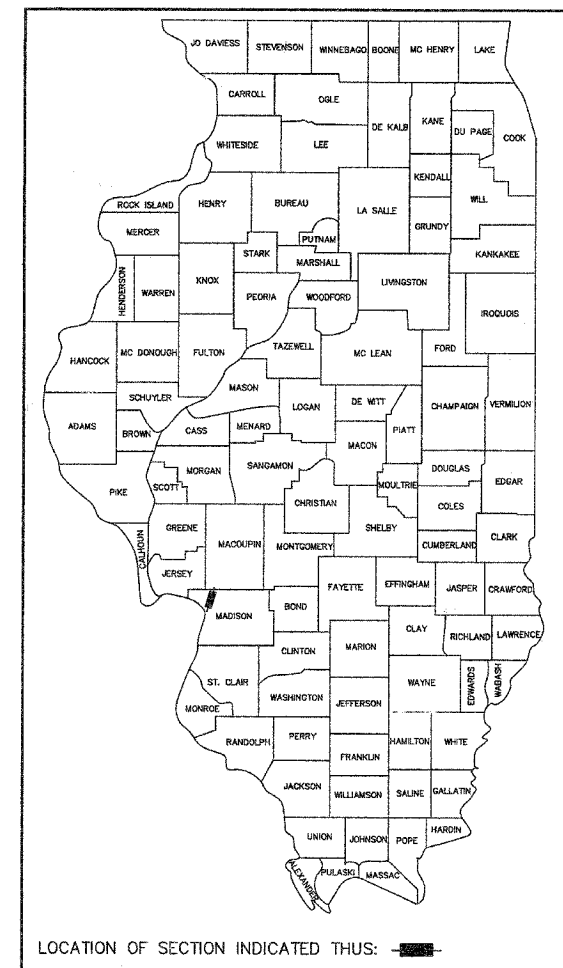


F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
8996	05-00221-00-BR	MADISON	20	1
STA. TO STA.				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
COVER SHEET				

CONTRACT NO. 97281



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
PLANS FOR PROPOSED
FAU ROUTE 8996 (HUMBERT ROAD)
OVER BLACK CREEK
SECTION 05-00221-00-BR
PROJECT BRM-5265(34)
CITY OF ALTON
MADISON COUNTY
JOB NO. C-98-324-06

INDEX OF SHEETS

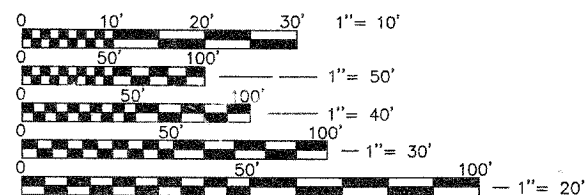
SHEET NO.	ITEM
1	COVER SHEET
2	SUMMARY OF QUANTITIES & GENERAL NOTES
3	TYPICAL SECTIONS
4-5	SUGGESTED STAGES OF CONSTRUCTION & TRAFFIC CONTROL
6	PLAN & PROFILE SHEETS
7	REMOVAL & EROSION CONTROL PLAN
8	DETAILS
9-20	BRIDGE PLANS

STANDARDS

000001-04	635006-02
001001	668001
001006	701101-01
280001-02	701106-01
420001-06	701426-02
424001-04	701421-04
513001-02	701606-04
604001-02	702001-06
606001-02	704001-02
630301-03	780001-01
631031-05	781001-02

SCALES

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

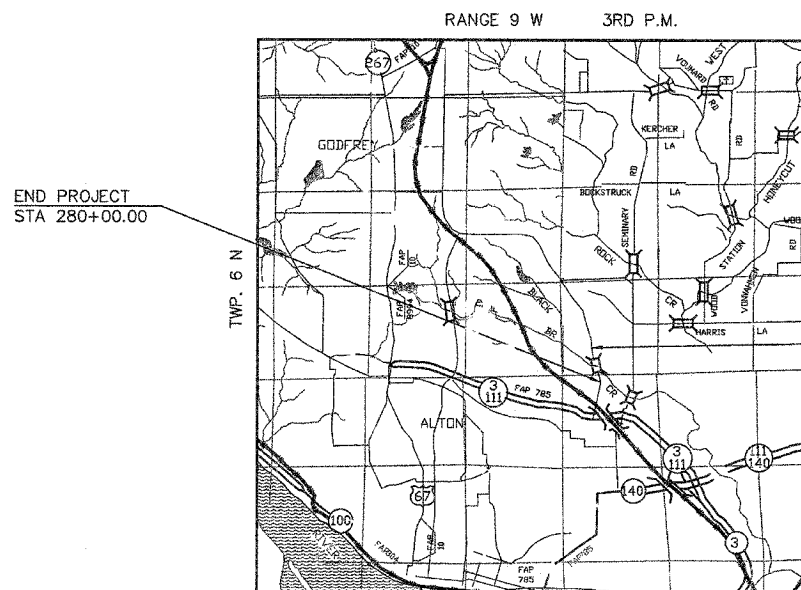


FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES, REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES, IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

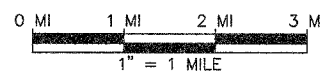
JOINT UTILITY LOCATING INFORMATION FOR EXCAVATIONS PHONE: 800-892-0123

CONTRACT NO. 97281

ROADWAY CLASSIFICATION = MINOR ARTERIAL (URBAN)
DESIGN SPEED = 45 MPH
CURRENT TRAFFIC (2004) = 12,000
DESIGN YEAR (2024) = 17,830



LOCATION MAP



NET LENGTH = 450.00 FEET (0.085 MILES)

PROJECT INCLUDES REHABILITATING S.N. 060-3023, A SINGLE SPAN WIDE FLANGE EXISTING STRUCTURE, USING A COMPOSITE DECK AND INTEGRAL ABUTMENTS. BEGIN BRIDGE STA. 278+09.92 AND END BRIDGE STA. 278+53.09. ABUTMENTS 11.0° SKEW; SPAN=41'-2"; AND ABUTMENTS AT 30° SKEW; SPAN=47'-10 1/2".

BEGIN PROJECT STA. 275+50.00

END PROJECT STA. 280+00.00



EXPIRES 11/30/2007

Jason G. Schreckenberg
JASON G. SCHRECKENBERG

6/26/06
DATE

APPROVED 6-26-06 2006
Donald E. Mackay
MAYOR OF ALTON

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED July 7 2006
Jeremy Opentano
DISTRICT-ENGINEER OF LOCAL ROADS & STREETS

PASSED July 7 2006
Mary C. Lame
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 & GAS) 700 OAKWOOD AVE. ALTON, IL 62002 618-482-2238	CITY OF ALTON 2 EMMA KAUS LANE ALTON, IL 62002 618-463-3530	IL AMERICAN WATER - ALTON 4436 INDUSTRIAL DRIVE ALTON, IL 62002 618-466-2131	CHARTER COMMUNICATIONS 508 NIAGRA STREET EAST ALTON, IL 62024 618-251-2660
---	--	---	---

SBC
203 GOETHE
COLLINSVILLE, IL 62234
618-346-6426

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 CONTRACT UNIT PRICES BID FOR THE VARIOUS ITEMS OF WORK INVOLVED.

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

13. WHEN THE MILLING OPERATION COMMENCES, "ROUGH GROOVED SURFACE" (W8-1106-(0)-48) SIGNS SHALL BE PLACED BY THE CONTRACTOR AT EACH END OF THE SECTION, AND EACH INTERSECTING SIDE ROAD. THE COST OF THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE CONSIDERED AS INCLUDED IN THE CONTRACT UNIT PRICES BID FOR THE VARIOUS ITEMS OF WORK INVOLVED.

14. THE CONTRACTOR SHALL NOTE THE LOCATION OF ALL MANHOLE AND VALVE VAULT FRAMES AND LIDS LOCATED WITHIN THE RESURFACING LIMITS. APPROPRIATE CARE SHALL BE TAKEN TO PROTECT THESE ITEMS DURING MILLING OPERATIONS.

15. THE THICKNESS OF THE BITUMINOUS MIXTURES SHOWN ON THE PLANS IS THE NOMINAL THICKNESS. DEVIATIONS FROM THE NOMINAL THICKNESS WILL BE PERMITTED WHEN SUCH DEVIATIONS OCCUR DUE TO IRREGULARITIES IN THE EXISTING SURFACE OR BASE ON WHICH THE BITUMINOUS MIXTURES ARE PLACED.

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

17. ALL EXISTING ROADWAY FEATURES SUCH AS PAVEMENT, CURB, SIDEWALK, DRIVEWAY PAVEMENT, CULVERTS, HEADWALLS, RIPRAP, FENCING, RETAINING WALLS, ETC. WHICH INTERFERE WITH THE PROPOSED CONSTRUCTION SHALL BE REMOVED BY THE CONTRACTOR UNLESS NOTED OTHERWISE ON THE PLANS. ALL MISCELLANEOUS FEATURES WHICH ARE TO BE REMOVED AND FOR WHICH THERE IS NO SPECIFIC PAY ITEM, WILL NOT BE MEASURED SEPARATELY FOR PAYMENT. THE COST OF THIS REMOVAL WORK SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE BID FOR BRIDGE APPROACH PAVEMENT CONNECTOR (PCC).

18. 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.

19. THE FOLLOWING ITEMS AND APPROXIMATE QUANTITIES ARE INCLUDED IN THE "SCHEDULE OF PRICES" 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.

PERIMETER EROSION BARRIER	57	FOOT
TEMPORARY PAVEMENT MARKING - LINE 4"	14,271	FOOT
TEMPORARY PAVEMENT MARKING - LINE 8"	145	FOOT
TEMPORARY PAINT PAVEMENT MARKING LINE 4"	184	FOOT
WORK ZONE PAVEMENT MARKING REMOVAL	4,915	SQ FT
THERMOPLASTIC PAVEMENT MARKING - LINE 4"	9,314	FOOT
PAINT PAVEMENT MARKING - LINE 4"	216	FOOT
PAVEMENT MARKING REMOVAL	2,501	SQ FT
AGGREGATE FOR TEMPORARY ACCESS	10	TON
REPLACEMENT REFLECTORS	124	EACH

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
8996	05-00221-00-BR	MADISON	20	2
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
GENERAL NOTES & SUMMARY OF QUANTITIES				

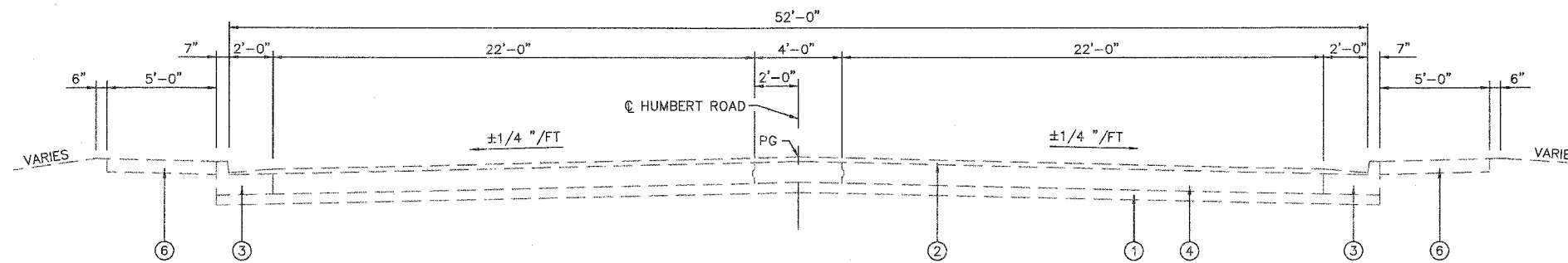
CONTRACT NO. 97281

SUMMARY OF QUANTITIES

CODE NO.	ITEM	UNIT	QUANTITY
			<i>Y071-2A</i>
28000400	PERIMETER EROSION BARRIER	FOOT	57
28100107	STONE RIPRAP, CLASS A4	SQ YD	482
28200200	FILTER FABRIC	SQ YD	482
31100500	SUB-BASE GRANULAR MATERIAL, TYPE A 6"	SQ YD	38
40600100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	177
42001420	BRIDGE APPROACH PAVEMENT CONNECTOR (PCC)	SQ YD	37
42400300	PORTLAND CEMENT CONCRETE SIDEWALK 6 INCH	SQ FT	104
42400800	DETECTABLE WARNINGS	SQ FT	6
* 44000030	BITUMINOUS SURFACE REMOVAL (VARIABLE DEPTH)	SQ YD	2,355
44000100	PAVEMENT REMOVAL	SQ YD	34
44000500	COMBINATION CURB AND GUTTER REMOVAL	FOOT	30
44000600	SIDEWALK REMOVAL	SQ FT	99
44003510	MEDIAN REMOVAL PARTIAL DEPTH	SQ FT	152
* 44300200	STRIP REFLECTIVE CRACK CONTROL TREATMENT	FOOT	2,393
50102400	CONCRETE REMOVAL	CU YD	3.4
50104000	BRIDGE RAIL REMOVAL	FOOT	73
50104720	REMOVAL OF EXISTING CONCRETE DECK	EACH	1
50300100	FLOOR DRAINS	EACH	6
50300255	CONCRETE SUPERSTRUCTURE	CU YD	93.1
50300260	BRIDGE DECK GROOVING	SQ YD	247
50300300	PROTECTIVE COAT	SQ YD	341
50500505	STUD SHEAR CONNECTORS	EACH	1,377
* 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	19,260
50900105	ALUMINUM RAILING, TYPE L	FOOT	88
51500100	NAME PLATES	EACH	1
60260400	INLETS TO BE ADJUSTED WITH NEW TYPE 1 FRAME, CLOSED LID	EACH	2
60405740	FRAMES AND GRATES TO BE REMOVED	EACH	2
60605000	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24	FOOT	18
* 63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	2
* 63100167	TRAFFIC BARRIER TERMINAL TYPE 1, SPECIAL (TANGENT)	EACH	2
63200310	GUARDRAIL REMOVAL	FOOT	104
67100100	MOBILIZATION	L SUM	1
70102625	TRAFFIC CONTROL AND PROTECTION, STANDARD 701606	L SUM	1
70102630	TRAFFIC CONTROL AND PROTECTION, STANDARD 701601	L SUM	1
70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	14,271
70300250	TEMPORARY PAVEMENT MARKING - LINE 8"	FOOT	145
70300625	TEMPORARY PAINT PAVEMENT MARKING LINE 4"	FOOT	184
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	4,915
70400100	TEMPORARY CONCRETE BARRIER	FOOT	550
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	400
* 78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	9,314
* 78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	216
78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	34
78100300	REPLACEMENT REFLECTOR	EACH	124
78200200	BIDIRECTIONAL PRISMATIC BARRIER REFLECTOR	EACH	46
* 78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	2
78300100	PAVEMENT MARKING REMOVAL	SQ FT	2,501
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	34
* X4066526	POLYMERIZED BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIX "D", N70	TON	264
* X4066910	POLYMERIZED LEVELING BINDER (MACHINE METHOD), SUPERPAVE N70	TON	179
Z0000990	AGGREGATE FOR TEMPORARY ACCESS	TON	10
Z0002800	BAR SPLICERS	EACH	139
* Z0030250	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2
* Z0030350	IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2

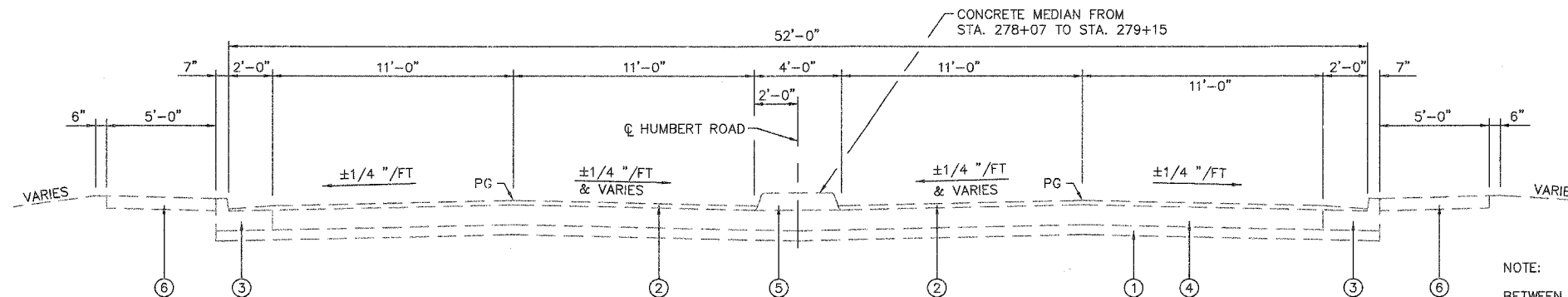
* - SPECIALTY ITEMS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
8996	05-00221-00-BR	MADISON	20	3
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
TYPICAL SECTIONS				
CONTRACT NO. 97281				



EXISTING TYPICAL SECTION

STA. 249+32.08 TO 275+50.00
STA. 280+00.00 TO STA. 294+37.80



EXISTING TYPICAL SECTION

STA. 275+50.00 TO STA. 280+00.00
BRIDGE OMISSION: STA. 278+09.92 TO STA. 278+53.09

NOTE:

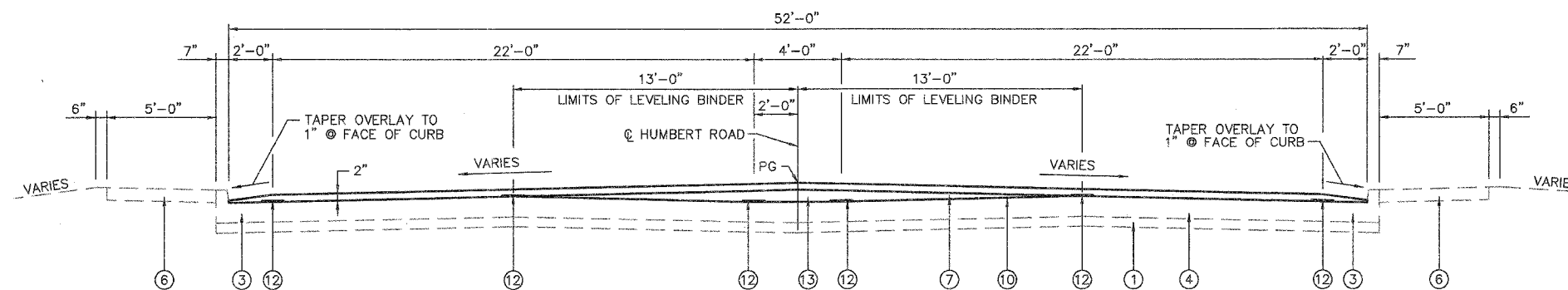
EXISTING BITUMINOUS CONCRETE SURFACE COURSE IS 1 1/2" FROM STA. 278+10.00 TO STA. 278+65.00. EXISTING BITUMINOUS CONCRETE SURFACE COURSE TRANSITIONS FROM 2" TO 1 1/2" FROM STA. 277+90.00 TO STA. 278+10.00. EXISTING BITUMINOUS CONCRETE SURFACE COURSE TRANSITIONS FROM 1 1/2" TO 2" FROM STA. 278+65.00 TO STA. 278+85.00.

