

85552

03-09-12 LETTING ITEM 101

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PLANS FOR PROPOSED
HIGHWAY BRIDGE PROGRAM
FAS 0052 (MONTAGUE ROAD BRIDGE)
over MILL CREEK

SECTION 03-00324-00-BR
PROJECT #BRS-0052 (109)
WINNEBAGO COUNTY
JOB NUMBER C-92-080-12
CONTRACT 85552

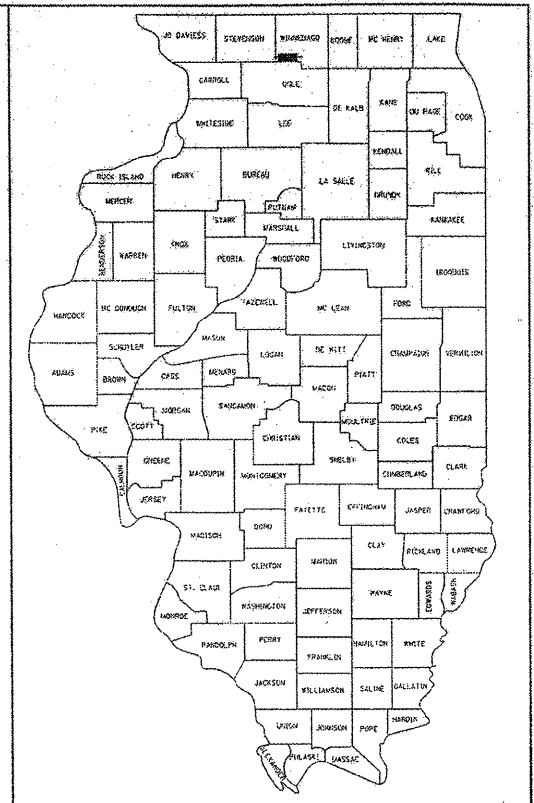
INDEX OF SHEETS

- 1. TITLE SHEET
- 2. GENERAL NOTES, UTILITY CONTACTS, AND TYPICAL SECTIONS
- 3. SUMMARY OF QUANTITIES AND SCHEDULES OF QUANTITIES
- 4. ALIGNMENT, TIES, BENCHMARKS AND REMOVAL PLAN
- 5. PLAN AND PROFILE
- 6. EROSION CONTROL PLAN
- 7.-8. TRAFFIC CONTROL PLAN
- 9.-20. BRIDGE PLANS (INCLUDING BORING LOGS)
- 21.-24. CROSS SECTIONS

LIST OF HIGHWAY STANDARDS

- 280001-06 TEMPORARY EROSION CONTROL SYSTEMS
- 515001-03 NAME PLATE FOR BRIDGES
- 630001-10 STEEL PLATE BEAM GUARDRAIL
- 630301-05 SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
- 631032-07 TRAFFIC BARRIER TERMINAL TYPE 6A
- 635006-03 REFLECTOR AND TERMINAL MARKER PLACEMENT
- 635011-02 REFLECTOR MARKER AND MOUNTING DETAILS
- 667101-02 PERMANENT SURVEY MARKERS
- 701006-03 OFF-RD OPERATIONS, 2L, 2W, 15' TO 24" FROM PAVEMENT EDGE
- 701201-04 LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS ≥ 45 MPH
- 701301-04 LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
- 701901-02 TRAFFIC CONTROL DEVICES
- 720001-01 SIGN PANEL MOUNTING DETAILS
- 720006-03 SIGN PANEL ERECTION DETAILS
- 720011-01 METAL POSTS FOR SIGN, MARKERS & DELINEATORS
- 728001-01 TELESCOPING STEEL SIGN SUPPORTS
- 729001-01 APPLICATIONS OF TYPES A AND B METAL POSTS (FOR SIGNS AND MARKERS)
- 731001-01 BASE FOR TELESCOPING STEEL SIGN SUPPORT
- 780001-03 TYPICAL PAVEMENT MARKINGS
- BLR 21-9 TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS

NOTE
SEE SHEET 2 FOR NAMES AND ADDRESSES
OF UTILITY OWNERS.



LOCATION OF SECTION INDICATED THUS: - - -

APPROVED *Robert J. ...*
COUNTY ENGINEER

PASSED *12-23 2011*
Eric S. ...
DISTRICT ENGINEER OF LOCAL ROADS & STREETS

RELEASING FOR BID BASED ON LIMITED REVIEW
12-23 2011
Eric S. ...
DEPUTY DIRECTOR OF HIGHWAYS REGION 2 ENGINEER

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED IMPROVEMENTS:

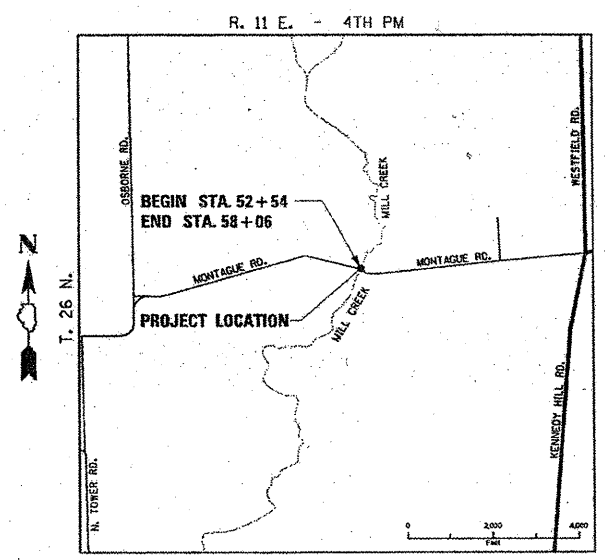
REMOVAL AND REPLACEMENT OF THE EXISTING BRIDGE CARRYING FAS ROUTE 0052 (MONTAGUE ROAD) OVER MILL CREEK AT STA. 55+30. NEW STRUCTURE CONSISTS OF A SINGLE SPAN PPC I-BEAM AND CONCRETE DECK SUPERSTRUCTURE, ON PILE-BENT ABUTMENTS. SN 101-3102

TRAFFIC DATA:

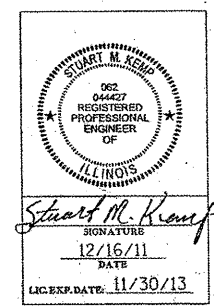
FUNCTIONAL CLASSIFICATION: RURAL COLLECTOR
2011 ADT : 2150 1% TRUCKS
DESIGN SPEED : 50 MPH

PLAN SHEET SCALES: HORIZ. = 20
VERT. = 5

CROSS SECTION SHT. SCALES: HORIZ. = 10
VERT. = 5



LOCATION MAP
SCALE IN FEET
NET LENGTH = 552 FEET (0.10 MILES)



J.U.L.I.E.
JOINT UTILITY LOCATION
INFORMATION FOR EXCAVATION
1-800-892-0123 OR 811
Know what's below.
Call before you dig.

UTILITY NOTE

THE LOCATIONS OF THOSE BURIED AND ABOVEGROUND UTILITIES SHOWN ARE APPROXIMATE, ARE SHOWN FOR CONTRACTOR INFORMATIONAL USE ONLY, AND ARE NOT TO BE REFERENCED FOR CONSTRUCTION PURPOSES. THE IMPLIED PRESENCE OR ABSENCE OF UTILITIES IS NOT TO BE CONSTRUED BY THE OWNER, ENGINEER, CONTRACTOR, OR SUBCONTRACTORS TO BE AN ACCURATE AND COMPLETE REPRESENTATION OF UTILITIES THAT MAY OR MAY NOT EXIST ON THE CONSTRUCTION SITE. BURIED AND ABOVEGROUND UTILITY LOCATION, IDENTIFICATION, AND MARKING ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. REROUTING, DISCONNECTION, PROTECTION, ETC. OF ANY UTILITIES MUST BE COORDINATED AMONG THE CONTRACTOR, UTILITY COMPANY, AND OWNER. SITE SAFETY, INCLUDING THE AVOIDANCE OF HAZARDS, ASSOCIATED WITH BURIED AND ABOVEGROUND UTILITIES REMAIN THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

12/21/2011
11:03:00 AM
C:\Users\stemp\Documents\03-09-12 Letting Item 101.dgn

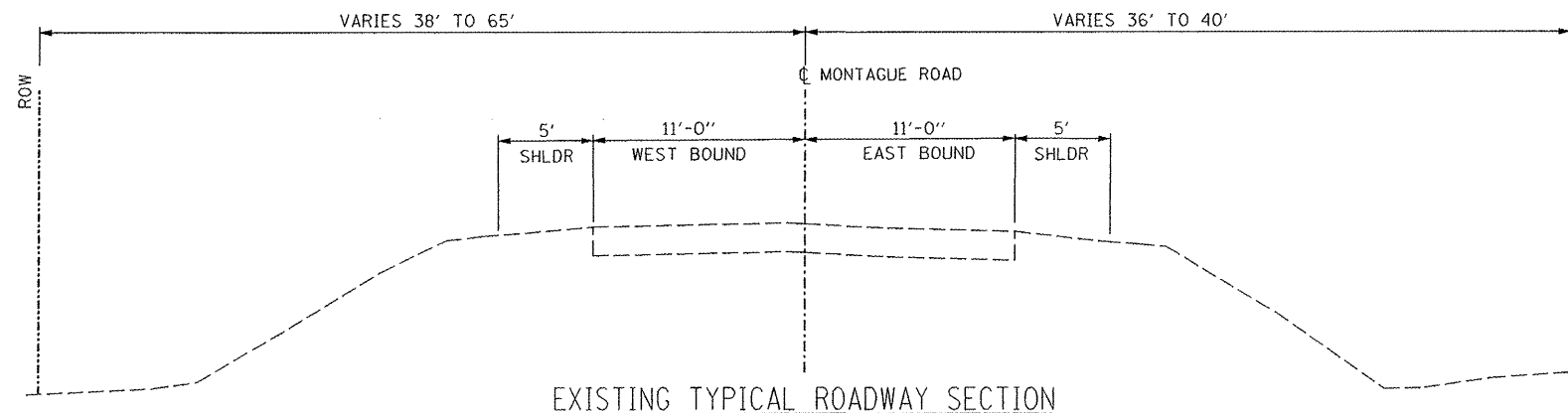
DATE	BY
05/02/11	SKM
05/02/11	SKM
05/02/11	SKM
05/02/11	SKM

03R1808	© Copyright Hanson Professional Services Inc. 2011	F.A.S. ROUTE	SECTION	COUNTY	TOTAL SHEET NO.
12/16/11		0052	03-00324-00-BR	WINNEBAGO	24 1
	Corporate License Number 184-001-084				CONTRACT NO. 85552
					FED. ROAD DIST. NO. 2 (ILLINOIS) FED. AID PROJECT

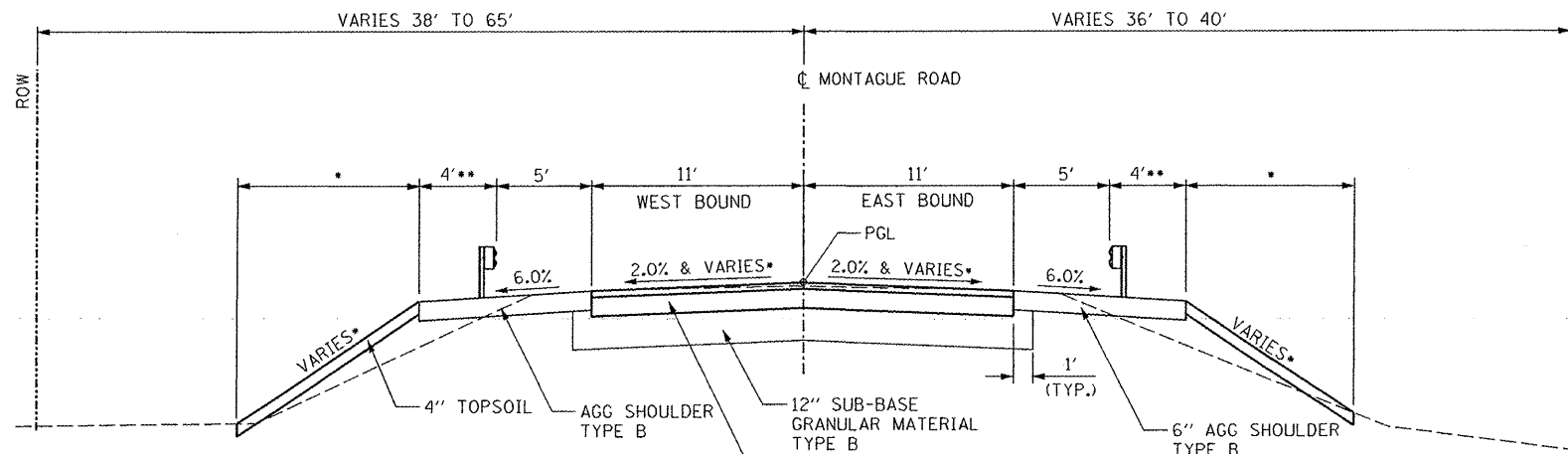
85552

GENERAL NOTES

- WHERE SECTION, SUBSECTION, SUBDIVISION, OR PROPERTY MONUMENTS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE REMOVED. THE CONTRACTOR SHALL PROTECT AND PRESERVE ALL PROPERTY MARKERS UNTIL AN OWNER OR AUTHORIZED SURVEYOR HAS WITNESSED OR REFERENCED THEIR LOCATION.
- CONTRACTORS BIDDING THIS PROJECT SHALL VISIT THE SITE BEFORE BIDDING.
- THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS PRIOR TO CONSTRUCTION AND NOTIFY THE ENGINEER OF ANY DISCREPANCY IMMEDIATELY.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRS TO ANY UTILITY LINES AND EXISTING IMPROVEMENTS TO REMAIN THAT ARE DAMAGED AS A RESULT OF THE WORK.
- ALL SECTIONS, DETAILS, AND NOTES SHOWN ON THE DRAWINGS ARE INTENDED TO BE TYPICAL AND SHALL APPLY TO SIMILAR SITUATIONS ELSEWHERE, UNLESS OTHERWISE SHOWN.
- ADJUSTMENT OF PROPOSED GRADES TO MATCH EXISTING ENTRANCES OR OTHER FIELD CONDITIONS MAY BE REQUIRED AS DIRECTED BY THE ENGINEER.
- ANY DAMAGE TO THE EXISTING PAVEMENT TO REMAIN DURING ANY CONSTRUCTION ACTIVITY SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
- THE OWNER RESERVES THE RIGHT TO REDUCE ANY QUANTITY OR DELETE ANY PAY ITEMS FROM THIS CONTRACT. NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
- ALL ELEVATIONS, STATIONS, AND OFFSETS SHOWN ON THE PLANS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
- THE CONSTRUCTION SHALL BE GOVERNED BY THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION IN ILLINOIS", CURRENT EDITION.
- ALL REFERENCES TO THE "DEPARTMENT" OR "ENGINEER" IN THE I.D.O.T. STANDARD SPECIFICATIONS SHALL BE CONSTRUED TO MEAN THE OWNER OR HIS AGENT.
- ALL PAVEMENT REMOVALS SHALL BE FULL DEPTH SAW CUT AT THE LIMITS TO BE REMOVED.
- THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS.
- ACCESS SHALL BE MAINTAINED TO ALL PROPERTIES DURING ALL STAGES OF CONSTRUCTION.
- EXCESS MATERIAL, IF NOT USED FOR OTHER ON-SITE PURPOSES, SHALL BE HAULED OFF-SITE AT CONTRACTOR'S EXPENSE.
- THE WORK AREA SHALL BE POSITIVELY DRAINED DURING CONSTRUCTION. FINAL GRADES SHALL BE PROTECTED AGAINST DAMAGE FROM EROSION, SEDIMENTATION, AND TRAFFIC.
- THE CONTRACTOR SHALL USE ANY ON SITE MATERIAL DEEMED SUITABLE BY THE ENGINEER BEFORE ANY NEW FILL IS HAULED TO THE SITE.
- CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL EXISTING UNDERGROUND UTILITIES PRIOR TO EXCAVATION.



EXISTING TYPICAL ROADWAY SECTION



- VARIES; SEE CROSS SECTIONS
- ** TRANSITION TO 2.0' AT BACK OF ABUTMENTS

TYPICAL SECTION

STA. 53+50 TO STA. 54+93.5
STA. 55+66.5 TO STA. 56+50

GUARDRAIL

STA. 53+50 TO 54+93.50 RT.
STA. 55+66.5 TO 56+50 RT.
STA. 54+00.25 TO 54+93.50 LT.
STA. 55+66.50 TO 56+50 LT.

MIXTURE REQUIREMENTS

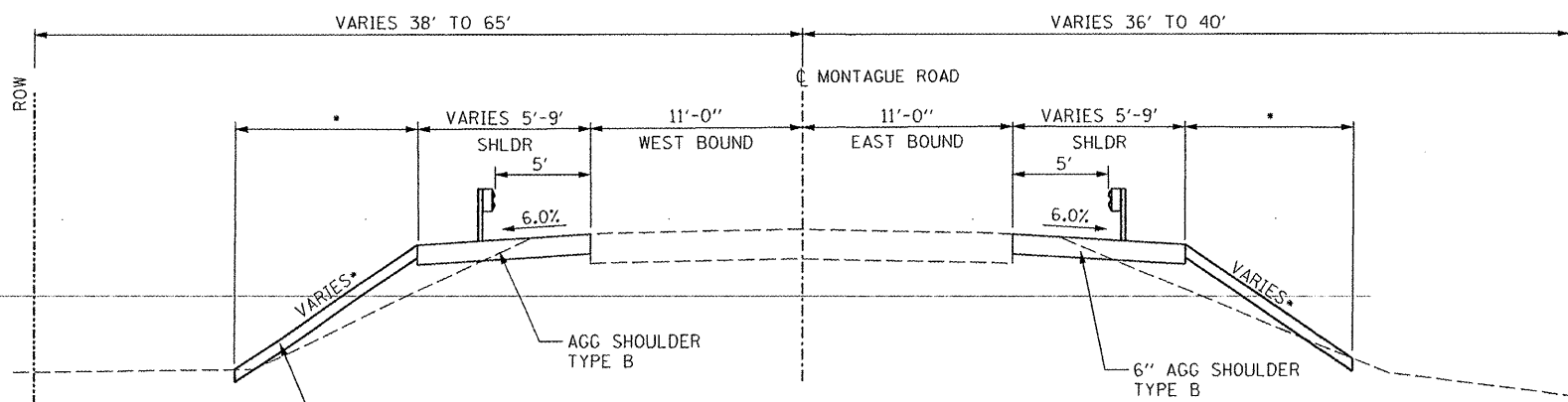
	HMA SURFACE	HMA BINDER
PG GRADE	PG58-28	PG58-28
DESIGN AIR VOIDS	4% AT N50	4% AT N50
MIXTURE COMPOSITION	IL-9.5 OR IL-12.5	IL-19.0
FRICTION AGGREGATE	MIXTURE C	
MIXTURE WEIGHT	112 LB./S.Y./IN	112 LB./S.Y./IN
TRAFFIC FACTOR	0.44	0.44

PAVEMENT DESIGN

SUBGRADE SUPPORT RATING	POOR
FLEXIBLE TRAFFIC FACTOR	0.03
DESIGN PAVEMENT HMA TEMP	77.5°F
DESIGN HMA MODULES (EAC)	525 KSI
DESIGN HMA MICROSTRAIN	210
PAVEMENT THICKNESS	6 3/4" USE 8" TO MATCH EXISTING PAVEMENT

UTILITY CONTACTS

UTILITY NAME	TYPE	PHONE NUMBER
COMED 123 ENERGY AVENUE ROCKFORD, IL 61109	ELECTRIC	(815) 490-2320
FRONTIER 2239 NEWBERG ROAD BELVIDERE, IL 61008	TELEPHONE	(815) 544-6171



EMBANKMENT WIDENING SECTION

STA. 52+54 TO STA. 53+50 RT.
STA. 56+50 TO STA. 58+06 LT.
STA. 56+50 TO STA. 56+93.7 RT.

GUARDRAIL

STA. 52+87.75 TO 53+50 RT.
STA. 56+50 TO 56+59.75 RT.
STA. 56+50 TO 57+72.25 LT.



