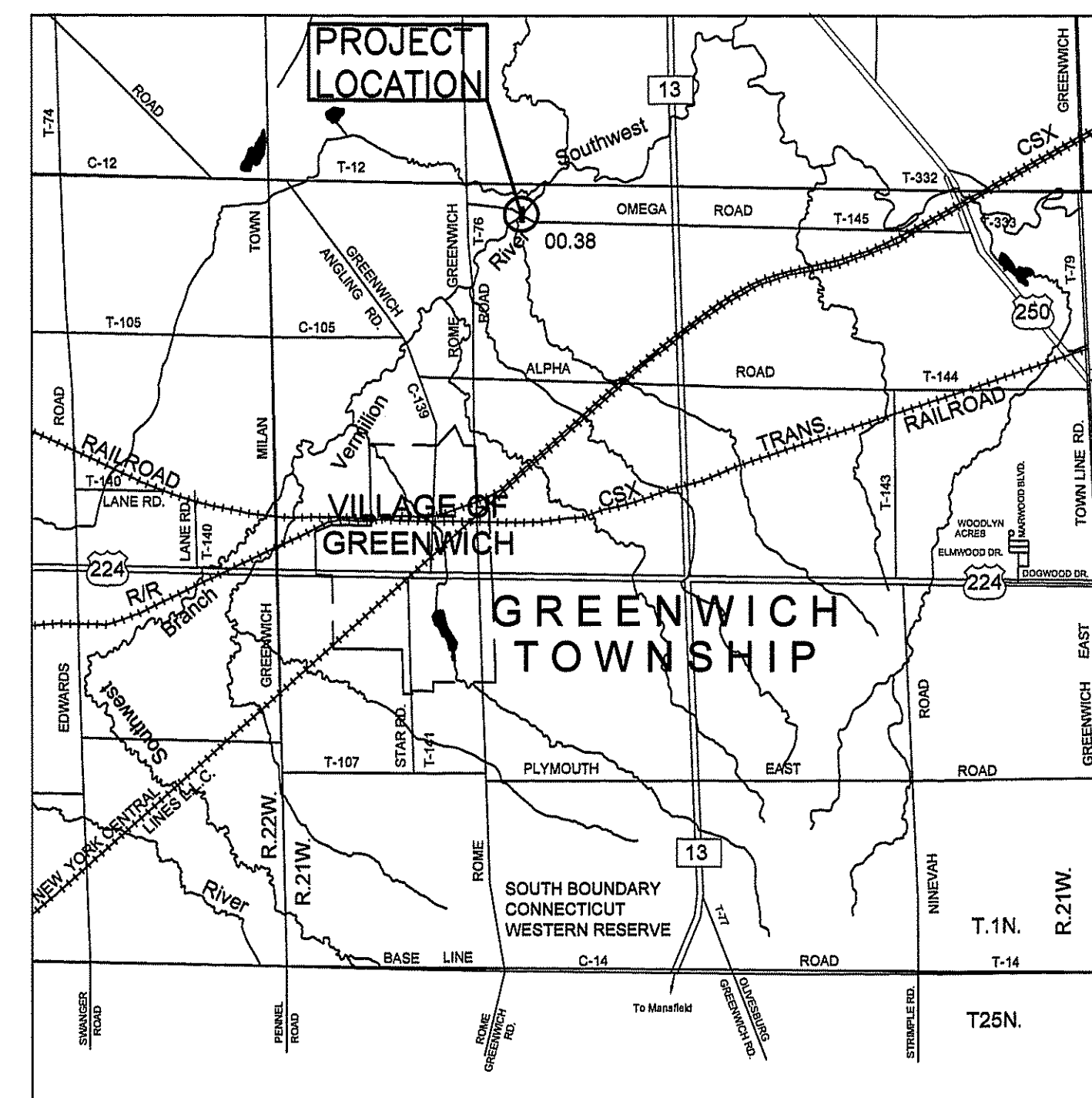


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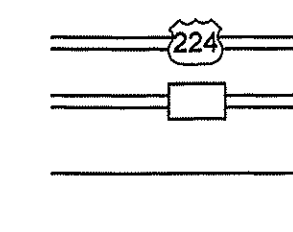
STATE OF OHIO
COUNTY OF HURON
HUR-T.R.145-00.38
OMEGA ROAD
OVER THE SOUTHWEST BRANCH
OF THE VERMILION RIVER

GREENWICH TOWNSHIP



LOCATION MAP
LAT: 41°03'50" N LONG: 82°30'21" W
0 1 2 3
SCALE IN MILES

U.S. ROUTES
STATE ROUTES
OTHER ROADS
CORP. LINE



DESIGN DESIGNATION

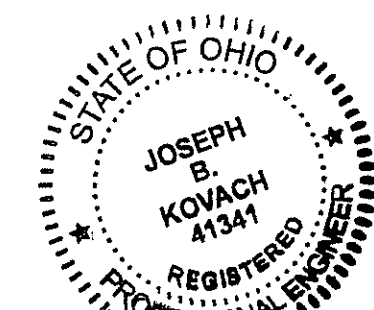
*CURRENT YEAR 2017 A.D.T. = 240
*DESIGN YEAR 2037 A.D.T. = 260
T(PERCENT B & C TRUCKS) = <1% (ESTIMATED)
V(DESIGN SPEED) = 55 MPH
V(LEGAL SPEED) = 55 MPH
FUNCTIONAL CLASSIFICATION = RURAL LOCAL
*CERTIFIED TRAFFIC CONTROL PROVIDED BY ODOT D3
TRAFFIC ENGINEER, JULIE CICHELO, DATED 01/06/14

LINE DATA

OMEGA ROAD:
BEGIN PROJECT STA. 47+47
END PROJECT STA. 52+50
LENGTH OF PROJECT 503 L.F. OR 0.095 MI.

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
OIL & GAS PRODUCERS PROTECTIVE
SERVICE CALL: 1-800-929-0988

ENGINEERS SEAL:



SIGNED: *Joseph B. Kovach*
DATE: 12/8/16

STANDARD CONSTRUCTION DRAWINGS				SUPPLEMENTAL SPECIFICATIONS	
			DS-1-92 07/18/03	832	01/17/14
				800	10/21/16
BP-3.1	07/18/14		BD-1-11 07/17/15	863	10/17/14
		MGS-1.1	07/19/13		
		MGS-2.1	07/19/13	PSBD-2-07	01/21/11
		MGS-3.1	07/18/14		
		MGS-5.3	07/15/16	TST-1-99	07/15/16
DM-1.1	01/15/16	MT-101.60	07/19/13	SPECIAL PROVISIONS	
DM-4.4	01/15/16	TC-61.30	07/18/14		
			NWP 3	01/09/15	

PROJECT DESCRIPTION

IMPROVEMENT OF 0.095 MILE OF T.R. 145 (OMEGA ROAD) BY REPLACEMENT OF AN EXISTING STEEL PONY TRUSS STRUCTURE OVER THE SOUTHWEST BRANCH OF THE VERMILION RIVER WITH A PRESTRESSED BOX BEAM TYPE STRUCTURE INCLUDING APPROACH RECONSTRUCTION.

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA: 0.20 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA: 0.20 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA: 0.40 ACRES

2016 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 REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT DETOURS WILL BE PROVIDED AS INDICATED ON SHEET 5.

12/8/16 DATE APPROVED *Joseph B. Kovach* HURON COUNTY ENGINEER
JOSEPH B. KOVACH, P.E., P.S.
12-16-16 DATE APPROVED *Joe Hintz* HURON COUNTY COMMISSIONER
JOE HINTZ, PRESIDENT
12/16/16 DATE APPROVED *Gary W. Bauer* HURON COUNTY COMMISSIONER
GARY W. BAUER, VICE PRESIDENT
12/16/16 DATE APPROVED *Tom Dunlap* HURON COUNTY COMMISSIONER
TOM DUNLAP

Plan Prepared By:

THE OFFICE OF THE HURON COUNTY ENGINEER
JOSEPH B. KOVACH, P.E., P.S.

150 JEFFERSON STREET
NORWALK OHIO 44857
PH. : (419) 668-1997

HUR-T.R. 145-00.38

NONE

N/A

94457

E060(304)

FEDERAL PROJECT NO.

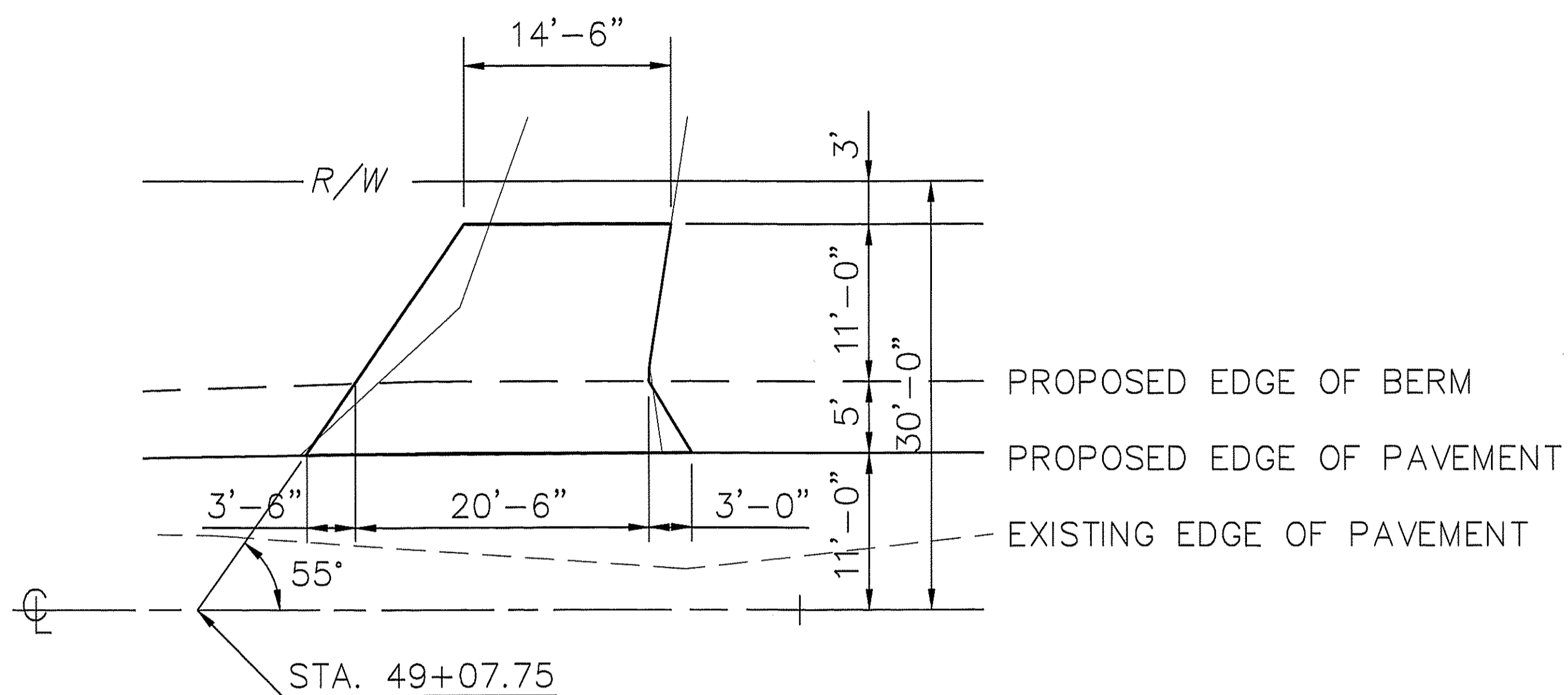
PID NO.

CONSTRUCTION PROJECT NO.

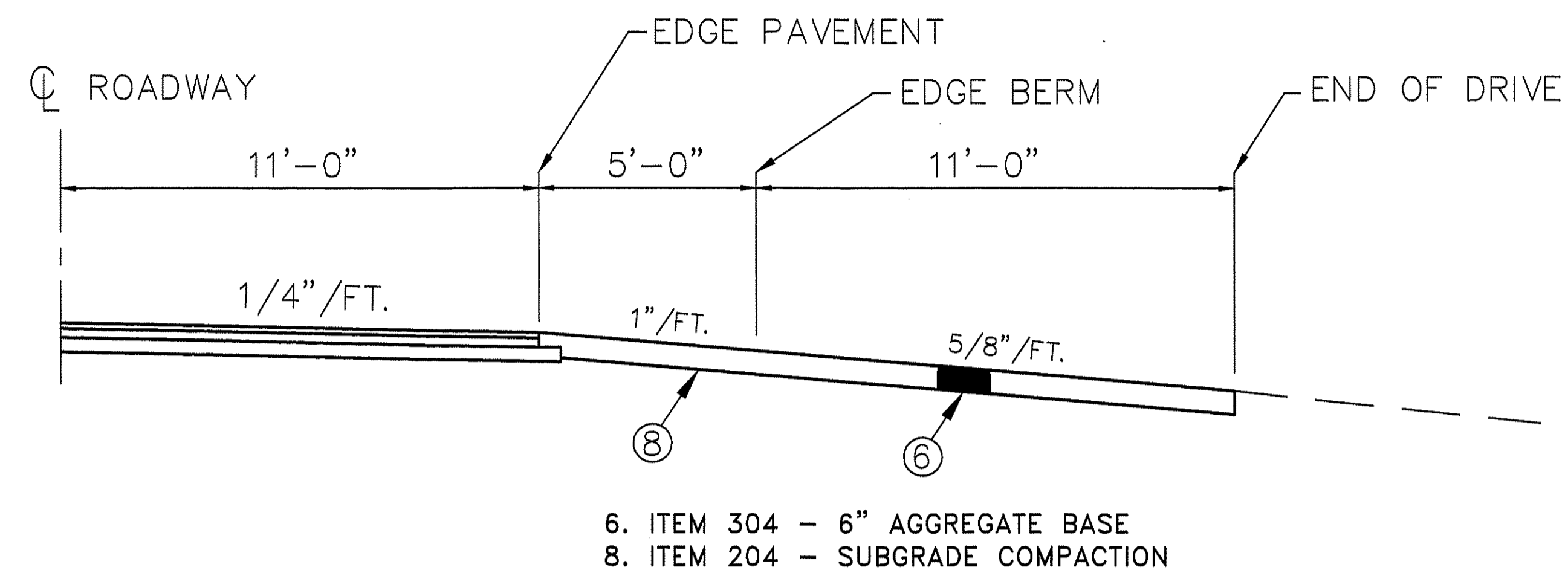
RAILROAD INVOLVEMENT

HUR-T.R. 145-00.38

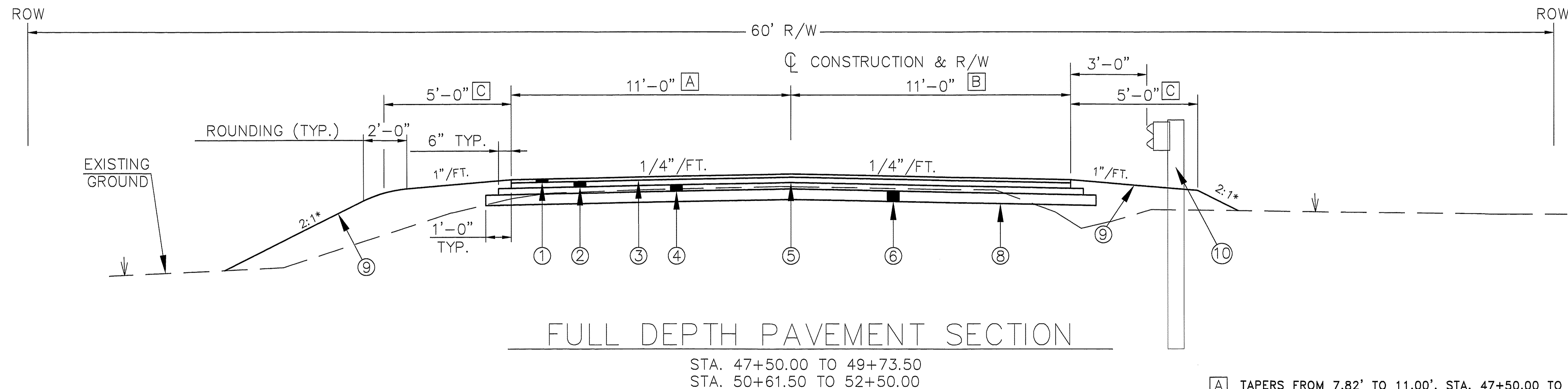
1/20



DRIVE PLAN
STA. 49+30 LT.



DRIVE SECTION
STA. 49+30 LT.



FULL DEPTH PAVEMENT SECTION
STA. 47+50.00 TO 49+73.50
STA. 50+61.50 TO 52+50.00

ITEM LEGEND

- | | |
|--------------------------------------------------------------------------------|-------------------------------------------------------|
| 1. ITEM 441 - 1-1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG 64-22. | 6. ITEM 304 - 5" AGGREGATE BASE |
| 2. ITEM 441 - 2 1/2" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448). | 8. ITEM 204 - SUBGRADE COMPACTION |
| 3. ITEM 407 - TACK COAT FOR INTERMEDIATE COURSE | 9. ITEM 659 - SEEDING AND MULCHING |
| 4. ITEM 301 - 3" ASPHALT CONCRETE BASE | 10. ITEM 606 - GUARDRAIL, TYPE MGS USING 9 FOOT POSTS |
| 5. ITEM 407 - TACK COAT | |

* SLOPES AS SHOWN UNLESS OTHERWISE NOTED ON CROSS SECTIONS.

[A] TAPERS FROM 7.82' TO 11.00', STA. 47+50.00 TO STA. 49+25.00
11.00' STA. 49+25.00 TO STA. 49+73.50
11.00' STA. 50+61.50 TO STA. 51+50.00
TAPERS FROM 11.00' TO 9.36', STA. 51+50.00 TO STA. 52+50.00

[B] TAPERS FROM 12.18' TO 11.00', STA. 47+50.00 TO STA. 49+25.00
11.00' FROM STA. 49+25.00 TO STA. 49+73.50
11.00' FROM STA. 50+61.50 TO STA. 51+50.00
TAPERS FROM 11.00' TO 11.04', STA. 51+50.00 TO STA. 52+50.00

[C] TAPERS FROM 2'-0" TO 5'-0" AS SHOWN ON SHEET 6.

