

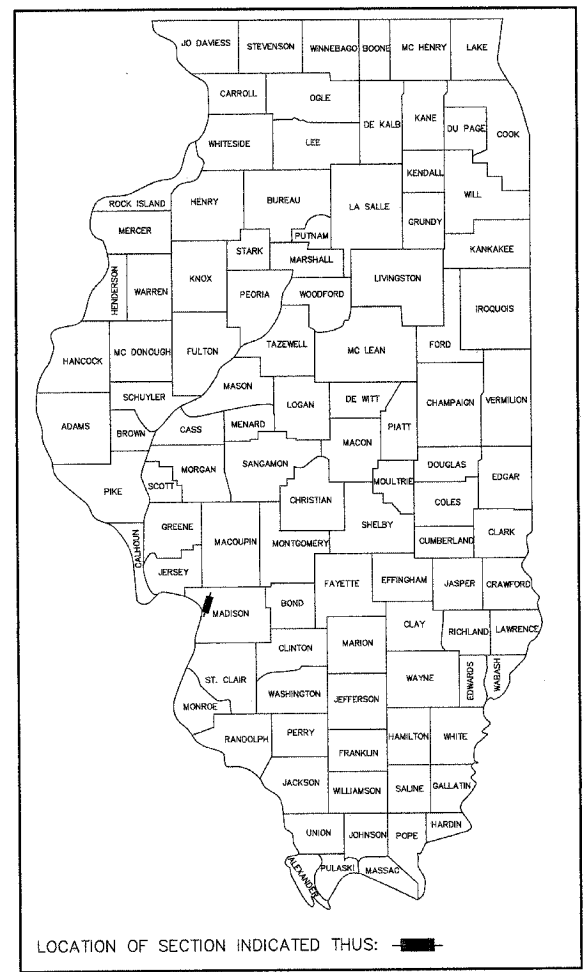
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
9003	03-00044-00-BR	MADISON	24	1
STA. TO STA.				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
COVER SHEET				

CONTRACT NO. 97256

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
PLANS FOR PROPOSED
FAU ROUTE 9003 (POWDER MILL ROAD)
OVER EAST FORK OF WOOD RIVER
SECTION 03-00044-00-BR
PROJECT BRM-501(117)
VILLAGE OF EAST ALTON
MADISON COUNTY
C-98-353-04

INDEX OF SHEETS

SHEET NO.	ITEM
1	COVER SHEET
2	SUMMARY OF QUANTITIES & GENERAL NOTES
3	TYPICAL SECTIONS
4-5	SUGGESTED STAGES OF CONSTRUCTION & TRAFFIC CONTROL
6	PLAN & PROFILE SHEETS
7	REMOVAL & EROSION CONTROL PLAN
8-24	BRIDGE PLANS

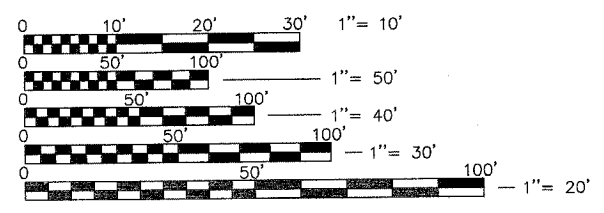


STANDARDS

000001-04	631031-05
001001	635011-01
001006	668001
280001-02	701001-01
420001-06	701006-02
420401-05	701201-02
420701-01	701301-02
421001-01	701311-02
515001-02	701321-08
542401	702001-05
601101	704001-02
606001-02	780001-01
609006-02	886001
630001-05	

SCALES

PLAN	1" = 20'
PROFILE HORIZ.	1" = 20'
PROFILE VERT.	1" = 5'
CROSS SECTIONS HORIZ.	N/A
CROSS SECTIONS VERT.	N/A

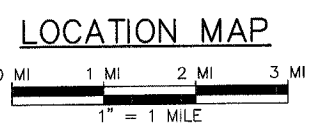
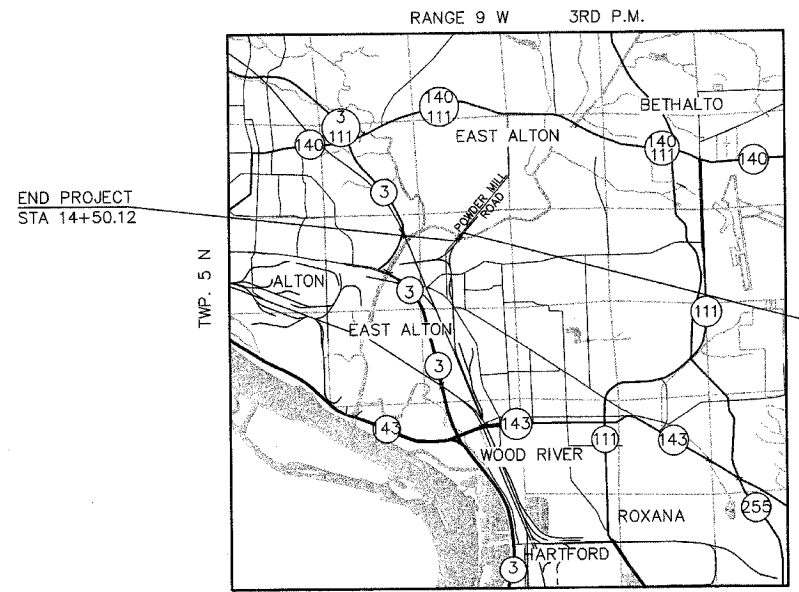


FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES, REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES, IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

JOINT UTILITY LOCATING INFORMATION FOR EXCAVATIONS PHONE: 800-892-0123

CONTRACT NO. 97256

ROADWAY CLASSIFICATION = COLLECTOR (URBAN)
DESIGN SPEED = 30 MPH
CURRENT TRAFFIC (2003) = 5,600
DESIGN YEAR (2023) = 7,000



NET LENGTH = 300.12 FEET (0.057 MILES)

PROJECT INCLUDES REHABILITATING S.N. 060-6400, A 3-SPAN CONTINUOUS WIDE FLANGE EXISTING STRUCTURE, USING A COMPOSITE DECK AND SEMI-INTEGRAL ABUTMENTS. BEGIN BRIDGE STA. 12+08.25 AND END BRIDGE STA. 14+11.75. SOUTH SPAN 60'-0", CENTER SPAN 80'-0", AND NORTH SPAN 60'-0".



EXPIRES 11/30/2005

JEFFREY R. RENSING

APPROVED 5/31/05 2005
Jan H. Bight
MAYOR OF EAST ALTON

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED 6-2 2005
Denise Oberthur
DISTRICT ENGINEER OF LOCAL ROADS & STREETS

PASSED 6-2 2005
Mary C. Lamie
MARY C. LAMIE, P.E. DEPUTY DIRECTOR OF HIGHWAYS REGION FIVE ENGINEER



GENERAL NOTES

1. THE ILLINOIS DEPARTMENT OF TRANSPORTATION (IDOT) HIGHWAY STANDARDS WITH THE REVISION NUMBER LISTED ON THE COVER SHEET OF THE PLANS SHALL APPLY TO THIS PROJECT.

2. UNDERGROUND FACILITIES, STRUCTURES AND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE SURVEYS AND RECORDS. THEIR LOCATIONS MUST BE CONSIDERED TO BE APPROXIMATE ONLY. IT IS POSSIBLE THERE MAY BE OTHERS, THE EXISTENCE OF WHICH IS NOT PRESENTLY KNOWN OR SHOWN. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THEIR EXISTENCE AND EXACT LOCATION AND TO AVOID DAMAGE THERETO. ILLINOIS LAW REQUIRES A MINIMUM 48-HOUR NOTICE TO ALL UTILITY COMPANIES BEFORE DIGGING. FIELD LOCATIONS OF UNDERGROUND FACILITIES MAY BE OBTAINED BY CALLING THE J.U.L.I.E. SYSTEM AT 800-892-0123 AND PROVIDING 48 HOURS ADVANCE NOTICE. NON-J.U.L.I.E. MEMBERS MAY BE CONTACTED DIRECT. AGENCIES KNOWN TO HAVE FACILITIES WITHIN THE PROJECT LIMITS ARE LISTED BELOW.

3. ANY FACILITIES OR APPURTENANCES WHICH ARE THE PROPERTY OF ANY PUBLIC UTILITY LOCATED WITHIN THE LIMITS OF CONSTRUCTION SHALL BE RELOCATED OR ADJUSTED BY THEIR RESPECTIVE OWNERS. THE CONTRACTOR SHALL NOTIFY AND COOPERATE WITH THE OWNERS OF ANY SUCH FACILITY IN THEIR REMOVAL AND REARRANGEMENT OPERATIONS IN ORDER THAT THESE OPERATIONS AND THE CONSTRUCTION OF THIS PROJECT MAY PROGRESS IN A REASONABLE MANNER. ALL ROADSIDE OBJECTS (UTILITY POLES, FIRE HYDRANTS, SIGNS, ETC.) SHALL BE RELOCATED TO PROVIDE A MINIMUM OF 2 FEET CLEARANCE, MEASURED FROM THE FACE OF CURB TO THE NEAR EDGE OF THE OBJECT.

4. THE FOLLOWING UTILITY COMPANIES MAY HAVE FACILITIES LOCATED WITHIN THE LIMITS OF CONSTRUCTION WHICH MAY REQUIRE ADJUSTMENT, RELOCATION OR REMOVAL. ALL ARE MEMBERS OF J.U.L.I.E., UNLESS NOTED OTHERWISE.

AMEREN IP (ELECTRIC) 2600 N. CENTER STREET MARYVILLE, IL 62062 618-346-1287	OLIN CORPORATION 427 NORTH SHAMROCK ST. EAST ALTON, IL 62024 618-258-3473	CITY OF EAST ALTON (WATER) 119 WEST MAIN EAST ALTON, IL 62024 618-259-8069
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5. THE ABOVE INFORMATION REPRESENTS THE BEST INFORMATION AVAILABLE TO THE LOCAL AGENCY AND IS ONLY INCLUDED FOR THE CONVENIENCE OF THE BIDDER. IT IS UNDERSTOOD AND AGREED THAT THE CONTRACTOR HAS TAKEN THE FOREGOING INTO CONSIDERATION IN PREPARING HIS/HER BID, AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR ANY DELAYS OR INCONVENIENCE CAUSED BY SAME.

6. THE CONTRACTOR SHALL REMOVE, MAINTAIN IN A TEMPORARY LOCATION AND PERMANENTLY RESET ALL MAILBOXES, TRAFFIC SIGNS, STREET NAME SIGNS AND ALL PRIVATE AND COMMERCIAL SIGNS WHICH INTERFERE WITH CONSTRUCTION OPERATIONS IN ACCORDANCE WITH ARTICLES 107.20 AND 107.25 OF THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" AND AS DIRECTED BY THE ENGINEER. THE COST OF THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE CONSIDERED AS INCLUDED IN THE UNIT BID PRICES OF THE CONTRACT.

7. THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL PROPERTY MARKERS AND MONUMENTS UNTIL THE OWNER AND AN AUTHORIZED SURVEYOR, OR AGENT, HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION.

8. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD PRIOR TO ORDERING MATERIALS AND COMMENCING CONSTRUCTION.

9. THE CONTRACTOR SHALL STAGE ALL WORK IN SUCH A WAY AS TO MAINTAIN INGRESS AND EGRESS TO ALL ABUTTING PROPERTIES AT ALL TIMES DURING CONSTRUCTION EXCEPT AS SHOWN ON THE STAGE CONSTRUCTION PLANS.

10. THE CONTRACTOR SHALL CONFINE ALL OPERATIONS TO THE AREA LOCATED WITHIN THE CONSTRUCTION LIMIT LINES, SHOWN ON THE PLANS. ANY AREA DISTURBED BEYOND THESE LIMITS SHALL BE RESTORED TO ITS ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE.

11. THE CONTRACTOR SHALL FERTILIZE, SEED AND MULCH ALL EARTH SURFACES DISTURBED BY CONSTRUCTION. SEE THE SUMMARY OF QUANTITIES FOR ESTIMATED PLAN QUANTITIES.

12. STRAW BALES, HAY BALES, PERIMETER EROSION BARRIER AND SILT FENCES WILL NOT BE PERMITTED FOR TEMPORARY OR PERMANENT DITCH CHECKS. DITCH CHECKS SHALL BE COMPOSED OF AGGREGATE, SILT PANELS, ROLLED EXCELSIOR, SILT WEDGES OR ANY OTHER MATERIAL APPROVED BY THE ENGINEER.

13. ANY UNSUITABLE MATERIAL ENCOUNTERED DURING CONSTRUCTION SHALL BE REMOVED BY THE CONTRACTOR AND REPLACED WITH SUITABLE MATERIAL AS APPROVED BY THE ENGINEER.

14. FULL DEPTH SAW CUTTING ON ALL EDGES FOR REMOVAL ITEMS SHALL BE INCLUDED IN THE COST OF THE REMOVAL ITEM AS INDICATED AND IN ACCORDANCE WITH SECTION 440 OF THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION."

15. ALL PIPE DRAINS, STORM SEWER AND PIPE CULVERTS TO BE REMOVED, WHICH THE ENGINEER DEEMS FIT FOR RE-USE, SHALL BE SALVAGED BY THE CONTRACTOR IN ACCORDANCE WITH ARTICLE 501.02 OF THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION." THE CONTRACTOR SHALL DISPOSE OF ALL OTHER PIPE DRAINS, STORM SEWER AND CULVERT PIPE IN ACCORDANCE WITH ARTICLE 202.03.

16. THE OFFSETS TO THE BRIDGE APPROACH DRAINS ARE GIVEN TO THE FACE OF CURB UNLESS OTHERWISE INDICATED.

17. ALL DRAINAGE STRUCTURES CONSTRUCTED, ADJUSTED OR RECONSTRUCTED UNDER THE CONTRACT, SHALL BE CLEANED OF ANY ACCUMULATION OF SILT, DEBRIS OR FOREIGN MATTER AT THE END OF EACH WORKING DAY AND AT THE TIME OF FINAL INSPECTION. THE COST OF THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE CONSIDERED AS INCLUDED IN THE UNIT BID PRICES OF THE VARIOUS DRAINAGE STRUCTURE ITEMS IN THE CONTRACT.

18. THE CONTRACTOR SHALL PLACE ALL TEMPORARY PAVEMENT MARKINGS IN SUCH A MANNER SO AS NOT TO INTERFERE WITH THE PLACEMENT OF PERMANENT PAVEMENT MARKINGS.

19. SEE THE SPECIAL PROVISIONS FOR OTHER INCIDENTAL CONSTRUCTION ITEMS AND OPERATIONS WHICH ARE TO BE INCLUDED WITH AND PAID FOR UNDER CERTAIN SPECIFICATION PAY ITEMS.

20. THE CONTRACTOR SHALL COORDINATE WITH THE WOOD RIVER DRAINAGE AND LEVEE DISTRICT REGARDING THE PLACEMENT OF TRAFFIC CONTROL ITEMS IN CONFLICT WITH THE OPERATION OF THE FLOODGATES. IN CASE OF EMERGENCY, THE CONTRACTOR SHALL CALL VINCE MILAZZO AT (618)779-9176.

21. THE COST OF ALL EARTH EXCAVATION REQUIRED TO CONSTRUCT THE SUBBASE FOR THE BRIDGE APPROACH PAVEMENT, BRIDGE APPROACH PAVEMENT CONNECTOR OR COMBINATION CONCRETE CURB AND GUTTER SHALL BE INCLUDED IN THE COST OF BRIDGE APPROACH PAVEMENT, BRIDGE APPROACH PAVEMENT CONNECTOR (PCC), OR COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24, RESPECTIVELY.

22. THE FOLLOWING ITEMS AND APPROXIMATE QUANTITIES ARE INCLUDED IN THE "SUMMARY OF QUANTITIES" IN ORDER TO ESTABLISH A UNIT COST FOR WORK WHICH MAY BE REQUIRED TO CONSTRUCT THIS SECTION. THE ACTUAL QUANTITY OF EACH ITEM SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

SEEDING, CLASS 2	0.25	ACRE
TEMPORARY EROSION CONTROL SEEDING	100	POUND
TEMPORARY DITCH CHECKS	1	EACH
PERIMETER EROSION BARRIER	350	FOOT
TEMPORARY PAVEMENT MARKING	3400	FOOT
WORK ZONE PAVEMENT MARKING REMOVAL	810	SQ FT
PAVEMENT MARKING REMOVAL	900	SQ FT

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
9003	03-00044-00-BR	MADISON	24	2
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
GENERAL NOTES & SUMMARY OF QUANTITIES				

CONTRACT NO. 97256

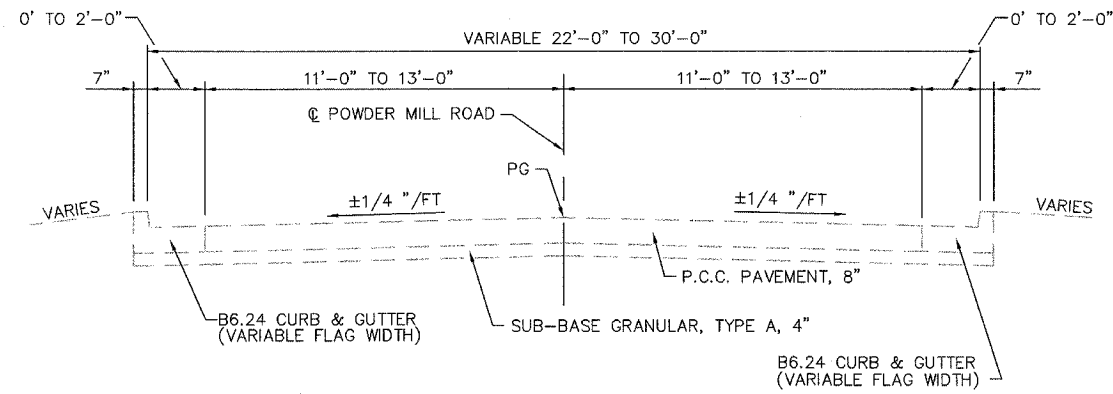
SUMMARY OF QUANTITIES

		X071-2A	
CODE NO.	ITEM	UNIT	QUANTITY
* 20700220	POROUS GRANULAR EMBANKMENT	CU YD	152
25000200	SEEDING, CLASS 2	ACRE	0.25
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	25
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	25
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	25
25100105	MULCH, METHOD 1	ACRE	0.25
* 28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	100
28000300	TEMPORARY DITCH CHECKS	EACH	1
28000400	PERIMETER EROSION BARRIER	FOOT	350
28100105	STONE RIPRAP, CLASS A3	SQ YD	6
28100107	STONE RIPRAP, CLASS A4	SQ YD	413
28200200	FILTER FABRIC	SQ YD	413
31100300	SUB-BASE GRANULAR, TYPE A 4"	SQ YD	205
42001165	BRIDGE APPROACH PAVEMENT	SQ YD	120
42001420	BRIDGE APPROACH PAVEMENT CONNECTOR (PCC)	SQ YD	40
44000100	PAVEMENT REMOVAL	SQ YD	124
44000500	COMBINATION CURB AND GUTTER REMOVAL	FOOT	162
44000600	SIDEWALK REMOVAL	SQ FT	133
44100200	PAVEMENT REPLACEMENT - SURFACE COURSE	SQ YD	40
50102400	CONCRETE REMOVAL	CU YD	8.2
* 50104000	BRIDGE RAIL REMOVAL	FOOT	392
* 50104720	REMOVAL OF EXISTING CONCRETE DECK	EACH	1
* 50200100	STRUCTURE EXCAVATION	CU YD	152
50300225	CONCRETE STRUCTURES	CU YD	4.0
50300255	CONCRETE SUPERSTRUCTURE	CU YD	240.9
50300260	BRIDGE DECK GROOVING	SQ YD	628
50300300	PROTECTIVE COAT	SQ YD	843
50300310	ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	6
50300320	ELASTOMERIC BEARING ASSEMBLY, TYPE II	EACH	6
* 50301245	FORMED CONCRETE REPAIR (DEPTH EQUAL TO OR LESS THAN 5")	SQ FT	38
50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	3740
50500505	STUD SHEAR CONNECTORS	EACH	2904
* 50500715	JACK AND REMOVE EXISTING BEARINGS	EACH	12
* 50600300	CLEANING AND PAINTING STEEL BRIDGE	L SUM	1
* 50606400	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES	L SUM	1
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	52,040
* 51205200	TEMPORARY SHEET PILING	SQ FT	576
51500100	NAME PLATES	EACH	1
* 54215547	METAL END SECTIONS 12"	EACH	2
60100945	PIPE DRAINS 12"	FOOT	64
60500050	REMOVING CATCH BASINS	EACH	2
* 60605400	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24 (SPECIAL)	FOOT	71
60900140	TYPE B INLET BOX, STANDARD 609006	EACH	2
60900515	CONCRETE THRUST BLOCKS	EACH	2
63000000	STEEL PLATE BEAM GUARD RAIL, TYPE A	FOOT	75
63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	4
63200310	GUARDRAIL REMOVAL	FOOT	190
67100100	MOBILIZATION	L SUM	1
* 70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	1
* 70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1
* 70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1
70300200	TEMPORARY PAVEMENT MARKING	FOOT	3400
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	810
* 70400100	TEMPORARY CONCRETE BARRIER	FOOT	330
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	330
78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	2680
78300100	PAVEMENT MARKING REMOVAL	SQ FT	900
* X0323586	PIPE DRAIN REMOVAL	FOOT	49
* X0323830	DRAINAGE SCUPPERS, DS-11	EACH	8
* Z0002600	BAR SPLICERS	EACH	647
* Z0030250	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2
* Z0030350	IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2

* - SEE SPECIAL PROVISIONS

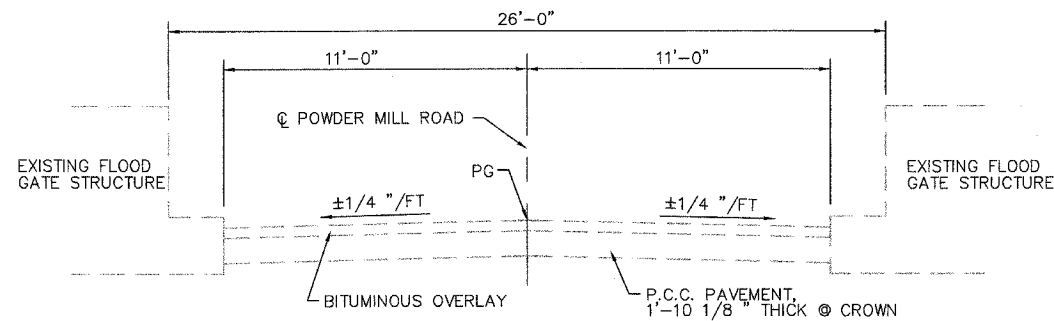
Δ - SPECIALITY ITEMS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
9003	03-00044-00-BR	MADISON	24	3
STA. TO STA.				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
TYPICAL SECTIONS				
CONTRACT NO. 97256				