Hanson Professional Services Inc.
Copyright Hanson Professional Services Inc. 2008

LAYOUT: JDM 07/14/11
DRAWN: JDM 12/16/11
REVIEWED: SMK 12/16/11
modar00377
12/09/2011
1\N83\obj\03RIB88\CA00\Road\Sheet\1-C-882-GEN.dgn

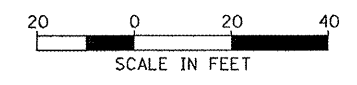
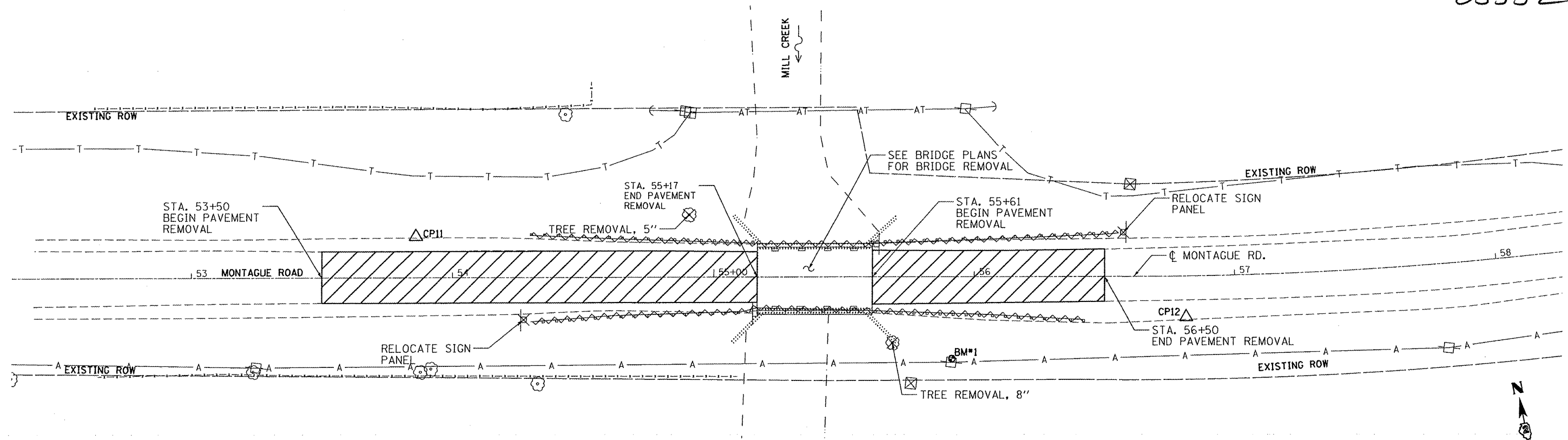
FILE NAME =	USER NAME = modar00377	DESIGNED - SMK	REVISED -
1\N83\obj\03RIB88\CA00\Road\Sheet\1-C-882-GEN.dgn		DRAWN - JDM	REVISED -
PLOT SCALE = AS SHOWN		CHECKED - SMK	REVISED -
PLOT DATE = 12\09\2011		DATE - 12/16/11	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES, UTILITY CONTACTS, AND TYPICAL SECTION
MONTAGUE ROAD BRIDGE REPLACEMENT
ROCKFORD, ILLINOIS

F.A.S. RTE. 0052	SECTION 03-00324-00-BR	COUNTY WINNEBAGO	TOTAL SHEETS 24	SHEET NO. 2
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 85552	

SHEET NO. OF SHEETS STA. - TO STA. -



BENCHMARK				
BENCHMARK	STATION	OFFSET	DESCRIPTION	ELEVATION
BM#1	55+91.66	31.5' RT	SPIKE IN POWERPOLE, SOUTHEAST OF BRIDGE.	806.05

ALIGNMENT DATA		
ALIGNMENT STA	NORTHING	EASTING
STA 52+00	2019489.889	2544431.012
STA 56+62	2019401.321	2544884.443

CONTROL POINTS			
POINT	NORTHING	EASTING	DESCRIPTION
CP11	2019469.847	2544616.470	SET 1/2" PIPE W/CAP
CP12	2019382.181	2544900.530	SET 1/2" PIPE W/CAP

- LEGEND**
- X SIGN PANEL AND POST
 - ~ GUARDRAIL REMOVAL
 - ▨ PAVEMENT REMOVAL
 - ⊗ TREE REMOVAL

HANSON
 Hanson Professional Services Inc.
 Copyright Hanson Professional Services Inc. 2008

LAYOUT: JDM 07/14/11 mcdar00377
 DRAWN: JDM 12/16/11 12/13/2011
 REVIEWED: SMK 12/16/11

FILE NAME = 1:\033\03\03RIB08\CADD\Road\Sheet\104-REM.dgn	USER NAME = mcdar00377	DESIGNED - SMK	REVISED -
PLOT SCALE = AS SHOWN	CHECKED - SMK	DRAWN - JDM	REVISED -
PLOT DATE = 12/13/2011	DATE - 12/16/11	REVIEWED -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ALIGNMENT TIES, BENCHMARKS AND REMOVAL PLAN
MONTAGUE ROAD BRIDGE REPLACEMENT
ROCKFORD, ILLINOIS

SHEET NO. OF SHEETS STA. TO STA.

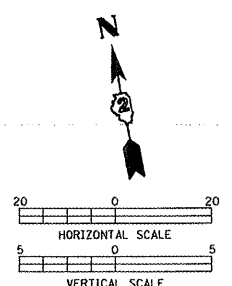
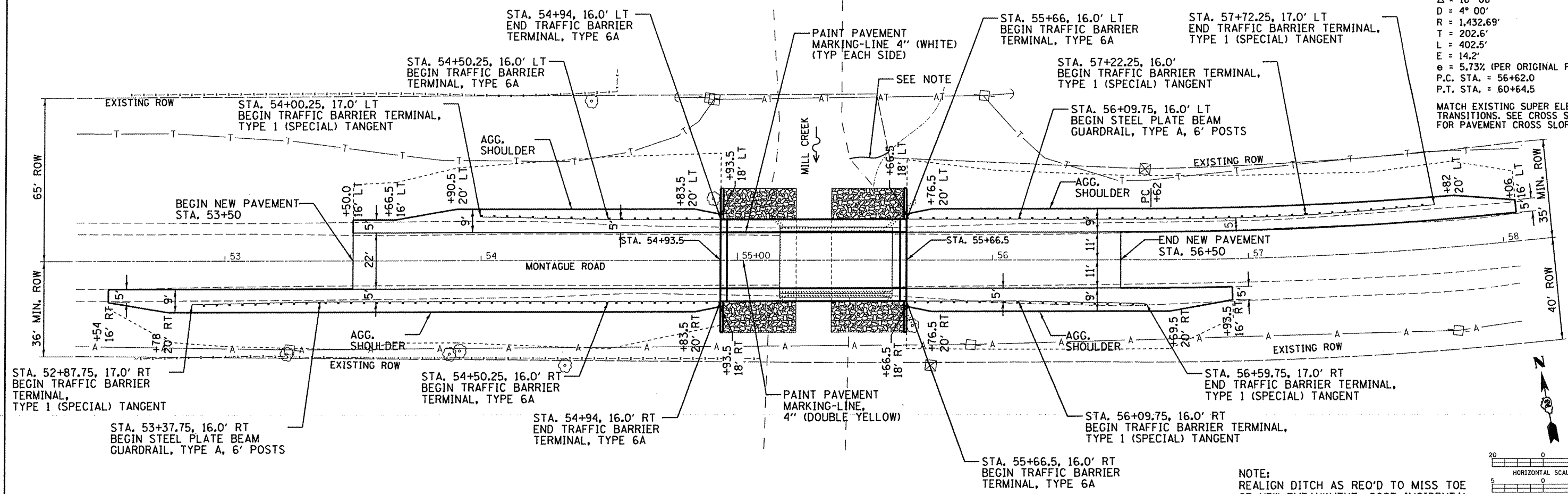
F.A.S. RTE. 0052	SECTION 03-00324-00-BR	COUNTY WINNEBAGO	TOTAL SHEETS 24	SHEET NO. 4
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 85552	



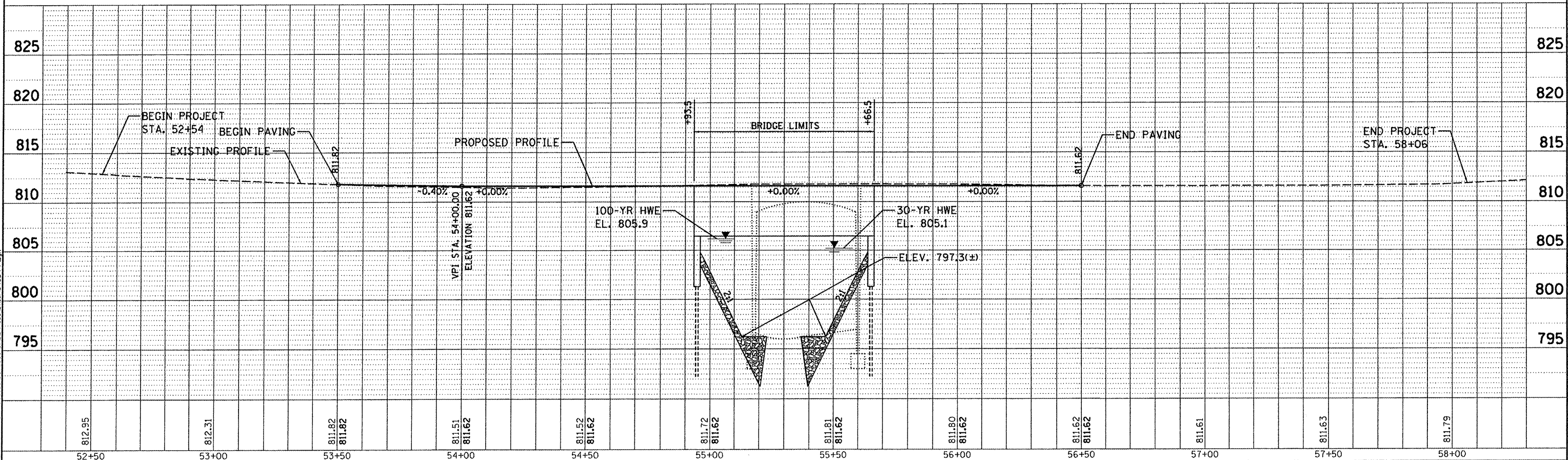
85552

EXISTING CURVE DATA
 PI STA. = 58+64.6
 $\Delta = 16^\circ 06'$
 $D = 4^\circ 00'$
 $R = 1,432.69'$
 $T = 202.6'$
 $L = 402.5'$
 $E = 14.2'$
 $e = 5.73\%$ (PER ORIGINAL PLANS)
 P.C. STA. = 56+62.0
 P.T. STA. = 60+64.5

MATCH EXISTING SUPER ELEVATION TRANSITIONS. SEE CROSS SECTIONS FOR PAVEMENT CROSS SLOPES.



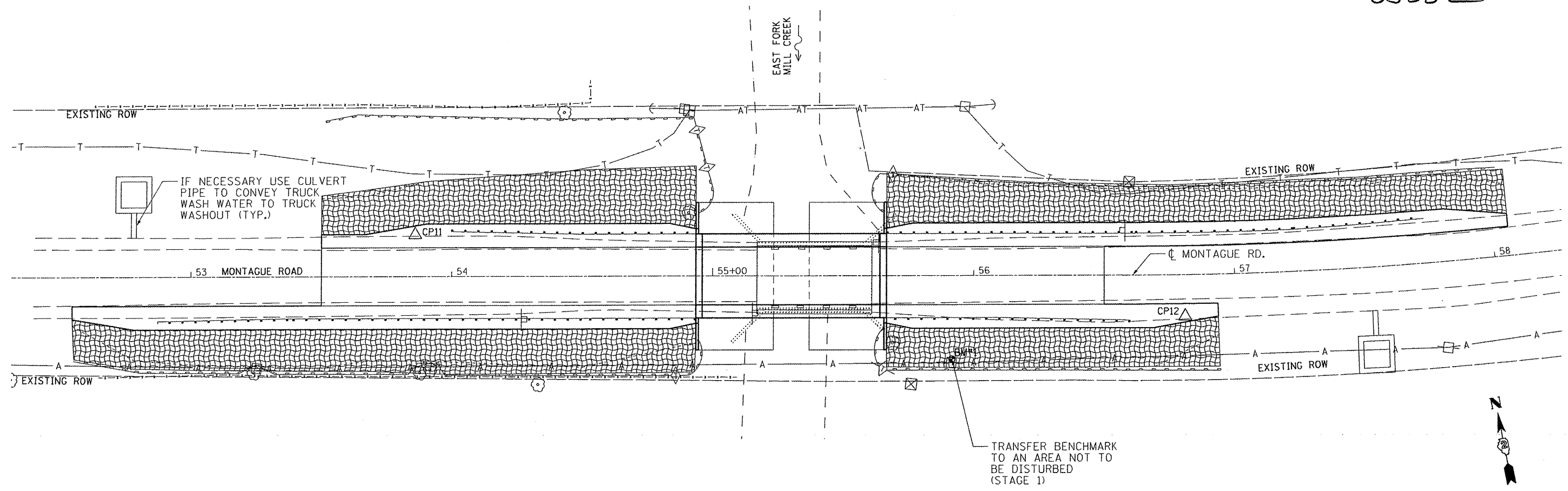
NOTE: REALIGN DITCH AS REQ'D TO MISS TOE OF NEW EMBANKMENT. COST INCIDENTAL TO VARIOUS EARTHWORK PAY ITEMS.



LAYOUT: 05/02/11, mcd000377
 DRAWN: 12/16/11, JDM
 CHECKED: 12/16/11, SMK
 FILE NAME: I:\R31\08\1831808\CA00\Road\Sheet\105-PP.dgn

FILE NAME =	USER NAME = JDM	DESIGNED SMK	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	ROADWAY PLAN AND PROFILE MONTAGUE ROAD BRIDGE REPLACEMENT WINNEBAGO COUNTY, ILLINOIS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
183108\1831808\CA00\Road\Sheet\105-PP.dgn		DRAWN JDM	REVISED -			0052	03-00324-00-BR	WINNEBAGO	24	5
PLOT SCALE = AS SHOWN		CHECKED SMK	REVISED -			CONTRACT NO. 85552				
PLOT DATE = 12/14/2011		DATE 12/16/11	REVISED -			FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				
SHEET NO. OF SHEETS STA. TO STA.										

85552



STAGE 1 - PERIMETER BARRIER TO BE INSTALLED PRIOR TO BEGINNING WORK.
 STAGE 2 - FINAL RESTORATION

LEGEND

- LIMITS OF CONSTRUCTION
- [Cross-hatched] EROSION CONTROL BLANKET
- PERIMETER BARRIER
- ◇ TEMPORARY DITCH CHECK
- [Square] CONCRETE TRUCK WASH OUT



LAYOUT JUN 05/02/11 mcdor00377
 DRAWN JUN 12/16/11 12/06/2011
 REVIEWED SKM 12/16/11 12/06/2011
 I:\03\Jobs\030188\Road\Sheet\106-ECR-REV2.dgn

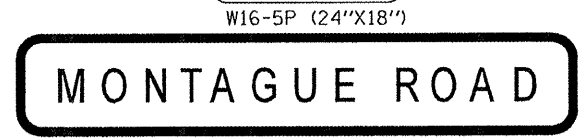
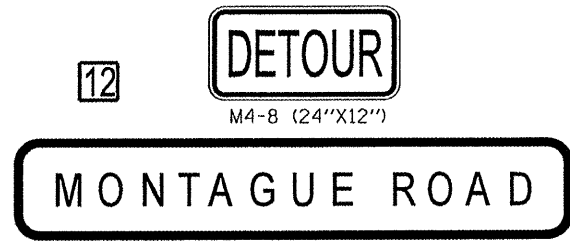
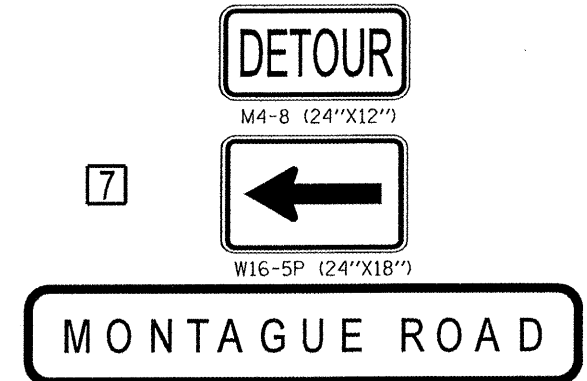
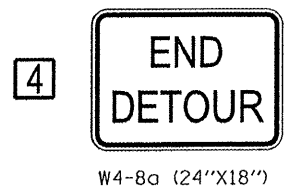
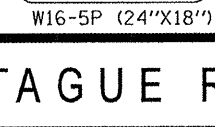
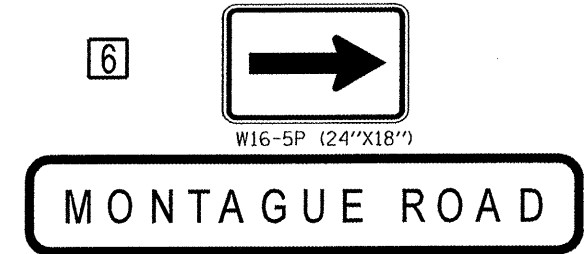
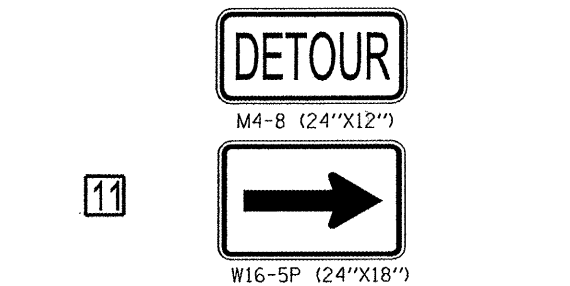
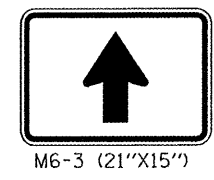
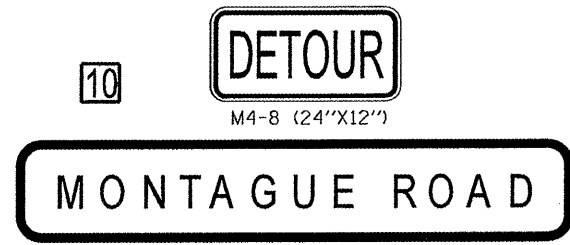
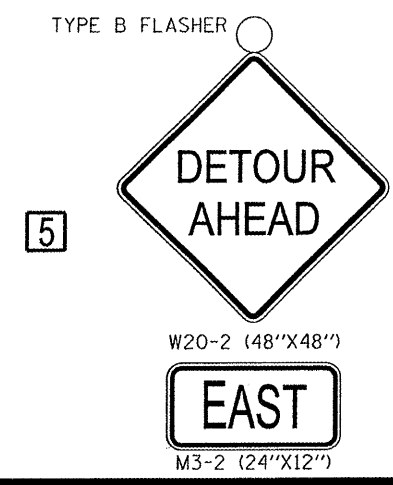
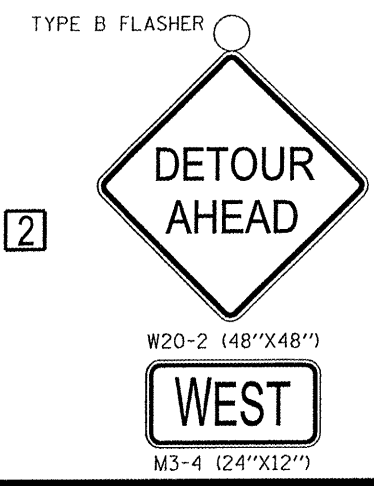
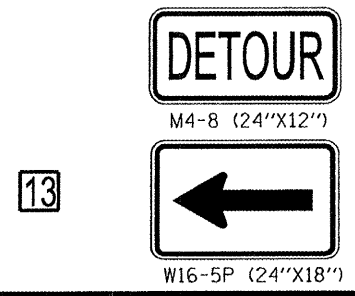
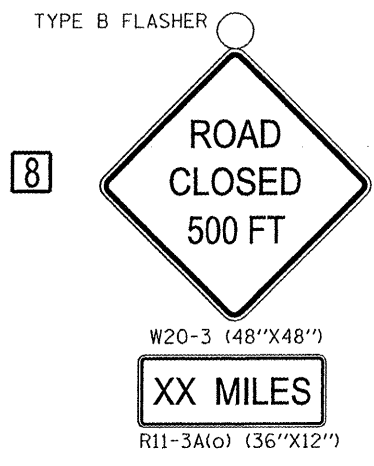
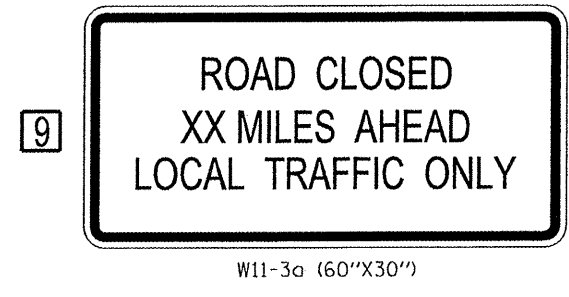
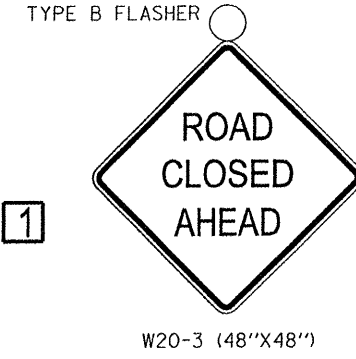
FILE NAME =	USER NAME = mcdor00377	DESIGNED -	REVISED -
1\03\Jobs\030188\Road\Sheet\106-ECR-REV2.dgn		DRAWN -	REVISED -
PLOT SCALE = AS SHOWN		CHECKED -	REVISED -
PLOT DATE = 12\06\2011		DATE = 12/16/11	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EROSION CONTROL PLAN
MONTAGUE ROAD BRIDGE REPLACEMENT
WINNEBAGO COUNTY, ILLINOIS