CALCULATED
RAK
CHECKED
CDL

TYPICAL SECTION

OMEGA ROAD
HUR-T.R.145-00.38

2
20

GENERAL SPECIFICATIONS		GENERAL NOTES									
<p>ALL MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION 2016 CONSTRUCTION AND MATERIAL SPECIFICATIONS.</p> <p>REFERENCES</p> <p>TO THE DEPARTMENT, DCA, DDD, ENGINEER, OR INSPECTOR IN THE STANDARD SPECIFICATIONS SHALL BE CONSIDERED REFERENCES TO THE DESIGNATED REPRESENTATIVE OF THE HURON COUNTY ENGINEERS OFFICE.</p> <p>REGULATIONS</p> <p>ALL WORK MUST COMPLY WITH APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS IN ALL RESPECTS, INCLUDING COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION.</p> <p>BEGINNING CONSTRUCTION</p> <p>THE CONTRACTOR WILL NOTIFY THE ENGINEER SEVENTY-TWO (72) HOURS PRIOR TO BEGINNING ACTUAL CONSTRUCTION AND WHEN REQUESTING ADDITIONAL MARKING IN THE FIELD.</p> <p>ROUNDING:</p> <p>THE ROUNDING AT SLOPE BREAKPOINTS SHOWN ON THE TYPICAL SECTION SHEET SHALL APPLY TO ALL PLAN SHEETS EVEN THOUGH OTHERWISE SHOWN.</p> <p>UTILITIES:</p> <p>LISTED BELOW ARE ALL UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS TOGETHER WITH THEIR RESPECTIVE OWNERS:</p> <p>FIRELANDS ELECTRIC COOPERATIVE INC. 1 ENERGY PLACE NEW LONDON, OHIO 44851 PHONE: 1-800-533-8658</p> <p>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.</p> <p>ALL EXPENSES INVOLVED IN ADJUSTMENT OR RELOCATION OF ANY AFFECTED UTILITY LINES SHALL BE BORNE BY THE UTILITY. CONTRACTOR SHALL NOTIFY THE UTILITY OWNER AT THEIR ADDRESS IF UTILITY LINE IS TO BE ADJUSTED, RELOCATED, DE-ENERGIZED OR REMOVED DURING PILE DRIVING OPERATIONS.</p> <p>CONTINGENCY QUANTITIES</p> <p>THE CONTRACTOR SHALL NOT ORDER MATERIALS OR PERFORM WORK FOR ITEMS DESIGNATED BY PLAN NOTE TO BE USED "AS DIRECTED BY THE ENGINEER" UNLESS AUTHORIZED BY THE ENGINEER. THE ACTUAL WORK LOCATIONS AND QUANTITIES USED FOR SUCH ITEMS SHALL BE INCORPORATED INTO THE FINAL CHANGE ORDER GOVERNING COMPLETION OF THIS PROJECT.</p> <p>WORK LIMITS</p> <p>THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. PROVIDE THE INSTALLATION AND OPERATION OF ALL WORK ZONE TRAFFIC CONTROL AND WORK ZONE TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.</p> <p>CLEARING AND GRUBBING</p> <p>REMOVE ALL STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE LIMITS OF THE PROJECT. REMOVE ALL STUMPS AS SET FORTH IN THE SPECIFICATIONS UNDER THE LUMP SUM PRICE BID FOR ITEM 201, CLEARING AND GRUBBING.</p> <p>ITEM 623 - CONSTRUCTION LAYOUT STAKES AND SURVEYING</p> <p>IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FURNISH, PLACE AND MAINTAIN THE CONSTRUCTION STAKES NECESSARY FOR PROPER CONSTRUCTION. THE ENGINEER HAS ESTABLISHED THE PRIMARY HORIZONTAL AND VERTICAL CONTROL FOR THIS PROJECT. ADDITIONAL HORIZONTAL AND VERTICAL CONTROL INFORMATION IS AVAILABLE FROM THE COUNTY ENGINEER.</p> <p>EXISTING SIGNAGE</p> <p>CONTRACTOR SHALL REMOVE EXISTING BRIDGE END MARKER SIGNS, ONE LANE BRIDGE SIGNS AND LOAD LIMIT SIGNS FOR SALVAGE BY THE HURON COUNTY ENGINEERS OFFICE. PAYMENT FOR REMOVAL OF SIGNS SHALL BE INCLUDED IN THE LUMP SUM BID FOR MOBILIZATION.</p>		<p>ITEM 407 - TACK COAT FOR INTERMEDIATE COURSE</p> <p>THE TACK COAT OPERATION SHALL BE AS DIRECTED BY THE ENGINEER. THE RATE OF APPLICATION OF THE TACK COAT SHALL BE SUBJECT TO ADJUSTMENT AS DIRECTED BY THE ENGINEER. FOR ESTIMATING PURPOSES ONLY, THE PLAN QUANTITIES INDICATE AN AVERAGE APPLICATION RATE OF:</p> <p>ITEM 407 - TACK COAT FOR INTERMEDIATE COURSE - 0.04 GAL./SQ. YD.</p> <p>ITEM 659 - SEEDING AND MULCHING</p> <p>SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS OF EXPOSED SOIL. QUANTITY CALCULATIONS FOR SEEDING AND MULCHING ARE BASED ON THESE LIMITS. CLASS C3 SEEDING MIX SHALL BE USED ON ALL SLOPES STEEPER THAN 2:1. PAYMENT FOR CLASS C3 SEEDING SHALL BE INCLUDED IN THE SQUARE YARD BID PRICE FOR SEEDING AND MULCHING.</p> <p>ITEM 619 - FIELD OFFICE, TYPE A</p> <p>PROVIDING, MAINTAINING AND REMOVAL OF A FIELD OFFICE SHALL BE AS DIRECTED BY THE ENGINEER.</p> <p>THE FOLLOWING QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY FOR THIS ITEM:</p> <p>ITEM 619 - FIELD OFFICE, TYPE A 4 MONTHS</p> <p>ACCESS</p> <p>THE CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION PHASES AND OPERATIONS IN A MANNER THAT PROVIDES ACCESS TO PROPERTY OWNERS/TENANTS AFFECTED BY THE WORK AT ALL TIMES, UNLESS OTHERWISE AGREED TO BY THE OWNER/TENANT.</p> <p>CONSTRUCTION LIMITS</p> <p>THE CONTRACTOR MUST AT ALL TIMES CONDUCT HIS OPERATIONS WITHIN THE PUBLIC RIGHT-OF-WAY.</p> <p>BEST MANAGEMENT PRACTICES</p> <p>BEST MANAGEMENT PRACTICES FOR SOIL EROSION AND SEDIMENTATION CONTROL SPECIFICATIONS SET FORTH IN THE MOST CURRENT VERSION OF ODOT'S CONSTRUCTION AND MATERIAL SPECIFICATIONS, LOCATION AND DESIGN MANUAL SUPPLEMENTAL SPECIFICATIONS 832, AND STANDARD DRAWINGS SHALL BE USED TO ENSURE ADEQUATE EROSION AND SEDIMENT CONTROL, ALONG WITH ADDITIONAL PROTECTIVE MEASURES TO AVOID IMPACTS TO ADJACENT PROPERTIES AND WETLANDS FROM CONSTRUCTION ACTIVITIES.</p> <p>EROSION/SEDIMENTATION IMPACTS SHALL BE KEPT TO A MINIMUM THROUGH THE USE OF BEST MANAGEMENT PRACTICES FOR SOIL EROSION AND SEDIMENTATION CONTROL. ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES AS SPECIFIED IN THE PLAN SHALL BE IN PLACE PRIOR TO ANY EXCAVATION, GRADING OR FILLING OPERATIONS AND INSTALLATION OF PROPOSED STRUCTURES OR UTILITIES. THEY SHALL REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETE AND THE AREA IS STABILIZED AS ACCEPTED BY THE ENGINEER. THEY SHALL ALSO COMPLY WITH ODOT'S "HANDBOOK FOR SEDIMENT AND EROSION CONTROL."</p> <p>ITEM 203 - EMBANKMENT, AS PER PLAN</p> <p>WHERE THE PROPOSED EMBANKMENT SLOPE EXCEEDS 2 TO 1, THE EMBANKMENT SHALL BE REINFORCED WITH GEOGRID AS DETAILED ON CROSS SECTION SHEET 9, USING TENSAR GEOGRID BX1200, OR APPROVED EQUAL. THE VOLUME OF EXCAVATION IN THE EMBANKMENT, AS PER PLAN AREA IS CONSIDERED INCIDENTAL.</p>									
<p>ITEM 611 - FARM DRAINS</p> <p>ALL FARM DRAINS, WHICH ARE ENCOUNTERED DURING CONSTRUCTION, SHALL BE PROVIDED WITH UNOBSTRUCTED OUTLETS. EXISTING COLLECTORS WHICH ARE LOCATED BELOW THE ROADWAY DITCH ELEVATIONS, AND WHICH CROSS THE ROADWAY, SHALL BE REPLACED WITHIN THE CONSTRUCTION LIMITS BY ITEM 611 CONDUIT, TYPE B, ONE COMMERCIAL SIZE LARGER THAN THE EXISTING CONDUIT.</p> <p>EXISTING COLLECTORS AND ISOLATED FARM DRAINS, WHICH ARE ENCOUNTERED ABOVE THE ELEVATION OF ROADWAY DITCHES, SHALL BE PROVIDED WITH AN OUTLET INTO THE ROADWAY DITCH BY 611 TYPE F CONDUIT. THE OPTIMUM OUTLET ELEVATION SHALL BE ONE FOOT ABOVE THE FLOWLINE ELEVATION OF THE DITCH. LATERAL FIELD TILES WHICH CROSS THE ROADWAY SHALL BE INTERCEPTED BY 611, TYPE E CONDUIT, AND CARRIED IN A LONGITUDINAL DIRECTION TO AN ADEQUATE OUTLET OR ROADWAY CROSSING.</p> <p>THE LOCATION, TYPE, SIZE AND GRADE OF REPLACEMENTS SHALL BE DETERMINED BY THE ENGINEER AND PAYMENT SHALL BE MADE ON FINAL MEASUREMENTS.</p> <p>EROSION CONTROL PADS AND ANIMAL GUARDS SHALL BE PROVIDED AT THE OUTLET END OF ALL FARM DRAINS AS PER STANDARD CONSTRUCTION DRAWING DM -1.1, EXCEPT WHEN THEY OUTLET INTO A DRAINAGE STRUCTURE. PAYMENT FOR THE EROSION CONTROL PADS AND ANIMAL GUARDS AND ANY NECESSARY BENDS OR BRANCHES SHALL BE INCLUDED FOR PAYMENT IN THE PERTINENT CONDUIT ITEMS.</p> <p>THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:</p> <table><tr><td>611 4" CONDUIT, TYPE C</td><td>30 FT.</td></tr><tr><td>611 6" CONDUIT, TYPE C</td><td>30 FT.</td></tr><tr><td>611 8" CONDUIT, TYPE C</td><td>30 FT.</td></tr><tr><td>601 ROCK CHANNEL PROTECTION TYPE C WITH FILTER</td><td>3 CU. YD.</td></tr></table>		611 4" CONDUIT, TYPE C	30 FT.	611 6" CONDUIT, TYPE C	30 FT.	611 8" CONDUIT, TYPE C	30 FT.	601 ROCK CHANNEL PROTECTION TYPE C WITH FILTER	3 CU. YD.	<p>ENVIRONMENTAL (CLEARANCE DATE: 02/18/16)</p> <p>TREE REMOVAL WILL ONLY BE PERFORMED BEFORE APRIL 1ST OR AFTER SEPTEMBER 30TH WHEN BAT SPECIES WOULD NOT BE USING ROOST OR BROOD-REARING HABITAT.</p> <p>PRIOR TO BRIDGE REMOVAL OR MAINTENANCE, FROM APRIL 15TH TO SEPTEMBER 15TH, THE UNDERSIDE OF THE BRIDGE WILL BE INSPECTED FOR THE PRESENCE OF BATS. IF ANY ARE FOUND, U.S. FISH & WILDLIFE SERVICES WILL BE CONTACTED PRIOR TO BRIDGE REMOVAL.</p> <p>THIS PROJECT IS WITHIN THE KNOWN SUMMER BREEDING RANGE OF THE FEDERALLY ENDANGERED INDIANA BAT. UNAVOIDABLE CUTTING OF TREES DEFINED AS POTENTIAL HABITAT FOR THE INDIANA BAT (I.E. LIVING OR STANDING DEAD TREES OR SNAGS WITH EXFOLIATING, PEELING OR LOOSE BARK, SPLIT TRUNKS AND/OR BRANCHES OR CAVITIES) WILL BE PERFORMED ONLY BEFORE APRIL 1 OR AFTER SEPTEMBER 30 WHEN THE SPECIES WOULD NOT BE USING SUCH HABITAT.</p> <p>REMAINING DISTURBED SOILS THAT ARE NOT COVERED BY HARD SURFACES WILL BE RE-SEEDED WITH NATIVE VEGETATION.</p> <p>THE STAGING AREA SHOULD BE DONE WELL AWAY FROM THE STREAM AND ANY WETLANDS IN THE AREA.</p> <p>HURON COUNTY ENGINEER'S STAFF WILL NOTIFY IN WRITING AT LEAST 10 DAYS PRIOR TO THE DETOUR THE FOLLOWING AGENCIES: TOWNSHIP TRUSTEES, LOCAL FIRE DEPARTMENT, LOCAL SCHOOL DISTRICT, AND HURON COUNTY SHERIFF'S DEPARTMENT.</p> <p>ALL PROJECTS INVOLVING JURISDICTIONAL WATERS OF THE UNITED STATES (STREAMS, RIVERS, NON ISOLATED WETLANDS) AND/OR ISOLATED WETLANDS ARE SUBJECT TO REGULATION UNDER SECTIONS 404 AND 401 OF THE CLEAN WATER ACT, AND POSSIBLY OHIO EPA ISOLATED WETLAND LAW. THE OHIO DEPARTMENT OF TRANSPORTATION - OFFICE OF ENVIRONMENTAL SERVICES (OES) AND/OR THE UNITED STATE CORPS OF ENGINEERS (USACE) HAS DETERMINED THAT THIS PROJECT MEETS THE CRITERIA OF (NWP-3); BASED UPON THE ANTICIPATED IMPACTS TO STREAM(S) AND/OR WETLAND(S). HOWEVER, THIS PERMIT DETERMINATION DID NOT INCLUDE THE USE OF TEMPORARY CONSTRUCTION ACCESS FILLS THAT MAY BE REQUIRED FOR CONSTRUCTION (I.E. CAUSEWAY STREAM CROSSINGS, CONSTRUCTION ACCESS PADS, COFFERDAMS, ETC.). INFORMATION REGARDING THE USE OF TEMPORARY CONSTRUCTION ACCESS FILLS MAY NOT HAVE BEEN KNOWN AT THE TIME OF THE PERMIT DETERMINATION. THE CONTRACTOR SHOULD BE AWARE THAT THE USE OF TEMPORARY FILLS BELOW THE ORDINARY HIGH WATER MARK (OHWM), WHICH IS THE USACE'S JURISDICTIONAL LIMITS, HAS NOT BEEN PERMITTED AND IS NOT ALLOWED.</p> <p>USACE DEFINITION OF OHWM - THE ORDINARY HIGH WATER MARK IS THE LINE ON THE SHORES ESTABLISHED BY THE FLUCTUATIONS OF WATER AND INDICATED BY PHYSICAL CHARACTERISTICS SUCH AS A CLEAR, NATURAL LINE IMPRESSED ON THE BANK; SHELVING; CHANGES IN THE CHARACTER OF THE SOIL; DESTRUCTION OF TERRESTRIAL VEGETATION; THE PRESENCE OF LITTER AND DEBRIS; OR THE APPROPRIATE MEANS THAT CONSIDER THE CHARACTERISTICS OF THE SURROUNDING AREAS.</p> <p>THE SPECIFICATIONS SET FORTH IN THE MOST CURRENT VERSION OF ODOT'S CONSTRUCTION AND MATERIAL SPECIFICATIONS, LOCATION AND DESIGN MANUAL AND STANDARD DRAWINGS WILL BE USED TO ENSURE ADEQUATE EROSION AND SEDIMENT CONTROL DURING CONSTRUCTION.</p>	
611 4" CONDUIT, TYPE C	30 FT.										
611 6" CONDUIT, TYPE C	30 FT.										
611 8" CONDUIT, TYPE C	30 FT.										
601 ROCK CHANNEL PROTECTION TYPE C WITH FILTER	3 CU. YD.										
		HUR-T.R. 145-00.38									
		3 20									

GENERAL SUMMARY

SHEET NO.			ITEM	QUANTITY (01/BRF/BR)	UNIT	DESCRIPTION	AS PER PLAN REFERENCES
3	6	*					
						ROADWAY	
			201	LUMP		CLEARING AND GRUBBING	GENERAL NOTES
	817		202	817	SY	PAVEMENT REMOVED	
	108		202	108	FT	GUARDRAIL REMOVED	
			203	273	CY	EXCAVATION	
			203	71	CY	EMBANKMENT	
			203	94	CY	EMBANKMENT, AS PER PLAN	GENERAL NOTES & SHEET 9/20
		90	203	90	CY	GRANULAR MATERIAL, TYPE C	
	1,100		204	1,100	SY	SUBGRADE COMPACTION	
	62.5		606	62.5	FT	GUARDRAIL, TYPE MGS USING 9 FOOT POSTS	TYPICAL SECTION
	4		606	4	EACH	ANCHOR ASSEMBLY, TYPE E	
	2		606	2	EACH	ANCHOR ASSEMBLY, TYPE T	
	4		606	4	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 1	
						EROSION CONTROL	
		3	601	3	CY	ROCK CHANNEL PROTECTION,TYPE C WITH FILTER	GENERAL NOTES
	1,157		659	1,157	SY	SEEDING AND MULCHING	GENERAL NOTES
		6,000	832	6,000	EACH	EROSION CONTROL	GENERAL NOTES
						DRAINAGE	
		30	611	30	FT	4" CONDUIT, TYPE C	GENERAL NOTES
		30	611	30	FT	6" CONDUIT, TYPE C	GENERAL NOTES
		30	611	30	FT	8" CONDUIT, TYPE C	GENERAL NOTES
						PAVEMENT	
	85		301	85	CY	ASPHALT CONCRETE BASE	
	154		304	154	CY	AGGREGATE BASE	
		39	407	39	GAL	TACK COAT	
		41	407	41	GAL	TACK COAT FOR INTERMEDIATE COURSE	GENERAL NOTES
	68		441	68	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448)	
	41		441	41	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22	
						TRAFFIC CONTROL	
	9		626	9	EACH	BARRIER REFLECTOR, TYPE A2	
		0.19	642	0.19	MILE	EDGE LINE, 4 INCH, TYPE 1	GENERAL NOTES
		0.095	642	0.095	MILE	CENTER LINE, TYPE 1	GENERAL NOTES
						MAINTENANCE OF TRAFFIC	
			614	LUMP		MAINTAINING TRAFFIC	SHEET 5/20
			614	LUMP		DETOUR SIGNING	
						STRUCTURE	
						SEE STRUCTURE ESTIMATED QUANTITIES	SHEET 14/20
						INCIDENTALS	
		4	619	4	MONTH	FIELD OFFICE, TYPE A	GENERAL NOTES
			623	LUMP		CONSTRUCTION LAYOUT STAKES AND SURVEYING	GENERAL NOTES
			624	LUMP		MOBILIZATION	GENERAL NOTES
			SPEC.	LUMP		PREMIUM FOR CONTRACT PERFORMANCE AND MAINTENANCE GUARANTEE BOND	

