1-20-2012 LETTING ITEM 038

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
587	(22 BR)BR	BUREAU	61	1
FED. ROAD DIST. NO.	ILLINOIS	CONTRACT NO. 66995		

D-93-040-11
P-93-026-07

INDEX OF SHEETS

FOR LIST OF HIGHWAY STANDARDS SEE SHEET NO. 2

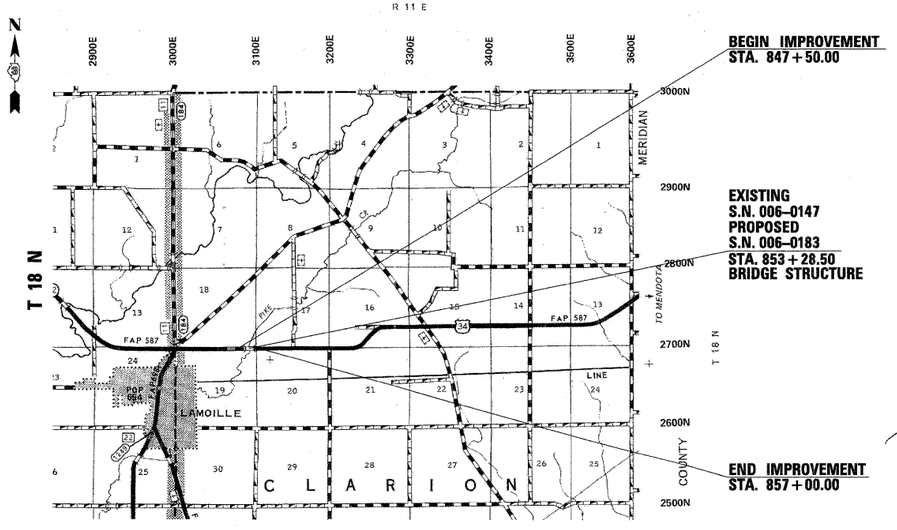
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROPOSED
HIGHWAY PLANS

FAP ROUTE 587 (US 34)
SECTION (22 BR)BR
PROJECT: F-0587(025)
BUREAU COUNTY

C – 93 – 047 – 11

REMOVE AND REPLACE EXISTING BRIDGE STUCTURE (SN 006–0147) CARRYING US 34 OVER PIKE CREEK
APPROXIMATELY ONE MILE NORTHEAST OF LAMOILLE

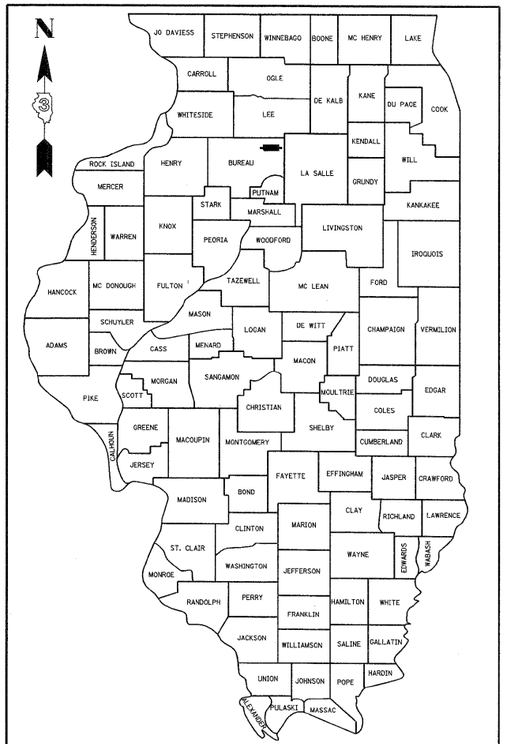


LOCATION MAP

1 INCH = 1 MILE
GROSS LENGTH = 950 FT. = 0.180 MI.
NET LENGTH = 950 FT. = 0.180 MI.

Atif M. Sheikh
Licensed Professional Engineer
State of Illinois
Lic. No. 062-062342
Expires: 11-30-2013
Signature and Seal apply to Civil Drawings

Syed M. Kazi
Licensed Structural Engineer
State of Illinois
Lic. No. 081-004047
Expires: 11-30-2012
Signature and Seal apply to Structural Drawings



LOCATION OF SECTION INDICATED THUS: –

FUNCTION CLASSIFICATION

RURAL MINOR ARTERIAL
2009 ADT = 2400
P.V. = 92% S.U. = 4.0% M.U. = 4.0%

100′ 200′ 300′ — 1″ = 100′
0 10′ 20′ 30′ — 1″ = 10′
0 50′ 100′ — 1″ = 50′
0 50′ 100′ — 1″ = 40′
0 50′ 100′ — 1″ = 30′
0 50′ 100′ — 1″ = 20′

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
OR 811

DISTRICT 3 NO. (815) 434–6131
PROJECT ENGINEER: JOSEPH KANNEL, P.E.
UNIT CHIEF: PAT BRABOY, P.E.
TOWNSHIP: CLARION
CONTRACT NO. 66995

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED November 1 20 11
Eric S. Thorkildsen
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER
December 9 20 11
Scott E. Stitt P.E. by
acting ENGINEER OF DESIGN AND ENVIRONMENT
December 9 20 11
William R. Frey by
Interim DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

DELTA ENGINEERING GROUP, LLC
CONSULTING ENGINEERS, CONSTRUCTION MANAGERS, SURVEYORS
111 W JACKSON BLVD, SUITE 910
CHICAGO, IL 60604

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LIST OF STANDARDS

000001-06	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001001-02	AREAS OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH AND OF A FOOT
280001-06	TEMPORARY EROSION CONTROL SYSTEMS
420401-08	BRIDGE APPROACH PAVEMENT CONNECTOR
482001-02	HMA SHOULDER ADJACENT TO FLEXIBLE PAVEMENT
482011-03	HMA SHOULDER STRIPS/SHOULDERS WITH RESURFACING OR WIDENING AND RESURFACING PROJECTS
515001-03	NAME PLATE FOR BRIDGES
601001-04	SUB-SURFACE DRAINS
601101-01	CONCRETE HEADWALL FOR PIPE DRAIN
630001-10	STEEL PLATE BEAM GUARDRAIL
630201-06	PCC/HMA STABILIZATION AT STEEL PLATE BEAM GUARDRAIL
630301-05	SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
631031-10	TRAFFIC BARRIER TERMINAL, TYPE 6
635006-03	REFLECTOR AND TERMINAL MARKER PLACEMENT
635011-02	REFLECTOR MARKER AND MOUNTING DETAILS
643001	SAND MODULE IMPACT ATTENUATORS
666001-01	RIGHT OF WAY MARKERS
667101-02	PERMANENT SURVEY MARKERS
701001-02	OFF-ROAD OPERATIONS, 2L, 2W, MORE THAN 15' AWAY
701006-03	OFF-ROAD OPERATIONS, 2L, 2W, 15' TO 24" FROM PAVEMENT EDGE
701011-02	OFF- ROAD MOVING OPERATIONS, 2L, 2W, DAY ONLY
701201-04	LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS >= 45 MPH
701301-04	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701306-03	LANE CLOSURE, 2L, 2W, SLOW MOVING OPERATIONS DAY ONLY, FOR SPEEDS >= 45 MPH
701311-03	LANE CLOSURE, 2L, 2W, MOVING OPERATIONS-DAY ONLY
701321-12	LANE CLOSURE, 2L, 2W, BRIDGE REPAIR WITH BARRIER
701326-04	LANE CLOSURE, 2L, 2W, PAVEMENT WIDENING, FOR SPEEDS >= 45 MPH
701901-02	TRAFFIC CONTROL DEVICES
704001-07	TEMPORARY CONCRETE BARRIER
720001-01	SIGN PANEL MOUNTING DETAILS
720006-03	SIGN PANEL ERECTION DETAILS
720011-01	METAL POSTS FOR SIGNS, MARKERS & DELINEATORS
780001-03	TYPICAL PAVEMENT MARKINGS
781001-03	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS

GENERAL NOTES

1. THE THICKNESS OF HMA SHOWN ON THE PLANS IS THE NOMINAL THICKNESS. DEVIATIONS FROM THE NOMINAL THICKNESS WILL BE PERMITTED WHEN SUCH DEVIATIONS OCCUR DUE TO IRREGULARITIES IN THE EXISTING SURFACE OR BASE ON WHICH THE HMA IS PLACED.
2. EXCEPT AS NOTED ON THE PLANS, PAVEMENT GRADES SHOWN ARE AT THE TOP OF PAVEMENT SURFACES.
3. THE ENGINEER WILL BE THE SOLE JUDGE CONCERNING CURING TIME FOR THE VARIOUS HMA LIFTS.
4. FOR STABILIZATION, ALL TYPE III BARRICADES SHALL REQUIRE A MINIMUM OF FOUR SAND BAGS PER BARRICADE.
5. SEEDING SHALL NOT BE PERMITTED AT ANY TIME WHEN THE GROUND IS FROZEN, WET, OR IN AN UNTILLABLE CONDITION. LOCATIONS TO BE SEEDED WILL BE DETERMINED BY THE ENGINEER.
6. ONLY THOSE TREES DESIGNATED BY THE ENGINEER OR LISTED IN THE TREE REMOVAL SCHEDULE SHALL BE REMOVED. THE CONTRACTOR SHALL PROTECT ALL REMAINING TREES FROM DAMAGE DUE TO HIS OPERATIONS.
7. THE FINISHED EARTHWORK SHALL HAVE A VEGETATION SUSTAINING SOIL COVERING THE TOP FOUR INCHES IN AREAS TO BE SEEDED OR SODDED. THE VEGETATION SUSTAINING SOIL REQUIRED WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF EARTH EXCAVATION.
8. ALL ELEVATIONS REFERRING TO U.S.G.S. MEAN SEA LEVEL DATUM.
9. ABANDONED UNDERGROUND UTILITIES THAT CONFLICT WITH CONSTRUCTION SHALL BE DISPOSED OF OUTSIDE THE LIMITS OF THE RIGHT OF WAY ACCORDING TO ARTICLE 202.03 OF THE STANDARD SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER. THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE COST OF EARTH EXCAVATION.
10. ANY REFERENCE TO A STANDARD IN THESE PLANS SHALL BE INTERPRETED TO MEAN THE EDITION AS INDICATED BY THE SUBNUMBER SHOWN IN THE LIST OF STANDARDS OR THE COPY INCLUDED IN THESE PLANS.
11. THE FOLLOWING RATES OF APPLICATION HAVE BEEN USED IN CALCULATING PLAN QUANTITIES:

GRANULAR MATERIALS	2.05	TONS / CU YD
BIT MATERIALS (PRIME COAT) ON AGGREGATE BASES	0.375	GAL / SQ YD
BITUMINOUS MATERIALS (PRIME COAT)	0.08	GAL / SQ YD
FOR ADDITIONAL HMA LIFTS "FOG COAT"	0.05	GAL / SQ YD
HMA RESURFACING	112	LBS / SQ YD / IN
SHORT TERM PAVEMENT MARKING	10	FT / 100 FT OF APPLICATION
MIX FOR CRACKS, JTS & FLGWYS	0.0003	TONS / SQ YD
LEVEL BINDER (HAND METHOD)	0.0005	TONS / SQ YD
SUPPLEMENTAL WATERING	3	GAL / SQ YD / APPLICATION
CALCIUM CHLORIDE	2	LB / SQ YD / APPLICATION
TEMPORARY DITCH CHECKS	5	TONS AGGREGATE

12. MEMBERS OF JULIE KNOWN TO BE WITHIN THE LIMITS OF THE IMPROVEMENT ARE:

1) FRONTIER COMMUNICATIONS, AND
2) AMEREN

13. THE SIGNS DISPLACED BY SHOULDER WIDENING ARE TO BE REINSTALLED IN LOCATIONS AS DETERMINED BY THE ENGINEER AND THE COST SHALL BE INCLUDED IN THE COST OF EARTH EXCAVATION.

COMMITMENTS

1. ENVIRONMENTAL COORDINATION
2. STORM WATER POLLUTION PREVENTION PLAN

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DISTRICT THREE

PREPARED BY: [signature]
DISTRICT STUDIES & PLANS ENGINEER

DATE: 10-24-11

EXAMINED BY: [signature]
DISTRICT CONSTRUCTION ENGINEER

Wayne L. Phillips
DISTRICT MATERIALS ENGINEER

Bruce A. Wunker
DISTRICT OPERATIONS ENGINEER

PLAN: SURVEYED / PLOTTED / ALIGNMENT CHECKED / R.T. OF WAY CHECKED / CADD FILE NAME — NOTE BOOK — NO. — BY — DATE

PROFILE: SURVEYED / PLOTTED / GRADES CHECKED / B.M. NOTED / STRUCTURE NOTATIONS CHKD — NOTE BOOK — NO. — BY — DATE

DELTA ENGINEERING GROUP, LLC	USER NAME = kkhan	DESIGNED DB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL NOTES AND LIST OF STANDARDS	F.A.P. RTE. 587 / SECTION (22 BR)BR / COUNTY BUREAU / TOTAL SHEETS 61 / SHEET NO. 2
		DRAWN DB	REVISED -			CONTRACT NO. 66995
	PLOT SCALE = $SCALE$	CHECKED AS	REVISED -			
	PLOT DATE = 10/12/2011	DATE OCTOBER 14, 2011	REVISED -		SCALE: NONE / SHEET NO. 2 OF 61 SHEETS / STA. / TO STA.	FED. ROAD DIST. NO. / ILLINOIS / FED. AID PROJECT

FILE NAME = G:\ZP101101\CADD Sheets\rdwySN-006-0183-02general.dgn

SUMMARY OF QUANTITIES

PAY CODE	DESCRIPTION	UNIT	80%FED./20%STATE TOTAL QUANTITY	CONSTRUCTION CODE ROADWAY 0004	CONSTRUCTION CODE SN 006-0183 0011
20200100	EARTH EXCAVATION	CU YD	515	515	
20400800	FURNISHED EXCAVATION	CU YD	935	935	
25000300	SEEDING, CLASS 3	ACRE	1.75	1.75	
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	158	158	
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	158	158	
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	158	158	
25100630	EROSION CONTROL BLANKET	SQ YD	7,632	7,632	
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	175	175	
28000305	TEMPORARY DITCH CHECKS	FOOT	80	80	
28000400	PERIMETER EROSION BARRIER	FOOT	307	307	
28001000	AGGREGATE (EROSION CONTROL)	TON	150	150	
28100109	STONE RIPRAP, CLASS A5	SQ YD	773		773
28200200	FILTER FABRIC	SQ YD	962	189	773
28300400	AGGREGATE DITCH	TON	130	130	
35600708	HOT-MIX ASPHALT BASE COURSE WIDENING, 8"	SQ YD	76	76	
40600100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	311	311	
40600400	MIXTURE FOR CRACKS, JOINTS, AND FLANGEWAYS	TON	0.7	0.7	
40600525	LEVELING BINDER (HAND METHOD), N50	TON	1.2	1.2	
40600625	LEVELING BINDER (MACHINE METHOD), N50	TON	261	261	
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	24	24	
40600990	TEMPORARY RAMP	SQ YD	48	48	
40603310	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50	TON	200	200	
42001430	BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)	SQ YD	43	43	
44000100	PAVEMENT REMOVAL	SQ YD	78	78	
44000161	HOT-MIX ASPHALT SURFACE REMOVAL, 3"	SQ YD	2,268	2,268	
48101200	AGGREGATE SHOULDERS, TYPE B	TON	32	32	
48203029	HOT-MIX ASPHALT SHOULDERS, 8"	SQ YD	620	620	
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1		1
50200100	STRUCTURE EXCAVATION	CU YD	111		111
50200300	COFFERDAM EXCAVATION	CU YD	17		17
50201101	COFFERDAM (TYPE 1) (LOCATION - 1)	EACH	1		1
50300100	FLOOR DRAINS	EACH	12		12
50300225	CONCRETE STRUCTURES	CU YD	92.2		92.2
50300255	CONCRETE SUPERSTRUCTURE	CU YD	248.5		248.5
50300260	BRIDGE DECK GROOVING	SQ YD	590		590
50300280	CONCRETE ENCASEMENT	CU YD	7.4		7.4
50300300	PROTECTIVE COAT	SQ YD	707		707
50500105	FURNISHING AND ERECTING STRUCTURAL STEEL	L SUM	1		1
50500505	STUD SHEAR CONNECTORS	EACH	2,772		2,772
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	67,800		67,800
50800515	BAR SPLICERS	EACH	670		670
51201400	FURNISHING STEEL PILES HP10X42	FOOT	640		640
51202305	DRIVING PILES	FOOT	640		640
51203400	TEST PILE STEEL HP10X42	EACH	3		3
51500100	NAME PLATES	EACH	1		1
52100510	ANCHOR BOLTS, 3/4"	EACH	12		12
52100520	ANCHOR BOLTS, 1"	EACH	24		24
59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	49		49
60100060	CONCRETE HEADWALLS FOR PIPE DRAINS	EACH	4	4	
60107600	PIPE UNDERDRAINS 4"	FOOT	61	61	
* 63000001	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	450	450	
* 63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	4	4	
* 63100169	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) FLARED	EACH	4	4	
63200310	GUARDRAIL REMOVAL	FOOT	1,354	1,354	
66600105	FURNISHING AND ERECTING RIGHT OF WAY MARKERS	EACH	7	7	
66700205	PERMANENT SURVEY MARKERS, TYPE 1	EACH	1	1	
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	6	6	
67100100	MOBILIZATION	L SUM	1	1	
70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	1	1	
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1	1	
70100460	TRAFFIC CONTROL AND PROTECTION, STANDARD 701306	L SUM	1	1	
70100500	TRAFFIC CONTROL AND PROTECTION, STANDARD 701326	L SUM	1	1	
70103815	TRAFFIC CONTROL SURVEILLENCE	CAL DA	7	7	
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1	1	
70300100	SHORT TERM PAVEMENT MARKING	FOOT	1,948	1,948	
70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	1,900	1,900	
70300240	TEMPORARY PAVEMENT MARKING - LINE 6"	FOOT	238	238	
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	729	729	
70400100	TEMPORARY CONCRETE BARRIER	FOOT	410	410	
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	390	390	
* 78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	3,800	3,800	
* 78001130	PAINT PAVEMENT MARKING - LINE 6"	FOOT	476	476	
* 78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	10	10	
* 78100105	RAISED REFLECTIVE PAVEMENT MARKER (BRIDGE)	EACH	2	2	
* 78200410	GUARDRAIL MARKERS, TYPE A	EACH	32	32	
* 78200520	BARRIER WALL MARKERS, TYPE B	EACH	10	10	
* 78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	4	4	
78300100	PAVEMENT MARKING REMOVAL	SQ FT	753	753	
X2070304	POROUS GRANULAR EMBANKMENT, SPECIAL	CU YD	111		111
X7200201	WIDTH RESTRICTION SIGNING	L SUM	1	1	
Z0026407	TEMPORARY SHEET PILING	SQ FT	632		632
Z0030250	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2	2	
Z0030350	IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2	2	
Z0046304	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	106		106

* SPECIALTY ITEM

PLAN — DATE — BY — SURVEYED — PLOTTED — ALIGNMENT CHECKED — RT. OF WAY CHECKED — CADD FILE NAME — NOTE BOOK — NO.

PROFILE — DATE — BY — SURVEYED — PLOTTED — PROFILE CHECKED — B.M. NOTED — STRUCTURE NO(S)/TYPE CHKD — NOTE BOOK — NO.

DELTA ENGINEERING GROUP, LLC
CONSULTING ENGINEERS, CONSTRUCTION MANAGERS, SURVEYORS
111 W JACKSON BLVD, SUITE 910
CHICAGO, IL 60604

USER NAME = kkhan	DESIGNED DB	REVISED -	
	DRAWN DB	REVISED -	
PLOT SCALE = $SCALE$	CHECKED AS	REVISED -	
PLOT DATE = 10/11/2011	DATE OCTOBER 14, 2011	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: NONE | SHEET NO. 3 OF 61 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
587	(22 BR)BR	BUREAU	61	3
		CONTRACT NO. 66995		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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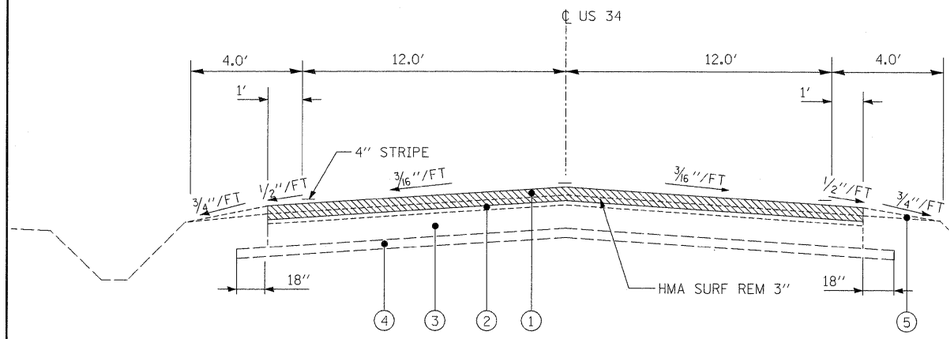
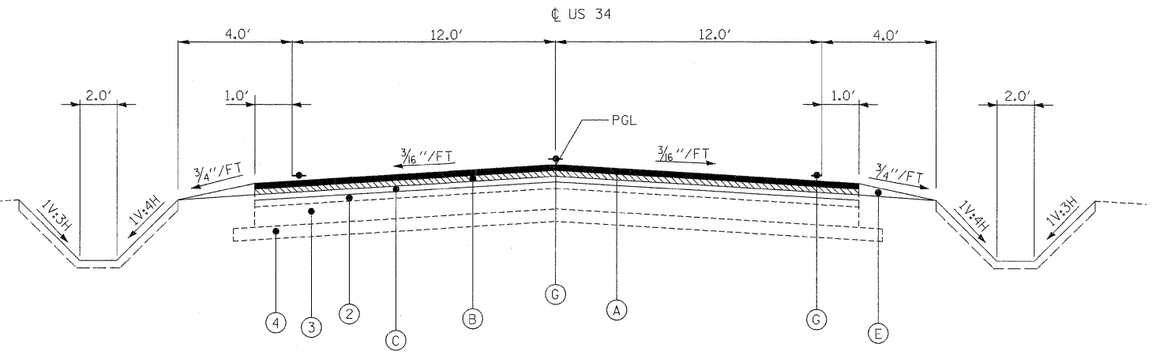


① EXISTING ROADWAY TYPICAL SECTION

NTS

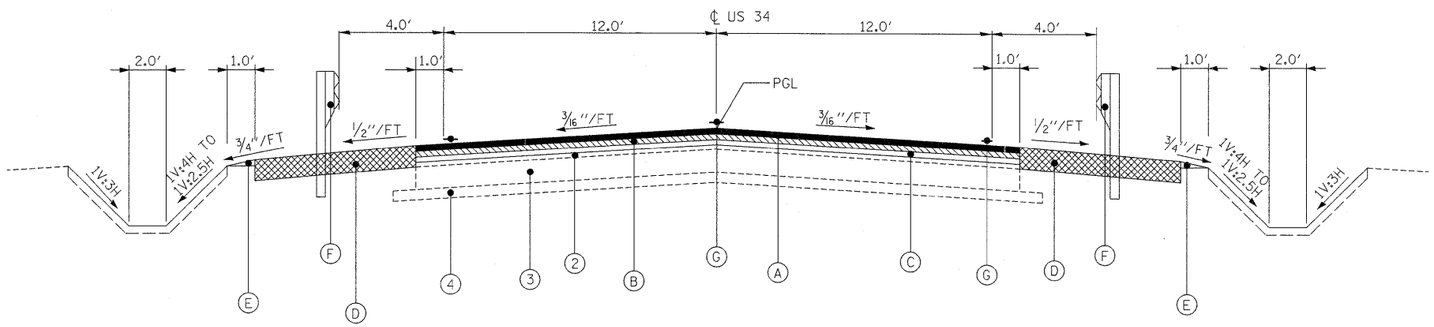
FROM STA 847+50.00 TO STA 852+68.25
FROM STA 854+06.08 TO STA 857+00.00



② PROPOSED ROADWAY TYPICAL SECTION

NTS

FROM STA 847+50.00 TO STA 850+87.30 (L)
FROM STA 847+50.00 TO STA 849+87.30 (R)
FROM STA 856+65.70 TO STA 857+00.00 (L)
FROM STA 855+65.70 TO STA 857+00.00 (R)



③ PROPOSED ROADWAY TYPICAL SECTION

NTS

FROM STA 850+87.30 TO STA 852+44.00 (L)
FROM STA 849+87.30 TO STA 852+44.00 (R)
FROM STA 854+09.00 TO STA 856+65.70 (L)
FROM STA 854+09.00 TO STA 855+65.70 (R)

LEGEND:

EXISTING

(1) EXISTING BITUMINOUS CONCRETE SURFACE COURSE CLASS I, 1¾″
(2) EXISTING BITUMINOUS CONCRETE BINDER COURSE 1¾″
(3) EXISTING BITUMINOUS BASE COURSE 8″
(4) EXISTING SUB-BASE GRANULAR MATERIAL, TYPE B 4″
(5) EXISTING AGGREGATE SHOULDERS, TYPE B

PROPOSED

(A) PROPOSED HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50, 1½″
(B) PROPOSED LEVELING BINDER (MACHINE METHOD), N50, ¾″
(C) PROPOSED LEVELING BINDER (MACHINE METHOD), N50, VAR. DEPTH
(D) PROPOSED HOT-MIX ASPHALT SHOULDERS, 8″
(E) PROPOSED AGGREGATE SHOULDERS, TYPE B
(F) PROPOSED STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS
(G) PAVEMENT MARKING

NOTE:

1. SEE STRUCTURAL SHEETS FOR STAGE CONSTRUCTION.
2. SEE PLAN AND PROFILE SHEET FOR HMA SHOULDER STABILIZATION LOCATIONS.

PLAN: DATE / BY / SURVEYED / PLOTTED / ALIGNMENT CHECKED / RT. OF WAY CHECKED / CADD FILE NAME / NOTE BOOK / NO.

PROFILE: DATE / BY / SURVEYED / PLOTTED / GRADES CHECKED / BM. NOTED / STRUCTURE NOTATNS CHKD / NOTE BOOK / NO.

DELTA ENGINEERING GROUP, LLC
CONSULTING ENGINEERING, CONSTRUCTION MANAGEMENT, SURVEYING
111 W JACKSON BLVD, SUITE 910
CHICAGO, IL 60604

USER NAME = kkhan	DESIGNED DB	REVISED -	
	DRAWN DB	REVISED -	
PLOT SCALE = $SCALE$	CHECKED AS	REVISED -	
PLOT DATE = 10/11/2011	DATE OCTOBER 14, 2011	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS
SN 006-0183 SHEET 1 OF 2

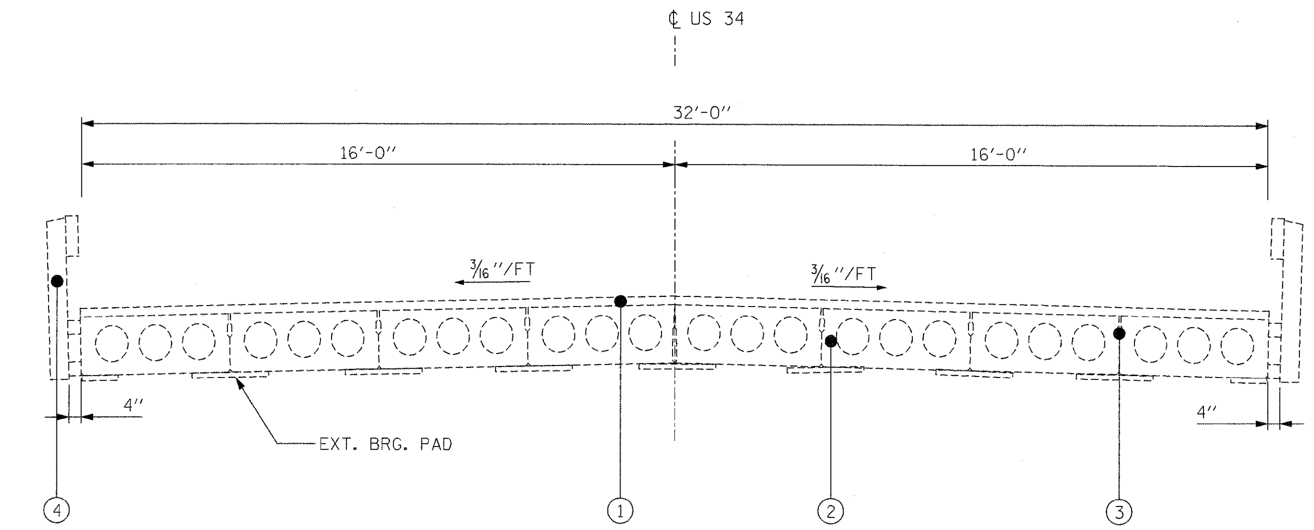
SCALE: NTS | SHEET NO. 4 OF 61 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
587	(22 BR)BR	BUREAU	61	4
		CONTRACT NO. 66995		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FILE NAME = g:\zp1011101\cadd sheets\rdwySN-006-0183-04typ-sht1.dgn

BITUMINOUS MIXTURE REQUIREMENTS

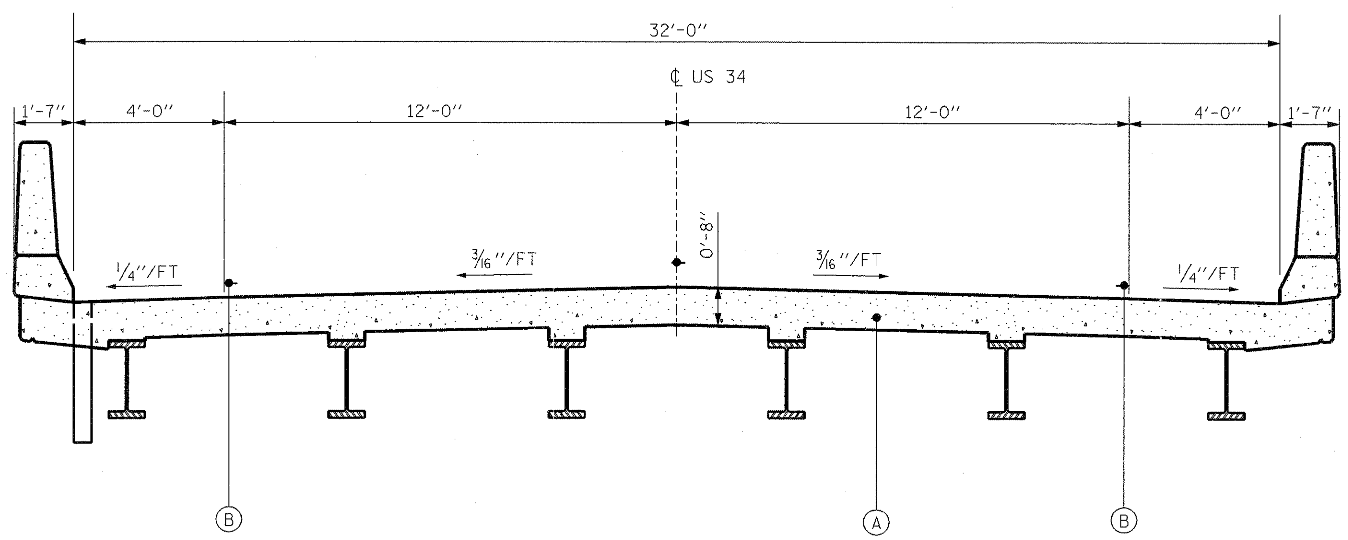
PAY ITEM	HMA LEVEL BINDER	HMA SURFACE	HMA WIDENING	HMA SHOULDERS
PG GRADE	PG64-22	PG64-22	PG64-22	PG58-22
DESIGN AIR VOIDS	4.0% @ N50	4.0% @ N50	4.0% @ N50	2.0% @ N50
MIXTURE COMPOSITION	IL 9.5	IL 9.5	IL 19.0	IL 19.0
FRICTION AGGREGATE		MIXTURE C		
DENSITY TEST METHOD	SATISFACTION OF THE ENGINEER	CORES	SATISFACTION OF THE ENGINEER	SATISFACTION OF THE ENGINEER



(4) EXISTING BRIDGE TYPICAL SECTION

NTS

FROM STA 852+87.83 TO STA 853+86.50



(5) PROPOSED BRIDGE TYPICAL SECTION LOOKING EAST

NTS

FROM STA 852+74.00 TO STA 853+79.00

LEGEND:

EXISTING

1. EXISTING 2 1/2"(MIN) CLASS I DECK WATERPROOFING
2. 8-17" PRECAST PRESTRESSED CONCRETE DECK BEAMS AT 4'-0"=32'-0"+ OVERRUN
3. EXISITNG GROUTED KEY
4. EXISTING TYPE S-1 STEEL RAILING

PROPOSED

(A) PROPOSED 8" DECK

(B) PAVEMENT MARKING

NOTE:

FOR APPROACH SLAB ADJACENT TO BRIDGE, SEE STRUCTURAL PLANS.

PLAN: SURVEYED / PLOTTED / ALIGNMENT CHECKED / RT. OF WAY CHECKED / CADD FILE NAME / NOTE BOOK NO. / BY / DATE

PROFILE: SURVEYED / PLOTTED / GRADES CHECKED / B.M. NOTED / STRUCTURE NOTATIONS CHKD / NOTE BOOK NO. / BY / DATE

DELTA ENGINEERING GROUP, LLC

USER NAME = kkhan	DESIGNED DB	REVISED -
	DRAWN DB	REVISED -
PLOT SCALE = $SCALE$	CHECKED AS	REVISED -
PLOT DATE = 10/11/2011	DATE OCTOBER 14, 2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS
SN 006-0183 SHEET 2 OF 2

SCALE: NTS | SHEET NO. 5 OF 61 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
587	(22 BR)BR	BUREAU	61	5

CONTRACT NO. 66995

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

FILE NAME = g:\zp101101\cadd sheets\rdwySN-006-0183-05typ-sht2.dgn

PAVEMENT SCHEDULE

LOCATION			SIDE	BITUMINOUS MATERIALS (PRIME COAT)	MIXTURE FOR CRACKS, JOINTS, AND FLANGEWAYS	LEVELING BINDER (HAND METHOD), N50	LEVELING BINDER (MACHINE METHOD), N50	HOT-MIX ASPHALT SURFACE REMOVAL- BUTT JOINT	TEMPORARY RAMP	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50	BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)	PAVEMENT REMOVAL	HOT-MIX ASPHALT SURFACE REMOVAL, 3"	AGGREGATE WEDGE SHOULDER, TYPE B	HOT-MIX ASPHALT SHOULDERS, 8"
STATION	TO	STATION	LT/RT	(GAL)	(TON)	(TON)	(TON)	(SQ YD)	(SQ YD)	(TON)	(SQ YD)	(SQ YD)	(SQ YD)	(TON)	(SQ YD)
847+50.00		847+55.00							24						
847+50.00		848+40.00						12							
847+50.00		852+44.00					82						1427		
847+50.00		849+87.30	RT	47	0.11	0.18	15			30				10	
847+50.00	TO	850+87.30	LT	67	0.15	0.26	21			43				15	
849+87.30	TO	852+44.00	RT	51	0.12	0.19	16			33					190
850+87.30	TO	852+44.00	LT	31	0.07	0.12	10			20					120
852+38.00	TO	852+44.00									21.5				
852+44.00	TO	852+68.25										70			
854+06.08	TO	854+09.00										8			
854+09.00	TO	854+15.00									21.5				
854+09.00	TO	855+65.70	RT	31	0.07	0.12	10			20					120
854+09.00	TO	856+65.70	LT	51	0.12	0.19	16			33					190
855+65.70	TO	857+00.00	RT	26	0.06	0.10	9			17				6	
856+65.70	TO	857+00.00	LT	7	0.02	0.03	2			4				1	
854+09.00	TO	857+00.00					80						841		
856+10.00	TO	857+00.00						12							
856+95.00	TO	857+00.00							24						
TOTAL				311	0.7	1.2	261	24	48	200	43	78	2,268	32	620

EARTHWORK SCHEDULE

STATION		SIDE	CUT VOLUME	FILL VOLUME
			EARTH EXCAVATION	FURNISHED EXCAVATION
FROM	TO	LT/RT	(CU YD)	(CU YD)
847+50.00	857+00.00	LT	195	435
847+50.00	857+00.00	RT	320	500
TOTAL			515	935

MAINTENANCE OF TRAFFIC

STAGE	LOCATION			SIDE	HMA BASE COURSE WIDENING, 8"	SHORT TERM PAVEMENT MARKING		TEMPORARY PAVEMENT MARKING- LINE 4"	TEMPORARY PAVEMENT MARKING- LINE 6"	WORK ZONE PAVEMENT MARKING REMOVAL	TEMPORARY CONCRETE BARRIER	RELOCATE TEMPORARY CONCRETE BARRIER	IMPACT ATTENTUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3	IMPACT ATTENTUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3	TEMPORARY BRIDGE TRAFFIC SIGNALS
						WIDTH	WHITE	WHITE	YELLOW						
	STATION	TO	STATION	LT/RT	(SQ YD)	(IN)	(FOOT)	(FOOT)	(FOOT)	(SQ FT)	(FOOT)	(FOOT)	(EACH)	(EACH)	(EACH)
PRESTAGE 1	851+36.52	TO	852+76.47	LT	43										
	853+98.29	TO	855+14.13	LT	33										
STAGE I	849+45.00					24	12			24					
	849+54.53	TO	851+69.00			4	214			71					
	851+69.00	TO	854+84.00			4	315			105					
	854+84.00	TO	856+94.85			4	211			70					
	857+55.00					24	12			24					
STAGE II	851+18.30	TO	855+35.12			4	417			139					
	849+32.00					24	12			24					
	849+54.00	TO	851+69.00			4	215			72					
	851+69.00	TO	854+84.00			4	315			105					
	854+84.00	TO	856+97.00			4	213			71					
	857+57.00					24	12			24					
	847+50.00	TO	857+00.00	LT				950							
	847+50.00	TO	857+00.00	RT				950							
	847+50.00	TO	857+00.00	CL					238						
STAGE I	851+23.00												1		
	851+23.00	TO	855+30.00								410				
	855+30.00												1		
STAGE II	851+35.00													1	
	851+35.00	TO	855+18.00									390			
	855+18.00													1	
	847+50.00	TO	857+00.00												1
	TOTAL				76		1,948	1,900	238	729	410	390	2	2	1

PAVEMENT MARKING SCHEDULE

LOCATION			SIDE	TYPE	PAVEMENT MARKING REMOVAL	PAINT PAVEMENT MARKING- LINE 4"	PAINT PAVEMENT MARKING- LINE 6"
						WHITE	YELLOW SKIP DASH
STATION	TO	STATION	LT/RT		(SQ FT)	(FOOT)	(FOOT)
847+50.00	TO	857+00.00	LT	SOLID	317	*1,900	
847+50.00	TO	857+00.00	RT	SOLID	317	*1,900	
847+50.00	TO	857+00.00	CL	10' DASH, 30' SKIP	119		* 476
	TOTAL				753	3,800	476

* QUANTITIES SHOWN IS FOR TWO APPLICATIONS TO PAINT THE PAVEMENT MARKING LINES.