NOTE:

BETWEEN STA. 275+50 AND STA. 278+09.92 CROWN OF PAVEMENT SHIFTS FROM HUMBERT ROAD CENTERLINE TO CENTERLINE OF EACH 22' PAVEMENT AND BETWEEN STA. 278+53.09 AND STA. 280+00.00 CROWN OF PAVEMENT SHIFTS FROM CENTERLINE OF EACH 22' PAVEMENT TO THE HUMBERT ROAD CENTERLINE.

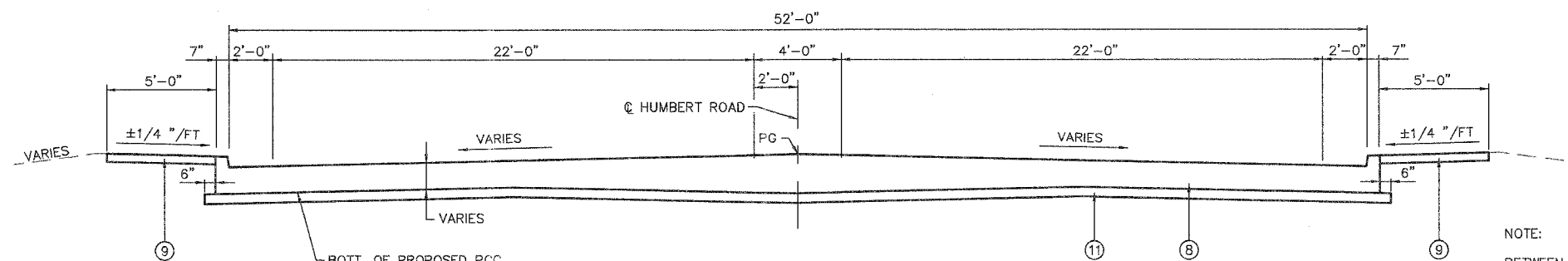
LEGEND

- ① EXISTING BITUMINOUS AGGREGATE MIXTURE BASE COURSE, 6"
- ② EXISTING POLYMERIZED BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIX "D", N70, 2"
- ③ EXISTING B6.24 CURB & GUTTER
- ④ EXISTING PCC PAVEMENT 8"
- ⑤ EXISTING CONCRETE MEDIAN - TYPE SM-6.06
- ⑥ EXISTING AGGREGATE BASE COURSE, TYPE A-6" WITH A-3 BITUMINOUS SURFACE TREATMENT
- ⑦ PROPOSED POLYMERIZED BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIX "D", N70, 2"
- ⑧ PROPOSED BRIDGE APPROACH PAVEMENT CONNECTOR (PCC)
- ⑨ PROPOSED PCC SIDEWALK 6 INCH
- ⑩ PROPOSED BITUMINOUS MATERIALS (PRIME COAT)
- ⑪ PROPOSED SUB-BASE GRANULAR MATERIAL, TYPE A 6"
- ⑫ PROPOSED STRIP REFLECTIVE CRACK CONTROL
- ⑬ PROPOSED LEVELING BINDER (MACHINE METHOD), SUPERPAVE N70



PROPOSED TYPICAL SECTION

STA. 275+50.00 TO STA. 278+07.42
STA. 278+55.59 TO STA. 280+00.00



PROPOSED TYPICAL SECTION

STA. 278+07.42 TO STA. 278+10.42
STA. 278+52.59 TO STA. 278+55.59
BRIDGE OMISSION: STA. 278+09.92 TO STA. 278+53.09

BOTT. OF PROPOSED PCC PAVEMENT TO MATCH BOTT. ELEV. OF EXISTING PCC PAVEMENT SEE SECTION A-A ON SHEET 8 OF 20.

NOTE:

BETWEEN STA. 275+50 AND STA. 278+00 PAVEMENT CROSS SLOPE TRANSITIONS FROM 1/8"/FOOT TO 3/8"/FOOT. THE CROSS SLOPE FROM STA. 278+00 AND STA. 278+70 IS 3/8"/FOOT. BETWEEN STA. 278+70 AND STA. 280+00 THE PAVEMENT CROSS SLOPE TRANSITIONS FROM 3/8"/FOOT TO 1/4"/FOOT.

MIXTURE REQUIREMENTS FOR HUMBERT ROAD

LOCATIONS:	HUMBERT ROAD
MIXTURE USE:	SURFACE
PG:	SBS PG 70-22
RAP % (MAX)	10%
DESIGN AIR VOIDS:	4.0% @ Ndes = 70
MIX COMPOSITION: (GRADATION MIXTURE)	IL-9.5 OR IL-12.5
FRACTION AGG:	MIXTURE D
MIXTURE WEIGHT:	112 LB/SQ YD./IN

NOTES

THIS WORK PLAN SHALL BE USED IN CONJUNCTION WITH HIGHWAY STANDARD 701606. SEE HIGHWAY STANDARD FOR ADDITIONAL INFORMATION INCLUDING:

- ARROW BOARD LOCATIONS.
- REQUIRED TRAFFIC CONTROL SIGNS AND LOCATIONS.
- ENTRANCE DETAILS.
- DRUM OR BARRICADE LOCATIONS & LAYOUT.

TWO LANES OF TRAFFIC SHALL BE MAINTAINED ON HUMBERT ROAD AT ALL TIMES.

ALL ENTRANCES SHALL REMAIN OPEN WITH THE EXCEPTION OF THE ENTRANCE @ STA. 277+78 LT, WHICH SHALL BE CLOSED DURING STAGE II CONSTRUCTION, AS SHOWN IN PLAN. SEE SHEET 5 OF 20 FOR STAGE II CONSTRUCTION.

SEE BRIDGE PLAN SHEET 11 OF 20 FOR STAGE CONSTRUCTION CROSS SECTION THROUGH BRIDGE.

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 INCLUDED IN THE COST OF TEMPORARY CONCRETE BARRIER.

EMERGENCY ACCESS SHALL BE PROVIDED AT ALL TIMES.

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

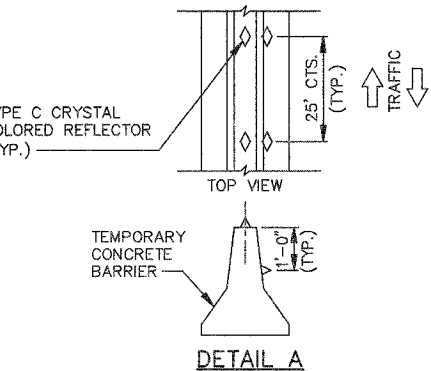
THE CONTRACTOR SHALL REMOVE REFLECTIVE ELEMENTS FROM RAISED REFLECTIVE PAVEMENT MARKERS WHICH CONFLICT WITH TEMPORARY TRAFFIC PATTERNS. NEW REFLECTORS SHALL BE INSTALLED AFTER STAGING IS COMPLETE. THE COST OF WHICH IS INCLUDED IN THE COST OF "REPLACEMENT REFLECTOR."

LIMITS OF TEMPORARY PAVEMENT MARKING SHALL BE AS DEFINED IN PARAGRAPH 701.06(K)(3) OF THE STANDARD SPECIFICATIONS.

PRIOR TO STAGE 1 & STAGE 2, THE CONTRACTOR SHALL UTILIZE HIGHWAY STANDARD 701601 TO REMOVE THE CONCRETE MEDIAN SURFACE ADJACENT TO THE BRIDGE AND REMOVE THE RAISED CONCRETE MEDIAN ACROSS THE BRIDGE. COST OF MEDIAN SURFACE REMOVAL ACROSS THE BRIDGE IS INCLUDED IN THE COST OF REMOVAL OF EXISTING CONCRETE DECK.

THE CONTRACTOR SHALL REMOVE PAVEMENT MARKINGS WHICH CONFLICT WITH TEMPORARY TRAFFIC PATTERNS AND SHALL BE PAID FOR AS PAVEMENT MARKING REMOVAL WITH AN APPROXIMATE QUANTITY OF 2,501 SQUARE FEET. THE PAVEMENT MARKINGS THAT ARE REMOVED OUTSIDE OF STA. 275+50 TO STA. 280+00 SHALL BE REPLACED UNDER THE PAY ITEM THERMOPLASTIC PAVEMENT MARKING - LINE 4" WITH AN APPROXIMATE QUANTITY OF 7510 FEET.

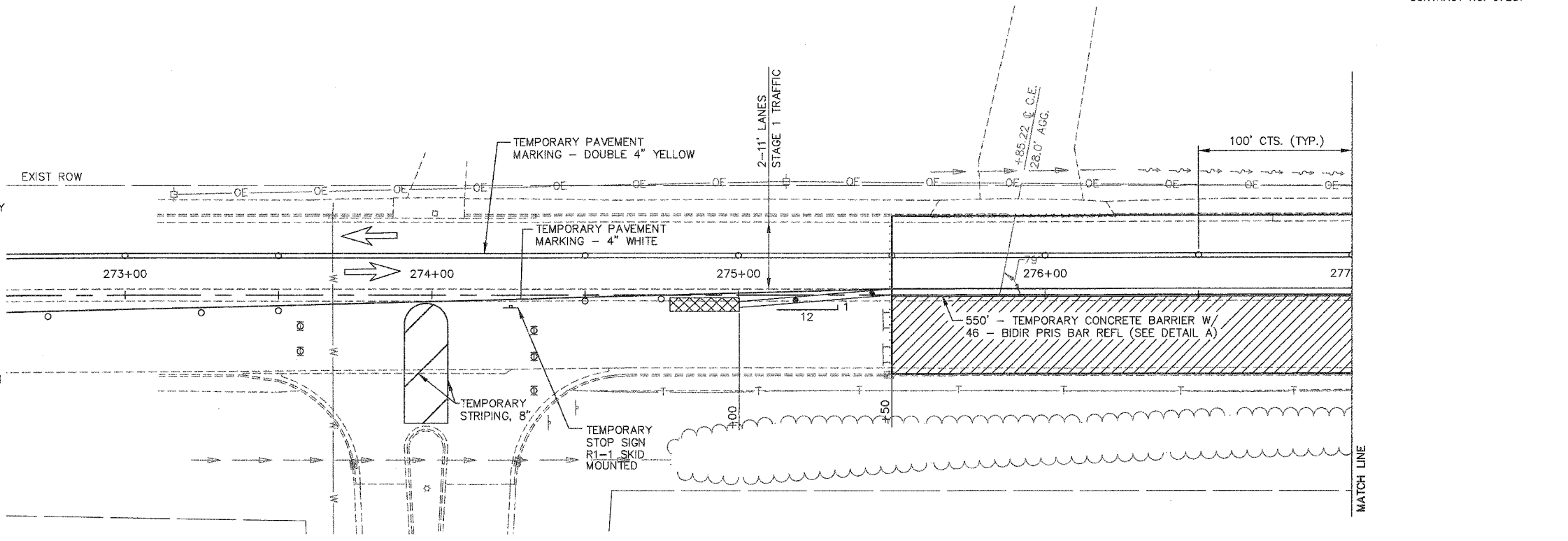
SEE SPECIAL PROVISIONS FOR ADDITIONAL REQUIREMENTS.



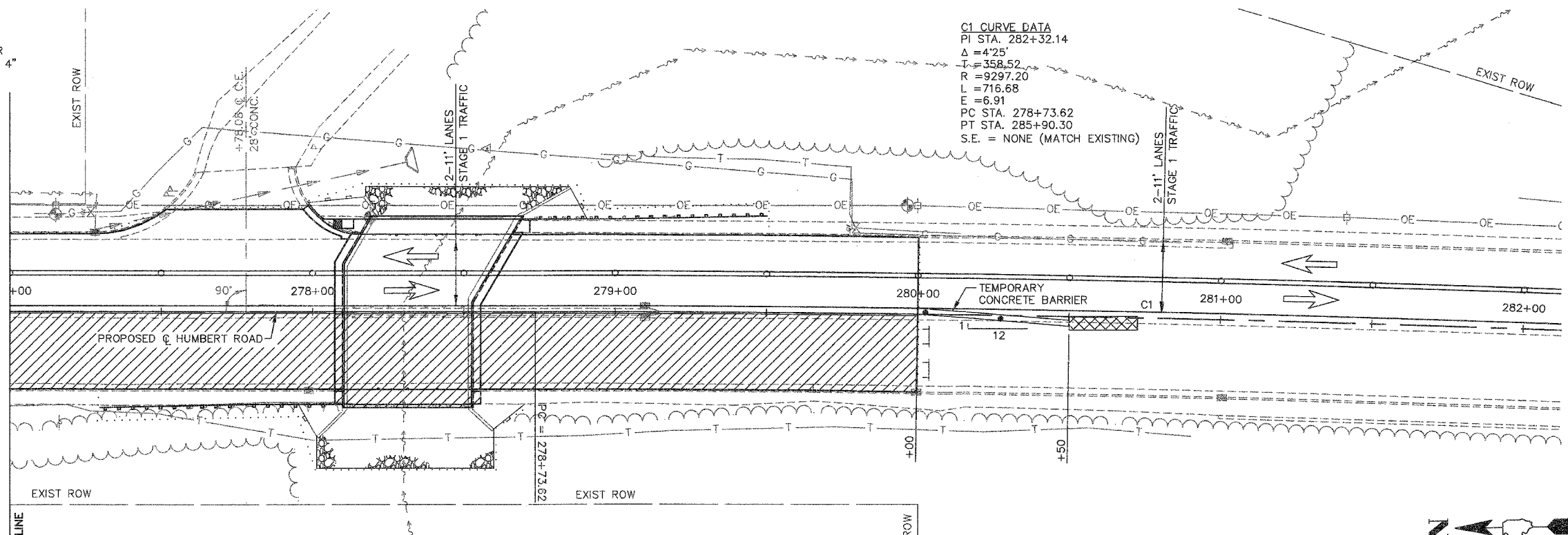
LEGEND

- TYPE III BARRICADES
- BARRICADE OR DRUM WITH FLASHING LIGHT
- ARROW BOARD
- DRUM OR BARRICADE W/ STEADY BURN LIGHT
- IMPACT ATTENUATOR
- STEADY BURNING LIGHTS AND DOUBLE VERTICAL PANELS
- WORK ZONE

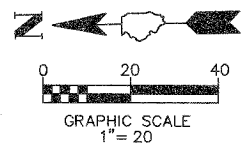
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
8996	05-00221-00-BR	MADISON	20	4
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
TRAFFIC CONTROL PLAN - STAGE 1				
CONTRACT NO. 97281				



