drawing be used for treatment of drop-offs that develop during construction operations, and that are not otherwise provided for in the construction plans. Where the plans do not provide specific items for labor, equipment, or materials to implement the drop-off treatments specified hereon, they shall be included for payment in the lump sum bid for Item 614 - Maintaining Traffic.
- While the need for certain advisory signing is noted hereon, it is not intended that this be indicative of all signing that may be required to advise or warn motorists, and all requirements of the Ohio Manual of Uniform Traffic Control Devices (OMUTCD) must be fulfilled.
- In urban or otherwise heavily developed areas where pedestrians and/or bicyclists may be present in significant numbers, additional signing and protective measures other than those shown hereon may be required.
- The drop-off treatment selected for use at any given location shall be as appropriate for the prevailing conditions at the site.
- Where concrete barrier is specified, it shall be in accordance with Standard Construction Drawing MC-4.2 and Item 622.
- When drums are specified for a dropoff condition, a minimum number of four drums shall be used. Spacing shall be as indicated in the plans or as specified in the OMUTCD.
- When W8-9a (Shoulder Drop-Off) signs or W8-11 (Uneven Lanes) signs are required, they shall be placed 750' in advance of the condition, on all intersecting entrance ramps within the limits of the condition and immediately beyond all intersecting roadways within the limits of the condition. When the dropoff condition extends more than one-half mile, additional signs should be erected at intervals of one mile or less.
- For locations, such as at ramps, lane shifts, lane closures, etc., where traffic is required to negotiate any difference in elevation between pavements, a 3:1 slope treatment similar to the Optional Wedge Treatment shall be provided.
- Portable concrete barrier shall be placed on the same level as the traffic surface and shall not encroach on lane width(s) designated as the minimum required for traffic use. Where drums are used, and their presence would reduce traveled lane widths to less than 10', drums may be placed on the opposite level from that of traffic provided the dropoff depth does not exceed 5" and approval is granted by the Project Engineer.
- Pavement Repairs (or similar work):
 - Lengths greater than 60 feet - utilize appropriate treatment from Condition I.
 - Lengths of 60 feet or less - repairs shall be effected in accordance with 255.08. Drums may be used as a separator adjacent to the traveled lane.

OPTIONAL WEDGE TREATMENT (MILLING OR RESURFACING)

- This treatment may be used when permitted for Condition I only.
- W8-11 sign required.



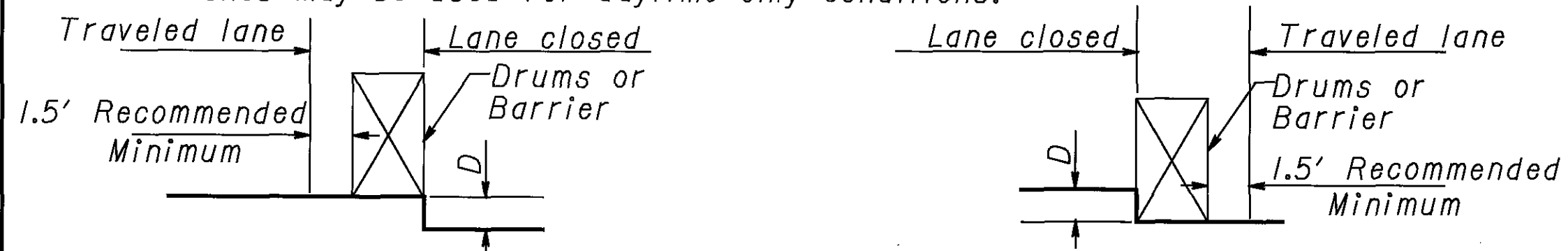
CONDITION I

DROPOFFS BETWEEN TRAVELED LANES

- These treatments are to be used for resurfacing, pavement planing, excavation, etc. between or within traveled lanes.

D (In.)	Treatment
$\leq 1\frac{1}{2}$	Erect W8-11 sign.
$> 1\frac{1}{2} - 3$	1) Lane closure utilizing drums* as shown below OR 2) Optional Wedge Treatment
$> 3 - 5$	Lane closure utilizing drums as shown below.
> 5	Lane closure utilizing portable concrete barrier as shown below.

*Cones may be used for daytime only conditions.



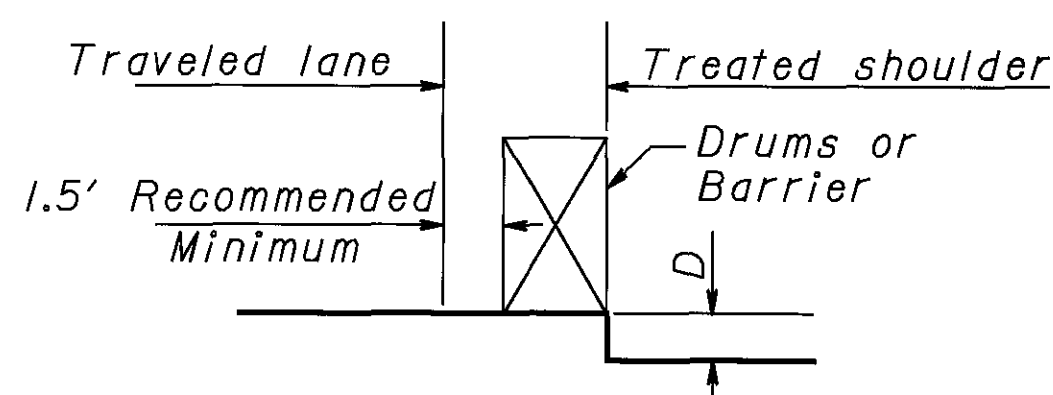
CONDITION II

DROPOFFS WITHIN GRADED SHOULDER AREA

- The treatments indicated below are for use in conjunction with resurfacing, planing, or excavations within the graded shoulder area.
- The graded shoulder area is that flat or gradually sloping area between the edge of a normally traveled lane and the more steeply sloping ditch foreslope or embankment slope. Its surface may be soil or turf, and/or it may be inclusive of a "treated" area (improved with aggregates, asphaltic materials, or concrete). For the purposes herein, its maximum width shall be considered to be twelve (12) feet.

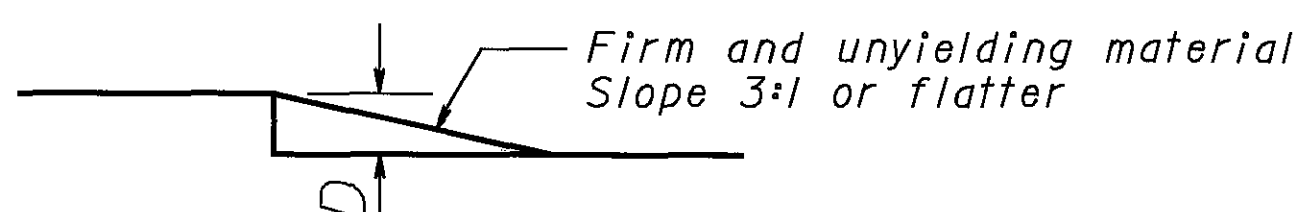
D (In.)	Treatment
$\leq 1\frac{1}{2}$	1) If edgelines are present, no treatment necessary OR 2) Erect W8-11 sign.
$> 1\frac{1}{2} - 5$	1) If min. lane width* requirements can be met, maintain lanes utilizing drums as shown below OR 2) If min. lane width* requirements cannot be met, close adjacent lane utilizing drums OR 3) Optional Shoulder Treatment.
$> 5 - 12$ Daylight only	If min. lane width* requirements can be met, maintain lanes utilizing drums as shown below.
$> 5 - 24$	1) If min. lane width* requirements can be met, maintain lanes utilizing portable concrete barrier as shown below. OR 2) If min. lane width* requirements cannot be met, close adjacent lane utilizing drums.
> 24	Lane closure utilizing portable concrete barrier as shown below.

*Minimum lane widths shall be 10' unless otherwise specified in the plans.



OPTIONAL SHOULDER TREATMENT

- This treatment may not be used within a bituminous shoulder where a hot longitudinal joint per 401.15 is required.
- W8-9a sign required.



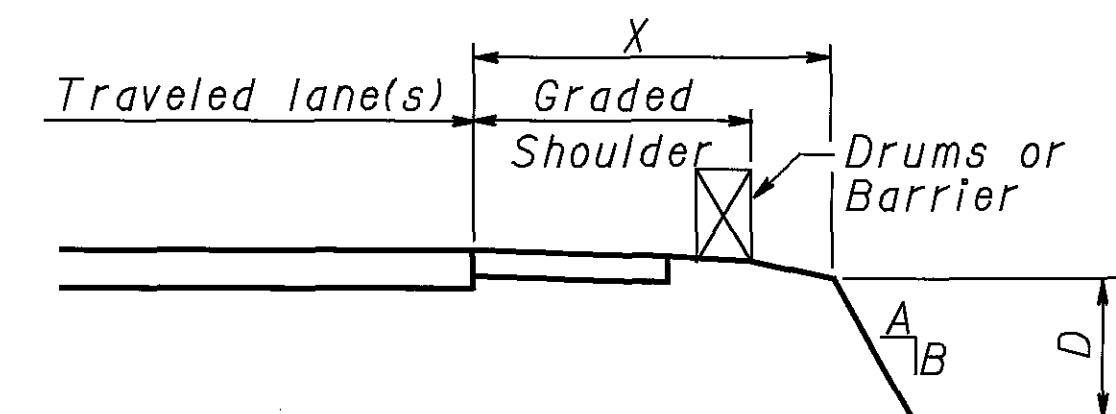
CONDITION III

DROPOFFS BEYOND GRADED SHOULDER OR BACK OF CURB

- See Note 2 under Condition II.
- Use Chart A or B below, as applicable.

CHART A

- USE FOR:
- Uncurbed Facilities.
 - Curbed Facilities, where:
 - Curbs are less than 6" in height.
 - Curbs are 6" or greater in height and the legal speed is greater than 40 mph.

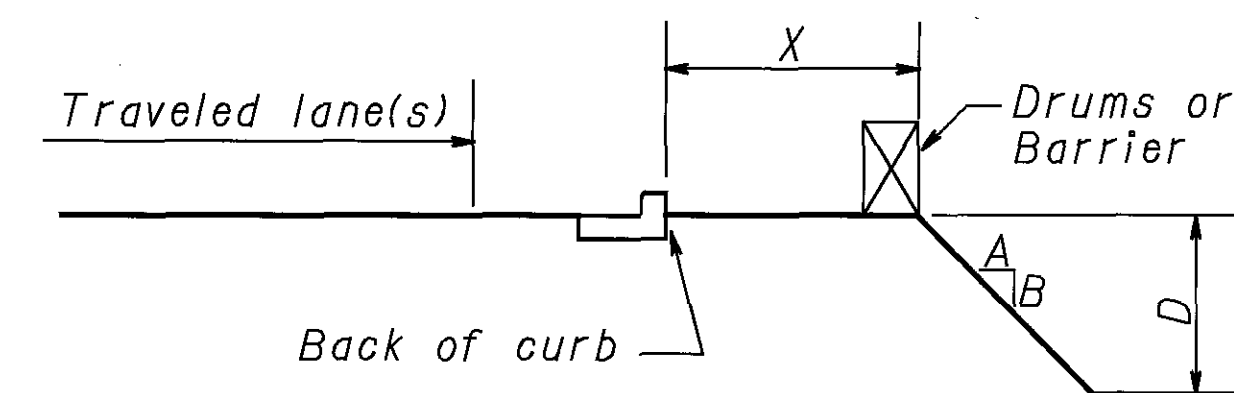


X (Ft.)	D (In.)	A/B	Treatment Required	
			Day	Night
0-4	Any	Any	(a)	(a)
4-30	Any	3:1 or Flatter	None	None
4-12	< 3	Steeper than 3:1	None	None
4-12	$> 3 - < 12$	Steeper than 3:1	Drums	Drums
4-12	> 12	Steeper than 3:1	Drums	Barrier
$> 12 - 20$	< 12	Steeper than 3:1	None	None
$> 12 - 20$	$> 12 - < 24$	Steeper than 3:1	Drums	Drums
$> 12 - 20$	> 24	Steeper than 3:1	Drums	Barrier
$> 20 - 30$	< 24	Steeper than 3:1	None	Drums
$> 20 - 30$	> 24	Steeper than 3:1	Drums	Barrier
> 30	Any	Any	None	None

(a) Use treatment specified under Condition II.

CHART B

- USE FOR: Curbed facilities, where the curb is 6" or greater in height and the legal speed is 40 mph or less.



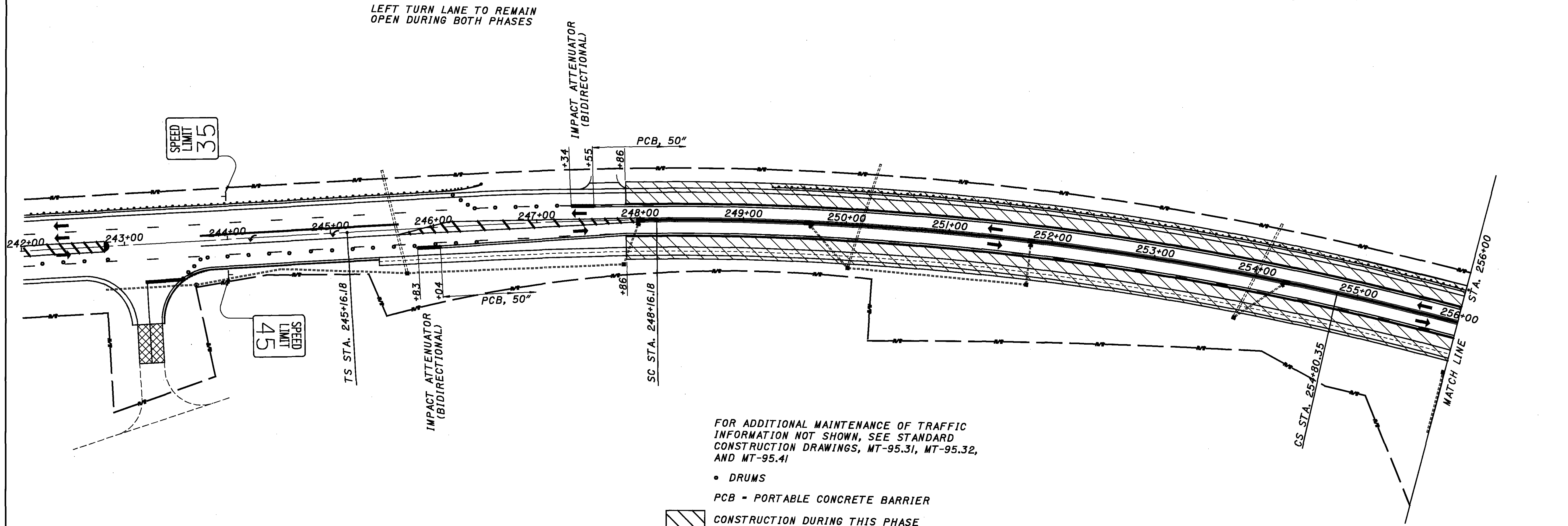
X (Ft.)	D (In.)	A/B	Treatment Required	
			Day	Night
0-10	< 12	Any	None	Drums
0-10	> 12	Any	Drums	Drums
> 10	Any	Any	None	None

CALCULATED
CER
CHECKED
LAW

MAINTENANCE OF TRAFFIC
DROP-OFFS IN WORK ZONES

SCI-23-2.39

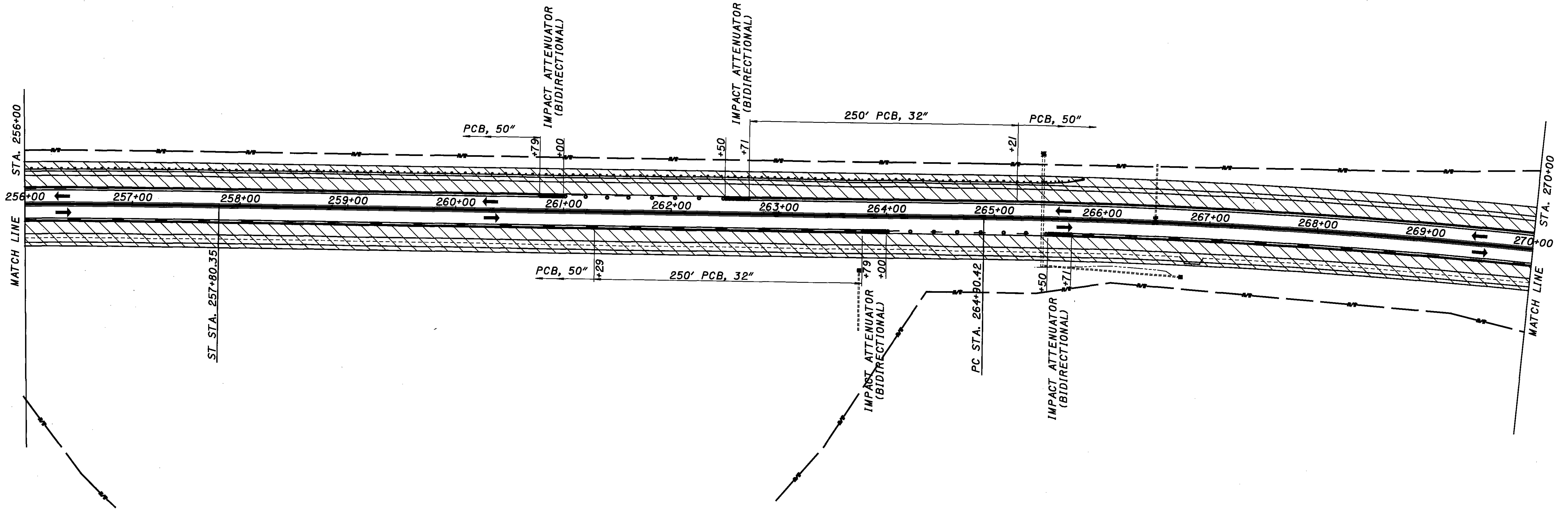
LEFT TURN LANE TO REMAIN OPEN DURING BOTH PHASES



FOR ADDITIONAL MAINTENANCE OF TRAFFIC INFORMATION NOT SHOWN, SEE STANDARD CONSTRUCTION DRAWINGS, MT-95.31, MT-95.32, AND MT-95.41

- DRUMS
- PCB - PORTABLE CONCRETE BARRIER

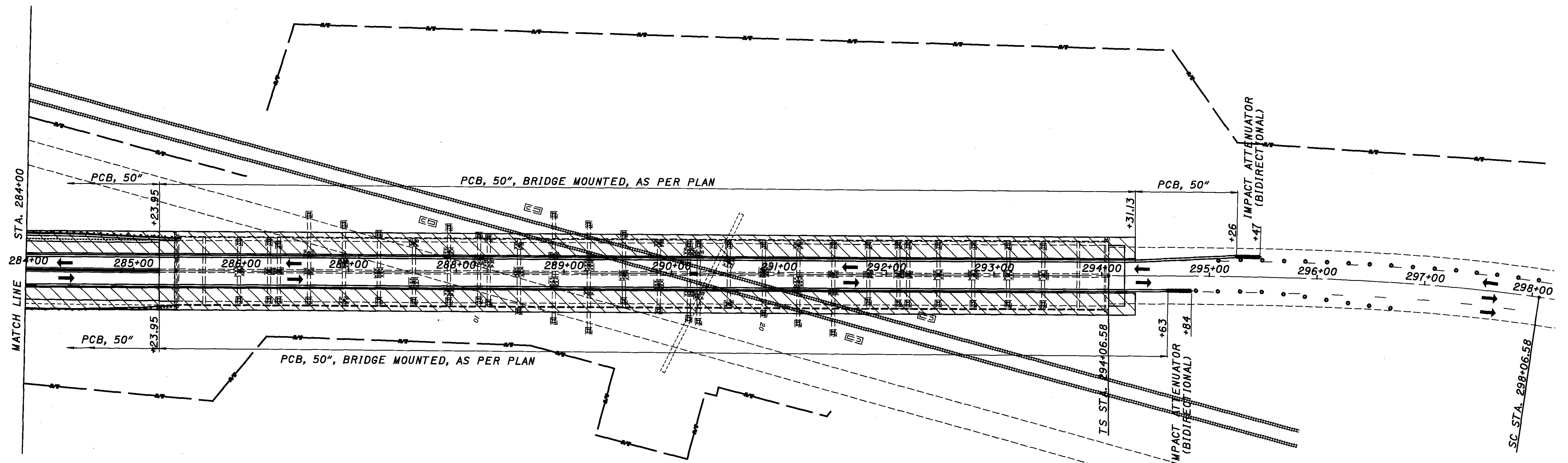
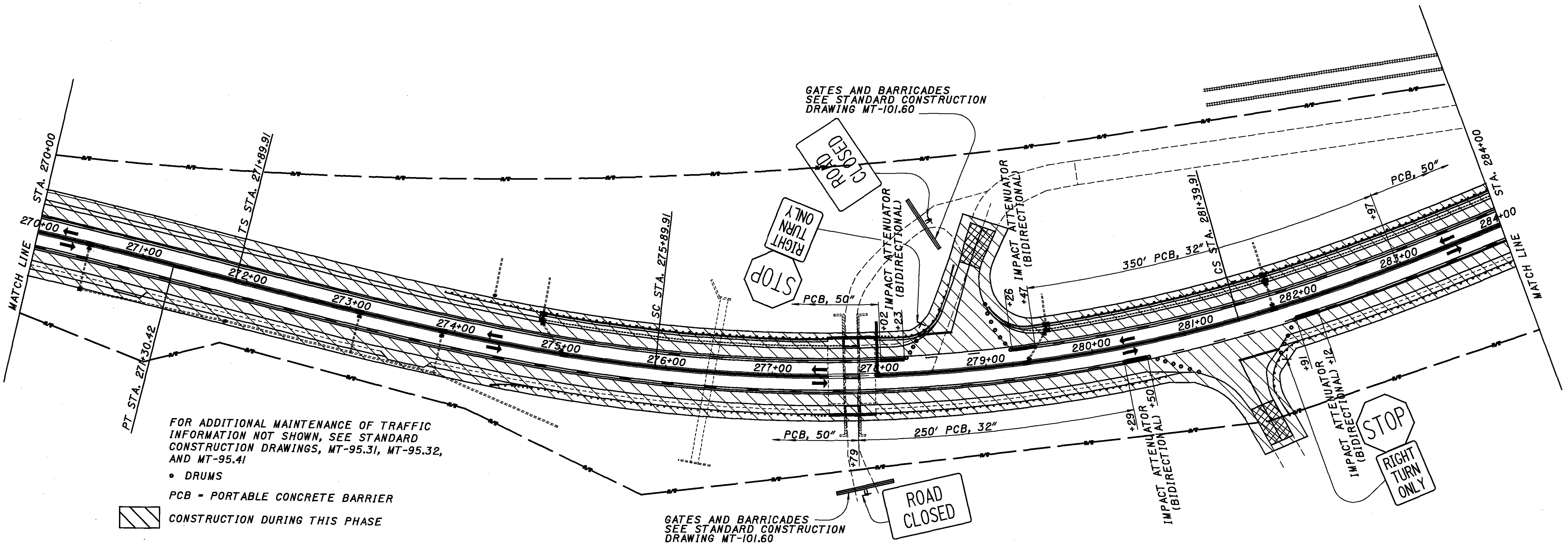
CONSTRUCTION DURING THIS PHASE



CALCULATED	CER
CHECKED	LAW

MAINTENANCE OF TRAFFIC
PHASE I - STA. 242+00 TO STA. 270+00

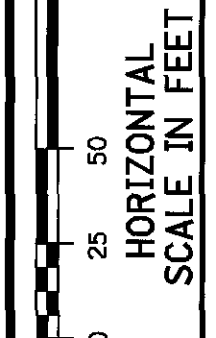
SCI-23-2.39



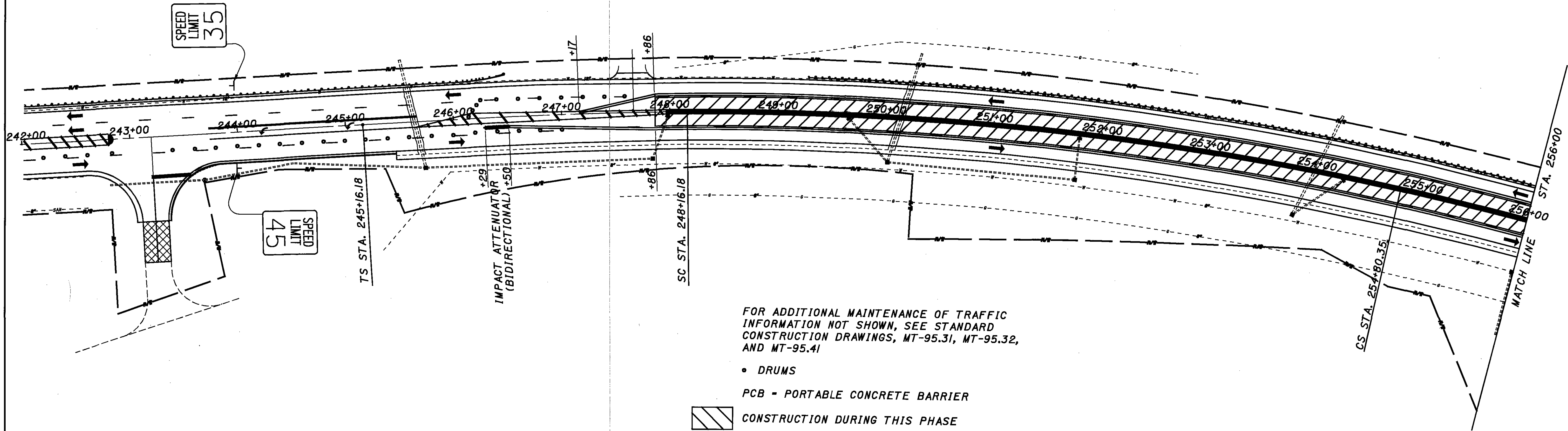
CALCULATED	CER	CHECKED	LAW

MAINTENANCE OF TRAFFIC
PHASE I - STA. 270+00 TO STA. 298+00

SCI-23-2.39

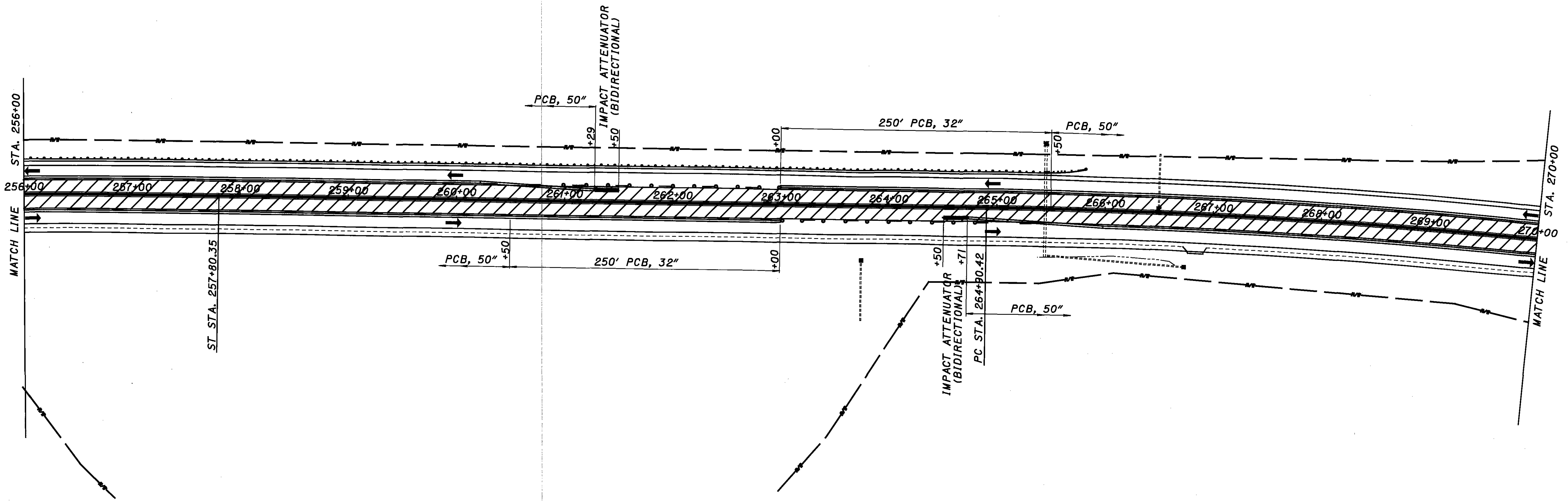


LEFT TURN LANE TO REMAIN OPEN DURING BOTH PHASES



FOR ADDITIONAL MAINTENANCE OF TRAFFIC INFORMATION NOT SHOWN, SEE STANDARD CONSTRUCTION DRAWINGS, MT-95.31, MT-95.32, AND MT-95.41

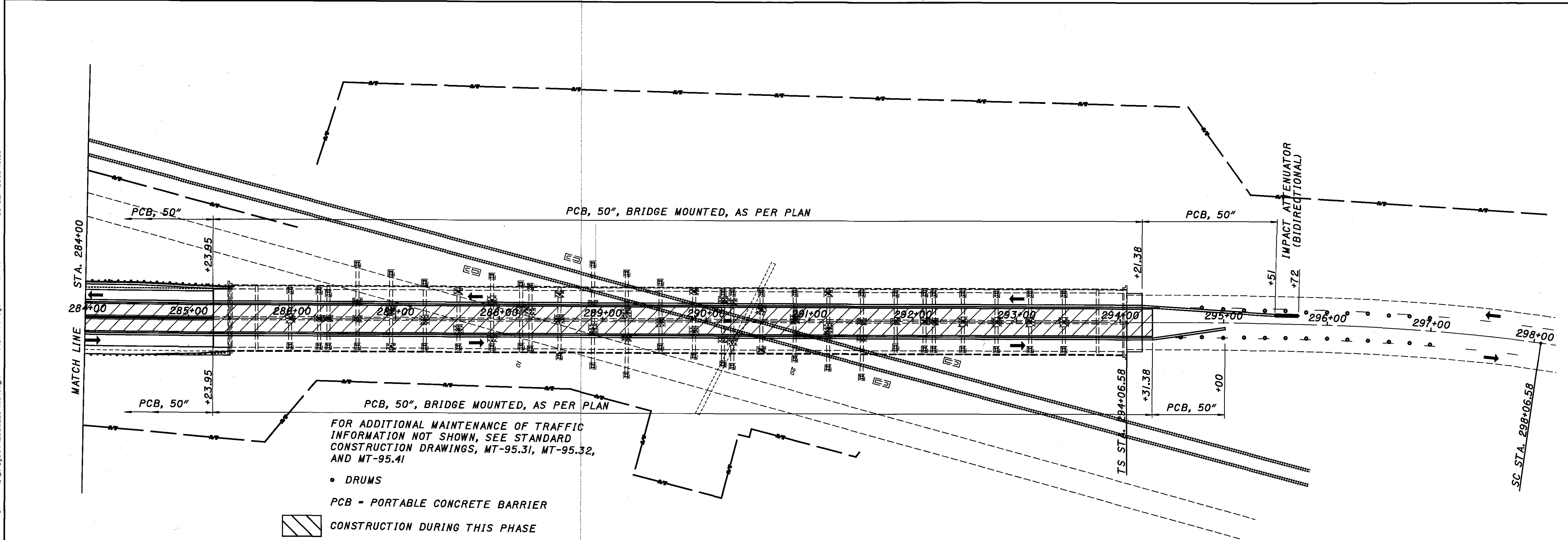
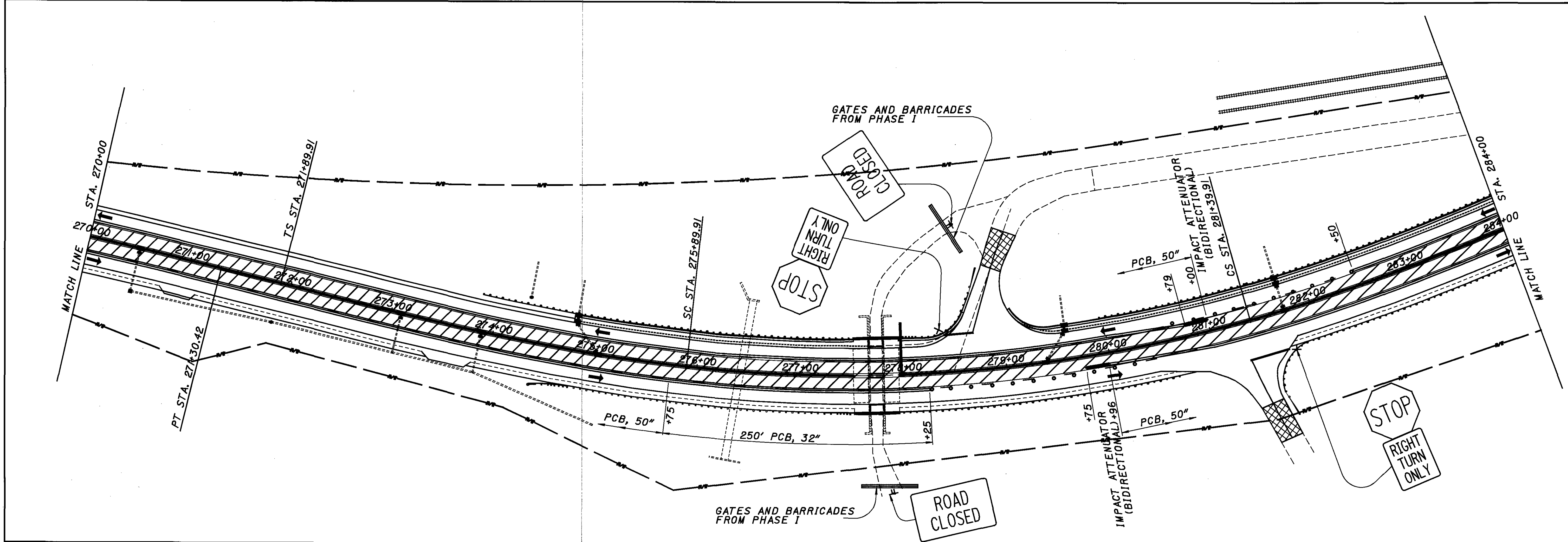
- DRUMS
- PCB - PORTABLE CONCRETE BARRIER
- CONSTRUCTION DURING THIS PHASE



<p>HORIZONTAL SCALE IN FEET</p>	
CALCULATED	CER
CHECKED	LAW

MAINTENANCE OF TRAFFIC
PHASE II - STA. 242+00 TO STA. 270+00

SCI-23-2.39



CALCULATED	
CER	LAW
CHECKED	

MAINTENANCE OF TRAFFIC
 PHASE II - STA. 270+00 TO STA. 298+00
 PHASE I - STA. 270+00 TO STA. 298+00

SHEET NUMBER										FUNDING			ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
11		30	31	32	33	34				* CITY	80% FED 20% STATE							
																	DRAINAGE	
		200									200	603	00400	200	FT	4" CONDUIT, TYPE E		
		100									100	603	00406	100	FT	4" CONDUIT, TYPE F		
					74						74	603	04400	74	FT	12" CONDUIT, TYPE B		
					182						182	603	05900	182	FT	15" CONDUIT, TYPE B		
					5						5	604	00400	5	EACH	CATCH BASIN, NO. 3		
					12						12	604	02000	12	EACH	CATCH BASIN, NO. 6		
					10						10	604	08600	10	EACH	CATCH BASIN MISC.: CATCH BASIN CLEANOUT	11	
					10						10	604	09500	10	EACH	CATCH BASIN RECONSTRUCTED TO GRADE		
					1						1	604	34500	1	EACH	MANHOLE ADJUSTED TO GRADE		
	4										4	604	36600	4	EACH	PRECAST REINFORCED CONCRETE OUTLET	11	
					3710						3710	SPECIAL	60460000	3710	FT	TRENCH DRAIN	9	
		200									200	605	13402	200	FT	6" UNCLASSIFIED PIPE UNDERDRAINS (FOR SPRINGS)	11	
		100									100	605	32200	100	FT	AGGREGATE DRAINS FOR SPRINGS	11	
																	PAVEMENT	
					7870						7870	252	01500	7870	FT	FULL DEPTH PAVEMENT SAWING		
		103184	3579								106763	254	01001	106763	SQ YD	PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN (1.5" MAX.)	12	
	21350										21350	254	01600	21350	SQ YD	PATCHING PLANED SURFACE	11	
		1001		66	24						1091	301	46000	1091	CU YD	ASPHALT CONCRETE BASE, PG 64-22		
		1012		426	16						1454	304	20000	1454	CU YD	AGGREGATE BASE		
		8164	432								8596	407	10000	8596	GAL	TACK COAT		
		8133	138								8271	407	14000	8271	GAL	TACK COAT FOR INTERMEDIATE COURSE		
		2428		1021	40						3489	408	10000	3489	GAL	PRIME COAT		
						6659					6659	422	98000	6659	SQ YD	CHIP SEAL WITH POLYMER BINDER, MISC.: SEALING COMPACTED ASPHALT CONCRETE GRINDINGS UNDER GUARDRAIL WITHOUT COVER AGGREGATE	11	
		4519	150								4669	442	10002	4669	CU YD	ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (446) WITH SUPPLEMENT 1059 WARRANTY		
		6025	102								6127	442	10100	6127	CU YD	ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A (446)		
			76								76	448	48020	76	CU YD	ASPHALT CONCRETE SURFACE COURSE, TYPE 1 PG64-22 (DRIVEWAYS)		
					6788						6788	609	12000	6788	FT	COMBINATION CURB AND GUTTER, TYPE 2		
					78						78	609	23000	78	FT	COMBINATION CURB AND GUTTER, TYPE 4		
											9176	617	98000	9176	SQ YD	SHOULDER RECONDITIONING MISC.: COMPACTED ASPHALT CONCRETE GRINDINGS	10	
		3.46									3.46	618	40600	3.46	MILE	RUMBLE STRIPS, (ASPHALT CONCRETE)		
																	WATER WORK	
					6						6	638	10800	6	EACH	VALVE BOX ADJUSTED TO GRADE		

GENERAL SUMMARY

SCI-23-2.39

STATION TO STATION	448	407		
	ASPHALT CONCRETE SURFACE COURSE, TYPE I, PG 64-22 (DRIVEWAYS)	TACK COAT @ 0.075 GAL./SQ.YD.		
	1.25" AVG. SQ. YD.	SQ. YD.		
DRIVES (CADD MEASURED)				
STA. 126+38 RIGHT (COMMERCIAL) 314 SQ. FT. / 9 -	34.9	34.9		
STA. 128+50 LEFT (COMMERCIAL) 364 SQ. FT. / 9 -	40.4	40.4		
STA. 132+37 RIGHT (RESIDENTIAL) 229 SQ. FT. / 9 -	25.4	25.4		
STA. 140+28 LEFT (COMMERCIAL) 759 SQ. FT. / 9 -	84.3	84.3		
STA. 141+86 LEFT (RESIDENTIAL) 267 SQ. FT. / 9 -	29.7	29.7		
STA. 145+77 RIGHT (RESIDENTIAL) 468 SQ. FT. / 9 -	52.0	52.0		
STA. 146+83 RIGHT (RESIDENTIAL) 223 SQ. FT. / 9 -	24.8	24.8		
STA. 146+88 LEFT (RESIDENTIAL) 203 SQ. FT. / 9 -	22.6	22.6		
STA. 147+20 RIGHT (RESIDENTIAL) 222 SQ. FT. / 9 -	24.7	24.7		
STA. 147+76 RIGHT (RESIDENTIAL) 81 SQ. FT. / 9 -	9.0	9.0		
STA. 148+20 RIGHT (RESIDENTIAL) 81 SQ. FT. / 9 -	9.0	9.0		
STA. 148+53 RIGHT (RESIDENTIAL) 130 SQ. FT. / 9 -	14.4	14.4		
STA. 148+98 RIGHT (RESIDENTIAL) 82 SQ. FT. / 9 -	9.1	9.1		
STA. 149+10 LEFT (RESIDENTIAL) 167 SQ. FT. / 9 -	18.6	18.6		
STA. 149+91 RIGHT (RESIDENTIAL) 346 SQ. FT. / 9 -	38.4	38.4		
STA. 151+04 RIGHT (RESIDENTIAL) 275 SQ. FT. / 9 -	30.6	30.6		
STA. 151+27 LEFT (COMMERCIAL) 272 SQ. FT. / 9 -	30.2	30.2		
STA. 153+35 RIGHT (RESIDENTIAL) 285 SQ. FT. / 9 -	31.7	31.7		
STA. 153+44 LEFT (COMMERCIAL) 273 SQ. FT. / 9 -	30.3	30.3		
STA. 155+91 RIGHT (COMMERCIAL) 305 SQ. FT. / 9 -	33.9	33.9		
STA. 157+31 LEFT (COMMERCIAL) 589 SQ. FT. / 9 -	65.4	65.4		
STA. 158+08 RIGHT (COMMERCIAL) 395 SQ. FT. / 9 -	43.9	43.9		
STA. 159+26 RIGHT (COMMERCIAL) 378 SQ. FT. / 9 -	42.0	42.0		
STA. 159+44 LEFT (COMMERCIAL) 219 SQ. FT. / 9 -	24.3	24.3		
STA. 160+47 LEFT (COMMERCIAL) 594 SQ. FT. / 9 -	66.0	66.0		
STA. 161+87 RIGHT (COMMERCIAL) 256 SQ. FT. / 9 -	28.4	28.4		
STA. 163+42 RIGHT (COMMERCIAL) 237 SQ. FT. / 9 -	26.3	26.3		
STA. 164+10 RIGHT (RESIDENTIAL) 81 SQ. FT. / 9 -	9.0	9.0		
STA. 177+62 RIGHT (COMMERCIAL) 333 SQ. FT. / 9 -	37.0	37.0		
STA. 178+41 RIGHT (COMMERCIAL) 159 SQ. FT. / 9 -	17.7	17.7		
STA. 179+87 RIGHT (COMMERCIAL) 368 SQ. FT. / 9 -	40.9	40.9		
STA. 183+96 RIGHT (COMMERCIAL) 191 SQ. FT. / 9 -	21.2	21.2		
STA. 197+99 RIGHT (COMMERCIAL) 429 SQ. FT. / 9 -	47.7	47.7		
STA. 200+88 RIGHT (COMMERCIAL) 394 SQ. FT. / 9 -	43.8	43.8		
STA. 201+40 LEFT (FIELD) 114 SQ. FT. / 9 -	12.7	12.7		
STA. 202+59 RIGHT (COMMERCIAL) 378 SQ. FT. / 9 -	42.0	42.0		
STA. 204+12 RIGHT (COMMERCIAL) 314 SQ. FT. / 9 -	34.9	34.9		
STA. 204+63 RIGHT (COMMERCIAL) 294 SQ. FT. / 9 -	32.7	32.7		
STA. 206+46 RIGHT (COMMERCIAL) 404 SQ. FT. / 9 -	44.9	44.9		
STA. 208+45 RIGHT (COMMERCIAL) 376 SQ. FT. / 9 -	41.8	41.8		
STA. 209+50 RIGHT (COMMERCIAL) 386 SQ. FT. / 9 -	42.9	42.9		
STA. 212+50 RIGHT (COMMERCIAL) 401 SQ. FT. / 9 -	44.6	44.6		
STA. 216+47 RIGHT (COMMERCIAL) 335 SQ. FT. / 9 -	37.2	37.2		
STA. 218+50 RIGHT (COMMERCIAL) 366 SQ. FT. / 9 -	40.7	40.7		
STA. 219+46 TO STA. 220+91 RIGHT (COMBINED COMMERCIAL DRIVES) 800 SQ. FT. / 9 -	88.9	88.9		
STA. 221+19 TO STA. 225+96 RIGHT (COMBINED COMMERCIAL DRIVES) 2845 SQ. FT. / 9 -	316.1	316.1		
STA. 226+85 RIGHT (RESIDENTIAL) 171 SQ. FT. / 9 -	19.0	19.0		
STA. 228+58 TO STA. 229+78 RIGHT (COMBINED COMMERCIAL DRIVES) 654 SQ. FT. / 9 -	72.7	72.7		
STA. 232+11 TO STA. 232+80 RIGHT (COMBINED COMMERCIAL DRIVES) 336 SQ. FT. / 9 -	37.3	37.3		
STA. 234+10 RIGHT (COMMERCIAL) 174 SQ. FT. / 9 -	19.3	19.3		
STA. 234+80 LEFT (RESIDENTIAL) 139 SQ. FT. / 9 -	15.4	15.4		
STA. 236+55 RIGHT (COMMERCIAL) 411 SQ. FT. / 9 -	45.7	45.7		
STA. 247+67 LEFT (COMMERCIAL) 209 SQ. FT. / 9 -	23.2	23.2		
STA. 266+85 RIGHT (RESIDENTIAL) 105 SQ. FT. / 9 -	11.7	11.7		
STA. 270+95 RIGHT (RESIDENTIAL) 179 SQ. FT. / 9 -	19.9	19.9		
STA. 273+62 RIGHT (COMMERCIAL) 247 SQ. FT. / 9 -	27.4	27.4		
TOTAL	2178.60	2178.60		
CONV. TO CY, GAL, ETC.	75.65			
TOTAL TO GENERAL SUMMARY SHEET	76			

STATION TO STATION	254		442		407			
	PAVEMENT PLANING ASPHALT CONCRETE, AS PER PLAN		ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A (446)		ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (446) WITH SUPPLEMENT 1059 WARRANTY		TACK COAT FOR INTERMEDIATE COURSE @ 0.075 GAL./SQ.YD.	TACK COAT @ 0.075 GAL./SQ.YD.
	1.00" SQ. YD.	1.50" SQ. YD.	2.00" SQ. YD.	1.50" SQ. YD.	SQ. YD.	SQ. YD.		
COUNTY AND TOWNSHIP ROAD CONNECTIONS (CADD MEASURED)								
TOWNSHIP ROAD 162; LOWERY HOLLOW ROAD STA. 154+40.90 (RETURN AREA) 2313.50 SQ. FT. / 9 - (FEATHER AREA) 737.81 SQ. FT. / 9 -	257.06		257.06	257.06	257.06	257.06		
TOWNSHIP ROAD 513; FORREST ROAD STA. 181+53.10 (RETURN AREA) 637.80 SQ. FT. / 9 - (FEATHER AREA) 750.00 SQ. FT. / 9 -	70.87		70.87	70.87	70.87	70.87		
TAPER FOR EXIT RAMP AT CO. RD. 38; SCIOTO TRAIL ROAD STA. 191+19.92 TO STA. 194+35 (TAPER AREA) 2752.00 SQ. FT. / 9 - (FEATHER AREA) 612.50 SQ. FT. / 9 -	305.78		305.78	305.78	305.78	305.78		
COUNTY ROAD 38; SCIOTO TRAIL ROAD STA. 195+89.30 (RETURN AREA) 2240.00 SQ. FT. / 9 - (FEATHER AREA) 1040.50 SQ. FT. / 9 -	248.89		248.89	248.89	248.89	248.89		
COUNTY ROAD 38; SCIOTO TRAIL ROAD STA. 243+19.87 (RETURN AREA) 2348.00 SQ. FT. / 9 - (FEATHER AREA) 900.00 SQ. FT. / 9 -	260.89		260.89	260.89	260.89	260.89		
COUNTY ROAD 160; FEURT HILL ROAD STA. 278+56.90 (RETURN AREA) 3239.80 SQ. FT. / 9 - (FEATHER AREA) 825.00 SQ. FT. / 9 -	359.98		359.98	359.98	359.98	359.98		
COUNTY ROAD 160; FEURT HILL ROAD STA. 281+22.70 (RETURN AREA) 2960.00 SQ. FT. / 9 - (FEATHER AREA) 845.90 SQ. FT. / 9 -	328.89		328.89	328.89	328.89	328.89		
BRIDGE APPROACH WORK								
STA. 294+21.38 TO STA. 296+00 MILL AND FILL AREA (1.5" DEEP) 178.62' x 56' / 9 -		1111.41		1111.41		1111.41		
SUB-TOTAL FROM PREVIOUS COLUMN							2178.60	
SUB-TOTAL FROM THIS COLUMN	2467.00	1111.41	1832.36	3578.41	1832.36	3578.41		
TOTAL	3578.41		1832.36	3578.41	1832.36	5757.01		
CONV. TO CY, GAL, ETC.	3578.41		101.80	149.10	137.43	431.78		
TOTAL TO GENERAL SUMMARY SHEET	3579	102	150	138	432			

CALCULATED
 CER
 CHECKED
 LAW

 SCI-23-2.39
 31
 110

REF NO.	SHEET NO.	STATION TO STATION	SIDE	202		609		203	204	304	408	301											CALCULATED CER	CHECKED LAW	
				CURB AND GUTTER REMOVED	COMBINATION CURB AND GUTTER, TYPE 2	COMBINATION CURB AND GUTTER, TYPE 4	LOCATIONS OF DROPPED CURB (NOT A PAY ITEM) (FOR INFORMATION ONLY) (SEE SCD BP-4.1)	EXCAVATION (6" DEEP)	SUBGRADE COMPACTION	AGGREGATE BASE	PRIME COAT @ 0.40 GAL./SQ.YD.	ASPHALT CONCRETE BASE, PG 64-22													
								6"					6"	9"	FT.	FT.	SQ.YD.	SQ.YD.	SQ.YD.	GAL.	CU.YD.				
CG-1	36-38	STA. 126+28 TO STA. 149+50 2322.00' x 3' x 1/9 - 2322.00' x 3' x 1/9 x 0.40 - (STA. 126+28 TO STA. 126+63) (STA. 132+14 TO STA. 132+59) (STA. 145+34 TO STA. 146+20) (STA. 146+62 TO STA. 147+41) (STA. 147+65 TO STA. 147+85) (STA. 148+10 TO STA. 148+30) (STA. 148+40 TO STA. 148+67) (STA. 148+88 TO STA. 149+08)	RT.		2322.00	2322.00		774.00	774.00	774.00		309.60													
CG-2	36-37	STA. 132+70.13 TO STA. 140+55.79 785.66' x 3' x 1/9 - 785.66' x 3' x 1/9 x 0.40 -	LT.		785.66				261.89	261.89		104.75	261.89												
CG-3	38	STA. 148+85.65 TO STA. 150+89.90	LT.		204.25																				
CG-4	38-39	STA. 150+89.90 TO STA. 160+16 926.10' x 3' x 1/9 - 926.10' x 3' x 1/9 x 0.40 - (STA. 151+06 TO STA. 151+48) (STA. 153+21 TO STA. 153+63) (STA. 156+78 TO STA. 157+81) (STA. 159+22 TO STA. 159+67)	LT.		926.10	926.10		308.70	308.70	308.70		123.48													
CG-5	39-41	STA. 160+34.58 TO STA. 181+38 (BY CADD) 2118.23' x 3' x 1/9 - 2118.23' x 3' x 1/9 x 0.40 - (STA. 161+62 TO STA. 162+12) (STA. 163+17 TO STA. 163+66) (STA. 164+00 TO STA. 164+20) (STA. 177+34 TO STA. 177+89) (STA. 178+25 TO STA. 178+55) (STA. 179+57 TO STA. 180+17)	RT.		2118.23	2118.23		706.08	706.08	706.08		282.43													
CG-6	41	STA. 181+58.27 TO STA. 183+35.11 (BY CADD) 213.37' x 3' x 1/9 - 213.37' x 3' x 1/9 x 0.40 -	RT.		213.37	213.37		71.12	71.12	71.12		28.45													
CG-7	47-48	STA. 243+31.87 TO STA. 245+45.40 (BY CADD) 242.90' x 3' x 1/9 - 242.90' x 3' x 1/9 x 0.40 -	RT.		242.90	242.90		80.97	80.97	80.97		32.39													
CG-8	51	STA. 274+76 TO STA. 277+51.76 275.76' x 3' x 1/9 - 275.76' x 3' x 1/9 x 0.40 -	LT.		275.76	275.76		**	91.92	91.92		36.77													
CG-9	51	STA. 277+96.66 TO STA. 278+63.63 (BY CADD) 72.08' x 3' x 1/9 - 72.08' x 3' x 1/9 x 0.40 -	LT.		72.08	72.08		**	24.03	24.03		9.61													
CG-10	51-53	STA. 279+06.83 TO STA. 285+23.95 (BY CADD) 617.17' x 3' x 1/9 - 617.17' x 3' x 1/9 x 0.40 -	LT.		617.17	617.17		**	205.72	205.72		82.29													
CG-11	53	STA. 284+97.95 TO STA. 285+23.95 26.00' x 3' x 1/9 - 26.00' x 3' x 1/9 x 0.40 -	RT.			26.00		**	8.67	8.67		3.47													
CG-12	54	STA. 294+21.38 TO STA. 294+47.38 26.00' x 3' x 1/9 - 26.00' x 3' x 1/9 x 0.40 -	LT.			26.00		8.67	8.67	8.67		3.47													
CG-13	54	STA. 294+21.38 TO STA. 294+47.38 26.00' x 3' x 1/9 - 26.00' x 3' x 1/9 x 0.40 -	LT.			26.00		8.67	8.67	8.67		3.47													
TOTAL CONV. TO CU.YD., GAL., ETC.					7777.52	6787.61	78.00	(792)	1958.21 326.37	2550.44	2550.44 425.07	1020.18 65.47	261.89 66												
TOTALS CARRIED TO GENERAL SUMMARY					7778	6788	78	327	2551	426	1021	66													

DRAINAGE SUBSUMMARY

SCI-23-2.39

NOTE: ** THE QUANTITIES FOR EXCAVATION IN THESE AREAS ARE COVERED ON THE CROSS SECTION SHEETS.

REF NO.	SHEET NO.	STATION TO STATION	SIDE	202				660	SPECIAL	601		SPECIAL	252	603		638	604				203	204	304	408	301	
				CONCRETE MEDIAN REMOVED	PIPE REMOVED, 24" AND UNDER	CATCH BASIN REMOVED	CURB REMOVED	SODDING REINFORCED	TRENCH DRAIN	ROCK CHANNEL PROTECTION, TYPE B WITH FILTER	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER	PIPE CLEANOUT	FULL DEPTH PAVEMENT SAWING	12" CONDUIT, TYPE B	15" CONDUIT, TYPE B	VALVE BOX ADJUSTED TO GRADE	CATCH BASIN RECONSTRUCTED TO GRADE	MANHOLE ADJUSTED TO GRADE	CATCH BASIN MISC. CATCH BASIN CLEANOUT	CATCH BASIN, NO. 3	CATCH BASIN, NO. 6	EXCAVATION	SUBGRADE COMPACTION	AGGREGATE BASE	PRIME COAT @ 0.40 GAL./SQ. YD.	ASPHALT CONCRETE BASE, PG 64-22
				SQ. YD.	FT.	EACH	FT.	SQ. YD.	FT.	CU. YD.	CU. YD.	FT.	FT.	FT.	FT.	EACH	EACH	EACH	EACH	EACH	CU. YD.	SQ. YD.	CU. YD.	GAL.	CU. YD.	
CB-1	36	STA. 129+40.89	RT.									85														
CB-2	36	STA. 132+06.06	RT.									96														
CB-3	36	STA. 133+07.12	RT.									50														
CB-4	36	STA. 133+07.12	LT.									24														
CB-5	37	STA. 141+49.50	RT.									130														
CB-6	38	STA. 144+89.24	RT.									112														
CB-7	39	STA. 156+59.45	LT.									92														
CB-8	40	STA. 168+36.05	RT.									120														
CB-9	41	STA. 178+12.55	RT.									108														
CB-10	43	STA. 194+28	RT.									114														
CB-11	48	STA. 248+00	Q MED.	4	1																					
CB-12	48	STA. 249+62.87	Q MED.	4	1									4												
CB-13	48	STA. 251+79.87	Q MED.	4	1									4												
CB-14	49	STA. 254+29.87	Q MED.	4	1									4												
CB-15	50	STA. 266+49.56	Q MED.	4	1									4												
CB-16	50	STA. 270+49.87	Q MED.	4	1									4												
CB-17	50	STA. 273+10.09	Q MED.	4	1									4												
CB-18	50	STA. 273+89.05	Q MED.	4	1									4												
CB-19	51	STA. 274+79.03	LT.	10	1									10												
CB-20	51	STA. 275+04.06	Q MED.	4	1									4												
CB-21	51	STA. 277+98.22	Q MED.							1.33		60		50						24	33.3	4.2	13.3	7.3		
CB-22	51	STA. 279+38.06	Q MED.	4	1									4												
CB-23	52	STA. 279+61.13	LT.	10	1									10												
CB-24	52	STA. 281+74.06	LT.	10	1									10												
CB-25	52	STA. 281+74.06	Q MED.	4	1									4												
CB-26	52	STA. 283+25	LT.							3.33																
CB-27	53	STA. 284+47	LT.											10												
														122												
TD-1	48	STA. 248+00 - STA. 249+62.87	Q MED.	72.39				162.87				325.74														
TD-2	48	STA. 249+62.87 - STA. 251+79.87	Q MED.	96.44				217.00				434.00														
TD-3	48-49	STA. 251+79.87 - STA. 254+29.87	Q MED.	111.11				250.00				500.00														
TD-4	49-50	STA. 254+29.87 - STA. 266+49.56	Q MED.	542.08				1219.69				2439.38														
TD-5	50	STA. 266+49.56 - STA. 270+49.87	Q MED.	177.92				400.31				800.62														
TD-6	50	STA. 270+49.87 - STA. 273+10.09	Q MED.	115.65				260.22				520.44														
TD-7	50	STA. 273+10.09 - STA. 273+89.05	Q MED.	35.09				78.96				157.92														
TD-8	50-51	STA. 273+89.05 - STA. 275+04.06	Q MED.	51.12				115.01				230.02														
TD-9	51	STA. 275+04.06 - STA. 277+52.06	Q MED.	110.22				248.00				496.00														
TD-10	51	STA. 277+96.07 - STA. 279+38.06	Q MED.	63.11				141.99				283.98														
TD-11	51-52	STA. 279+38.06 - STA. 281+74.06	Q MED.	104.89				236.00				472.00														
TD-12	52-53	STA. 281+74.06 - STA. 285+23.95	Q MED.	155.51				349.89				699.78														
TD-13	41	FORREST ROAD (USR 23 STA. 181+33 - 181+63)	RT.					30.00				50.00														
MH-1	36	STA. 126+36	RT.																							
D-1	53	STA. 284+94.45	RT.					53																		
D-2	54	STA. 294+50.88	LT.					65																		
D-3	54	STA. 294+50.88	RT.					55																		
R-1	43	STA. 194+35 TO STA. 195+35	RT.					100				200.00									33.3	5.6	13.3	8.3		
R-2	45	STA. 218+45 TO STA. 219+45	RT.					100				200.00									33.3	5.6	13.3	8.3		
W-1	39	STA. 157+24	LT.																							
W-2	39	STA. 154+57	RT.																							
W-3	39	STA. 154+62	RT.																							
W-4	39	STA. 154+69	RT.																							
W-5	41	STA. 181+43	RT.																							
W-6	47	STA. 243+38	LT.																							
TOTAL				1635.53	74	14	200	173	3709.94	3.33	1.33	931	7869.88	74	182	6	10	1	10	5	12	24	99.9	15.4	39.9	23.9
TOTALS CARRIED TO GENERAL SUMMARY				1636	74	14	200	173	3710	3.4	1.4	931	7870	74	182	6	10	1	10	5	12	24	100	16	40	24

CALCULATED
 CER
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 LAW
 DRAINAGE SUBSUMMARY
 SCI-23-2.39
 33
 110

REF. NUMBER	SHEET NUMBER	STATION		SIDE	202		606								SPECIAL	617		209	422	626		622	
					GUARDRAIL REMOVED	GUARD POST REMOVED	GUARDRAIL, TYPE 5	GUARDRAIL, TYPE 5, USING 9 FOOT POSTS	ANCHOR ASSEMBLY, TYPE E-98	ANCHOR ASSEMBLY, TYPE B-98	ANCHOR ASSEMBLY, TYPE T	ANCHOR ASSEMBLY, TYPE A	BRIDGE TERMINAL ASSEMBLY, TYPE 1	BRIDGE TERMINAL ASSEMBLY, TYPE 2	SOIL STERILANT	SHOULDER RECONDITIONING MISC.; COMPACTED ASPHALT CONCRETE GRINDINGS	PREPARING SUBGRADE FOR SHOULDER PAVING	CHIP SEAL WITH POLYMER BINDER, MISC. SEALING COMPACTED ASPHALT CONCRETE GRINDINGS UNDER GUARDRAIL	BARRIER REFLECTOR, TYPE A	BARRIER REFLECTOR, TYPE B	CONCRETE BARRIER, SINGLE SLOPE TYPE D	CONCRETE BARRIER, END SECTION TYPE D	
					FT.	EACH	FT.	FT.	EACH	EACH	EACH	EACH	EACH	EACH	SQ. YD.	2.5" AVG. SQ. YD.	6" SQ. YD.	STA.	SQ. YD.	EACH	EACH	FT.	EACH
GR-1	36	STA. 126+38.25	STA. 128+08	LT.	187.50		112.50		1		1				100.0		100.0	2.3	100.0	3			
GR-2	36-37	STA. 128+72.40	STA. 139+88	LT.	1125.00			1062.50	1		1				522.2		522.2	11.8	522.2	13			
GR-3	37	STA. 140+85.40	STA. 141+78.81	LT.	125.00		87.50				1				66.7		66.7	1.5	66.7	3			
GR-4	37-38	STA. 142+27	STA. 146+58.25	LT.	450.00		375.00		1		1				216.7		216.7	4.9	216.7	6			
GR-5	38	STA. 147+23.70	STA. 148+85.65	LT.	187.50		100.00		1		1				94.4		94.4	2.1	94.4	3			
GR-6	38	STA. 149+37.70	STA. 150+89.90	LT.	162.50		87.50		1		1				88.9		88.9	2.0	88.9	3			
GR-7	38-39	STA. 153+48.44	STA. 154+74.44	RT.	118.75		137.50				1	1			100.0		100.0	2.3	100.0	3			
GR-8	38-39	STA. 153+85.65	STA. 156+72.87	LT.	287.50																		
GR-9	39	STA. 155+00	STA. 155+77.70	RT.	175.00		162.50				1				100.0		100.0	2.3	100.0	3			
GR-10	39-43	STA. 161+40.25	STA. 195+93.90	LT.	3487.50		3450.00				1			1	1550.0		1550.0	34.9	1550.0	36			
	43	STA. 195+91.90	STA. 196+05.90	LT.																		1	
	43	STA. 196+05.90	STA. 196+25.90	LT.																	1	20.00	
	43	STA. 196+25.90	STA. 196+39.90	LT.																		1	
GR-11	43	STA. 196+37.75	STA. 201+19	LT.	500.00			431.25	1				1		225.0		225.0	5.1	225.0	5			
GR-12	43	STA. 201+12.67	STA. 202+37.62	RT.	162.50		125.00					2			88.9		88.9	2.0	88.9	3			
GR-13	43-44	STA. 201+74.14	STA. 204+37.50	LT.	262.50		200.00		1		1				138.9		138.9	3.2	138.9	3			
GR-14	44-45	STA. 211+75	STA. 216+62.50	LT.	412.50		437.50			1	1				244.4		244.4	5.5	244.4	5			
GR-15	45	STA. 216+75	STA. 217+97	RT.	137.50		112.50					2			83.3		83.3	1.9	83.3	3			
GR-16	45-47	STA. 219+00	STA. 234+55.90	LT.	1562.50			1500.00		1	1				716.7		716.7	16.2	716.7	16			
GR-17	47	STA. 235+05.20	STA. 236+55.30	LT.	175.00		100.00			1	1				94.4		94.4	2.2	94.4	3			
GR-18	47-48	STA. 240+74	STA. 246+48	LT.	537.50		525.00			1	1				283.3		283.3	6.4	283.3	6			
GR-19	48-50	STA. 249+27	STA. 268+80	LT.	1950.00		1912.50			1	1				900.0		900.0	20.1	900.0	21			
GR-20	50-51	STA. 273+84	STA. 277+53.84	LT.	362.50		350.00				1			1	172.2		172.2	3.9	172.2	3	1		
GR-21	51	STA. 274+42.50	STA. 277+54.89	RT.	325.00		281.25			1			1		158.3		158.3	3.6	158.3	3	1		
GR-22	51	STA. 277+94.61	STA. 278+79.78	LT.	137.50		93.75					1	1		63.9		63.9	1.5	63.9	3			
GR-23	51-52	STA. 277+93.32	STA. 280+62	RT.	312.50		262.50					1		1	133.3		133.3	3.0	133.3	3			
GR-24	52-53	STA. 279+92.73	STA. 285+27.51	LT.	550.00		512.50				1			1	244.4		244.4	5.5	244.4	6	9		
GR-25	52-53	STA. 281+56.35	STA. 285+27.51	RT.	437.50		406.25					1	1		202.8		202.8	4.6	202.8	5	9		
GR-26	54	STA. 294+19.60	STA. 295+02	LT.	81.25		81.25							1	36.1		36.1	0.8	36.1	1			
GR-27	54	STA. 294+19.60	STA. 294+96.60	RT.	75.00		75.00							1	33.3		33.3	0.8	33.3	1			
R-3	41	STA. 180+18		RT.		1																	
617 COMPACTED ASPHALT CONCRETE GRINDINGS FOR AREAS WITHOUT GUARDRAIL																							
33894.2' (WORK LENGTH x 2) - 15040' (ITEM 209) -																							
6866' (ITEM 609) - 6325' (CONNECTION ROADS, DRIVES, BRIDGES, ETC) -																							
5663.2' x 4' / 9 -																							
TOTAL					14287.50	1	9987.50	2993.75	7	6	22	3	5	5	6658.1	2517	6658.1	150.4	6658.1	163	21	20.00	2
TOTALS CARRIED TO GENERAL SUMMARY					14287.50	1	9987.50	2993.75	7	6	22	3	5	5	6659	9175.1	9175.1	151	6659	163	21	20.00	2

CALCULATED
CER
CHECKED
BCB

GUARDRAIL SUBSUMMARY

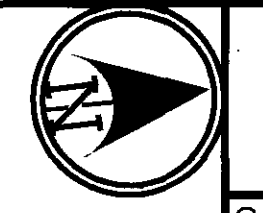
SCI-23-2.39

STATION TO STATION	644										202	621														
	EDGE LINE		LANE LINE	CENTER LINE		CHANNELIZING LINE	STOP LINE	TRANSVERSE/ DIAGONAL LINE	LANE ARROW	ISLAND MARKING		RAISED PAVEMENT MARKER REMOVED	RPM													
	(WHITE)	(YELLOW)		(DOUBLE SOLID)	(SOLID DASH)								WHITE	YELLOW/YELLOW												WHITE/RED
	MILE	MILE		MILE	MILE								MILE	FT.												FT.
LANE LINE (NORTHBOUND AND SOUTHBOUND USR 23) 126+28 - 296+00 = 16,972.00' x 2 / 5280			6.43								426			426												
EDGE LINE (WHITE) (NORTHBOUND AND SOUTHBOUND USR 23) 126+28 - 296+00 = 16,972.00' x 2 / 5280 (RPMs NORTHBOUND USR 23) 187+15 - 191+15 = 400.00 / 80' SPACING = (RPMs NORTHBOUND USR 23) 193+91 - 195+35 = 144.00 / 40' SPACING = (RPMs SOUTHBOUND USR 23) 196+50 - 200+90 = 440.00 / 40' SPACING = (RPMs SOUTHBOUND USR 23) 200+90 - 204+90 = 400.00 / 80' SPACING = ADD FOR TR-162 (LOWRY HOLLOW ROAD) RT. 244.32' / 5280 = ADD FOR TR-513 (FORREST ROAD) RT. 143.86' / 5280 = ADD FOR CR-38 (SCIOTO TRAIL ROAD) RT. 362.71' / 5280 = ADD FOR CR-38 (SCIOTO TRAIL ROAD) RT. 233.24' / 5280 = ADD FOR CR-160 (FEURT HILL ROAD) LT. 251.15' / 5280 = ADD FOR CR-160 (FEURT HILL ROAD) RT. 255.40' / 5280 =	6.43											5 4 11 5														
EDGE LINE (YELLOW) (NORTHBOUND AND SOUTHBOUND USR 23) ADD FOR CR-38 (SCIOTO TRAIL ROAD) LT. EDGE 117.38' / 5280 = 247+95 - 296+00 = 4,805.00' x 2 / 5280			0.02 1.82																							
CENTER LINE (DOUBLE SOLID) 126+28 - 192+50 = 6622.00' / 5280 = 192+50 - 195+35 (ISLAND) = 285.00' x 2 / 5280 = 196+50 - 198+51 = 201.00' x 2 / 5280 = 240+80 - 242+80 = 200.00' x 2 / 5280 = 243+75 - 245+65 = 190.00' / 5280 = 245+65 - 247+95 (ISLAND) = 230.00' x 2 / 5280 = ADD FOR TR-162 (LOWRY HOLLOW ROAD) RT. 95.00' / 5280 = ADD FOR TR-513 (FORREST ROAD) RT. 53.60' / 5280 = ADD FOR CR-38 (SCIOTO TRAIL ROAD) RT. 79.00' / 5280 = ADD FOR CR-160 (FEURT HILL ROAD) LT. 103.00' / 5280 = ADD FOR CR-160 (FEURT HILL ROAD) RT. 85.00' / 5280 =				1.25 0.11 0.08 0.08 0.04 0.09 0.02 0.01 0.02 0.02 0.02							166 14 11 10 5 11		83 8 6 6 3 6													
CENTER LINE (SOLID-DASHED) (NORTHBOUND AND SOUTHBOUND USR 23) 198+51 - 240+80 = 4229.00' x 2 / 5280 =				1.60							211		106													
STOP LINE TR-162 (LOWRY HOLLOW ROAD) RT. 154+64 - 155+05 = 43.00' TR-513 (FORREST ROAD) RT. 181+50 - 181+63 = 14.00' CR-38 (SCIOTO TRAIL ROAD) RT. 195+57 - 196+20 = 63.00' USR 23 NORTHBOUND 195+35 = 23.00' USR 23 SOUTHBOUND 196+50 = 23.00' CR-38 (SCIOTO TRAIL ROAD) RT. 243+20 - 243+53 = 33.00' CR-160 (FEURT HILL ROAD) LT. 278+42 - 278+70 = 27.00' CR-160 (FEURT HILL ROAD) RT. 281+31 - 281+67 = 37.00'																										
CHANNELIZING LINE USR 23 NORTHBOUND RT. 193+91 - 194+35 = 46.00' CR-38 (SCIOTO TRAIL ROAD) RT. 195+89.33 = 82.00' USR 23 SOUTHBOUND 243+75 - 245+65 = 190.00'						46 82 190					6		6													
ISLAND MARKING USR 23 195+35 - 195+40 = 39.25 SQ. FT. 196+45 - 196+50 = 39.25 SQ. FT. 242+80 - 242+85 = 39.25 SQ. FT.																							39.25 39.25 39.25			
TRANSVERSE / DIAGONAL LINE (YELLOW) 192+50 - 195+35 VARIABLE LENGTHS, VARIABLE SPACING, SEE PLAN SHEETS = 113.26' 196+50 - 198+51 13 @ 13.67', VARIABLE SPACING, SEE PLAN SHEETS = 177.71' 240+80 - 242+80 13 @ 13.67', VARIABLE SPACING, SEE PLAN SHEETS = 177.71' 245+65 - 247+95 VARIABLE LENGTHS, VARIABLE SPACING, SEE PLAN SHEETS = 101.06'																							113.26 177.71 177.71 101.06			
TURN ARROW CR-38 (SCIOTO TRAIL ROAD) RT. 195+76 = 1 EACH CR-38 (SCIOTO TRAIL ROAD) RT. 196+03 = 1 EACH (RIGHT TURN ARROW) USR 23 199+50 = 2 EACH USR 23 209+50 = 2 EACH USR 23 219+50 = 2 EACH USR 23 229+50 = 2 EACH USR 23 239+50 = 2 EACH USR 23 244+20 = 1 EACH USR 23 245+00 = 1 EACH																							1 1 2 2 2 2 2 1 1			
SUB-TOTAL																							25			
TOTAL	6.72	1.84	6.43	1.74	1.60	318	263	569.74	14	117.75	860			432									218			
TOTAL TO GENERAL SUMMARY SHEET	8.56	6.43	3.34	318	263	570	14	118	860					675									675			

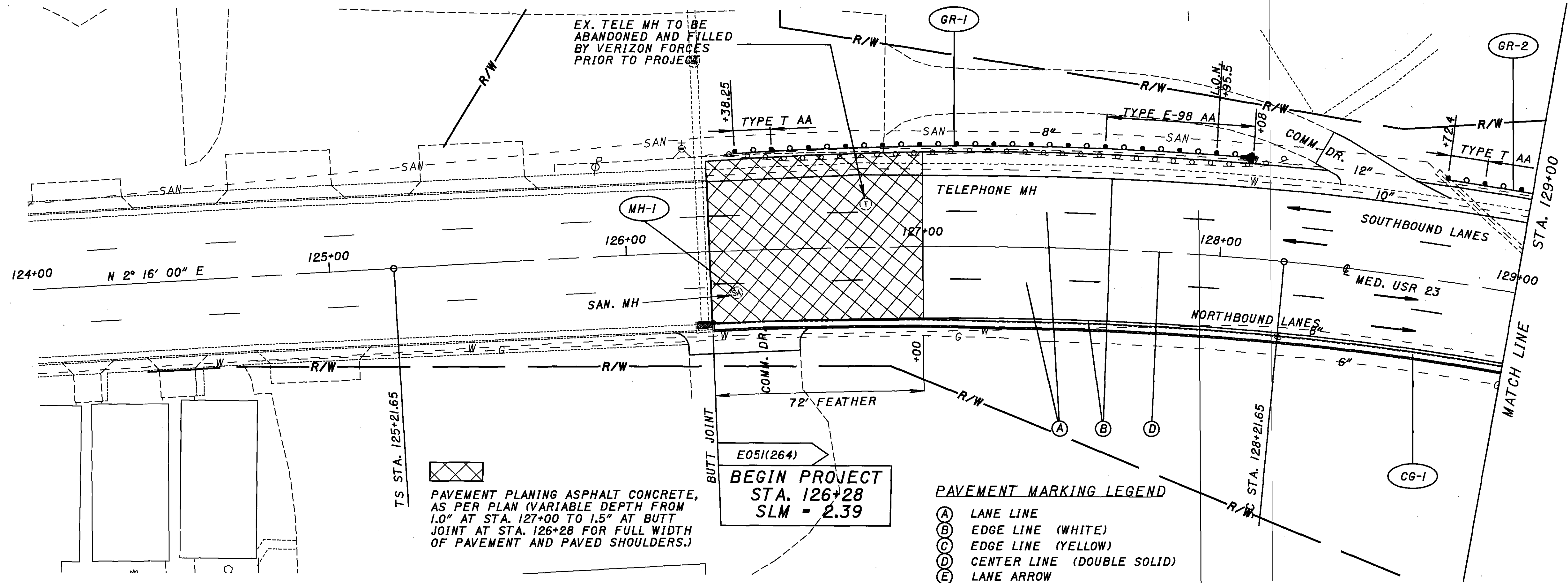
CALCULATED
BCB
CHECKED
CER

PAVEMENT MARKING SUB-SUMMARY

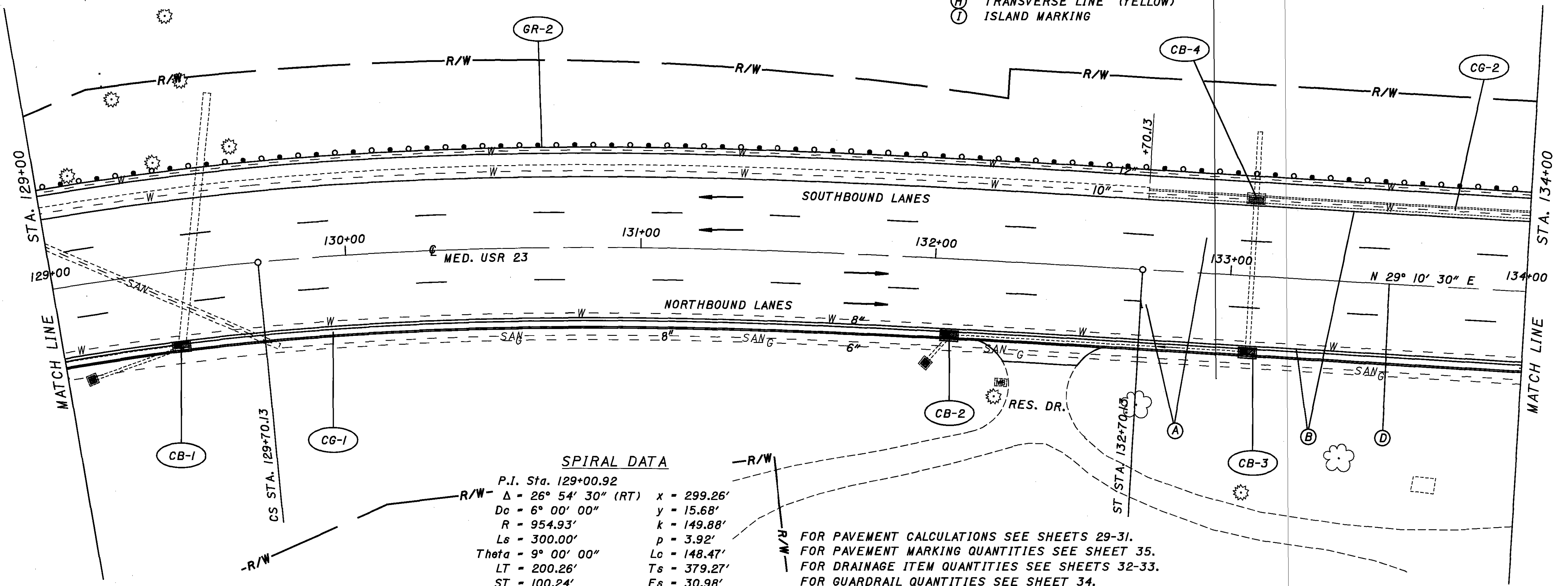
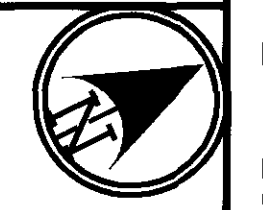
SCI-23-2.39



0	20	40
HORIZONTAL SCALE IN FEET		
CALCULATED	CER	CHECKED
		LAW

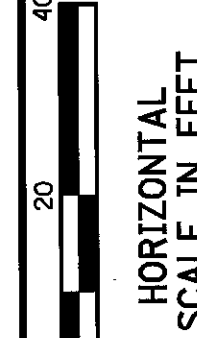
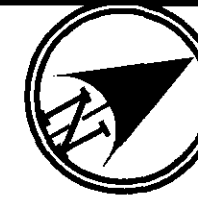


PAVEMENT PLANING ASPHALT CONCRETE, AS PER PLAN (VARIABLE DEPTH FROM 1.0" AT STA. 127+00 TO 1.5" AT BUTT JOINT AT STA. 126+28 FOR FULL WIDTH OF PAVEMENT AND PAVED SHOULDERS.)



PLAN AND PAVEMENT MARKING
STA. 124+00 TO STA. 134+00

SCI-23-2.39

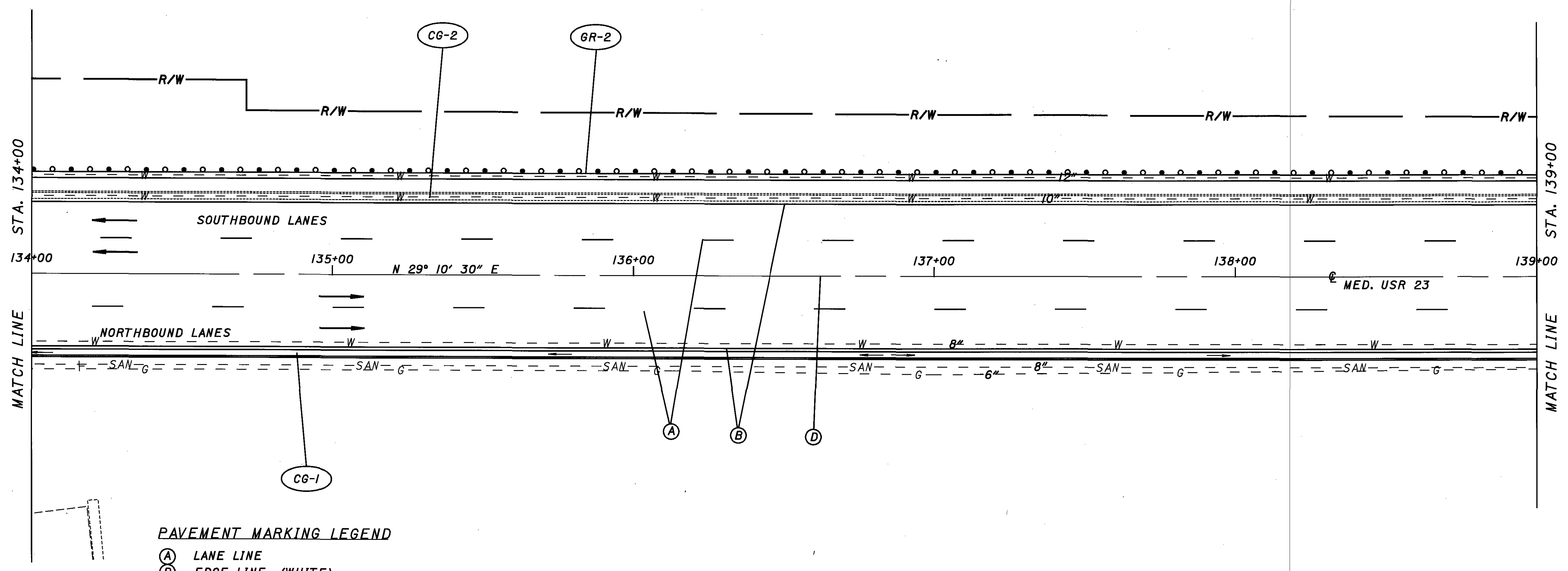


CALCULATED
CER
CHECKED
LAW

**PLAN AND PAVEMENT MARKING
STA. 134+00 TO STA. 144+00**

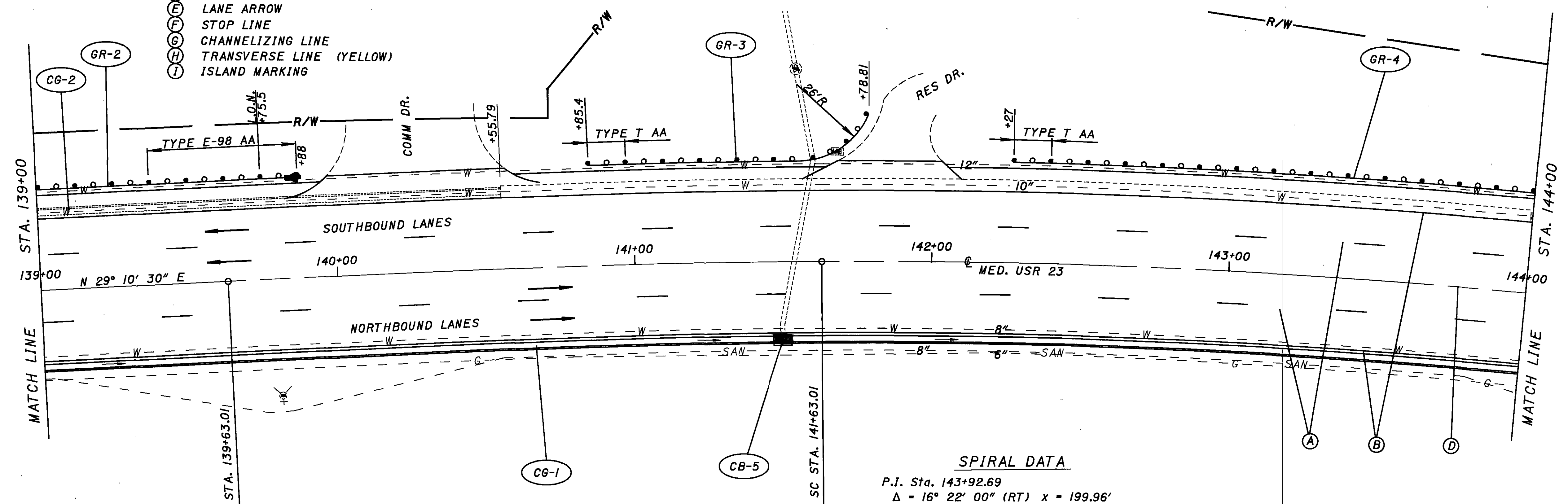


SCI-23-2.39



PAVEMENT MARKING LEGEND

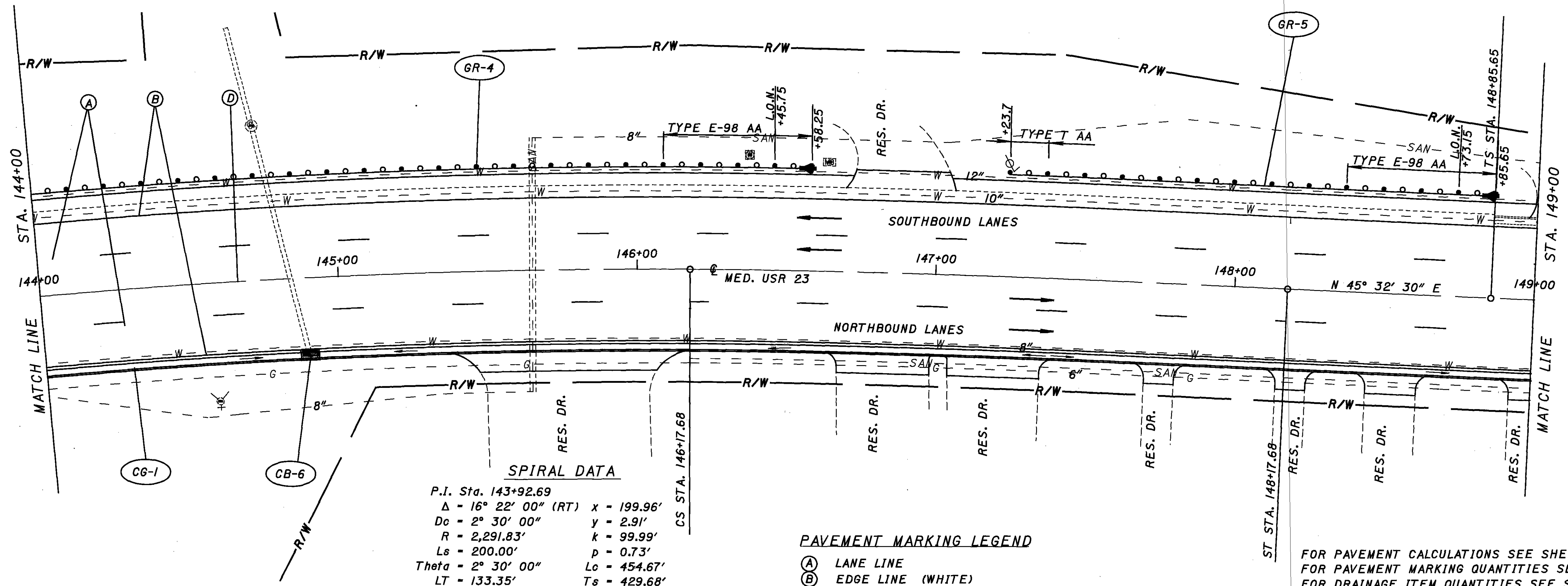
- (A) LANE LINE
- (B) EDGE LINE (WHITE)
- (C) EDGE LINE (YELLOW)
- (D) CENTER LINE (DOUBLE SOLID)
- (E) LANE ARROW
- (F) STOP LINE
- (G) CHANNELIZING LINE
- (H) TRANSVERSE LINE (YELLOW)
- (I) ISLAND MARKING



SPIRAL DATA

P.I. Sta. 143+92.69
 $\Delta = 16^\circ 22' 00''$ (RT) $x = 199.96'$
 $D_c = 2^\circ 30' 00''$ $y = 2.91'$
 $R = 2,291.83'$ $k = 99.99'$
 $L_s = 200.00'$ $p = 0.73'$
 $\text{Theta} = 2^\circ 30' 00''$ $L_c = 454.67'$
 $LT = 133.35'$ $T_s = 429.68'$
 $ST = 66.68'$ $Es = 24.31'$

FOR PAVEMENT CALCULATIONS SEE SHEETS 29-31.
 FOR PAVEMENT MARKING QUANTITIES SEE SHEET 35.
 FOR DRAINAGE ITEM QUANTITIES SEE SHEETS 32-33.
 FOR GUARDRAIL QUANTITIES SEE SHEET 34.