PLAN: SURVEYED, PLOTTED, ALIGNMENT CHECKED, RT. OF WAY CHECKED, CADD FILE NAME, NOTE BOOK, NO. ____, BY, DATE

PROFILE: SURVEYED, PLOTTED, GRADE CHECKED, B.M. NOTED, STRUCTURE NOTATNS CHKD, NOTE BOOK, NO. ____, BY, DATE

DELTA ENGINEERING GROUP, LLC
CONSULTING ENGINEERING, CONSTRUCTION MANAGEMENT, SURVEYING
111 W JACKSON BLVD, SUITE 1512
CHICAGO, IL 60604

USER NAME = kkhan	DESIGNED DB	REVISED -	
	DRAWN DB	REVISED -	
PLOT SCALE = $SCALE$	CHECKED AS	REVISED -	
PLOT DATE = 10/11/2011	DATE OCTOBER 14, 2011	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES
SN 006-0183 SHEET 1 OF 2

SCALE: NONE | SHEET NO. 6 OF 61 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
587	(22 BR)BR	BUREAU	61	6
		CONTRACT NO. 66995		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FILE NAME = g:\zp1011101\cadd sheets\r-dwySN-006-0183-06schedule-sht1.dgn

SEEDING AND EROSION CONTROL SCHEDULE

LOCATION			SIDE	SEEDING, CLASS 3	NITROGEN FERTILIZER NUTRIENT	PHOSPHORUS FERTILIZER NUTRIENT	POTASSIUM FERTILIZER NUTRIENT	EROSION CONTROL BLANKET	TEMPORARY EROSION CONTROL SEEDING	TEMPORARY DITCH CHECKS	PERIMETER EROSION BARRIER	AGGREGATE (EROSION CONTROL)	FILTER FABRIC	AGGREGATE DITCH
STATION	TO	STATION	LT/RT	(ACRE)	(POUND)	(POUND)	(POUND)	(SQ YD)	(POUND)	(FOOT)	(FOOT)	(TON)	(SQ YD)	(TON)
847+00.00	TO	853+18.00	LT	0.50	45	45	45	2,379	50					
847+00.00	TO	853+18.00	RT	0.75	67	67	67	2,820	75					
853+42.00	TO	857+50.00	LT	0.25	23	23	23	1,150	25					
853+42.00	TO	857+50.00	RT	0.25	23	23	23	1,283	25					
848+00.00			LT							8				
848+00.00			RT							8				
850+00.00			LT							8				
850+00.00			RT							8				
852+00.00			LT							8				
852+00.00			RT							8				
854+00.00			LT							8				
854+00.00			RT							8				
856+00.00			LT							8				
856+00.00			RT							8				
NW OF CULVERT			LT								32			
SW OF CULVERT			RT								33			
NE OF CULVERT			LT								26			
SE OF CULVERT			RT								22			
852+64.00	TO	853+18.00	LT										57	39
852+67.00	TO	853+14.00	RT										49	34
853+42.00	TO	853+89.00	LT										49	34
853+54.00	TO	853+86.00	RT										34	23
856+65.00	TO	857+09.00	RT								44			
* 847+00.00	TO	857+50.00									150	150		
TOTAL				1.75	158	158	158	7,632	175	80	307	150	189	130

* TO BE USED AT ENGINEER'S DISCRETION

GUARDRAIL SCHEDULE

LOCATION			SIDE	STEEL PLATE BEAM GUARD RAIL, TYPE A, 6 FOOT POSTS	TRAFFIC BARRIER TERMINAL, TYPE 6	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) FLARED	GUARDRAIL REMOVAL	GUARDRAIL MARKERS, TYPE A	BARRIER WALL MARKERS, TYPE B	TERMINAL MARKER - DIRECT APPLIED
STATION	TO	STATION	LT/RT	(FOOT)	(EACH)	(EACH)	(FOOT)	(EACH)	(EACH)	(EACH)
847+99.56	TO	852+87.70	LT				488			
847+99.65	TO	852+88.21	RT				489			
850+03.36	TO	850+53.36	RT			1				
850+53.36	TO	852+61.53	RT					10		
850+53.36	TO	852+15.86	RT	162.50						
851+03.36	TO	851+53.36	LT			1				
851+03.36	TO	852+61.53	LT					6		
851+53.36	TO	852+15.86	LT	62.50						
852+15.86	TO	852+61.53	RT		1					
852+15.86	TO	852+61.53	LT		1					
852+61.00	TO	853+92.00	LT						5	
852+61.00	TO	853+92.00	RT						5	
853+87.45	TO	855+74.93	LT				187			
853+85.26	TO	855+74.79	RT				190			
853+91.47	TO	854+37.14	RT		1					
853+91.47	TO	854+37.14	LT		1					
853+91.47	TO	855+49.64	RT					6		
853+91.47	TO	856+49.64	LT					10		
854+37.14	TO	854+99.64	RT	62.50						
854+37.14	TO	855+99.64	LT	162.50						
854+99.64	TO	855+49.64	RT			1				
855+99.64	TO	856+49.64	LT			1				
APPLIED AT EACH FACE OF TBT										4
TOTAL				450	4	4	1,354	32	10	4

FURNISHING AND ERECTING RIGHT-OF-WAY MARKERS

LOCATION	OFFSET (FOOT)	SIDE	EACH
STATION			
846+50.00	50	RT	1
847+00.00	40	LT	1
847+50.00	60	RT	1
848+00.00	55	LT	1
852+59.42	55	LT	1
857+00.00	60	RT	1
857+50.00	50	RT	1
TOTAL			7

DRAINAGE PIPE AND STRUCTURE SCHEDULE

LOCATION	SIDE	CONCRETE HEADWALLS FOR PIPE DRAIN	PIPE UNDERDRAINS 4"
STATION TO STATION	LT/RT	(EACH)	(FOOT)
852+72.00	LT	1	16
852+72.00	RT	1	18
853+81.00	LT	1	14
853+81.00	RT	1	13
TOTAL		4	61

RAISED REFLECTIVE PAVEMENT MARKERS

LOCATION			SIDE	RAISED REFLECTIVE PAVEMENT MARKER	RAISED REFLECTIVE PAVEMENT MARKER (BRIDGE)
STATION	TO	STATION	LT/RT	(EACH)	(EACH)
847+50.00	TO	852+44.00	RT	6	
852+44.00	TO	854+09.00	RT		2
854+09.00	TO	857+00.00	RT	4	
	TOTAL			10	2

PERMANENT SURVEY MARKERS

LOCATION	EACH
STATION	
853+26.50	1
TOTAL	1

PLAN		PROFILE	
SURVEYED		SURVEYED	
PLOTTED		PLOTTED	
ALIGNMENT CHECKED		GRADES CHECKED	
R.O. OF WAY CHECKED		B.M. NOTED	
CADD FILE NAME		STRUCTURE NOTATIONS CHKD	
NOTE BOOK		NOTE BOOK	
NO.		NO.	
BY		BY	
DATE		DATE	

DELTA ENGINEERING GROUP, LLC

USER NAME = kkhan	DESIGNED DB	REVISED -
	DRAWN DB	REVISED -
PLOT SCALE = $SCALE$	CHECKED AS	REVISED -
PLOT DATE = 10/11/2011	DATE OCTOBER 14, 2011	REVISED -

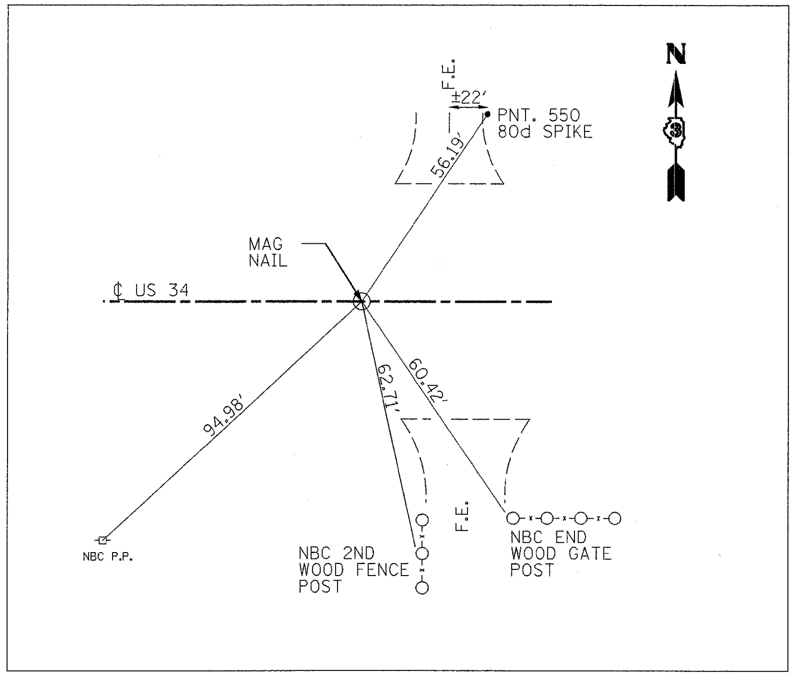
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES
SN 006-0183 SHEET 2 OF 2

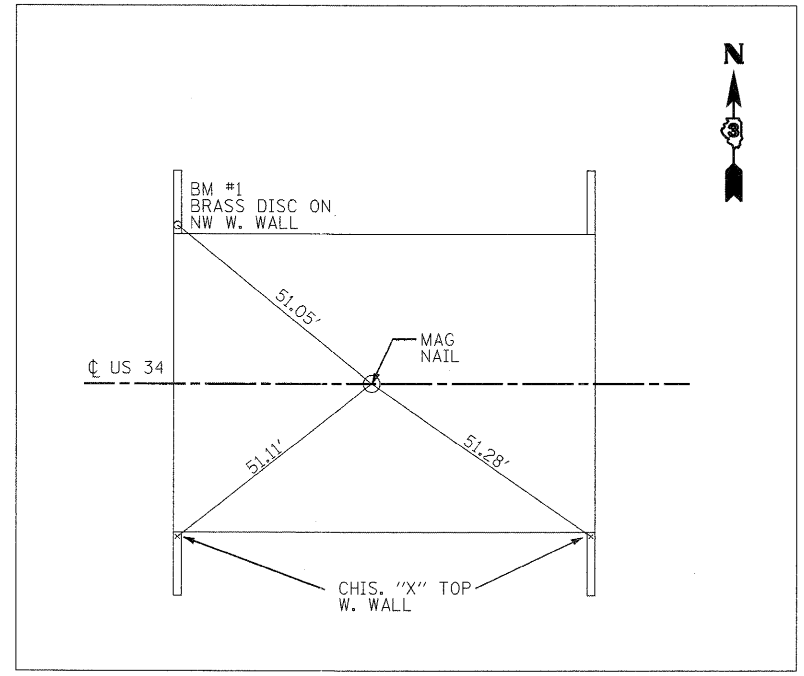
SCALE: NONE | SHEET NO. 7 OF 61 SHEETS | STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
587	(22 BR)BR	BUREAU	61	7
		CONTRACT NO. 66995		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

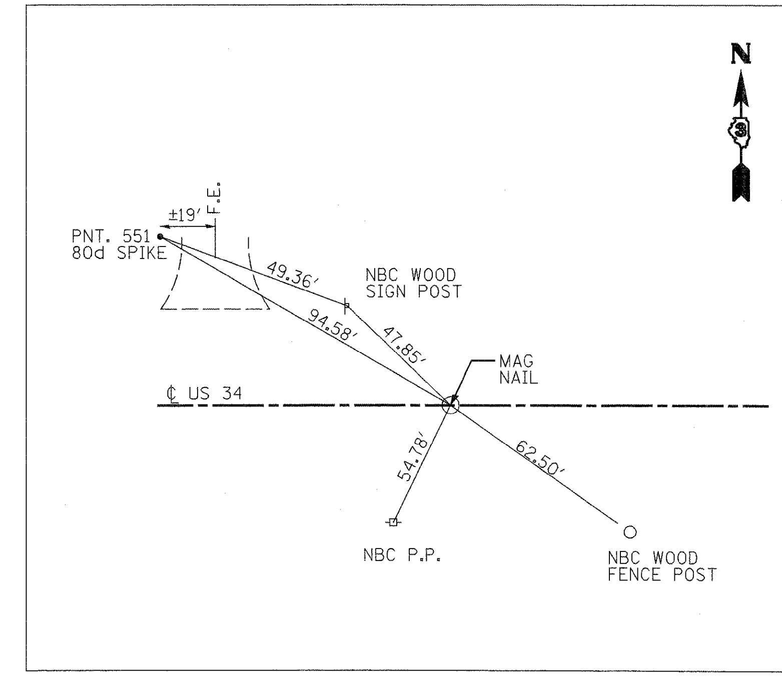
FILE NAME = g:\zp101101\cadd sheets\rdwySN-006-0183-07schedule-sht2.dgn



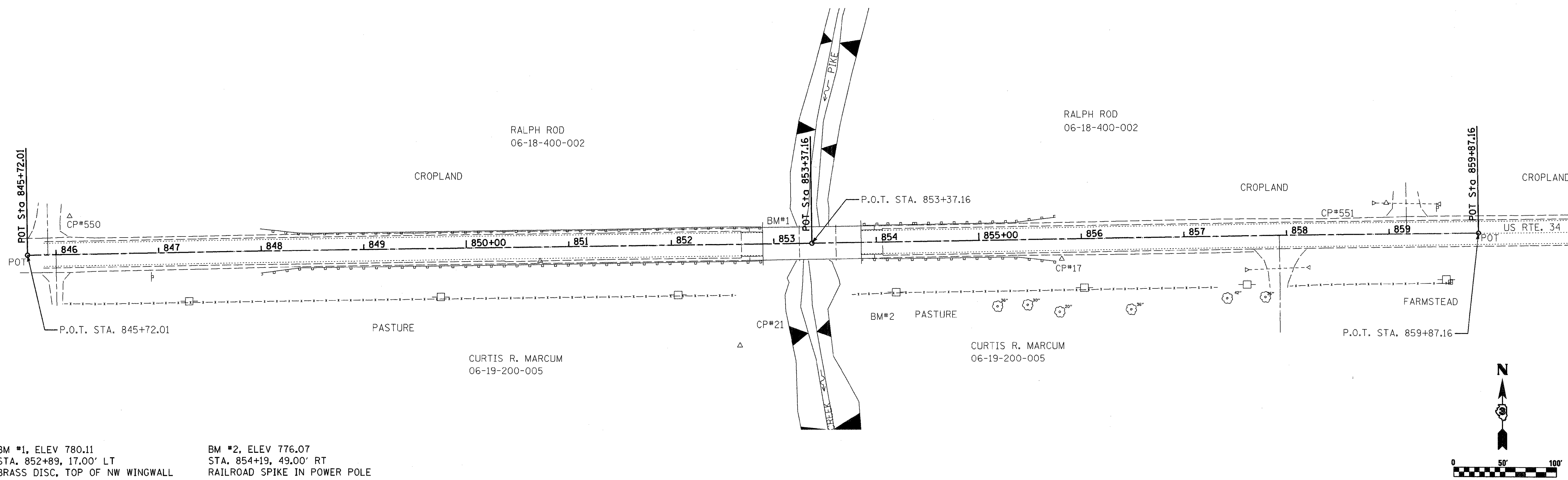
P.O.T. STA. 845+72.01
C.P. 550 STA. 846+13.70, 37.30' LT
(N.T.S)



℄ STRUCTURE P.O.T. STA. 853+37.16
SN 006-0147
(N.T.S)
REPLACE WITH PERMANENT SURVEY MARKER



P.O.T. STA. 859+87.16
C.P. 551 STA. 858+97.68, 30.48' LT
(N.T.S)



BM #1, ELEV 780.11
STA. 852+89, 17.00' LT
BRASS DISC, TOP OF NW WINGWALL

BM #2, ELEV 776.07
STA. 854+19, 49.00' RT
RAILROAD SPIKE IN POWER POLE

DELTA ENGINEERING GROUP, LLC	USER NAME = kkhan	DESIGNED DB	REVISED -
		DRAWN DB	REVISED -
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	PLOT DATE = 10/11/2011	DATE OCTOBER 14, 2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ALIGNMENT, TIES AND BENCHMARKS

SCALE: 1"= 50' | SHEET NO. 8 OF 61 SHEETS | STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
587	(22 BR)BR	BUREAU	61	8
		CONTRACT NO. 66995		

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

PLAN: SURVEYED / PLOTTED / ALIGNMENT CHECKED / R.T. OF WAY CHECKED / CADD FILE NAME / NOTE BOOK NO. / BY / DATE

PROFILE: SURVEYED / PLOTTED / GRADES CHECKED / B.M. NOTED / STRUCTURE NOTATNS CHKD / NOTE BOOK NO. / BY / DATE

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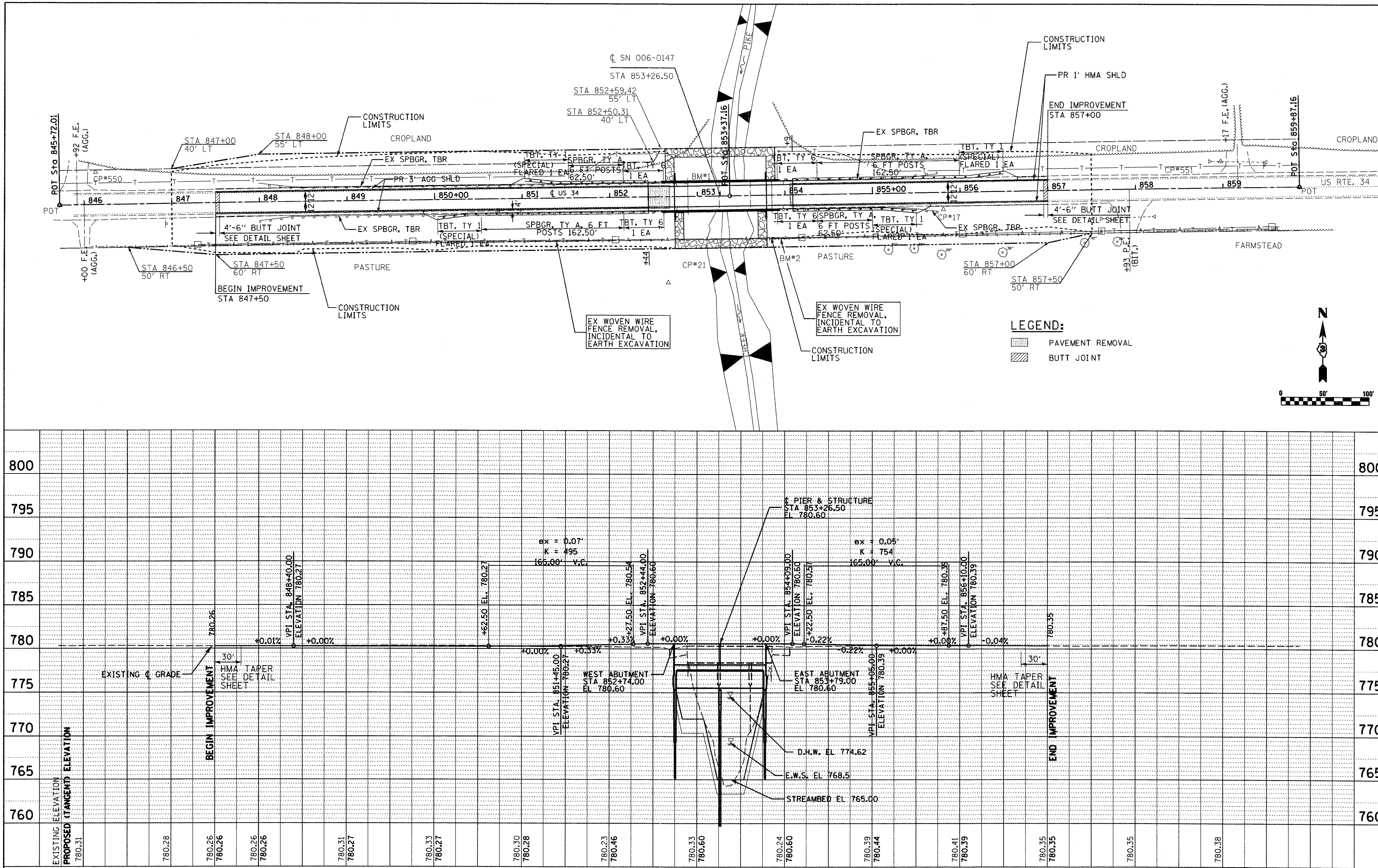


PLAN
NOTE BOOK
NO.
SURVEYED
PLOTTED
ALIGNMENT CHECKED
R.T. OF WAY CHECKED
CADD FILE NAME
BY
DATE
CONSTRUCTION LIMITS
℄ SN 006-0147
STA 853+26.50
STA 852+59.42
55' LT
STA 852+50.31
40' LT
POT Sta 853+37.16
PR 1' HMA SHLD
END IMPROVEMENT
STA 857+00
EX SPBGR, TBR
CROPLAND
POT Sta 845+72.01
+92 F.E. (AGG.)
STA 847+00
40' LT
STA 848+00
55' LT
CP#550
PR 3' AGG SHLD
TBT. TY 1 (SPECIAL) FLARED 1 EA
SPBGR, TY A, 6 FT POSTS 62.50'
TBT. TY 6
1 EA
BM#1
SPBGR, TY A, 6 FT POSTS 162.50'
TBT. TY 1 (SPECIAL) FLARED 1 EA
+17 F.E. (AGG.)
POT Sta 859+87.16
CP#551
US RTE. 34
POT
℄ US 34
846
847
848
849
850+00
851
852
853
854
855+00
856
857
858
859
4'-6" BUTT JOINT
SEE DETAIL SHEET
SPBGR, TY A, 6 FT POSTS 162.50'
TBT. TY 1 (SPECIAL) FLARED 1 EA
TBT. TY 6
1 EA
SPBGR, TY A, 6 FT POSTS 62.50'
CP#17
FARMSTEAD
+00 F.E. (AGG.)
STA 846+50
50' RT
STA 847+50
60' RT
BEGIN IMPROVEMENT
STA 847+50
PASTURE
+44
CP#21
BM#2
STA 857+00
60' RT
STA 857+50
50' RT
+93 P.E. (BIT.)
EX WOVEN WIRE FENCE REMOVAL, INCIDENTAL TO EARTH EXCAVATION
CREEK
PIKE
LEGEND:
PAVEMENT REMOVAL
BUTT JOINT
N
0
50'
100'
PROFILE
NOTE BOOK
NO.
SURVEYED
PLOTTED
GRADES CHECKED
B.M. NOTED
STRUCTURE NOTAT'NS CHK'D
800
795
790
785
780
775
770
765
760
℄ PIER & STRUCTURE
STA 853+26.50
EL 780.60
ex = 0.07'
K = 495
165.00' V.C.
ex = 0.05'
K = 754
165.00' V.C.
VPI STA. 848+40.00
ELEVATION 780.27
+62.50 EL. 780.27
+27.50 EL. 780.54
VPI STA. 852+44.00
ELEVATION 780.60
VPI STA. 854+09.00
ELEVATION 780.60
+22.50 EL. 780.57
+87.50 EL. 780.39
VPI STA. 856+10.00
ELEVATION 780.39
780.35
780.26
+0.01%
+0.00%
+0.00%
+0.33%
+0.33%
+0.00%
+0.00%
-0.22%
-0.22%
+0.00%
+0.00%
-0.04%
30'
EXISTING ℄ GRADE
HMA TAPER
SEE DETAIL SHEET
BEGIN IMPROVEMENT
VPI STA. 851+45.00
ELEVATION 780.27
WEST ABUTMENT
STA 852+74.00
EL 780.60
EAST ABUTMENT
STA 853+79.00
EL 780.60
VPI STA. 855+05.00
ELEVATION 780.39
END IMPROVEMENT
D.H.W. EL 774.62
E.W.S. EL 768.5
STREAMBED EL 765.00
EXISTING ELEVATION
PROPOSED (TANGENT) ELEVATION
780.31
780.28
780.26
780.26
780.26
780.26
780.31
780.27
780.33
780.27
780.30
780.28
780.23
780.46
780.33
780.60
780.24
780.60
780.39
780.44
780.41
780.39
780.35
780.35
780.35
780.38
846+00
847+00
848+00
849+00
850+00
851+00
852+00
853+00
854+00
855+00
856+00
857+00
858+00
859+00

DELTA ENGINEERING GROUP, LLC	USER NAME = kkhan	DESIGNED DB	REVISED -	
		DRAWN DB	REVISED -	
	PLOT SCALE = $SCALE$	CHECKED AS	REVISED -	
	PLOT DATE = 10/11/2011	DATE OCTOBER 14, 2011	REVISED -	

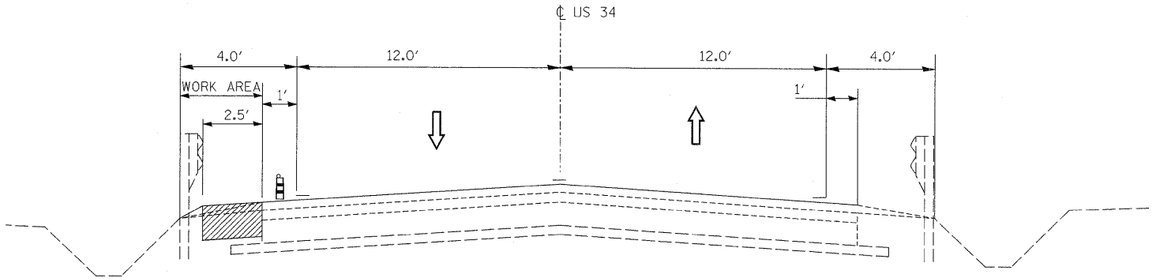
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE

SCALE: 1" : 50' | SHEET NO. 9 OF 61 SHEETS | STA. 847+50.00 TO STA. 857+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
587	(22 BR)BR	BUREAU	61	9
		CONTRACT NO. 66995		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

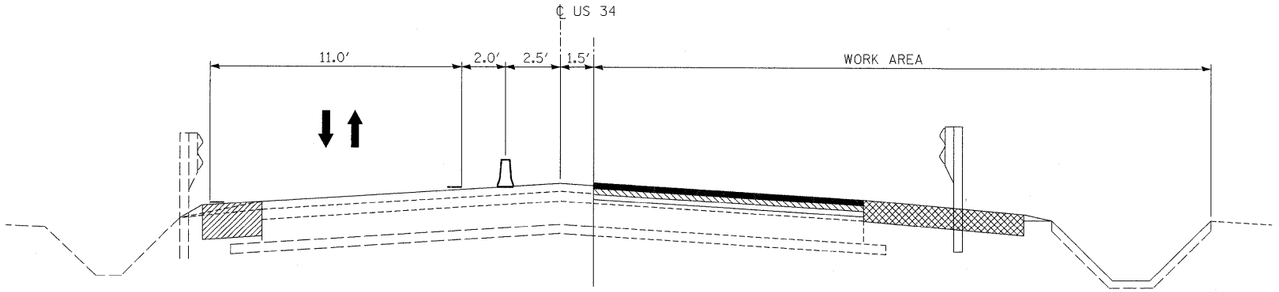
FILE NAME = g:\zp101101\cadd sheets\r-dwySN-006-0183-09pp-sht1.dgn



① PRE STAGE I

NTS

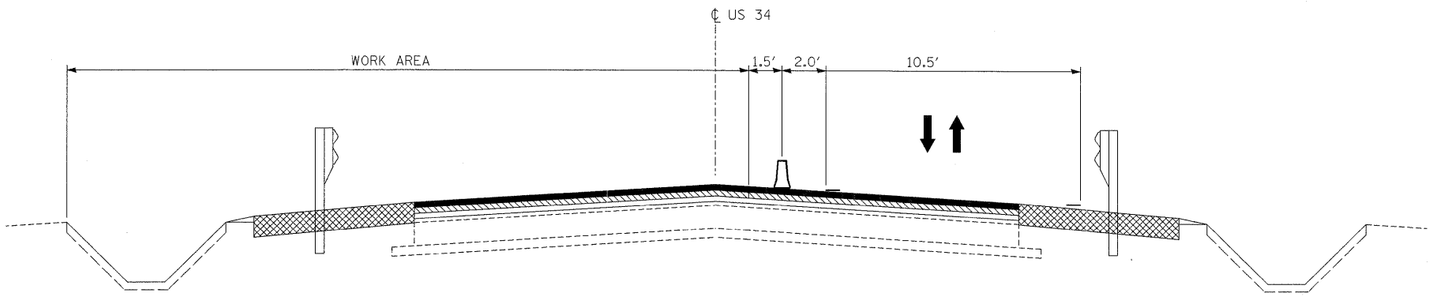
FROM STA 847+50.00 TO STA 852+68.25
FROM STA 854+06.08 TO STA 857+00.00



② STAGE I

NTS

FROM STA 847+50.00 TO STA 852+68.25
FROM STA 854+06.08 TO STA 857+00.00



③ STAGE II

NTS

FROM STA 847+50.00 TO STA 852+68.25
FROM STA 854+06.08 TO STA 857+00.00

MAINTENANCE OF TRAFFIC LEGEND

- HOT-MIX ASPHALT BASE COURSE WIDENING, 8″
- TEMPORARY CONCRETE BARRIER
- TYPE II BARRICADE OR DRUM W/ TYPE C STEADY BURN MONO-DIRECTIONAL LIGHT
- TRAFFIC DIRECTION
- PROPOSED TRAFFIC DIRECTION

NOTE:

FOR PAVEMENT MARKING, SEE STAGE PLAN SHEETS

PLAN — DATE / BY / SURVEYED / PLOTTED / ALIGNMENT CHECKED / RELATIVE MARKS CHECKED / CADD FILE NAME / NOTE BOOK / NO.

PROFILE — DATE / BY / SURVEYED / PLOTTED / GRADES CHECKED / RELATIVE MARKS CHECKED / STRUCTURE NO(S)/RNS CHK'D

DELTA ENGINEERING GROUP, LLC
CONSULTING ENGINEERING, CONSTRUCTION MANAGEMENT, SURVEYING
111 W JACKSON BLVD, SUITE 910
CHICAGO, IL 60604

USER NAME = kkhan	DESIGNED DB	REVISED -	
	DRAWN DB	REVISED -	
PLOT SCALE = @SCALE@	CHECKED AS	REVISED -	
PLOT DATE = 10/11/2011	DATE OCTOBER 14, 2011	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

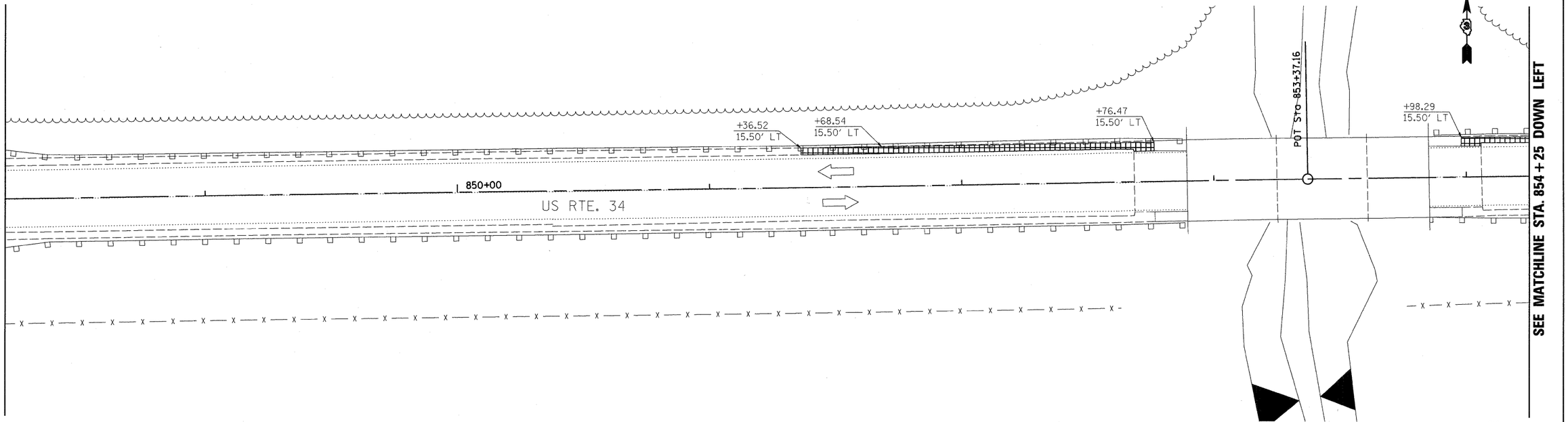
MOT TYPICAL SECTIONS

SCALE: NTS | SHEET NO. 10 OF 61 SHEETS | STA. | TO STA.

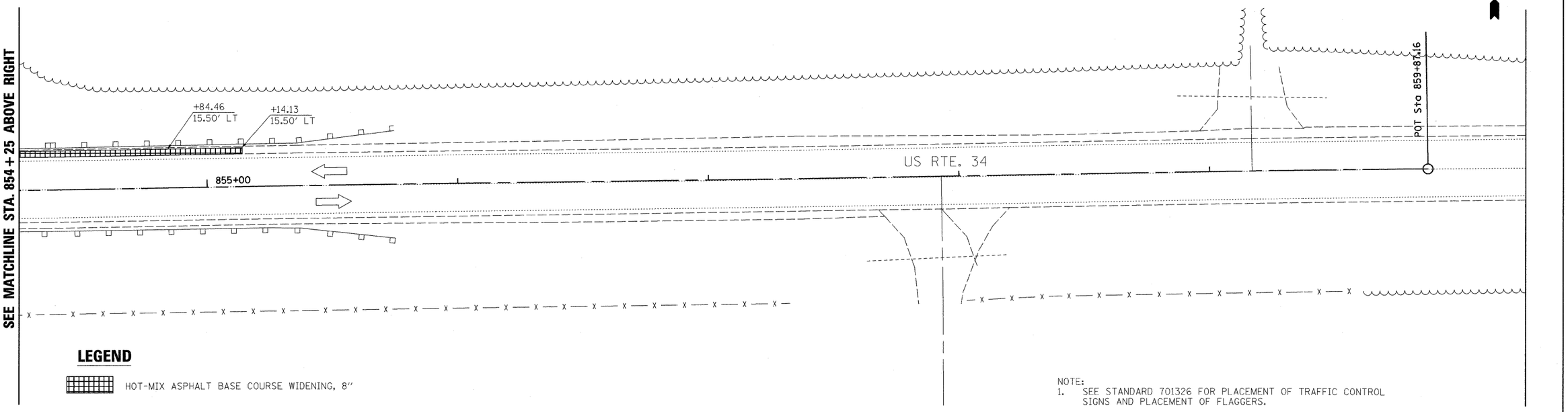
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
587	(22 BR)BR	BUREAU	61	10
		CONTRACT NO. 66995		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FILE NAME = g:\zp10101\cadd sheets\rdwySN-006-0183-10MOTtyp.dgn

PLAN
SURVEYED | DATE
PLOTTED | BY
DRAWN
CHECKED
R/W CHECKED
NOTE BOOK
NO.
CADD FILE NAME



PROFILE
SURVEYED | DATE
PLOTTED | BY
DRAWN
CHECKED
R/W NOTED
NOTE BOOK
NO.
STRUCTURE NOTATIONS CHKD



LEGEND

HOT-MIX ASPHALT BASE COURSE WIDENING, 8"

NOTE:
1. SEE STANDARD 701326 FOR PLACEMENT OF TRAFFIC CONTROL SIGNS AND PLACEMENT OF FLAGGERS.

0 50' 100'

DELTA ENGINEERING GROUP, LLC
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111 W JACKSON BLVD, SUITE 810
CHICAGO, IL 60604

USER NAME = kkhan	DESIGNED DB	REVISED -	
	DRAWN DB	REVISED -	
PLOT SCALE = $SCALE$	CHECKED AS	REVISED -	
PLOT DATE = 10/11/2011	DATE OCTOBER 14, 2011	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PRE STAGE I – TRAFFIC CONTROL

SCALE: 1" = 20' | SHEET NO. 11 OF 61 SHEETS | STA. 847+50.00 TO STA. 857+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
587	(22 BR)BR	BUREAU	61	11
		CONTRACT NO. 66995		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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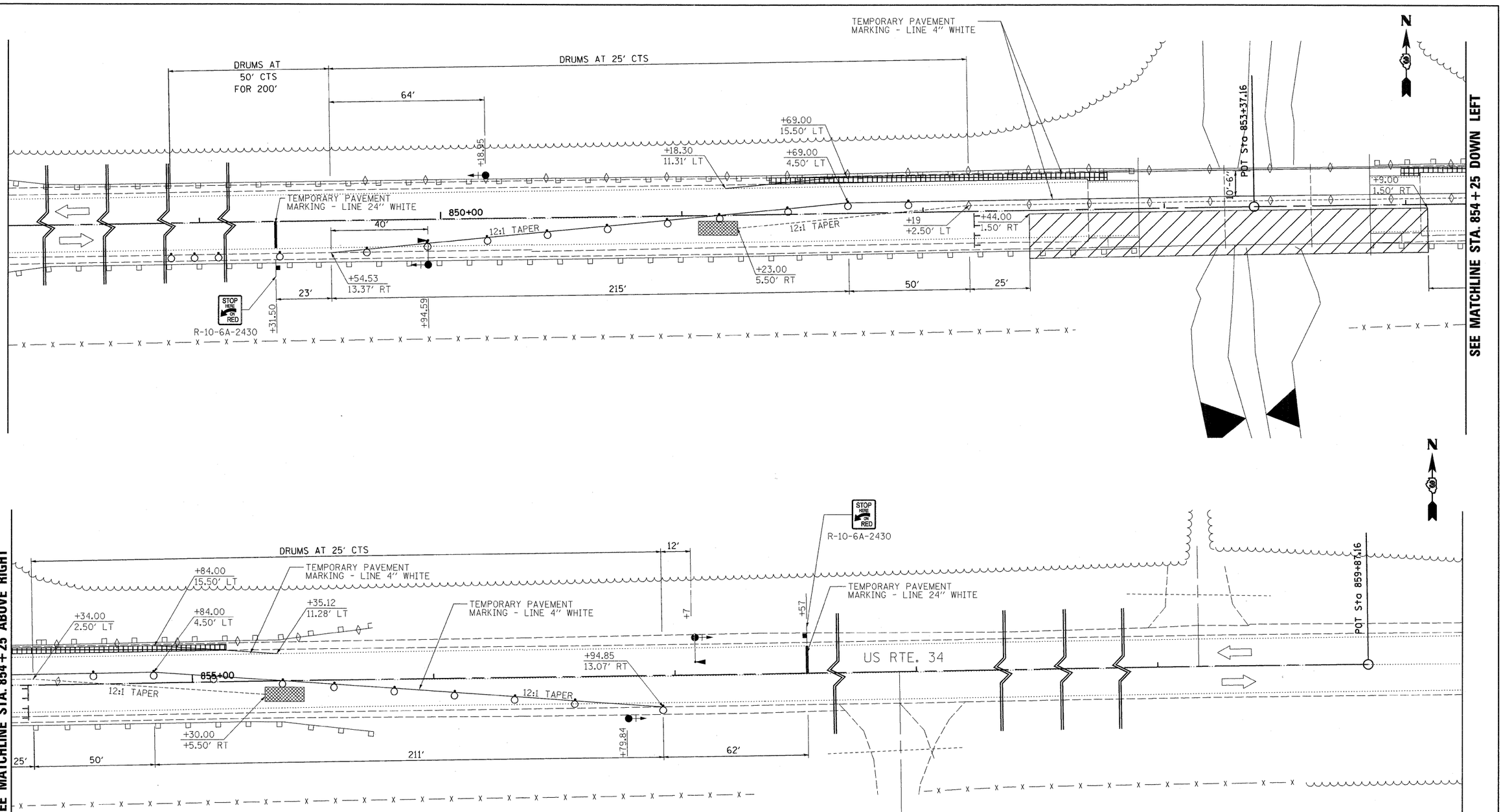

LEGEND

- WORK AREA
- IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3
- SIGN
- TYPE III BARRICADE
- TRAFFIC SIGNAL WITH BACKPLATE
- MICROWAVE
- DRUM WITH STEADY BURN LIGHT
- TYPE "C" BIDIRECTIONAL REFLECTOR/TEMPORARY
- TEMPORARY CONCRETE BARRIER
- HOT-MIX ASPHALT BASE COURSE WIDENING, 8" (PRE-STAGE I)

NOTES

1. SEE STANDARD 701321 FOR DETAILS.
2. SEE MOT TYPICAL SECTIONS SHEET FOR STAGES OF CONSTRUCTION.

0 50' 100'

PLAN / PROFILE — SURVEYED, PLOTTED, DRAWN, CHECKED, R.T. OF WAY, CHECKED, CADD FILE NAME, NOTE BOOK, NO., B.M. NOTED, STRUCTURE NOTATNS CHKD, DATE, BY

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CONSULTING ENGINEERS, CONSTRUCTION MANAGERS, SURVEYORS
111 W. JACKSON BLVD., SUITE 910
CHICAGO, IL 60604

USER NAME = kkhan	DESIGNED DB	REVISED -
	DRAWN DB	REVISED -
PLOT SCALE = $SCALE$	CHECKED AS	REVISED -
PLOT DATE = 10/11/2011	DATE OCTOBER 14, 2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE I – TRAFFIC CONTROL

SCALE: 1" = 20' | SHEET NO. 12 OF 61 SHEETS | STA. 847+50.00 TO STA. 857+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
587	(22 BR)BR	BUREAU	61	12
		CONTRACT NO. 66995		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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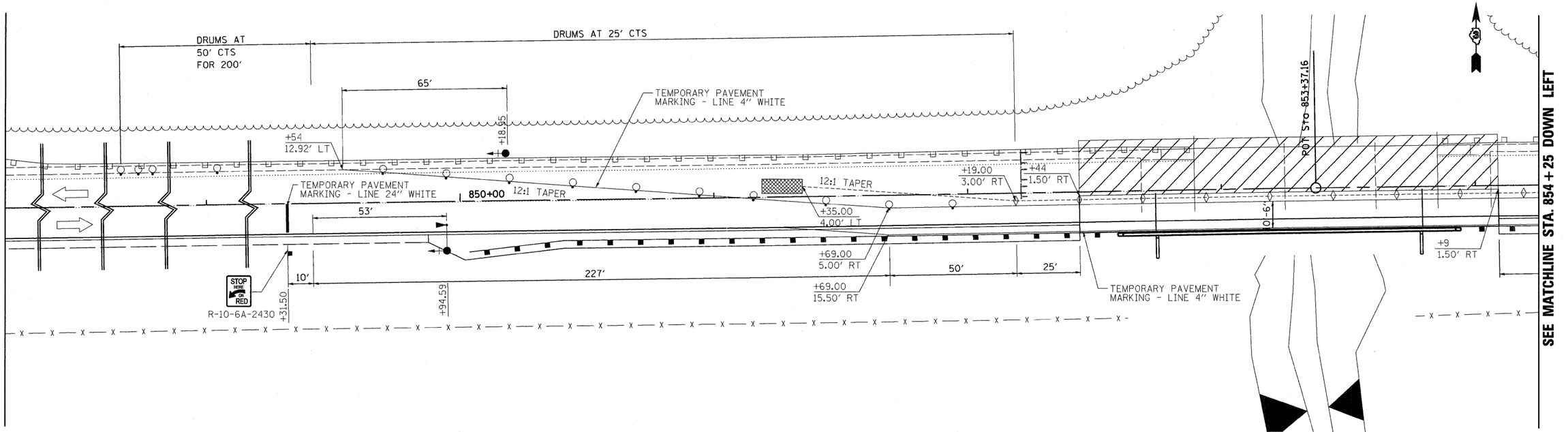

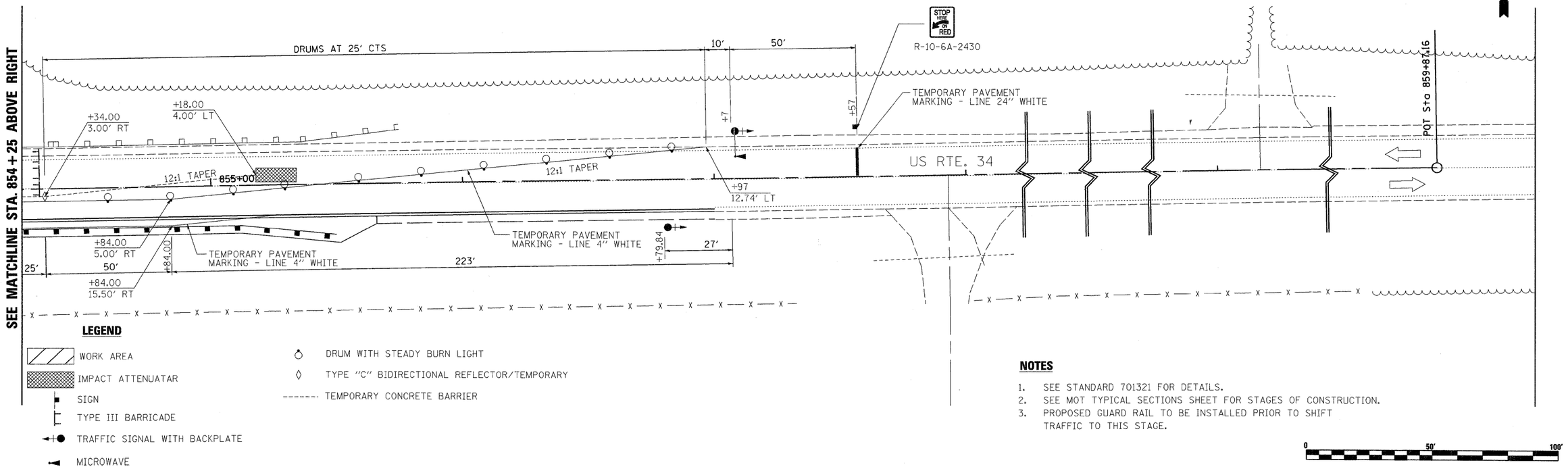

LEGEND

- WORK AREA
- IMPACT ATTENUATAR
- SIGN
- TYPE III BARRICADE
- TRAFFIC SIGNAL WITH BACKPLATE
- MICROWAVE
- DRUM WITH STEADY BURN LIGHT
- TYPE "C" BIDIRECTIONAL REFLECTOR/TEMPORARY
- TEMPORARY CONCRETE BARRIER

NOTES

1. SEE STANDARD 701321 FOR DETAILS.
2. SEE MOT TYPICAL SECTIONS SHEET FOR STAGES OF CONSTRUCTION.
3. PROPOSED GUARD RAIL TO BE INSTALLED PRIOR TO SHIFT TRAFFIC TO THIS STAGE.