TRAFFIC CONTROL PLAN - STAGE 1



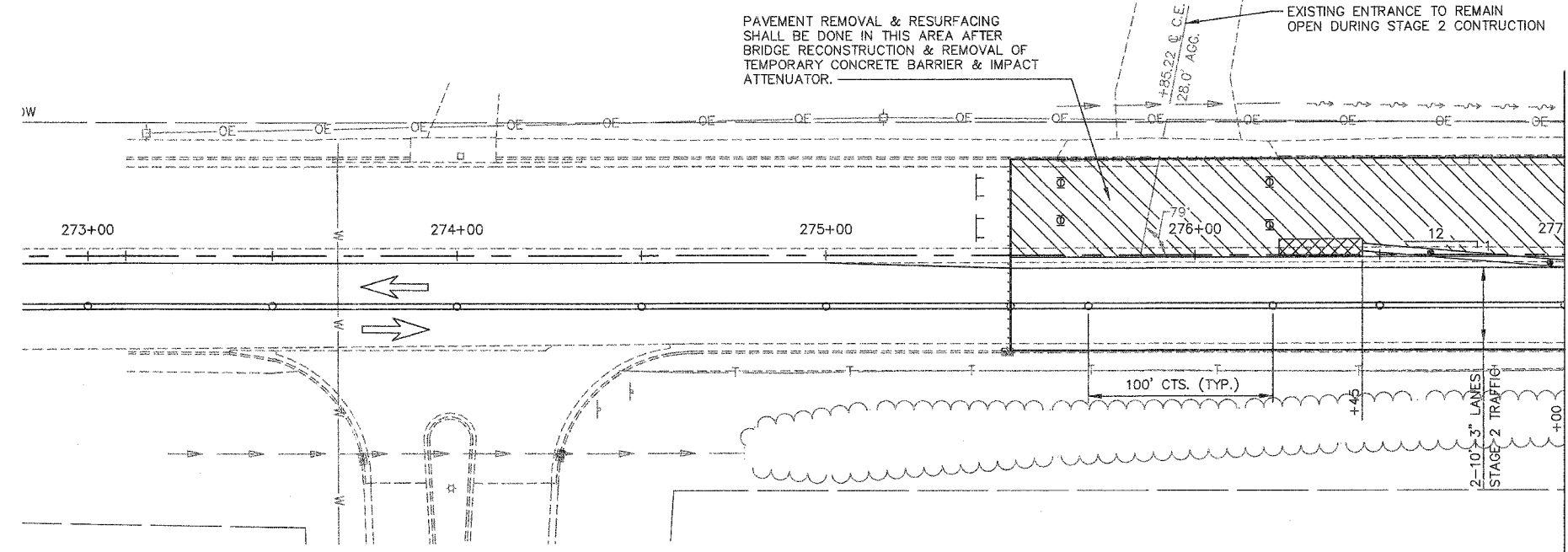
TRAFFIC CONTROL PLAN - STAGE 1



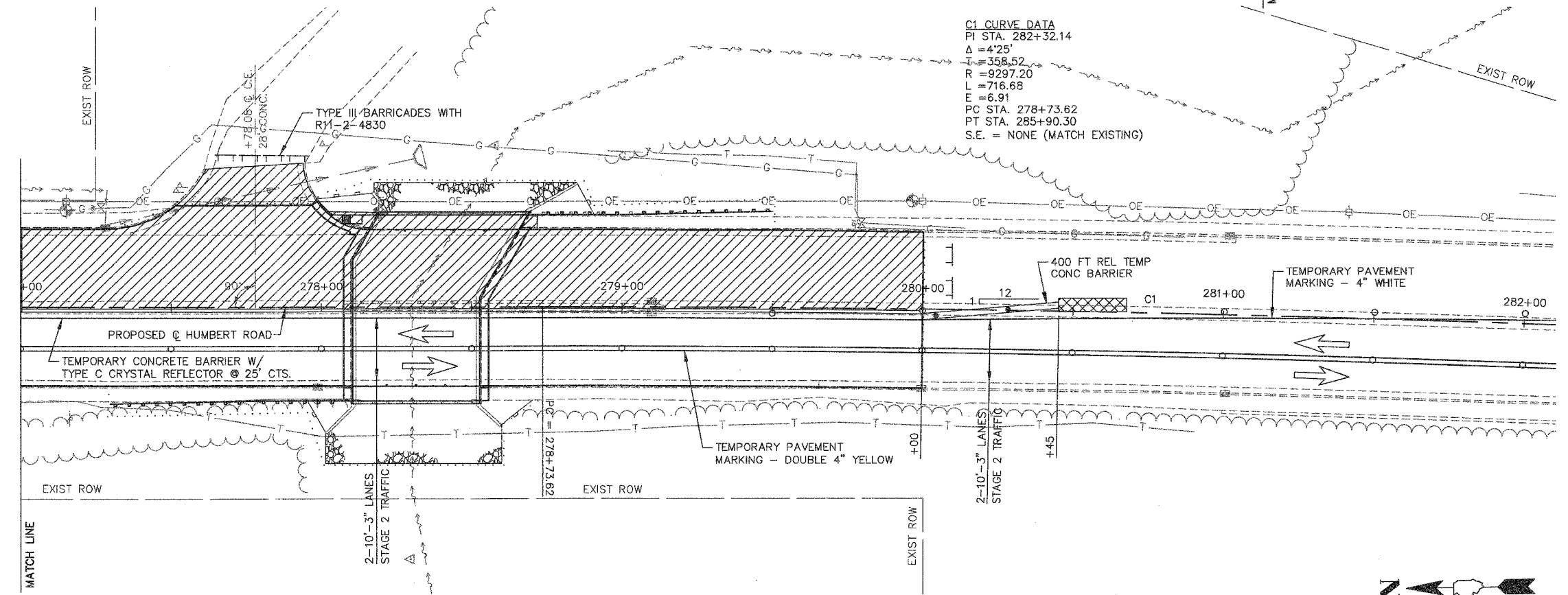
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DATE	BY

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
8996	05-00221-00-BR	MADISON	20	5
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
TRAFFIC CONTROL PLAN - STAGE 2				
CONTRACT NO. 97281				

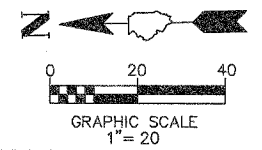


TRAFFIC CONTROL PLAN -- STAGE 2



TRAFFIC CONTROL PLAN -- STAGE 2

- LEGEND**
- TYPE III BARRICADES
 - ⊗ BARRICADE OR DRUM WITH FLASHING LIGHT
 - ↑ ARROW BOARD
 - DRUM OR BARRICADE W/ STEADY BURN LIGHT
 - ⊗ IMPACT ATTENUATOR
 - STEADY BURNING LIGHTS AND DOUBLE VERTICAL PANELS
 - ▨ WORK ZONE
 - ▩ WORK ZONE AFTER COMPLETION OF BRIDGE & REMOVAL OF TEMPORARY CONCRETE BARRIER & IMPACT ATTENUATOR



BY	DATE
FINAL SURVEY	
NO. OF SHEETS	
NOTE BOOK TEMPLATE	
AREAS CHECKED	
NO.	

BY	DATE
ORIGINAL SURVEY	
NO. OF SHEETS	
NOTE BOOK TEMPLATE	
AREAS CHECKED	
NO.	

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
899E	05-00221-00-BR	MADISON	20	6
STA. 275+50 TO STA. 280+00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
PLAN & PROFILE				

CONTRACT NO. 97281

ALTON ENT HOLDINGS, INC.

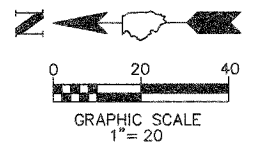
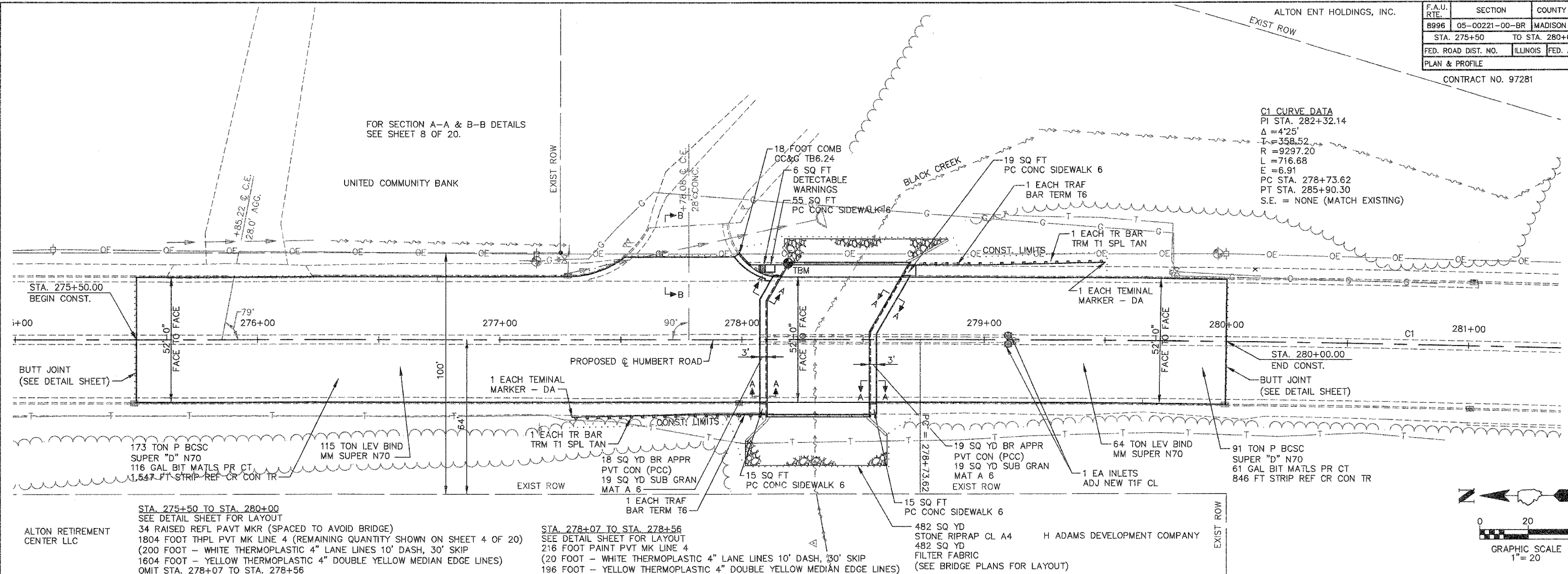
EXIST ROW

FOR SECTION A-A & B-B DETAILS SEE SHEET 8 OF 20.

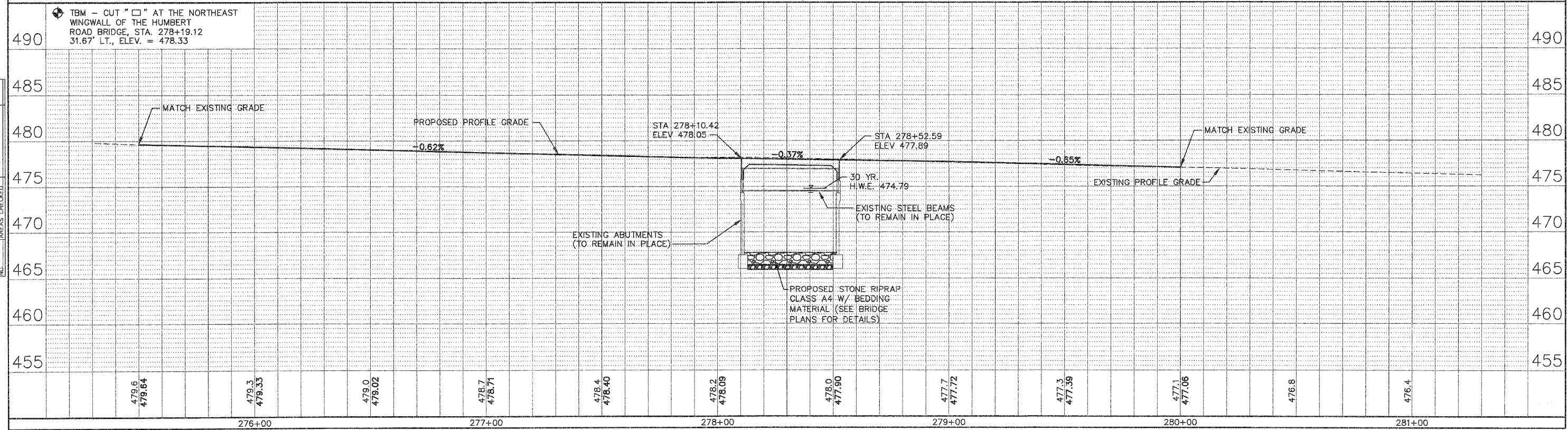
UNITED COMMUNITY BANK

C1 CURVE DATA
 PI STA. 282+32.14
 $\Delta = 4^{\circ}25'$
 $T = 358.52$
 $R = 9297.20$
 $L = 716.68$
 $E = 6.91$
 PC STA. 278+73.62
 PT STA. 285+90.30
 S.E. = NONE (MATCH EXISTING)

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



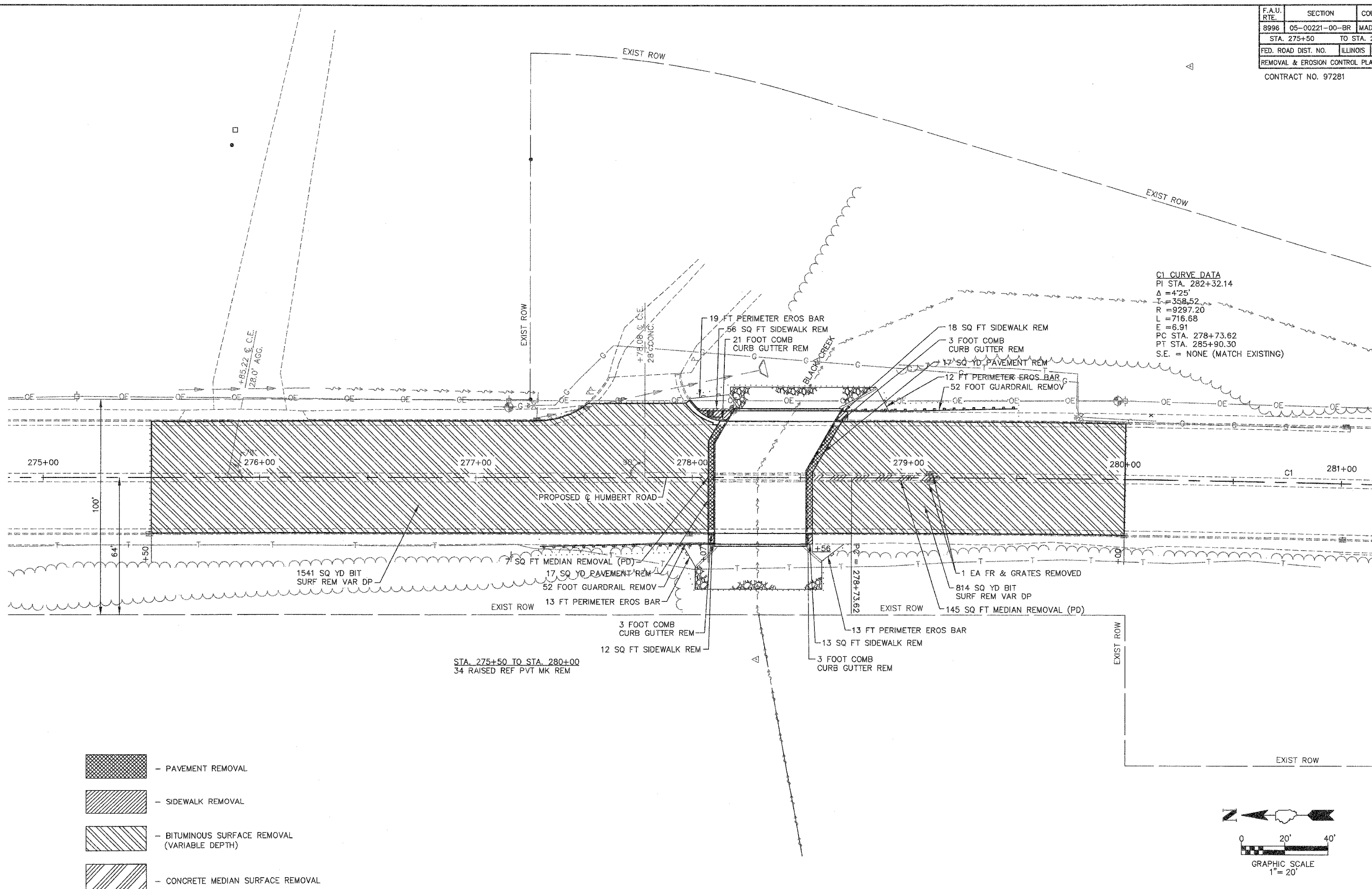
BY	DATE
ORIGINAL SURVEYED	
SURVEY PLOTTED	
NOTE BOOK TEMPLATE	
AREAS CHECKED	
NO.	



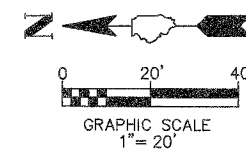
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
8996	05-00221-00-BR	MADISON	20	7
STA. 275+50		TO STA. 280+00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
REMOVAL & EROSION CONTROL PLAN				
CONTRACT NO. 97281				

DATE	BY

DATE	BY

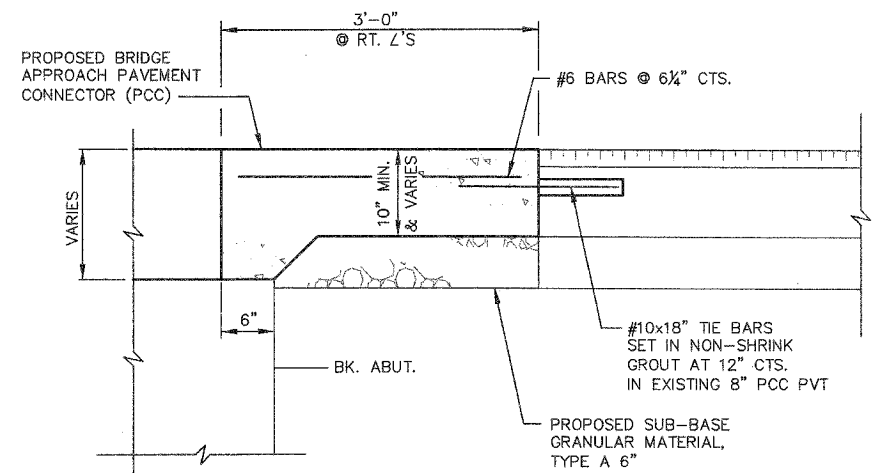


- PAVEMENT REMOVAL
- SIDEWALK REMOVAL
- BITUMINOUS SURFACE REMOVAL (VARIABLE DEPTH)
- CONCRETE MEDIAN SURFACE REMOVAL

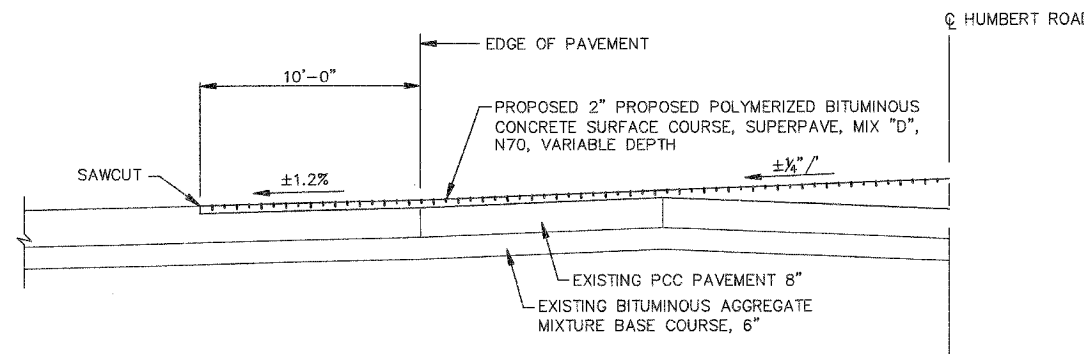


F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
8996	05-00221-00-BR	MADISON	20	8
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
DETAILS				

