

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
301	(2HB-2, 2HB-1)D	WINNEBAGO	107	1

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

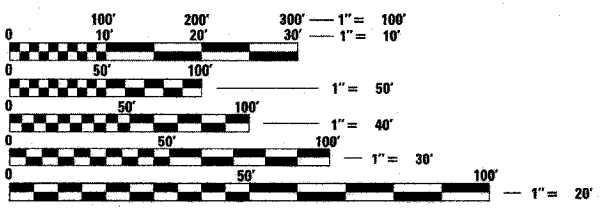
**PROPOSED
HIGHWAY PLANS**

FAP ROUTE 301 (US 20)
SECTION (2HB-2, 2HB-1) D
PROJECT BHF-0301(044)
WINNEBAGO COUNTY
C-92-025-07

FOR INDEX OF SHEETS, SEE SHEET NO. 02

DESIGN DESIGNATION:
TRAFFIC DATA
ADT (2005) 21,100
SPEED LIMIT 65MPH

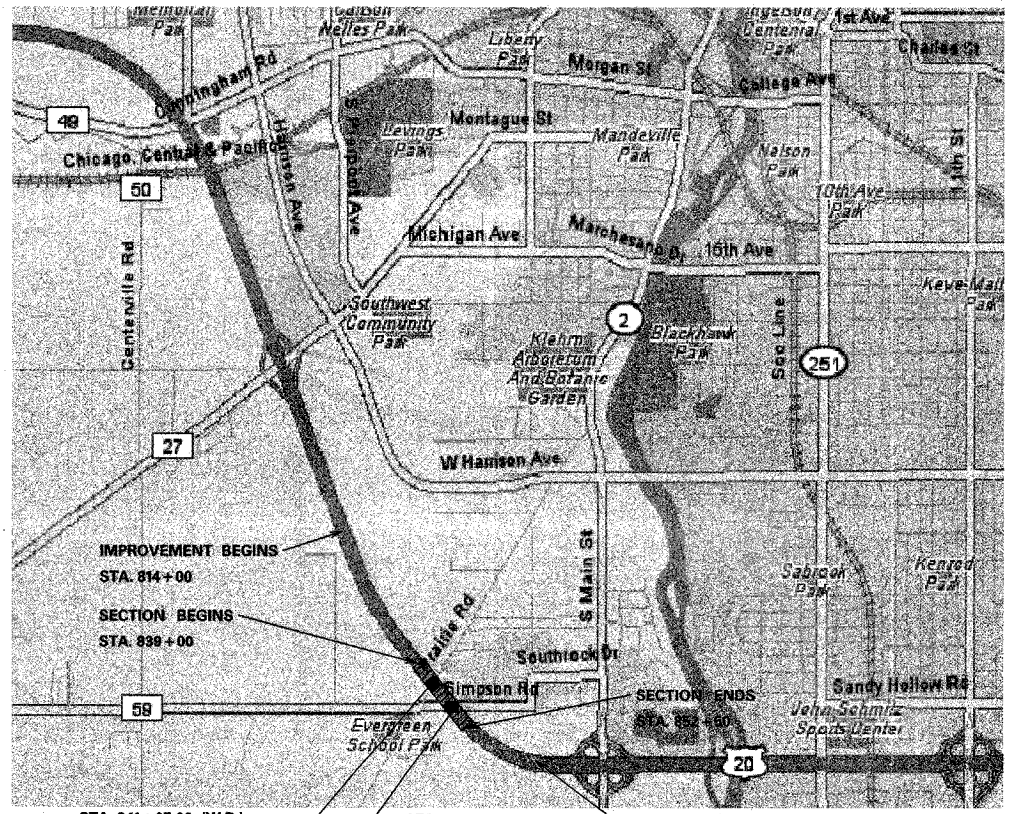
IMPROVEMENT LOCATED IN:
WINNEBAGO COUNTY
ROCKFORD TOWNSHIP
T43N, R1E, SECTION 4



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.

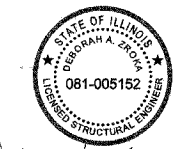
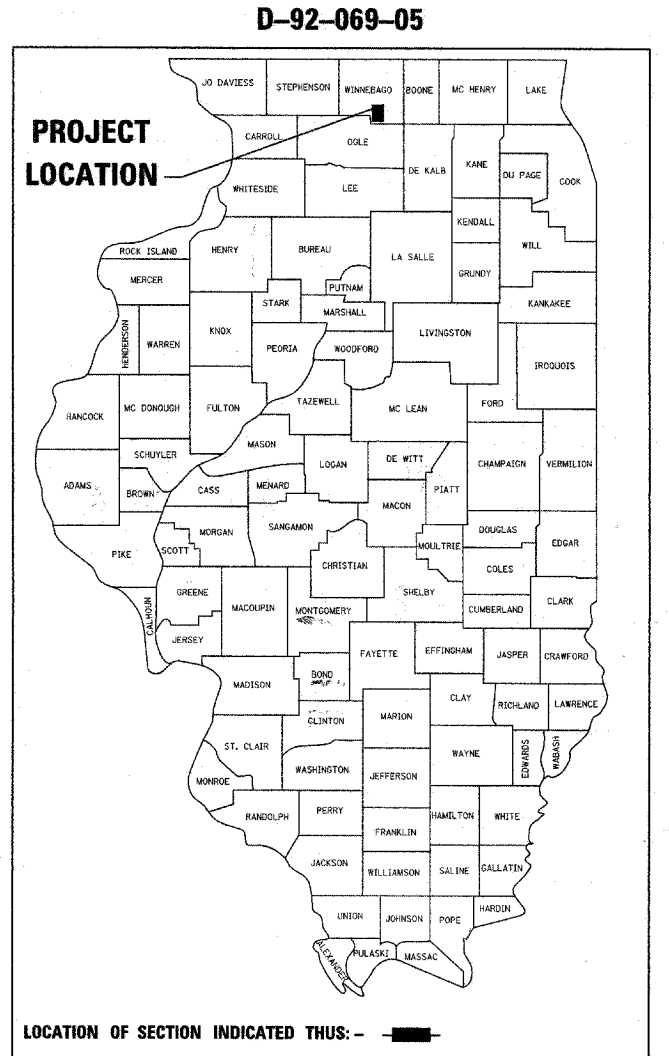
J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123

CONTRACT NO. 64B07



LOCATION MAP
1" = 1/2 MILE

GROSS LENGTH OF PROJECT: 1,350 FEET (0.256 MILES)
NET LENGTH OF PROJECT: 1,350 FEET (0.256 MILES)



Deborah A. Zroka
DEBORAH A. ZROKA, S.E.
LIC. NO. 081-005152
EXPIRES 11/30/2008



Steven P. Fessenbecker
STEVEN P. FESSENBECKER, P.E.
LIC. NO. 062-051254
EXPIRES 11/30/2007



Jennifer L. Anderson
JENNIFER L. ANDERSON, S.E.
LIC. NO. 081-005858
EXPIRES 11/30/2008

LOCATION OF SECTION INDICATED THIS: - [Symbol] -

400 South Green Street - Suite 304
Chicago, Illinois 60607
Phone (312)738-1522
Fax (312)738-9792

KUDRNA
& ASSOCIATES, LTD.
www.kudrna.com

203 North Cass Avenue
Westmont, Illinois 60559
Phone (630)969-3060
Fax (630)969-3122

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED *June 15th 2007*

Cheryl F. Brown
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

August 17, 2007
Eric E. Harms
ENGINEER OF DESIGN AND ENVIRONMENT

August 17, 2007
Melton R. Seay, P.E.
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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LICENSE NO. 184-000920
EXPIRES 4/30/2009

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
301	(2HB-2, 2HB-11D)	WINNEBAGO	107	2
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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STATE STANDARDS

000001-04	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001001-01	AREAS OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH AND OF A FOOT
280001-03	TEMPORARY EROSION CONTROL SYSTEMS
420001-06	PAVEMENT JOINTS
420401-05	BRIDGE APPROACH PAVEMENT
421001-01	BAR REINFORCEMENT FOR CRC PAVEMENT
515001-02	NAME PLATE FOR BRIDGES
601101	CONCRETE HEADWALL FOR PIPE DRAIN
630001-07	STEEL PLATE BEAM GUARDRAIL
630201-04	PCC/HMA STABILIZATION AT STEEL PLATE BEAM GUARDRAIL
630301-04	SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
631031-06	TRAFFIC BARRIER TERMINAL TYPE 6
635001	DELINEATORS
635006-02	REFLECTOR AND TERMINAL MARKER PLACEMENT
635011-01	REFLECTOR MARKER AND MOUNTING DETAILS
642001	SHOULDER RUMBLE STRIPS
701301-02	LANE CLOSURE, 2L, 2W SHORT TIME OPERATIONS
701400-02	APPROACH TO LANE CLOSURE, FREEWAY/EXPRESSWAY
701416-05	LANE CLOSURE, FREEWAY/EXPRESSWAY, WITH CROSSOVER AND BARRIER
701426-02	LANE CLOSURE, MULTILANE, INTERMITTENT OR MOVING OPERATION FOR SPEEDS ≥ 45 MI
702001-06	TRAFFIC CONTROL DEVICES
704001-03	TEMPORARY CONCRETE BARRIER
720011	METAL POSTS FOR SIGNS, MARKERS AND DELINEATORS
728001	TELESCOPING STEEL SIGN SUPPORT
729001	APPLICATIONS OF TYPES A AND B METAL POSTS (FOR SIGNS AND MARKERS)
780001-01	TYPICAL PAVEMENT MARKINGS
781001-02	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS

GENERAL NOTES

THE FINAL TOP FOUR INCHES OF SOIL IN ANY RIGHT OF WAY AREA DISTURBED BY THE CONTRACTOR MUST BE CAPABLE OF SUPPORTING VEGETATION. THE SOIL MUST BE FROM THE A HORIZON (0' TO 2' DEEP) OF SOIL PROFILES OF LOCAL SOILS.

THE CONTRACTOR SHALL SEED ALL DISTURBED AREAS WITHIN THE PROJECT LIMITS. SEEDING CLASS 2A SHALL BE USED.

FERTILIZER NUTRIENTS SHALL BE APPLIED AT THE RATE SPECIFIED IN SECTIONS 250 AND 252 OF THE STANDARD SPECIFICATIONS. THIS SHALL BE INCLUDED IN THE COST OF THE SEEDING.

THE FOLLOWING MIXTURE REQUIREMENTS ARE APPLICABLE FOR THIS PROJECT:

MIXTURE USES(S):	SURFACE	LEVELING BINDER	SURFACE SHOULDERS
PG:	SBS PG-70-22	SBS PG-70-22	58-22
DESIGN AIR VOIDS	4.2 @ N90	4.2 @ N90	3.0 @ N50
MIXTURE COMPOSITION (GRADATION MIXTURE)	IL-9.5 OR IL-12.5	IL-9.5	IL-9.5 OR IL-12.5
FRICTION AGGREGATE	"E"	N/A	"C"
20 YEAR ESAL	27.9	---	---

THE CONTRACTOR WILL BE REQUIRED TO FURNISH 140 MM (5 1/2") HIGH BRASS STENCILS AS APPROVED BY THE ENGINEER AND INSTALL STATIONING AT 250' INTERVALS. STATIONING SHALL BE PLACED ON BOTH LANES OF 2-LANE HIGHWAYS AND ON THE OUTSIDE LANES IN BOTH DIRECTIONS ON 4-LANE HIGHWAYS. THE STATIONS SHALL BE PLACED 150 MM (6") INSIDE THE PAVEMENT MARKING EDGE SO THEY CAN BE READ FROM THE SHOULDER. THIS WORK WILL BE INCLUDED IN THE COST OF THE FINAL PAVEMENT SURFACE.

INSTALL RUMBLE STRIPS IN ALL SHOULDERS IN ACCORDANCE WITH STATE STANDARD 642001. RUMBLE STRIPS SHALL BE PLACED ON SHOULDERS ON BOTH SIDES OF THE PAVEMENT.

BITUMINOUS AND AGGREGATE PRIME COAT SHALL BE PLACED IN ACCORDANCE WITH SECTION 406 OF THE STANDARD SPECIFICATIONS. THE COST OF THE PRIME COATS SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE PER (TON) FOR LEVELING BINDER (MACHINE METHOD) OF THE TYPE SPECIFIED.

THE STRUCTURES WILL RETAIN THE SAME NUMBERS:
S.N. 101-0051, S.N. 101-0052, S.N. 101-0053, S.N. 101-0054

THE CONTRACTOR SHALL SUBMIT FOUR COPIES OF THE REQUIRED SHOP DRAWINGS FOR REVIEW AND APPROVAL TO THE BUREAU OF BRIDGES AND STRUCTURES, 2300 SOUTH DIRKSEN PARKWAY, SPRINGFIELD, IL 62764. AFTER APPROVAL OF INITIAL SUBMITTAL, THE CONTRACTOR SHALL SUBMIT ONE SET OF SHOP DRAWINGS TO DAVE LIPPERT, ENGINEER OF MATERIALS, 126 EAST ASH STREET, SPRINGFIELD, IL 62706, AND EIGHT (8) SETS OF SHOP DRAWINGS TO BE DISTRIBUTED TO:

- DISTRICT 2 DISTRICT ENGINEER (1)
- FABRICATOR (1)
- CONTRACTOR (2)
- RESIDENT ENGINEER (2)
- DISTRICT 2 BUREAU OF MATERIALS (2)

AT BRIDGE EXPANSION JOINTS, IF TEMPORARY EXPANSION JOINT BULKHEADS ARE ATTACHED TO ADJACENT DECK SLABS OR ABUTMENTS FOR SUPPORT, THE CONTRACTOR SHALL CUT THE ATTACHMENTS AS SOON AS THE CONCRETE HAS SET TO PREVENT JOINT DAMAGE DUE TO HORIZONTAL CONTRACTION OR EXPANSION.

THE CURB IS REQUIRED ON THE BRIDGE APPROACH PAVEMENT AS SHOWN ON STANDARD 420401.

REFLECTOR MARKERS TYPE B SHALL BE INSTALLED ON THE TOP OF BRIDGE PARAPET WALLS. THE MARKERS SHALL BE ACCORDING TO STANDARD 635011 AND THE COLOR AND SPACING ACCORDING TO STANDARD 635006, EXCEPT THE MINIMUM IS 2 PER SIDE.

THE EXCAVATED MATERIALS FROM EARTH EXCAVATION SHALL BE USED TO BUILD UP THE SHOULDER THROUGHOUT THE JOB TO CONFORM WITH THE TYPICAL SECTIONS AND SHOULDER WIDENING FOR TERMINALS AS SHOWN ON THE PLANS.

EMBANKMENT QUANTITIES FOR THE CONSTRUCTION OF THE TRAFFIC BARRIER TERMINALS AS SHOWN IN THE PLANS ARE INCLUDED IN QUANTITIES FOR EARTH EXCAVATION.

THE CONTRACTOR SHALL SUPPLY THE RESIDENT ENGINEER WITH THE MANUFACTURER'S INSTALLATION REQUIREMENTS FOR THE TYPE OF STEEL PLATE BEAM GUARDRAIL TERMINAL TYPE 1 SPECIAL (TANGENT).

ONE 16D GALVANIZED NAIL SHALL BE USED TO TOE NAIL THE WOOD BLOCK OUT TO THE WOOD POST ON ALL TRAFFIC BARRIER TERMINAL TYPE I SPECIALS.

DELINEATORS SHALL BE INSTALLED AS SHOWN IN STANDARD 635001, EXCEPT THAT THE POST SHALL BE ROTATED 180 DEGREES AND ONLY METAL-BACKED DELINEATORS SHALL BE PERMITTED.

DELINEATORS SHALL BE PLACED AT THE ENDS OF APPROACH GUARDRAIL TERMINAL SECTIONS, AND AT EACH HEADWALL OR END SECTION OF AR CULVERTS. THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR DELINEATORS.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING UTILITY PROPERTY DURING CONSTRUCTION OPERATIONS AS OUTLINED IN ARTICLE 107.31 OF THE STANDARD SPECIFICATIONS. A MINIMUM OF 48 HOURS ADVANCE NOTICE IS REQUIRED FOR NON-EMERGENCY WORK. THE JULIE NUMBER IS 800-892-0123. THE FOLLOWING LISTED UTILITIES LOCATED WITHIN THE PROJECT LIMITS OR IMMEDIATELY ADJACENT TO THE PROJECT CONSTRUCTION LIMITS ARE MEMBERS OF JULIE:

COMMONWEALTH EDISON COMPANY
SBC/AMERITECH TELEPHONE CO.
NICOR GAS CO.
ROCK RIVER WATER RECLAMATION DISTRICT
INSIGHT COMMUNICATIONS OF ROCKFORD

FOLLOWING ARE THE KNOWN UTILITIES LOCATED WITHIN THE PROJECT LIMITS OR IMMEDIATELY ADJACENT TO THE PROJECT CONSTRUCTION LIMITS WHICH ARE NOT MEMBERS OF JULIE AND SHOULD BE NOTIFIED INDIVIDUALLY BY THE CONTRACTOR:

ROCKFORD WATER DEPARTMENT
425 E. STATE STREET
ROCKFORD, IL 61104
815-961-3766

CADD DATA WILL BE AVAILABLE TO CONTRACTORS AND CONSULTANTS WORKING ON THIS PROJECT. THIS INFORMATION WILL BE PROVIDED UPON REQUEST AS MICROSTATION CADD FILES AND GEOPAK COORDINATE GEOMETRY FILES ONLY. IF DATA IS REQUIRED IN OTHER FORMATS IT WILL BE YOUR RESPONSIBILITY TO MAKE THESE CONVERSIONS. IF ANY DISCREPANCY OR INCONSISTENCY ARISES BETWEEN THE ELECTRONIC DATA AND THE INFORMATION ON THE HARD COPY, THE INFORMATION ON THE HARD COPY SHOULD BE USED. CONTACT THE DISTRICT'S PROJECT ENGINEER TO REQUEST THESE FILES.

COMMITMENTS

TREE REMOVAL WILL ONLY TAKE PLACE WHEN REQUIRED FOR CONSTRUCTION ACTIVITY WITHIN THE PROJECT CONSTRUCTION LIMITS. A QUANTITY FOR TREES HAS ALSO BEEN INCLUDED AND WILL ONLY BE USED IF NEEDED.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
US 20 OVER
PRAIRIE AND SIMPSON ROADS
STATE STANDARDS AND GENERAL NOTES

SCALE: VERT. NONE
HORIZ. NONE
DATE 06/22/07
DRAWN BY AJP
CHECKED BY SPF

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
301	(2HB-2, 2HB-1D)	WINNEBAGO	107	3
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

ITEM CODE	PAY ITEM	UNIT	1000 ROADWAY QUANTITY	X271-2A STRUCTURE QUANTITY	80% FED 20% STATE TOTAL QUANTITY
20200100	EARTH EXCAVATION	CU YD	1180		1180
20100110	TREE REMOVAL (6 TO 15 INETS DIAMETER)	UNIT	12		12
20700400	POROUS GRANULAR EMBANKMENT, SPECIAL	CU YD		527	527
25000210	SEEDING, CLASS 2A	ACRE	0.5		0.5
25100115	MULCH, METHOD 2	ACRE	0.5		0.5
25100630	EROSION CONTROL BLANKET	SQ YD	2420		2420
25301500	TREES	EACH	2		2
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	300		300
28000300	TEMPORARY DITCH CHECKS	EACH	10		10
28000400	PERIMETER EROSION BARRIER	FOOT	2700		2700
28000500	INLET AND PIPE PROTECTION	EACH	2		2
35101800	AGGREGATE BASE COURSE, TYPE B 6"	SQ YD	4626		4626
40600845	POLYMERIZED LEVELING BINDER (MACHINE METHOD), N80	TON	887		887
40600962	HOT MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	320		320
40603310	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50	TON	538		538
40803570	POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "E", N80	TON	406		406
42001165	BRIDGE APPROACH PAVEMENT	SQ YD	1040		1040
42001300	PROTECTIVE COAT	SQ YD	1248		1248
42001420	BRIDGE APPROACH PAVEMENT CONNECTOR (POC)	SQ YD	208		208
44000158	HOT-MIX ASPHALT SURFACE REMOVAL, 2 1/4"	SQ YD	4827		4827
44000700	APPROACH SLAB REMOVAL	SQ YD	427		427
44004250	PAVED SHOULDER REMOVAL	SQ YD	2816		2816
48203020	HOT-MIX ASPHALT SHOULDERS, 5 3/4"	SQ YD	4224		4224
50102400	CONCRETE REMOVAL	CU YD		200.3	200.3
50104850	SLOPE WALL REMOVAL	SQ YD		2509	2509
50104720	REMOVAL OF EXISTING CONCRETE DECK	EACH		4	4
50157300	PROTECTIVE SHIELD	SQ YD		1176	1176
50200100	STRUCTURE EXCAVATION	CU YD		907.3	907.3
50300225	CONCRETE STRUCTURES	CU YD		351.6	351.6
50300255	CONCRETE SUPERSTRUCTURES	CU YD		875.6	875.6
50300260	BRIDGE DECK GROOVING	SQ YD		2648	2648
50300280	CONCRETE ENCASEMENT	CU YD		8.4	8.4
50300300	PROTECTIVE COAT	SQ YD		3380	3380
50501140	STRUCTURAL STEEL REMOVAL	POUND		11489	11489
50500105	FURNISHING AND ERECTING STRUCTURAL STEEL	L SUM		1	1
50500505	STUD SHEAR CONNECTORS	EACH		15060	15060
50500715	JACK AND REMOVE EXISTING BEARINGS	EACH		40	40
50600600	CLEANING AND PAINTING STEEL BRIDGE NO. 1	L SUM		1	1
5060401	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 1	L SUM		1	1
50600700	CLEANING AND PAINTING STEEL BRIDGE NO. 2	L SUM		1	1
5060402	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 2	L SUM		1	1
50600800	CLEANING AND PAINTING STEEL BRIDGE NO. 3	L SUM		1	1
5060403	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 3	L SUM		1	1
50600900	CLEANING AND PAINTING STEEL BRIDGE NO. 4	L SUM		1	1
5060404	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 4	L SUM		1	1
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND		270,880	270,880
50800515	BAR SPLICERS	EACH		376	376

* SPECIALTY ITEMS

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 US 20 OVER
 PRAIRIE AND SIMPSON ROADS

SUMMARY OF QUANTITIES

SCALE: VERT. _____
 HORIZ. _____
 DATE 06/22/07

DRAWN BY AJP
 CHECKED BY SPF

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
301	(2HB-2, 2HB-1D)	WINNEBAGO	107	4
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

URBAN

ITEM CODE	PAY ITEM	UNIT	1000 ROADWAY QUANTITY	X271-2A STRUCTURE QUANTITY	80% FED 20% STATE TOTAL QUANTITY
51100100	SLOPE WALL 4 INCH	SQ YD		2837	2837
51201600	FURNISHING STEEL PILES HP12X53	FOOT		1215	1215
51202305	DRIVING PILES	FOOT		1090	1090
51203600	TEST PILE STEEL HP12X53	EACH		3	3
51500100	NAME PLATES	EACH		4	4
52000110	PREFORMED JOINT STRIP SEAL	FOOT		386	386
52100010	ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH		24	24
52100020	ELASTOMERIC BEARING ASSEMBLY, TYPE II	EACH		24	24
52100520	ANCHOR BOLTS, 1"	EACH		112	112
58700300	CONCRETE SEALER	SQ FT		6916	6916
59100100	GEOCOMPOSITE WALL DRAIN	SQ YD		216.7	216.7
60109580	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT		506	506
* 63000000	STEEL PLATE BEAM GUARD RAIL, TYPE A	FOOT	3312.5		3312.5
* 63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	16		16
* 63100167	TRAFFIC BARRIER TERMINAL TYPE 1, SPECIAL (TANGENT)	EACH	6		6
63200310	GUARDRAIL REMOVAL	FOOT	3695		3695
* 63600105	DELINEATORS	EACH	6		6
64200105	SHOULDER RUMBLE STRIP	FOOT	3620		3620
67000400	ENGINEERS FIELD OFFICE, TYPE A	CAL MO	18		18
67100100	MOBILIZATION	L SUM	1		1
* 70100410	TRAFFIC CONTROL AND PROTECTION, STANDARD 701416	EACH	2		2
* 70300520	PAVEMENT MARKING TAPE, TYPE III 4"	FOOT	33000		33000
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	5500		5500
70400100	TEMPORARY CONCRETE BARRIER	FOOT	5580		5580
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	4700		4700
* 78003130	PREFORMED PLASTIC PAVEMENT MARKING, TYPE B - LINE 6"	FOOT	700		700
* 78008310	POLYUREA PAVEMENT MARKING TYPE II - LINE 4"	FOOT	5400		5400
* 78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	44		44
* 78100105	RAISED REFLECTIVE PAVEMENT MARKER (BRIDGE)	EACH	24		24
* 78200410	GUARDRAIL MARKERS, TYPE A	EACH	48		48
* 78200520	BARRIER WALL MARKERS, TYPE B	EACH	16		16
* 78201000	TERMINAL MARKER-DIRECT APPLIED	EACH	6		6
78300100	PAVEMENT MARKING REMOVAL	SQ FT	2250		2250
X0323830	DRAINAGE SCUPPER, DS-11	EACH		8	8
* X0113015	TRAFFIC CONTROL FOR ROAD CLOSURES	L SUM	1		1
X8410102	TEMPORARY LIGHTING SYSTEM	L SUM	1		1
Z0013798	CONSTRUCTION LAYOUT	L SUM	1		1
Z0030250	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3	EACH	4		4
Z0030350	RELOCATE IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2		2

* SPECIALTY ITEMS

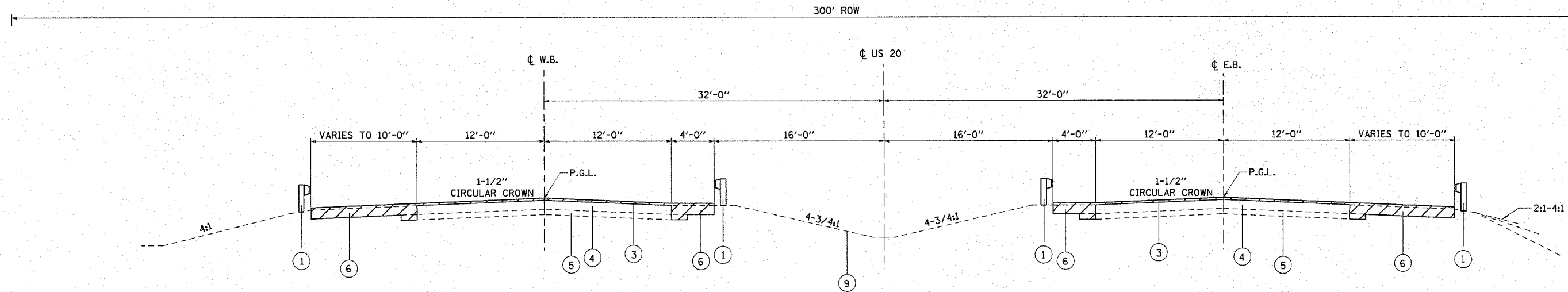
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ILLINOIS DEPARTMENT OF TRANSPORTATION
US 20 OVER
PRAIRIE AND SIMPSON ROADS

SUMMARY OF QUANTITIES

SCALE: VERT. DRAWN BY AJP
HORIZ. CHECKED BY SPF
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
301	2HB-2, 2HB-10D	WINNEBAGO	107	5
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

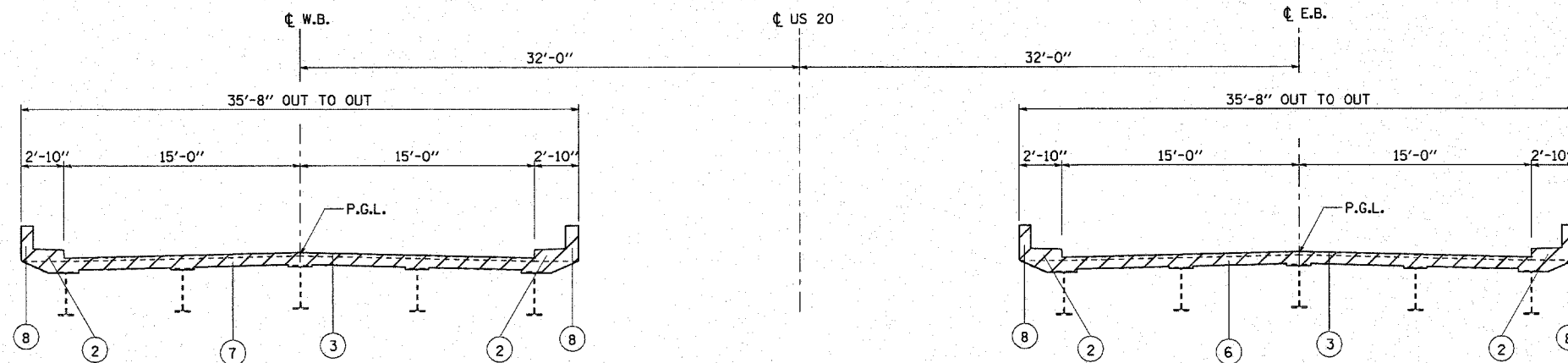


EXISTING US 20 TYPICAL SECTION

STA. 839+00 TO STA. 841+05.08 (W.B.)
 STA. 842+59.18 TO STA. 848+68.45 (W.B.)
 STA. 850+42.11 TO STA. 852+50 (W.B.)
 STA. 839+00 TO STA. 841+19.74 (E.B.)
 STA. 842+73.85 TO STA. 848+10.96 (E.B.)
 STA. 849+84.62 TO STA. 852+50 (E.B.)

LEGEND

- ① EXISTING GUARDRAIL
- ② EXISTING SIDEWALK
- ③ EXISTING BITUMINOUS OVERLAY
BITUMINOUS SURFACE REMOVAL, 2 1/4"
- ④ EXISTING P.C.C. PAVEMENT, 10"
- ⑤ EXISTING SUB-BASE GRANULAR
MATERIAL, TYPE A, 6"
- ⑥ EXISTING STABILIZED SHOULDER
PAVED SHOULDER REMOVAL
- ⑦ EXISTING BRIDGE DECK
- ⑧ EXISTING BRIDGE RAILING
- ⑨ EXISTING MEDIAN
- ⑩ PROPOSED BARRIER
- ⑪ PROPOSED BRIDGE DECK
- ⑫ PROPOSED POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "E" N90 (1 1/2")
112 lbs/sq. yd./in.
- ⑬ PROPOSED POLYMERIZED LEVELING BINDER (MACHINE METHOD), N90 (VARIES 3/4" TO 6")
112 lbs/sq. yd./in.
- ⑭ PROPOSED HOT-MIX ASPHALT SHOULDERS, 5 3/4"
112 lbs/sq. yd./in.
- ⑮ PROPOSED AGGREGATE BASE COURSE, TYPE B, 6"
- ⑯ PROPOSED STEEL PLATE BEAM GUARDRAIL
- ⑰ PROPOSED HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50 (2 1/4")



EXISTING US 20 TYPICAL SECTION

STA. 841+05.08 TO STA. 842+59.18 (W.B.)
 STA. 848+68.45 TO STA. 850+42.11 (W.B.)
 STA. 841+19.74 TO STA. 842+73.85 (E.B.)
 STA. 848+10.96 TO STA. 849+84.62 (E.B.)

REVISIONS	
NAME	DATE

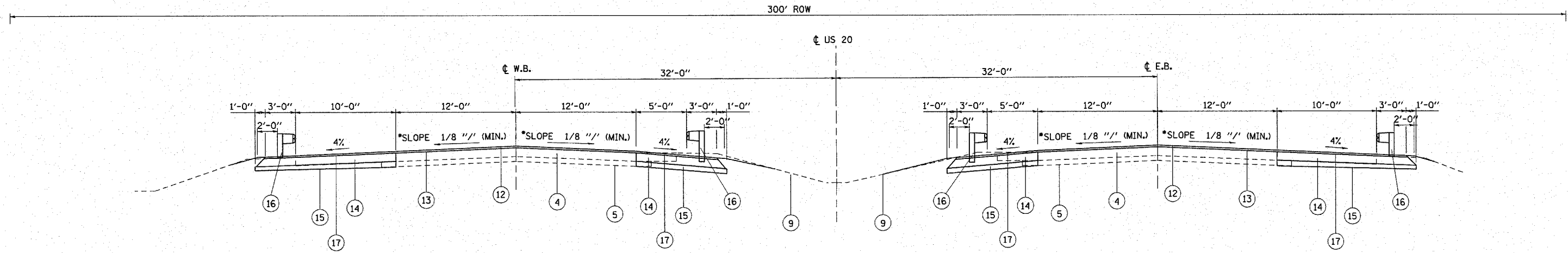
ILLINOIS DEPARTMENT OF TRANSPORTATION
 US 20 OVER
 PRAIRIE AND SIMPSON ROADS

TYPICAL SECTIONS

SCALE: VERT.
 HORIZ.
 DATE: 06/22/07

DRAWN BY AJP
 CHECKED BY SPF

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
301	(2HB-2, 2HB-1D)	WINNEBAGO	107	6
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

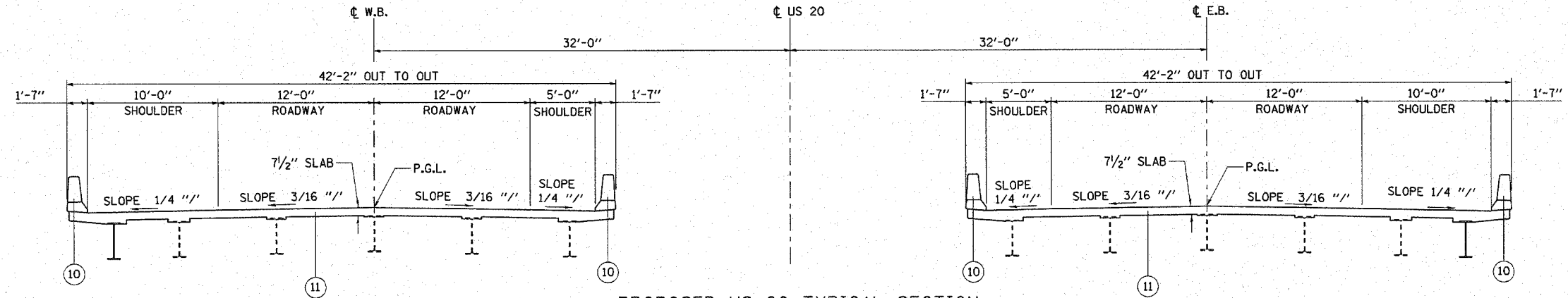


* MAINTAIN THE EXISTING CROSS SLOPE WITH A MINIMUM OF 1/8"/FT

PROPOSED US 20 TYPICAL SECTION

STA. 839+00 TO STA. 841+05.08 (W.B.)
 STA. 842+59.18 TO STA. 848+68.45 (W.B.)
 STA. 850+42.11 TO STA. 852+50 (W.B.)
 STA. 839+00 TO STA. 841+19.74 (E.B.)
 STA. 842+73.85 TO STA. 848+10.96 (E.B.)
 STA. 849+84.62 TO STA. 852+50 (E.B.)

* MAINTAIN THE EXISTING CROSS SLOPE WITH A MINIMUM OF 1/8"/FT

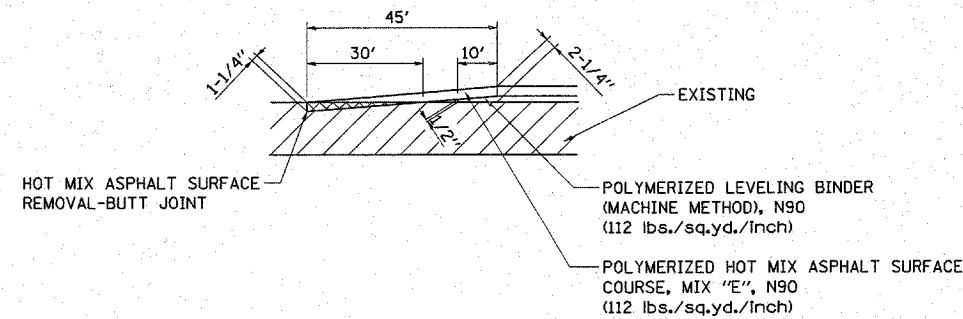


PROPOSED US 20 TYPICAL SECTION

STA. 841+05.08 TO STA. 842+59.18 (W.B.)
 STA. 848+68.45 TO STA. 850+42.11 (W.B.)
 STA. 841+19.74 TO STA. 842+73.85 (E.B.)
 STA. 848+10.96 TO STA. 849+84.62 (E.B.)

LEGEND

- 1 EXISTING GUARDRAIL
- 2 EXISTING SIDEWALK
- 3 EXISTING BITUMINOUS OVERLAY
BITUMINOUS SURFACE REMOVAL, 2 1/4"
- 4 EXISTING P.C.C. PAVEMENT, 10"
- 5 EXISTING SUB-BASE GRANULAR MATERIAL, TYPE A, 6"
- 6 EXISTING STABILIZED SHOULDER
PAVED SHOULDER REMOVAL
- 7 EXISTING BRIDGE DECK
- 8 EXISTING BRIDGE RAILING
- 9 EXISTING MEDIAN
- 10 PROPOSED BARRIER
- 11 PROPOSED BRIDGE DECK
- 12 PROPOSED POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "E" N90 (1 1/2")
112 lbs/sq. yd./In.
- 13 PROPOSED POLYMERIZED LEVELING BINDER (MACHINE METHOD), N90 (VARIES 3/4" TO 6")
112 lbs/sq. yd./In.
- 14 PROPOSED HOT-MIX ASPHALT SHOULDERS, 5 3/4"
112 lbs/sq. yd./In.
- 15 PROPOSED AGGREGATE BASE COURSE, TYPE B, 6"
- 16 PROPOSED STEEL PLATE BEAM GUARDRAIL
- 17 PROPOSED HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50 (2 1/4")



US20 TYPICAL TAPER BUTT JOINT

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 US 20 OVER
 PRAIRIE AND SIMPSON ROADS

TYPICAL SECTIONS

SCALE: VERT.
 HORIZ.
 DATE 06/22/07

DRAWN BY AJP
 CHECKED BY SPF

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
301	(2HB-2, 2HB-10)	WINNEBAGO	107	7
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

ITEM	DESCRIPTION	UNIT	STA. 839+00 TO STA. 840+80	STA. 842+95 TO STA. 848+10	STA. 850+40 TO STA. 852+50	TOTAL
40600845	POLYMERIZED LEVELING BINDER (MACHINE METHOD), N90	TON	78.9 E.B. / 131.9 W.B.	116.9 E.B. / 296.9 W.B.	156.4 E.B. / 106.4 W.B.	887
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ. YD.	80 E.B. / 80 W.B.		80 E.B. / 80 W.B.	320
40603310	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50	TON	53.5 E.B. / 53.5 W.B.	153 E.B. / 153 W.B.	62.5 E.B. / 62.5 W.B.	538
40603570	POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "E", N90	TON	40.4 E.B. / 40.4 W.B.	115.5 E.B. / 115.5 W.B.	47.1 E.B. / 47.1 W.B.	406
44000158	HOT-MIX ASPHALT SURFACE REMOVAL, 2 1/4"	SQ. YD.	480.3 E.B. / 480.3 W.B.	1373.3 E.B. / 1373.3 W.B.	559.9 E.B. / 559.9 W.B.	4827
44004250	PAVED SHOULDER REMOVAL	SQ. YD.	280.2 E.B. / 280.2 W.B.	801.2 E.B. / 801.2 W.B.	326.6 E.B. / 326.6 W.B.	2816
48203020	HOT-MIX ASPHALT SHOULDERS, 5 3/4"	SQ. YD.	420.3 E.B. / 420.3 W.B.	1201.8 E.B. / 1201.8 W.B.	490.0 E.B. / 490.0 W.B.	4224

ITEM	DESCRIPTION	UNIT	SIMPSON		PRAIRIE		TOTAL
			EB	WB	EB	WB	
42001165	BRIDGE APPROACH PAVEMENT	SQ. YD.	260	260	260	260	1040
42001300	PROTECTIVE COAT	SQ. YD.	312	312	312	312	1248
42001420	BRIDGE APPROACH PAVEMENT CONNECTOR (PCC)	SQ. YD.	52	52	52	52	208
44000700	APPROACH SLAB REMOVAL	SQ. YD.	106.75	106.75	106.75	106.75	427

LOCATION	EB	WB
839+00 to 840+80	118	118
842+95 to 848+10	334	334
850+40 to 852+50	138	138
TOTAL	590	590
TOTAL EXCAVATION 1180 CU YD		

LOCATION	EB	WB
839+00 to 841+15	0.05	0.05
842+65 to 848+40	0.15	0.15
850+10 to 852+50	0.05	0.05
TOTAL	0.25	0.25
TOTAL SEEDING .50 ACRE		

LOCATION	EB	WB
839+00 to 841+15	0.05	0.05
842+65 to 848+40	0.15	0.15
850+10 to 852+50	0.05	0.05
TOTAL	0.25	0.25
TOTAL MULCH .50 ACRE		

LOCATION	EB	WB
839+00 to 841+15	242	242
842+65 to 848+40	726	726
850+10 to 852+50	242	242
TOTAL	1210	1210
TOTAL BLANKET 2420 SQ YD		

LOCATION	EB	WB
839+00 to 841+15	30	30
842+65 to 848+40	90	90
850+10 to 852+50	30	30
TOTAL	150	150
TOTAL SEEDING 300 POUNDS		

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 US 20 OVER
 PRAIRIE AND SIMPSON ROADS

SCHEDULE OF QUANTITIES

SCALE: VERT. DRAWN BY AJP
 HORIZ. CHECKED BY SPF
 DATE: 06/22/07

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
301	(2HB-2, 2HB-1D)	WINNEBAGO	107	8
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

28000300 TEMPORARY DITCH CHECKS	
LOCATION	
839+90	1
840+90	1
842+90	1
843+90	1
844+90	1
845+90	1
846+90	1
847+90	1
850+90	1
851+90	1
TOTAL 10 EACH	

28000400 PERIMETER EROSION BARRIER		
LOCATION	EB	WB
839+00 to 852+50	1350	1350
TOTAL	1350	1350
TOTAL BARRIER 2700 FEET		

28000500 INLET AND PIPE PROTECTION	
LOCATION	
840+62	1
847+92	1
TOTAL 2 EACH	

35101800 AGGREGATE BASE COURSE, TYPE B, 6"		
LOCATION	EB	WB
839+00 to 840+80	460.3	460.3
842+95 to 848+10	1316.1	1316.1
850+40 to 852+50	536.6	536.6
TOTAL	2313	2313
TOTAL BASE COURSE 4626 SQ YD		

63000000 STEEL PLATE BEAM GUARDRAIL, TYPE A	
LOCATION	
WESTBOUND (N. SIDE)	
839+00 to 840+46	150
843+08 to 848+34	525
851+17 to 853+70	262.5
WESTBOUND (S. SIDE)	
839+00 to 840+55	162.5
843+17 to 847+99	487.5
850+82 to 852+00	125
EASTBOUND (N. SIDE)	
839+00 to 840+63	162.5
843+25 to 847+72	450
850+55 to 852+00	150
EASTBOUND (S. SIDE)	
839+00 to 840+72	175
844+33 to 847+37	312.5
850+20 to 853+70	350
TOTAL GUARDRAIL 3312.5 FEET	

63100085 TRAFFIC BARRIER TERMINAL, TYPE 6	
LOCATION	
EB SIMPSON 4	
WB SIMPSON 4	
EB PRAIRIE 4	
WB PRAIRIE 4	
TOTAL 16 EACH	

63100167 TRAFFIC BARRIER TERMINAL TYPE 1, SPECIAL (TANGENT)	
LOCATION	
838+50	2
852+50	2
854+20	2
TOTAL	6 EACH

63200310 GUARDRAIL REMOVAL	
LOCATION	
WESTBOUND (N. SIDE)	
839+00 to 841+20	220
842+30 to 849+00	670
850+30 to 854+20	390
WESTBOUND (S. SIDE)	
842+40 to 845+20	280
850+00 to 852+80	280
EASTBOUND (N. SIDE)	
838+50 to 841+40	290
845+65 to 848+50	285
EASTBOUND (S. SIDE)	
839+00 to 841+50	250
842+50 to 848+10	560
849+50 to 854+20	470
TOTAL REMOVAL 3695 FEET	

63500105 DELINIATORS	
LOCATION	
838+50	2
852+50	2
854+20	2
TOTAL 6 EACH	

64200105 SHOULDER RUMBLE STRIP		
LOCATION	EB	WB
839+00 to 840+80	360	360
842+95 to 848+10	1030	1030
850+40 to 852+50	420	420
TOTAL	1810	1810
TOTAL RUMBLE STRIP 3620 FEET		

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
US 20 OVER
PRAIRIE AND SIMPSON ROADS

SCHEDULE OF QUANTITIES

SCALE: VERT.
HORIZ.
DATE 06/22/07

DRAWN BY AJP
CHECKED BY SPF

PLOT DATE = 6/28/2007
 FILE NAME = P:\2273\00 - IDOT US 20 Bridges\VP206\06-Roadway\ZB05\05SCH.dwg
 PLOT SCALE = #SCALE#
 USER NAME = #USER#

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
301	(2HB-2, 2HB-1)D	WINNEBAGO	107	9
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

70400100 TEMPORARY CONCRETE BARRIER	
LOCATION	
(ALONG CENTERLINE)	
817+25 to 864+25	4700
(BETWEEN STRUCTURES)	
842+70 to 845+70	300
850+00 to 855+80	580
TOTAL BARRIER 5580 FEET	

70400200 RELOCATE TEMPORARY CONCRETE BARRIER	
LOCATION	
820+00 to 867+00	4700
TOTAL BARRIER 4700 FEET	

78100100 RAISED REFLECTIVE PAVEMENT MARKERS (80 FEET O.C., DOUBLE MARKER)		
LOCATION	EB	WB
839+00 to 840+80	4	4
842+95 to 848+10	14	14
850+40 to 852+50	4	4
TOTAL	22	22
TOTAL MARKERS 44 EACH		

78100105 RAISED REFLECTIVE PAVEMENT MARKER (BRIDGE)		
LOCATION	EB	WB
840+80 to 842+95	6	6
848+10 to 850+40	6	6
TOTAL	12	12
TOTAL MARKERS 24 EACH		

78200410 GUARDRAIL MARKERS, TYPE A		
LOCATION	EB	WB
838+50 to 841+00	8	8
842+75 to 848+50	8	8
850+10 to 852+50	8	8
TOTAL	24	24
TOTAL MARKERS 48 EACH		

78200520 BARRIER WALL MARKERS, TYPE B		
LOCATION	EB	WB
SIMPSON	4	4
PRAIRIE	4	4
TOTAL MARKERS 16 EACH		

78201000 TERMINAL MARKER DIRECT APPLIED	
LOCATION	
838+50	2
852+50	2
854+20	2
TOTAL MARKERS 6 EACH	

Z0030250 IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE) TEST LEVEL 3	
LOCATION	
817+20	1
845+90	1
855+80	1
864+30	1
TOTAL ATTENUATORS 4 EACH	

Z0030350 RELOCATE IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE) TEST LEVEL 3	
LOCATION	
819+90	1
866+80	1
TOTAL ATTENUATORS 2 EACH	

ITEM	DESCRIPTION	UNIT	STAGE I	STAGE II	PERMANENT	TOTAL
70300520	PAVEMENT MARKING TAPE, TYPE III, 4"	FOOT	16500	16500		33000
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT		5500		5500
78003130	PREFORMED PLASTIC PAVEMENT MARKING, TYPE B - LINE 6"	FOOT			700	700
78008310	POLYUREA PAVEMENT MARKING, TYPE II, 4"	FOOT			5400	5400
78300100	PAVEMENT MARKING REMOVAL	SQ FT	2250			2250

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 US 20 OVER
 PRAIRIE AND SIMPSON ROADS

SCHEDULE OF QUANTITIES

SCALE: VERT. _____
 HORIZ. _____
 DATE 06/22/07

DRAWN BY AJP
 CHECKED BY SPF

PLOT DATE = 6/20/2007
 FILE NAME = P:\2273-00 - IDOT US 20 Bridges\VP2269-06-Roadway\2269-06SCH.dwg
 PLOT SCALE = MISFILE
 USER NAME = WISEN9

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
301	(2HB-2, 2HB-1D)	WINNEBAGO	107	10
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

Chain Bypass20 contains:
12 CUR 200 CUR 210 CUR 220 CUR 230 20

Beginning chain Bypass20 description

Point 12 X 2,560,295.9940 Y 2,045,155.7590
Sta 561+57.6646

Course from 12 to PC 200 131° 40' 27.8273" Dist 4,791.0678

Curve Data

Curve 200
P.I. Station 624+39.9871 X 2,564,988.4829
Y 2,040,978.6639
Delta = 42° 35' 57.7134" (LT)
Degree = 1° 29' 52.6381"
Tangent = 1,491.2547
Length = 2,843.8347
Radius = 3,824.9332
External = 280.4236
Long Chord = 2,778.7839
Mid. Ord. = 261.2688
P.C. Station 609+48.7324 X 2,563,874.6120
Y 2,041,970.1941
P.T. Station 637+92.5671 X 2,566,479.5433
Y 2,041,002.7373
C.C. X 2,566,417.7973
Y 2,044,827.1720
Back = 131° 40' 27.8273"
Ahead = 89° 04' 30.1138"
Chord Bear = 110° 22' 28.9705"

Course from PT 200 to PC 210 89° 04' 30.1138" Dist 591.6257

Curve Data

Curve 210
P.I. Station 681+39.6603 X 2,570,826.0701
Y 2,041,072.9126
Delta = 66° 34' 11.3078" (RT)
Degree = 1° 00' 05.7527"
Tangent = 3,755.4875
Length = 6,646.3601
Radius = 5,720.4368
External = 1,122.5840
Long Chord = 6,278.7810
Mid. Ord. = 938.4263
P.C. Station 643+84.1928 X 2,567,071.0920
Y 2,041,012.2879
P.T. Station 710+30.5529 X 2,572,374.7934
Y 2,037,651.6566
C.C. X 2,567,163.4372
Y 2,035,292.5965
Back = 89° 04' 30.1138"
Ahead = 155° 38' 41.4216"
Chord Bear = 122° 21' 35.7677"

Course from PT 210 to PC 220 155° 38' 41.4216" Dist 9,646.1918

Curve Data

Curve 220
P.I. Station 816+26.9622 X 2,576,744.6636
Y 2,027,998.2570
Delta = 18° 48' 22.5631" (LT)
Degree = 0° 59' 54.8093"
Tangent = 950.2175
Length = 1,883.3423
Radius = 5,737.8512
External = 78.1483
Long Chord = 1,874.8994
Mid. Ord. = 77.0982
P.C. Station 806+76.7447 X 2,576,352.8019
Y 2,028,863.9115
P.T. Station 825+60.0870 X 2,577,394.6659
Y 2,027,305.1405
C.C. X 2,581,580.0227
Y 2,031,230.1532
Back = 155° 38' 41.4216"
Ahead = 136° 50' 18.8585"
Chord Bear = 146° 14' 30.1400"

Course from PT 220 to PC 230 136° 50' 18.8585" Dist 2,552.0889

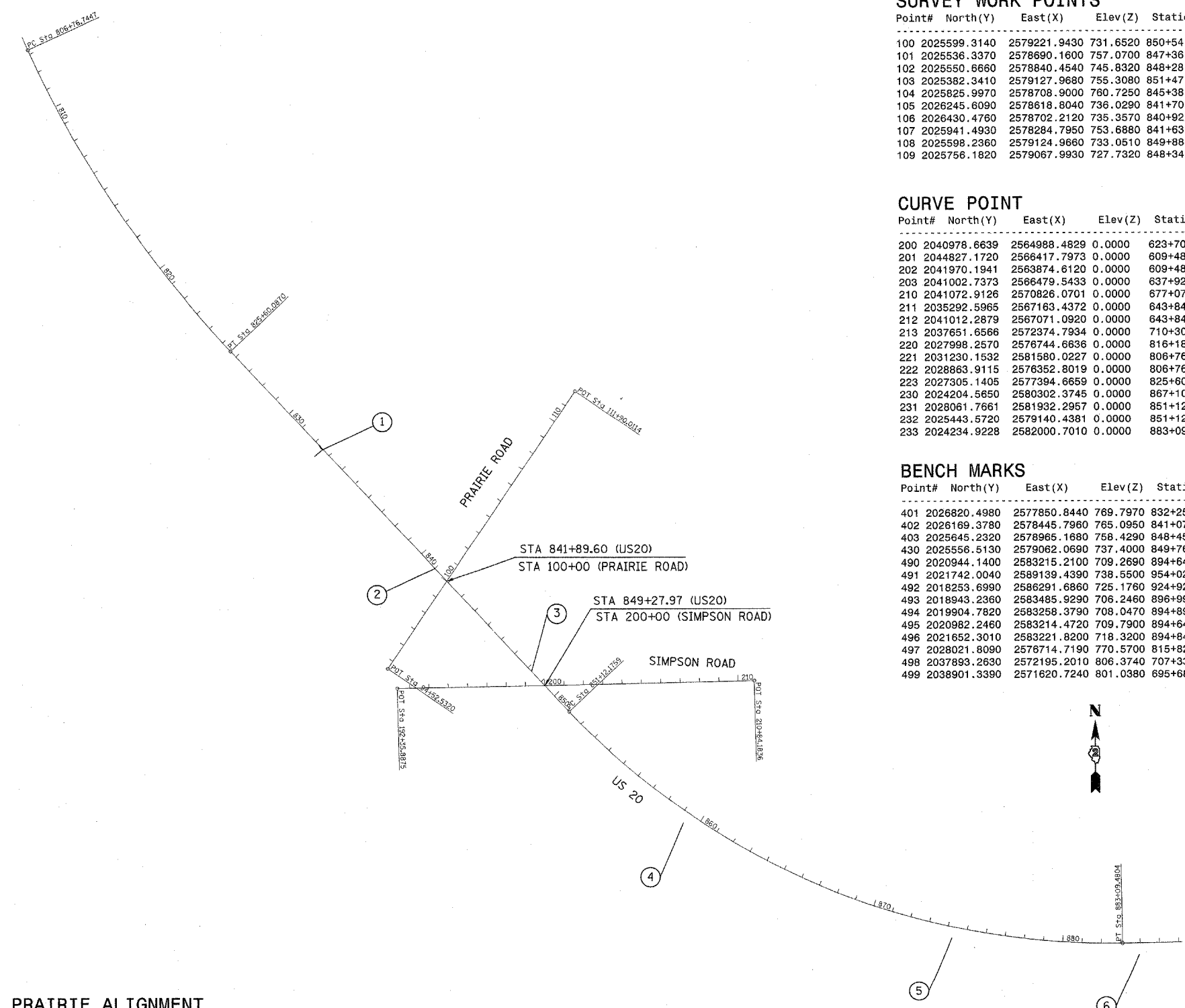
Curve Data

Curve 230
P.I. Station 868+10.7737 X 2,580,302.3745
Y 2,024,204.5650
Delta = 47° 51' 45.4783" (LT)
Degree = 1° 29' 49.0857"
Tangent = 1,698.5978
Length = 3,197.3045
Radius = 3,827.4546
External = 359.9841
Long Chord = 3,105.1468
Mid. Ord. = 329.0372
P.C. Station 851+12.1759 X 2,579,140.4381
Y 2,025,443.5720
P.T. Station 883+09.4804 X 2,582,000.7010
Y 2,024,234.9228
C.C. X 2,581,932.2957
Y 2,028,061.7661
Back = 136° 50' 18.8585"
Ahead = 88° 58' 33.3802"
Chord Bear = 112° 54' 26.1194"

Course from PT 230 to 20 88° 58' 33.3802" Dist 16,325.6225

Point 20 X 2,598,323.7160 Y 2,024,526.6990
Sta 1046+35.1029

Ending chain Bypass20 description



PRAIRIE ALIGNMENT

Point#	North(Y)	East(X)	Elev(Z)	Station	Offset	Description
24	2025663.748	2578201.589	761.936	94+52.5320	0.0000	POT, NAIL
22	2027100.713	2579178.301	763.568	111+90.0114	0.0000	POT, NAIL

SIMPSON ALIGNMENT

Point#	North(Y)	East(X)	Elev(Z)	Station	Offset	Description
25	2025561.534	2578250.492	764.282	192+35.8875	0.0000	POT, NAIL
26	2025601.218	2580098.362	734.855	210+84.1836	0.0000	POT, NAIL

SURVEY WORK POINTS

Point#	North(Y)	East(X)	Elev(Z)	Station	Offset	Description
100	2025599.3140	2579221.9430	731.6520	850+54.3270	-165.9883	TOPO SURVEY POINT, NAIL
101	2025536.3370	2578690.1600	757.0700	847+36.4948	264.9896	TOPO SURVEY POINT, NAIL
102	2025560.6660	2578840.4540	745.8320	848+28.8524	145.5589	TOPO SURVEY POINT, NAIL
103	2025382.3410	2579127.9680	755.3080	851+47.8333	51.1498	TOPO SURVEY POINT, NAIL
104	2025825.9970	2578708.9000	760.7250	845+38.0276	53.1764	TOPO SURVEY POINT, NAIL
105	2026245.6090	2578618.8040	736.0290	841+70.3195	-168.1432	TOPO SURVEY POINT, NAIL
106	2026430.4760	2578702.2120	735.3570	840+92.5279	-385.4428	TOPO SURVEY POINT, NAIL
107	2025941.4930	2578284.7950	753.6880	841+63.6697	283.5252	TOPO SURVEY POINT, NAIL
108	2025598.2360	2579124.9660	733.0510	849+88.7756	-94.5130	TOPO SURVEY POINT, NAIL
109	2025756.1820	2579067.9930	727.7320	848+34.5925	-160.9992	TOPO SURVEY POINT, NAIL

CURVE POINT

Point#	North(Y)	East(X)	Elev(Z)	Station	Offset	Description
200	2040978.6639	2564988.4829	0.0000	623+70.6497	280.4236	PI
201	2044827.1720	2566417.7973	0.0000	609+48.7324	-3824.9332	RADIUS PT
202	2041970.1941	2563874.6120	0.0000	609+48.7324	0.0000	PC
203	2041002.7373	2566479.5433	0.0000	637+92.5671	-0.0000	PT
210	2041072.9126	2570826.0701	0.0000	677+07.3728	-1122.5840	PI
211	2035292.5965	2567163.4372	0.0000	643+84.1928	5720.4368	RADIUS PT
212	2041012.2879	2567071.0920	0.0000	643+84.1928	0.0000	PC
213	2037651.6566	2572374.7934	0.0000	710+30.5529	0.0000	PT
220	2027998.2570	2576744.6636	0.0000	816+18.4158	78.1483	PI
221	2031230.1532	2581580.0227	0.0000	806+76.7447	-5737.8512	RADIUS PT
222	2028863.9115	2576352.8019	0.0000	806+76.7447	0.0000	PC
223	2027305.1405	2577394.6659	0.0000	825+60.0870	0.0000	PT
230	2024204.5650	2580302.3745	0.0000	867+10.8281	359.9841	PI
231	2028061.7661	2581932.2957	0.0000	851+12.1759	-3827.4546	RADIUS PT
232	2025443.5720	2579140.4381	0.0000	851+12.1759	0.0000	PC
233	2024234.9228	2582000.7010	0.0000	883+09.4804	-0.0000	PT

BENCH MARKS

Point#	North(Y)	East(X)	Elev(Z)	Station	Offset	Description
401	2026820.4980	2577850.8440	769.7970	832+25.6509	-1.2270	DROP BOX, CHISELED SQUARE
402	2026169.3780	2578445.7960	765.0950	841+07.5775	10.2002	TOP OF WINGWALL, CHISELED SQUARE
403	2025645.2320	2578965.1680	768.4290	848+45.1846	-10.0996	TOP OF WINGWALL, CHISELED SQUARE
430	2025556.5130	2579062.0690	737.4000	849+76.1845	-20.0932	PIER, CHISELED SQUARE
490	2020944.1400	2583215.2100	709.2690	894+64.9816	3311.9633	TOP OF WINGWALL, CHISELED SQUARE
491	2021742.0040	2589139.4390	738.5500	954+02.5240	2620.1062	WALL, CHISELED SQUARE
492	2018253.6990	2586291.6860	725.1760	924+92.8819	6058.9582	SIGN FOUNDATION, CHISELED SQUARE
493	2018943.2360	2583485.9290	706.2460	896+99.8966	5317.3860	WALL, DISK
494	2019904.7820	2583258.3790	708.0470	894+89.5680	4351.9268	WALL, DISK
495	2020982.2460	2583214.4720	709.7900	894+64.9247	3273.8501	TOP OF WINGWALL, CHISELED SQUARE
496	2021652.3010	2583221.8200	718.3200	894+84.2470	2604.0335	FIRE HYDRANT, CHISELED X
497	2028021.8090	2578714.7190	770.5700	815+82.7545	90.0688	SIGN FOUNDATION, CHISELED SQUARE
498	2037893.2630	2572195.2010	806.3740	707+33.3262	56.3294	WALL, CHISELED SQUARE
499	2038901.3390	2571620.7240	801.0380	695+68.9458	-14.5809	WALL, CHISELED SQUARE

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
US 20 OVER
PRAIRIE AND SIMPSON ROADS
ALIGNMENT, TIES, AND BENCHMARKS

SCALE: VERT.
HORIZ.
DATE 06/22/07

DRAWN BY AJP
CHECKED BY SPF

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 PLOT SCALE = #SCALE#
 USER NAME = #USER#

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
301	(2)HB-2, 2)HB-1)D	WINNEBAGO	107	11
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

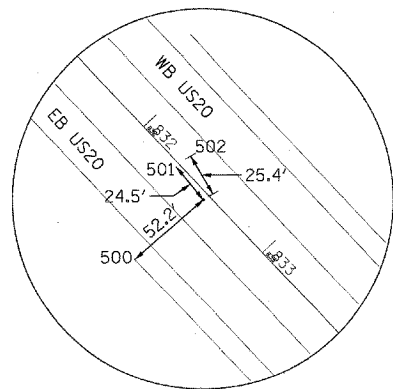
EXISTING HORIZONTAL AND VERTICAL CONTROL

HORIZONTAL CONTROL POINT

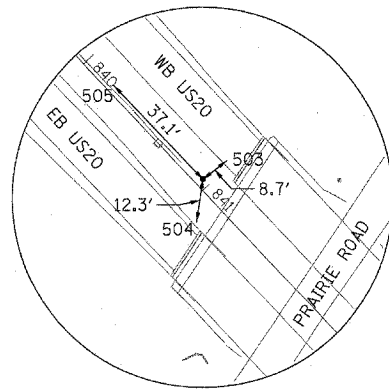
Point#	North(Y)	East(X)	Elev(Z)	Station	Offset	Description
1	2026796.1010	2577866.6320	770.0870	832+54.2466	3.9457	TOPO SURVEY POINT, PIN
2	2026181.9620	2578448.1190	764.6190	840+99.9874	-0.1024	TOPO SURVEY POINT, PIN
3	2025653.2160	2578946.8690	758.0010	848+26.8433	-2.2133	TOPO SURVEY POINT, PIN
4	2024863.6570	2579727.9870	738.1380	859+31.2896	56.7285	TOPO SURVEY POINT, PIN
5	2024264.2120	2581116.4260	731.8370	874+31.0901	56.7519	TOPO SURVEY POINT, PIN
6	2024177.8740	2582086.6570	741.7640	883+94.4031	58.5759	TOPO SURVEY POINT, PIN
21	2035947.8670	2573078.8440	800.5590	728+73.0612	61.2337	TOPO SURVEY POINT, PIN
23	2025982.1260	2578397.0200	748.8460	842+10.7990	173.8698	TOPO SURVEY POINT, NAIL
27	2026100.2640	2578526.8230	741.0960	842+13.4183	-1.6254	TOPO SURVEY POINT, CHISELED X
28	2026171.6370	2578526.1760	739.3400	841+60.9141	-49.9766	TOPO SURVEY POINT, CHISELED X
29	2026089.0300	2578467.6690	743.0180	841+81.1480	49.2080	TOPO SURVEY POINT, CHISELED X
30	2025562.0180	2579030.4720	735.8630	849+50.5549	-0.8112	TOPO SURVEY POINT, PIN
31	2025595.4340	2579069.1230	734.7070	849+52.6198	-51.8628	TOPO SURVEY POINT, PIN
32	2025592.1480	2578904.3140	741.3090	848+42.2780	70.6015	TOPO SURVEY POINT, PIN
8912	2020156.1370	2583197.5360	707.8600	894+33.2270	4099.5245	TOPO SURVEY POINT, CHISELED X
65723043	2032951.3280	2574598.3060	791.7010	762+29.5416	-87.2588	DISTRICT NETWORK MONUMENT, PERM. SURVEY MARKER
65723044	2037014.3890	2572667.0590	805.8400	717+31.6358	-3.4521	DISTRICT NETWORK MONUMENT, PERM. SURVEY MARKER
68697362	2024378.8760	2582292.5610	742.9530	886+03.8665	-138.7140	GPS CONTROL POINT, PERM. SURVEY MARKER
78720596	2021840.3650	2590379.5300	737.8200	966+44.1749	2543.9242	N.G.S. MONUMENT, DISK

REFERENCE TIES

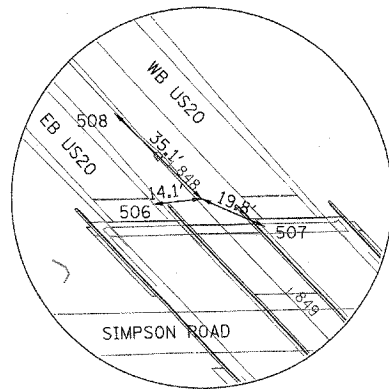
Point#	North(Y)	East(X)	Elev(Z)	Station	Offset	Description
500	2026762.0360	2577827.0260	771.8720	832+52.0019	56.1378	STEEL PLATE BEAM GUARDRAIL, END
501	2026815.0740	2577851.1330	769.6900	832+29.8050	2.2725	DROP BOX, CORNER
502	2026818.0500	2577853.8680	769.7490	832+29.5051	-1.7582	DROP BOX, CORNER
503	2026187.2570	2578455.0140	763.6940	841+00.8416	-8.7539	TOP OF WINGWALL, CORNER
504	2026169.7790	2578446.2570	762.4460	841+07.6003	9.5897	TOP OF WINGWALL, CORNER
505	2026208.9010	2578422.6050	761.7390	840+62.8843	0.0805	DROP BOX, CENTER
506	2025651.6440	2578932.9020	757.5530	848+18.4357	9.0500	TOP OF WINGWALL, CORNER
507	2025645.3680	2578965.0870	756.8820	848+45.0300	-10.1335	TOP OF WINGWALL, CORNER
508	2025677.7850	2578921.8520	755.4660	847+91.8089	-0.7717	DROP BOX, CENTER
509	2024899.6410	2579774.6560	734.4940	859+49.2911	0.6577	PIPE CULVERT, CMP
510	2024858.0370	2579838.7330	732.4240	860+25.6814	-0.3297	PIPE CULVERT, CMP
511	2024321.0880	2580881.8990	730.5210	871+93.2907	57.9033	STEEL PLATE BEAM GUARDRAIL, END
512	2024373.7470	2581140.9170	731.7580	874+32.0409	-55.4836	STEEL PLATE BEAM GUARDRAIL, END
513	2024215.6300	2581232.8900	729.8540	875+52.5861	81.7565	SIGN POLE
514	2024154.6260	2581958.5160	738.4750	882+66.7586	79.7735	SIGN FOUNDATION, CORNER
515	2024224.4120	2581958.1200	739.2490	882+66.8287	9.9864	SIGN FOUNDATION, CORNER



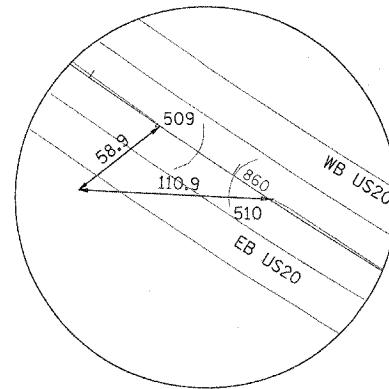
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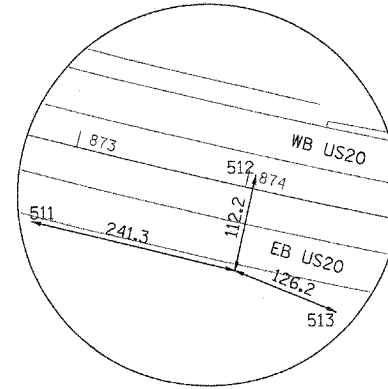
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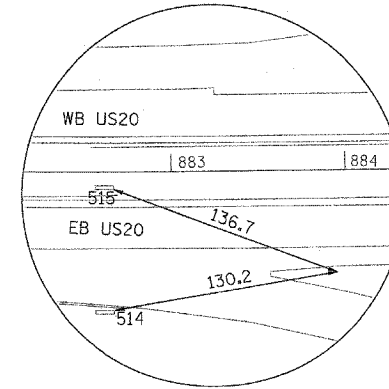
HORIZONTAL CONTROL POINT No.3



HORIZONTAL CONTROL POINT No.4



HORIZONTAL CONTROL POINT No.5



HORIZONTAL CONTROL POINT No.6

REVISIONS	
NAME	DATE

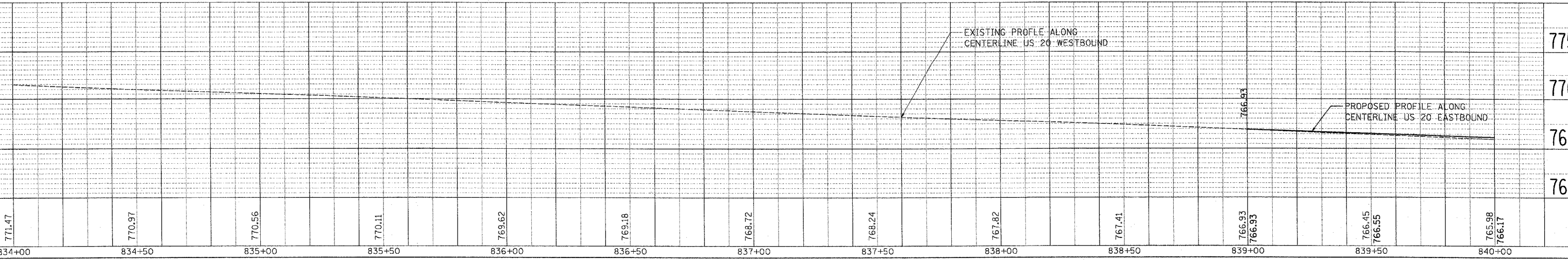
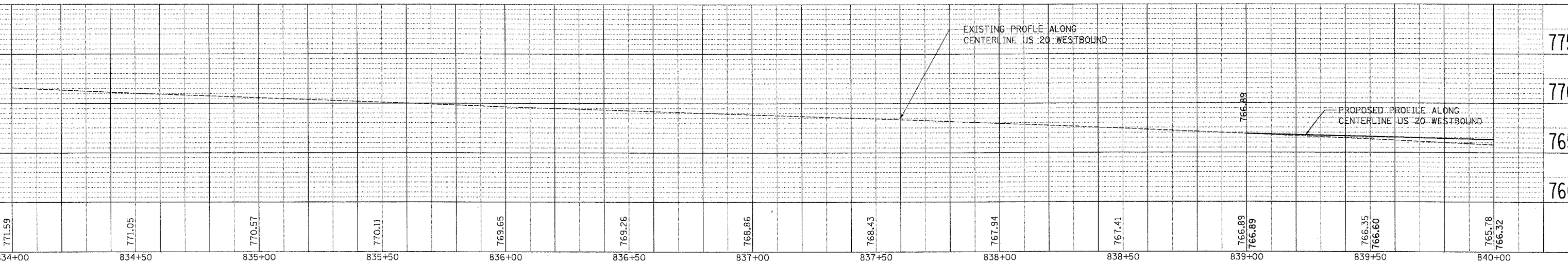
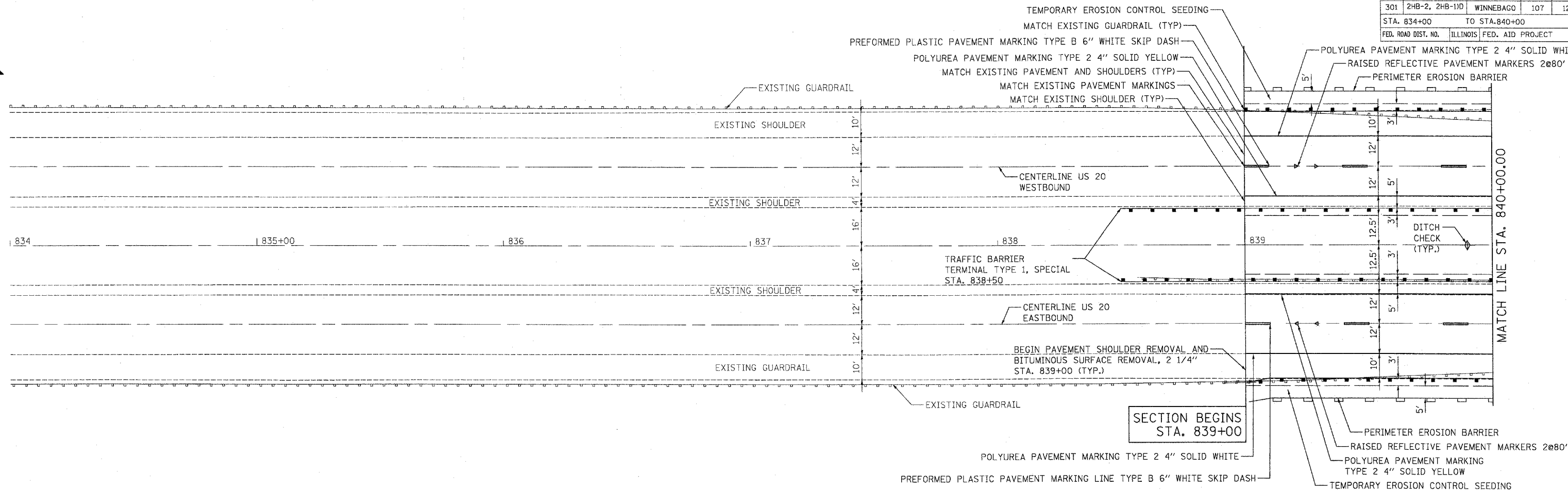
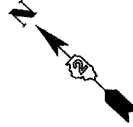
ILLINOIS DEPARTMENT OF TRANSPORTATION
US 20 OVER
PRAIRIE AND SIMPSON ROADS

ALIGNMENT, TIES, AND BENCHMARKS

SCALE: VERT.
HORIZ.
DATE 06/22/07

DRAWN BY AJP
CHECKED BY SPF

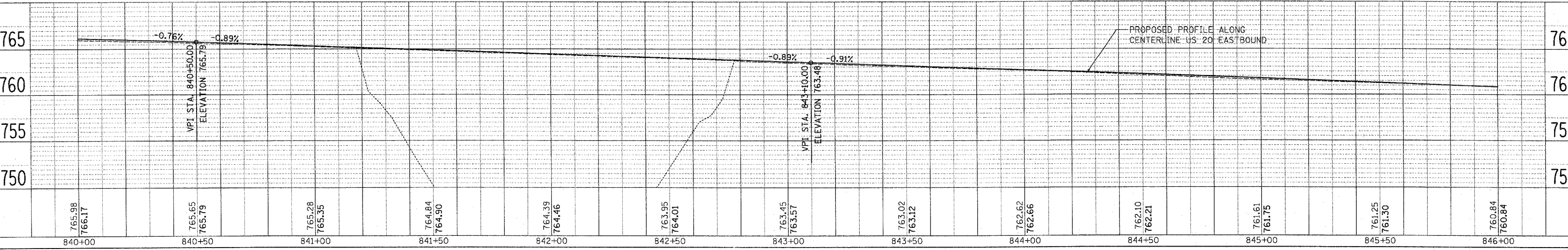
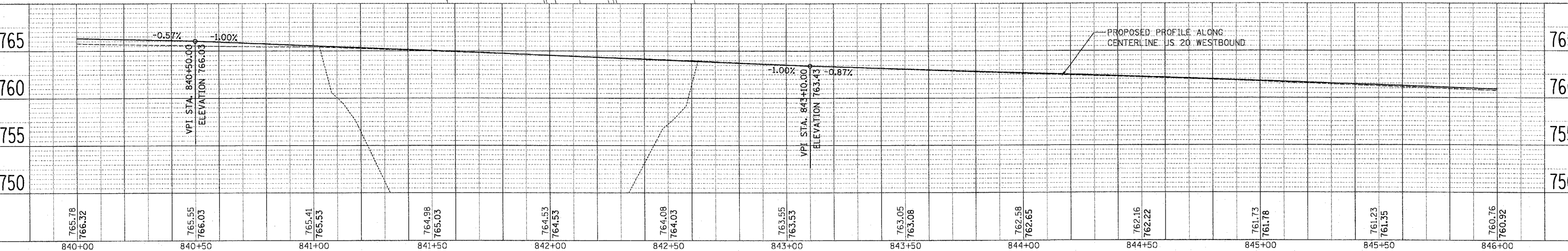
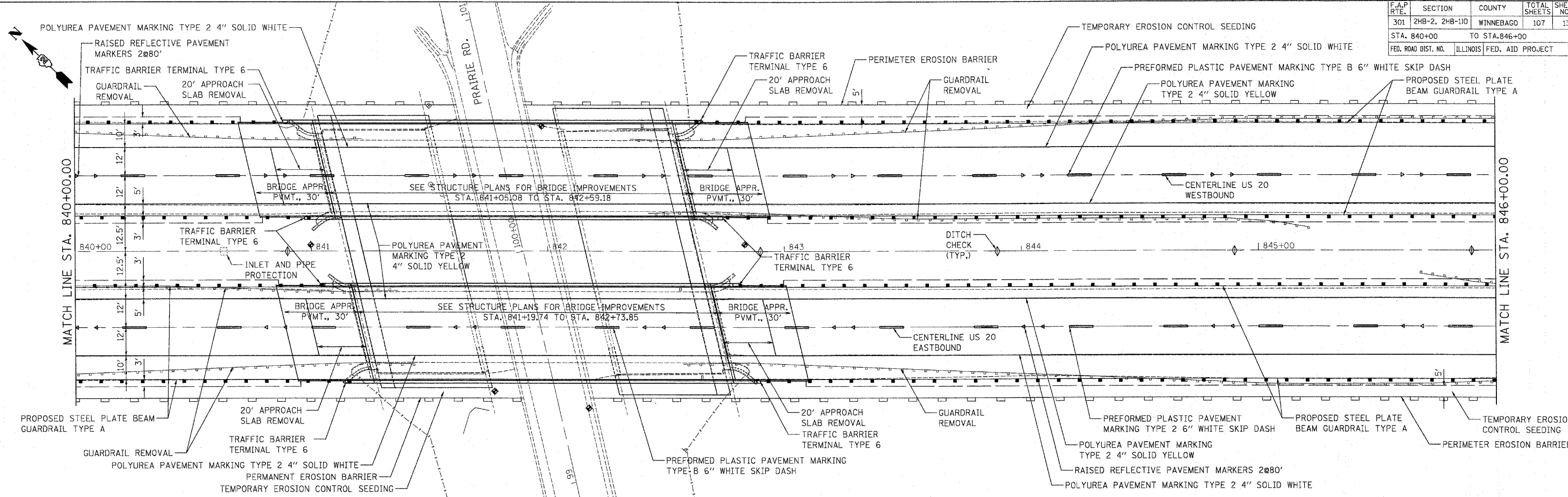
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
301	2HB-2, 2HB-1D	WINNEBAGO	107	12
STA. 834+00		TO STA. 840+00		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



NOTE BOOK NO. ROADWAY CHECKED CAD FILE NAME

BOOK NO. GRADES CHECKED STRUCTURE NOTATIONS CHKD FILE NAME = P:\2273-00 - I001 US 20 Bridge\206-905-Roadway\206-905.dwg PLOT SCALE = 450AL=9 USER NAME = BJSEB

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
301	2HB-2, 2HB-1D	WINNEBAGO	107	13
STA. 840+00		TO STA. 846+00		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

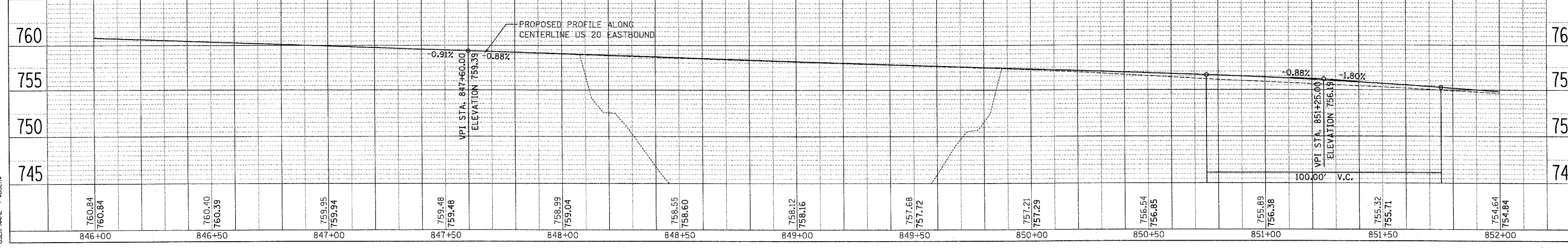
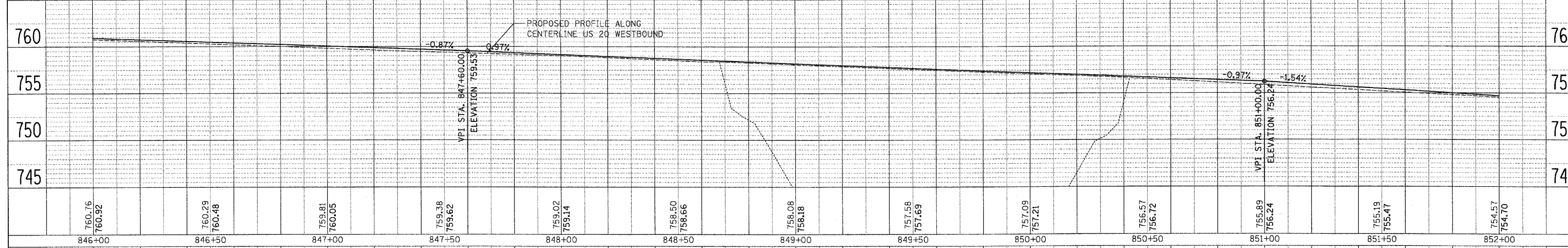
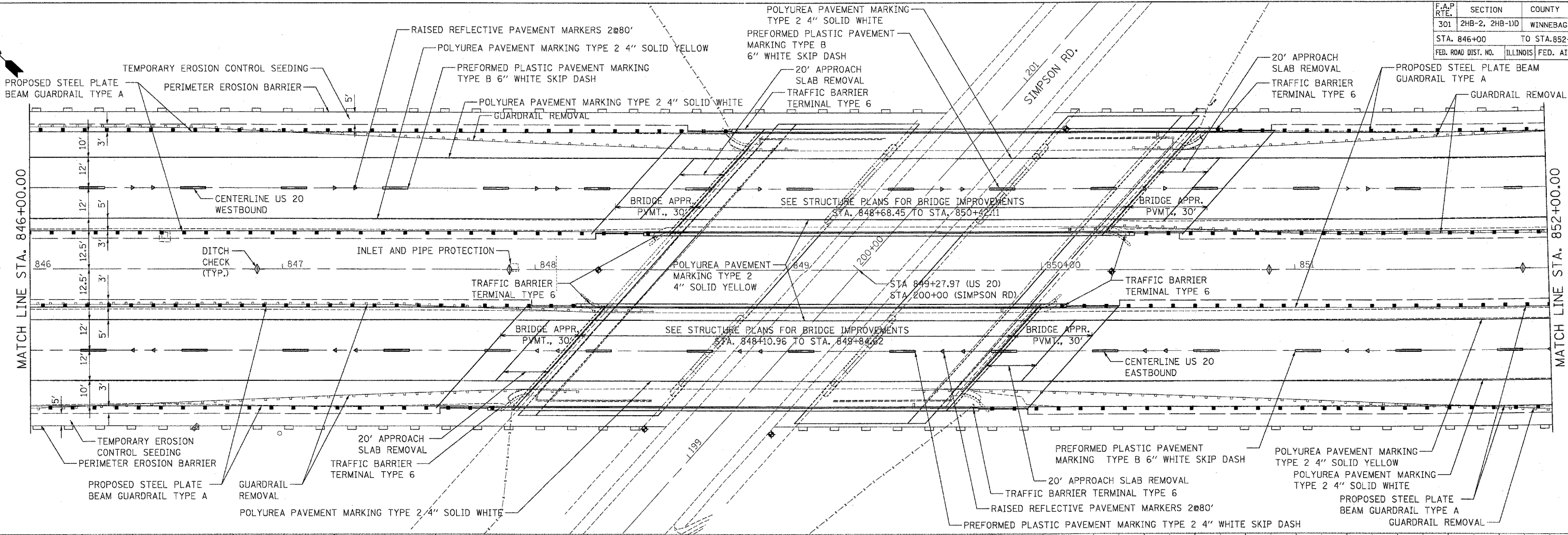


NOTE BOOK
NO. _____
FILE NAME _____
ADD. FILE NAME _____

GRADES CHECKED
STRUCTURE NOTATIONS CHECKED
NO. _____

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PLOT SCALE = 1/8"=1'-0"
USER NAME = JUSER

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
301	2HB-2, 2HB-10D	WINNEBAGO	107	14
STA. 846+00		TO STA. 852+00		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

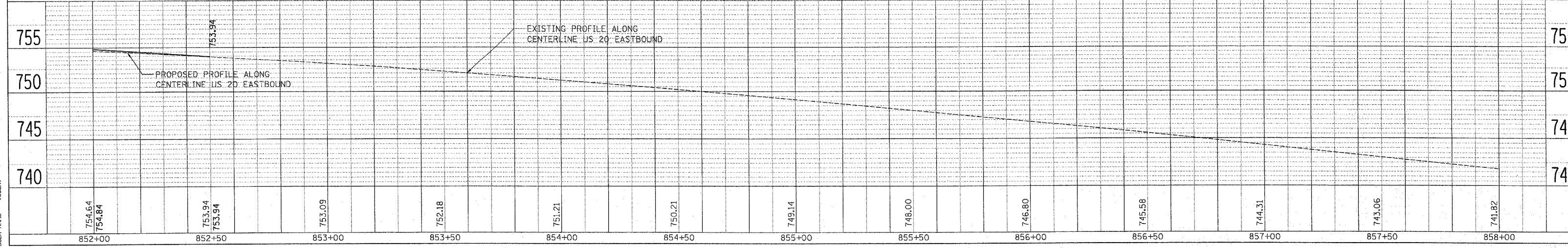
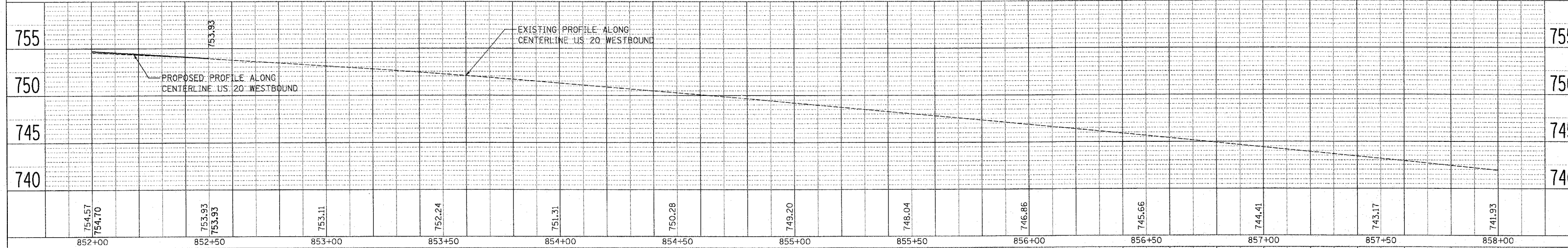
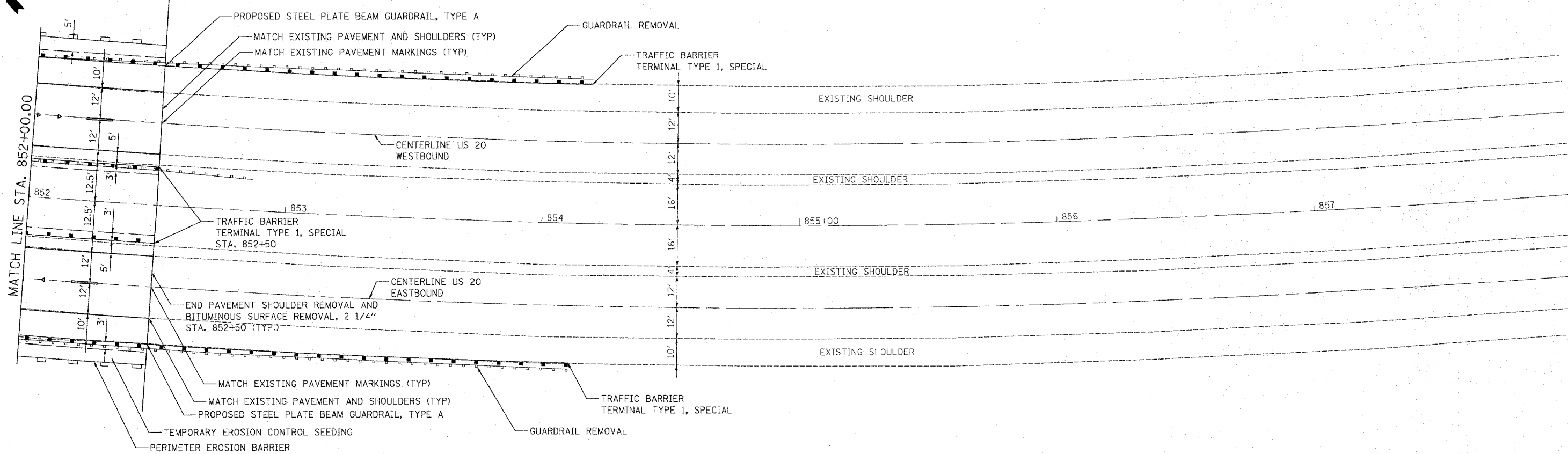


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 ROAD FILE NAME _____

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 STRUCTURE NOTATIONS CHKD _____
 PLOT DATE = 6/20/2007
 PLOT SCALE = AS SHOWN
 USER NAME = MUSER88

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
301	2HB-2, 2HB-1UD	WINNEBAGO	107	15
STA. 852+00		TO STA. 858+00		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

SECTION ENDS
STA. 852+50



NOTE BOOK NO. OF WAY CHECKED CARD FILE NAME

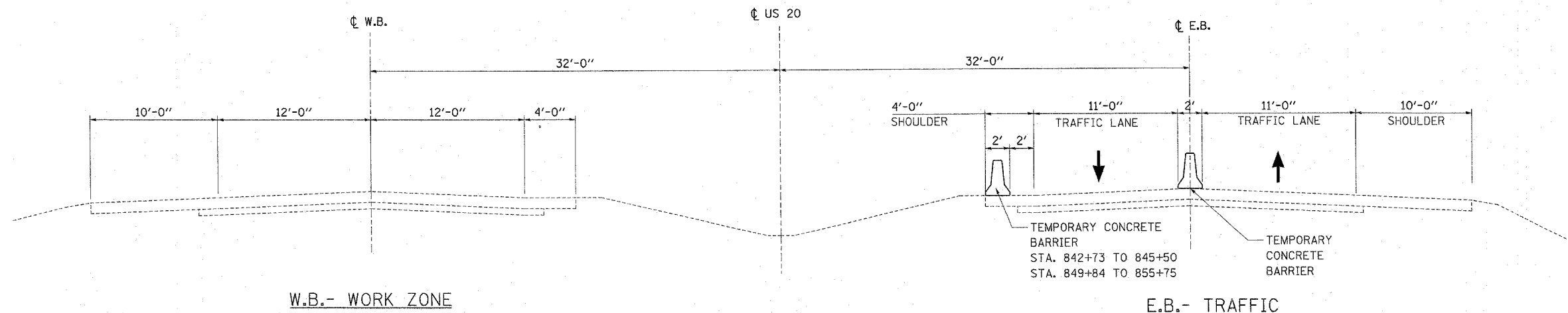
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
301	(2HB-2, 2HB-1D)	WINNEBAGO	107	16
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

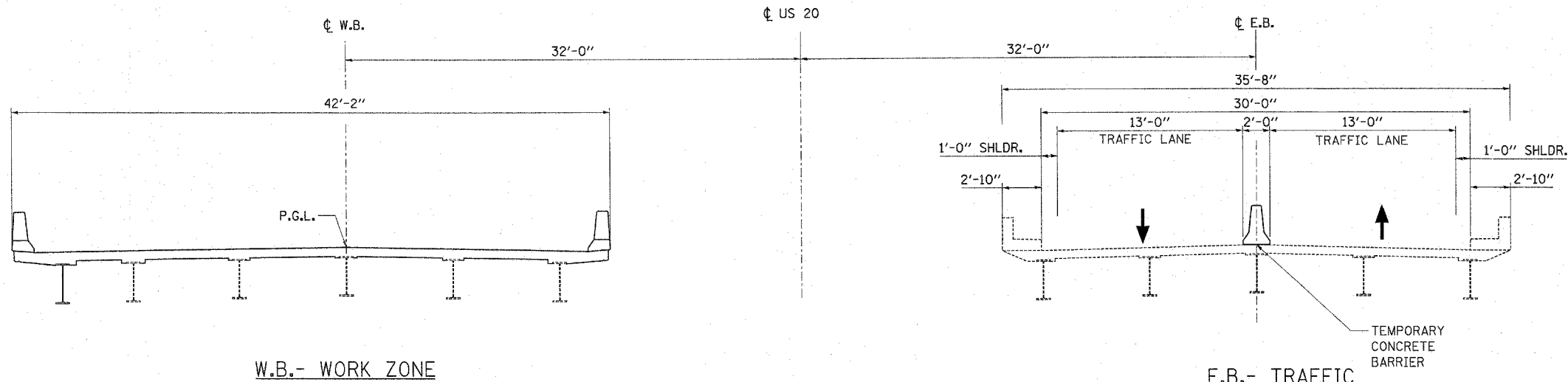
NOTES

1. TRAFFIC CONTROL STANDARDS SHOWN ON THE WORK ZONE MAP ON THIS SHEET AND AS MODIFIED BY THESE NOTES INDICATE THE MINIMUM ACCEPTABLE PLACEMENT OF TRAFFIC CONTROL DEVICES. THE CONTRACTOR'S ATTENTION IS CALLED TO THE FACT THAT THIS INFORMATION IS PROVIDED FOR BIDDING PURPOSES AND THAT CHANGES TO THESE STANDARDS MAY BE MADE BY THE ENGINEER TO SUIT FIELD CONDITIONS. IT SHOULD BE NOTED THAT LOCATION AND DURATION OF BARRICADE PLACEMENT WILL BE CONTINGENT UPON THE ANTICIPATED PROGRESS SCHEDULE OF THE CONTRACTOR. ACCESS TO COMMERCIAL, INDUSTRIAL, RESIDENTIAL, OR OTHER LAND USES ADJACENT TO THE WORK ZONE WILL BE MAINTAINED WHEN TRENCHING, TUNNELING, EXCAVATION, OR ROADWAY CONSTRUCTION ACTIVITIES DO NOT CONFLICT WITH THE SAFE MOVEMENT OF VEHICULAR OR PEDESTRIAN TRAFFIC IN THE WORK ZONE.
2. TYPE I, II AND/OR III BARRICADES WITH TWO WAY FLASHING LIGHTS WILL BE REQUIRED TO GUIDE TRAFFIC AWAY FROM PAVEMENT AREAS CLOSED FOR CONSTRUCTION.
3. ARROW BOARDS WILL BE REQUIRED WHEN IMPLEMENTING ALL LANE CLOSURES.
4. ALL SIGNS ARE REFERENCED TO THE ILLINOIS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
5. ONE BARRIER WALL MARKER SHALL BE ADDED TO THE CENTER OF EACH TEMPORARY CONCRETE BARRIER WALL SECTION.
6. EXISTING PAVEMENT MARKINGS THAT CONFLICT WITH THE TEMPORARY PAVEMENT MARKINGS SHALL BE REMOVED. THIS WORK SHALL BE PAID FOR AS PAVEMENT MARKING REMOVAL.
7. TEMPORARY IMPACT ATTENUATORS SHALL MEET NCNRP 350 STANDARDS AND BE PLACED AT THE END OF TEMPORARY CONCRETE BARRIERS.
8. PRAIRIE AND SIMPSON ROAD SHALL NEVER BE CLOSED SIMULTANEOUSLY DURING CONSTRUCTION. EACH ROAD SHALL HAVE A MAXIMUM OF 30 CALENDAR DAY'S CLOSURE. ANY EXTRA CLOSURE DAYS WILL BE LIQUIDATED DAMAGES.