* AS DIRECTED BY ENGINEER

CALCULATED
RAK

CHECKED
CDL

GENERAL SUMMARY

HUR-T.R.145-00.38

4
20

ITEM 614 – MAINTAINING TRAFFIC

OMEGA ROAD SHALL BE CLOSED TO TRAFFIC. THIS ITEM SHALL CONSIST OF MAINTENANCE OF TRAFFIC ON EXISTING ROADWAYS IN ACCORDANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, CURRENT EDITION, LATEST REVISION, THE SPECIFICATIONS AND THE FOLLOWING:

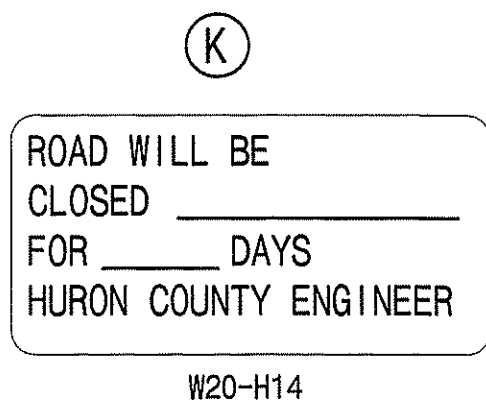
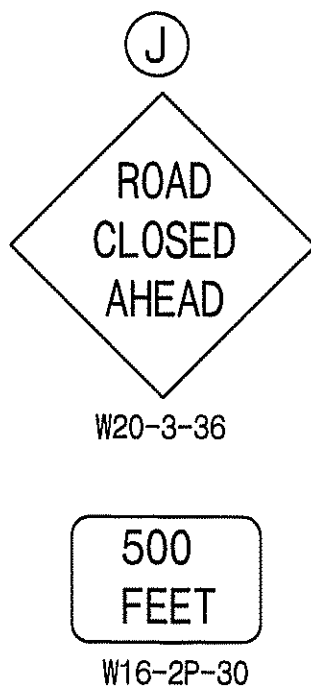
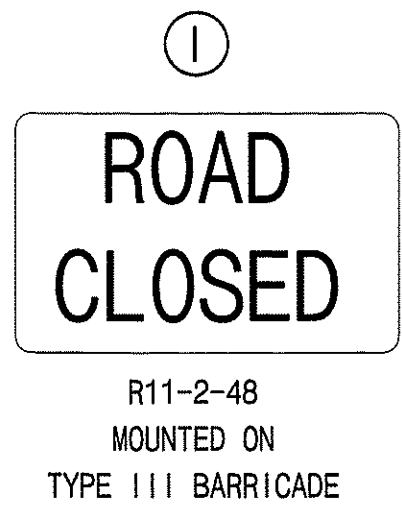
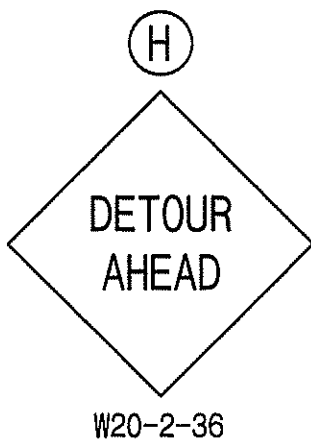
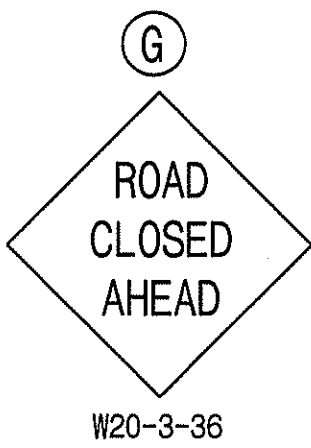
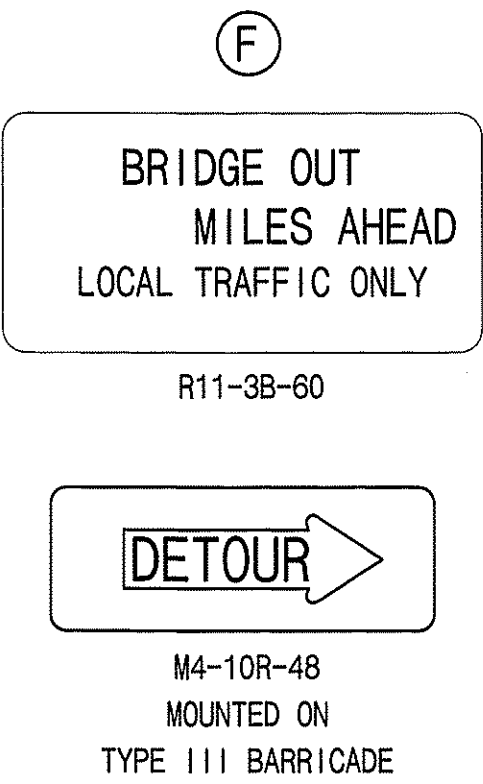
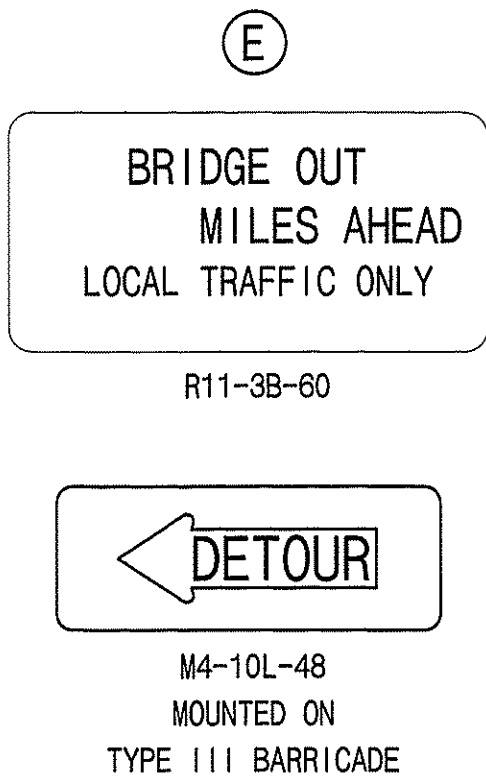
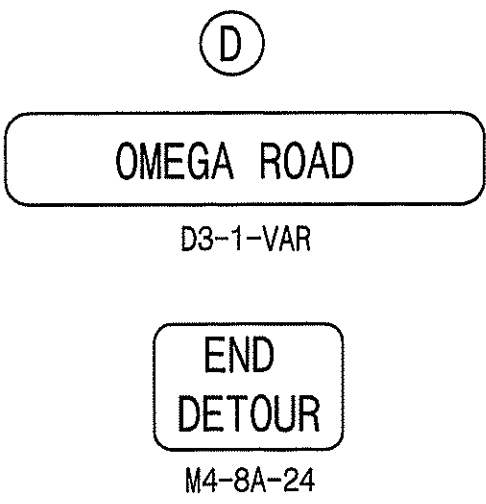
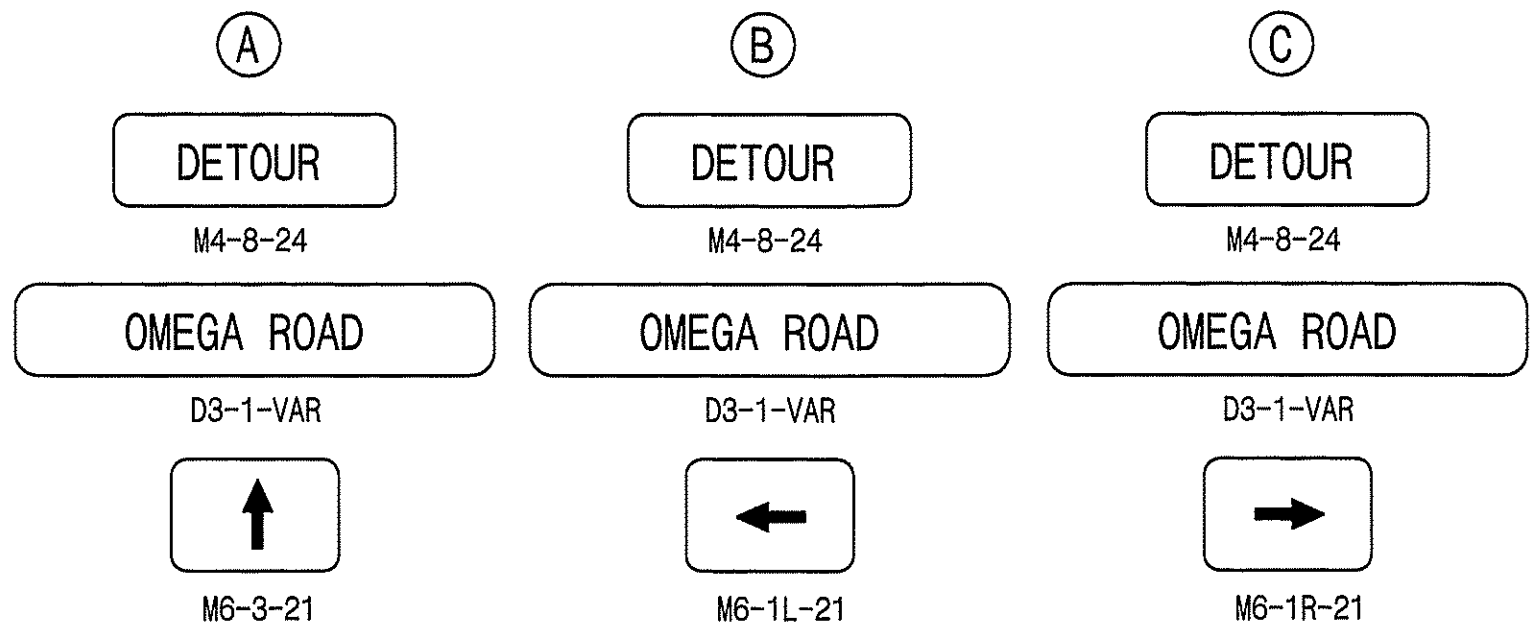
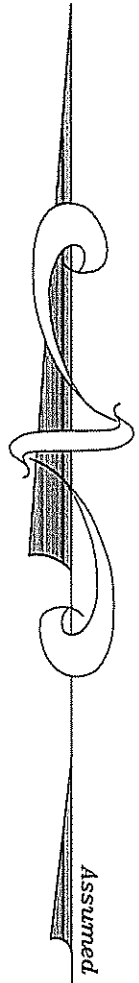
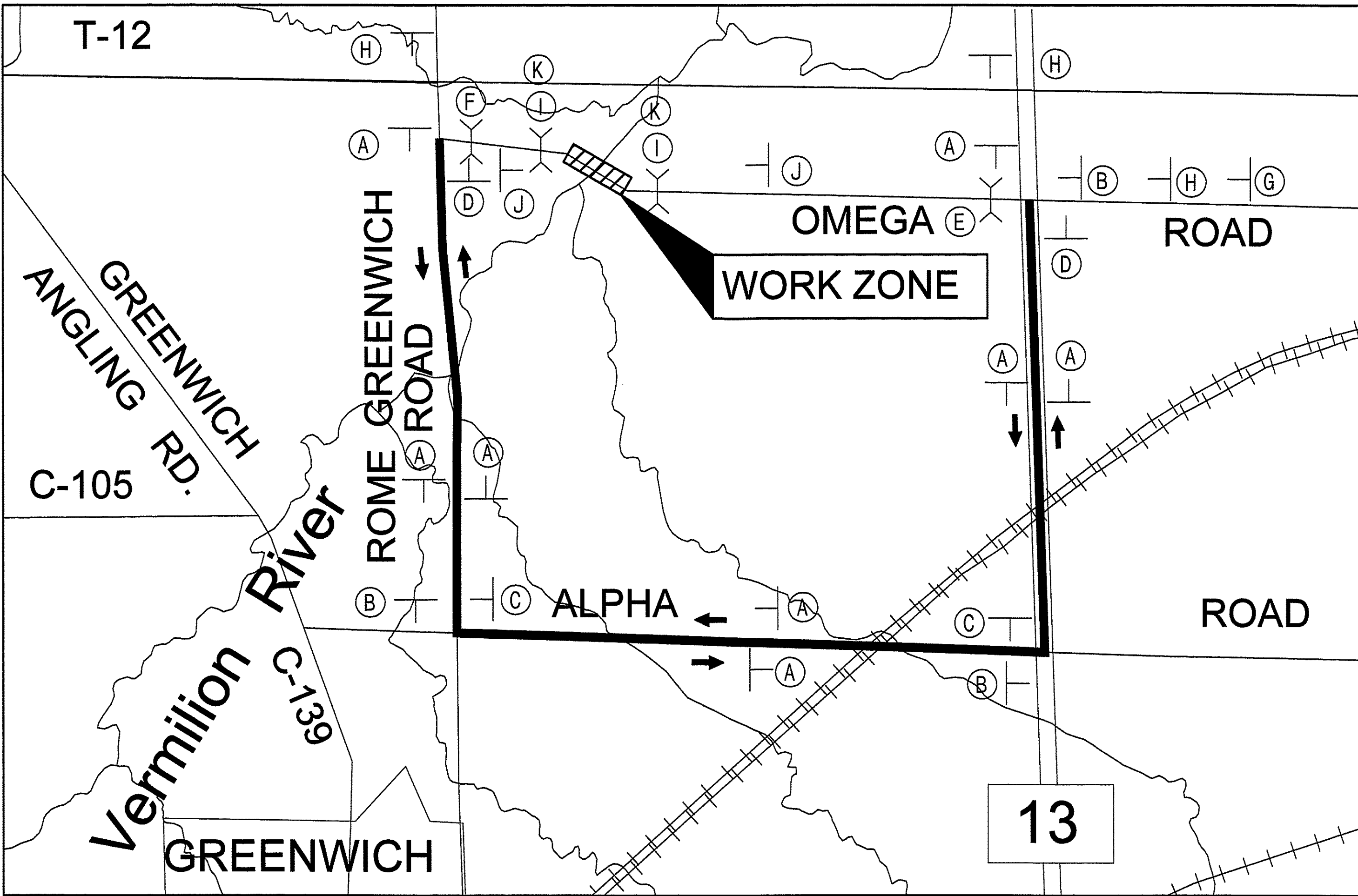
1. THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN STANDARD 48x30 INCH ROAD CLOSED SIGNS, SIGN SUPPORTS, BARRICADES AND LIGHTS, AS DETAILED IN SCD MT-101.60 AT THE PROJECT LIMITS AS SHOWN ON THE DETOUR MAP.
2. THE CONTRACTOR WILL INFORM THE COUNTY ENGINEER EIGHTEEN (18) DAYS PRIOR TO THE BEGINNING OF WORK AND SHALL WORK WITH THE COUNTY IN THE PUBLIC NOTIFICATION PROCESS.
3. THE CONTRACTOR WILL FURNISH, ERECT, MAINTAIN AND SUBSEQUENTLY REMOVE ALL FLAGS, BARRICADES, SIGNS, SIGN SUPPORTS, AND FURNISH AND MAINTAIN ALL FLAGGERS, WATCHERS AND INCIDENTALS RELATED THERETO.
4. DURING CONSTRUCTION, ACCESS SHALL BE MAINTAINED TO ALL PROPERTIES ADJACENT TO AND WITHIN THE PROJECT AREA.
5. NOTICE OF CLOSURE SIGNS SHALL BE ERECTED BY THE CONTRACTOR AT LEAST ONE WEEK IN ADVANCE OF THE SCHEDULED ROAD CLOSURE. THE SIGNS SHALL BE ERECTED ON THE RIGHT-HAND SIDE OF THE ROAD FACING TRAFFIC. THEY SHALL BE PLACED SO AS NOT TO INTERFERE WITH THE VISIBILITY OF ANY OTHER TRAFFIC CONTROL SIGNS. ON ROADWAYS, THEY SHOULD BE ERECTED AT THE POINT OF CLOSURE.

THE "NOTICE OF CLOSURE" SIGNS SHALL BE W20-H14 WITH THE FOLLOWING FOUR LINES:

- LINE 1: "ROAD WILL BE"
LINE 2: "CLOSED _____"
LINE 3: "FOR _____ DAYS"
LINE 4: "HURON COUNTY ENGINEER"

THE ABOVE BLANKS SHALL BE FILLED IN BY THE CONTRACTOR.

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 PLAN.