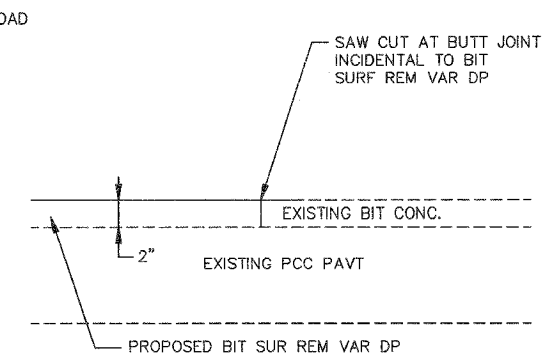
CONTRACT NO. 97281



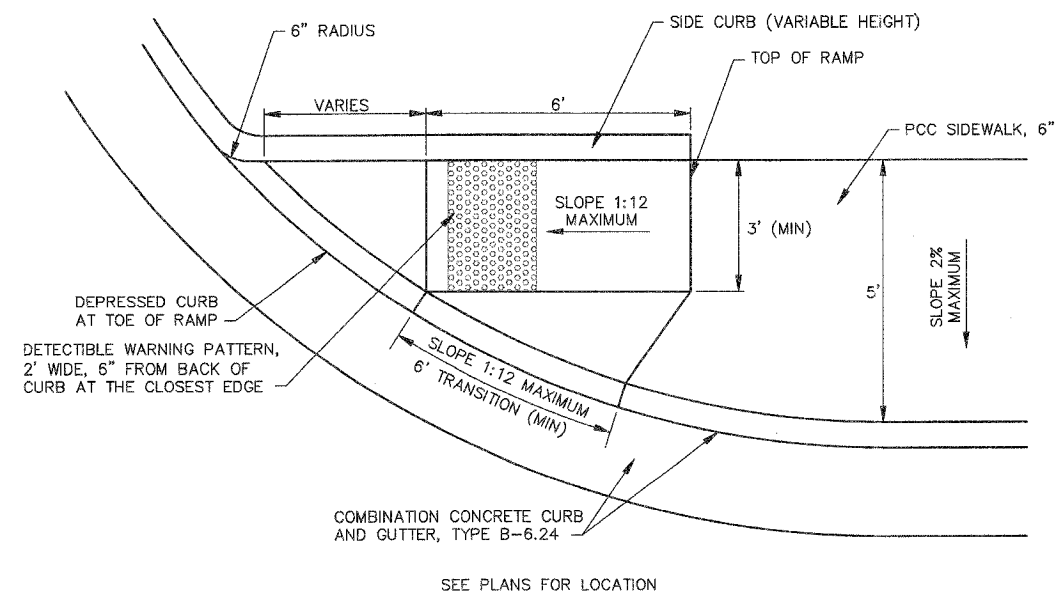
SECTION A-A



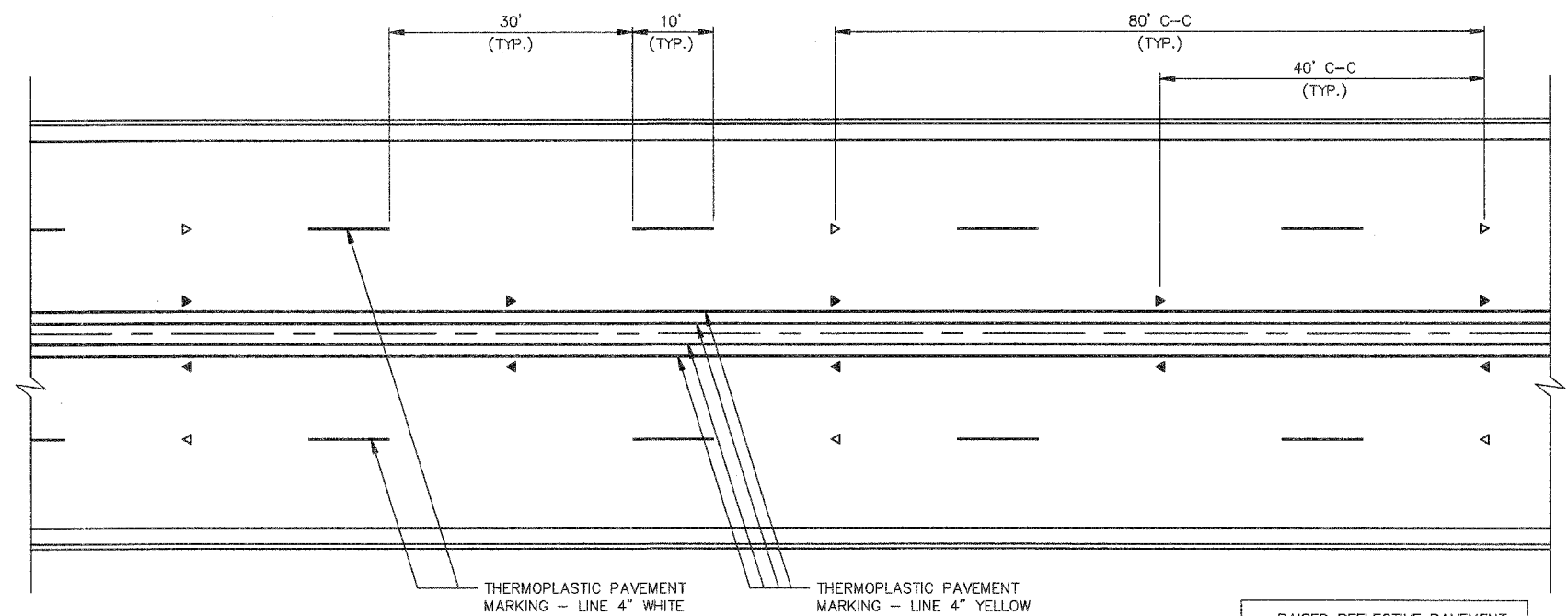
SECTION B-B



BUTT JOINT DETAIL
(NOT TO SCALE)



SIDEWALK RAMP
(NOT TO SCALE)



TYPICAL PAVEMENT MARKING DETAIL

- ◀ RAISED REFLECTIVE PAVEMENT MARKER (ONE WAY AMBER)
- ◀ RAISED REFLECTIVE PAVEMENT MARKER (ONE WAY CRYSTAL)

Bench Mark: Cut "□" on top of northeast wingwall of Humbert Road Bridge over Black Creek. Elev. 478.33

Existing Structure: S.N. 060-3023 was built as Sec. 121 MFT in 1953 and widened in 1973. The existing structure is a single span wide flange with a 7 1/2" non-composite deck at the northbound lanes and a 7" non-composite deck at the southbound lanes. The original structure is on a 0° skew with a structure length of 43'-2" bk. to bk. of abutments. The 1973 widening was constructed with a 30° skew at the abutments resulting in a widened structure length of ±50'-8" bk. to bk. abut. The structure is 63'-10" out to out of deck. Traffic to be maintained using concrete barriers and traffic control devices.

ROUTE NO.	SECTION	COUNTY	SHEETS	SHEET NO.
FAU 8996	05-00221-00-BR	MADISON	20	9
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

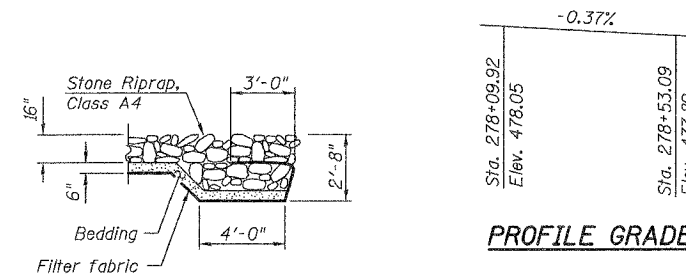
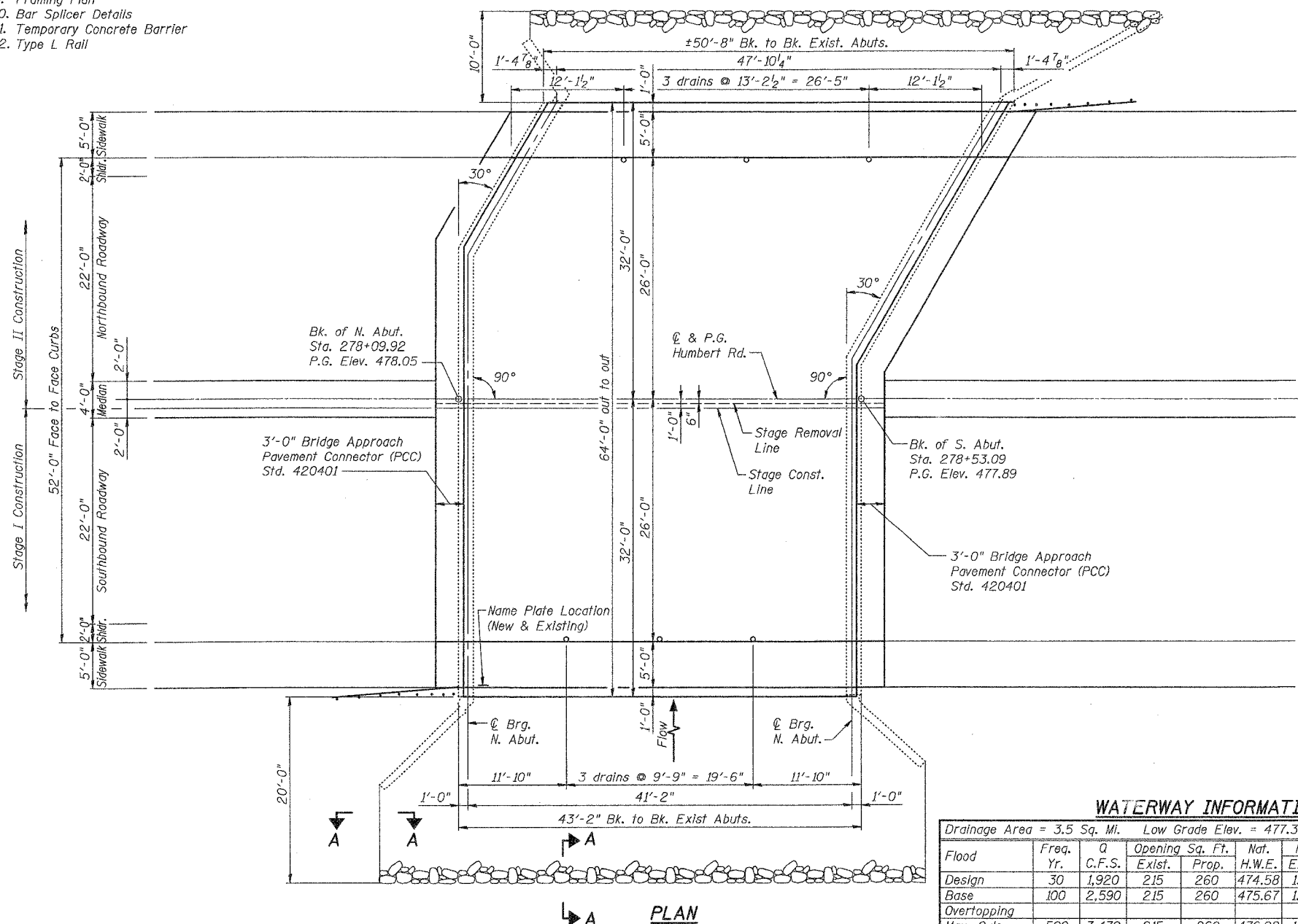
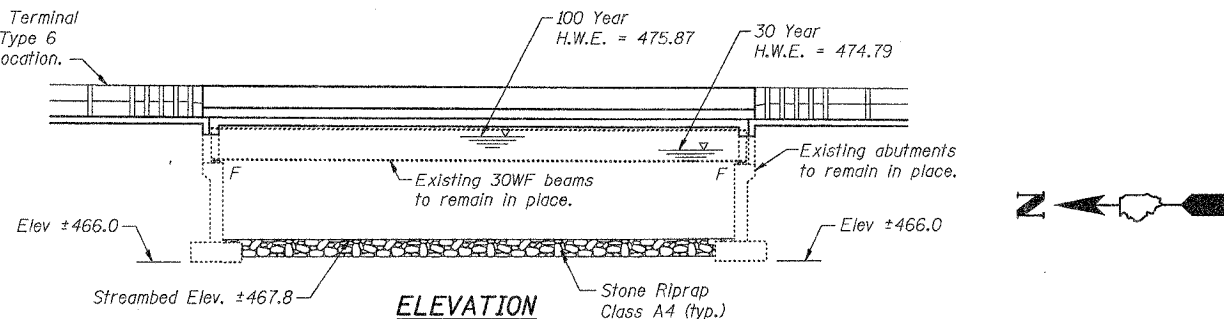
SHEET NO. 1
12 SHEETS

Contract No. 97281

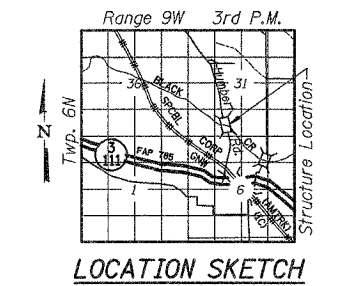
INDEX OF SHEETS

1. General Plan & Elevation
2. General Notes, Details, & Total Bill of Materials
3. Staging Details
4. Deck Elevations
5. Deck Elevations
6. Superstructure
7. Superstructure Details
8. Superstructure Details
9. Framing Plan
10. Bar Splice Details
11. Temporary Concrete Barrier
12. Type L Rail

Traffic Barrier Terminal
Std. 631031 - Type 6
See Plan for Location.



SECTION A-A



STATION 278+31.50
REBUILT 200
CITY OF ALTON
F.A.U. RTE. 8996
SEC. 05-00221-00-BR
LOADING HS20
STR. NO. 060-3023

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.

DESIGN SPECIFICATIONS

2002 AASHTO Standard Specifications - 17th ed.

LOADING HS20-44

No allowance for future wearing surface.

DESIGN STRESSES

FIELD UNITS (Existing Construction)

- f_c = 1,200 psi (deck slab)
- f_c = 1,400 psi (curb)
- f_s = 20,000 psi (reinf.)
- f_s = 20,000 psi (struct. steel)
- n = 10

DESIGN STRESSES

FIELD UNITS (New Construction)

- f_c = 3,500 psi
- f_y = 60,000 psi (reinf.)
- f_y = 36,000 psi (M270 Gr. 36) struct. steel

"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 the requirements of the current 'AASHTO Standard Specifications for Highway Bridges'."

WATERWAY INFORMATION

Drainage Area = 3.5 Sq. Mi. Low Grade Elev. = 477.3 @ S. Abut.

Flood	Freq. Yr.	Q C.F.S.	Opening	Sq. Ft.	Nat. H.W.E.	Head - Ft.	Headwater El.
			Exist.	Prop.		Exist.	Prop.
Design	30	1,920	215	260	474.58	1.35	0.21 475.93 474.79
Base	100	2,590	215	260	475.67	1.96	0.20 477.63 475.87
Overtopping							
Max. Calc.	500	3,470	215	260	476.92	1.29	0.44 478.21 477.36

Plans Prepared By:
Oates Associates, Inc.

BRUCE P. SCHOPP
081-005158
SULLYVILLE, ILLINOIS
STATE OF ILLINOIS

Bruce P. Schopp
06/04/26
EXPIRES 11/30/26

GENERAL PLAN & ELEVATION
HUMBERT ROAD OVER
BLACK CREEK
SECTION 05-00221-00-BR
CITY OF ALTON
STA. 278+31.50
STRUCTURE NO. 060-3023

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 the cause for additional compensation for a change in the scope of work, however, the Contractor will be paid for the quantity actually furnished at the unit price for the work.

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 in contact with the concrete. The cost of this work will be included in the pay item covering the removal of the existing concrete. All heavy rust and other tightly adhered potentially detrimental foreign matter shall also be removed from the surfaces of the beams in contact with the concrete. Tightly adhered paint may remain unless otherwise noted. This removal shall be accomplished by methods that will not damage the steel. 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". The last 2 feet of Beam 5 (measured along the beam from the face of the concrete diaphragm) at the south abutment shall be cleaned per Near White Blast Cleaning - SSPC-SP10.

The designated areas cleaned per Near White Blast Cleaning - SSPC-SP10 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 construction joints shall be bonded.

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 3½". The Contractor shall provide positive control for controlling the depth of the cut into the slab. The Contractor shall provide sawing equipment adequate in size and horsepower to complete the sawing operation.