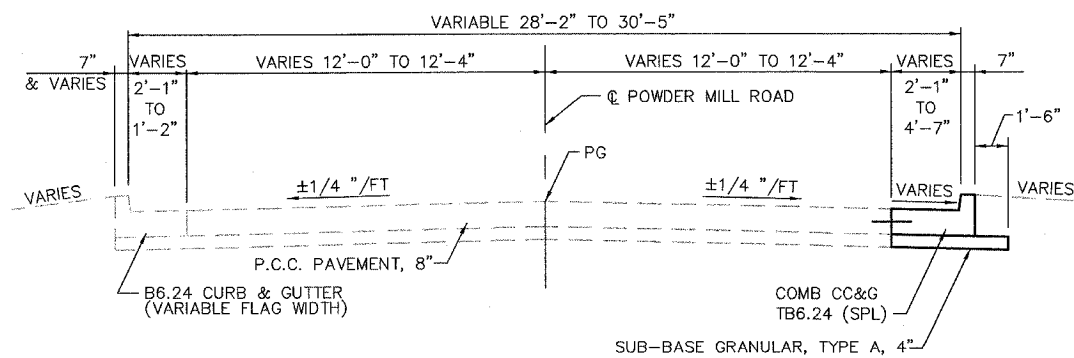
EXISTING TYPICAL SECTION

STA. 11+00 TO STA. 14+50
BRIDGE OMISSION: STA. 12+09.08 TO STA. 14+10.92



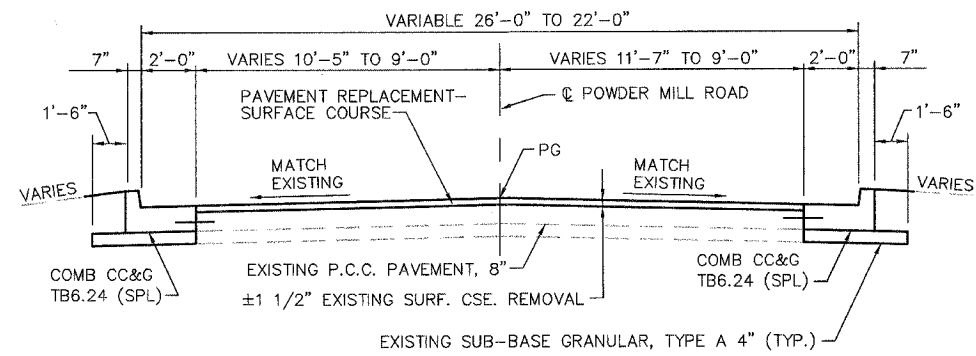
EXISTING TYPICAL SECTION THRU FLOOD GATE STRUCTURE

STA. 14+50 TO STA. 14+73



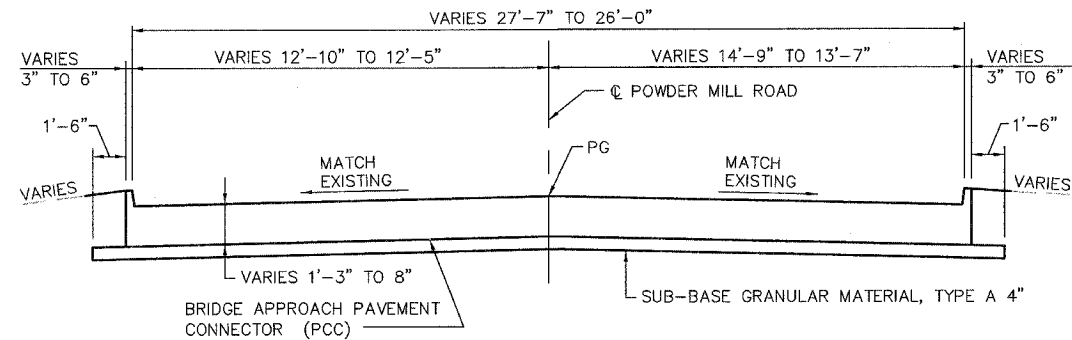
PROPOSED TYPICAL SECTION

STA. 11+50.00 TO STA. 11+83.08



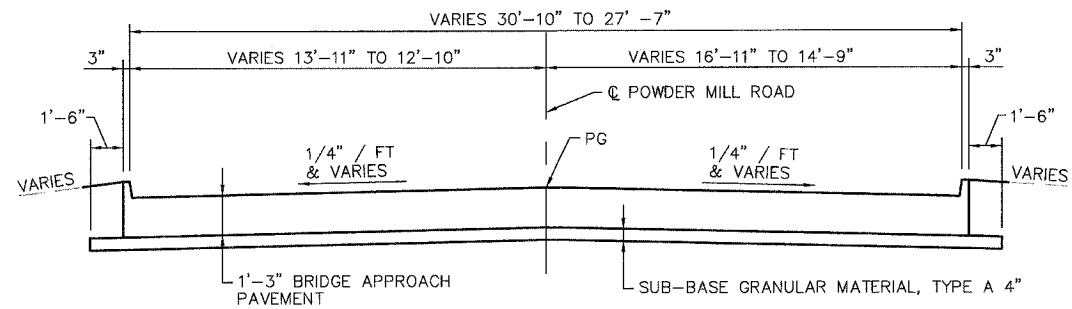
PROPOSED TYPICAL SECTION

STA. 14+31.92 TO STA. 14+50.12



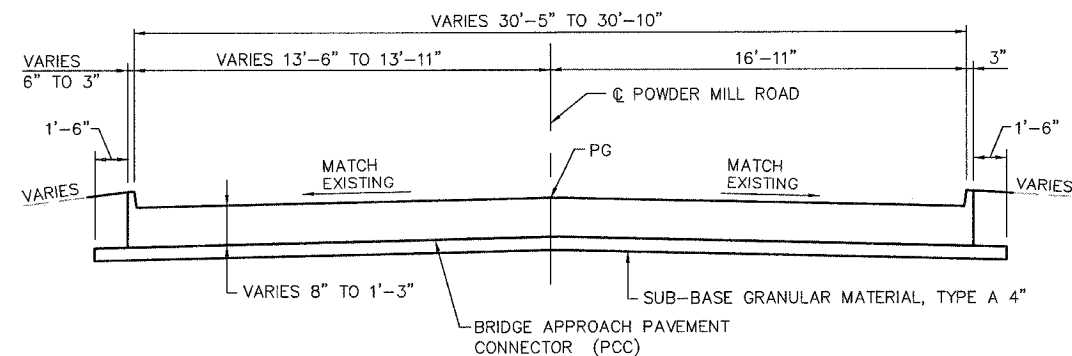
PROPOSED TYPICAL SECTION

PCC CONNECTOR PAVEMENT (SEE STD. 420401)
STA. 14+25.92 TO STA. 14+31.92



PROPOSED TYPICAL SECTION

(SEE BRIDGE APPROACH PAVEMENT - STD. 420401)
STA. 11+89.08 TO STA. 12+09.08
STA. 14+10.92 TO STA. 14+25.92
BRIDGE OMISSION: STA. 12+09.08 TO STA. 14+10.92



PROPOSED TYPICAL SECTION

PCC CONNECTOR PAVEMENT (SEE STD. 420401)
STA. 11+83.08 TO STA. 11+89.08

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
9003	03-00044-00-BR	MADISON	24	4
STA. 9+00		TO STA. 17+00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
TRAFFIC CONTROL PLAN - STAGE 1				
CONTRACT NO. 97256				

NOTES

THIS WORK PLAN SHALL BE USED IN CONJUNCTION WITH HIGHWAY STANDARD 701321. SEE HIGHWAY STANDARD 701321 FOR ADDITIONAL INFORMATION INCLUDING:

- REQUIRED TRAFFIC CONTROL SIGNS AND LOCATIONS
- INDUCTION LOOP DETECTOR LOCATIONS
- TEMPORARY TRAFFIC SIGNAL SEQUENCE OF OPERATIONS
- DOUBLE VERTICAL PANEL LOCATIONS
- TYPE C BI-DIRECTIONAL REFLECTORS.

ONE LANE OF TRAFFIC SHALL BE MAINTAINED ON POWDER MILL ROAD AT ALL TIMES.

SEE BRIDGE PLANS SHEET 10 FOR STAGE CONSTRUCTION CROSS SECTION THROUGH BRIDGE.

THE FURNISHING, PLACEMENT AND REMOVAL OF THE TYPE C BI-DIRECTIONAL REFLECTORS SHALL BE INCLUDED IN THE COST OF "TRAFFIC CONTROL AND PROTECTION, STANDARD 701321."

THE BOTTOM 6" OF THE TRAFFIC FACE OF THE TEMPORARY CONCRETE BARRIER SHALL BE PAINTED WITH WHITE TEMPORARY PAVEMENT MARKING. THE COST OF WHICH SHALL BE PAID FOR AS "TEMPORARY PAVEMENT MARKING."

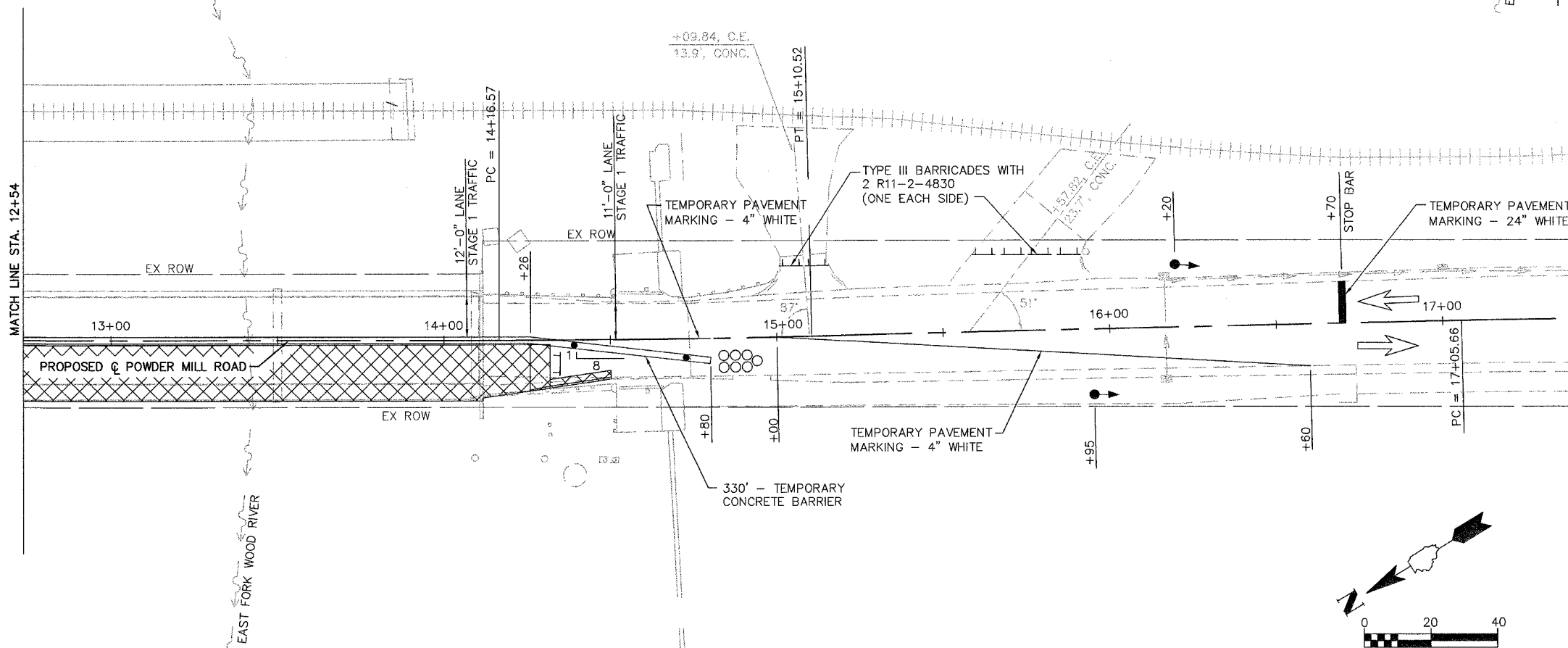
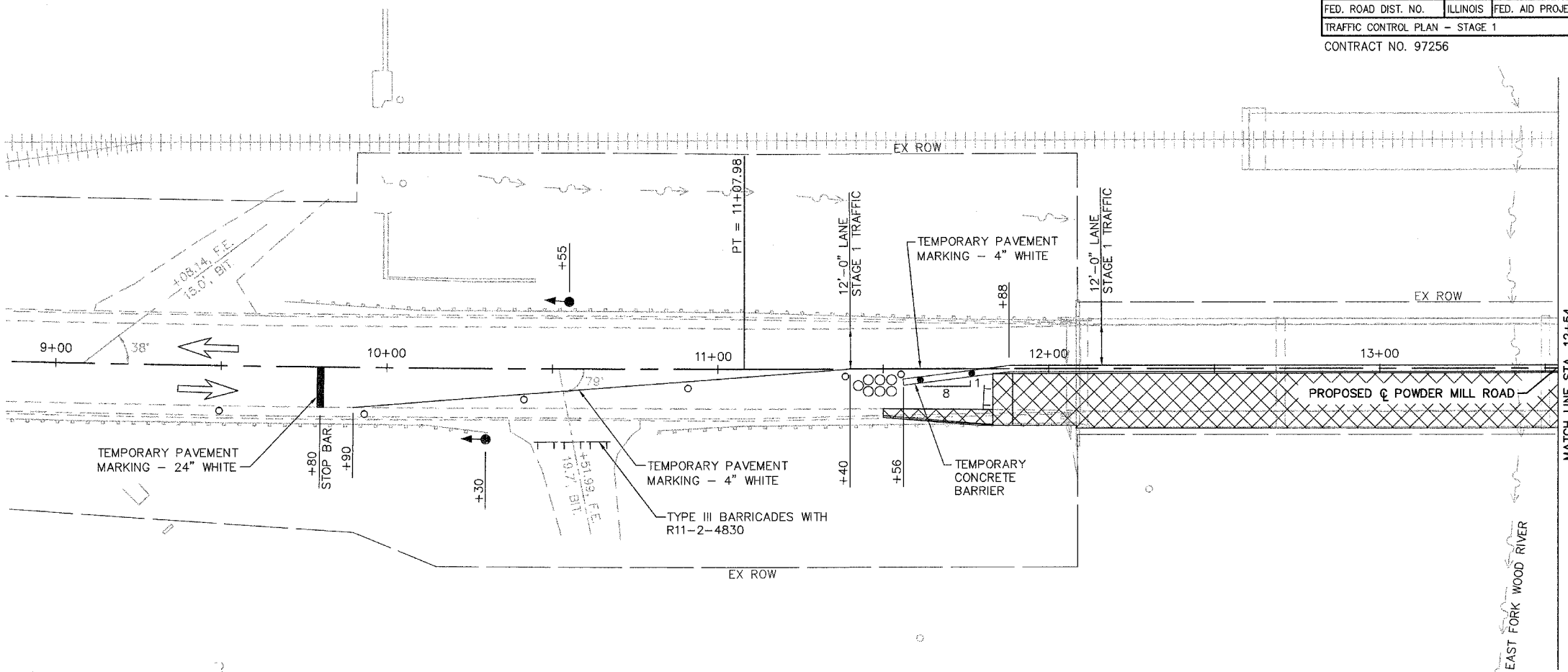
EMERGENCY ACCESS SHALL BE PROVIDED AT ALL TIMES.

EXISTING CENTERLINE AND EDGE LINE MARKINGS WHICH CONFLICT WITH THE PROPOSED TRAFFIC PATTERN SHALL BE REMOVED. THE COST OF WHICH WILL BE PAID FOR AS "PAVEMENT MARKING REMOVAL."

TEMPORARY RUMBLE STRIPS ARE NOT REQUIRED ON THIS PROJECT.

AFTER STAGE 1 AND STAGE 2 HAS BEEN COMPLETED, THE CONTRACTOR SHALL UTILIZE HIGHWAY STANDARD 701201 TO CONSTRUCT THE "PAVEMENT REPLACEMENT - SURFACE COURSE." TWO LANES OF TRAFFIC SHALL BE MAINTAINED WHEN WORKERS ARE NOT PRESENT.

SEE SPECIAL PROVISIONS FOR ADDITIONAL REQUIREMENTS.



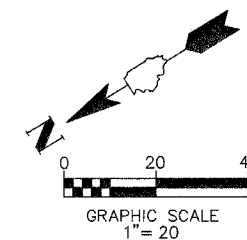
FINAL	SURVEY	DATE
SURVEY	PLOTTED	
NOTE	BOOK	
AREA	TEMPLATE	
CHECKED		

ORIGINAL	SURVEY	DATE
SURVEY	PLOTTED	
NOTE	BOOK	
AREA	TEMPLATE	
CHECKED		

LEGEND

- TYPE III BARRICADES
- ◀•▶ TEMPORARY TRAFFIC SIGNALS
- DRUM WITH STEADY BURNING LIGHT
- ⊙ IMPACT ATTENUATOR
- STEADY BURNING LIGHTS AND DOUBLE VERTICAL PANELS
- ▨ WORK ZONE

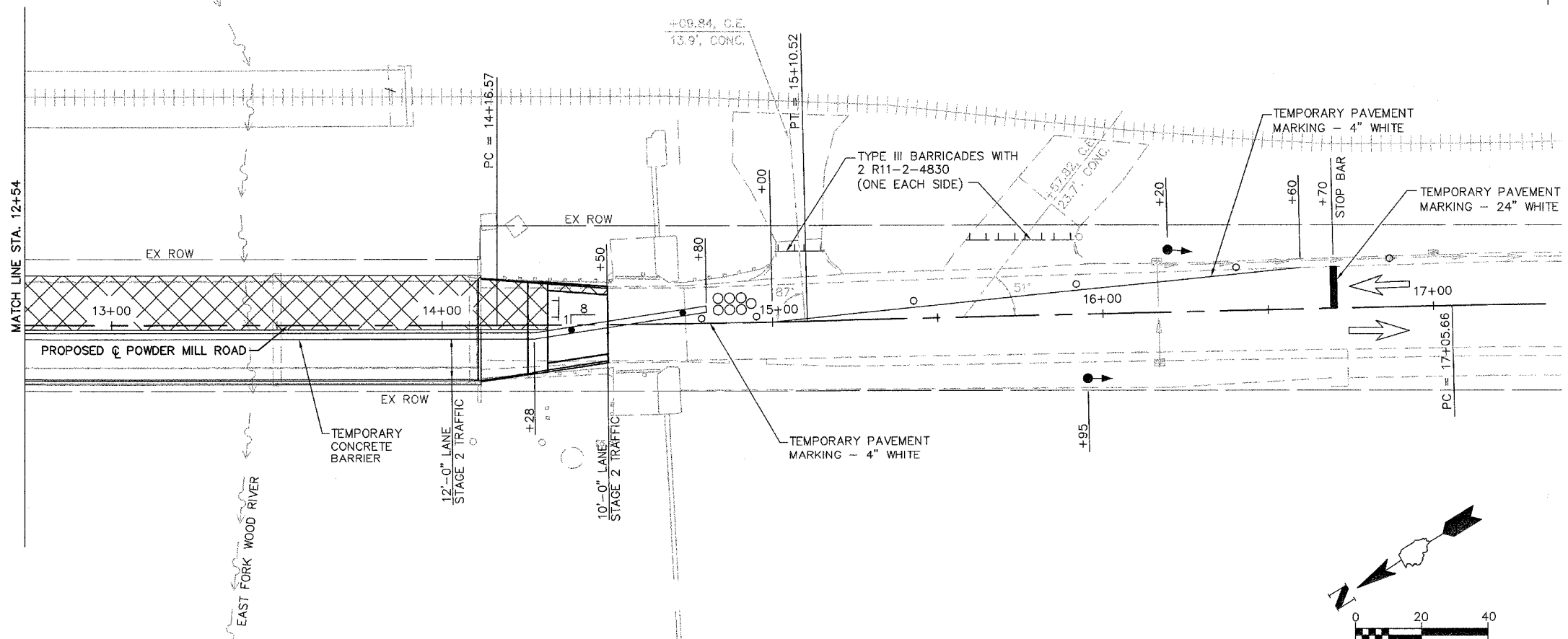
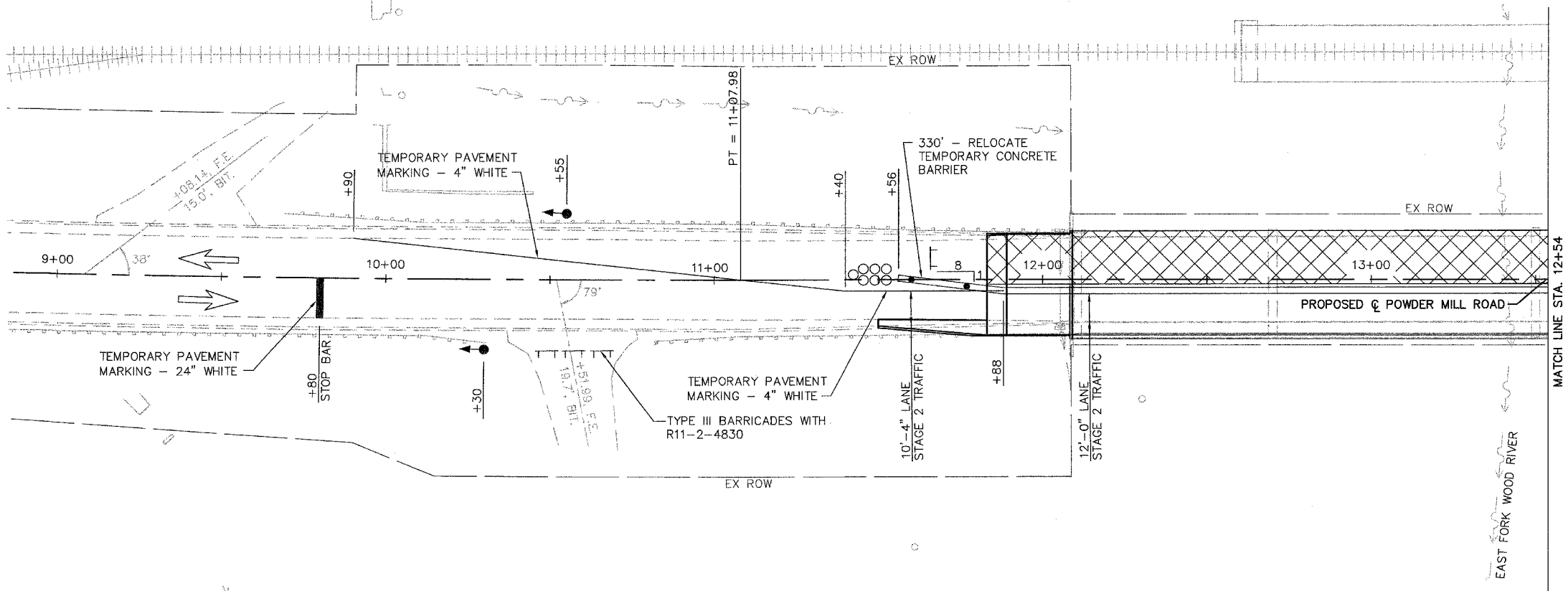
TRAFFIC CONTROL PLAN - STAGE 1



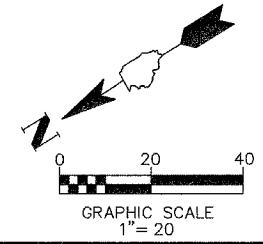
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
9003	03-00044-00-BR	MADISON	24	5
STA. 9+00		TO STA. 17+00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
TRAFFIC CONTROL PLAN - STAGE 2				
CONTRACT NO. 97256				

FINAL SURVEY	BY	DATE
SURVEY PLOTTED		
NOTE BOOK TEMPLATE		
AREAS CHECKED		
NO.		

ORIGINAL SURVEY	BY	DATE
SURVEY PLOTTED		
NOTE BOOK TEMPLATE		
AREAS CHECKED		
NO.		