STAGE I TRAFFIC CONTROL

- STA. 839+00 TO STA. 841+05.08 (W.B.)
- STA. 842+59.18 TO STA. 848+68.45 (W.B.)
- STA. 850+42.11 TO STA. 852+50 (W.B.)
- STA. 839+00 TO STA. 841+19.74 (E.B.)
- STA. 842+73.85 TO STA. 848+10.96 (E.B.)
- STA. 849+84.62 TO STA. 852+50 (E.B.)



STAGE I TRAFFIC CONTROL

- STA. 841+05.08 TO STA. 842+59.18 (W.B.)
- STA. 848+68.45 TO STA. 850+42.11 (W.B.)
- STA. 841+19.74 TO STA. 842+73.85 (E.B.)
- STA. 848+10.96 TO STA. 849+84.62 (E.B.)

SUGGESTED CONSTRUCTION STAGING:

THE FOLLOWING IS THE PREFERRED CONSTRUCTION STAGING FOR THIS PROJECT. THE PURPOSE OF THIS STAGING IS TO MINIMIZE DELAYS TO THE MOTORIST. THE CONTRACTOR MAY ALTER THE SEQUENCE OF OF CONSTRUCTION WITH THE PRIOR APPROVAL OF THE ENGINEER. PRIOR TO THE START OF CONSTRUCTION, REQUIRED TRAFFIC CONTROL DEVICES SHALL BE IN PLACE.

STAGE I

1. REDUCE E.B. TRAFFIC TO OUTSIDE LANE.
2. ERECT TEMPORARY LIGHTS, BARRICADES, SIGNS, AND TEMPORARY CONCRETE BARRIER AS SHOWN ON THE DRAWING, STATE STANDARDS, AND AS DIRECTED BY THE ENGINEER. PLACE TEMPORARY PAVEMENT MARKINGS.
3. REMOVE MEDIAN CROSSOVER CLOSURE.
4. REDUCE W.B. TRAFFIC TO INSIDE LANE AND REDIRECT OVER CROSSOVERS.
5. CONSTRUCT THE W.B. BRIDGES AT PRAIRIE ROAD AND SIMPSON ROAD.

STAGE II

1. REDUCE W.B. TRAFFIC TO OUTSIDE LANE. ENSURE GUARDRAIL IS ALONG LENGTH OF W.B. INSIDE LANE APPROACHING PRAIRIE ROAD AND SIMPSON ROAD BRIDGES.
2. ERECT BARRICADES, SIGNS, AND TEMPORARY CONCRETE BARRIER AND GUARDRAIL AS SHOWN ON THE DRAWING, STATE STANDARDS, AND AS DIRECTED BY THE ENGINEER. PLACE TEMPORARY PAVEMENT MARKINGS.
3. REDUCE E.B. TRAFFIC TO INSIDE LANE AND REDIRECT OVER CROSSOVERS.
4. CONSTRUCT THE E.B. BRIDGES AT PRAIRIE ROAD AND SIMPSON ROAD.

STAGE III

1. COMPLETE SITE RESTORATION AND INSTALLATION OF THE PERMANENT PAVEMENT MARKINGS.
2. REMOVE ALL TEMPORARY PAVEMENT MARKINGS.
3. REINSTALL MEDIAN CROSSOVER CLOSURE.
4. REMOVE TEMPORARY LIGHTS.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
US 20 OVER
PRAIRIE AND SIMPSON ROADS

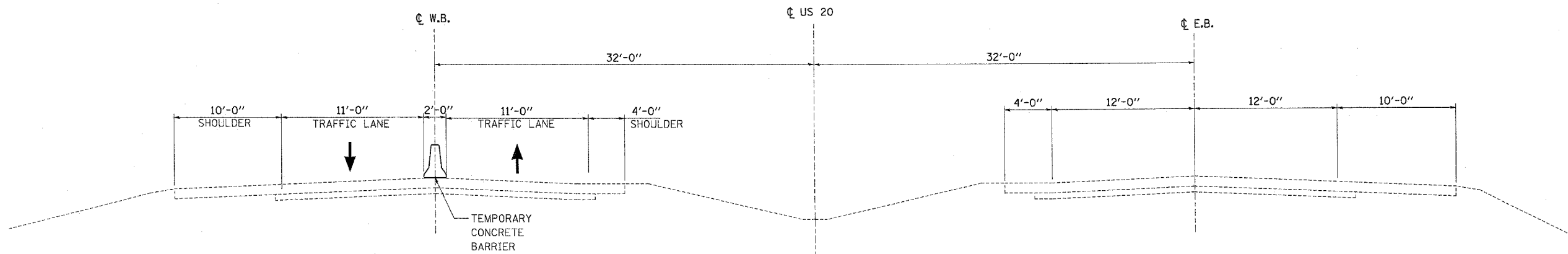
TRAFFIC CONTROL NOTES
AND SECTIONS

SCALE: VERT.
 HORIZ.
DATE 06/22/07

DRAWN BY AJP
CHECKED BY SPF

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PLOT SCALE = \$SCALE\$
USER NAME = \$USER\$

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
301	(2HB-2, 2HB-1D)	WINNEBAGO	107	17
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

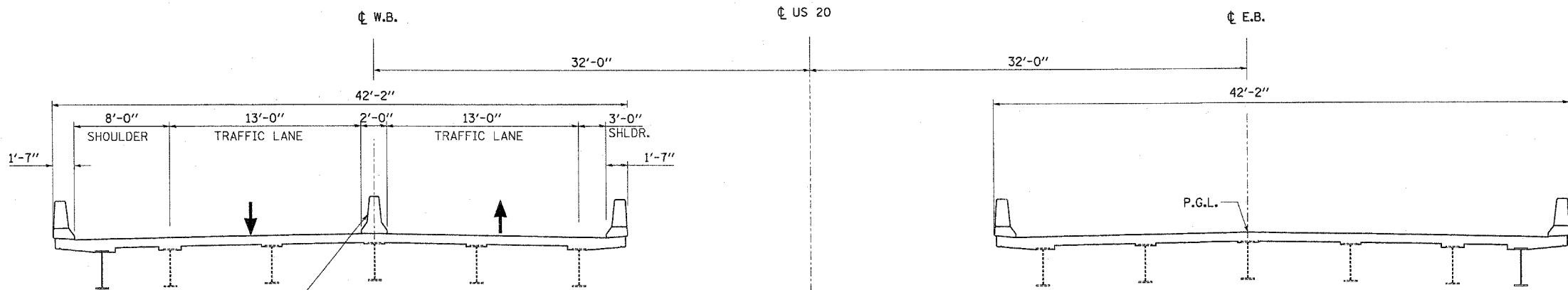


W.B.- TRAFFIC

E.B.- WORK ZONE

STAGE II TRAFFIC CONTROL

- STA. 839+00 TO STA. 841+05.08 (W.B.)
- STA. 842+59.18 TO STA. 848+68.45 (W.B.)
- STA. 850+42.11 TO STA. 852+50 (W.B.)
- STA. 839+00 TO STA. 841+19.74 (E.B.)
- STA. 842+73.85 TO STA. 848+10.96 (E.B.)
- STA. 849+84.62 TO STA. 852+50 (E.B.)



W.B.- TRAFFIC

E.B.- WORK ZONE

STAGE II TRAFFIC CONTROL

- STA. 841+05.08 TO STA. 842+59.18 (W.B.)
- STA. 848+68.45 TO STA. 850+42.11 (W.B.)
- STA. 841+19.74 TO STA. 842+73.85 (E.B.)
- STA. 848+10.96 TO STA. 849+84.62 (E.B.)

- NOTES:
1. SEE SHEET 16 FOR TRAFFIC CONTROL NOTES.
 2. SEE SHEETS 18 THROUGH 21 FOR TRAFFIC CONTROL PLANS.

REVISIONS	
NAME	DATE

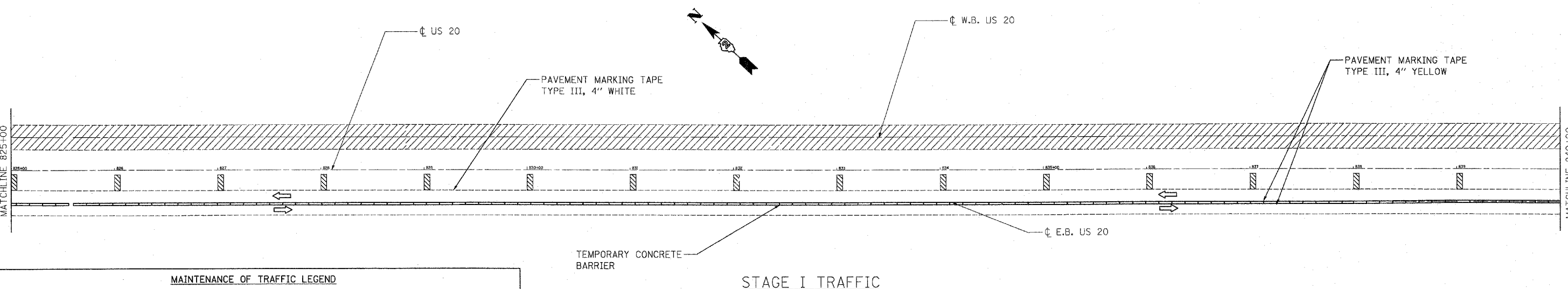
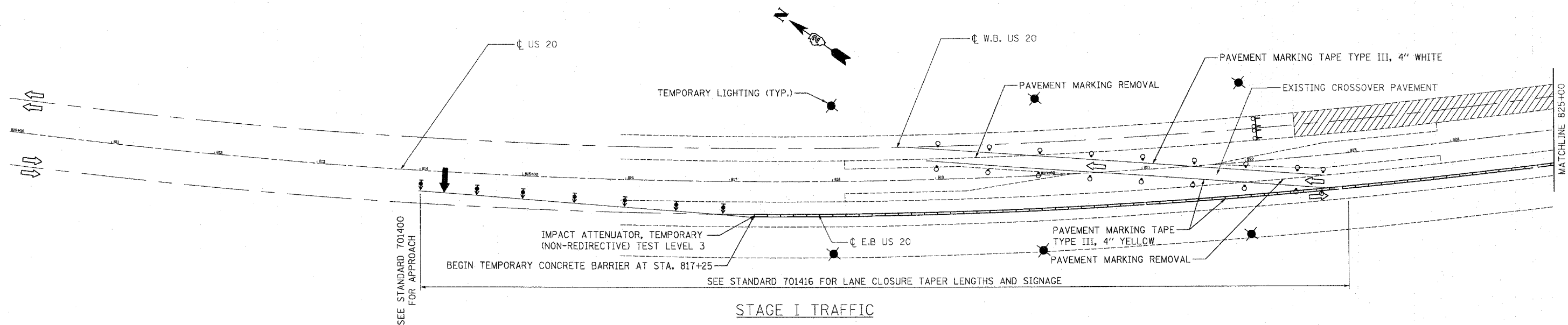
ILLINOIS DEPARTMENT OF TRANSPORTATION
 US 20 OVER
 PRAIRIE AND SIMPSON ROADS

TRAFFIC CONTROL NOTES
 AND SECTIONS

SCALE: VERT. DRAWN BY AJP
 HORIZ. CHECKED BY SPF
 DATE 06/22/07

PLOT DATE = 6/20/07
 FILE NAME = 64B07.dwg
 USER NAME = JWB

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
301	(2HB-2, 2HB-1D)	WINNEBAGO	107	18
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



MAINTENANCE OF TRAFFIC LEGEND

	TRAFFIC FLOW DIRECTION		PR TEMPORARY CONCRETE BARRIER
	ARROW BOARD		BARRICADE TYPE I OR TYPE II OR DRUM
	DRUM WITH STEADY BURNING MONODIRECTIONAL LIGHT		SIGN
	TYPE III BARRICADE WITH FLASHING LIGHT		TEMPORARY LIGHT POLE
	TYPE III BARRICADE		
	DIRECTION INDICATOR BARRICADE WITH STEADY BURN MONODIRECTIONAL LIGHT		
	VERTICAL PANEL		

NOTES

- SEE STANDARD 70146 FOR ADDITIONAL SIGNAGE, PAVEMENT MARKING, AND DIMENSIONS.
- SEE SECTIONS FOR LANE AND SHOULDER DIMENSIONS.
- ALL BARRICADES, DRUMS, AND VERTICAL PANELS SHALL BE AT 15 m (50 ft.) CENTERS. WHERE THE TANGENT DISTANCE "T" ON THE TEMPORARY RUNAROUND EXCEEDS 180 m (600 ft.) CLEAR DELINEATORS AT 15 m (50 ft.) CENTERS MAY BE SUBSTITUTE FOR THE VERTICAL PANELS, OR SPACING BETWEEN VERTICAL PANELS MAY BE INCREASED TO 30 m (100 ft.) WITHIN THE LIMITS OF THE TANGENT.
- SEE TEMPORARY ROADWAY LIGHTING DETAIL FOR MORE INFORMATION. THE COST FOR TEMPORARY LIGHTS WILL BE INCLUDED IN LUMP SUM COST FOR TEMPORARY LIGHTING SYSTEM.
- CONTRACTOR TO COORDINATE WITH COM ED ON PROPOSED LOCATION FOR TEMPORARY LIGHTING.

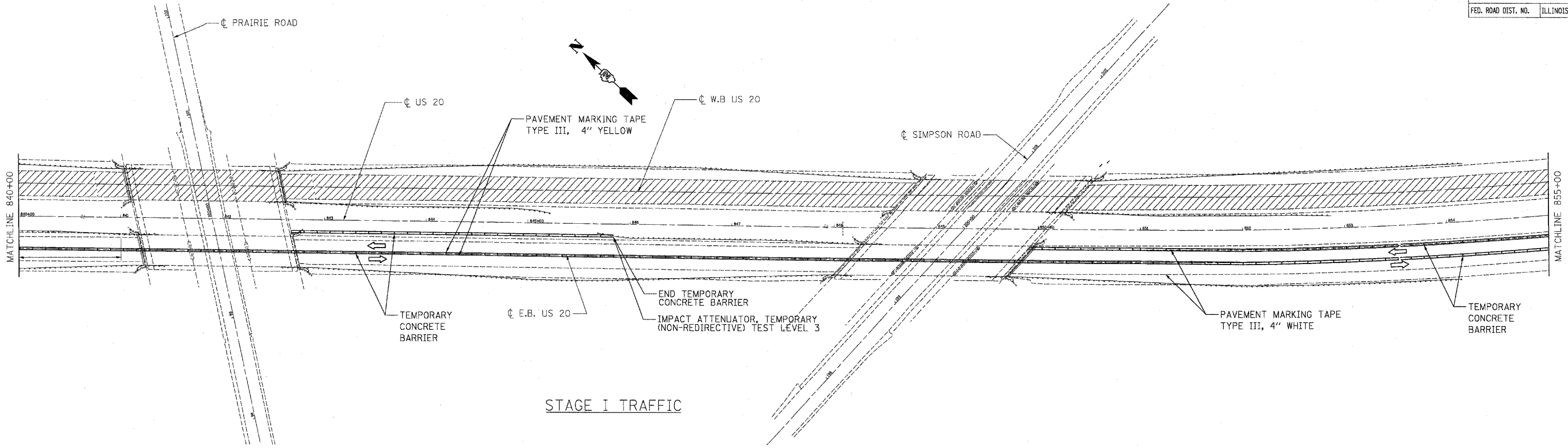
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 US 20 OVER
 PRAIRIE AND SIMPSON ROADS
**TRAFFIC CONTROL PLAN
 STAGE I**

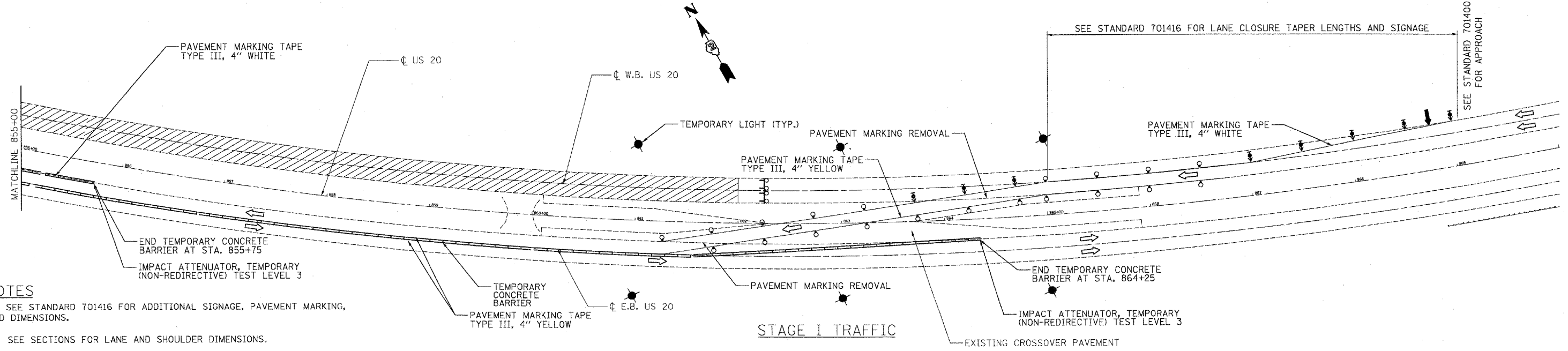
SCALE: VERT. 1" = 50'
 HORIZ. 1" = 50'
 DATE 04/03/07

DRAWN BY AJP
 CHECKED BY SPF

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
301	(2HB-2, 2HB-1D)	WINNEBAGO	107	15
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	



STAGE I TRAFFIC



STAGE I TRAFFIC

- NOTES**
- SEE STANDARD 701416 FOR ADDITIONAL SIGNAGE, PAVEMENT MARKING, AND DIMENSIONS.
 - SEE SECTIONS FOR LANE AND SHOULDER DIMENSIONS.
 - ALL BARRICADES, DRUMS, AND VERTICAL PANELS SHALL BE AT 15 m (50 ft.) CENTERS. WHERE THE TANGENT DISTANCE "T" ON THE TEMPORARY RUNAROUND EXCEEDS 180 m (600 ft.) CLEAR DELINEATORS AT 15 m (50 ft.) CENTERS MAY BE SUBSTITUTE FOR THE VERTICAL PANELS, OR SPACING BETWEEN VERTICAL PANELS MAY BE INCREASED TO 30 m (100 ft.) WITHIN THE LIMITS OF THE TANGENT.
 - SEE TEMPORARY ROADWAY LIGHTING DETAIL FOR MORE INFORMATION. THE COST FOR TEMPORARY LIGHTS WILL BE INCLUDED IN LUMP SUM COST FOR TEMPORARY LIGHTING SYSTEM.
 - CONTRACTOR TO COORDINATE WITH COM ED ON PROPOSED LOCATION FOR TEMPORARY LIGHTING.

REVISIONS	
NAME	DATE

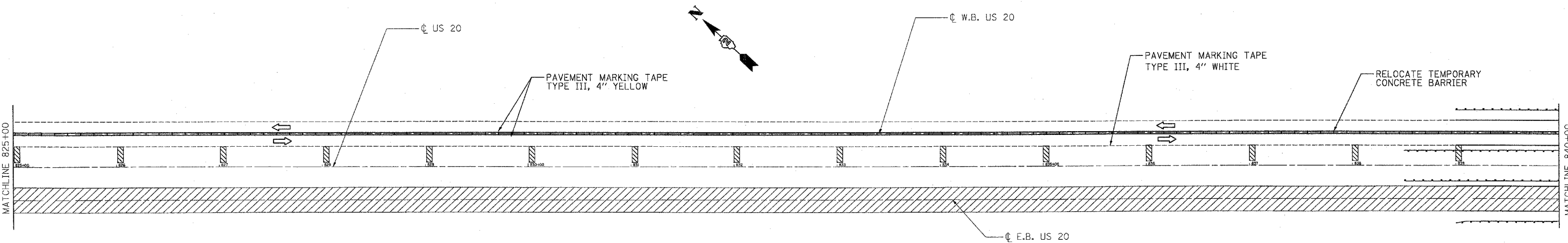
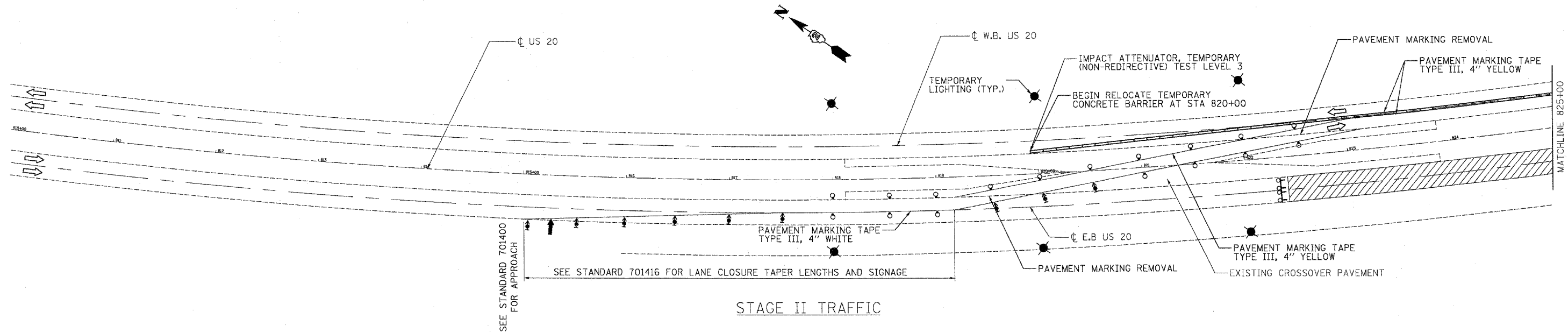
ILLINOIS DEPARTMENT OF TRANSPORTATION
 US 20 OVER
 PRAIRIE AND SIMPSON ROADS

TRAFFIC CONTROL PLAN
 STAGE I

SCALE: VERT. 1" = 50'
 HORIZ. 1" = 50'
 DATE 04/03/07

DRAWN BY AJP
 CHECKED BY SPF

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
301	(2HB-2, 2HB-1)D	WINNEBAGO	107	20
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



MAINTENANCE OF TRAFFIC LEGEND

	TRAFFIC FLOW DIRECTION		PR TEMPORARY CONCRETE BARRIER
	ARROW BOARD		BARRICADE TYPE I OR TYPE II OR DRUM
	DRUM WITH STEADY BURNING MONODIRECTIONAL LIGHT		SIGN
	TYPE III BARRICADE WITH FLASHING LIGHT		TEMPORARY LIGHT POLE
	TYPE III BARRICADE		
	DIRECTION INDICATOR BARRICADE WITH STEADY BURN MONODIRECTIONAL LIGHT		
	VERTICAL PANEL		

STAGE II TRAFFIC

NOTES

- SEE STANDARD 701416 FOR ADDITIONAL SIGNAGE, PAVEMENT MARKING, AND DIMENSIONS.
- SEE SECTIONS FOR LANE AND SHOULDER DIMENSIONS.
- ALL BARRICADES, DRUMS, AND VERTICAL PANELS SHALL BE AT 15 m (50 ft.) CENTERS. WHERE THE TANGENT DISTANCE "T" ON THE TEMPORARY RUNAROUND EXCEEDS 180 m (600 ft.) CLEAR DELINEATORS AT 15 m (50 ft.) CENTERS MAY BE SUBSTITUTE FOR THE VERTICAL PANELS, OR SPACING BETWEEN VERTICAL PANELS MAY BE INCREASED TO 30 m (100 ft.) WITHIN THE LIMITS OF THE TANGENT.
- SEE TEMPORARY ROADWAY LIGHTING DETAIL FOR MORE INFORMATION. THE COST FOR TEMPORARY LIGHTS WILL BE INCLUDED IN LUMP SUM COST FOR TEMPORARY LIGHTING SYSTEM.
- CONTRACTOR TO COORDINATE WITH COM ED ON PROPOSED LOCATION FOR TEMPORARY LIGHTING.
- ALL TEMPORARY PAVEMENT MARKING INSTALLED DURING STAGE II TO BE REMOVED PRIOR TO PERMANENT PAVEMENT MARKING INSTALLATION. WORK TO BE PAID FOR AS WORK ZONE PAVEMENT MARKING REMOVAL.

REVISIONS	
NAME	DATE

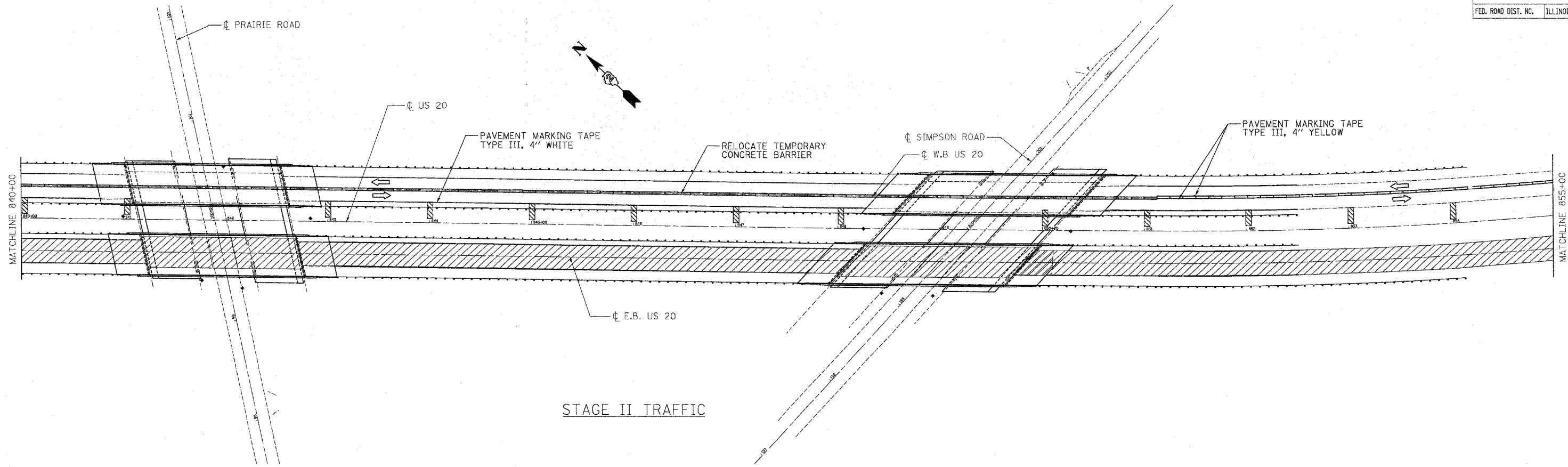
ILLINOIS DEPARTMENT OF TRANSPORTATION
US 20 OVER
PRAIRIE AND SIMPSON ROADS

TRAFFIC CONTROL PLAN
STAGE II

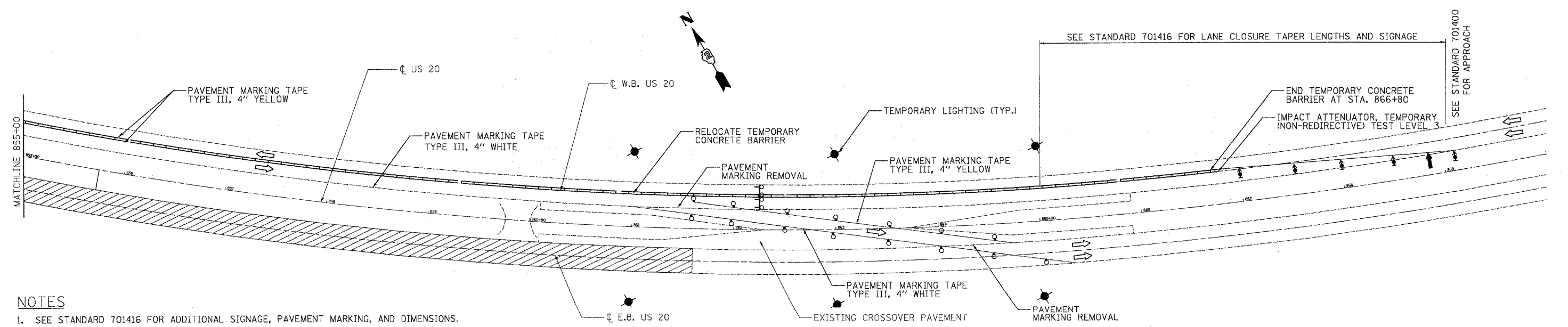
SCALE: VERT. 1" = 50'
HORIZ. 1" = 50'
DATE 04/03/07

DRAWN BY AJP
CHECKED BY SPF

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
301	(2HB-2, 2HB-1)D	WINNEBAGO	107	21
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



STAGE II TRAFFIC



STAGE II TRAFFIC

NOTES

1. SEE STANDARD 701416 FOR ADDITIONAL SIGNAGE, PAVEMENT MARKING, AND DIMENSIONS.
2. SEE SECTIONS FOR LANE AND SHOULDER DIMENSIONS.
3. ALL BARRICADES, DRUMS, AND VERTICAL PANELS SHALL BE AT 15 m (50 ft.) CENTERS. WHERE THE TANGENT DISTANCE "T" ON THE TEMPORARY RUNAROUND EXCEEDS 180 m (600 ft.) CLEAR DELINEATORS AT 15 m (50 ft.) CENTERS MAY BE SUBSTITUTE FOR THE VERTICAL PANELS, OR SPACING BETWEEN VERTICAL PANELS MAY BE INCREASED TO 30 m (100 ft.) WITHIN THE LIMITS OF THE TANGENT.
4. SEE TEMPORARY ROADWAY LIGHTING DETAIL FOR MORE INFORMATION. THE COST FOR TEMPORARY LIGHTS WILL BE INCLUDED IN LUMP SUM COST FOR TEMPORARY LIGHTING SYSTEM.
5. CONTRACTOR TO COORDINATE WITH COM ED ON PROPOSED LOCATION FOR TEMPORARY LIGHTING.
6. ALL TEMPORARY PAVEMENT MARKING INSTALLED DURING STAGE II TO BE REMOVED PRIOR TO PERMANENT PAVEMENT MARKING INSTALLATION. WORK TO BE PAID FOR AS WORK ZONE PAVEMENT MARKING REMOVAL.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 US 20 OVER
 PRAIRIE AND SIMPSON ROADS
 TRAFFIC CONTROL PLAN
 STAGE II

SCALE: VERT. 1" = 50'
 HORIZ. 1" = 50'
 DATE 04/03/07

DRAWN BY AJP
 CHECKED BY SPF

PLOT DATE = 6/27/2007
 FILE NAME = I:\2007\2007-06-27\2007-06-27-1100T US 20 Br-Igna V2006905-Roadway\2006905R07
 USER NAME = RUSERR

B.M. - Cut "X" on North side of Prairie Road, east of bypass. Elev.=739.34
 Existing S.N.'s 101-0051 (W.B.) and 101-0052 (E.B.)

Each structure is a three span reinforced concrete deck bridge on steel I-beams. Spans of 47'-0", 56'-0", 47'-0", 154'-1 1/4" Back to Back Abutments. 35'-8" O. to O. Built in 1963. The Contractor shall remove existing concrete deck, abutment bearings, abutment backwalls, abutment wingwalls, and approach slabs. Replace with widened R.C. deck, Elastomeric bearings, and widen structure for additional beam l'ne. The road shall be kept open with one lane of traffic in each direction using a median crossover.

No Salvage

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

INDEX OF SHEETS

- 1 General Plan and Elevation
- 2 General Notes and Total Bill of Materials
- 3 Stage Construction
- 4-6 Top of Slab Elevations
- 7-10 Top of Slab Approach Elevations
- 11 Superstructure Plan
- 12 Superstructure Details
- 13 Drainage Scupper, DS-II
- 14 Preformed Joint Strip Seal
- 15 Framing Plan
- 16 Structural Steel Details
- 17 Pier Steel Bearing Assembly
- 18 Elastomeric Bearing Assembly Type I
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- 20 Westbound West Abutment
- 21 Westbound West Abutment Wingwalls
- 22 Westbound West Abutment Details
- 23 Westbound East Abutment
- 24 Westbound East Abutment Wingwalls
- 25 Westbound East Abutment Details
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- 29 Eastbound East Abutment
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- 32 Westbound Pier 1
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- 34 Eastbound Pier 1
- 35 Eastbound Pier 2
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- 37 Bar Splicer Assembly Details
- 38 Pile and Encasement Details
- 39 Parapet Slip Forming Option
- 40-43 Boring Logs

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET NO.
F.A.P. 301 (US 20)	(2HB-2)D	WINNEBAGO	107	23
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

43 SHEETS

Contract #64B07

DESIGN SPECIFICATIONS

2002 AASHTO Standard Specifications - 17th ed.

LOADING HS20-44

No allowance for future wearing surface.

DESIGN STRESSES

New construction field units

f'c = 3,500 psi

fy = 60,000 psi (Reinforcement)

fy = 36,000 psi (Structural Steel AASHTO M270 Grade 50)

Existing construction field units

f'c = 3,500 psi

fy = 40,000 psi (Reinforcement)

fy = 36,000 psi (Structural Steel AASHTO M270 Grade 50)

SEISMIC DATA

Seismic Performance Category (SPC) = A

Bedrock Acceleration Coefficient (A) = 0.035

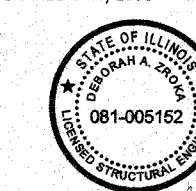
Site Coefficient (S) = 1.2

APPROVED

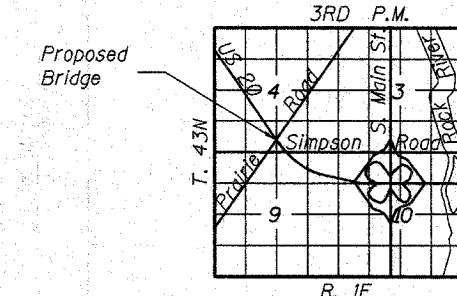
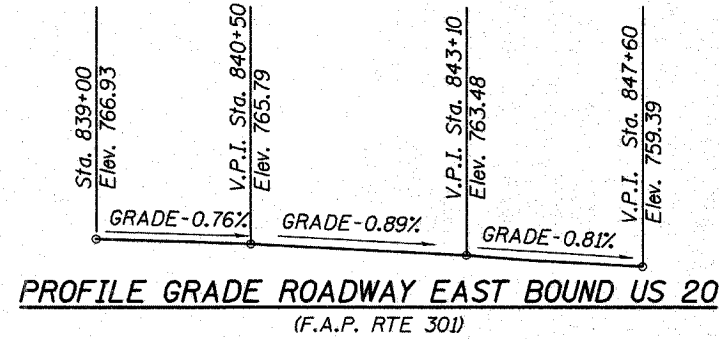
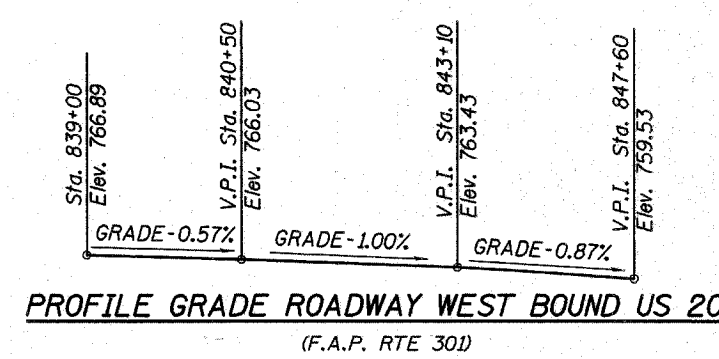
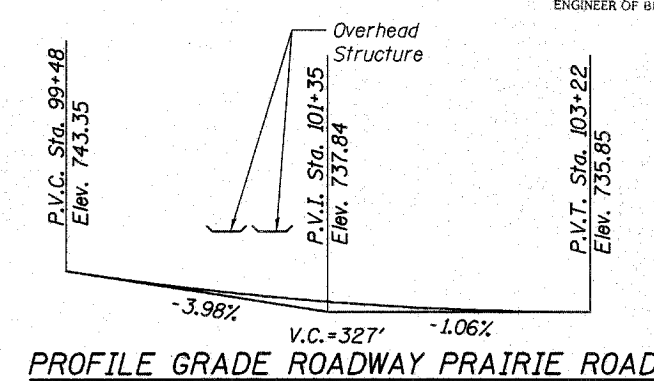
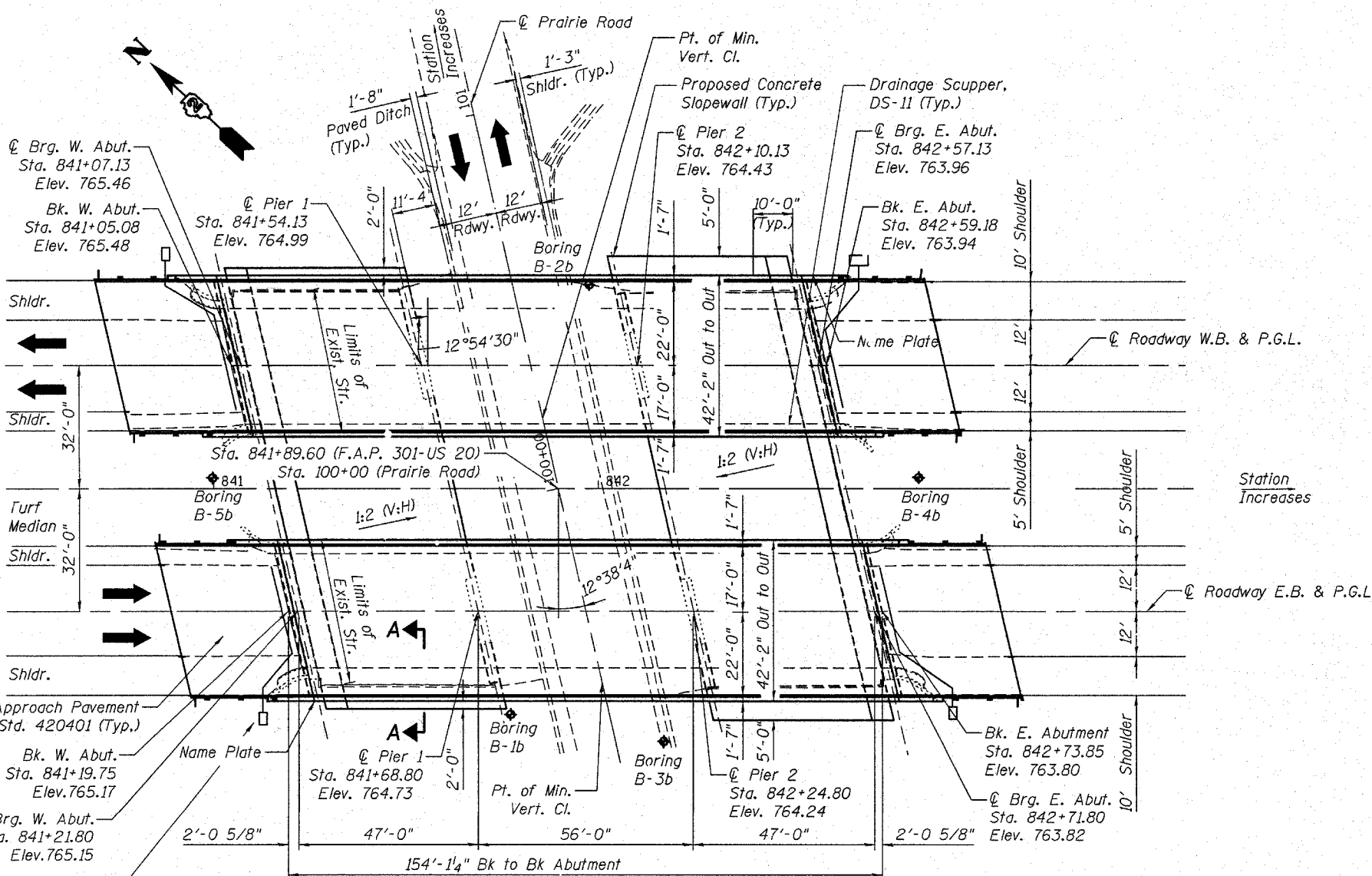
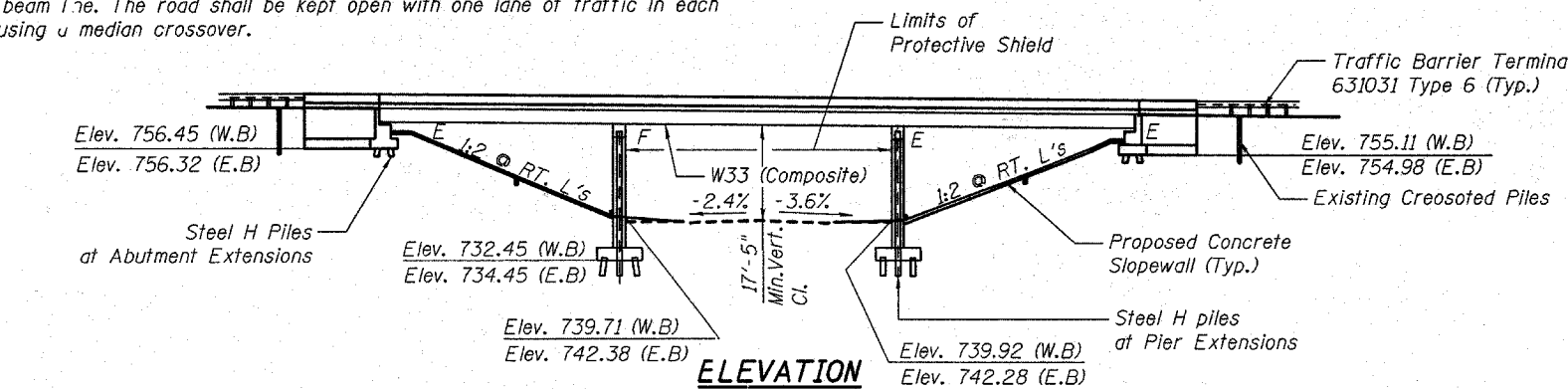
FOR STRUCTURAL ADEQUACY ONLY

Ralph E. Anderson (SE)
 ENGINEER OF BRIDGES AND STRUCTURES

Jennifer L. Anderson (SE)
 JENNIFER L. ANDERSON, S.E., P.E.
 LICENSE NO: 081-005858
 EXPIRES: 11/2008



Deborah A. Zroka
 DEBORAH A. ZROKA, S.E.
 LICENSE NO. 081-005152
 EXPIRES: 11/30/2008



LOCATION SKETCH

GENERAL PLAN AND ELEVATION
 F.A.P. ROUTE 301 (US 20)
 OVER PRAIRIE ROAD
 SECTION (2HB-2)D
 WINNEBAGO COUNTY
 STATION 841+89.60
 STRUCTURE NO. 101-0051 (W.B.)
 STRUCTURE NO. 101-0052 (E.B.)

DESIGNED	SSM
CHECKED	JLA
DRAWN	GYR
CHECKED	SSM

STATION 841+89.60
 REBUILT 2007 BY
 STATE OF ILLINOIS
 F.A.P. RT. 301 SEC. (2HB-2)D
 LOADING HS20
 STR. NO. 101-0051 (W.B.)

STATION 841+89.60
 REBUILT 2007 BY
 STATE OF ILLINOIS
 F.A.P. RT. 301 SEC. (2HB-2)D
 LOADING HS20
 STR. NO. 101-0052 (E.B.)

NAME PLATE

See Std. 515001

NAME PLATE

See Std. 515001

Note:
 Clean and relocate existing Name Plates adjacent to new Name Plates. Cost included with Name Plates.

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 301 (US 20)	(2HB -2)D	WINNEBAGO	107	24
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 2
43 SHEETS

Contract #64B07

GENERAL NOTES

Fasteners shall be AASHTO M164 Type I, mechanically galvanized. Bolts - 7/8 in. diameter, holes - 5/16 in. diameter, unless otherwise noted.

Calculated weight of Structural Steel = 56,684 lbs.

All structural steel shall be AASHTO M 270 Grade 36.

No field welding is permitted except as specified in the contract documents.

Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60 (IL Modified). See Special Provisions.

Reinforcement bars designated (E) shall be epoxy coated.

Prior to pouring the new concrete deck, all heavy or loose rust, loose mill scale, and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel and the cost will be included in the pay item covering removal of the existing concrete.

As directed by the Engineer, existing construction accessories welded to the top flange of beams and girders shall be removed. The weld areas shall be ground flush and inspected for cracks using magnetic particle testing (MT) or dye penetrant testing (PT) by an individual acceptable to the Engineer. Any cracks that cannot be removed by grinding 1/4 inch deep shall be identified and reported to the Bureau of Bridges and Structures for further disposition. The cost of removing welded accessories, grinding and inspecting weld areas and grinding cracks will be paid for according to Article 109.04 of the Standard Specifications.

If the Contractor elects to use cantilever forming brackets on the exterior beams or girders, the brackets shall be placed at the same locations as required for the hardwood blocks in Article 503.06(b) of the Standard Specifications. If additional cantilever forming brackets are required, hardwood blocking shall be wedged between the exterior and first interior beam at each of these additional bracket locations.

Plan dimensions and details relative to existing plans are subject to routine variations. The Contractor shall field verify existing dimensions and details affecting new construction 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 scope of the work, however, the Contractor will be paid for the quantity actually furnished based upon the unit price bid for the work.

Bearing seat surfaces shall be constructed or adjusted to their designated elevations within a tolerance of 1/8 inch (0.01 ft.). Adjustment shall be made either by grinding the surface or by shimming the bearings.

Concrete Sealer shall be applied to the designated areas of the abutments and piers. See abutment and pier sheets for additional clarification.

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

The Organic Zinc Rich Primer / Epoxy / Urethane Paint System shall be used for shop and field painting of new structural steel except where otherwise noted. The color of the final finish coat for all interior steel surfaces shall be gray, Munsell No. 5B 7/1. The color of the final finish coat for the exterior and bottom flange of the fascia beams shall be Blue, Munsell No. 10B 3/6. See Special Provision for "Cleaning and Painting New Metal Structures".

The embankment configuration shown shall be the minimum that must be placed and compacted prior to construction of the abutments.

Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.

Partial depth saw cutting of the existing concrete deck over the top of the existing flanges shall be permitted. See Special Provisions for Removal of Existing Non-Composite Bridge Decks.

The contractor may use slip form option for concrete parapets. See IDOT special provision.

Cleaning and painting of the existing structural steel shall be as specified in the special provision of "Cleaning and Painting Existing Steel Structure". All beams, bearing, and other structural steel within 5ft. (measured along the beam) of either side deck joints 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. All remaining structural steel shall be cleaned per Power Tool Cleaning - Modified SSPC-SP3.

The designated areas cleaned per Near White Blast Cleaning - SSPC-SP10 and per Power Tool Cleaning - Commercial Grade shall be painted according to the requirements of Paint System 1 - OZ/E/U. The designated areas cleaned per Power Tool Cleaning - Modified SSPC-SP3 shall be painted according to the requirements of Paint System 2-PS/EM/U. The color of the final finish coat for all interior steel surfaces shall be Grey, Munsell NO. 5B 7/1. The color of the final finish coat for the exterior and bottom flange of the fascia shall be Blue, Munsell No. 10B 3/6.

The contractor shall drive test piles to 110% of the nominal required bearing specified in production locations at substructures specified or as approved by the Engineer before ordering the remainder of the piles.

The structural steel plates of the Bearing Assembly shall conform to the requirements of AASHTO M270 Grade 36.

TOTAL BILL OF MATERIAL

ITEM	Unit	SUPER	SUB	TOTAL
Porous Granular Embankment, Special	Cu Yd		189	189
Concrete Removal	Cu Yd		60.1	60.1
Slope Wall Removal	Sq Yd		1102	1102
Removal of Existing Concrete Deck	Each		2	2
Protective Shielding	Sq Yd		502	502
Structure Excavation	Cu Yd		420	420
Concrete Structures	Cu Yd		156	156
Concrete Superstructure	Cu Yd	413.6	0	413.6
Bridge Deck Grooving	Sq Yd	1248	0	1248
Concrete Encasement	Cu Yd		4.4	4.4
Protective Coat	Sq Yd		1608	1608
Furnishing and Erecting Structural Steel	L Sum		0.48	0.48
Stud Shear Connectors	Each		7824	7824
Jack and Remove Existing Bearings	Each		20	20
Cleaning and Painting Steel Bridge No. 1	L Sum		1	1
Cleaning and Painting Steel Bridge No. 2	L Sum		1	1
Containment and Disposal of Lead Paint Cleaning Residues No. 1	L Sum	1		1
Containment and Disposal of Lead Paint Cleaning Residues No. 2	L Sum	1		1
Reinforcement Bars, Epoxy Coated	Pound	104000	19820	123820
Bar Splicers	Each		164	164
Slope Wall 4 Inch	Sq Yd		1246	1246
Furnishing Steel Piles HP12X53	Foot		620	620
Driving Piles	Foot		554	554
Test Pile Steel HP12X53	Each		2	2
Name Plates	Each	2	0	2
Preformed Joint Strip Seal	Foot	168	0	168
Elastomeric Bearing Assembly, Type I	Each		12	12
Elastomeric Bearing Assembly, Type II	Each		12	12
Anchor Bolts, 1"	Each		56	56
Concrete Sealer	Sq Ft		2326	2326
Geocomposite Wall Drain	Sq Yd		92.7	92.7
Pipe Underdrains for Structures 4"	Foot		202	202
Structural Steel Removal	Pound		5056	5056
Drainage Scupper, DS-11	Each		4	4

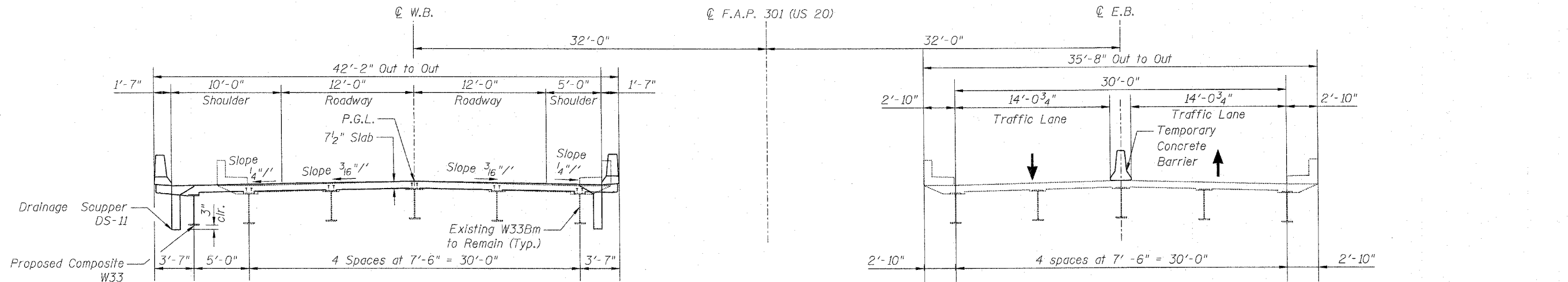
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CHECKED	JLA
DRAWN	GYR
CHECKED	SSM

**GENERAL NOTES AND
TOTAL BILL OF MATERIALS
F.A.P. ROUTE 301 (US 20)
OVER PRAIRIE ROAD
SECTION (2HB-2)D
WINNEBAGO COUNTY
STATION 841+89.60
STRUCTURE NO. 101-0051 (W.B.)
STRUCTURE NO. 101-0052 (E.B.)**

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 3 43 SHEETS
F.A.P. 301 (US 20)	(2HB -2)D	WINNEBAGO	107	25	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

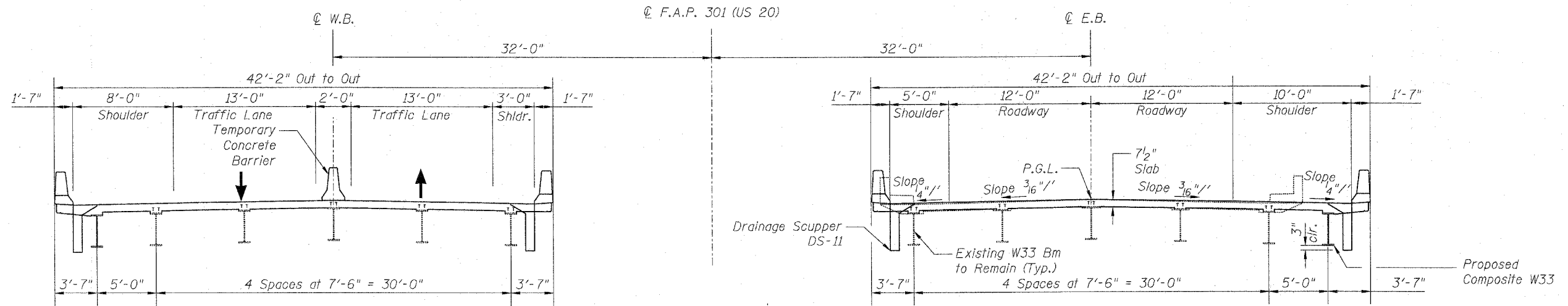
Contract #64B07



Stage I Construction

CROSS SECTION

Looking East



Stage II Construction

CROSS SECTION

Looking East

DESIGNED	SSM
CHECKED	JLA
DRAWN	GYR
CHECKED	SSM

STAGE CONSTRUCTION
F.A.P. ROUTE 301 (US 20)
OVER PRAIRIE ROAD
SECTION (2HB-2)D
WINNEBAGO COUNTY
STATION 841+89.60
STRUCTURE NO. 101-0051 (W.B.)
STRUCTURE NO. 101-0052 (E.B.)

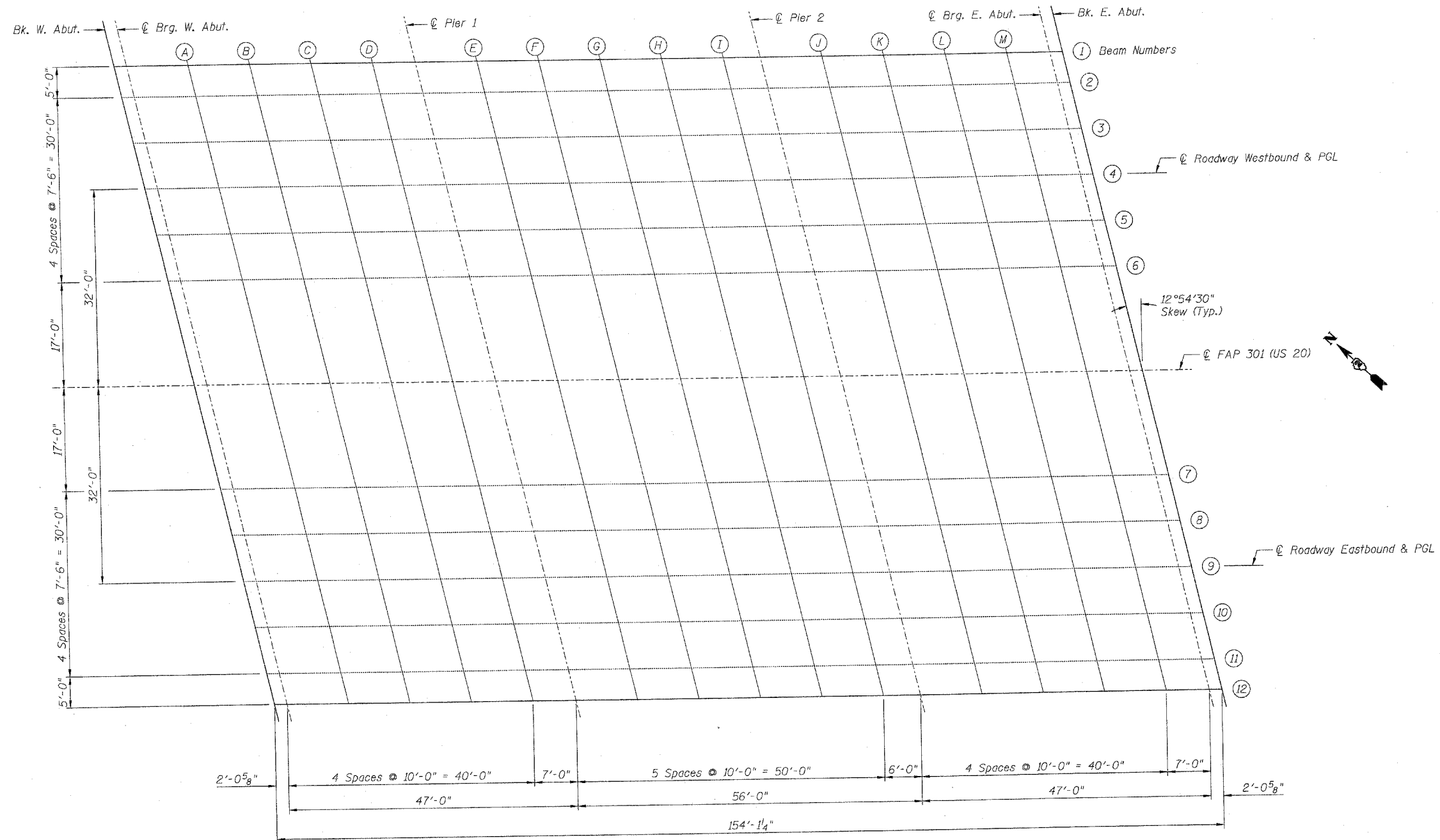
Plans Prepared by: Kudrna & Associates, Ltd.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

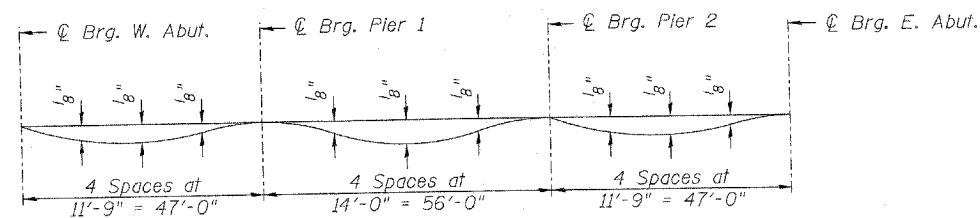
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 301 (US 20)	(2HB-2)D	WINNEBAGO	107	26
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

Contract #64B07

SHEET NO. 4
43 SHEETS



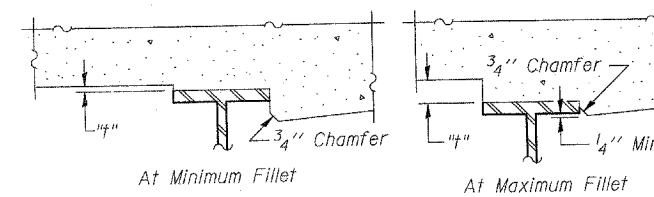
PLAN FOR TOP OF SLAB ELEVATIONS



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 "Theoretical Grade Elevations Adjusted for Dead Load Deflection".



FILLET HEIGHTS

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

Plans Prepared by: Zroka Engineering, P.C.

PLAN OF TOP OF SLAB
ELEVATIONS
F.A.P. ROUTE 301 (US 20)
OVER PRAIRIE ROAD
SECTION (2HB-2)D
WINNEBAGO COUNTY
STATION 841+89.60

STRUCTURE NO. 101-0051 (W.B.)
STRUCTURE NO. 101-0052 (E.B.)

DESIGNED	LAS
CHECKED	DAZ
DRAWN	SAW
CHECKED	LAS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 301 (US 20)	(2HB -2)D	WINNEBAGO	107	27
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 5
43 SHEETS

Contract #64B07

BEAM 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	841+00.50	-20.00	765.17	765.17
⊕ Brg. W. Abut.	841+02.55	-20.00	765.15	765.15
A	841+12.55	-20.00	765.05	765.06
B	841+22.55	-20.00	764.95	764.97
C	841+32.55	-20.00	764.85	764.86
D	841+42.55	-20.00	764.75	764.75
⊕ Pier 1	841+49.55	-20.00	764.68	764.68
E	841+59.55	-20.00	764.58	764.59
F	841+69.55	-20.00	764.48	764.49
G	841+79.55	-20.00	764.38	764.39
H	841+89.55	-20.00	764.28	764.29
I	841+99.55	-20.00	764.18	764.18
⊕ Pier 2	842+05.55	-20.00	764.12	764.12
J	842+15.55	-20.00	764.02	764.03
K	842+25.55	-20.00	763.92	763.93
L	842+35.55	-20.00	763.82	763.84
M	842+45.55	-20.00	763.72	763.73
⊕ Brg. E. Abut.	842+52.55	-20.00	763.65	763.65
Bk. E. Abut.	842+54.60	-20.00	763.63	763.63

BEAM 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	841+01.64	-15.00	765.26	765.26
⊕ Brg. W. Abut.	841+03.69	-15.00	765.24	765.24
A	841+13.69	-15.00	765.14	765.15
B	841+23.69	-15.00	765.04	765.05
C	841+33.69	-15.00	764.94	764.95
D	841+43.69	-15.00	764.84	764.84
⊕ Pier 1	841+50.69	-15.00	764.77	764.77
E	841+60.69	-15.00	764.67	764.67
F	841+70.69	-15.00	764.57	764.58
G	841+80.69	-15.00	764.47	764.48
H	841+90.69	-15.00	764.37	764.38
I	842+00.69	-15.00	764.27	764.27
⊕ Pier 2	842+06.69	-15.00	764.21	764.21
J	842+16.69	-15.00	764.11	764.12
K	842+26.69	-15.00	764.01	764.02
L	842+36.69	-15.00	763.91	763.92
M	842+46.69	-15.00	763.81	763.82
⊕ Brg. E. Abut.	842+53.69	-15.00	763.74	763.74
Bk. E. Abut.	842+55.74	-15.00	763.72	763.72

BEAM 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	841+03.36	-7.50	765.38	765.38
⊕ Brg. W. Abut.	841+05.41	-7.50	765.36	765.36
A	841+15.41	-7.50	765.26	765.27
B	841+25.41	-7.50	765.16	765.17
C	841+35.41	-7.50	765.06	765.07
D	841+45.41	-7.50	764.96	764.96
⊕ Pier 1	841+52.41	-7.50	764.89	764.89
E	841+62.41	-7.50	764.79	764.79
F	841+72.41	-7.50	764.69	764.70
G	841+82.41	-7.50	764.59	764.60
H	841+92.41	-7.50	764.49	764.50
I	842+02.41	-7.50	764.39	764.39
⊕ Pier 2	842+08.41	-7.50	764.33	764.33
J	842+18.41	-7.50	764.23	764.24
K	842+28.41	-7.50	764.13	764.14
L	842+38.41	-7.50	764.03	764.04
M	842+48.41	-7.50	763.93	763.94
⊕ Brg. E. Abut.	842+55.41	-7.50	763.86	763.86
Bk. E. Abut.	842+57.46	-7.50	763.84	763.84

⊕ ROADWAY WESTBOUND & PGL AND BEAM 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	841+05.08	0.00	765.48	765.48
⊕ Brg. W. Abut.	841+07.13	0.00	765.46	765.46
A	841+17.13	0.00	765.36	765.37
B	841+27.13	0.00	765.26	765.27
C	841+37.13	0.00	765.16	765.17
D	841+47.13	0.00	765.06	765.06
⊕ Pier 1	841+54.13	0.00	764.99	764.99
E	841+64.13	0.00	764.89	764.89
F	841+74.13	0.00	764.79	764.80
G	841+84.13	0.00	764.69	764.70
H	841+94.13	0.00	764.59	764.60
I	842+04.13	0.00	764.49	764.49
⊕ Pier 2	842+10.13	0.00	764.43	764.43
J	842+20.13	0.00	764.33	764.34
K	842+30.13	0.00	764.23	764.24
L	842+40.13	0.00	764.13	764.14
M	842+50.13	0.00	764.03	764.04
⊕ Brg. E. Abut.	842+57.13	0.00	763.96	763.96
Bk. E. Abut.	842+59.18	0.00	763.94	763.94

BEAM 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	841+06.80	7.50	765.35	765.35
⊕ Brg. W. Abut.	841+08.85	7.50	765.33	765.33
A	841+18.85	7.50	765.23	765.24
B	841+28.85	7.50	765.13	765.14
C	841+38.85	7.50	765.03	765.04
D	841+48.85	7.50	764.93	764.93
⊕ Pier 1	841+55.85	7.50	764.86	764.86
E	841+65.85	7.50	764.76	764.76
F	841+75.85	7.50	764.66	764.67
G	841+85.85	7.50	764.56	764.57
H	841+95.85	7.50	764.46	764.47
I	842+05.85	7.50	764.36	764.36
⊕ Pier 2	842+11.85	7.50	764.30	764.30
J	842+21.85	7.50	764.20	764.21
K	842+31.85	7.50	764.10	764.11
L	842+41.85	7.50	764.00	764.01
M	842+51.85	7.50	763.90	763.91
⊕ Brg. E. Abut.	842+58.85	7.50	763.83	763.83
Bk. E. Abut.	842+60.90	7.50	763.80	763.80

BEAM 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	841+08.52	15.00	765.20	765.20
⊕ Brg. W. Abut.	841+10.57	15.00	765.18	765.18
A	841+20.57	15.00	765.08	765.09
B	841+30.57	15.00	764.98	764.99
C	841+40.57	15.00	764.88	764.89
D	841+50.57	15.00	764.78	764.78
⊕ Pier 1	841+57.57	15.00	764.71	764.71
E	841+67.57	15.00	764.61	764.61
F	841+77.57	15.00	764.51	764.52
G	841+87.57	15.00	764.41	764.42
H	841+97.57	15.00	764.31	764.32
I	842+07.57	15.00	764.21	764.21
⊕ Pier 2	842+13.57	15.00	764.15	764.15
J	842+23.57	15.00	764.05	764.06
K	842+33.57	15.00	763.95	763.96
L	842+43.57	15.00	763.85	763.86
M	842+53.57	15.00	763.75	763.76
⊕ Brg. E. Abut.	842+60.57	15.00	763.68	763.68
Bk. E. Abut.	842+62.62	15.00	763.65	763.65

DESIGNED LAS
CHECKED DAZ
DRAWN SAW
CHECKED LAS

E-S

11-1-06

Plans Prepared by: Zroka Engineering, P.C.

TOP OF SLAB ELEVATIONS
WESTBOUND
F.A.P. ROUTE 301 (US 20)
OVER PRAIRIE ROAD
SECTION (2HB-2)D
WINNEBAGO COUNTY
STATION 841+89.60
STRUCTURE NO. 101-0051 (W.B.)
STRUCTURE NO. 101-0052 (E.B.)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO. F.A.P. 301 (US 20)	SECTION (2HB-2)D	COUNTY WINNEBAGO	TOTAL SHEETS 107	SHEET NO. 28	SHEET NO. 6 43 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

Contract #64B07

BEAM 7

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. W. ABUT	841+16.31	-15.00	764.95	764.95
⊙ BRG. W. ABUT.	841+18.36	-15.00	764.93	764.93
A	841+28.36	-15.00	764.84	764.85
B	841+38.36	-15.00	764.75	764.77
C	841+48.36	-15.00	764.67	764.68
D	841+58.36	-15.00	764.58	764.58
⊙ PIER	841+65.36	-15.00	764.51	764.51
E	841+75.36	-15.00	764.43	764.43
F	841+85.36	-15.00	764.34	764.35
G	841+95.36	-15.00	764.25	764.26
H	842+05.36	-15.00	764.16	764.17
I	842+15.36	-15.00	764.07	764.07
⊙ PIER	842+21.36	-15.00	764.02	764.02
J	842+31.36	-15.00	763.93	763.93
K	842+41.36	-15.00	763.84	763.85
L	842+51.36	-15.00	763.75	763.76
M	842+61.36	-15.00	763.66	763.67
⊙ BRG. E. ABUT.	842+68.36	-15.00	763.60	763.60
BK. E. ABUT.	842+70.41	-15.00	763.58	763.58

BEAM 8

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. W. ABUT	841+18.03	-7.50	765.07	765.07
⊙ BRG. W. ABUT.	841+20.08	-7.50	765.05	765.05
A	841+30.08	-7.50	764.96	764.97
B	841+40.08	-7.50	764.87	764.89
C	841+50.08	-7.50	764.78	764.79
D	841+60.08	-7.50	764.69	764.70
⊙ PIER	841+67.08	-7.50	764.63	764.63
E	841+77.08	-7.50	764.54	764.55
F	841+87.08	-7.50	764.45	764.46
G	841+97.08	-7.50	764.36	764.38
H	842+07.08	-7.50	764.28	764.28
I	842+17.08	-7.50	764.19	764.19
⊙ PIER	842+23.08	-7.50	764.13	764.13
J	842+33.08	-7.50	764.04	764.05
K	842+43.08	-7.50	763.96	763.97
L	842+53.08	-7.50	763.87	763.88
M	842+63.08	-7.50	763.78	763.78
⊙ BRG. E. ABUT.	842+70.08	-7.50	763.71	763.71
BK. E. ABUT.	842+72.13	-7.50	763.70	763.70

BEAM 9 & PROFILE GRADE LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. W. ABUT	841+19.75	0.00	765.17	765.17
⊙ BRG. W. ABUT.	841+21.80	0.00	765.15	765.15
A	841+31.80	0.00	765.06	765.07
B	841+41.80	0.00	764.97	764.99
C	841+51.80	0.00	764.88	764.90
D	841+61.80	0.00	764.80	764.80
⊙ PIER	841+68.80	0.00	764.73	764.73
E	841+78.80	0.00	764.64	764.65
F	841+88.80	0.00	764.56	764.57
G	841+98.80	0.00	764.47	764.48
H	842+08.80	0.00	764.38	764.39
I	842+18.80	0.00	764.29	764.29
⊙ PIER	842+24.80	0.00	764.24	764.24
J	842+34.80	0.00	764.15	764.15
K	842+44.80	0.00	764.06	764.07
L	842+54.80	0.00	763.97	763.98
M	842+64.80	0.00	763.88	763.89
⊙ BRG. E. ABUT.	842+71.80	0.00	763.82	763.82
BK. E. ABUT.	842+73.85	0.00	763.80	763.80

BEAM 10

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. W. ABUT	841+21.47	7.50	765.04	765.04
⊙ BRG. W. ABUT.	841+23.52	7.50	765.02	765.02
A	841+33.52	7.50	764.93	764.94
B	841+43.52	7.50	764.84	764.86
C	841+53.52	7.50	764.75	764.76
D	841+63.52	7.50	764.66	764.67
⊙ PIER	841+70.52	7.50	764.60	764.60
E	841+80.52	7.50	764.51	764.52
F	841+90.52	7.50	764.42	764.43
G	842+00.52	7.50	764.33	764.35
H	842+10.52	7.50	764.24	764.25
I	842+20.52	7.50	764.16	764.16
⊙ PIER	842+26.52	7.50	764.10	764.10
J	842+36.52	7.50	764.01	764.02
K	842+46.52	7.50	763.92	763.94
L	842+56.52	7.50	763.84	763.85
M	842+66.52	7.50	763.75	763.75
⊙ BRG. E. ABUT.	842+73.52	7.50	763.68	763.68
BK. E. ABUT.	842+75.57	7.50	763.67	763.67

BEAM 11

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. W. ABUT	841+23.19	15.00	764.89	764.89
⊙ BRG. W. ABUT.	841+25.24	15.00	764.87	764.87
A	841+35.24	15.00	764.78	764.79
B	841+45.24	15.00	764.69	764.71
C	841+55.24	15.00	764.60	764.62
D	841+65.24	15.00	764.52	764.52
⊙ PIER	841+72.24	15.00	764.45	764.45
E	841+82.24	15.00	764.36	764.37
F	841+92.24	15.00	764.27	764.29
G	842+02.24	15.00	764.19	764.20
H	842+12.24	15.00	764.11	764.11
I	842+22.24	15.00	764.01	764.01
⊙ PIER	842+28.24	15.00	763.95	763.95
J	842+38.24	15.00	763.87	763.87
K	842+48.24	15.00	763.78	763.79
L	842+58.24	15.00	763.69	763.70
M	842+68.24	15.00	763.60	763.61
⊙ BRG. E. ABUT.	842+75.24	15.00	763.54	763.54
BK. E. ABUT.	842+77.29	15.00	763.52	763.52

BEAM 12

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. W. ABUT	841+24.33	20.00	764.78	764.78
⊙ BRG. W. ABUT.	841+26.38	20.00	764.76	764.76
A	841+36.38	20.00	764.67	764.68
B	841+46.38	20.00	764.58	764.59
C	841+56.38	20.00	764.49	764.50
D	841+66.38	20.00	764.40	764.40
⊙ PIER	841+73.38	20.00	764.34	764.34
E	841+83.38	20.00	764.25	764.25
F	841+93.38	20.00	764.16	764.17
G	842+03.38	20.00	764.07	764.08
H	842+13.38	20.00	763.98	763.99
I	842+23.38	20.00	763.89	763.90
⊙ PIER	842+29.38	20.00	763.84	763.84
J	842+39.38	20.00	763.75	763.76
K	842+49.38	20.00	763.66	763.67
L	842+59.38	20.00	763.57	763.59
M	842+69.38	20.00	763.48	763.49
⊙ BRG. E. ABUT.	842+76.38	20.00	763.42	763.42
BK. E. ABUT.	842+78.43	20.00	763.40	763.40

DESIGNED SSM
CHECKED JLA
DRAWN GYR
CHECKED SSM

TOP OF SLAB ELEVATIONS
EASTBOUND
F.A.P. ROUTE 301 (US 20)
OVER PRAIRIE ROAD
SECTION (2HB-2)D
WINNEBAGO COUNTY
STATION 841+89.60
STRUCTURE NO. 101-0051 (W.B.)
STRUCTURE NO. 101-0052 (E.B.)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 301 (US 20)	(2HB -2)D	WINNEBAGO	107	29
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 7
43 SHEETS

Contract #64B07

NORTH CURB LINE

Location	Station	Offset	Theoretical Grade Elevations
End W. Appr. Pav't.	840+70.04	-22.00	765.43
A	840+80.04	-22.00	765.33
B	840+90.04	-22.00	765.23
Bk. W. Abut.	841+00.04	-22.00	765.13

NORTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
End W. Appr. Pav't.	840+72.33	-12.00	765.62
A	840+82.33	-12.00	765.52
B	840+92.33	-12.00	765.42
Bk. W. Abut.	841+02.33	-12.000	765.32

☉ WB ROADWAY & PGL

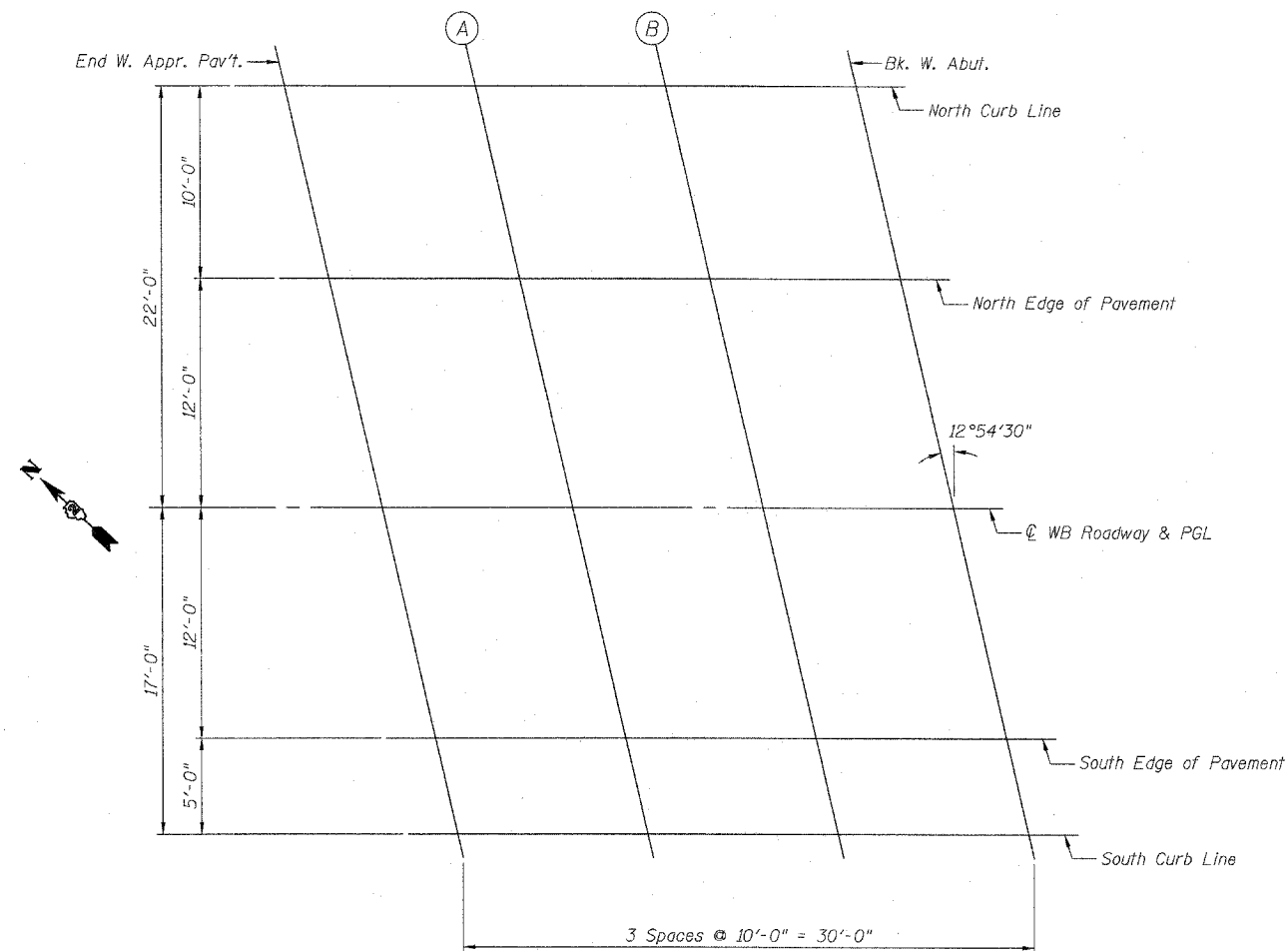
Location	Station	Offset	Theoretical Grade Elevations
End W. Appr. Pav't.	840+75.08	0.00	765.78
A	840+85.08	0.00	765.68
B	840+95.08	0.00	765.58
Bk. W. Abut.	841+05.08	0.00	765.48

SOUTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
End W. Appr. Pav't.	840+77.83	12.00	765.57
A	840+87.83	12.00	765.47
B	840+97.83	12.00	765.37
Bk. W. Abut.	841+07.83	12.00	765.27

SOUTH CURB LINE

Location	Station	Offset	Theoretical Grade Elevations
End W. Appr. Pav't.	840+78.98	17.00	765.45
A	840+88.98	17.00	765.35
B	840+98.98	17.00	765.25
Bk. W. Abut.	841+08.98	17.00	765.15



PLAN

DESIGNED	LAS
CHECKED	DAZ
DRAWN	SAW
CHECKED	LAS

TOP OF SLAB ELEVATIONS
NORTHWEST APPROACH
F.A.P. ROUTE 301 (US 20)
OVER PRAIRIE ROAD
SECTION (2HB-2)D
WINNEBAGO COUNTY
STATION 841+89.60
STRUCTURE NO. 101-0051 (W.B.)
STRUCTURE NO. 101-0052 (E.B.)

Plans Prepared by: Zroka Engineering, P.C.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 8 43 SHEETS
F.A.P. 301 (US 20)	(2HB-2D)	WINNEBAGO	107	30	
FED. ROAD DIST. NO. 7		ILLINOIS FED. AID PROJECT			

Contract #64B07

NORTH CURB LINE

Location	Station	Offset	Theoretical Grade Elevations
Bk. E. Abut.	842+54.14	-22.00	763.59
A	842+64.14	-22.00	763.49
B	842+74.14	-22.00	763.39
End E. Appr. Pav't.	842+84.14	-22.00	763.29

NORTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
Bk. E. Abut.	842+56.43	-12.00	763.78
A	842+66.43	-12.00	763.68
B	842+76.43	-12.00	763.58
End E. Appr. Pav't.	842+86.43	-12.00	763.48

☉ WB ROADWAY & PGL

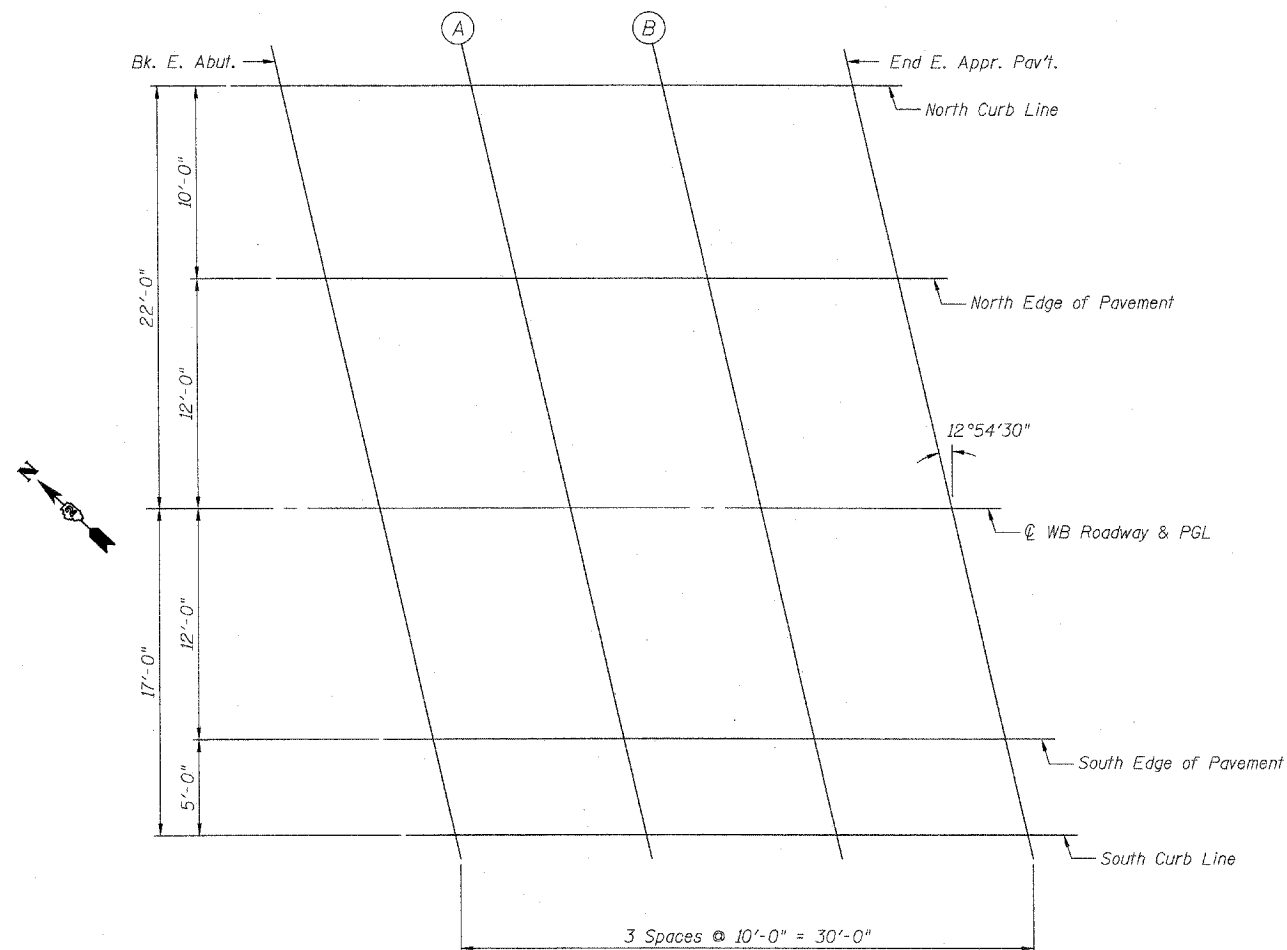
Location	Station	Offset	Theoretical Grade Elevations
Bk. E. Abut.	842+59.18	0.00	763.94
A	842+69.18	0.00	763.84
B	842+79.18	0.00	763.74
End E. Appr. Pav't.	842+89.18	0.00	763.64

SOUTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
Bk. E. Abut.	842+61.93	12.00	763.72
A	842+71.93	12.00	763.62
B	842+81.93	12.00	763.52
End E. Appr. Pav't.	842+91.93	12.00	763.42

SOUTH CURB LINE

Location	Station	Offset	Theoretical Grade Elevations
Bk. E. Abut.	842+63.08	17.00	763.61
A	842+73.08	17.00	763.51
B	842+83.08	17.00	763.41
End E. Appr. Pav't.	842+93.08	17.00	763.31



DESIGNED	LAS
CHECKED	DAZ
DRAWN	SAW
CHECKED	LAS

TOP OF SLAB ELEVATIONS
NORTHEAST APPROACH
F.A.P. ROUTE 301 (US 20)
OVER PRAIRIE ROAD
SECTION (2HB-2D)
WINNEBAGO COUNTY
STATION 841+89.60
STRUCTURE NO. 101-0051 (W.B.)
STRUCTURE NO. 101-0052 (E.B.)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	ISTH SHEETS	SHEET NO.	SHEET NO. 9 43 SHEETS
F.A.P. 301 (US 20)	(2HB -2)D	WINNEBAGO	107	31	
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-		

Contract #64B07

NORTH CURB LINE

Location	Station	Offset	Theoretical Grade Elevations
End W. Appr. Pav't.	840+85.85	-17.00	765.18
C	840+95.85	-17.00	765.10
D	841+05.85	-17.00	765.01
Bk. W. Abut.	841+15.85	-17.00	764.92

NORTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
End W. Appr. Pav't.	840+87.00	-12.00	765.28
C	840+97.00	-12.00	765.19
D	841+07.00	-12.00	765.10
Bk. W. Abut.	841+17.00	-12.00	765.01

☉ EB ROADWAY & PGL

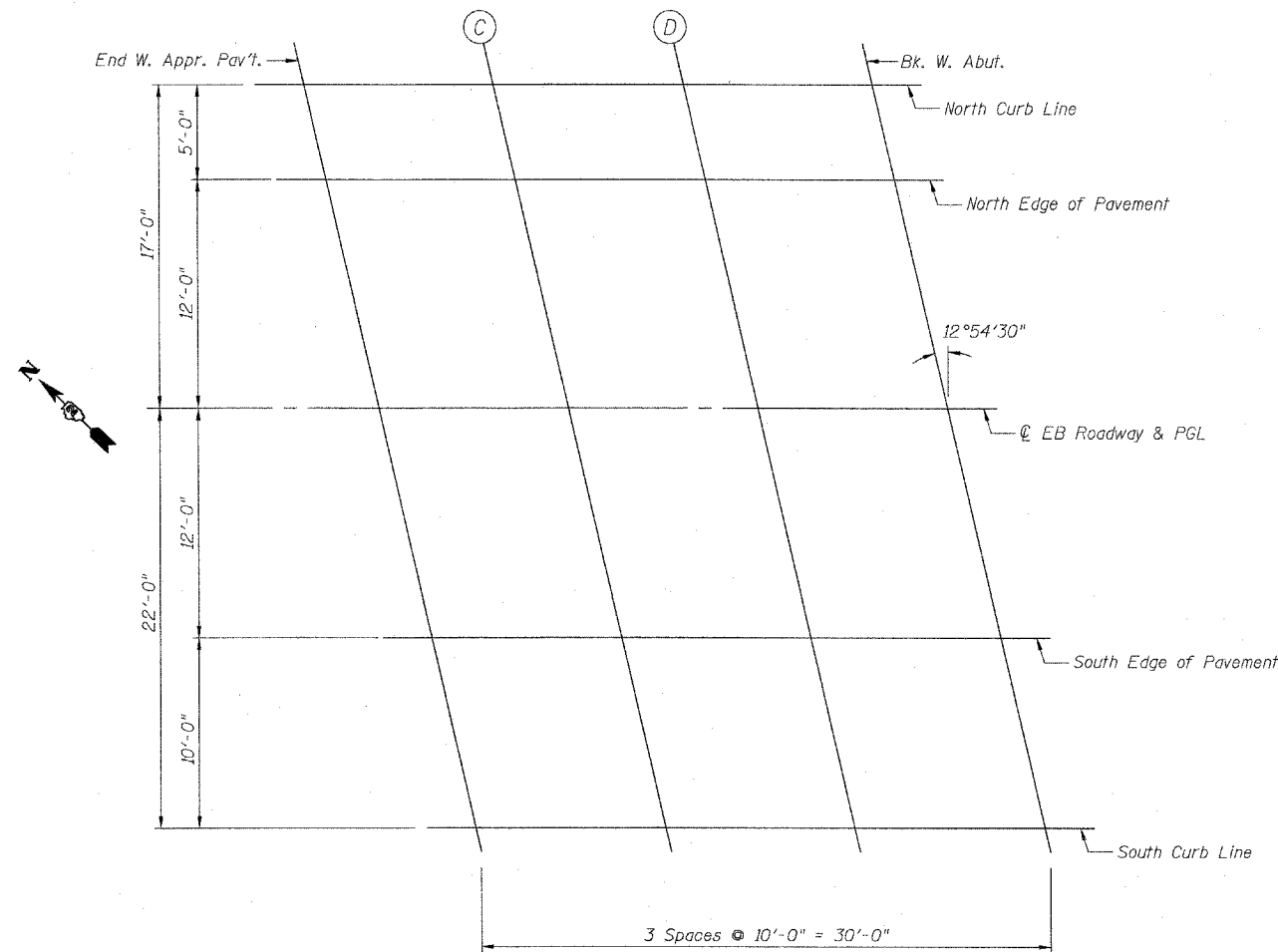
Location	Station	Offset	Theoretical Grade Elevations
End W. Appr. Pav't.	840+89.75	0.00	765.44
C	840+99.75	0.00	765.35
D	841+09.75	0.00	765.26
Bk. W. Abut.	841+19.75	0.00	765.17

SOUTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
End W. Appr. Pav't.	840+92.50	12.00	765.22
C	841+02.50	12.00	765.13
D	841+12.50	12.00	765.04
Bk. W. Abut.	841+22.50	12.00	764.95

SOUTH CURB LINE

Location	Station	Offset	Theoretical Grade Elevations
End W. Appr. Pav't.	840+94.79	22.00	764.99
C	841+04.79	22.00	764.90
D	841+14.79	22.00	764.81
Bk. W. Abut.	841+24.79	22.00	764.72



PLAN

DESIGNED	SSM
CHECKED	JLA
DRAWN	GYR
CHECKED	SSM

TOP OF SLAB ELEVATIONS
SOUTHWEST APPROACH
F.A.P. ROUTE 301 (US 20)
OVER PRAIRIE ROAD
SECTION (2HB-2)D
WINNEBAGO COUNTY
STATION 841+89.60
STRUCTURE NO. 101-0051 (W.B.)
STRUCTURE NO. 101-0052 (E.B.)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET NO.
F.A.P. 301 (US 20)	(2HB-2D)	WINNEBAGO	107	32
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

Contract #64B07

NORTH CURB LINE

Location	Station	Offset	Theoretical Grade Elevations
Bk. E. Abut.	842+69.95	-17.00	763.55
C	842+79.95	-17.00	763.46
D	842+89.95	-17.00	763.37
End E. Appr. Pav't.	842+99.95	-17.00	763.28

NORTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
Bk. E. Abut.	842+71.10	-12.00	763.43
C	842+81.10	-12.00	763.55
D	842+91.10	-12.00	763.46
End E. Appr. Pav't.	843+01.10	-12.00	763.37

☉ EB ROADWAY & PGL

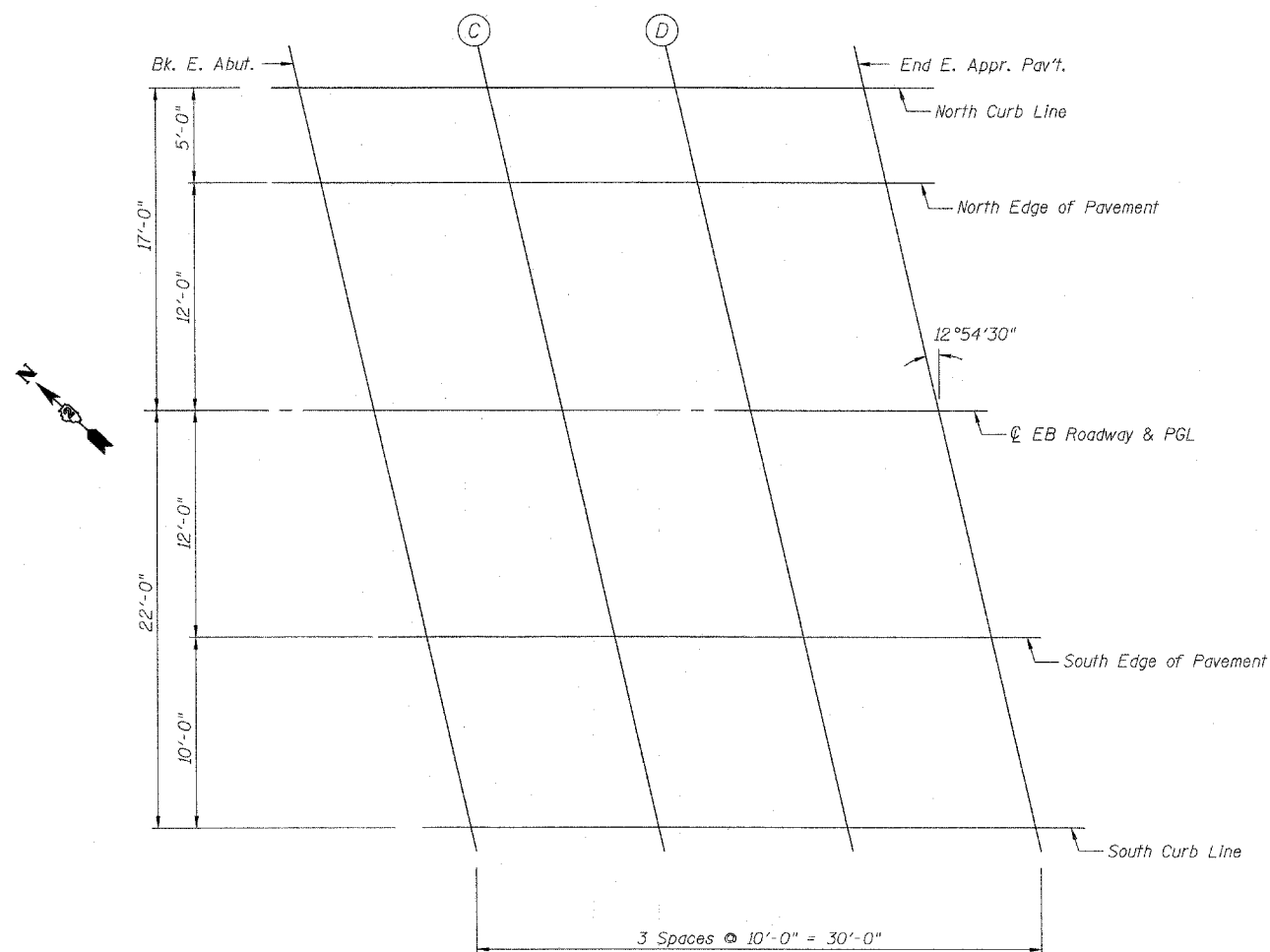
Location	Station	Offset	Theoretical Grade Elevations
Bk. E. Abut.	842+73.85	0.00	763.80
C	842+83.85	0.00	763.71
D	842+93.85	0.00	763.62
End E. Appr. Pav't.	843+03.85	0.00	763.53

SOUTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
Bk. E. Abut.	842+76.60	12.00	763.58
C	842+86.60	12.00	763.49
D	842+96.60	12.00	763.41
End E. Appr. Pav't.	843+06.60	12.00	763.32

SOUTH CURB LINE

Location	Station	Offset	Theoretical Grade Elevations
Bk. E. Abut.	842+78.89	22.00	763.35
C	842+88.89	22.00	763.36
D	842+98.89	22.00	763.28
End E. Appr. Pav't.	843+08.89	22.00	763.19



PLAN

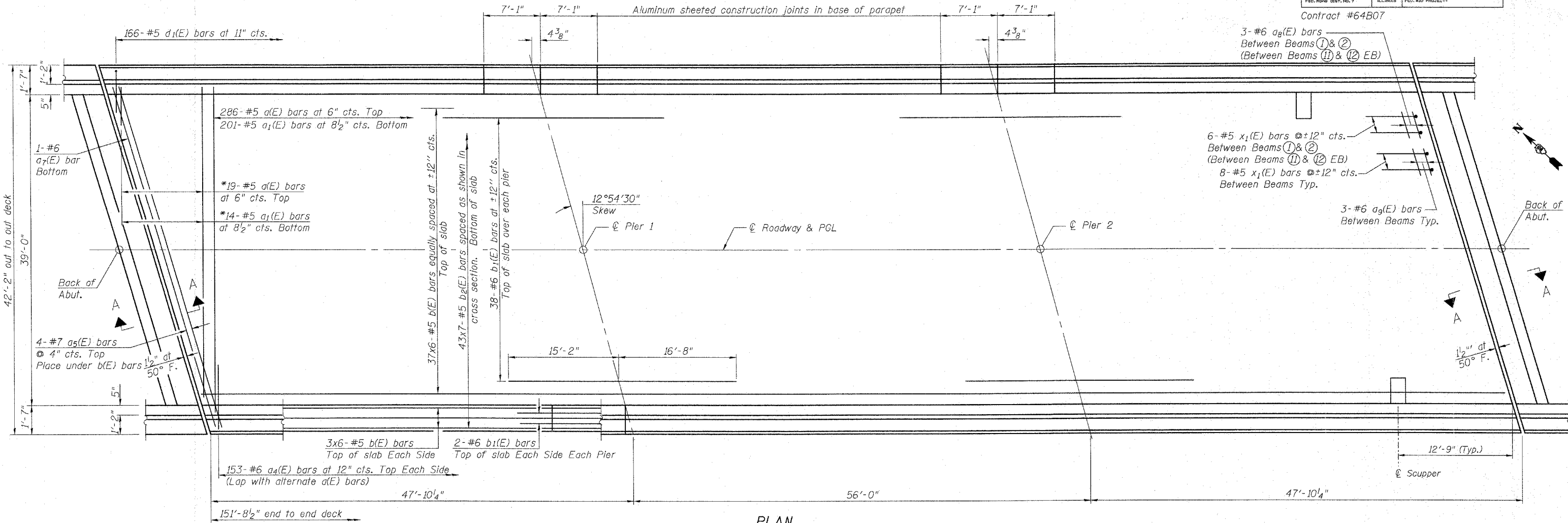
DESIGNED	SSM
CHECKED	JLA
DRAWN	GYR
CHECKED	SSM

TOP OF SLAB ELEVATIONS
SOUTHEAST APPROACH
F.A.P. ROUTE 301 (US 20)
OVER PRAIRIE ROAD
SECTION (2HB-2D)
WINNEBAGO COUNTY
STATION 841+89.60
STRUCTURE NO. 101-0051 (W.B.)
STRUCTURE NO. 101-0052 (E.B.)