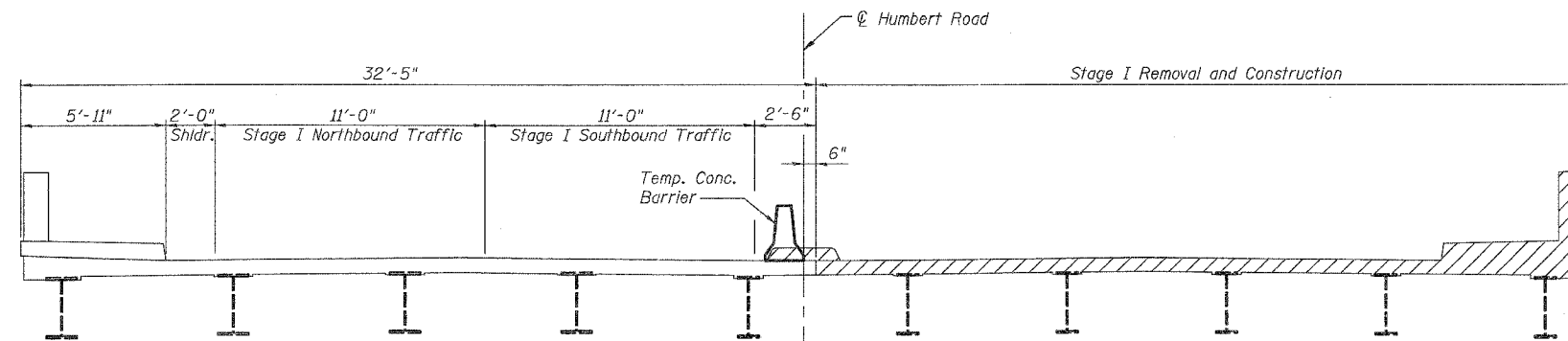
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FAU 8996	05-00221-00-BR	MADISON	20	10	12 SHEETS
FED. ROAD DIST. NO. 7	BALDWIN	FED. AID PROJECT			

Contract No. 97281

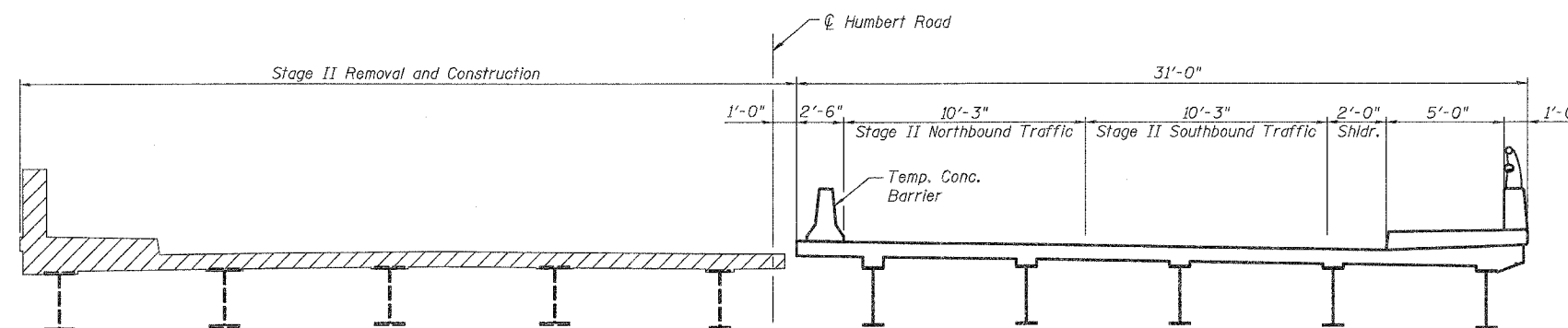
TOTAL BILL OF MATERIAL

Item	Unit	Super	Substr	Total
Stone Riprap, Class A4	Sq. Yd.	---	482	482
Filter Fabric	Sq. Yd.	---	482	482
Concrete Removal	Cu. Yd.	3.4	---	3.4
Bridge Rail Removal	Foot	73	---	73
Removal of Existing Concrete Deck	Each	1	---	1
Floor Drains	Each	6	---	6
Concrete Superstructure	Cu. Yd.	93.1	---	93.1
Bridge Deck Grooving	Sq. Yd.	247	---	247
Protective Coat	Sq. Yd.	341	---	341
Stud Shear Connectors	Each	1,377	---	1,377
Cleaning And Painting Steel Bridge	L. Sum	1	---	1
Containment And Disposal of Lead Paint Cleaning Residues	L. Sum	1	---	1
Reinforcement Bars, Epoxy Coated	Pound	19,260	---	19,260
Aluminum Railing, Type L	Foot	88	---	88
Name Plates	Each	1	---	1
Bar Spllicers	Each	139	---	139

GENERAL NOTES, DETAILS, &
TOTAL BILL OF MATERIALS
HUMBERT ROAD OVER
BLACK CREEK
SECTION 05-00221-00-BR
CITY OF ALTON
STA. 278+31.50
STRUCTURE NO. 060-3023



STAGE I
(Looking South)



STAGE II
(Looking South)

STAGE TRAFFIC CROSS SECTIONS

STAGE CONSTRUCTION NOTES

STAGE I

Suggested sequence of construction:

1. Remove concrete median, erect traffic control & reroute traffic to the northbound lanes with two 11'-0" lanes. See Roadway Plans.
2. Remove existing deck slab, railing, approach pavement and concrete diaphragm within Stage I limits.
3. Clean existing beams and remove lead paint in designated areas. See Special Provisions.
4. Install stud shear connectors to steel beams.
5. Cast new Stage I bridge deck, concrete diaphragm, sidewalk and parapet.
6. Complete Stage I roadway and approach work as required.
7. Remove traffic control from this stage and install new traffic control for Stage II.

STAGE II

1. Erect traffic control & reroute traffic to the southbound lanes with two 10'-3" lanes. See Roadway Plans.
2. Remove existing deck slab, railing, approach pavement and concrete diaphragm within Stage II limits.
3. Clean existing beams and remove lead paint in designated areas. See Special Provisions.
4. Install stud shear connectors to steel beams.
5. Cast new Stage II bridge deck, concrete diaphragm, sidewalk and parapet.
6. Complete Stage II roadway and approach work as required.

Notes:

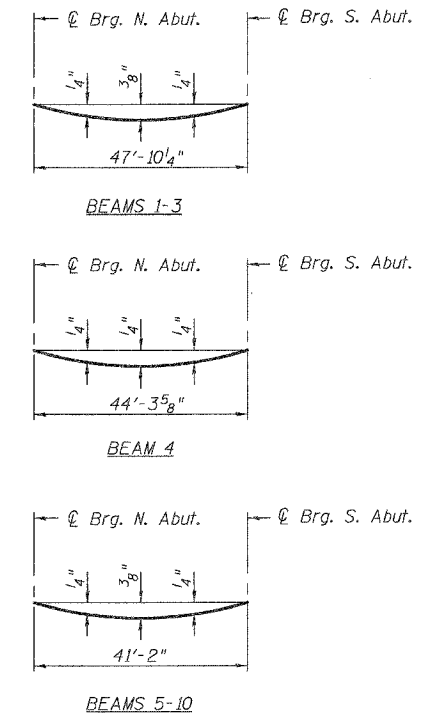
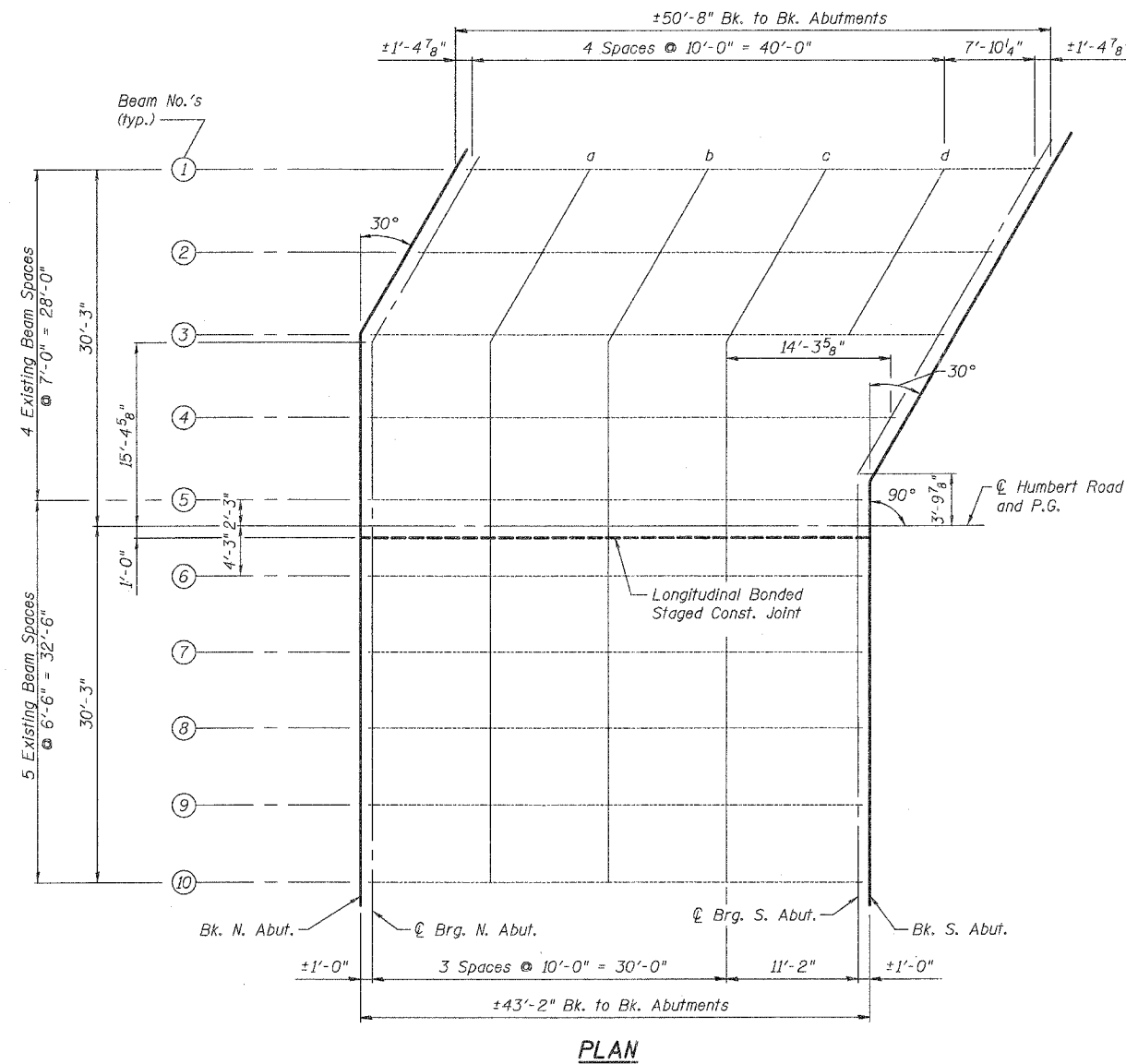
- ① See sheet 7 of 12 for concrete diaphragm removal details.
- ② Hatching indicates removal of existing concrete deck.
- ③ Temporary concrete barrier shall conform to Standard 704001. See sheet 11 of 12 for anchorage details.
- ④ For quantity of temporary concrete barrier, see Roadway Plans.

STAGING DETAILS
HUMBERT ROAD OVER
BLACK CREEK
SECTION 05-00221-00-BR
CITY OF ALTON
STA. 278+31.50
STRUCTURE NO. 060-3023

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 8996	05-00221-00-BR	MADISON	20	12
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 4
12 SHEETS

Contract No. 97281



DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only.)

Note:

The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown on sheet 5 of 12.

DECK ELEVATIONS
HUMBERT ROAD OVER
BLACK CREEK
SECTION 05-00221-00-BR
CITY OF ALTON
STA. 278+31.50
STRUCTURE NO. 060-3023

BEAM 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abutment	278+18.10	-30.250	477.547	477.547
⊕ Brg. N. Abutment	278+19.51	-30.250	477.542	477.542
a	278+29.51	-30.250	477.505	477.531
b	278+39.51	-30.250	477.468	477.509
c	278+49.51	-30.250	477.431	477.470
d	278+59.51	-30.250	477.394	477.416
⊕ Brg. S. Abutment	278+67.35	-30.250	477.365	477.365
Bk. S. Abutment	278+68.76	-30.250	477.360	477.360

BEAM 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abutment	278+14.06	-23.250	477.671	477.671
⊕ Brg. N. Abutment	278+15.46	-23.250	477.666	477.666
a	278+25.46	-23.250	477.629	477.655
b	278+35.46	-23.250	477.592	477.633
c	278+45.46	-23.250	477.555	477.594
d	278+55.46	-23.250	477.518	477.540
⊕ Brg. S. Abutment	278+63.31	-23.250	477.489	477.489
Bk. S. Abutment	278+64.71	-23.250	477.484	477.484

BEAM 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abutment	278+10.01	-16.250	477.796	477.796
⊕ Brg. N. Abutment	278+11.42	-16.250	477.791	477.791
a	278+21.42	-16.250	477.754	477.779
b	278+31.42	-16.250	477.717	477.757
c	278+41.42	-16.250	477.680	477.719
d	278+51.42	-16.250	477.643	477.664
⊕ Brg. S. Abutment	278+59.27	-16.250	477.614	477.614
Bk. S. Abutment	278+60.67	-16.250	477.608	477.608

BEAM 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abutment	278+09.92	-9.250	477.905	477.905
⊕ Brg. N. Abutment	278+10.92	-9.250	477.902	477.902
a	278+20.92	-9.250	477.865	477.885
b	278+30.92	-9.250	477.828	477.859
c	278+40.92	-9.250	477.791	477.817
⊕ Brg. S. Abutment	278+55.22	-9.250	477.738	477.738
Bk. S. Abutment	278+56.63	-9.250	477.733	477.733

BEAM 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abutment	278+09.92	-2.250	478.015	478.015
⊕ Brg. N. Abutment	278+10.92	-2.250	478.011	478.011
a	278+20.92	-2.250	477.974	477.998
b	278+30.92	-2.250	477.937	477.971
c	278+40.92	-2.250	477.900	477.926
⊕ Brg. S. Abutment	278+52.09	-2.250	477.859	477.859
Bk. S. Abutment	278+53.09	-2.250	477.855	477.855

BEAM 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abutment	278+09.92	4.250	477.984	477.984
⊕ Brg. N. Abutment	278+10.92	4.250	477.980	477.980
a	278+20.92	4.250	477.943	477.967
b	278+30.92	4.250	477.906	477.940
c	278+40.92	4.250	477.869	477.895
⊕ Brg. S. Abutment	278+52.09	4.250	477.828	477.828
Bk. S. Abutment	278+53.09	4.250	477.824	477.824

BEAM 7

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abutment	278+09.92	10.750	477.882	477.882
⊕ Brg. N. Abutment	278+10.92	10.750	477.878	477.878
a	278+20.92	10.750	477.841	477.865
b	278+30.92	10.750	477.804	477.838
c	278+40.92	10.750	477.767	477.793
⊕ Brg. S. Abutment	278+52.09	10.750	477.726	477.726
Bk. S. Abutment	278+53.09	10.750	477.722	477.722

BEAM 8

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abutment	278+09.92	17.250	477.780	477.780
⊕ Brg. N. Abutment	278+10.92	17.250	477.777	477.777
a	278+20.92	17.250	477.740	477.764
b	278+30.92	17.250	477.703	477.737
c	278+40.92	17.250	477.666	477.692
⊕ Brg. S. Abutment	278+52.09	17.250	477.624	477.624
Bk. S. Abutment	278+53.09	17.250	477.621	477.621

BEAM 9

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abutment	278+09.92	23.750	477.679	477.679
⊕ Brg. N. Abutment	278+10.92	23.750	477.675	477.675
a	278+20.92	23.750	477.638	477.662
b	278+30.92	23.750	477.601	477.635
c	278+40.92	23.750	477.564	477.590
⊕ Brg. S. Abutment	278+52.09	23.750	477.523	477.523
Bk. S. Abutment	278+53.09	23.750	477.519	477.519

BEAM 10

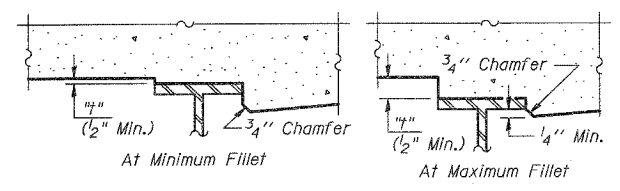
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abutment	278+09.92	30.250	477.577	477.577
⊕ Brg. N. Abutment	278+10.92	30.250	477.574	477.574
a	278+20.92	30.250	477.537	477.561
b	278+30.92	30.250	477.500	477.534
c	278+40.92	30.250	477.463	477.488
⊕ Brg. S. Abutment	278+52.09	30.250	477.421	477.421
Bk. S. Abutment	278+53.09	30.250	477.418	477.418

PROFILE GRADE LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abutment	278+09.92	0.000	478.050	478.050
⊕ Brg. N. Abutment	278+10.92	0.000	478.046	478.046
a	278+20.92	0.000	478.009	478.033
b	278+30.92	0.000	477.972	478.006
c	278+40.92	0.000	477.935	477.961
⊕ Brg. S. Abutment	278+52.09	0.000	477.894	477.894
Bk. S. Abutment	278+53.09	0.000	477.890	477.890

LONGITUDINAL STAGED CONSTRUCTION JOINT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abutment	278+09.92	1.000	478.034	478.034
⊕ Brg. N. Abutment	278+10.92	1.000	478.031	478.031
a	278+20.92	1.000	477.994	478.018
b	278+30.92	1.000	477.957	477.991
c	278+40.92	1.000	477.920	477.946
⊕ Brg. S. Abutment	278+52.09	1.000	477.878	477.878
Bk. S. Abutment	278+53.09	1.000	477.875	477.875



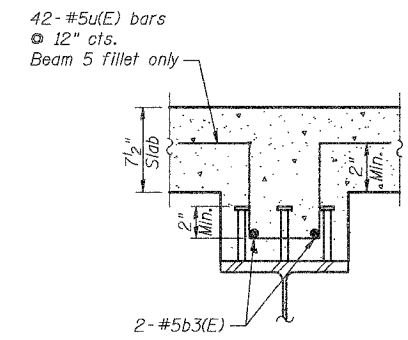
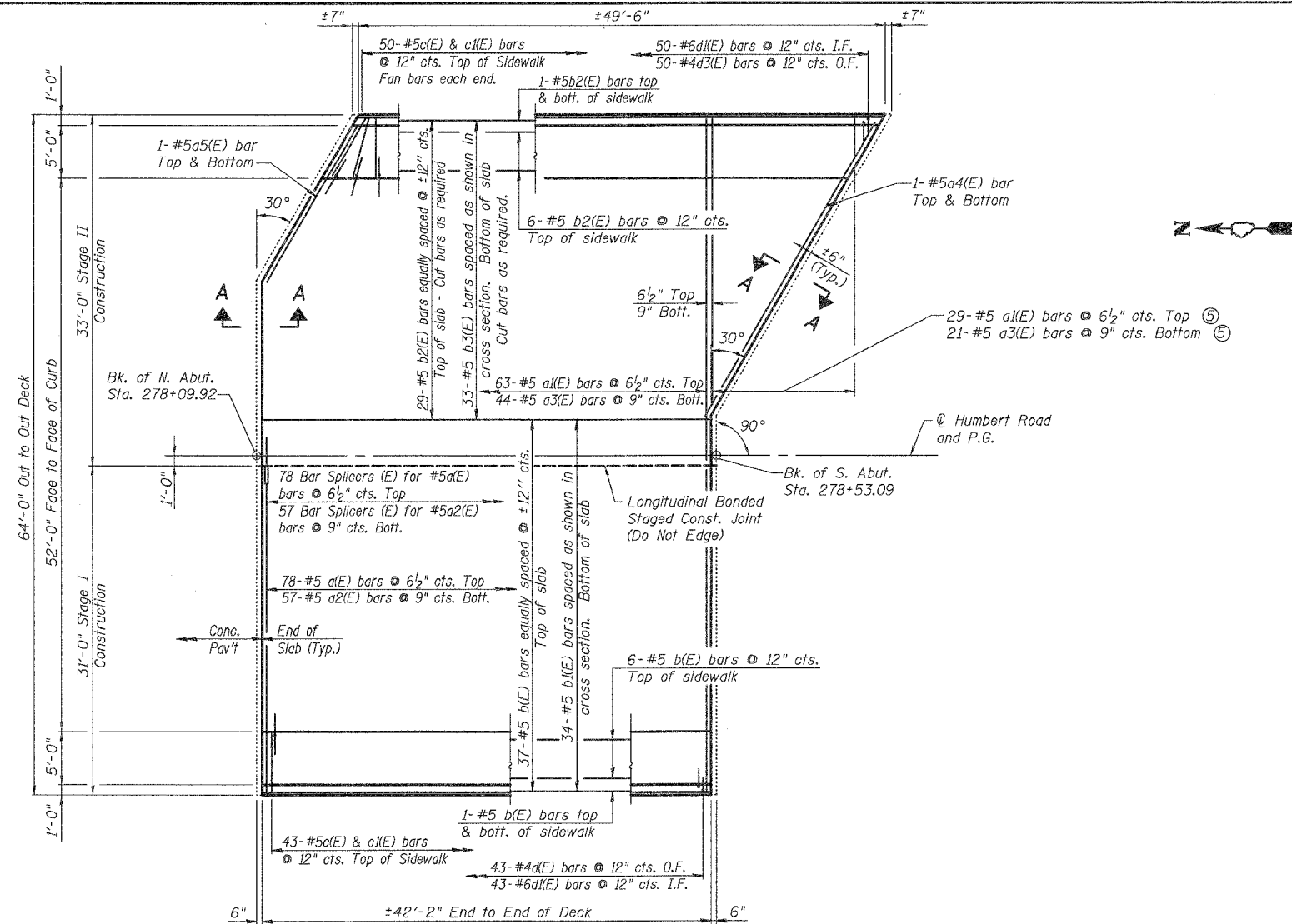
To determine "h": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown above. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown above, minus slab thickness, equals the fillet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