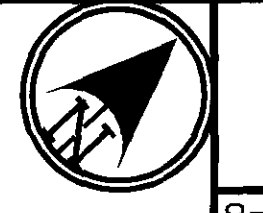
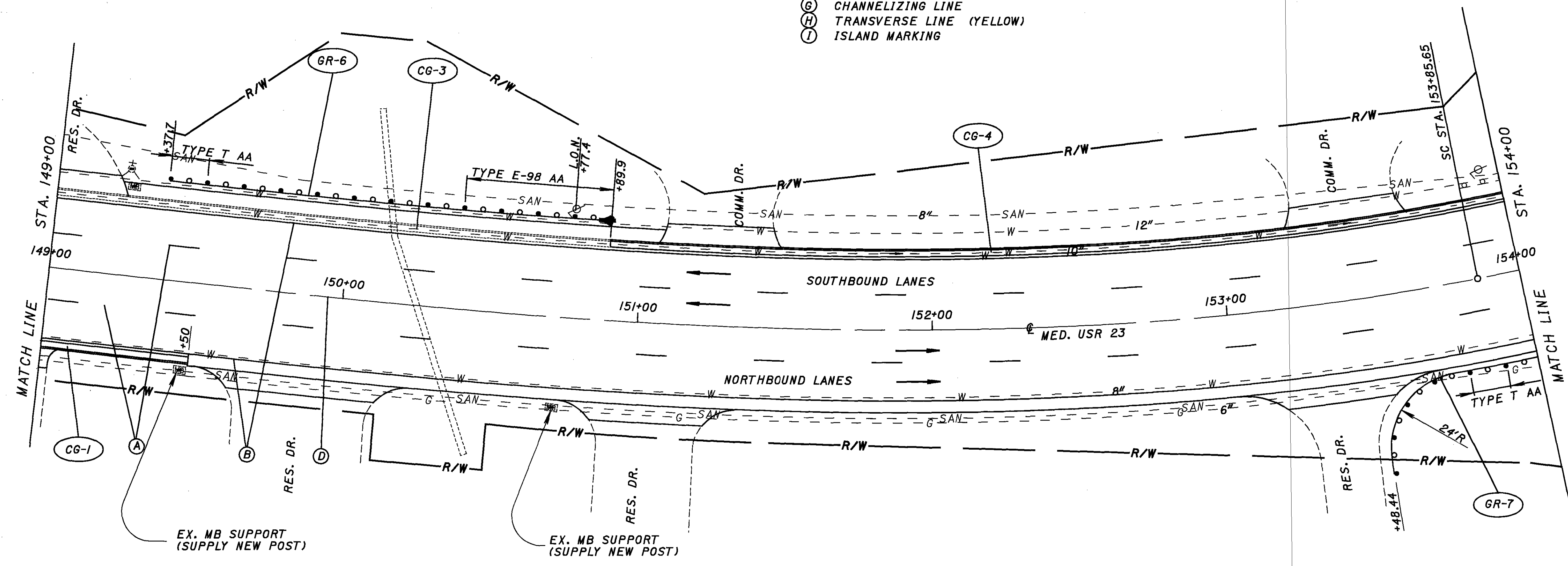


SPIRAL DATA

P.I. Sta. 143+92.69
 $\Delta = 16^\circ 22' 00''$ (RT) $x = 199.96'$
 $D_c = 2^\circ 30' 00''$ $y = 2.91'$
 $R = 2,291.83'$ $k = 99.99'$
 $L_s = 200.00'$ $p = 0.73'$
 $\text{Theta} = 2^\circ 30' 00''$ $L_c = 454.67'$
 $LT = 133.35'$ $T_s = 429.68'$
 $ST = 66.68'$ $E_s = 24.31'$

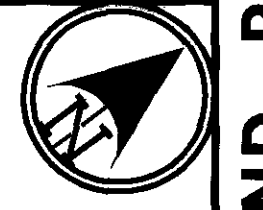
- PAVEMENT MARKING LEGEND**
- (A) LANE LINE
 - (B) EDGE LINE (WHITE)
 - (C) EDGE LINE (YELLOW)
 - (D) CENTER LINE (DOUBLE SOLID)
 - (E) LANE ARROW
 - (F) STOP LINE
 - (G) CHANNELIZING LINE
 - (H) TRANSVERSE LINE (YELLOW)
 - (I) ISLAND MARKING

FOR PAVEMENT CALCULATIONS SEE SHEETS 29-31.
 FOR PAVEMENT MARKING QUANTITIES SEE SHEET 35.
 FOR DRAINAGE ITEM QUANTITIES SEE SHEETS 32-33.
 FOR GUARDRAIL QUANTITIES SEE SHEET 34.



CALCULATED
 CER
 CHECKED
 LAW

PLAN AND PAVEMENT MARKING
STA. 144+00 TO STA. 154+00

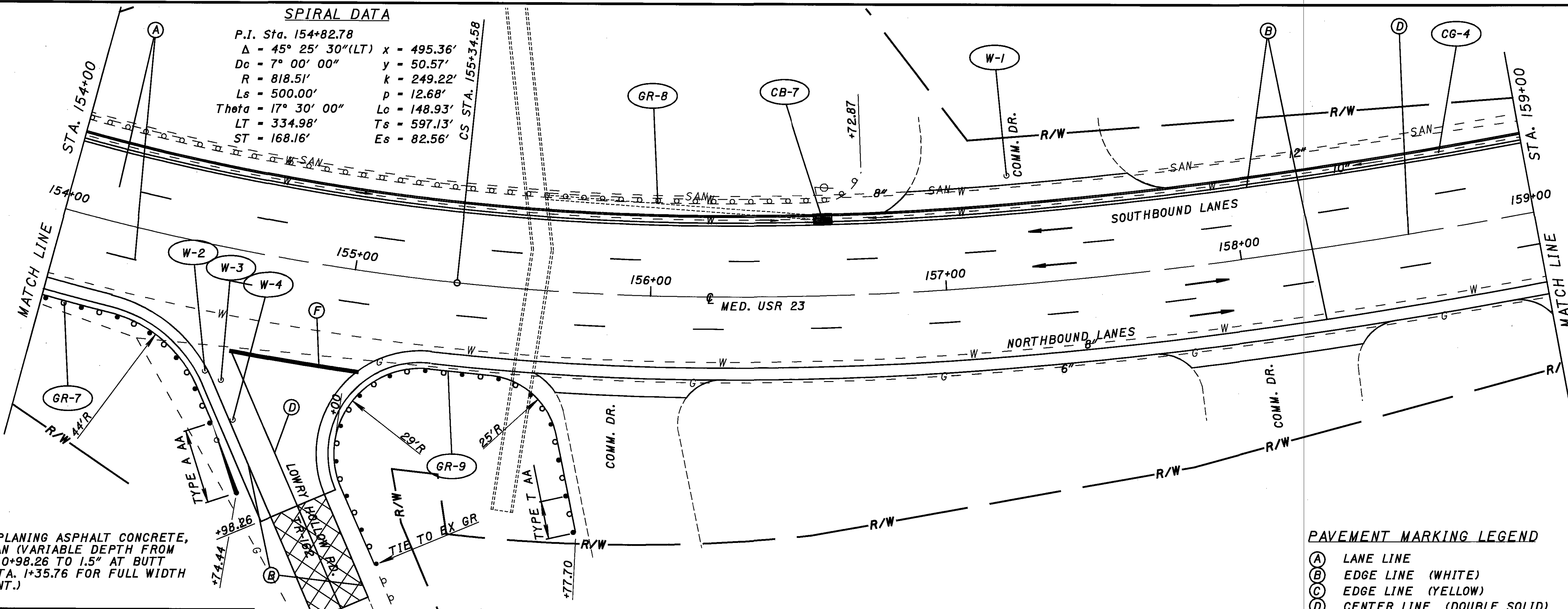


SCI-23-2.39

38
 110

SPIRAL DATA

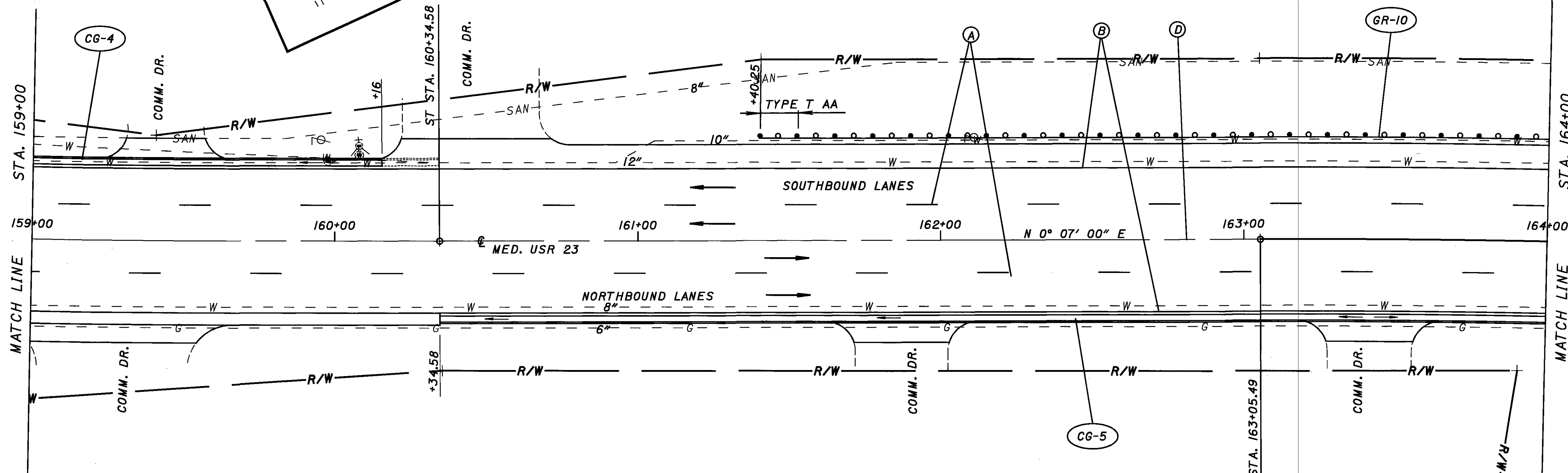
P.I. Sta. 154+82.78
 $\Delta = 45^\circ 25' 30''$ (LT) $x = 495.36'$
 $D_c = 7^\circ 00' 00''$ $y = 50.57'$
 $R = 818.51'$ $k = 249.22'$
 $L_s = 500.00'$ $p = 12.68'$
 $\text{Theta} = 17^\circ 30' 00''$ $L_c = 148.93'$
 $LT = 334.98'$ $T_s = 597.13'$
 $ST = 168.16'$ $E_s = 82.56'$
 CS STA. 155+34.58



PAVEMENT PLANING ASPHALT CONCRETE,
 AS PER PLAN (VARIABLE DEPTH FROM
 0" AT STA. 0+98.26 TO 1.5" AT BUTT
 JOINT AT STA. 1+35.76 FOR FULL WIDTH
 OF PAVEMENT.)

PAVEMENT MARKING LEGEND

- (A) LANE LINE
- (B) EDGE LINE (WHITE)
- (C) EDGE LINE (YELLOW)
- (D) CENTER LINE (DOUBLE SOLID)
- (E) LANE ARROW
- (F) STOP LINE
- (G) CHANNELIZING LINE
- (H) TRANSVERSE LINE (YELLOW)
- (I) ISLAND MARKING

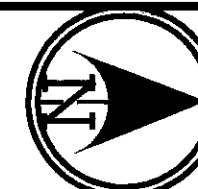


FOR PAVEMENT CALCULATIONS SEE SHEETS 29-31.
 FOR PAVEMENT MARKING QUANTITIES SEE SHEET 35.
 FOR DRAINAGE ITEM QUANTITIES SEE SHEETS 32-33.
 FOR GUARDRAIL QUANTITIES SEE SHEET 34.

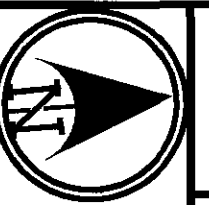


CALCULATED
 CER
 CHECKED
 LAW

**PLAN AND PAVEMENT MARKING
 STA. 154+00 TO STA. 164+00**



SCI-23-2.39



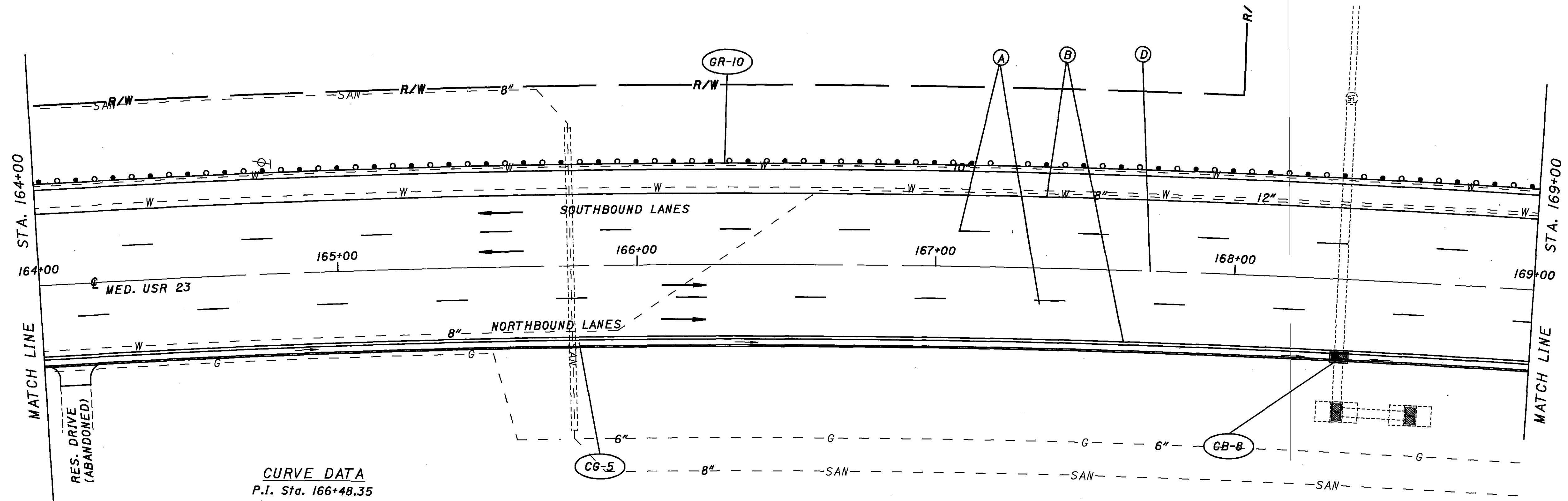
HORIZONTAL SCALE IN FEET
0 20 40

CALCULATED
CER
CHECKED
LAW

PLAN AND PAVEMENT MARKING
STA. 164+00 TO STA. 174+00

SCI-23-2.39

40
110

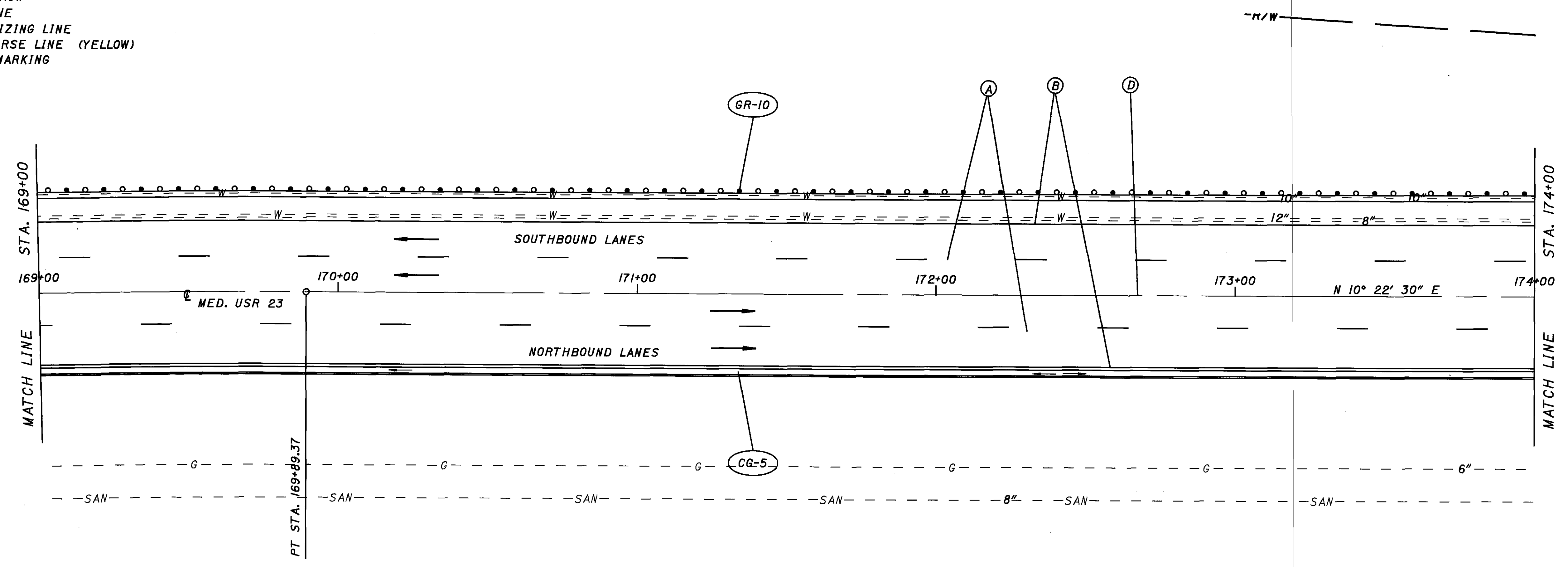


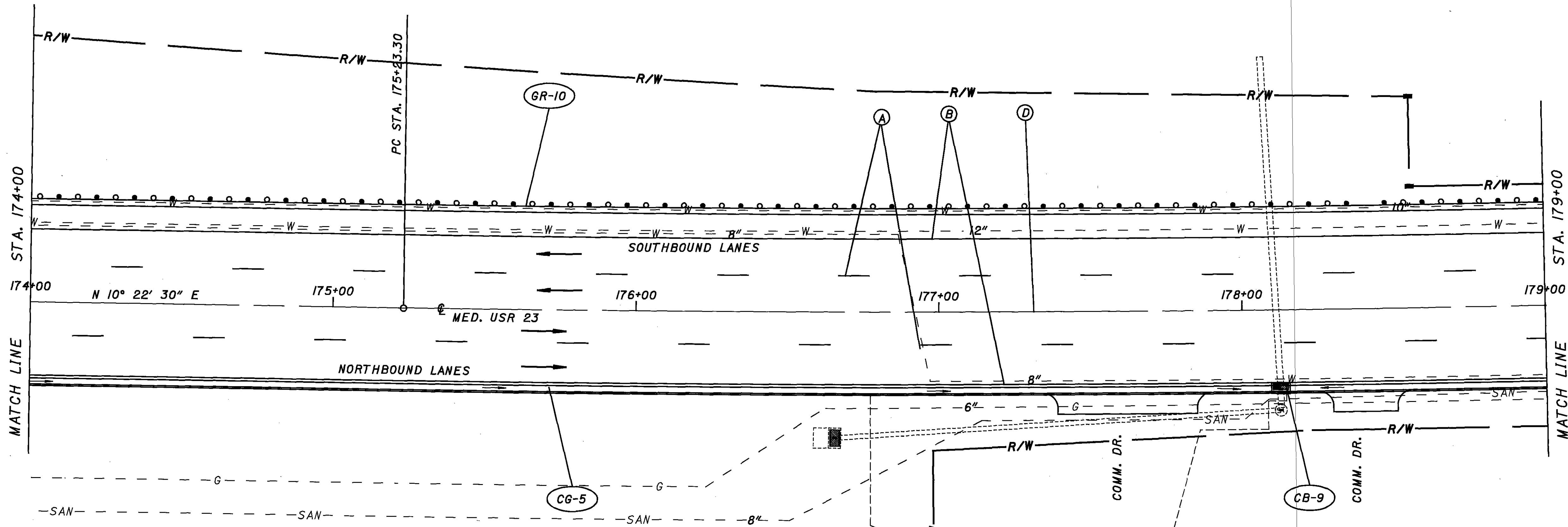
CURVE DATA
 P.I. Sta. 166+48.35
 $\Delta = 10^\circ 15' 30''$ (RT)
 $D_c = 1^\circ 30' 00''$
 $R = 3,819.72'$
 $T = 342.86'$
 $L = 683.89'$
 $E = 15.36'$

FOR PAVEMENT CALCULATIONS SEE SHEETS 29-31.
 FOR PAVEMENT MARKING QUANTITIES SEE SHEET 35.
 FOR DRAINAGE ITEM QUANTITIES SEE SHEETS 32-33.
 FOR GUARDRAIL QUANTITIES SEE SHEET 34.

PAVEMENT MARKING LEGEND

- (A) LANE LINE
- (B) EDGE LINE (WHITE)
- (C) EDGE LINE (YELLOW)
- (D) CENTER LINE (DOUBLE SOLID)
- (E) LANE ARROW
- (F) STOP LINE
- (G) CHANNELIZING LINE
- (H) TRANSVERSE LINE (YELLOW)
- (I) ISLAND MARKING

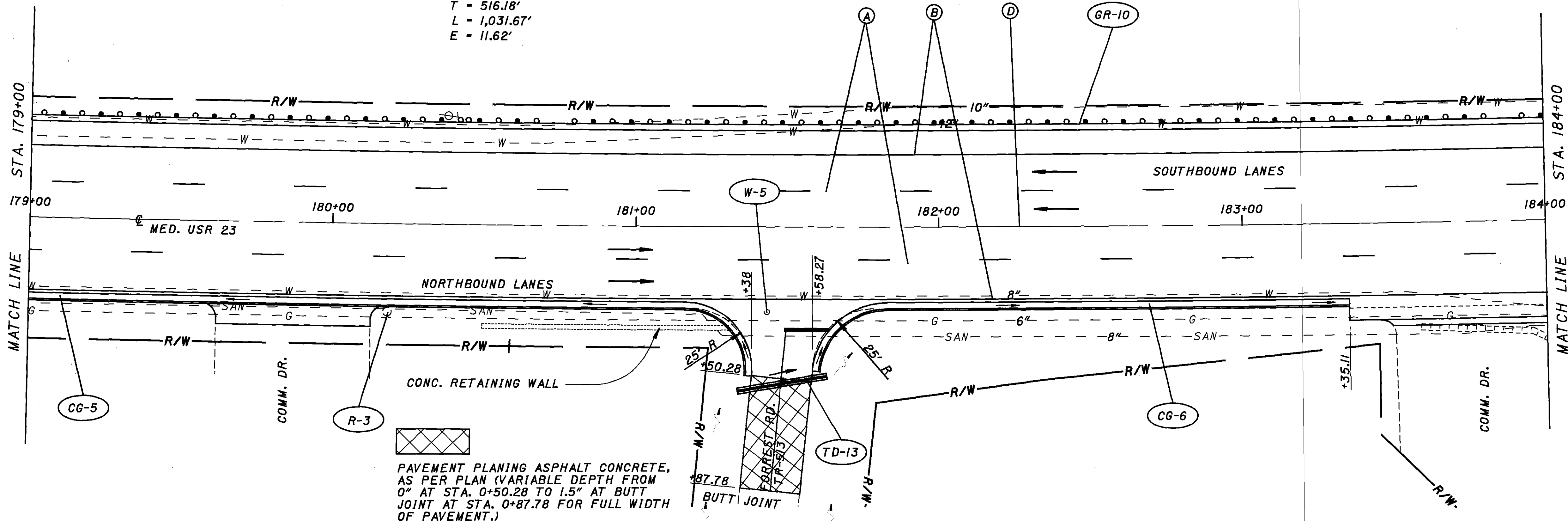




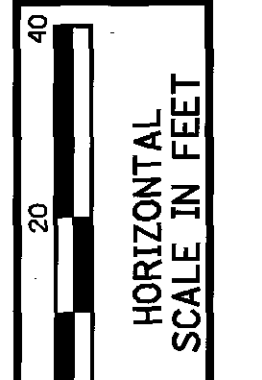
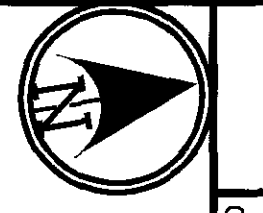
FOR PAVEMENT CALCULATIONS SEE SHEETS 29-31.
 FOR PAVEMENT MARKING QUANTITIES SEE SHEET 35.
 FOR DRAINAGE ITEM QUANTITIES SEE SHEETS 32-33.
 FOR GUARDRAIL QUANTITIES SEE SHEET 34.

- PAVEMENT MARKING LEGEND**
- (A) LANE LINE
 - (B) EDGE LINE (WHITE)
 - (G) EDGE LINE (YELLOW)
 - (D) CENTER LINE (DOUBLE SOLID)
 - (E) LANE ARROW
 - (F) STOP LINE
 - (G) CHANNELIZING LINE
 - (H) TRANSVERSE LINE (YELLOW)
 - (J) ISLAND MARKING

CURVE DATA
 P.I. Sta. 180+39.48
 $\Delta = 5^\circ 09' 30''$ (LT)
 $D_c = 0^\circ 30' 00''$
 $R = 11,459.16'$
 $T = 516.18'$
 $L = 1,031.67'$
 $E = 11.62'$

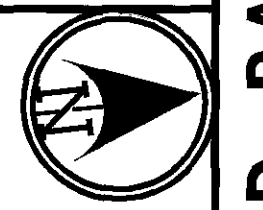


PAVEMENT PLANING ASPHALT CONCRETE,
 AS PER PLAN (VARIABLE DEPTH FROM
 0" AT STA. 0+50.28 TO 1.5" AT BUTT
 JOINT AT STA. 0+87.78 FOR FULL WIDTH
 OF PAVEMENT.)

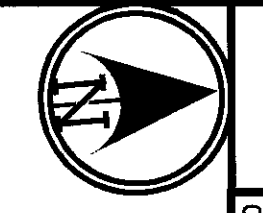


CALCULATED
 CER
 CHECKED
 LAW

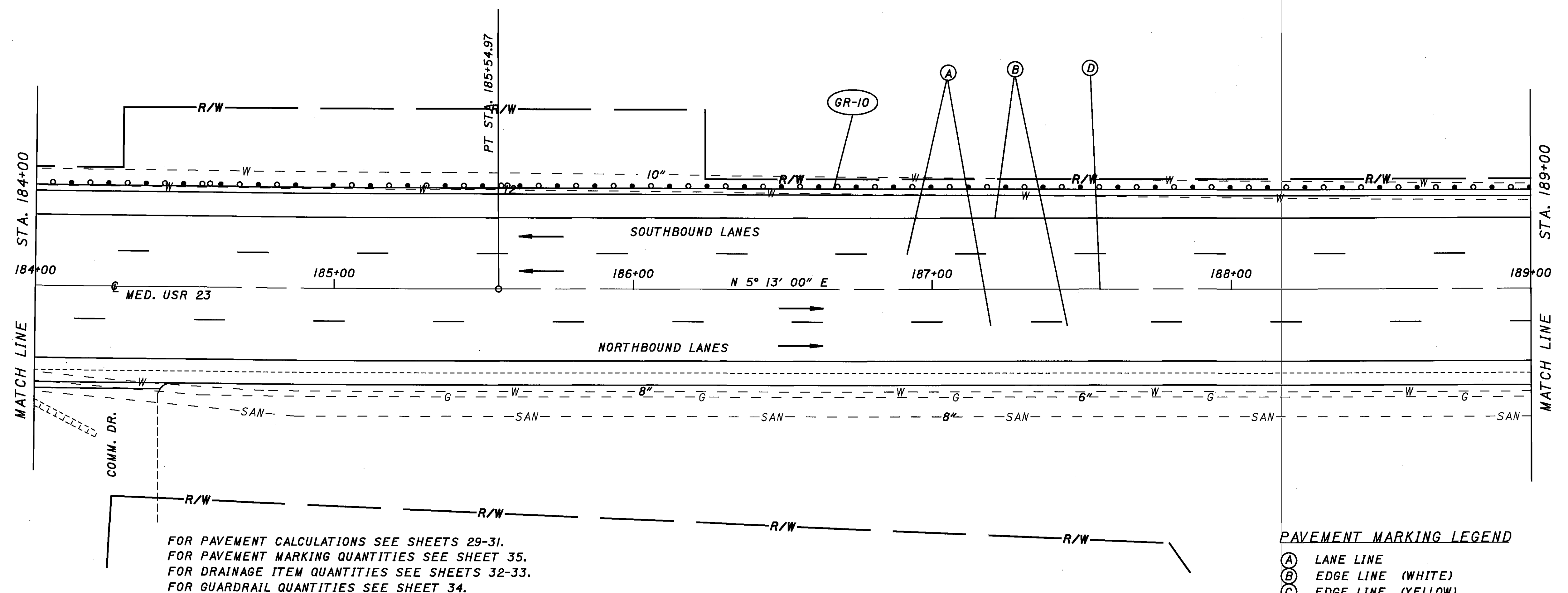
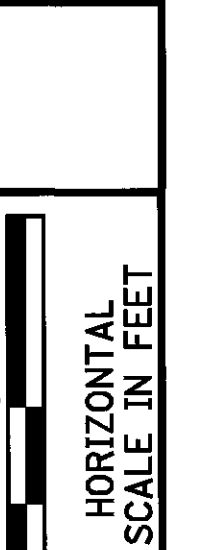
**PLAN AND PAVEMENT MARKING
 STA. 174+00 TO STA. 184+00**



SCI-23-2.39



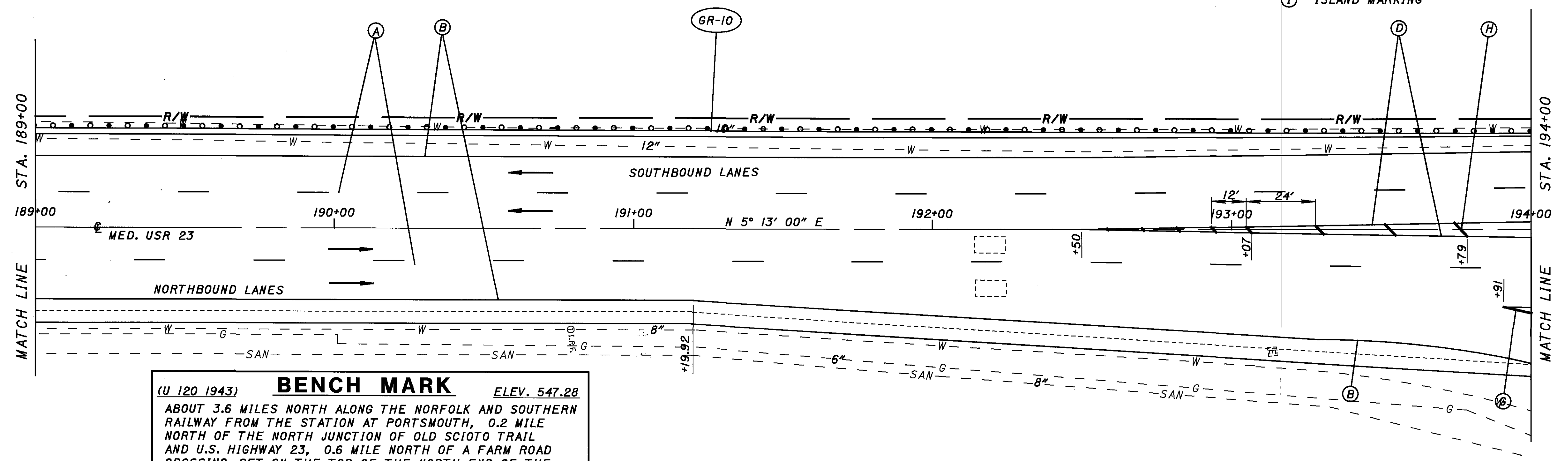
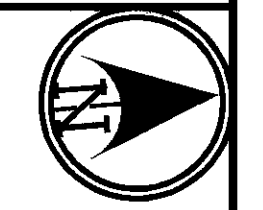
CALCULATED
CER
CHECKED
LAW



FOR PAVEMENT CALCULATIONS SEE SHEETS 29-31.
FOR PAVEMENT MARKING QUANTITIES SEE SHEET 35.
FOR DRAINAGE ITEM QUANTITIES SEE SHEETS 32-33.
FOR GUARDRAIL QUANTITIES SEE SHEET 34.

PAVEMENT MARKING LEGEND

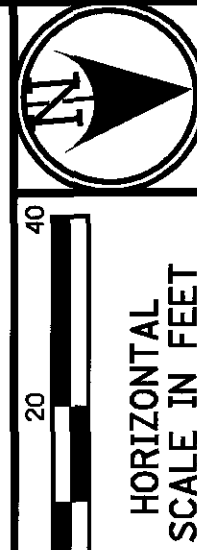
- (A) LANE LINE
- (B) EDGE LINE (WHITE)
- (C) EDGE LINE (YELLOW)
- (D) CENTER LINE (DOUBLE SOLID)
- (E) LANE ARROW
- (F) STOP LINE
- (G) CHANNELIZING LINE
- (H) TRANSVERSE LINE (YELLOW)
- (I) ISLAND MARKING



(U 120 1943) **BENCH MARK** ELEV. 547.28
ABOUT 3.6 MILES NORTH ALONG THE NORFOLK AND SOUTHERN RAILWAY FROM THE STATION AT PORTSMOUTH, 0.2 MILE NORTH OF THE NORTH JUNCTION OF OLD SCIOTO TRAIL AND U.S. HIGHWAY 23, 0.6 MILE NORTH OF A FARM ROAD CROSSING, SET ON THE TOP OF THE NORTH END OF THE EAST HEADWALL OF A 2 FOOT BY 3 FOOT CONCRETE BOX CULVERT WITH WING WALLS, 58 FEET WEST OF THE CENTER LINE OF THE SOUTHBOUND LANE OF THE U.S. HIGHWAY, 15 FEET EAST OF THE EAST RAIL OF THE EAST TRACK, AND ABOUT 6 FEET BELOW THE LEVEL OF THE TRACK

PLAN AND PAVEMENT MARKING
STA. 184+00 TO STA. 194+00

SCI-23-2.39

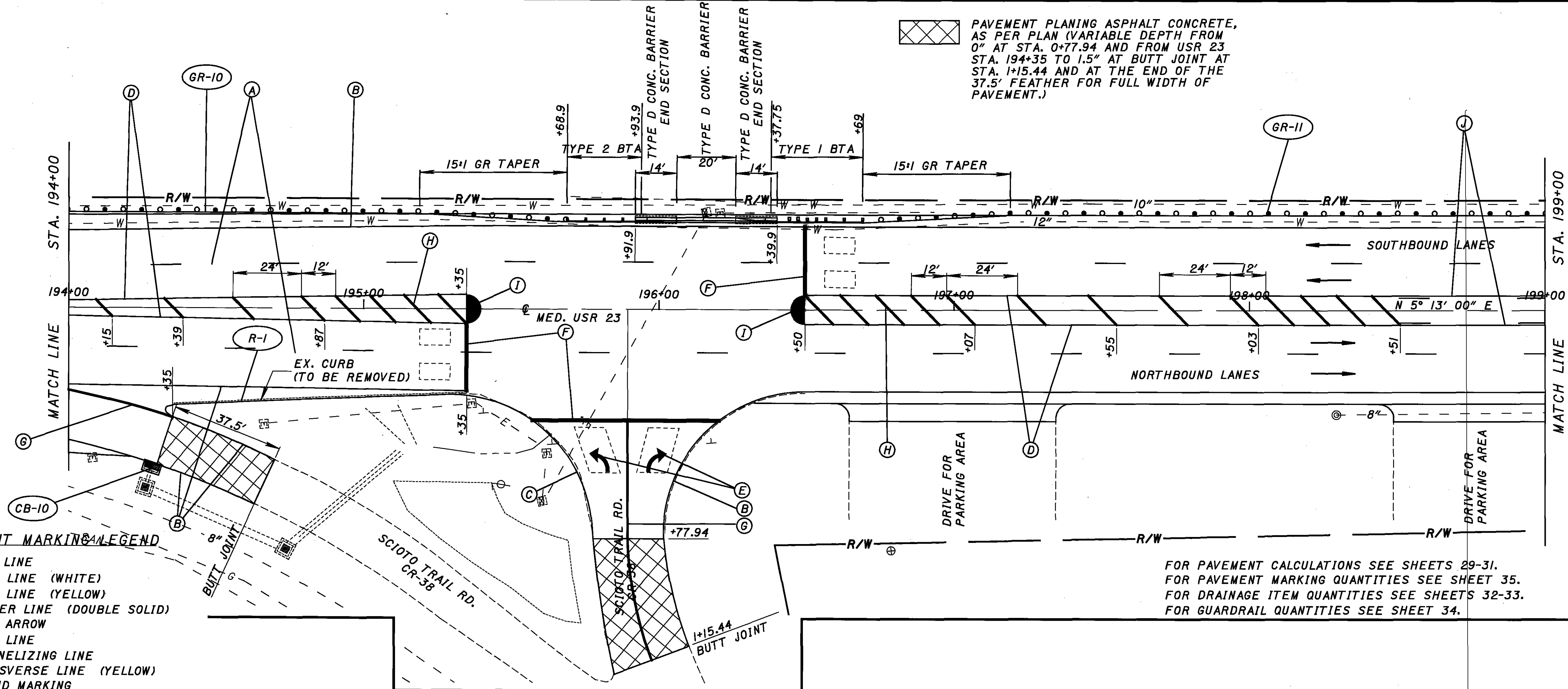


CALCULATED
CER
CHECKED
LAW

**PLAN AND PAVEMENT MARKING
STA. 194+00 TO STA. 204+00**

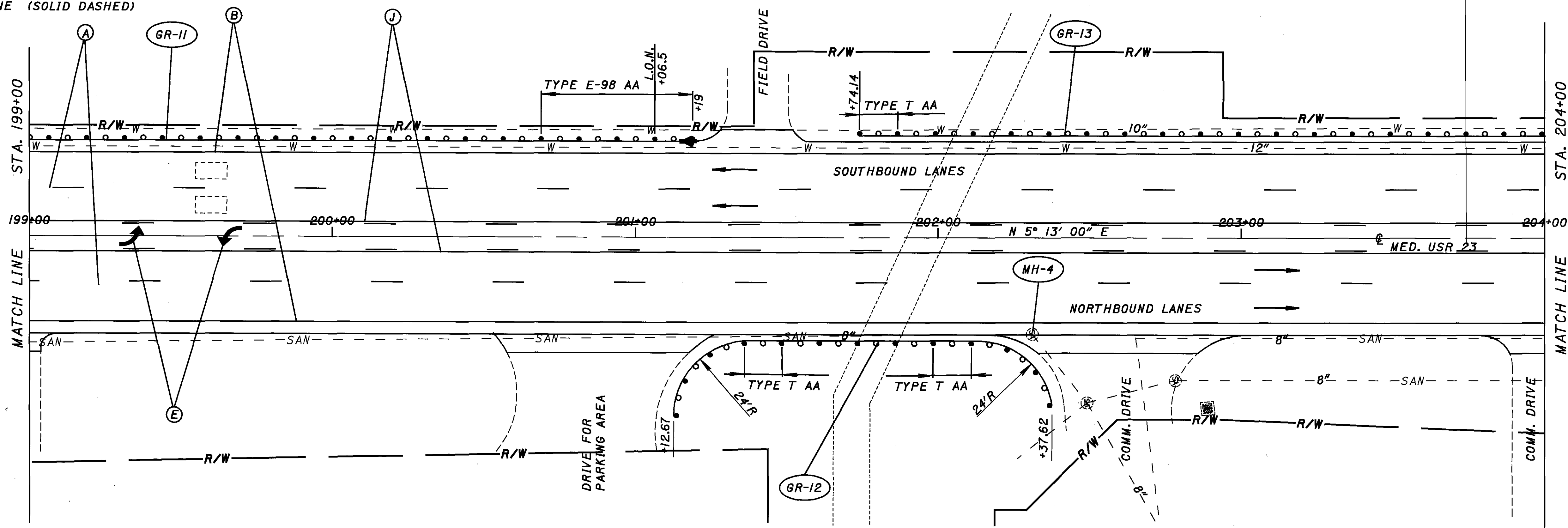
SCI-23-2.39

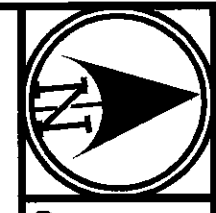
PAVEMENT PLANING ASPHALT CONCRETE,
AS PER PLAN (VARIABLE DEPTH FROM
0" AT STA. 0+77.94 AND FROM USR 23
STA. 194+35 TO 1.5" AT BUTT JOINT AT
STA. 1+15.44 AND AT THE END OF THE
37.5' FEATHER FOR FULL WIDTH OF
PAVEMENT.)



- PAVEMENT MARKING LEGEND**
- (A) LANE LINE
 - (B) EDGE LINE (WHITE)
 - (C) EDGE LINE (YELLOW)
 - (E) CENTER LINE (DOUBLE SOLID)
 - (F) LANE ARROW
 - (G) STOP LINE
 - (H) CHANNELIZING LINE
 - (I) TRANSVERSE LINE (YELLOW)
 - (J) ISLAND MARKING
 - (L) CENTER LINE (SOLID DASHED)

FOR PAVEMENT CALCULATIONS SEE SHEETS 29-31.
FOR PAVEMENT MARKING QUANTITIES SEE SHEET 35.
FOR DRAINAGE ITEM QUANTITIES SEE SHEETS 32-33.
FOR GUARDRAIL QUANTITIES SEE SHEET 34.





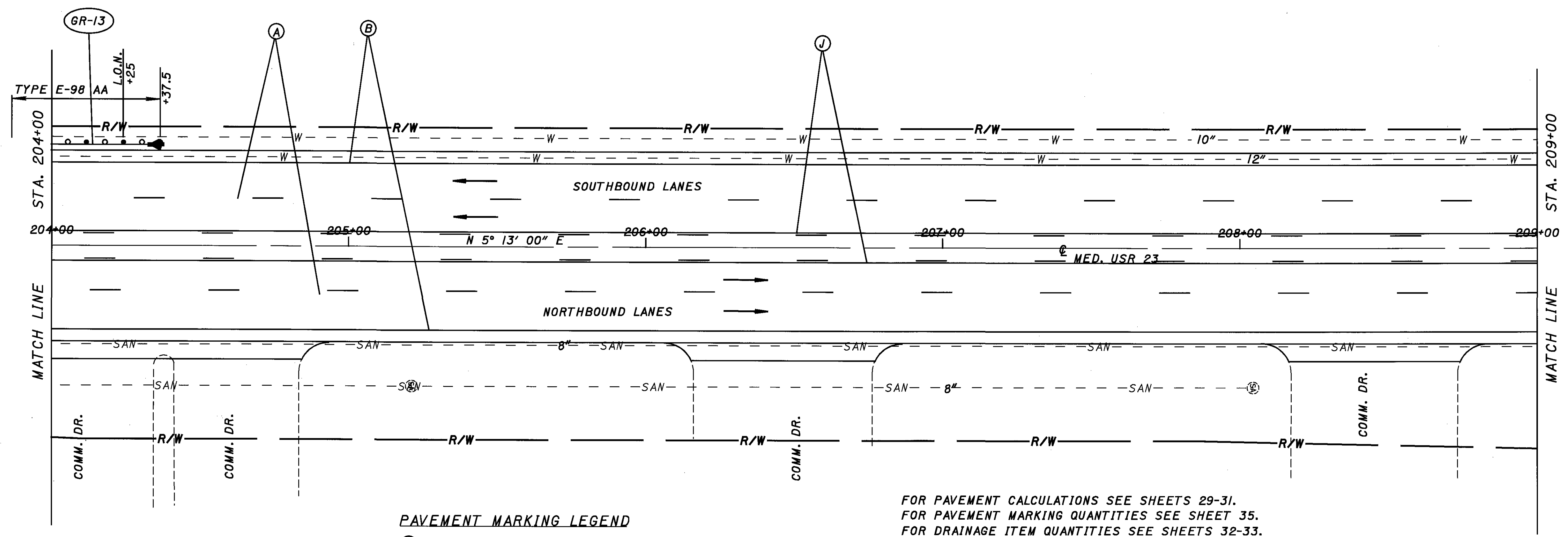
0 20 40
HORIZONTAL
SCALE IN FEET

CALCULATED
CER
CHECKED
LAW

PLAN AND PAVEMENT MARKING
STA. 204+00 TO STA. 214+00

SCI-23-2.39

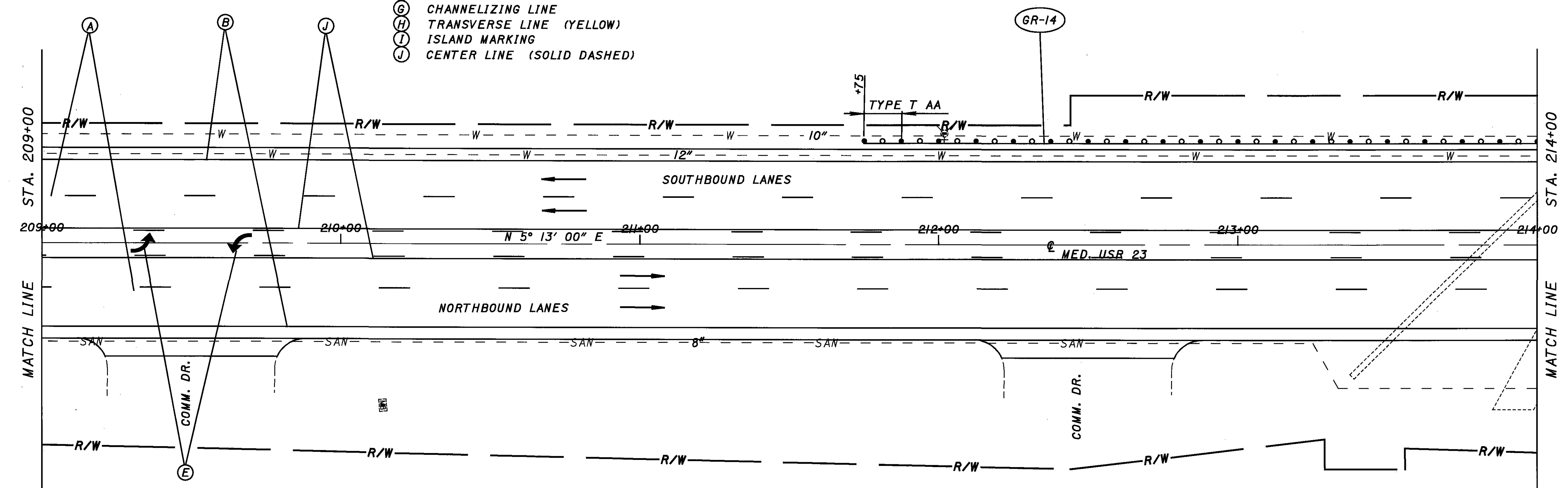
44
110



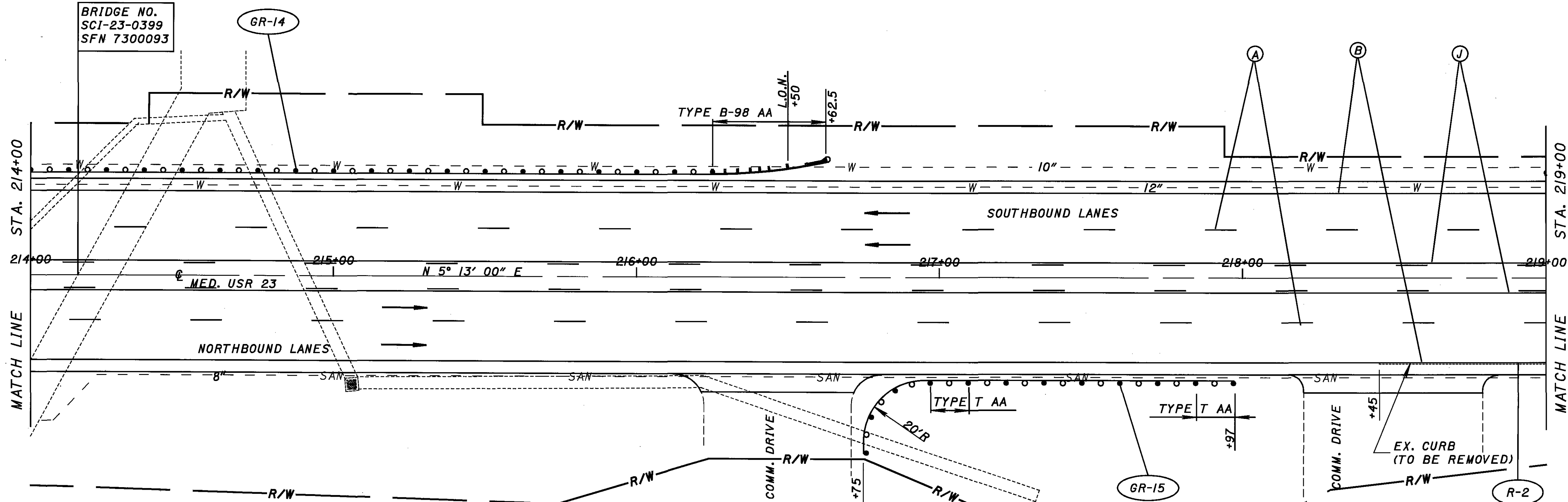
PAVEMENT MARKING LEGEND

- (A) LANE LINE
- (B) EDGE LINE (WHITE)
- (C) EDGE LINE (YELLOW)
- (D) CENTER LINE (DOUBLE SOLID)
- (E) LANE ARROW
- (F) STOP LINE
- (G) CHANNELIZING LINE
- (H) TRANSVERSE LINE (YELLOW)
- (I) ISLAND MARKING
- (J) CENTER LINE (SOLID DASHED)

FOR PAVEMENT CALCULATIONS SEE SHEETS 29-31.
FOR PAVEMENT MARKING QUANTITIES SEE SHEET 35.
FOR DRAINAGE ITEM QUANTITIES SEE SHEETS 32-33.
FOR GUARDRAIL QUANTITIES SEE SHEET 34.



BRIDGE NO.
SCI-23-0399
SFN 7300093



PAVEMENT MARKING LEGEND

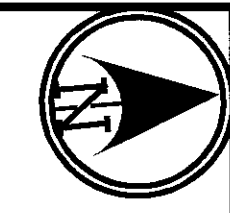
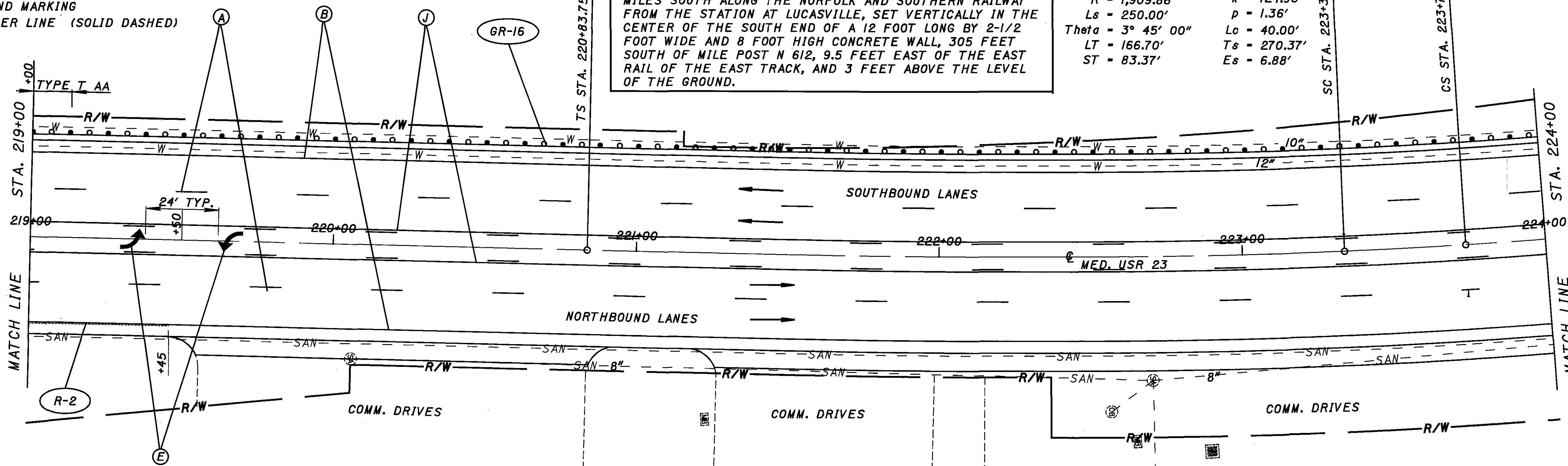
- (A) LANE LINE
- (B) EDGE LINE (WHITE)
- (C) EDGE LINE (YELLOW)
- (D) CENTER LINE (DOUBLE SOLID)
- (E) LANE ARROW
- (F) STOP LINE
- (G) CHANNELIZING LINE
- (H) TRANSVERSE LINE (YELLOW)
- (I) ISLAND MARKING
- (J) CENTER LINE (SOLID DASHED)

FOR PAVEMENT CALCULATIONS SEE SHEETS 29-31.
FOR PAVEMENT MARKING QUANTITIES SEE SHEET 35.
FOR DRAINAGE ITEM QUANTITIES SEE SHEETS 32-33.
FOR GUARDRAIL QUANTITIES SEE SHEET 34.

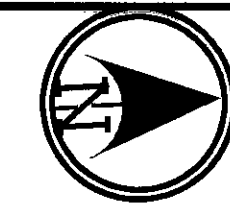
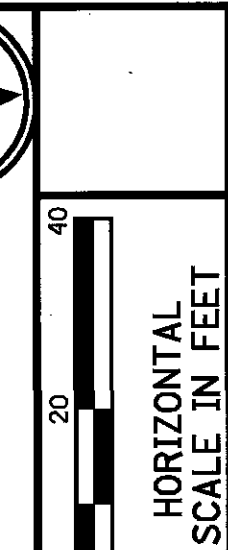
(J 311 1967) **BENCH MARK** ELEV. 560.87
ABOUT 4.2 MILES NORTH ALONG THE NORFOLK AND SOUTHERN RAILWAY FROM THE STATION AT PORTSMOUTH, NEAR THE SOUTH END OF THE U.S. HIGHWAY 23 OVERPASS, ABOUT 5.35 MILES SOUTH ALONG THE NORFOLK AND SOUTHERN RAILWAY FROM THE STATION AT LUCASVILLE, SET VERTICALLY IN THE CENTER OF THE SOUTH END OF A 12 FOOT LONG BY 2-1/2 FOOT WIDE AND 8 FOOT HIGH CONCRETE WALL, 305 FEET SOUTH OF MILE POST N 612, 9.5 FEET EAST OF THE EAST RAIL OF THE EAST TRACK, AND 3 FEET ABOVE THE LEVEL OF THE GROUND.

SPIRAL DATA

P.I. Sta. 223+54.12
 $\Delta = 8^\circ 42' 00''$ (LT) $x = 249.89'$
 $Dc = 3^\circ 00' 00''$ $y = 5.45'$
 $R = 1,909.86'$ $k = 124.98'$
 $Ls = 250.00'$ $p = 1.36'$
 $Theta = 3^\circ 45' 00''$ $Lc = 40.00'$
 $LT = 166.70'$ $Ts = 270.37'$
 $ST = 83.37'$ $Es = 6.88'$

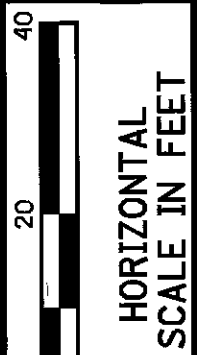
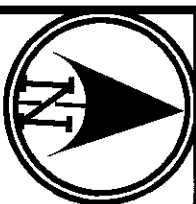


CALCULATED
CER
CHECKED
LAW



PLAN AND PAVEMENT MARKING
STA. 214+00 TO STA. 224+00

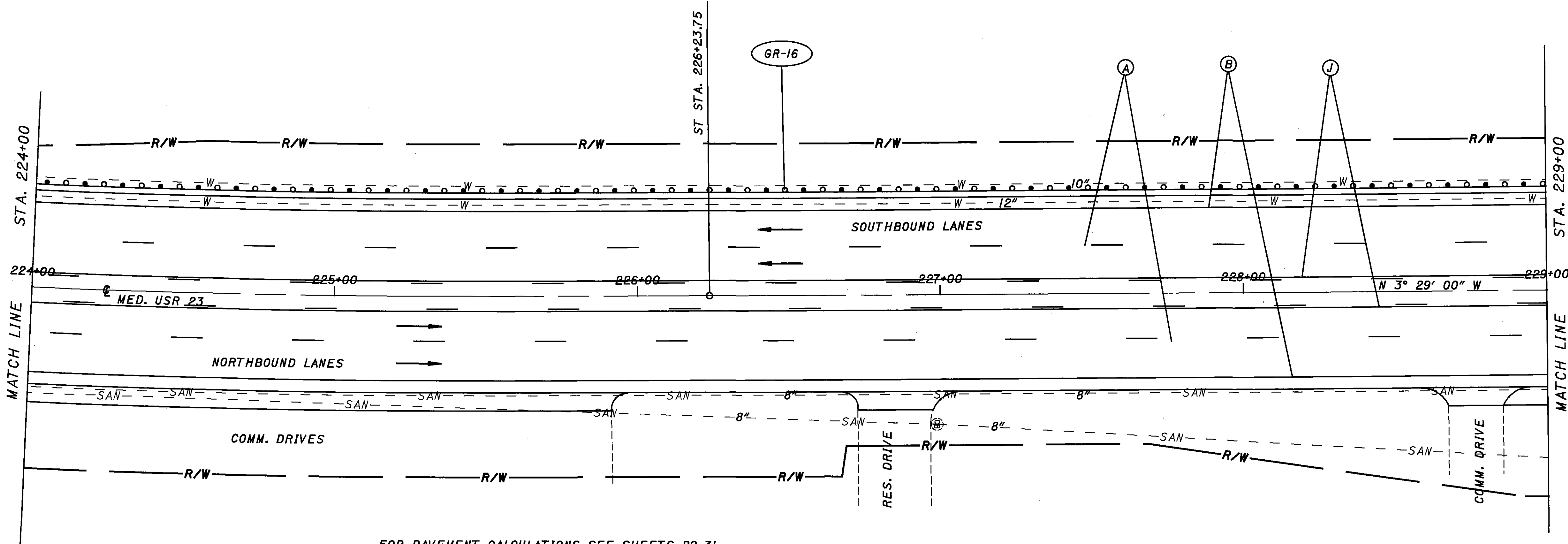
SCI-23-2.39



CALCULATED
CER
CHECKED
LAW

PLAN AND PAVEMENT MARKING
STA. 224+00 TO STA. 234+00

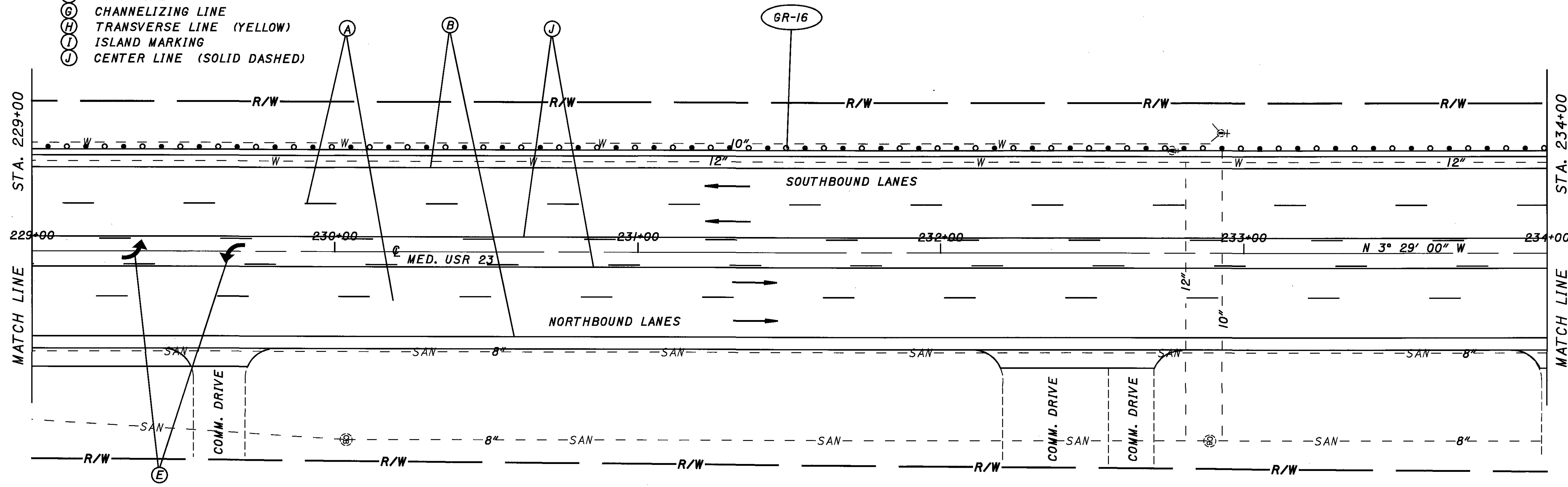
SCI-23-2.39

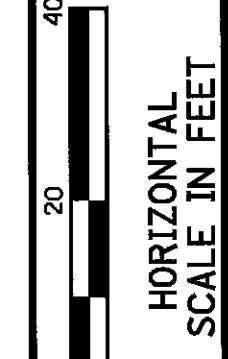
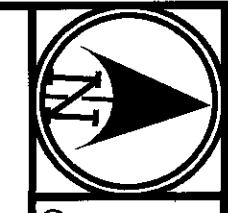


PAVEMENT MARKING LEGEND

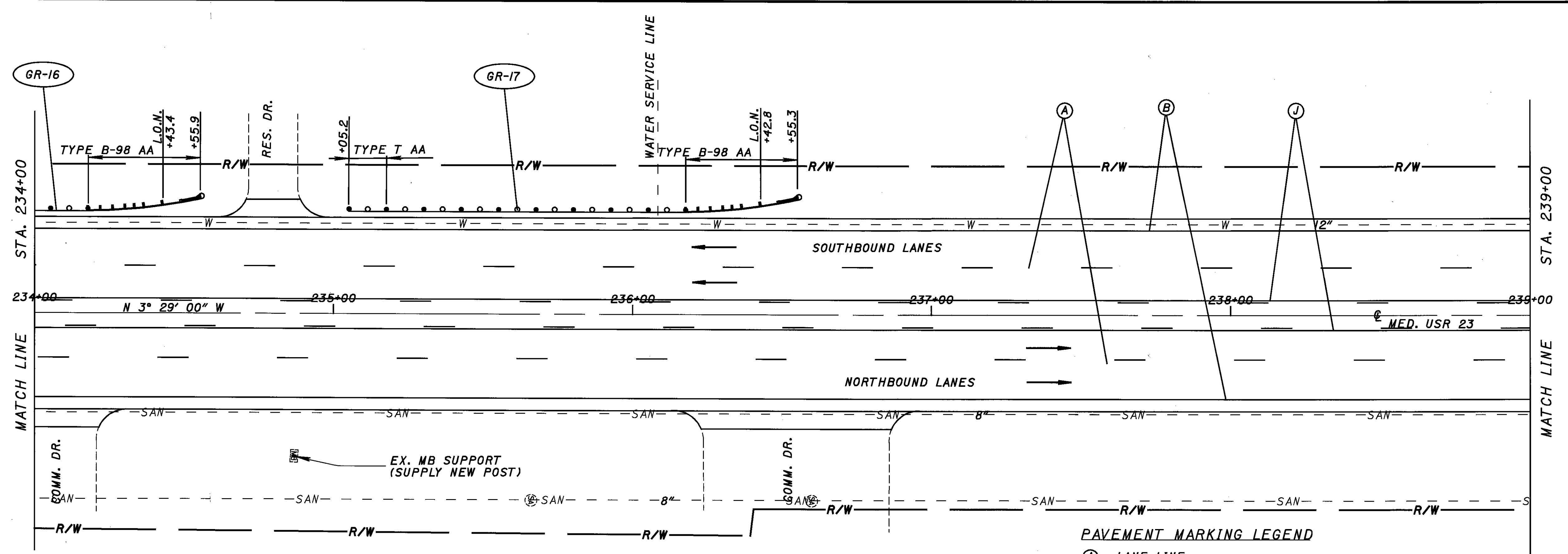
- (A) LANE LINE
- (B) EDGE LINE (WHITE)
- (C) EDGE LINE (YELLOW)
- (D) CENTER LINE (DOUBLE SOLID)
- (E) LANE ARROW
- (F) STOP LINE
- (G) CHANNELIZING LINE
- (H) TRANSVERSE LINE (YELLOW)
- (I) ISLAND MARKING
- (J) CENTER LINE (SOLID DASHED)

FOR PAVEMENT CALCULATIONS SEE SHEETS 29-31.
 FOR PAVEMENT MARKING QUANTITIES SEE SHEET 35.
 FOR DRAINAGE ITEM QUANTITIES SEE SHEETS 32-33.
 FOR GUARDRAIL QUANTITIES SEE SHEET 34.





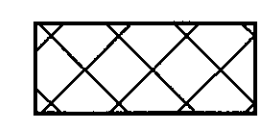
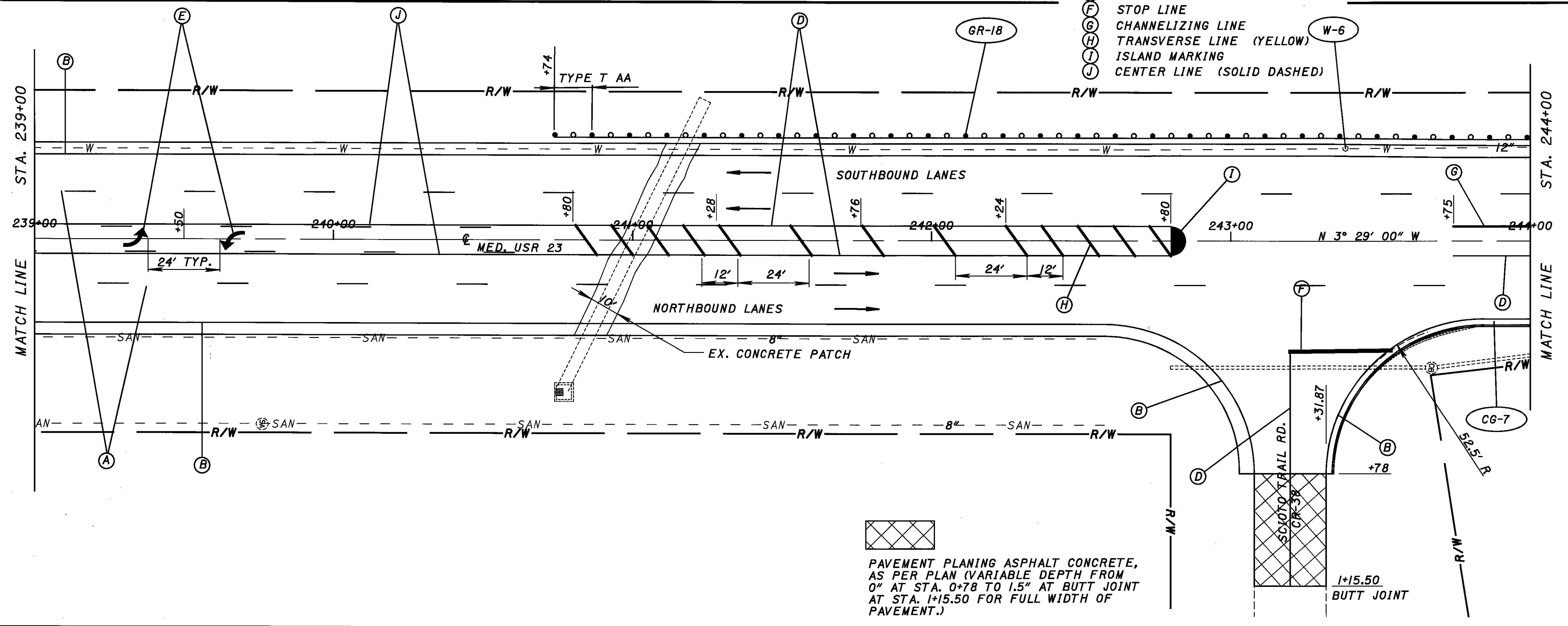
HORIZONTAL SCALE IN FEET
CALCULATED
CER
CHECKED
LAW



FOR PAVEMENT CALCULATIONS SEE SHEETS 29-31.
 FOR PAVEMENT MARKING QUANTITIES SEE SHEET 35.
 FOR DRAINAGE ITEM QUANTITIES SEE SHEETS 32-33.
 FOR GUARDRAIL QUANTITIES SEE SHEET 34.

PAVEMENT MARKING LEGEND

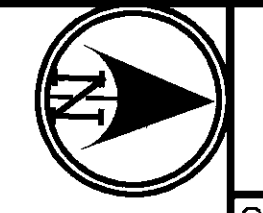
- (A) LANE LINE
- (B) EDGE LINE (WHITE)
- (C) EDGE LINE (YELLOW)
- (D) CENTER LINE (DOUBLE SOLID)
- (E) LANE ARROW
- (F) STOP LINE
- (G) CHANNELIZING LINE
- (H) TRANSVERSE LINE (YELLOW)
- (I) ISLAND MARKING
- (J) CENTER LINE (SOLID DASHED)



PAVEMENT PLANING ASPHALT CONCRETE,
 AS PER PLAN (VARIABLE DEPTH FROM
 0" AT STA. 0+78 TO 1.5" AT BUTT JOINT
 AT STA. 1+15.50 FOR FULL WIDTH OF
 PAVEMENT.)

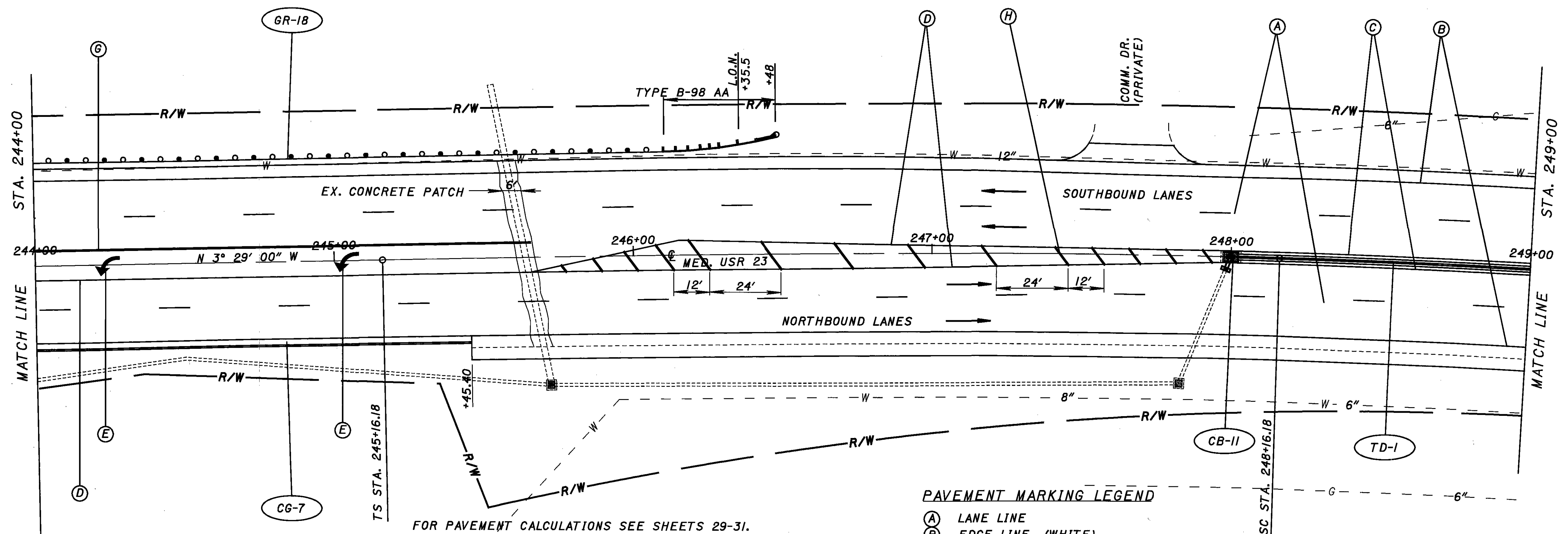
**PLAN AND PAVEMENT MARKING
 STA. 234+00 TO STA. 244+00**

SCI-23-2.39



0 20 40
HORIZONTAL
SCALE IN FEET

CALCULATED
CER
CHECKED
LAW

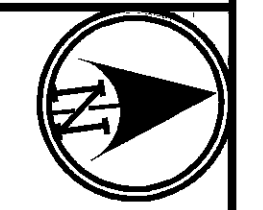
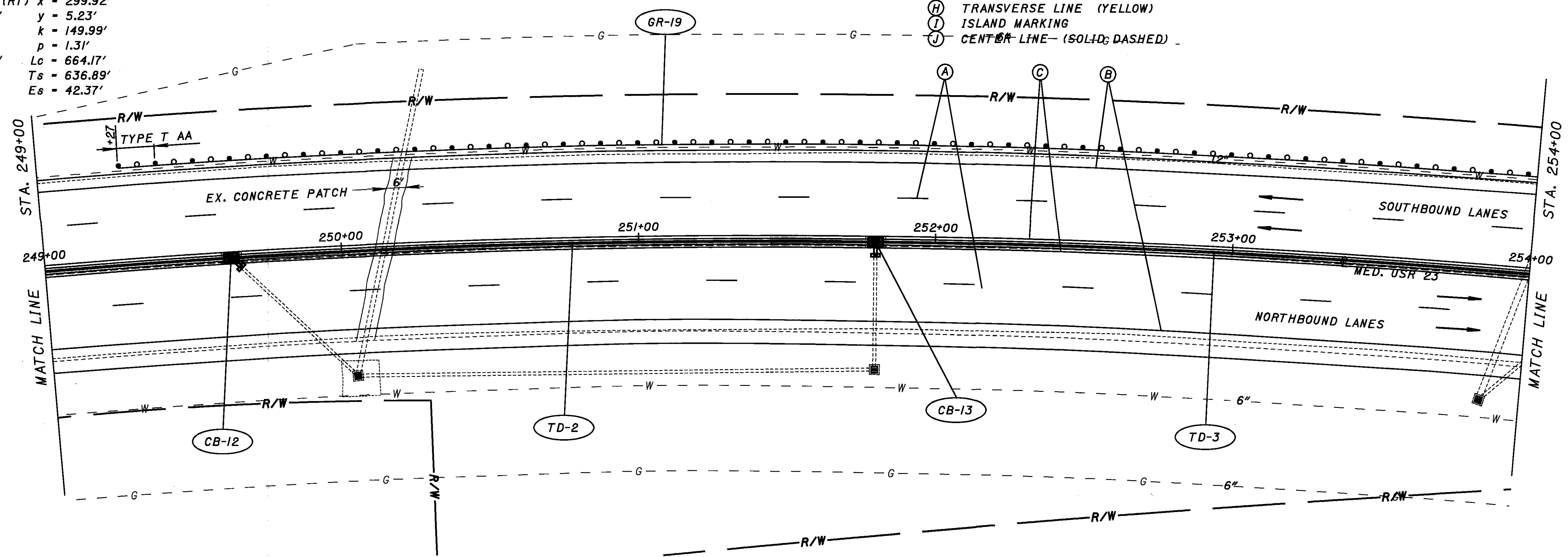


FOR PAVEMENT CALCULATIONS SEE SHEETS 29-31.
FOR PAVEMENT MARKING QUANTITIES SEE SHEET 35.
FOR DRAINAGE ITEM QUANTITIES SEE SHEETS 32-33.
FOR GUARDRAIL QUANTITIES SEE SHEET 34.

- PAVEMENT MARKING LEGEND**
- (A) LANE LINE
 - (B) EDGE LINE (WHITE)
 - (C) EDGE LINE (YELLOW)
 - (D) CENTER LINE (DOUBLE SOLID)
 - (E) LANE ARROW
 - (F) STOP LINE
 - (G) CHANNELIZING LINE
 - (H) TRANSVERSE LINE (YELLOW)
 - (I) ISLAND MARKING
 - (J) CENTER LINE (SOLID; DASHED)

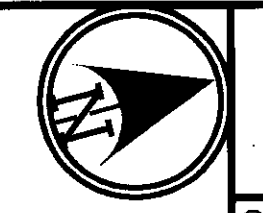
SPIRAL DATA

P.I. Sta. 251+53.07
 $\Delta = 19^\circ 17' 00''$ (RT) $x = 299.92'$
 $D_c = 2^\circ 00' 00''$ $y = 5.23'$
 $R = 2,864.79'$ $k = 149.99'$
 $L_s = 300.00'$ $p = 1.31'$
 $\text{Theta} = 3^\circ 00' 00''$ $L_c = 664.17'$
 $LT = 200.03'$ $T_s = 636.89'$
 $ST = 100.03'$ $E_s = 42.37'$

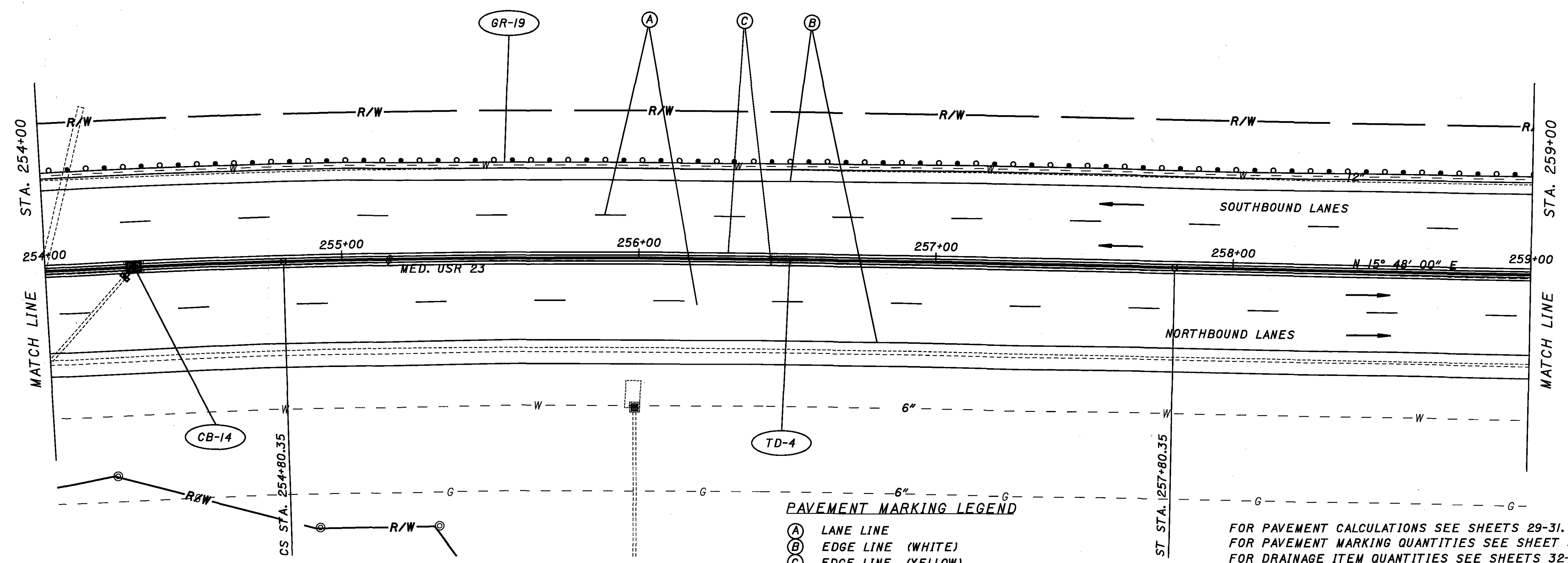


PLAN AND PAVEMENT MARKING
STA. 244+00 TO STA. 254+00

SCI-23-2.39



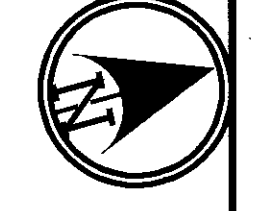
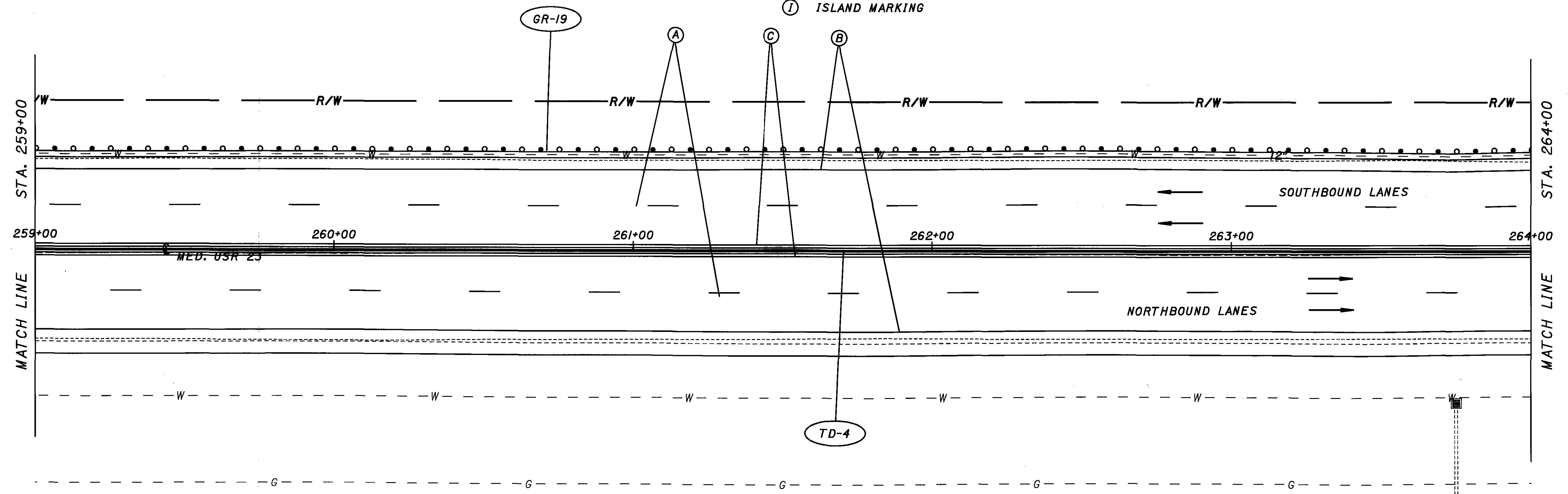
40
20
0
CALCULATED
CER
CHECKED
LAW
HORIZONTAL
SCALE IN FEET



PAVEMENT MARKING LEGEND

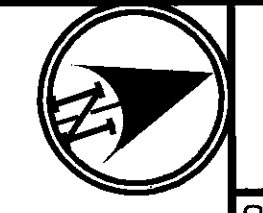
- (A) LANE LINE
- (B) EDGE LINE (WHITE)
- (C) EDGE LINE (YELLOW)
- (D) CENTER LINE (DOUBLE SOLID)
- (E) LANE ARROW
- (F) STOP LINE
- (G) CHANNELIZING LINE
- (H) TRANSVERSE LINE (YELLOW)
- (I) ISLAND MARKING

FOR PAVEMENT CALCULATIONS SEE SHEETS 29-31.
FOR PAVEMENT MARKING QUANTITIES SEE SHEET 35.
FOR DRAINAGE ITEM QUANTITIES SEE SHEETS 32-33.
FOR GUARDRAIL QUANTITIES SEE SHEET 34.