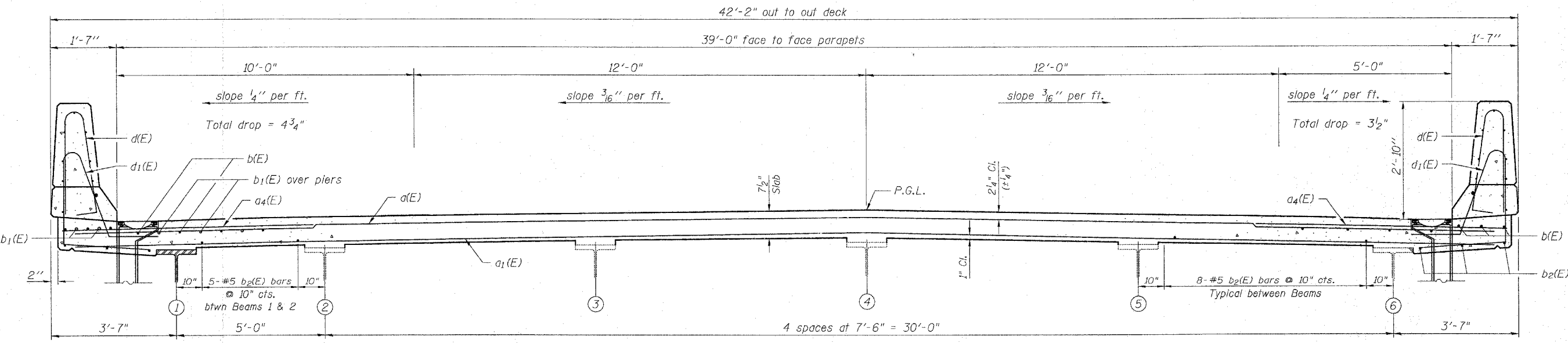
* Order a(E) & a₁(E) bars full length.
Cut to fit skew and use remainder of bars in opposite end.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	STATION	SHEET NO.	SHEET NO. 11
F.A.P. 301 (US 20)	(2HB-2)D	WINNEBAGO	107	33	43 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			



PLAN



CROSS SECTION
(Looking East)

DESIGNED	LAS
CHECKED	DAZ
DRAWN	SAW
CHECKED	LAS

MINIMUM BAR LAP
#5 bar = 2'-2"
#6 bar = 2'-7"
#7 bar = 3'-5"

Note: WB deck shown, EB similar

Notes:
Cut longitudinal reinforcement to clear scuppers.
See Sheet 12 of 43 for superstructure details and Bill of Material.
Bars indicated thus 43x7-#5 etc. indicates 43 lines of bars with 7 lengths per line.
See Sheet 12 of 43 for parapet reinforcement.

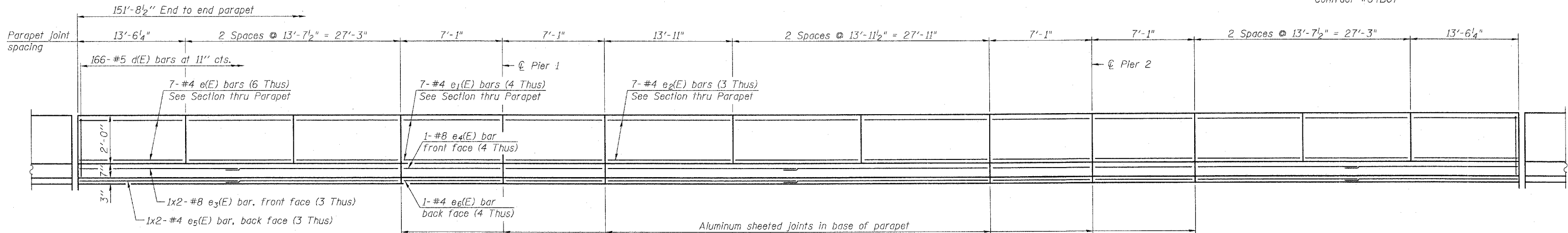
SUPERSTRUCTURE PLAN
F.A.P. ROUTE 301 (US 20)
OVER PRAIRIE ROAD
SECTION (2HB-2)D
WINNEBAGO COUNTY
STATION 841+89.60

STRUCTURE NO. 101-0051 (W.B.)
STRUCTURE NO. 101-0052 (E.B.)

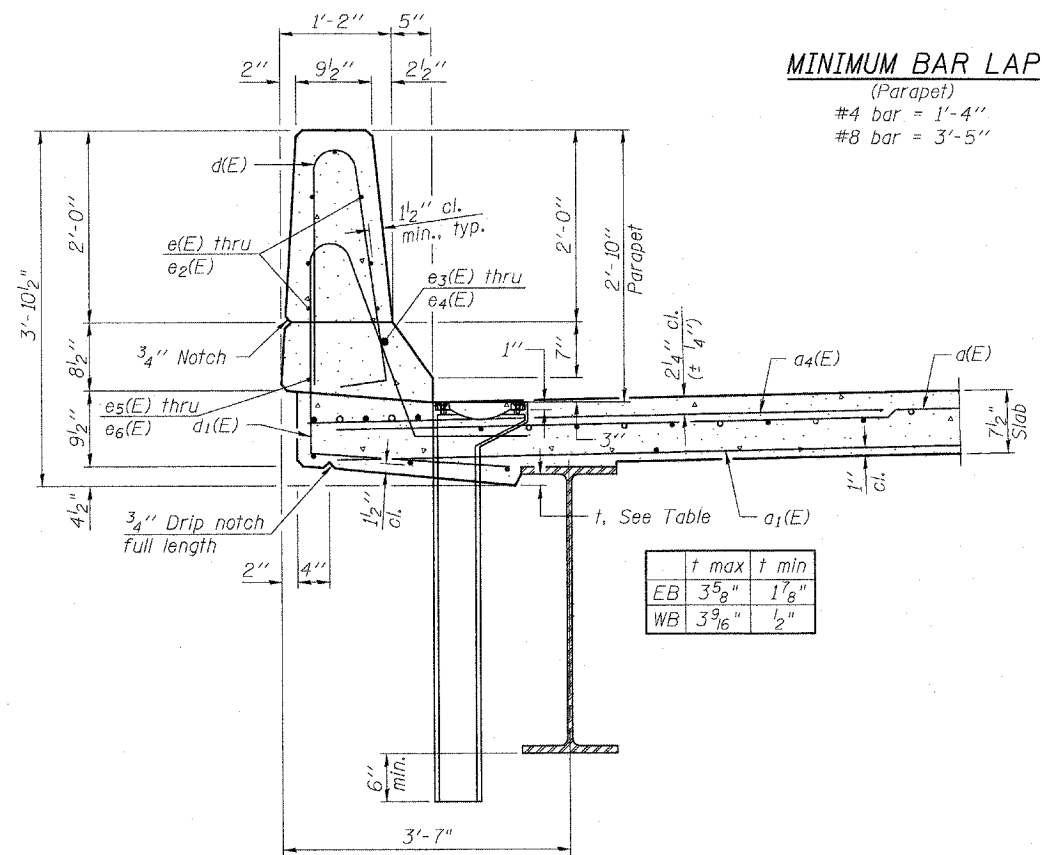
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 301 (US 20)	(2HB -2D)	WINNEBAGO	107	34
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

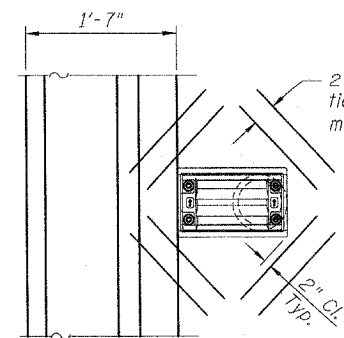
Contract #64B07



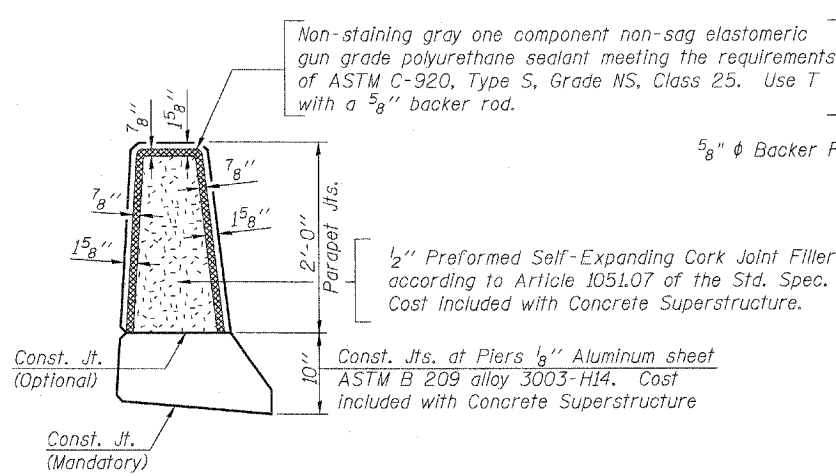
INSIDE ELEVATION OF PARAPET



SECTION THRU PARAPET



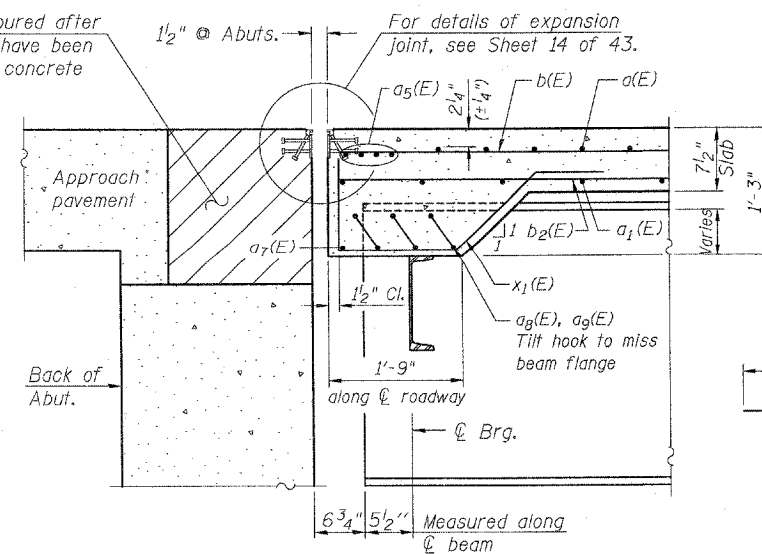
PLAN



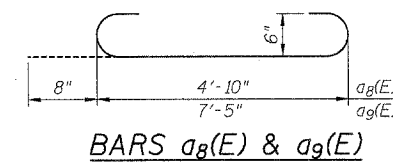
PARAPET JOINT DETAILS

Notes:
The exterior surfaces of the floor drains shall be painted with the finish coat as specified in the special provisions for Cleaning and Painting New Metal Structures. The exterior surfaces of the drains shall be cleaned according to Steel Structures Painting Council's Spec. SSPC-SPI prior to painting.
Fiberglass pipe shall conform to ASTM D 2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum.

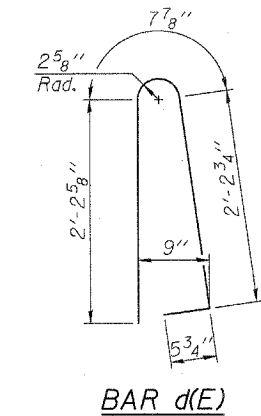
Hatched area to be poured after superstructure forms have been removed. Quantity of concrete included with Concrete Superstructure.



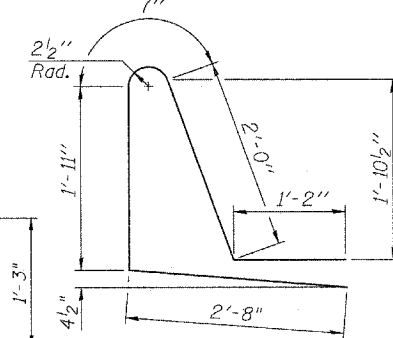
SECTION A-A



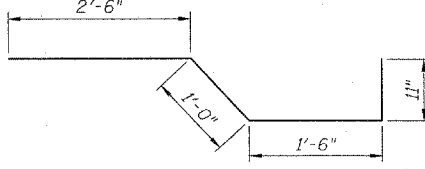
BARS a8(E) & a9(E)



BAR d(E)



BAR d1(E)



BAR x1(E)

SUPERSTRUCTURE
BILL OF MATERIAL FOR ONE DECK

Bar	No.	Size	Length	Shape
a(E)	305	#5	41'-6"	—
a1(E)	215	#5	41'-0"	—
a4(E)	306	#5	6'-0"	—
a5(E)	8	#7	42'-7"	—
a6(E)	16	#5	1'-6"	—
a7(E)	2	#6	42'-0"	—
a8(E)	6	#6	6'-2"	U
a9(E)	24	#6	8'-9"	U
b(E)	258	#5	27'-2"	—
b1(E)	84	#6	31'-10"	—
b2(E)	301	#5	23'-7"	—
d(E)	332	#5	5'-7"	L
d1(E)	332	#5	8'-4"	L
e(E)	84	#4	13'-3"	—
e1(E)	56	#4	6'-9"	—
e2(E)	42	#4	13'-7"	—
e3(E)	12	#8	22'-8"	—
e4(E)	8	#8	6'-9"	—
e5(E)	12	#4	21'-7"	—
e6(E)	8	#4	6'-9"	—
x1(E)	76	#5	5'-11"	—
Item	Unit	Quantity		
Reinforcement Bars, Epoxy Coated	Pound	52,000		
Concrete Superstructure	Cu. Yds.	206.8		
Protective Coat	Sq. Yd.	804		
Bridge Deck Grooving	Sq. Yd.	624		

Bars indicated thus 1x2-#5 etc. indicates 1 line of bars with 2 lengths per line.

SUPERSTRUCTURE DETAILS
F.A.P. ROUTE 301 (US 20)
OVER PRAIRIE ROAD
SECTION (2HB-2D)
WINNEBAGO COUNTY
STATION 841+89.60
STRUCTURE NO. 101-0051 (W.B.)
STRUCTURE NO. 101-0052 (E.B.)

DESIGNED	LAS
CHECKED	DAZ
DRAWN	SAW
CHECKED	LAS

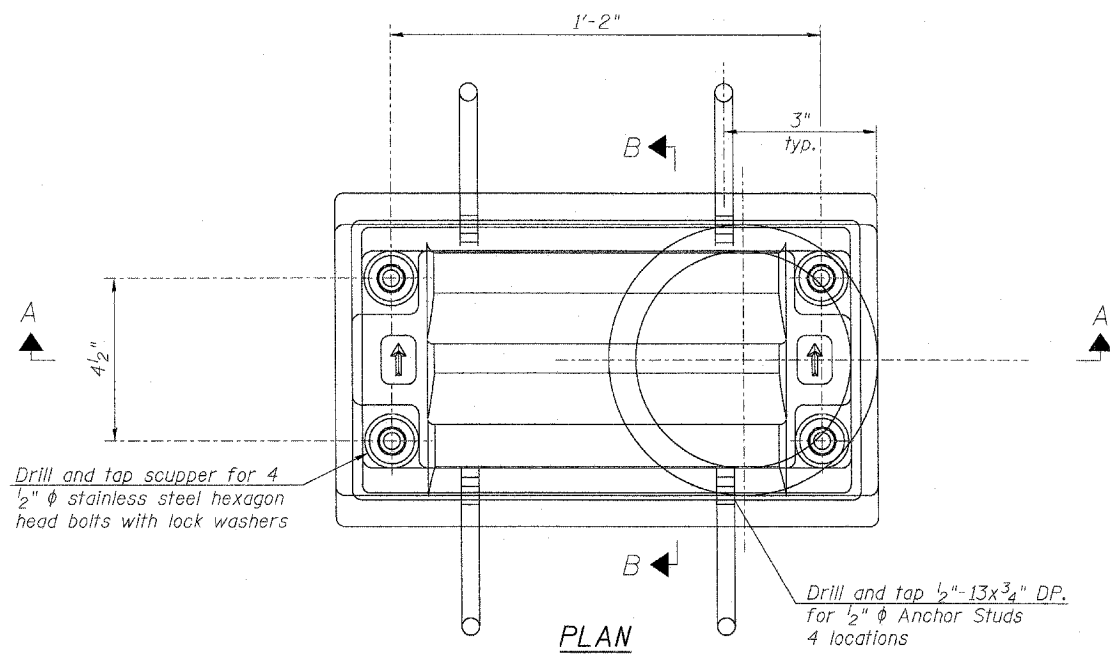
S-D 11-1-06

Plans Prepared by: Zroka Engineering, P.C.

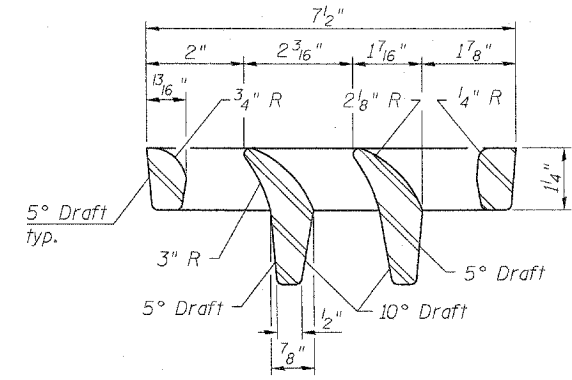
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEETS	SHEET NO.	SHEET NO. 13 43 SHEETS
F.A.P. 301 (US 20)	(2HB -2D)	WINNEBAGO	107	35	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

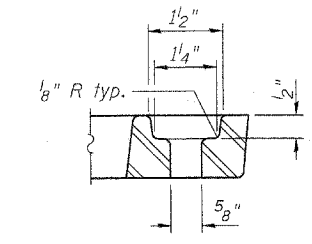
Contract #64B07



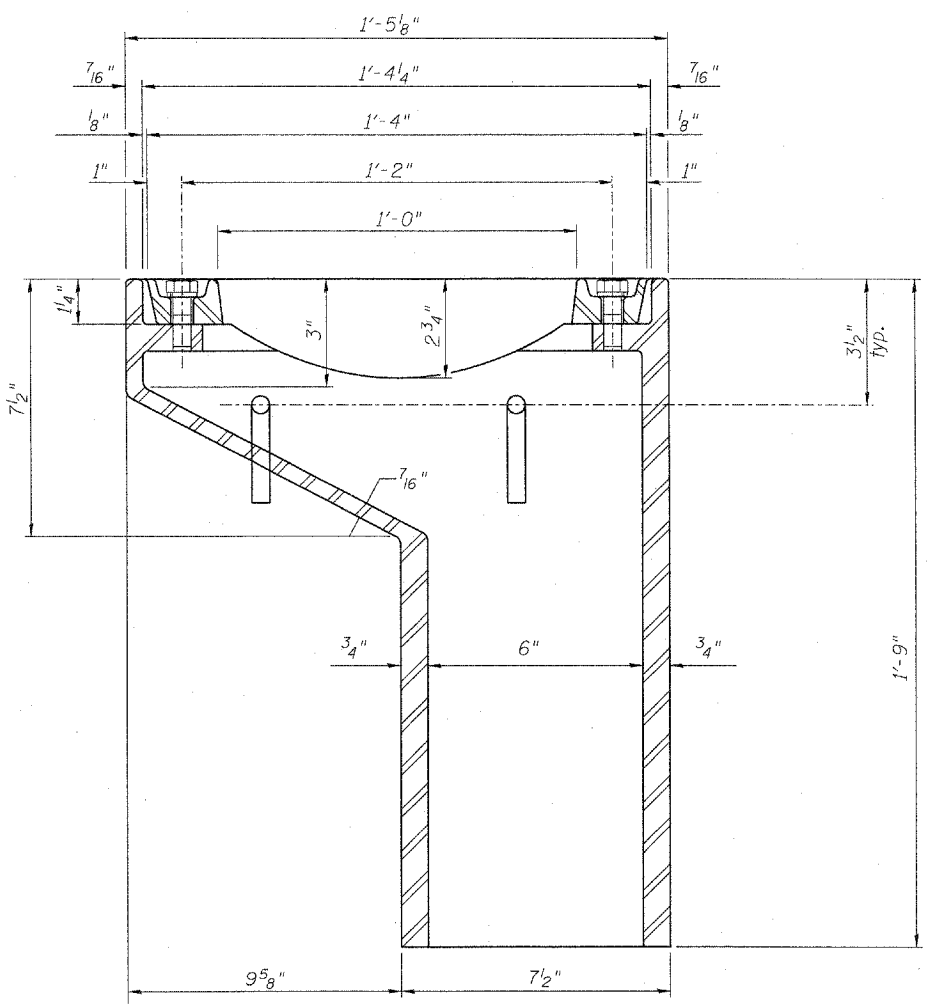
PLAN



VANE GRATE DETAIL

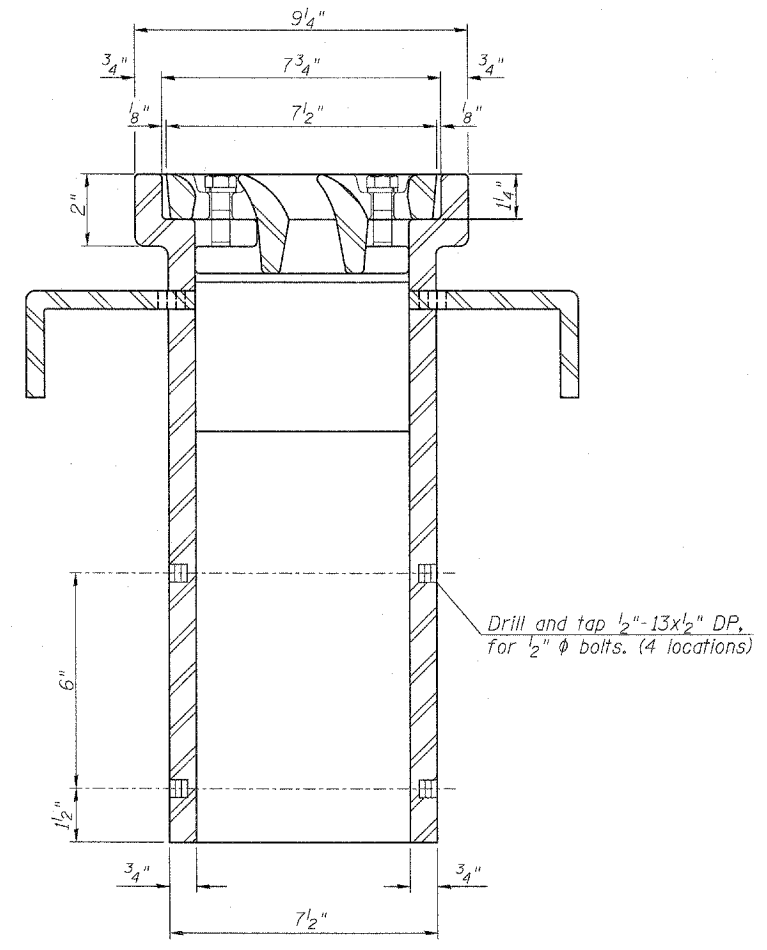


BOLT HOLE DETAIL



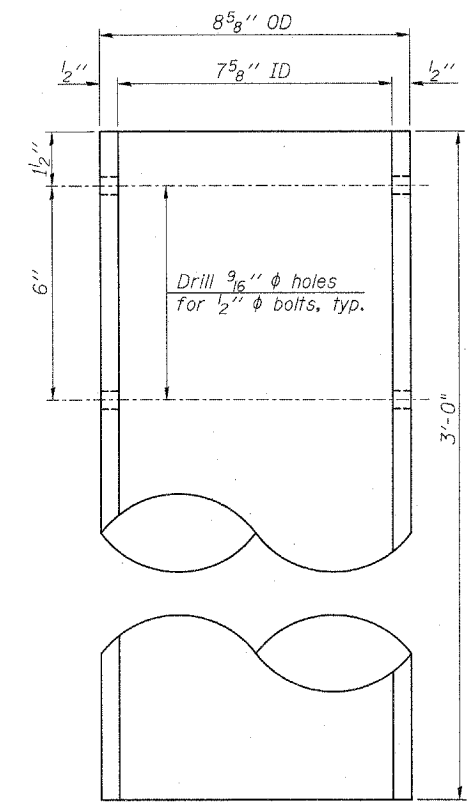
SECTION A-A

See Sheet 12 of 43 for scupper location relative to parapet.

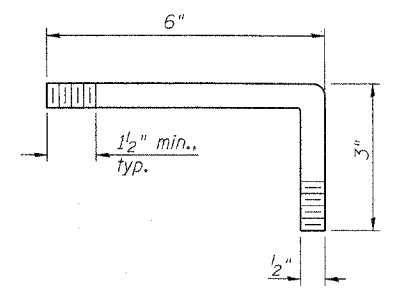


SECTION B-B

Drill and tap 1/2"-13x1/2" DP. for 1/2" φ bolts. (4 locations)



DOWNSPOUT



ANCHOR STUD DETAIL

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scupper, DS-II	Each	4

DRAINAGE SCUPPER, DS-II
F.A.P. ROUTE 301 (US 20)
OVER PRAIRIE ROAD
SECTION (2HB-2D)
WINNEBAGO COUNTY
STATION 841+89.60
STRUCTURE NO. 101-0051 (W.B.)
STRUCTURE NO. 101-0052 (E.B.)

DESIGNED	LAS
CHECKED	DAZ
DRAWN	SAW
CHECKED	LAS

DS-11 11-1-06

Plans Prepared by: Zroka Engineering, P.C.

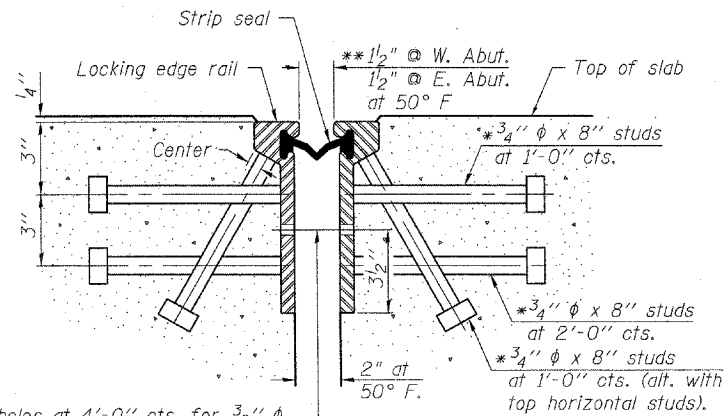
* Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

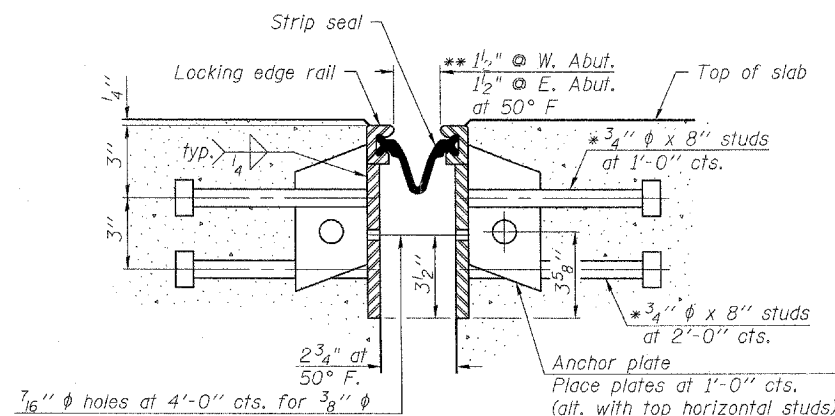
ROUTE NO.	SECTION	COUNTY	SHEETS	SHEET NO.	SHEET NO. 14 43 SHEETS
F.A.P. 301 (US 20)	(2HB-2D)	WINNEBAGO	107	36	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

Contract #64B07

** When joint is fixed, dimension is set at 1 1/2".



7/16" φ holes at 4'-0" cts. for 3/8" φ bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.



7/16" φ holes at 4'-0" cts. for 3/8" φ bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

Notes:

The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of 4 inches.

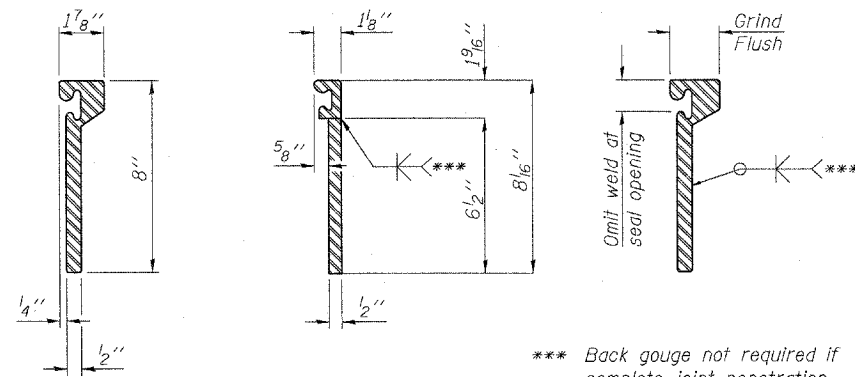
The height and thickness of the Locking Edge Rails shown are minimum dimensions. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed. Locking Edge Rails may be spliced at slope discontinuities and stage construction joints.

The manufacturer's recommended installation methods shall be followed. The joint opening and deck dimensions detailed on the superstructure are based on a rolled rail expansion joint. If the Contractor elects to use the welded rail expansion joint, the opening and deck dimensions shall be modified according to the dimensions detailed on this sheet. Required modifications shall be made at no additional cost to the State.

All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.

SECTION THRU
ROLLED RAIL JOINT

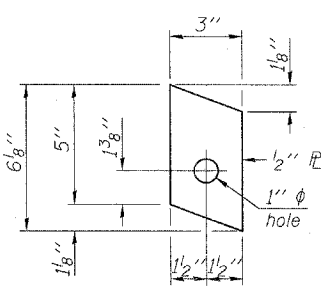
SECTION THRU
WELDED RAIL JOINT



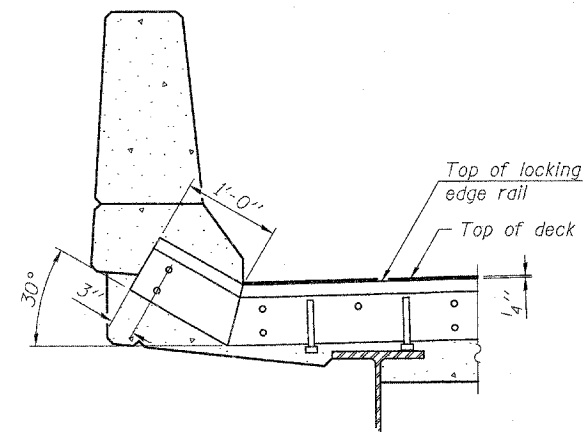
ROLLED
(EXTRUDED) RAIL WELDED RAIL

LOCKING EDGE
RAIL SPLICE

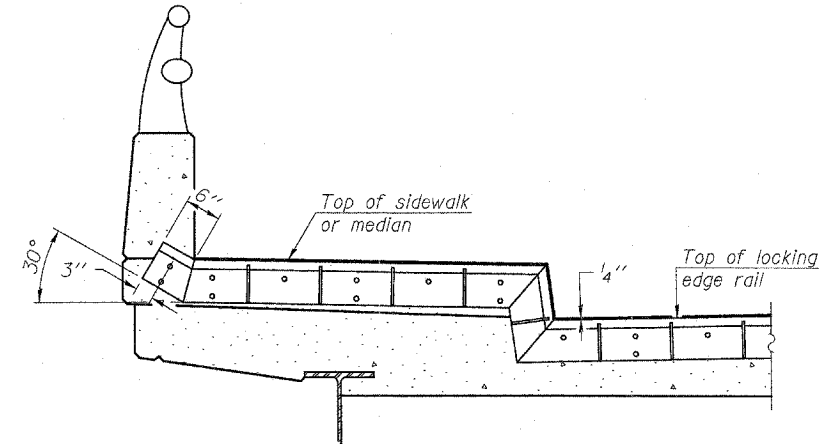
The inside of the locking edge rail groove shall be free of weld residue.



ANCHOR PLATE
(for welded rail)



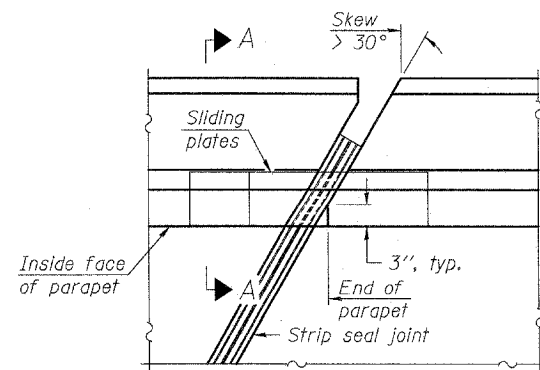
AT PARAPET



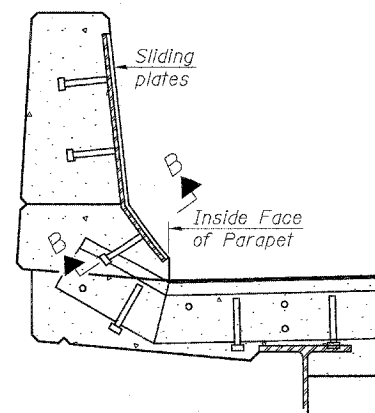
AT SIDEWALK OR MEDIAN

Shorter plates with a single row of studs at 12" cts. may be necessary on medians which are shallower than 9". See manufacturer's recommendation.

LOCKING EDGE RAILS



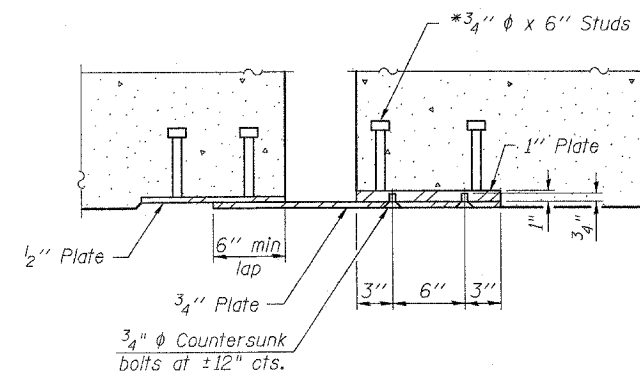
PLAN



SECTION A-A

POINT BLOCK DETAILS
(for skews > 30°)

TYPICAL END TREATMENTS



SECTION B-B

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	168

PREFORMED JOINT STRIP SEAL
F.A.P. ROUTE 301 (US 20)
OVER PRAIRIE ROAD
SECTION (2HB-2D)
WINNEBAGO COUNTY
STATION 841+89.60
STRUCTURE NO. 101-0051 (W.B.)
STRUCTURE NO. 101-0052 (E.B.)

DESIGNED	LAS
CHECKED	DAZ
DRAWN	SAW
CHECKED	LAS

EJ-SSJ

11-1-06

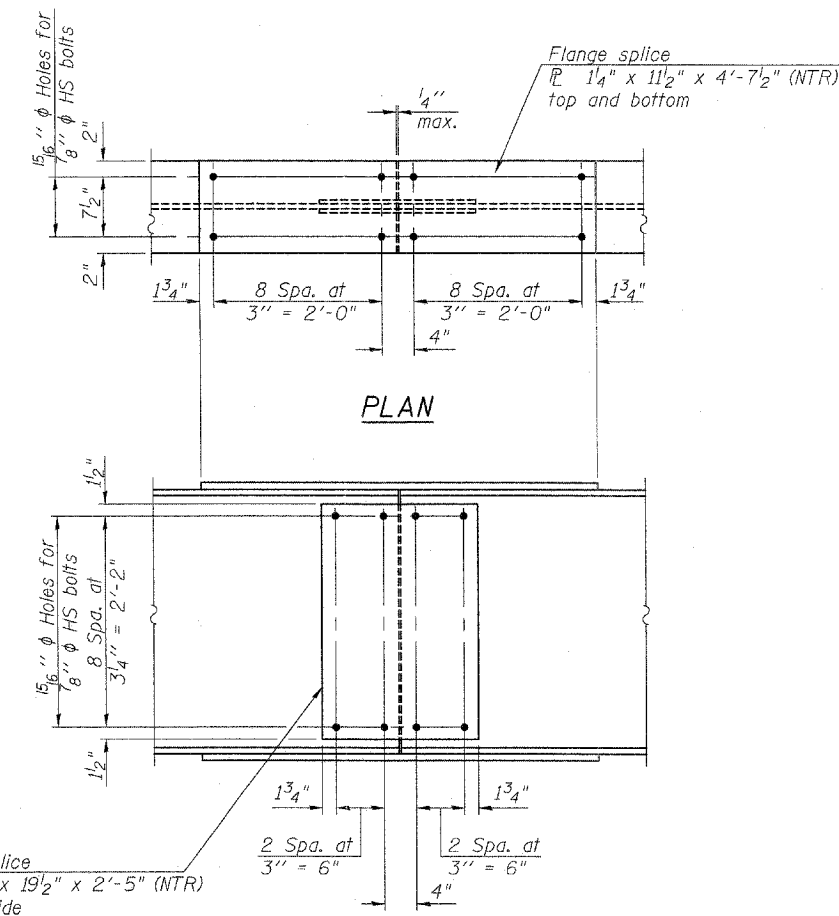
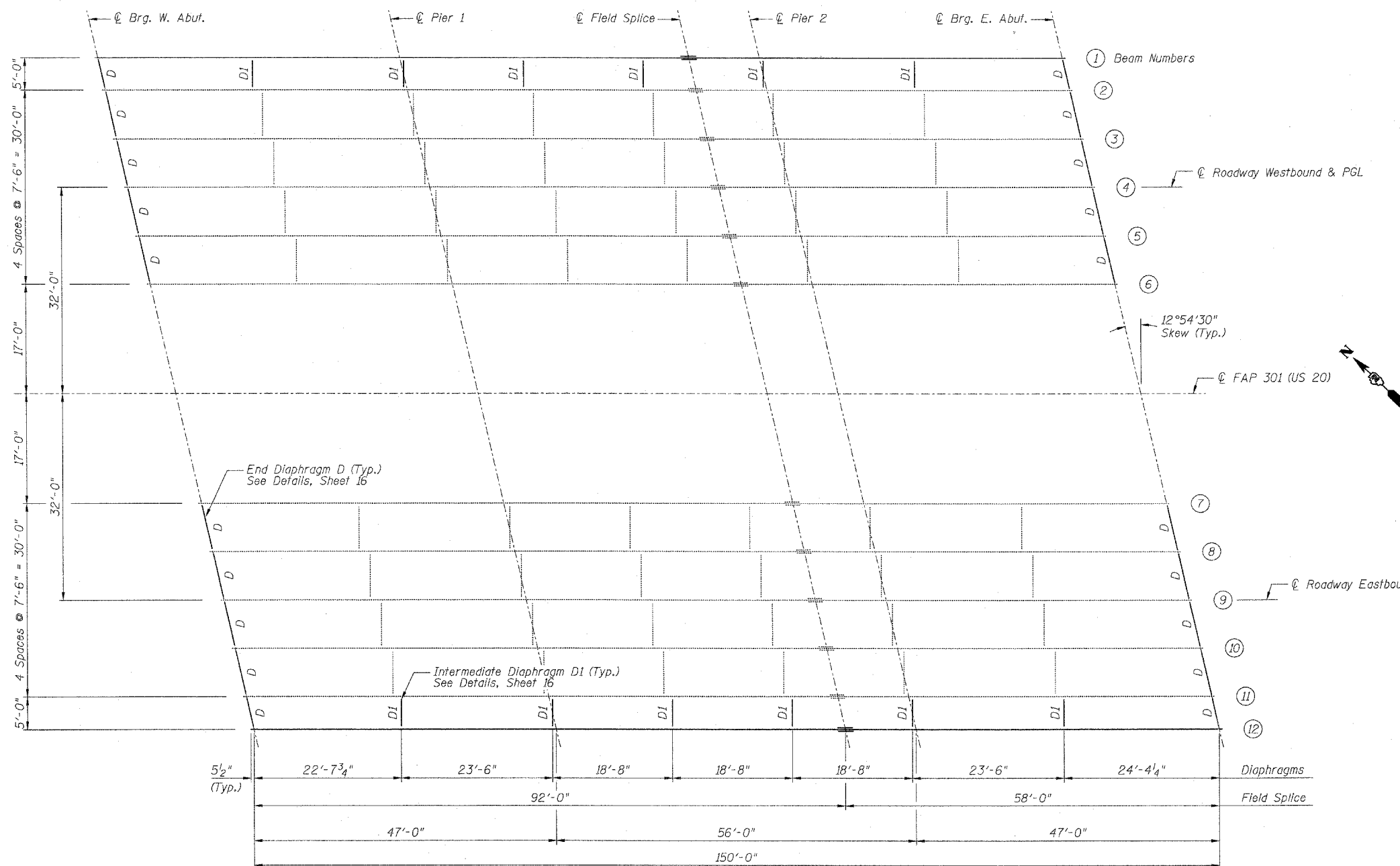
Plans Prepared by: Zroka Engineering, P.C.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 301 (US 20)	(2HB-2)D	WINNEBAGO	107	37
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 15
43 SHEETS

Contract #64B07



BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Furnishing & Erecting Structural Steel	Pound	57,000
Stud Shear Connectors	Each	7,824
Anchor Bolts, 1"	Each	8
Structural Steel Removal	Pound	5,056

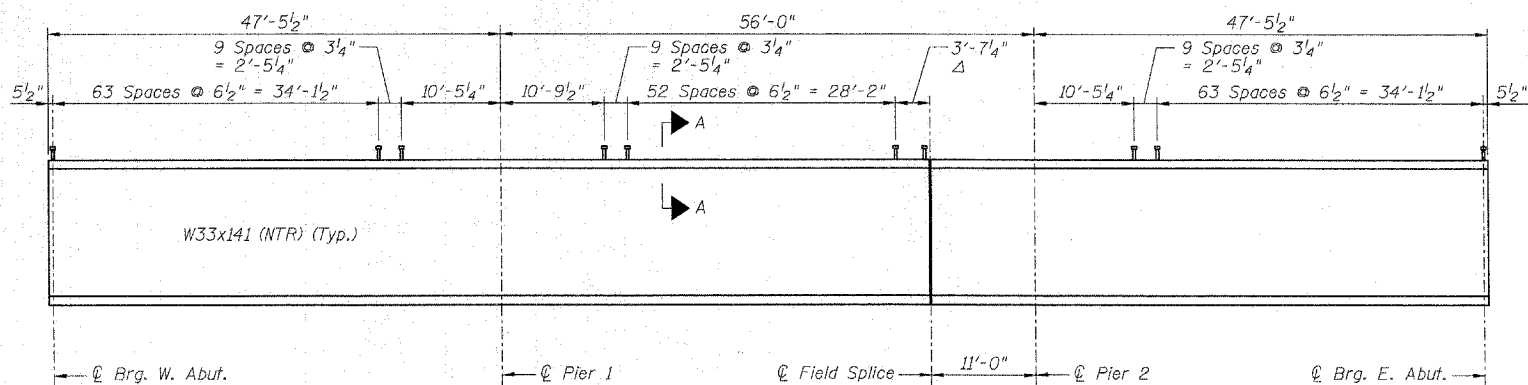
Note:
Contractor to verify existing dimensions in the field and make necessary approved adjustments prior to ordering materials.

All existing end diaphragms and angles to be removed. Replace with new steel. See End Diaphragm D Details on Sheet 16.

DESIGNED	LAS
CHECKED	DAZ
DRAWN	SAW
CHECKED	LAS

FRAMING PLAN
F.A.P. ROUTE 301 (US 20)
OVER PRAIRIE ROAD
SECTION (2HB-2)D
WINNEBAGO COUNTY
STATION 841+89.60
STRUCTURE NO. 101-0051 (W.B.)
STRUCTURE NO. 101-0052 (E.B.)

Contract #64B07



PROPOSED BEAM 1 & 12 ELEVATION

△ See Splice Detail
"NTR" denotes beams to which notch toughness requirements are applicable
Note: Shear stud spacing shown is to be used on both existing and new beams.

	0.4 Sp. 1 or 0.6 Sp. 3	Pier	0.5 Sp. 2
I_s	(in ⁴) 7450	7450	7450
$I_o(n)$	(in ⁴) 19305	-	19305
$I_o(3n)$	(in ⁴) 14260	-	14260
S_s	(in ³) 448	448	448
$S_o(n)$	(in ³) 640	-	640
$S_o(3n)$	(in ³) 580	-	580
Z	(in ³) -	-	-
ρ	(k/')	1.05	0.90
$M \rho$	(k)	143	115
$s \rho$	(k/')	0.15	0.15
$M_s \rho$	(k)	27	27
$M \bar{L}$	(k)	337	342
M_{imp}	(k)	98	94
M_a	(k)	1164	1130
M_u	(k)	1834	1850
$f_s \rho$ non-comp	(ksi)	3.9	7.3
$f_s \rho$ comp	(ksi)	0.6	0.6
$f_s [M \bar{L} + M_{imp}]$	(ksi)	13.6	10.9
f_s (Overload)	(ksi)	18.1	17.3
f_s (Total)	(ksi)	-	23.7
VR	(k)	38.3	39.9

I_s, S_s : Non-composite moment of inertia and section modulus of the steel section used for computing f_s (Total and Overload) due to non-composite dead loads (in⁴ and in³).

$I_o(n), S_o(n)$: Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing f_s (Total and Overload) due to short-term composite live loads (in⁴ and in³).

$I_o(3n), S_o(3n)$: Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing f_s (Total and Overload) due to long-term composite (superimposed) dead loads (in⁴ and in³).

Z: Plastic Section Modulus of the steel section in non-composite areas (in³).

ρ : Un-factored non-composite dead load (kips/ft.).

$M \rho$: Un-factored moment due to non-composite dead load (kip-ft.).

$s \rho$: Un-factored long-term composite (superimposed) dead load (kips/ft.).

$M_s \rho$: Un-factored moment due to long-term composite (superimposed) dead load (kip-ft.).

$M \bar{L}$: Un-factored live load moment (kip-ft.).

M_{imp} : Un-factored moment due to impact (kip-ft.).

M_a : Factored design moment (kip-ft.).
 $1.3 [M \rho + M_s \rho + \frac{5}{8} (M \bar{L} + M_{imp})]$

M_u : Compact composite moment capacity according to AASHTO LFD 10.50.1.1 or compact non-composite moment capacity according to AASHTO LFD 10.48.1 (kip-ft.).

f_s (Overload): Sum of stresses as computed from the moments below (ksi).
 $M \rho + M_s \rho + \frac{5}{8} (M \bar{L} + M_{imp})$

f_s (Total): Sum of stresses as computed from the moments below on non-compact section (ksi).
 $1.3 [M \rho + M_s \rho + \frac{5}{8} (M \bar{L} + M_{imp})]$

VR: Maximum \bar{L} + impact horizontal shear range within the composite portion of the span for stud shear connector design (kips).

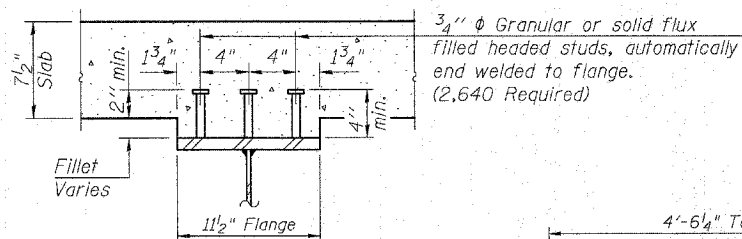
TOP OF BEAM ELEVATIONS

Location/Beam No.	1	12
⊖ Brg. W. Abut.	764.48	764.01
⊖ Pier 1	763.96	763.60
⊖ Field Splice	763.46	763.21
⊖ Pier 2	763.37	763.12
⊖ Brg. E. Abut.	762.98	762.72

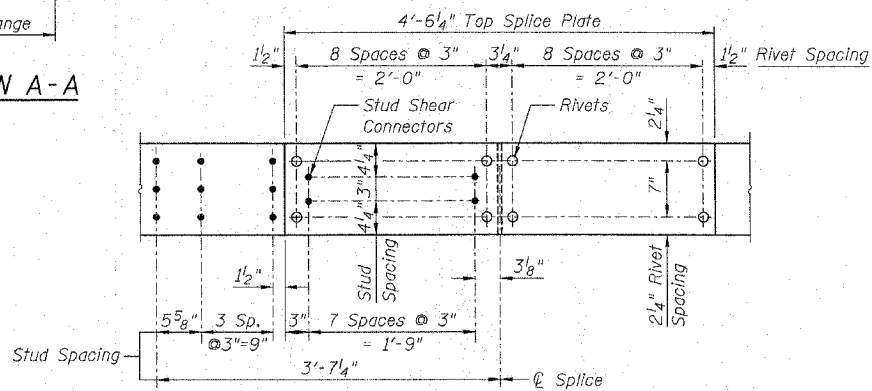
For fabrication only

	Abut.	Pier
R ρ	(k) 18.8	59.6
R \bar{L}	(k) 38.1	45.3
Imp.	(k) 11.1	12.8
R Total	(k) 68.0	117.7

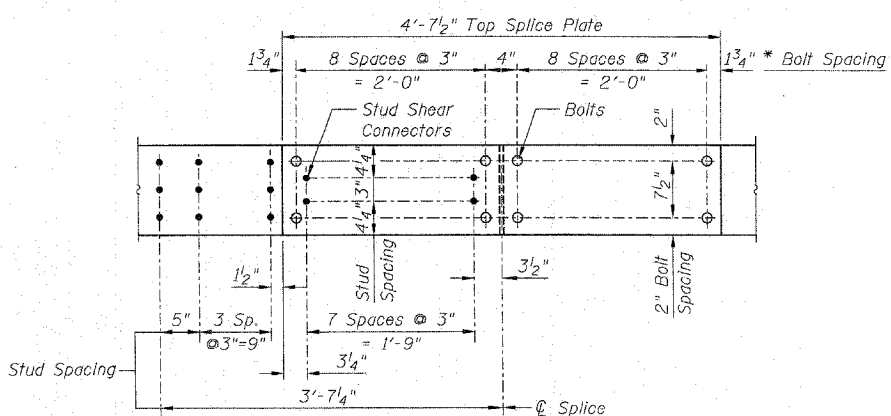
* Compact section
** Braced non-compact and partially braced section



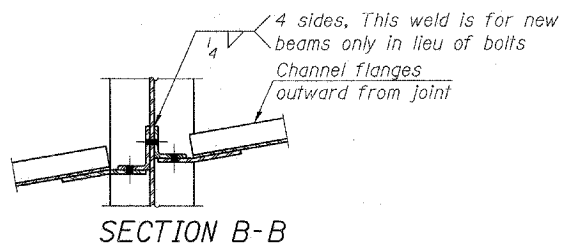
SECTION A-A



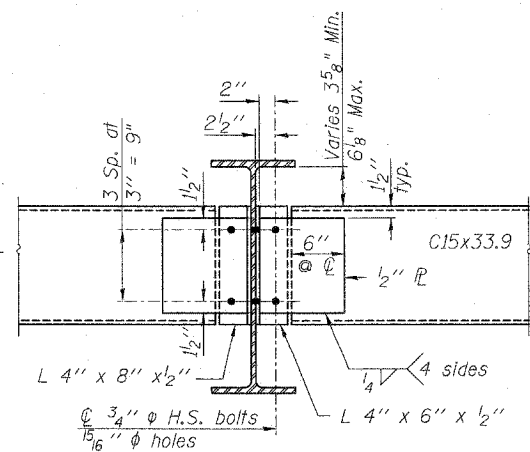
EXISTING SPLICE DETAIL



BEAM 1 & 12 SPLICE DETAIL

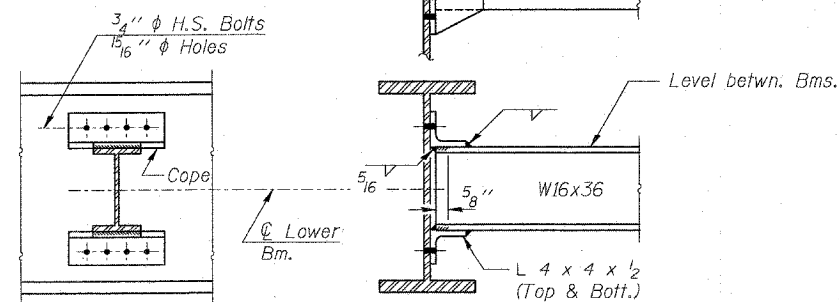


SECTION B-B



END DIAPHRAGM D

Notes:
Two hardened washers required for each set of oversized holes.
Existing angles welded to existing beams to be removed using the air-arc method.
Bolt holes for proposed diaphragm connection to be field drilled in the existing beam using the proposed connection angle as the template. Cost included with Furnishing and Erecting Structural Steel.



DIAPHRAGM D1
(12 Required)

Note:
Two hardened washers shall be required over all oversized holes for diaphragms.
Bolt holes for proposed diaphragm connection to be field drilled in the existing beam using the proposed connection angle as the template. Cost included with Furnishing and Erecting Structural Steel.

DESIGNED	LAS
CHECKED	DAZ
DRAWN	SAW
CHECKED	LAS

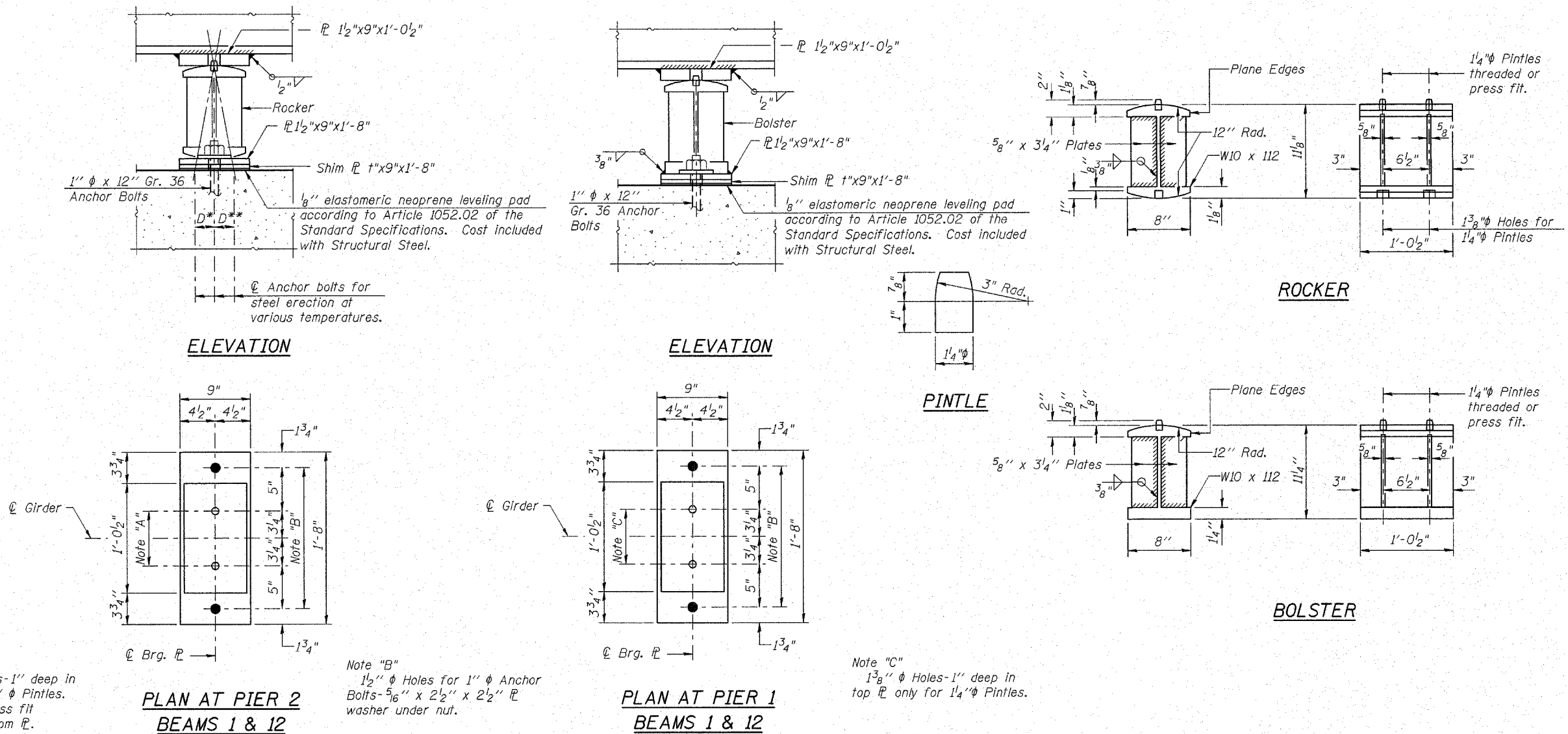
Plans Prepared by: Zroka Engineering, P.C.

STRUCTURAL STEEL DETAILS
F.A.P. ROUTE 301 (US 20)
OVER PRAIRIE ROAD
SECTION (2HB-2)D
WINNEBAGO COUNTY
STATION 841+89.60
STRUCTURE NO. 101-0051 (W.B.)
STRUCTURE NO. 101-0052 (E.B.)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 17
F.A.P. 301 (US 20)	(2HB-2)D	WINNEBAGO	107	39	43 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

Contract #64B07



BEARING ASSEMBLY DETAILS

NOTES FOR SETTING OF ANCHOR BOLTS AT EXPANSION BEARINGS

- a.) D^* (Side of brg. away from fixed brg.)
 $D^* = \frac{1}{8}$ " per each 100' of expansion for every 15° fall below the normal temp. of 50° F.
- D^{**} (Side of brg. toward fixed brg.)
 $D^{**} = \frac{1}{8}$ " per each 100' of expansion for every 15° rise above the normal temp. of 50° F.
- b.) After girders have been erected and dimensions D^* & D^{**} determined, holes shall be drilled and anchor bolts shall be installed as shown on Sheets 32 & 33 of 43. All fixed anchor bolts may be built into the masonry.

Note:
Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

DESIGNED	LAS
CHECKED	DAZ
DRAWN	SAW
CHECKED	LAS

I-2-B

10-22-04

Plans Prepared by: Zroka Engineering, P.C.

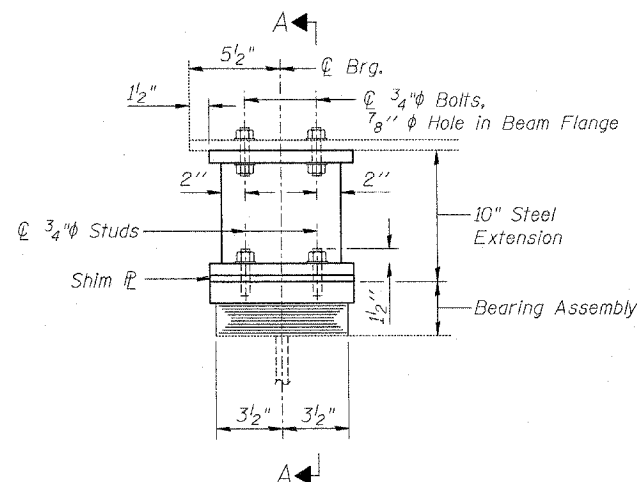
PIER STEEL
BEARING ASSEMBLY
F.A.P. ROUTE 301 (US 20)
OVER PRAIRIE ROAD
SECTION (2HB-2)D
WINNEBAGO COUNTY
STATION 841+89.60
STRUCTURE NO. 101-0051 (W.B.)
STRUCTURE NO. 101-0052 (E.B.)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

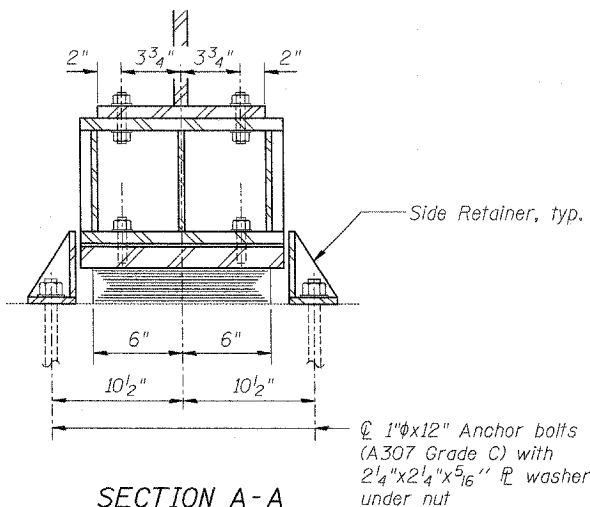
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 301 (US 20)	(2HB -2)D	WINNEBAGO	107	40
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 18
43 SHEETS

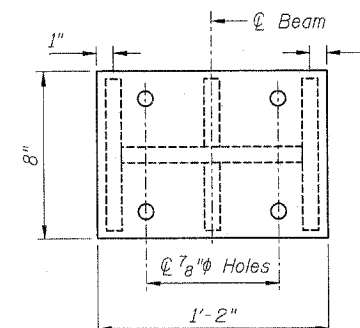
Contract #64B07



ELEVATION AT ABUT.



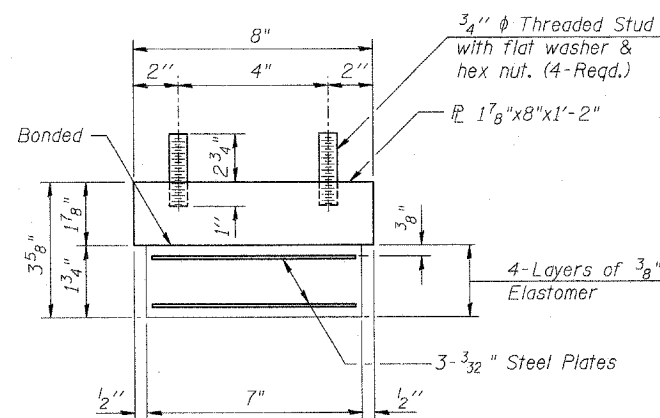
SECTION A-A



PLAN STEEL EXTENSION

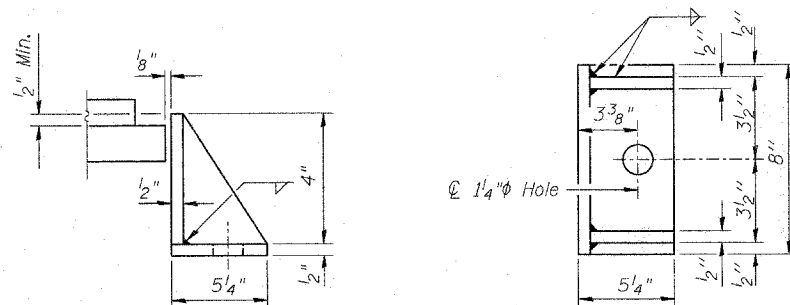
TYPE I ELASTOMERIC EXP. BRG.

@ West Abutments



BEARING ASSEMBLY

Note:
Shim plates shall not be placed under Bearing Assembly.



SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

Notes:

Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.

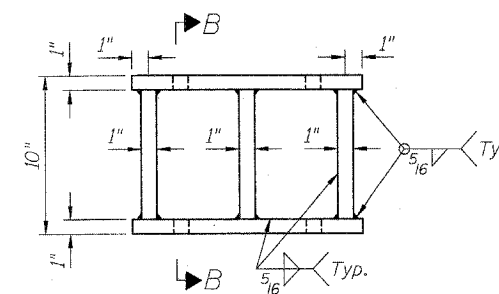
Anchor bolts for side retainers may be cast in place or installed in holes drilled before or after members are in place.

Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

Side retainers, steel extensions and other steel members required for the bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type I.

Two 1/8 inch adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.

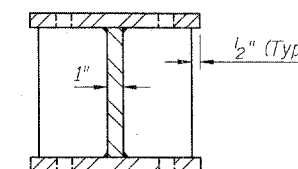
Bolt holes for the proposed bearing to be field drilled in the bottom flange of the existing beams using the proposed steel extension as the template. Cost included with Furnishing and Erecting Structural Steel.



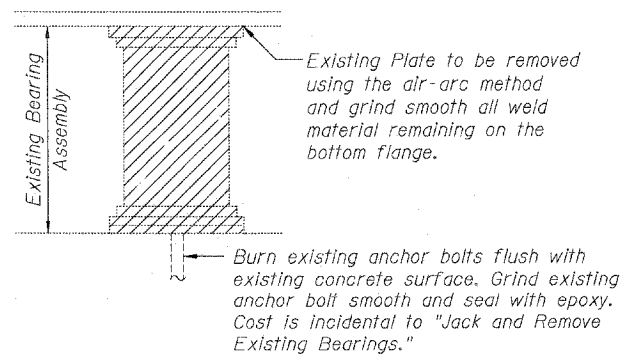
ELEVATION STEEL EXTENSION

Note:
Steel Extensions are to be used on bearings for Beams 2 thru 11 only. Beams 1 & 12 do not have extensions.

Note:
Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions.



SECTION B-B



EXISTING BEARING REMOVAL DETAIL

BILL OF MATERIAL

Item	Unit	Total
Jack & Remove Existing Bearings	Each	10
Elastomeric Bearing Assembly Type I	Each	12
Anchor Bolts, 1"	Each	24

ELASTOMERIC BEARING ASSEMBLY TYPE I

F.A.P. ROUTE 301 (US 20)
OVER PRAIRIE ROAD
SECTION (2HB-2)D
WINNEBAGO COUNTY
STATION 841+89.60

STRUCTURE NO. 101-0051 (W.B.)
STRUCTURE NO. 101-0052 (E.B.)

DESIGNED	LAS
CHECKED	DAZ
DRAWN	SAW
CHECKED	LAS

I-2-E1

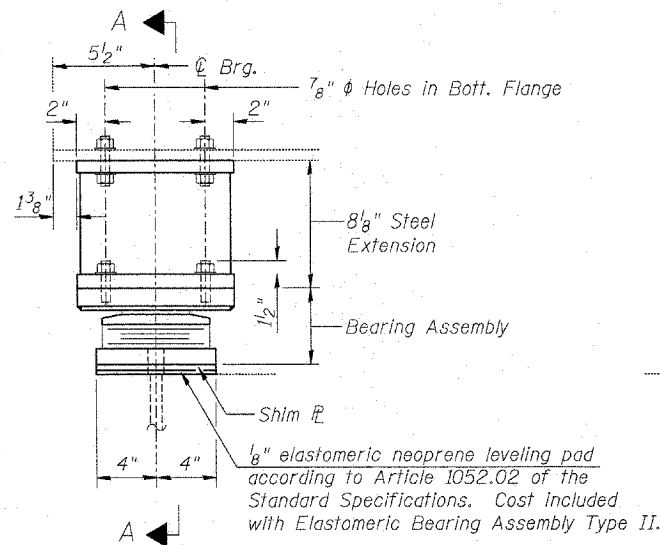
11-1-06

Plans Prepared by: Zroka Engineering, P.C.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 19
F.A.P. 301 (US 20)	(2HB-2D)	WINNEBAGO	107	41	43 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

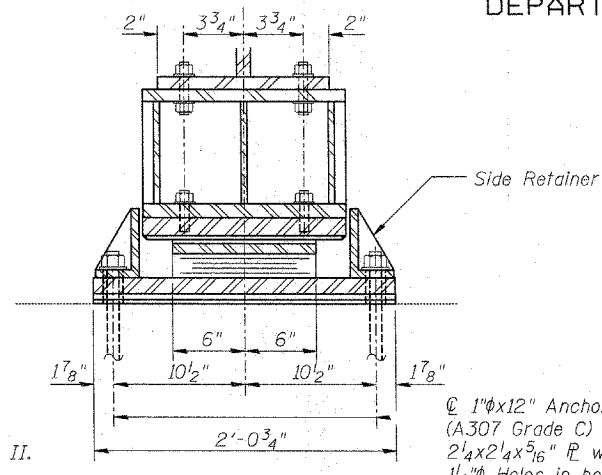
Contract #64B07



ELEVATION AT ABUT.

TYPE II ELASTOMERIC EXP. BRG.

East Abutments



SECTION A-A

1" x 12" Anchor bolts (A307 Grade C) with 2 1/4 x 2 1/4 x 5/16" washer under nut. 1 1/4" holes in bottom flange.

Notes:

Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.

Anchor bolts for Type II bearings shall be placed in holes drilled through the bottom bearing plate after members are in place. Side retainers shall be placed after bolts are installed.

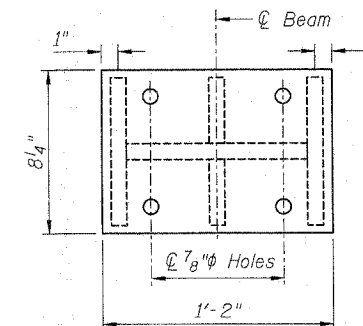
Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

Side retainers, steel extensions and other steel members required for the bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type II.

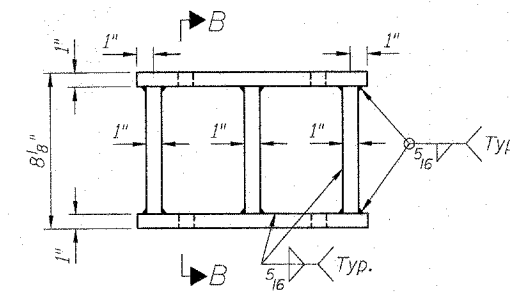
The 1/8" TFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.

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. Two 1/8" adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.

Bolt holes for the proposed bearing to be field drilled in the bottom flange of the existing beams using the proposed steel extension as the template. Cost included with Furnishing and Erecting Structural Steel.



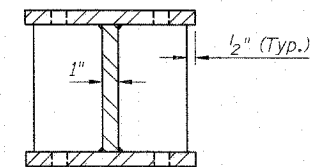
PLAN STEEL EXTENSION



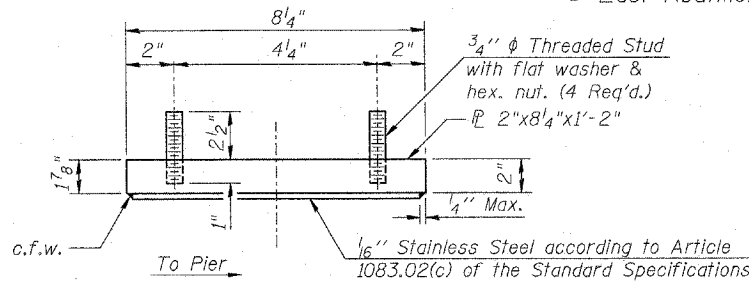
ELEVATION STEEL EXTENSION

Note: Steel Extensions are to be used on bearings for Beams 2 thru 11 only. Beams 1 & 12 do not have extensions.

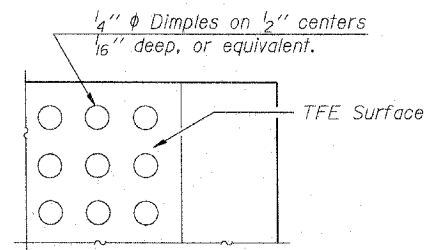
Note: Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions.



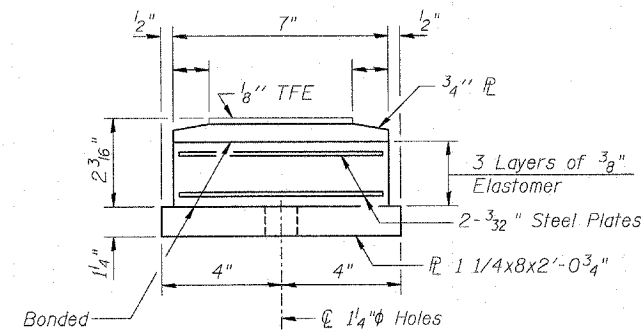
SECTION B-B



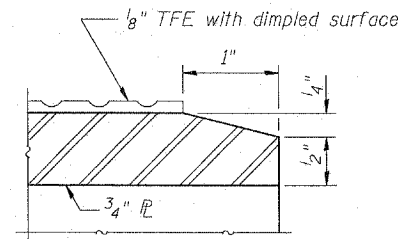
TOP BEARING ASSEMBLY



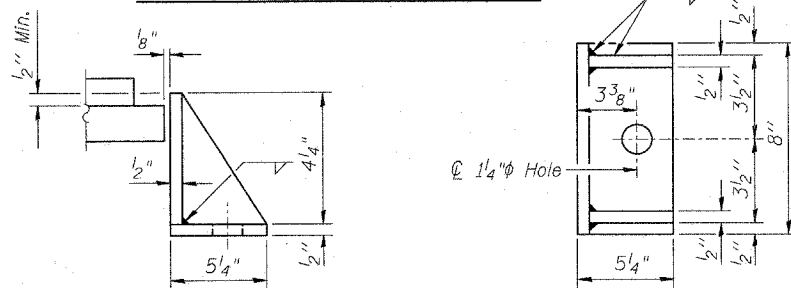
PLAN-TFE SURFACE



BOTTOM BEARING ASSEMBLY

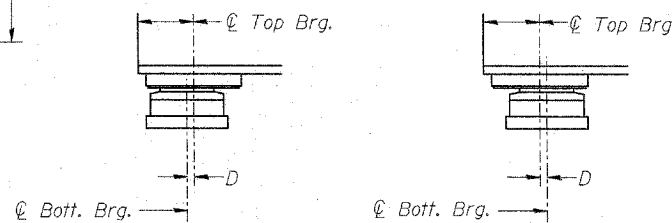


SECTION THRU TFE



SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.



BELOW 50°F.

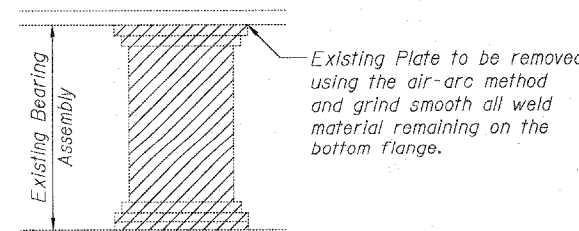
(Move bott. brg. away from fixed brg.)

ABOVE 50°F.

(Move bott. brg. toward fixed brg.)

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.



Existing Plate to be removed using the air-arc method and grind smooth all weld material remaining on the bottom flange.

Burn existing anchor bolts flush with existing concrete surface. Grind existing anchor bolt smooth and seal with epoxy. Cost is incidental to "Jack and Remove Existing Bearings."

EXISTING BEARING REMOVAL DETAIL

BILL OF MATERIAL

Item	Unit	Total
Jack & Remove Existing Bearings	Each	10
Elastomeric Bearing Assembly Type II	Each	12
Anchor Bolts, 1"	Each	24

ELASTOMERIC BEARING ASSEMBLY TYPE II

F.A.P. ROUTE 301 (US 20)

OVER PRAIRIE ROAD

SECTION (2HB-2D)

WINNEBAGO COUNTY

STATION 841+89.60

STRUCTURE NO. 101-0051 (W.B.)

STRUCTURE NO. 101-0052 (E.B.)

DESIGNED	LAS
CHECKED	DAZ
DRAWN	SAW
CHECKED	LAS

I-2-E2

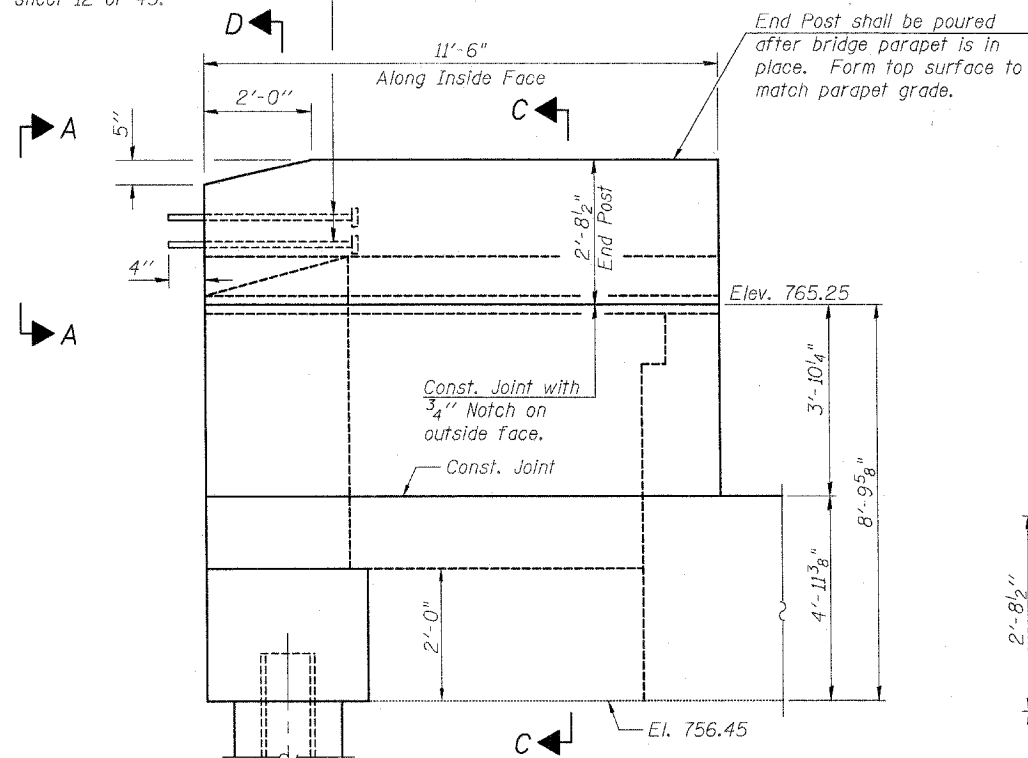
11-1-06

Plans Prepared by: Zroka Engineering, P.C.

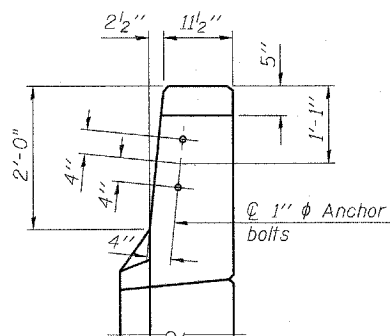
1" ϕ Anchor Bolts. Cost included with Concrete Superstructure on sheet 12 of 43.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

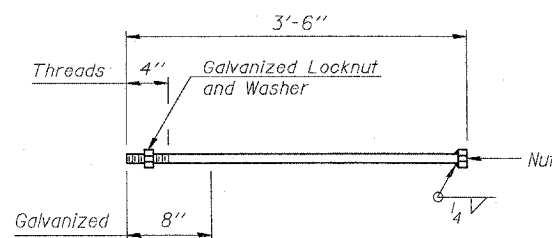
ROUTE NO.	SECTION	COUNTY	TRIP SHEETS	SHEET NO.	SHEET NO. 21 43 SHEETS
F.A.P. 301 (US 20)	(2HB -2)D	WINNEBAGO	107	43	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			
Contract #64B07					



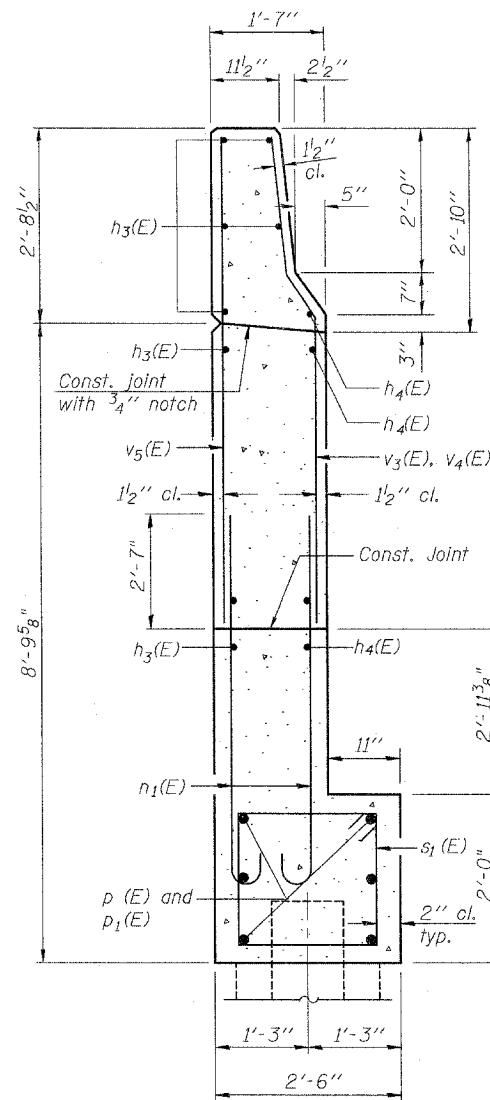
WING WALL ELEVATION
Showing Dimensions



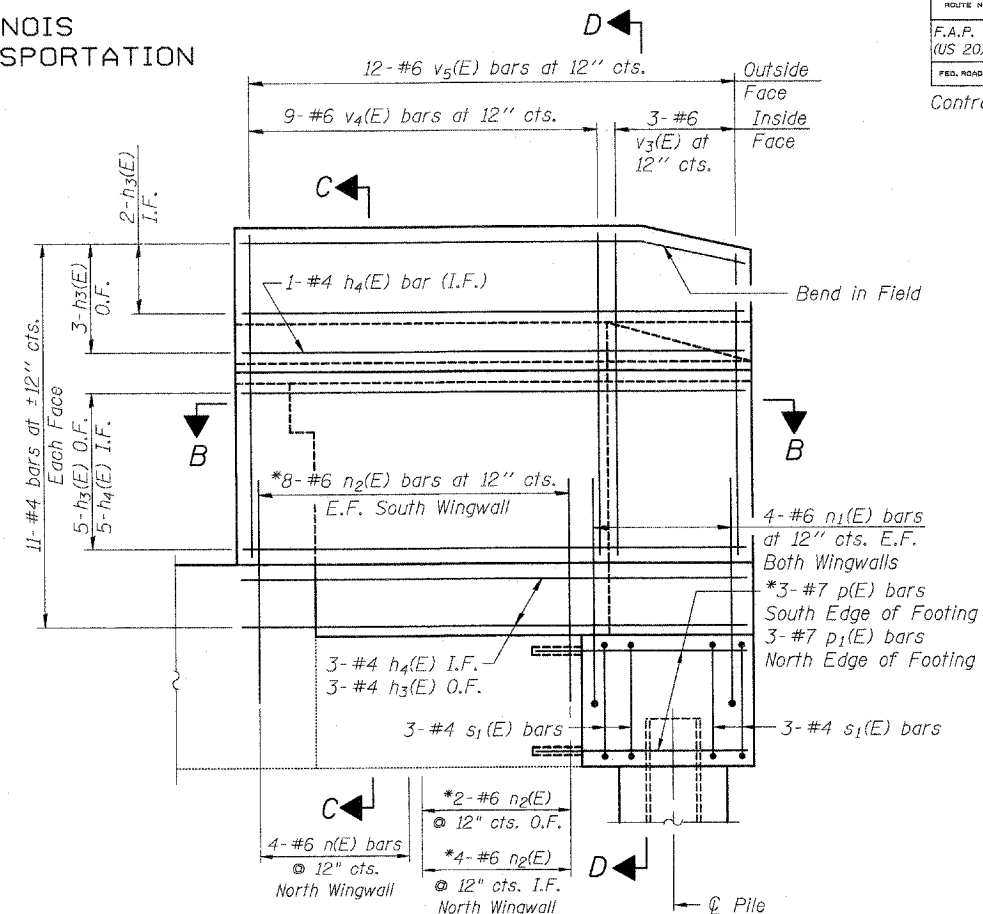
VIEW A-A



1" ϕ ANCHOR BOLT



SECTION D-D



WING WALL ELEVATION
Showing Reinforcement

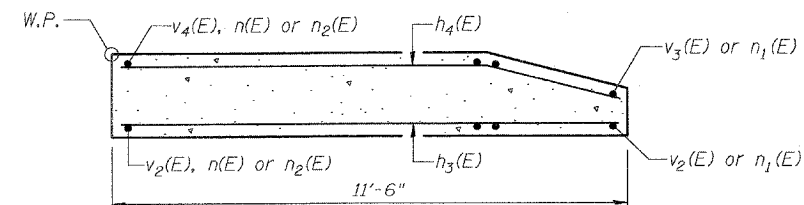
Note: $h_3(E)$ and $h_4(E)$ bars for south wingwall to be cut to fit at existing abutment bearing seat.

*Epoxy grout #6 $n_2(E)$ bars in 1" ϕ hole.

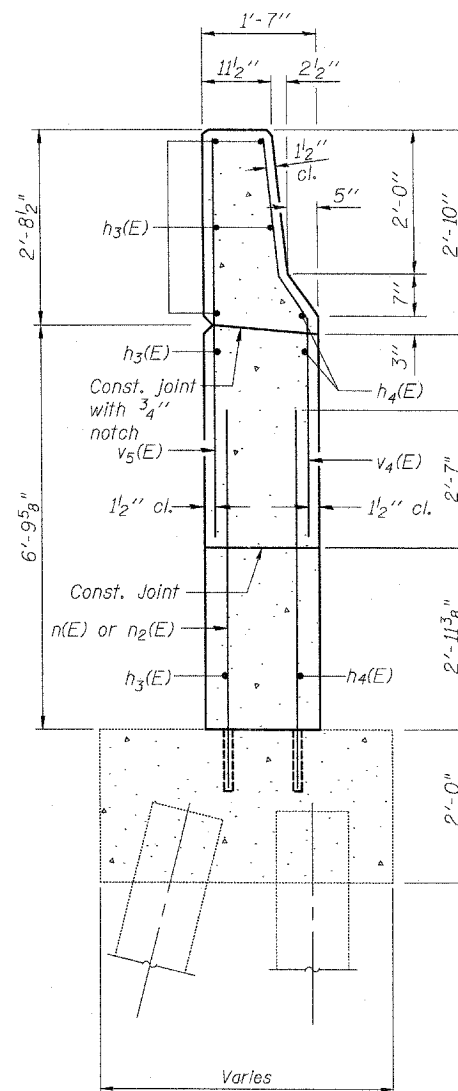
*Epoxy grout #7 $p(E)$ and $p_1(E)$ bars in 1 1/8" ϕ hole.

Holes shall be drilled a minimum of 9" deep. The bars shall be drilled and epoxy grouted according to Article 584 of the Standard Specifications.

Quantity of concrete in end post included with Concrete Superstructure on sheet 12 of 43.



SECTION B-B



SECTION C-C

DESIGNED	LAS
CHECKED	DAZ
DRAWN	SAW
CHECKED	LAS

A-1-D

11-1-06

Plans Prepared by: Zroka Engineering, P.C.

**WESTBOUND WEST
ABUTMENT WINGWALLS
F.A.P. ROUTE 301 (US 20)
OVER PRAIRIE ROAD
SECTION (2HB-2)D
WINNEBAGO COUNTY
STATION 841+89.60
STRUCTURE NO. 101-0051 (W.B.)
STRUCTURE NO. 101-0052 (E.B.)**

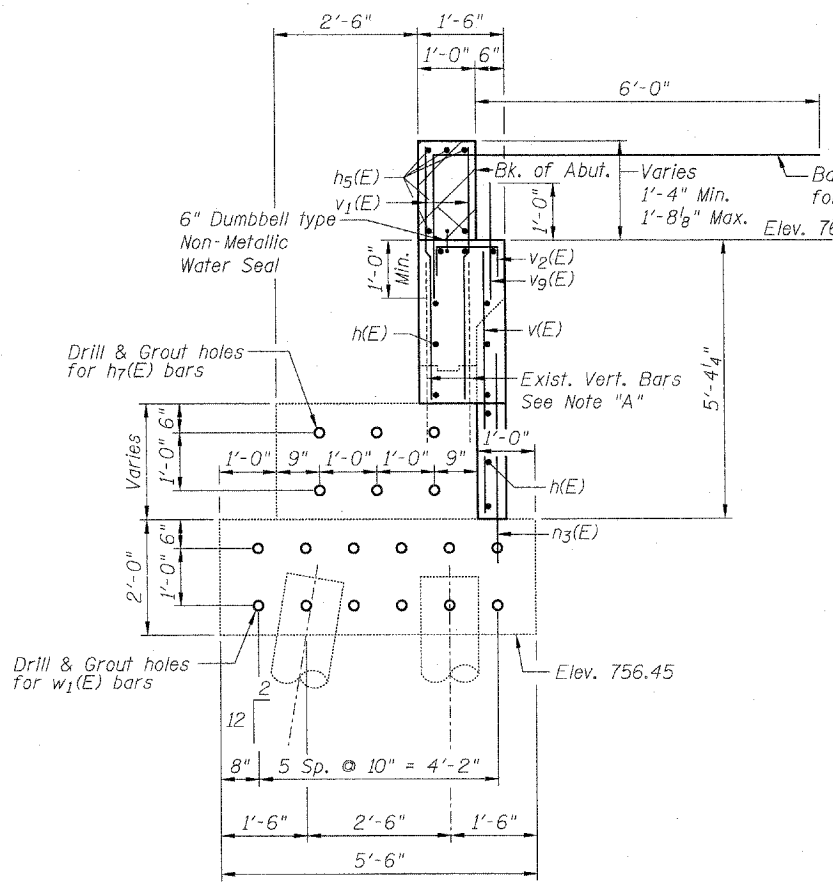
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	INITIAL SHEETS	SHEET NO.	SHEET NO. 22 43 SHEETS
F.A.P. 301 (US 20)	(2HB -2)D	WINNEBAGO	107	44	
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT		

Contract #64B07

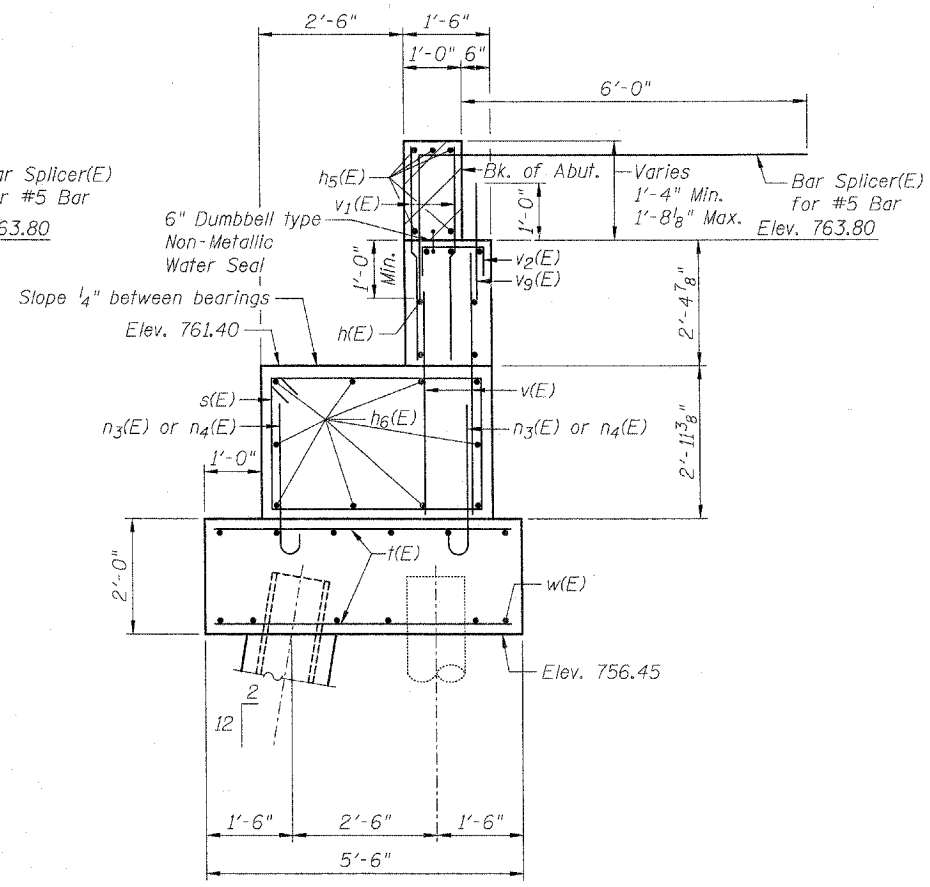
**ABUTMENT
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h(E)	24	#5	21'-1"	—
h ₁ (E)	12	#5	4'-4"	└
h ₂ (E)	12	#5	4'-4"	└
h ₃ (E)	26	#4	11'-3"	—
h ₄ (E)	18	#4	11'-3"	—
h ₅ (E)	10	#6	21'-3"	—
h ₆ (E)	10	#7	5'-6"	—
h ₇ (E)	6	#7	5'-0"	—
n(E)	4	#6	13'-10"	—
n ₁ (E)	16	#6	7'-0"	—
n ₂ (E)	22	#6	6'-4"	—
n ₃ (E)	42	#6	3'-11"	—
n ₄ (E)	7	#6	4'-7"	—
p(E)	6	#7	4'-7"	—
p ₁ (E)	6	#7	6'-4"	—
s(E)	7	#4	13'-5"	—
s ₁ (E)	12	#4	8'-5"	—
t(E)	6	#6	11'-0"	—
u(E)	3	#6	7'-9"	—
v(E)	46	#5	5'-0"	—
v ₁ (E)	82	#5	4'-0"	—
v ₂ (E)	41	#5	2'-2"	—
v ₃ (E)	6	#6	5'-9"	—
v ₄ (E)	18	#6	6'-6"	—
v ₅ (E)	24	#6	6'-4"	—
v ₉ (E)	41	#5	2'-0"	—
w(E)	8	#6	6'-3"	—
w ₁ (E)	12	#6	4'-0"	—
Structure Excavation		Cu. Yd.	88	
Concrete Structures		Cu. Yd.	23.8	
Reinforcement Bars, Epoxy Coated		Pound	3,980	
Furnishing - Piles, HP12x53		Foot	124	
Driving Piles		Foot	124	
Test Pile, HP12x53		Each	1	
Concrete Encasement		Cu. Yd.	1.2	
Concrete Sealer		Sq. Ft.	173	
Porous Granular Embankment, Special		Cu. Yd.	52	
Concrete Removal		Cu. Yd.	16.0	
Geocomposite Wall Drain		Sq. Ft.	24	
Pipe Underdrains For Structures 4"		Sq. Ft.	51	
Bar Splicers		Each	41	

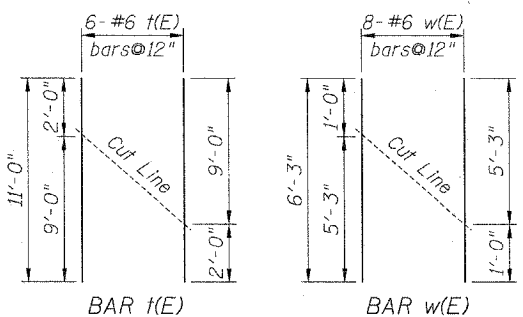


SECTION THRU EXISTING ABUTMENT

Note "A": Existing vertical bars to remain in place, blast clean and lap with new vertical bars. Existing horizontal bars shall be removed.