- LEGEND**
- I — TYPE III BARRICADES
 - ◀ ● TEMPORARY TRAFFIC SIGNALS
 - DRUM WITH STEADY BURNING LIGHT
 - IMPACT ATTENUATOR
 - STEADY BURNING LIGHTS AND DOUBLE VERTICAL PANELS
 - ▨ WORK ZONE

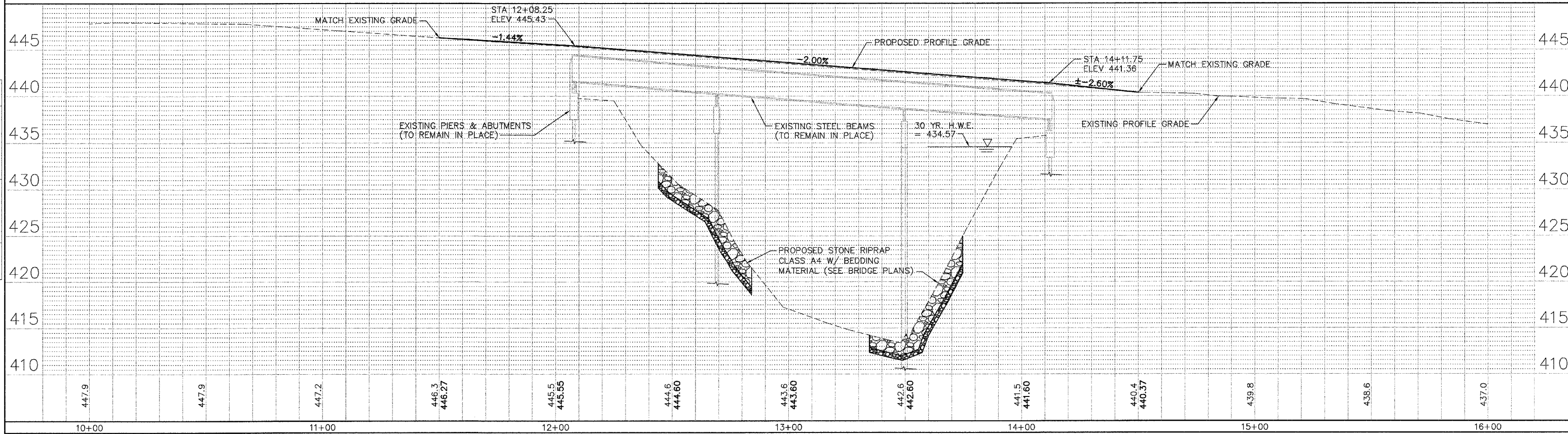
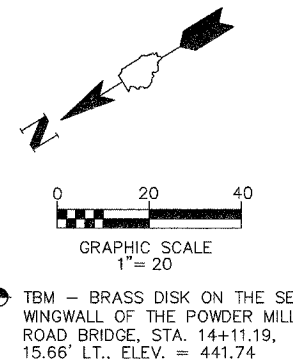
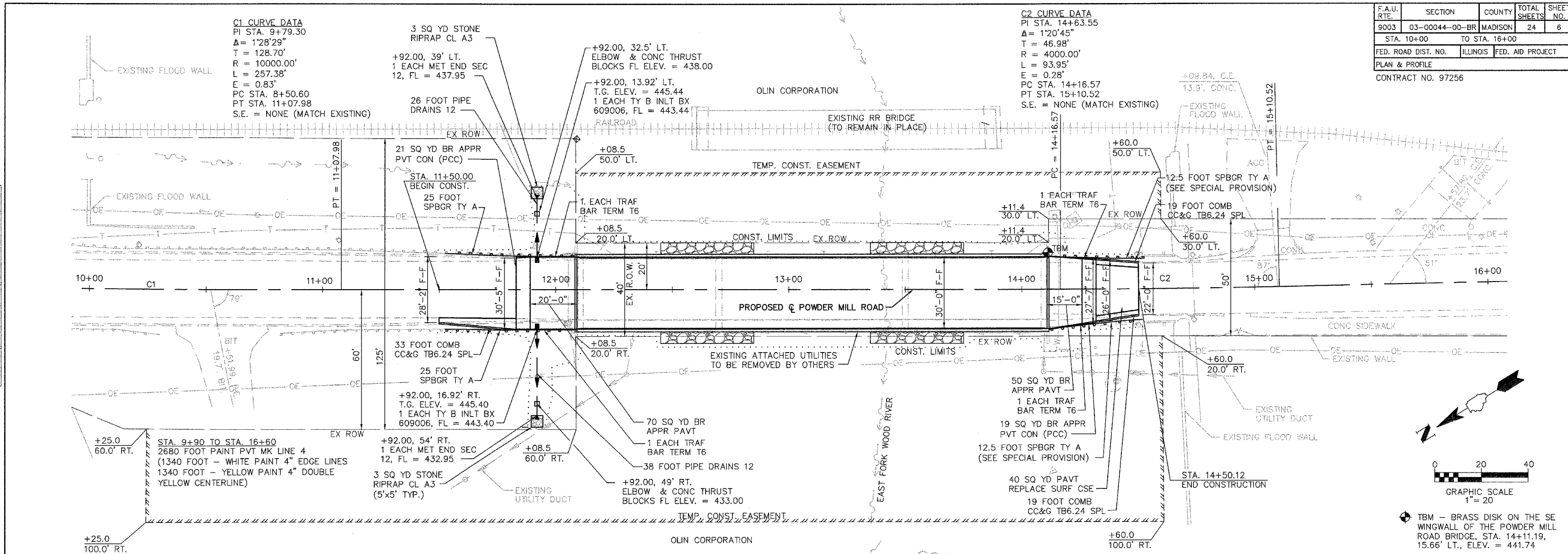


TRAFFIC CONTROL PLAN - STAGE 2

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
9003	03-00044-00-BR	MADISON	24	6
STA. 10+00 TO STA. 16+00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
PLAN & PROFILE				
CONTRACT NO. 97256				

BY	DATE

BY	DATE



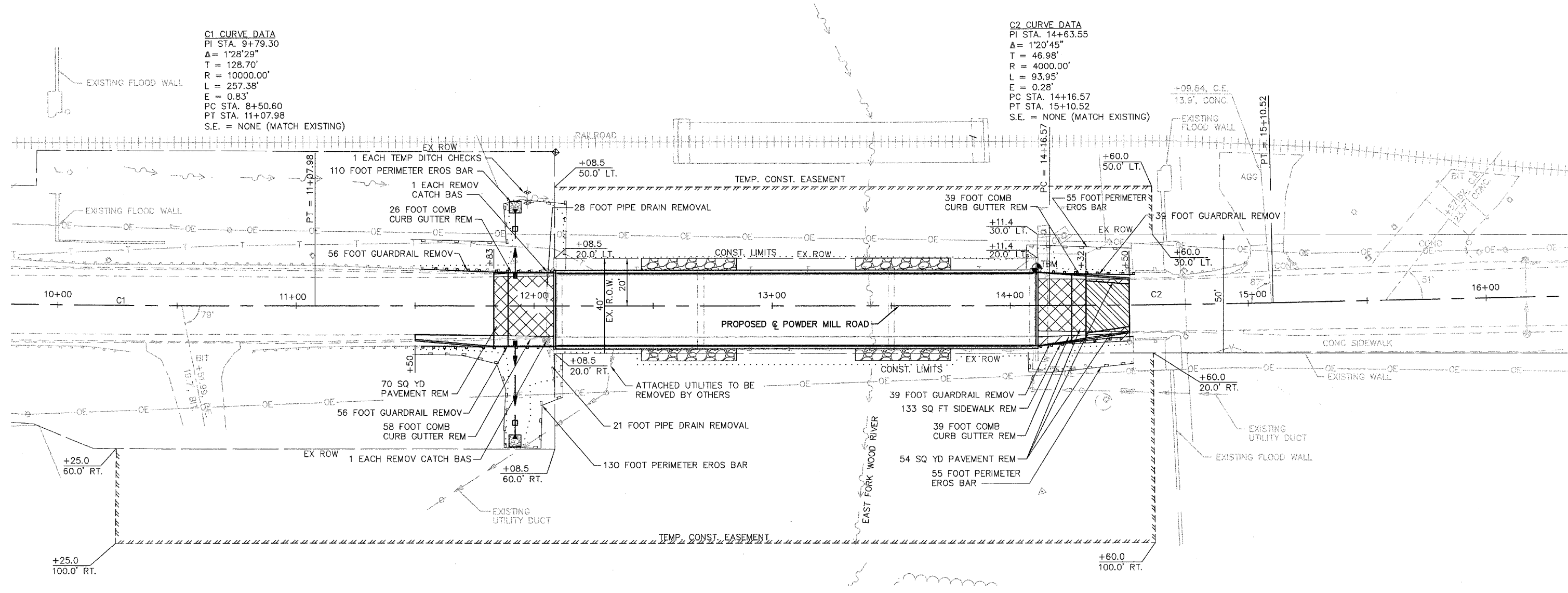
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
9003	03-0044-00-BR	MADISON	24	7
STA. 10+00		TO STA. 16+00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
REMOVAL & EROSION CONTROL PLAN				
CONTRACT NO. 97256				

FINAL SURVEY	BY	DATE
SURVEY PLOTTED		
NOTE BOOK TEMPLATE		
AREAS CHECKED		
NO.		

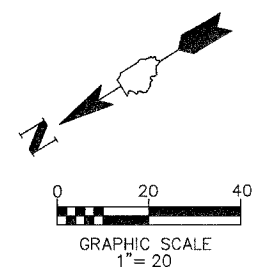
ORIGINAL SURVEY	BY	DATE
SURVEY PLOTTED		
NOTE BOOK TEMPLATE		
AREAS CHECKED		
NO.		

C1 CURVE DATA
 PI STA. 9+79.30
 $\Delta = 1'28'29"$
 $T = 128.70'$
 $R = 10000.00'$
 $L = 257.38'$
 $E = 0.83'$
 PC STA. 8+50.60
 PT STA. 11+07.98
 S.E. = NONE (MATCH EXISTING)

C2 CURVE DATA
 PI STA. 14+63.55
 $\Delta = 1'20'45"$
 $T = 46.98'$
 $R = 4000.00'$
 $L = 93.95'$
 $E = 0.28'$
 PC STA. 14+16.57
 PT STA. 15+10.52
 S.E. = NONE (MATCH EXISTING)



- PAVEMENT REMOVAL
- PAVEMENT REPLACEMENT - SURFACE COURSE
- SIDEWALK REMOVAL



Bench Mark: Brass disc on top of SE wingwall of Powder Mill Road Bridge over East Fork Wood River. Elev. 441.74

Existing Structure: S.N. 060-6400 built as F.A.U. Rte 9003, Sec. 03-00044-00-BR in 1960. The existing structure is a 3-span continuous wide flange with a 7" non-composite deck. The pile bent pier and abutments are founded on metal shell piles. The fixed pier is a single hammerhead pier on a steel H-pile supported footing. The structure was rehabilitated in 1989 with partial and full depth deck patching, a weatherproofing membrane and a bituminous overlay. The length of the structure is 203'-6" bk. to bk. of abutments and 33'-2" out to out of deck. Traffic to be maintained utilizing concrete barriers and traffic control devices.

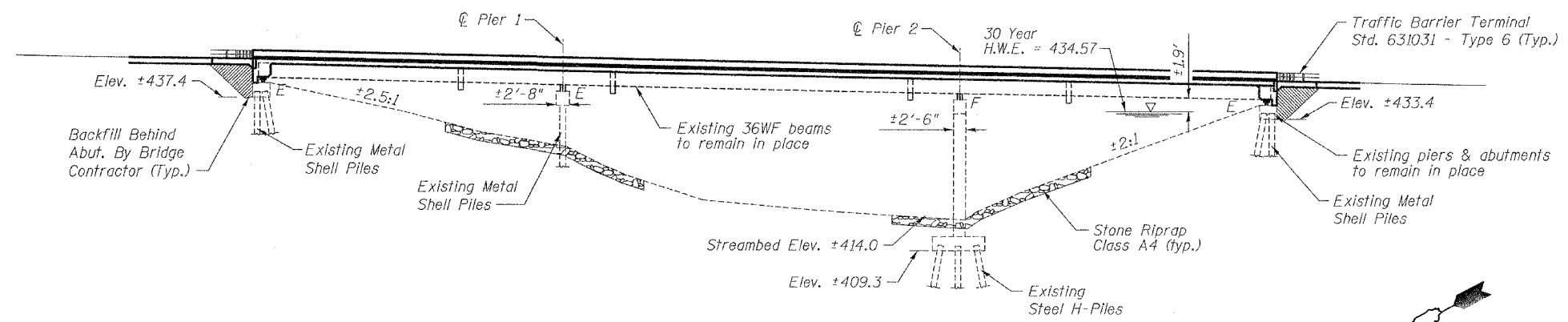
FAU ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
9003	03-00044-00-BR	MADISON	24	8
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID URBAN-		

CONTRACT NO. 97256

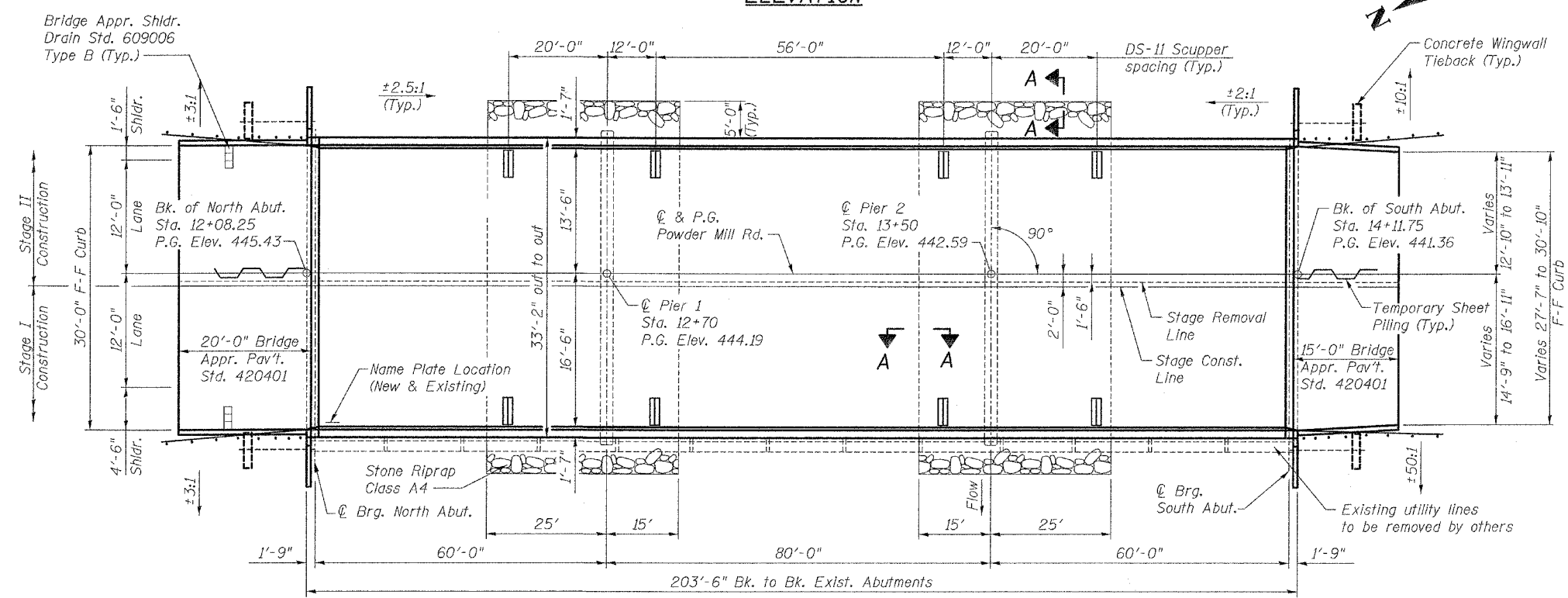
STATION 13+10.00
REBUILT 200 BY
VILLAGE OF EAST ALTON
F.A.U. RTE. 9003
SEC. 03-00044-00-BR
LOADING HS20
STRUCTURE NO. 060-6400

NAME PLATE
(See Std. 515001)

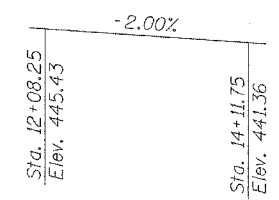
Note:
Existing name plates shall be cleaned and relocated next to the new name plates. Cost included with Name Plates.



ELEVATION



PLAN



PROFILE GRADE

DESIGN SPECIFICATION
2002 AASHTO

LOADING HS20-44

Allow 50#/sq. ft. for future wearing surface.

DESIGN STRESSES

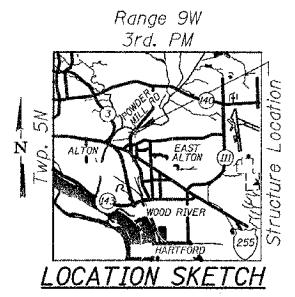
FIELD UNITS (Existing Construction)

- fc = 1,200 psi (superstructure)
- fc = 1,000 psi (substructure)
- fs = 20,000 psi (reinf.)
- fs = 18,000 psi (struct. steel)
- n = 10

DESIGN STRESSES

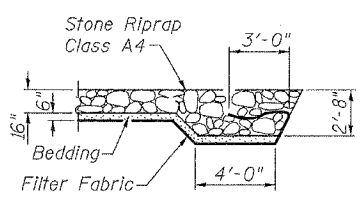
FIELD UNITS (New Construction)

- f'c = 3,500 psi
- fy = 60,000 psi (reinf.)
- fy = 36,000 psi (M270 Gr. 36) struct. steel



LOCATION SKETCH

"I certify that to the best of my knowledge, information and belief, this bridge design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with requirements of the current 'AASHTO Standard Specifications for Highway Bridges'."



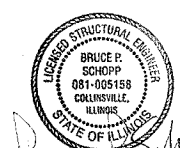
SECTION A-A

WATERWAY INFORMATION

Drainage Area = 66.2 mi² Low Grade Elev. 441.2 ft. @ W. Abutment
Max. Rec. HWE. = 438.2 (1993)

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Natural Head - Ft.		Headwater El.	
			Exist.	Prop.	H.W.E. Exist.	Prop.	Exist.	Prop.
Overtopping	-	-	-	-	-	-	-	-
Design	30	7900	1956	1956	434.57	0.0	0.0	434.57 434.57
Base	100	15200	2464	2464	437.68	0.0	0.0	437.68 437.68
Max. Calc.	500	19700	2696	2696	442.23	0.71	0.71	442.94 442.94

Plans Prepared By:
Oates Associates, Inc.



BRUCE P. SCHOPP
081-005158
ILLINOIS
STATE OF ILLINOIS
u/21/05
EXPIRES 11/30/06

GENERAL PLAN
POWDER MILL ROAD OVER
EAST FORK OF WOOD RIVER
SECTION 03-00044-00-BR
VILLAGE OF EAST ALTON
STA. 13+10
STRUCTURE NO. 060-6400

GENERAL NOTES

Field welding of construction accessories will not be permitted to beams.

Reinforcement bars shall conform to the requirements of AASHTO M31 or M322 Grade 60.

Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.

Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

Bearing seat adjustment shall be made by shimming the bearing. Two 1/8" adjusting shims, of the dimensions of the bottom bearing plate, shall be provided for each bearing in addition to all other plates or shims. For Type I Elastomeric Bearings, two 1/2" adjusting shims shall be provided for each bearing and placed as detailed.

Prior to pouring the new concrete deck, all loose rust, loose mill scale, and other loose potentially detrimental foreign material shall be removed from the surfaces of the beams or girders in contact with concrete. The cost of this work will be included in the pay item covering removal of the existing concrete. All heavy rust and other tightly adhered potentially detrimental foreign matters shall also be removed from the surfaces of the beams or girders in contact with concrete. Tightly adhered paint may remain unless otherwise noted. This removal shall be accomplished by the methods that will not damage the steel. The cost of this work will be paid for according to Article 109.04.

All existing construction accessories welded to the top flange over the pier(s) between the quarter points of the beams or girders shall be removed. The remaining weld shall be ground smooth and inspected for cracks using magnetic particle testing. Any cracks that cannot be removed by grinding approximately 1/4 inch deep shall be identified and reported to the Bureau of Bridges and Structures for further disposition. The cost of this work will be paid for according to Article 109.04.

The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.

Cleaning and painting of the existing structural steel shall be as specified in the special provision for "Cleaning and Painting Existing Steel Structures". All beams, bearings and other structural steel within 20 ft (measured along the beam) of each end of each beam shall be cleaned per Near White Blast Cleaning - SSPC-SP10. The exterior surfaces and bottom of the bottom flange of the fascia beams shall be cleaned per Power Tool Cleaning - Commercial Grade.

The designated areas cleaned per Near White Blast Cleaning - SSPC-SP10 and per Power Tool Cleaned - Commercial Grade shall be painted according to the requirements of Paint System 1 - OZ/E/U. The color of the final finish coat for all steel surfaces shall be Gray, Munsell No. 5B 7/1.

The SSPC-QP1 and SSPC-QP2 Painting Contractor Certifications will not be required for this bridge.

All new structural steel shall be shop painted with an inorganic zinc rich primer per AASHTO M300, Type 1.

All construction joints shall be bonded.

If the Contractor chooses to alter the temporary cantilevered sheet piling design requirements shown on the plans, a design submittal including plan details and calculations will be required for review and acceptance by the Engineer.

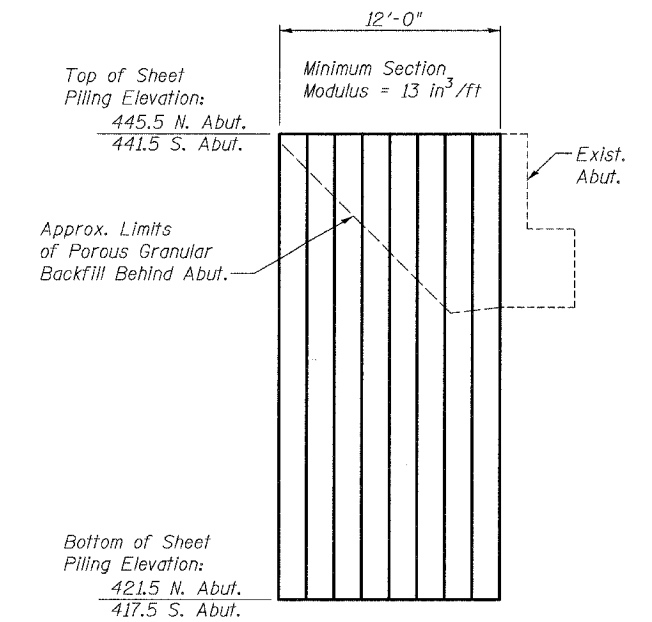
Saw cutting directly over the top of beam flanges will be permitted if the following conditions are met: The maximum saw cut depth allowed directly over a flange shall be to the bottom of the top mat of reinforcing steel but shall not exceed 3 1/2". The Contractor shall provide positive control for controlling the depth of cut into the slab. The Contractor shall provide sawing equipment adequate in size and horsepower to complete the sawing operation.