**PLAN AND PAVEMENT MARKING
STA. 254+00 TO STA. 264+00**

SCI-23-2.39



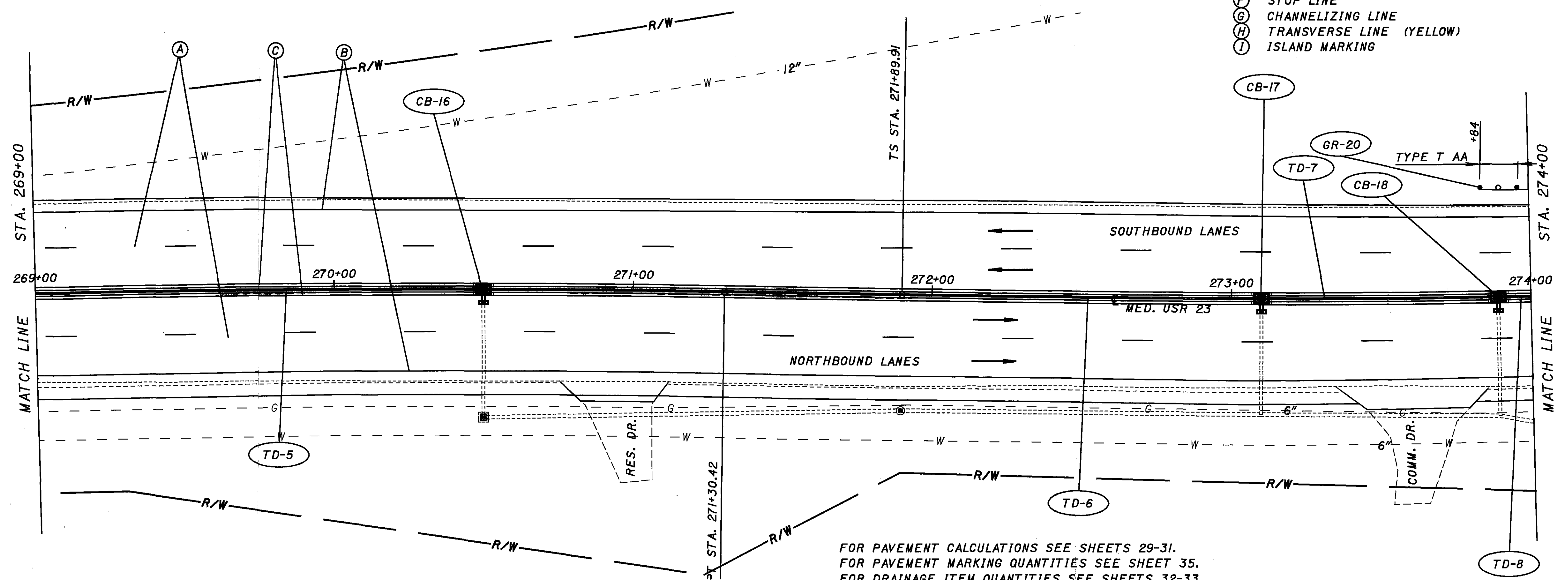
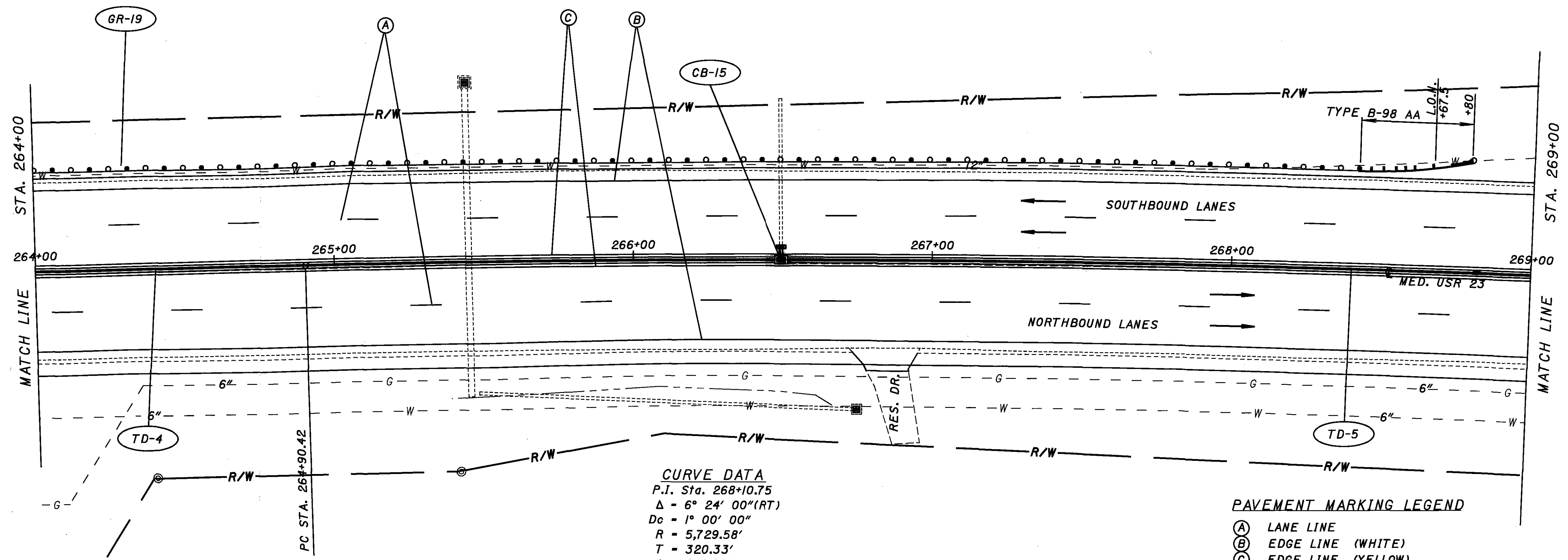
CALCULATED
CER
CHECKED
LAW

0 20 40
HORIZONTAL
SCALE IN FEET

**PLAN AND PAVEMENT MARKING
STA. 264+00 TO STA. 274+00**

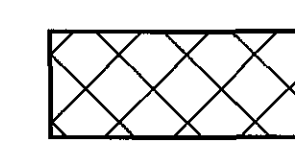
SCI-23-2.39

50
110



SPIRAL DATA

P.I. Sta. 278+84.59
 $\Delta = 38^\circ 00' 00''$ (LT) $x = 399.22'$
 $Dc = 4^\circ 00' 00''$ $y = 18.59'$
 $R = 1,432.39'$ $k = 199.87'$
 $Ls = 400.00'$ $p = 4.65'$
 $Theta = 8^\circ 00' 00''$ $Lc = 550.00'$
 $LT = 266.94'$ $Ts = 694.68'$
 $ST = 133.58'$ $Es = 87.45'$

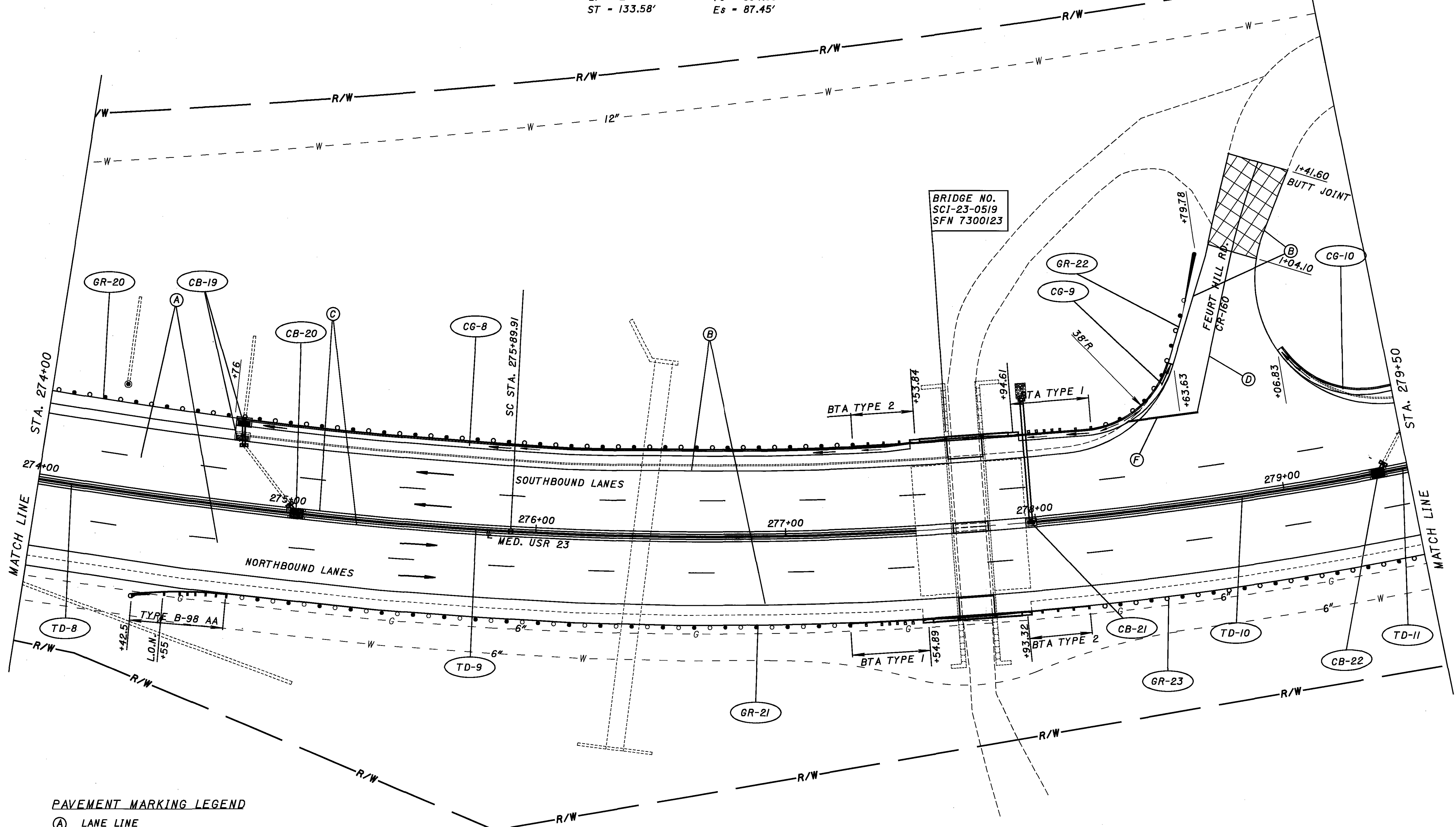


PAVEMENT PLANING ASPHALT CONCRETE,
 AS PER PLAN (VARIABLE DEPTH FROM
 0" AT STA. 1+04.10 TO 1.5" AT BUTT JOINT
 AT STA. 1+41.60 FOR FULL WIDTH OF
 PAVEMENT.)

0 20 40
 HORIZONTAL SCALE IN FEET
 CALCULATED
 CER
 CHECKED
 LAW

PLAN AND PAVEMENT MARKING
 STA. 274+00 TO STA. 279+50

SCI-23-2.39



PAVEMENT MARKING LEGEND

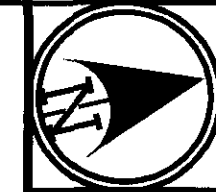
- (A) LANE LINE
- (B) EDGE LINE (WHITE)
- (C) EDGE LINE (YELLOW)
- (D) CENTER LINE (DOUBLE SOLID)
- (E) LANE ARROW
- (F) STOP LINE
- (G) CHANNELIZING LINE
- (H) TRANSVERSE LINE (YELLOW)
- (I) ISLAND MARKING

FOR PAVEMENT CALCULATIONS SEE SHEETS 29-31.
 FOR PAVEMENT MARKING QUANTITIES SEE SHEET 35.
 FOR DRAINAGE ITEM QUANTITIES SEE SHEETS 32-33.
 FOR GUARDRAIL QUANTITIES SEE SHEET 34.

Drawing: I:\proj\sci\23\0228\PLAN6.DGN
 Plotted by: crice
 12-SEP-2005 09:45

SPIRAL DATA

P.I. Sta. 278+84.59
 $\Delta = 38^\circ 00' 00''$ (LT) $x = 399.22'$
 $Dc = 4^\circ 00' 00''$ $y = 18.59'$
 $R = 1,432.39'$ $k = 199.87'$
 $Ls = 400.00'$ $p = 4.65'$
 $\text{Theta} = 8^\circ 00' 00''$ $Lc = 550.00'$
 $LT = 266.94'$ $Ts = 694.68'$
 $ST = 133.58'$ $Es = 87.45'$



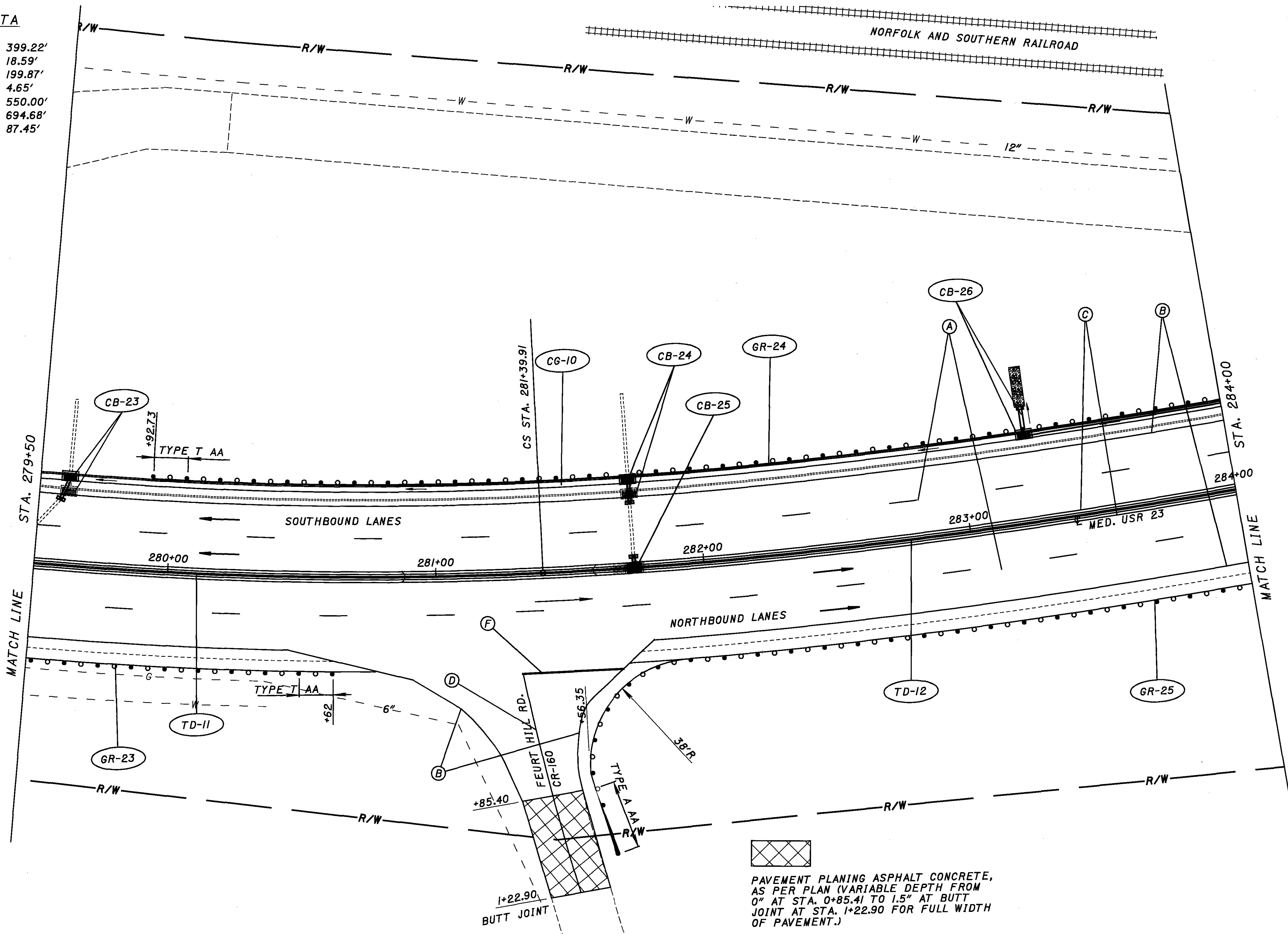
0 20 40
 HORIZONTAL
 SCALE IN FEET

CALCULATED
 CER
 CHECKED
 LAW

PLAN AND PAVEMENT MARKING STA. 279+50 TO STA. 284+00

SCI-23-2.39

52
 110



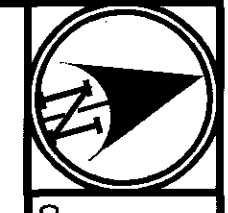
PAVEMENT PLANING ASPHALT CONCRETE,
 AS PER PLAN (VARIABLE DEPTH FROM
 0" AT STA. 0+85.41 TO 1.5" AT BUTT
 JOINT AT STA. 1+22.90 FOR FULL WIDTH
 OF PAVEMENT.)

PAVEMENT MARKING LEGEND

- (A) LANE LINE
- (B) EDGE LINE (WHITE)
- (C) EDGE LINE (YELLOW)
- (D) CENTER LINE (DOUBLE SOLID)
- (E) LANE ARROW
- (F) STOP LINE
- (G) CHANNELIZING LINE
- (H) TRANSVERSE LINE (YELLOW)
- (I) ISLAND MARKING

FOR PAVEMENT CALCULATIONS SEE SHEETS 29-31.
 FOR PAVEMENT MARKING QUANTITIES SEE SHEET 35.
 FOR DRAINAGE ITEM QUANTITIES SEE SHEETS 32-33.
 FOR GUARDRAIL QUANTITIES SEE SHEET 34.

Drawing: It:\projects\23s0228\PLAN\7.DGN
 Plotted by: office
 12-SEP-2005 09:45



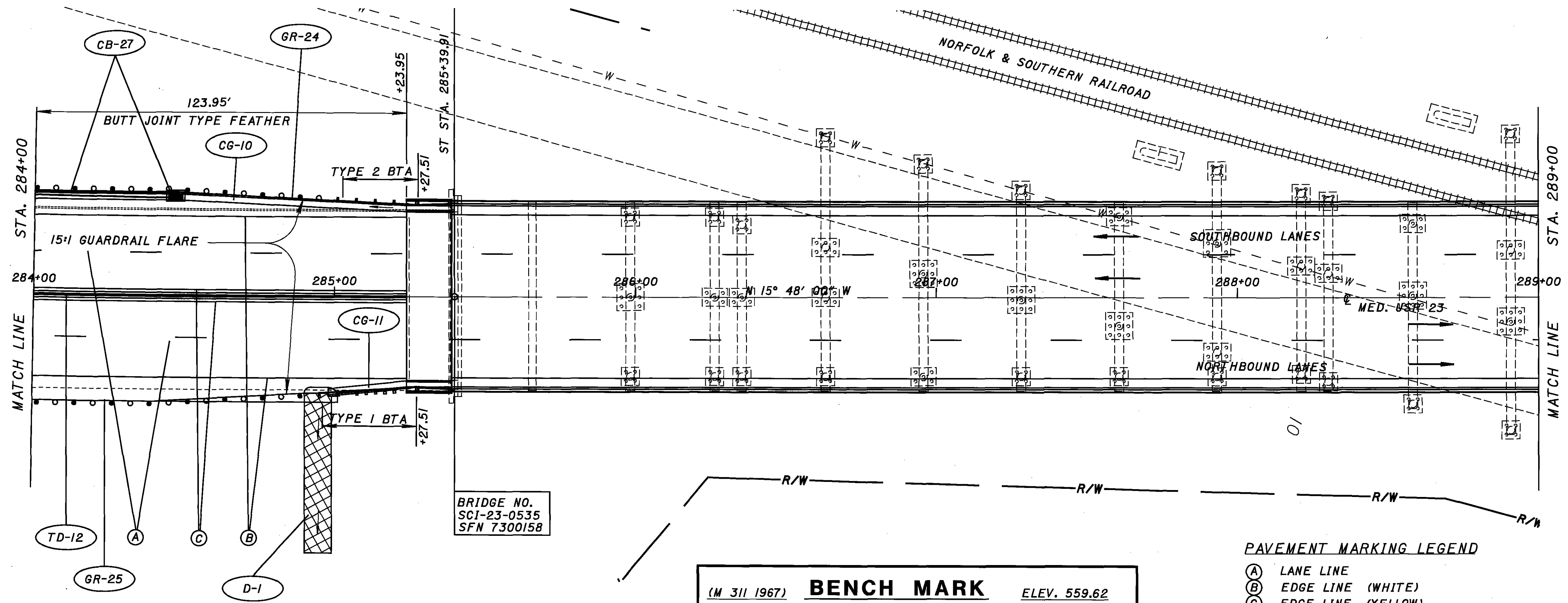
HORIZONTAL SCALE IN FEET
0 20 40

CALCULATED
CER
CHECKED
LAW

PLAN AND PAVEMENT MARKING
STA. 284+00 TO STA. 294+00

SCI-23-2.39

53
110



BRIDGE NO.
SCI-23-0535
SFN 7300158

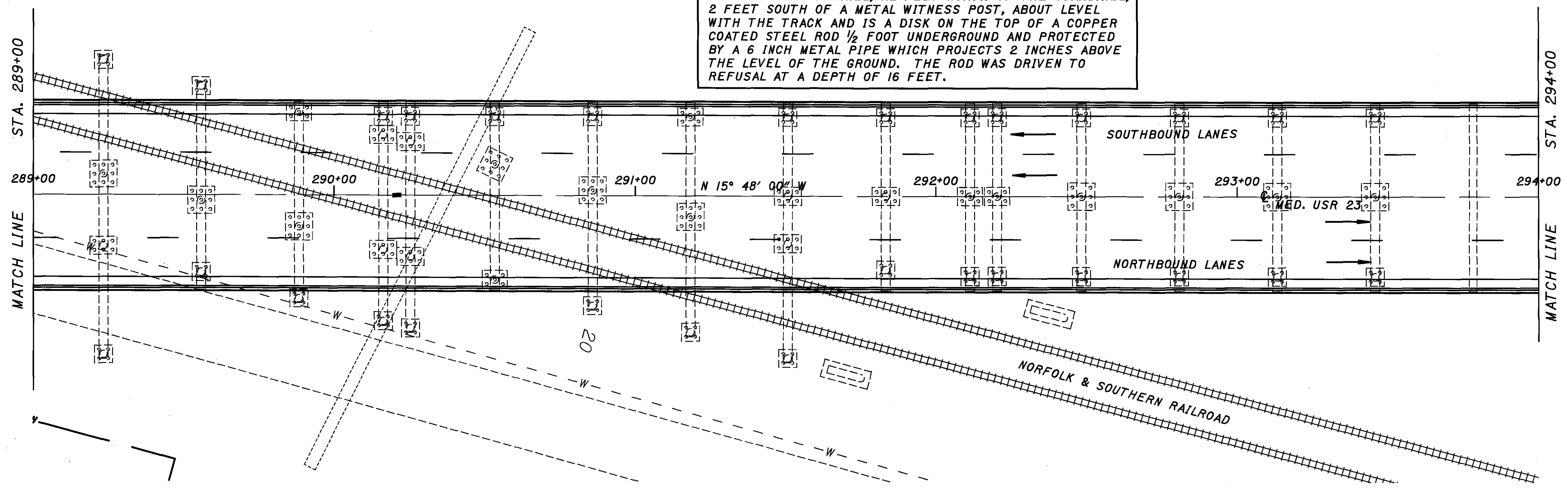
(M 311 1967) **BENCH MARK** ELEV. 559.62

ABOUT 5.0 MILES SOUTH ALONG THE NORFOLK AND SOUTHERN RAILWAY FROM THE STATION AT LUCASVILLE, 0.25 MILE NORTH OF THE NORTH END OF THE U.S. HIGHWAY 23 OVERPASS OVER THE TRACKS, NEAR THE WEST END OF A GUARDRAIL, 46 FEET EAST OF THE EAST RAIL OF THE EAST TRACK, 35 FEET WEST OF THE CENTER LINE OF OLD U.S. HIGHWAY 23, 37 FEET NORTHEAST OF THE 12TH TELEPHONE POLE NORTH OF MILEPOST N 612, 3 FEET EAST OF THE WEST END OF THE GUARDRAIL, 1.2 FEET NORTH OF THE GUARDRAIL, 2 FEET SOUTH OF A METAL WITNESS POST, ABOUT LEVEL WITH THE TRACK AND IS A DISK ON THE TOP OF A COPPER COATED STEEL ROD 1/2 FOOT UNDERGROUND AND PROTECTED BY A 6 INCH METAL PIPE WHICH PROJECTS 2 INCHES ABOVE THE LEVEL OF THE GROUND. THE ROD WAS DRIVEN TO REFUSAL AT A DEPTH OF 16 FEET.

PAVEMENT MARKING LEGEND

- (A) LANE LINE
- (B) EDGE LINE (WHITE)
- (C) EDGE LINE (YELLOW)
- (D) CENTER LINE (DOUBLE SOLID)
- (E) LANE ARROW
- (F) STOP LINE
- (G) CHANNELIZING LINE
- (H) TRANSVERSE LINE (YELLOW)
- (I) ISLAND MARKING

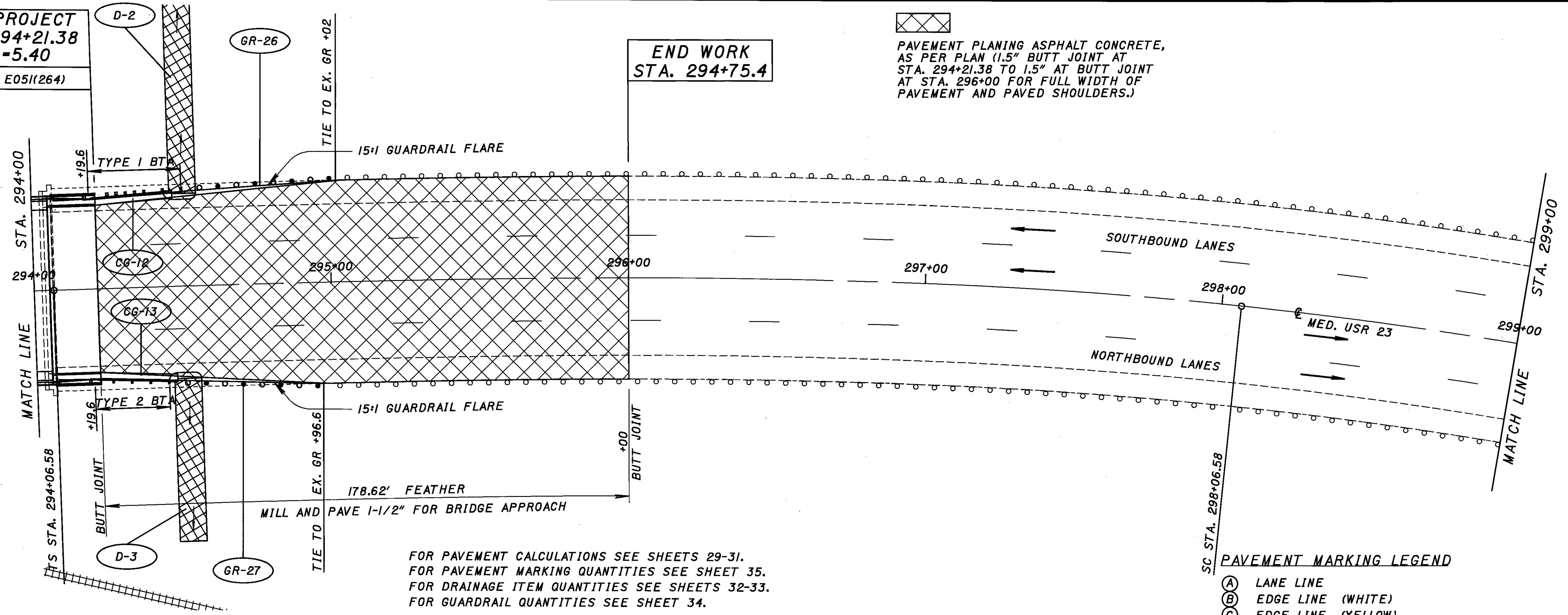
FOR PAVEMENT CALCULATIONS SEE SHEETS 29-31.
FOR PAVEMENT MARKING QUANTITIES SEE SHEET 35.
FOR DRAINAGE ITEM QUANTITIES SEE SHEETS 32-33.
FOR GUARDRAIL QUANTITIES SEE SHEET 34.



END PROJECT
STA. 294+21.38
SLM -5.40
E05(264)

END WORK
STA. 294+75.4

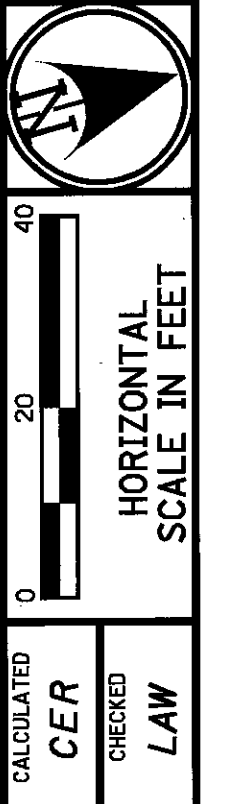
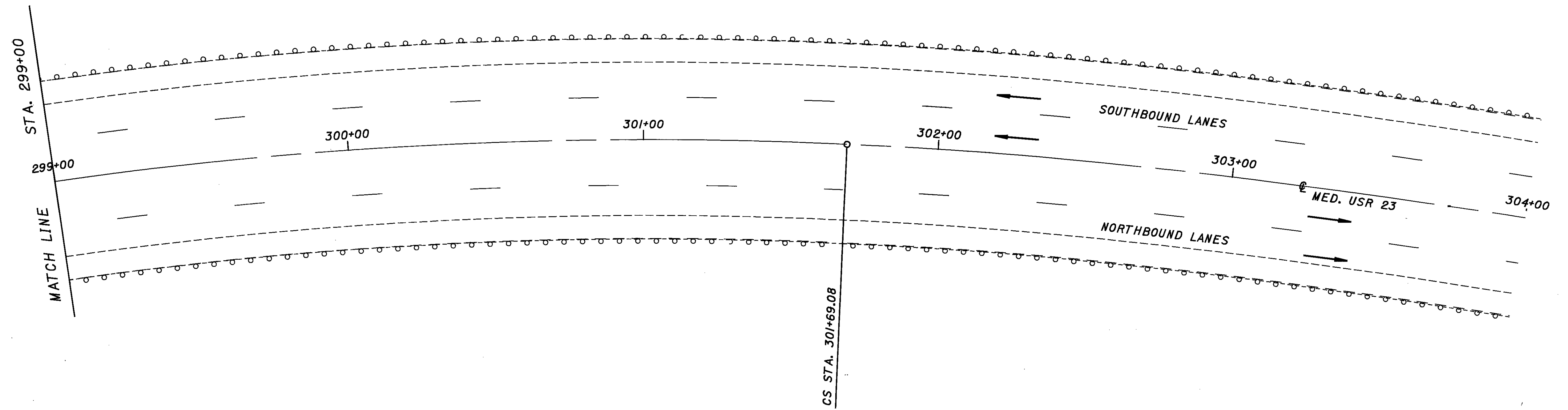
PAVEMENT PLANING ASPHALT CONCRETE,
AS PER PLAN (1.5" BUTT JOINT AT
STA. 294+21.38 TO 1.5" AT BUTT JOINT
AT STA. 296+00 FOR FULL WIDTH OF
PAVEMENT AND PAVED SHOULDERS.)



FOR PAVEMENT CALCULATIONS SEE SHEETS 29-31.
FOR PAVEMENT MARKING QUANTITIES SEE SHEET 35.
FOR DRAINAGE ITEM QUANTITIES SEE SHEETS 32-33.
FOR GUARDRAIL QUANTITIES SEE SHEET 34.

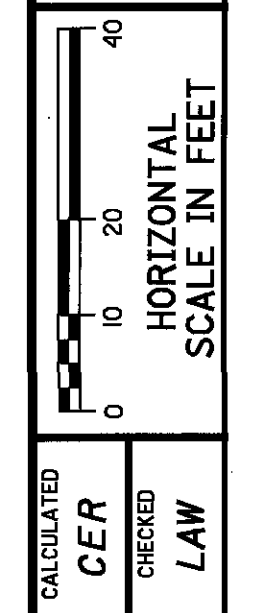
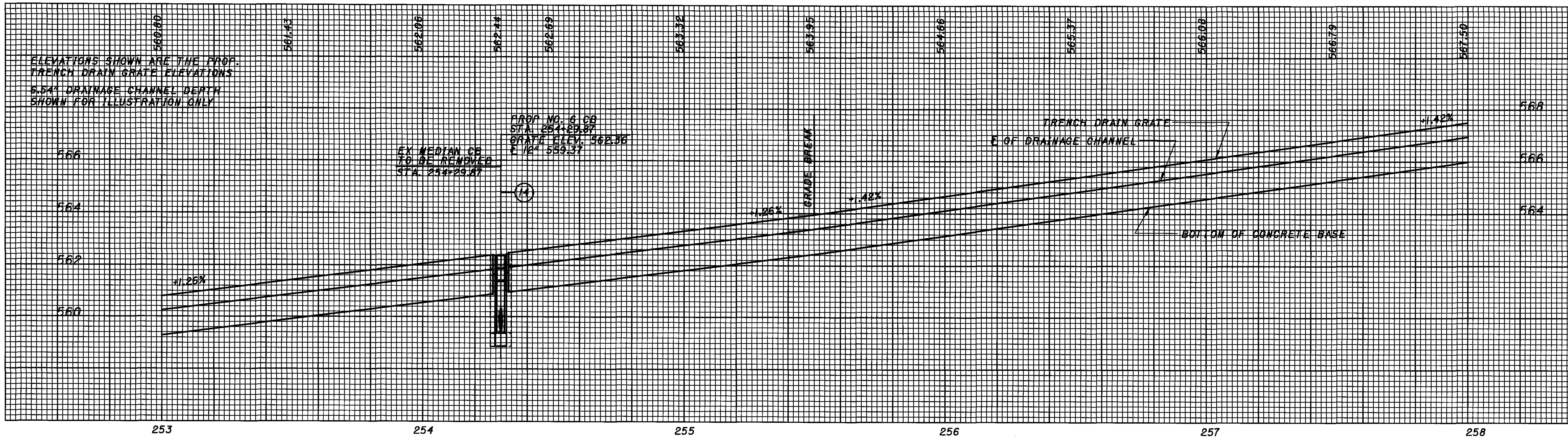
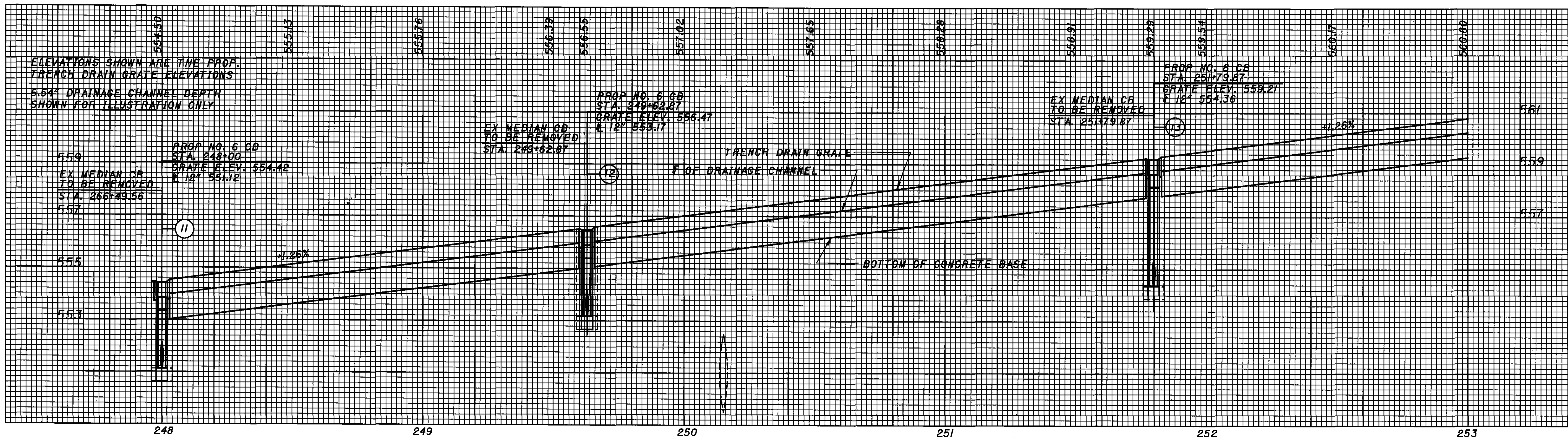
PAVEMENT MARKING LEGEND

- (A) LANE LINE
- (B) EDGE LINE (WHITE)
- (C) EDGE LINE (YELLOW)
- (D) CENTER LINE (DOUBLE SOLID)
- (E) LANE ARROW
- (F) STOP LINE
- (G) CHANNELIZING LINE
- (H) TRANSVERSE LINE (YELLOW)
- (I) ISLAND MARKING



PLAN AND PAVEMENT MARKING
STA. 294+00 TO STA. 304+00

SCI-23-2.39

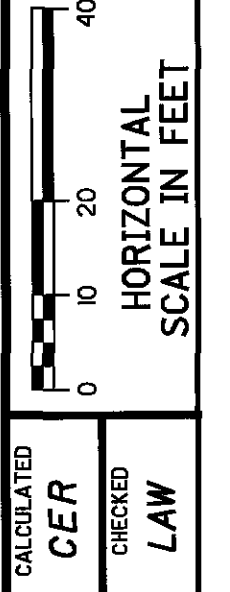
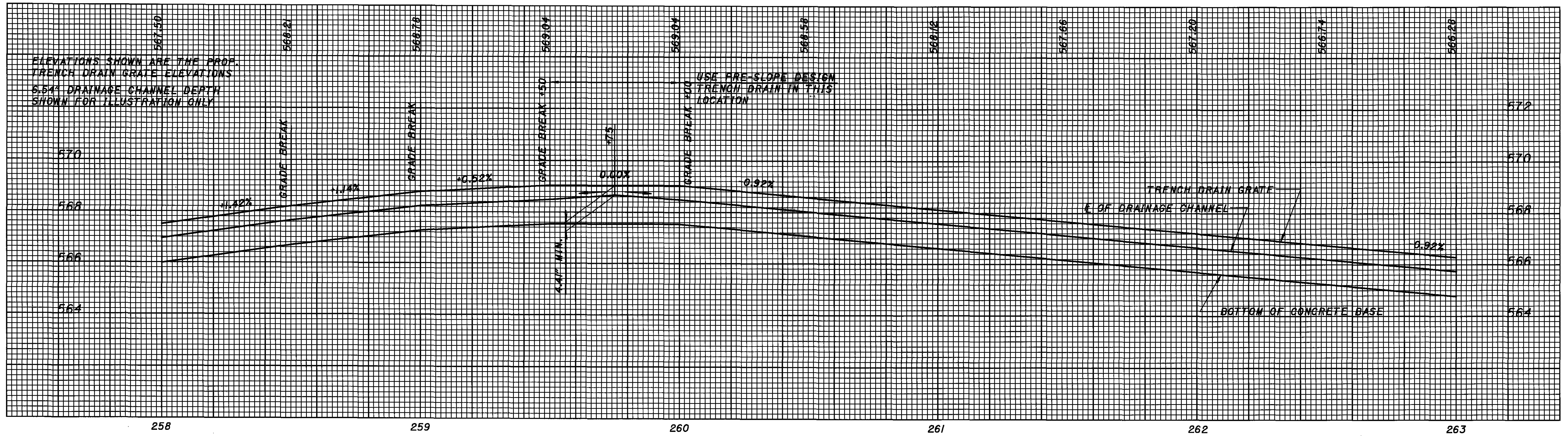


CALCULATED
CER
CHECKED
LAW

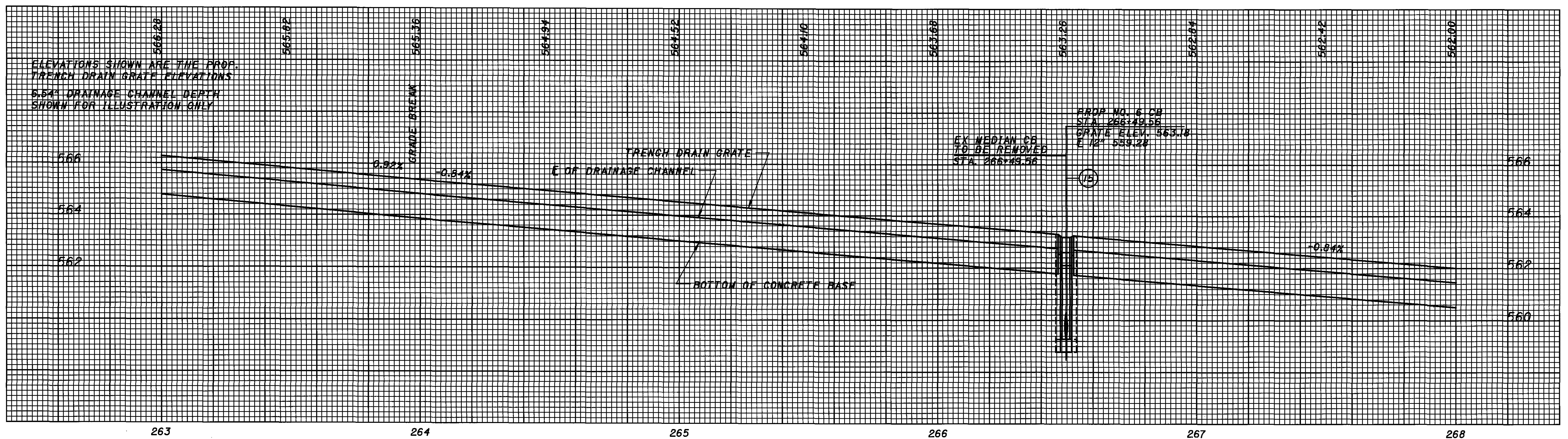
TRENCH DRAIN PROFILE
STA. 248+00 TO STA. 258+00

SCI-23-2.39

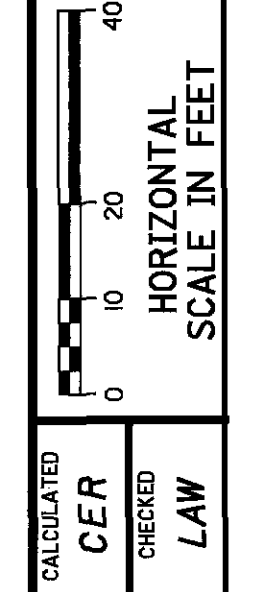
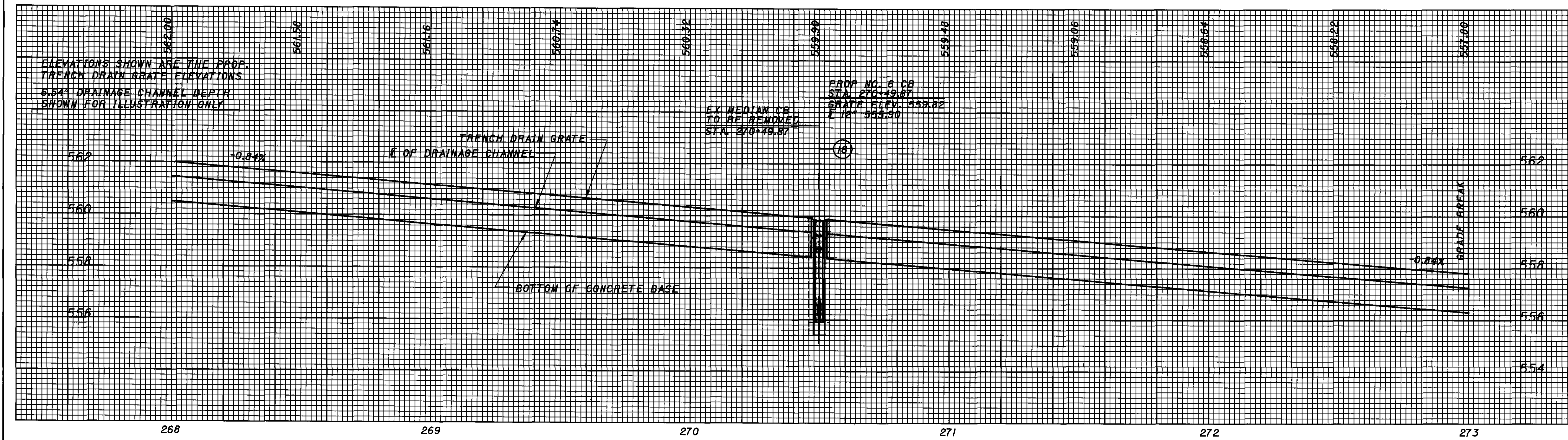
Drawing Object: 23s0228\TRENCH DRAIN PROFILE.DWG Notified by: crlce 09-SEP-2005 12:54



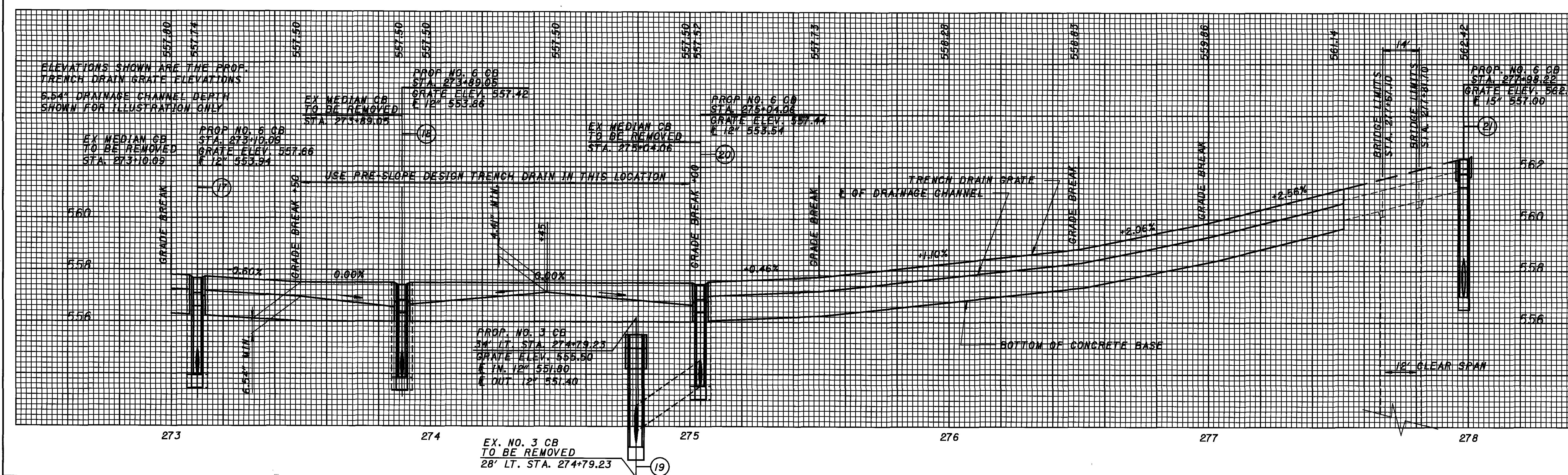
**TRENCH DRAIN PROFILE
STA. 258+00 TO STA. 268+00**



Drawings Project: 23s0228 \ TRENCH DRAIN PROFILE.DWG Noted by: crice 09-SEP-2005 12:53

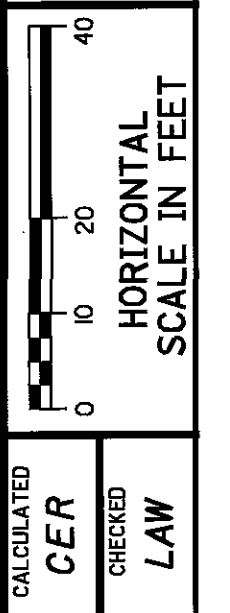
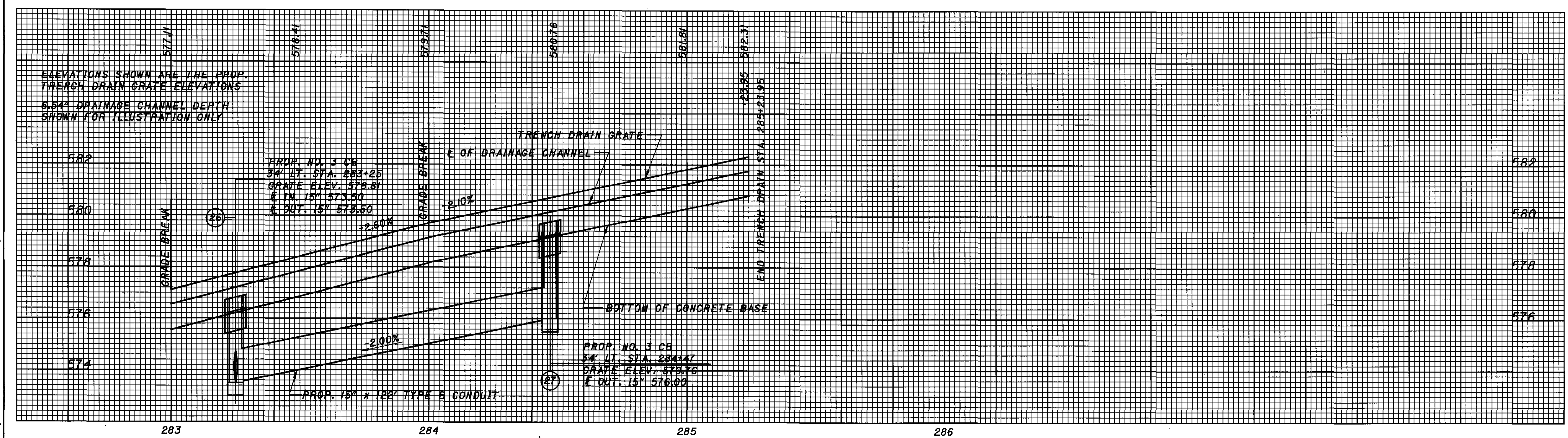
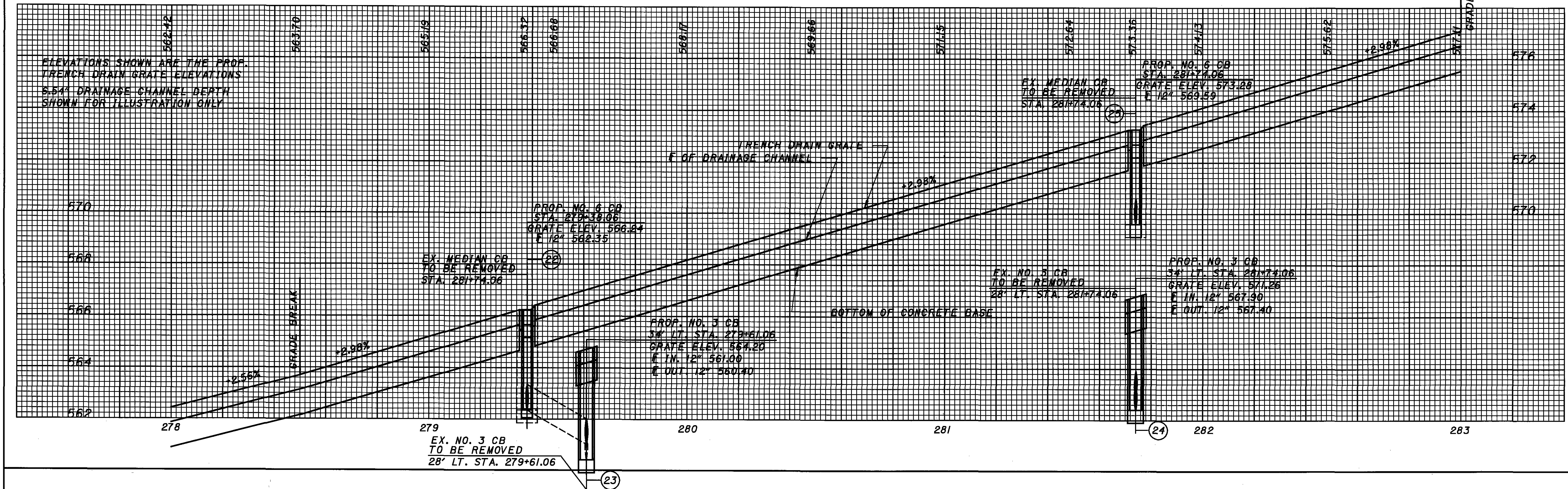


**TRENCH DRAIN PROFILE
STA. 268+00 TO STA. 278+00**



SCI-23-2.39

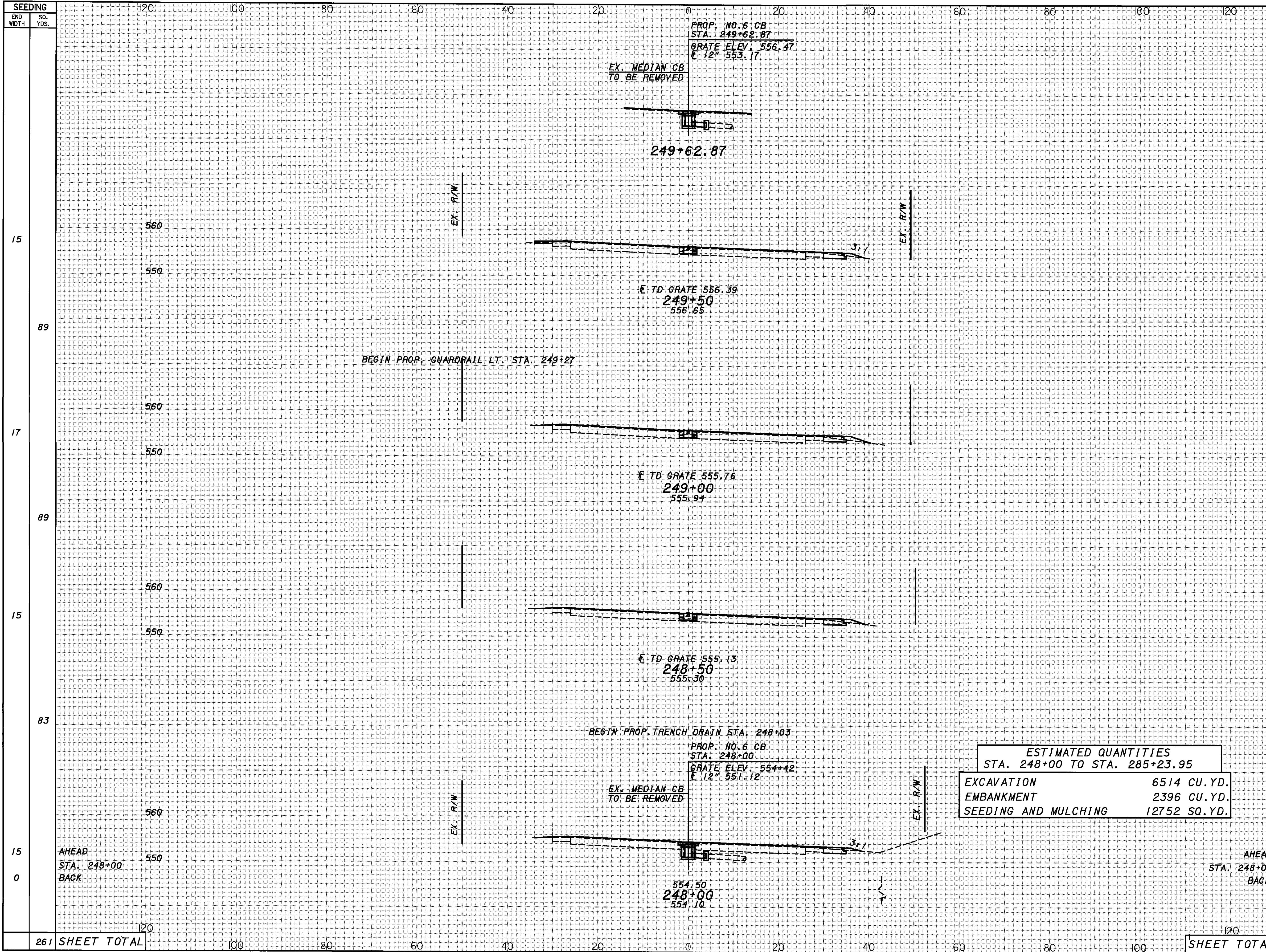
Drawings Project: 23s0228-TRENCH DRAIN PROFILE.DWG Noted by: crlcc 09-SEP-2005 10:59



**TRENCH DRAIN PROFILE
STA. 278+00 TO STA. 285+23.95**

SCI-23-2.39

Drawn by: [unclear] 09-SEP-2005 15:03



END AREA	VOLUME		CALCULATED	CHECKED	LAW
	CUT	FILL			
7.5	1.8				
		13	5		
6.3	3.2				
		12	5		
6.8	2.3				
		10	3		
4.4	1.4				
0	0				
SHEET TOTAL		35	13		

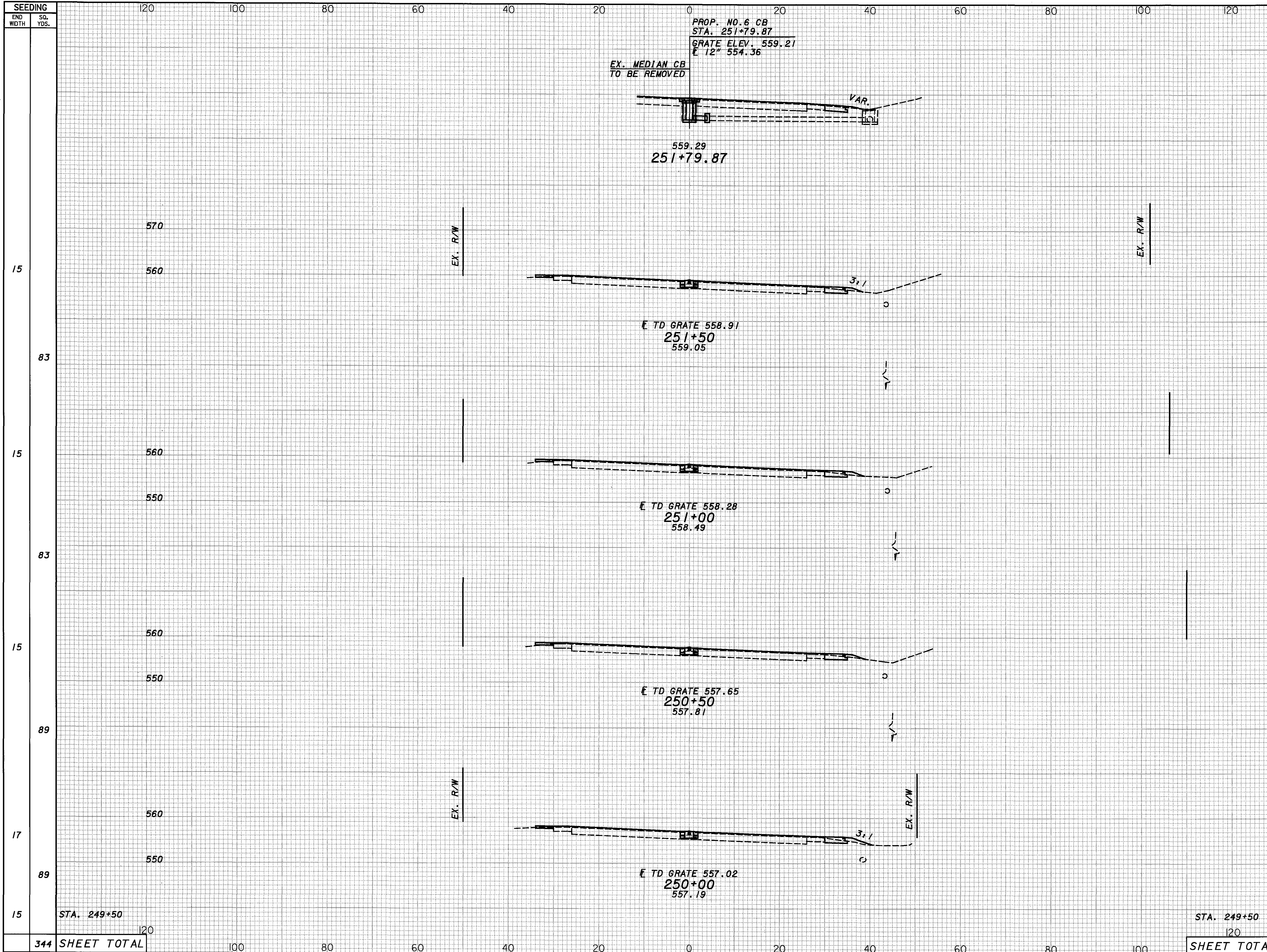
ESTIMATED QUANTITIES STA. 248+00 TO STA. 285+23.95	
EXCAVATION	6514 CU.YD.
EMBANKMENT	2396 CU.YD.
SEEDING AND MULCHING	12752 SQ.YD.

CROSS SECTION SHEET
STA. 248+00 TO STA. 249+50
SCI-23-2.39

Drawing : I:\project\230228\XSECT\01.DGN Plotted by: cr/ice 09-SEP-2005 13:11

261 SHEET TOTAL

SHEET TOTAL



END AREA	VOLUME		CALCULATED	CHECKED	LAW
	CUT	FILL			
	6.9	1.7			
			13	4	
	6.9	2.1			
			13	4	
	7.1	1.8			
			12	5	
	6.3	3.4			
			13	5	
STA. 249+50	7.5	1.8			
SHEET TOTAL			51	13	

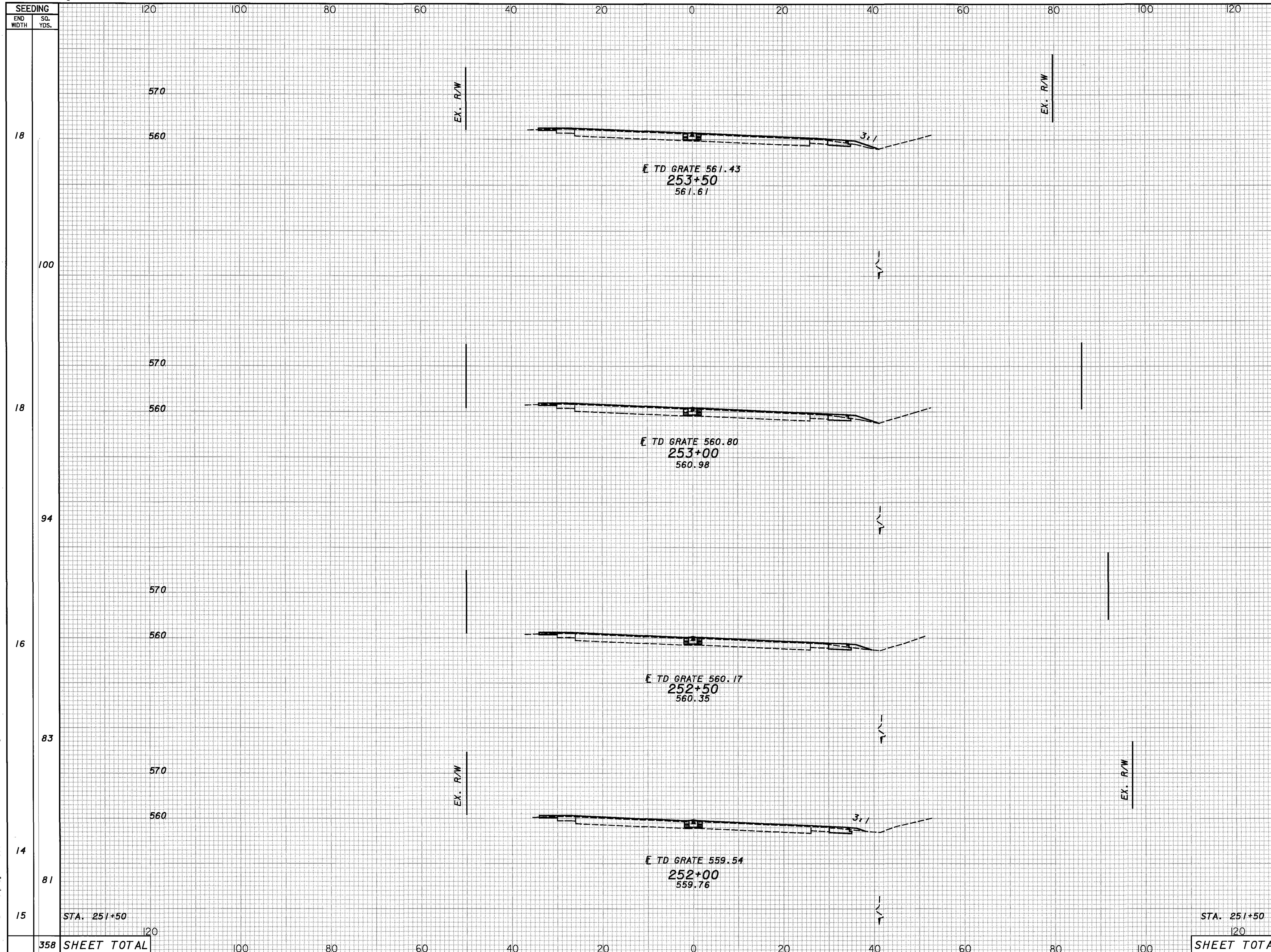
CROSS SECTION SHEET
STA. 250+00 TO STA. 251+50

SCI-23-2.39

Drawing : I:\Project\23s0228\XSECT\01.dgn Plotted by: orice 09-SEP-2005 13:11

344 SHEET TOTAL

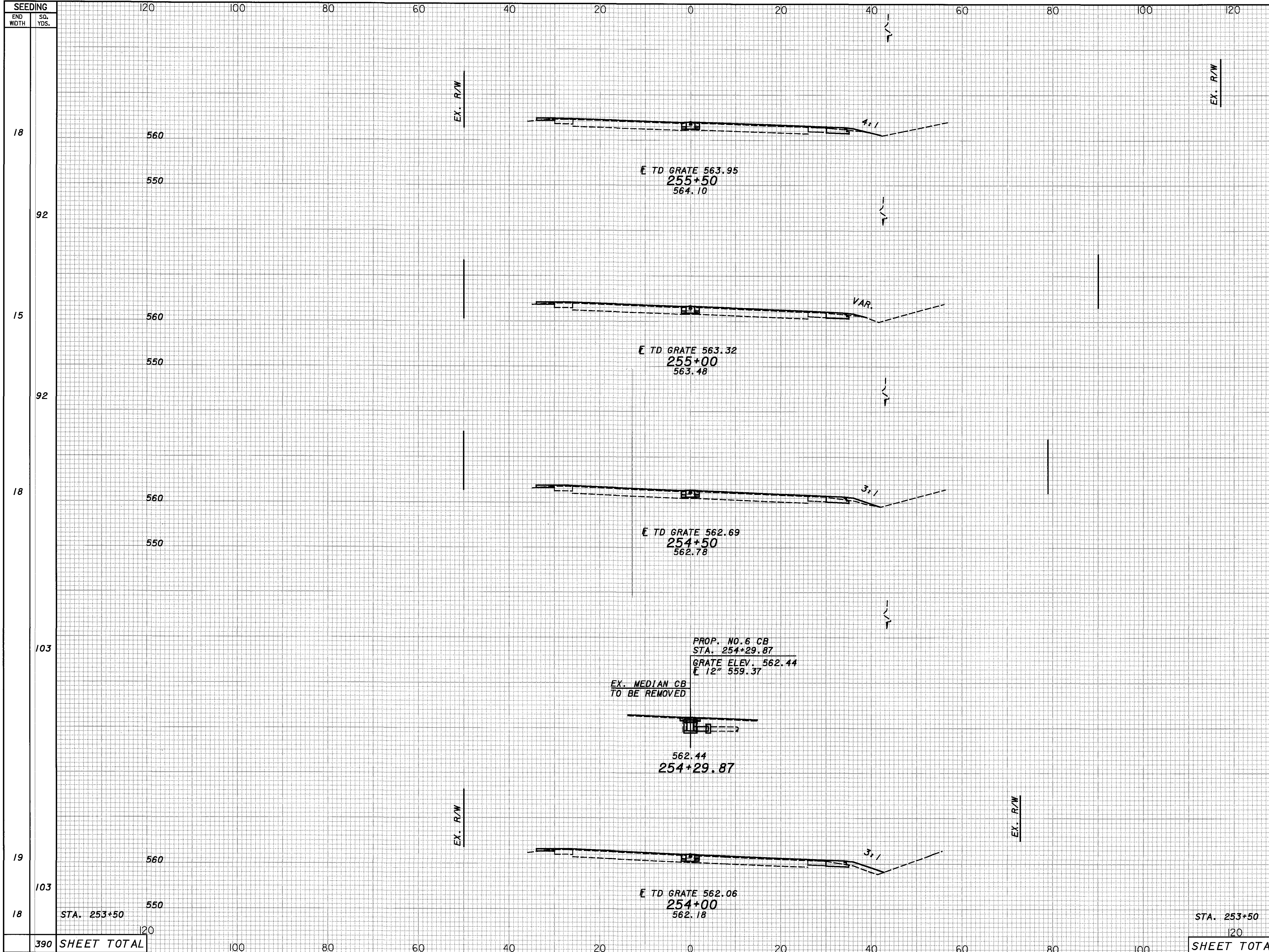
SHEET TOTAL



SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
18		7	3.6		
100				13	6
18		6.9	3.2		
94				13	5
16		6.6	2.7		
83				13	4
14		7.4	1.3		
81				13	3
15	STA. 251+50	6.9	1.7		
358 SHEET TOTAL				52	18

CROSS SECTION SHEET
STA. 252+00 TO STA. 253+50

SCI-23-2.39

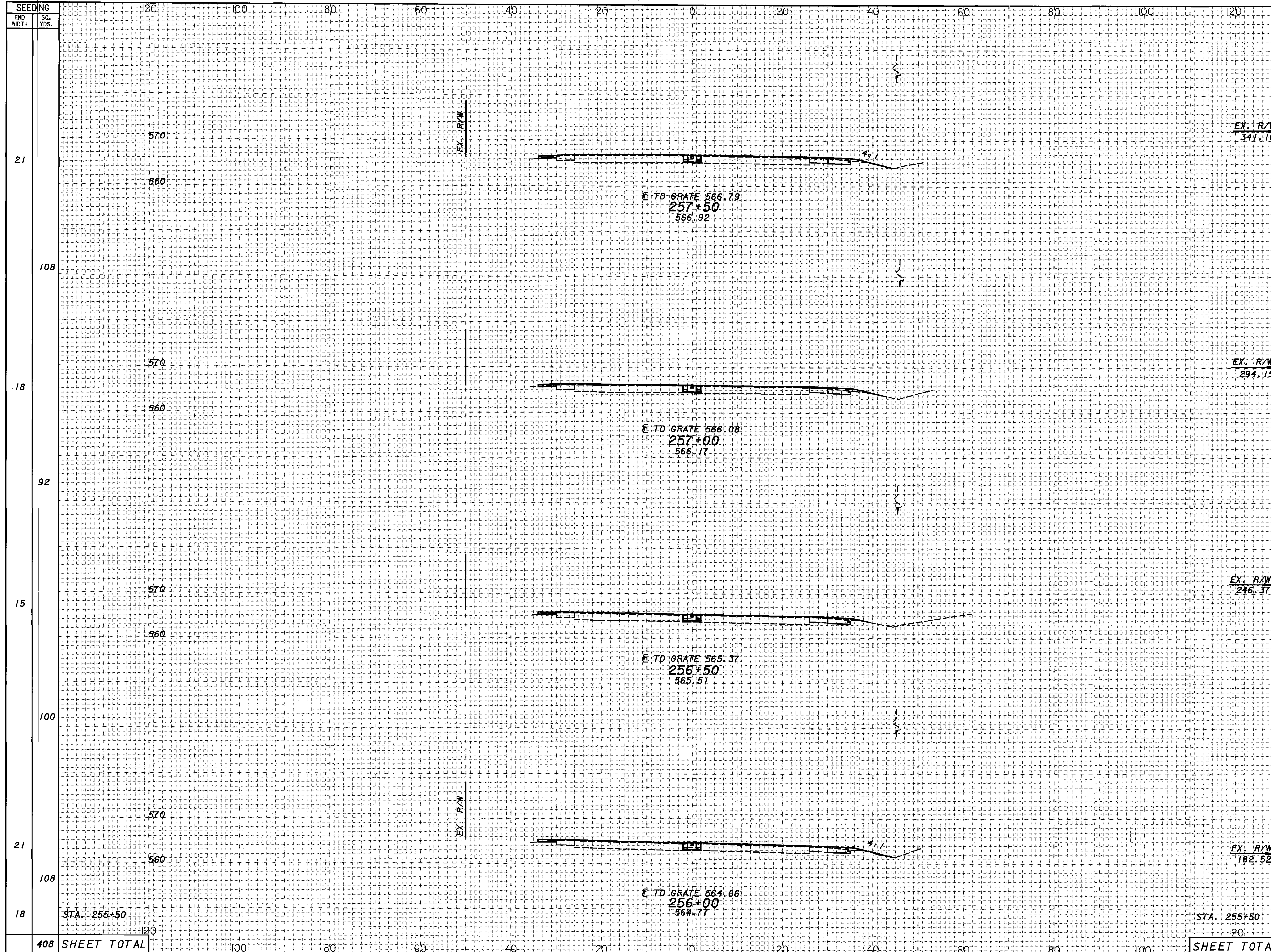


SEEDING	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
18	6.6	1.5		
92			12	2
15	6.4	1.1		
92			12	4
18	6.8	3.3		
103			12	10
19	6.6	7.2		
103			13	10
18	7	3.6		
390 SHEET TOTAL			49	26

CROSS SECTION SHEET
STA. 254+00 TO STA. 255+50

SCI-23-2.39

Drawing: I:\project\23s022\XSECT02.DGN Plotted by: crice 09-SEP-2005 13:4

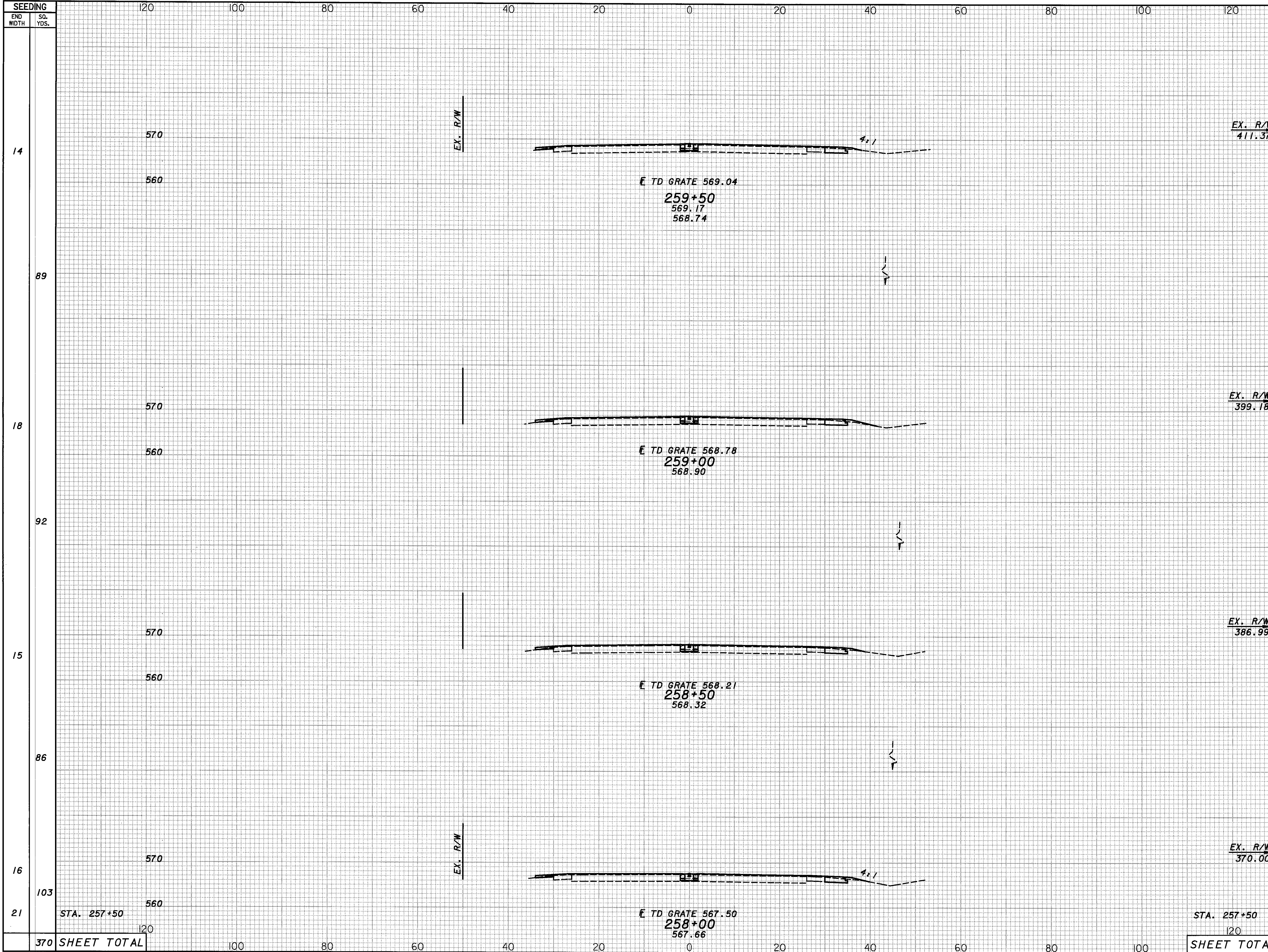


SEEDING		END AREA		VOLUME		CALCULATED CER	CHECKED LAW
END WIDTH	SO. YDS.	CUT	FILL	CUT	FILL		
21	108	6.3	2.2				
				12	4		
18	92	6.1	1.9				
				12	3		
15	100	6.6	1				
				12	3		
21	108	6.2	2.2				
				12	3		
18		6.6	1.5				
408	SHEET TOTAL			48	13		

**CROSS SECTION SHEET
STA. 256+00 TO STA. 257+50**

SCI-23-2.39

Drawing: I:\projects\230228\XSECT02.DGN Plotted by: crice 09-SEP-2005 13:45

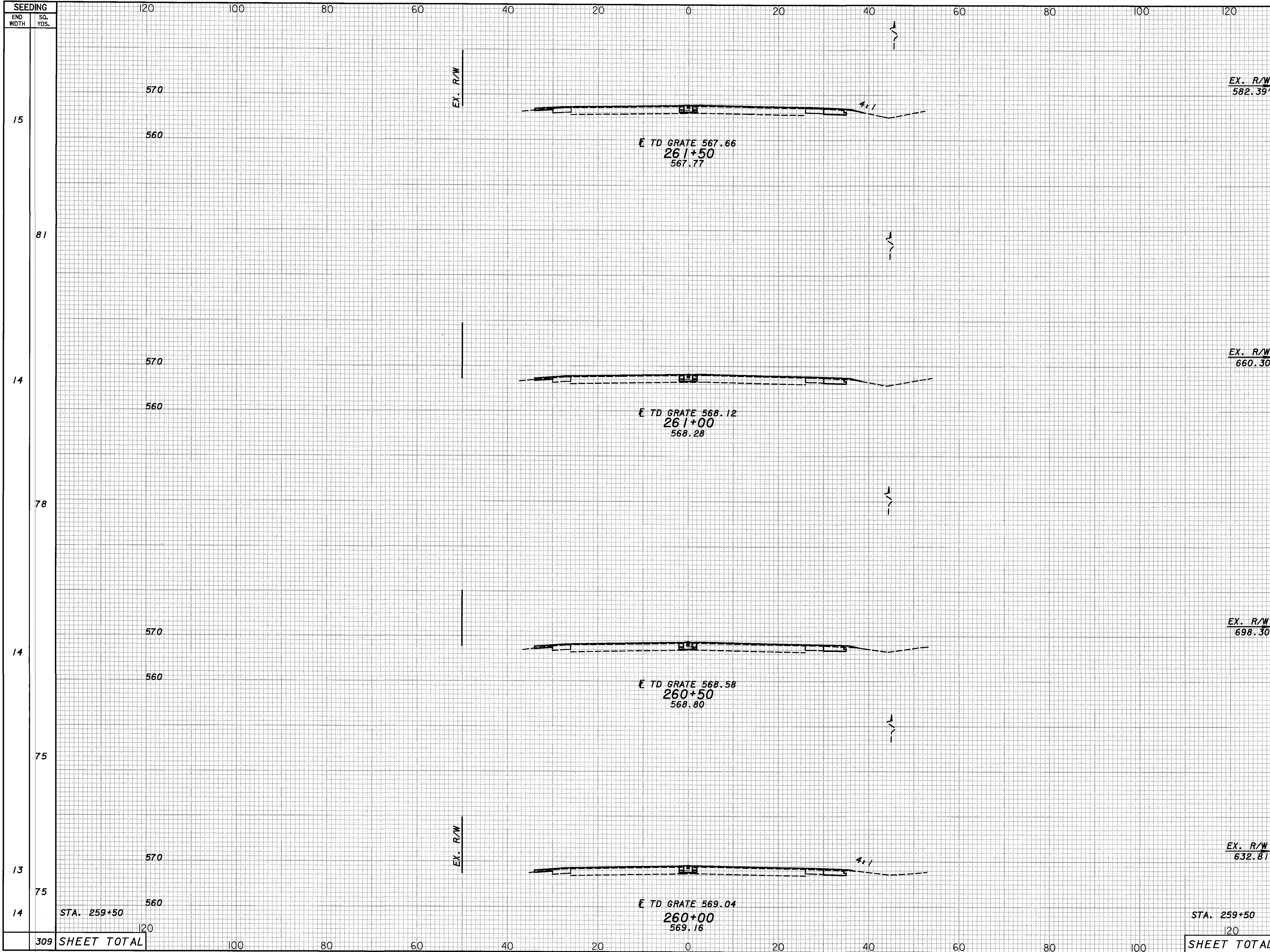


END WIDTH	SEEDING SQ. YDS.	END AREA		VOLUME	
		CUT	FILL	CUT	FILL
14		6.6	1		
89				12	3
18		6.3	1.8		
92				12	3
15		6.5	1.1		
86				12	2
16		6.5	1.4		
103				12	3
21	STA. 257+50	6.3	2.2		
370	SHEET TOTAL			48	11

**CROSS SECTION SHEET
STA. 258+00 TO STA. 259+50**

SCI-23-2.39

Drawing : I:\project\230228\XSECT\02.DGN Plotted by cr/lee 09-SEP-2005 13:45

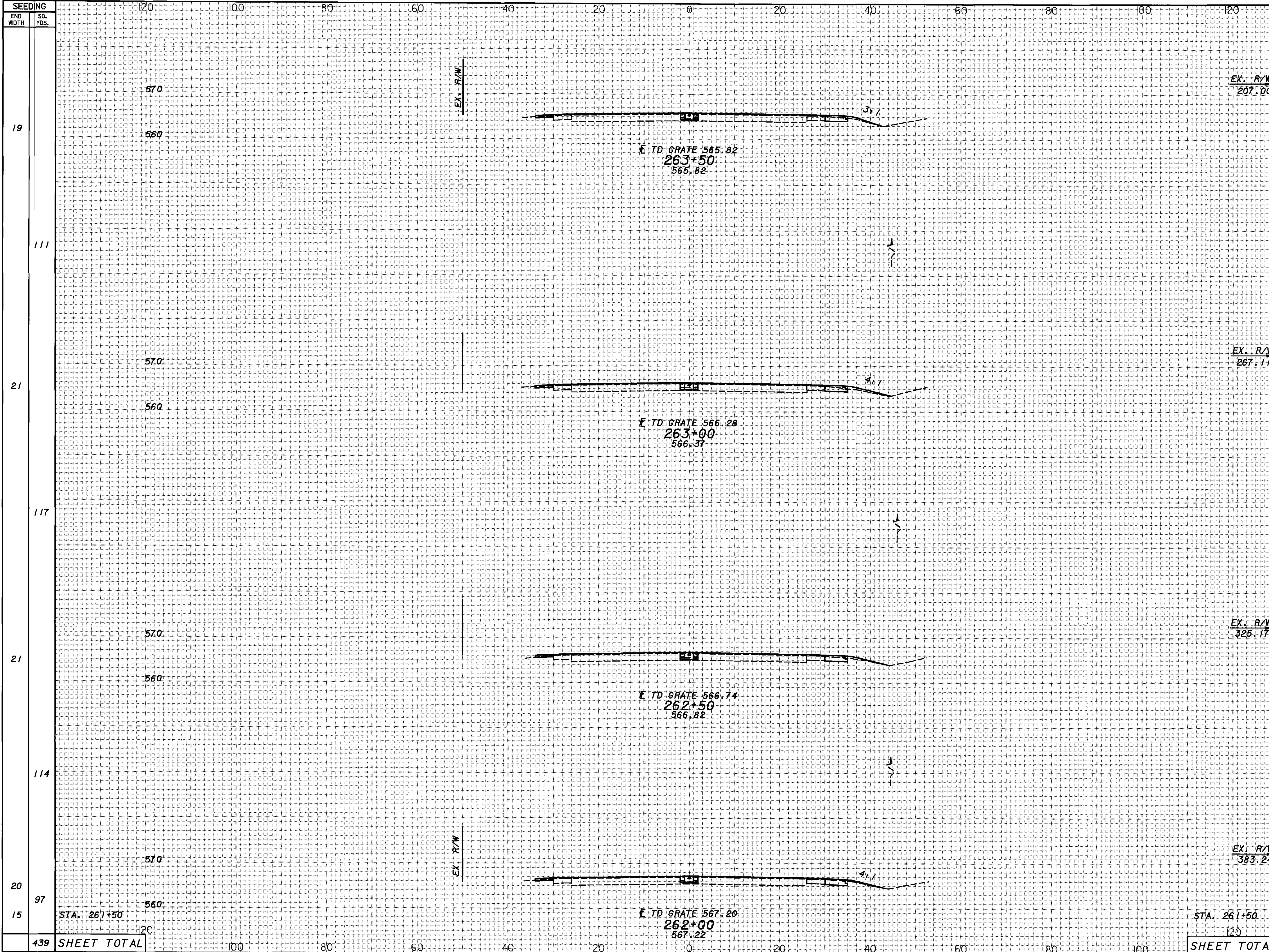


SEEDING		END AREA		VOLUME		CALCULATED	CER	CHECKED	LAW
END WIDTH	SO. YDS.	CUT	FILL	CUT	FILL				
15	81	6.6	1	12	2				
14	78	6.8	1	13	2				
14	75	7	1	13	2				
13	75	6.8	1	12	2				
14		6.6	1						
309 SHEET TOTAL				50	8				