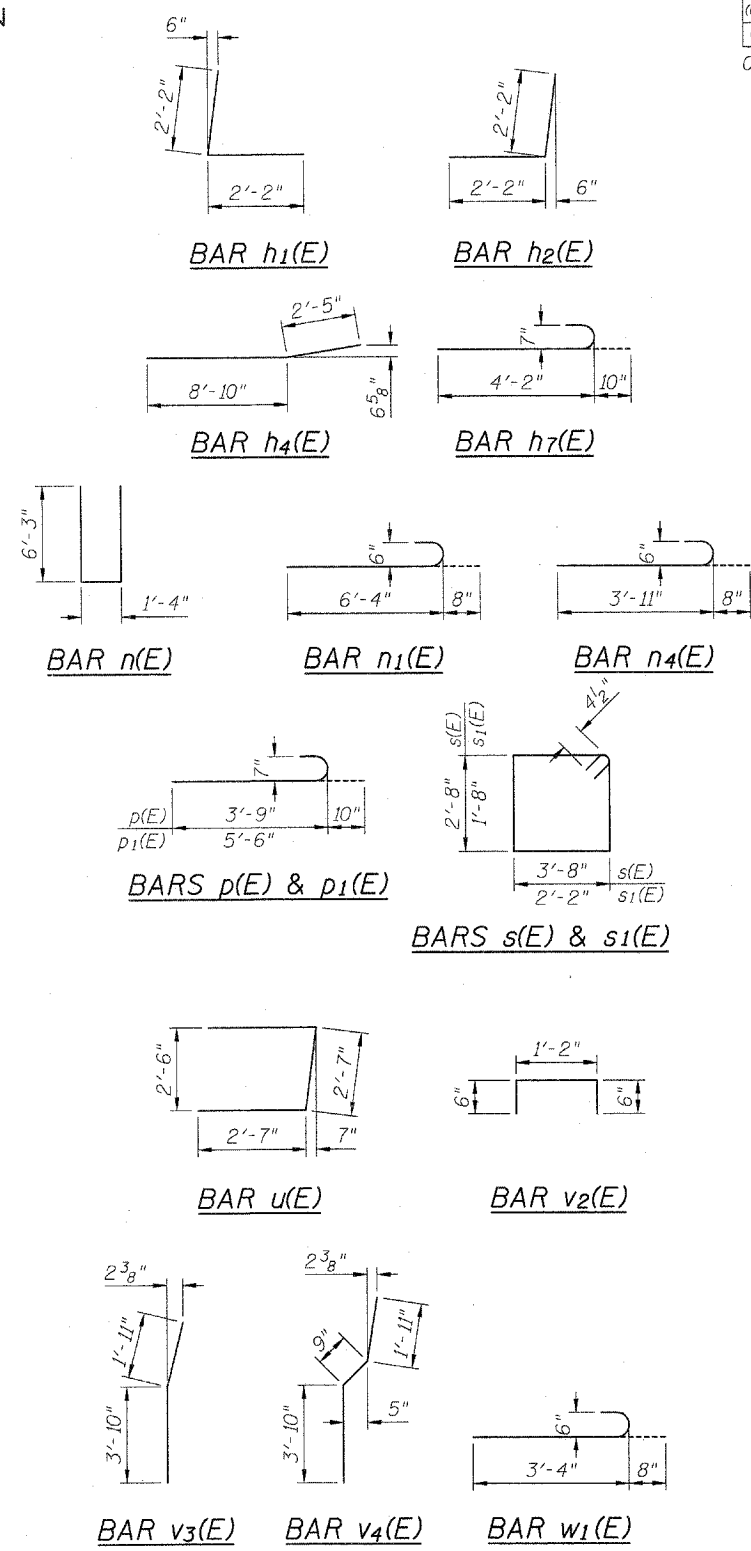


SECTION THRU PROPOSED ABUTMENT EXTENSION



CUTTING DIAGRAMS

Order bars full length. Cut as shown and use half of bars top and half on bottom.



PILE DATA

Type: HP12x53
Nominal Required Bearing: 418 kips
Allowable Resistance Available: 139 kips
Est. Length: 62'
No. Production Piles: 2
No. Test Piles: 1
The Steel H-piles shall be according to AASHTO M270 Grade 50.

The test pile shall be driven to 110 percent of the Nominal Required Bearing indicated in the pile data information.

Plans Prepared by: Zroka Engineering, P.C.

**WESTBOUND WEST
ABUTMENT DETAILS
F.A.P. ROUTE 301 (US 20)
OVER PRAIRIE ROAD
SECTION (2HB-2)D
WINNEBAGO COUNTY
STATION 841+89.60
STRUCTURE NO. 101-0051 (W.B.)
STRUCTURE NO. 101-0052 (E.B.)**

DESIGNED	LAS
CHECKED	DAZ
DRAWN	SAW
CHECKED	LAS

Notes:

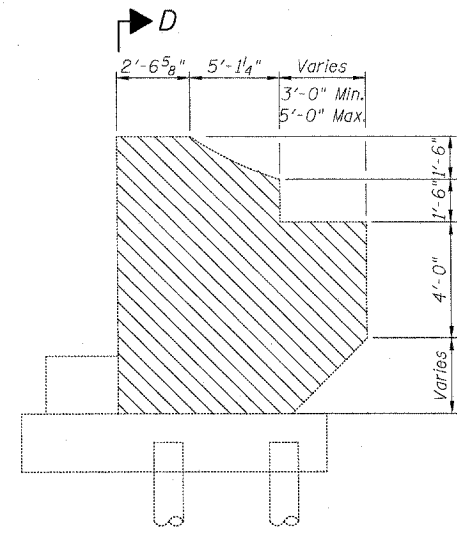
- Hatched area to be poured after superstructure false work has been removed. Quantity of concrete included with Concrete Superstructure.
- Space reinforcement in cap to miss anchor bolts.
- Concrete Sealer shall be applied to all exposed surfaces of new concrete for the abutment.
- For details of piles and Concrete Encasement details, see sheet 38 of 43.
- For details of Bar Splicers, see sheet 37 of 43.
- For drainage details behind Abutment, see Sheet 2 of 43.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

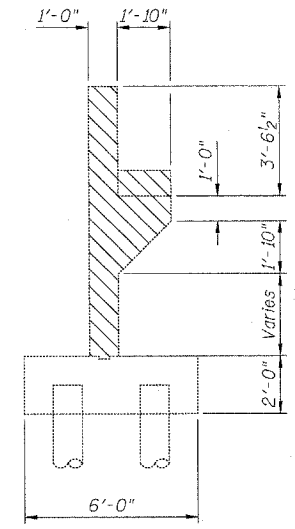
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 23 43 SHEETS
F.A.P. 301 (US 20)	(2HB-2)D	WINNEBAGO	107	45	
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT		

Contract #64B07

LEGEND
Concrete Removal



TYPICAL EXISTING WINGWALL ELEVATION



SECTION D-D

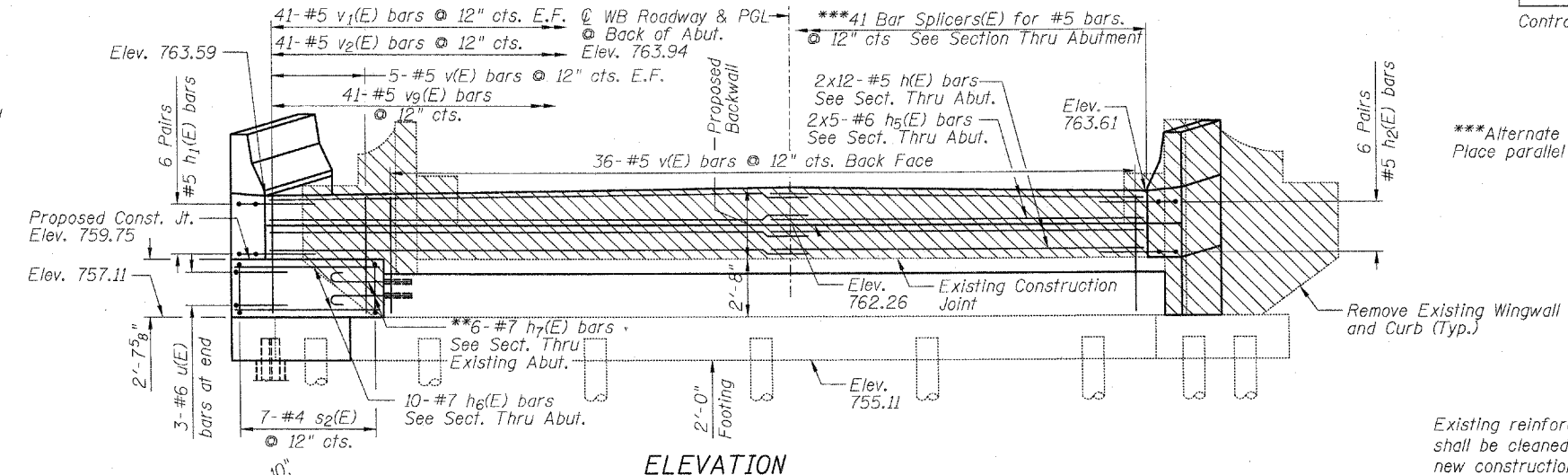
MINIMUM BAR LAPS

- #5 Bars = 2'-2"
- #6 Bars = 2'-7"
- #7 Bars = 3'-5"

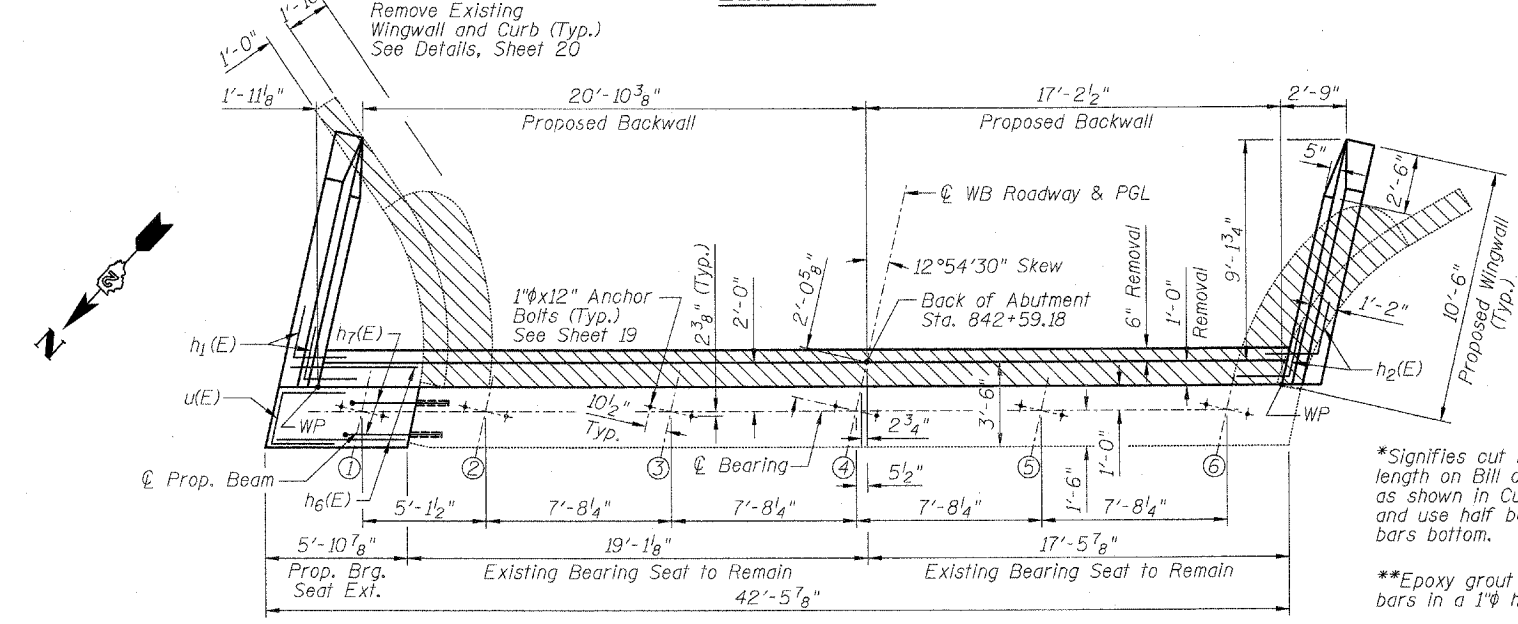
DESIGNED	LAS
CHECKED	DAZ
DRAWN	SAW
CHECKED	LAS

A-1-R (<30°)

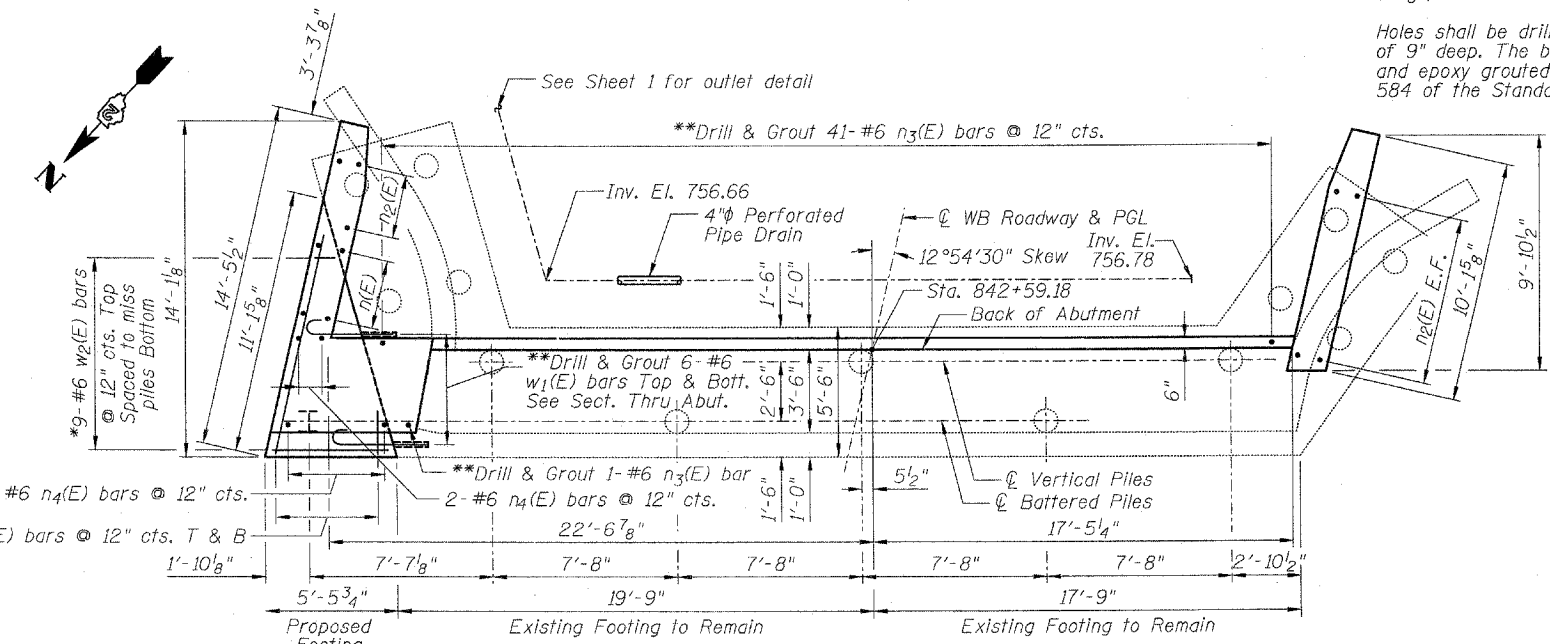
11-1-06



ELEVATION



TOP VIEW



PLAN-PILE CAP

***Alternate with #5 v₁(E) bars. Place parallel to beams.

Existing reinforcement extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Cost included with Concrete Removal. Existing reinforcement not extending into new construction shall be cut flush with the existing concrete and sealed with a layer of epoxy. Cost included with Concrete Removal.

The existing bearing seat and top of footing that will have concrete placed against it shall be blast cleaned according to Article 501 of the Standard Specifications. Cost included with Structure Excavation.

*Signifies cut bar. Order per length on Bill of Material. Cut as shown in Cutting Diagram and use half bars top and half bars bottom.

**Epoxy grout #6 w₁(E) & #6 n₃(E) bars in a 1"φ hole

**Epoxy grout #7 h₇(E) bars in a 1¹/₈"φ hole

Holes shall be drilled a minimum of 9" deep. The bars shall be drilled and epoxy grouted according to Article 584 of the Standard Specifications.

For Bill of Material, Cutting Diagrams, Bar Details, and Abutment Sections, see Sheet 25.

WESTBOUND EAST ABUTMENT
F.A.P. ROUTE 301 (US 20)
SECTION (2HB-2)D
WINNEBAGO COUNTY
STATION 841+89.60
STRUCTURE NO. 101-0051 (W.B.)
STRUCTURE NO. 101-0052 (E.B.)

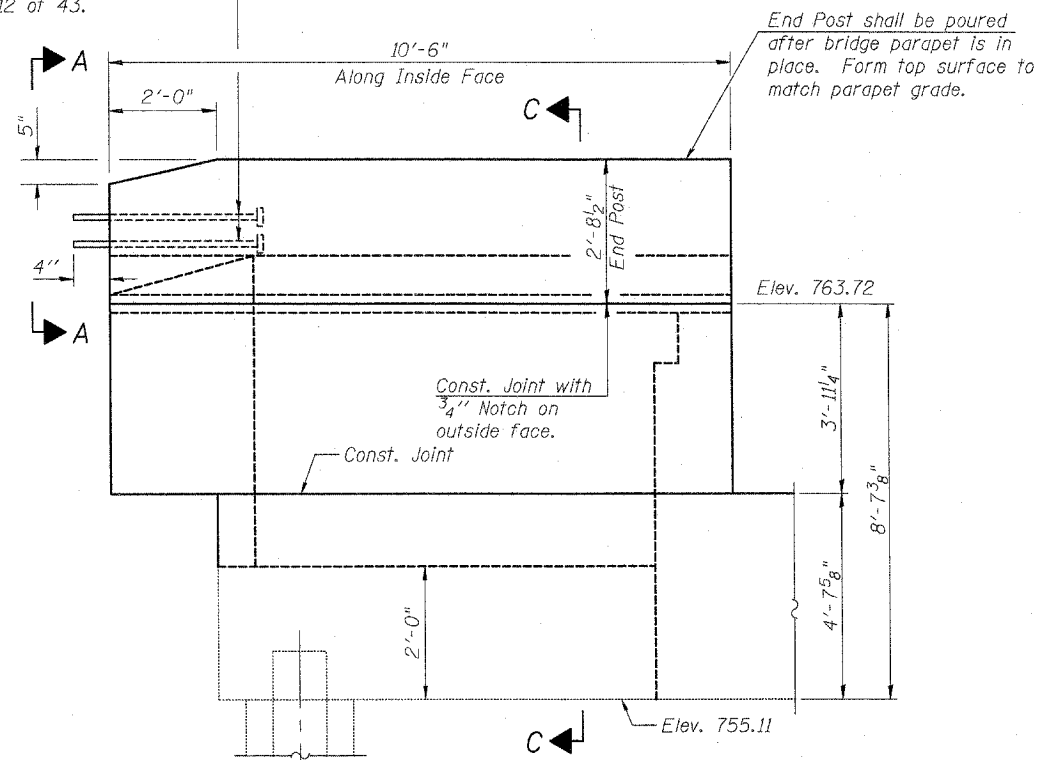
Plans Prepared by: Zroka Engineering, P.C.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

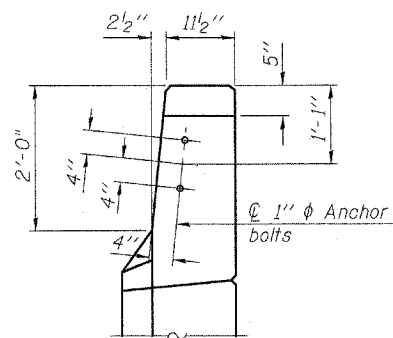
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 24 43 SHEETS
F.A.P. 301 (US 20)	(2HB -2)D	WINNEBAGO	107	46	
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT		

Contract #64B07

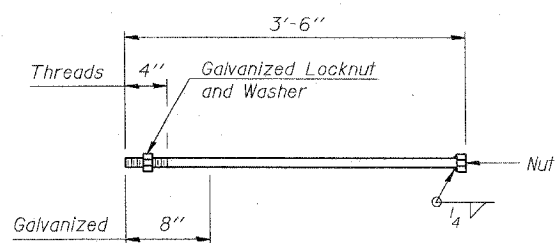
1" ϕ Anchor Bolts. Cost
Included with Concrete
Superstructure on sheet
12 of 43.



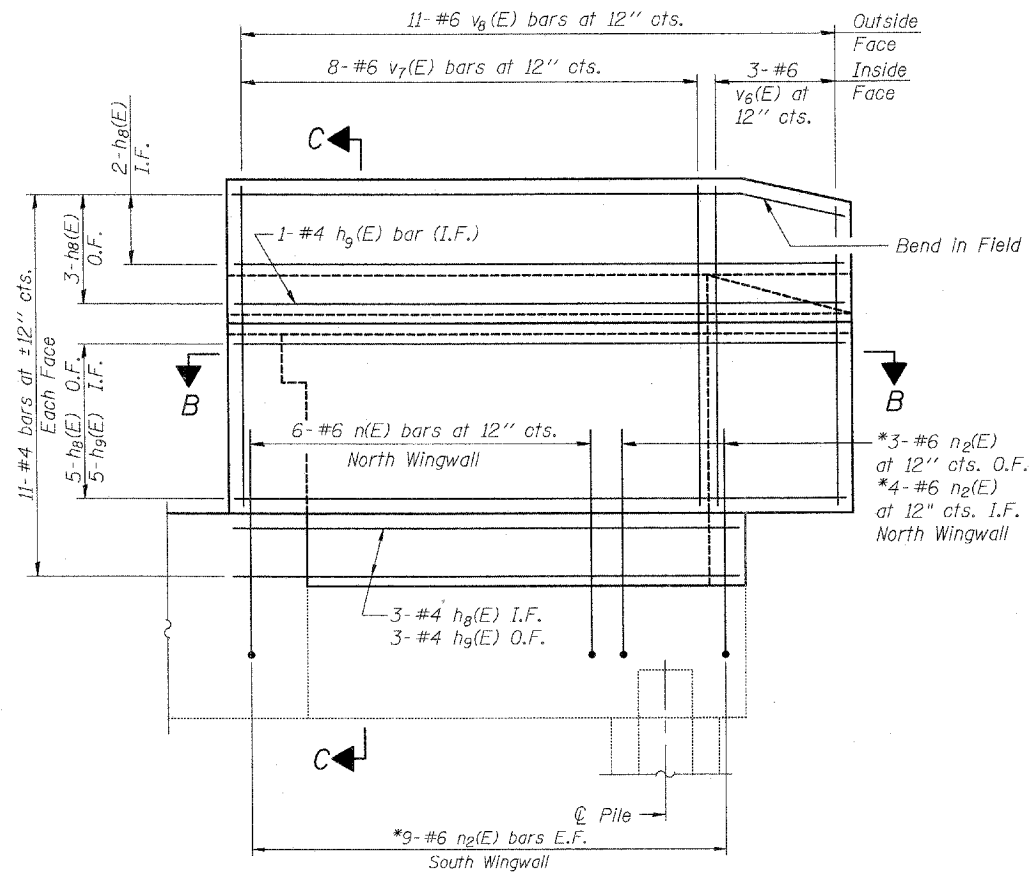
WING WALL ELEVATION
Showing Dimensions



VIEW A-A

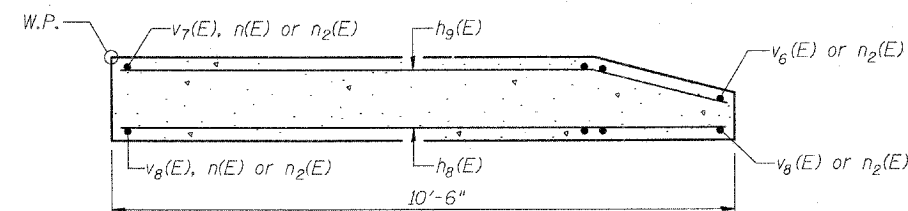


1" ϕ ANCHOR BOLT

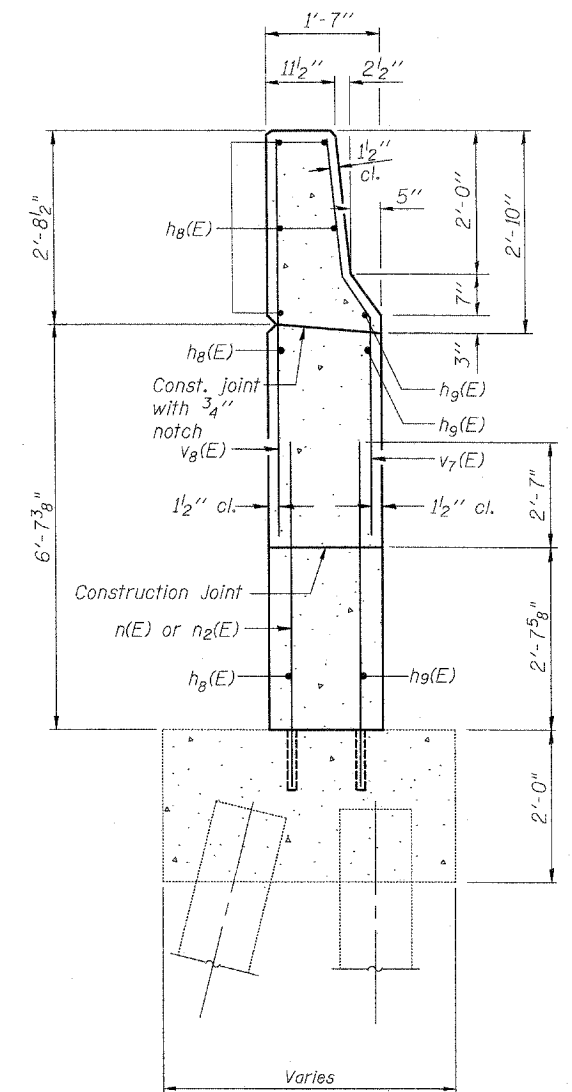


WING WALL ELEVATION
Showing Reinforcement

*Epoxy grout #6 n2(E) bars in 1" ϕ hole.
Holes shall be drilled a minimum of 9" deep. The bars shall be drilled and epoxy grouted according to Article 584 of the Standard Specifications.
Quantity of concrete in end post included with Concrete Superstructure on Sheet 12 of 43.



SECTION B-B



SECTION C-C

DESIGNED	LAS
CHECKED	DAZ
DRAWN	SAW
CHECKED	LAS

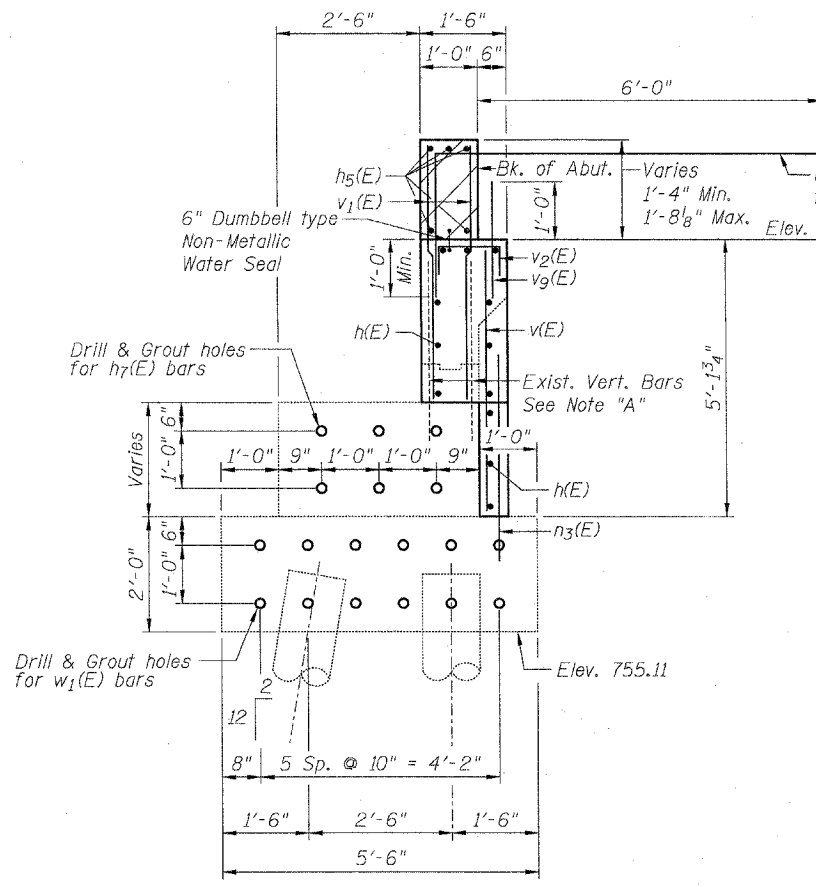
A-1-D

11-1-06

Plans Prepared by: Zroka Engineering, P.C.

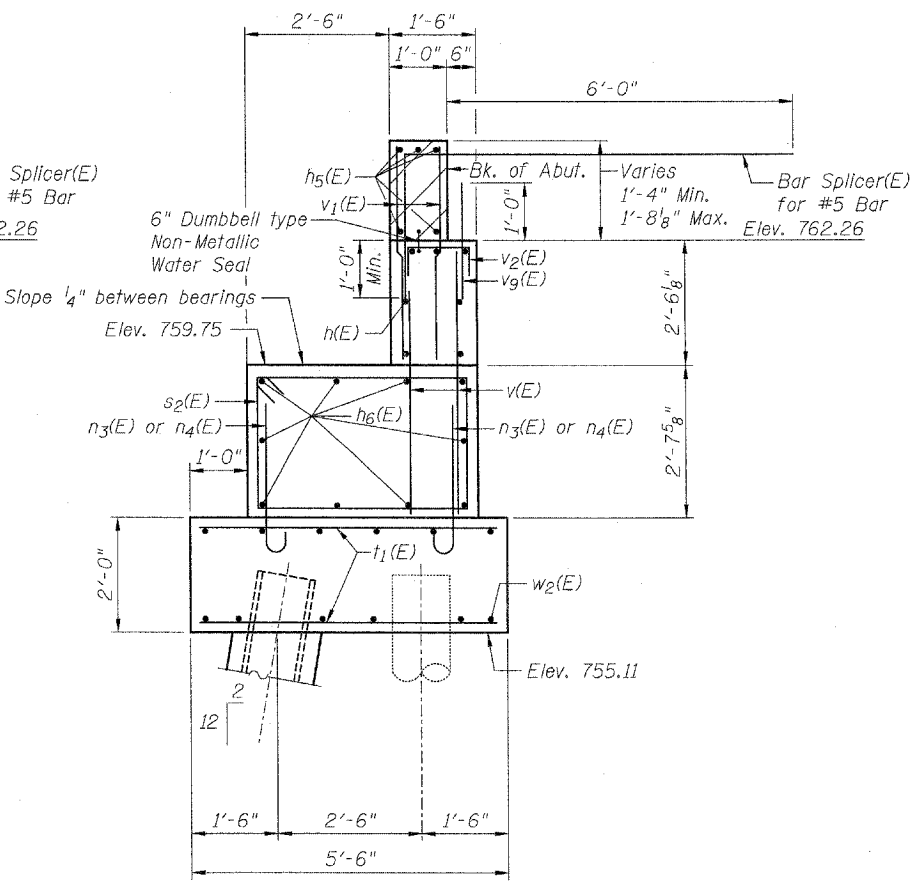
**WESTBOUND EAST
ABUTMENT WINGWALLS
F.A.P. ROUTE 301 (US 20)
OVER PRAIRIE ROAD
SECTION (2HB-2)D
WINNEBAGO COUNTY
STATION 841+89.60
STRUCTURE NO. 101-0051 (W.B.)
STRUCTURE NO. 101-0052 (E.B.)**

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



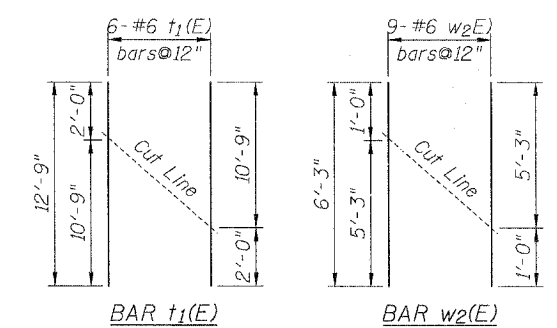
**SECTION THRU
EXISTING ABUTMENT**

Note "A": Existing vertical bars to remain in place, blast clean and lap with new vertical bars. Existing horizontal bars shall be removed.

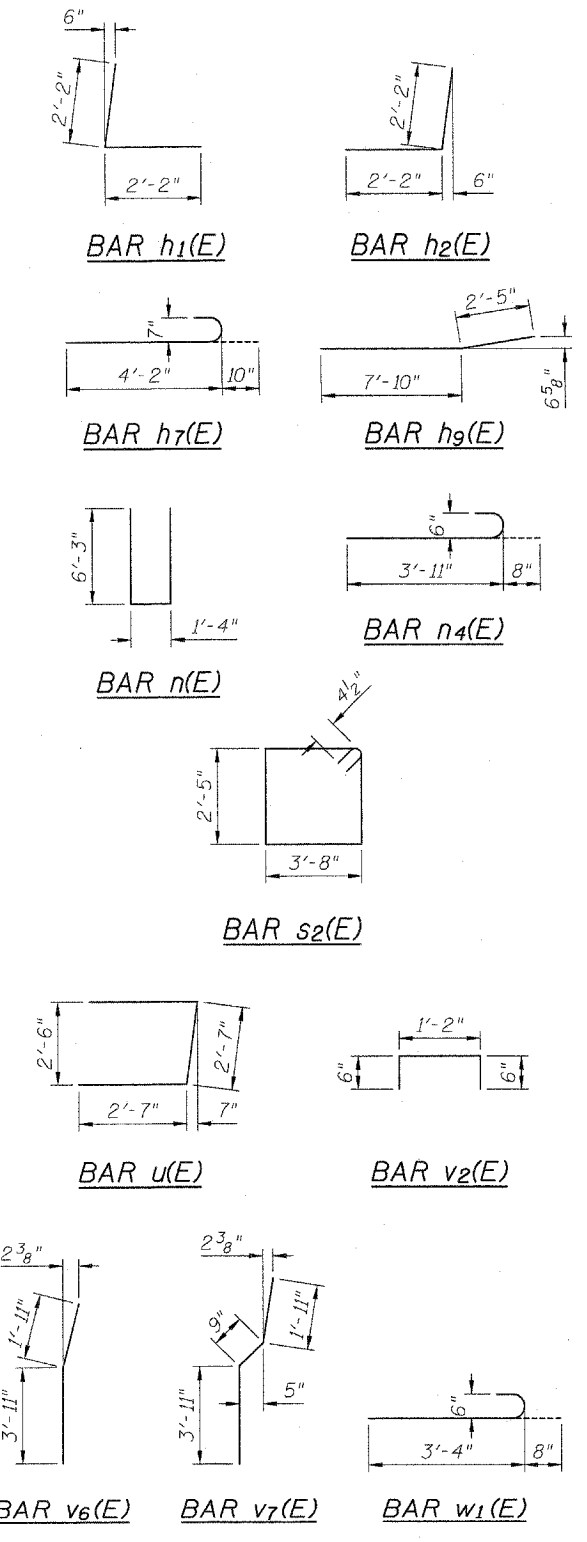


**SECTION THRU PROPOSED
ABUTMENT EXTENSION**

- Notes:
- Hatched area to be poured after superstructure false work has been removed. Quantity of concrete included with Concrete Superstructure.
 - Space reinforcement in cap to miss anchor bolts.
 - Concrete Sealer shall be applied to all exposed surfaces of new concrete for the abutment.
 - For details of piles and Concrete Encasement details, see sheet 38 of 43.
 - For details of Bar Splicers, see sheet 37 of 43.
 - For drainage details behind Abutment, see Sheet 2 of 43.



CUTTING DIAGRAMS
Order bars full length. Cut as shown and use half of bars top and half on bottom.



PILE DATA

Type: HP12x53
Nominal Required Bearing: 418 kips
Allowable Resistance Available: 139 kips
Est. Length: 55'
No. Production Piles: 1
No. Test Piles: None

The Steel H-piles shall be according to AASHTO M270 Grade 50.

**ABUTMENT
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h(E)	24	#5	21'-1"	—
h1(E)	12	#5	4'-4"	—
h2(E)	12	#5	4'-4"	—
h5(E)	10	#6	21'-3"	—
h6(E)	10	#7	5'-6"	—
h7(E)	6	#7	5'-0"	—
h8(E)	26	#4	10'-3"	—
h9(E)	18	#4	10'-3"	—
n(E)	6	#6	13'-10"	—
n2(E)	25	#6	6'-4"	—
n3(E)	42	#6	3'-11"	—
n4(E)	7	#6	4'-7"	—
s2(E)	7	#4	12'-11"	—
t1(E)	6	#6	12'-9"	—
u(E)	3	#6	7'-9"	—
v(E)	46	#5	5'-0"	—
v1(E)	82	#5	4'-0"	—
v2(E)	41	#5	2'-2"	—
v6(E)	6	#6	5'-10"	—
v7(E)	16	#6	6'-7"	—
v8(E)	22	#6	6'-5"	—
v9(E)	41	#5	2'-0"	—
w1(E)	12	#6	4'-0"	—
w2(E)	9	#6	6'-3"	—
Structure Excavation	Cu. Yd.		83	
Concrete Structures	Cu. Yd.		20.8	
Reinforcement Bars, Epoxy Coated	Pound		3,640	
Furnishing - Piles, HP12x53	Foot		55	
Driving Piles	Foot		55	
Concrete Encasement	Cu. Yd.		0.4	
Concrete Sealer	Sq. Ft.		171	
Porous Granular Embankment, Special	Cu. Yd.		49	
Concrete Removal	Cu. Yd.		15.7	
Geocomposite Wall Drain	Sq. Yd.		24	
Pipe Underdrains for Structures 4"	Foot		50	
Bar Splicers	Each		41	

**WESTBOUND EAST
ABUTMENT DETAILS**

F.A.P. ROUTE 301 (US 20)
OVER PRAIRIE ROAD
SECTION (2HB-2D)
WINNEBAGO COUNTY
STATION 841+89.60
STRUCTURE NO. 101-0051 (W.B.)
STRUCTURE NO. 101-0052 (E.B.)

DESIGNED	LAS
CHECKED	DAZ
DRAWN	SAW
CHECKED	LAS

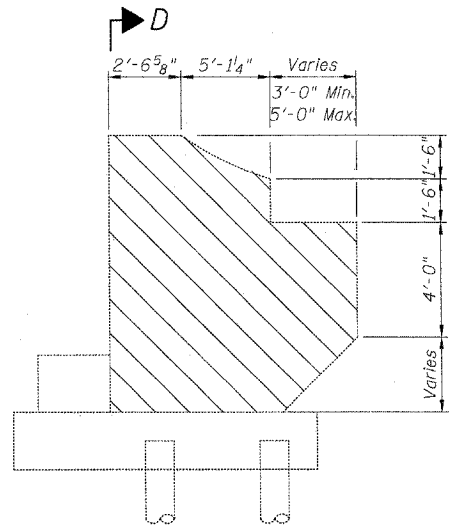
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Contract #64B07

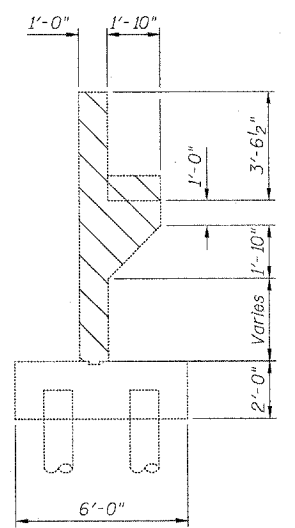
LEGEND

Concrete Removal

Concrete Placement



TYPICAL EXISTING
WINGWALL ELEVATION



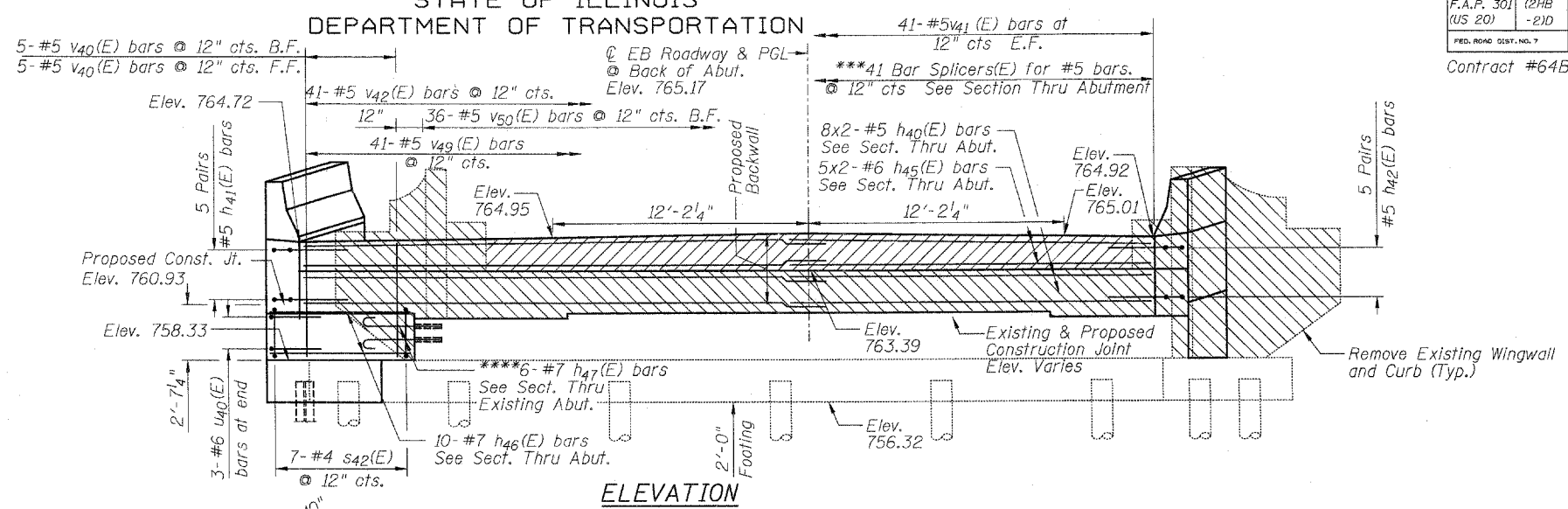
SECTION D-D

MINIMUM BAR LAPS

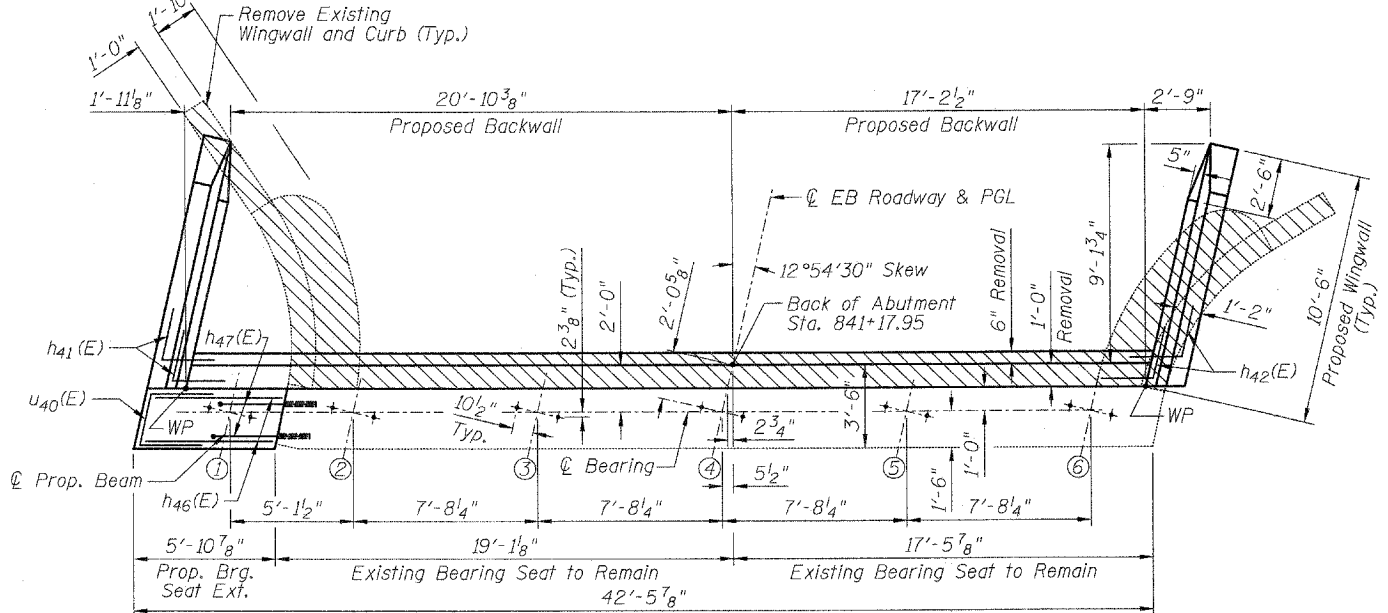
#5 Bars = 2'-2"
#6 Bars = 2'-7"
#7 Bars = 3'-5"

DESIGNED	SSM
CHECKED	JLA
DRAWN	GYR
CHECKED	SSM

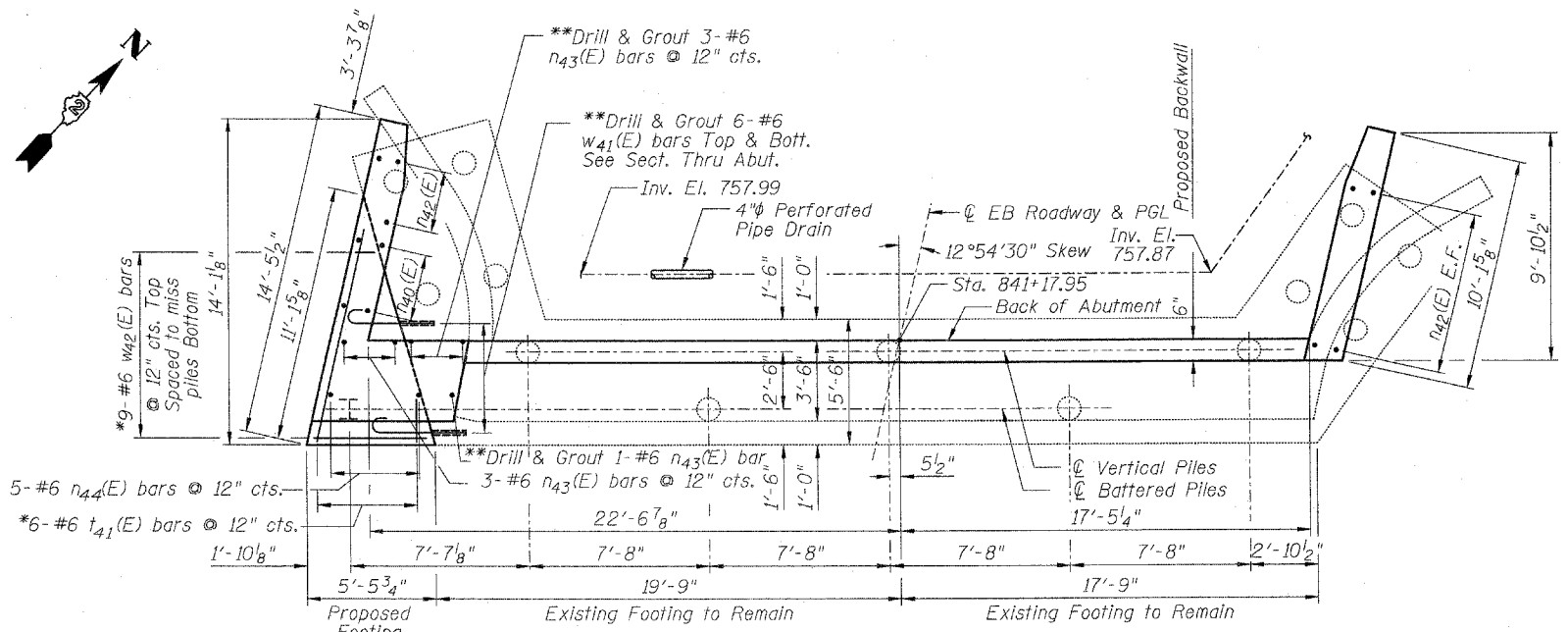
A-1-R (K30°) 11-1-06



ELEVATION



TOP VIEW



PLAN-PILE CAP

Notes:

Existing reinforcement not extending into new construction shall be cut flush with existing concrete and sealed with a layer of epoxy. Cost included with Concrete Removal.

Existing reinforcement extending into the removal area shall be cleaned, straightened, and incorporated into the new construction. Cost included with Concrete Removal.

*Signifies cut bar. Order per length on Bill of Material. Cut as shown in Cutting Diagram and use half bars top and half bars bottom.

**Epoxy grout #6 w41(E) & #6 n43(E) bars in a 1" hole.

***Alternate with #5 v41(E) bars. Place parallel to beams.

****Epoxy grout #7 h47(E) bars in a 1 1/8" hole x 12" deep.

Holes shall be drilled a minimum of 9" deep. Bars shall be drilled and epoxy grouted according to Article 584 of the Standard Specifications.

Bars indicated thus 8x2 - #5 etc. indicates 8 lines of bars with 2 lengths of bars.

For Bill of Material, Cutting Diagrams, Bar Details, and Abutment Sections, see Sheet 28.

EASTBOUND WEST ABUTMENT
F.A.P. ROUTE 301 (US 20)
OVER PRAIRIE ROAD
SECTION (2HB-2)D
WINNEBAGO COUNTY
STATION 841+89.60
STRUCTURE NO. 101-0051 (W.B.)
STRUCTURE NO. 101-0052 (E.B.)

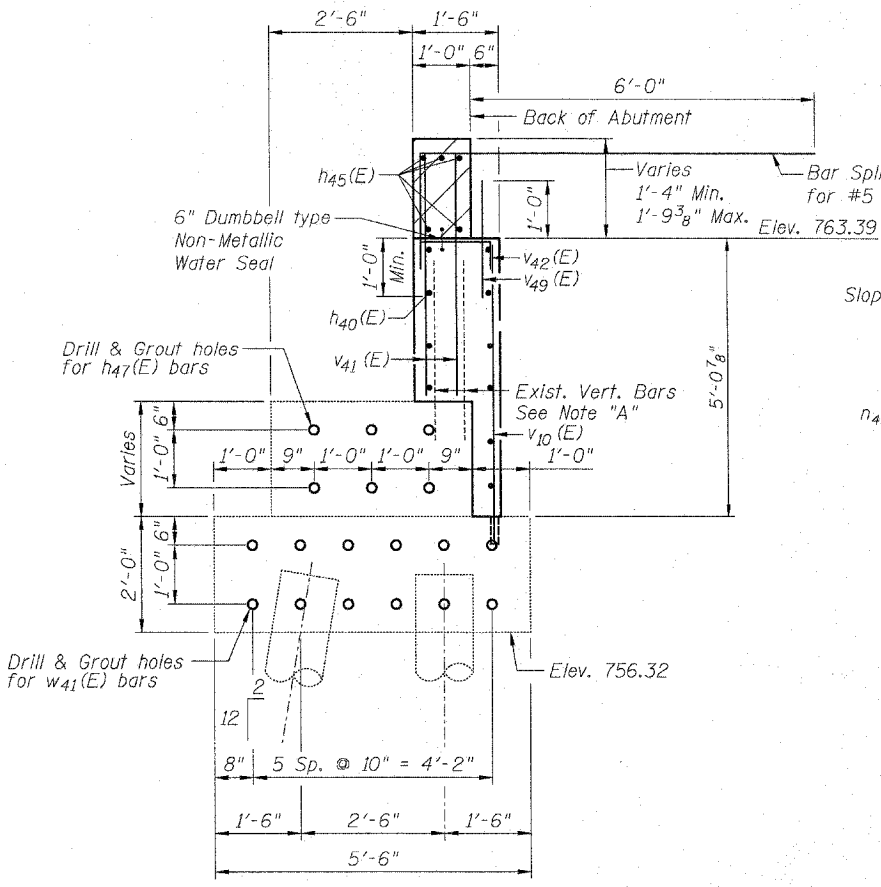
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 28 43 SHEETS
F.A.P. 301 (US 20)	(2HB-2)D	WINNEBAGO	107	50	
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-		

Contract #64B07

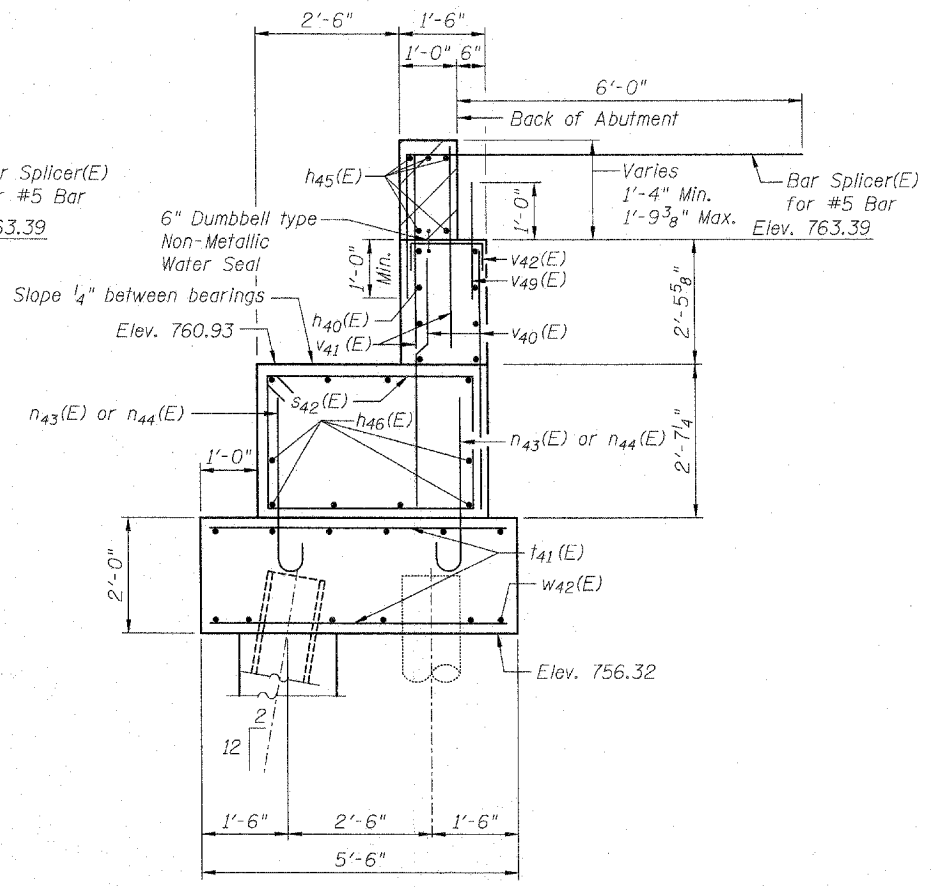
ABUTMENT
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h40(E)	16	#5	21'-1"	—
h41(E)	10	#5	4'-4"	—
h42(E)	10	#5	4'-4"	—
h45(E)	10	#6	21'-3"	—
h46(E)	10	#7	5'-6"	—
h47(E)	6	#7	5'-0"	—
h48(E)	26	#4	10'-3"	—
h49(E)	18	#4	10'-3"	—
n40(E)	6	#6	13'-10"	—
n42(E)	25	#6	6'-4"	—
n43(E)	7	#6	3'-1"	—
n44(E)	5	#6	4'-1"	—
s42(E)	7	#4	12'-7"	—
t41(E)	6	#6	12'-9"	—
u40(E)	3	#6	7'-6"	—
v40(E)	10	#5	4'-10"	—
v41(E)	82	#5	3'-5"	—
v42(E)	41	#5	2'-2"	—
v46(E)	6	#6	5'-10"	—
v47(E)	16	#6	6'-7"	—
v48(E)	22	#6	6'-5"	—
v49(E)	41	#5	2'-0"	—
v50(E)	36	#5	5'-7"	—
w41(E)	12	#6	4'-0"	—
w42(E)	9	#6	6'-3"	—
Item	Unit	Quantity		
Structure Excavation	Cu. Yd.	74		
Concrete Structures	Cu. Yd.	20.5		
Reinforcement Bars, Epoxy Coated	Pound	3,180		
Furnishing Steel Piles, HP12x53	Foot	55		
Driving Piles	Foot	54		
Concrete Encasement	Cu. Yd.	.4		
Concrete Sealer	Sq. Ft.	263		
Porous Granular Embankment, Special	Cu. Yd.	40		
Concrete Removal	Cu. Yd.	14.0		
Geocomposite Wall Drain	Sq. Yd.	22.5		
Pipe Underdrains for Structures 4"	Foot	50		
Bar Splicers	Each	41		



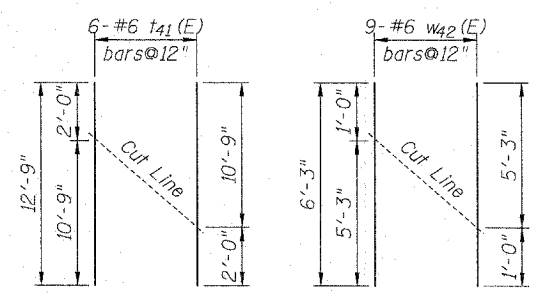
SECTION THRU
EXISTING ABUTMENT

Note "A": Existing vertical bars to remain in place, blast clean and lap with new vertical bars. Existing horizontal bars shall be removed.



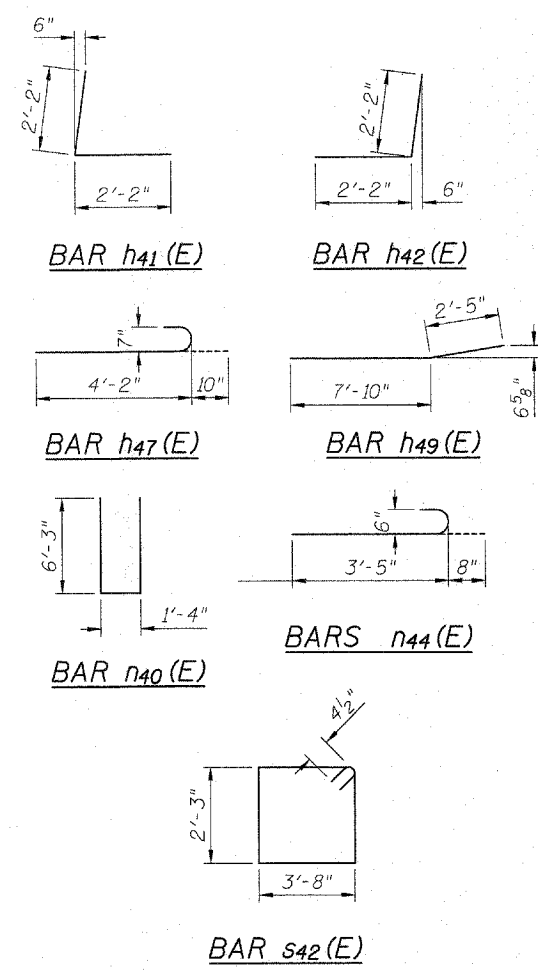
SECTION THRU PROPOSED
ABUTMENT EXTENSION

- Notes:
- Hatched area to be poured after superstructure false work has been removed. Quantity of concrete included with Concrete Superstructure.
 - Space reinforcement in cap to miss anchor bolts.
 - Pour steps monolithically with cap.
 - For details of piles and Concrete Encasement details, see sheet 38.
 - For details of Bar Splicers, see sheet 37.
 - For drainage details behind Abutment, see Sheet 36.
 - Concrete Sealer shall be applied to all permanently exposed portions of the proposed backwalls, abutment fronts and bearing seats, new concrete only.



CUTTING DIAGRAMS

Order bars full length. Cut as shown and use half of bars top and half on bottom.



PILE DATA

Type: HP12x53
Nominal Required Bearing: 418 kips
Allowable Resistance Available: 139 kips
Est. Length: 55'
No. Production Piles: 1
No. Test Piles: None

The Steel H-piles shall be according to AASHTO M270 Grade 50.

Plans Prepared by: Kudrna & Associates, Ltd.

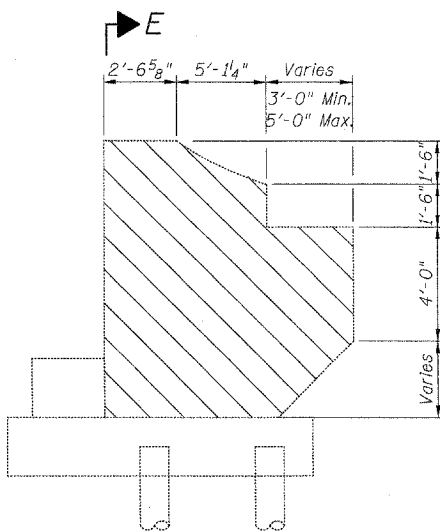
EASTBOUND WEST
ABUTMENT DETAILS
F.A.P. ROUTE 301 (US 20)
OVER PRAIRIE ROAD
SECTION (2HB-2)D
WINNEBAGO COUNTY
STATION 841+89.60
STRUCTURE NO. 101-0051 (W.B.)
STRUCTURE NO. 101-0052 (E.B.)

DESIGNED	SSM
CHECKED	JLA
DRAWN	GYR
CHECKED	SSM

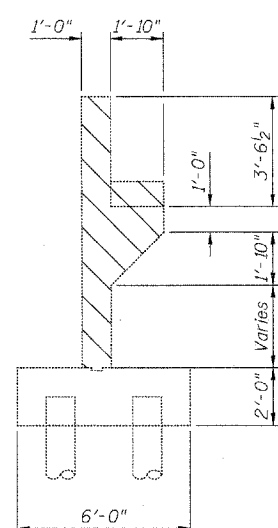
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 29 43 SHEETS
F.A.P. 301 (US 20)	(2HB -2)D	WINNEBAGO	107	51	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

Contract #64B07



TYPICAL EXISTING
WINGWALL ELEVATION



SECTION E-E

MINIMUM BAR LAPS

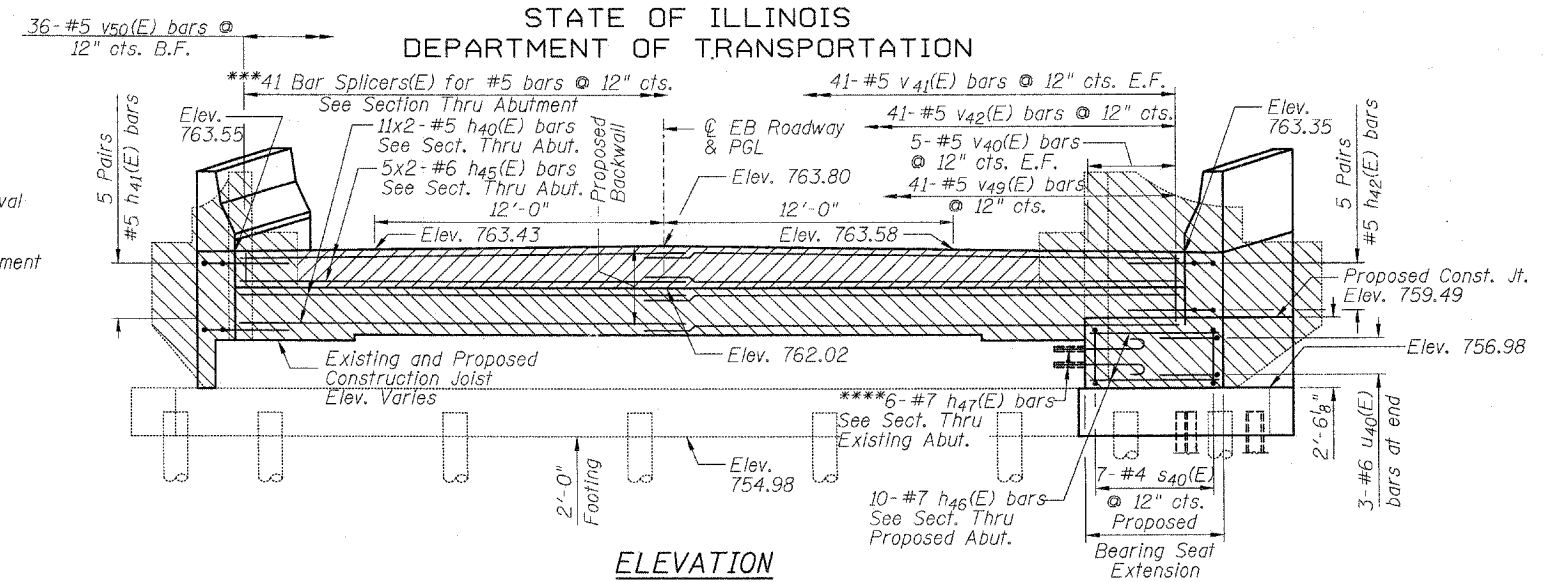
- #5 Bars = 2'-2"
- #6 Bars = 2'-7"
- #7 Bars = 3'-5"

DESIGNED	SSM
CHECKED	JLA
DRAWN	GYR
CHECKED	SSM

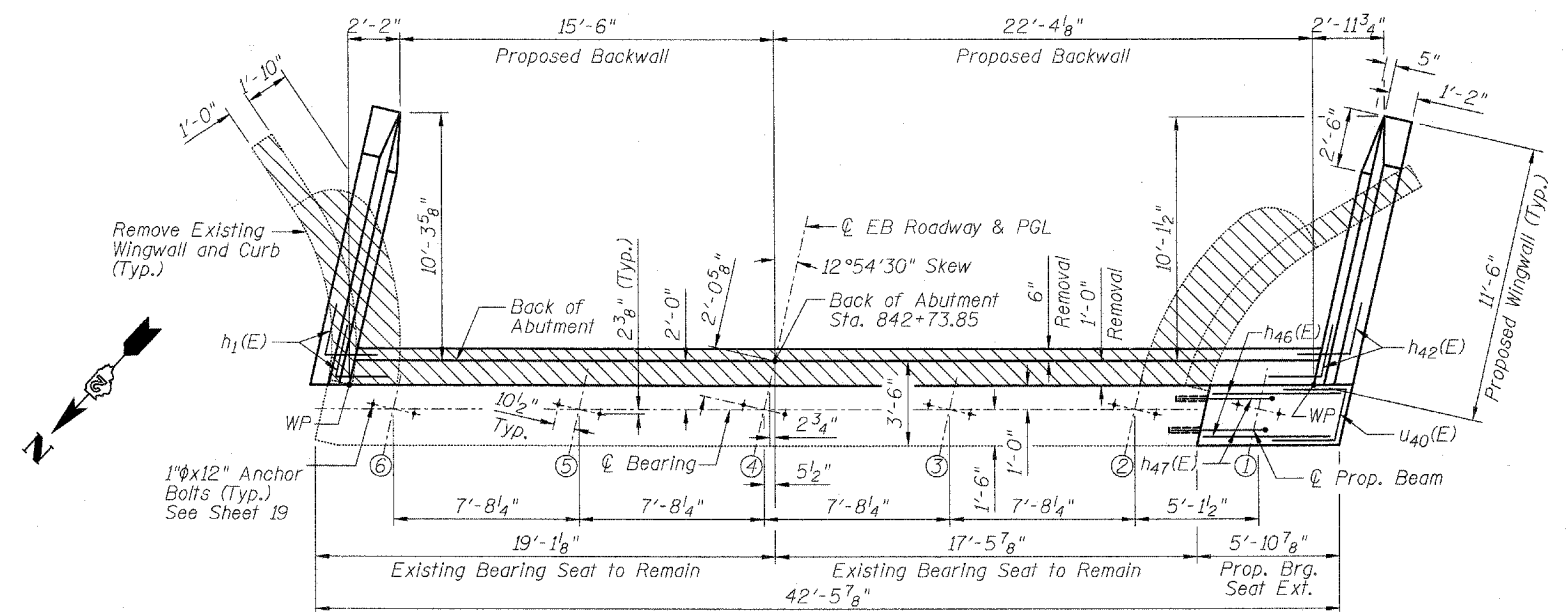
A-1-R (<30°)

11-1-06

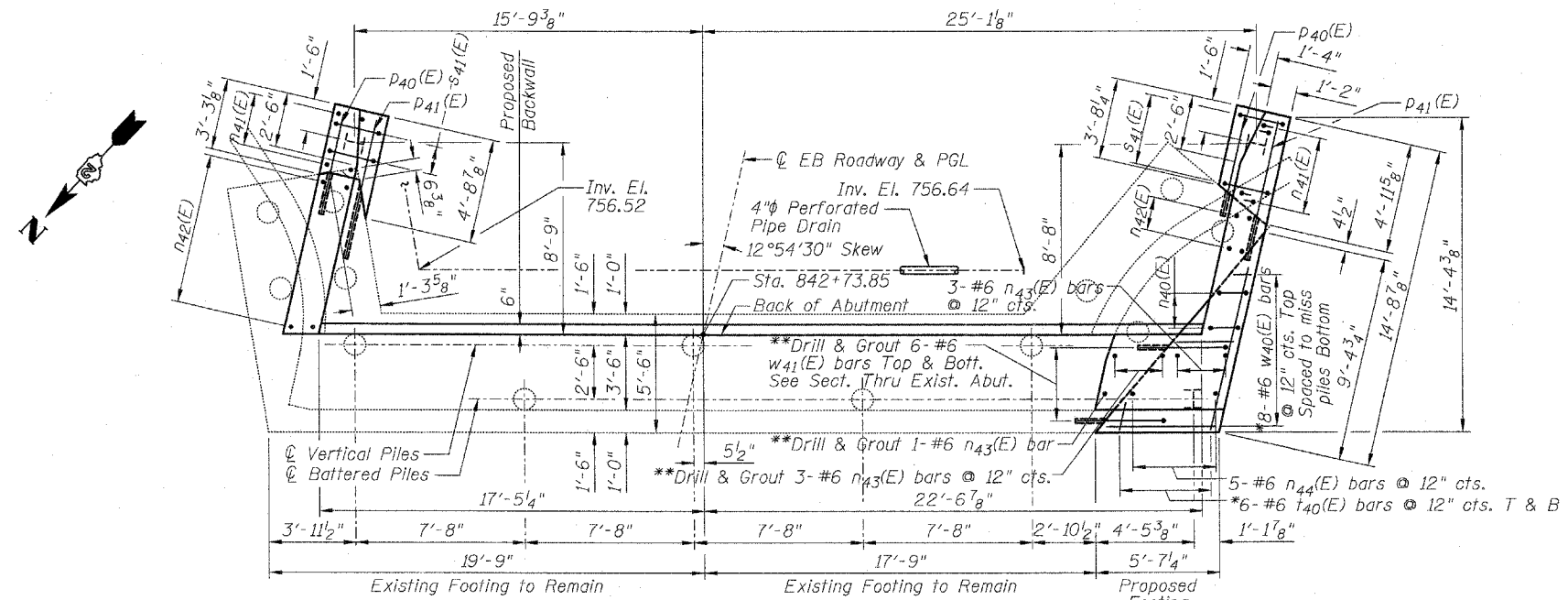
LEGEND
 Concrete Removal
 Concrete Placement



ELEVATION



TOP VIEW



PLAN-PILE CAP

Existing reinforcement not extending into new construction shall be cut flush with existing concrete with a layer of epoxy. Cost included with Concrete Removal.

Existing reinforcement extending into the removal area shall be cleaned, straightened, and incorporated into the new construction. Cost included with Concrete Removal.

*Signifies cut bar. Order per length on Bill of Material. Cut as shown in Cutting Diagram and use half bars top and half bars bottom.

***Epoxy grout #6 w₄₁(E) & #6 n₄₃(E) bars in a 1" hole

***Alternate with #5 v₄₁(E) bars. Place parallel to beams.

****Epoxy grout #7 h₄₇(E) bars in a 1 1/8" hole x 12" deep.

Holes shall be drilled a minimum of 9" deep. Bars shall be drilled and epoxy grouted according to Article 584 of the Standard Specifications.

Bars indicated thus 8x2 - #5 etc. indicates 8 lines of bars with 2 lengths of bars.

For Bill of Material, Cutting Diagrams, Bar Details, and Abutment Sections, see Sheet 31.

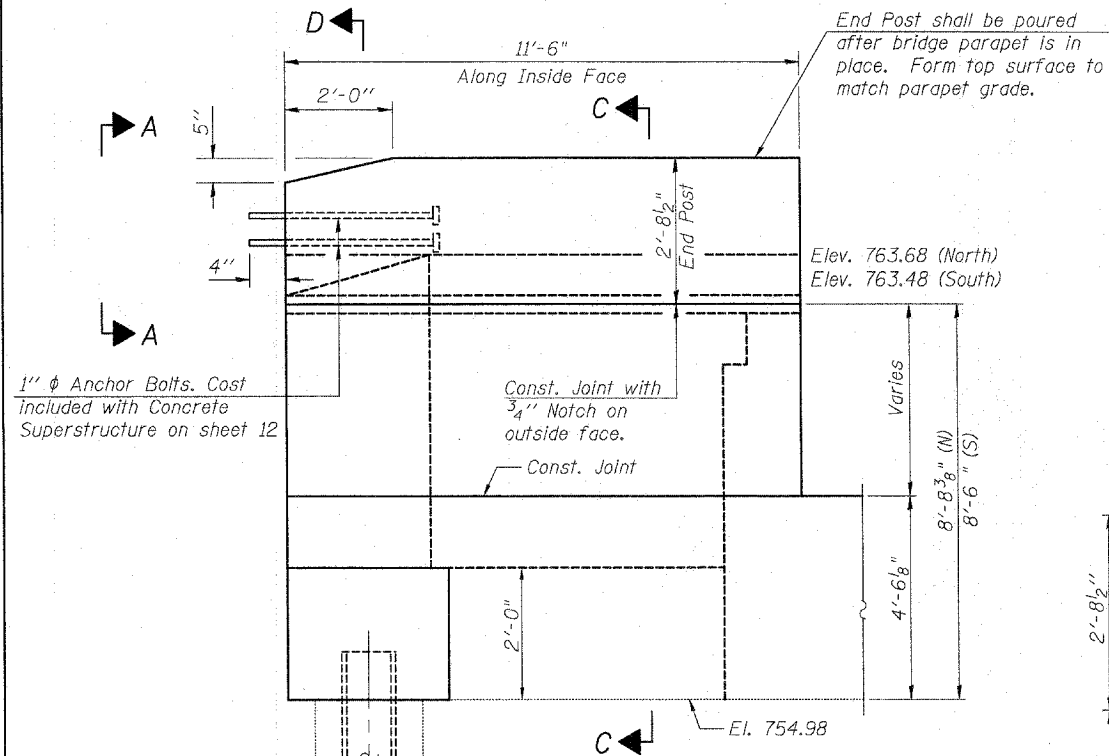
EASTBOUND EAST ABUTMENT
F.A.P. ROUTE 301 (US 20)
OVER PRAIRIE ROAD
SECTION (2HB-2)D
WINNEBAGO COUNTY
STATION 841+89.60
STRUCTURE NO. 101-0051 (W.B.)
STRUCTURE NO. 101-0052 (E.B.)

Plans Prepared by: Kudrna & Associates, Ltd.

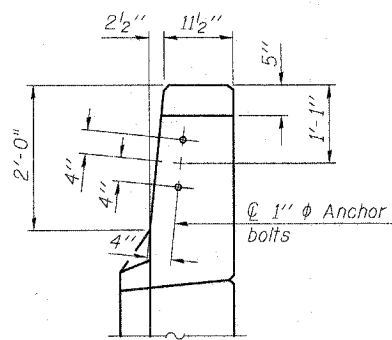
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 30
F.A.P. 301 (US 20)	(2HB-2)D	WINNEBAGO	107	52	43 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

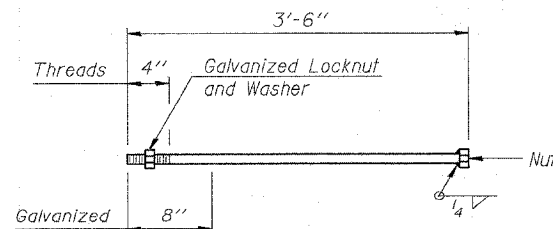
Contract #64B07



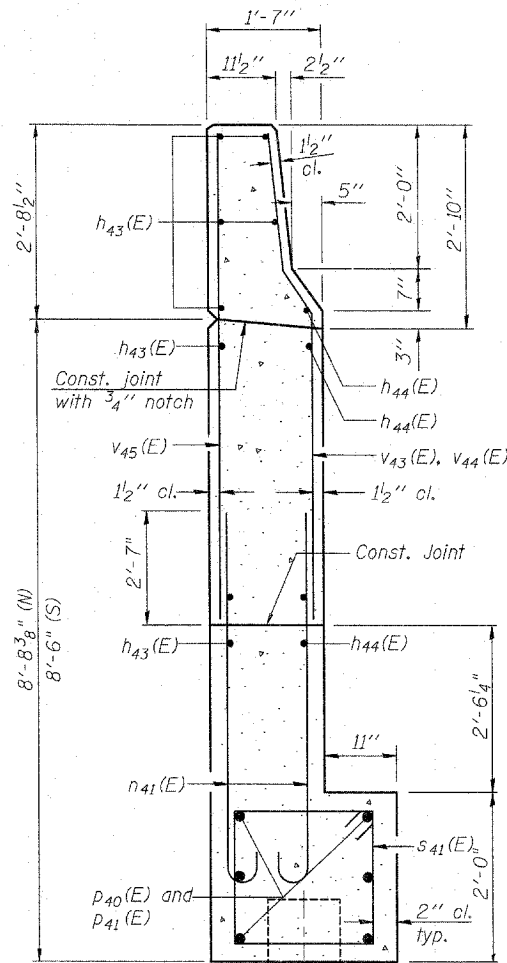
WING WALL ELEVATION
Showing Dimensions



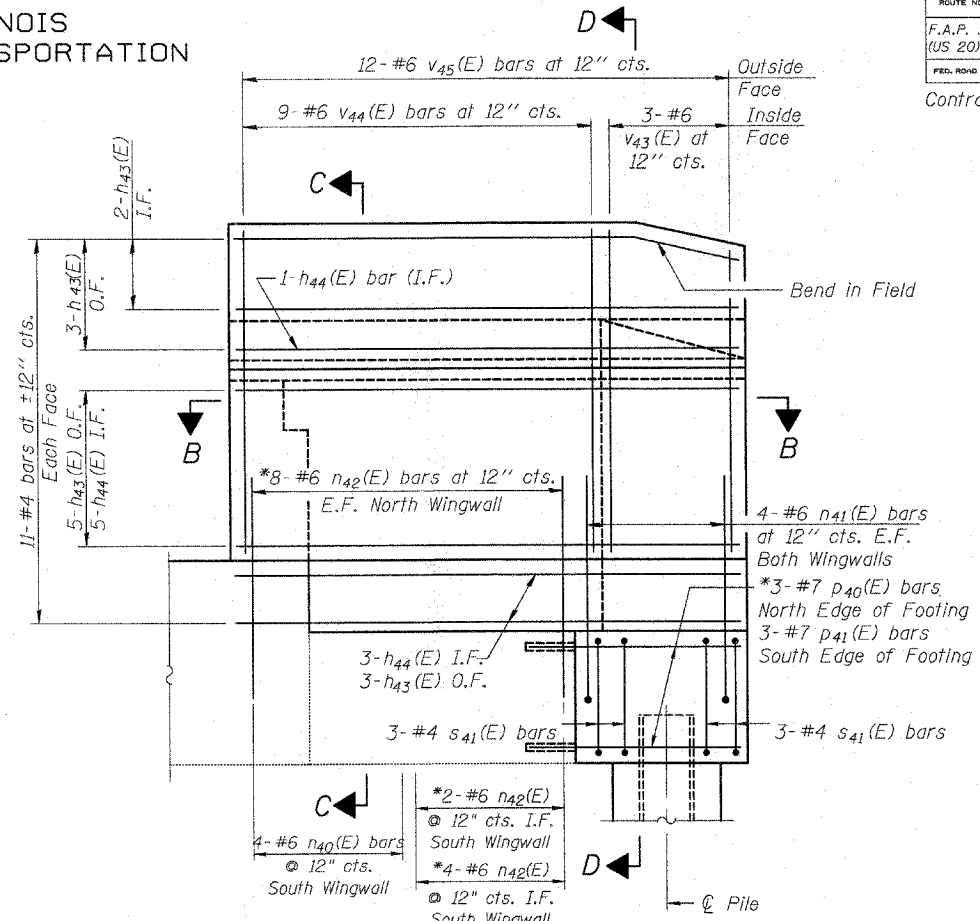
VIEW A-A



1" φ ANCHOR BOLT



SECTION D-D



WING WALL ELEVATION
Showing Reinforcement

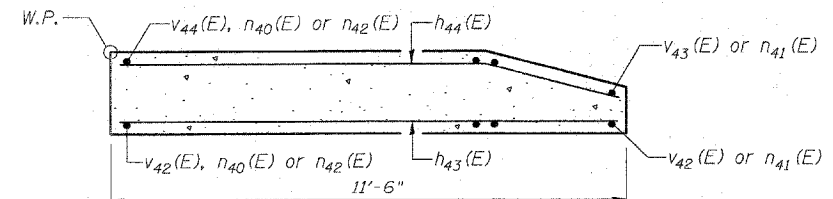
Note: h₄₃(E) and h₄₄(E) bars for south wingwall to be cut to fit at existing abutment bearing seat.

*Epoxy grout #6 n₄₂(E) bars in 1" φ hole.

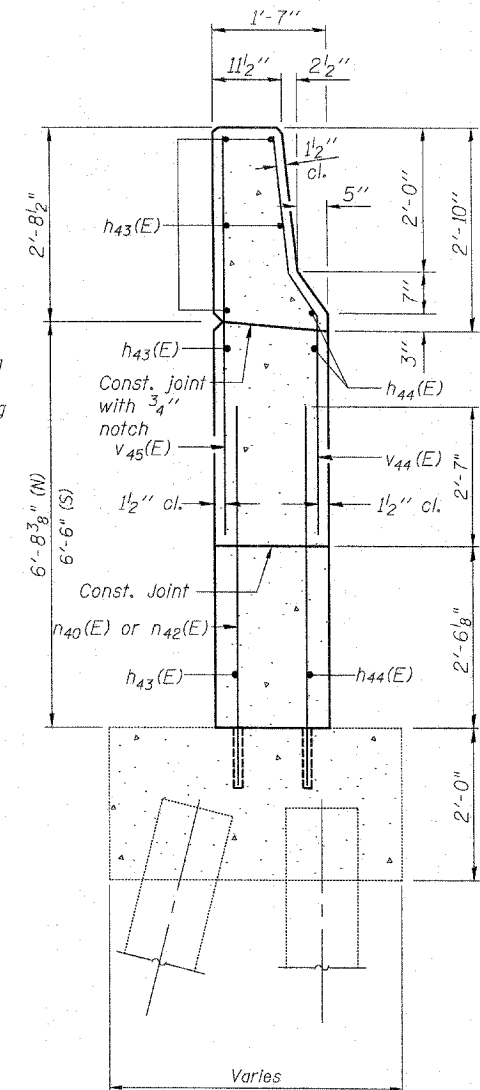
*Epoxy grout #7 p₄₀(E) and p₄₁(E) bars in 1 1/8" φ hole x 12" deep.

Holes shall be drilled a minimum of 9" deep. Bars shall be drilled and grouted according to Article 584 of the Standard Specifications.

Quantity of concrete in end post included with Concrete Superstructure on sheet 12.



SECTION B-B



SECTION C-C

DESIGNED	SSM
CHECKED	JLA
DRAWN	GYR
CHECKED	SSM

A-1-D

11-1-06

Plans Prepared by: Kudrna & Associates, Ltd.

**EASTBOUND EAST
ABUTMENT WINGWALLS
F.A.P. ROUTE 301 (US 20)
OVER PRAIRIE ROAD
SECTION (2HB-2)D
WINNEBAGO COUNTY
STATION 841+89.60
STRUCTURE NO. 101-0051 (W.B.)
STRUCTURE NO. 101-0052 (E.B.)**

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

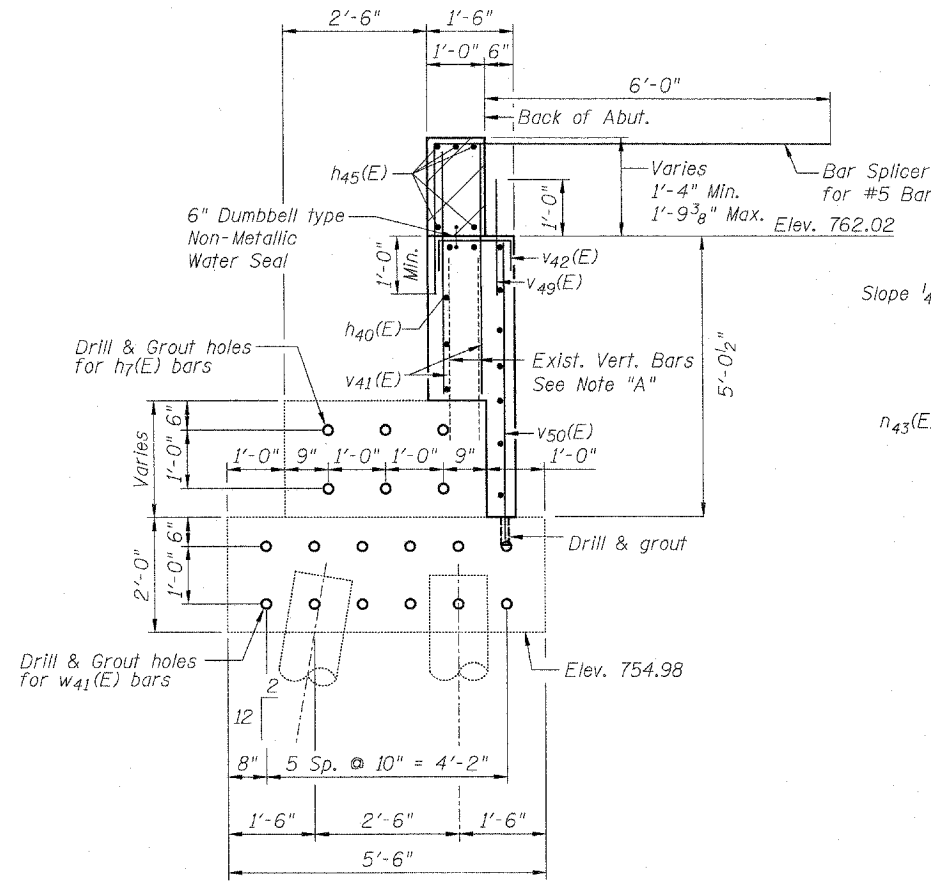
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO.
F.A.P. 301 (US 20)	(2HB-2D)	WINNEBAGO	107	53	43 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

Contract #64B07

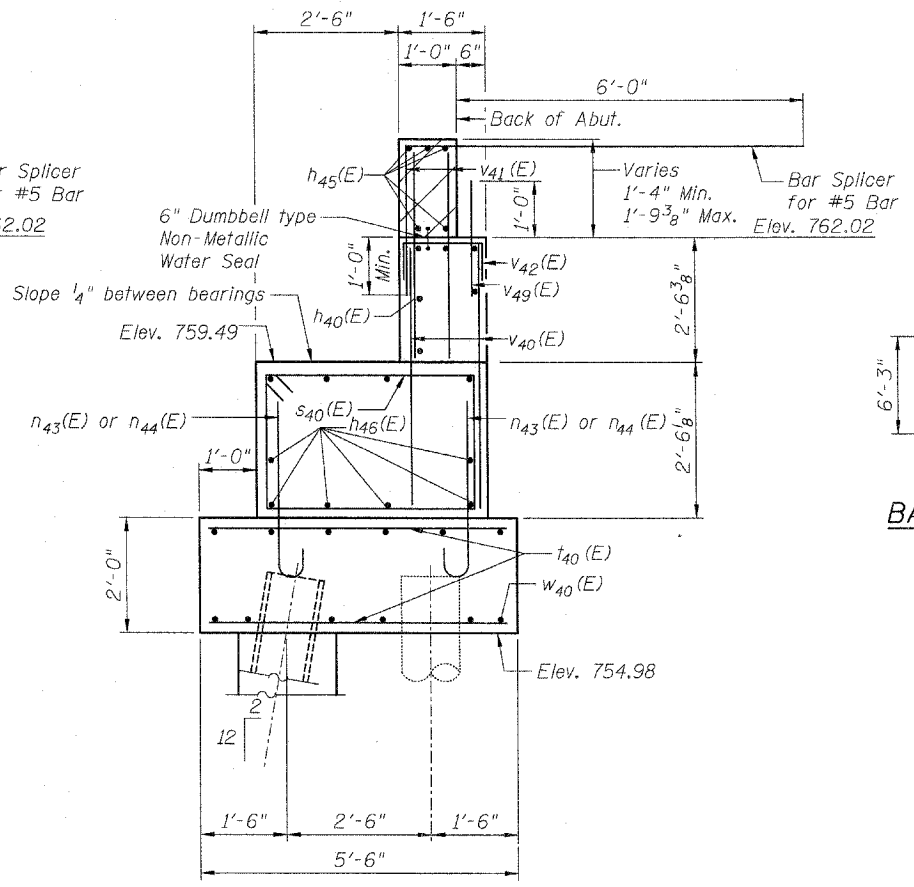
**ABUTMENT
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h40(E)	22	#5	21'-1"	—
h41(E)	10	#5	4'-4"	L
h42(E)	10	#5	4'-4"	L
h43(E)	26	#4	11'-3"	—
h44(E)	18	#4	11'-3"	—
h45(E)	10	#6	21'-3"	—
h46(E)	10	#7	5'-6"	—
h47(E)	6	#7	5'-0"	—
n40(E)	4	#6	13'-10"	—
n41(E)	16	#6	7'-0"	—
n42(E)	22	#6	6'-4"	—
n43(E)	7	#6	3'-1"	—
n44(E)	5	#6	4'-1"	—
p40(E)	6	#7	5'-1"	—
p41(E)	6	#7	6'-7"	—
s40(E)	7	#4	12'-5"	—
s41(E)	12	#4	8'-5"	—
t40(E)	6	#6	11'-0"	—
u40(E)	3	#6	7'-6"	—
v40(E)	10	#5	4'-10"	—
v41(E)	82	#5	3'-5"	—
v42(E)	41	#5	2'-2"	—
v43(E)	6	#6	5'-9"	—
v44(E)	18	#6	6'-6"	—
v45(E)	24	#6	6'-4"	—
v49(E)	41	#5	2'-0"	—
v50(E)	36	#5	5'-7"	—
w40(E)	8	#6	6'-3"	—
w41(E)	12	#6	4'-0"	—

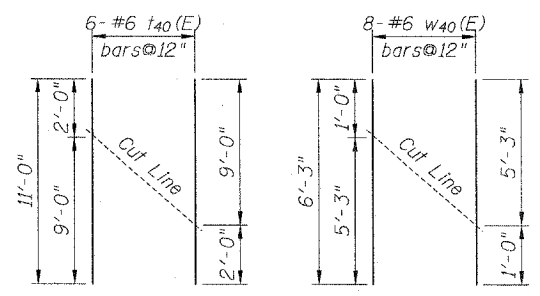
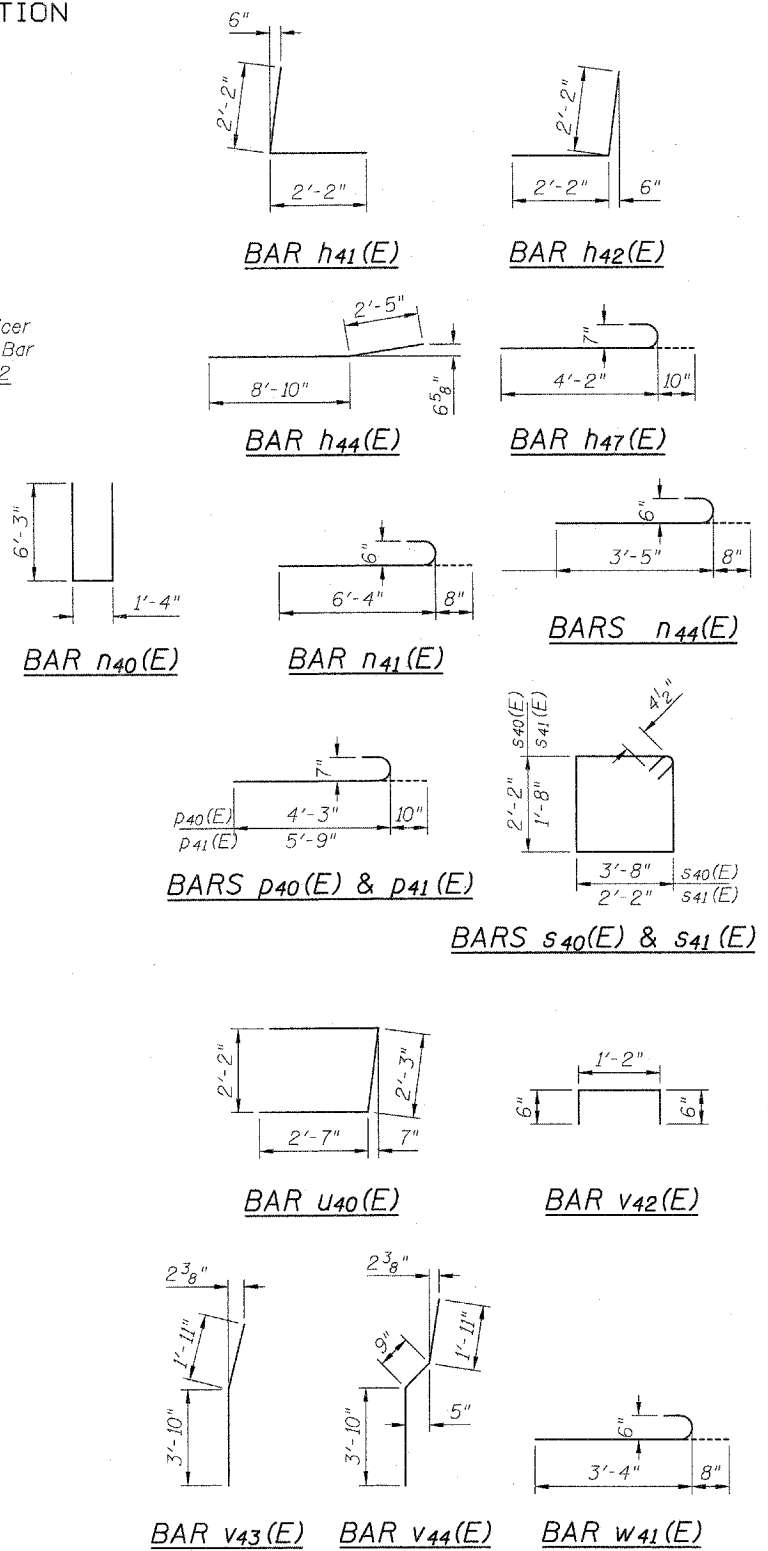
Structure Excavation	Cu. Yd.	77
Concrete Structures	Cu. Yd.	21.1
Reinforcement Bars, Epoxy Coated	Pound	3,660
Furnishing Steel Piles, HP12x53	Foot	124
Driving Piles	Foot	122
Test Pile, HP12x53	Each	1
Concrete Encasement	Cu. Yd.	.8
Concrete Sealer	Sq. Ft.	263
Porous Granular Embankment, Special	Cu. Yd.	48
Concrete Removal	Cu. Yd.	14.4
Geocomposite Wall Drain	Sq. Ft.	22.2
Pipe Underdrains For Structures 4"	Sq. Yd.	51
Bar Splicers	Each	41



SECTION THRU EXISTING ABUTMENT



SECTION THRU PROPOSED ABUTMENT EXTENSION



CUTTING DIAGRAMS

Order bars full length. Cut as shown and use half of bars top and half on bottom.