TOTAL BILL OF MATERIALS

Item	Unit	Super	Substr.	Total
Porous Granular Embankment	Cu Yd	---	152	152
Structure Excavation	Cu Yd	---	152	152
Concrete Structures	Cu Yd	---	4.0	4.0
Concrete Superstructure	Cu Yd	240.9	---	240.9
Bridge Deck Grooving	Sq Yd	628	---	628
Protective Coat	Sq Yd	843	---	843
Furnishing And Erecting Structural Steel	Pound	3570	170	3740
Stud Shear Connectors	Each	2,904	---	2,904
Reinforcement Bars, Epoxy Coated	Pound	51,830	210	52,040
Name Plates	Each	1	---	1
Bar Splicers	Each	647	---	647
Drainage Scupper, DS-II	Each	8	---	8
Elastomeric Bearing Assembly, Type I	Each	6	---	6
Elastomeric Bearing Assembly, Type II	Each	6	---	6
Jack And Remove Existing Bearings	Each	12	---	12
Stone Riprap, Class A4	Sq Yd	---	413	413
Filter Fabric	Sq Yd	---	413	413
Bridge Rail Removal	Foot	392	---	392
Removal of Existing Concrete Deck	Each	1	---	1
Concrete Removal	Cu Yd	---	8.2	8.2
Temporary Sheet Piling	Sq Ft	---	576	576
Cleaning And Painting Steel Bridge	L Sum	1	---	1
Containment And Disposal Of Lead Paint Cleaning Residues	L Sum	1	---	1
Formed Concrete Repair (Depth Equal To Or Less Than 5")	Sq Ft	---	38	38

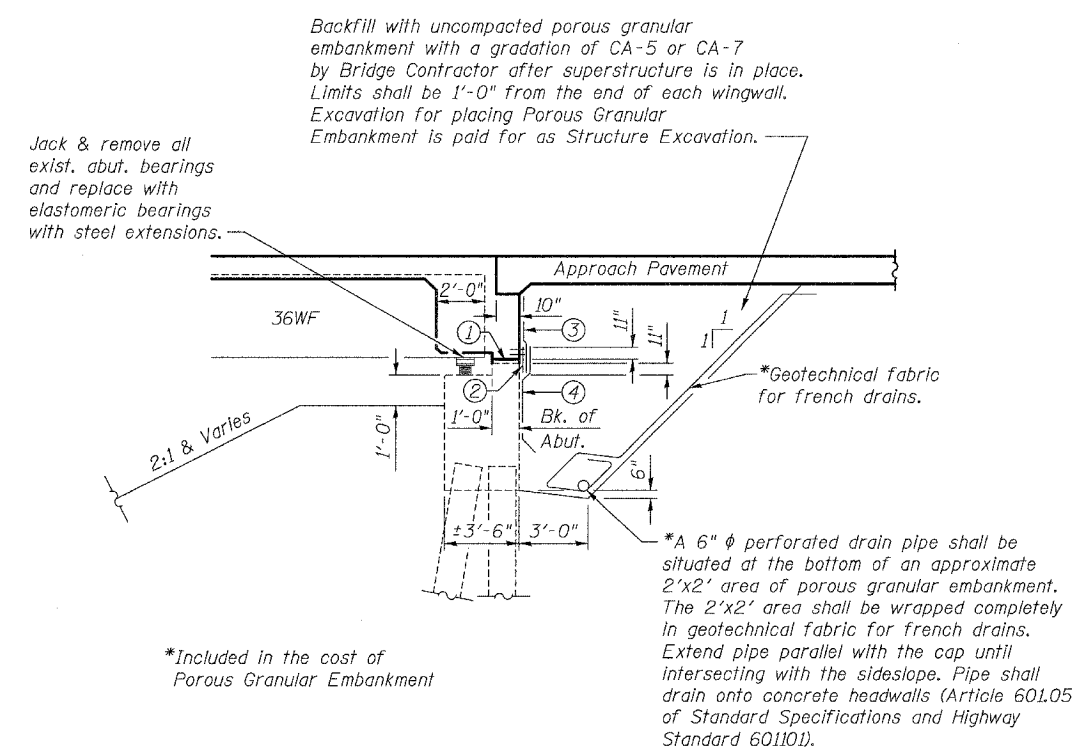
FILE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
9003	03-00044-00-BR	MADISON	24	9
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID URBAN-		
CONTRACT NO. 97256				

SHEET NO. 2
17 SHEETS



TEMPORARY SHEET PILING DETAIL
(Typ. each end)

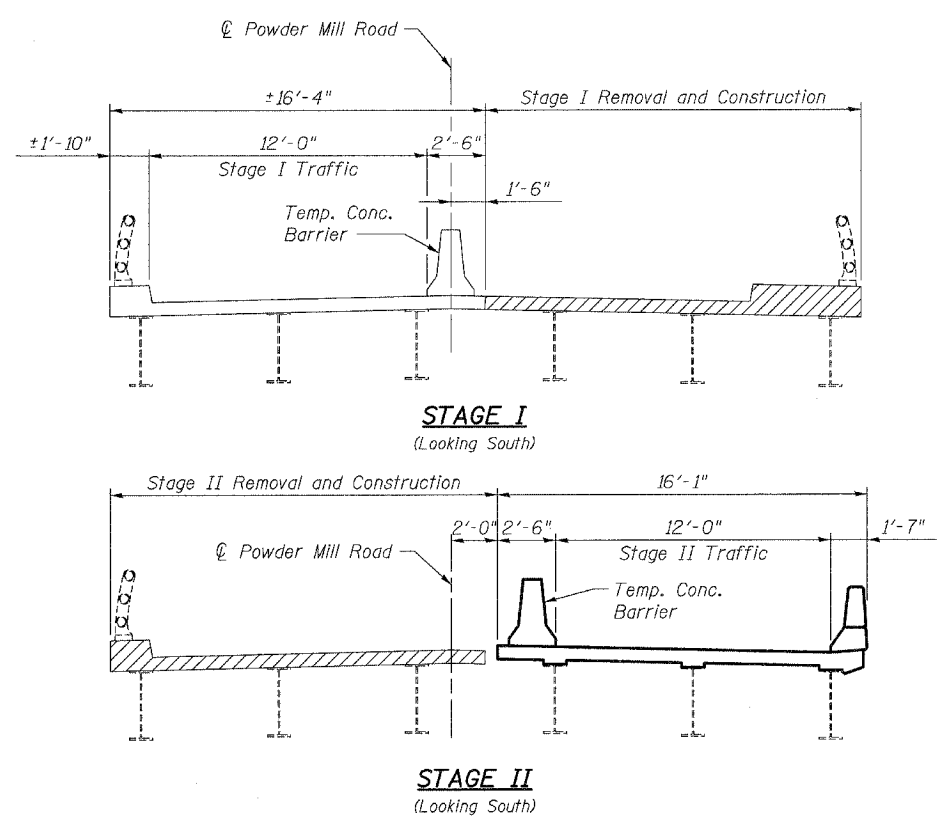
The Contractor shall locate all utilities prior to driving sheet pile. Possible conflicts include a water main located south of the south abutment. The Contractor shall coordinate the sheet pile driving with the Village of East Alton's Superintendent of Streets, Denny Weber (618) 977-3677.



SECTION THRU ABUTMENTS AT RT. L's

- ① 2" Preformed Joint Filler (Section 1051 of the Standard Specifications) bonded to abutment cap with approved adhesive (full width of cap)
- ② Fabric Reinforced Elastomeric Mat (See Special Provisions). Fabric mat shall be 24" wide and attached full width to the abutment cap with a 3/8" x 5" steel plate and 1/2" φ studs with nuts and washers at 12" cts.
- ③ 2" Preformed Joint Filler (Section 1051 of the Standard Specifications) bonded to superstructure (full width of cap)
- ④ Geocomposite Wall Drain (Section 591 of the Standard Specifications - full width of cap)

**GENERAL NOTES, DETAILS & TOTAL BILL OF MATERIALS
POWDER MILL ROAD OVER EAST FORK OF WOOD RIVER
SECTION 03-00044-00-BR
VILLAGE OF EAST ALTON
STA. 13+10
STRUCTURE NO. 060-6400**



STAGE TRAFFIC CROSS SECTIONS

STAGE CONSTRUCTION NOTES

STAGE I

Suggested Sequence of Construction:

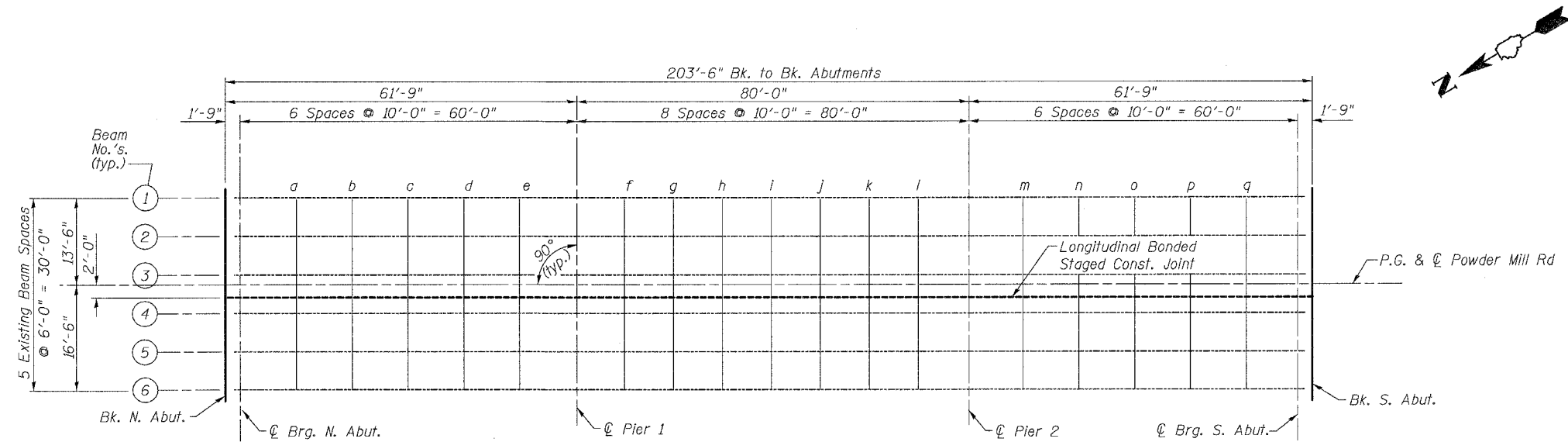
1. Remove all welded utility connections (by others).
2. Erect traffic control & reroute traffic to the southbound lane with one 12'-0" lane and signalization. See Roadway Plans.
3. Remove existing deck slab, railing, approach pavement and abutment backwall within Stage I limits. Temporary Sheet Piling will be required for abutment modifications & approach slab replacement.
4. Jack and remove existing bearings. (Both abutments. Piers 1 and 2 bearings to remain in place).
5. Install new bearings and steel extensions. Remove any temporary jacking.
6. Clean existing beams and remove lead paint in designated areas See Special Provisions.
7. Install stud shear connectors to steel beams.
8. Cast new bridge deck, concrete diaphragms and parapets.
9. Complete Stage I roadway and approach work as required.
10. Remove traffic control from this stage and install new traffic control for Stage II

STAGE II

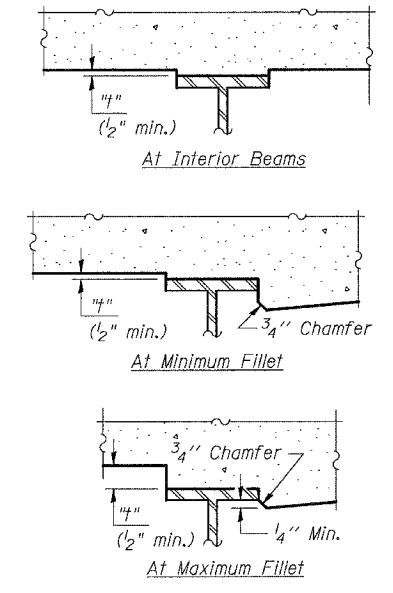
1. Same sequence as Stage I except widening is on west side of structure.

- Notes:
- ① See sheet 13 of 17 for abutment removal details.
 - ② Hatching indicates removal of existing concrete deck.
 - ③ Temporary concrete barrier shall conform to Standard 704001. See sheet 17 of 17.
 - ④ For quantity of temporary concrete barrier, see Roadway Plans.

**STAGING DETAILS
POWDER MILL ROAD OVER
EAST FORK OF WOOD RIVER
SECTION 03-00044-00-BR
VILLAGE OF EAST ALTON
STA. 13+10
STRUCTURE NO. 060-6400**

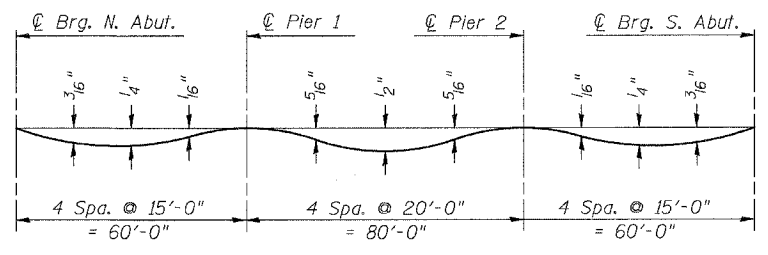


PLAN



To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown in the plan view. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown on sheets 5 thru 6 minus slab thickness, equals the fillet heights "t" above top flange of beams.

FILLET HEIGHTS



DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete deck and all superimposed dead loads except future wearing surface.)

Note: The above deflections are not to be used in the field if the engineer is working from the Theoretical Grade Elevations Adjusted for Dead Load Deflections as shown on sheets 5 thru 6 of 17.

**DECK ELEVATIONS
POWDER MILL ROAD OVER
EAST FORK OF WOOD RIVER
SECTION 03-00044-00-BR
VILLAGE OF EAST ALTON
STA. 13+10
STRUCTURE NO. 060-6400**

FILE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
9003	03-00044-00-BR	MADISON	24	12
STA.	TO STA.			
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID URBAN-		

SHEET NO. 5
17 SHEETS

CONTRACT NO. 97256

BEAM 1

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS
Back of North Abutment	12+08.25	-13.500	445.214	445.214
Ⓞ Brg. of North Abutment	12+10.00	-13.500	445.179	445.179
a	12+20.00	-13.500	444.979	444.992
b	12+30.00	-13.500	444.779	444.798
c	12+40.00	-13.500	444.579	444.597
d	12+50.00	-13.500	444.379	444.391
e	12+60.00	-13.500	444.179	444.181
Ⓞ of Pier 1	12+70.00	-13.500	443.979	443.979
f	12+80.00	-13.500	443.779	443.788
g	12+90.00	-13.500	443.579	443.604
h	13+00.00	-13.500	443.379	443.417
i	13+10.00	-13.500	443.179	443.222
j	13+20.00	-13.500	442.979	443.017
k	13+30.00	-13.500	442.779	442.804
l	13+40.00	-13.500	442.579	442.588
Ⓞ of Pier 2	13+50.00	-13.500	442.379	442.379
m	13+60.00	-13.500	442.179	442.181
n	13+70.00	-13.500	441.979	441.991
o	13+80.00	-13.500	441.779	441.797
p	13+90.00	-13.500	441.579	441.598
q	14+00.00	-13.500	441.379	441.392
Ⓞ Brg. of South Abutment	14+10.00	-13.500	441.179	441.179
Back of South Abutment	14+11.75	-13.500	441.144	441.144

BEAM 2

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS
Back of North Abutment	12+08.25	-7.500	445.308	445.308
Ⓞ Brg. of North Abutment	12+10.00	-7.500	445.273	445.273
a	12+20.00	-7.500	445.073	445.085
b	12+30.00	-7.500	444.873	444.892
c	12+40.00	-7.500	444.673	444.691
d	12+50.00	-7.500	444.473	444.484
e	12+60.00	-7.500	444.273	444.274
Ⓞ of Pier 1	12+70.00	-7.500	444.073	444.073
f	12+80.00	-7.500	443.873	443.882
g	12+90.00	-7.500	443.673	443.698
h	13+00.00	-7.500	443.473	443.511
i	13+10.00	-7.500	443.273	443.316
j	13+20.00	-7.500	443.073	443.111
k	13+30.00	-7.500	442.873	442.898
l	13+40.00	-7.500	442.673	442.682
Ⓞ of Pier 2	13+50.00	-7.500	442.473	442.473
m	13+60.00	-7.500	442.273	442.274
n	13+70.00	-7.500	442.073	442.084
o	13+80.00	-7.500	441.873	441.891
p	13+90.00	-7.500	441.673	441.692
q	14+00.00	-7.500	441.473	441.485
Ⓞ Brg. of South Abutment	14+10.00	-7.500	441.273	441.273
Back of South Abutment	14+11.75	-7.500	441.238	441.238

BEAM 3

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS
Back of North Abutment	12+08.25	-1.500	445.402	445.402
Ⓞ Brg. of North Abutment	12+10.00	-1.500	445.367	445.367
a	12+20.00	-1.500	445.167	445.179
b	12+30.00	-1.500	444.967	444.986
c	12+40.00	-1.500	444.767	444.785
d	12+50.00	-1.500	444.567	444.578
e	12+60.00	-1.500	444.367	444.368
Ⓞ of Pier 1	12+70.00	-1.500	444.167	444.167
f	12+80.00	-1.500	443.967	443.976
g	12+90.00	-1.500	443.767	443.792
h	13+00.00	-1.500	443.567	443.605
i	13+10.00	-1.500	443.367	443.410
j	13+20.00	-1.500	443.167	443.205
k	13+30.00	-1.500	442.967	442.992
l	13+40.00	-1.500	442.767	442.776
Ⓞ of Pier 2	13+50.00	-1.500	442.567	442.567
m	13+60.00	-1.500	442.367	442.368
n	13+70.00	-1.500	442.167	442.178
o	13+80.00	-1.500	441.967	441.985
p	13+90.00	-1.500	441.767	441.786
q	14+00.00	-1.500	441.567	441.579
Ⓞ Brg. of South Abutment	14+10.00	-1.500	441.367	441.367
Back of South Abutment	14+11.75	-1.500	441.332	441.332

BEAM 4

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS
Back of North Abutment	12+08.25	4.500	445.355	445.355
Ⓞ Brg. of North Abutment	12+10.00	4.500	445.320	445.320
a	12+20.00	4.500	445.120	445.132
b	12+30.00	4.500	444.920	444.939
c	12+40.00	4.500	444.720	444.738
d	12+50.00	4.500	444.520	444.531
e	12+60.00	4.500	444.320	444.321
Ⓞ of Pier 1	12+70.00	4.500	444.120	444.120
f	12+80.00	4.500	443.920	443.929
g	12+90.00	4.500	443.720	443.745
h	13+00.00	4.500	443.520	443.558
i	13+10.00	4.500	443.320	443.363
j	13+20.00	4.500	443.120	443.158
k	13+30.00	4.500	442.920	442.945
l	13+40.00	4.500	442.720	442.729
Ⓞ of Pier 2	13+50.00	4.500	442.520	442.520
m	13+60.00	4.500	442.320	442.321
n	13+70.00	4.500	442.120	442.131
o	13+80.00	4.500	441.920	441.938
p	13+90.00	4.500	441.720	441.739
q	14+00.00	4.500	441.520	441.532
Ⓞ Brg. of South Abutment	14+10.00	4.500	441.320	441.320
Back of South Abutment	14+11.75	4.500	441.285	441.285

BEAM 5

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS
Back of North Abutment	12+08.25	10.500	445.261	445.261
Ⓞ Brg. of North Abutment	12+10.00	10.500	445.226	445.226
a	12+20.00	10.500	445.026	445.038
b	12+30.00	10.500	444.826	444.845
c	12+40.00	10.500	444.626	444.644
d	12+50.00	10.500	444.426	444.438
e	12+60.00	10.500	444.226	444.228
Ⓞ of Pier 1	12+70.00	10.500	444.026	444.026
f	12+80.00	10.500	443.826	443.835
g	12+90.00	10.500	443.626	443.651
h	13+00.00	10.500	443.426	443.464
i	13+10.00	10.500	443.226	443.269
j	13+20.00	10.500	443.026	443.064
k	13+30.00	10.500	442.826	442.851
l	13+40.00	10.500	442.626	442.635
Ⓞ of Pier 2	13+50.00	10.500	442.426	442.426
m	13+60.00	10.500	442.226	442.228
n	13+70.00	10.500	442.026	442.038
o	13+80.00	10.500	441.826	441.844
p	13+90.00	10.500	441.626	441.645
q	14+00.00	10.500	441.426	441.438
Ⓞ Brg. of South Abutment	14+10.00	10.500	441.226	441.226
Back of South Abutment	14+11.75	10.500	441.191	441.191

BEAM 6

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS
Back of North Abutment	12+08.25	16.500	445.167	445.167
Ⓞ Brg. of North Abutment	12+10.00	16.500	445.132	445.132
a	12+20.00	16.500	444.932	444.945
b	12+30.00	16.500	444.732	444.751
c	12+40.00	16.500	444.532	444.551
d	12+50.00	16.500	444.332	444.344
e	12+60.00	16.500	444.132	444.134
Ⓞ of Pier 1	12+70.00	16.500	443.932	443.932
f	12+80.00	16.500	443.732	443.741
g	12+90.00	16.500	443.532	443.557
h	13+00.00	16.500	443.332	443.371
i	13+10.00	16.500	443.132	443.176
j	13+20.00	16.500	442.932	442.971
k	13+30.00	16.500	442.732	442.757
l	13+40.00	16.500	442.532	442.541
Ⓞ of Pier 2	13+50.00	16.500	442.332	442.332
m	13+60.00	16.500	442.132	442.134
n	13+70.00	16.500	441.932	441.944
o	13+80.00	16.500	441.732	441.751
p	13+90.00	16.500	441.532	441.551
q	14+00.00	16.500	441.332	441.345
Ⓞ Brg. of South Abutment	14+10.00	16.500	441.132	441.132
Back of South Abutment	14+11.75	16.500	441.097	441.097

DECK ELEVATIONS
POWDER MILL ROAD OVER
EAST FORK OF WOOD RIVER
SECTION 03-00044-00-BR
VILLAGE OF EAST ALTON
STA. 13+10
STRUCTURE NO. 060-6400