F.A.S. RTE. 0052	SECTION 03-00324-00-BR	COUNTY WINNEBAGO	TOTAL SHEETS 24	SHEET NO. 6
SHEET NO. OF SHEETS STA. TO STA.		CONTRACT NO. 85552		
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

85552



NOTES:
1. FOR DETOUR PLAN SEE SHT. 7 OF 24

HANSON
Hanson Professional Services Inc.
Copyright Hanson Professional Services Inc. 2008

LAYOUT: JDM 07/14/11 mder00377
DRAWN: JDM 12/16/11 12/16/11
REVIEWED: SMK 12/16/11 12/16/11

FILE NAME =	USER NAME = mder00377	DESIGNED - SMK	REVISED -
IN:\83\Jobs\031808\CAD\Road\Sheet\C-188-TRF.dgn		DRAWN - JDM	REVISED -
		CHECKED - SMK	REVISED -
		DATE - 12/16/11	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

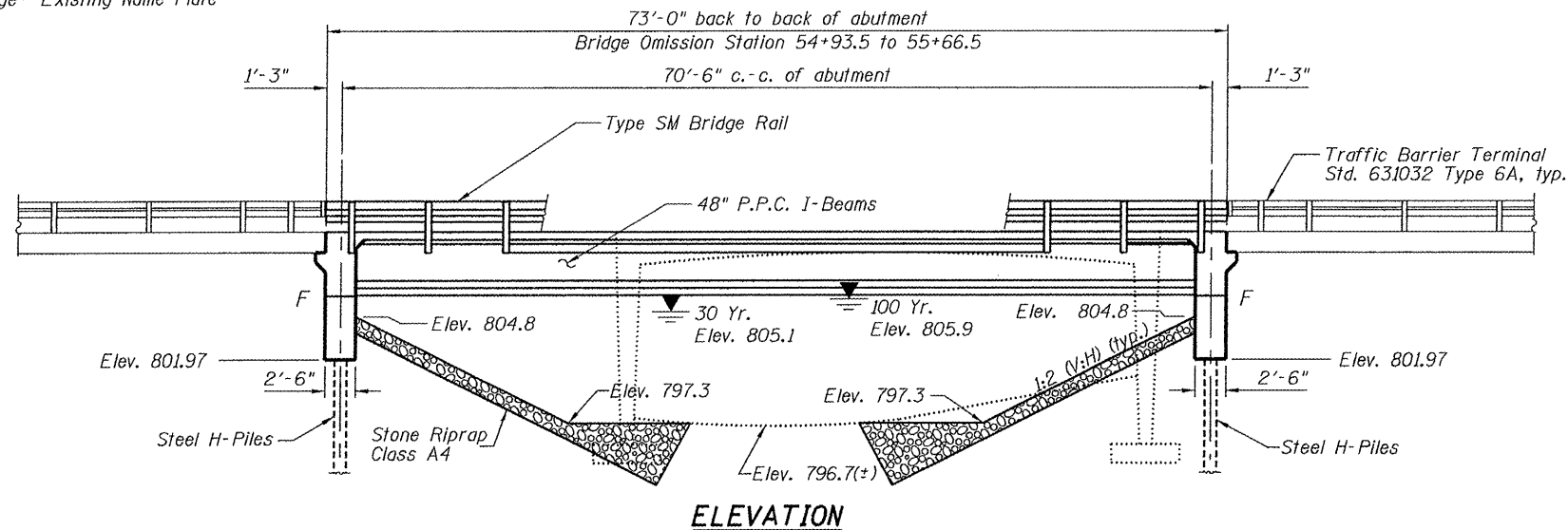
DETOUR ROUTE		F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
MONTAGUE ROAD BRIDGE REPLACEMENT		0052	03-00324-00-BR	WINNEBAGO	24	8
ROCKFORD, ILLINOIS		CONTRACT NO. 85552				
SHEET NO.	OF	SHEETS	STA.	TO	STA.	

FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT
---------------------	---------------------------

B.M.- Benchmark spike located in Power Pole Southeast of bridge. Sta. 55+91.66, 31.5' Rt., Elev. 806.05

Existing Structure - Structure No. 101-3006. Existing structure was constructed in 1936 and consists of a three-sided, rigid frame concrete slab with closed concrete abutments. The bridge width is 27'-6" out-to-out of deck. The bridge length is 44'-0" back to back of abutments. The abutments and wing wall footings are supported by timber piles.

Salvage- Existing Name Plate



DESIGN SPECIFICATIONS

2010 AASHTO LRFD Bridge Design Specifications - 5th edition

LOADING HL-93

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

DESIGN STRESSES

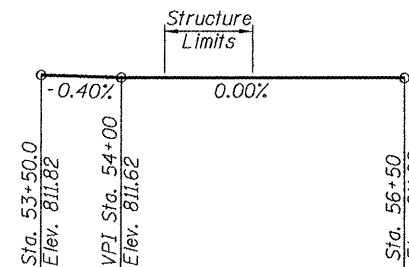
FIELD UNITS
f'c = 3,500 p.s.i.
fy = 60,000 p.s.i. (Reinforcement)

PRECAST PRESTRESSED UNITS
f'c = 6,000 p.s.i.
f'ci = 5,000 p.s.i.
fpu = 270,000 p.s.i. (1/2" φ low relax. strands)
fbpt = 201,960 p.s.i. (1/2" φ low relax. strands)

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec (SD1) = 0.056
Design Spectral Acceleration at 0.2 sec (SDs) = 0.099
Soil Site Class = C

85552



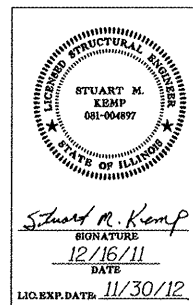
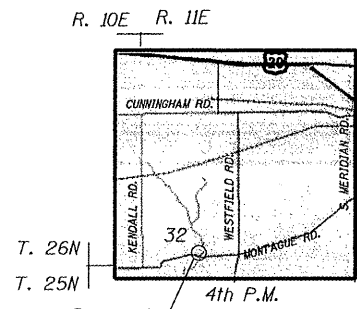
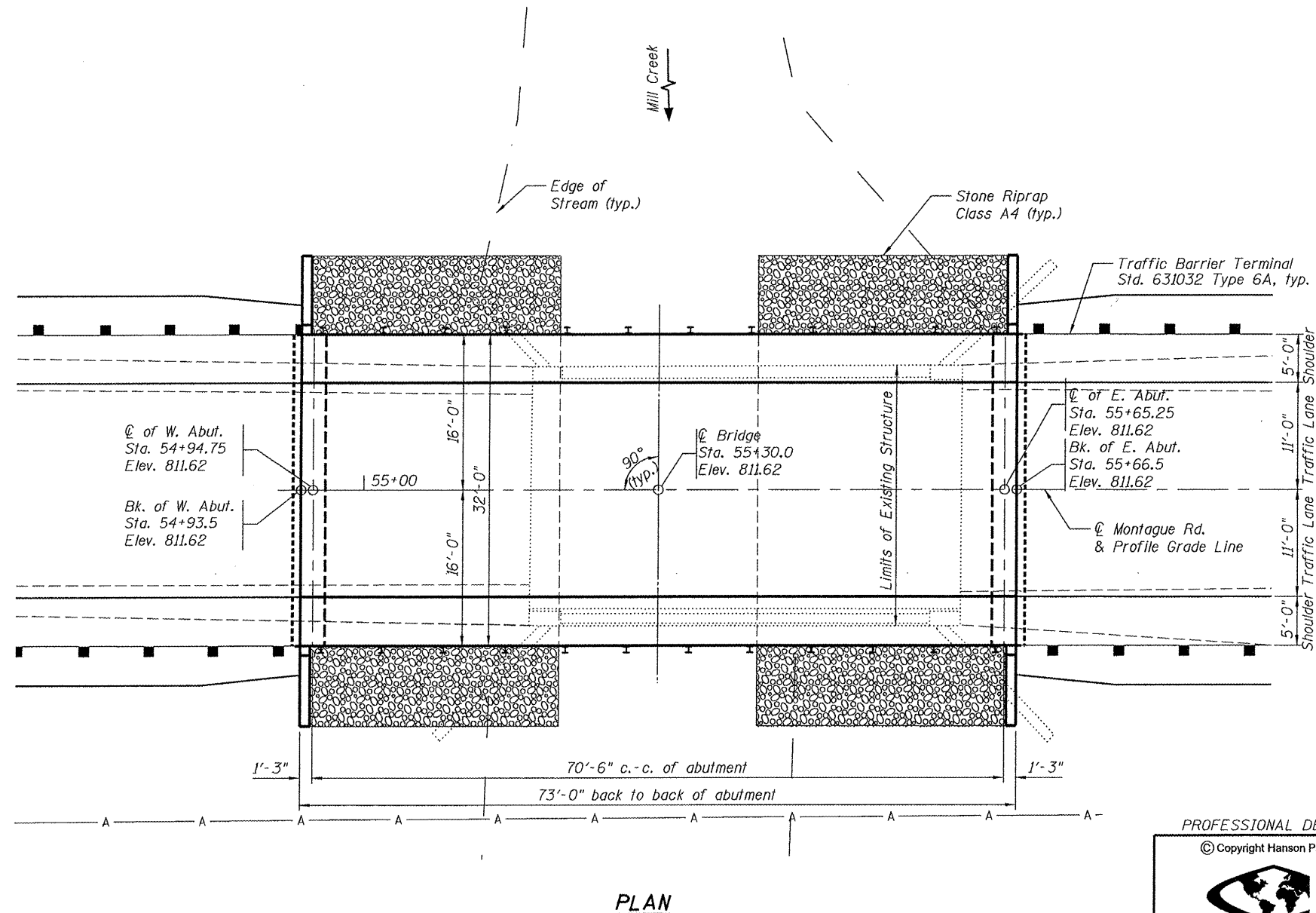
DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	W. Abut.	E. Abut.
	801.97	801.97

WATERWAY INFORMATION

Drainage Area = 5.2 Sq. Mi. Low Grade Elev. = ±811.62

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Head - Ft.		Headwater El.		
			Exist.	Prop.	H.W.E. Exist.	H.W.E. Prop.	Exist.	Prop.	
Design	30	1690	284.4	342.8	805.1	0.13	0.11	805.2	805.2
Base	100	2700	336.0	408.5	805.9	0.57	0.29	806.5	806.2



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

INDEX OF SHEETS

1. General Plan and Elevation
2. General Notes, Bridge Bill of Materials and Riprap Details
3. Top of Bridge Slab Elevations
4. Superstructure
5. Integral Abutment Diaphragm Details
6. Framing Plan
- 7-8. PPC I-Beam & Details
9. Steel Railing, Type SM
10. Abutments
11. Steel H-Pile Details
- 12-13. Boring Logs

**GENERAL PLAN & ELEVATION
STRUCTURE NUMBER 101-3102**

PROFESSIONAL DESIGN FIRM LICENSE #184-001084

© Copyright Hanson Professional Services Inc. 2011

03R1808 SHEET NO. 1
13 SHEETS
DATE 12/16/11

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0052	03-00324-00-BR	Winnebago	24	9
CONTRACT NO. 85552				
FED. ROAD DIST. NO. 2 ILLINOIS FED. AID PROJECT				

12/16/2011
 I:\03\Jobs\03R1808\CADD\Struct\Sheet\101-009-09R1E.dgn
 LAYOUT 7/25/11
 DRAWN JOM 12/16/11
 REVIEWED SKK 12/16/11

GENERAL NOTES

Reinforcement bars shall conform to the requirements of ASTM A706, Grade 60. See Special Provisions.

Reinforcement bars designated (E) shall be epoxy coated.

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

Protective coat shall be applied to the entire top surface of the bridge deck.

The Contractor shall obtain a construction permit from the Illinois Department of Natural Resources (IDNR), Office of Water Resources for any temporary construction activity placed in the water, except cofferdams. This shall include the placement of material for run-arounds, causeways, etc. Any permit application by the Contractor shall refer to IDNR Floodway Construction permit number 3704 allowing permanent construction as shown on the contract plans.

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

**MONTAGUE ROAD BRIDGE
BUILT 2012 BY
WINNEBAGO COUNTY
SEC. 03-00324-00-BR
F.A.S. RT. 0052 STA. 53+30
STR. NO. 101-3102 LOADING HL-93**

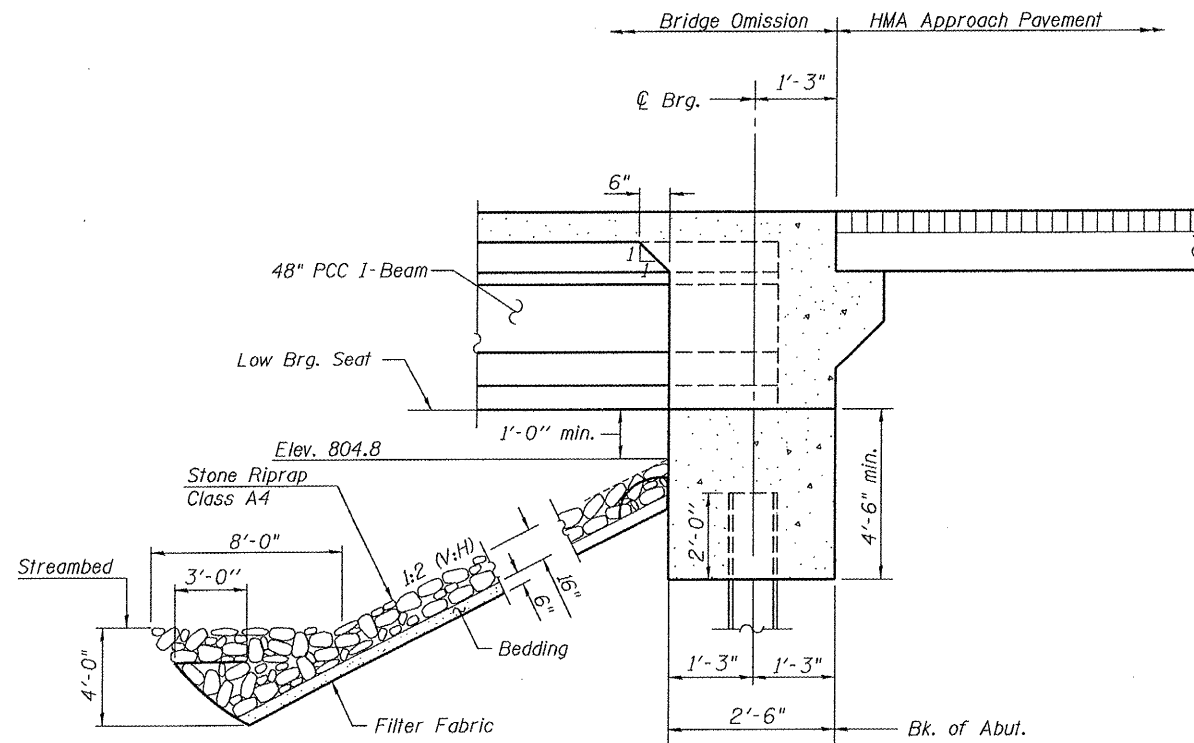
LETTERING FOR NAME PLATE

Locate Name Plate at Corner of Bridge
(See Std. 515001-03)

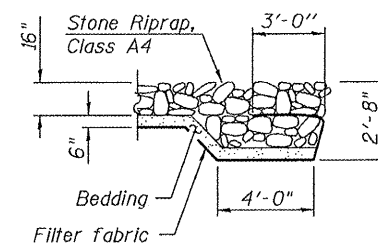
TOTAL BILL OF MATERIALS

85552

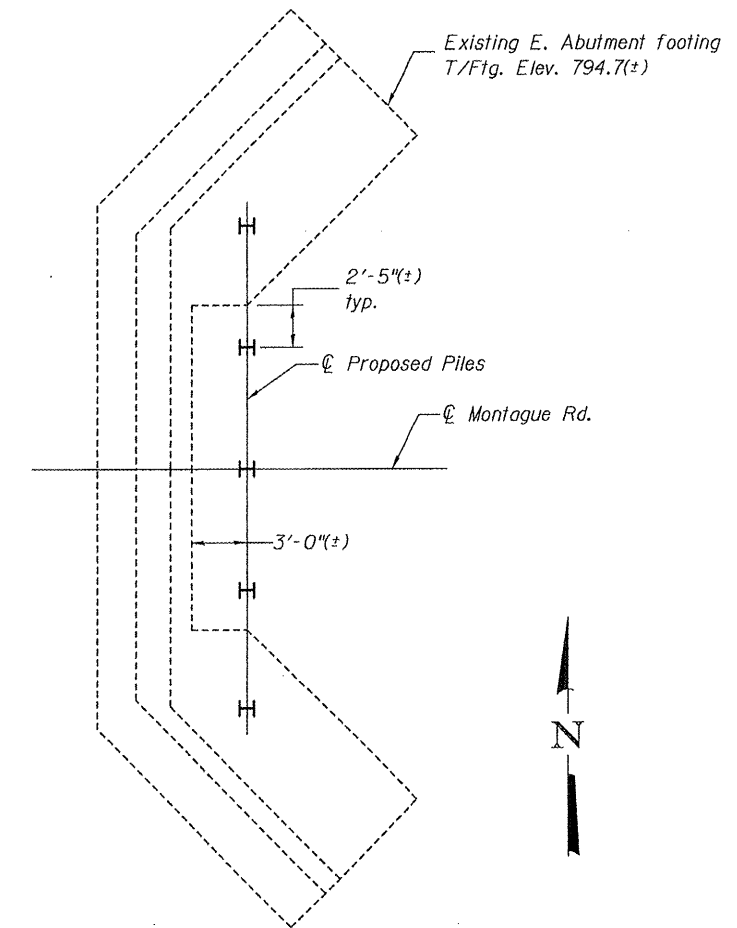
Item	Unit	Super	Sub.	Total
Stone Riprap, Class A4	Sq. Yd.	—	320	320
Filter Fabric	Sq. Yd.	—	320	320
Removal of Existing Structures	Each	1	—	1
Structure Excavation	Cu. Yd.	—	253	253
Concrete Structures	Cu. Yd.	—	40.6	40.6
Concrete Superstructure	Cu. Yd.	88.6	—	88.6
Bridge Deck Grooving	Sq. Yd.	243	—	243
Concrete Encasement	Cu. Yd.	—	3.5	3.5
Protective Coat	Sq. Yd.	260	—	260
Furnishing and Erecting PPC I-Beam, 48"	Foot	357.5	—	357.5
Reinforcement Bars, Epoxy Coated	Pound	16,330	5,490	21,820
Steel Railing, Type SM	Foot	146	—	146
Furnishing Steel Piles HP12x53	Foot	—	352	352
Driving Piles	Foot	—	352	352
Test Pile Steel HP12x53	Each	—	2	2
Pile Shoes	Each	—	8	8
Name Plates	Each	1	—	1



SECTION THRU ABUTMENT



FLANK STONE RIPRAP DETAIL



EAST ABUTMENT FOUNDATION PLAN

Contractor shall remove portions of existing abutment footing, wing walls, and piles as required to drive new piles. Cost included in Removal of Existing Structures.