Note "A": Existing vertical bars to remain in place, blast clean and lap with new vertical bars. Existing horizontal bars shall be removed.

- Notes:
- Hatched area to be poured after superstructure false work has been removed. Quantity of concrete included with Concrete Superstructure.
 - Space reinforcement in cap to miss anchor bolts.
 - Pour steps monolithically with cap.
 - For details of piles and Concrete Encasement details, see sheet 38.
 - For details of Bar Splicers, see sheet 37.
 - For drainage details behind Abutment, see Sheet 36.
 - Concrete Sealer shall be applied to all permanently exposed portions of the proposed backwalls, abutment fronts and bearing seats, new concrete only.

DESIGNED	SSM
CHECKED	JLA
DRAWN	GYR
CHECKED	SSM

PILE DATA

Type: HP12x53
Nominal Required Bearing: 418 kips
Allowable Resistance Available: 139 kips
Est. Length: 62'
No. Production Piles: 2
No. Test Piles: 1
The Steel H-piles shall be according to AASHTO M270 Grade 50.

The test pile shall be driven to 110 percent of the Nominal Required Bearing indicated in the pile data information.

Plans Prepared by: Kudrna & Associates, Ltd.

**EASTBOUND EAST
ABUTMENT DETAILS
F.A.P. ROUTE 301 (US 20)
OVER PRAIRIE ROAD
SECTION (2HB-2D)
WINNEBAGO COUNTY
STATION 841+89.60
STRUCTURE NO. 101-0051 (W.B.)
STRUCTURE NO. 101-0052 (E.B.)**

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO. F.A.P. 301 (US 20)	SECTION (2HB-2)D	COUNTY WINNEBAGO	TOTAL SHEETS 107	SHEET NO. 54	SHEET NO. 32 43 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

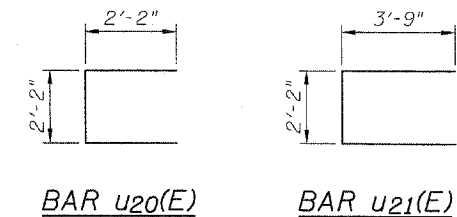
Contract #64B07

PIER 1
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h ₂₀ (E)	3	#8	3'-6"	—
h ₂₁ (E)	16	#5	13'-0"	—
h ₂₂ (E)	16	#5	3'-4"	—
h ₂₃ (E)	1	#5	10'-2"	—
h ₂₄ (E)	1	#5	4'-11"	—
u ₂₀ (E)	23	#5	6'-6"	⊏
u ₂₁ (E)	42	#5	9'-8"	⊏
v ₂₀ (E)	14	#5	24'-9"	—
v ₂₁ (E)	18	#5	6'-9"	—
Structure Excavation		Cu. Yd.	18	
Concrete Structures		Cu. Yd.	17.5	
Reinforcement Bars, Epoxy Coated		Pound	1,380	
Furnishing - Piles, HP12x53		Foot	65	
Driving Piles		Foot	47	
Concrete Encasement		Cu. Yd.	0.4	
Concrete Sealer		Sq. Ft.	376	

For details of piles and Concrete Encasement, see sheet 38 of 43.

Concrete Sealer shall be applied to all exposed surfaces of new concrete for the pier.



MINIMUM BAR LAPS

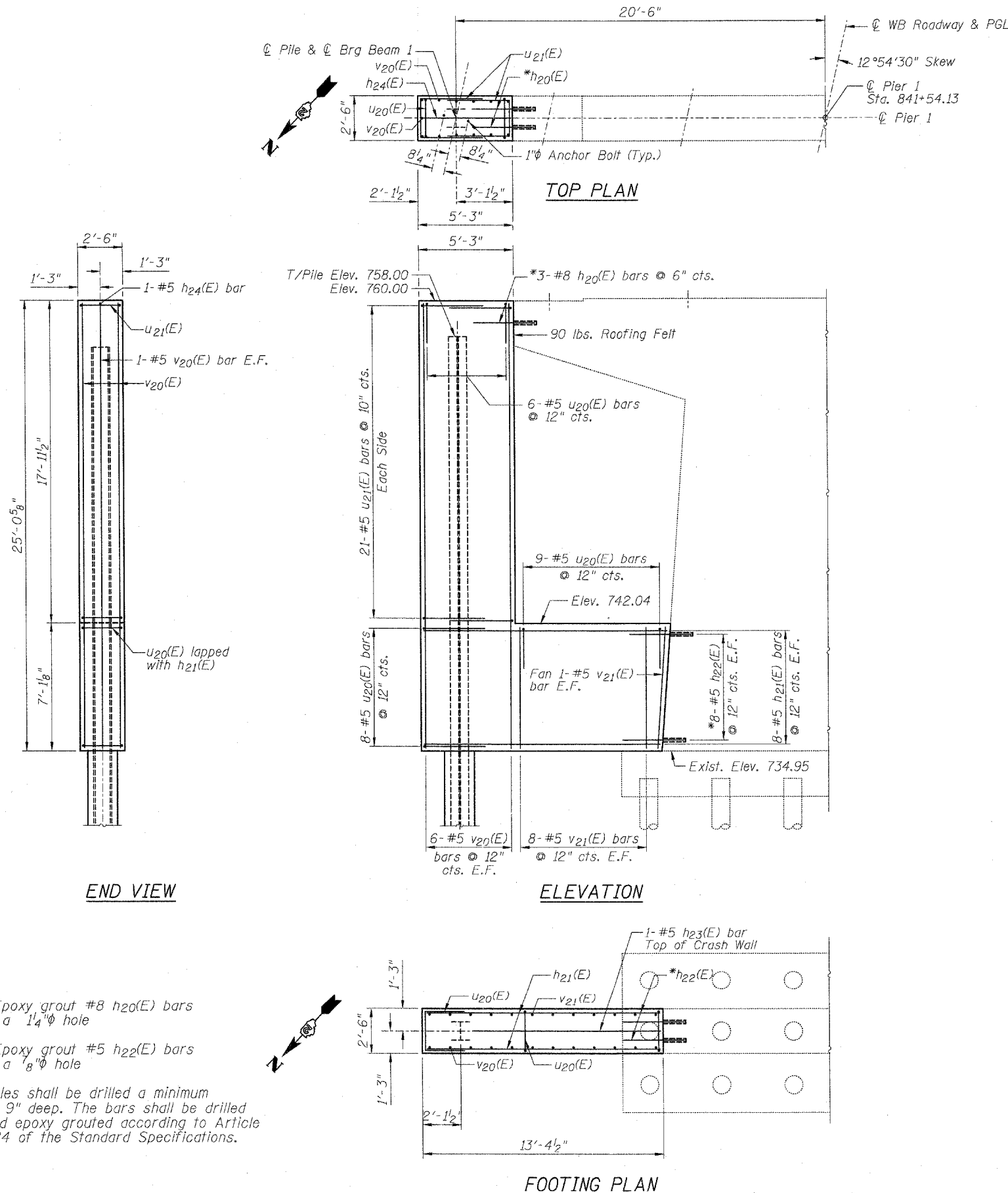
#5 Bars = 2'-2"

PILE DATA

Type: HP12x53
Nominal Required Bearing: 418 kips
Allowable Resistance Available: 139 kips
Est. Length: 65'
No. Production Piles: 1
No. Test Piles: None

The Steel H-piles shall be according to AASHTO M270 Grade 50.

WESTBOUND PIER 1
F.A.P. ROUTE 301 (US 20)
OVER PRAIRIE ROAD
SECTION (2HB-2)D
WINNEBAGO COUNTY
STATION 841+89.60
STRUCTURE NO. 101-0051 (W.B.)
STRUCTURE NO. 101-0052 (E.B.)



*Epoxy grout #8 h₂₀(E) bars in a 1 1/4" hole

*Epoxy grout #5 h₂₂(E) bars in a 3/8" hole

Holes shall be drilled a minimum of 9" deep. The bars shall be drilled and epoxy grouted according to Article 584 of the Standard Specifications.

DESIGNED	LAS
CHECKED	DAZ
DRAWN	SAW
CHECKED	LAS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 301 (US 20)	(2HB -2)D	WINNEBAGO	107	55
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 33
43 SHEETS

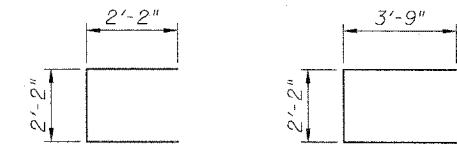
Contract #64B07

PIER 2
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h20(E)	3	#8	3'-6"	—
h21(E)	16	#5	13'-0"	—
h22(E)	16	#5	3'-4"	—
h23(E)	1	#5	10'-2"	—
h24(E)	1	#5	4'-11"	—
u20(E)	23	#5	6'-6"	□
u21(E)	42	#5	9'-8"	□
v22(E)	14	#5	24'-1"	—
v23(E)	18	#5	7'-0"	—
Structure Excavation		Cu. Yd.	18	
Concrete Structures		Cu. Yd.	17.4	
Reinforcement Bars, Epoxy Coated		Pound	1,380	
Furnishing - Piles, HP12x53		Foot	66	
Driving Piles		Foot	49	
Concrete Encasement		Cu. Yd.	0.4	
Concrete Sealer		Sq. Ft.	364	

For details of piles and Concrete Encasement, see sheet 38 of 43.

Concrete Sealer shall be applied to all exposed surfaces of new concrete for the pier.



BAR u20(E)

BAR u21(E)

MINIMUM BAR LAPS

#5 Bars = 2'-2"

PILE DATA

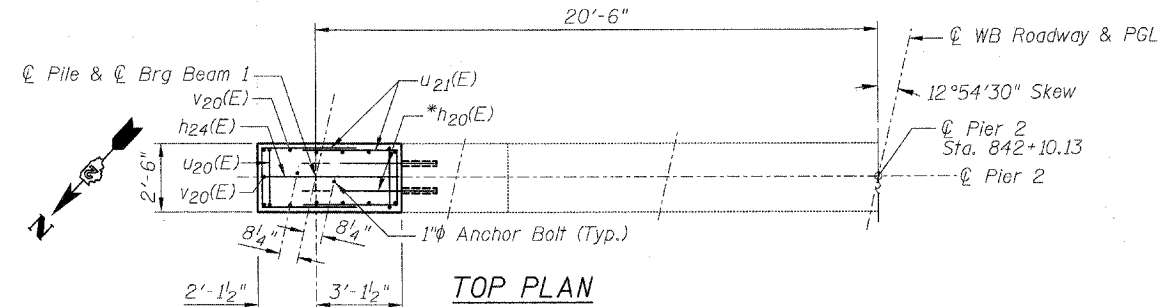
Type: HP12x53
Nominal Required Bearing: 418 kips
Allowable Resistance Available: 139 kips
Est. Length: 66'
No. Production Piles: 1
No. Test Piles: None

The Steel H-piles shall be according to AASHTO M270 Grade 50.

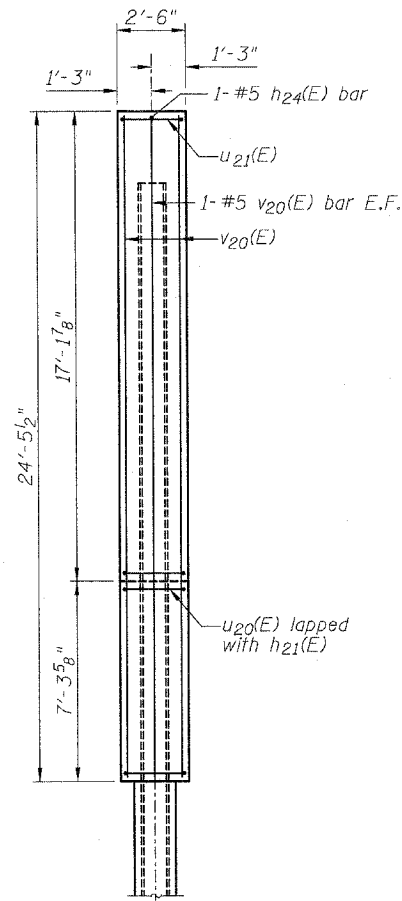
WESTBOUND PIER 2
F.A.P. ROUTE 301 (US 20)
OVER PRAIRIE ROAD
SECTION (2HB-2)D
WINNEBAGO COUNTY
STATION 841+89.60

STRUCTURE NO. 101-0051 (W.B.)
STRUCTURE NO. 101-0052 (E.B.)

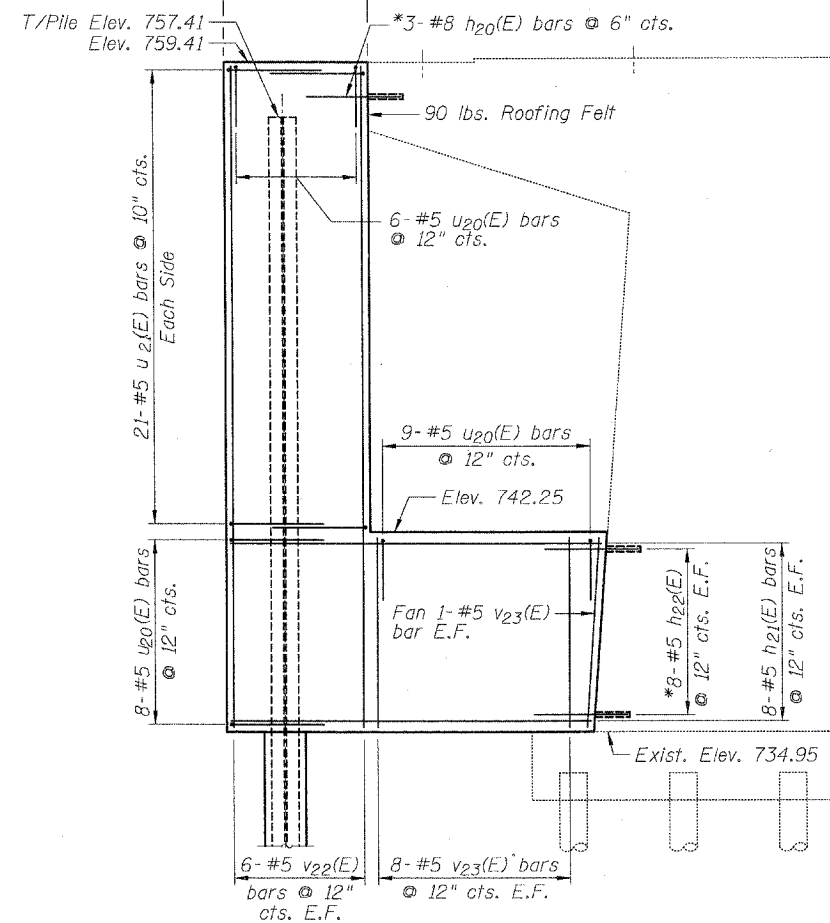
Plans Prepared by: Zroka Engineering, P.C.



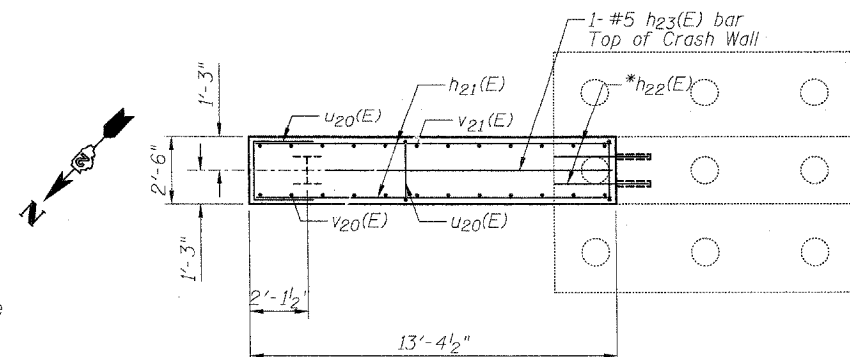
TOP PLAN



END VIEW



ELEVATION



FOOTING PLAN

*Epoxy grout #8 h20(E) bars in a 1 1/4" hole

*Epoxy grout #5 h22(E) bars in a 7/8" hole

Holes shall be drilled a minimum of 9" deep. The bars shall be drilled and epoxy grouted according to Article 584 of the Standard Specifications.

DESIGNED	LAS
CHECKED	DAZ
DRAWN	SAW
CHECKED	LAS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

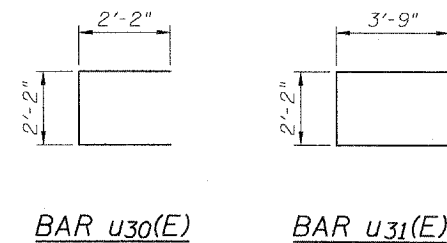
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 34
F.A.P. 301 (US 20)	(2HB-2)D	WINNEBAGO	107	56	43 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

Contract #64B07

PIER 1
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h ₃₀ (E)	3	#8	3'-6"	—
h ₃₁ (E)	16	#5	13'-0"	—
h ₃₂ (E)	16	#5	3'-4"	—
u ₃₀ (E)	24	#5	6'-6"	⊓
u ₃₁ (E)	34	#5	9'-8"	⊓
v ₃₀ (E)	14	#5	22'-4"	—
v ₃₁ (E)	18	#5	8'-8"	—
Item	Unit	Quantity		
Structure Excavation	Cu. Yd.	33		
Concrete Structures	Cu. Yd.	17.8		
Reinforcement Bars, Epoxy Coated	Pound	1,300		
Furnishing Steel Piles, HP12x53	Foot	65		
Driving Piles	Foot	51		
Concrete Encasement	Cu. Yd.	.4		
Concrete Sealer	Sq. Ft.	358		

For details of piles and Concrete Encasement, see sheet 38 of 42.



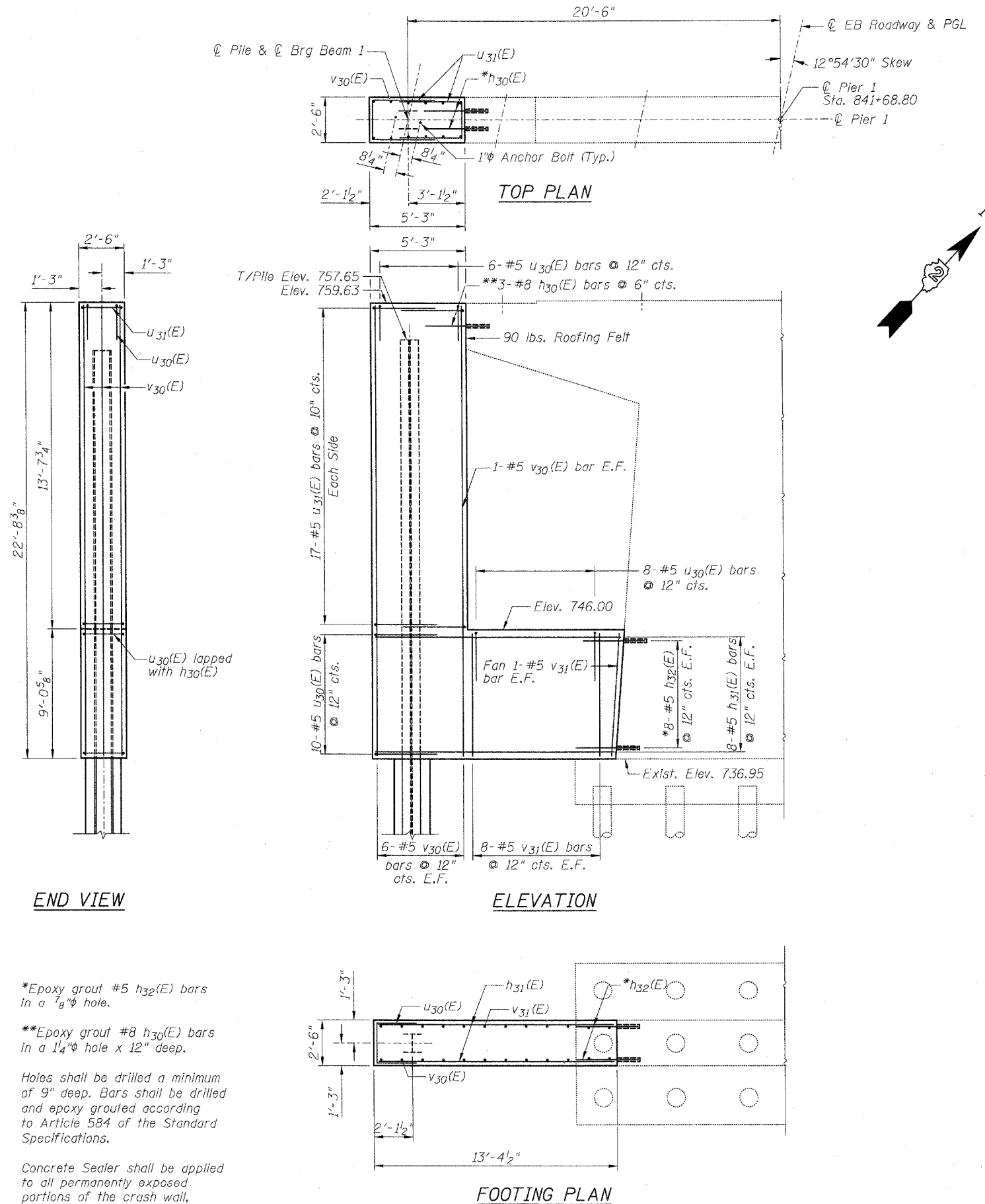
MINIMUM BAR LAPS
#5 Bars = 2'-2"

PILE DATA

Type: HP12x53
Nominal Required Bearing: 418 kips
Allowable Resistance Available: 139 kips
Est. Length: 65'
No. Production Piles: 1
No. Test Piles: None

The Steel H-piles shall be according to AASHTO M270 Grade 50.

EASTBOUND PIER 1
F.A.P. ROUTE 301 (US 20)
OVER PRAIRIE ROAD
SECTION (2HB-2)D
WINNEBAGO COUNTY
STATION 841+89.60
STRUCTURE NO. 101-0051 (W.B.)
STRUCTURE NO. 101-0052 (E.B.)



*Epoxy grout #5 h₃₂(E) bars in a 7/8" hole.
**Epoxy grout #8 h₃₀(E) bars in a 1 1/4" hole x 12" deep.
Holes shall be drilled a minimum of 9" deep. Bars shall be drilled and epoxy grouted according to Article 584 of the Standard Specifications.

Concrete Sealer shall be applied to all permanently exposed portions of the crash wall, columns, and pier caps, new concrete only.

DESIGNED	SSM
CHECKED	JLA
DRAWN	GYR
CHECKED	SSM

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

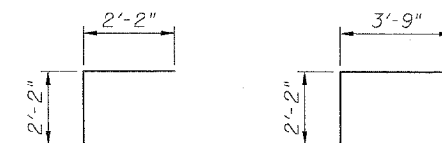
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO.
F.A.P. 301 (US 20)	(2HB -2D)	WINNEBAGO	107	57	35
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			43 SHEETS

Contract #64B07

PIER 2
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h ₃₀ (E)	3	#8	3'-6"	—
h ₃₁ (E)	16	#5	13'-0"	—
h ₃₂ (E)	16	#5	3'-4"	—
u ₃₀ (E)	23	#5	6'-6"	⊔
u ₃₁ (E)	34	#5	9'-8"	⊔
v ₃₂ (E)	14	#5	24'-1"	—
v ₃₃ (E)	18	#5	7'-11"	—
Item Unit Quantity				
Structure Excavation	Cu. Yd.	29		
Concrete Structures	Cu. Yd.	17.1		
Reinforcement Bars, Epoxy Coated	Pound	1,300		
Furnishing Steel Piles, HP12x53	Foot	66		
Driving Piles	Foot	52		
Concrete Encasement	Cu. Yd.	.4		
Concrete Sealer	Sq. Ft.	358		

For details of piles and Concrete Encasement,
see sheet 38 of 42.



BAR u₃₀(E)

BAR u₃₁(E)

MINIMUM BAR LAPS

#5 Bars = 2'-2"

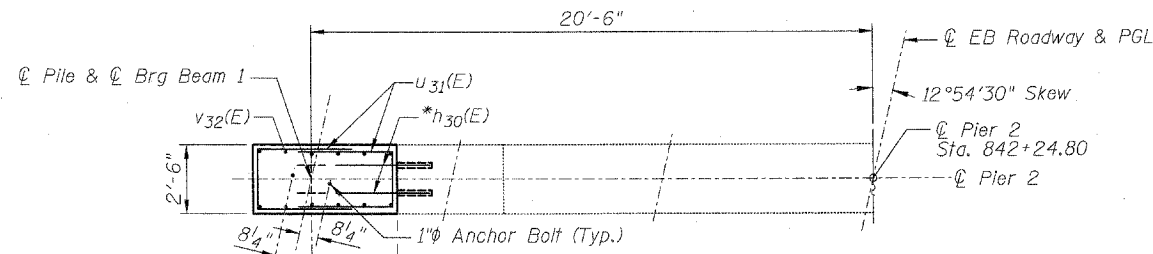
PILE DATA

Type: HP12x53
Nominal Required Bearing: 418 kips
Allowable Resistance Available: 139 kips
Est. Length: 66'
No. Production Piles: 1
No. Test Piles: None

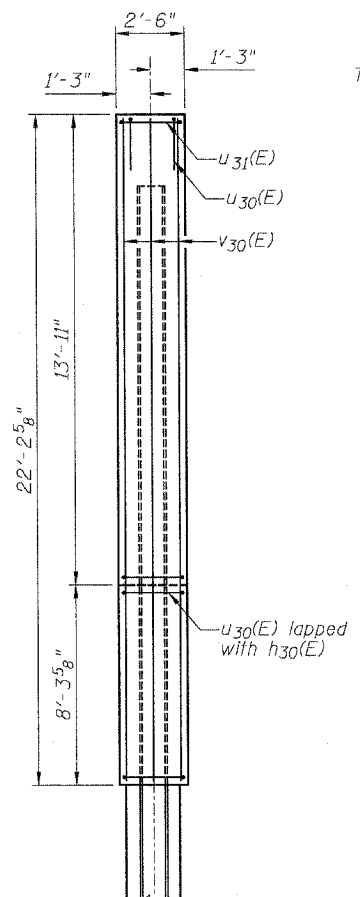
The Steel H-piles shall be according to
AASHTO M270 Grade 50.

EASTBOUND PIER 2
F.A.P. ROUTE 301 (US 20)
OVER PRAIRIE ROAD
SECTION (2HB-2D)
WINNEBAGO COUNTY
STATION 841+89.60
STRUCTURE NO. 101-0051 (W.B.)
STRUCTURE NO. 101-0052 (E.B.)

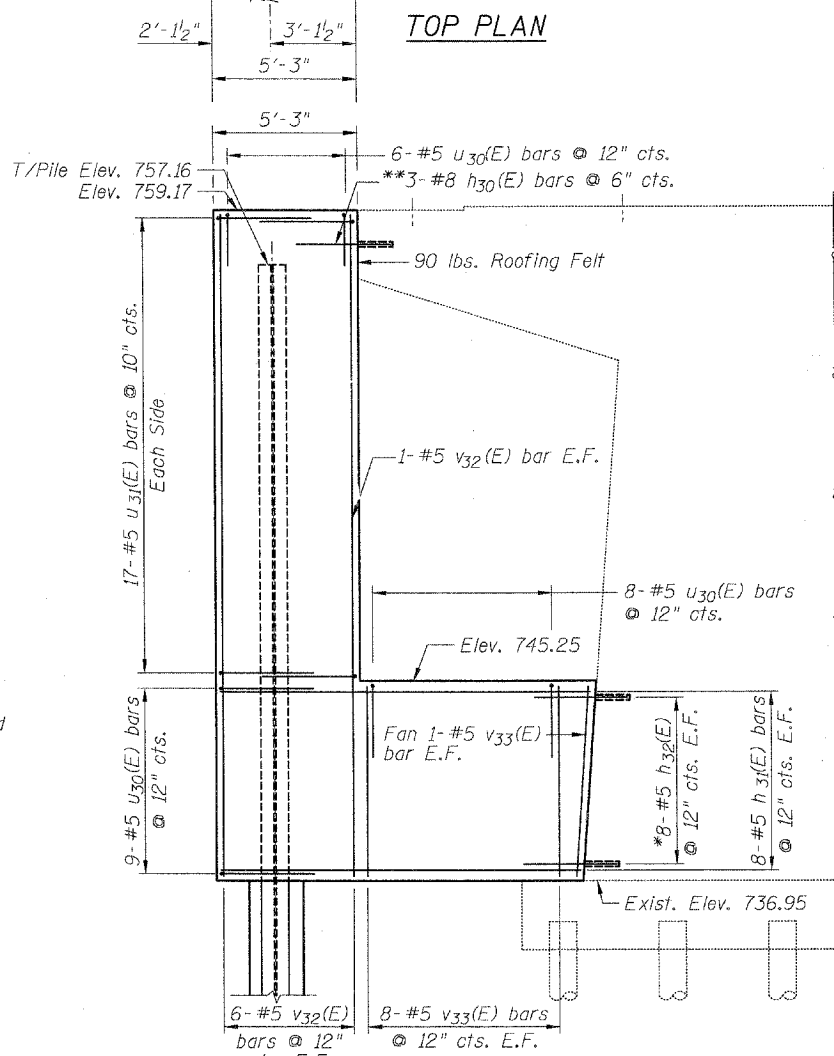
Plans Prepared by: Kudrna & Associates, Ltd.



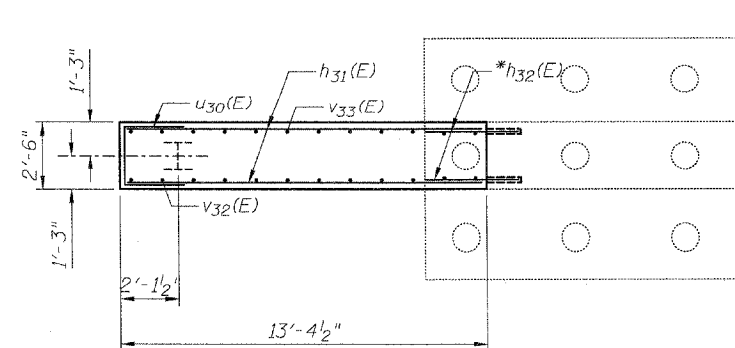
TOP PLAN



END VIEW



ELEVATION



FOOTING PLAN

*Epoxy grout #5 h₃₂(E) bars in a 7/8" hole.
**Epoxy grout #8 h₃₀(E) bars in a 1 1/4" hole x 12" deep.
Holes shall be drilled a minimum of 9" deep. Bars shall be drilled and epoxy grouted according to Article 584 of the Standard Specifications.

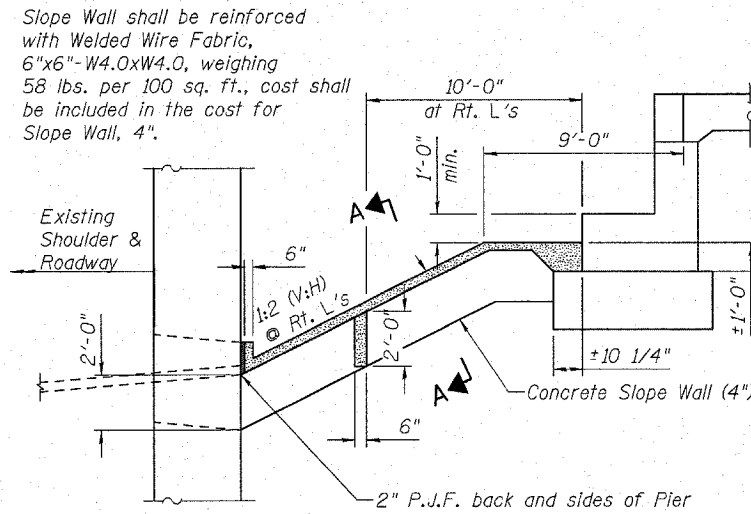
Concrete Sealer shall be applied to all permanently exposed portions of the crash wall, columns, and pier caps, new concrete only.

DESIGNED	SSM
CHECKED	JLA
DRAWN	GYR
CHECKED	SSM

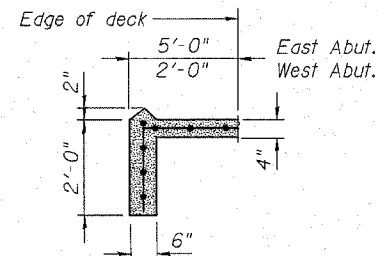
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO.
F.A.P. 301 (US 20)	(2HB-2)D	WINNEBAGO	107	58	43 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

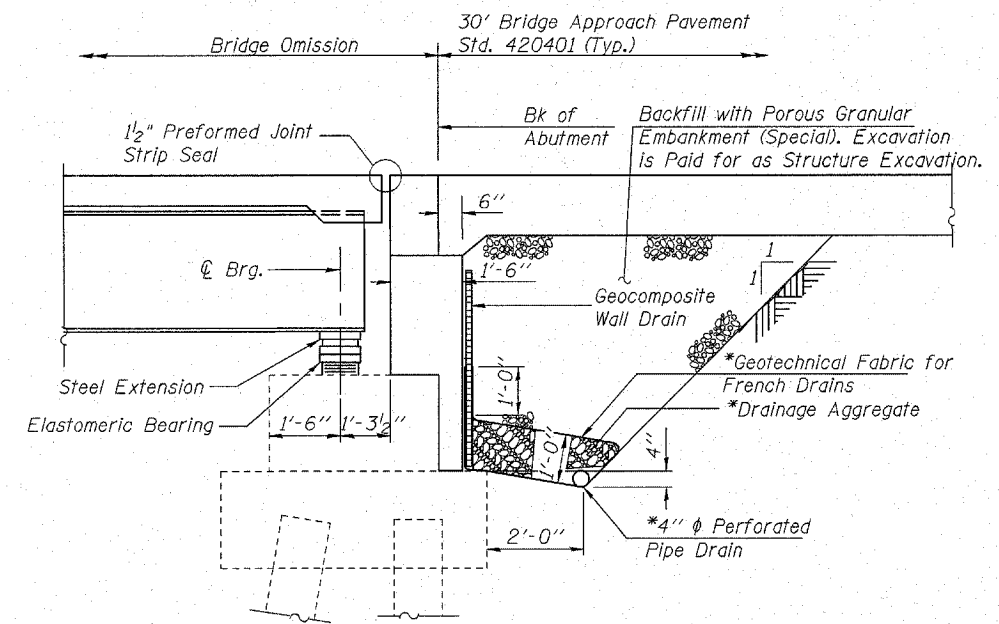
Contract #64B07



SECTION THRU SLOPE WALL



SECTION A-A



SECTION THRU PILE BENT ABUTMENT

(Horiz. dim. @ Rt. L's)

* Included in the cost of Pipe Underdrains for Structure, 4".

NOTES:

The cost for Non-Perforated Pipes to extend the pipe drains to the embankment side slopes shall be included in the cost for Pipe Underdrains for Structures, 4".

All drainage system components shall extend 2'-0" from the end of each wingwall except an outlet pipe shall extend until intersection with side slopes. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601.01)

DESIGNED	SSM
CHECKED	JLA
DRAWN	GYR
CHECKED	SSM

SLOPE WALL AND ABUTMENT
DRAINAGE DETAILS
F.A.P. ROUTE 301 (US 20)
OVER PRAIRIE ROAD
SECTION (2HB-2)D
WINNEBAGO COUNTY
STATION 841+89.60
STRUCTURE NO. 101-0051 (W.B.)
STRUCTURE NO. 101-0052 (E.B.)

Plans Prepared by: Kudrna & Associates, Ltd.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Contract #64B07

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 = $0.66 \times f_y \times A_t$
(Tension in kips)

Where f_y = Yield strength of lapped reinforcement bars in ksi.

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	7.9
#5	2'-0"	23.0	12.3
#6	2'-7"	33.1	17.4
#7	3'-5"	45.1	23.8
#8	4'-6"	58.9	31.3
#9	5'-9"	75.0	39.6
#10	7'-3"	95.0	50.3
#11	9'-0"	117.4	61.8

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

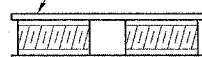
The diameter of this part is equal or larger than the diameter of bar spliced.

ROLLED THREAD DOWEL BAR



** ONE PIECE

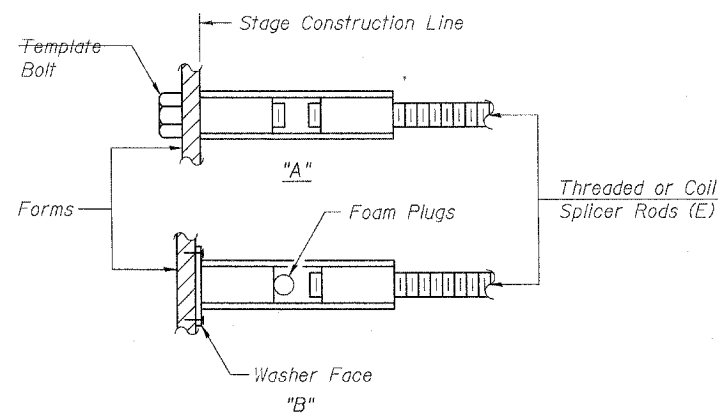
Wire Connector



WELDED SECTIONS

BAR SPLICER ASSEMBLY ALTERNATIVES

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

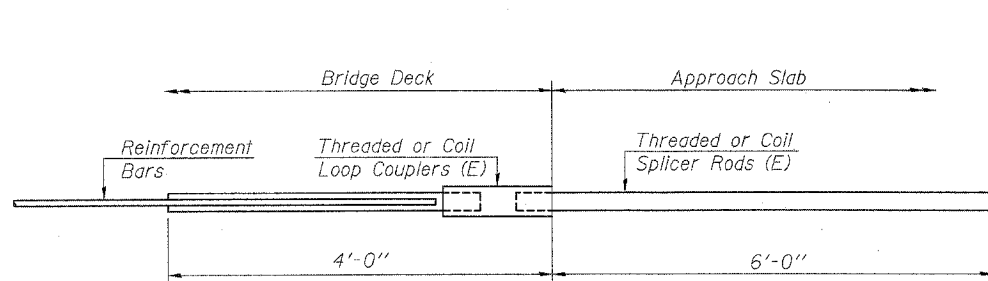


INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.

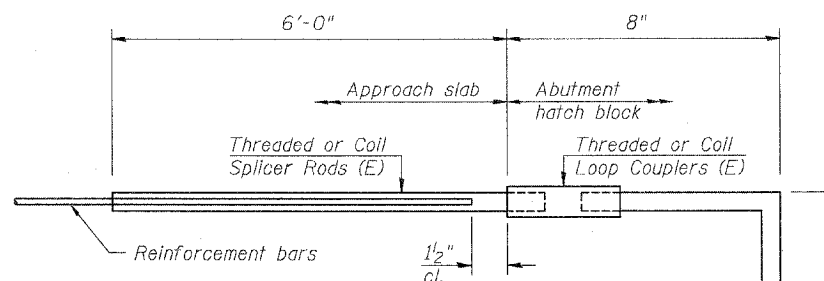
"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.

(E) : Indicates epoxy coating.



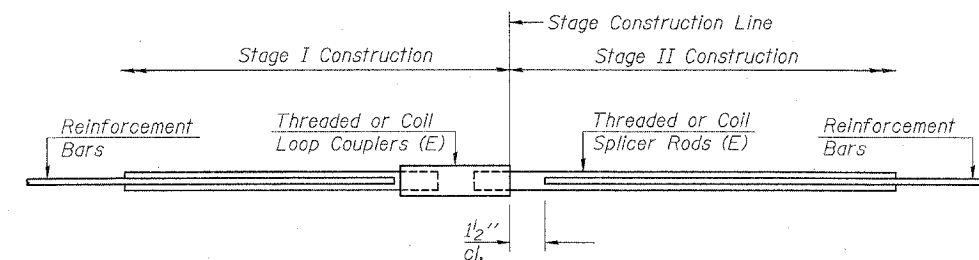
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 12.3 kips - tension
No. Required =



FOR STUB ABUTMENTS

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 12.3 kips - tension
No. Required = 164



STANDARD

Bar Size	No. Assemblies Required	Location

BAR SPLICER ASSEMBLY DETAILS
F.A.P. ROUTE 301 (US 20)
OVER PRAIRIE ROAD
SECTION (2HB-2)D
WINNEBAGO COUNTY
STATION 841+89.60
STRUCTURE NO. 101-0051 (W.B.)
STRUCTURE NO. 101-0052 (E.B.)

DESIGNED LAS
CHECKED DAZ
DRAWN SAW
CHECKED LAS

BSD-1

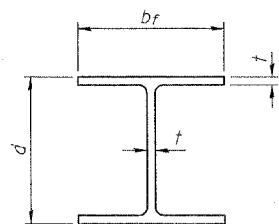
11-1-06

Plans Prepared by: Zroka Engineering, P.C.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

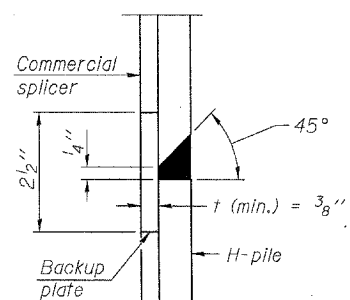
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 38 42 SHEETS
F.A.P. 301 (US 20)	(2)D	WINNEBAGO	107	60	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

Contract #64B07



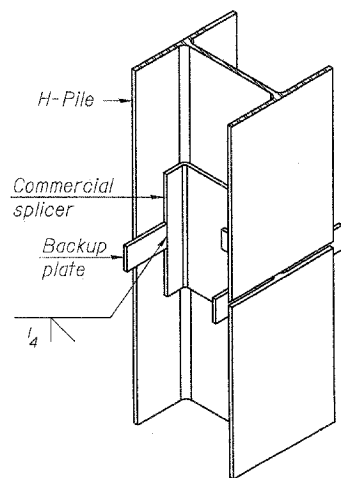
STEEL PILE TABLE

Designation	Depth d	Flange width bf	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	13/16"	30"
x102	14"	14 3/4"	1/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	1/16"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 1/8"	1/2"	24"
x53	11 3/4"	12"	7/16"	24"
HP 10x57	10"	10 1/4"	9/16"	24"
x42	9 3/4"	10 1/8"	7/16"	24"
HP 8x36	8"	8 1/8"	7/16"	18"

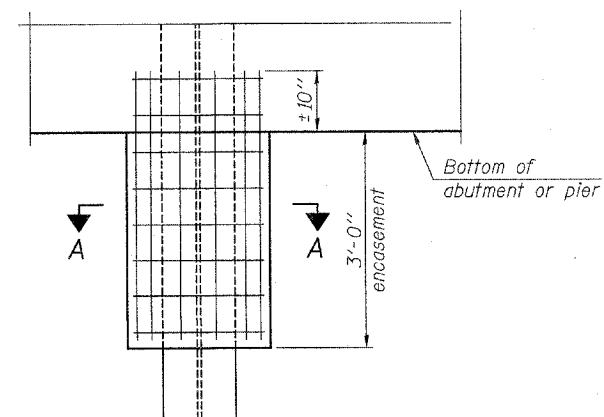


DETAIL "B"

WELDED COMMERCIAL SPLICE

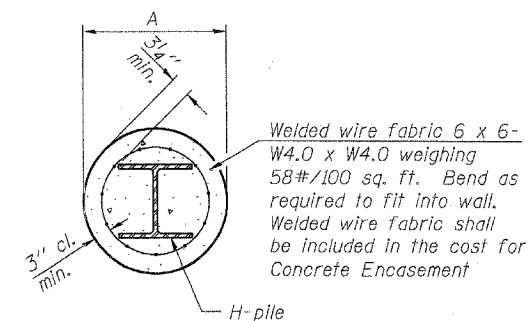


ISOMETRIC VIEW



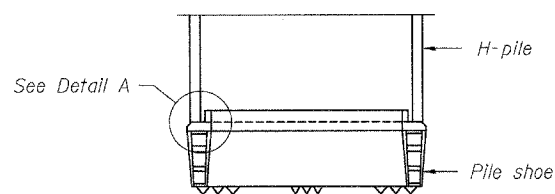
ELEVATION

PILE ENCASEMENT



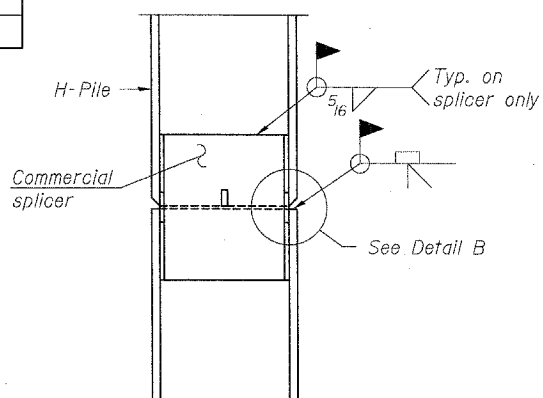
SECTION A-A

Note:
Forms for encasement may be omitted when soil conditions permit.



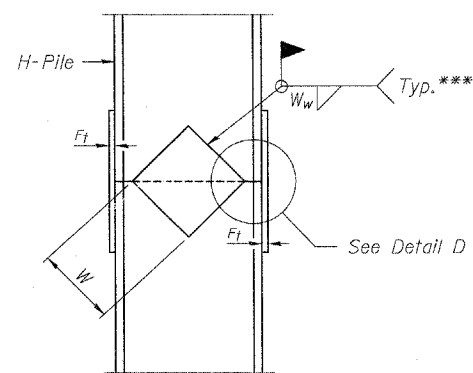
ELEVATION

H-PILE SHOE ATTACHMENT

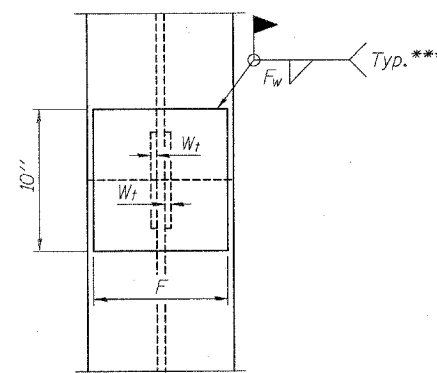


ELEVATION

COMPLETE PENETRATION WELD SPLICE

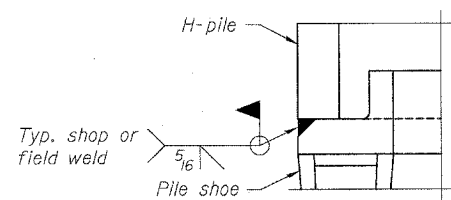


ELEVATION

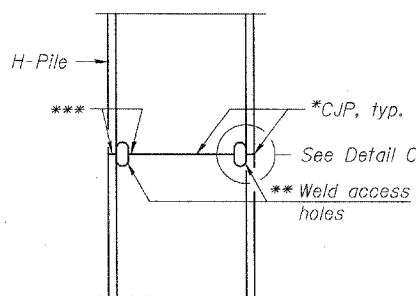


END VIEW

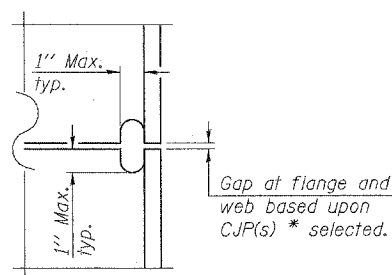
WELDED PLATE FIELD SPLICE



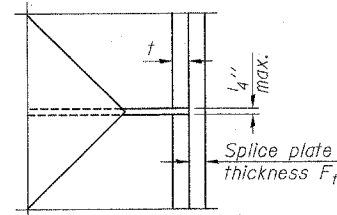
DETAIL A



ELEVATION



DETAIL C



DETAIL D

Designation	F	Ft	Fw	W	Wt	Ww
HP 14x117	12 1/2"	1"	7/8"	7 3/4"	5 8/8"	1/2"
x102	12 1/2"	7/8"	3/4"	7 3/4"	5 8/8"	1/2"
x89	12 1/2"	3/4"	1/16"	7 3/4"	5 8/8"	1/2"
x73	12 1/2"	5/8"	9/16"	7 3/4"	5 8/8"	1/2"
HP 12x84	10"	7/8"	1/16"	6 1/2"	5 8/8"	1/2"
x74	10"	7/8"	1/16"	6 1/2"	5 8/8"	1/2"
x63	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
x53	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
HP 10x57	8"	3/4"	9/16"	5 1/4"	1/2"	3/8"
x42	8"	5/8"	9/16"	5 1/4"	1/2"	3/8"
HP 8x36	7"	5/8"	7/16"	4 1/4"	1/2"	3/8"

DESIGNED	SSM
CHECKED	JLA
DRAWN	GYR
CHECKED	SSM

F-HP

11-1-06

- * Use joint conforming to Figure 3.4 in AWS D1.1, Structure Welding Code - Steel.
- ** Preparation per Fig. 5.2 in AWS D1.1, Structure Welding Code - Steel.
- *** Interrupt welds 1/4" from end of each pile.

Note:
The steel H-piles shall be according to AASHTO M270 Grade 50.

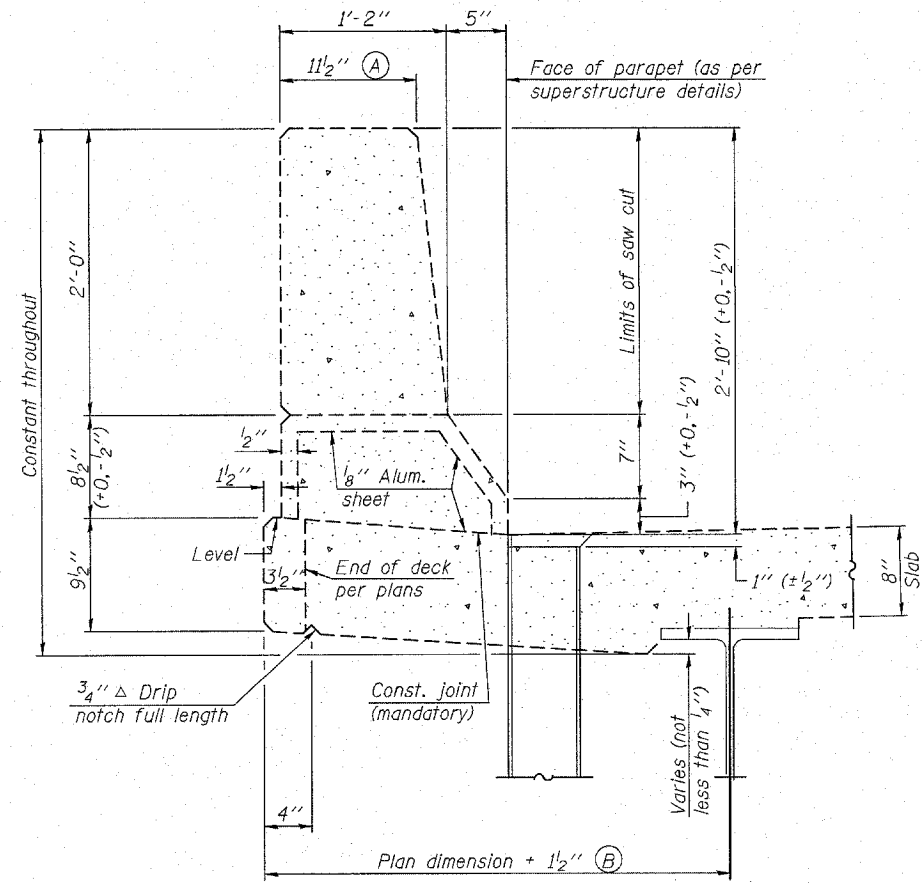
Plans Prepared by: Kudrna & Associates, Ltd.

PILE AND ENCASEMENT DETAILS
F.A.P. ROUTE 301 (US 20)
OVER PRAIRIE ROAD
SECTION (2)HB-2)D
WINNEBAGO COUNTY
STATION 841+89.60
STRUCTURE NO. 101-0051 (W.B.)
STRUCTURE NO. 101-0052 (E.B.)

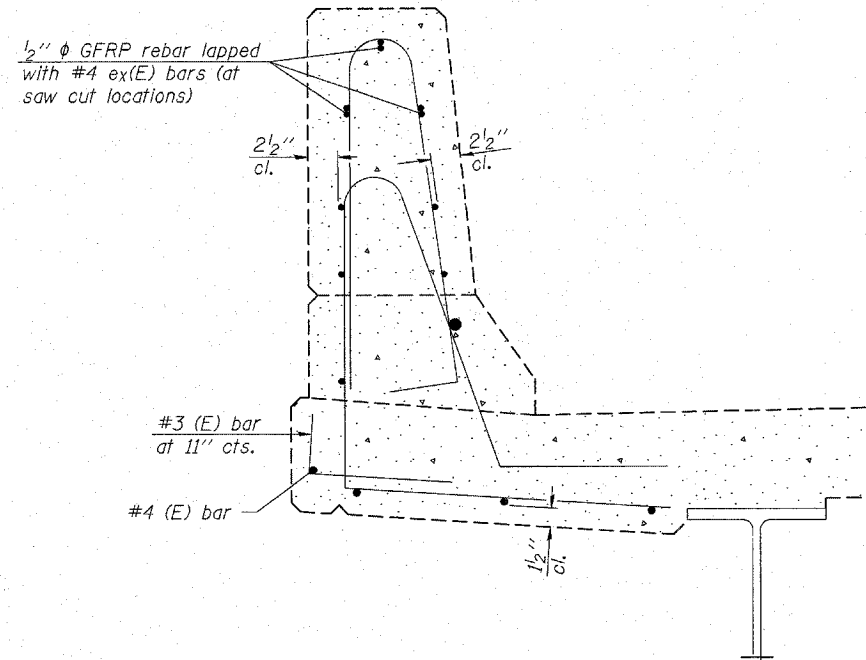
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	STATION	SHEET	SHEET NO.
F.A.P. 301 (US 20)	(2HB -2)D	WINNEBAGO	107	61	39
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			43 SHEETS

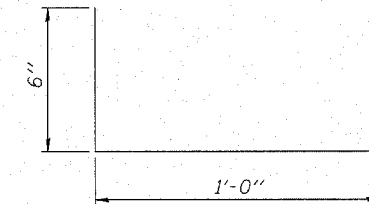
Contract #64B07



SECTION
(Showing dimensions)



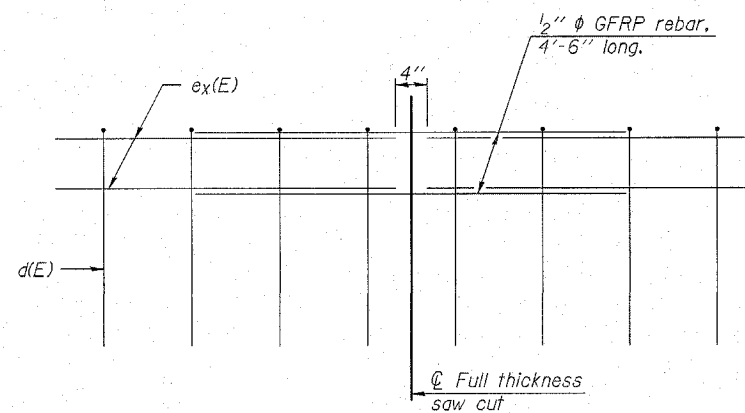
SECTION
(Showing reinforcement clearances for slip forming and additional reinforcement bars)



#3 (E) BAR

SFP-34

5-9-2007



GFRP REBAR STIFFENING DETAIL
(Place as shown in parapet section at each parapet joint location.)

CONCRETE PARAPET
SLIPFORMING OPTION

PARAPET SLIP FORMING OPTION
F.A.P. ROUTE 301 (US 20)
OVER PRAIRIE ROAD
SECTION (2HB-2)D
WINNEBAGO COUNTY
STATION 841+89.60
STRUCTURE NO. 101-0051 (W.B.)
STRUCTURE NO. 101-0052 (E.B.)

DESIGNED	SSM
CHECKED	JLA
DRAWN	GYR
CHECKED	SSM

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 40 43 SHEETS
F.A.P. 301 (US 20)	(2HB-2)D	WINNEBAGO	107	62	
FED. ROAD DIST. NO. 7		ILLINOIS		FED. AID PROJECT	

Contract #64B07

Illinois Department of Transportation
Division of Highways
DOT

SOIL BORING LOG Page 1 of 2
Date 1/18/06

ROUTE US Bypass 20 DESCRIPTION P92-069-05 Bypass 20 Bridge over Prairie Road edge of Rockford, 450' N. of Simpson Road LOGGED BY J. Stratina

SECTION 2HB-1 & 2 LOCATION Rockford Twp. - 4SW, SEC. , TWP. 43N, RNG. 1E

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

STRUCT. NO. 841+90
Station 841+77
BORING NO. B-1b
Station 841+77
Offset 59.00ft RI CL
Ground Surface Elev. 743.6 ft

SOIL DESCRIPTION	DEPTH (ft)	U (ft)	M (%)	Surface Water Elev. (ft)	Stream Bed Elev. (ft)	Groundwater Elev. (ft)	First Encounter (ft)	Upon Completion (ft)	After (Hrs.)	D (ft)	B (ft)	U (ft)	M (%)
MEDIUM dark brown SILTY CLAY LOAM	723.10	18	4.1	N/A									
DENSE tan weathered LIMESTONE fill	742.10	15											
DENSE tan weathered LIMESTONE fill	740.60	23											
DENSE tan weathered LIMESTONE fill	737.60	13											
STIFF tan/brown SANDY LOAM	735.60	4	1.3										
STIFF tan/brown LOAM TILL	733.10	6	1.3										
VERY STIFF tan/brown SANDY LOAM TILL	730.60	8	3.0										
VERY STIFF tan/brown SANDY LOAM TILL	728.10	9	3.7										
VERY STIFF tan/brown SANDY LOAM TILL	725.60	11	3.9										
HARD tan/brown SANDY LOAM TILL	723.10	11											

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
DOT

SOIL BORING LOG Page 2 of 2
Date 1/18/06

ROUTE US Bypass 20 DESCRIPTION P92-069-05 Bypass 20 Bridge over Prairie Road edge of Rockford, 450' N. of Simpson Road LOGGED BY J. Stratina

SECTION 2HB-1 & 2 LOCATION Rockford Twp. - 4SW, SEC. , TWP. 43N, RNG. 1E

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

STRUCT. NO. 841+90
Station 841+77
BORING NO. B-1b
Station 841+77
Offset 59.00ft RI CL
Ground Surface Elev. 743.6 ft

SOIL DESCRIPTION	DEPTH (ft)	U (ft)	M (%)	Surface Water Elev. (ft)	Stream Bed Elev. (ft)	Groundwater Elev. (ft)	First Encounter (ft)	Upon Completion (ft)	After (Hrs.)	D (ft)	B (ft)	U (ft)	M (%)
HARD brown SANDY LOAM TILL with SAND lenses	703.10	27	3.9										
Wash DENSE tan medium SAND	698.10	10											
MEDIUM tan fine SAND	695.60	16											
Wash VERY DENSE tan fine SAND	693.10	15											
End of Boring	693.10	42											

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
DOT

SOIL BORING LOG Page 1 of 2
Date 1/24/06

ROUTE US Bypass 20 DESCRIPTION P92-069-05 Bypass 20 Bridge over Prairie Road edge of Rockford, 450' N. of Simpson Road LOGGED BY J. Stratina

SECTION 2HB-1 & 2 LOCATION Rockford Twp. - 4SW, SEC. , TWP. 43N, RNG. 1E

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

STRUCT. NO. 841+90
Station 841+97
BORING NO. B-2b
Station 841+97
Offset 53.00ft LI CL
Ground Surface Elev. 740.1 ft

SOIL DESCRIPTION	DEPTH (ft)	U (ft)	M (%)	Surface Water Elev. (ft)	Stream Bed Elev. (ft)	Groundwater Elev. (ft)	First Encounter (ft)	Upon Completion (ft)	After (Hrs.)	D (ft)	B (ft)	U (ft)	M (%)
MEDIUM brown SILTY CLAY LOAM	718.10	6											
STIFF dark gray LOAM	737.60	2											
STIFF brown SILTY CLAY LOAM	733.10	4	1.8										
LOOSE brown dirty dry fine SAND	730.60	2											
MEDIUM tan SANDY LOAM TILL	728.60	3	0.6										
No Recovery	726.10	3											
MEDIUM tan SANDY LOAM TILL	723.60	3	0.8										
MEDIUM tan weathered LIMESTONE	720.60	13											

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

Boring B-2b continued on Sheet 41

DESIGNED	SSM
CHECKED	JLA
DRAWN	GYR
CHECKED	SSM

BORING LOGS
F.A.P. ROUTE 301 (US 20)
OVER PRAIRIE ROAD
SECTION (2HB-2)D
WINNEBAGO COUNTY
STATION 841+89.60
STRUCTURE NO. 101-0051 (W.B.)
STRUCTURE NO. 101-0052 (E.B.)

Plans Prepared by: Kudrna & Associates, Ltd.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 301 (US 20)	(2HB -2)D	WINNEBAGO	107	63
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

Contract #64B07

Illinois Department of Transportation
Division of Highways
DOT

SOIL BORING LOG Page 2 of 2

ROUTE US Bypass 20 DESCRIPTION P92-069-05 Bypass 20 Bridge over Prairie Road edge of Rockford, 450' N. of Simpson Road LOGGED BY J. Stratling Date 1/24/06

SECTION 2HB-1 & 2 LOCATION Rockford Twp. - 4SW, SEC. , TWP. 43N, RNG. 1E

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

STRUCT. NO. 841+90 Station 841+90 Surface Water Elev. _____ ft
Stream Bed Elev. _____ ft

BORING NO. B-2b Station 841+97 Groundwater Elev.: _____ ft
First Encounter 720.1 ft
Offset 53.00ft RI CL Upon Completion Wash ft
Ground Surface Elev. 740.1 ft After _____ Hrs. _____ ft

DEPTH (ft)	U (ft)	M (%)	SOIL DESCRIPTION
18			DENSE tan clean medium coarse SAND
20			
26			
698.60			
19			Wash
31			VERY DENSE tan fine SAND
35			
696.10			
-45			Wash
14			VERY DENSE tan medium SAND with fine SAND lens
27			
32			
693.60			End of Boring
-50			
-55			
-60			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
DOT

SOIL BORING LOG Page 1 of 2

ROUTE US Bypass 20 DESCRIPTION P92-069-05 Bypass 20 Bridge over Prairie Road, south edge of Rockford, 450' N. of Simpson Road LOGGED BY J. Stratling Date 1/25/06

SECTION 2HB-1 & 2 LOCATION Rockford Twp. - 4SW, SEC. , TWP. 43N, RNG. 1E

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

STRUCT. NO. 841+90 Station 841+90 Surface Water Elev. _____ ft
Stream Bed Elev. _____ ft

BORING NO. B-3b Station 842+17 Groundwater Elev.: _____ ft
First Encounter 718.2 ft
Offset 66.00ft RI CL Upon Completion Wash ft
Ground Surface Elev. 743.2 ft After _____ Hrs. _____ ft

DEPTH (ft)	U (ft)	M (%)	SOIL DESCRIPTION
13			VERY STIFF tan SANDY LOAM TILL
16		3.3	
24		8	
721.20			
4			VERY STIFF light brown SILTY CLAY LOAM
4	2.8	19	
4	P		
739.20			
-5			Wash
4			VERY STIFF light brown SILTY CLAY LOAM
5	3.1	19	
5	P		
736.70			
5			MEDIUM tan weathered LIMESTONE fill
13			
9			
734.20			
-10			Wash
2			MEDIUM tan LOAM TILL
3	0.7	9	
5	S		
731.70			
6			STIFF tan SANDY LOAM TILL
7	1.8	10	
10	B		
729.20			
-15			Wash
5			STIFF tan SANDY LOAM TILL
8	1.7	10	
9	S		
726.70			
5			VERY STIFF tan SANDY LOAM TILL
8	2.7	9	
16	S		
724.20			
-20			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
DOT

SOIL BORING LOG Page 2 of 2

ROUTE US Bypass 20 DESCRIPTION P92-069-05 Bypass 20 Bridge over Prairie Road, south edge of Rockford, 450' N. of Simpson Road LOGGED BY J. Stratling Date 1/25/06

SECTION 2HB-1 & 2 LOCATION Rockford Twp. - 4SW, SEC. , TWP. 43N, RNG. 1E

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

STRUCT. NO. 841+90 Station 841+90 Surface Water Elev. _____ ft
Stream Bed Elev. _____ ft

BORING NO. B-3b Station 842+17 Groundwater Elev.: _____ ft
First Encounter 718.2 ft
Offset 66.00ft RI CL Upon Completion Wash ft
Ground Surface Elev. 743.2 ft After _____ Hrs. _____ ft

DEPTH (ft)	U (ft)	M (%)	SOIL DESCRIPTION
22			Wash
21			DENSE tan dirty SAND & GRAVEL
24			
701.20			
6			Wash
14	4.1	12	HARD tan CLAY LOAM TILL
27	B		
698.70			
-45			Wash
40			VERY DENSE tan fine SAND
33			
31			
696.70			
6			VERY DENSE tan fine SAND
28			
41			
694.20			End of Boring
-50			
-55			
-60			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)


DESIGNED	SSM
CHECKED	JLA
DRAWN	GYR
CHECKED	SSM

BORING LOGS
F.A.P. ROUTE 301 (US 20)
OVER PRAIRIE ROAD
SECTION (2HB-2)D
WINNEBAGO COUNTY
STATION 841+89.60
STRUCTURE NO. 101-0051 (W.B.)
STRUCTURE NO. 101-0052 (E.B.)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 43 43 SHEETS
F.A.P. 301 (US 20)	(2HB -2)D	WINNEBAGO	107	65	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

Contract #64B07



Illinois Department
of Transportation
Division of Highways
DOT

SOIL BORING LOG

Page 2 of 2
Date 1/27/06

ROUTE US Bypass 20 DESCRIPTION P92-069-05 Bypass 20 Bridge over Prairie Road, south edge of Rockford, 450' N. of Simpson Road LOGGED BY J. Stratling

SECTION 2HB-1 & 2 LOCATION Rockford Twp. - 4SW, SEC. , TWP. 43N, RNG. 1E

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

STRUCT. NO. Station	D E P T H S	B L O W S	U C S	M O D E	Surface Water Elev. _____ ft	Stream Bed Elev. _____ ft	Groundwater Elev.: First Encounter _____ ft	Wash Upon Completion _____ ft	After _____ Hrs.	D E P T H S	B L O W S	U C S	M O D E
DENSE tan SANDY LOAM TILL	14			8						7			
	21									6			
	28									9			
	722.40									702.40			
HARD tan SANDY LOAM TILL	11									12			
	14	4.6		9						14			
	21	S								16			
	719.90									699.90			
HARD tan SANDY LOAM TILL	15									12			
	20	5.5		8						15			
	20	S								18			
	717.40									697.40			
HARD tan SANDY LOAM TILL	8									11			
	9	4.5		9						17			
	12	B								24			
	714.90									694.90			
VERY STIFF tan SANDY LOAM TILL	10									9			
	12	3.1								16			
	16	S								30			
	712.40									692.40			
STIFF gray SANDY LOAM TILL	3									15			
	6	1.5		10						21			
	9	B								24			
	709.90									689.90			
HARD brown CLAY LOAM TILL	7												
	15	4.8		11									
	22	S											
	707.40												
DENSE brown CLAY LOAM TILL with SAND lens	12												
	14												
	23												
	704.40												

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

DESIGNED <u>SSM</u>
CHECKED <u>JLA</u>
DRAWN <u>GYR</u>
CHECKED <u>SSM</u>

BORING LOGS
F.A.P. ROUTE 301 (US 20)
OVER PRAIRIE ROAD
SECTION (2HB-2)D
WINNEBAGO COUNTY
STATION 841+89.60
STRUCTURE NO. 101-0051 (W.B.)
STRUCTURE NO. 101-0052 (E.B.)

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 2 34 SHEETS
F.A.P. 301 (US 20)	(2HB-1D)	WINNEBAGO	107	67	
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT		

Contract #64B07

GENERAL NOTES

Fasteners shall be AASHTO M164 Type I, mechanically galvanized. Bolts - 7/8 in. diameter, holes - 15/16 in. diameter, unless otherwise noted.

Calculated weight of Structural Steel = 57,060 lbs. (Grade 36)
= 4,990 lbs. (Grade 50)

All structural steel shall be AASHTO M 270 Grade 36.

No field welding is permitted except as specified in the contract documents.

Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60 (IL Modified). See Special Provisions

Reinforcement bars designated (E) shall be epoxy coated.

Prior to pouring the new concrete deck, all heavy or loose rust, loose mill scale, and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel and the cost will be included in the pay item covering removal of the existing concrete.

As directed by the Engineer, existing construction accessories welded to the top flange of beams and girders shall be removed. The weld areas shall be ground flush and inspected for cracks using magnetic particle testing (MT) or dye penetrant testing (PT) by an individual acceptable to the Engineer. Any cracks that cannot be removed by grinding 1/4 inch deep shall be identified and reported to the Bureau of Bridges and Structures for further disposition. The cost of removing welded accessories, grinding and inspecting weld areas and grinding cracks will be paid for according to Article 109.04 of the Standard Specifications.

If the Contractor elects to use cantilever forming brackets on the exterior beams or girders, the brackets shall be placed at the same locations as required for the hardwood blocks in Article 503.06(b) of the Standard Specifications. If additional cantilever forming brackets are required, hardwood blocking shall be wedged between the exterior and first interior beam at each of these additional bracket locations.

Plan dimensions and details relative to existing plans are subject to routine variations. The Contractor shall field verify existing dimensions and details affecting new construction 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 scope of the work. However, the Contractor will be paid for the quantity actually furnished based upon the unit price bid for the work.

Bearing seat surfaces shall be constructed or adjusted to their designated elevations within a tolerance of 1/8 inch (0.01 ft.). Adjustment shall be made either by grinding the surface or by shimming the bearings.

Concrete Sealer shall be applied to the designated areas of the abutments and piers. See abutment and pier sheets for additional clarification.

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

The Organic Zinc Rich Primer / Epoxy / Urethane Paint System shall be used for shop and field painting of new structural steel except where otherwise noted. The color of the final finish coat for all interior steel surfaces shall be gray, Munsell No. 5B 7/1. The color of the final finish coat for the exterior and bottom flange of the fascia beams shall be Blue, Munsell No. 10B 3/6. See Special Provision for "Cleaning and Painting New Metal Structures".

The embankment configuration shown shall be the minimum that must be placed and compacted prior to construction of the abutments.

Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.

Partial depth saw cutting of the existing concrete deck over the top of the existing flanges shall be permitted. See Special Provisions for Removal Of Existing Non-Composite Bridge Decks.

The contractor may use slip form option for concrete parapets. See IDOT special provision.

Cleaning and painting of the existing structural steel shall be as specified in the special provision of "Cleaning and Painting Existing Steel Structure". All beams, bearing, and other structural steel within 5ft. (measured along the beam) of either side deck joints 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. All remaining structural steel shall be cleaned per Power Tool Cleaning - Modified SSPC-SP3.

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 designated areas cleaned per Power Tool Cleaning - Modified SSPC-SP3 shall be painted according to the requirements of Paint System 2-PS/EM/U. The color of the final finish coat for all interior steel surfaces shall be Grey, Munsell NO. 5B 7/1. The color of the final finish coat for the exterior and bottom flange of the fascia shall be Blue, Munsell No. 10B 3/6.

The contractor shall drive test piles to 110% of the nominal required bearing specified in production locations at substructures specified or as approved by the Engineer before ordering the remainder of the piles.

The structural steel plates of the Bearing Assembly shall conform to the requirements of AASHTO M270 Grade 50.

TOTAL BILL OF MATERIAL

ITEM	Unit	SUPER	SUB	TOTAL
Porous Granular Embankment, Special	Cu Yd	0	338	338.0
Slope Wall 4 Inch	Sq Yd	0	1591	1591
Concrete Removal	Cu Yd	0	140.2	140.2
Slope Wall Removal	Sq Yd	0	1407	1407
Removal of Existing Concrete Deck	Each	0	2	2
Protective Shield	Sq Yd	674	0	674
Structure Excavation	Cu Yd	0	487.3	487.3
Concrete Structures	Cu Yd	0	195.6	195.6
Concrete Superstructure	Cu Yd	462.0	0	462.0
Bridge Deck Grooving	Sq Yd	1400	0	1400
Concrete Encasement	Cu Yd	0	4	4.0
Protective Coat	Sq Yd	1772	0	1772
Furnishing and Erecting Structural Steel	L Sum	0.52	0	0.52
Stud Shear Connectors	Each	0	7236	7236
Jack and Remove Existing Bearings	Each	20	0	20
Cleaning and Painting Steel Bridge No. 3	L Sum	1	0	1
Cleaning and Painting Steel Bridge No. 4	L Sum	1	0	1
Containment and Disposal of Lead Paint Cleaning Residues No. 3	L Sum	1	0	1
Containment and Disposal of Lead Paint Cleaning Residues No. 4	L Sum	1	0	1
Reinforcement Bars, Epoxy Coated	Pound	125420	21640	147060
Bar Splicers	Each	0	212	212
Furnishing Steel Piles HP12X53	Foot	0	595	595
Driving Piles	Foot	0	536	536
Test Pile Steel HP12X53	Each	0	1	1
Name Plates	Each	2	0	2
Preformed Joint Strip Seal	Foot	218	0	218
Elastomeric Bearing Assembly, Type I	Each	12	0	12
Elastomeric Bearing Assembly, Type II	Each	12	0	12
Anchor Bolts, 1"	Each	56	0	56
Concrete Sealer	Sq Ft	0	4590	4590
Geocomposite Wall Drain	Sq Yd	0	124	124
Pipe Underdrains for Structures 4"	Foot	0	304	304
Structural Steel Removal	Pound	0	6433	6433
Drainage Scupper, DS-11	Each	0	4	4

DESIGNED	SSM
CHECKED	JLA
DRAWN	GYR
CHECKED	SSM

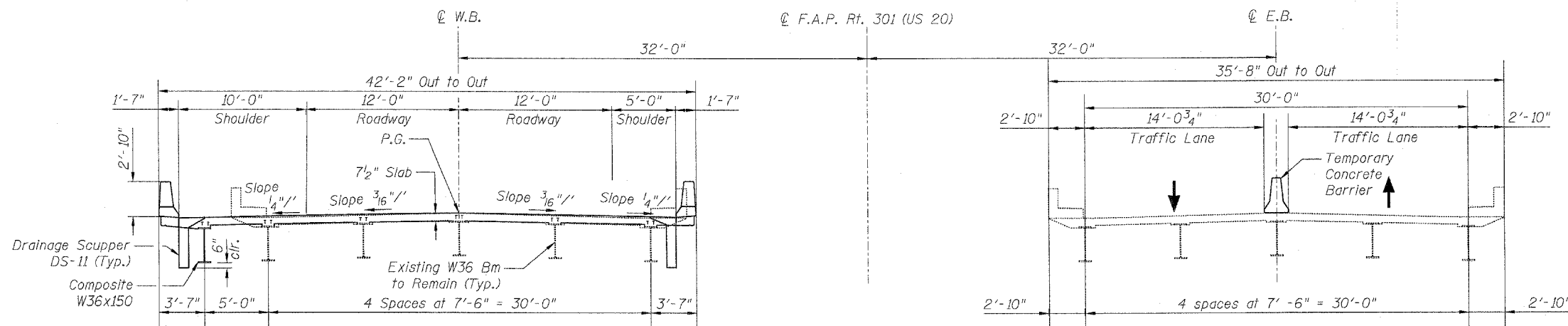
**GENERAL NOTES AND
TOTAL BILL OF MATERIALS
F.A.P. ROUTE 301 (US 20)
OVER SIMPSON ROAD
SECTION (2HB-1D)
WINNEBAGO COUNTY
STATION 849+27.97
STRUCTURE NO. 101-0053 (W.B.)
STRUCTURE NO. 101-0054 (E.B.)**

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

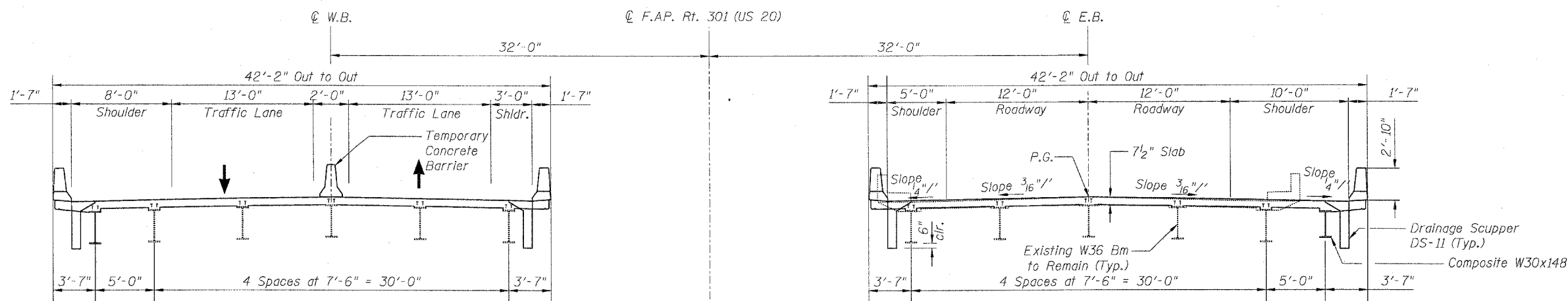
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 301 (US 20)	(2HB-1)D	WINNEBAGO	107	68
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 3
34 SHEETS

Contract #64B07



Stage I Construction
CROSS SECTION
Looking East



Stage II Construction
CROSS SECTION
Looking East

DESIGNED	SSM
CHECKED	JLA
DRAWN	GYR
CHECKED	SSM

STAGE CONSTRUCTION
F.A.P. ROUTE 301 (US 20)
OVER SIMPSON ROAD
SECTION (2HB-1)D
WINNEBAGO COUNTY
STATION 849+27.97
STRUCTURE NO. 101-0053 (W.B.)
STRUCTURE NO. 101-0054 (E.B.)