**CROSS SECTION SHEET
STA. 260+00 TO STA. 261+50**

SCI-23-2.39

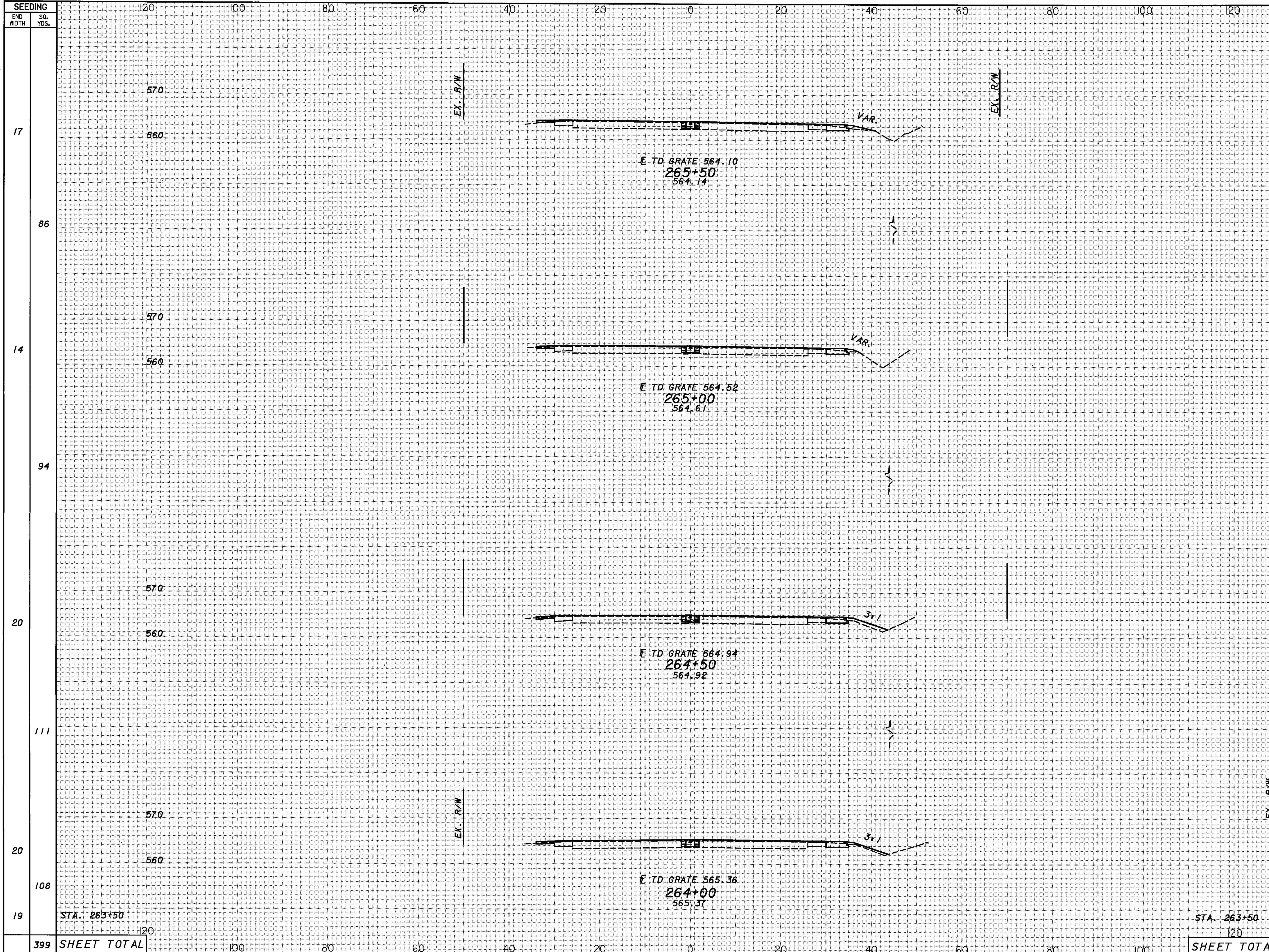
Drawing: I:\project\230228\XSECT02.DGN Plotted by: crice 09-SEP-2005 13:45



SEEDING	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
19	5.8	2.2		
111			11	5
21	6	3.7		
117			11	6
21	6.1	2.4		
114			12	4
20	6.5	1.8		
97			12	3
15	6.6	1		
439	SHEET TOTAL		46	18

CROSS SECTION SHEET
 STA. 262+00 TO STA. 263+50
 SCI-23-2.39
 66
 110

Drawing : I:\project\230228\XSECT02.DGN
 Plotted by : cr/ice
 09-SEP-2005 13:45



END AREA	VOLUME	CUT		FILL	
		CUT	FILL	CUT	FILL
5.7	2.9			11	4
6	1.3			11	7
5.5	6.2			11	9
6	3.7			11	5
5.8	2.2			44	25
SHEET TOTAL				44	25

CROSS SECTION SHEET
STA. 264+00 TO STA. 265+50

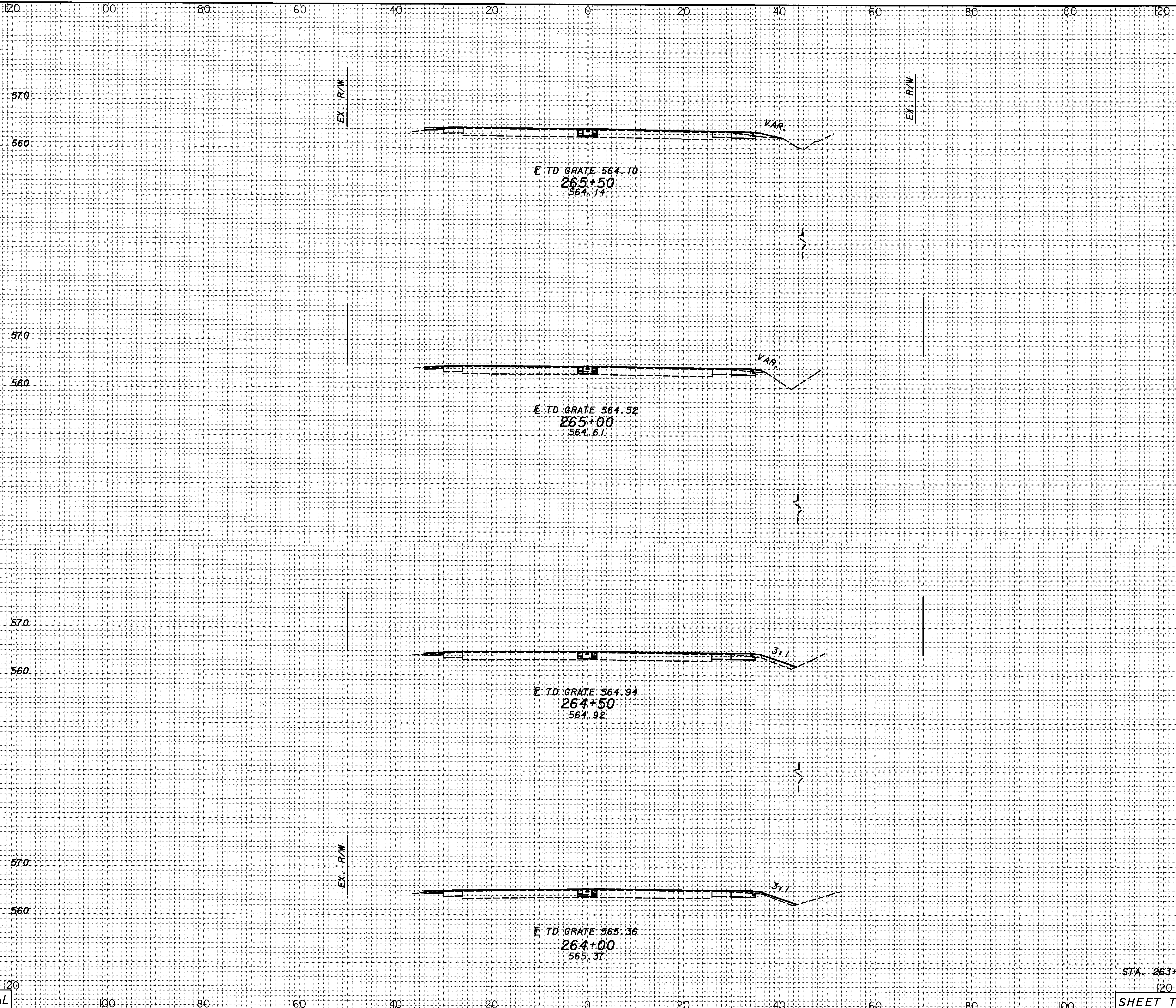
SCI-23-2.39

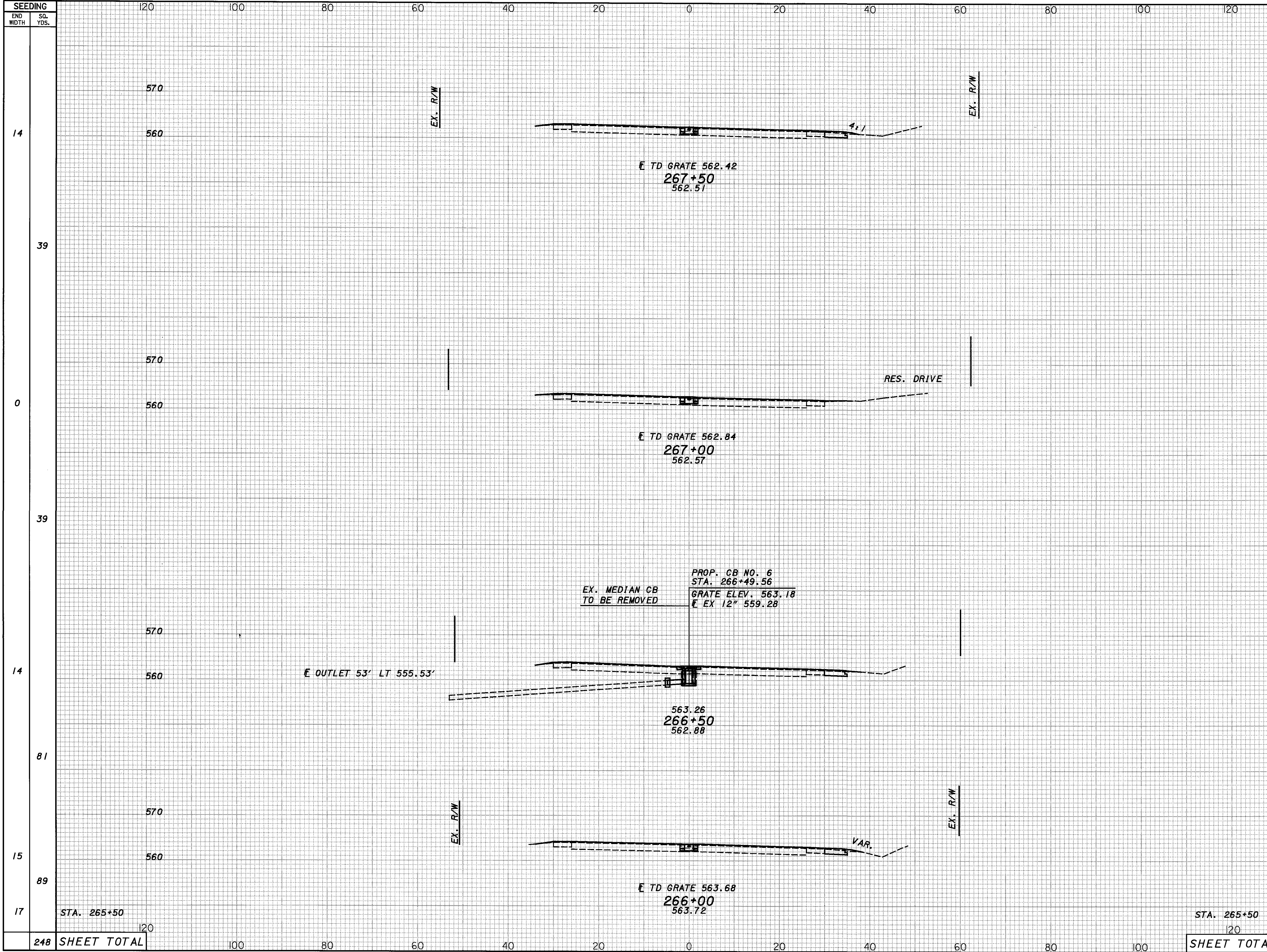
Drawing: I:\project\330228\XSECT02.DGN Plotted by: orice 09-SEP-2005 13:45

SEEDING	
END WIDTH	SO. YDS.
17	
86	
14	
94	
20	
111	
20	
108	
19	
399	SHEET TOTAL

STA. 263+50
 120
SHEET TOTAL

STA. 263+50
 120
SHEET TOTAL





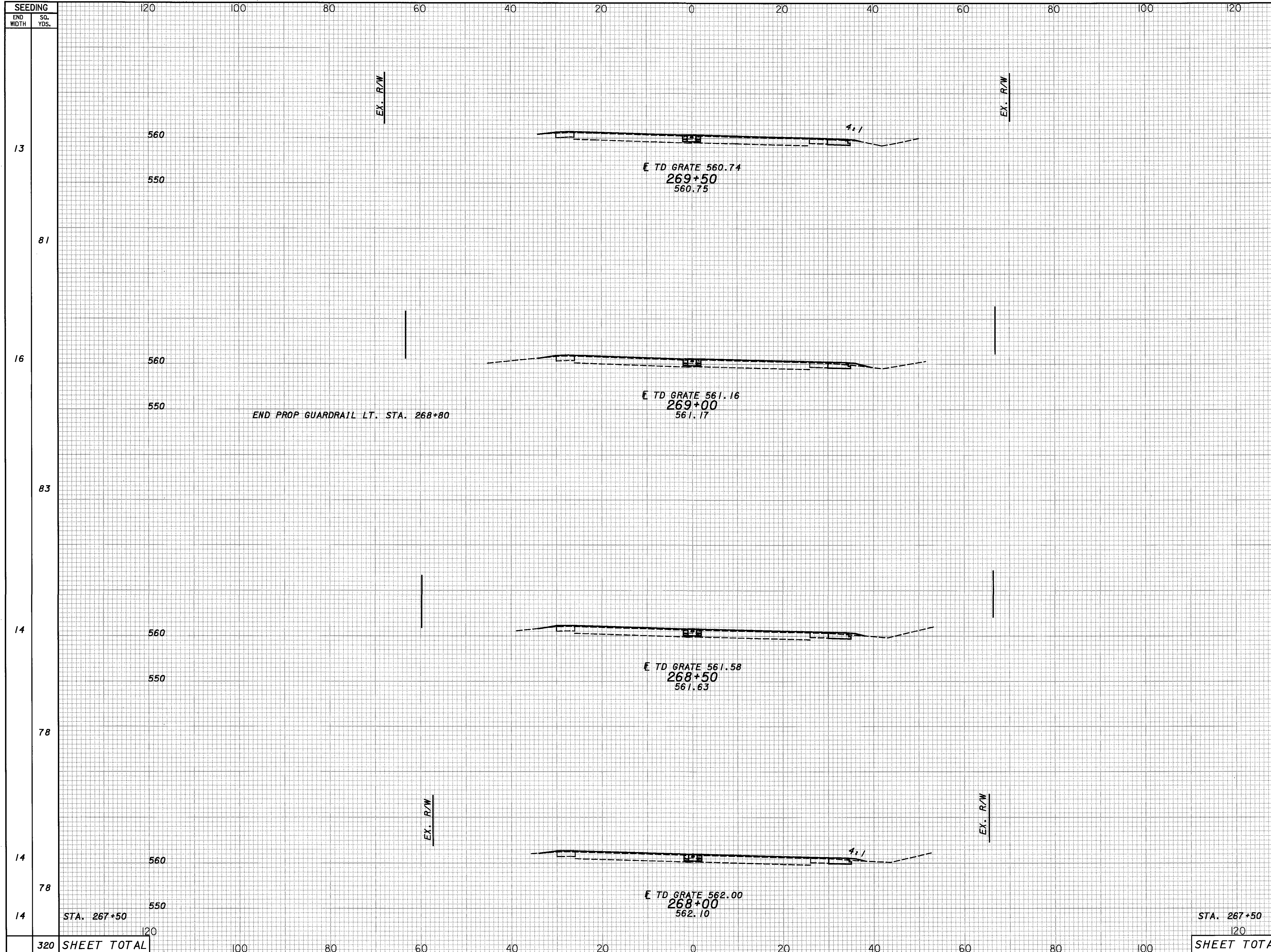
SEEDING		END AREA		VOLUME	
END WIDTH	SO. YDS.	CUT	FILL	CUT	FILL
14		7.3	1		
39				9	1
0		2.5	0		
39				9	1
14		7.5	1		
81				14	2
15		7.1	1		
89				12	4
17	STA. 265+50	5.7	2.9		
248	SHEET TOTAL			44	8

CROSS SECTION SHEET
STA. 266+00 TO STA. 267+50

SCI-23-2.39

68
 110

Drawing: I:\projects\230228\XSECT03.DGN Plotted by: crice 09-SEP-2005 13:49



END AREA	VOLUME	CUT		FILL	
		CUT	FILL	CUT	FILL
7.3	1			13	3
6.5	1.7			13	3
7	1.1			13	2
7.2	1.1			13	1
7.3	1			52	9
SHEET TOTAL					

CALCULATED
 CER
 CHECKED
 LAW

CROSS SECTION SHEET
STA. 268+00 TO STA. 269+50

SCI-23-2.39

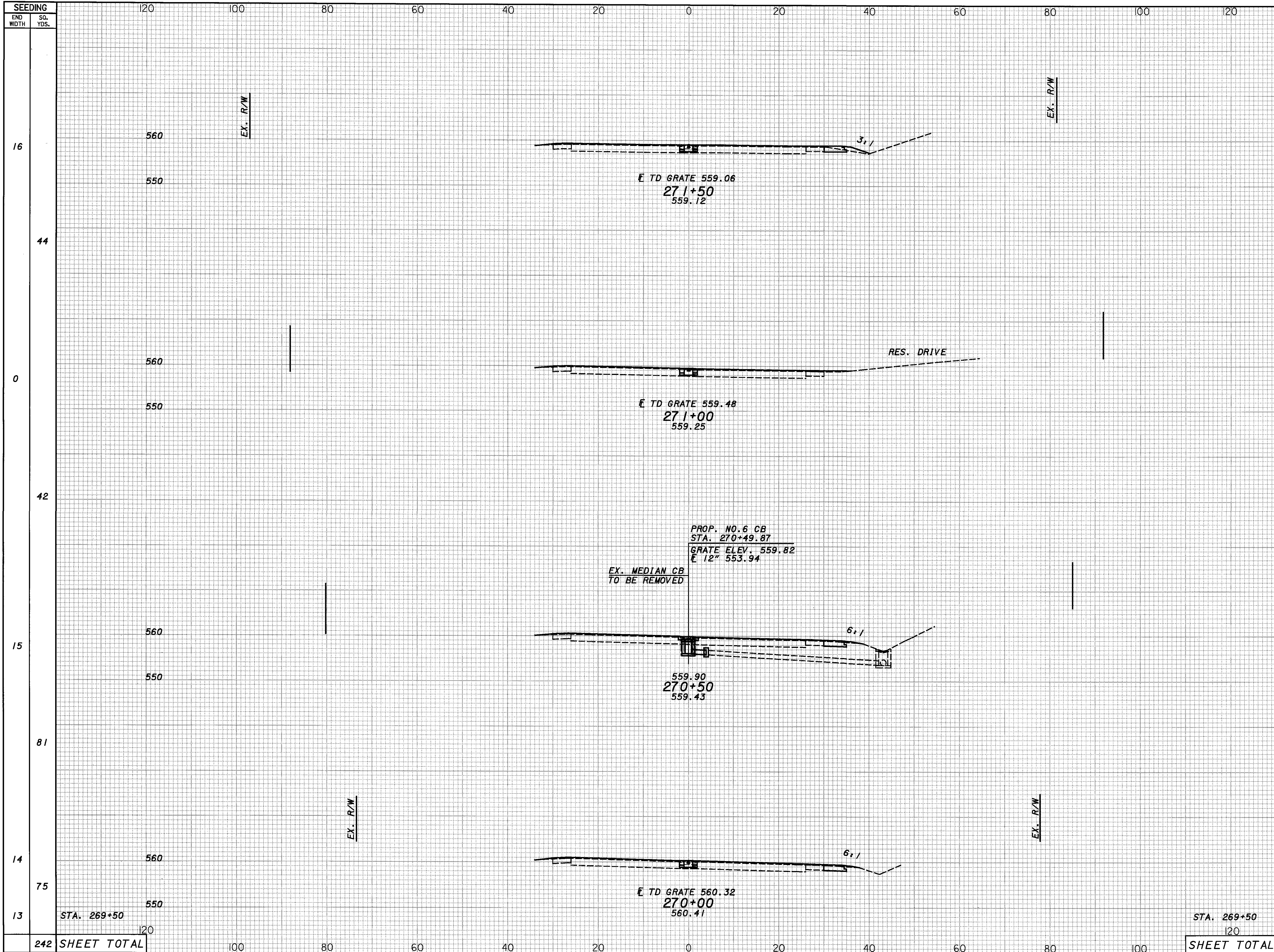
Drawing : I:\p\Project\23s0228\XSECT03.DGN Plotted by: crice 09-SEP-2005 13:20

STA. 267+50

STA. 267+50

SHEET TOTAL

SHEET TOTAL



END	AREA		VOLUME	
	CUT	FILL	CUT	FILL
16	6.4	3.6		
44			8	3
0	2.5	0		
42			9	1
15	7.5	1		
81			14	2
14	7.4	1		
75			14	2
13	7.3	1		
242	SHEET TOTAL		45	8

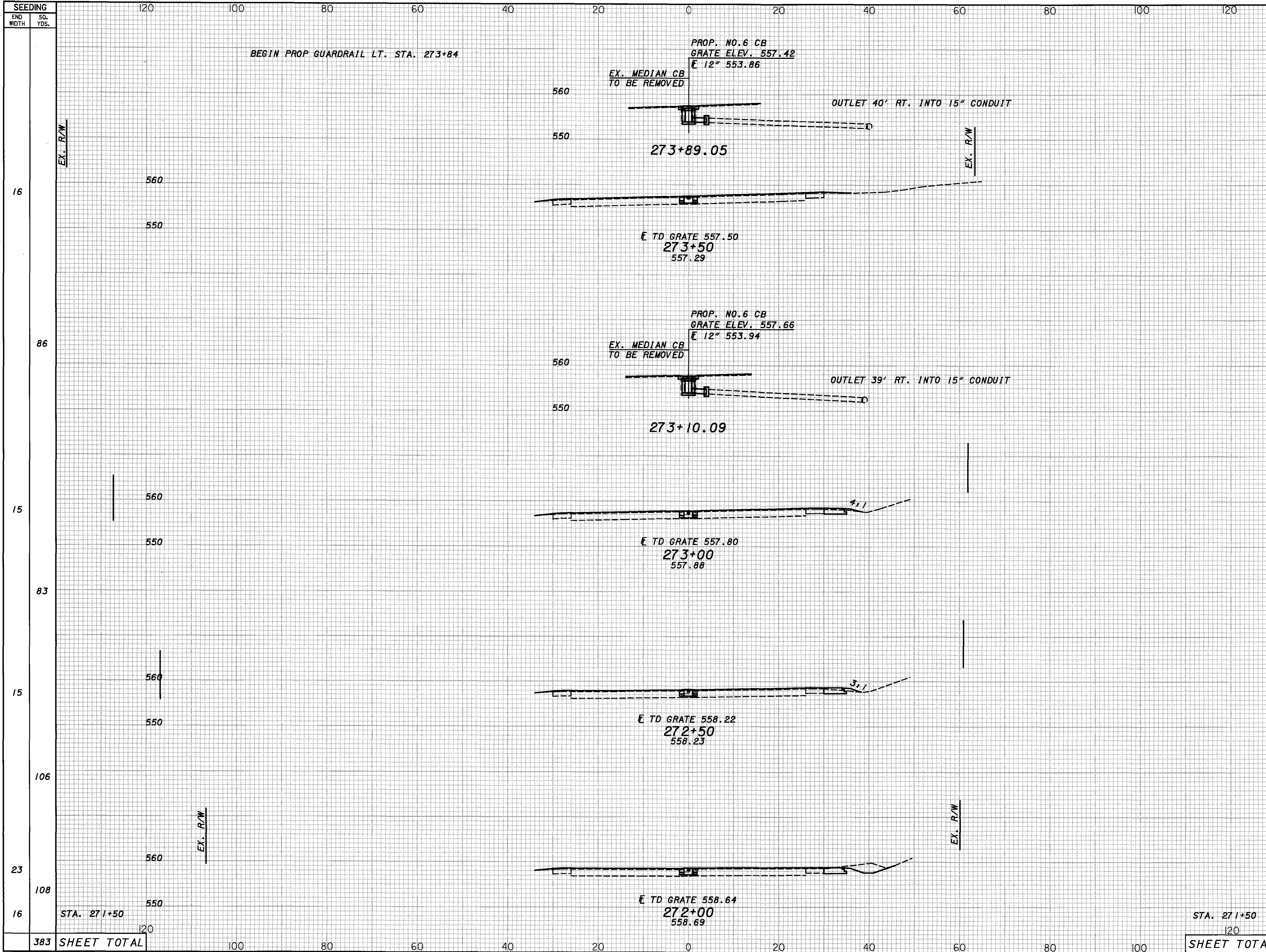
CALCULATED
 CHECKED
 LAW

CROSS SECTION SHEET
STA. 270+00 TO STA. 271+50

SCI-23-2.39

70
 110

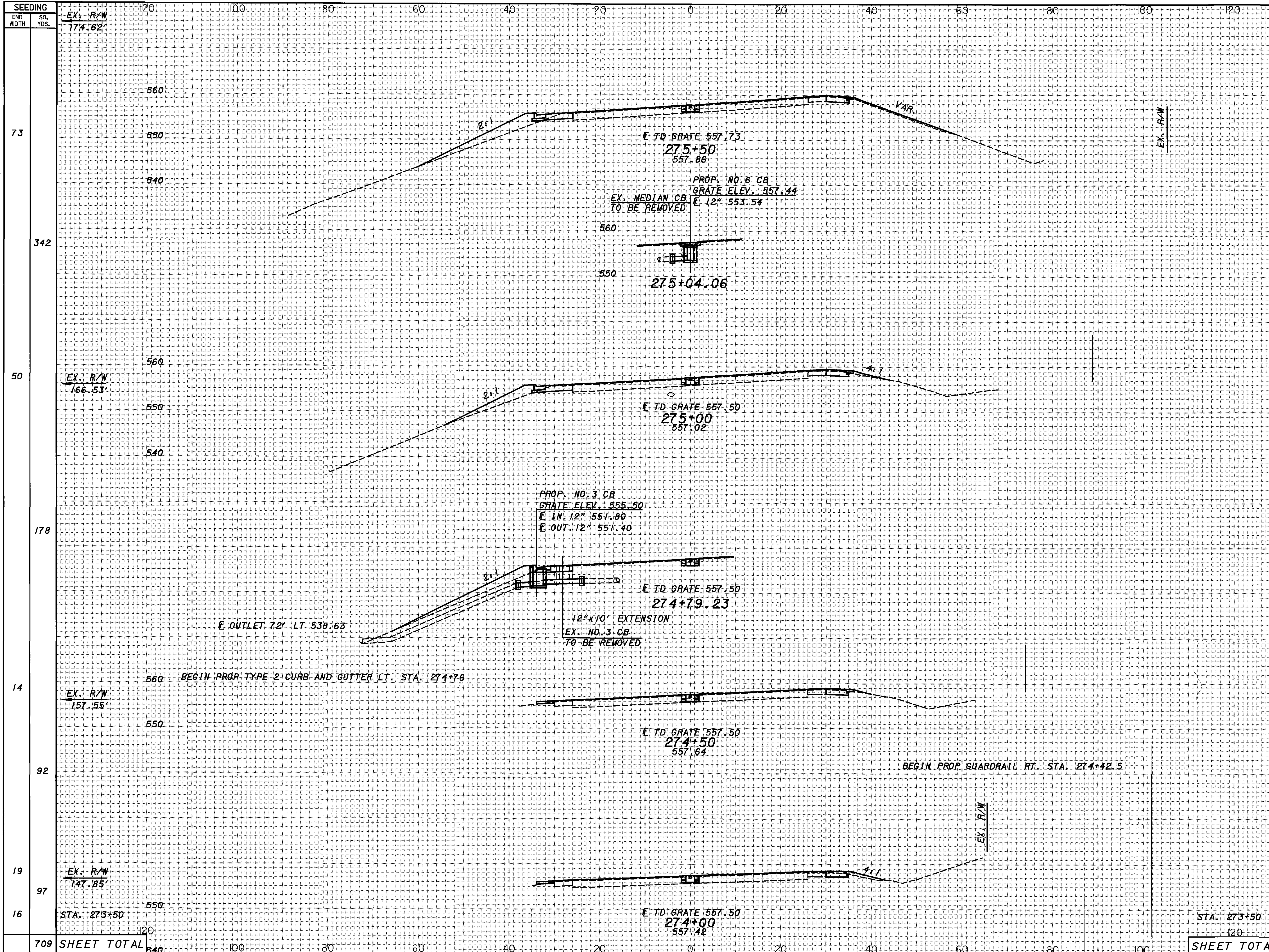
Drawing: I:\Project\230228\XSECT03.DGN Plotted by: crice 09-SEP-2005 13:20



SEEDING		END AREA		VOLUME		CALCULATED	CHECKED	LAW
END WIDTH	SO. YDS.	CUT	FILL	CUT	FILL			
16		2.6	1					
86				9	2			
15		7.3	1					
83				13	2			
15		6.5	1.6					
106				14	13			
23		8.1	12.4					
108				13	15			
16	STA. 271+50	6.4	3.6					
383	SHEET TOTAL			49	32			

CROSS SECTION SHEET
STA. 272+00 TO STA. 273+00
SCI-23-2.39

Drawing: I:\project\230228\XSECT\03.DGN
 Plotted by: crice
 09-SEP-2005 13:20

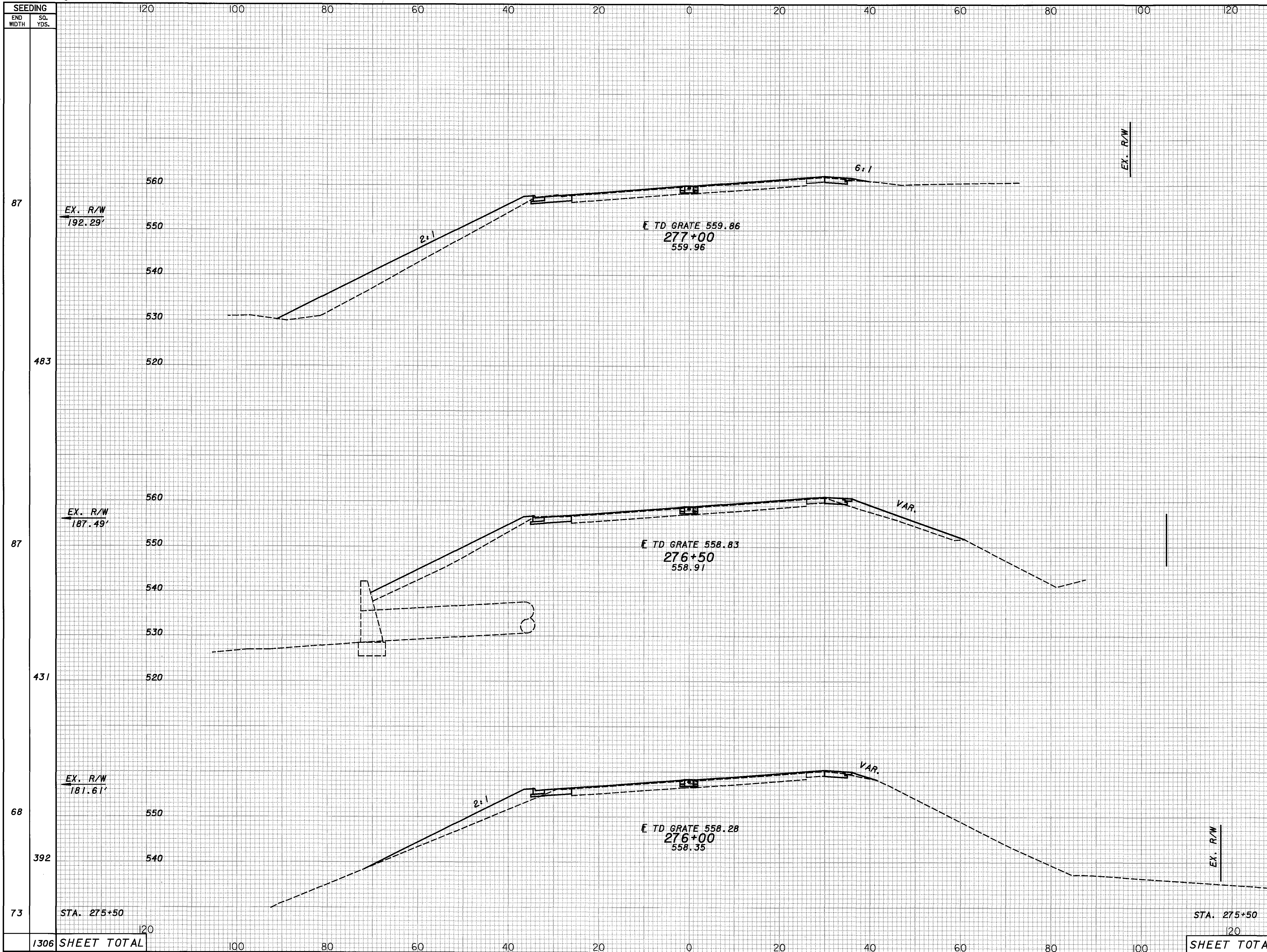


SEEDING	END AREA		VOLUME		CALCULATED	CHECKED	LAW
	CUT	FILL	CUT	FILL			
73	14	48					
342			28	69			
50	16	27					
178			22	26			
14	7.5	1					
92			14	5			
19	7.1	4.3					
97			9	5			
16	2.6	1					
709	SHEET TOTAL		73	105			

**CROSS SECTION SHEET
STA. 273+50 TO STA. 274+50**

SCI-23-2.39

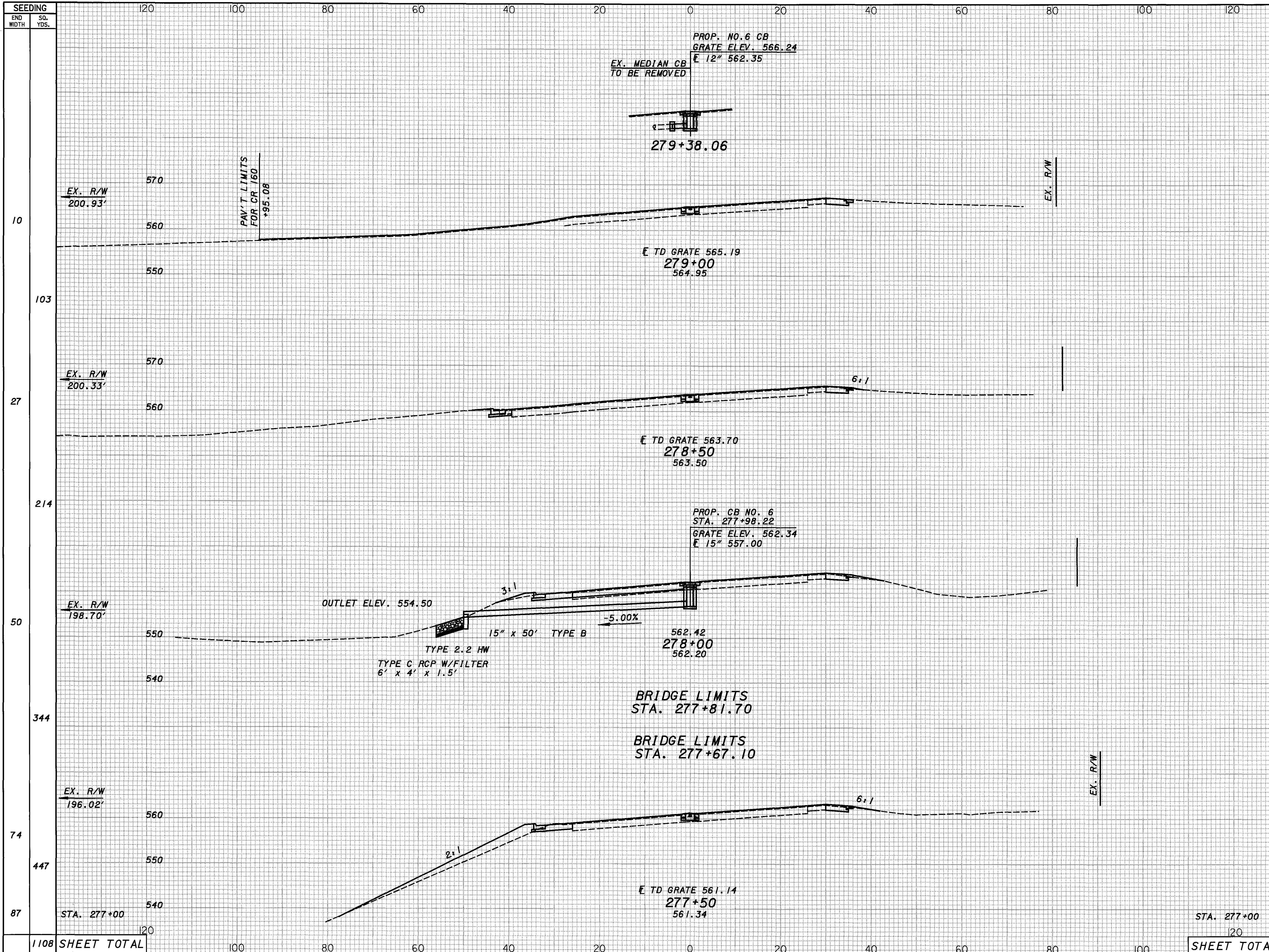
Drawing: I:\projects\230228\XSECT03.DGN Plotted by: crice 09-SEP-2005 13:20



STATION	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
87	20	159		
483			32	248
87	15	109		
431			26	163
68	13	67		
392			25	106
73	14	48		
1306 SHEET TOTAL			83	517

CROSS SECTION SHEET
STA. 275+00 TO STA. 276+50
SCI-23-2.39
 CALCULATED
 CER
 CHECKED
 LAW

Drawing: I:\Project\23s0228\XSECT\03.dgn
 Plotted by: orice
 09-SEP-2005 13:21



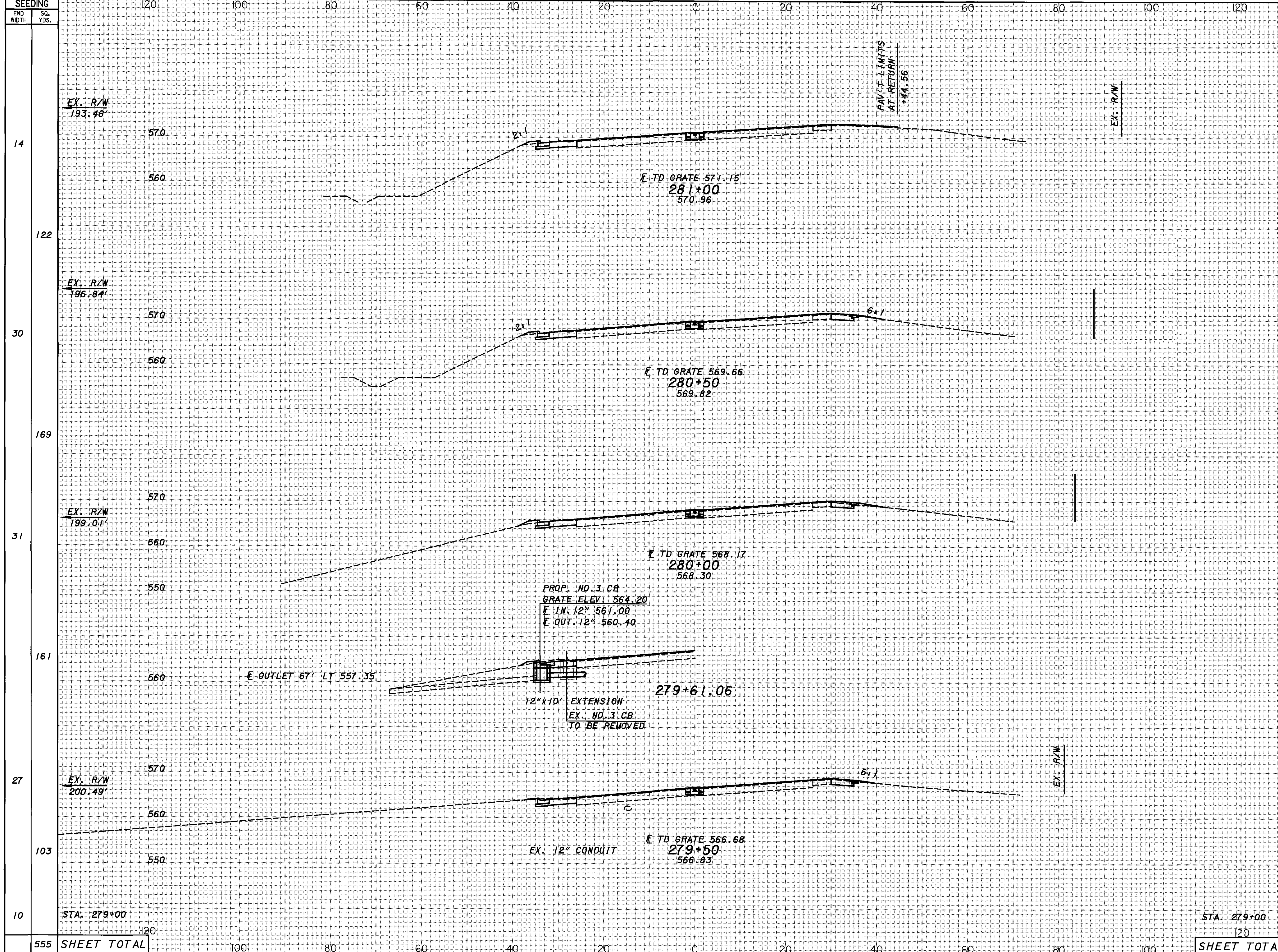
STATION	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
10	9.7	0		
103			17	1
27	8.8	1		
214			26	6
50	19	5.4		
344			28	57
74	11.7	56		
447			29	199
87	20	159		
1108 SHEET TOTAL			100	263

CROSS SECTION SHEET
STA. 277+50 TO STA. 279+00

SCI-23-2.39

74
 110

Drawing: I:\projects\330228\XSECT04.DGN Plotted by: crice 09-SEP-2005 13:22



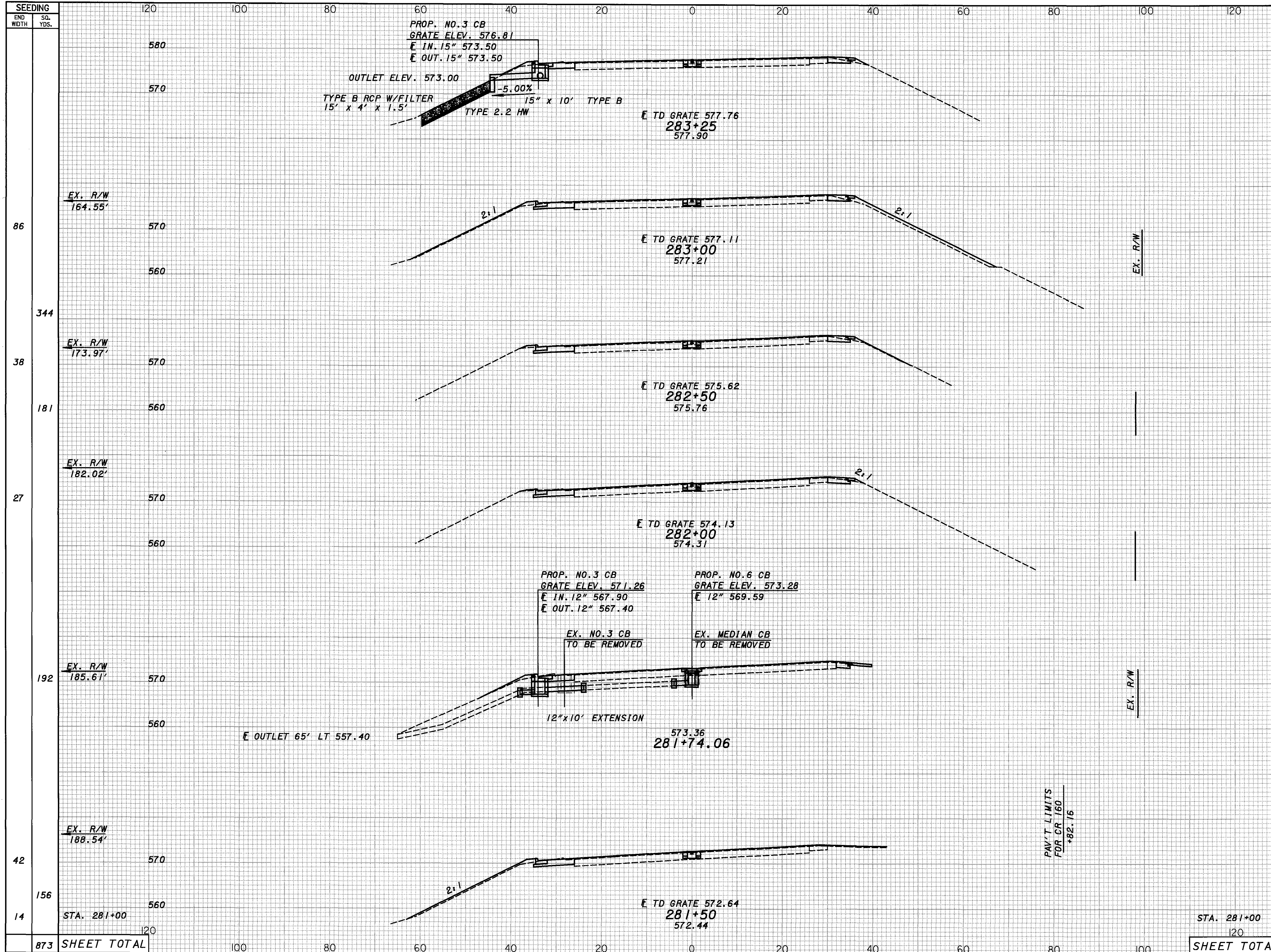
STATION	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
14	14.3	2		
122			32	4
30	20	2.4		
169			36	5
31	18.6	3.3		
161			36	5
27	20	2		
103			28	2
10	9.7	0		
SHEET TOTAL			132	16

CALCULATED
 CER
 CHECKED
 LAW

CROSS SECTION SHEET
STA. 279+50 TO STA. 281+00

SCI-23-2.39

Drawing : I:\projects\230228\XSECT04.DGN
 Plotted by: crlcc
 09-SEP-2005 13:22



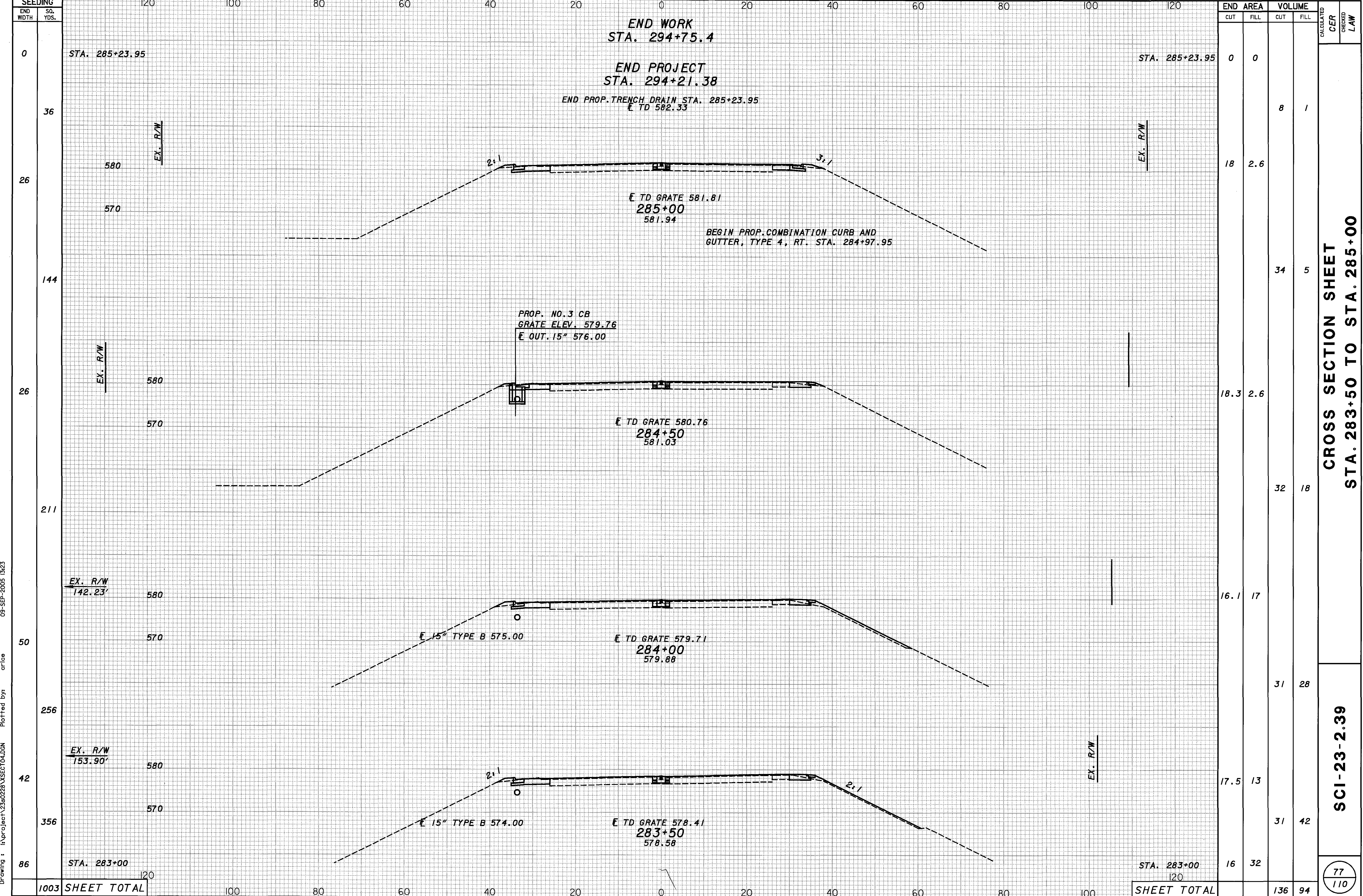
STATION	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
283+00	16	32		
283+00			32	34
282+50	18.1	4.4		
282+50			35	7
282+00	19.4	3		
282+00			31	15
281+50	13.8	13		
281+50			26	14
281+00	14.3	2		
SHEET TOTAL			124	70

CROSS SECTION SHEET
STA. 281+50 TO STA. 283+00

SCI-23-2.39

76
 110

Drawing: I:\projects\230228\XSECT04.DGN
 09-SEP-2005 13:22
 cr/ice
 Plotted by:

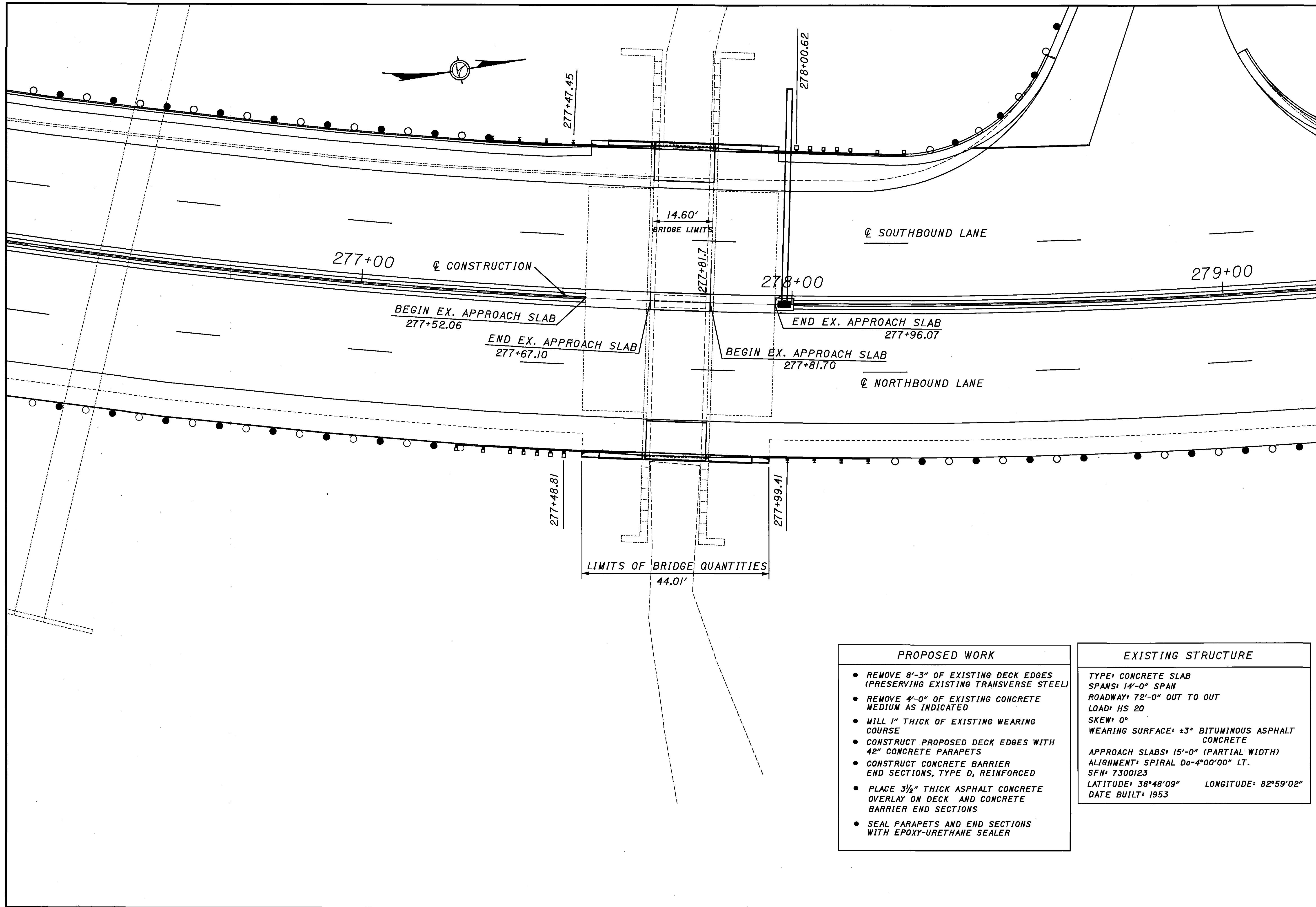


END STA.	AREA		VOLUME		CALCULATED	CER	CHECKED	LAW
	CUT	FILL	CUT	FILL				
0	0	0						
36			8	1				
26	18	2.6						
144			34	5				
26	18.3	2.6						
211			32	18				
50	16.1	17						
256			31	28				
42	17.5	13						
356			31	42				
86	16	32						
1003	SHEET TOTAL		136	94				

CROSS SECTION SHEET
STA. 283+50 TO STA. 285+00

SCI-23-2.39

Drawing : I:\projects\230228\XSECT04.DGN Plotted by: office 09-SEP-2005 13:23



DESIGN AGENCY: STATE OF OHIO
 DEPARTMENT OF TRANSPORTATION
 DISTRICT 9 PRODUCTION
 DATE: 9/1/05
 STRUCTURE FILE NUMBER: 7300123
 DRAWN: MRH
 CHECKED: GEC
 DESIGNED: MRH
 STA. 277+67.1
 STA. 277+81.7
 SITE PLAN
 BRIDGE NO. SCI-23-0519
 OVER PRIVATE DRIVE
 SCI-23-2.39
 1/9
 78
 110

- | PROPOSED WORK |
|--|
| <ul style="list-style-type: none"> REMOVE 8'-3" OF EXISTING DECK EDGES (PRESERVING EXISTING TRANSVERSE STEEL) REMOVE 4'-0" OF EXISTING CONCRETE MEDIUM AS INDICATED MILL 1" THICK OF EXISTING WEARING COURSE CONSTRUCT PROPOSED DECK EDGES WITH 42" CONCRETE PARAPETS CONSTRUCT CONCRETE BARRIER END SECTIONS, TYPE D, REINFORCED PLACE 3/2" THICK ASPHALT CONCRETE OVERLAY ON DECK AND CONCRETE BARRIER END SECTIONS SEAL PARAPETS AND END SECTIONS WITH EPOXY-URETHANE SEALER |

EXISTING STRUCTURE
TYPE: CONCRETE SLAB SPANS: 14'-0" SPAN ROADWAY: 72'-0" OUT TO OUT LOAD: HS 20 SKEW: 0° WEARING SURFACE: ±3" BITUMINOUS ASPHALT CONCRETE APPROACH SLABS: 15'-0" (PARTIAL WIDTH) ALIGNMENT: SPIRAL Dc-4°00'00" LT. SFN: 7300123 LATITUDE: 38°48'09" LONGITUDE: 82°59'02" DATE BUILT: 1953

ESTIMATED QUANTITIES FOR R0S-23-0519 S.F.N. 7100123

ESTIMATED QUANTITIES					GENERAL	SUPERSTRUCTURE	PARAPETS	SEE SHEET NO.
ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION				
202	11201	LUMP		PORTIONS OF STRUCTURE REMOVED, AS PER PLAN		LUMP		3/9
202	23500	30	SQ. YD.	WEARING COURSE REMOVED		30		
254	01001	315	SQ. YD.	PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN	234	81		12
407	10000	27	GAL	TACK COAT	18	9		
407	14000	28	GAL	TACK COAT FOR INTERMEDIATE COURSE	19	9		
442	10002	15	CU. YD.	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446) WITH SUPPLEMENTAL 1059 WARRANTY	10	5		
442	10100	22	CU. YD.	ASPHALT CONCRETE SURFACE COURSE, 19 MM, TYPE A (446)	15	7		
509	10000	3150	POUND	EPOXY COATED REINFORCING STEEL		2830	320	
511	50000	15	CU. YD.	CLASS HP CONCRETE, BRIDGE DECK		15		
511	50100	5	CU. YD.	CLASS HP CONCRETE, BRIDGE DECK (PARAPET)			5	
512	10100	34	SQ. YD.	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)*			34	
512	55800	30	SQ. YD.	TYPE D WATERPROOFING		30		
516	13600	32	SQ. FT.	1" PREFORMED ELASTOMERIC JOINT FILLER	32			
622	25011	4	EACH	CONCRETE BARRIER END SECTION, TYPE D, REINFORCED, AS PER PLAN	4			3/9
630	77000	2	EACH	OVERPASS STRUCTURE MOUNTED SIGN SUPPORT, TYPE TC 18.24	2			
630	87100	2	EACH	REMOVAL OF OVERHEAD MOUNTED SIGN AND REERECTION	2			

* LIGHT NEUTRAL (FEDERAL COLOR NO. 17778)

DESIGN AGENCY
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT 9 PRODUCTION

DATE
9/1/05
LAW
STRUCTURE FILE NUMBER
7300123

DRAWN
MRH
REVISED
DESIGNED
MRH
CHECKED
GEC

ESTIMATED QUANTITIES
BRIDGE NO. SCT-23-0519
OVER PRIVATE DRIVE

SCT-23-2.39

2 / 9

79
110

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWING:

SBR-1-99

REVISED 07-19-02

DESIGN SPECIFICATIONS:

THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2002 AND THE O.D.O.T BRIDGE DESIGN MANUAL

DESIGN LOADING:

HS20, AND THE ALTERNATE MILITARY LOADING.
NO FUTURE WEARING SURFACE (FWS).

DESIGN DATA:

CONCRETE CLASS HP - COMPRESSIVE STRENGTH 4500 P.S.I.
(SUPERSTRUCTURE)
REINFORCING STEEL - ASTM A615 OR A996, GRADE 60
MINIMUM YIELD STRENGTH 60,000 P.S.I.

DECK PROTECTION METHOD:

WATERPROOFING AND ASPHALT CONCRETE OVERLAY.

EXISTING BRIDGE PLANS

DETAIL DRAWINGS OF THE EXISTING BRIDGES MAY BE INSPECTED AT THE DISTRICT 9 BRIDGE OFFICE AT 650 EASTERN AVENUE IN CHILLICOTHE, OHIO.

EXISTING STRUCTURE VERIFICATION

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05 AND 105.02.

BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS THAT HAVE BEEN VERIFIED IN THE FIELD.

CONCRETE PARAPETS

AS SOON AS A CONCRETE SAW CAN BE OPERATED WITHOUT DAMAGING THE FRESHLY PLACED CONCRETE, SAWCUT 1-1/4" DEEP CONTROL JOINTS INTO THE PERIMETER OF THE CONCRETE PARAPET STARTING AND ENDING AT THE ELEVATION OF THE CONCRETE DECK. PLACE THE SAWCUTS AT A MINIMUM OF 6 FEET AND A MAXIMUM OF 10 FEET CENTERS. USE AN EDGE GUIDE, FENCE, OR JIG TO ENSURE THAT THE CUT JOINT IS STRAIGHT, TRUE, AND ALIGNED ON ALL FACES OF THE PARAPET. THE JOINT WIDTH SHALL BE THE WIDTH OF THE SAW BLADE, A NOMINAL WIDTH OF 1/4 INCH. SEAL THE PERIMETER OF THE DEFLECTION CONTROL JOINT TO A MINIMUM DEPTH OF 1 INCH WITH A POLYURETHANE OR POLYMERIC MATERIAL CONFORMING TO ASTM C920, TYPE S. LEAVE THE BOTTOM 1/2 INCH OF THE INSIDE AND OUTSIDE FACE UNSEALED TO ALLOW WATER TO ESCAPE.

ITEM 622 - CONCRETE BARRIER END SECTION, TYPE D, REINFORCED, AS PER PLAN

THIS ITEM CONSISTS OF CONSTRUCTING THE PARAPET TRANSITIONS OFF THE STRUCTURE AND ANCHORING THEM WITH CONCRETE REINFORCED DRILLED SHAFTS. THIS ITEM SHALL BE CONSTRUCTED AS DETAILED ON SHEET 7/9 AND CONFORM TO STD. DWG. SBR-1-99.

THE CONCRETE FOR THE TRANSITIONS, FOOTINGS, AND DRILLED SHAFTS SHALL BE THE SAME CLASS AND MIX DESIGN AS THAT USED FOR THE CONCRETE PARAPETS ON THE STRUCTURE. ALL REINFORCING STEEL SHALL BE EPOXY COATED AND CONFORM TO 509 OF THE CMS.

THE TRANSITION AREA SHALL BE AT THE SAME ELEVATION AS THE ROADWAY AFTER MILLING HAS BEEN PERFORMED. THE 3/2" ASPHALT CONCRETE OVERLAY SHALL BE PLACED OVER THE FOOTINGS TO THE FACE OF THE TRANSITIONING PARAPETS.

EQUIPMENT, MATERIALS, AND LABOR REQUIRED TO PERFORM THE WORK OUTLINED ABOVE, WITH THE EXCEPTION OF ITEMS SEPARATELY ITEMIZED, SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 622, CONCRETE END SECTION, TYPE D, REINFORCED, AS PER PLAN.

ITEM 202 - PORTIONS OF STRUCTURE REMOVED, AS PER PLAN:

THIS ITEM SHALL INCLUDE THE ELEMENTS INDICATED IN THE PLANS AND GENERAL NOTES AND THAT ARE NOT SEPARATELY LISTED FOR PAYMENT, EXCEPT FOR WEARING COURSE REMOVAL. ITEMS TO BE REMOVED INCLUDE ALL EXISTING MATERIALS BEING REPLACED BY NEW CONSTRUCTION AND MISCELLANEOUS ITEMS THAT ARE NOT SHOWN TO BE INCORPORATED INTO THE FINAL CONSTRUCTION AND ARE DIRECTED TO BE REMOVED BY THE ENGINEER. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE-RAMS WILL NOT BE PERMITTED. THE METHOD OF REMOVAL AND THE WEIGHT OF HAMMER SHALL BE APPROVED BY THE ENGINEER. PERFORM ALL WORK IN A MANNER THAT WILL NOT CUT, ELONGATE OR DAMAGE THE EXISTING REINFORCING STEEL TO BE PRESERVED. CHIPPING HAMMERS SHALL NOT BE HEAVIER THAN THE NOMINAL 90-POUND CLASS. PNEUMATIC HAMMERS SHALL NOT BE PLACED IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE. SUBMIT CONSTRUCTION PLANS ACCORDING TO CMS 501.05.

ALL DECK TRANSVERSE REINFORCING STEEL SHALL BE PRESERVED SO THAT THE BAR STRENGTH CAN BE FULLY DEVELOPED AT THE REMOVAL LINE BY PROVIDING THE REQUIRED MINIMUM LAP LENGTH SPECIFIED IN THE PLAN.

BRIDGE CONSTRUCTION SEQUENCE:

STAGE ONE CONSTRUCTION

1. SET UP PHASE I TRAFFIC CONTROL TO CLOSE THE RIGHT DRIVING LANES IN ACCORDANCE WITH MAINTENANCE OF TRAFFIC PLAN FOR THE BRIDGE WORK AS DETAILED ON SHEETS 22 AND 23 AND USE PORTABLE CONCRETE BARRIER, 50" BRIDGE MOUNTED, AS PER PLAN (UNANCHORED) TO PROTECT THE BRIDGE WORK AREA AS DETAILED ON SHEET 4/9.
2. REMOVE THE 8'-3" PORTION OF BOTH EDGES OF THE EXISTING BRIDGE DECK AND ABUTMENTS AS SHOWN ON SHEET 5/9.
3. COMPLETED STAGE ONE CONSTRUCTION OF BOTH BRIDGE NO. SCI-23-0519 AND BRIDGE NO. SCI-23-0535 AND ROADWAY APPROACH WORK IN THE CONSTRUCTION AREA DETAILED ON SHEETS 22 AND 23 WITH THE EXCEPTION OF 1-1/2" ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446) WITH SUPPLEMENTAL 1059 WARRANTY AND ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE).

CONSTRUCTION AREA DETAILED ON SHEETS 22 AND 23 WITH THE EXCEPTION OF 1-1/2" ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446) WITH SUPPLEMENTAL 1059 WARRANTY AND ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE).

STAGE TWO CONSTRUCTION

1. AT COMPLETION OF STAGE ONE CONSTRUCTION REVISE MAINTENANCE OF TRAFFIC DEVICES TO OPEN THE RIGHT DRIVING LANES AND SET UP PHASE II TRAFFIC CONTROL TO CLOSE THE LEFT PASSING LANES IN ACCORDANCE WITH MAINTENANCE OF TRAFFIC PLAN FOR THE BRIDGE WORK AS DETAILED ON SHEETS 24 AND 25 AND USE PORTABLE CONCRETE BARRIER, 50" BRIDGE MOUNTED, AS PER PLAN (UNANCHORED) TO PROTECT THE BRIDGE WORK AREA AS DETAILED ON SHEET 4/9.
2. REMOVE THE 4' PORTION AT CENTER OF THE EXISTING BRIDGE DECK AND ABUTMENTS AS SHOWN ON SHEET 5/9.
3. COMPLETED STAGE TWO CONSTRUCTION OF BOTH BRIDGE NO. SCI-23-0519 AND BRIDGE NO. SCI-23-0535 AND ROADWAY APPROACH WORK IN THE CONSTRUCTION AREA DETAILED ON SHEETS 24 AND 25 WITH THE EXCEPTION OF 1-1/2" ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446) WITH SUPPLEMENTAL 1059 WARRANTY ON THE ENTIRE LENGTH OF THE PROJECT.

STAGE THREE CONSTRUCTION

1. AT COMPLETION OF STAGE TWO CONSTRUCTION REMOVE MAINTENANCE OF TRAFFIC DEVICES FOR PHASE II TRAFFIC CONTROL AND OPEN ALL LANES TO TRAFFIC.
2. 1-1/2" ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446) WITH SUPPLEMENTAL 1059 WARRANTY AND ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) AND ALL OTHER REMAINING WORK IN CONJUNCTION WITH THE PLACEMENT OF THE 1-1/2" ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446) WITH SUPPLEMENTAL 1059 WARRANTY ON THE ENTIRE LENGTH OF THE PROJECT.

DESIGN AGENCY
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT 9 PRODUCTION

DATE
9/1/05
LAW
STRUCTURE FILE NUMBER
7300123

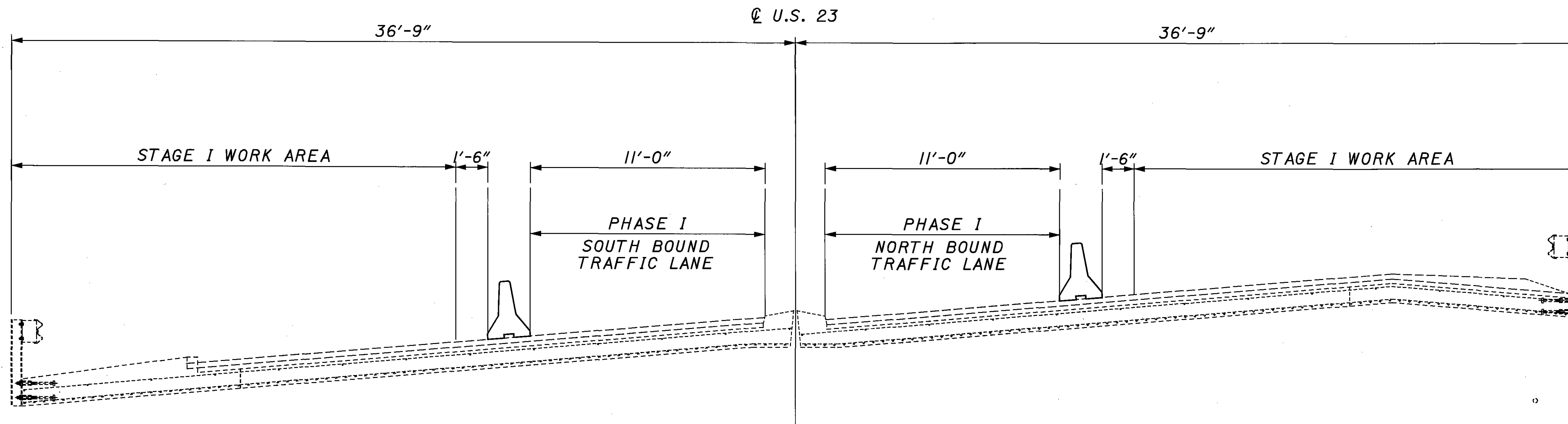
DRAWN
MRH
REVISED
DESIGNED
MRH
CHECKED
GEC

GENERAL NOTES
BRIDGE NO. SCI-23-0519
OVER PRIVATE DRIVE

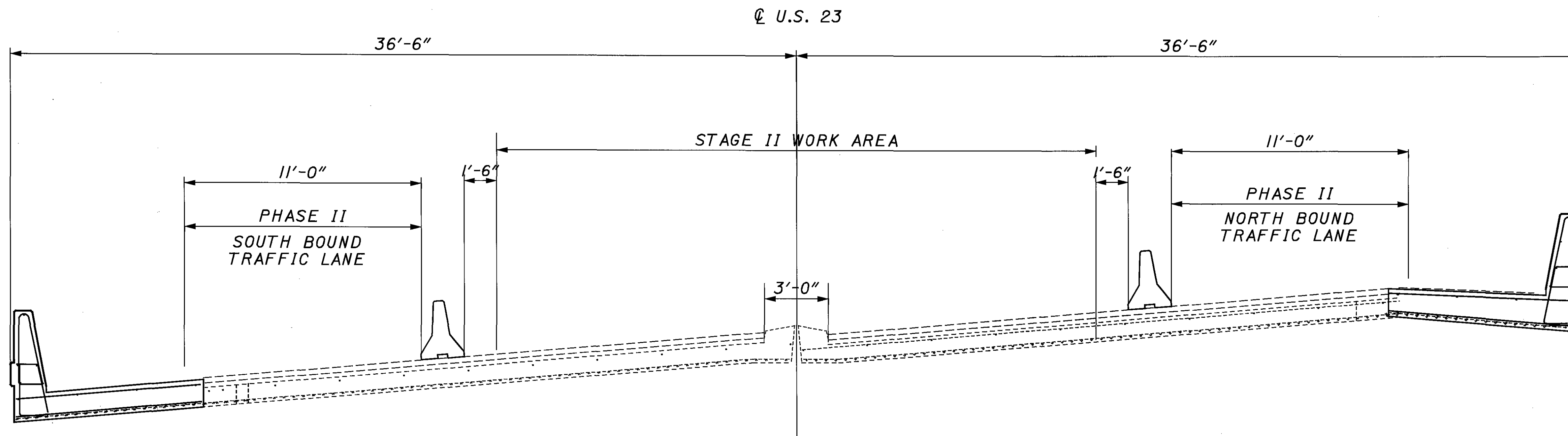
SCI-23-2.39

3 / 9

80
110

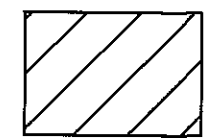


EXISTING TRANSVERSE SECTION
PHASE I

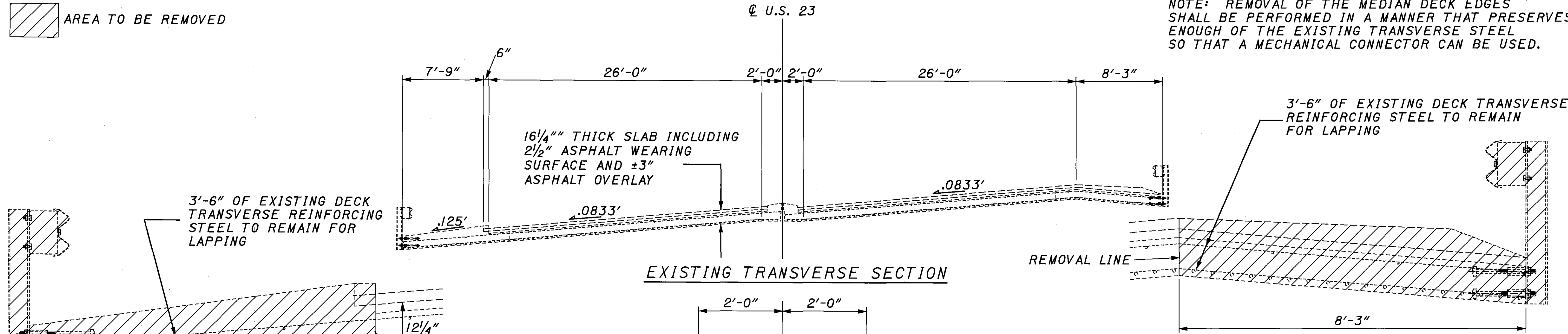


EXISTING TRANSVERSE SECTION
PHASE II

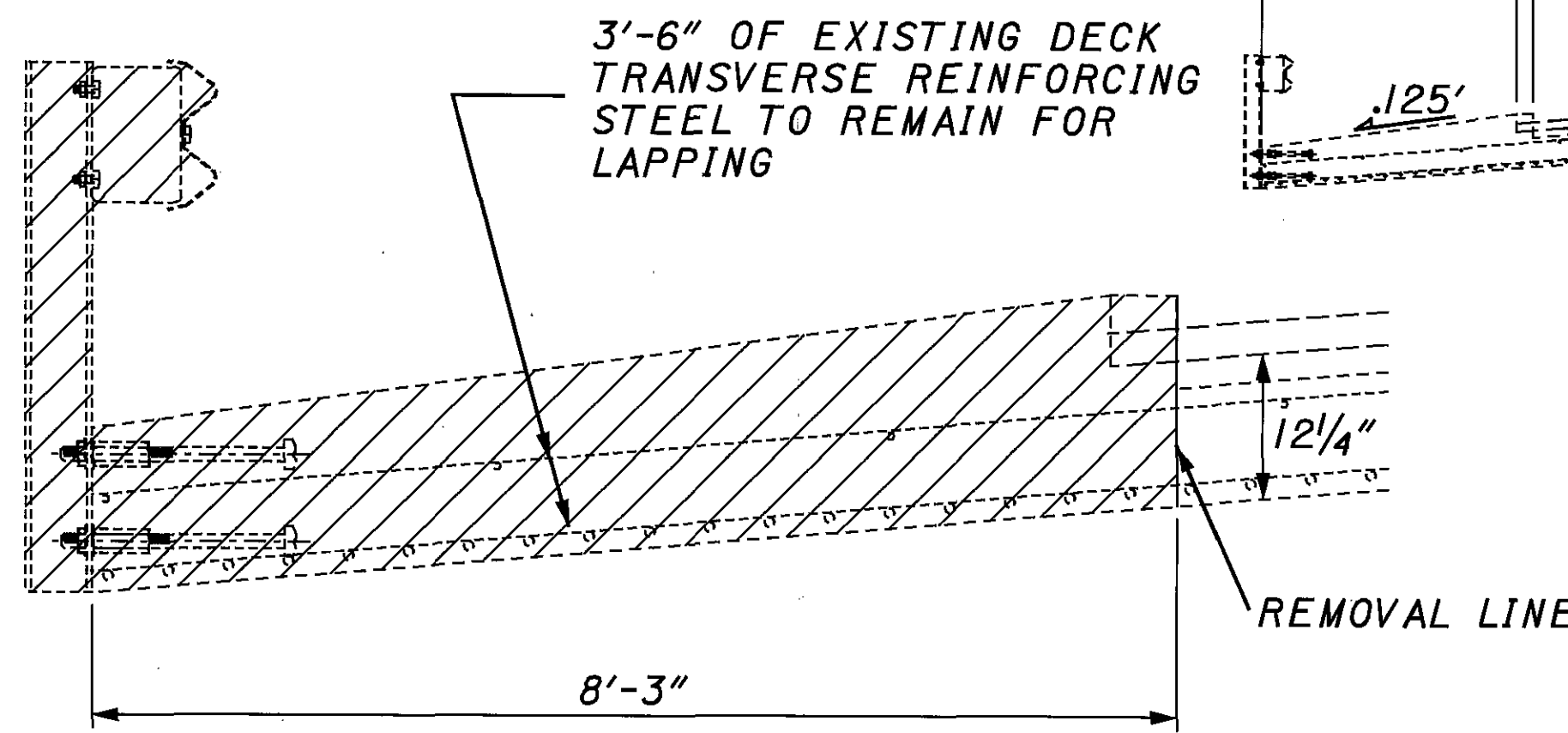
DESIGN AGENCY STATE OF OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 9 PRODUCTION	
REVIEWED LAW	DATE 9/1/05 STRUCTURE FILE NUMBER 7300123
DRAWN BCB	REVISIONS
DESIGNED MRH	CHECKED MRH
MAINTENANCE OF TRAFFICE PHASING BRIDGE SCI-23-0519 OVER PRIVATE DRIVE	
ROS-23-2.39	
4 / 9	
81 110	

 AREA TO BE REMOVED

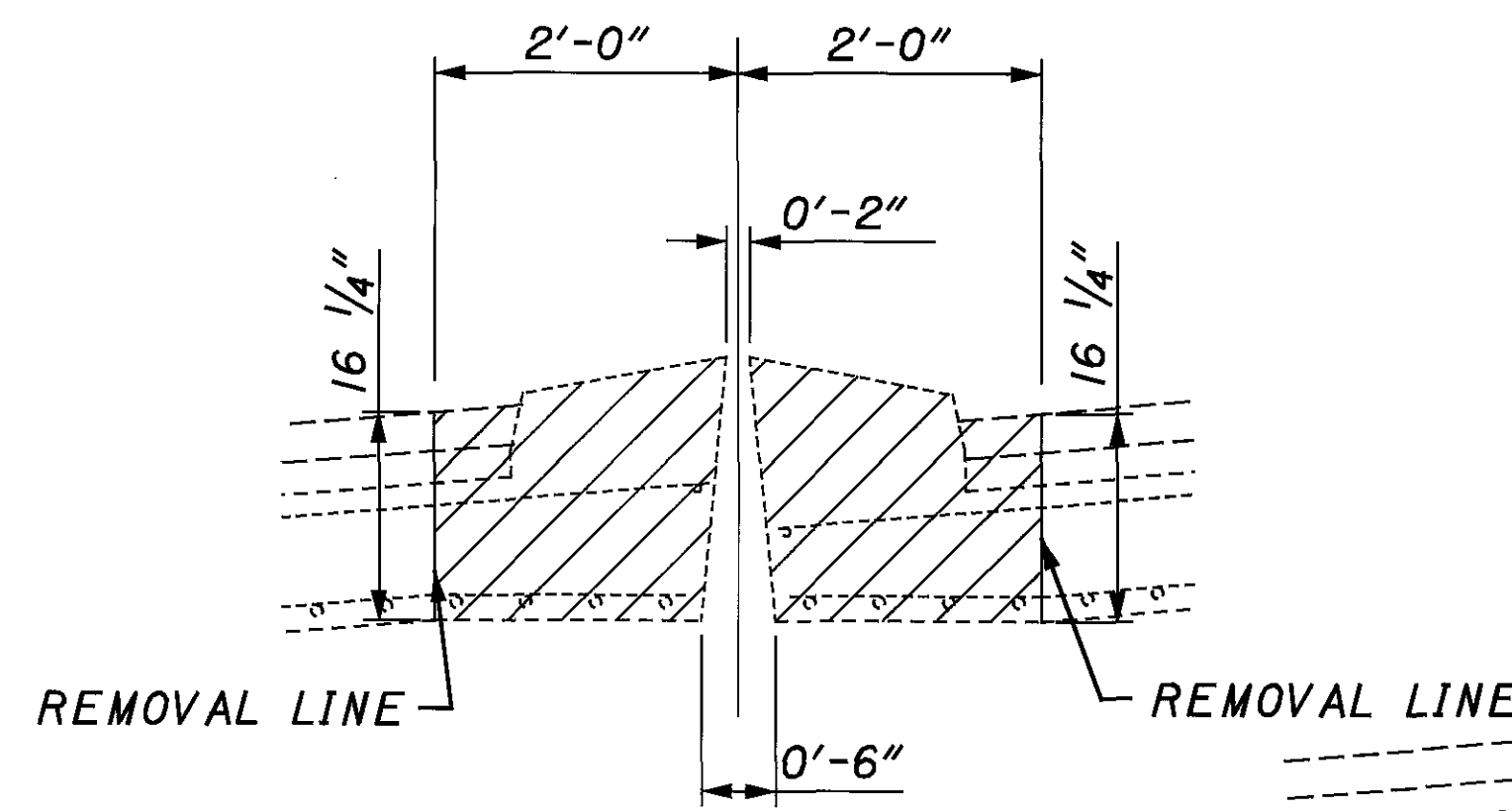
NOTE: REMOVAL OF THE MEDIAN DECK EDGES SHALL BE PERFORMED IN A MANNER THAT PRESERVES ENOUGH OF THE EXISTING TRANSVERSE STEEL SO THAT A MECHANICAL CONNECTOR CAN BE USED.