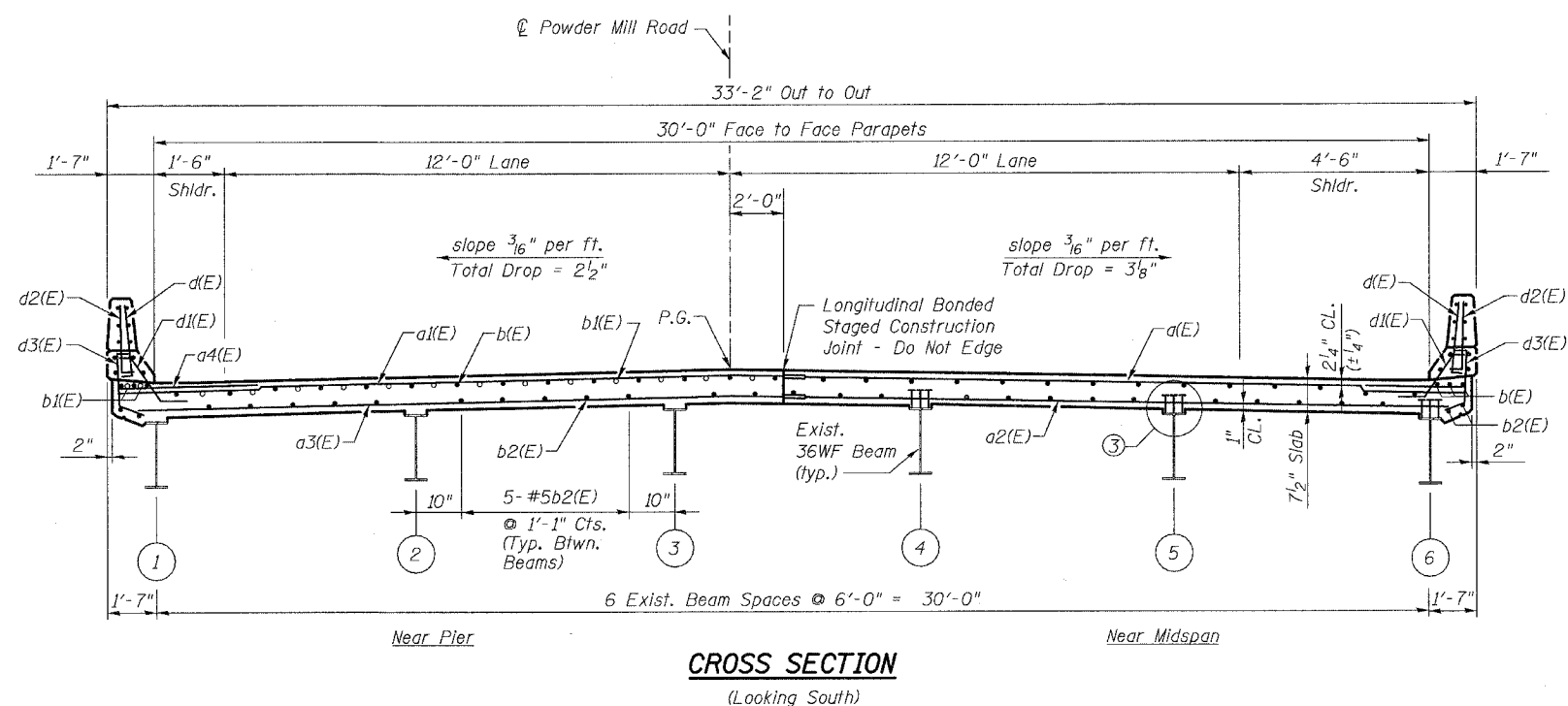
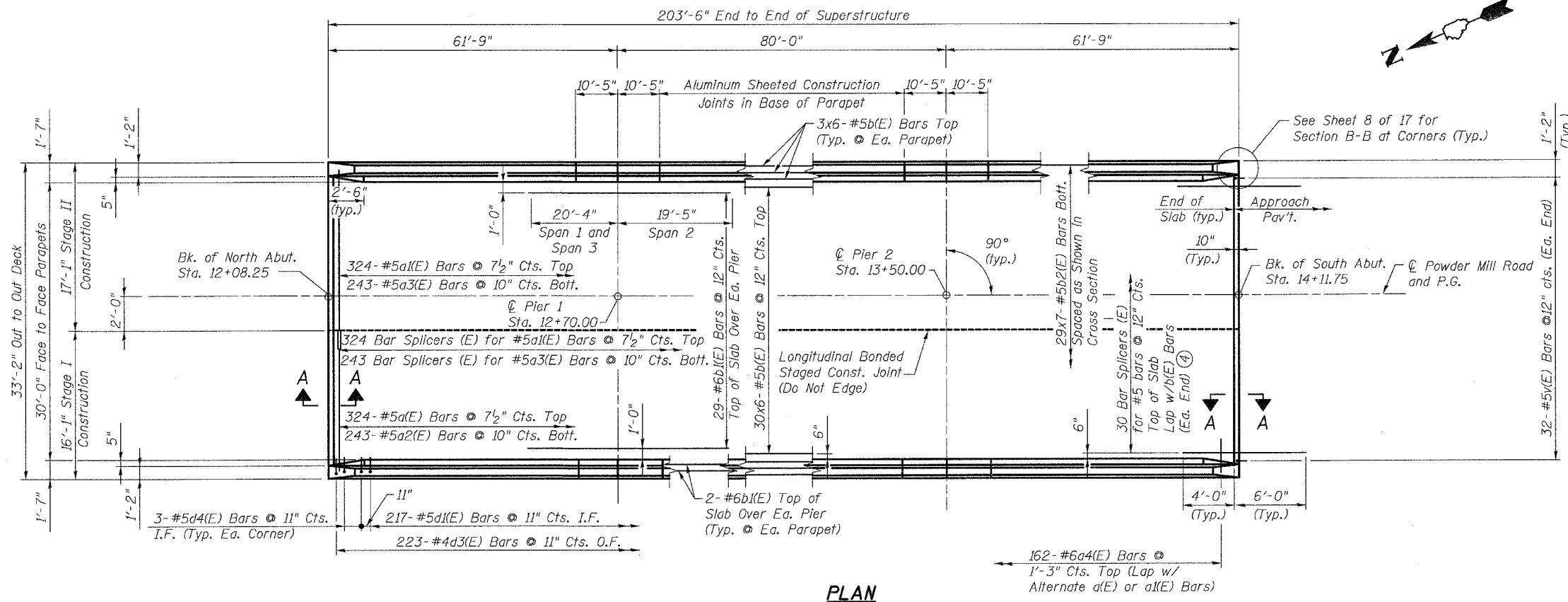
PROFILE GRADE LINE

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS
Back of North Abutment	12+08.25	0.000	445.425	445.425
Ⓞ Brg. of North Abutment	12+10.00	0.000	445.390	445.390
a	12+20.00	0.000	445.190	445.203
b	12+30.00	0.000	444.990	445.009
c	12+40.00	0.000	444.790	444.808
d	12+50.00	0.000	444.590	444.602
e	12+60.00	0.000	444.390	444.392
Ⓞ of Pier 1	12+70.00	0.000	444.190	444.190
f	12+80.00	0.000	443.990	443.999
g	12+90.00	0.000	443.790	443.815
h	13+00.00	0.000	443.590	443.628
i	13+10.00	0.000	443.390	443.433
j	13+20.00	0.000	443.190	443.228
k	13+30.00	0.000	442.990	443.015
l	13+40.00	0.000	442.790	442.799
Ⓞ of Pier 2	13+50.00	0.000	442.590	442.590
m	13+60.00	0.000	442.390	442.392
n	13+70.00	0.000	442.190	442.202
o	13+80.00	0.000	441.990	442.008
p	13+90.00	0.000	441.790	441.809
q	14+00.00	0.000	441.590	441.603
Ⓞ Brg. of South Abutment	14+10.00	0.000	441.390	441.390
Back of South Abutment	14+11.75	0.000	441.355	441.355

LONGITUDINAL STAGED CONSTRUCTION JOINT

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS
Back of North Abutment	12+08.25	2.000	445.394	445.394
Ⓞ Brg. of North Abutment	12+10.00	2.000	445.359	445.359
a	12+20.00	2.000	445.159	445.171
b	12+30.00	2.000	444.959	444.978
c	12+40.00	2.000	444.759	444.777
d	12+50.00	2.000	444.559	444.570
e	12+60.00	2.000	444.359	444.360
Ⓞ of Pier 1	12+70.00	2.000	444.159	444.159
f	12+80.00	2.000	443.959	443.968
g	12+90.00	2.000	443.759	443.784
h	13+00.00	2.000	443.559	443.597
i	13+10.00	2.000	443.359	443.402
j	13+20.00	2.000	443.159	443.197
k	13+30.00	2.000	442.959	442.984
l	13+40.00	2.000	442.759	442.768
Ⓞ of Pier 2	13+50.00	2.000	442.559	442.559
m	13+60.00	2.000	442.359	442.360
n	13+70.00	2.000	442.159	442.170
o	13+80.00	2.000	441.959	441.977
p	13+90.00	2.000	441.759	441.778
q	14+00.00	2.000	441.559	441.571
Ⓞ Brg. of South Abutment	14+10.00	2.000	441.359	441.359
Back of South Abutment	14+11.75	2.000	441.324	441.324

DECK ELEVATIONS
POWDER MILL ROAD OVER
EAST FORK OF WOOD RIVER
SECTION 03-00044-00-BR
VILLAGE OF EAST ALTON
STA. 13+10
STRUCTURE NO. 060-6400

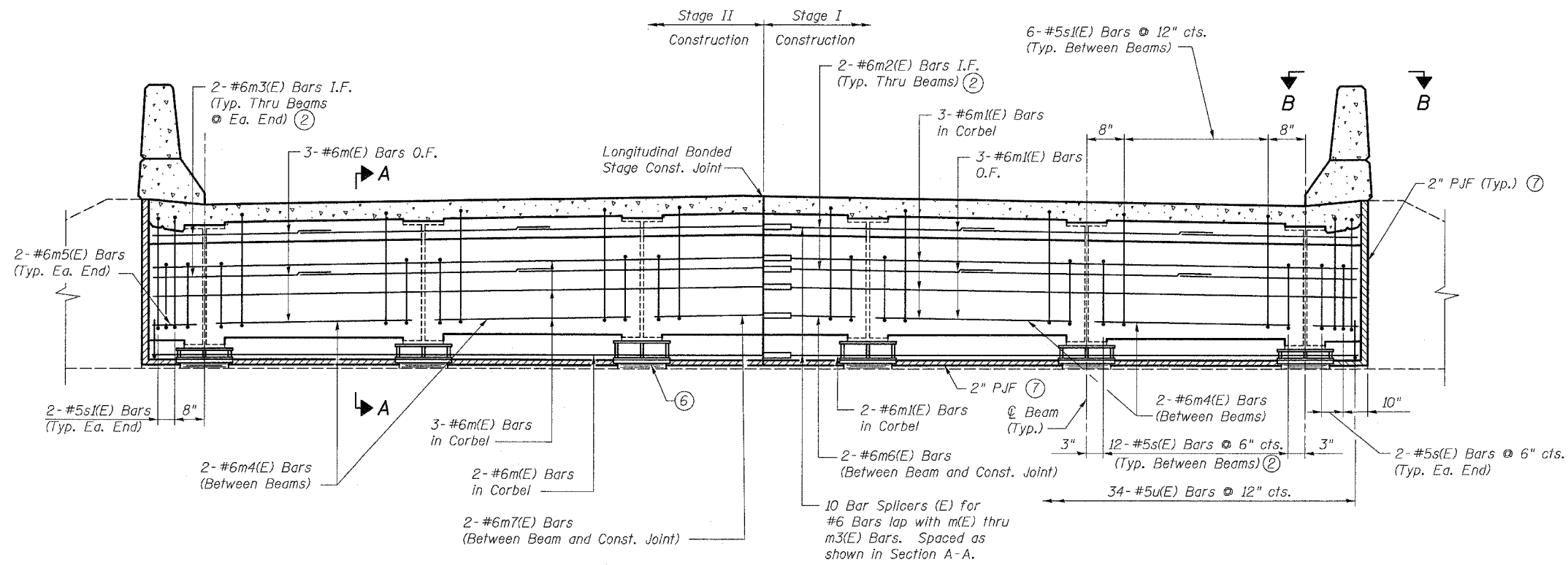


- Notes:
- ① For superstructure details, bar bending details, parapet elevations and bill of materials, see sheet 9 of 17.
 - ② For location of drainage scuppers, see sheet 1 of 17.
 - ③ For shear stud details, see sheet 11 of 17.
 - ④ For bar splicer details, see sheet 15 of 17.
 - ⑤ For Section A-A and diaphragm elevations at abutments, see sheet 8 of 17.
 - ⑥ Bars indicated thus 30x6 indicates 30 lines of bars with 6 lengths per line.
 - ⑦ O.F. denotes outside face. I.F. denotes inside face.
 - ⑧ Minimum bar laps: #5 - 1'-8"
 - ⑨ Reinforcement bars designated (E) shall be epoxy coated.

SUPERSTRUCTURE
POWDER MILL ROAD OVER
EAST FORK OF WOOD RIVER
SECTION 03-00044-00-BR
VILLAGE OF EAST ALTON
STA. 13+10
STRUCTURE NO. 060-6400

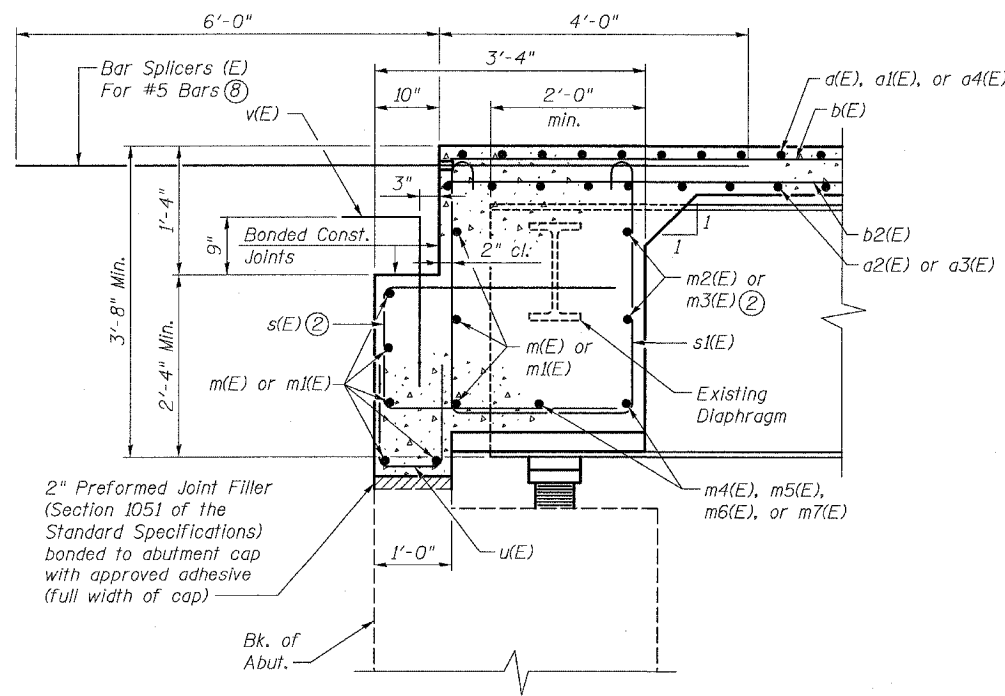
FAU ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 8 17 SHEETS
9003	03-00044-00-BR	MADISON	24	15	
STA.		TO STA.			
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID URBAN-			

CONTRACT NO. 97256

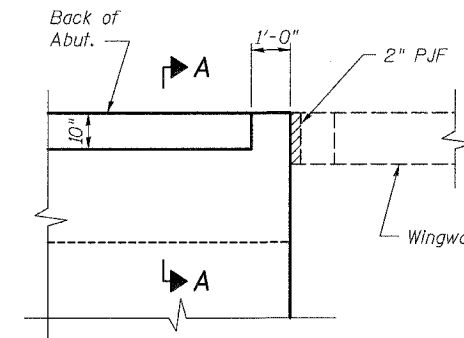


DIAPHRAGM ELEVATION

(South Diaphragm looking South shown, North Diaphragm looking North opposite hand)



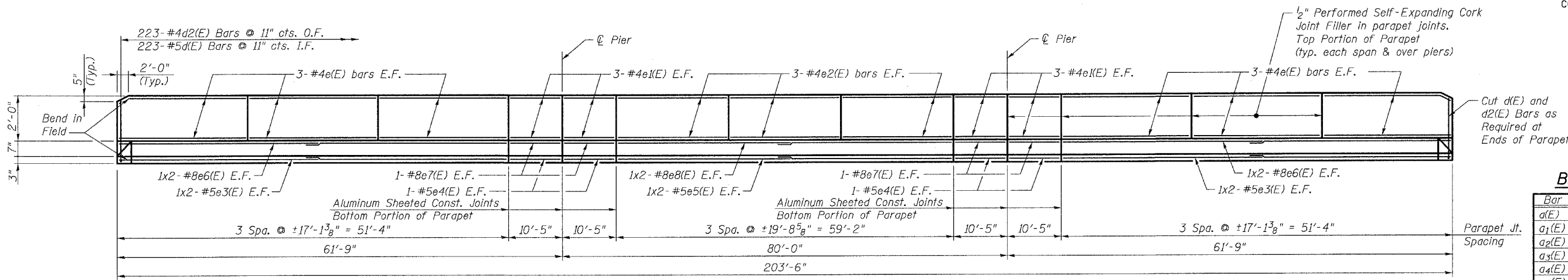
SECTION A-A AT ABUTMENTS



SECTION B-B
(Parapet Not Shown)

- Notes:
- ① See sheet 9 of 17 for additional superstructure details, bar bending details, and bill of materials. Concrete in diaphragm is included with Concrete Superstructure.
 - ② Place s(E), m2(E) & m3(E) bars through drilled holes in steel beams and diaphragms. Provide 1" ϕ drilled holes except at beam No. 4, where 2" ϕ holes are required.
 - ③ Cost to drill holes is included in the cost for Reinforcement Bars, Epoxy Coated.
 - ④ Reinforcement bars designated (E) shall be epoxy coated.
 - ⑤ I.F. denotes inside face. O.F. denotes outside face.
 - ⑥ Side retainers not shown for clarity. See sheet 12 of 17 for bearing details.
 - ⑦ Provide fabric reinforced elastomeric mat, 2" preformed joint filler and geocomposite wall drain behind 2" PJF, which separates the abutment diaphragm from the wingwall. See abutment backfill detail on sheet 2 of 17. Cost included with Porous Granular Embankment.
 - ⑧ See sheet 15 of 17 for Bar Splicer Details.
 - ⑨ Minimum bar lap: #6 bar = 2'-9"

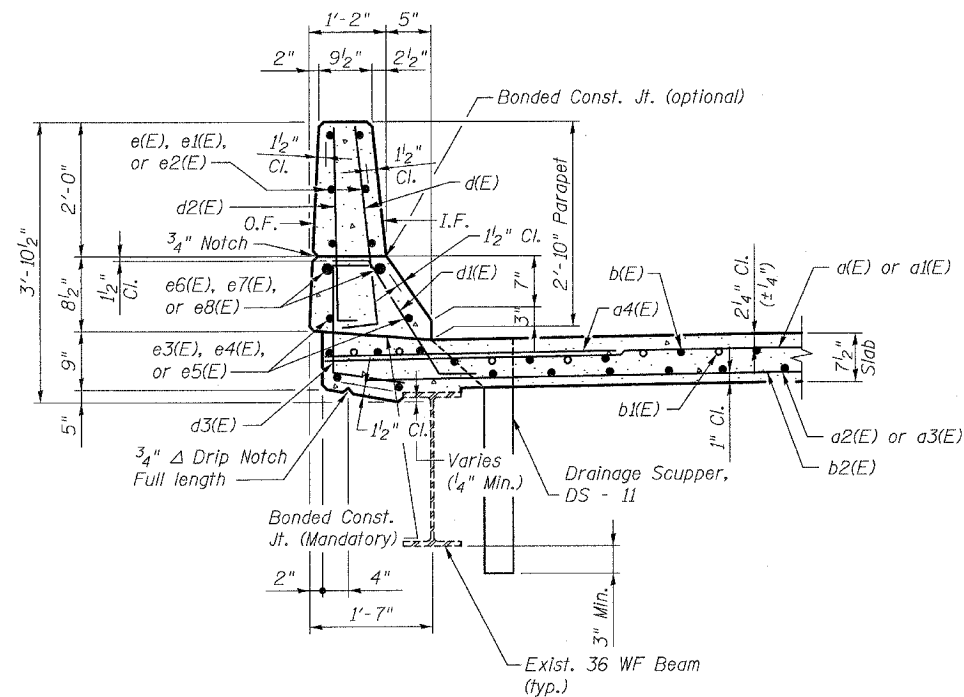
SUPERSTRUCTURE DETAILS
POWDER MILL ROAD OVER
EAST FORK OF WOOD RIVER
SECTION 03-00044-00-BR
VILLAGE OF EAST ALTON
STA. 13+10
STRUCTURE NO. 060-6400



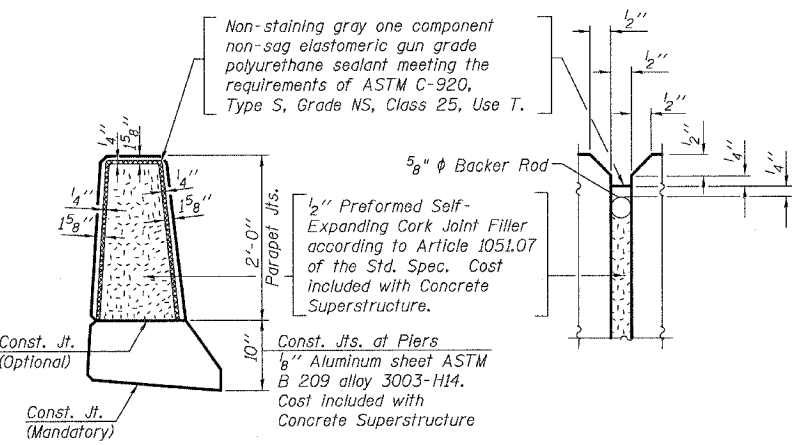
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	324	#5	15'-8"	—
a1(E)	324	#5	16'-8"	—
a2(E)	243	#5	15'-4"	—
a3(E)	243	#5	16'-4"	—
a4(E)	324	#6	4'-6"	—
a5(E)	64	#5	1'-6"	—
b(E)	216	#5	35'-0"	—
b1(E)	66	#6	39'-9"	—
b2(E)	203	#5	30'-3"	—
d(E)	446	#5	3'-0"	L
d1(E)	434	#5	2'-5"	L
d2(E)	446	#4	3'-0"	L
d3(E)	446	#4	2'-4"	L
d4(E)	12	#5	2'-2"	L
e(E)	72	#4	16'-10"	—
e1(E)	48	#4	10'-2"	—
e2(E)	36	#4	19'-5"	—
e3(E)	16	#5	26'-8"	—
e4(E)	16	#5	10'-2"	—
e5(E)	8	#5	30'-7"	—
e6(E)	16	#8	27'-10"	—
e7(E)	16	#8	10'-2"	—
e8(E)	8	#8	31'-9"	—
m(E)	16	#6	16'-7"	—
m1(E)	16	#6	15'-7"	—
m2(E)	16	#6	8'-2"	—
m3(E)	8	#6	5'-9"	—
m4(E)	16	#6	5'-8"	—
m5(E)	8	#6	1'-1"	—
m6(E)	4	#6	2'-2"	—
m7(E)	4	#6	3'-2"	—
s(E)	128	#5	8'-0"	—
s1(E)	68	#5	9'-3"	—
u(E)	68	#5	4'-9"	—
v(E)	64	#5	2'-11"	—
Reinforcement Bars, Epoxy Coated			Pound	51,830
Concrete Superstructure (5)			Cu. Yd.	240.9