0 50' 100'

PLAN / PROFILE — SURVEYED, PLOTTED, CROSS SECTIONS CHECKED, RT. OF WAY CHECKED, CADD FILE NAME, NOTE BOOK, NO., BM. NOTED, STRUCTURE NOTATNS CHKD, DATE, BY

DELTA ENGINEERING GROUP, LLC
CONSULTING ENGINEERING, CONSTRUCTION MANAGEMENT, SURVEYING
111 W JACKSON BLVD, SUITE 912, CHICAGO, IL 60604

USER NAME = kkhan	DESIGNED DB	REVISED -	
	DRAWN DB	REVISED -	
PLOT SCALE = $SCALE$	CHECKED AS	REVISED -	
PLOT DATE = 10/11/2011	DATE OCTOBER 14, 2011	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE II – TRAFFIC CONTROL

SCALE: 1" = 20' | SHEET NO. 13 OF 61 SHEETS | STA. 847+50.00 TO STA. 857+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
587	(22 BRIBR	BUREAU	61	13
		CONTRACT NO. 66995		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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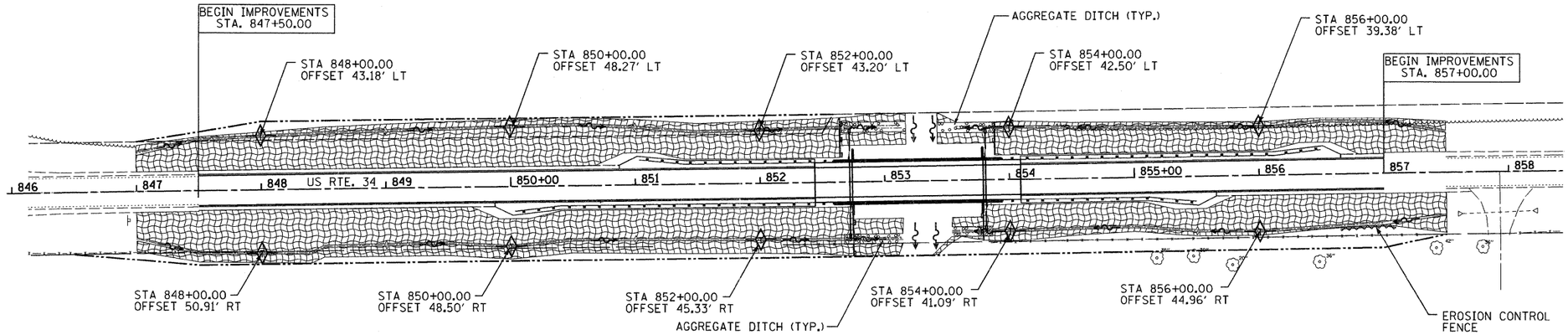
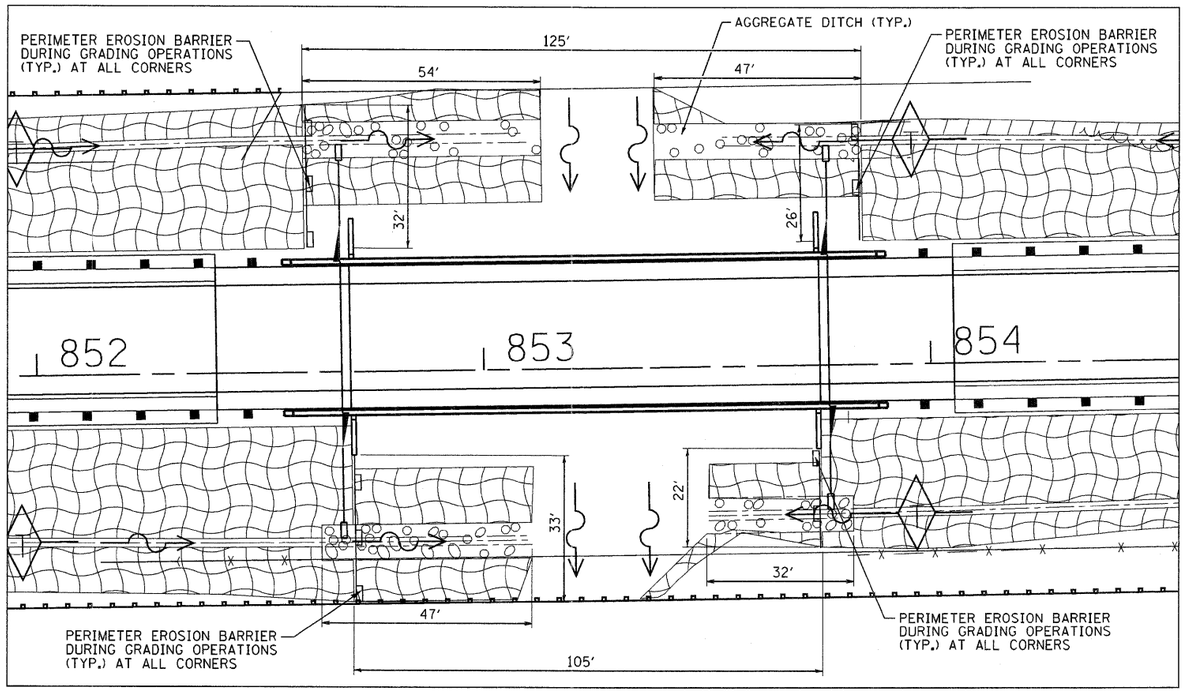
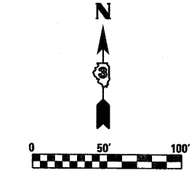




RIPRAP DETAIL
N.T.S

LEGEND:

- EXISTING DITCH
- PROPOSED DITCH
- TEMPORARY DITCH CHECKS
- AGGREGATE DITCH
- EROSION CONTROL BLANKET AND PERMANENT SEEDING, CLASS 3 (TEMPORARY EROSION CONTROL SEEDING AS NEEDED)
- PERIMETER EROSION BARRIER
- EROSION CONTROL FENCE
- PIPE UNDERDRAINS
- CONCRETE HEADWALL FOR PIPE UNDERDRAINS



PLAN: SURVEYED, PLOTTED, DRAWN, ALIGNMENT CHECKED, RT. OF WAY CHECKED, CADD FILE NAME, NOTE BOOK, NO., BY, DATE

PROFILE: SURVEYED, PLOTTED, DRAWN, CROSS SECTIONS CHECKED, BAL. NOTED, STRUCTURE NOTATIONS CHKD, BY, DATE

DELTA ENGINEERING GROUP, LLC
CONSULTING ENGINEERING, CONSTRUCTION MANAGEMENT, SURVEYING
111 W JACKSON BLVD, SUITE 910
CHICAGO, IL 60604

USER NAME = kkhan	DESIGNED DB	REVISED -	
	DRAWN DB	REVISED -	
PLOT SCALE = $SCALE$	CHECKED AS	REVISED -	
PLOT DATE = 10/11/2011	DATE OCTOBER 14, 2011	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EROSION CONTROL PLAN
SN 006-0183

SCALE: 1": 50' | SHEET NO. 14 OF 61 SHEETS | STA. 847+50 TO STA. 857+50

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
587	(22 BR)BR	BUREAU	61	14
		CONTRACT NO. 66995		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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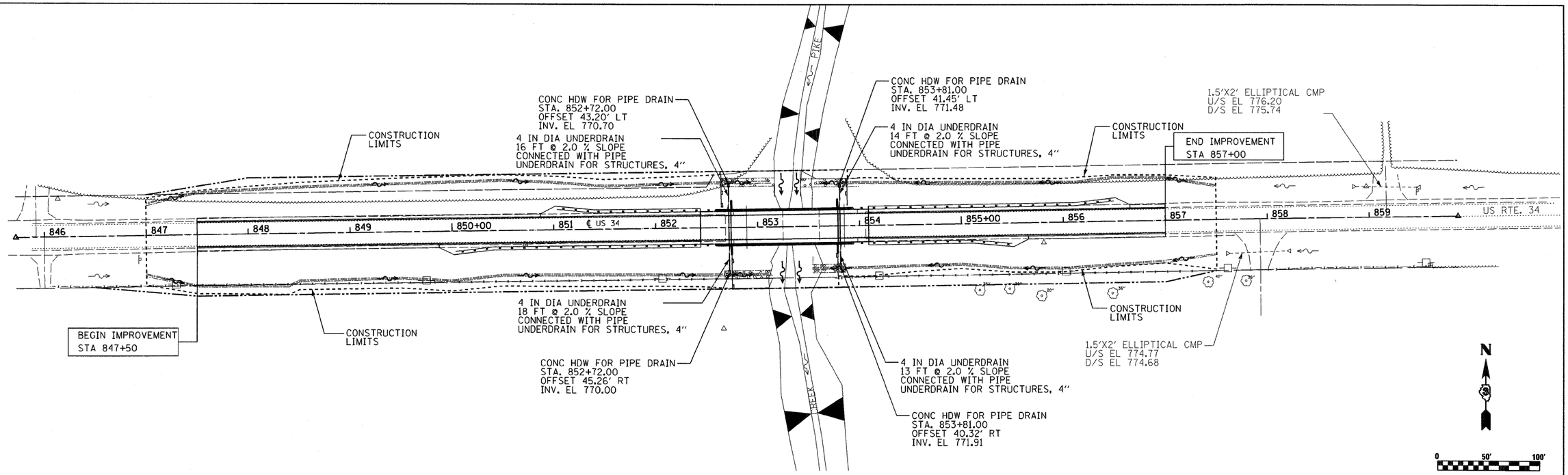
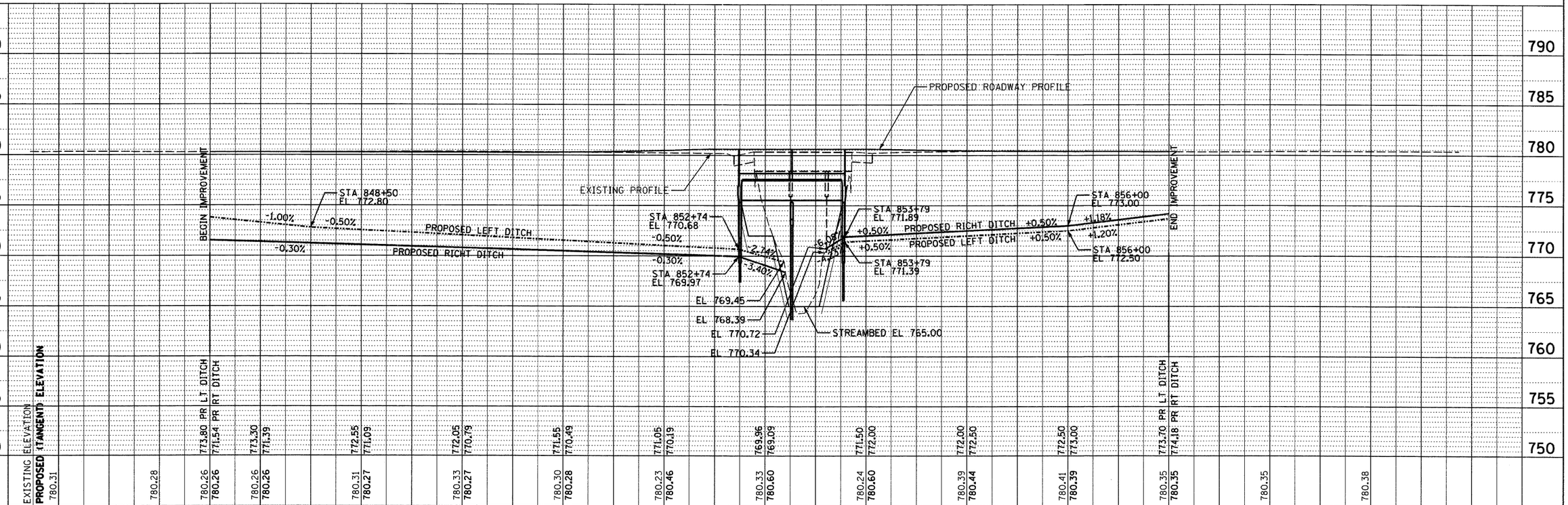
SURVEYED
PLOTTED
ALIGNMENT CHECKED
RT. OF WAY CHECKED
CADD FILE NAME
NOTE BOOK
NO.
BY
DATE



PROFILE
SURVEYED
PLOTTED
ALIGNMENT CHECKED
BM. NOTED
STRUCTURE NOTATNS CHKD
NOTE BOOK
NO.
BY
DATE



USER NAME = kkhan	DESIGNED DB	REVISED -	
	DRAWN DB	REVISED -	
PLOT SCALE = *SCALE*	CHECKED AS	REVISED -	
PLOT DATE = 10/11/2011	DATE OCTOBER 14, 2011	REVISED -	

DELTA ENGINEERING GROUP, LLC
CONSULTING ENGINEERS, CONSTRUCTION MANAGERS, SURVEYORS
111 W. JACKSON BLVD., SUITE 910
CHICAGO, IL 60604

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DRAINAGE PLAN AND PROFILE

SCALE: 1": 50' | SHEET NO. 15 OF 61 SHEETS | STA. 847+50 | TO STA. 856+10

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
587	(22 BR)BR	BUREAU	61	15
		CONTRACT NO. 66995		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FILE NAME = g:\zp101101\cadd sheets\rdwySN-006-0183-15drainage_pp-sht1.dgn

S.E 1/4 SECTION 18, T.18N., R.11E., of the 4th P.M.

PARCEL NO. 3WC0001

RALPH ROD, et al

TOTAL HOLDING	= 125.000 AC.±
TOTAL R.O.W. REQUIRED	= 2.261 AC.±
AREA IN EXISTING R.O.W.	= 2.087 AC.±
NET AREA REQUIRED	= 0.174 AC.±
REMAINDER	= 122.739 AC.±

FOUND SURVEY NAIL
PER MON. REC. 2006R05978
N.1780992.96
E.2540157.04

W. LINE SEC. 18-18-11
N2°24'44"W 5267.15'
W. LINE, E.1/2, S.E. 1/4, SEC. 18-18-11
STA. 845+92.97

FOUND PK NAIL
PER MON. REC
BK. 953, PG. 973

61.21'

N89°03'58"E 106.85'
845+93.16 40.00'
847+00.00 40.00'
848+00.00 55.00'
N80°32'07"E 101.12'
PROPOSED R.O.W. LINE
N89°03'58"E 459.42'
852+59.42 55.00'
EXISTING R.O.W. LINE S30°20'16"W 17.55'
852+50.31 40.00'
TREE LINE S89°03'58"W 550.31'
3WC0001
N0°41'32"W 56.65'
F.A.P. 587
40'
C/L BEARING N89°03'58"E
850+00
S89°27'43"W 1323.25'
3WC0002
50'
N0°41'56"W 33.36'
846+50.00 50.00'
4054.96'
N89°27'43"E
N.1775729.28
E.2540348.11
FOUND PK NAIL
PER MON. REC.
845+92.77 50.00'
S89°03'58"W 57.23'
847+50.00 60.00'
N85°13'24"W 100.50'
PROPOSED R.O.W. LINE
W. LINE, E.1/2, N.E. 1/4, SEC. 19-18-11

FLOW CREEK
S89°03'58"W 950.00'
PIKE

EXISTING R.O.W. LINE
N89°03'58"E 657.04'
TREE LINE
SURVEY CENTERLINE
U.S. ROUTE 34
855+00
859+16.46 55.00'
857+50.00 50.00'
SECTION LINE
EXISTING R.O.W. LINE
857+00.00 60.00'
S89°03'58"W 166.02'
S77°45'34"W 51.00'

FOUND STONE
PER MON. REC.#94-1527
BK. 808 PG. 430
N.1778422.33
E.2545693.87
2561.95'
STA. 859+16.23
2642.73'
S0°41'55"E
80.78'
S0°41'55"E
24.22'
S0°41'21"E
P.O.B. 3WC0001
P.O.B. 3WC0002
FOUND 3/4" IRON PIPE
PER MON. REC.
N.1775779.79
E.2545726.09
5259.51'
5235.29'
N0°41'21"W

FOUND 5/8" REBAR
PER MON. REC.#021721
N 1770520.66
E 2545789.35

SURVEYOR'S STATEMENT

I, DONALD G. GROESSER, HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR OF THE STATE OF ILLINOIS, THAT THE SURVEY OF FAP 587 (US 34) WAS MADE UNDER MY DIRECTION, AND THAT THE SURVEY IS TRUE AND COMPLETE AS SHOWN TO THE BEST OF MY KNOWLEDGE AND BELIEF, THAT ALL MONUMENTS AND MARKS ARE OF THE CHARACTER AND OCCUPY THE POSITION SHOWN THEREON, AND ARE SUFFICIENT TO ENABLE THE SURVEY TO BE RETRACED. THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT ILLINOIS MINIMUM STANDARDS FOR A BOUNDARY SURVEY.

DATED _____
BY _____

DONALD G. GROESSER
ILLINOIS PROFESSIONAL LAND SURVEYOR NO. 35-3273
LICENSE EXPIRES NOVEMBER 30, 2010

PARCEL NO. 3WC0002

CURTIS R. MARCUM, TRUSTEE, et al

TOTAL HOLDING	= 227.08 AC.±
TOTAL R.O.W. REQUIRED	= 1.109 AC.±
AREA IN EXISTING R.O.W.	= 0.874 AC.±
NET R.O.W. REQUIRED	= 0.235 AC.±
REMAINDER	= 225.971 AC.±

N.E 1/4 SECTION 19, T.18N., R.11E. of the 4th P.M.

50 0 50 100 200 300 400
SCALE 1"=50'

BEARINGS ARE BASED UPON ILLINOIS STATE PLANE COORDINATE SYSTEM WEST ZONE, NAD 83 (r.2007)

PLAN / PROFILE — SURVEYED, PLOTTED, ALIGNMENT CHECKED, RT. OF WAY CHECKED, CADD FILE NAME, NOTE BOOK NO., B.M. NOTED, STRUCTURE NOTATNS CHKD, BY, DATE

DELTA ENGINEERING GROUP, LLC
CONSULTING ENGINEERING, CONSTRUCTION MANAGEMENT, SURVEYING
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

RIGHT OF WAY PLAN

SCALE: NONE | SHEET NO. 16 OF 61 SHEETS | STA. | TO STA.

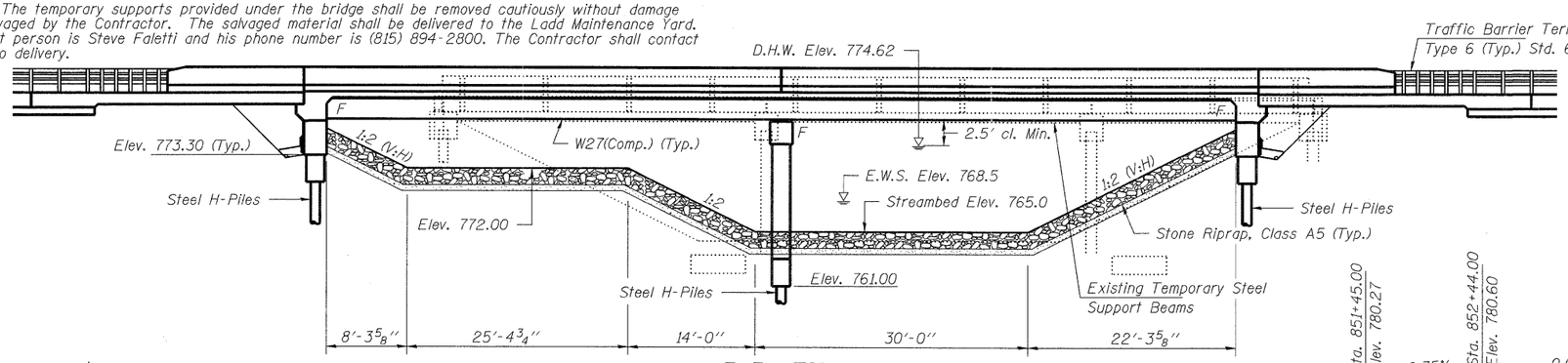
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
587	(22 BR)BR	BUREAU	61	16
		CONTRACT NO. 66995		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FILE NAME = g:\zpl011101\cadd sheets\r-dwySN-006-0183-16row.dgn

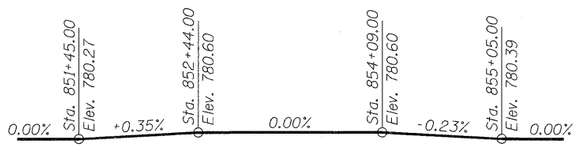
BENCHMARK: Brass Disc in top northwest wingwall. 17' Lt., Sta. 852+89, Elev. 780.10.

EXISTING STRUCTURE: SN 006-0147 was originally built in 1987 as FA Route 587, Section 22BR. It consists of a 3-span PPC deck beam superstructure on pile bent substructure units. The superstructure consists of 17"x48" PPC deck beams with a 98'-8" bk.-bk. length and 32'-0" o.-o. width. Structure to be removed and replaced using staged construction.

SALVAGE: The temporary supports provided under the bridge shall be removed cautiously without damage and be salvaged by the Contractor. The salvaged material shall be delivered to the Ladd Maintenance Yard. The contact person is Steve Faletti and his phone number is (815) 894-2800. The Contractor shall contact him prior to delivery.

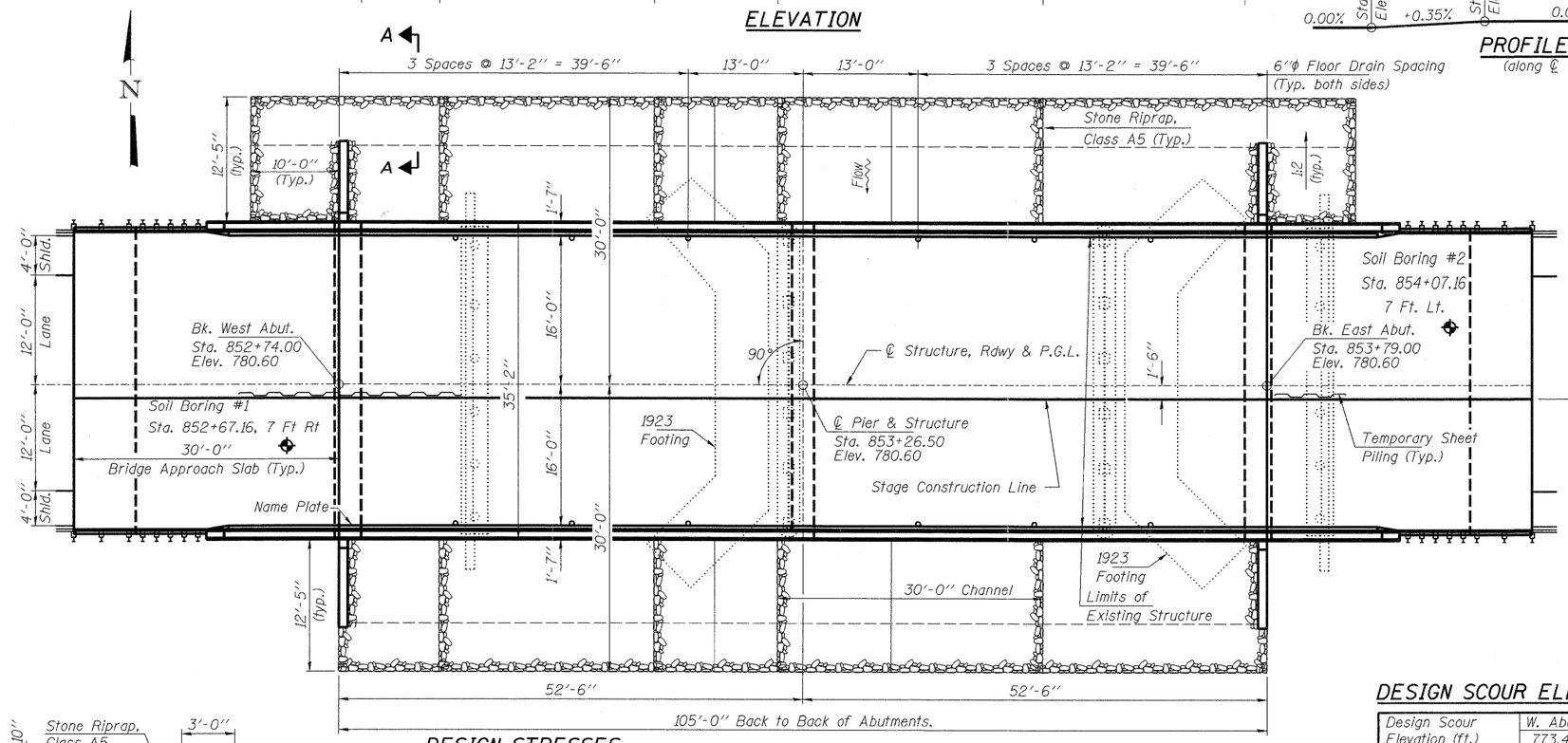


ELEVATION

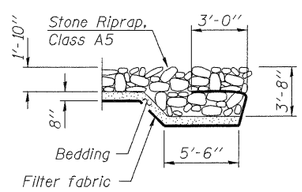


PROFILE GRADE

(along ℄ roadway)



PLAN



SECTION A-A

DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)
fy = 50,000 psi (Structural steel)(M270 Grade 50W)

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.066g
Design Spectral Acceleration at 0.2 sec. (S_{DS}) = 0.118g
Soil Site Class = C

LOADING HL-93

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

DESIGN SPECIFICATIONS

2010 AASHTO LRFD Bridge Design Specifications

INDEX OF SHEETS

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
D. Carl Puzey (TRD)
ENGINEER OF BRIDGES AND STRUCTURES

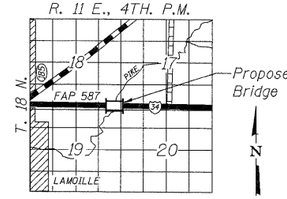
STATION 853+26.50
BUILT 20 BY
STATE OF ILLINOIS
F.A.P. RTE. 587 SEC. (22BR)BR
LOADING HL-93
STR. NO. 006-0183

NAME PLATE

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

STATE OF ILLINOIS
SYED M. KAZI
081-004047
REGISTERED STRUCTURAL ENGINEER

Syed M. Kazi
LIcensed Structural Engineer
State of Illinois
Lic. No. 081-004047
License Expires: 11-30-2012



LOCATION SKETCH

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	W. Abut.	Pier	E. Abut.
	773.4	756.5	773.4

WATERWAY INFORMATION

Drainage Area = 20.5 Sq. Mi. Existing Low Grade Elev. 780.3 ft. @ Sta. 851+00

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Natural H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
	10	1920	390	470	774.04	1.60	1.59	775.64	775.63
Design	50	3080	430	520	774.62	2.29	2.23	776.91	776.85
Base	100	3600	450	540	774.83	2.60	2.51	777.43	777.34
Max. Calc.	500	4850	480	580	775.25	3.33	3.01	778.58	778.26

GENERAL PLAN
US ROUTE 34
OVER PIKE CREEK
FAP ROUTE 587 - SECTION (22BR)BR
BUREAU COUNTY
STATION 853+26.50
STRUCTURE NO. 006-0183

DELTA ENGINEERING GROUP, LLC
CONSULTING ENGINEERS, CONSTRUCTION MANAGERS, SURVEYORS
111 W JACKSON BLVD, SUITE 910
CHICAGO, IL 60604

USER NAME = kkhan	DESIGNED - SK	REVISED -	
	CHECKED - GBC/SMK	REVISED -	
PLOT SCALE =	DRAWN - SK	REVISED -	
PLOT DATE = 10/11/2011	CHECKED - GBC/SMK	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
STRUCTURE NO. 006-0183
SHEET NO. 1 OF 26 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
587	(22 BR)BR	BUREAU	61	17
		CONTRACT NO. 66995		
	ILLINOIS FED. AID PROJECT			

FILE NAME = g:\zp101101\Bridge\Sheets\Sheet 1 - General Plan.dgn

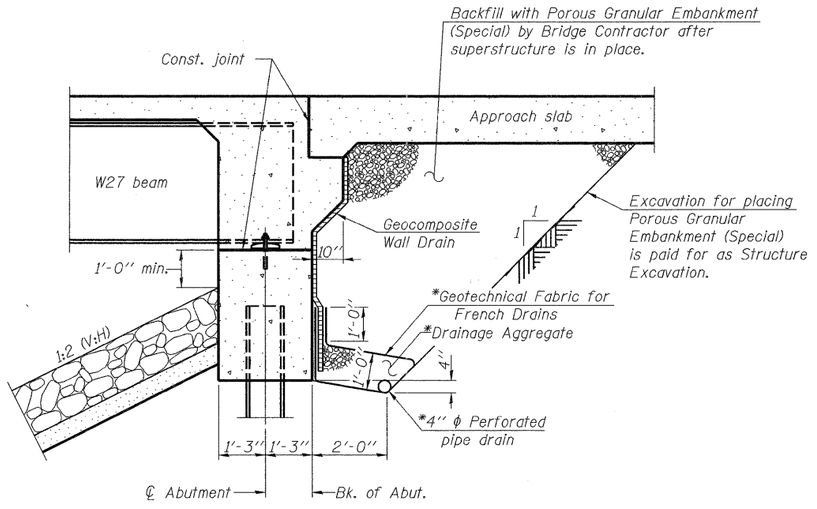
GENERAL NOTES:

1. Fasteners shall be AASHTO M164 Type 1, mechanically galvanized bolts in painted areas and M164 Type 3 in unpainted areas. Bolts $^{7}/_{8}$ in. ϕ, holes $^{15}/_{16}$ in. ϕ, unless otherwise noted.
2. Calculated weight of Structural Steel = 75,200 pounds (AASHTO, M270, Grade 50W).
3. All structural steel shall be AASHTO M 270 Grade 50W. All structural steel shall be cleaned as specified in Section 506 of the Standard Specifications.
4. No field welding is permitted except as specified in the contract documents.
5. Reinforcement bars designated (E) shall be epoxy coated.
6. Bearing seat surfaces shall be constructed or adjusted to the 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.
7. Structural steel shall only be painted for a distance equal to the depth of embedment into the concrete cap plus 3 inches. Painted areas shall be primed in the shop with a Department approved zinc rich primer. Field painting will not be required.
8. Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.

TOTAL BILL OF MATERIAL

	ITEM	UNIT	SUPER.	SUB.	TOTAL
	Stone Riprap, Class A5	Sq Yd	-	773	773
	Filter Fabric	Sq Yd	-	773	773
	Removal of Existing Structures	Each	1	-	1
	Structure Excavation	Cu Yd	-	111	111
	Cofferdam Excavation	Cu Yd	-	17.0	17.0
	Cofferdam (Type 1) (Location - 1)	Each	-	1	1
	Floor Drains	Each	12	-	12
	Concrete Structures	Cu Yd	-	92.2	92.2
	Concrete Superstructure	Cu Yd	248.5	-	248.5
*	Bridge Deck Grooving	Sq Yd	590	-	590
	Concrete Encasement	Cu Yd	-	7.4	7.4
	Protective Coat	Sq Yd	707.0	-	707.0
	Furnishing and Erecting Structural Steel	L Sum	1	-	1
	Stud Shear Connectors	Each	2772	-	2772
	Reinforcement Bars, Epoxy Coated	Pound	56,680	11,120	67,800
	Bar Splicers	Each	542	128	670
	Furnishing Steel Piles HP10x42	Foot	-	640	640
	Driving Piles	Foot	-	640	640
	Test Pile Steel HP10x42	Each	-	3	3
	Name Plates	Each	1	-	1
	Anchor Bolts, $^{3}/_{4}$''	Each	12	-	12
	Anchor Bolts, 1''	Each	24	-	24
	Geocomposite Wall Drain	Sq Yd	-	49	49
	Porous Granular Embankment, Special	Cu Yd	-	111	111
	Temporary Sheet Piling	Sq Ft	-	632	632
	Pipe Underdrains for Structures 4''	Foot	-	106	106

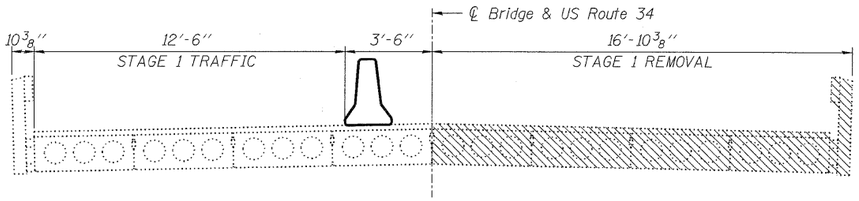
* Quantity includes deck surface, approach slabs, inside face and top of parapets on deck and approaches.



SECTION THRU INTEGRAL ABUTMENT

*Included in the cost of Pipe Underdrains for Structures.

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

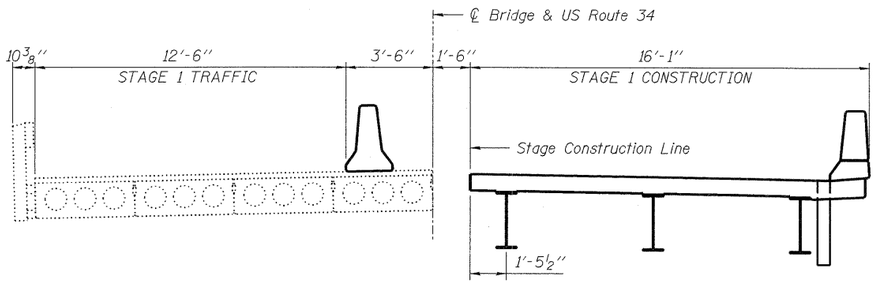


STAGE 1 REMOVAL

(Looking East)

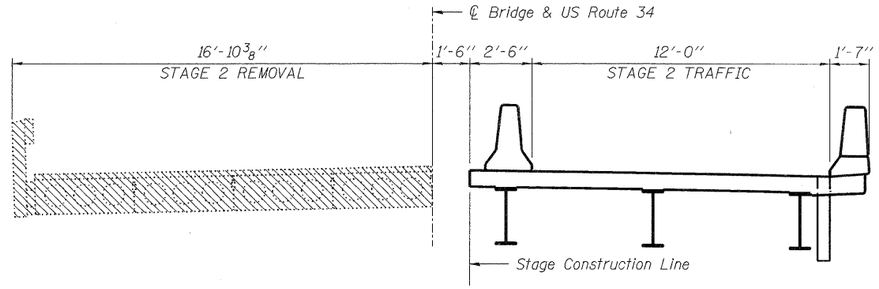
NOTE:

Existing temporary steel support beams not shown in cross sections for clarity.



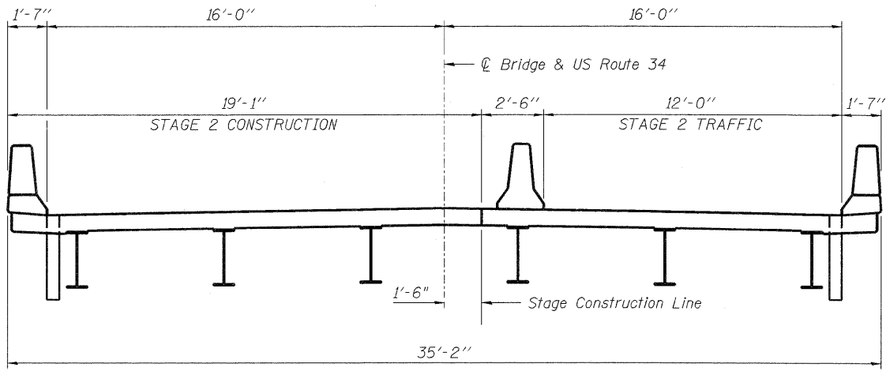
STAGE 1 CONSTRUCTION

(Looking East)



STAGE 2 REMOVAL

(Looking East)

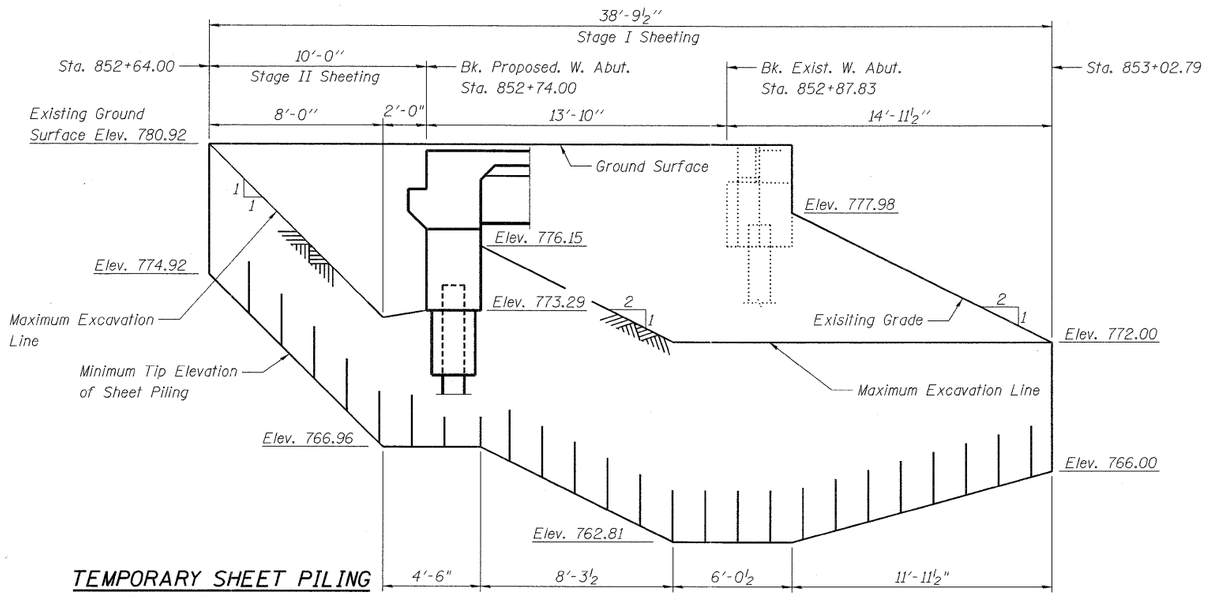


STAGE 2 CONSTRUCTION

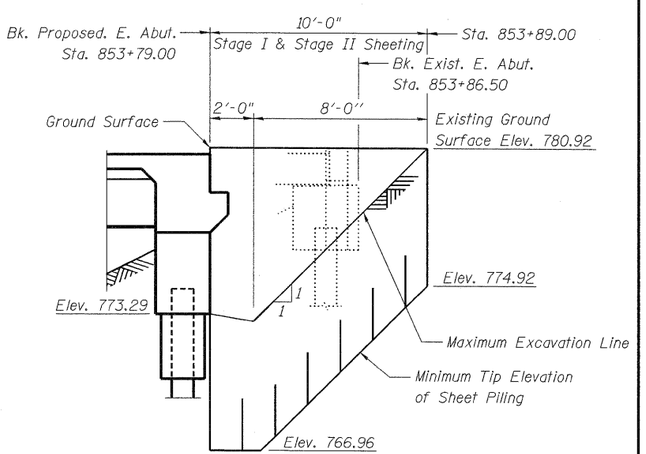
(Looking East)

NOTES

1. If the Contractor chooses to alter the temporary cantilevered sheet piling design requirements shown on the plans, a design submittal including plan details and calculations will be required for review and acceptance by the Engineer.
2. Minimum section modulus of temporary sheet piling shall be 3.3 in^3 / ft.