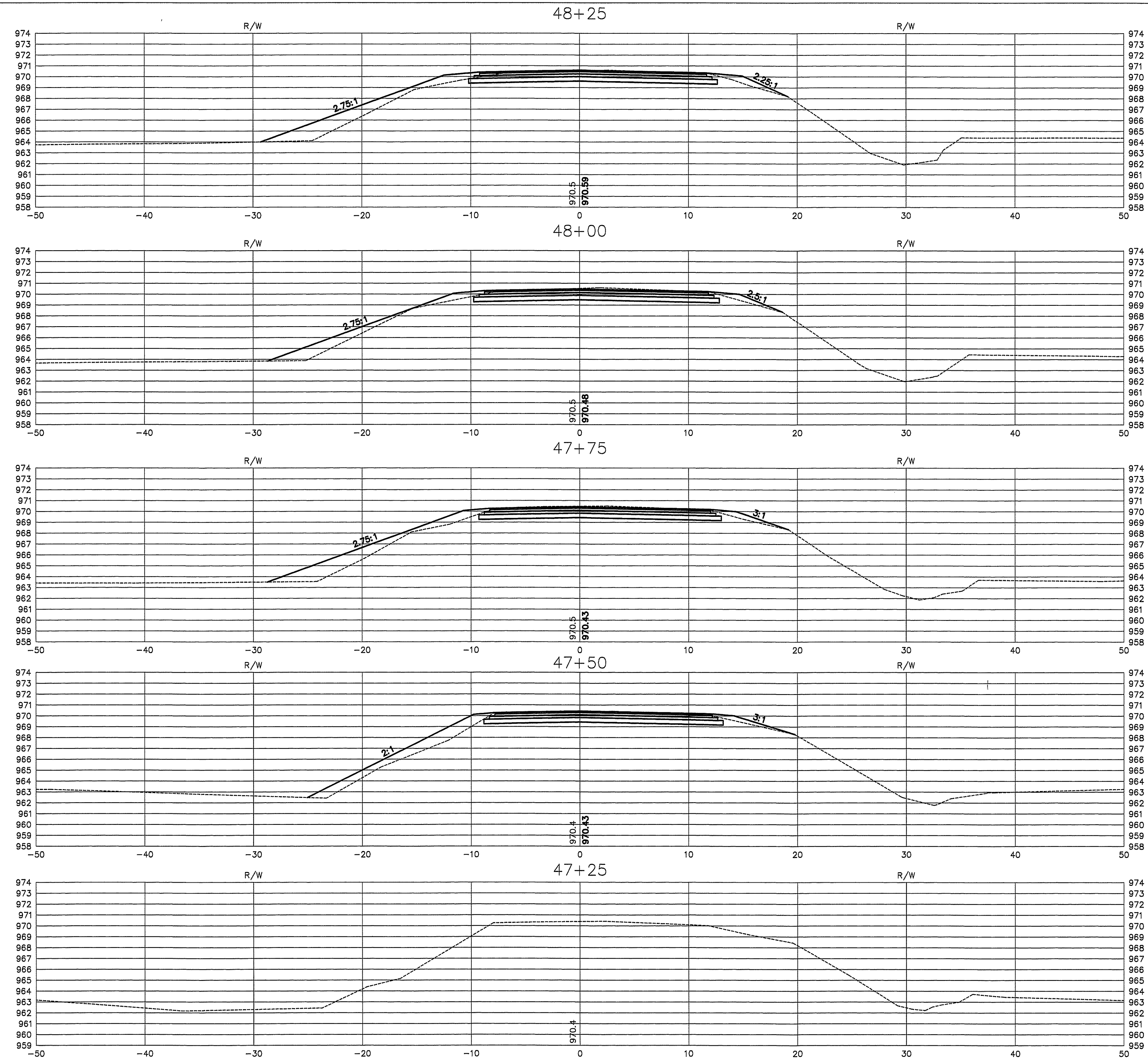
— SINGLE POST SIGN
— TYPE III BARRICADE (PORTABLE)

DETOUR PLAN

HUR-T.R.145-00.38

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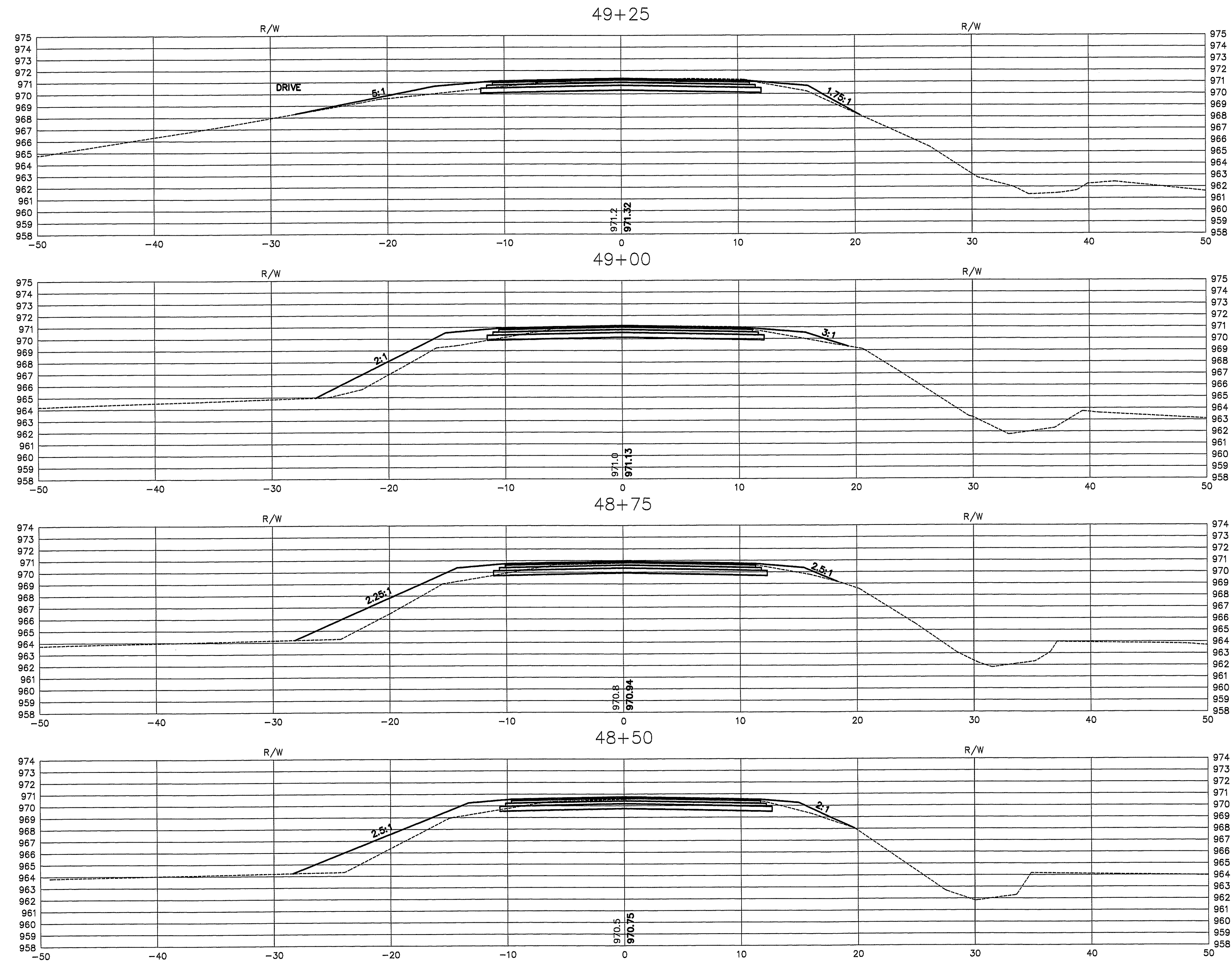
$$\frac{6}{20}$$

SCALE / HORZ.: 1" = 5'
VERT.: 1" = 5'

CALCULATED	RAK	CHECKED	CDL
CROSS SECTION - OMEGA ROAD			
Sta. 47+25 thru Sta. 48+25			
HUR-T.R. 145-00.38			
PID 94457			
7/20			

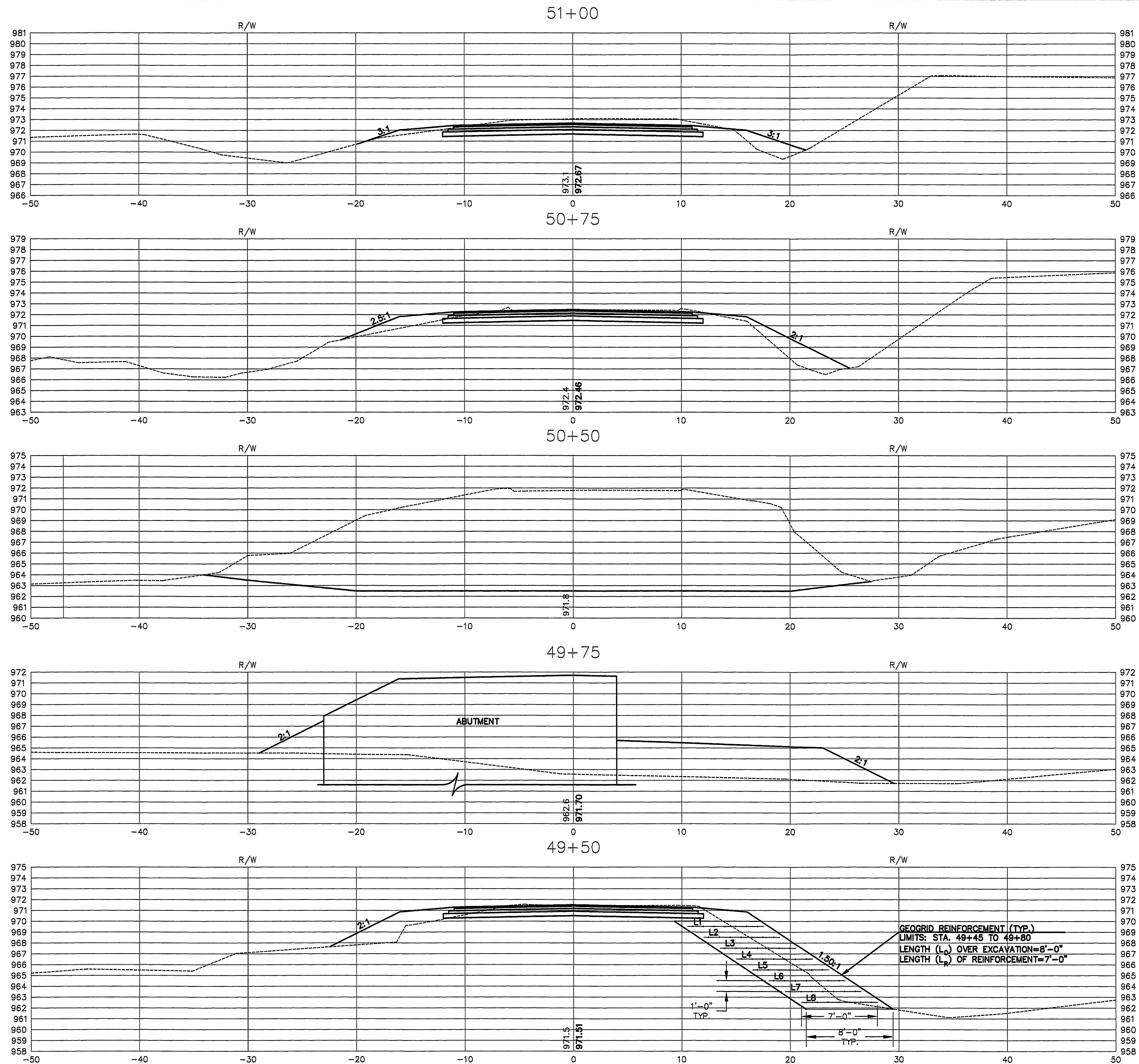
SCALE / HORZ.: 1" = 5'
VERT.: 1" = 5'



CROSS SECTION - OMEGA ROAD
Sta. 48+50 thru Sta. 49+25

HUR-T.R. 145-00.38
PID 94457

8
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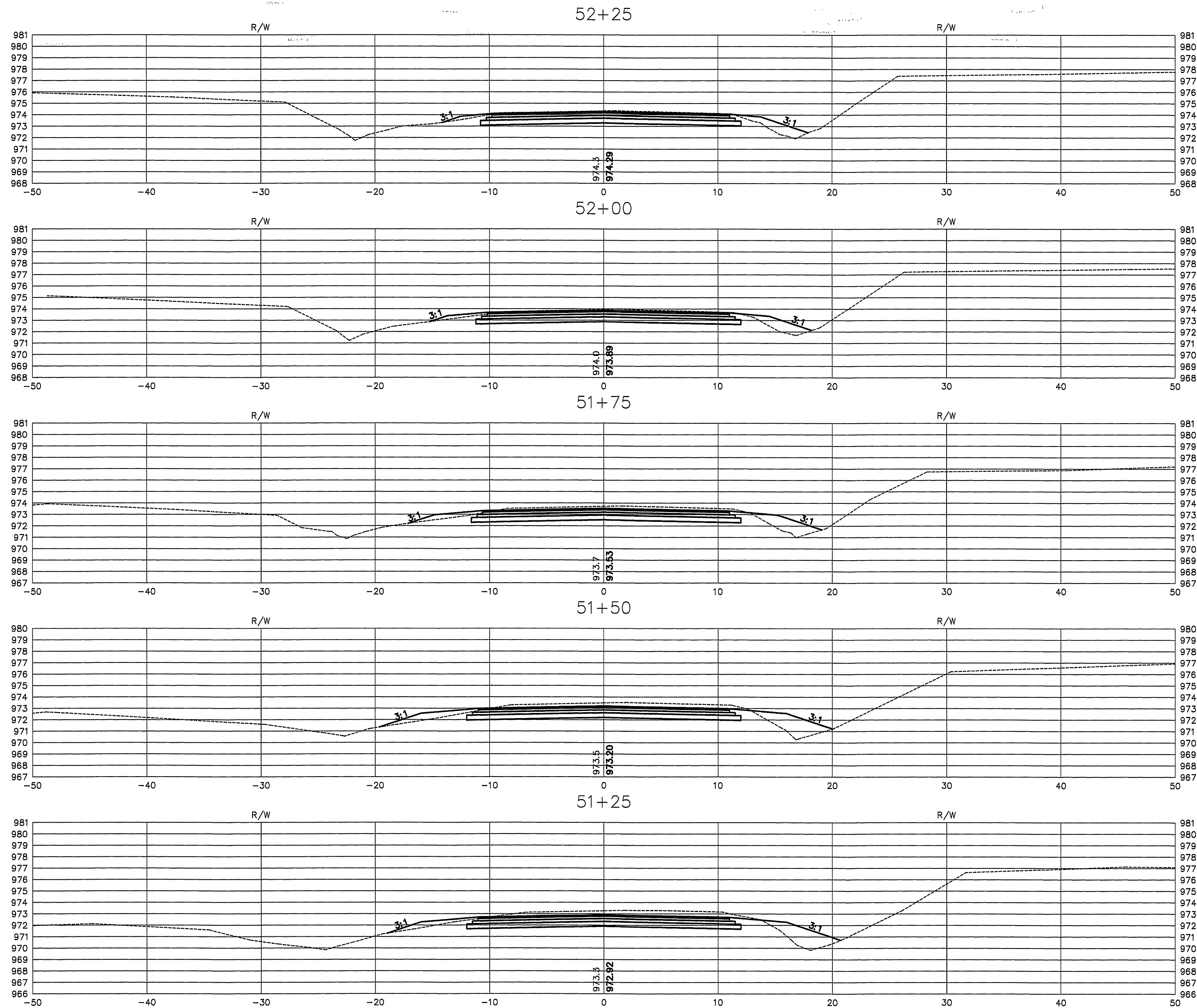
SCALE / HORZ.: 1" = 5'
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CALCULATED	PK	CHECKED	CDL

CROSS SECTION - OMEGA ROAD
Sta. 49+50 thru Sta. 51+00

HUR-T.R. 145-00.38
PID 94457

SCALE / HORZ.: 1" = 5'
VERT.: 1" = 5'

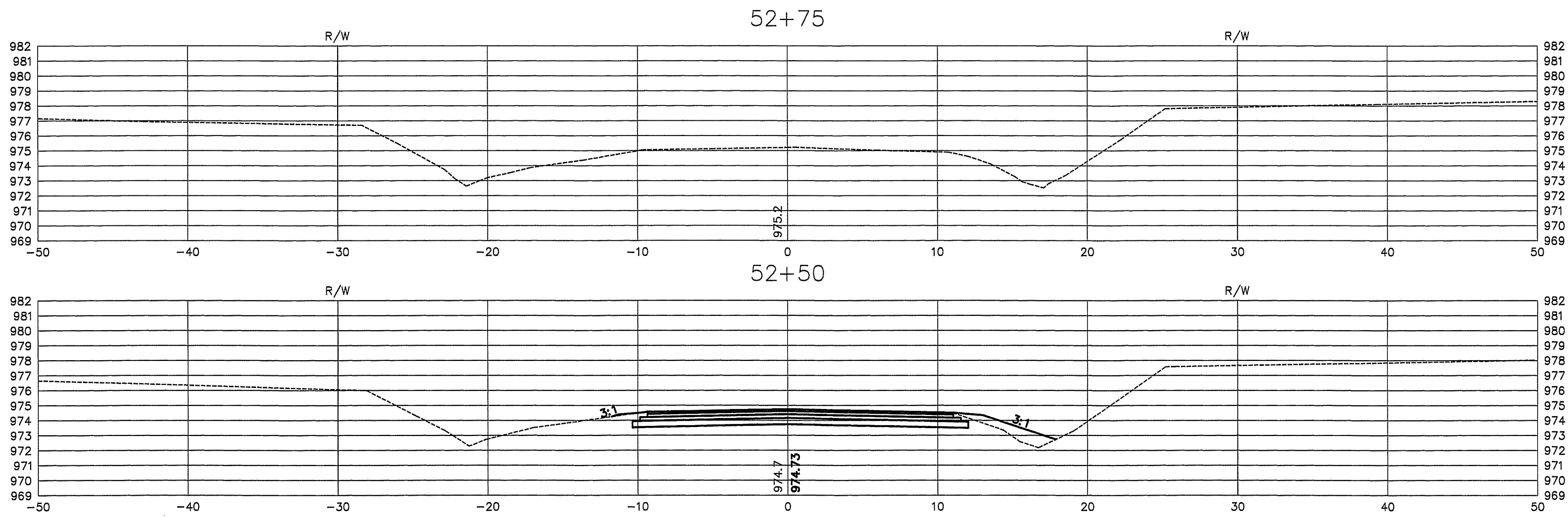


CROSS SECTION - OMEGA ROAD
Sta. 51+25 thru Sta. 52+25

HUR-T.R. 145-00.38
PID 94457

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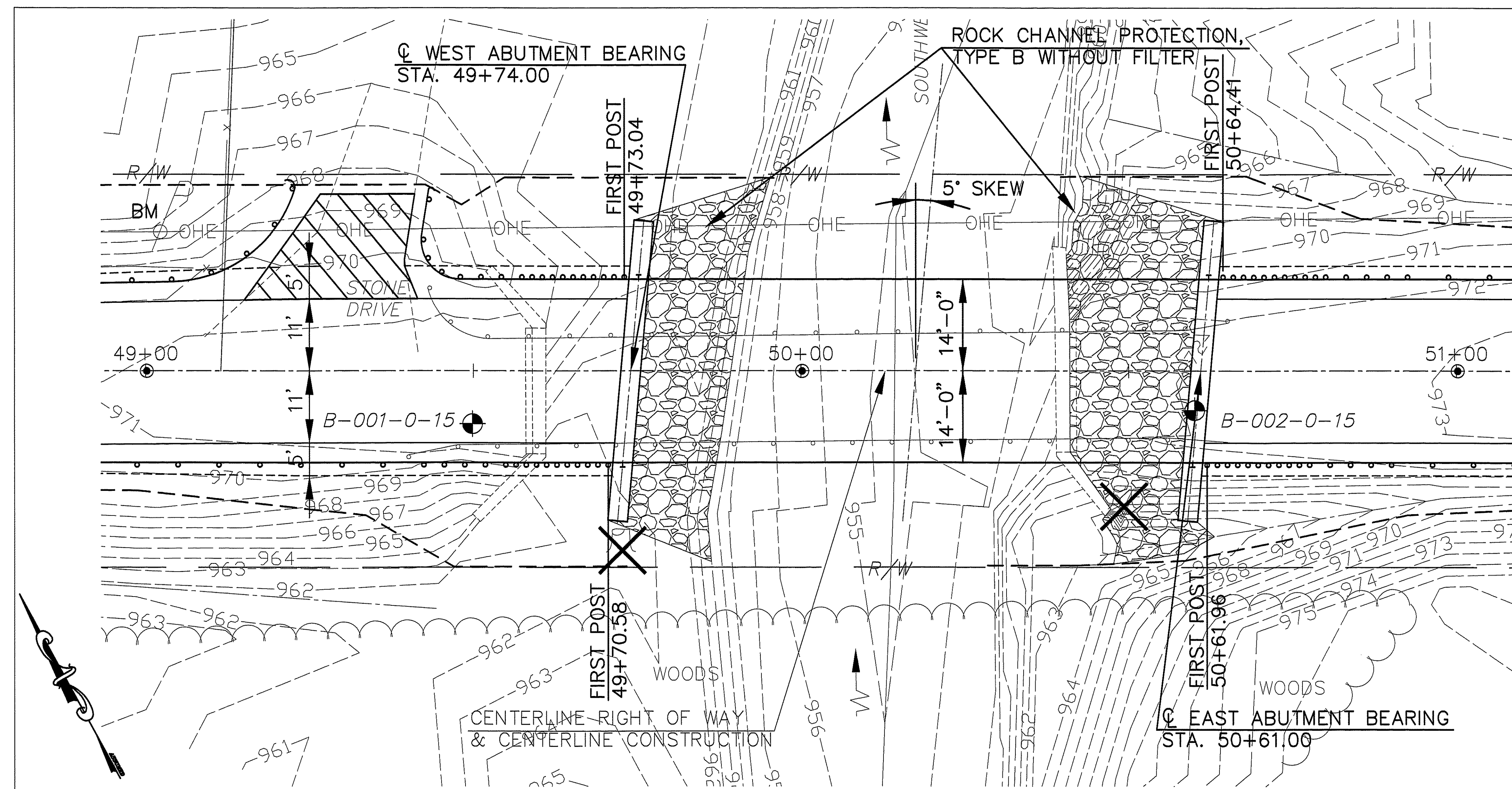
SCALE / HORZ.: 1" = 5'
VERT.: 1" = 5'