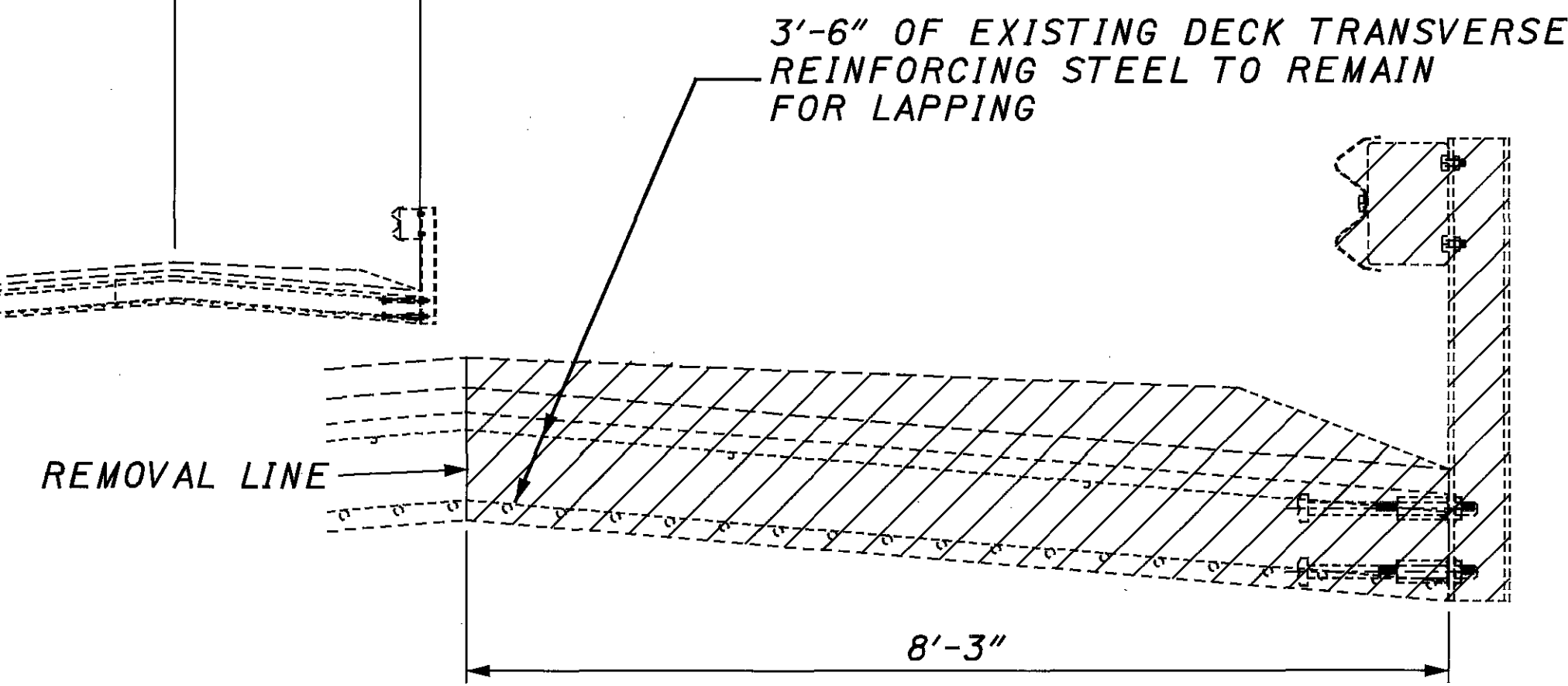
EXISTING TRANSVERSE SECTION



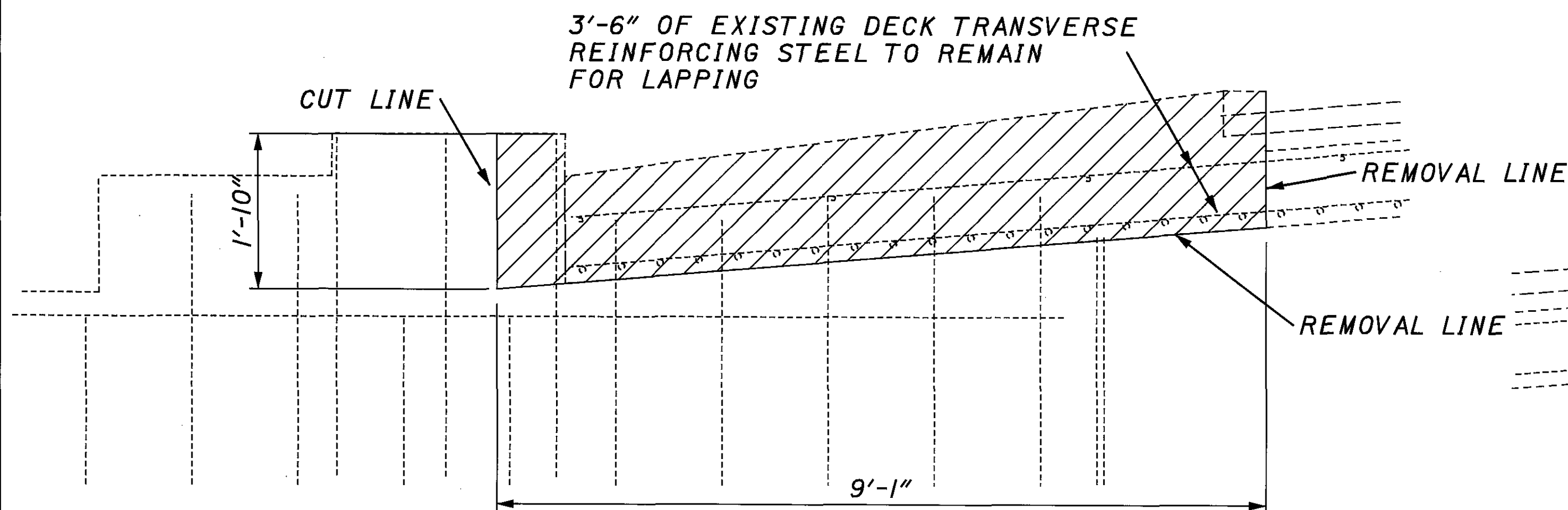
REMOVAL DETAILS
APPLIES TO LEFT EDGE OF DECK



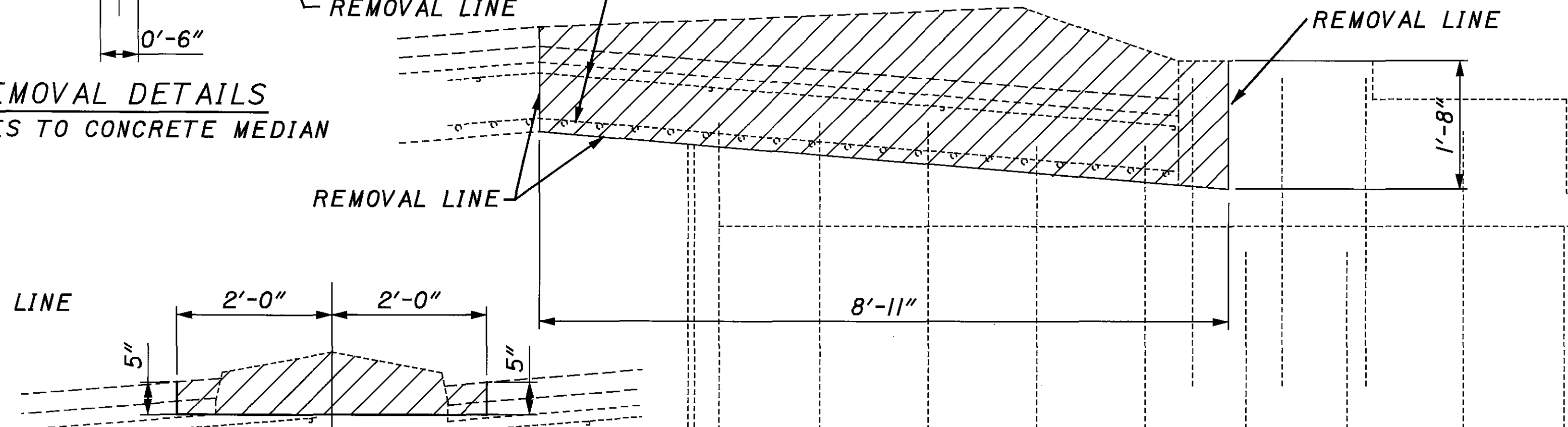
REMOVAL DETAILS
APPLIES TO CONCRETE MEDIAN



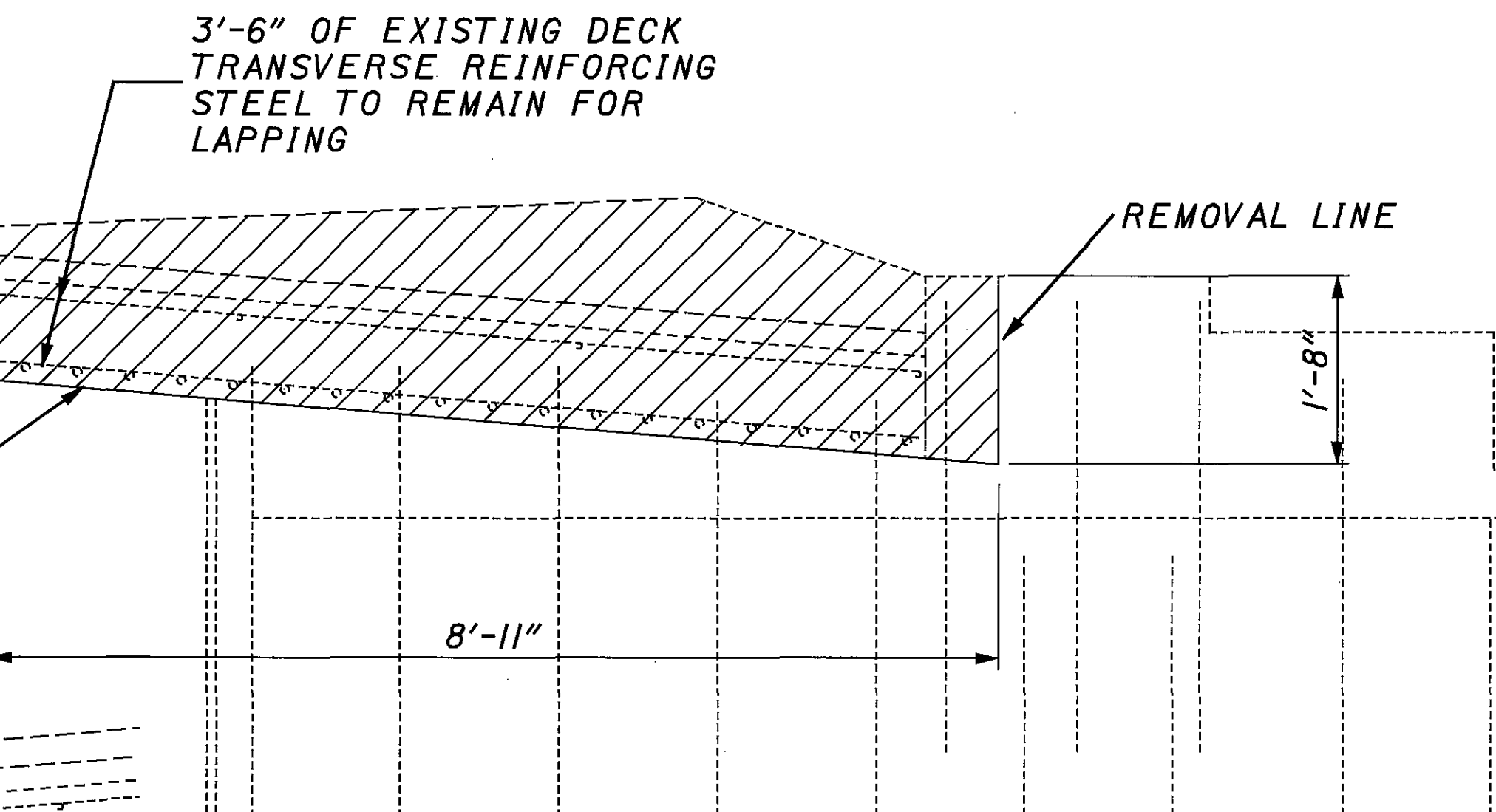
REMOVAL DETAILS
APPLIES TO RIGHT EDGE OF DECK



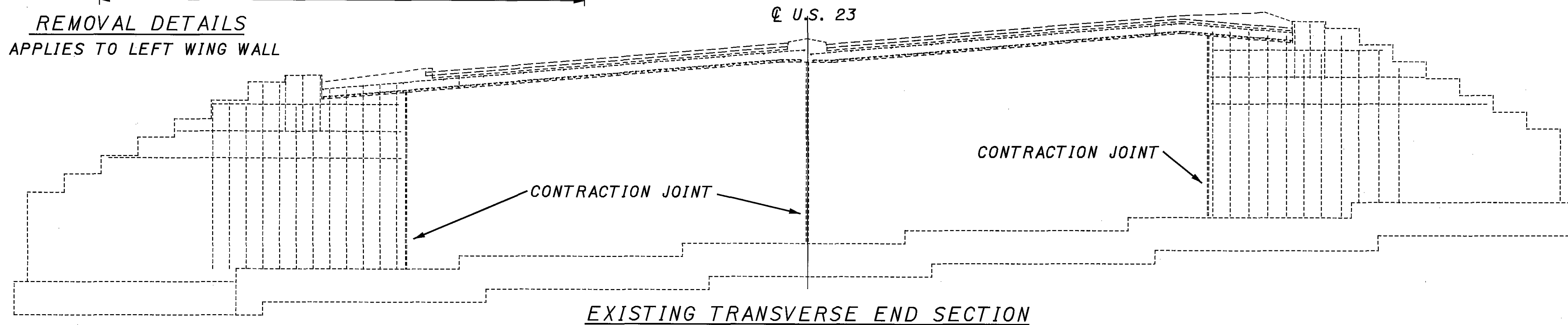
REMOVAL DETAILS
APPLIES TO LEFT WING WALL



REMOVAL DETAILS
APPLIES TO CONCRETE MEDIAN
OVER ABUTMENTS

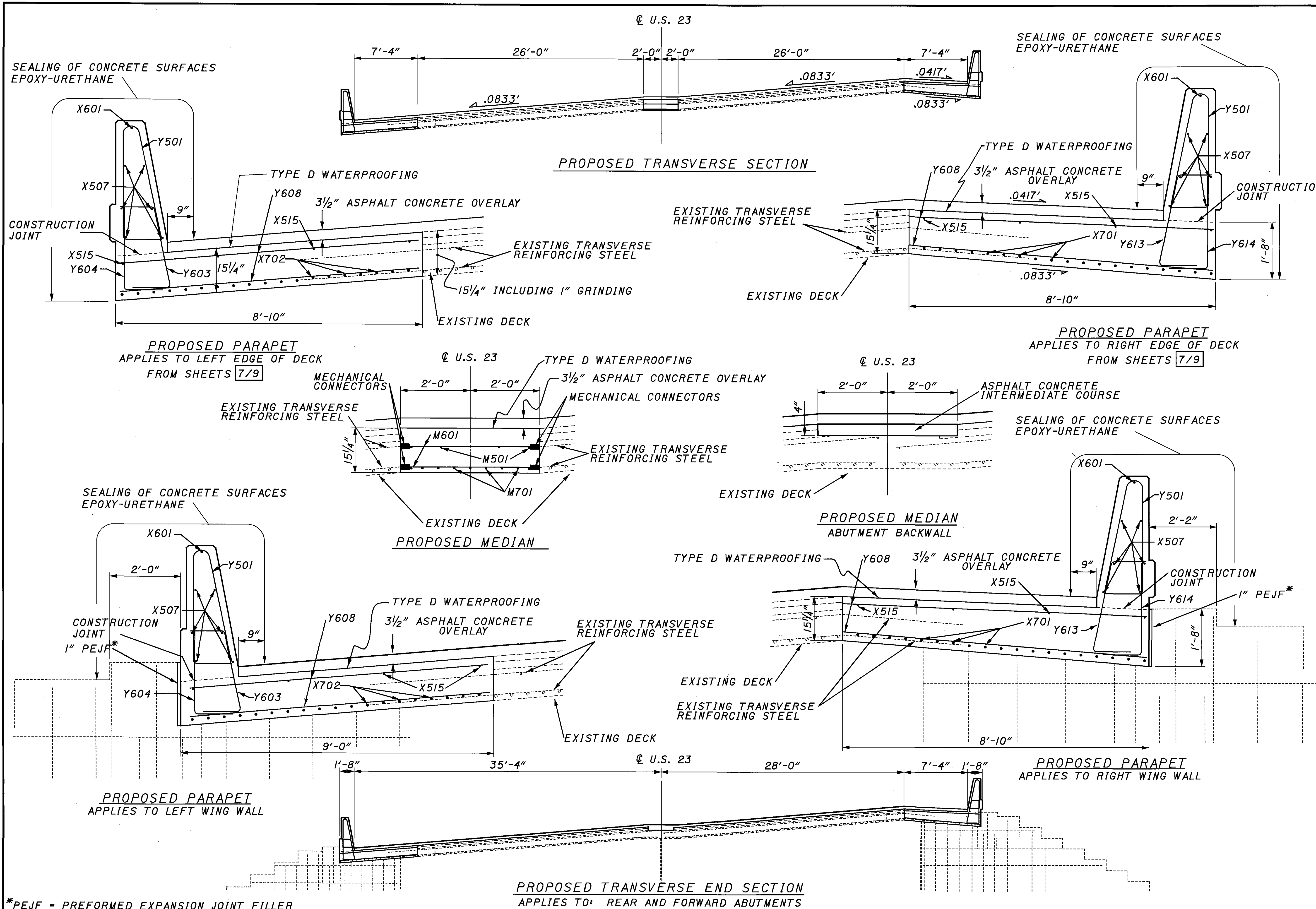


REMOVAL DETAILS
APPLIES TO RIGHT WING WALL



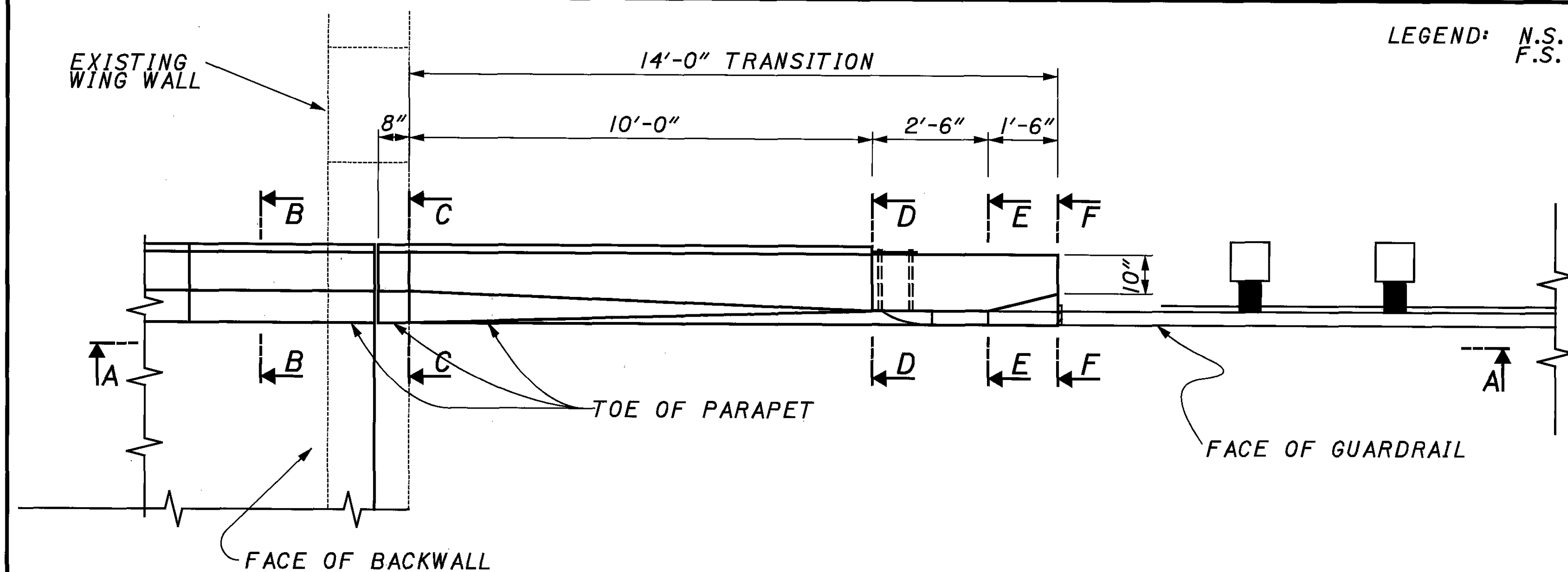
EXISTING TRANSVERSE END SECTION

DESIGN AGENCY: STATE OF OHIO
 DATE: 9/1/05
 REVIEWED: LAW
 STRUCTURE FILE NUMBER: 7300123
 DISTRICT 9 PRODUCTION
 DRAWN: MRH
 CHECKED: GEC
 EXISTING TRANSVERSE SECTIONS
 BRIDGE NO. SCI-23-0519
 OVER PRIVATE DRIVE
 SCI-23-2.39
 5 / 9
 82 / 110

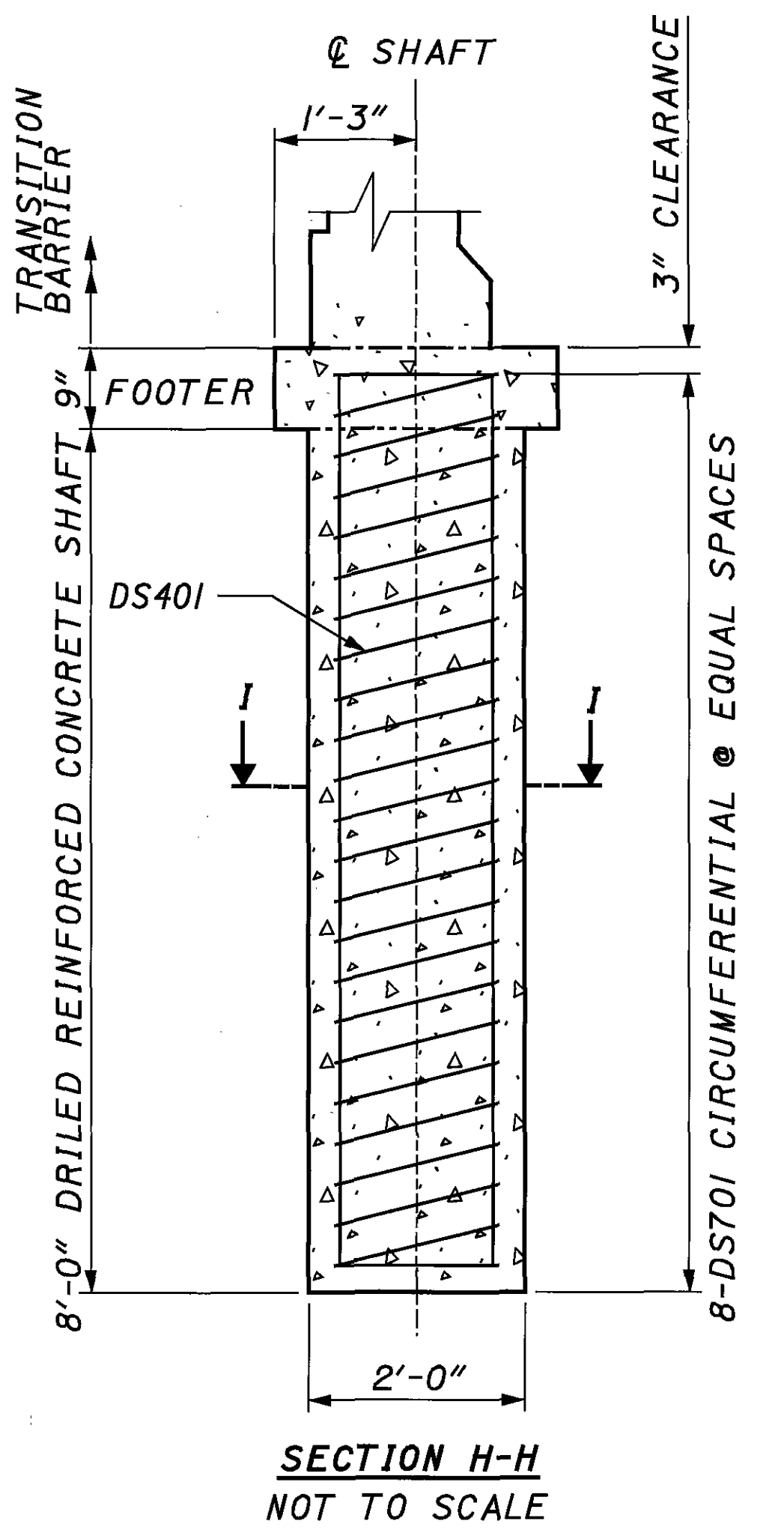
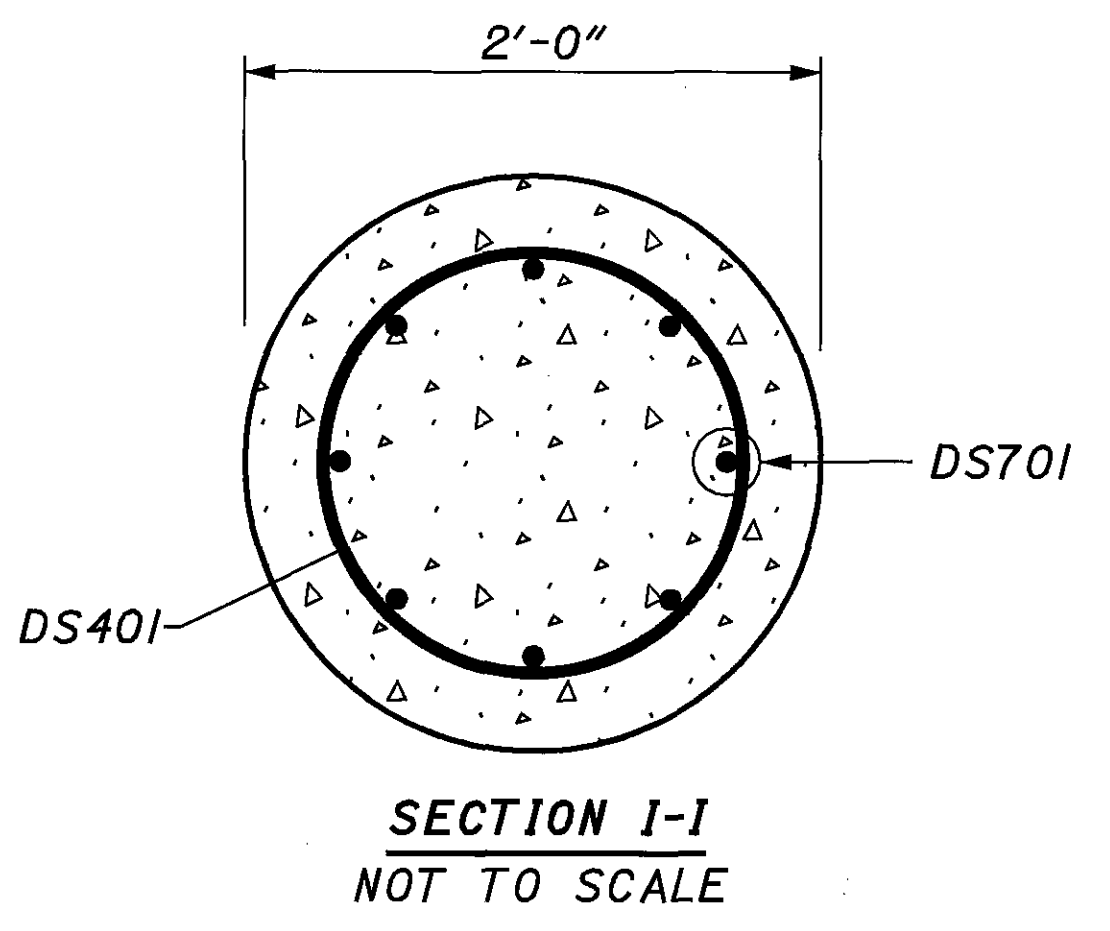


*PEJF - PREFORMED EXPANSION JOINT FILLER

DESIGNED	MRH	CHECKED	GEC
DRAWN	MRH	REVISED	
REVIEWED	LAW	DATE	9/11/05
DESIGN AGENCY	STATE OF OHIO		
DEPARTMENT	DEPARTMENT OF TRANSPORTATION		
DISTRICT	DISTRICT 9 PRODUCTION		
STRUCTURE FILE NUMBER	7300123		
PROPOSED TRANSVERSE SECTIONS			
BRIDGE NO. SCI-23-0519			
OVER PRIVATE DRIVE			
SCI-23-2.39			
6 / 9			
83			
110			

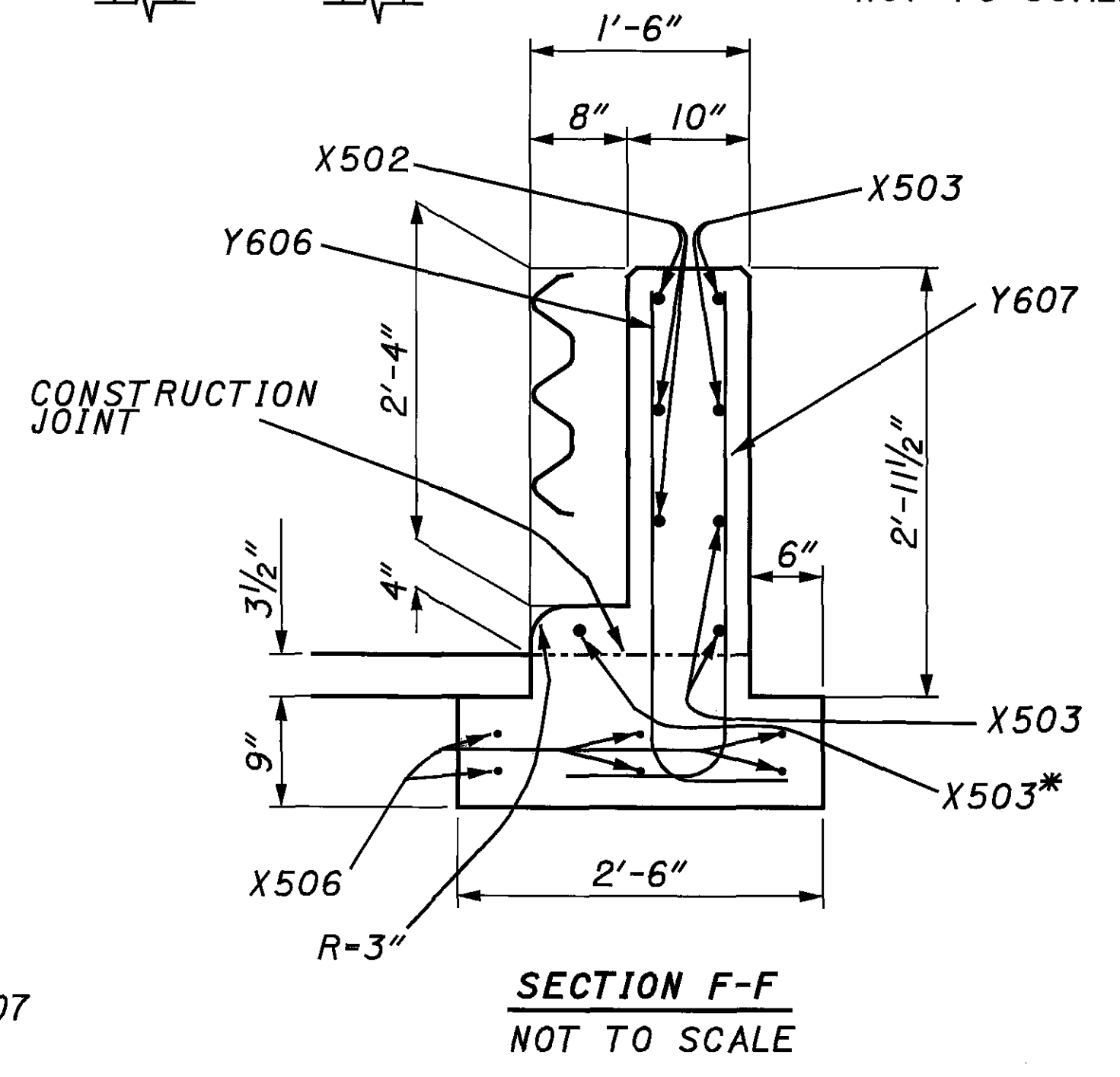
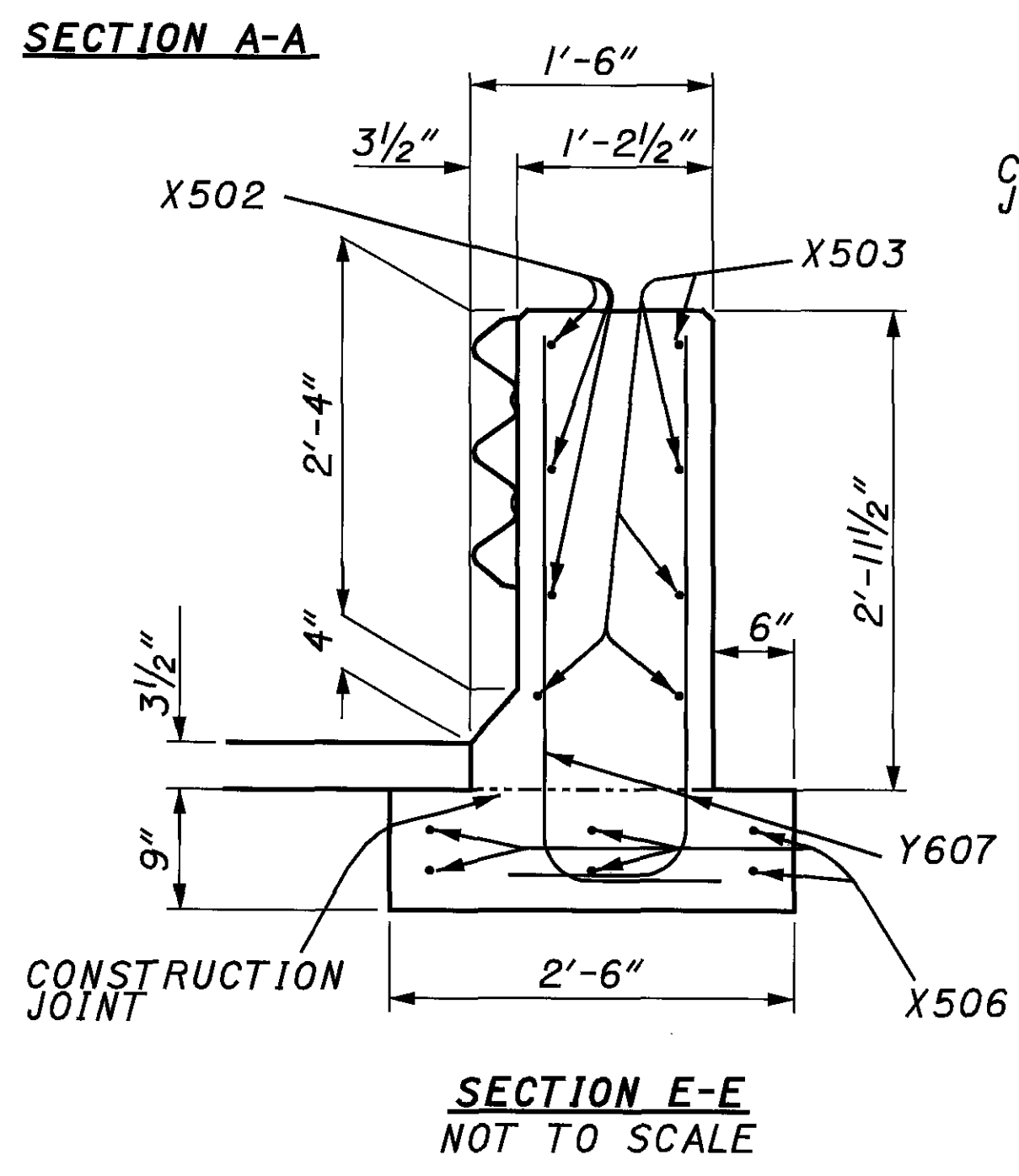
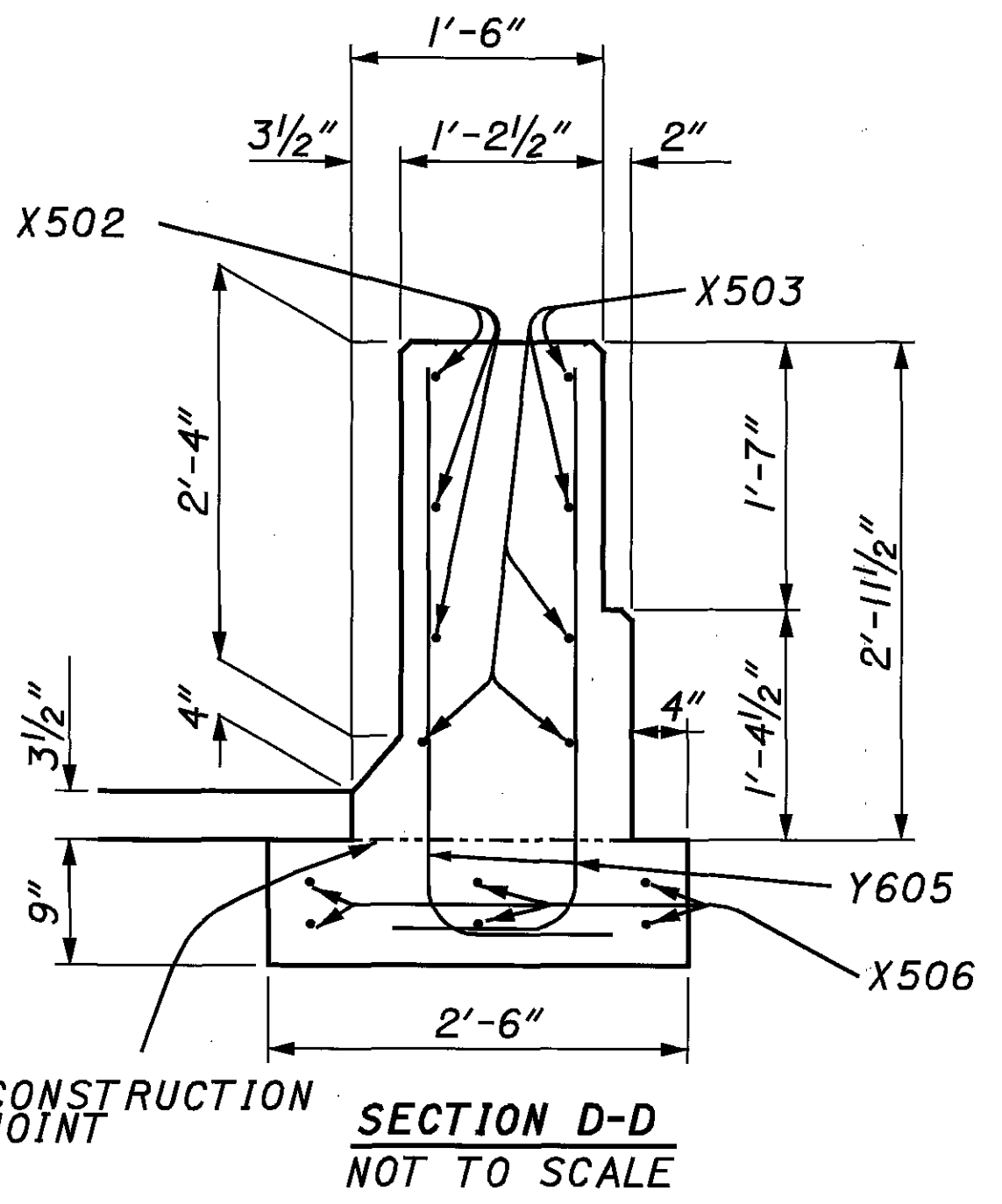
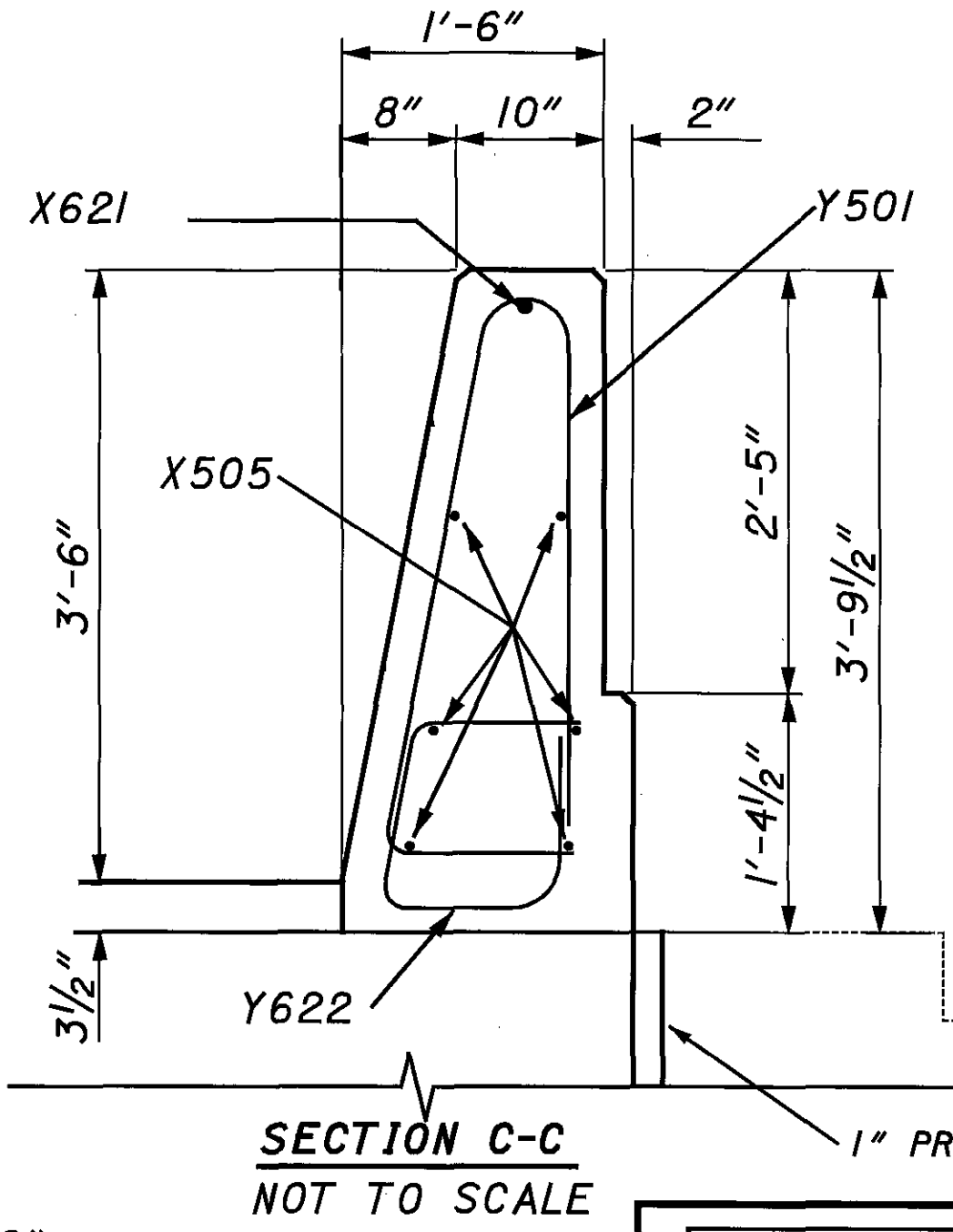
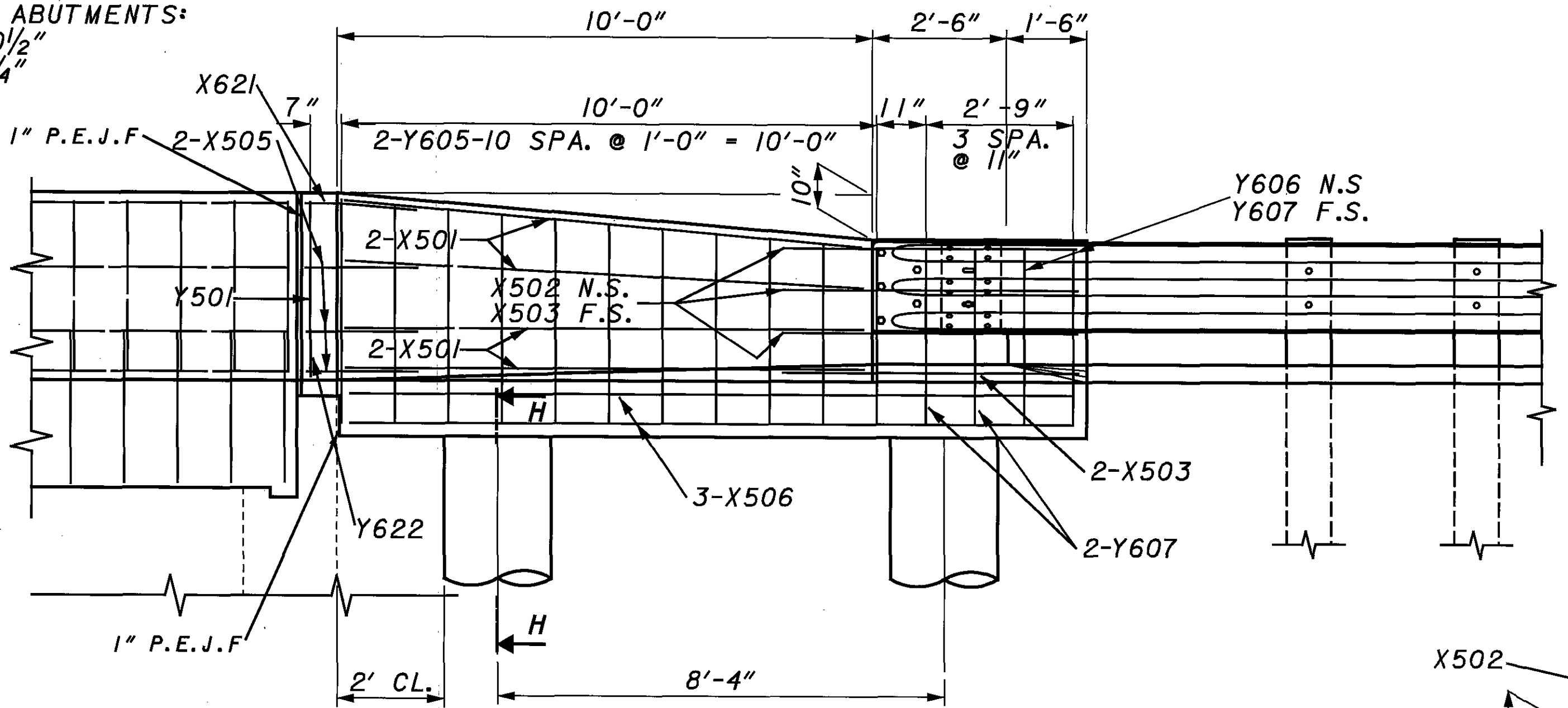


LEGEND: N.S. = NEAR SIDE
F.S. = FAR SIDE

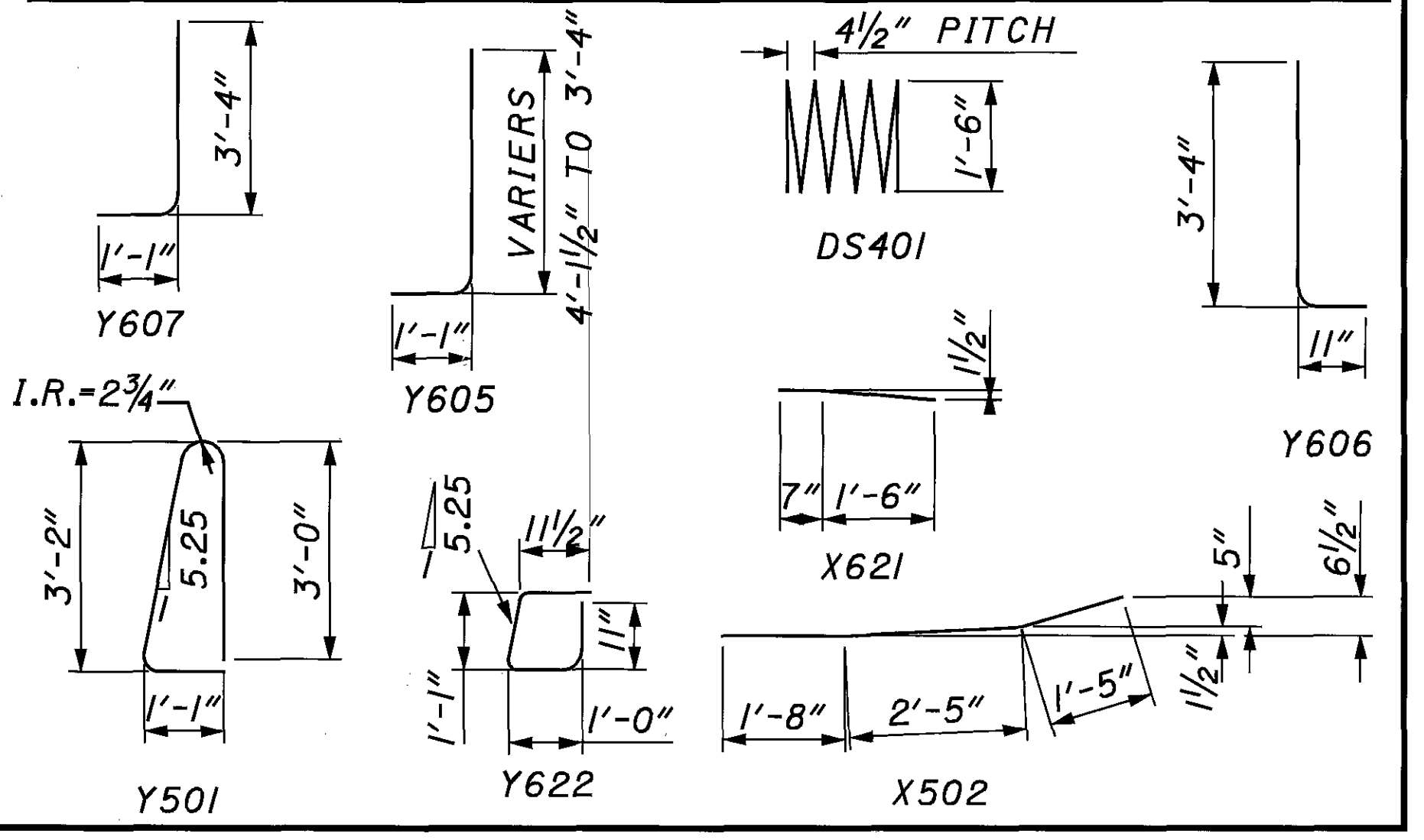


PART PLAN AT ABUTMENT
NOTE: SECTION B-B IS ON SHEET 25 OF 30

DECK THICKNESS AT THE ABUTMENTS:
LT. = 20 1/2"
RT. = 15 1/4"



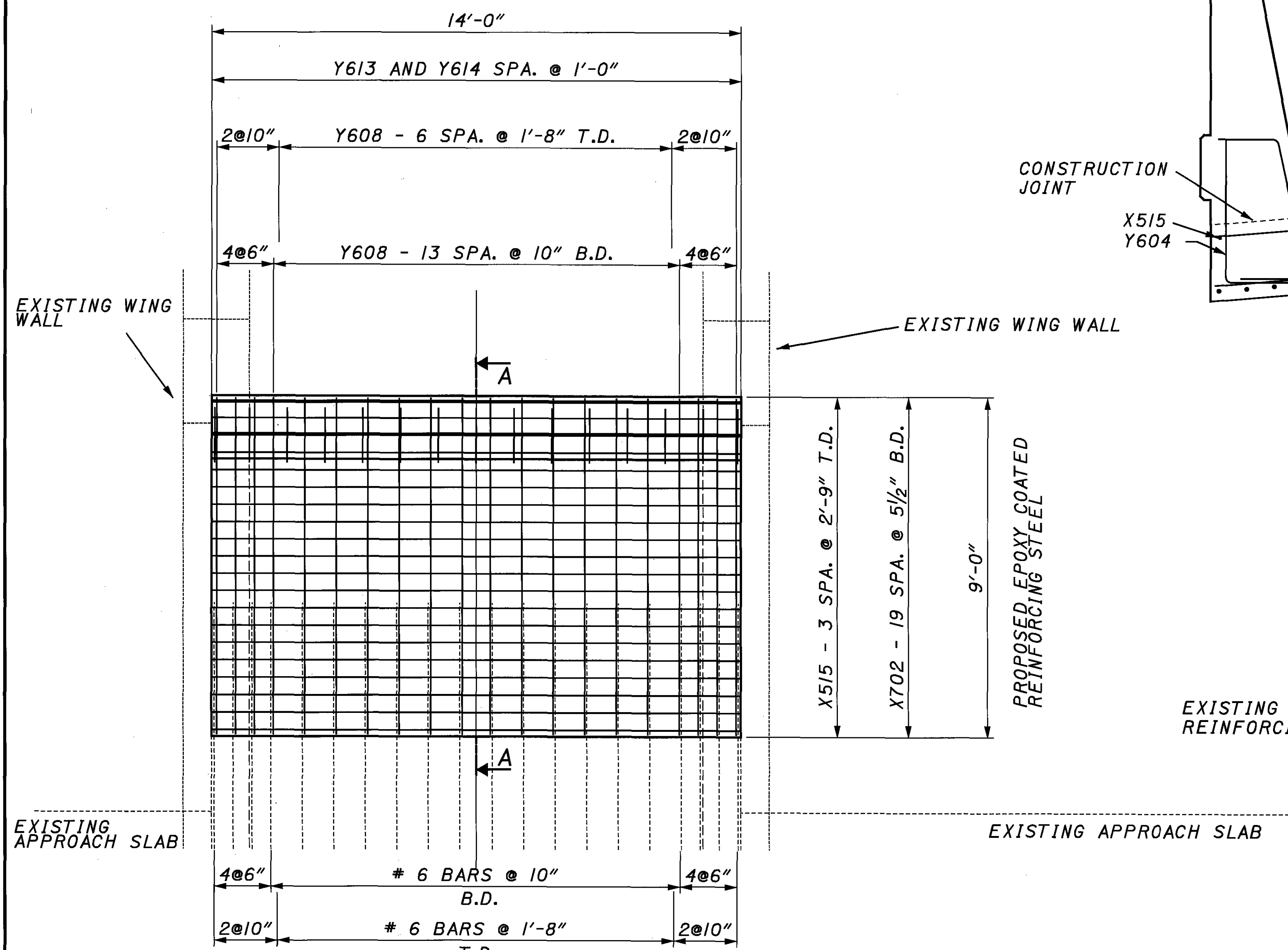
REINFORCING BAR LIST FOR ONE TRANSITION							
MARK	NUMBER	LENGTH	SHAPE	MARK	NUMBER	LENGTH	SHAPE
X501	8	10'-0"	STR.	Y501	1	7'-5"	BNT.
X502	3	5'-6"	BNT.	Y605	22	VARIES	BNT.
X503	5	5'-6"	STR.			5'-2 1/2" TO 4'-5"	
X505	6	2'-1"	STR.	Y606	2	4'-3"	BNT.
X506	6	13'-6"	STR.	Y607	6	4'-5"	BNT.
X621	1	2'-1"	BNT.	Y622	1	3'-11 1/2"	BNT.
DS401	8	8'-3"	BNT.	DS701	16	8'-3"	STR.



*FEILD BEND IF NECESSARY

DESIGN AGENCY: STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT 9 PRODUCTION
DATE: 9/1/05
REVIEWED: LAW
STRUCTURE FILE NUMBER: 7300123
DRAWN: MRH
REVISER: GEC
DESIGNED: MRH
CHECKED: GEC
CONCRETE BARRIER END SECTION, TYPE D, REINFORCED, AS PER PLAN
BRIDGE NO. SC1-23-0519
OVER PRIVATE DRIVE
SC1-23-2.39
7/9
84
110

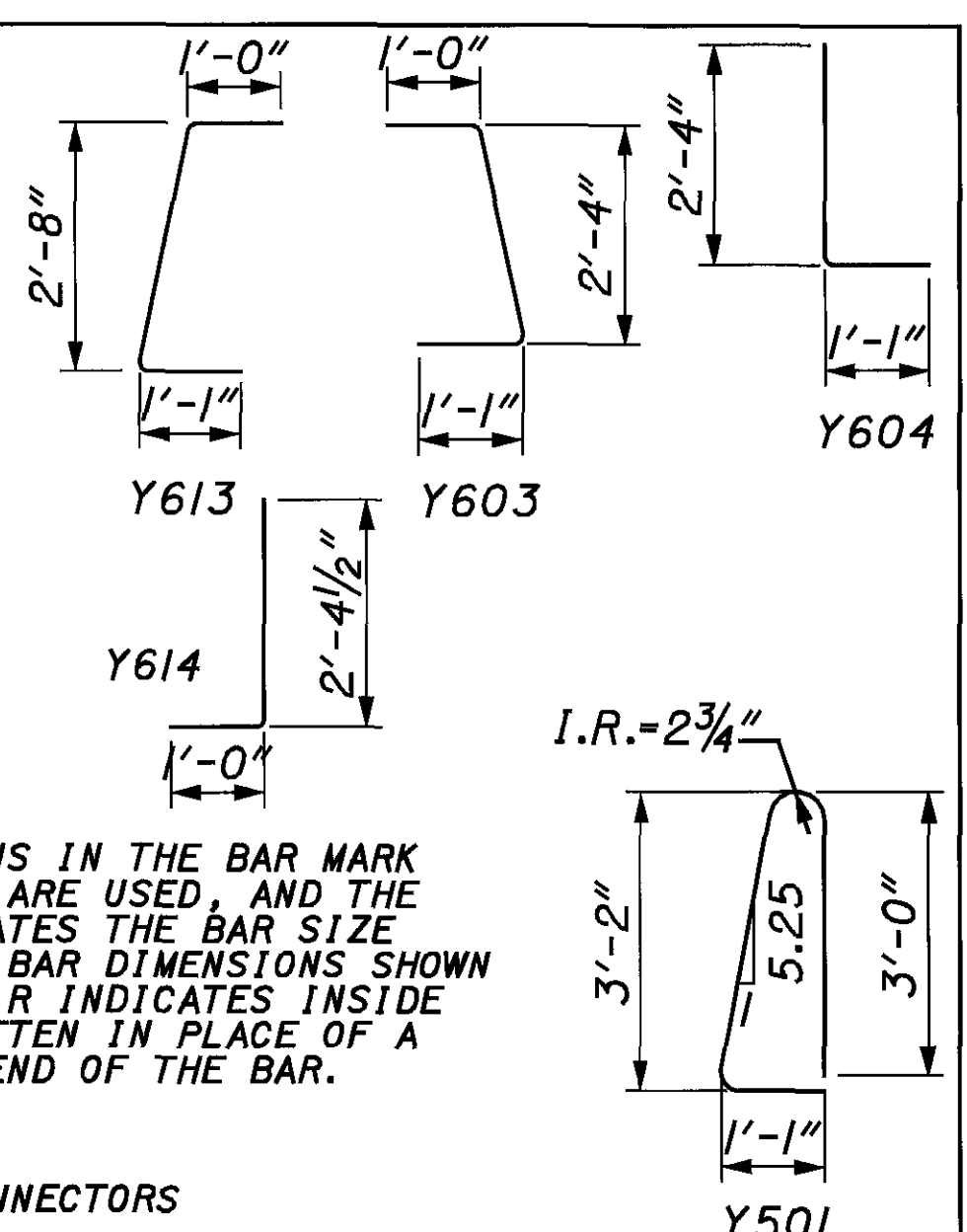
PROPOSED EPOXY COATED REINFORCING STEEL



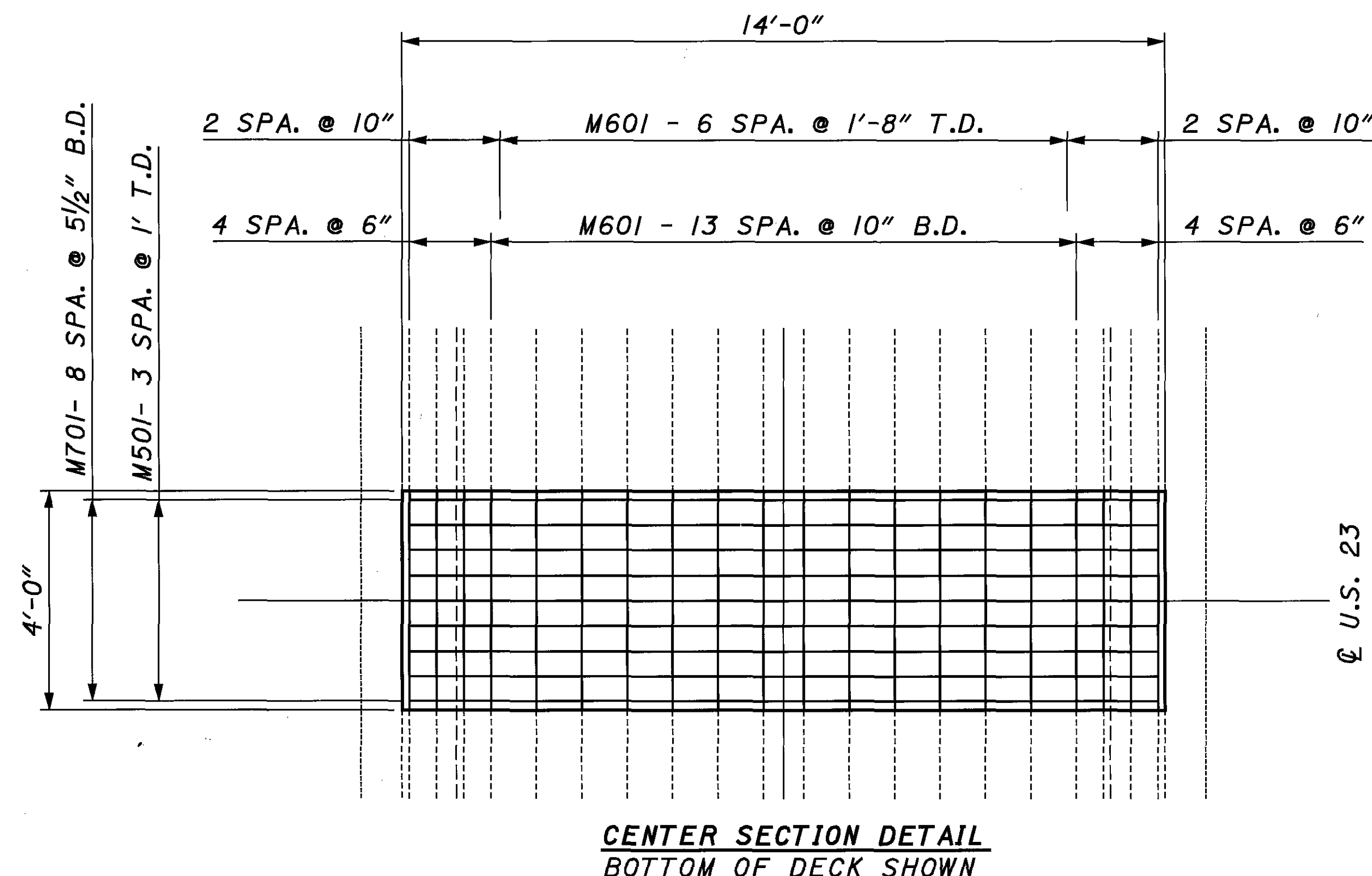
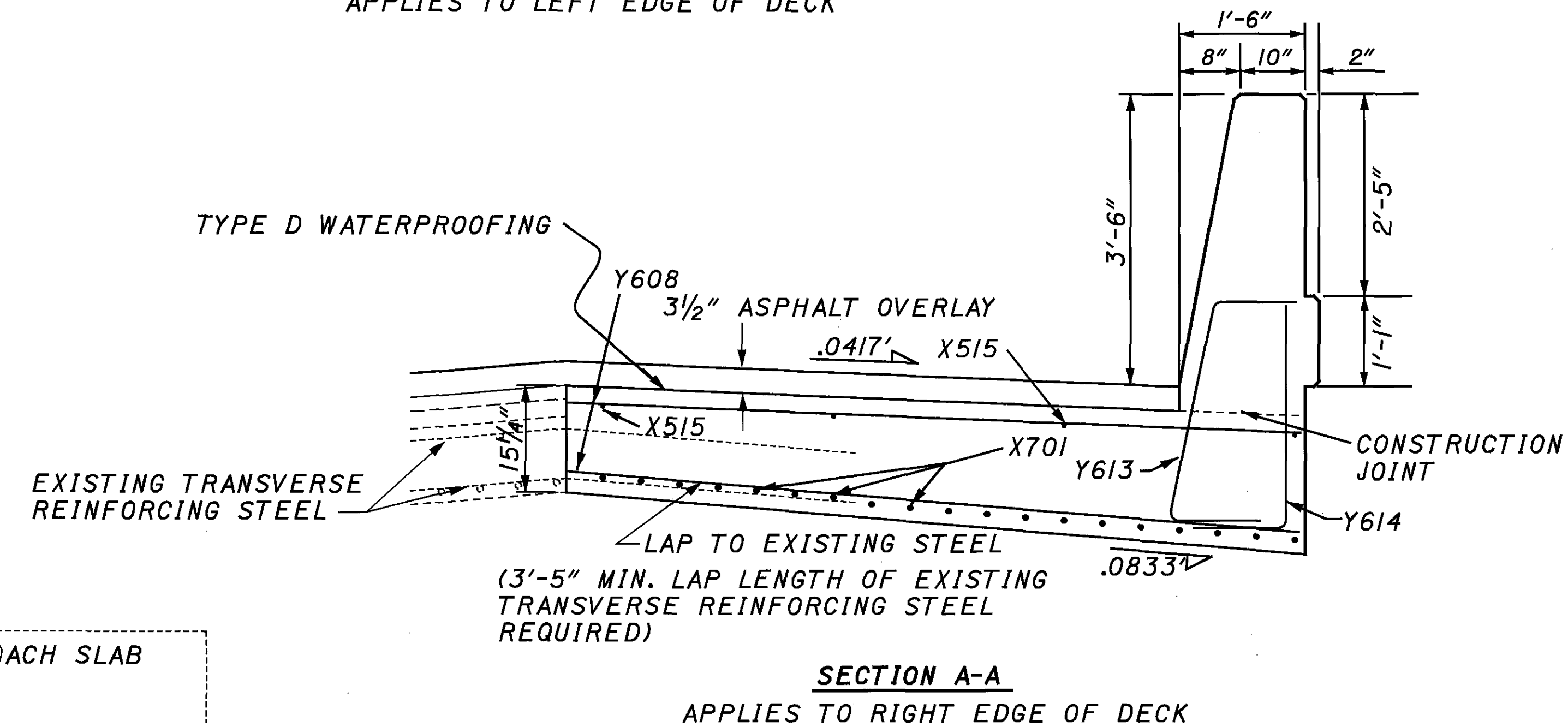
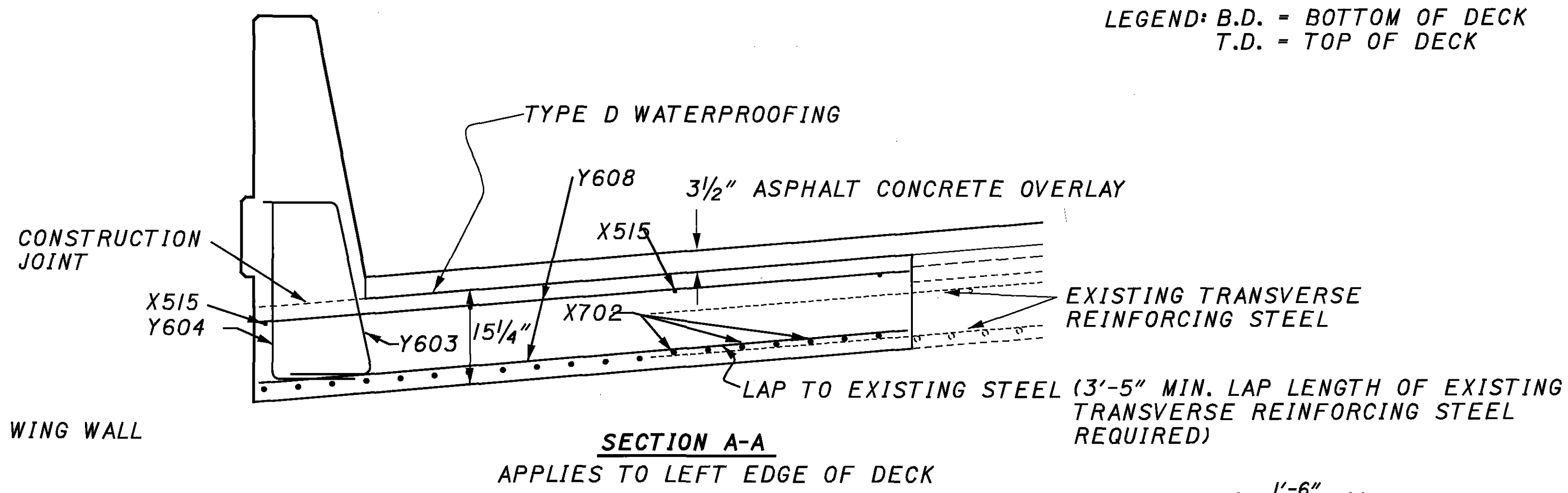
EXISTING REINFORCING STEEL
DECK EDGE DETAIL
BOTTOM OF DECK SHOWN

* NOTES

REINFORCING BAR LIST FOR BRIDGE DECK					REINFORCING BAR LIST FOR BRIDGE DECK				
SUPERSTRUCTURE					PARAPET				
MARK	NUMBER	LENGTH	SHAPE	WEIGHT	MARK	NUMBER	LENGTH	SHAPE	WEIGHT
X515	8	13'-8"	STR.	114	X507	12	13'-8"	STR.	171
X702	19	13'-8"	STR.	531	X601	2	13'-8"	STR.	41
X702	19	13'-8"	STR.	531	Y501	14	7'-5"	BNT.	108
M501	4	13'-8"	STR.	57	TOTAL = 320				
M601*	31	4'-0"	STR.	186	TOTAL WEIGHT CARRIED TO GENERAL SUMMARY = 3150 LBS.				
M701	9	13'-8"	STR.	251					
Y603	15	4'-5"	BNT.	100	THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT WHERE THREE DIGITS ARE USED, AND THE FIRST TWO DIGITS WHERE FOUR ARE USED, INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE, W601 IS A NO. 6 BAR. BAR DIMENSIONS SHOWN ARE OUT TO OUT UNLESS OTHERWISE INDICATED. R INDICATES INSIDE RADIUS, UNLESS OTHERWISE NOTED. "STD." WRITTEN IN PLACE OF A DIMENSION INDICATES A STANDARD BEND AT THE END OF THE BAR. ALL REINFORCING STEEL TO BE EPOXY COATED. * - DENOTES BARS THAT UTILIZE MECHANICAL CONNECTORS				
Y604	15	3'-5"	BNT.	77					
Y608	62	8'-6"	STR.	792					
Y613	15	4'-9"	BNT.	107					
Y614	15	3'-9"	BNT.	84					
				TOTAL = 2830					

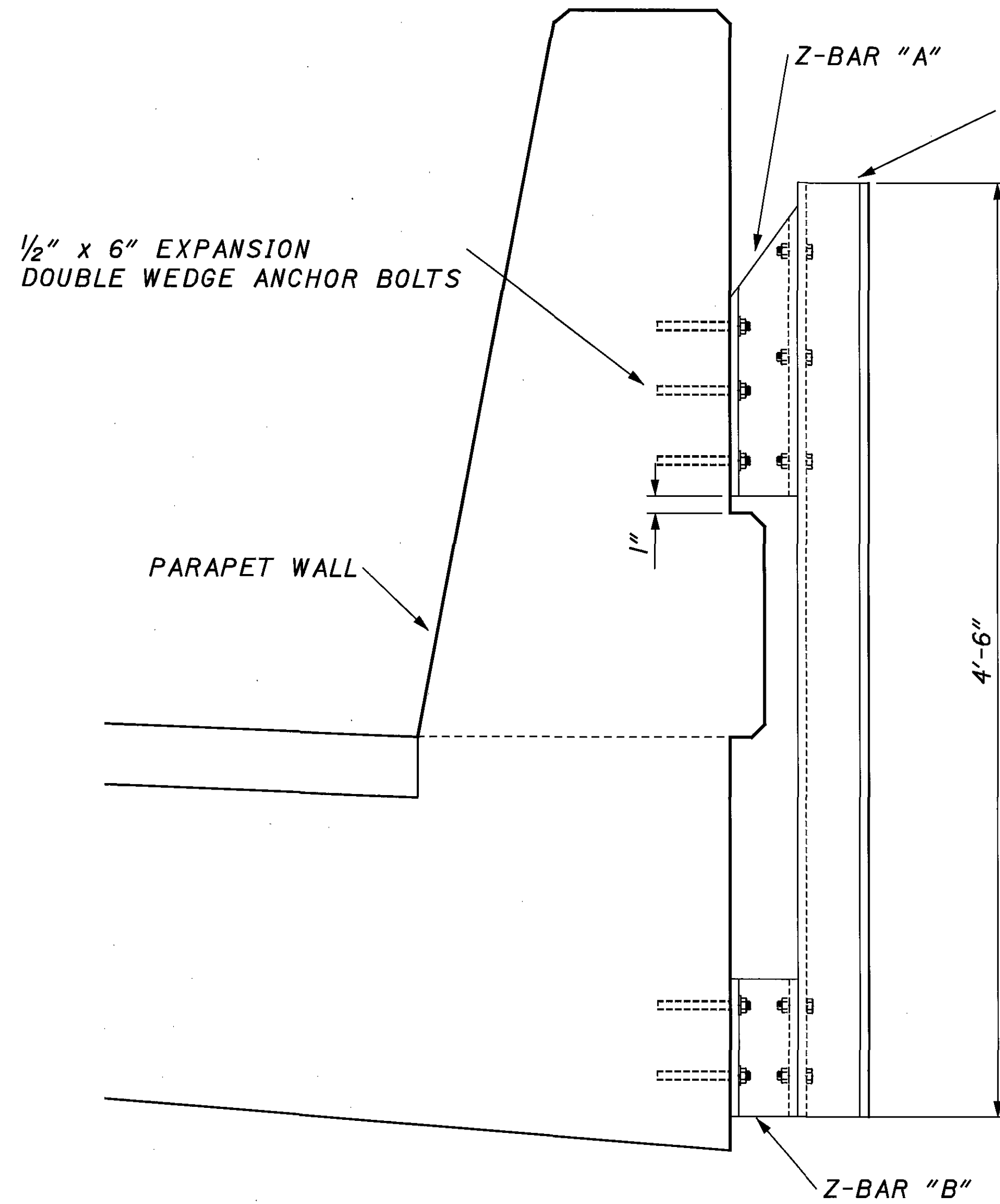
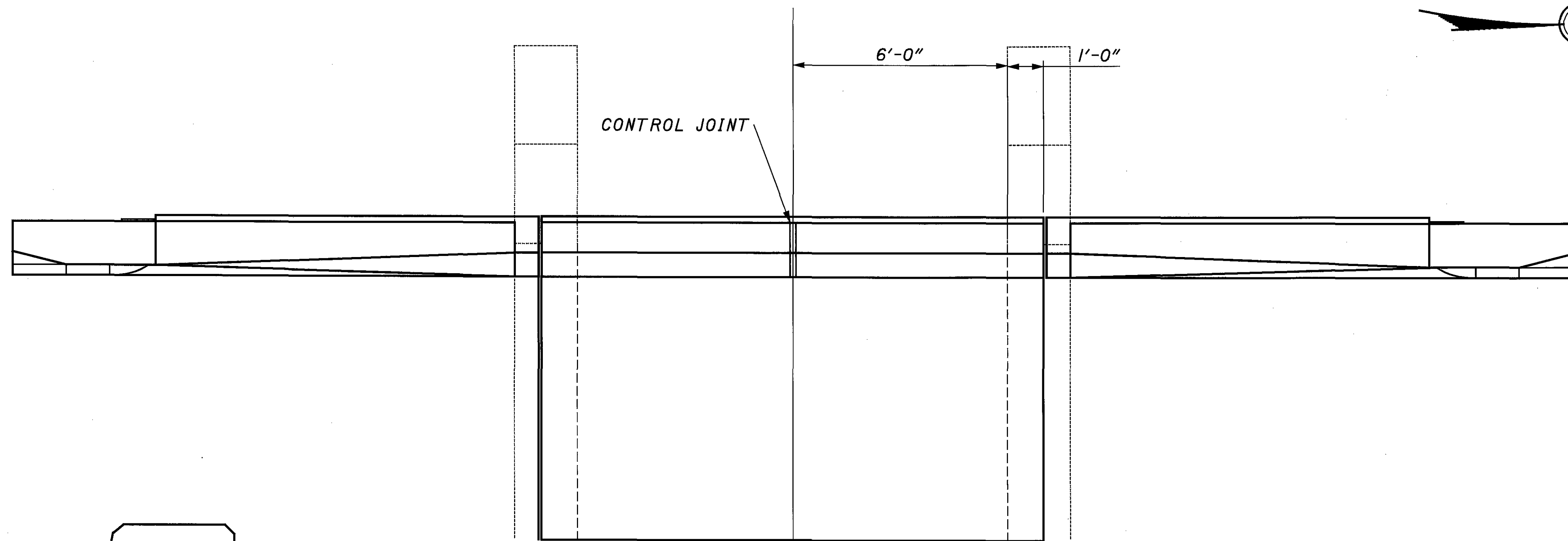


LEGEND: B.D. = BOTTOM OF DECK
T.D. = TOP OF DECK

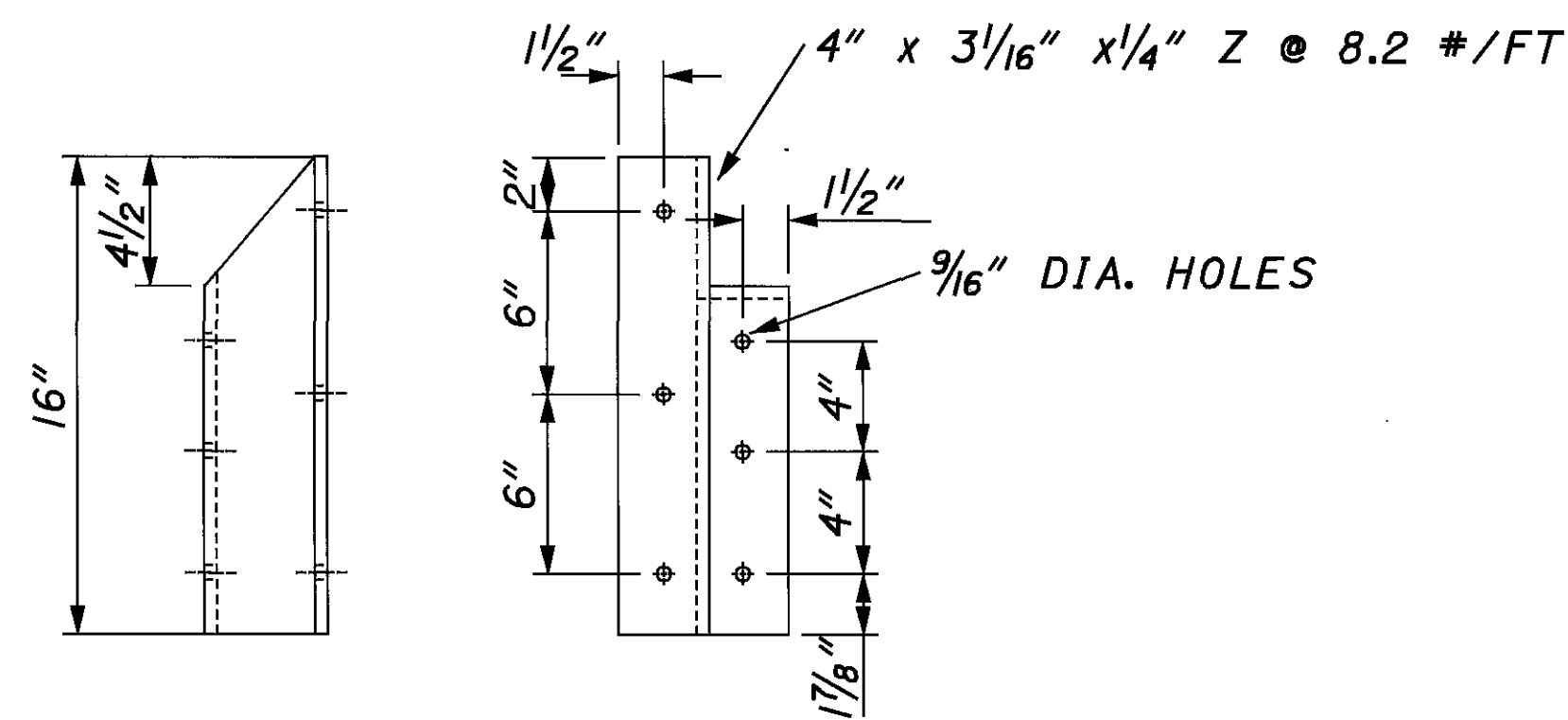


CENTER SECTION DETAIL
BOTTOM OF DECK SHOWN

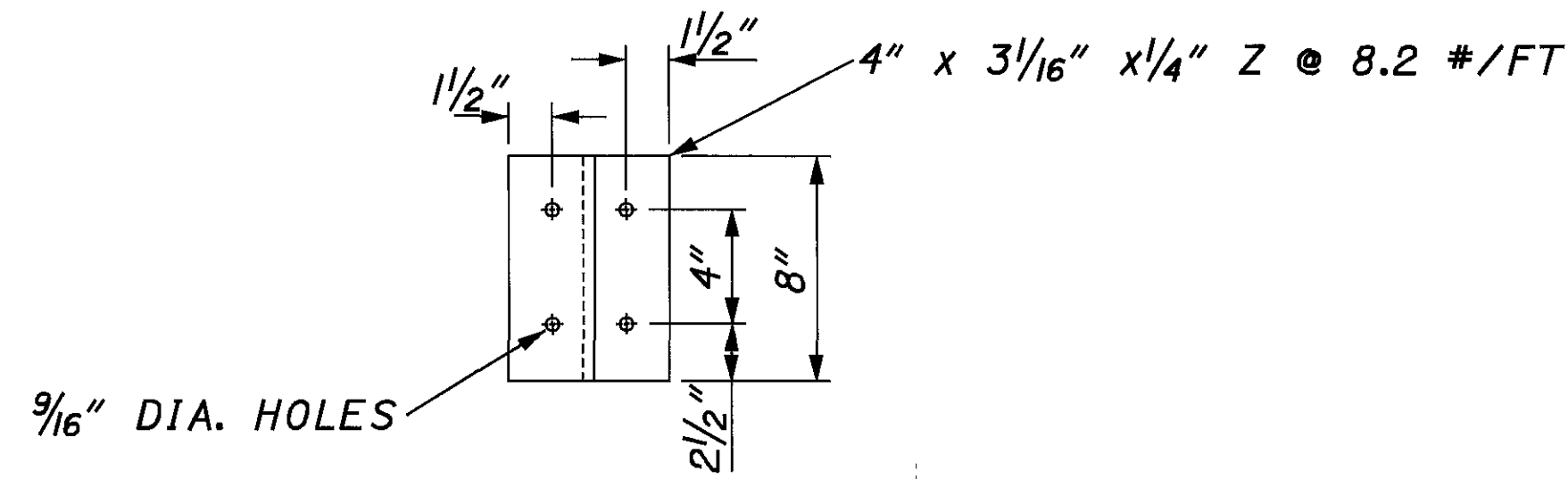
DESIGN AGENCY: STATE OF OHIO
 DEPARTMENT OF TRANSPORTATION
 DISTRICT 9 PRODUCTION
 DATE: 9/1/05
 REVIEWED: LAW
 STRUCTURE FILE NUMBER: 7300123
 DRAWN: MRH
 REVISIONS: GEC
 DESIGNED: MRH
 CHECKED: GEC
 BRIDGE NO. SCI-23-0519
 OVER PRIVATE DRIVE
 DECK DETAILS AND REINFORCING LIST
 SCI-23-2.39
 8/9
 85/110



DETAIL FOR CONTROL JOINT
SAME FOR LEFT AND RIGHT PARAPETS

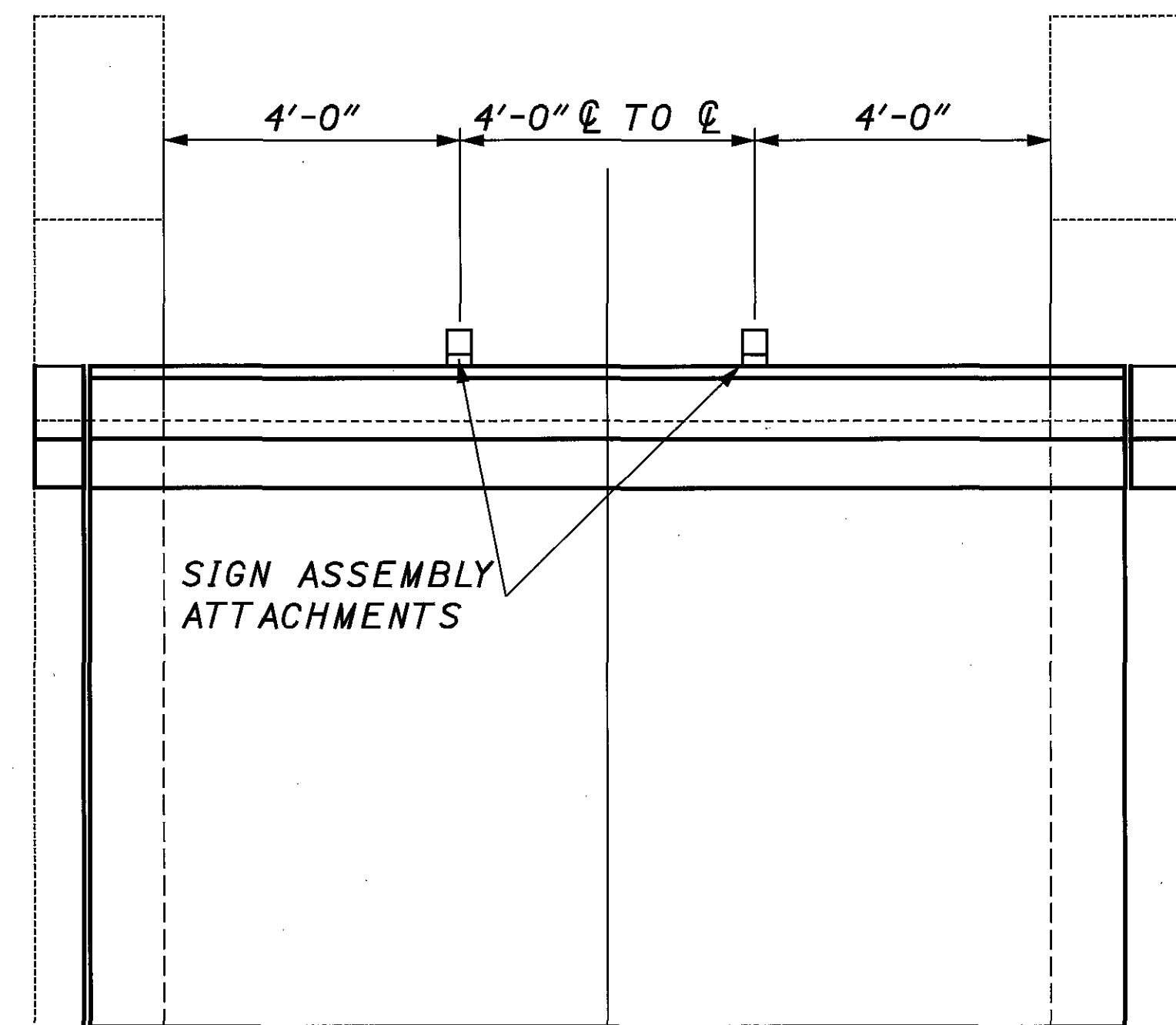


Z-BAR "A"
GALVANIZED STEEL



Z-BAR "B"
GALVANIZED STEEL

SIGN ATTACHMENT DETAIL
SAME FOR LEFT AND RIGHT DECK



NOTE: PREVENT CONTACT BETWEEN ALUMINUM AND GALVANIZED PARTS WITH A MINIMUM 1/16" THICK CHLOROPRENE GASKET OR APPROVED EQUAL. ALSO INSTALL A GASKET BETWEEN GALVANIZED STEEL AND CONCRETE SURFACES.