TEMPORARY SHEET PILING AT WEST ABUTMENT.



TEMPORARY SHEET PILING AT EAST ABUTMENT.

BILL OF MATERIAL

Item	Unit	Total
Temporary Sheet Piling	Sq Ft	632

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CONSULTING ENGINEERS, CONSTRUCTION MANAGERS, SURVEYORS
111 W JACKSON BLVD, SUITE 1100
CHICAGO, IL 60604

USER NAME = kkhan	DESIGNED - SK	REVISED -	
	CHECKED - GBC/SMK	REVISED -	
PLOT SCALE =	DRAWN - SK	REVISED -	
PLOT DATE = 10/11/2011	CHECKED - GBC/SMK	REVISED -	

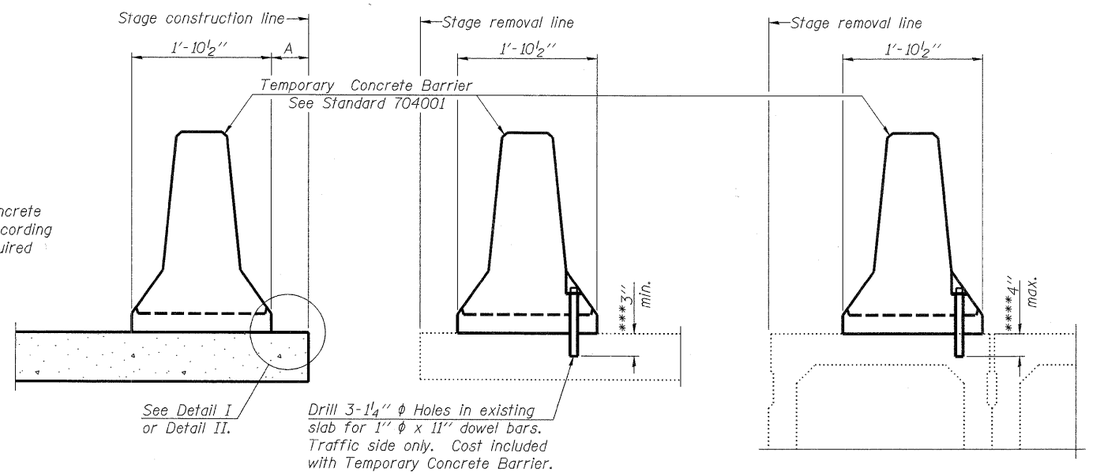
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE CONSTRUCTION
STRUCTURE NO. 006-0183
SHEET NO. 3 OF 26 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
587	(22 BR)BR	BUREAU	61	19
		CONTRACT NO. 66995		
	ILLINOIS	FED. AID PROJECT		

FILE NAME = g:\zp101101\Bridge\Sheets\Sheet 3 - Stage Construction.dgn

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



NEW SLAB | EXISTING SLAB | EXISTING DECK BEAM

NOTES

Detail I - With Bar Splicer or Couplers:
Connect one (1) 1" x 7' 'x "W" steel ℙ to the top layer of couplers with 2-⅝" ϕ bolts screwed to coupler at approximate ℄ of each barrier panel.

Detail II - With Extended Reinforcement Bars:
Connect one (1) 1" x 7" x "W" steel ℙ to the concrete slab or concrete wearing surface with 2-⅝" ϕ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate ℄ of each barrier panel.

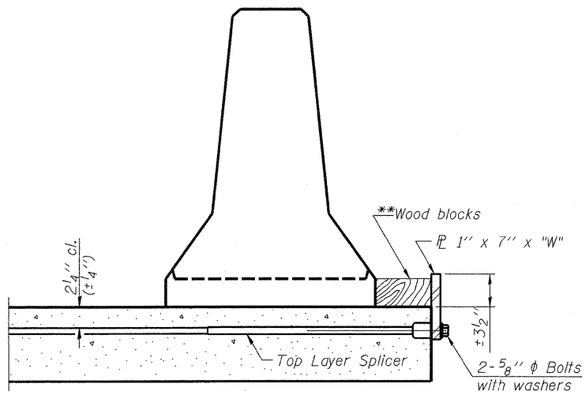
Cost of anchorage is included with Temporary Concrete Barrier.

The 1" x 7" x "W" plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.

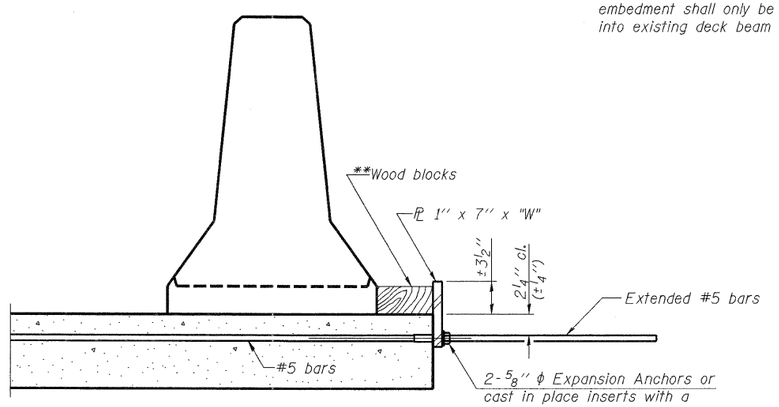
SECTIONS THRU SLAB OR DECK BEAM

*** Dimension shown is minimum required embedment into concrete. If hot-mix asphalt wearing surface is present, minimum embedment shall be in addition to wearing surface depth.

**** If existing deck beam is to remain in place after stage construction, embedment shall only be into wearing surface and not into existing deck beam concrete.



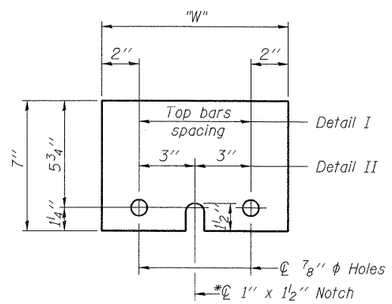
DETAIL I



DETAIL II

** Wood blocks may be omitted when required to provide minimum stage traffic lane width. When the wood blocks are omitted, the concrete barrier shall be in direct contact with the steel retainer plate.

"W" = Top bars spacing + 4"



STEEL RETAINER ℙ 1" x 7" x "W"

* Required only with Detail II

R-27 7-1-10

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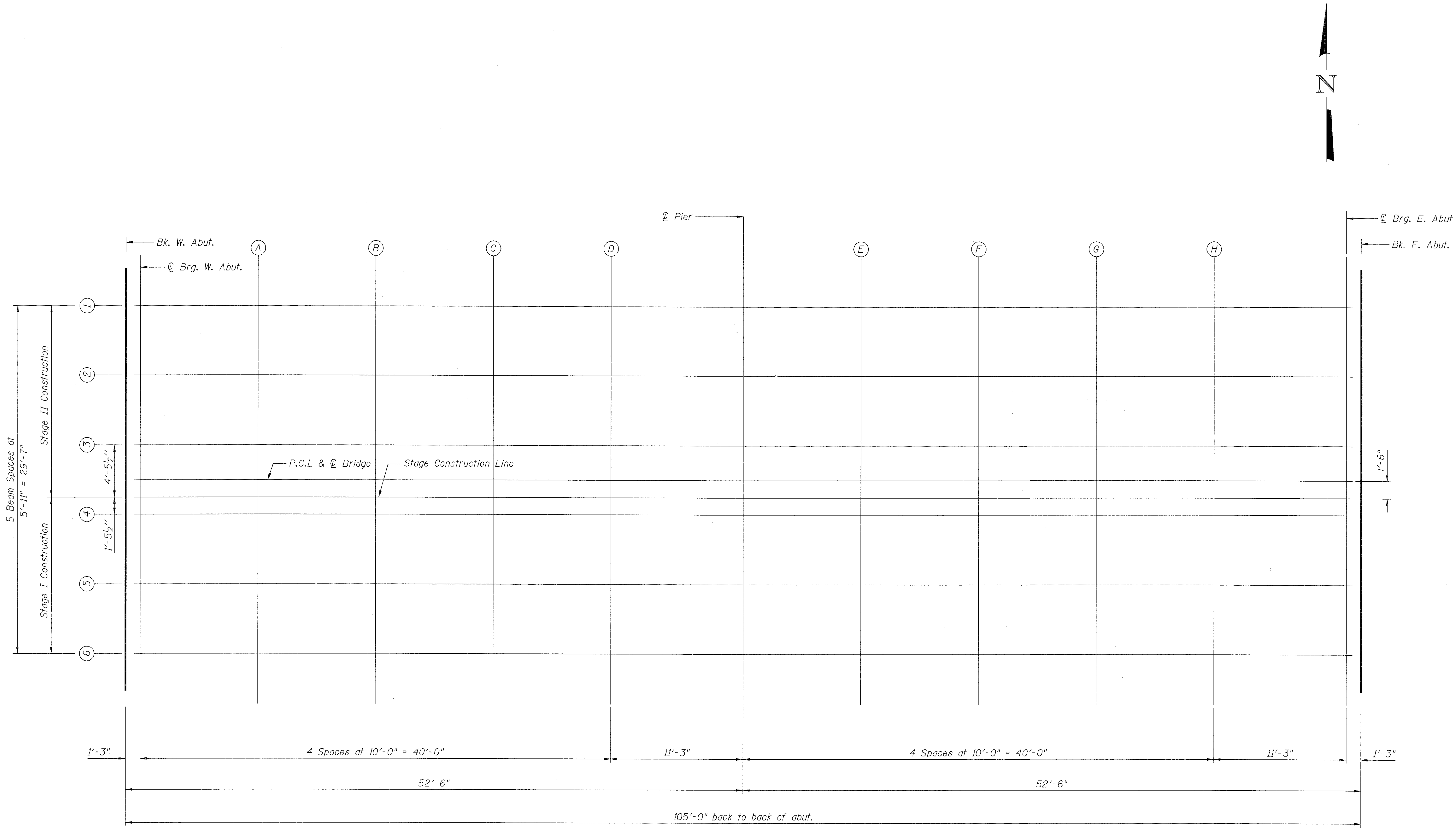
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION
STRUCTURE NO. 006-0183
SHEET NO. 4 OF 26 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
587	(22 BR)BR	BUREAU	61	20
		CONTRACT NO. 66995		
	ILLINOIS	FED. AID PROJECT		

FILE NAME = g:\zp101101\Bridge\Sheets\Sheet 4 - Temporary Concrete Barrier.dgn



PLAN

DELTA ENGINEERING GROUP, LLC
CONSULTING ENGINEERS, CONSTRUCTION MANAGERS, SURVEYORS
111 W JACKSON BLVD, SUITE 910
CHICAGO, IL 60604

USER NAME = kkhan	DESIGNED - SK	REVISED -
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PLOT DATE = 10/11/2011	CHECKED - GBC/SMK	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF DECK ELEVATIONS-1
STRUCTURE NO. 006-0183

SHEET NO. 5 OF 26 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
587	(22 BR)BR	BUREAU	61	21
		CONTRACT NO. 66995		

ILLINOIS FED. AID PROJECT

FILE NAME = g:\zp101101\Bridge\Sheets\Sheet 5 - Top of Deck Elevations-1.dgn

BEAM 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	852+74.00	-14.79	780.35	780.35
℄ Brg. W. Abut.	852+75.25	-14.79	780.35	780.35
A	852+85.25	-14.79	780.35	780.38
B	852+95.25	-14.79	780.35	780.39
C	853+05.25	-14.79	780.35	780.38
D	853+15.25	-14.79	780.35	780.37
℄ Brg. Pier	853+26.50	-14.79	780.35	780.35
E	853+36.50	-14.79	780.35	780.36
F	853+46.50	-14.79	780.35	780.38
G	853+56.50	-14.79	780.35	780.39
H	853+66.50	-14.79	780.35	780.38
℄ Brg. E. Abut.	853+77.75	-14.79	780.35	780.35
Bk. E. Abut.	853+79.00	-14.79	780.35	780.35

BEAM 2

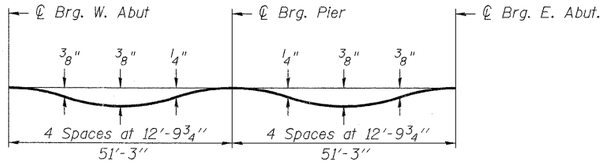
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	852+74.00	-8.87	780.46	780.46
℄ Brg. W. Abut.	852+75.25	-8.87	780.46	780.46
A	852+85.25	-8.87	780.46	780.48
B	852+95.25	-8.87	780.46	780.49
C	853+05.25	-8.87	780.46	780.49
D	853+15.25	-8.87	780.46	780.47
℄ Brg. Pier	853+26.50	-8.87	780.46	780.46
E	853+36.50	-8.87	780.46	780.47
F	853+46.50	-8.87	780.46	780.49
G	853+56.50	-8.87	780.46	780.49
H	853+66.50	-8.87	780.46	780.49
℄ Brg. E. Abut.	853+77.75	-8.87	780.46	780.46
Bk. E. Abut.	853+79.00	-8.87	780.46	780.46

BEAM 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	852+74.00	-2.96	780.55	780.55
℄ Brg. W. Abut.	852+75.25	-2.96	780.55	780.55
A	852+85.25	-2.96	780.55	780.58
B	852+95.25	-2.96	780.55	780.59
C	853+05.25	-2.96	780.55	780.58
D	853+15.25	-2.96	780.55	780.57
℄ Brg. Pier	853+26.50	-2.96	780.55	780.55
E	853+36.50	-2.96	780.55	780.56
F	853+46.50	-2.96	780.55	780.58
G	853+56.50	-2.96	780.55	780.59
H	853+66.50	-2.96	780.55	780.58
℄ Brg. E. Abut.	853+77.75	-2.96	780.55	780.55
Bk. E. Abut.	853+79.00	-2.96	780.55	780.55

℄ ROADWDAY & PROFILE GRADE LINE

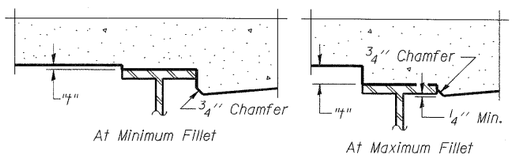
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	852+74.00	0.00	780.60	780.60
℄ Brg. W. Abut.	852+75.25	0.00	780.60	780.60
A	852+85.25	0.00	780.60	780.62
B	852+95.25	0.00	780.60	780.63
C	853+05.25	0.00	780.60	780.63
D	853+15.25	0.00	780.60	780.61
℄ Brg. Pier	853+26.50	0.00	780.60	780.60
E	853+36.50	0.00	780.60	780.61
F	853+46.50	0.00	780.60	780.63
G	853+56.50	0.00	780.60	780.63
H	853+66.50	0.00	780.60	780.62
℄ Brg. E. Abut.	853+77.75	0.00	780.60	780.60
Bk. E. Abut.	853+79.00	0.00	780.60	780.60



DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only.)

Note:
The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown above or on sheet 7.



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 sheet 5. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown above and on sheet 7, minus slab thickness, equals the fillet heights "t" above top flange of beams.

FILLET HEIGHTS

DELTA ENGINEERING GROUP, LLC
CONSULTING ENGINEERS, CONSTRUCTION MANAGERS, SURVEYORS
111 W JACKSON BLVD, SUITE 910
CHICAGO, IL 60604

USER NAME = kkhan	DESIGNED - SK	REVISED -	
	CHECKED - GBC/SMK	REVISED -	
PLOT SCALE =	DRAWN - SK	REVISED -	
PLOT DATE = 10/11/2011	CHECKED - GBC/SMK	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF DECK ELEVATIONS-2
STRUCTURE NO. 006-0183
SHEET NO. 6 OF 26 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
587	122 BRIBR	BUREAU	61	22
		CONTRACT NO. 66995		
	ILLINOIS	FED. AID PROJECT		

FILE NAME = g:\zp101101\Bridge\Sheets\Sheet 6 - Top of Deck Elevations-2.dgn

STAGE CONSTRUCTION LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	852+74.00	1.50	780.58	780.58
℄ Brg. W. Abut.	852+75.25	1.50	780.58	780.58
A	852+85.25	1.50	780.58	780.60
B	852+95.25	1.50	780.58	780.61
C	853+05.25	1.50	780.58	780.61
D	853+15.25	1.50	780.58	780.59
℄ Brg. Pier	853+26.50	1.50	780.58	780.58
E	853+36.50	1.50	780.58	780.59
F	853+46.50	1.50	780.58	780.60
G	853+56.50	1.50	780.58	780.61
H	853+66.50	1.50	780.58	780.60
℄ Brg. E. Abut.	853+77.75	1.50	780.58	780.58
Bk. E. Abut.	853+79.00	1.50	780.58	780.58

BEAM 4

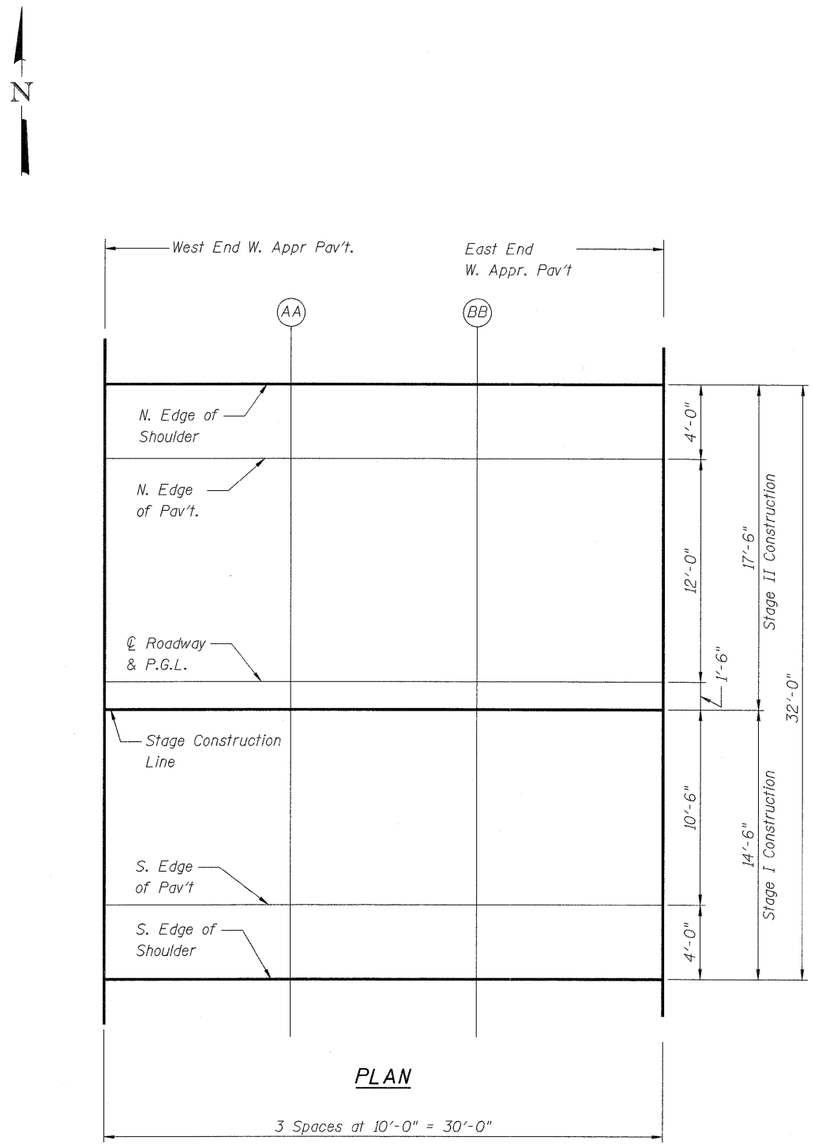
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	852+74.00	2.96	780.55	780.55
℄ Brg. W. Abut.	852+75.25	2.96	780.55	780.55
A	852+85.25	2.96	780.55	780.58
B	852+95.25	2.96	780.55	780.59
C	853+05.25	2.96	780.55	780.58
D	853+15.25	2.96	780.55	780.57
℄ Brg. Pier	853+26.50	2.96	780.55	780.55
E	853+36.50	2.96	780.55	780.56
F	853+46.50	2.96	780.55	780.58
G	853+56.50	2.96	780.55	780.59
H	853+66.50	2.96	780.55	780.58
℄ Brg. E. Abut.	853+77.75	2.96	780.55	780.55
Bk. E. Abut.	853+79.00	2.96	780.55	780.55

BEAM 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	852+74.00	8.87	780.46	780.46
℄ Brg. W. Abut.	852+75.25	8.87	780.46	780.46
A	852+85.25	8.87	780.46	780.48
B	852+95.25	8.87	780.46	780.49
C	853+05.25	8.87	780.46	780.49
D	853+15.25	8.87	780.46	780.47
℄ Brg. Pier	853+26.50	8.87	780.46	780.46
E	853+36.50	8.87	780.46	780.47
F	853+46.50	8.87	780.46	780.49
G	853+56.50	8.87	780.46	780.49
H	853+66.50	8.87	780.46	780.49
℄ Brg. E. Abut.	853+77.75	8.87	780.46	780.46
Bk. E. Abut.	853+79.00	8.87	780.46	780.46

BEAM 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	852+74.00	14.79	780.35	780.35
℄ Brg. W. Abut.	852+75.25	14.79	780.35	780.35
A	852+85.25	14.79	780.35	780.38
B	852+95.25	14.79	780.35	780.39
C	853+05.25	14.79	780.35	780.38
D	853+15.25	14.79	780.35	780.37
℄ Brg. Pier	853+26.50	14.79	780.35	780.35
E	853+36.50	14.79	780.35	780.36
F	853+46.50	14.79	780.35	780.38
G	853+56.50	14.79	780.35	780.39
H	853+66.50	14.79	780.35	780.38
℄ Brg. E. Abut.	853+77.75	14.79	780.35	780.35
Bk. E. Abut.	853+79.00	14.79	780.35	780.35



NORTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
West End W. Appr. Pav't	852+44.00	-16.00	780.33
AA	852+54.00	-16.00	780.33
BB	852+64.00	-16.00	780.33
East End W. Appr. Pav't	852+74.00	-16.00	780.33

NORTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
West End W. Appr. Pav't	852+44.00	-12.00	780.41
AA	852+54.00	-12.00	780.41
BB	852+64.00	-12.00	780.41
East End W. Appr. Pav't	852+74.00	-12.00	780.41

℄ ROADWAY & P.G.L.

Location	Station	Offset	Theoretical Grade Elevations
West End W. Appr. Pav't	852+44.00	0.00	780.60
AA	852+54.00	0.00	780.60
BB	852+64.00	0.00	780.60
East End W. Appr. Pav't	852+74.00	0.00	780.60

STAGE CONSTRUCTION LINE

Location	Station	Offset	Theoretical Grade Elevations
West End W. Appr. Pav't	852+44.00	1.50	780.58
AA	852+54.00	1.50	780.58
BB	852+64.00	1.50	780.58
East End W. Appr. Pav't	852+74.00	1.50	780.58

SOUTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
West End W. Appr. Pav't	852+44.00	12.00	780.41
AA	852+54.00	12.00	780.41
BB	852+64.00	12.00	780.41
East End W. Appr. Pav't	852+74.00	12.00	780.41

SOUTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
West End W. Appr. Pav't	852+44.00	16.00	780.33
AA	852+54.00	16.00	780.33
BB	852+64.00	16.00	780.33
East End W. Appr. Pav't	852+74.00	16.00	780.33

DELTA ENGINEERING GROUP, LLC
CONSULTING ENGINEERS, CONSTRUCTION MANAGERS, SURVEYORS
111 W. JACKSON BLVD., SUITE 910
CHICAGO, IL 60604

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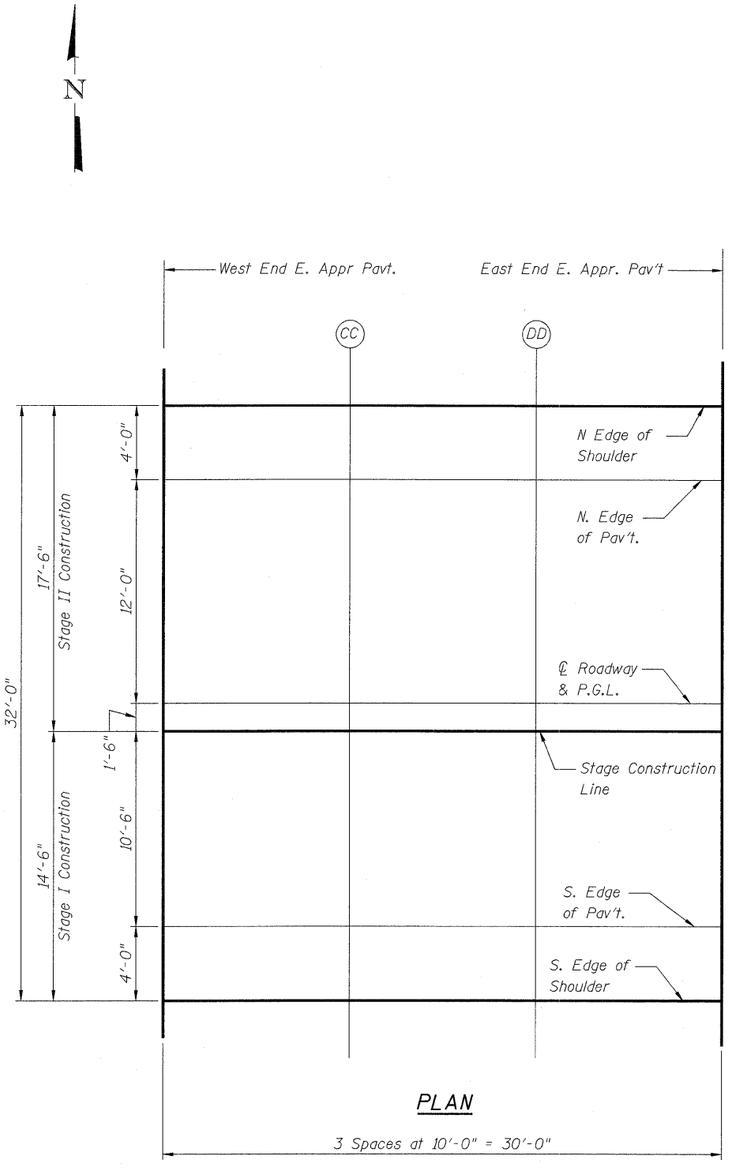
PLOT SCALE =	DRAWN - SK	REVISED -
PLOT DATE = 10/11/2011	CHECKED - GBC/SMK	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF WEST APPROACH SLAB ELEVATIONS
STRUCTURE NO. 006-0183
SHEET NO. 8 OF 26 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
587	(22 BR)BR	BUREAU	61	24
		CONTRACT NO. 66995		
	ILLINOIS	FED. AID PROJECT		

FILE NAME = g:\zp101101\Bridge\Sheets\Sheet 8 - West Approach Slab Elevations.dgn



PLAN

NORTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
West End. E. Appr. Pav't	853+79.00	-16.00	780.33
CC	853+89.00	-16.00	780.33
DD	853+99.00	-16.00	780.33
East End E. Appr. Pav't	854+09.00	-16.00	780.33

NORTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
West End. E. Appr. Pav't	853+79.00	-12.00	780.41
CC	853+89.00	-12.00	780.41
DD	853+99.00	-12.00	780.41
East End E. Appr. Pav't	854+09.00	-12.00	780.41

℄ ROADWAY & P.G.L.

Location	Station	Offset	Theoretical Grade Elevations
West End. E. Appr. Pav't	853+79.00	0.00	780.60
CC	853+89.00	0.00	780.60
DD	853+99.00	0.00	780.60
East End E. Appr. Pav't	854+09.00	0.00	780.60

STAGE CONSTRUCTION LINE

Location	Station	Offset	Theoretical Grade Elevations
West End. E. Appr. Pav't	853+79.00	1.50	780.58
CC	853+89.00	1.50	780.58
DD	853+99.00	1.50	780.58
East End E. Appr. Pav't	854+09.00	1.50	780.58

SOUTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
West End. E. Appr. Pav't	853+79.00	12.00	780.41
CC	853+89.00	12.00	780.41
DD	853+99.00	12.00	780.41
East End E. Appr. Pav't	854+09.00	12.00	780.41

SOUTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
West End. E. Appr. Pav't	853+79.00	16.00	780.33
CC	853+89.00	16.00	780.33
DD	853+99.00	16.00	780.33
East End E. Appr. Pav't	854+09.00	16.00	780.33

DELTA ENGINEERING GROUP, LLC
CONSULTING ENGINEERS, CONSTRUCTION MANAGERS, SURVEYORS
111 W JACKSON BLVD, SUITE 910
CHICAGO, IL 60604

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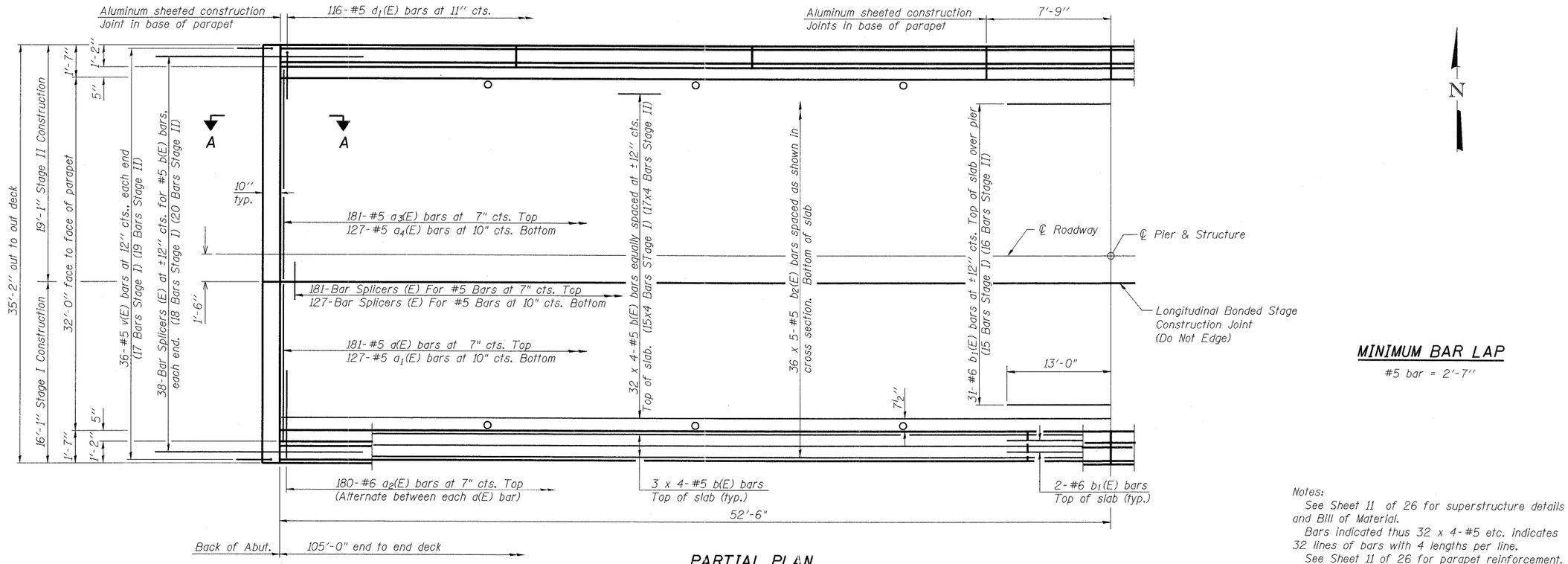
PLOT SCALE =	DRAWN - SK	REVISED -	
PLOT DATE = 10/11/2011	CHECKED - GBC/SMK	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF EAST APPROACH SLAB ELEVATIONS
STRUCTURE NO. 006-0183
SHEET NO. 9 OF 26 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
587	(22 BR)BR	BUREAU	61	25
		CONTRACT NO. 66995		
	ILLINOIS FED. AID PROJECT			

FILE NAME = gt\zp101101\Bridge\Sheets\Sheet 9 - East Approach Slab Elevations.dgn

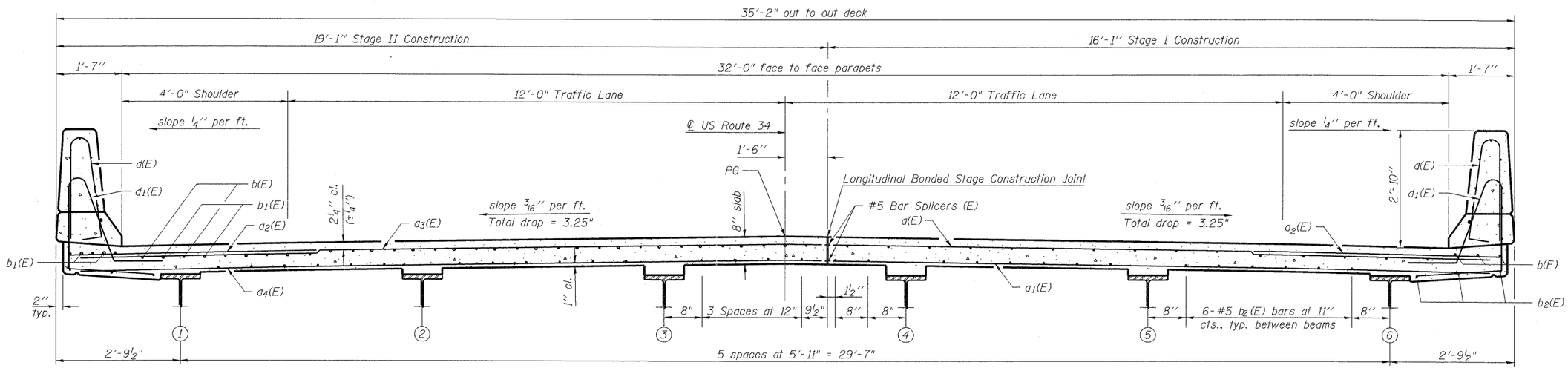


PARTIAL PLAN

MINIMUM BAR LAP

#5 bar = 2'-7"

Notes:
See Sheet 11 of 26 for superstructure details and Bill of Material.
Bars indicated thus 32 x 4-#5 etc. indicates 32 lines of bars with 4 lengths per line.
See Sheet 11 of 26 for parapet reinforcement.
See Sheet 13 of 26 for Section A-A



NEAR PIER

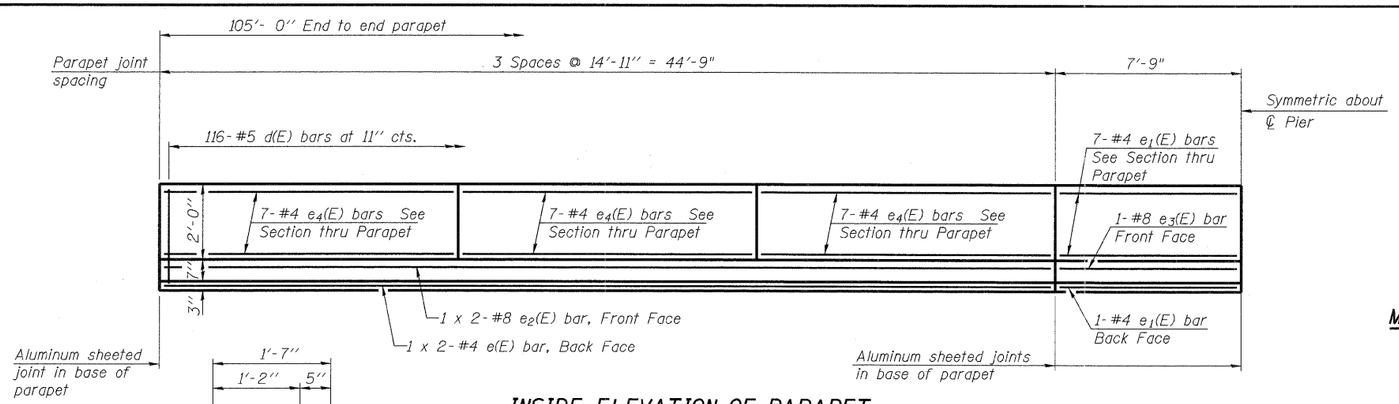
NEAR MIDSPAN

CROSS SECTION

(Looking East)

DELTA ENGINEERING GROUP, LLC	USER NAME = kkhan	DESIGNED - SK	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUPERSTRUCTURE STRUCTURE NO. 006-0183	F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		CHECKED - GBC/SMK	REVISED -			587	(22 BR)BR	BUREAU	61	26
	PLOT SCALE =	DRAWN - SK	REVISED -					CONTRACT NO. 66995		
	PLOT DATE = 10/11/2011	CHECKED - GBC/SMK	REVISED -		SHEET NO. 10 OF 26 SHEETS			ILLINOIS FED. AID PROJECT		

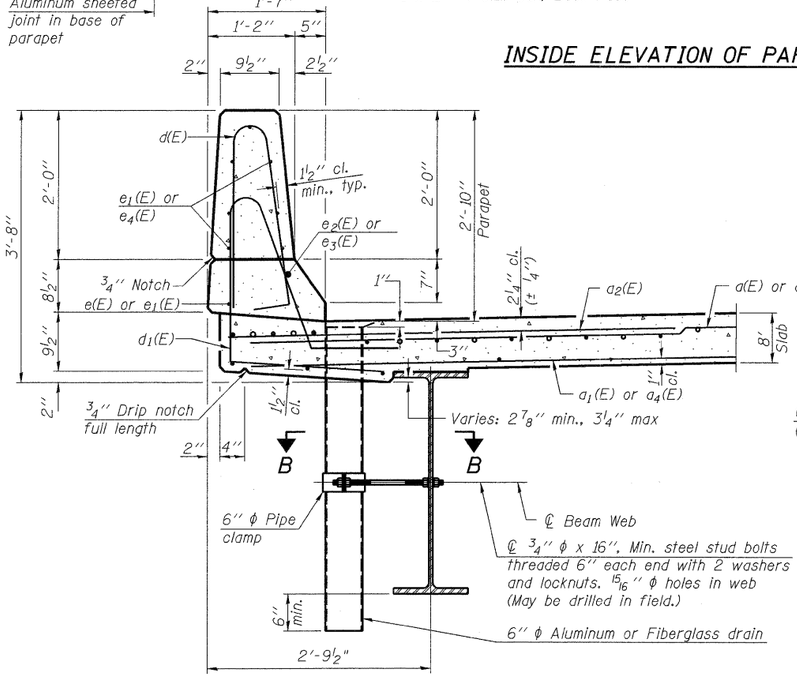
FILE NAME = g:\zp101101\Bridge\Sheets\Sheet 10 - Superstructure.dgn



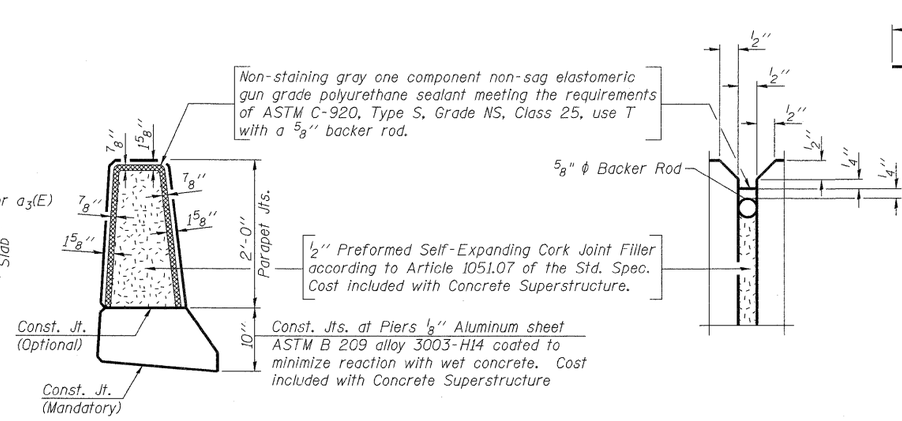
INSIDE ELEVATION OF PARAPET

MINIMUM BAR LAP

(Parapet)
#4 bar = 2'-1"
#8 bar = 5'-5"

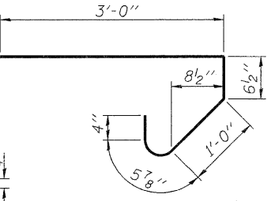


SECTION THRU PARAPET

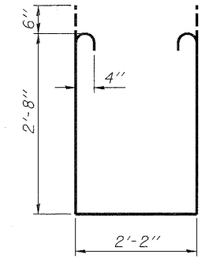


PARAPET JOINT DETAILS

Notes:
Floor Drains need not be painted.
Fiberglass pipe shall conform to ASTM D 2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum.
Galvanize clamping device according to AASHTO M232. Cost of clamping device and galvanizing is included with Floor Drains.