Plans Prepared by: Kudrna & Associates, Ltd.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET NO.
F.A.P. 301 (US 20)	(2HB-1D)	WINNEBAGO	107	70
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 5
34 SHEETS

Contract #64B07

BEAM 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. W. ABUT	848+ 86.42	-20.00	757.95	757.95
☉ BRG. W. ABUT.	848+ 89.50	-20.00	757.92	757.92
A	848+ 99.50	-20.00	757.82	757.84
B	849+ 09.50	-20.00	757.73	757.75
C	849+ 19.50	-20.00	757.63	757.66
D	849+ 29.50	-20.00	757.53	757.55
E	849+ 39.50	-20.00	757.44	757.44
☉ PIER	849+ 45.00	-20.00	757.38	757.38
F	849+ 55.00	-20.00	757.29	757.29
G	849+ 65.00	-20.00	757.19	757.20
H	849+ 75.00	-20.00	757.09	757.10
I	849+ 85.00	-20.00	757.00	757.00
J	849+ 95.00	-20.00	756.90	756.90
☉ PIER	850+ 05.00	-20.00	756.80	756.80
K	850+ 15.00	-20.00	756.70	756.71
L	850+ 25.00	-20.00	756.61	756.62
M	850+ 35.00	-20.00	756.51	756.53
N	850+ 45.00	-20.00	756.41	756.43
☉ BRG. E. ABUT.	850+56.83	-20.00	756.30	756.30
BK. E. ABUT.	850+59.91	-20.00	756.27	756.27

BEAM 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. W. ABUT	848+ 81.92	-15.00	758.10	758.10
☉ BRG. W. ABUT.	848+ 85.00	-15.00	758.07	758.07
A	848+ 95.00	-15.00	757.97	757.99
B	849+ 05.00	-15.00	757.88	757.90
C	849+ 15.00	-15.00	757.78	757.80
D	849+ 25.00	-15.00	757.68	757.70
E	849+ 35.00	-15.00	757.58	757.59
☉ PIER	849+ 40.50	-15.00	757.53	757.53
F	849+ 50.50	-15.00	757.43	757.44
G	849+ 60.50	-15.00	757.34	757.34
H	849+ 70.50	-15.00	757.24	757.25
I	849+ 80.50	-15.00	757.14	757.15
J	849+ 90.50	-15.00	757.05	757.05
☉ PIER	850+ 00.50	-15.00	756.95	756.95
K	850+ 10.50	-15.00	756.85	756.86
L	850+ 20.50	-15.00	756.76	756.77
M	850+ 30.50	-15.00	756.66	756.68
N	850+ 40.50	-15.00	756.56	756.58
☉ BRG. E. ABUT.	850+52.34	-15.00	756.45	756.45
BK. E. ABUT.	850+55.42	-15.00	756.42	756.42

BEAM 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. W. ABUT	848+ 75.19	-7.50	758.30	758.30
☉ BRG. W. ABUT.	848+ 78.27	-7.50	758.27	758.27
A	848+ 88.27	-7.50	758.17	758.19
B	848+ 98.27	-7.50	758.07	758.10
C	849+ 08.27	-7.50	757.98	758.00
D	849+ 18.27	-7.50	757.88	757.89
E	849+ 28.27	-7.50	757.78	757.79
☉ PIER	849+ 33.77	-7.50	757.73	757.73
F	849+ 43.77	-7.50	757.63	757.63
G	849+ 53.77	-7.50	757.54	757.54
H	849+ 63.77	-7.50	757.44	757.45
I	849+ 73.77	-7.50	757.34	757.35
J	849+ 83.77	-7.50	757.24	757.25
☉ PIER	849+ 93.77	-7.50	757.15	757.15
K	850+ 03.77	-7.50	757.05	757.06
L	850+ 13.77	-7.50	756.95	756.97
M	850+ 23.77	-7.50	756.86	756.88
N	850+ 33.77	-7.50	756.76	756.77
☉ BRG. E. ABUT.	850+45.60	-7.50	756.64	756.64
BK. E. ABUT.	850+48.68	-7.50	756.61	756.61

BEAM 4 & PROFILE GRADE LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. W. ABUT	848+ 68.45	0.00	758.48	758.48
☉ BRG. W. ABUT.	848+ 71.53	0.00	758.45	758.45
A	848+ 81.53	0.00	758.35	758.37
B	848+ 91.53	0.00	758.26	758.28
C	849+ 01.53	0.00	758.16	758.18
D	849+ 11.53	0.00	758.06	758.08
E	849+ 21.53	0.00	757.97	757.97
☉ PIER	849+ 27.03	0.00	757.91	757.91
F	849+ 37.03	0.00	757.81	757.82
G	849+ 47.03	0.00	757.72	757.73
H	849+ 57.03	0.00	757.62	757.63
I	849+ 67.03	0.00	757.52	757.53
J	849+ 77.03	0.00	757.43	757.43
☉ PIER	849+ 87.03	0.00	757.33	757.33
K	849+ 97.03	0.00	757.23	757.24
L	850+ 07.03	0.00	757.14	757.15
M	850+ 17.03	0.00	757.04	757.06
N	850+ 27.03	0.00	756.94	756.96
☉ BRG. E. ABUT.	850+38.86	0.00	756.83	756.83
BK. E. ABUT.	850+41.95	0.00	756.80	756.80

BEAM 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. W. ABUT	848+ 61.71	7.50	758.43	758.43
☉ BRG. W. ABUT.	848+ 64.79	7.50	758.40	758.40
A	848+ 74.79	7.50	758.30	758.32
B	848+ 84.79	7.50	758.20	758.23
C	848+ 94.79	7.50	758.11	758.13
D	849+ 04.79	7.50	758.01	758.03
E	849+ 14.79	7.50	757.91	757.92
☉ PIER	849+ 20.29	7.50	757.86	757.86
F	849+ 30.29	7.50	757.76	757.76
G	849+ 40.29	7.50	757.67	757.67
H	849+ 50.29	7.50	757.57	757.58
I	849+ 60.29	7.50	757.47	757.48
J	849+ 70.29	7.50	757.37	757.38
☉ PIER	849+ 80.29	7.50	757.28	757.28
K	849+ 90.29	7.50	757.18	757.19
L	850+ 00.29	7.50	757.08	757.10
M	850+ 10.29	7.50	756.99	757.01
N	850+ 20.29	7.50	756.89	756.90
☉ BRG. E. ABUT.	850+32.13	7.50	756.78	756.78
BK. E. ABUT.	850+35.21	7.50	756.75	756.75

BEAM 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. W. ABUT	848+ 54.98	15.00	758.36	758.36
☉ BRG. W. ABUT.	848+ 58.06	15.00	758.33	758.33
A	848+ 68.06	15.00	758.23	758.25
B	848+ 78.06	15.00	758.14	758.16
C	848+ 88.06	15.00	758.04	758.06
D	848+ 98.06	15.00	757.94	757.96
E	849+ 08.06	15.00	757.85	757.85
☉ PIER	849+ 13.56	15.00	757.79	757.79
F	849+ 23.56	15.00	757.70	757.70
G	849+ 33.56	15.00	757.60	757.61
H	849+ 43.56	15.00	757.50	757.51
I	849+ 53.56	15.00	757.40	757.41
J	849+ 63.56	15.00	757.31	757.31
☉ PIER	849+ 73.56	15.00	757.21	757.21
K	849+ 83.56	15.00	757.11	757.12
L	849+ 93.56	15.00	757.02	757.03
M	850+ 03.56	15.00	756.92	756.94
N	850+ 13.56	15.00	756.82	756.84
☉ BRG. E. ABUT.	850+25.39	15.00	756.71	756.71
BK. E. ABUT.	850+28.47	15.00	756.68	756.68

DESIGNED	SSM
CHECKED	JLA
DRAWN	GYR
CHECKED	SSM

TOP OF SLAB ELEVATIONS
F.A.P. ROUTE 301 (US 20)
OVER SIMPSON ROAD
SECTION (2HB-1D)
WINNEBAGO COUNTY
STATION 849+27.97
STRUCTURE NO. 101-0053 (W.B.)
STRUCTURE NO. 101-0054 (E.B.)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 301 (US 20)	(2HB -1D)	WINNEBAGO	107	71
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 6
34 SHEETS

Contract #64B07

BEAM 7

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. W. ABUT	848+24.43	-15.00	758.58	758.58
⊙ BRG. W. ABUT.	848+27.51	-15.00	758.55	758.55
A	848+37.51	-15.00	758.47	758.48
B	848+47.51	-15.00	758.38	758.40
C	848+57.51	-15.00	758.29	758.31
D	848+67.51	-15.00	758.20	758.22
E	848+77.51	-15.00	758.11	758.12
⊙ PIER	848+83.01	-15.00	758.07	758.07
F	848+93.01	-15.00	757.98	757.98
G	849+03.01	-15.00	757.89	757.90
H	849+13.01	-15.00	757.80	757.81
I	849+23.01	-15.00	757.71	757.72
J	849+33.01	-15.00	757.63	757.63
⊙ PIER	849+43.04	-15.00	757.54	757.54
K	849+53.04	-15.00	757.45	757.46
L	849+63.04	-15.00	757.36	757.38
M	849+73.04	-15.00	757.27	757.29
N	849+83.04	-15.00	757.19	757.20
⊙ BRG. E. ABUT.	849+94.97	-15.00	757.08	757.08
BK. E. ABUT.	849+98.05	-15.00	757.05	757.05

BEAM 8

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. W. ABUT	848+17.70	-7.50	758.77	758.77
⊙ BRG. W. ABUT.	848+20.78	-7.50	758.75	758.75
A	848+30.78	-7.50	758.66	758.67
B	848+40.78	-7.50	758.57	758.60
C	848+50.78	-7.50	758.48	758.51
D	848+60.78	-7.50	758.39	758.41
E	848+70.78	-7.50	758.31	758.31
⊙ PIER	848+76.28	-7.50	758.26	758.26
F	848+86.28	-7.50	758.17	758.17
G	848+96.28	-7.50	758.08	758.09
H	849+06.28	-7.50	757.99	758.00
I	849+16.28	-7.50	757.91	757.91
J	849+26.28	-7.50	757.82	757.82
⊙ PIER	849+36.30	-7.50	757.73	757.73
K	849+46.30	-7.50	757.64	757.65
L	849+56.30	-7.50	757.55	757.57
M	849+66.30	-7.50	757.47	757.49
N	849+76.30	-7.50	757.38	757.39
⊙ BRG. E. ABUT.	849+88.23	-7.50	757.27	757.27
BK. E. ABUT.	849+91.32	-7.50	757.25	757.25

BEAM 9 & PROFILE GRADE LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. W. ABUT	848+10.96	0.00	758.95	758.95
⊙ BRG. W. ABUT.	848+14.04	0.00	758.92	758.92
A	848+24.04	0.00	758.83	758.85
B	848+34.04	0.00	758.75	758.77
C	848+44.04	0.00	758.66	758.68
D	848+54.04	0.00	758.57	758.59
E	848+64.04	0.00	758.48	758.49
⊙ PIER	848+69.54	0.00	758.43	758.43
F	848+79.54	0.00	758.35	758.35
G	848+89.54	0.00	758.26	758.27
H	848+99.54	0.00	758.17	758.18
I	849+09.54	0.00	758.08	758.09
J	849+19.54	0.00	757.99	758.00
⊙ PIER	849+29.56	0.00	757.91	757.91
K	849+39.56	0.00	757.82	757.83
L	849+49.56	0.00	757.73	757.75
M	849+59.56	0.00	757.64	757.66
N	849+69.56	0.00	757.55	757.57
⊙ BRG. E. ABUT.	849+81.50	0.00	757.45	757.45
BK. E. ABUT.	849+84.58	0.00	757.42	757.42

BEAM 10

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. W. ABUT	848+04.22	7.50	758.89	758.89
⊙ BRG. W. ABUT.	848+12.12	7.50	758.82	758.82
A	848+23.16	7.50	758.73	758.74
B	848+34.04	7.50	758.63	758.65
C	848+41.27	7.50	758.57	758.59
D	848+54.04	7.50	758.45	758.47
E	848+64.04	7.50	758.37	758.37
⊙ PIER	848+69.54	7.50	758.32	758.32
F	848+79.54	7.50	758.23	758.23
G	848+89.54	7.50	758.14	758.15
H	848+99.54	7.50	758.05	758.06
I	849+09.54	7.50	757.97	757.97
J	849+19.54	7.50	757.88	757.88
⊙ PIER	849+29.56	7.50	757.79	757.79
K	849+39.56	7.50	757.70	757.71
L	849+49.56	7.50	757.61	757.63
M	849+59.56	7.50	757.53	757.54
N	849+69.56	7.50	757.44	757.45
⊙ BRG. E. ABUT.	849+81.50	7.50	757.33	757.33
BK. E. ABUT.	849+84.58	7.50	757.30	757.30

BEAM 11

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. W. ABUT	847+97.49	15.00	758.82	758.82
⊙ BRG. W. ABUT.	848+00.57	15.00	758.79	758.79
A	848+10.57	15.00	758.70	758.72
B	848+20.57	15.00	758.62	758.64
C	848+30.57	15.00	758.53	758.55
D	848+40.57	15.00	758.44	758.45
E	848+50.57	15.00	758.35	758.36
⊙ PIER	848+56.07	15.00	758.30	758.30
F	848+66.07	15.00	758.22	758.22
G	848+76.07	15.00	758.13	758.13
H	848+86.07	15.00	758.04	758.05
I	848+96.07	15.00	757.95	757.96
J	849+06.07	15.00	757.86	757.87
⊙ PIER	849+16.09	15.00	757.77	757.77
K	849+26.09	15.00	757.69	757.69
L	849+36.09	15.00	757.60	757.61
M	849+46.09	15.00	757.51	757.53
N	849+56.09	15.00	757.42	757.44
⊙ BRG. E. ABUT.	849+68.02	15.00	757.32	757.32
BK. E. ABUT.	849+71.10	15.00	757.29	757.29

BEAM 12

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. W. ABUT	847+92.99	20.00	758.75	758.75
⊙ BRG. W. ABUT.	847+96.07	20.00	758.73	758.73
A	848+06.07	20.00	758.64	758.65
B	848+16.07	20.00	758.55	758.58
C	848+26.07	20.00	758.46	758.49
D	848+36.07	20.00	758.37	758.39
E	848+46.07	20.00	758.29	758.29
⊙ PIER	848+51.57	20.00	758.24	758.24
F	848+61.57	20.00	758.15	758.15
G	848+71.57	20.00	758.06	758.07
H	848+81.57	20.00	757.97	757.98
I	848+91.57	20.00	757.89	757.89
J	849+01.57	20.00	757.80	757.80
⊙ PIER	849+11.60	20.00	757.71	757.71
K	849+21.60	20.00	757.62	757.63
L	849+31.60	20.00	757.53	757.55
M	849+41.60	20.00	757.45	757.47
N	849+51.60	20.00	757.36	757.37
⊙ BRG. E. ABUT.	849+63.53	20.00	757.25	757.25
BK. E. ABUT.	849+66.61	20.00	757.23	757.23

DESIGNED	SSM
CHECKED	JLA
DRAWN	GYR
CHECKED	SSM

TOP OF SLAB ELEVATIONS
F.A.P. ROUTE 301 (US 20)
OVER SIMPSON ROAD
SECTION (2HB-1D)
WINNEBAGO COUNTY
STATION 849+27.97
STRUCTURE NO. 101-0053 (W.B.)
STRUCTURE NO. 101-0054 (E.B.)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 301 (US 20)	(2HB -DD)	WINNEBAGO	107	72
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 7
34 SHEETS

Contract #64B07

NORTH CURB LINE - W.B. US 20

Location	Station	Offset	Theoretical Grade Elevations
END W. APPR. PAV'T.	848+58.21	-22.00	758.18
A	848+68.21	-22.00	758.09
B	848+78.21	-22.00	757.99
BK. W. ABUT.	848+88.21	-22.00	757.89

NORTH EDGE OF PAVEMENT - W.B. US 20

Location	Station	Offset	Theoretical Grade Elevations
END W. APPR. PAV'T.	848+49.23	-12.00	758.48
A	848+59.23	-12.00	758.38
B	848+69.23	-12.00	758.28
BK. W. ABUT.	848+79.23	-12.00	758.19

PROFILE GRADE AND C - W.B. US 20

Location	Station	Offset	Theoretical Grade Elevations
END W. APPR. PAV'T.	848+38.45	0.00	758.77
A	848+48.45	0.00	758.67
B	848+58.45	0.00	758.58
BK. W. ABUT.	848+68.45	0.00	758.48

SOUTH EDGE OF PAVEMENT - W.B. US 20

Location	Station	Offset	Theoretical Grade Elevations
END W. APPR. PAV'T.	848+27.67	12.00	758.69
A	848+37.67	12.00	758.59
B	848+47.67	12.00	758.49
BK. W. ABUT.	848+57.67	12.00	758.40

SOUTH CURB LINE - W.B. US 20

Location	Station	Offset	Theoretical Grade Elevations
END W. APPR. PAV'T.	848+23.18	17.00	758.63
A	848+33.18	17.00	758.53
B	848+43.18	17.00	758.43
BK. W. ABUT.	848+53.18	17.00	758.34

NORTH CURB LINE - E.B. US 20

Location	Station	Offset	Theoretical Grade Elevations
END W. APPR. PAV'T.	847+96.23	-17.00	758.77
A	848+06.23	-17.00	758.69
B	848+16.23	-17.00	758.60
BK. W. ABUT.	848+26.23	-17.00	758.51

NORTH EDGE OF PAVEMENT - E.B. US 20

Location	Station	Offset	Theoretical Grade Elevations
END W. APPR. PAV'T.	847+91.74	-12.00	758.92
A	848+01.74	-12.00	758.83
B	848+11.74	-12.00	758.75
BK. W. ABUT.	848+21.74	-12.00	758.66

PROFILE GRADE AND C - E.B. US 20

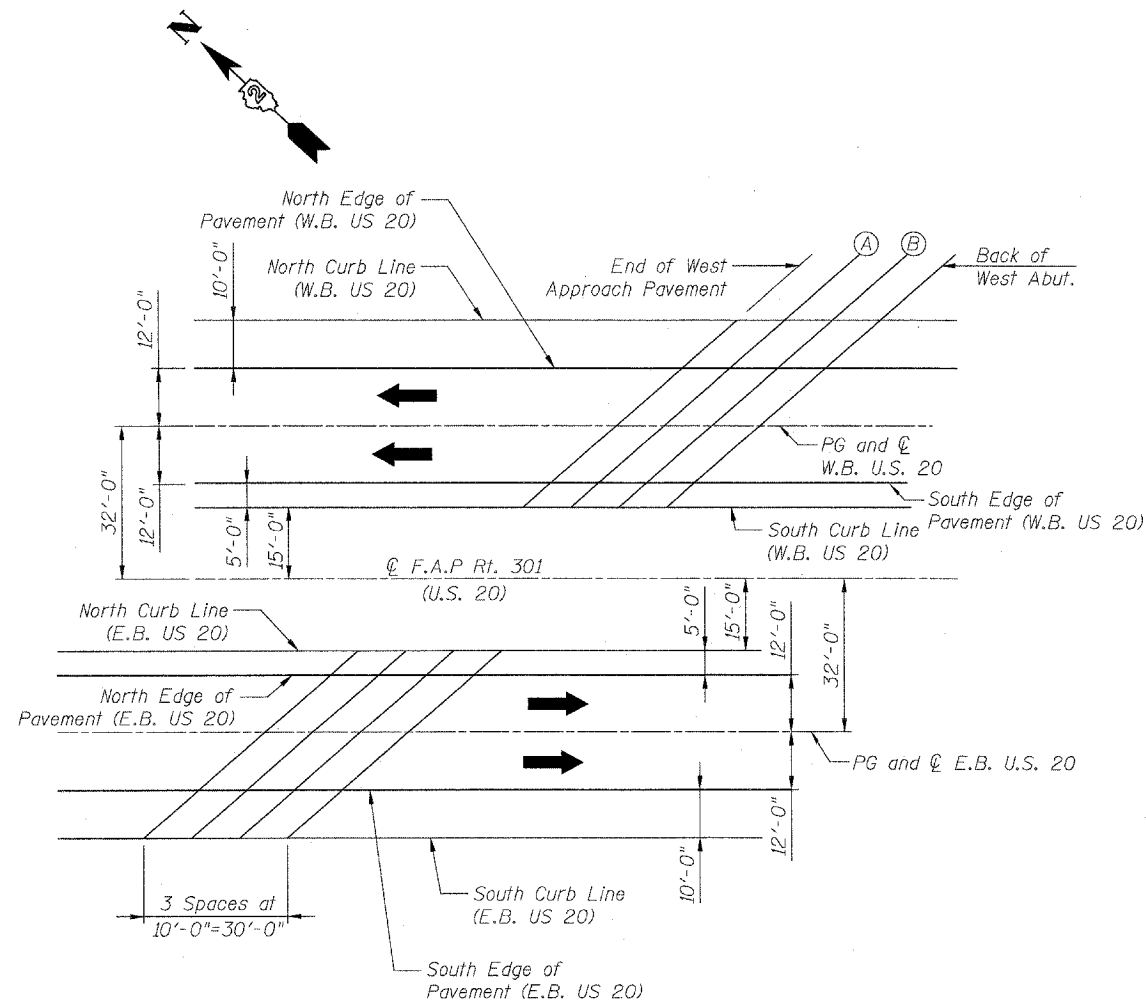
Location	Station	Offset	Theoretical Grade Elevations
END W. APPR. PAV'T.	847+80.96	0.00	759.21
A	847+90.96	0.00	759.13
B	848+00.96	0.00	759.04
BK. W. ABUT.	848+10.96	0.00	758.95

SOUTH EDGE OF PAVEMENT - E.B. US 20

Location	Station	Offset	Theoretical Grade Elevations
END W. APPR. PAV'T.	847+70.18	12.00	759.13
A	847+80.18	12.00	759.04
B	847+90.18	12.00	758.96
BK. W. ABUT.	848+00.18	12.00	758.87

SOUTH CURB LINE - E.B. US 20

Location	Station	Offset	Theoretical Grade Elevations
END W. APPR. PAV'T.	847+61.2	22.00	759.01
A	847+71.2	22.00	758.92
B	847+81.2	22.00	758.83
BK. W. ABUT.	847+91.2	22.00	758.75



PLAN - WEST APPROACH PAVEMENTS

DESIGNED	SSM
CHECKED	JLA
DRAWN	GYR
CHECKED	SSM

TOP OF WEST APPROACH
SLAB ELEVATIONS
F.A.P. ROUTE 301 (US 20)
OVER SIMPSON ROAD
SECTION (2HB-1)D
WINNEBAGO COUNTY
STATION 849+27.97
STRUCTURE NO. 101-0053 (W.B.)
STRUCTURE NO. 101-0054 (E.B.)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 8 34 SHEETS
F.A.P. 301 (US 20)	(2HB -1D)	WINNEBAGO	107	73	
FED. ROAD DIST. NO. 7		FED. AID PROJECT-			

Contract #64B07

NORTH CURB LINE - W.B. US 20

Location	Station	Offset	Theoretical Grade Elevations
BK. E. ABUT.	850+61.71	-22.00	756.21
C	850+71.71	-22.00	756.50
D	850+81.71	-22.00	756.40
END E. APPR. PAV'T.	850+91.71	-22.00	755.92

NORTH EDGE OF PAVEMENT - W.B. US 20

Location	Station	Offset	Theoretical Grade Elevations
BK. E. ABUT.	850+52.72	-12.00	756.51
C	850+62.72	-12.00	756.41
D	850+72.72	-12.00	756.31
END E. APPR. PAV'T.	850+82.72	-12.00	756.21

PROFILE GRADE AND C - W.B. US 20

Location	Station	Offset	Theoretical Grade Elevations
BK. E. ABUT.	850+41.95	0.00	756.80
C	850+51.95	0.00	756.70
D	850+61.95	0.00	756.60
END E. APPR. PAV'T.	850+71.95	0.00	756.51

SOUTH EDGE OF PAVEMENT - W.B. US 20

Location	Station	Offset	Theoretical Grade Elevations
BK. E. ABUT.	850+31.17	12.00	756.71
C	850+41.17	12.00	756.62
D	850+51.17	12.00	756.52
END E. APPR. PAV'T.	850+61.17	12.00	756.42

SOUTH CURB LINE - W.B. US 20

Location	Station	Offset	Theoretical Grade Elevations
BK. E. ABUT.	850+26.67	17.00	756.65
C	850+36.67	17.00	756.56
D	850+46.67	17.00	756.46
END E. APPR. PAV'T.	850+56.67	17.00	756.36

NORTH CURB LINE - E.B. US 20

Location	Station	Offset	Theoretical Grade Elevations
BK. E. ABUT.	849+99.85	-17.00	756.98
C	850+09.85	-17.00	756.89
D	850+19.85	-17.00	756.81
END E. APPR. PAV'T.	850+29.85	-17.00	756.72

NORTH EDGE OF PAVEMENT - E.B. US 20

Location	Station	Offset	Theoretical Grade Elevations
BK. E. ABUT.	849+95.36	-12.00	756.92
C	850+05.36	-12.00	757.04
D	850+15.36	-12.00	756.95
END E. APPR. PAV'T.	850+25.36	-12.00	756.87

PROFILE GRADE AND C - E.B. US 20

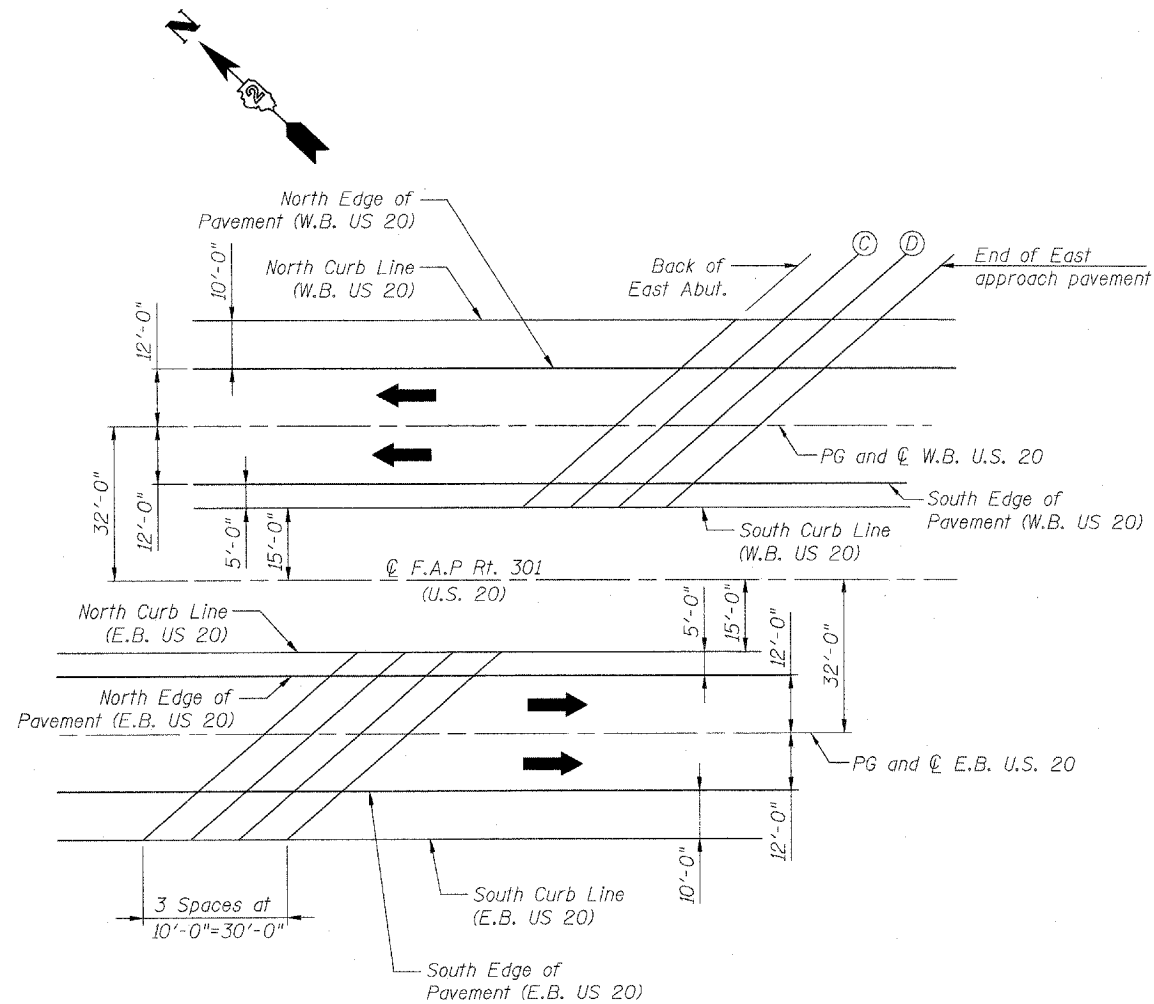
Location	Station	Offset	Theoretical Grade Elevations
BK. E. ABUT.	849+84.58	0.00	757.42
C	849+94.58	0.00	757.33
D	850+04.58	0.00	757.25
END E. APPR. PAV'T.	850+14.58	0.00	757.16

SOUTH EDGE OF PAVEMENT - E.B. US 20

Location	Station	Offset	Theoretical Grade Elevations
BK. E. ABUT.	849+73.8	12.00	757.34
C	849+83.8	12.00	757.25
D	849+93.8	12.00	757.16
END E. APPR. PAV'T.	850+03.8	12.00	757.08

SOUTH CURB LINE - E.B. US 20

Location	Station	Offset	Theoretical Grade Elevations
BK. E. ABUT.	849+64.82	22.00	757.22
C	849+74.82	22.00	757.13
D	849+84.82	22.00	757.04
END E. APPR. PAV'T.	849+94.82	22.00	756.95



PLAN - EAST APPROACH PAVEMENTS

DESIGNED	SSM
CHECKED	JLA
DRAWN	GYR
CHECKED	SSM

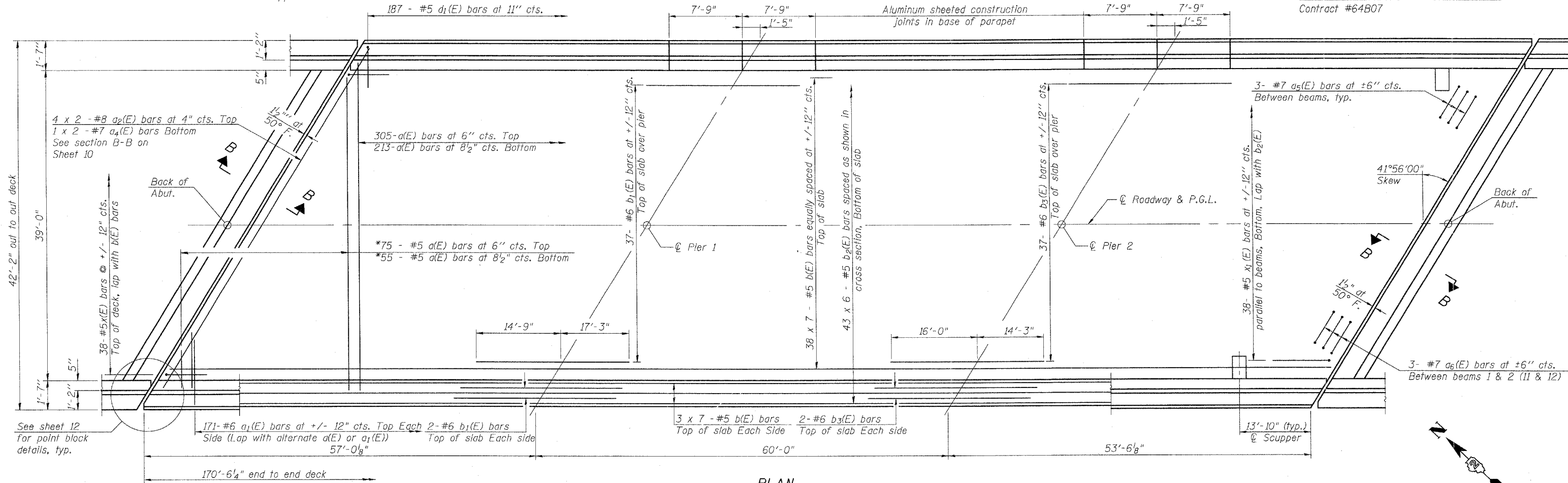
TOP OF EAST APPROACH
SLAB ELEVATIONS
F.A.P. ROUTE 301 (US 20)
OVER SIMPSON ROAD
SECTION (2HB-1D)
WINNEBAGO COUNTY
STATION 849+27.97
STRUCTURE NO. 101-0053 (W.B.)
STRUCTURE NO. 101-0054 (E.B.)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

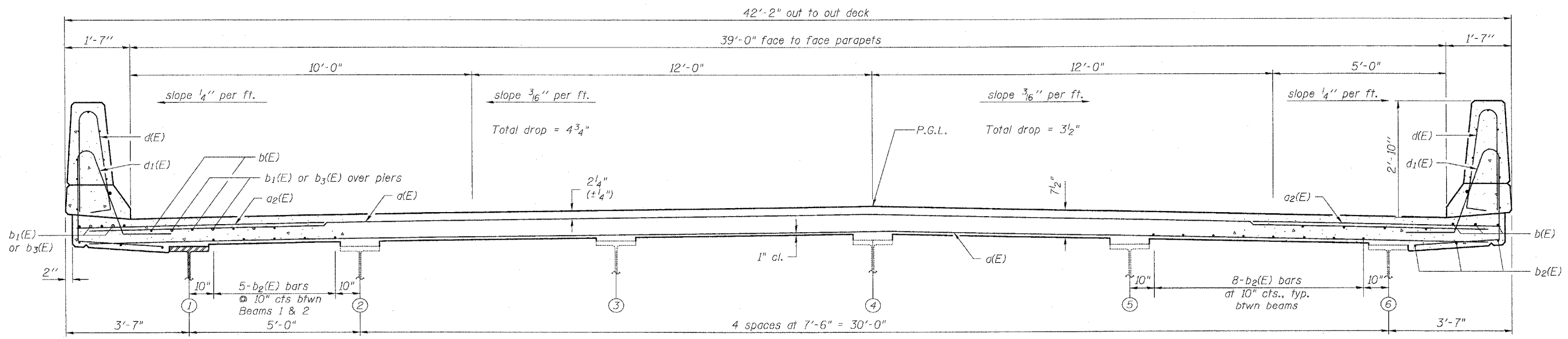
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F.A.P. 301 (US 20)	(2HB-1D)	WINNEBAGO	107	74	34 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

Contract #64B07

* Order a(E) bars full length.
Cut to fit skew and use remainder of bars in opposite end.



PLAN



NEAR PIER

CROSS SECTION

NEAR MIDSPAN

DESIGNED	SSM
CHECKED	JLA
DRAWN	GYR
CHECKED	SSM

Notes:
See Sheet 10 for superstructure details and Bill of Material.
Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
See Sheet 10 for parapet reinforcement.

MINIMUM BAR LAP

- #5 bars = 2'-2"
- #6 bars = 2'-7"
- #7 bars = 3'-5"
- #8 bars = 4'-6"

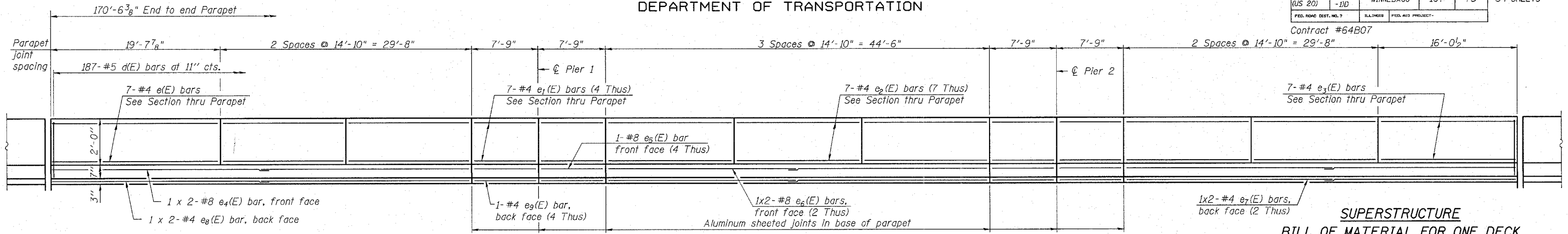
SUPERSTRUCTURE PLAN
F.A.P. ROUTE 301 (US 20)
OVER SIMPSON ROAD
SECTION (2HB-1D)
WINNEBAGO COUNTY
STATION 849+27.97

STRUCTURE NO. 101-0053 (W.B.)
STRUCTURE NO. 101-0054 (E.B.)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 10 34 SHEETS
F.A.P. 301 (US 20)	2HB -1D	WINNEBAGO	107	75	
FED. ROAD DIST. NO. 7	BALTIMORE	FED. AID PROJECT-			

Contract #64B07



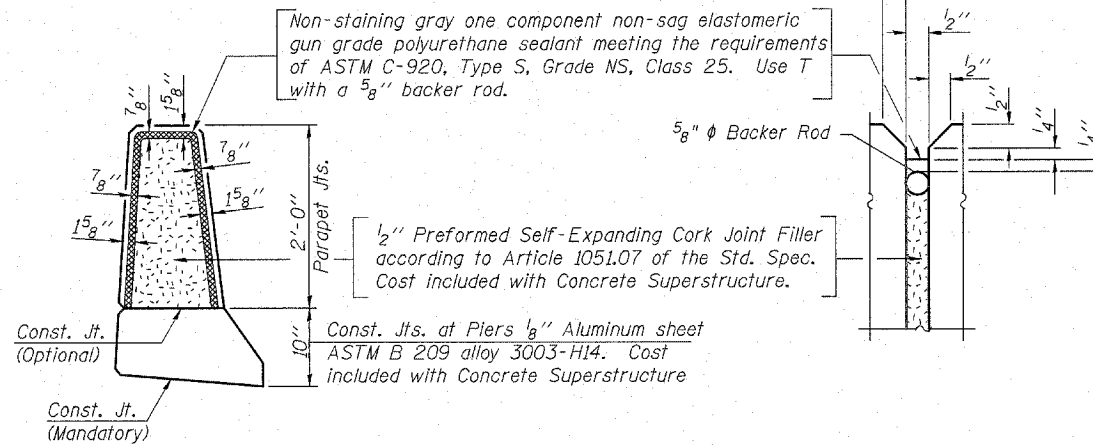
**SUPERSTRUCTURE
BILL OF MATERIAL FOR ONE DECK**

Bar	No.	Size	Length	Shape
a(E)	648	#5	41'-6"	—
a ₁ (E)	342	#6	6'-0"	—
a ₂ (E)	16	#8	30'-4"	—
a ₃ (E)	16	#5	1'-6"	—
a ₄ (E)	4	#7	29'-10"	—
a ₅ (E)	24	#7	8'-10"	—
a ₆ (E)	6	#7	6'-5"	—
b(E)	308	#5	26'-2"	—
b ₁ (E)	41	#6	32'-0"	—
b ₂ (E)	258	#5	30'-7"	—
b ₃ (E)	41	#6	30'-3"	—
d(E)	374	#5	5'-7"	—
d ₁ (E)	374	#5	8'-4"	—
e(E)	14	#4	19'-4"	—
e ₁ (E)	56	#4	7'-5"	—
e ₂ (E)	98	#4	14'-6"	—
e ₃ (E)	14	#4	15'-8"	—
e ₄ (E)	4	#8	29'-10"	—
e ₅ (E)	8	#8	7'-5"	—
e ₆ (E)	8	#8	25'-2"	—
e ₇ (E)	8	#4	24'-7"	—
e ₈ (E)	4	#4	26'-5"	—
e ₉ (E)	8	#4	7'-5"	—
x(E)	76	#5	4'-1"	—
x ₁ (E)	76	#5	5'-11"	—

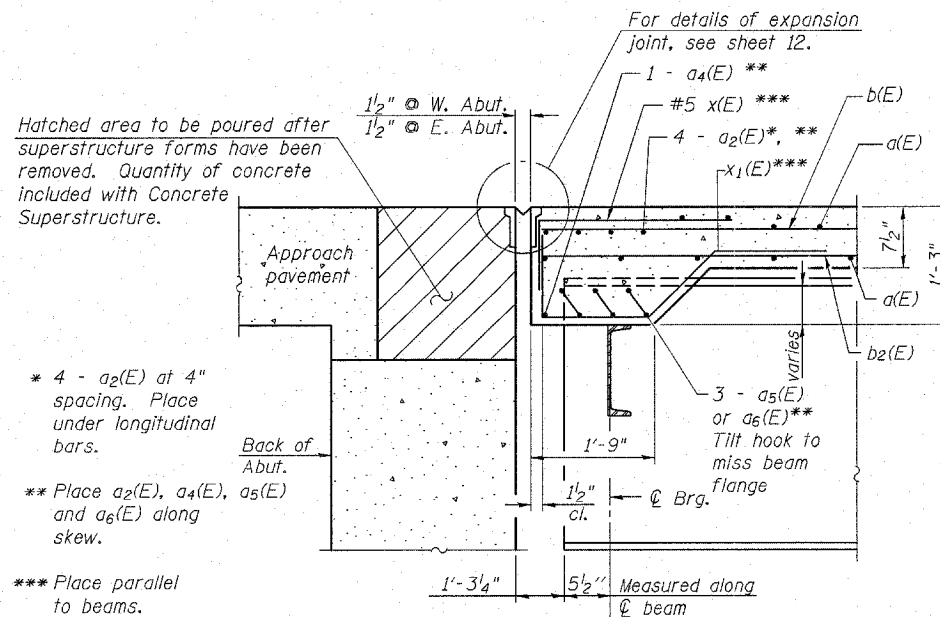
Item	Unit	Quantity
Reinforcement Bars, Epoxy Coated	Pound	62,710
Concrete Superstructure	Cu. Yd.	231
Bridge Deck Grooving	Sq. Yd.	700
Protective Coat	Sq. Yd.	886

Bars indicated thus 1x2-#5 etc. indicates 1 line of bars with 2 lengths per line.

INSIDE ELEVATION OF PARAPET



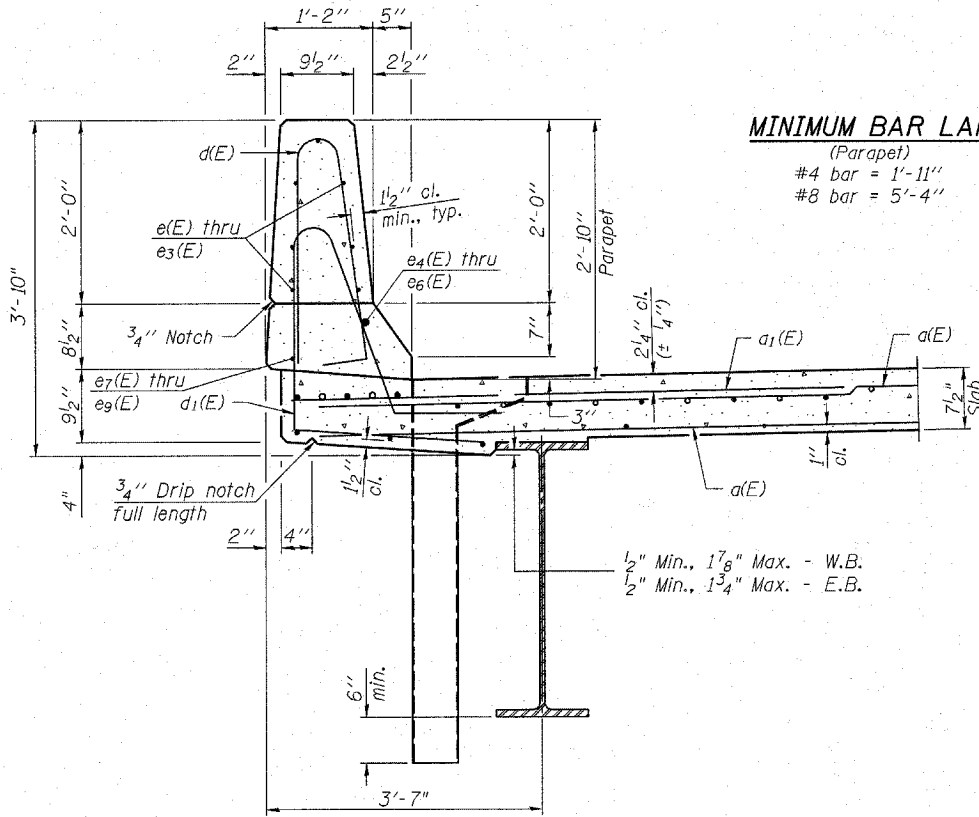
PARAPET JOINT DETAILS



SECTION B-B

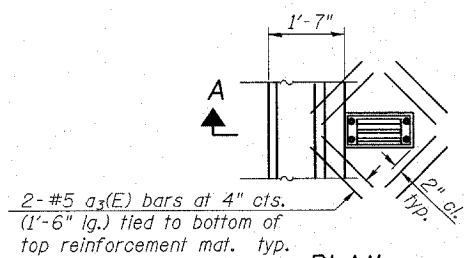
MINIMUM BAR LAP

(Parapet)
#4 bar = 1'-11"
#8 bar = 5'-4"

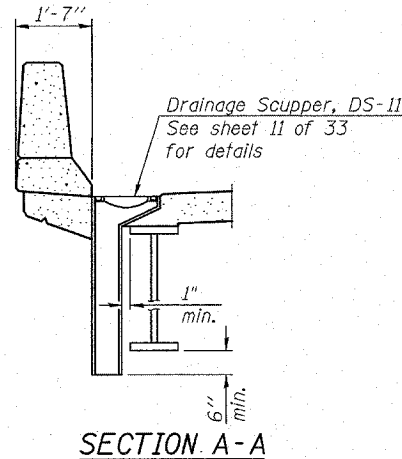


SECTION THRU PARAPET

PLAN



Note:
Cut longitudinal reinforcement to clear drainage scuppers.



SECTION A-A

DESIGNED	SSM
CHECKED	JLA
DRAWN	GYR
CHECKED	SSM

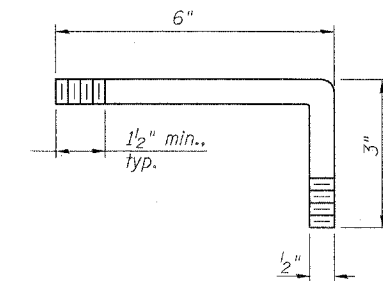
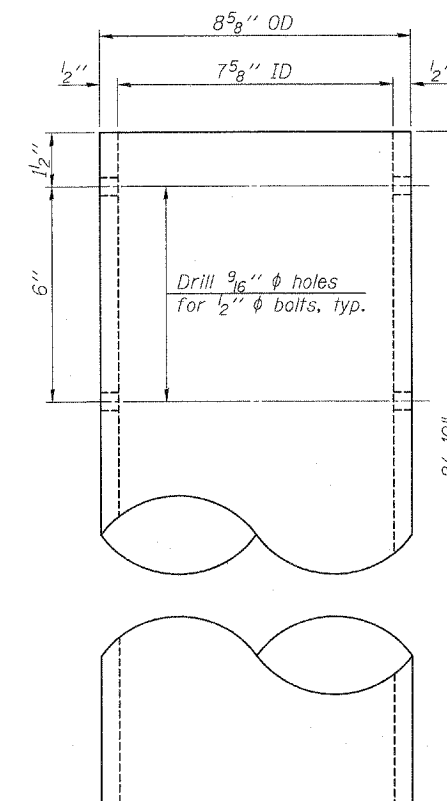
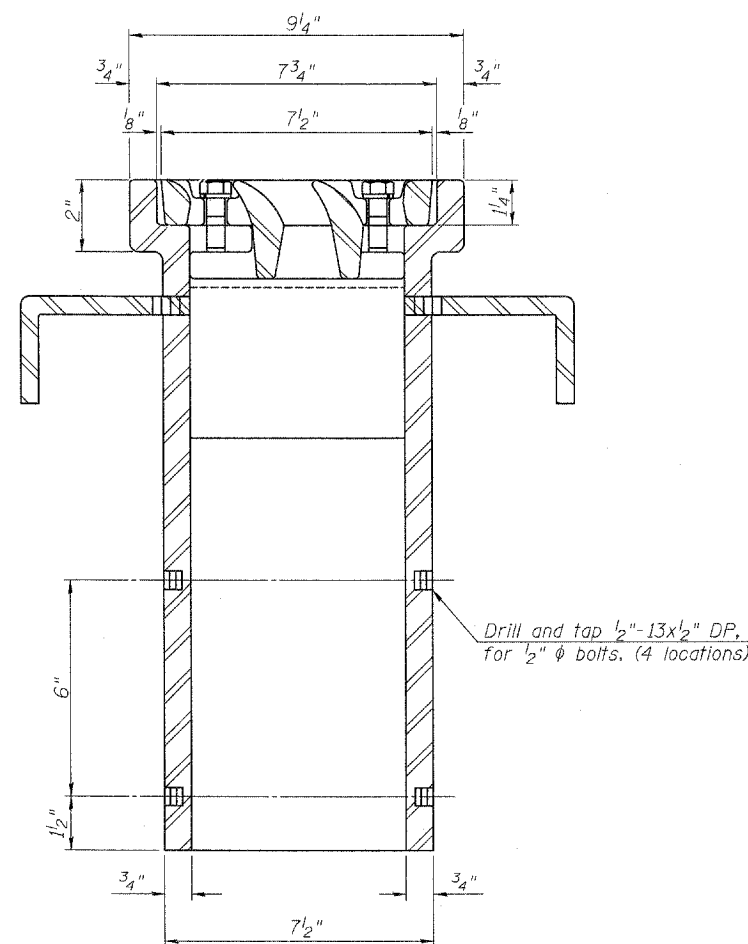
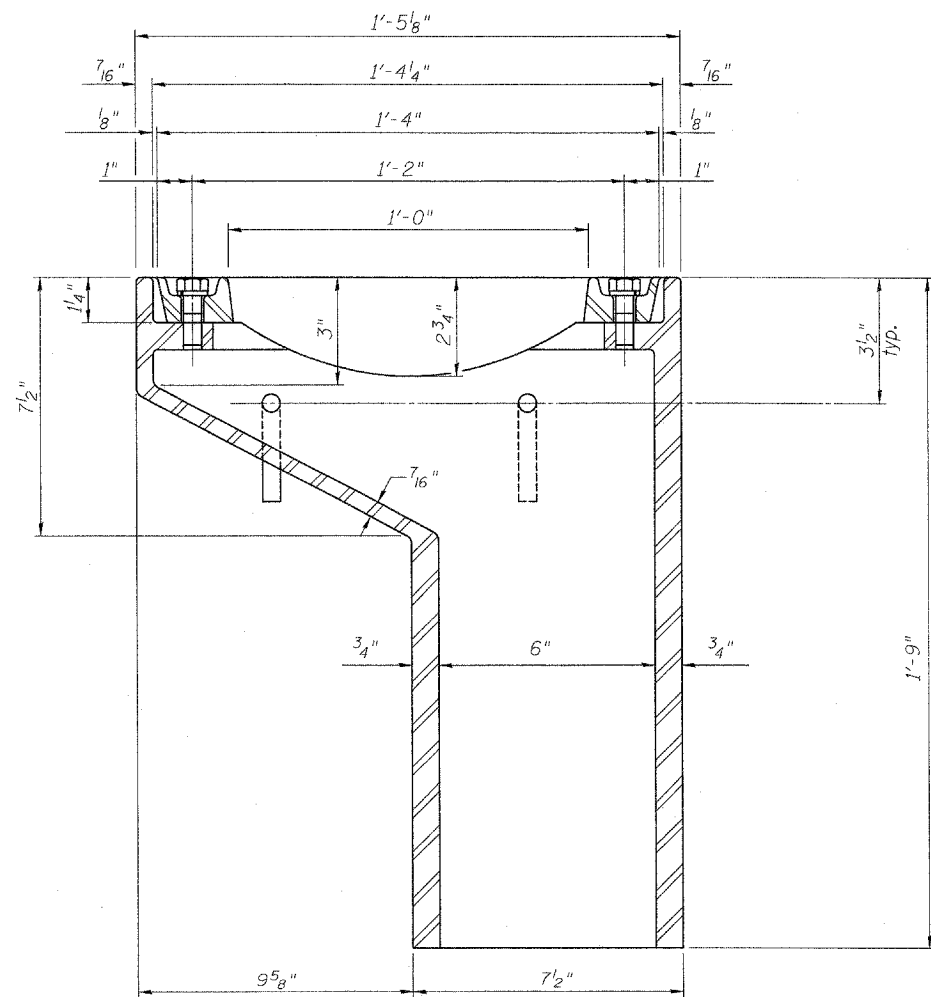
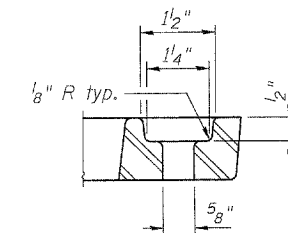
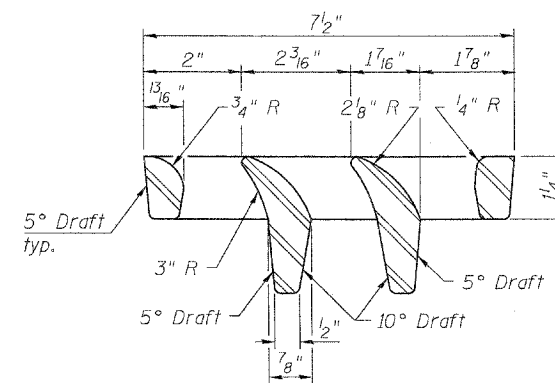
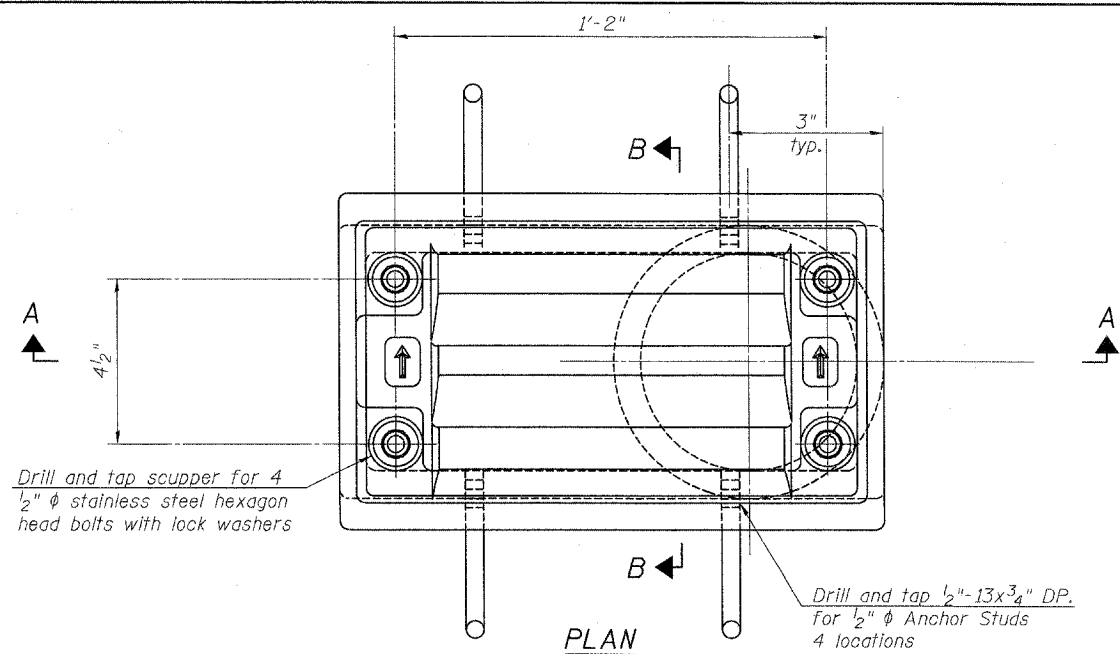
**SUPERSTRUCTURE DETAILS
F.A.P. ROUTE 301 (US 20)
OVER SIMPSON ROAD
SECTION (2HB-1D)
WINNEBAGO COUNTY
STATION 849+27.97
STRUCTURE NO. 101-0053 (W.B.)
STRUCTURE NO. 101-0054 (E.B.)**

Plans Prepared by: Kudrna & Associates, Ltd.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 11 34 SHEETS
F.A.P. 301 (US 20)	(2HB -1D)	WINNEBAGO	107	76	
FED. ROAD DIST. NO. 7		ILLINOIS FED. AID PROJECT-			

Contract #64B07



BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scupper, DS-11	Each	4

DRAINAGE SCUPPER, DS-11
F.A.P. ROUTE 301 (US 20)
OVER SIMPSON ROAD
SECTION (2HB-1D)
WINNEBAGO COUNTY
STATION 849+27.97
STRUCTURE NO. 101-0053 (W.B.)
STRUCTURE NO. 101-0054 (E.B.)

DESIGNED	SSM
CHECKED	JLA
DRAWN	GYR
CHECKED	SSM
DS-11	11-1-06

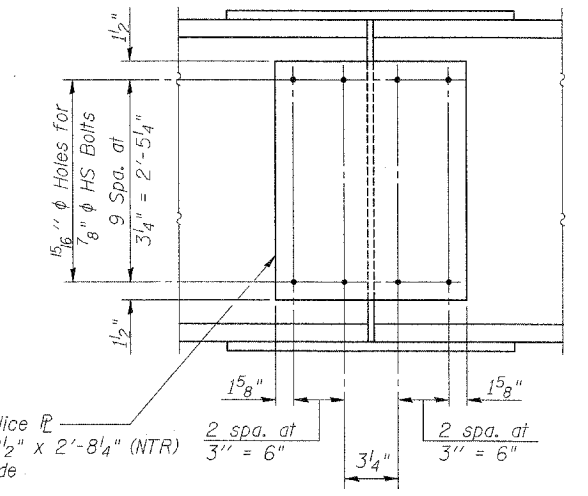
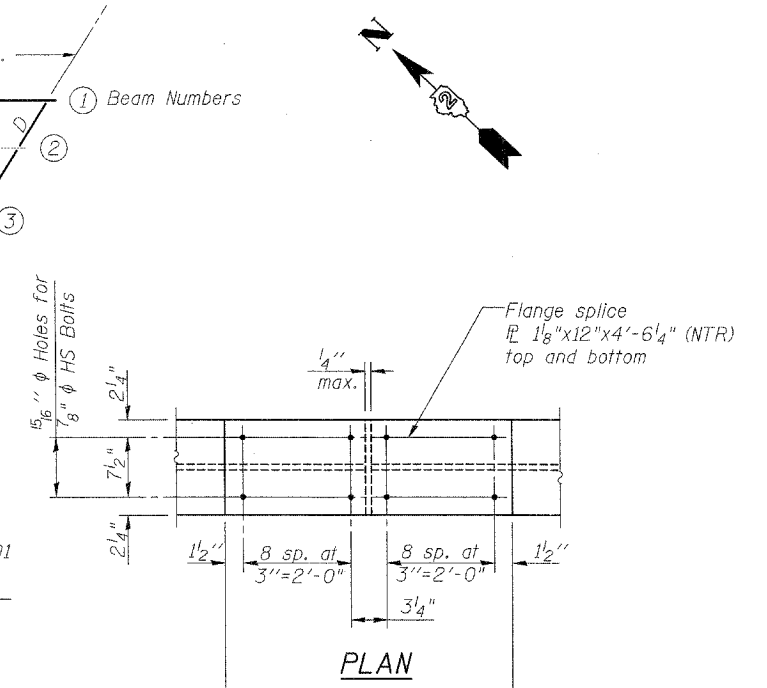
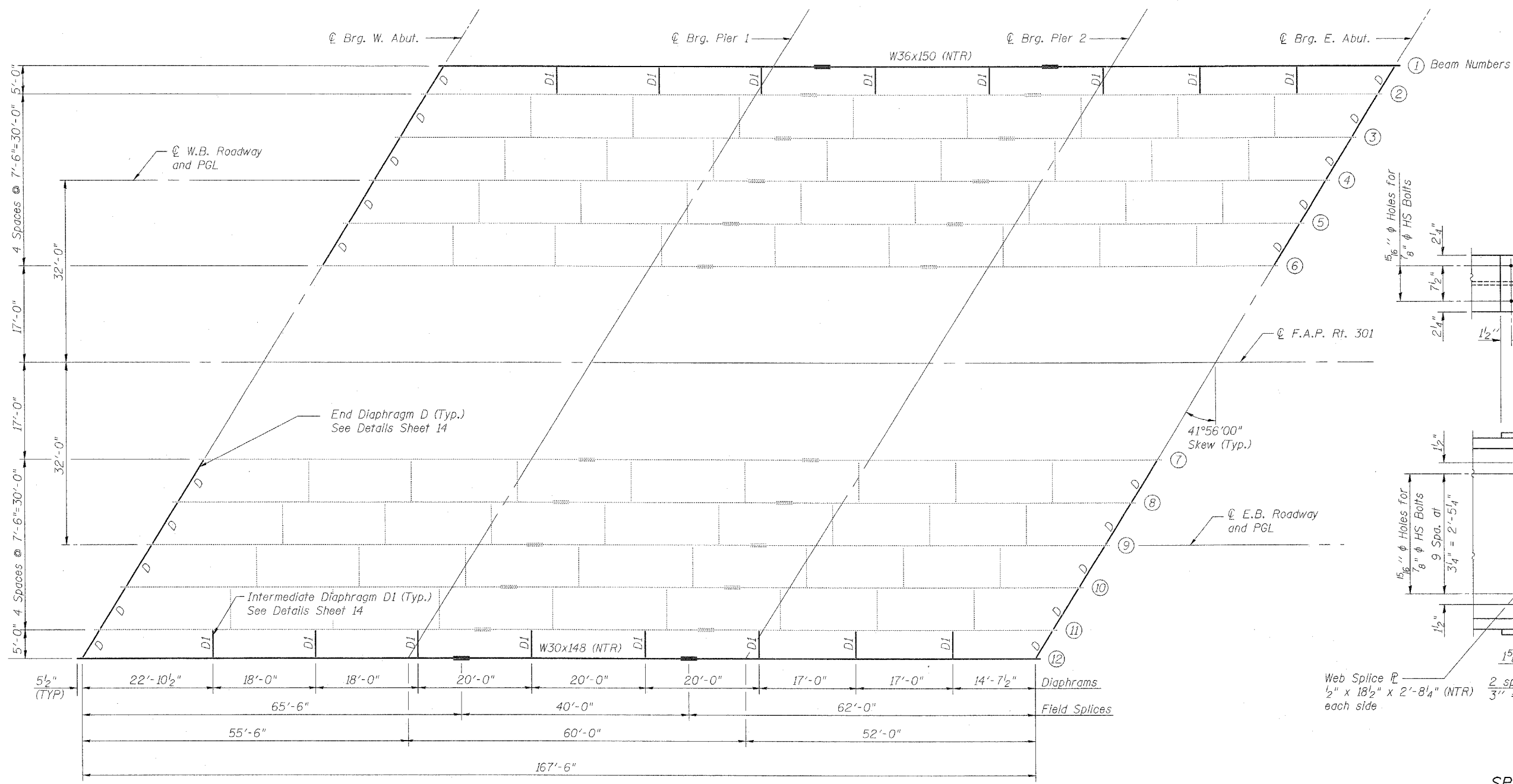
Notes:

- 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.
- Downspouts located on the exterior side of a painted steel fascia beam shall be painted with the finish coat specified for the exterior side of the fascia beam.
- 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 the cast iron scupper frame. Fillet or full penetration welds shall be used for the weldments. Details shall be submitted to the Engineer for approval. Structural steel weldments shall not be substituted for the cast iron scupper grate. Structural steel frames and downspouts shall be galvanized according to AASHTO M 111.
- 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.
- Alternate fiberglass downspout conforming to ASTM D 2996 with a short-time rupture strength hoop tensile stress of 30,000 psi min. may be used in lieu of the cast iron or steel equivalent.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 13
F.A.P. 301 (US 20)	(2HB) -1D	WINNEBAGO	107	78	34 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

Contract #64B07



SPLICE DETAIL BEAM 1
(2 Required)
(See Sheet 14 for Beam 12)

FRAMING PLAN

NOTES:
Contractor to verify existing dimensions in the field and make necessary approved adjustments prior to ordering materials.

All existing end diaphragms and angles to be removed. Removal shall be paid per pound for Structural Steel Removal. Replace with new steel. See End Diaphragm D Details on Sheet 14 of 34.

BILL OF MATERIAL

Item	UNIT	QUANTITY
Furnishing & Erecting Structural Steel	Pound	62,050
Stud Shear Connectors	Each	7,236
Structural Steel Removal	Pound	6,433

DESIGNED	SSM
CHECKED	JLA
DRAWN	GYR
CHECKED	SSM

FRAMING PLAN
F.A.P. ROUTE 301 (US 20)
OVER SIMPSON ROAD
SECTION (2HB-1D)
WINNEBAGO COUNTY
STATION 849+27.97
STRUCTURE NO. 101-0053 (W.B.)
STRUCTURE NO. 101-0054 (E.B.)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	"REV"	SHEET NO.
F.A.P. 301 (US 20)	(2HB -DD)	WINNEBAGO	107	79	14
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			34 SHEETS

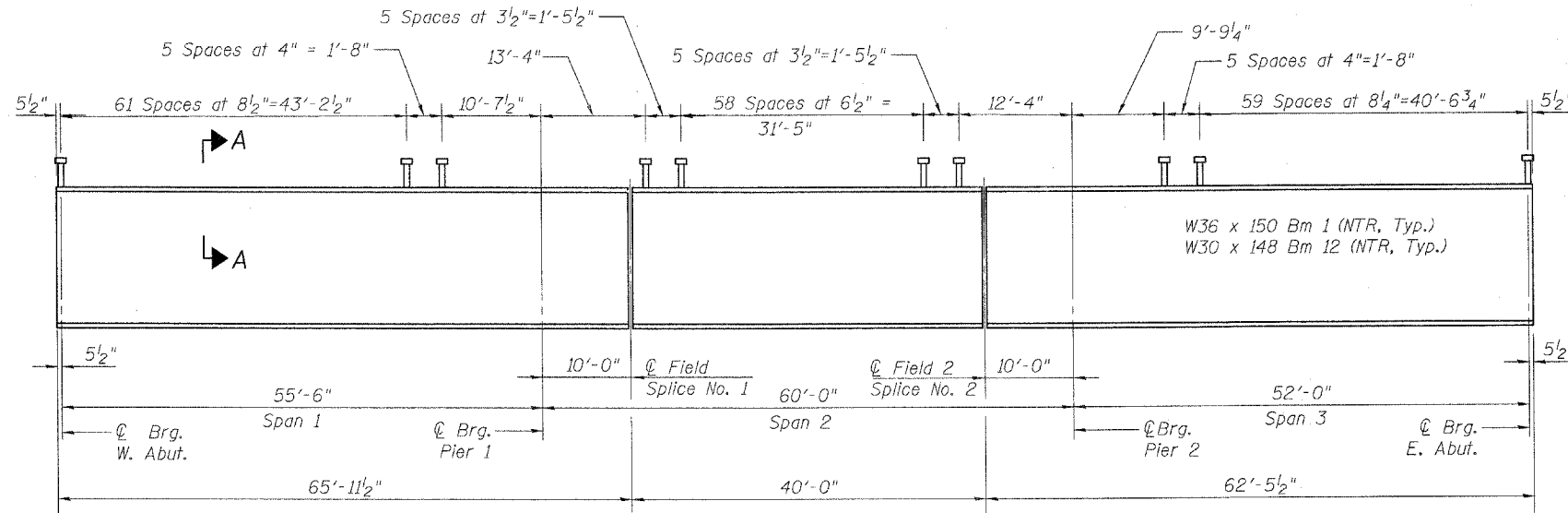
Contract #64B07

		0.4 Sp. 1	Pier	0.5 Sp. 2
I_s	(in ⁴)	9,040	9,040	9,040
$I_c(n)$	(in ⁴)	23,394	-	23,394
$I_c(3n)$	(in ⁴)	17,221	-	17,221
S_s	(in ³)	504	504	504
$S_c(n)$	(in ³)	729.5	-	729.5
$S_c(3n)$	(in ³)	660.4	-	660.4
Z	(in ³)	581	581	581
ρ	(k/')	0.943	0.943	0.943
$M\bar{\rho}$	('k)	220.8	319.7	119.8
$s\bar{\rho}$	(k/')	0.34	0.34	0.34
$M_s\bar{\rho}$	('k)	79.6	115.3	43.2
$M\bar{L}$	('k)	391.7	293.2	341.6
M_{Imp}	('k)	109.7	82.1	95.7
$\bar{M}_s [M\bar{L} + M_{Imp}]$	('k)	835.7	625.5	728.8
M_o	('k)	1,477	1,379	1,159.4
M_u	('k)	2,979	1,743	2,979
$f_s \bar{\rho}$ non-comp	(ksi)	5.25	7.6	2.85
$f_s \bar{\rho}$ (comp)	(ksi)	1.45	2.75	0.80
$f_s \bar{M}_s [M\bar{L} + M_{Imp}]$	(ksi)	13.75	14.9	12.0
f_s (Overload)	(ksi)	20.45	25.2	15.64
f_s (Total)	(ksi)	-	-	-
VR	(k)	46.4	-	39.5

		Abut.	Pier
$R\bar{\rho}$	(k)	27.8	82.6
$R\bar{L}$	(k)	38.9	50.0
Imp.	(k)	10.9	14.0
R_{Total}	(k)	77.6	146.6

* Compact section
** Braced non-compact and partially braced section

I_s, S_s : Non-composite moment of inertia and section modulus of the steel section used for computing f_s (Total and Overload) due to non-composite dead loads (in⁴ and in³).
 $I_c(n), S_c(n)$: Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing f_s (Total and Overload) due to short-term composite live loads (in⁴ and in³).
 $I_c(3n), S_c(3n)$: Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing f_s (Total and Overload) due to long-term composite (superimposed) dead loads (in⁴ and in³).
 Z : Plastic Section Modulus of the steel section in non-composite areas (in³).
 ρ : Un-factored non-composite dead load (kips/ft.).
 $M\bar{\rho}$: Un-factored moment due to non-composite dead load (kip-ft.).
 $s\bar{\rho}$: Un-factored long-term composite (superimposed) dead load (kips/ft.).
 $M_s\bar{\rho}$: Un-factored moment due to long-term composite (superimposed) dead load (kip-ft.).
 $M\bar{L}$: Un-factored live load moment (kip-ft.).
 M_{Imp} : Un-factored moment due to impact (kip-ft.).
 M_o : Factored design moment (kip-ft.).
 M_u : Compact composite moment capacity according to AASHTO LFD 10.50.1.1 or compact non-composite moment capacity according to AASHTO LFD 10.48.1 (kip-ft.).
 f_s (Overload): Sum of stresses as computed from the moments below (ksi).
 f_s (Total): Sum of stresses as computed from the moments below on non-compact section (ksi).
 VR : Maximum $\frac{1}{4}$ + impact horizontal shear range within the composite portion of the span for stud shear connector design (kips).



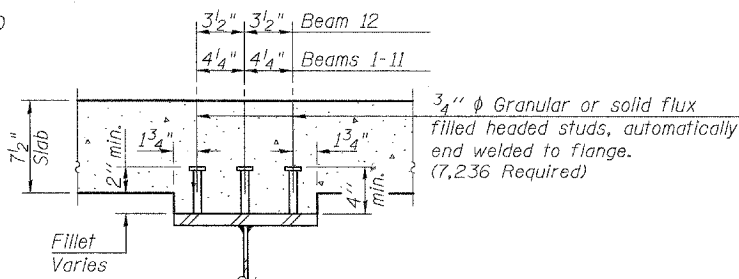
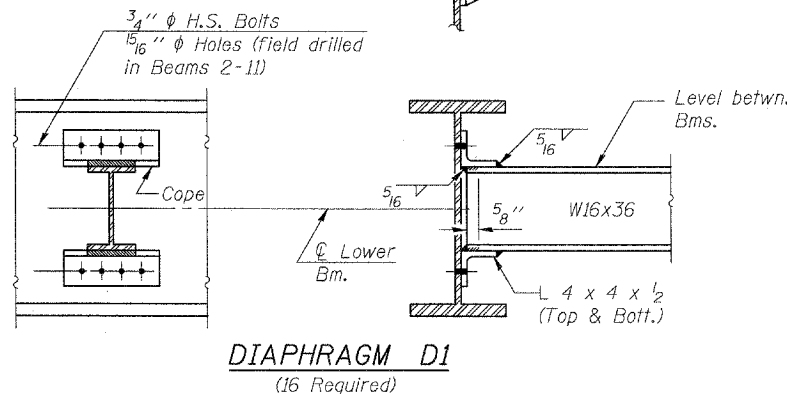
NOTES:
Two hardened washers shall be required over all oversize holes for diaphragms.

PROPOSED BEAM 1 & 12 ELEVATION

"NTR" Denotes Beams to which notch toughness requirements are applicable.

NOTE:
Shear stud spacing shown is to be used on both new and existing beams.

Holes shall be field drilled in the existing fascia beam using the holes in the proposed connection angle as a template. Cost included with Furnishing and Erecting Structural Steel.

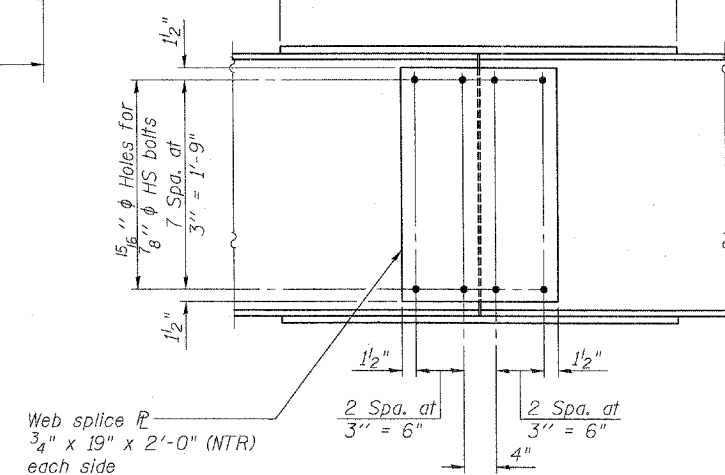
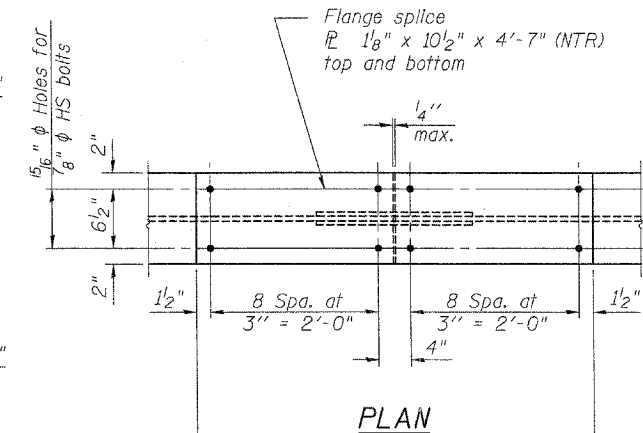


TOP OF BEAM ELEVATIONS

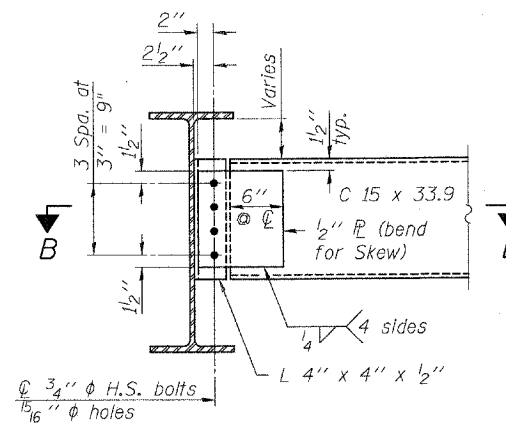
BEAM	W. ABUT.	PIER 1	***SPlice 1	***SPlice 2	PIER 2	E. ABUT.
1	757.19	756.63	756.53	756.13	756.03	755.47
12	757.98	757.48	757.39	757.03	756.93	756.46

For fabrication only.
*** Elevations at Top of Beams, Not Top of Splice Plates.

DESIGNED	SSM
CHECKED	JLA
DRAWN	GYR
CHECKED	SSM

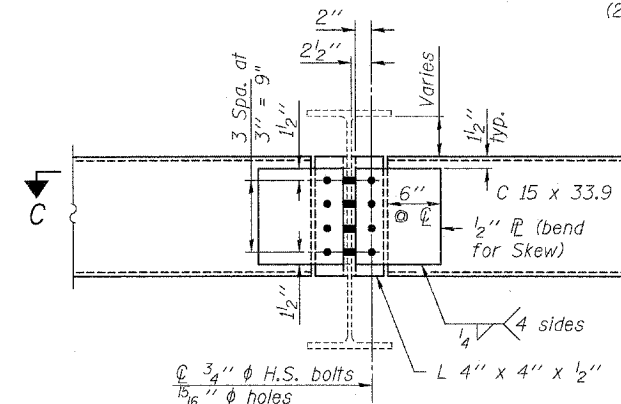


Note:
(See Sheet 13 for Beam 1)

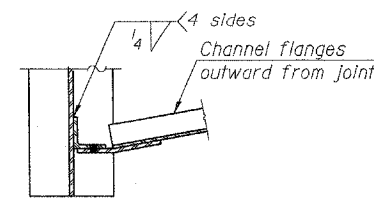


END DIAPHRAGM D
(20 Required)

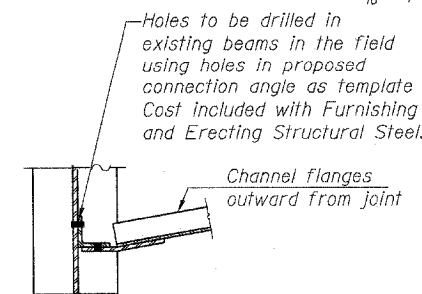
NOTES:
Two hardened washers required for each set of oversized holes.
Existing diaphragm angles shall be removed from existing beams using the air-arc method. Cost included with Structural Steel Renewal.



END DIAPHRAGM D
(At existing beams 2-11)



SECTION B-B
BEAM 1 & BEAM 12 ONLY



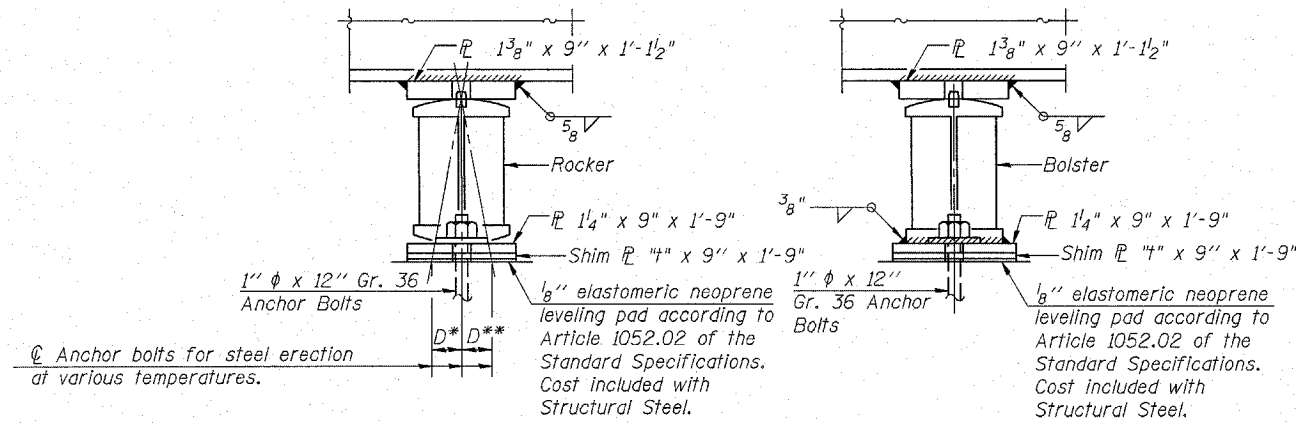
SECTION C-C
BEAM 2 THRU BEAM 11 ONLY

STRUCTURAL STEEL DETAILS
F.A.P. ROUTE 301 (US 20)
OVER SIMPSON ROAD
SECTION (2HB-1)D
WINNEBAGO COUNTY
STATION 849+27.97
STRUCTURE NO. 101-0053 (W.B.)
STRUCTURE NO. 101-0054 (E.B.)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

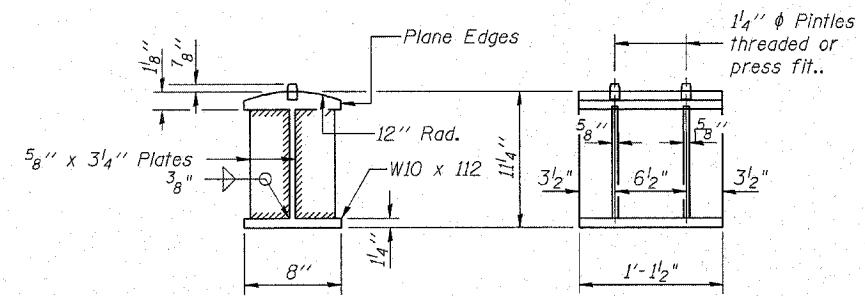
ROUTE NO. F.A.P. 301 (US 20)	SECTION (2HB-1D)	COUNTY WINNEBAGO	TOTAL SHEETS 107	SHEET NO. 80	SHEET NO. 15 34 SHEETS
FED. ROAD DIST. NO. 7		ILL. INDEX	FED. AID PROJECT		

Contract #64B07

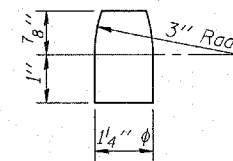


PIER 2 D** → Fixed Pier

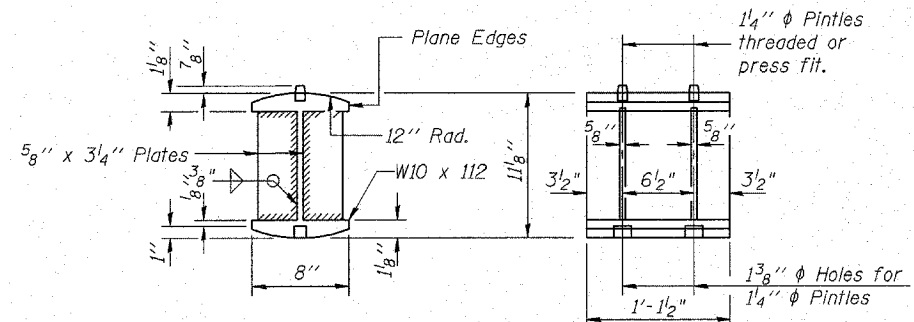
PIER 1



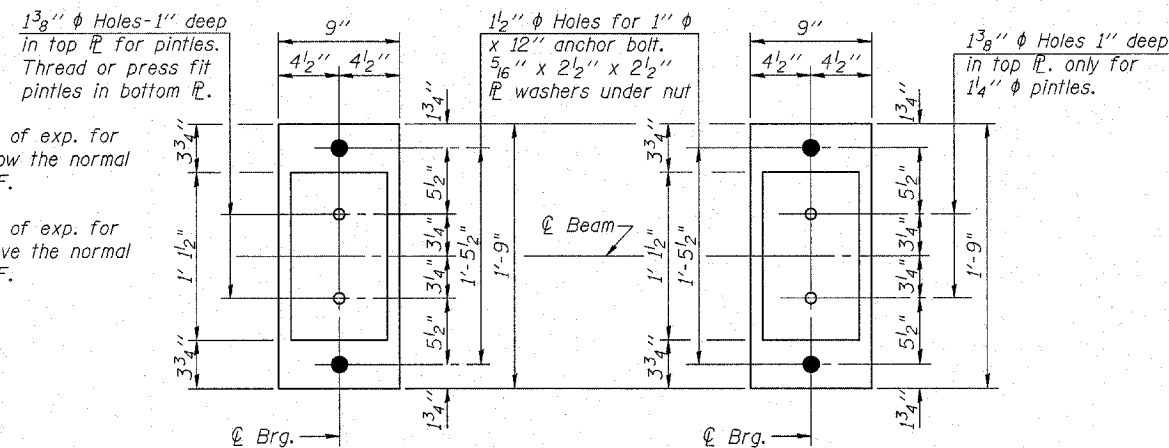
DETAIL OF BOLSTER
AT PIER 1



DETAIL OF
PINTLE



DETAIL OF ROCKER
AT PIER 2



PLAN AT PIER 2
BEAMS 1 & 12

PLAN AT PIER 1
BEAMS 1 & 12

* $D = \frac{1}{8}''/100$ ft. of exp. for every 15° below the normal temp. of 50°F.
** $D = \frac{1}{8}''/100$ ft. of exp. for every 15° above the normal temp. of 50°F.

NOTES FOR SETTING OF ANCHOR BOLTS
AT EXPANSION BEARINGS

- D^* (Side of brg. away from fixed brg.)
 $D^* = \frac{1}{8}''$ per each 100' of expansion for every 15° fall below the normal temp. of 50° F.
- D^{**} (Side of brg. toward fixed brg.)
 $D^{**} = \frac{1}{8}''$ per each 100' of expansion for every 15° rise above the normal temp. of 50° F.
- After girders have been erected and dimensions D^* & D^{**} determined, holes shall be drilled and anchor bolts shall be installed as shown on Sheets 16 & 17. All fixed anchor bolts may be built into the masonry.

NOTES:

Anchor bolts at fixed bearings may be built into the masonry.

See sheet 17 for Anchor Bolt installation.

Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36 ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

The structural steel of the Bearing Assembly shall conform to the requirements of AASHTO M270 Grade 50.

BILL OF MATERIAL

Item	UNIT	QUANTITY
Anchor Bolts 1"φ	Each	8

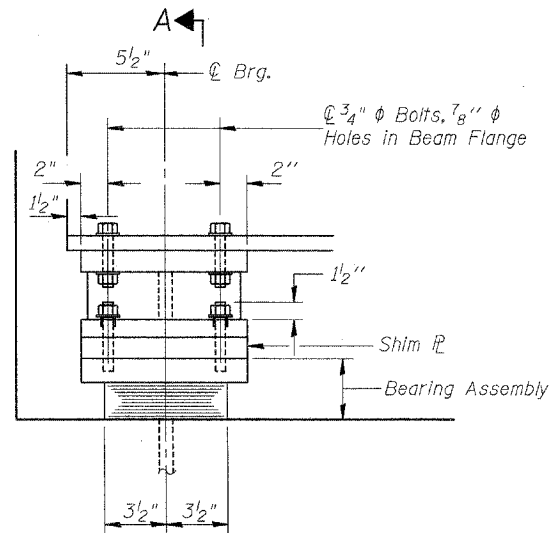
STEEL BEARINGS AT PIERS
F.A.P. ROUTE 301 (US 20)
OVER SIMPSON ROAD
SECTION (2HB-1D)
WINNEBAGO COUNTY
STATION 849+27.97
STRUCTURE NO. 101-0053 (W.B.)
STRUCTURE NO. 101-0054 (E.B.)

DESIGNED	SSM
CHECKED	JLA
DRAWN	GYR
CHECKED	SSM

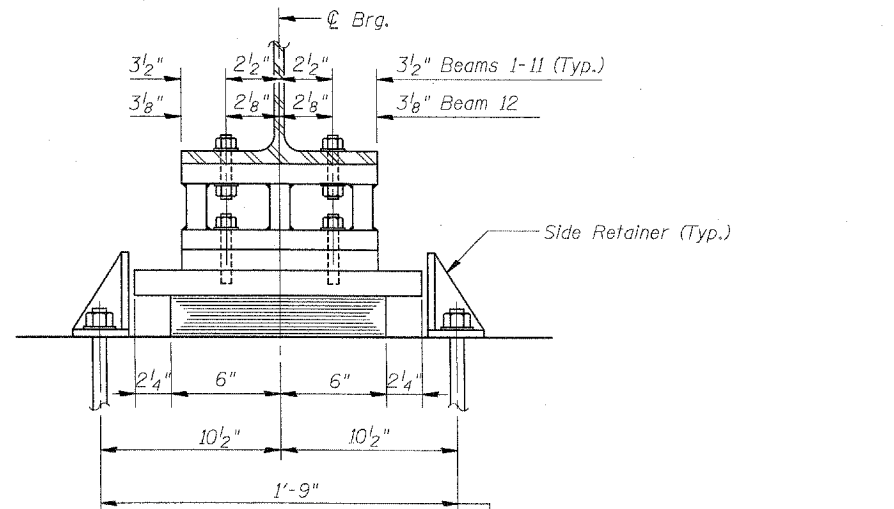
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 16
F.A.P. 301 (US 20)	(2HB-1)D	WINNEBAGO	107	81	34 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

Contract #64B07



ELEVATION AT ABUT.



SECTION A-A

1" ϕ x 12" Anchor bolts (A 307 Grade C) with 2 1/4" x 2 1/4" x 5/16" PL washer under nut.

TYPE I ELASTOMERIC EXP. BRG. (West Abutment)

Notes:

Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.

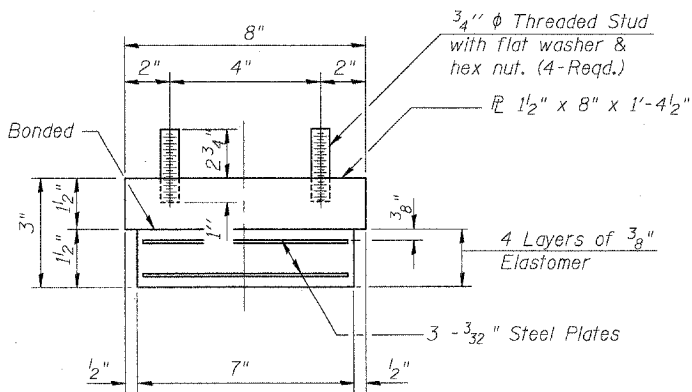
Anchor bolts for side retainers may be cast in place or installed in holes drilled before or after members are in place.

Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

Side retainers, steel extensions, and other steel members required for the bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type I.

Two 1/8" adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.

The structural steel plates of the Bearing Assembly shall conform to the requirements of AASHTO M 270 Grade 50.



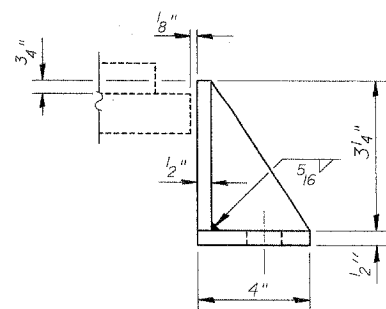
BEARING ASSEMBLY

Note: Shim plates shall not be placed under Bearing Assembly.

DESIGNED	SSM
CHECKED	JLA
DRAWN	GYR
CHECKED	SSM

I-2-E1

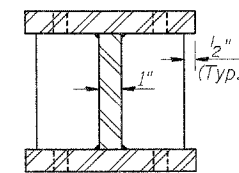
11-1-06



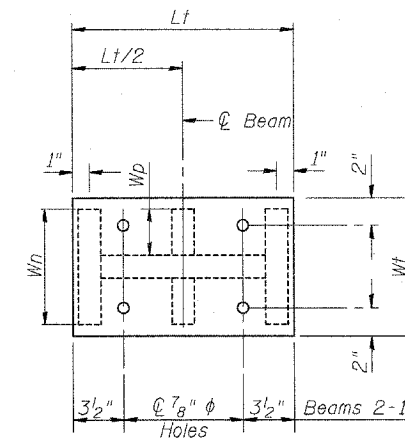
SIDE RETAINER

(24 Required)

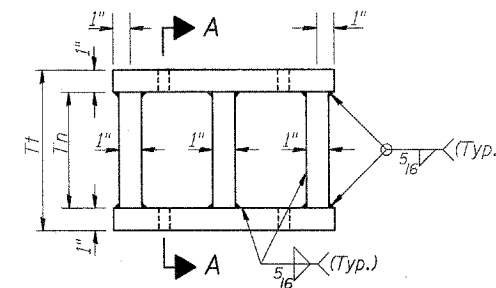
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. Weight included with Structural Steel.



SECTION A-A



PLAN STEEL EXTENSION



ELEVATION STEEL EXTENSION

STEEL EXTENSION TABLE

Location	Brm. No.	Tn	Tt	Lf	Wp	Wn	Wt
West Abut.	2	8 5/8"	10 5/8"	12"	3"	7"	8"
West Abut.	3	8 5/8"	10 5/8"	12"	3"	7"	8"
West Abut.	4	8 5/8"	10 5/8"	12"	3"	7"	8"
West Abut.	5	8 7/8"	10 7/8"	12"	3"	7"	8"
West Abut.	6	8 5/8"	10 5/8"	12"	3"	7"	8"
West Abut.	7	8 5/8"	10 5/8"	12"	3"	7"	8"
West Abut.	8	8 5/8"	10 5/8"	12"	3"	7"	8"
West Abut.	9	8 5/8"	10 5/8"	12"	3"	7"	8"
West Abut.	10	8 7/8"	10 7/8"	12"	3"	7"	8"
West Abut.	11	8 5/8"	10 5/8"	12"	3"	7"	8"

NOTES:

Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions.

For existing beams 2-11, holes will need to be drilled in the bottom flange of the beams using the proposed steel extension as a template. Cost is included with Elastomeric Bearing Assembly Type I.

BILL OF MATERIAL

Item	Unit	Total
Jack & Remove Existing Bearings	Each	10
Elastomeric Bearing Assembly Type I	Each	12
Anchor Bolts 1" ϕ	Each	24

ELASTOMERIC BEARING ASSEMBLY TYPE I

F.A.P. ROUTE 301 (US 20)

OVER SIMPSON ROAD

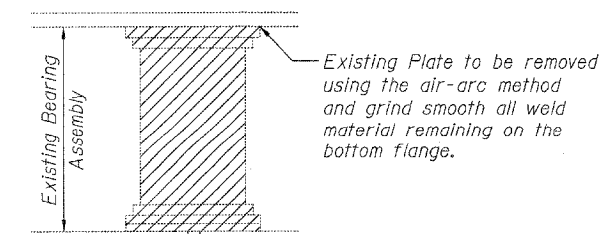
SECTION (2HB-1)D

WINNEBAGO COUNTY

STATION 849+27.97

STRUCTURE NO. 101-0053 (W.B.)

STRUCTURE NO. 101-0054 (E.B.)



EXISTING BEARING REMOVAL DETAIL

Existing Plate to be removed using the air-arc method and grind smooth all weld material remaining on the bottom flange.
Burn existing anchor bolts flush with existing concrete surface. Grind existing anchor bolt smooth and seal with epoxy. Cost is incidental to "Jack and Remove Existing Bearings."

Plans Prepared by: Kudrna & Associates, Ltd.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 17 34 SHEETS
F.A.P. 301 (US 20)	(2HB -1D)	WINNEBAGO	107	82	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

Contract #64B07

STEEL EXTENSION TABLE

Location	Bm. No.	Tn	Tt	Lt	Wp	Wn	Wt
East Abut.	2	6 1/8"	8 1/8"	12"	3 1/4"	7 1/2"	8 1/2"
East Abut.	3	6 1/8"	8 1/8"	12"	3 1/4"	7 1/2"	8 1/2"
East Abut.	4	6 1/8"	8 1/8"	12"	3 1/4"	7 1/2"	8 1/2"
East Abut.	5	6 3/8"	8 3/8"	12"	3 1/4"	7 1/2"	8 1/2"
East Abut.	6	6 1/8"	8 1/8"	12"	3 1/4"	7 1/2"	8 1/2"
East Abut.	7	6 1/8"	8 1/8"	12"	3 1/4"	7 1/2"	8 1/2"
East Abut.	8	6 1/8"	8 1/8"	12"	3 1/4"	7 1/2"	8 1/2"
East Abut.	9	6 1/8"	8 1/8"	12"	3 1/4"	7 1/2"	8 1/2"
East Abut.	10	6 3/8"	8 3/8"	12"	3 1/4"	7 1/2"	8 1/2"
East Abut.	11	6 1/8"	8 1/8"	12"	3 1/4"	7 1/2"	8 1/2"

Notes:

Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.

Anchor bolts for Type II bearings shall be placed in holes drilled through the bottom bearing plate after members are in place. Side retainers shall be placed after bolts are installed.

Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

Side retainers, steel extensions, and other steel members required for the bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type II.

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.

Two 1/4" adjusting shims shall be provided for each bearing in addition to all other plates of shims placed as shown on bearing details.

The structural steel plates of the Bearing Assembly shall conform to the requirements of AASHTO M 270 Grade 50.

BILL OF MATERIAL

Item	Unit	Total
Jack & Remove Existing Bearings	Each	10
Elastomeric Bearing Assembly Type II	Each	12
Anchor Bolts 1"φ	Each	24

ELASTOMERIC BEARING ASSEMBLY TYPE II

F.A.P. ROUTE 301 (US 20)

OVER SIMPSON ROAD

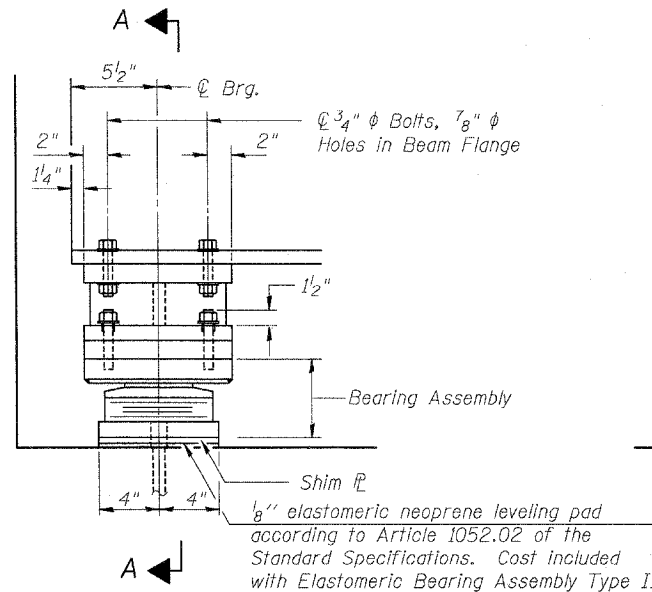
SECTION (2HB-1D)

WINNEBAGO COUNTY

STATION 849+27.97

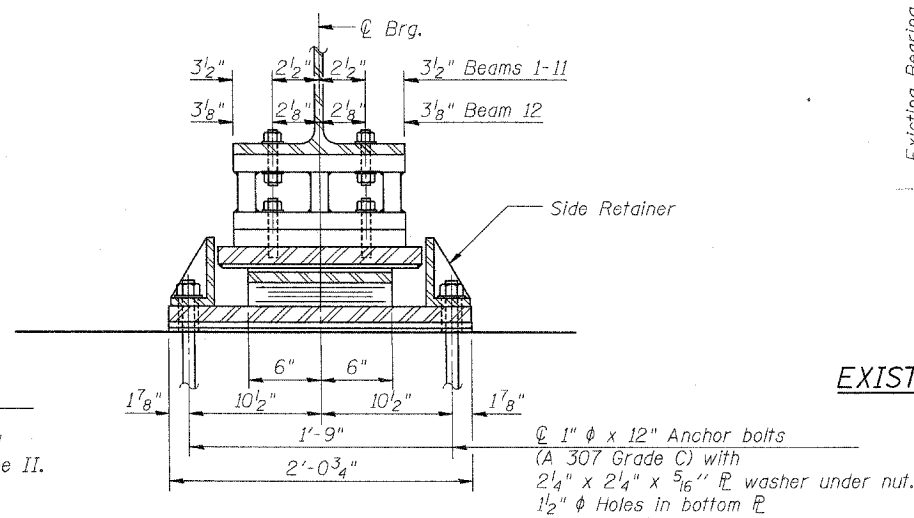
STRUCTURE NO. 101-0053 (W.B.)

STRUCTURE NO. 101-0054 (E.B.)



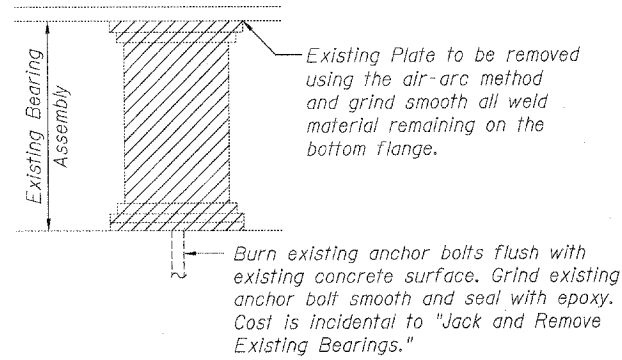
ELEVATION AT ABUT.

TYPE II ELASTOMERIC EXP. BRG.
(East Abutment)



SECTION A-A

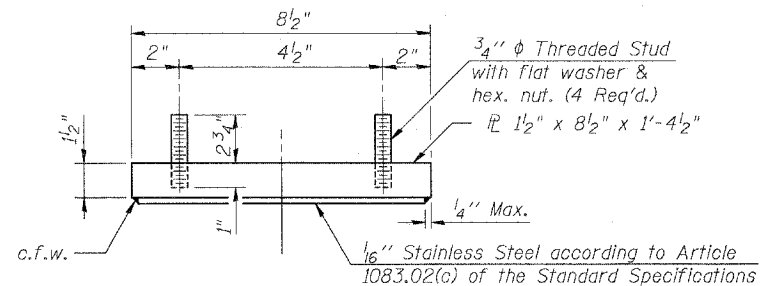
EXISTING BEARING REMOVAL DETAIL



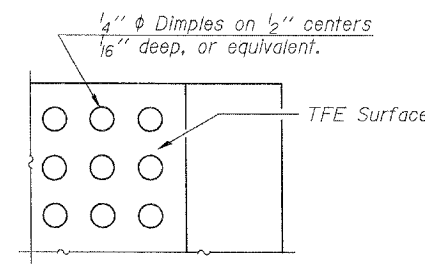
NOTES:

Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions.

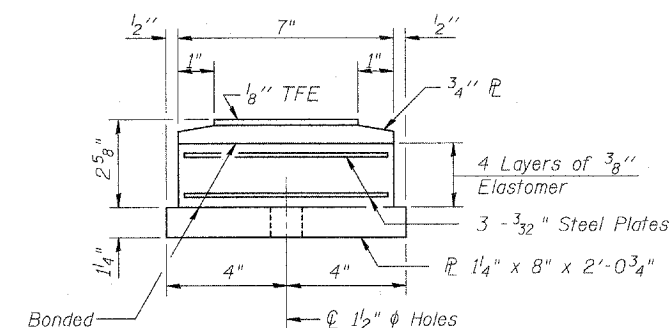
For existing beams 2-11, holes will need to be drilled in the bottom flange of the beams using the proposed steel extension as a template. Cost is included with Elastomeric Bearing Assembly Type II.



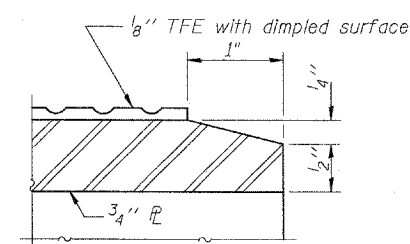
TOP BEARING ASSEMBLY



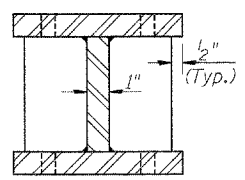
PLAN-TFE SURFACE



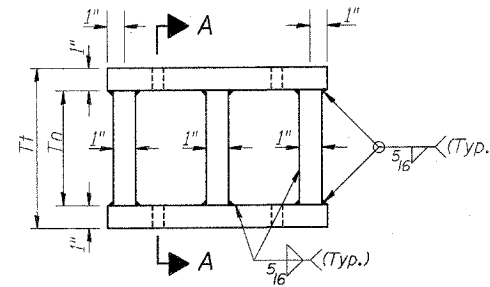
BOTTOM BEARING ASSEMBLY



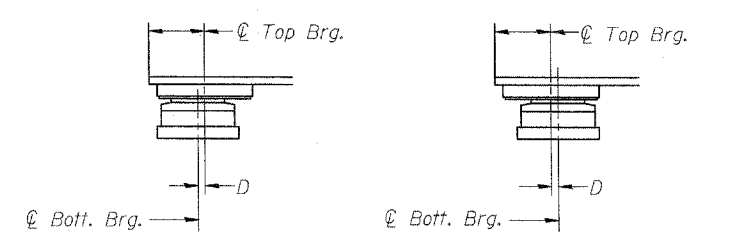
SECTION THRU TFE



SECTION A-A

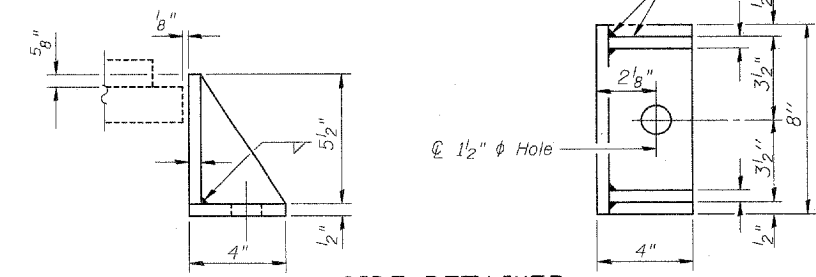


ELEVATION STEEL EXTENSION



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.