**GENERAL NOTES, TOTAL BILL OF MATERIAL AND RIPRAP DETAILS
STRUCTURE NUMBER 101-3102**

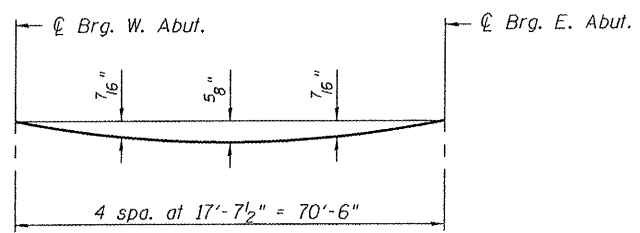
12/08/2011 12:03:08 PM C:\ADD\Struct\Sheet\02-00-00-WDE\X.dgn

LAYOUT	SWK	12/25/11
DRAWN	JDM	12/16/11
REVIEWED	SWK	12/16/11

PROFESSIONAL DESIGN FIRM LICENSE #184-001084

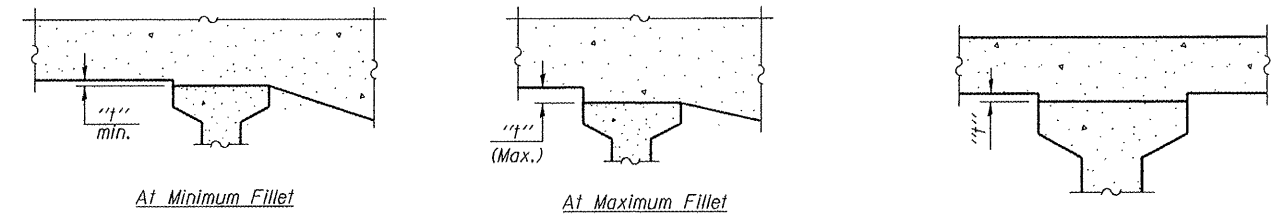
<p>Hanson Professional Services Inc.</p>	JOB NO. 03R1808	SHEET NO. 2 13 SHEETS	F.A.S. RTE. 0052	SECTION 03-00324-00-BR	COUNTY Winnebago	TOTAL SHEETS 24	SHEET NO. 10
	DATE 12/16/11		CONTRACT NO. 85552			FED. ROAD DIST. NO. 2 ILLINOIS FED. AID PROJECT	

85552



DEAD LOAD DEFLECTION DIAGRAM
(Includes weight of concrete deck only.)

Note:
The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown below.



EXTERIOR BEAMS **INTERIOR BEAMS**

FILLET HEIGHTS

To determine "f": After all precast prestressed beams have been erected, elevations of the top flanges of the beams shall be taken at intervals shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflections" shown below, minus slab thickness, equals the fillet heights "f" above top flanges of beams.

BEAM 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	54+93.50	-14.00	811.340	811.340
CL Brg. W. Abut.	54+94.75	-14.00	811.340	811.340
A	55+04.75	-14.00	811.340	811.362
B	55+14.75	-14.00	811.340	811.379
C	55+24.75	-14.00	811.340	811.388
D	55+34.75	-14.00	811.340	811.388
E	55+44.75	-14.00	811.340	811.379
F	55+54.75	-14.00	811.340	811.363
CL Brg. E. Abut.	55+65.25	-14.00	811.340	811.340
Bk. E. Abut.	55+66.50	-14.00	811.340	811.340

BEAM 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	54+93.50	-7.0	811.480	811.480
CL Brg. W. Abut.	54+94.75	-7.0	811.480	811.480
A	55+04.75	-7.0	811.480	811.503
B	55+14.75	-7.0	811.480	811.521
C	55+24.75	-7.0	811.480	811.531
D	55+34.75	-7.0	811.480	811.531
E	55+44.75	-7.0	811.480	811.521
F	55+54.75	-7.0	811.480	811.504
CL Brg. E. Abut.	55+65.25	-7.0	811.480	811.480
Bk. E. Abut.	55+66.50	-7.0	811.480	811.480

BEAM 3 & PGL

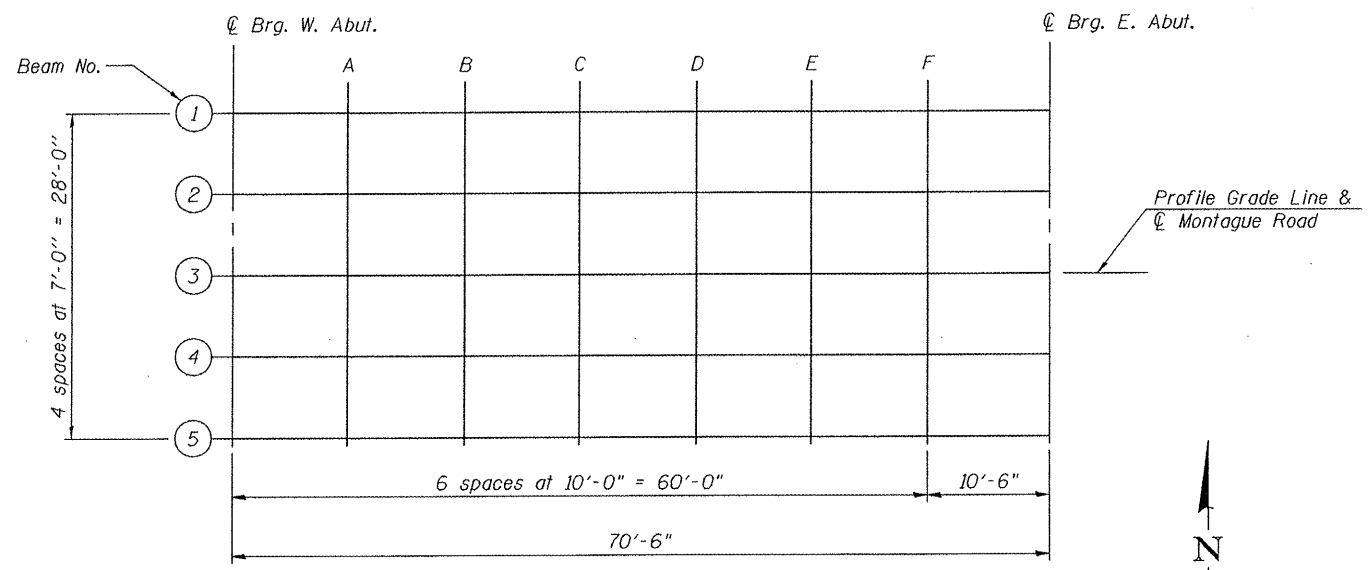
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	54+93.50	0.00	811.620	811.620
CL Brg. W. Abut.	54+94.75	0.00	811.620	811.620
A	55+04.75	0.00	811.620	811.643
B	55+14.75	0.00	811.620	811.661
C	55+24.75	0.00	811.620	811.671
D	55+34.75	0.00	811.620	811.671
E	55+44.75	0.00	811.620	811.661
F	55+54.75	0.00	811.620	811.644
CL Brg. E. Abut.	55+65.25	0.00	811.620	811.620
Bk. E. Abut.	55+66.50	0.00	811.620	811.620

BEAM 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	54+93.50	7.00	811.480	811.480
CL Brg. W. Abut.	54+94.75	7.00	811.480	811.480
A	55+04.75	7.00	811.480	811.503
B	55+14.75	7.00	811.480	811.521
C	55+24.75	7.00	811.480	811.531
D	55+34.75	7.00	811.480	811.531
E	55+44.75	7.00	811.480	811.521
F	55+54.75	7.00	811.480	811.504
CL Brg. E. Abut.	55+65.25	7.00	811.480	811.480
Bk. E. Abut.	55+66.50	7.00	811.480	811.480

BEAM 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	54+93.50	14.0	811.340	811.340
CL Brg. W. Abut.	54+94.75	14.0	811.340	811.340
A	55+04.75	14.0	811.340	811.362
B	55+14.75	14.0	811.340	811.379
C	55+24.75	14.0	811.340	811.388
D	55+34.75	14.0	811.340	811.388
E	55+44.75	14.0	811.340	811.379
F	55+54.75	14.0	811.340	811.363
CL Brg. E. Abut.	55+65.25	14.0	811.340	811.340
Bk. E. Abut.	55+66.50	14.0	811.340	811.340



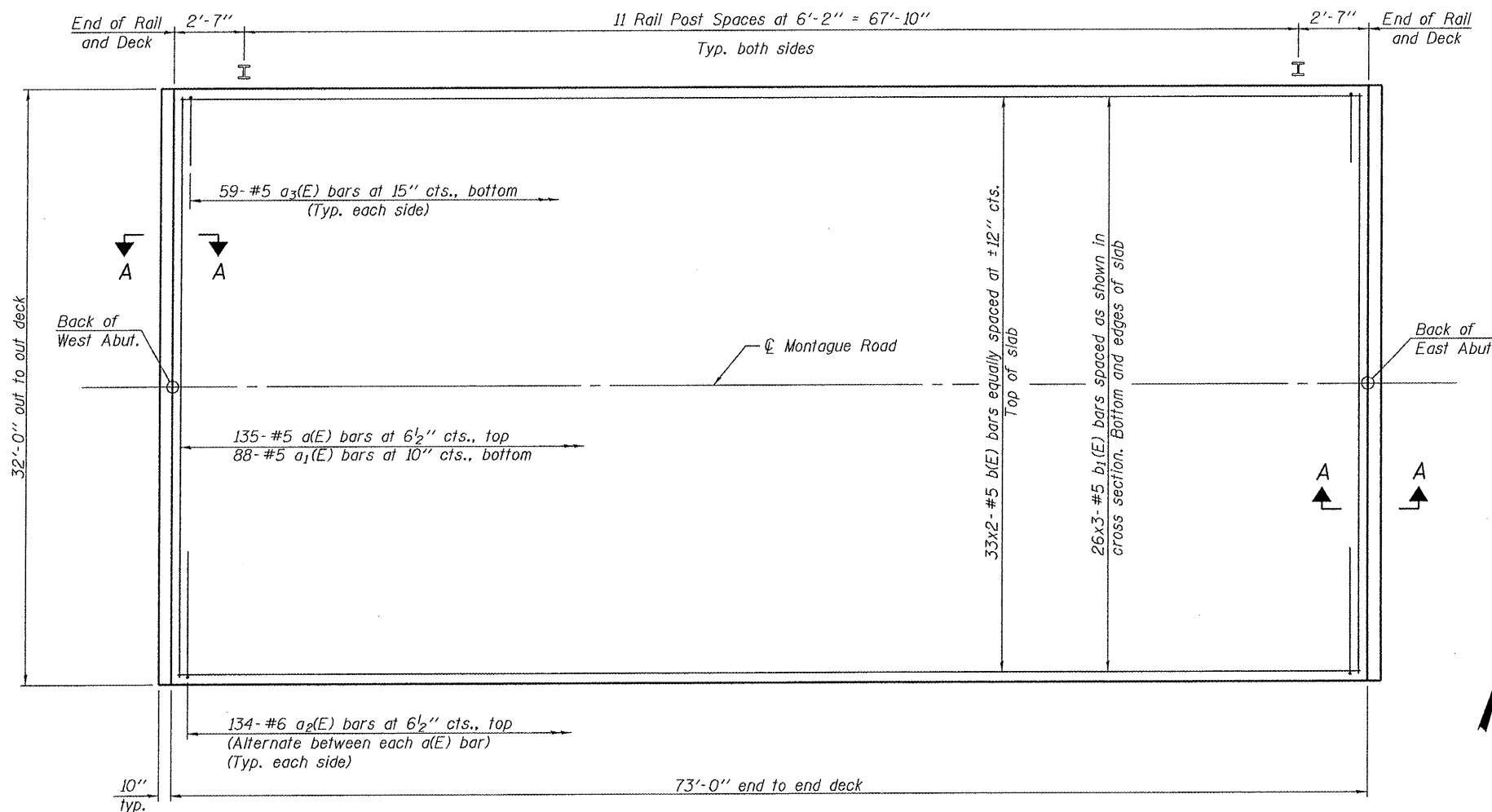
DIAGRAMMATIC PLAN - TOP OF CONCRETE ELEVATIONS

**TOP OF SLAB ELEVATIONS
STRUCTURE NUMBER 101-3102**

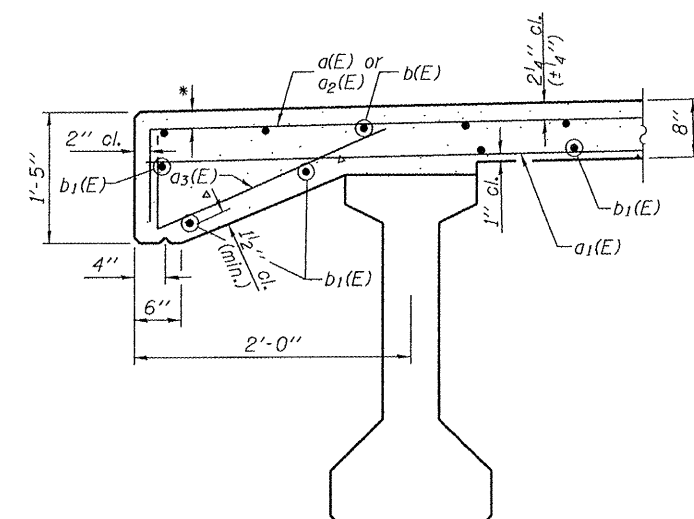
12/09/2011
 A:\03\101-3102\101-3102.dgn
 LAYOUT: SWK 12/25/11
 DRAWN: JDM 12/16/11
 REVIEWED: SWK 12/16/11

PROFESSIONAL DESIGN FIRM LICENSE #184-001084
 © Copyright Hanson Professional Services Inc. 2011

 Hanson Professional Services Inc.	SHEET NO. 3 13 SHEETS	F.A.S. RTE. 0052	SECTION 03-00324-00-BR	COUNTY Winnebago	TOTAL SHEETS 24	SHEET NO. 11
	DATE 12/16/11	CONTRACT NO. 85552 FED. ROAD DIST. NO. 2 ILLINOIS FED. AID PROJECT				

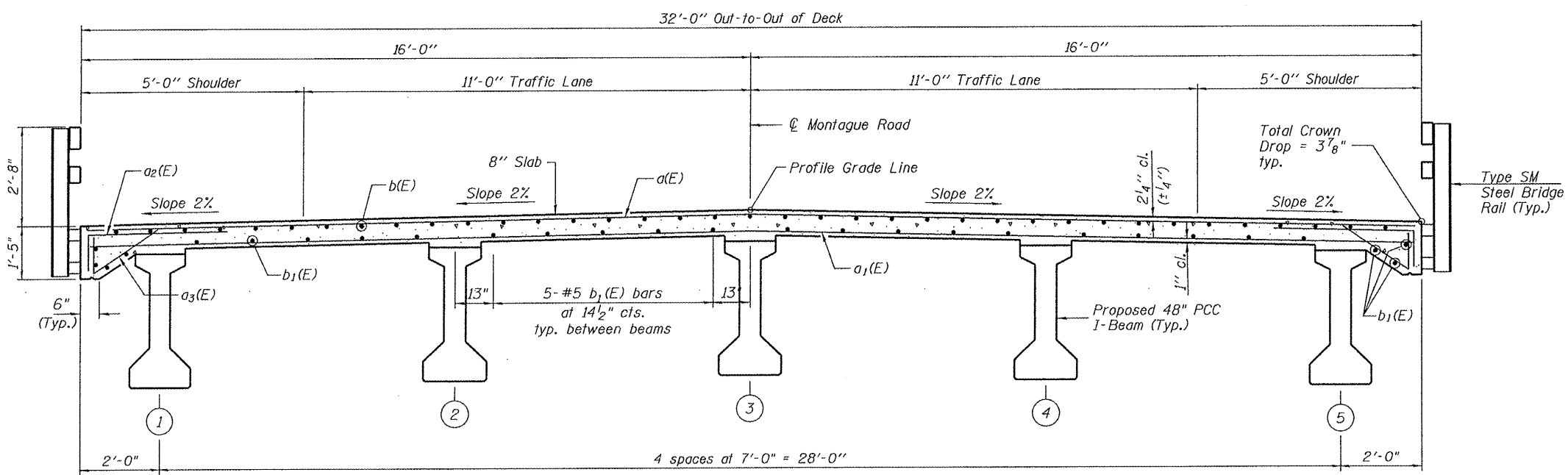


PLAN



SECTION THRU EDGE OF SLAB

* Reinforcement bars in the top deck may be placed with a 1/2 inch minimum clearance in the area of the rail post anchor devices. The studs of the anchor devices shall be placed below the top reinforcement bars and the outermost longitudinal reinforcement bar shall be placed directly above the studs of the rail post anchor device.



CROSS SECTION (Looking East)

Notes:
See Sheet 5 of 13 for diaphragm details, bar details and Bill of Material.
Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
For Section A-A, see Sheet 5 of 13.

SUPERSTRUCTURE
STRUCTURE NUMBER 101-3102

P:\09\8011
 I:\03\05\03\PR008\CADD\Struct\Sheet\85552-004-012-Super.str.dgn
 LAYOUT
 DRAWN
 REVIEWED
 7/25/11
 JDM
 SMK
 12/16/11
 12/16/11

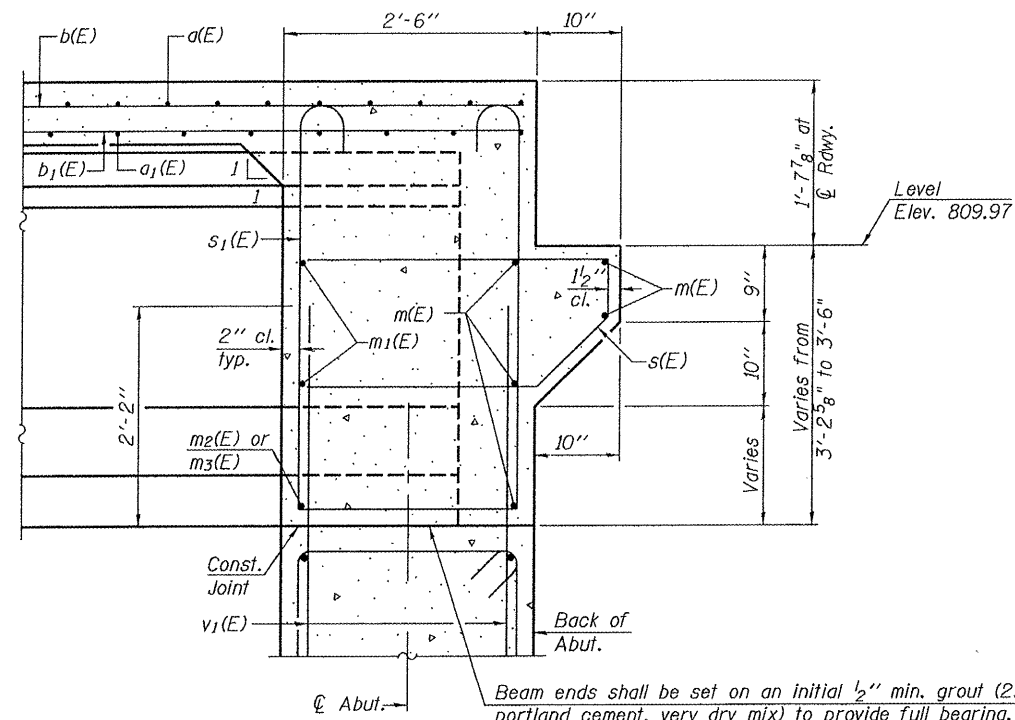
PROFESSIONAL DESIGN FIRM LICENSE #184-001084

© Copyright Hanson Professional Services Inc. 2011

Hanson Professional Services Inc.