CROSS SECTION - OMEGA ROAD
Sta. 52+50 thru Sta. 52+75

HUR-T.R. 145-00.38
PID 94457

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BENCHMARK DATA	
BM #1	STA. 49+02.26, ELEV. 967.85, OFFSET 21.24 LT., 60D NAIL SET IN POWER POLE #F122-9

LEGENDS:

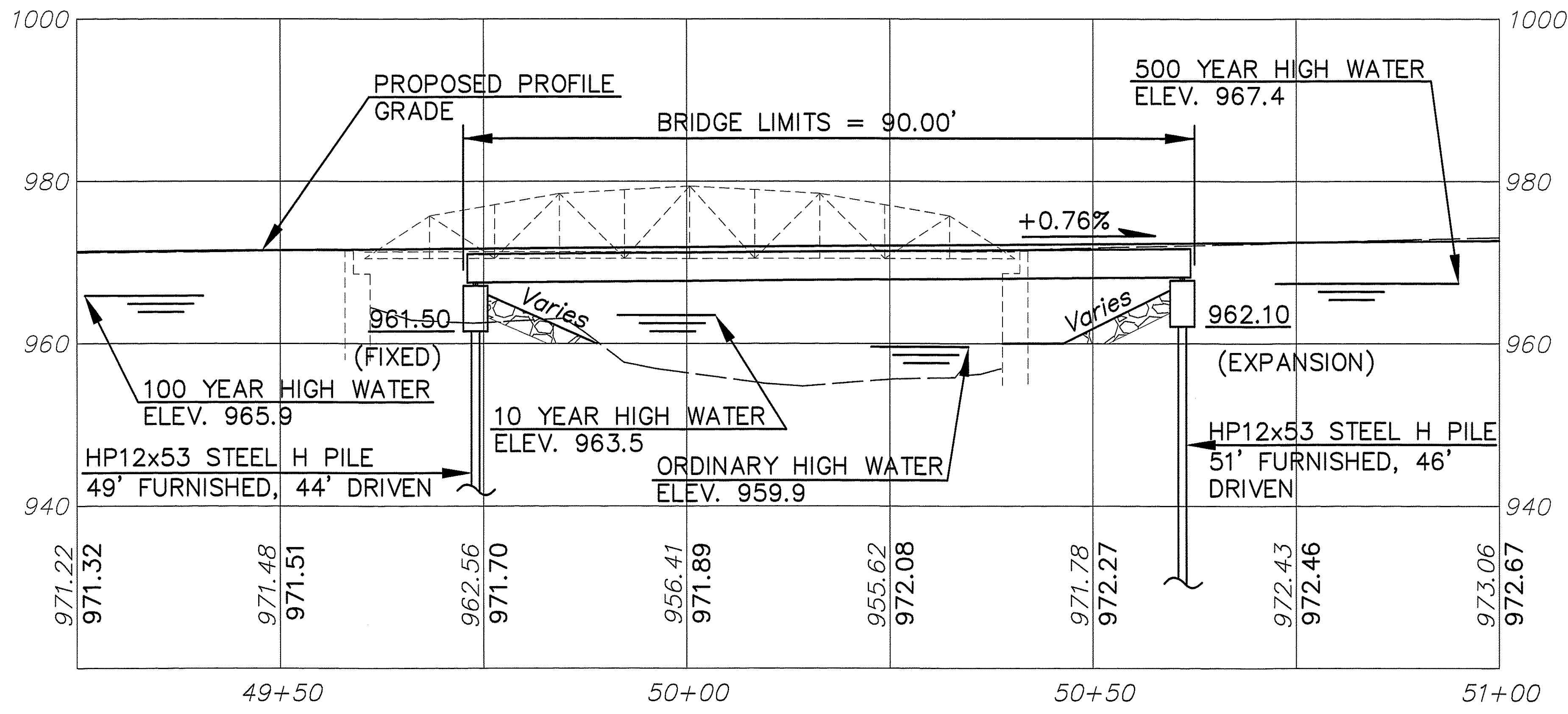
BORING LOCATION B-001-0-15 STA. 49+50, 10' RT., EL.=971.0
 B-002-0-15 STA. 50+60, 6' RT., EL.=972.0

HYDRAULIC DATA:

DRAINAGE AREA = 21.67 SQ. MILES
 Q (10) = 1801 CFS V (10) = 4.10 FT/S
 Q (100) = 2995 CFS V (100) = 4.75 FT/S
 STRUCTURE CLEARS THE 100 YEAR
 DESIGN HW BY 1.7 FEET

EXISTING STRUCTURE
TYPE: RIVETED STEEL PONY TRUSS WITH ASPHALT OVER TIMBER DECKING ON STEEL STRINGERS AND FLOOR BEAMS ON REINFORCED CONCRETE WALL ABUTMENTS.
SPAN: 80'-0" SINGLE SPAN
ROADWAY: 15'-5" F/F GUARDRAIL
LOADING: H10
SKEW: 2± RF
APPROACH SLABS: NONE
WEARING SURFACE: ASPHALT
CONDITION: POOR, 14 TON LOAD LIMIT
STRUCTURAL FILE NUMBER: 3948315
DATE BUILT: 1910

PROPOSED STRUCTURE
TYPE: SINGLE SPAN PRESTRESSED NON-COMPOSITE BOX BEAM SUPERSTRUCTURE ON CAPPED PILE ABUTMENTS.
SPANS: 87'-0" C/C BOX BEAM BEARING
ROADWAY: 28'-0" F/F RAILING
LOADING: HL-93
SKEW: 5'-00'-00" LF
APPROACH SLABS: NONE
ALIGNMENT: TANGENT
CROWN: 0.02 FT/FT
FUTURE WEARING SURFACE: 60 PSF
COORDINATES: LATITUDE N41°03'50" LONGITUDE W82°30'21"



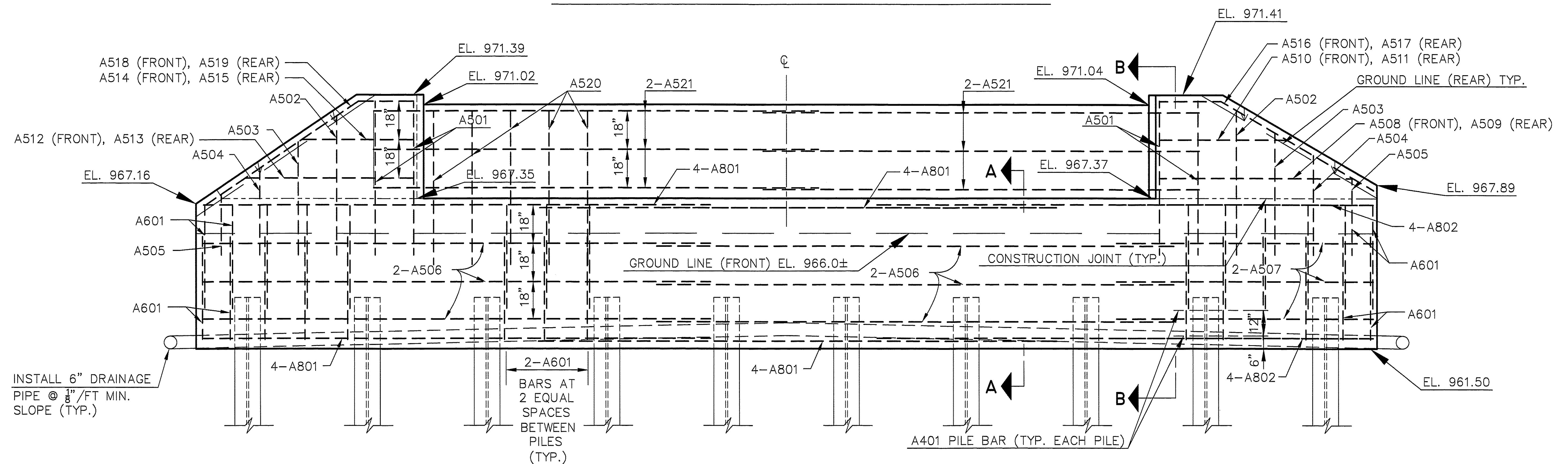
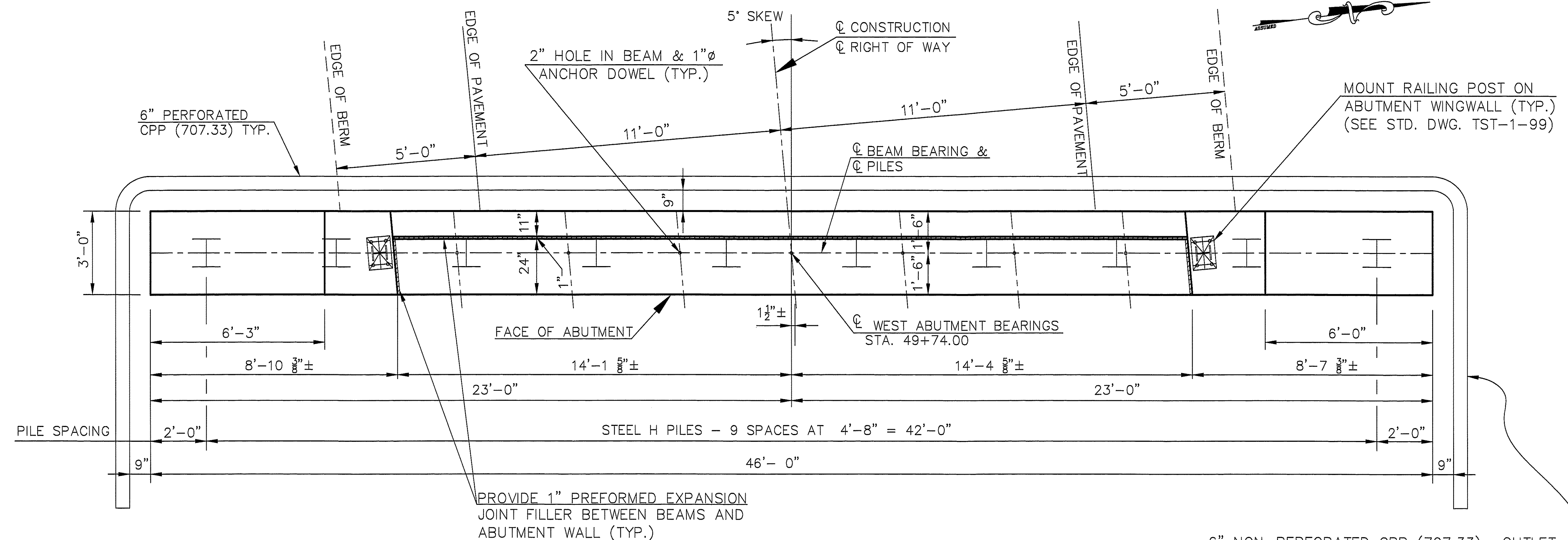
HURON COUNTY STA. 49+74 STA. 50+61	HURON COUNTY DATE REVIEWED CDL STRUCTURE FILE NUMBER 3948315	HCEO Huron County Engineer
SITE PLAN HUR-T.R.-145-00.38 OMEGA RD. OVER SOUTHWEST BRANCH VERMILION RIVER		
HUR-T.R. 145-00.38 PID 94457		
1/9		
<div>12</div> <div>20</div>		