BAR s(E)

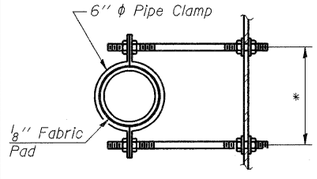


BAR s1(E)

SUPERSTRUCTURE BILL OF MATERIAL

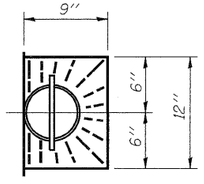
Bar	No.	Size	Length	Shape
d(E)	181	#5	15'-8"	
d1(E)	127	#5	15'-2"	
d2(E)	360	#6	6'-6"	
d3(E)	181	#5	18'-8"	
d4(E)	127	#5	18'-2"	
b(E)	152	#5	28'-2"	
b1(E)	35	#6	26'-0"	
b2(E)	180	#5	23'-1"	
d(E)	232	#5	5'-7"	
d1(E)	232	#5	7'-7"	
e(E)	8	#4	23'-4"	
e1(E)	32	#4	7'-6"	
e2(E)	8	#8	25'-0"	
e3(E)	4	#8	7'-6"	
e4(E)	84	#4	14'-8"	
m(E)	10	#6	15'-10"	
m1(E)	12	#6	7'-9"	
m2(E)	8	#6	5'-8"	
m3(E)	4	#6	2'-6"	
m4(E)	2	#6	1'-3"	
m5(E)	10	#6	18'-10"	
m6(E)	12	#6	8'-9"	
m7(E)	2	#6	4'-3"	
s(E)	82	#5	5'-4"	
s1(E)	72	#4	8'-6"	
v(E)	72	#5	3'-9"	
Bridge Deck Grooving			Sq Yd	374
Protective Coat			Sq Yd	473.2
Reinforcement Bars, Epoxy Coated			Pound	32,180
Concrete Superstructure			Cu. Yds.	143.9
Bar Splicers			Each	400

Bars indicated thus 1 x 2-#4 etc. indicates 1 line of bars with 2 lengths per line.

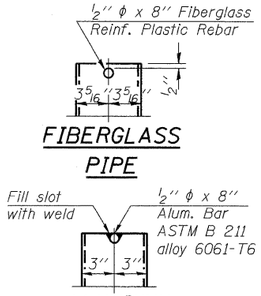


SECTION B-B

*Dimension as required by Pipe Clamp

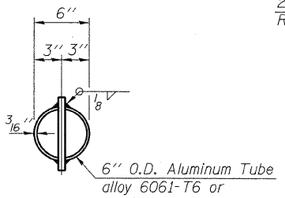


TOP PLAN

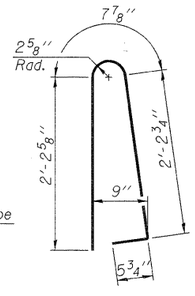


FIBERGLASS PIPE

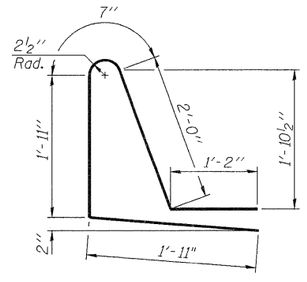
ALUMINUM TUBE



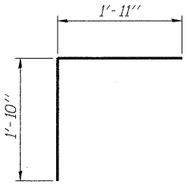
TOP PLAN
(Showing Aluminum Tube)



BAR d(E)



BAR d1(E)



BAR v(E)

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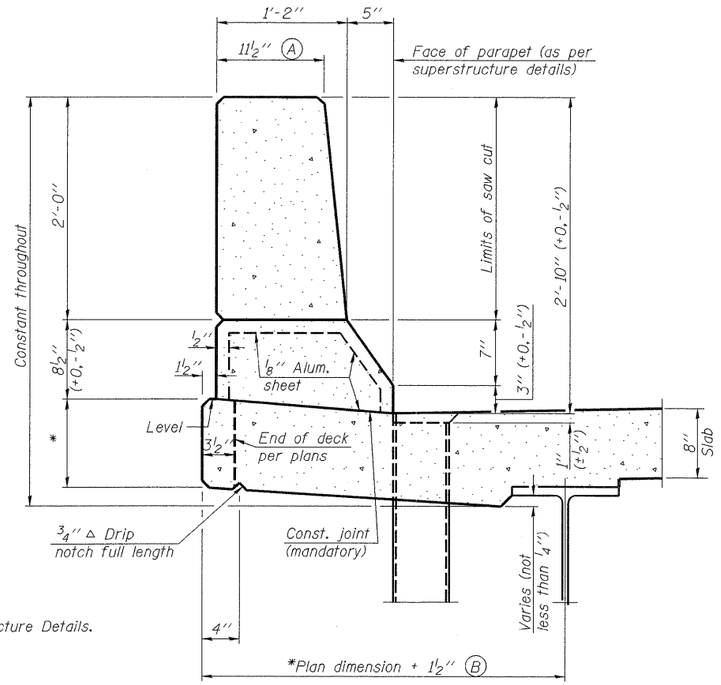
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE DETAILS
STRUCTURE NO. 006-0183
SHEET NO. 11 OF 26 SHEETS

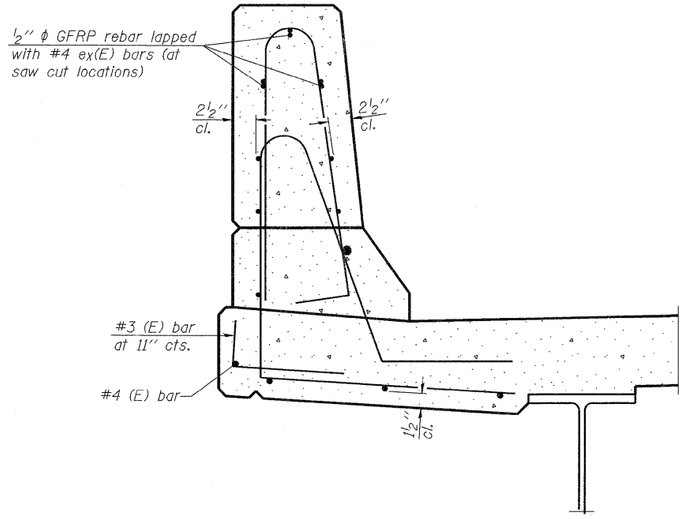
F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
587	(22 BR)BR	BUREAU	61	27
		CONTRACT NO. 66995		
		ILLINOIS FED. AID PROJECT		

FILE NAME = gr\zp1011101\Bridge\Sheets\Sheet 11 - Superstructure Details.dgn



* See Superstructure Details.

SECTION
(Showing dimensions)



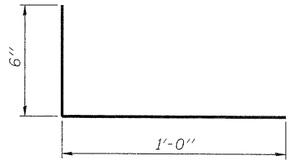
SECTION
(Showing reinforcement clearances for slip forming and additional reinforcement bars)

GENERAL NOTES

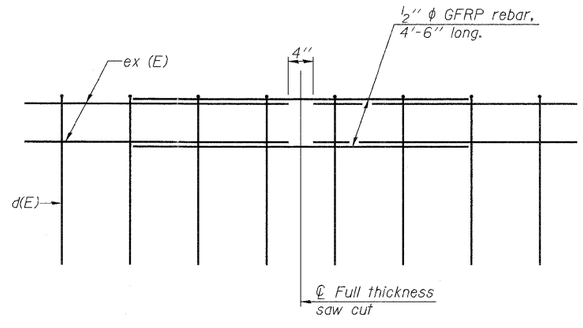
All dimensions shall remain the same as shown on superstructure details, except dimensions A and B which are to be revised as shown to provide additional clearance. Additional concrete needed to revise dimension A and B = 0.0165 cu. yds./ft. of parapet.

Place aluminum sheet in curb portion at and near piers. Full thickness saw cut at all joint locations in lieu of cork joint filler.

Steel superstructure shown. Other superstructure types similar.



#3 (E) BAR



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

SFP-34 7-1-10

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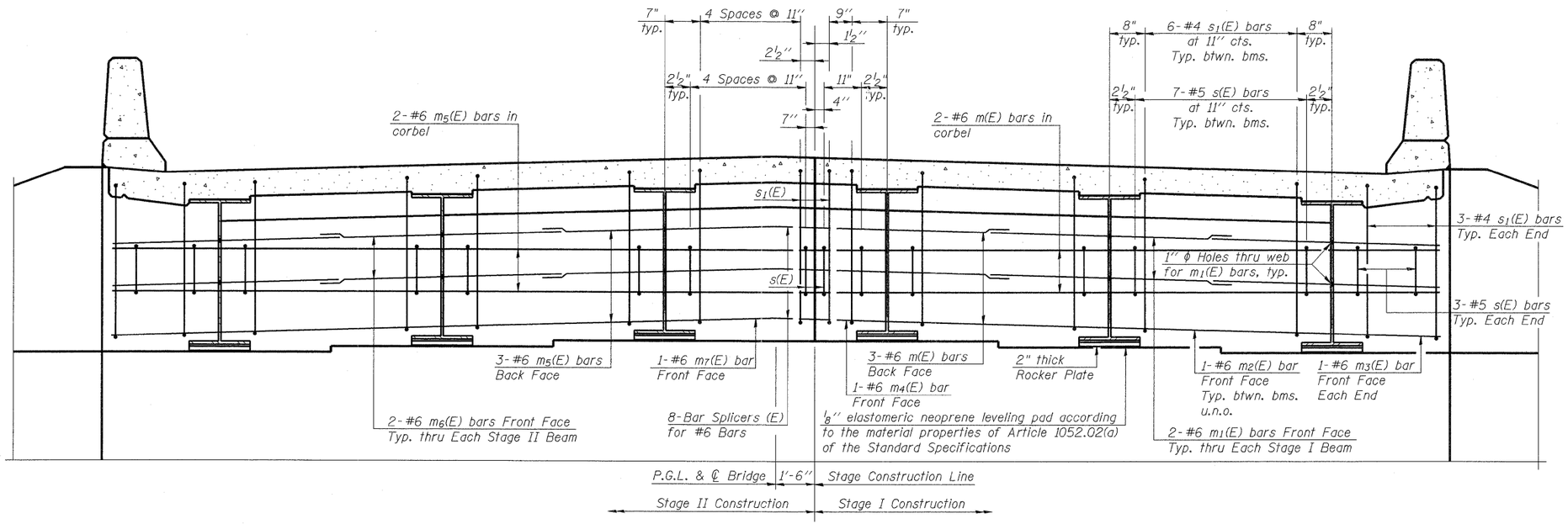
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CONCRETE PARAPET SLIPFORMING OPTION
STRUCTURE NO. 006-0183
SHEET NO. 12 OF 26 SHEETS

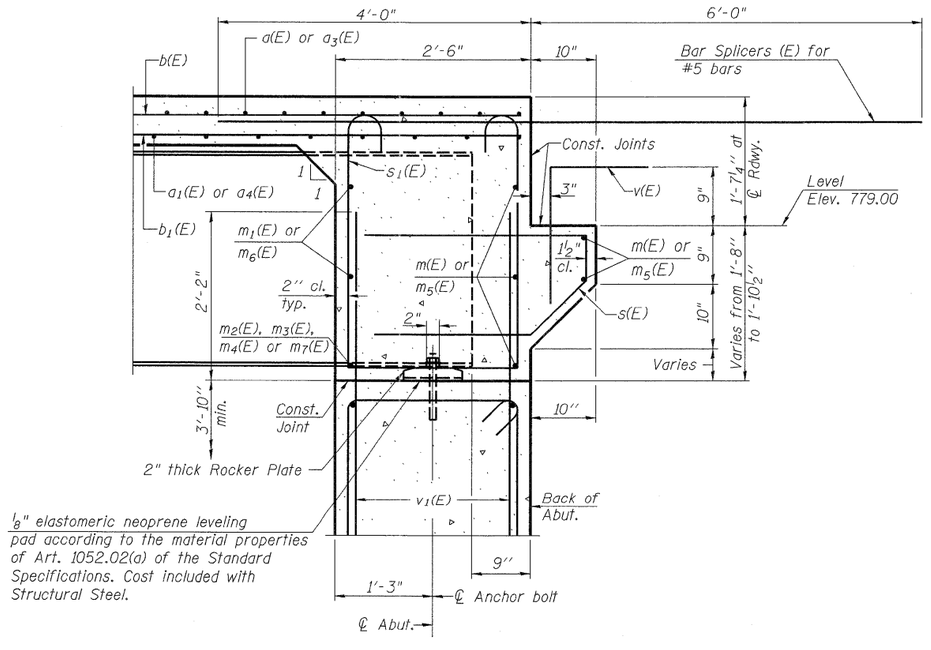
F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
587	(22 BR)BR	BUREAU	61	28
		CONTRACT NO. 66995		
	ILLINOIS FED. AID PROJECT			

FILE NAME = g:\zp101101\Bridge\Sheets\Sheet 12 - CONCRETE PARAPET SLIPFORMING OPTION.DGN



DIAPHRAGM ELEVATION AT EAST ABUTMENT (LOOKING EAST)

West Abutment similar, opposite hand.



SECTION A-A

Notes:

Reinforcement bars in diaphragm are billed with superstructure on sheet 11 of 26.

Concrete in diaphragm is included with Concrete Superstructure on sheet 11 of 26.

For details of bars s(E) & s (E) see sheet 11 of 26.

Start m_1(E) bars in Stage I at end of diaphragm. Cut in field at stage construction line.

Start m_6(E) bars in Stage II at stage construction line. Cut in field at end of diaphragm.

MIN. BAR LAP

#6 bar = 3'-4"

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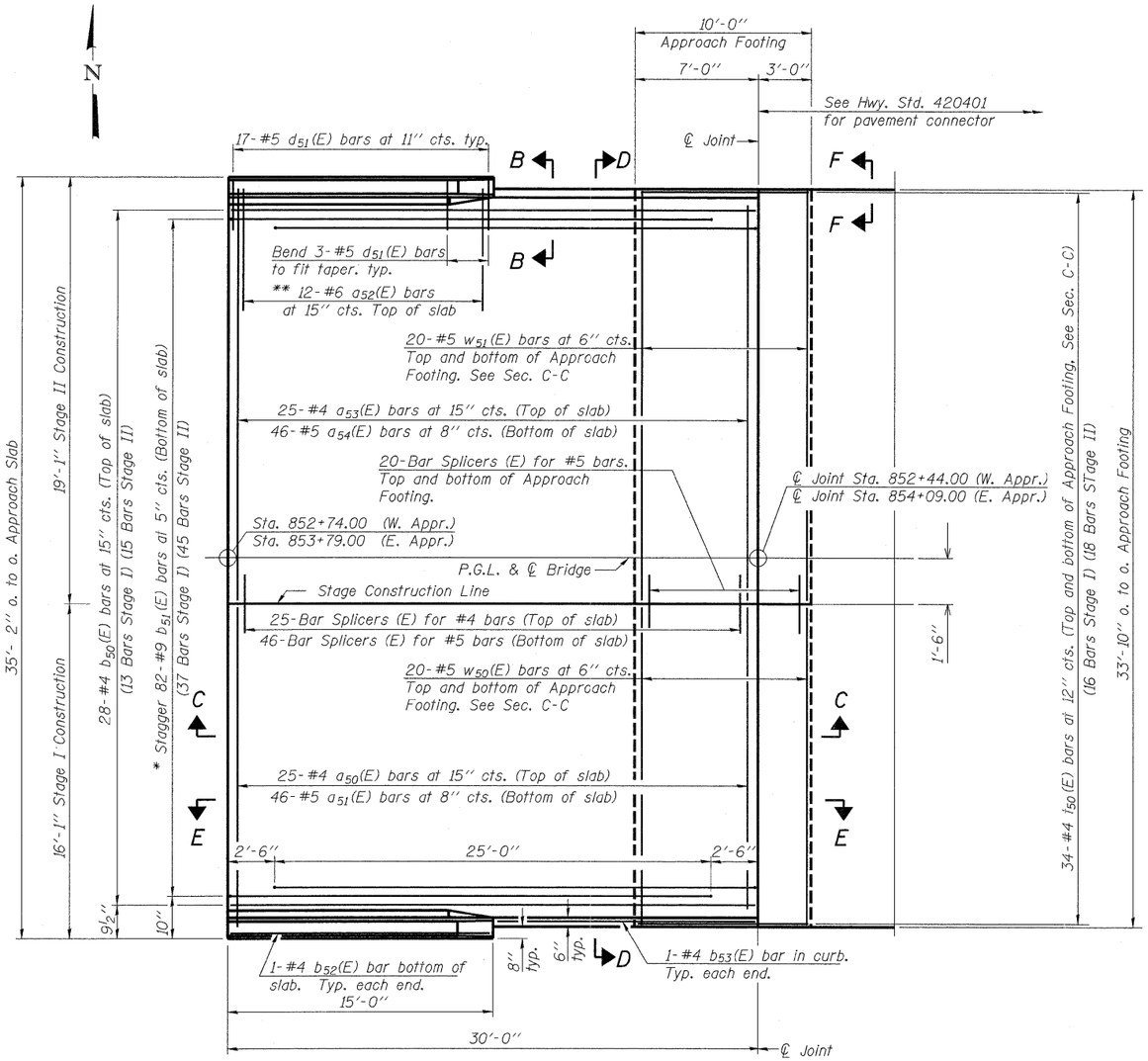
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

INTEGRAL ABUTMENT DIAPHRAGM DETAILS
STRUCTURE NO. 006-0183
SHEET NO. 13 OF 26 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
587	(22 BR)BR	BUREAU	61	29
		CONTRACT NO. 66995		
	ILLINOIS	FED. AID PROJECT		

FILE NAME = gr\zp101101\Bridge\Sheets\Sheet 13 - Integral Abutment Diaphragm Details.dgn

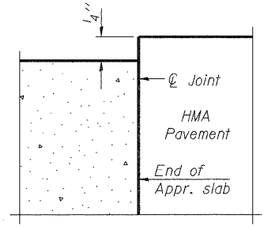
Notes:
See sheet 15 of 26 for Sections C-C & D-D and View E-E.
$a_{50}(E)$, $a_{51}(E)$, $a_{53}(E)$ and $a_{54}(E)$ bar spacings measured along ℄ Rdwy.



PLAN

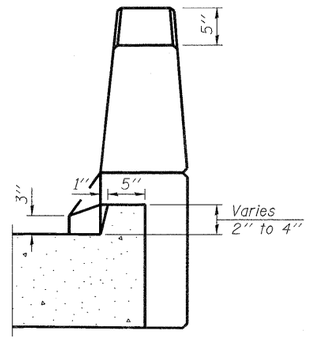
East approach shown.
West approach similar, opposite hand.

* Tilt #9 $b_{51}(E)$ bars as required to maintain clearance.
** Space between $a_{50}(E)$ and $a_{53}(E)$ bars, typ. ea. parapet.

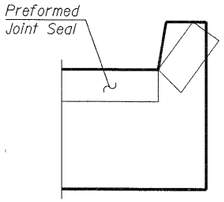


FLEXIBLE PAVEMENT

DETAIL A



VIEW B-B



VIEW F-F

Angle Preformed Joint Seal at 45° at curbs when req'd for drainage.

BA-0 7-1-10

(Sheet 1 of 2)

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	PLOT DATE = 10/11/2011	CHECKED - GBC/SMK	REVISED -

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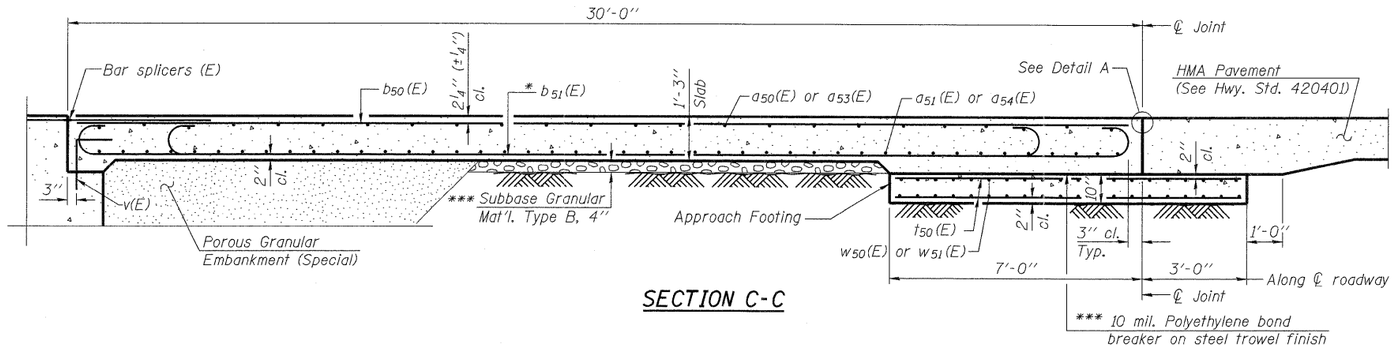
DEPARTMENT OF TRANSPORTATION

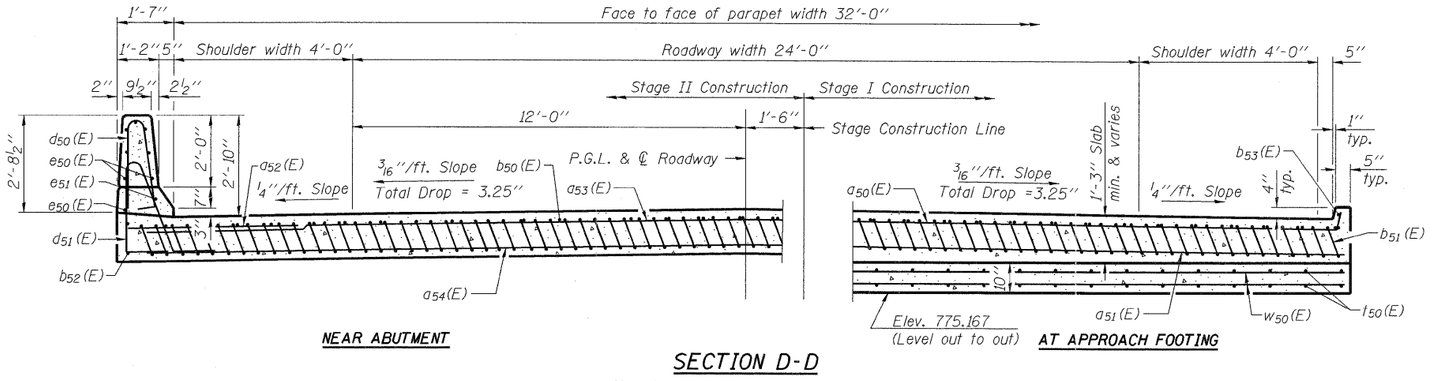
BRIDGE APPROACH SLAB DETAILS-1
STRUCTURE NO. 006-0183
SHEET NO. 14 OF 26 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
587	122 BRIBR	BUREAU	61	30
		CONTRACT NO. 66995		
	ILLINOIS FED. AID PROJECT			

FILE NAME = g:\zp101101\Bridge\Sheets\Sheet 14 - Bridge Approach Slab 1.dgn

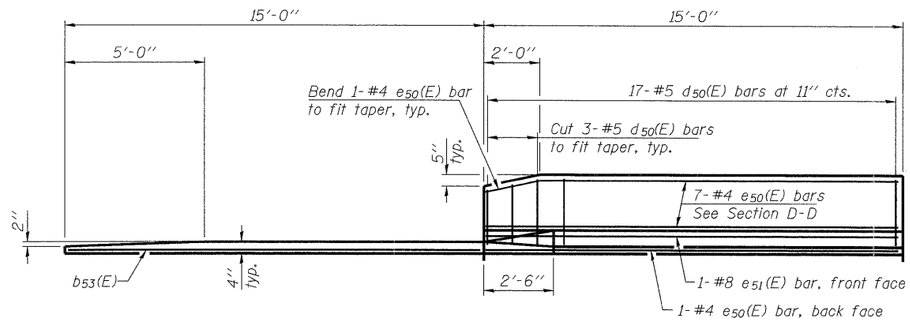


SECTION C-C

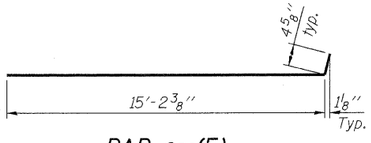


SECTION D-D

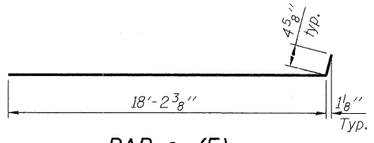
(See Plan for dimensions not shown)



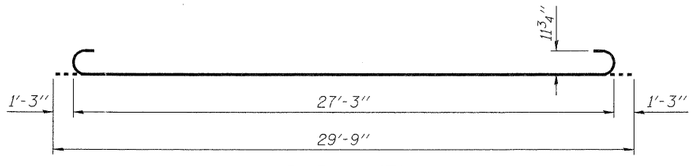
VIEW E-E



BAR a50(E)



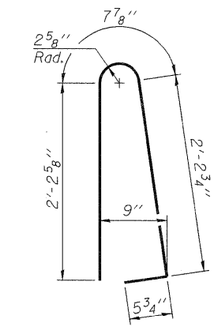
BAR a53(E)



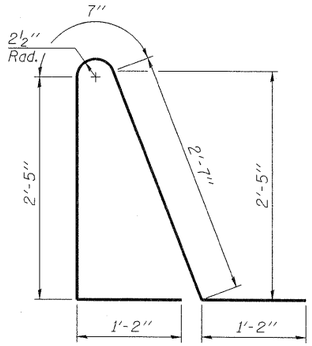
BAR b51(E)

Notes:

See sheet 14 of 26 for Detail A and View B-B.
Approach slab and parapet concrete shall be paid for as Concrete Superstructure.
Approach footing concrete shall be paid for as Concrete Structures.
Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
For v(E) bar details, see sheet 11 of 26.
The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.
For bar splicer details, see sheet 23 of 26.
Cost of excavation for approach footing included with Concrete Structures.
For Porous Granular Embankment (Special) and drainage treatment details, see sheet 2 of 26.
For additional parapet details, see sheet 11 of 26.



BAR d50(E)



BAR d51(E)

* Tilt #9 b51(E) bars as required to maintain clearance.

*** Cost included with Concrete Superstructure.

TWO APPROACHES BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a50(E)	50	#4	15'-7"	
a51(E)	92	#5	15'-2"	
a52(E)	48	#6	6'-6"	
a53(E)	50	#4	18'-7"	
a54(E)	92	#5	18'-2"	
b50(E)	56	#4	29'-8"	
b51(E)	164	#9	29'-9"	
b52(E)	4	#4	14'-8"	
b53(E)	4	#4	14'-9"	
d50(E)	68	#5	5'-7"	
d51(E)	68	#5	7'-11"	
e50(E)	32	#4	14'-8"	
e51(E)	4	#8	14'-8"	
t50(E)	136	#4	9'-8"	
w50(E)	80	#5	15'-1"	
w51(E)	80	#5	18'-1"	
Concrete Superstructure		Cu. Yd.	104.6	
Concrete Structures		Cu. Yd.	21.4	
Bridge Deck Grooving		Sq. Yd.	216	
Protective Coat		Sq. Yd.	233.8	
Reinforcement Bars, Epoxy Coated		Pound	28,240	
Bar Splicers		Each	222	

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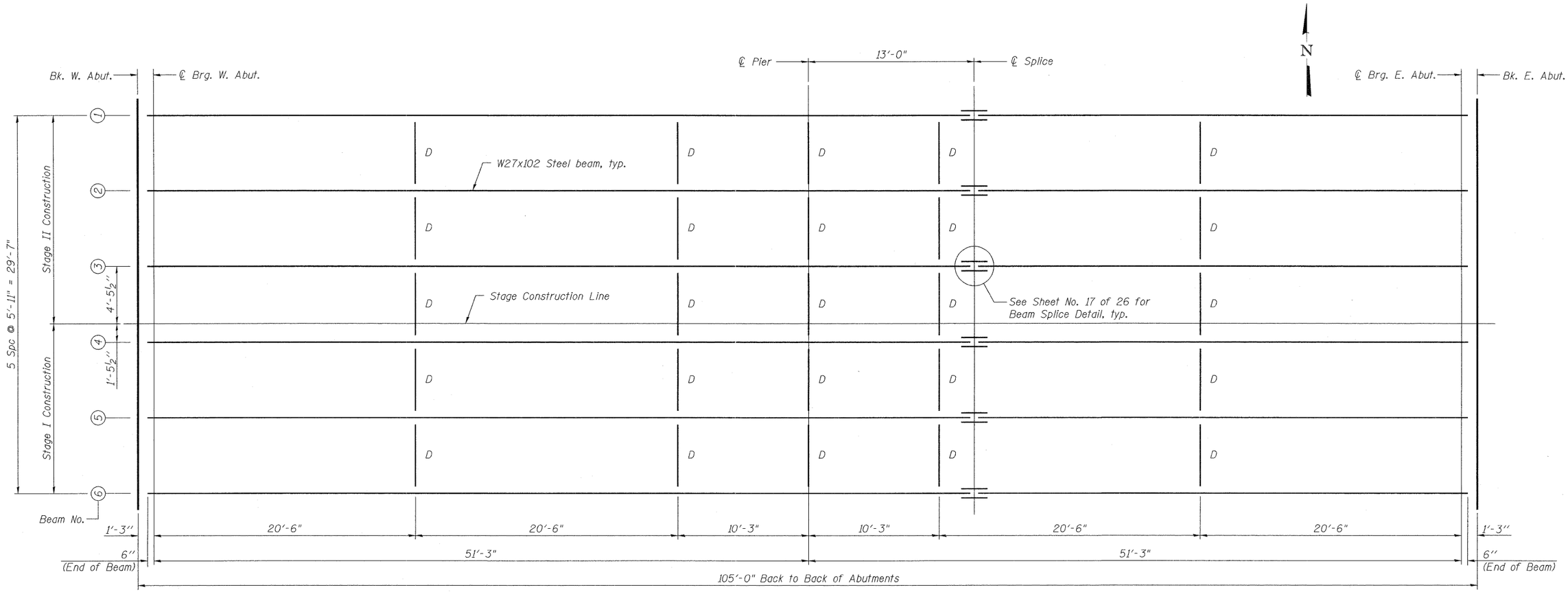
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

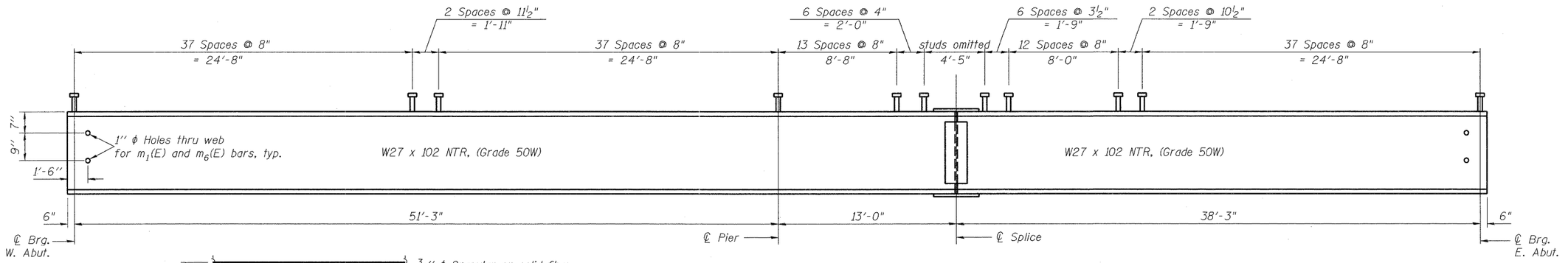
BRIDGE APPROACH SLAB DETAILS-2
STRUCTURE NO. 006-0183
SHEET NO. 15 OF 26 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
587	(22 BR)BR	BUREAU	61	31
		CONTRACT NO. 66995		
	ILLINOIS	FED. AID PROJECT		

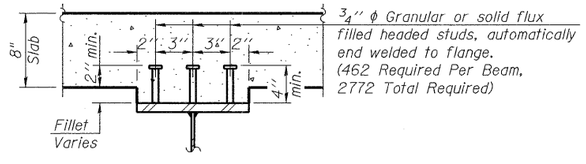
FILE NAME = gt\zp1011101\Bridge\Sheets\Sheet 15 - Bridge Approach Slab 2.dgn



PLAN



BEAM ELEVATION



¾" ϕ Granular or solid flux filled headed studs, automatically end welded to flange. (462 Required Per Beam, 2772 Total Required)

SECTION A-A

NOTES:

1. All diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual diaphragms at supports may be temporarily disconnected to install bearing anchor rods.
2. "D" - Denotes Interior Diaphragm. See Sheet 17 of 26 for Details
3. Load carrying components designated "NTR" shall conform to the Impact Testing Requirements, Zone 2.

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

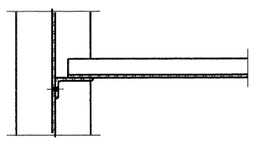
FRAMING PLAN
STRUCTURE NO. 006-0183
SHEET NO. 16 OF 26 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
587	(22 BR)BR	BUREAU	61	32
		CONTRACT NO. 66995		
	ILLINOIS FED. AID PROJECT			

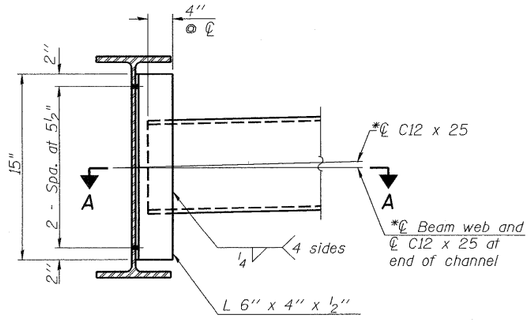
FILE NAME = ...\Sheet 16 - Framing Plan.dgn

INTERIOR BEAM MOMENT TABLE			
		0.4 Sp. 1 or 0.6 Sp. 2	Pier
I_s	(in^4)	3620	3620
$I_c(n)$	(in^4)	11238	-
$I_c(3n)$	(in^4)	8153	-
$I_c(cr)$	(in^4)	-	4593
S_s	(in^3)	267	267
$S_c(n)$	(in^3)	424	-
$S_c(3n)$	(in^3)	380	-
$S_c(cr)$	(in^3)	-	298
DC1	(k/')	0.76	0.76
M_{DC1}	('k)	140.4	246.5
DC2	(k/')	0.15	0.15
M_{DC2}	('k)	27.7	48.7
DW	(k/')	0.27	0.27
M_{DW}	('k)	49.3	86.5
M_{L+IM}	('k)	487.9	370.9
M_U (Strength I)	('k)	1137.9	1147.9
$\phi_f M_n$	('k)	2142.7	1201.9
f_s DC1	(ksi)	6.3	11.1
f_s DC2	(ksi)	0.9	2.0
f_s DW	(ksi)	1.6	3.5
f_s (L+IM)	(ksi)	13.8	14.9
f_s (Service II)	(ksi)	26.7	36.0
$0.95R_hF_{yf}$	(ksi)	47.5	47.5
f_s (Total)(Strength I)	(ksi)	-	-
$\phi_f F_n$	(ksi)	-	-
V_f	(k)	14.3	21.2

INTERIOR BEAM REACTION TABLE			
		Abut.	Pier
R_{DC1}	(k)	14.6	48.5
R_{DC2}	(k)	2.9	9.6
R_{DW}	(k)	5.1	17.0
R_{L+IM}	(k)	61.8	108.8
R_{Total}	(k)	84.4	183.9



SECTION A-A



INTERIOR DIAPHRAGM

(25 Required)

I_s, S_s: Non-composite moment of inertia and section modulus of the steel section used for computing f_s (Total-Strength I, and Service II) due to non-composite dead loads (in.^{4} and in.^{3}).

$I_c(n)$, $S_c(n)$: Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing f_s (Total-Strength I, and Service II) in uncracked sections, due to short-term composite live loads (in.^{4} and in.^{3}).

$I_c(3n)$, $S_c(3n)$: 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-Strength I, and Service II) in uncracked sections, due to long-term composite (superimposed) dead loads (in.^{4} and in.^{3}).

$I_c(cr)$, $S_c(cr)$: Composite moment of inertia and section modulus of the steel and longitudinal deck reinforcement, used for computing f_s (Total-Strength I and Service II) in cracked sections, due to both short-term composite live loads and long-term composite dead loads (in.^{4} and 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.).

M_U (Strength I): Factored design moment (kip-ft.).
$1.25\ (M_{DC1} + M_{DC2}) + 1.5\ M_{DW} + 1.75\ M_{L+IM}$

$\phi_f M_n$: Compact composite positive moment capacity computed according to Article 6.10.7.1 or non-slender negative moment capacity according to Article A6.1.1 or A6.1.2 (kip-ft).

f_s DC1: Un-factored stress at edge of flange for controlling steel flange due to vertical non-composite dead loads as calculated below (ksi).
M_{DC1} / S_{nc}

f_s DC2: Un-factored stress at edge of flange for controlling steel flange due to vertical composite dead loads as calculated below (ksi).
$M_{DC2} / S_c(3n)$ or $M_{DC2} / S_c(cr)$ as applicable.

f_s DW: Un-factored stress at edge of flange for controlling steel flange due to vertical composite future wearing surface loads as calculated below (ksi).
$M_{DW} / S_c(3n)$ or $M_{DW} / S_c(cr)$ as applicable.

f_s (L+IM): Un-factored stress at edge of flange for controlling steel flange due to vertical composite live plus impact loads as calculated below (ksi).
$M_{L+IM} / S_{c(n)}$ or $M_{L+IM} / S_c(cr)$ as applicable.

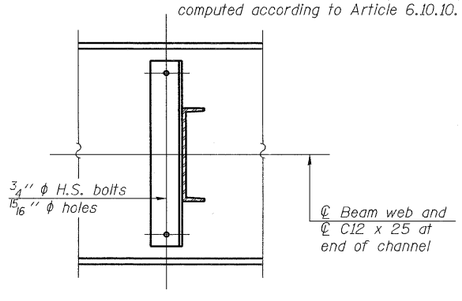
f_s (Service II): Sum of stresses as computed below (ksi).
$f_{sDC1} + f_{sDC2} + f_{sDW} + 1.3\ f_s(L+IM)$

$0.95R_hF_yf$: Composite stress capacity for Service II loading according to Article 6.10.4.2 (ksi).

f_s (Total)(Strength I): Sum of stresses as computed below on non-compact section (ksi).
$1.25\ (f_{sDC1} + f_{sDC2}) + 1.5\ f_{sDW} + 1.75\ f_{sL+IM}$

$\phi_f F_n$: Non-Compact composite positive or negative stress capacity for Strength I loading according to Article 6.10.7.2 (ksi).

V_f: Maximum factored shear range in composite portion of span computed according to Article 6.10.10.