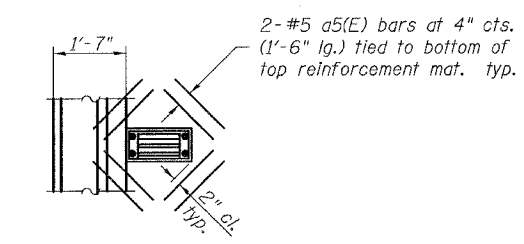
PARAPET INSIDE ELEVATION



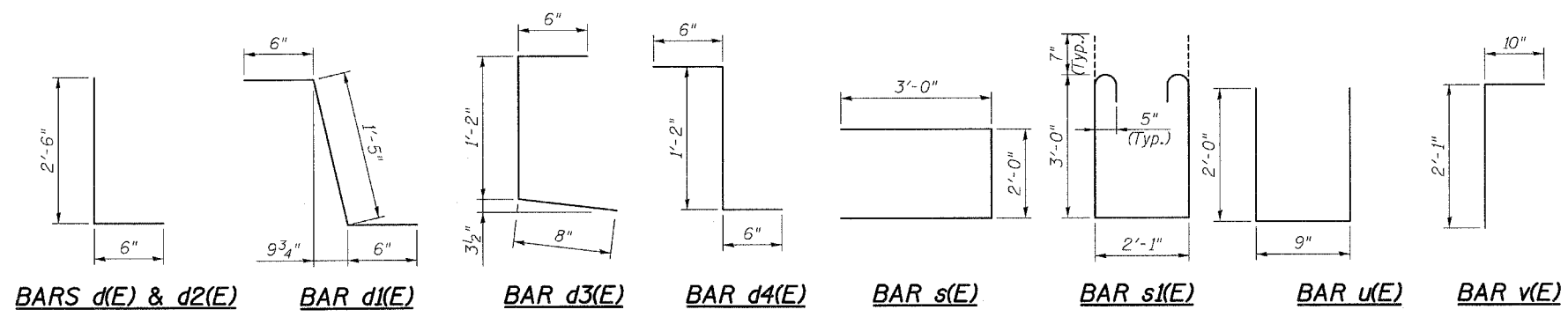
SECTION THRU PARAPET



PARAPET JOINT DETAIL

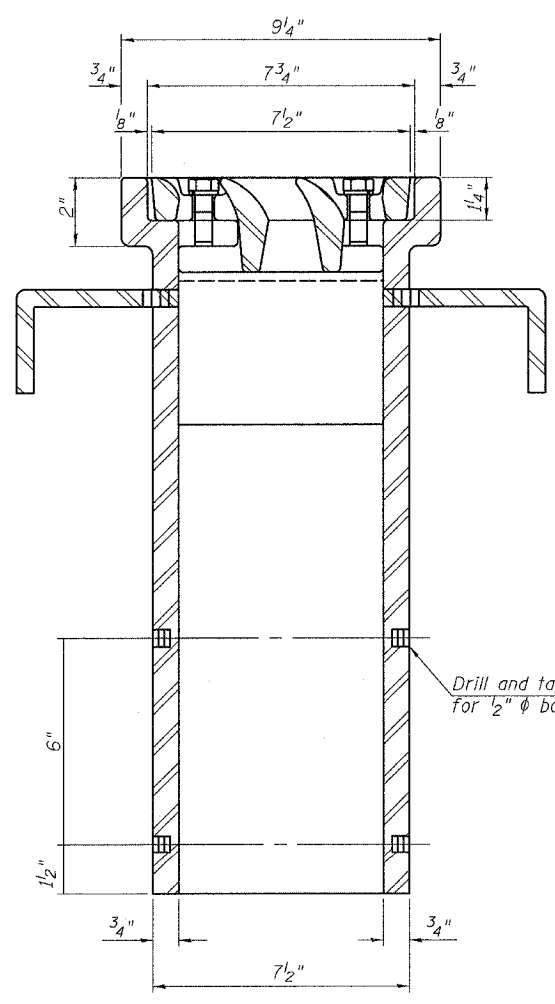
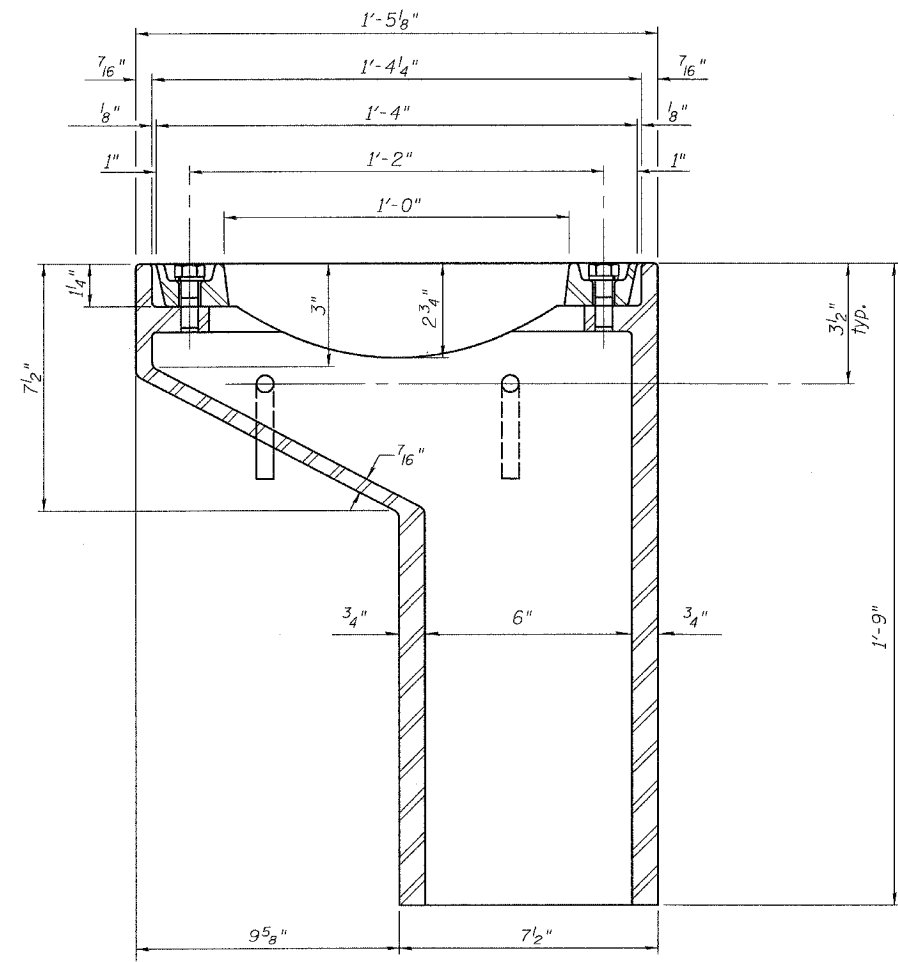
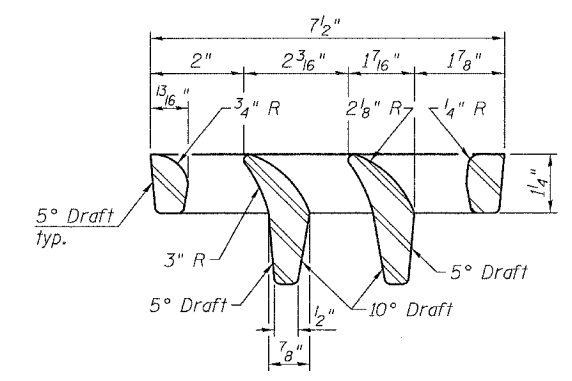
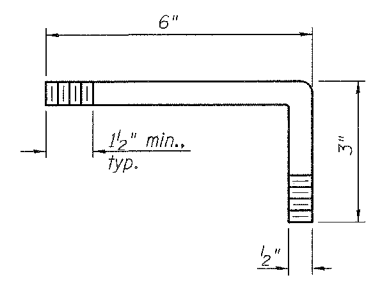
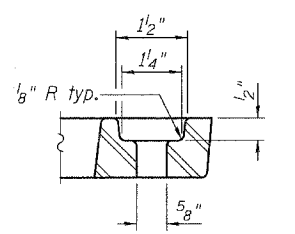
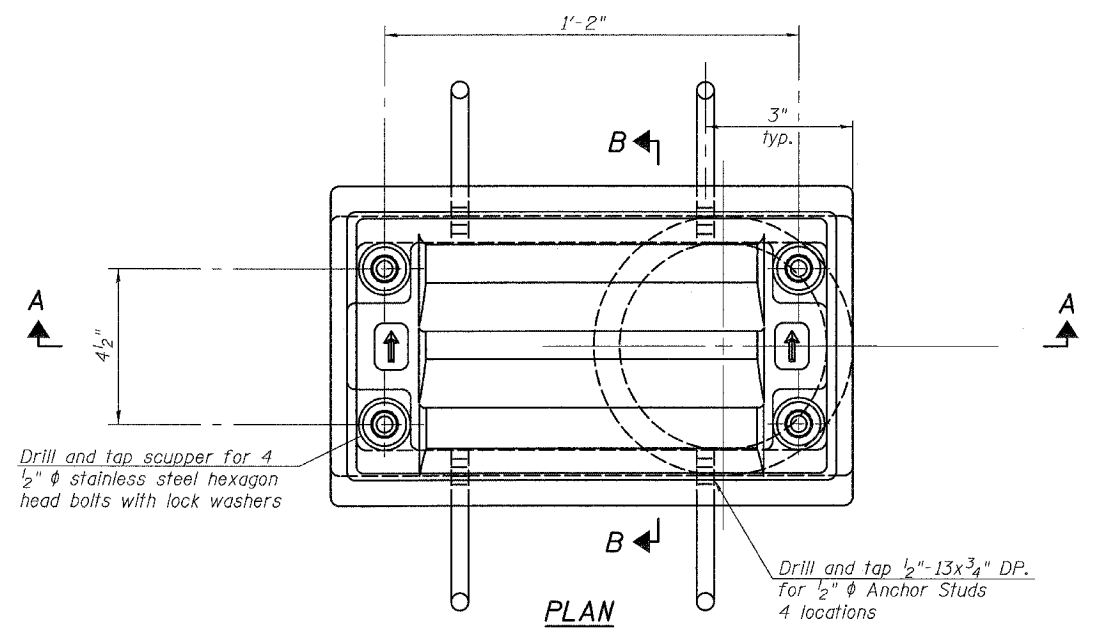


SCUPPER BAR DETAIL



- Notes:
- Reinforcement bars designated (E) shall be epoxy coated.
 - Minimum bar laps: #5 - 2'-2"
#8 - 4'-6"
 - E.F. denotes each face
I.F. denotes inside face
O.F. denotes outside face
 - Bars indicated thus 1x2-#8 etc. indicates 1 line of bars with 2 lengths per line.
 - Concrete Superstructure includes concrete in diaphragm

SUPERSTRUCTURE DETAILS
POWDER MILL ROAD OVER
EAST FORK OF WOOD RIVER
SECTION 03-00044-00-BR
VILLAGE OF EAST ALTON
STA. 13+10
STRUCTURE NO. 060-6400



Notes:

All cast iron parts shall be gray iron conforming to the requirements of AASHTO M 105, Class 35B.

Bolts, anchor studs, washers and nuts shall conform to the requirements of ASTM A 307 and shall be galvanized according to AASHTO M 232.

The grate, frame and downspout shall be galvanized according to AASHTO M 111 and ASTM A 385.

As an alternate, bolts, anchor studs, washers and nuts may be stainless steel according to Article 1006.29(d) of the Standard Specifications.

Structural steel weldments of equal sections and of the same configuration may be substituted for cast iron. Fillet or full penetration welds shall be used for the weldments. Details shall be submitted to the Engineer for approval.

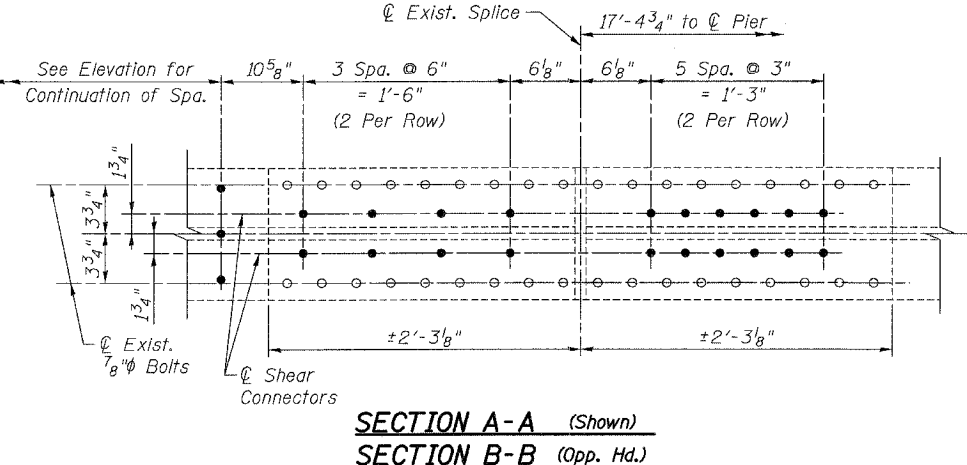
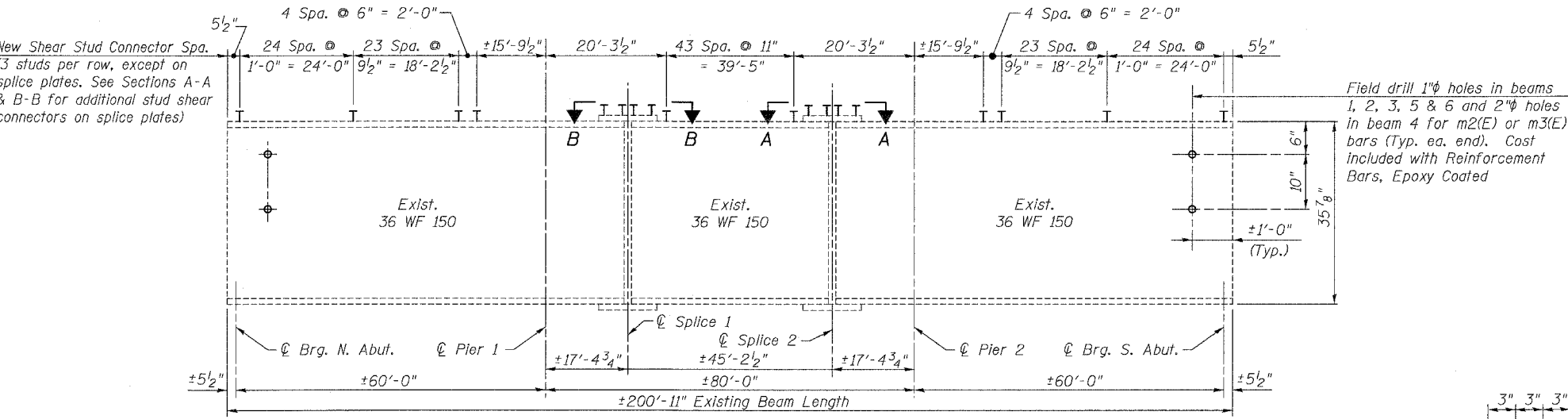
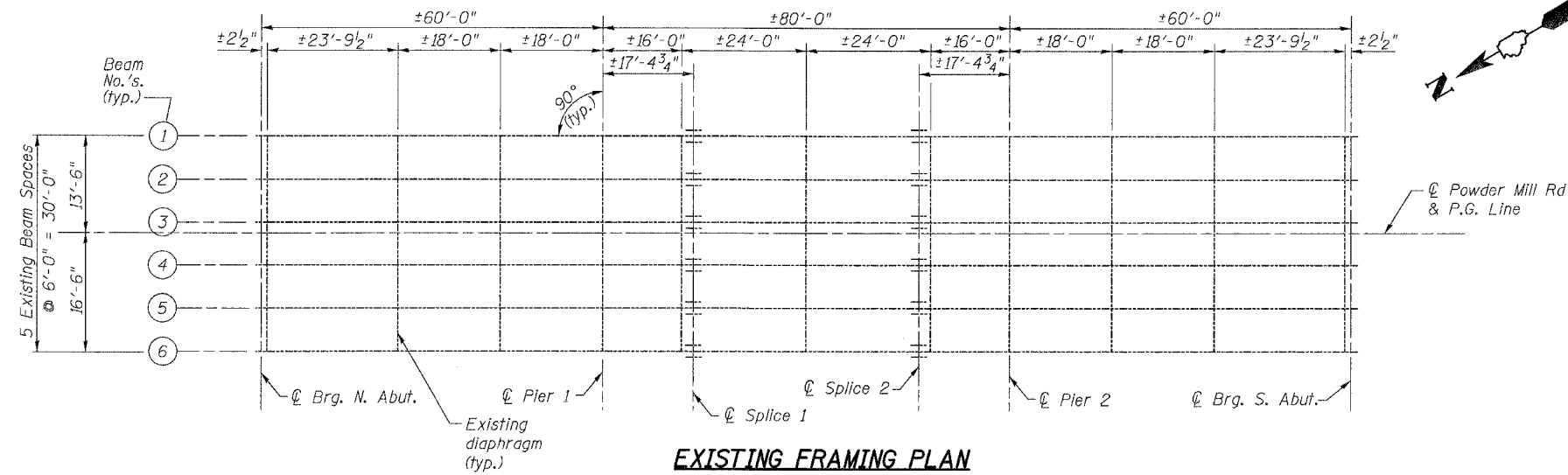
The Contractor shall take appropriate measures to assure that Protective Coat is not applied to the scupper.

Cost of the Grate, Frame, Downspout, Anchor Studs, Bolts, Washers and Nuts including complete installation of the scupper shall be paid for at the contract unit price each for Drainage Scupper, DS-11.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scupper, DS-11	Each	8

DRAINAGE SCUPPER, DS-11
POWDER MILL ROAD OVER
EAST FORK OF WOOD RIVER
SECTION 03-00044-00-BR
VILLAGE OF EAST ALTON
STA. 13+10
STRUCTURE NO. 060-6400



TOP OF BEAM ELEVATIONS

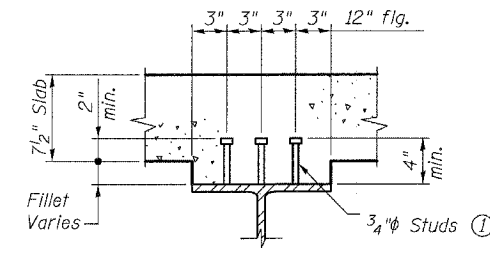
Location	Exist. Beam 1	Exist. Beam 2	Exist. Beam 3	Exist. Beam 4	Exist. Beam 5	Exist. Beam 6
⊕ Brg. N. Abut.	444.42	444.49	444.57	444.55	444.46	444.45
⊕ Pier 1	443.14	443.24	443.26	443.25	443.18	443.17
⊕ Splice 1	442.77	442.88	442.89	442.87	442.82	442.80
⊕ Splice 2	441.91	442.05	442.11	442.07	441.98	441.91
⊕ Pier 2	441.57	441.70	441.76	441.72	441.64	441.57
⊕ Brg. S. Abut.	440.39	440.50	440.54	440.51	440.46	440.43

EXISTING INTERIOR BEAM MOMENT TABLE

	0.4 SPAN 1 & 0.6 SPAN 3	PIER 1 & 2	0.5 SPAN 2
I_s (in.4)	9040	12674	9040
I_c (in.4) (n=9)	21283		21283
I_c (in.4) (n=27)	15606		15606
S_s (in.3)	504	688	504
S_c (in.3) (n=9)	700		700
S_c (in.3) (n=27)	633		633
Z (in.3)		781	
DL (k./ft.)	0.761	1.186	0.761
M _{DL} (ft.k./beam)	166.7	605.4	204.0
s DL (k./ft.)	0.425		0.425
M _s DL (ft.k./beam)	103.6		140.0
M _{LL} (ft.k./beam)	368.9	269.7	435.2
M _{Imp.} (ft.k./beam)	99.6	72.8	111.0
5/3 M _{LL} +Imp. (ft.k./beam)	780.9	570.8	910.2
M _a (ft.k.)	1366.6	1529.0	1630.6
M _u (ft.k.)	2581.8	2147.8	2581.8
f_s (DL non-comp) (k.s.i.)	3.97	10.56	4.86
f_s (DL comp.) (k.s.i.)	1.96		2.65
f_s 5/3 [M _{LL} +M _{Imp.}] (k.s.i.)	13.39	9.96	15.60
f_s (Overload) (k.s.i.)	19.32	20.52	23.12
f_s (Total) (k.s.i.)			
VR (k)	45.4		43.3

INTERIOR BEAM REACTION TABLE

	N. & S. ABUT. (3)	PIER 1 & 2
R DL (K)	52.0	93.4
R LL (K)	36.1	42.3
R IMP. (K)	9.7	8.0
R TOTAL (K)	97.8	143.7

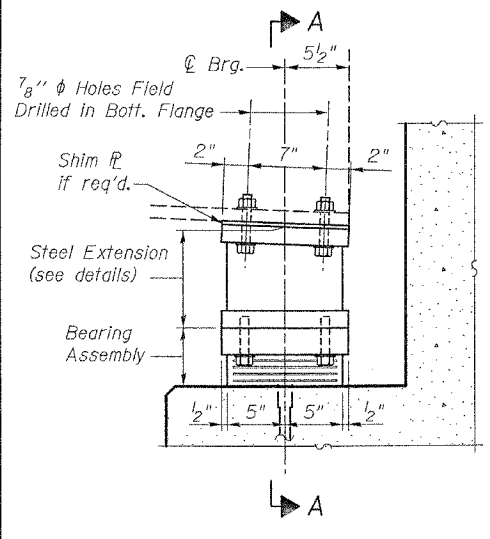


TYPICAL SHEAR STUD DETAIL
(Typical, except use 2 studs per row at existing splice plates. See Sections A-A and B-B.)

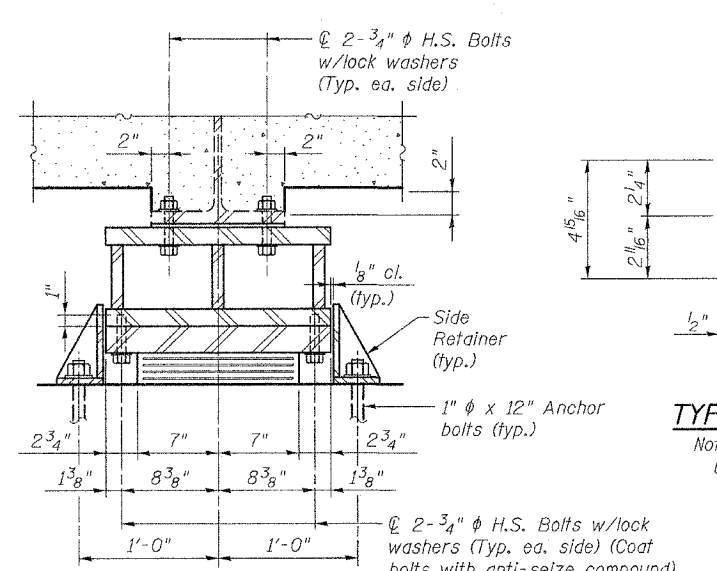
- MOMENT TABLE NOTES:**
- I_s and S_s are the moment of inertia and section modulus of the steel section used in computing f_s (Total and Overload).
 - $I_c(n)$ and $S_c(n)$ are the moment of inertia and section modulus of the composite section used in computing stresses due to live load.
 - $I_c(3n)$ and $S_c(3n)$ are the moment of inertia and section modulus of the composite section used in computing stresses due to superimposed dead load.
 - VR is the maximum $L +$ Impact Shear Range within the composite portion of the span.
 - Z is the plastic section modulus to determine the fully plastic moments in the non-composite areas.
 - M_u is the Plastic Moment capacity.
 - f_s (Total) is the sum of the stresses due to $1.3[M_D + M_S D + 5/3(M_L + M_{IMP})]$.
 - f_s (Overload) is the sum of the stresses due to $[M_D + M_S D + 5/3(M_L + M_{IMP})]$.
 - M_D - moment due to dead loads on non-composite section.
 - $M_S D$ - moment due to dead loads on composite section.
 - M_L - moment due to live load on non-composite or composite section.
 - M_{IMP} - moment due to live load impact on non-composite or composite section.
 - M_a (Applied Moment) = $1.3[M_D + M_S D + 5/3(M_L + M_{IMP})]$.

- NOTES:**
- All studs to be 3/4" Granular or solid flux filled headed studs conforming to Article 1006.32 of the Standard Specifications automatically end welded to flange. (No. required = 2,904)
 - Field drill 1" ϕ holes in existing end diaphragms at each abutment to receive s(E) bars. See sheet 8 of 17 for Section A-A at abutments and for number and spacing of bars. Cost to drill 1" ϕ holes is included in the cost for Reinforcement Bars, Epoxy Coated.
 - Dead load reaction at abutments includes superstructure, diaphragm and approach pavement dead load (3.0 k/foot).

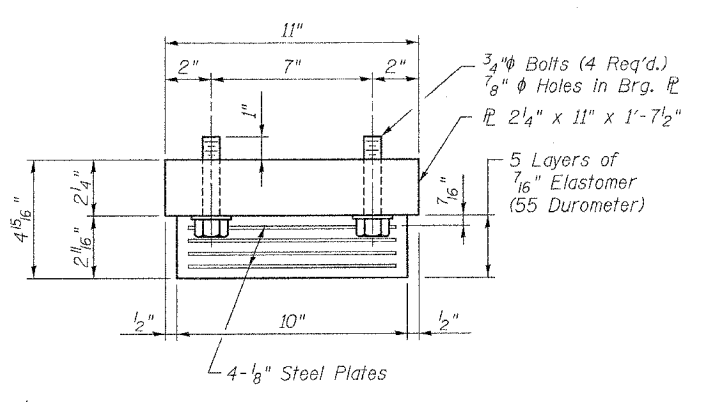
**FRAMING PLAN
POWDER MILL ROAD OVER
EAST FORK OF WOOD RIVER
SECTION 03-00044-00-BR
VILLAGE OF EAST ALTON
STA. 13+10
STRUCTURE NO. 060-6400**



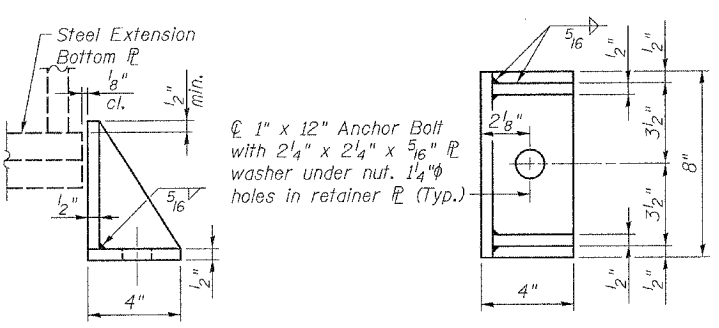
ELEVATION AT S. ABUT.
TYPE I ELASTOMERIC EXP. BRG. @ S. ABUT.