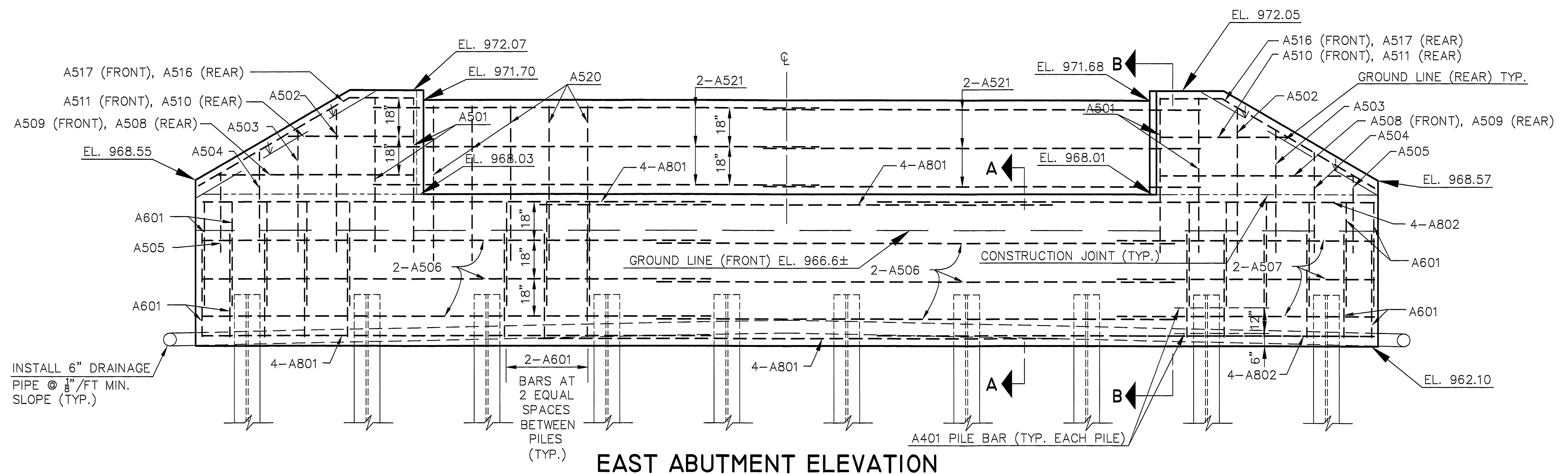
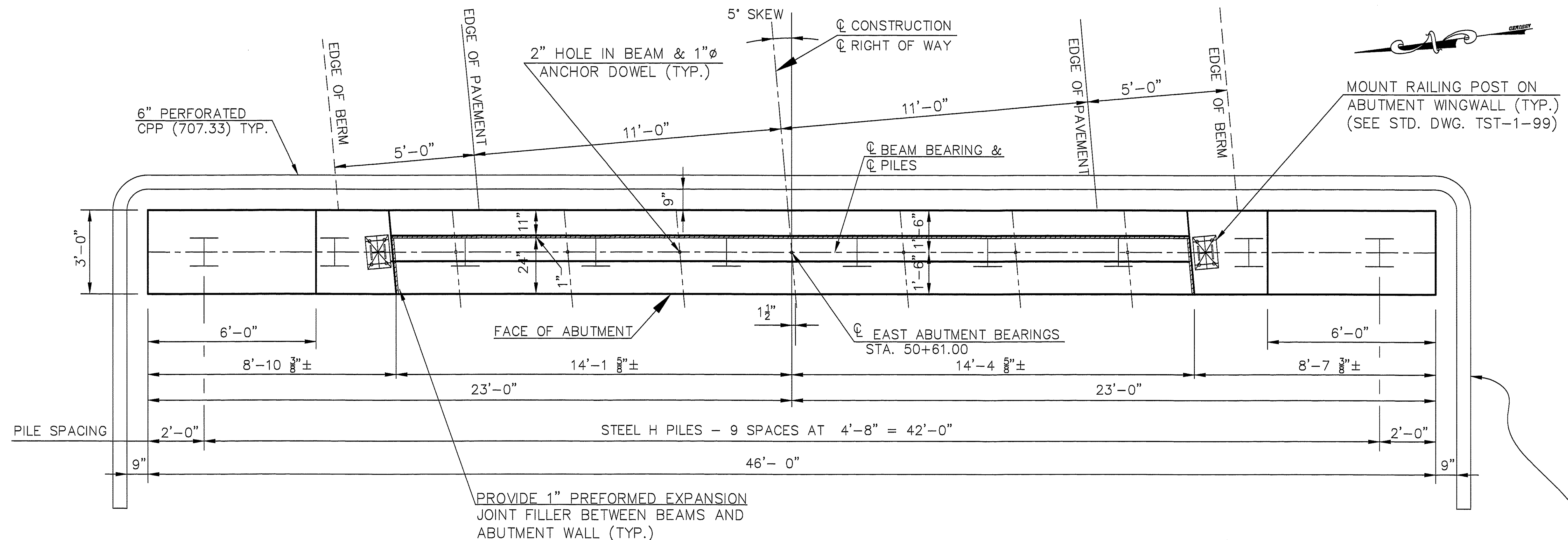
			CALCULATED	RAK	CHECKED	CDL
			STRUCTURE GENERAL NOTES			
			HUR-T.R.145-00.38			
			2/9			
			13 20			
DESIGN SPECIFICATIONS	PRESTRESSED BEAM SHOP DRAWINGS	ITEM 507 – STEEL PILES				
THIS STRUCTURE CONFORMS TO CURRENT AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, THE CURRENT ODOT BRIDGE DESIGN MANUAL, AND THE AASHTO POLICY ON GEOMETRIC DESIGN OF HIGHWAY AND STREETS, 2011 EDITION.	MANUFACTURER SHALL FURNISH THE HURON COUNTY ENGINEERS OFFICE WITH DESIGN SPECIFICATIONS, CALCULATIONS AND SHOP DRAWINGS FOR THE PRESTRESSED CONCRETE BOX BEAMS, SEALED BY A REGISTERED PROFESSIONAL ENGINEER. HURON COUNTY SHALL REVIEW AND APPROVE SHOP DRAWINGS PRIOR TO THE MANUFACTURING OF THE BEAMS.	SUBSURFACE INVESTIGATIONS REVEALED THAT HIGHLY WEATHERED SHALE WILL BE ENCOUNTERED AT ELEVATION 928.0±. THE MATERIAL ABOVE THE SHALE CONSISTS OF HARD, GREY, SILTY CLAY. PILES SHALL BE DRIVEN INTO THE SHALE LAYER AT ELEVATION 920± OR 45± FEET BELOW BOTTOM OF ABUTMENT CAP.				
LOAD MODIFIER FOR OPERATIONAL IMPORTANCE	MANUFACTURER SHALL ALSO FURNISH THE HURON COUNTY ENGINEERS OFFICE WITH A LOAD RATING ANALYSIS REPORT PER ODOT BRIDGE DESIGN MANUAL, SECTION 900.	ASBESTOS NOTIFICATION				
OPERATIONAL IMPORTANCE: A LOAD MODIFIER OF 1.0 HAS BEEN ASSUMED FOR THE DESIGN OF THIS STRUCTURE IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, ARTICLE 1.3.5 AND THE ODOT BRIDGE DESIGN MANUAL, 2007.	ITEM 512	AN ASBESTOS SURVEY OF THE OMEGA ROAD (HUR–TR145–00.38) BRIDGE OVER THE SOUTHWEST BRANCH OF THE VERMILION RIVER, SCHEDULED FOR REPLACEMENT, WAS CONDUCTED BY A CERTIFIED ASBESTOS HAZARD EVALUATION SPECIALIST. THE SURVEY DETERMINED THAT NO ASBESTOS IS PRESENT ON THE BRIDGE.				
DESIGN LOADING	ALL EXPOSED CONCRETE SURFACES OF THE ABUTMENTS, INCLUDING WINGWALLS, AND LIMITS OF THE CONCRETE SUPERSTRUCTURE, AS PER PLAN DETAILS, SHALL BE SEALED. EPOXY–URETHANE, STANDARD COLOR NO. 17773, SHALL BE USED.	A COPY OF THE OHIO ENVIRONMENTAL PROTECTION AGENCY (OEPA) NOTIFICATION OF DEMOLITION AND RENOVATION FORMS, PARTIALLY COMPLETED AND SIGNED BY THE BRIDGE OWNER, WILL BE PROVIDED TO THE SUCCESSFUL BIDDER. THE CONTRACTOR SHALL COMPLETE THE FORM AND SUBMIT IT TO:				
HL–93 FUTURE WEARING SURFACE OF 60 LBS PER SQ. FT.	PRESTRESSED BEAM TESTS	SHANNON NABORS OHIO EPA NORTHWEST DISTRICT OFFICE 347 N. DUNBRIDGE ROAD BOWLING GREEN, OHIO 43402 (419) 352–8461 FAX (419) 352–8468				
DESIGN DATA	MANUFACTURER SHALL FURNISH HURON COUNTY WITH COPIES OF THE 28 DAY CYLINDER TEST RESULTS FOR EACH BEAM, TO VERIFY THAT THE 28 DAY STRENGTH OF 7000 PSI HAS BEEN ACHIEVED.	AT LEAST TEN (10) WORKING DAYS PRIOR TO THE START OF ANY DEMOLITION. THE CONTRACTOR SHALL PROVIDE A COPY OF THE COMPLETED FORM TO THE ENGINEER.				
CONCRETE, CLASS QC 1 – COMPRESSIVE STRENGTH AT 28 DAYS, f’c=4.0 KSI (SUBSTRUCTURE) REINFORCING STEEL – MINIMUM YIELD STRENGTH 60 KSI	ITEM 516 – BEARING PAD SHIMS, AS PER PLAN	INFORMATION REQUIRED ON THE FORM WILL INCLUDE: 1) THE CONTRACTOR’S NAME AND ADDRESS. 2) THE SCHEDULED DATES FOR THE START AND COMPLETION OF BRIDGE REMOVAL. 3) A DESCRIPTION OF THE PLANNED DEMOLITION WORK AND THE METHOD(S) TO BE USED				
CONCRETE FOR PRESTRESSED BEAMS: COMPRESSIVE STRENGTH (AT 28 DAYS) – 7.0 KSI COMPRESSIVE STRENGTH (RELEASE) – 5.0 KSI	1/8 INCH THICK PREFORMED BEARING PAD SHIMS, PLAN AREA 6 INCHES BY 12 INCHES SHALL BE PLACED UNDER THE ELASTOMERIC BEARING PADS WHERE REQUIRED FOR PROPER BEARING. PAYMENT WILL BE MADE AT THE CONTRACT BID PRICE FOR ITEM 516 – 1/8 INCH PREFORMED BEARING PADS. ANY UNUSED SHIMS SHALL BECOME THE PROPERTY OF THE COUNTY.	REFER TO THE ASBESTOS SURVEY SPECIAL PROVISION.				
PRESTRESSING STRANDS – ASTM A416 GRADE 270, 1/2” DIAMETER, SEVEN WIRE, UNCOATED, LOW RELAXATION STRANDS, HAVING As = 0.167 SQ. IN., f’s = 270,000 P.S.I., INITIAL STRESS 0.75 f’s = 202,500 P.S.I., INITIAL TENSION LOAD = 33,818 LBS. / STRAND AND STRESS AT RELEASE 0.69 f’s = 186,300 P.S.I. (ASSUMED AT SECTION OF MAX. MOMENT.)	SOIL REPORT	THE CONTRACTOR SHALL FURNISH ALL FEES, LABOR AND MATERIAL NECESSARY TO COMPLETE AND SUBMIT THE OEPA NOTIFICATION FORM.				
DECK PROTECTION METHOD	SUBSURFACE INVESTIGATION INFORMATION IS INCLUDED IN THE BID DOCUMENTS.	ITEM 503 – UNCLASSIFIED EXCAVATION				
TYPE 3 WATERPROOFING, STAINLESS STEEL DRIP STRIP AND ASPHALT CONCRETE OVERLAY.	DEMOLITION DEBRIS	THIS ITEM SHALL INCLUDE ALL EXCAVATION (EXCEPT ITEM 202 PAVEMENT REMOVED), GRANULAR BACKFILL TO BOTTOM OF ITEM 304 AGGREGATE BASE AND EMBANKMENT FROM STATION 49+45 TO STATION 50+75 NEEDED FOR THE CONSTRUCTION OF THE PROPOSED BRIDGE.				
ITEM 202 – PORTIONS OF STRUCTURE REMOVED, AS PER PLAN	OVERHEAD (O/H) UTILITY LINES	GRANULAR BACKFILL LIMITS UNDER PAVEMENT SHALL EXTEND AT A 1:1 SLOPE FROM EDGE OF ROADWAY TO THE SURFACE OF UNDISTURBED GROUND.				
ALL APPLICABLE PROVISIONS OF ITEM 202 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS SHALL BE IN EFFECT IN THE PERFORMANCE OF THIS ITEM EXCEPT AS MODIFIED HEREIN.	DURING CONSTRUCTION OF THE PROJECT, THE CONTRACTOR SHALL GIVE SPECIAL ATTENTION TO THE EXISTING O/H UTILITY LINES LOCATED WITHIN THE GENERAL AREA OF THE PROJECT.	EXCAVATION BETWEEN THE EXISTING WEST ABUTMENT AND THE PROPOSED WEST ABUTMENT SHALL EXTEND TO ELEVATION 961.5. IF UNSUITABLE MATERIAL IS ENCOUNTERED AT THIS DEPTH, ADDITIONAL EXCAVATION AND GRANULAR BACKFILL MATERIAL TYPE C SHALL BE PERFORMED AS DIRECTED BY THE ENGINEER. PAYMENT FOR THE EXTRA WORK SHALL BE BY CHANGE ORDER AT THE UNIT PRICE BID FOR EXCAVATION AND GRANULAR MATERIAL, TYPE C.				
THIS WORK SHALL INCLUDE THE REMOVAL AND DISPOSAL OF THE EXISTING SUPERSTRUCTURE.	IN PLANNING CONSTRUCTION AND REMOVAL OPERATIONS, THE CONTRACTOR SHALL CONSIDER THE POTENTIAL CONFLICT OF THE O/H UTILITY LINES WITH THE MOVEMENT, TRAVERSING AND OPERATIONS OF HIS CONSTRUCTION EQUIPMENT. THE CONTRACTOR SHALL MODIFY HIS CONSTRUCTION PROCEDURES AND METHODS AS NECESSARY TO ELIMINATE THE CONFLICT MENTIONED ABOVE. THE CONTRACTOR SHALL OBSERVE ALL OSHA RULES AND REGULATIONS, AND PROTECT AND SAFEGUARD THE SAFETY OF THE PERSONNEL AND PROPERTY AT ALL TIMES.					
THE WEST ABUTMENT AND WINGWALLS SHALL BE REMOVED TO ELEVATION 962.0±. THE EAST ABUTMENT AND WINGWALLS SHALL BE REMOVED TO ELEVATION 960.0±						
ALL ABUTMENT MATERIAL TO BE DEMOLISHED AND REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR. ALL MATERIALS WHICH BECOME THE PROPERTY OF THE CONTRACTOR SHALL BE REMOVED FROM THE SITE AND PROPERLY DISPOSED OF BY THE CONTRACTOR.						
PAYMENT FOR THIS ITEM SHALL BE MADE AT THE CONTRACT LUMP SUM PRICE BID FOR ITEM 202 – PORTIONS OF STRUCTURES REMOVED, AS PER PLAN, WHICH PRICE SHALL CONSTITUTE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY TO PERFORM THIS WORK IN ACCORDANCE WITH THESE SPECIFICATIONS.						

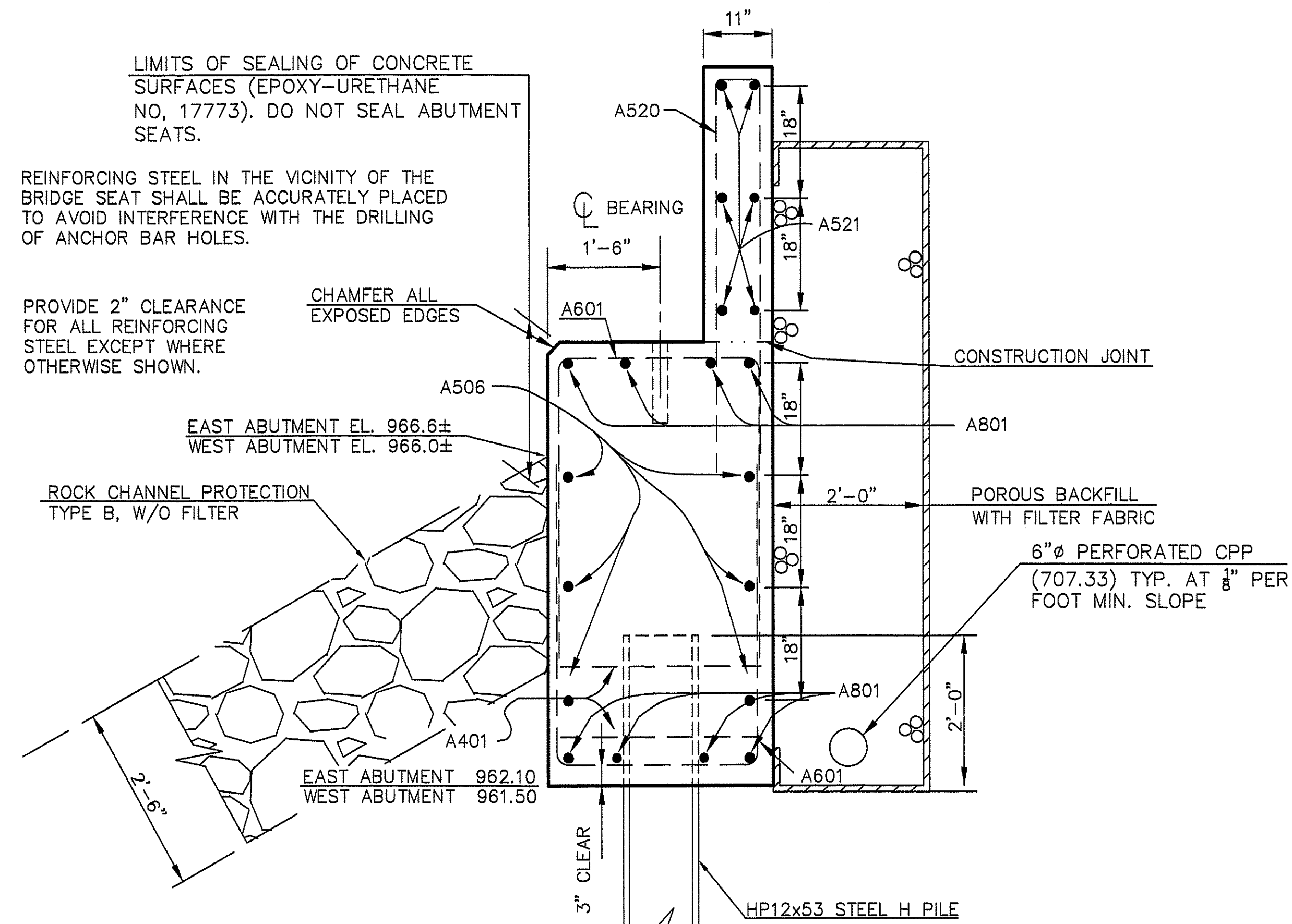
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STRUCTURE ESTIMATED QUANTITIES

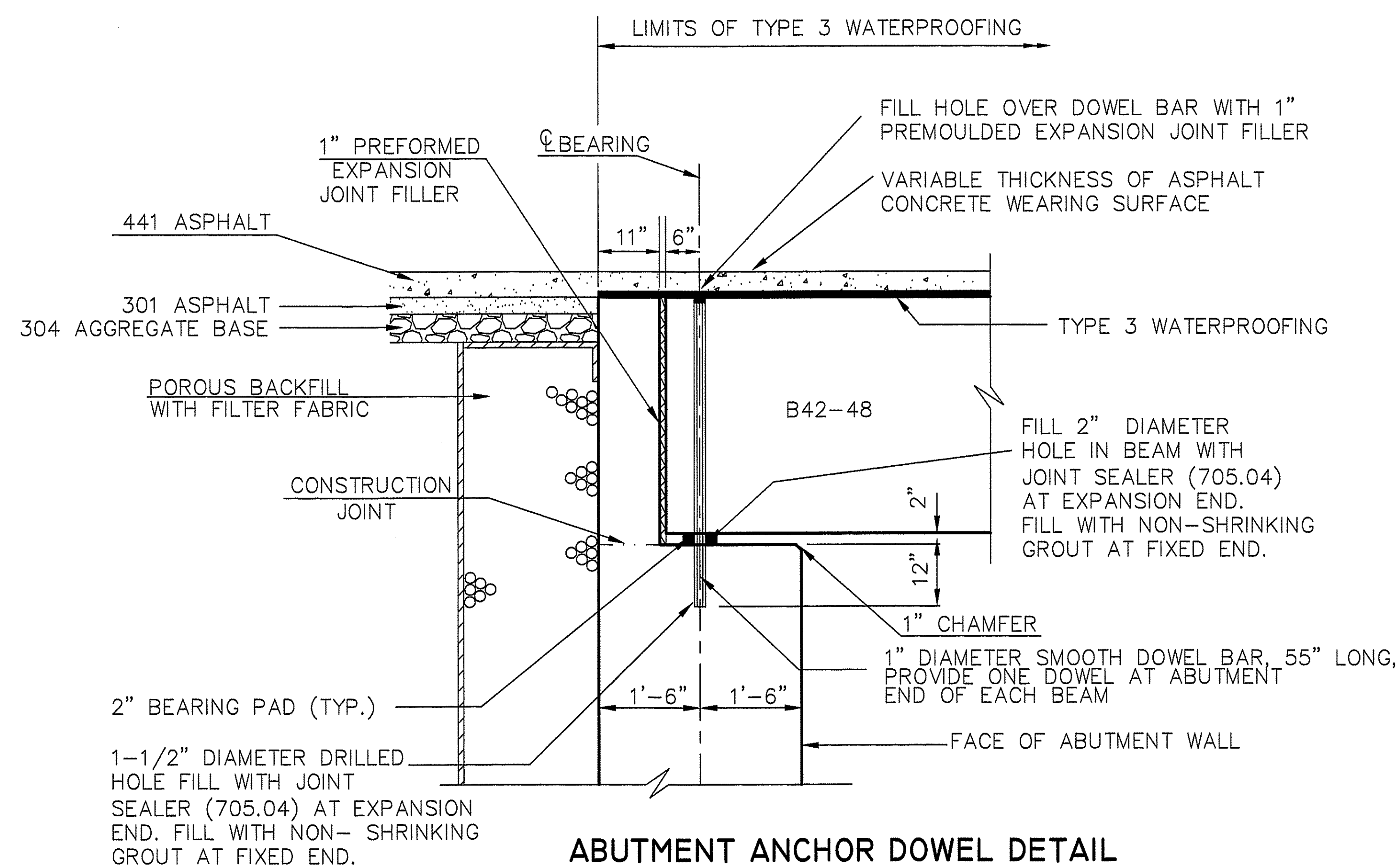
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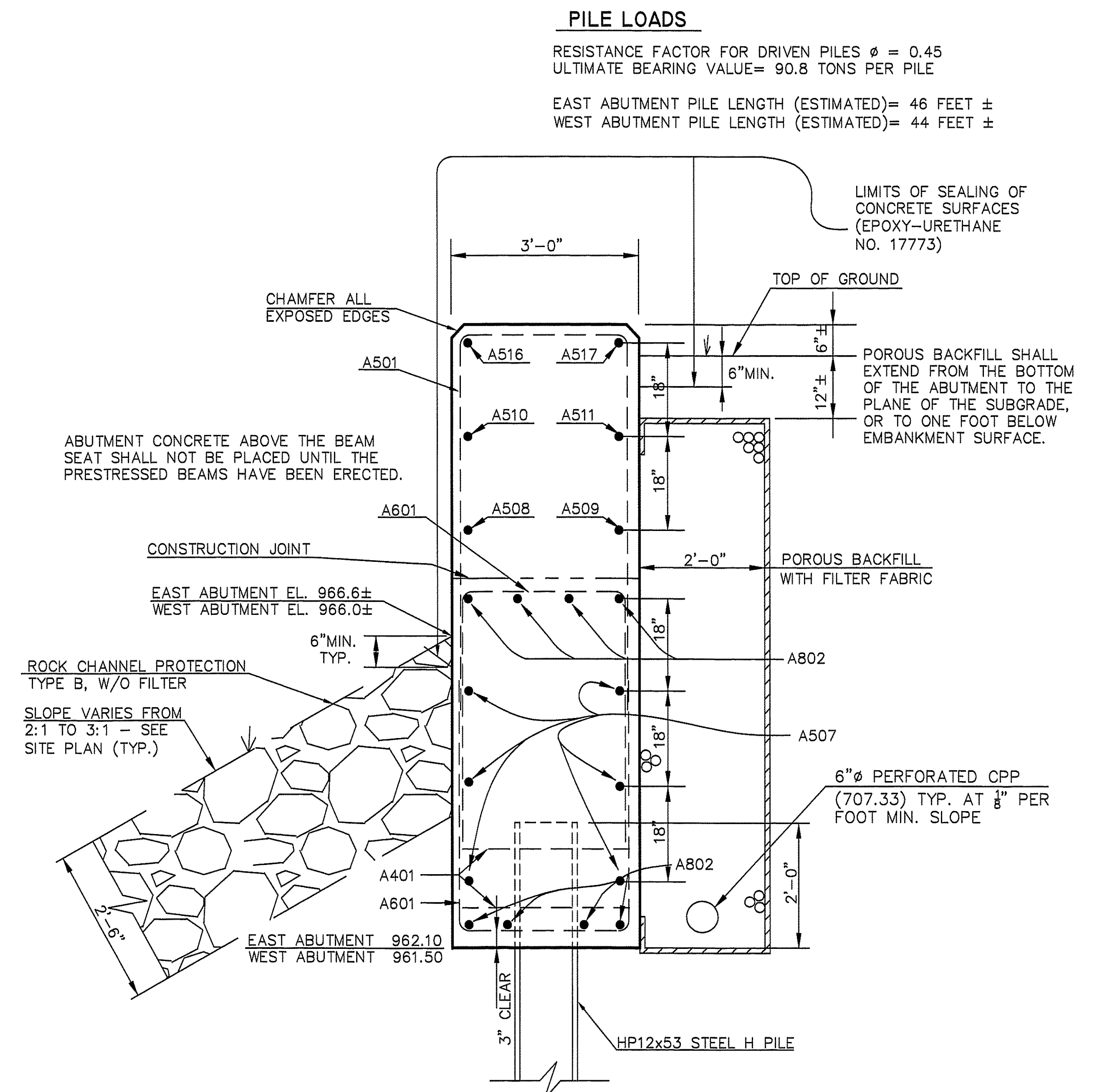