FILLET HEIGHTS

DECK ELEVATIONS
HUMBERT ROAD OVER
BLACK CREEK
SECTION 05-00221-00-BR
CITY OF ALTON
STA. 278+31.50
STRUCTURE NO. 060-3023

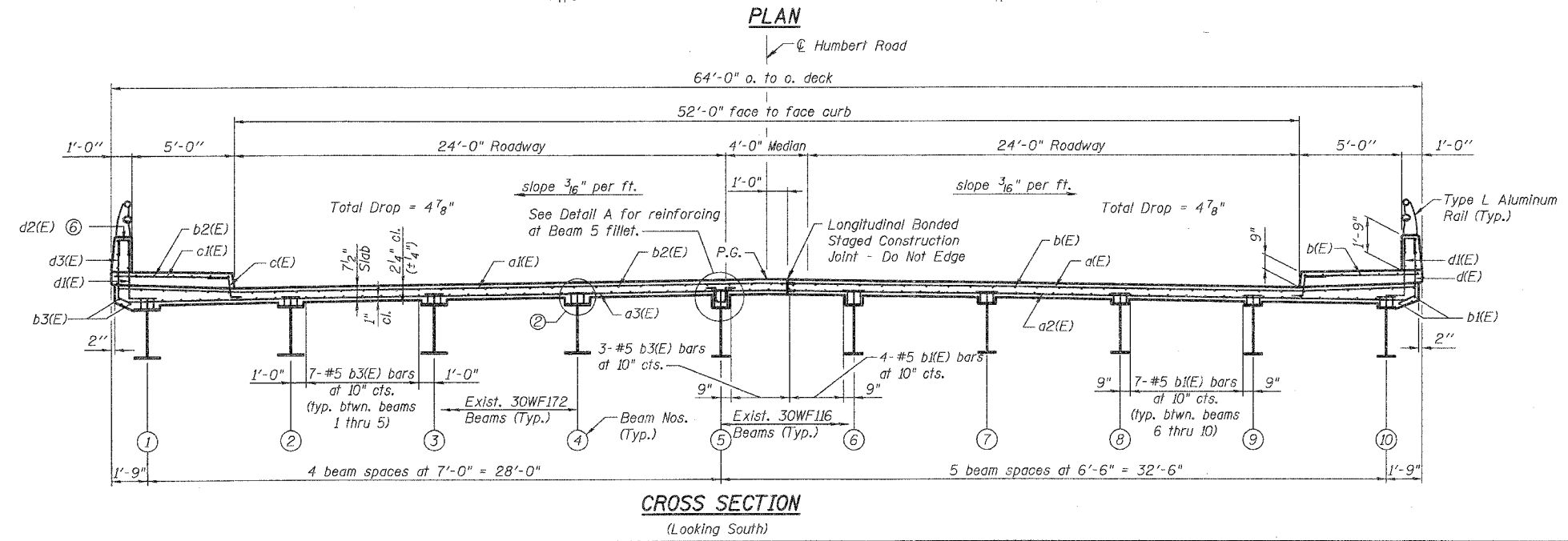
ROUTE NO.	SECTION	COUNTY	SHEET	SHEET NO.
FAU 8996	05-00221-00-BR	MADISON	20 14	12 SHEETS
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

Contract No. 97281



DETAIL A

- Notes:
- See sheet 8 of 12 for superstructure details, bar bending details, parapet elevations and bill of materials.
 - See sheet 9 of 12 for shear stud details.
 - See sheet 10 of 12 for bar splicer details.
 - For Section A-A and diaphragm elevations at abutments, see sheet 7 of 12.
 - Order a1(E) and a2(E) bars full length. Cut to fit skew and use remainder of bars in opposite end as required by spacing shown.
 - Place 2-#4d2(E) bars at each rail post.
 - Space d(E), d1(E) & d3(E) bars to miss parapet joints.
 - O.F. denotes outside face. I.F. denotes inside face.
 - Reinforcement designated (E) shall be epoxy coated.



CROSS SECTION

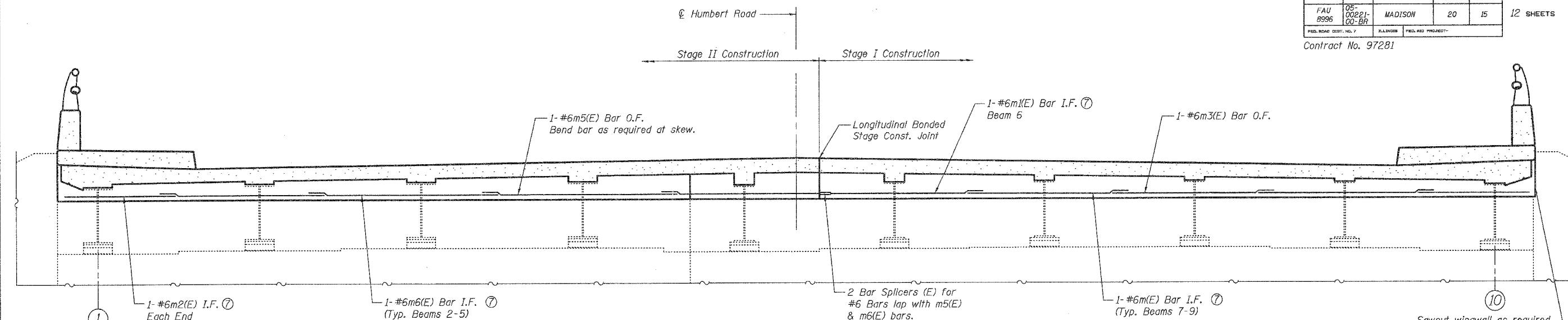
(Looking South)

SUPERSTRUCTURE
HUMBERT ROAD OVER
BLACK CREEK
SECTION 05-00221-00-BR
CITY OF ALTON
STA. 278+31.50
STRUCTURE NO. 060-3023

ROUTE NO.	SECTION	COUNTY	SHEET	SHEET NO.
FAU 8996	05-00221-00-BR	MADISON	20	15
FED. ROAD DIST. NO. 7		ALIGNMENT	FED. AID PROJECT	

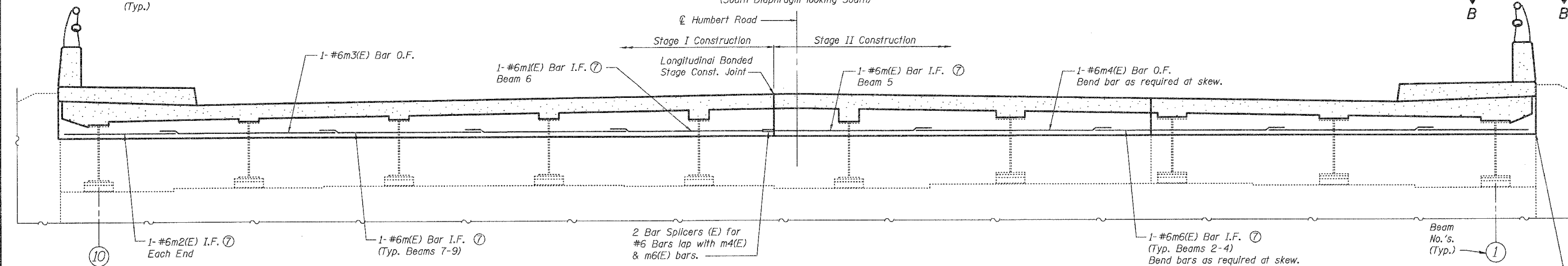
Contract No. 97281

12 SHEETS



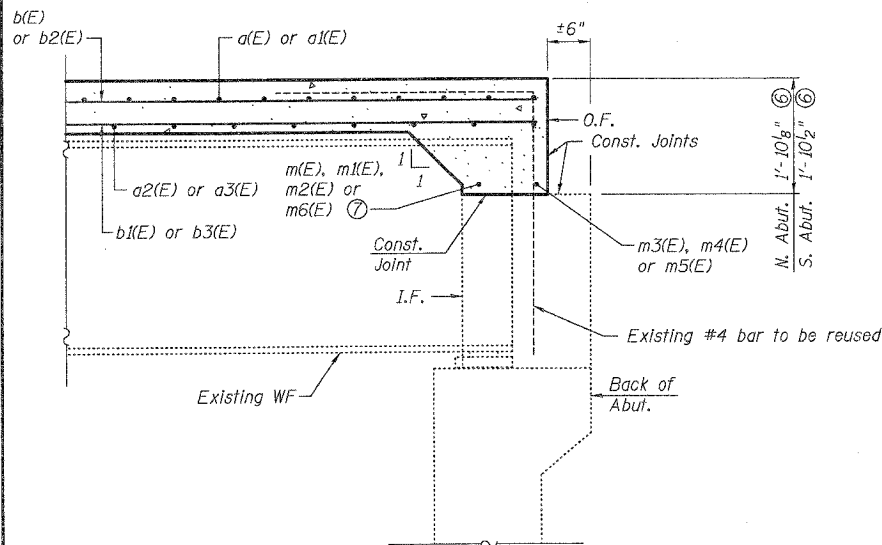
DIAPHRAGM ELEVATION AT ABUTMENT

(South Diaphragm looking South)

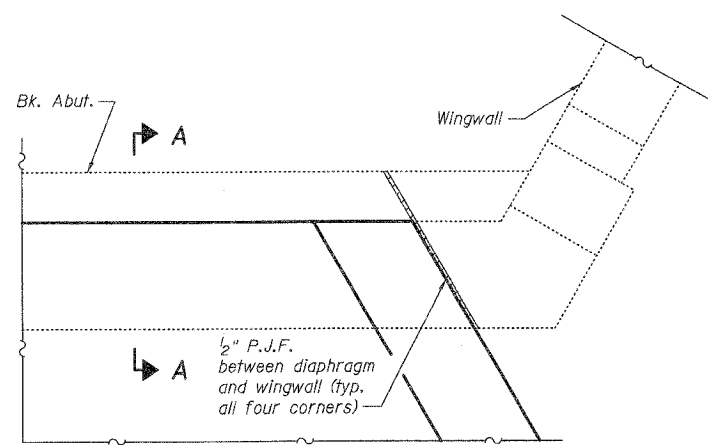


DIAPHRAGM ELEVATION AT ABUTMENT

(North Diaphragm looking North)



SECTION A-A AT ABUTMENTS



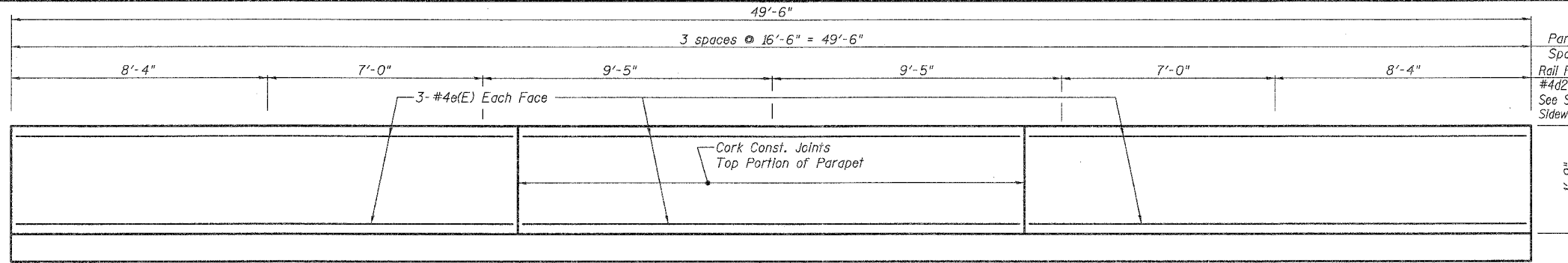
SECTION B-B

(Parapet Shown)

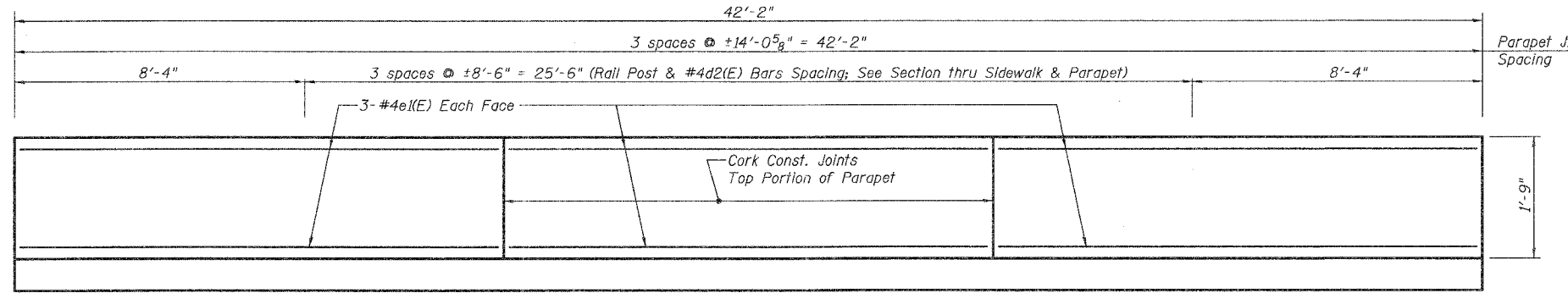
Notes:

- ① See sheet 8 of 12 for additional superstructure details, bar bending details, parapet elevations and bill of materials. Concrete in diaphragm is included with Concrete Superstructure.
- ② See sheet 9 of 12 for shear stud details.
- ③ See sheet 10 of 12 for bar splicer details.
- ④ Reinforcement bars designated (E) shall be epoxy coated.
- ⑤ Existing reinforcement bars shown are to be cleaned and incorporated into new construction.
- ⑥ Distance is measured at the centerline of the roadway.
- ⑦ Place m(E), m1(E), m2(E) & m6(E) bars through 1"φ drilled holes in steel beams.
- ⑧ Minimum bar laps: #6 - 2'-9".

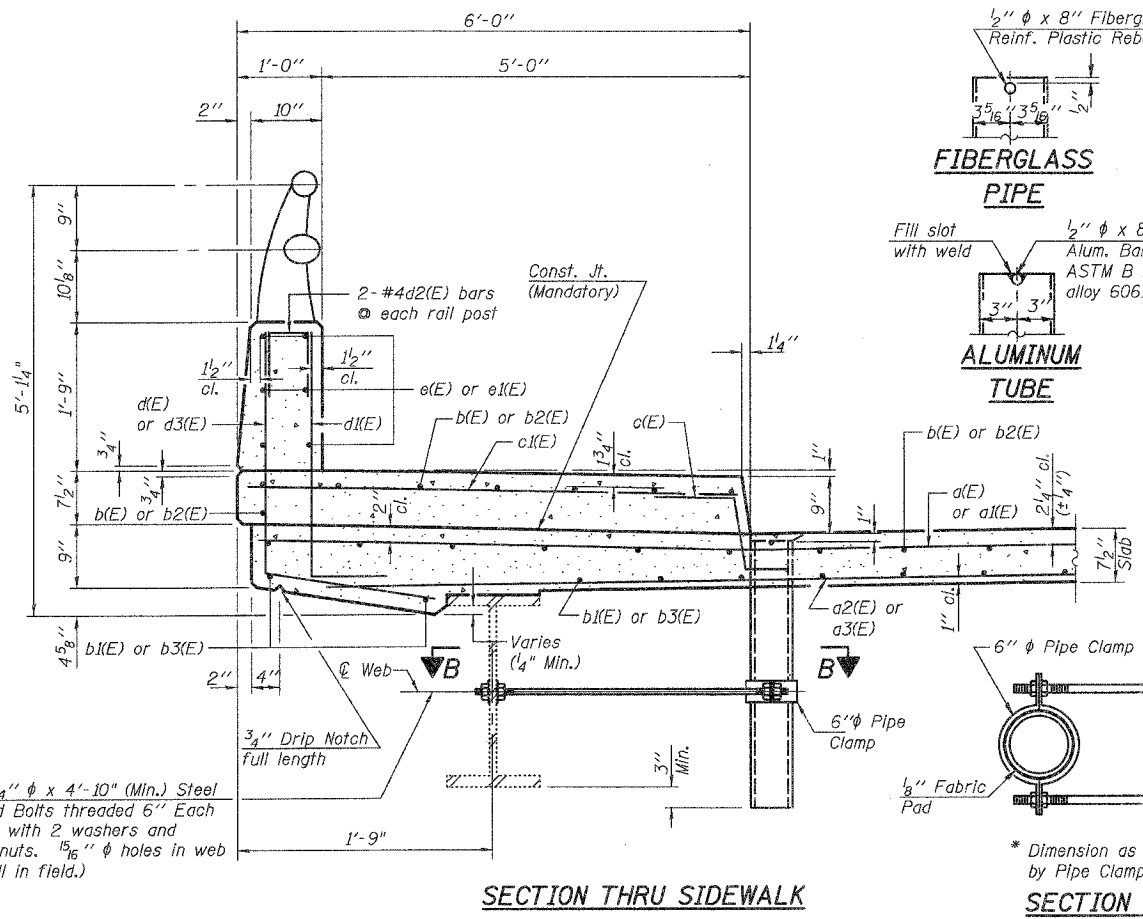
SUPERSTRUCTURE DETAILS
HUMBERT ROAD OVER
BLACK CREEK
SECTION 05-00221-00-BR
CITY OF ALTON
STA. 278+31.50
STRUCTURE NO. 060-3023