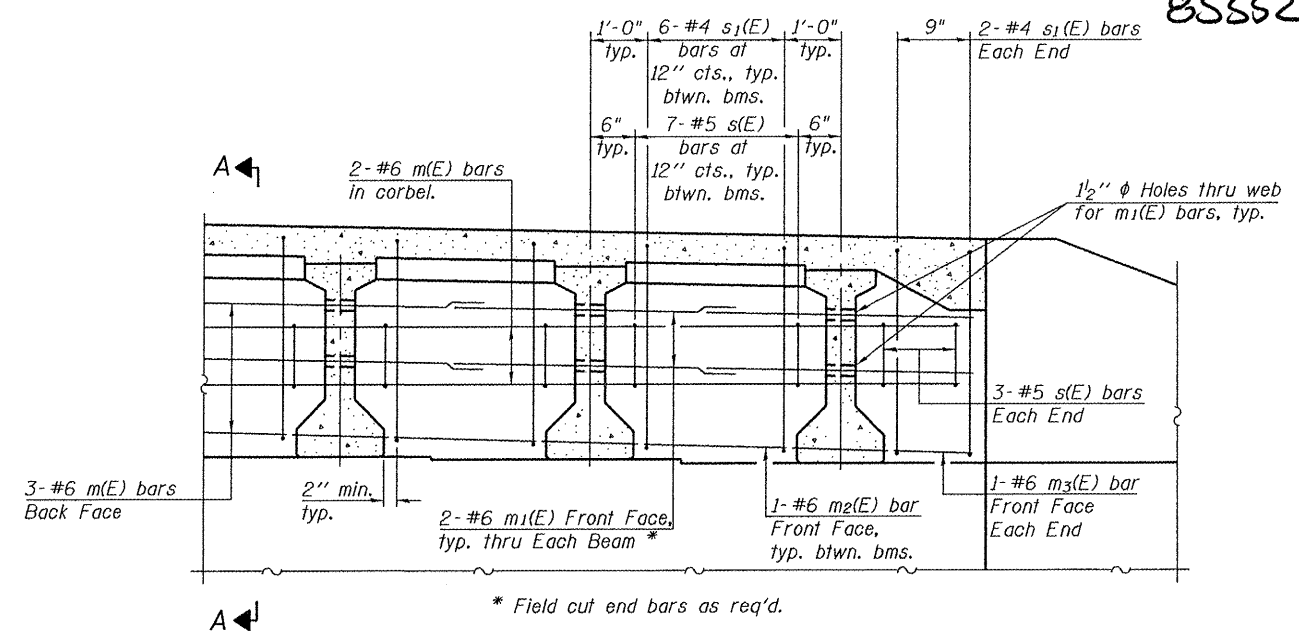
03R1808
SHEET NO. 4
13 SHEETS
DATE 12/16/11

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0052	03-00324-00-BR	Winnebago	24	12
CONTRACT NO. 85552				
FED. ROAD DIST. NO. 2 ILLINOIS FED. AID PROJECT				



Beam ends shall be set on an initial 1/2" min. grout (2:1 sand and portland cement, very dry mix) to provide full bearing. Any excess grout squeezed out from under the beam shall be removed. Cost included with Concrete Structures.

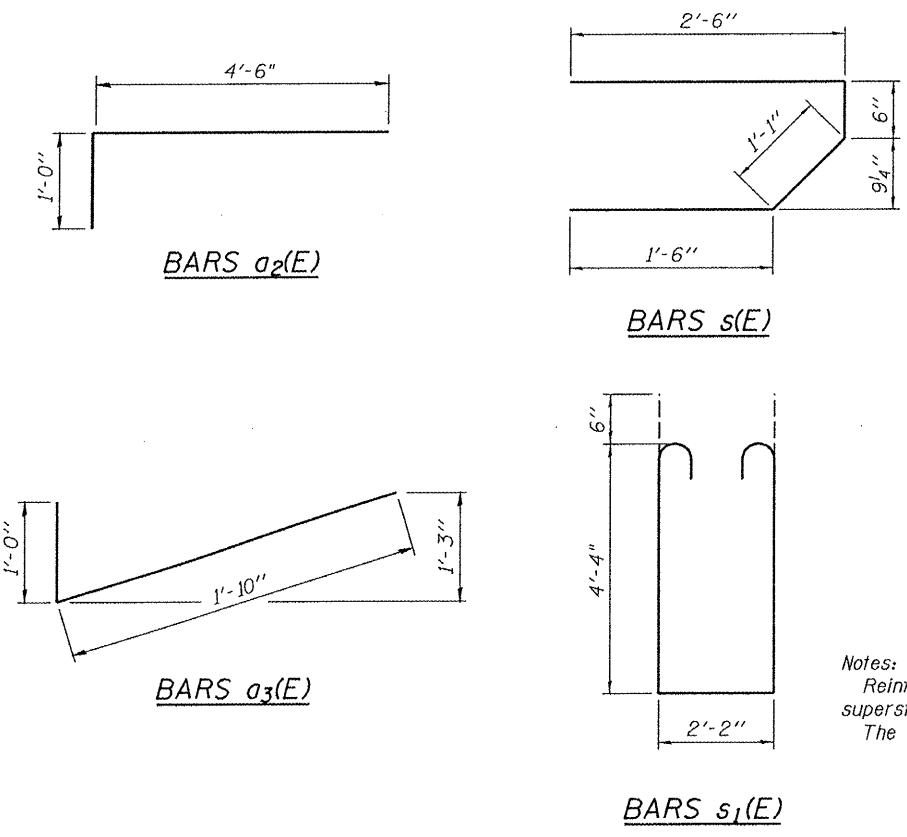
SECTION A-A
Dimensions at right angles to abutment, except as shown.



DIAPHRAGM ELEVATION AT ABUTMENT

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	135	#5	31'-8"	—
a1(E)	88	#5	31'-8"	—
a2(E)	268	#6	5'-6"	—
a3(E)	118	#5	2'-10"	┘
b(E)	66	#5	37'-9"	—
b1(E)	78	#5	26'-0"	—
m(E)	10	#6	31'-8"	—
m1(E)	20	#6	10'-4"	—
m2(E)	8	#6	4'-10"	—
m3(E)	4	#6	0'-10"	—
s(E)	68	#5	5'-7"	┘
s1(E)	56	#4	11'-10"	┘
Reinforcement Bars, Epoxy Coated			Pound	16,330
Concrete Superstructure			Cu. Yd.	88.6
Bridge Deck Grooving			Sq. Yds.	243
Protective Coat			Sq. Yds.	260



Notes:
Reinforcement bars and concrete in diaphragms are billed with superstructure on this sheet.
The s(E) and s1(E) bars shall be placed parallel to the beams.

MIN. BAR LAP
#6 bar = 3'-4"
#5 bar = 2'-7"

INTEGRAL ABUTMENT DIAPHRAGM DETAILS
STRUCTURE NUMBER 101-3102

12/08/2011 12/16/11 12/16/11 12/16/11
12/08/2011 12/16/11 12/16/11 12/16/11
12/08/2011 12/16/11 12/16/11 12/16/11
12/08/2011 12/16/11 12/16/11 12/16/11

PROFESSIONAL DESIGN FIRM LICENSE #184-001084

© Copyright Hanson Professional Services Inc. 2011

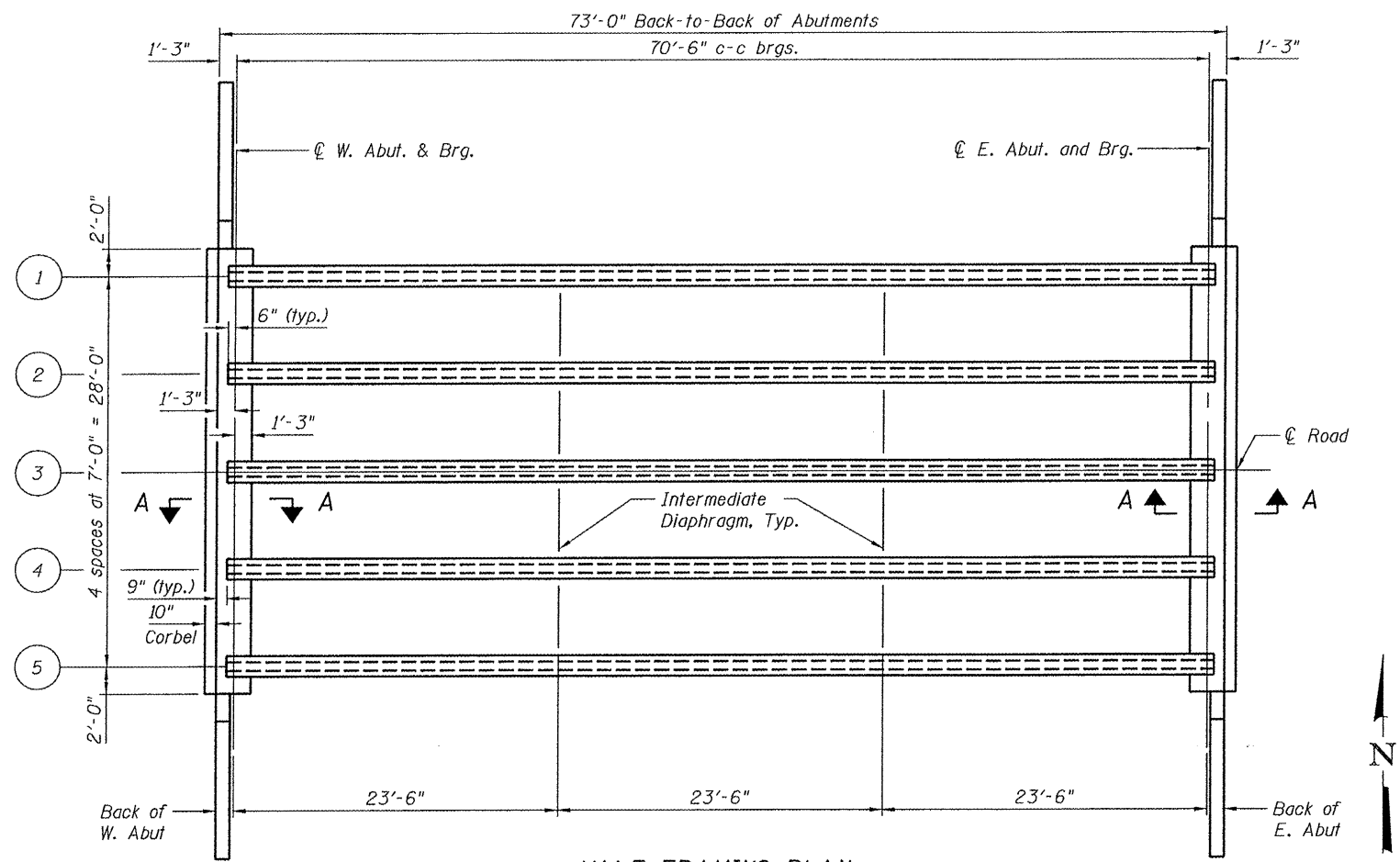
HANSON
Hanson Professional Services Inc.

JOB NO. 03R1808
DATE 12/16/11

SHEET NO. 5
13 SHEETS

F.A.S. RTE. 0052	SECTION 03-00324-00-BR	COUNTY Winnebago	TOTAL SHEETS 24	SHEET NO. 13
CONTRACT NO. 85552				
FED. ROAD DIST. NO. 2 ILLINOIS FED. AID PROJECT				

85552



HALF FRAMING PLAN

All Beams are Precast Prestressed Concrete I-Beams, 48"

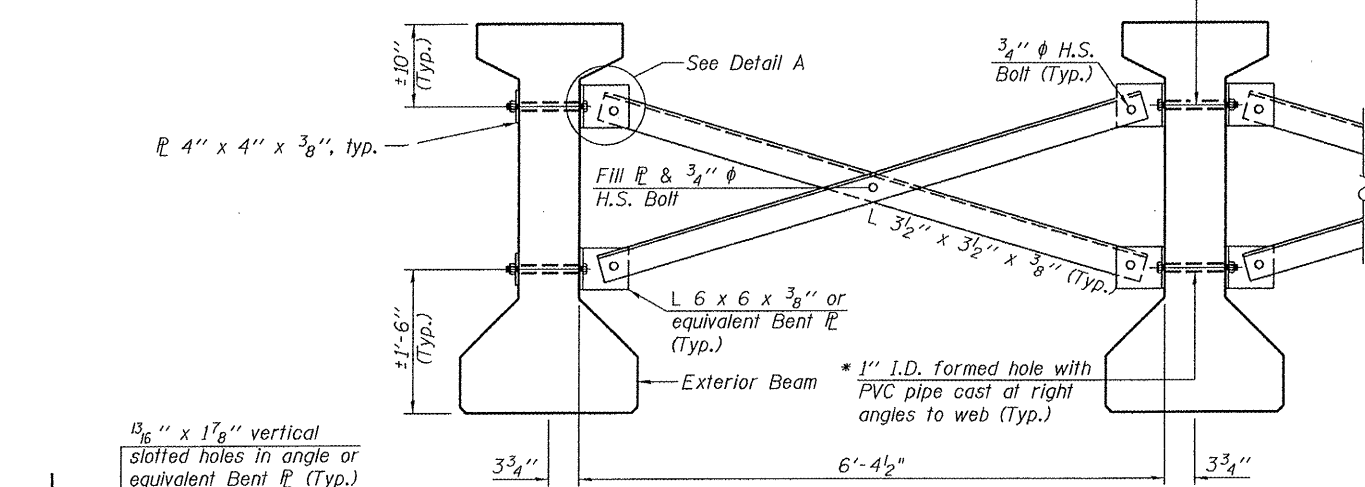
INTERIOR BEAM MOMENT TABLE		
0.5 Span		
I	(in ⁴)	144,117
I'	(in ⁴)	404,202
S _b	(in ³)	6,834
S _b '	(in ³)	11,323
S _t	(in ³)	5,355
S _t '	(in ³)	32,855
DC1	(k'/')	1.324
M _{DC1}	(k)	823
DC2	(k'/')	0.024
M _{DC2}	(k)	15
DW	(k'/')	0.350
M _{DW}	(k)	217
M _{L + IM}	(k)	1,121

INTERIOR BEAM REACTION TABLE		
Abut.		
R _{DC1}	(k)	46.7
R _{DC2}	(k)	0.8
R _{DW}	(k)	12.3
R _{L + IM}	(k)	78.5
R _{Total}	(k)	138.3

- I: Non-composite moment of inertia of beam section (in.⁴).
- I': Composite moment of inertia of beam section (in.⁴).
- S_b: Non-composite section modulus for the bottom fiber of the prestressed beam (in.³).
- S_b': Composite section modulus for the bottom fiber of the prestressed beam (in.³).
- S_t: Non-composite section modulus for the top fiber of the prestressed beam (in.³).
- S_t': Composite section modulus for the top fiber of the prestressed beam (in.³).
- DC1: Un-factored non-composite dead load (kips/ft.).
- M_{DC1}: Un-factored moment due to non-composite dead load (kip-ft.).
- DC2: Un-factored long-term composite (superimposed excluding future wearing surface) dead load (kips/ft.).
- M_{DC2}: Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).
- DW: Un-factored long-term composite (superimposed future wearing surface only) dead load (kips/ft.).
- M_{DW}: Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).
- M_{L + IM}: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).

* Fabricator shall locate to miss strands within permissible tolerances.

3/4" φ A307 Bolts with lock nuts. (Typ.)
Bolts through the concrete web shall be tightened to snug tight only.



INTERMEDIATE DIAPHRAGM

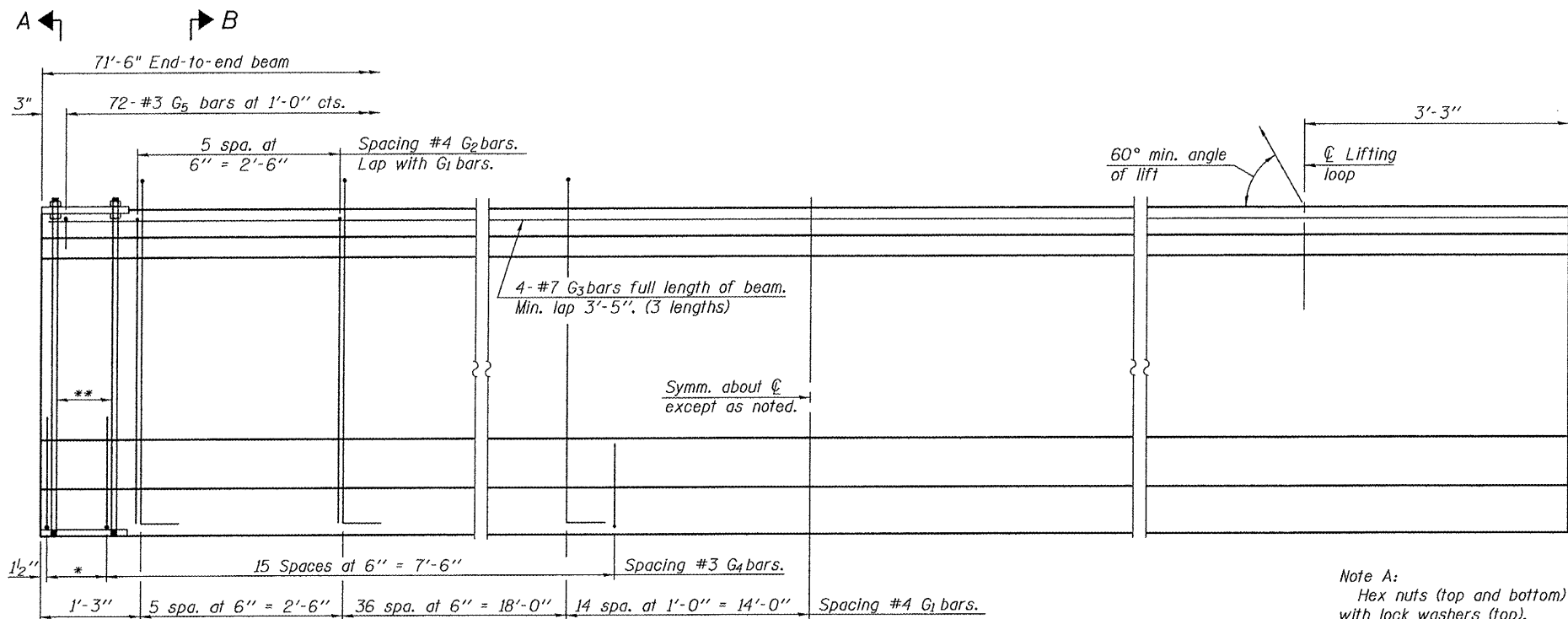
Notes:
All material for intermediate diaphragm shall be hot dip galvanized according to AASHTO M111 unless otherwise noted.
Two hardened washers are required for each set of oversized holes in intermediate diaphragm.
All holes shall be 15/16" φ unless otherwise noted.
5/16" x 3" x 3" plate washers are required over all slotted holes.
All bolts shall be galvanized according to AASHTO M232.
Intermediate diaphragm shall be installed as beams are erected and tightened as soon as possible during erection.
Permanent bracing shall not be paid for separately but shall be included in the cost of furnishing and erecting the prestressed beams.
For section A-A, see sheet 5 of 13.