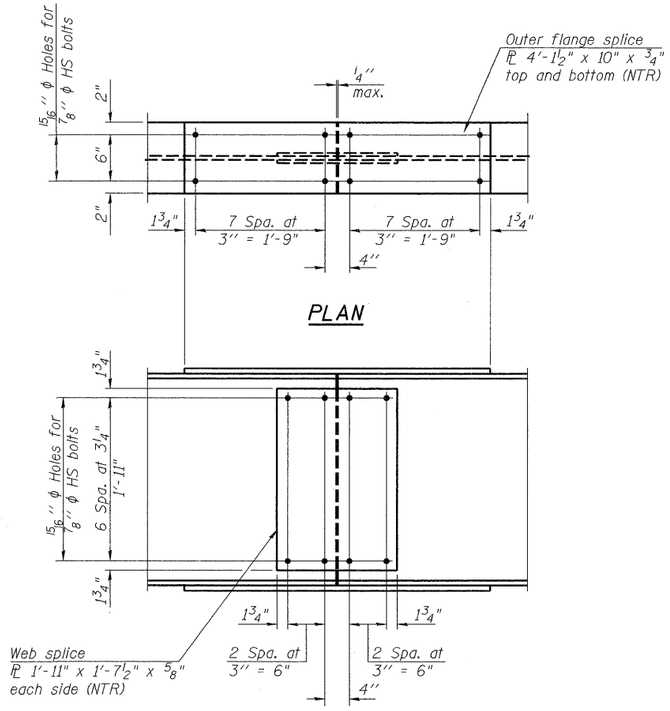


ELEVATION

TOP OF BEAM ELEVATIONS

Location	Beam 1	Beam 2	Beam 3	Beam 4	Beam 5	Beam 6
℄ Brg. West Abutment	779.56	779.67	779.76	779.76	779.67	779.56
℄ Brg. Pier	779.56	779.67	779.76	779.76	779.67	779.56
℄ Splice	779.56	779.67	779.76	779.76	779.67	779.56
℄ Brg. East Abutment	779.56	779.67	779.76	779.76	779.67	779.56

Note: Top of Beam Elevations shown are for fabrication use only.



ELEVATION

FIELD SPLICE DETAIL

(6 Required)

NOTES:

All splices are symmetrical about ℄ splice except for fills.

Two hardened washers required for each set of oversized holes.

*Alternate channels C12 x 30 are permitted to facilitate material acquisition. Calculated weight of structural steel is based on the lighter section. The alternate, if utilized, shall be provided at no additional cost to the Department.

Load carrying components designated "NTR" shall conform to the Impact Testing Requirements, Zone 2.

HS bolts shall be ⅞" ϕ AASHTO M164/ASTM A325 (type 3 for weathering steel).

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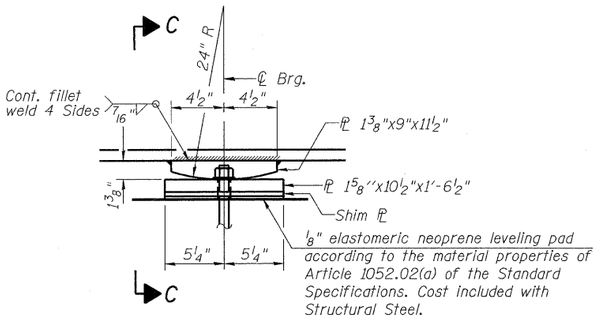
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STRUCTURAL STEEL DETAILS
STRUCTURE NO. 006-0183
SHEET NO. 17 OF 26 SHEETS

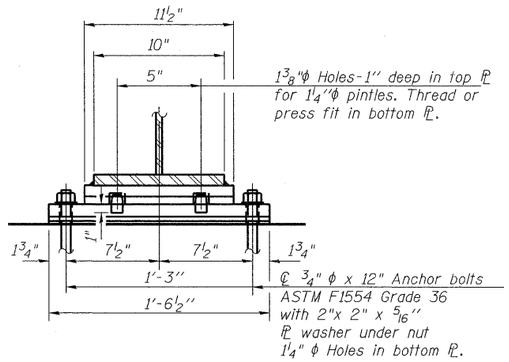
F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
587	(22 BR)BR	BUREAU	61	33
		CONTRACT NO. 66995		
	ILLINOIS FED. AID PROJECT			

FILE NAME = ...\Sheet 17 - Structural Steel Details.dgn



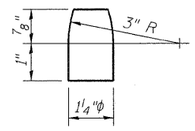
1/8" elastomeric neoprene leveling pad according to the material properties of Article 1052.02(a) of the Standard Specifications. Cost included with Structural Steel.

ELEVATION AT PIER

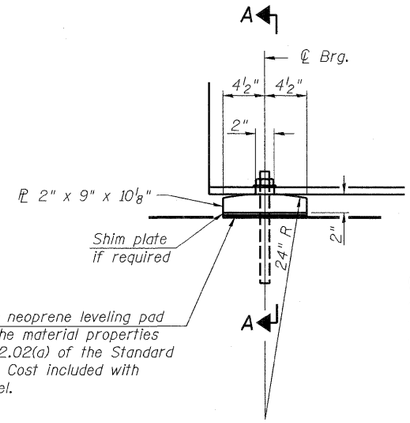


SECTION C-C

FIXED BEARING
(6 Required)

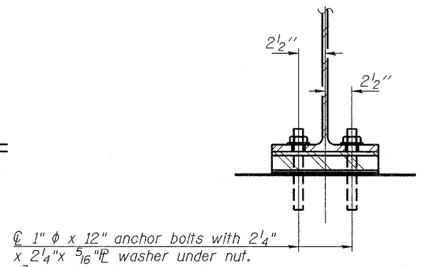


PINTLE



1/8" elastomeric neoprene leveling pad according to the material properties of Article 1052.02(a) of the Standard Specifications. Cost included with Structural Steel.

ELEVATION AT ABUTMENT



℄ 1" ϕ x 12" anchor bolts with 2 1/4" x 2 1/4"x 5/16"℄ washer under nut.
1 3/8" x 2" slotted hole in flange.
1 1/2" ϕ holes in bearing plate.

SECTION A-A

FIXED BEARING
(12 Required)

Notes:

Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. 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.

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

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

All structural steel for the bearings (including plates and pintles) shall be AASHTO M270 Grade 50W.

BILL OF MATERIAL

Item	Unit	Total
Anchor Bolts, 3/4"	Each	12
Anchor Bolts, 1"	Each	24

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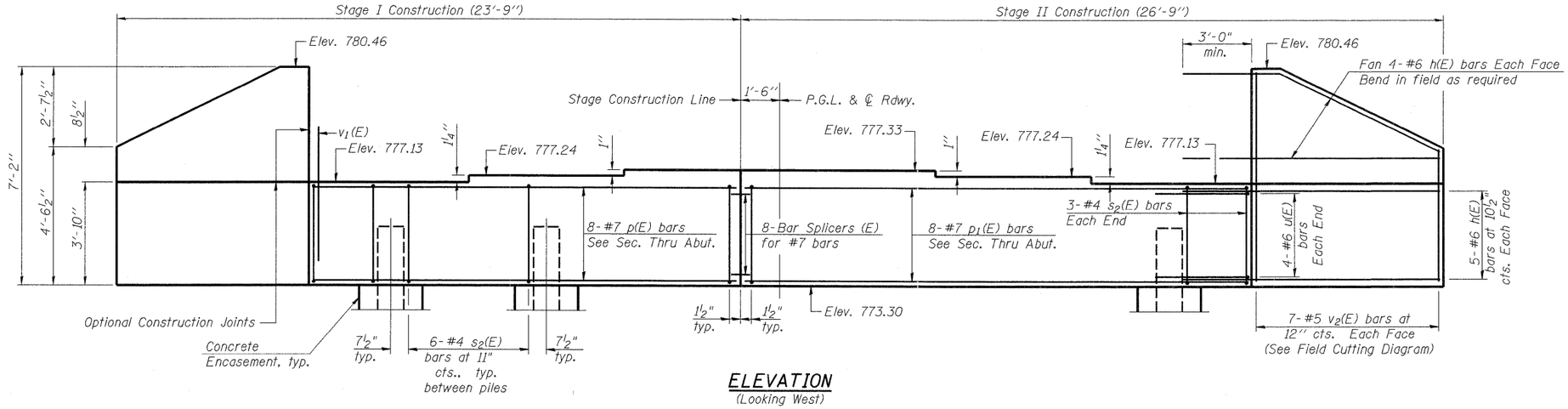
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BEARING DETAILS
STRUCTURE NO. 006-0183
SHEET NO. 18 OF 26 SHEETS

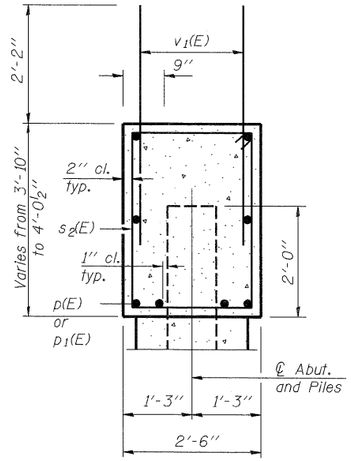
F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
587	(22 BR)BR	BUREAU	61	34
		CONTRACT NO. 66995		
	ILLINOIS	FED. AID PROJECT		

FILE NAME = ...\Sheet 18 - Bearing Details.dgn

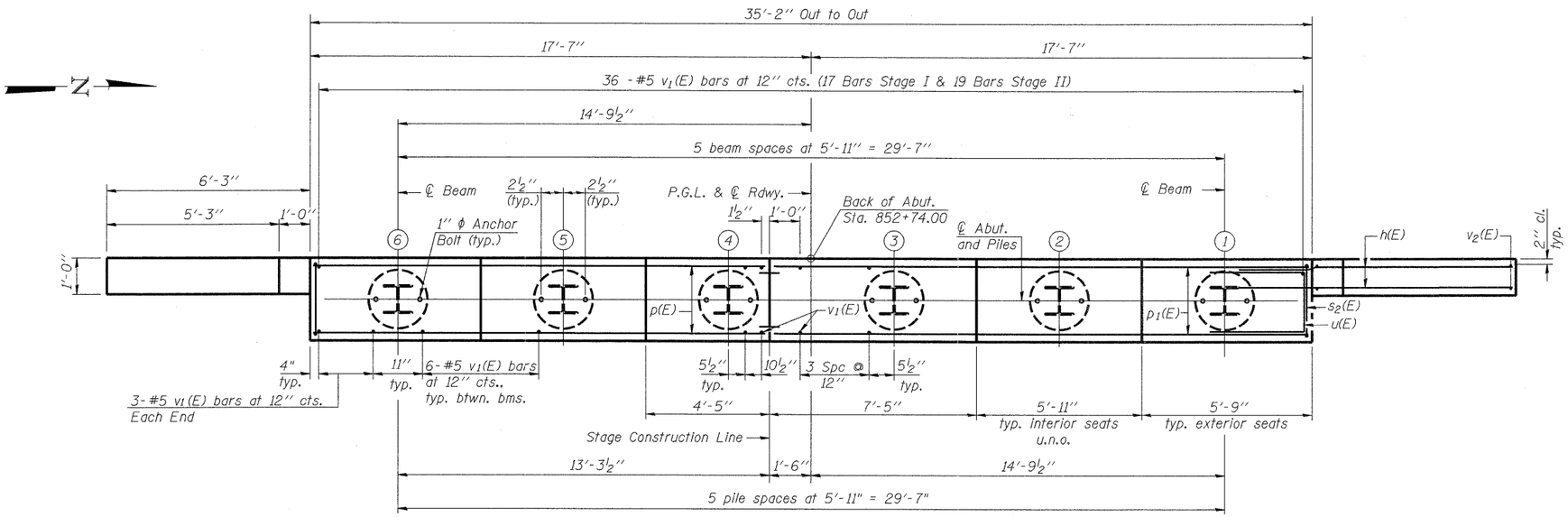
Notes:
Pour steps monolithically with cap.



ELEVATION
(Looking West)



SECTION THRU ABUT.



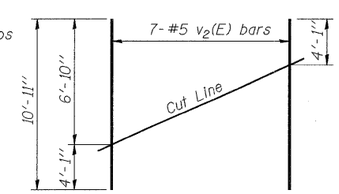
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	36	#6	9'-11"	——
p(E)	8	#7	15'-9"	——
p1(E)	8	#7	18'-9"	——
s2(E)	36	#4	12'-1"	□
u(E)	8	#6	8'-0"	⊐
v1(E)	72	#5	4'-4"	——
v2(E)	14	#5	10'-11"	——
Structure Excavation		Cu. Yd.	55.5	
Concrete Structures		Cu. Yd.	15.9	
Reinforcement Bars, Epoxy Coated		Pound	2,020	
Furnishing Steel Piles HP 10x42		Foot	155	
Driving Piles		Foot	155	
Test Pile Steel HP 10x42		Each	1	
Concrete Encasement		Cu. Yd.	2.1	
Bar Splicers		Each	8	

For details of Bar Splicers, see sheet 23 of 26.
For details of piles and Concrete Encasement, see sheet 22 of 26.

PILE DATA

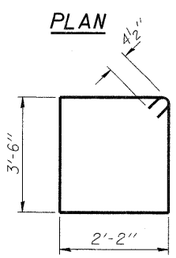
Type: HP 10 x 42
Nominal Required Bearing: 228 Kips
Factored Resistance Available: 125 Kips
Est. Length: 31 feet
No. Production Piles: 5
No. Test Piles: 1



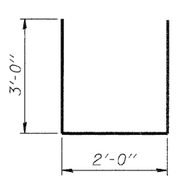
FIELD CUTTING DIAGRAM

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

PLAN



BAR s2(E)



BAR u(E)

DELTA ENGINEERING GROUP, LLC	USER NAME = kkhan	DESIGNED - SK	REVISED -
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	PLOT DATE = 10/11/2011	CHECKED - GBC/SMK	REVISED -

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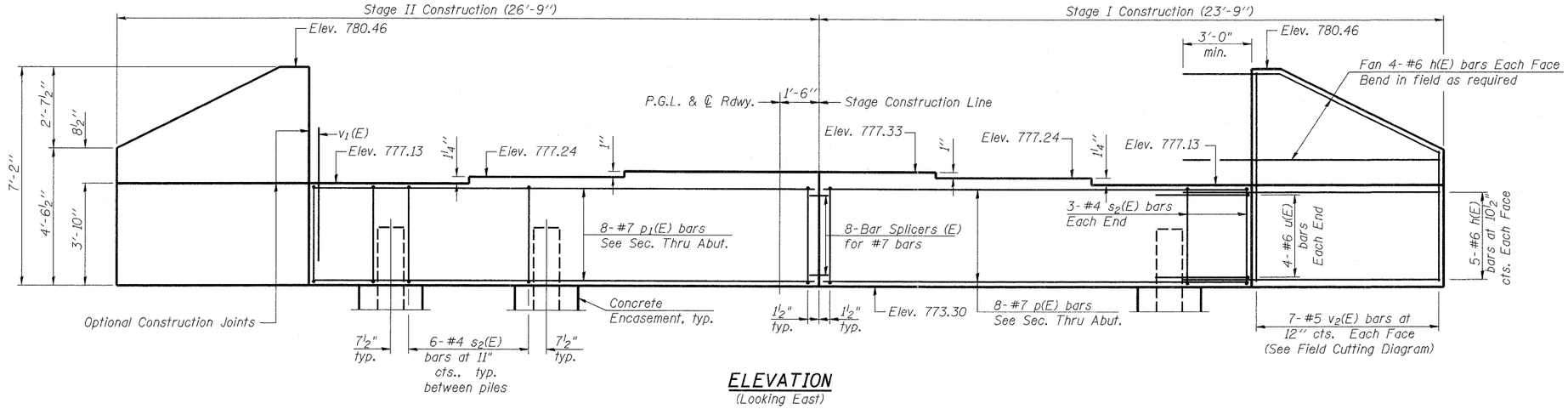
DEPARTMENT OF TRANSPORTATION

WEST ABUTMENT
STRUCTURE NO. 006-0183
SHEET NO. 19 OF 26 SHEETS

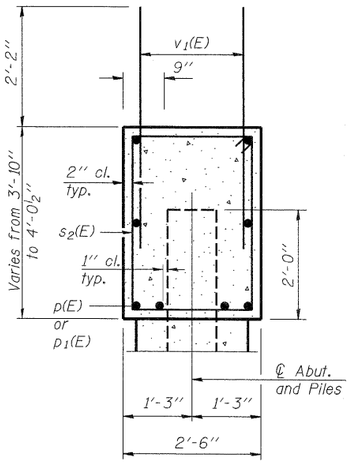
F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
587	(22 BR)BR	BUREAU	61	35
		CONTRACT NO. 66995		
	ILLINOIS	FED. AID PROJECT		

FILE NAME = gr\zp101101\Bridge\Sheets\Sheet 19 - West Abutment.dgn

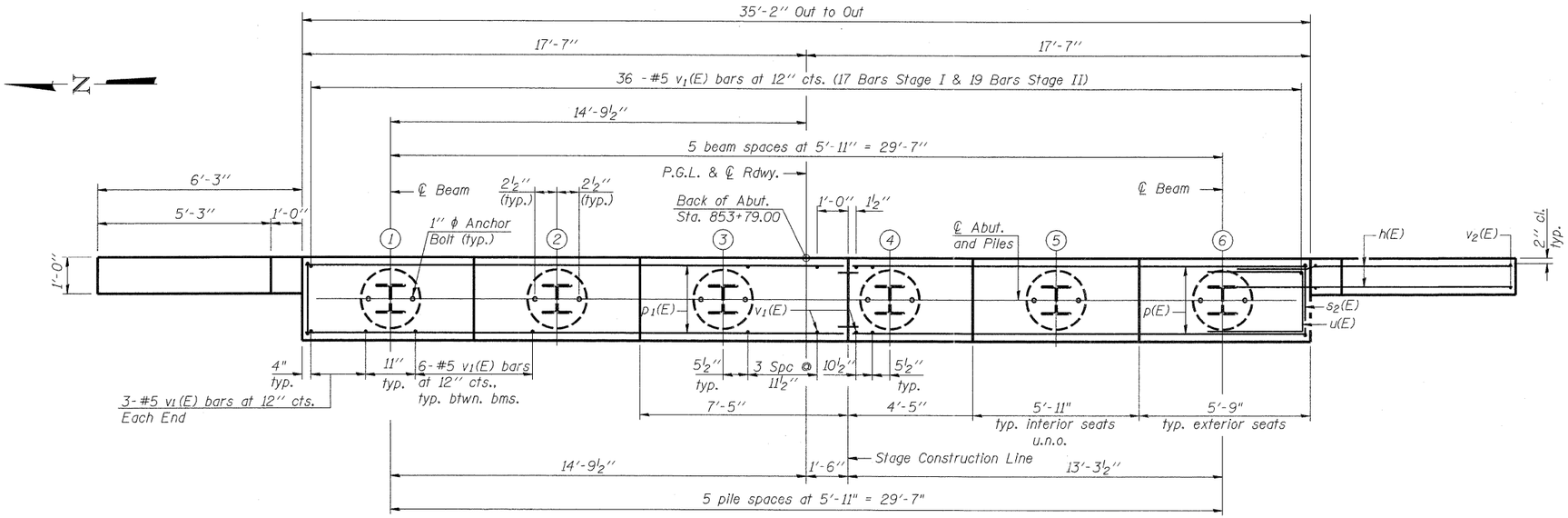
Notes:
Pour steps monolithically with cap.



ELEVATION
(Looking East)



SECTION THRU ABUT.



PLAN

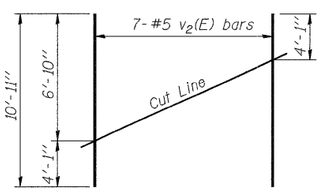
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	36	#6	9'-11"	
p(E)	8	#7	15'-9"	
p1(E)	8	#7	18'-9"	
s2(E)	36	#4	12'-1"	
u(E)	8	#6	8'-0"	
v1(E)	72	#5	4'-4"	
v2(E)	14	#5	10'-11"	
Structure Excavation		Cu. Yd.	55.5	
Concrete Structures		Cu. Yd.	15.9	
Reinforcement Bars, Epoxy Coated		Pound	2,020	
Furnishing Steel Piles HP 10x42		Foot	165	
Driving Piles		Foot	165	
Test Pile Steel HP 10x42		Each	1	
Concrete Encasement		Cu. Yd.	2.1	
Bar Splicers		Each	8	

For details of Bar Splicers, see sheet 23 of 26.
For details of piles and Concrete Encasement, see sheet 22 of 26.

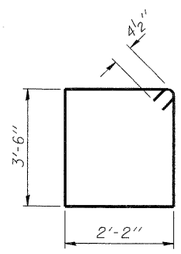
PILE DATA

Type: HP 10 x 42
Nominal Required Bearing: 234 Kips
Factored Resistance Available: 129 Kips
Est. Length: 33 feet
No. Production Piles: 5
No. Test Piles: 1

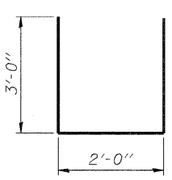


FIELD CUTTING DIAGRAM

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



BAR s2(E)



BAR u(E)

DELTA ENGINEERING GROUP, LLC
CONSULTING ENGINEERS, CONSTRUCTION MANAGERS, SURVEYORS
111 W JACKSON BLVD, SUITE 910
CHICAGO, IL 60604

USER NAME = kkhan	DESIGNED - SK	REVISED -	
	CHECKED - GBC/SMK	REVISED -	
PLOT SCALE =	DRAWN - SK	REVISED -	
PLOT DATE = 10/11/2011	CHECKED - GBC/SMK	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

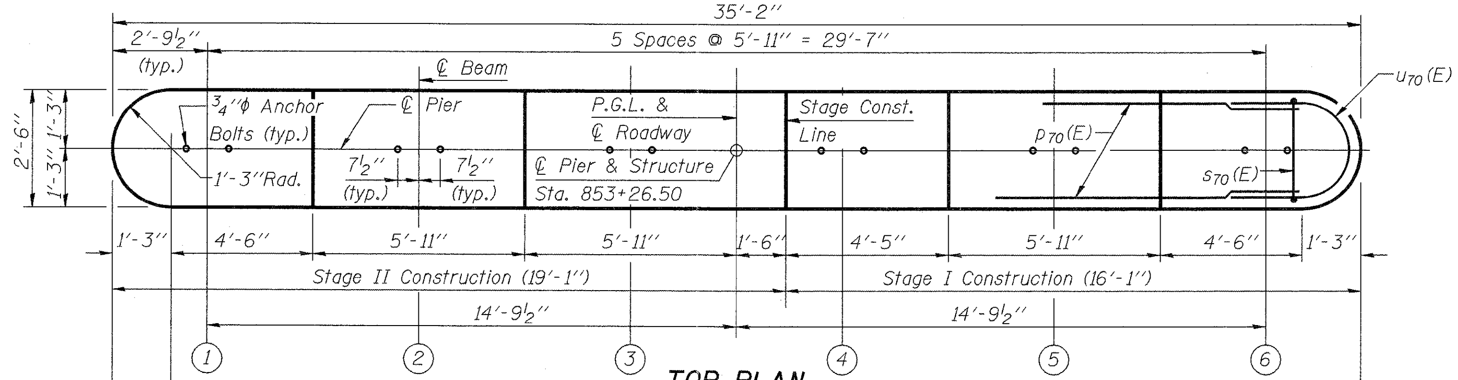
EAST ABUTMENT
STRUCTURE NO. 006-0183
SHEET NO. 20 OF 26 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
587	(22 BR)BR	BUREAU	61	36
		CONTRACT NO. 66995		
	ILLINOIS FED. AID PROJECT			

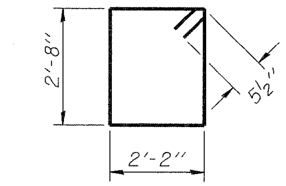
FILE NAME = gr\zp1011101\Bridge\Sheets\Sheet 20 - East Abutment.dgn

PILE DATA

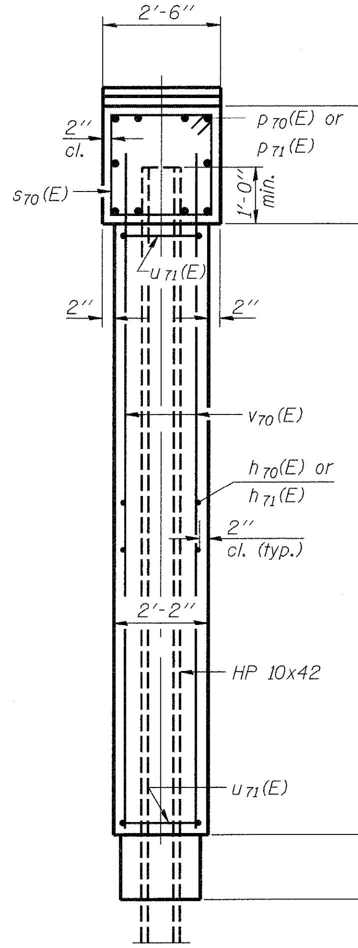
Type: HP 10 x 42
Nominal Required Bearing: 277 Kips
Factored Resistance Available: 142 Kips
Est. Length: 40 feet
No. Production Piles: 8
No. Test Piles: 1



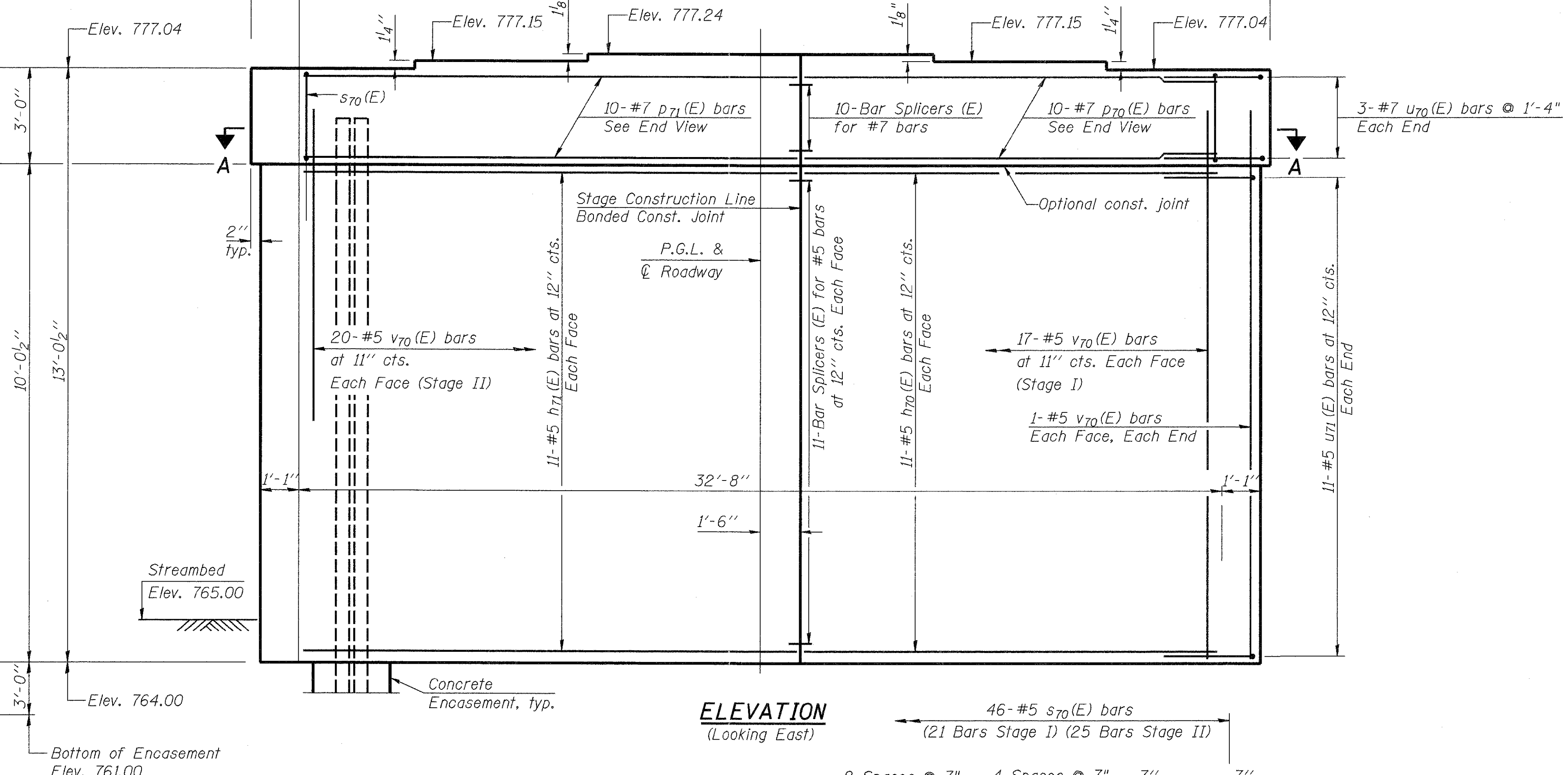
TOP PLAN



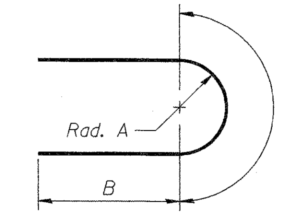
BAR s_{70}(E)



END VIEW



ELEVATION
(Looking East)



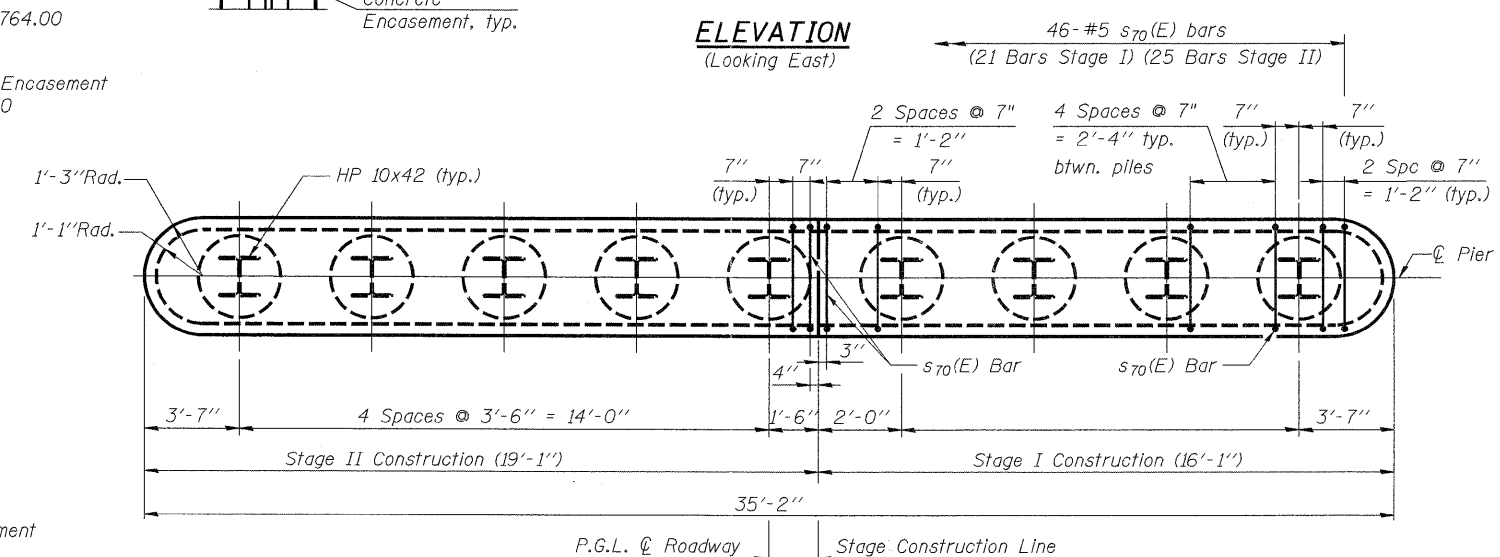
BARS u_{70}(E) & u_{71}(E)

Dimension	u_{70}(E)	u_{71}(E)
A	1'-0"	11"
B	4'-2"	2'-7"
C	3'-2"	2'-11"

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h_{70}(E)	22	#5	14'-10"	—
h_{71}(E)	22	#5	17'-10"	—
p_{70}(E)	10	#7	14'-10"	—
p_{71}(E)	10	#7	17'-10"	—
s_{70}(E)	46	#5	10'-7"	□
u_{70}(E)	6	#7	11'-6"	⊃
u_{71}(E)	22	#5	8'-1"	⊃
v_{70}(E)	78	#5	12'-6"	—

Cofferdam Excavation	Cu. Yd.	17.0
Concrete Structures	Cu. Yd.	39.0
Cofferdam (Type 1) (Location - 1)	Each	1
Reinforcement Bars, Epoxy Coated	Pound	3,340
Furnishing Steel Piles HP 10x42	Foot	320
Driving Piles	Foot	320
Test Pile Steel HP 10x42	Each	1
Concrete Encasement	Cu. Yd.	3.2
Bar Splicers	Each	32



SECTION A-A

N

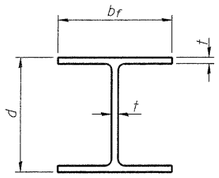
Notes:
Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.
For details of piles, see sheet 22 of 26.

If a portion of the concrete encasement is under water, reinforcement may be placed underwater into forms. Concrete shall be tremied according to Article 503.08 of the Standard Specifications to an elevation of 1'-0" above the water line at the time of construction.

DELTA ENGINEERING GROUP, LLC	USER NAME = kkhan	DESIGNED - SK	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PIER STRUCTURE NO. 006-0183
		CHECKED - GBC/SMK	REVISED -		
	PLOT SCALE =	DRAWN - SK	REVISED -		
	PLOT DATE = 10/11/2011	CHECKED - GBC/SMK	REVISED -		SHEET NO. 21 OF 26 SHEETS

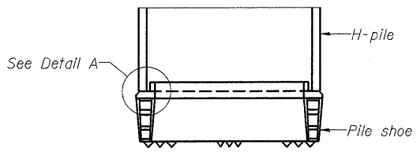
F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
587	(22 BR)BR	BUREAU	61	37
		CONTRACT NO. 66995		
		ILLINOIS FED. AID PROJECT		

FILE NAME = g:\zp121101\Bridge\Sheets\Sheet 21 - Pier.dgn

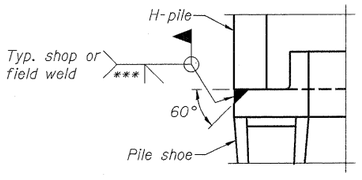


STEEL PILE TABLE

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"	11/16"	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"	11/16"	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"

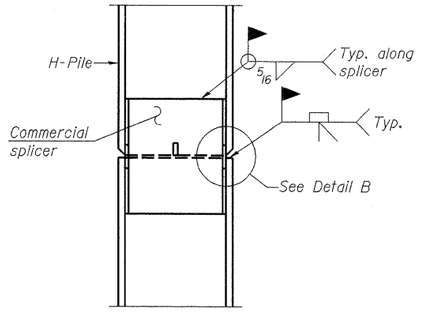


ELEVATION



DETAIL A

H-PILE SHOE ATTACHMENT



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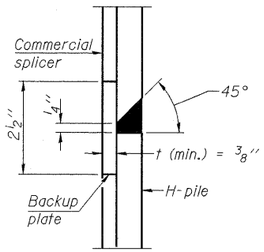
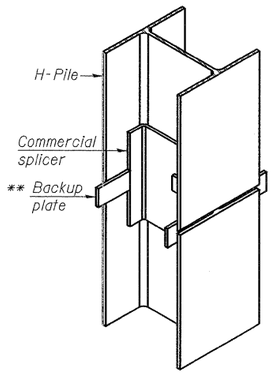
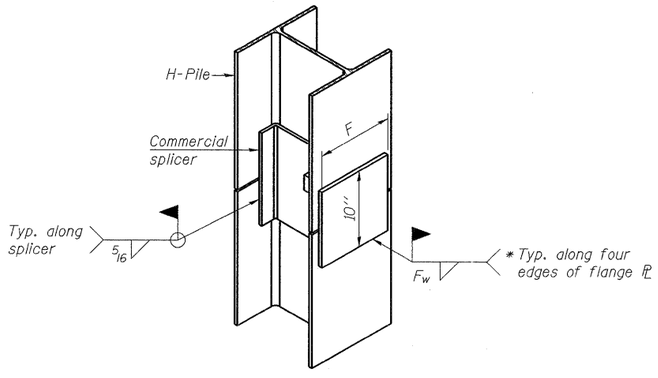


DETAIL "B"

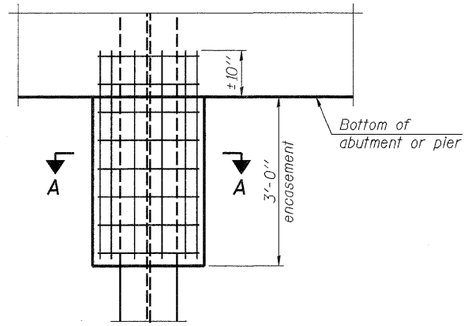


ISOMETRIC VIEW

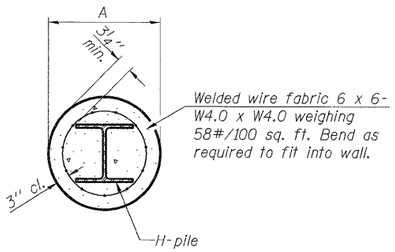
WELDED COMMERCIAL SPLICE



ISOMETRIC VIEW



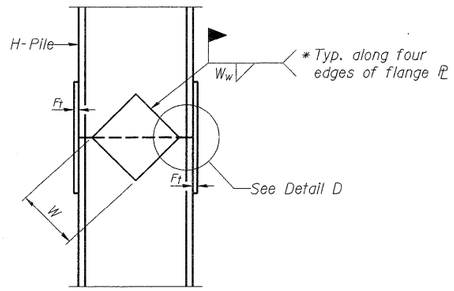
ELEVATION



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

SECTION A-A

PILE ENCASEMENT



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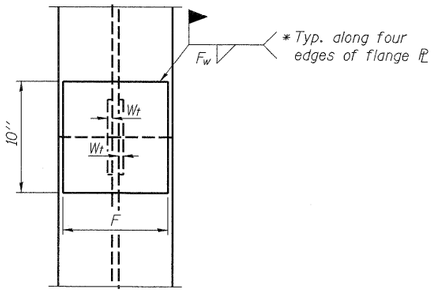
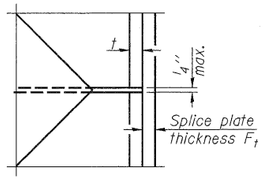


END VIEW



DETAIL D

Designation	F	F_f	F_w	W	W_f	W_w
HP 14x117	12 1/2"	1"	7/8"	7 3/4"	5/8"	1/2"
x102	12 1/2"	7/8"	3/4"	7 3/4"	5/8"	1/2"
x89	12 1/2"	3/4"	11/16"	7 3/4"	5/8"	1/2"
x73	12 1/2"	5/8"	9/16"	7 3/4"	5/8"	1/2"
HP 12x84	10"	7/8"	11/16"	6 1/2"	5/8"	1/2"
x74	10"	7/8"	11/16"	6 1/2"	5/8"	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"

WELDED PLATE FIELD SPLICE

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.).

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

F-HP 7-1-10

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CONSULTING ENGINEERS, CONSTRUCTION MANAGERS, SURVEYORS
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CHICAGO, IL 60604

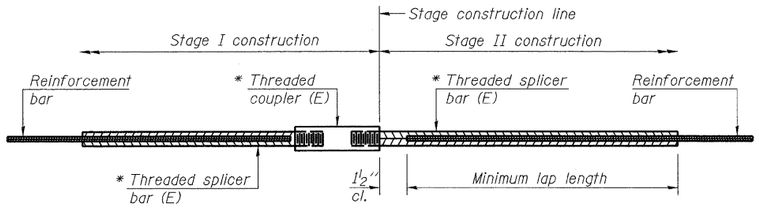
USER NAME = kkhan	DESIGNED - SK	REVISED -	
	CHECKED - GBC/SMK	REVISED -	
PLOT SCALE =	DRAWN - SK	REVISED -	
PLOT DATE = 10/11/2011	CHECKED - GBC/SMK	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

HP PILE DETAILS
STRUCTURE NO. 006-0183
SHEET NO. 22 OF 26 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
587	(22 BR)BR	BUREAU	61	38
		CONTRACT NO. 66995		
	ILLINOIS	FED. AID PROJECT		

FILE NAME = gr\zp101101\Bridge\Sheets\Sheet 22 - Pile Details.dgn



STANDARD BAR SPLICER ASSEMBLY

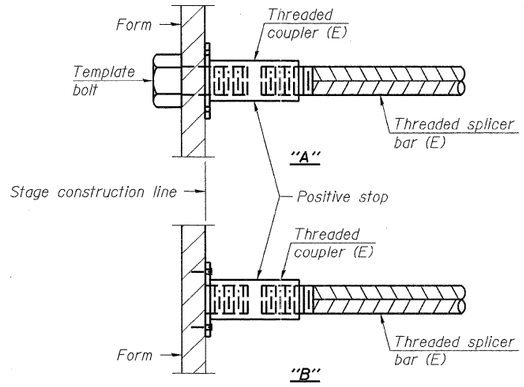
Minimum Lap Lengths					
Bar size to be spliced	Table 1	Table 2	Table 3	Table 4	Table 5
3, 4	1'-5"	1'-11"	2'-1"	2'-4"	2'-3"
5	1'-9"	2'-5"	2'-7"	2'-11"	2'-10"
6	2'-1"	2'-11"	3'-1"	3'-6"	3'-4"
7	2'-9"	3'-10"	4'-2"	4'-8"	4'-6"
8	3'-8"	5'-1"	5'-5"	6'-2"	5'-10"
9	4'-7"	6'-5"	6'-10"	7'-9"	7'-5"

Table 1: Black bar, 0.8 Class C
Table 2: Black bar, Top bar lap, 0.8 Class C
Table 3: Epoxy bar, 0.8 Class C
Table 4: Epoxy bar, Top bar lap, 0.8 Class C
Table 5: Epoxy bar, Top bar lap, Class B

Threaded splicer bar length = min. lap length + 1½" + thread length

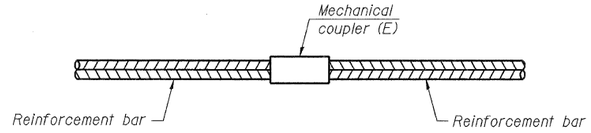
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length
Deck, Top Trans.	#5	181	3
Deck, Bot Trans.	#5	127	3
Integral Diaphragms	#6	16	4
Abutments	#7	16	4
Pier Cap	#7	10	4
Pier Wall	#5	22	4
Approaches, Top Trans.	#4	50	3
Approaches, Bot Trans.	#5	92	3
Approaches, Footing.	#5	80	3



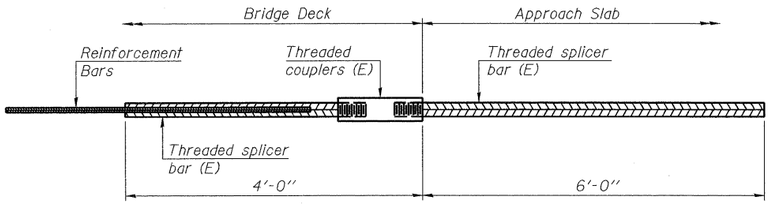
INSTALLATION AND SETTING METHODS

"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.