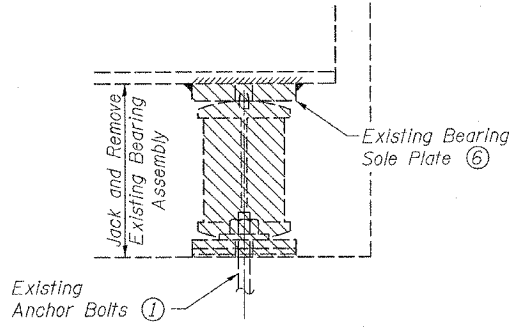
SECTION A-A
TYPE I ELASTOMERIC EXP. BRG. @ S. ABUT.



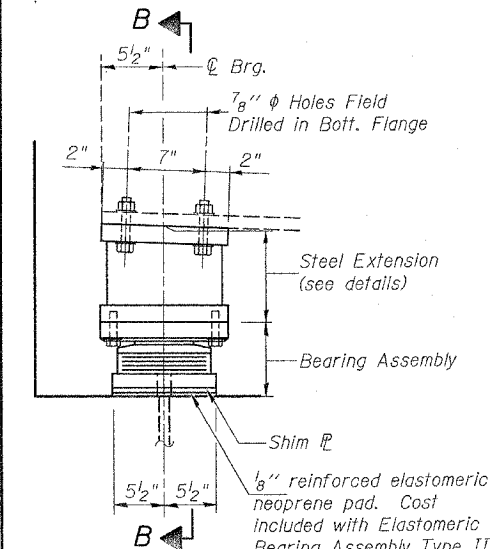
TYPE I BEARING ASSEMBLY
Note: Shim plates shall not be placed under Type I Bearing Assembly.



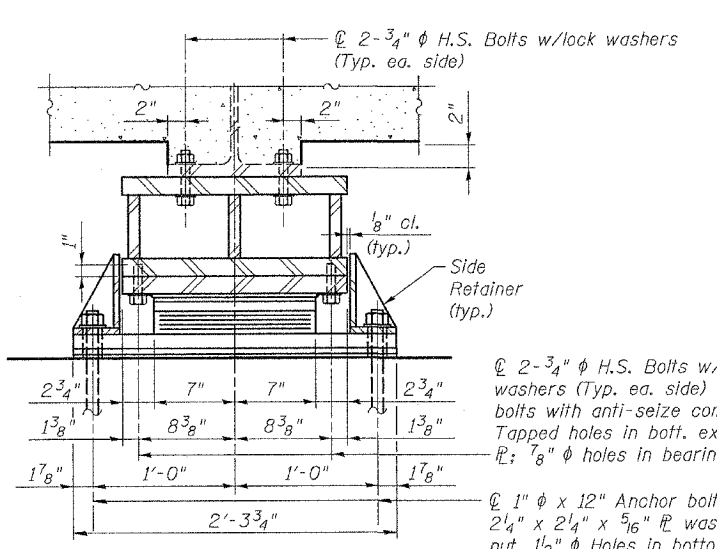
SIDE RETAINER
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. Weight included with Structural Steel.



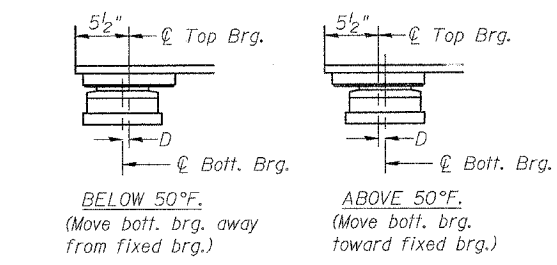
EXISTING BEARING REMOVAL DETAIL



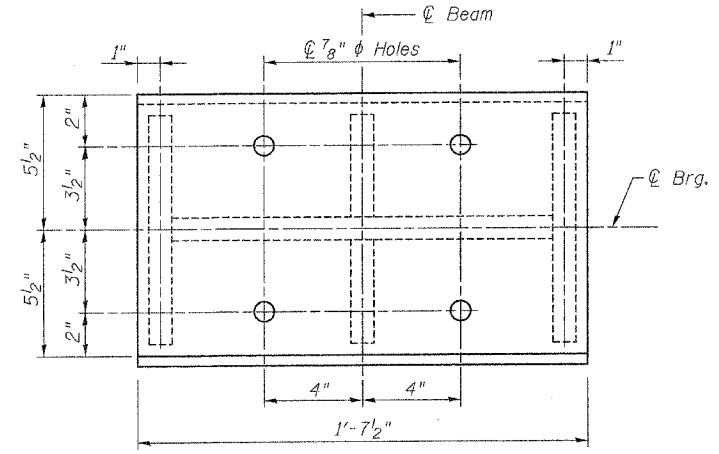
ELEVATION AT N. ABUT.
TYPE II ELASTOMERIC EXP. BRG. @ N. ABUT.



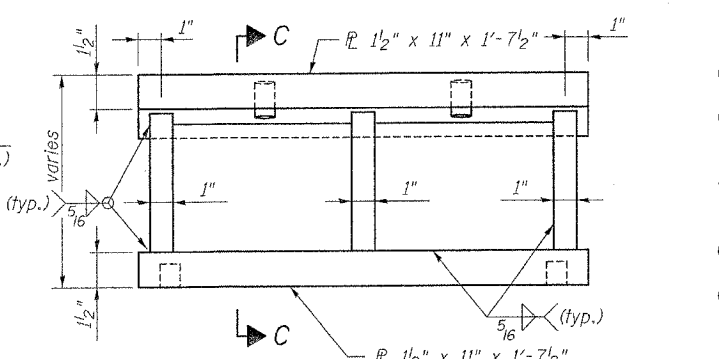
SECTION B-B
TYPE II ELASTOMERIC EXP. BRG. @ N. ABUT.



SETTING ANCHOR BOLTS AT EXP. BRG.
D = 1/8" per each 100' of expansion for every 15° temp. change from the normal temp. of 50°F.



PLAN - TOP

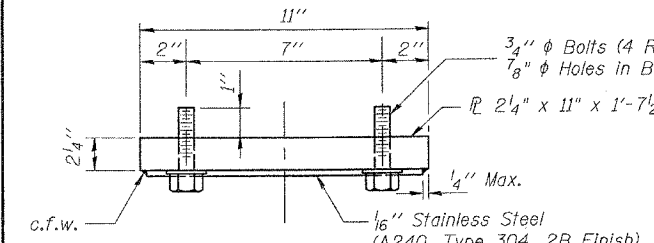


ELEVATION

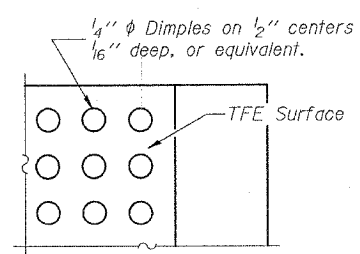
RISER HEIGHT TABLE

Beam	S. Abut. (Type I)	N. Abut. (Type II)
1	±8 5/8"	±6"
2	±9 3/4"	±7 1/8"
3	±10 3/8"	±7 3/4"
4	±10 1/8"	±7 1/2"
5	±9 1/4"	±6 5/8"
6	±8 5/8"	±6"

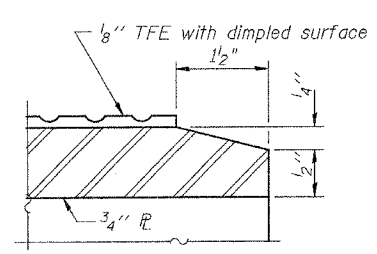
- Notes:
- Burn existing anchor bolts flush with existing concrete surface. Grind existing anchor bolt smooth and seal with epoxy. Cost is included with Jack and Remove Existing Bearings. See Special Provisions.
 - All extension plates shall be AASHTO M270, Grade 36 steel.
 - Weight of all steel extension plates, anchor bolts and side retainers is included with the Structural Steel.
 - Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions.
 - See sheet 16 of 17 for anchor bolt installation.
 - Remove existing bearing sole plates welded to existing beams using the air-arc method and grind smooth all weld material remaining on the bottom flange.
 - The minimum jack capacity is 13 ton for the weight of the beam only, and does not include the weight of deck.



TYPE II TOP BEARING ASSEMBLY



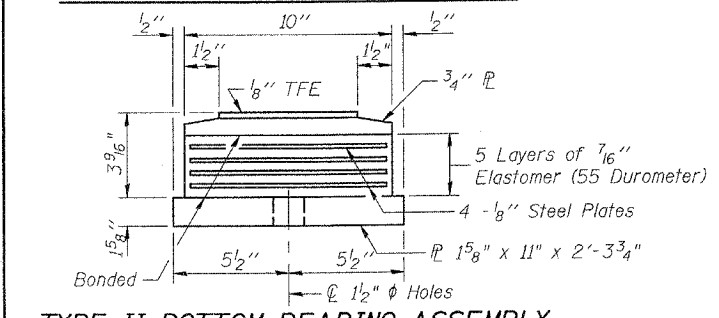
PLAN-TFE SURFACE



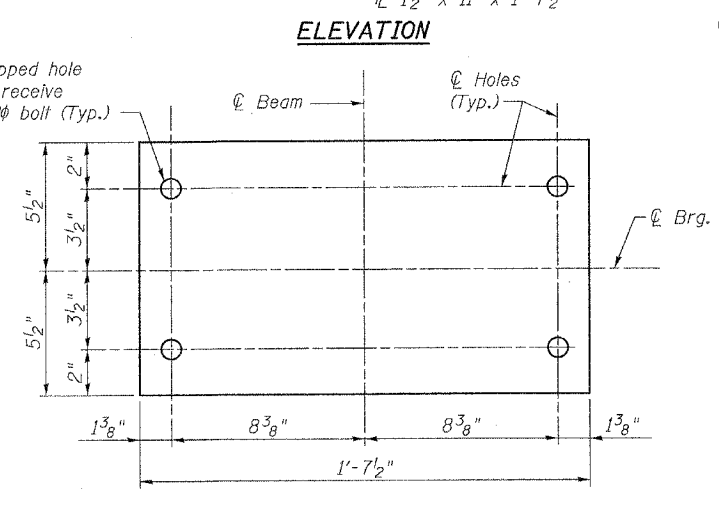
SECTION THRU TFE

Note: The 1/8" TFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.

Bonding of 1/8" TFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.



TYPE II BOTTOM BEARING ASSEMBLY

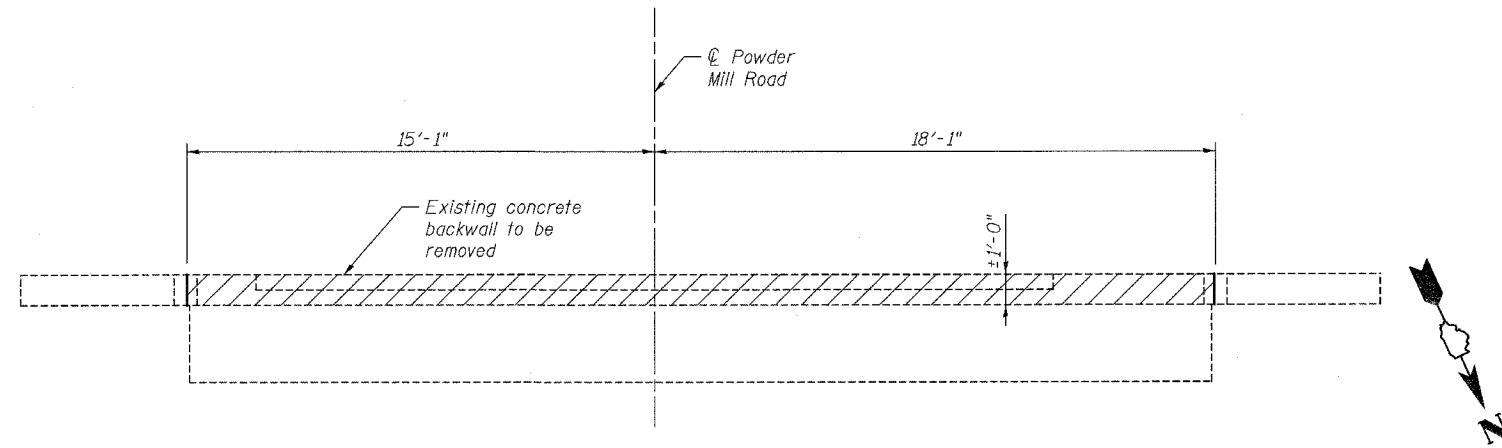


PLAN - BOTTOM
STEEL EXTENSION

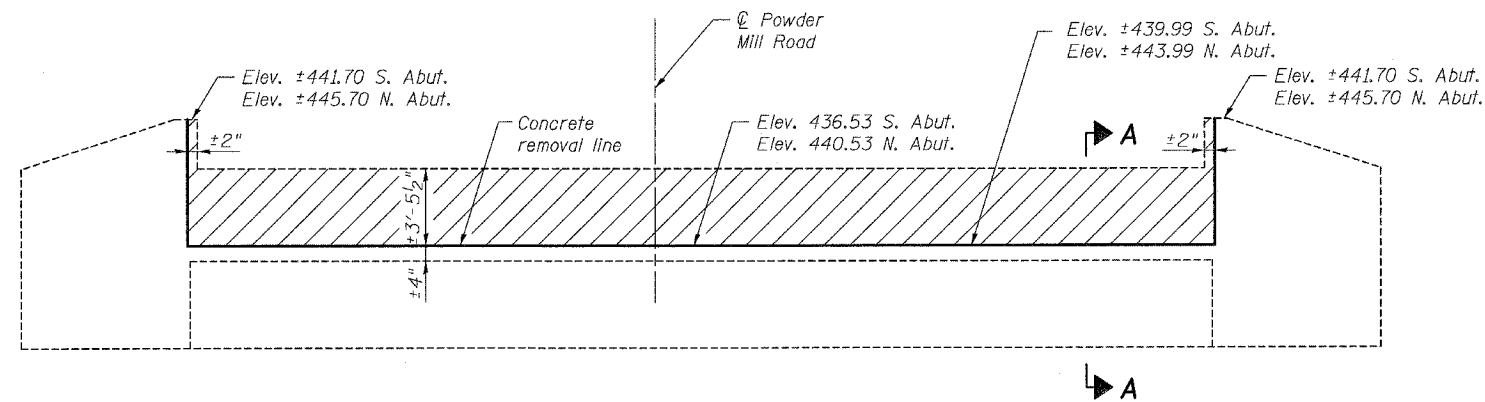
BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	6
Elastomeric Bearing Assembly Type II	Each	6
Jack and Remove Existing Bearings	Each	12
Furnishing And Erecting Structural Steel	Pound	3570

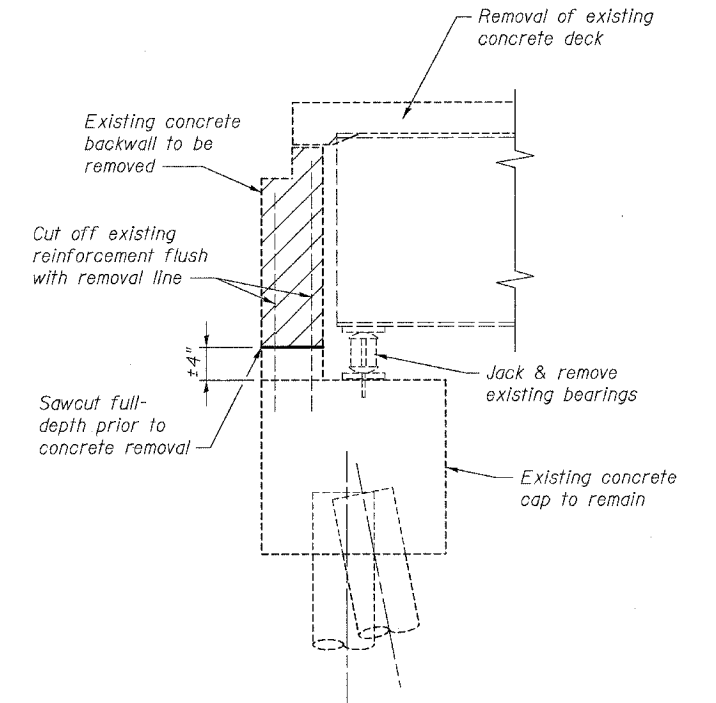
BEARING DETAILS
POWDER MILL ROAD OVER EAST FORK OF WOOD RIVER SECTION 03-00044-00-BR VILLAGE OF EAST ALTON STA. 13+10 STRUCTURE NO. 060-6400



ABUTMENT PLAN
(South Abutment Shown,
North Abutment Opposite Hand)



ABUTMENT ELEVATION
(South Abutment Looking South Shown,
North Abutment Looking North Opposite Hand)



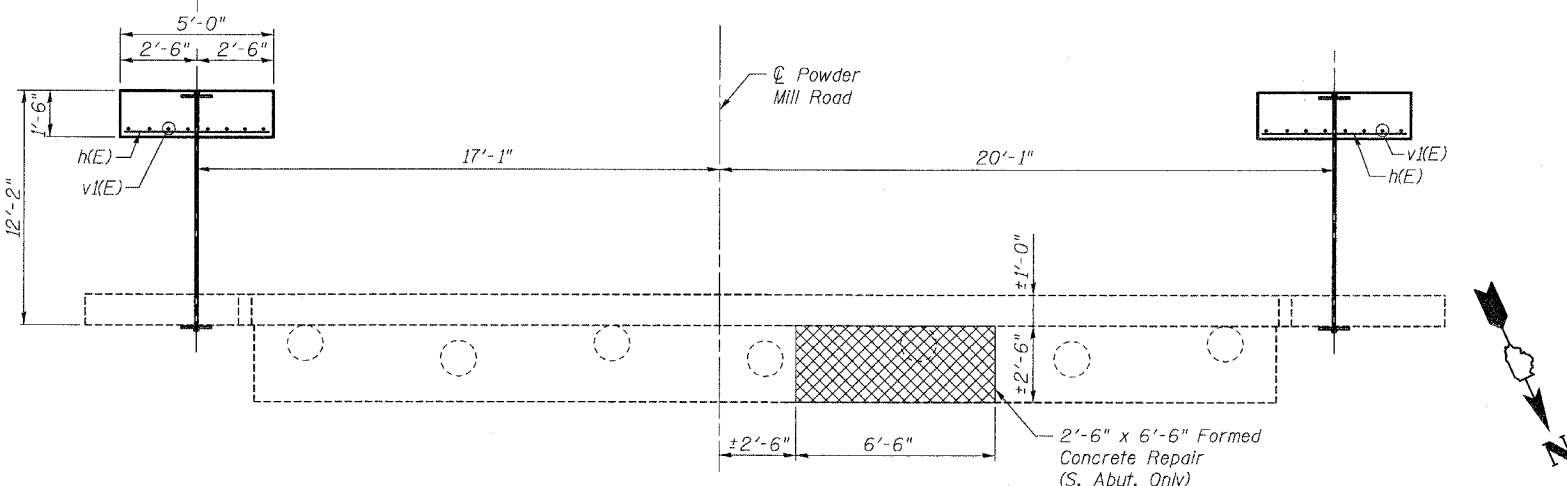
SECTION A-A

BILL OF MATERIAL
(2 Abutments)

Item	Unit	Quantity
Concrete Removal	Cu. Yd.	8.2

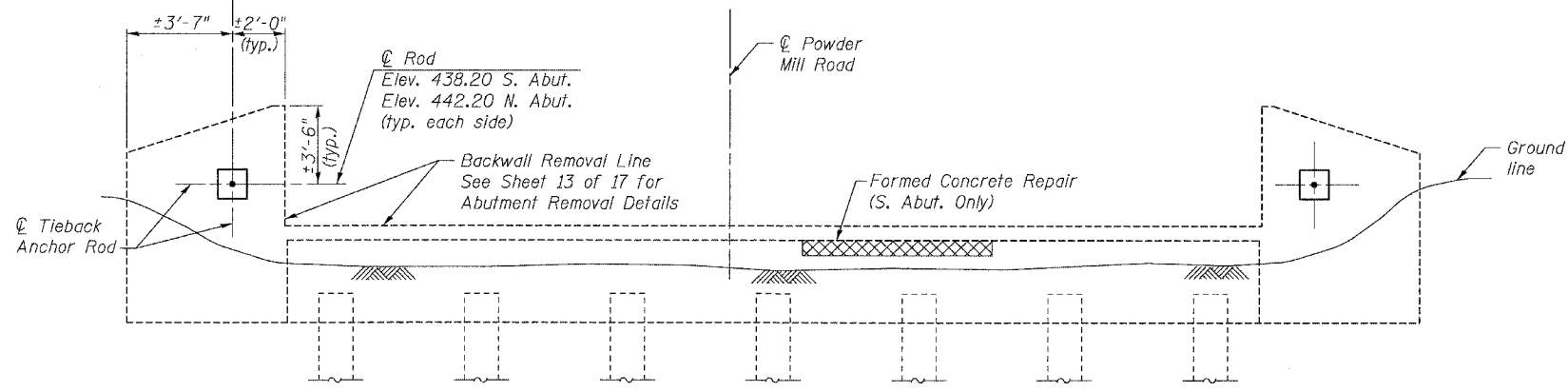
- Notes:
- ① Hatched areas indicate Concrete Removal.
 - ② Existing piles not shown in plan and elevation.
 - ③ Do not remove abutment backwall until wingwall tiebacks are in place. See Sheet 14 of 17 for wingwall tieback details.

**ABUTMENT CONCRETE REMOVAL
POWDER MILL ROAD OVER
EAST FORK OF WOOD RIVER
SECTION 03-00044-00-BR
VILLAGE OF EAST ALTON
STA. 13+10
STRUCTURE NO. 060-6400**



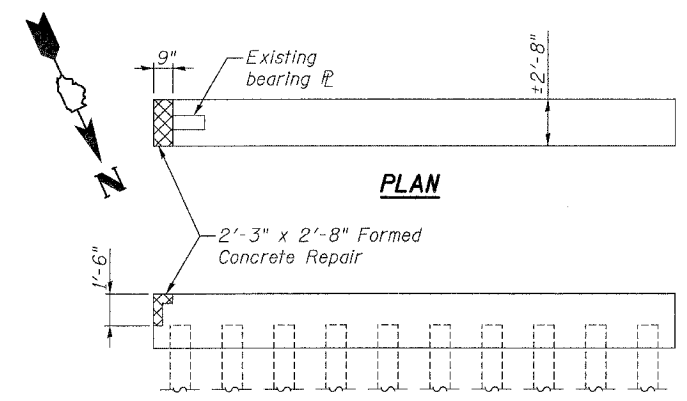
ABUTMENT REPAIR PLAN

(South Abutment Shown,
North Abutment Opposite Hand)

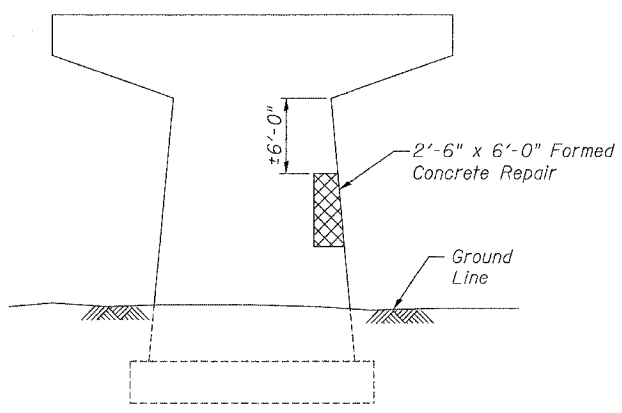


ABUTMENT REPAIR ELEVATION

(South Abutment Looking South Shown,
North Abutment Looking North Opposite Hand)

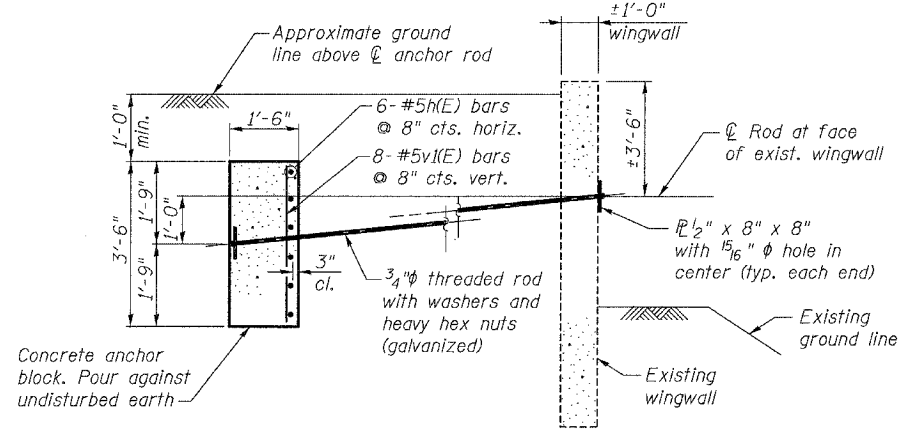


PIER 1 REPAIR



PIER 2 REPAIR

(Looking North)



WINGWALL TIEBACK DETAIL

(4 locations)

Note: The cost of excavation for concrete anchor blocks is included in the cost of Concrete Structures.