FRAMING PLAN
STRUCTURE NUMBER 101-3102

12/08/2011
 I:\Users\03R1808\CADD\Struct\Sheet\S-006-014-Beams.dgn
 LAYOUT SMK 7/25/11
 DRAWN JDM 12/16/11
 REVIEWED SMK 12/16/11

PROFESSIONAL DESIGN FIRM LICENSE #184-001084

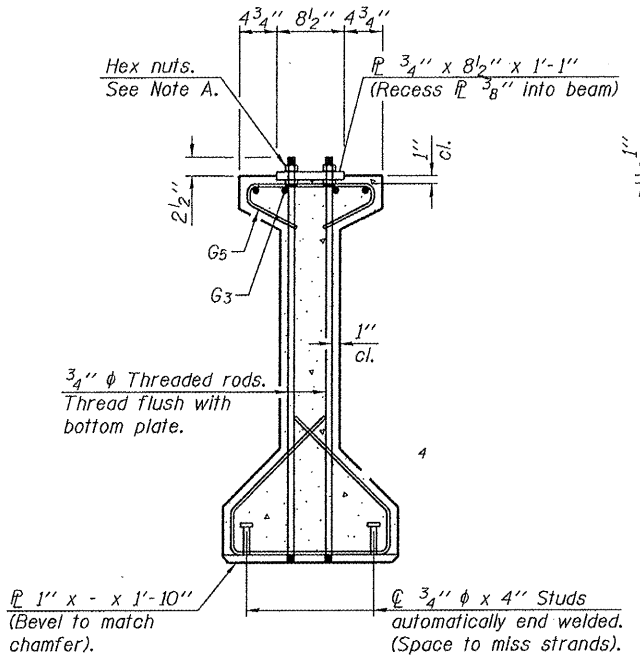
<p>Hanson Professional Services Inc.</p>	SHEET NO. 6 13 SHEETS	F.A.S. RTE. 0052	SECTION 03-00324-00-BR	COUNTY Winnebago	TOTAL SHEETS 24	SHEET NO. 14
	DATE 12/16/11		CONTRACT NO. 85552			
		FED. ROAD DIST. NO. 2 ILLINOIS FED. AID PROJECT				



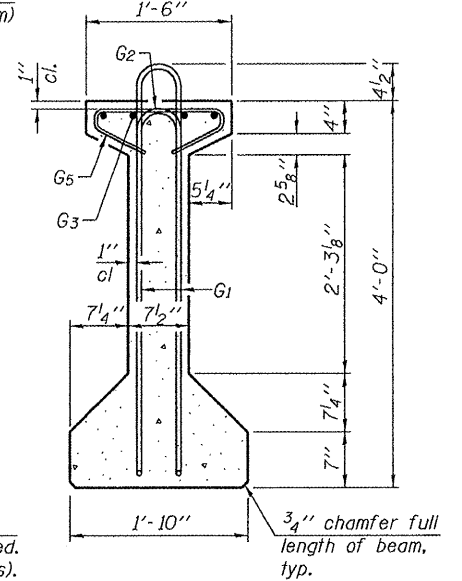
ELEVATION OF BEAM
(Showing reinforcement & dimensions)

* 3 spaces at 3" = 9".
** 4-3/4" φ threaded dowel rods at 3" cts., Each Face.

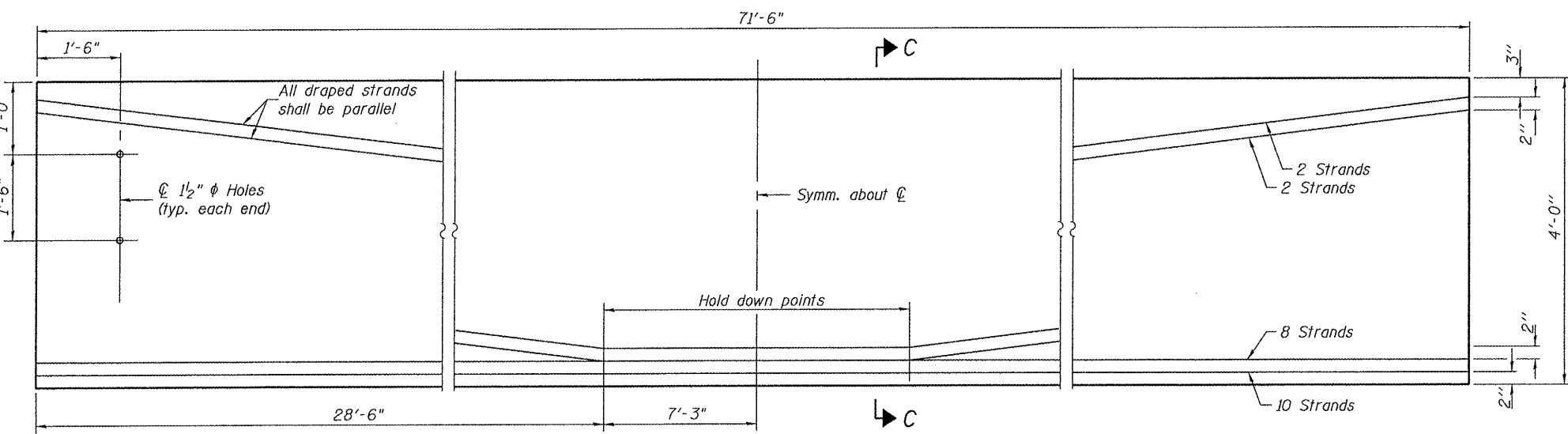
Note A:
Hex nuts (top and bottom) with lock washers (top). Only tighten sufficiently to compress lock washers.



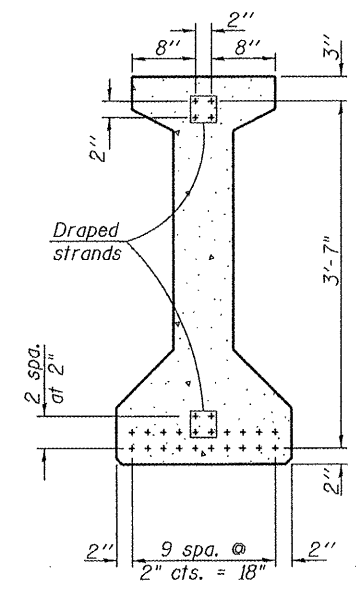
SECTION A-A



SECTION B-B



ELEVATION OF BEAM
(Showing prestressing steel)



SECTION C-C

*****BAR LIST
ONE BEAM ONLY**

Bar	No.	Size	Length	Shape
G ₁	111	#4	9'-6"	⊏
G ₂	12	#4	7'-11"	⊏
G ₃	12	#7	26'-0"	⊏
G ₄	38	#3	5'-3"	⊏
G ₅	72	#3	2'-9"	⊏

***For information only

Notes:
See sheet 8 of 13 for additional details and Bill of Material.
Required release strength, f'ci, shall be 5000 psi.

**48" PPC I-BEAM
STRUCTURE NUMBER 101-3102**

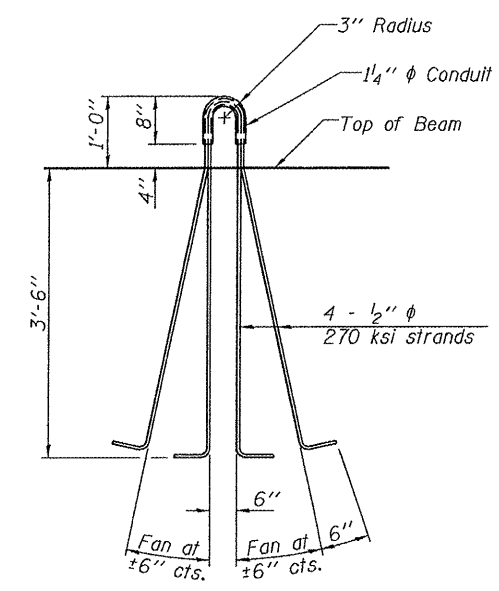
PROFESSIONAL DESIGN FIRM LICENSE #184-001084

<p>Hanson Professional Services Inc.</p>	SHEET NO. 7 13 SHEETS	F.A.S. RTE. 0052 SECTION 03-00324-00-BR	COUNTY Winnebago	TOTAL SHEETS 24	SHEET NO. 15
	DATE 12/16/11	CONTRACT NO. 85552 FED. ROAD DIST. NO. 2 ILLINOIS FED. AID PROJECT			

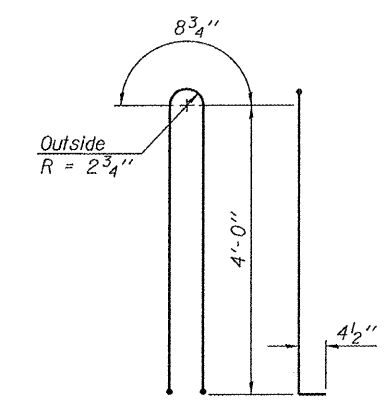
P:\08\801\1003\03R1808\CADD\Struct\Sheet\1007-015-BeamDetail.dgn
 12/16/11
 SWK
 12/16/11
 SWK

NOTES

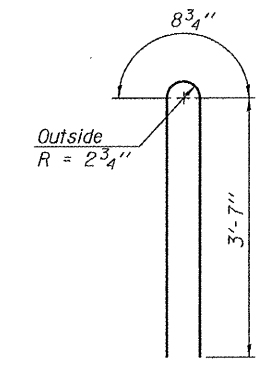
Inserts for 3/4" φ threaded dowel rods, when specified, are to be two strut, ferrule type for interior beams and single ferrule, flared loop type for exterior beams.
 Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in.
 Reinforcement bars shall conform to ASTM A 706, Grade 60. (See Special Provisions).
 A minimum 2 1/2" φ lifting pin shall be used to engage the lifting loops during handling.
 The top and bottom plates shall be AASHTO M270 Grade 50.
 The bottom plates and studs shall be galvanized according to AASHTO M111. Top plates and threaded rods need not be galvanized.
 Threaded rods shall be ASTM F 1554 Grade 55.



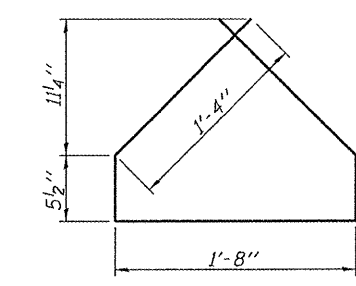
LIFTING LOOP DETAIL



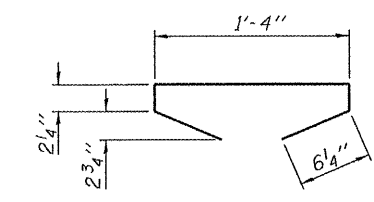
BAR G1



BAR G2



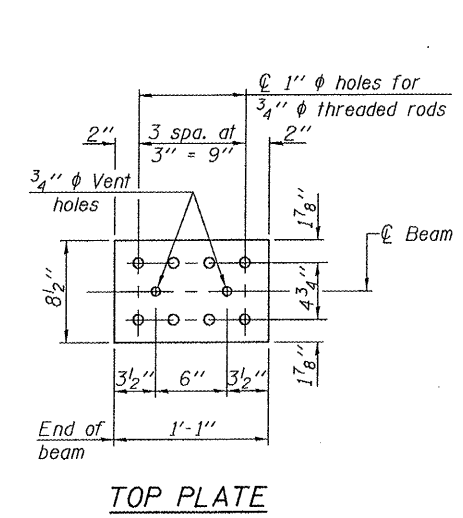
BAR G4



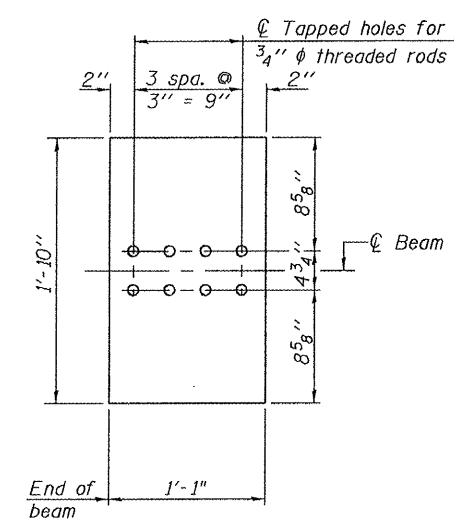
BAR G5

BILL OF MATERIAL

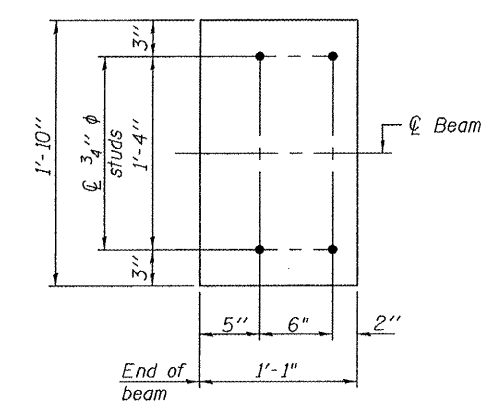
Item	Unit	Total
Furnishing and Erecting Precast Prestressed Concrete	F1.	357.5
1-Beams, 48"		



TOP PLATE



BOTTOM PLATE (Showing threaded rods)



BOTTOM PLATE (Showing studs)

See bearing details for pintle hole locations when required.

48" PPC I-BEAM DETAILS
 STRUCTURE NUMBER 101-3102

12/05/2011
 A:\03\1003\03R1808\CADD\Struct\Sheet\5-008-016-BeamDetail.dgn
 LAYOUT SWK 7/25/11
 DRAWN JDM 12/16/11
 REVIEWED SWK 12/16/11

PROFESSIONAL DESIGN FIRM LICENSE #184-001084

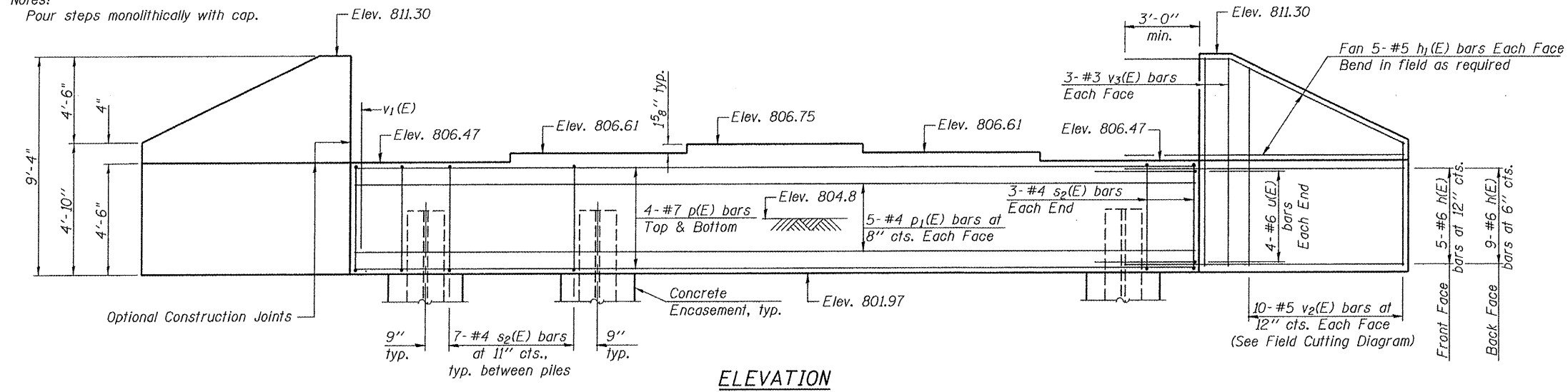
© Copyright Hanson Professional Services Inc. 2011

Hanson Professional Services Inc.

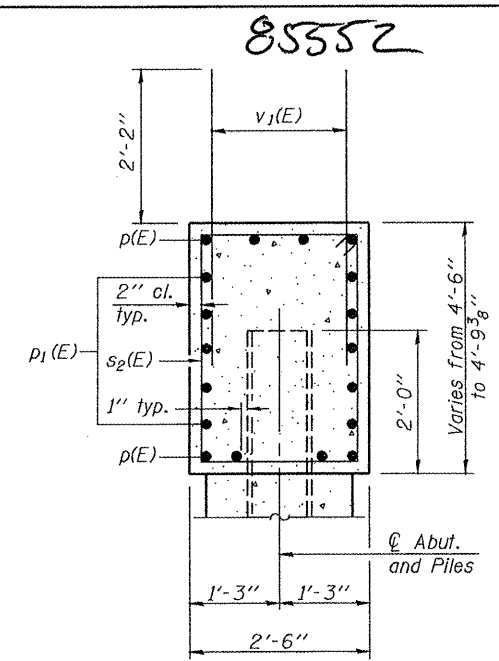
JOB NO. 03R1808
 SHEET NO. 8
 13 SHEETS
 DATE 12/16/11

F.A.S. RTE. 0052	SECTION 03-00324-00-BR	COUNTY Winnebago	TOTAL SHEETS 24	SHEET NO. 16
CONTRACT NO. 85552				
FED. ROAD DIST. NO. 2 ILLINOIS FED. AID PROJECT				

Notes:
Pour steps monolithically with cap.



ELEVATION



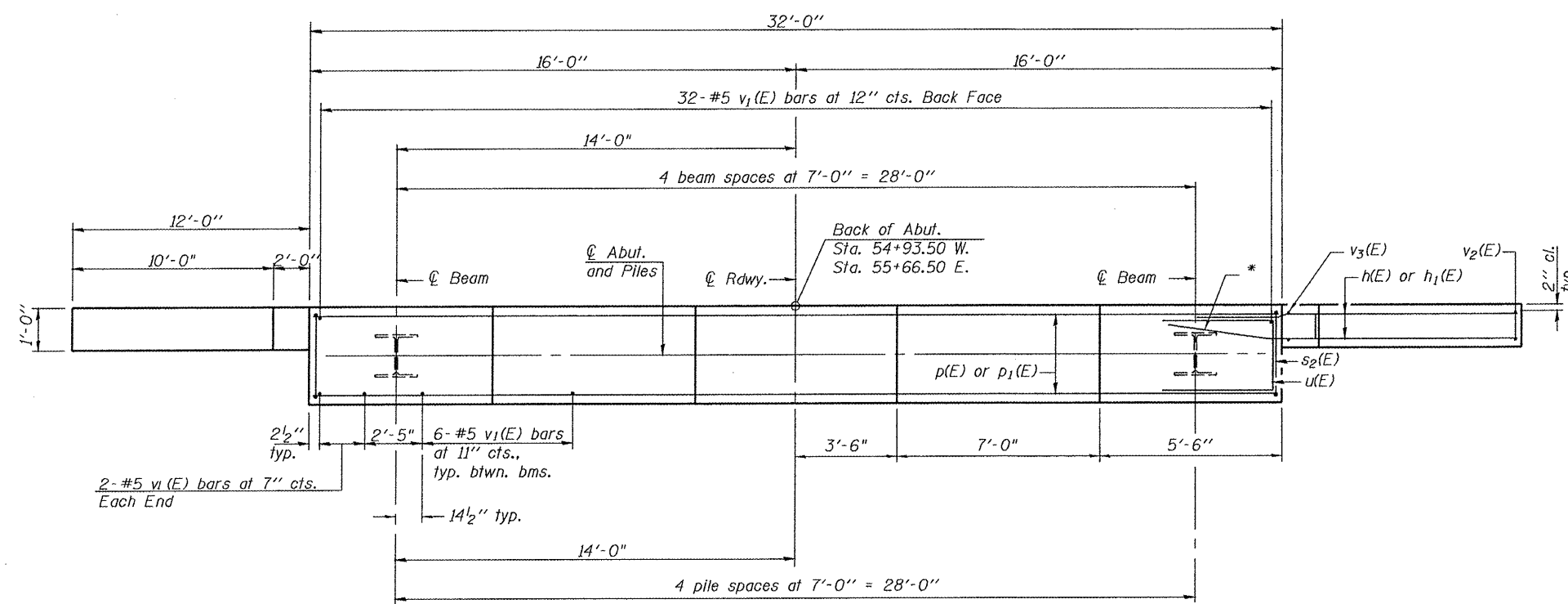
SEC. THRU ABUT.

BILL OF MATERIAL
(TWO ABUTS)

Bar	No.	Size	Length	Shape
* h(E)	56	#6	14'-4"	
* h1(E)	40	#5	15'-9"	
p(E)	16	#7	31'-8"	
p1(E)	20	#4	31'-8"	
s2(E)	68	#4	13'-5"	
u(E)	16	#6	10'-1"	
v1(E)	120	#5	4'-4"	
v2(E)	40	#5	13'-1"	
v3(E)	24	#5	9'-0"	
Structure Excavation		Cu. Yd.	253.0	
Concrete Structures		Cu. Yd.	40.6	
Reinforcement Bars, Epoxy Coated		Pound	5490	
Furnishing Steel Piles, HP12x53		Foot	352	
Driving Piles		Foot	352	
Test Pile, HP12x53		Each	2	
Concrete Encasement		Cu. Yd.	3.5	
Pile Shoes		Each	8	

* Field bend h(E) and h1(E) in front face to avoid interference with piles and beams.