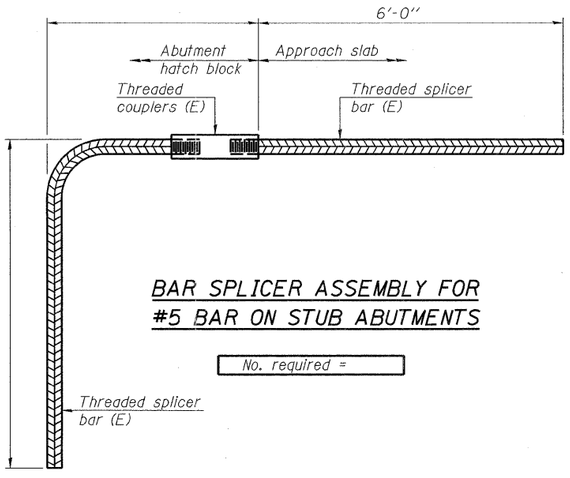
STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required



BAR SPLICER ASSEMBLY FOR #5 BAR ON INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

No. required = 76



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. required =

NOTES

Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.

All reinforcement shall be lapped and tied to the splicer bars.

Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.

See approved list of bar splicer assemblies and mechanical splicers for alternatives.

BSD-1 7-1-10

DELTA ENGINEERING GROUP, LLC
CONSULTING ENGINEERING, CONSTRUCTION MANAGEMENT, SURVEYING
111 W JACKSON BLVD, SUITE 510 CHICAGO, IL. 60604

USER NAME = kkhan	DESIGNED - SK	REVISED -	
	CHECKED - GBC/SMK	REVISED -	
PLOT SCALE =	DRAWN - SK	REVISED -	
PLOT DATE = 11/23/2011	CHECKED - GBC/SMK	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
STRUCTURE NO. 006-0183
SHEET NO. 23 OF 26 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
587	(22 BR)BR	BUREAU	61	39
		CONTRACT NO. 66995		
	ILLINOIS FED. AID PROJECT			

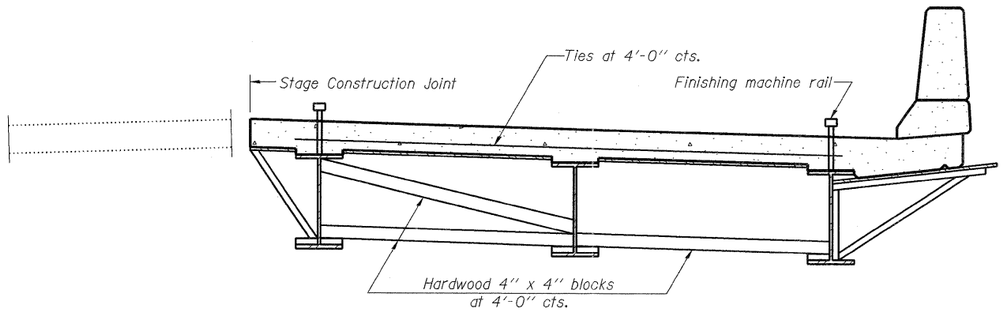
FILE NAME = ...\Sheet 23 - Bar Splicer Assembly Details.dgn

When cantilever forming brackets are used, the work shall be done according to Article 503.06(b) of the Standard Specifications, except as modified below and in the details shown on this sheet.

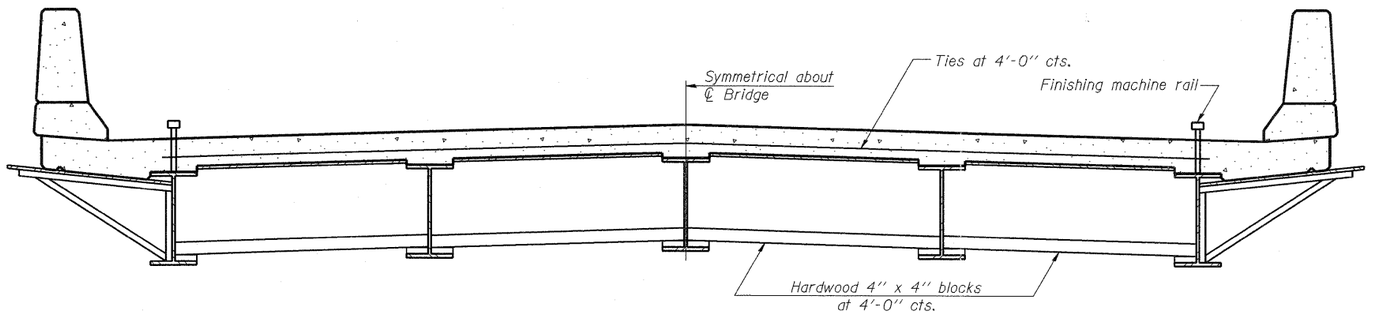
The finishing machine rails shall be placed on the top flange of the exterior beams.

The beams or girders, supporting cantilever forming brackets, shall be tied together at 4 foot intervals.

For Standard construction, or Stage Construction the Hardwood bracing materials shall be placed as shown between webs of beams in each bay.



FORM BRACES FOR
STAGE CONSTRUCTION



FORM BRACES FOR
STANDARD CONSTRUCTION

SB-1

7-1-10

DELTA ENGINEERING GROUP, LLC
CONSULTING ENGINEERS, CONSTRUCTION MANAGERS, SURVEYORS
311 W JACKSON BLVD, SUITE 900
CHICAGO, IL 60606

USER NAME = kkhan	DESIGNED - SK	REVISED -
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PLOT SCALE =	DRAWN - SK	REVISED -
PLOT DATE = 10/11/2011	CHECKED - GBC/SMK	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CANTILEVER FORMING BRACKETS FOR SUPERSTRUCTURES WITH W27 BEAMS AND SMALLER **STRUCTURE NO. 006-0183**

SHEET NO. 24 OF 26 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
587	(22 BR)BR	BUREAU	61	40
		CONTRACT NO. 66995		
		ILLINOIS FED. AID PROJECT		

FILE NAME = g:\zp101101\Bridge\Sheets\Sheet 24 - Cantilever Forming Brackets.dgn

Illinois Department of Transportation
Division of Highways
District #3, Ottawa

SOIL BORING LOG

Date 7/1/09

ROUTE FAP 587 (US 34) DESCRIPTION US 34 over Pike Creek, 1 mile North East of LaMoille LOGGED BY LM

SECTION 22 BR LOCATION SE 1/4, SEC. 18, TWP. 18N, RNG. 11E

COUNTY Bureau DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO. 006-0147 (Exist.)
Station 853+37.16

BORING NO. 1 (S.W. Quad.)
Station 852+67.16
Offset 7.00ft Rt.
Ground Surface Elev. 780.12 ft

Surface Water Elev. 766.74 ft
Stream Bed Elev. 763.48 ft

Groundwater Elev.:
First Encounter ft
Upon Completion 763.1 ft ▽
After Hrs. ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Augered Bit. pavement, Brown Sand & Gravel Fill and Brown & Black Silty Clay Loam Fill			
777.62			
Stiff Brown & Black Silty Clay Loam Fill over concrete @ 3.5'-4' (possible old road bed or large concrete debris)	2		
	2 10	1.5 P	15.7
775.62			
Stiff Black & Gray Silty Clay/Silty Clay Loam Fill -5	3		
	3 4	1.5 P	25.9
	2		
	2 4	1.8 P	21.3
-10	1		
	2 2	1.5 P	24.6
	wh		
	2 3	1.5 P	26.6
765.12 -15	3		
Loose Black to Brown Loamy Sand & Gravel with free water	4 5		17.1
763.12▽			
Very Stiff Gray Silty Loam Till	3		
	5 8	3.1 S	18.1
-20			
Very Stiff Gray Silty Loam Till *(continued)*	3		
	6 6	2.8 S	15.0
758.12			
Very Stiff Gray Silty Clay Loam Till	2		
	4 5	2.6 S	14.3
-25	2		
	4 5	2.6 B	14.6
753.12			
Very Stiff Reddish Brown Silty Clay Loam Till	3		
	4 5	2.6 B	14.0
-30	3		
	8 9	3.4 B	12.3
	3		
	5 7	3.4 B	14.2
-35	3		
	5 8	3.4 B	12.9
	5		
	7 12	5.0 S	11.6
-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)

Illinois Department of Transportation
Division of Highways
District #3, Ottawa

SOIL BORING LOG

Date 7/1/09

ROUTE FAP 587 (US 34) DESCRIPTION US 34 over Pike Creek, 1 mile North East of LaMoille LOGGED BY LM

SECTION 22 BR LOCATION SE 1/4, SEC. 18, TWP. 18N, RNG. 11E

COUNTY Bureau DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO. 006-0147 (Exist.)
Station 853+37.16

BORING NO. 1 (S.W. Quad.)
Station 852+67.16
Offset 7.00ft Rt.
Ground Surface Elev. 780.12 ft

Surface Water Elev. 766.74 ft
Stream Bed Elev. 763.48 ft

Groundwater Elev.:
First Encounter ft
Upon Completion 763.1 ft ▽
After Hrs. ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Very Stiff Reddish Brown Silty Clay Loam Till *(continued)*	7		
	9 13	5.0 S	12.3
738.12			
Hard Reddish Brown Silty Clay Loam Till - very uniform	8		
	11 15	5.8 S	12.0
-45	8		
	11 16	6.0 S	11.9
	8		
	11 21	7.0 S	10.3
-50	8		
	11 20	7.0 S	12.1
	7		
	11 19	7.0 S	11.8
-55	8		
	12 21	7.0 S	11.4
	9		
	14 23	7.2 S	10.6
-60			
Hard Reddish Brown Silty Clay Loam Till - very uniform *(continued)*	8		
	12 22	7.0 S	11.0
	10		
	18 23	7.2 S	11.7
-65	9		
	16 22	7.2 S	10.4
	10		
	18 22	7.2 S	11.3
708.62			
End of Boring			
-70			
-75			
-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
District #3, Ottawa

SOIL BORING LOG

Date 7/2/09

ROUTE FAP 587 (US 34) DESCRIPTION US 34 over Pike Creek, 1 mile North East of LaMoille LOGGED BY LM

SECTION 22 BR LOCATION SE 1/4, SEC. 18, TWP. 18N, RNG. 11E

COUNTY Bureau DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO. 006-0147 (Exist.)
Station 853+37.16

BORING NO. 2 (N.E. Quad.)
Station 854+07.16
Offset 7.00ft Lt.
Ground Surface Elev. 780.04 ft

Surface Water Elev. 766.74 ft
Stream Bed Elev. 764.44 ft
Groundwater Elev.:
First Encounter ft
Upon Completion 765.0 ft ▽
After Hrs. ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Augered Bit. pavement, Sand & Gravel Base, Black Silty Clay Loam Fill & Concrete (Old Road?) @ 3' then Black Silty Clay Loam Fill			
775.04 -5			
Stiff Black & Gray Silty Clay Loam Fill	2		
	2	1.5	18.1
	3	P	
	2		
	2	1.5	35.7
	3	P	
770.04 -10			
Stiff Dark Gray Silty Clay Loam	wh		
	wh	1.0	29.3
768.04	2	P	
Stiff Brown & Gray Silty Loam/Silty Clay Loam Loess			
	wh		
	wh	1.0	27.1
765.54	2	P	
Stiff Gray & Brown Clay, Silt, Fine to Coarse Sand & Gravel with free water ▽ -15			
	2		
	3	1.5	22.9
	4	P	
	2		
	3	1.5	13.7
761.04	2	P	
-20			

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Very Stiff Gray Silty Clay Loam Till with layers of Sand & Gravel @ 37.5'-39' *(continued)*	2		
	3	2.0	16.3
	4	S	
	2		
	3	2.5	14.7
	5	S	
-25			
	2		
	3	2.5	16.1
	5	S	
	3		
	3	2.7	14.2
	5	S	
-30			
	3		
	5	3.3	12.6
	8	S	
	4		
	5	3.1	14.9
	6	S	
-35			
	4		
	6	3.3	13.9
	8	S	
	11		
	9	3.5	11.4
740.54	11	S	
-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)

Illinois Department of Transportation
Division of Highways
District #3, Ottawa

SOIL BORING LOG

Date 7/2/09

ROUTE FAP 587 (US 34) DESCRIPTION US 34 over Pike Creek, 1 mile North East of LaMoille LOGGED BY LM

SECTION 22 BR LOCATION SE 1/4, SEC. 18, TWP. 18N, RNG. 11E

COUNTY Bureau DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO. 006-0147 (Exist.)
Station 853+37.16

BORING NO. 2 (N.E. Quad.)
Station 854+07.16
Offset 7.00ft Lt.
Ground Surface Elev. 780.04 ft

Surface Water Elev. 766.74 ft
Stream Bed Elev. 764.44 ft
Groundwater Elev.:
First Encounter ft
Upon Completion 765.0 ft ▽
After Hrs. ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Very Stiff Reddish Brown Silty Clay Loam Till *(continued)*	3		
	5	3.4	13.5
	8	S	
	8		
	9	3.9	12.5
	10	S	
735.54			
Hard Reddish Brown Silty Clay Loam Till	-45		
	9		
	11	4.2	12.2
	13	S	
-50			
	11		
	13	6.8	11.0
	17	S	
708.54			
End of Boring			
-55			
	23		
	11	7.0	10.9
	20	S	
-60			

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Hard Reddish Brown Silty Clay Loam Till *(continued)*	17		
	14	7.2	12.8
	22	S	
-65			
	17		
	21	7.2	14.5
	26	S	
-70			
	16		
	20	7.2	14.3
	25	S	
-75			
-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)

DELTA ENGINEERING GROUP, LLC
CONSULTING ENGINEERS, CONSTRUCTION MANAGERS, SURVEYORS
111 W. JACKSON BLVD., SUITE 1100
CHICAGO, IL 60604

USER NAME = kkhan	DESIGNED - SK	REVISED -	
	CHECKED - GBC/SMK	REVISED -	
PLOT SCALE =	DRAWN - SK	REVISED -	
PLOT DATE = 10/11/2011	CHECKED - GBC/SMK	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOG-2
STRUCTURE NO. 006-0183
SHEET NO. 26 OF 26 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
587	(22 BR)BR	BUREAU	61	42
		CONTRACT NO. 66995		
	ILLINOIS FED. AID PROJECT			

FILE NAME = gr\zp101101\Bridge\Sheets\Sheet 26 - Soil Boring Log-2.dgn

B.M. # 3 : Chiseled "□", on northwest wingwall of existing bridge. Elev. 778.11.

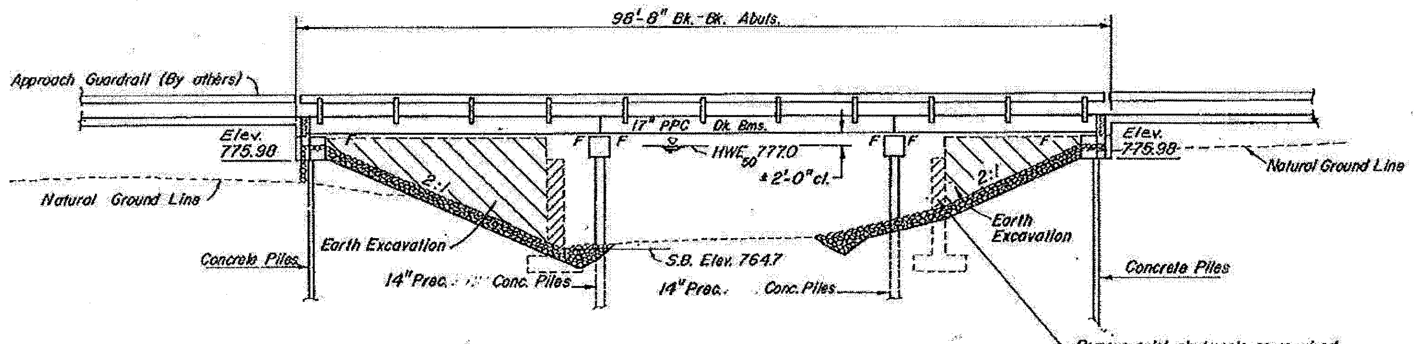
EXISTING STRUCTURE #006-0077 : Built in 1923 as Sec. 22 , SBI Rte. 18. Single span R.C. thru-girder w/ tranverse R.C. girders. R.C. closed abutment on timber piles. 48'-3" Bk.-Bk. x 25'-8" o-o. To be removed. No salvage.

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 587	22BR	BUREAU	24	9
FHWA. REG. NO. 5	ILLINOIS	FED. AID PROJECT-		

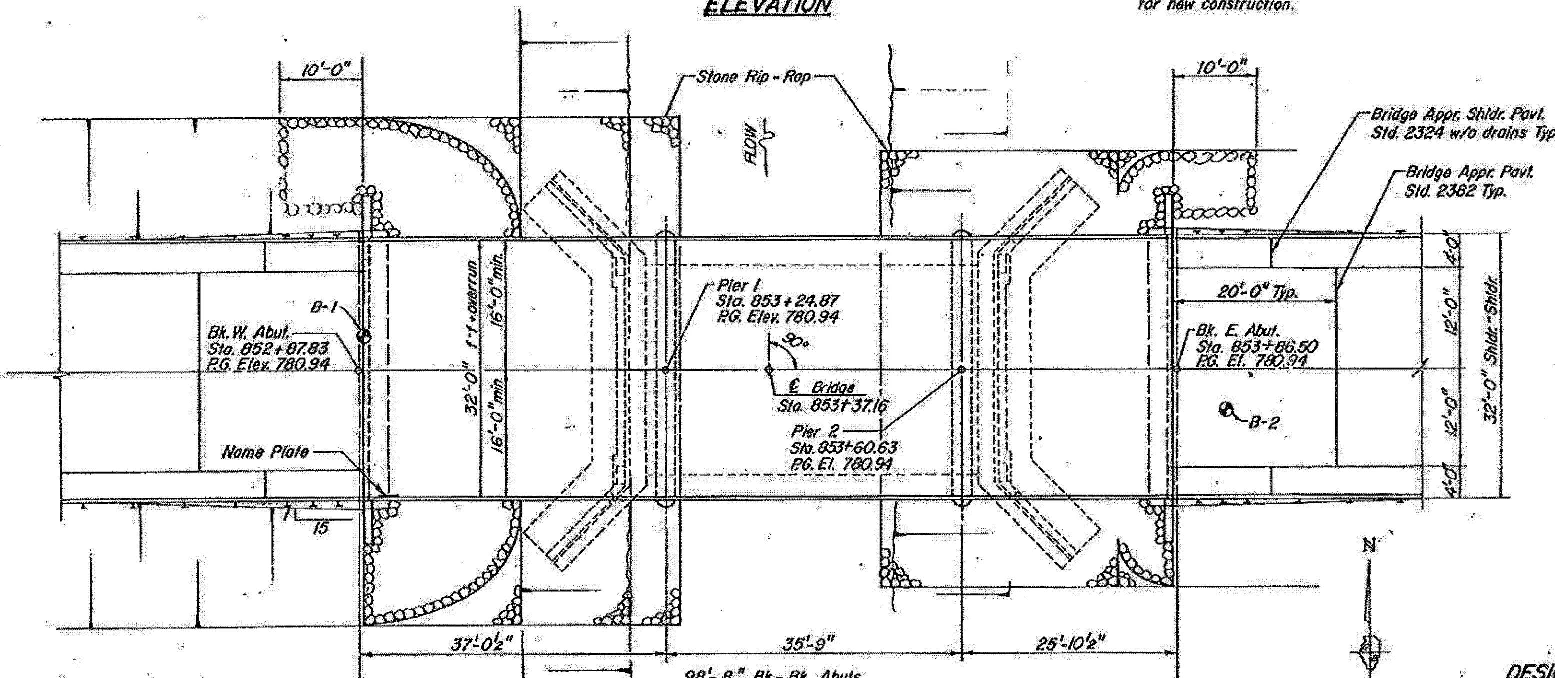
SHEET NO. 1
8 SHEETS

GENERAL NOTES

1. REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-31 OR M-53, GRADE 60.
2. THE TOP SURFACE OF THE BEAMS SHALL BE FINISHED IN ACCORDANCE WITH ARTICLE 505.06 OF THE STANDARD SPECIFICATION EXCEPT THAT THE SURFACE SHALL NOT BE ROUGHENED BY BROOMING. THE FINISHED SURFACE SHALL BE FREE OF DEPRESSIONS OR HIGH SPOTS WITH SHARP CORNERS, AND THE TOP OF KEYS SHALL BE ROUNDED OR CHAMFERED A MINIMUM OF 1/4".
3. A CALCIUM NITRITE CORROSION INHIBITOR, AS COVERED IN THE SPECIAL PROVISIONS, SHALL BE USED IN THE CONCRETE FOR PRECAST PRESTRESSED CONCRETE DECK BEAMS.
4. THE CONTRACTOR SHALL DRIVE ONE (1) CONCRETE TEST PILE IN A PERMANENT LOCATION AT THE EAST ABUTMENT AND ONE (1) PRECAST CONCRETE (14") TEST PILE IN A PERMANENT LOCATION AT PIER 1, AS DIRECTED BY THE ENGINEER, BEFORE ORDERING THE REMAINDER OF PILES.
5. ALL STRUCTURAL STEEL SHALL BE SHOP PAINTED WITH THE ZINC-SILICATE AND VINYL PAINT SYSTEM.
6. LAYOUT OF STONE RIP RAP MAY BE VARIED IN THE FIELD TO SUIT GROUND CONDITIONS AS DIRECTED BY THE ENGINEER.



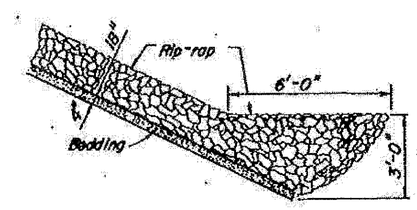
ELEVATION



PLAN

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUB	SUPER	TOTAL
Class X Concrete	Cu. Yd.	49.3		49.3
Reinforcement Bars	Pound	4890		4890
P.P.C. Deck Beams (17" Depth)	Sq. Ft.		3067	3067
Steel Railing, Type S-1	Lin. Ft.		192	192
Precast Concrete Piles 14"	Lin. Ft.	319		319
Test Pile, Precast Concrete	Each	1		1
Concrete Piles	Lin. Ft.	323		323
Test Pile, Concrete	Each	1		1
Waterproof Membrane System	Sq. Yd.		351	351
P.C. Mortar Fairing Course	Lin. Ft.		683	683
Bit. Conc. Surf. Crse., Class I	Ton		45	45
Name Plates	Each		1	1
Stone Riprap	Sq. Yd.	450		450
Removal of Existing Structures	Each			1
Earth Excavation	Cu. Yd.	550		550
Furnish & Erect Structural Steel	Pound	900		900



RIP-RAP ANCHOR DETAIL

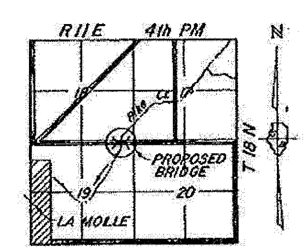
DESIGN STRESSES

Precast Prestressed Units
f'c = 5,000 p.s.i.
f'ci = 4,000 p.s.i.
f's = 270,000 p.s.i. (½" ø strands)
fsi = 189,000 p.s.i. (½" ø strands)
Field Units
f'c = 3,500 p.s.i.
fy = 60,000 p.s.i. (Reinf.)

LOADING HS20-44

Design Specifications: 1983 A.A.S.H.T.O. & 1984, 1985 INTERIMS

Allow 25 #/sq. ft. for future wearing surface.



LOCATION MAP

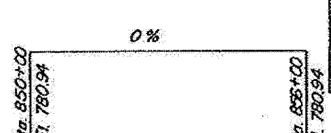
APPROVED
FOR STRUCTURAL ADEQUACY ONLY
James T. Rayburn
Engineer of Bridges and Structures

ROBERT BRADFORD, JR. STRUCTURAL ENGINEER

GENERAL PLAN & ELEVATION

F.A. ROUTE 587 OVER PIKE CREEK
SECTION 22BR BUREAU COUNTY
STA. 853+37.16
STRUCTURE NUMBER 006-0147

GREENE & BRADFORD, Ltd.
CONSULTING ENGINEERS



PROFILE GRADE

F.A. PROJECT MA BRF-587(9)

STATION 853+37.16
BUILT 198_ BY
STATE OF ILLINOIS
F.A. ROUTE 587 SECTION 22BR
LOADING HS20
STR. NO. 006-0147

NAME PLATE
(SEE STD. 2113)

WATERWAY INFORMATION

Drainage Area 20.43 Sq. Mi. Low Grade Elev. 777.03' (Exist.) 780.94' (Prop.)

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
Design	50	2508	405	652	777.0'	0.66	0.66	777.66	777.66
Base	100	2868	405	679	777.2'	0.62	0.81	777.82	778.01
Overtopping	300	3420		712	777.6'		1.03		778.63
Max. Calc.									

EXISTING PLANS FOR INFORMATION ONLY
S.N. 006-0147

PLAN	SURVEYED	PLOTTED	ALIGNMENT CHECKED	R.O.W. CHECKED	CADD FILE NAME	NOTE BOOK	NO.	BY	DATE

PROFILE	SURVEYED	PLOTTED	GRADES CHECKED	B.M. NOTED	STRUCTURE NOTAT'NS CHK'D	NOTE BOOK	NO.	BY	DATE

DELTA ENGINEERING GROUP, LLC

USER NAME = kkhan	DESIGNED DB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	DRAWN DB	REVISED -	
PLOT SCALE = $SCALE$	CHECKED AS	REVISED -	
PLOT DATE = 10/11/2011	DATE OCTOBER 14, 2011	REVISED -	

EXISTING PLAN - STRUCTURE

SCALE: NTS | SHEET NO. 43 OF 61 SHEETS | STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
587	122 BRIBR	BUREAU	61	43
		CONTRACT NO. 66995		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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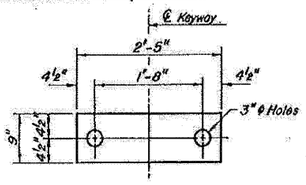
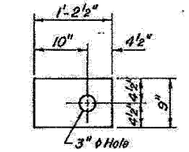


FABRIC BEARING PAD
(Interior)



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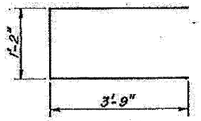
(Exterior)



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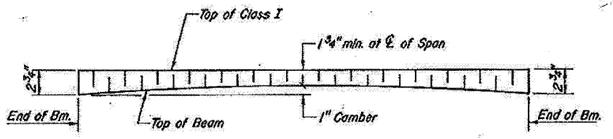
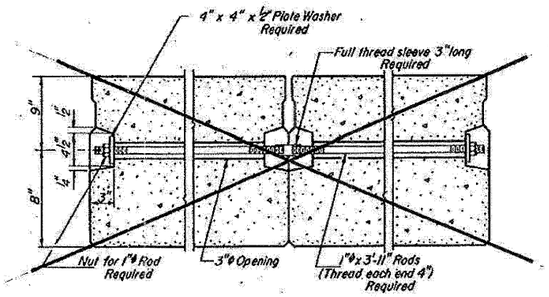


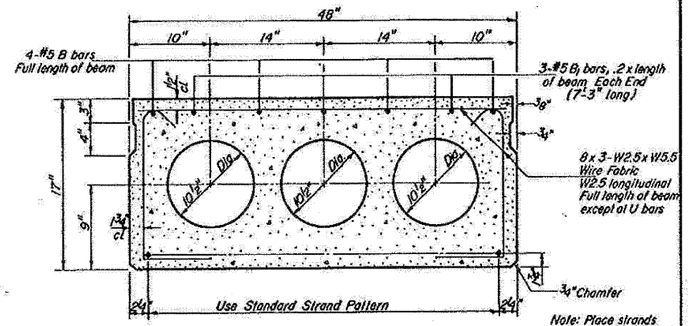
CAMBER DIAGRAM

NOTE:
Omit Keyway on facia side exterior beams.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 587	22BR	BUREAU	24	10
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SHEET NO. 2
8 SHEETS

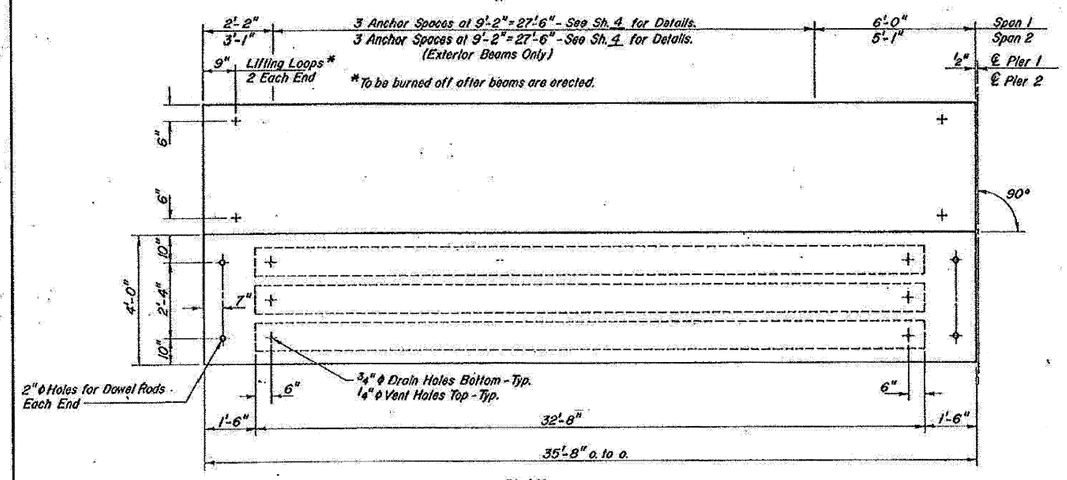




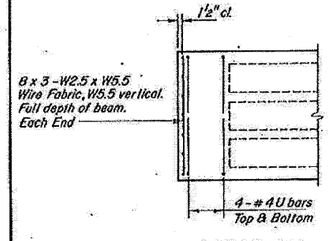
Note: Place strands symmetrically about ℄ of beam.

TYPICAL SECTION

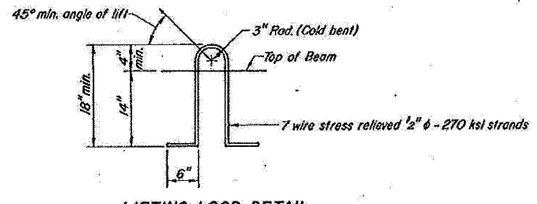
11-½" ϕ Strands, Each Strand Stressed to 28,900 Lbs.
11-Strands 1¾" up.



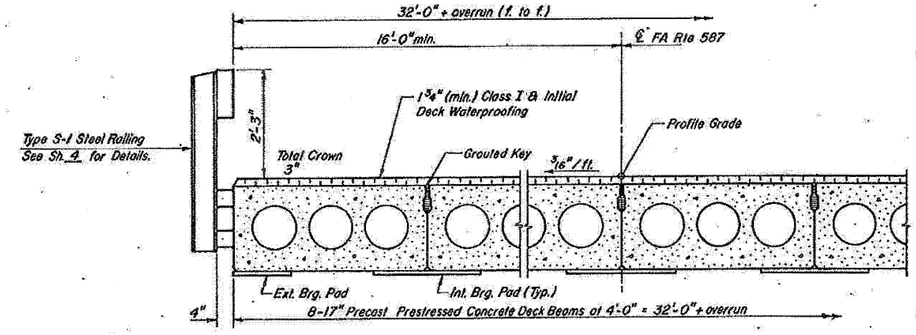
PLAN



END PLAN



LIFTING LOOP DETAIL



PARTIAL CROSS SECTION

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
Precast Prestressed Concrete Deck Beams (17" Depth)		Sq. Ft.	2283	

NOTES

Prestressing steel shall be non-galvanized high strength, stress-relieved 7-wire strand, Grade 270. The nominal diameter shall be ½" and the nominal cross-sectional area shall be 0.153 sq. in.

Lifting loops shall be ½" diameter, 6 x 25 class wire rope with fiber core and shall have a minimum ultimate tensile strength of 21,000 lbs. or 2-½ ϕ - 270 ksi strands.

~~The ℄ rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets that receive transverse tie bar on outside shall be filled with grout after transverse tie assembly is in place.~~

Reinforcement bars shall conform to AASHTO: M-31 or M-53, Grade 60.

The bearing seat surfaces shall be adjusted by shimming to assure firm and even bearing. Two ⅛ fabric adjusting shims of the dimensions of the Exterior Bearing Pad shall be provided for each bearing.

An equal substitution of the low-relaxation strands for the stressed-relieved strands will be permitted.

Keyway surfaces shall be cleaned to remove form oil or other bond breaking material prior to shipment of the beams. Cleaning shall be done by sand-blasting the keyway areas between the top of the beam and the bottom edge of the key.

Work this sheet with sheets 5 and 6 of 8.

SUPERSTRUCTURE
SPANS 1 & 2
FA RTE 587 OVER PIKE CR.
SECTION 22BR
BUREAU COUNTY

GREENE & BRADFORD, Ltd.
CONSULTING ENGINEERS
1510 STEVENSON DR. • 217/529-6681 • SPRINGFIELD, ILL.

EXISTING PLANS
FOR INFORMATION ONLY
S.N. 006-0147

PLAN / PROFILE
SURVEYED — BY — DATE
PLOTTED
CROSS SECTIONS CHECKED
BAR NOTES CHKD
STRUCTURE NOTATNS CHKD
NOTE BOOK
NO.

DELTA ENGINEERING GROUP, LLC
CONSULTING ENGINEERING, CONSTRUCTION MANAGERS, SURVEYORS
111 W. JACKSON BLVD., SUITE 1511
CHICAGO, IL 60604

USER NAME = kkhan	DESIGNED DB	REVISED -
	DRAWN DB	REVISED -
PLOT SCALE = $SCALE$	CHECKED AS	REVISED -
PLOT DATE = 10/11/2011	DATE OCTOBER 14, 2011	REVISED -

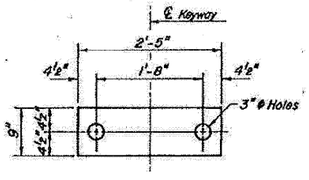
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING PLAN – STRUCTURE

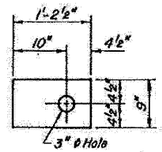
SCALE: NTS | SHEET NO. 44 OF 61 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
587	(22 BR)BR	BUREAU	61	44
		CONTRACT NO. 66995		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

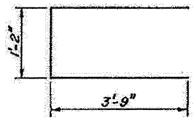
FILE NAME = g:\zp1011101\cadd sheets\rdwySN-006-0183-44exist-structure.dgn



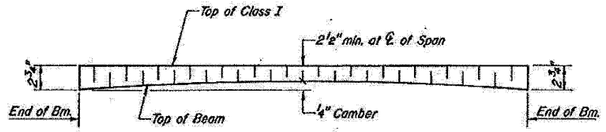
FABRIC BEARING PAD
(Interior)



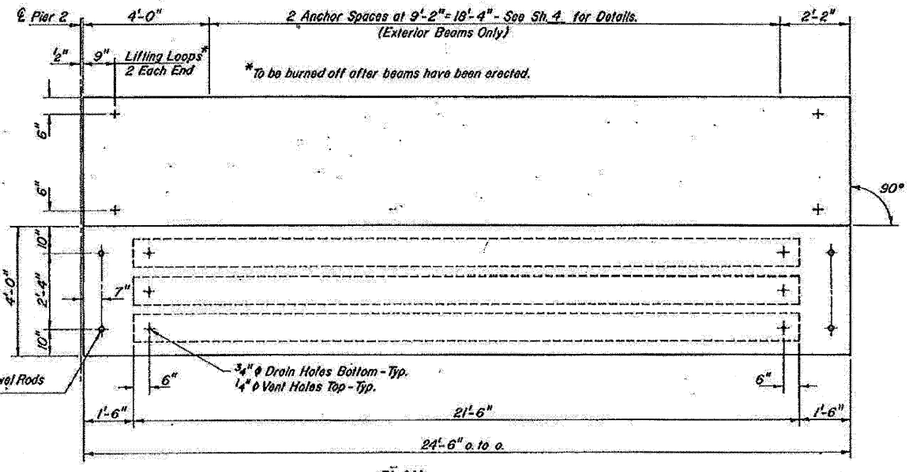
FABRIC BEARING PAD
(Exterior)



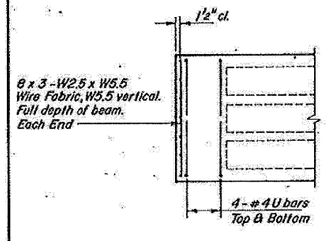
U BAR



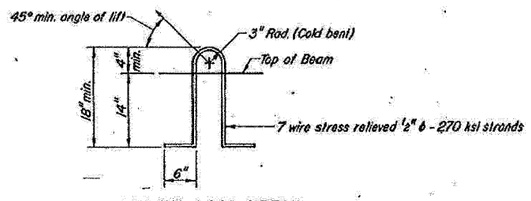
CAMBER DIAGRAM



PLAN



END PLAN

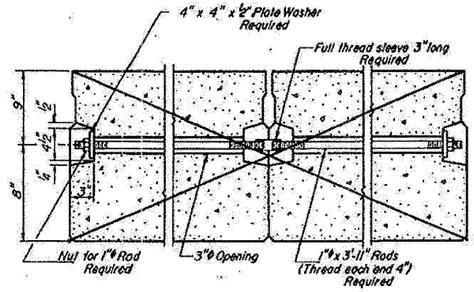


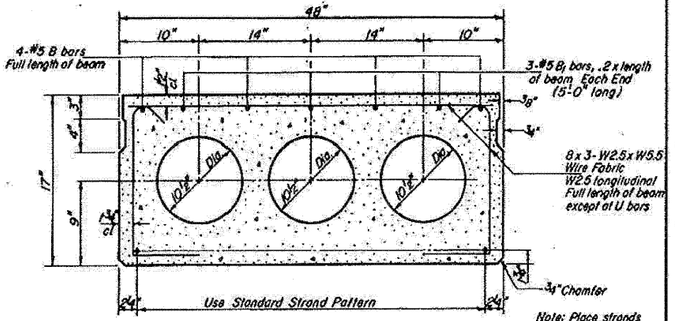
LIFTING LOOP DETAIL

NOTE:
Omit Keyway on facia side exterior beams.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 587	22BR	BUREAU	24	11
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

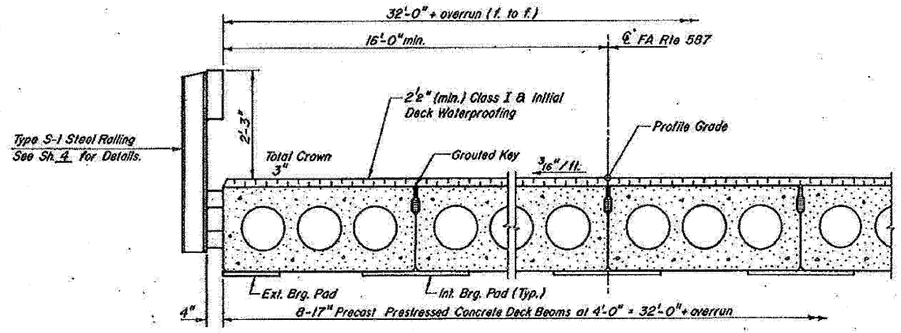
SHEET NO. 3
8 SHEETS





Note: Place strands symmetrically about ℄ of beam.

TYPICAL SECTION
5 - ½" ϕ Strands, Each Strand Stressed to 28,900 Lbs.
5 - Strands I-¾" up



PARTIAL CROSS SECTION

NOTES

Prestressing steel shall be non-galvanized high strength, stress-relieved 7-wire strand, Grade 270. The nominal diameter shall be ½" and the nominal cross-sectional area shall be 0.153 sq. in.