SIDE RETAINER

(24 Required)
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

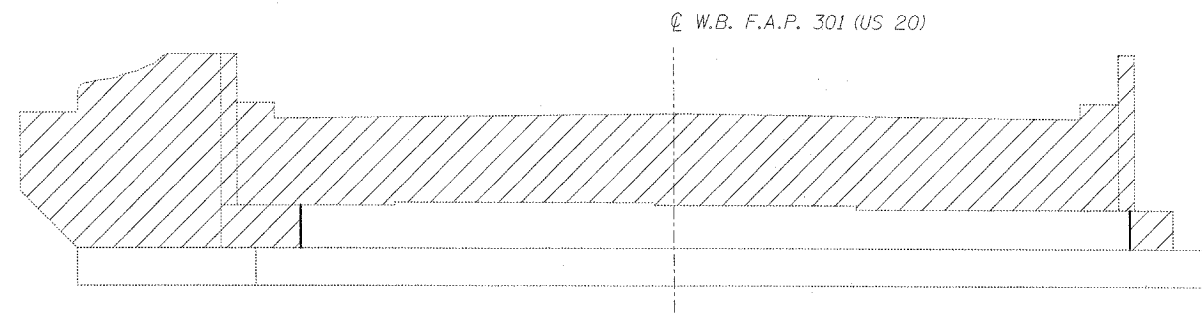
DESIGNED	SSM
CHECKED	JLA
DRAWN	GYR
CHECKED	SSM

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

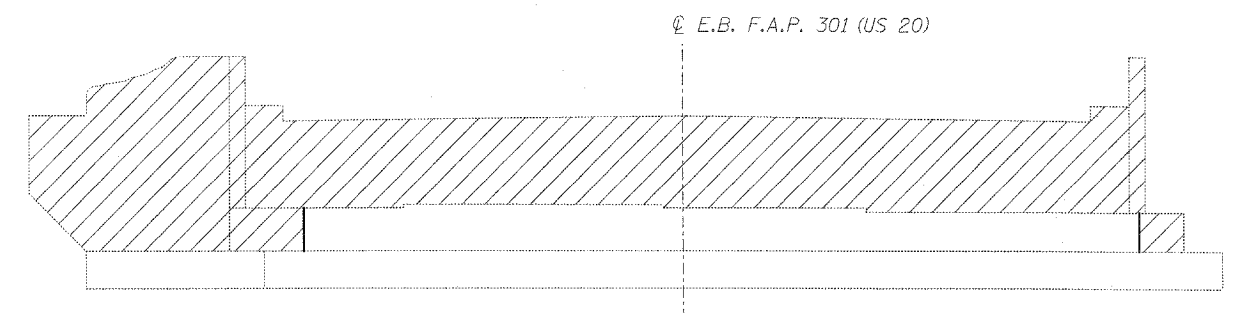
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 18 34 SHEETS
F.A.P. 301 (US 20)	(2HB-1D)	WINNEBAGO	107	83	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

Contract #64B07

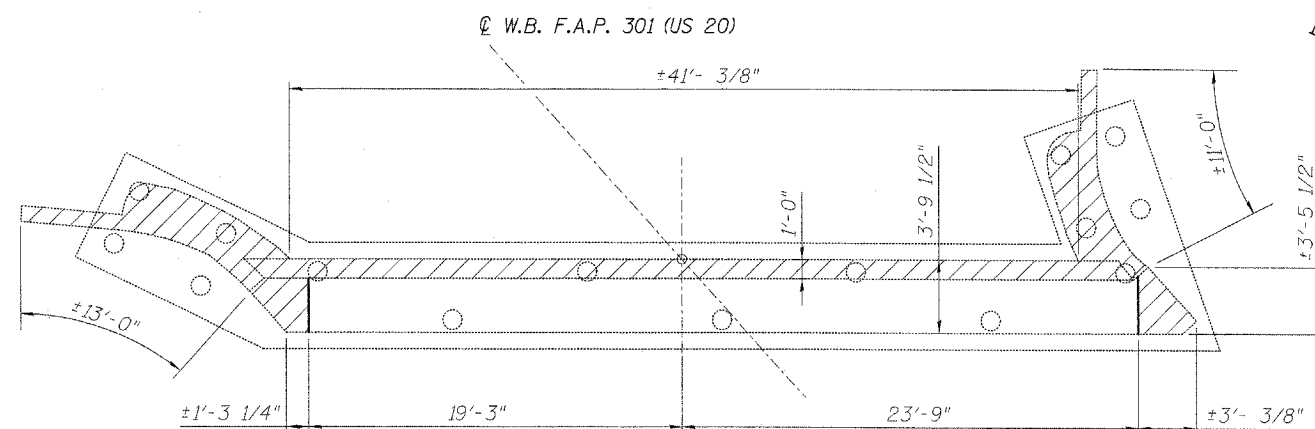
BASE LINE
F.A.P. 301 (US 20)



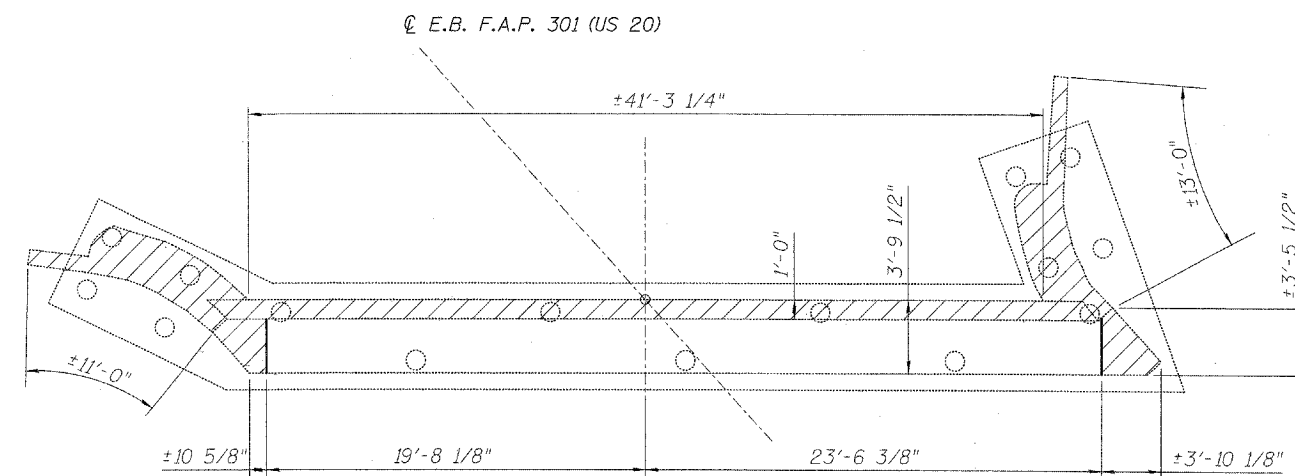
ELEVATION - STAGE I REMOVAL



ELEVATION - STAGE II REMOVAL



PLAN - STAGE I REMOVAL
EAST ABUTMENT (W.B. US 20)



PLAN - STAGE II REMOVAL
EAST ABUTMENT (E.B. US 20)

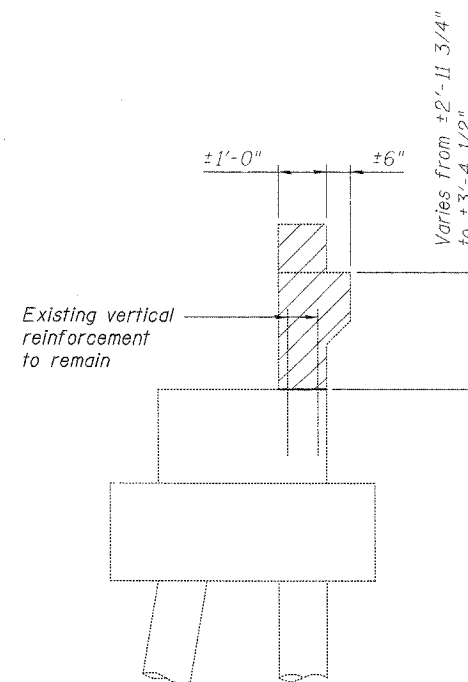
NOTES:

Hatch areas indicate removal. These areas include the wing walls down to the top of the existing footing, the abutment backwall to the top of the bearing seat and portions of the bearing seat and footing. In addition, partial removal of the top of the existing concrete pile indicated may also be required.

Existing vertical reinforcement extending into removed areas shall be cleaned, straightened and incorporated into new construction. Cost included with Concrete Removal.

Existing reinforcement not extending into new construction shall be cut off flush with existing concrete and sealed with a layer of epoxy. Cost included with Concrete Removal.

DESIGNED	SSM
CHECKED	JLA
DRAWN	GYR
CHECKED	SSM



SECTION THRU ABUTMENTS

TWO ABUTMENTS
BILL OF MATERIAL

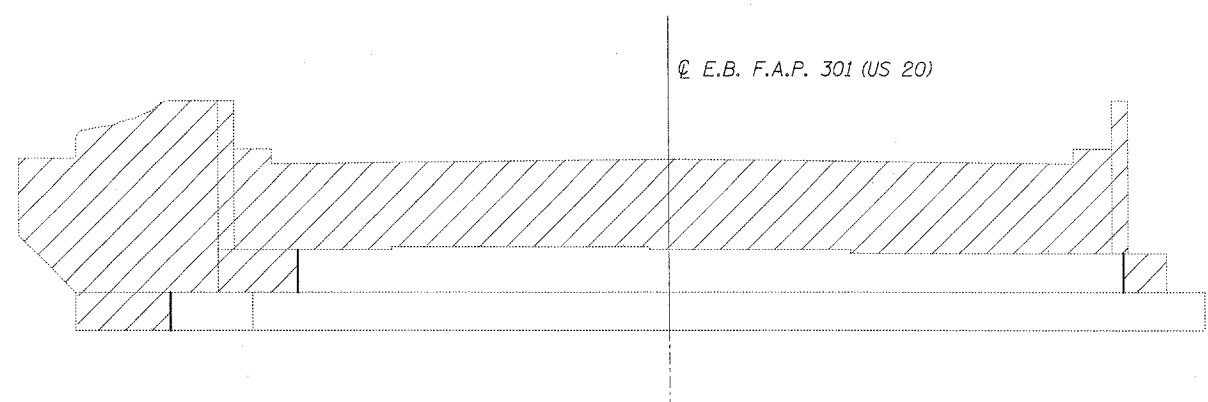
ITEM	UNIT	TOTAL
Concrete Removal	Cu. Yd.	70.1

EAST ABUTMENT
CONCRETE REMOVAL DETAILS
F.A.P. ROUTE 301 (US 20)
OVER SIMPSON ROAD
SECTION (2HB-1D)
WINNEBAGO COUNTY
STATION 849+27.97
STRUCTURE NO. 101-0053 (W.B.)
STRUCTURE NO. 101-0054 (E.B.)

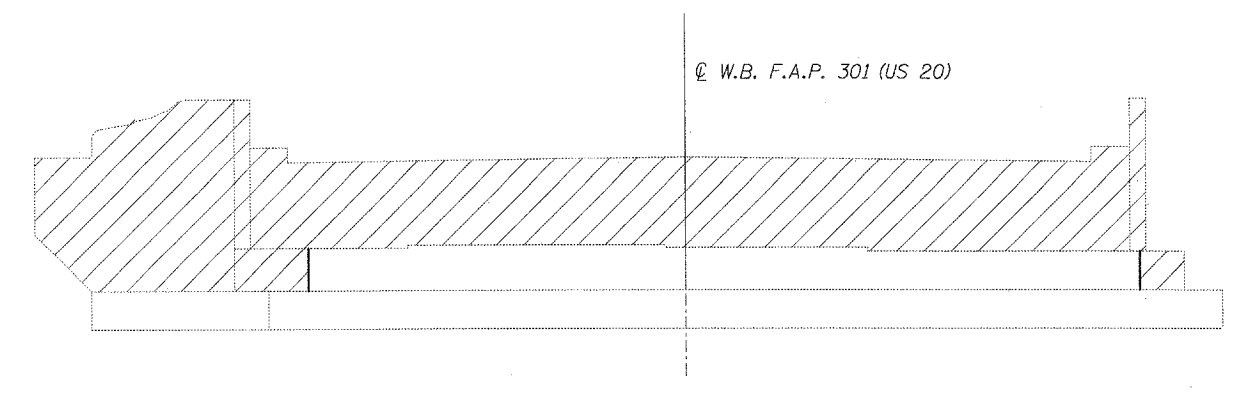
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO. F.A.P. 301 (US 20)	SECTION (2HB -1D)	COUNTY WINNEBAGO	TOTAL SHEETS 107	SHEET NO. 84	SHEET NO. 19 34 SHEETS
FED. ROAD DIST. NO. 7		ILLINOIS FED. AID PROJECT-			

Contract #64B07

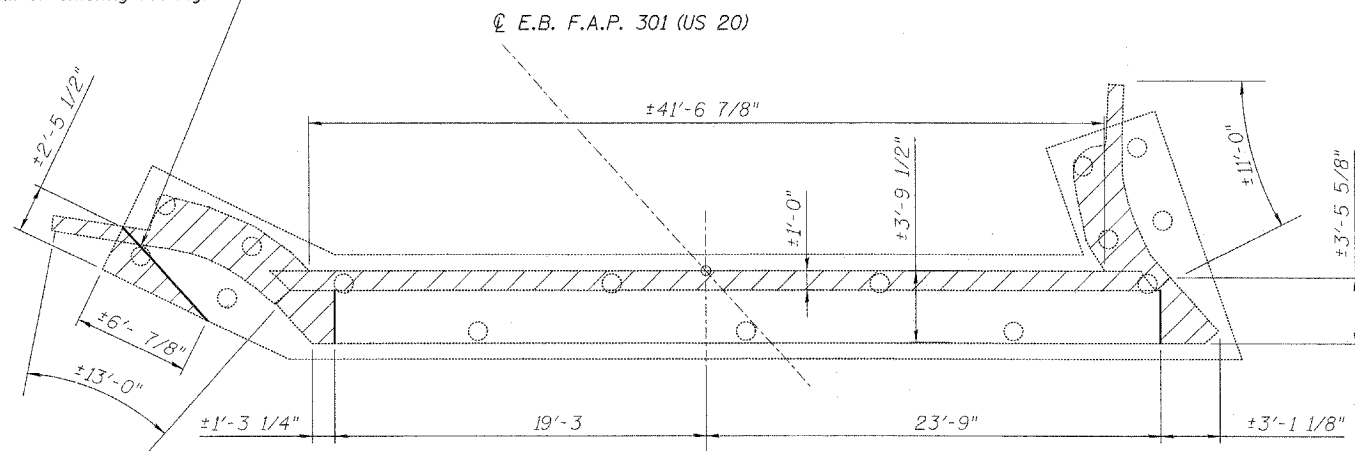


ELEVATION - STAGE II REMOVAL



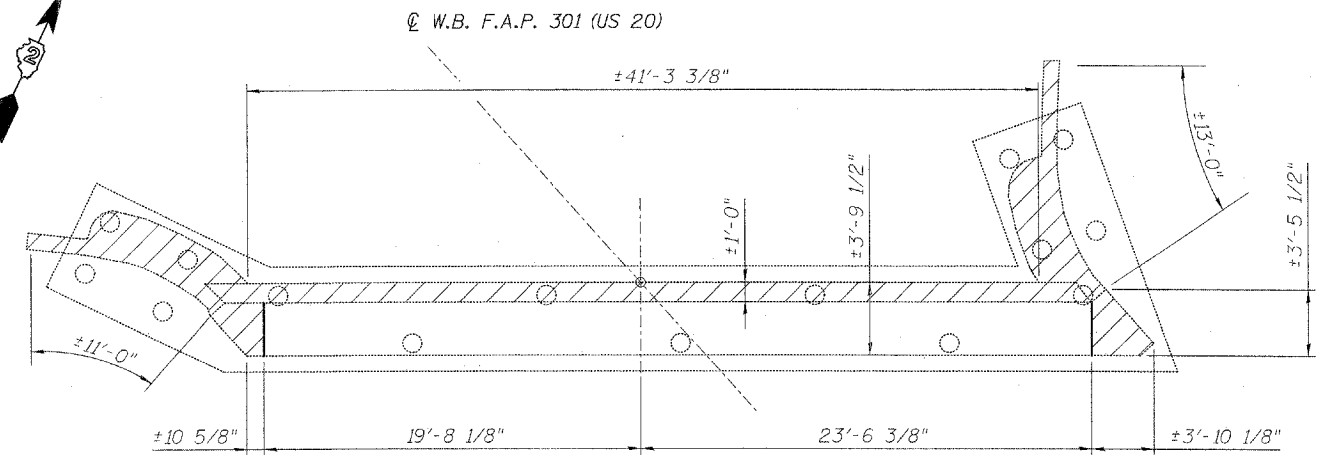
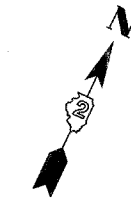
ELEVATION - STAGE I REMOVAL

Partial removal of top of existing concrete pile required. Chip down to bottom of existing footing.



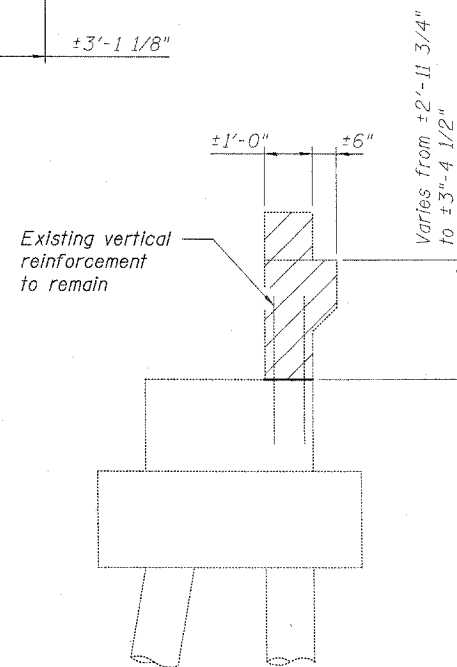
PLAN - STAGE II REMOVAL

WEST ABUTMENT (E.B. US 20)



PLAN - STAGE I REMOVAL

WEST ABUTMENT (W.B. US 20)



SECTION THRU ABUTMENTS

NOTES:

Hatch areas indicate removal. These areas include the wing walls down to the top of the existing footing, the abutment backwall to the top of the bearing seat and portions of the bearing seat and footing. In addition, partial removal of the top of the existing concrete pile indicated may also be required.

Existing vertical reinforcement extending into removed areas shall be cleaned, straightened and incorporated into new construction. Cost included with Concrete Removal.

Existing reinforcement not extending into new construction shall be cut off flush with existing concrete and sealed with a layer of epoxy. Cost included with Concrete Removal.

DESIGNED	SSM
CHECKED	JLA
DRAWN	GYR
CHECKED	SSM

TWO ABUTMENTS
BILL OF MATERIAL

ITEM	UNIT	TOTAL
Concrete Removal	Cu. Yd.	70.1

WEST ABUTMENT
CONCRETE REMOVAL DETAILS

F.A.P. ROUTE 301 (US 20)

OVER SIMPSON ROAD

SECTION (2HB-1D)

WINNEBAGO COUNTY

STATION 849+27.97

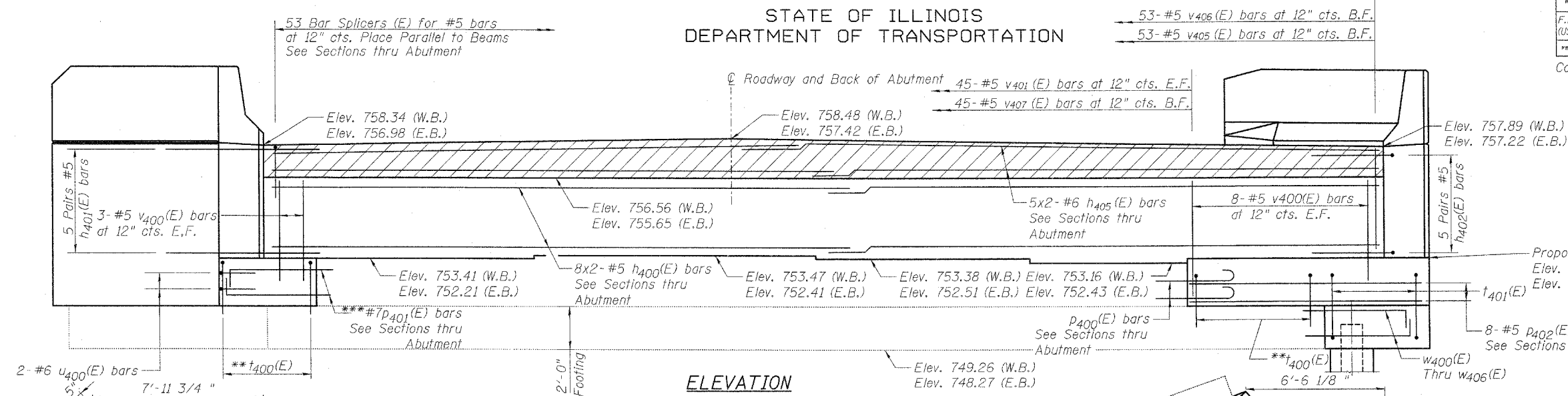
STRUCTURE NO. 101-0053 (W.B.)

STRUCTURE NO. 101-0054 (E.B.)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET	SHEET NO. 20
F.A.P. 301 (US 20)	2HB-1D	WINNEBAGO	107	85	34 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

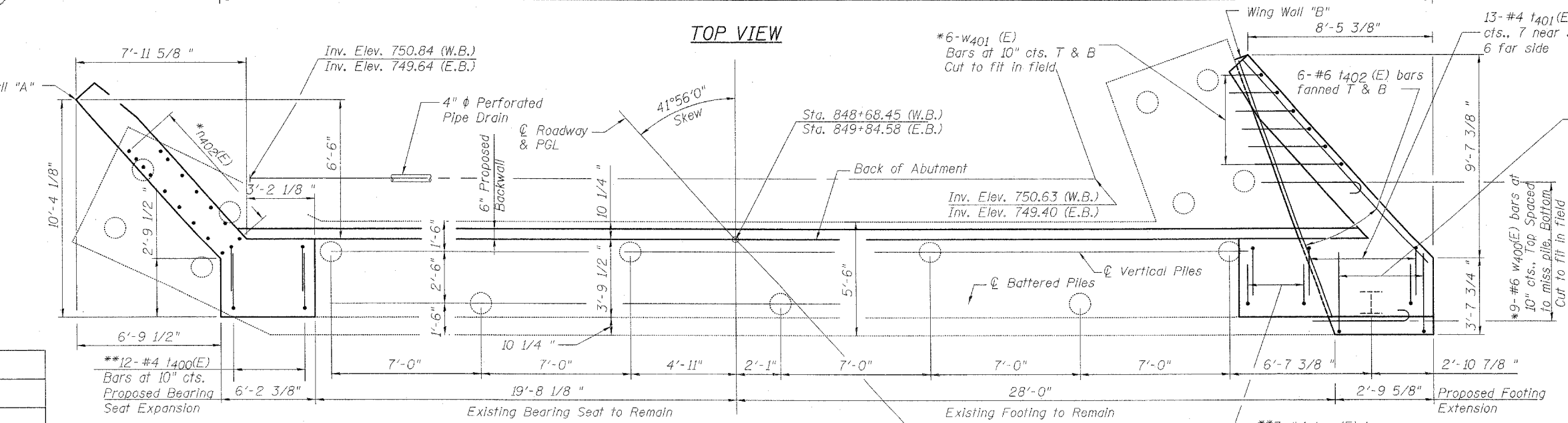
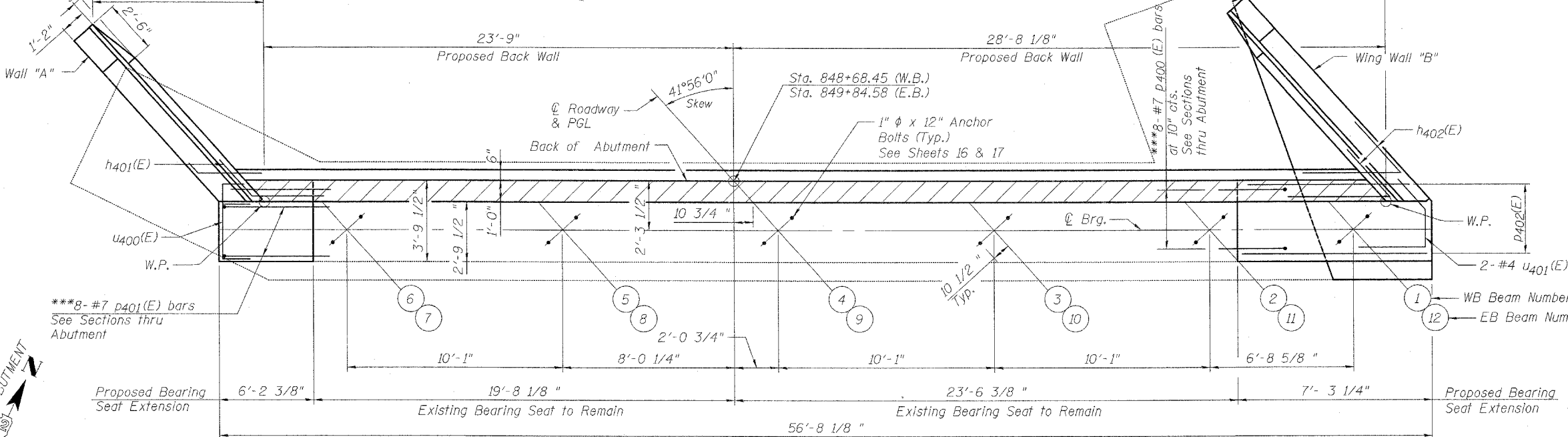
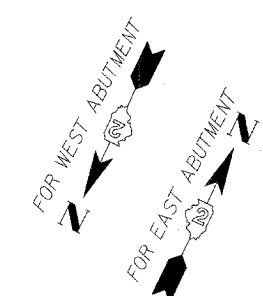
Contract #64B07



MINIMUM BAR LAPS

#5 Bars	= 2'-2"
#6 Bars	= 2'-7"
#7 Bars	= 3'-5"

- Notes:
- * Epoxy grout #6 bars in a 1" ϕ hole.
 - ** Epoxy grout #4 bars in a 3/4" ϕ hole.
 - *** Epoxy grout #7 bars in a 1 1/8" ϕ hole x 12" Deep.
 - **** Epoxy grout #5 bars in a 7/8" ϕ hole.
- Holes shall be drilled a minimum of 9" deep. Bars shall be drilled and epoxy grouted according to Article 584 of the Standard Specifications.
- For Bill of Materials, Bar Details and Abutment Sections, see Sheet 22.



**ABUTMENT MODIFICATION
DETAILS PLAN AND ELEVATION
WEST ABUTMENT (WB ROADWAY)
EAST ABUTMENT (EB ROADWAY)
F.A.P. ROUTE 301 (US 20)
OVER SIMPSON ROAD
SECTION (2HB-1D)
WINNEBAGO COUNTY
STATION 849+27.97
STRUCTURE NO. 101-0053 (W.B.)
STRUCTURE NO. 101-0054 (E.B.)**

DESIGNED	SSM
CHECKED	JLA
DRAWN	GYR
CHECKED	SSM

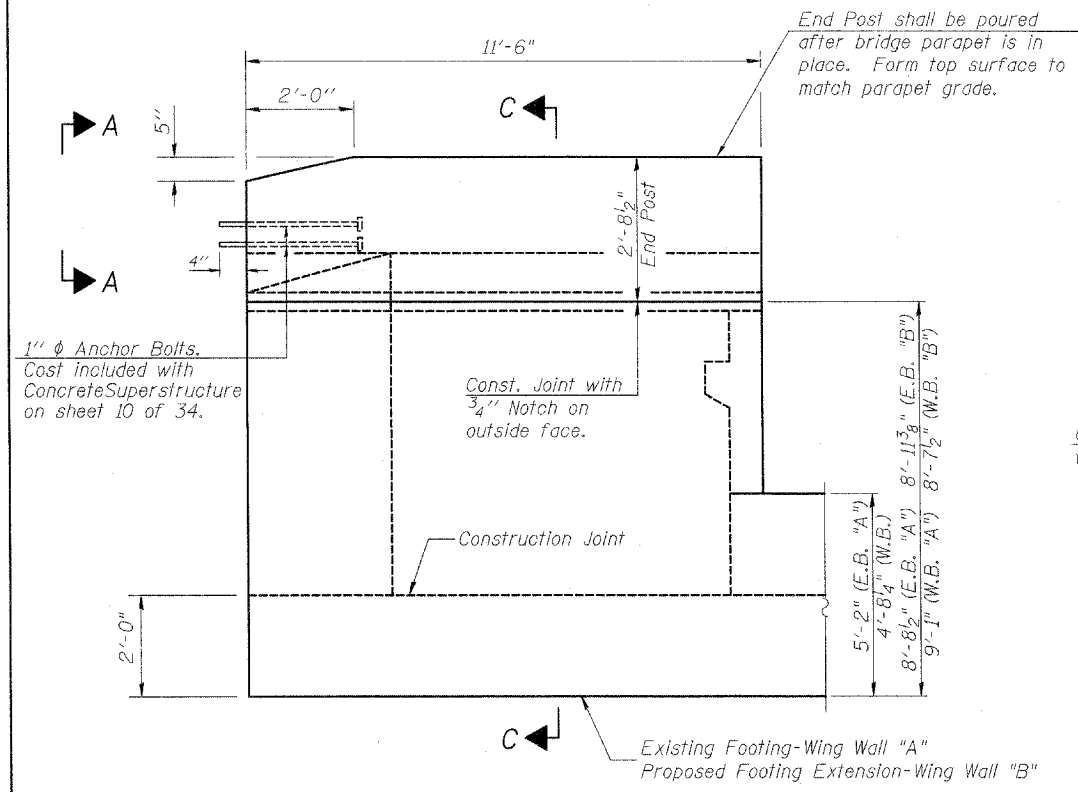
A-1-L (>30°) 11-1-06

Plans Prepared by: Kudrna & Associates, Ltd.

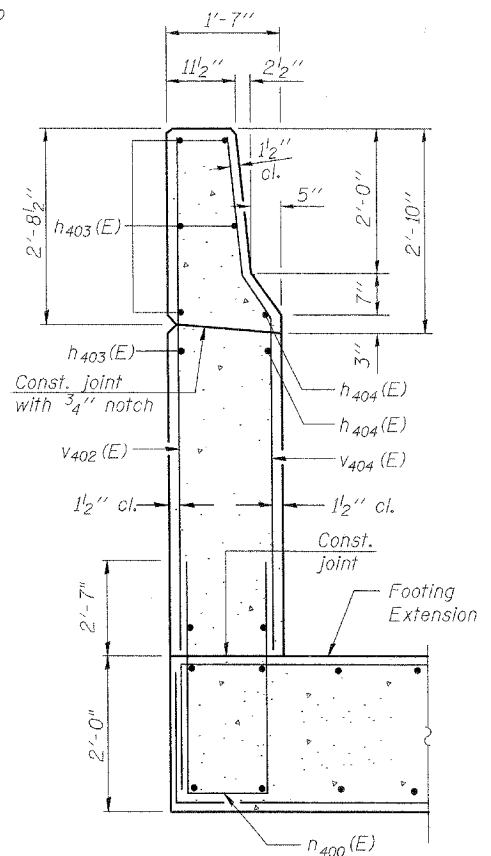
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 21 34 SHEETS
F.A.P. 301 (US 20)	2HB -1D	WINNEBAGO	107	86	
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT		

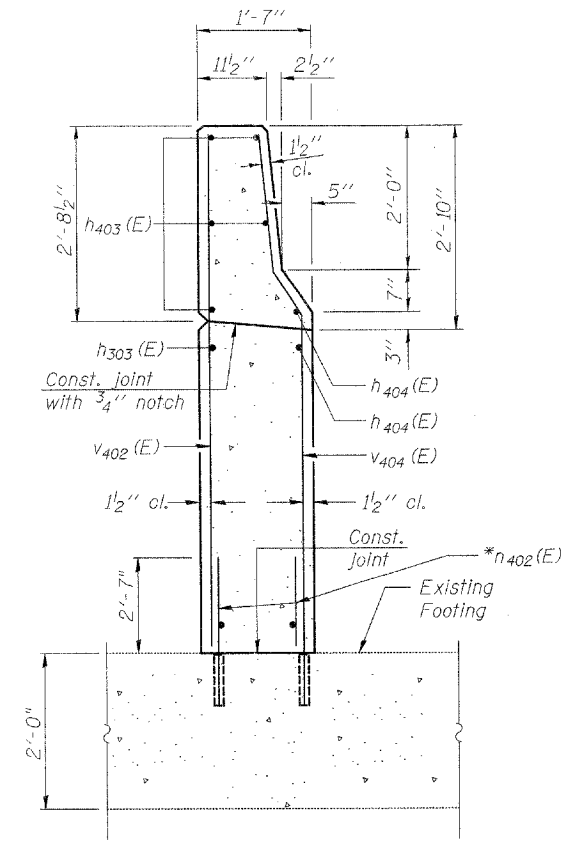
Contract #64B07



WING WALL ELEVATION
Showing Dimensions

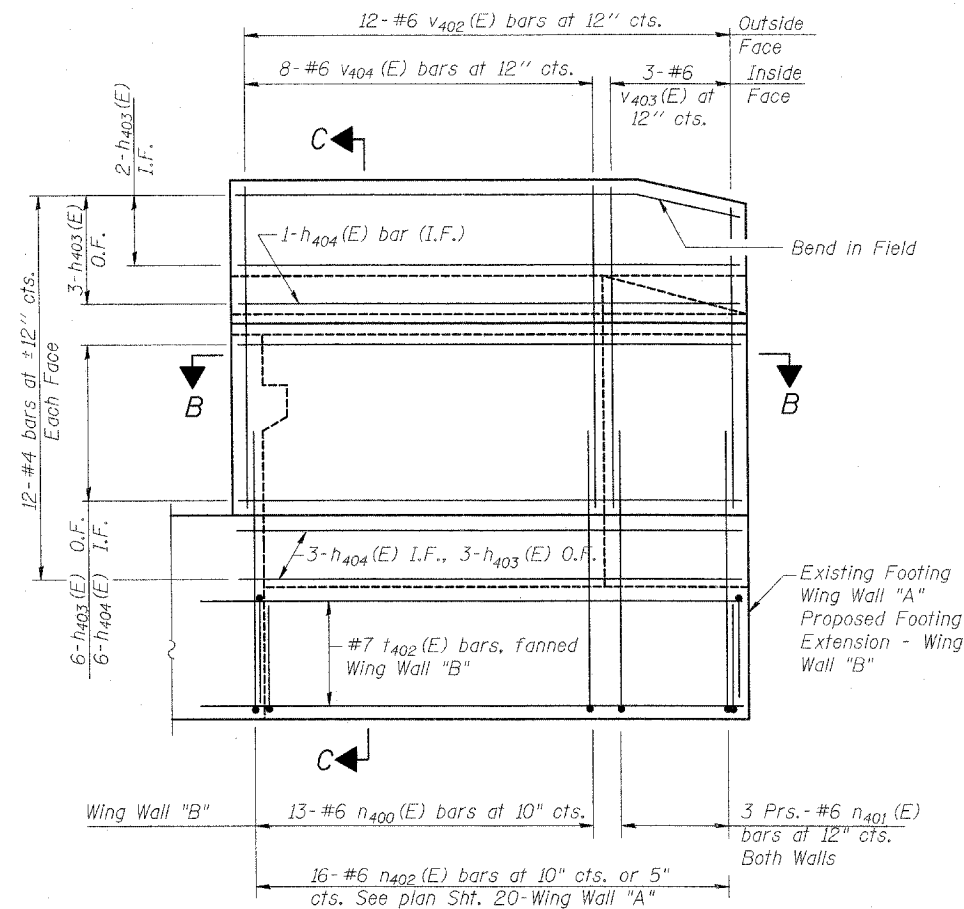


SECTION C-C THRU PROPOSED FOOTING EXTENSION (WING WALL "B")

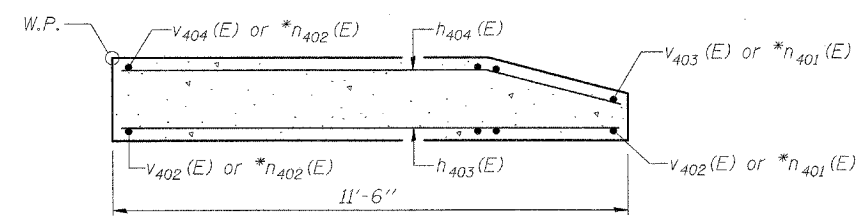


SECTION C-C THRU EXISTING FOOTING (WING WALL "A")

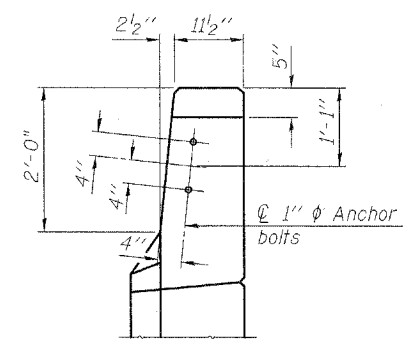
* Epoxy grout #6 n402(E) bars in a 1" diameter hole.
Holes shall be drilled a minimum of 9" deep. Bars shall be drilled and epoxy grouted according to Article 584 of the Standard Specifications.



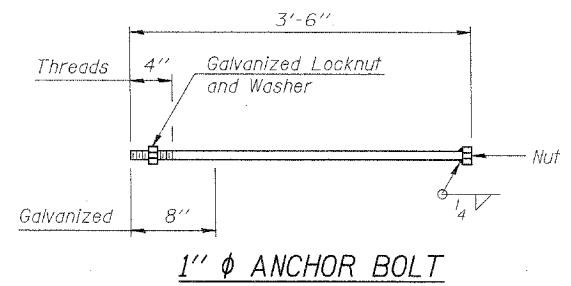
WING WALL ELEVATION
Showing Reinforcement



SECTION B-B



VIEW A-A



1" diameter ANCHOR BOLT

NOTES:
Hatched area to be poured after superstructure false work has been removed. Quantity of concrete included with Concrete Superstructure.
Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.
Quantity of concrete in end post included with Concrete Superstructure on sheet 10 of 34.
For Concrete Encasement details, see sheet 29 of 34.

ABUTMENT MODIFICATION DETAILS
WINGWALL DETAILS
WEST ABUTMENT (WB ROADWAY)
EAST ABUTMENT (EB ROADWAY)
F.A.P. ROUTE 301 (US 20)
OVER SIMPSON ROAD
SECTION (2HB-1D)
WINNEBAGO COUNTY
STATION 849+27.97
STRUCTURE NO. 101-0053 (W.B.)
STRUCTURE NO. 101-0054 (E.B.)

DESIGNED	SSM
CHECKED	JLA
DRAWN	GYR
CHECKED	SSM

A-1-D 11-1-06

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 301 (US 20)	(2HB-1D)	WINNEBAGO	107	87
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

Contract #64B07

REINFORCEMENT
FOR ONE ABUTMENT

Bar	No.	Size	Length	Shape
h400(E)	16	#5	27'-2"	—
h401(E)	10	#5	8'-0"	—
h402(E)	10	#5	8'-0"	—
h403(E)	28	#4	11'-2"	—
h404(E)	20	#4	9'-1"	—
h405(E)	10	#6	27'-6"	—
p400(E)	13	#6	13'-4"	—
p401(E)	12	#6	6'-10"	—
p402(E)	16	#6	5'-0"	—
p400(E)	8	#7	5'-0"	—
p401(E)	8	#7	7'-9"	—
p402(E)	8	#5	7'-0"	—
t400(E)	19	#4	5'-4"	—
t401(E)	13	#4	9'-1"	—
t402(E)	12	#7	12'-8"	—
t403(E)	12	#6	5'-7"	—
u400(E)	2	#6	9'-8"	—
u401(E)	2	#4	7'-7"	—
v400(E)	22	#5	5'-0"	—
v401(E)	90	#5	4'-2"	—
v402(E)	24	#6	9'-1"	—
v403(E)	6	#6	6'-11"	—
v404(E)	16	#6	7'-8"	—
v405(E)	10	#5	3'-8"	—
v406(E)	53	#5	2'-0"	—
v407(E)	42	#5	3'-9"	—
w400(E)	18	#6	4'-4"	—
w401(E)	12	#6	5'-2"	—

BILL OF MATERIAL
FOR TWO ABUTMENTS

ITEM	UNIT	QTY
Structure Excavation	Cu. Yd.	218.6
Concrete Structures	Cu. Yd.	74.6
Reinforcement Bars, Epoxy Coated	Pound	8,680
Furnishing Steel Piles, HP12X53	Foot	126
Driving Piles	Foot	126
Concrete Encasement	Cu. Yd.	.8
Concrete Sealer	Sq. Ft.	1,614
Bar Splicers	Each	106
Geocomposite Wall Drain	Sq. Yd.	62
Pipe Underdrains For Structures, 4"	Foot	152
Porous Granular Embankment, Special	Cy. Yd.	169

Concrete Sealer shall be applied to all permanently exposed portions of the proposed backwalls, abutment fronts and bearing seats, new concrete only.

For details of Bar Splicers, see sheet 30 of 34.
For details of piles and Concrete Encasement, see sheet 29 of 34.

ABUTMENT MODIFICATION DETAILS

WEST ABUTMENT (WB ROADWAY)
EAST ABUTMENT (EB ROADWAY)

F.A.P. ROUTE 301 (US 20)

OVER SIMPSON ROAD

SECTION (2HB-1D)

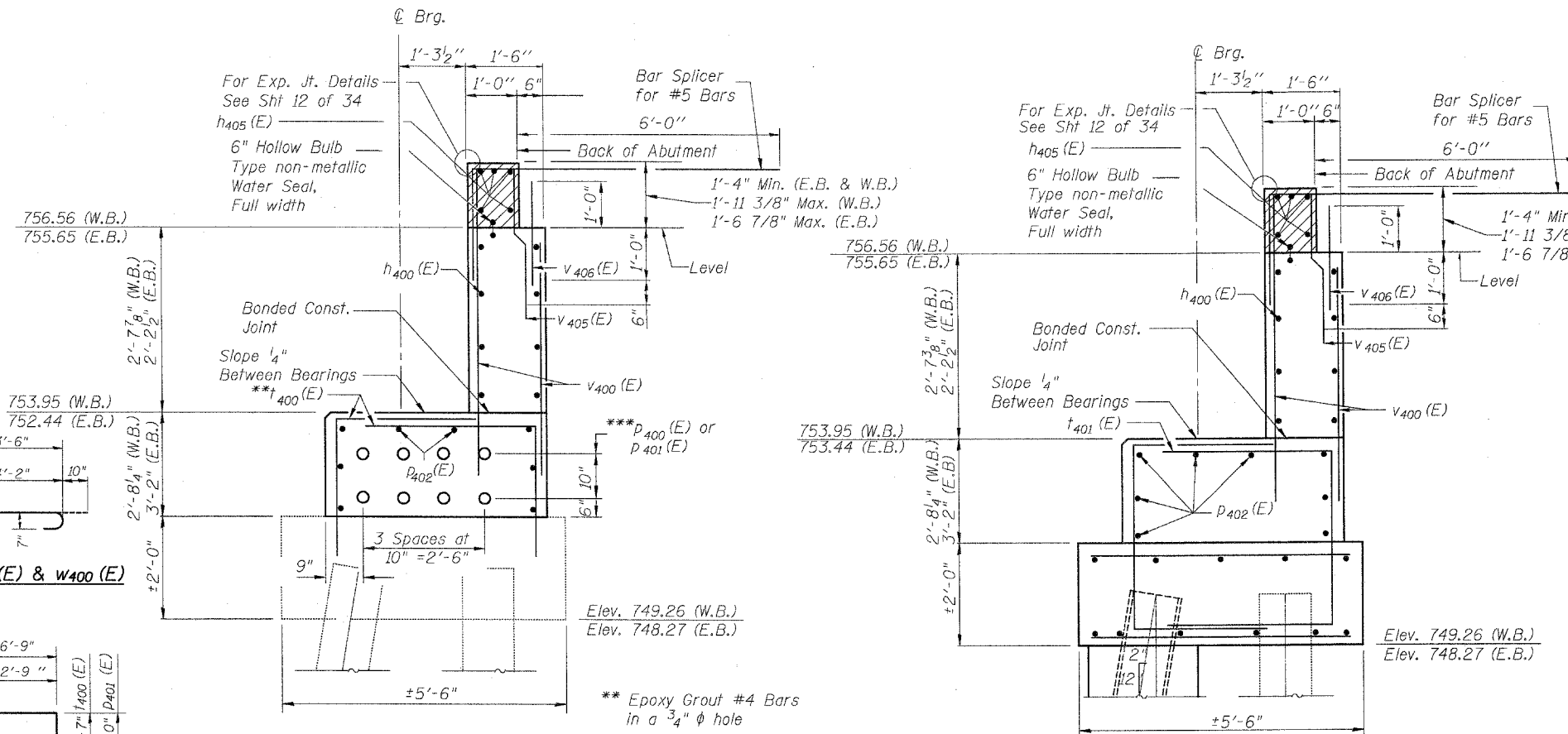
WINNEBAGO COUNTY

STATION 849+27.97

STRUCTURE NO. 101-0053 (W.B.)

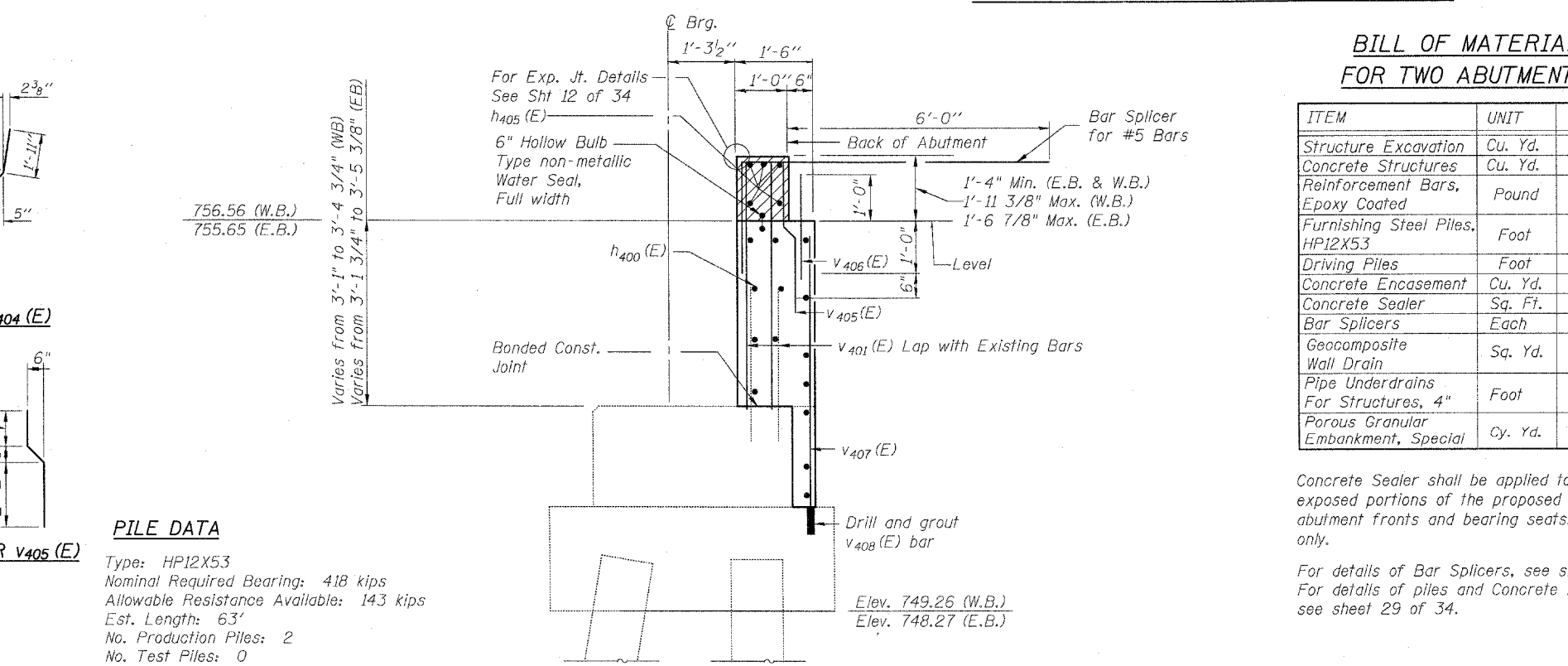
STRUCTURE NO. 101-0054 (E.B.)

Plans Prepared by: Kudrna & Associates, Ltd.



SECTION THRU PROPOSED BEARING SEAT EXTENSION

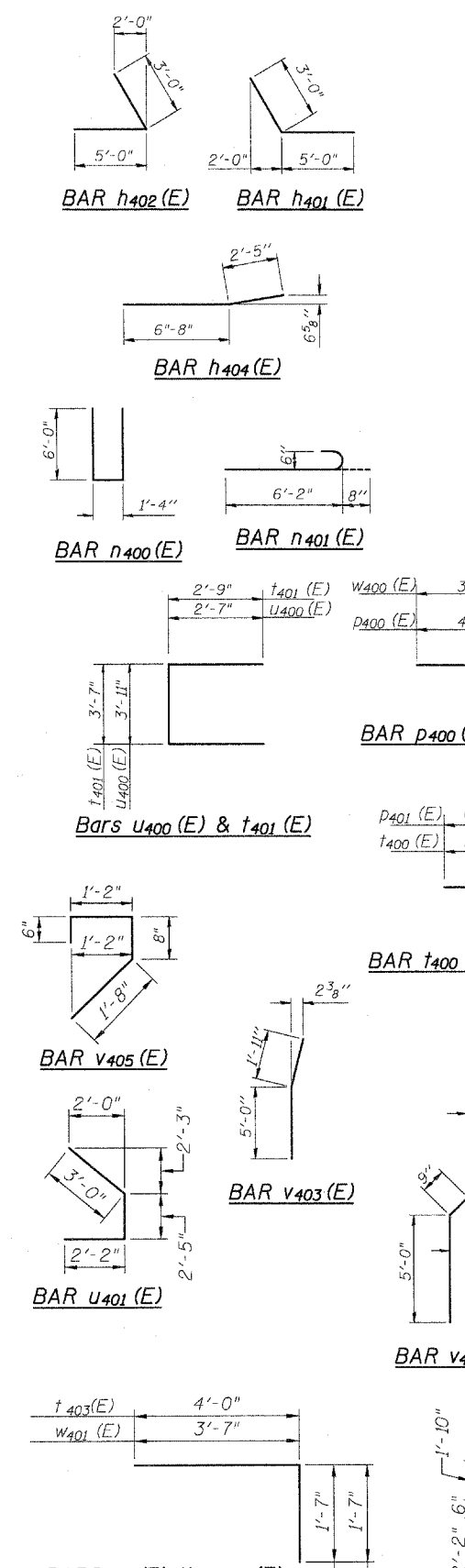
SECTION THRU PROPOSED BEARING SEAT AND FOOTING EXTENSION



SECTION THRU EXISTING ABUTMENT

PILE DATA

Type: HP12X53
Nominal Required Bearing: 418 kips
Allowable Resistance Available: 143 kips
Est. Length: 63'
No. Production Piles: 2
No. Test Piles: 0
The Steel H-Piles shall be according to AASHTO M270 grade 50.



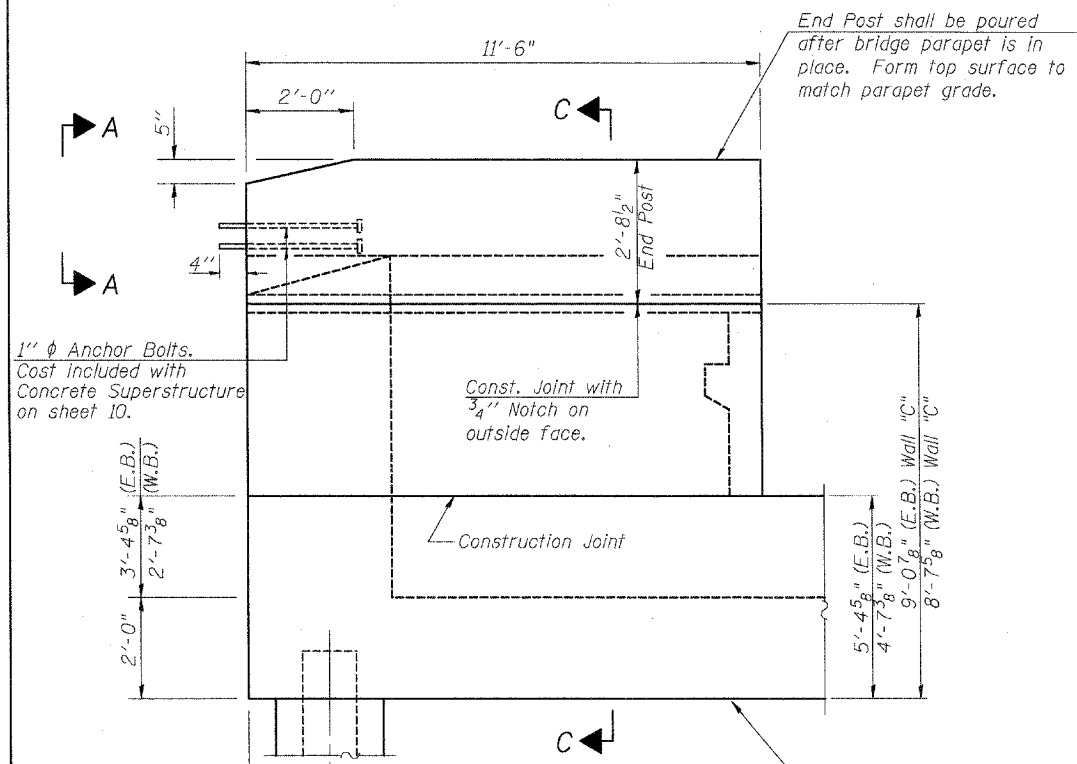
DESIGNED	SSM
CHECKED	JLA
DRAWN	GYR
CHECKED	SSM

A-1-D 11-1-06

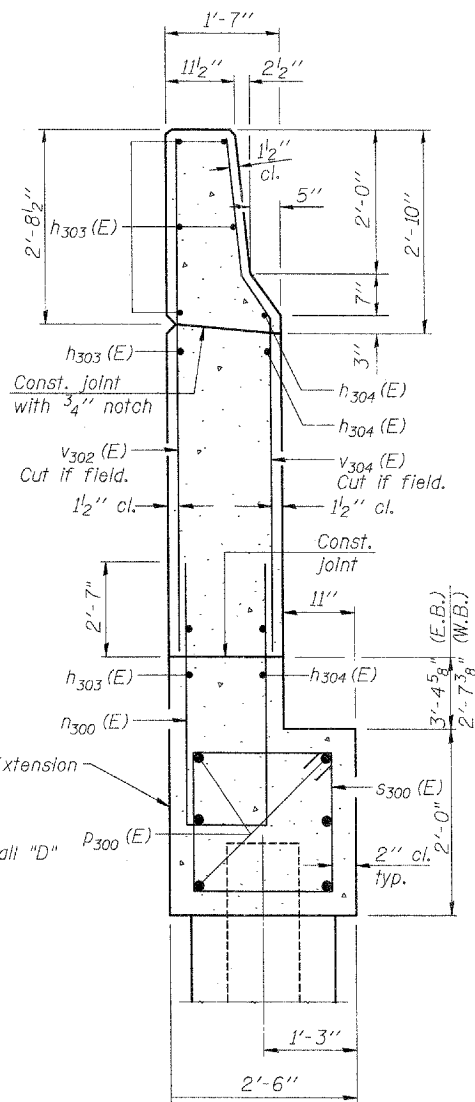
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 24 34 SHEETS
F.A.P. 301 (US 20)	(2HB -DD)	WINNEBAGO	107	89	
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT		

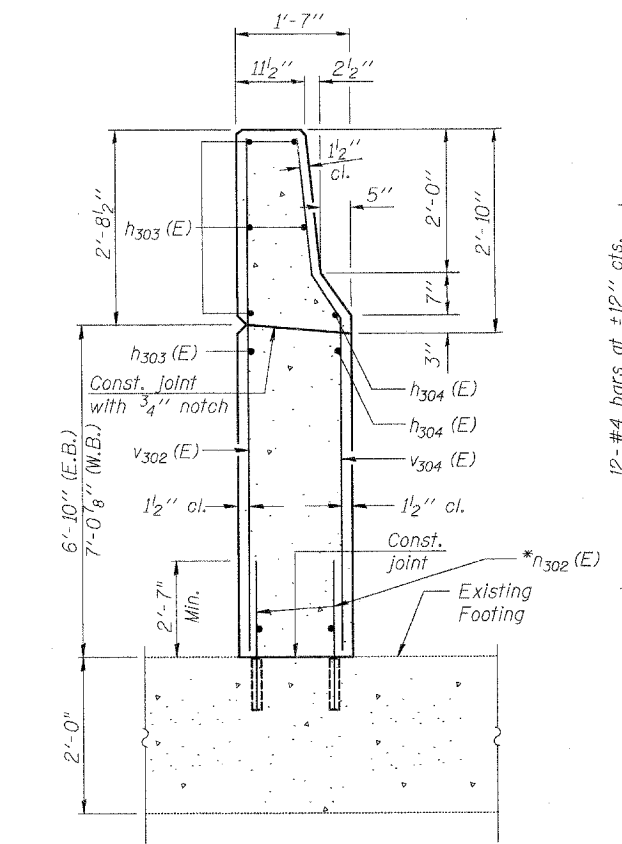
Contract #64B07



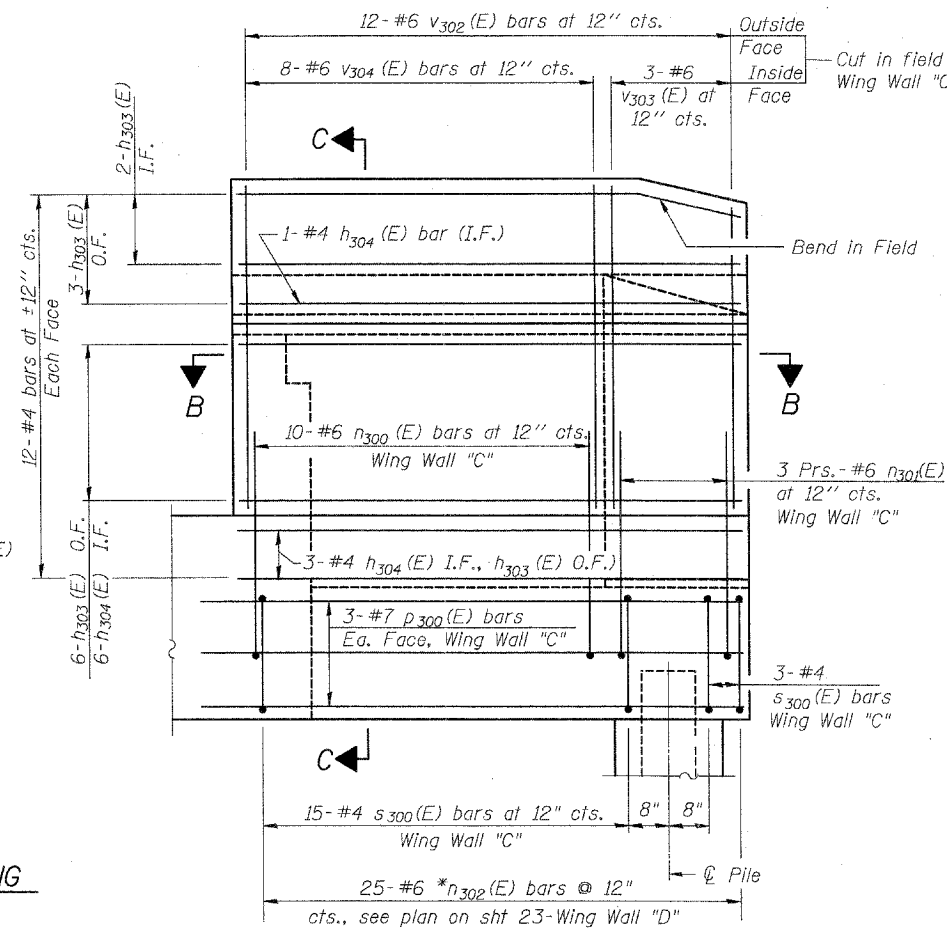
WING WALL ELEVATION
Showing Dimensions



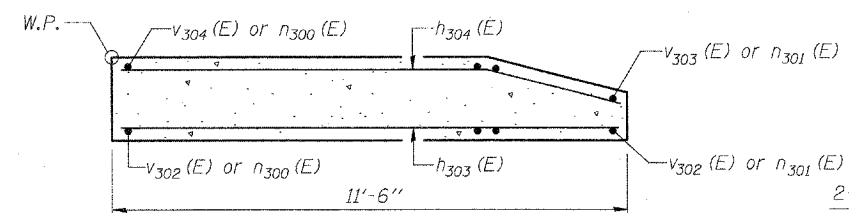
**SECTION C-C THRU
PROPOSED FOOTING EXTENSION
(WING WALL "C")**



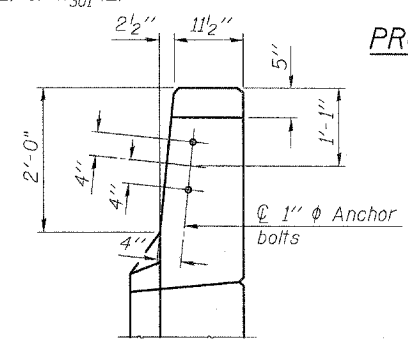
**SECTION C-C THROUGH EXISTING FOOTING
(WING WALL "D")**



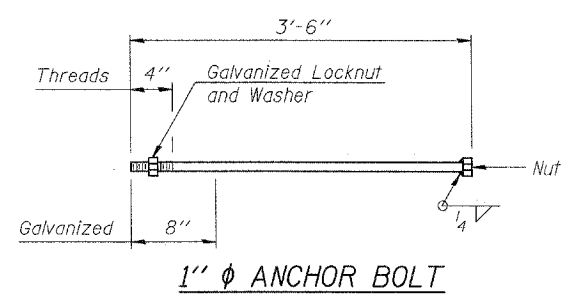
WING WALL ELEVATION
Showing Reinforcement



SECTION B-B



VIEW A-A



1" Ø ANCHOR BOLT

Notes:
Quantity of concrete in end post included with Concrete Superstructure on sheet 10 of 34.
For Concrete Encasement details, see sheet 29 of 34.
*Epoxy grout #6 n302(E) bars in 1" Ø hole.
Holes shall be drilled a minimum of 9" deep. Bars shall be drilled and epoxy grouted according to Article 584 of the Standard Specifications.

DESIGNED	SSM
CHECKED	JLA
DRAWN	GYR
CHECKED	SSM

A-1-D 11-1-06

ABUTMENT MODIFICATION DETAILS
WINGWALL DETAILS
WEST ABUTMENT (EB ROADWAY)
EAST ABUTMENT (WB ROADWAY)
F.A.P. ROUTE 301 (US 20)
OVER SIMPSON ROAD
SECTION (2HB-1D)
WINNEBAGO COUNTY
STATION 849+27.97
STRUCTURE NO. 101-0053 (W.B.)
STRUCTURE NO. 101-0054 (E.B.)

Plans Prepared by: Kudrna & Associates, Ltd.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 301 (US 20)	(2HB-1)D	WINNEBAGO	107	90
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 25
34 SHEETS

Contract #64B07

REINFORCEMENT FOR
ONE ABUTMENT

Bar	No.	Size	Length	Shape
h ₃₀₀ (E)	16	#5	27'-2"	
h ₃₀₁ (E)	10	#5	8'-0"	
h ₃₀₂ (E)	10	#5	8'-0"	
h ₃₀₃ (E)	28	#4	11'-2"	
h ₃₀₄ (E)	20	#4	10'-10"	
h ₃₀₅ (E)	10	#6	27'-6"	
n ₃₀₀ (E)	10	#6	15'-4"	
n ₃₀₁ (E)	6	#6	7'-8"	
n ₃₀₂ (E)	25	#6	5'-0"	
p ₃₀₀ (E)	6	#7	13'-1"	
p ₃₀₁ (E)	8	#7	5'-0"	
p ₃₀₂ (E)	8	#7	11'-2"	
p ₃₀₃ (E)	8	#7	3'-8"	
s ₃₀₀ (E)	18	#4	8'-5"	
t ₃₀₀ (E)	2	#6	11"	
t ₃₀₁ (E)	2	#6	1'-6"	
t ₃₀₂ (E)	2	#6	2'-3"	
t ₃₀₃ (E)	2	#6	3'-4"	
t ₃₀₄ (E)	2	#6	4'-5"	
t ₃₀₅ (E)	2	#6	5'-7"	
t ₃₀₆ (E)	2	#6	6'-8"	
t ₃₀₇ (E)	14	#4	6'-10"	
t ₃₀₈ (E)	8	#4	9'-8"	
u ₃₀₀ (E)	4	#6	9'-1"	
v ₃₀₀ (E)	10	#5	5'-0"	
v ₃₀₁ (E)	10	#5	6'-2"	
v ₃₀₂ (E)	24	#6	9'-2"	
v ₃₀₃ (E)	6	#6	8'-6"	
v ₃₀₄ (E)	16	#6	9'-5"	
v ₃₀₅ (E)	10	#5	3'-8"	
v ₃₀₆ (E)	53	#5	2'-0"	
v ₃₀₇ (E)	86	#5	4'-0"	
v ₃₀₈ (E)	43	#5	6'-2"	
w ₃₀₀ (E)	16	#6	13'-3"	
w ₃₀₁ (E)	2	#6	8'-0"	
w ₃₀₂ (E)	2	#6	7'-4"	
w ₃₀₃ (E)	2	#6	4'-2"	
w ₃₀₄ (E)	2	#6	3'-4"	
w ₃₀₅ (E)	2	#6	2'-2"	

BILL OF MATERIAL
FOR TWO ABUTMENTS

Structure Excavation	Cu. Yd.	222.4
Concrete Structures	Cu. Yd.	75.8
Reinforcement Bars, Epoxy Coated	Pound	8,750
Furnishing Steel Piles HP12x53	Foot	189
Driving Piles	Foot	189
Test Pile, HP12x53	Each	1
Concrete Encasement	Cu. Yd.	1.6
Concrete Sealer	Sq. Ft.	1,614
Geocomposite Wall Drain	Sq. Yd.	62
Pipe Underdrains For Structures, 4"	Foot	152
Bar Splicers	Each	106
Porous Granular Embankment, Special	Cu. Yd.	169

For details of Bar Splicers, see sheet 30 of 34.
For details of piles and Concrete Encasement, see sheet 29 of 34.

Concrete Sealer shall be applied to all permanently exposed portions of the proposed backwalls, abutment fronts and bearing seats, new concrete only.

Holes shall be drilled a minimum of 9" deep. Bars shall be drilled and epoxy grouted according to Article 584 of the Standard and Specifications.

ABUTMENT MODIFICATION DETAILS

WEST ABUTMENT (EB ROADWAY)

EAST ABUTMENT (WB ROADWAY)

F.A.P. ROUTE 301 (US 20)

OVER SIMPSON ROAD

SECTION (2HB-1)D

WINNEBAGO COUNTY

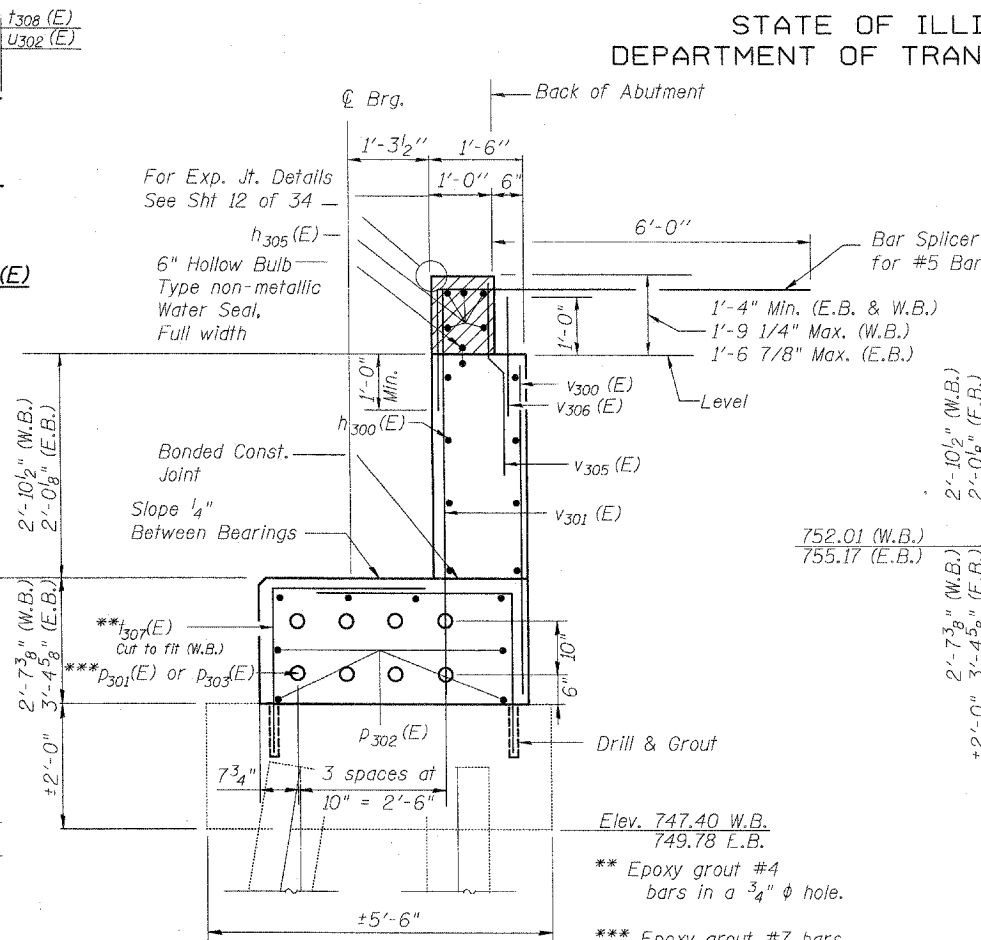
STATION 849+27.97

STRUCTURE NO. 101-0053 (W.B.)

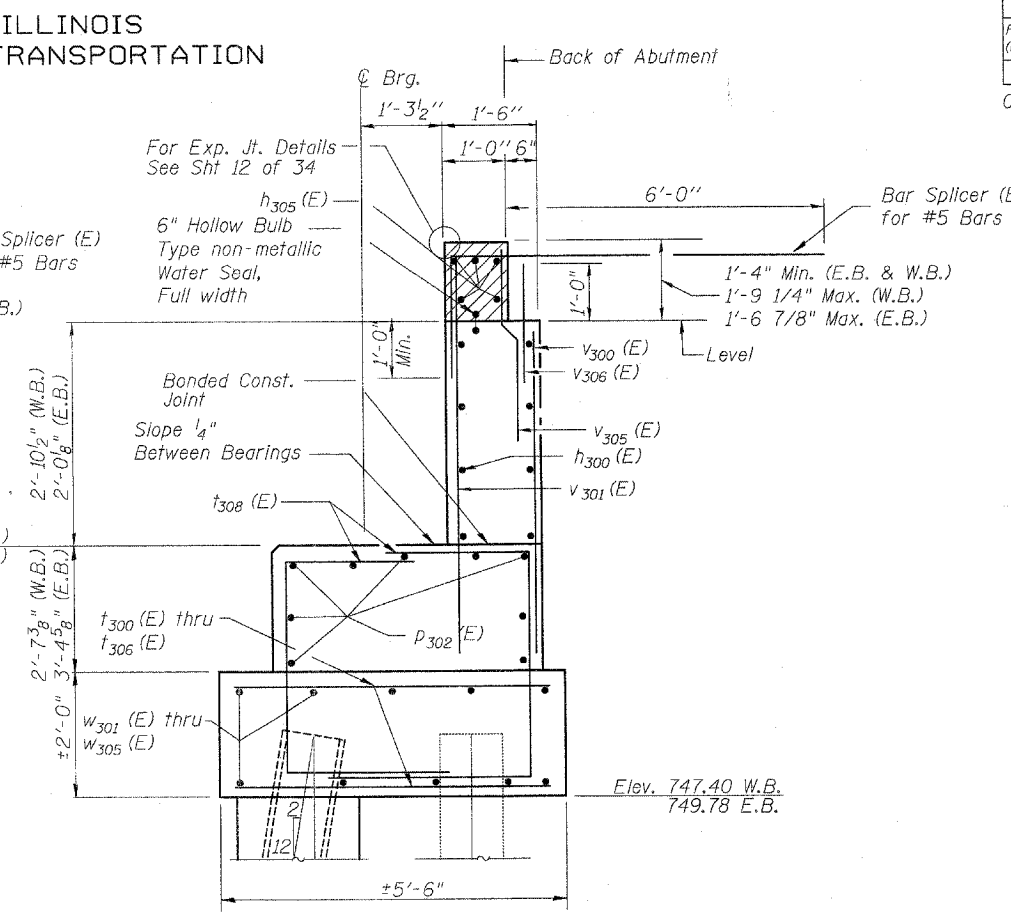
STRUCTURE NO. 101-0054 (E.B.)

Plans Prepared by: Kudrna & Associates, Ltd.

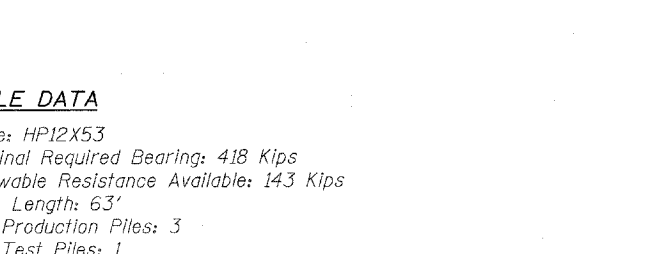
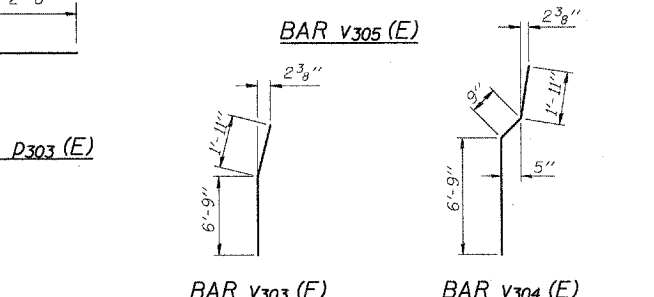
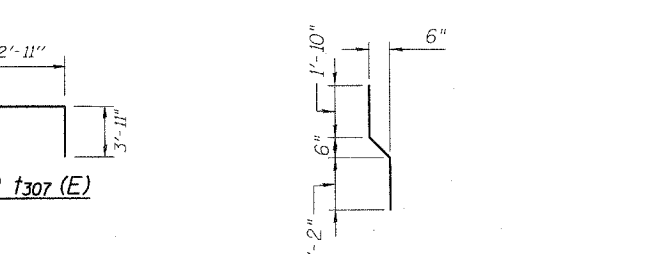
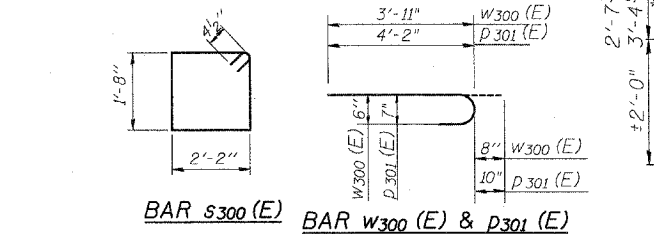
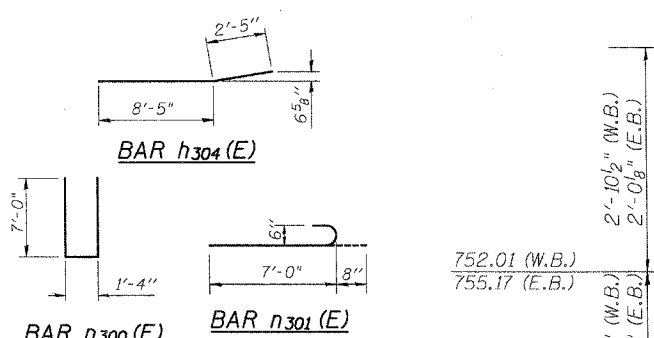
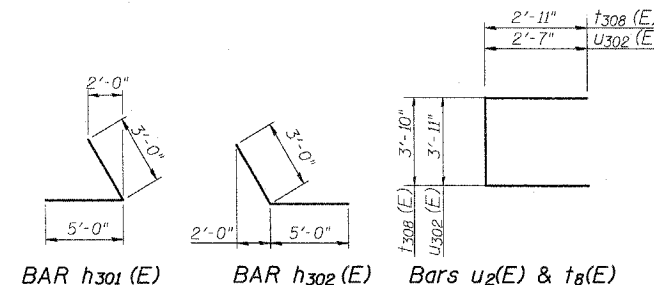
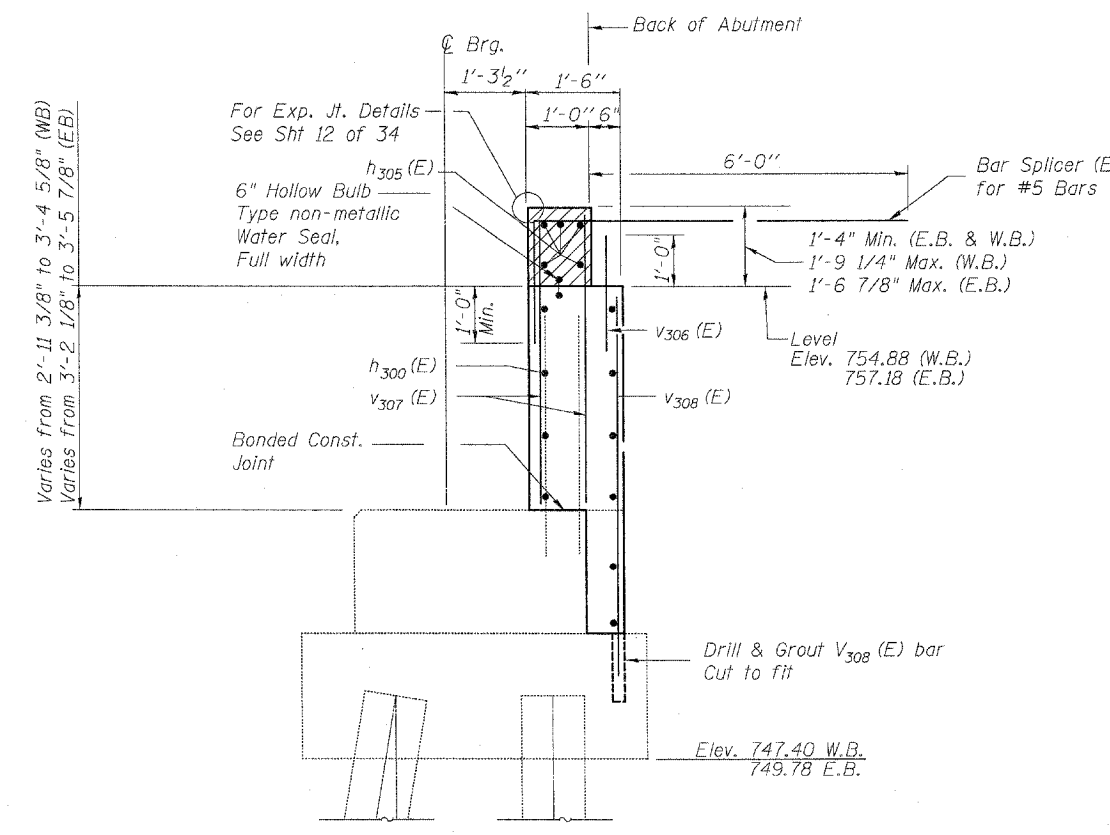
SECTION THRU PROPOSED
BEARING SEAT EXTENSION



SECTION THRU PROPOSED
BEARING SEAT AND FOOTING EXTENSION



SECTION THRU EXISTING ABUTMENT



PILE DATA

Type: HP12X53
Nominal Required Bearing: 418 Kips
Allowable Resistance Available: 143 Kips
Est. Length: 63'
No. Production Piles: 3
No. Test Piles: 1

DESIGNED	SSM
CHECKED	JLA
DRAWN	GYR
CHECKED	SSM

A-1-D

11-1-06

The Steel H-Piles shall be according to AASHTO M270 grade 50.

The Test Pile Shall be driven to 110% of the nominal required Bearing indicated in the Pile data information.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 26 34 SHEETS
F.A.P. 301 (US 20)	(2HB -1D)	WINNEBAGO	107	91	
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT		

Contract #64B07

PILE DATA

Type : HP 12x53
Nominal Required Bearing : 418 kips
Allowable Resistance Available : 142 kips
Est. Length : 70'
No. Production Piles: 2
No. Test Piles: None
The Steel H-piles shall be according to AASHTO M270 Grade 50.

MIN. BAR LAPS

#5 (E) bars = 2'-2"

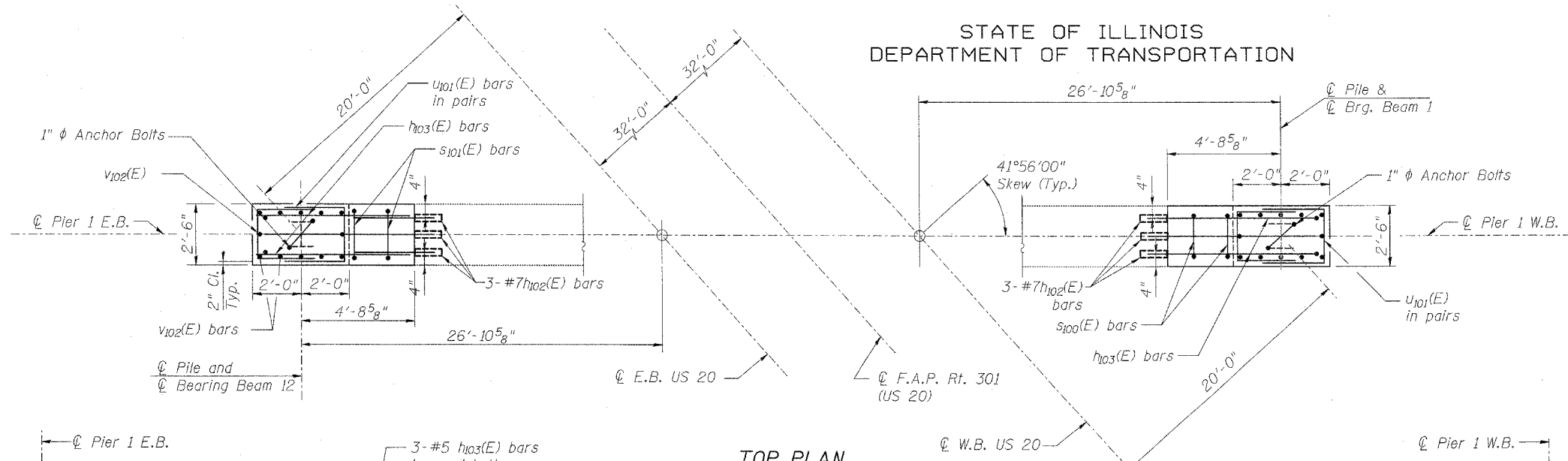
PIER DIMENSIONS

	A	B	C
Pier 1 W.B.	20'-3 ³ / ₈ "	6'-0"	14'-3 ³ / ₂ "
Pier 1 E.B.	18'-3 ¹ / ₂ "	5'-10"	12'-5 ¹ / ₂ "

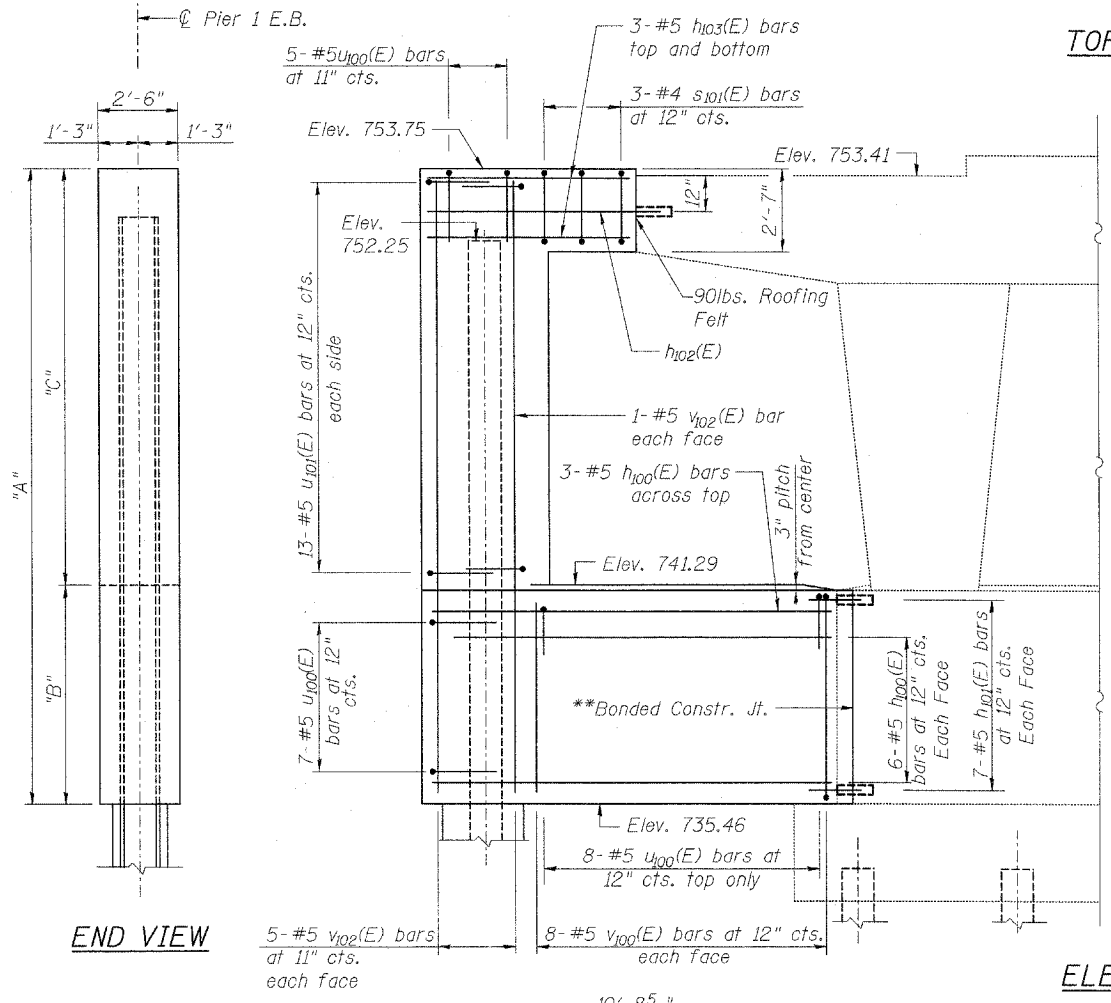
BILL OF MATERIAL FOR TWO PIERS

Bar	No.	Size	Length	Shape
h ₁₀₀ (E)	30	#5	10'-8"	
h ₁₀₁ (E)	28	#5	3'-4"	
h ₁₀₂ (E)	6	#7	7'-6"	
h ₁₀₃ (E)	12	#5	6'-6"	
*** s ₁₀₀ (E)	3	#4	8'-1"	
*** s ₁₀₁ (E)	3	#4	9'-7"	
u ₁₀₀ (E)	40	#5	7'-0"	
u ₁₀₁ (E)	56	#5	8'-6"	
*** u ₁₀₀ (E)	32	#5	5'-5"	
*** v ₁₀₁ (E)	12	#5	19'-11"	
*** v ₁₀₂ (E)	12	#5	18'-2"	

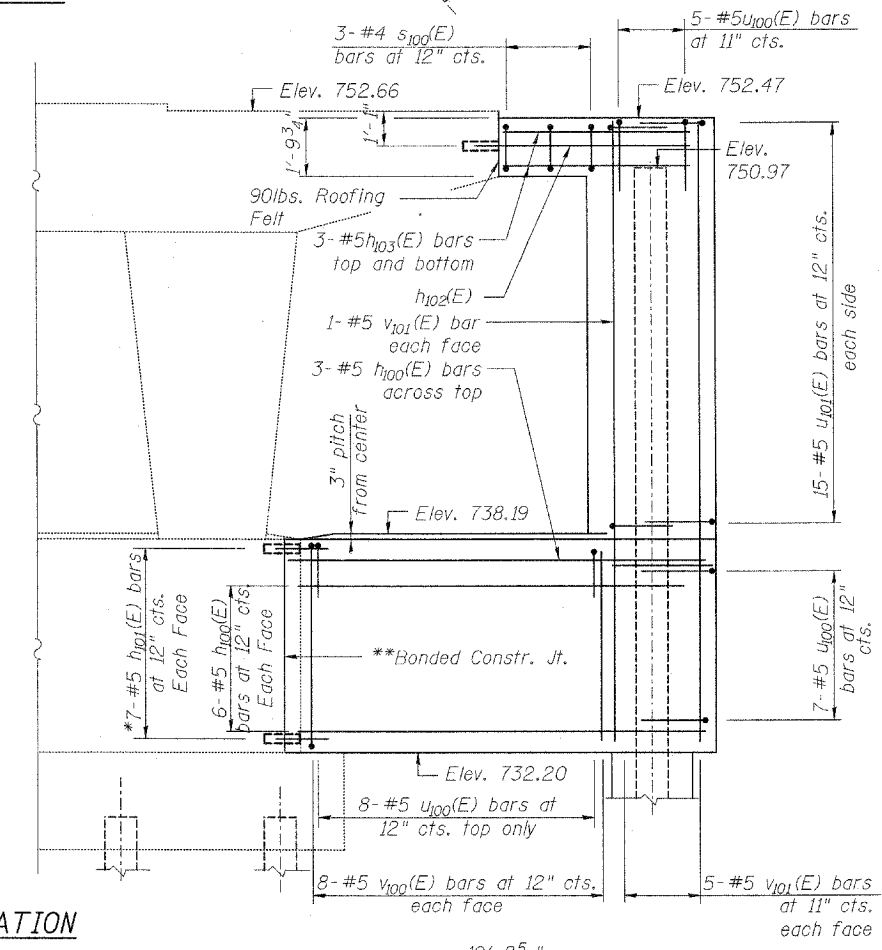
Item	Unit	Quantity
Structure Excavation	Cu. Yd.	25.5
Concrete Structures	Cu. Yd.	22.1
Reinforcement Bars, Epoxy Coated	Pound	2,090
Furnishing Steel Piles, HP12X53	Foot	140
Driving Piles	Foot	111
Concrete Encasement	Cu. Yd.	0.8
Concrete Sealer	Sq. Ft.	681



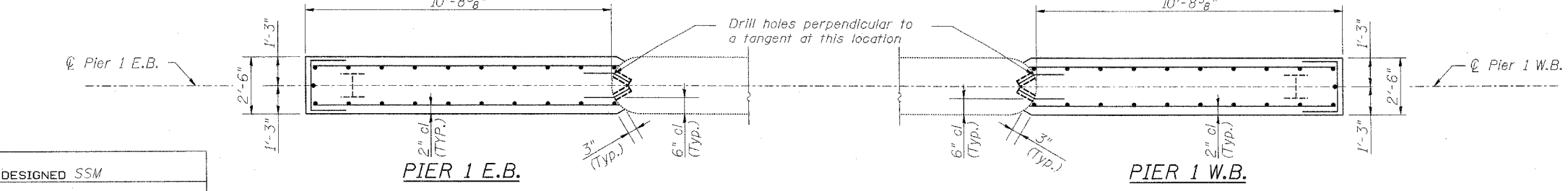
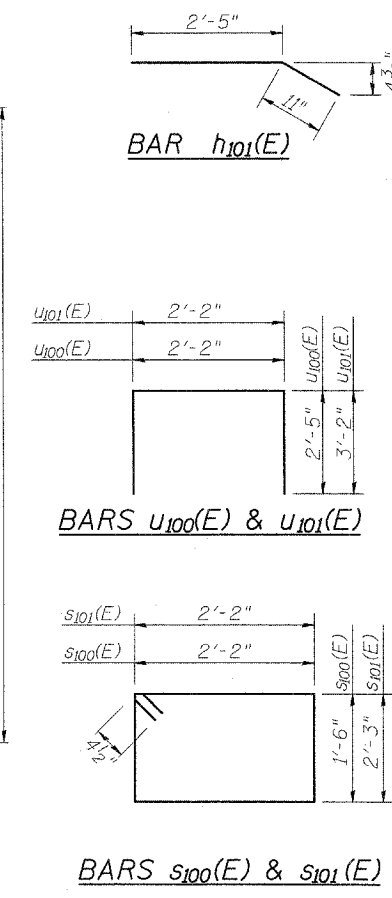
TOP PLAN



ELEVATION



END VIEW



PIER 1 E.B.

PIER 1 W.B.

Notes:
Space reinforcement in cap to miss anchor bolts.
* Drill 7/8" φ x 9" min. holes for h₁₀₁(E) bars and 1 1/8" φ x 12" holes for h₁₀₂(E) bars. Epoxy grout h₁₀₁(E) and h₁₀₂(E) bars.
Bars shall be drilled and epoxy grouted according to Article 584 of the Standard Specification.
** Bonded construction joint in accordance with Article 503.09(b) of The Standard Specifications.
*** Bar to be used at one pier only.
Concrete Sealer shall be applied to all permanently exposed portions of the crash walls, columns and pier caps, new concrete only.

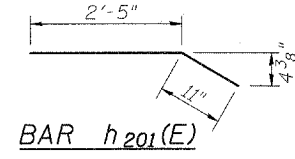
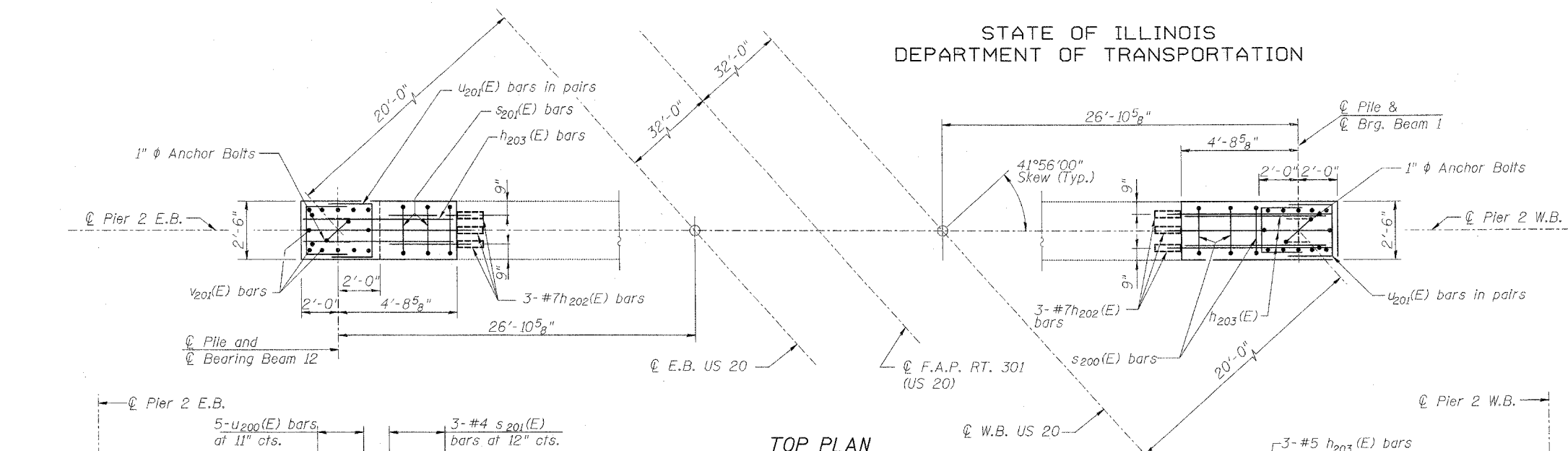
PIER 1 - W.B. & E.B.
F.A.P. ROUTE 301 (US 20)
OVER SIMPSON ROAD
SECTION (2HB-1D)
WINNEBAGO COUNTY
STATION 849+27.97
STRUCTURE NO. 101-0053 (W.B.)
STRUCTURE NO. 101-0054 (E.B.)