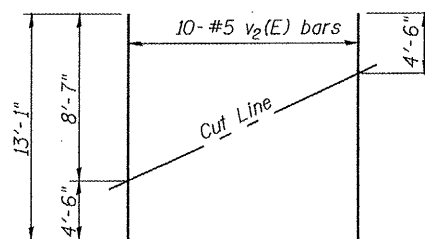
For details of piles and Concrete Encasement, see sheet 11 of 13.



PLAN

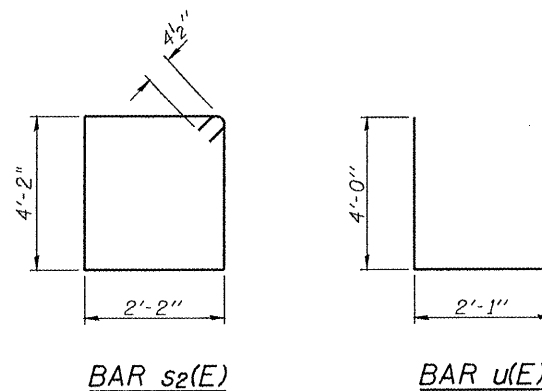
PILE DATA

Type: HP12x53
Nominal Required Bearing: 400k
Factored Resistance Available: 220k
Est. Length: 44'-W. Abut.; 44'-E. Abut.
No. Production Piles: 8 (4 each abut.)
* No. Test Piles: 2 (1 each abut.)
* Test pile shall be one of the interior piles.



FIELD CUTTING DIAGRAM

Order v2(E) full length. Cut as shown and use remainder of bars in opposite face.



BAR s2(E)

BAR u(E)

ABUTMENTS
STRUCTURE NUMBER 101-3102

PROFESSIONAL DESIGN FIRM LICENSE #184-001084

© Copyright Hanson Professional Services Inc. 2011



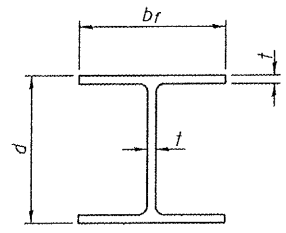
JOB NO. 03R1808
DATE 12/16/11
SHEET NO. 10
13 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0052	03-00324-00-BR	Winnebago	24	18
CONTRACT NO. 85552				
FED. ROAD DIST. NO. 2 ILLINOIS FED. AID PROJECT				

12/06/2011 10:03:00 AM C:\Users\skm\OneDrive\Projects\101-3102-00-018-abutments.dgn

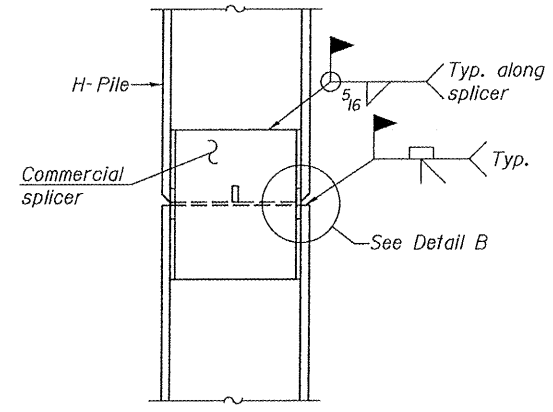
LAYOUT	DATE	BY
SKM	12/25/11	
DRWN	12/16/11	
REVIEWED	12/16/11	

85552

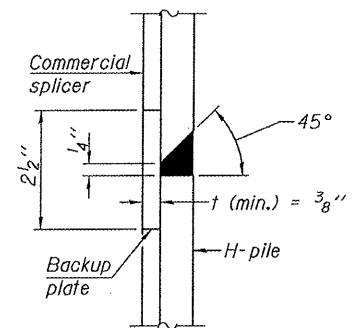


STEEL PILE TABLE

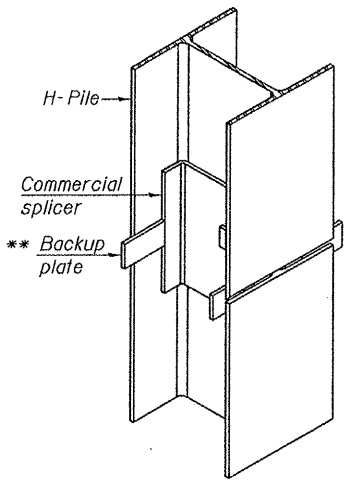
Designation	Depth d	Flange width br	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	13/16"	30"
x102	14"	14 3/4"	1/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	1/16"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 1/8"	1/2"	24"
x53	11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



ELEVATION

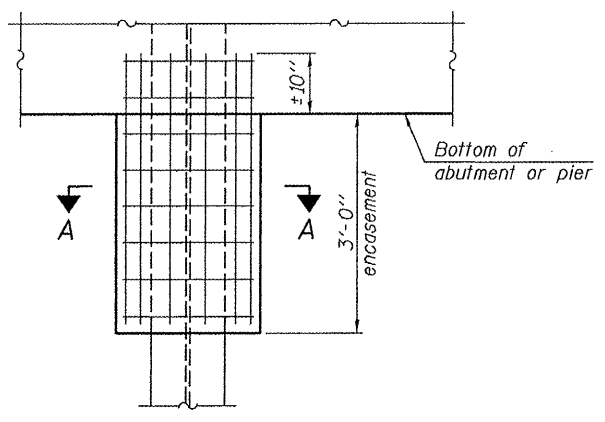


DETAIL "B"



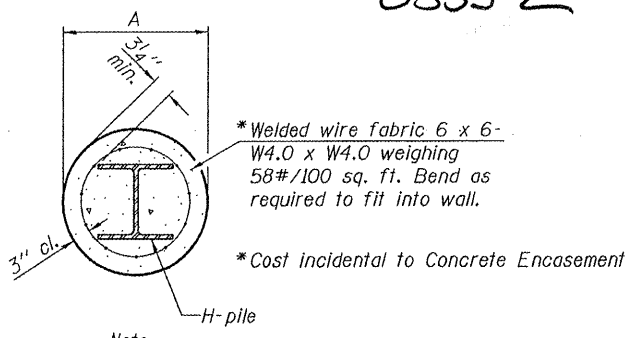
ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE



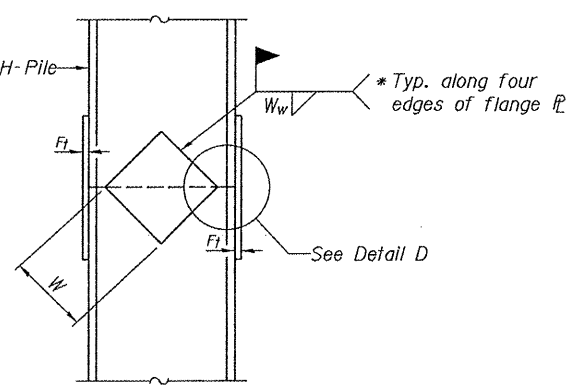
ELEVATION

PILE ENCASEMENT

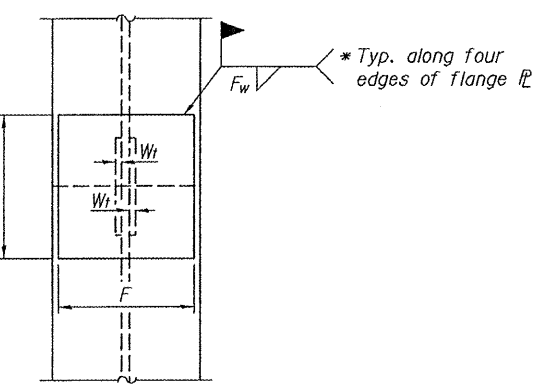


Note:
Forms for encasement may be omitted when soil conditions permit.

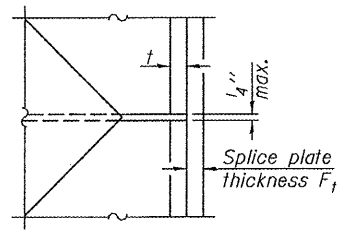
SECTION A-A



ELEVATION



END VIEW



DETAIL D

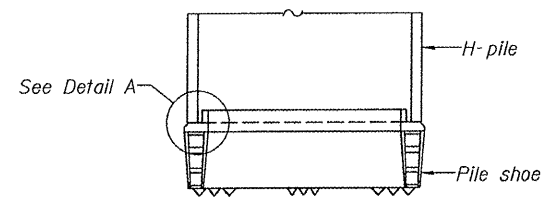
WELDED PLATE FIELD SPLICE

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

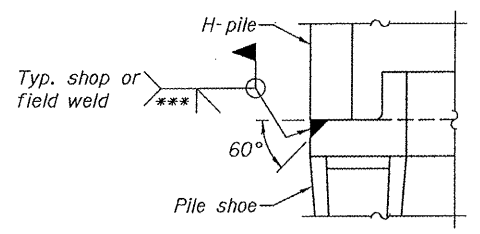
Note:
The steel H-piles shall be according to AASHTO M270 Grade 50.

WELDED COMMERCIAL SPLICE ALTERNATE

- * Interrupt welds 1/4" from end of web and/or each flange.
- ** Remove portions of backup plates that extend outside the flanges.
- *** Weld size per pile shoe manufacturer (5/16" min.).

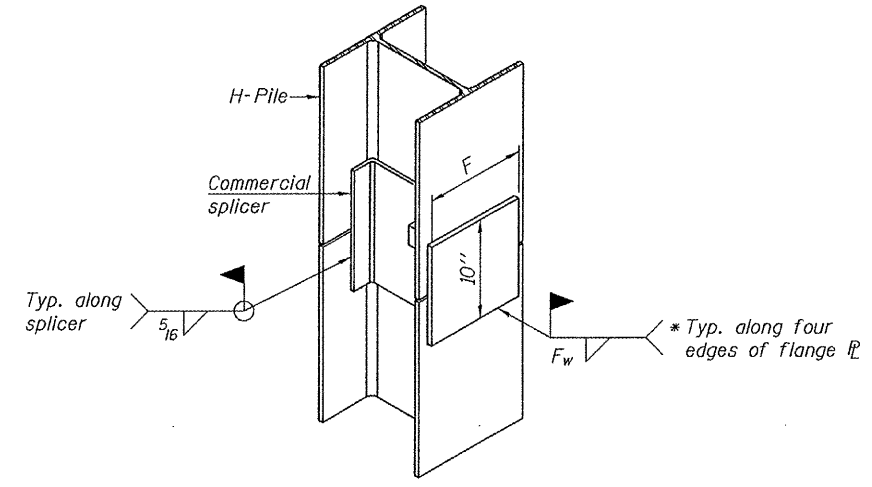


ELEVATION



DETAIL A

H-PILE SHOE ATTACHMENT



ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE ALTERNATE

- * Interrupt welds 1/4" from end of web and/or each flange.
- ** Remove portions of backup plates that extend outside the flanges.
- *** Weld size per pile shoe manufacturer (5/16" min.).

PROFESSIONAL DESIGN FIRM LICENSE #184-001084

© Copyright Hanson Professional Services Inc. 2011



JOB NO. 03R1808

SHEET NO. 11

DATE 12/16/11

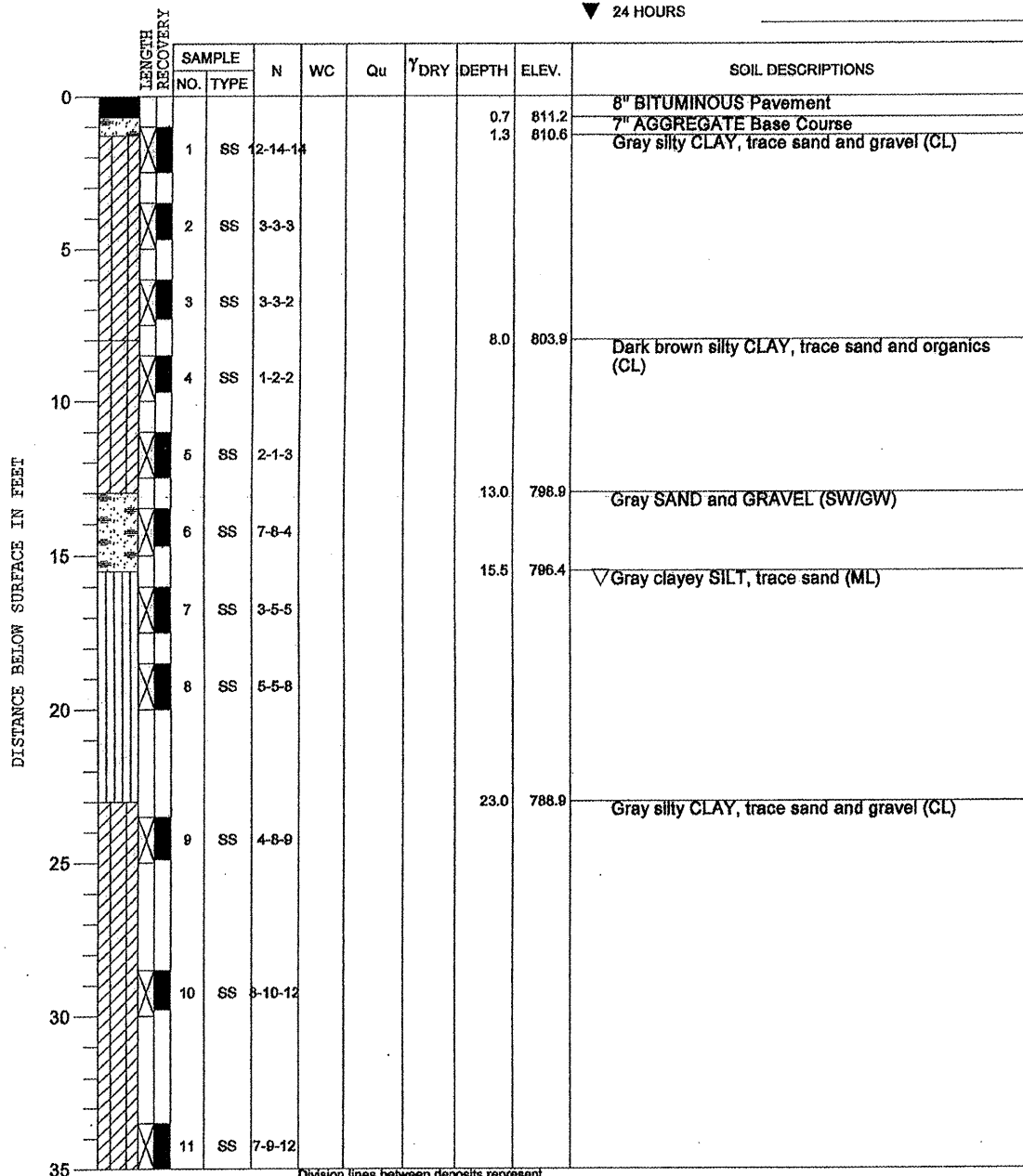
13 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0052	03-00324-00-BR	Winnebago	24	19
CONTRACT NO. 85552				
FED. ROAD DIST. NO. 2 ILLINOIS FED. AID PROJECT				

STEEL H- PILE DETAILS
STRUCTURE NUMBER 101-3102

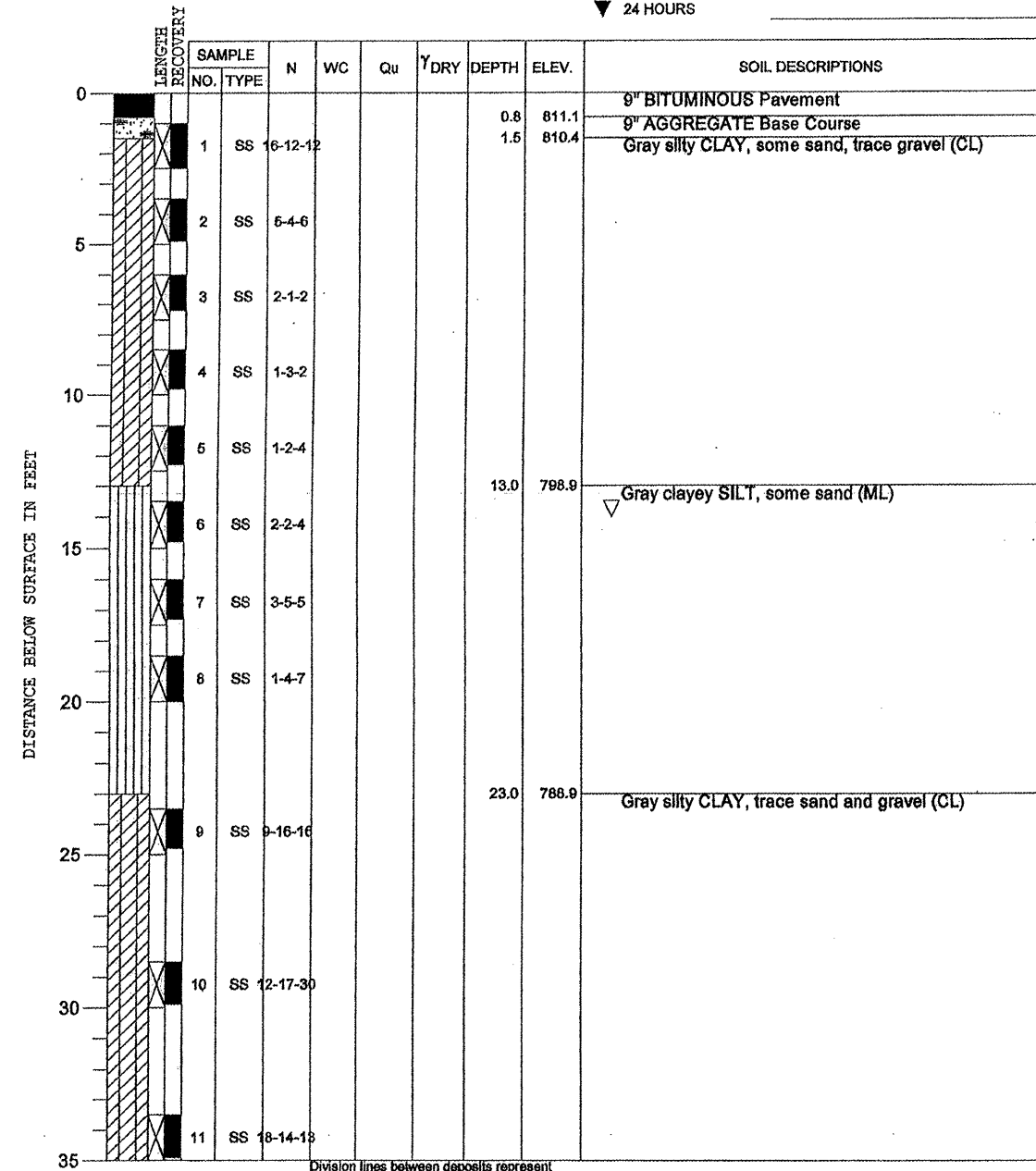
12/08/2011
 I:\03\085\03R1808\CADD\Struct\Sheet\101-019-H-PILE.dgn
 LAYOUT: SMK 7/25/11
 DRAWN: JDM 12/16/11
 REVIEWED: SMK 12/16/11

PROJECT **Montague Road Bridge, East Fork Mill Creek, Winnebago Township, Illinois**
 CLIENT **Hanson Professional Services, Inc., 1525 S. Sixth St., Springfield, IL 62703**
 BORING **B-1** DATE STARTED **2-17-04** DATE COMPLETED **2-17-04** JOB **L-59,938**
 ELEVATIONS WATER TABLE
 GROUND SURFACE **811.9** WHILE DRILLING **53.5'**
 END OF BORING **755.1** AT END OF BORING **16'**
 24 HOURS



DRILL RIG NO. **242** Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual. Page 1 of 2