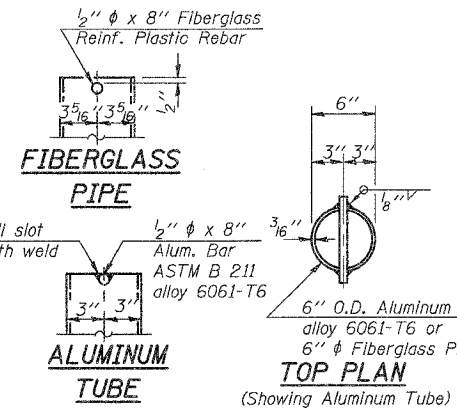
INSIDE ELEVATION OF EAST PARAPET



INSIDE ELEVATION OF WEST PARAPET



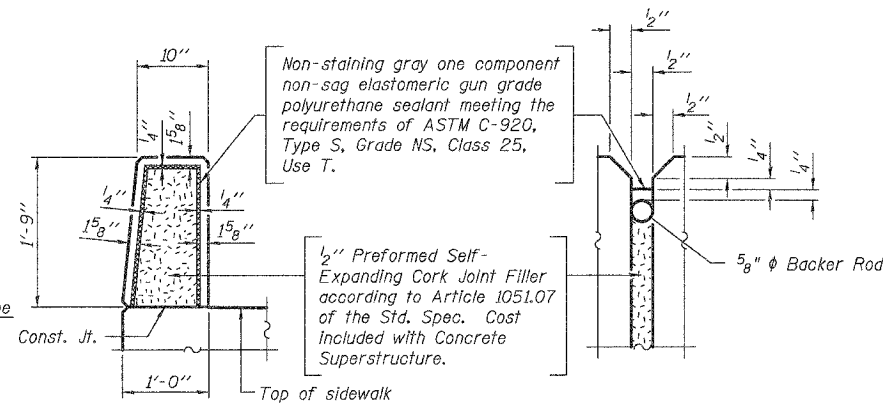
SECTION THRU SIDEWALK



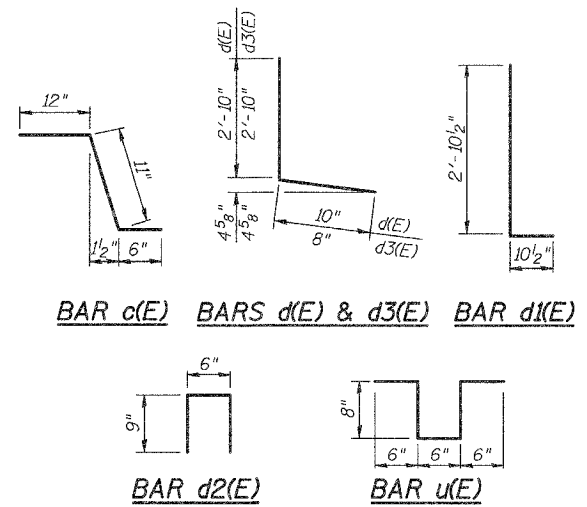
ALUMINUM TUBE

SECTION B-B

TOP PLAN



PARAPET JOINT DETAILS

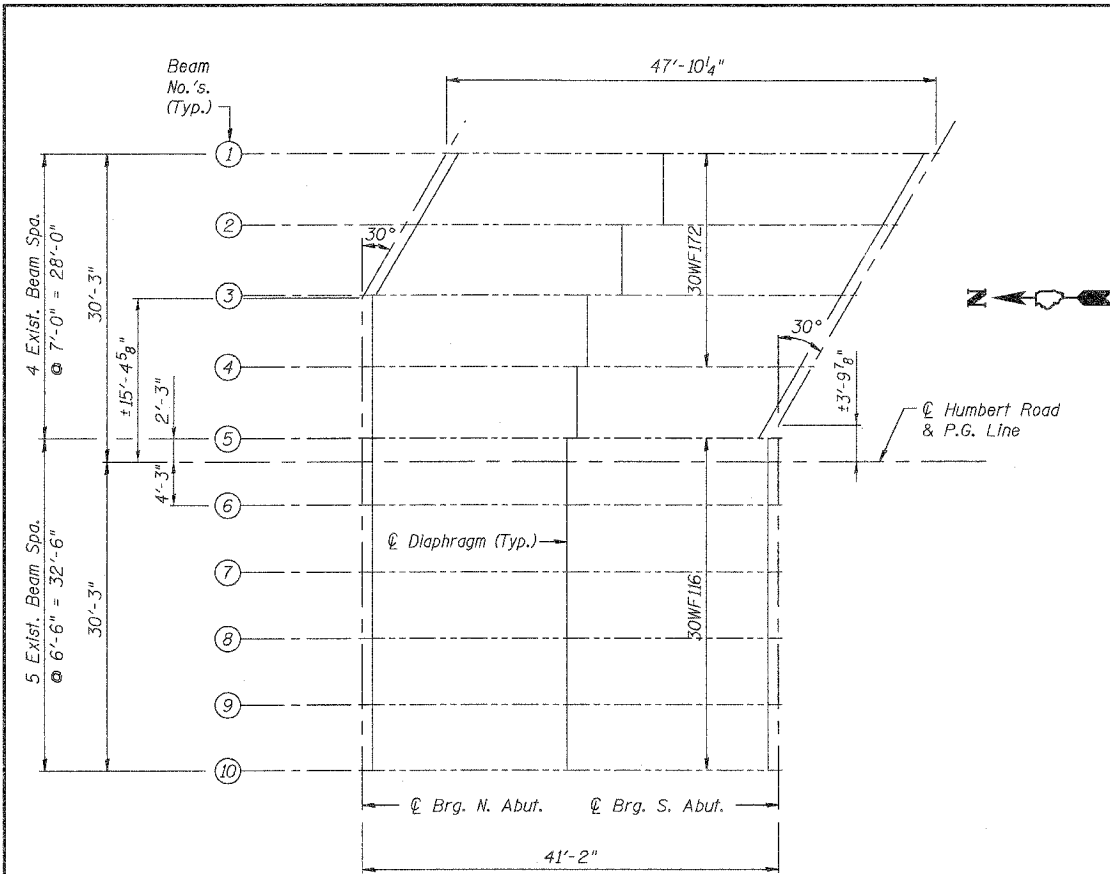


SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	78	#5	30'-6"	—
a1(E)	92	#5	32'-6"	—
a2(E)	57	#5	29'-6"	—
a3(E)	65	#5	32'-0"	—
a4(E)	2	#5	31'-5"	—
a5(E)	2	#5	17'-10"	—
b(E)	45	#5	41'-10"	—
b1(E)	34	#5	41'-10"	—
b2(E)	37	#5	49'-2"	—
b3(E)	35	#5	49'-2"	—
c(E)	93	#5	2'-5"	L
c1(E)	93	#5	5'-6"	—
d(E)	43	#4	3'-8"	L
d1(E)	93	#6	3'-9"	L
d2(E)	18	#4	2'-0"	□
d3(E)	50	#4	3'-6"	L
e(E)	18	#4	16'-2"	—
e1(E)	18	#4	13'-8"	—
m(E)	7	#6	9'-3"	—
m1(E)	2	#6	7'-11"	—
m2(E)	4	#6	7'-3"	—
m3(E)	2	#6	30'-8"	—
m4(E)	1	#6	35'-0"	—
m5(E)	1	#6	37'-0"	—
m6(E)	7	#6	10'-10"	—
u(E)	42	#5	2'-10"	U
Reinforcement Bars, Epoxy Coated		Pound	19,260	
Concrete Superstructure		Cu. Yds.	93.1	

- Notes:
- Reinforcement bars designated (E) shall be epoxy coated.
 - E.F. denotes each face.
I.F. denotes inside face.
O.F. denotes outside face.
 - Concrete superstructure includes concrete in diaphragm.

SUPERSTRUCTURE DETAILS
HUMBERT ROAD OVER
BLACK CREEK
SECTION 05-00221-00-BR
CITY OF ALTON
STA. 278+31.50
STRUCTURE NO. 060-3023

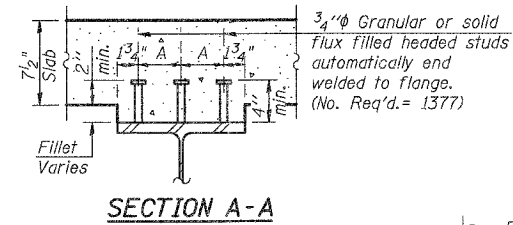


	Beams 1-4 (4)		Beams 5-10	
	0.5 Span 1		0.5 Span 1	
Is (in.4)	7892	4919		
Ic (in.4) (n=9)	19042	13517		
Ic (in.4) (n=27)	13884	9932		
Ss (in.3)	528	328		
Sc (in.3) (n=9)	730	489		
Sc (in.3) (n=27)	661	442		
Z (in.3)				
DL (k./ft.)	0.884	0.811		
M(DL) (ft.k./beam)	253.0	171.8		
s DL (k./ft.)	0.171	0.171		
M(s DL) (ft.k./beam)	49.0	36.2		
M(LL) (ft.k./beam)	369.8	272.5		
M(Imp.) (ft.k./beam)	106.9	81.7		
5/3 M(LL+Imp.) (ft.k./beam)	794.4	590.3		
Ma (ft.k.)	1425.3	1037.8		
M(U) (ft.k.)	2587.1	1894.4		
fs (DL non-comp.) (k.s.i.)	5.75	6.29		
fs (DL comp.) (k.s.i.)	0.89	0.98		
fs 5/3 [M(LL+Imp.)] (k.s.i.)	13.06	14.49		
fs (Overload) (k.s.i.)	19.70	21.76		
fs (Total) (k.s.i.)	25.60	28.28		
VR (k)	47.5	42.7		

- MOMENT TABLE NOTES:
- Is and Ss are the moment of inertia and section modulus of the steel section used in computing fs (Total & Overload).
 - Ic(n) and Sc(n) are the moment of inertia and section modulus of the composite section used in computing stresses due to live load.
 - Ic(3n) and Sc(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 LL + Impact shear range in span.
 - Z is the plastic section modulus used to determine the fully plastic moments in the non-composite areas.
 - Mu is the Full Plastic Moment Capacity for Compact, Braced
 - fs (Overload) is the sum of the stresses due to [M(DL) + M(s DL) + 5/3(M(LL) + M(Imp))].
 - fs (Total) is the sum of the stresses due to 1.3[M(DL) + M(s DL) + 5/3(M(LL) + M(Imp))].
 - M(DL) - moment due to dead loads on non-composite section.
 - M(s DL) - moment due to dead loads on composite section.
 - M(LL) - moment due to live load on composite section.
 - M(Imp) - moment due to live load impact on composite section.
 - Ma (Applied Moment) = 1.3[M(DL) + M(s DL) + 5/3(M(LL) + M(Imp))].
 - The values shown in the table are based on the analysis of Beam 2.

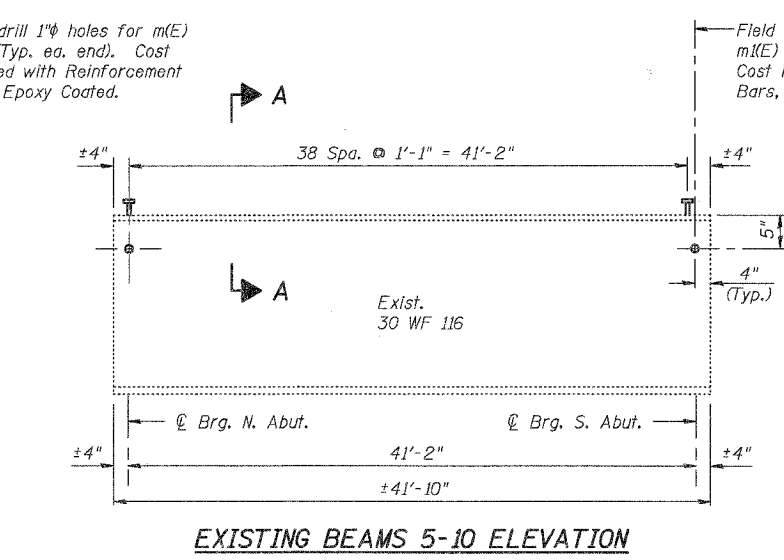
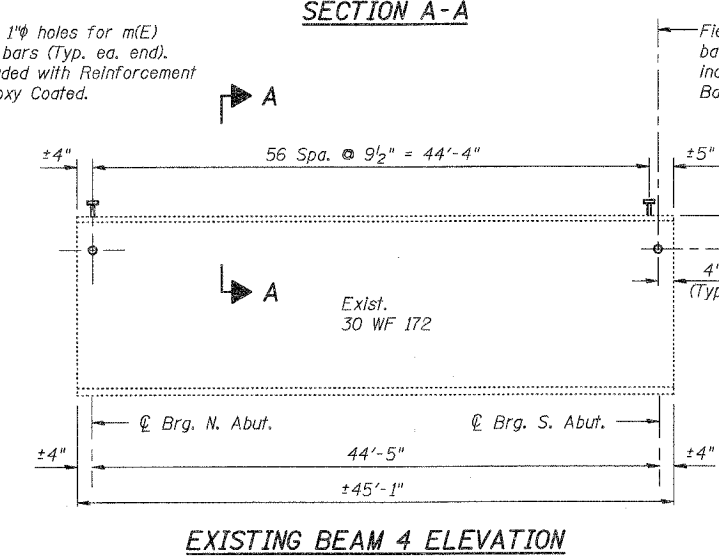
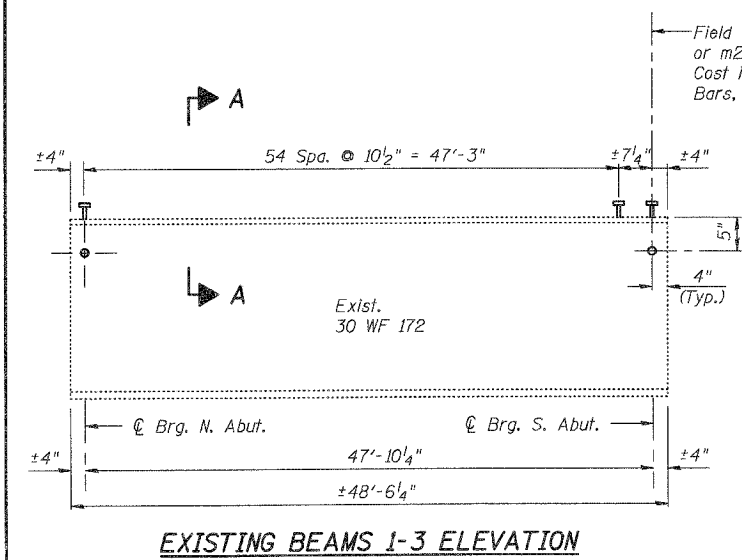
	Beams 1-4		Beams 5-10	
	N. & S. Abut.		N. & S. Abut.	
Rp (K)	25.3	20.2		
Rl (K)	36.9	32.9		
Imp. (K)	10.7	9.9		
R (Total) (K)	72.9	63.0		

Beam No.	Dim. A
1-4	3 1/2"
5-10	5 3/4"



TOP OF BEAM ELEVATIONS

Location	Exist. Beam 1	Exist. Beam 2	Exist. Beam 3	Exist. Beam 4	Exist. Beam 5	Exist. Beam 6	Exist. Beam 7	Exist. Beam 8	Exist. Beam 9	Exist. Beam 10
℄ Brg. N. Abut.	476.81	476.92	477.00	477.01	476.84	476.96	477.01	477.00	476.93	476.81
℄ Brg. S. Abut.	476.64	476.74	476.82	476.87	476.72	476.81	476.84	476.87	476.80	476.68



FRAMING PLAN
HUMBERT ROAD OVER
BLACK CREEK
SECTION 05-00221-00-BR
CITY OF ALTON
STA. 278+31.50
STRUCTURE NO. 060-3023

Contract No. 97281

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 (Tension in kips) = $1.25 \times f_y \times A_t$
- ② Minimum *Pull-out Strength (Tension in kips) = $1.25 \times f_{s_{allow}} \times A_t$

Where f_y = Yield strength of lapped reinforcement bars in ksi.
 $f_{s_{allow}}$ = 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."

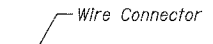
The diameter of this part is the same as the diameter of the bar spliced.

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

ROLLED THREAD DOWEL BAR



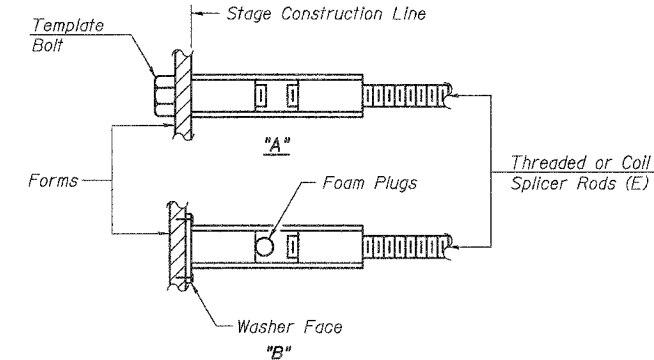
**** ONE PIECE**



WELDED SECTIONS

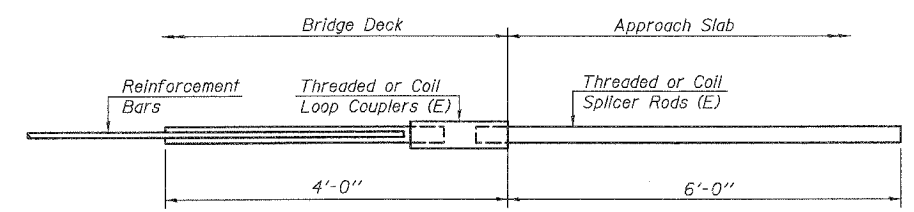
BAR SPLICER ASSEMBLY ALTERNATIVES

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



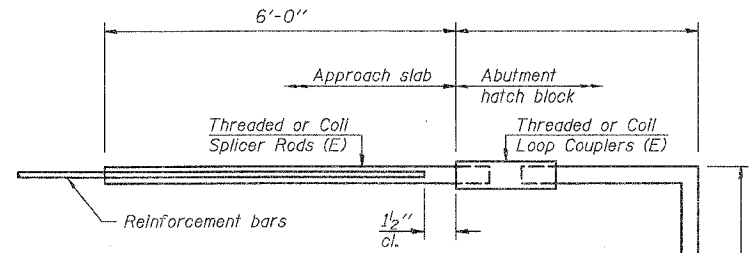
INSTALLATION AND SETTING METHODS

"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.