REFER TO THE FOLLOWING STANDARD DRAWINGS: TC 18.24
TC 22.20

DESIGN AGENCY
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT 9 PRODUCTION

DATE
9/1/05

REVIEWED
LAW
STRUCTURE FILE NUMBER
7.300123

DESIGNED
MRH
CHECKED
GEC

CONTROL JOINT AND SIGN ASSEMBLY DETAILS
BRIDGE NO. SCI-23-0519
OVER PRIVATE DRIVE

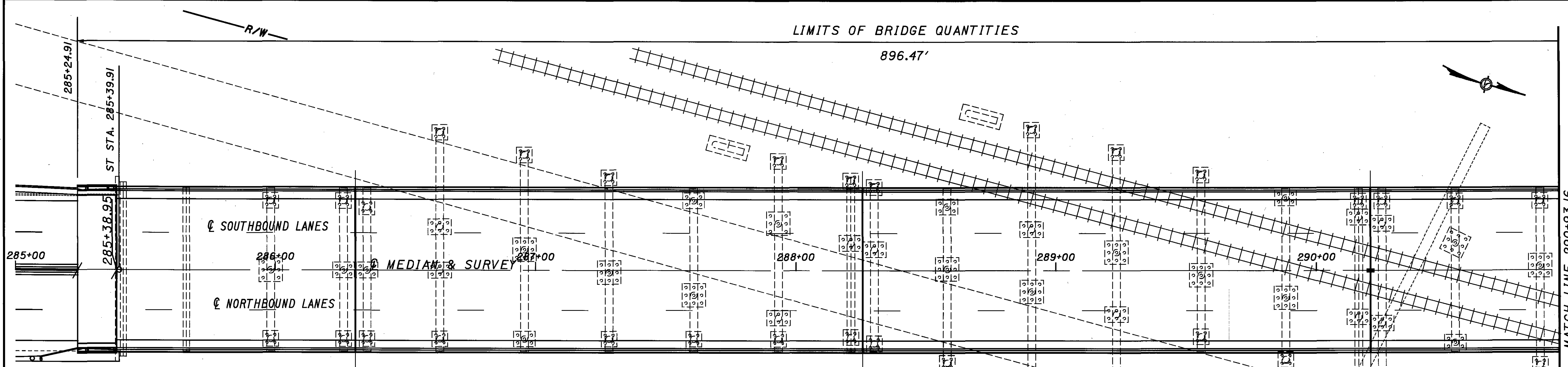
SCI-23-2.39

9/9

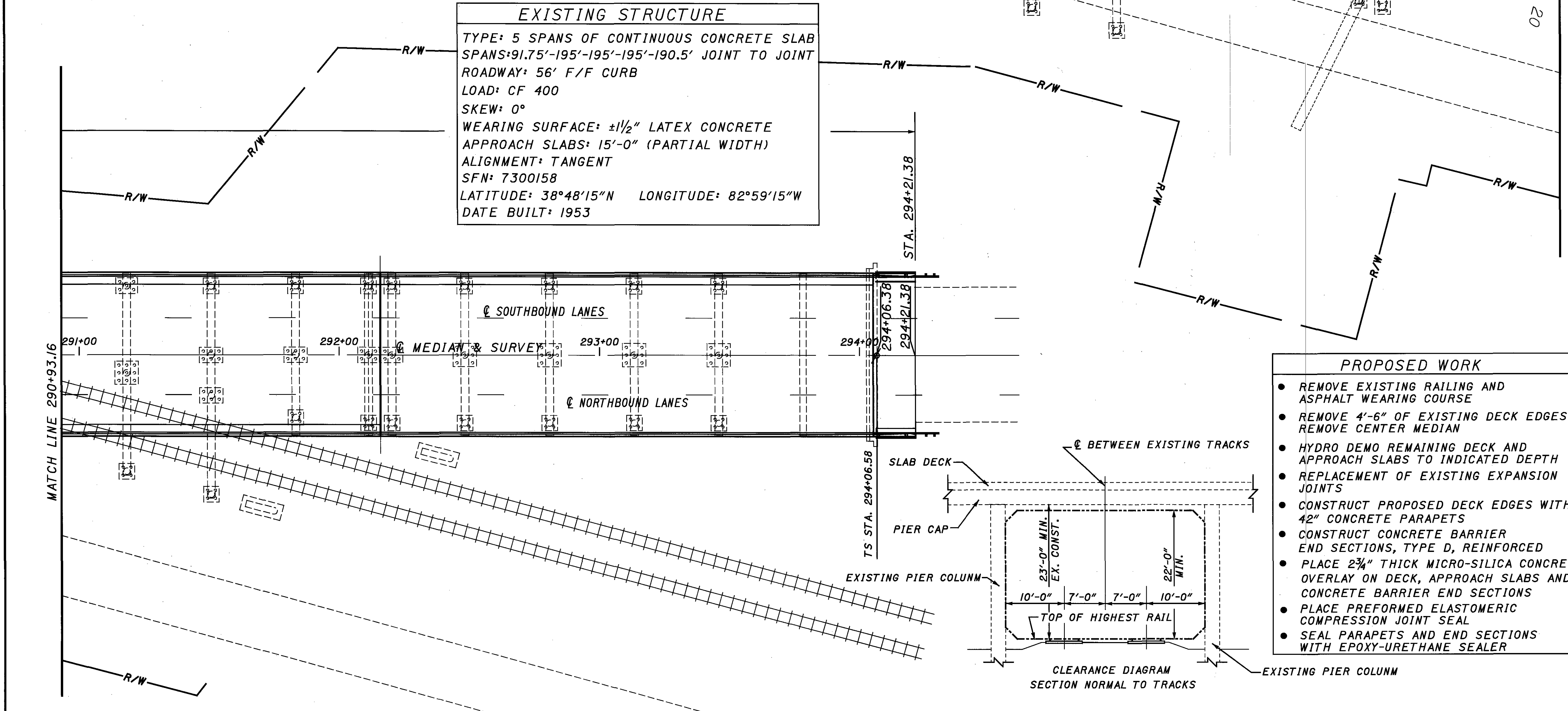
86
110

LIMITS OF BRIDGE QUANTITIES

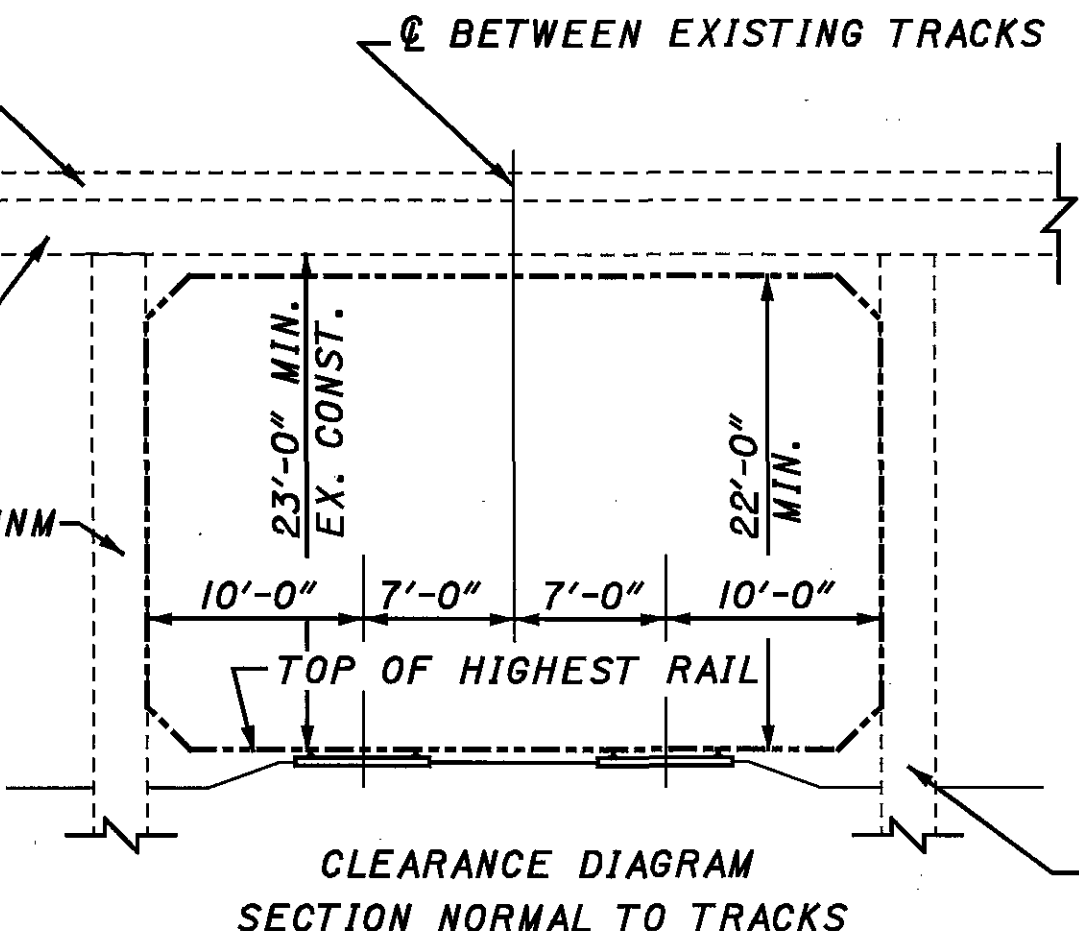
896.47'



EXISTING STRUCTURE
 TYPE: 5 SPANS OF CONTINUOUS CONCRETE SLAB
 SPANS: 91.75'-195'-195'-195'-190.5' JOINT TO JOINT
 ROADWAY: 56' F/F CURB
 LOAD: CF 400
 SKEW: 0°
 WEARING SURFACE: ±1/2" LATEX CONCRETE
 APPROACH SLABS: 15'-0" (PARTIAL WIDTH)
 ALIGNMENT: TANGENT
 SFN: 7300158
 LATITUDE: 38°48'15"N LONGITUDE: 82°59'15"W
 DATE BUILT: 1953



- PROPOSED WORK**
- REMOVE EXISTING RAILING AND ASPHALT WEARING COURSE
 - REMOVE 4'-6" OF EXISTING DECK EDGES REMOVE CENTER MEDIAN
 - HYDRO DEMO REMAINING DECK AND APPROACH SLABS TO INDICATED DEPTH
 - REPLACEMENT OF EXISTING EXPANSION JOINTS
 - CONSTRUCT PROPOSED DECK EDGES WITH 42" CONCRETE PARAPETS
 - CONSTRUCT CONCRETE BARRIER END SECTIONS, TYPE D, REINFORCED
 - PLACE 2 3/4" THICK MICRO-SILICA CONCRETE OVERLAY ON DECK, APPROACH SLABS AND CONCRETE BARRIER END SECTIONS
 - PLACE PREFORMED ELASTOMERIC COMPRESSION JOINT SEAL
 - SEAL PARAPETS AND END SECTIONS WITH EPOXY-URETHANE SEALER



MATCH LINE 290+93.16

MATCH LINE 290+93.16

DESIGN AGENCY
 STATE OF OHIO
 DEPARTMENT OF TRANSPORTATION
 DISTRICT 9 PRODUCTION

DATE
 9/6/05
 REVIEWED
 LAW
 STRUCTURE FILE NUMBER
 7300158

DRAWN
 MRH
 CHECKED
 GEC

SITE PLAN
 BRIDGE NO. SCI-23-0535
 OVER NORFOLK SOUTHERN RAILWAY AND C.R. 160

SCI-23-2.39

1 / 24

87
 110

REFER TO THE FOLLOWING BRIDGE STANDARD DRAWING:

SBR-I-99 REVISED 07-19-02

DESIGN SPECIFICATIONS:

THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2002 AND THE O.D.O.T BRIDGE DESIGN MANUAL

DESIGN LOADING:

HS20, AND THE ALTERNATE MILITARY LOADING.
NO FUTURE WEARING SURFACE (FWS).

DESIGN DATA:

CONCRETE CLASS HP - COMPRESSIVE STRENGTH 4500 P.S.I. (SUPERSTRUCTURE)
REINFORCING STEEL - ASTM A615 OR A996
GRADE 60 MINIMUM YIELD STRENGTH 60,000 P.S.I.

DECK PROTECTION METHOD:

2 3/4" MICRO SILICA OVERLAY
SEALING OF CONCRETE SURFACES

EXISTING BRIDGE PLANS

DETAIL DRAWINGS OF THE EXISTING BRIDGES MAY BE INSPECTED AT THE DISTRICT 9 BRIDGE OFFICE AT 650 EASTERN AVENUE IN CHILLICOTHE, OHIO.

EXISTING STRUCTURE VERIFICATION

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURES HAVE BEEN OBTAINED FROM THE PLANS OF THE EXISTING STRUCTURES AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURES AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05 AND 105.02.

BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS THAT HAVE BEEN VERIFIED IN THE FIELD.

CONCRETE PARAPETS

AS SOON AS A CONCRETE SAW CAN BE OPERATED WITHOUT DAMAGING THE FRESHLY PLACED CONCRETE, SAW CUT 1-1/4" DEEP CONTROL JOINTS INTO THE PERIMETER OF THE CONCRETE PARAPET STARTING AND ENDING AT THE ELEVATION OF THE CONCRETE DECK. PLACE THE SAW CUTS AT A MINIMUM OF 6 FEET AND A MAXIMUM OF 10 FEET CENTERS. USE AN EDGE GUIDE, FENCE, OR JIG TO ENSURE THAT THE CUT JOINT IS STRAIGHT, TRUE, AND ALIGNED ON ALL FACES OF THE PARAPET. THE JOINT WIDTH SHALL BE THE WIDTH OF THE SAW BLADE, A NOMINAL WIDTH OF 1/4 INCH. SEAL THE PERIMETER OF THE DEFLECTION CONTROL JOINT TO A MINIMUM DEPTH OF 1 INCH WITH A POLYURETHANE OR POLYMERIC MATERIAL CONFORMING TO ASTM C920, TYPE S. LEAVE THE BOTTOM 1/2 INCH OF THE INSIDE AND OUTSIDE FACE UNSEALED TO ALLOW WATER TO ESCAPE.

ITEM 622 - CONCRETE BARRIER END SECTION, TYPE D, REINFORCED, AS PER PLAN

THIS ITEM CONSISTS OF CONSTRUCTING THE PARAPET TRANSITIONS OFF THE STRUCTURE AND ANCHORING THEM BY DOWELING INTO THE EXISTING APPROACH SLAB. THIS ITEM SHALL BE CONSTRUCTED AS DETAILED ON SHEETS 18/24, 19/24 AND 20/24 AND CONFORM TO STD. DWG. SBR-I-99.

THE CONCRETE FOR THE TRANSITIONS, AND FOOTINGS SHALL BE THE SAME CLASS AND MIX DESIGN AS THAT USED FOR THE CONCRETE PARAPETS ON THE STRUCTURE. ALL REINFORCING STEEL SHALL BE EPOXY COATED AND CONFORM TO 509 OF THE CMS.

THE TRANSITION AREA SHALL BE AT THE SAME ELEVATION AS THE ROADWAY AFTER MILLING HAS BEEN PERFORMED. THE 2 3/4" CONCRETE OVERLAY SHALL BE PLACED OVER THE FOOTINGS TO THE FACE OF THE TRANSITIONING PARAPETS.

PAYMENT FOR ALL WORK AND MATERIALS NECESSARY TO CONSTRUCT ITEM 622 - CONCRETE BARRIER END SECTION, TYPE D, REINFORCED, AS PER PLAN INCLUDING BUT NOT LIMITED TO EXCAVATION, CONCRETE, AND REINFORCING STEEL SHALL BE INCLUDED IN ITEM 622 FOR PAYMENT.

EQUIPMENT, MATERIALS, AND LABOR REQUIRED TO PERFORM THE WORK OUTLINED ABOVE, WITH THE EXCEPTION OF ITEMS SEPARATELY ITEMIZED, SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 622, CONCRETE END SECTION, TYPE D, REINFORCED, AS PER PLAN.

COORDINATION WITH RAILROAD:

CONSTRUCTION REQUIRES COORDINATION OF BOTH RAIL TRAFFIC AND CONSTRUCTION WORK TO ENSURE THE CONTINUOUS SAFE OPERATION OF EACH AND TO MINIMIZE INTERFERENCE WITH EACH.

A NORFOLK SOUTHERN CORPORATION RAILROAD FLAGGERS WILL BE REQUIRED WHEN WORK IS PERFORMED ON, AROUND OR ABOUT THE NORFOLK SOUTHERN CORPORATION RIGHT OF WAY THAT MAY INTERFERE WITH TRAIN OPERATION. RAILROAD FLAGGERS WILL BE PRESENT TO PROTECT THE RAILROAD AND ITS PROPERTY. NORFOLK SOUTHERN CORPORATION OR ITS DESIGNATED REPRESENTATIVE WILL DETERMINE WHEN RAILROAD FLAGGERS PROTECTION IS REQUIRED.

NORFOLK SOUTHERN CORPORATION WILL PROVIDE THE DEPARTMENT WITH WRITTEN AUTHORIZATION TO BEGIN WORK ON THE RAILROAD PROPERTY UNDER THE TERMS OF AGREEMENT WITH THE DEPARTMENT AND THE SPECIAL CLAUSES IN THE PROPOSAL, INCLUDING THE NAME AND TELEPHONE NUMBER OF THE LOCAL REPRESENTATIVE WHO MUST BE CONTACTED TO ARRANGE FOR RAILROAD FLAGGERS PROTECTION.

WHEN WORKING ON NORFOLK SOUTHERN CORPORATION RIGHT OF WAY OR WITHIN THE SAFETY ZONE SURROUNDING THE LOCATION, THE CONTRACTOR'S EMPLOYEES WILL PARTICIPATE IN A JOB BRIEFING THAT WILL BE CONDUCTED BY THE NORFOLK SOUTHERN CORPORATION RAILROAD FLAGGERS. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR'S SUPERVISORY PERSONNEL TO CARRY THROUGH FOR THE ENTIRE WORKDAY ALL OF THE ITEMS DISCUSSED DURING THE SAFETY BRIEFING.

CONSTRUCTION CLEARANCES:

MAINTAIN A CONSTRUCTION CLEARANCE OF 10'-0" FEET HORIZONTALLY FROM THE CENTER OF EACH TRACKS AND 22'-0" VERTICALLY FROM A POINT LEVEL WITH THE TOP OF THE HIGHER RAIL AND 10'-0" FROM THE CENTER OF TRACKS, AT ALL TIMES.

RAILROAD SIGNAL LINES:

RAILROAD SIGNAL LINES WILL BE RELOCATED BY THE RAILROAD. THE CONTRACTOR SHALL USE ALL PRECAUTIONS NECESSARY TO ENSURE THAT THE LINES ARE NOT DISTURBED DURING CONSTRUCTION AND SHALL COOPERATE WITH THE RAILROAD IN THE RELOCATION OF THE LINES. THE COST OF RELOCATION SHALL BE INCLUDED IN THE RAILROAD FORCE ACCOUNT WORK.

ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

THIS ITEM SHALL INCLUDE THE ELEMENTS INDICATED IN THE PLANS AND GENERAL NOTES AND THAT ARE NOT SEPARATELY LISTED FOR PAYMENT, EXCEPT FOR WEARING COURSE REMOVAL. ITEMS TO BE REMOVED INCLUDE ALL EXISTING MATERIALS BEING REPLACED BY NEW CONSTRUCTION AND MISCELLANEOUS ITEMS THAT ARE NOT SHOWN TO BE INCORPORATED INTO THE FINAL CONSTRUCTION AND ARE DIRECTED TO BE REMOVED BY THE ENGINEER. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE-RAMS WILL NOT BE PERMITTED. THE METHOD OF REMOVAL AND THE WEIGHT OF HAMMER SHALL BE APPROVED BY THE ENGINEER. PERFORM ALL WORK IN A MANNER THAT WILL NOT CUT, ELONGATE OR DAMAGE THE EXISTING REINFORCING STEEL TO BE PRESERVED. CHIPPING HAMMERS SHALL NOT BE HEAVIER THAN THE NOMINAL 90-POUND CLASS. PNEUMATIC HAMMERS SHALL NOT BE PLACED IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE. SUBMIT CONSTRUCTION PLANS ACCORDING TO CMS 501.05.

ALL DECK TRANSVERSE REINFORCING STEEL SHALL BE PRESERVED SO THAT THE BAR STRENGTH CAN BE FULLY DEVELOPED AT THE REMOVAL LINE BY PROVIDING THE REQUIRED MINIMUM LAP LENGTH SPECIFIED IN THE PLAN OR MECHANICAL CONNECTORS SHALL BE USED TO CONNECT THE REPLACEMENT TRAVERSE REINFORCING STEEL TO THE EXISTING TRANSVERSE STEEL.

ALTHOUGH NOT DETAILED IN THE PLAN, ALL PIPES, DOWNSPOUTS, STRAPS, FASTENERS, AND OTHER HARDWARE ASSOCIATED WITH THE EXISTING SCUPPER DRAINAGE SHALL BE REMOVED FROM THE BRIDGE SUPERSTRUCTURE AND SUBSTRUCTURE UNITS.

ITEM 516 - STRUCTURAL JOINT OR JOINT SEALER, MISC.: STRUCTURAL JOINT SEALING SYSTEM

THIS ITEM SHALL INCLUDE THE MODIFICATION OF THE EXISTING STEEL SLIDING PLATE EXPANSION JOINT INTO AN OPEN JOINT WITH STEEL ARMOR AND INSTALLATION OF A CONTINUOUS ELASTOMER SEAL BETWEEN THE STEEL ARMOR AS SHOWN ON SHEETS 21/24 AND 22/24. THE CONTINUOUS ELASTOMER SEAL AND INSTALLATION SHALL BE ACCORDANCE WITH THE WATSON BOWMAN ACME SPECIFICATION FOR THE JEENE® STRUCTURAL SEALING SYSTEM FOR BRIDGE AND HIGHWAY APPLICATIONS, EXCEPT THAT SECTION E OF THE SPECIFICATION IS NOT APPLICABLE.

THE CONTINUOUS ELASTOMERIC SEALING SYSTEM OF THE SIZE AND SHAPE SHOWN IN THE PLAN SHALL BE MANUFACTURED BY WATSON BOWMAN ACME, 95 PINEVIEW DRIVE, AMHERST, NY 14228 (PHONE: 716-691-7566).

PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE FOOT CONTRACT PRICE FOR ITEM 516, STRUCTURAL JOINT OR JOINT SEALER, MISC.: STRUCTURAL JOINT SEALING SYSTEM, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

ITEM SPECIAL, STRUCTURE, MISC.: PREFORMED ELASTOMERIC COMPRESSION JOINT SEAL

A PREFORMED ELASTOMERIC COMPRESSION JOINT SEAL CONFORMING TO 505.11 OF THE CMS SHALL BE PLACED IN THE FULL LENGTH OF THE SAWED JOINT BETWEEN THE APPROACH SLAB AND THE BRIDGE DECK AT THE REAR ABUTMENT AS DETAILED ON SHEET 23/24.

DESIGN AGENCY	STATE OF OHIO
DEPARTMENT OF TRANSPORTATION	DISTRICT 9 PRODUCTION
DATE	9/6/05
REVIEWED	LAW
STRUCTURE FILE NUMBER	7300158
DRAWN	MRH
REVISOR	
DESIGNED	MRH
CHECKED	GEC
GENERAL NOTES	
BRIDGE NO. SCI-23-0535	
OVER NORFOLK SOUTHERN RAILWAY COMPANY AND C. R. 160	
SCI-23-2.39	
2/24	
88	
110	

ITEM 513 - STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN

ALL REQUIREMENTS OF 513 APPLY TO SHOP FABRICATED MEMBERS. PERFORM WORK FOR FIELD FABRICATED MEMBERS ACCORDING TO ITEM 513, EXCEPT AS MODIFIED HEREIN. THE DEPARTMENT WILL NOT REQUIRE THE CONTRACTOR PERFORMING FIELD FABRICATION TO BE PRE-QUALIFIED AS SPECIFIED IN SUPPLEMENT 1078. SUBMIT A WRITTEN LETTER OF MATERIAL ACCEPTANCE, 501.06, TO THE ENGINEER. PROVIDE SHOP DRAWINGS ACCORDING TO 513.04 OR SUPPLY THE ENGINEER WITH "AS BUILT" DRAWINGS MEETING 513.04 AFTER COMPLETION OF FIELD FABRICATION. THE ENGINEER WILL REVIEW THE SUBMITTED DRAWINGS FOR CONCURRENCE WITH THE FINAL AS-BUILT CONDITION. IF NECESSARY, THE ENGINEER MAY CONTACT THE OFFICE OF STRUCTURAL ENGINEERING FOR TECHNICAL ASSISTANCE. IF THE ENGINEER IS SATISFIED WITH THE "AS-BUILT" DRAWINGS AND THE DELIVERED MATERIALS, SUPPLY A COPY OF THE DRAWINGS, STAMPED AND DATED, ALONG WITH MICROFILM, TO THE STRUCTURAL, WELDING AND METALS SECTION OF THE OFFICE OF MATERIAL MANAGEMENT.

THE FOLLOWING MEMBERS ARE INCLUDED IN THIS ITEM: NEW STRUCTURAL STEEL BARS, ANGLES AND PLATES REQUIRED TO RECONSTRUCT THE EXISTING BRIDGE EXPANSION JOINTS AS DETAILED ON SHEETS 21/24 AND 22/24. NEW STRUCTURAL STEEL MAY BE EITHER ASTM A709 GRADE 50, YIELD STRENGTH 50,000 PSI OR ASTM A709 GRADE 36, YIELD STRENGTH 36,000 PSI.

BRIDGE CONSTRUCTION SEQUENCE:

STAGE ONE CONSTRUCTION:

1. SET UP PHASE I TRAFFIC CONTROL TO CLOSE THE RIGHT DRIVING LANES IN ACCORDANCE WITH MAINTENANCE OF TRAFFIC PLAN FOR THE BRIDGE WORK AS DETAILED ON SHEETS 22 AND 23 AND USE PORTABLE CONCRETE BARRIER, 50" BRIDGE MOUNTED, AS PER PLAN (UNANCHORED) TO PROTECT THE BRIDGE WORK AREA AS DETAILED ON SHEET 4/24.

2. REMOVE THE 4'-6" PORTION OF BOTH EDGES OF THE EXISTING BRIDGE DECK AND PORTIONS OF PIERS AND ABUTMENTS AS SHOWN ON SHEETS 5/24 & 6/24.
3. COMPLETED STAGE ONE CONSTRUCTION OF BOTH BRIDGE NO. SCI-23-0519 AND BRIDGE NO. SCI-23-0535 AND ROADWAY APPROACH WORK IN THE CONSTRUCTION AREA DETAILED ON SHEETS 22 AND 23 WITH THE EXCEPTION OF 1-1/2" ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446) WITH SUPPLEMENTAL 1059 WARRANTY AND ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) AND INSTALLATION OF THE CONTINUOUS ELASTOMER SEALS IN THE BRIDGE EXPANSION JOINTS AND INSTALLATION OF PREFORMED ELASTOMERIC COMPRESSION JOINT SEAL IN THE SAWED JOINT.

STAGE TWO CONSTRUCTION

1. AT COMPLETION OF STAGE ONE CONSTRUCTION PLACE TEMPORARY PAVEMENT WEDGES AT THE ENDS OF THE BRIDGE APPROACH SLAB IN THE RIGHT DRIVING LANES USING ASPHALT CONCRETE FOR MAINTAINING TRAFFIC AND REVISE MAINTENANCE OF TRAFFIC DEVICES TO OPEN THE RIGHT DRIVING LANES AND SET UP PHASE II TRAFFIC CONTROL TO CLOSE THE LEFT PASSING LANES IN ACCORDANCE WITH MAINTENANCE OF TRAFFIC PLAN FOR THE BRIDGE WORK AS DETAILED ON SHEETS 24 AND 25 AND USE PORTABLE CONCRETE BARRIER, 50" BRIDGE MOUNTED, AS PER PLAN (UNANCHORED) TO PROTECT THE BRIDGE WORK AREA AS DETAILED ON SHEET 4/24.
2. REMOVE THE 3' CONCRETE MEDIAN AT THE CENTER OF THE EXISTING BRIDGE DECK AND ABUTMENTS AS SHOWN ON SHEET 5/24.
3. COMPLETED STAGE TWO CONSTRUCTION OF BOTH BRIDGE NO. SCI-23-0519 AND BRIDGE NO. SCI-23-0535 AND ROADWAY APPROACH WORK IN THE CONSTRUCTION AREA DETAILED ON SHEETS 24 AND 25 WITH THE EXCEPTION OF 1-1/2" ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446) WITH SUPPLEMENTAL 1059 WARRANTY.

STAGE THREE CONSTRUCTION

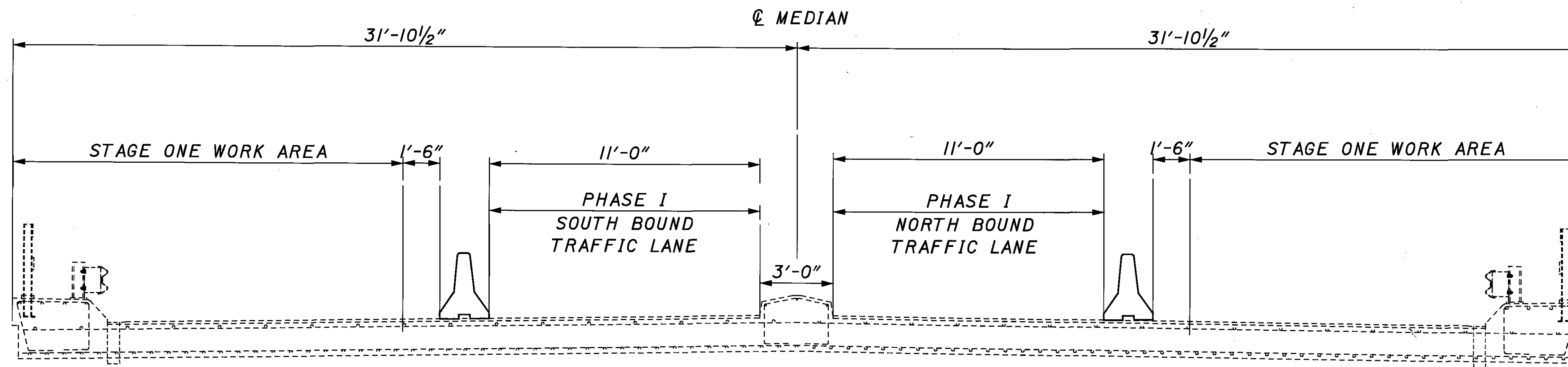
1. AT COMPLETION OF STAGE TWO CONSTRUCTION PLACE TEMPORARY PAVEMENT WEDGES AT THE ENDS OF THE BRIDGE APPROACH SLAB IN THE LEFT PASSING LANES USING ASPHALT CONCRETE FOR MAINTAINING TRAFFIC AND REMOVE MAINTENANCE OF TRAFFIC DEVICES FOR PHASE II TRAFFIC CONTROL AND OPEN ALL LANES TO TRAFFIC.
2. COMPLETE ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) AND ALL OTHER REMAINING WORK IN CONJUNCTION WITH THE PLACEMENT OF THE 1-1/2" ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446) WITH SUPPLEMENTAL 1059 WARRANTY ON THE ENTIRE LENGTH OF THE PROJECT.

ESTIMATED QUANTITIES FOR SCI-23-0535 S.F.N. 7300158

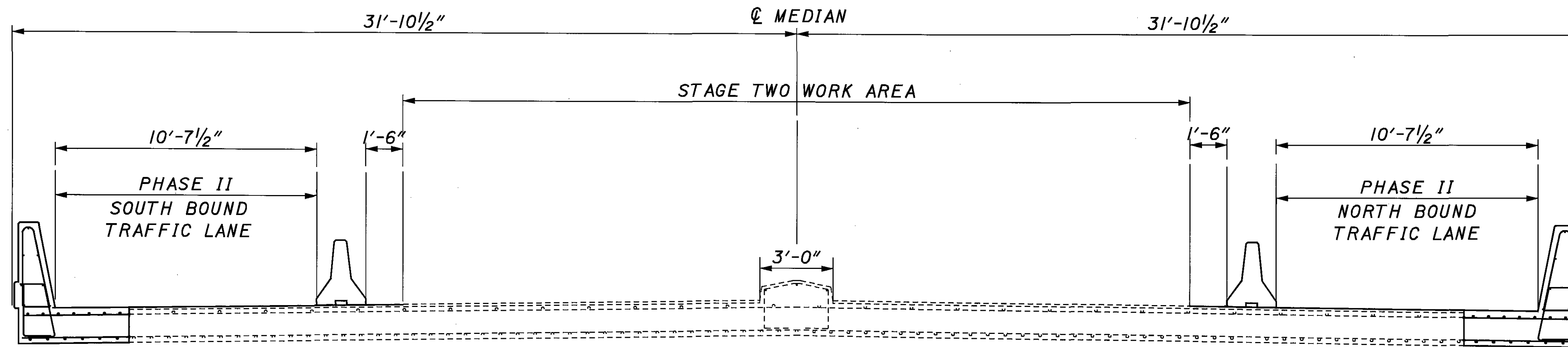
ESTIMATED QUANTITIES					GENERAL	SUPERSTRUCTURE	PARAPETS	SEE SHEET NO.
ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION				
202	11203	LUMP		PORTIONS OF STRUCTURE REMOVED OVER 20 FOOT SPAN, AS PER PLAN		LUMP		2/24
202	23500	187	SQ. YD.	WEARING COURSE REMOVED	187			
509	10000	195,765	POUND	EPOXY COATED REINFORCING STEEL		174,208	21,557	
510	10000	344	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	136	208		
511	50000	422	CU. YD.	CLASS HP CONCRETE, BRIDGE DECK		422		
511	50100	273	CU. YD.	CLASS HP CONCRETE, BRIDGE DECK (PARAPET)			273	
512	10100	2056	SQ. YD.	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)*	71		1985	
513	10201	5133	POUND	STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN		5133		
516	13600	105	SQ. FT.	1" PREFORMED ELASTOMERIC JOINT FILLER	33		72	
516	14600	317	FT.	STRUCTURAL JOINT OR JOINT SEALER, MISC.: STRUCTURAL JOINT SEALING SYSTEM		317		2/24
SPECIAL	53001300	61	FT.	STRUCTURE MISC.: PREFORMED ELASTOMERIC COMPRESSION JOINT SEAL	61			
622	25011	4	EACH	CONCRETE BARRIER END SECTION, TYPE D, REINFORCED, AS PER PLAN	4			2/24
848	10000	5438	SQ. YD.	MICRO SILICA MODIFIED CONCRETE OVERLAY USING HYDRODEMOLITION (2 3/4" THICK)	208	5230		
848	20000	5426	SQ. YD.	SURFACE PREPARATION USING HYDRODEMOLITION	196	5230		
848	30000	638	CU. YD.	MICRO SILICA MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY	35	603		
848	50000	160	SQ. YD.	HAND CHIPPING	20	140		
848	50100	LUMP		TEST SLAB	LUMP			
848	50320	4940	SQ. YD.	EXISTING CONCRETE OVERLAY REMOVED (1 1/4" THICK)		4940		

* LIGHT NEUTRAL (FEDERAL COLOR NO. 17778)

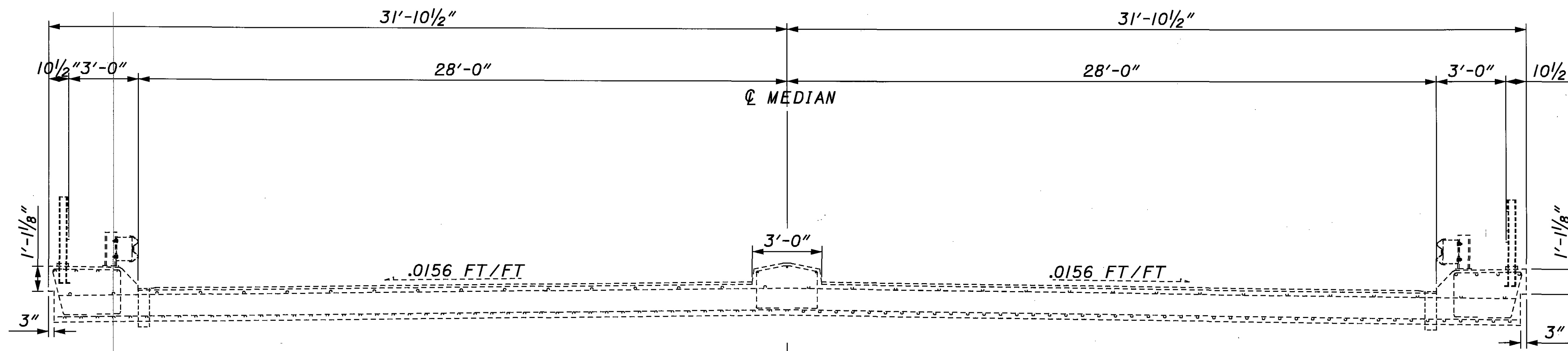
DESIGN AGENCY: STATE OF OHIO
 DEPARTMENT OF TRANSPORTATION
 DISTRICT 9 PRODUCTION
 DATE: 9/6/05
 STRUCTURE FILE NUMBER: 7300158
 LAW: 7300158
 DRAWN: MRH
 CHECKED: GEC
 DESIGNED: MRH
 REVISED: GEC
 GENERAL NOTES AND ESTIMATED QUANTITIES
 BRIDGE NO. SCI-23-0535
 OVER NORFOLK SOUTHERN RAILWAY COMPANY AND C.R. 160
 SCI-23-2-39
 3/24
 89
 110



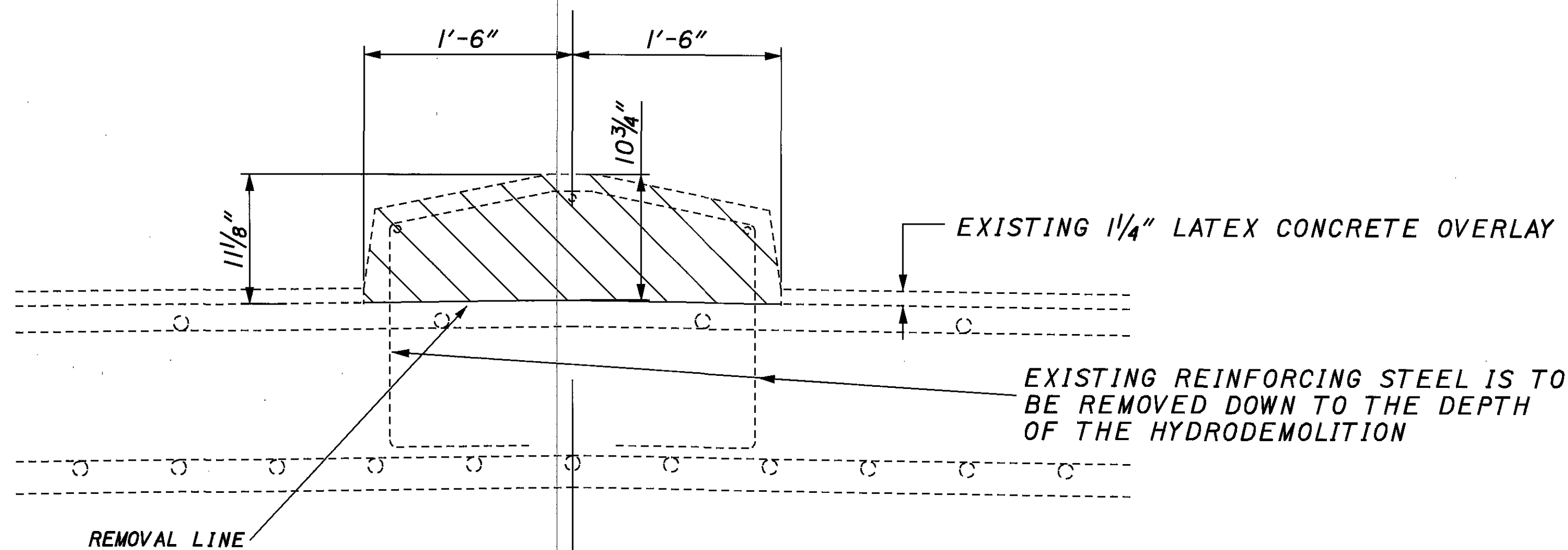
TRANSVERSE SECTION
PHASE I



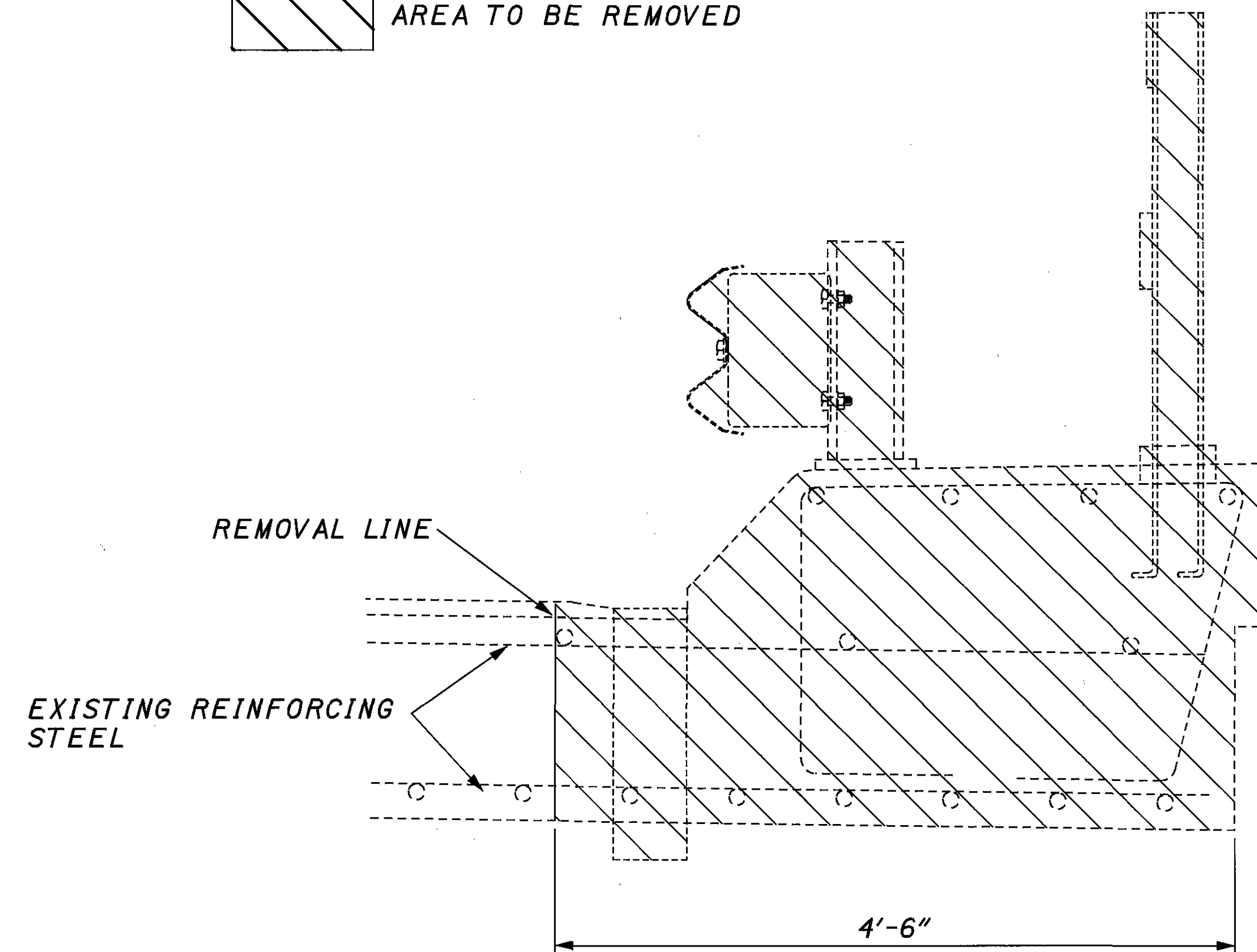
TRANSVERSE SECTION
PHASE II



EXISTING TRANSVERSE SECTION



REMOVAL DETAILS
 APPLIES TO: THE CONCRETE MEDIAN
 THE EXISTING MEDIAN SHALL BE REMOVED DOWN TO THE EXISTING DECK SO THAT HYDRODEMOLITION CAN BE DONE OVER THE MEDIAN.

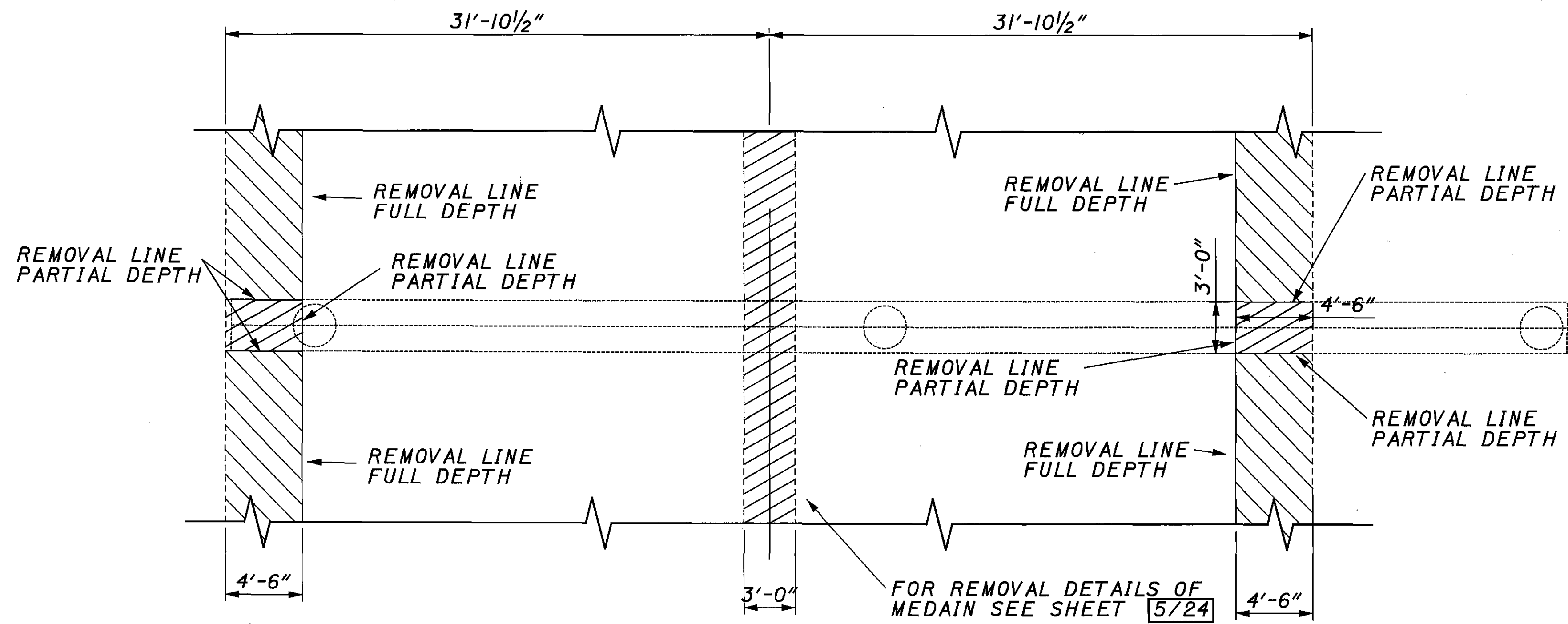


REMOVAL DETAILS
 APPLIES TO: LEFT AND RIGHT EDGE OF DECK EXCEPT OVER PIERS, SEE DETAILS ON SHEET 6 / 24

UNITS	PIERS	LENGTH	DECK THICKNESS	DESCRIPTION
1	1-3	91'-9"	16 1/4"	END OF APPROACH SLAP TO FIRST JOINT
2	4-10	195'-0"	16 1/4"	FIRST JOINT TO SECOND JOINT
3	11-17	195'-0"	16 3/4"	SECOND JOINT TO THIRD JOINT
4	18-24	195'-0"	16 3/4"	THIRD JOINT TO FORTH JOINT
5	25-30	190'-6"	16 1/4"	FORTH JOINT TO BEGINNING OF APPROACH SLAB

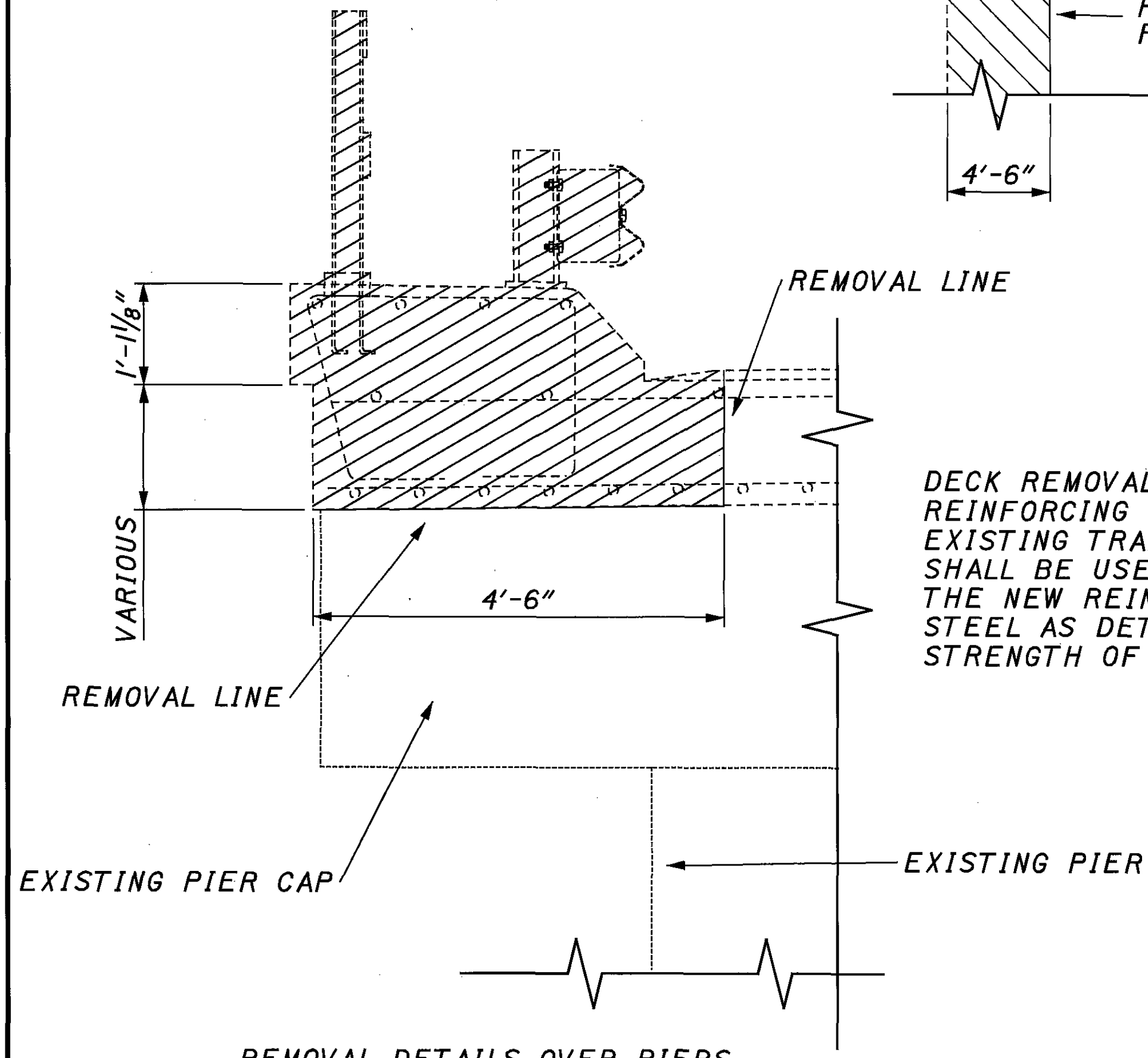
PIER 13 HAS A DECK THICKNESS OF 16 1/8", STARTING AT PIER 12, WITH A DECK THICKNESS OF 16 3/4", THE DECK IS TAPERED DOWN TO A THICKNESS OF 16 1/8" AT PIER 13 AND THEN IS TAPERED BACK TO THE THICKNESS OF 16 3/4" AT PIER 14.

NOTE: ALL PIPING AND DOWNSPOUTS FOR SCUPPERS SHALL BE REMOVED
 DECK REMOVALS SHALL EITHER PRESERVE THE EXISTING TRANSVERSE REINFORCING STEEL TO PROVIDE A 3'-5" MIN. LAP LENGTH REQUIRED FOR THE EXISTING TRANSVERSE REINFORCING STEEL OR MECHANICAL CONNECTORS SHALL BE USED TO CONNECT EXISTING TRANSVERSE REINFORCING STEEL TO THE NEW REINFORCING STEEL USED TO REPLACE THE EXISTING REINFORCING STEEL AS DETAIL ON SHEET 7 / 24 IN ORDER TO FULLY DEVELOP THE STRENGTH OF THE TRANSVERSE REINFORCING STEEL AT THE REMOVAL LINE.



EXISTING PLAN VIEW OVER PIER

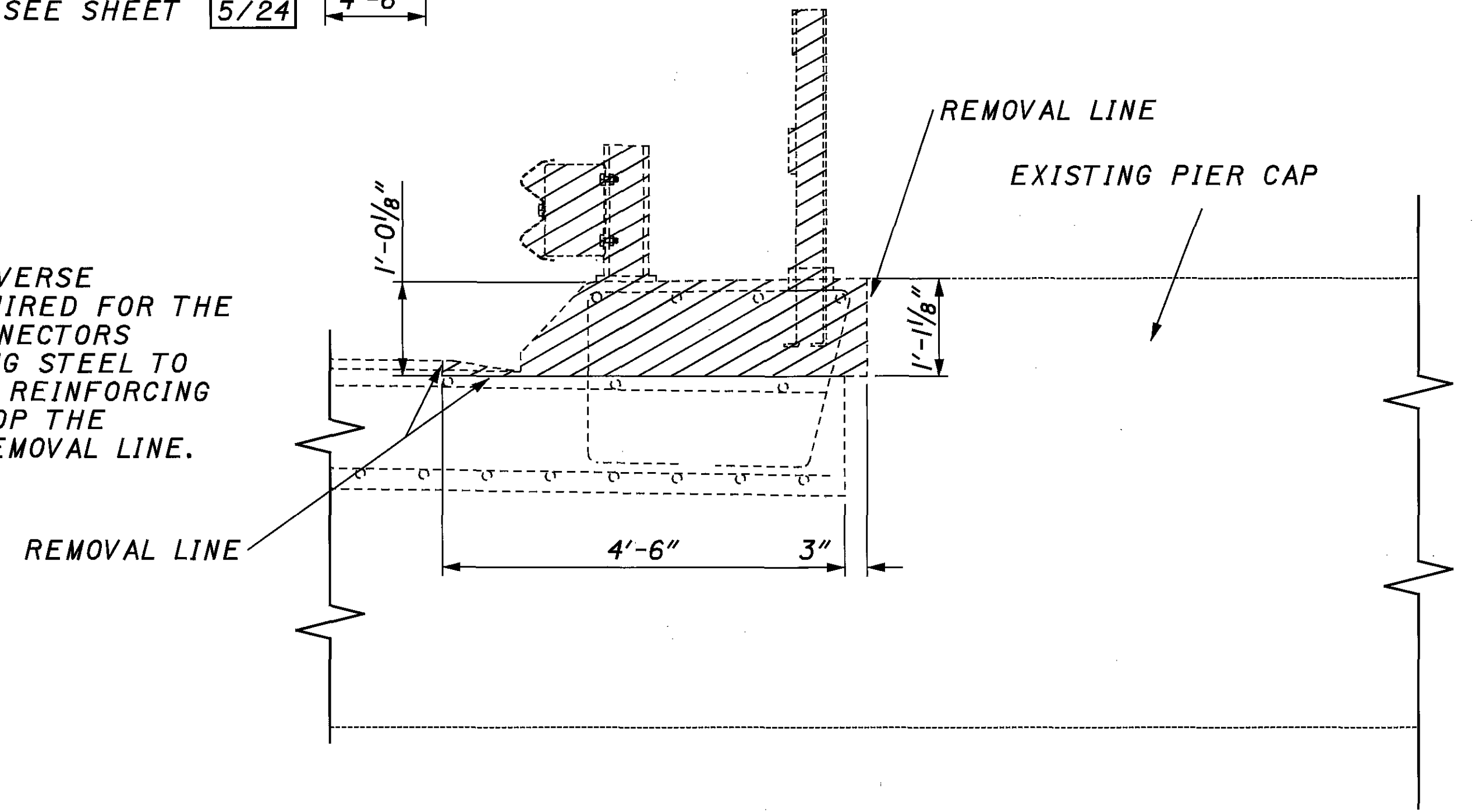
REMOVAL DETAILS
 PARTIAL DEPTH DECK REMOVAL
 FULL DEPTH DECK REMOVAL



REMOVAL DETAILS OVER PIERS

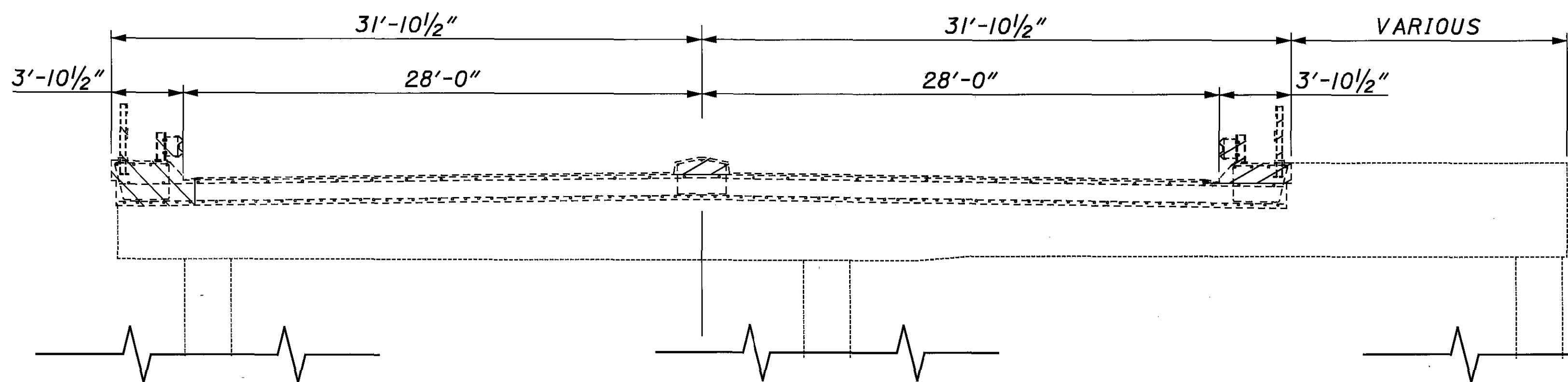
APPLIES TO THE FOLLOWING PIERS:
 LEFT AND RIGHT SIDE: 1, 2, 3, 4, 8, 19, 23, 24, 25, 26, 27, 28, 29, 30
 LEFT SIDE ONLY: 12, 16, 17, 18, 20, 21, 22
 RIGHT SIDE ONLY: 5, 6, 7, 9, 10, 11, 15,

DECK REMOVALS SHALL EITHER PRESERVE THE EXISTING TRANSVERSE REINFORCING STEEL TO PROVIDE A 3'-5" MIN. LAP LENGTH REQUIRED FOR THE EXISTING TRANSVERSE REINFORCING STEEL OR MECHANICAL CONNECTORS SHALL BE USED TO CONNECT EXISTING TRANSVERSE REINFORCING STEEL TO THE NEW REINFORCING STEEL USED TO REPLACE THE EXISTING REINFORCING STEEL AS DETAIL ON SHEET 7/24 IN ORDER TO FULLY DEVELOP THE STRENGTH OF THE TRANSVERSE REINFORCING STEEL AT THE REMOVAL LINE.

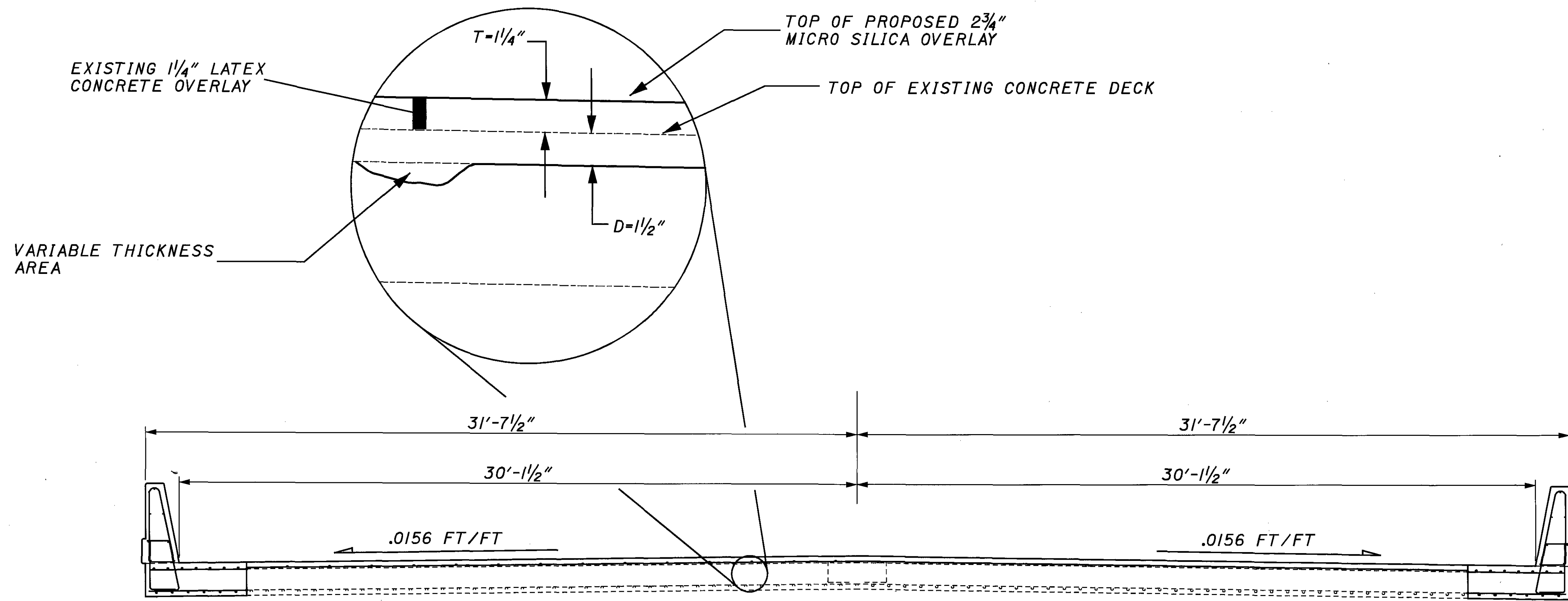


REMOVAL DETAILS OVER PIERS

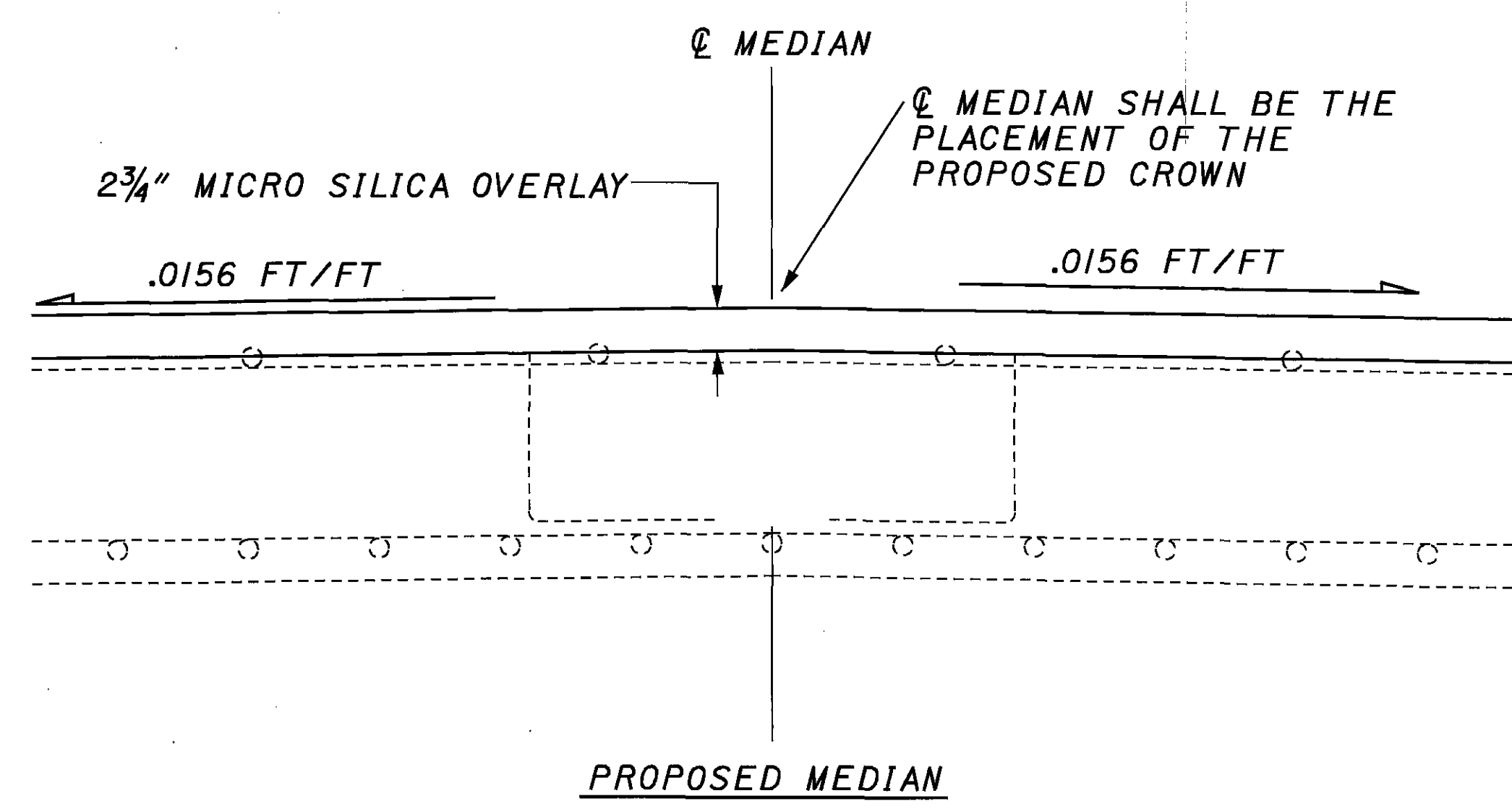
APPLIES TO THE FOLLOWING PIERS:
 LEFT AND RIGHT SIDE: 13, 14
 LEFT SIDE ONLY: 5, 6, 7, 9, 10, 15
 RIGHT SIDE ONLY: 12, 16, 17, 18, 20, 21, 22



EXISTING TRANSVERSE VIEW OVER PIER



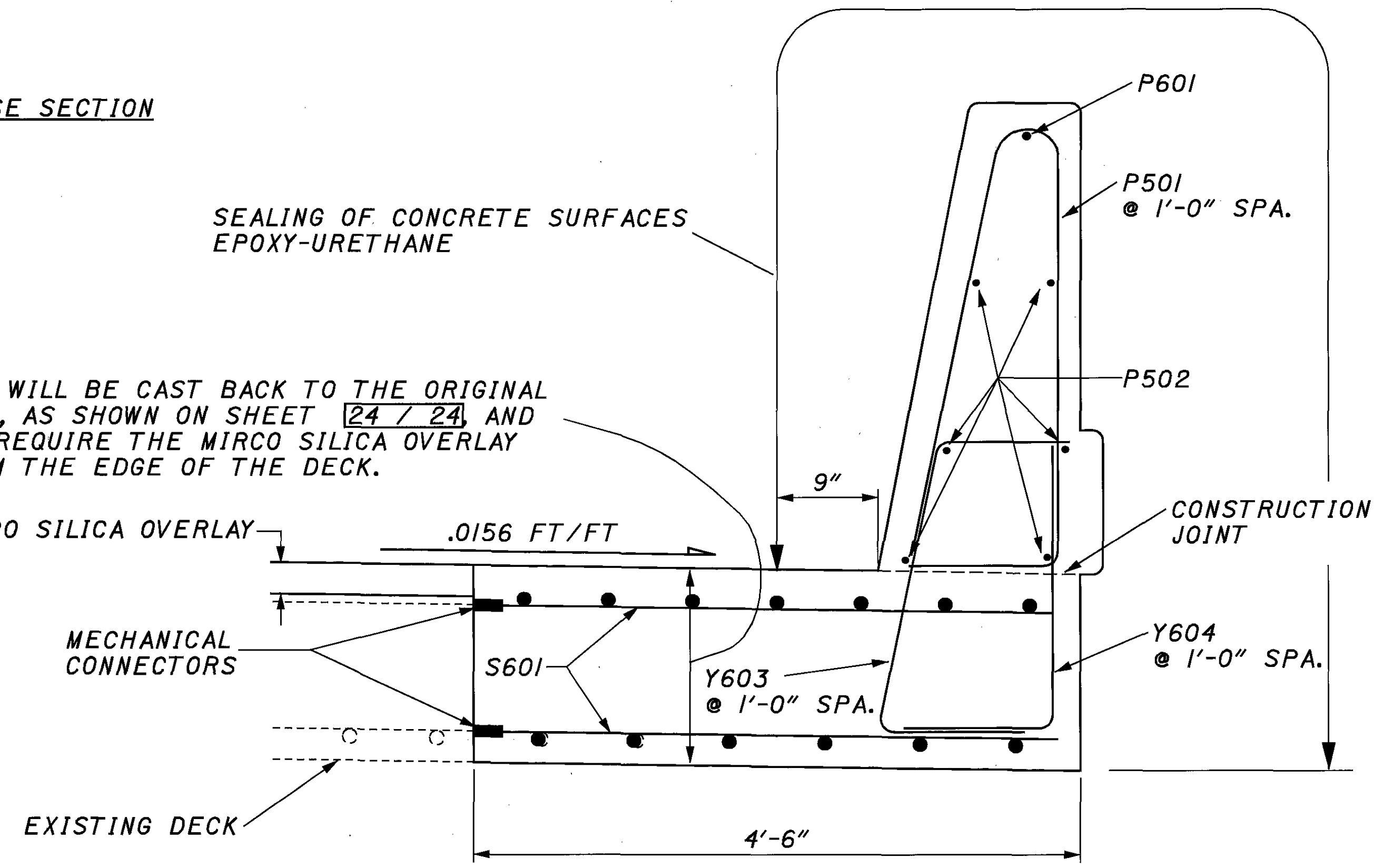
PROPOSED TRANSVERSE SECTION



PROPOSED MEDIAN

SEALING OF CONCRETE SURFACES
EPOXY-URETHANE

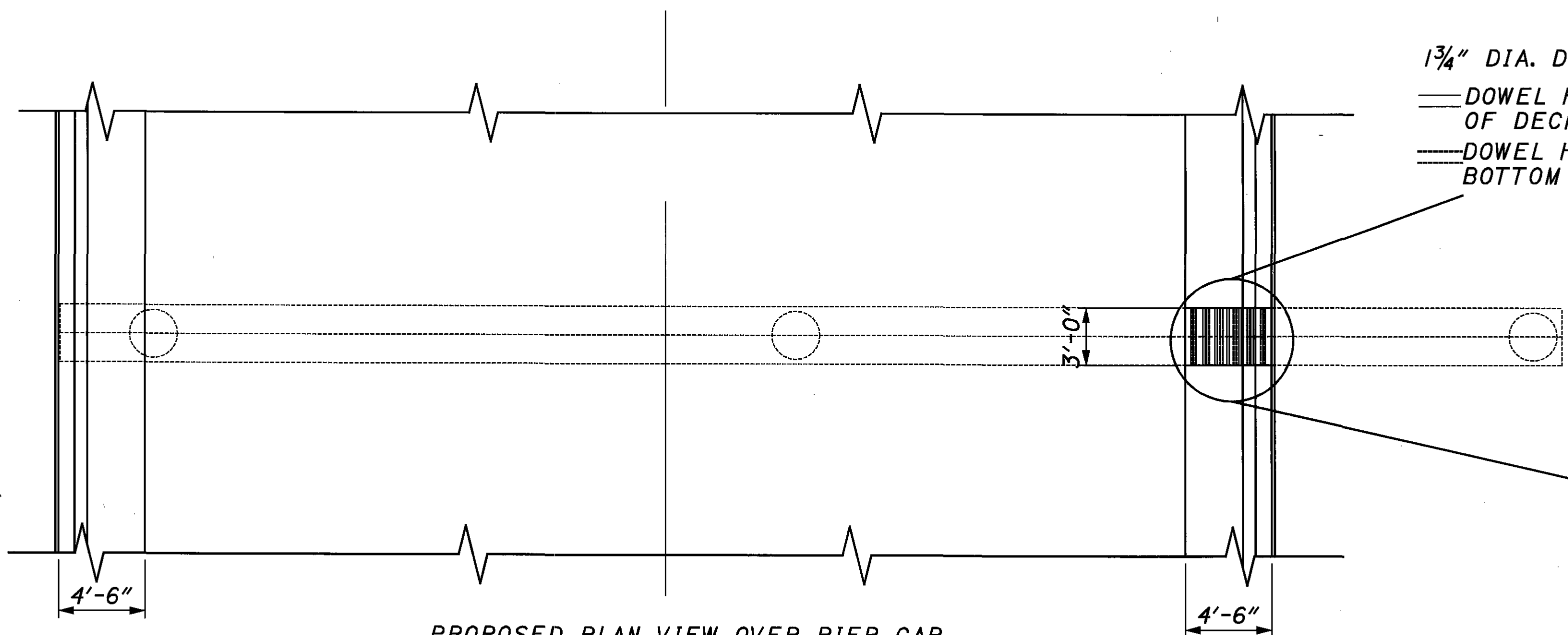
THE DECK WILL BE CAST BACK TO THE ORIGINAL ELEVATION, AS SHOWN ON SHEET 24 / 24, AND WILL NOT REQUIRE THE MICRO SILICA OVERLAY 4'-6" FROM THE EDGE OF THE DECK.



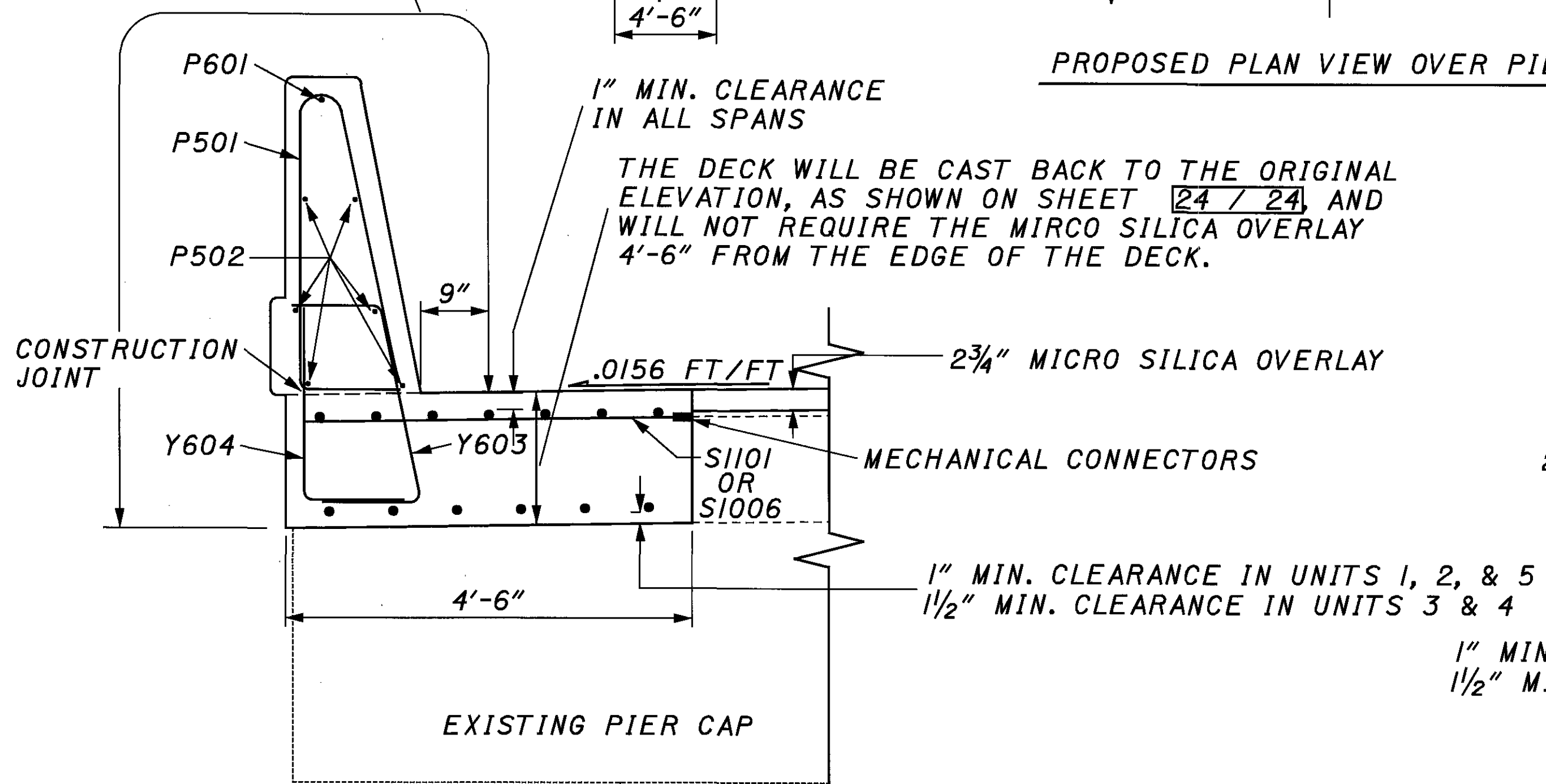
PROPOSED PARAPET
FOR PARAPET DIMENSIONS SEE STD. DWG. SBR-1-99
APPLIES TO: LEFT AND RIGHT EDGE OF DECK, EXCEPT OVER PIERS, AS SHOWN ON SHEET 8 / 24

DESIGNED	MRH	CHECKED	GEC
DRAWN	MRH	REVISED	
REVIEWED	LAW	STRUCTURE FILE NUMBER	7300158
DATE	9/6/05		
DESIGN AGENCY	STATE OF OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 9 PRODUCTION		
PROPOSED TRANSVERSE SECTION BRIDGE NO. SCI-23-0535 OVER NORFOLK SOUTHERN RAILWAY COMPANY AND C.R. 160			
SCI-23-2.39			
7 / 24			
93 110			

SEALING OF CONCRETE SURFACES
EPOXY-URETHANE

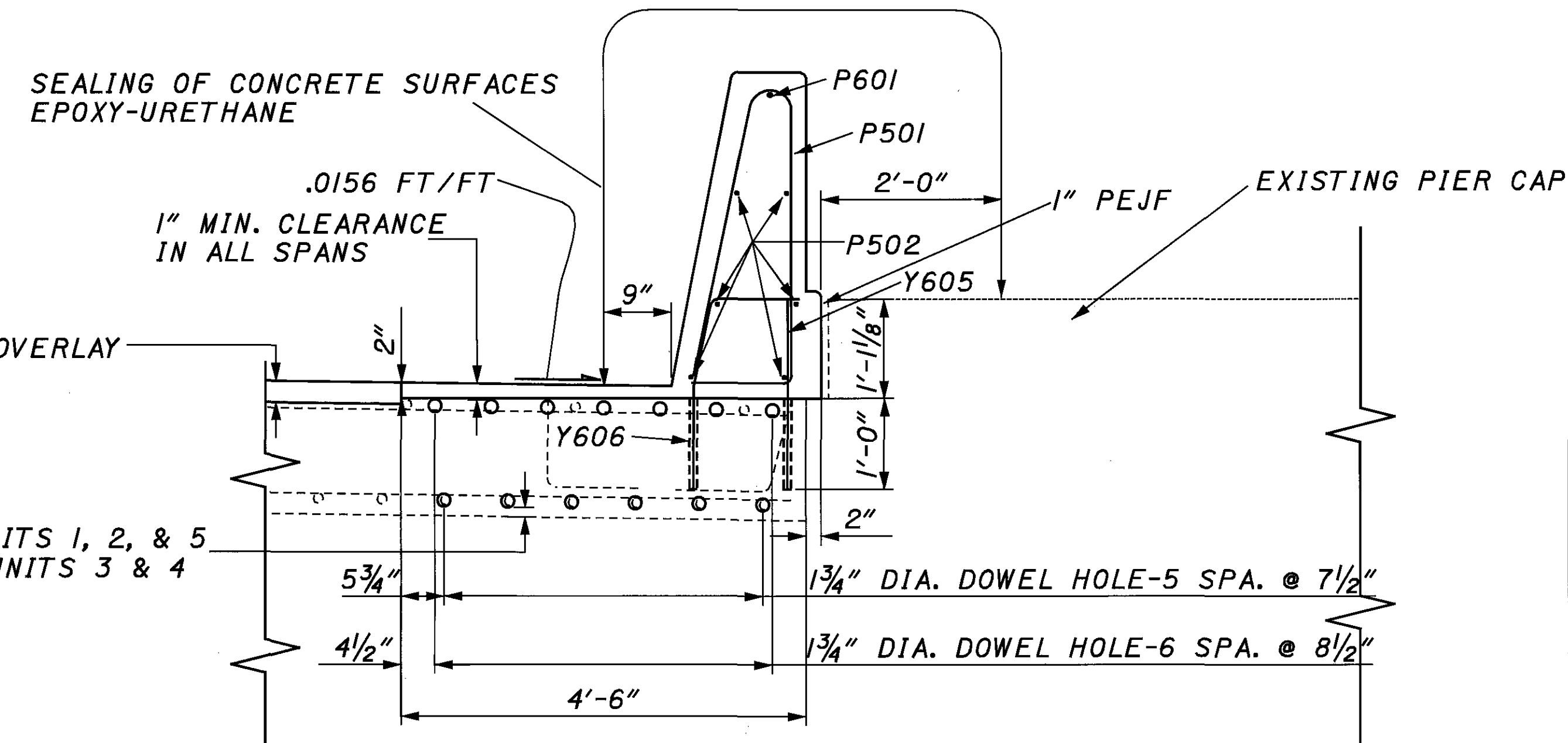


PROPOSED PLAN VIEW OVER PIER CAP



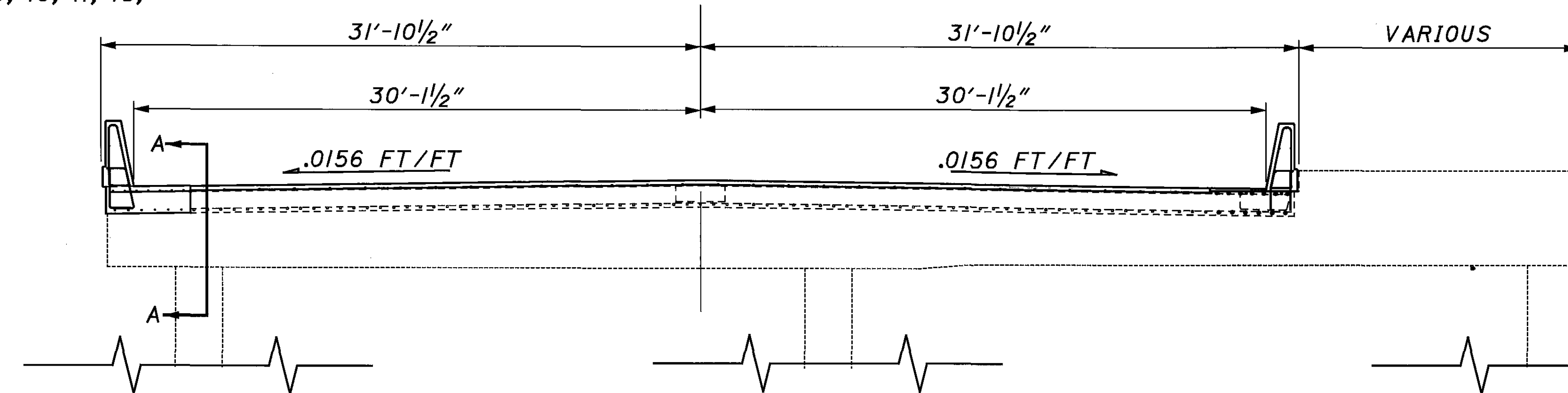
PROPOSED PARAPET
APPLIES TO THE FOLLOWING PIERS:
LEFT AND RIGHT SIDE: 1, 2, 3, 4, 8, 19, 23,
24, 25, 26, 27, 28,
29, 30
LEFT SIDE ONLY: 12, 16, 17, 18, 20, 21, 22
RIGHT SIDE ONLY: 5, 6, 7, 9, 10, 11, 15,

SEALING OF CONCRETE SURFACES
EPOXY-URETHANE

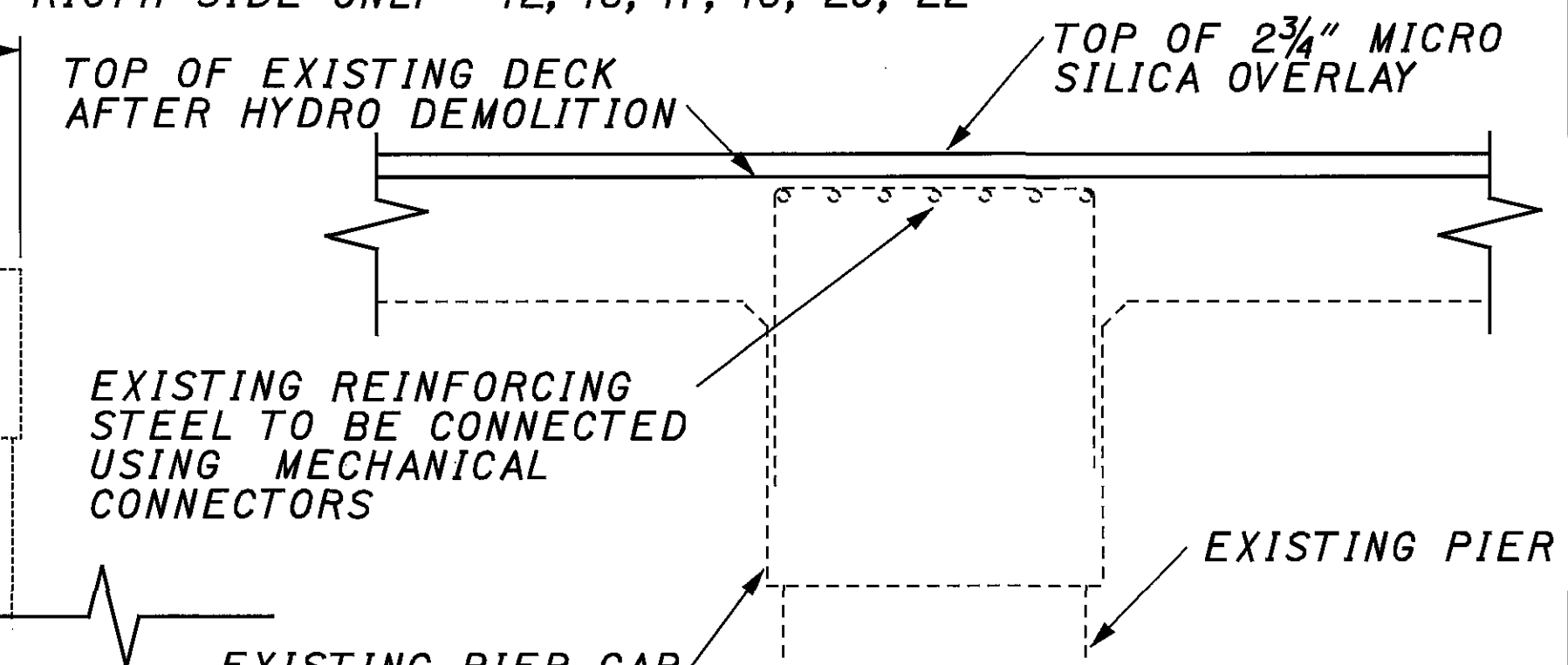


PROPOSED PARAPET OVER PIER

APPLIES TO THE FOLLOWING PIERS:
LEFT AND RIGHT SIDE: 13, 14
LEFT SIDE ONLY: 5, 6, 7, 9, 10, 15
RIGHT SIDE ONLY: 12, 16, 17, 18, 20, 22