PROJECT **Montague Road Bridge, East Fork Mill Creek, Winnebago Township, Illinois**
 CLIENT **Hanson Professional Services, Inc., 1525 S. Sixth St., Springfield, IL 62703**
 BORING **B-2** DATE STARTED **2-17-04** DATE COMPLETED **2-17-04** JOB **L-59,938**
 ELEVATIONS WATER TABLE
 GROUND SURFACE **811.9** WHILE DRILLING **48.5'**
 END OF BORING **753.1** AT END OF BORING **14'**
 24 HOURS



DRILL RIG NO. **242** Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual. Page 1 of 2

12/08/2011
 A:\03 Jobs\03181808\CADD\Struct\Sheet\012-020-bor logs.dgn

LAYOUT	SMK	1/25/11
DRAWN	JDM	12/16/11
REVIEWED	SMK	12/16/11

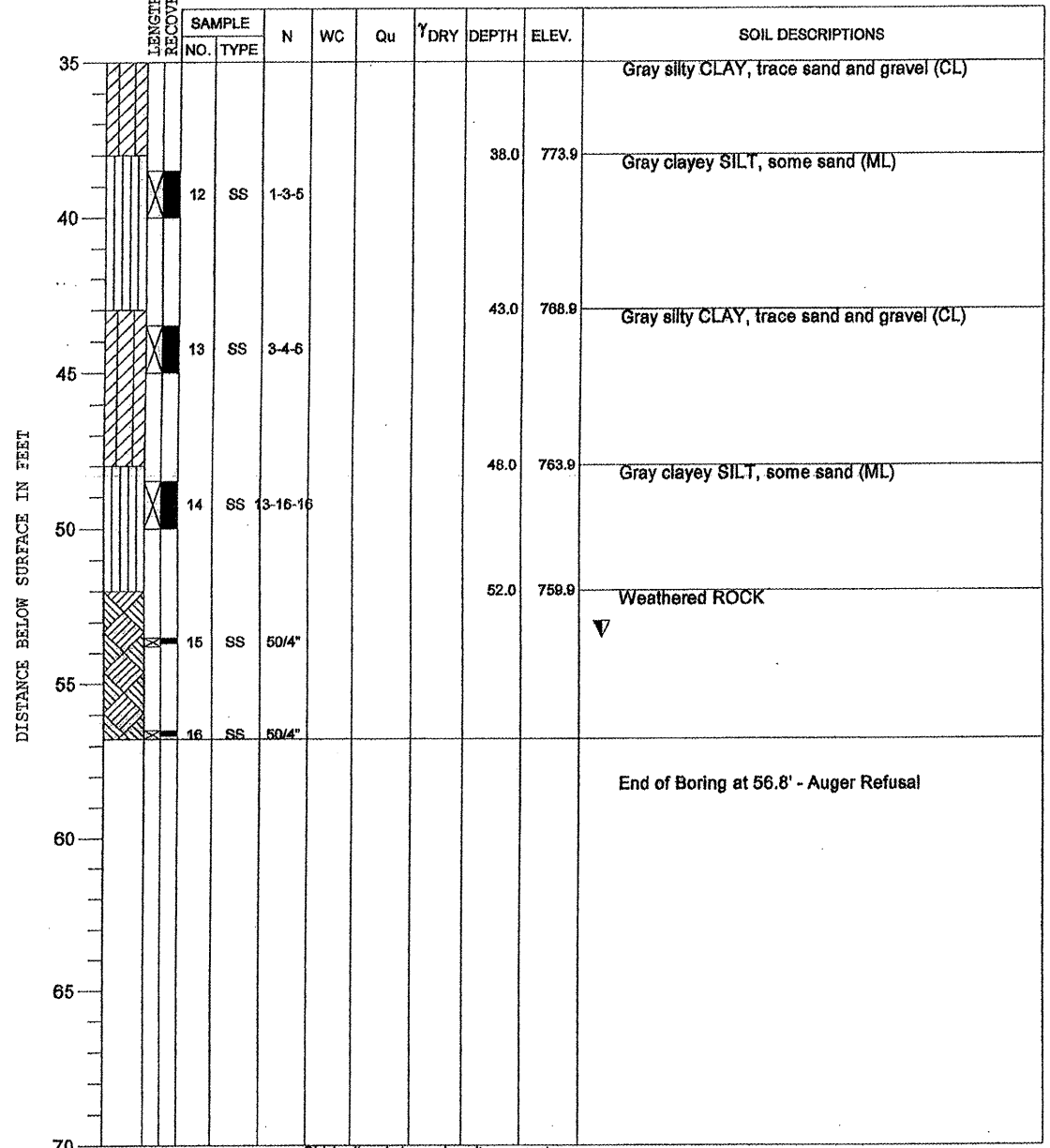
BORING LOGS
STRUCTURE NUMBER 101-3102

PROFESSIONAL DESIGN FIRM LICENSE #184-001084

Hanson Professional Services Inc.	JOB NO. 03R1808 DATE 12/16/11	SHEET NO. 12 13 SHEETS	F.A.S. RTE. 0052 SECTION 03-00324-00-BR	COUNTY Winnebago	TOTAL SHEETS 24 SHEET NO. 20
	CONTRACT NO. 85552			FED. ROAD DIST. NO. 2 ILLINOIS FED. AID PROJECT	

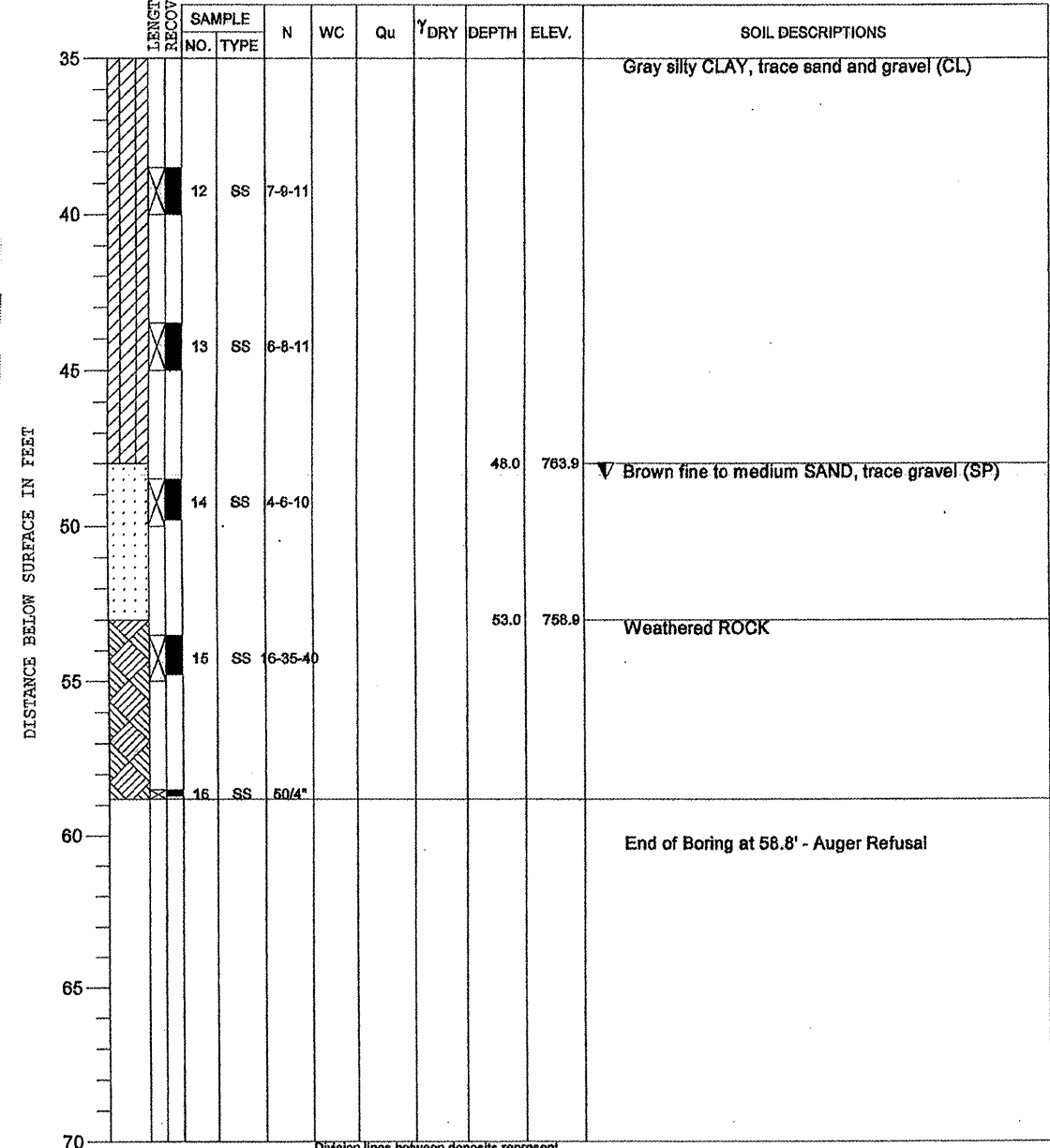
85552

PROJECT **Montague Road Bridge, East Fork Mill Creek, Winnebago Township, Illinois**
 CLIENT **Hanson Professional Services, Inc., 1525 S. Sixth St., Springfield, IL 62703**
 BORING **B-1** DATE STARTED **2-17-04** DATE COMPLETED **2-17-04** JOB **L-59,938**
 ELEVATIONS WATER TABLE
 GROUND SURFACE **811.9** WHILE DRILLING **53.5'**
 END OF BORING **755.1** AT END OF BORING **16'**
 24 HOURS



DRILL RIG NO. **242** Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual. Page 2 of 2

PROJECT **Montague Road Bridge, East Fork Mill Creek, Winnebago Township, Illinois**
 CLIENT **Hanson Professional Services, Inc., 1525 S. Sixth St., Springfield, IL 62703**
 BORING **B-2** DATE STARTED **2-17-04** DATE COMPLETED **2-17-04** JOB **L-59,938**
 ELEVATIONS WATER TABLE
 GROUND SURFACE **811.9** WHILE DRILLING **48.5'**
 END OF BORING **753.1** AT END OF BORING **14'**
 24 HOURS



DRILL RIG NO. **242** Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual. Page 2 of 2

12/08/2011 11:03:10am 03R1808 CAD/Struct/Sheet S-013-021-bor/lngs.dgn

LAYOUT	SWK	12/16/11
DRAWN	JON	12/16/11
REVIEWED	SWK	12/16/11

BORING LOGS
STRUCTURE NUMBER 101-3102

PROFESSIONAL DESIGN FIRM LICENSE #184-001084

© Copyright Hanson Professional Services Inc. 2011

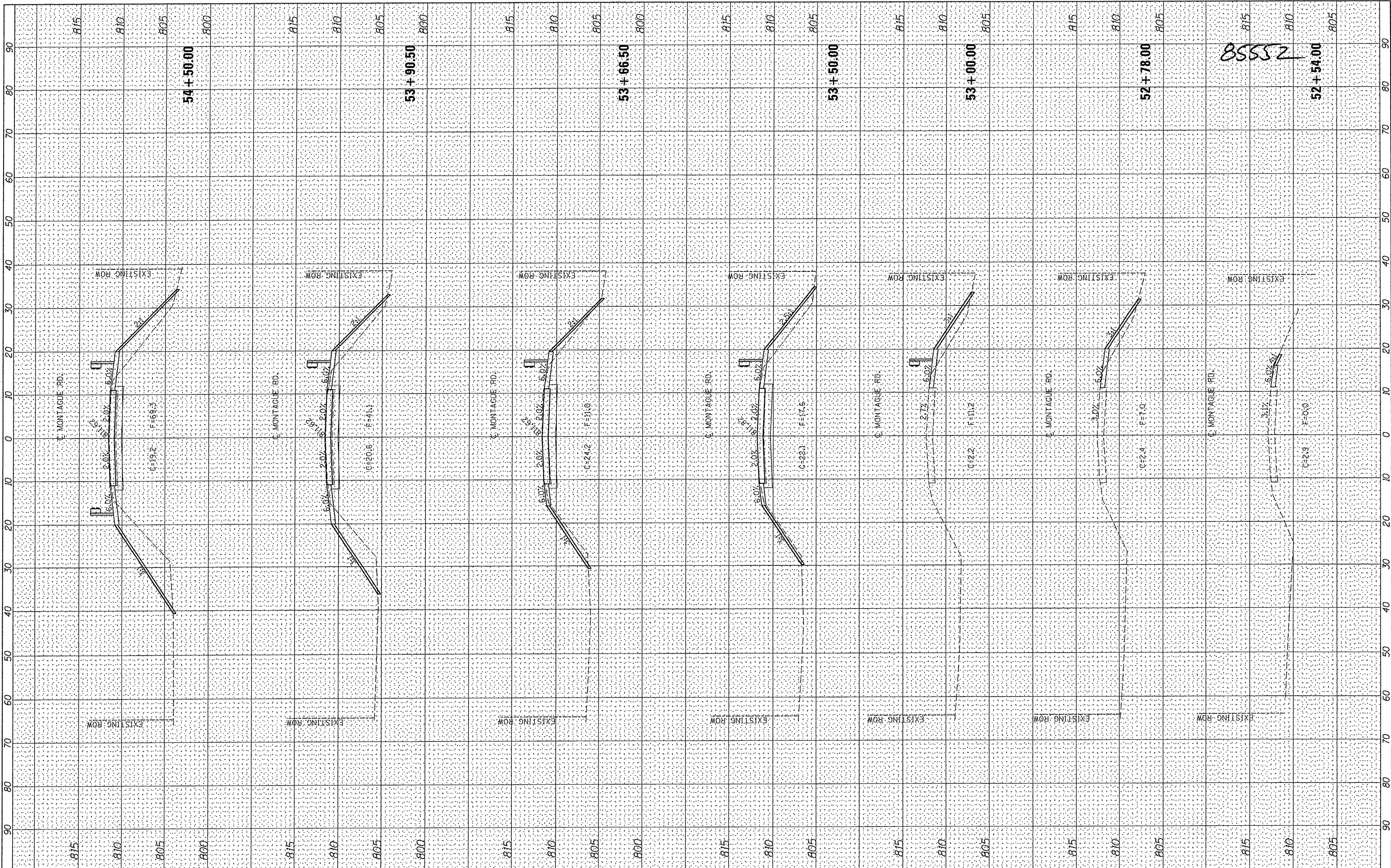
JOB NO. **03R1808** SHEET NO. **13**
 DATE **12/16/11** 13 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0052	03-00324-00-BR	Winnebago	24	21
CONTRACT NO. 85552				
FED. ROAD DIST. NO. 2 ILLINOIS FED. AID PROJECT				

HANSON
 Hanson Professional Services Inc.

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

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



85552

FILE NAME = 1:\03\Jobs\03R1808\CADD\Road\Sheet\NC-301-XS.dgn

USER NAME = mador0377
 PLOT SCALE = 10.0000' / 1"
 PLOT DATE = 12/09/2011

DESIGNED	SMK	REVISED	-
DRAWN	JDM	REVISED	-
CHECKED	SMK	REVISED	-
DATE	12/16/11	REVISED	-

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

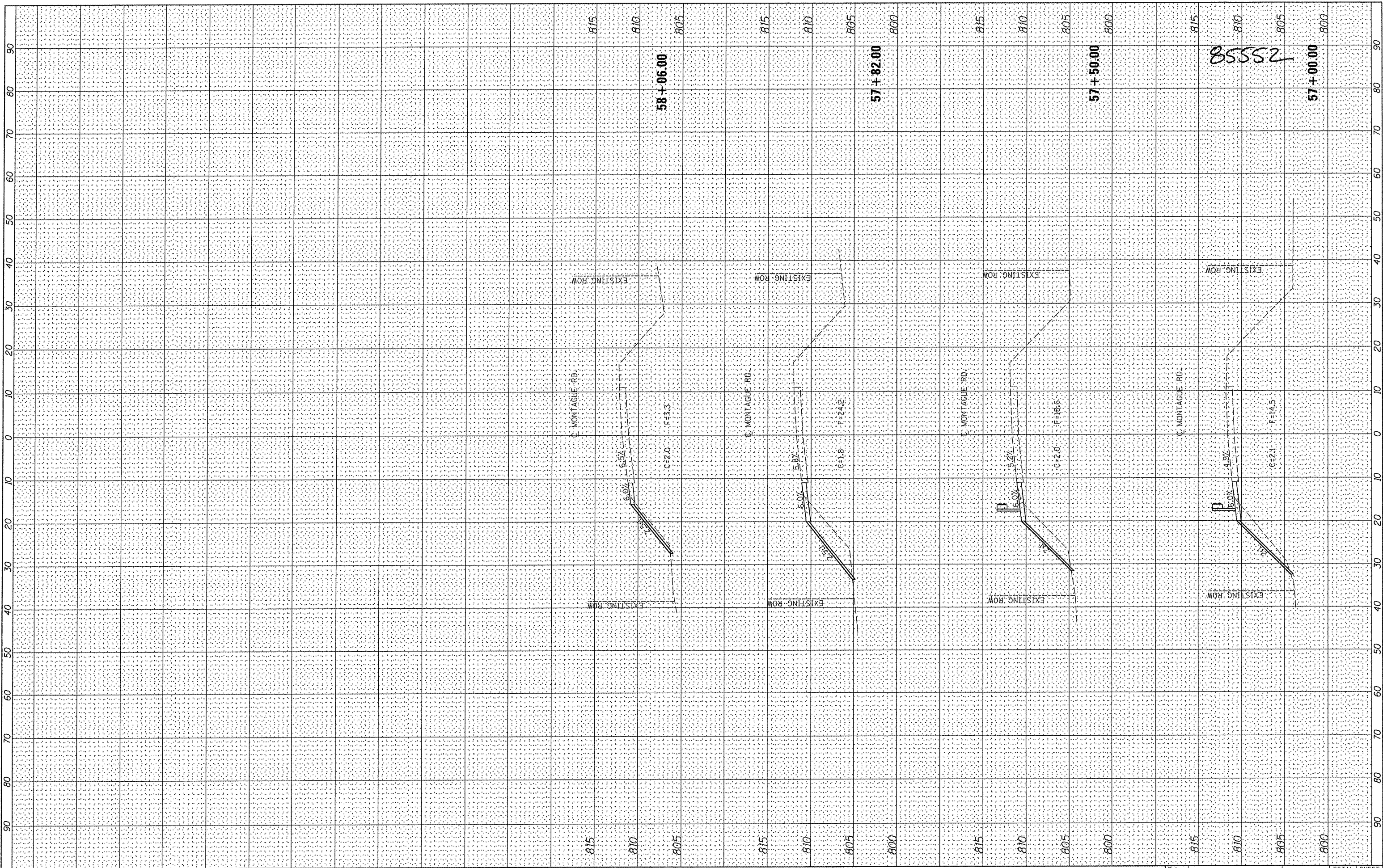
**CROSS SECTIONS
MONTAGUE ROAD BRIDGE REPLACEMENT
WINNEBAGO COUNTY, ILLINOIS**

SCALE: AS SHOWN SHEET NO. OF SHEETS STA. 52+54.00 TO STA. 54+50.00

F.A.S. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0052	03-00324-00-BR	WINNEBAGO	24	22
CONTRACT NO. 85552			ILLINOIS FED. AID PROJECT	

DATE	
BY	
SURVEYED	
PLOTTED	
NOTE BOOK	
TEMPLE	
AREAS CHECKED	
NO.	

DATE	
BY	
SURVEYED	
PLOTTED	
NOTE BOOK	
TEMPLE	
AREAS CHECKED	
NO.	



FILE NAME = I:\03\Jobs\03R1000\CADD\Road\Sheet\NC-301-XS.dgn

USER NAME = mador00377
 DESIGNED *SMK*
 DRAWN *JDM*
 CHECKED *SMK*
 PLOT DATE = 12/08/2011

REVISIONS:
 REVISION -
 REVISION -
 REVISION -
 REVISION -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**CROSS SECTIONS
 MONTAGUE ROAD BRIDGE REPLACEMENT
 WINNEBAGO COUNTY, ILLINOIS**

SCALE: AS SHOWN SHEET NO. OF SHEETS STA. 57+00.00 TO STA. 58+06.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0052	03-00324-00-BR	WINNEBAGO	24	24
ILLINOIS FED. AID PROJECT			CONTRACT NO. 85552	