DESIGNED	SSM
CHECKED	JLA
DRAWN	GYR
CHECKED	SSM

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 301 (US 20)	(2HB-1D)	WINNEBAGO	107	92
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

Contract #64B07



PILE DATA
Type : HP 12x53
Nominal Required Bearing: 418 kips
Allowable Resistance Available : 142 kips
Est. Length : 70'
No. Production Piles: 2
No. Test Piles: None

MIN. BAR LAPS
#5 (E) bars = 2'-2"

PIER DIMENSIONS

	A	B	C
Pier 2 W.B.	20'-7"	6'-0"	14'-7"
Pier 2 E.B.	18'-6 1/2"	6'-0"	12'-6 1/2"

BILL OF MATERIAL FOR TWO PIERS

Bar	No.	Size	Length	Shape
h200(E)	30	#5	10'-8"	
h201(E)	28	#5	3'-4"	
h202(E)	6	#7	7'-6"	
h203(E)	12	#5	6'-6"	

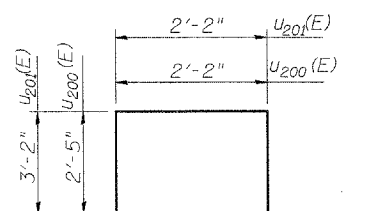
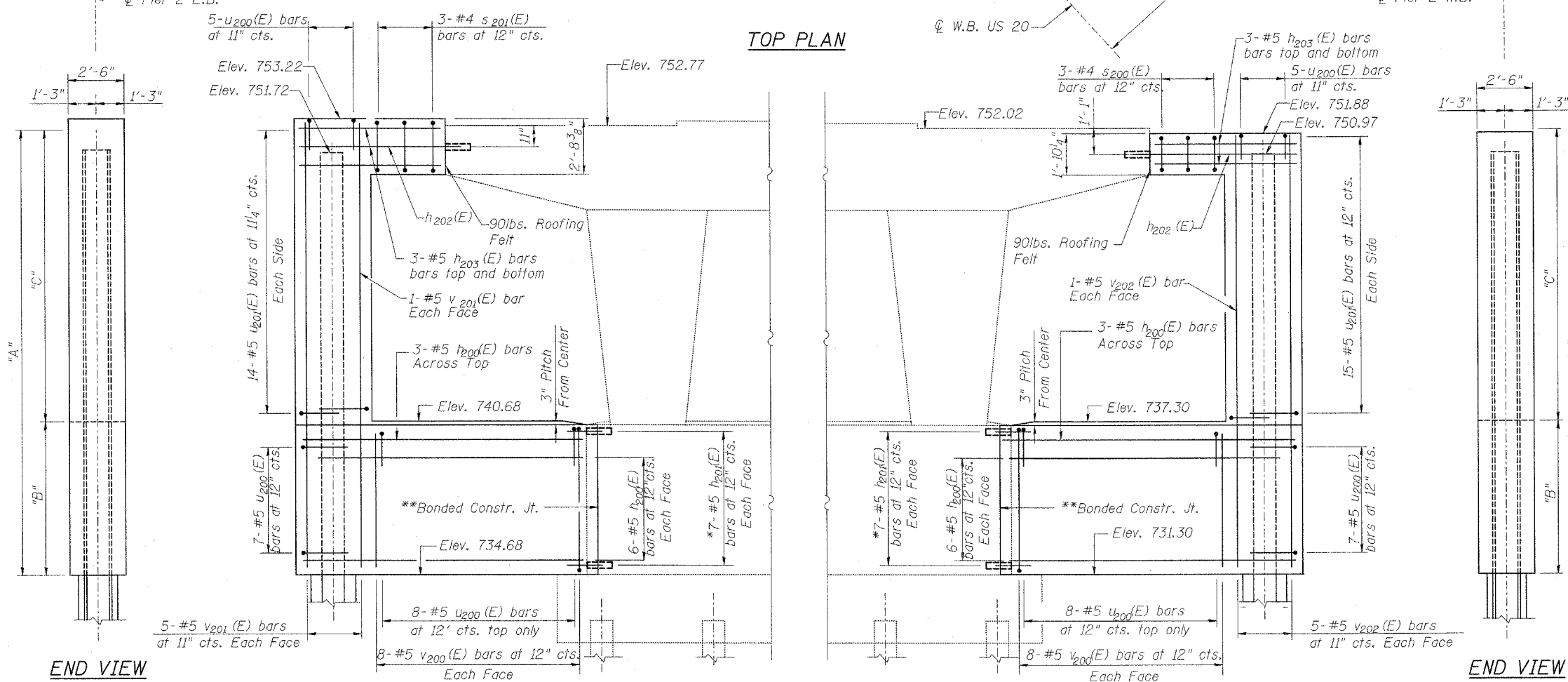
s200(E)	3	#4	8'-4"	
s201(E)	3	#4	9'-9"	

u200(E)	40	#5	7'-0"	
u201(E)	58	#5	8'-6"	

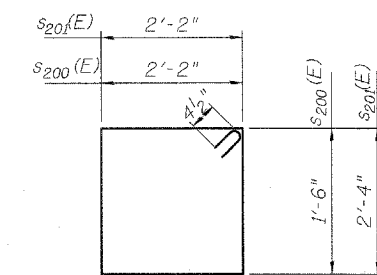
v200(E)	32	#5	5'-5"	
v201(E)	12	#5	18'-2"	
v202(E)	12	#5	20'-3"	

Item	Unit	Quantity
Structure Excavation	Cu. Yd.	20.8
Concrete Structures	Cu. Yd.	23.1
Reinforcement Bars, Epoxy Coated	Pound	2,120
Furnishing Steel Piles, HP12x53	Foot	140
Driving Piles	Foot	110
Concrete Encasement	Cu. Yd.	0.8
Concrete Sealer	Sq. Ft.	681

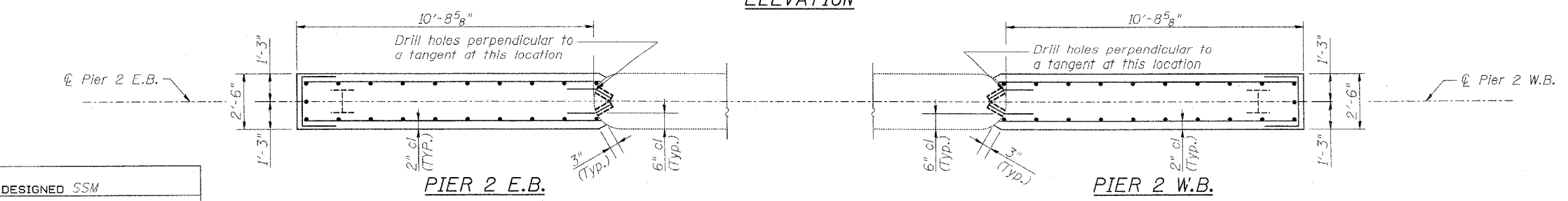
Reinforcement Bars designated (E) shall be epoxy coated.



BARS u200(E) & u201(E)



BAR s200(E) & s201(E)



DESIGNED	SSM
CHECKED	JLA
DRAWN	GYR
CHECKED	SSM

P-5 10-22-04

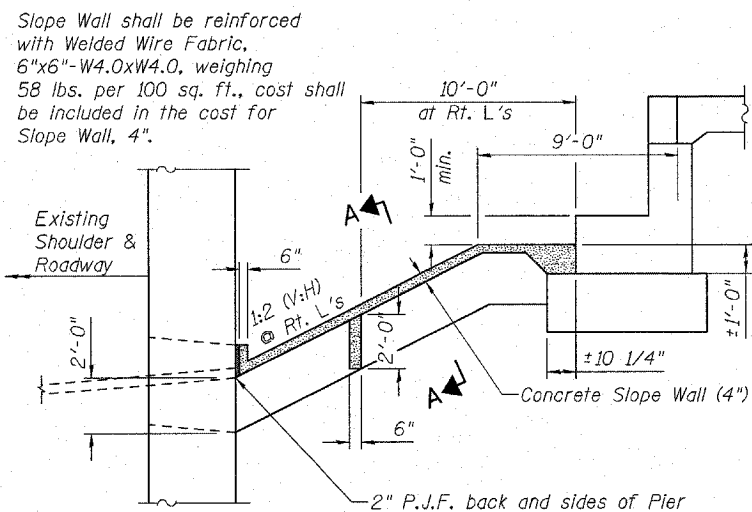
Notes:
Space reinforcement in cap to miss anchor bolts.
* Drill 7/8" ϕ x 9" min. holes for h201(E) bars and 1" ϕ x 12" holes for h202(E) bars.
Epoxy grout h201(E) and h202(E).
** Bonded construction joint in accordance with Article 503.09 (b) of the standard specifications.
*** Bar to be used at one pier only.
Concrete Sealer shall be applied to all permanently exposed portions of the crash walls, columns and pier caps, new concrete only.

PIER 2 - W.B. & E.B.
F.A.P. ROUTE 301 (US 20)
OVER SIMPSON ROAD
SECTION (2HB-1D)
WINNEBAGO COUNTY
STATION 849+27.97
STRUCTURE NO. 101-0053 (W.B.)
STRUCTURE NO. 101-0054 (E.B.)

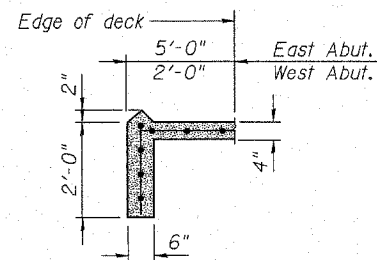
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO.
F.A.P. 301 (US 20)	(2HB-1D)	WINNEBAGO	107	93	34 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

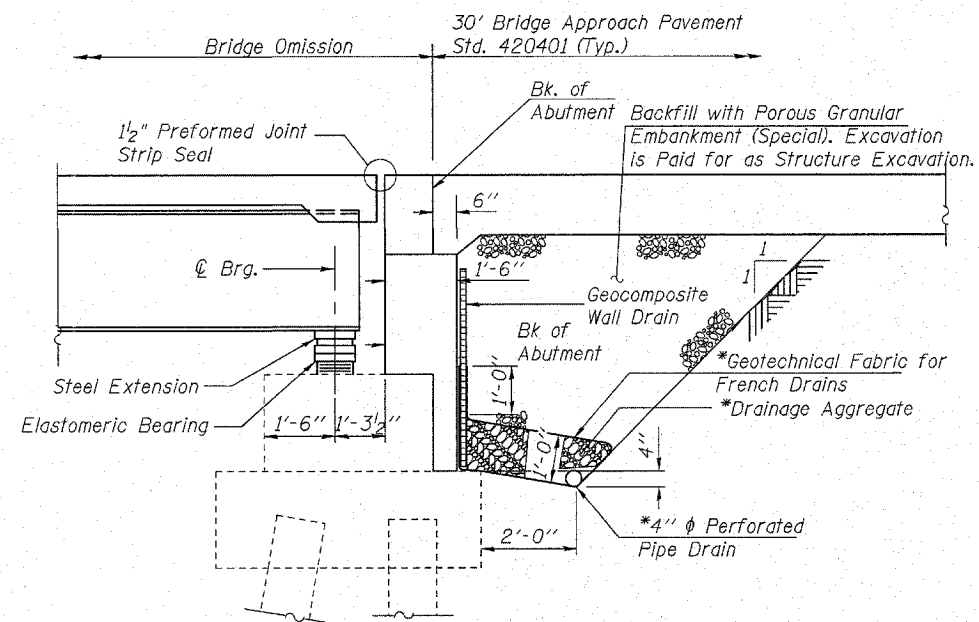
Contract #64B07



SECTION THRU SLOPE WALL



SECTION A-A



SECTION THRU PILE BENT ABUTMENT

(Horiz. dim. @ Rt. L's)

* Included in the cost of Pipe Underdrains for Structures, 4".

NOTES:

The cost for Non-Perforated Pipes to extend the pipe drains to the embankment side slopes shall be included in the cost for Pipe Underdrains for Structures, 4".

All drainage system components shall extend 2'-0" from the end of each wingwall except an outlet pipe shall extend until intersection with side slopes. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101)

DESIGNED	SSM
CHECKED	JLA
DRAWN	GYR
CHECKED	SSM

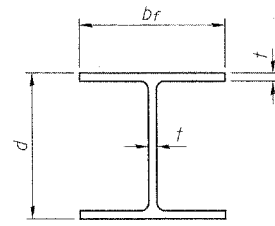
SLOPE WALL AND
ABUTMENT DRAINAGE DETAILS
F.A.P. ROUTE 301 (US 20)
OVER SIMPSON ROAD
SECTION (2HB-1D)
WINNEBAGO COUNTY
STATION 849+27.97
STRUCTURE NO. 101-0053 (W.B.)
STRUCTURE NO. 101-0054 (E.B.)

Plans Prepared by: Kudrna & Associates, Ltd.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

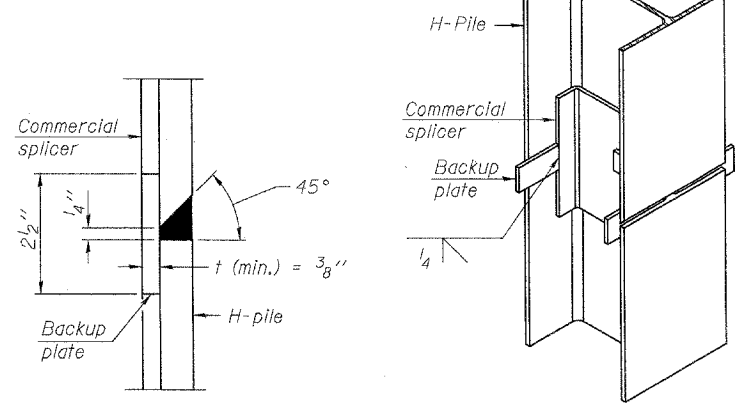
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 29 34 SHEETS
F.A.P. 301 (US 20)	(2HB -1D)	WINNEBAGO	107	94	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

Contract #64B07



STEEL PILE TABLE

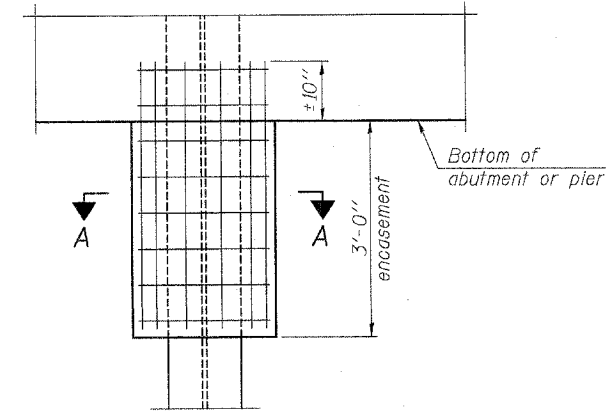
Designation	Depth d	Flange width b _f	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	13/16"	30"
x102	14"	14 3/4"	1/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	1/16"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 1/8"	1/2"	24"
x53	11 3/4"	12"	1/16"	24"
HP 10x57	10"	10 1/4"	9/16"	24"
x42	9 3/4"	10 1/8"	7/16"	24"
HP 8x36	8"	8 1/8"	7/16"	18"



DETAIL "B"

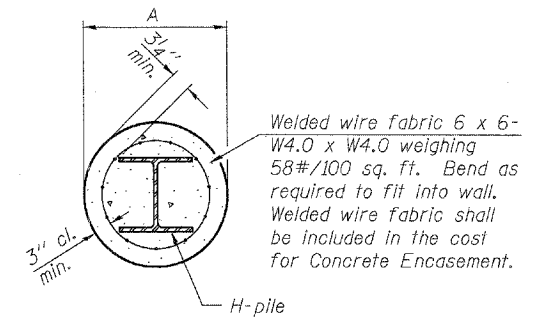
ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE



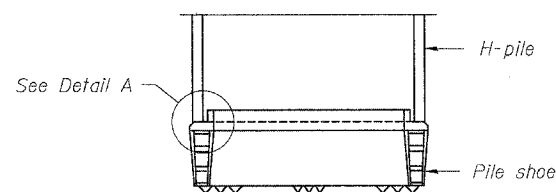
ELEVATION

PILE ENCASEMENT



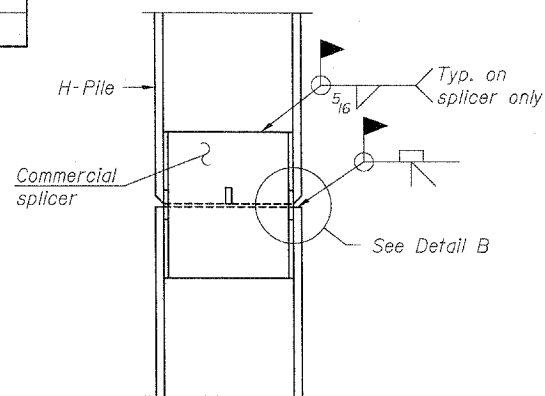
Note:
Forms for encasement may be omitted when soil conditions permit.

SECTION A-A



ELEVATION

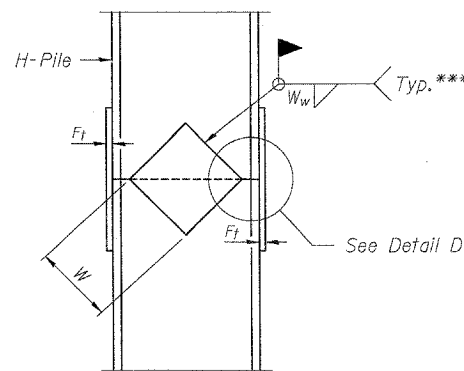
H-PILE SHOE ATTACHMENT



ELEVATION

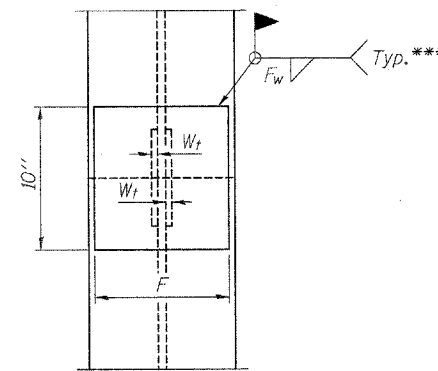
ELEVATION

COMPLETE PENETRATION WELD SPLICE



ELEVATION

DETAIL C



END VIEW

WELDED PLATE FIELD SPLICE

Note:
The steel H-piles shall be according to AASHTO M270 Grade 50.

Plans Prepared by: Kudrna & Associates, Ltd.

DESIGNED	SSM
CHECKED	JLA
DRAWN	GYR
CHECKED	SSM

F-HP 11-1-06

PILE AND ENCASEMENT DETAILS
F.A.P. ROUTE 301 (US 20)
OVER SIMPSON ROAD
SECTION (2HB-1D)
WINNEBAGO COUNTY
STATION 849+27.97
STRUCTURE NO. 101-0053 (W.B.)
STRUCTURE NO. 101-0054 (E.B.)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Contract #64B07

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) = $0.66 \times f_y \times A_t$
- Where f_y = Yield strength of lapped reinforcement bars in ksi.
 A_t = Tensile stress area of lapped reinforcement bars.
* = 28 day concrete

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	7.9
#5	2'-0"	23.0	12.3
#6	2'-7"	33.1	17.4
#7	3'-5"	45.1	23.8
#8	4'-6"	58.9	31.3
#9	5'-9"	75.0	39.6
#10	7'-3"	95.0	50.3
#11	9'-0"	117.4	61.8

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

ROLLED THREAD DOWEL BAR



** ONE PIECE

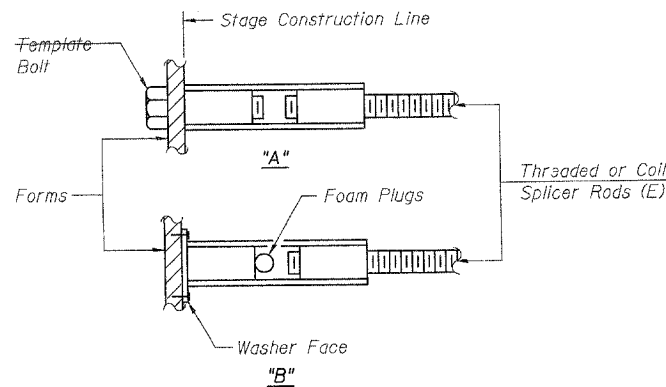
Wire Connector



WELDED SECTIONS

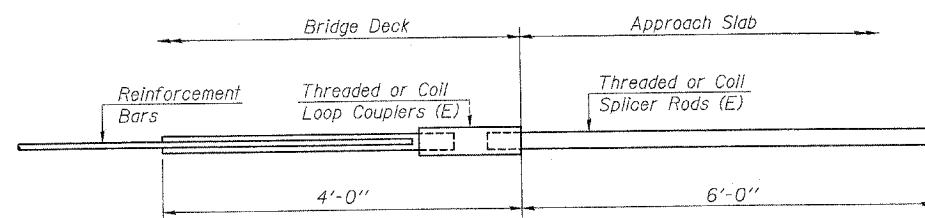
BAR SPLICER ASSEMBLY ALTERNATIVES

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



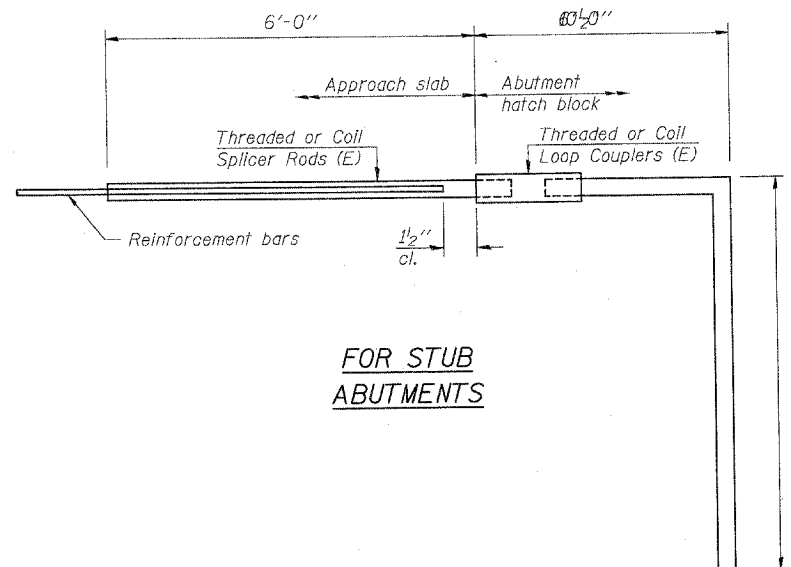
INSTALLATION AND SETTING METHODS

"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.



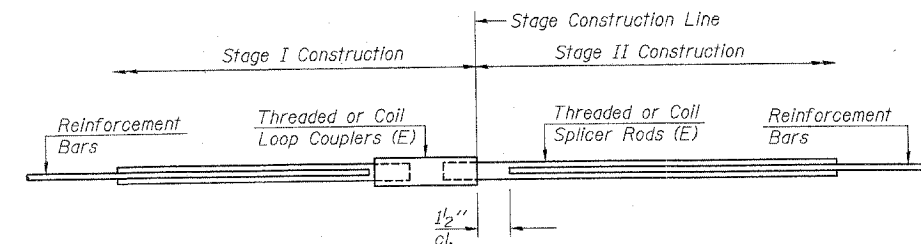
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 12.3 kips - tension
No. Required =



FOR STUB ABUTMENTS

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 12.3 kips - tension
No. Required = 212



STANDARD

Bar Size	No. Assemblies Required	Location

BAR SPLICER ASSEMBLY DETAILS
F.A.P. ROUTE 301 (US 20)
OVER SIMPSON ROAD
SECTION (2HB-1)D
WINNEBAGO COUNTY
STATION 849+27.97
STRUCTURE NO. 101-0053 (W.B.)
STRUCTURE NO. 101-0054 (E.B.)

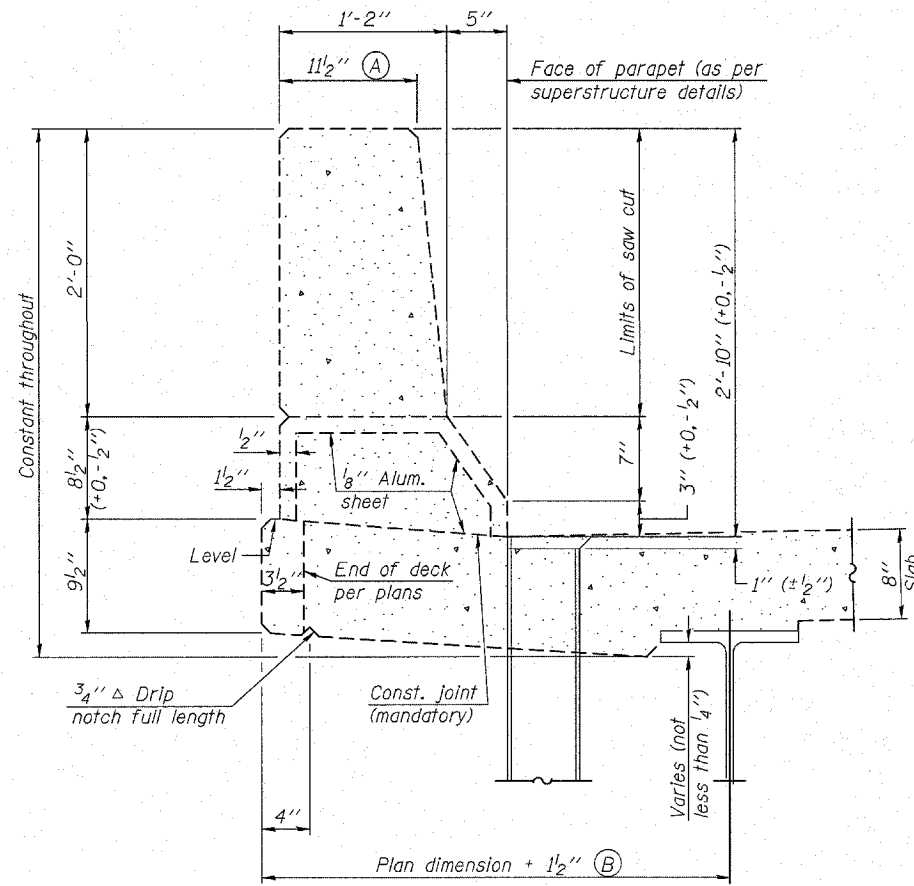
DESIGNED	SSM
CHECKED	JLA
DRAWN	GYR
CHECKED	SSM

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

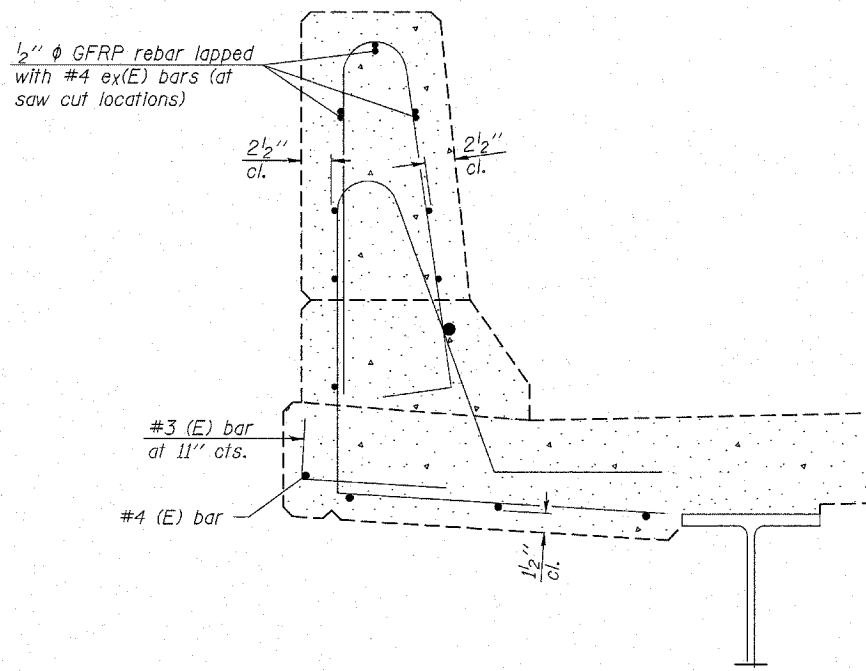
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 301 (US 20)	(2HB-1D)	WINNEBAGO	107	96
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 31
34 SHEETS

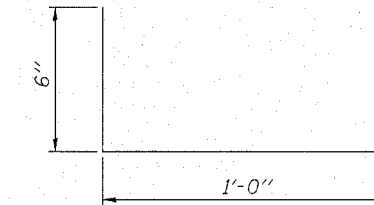
Contract #64B07



SECTION
(Showing dimensions)



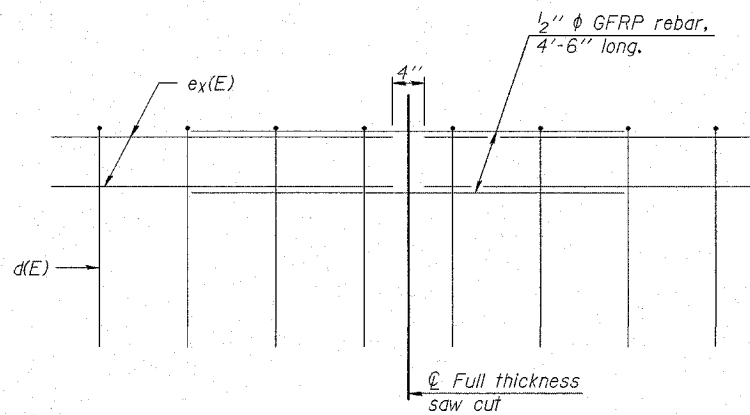
SECTION
(Showing reinforcement clearances for slip forming and additional reinforcement bars)



#3 (E) BAR

SFP-34

5-9-2007



GFRP REBAR STIFFENING DETAIL

(Place as shown in parapet section at each parapet joint location.)

CONCRETE PARAPET
SLIPFORMING OPTION

PARAPET SLIP FORMING OPTION
F.A.P. ROUTE 301 (US 20)
OVER SIMPSON ROAD
SECTION (2HB-1D)
WINNEBAGO COUNTY
STATION 849+27.97
STRUCTURE NO. 101-0053 (W.B.)
STRUCTURE NO. 101-0054 (E.B.)

Plans Prepared by: Kudrna & Associates, Ltd.

DESIGNED	SSM
CHECKED	JLA
DRAWN	GYR
CHECKED	SSM

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET NO.
F.A.P. 301 (US 20)	(2HB-1D)	WINNEBAGO	107	97
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

Contract #64B07

Illinois Department of Transportation
Division of Highways
1007

SOIL BORING LOG Page 1 of 1

P92-069-05 Bypass 20 Bridge over Simpson Road, south edge of Rockford, 900' E. of Prairie Road Date 1/20/06

ROUTE US Bypass 20 DESCRIPTION LOGGED BY J. Strating

SECTION 2HB-1 & 2 LOCATION Rockford Twp. - 4SE, SEC. , TWP. 43N, RNG. 1E

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

STRUCT. NO.	STATION	DEPTH (ft)	BL (in)	UC (in)	MOISTURE (%)	SOIL DESCRIPTION	DEPTH (ft)	BL (in)	UC (in)	MOISTURE (%)
849+28						Surface Water Elev. N/A ft				
						Stream Bed Elev. ft				
B-1a	848+43					Groundwater Elev.:				
	63.00ft RL CL					First Encounter Dry ft				
	740.3					Upon Completion Dry ft				
						After Hrs. ft				
STIFF red/brown SILTY CLAY LOAM				1.3	22	VERY DENSE tan weathered LIMESTONE (continued)	719.30			100/2
	738.30									
STIFF brown SILTY CLAY LOAM			6	1.3	17	VERY DENSE tan weathered LIMESTONE	716.80			100/3.5
	736.80					Borehole continued with rock coring.				
MEDIUM brown SILTY CLAY LOAM			4	1.0	27					
	734.30									
MEDIUM brown SILTY CLAY LOAM			2	1.0	30					
	731.80									
SOFT brown SILTY CLAY LOAM			1	0.4	29					
	728.80									
MEDIUM tan medium SAND with GRAVEL			3							
	726.80									
DENSE tan fine SAND with GRAVEL and LIMESTONE at bottom			7							
	724.30									
VERY DENSE tan weathered LIMESTONE			21							
	721.80									

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
1007

SOIL BORING LOG Page 1 of 1

P92-069-05 Bypass 20 Bridge over Simpson Road, south edge of Rockford, 900' East of Prairie Road Date 1/23/06

ROUTE US Bypass 20 DESCRIPTION LOGGED BY J. Strating

SECTION 2HB-1 & 2 LOCATION Rockford Twp. - 4SE, SEC. , TWP. 43N, RNG. 1E

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

STRUCT. NO.	STATION	DEPTH (ft)	BL (in)	UC (in)	MOISTURE (%)	SOIL DESCRIPTION	DEPTH (ft)	BL (in)	UC (in)	MOISTURE (%)
849+28						Surface Water Elev. N/A ft				
						Stream Bed Elev. ft				
B-2a	848+93					Groundwater Elev.:				
	65.00ft RL CL					First Encounter ft				
	734.8					Upon Completion ft				
						After Hrs. ft				
MEDIUM dark brown SILTY CLAY LOAM				0.5	27					
	732.80									
MEDIUM brown SILTY CLAY LOAM			2	0.6	31					
	731.30									
MEDIUM brown SILTY CLAY LOAM			2	0.6	30					
	728.80									
VERY SOFT brown SANDY LOAM			1	0.2	17					
	725.80									
MEDIUM tan clean medium SAND with GRAVEL			4							
	723.80									
VERY DENSE tan weathered LIMESTONE			100		11					
	721.30									
VERY DENSE tan weathered LIMESTONE			100		11					
	718.80									
VERY DENSE tan weathered LIMESTONE			100		2					
	716.30									
End of Boring										

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)

DESIGNED	SSM
CHECKED	JLA
DRAWN	GYR
CHECKED	SSM

BORING LOGS
F.A.P. ROUTE 301 (US 20)
OVER SIMPSON ROAD
SECTION (2HB-1D)
WINNEBAGO COUNTY
STATION 849+27.97
STRUCTURE NO. 101-0053 (W.B.)
STRUCTURE NO. 101-0054 (E.B.)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 301 (US 20)	(2HB-1/D)	WINNEBAGO	107	98
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 33
34 SHEETS

Contract #64B07

Illinois Department of Transportation
Division of Highways
SOIL BORING LOG
Page 1 of 2

P92-069-05 Bypass 20 Bridge over Simpson Road, south edge of Rockford, 900' E. of Prairie Road

Date 1/23/06

ROUTE US Bypass 20 DESCRIPTION LOGGED BY J. Stratina

SECTION 2HB-1 & 2 LOCATION Rockford Twp. - 4SE, SEC. , TWP. 43N, RNG. 1E

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

STRUCT. NO. 849+28
Station 849+28

BORING NO. B-3a
Station 850+28
Offset 1.00ft RI CL
Ground Surface Elev. 756.0 ft

DEPTH (ft)	SOIL DESCRIPTION	UCS (psi)	Failure Mode	SPT (blows)
0-3	VERY STIFF gray SILTY CLAY with SAND & GRAVEL lens	3	B	23
3-11	MEDIUM brown LOAM	4	B	2.9
11-18	STIFF reddish brown SANDY LOAM	4	B	1.1
18-25	VERY STIFF olive-green SILTY CLAY	6	B	3.5
25-22	VERY STIFF gray SILTY CLAY LOAM	4	B	2.1
22-23	VERY STIFF gray SILTY CLAY LOAM	6	S	
23-25	LOOSE/MEDIUM gray clean medium coarse SAND & GRAVEL	2	B	5
25-24	VERY STIFF gray SILTY CLAY	7	B	14
24-23	DENSE tan weathered LIMESTONE	14	B	23
23-15	VERY DENSE tan weathered LIMESTONE	15	B	100/10.5
15-7	VERY DENSE tan weathered LIMESTONE	18	B	100/7
7-9	VERY DENSE tan weathered LIMESTONE	18	B	
9-19	MEDIUM brown dirty SAND & GRAVEL	5	B	
19-8	MEDIUM brown SILTY CLAY LOAM	7	B	
8-5	MEDIUM brown SILTY CLAY LOAM	7	B	
5-11	VERY STIFF gray/brown SILTY CLAY with SAND lens	5	B	25
11-10	MEDIUM brown SILTY CLAY LOAM	3	B	28
10-9	MEDIUM gray/brown SANDY LOAM	8	B	9
9-8	MEDIUM brown SILTY CLAY LOAM	2	B	29
8-1	MEDIUM brown SILTY CLAY LOAM	1	B	0.6
1-0	MEDIUM brown LOAM	1	B	0.5

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
SOIL BORING LOG
Page 2 of 2

P92-069-05 Bypass 20 Bridge over Simpson Road, south edge of Rockford, 900' E. of Prairie Road

Date 1/23/06

ROUTE US Bypass 20 DESCRIPTION LOGGED BY J. Stratina

SECTION 2HB-1 & 2 LOCATION Rockford Twp. - 4SE, SEC. , TWP. 43N, RNG. 1E

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

STRUCT. NO. 849+28
Station 849+28

BORING NO. B-3a
Station 850+28
Offset 1.00ft RI CL
Ground Surface Elev. 756.0 ft

DEPTH (ft)	SOIL DESCRIPTION	UCS (psi)	Failure Mode	SPT (blows)
0-3	VERY DENSE tan weathered LIMESTONE	100/3	B	
3-7	VERY DENSE tan weathered LIMESTONE	100/3	B	
7-10	VERY DENSE tan weathered LIMESTONE	100/3	B	
10-11	VERY DENSE tan weathered LIMESTONE	100/3	B	
11-12	VERY DENSE tan weathered LIMESTONE	100/3	B	
12-13	VERY DENSE tan weathered LIMESTONE	100/3	B	
13-14	VERY DENSE tan weathered LIMESTONE	100/3	B	
14-15	VERY DENSE tan weathered LIMESTONE	100/3	B	
15-16	VERY DENSE tan weathered LIMESTONE	100/3	B	
16-17	VERY DENSE tan weathered LIMESTONE	100/3	B	
17-18	VERY DENSE tan weathered LIMESTONE	100/3	B	
18-19	VERY DENSE tan weathered LIMESTONE	100/3	B	
19-20	VERY DENSE tan weathered LIMESTONE	100/3	B	
20-21	VERY DENSE tan weathered LIMESTONE	100/3	B	
21-22	VERY DENSE tan weathered LIMESTONE	100/3	B	
22-23	VERY DENSE tan weathered LIMESTONE	100/3	B	
23-24	VERY DENSE tan weathered LIMESTONE	100/3	B	
24-25	VERY DENSE tan weathered LIMESTONE	100/3	B	
25-26	VERY DENSE tan weathered LIMESTONE	100/3	B	
26-27	VERY DENSE tan weathered LIMESTONE	100/3	B	
27-28	VERY DENSE tan weathered LIMESTONE	100/3	B	
28-29	VERY DENSE tan weathered LIMESTONE	100/3	B	
29-30	VERY DENSE tan weathered LIMESTONE	100/3	B	
30-31	VERY DENSE tan weathered LIMESTONE	100/3	B	
31-32	VERY DENSE tan weathered LIMESTONE	100/3	B	
32-33	VERY DENSE tan weathered LIMESTONE	100/3	B	
33-34	VERY DENSE tan weathered LIMESTONE	100/3	B	
34-35	VERY DENSE tan weathered LIMESTONE	100/3	B	
35-36	VERY DENSE tan weathered LIMESTONE	100/3	B	
36-37	VERY DENSE tan weathered LIMESTONE	100/3	B	
37-38	VERY DENSE tan weathered LIMESTONE	100/3	B	
38-39	VERY DENSE tan weathered LIMESTONE	100/3	B	
39-40	VERY DENSE tan weathered LIMESTONE	100/3	B	
40-41	VERY DENSE tan weathered LIMESTONE	100/3	B	
41-42	VERY DENSE tan weathered LIMESTONE	100/3	B	
42-43	VERY DENSE tan weathered LIMESTONE	100/3	B	
43-44	VERY DENSE tan weathered LIMESTONE	100/3	B	
44-45	VERY DENSE tan weathered LIMESTONE	100/3	B	
45-46	VERY DENSE tan weathered LIMESTONE	100/3	B	
46-47	VERY DENSE tan weathered LIMESTONE	100/3	B	
47-48	VERY DENSE tan weathered LIMESTONE	100/3	B	
48-49	VERY DENSE tan weathered LIMESTONE	100/3	B	
49-50	VERY DENSE tan weathered LIMESTONE	100/3	B	
50-51	VERY DENSE tan weathered LIMESTONE	100/3	B	
51-52	VERY DENSE tan weathered LIMESTONE	100/3	B	
52-53	VERY DENSE tan weathered LIMESTONE	100/3	B	
53-54	VERY DENSE tan weathered LIMESTONE	100/3	B	
54-55	VERY DENSE tan weathered LIMESTONE	100/3	B	
55-56	VERY DENSE tan weathered LIMESTONE	100/3	B	
56-57	VERY DENSE tan weathered LIMESTONE	100/3	B	
57-58	VERY DENSE tan weathered LIMESTONE	100/3	B	
58-59	VERY DENSE tan weathered LIMESTONE	100/3	B	
59-60	VERY DENSE tan weathered LIMESTONE	100/3	B	

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
SOIL BORING LOG
Page 1 of 1

P92-069-05 Bypass 20 Bridge over Simpson Road, south edge of Rockford, 900' E. of Prairie Road

Date 1/24/06

ROUTE US Bypass 20 DESCRIPTION LOGGED BY J. Stratina

SECTION 2HB-1 & 2 LOCATION Rockford Twp. - 4SE, SEC. , TWP. 43N, RNG. 1E

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

STRUCT. NO. 849+28
Station 849+28

BORING NO. B-4a
Station 849+50
Offset 32.00ft LI CL
Ground Surface Elev. 734.8 ft

DEPTH (ft)	SOIL DESCRIPTION	UCS (psi)	Failure Mode	SPT (blows)
0-19	VERY DENSE tan/brown weathered LIMESTONE with SAND lenses (continued)	N/A	B	100/7
19-20	VERY DENSE tan weathered LIMESTONE	713.80	B	100/3
20-21	VERY DENSE tan weathered LIMESTONE	711.30	B	100/3
21-22	VERY DENSE tan weathered LIMESTONE	708.80	B	100/3
22-23	VERY DENSE tan weathered LIMESTONE	708.80	B	100/3
23-24	VERY DENSE tan weathered LIMESTONE	708.80	B	100/3
24-25	VERY DENSE tan weathered LIMESTONE	708.80	B	100/3
25-26	VERY DENSE tan weathered LIMESTONE	708.80	B	100/3
26-27	VERY DENSE tan weathered LIMESTONE	708.80	B	100/3
27-28	VERY DENSE tan weathered LIMESTONE	708.80	B	100/3
28-29	VERY DENSE tan weathered LIMESTONE	708.80	B	100/3
29-30	VERY DENSE tan weathered LIMESTONE	708.80	B	100/3
30-31	VERY DENSE tan weathered LIMESTONE	708.80	B	100/3
31-32	VERY DENSE tan weathered LIMESTONE	708.80	B	100/3
32-33	VERY DENSE tan weathered LIMESTONE	708.80	B	100/3
33-34	VERY DENSE tan weathered LIMESTONE	708.80	B	100/3
34-35	VERY DENSE tan weathered LIMESTONE	708.80	B	100/3
35-36	VERY DENSE tan weathered LIMESTONE	708.80	B	100/3
36-37	VERY DENSE tan weathered LIMESTONE	708.80	B	100/3
37-38	VERY DENSE tan weathered LIMESTONE	708.80	B	100/3
38-39	VERY DENSE tan weathered LIMESTONE	708.80	B	100/3
39-40	VERY DENSE tan weathered LIMESTONE	708.80	B	100/3
40-41	VERY DENSE tan weathered LIMESTONE	708.80	B	100/3
41-42	VERY DENSE tan weathered LIMESTONE	708.80	B	100/3
42-43	VERY DENSE tan weathered LIMESTONE	708.80	B	100/3
43-44	VERY DENSE tan weathered LIMESTONE	708.80	B	100/3
44-45	VERY DENSE tan weathered LIMESTONE	708.80	B	100/3
45-46	VERY DENSE tan weathered LIMESTONE	708.80	B	100/3
46-47	VERY DENSE tan weathered LIMESTONE	708.80	B	100/3
47-48	VERY DENSE tan weathered LIMESTONE	708.80	B	100/3
48-49	VERY DENSE tan weathered LIMESTONE	708.80	B	100/3
49-50	VERY DENSE tan weathered LIMESTONE	708.80	B	100/3
50-51	VERY DENSE tan weathered LIMESTONE	708.80	B	100/3
51-52	VERY DENSE tan weathered LIMESTONE	708.80	B	100/3
52-53	VERY DENSE tan weathered LIMESTONE	708.80	B	100/3
53-54	VERY DENSE tan weathered LIMESTONE	708.80	B	100/3
54-55	VERY DENSE tan weathered LIMESTONE	708.80	B	100/3
55-56	VERY DENSE tan weathered LIMESTONE	708.80	B	100/3
56-57	VERY DENSE tan weathered LIMESTONE	708.80	B	100/3
57-58	VERY DENSE tan weathered LIMESTONE	708.80	B	100/3
58-59	VERY DENSE tan weathered LIMESTONE	708.80	B	100/3
59-60	VERY DENSE tan weathered LIMESTONE	708.80	B	100/3

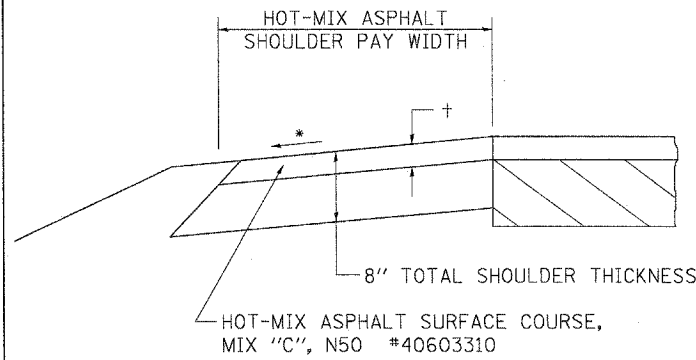
The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

DESIGNED	SSM
CHECKED	JLA
DRAWN	GYR
CHECKED	SSM

BORING LOGS
F.A.P. ROUTE 301 (US 20)
OVER SIMPSON ROAD
SECTION (2HB-1/D)
WINNEBAGO COUNTY
STATION 849+27.97
STRUCTURE NO. 101-0053 (W.B.)
STRUCTURE NO. 101-0054 (E.B.)

HOT-MIX ASPHALT SHOULDER



GENERAL NOTES

THE HOT-MIX ASPHALT SHOULDER SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 482 EXCEPT THE TOP LIFT SHALL BE HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50 #40603310. THE WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER TON FOR HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50 #40603310 AND SQUARE YARD FOR HOT-MIX ASPHALT SHOULDERS OF THE THICKNESS SPECIFIED.

USE HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50 #40603310. WHEN RESURFACING EXISTING HOT-MIX ASPHALT SHOULDERS. THE THICKNESS IS SHOWN ON THE TYPICAL SECTIONS. THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER TON FOR HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50 #40603310.

REMOVAL OF MATERIAL FOR PLACEMENT OF THE HOT-MIX ASPHALT SHOULDER TO BE PAID FOR IN UNITS FOR EXCAVATING AND GRADING EXISTING SHOULDERS OR IN CUBIC YARDS FOR EARTH EXCAVATION OR EARTH EXCAVATION WIDENING.

*4% WHEN MAINLINE IS ON TANGENT. FOR CROSS SLOPE ON SUPERELEVATION SECTION, SEE HIGHWAY STANDARD 482001 OR 482006.

† = SEE TYPICAL SECTIONS FOR THICKNESS

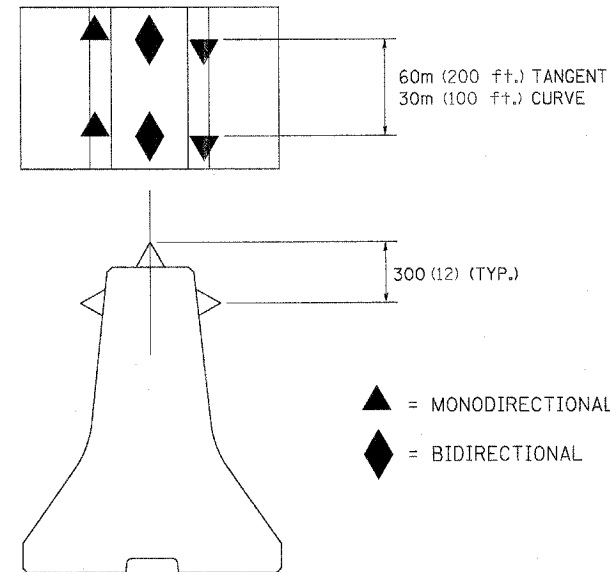
ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE NOTED.

HOT-MIX ASPHALT SHOULDER

23.4a

REVISED 10-06-06

DELINEATION OF CENTER BARRIER OF TWO-LANE TWO WAY OPERATION



DESIGNER NOTE:

Use this with Traffic Control and Protection Standard 701416 when using concrete barrier vs. flexible delineators as the barrier on centerline.

NOTES

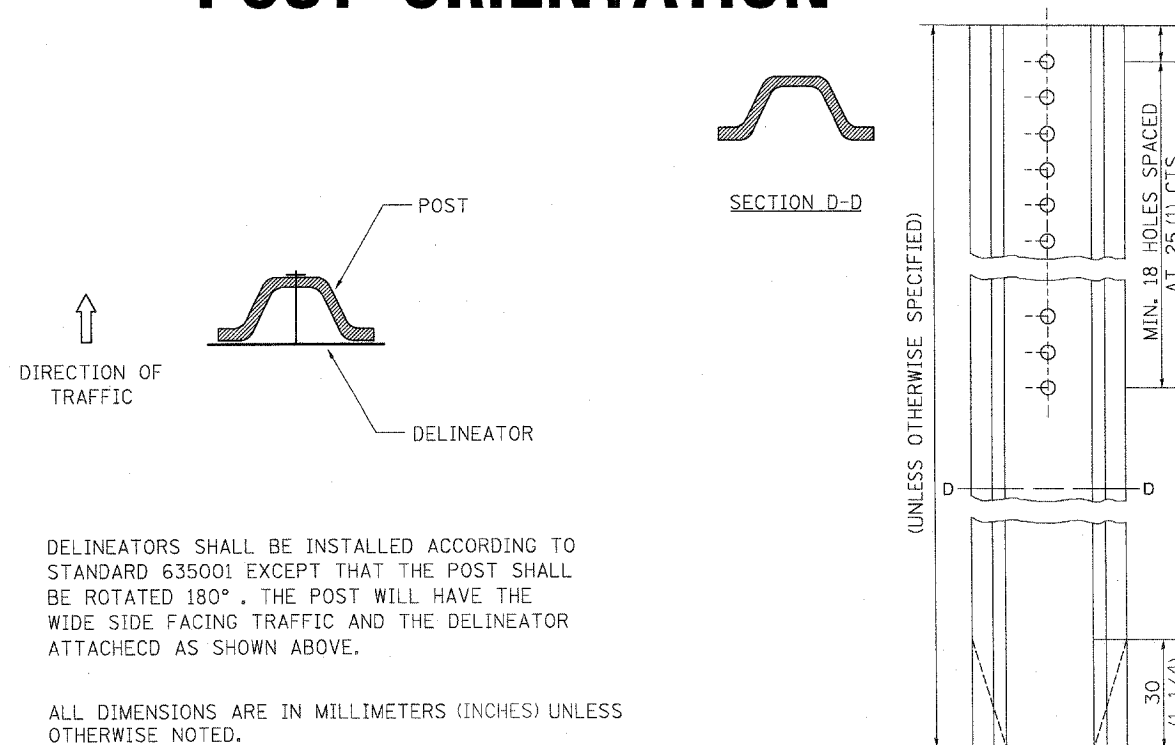
- All reflectors are to be amber in color and meet the specifications of Section 1097 of the Standard Specifications for Road and Bridge Construction.
- All reflectors are to be installed in accordance with Section 782 of the Standard Specifications for Road and Bridge Construction.
- On Interstates do not use the panels mounted on top of the barriers as shown on Standard 701416.
- The cost of the reflectors will be included in the contract unit price per meter (foot) for Temporary Concrete Barrier.
- ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE NOTED.

DELINEATION OF CENTER BARRIER OF TWO-LANE TWO WAY OPERATION

25.4

REVISED 10-10-06

DELINEATOR AND POST ORIENTATION



DELINEATORS SHALL BE INSTALLED ACCORDING TO STANDARD 635001 EXCEPT THAT THE POST SHALL BE ROTATED 180°. THE POST WILL HAVE THE WIDE SIDE FACING TRAFFIC AND THE DELINEATOR ATTACHED AS SHOWN ABOVE.

ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE NOTED.

DELINEATOR AND POST ORIENTATION

37.4

REVISED 1-31-00

TYPICAL MEDIAN CROSSOVER CLOSURE (WITH EMERGENCY OPENING)

GENERAL NOTES

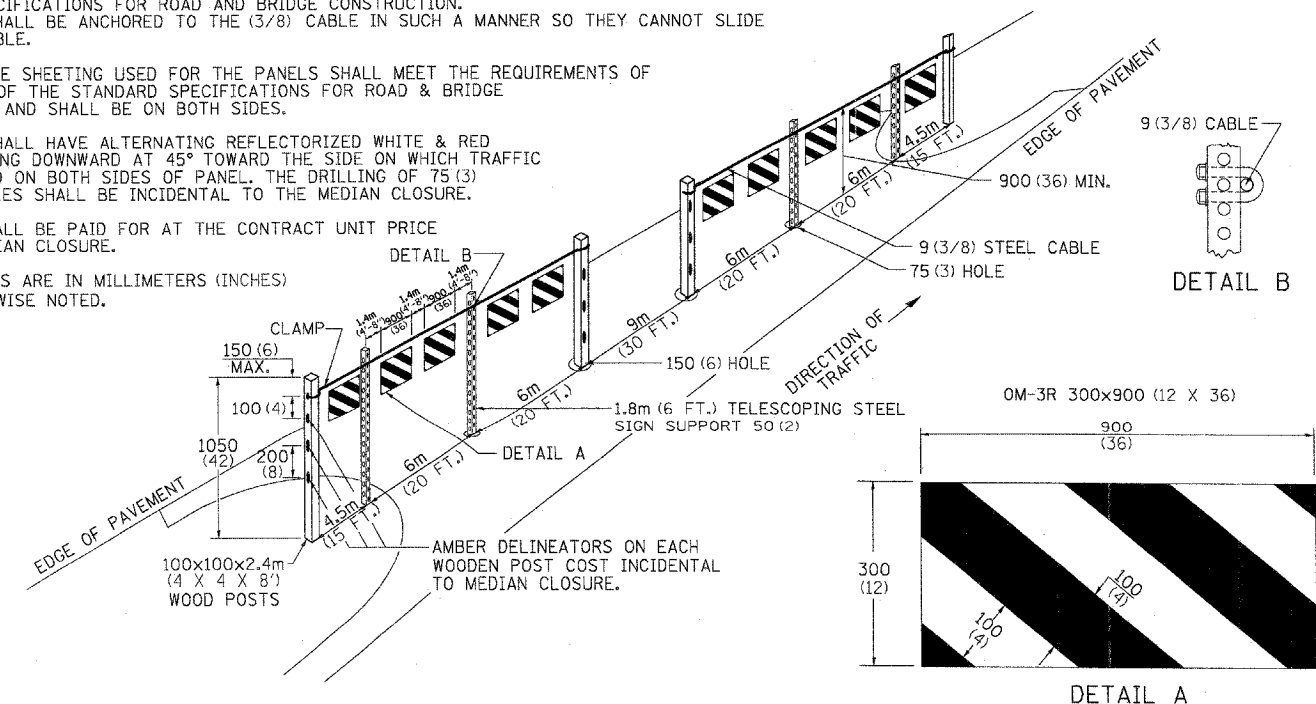
WOOD POSTS, CABLE, AND SIGN SUPPORTS SHALL BE IN ACCORDANCE WITH SECTION 634 & 636 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION. THE PANELS SHALL BE ANCHORED TO THE (3/8) CABLE IN SUCH A MANNER SO THEY CANNOT SLIDE ALONG THE CABLE.

THE REFLECTIVE SHEETING USED FOR THE PANELS SHALL MEET THE REQUIREMENTS OF SECTION 1091 OF THE STANDARD SPECIFICATIONS FOR ROAD & BRIDGE CONSTRUCTION AND SHALL BE ON BOTH SIDES.

ALL PANELS SHALL HAVE ALTERNATING REFLECTORIZED WHITE & RED STRIPES SLOPING DOWNWARD AT 45° TOWARD THE SIDE ON WHICH TRAFFIC WILL PASS AND ON BOTH SIDES OF PANEL, THE DRILLING OF 75 (3) AND 150 (6) HOLES SHALL BE INCIDENTAL TO THE MEDIAN CLOSURE.

THIS WORK SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR MEDIAN CLOSURE.

ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE NOTED.



TYPICAL MEDIAN CROSSOVER CLOSURE (WITH EMERGENCY OPENING)

87.4

REVISED 1-24-07

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
301	(2HB-2, 2HB-1D)	WINNEBAGO	107	10
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
301	(2HB-2, 2HB-10)	WINNEBAGO	107	101
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

TYPICAL MEDIAN CROSSOVER CLOSURE

GENERAL NOTES

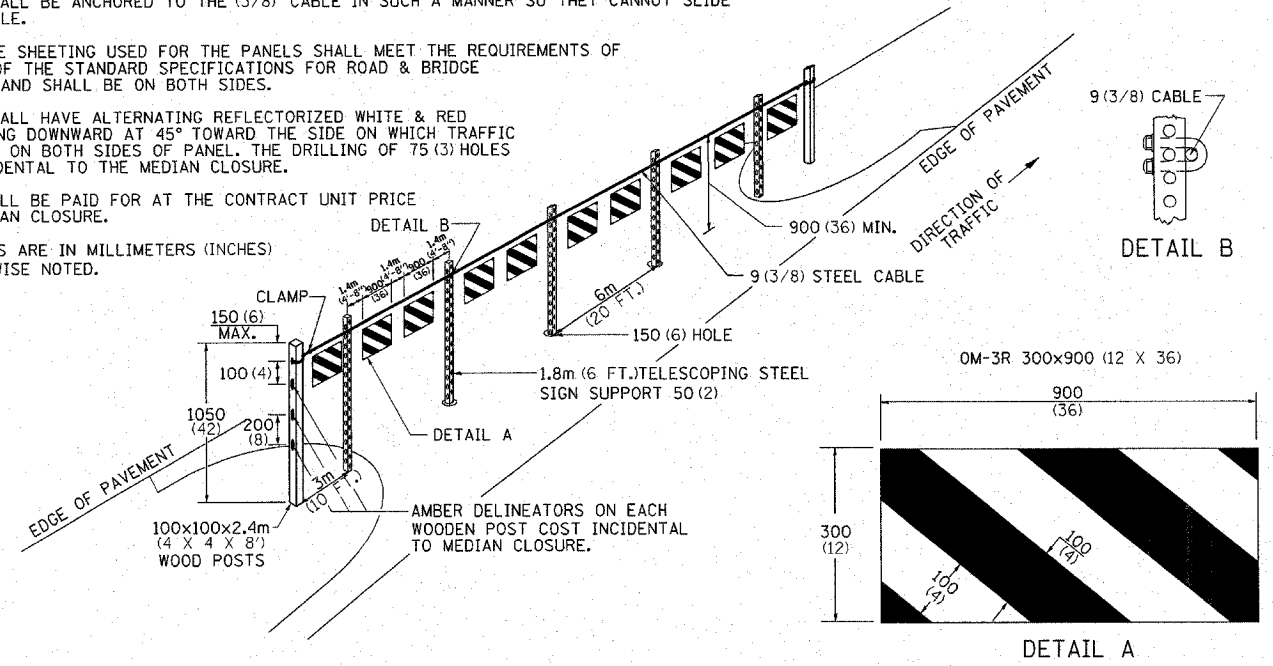
WOOD POSTS, CABLE, AND SIGN SUPPORTS SHALL BE IN ACCORDANCE WITH SECTION 634 & 636 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
THE PANELS SHALL BE ANCHORED TO THE (3/8) CABLE IN SUCH A MANNER SO THEY CANNOT SLIDE ALONG THE CABLE.

THE REFLECTIVE SHEETING USED FOR THE PANELS SHALL MEET THE REQUIREMENTS OF SECTION 1091 OF THE STANDARD SPECIFICATIONS FOR ROAD & BRIDGE CONSTRUCTION AND SHALL BE ON BOTH SIDES.

ALL PANELS SHALL HAVE ALTERNATING REFLECTORIZED WHITE & RED STRIPES SLOPING DOWNWARD AT 45° TOWARD THE SIDE ON WHICH TRAFFIC WILL PASS AND ON BOTH SIDES OF PANEL. THE DRILLING OF 75 (3) HOLES SHALL BE INCIDENTAL TO THE MEDIAN CLOSURE.

THIS WORK SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR MEDIAN CLOSURE.

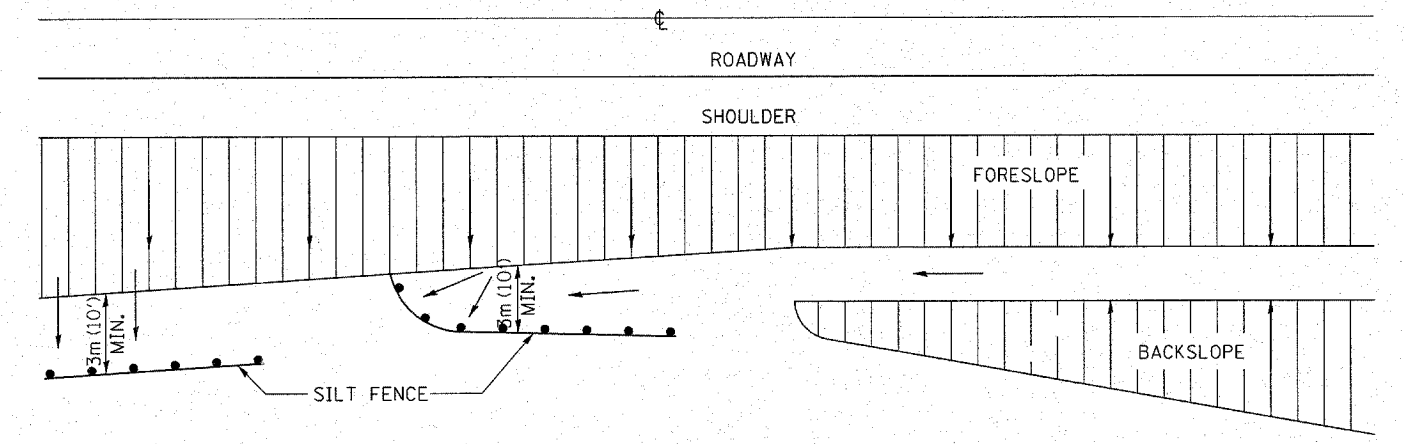
ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE NOTED.



TYPICAL MEDIAN CROSSOVER CLOSURE 98.4

REVISED 10-10-06

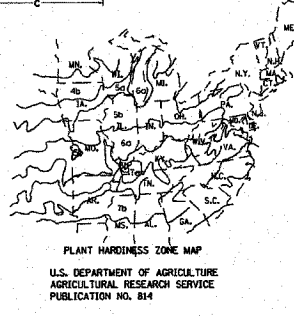
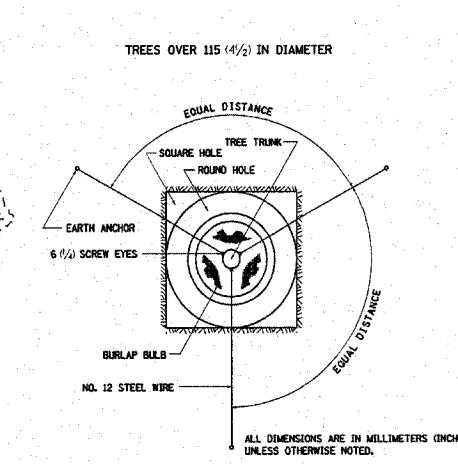
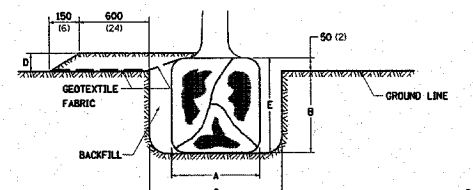
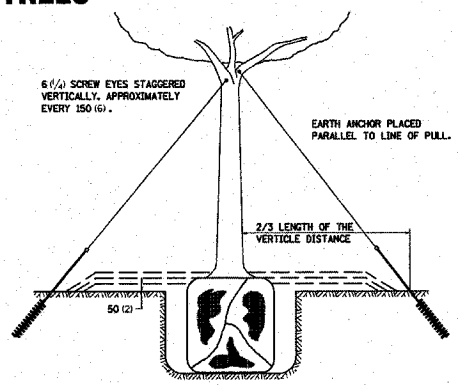
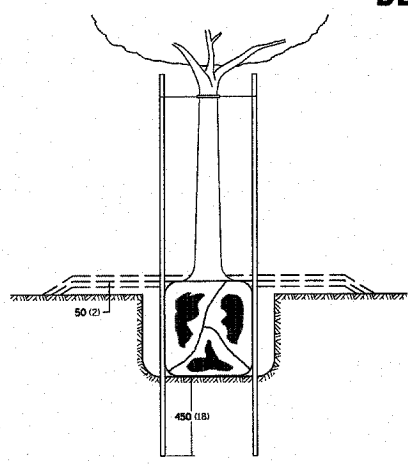
EROSION CONTROL DETAILS FOR SILT FENCE



DETAILS OF PLANTING AND BRACING TREES

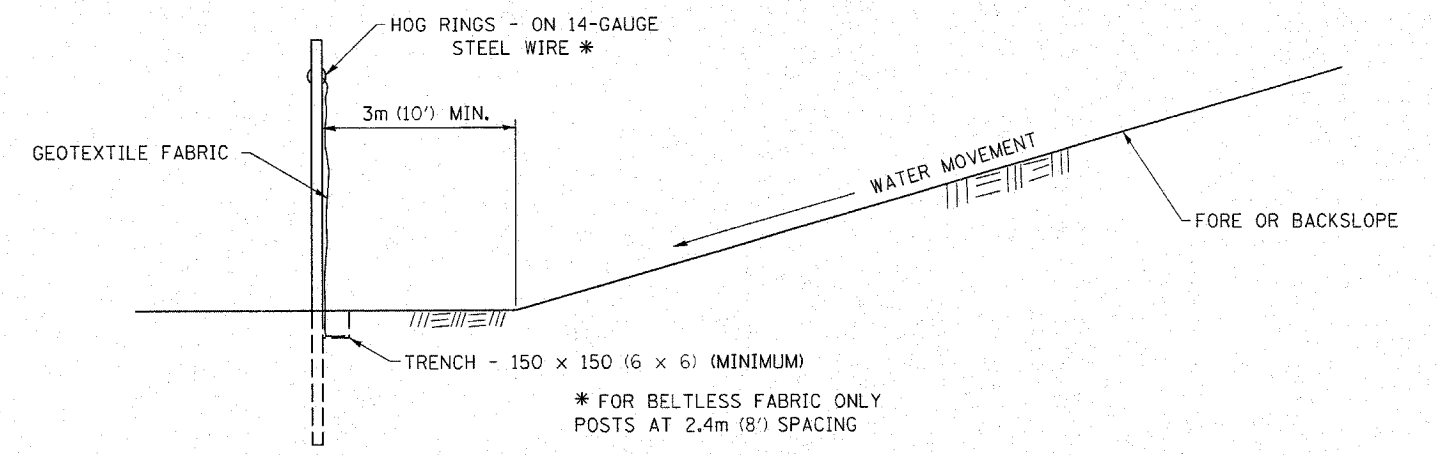
SMALL	A	B	C	D	E	F
TREE SIZE	DIAMETER OF BALL OR ROOT SYS.	DEPTH OF HOLE EXCAVATION	WIDTH OF HOLE EXCAVATION	THICKNESS OF MULCH COVER	DEPTH OF BALL OR ROOT SYS.	VOLUME OF MULCH COVER m³ (CU. YDS.)
1.5-1.8m (5'-6")	400 (16)	250 (10)	750 (30)	100 (4)	300 (12)	0.41 (0.54)
1.5-1.8m (5'-6") BB	400 (16)	250 (10)	750 (30)	100 (4)	300 (12)	0.41 (0.54)
1.8-2.0m (6'-7")	450 (18)	300 (12)	750 (30)	100 (4)	350 (14)	0.41 (0.54)
1.8-2.0m (6'-7") BB	450 (18)	300 (12)	750 (30)	100 (4)	350 (14)	0.41 (0.54)
2.0-2.4m (7'-8")	500 (20)	275 (11)	750 (30)	100 (4)	325 (13)	0.41 (0.54)
2.0-2.4m (7'-8") BB	500 (20)	275 (11)	750 (30)	100 (4)	325 (13)	0.41 (0.54)
2.4-3.0m (8'-10")	600 (24)	350 (14)	900 (36)	100 (4)	400 (16)	0.47 (0.61)
2.4-3.0m (8'-10") BB	600 (24)	350 (14)	900 (36)	100 (4)	400 (16)	0.47 (0.61)
3.0-3.6m (10'-12")	650 (26)	375 (15)	900 (36)	100 (4)	425 (17)	0.47 (0.61)

LARGE	A	B	C	D	E	F
TREE SIZE	DIAMETER OF BALL OR ROOT SYS.	DEPTH OF HOLE EXCAVATION	WIDTH OF HOLE EXCAVATION	THICKNESS OF MULCH COVER	DEPTH OF BALL OR ROOT SYS.	VOLUME OF MULCH COVER m³ (CU. YDS.)
0-50 (0-2)	500 (20)	275 (11)	900 (36)	100 (4)	325 (13)	0.47 (0.61)
50-65 (2-2 1/2) BB	600 (24)	350 (14)	1200 (48)	100 (4)	400 (16)	0.60 (0.78)
65-75 (2 1/2-3) BB	700 (28)	425 (17)	1200 (48)	100 (4)	475 (19)	0.60 (0.78)
75-90 (3-3 1/2) BB	800 (32)	425 (17)	1500 (60)	100 (4)	475 (19)	0.73 (0.96)
90-100 (3 1/2-4) BB	900 (36)	500 (20)	1500 (60)	100 (4)	550 (22)	0.73 (0.96)
100-115 (4-4 1/2) BB	1000 (40)	550 (22)	1800 (72)	100 (4)	600 (24)	0.89 (1.16)
115-125 (4 1/2-5) BB	1100 (44)	600 (24)	1800 (72)	100 (4)	650 (26)	0.89 (1.16)
125-140 (5-5 1/2) BB	1200 (48)	675 (27)	2100 (84)	100 (4)	725 (29)	1.06 (1.38)



U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESEARCH SERVICE
PUBLICATION NO. 814

DETAILS OF PLANTING AND BRACING TREES 92.1



DETAILS OF SILT FENCE

ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE NOTED.

EROSION CONTROL DETAILS FOR SILT FENCE 29.2

REVISED 10-22-01

PLOT DATE = 8/18/2007
 FILE NAME = F:\2275-00
 PLOT SCALE = #SCALE#
 REFERENCE = #REF#

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
301	(2HB-2, 2HB-1D)	WINNEBAGO	107	10
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

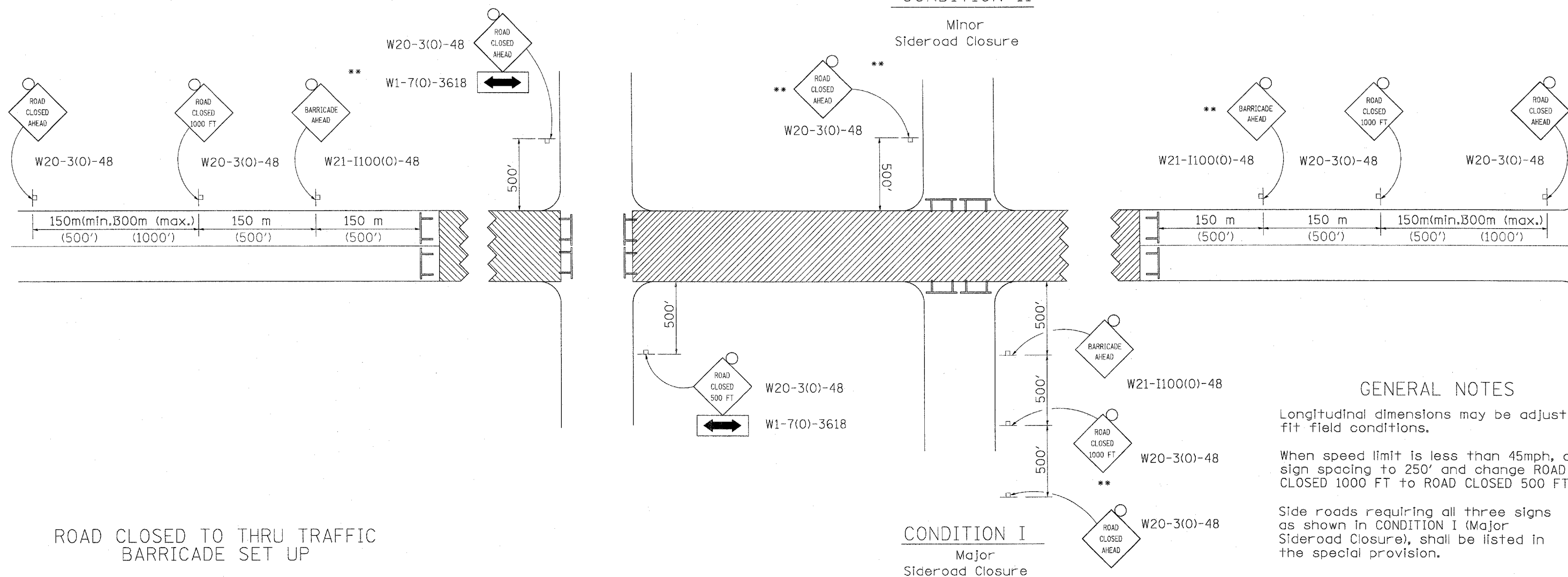
TRAFFIC CONTROL FOR ROAD CLOSURE

CONDITION II

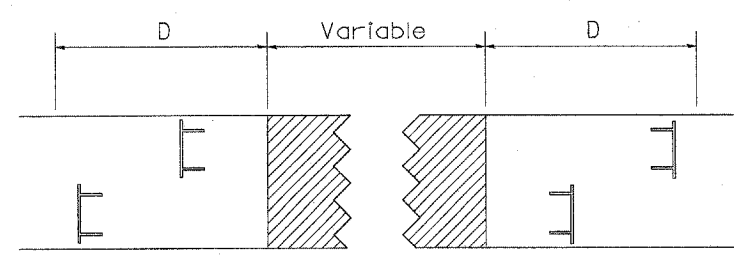
Minor Sideroad Closure

CONDITION I

Major Sideroad Closure



ROAD CLOSED TO THRU TRAFFIC BARRICADE SET UP



Type III Barricades and R11-4-4830 signs shall be as shown in "Road Closed To All Thru Traffic" detail on Highway Standard 702001. If the distance "D" exceeds 600 m (2000') an additional set of barricades and R11-4-4830 shall be placed at each end of the work area.

SYMBOLS

- Work area
- Type III Barricade with Flashers
- Sign with flashing light

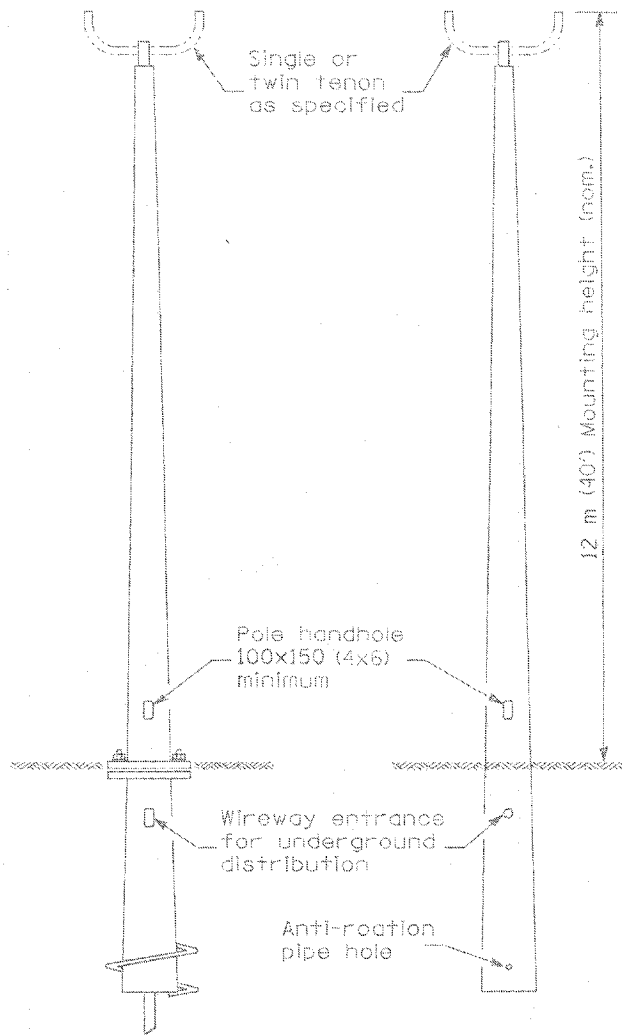
GENERAL NOTES

- Longitudinal dimensions may be adjusted to fit field conditions.
- When speed limit is less than 45mph, change sign spacing to 250' and change ROAD CLOSED 1000 FT to ROAD CLOSED 500 FT.
- Side roads requiring all three signs as shown in CONDITION I (Major Sideroad Closure), shall be listed in the special provision.
- ** Where local access is to be maintained, barricades are to be set up as shown in Road Closed to thru traffic.
- Type III Barricades and R11-2-4830 signs shall be as shown in "Road Closed To All Traffic" detail on Highway Standard 702001.

All dimensions are in millimeters (inches) unless otherwise shown.

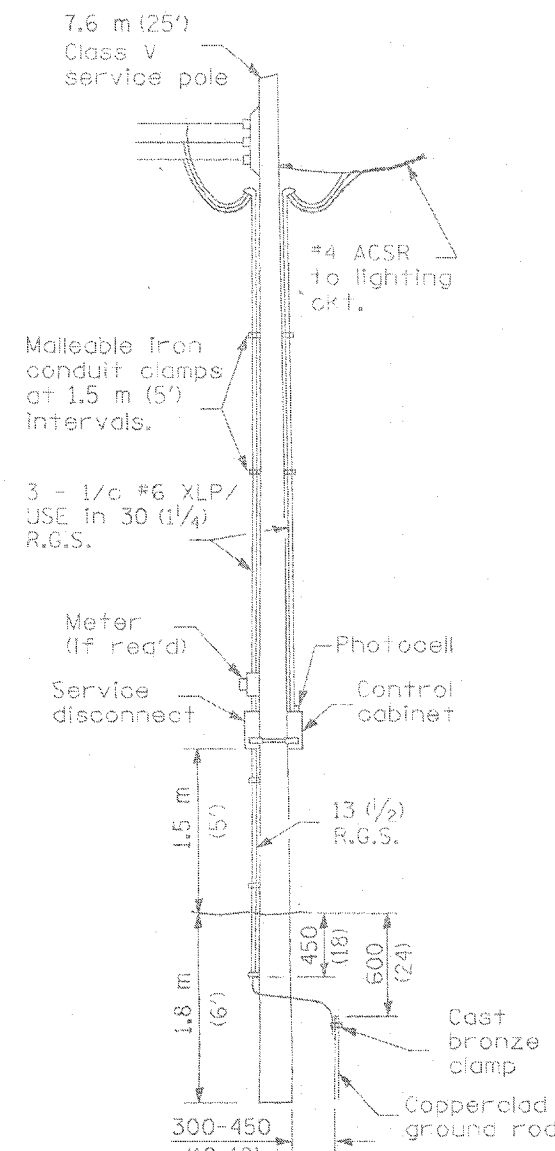
PLOT DATE = 6/20/2007
 FILE NAME = P:\227\5-00
 SHEET NO. = 40.1

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
301	(2HB-2, 2HB-10)	WINNEBAGO	107	103
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

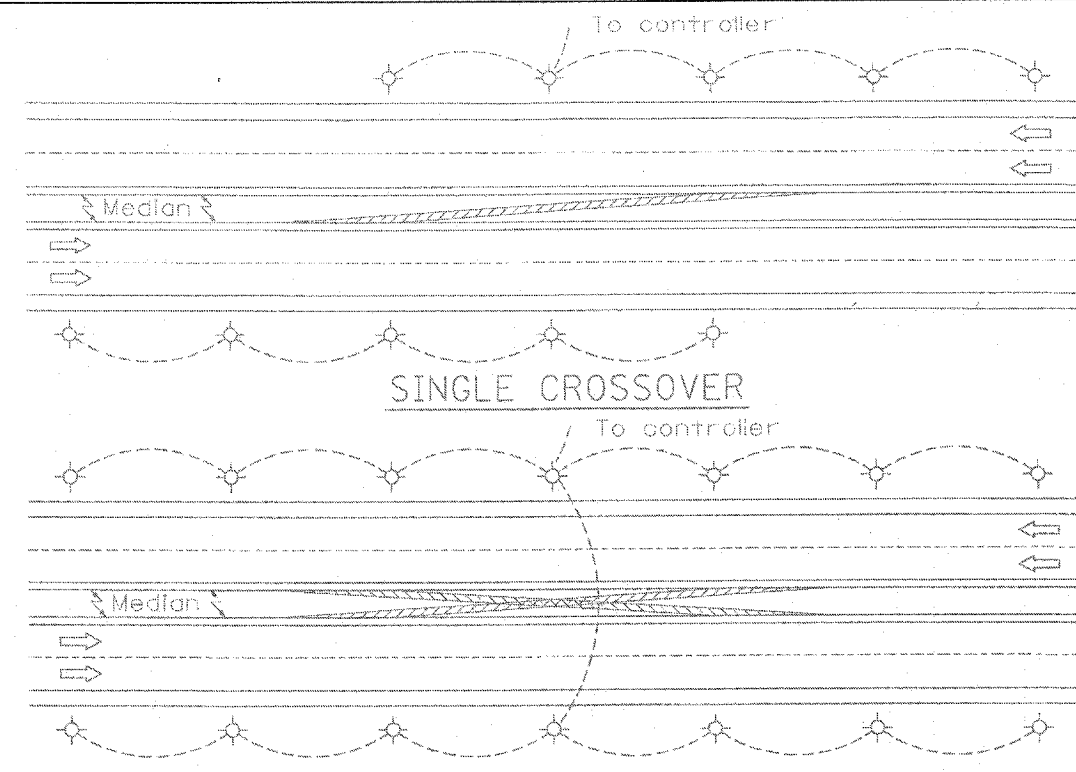


ANCHOR BASE W/
METAL FOUNDATION BUTT BASE

POLE, FIBERGLASS
BREAKAWAY TYPE



SERVICE
INSTALLATION



SINGLE CROSSOVER

DUAL CROSSOVER

NOTE:

Min. Pole spacing 60 m (200')
Max. Pole spacing 75 m (250')

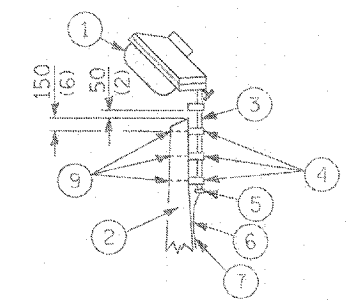
Setback shall be min. 9 m (30')
or 1.5 m (5') back of ditch, unless
breakaway type pole is used.

- ① Luminaire
- ② Wood pole, class 3 or better
- ③ 63 (2 1/2) Galv. steel conduit
- ④ Single offset pole band
- ⑤ Conduit bushing
- ⑥ Cable clamps on 600 (24) centers
- ⑦ 2/c #12 Type USE cable
- ⑧ 25 (1) Galv. steel conduit 3.0 m (10') in length

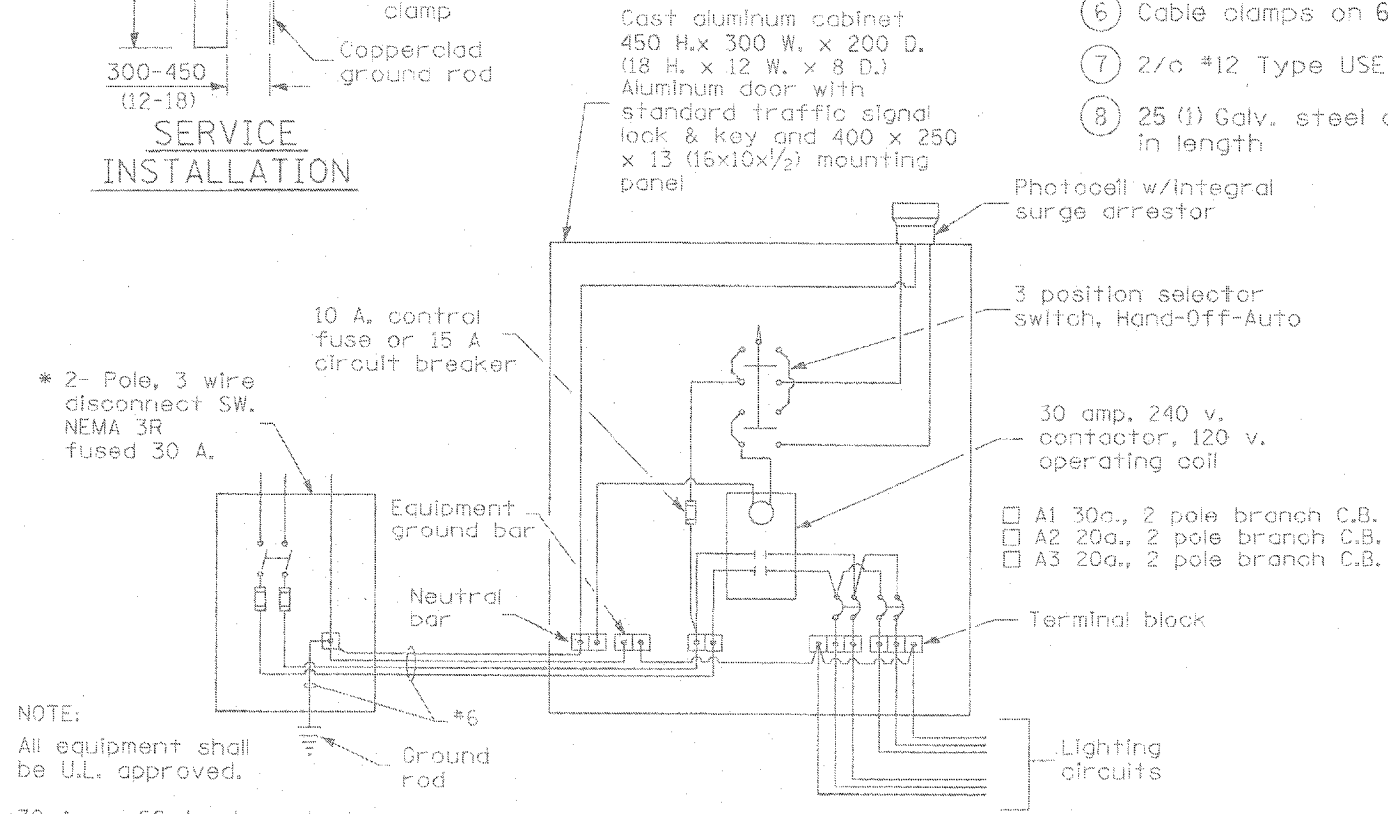
NOTE:

Luminaire(s) shall be oriented and the mounting angle adjusted as recommended by the Engineer.

Connect luminaire equipment ground to ACSR messenger.



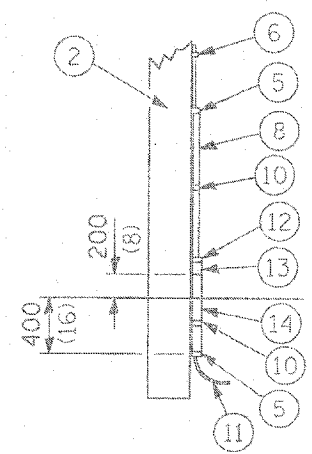
- ⑨ 16 (5/8) Ø hot dipped galvanized bolt with flat washer & locknut (3 req'd)
- ⑩ Conduit clamps on 900 (36) centers
- ⑪ Unit duct
- ⑫ Threaded reducer
- ⑬ "C" Condulet, threaded
- ⑭ 40 (1 1/2) Galv. steel conduit for 1 unit duct or 75 (3) galv. steel conduit for 2 or 3 unit ducts.



NOTE:
All equipment shall be U.L. approved.

* 30 A. or 60 A., dependent upon utility co. rules.

WIRING DIAGRAM



POLE, WOOD

POLE LENGTH	DEPTH IN GROUND
19.8 m (65')	3.6 m (12')
18.0 m (60')	3.0 m (10')
16.8 m (55')	2.7 m (9')
16.0 m (50')	2.4 m (8')
13.7 m (45')	2.1 m (7')
12.0 m (40')	2.0 m (6.5')
10.7 m (35')	1.8 m (6')
9.0 m (30')	1.7 m (5.5')

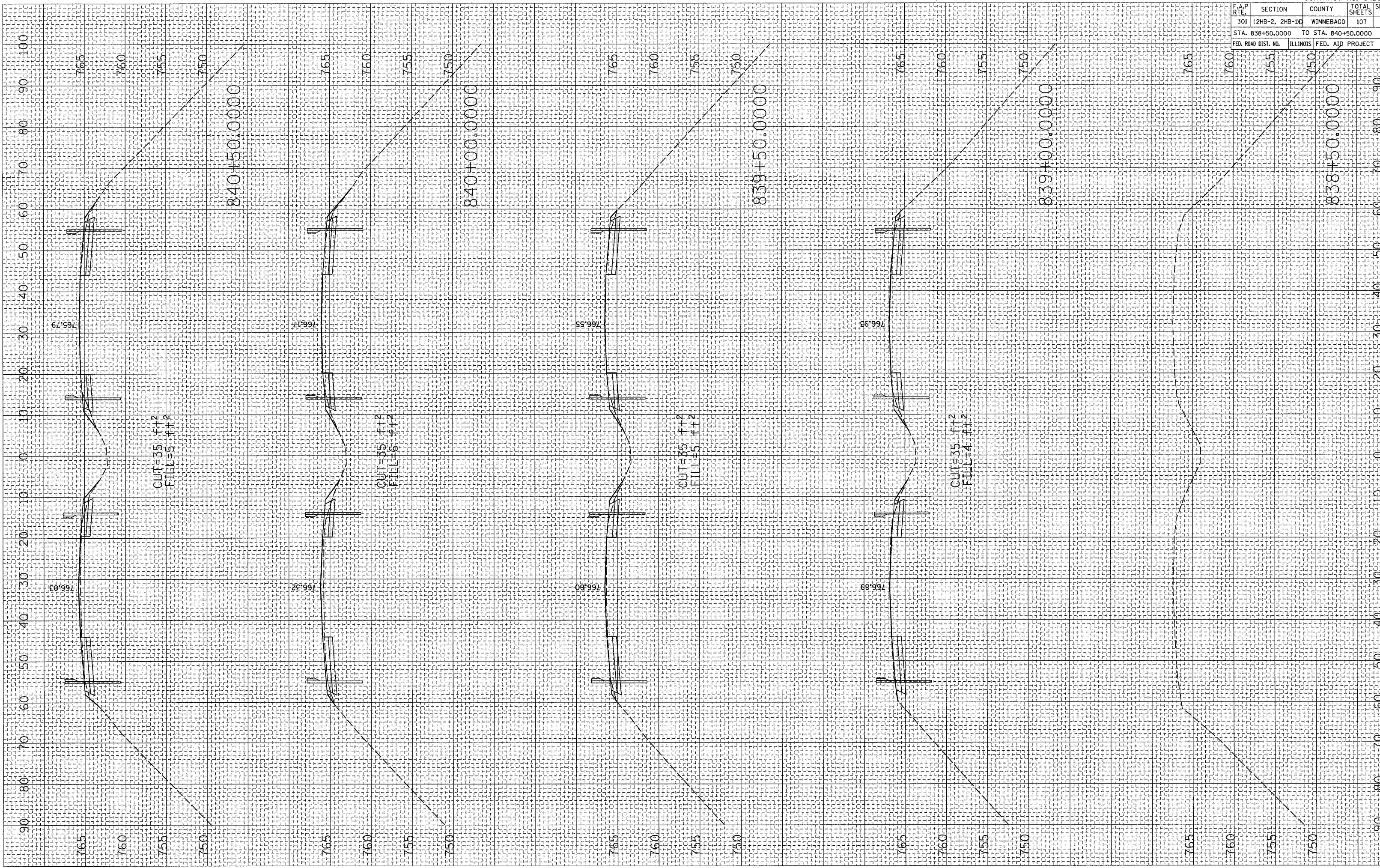
All dimensions are in millimeters (inches) unless otherwise shown.

TEMPORARY LIGHTING SYSTEM

PLOT DATE = 6/29/2007
 FILE NAME = P:\2273-06
 PLOT SCALE = 1/8"=1'-0"
 SHEET NO. = 103

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SH. N.
301	(2HB-2, 2HB-1D)	WINNEBAGO	107	1
STA. 838+50.0000		TO STA. 840+50.0000		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

NO. AREAS CHECKED
NO. AREAS CHECKED
USER NAME = 8/4/22 AM

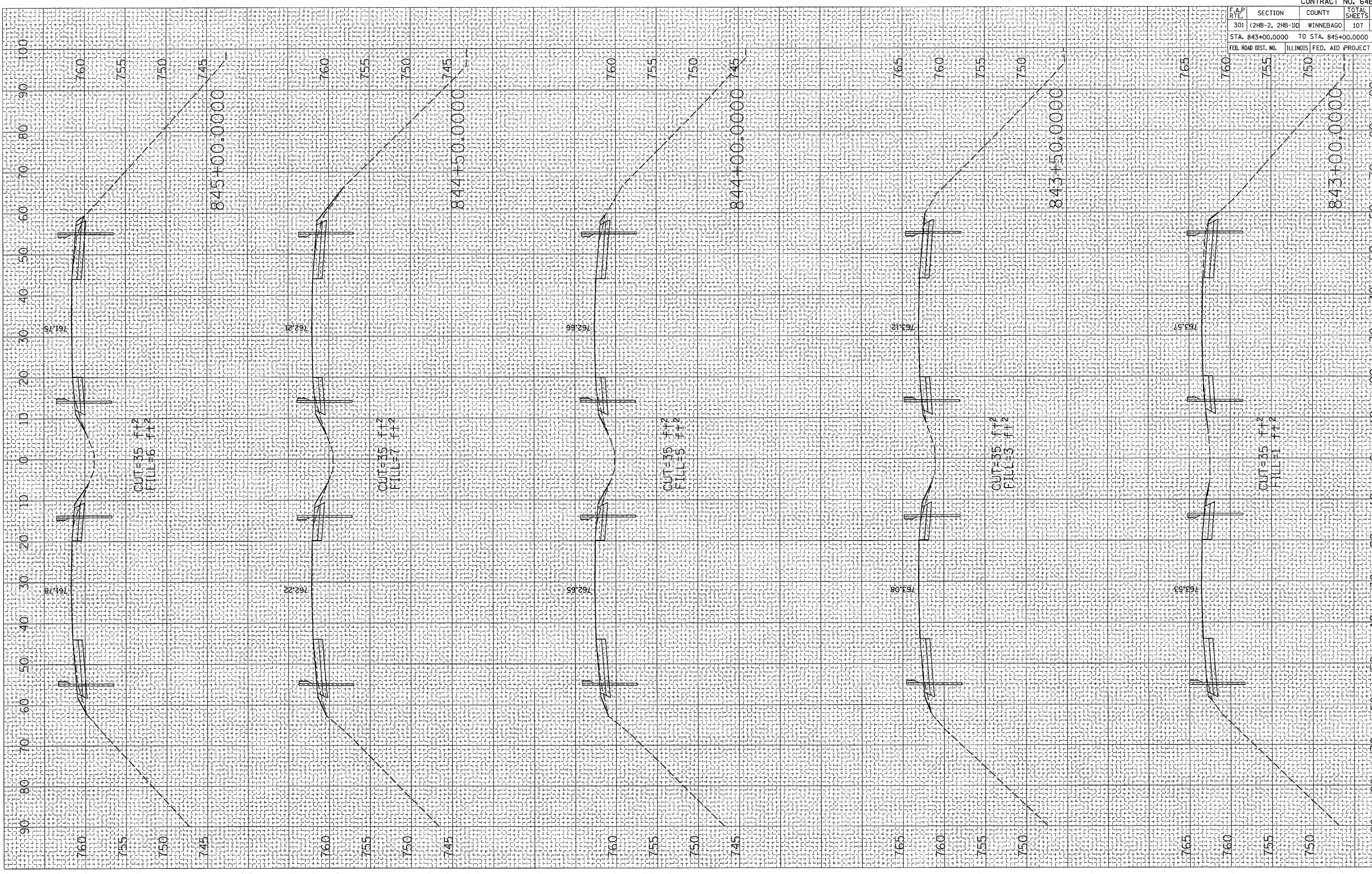


NO. AREAS CHECKED

NO. AREAS CHECKED

USER NAME: 84621 AM

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SH. N.
301	(2HB-2, 2HB-1D)	WINNEBAGO	107	1
STA. 843+00.0000		TO STA. 845+00.0000		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	



CUT=35 ft
FILL=6 ft

CUT=35 ft
FILL=7 ft

CUT=35 ft
FILL=5 ft

CUT=35 ft
FILL=3 ft

CUT=35 ft
FILL=1 ft

761.78

762.22

762.55

763.08

763.53

761.75

762.29

762.56

763.12

763.57

760

755

750

745

760

755

750

745

760

755

750

745

765

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760

755

750

745

760

755

750

745

760

755

750

745

765

760

755

750

765

760

755

750

845+00.0000

844+50.0000

844+00.0000

843+50.0000

843+00.0000

CONTRACT NO. 64B0

F.A.P. RATE.	SECTION	COUNTY	TOTAL SHEETS
301	(2HB-2, 2HB-10)	WINNEBAGO	107
STA. 851+00.0000		TO STA. 852+50.0000	
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT	

NO. AREAS CHECKED

NO. AREAS CHECKED

CR NAME = B3451 AM