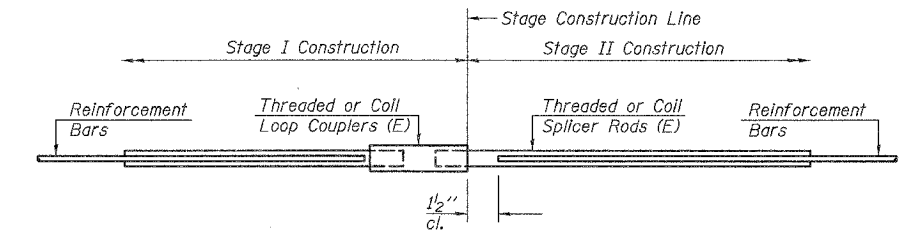
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

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



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 =

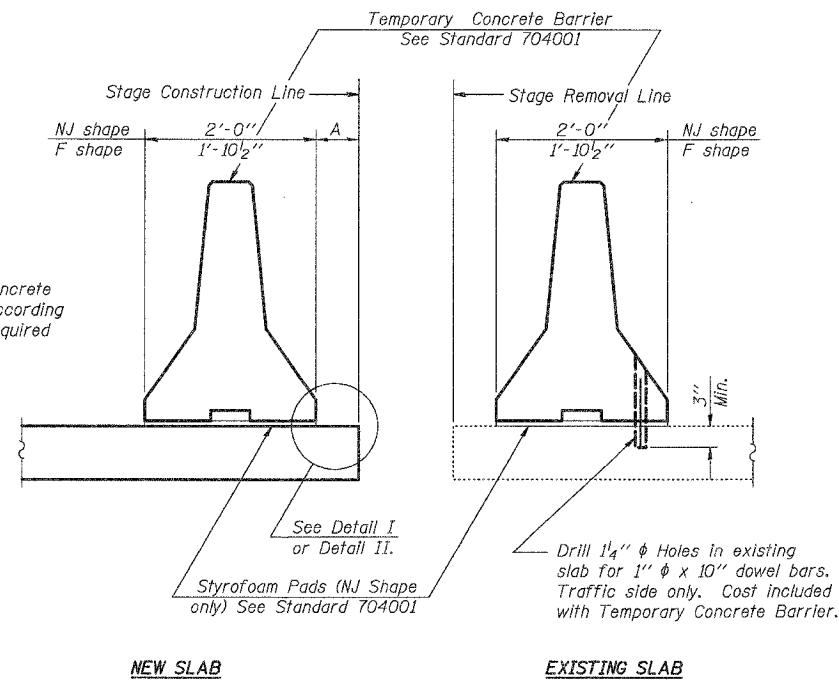


STANDARD

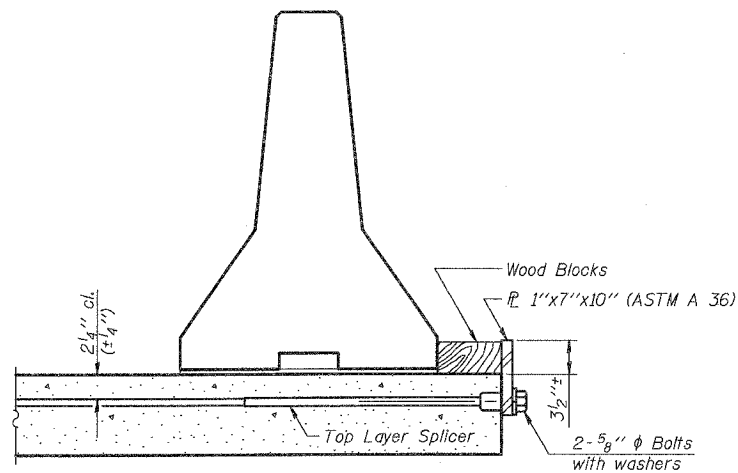
Bar Size	No. Assemblies Required	Location
#5	135	Staged Const. Jt.
#6	2	N. Abut. Diaph.
#6	2	S. Abut. Diaph.

BAR SPLICER DETAILS
 HUMBERT ROAD OVER
 BLACK CREEK
 SECTION 05-00221-00-BR
 CITY OF ALTON
 STA. 278+31.50
 STRUCTURE NO. 060-3023

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".

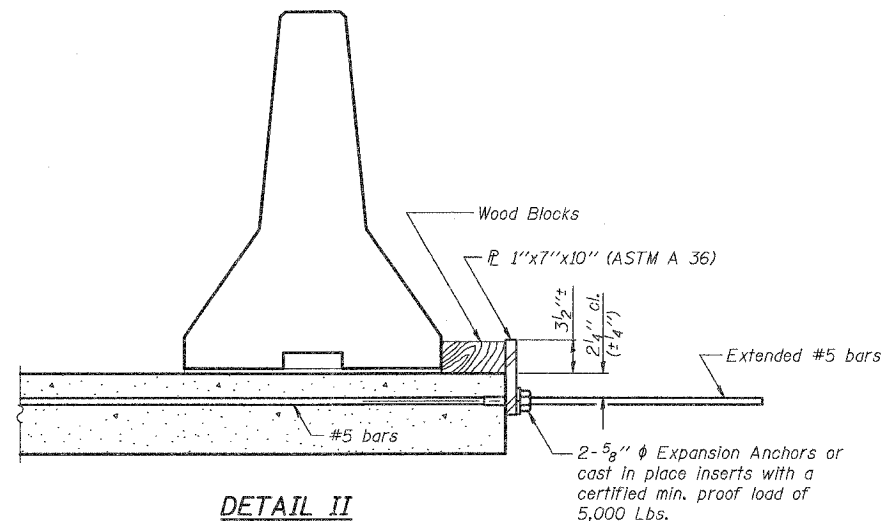


SECTIONS THRU SLAB



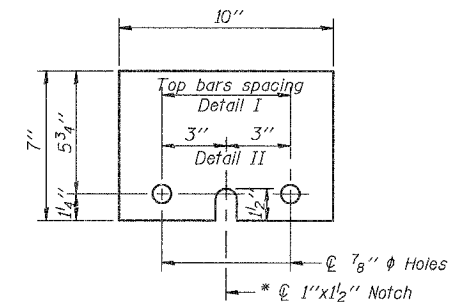
DETAIL I

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.



1"x7"x10"

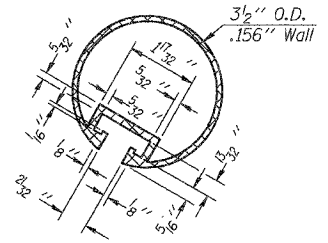
* Required only with Detail II

NOTES

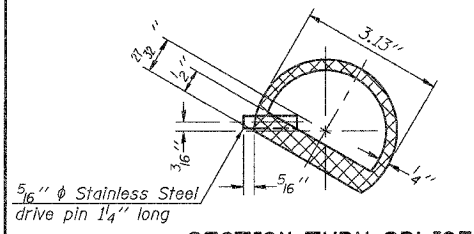
- Detail I - With Bar Splicer or Couplers:
Connect one (1) 1"x7"x10" steel \bar{P} to the top layer of couplers with 2-5/8" ϕ bolts screwed to coupler at approximate \bar{C} of each barrier panel.
- Detail II - With Extended Reinforcement Bars:
Connect one (1) 1"x7"x10" steel \bar{P} to the concrete 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.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 12 12 SHEETS
FAU 8996	05-00221-00-BR	MADISON	20	20	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

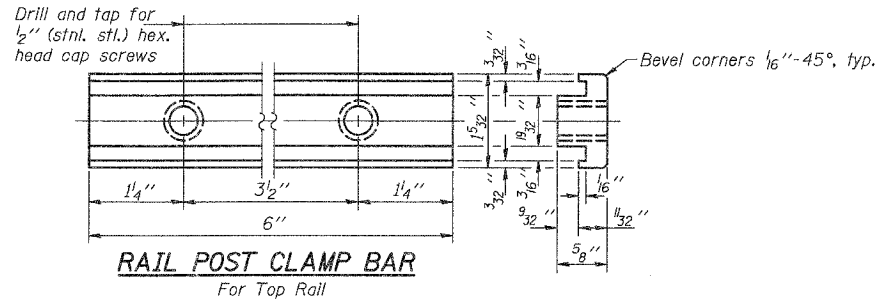
Contract No. 97281



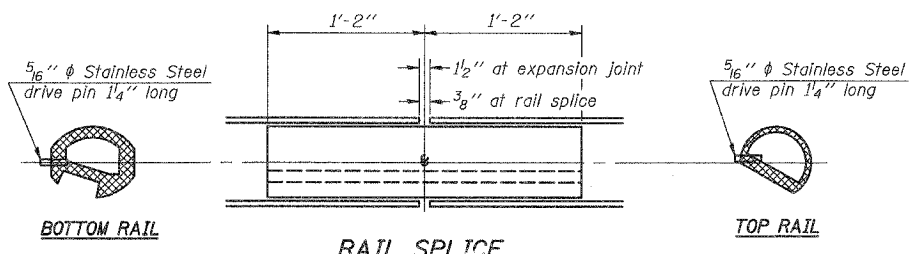
SECTION THRU TOP RAIL



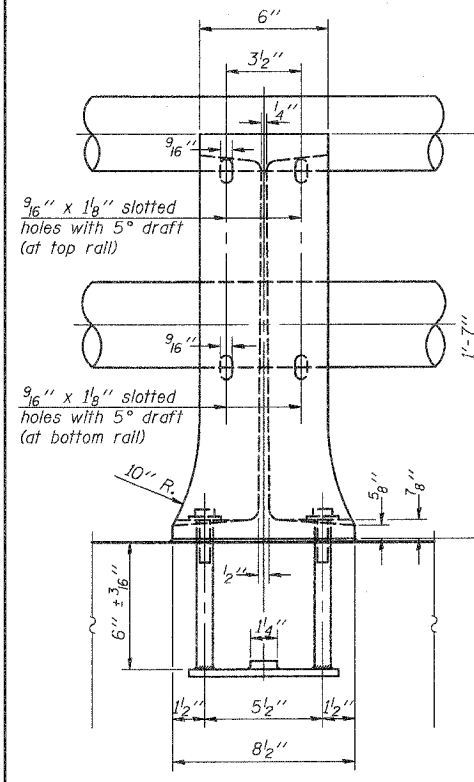
SECTION THRU SPLICE
For Top Rail



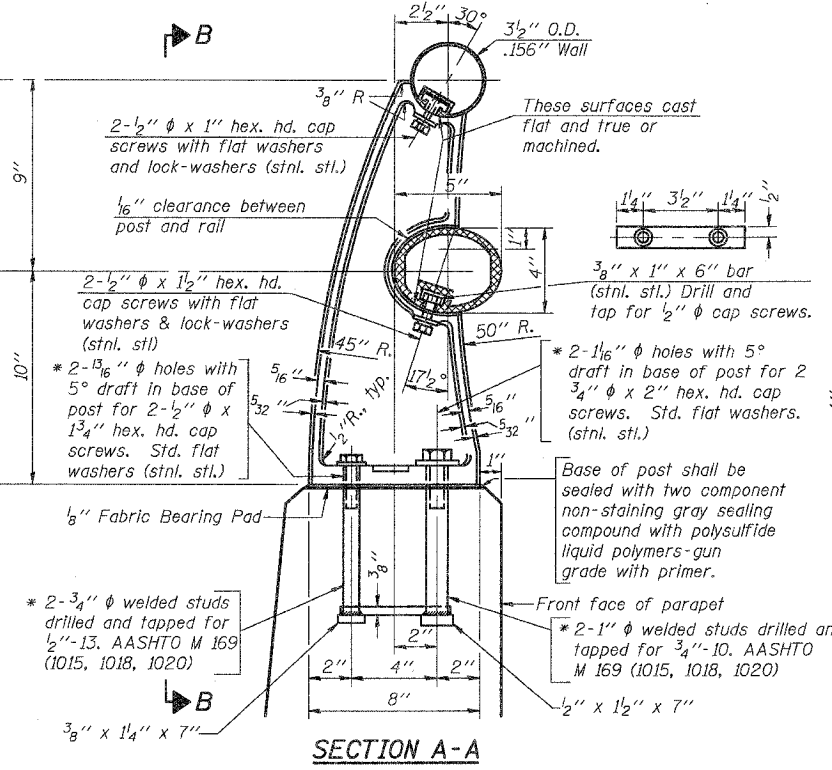
RAIL POST CLAMP BAR
For Top Rail



RAIL SPLICE

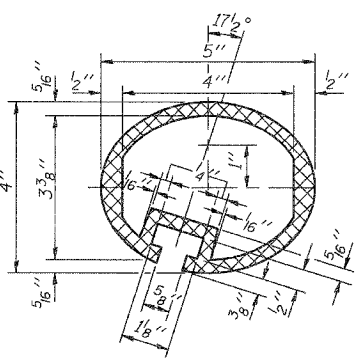


VIEW B-B

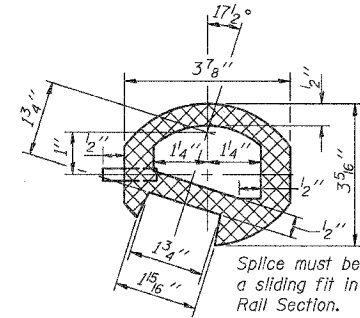


SECTION A-A

RAIL POST DETAILS

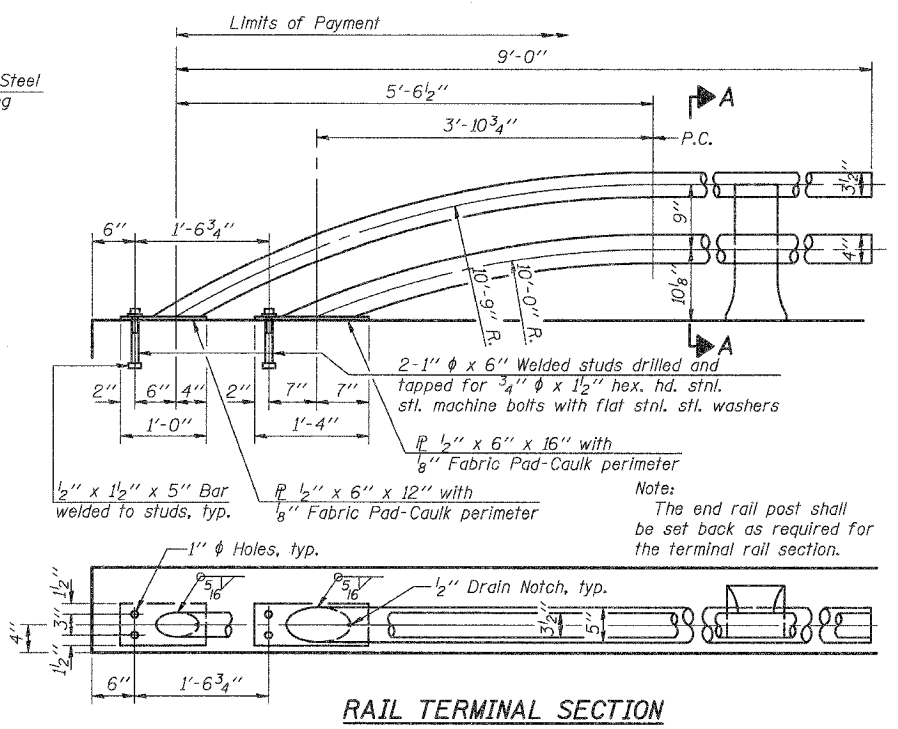


SEC. THRU ELLIPTICAL RAIL SECTION



SEC. THRU SPLICE

Notes:
 All Posts shall be normal to parapet.
 All Aluminum Alloy Extruded Rail shall be supplied in modular lengths of 30 feet, except at the end of bridge or over open joints in bridge deck where the rail shall be attached to a minimum of 2 posts. If the rail is on a horizontal curve of 2300 Foot radius or less, the modular lengths may be reduced but shall be attached to a minimum of 2 posts.
 All joints in rail shall be spliced per detail.
 Provide 1-1/8" and 2-1/16" Aluminum Shims for 25% of the Posts.
 Rail elements shall be parallel to Grade-high spots will be ground and low spots shimmed.
 Railing shall be according to Section 509 of the Standard Specifications, except as noted, and will be paid for at the contract unit price per foot for ALUMINUM RAILING, TYPE L.
 Aluminum alloy rail shall conform to ASTM B 221 alloy 6061-T6 or 6351-T5 with min. yield 35 ksi, min. tensile 38 ksi, and elongation of 10% in 2 inches.



RAIL TERMINAL SECTION

BILL OF MATERIAL

Item	Unit	Quantity
Aluminum Railing, Type L	Foot	88

TYPE L ALUMINUM RAILING
 HUMBERT ROAD OVER
 BLACK CREEK
 SECTION 05-00221-00-BR
 CITY OF ALTON
 STA. 278+31.50
 STRUCTURE NO. 060-3023

* In lieu of the cast-in-place anchor device shown, the Contractor has the option of drilling and epoxy grouting stainless steel anchor rods of the same diameter and grade as the specified cap screws. Embedment shall be according to the manufacturer's specifications.