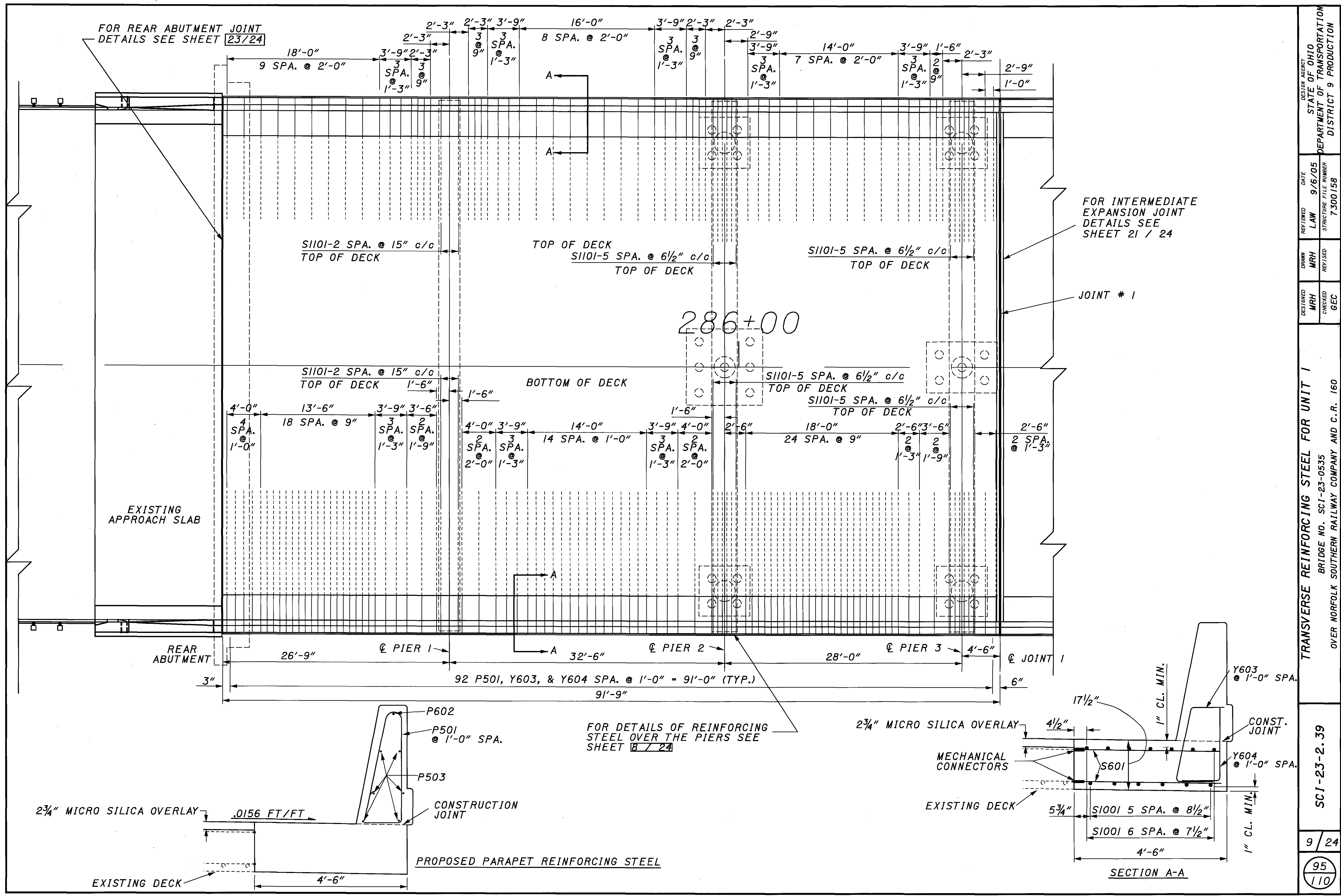
PROPOSED TRANSVERSE SECTION OVER PIER CAP



SECTION A-A
TYPICAL SECTION VIEW THRU PIER CAP

DESIGN AGENCY: STATE OF OHIO
 DEPARTMENT OF TRANSPORTATION
 DISTRICT 9 PRODUCTION
 DATE: 9/6/05
 LAW: 9/6/05
 STRUCTURE FILE NUMBER: 7300158
 DRAWN: MRH
 REVIEWED: GEC
 DESIGNED: MRH
 CHECKED: GEC
 BRIDGE NO.: SCI-23-0535
 OVER NORFOLK SOUTHERN RAILWAY COMPANY AND C.R. 160
 PROPOSED TRANSVERSE SECTION OVER PIERS
 SCI-23-2.39
 8/24
 94
 110

FOR REAR ABUTMENT JOINT
DETAILS SEE SHEET 23/24



FOR INTERMEDIATE
EXPANSION JOINT
DETAILS SEE
SHEET 21 / 24

JOINT # 1

286+00

EXISTING
APPROACH SLAB

REAR
ABUTMENT

PIER 1

PIER 2

PIER 3

JOINT 1

92 P501, Y603, & Y604 SPA. @ 1'-0" = 91'-0" (TYP.)

FOR DETAILS OF REINFORCING
STEEL OVER THE PIERS SEE
SHEET 7 / 24

2 3/4" MICRO SILICA OVERLAY

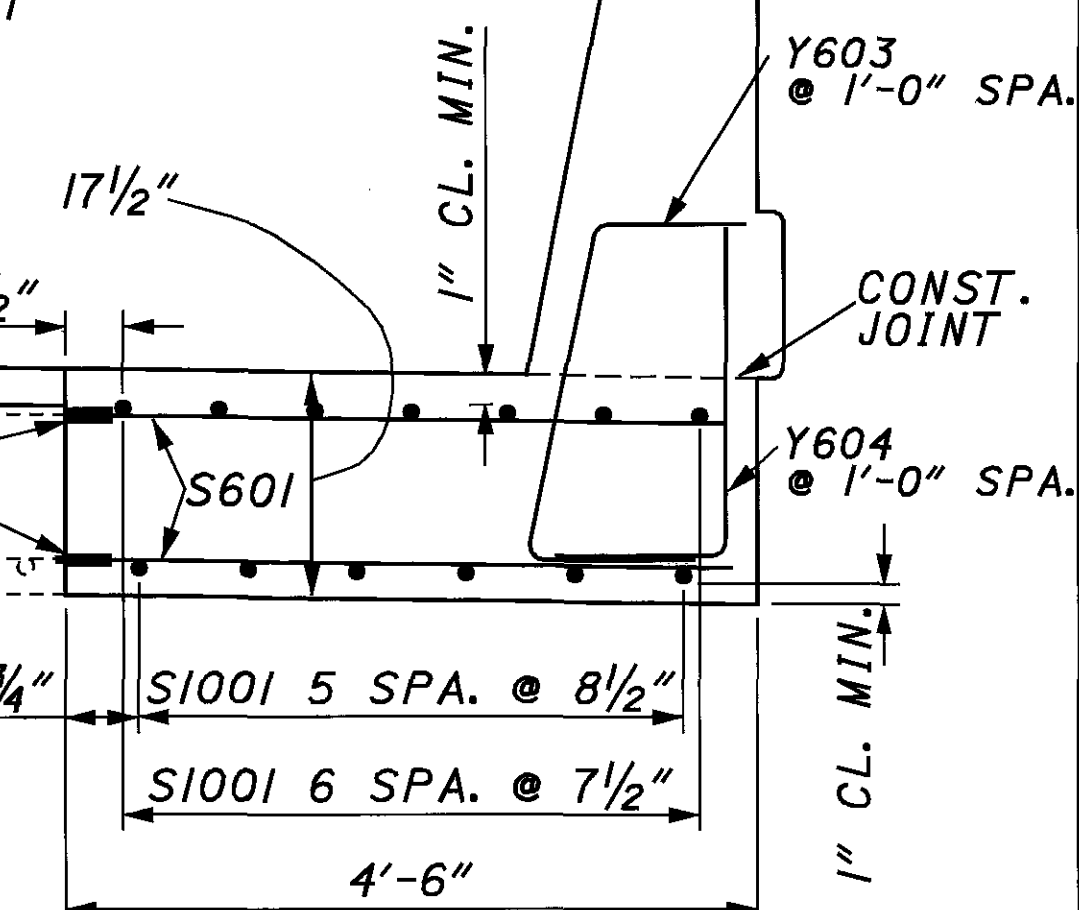
MECHANICAL
CONNECTORS

EXISTING DECK

2 3/4" MICRO SILICA OVERLAY
0.0156 FT/FT

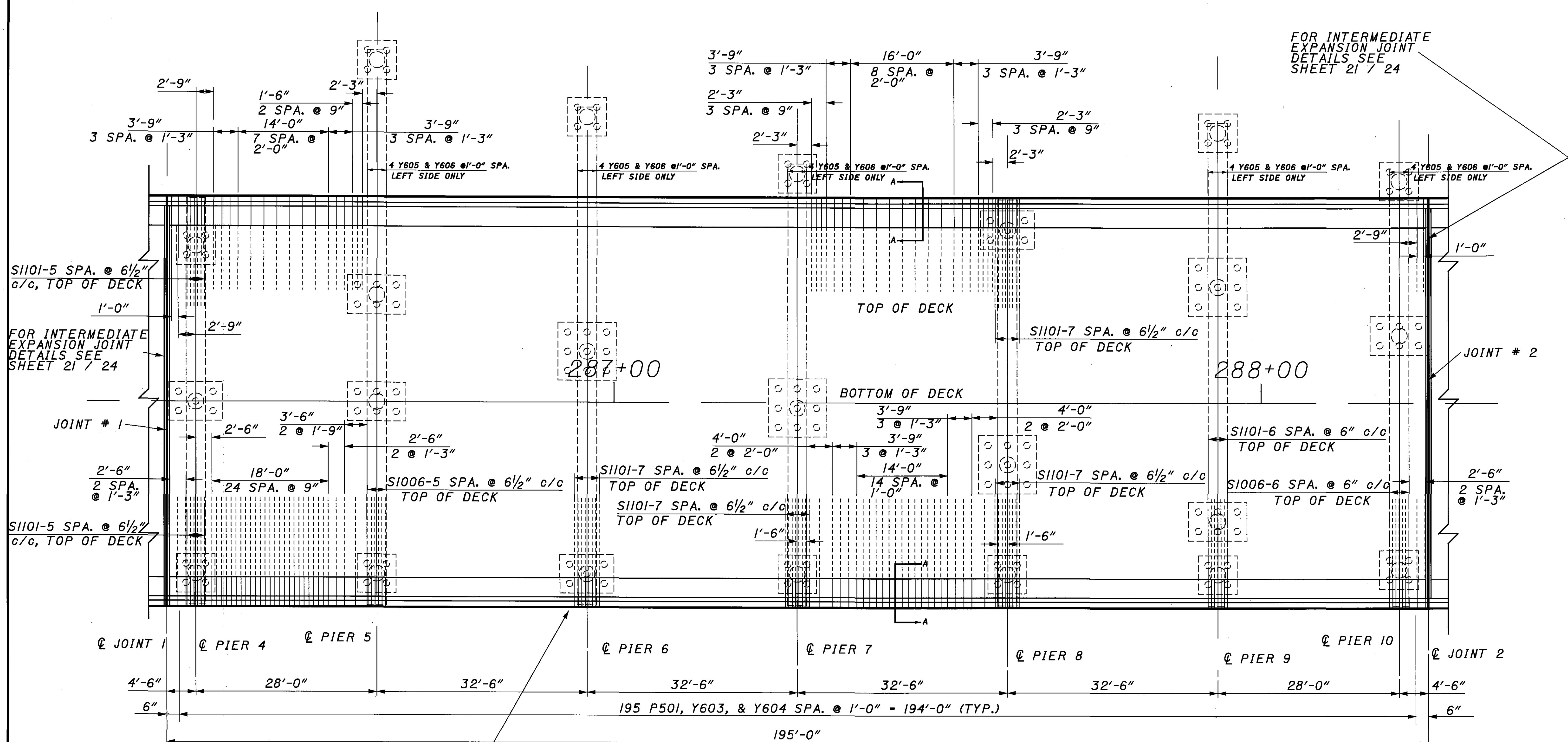
CONSTRUCTION
JOINT

PROPOSED PARAPET REINFORCING STEEL



SECTION A-A

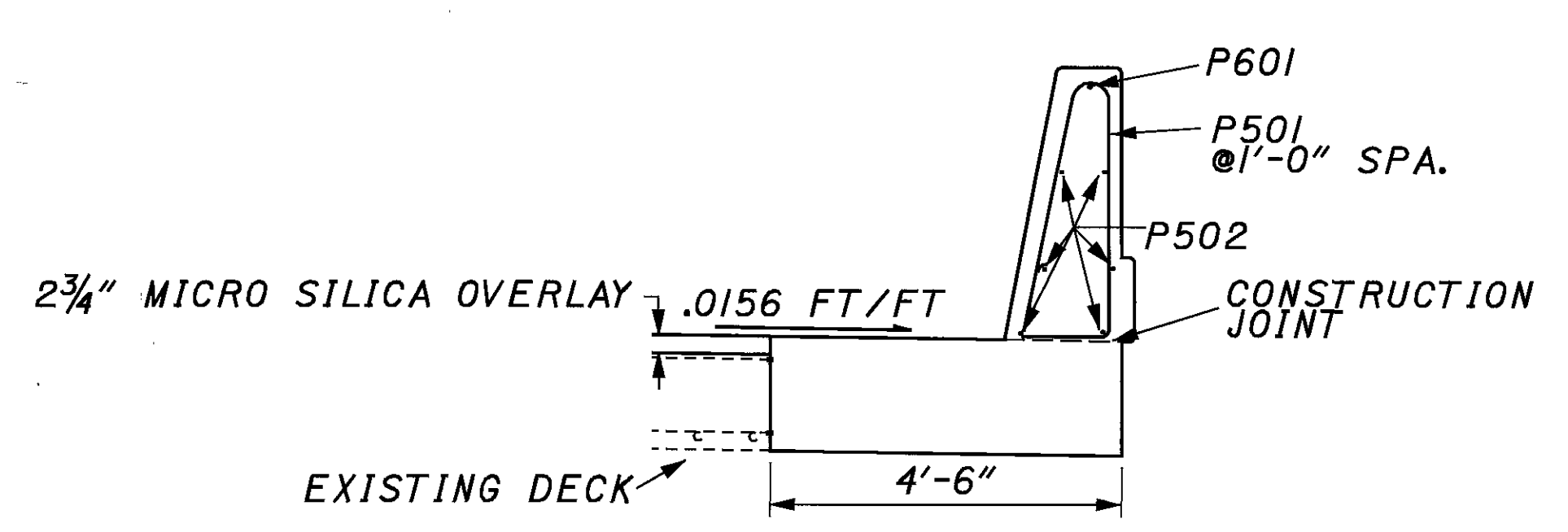
DESIGN AGENCY STATE OF OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 9 PRODUCTION	DATE 9/6/05	DESIGNED MRH	CHECKED GEC	TRANSVERSE REINFORCING STEEL FOR UNIT 1 BRIDGE NO. SCI-23-0535 OVER NORFOLK SOUTHERN RAILWAY COMPANY AND C.R. 160
REVISED LAW	STRUCTURE FILE NUMBER 7300158	DRAWN MRH	REVISED	SCI-23-2.39
FOR REAR ABUTMENT JOINT DETAILS SEE SHEET 23/24	FOR INTERMEDIATE EXPANSION JOINT DETAILS SEE SHEET 21 / 24			9 / 24
				95 / 110



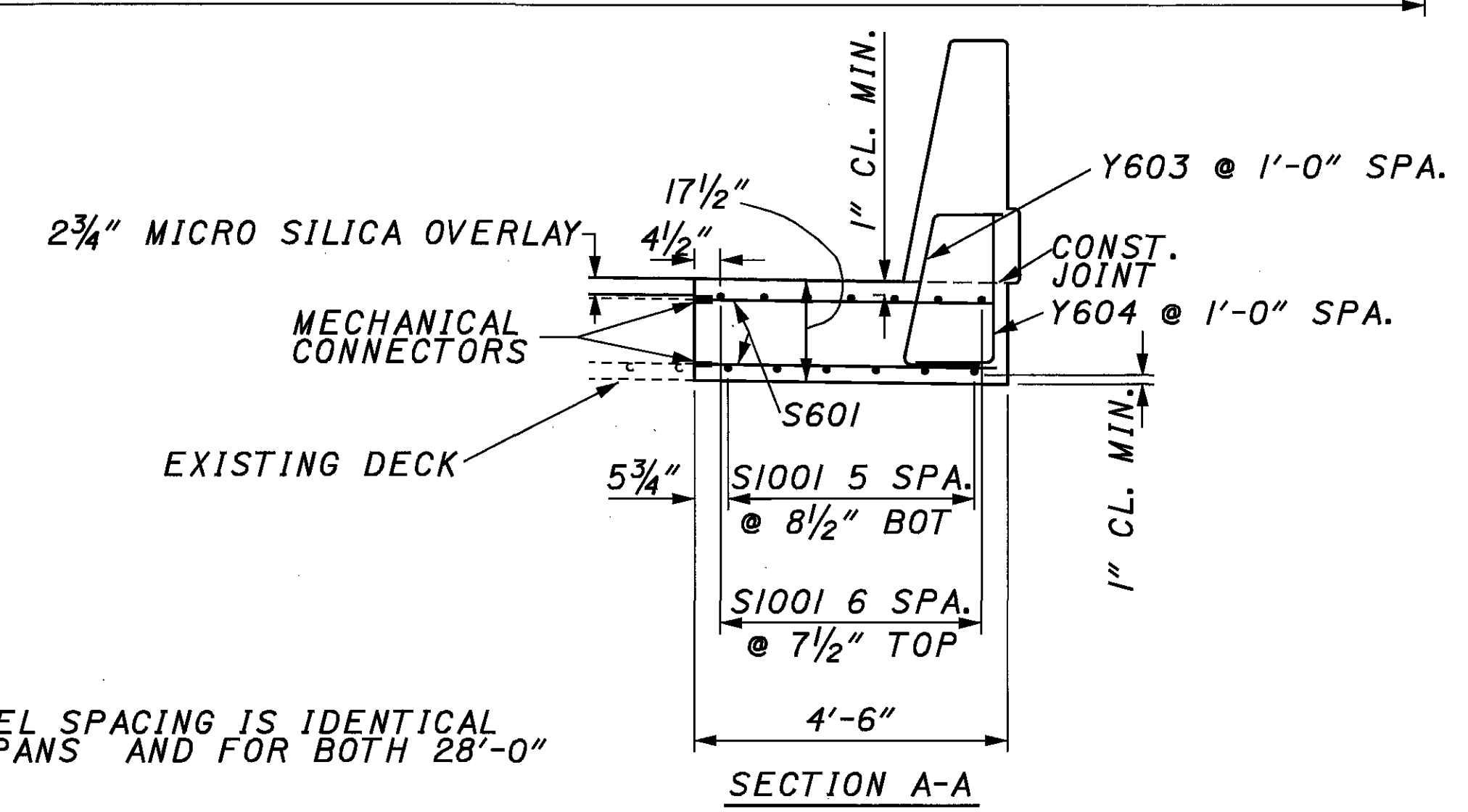
FOR INTERMEDIATE EXPANSION JOINT DETAILS SEE SHEET 21 / 24

FOR INTERMEDIATE EXPANSION JOINT DETAILS SEE SHEET 21 / 24

FOR DETAILS OF REINFORCING STEEL OVER THE PIERS SEE SHEET 8 / 24



PROPOSED PARAPET REINFORCING STEEL

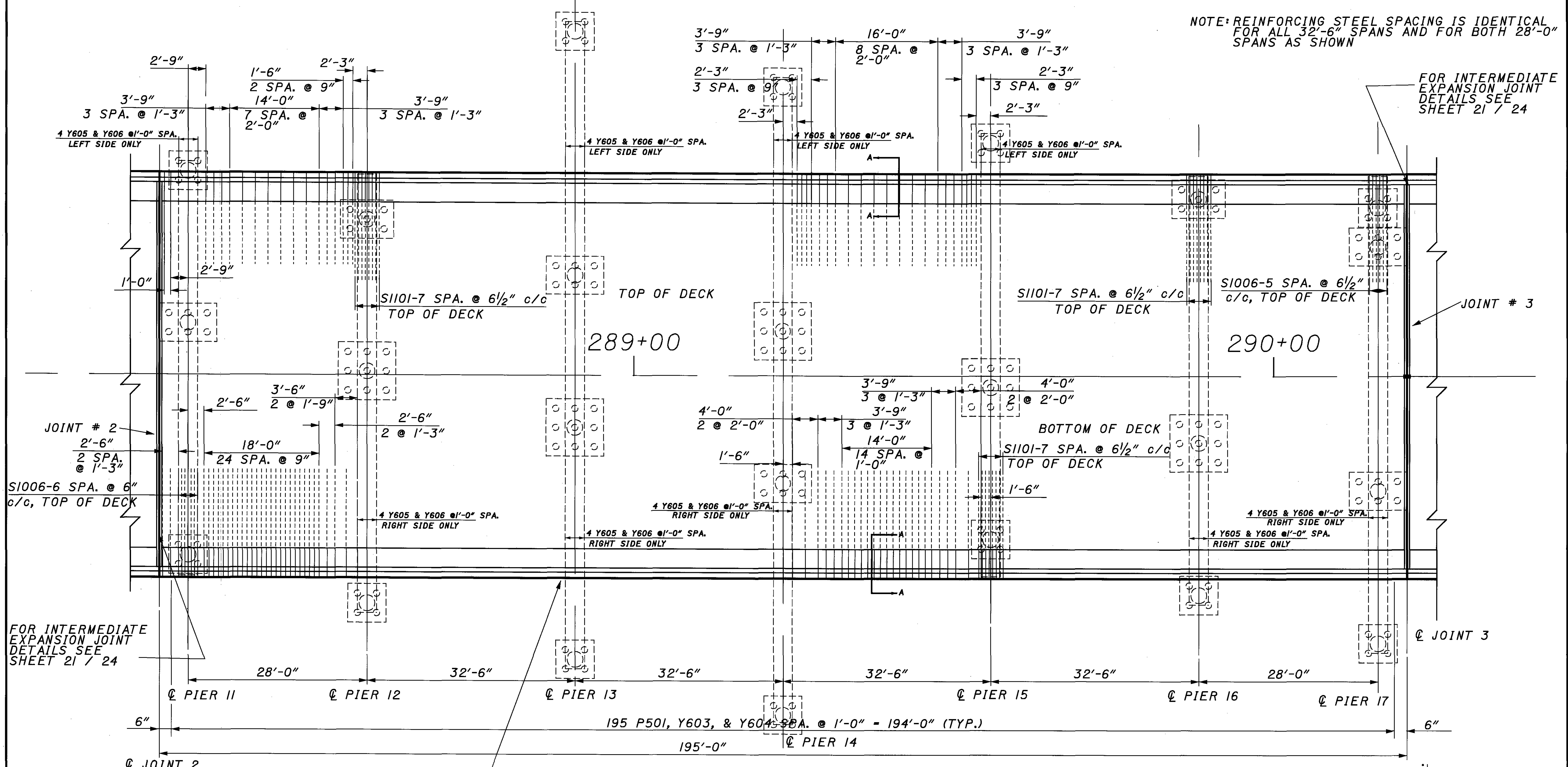


NOTE: REINFORCING STEEL SPACING IS IDENTICAL FOR ALL 32'-6" SPANS AND FOR BOTH 28'-0" SPANS AS SHOWN

SECTION A-A

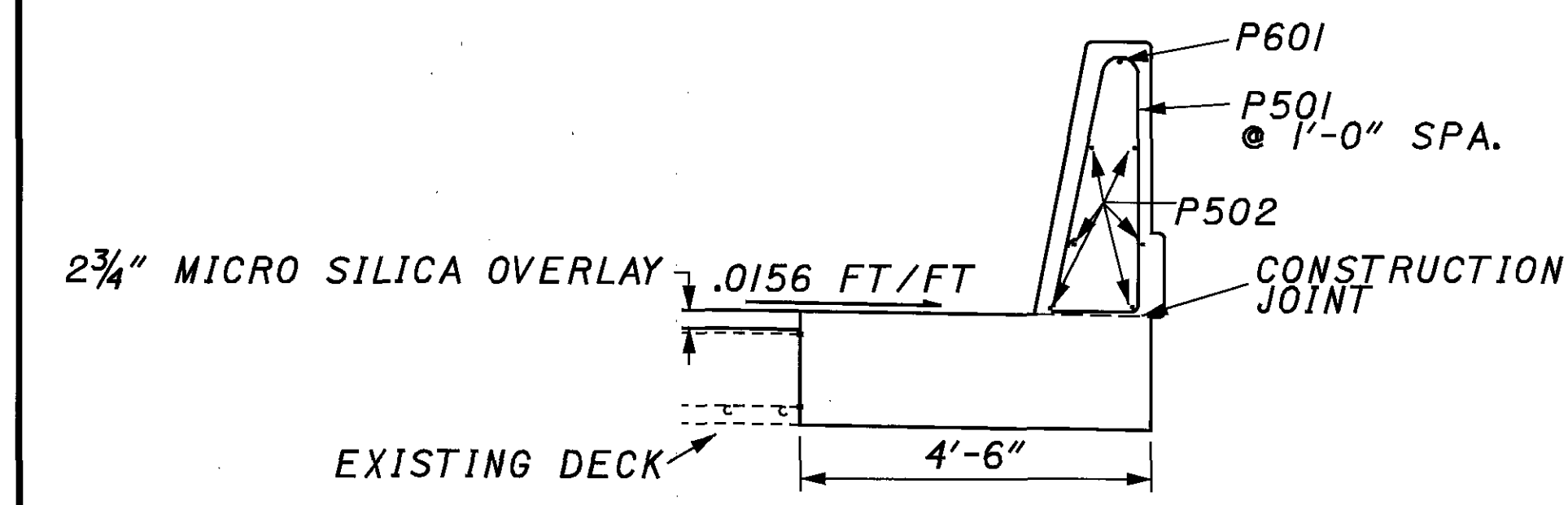
NOTE: REINFORCING STEEL SPACING IS IDENTICAL FOR ALL 32'-6" SPANS AND FOR BOTH 28'-0" SPANS AS SHOWN

FOR INTERMEDIATE EXPANSION JOINT DETAILS SEE SHEET 21 / 24



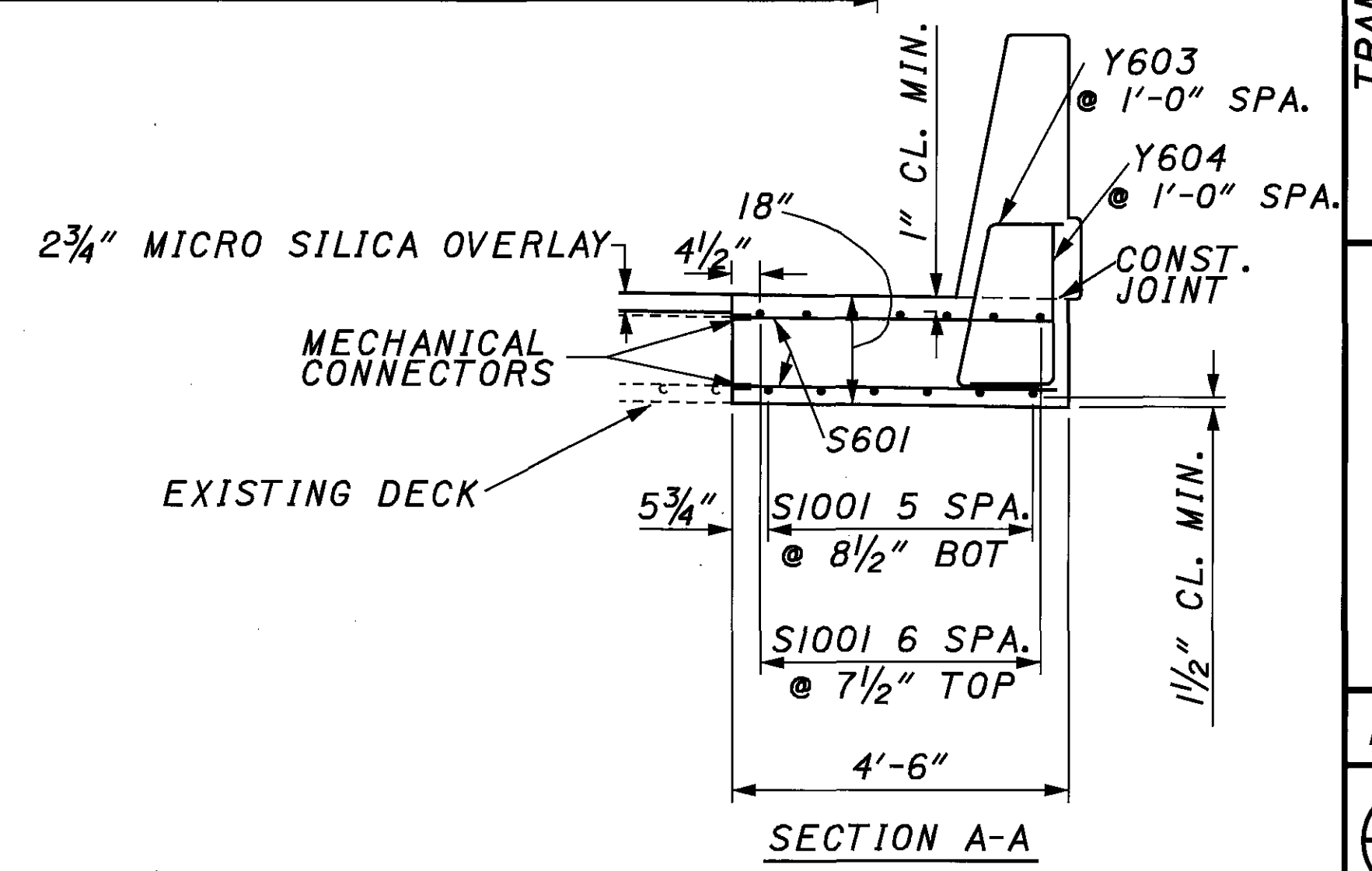
FOR INTERMEDIATE EXPANSION JOINT DETAILS SEE SHEET 21 / 24

FOR DETAILS OF REINFORCING STEEL OVER THE PIERS SEE SHEET 8 / 24



PROPOSED PARAPET REINFORCING STEEL

NOTE: THE EXISTING DECK THICKNESS OVER PIER 13 IS 16 7/8" THICK WITH A 1 1/4" LATEX CONCRETE OVERLAY AND TAPERS BACK TO A DECK THICKNESS OF 16 3/4" WITH A 1 1/4" LATEX CONCRETE OVERLAY AT PIERS 12 AND 14. THE PROPOSED DECK THICKNESS AT PIER 13 WILL BE 17 3/8" 4'-6" FROM THE EDGE OF DECK AND TAPER BACK TO A THICKNESS OF 18" 4'-6" FROM THE DECKS EDGE AT PIERS 12 AND 14. OVER THE INTERIOR OF THE DECK, THE DECK THICKNESS AT PIER 13 WILL BE 14 5/8" THICK WITH A 2 3/4" MICRO SILICA OVERLAY AND WILL TAPER TO A DECK THICKNESS OF 15 1/4" THICK WITH A 2 3/4" MICRO SILICA OVERLAY AT PIERS 12 AND 14.

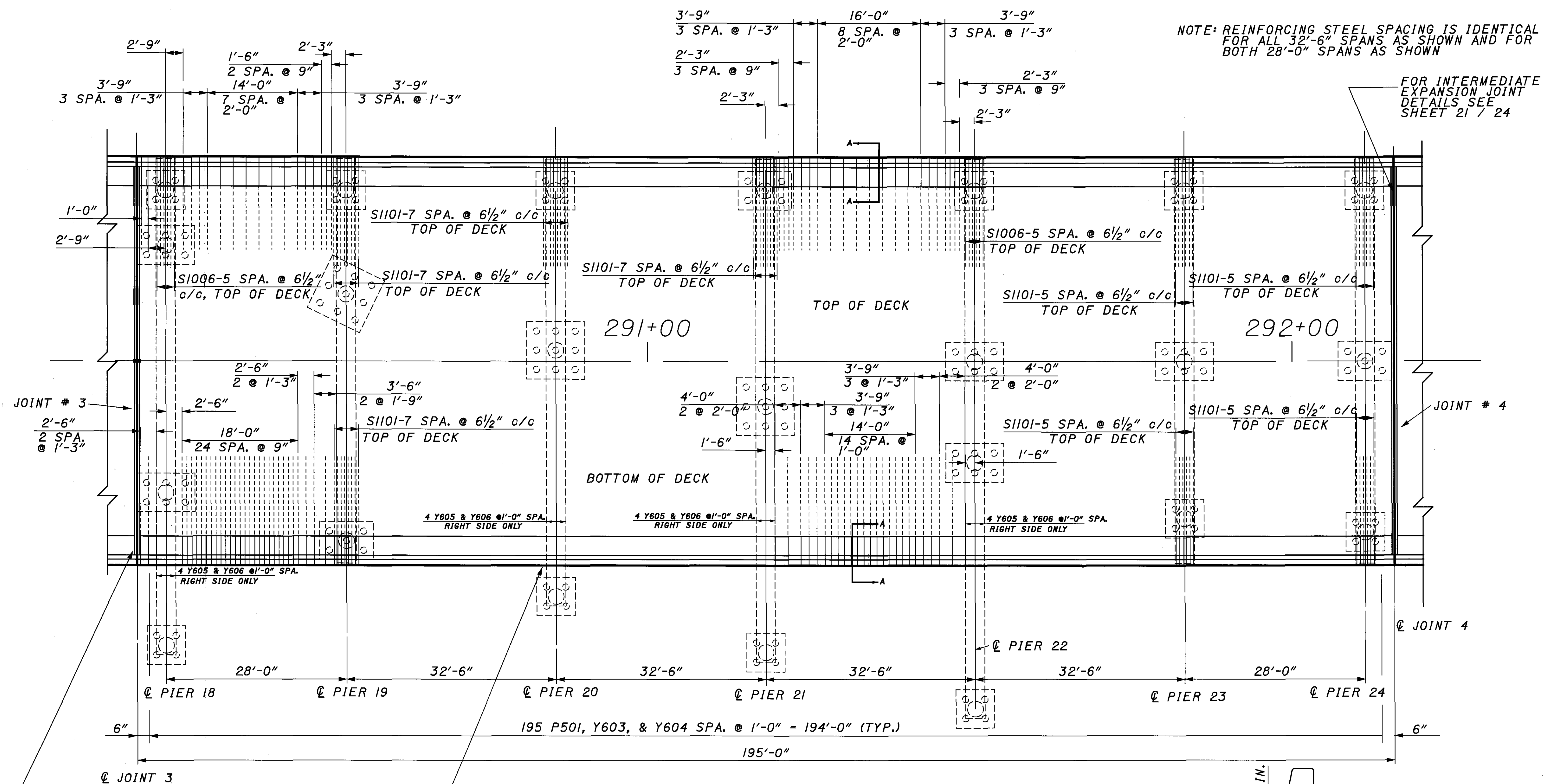


SECTION A-A

DESIGN AGENCY: STATE OF OHIO
 DEPARTMENT OF TRANSPORTATION
 DISTRICT 9 PRODUCTION
 DATE: 9/6/05
 LAW: 7300158
 STRUCTURE FILE NUMBER:
 DRAWN: MRH
 REVISED:
 DESIGNED: MRH
 CHECKED: GEC
 TRANSVERSE REINFORCING STEEL FOR UNIT 3
 BRIDGE NO. SCI-23-0535
 OVER NORFOLK SOUTHERN RAILWAY COMPANY AND C.R. 160
 SCI-23-2.39
 11/24
 97/110

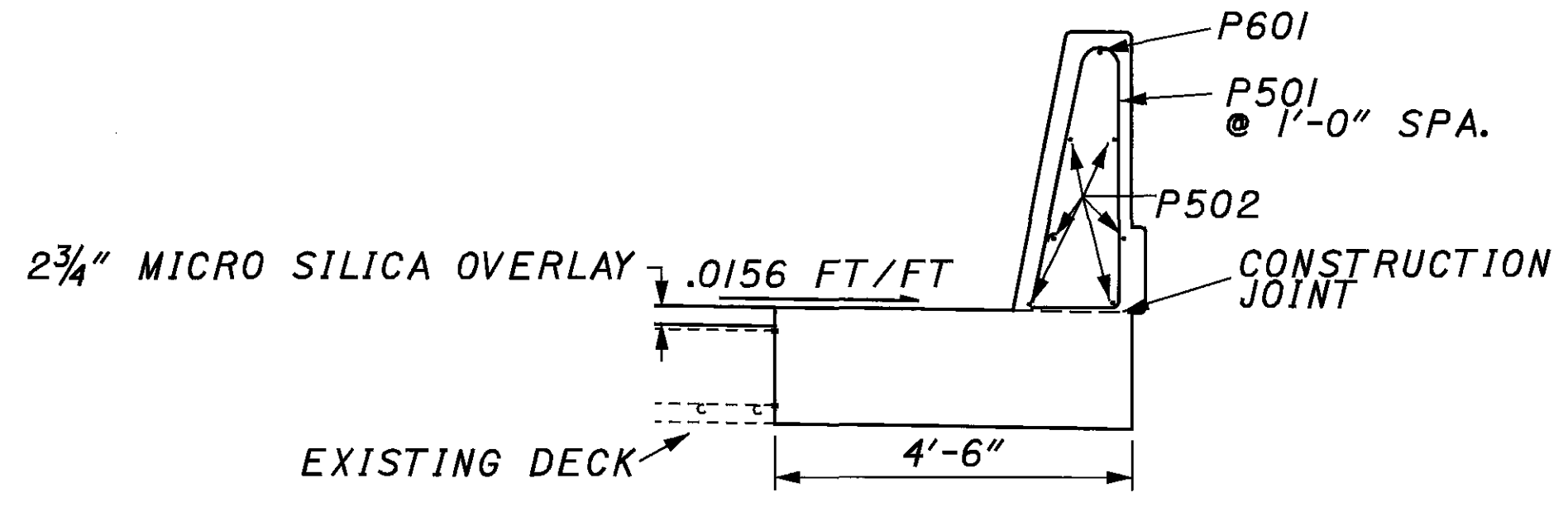
NOTE: REINFORCING STEEL SPACING IS IDENTICAL FOR ALL 32'-6" SPANS AS SHOWN AND FOR BOTH 28'-0" SPANS AS SHOWN

FOR INTERMEDIATE EXPANSION JOINT DETAILS SEE SHEET 21 / 24

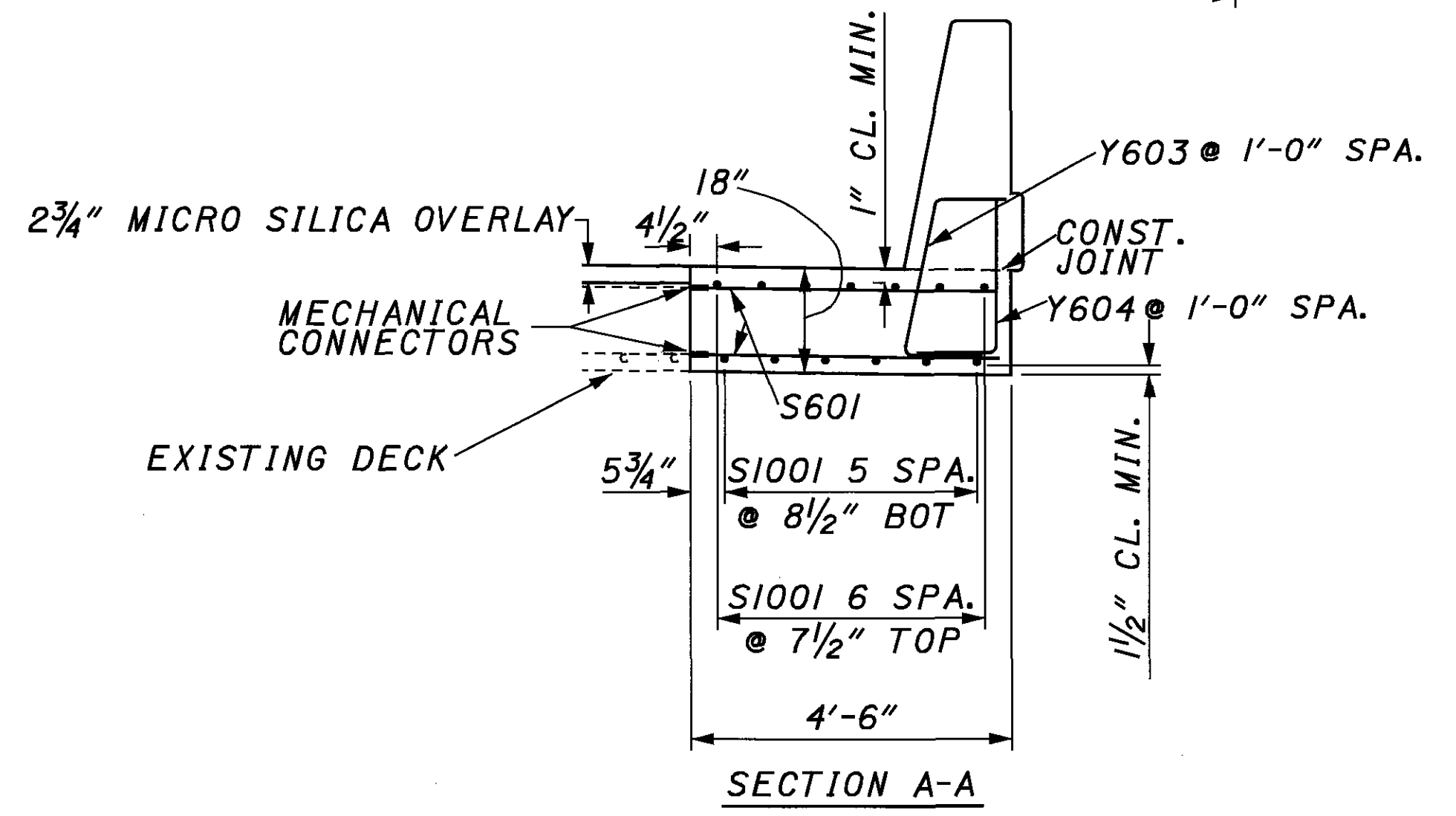


FOR INTERMEDIATE EXPANSION JOINT DETAILS SEE SHEET 21 / 24

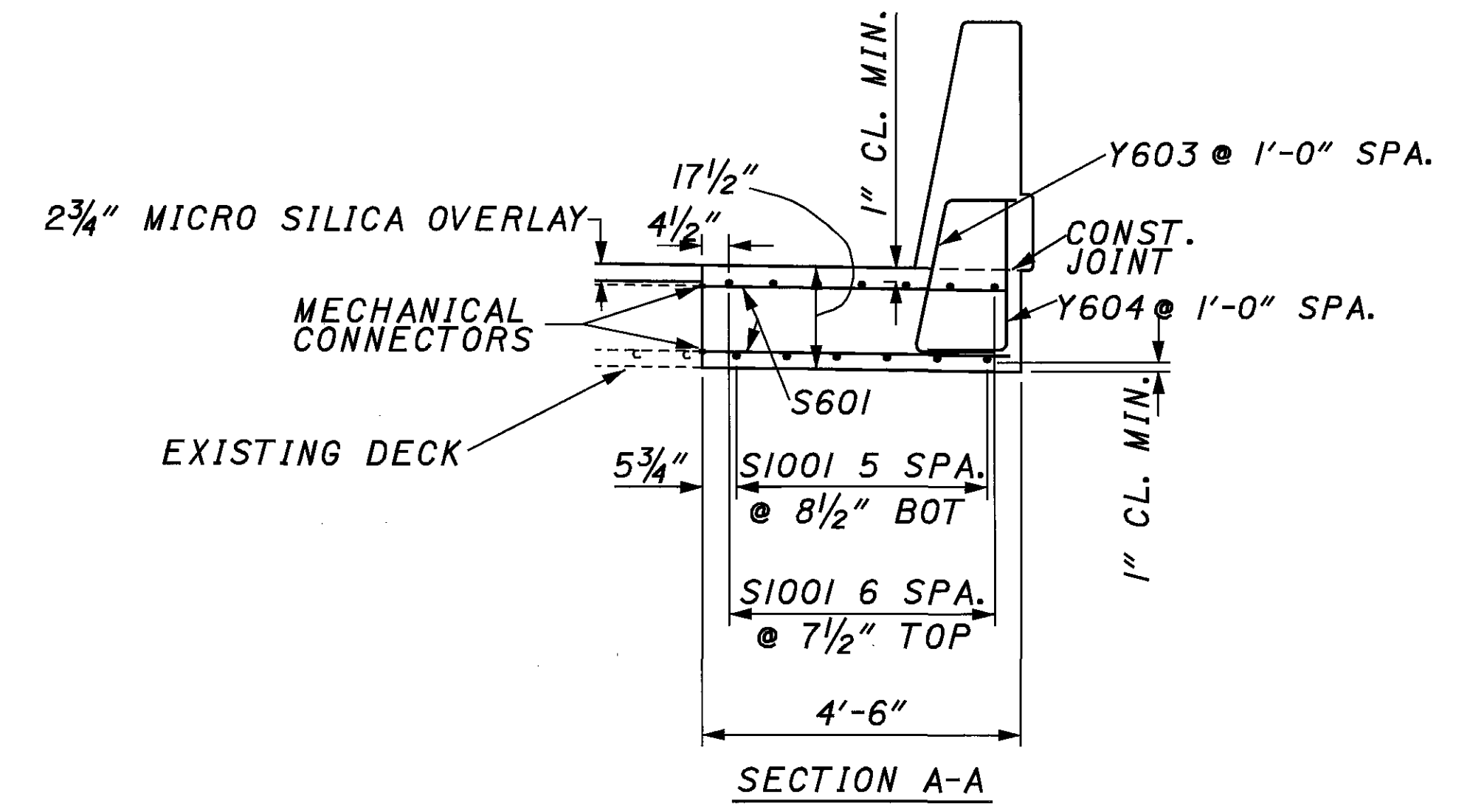
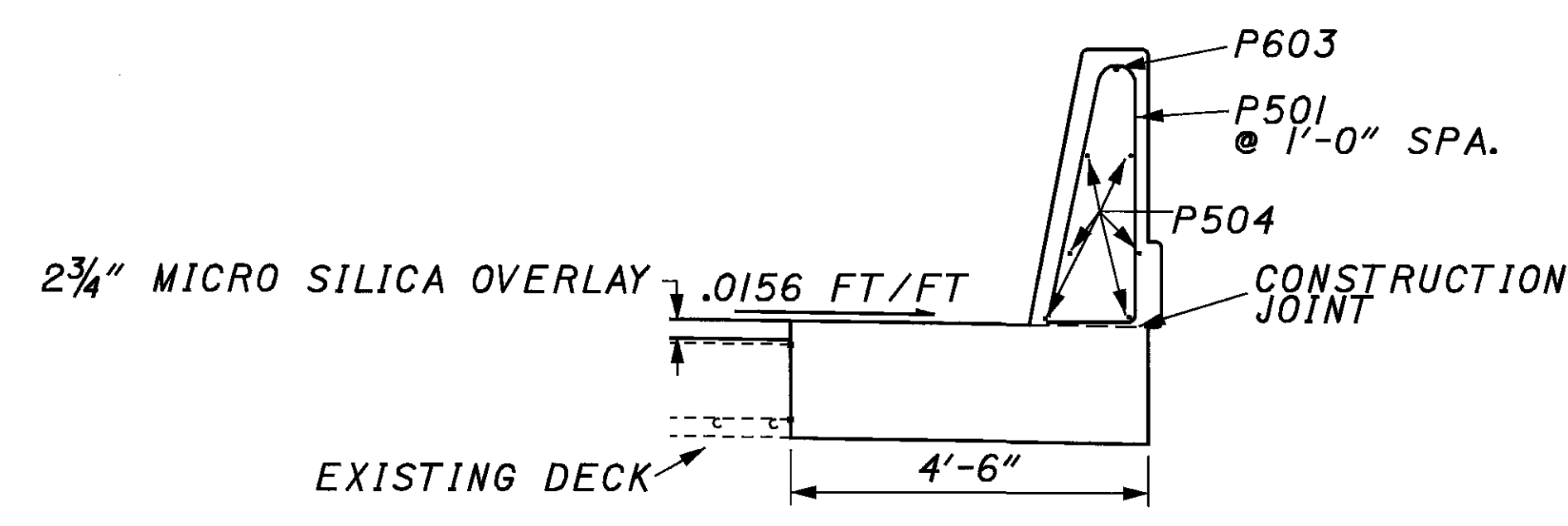
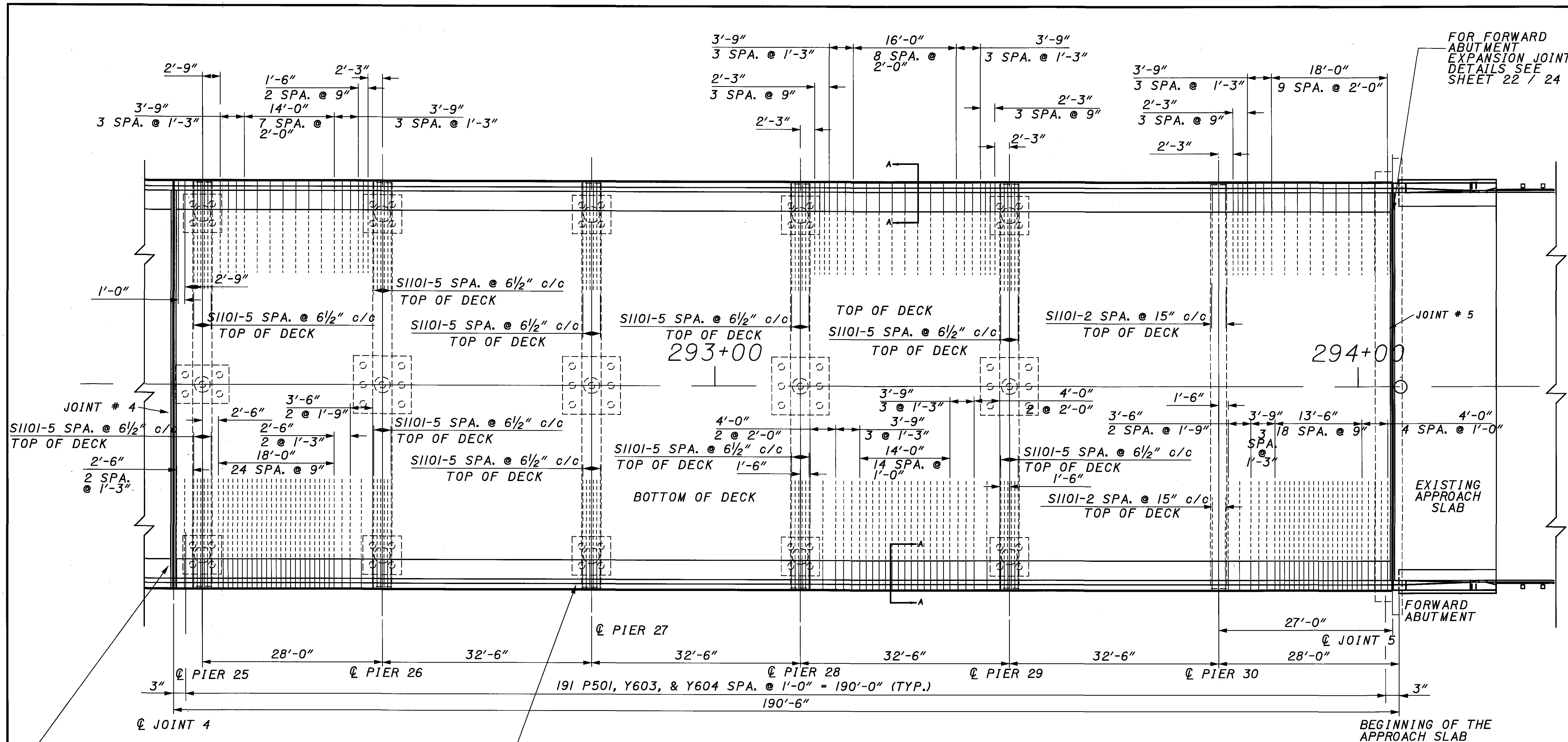
FOR DETAILS OF REINFORCING STEEL OVER THE PIERS SEE SHEET 8 / 24



PROPOSED PARAPET REINFORCING STEEL

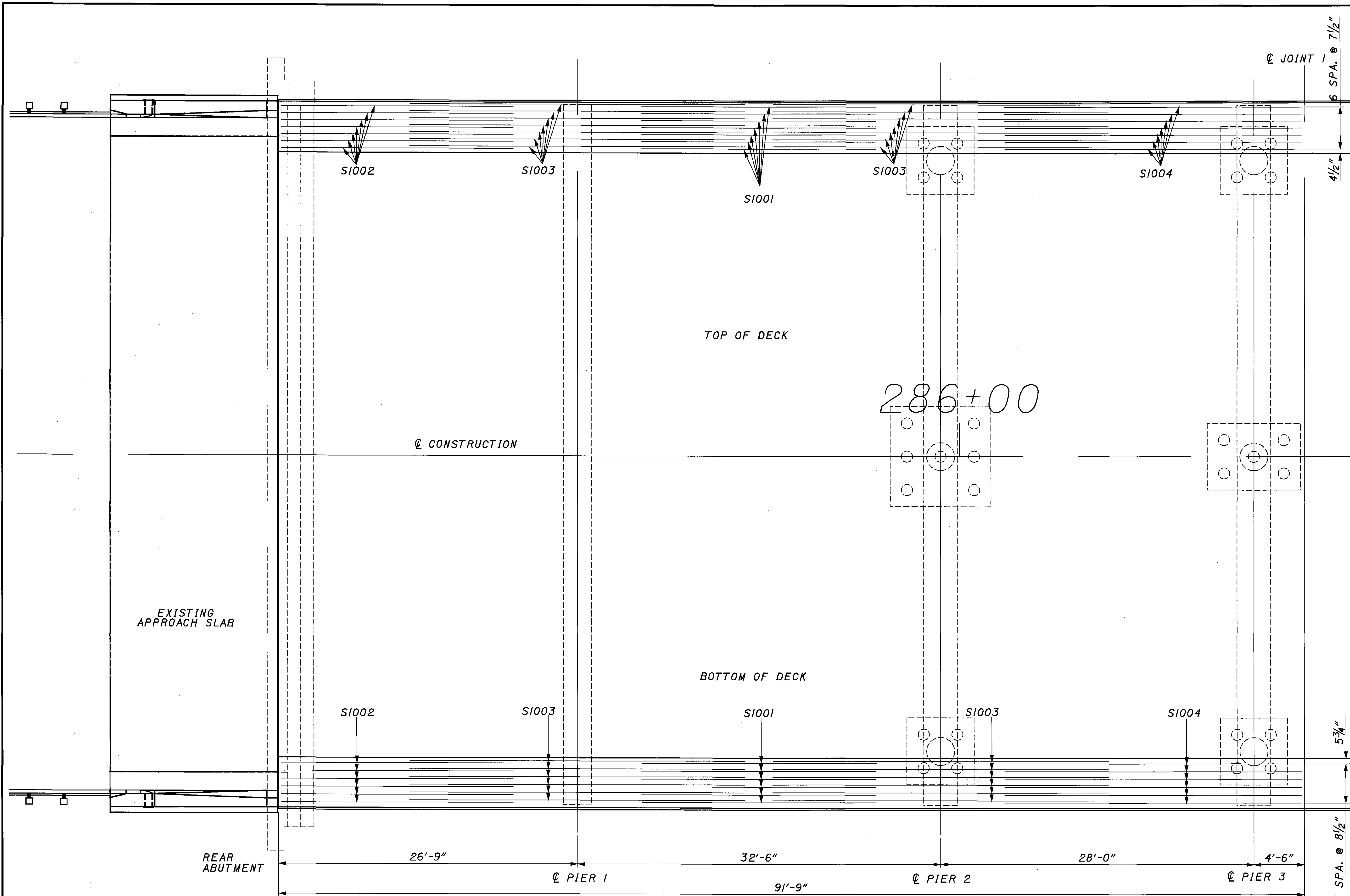


SECTION A-A



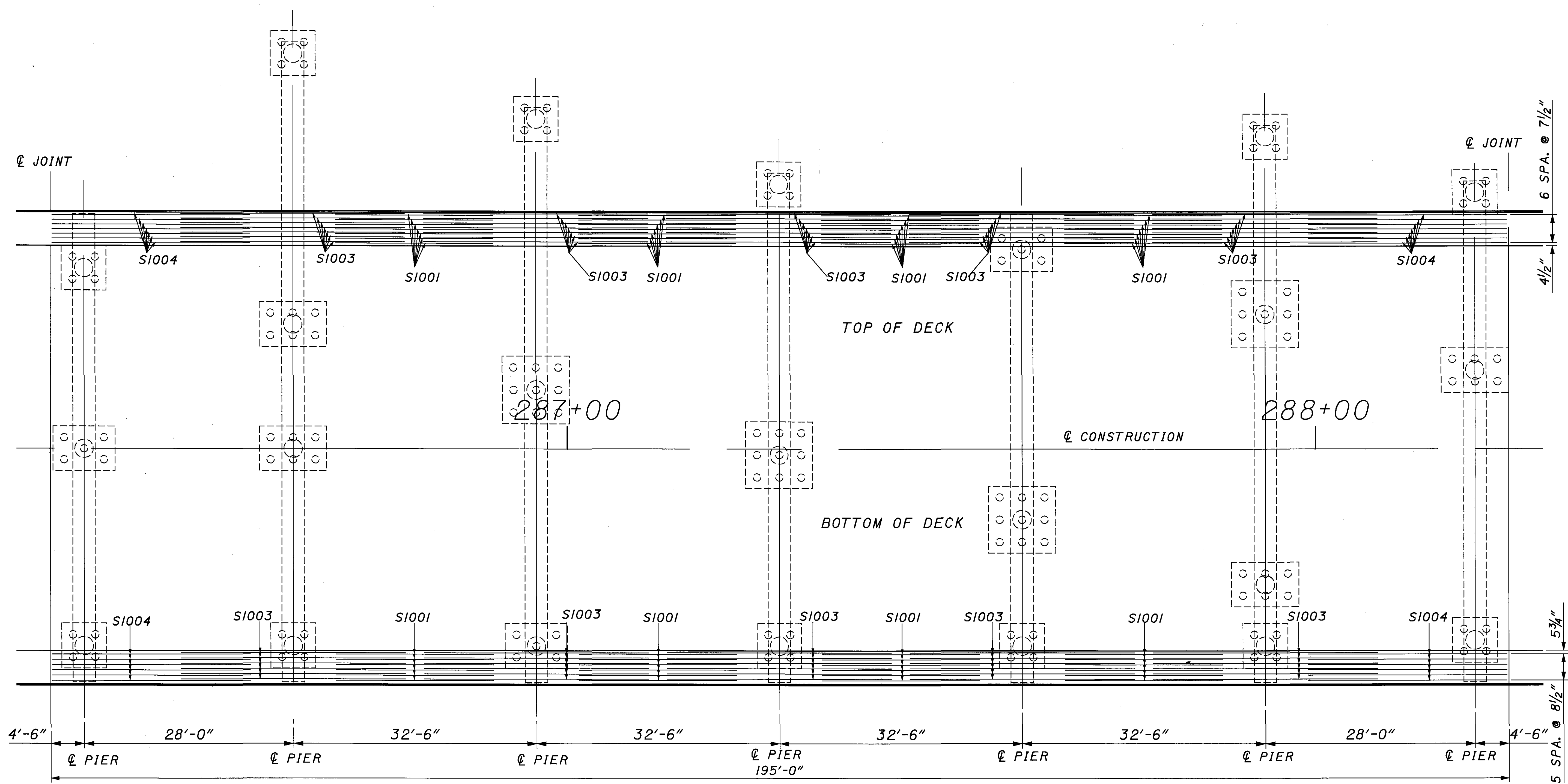
NOTE: REINFORCING STEEL SPACING IS IDENTICAL FOR ALL 32'-6" SPANS AS SHOWN

DESIGN AGENCY	STATE OF OHIO
DEPARTMENT OF TRANSPORTATION	
DISTRICT 9 PRODUCTION	
DATE	9/6/05
STRUCTURE FILE NUMBER	7300158
REVIEWED	LAW
DRAWN	MRH
DESIGNED	MRH
CHECKED	GEC
BRIDGE NO.	SCI-23-0535
OVER	NORFOLK SOUTHERN RAILWAY COMPANY AND C.R. 160
TRANSVERSE REINFORCING STEEL FOR UNIT 5	
SCI-23-2.39	
13/24	
99	
110	

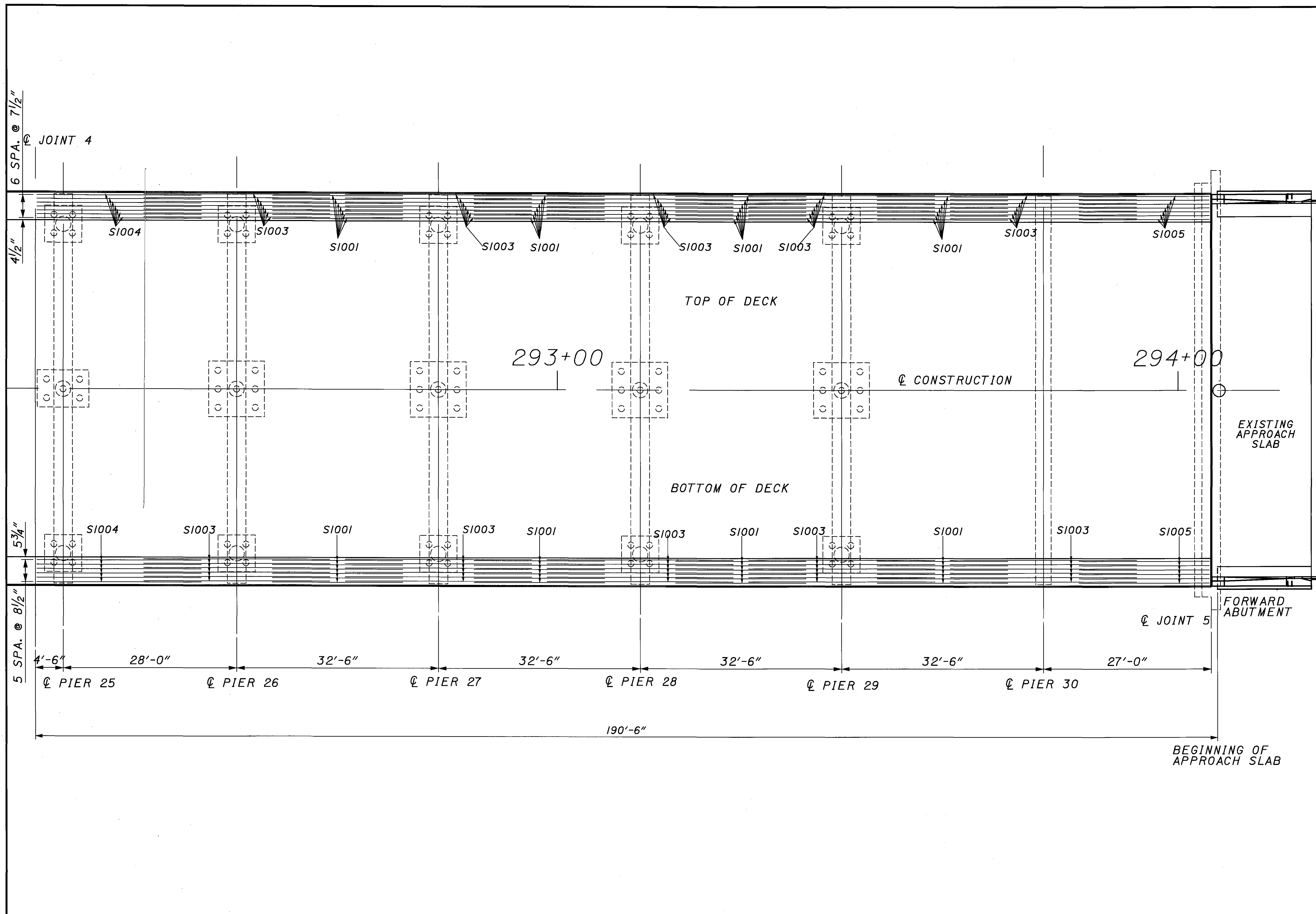


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DESIGN AGENCY STATE OF OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 9 PRODUCTION	
DATE 9/6/05	STRUCTURE FILE NUMBER 7300158
REVIEWED LAW	REVISIONS 7300158
DRAWN MRH	REVISED
DESIGNED MRH	CHECKED GEC
LONGITUDINAL REINFORCING STEEL FOR UNIT 1 BRIDGE NO. SCI-23-0535 OVER NORFOLK SOUTHERN RAILWAY COMPANY AND C.R. 160	
SCI-23-2.39	
14/24	
100 110	



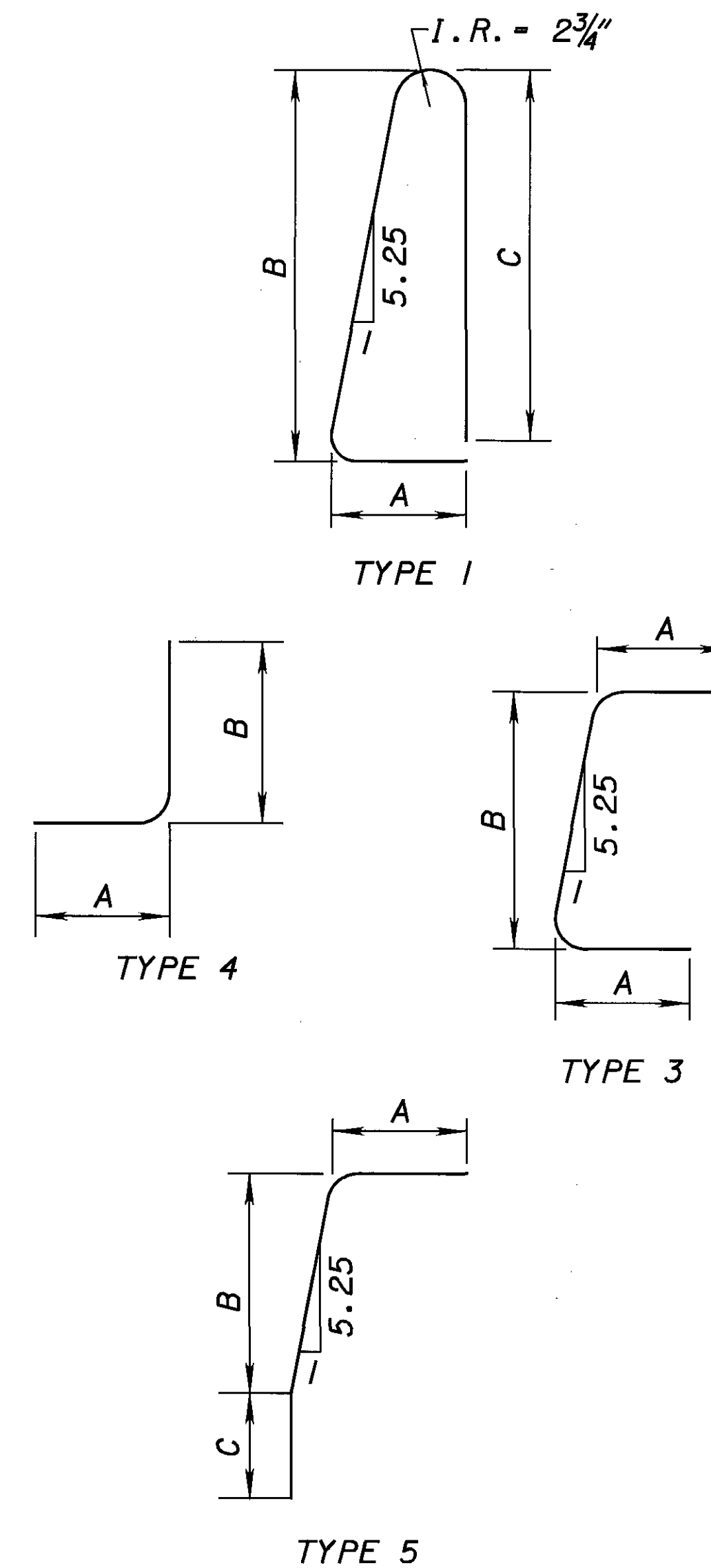
DESIGN AGENCY STATE OF OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 9 PRODUCTION	DATE 9/6/05
	STRUCTURE FILE NUMBER 7300158
REVIEWED LAW	DRAWN MRH
DESIGNED MRH	CHECKED GEC
LONGITUDINAL REINFORCING STEEL FOR UNITS 2, 3, 4 BRIDGE NO. SCI-23-0535 OVER NORFOLK SOUTHERN RAILWAY COMPANY AND C.R. 160	
SCI-23-2.39	
15/24	
101 110	



DESIGN AGENCY STATE OF OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 9 PRODUCTION	DATE 9/6/05	STRUCTURE FILE NUMBER 7300158
REVIEWED LAW	DATE 9/6/05	STRUCTURE FILE NUMBER 7300158
DRAWN MRH	REVISED REVISED	
DESIGNED MRH	CHECKED GEC	
LONGITUDINAL REINFORCING STEEL OF UNIT 5		
BRIDGE NO. SC1-23-0535		
OVER NORFOLK SOUTHERN RAILWAY COMPANY AND C.R. 160		
SC1-23-2.39		
16/24		
102 110		

REINFORCING STEEL LIST

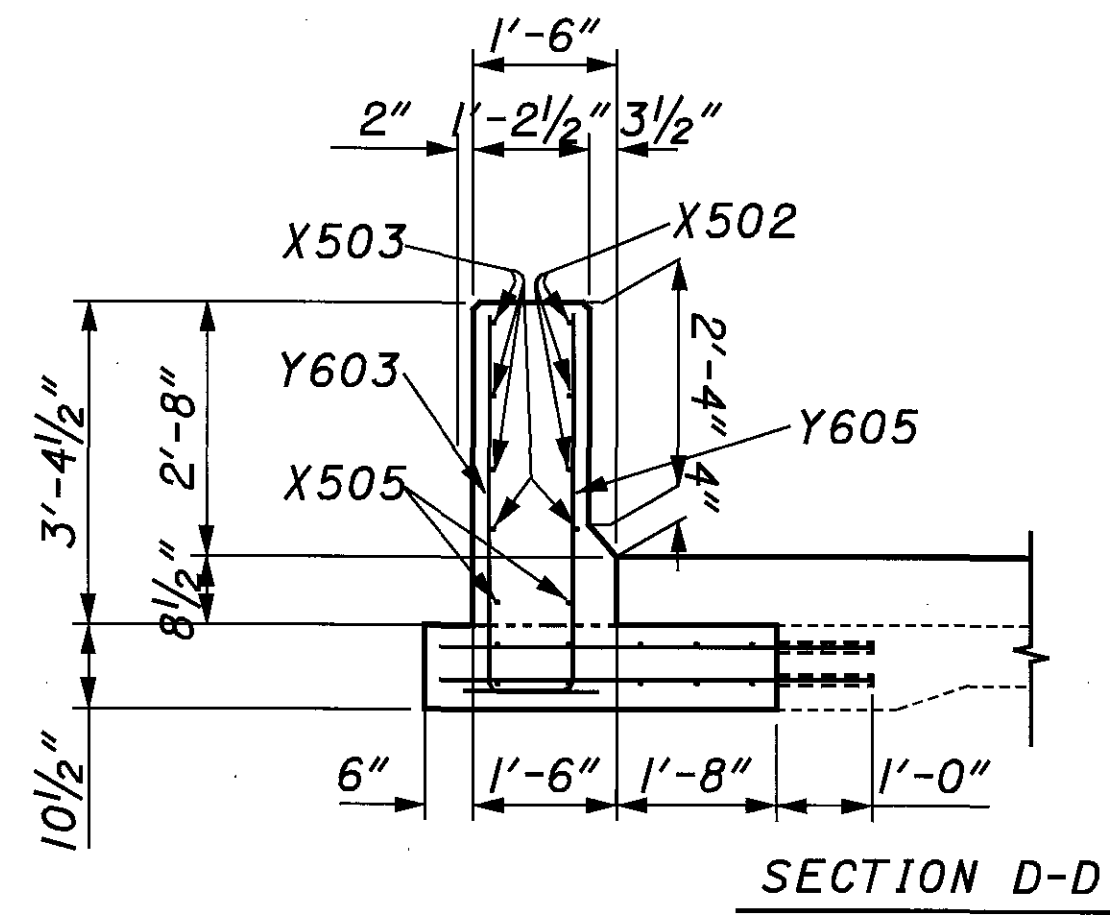
SCI-23-5.35							
MARK	NUMBER	LENGTH	WEIGHT	SHAPE	A	B	C
SUPERSTRUCTURE							
S601*	2528	4'-4"	16,454	STR.			
Y603	796	4'-4"	5181	TYPE 3	1'-1"	2'-2"	
Y604	796	3'-2"	3786	TYPE 4	1'-1"	2'-1"	
Y605	72	2'-2"	234	STR.			
Y606	72	4'-3"	460	TYPE 5	1'-1"	2'-2"	1'-0"
S1001	442	21'-0"	39,940	STR.			
S1002	26	20'-9"	2321	STR.			
S1003	572	30'-0"	73,839	STR.			
S1004	208	26'-6"	23,718	STR.			
S1005	26	20'-11"	2340	STR.			
S1006*	38	4'-4"	709	STR.			
S1101*	227	4'-4"	5226	STR.			
TOTAL			174,208 LB				
PARAPET							
P501	868	7'-5"	6714	TYPE 1	1'-0"	3'-2"	3'-0"
P502	288	26'-11"	8085	STR.			
P503	48	25'-0"	1252	STR.			
P504	84	29'-8"	2599	STR.			
P601	48	27'-4"	1971	STR.			
P602	8	25'-5"	305	STR.			
P603	14	30'-0"	631	STR.			
TOTAL			21,557 LB				
TOTAL CARRIED TO ESTIMATED QUANTITIES			195,765 LB				



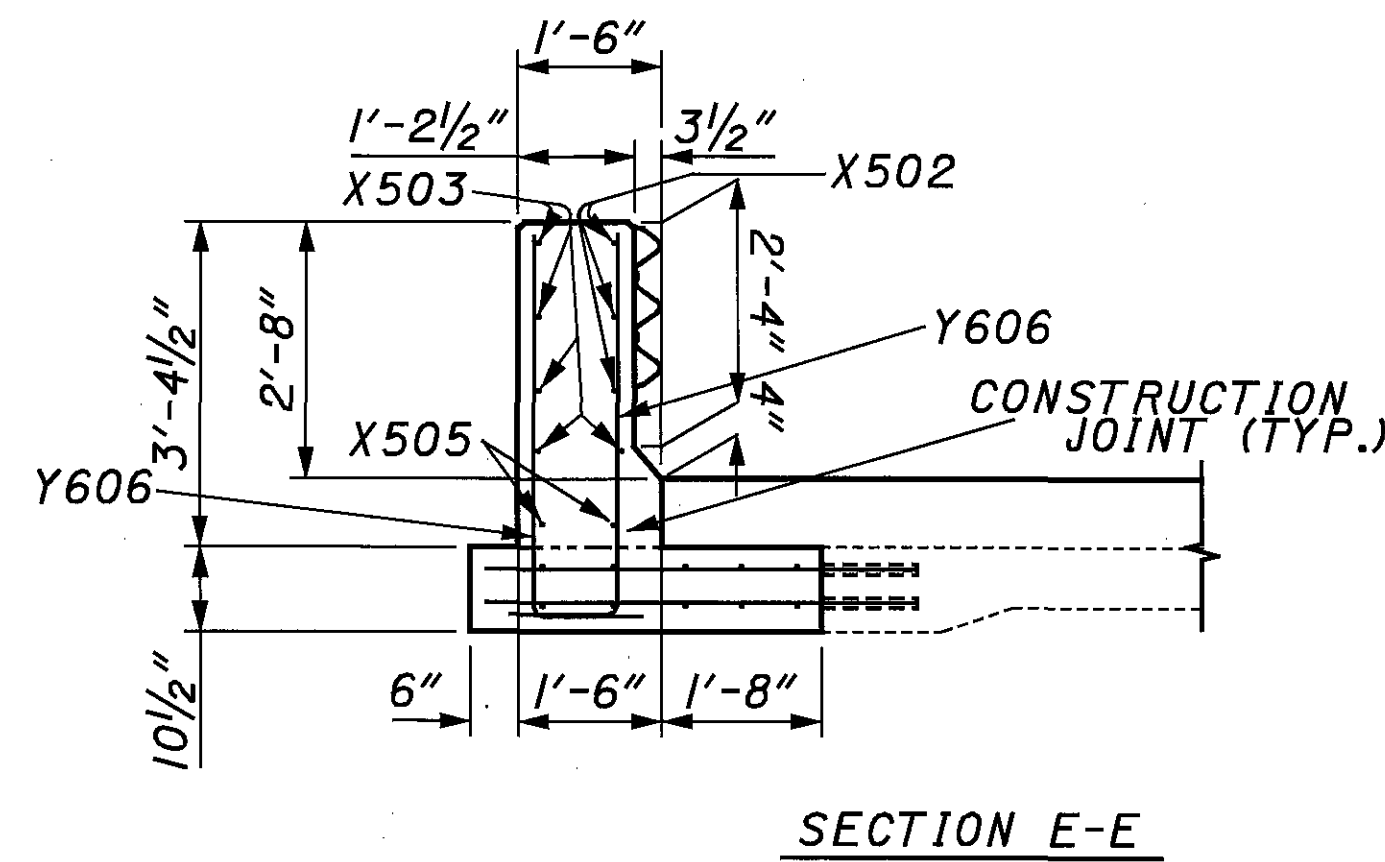
* - REINFORCING BAR UTILIZES A MECHANICAL CONNECTOR, BAR LENGTH IS MEASURED TO THE CONSTRUCTION JOINT, EXTRA BAR LENGTH AND/OR END PREPARATION MAY BE NECESSARY DEPENDING UPON THE TYPE OF MECHANICAL CONNECTOR FURNISHED.

NOTE: MECHANICAL CONNECTORS: AN APPROVED TYPE OF CONNECTOR FOR REINFORCING BARS SHALL BE PROVIDED. INSTALLATION OF CONNECTORS SHALL CONFORM WITH MANUFACTURE'S RECOMMENDED PROCEDURE.