SECTION A-A



ABUTMENT ANCHOR DOWEL DETAIL



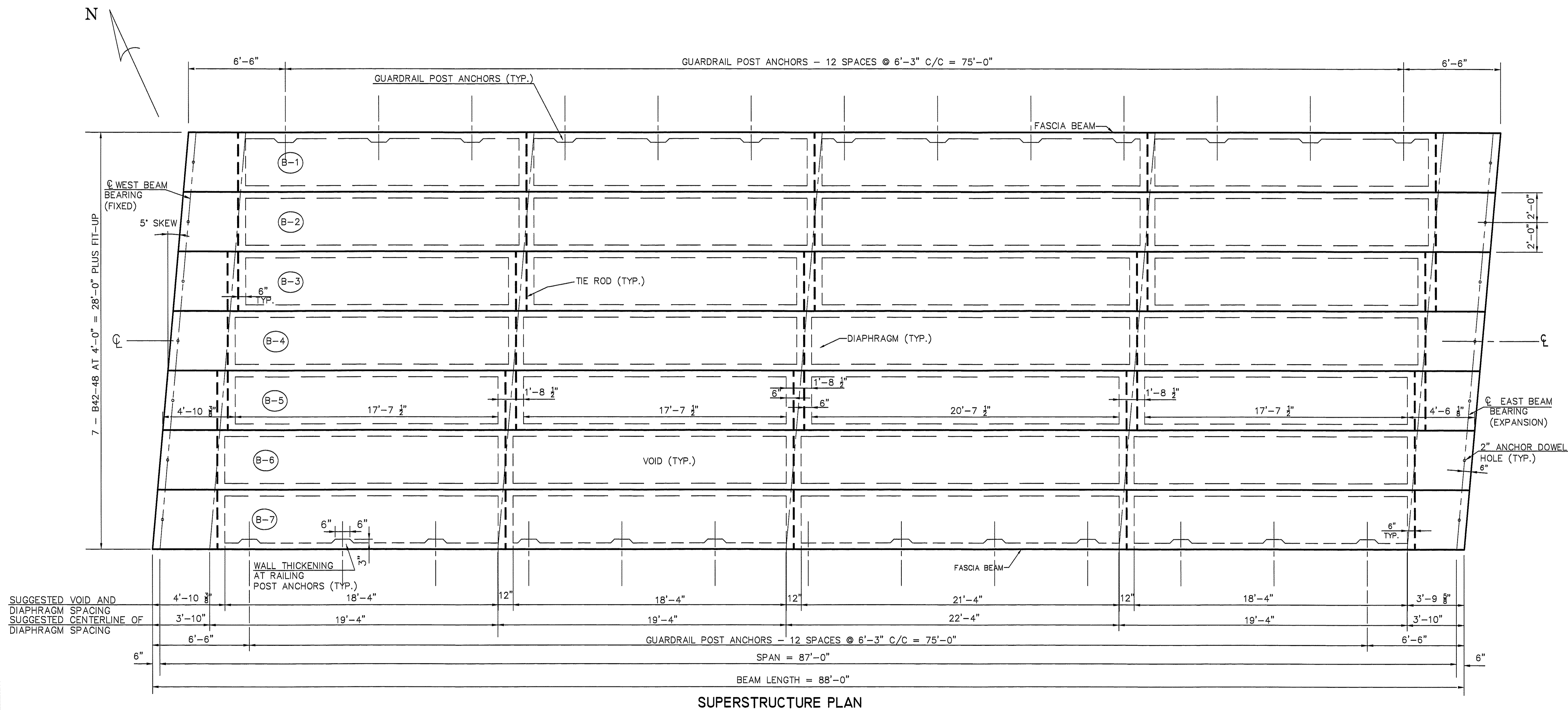
SECTION B-B

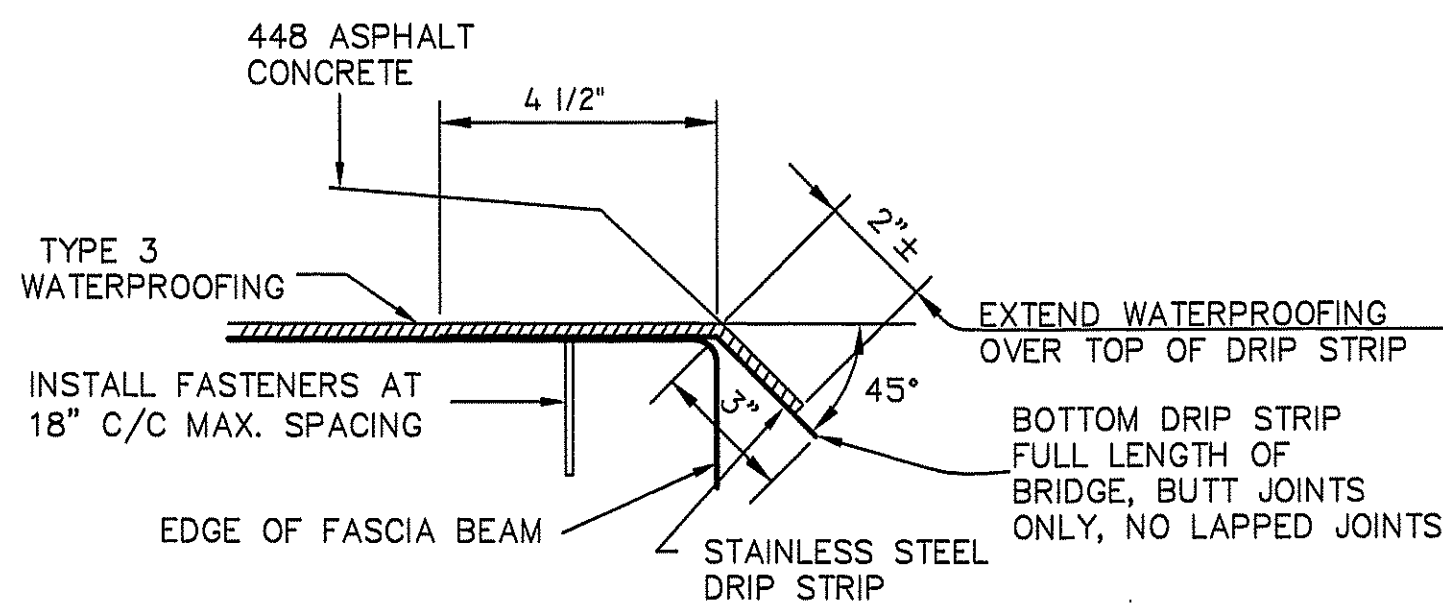
ABUTMENT DETAILS

HUR-T.R.145-00.38

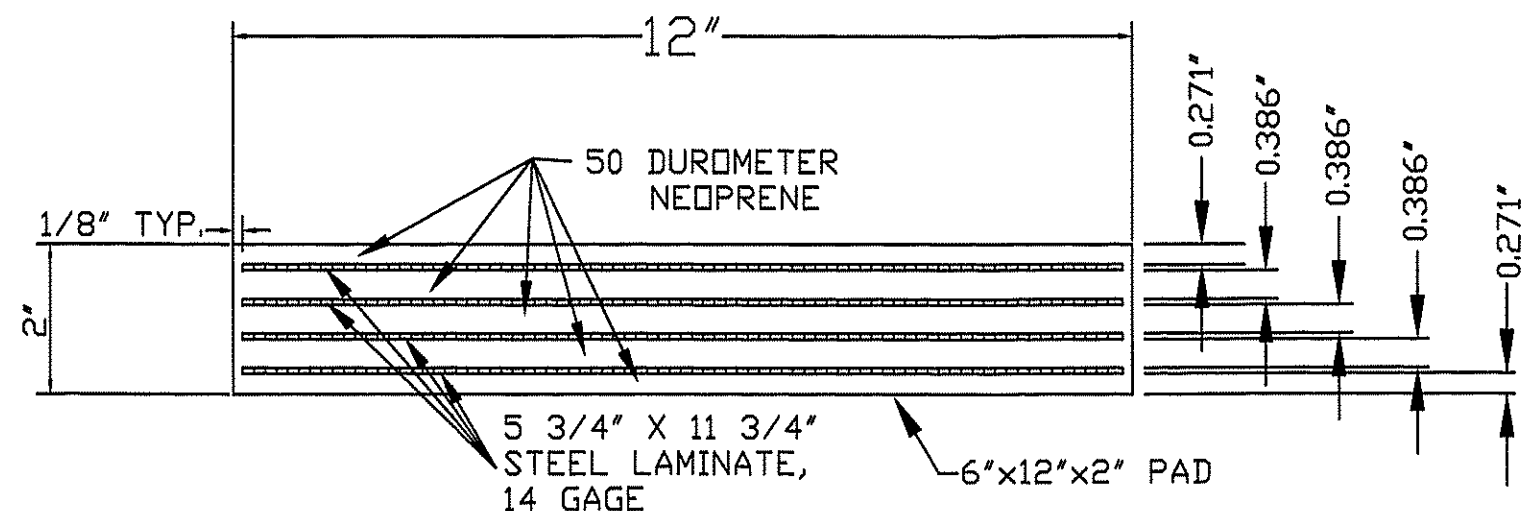
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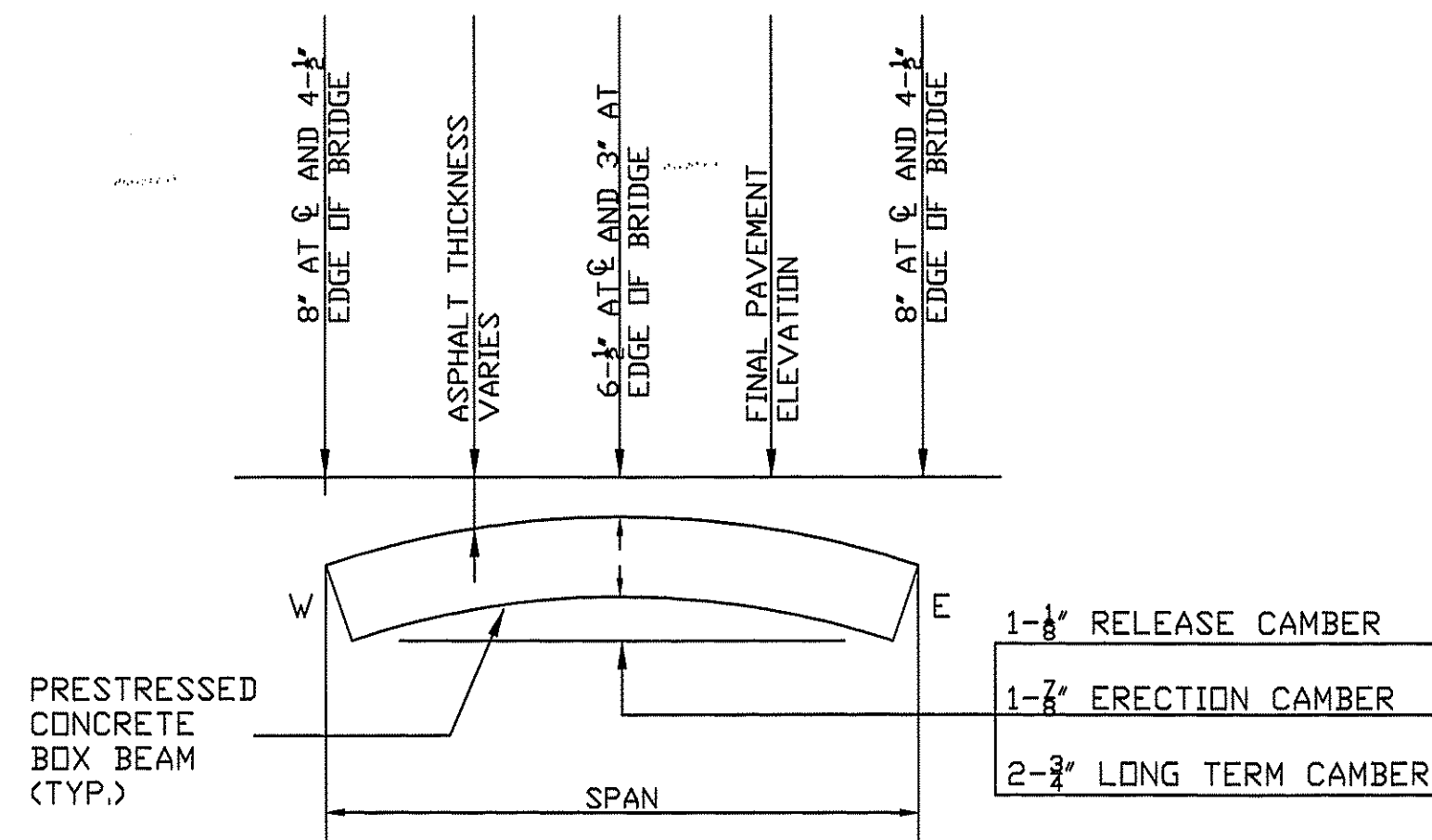
DRIP STRIP DETAIL



ELASTOMERIC BEARINGS SHALL COMPLY WITH ITEM 516 AND AASHTO STANDARD SPECIFICATION FOR HIGHWAY BRIDGES, SECTION 18, BEARING DEVICES, DIVISION II, CONSTRUCTION, ARTICLES 18.4.5.1 AND 18.5.6.2. BEARINGS SHALL BE GRADE 3, 50 DUROMETER ELASTOMER, AND SHALL BE SUBJECTED TO THE LOAD TESTING REQUIREMENTS DEFINED IN ARTICLE 18.7.4.5 OF THE AASHTO DOCUMENT LISTED ABOVE. BEARINGS WERE DESIGNED UNDER SECTION 14.6.5 OF SECTION 14, BEARINGS, DIVISION I, DESIGN. TESTING SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE BEARINGS, EACH.

DEAD LOAD = 35.3K
LIVE LOAD = 12.7K
MAXIMUM DESIGN LOAD = 48.0K

LAMINATED ELASTOMERIC BEARING PAD DETAIL

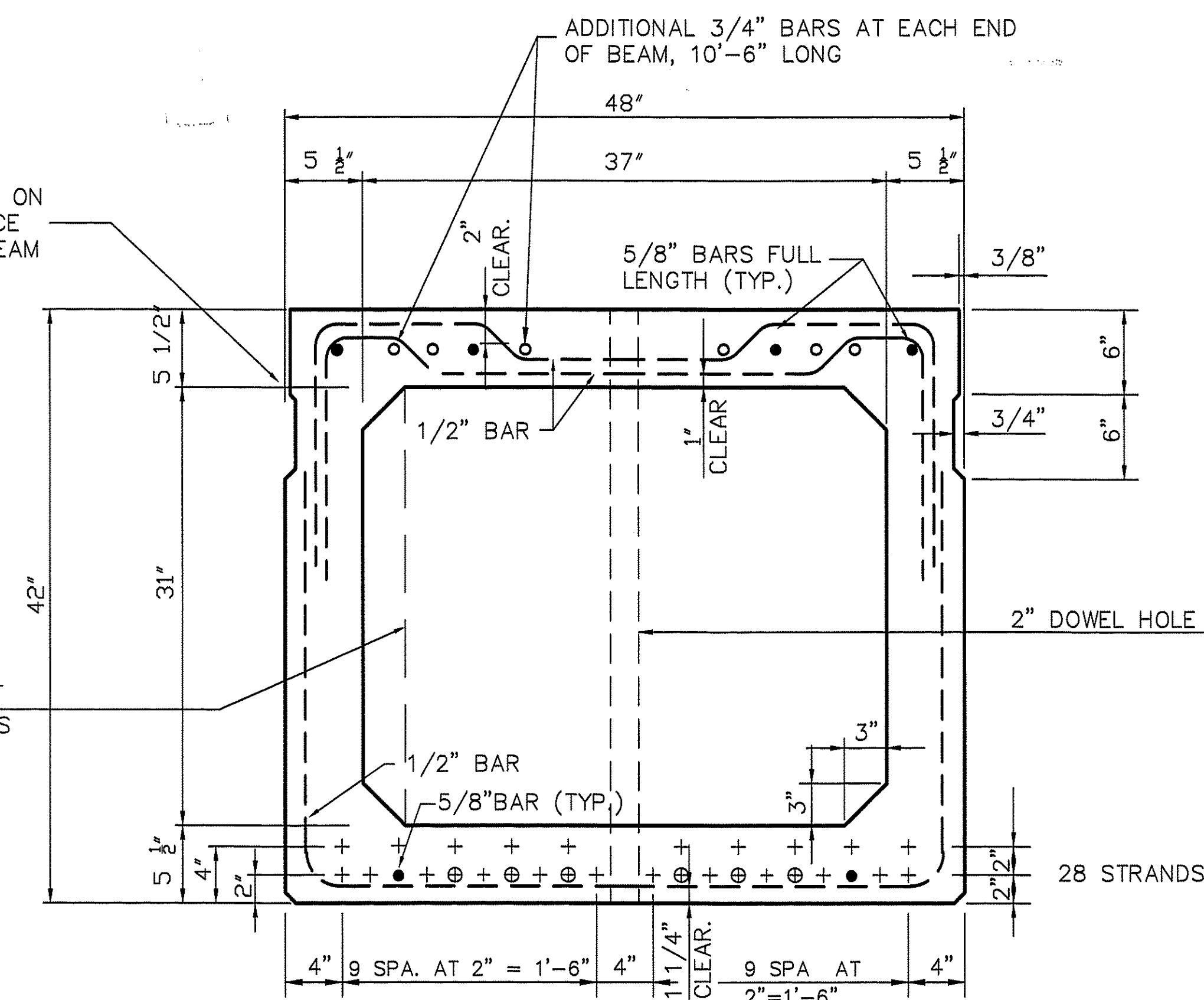


CAMBER AND ASPHALT THICKNESS DIAGRAM

ASPHALT CONCRETE SURFACE SHALL CONSIST OF 1 1/2" THICKNESS OF 448 SURFACE COURSE OVER A VARIABLE THICKNESS OF 448 INTERMEDIATE COURSE.