BILL OF MATERIAL

Bar	No.	Size	Length	Shape	
h(E)	24	#5	4'-6"	—	
v ₁ (E)	32	#5	3'-0"	—	
Reinforcement Bars, Epoxy Coated				Pound	210
Concrete Structures				Cu. Yd.	4.0
Furnishing and Erecting Structural Steel				Pound	170
Formed Concrete Repair (Depth Equal To Or Less Than 5")				Sq Ft	38

- Notes:
- ① Cross hatched areas indicate Formed Concrete Repair.
 - ② Threaded rods shall conform to the requirements of ASTM A307. Nuts and washers shall conform to AASHTO M164.
 - ③ Steel plates shall conform to the requirements of AASHTO M270 Grade 36.
 - ④ All threaded rods, nuts and washers shall be galvanized according to AASHTO M232.
 - ⑤ All plates shall be galvanized after shop fabrication according to AASHTO M111 and ASTM A385.
 - ⑥ Reinforcement bars designated (E) shall be epoxy coated.
 - ⑦ Install wingwall tiebacks prior to concrete backwall removal. Tieback anchors shall not be tightened for a minimum of 14 days after anchor block is poured.
 - ⑧ Contractor shall provide a 1" deep saw cut along the outside edges of partial depth repair areas prior to concrete removal. Existing reinforcement bars shall be cleaned and reused. See Special Provisions for additional requirements.
 - ⑨ Formed Concrete Repair areas are approximate and subject to adjustment during construction. Final removal limits will be established by the Engineer in the field. Contractor will be paid for the actual area of removal and repair, as approved by the Engineer.

**SUBSTRUCTURE REPAIRS
POWDER MILL ROAD OVER
EAST FORK OF WOOD RIVER
SECTION 03-00044-00-BR
VILLAGE OF EAST ALTON
STA. 13+10
STRUCTURE NO. 060-6400**

NOTES

Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.
Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.
All reinforcement bars shall be lapped and tied to the splicer rods or dowel bars.
Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars.
Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

- ① Minimum Capacity = $1.25 \times f_y \times A_t$
(Tension in kips)
 - ② Minimum *Pull-out Strength = $1.25 \times f_{sallow} \times A_t$
(Tension in kips)
- Where f_y = Yield strength of lapped reinforcement bars in ksi.
 f_{sallow} = Allowable tensile stress in lapped reinforcement bars in ksi (Service Load)
 A_t = Tensile stress area of lapped reinforcement bars.
* = 28 day concrete

BAR SPLICER ASSEMBLIES			
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#4	1'-8"	14.7	5.9
#5	2'-0"	23.0	9.2
#6	2'-7"	33.1	13.3
#7	3'-5"	45.1	18.0
#8	4'-6"	58.9	23.6
#9	5'-9"	75.0	30.0
#10	7'-3"	95.0	38.0
#11	9'-0"	117.4	46.8

Bar splicer assemblies shall be according to Section 508 of the Standard Specifications, except as noted. The furnishing and installation of bar splicer assemblies will be measured and paid for at the contract unit price each for "BAR SPLICERS."

The diameter of this part is equal or larger than the diameter of bar spliced.
The diameter of this part is the same as the diameter of the bar spliced.

ROLLED THREAD DOWEL BAR



**** ONE PIECE**

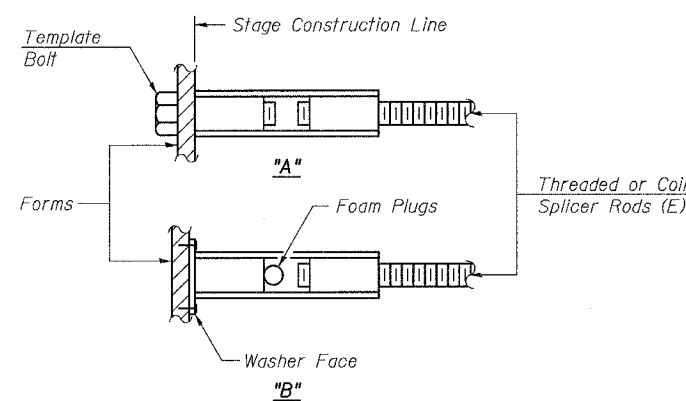
Wire Connector



WELDED SECTIONS

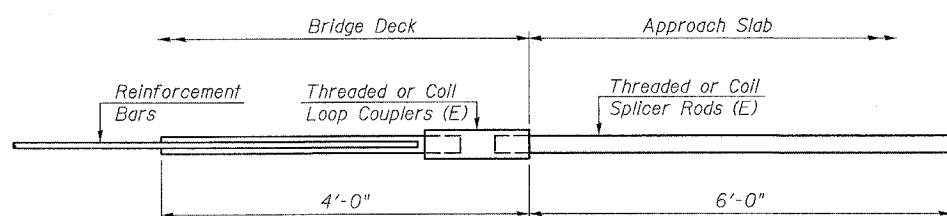
BAR SPLICER ASSEMBLY ALTERNATIVES

** Heavy Hex Nuts conforming to ASTM A 563, Grade C, D or DH may be used.



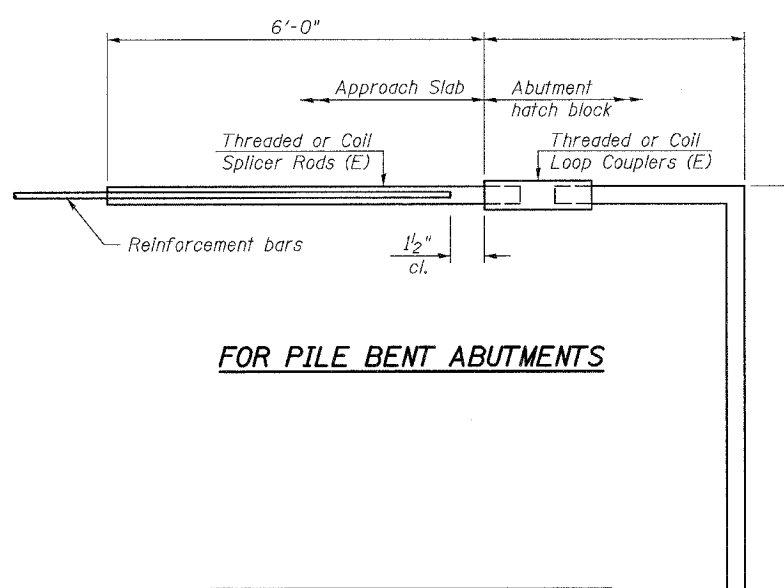
INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.
"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
(E) : Indicates epoxy coating.



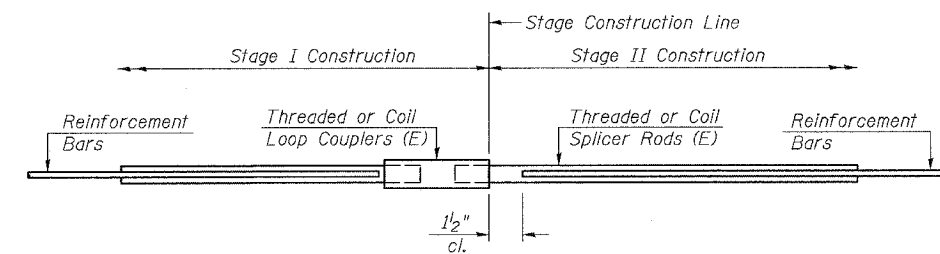
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 9.2 kips - tension
No. Required = 60



FOR PILE BENT ABUTMENTS

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 9.2 kips - tension
No. Required =



STANDARD

Bar Size	No. Assemblies Required	Location
#5	567	Deck Slab
#6	10	N. Abut. Diaph.
#6	10	S. Abut. Diaph.

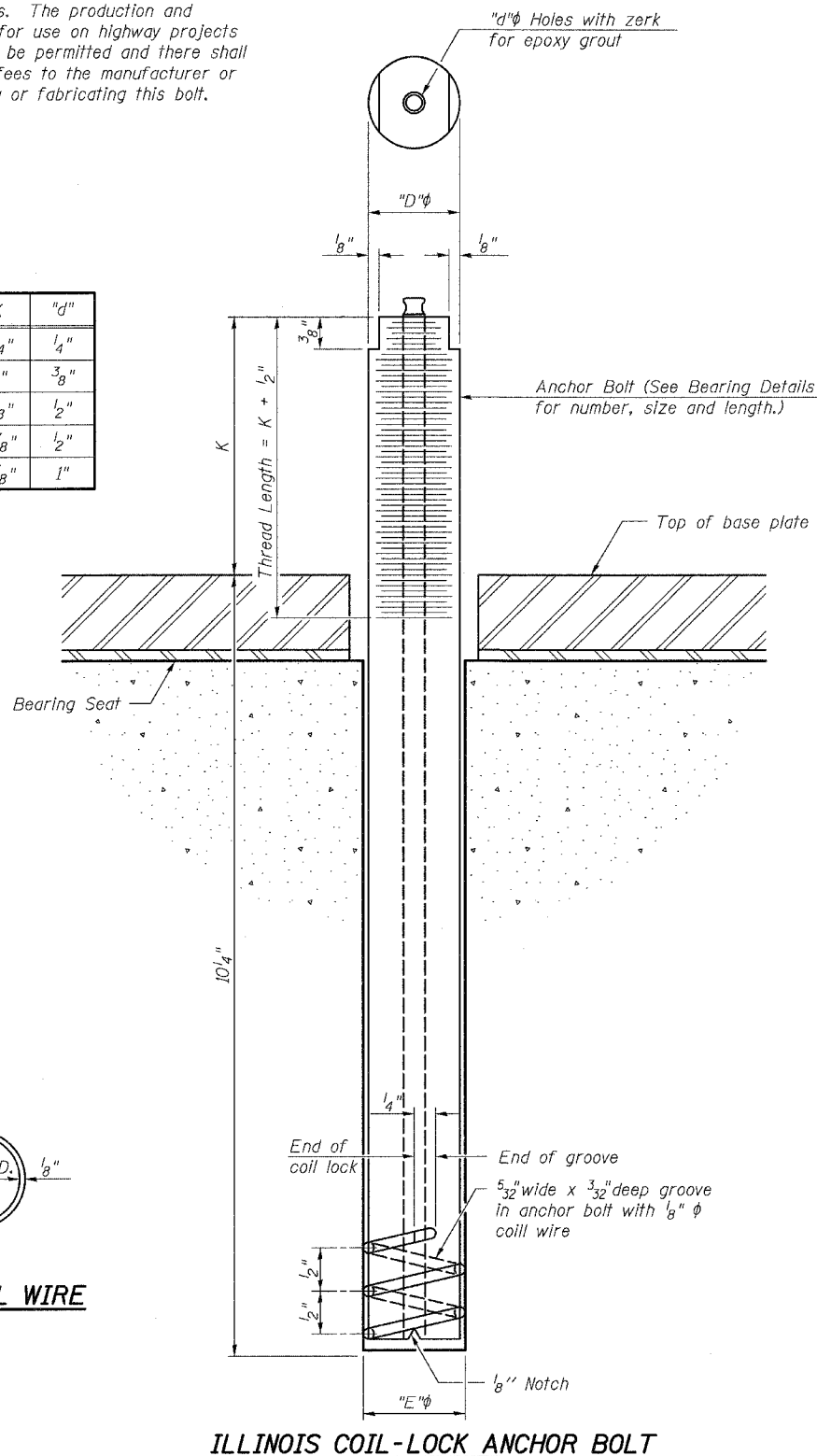
**BAR SPLICER DETAILS
POWDER MILL ROAD OVER
EAST FORK OF WOOD RIVER
SECTION 03-00044-00-BR
VILLAGE OF EAST ALTON
STA. 13+10
STRUCTURE NO. 060-6400**

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FILE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 16 17 SHEETS
9003	03-00044-00-BR	MADISON	24	23	
STA.	TO STA.				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID URBAN-			
CONTRACT NO. 97256					

The Illinois Coil-Lock Anchor Bolt is a proprietary item which is the property of the Illinois Department of Transportation. Use, reproduction or disclosure without express written permission is prohibited and protected under Federal copyright laws. The production and the fabrication of this bolt for use on highway projects in the State of Illinois shall be permitted and there shall be no incurred charges or fees to the manufacturer or the fabricator for producing or fabricating this bolt.

D	E	H	K	"d"
1"	1 1/8"	1 3/16"	1 3/4"	1/4"
1 1/4"	1 3/8"	1 1/16"	2"	3/8"
1 1/2"	1 5/8"	1 5/16"	2 1/8"	1/2"
2"	2 1/8"	1 13/16"	2 7/8"	1/2"
2 1/2"	2 5/8"	2 5/16"	3 3/8"	1"



MATERIALS FOR ILLINOIS COIL-LOCK ANCHOR BOLT

The anchor bolt shall be fabricated from cold drawn or hot finished seamless carbon steel mechanical tubing conforming to ASTM A 519, Grade 1026, CW and supplied with hexagonal nuts and cut washers.
The coil wire shall be made of any suitable soft steel wire.
The finished anchor bolt shall be cleaned of rust and other foreign materials and wrapped or packaged to prevent contamination until they are installed.
The epoxy grout shall be a two-component, epoxy resin bonding system conforming to ASTM C 881, Type I, Grade 1 and of a Class suitable for the temperature at installation.

INSTALLATION PROCEDURE for the ILLINOIS COIL-LOCK ANCHOR BOLT

1. With the coil wire in place, the bolt shall be inserted into the hole and turned clockwise to a snug fit in the hole. Nut and washer shall be placed on the bolt. The nut shall be tensioned until the steel base plates are held securely to the concrete bearing seat.
2. Epoxy grout shall be pumped through the zerk fitting with a pressure gun. Pumping shall continue until the epoxy overflows the hole around the bolt shank. After pumping is discontinued, excess epoxy shall be immediately wiped off.

ALTERNATE ANCHOR BOLTS

The Contractor may use, at his option, the capsule or the adhesive cartridge type anchor rods that have been previously tested and given a prior approval by the Department. The Contractor shall install these anchor rods in pre-drilled holes according to the manufacturer's recommendations and procedures.

- The capsule or the adhesive cartridge type anchor rods shall be a two part system composed of:
1. A threaded rod stud with nut and washer of the type specified.
 2. A sealed glass capsule or a sealed glass adhesive cartridge containing premeasured amounts of the adhesive chemical.

Location	Type
S. Abut.	A307
N. Abut.	A307

ASTM F 1554 Grade 105, ASTM A 449 and AASHTO M 314 Grade 105 anchor bolts may be substituted for the anchor bolts shown above.

GENERAL NOTES

Holes in the masonry for anchor bolts shall be drilled through the base plates to the diameter and depth shown or according to the manufacturer's recommendation after beams or girders have been erected and adjusted.
Prior to setting the bolts, the holes shall be dry and all dust and loose particles shall be removed by the use of compressed air or vacuuming.
The anchor bolts, furnished and installed including the epoxy grout or capsules shall not be paid for separately but shall be included in the unit bid price for Furnishing and Erecting Structural Steel.

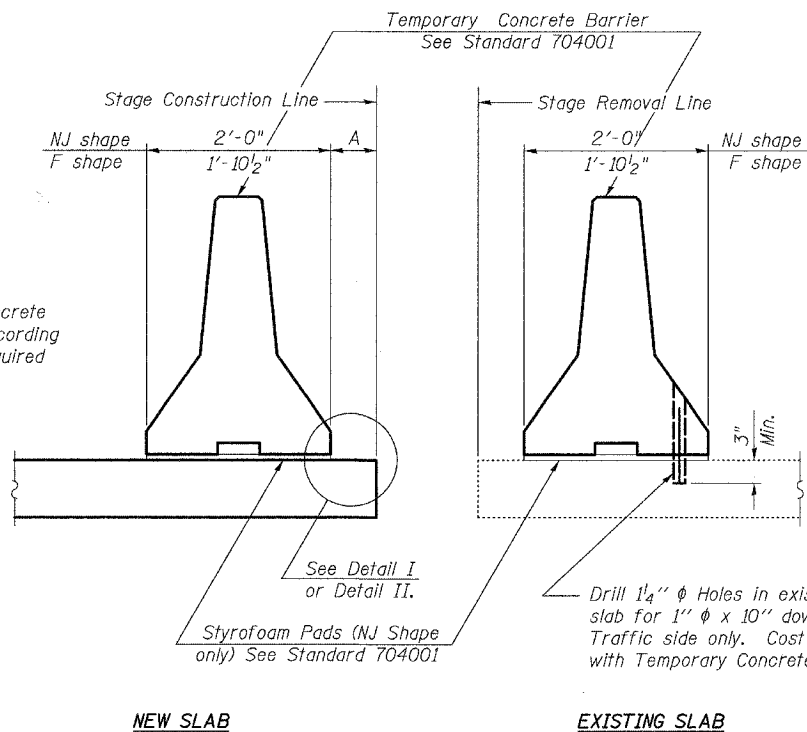
ANCHOR BOLT DETAILS
POWDER MILL ROAD OVER
EAST FORK OF WOOD RIVER
SECTION 03-00044-00-BR
VILLAGE OF EAST ALTON
STA. 13+10
STRUCTURE NO. 060-6400

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FBI ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
9003	03-00044-00-BR	MADISON	24	24
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID URBAN		

CONTRACT NO. 97256

SHEET NO. 17
17 SHEETS

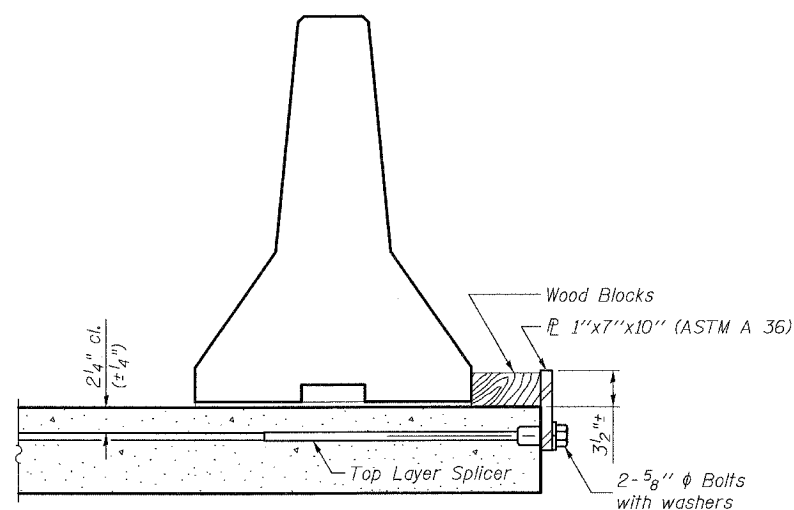


When "A" is 3'-6" or less, the temporary concrete barrier shall be anchored to the new slab according to Detail I or Detail II. No anchorage is required when "A" is greater than 3'-6".

NOTES

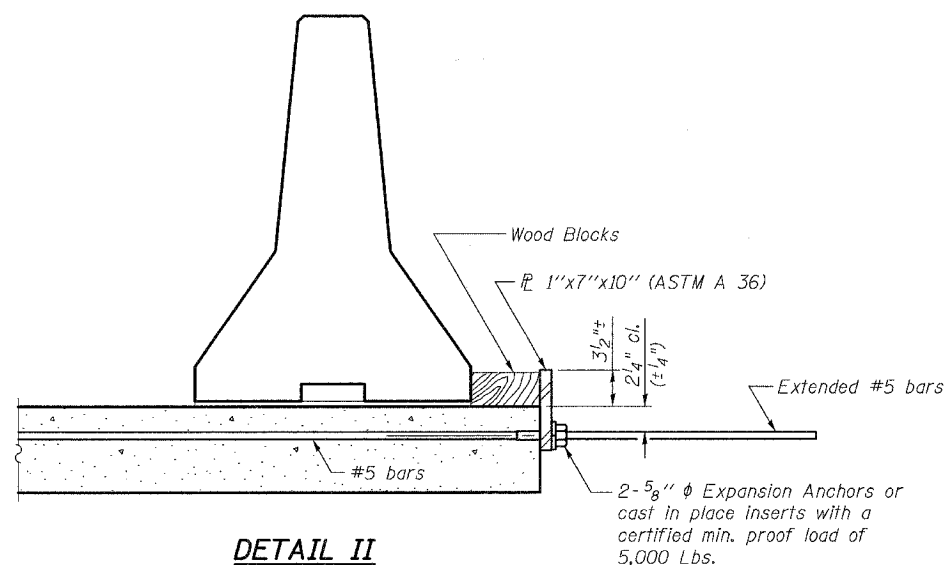
- Detail I - With Bar Splicer or Couplers:
Connect one (1) 1"x7"x10" steel \bar{P} to the top layer of couplers with 2-5/8" ϕ bolts screwed to coupler at approximate \bar{C} of each barrier panel.
- Detail II - With Extended Reinforcement Bars:
Connect one (1) 1"x7"x10" steel \bar{P} to the concrete slab with 2-5/8" ϕ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate \bar{C} of each barrier panel.
- Cost of anchorage is included with Temporary Concrete Barrier.

SECTIONS THRU SLAB



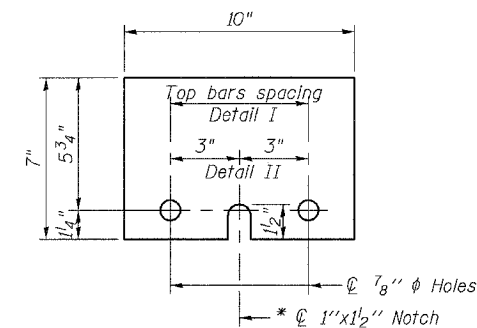
DETAIL I

The 1"x7"x10" Plate shall not be removed until Stage II Construction forms and reinforcement bars are in place.



DETAIL II

The 1"x7"x10" Plate shall not be removed until Stage II Construction forms and all reinforcement bars are in place and the concrete is ready to be placed.



P 1"x7"x10"

* Required only with Detail II

TEMPORARY CONCRETE BARRIER
POWDER MILL ROAD OVER
EAST FORK OF WOOD RIVER
SECTION 03-00044-00-BR
VILLAGE OF EAST ALTON
STA. 13+10
STRUCTURE NO. 060-6400