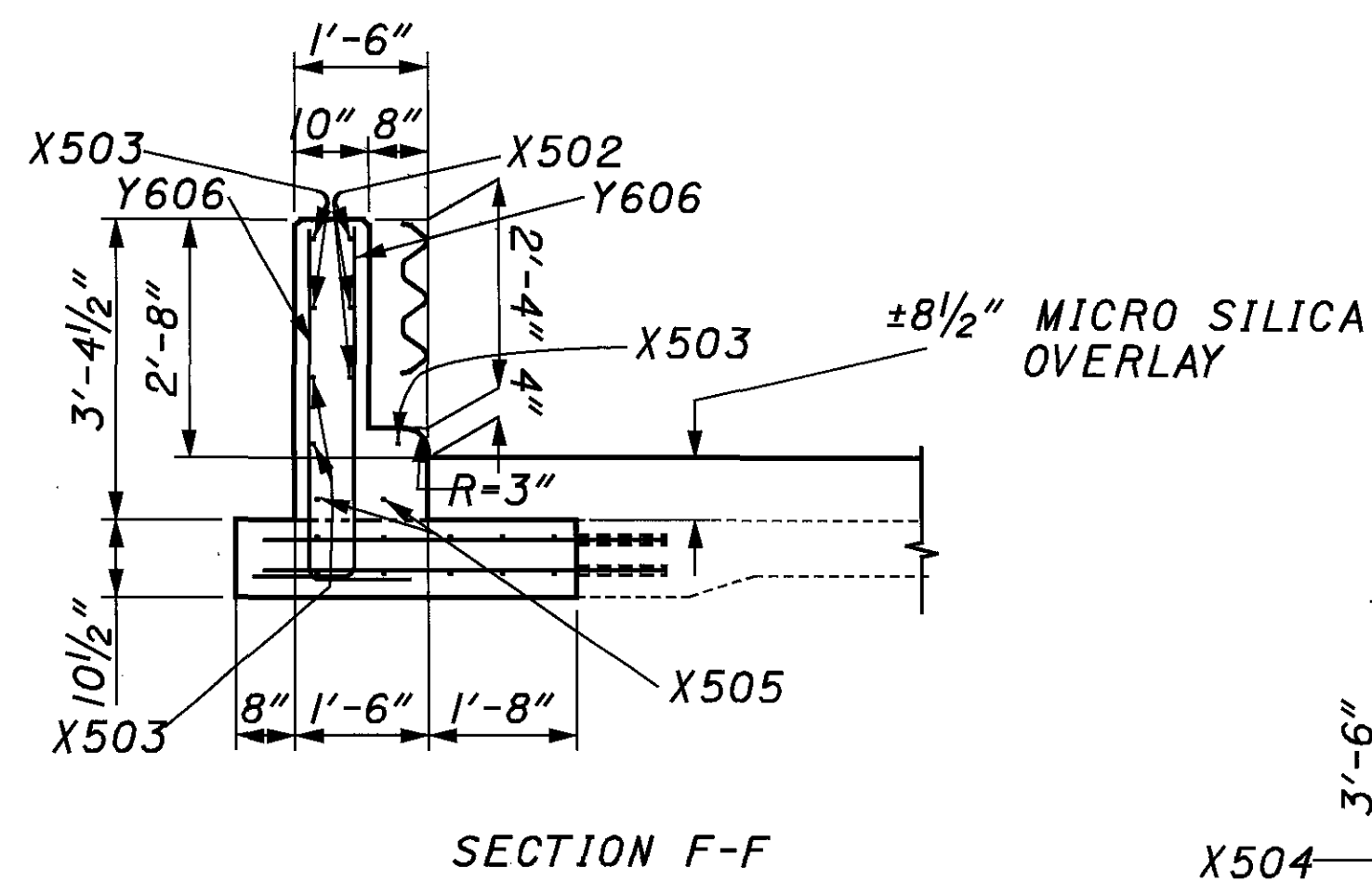
NOTE: E.S. - EACH SIDE
 F.S. - FAR SIDE
 N.S. - NEAR SIDE



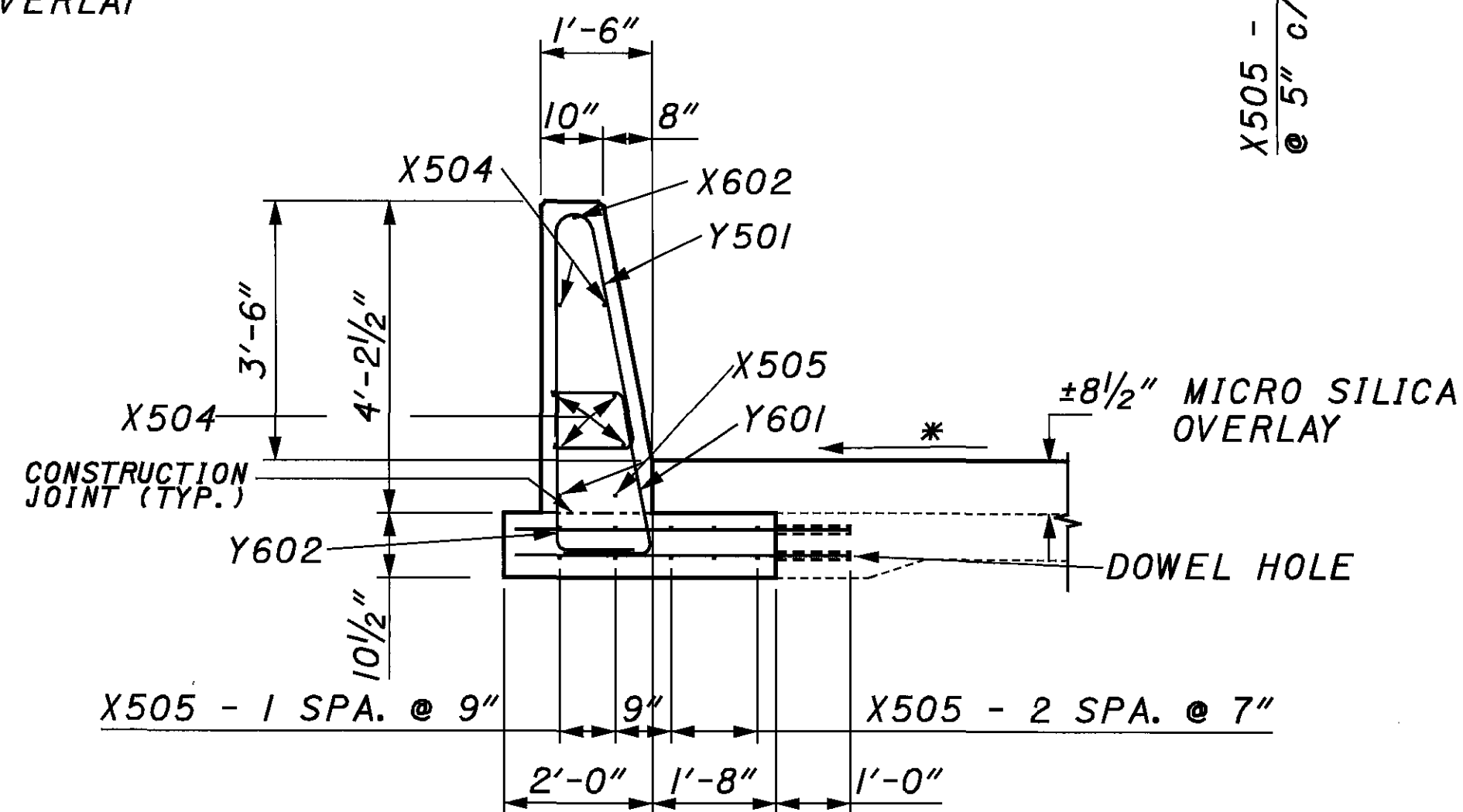
SECTION D-D



SECTION E-E

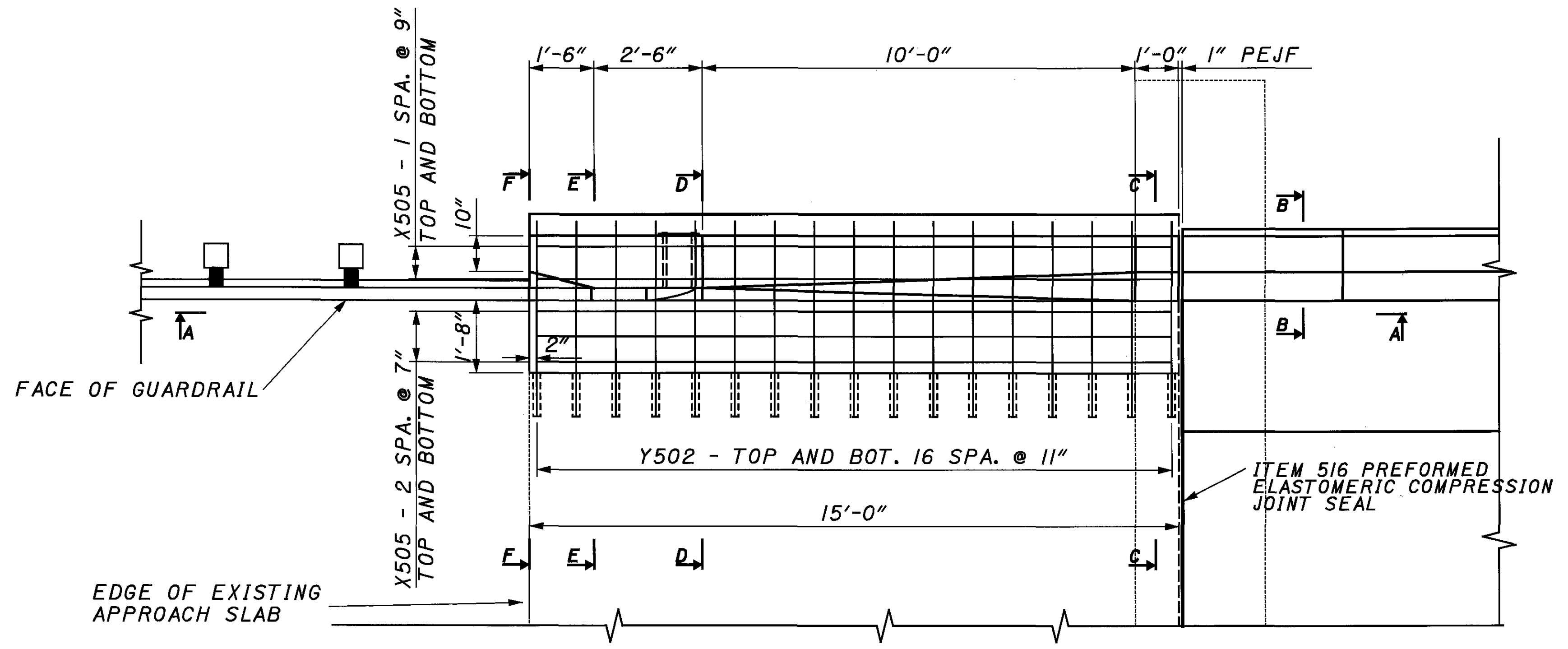


SECTION F-F

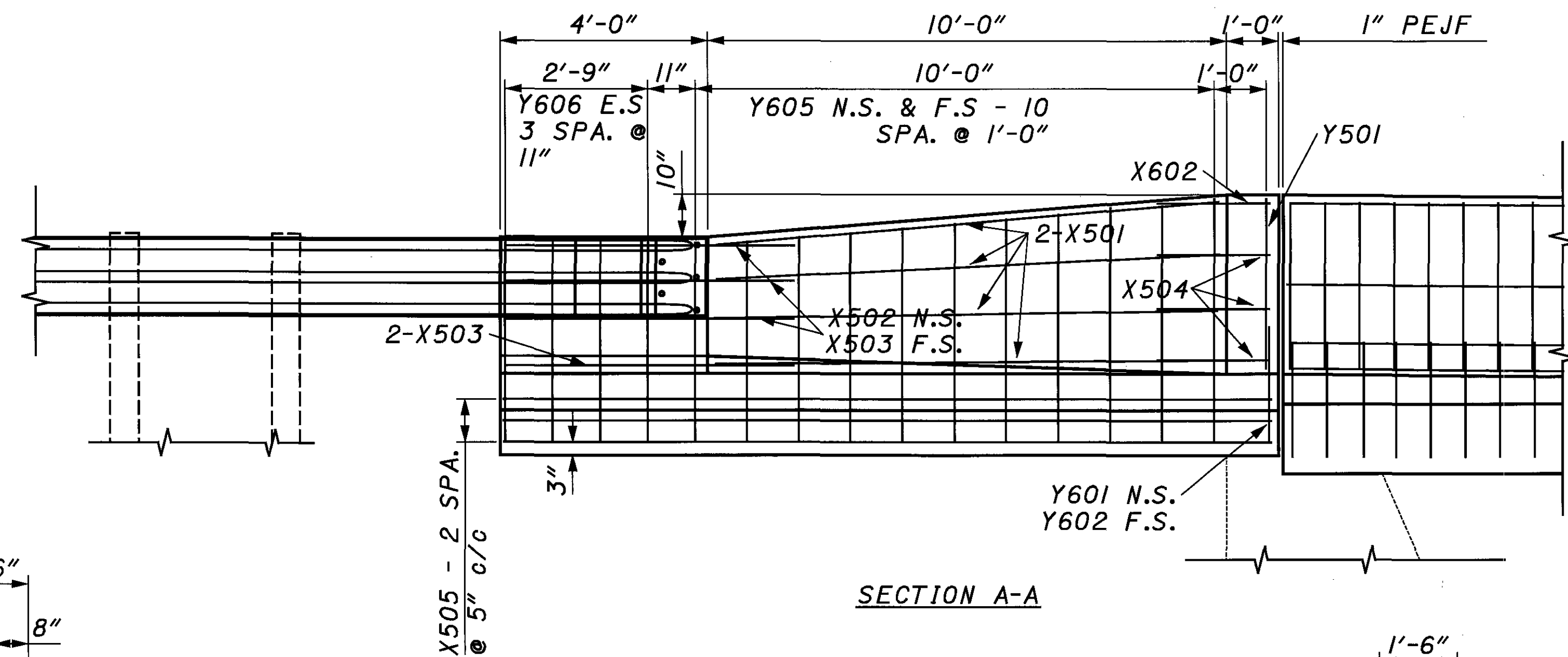


SECTION C-C

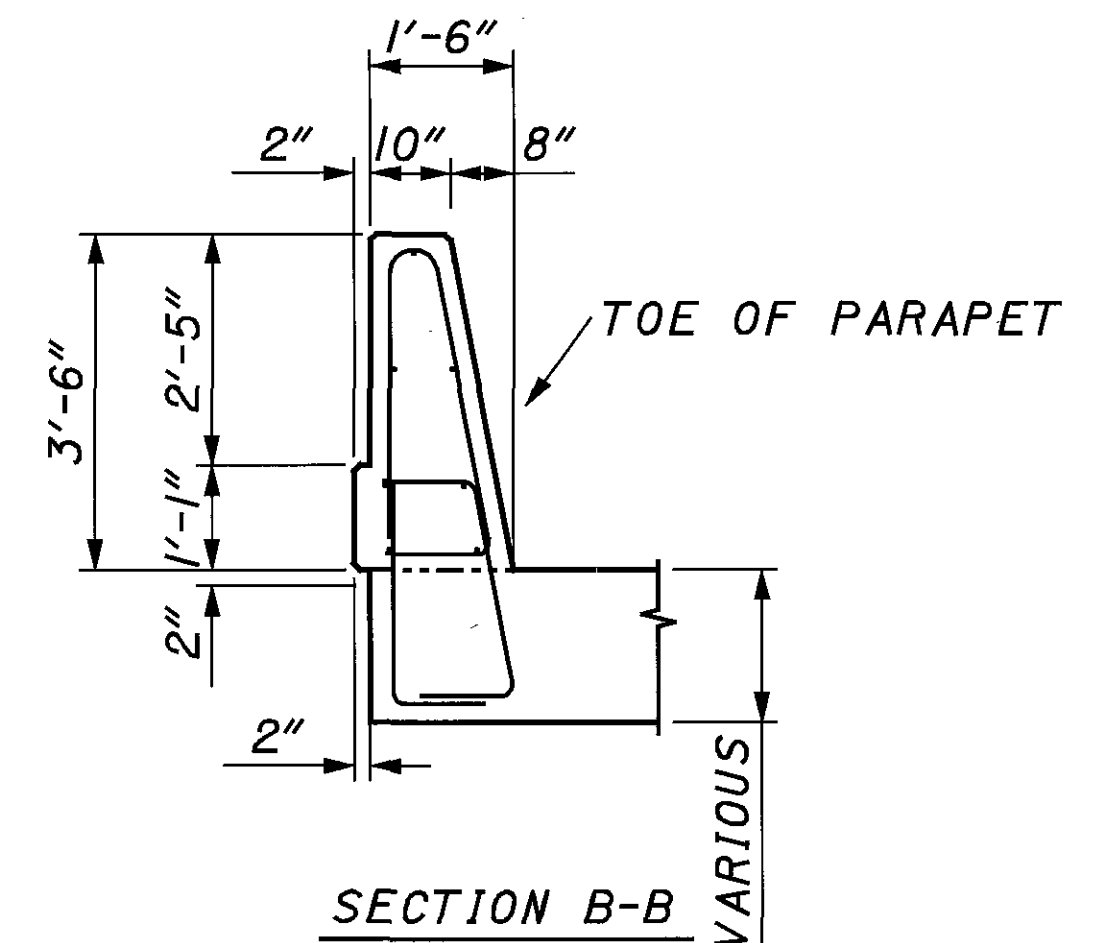
* - MATCH STRUCTURE CROSS SLOPE



TYPICAL CONCRETE BARRIER END SECTION, TYPE D, REINFORCED, AS PER PLAN APPLIES TO REAR ABUTMENT



SECTION A-A

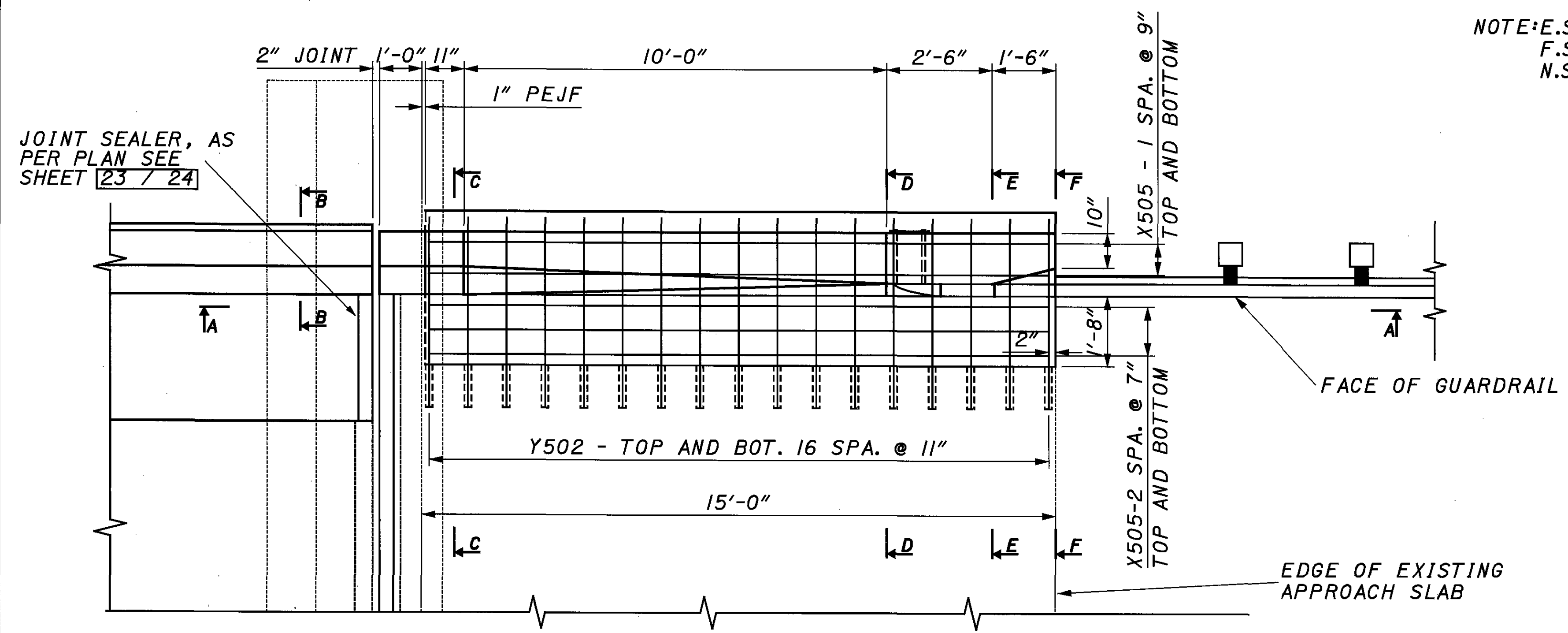


SECTION B-B

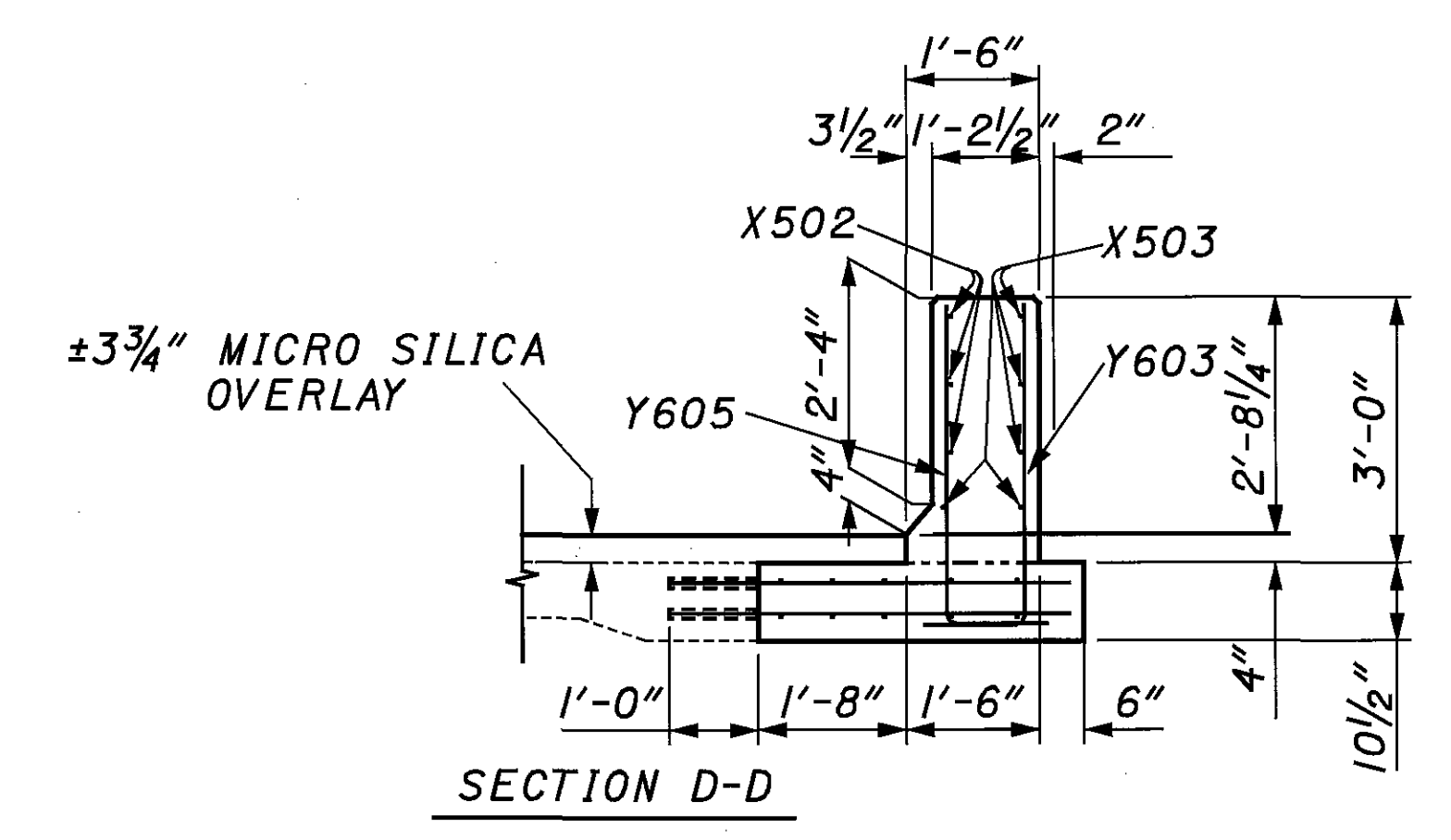
VARIOUS

DESIGN AGENCY	STATE OF OHIO
DEPARTMENT OF TRANSPORTATION	
DISTRICT 9 PRODUCTION	
DATE	9/6/05
REVIEWED	LAW
STRUCTURE FILE NUMBER	7300158
DESIGNED	MRH
CHECKED	GEC
DRAWN	MRH
REVISOR	
CONCRETE BARRIER END SECTION, TYPE D, REINFORCED, AS PER PLAN	
REAR APPROACH SLAB	
BRIDGE NO. SC1-23-0535	
OVER NORFOLK SOUTHERN RAILWAY COMPANY AND C.R. 160	
SC1-23-2.39	
18/24	
104	
110	

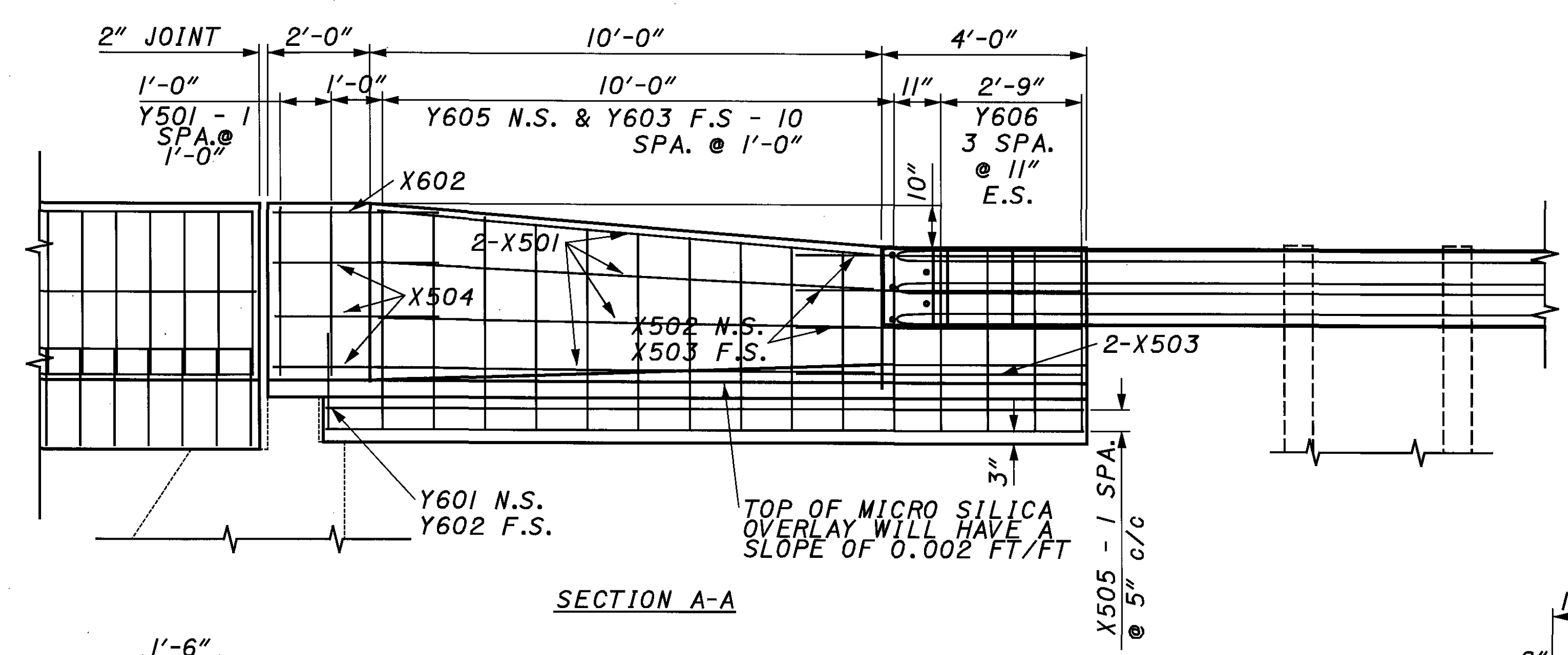
NOTE: E.S. = EACH SIDE
 F.S. = FAR SIDE
 N.S. = NEAR SIDE



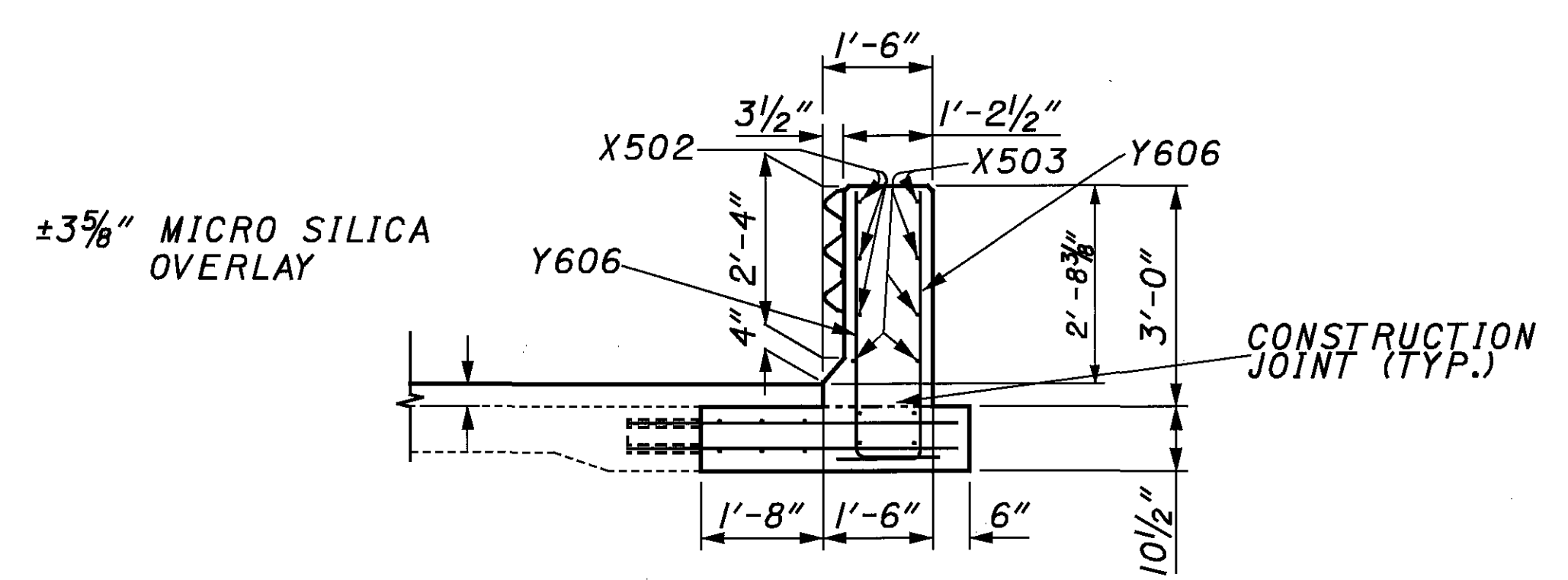
TYPICAL CONCRETE BARRIER END SECTION, TYPE D, REINFORCED, AS PER PLAN
 APPLIES TO FORWARD ABUTMENT



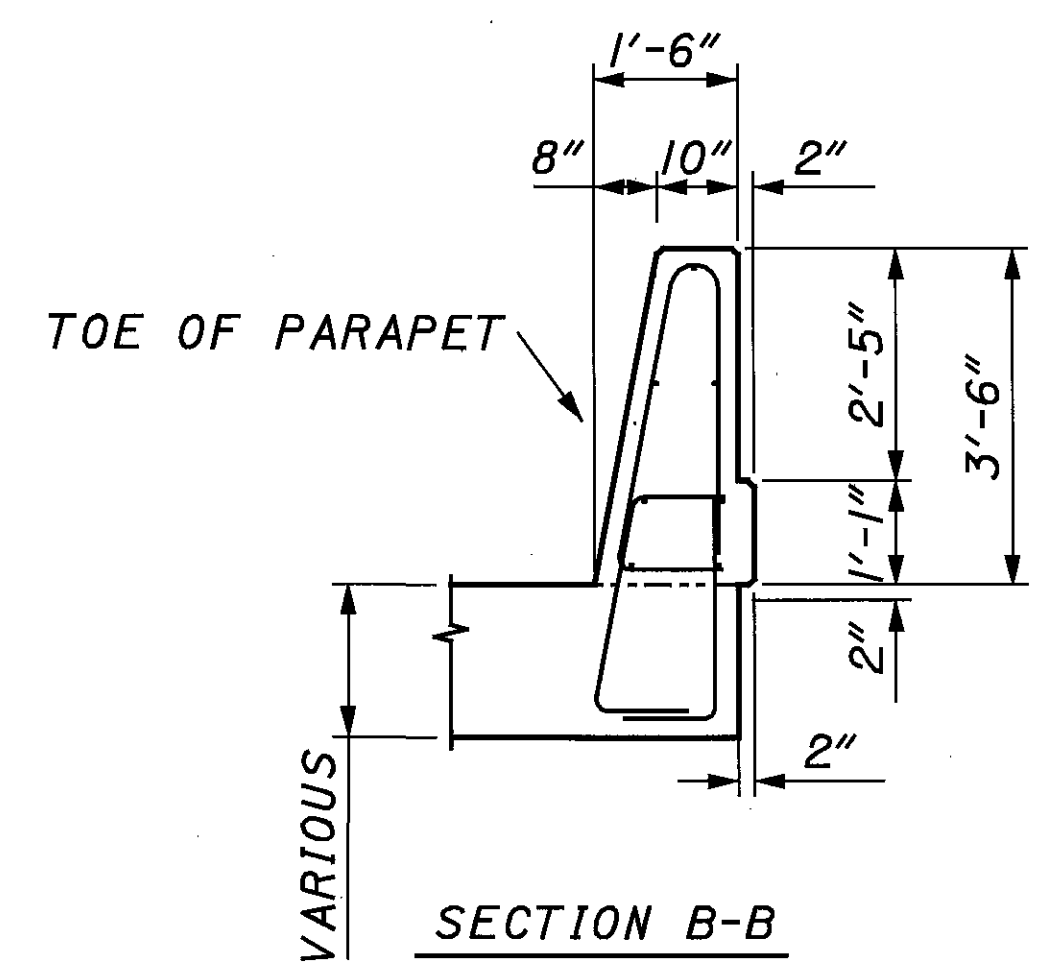
SECTION D-D



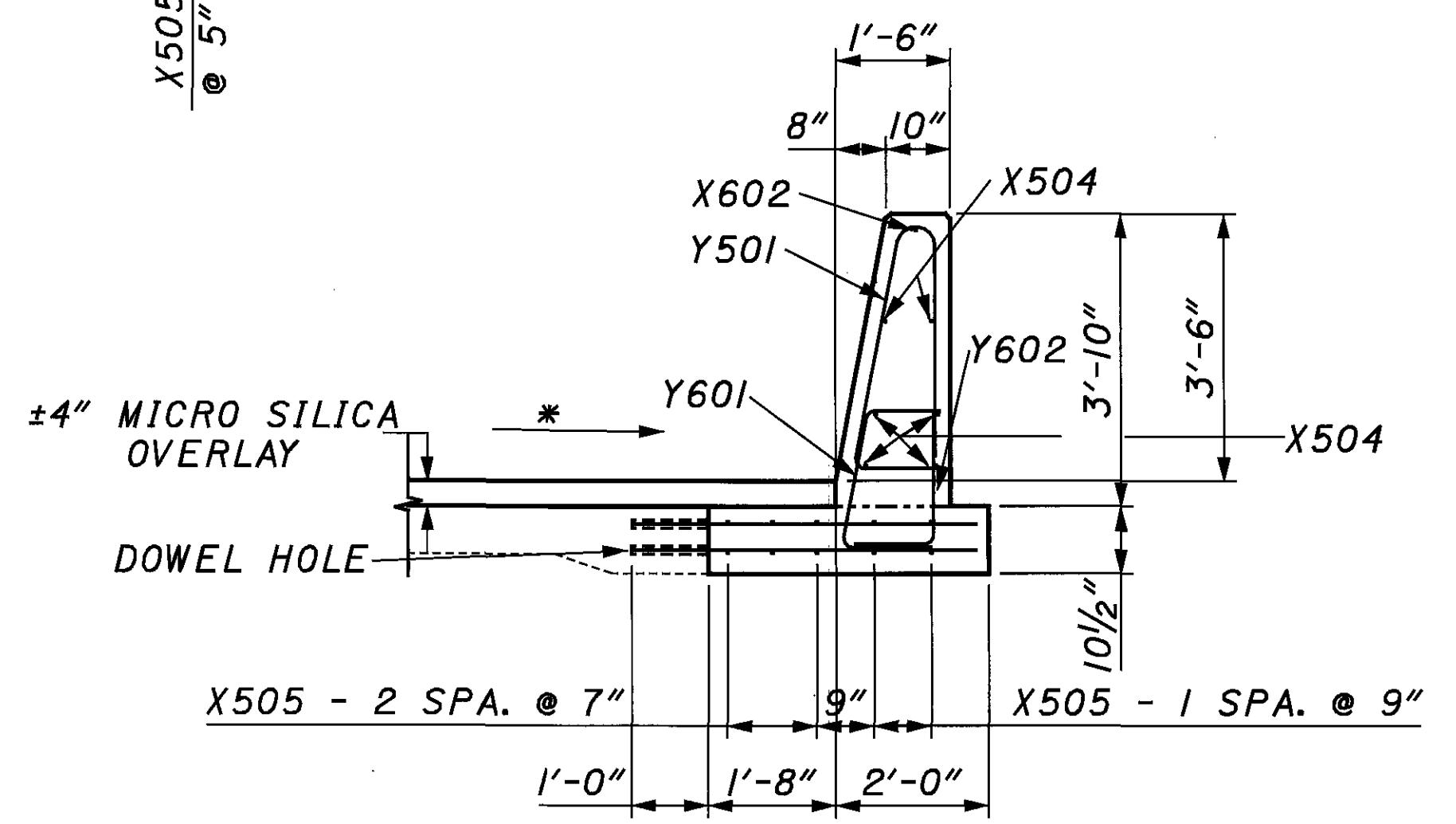
SECTION A-A



SECTION E-E

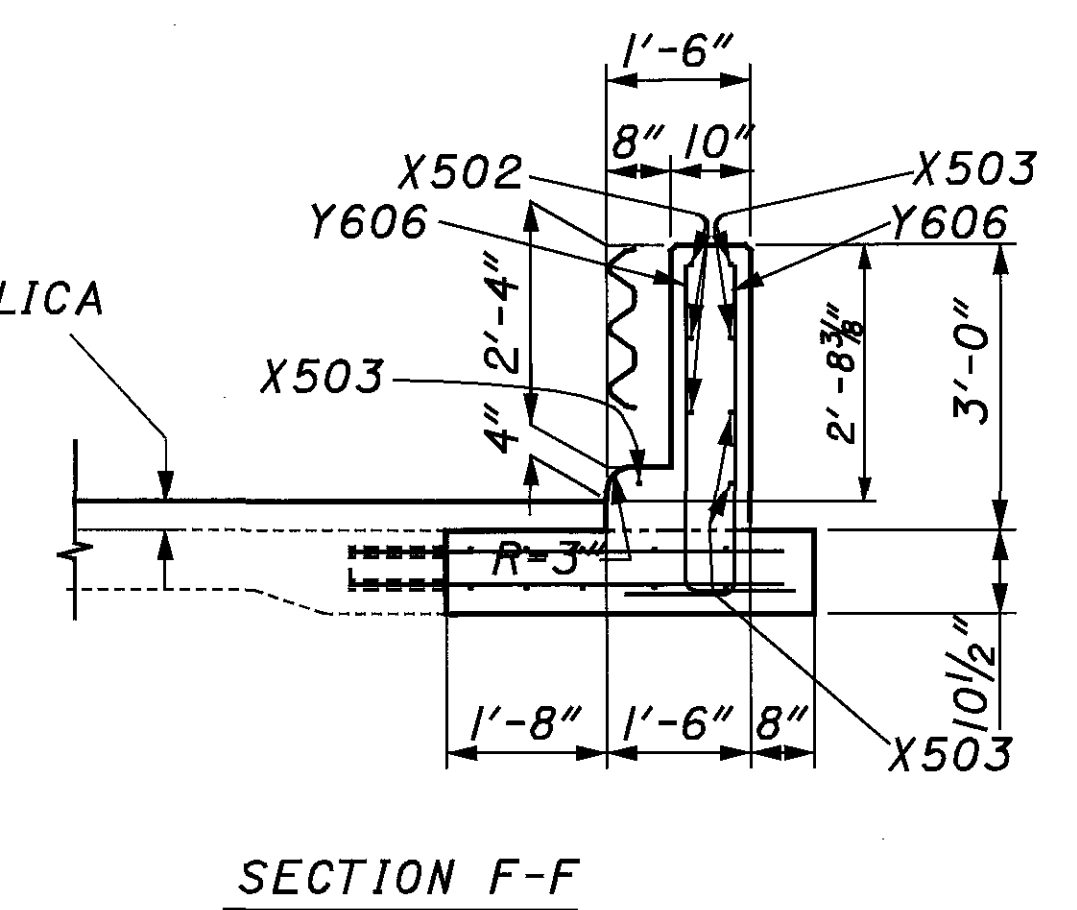


SECTION B-B



SECTION C-C

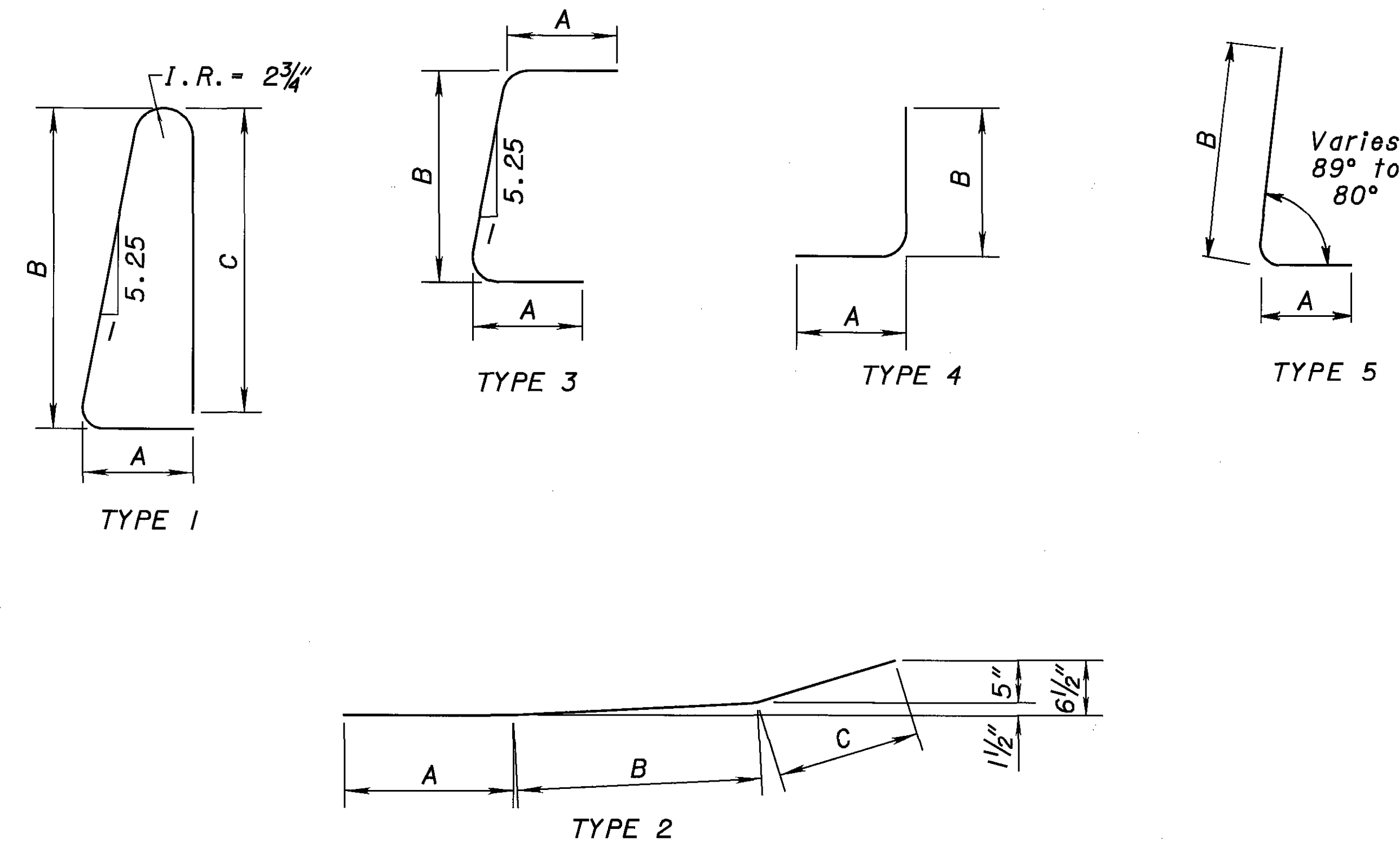
* - MATCH STRUCTURE CROSS SLOPE



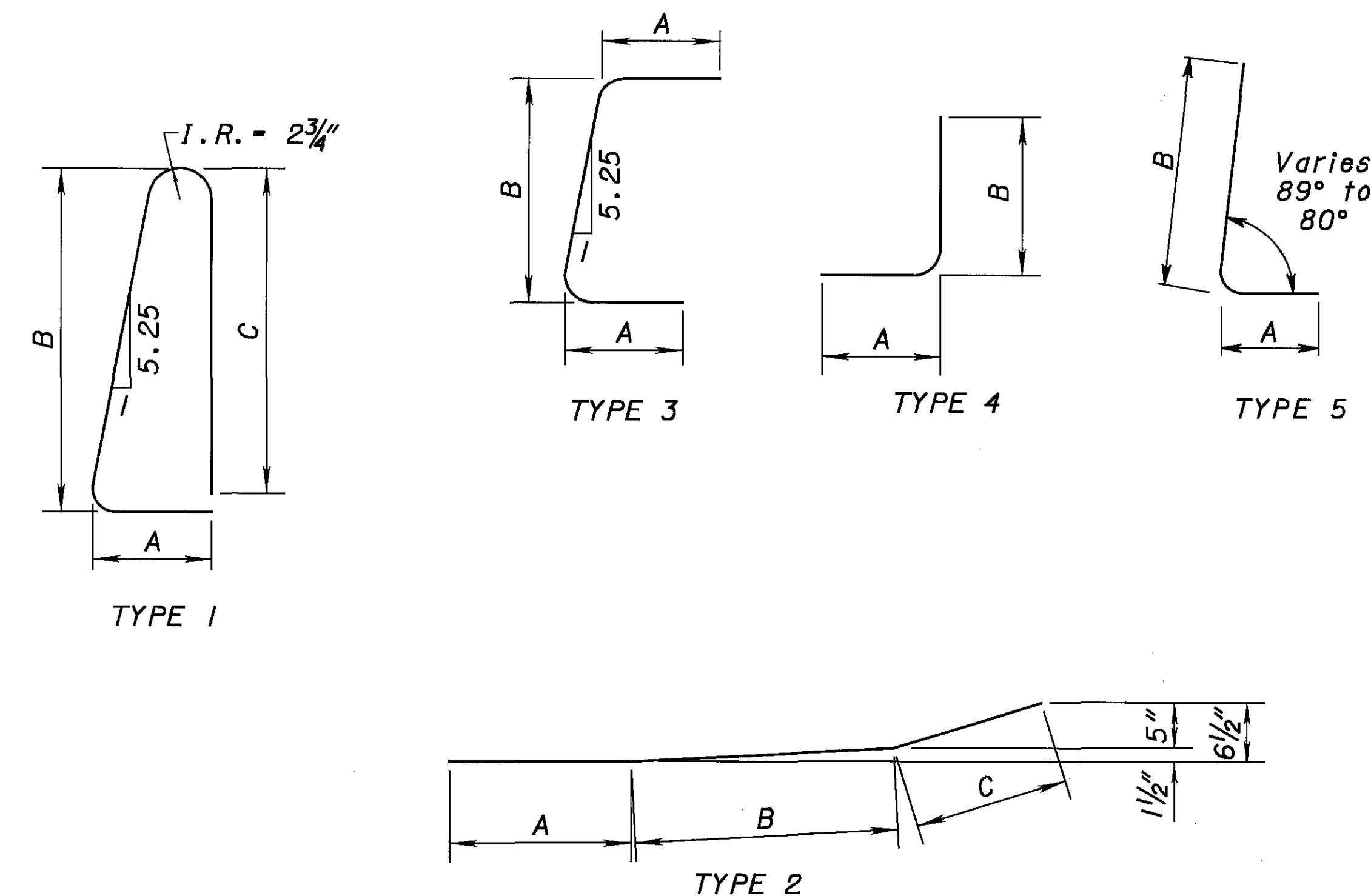
SECTION F-F

DESIGN AGENCY: STATE OF OHIO
 DEPARTMENT OF TRANSPORTATION
 DISTRICT 9 PRODUCTION
 DATE: 9/6/05
 LAW: 7300158
 STRUCTURE FILE NUMBER:
 DRAWN: MRH
 CHECKED: GEC
 DESIGNED: MRH
 CONCRETE BARRIER END SECTION, TYPE D, REINFORCED, AS PER PLAN
 FORWARD APPROACH SLAB
 BRIDGE NO. SCI-23-0535
 OVER NORFOLK SOUTHERN RAILWAY COMPANY AND C.R. 160
 SCI-23-2.39
 19/24
 105
 110

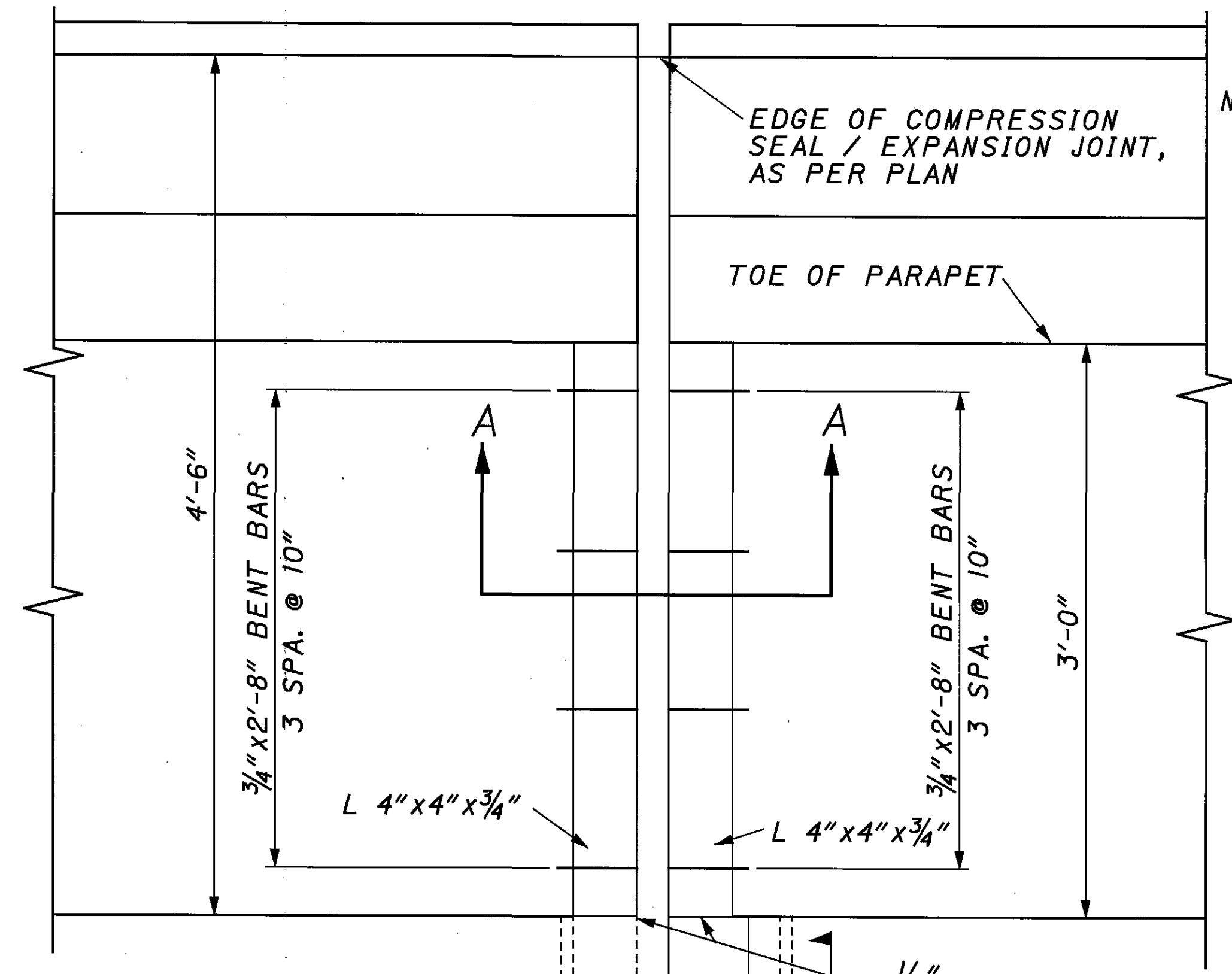
REINFORCING STEEL LIST FOR REAR END SECTION								
MARK	NUMBER	LENGTH	SHAPE	A	B	C	D	
X501	8	10'-0"	STR.					
X502	3	5'-6"	TYPE 2	1'-8"	2'-5"	1'-5"		
X503	5	5'-6"	STR.					
X504	6	2'-2"	STR.					
X505	12	14'-8"	STR.					
Y501	1	7'-5"	TYPE 1	1'-1"	3'-2"	3'-0"		
Y502	34	4'-6"	STR.					
X602	1	2'-2"	STR.	FIELD BEND IF NECESSARY				
Y601	1	4'-4"	TYPE 3	1'-1"	2'-2"			
Y602	1	3'-3"	TYPE 4	1'-1"	2'-2"			
Y603	1 SER. 11 BARS	5'-0" TO 5'-10"	TYPE 4	1'-1"	3'-11" TO 4'-9"	1" INC.		
Y605	1 SER. 11 BARS	5'-0" TO 5'-10"	TYPE 5	1'-1"	3'-11" TO 4'-9"	1" INC.		
Y606	8	5'-0"	TYPE 4	1'-1"	3'-11"			



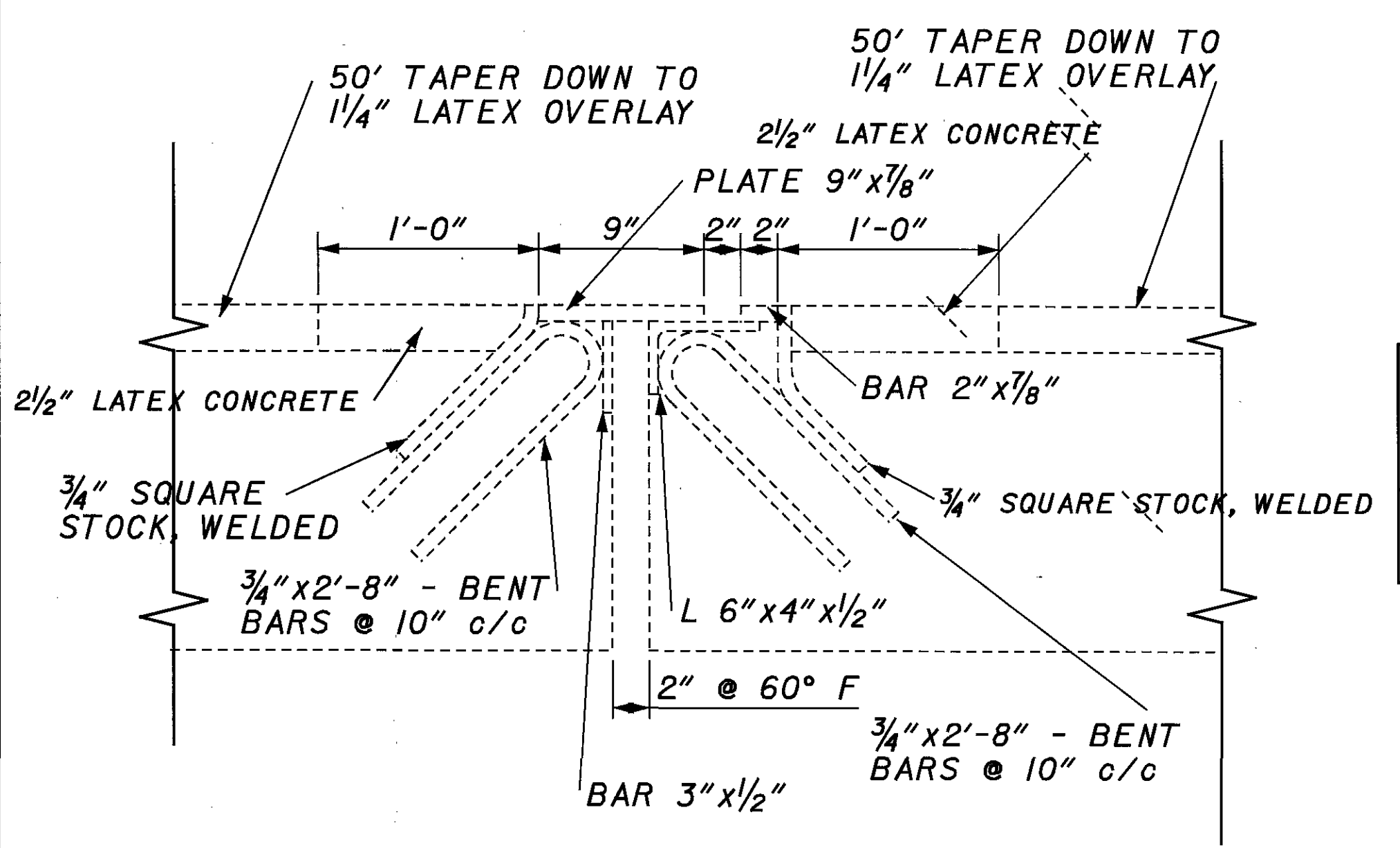
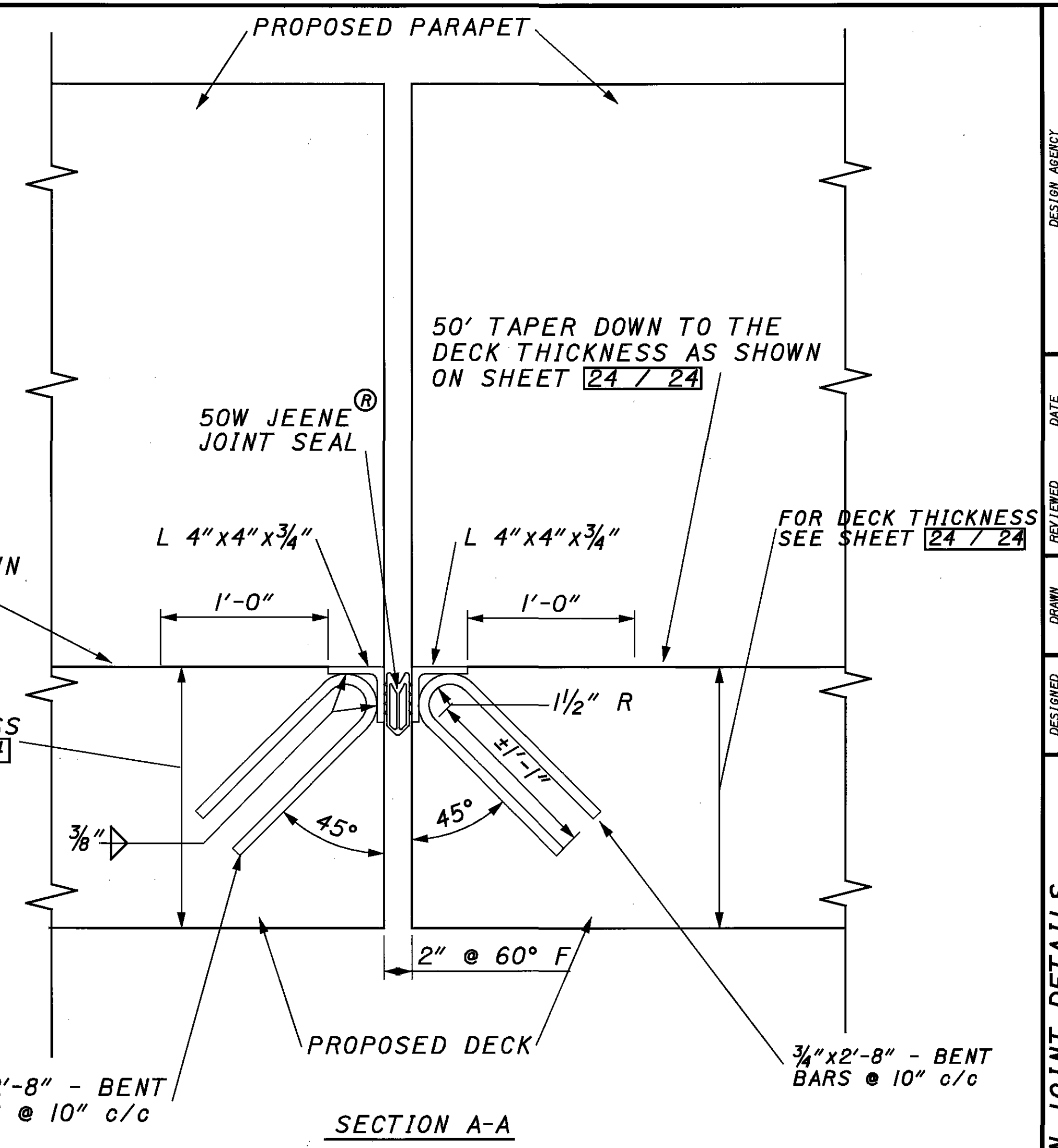
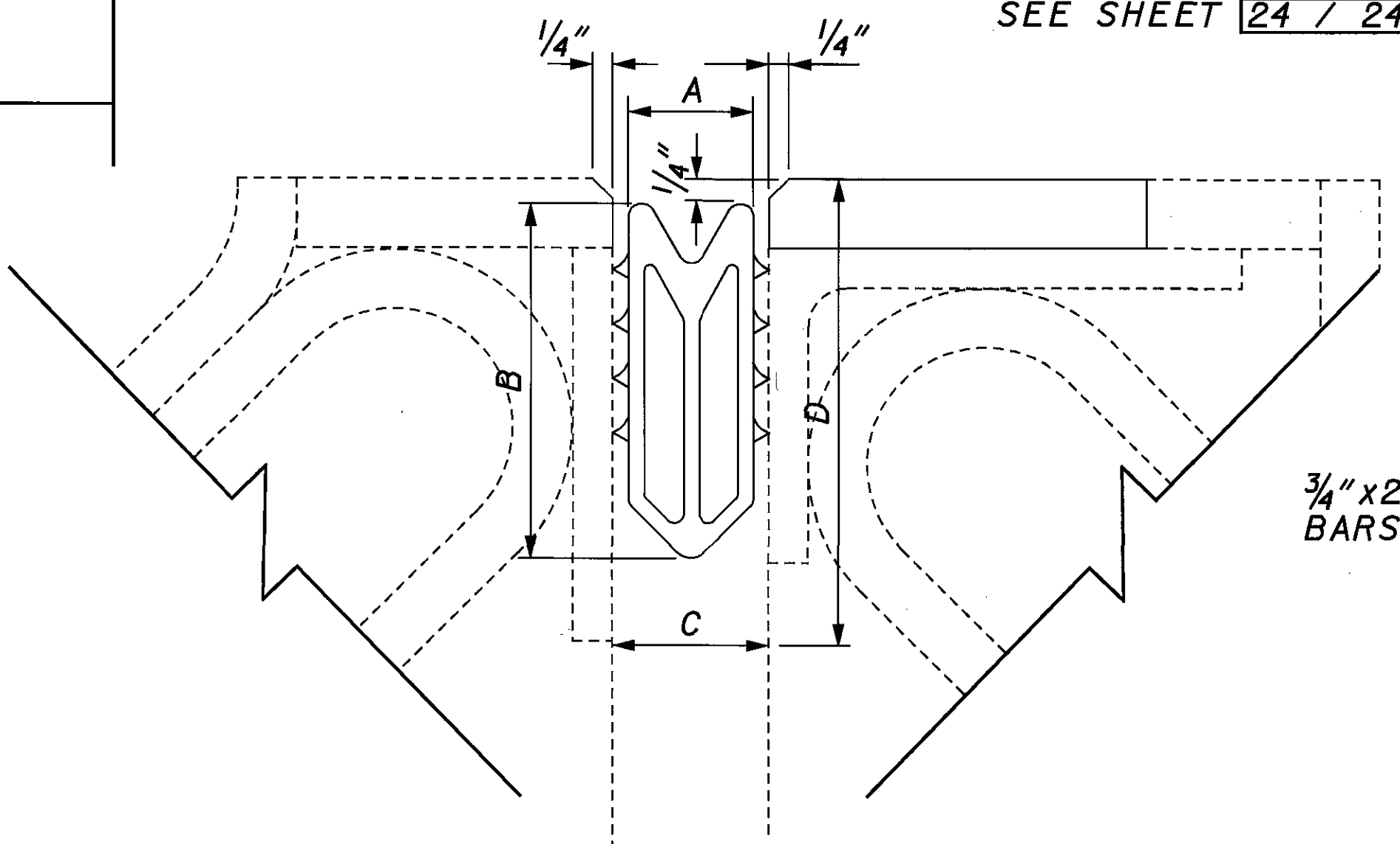
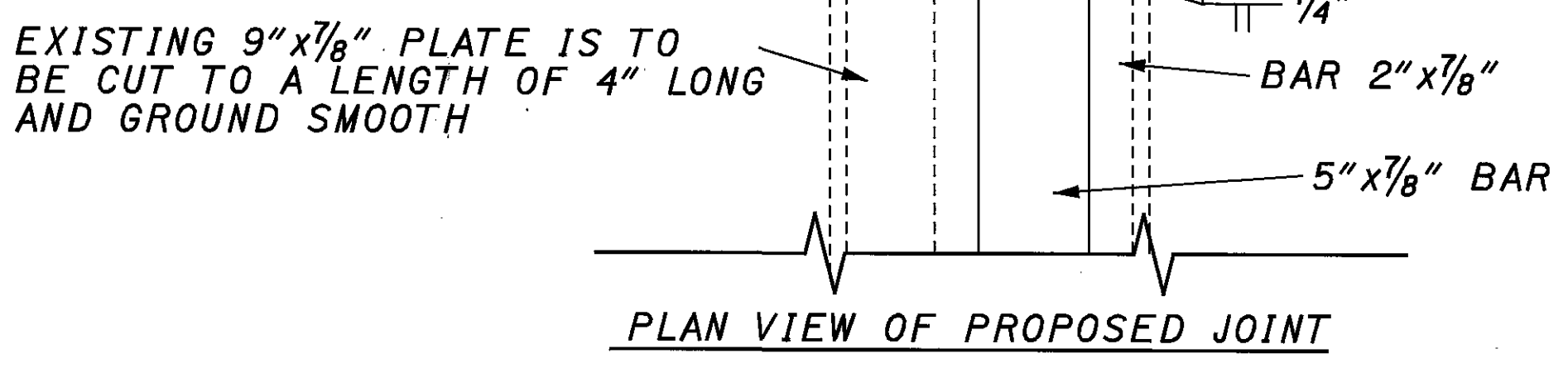
REINFORCING STEEL LIST FOR FORWARD END SECTION								
MARK	NUMBER	LENGTH	SHAPE	A	B	C	D	
X501	8	10'-0"	STR.					
X502	3	5'-6"	TYPE 2	1'-8"	2'-5"	1'-5"		
X503	5	5'-6"	STR.					
X504	6	3'-2"	STR.					
X505	10	14'-8"	STR.					
Y501	2	7'-5"	TYPE 1	1'-1"	3'-2"	3'-0"		
Y502	34	4'-6"	STR.					
X602	1	3'-2"	STR.	FIELD BEND IF NECESSARY				
Y601	1	3'-11"	TYPE 3	1'-1"	1'-9"			
Y602	1	2'-10"	TYPE 4	1'-1"	1'-9"			
Y603	1 SER. 11 BARS	4'-7" TO 5'-5"	TYPE 4	1'-1"	3'-6" TO 4'-4"	1" INC.		
Y605	1 SER. 11 BARS	4'-7" TO 5'-5"	TYPE 5	1'-1"	3'-6" TO 4'-4"	1" INC.		
Y606	8	4'-7"	TYPE 4	1'-1"	3'-6"			



NOTE: EACH REINFORCING STEEL LIST APPLIES TO ONE (1) END SECTION REINFORCING STEEL LISTED IN THESE TABLES IS TO BE INCLUDED IN ITEM 622 FOR PAYMENT

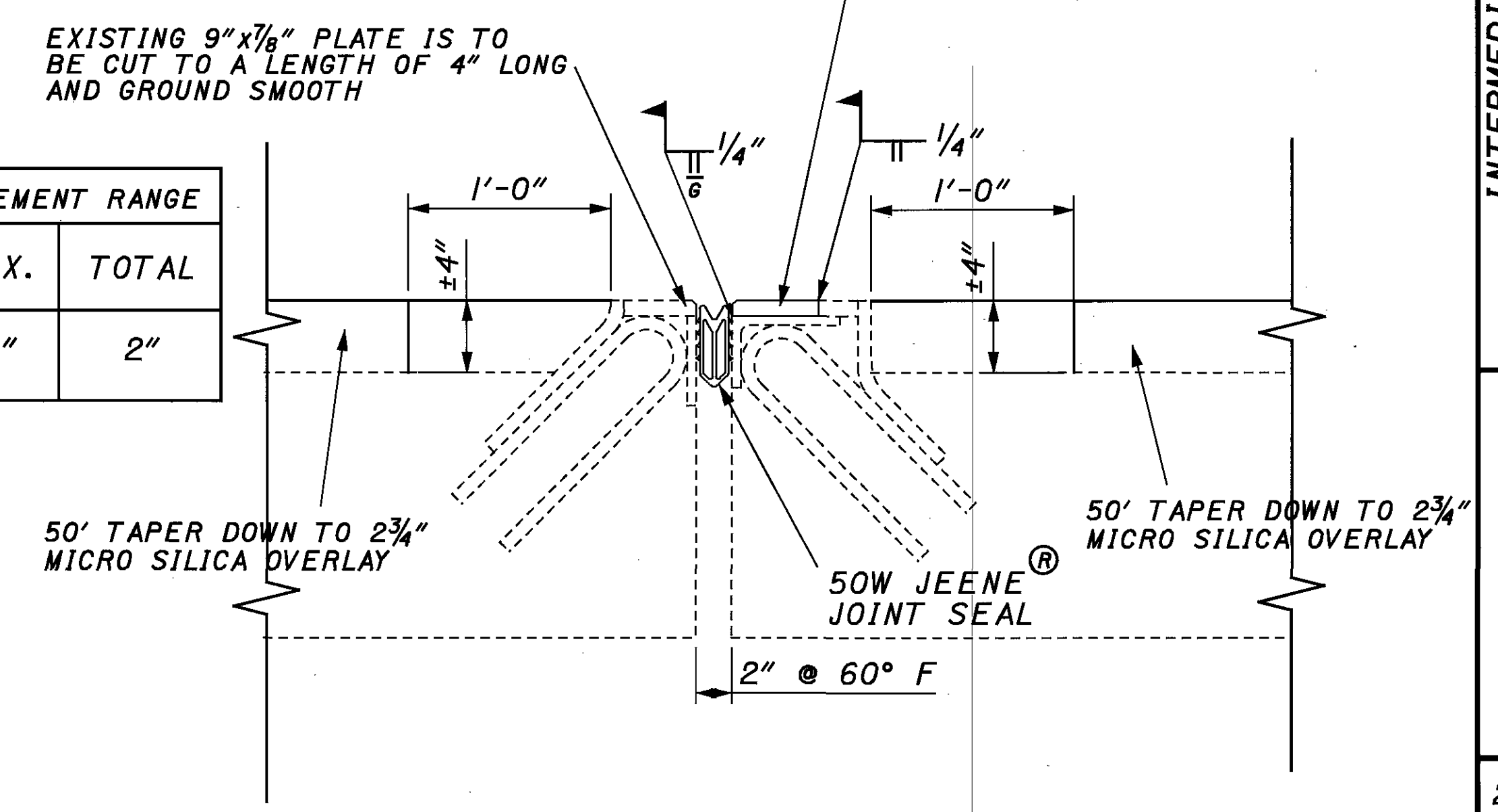


NOTE:
ALL CUTTING OF EXISTING STEEL, FIELD WELDING, SHOP WELDING, PROPOSED STEEL, AND FABRICATION SHALL BE INCLUDED IN ITEM 513 - STRUCTURAL STEEL MEMBERS, LEVEL UP, AS PER PLAN FOR PAYMENT.

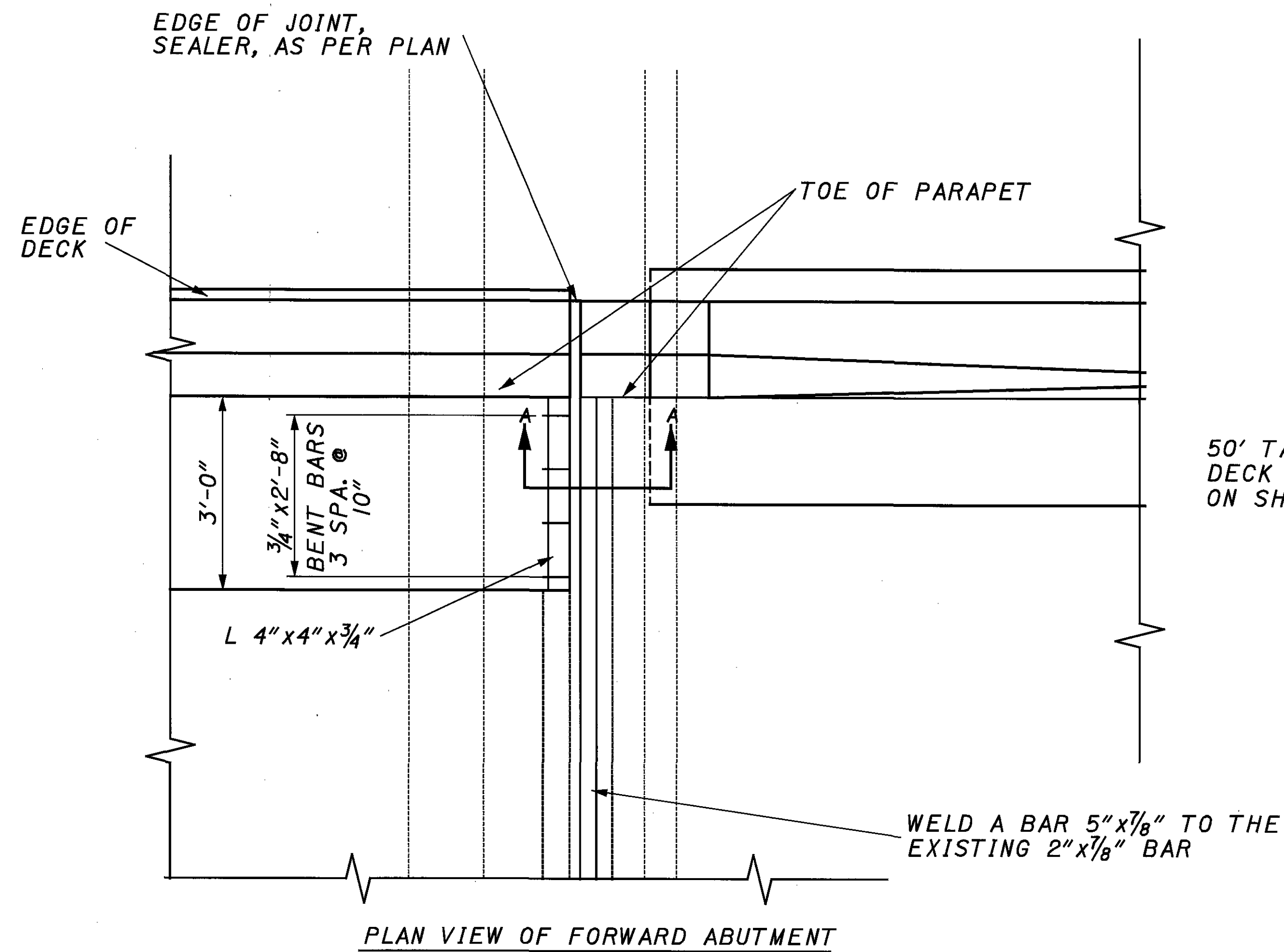


NOTE: HYDRODEMOLITION WILL STOP 1'-0" FROM EITHER SIDE OF THE JOINT AND THE REMAINING 2 1/2" LATEX CONCRETE WILL BE REMOVED IN SUCH A MANNER AND TO AN EXTENT AS TO EXPOSE SOUND CONCRETE.

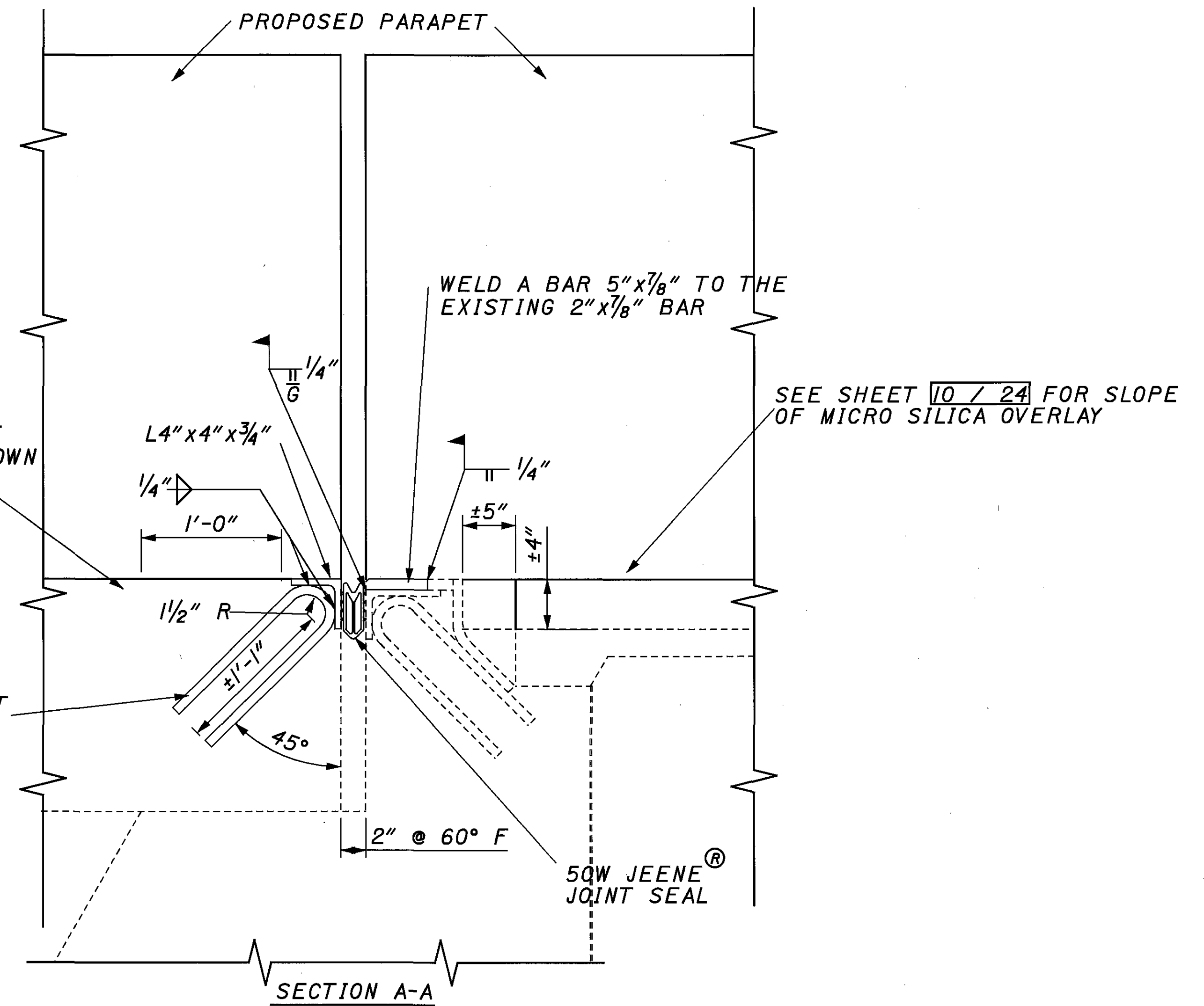
MODEL NUMBER	WIDTH A	HEIGHT B	REQUIRED JOINT GAP		HORIZ. MOVEMENT RANGE		
			WIDTH C	HEIGHT D	MIN.	MAX.	TOTAL
50W	2"	2 3/4"	2"	3 1/8"	1"	3"	2"



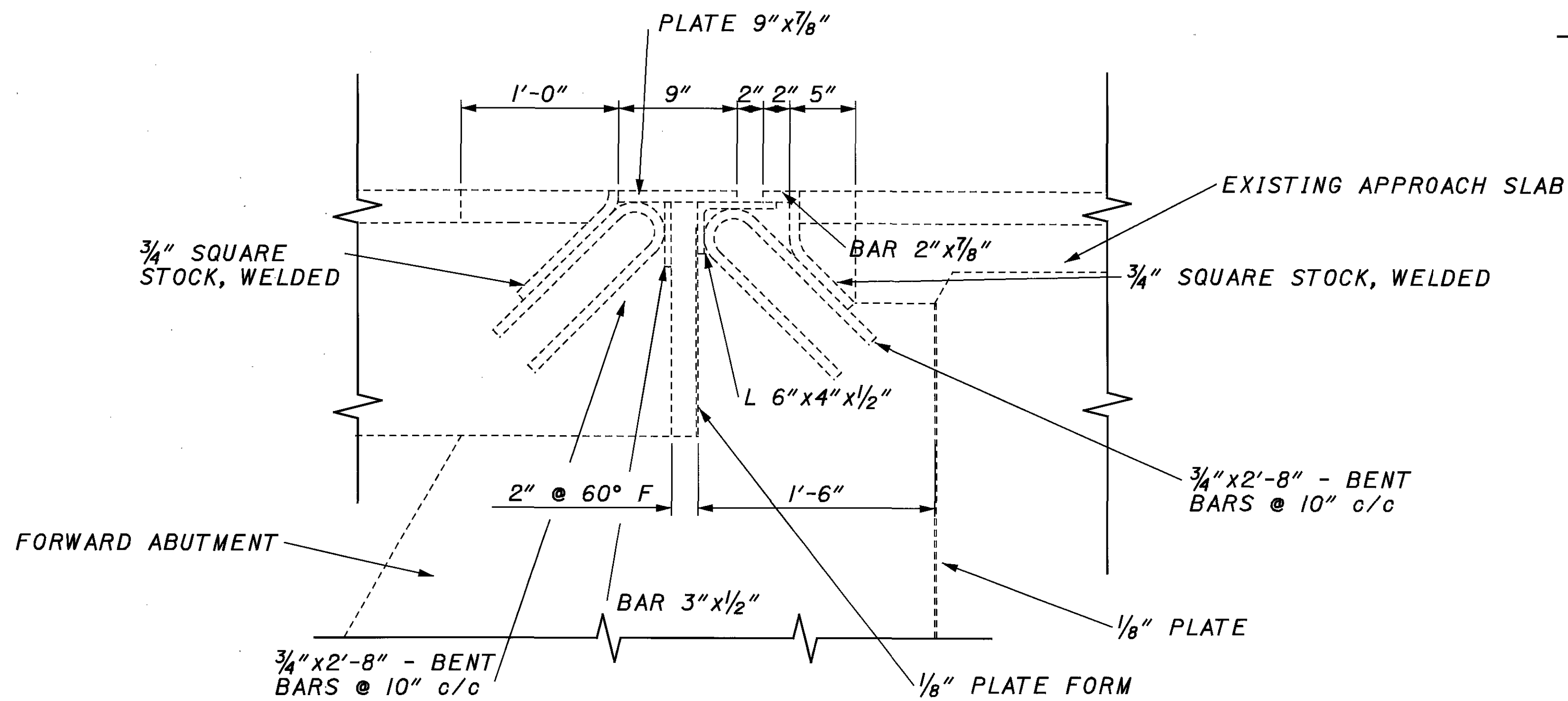
CROSS SECTION VIEW OF PROPOSED JOINT



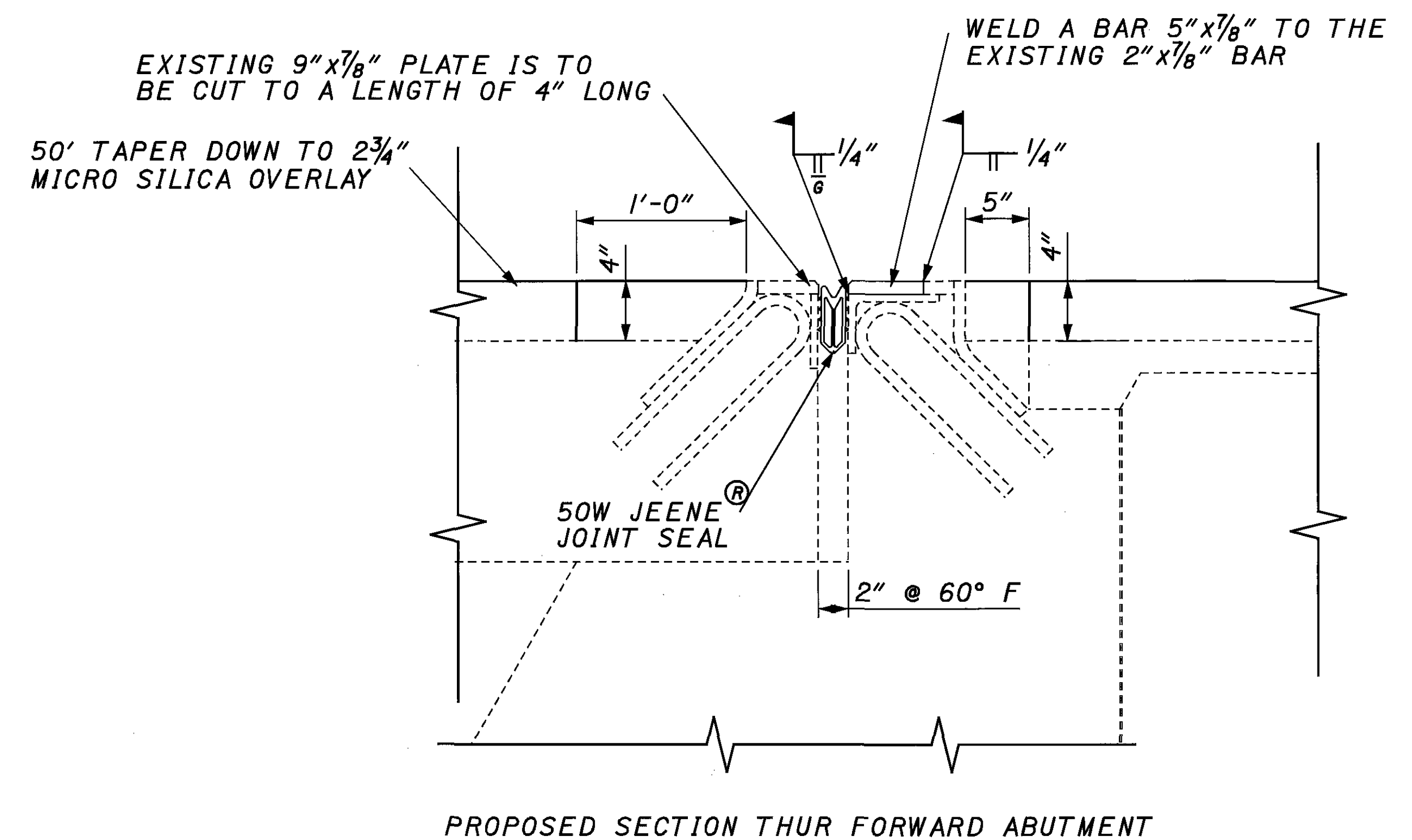
50' TAPER DOWN TO THE DECK THICKNESS AS SHOWN ON SHEET 24 / 24



$\frac{3}{4}$ " x 2'-8" - BENT BARS @ 10" c/c



NOTE: HYDRODEMOLITION WILL STOP 1'-0" FROM THE SOUTH SIDE AND ±5" FROM THE NORTH SIDE OF THE JOINT AND THE REMAINING LATEX CONCRETE WILL BE REMOVED IN SUCH A MANNER AND TO AN EXTENT AS TO EXPOSE SOUND CONCRETE.



DESIGN AGENCY: STATE OF OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 9 PRODUCTION

DATE: 9/6/05

REVIEWED: LAW STRUCTURE FILE NUMBER: 7300158

DESIGNED: MRH CHECKED: GEC

FORWARD ABUTMENT EXPANSION JOINT DETAILS

BRIDGE NO. SC1-23-0535

OVER NORFOLK SOUTHERN RAILWAY COMPANY AND C.R. 160

SC1-23-2.39

22 / 24

108 / 110

± 7" OF ASPHALT TAPERED
BACK 100' TO REACH A
ASPHALT THICKNESS OF
± 2 1/2"

± 7" OF LATEX CONCRETE
@ END OF DECK, TAPERED
BACK 50' TO A THICKNESS
OF 1 1/4" OVERLAY OVER
THE DECK

EXISTING APPROACH
SLAB

EXISTING CONCRETE
DECK

EXISTING SECTION THRU REAR ABUTMENT

AFTER HYDRODEMOLITION, PLACE
± 8 1/2" OF MICRO SILICA CONCRETE
OVER THE ENTIRE APPROACH SLAB,
AT THE BEGINNING OF THE APPROACH
SLAB THE RESURFACING WILL BE
TAPERED AS INDICATED IN THE
ROAD WAY PLANS.

PREFORMED ELASTOMERIC COMPRESSION
JOINT SEAL, 705.11 (1 1/4" WIDE FOR A 1/2"
WIDE GROOVE) PLACED IN A 1/2" X 2 1/4"
GROOVE.

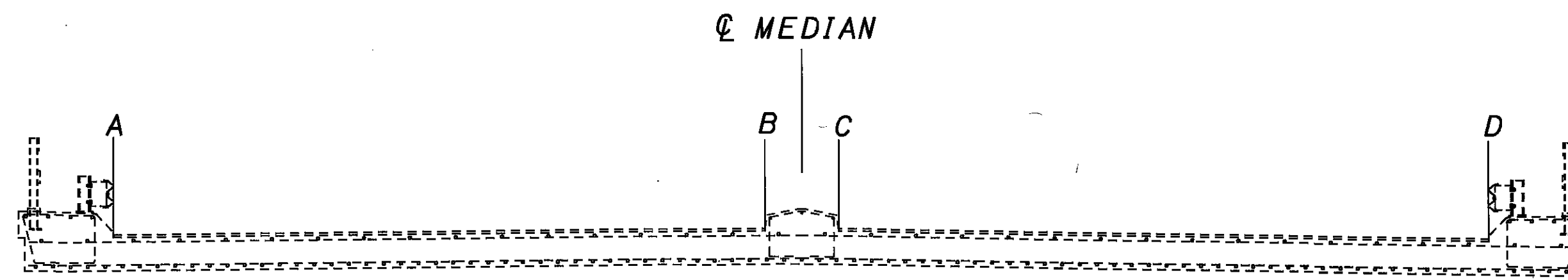
EXISTING APPROACH
SLAB

EXISTING CONCRETE
DECK

AFTER HYDRODEMOLITION, PLACE ± 8 1/2" OF
MICRO SILICA CONCRETE OVERLAY AT THE
BEGINNING OF THE DECK AND TAPER IT
45' TO A THICKNESS OF 2 3/4" OF MICRO
SILICA OVER THE DECK.

PROPOSED SECTION THRU REAR ABUTMENT

SEE SHEET 9/24 FOR PLAN VIEW



DESCRIPTION	ELEVATIONS			
	A	B	C	D
*2+00.00 BEFORE END OF APPROACH SLAB AT THE REAR ABUTMENT	577.33	577.92	577.93	578.63
*1+50.00 BEFORE END OF APPROACH SLAB AT THE REAR ABUTMENT	578.71	579.21	579.20	579.60
*1+00.00 BEFORE END OF APPROACH SLAB AT THE REAR ABUTMENT	579.87	580.41	580.41	580.60
*0+50.00 BEFORE END OF APPROACH SLAB AT THE REAR ABUTMENT	580.69	581.40	581.41	581.16
END OF APPROACH SLAB AT THE REAR ABUTMENT	581.66	582.12	582.11	581.73
PIER 1	582.17	582.64	582.64	582.26
PIER 2	582.93	583.35	583.35	582.94
CL OF EXPANSION JOINT # 1	583.56	583.96	583.96	583.55
PIER 5	583.90	584.36	584.36	584.02
PIER 6	584.35	584.78	584.78	584.41
PIER 7	584.72	585.15	585.17	584.81
PIER 8	585.16	585.55	585.55	585.19
PIER 9	585.49	585.92	585.91	585.56
CL OF EXPANSION JOINT # 2	585.88	586.29	586.29	585.87
PIER 12	586.04	586.45	586.43	586.07
PIER 13	585.17	586.64	586.61	586.21
PIER 14	586.26	586.77	586.78	586.37
PIER 15	586.40	586.83	586.84	586.49
PIER 16	586.58	586.93	586.96	586.59
CL OF EXPANSION JOINT # 3	586.67	587.04	587.02	586.69
PIER 19	586.50	586.87	586.90	586.57
PIER 20	586.49	586.89	586.88	586.48

DESCRIPTION	ELEVATIONS			
	A	B	C	D
PIER 21	586.42	586.80	586.79	586.34
PIER 22	586.24	586.64	586.64	586.23
PIER 23	586.05	586.49	586.48	586.04
CL OF EXPANSION JOINT # 4	585.81	586.31	586.30	585.90
PIER 26	585.45	585.91	585.90	585.56
PIER 27	585.13	585.53	585.54	585.16
PIER 28	584.78	585.20	585.19	584.80
PIER 29	584.41	584.79	584.78	584.44
PIER 30	583.78	584.24	584.24	583.88
CL OF EXPANSION JOINT # 5	583.57	583.83	583.83	583.47
*0+50.00 AFTER CL OF EXPANSION JOINT # 5	583.00	583.40	583.36	583.04
*1+00.00 AFTER CL OF EXPANSION JOINT # 5	582.59	582.63	582.60	582.16
*1+50.00 AFTER CL OF EXPANSION JOINT # 5	581.81	581.69	581.67	581.21
*2+00.00 AFTER CL OF EXPANSION JOINT # 5	580.93	580.61	580.59	580.05

BENCH MARK - U.S.G.S TABLET STAMPED "M 311 1967"
ELEV. - 559.02 Navd 88 PID # HY1166

UNITS	PIERS	LENGTH	PROPOSED DECK THICKNESS 4'-6" FROM DECK EDGE	PROPOSED DECK THICKNESS 4'-6" FROM DECK EDGE AT THE JOINTS
1	1-3	91'-9"	17 1/2"	18 3/4"
2	4-10	195'-0"	17 1/2"	18 3/4"
3	11-17	195'-0"	18"	19 1/4"
4	18-24	195'-0"	18"	19 1/4"
5	25-30	190'-6"	17 1/2"	18 3/4"

* ELEVATIONS A AND D WERE TAKEN AT THE EDGE OF PAVEMENT BEFORE AND AFTER THE STRUCTURE

DESIGN AGENCY: STATE OF OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 9 PRODUCTION
 DATE: 9/6/05
 REVIEWED: LAW STRUCTURE FILE NUMBER: 7300158
 DRAWN: MRH REVISED:
 DESIGNED: MRH CHECKED: GEC
 DECK AND APPROACH SLABS EXISTING AND FINAL ELEVATION TABLE AND PROPOSED DECK EDGE THICKNESS
 BRIDGE NO. SCI-23-0535
 OVER NORFOLK SOUTHERN RAILWAY COMPANY AND C.R. 160
 SCI-23-2.39
 24/24
 110/110