OMIT KEYWAY ON EXTERIOR FACE OF FASCIA BEAM

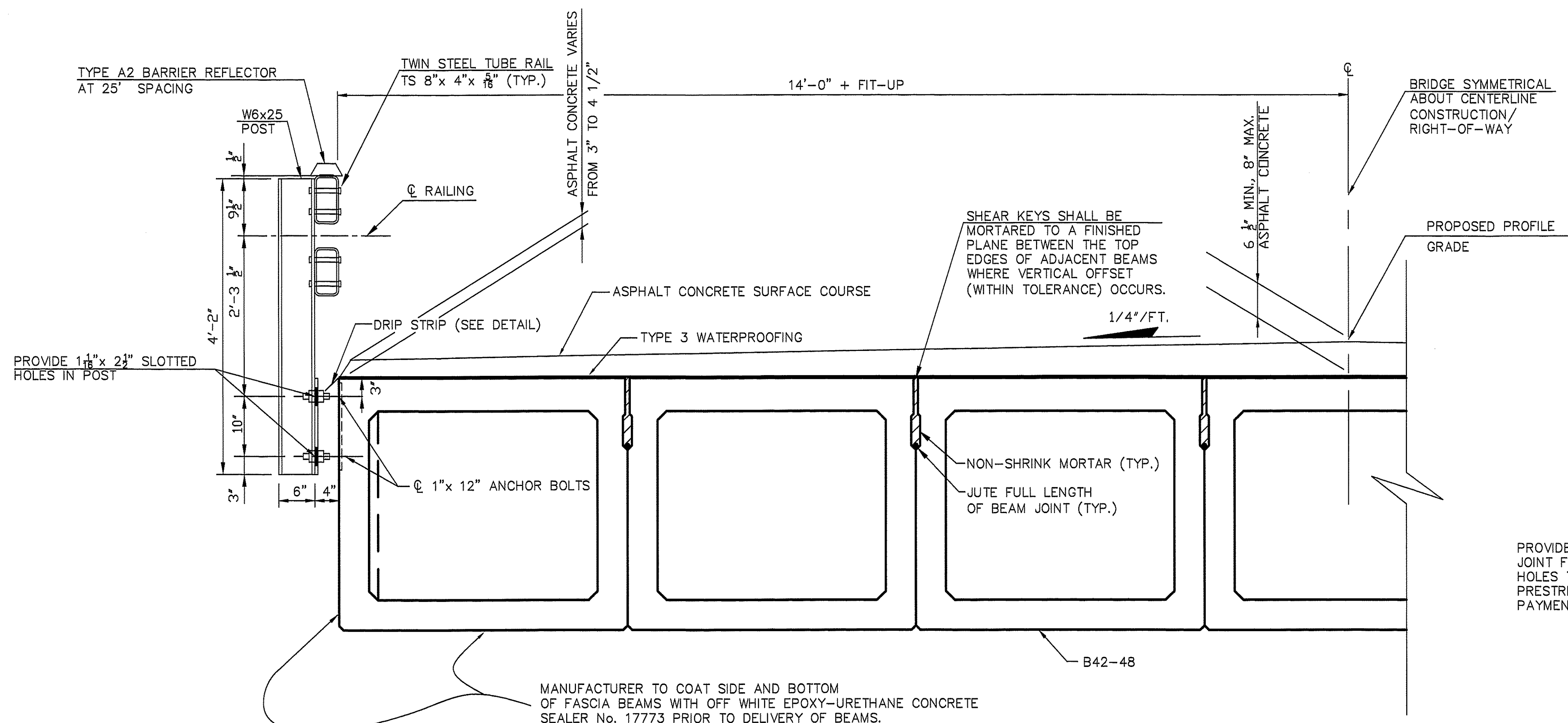
THICKENED AREA AT GUARDRAIL ANCHORS



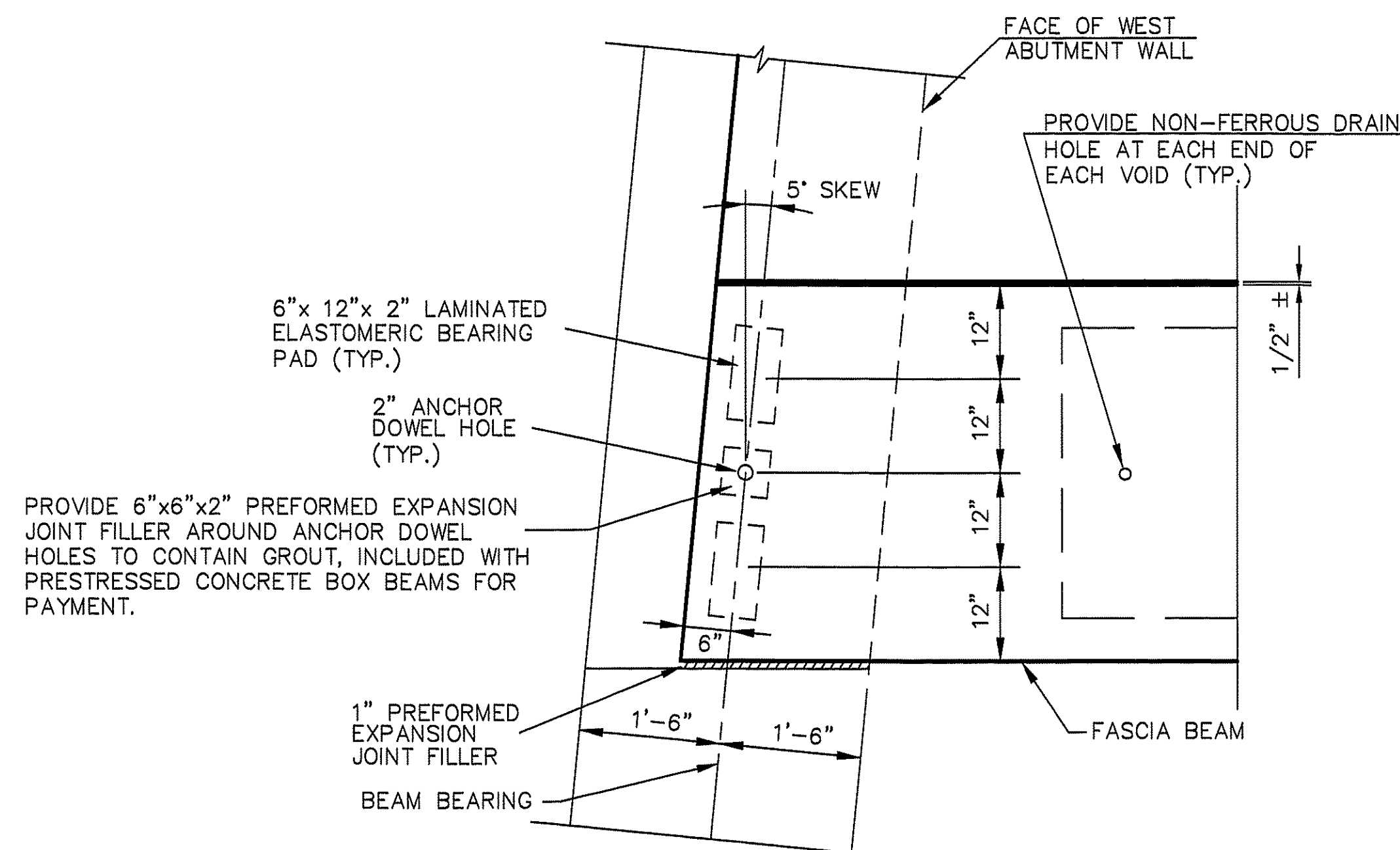
REINFORCING BAR CLEARANCE SHALL BE 2" UNLESS OTHERWISE NOTED. \oplus INDICATES DEBONDED STRAND HAVING A LENGTH OF 2'-6".

MANUFACTURER SHALL VERIFY NUMBER AND SPACING OF STRANDS. MANUFACTURER SHALL VERIFY NUMBER, LENGTH AND LOCATION OF DEBONDED STRANDS. MANUFACTURER SHALL VERIFY NUMBER, SIZE, LOCATION AND LENGTH OF ADDITIONAL 3/4" BARS AT ENDS OF BEAMS.

NON-COMPOSITE B42-48 BOX BEAM



HALF TRANSVERSE SECTION



BEAM BEARING PLAN

CALCULATED
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SUPERSTRUCTURE DETAILS

HUR-T.R.145-00.38

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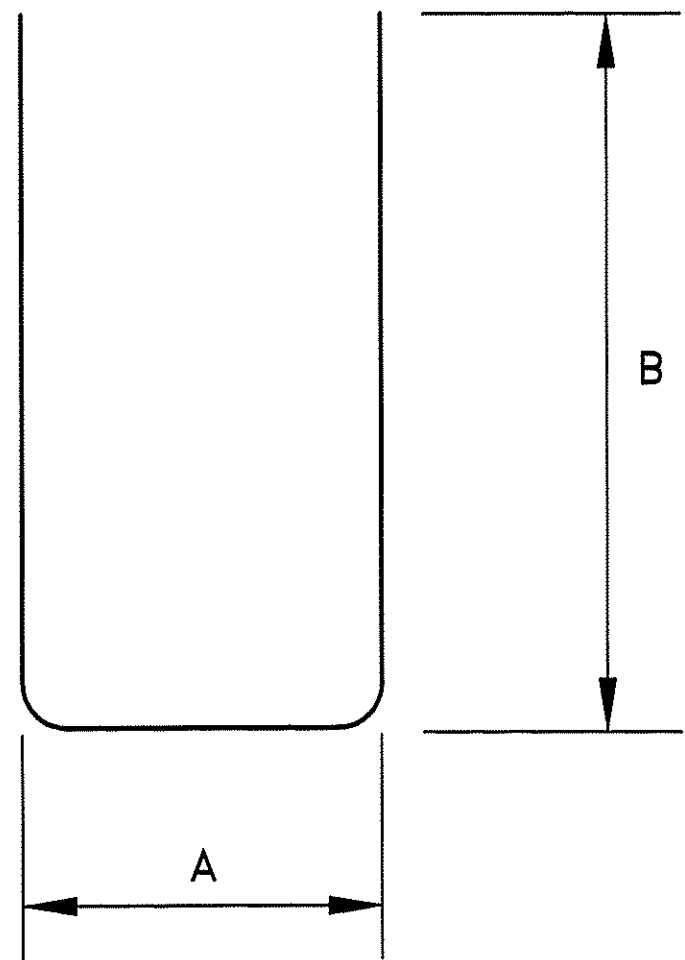
ABUTMENT REINFORCING STEEL							
MARK	NUMBER REQUIRED	LENGTH	TYPE	DIMENSION "A"	DIMENSION "B"	DIMENSION "C"	WEIGHT (LBS.)
A801	32	20'-0"	STR				1,709
A802	16	19'-4"	STR				826
A601	124	11'-10"	1	2'-8"	4'-9"		2,204
A501	8	17'-3"	1	2'-8"	7'-5"		144
A502	4	16'-5"	1	2'-8"	7'-0"		66
A503	4	14'-5"	1	2'-8"	6'-0"		60
A504	4	12'-5"	1	2'-8"	5'-0"		52
A505	4	10'-5"	1	2'-8"	4'-0"		43
A506	24	20'-0"	STR				501
A507	12	12'-6"	STR				156
A508	3	7'-7"	STR				24
A509	3	7'-10"	STR				25
A510	3	4'-11"	STR				15
A511	3	5'-2"	STR				16
A512	1	6'-10"	STR				7
A513	1	6'-7"	STR				7
A514	1	4'-7"	STR				5
A515	1	4'-4"	STR				5
A516	3	9'-2 1/2"	2	2'-5"	3'-6"	5'-10"	29
A517	3	9'-5 1/2"	2	2'-8"	3'-6"	5'-10"	30
A518	1	8'-7"	2	2'-5"	3'-6"	5'-1"	9
A519	1	8'-4"	2	2'-2"	3'-6"	5'-1"	9
A520	38	14'-6"	1	0'-7"	7'-1"		575
A521	24	17'-10"	STR				446
A401	40	9'-4"	3	2'-6"	2'-0"	0'-8"	249
TOTAL							7,212

NOTE

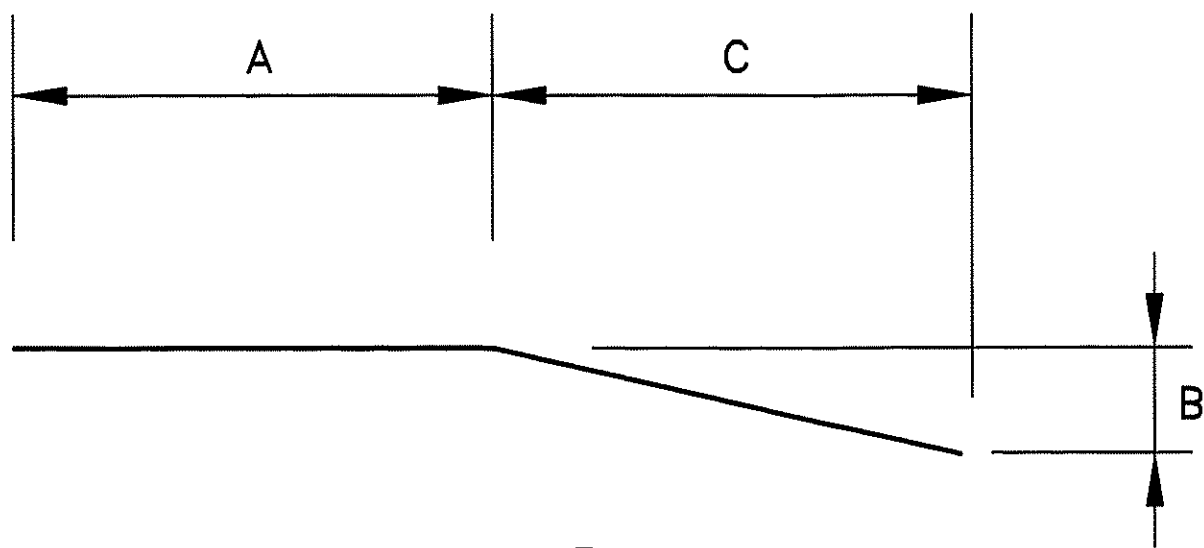
THE BAR SIZE NUMBER IS INDICATED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT WHERE THREE DIGITS ARE USED INDICATES THE BAR SIZE NUMBER.

BAR DIMENSIONS ARE SHOWN OUT TO OUT.

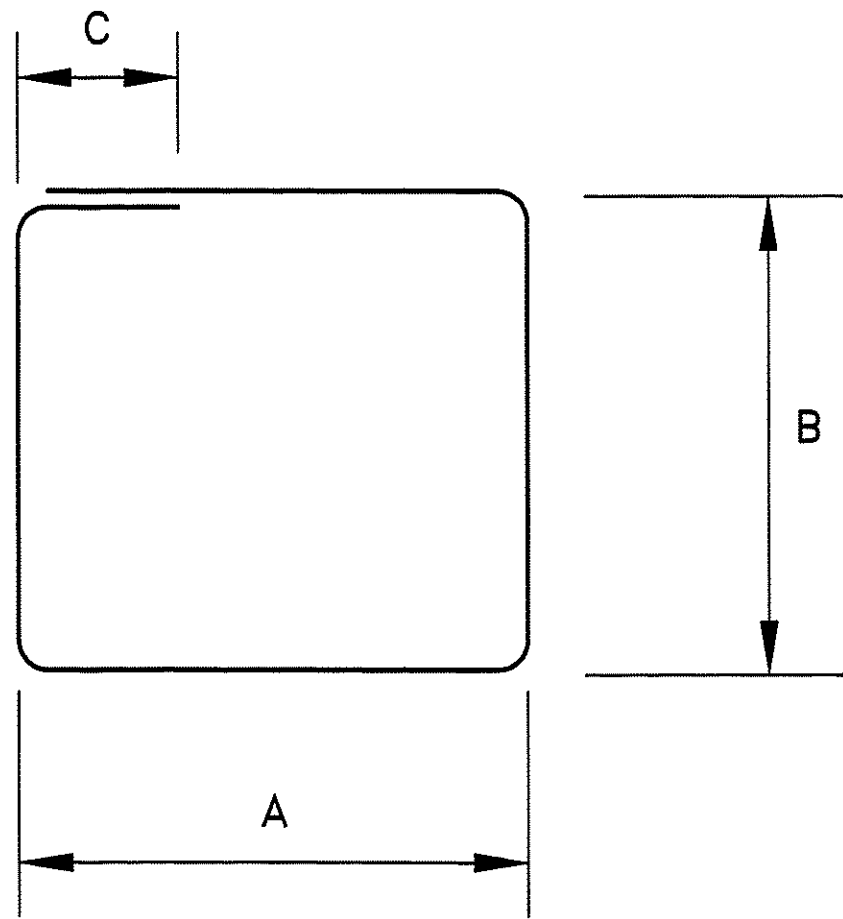
STRAIGHT BARS ARE INDICATED BY "STR".



TYPE ①



TYPE ②



TYPE ③