Lifting loops shall be ½" diameter, 6 x 25 class wire rope with fiber core and shall have a minimum ultimate tensile strength of 21,000 lbs. or 2 - ½" ϕ - 270 ksi strands.

~~The 1" ϕ rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets that receive transverse tie bar on outside shall be filled with grout after transverse tie assembly is in place.~~

Reinforcement bars shall conform to AASHTO: M-31 or M-53, Grade 60.

The bearing seat surfaces shall be adjusted by shimming to assure firm and even bearing. Two ½" fabric adjusting shims of the dimensions of the Exterior Bearing Pad shall be provided for each bearing.

An equal substitution of the low-relaxation strands for the stress-relieved strands will be permitted.

Keyway surfaces shall be cleaned to remove form oil or other bond breaking material prior to shipment of the beams. Cleaning shall be done by sand-blasting the keyway areas between the top of the beam and the bottom edge of the key.

Work this sheet with sheets 5 and 6 of 8.

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
Precast Prestressed Concrete Deck Beams (17" Depth)			Sq. Ft.	784

SUPERSTRUCTURE

SPAN 3
FA RTE 587 OVER PIKE CR
SECTION 22BR
BUREAU COUNTY

GREENE & BRADFORD, Ltd.
CONSULTING ENGINEERS
1615 STEVENSON DR. • 217/529-6641 • SPRINGFIELD, ILL.

EXISTING PLANS
FOR INFORMATION ONLY
S.N. 006-0147

PLAN — SURVEYED, PLOTTED, ALIGNMENT CHECKED, RT. OF WAY CHECKED, CADD FILE NAME, NOTE BOOK, NO., DATE, BY

PROFILE — SURVEYED, PLOTTED, ALIGNMENT CHECKED, B.M. NOTED, STRUCTURE NO/ATHS CHKD, NOTE BOOK, NO., DATE, BY

DELTA ENGINEERING GROUP, LLC
CONSULTING ENGINEERING, CONSTRUCTION MANAGEMENT, SURVEYING
115 W. JACKSON BLVD., SUITE 916, CHICAGO, IL 60604

USER NAME = kkhan	DESIGNED DB	REVISED -	
	DRAWN DB	REVISED -	
PLOT SCALE = *SCALE*	CHECKED AS	REVISED -	
PLOT DATE = 10/11/2011	DATE OCTOBER 14, 2011	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING PLAN – STRUCTURE

SCALE: NTS | SHEET NO. 45 OF 61 SHEETS | STA. | TO STA.

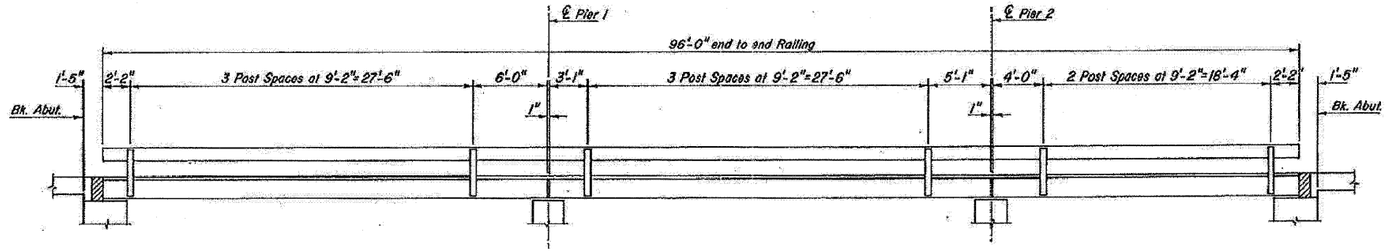
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
587	(22 BR)BR	BUREAU	61	45
		CONTRACT NO. 66995		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FILE NAME = g:\zpl01101\cadd sheets\rdwySN-006-0183-45exist-structure.dgn

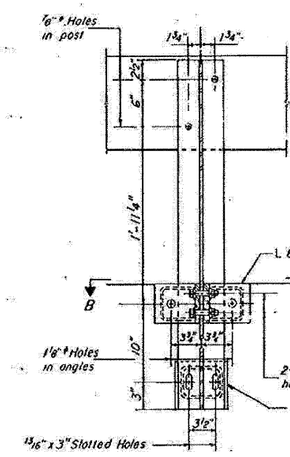
ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA-587	22BR	BUREAU	24	12

SHEET NO. 4
8 SHEETS

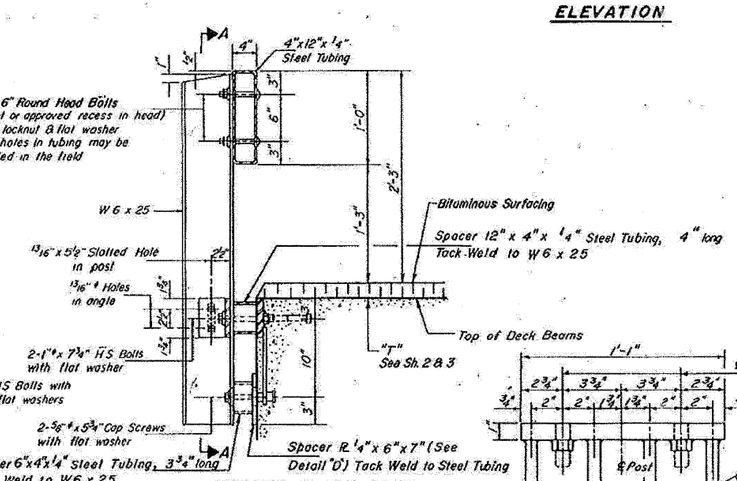
PLAN: SURVEYED | PLOTTED | CROSS CHECKED | ALIGNMENT CHECKED | R.T. OF WAY CHECKED | CADD FILE NAME
NOTE BOOK | DATE | BY | NO. | BAL. NOTED | STRUCTURE NOTATNS CHKD



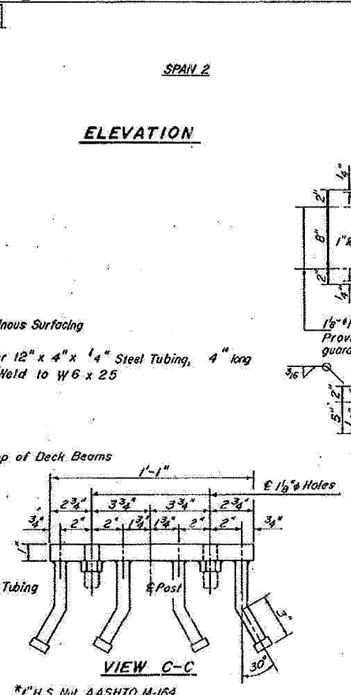
ELEVATION



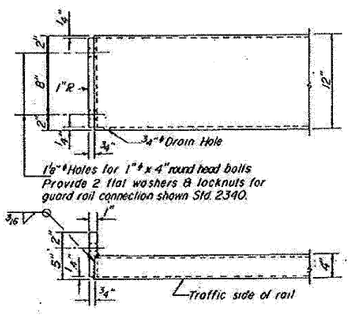
SECTION A-A



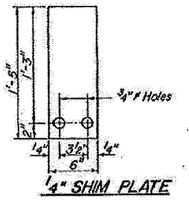
SECTION AT RAIL POST



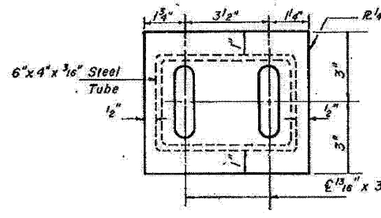
VIEW C-C



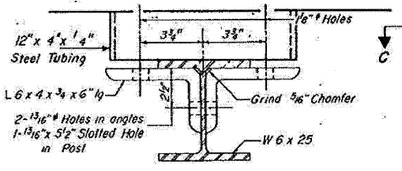
END OF RAIL DETAILS



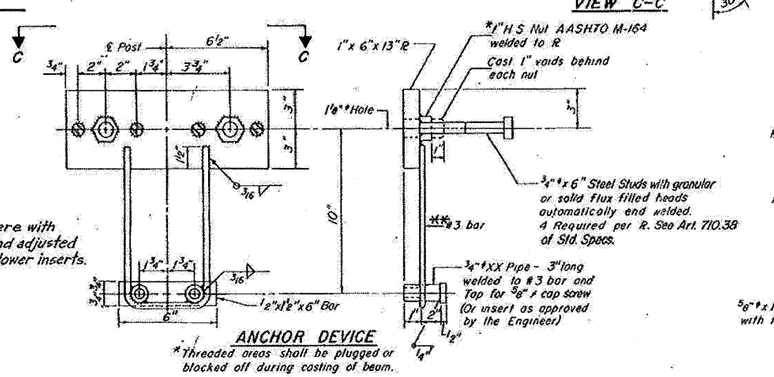
1/4" SHIM PLATE



DETAIL "D"

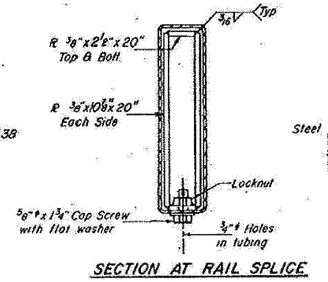


SECTION B-B

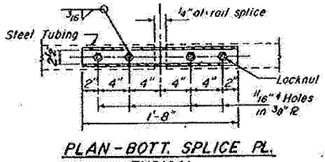


ANCHOR DEVICE

*Threaded areas shall be plugged or blocked off during casting of beam.



SECTION AT RAIL SPLICE



PLAN - BOTT. SPLICE PL. TYPICAL

**Whenever the lower insert assemblies interfere with strand locations, the #3 bars shall be cut and adjusted in order to allow raising or lowering of the lower inserts. Maximum adjustment not to exceed 1/2".

NOTES

Hollow structural steel tubing shall conform to the requirements of A.S.T.M. designation A-500 Grade B Structural Steel Tubing.

All other steel shapes and plates shall conform to the requirements of AASHTO M-183 except posts and angles shall conform to AASHTO M-223,Gr.50.

Bolts, cap screws, and nuts shall conform to the requirement of A.S.T.M. designation A-307 except for high strength bolts, nuts and washers noted which shall conform to AASHTO M-164

All bolts, nuts, cap screws, washers and lock washers shall be galvanized in accordance with AASHTO M-232.

All posts, railing, rail splices, anchor devices, angles and spacers shall be galv. after shop fabrication in accordance with AASHTO M-111 and ASTM A-385. Galvanized rail shall not be painted

Railing shall be in accordance with Section 508 of the Standard Specifications, except as noted, and shall be paid for at the contract unit price per linear foot for STEEL RAILING, TYPE S-1

All field drilled holes shall be coated with an approved zinc rich paint before erection

The lower plate of the post spacer in contact with concrete shall receive two coats of asphalt paint conforming to Section 714.08 Type B or place 1/8" fabric bearing pad between the post spacer and concrete.

The 3/4" ϕ high strength bolts used to connect the 6 x 4 x 3/4 angles to the post shall be tightened in accordance with Article 507.04(g)(3) of the Standard Specifications. The 1" ϕ high strength bolts connecting the angles to the concrete shall be tightened to a snug fit and given an additional 1/2 turn. The 5/8" ϕ cap screws in bottom of posts shall be tightened to a snug fit only.

For multi span bridges, sufficient 1/4" x 6" x 1'-5" galvanized steel shims shall be provided to align rail between adjacent spans. Cost incidental to Steel Railing.

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type S-1	Lin. Ft.	192

TYPE S-1 STEEL RAILING

FA RTE 587 OVER PIKE CREEK
SECTION 22BR
BUREAU COUNTY

GREENE & BRADFORD, Ltd.
CONSULTING ENGINEERS
1519 STEVENSON DR. • 217-529-6661 • SPRINGFIELD, ILL.

EXISTING PLANS FOR INFORMATION ONLY
S.N. 006-0147

DELTA ENGINEERING GROUP, LLC
CONSULTING ENGINEERS, CONSTRUCTION MANAGERS, SURVEYORS
111 W. JACKSON BLVD., SUITE 1512
CHICAGO, IL 60604

USER NAME = kkhan	DESIGNED DB	REVISED -	
	DRAWN DB	REVISED -	
PLOT SCALE = $SCALE$	CHECKED AS	REVISED -	
PLOT DATE = 10/11/2011	DATE OCTOBER 14, 2011	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING PLAN – STRUCTURE

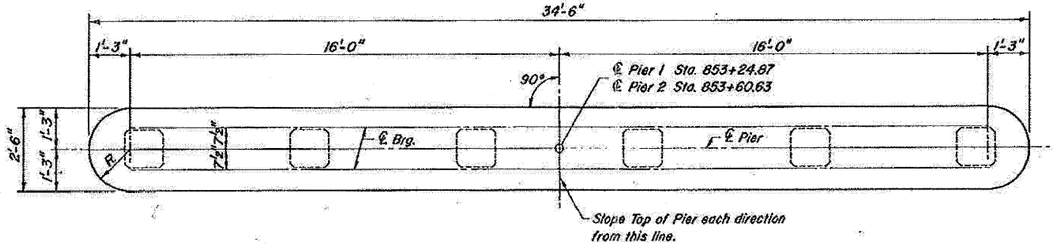
SCALE: NTS | SHEET NO. 46 OF 61 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
587	(22 BR)BR	BUREAU	61	46
		CONTRACT NO. 66995		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

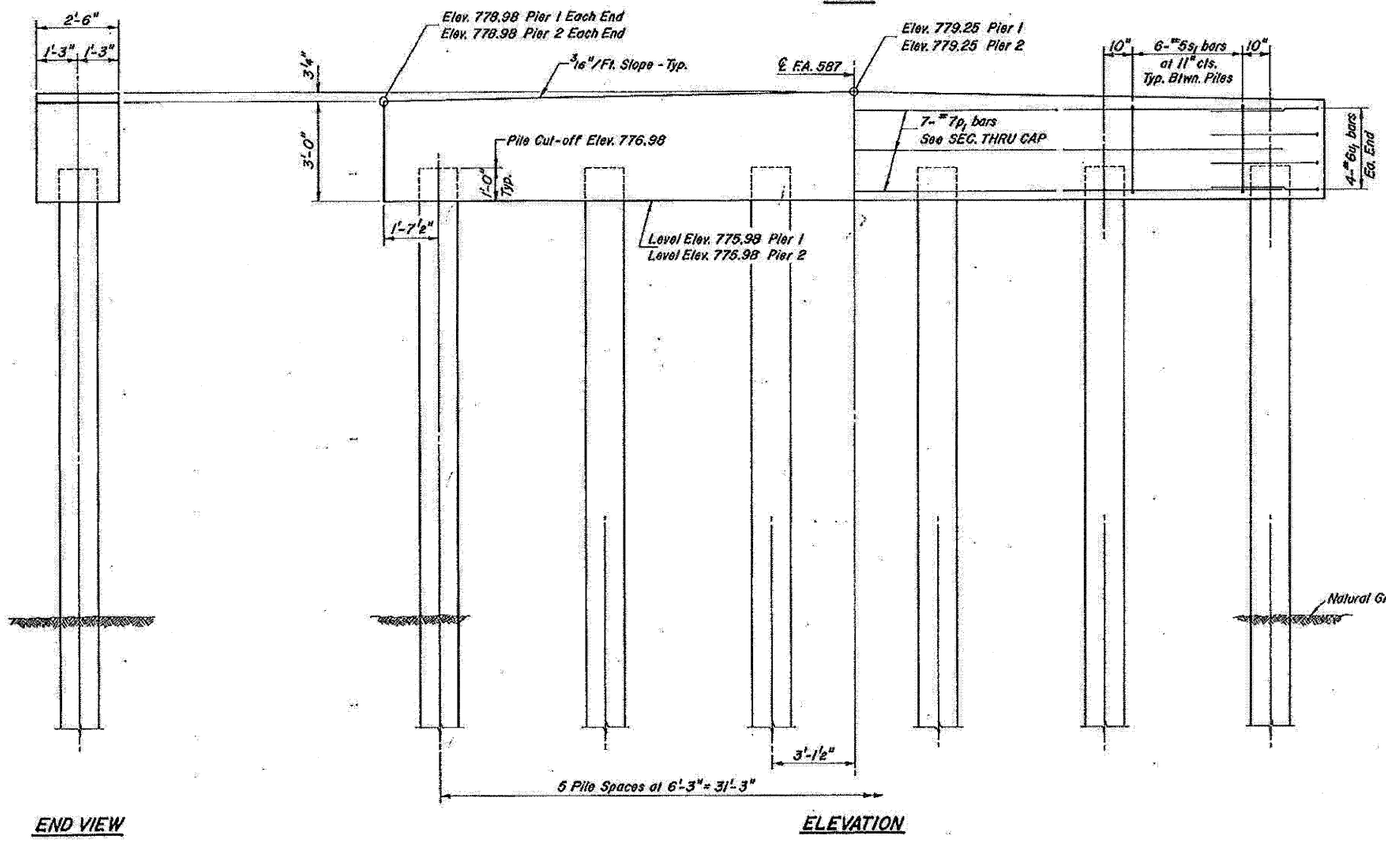
FILE NAME = g:\zp\011101\cadd sheets\r-dwgSN-006-0183-46exist-structure.dgn

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 587	22BR	BUREAU	24	13
FHWA REG NO. 5	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 5
8 SHEETS

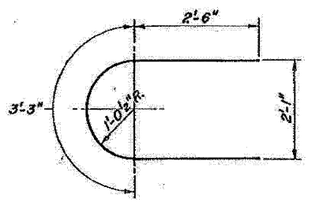


PLAN

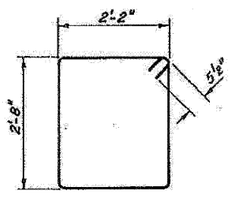


END VIEW

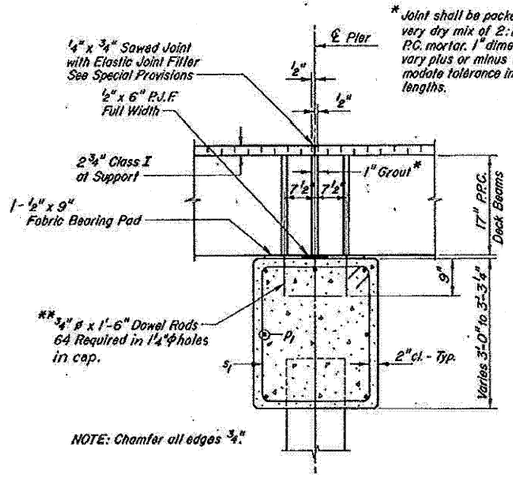
ELEVATION



BAR u_1



BAR s_1



NOTE: Chamfer all edges ¾".

* Joint shall be packed with a very dry mix of 2:1 sand and P.C. mortar. 1" dimension may vary plus or minus to accommodate tolerance in beam lengths.

SECTION THRU CAP

** Dowel Rods to be grouted after beams are in place. Allow rods to cure (minimum 24 hours) prior to grouting the shear keys. Cost of rods to be incidental to the Unit Price Bid for P.P.C. Deck Beams (17" Depth).

TWO PIERS
BILL OF MATERIALS

Bar	No.	Size	Length	Shape
p_1	14	#7	32'-0"	
s_1	60	#5	10'-7"	
u_1	16	#6	8'-3"	
Class X Concrete			Cu. Yd.	19.7
Reinforcement Bars			Pound	1780
Precast Conc. Piles 14"			Lin. Ft.	319
Test Pile, Precast Conc.			Each	1

EXISTING PLANS FOR INFORMATION ONLY
S.N. 006-0147

PILE DATA

Type: Precast Concrete 14"
Capacity: 32T
Est. Length: 29' Pier 1; 29' Pier 2
No. Required: 12 (Includes 1 Test Pile)

Contractor shall drive one Precast Pile in a permanent location at Pier 1 before ordering remainder of piles.

PIERS

F.A. ROUTE 587 OVER PIKE CREEK
SECTION 22BR BUREAU COUNTY
STA. 853+37.16

GREENE & BRADFORD, Ltd.
CONSULTING ENGINEERS
1512 STEVENSON DR. • 217/529-0661 • SPRINGFIELD, IL.

PLAN — SURVEYED / PLOTTED / ALIGNMENT CHECKED / RT. OF WAY CHECKED / CADD FILE NAME / NOTE BOOK / NO. / BY / DATE

PROFILE — SURVEYED / PLOTTED / GRADE CHECKED / B.M. NOTED / STRUCTURE NO.TATNS CHKD / NOTE BOOK / NO. / BY / DATE

DELTA ENGINEERING GROUP, LLC	USER NAME = kkhan	DESIGNED DB	REVISED -
		DRAWN DB	REVISED -
	PLOT SCALE = $SCALE$	CHECKED AS	REVISED -
	PLOT DATE = 10/11/2011	DATE OCTOBER 14, 2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING PLAN – STRUCTURE

SCALE: NTS | SHEET NO. 47 OF 61 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
587	(22 BR)BR	BUREAU	61	47
		CONTRACT NO. 66995		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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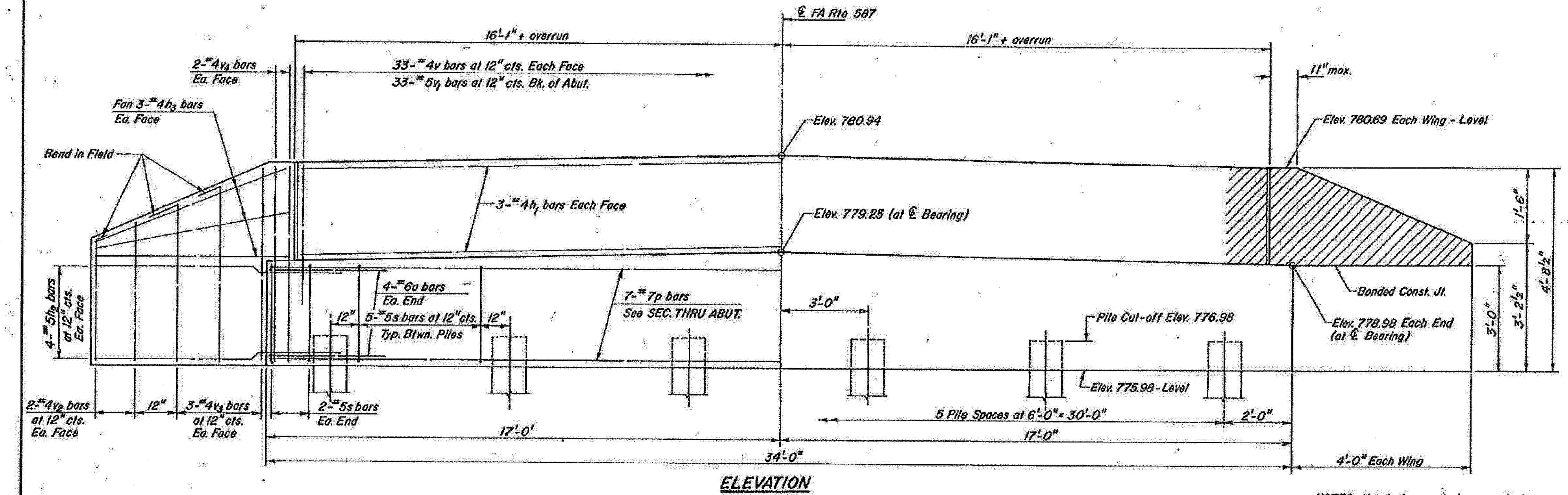
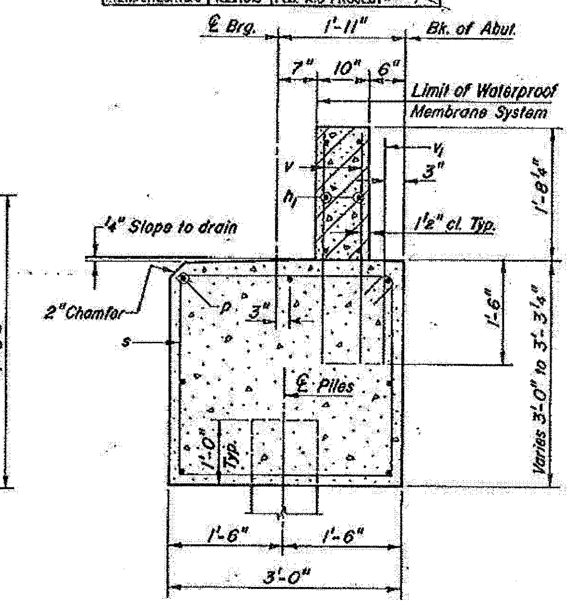


ELEVATION

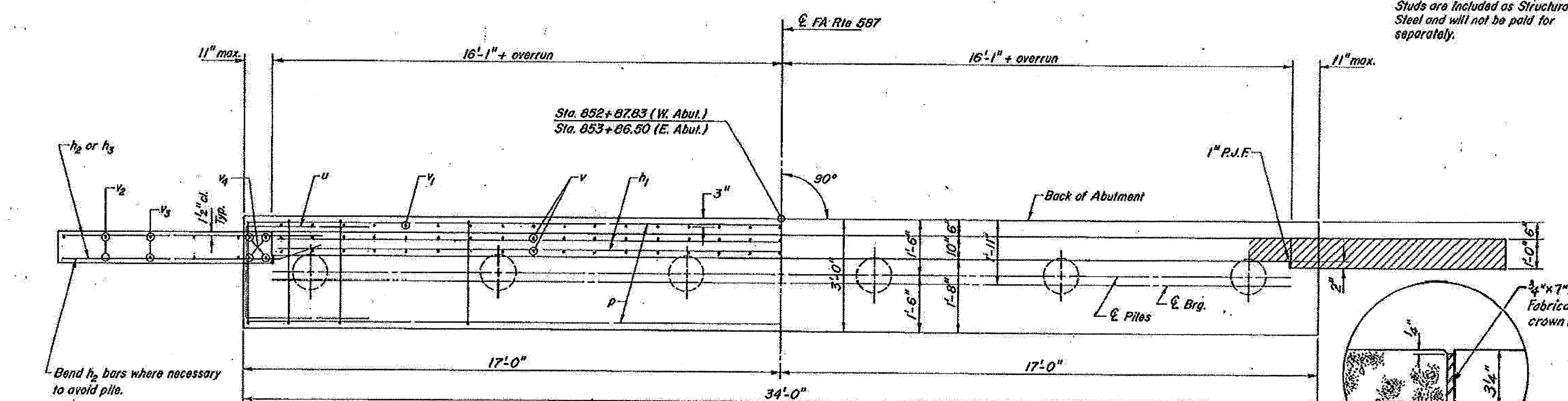


SEC. THRU ABUT.

NOTES: Hatched areas to be poured after beams are anchored in place.
Studs are included as Structural Steel and will not be paid for separately.

TWO ABUTMENTS
BILL OF MATERIALS

Bar	No.	Size	Length	Shape
h_1	12	#4	34'-0"	——
h_2	32	#5	6'-3"	——
h_3	24	#4	4'-9"	——
p	14	#7	33'-9"	——
s	58	#5	11'-7"	☐
u	16	#6	11'-0"	⊏
v	132	#4	3'-0"	——
v_1	66	#5	3'-0"	——
v_2	16	#4	3'-3"	——
v_3	24	#4	4'-6"	——
v_4	16	#4	4'-3"	——
Structural Steel			Pound	900
Class X Concrete			Cu. Yd.	29.6
Reinforcement Bars			Pound	3110
Concrete Piles			Lin. Ft.	323
Test Pile, Concrete			Each	1

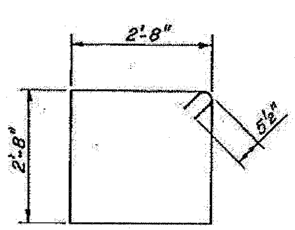


PLAN VIEW
(Symmetrical about ℄)

PILE DATA

Type: Concrete
Capacity: 35T (W. Abut.); 21T (E. Abut.)
Est. Length: 33' (W. Abut.); 25' (E. Abut.)
No. Required: 12 (Includes 1 Test Pile)

Contractor shall drive one Concrete Pile in a permanent location at the East Abutment before ordering remainder of piles.



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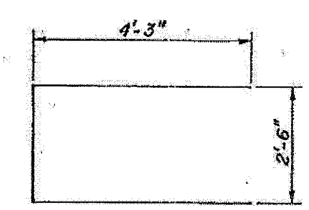

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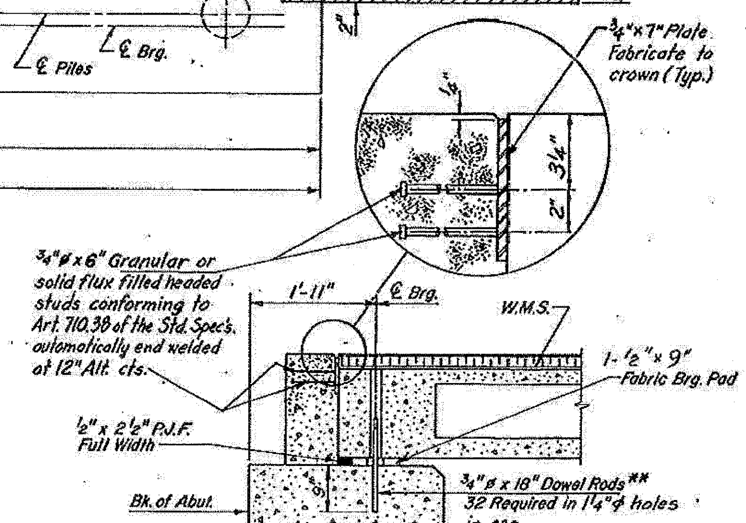


SEC. AT ABUT.

**Dowel Rods to be grouted after beams are in place. Allow rods to cure (min. 24 hrs.) prior to grouting shear keys. Cost of rods to be incidental to the Unit Price Bid for P.P.C. Dk. Bms. (17" Depth).

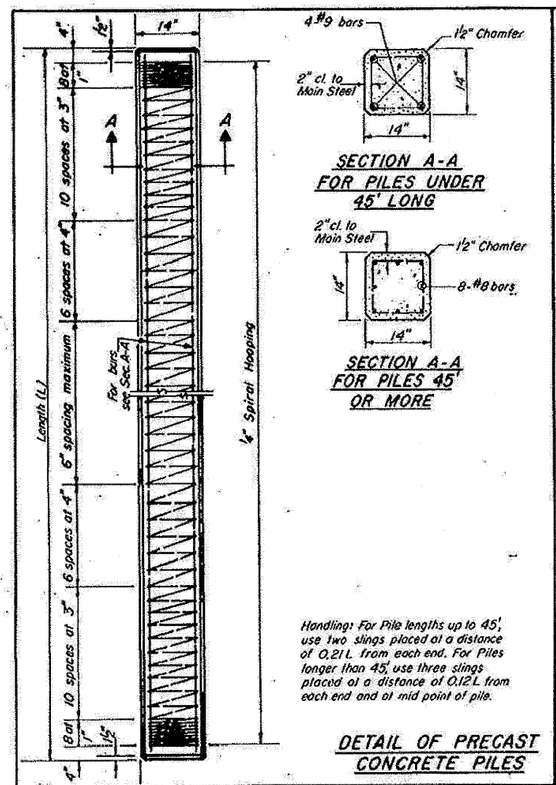
EXISTING PLANS FOR INFORMATION ONLY
S.N. 006-0147

ABUTMENTS
F.A. ROUTE 587 OVER PIKE CREEK
SECTION 22BR BUREAU COUNTY
STA. 853+37.16

GREENE & BRADFORD, Ltd.
CONSULTING ENGINEERS

PLAN | NOTE BOOK | NO. | SURVEYED | PLOTTED | ALIGNMENT CHECKED | R.O.W. CHECKED | CADD FILE NAME | BY | DATE

PROFILE | NOTE BOOK | NO. | SURVEYED | PLOTTED | GRADES CHECKED | B.M. NOTED | STRUCTURE NOTATIONS CHKD | BY | DATE

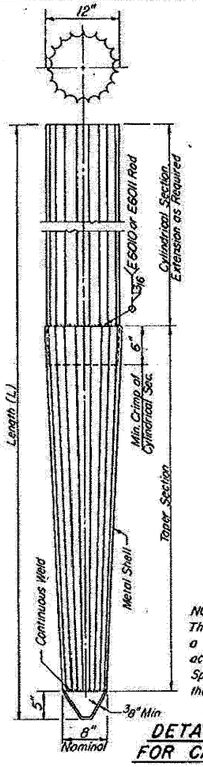


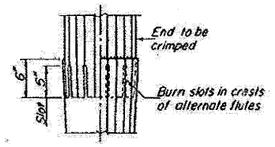
DETAIL OF PRECAST CONCRETE PILES

SECTION A-A FOR PILES UNDER 45' LONG

SECTION A-A FOR PILES 45' OR MORE

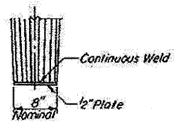
Handling: For Pile lengths up to 45', use two slings placed at a distance of 0.21 L from each end. For Piles longer than 45' use three slings placed at a distance of 0.12 L from each end and at mid point of pile.





FIELD CRIMP DETAIL

Note: 6" Crimp shall either be supplied on the cylindrical section or made in the field as detailed.



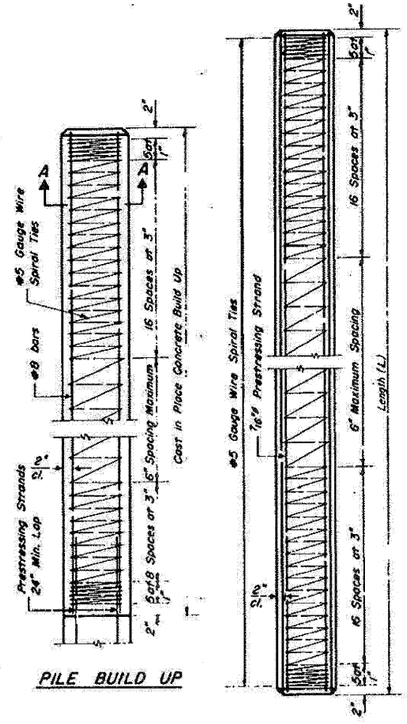
OPTIONAL FLAT END

ALLOWABLE TAPER SECTIONS

10' Length - Taper 1" in 2'-6"
17' Length - Taper 1" in 4'-0"
25' Length - Taper 1" in 7'-0"
30' Length - Taper 1" in 7'-0"

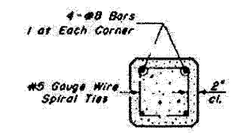
NOTE:
The thickness of the shell shall be 0.1495 inches with a tolerance of 5%. The shell shall be in accordance with Article 710.05 (a) of the Standard Specification except that minimum yield strength for the steel after cold working shall be 50,000 psi

DETAIL OF TAPERED METAL SHELLS FOR CAST IN PLACE CONCRETE PILES

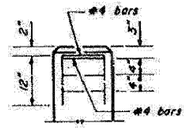


PILE BUILD UP

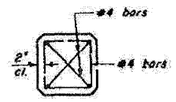
PILE PLAN



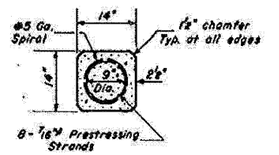
SECTION A-A



ELEVATION (End Reinforcement)



PLAN (End Reinforcement)



SECTION THRU PILE

DESIGN STRESSES

f'c' = 5,000 psi.
f'ci = 4,000 psi.
fs' = 270,000 psi. (31,000 lbs.)
f'si = 189,000 psi. (21,700 lbs.-7/16" or 28,900 lbs.-½")

NOTES

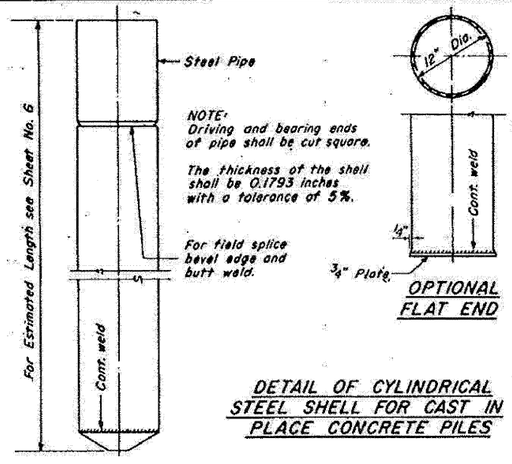
Prestressing steel shall be non-galvanized extra high strength stress-relieved 7-wire strand. The nominal diameter shall be 7/16" and the minimum nominal cross-sectional area shall be 0.115 sq.in. or the equivalent 6-½" strands with a cross-sectional area of 0.153 sq.in. may be used.

For Pile lengths up to 65', use two slings placed at a distance of 0.21 L * from each end. For Piles longer than 65', use three slings placed at a distance of 0.12 L * from each end and at mid-point of pile. * L = Over all length of pile to be handled.

PRECAST PRESTRESSED CONCRETE PILE

	587	22BR	BUREAU	24	16

SHEET NO. 8
8 SHEETS



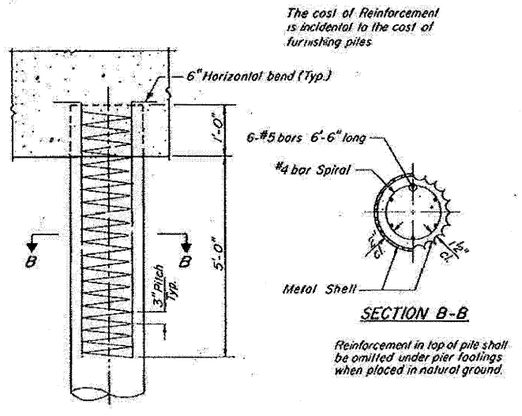
NOTE:
Driving and bearing ends of pipe shall be cut square.

The thickness of the shell shall be 0.1793 inches with a tolerance of 5%.

For field splice bevel edge and butt weld.

OPTIONAL FLAT END

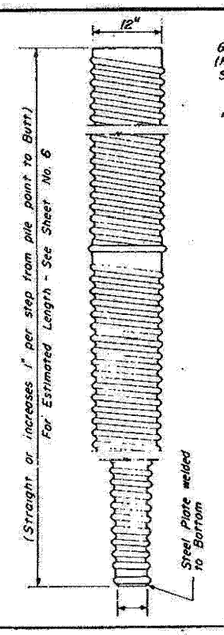
DETAIL OF CYLINDRICAL STEEL SHELL FOR CAST IN PLACE CONCRETE PILES



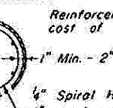
SECTION B-B

Reinforcement in top of pile shall be omitted under pier footings when placed in natural ground.

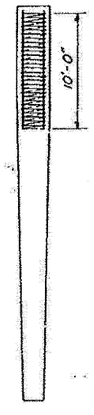
DETAIL OF REINFORCEMENT FOR METAL SHELLS



Reinforcement is incidental to the cost of furnishing piles.

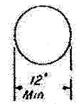


SECTION A-A



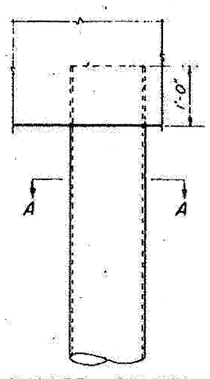
PILE REINFORCEMENT

At least 10% of the length of pile shall have a Butt diameter equal to or greater than 12" Gauges are furnished to suit soil conditions (16 Gauge avg. min.)



BUTT

POINT (Applies only to Step Taper type pile)



DETAIL OF MANDREL DRIVEN STRAIGHT OR STEP-TAPER PILES FOR CAST IN PLACE CONCRETE PILES

STANDARD PILE SHEET

F.A. ROUTE 587 OVER PIKE CREEK
SECTION 22BR BUREAU COUNTY
STA. 853+37.16

EXISTING PLANS FOR INFORMATION ONLY
S.N. 006-0147

GREENE & BRADFORD, Ltd.
CONSULTING ENGINEERS

PLAN: SURVEYED, PLOTTED, QUANTITIES CHECKED, ALIGNMENT CHECKED, RT. OF WAY CHECKED, CADD FILE NAME, NOTE BOOK, NO.

PROFILE: SURVEYED, PLOTTED, QUANTITIES CHECKED, BM. NOTED, STRUCTURE NOTATNS CHKD, NOTE BOOK, NO.

DELTA ENGINEERING GROUP, LLC
CONSULTING ENGINEERS, CONSTRUCTION MANAGERS, SURVEYORS
111 W. WASHINGTON, SUITE 1511, CHICAGO, IL 60602

USER NAME = kkhan	DESIGNED DB	REVISED -	
	DRAWN DB	REVISED -	
PLOT SCALE = $SCALE$	CHECKED AS	REVISED -	
PLOT DATE = 10/11/2011	DATE OCTOBER 14, 2011	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING PLAN - STRUCTURE

SCALE: NTS | SHEET NO. 49 OF 61 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
587	(22 BR)BR	BUREAU	61	49
		CONTRACT NO. 66995		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FILE NAME = g:\zp1011121\cadd sheets\rdwySN-006-0183-49exist-structure.dgn

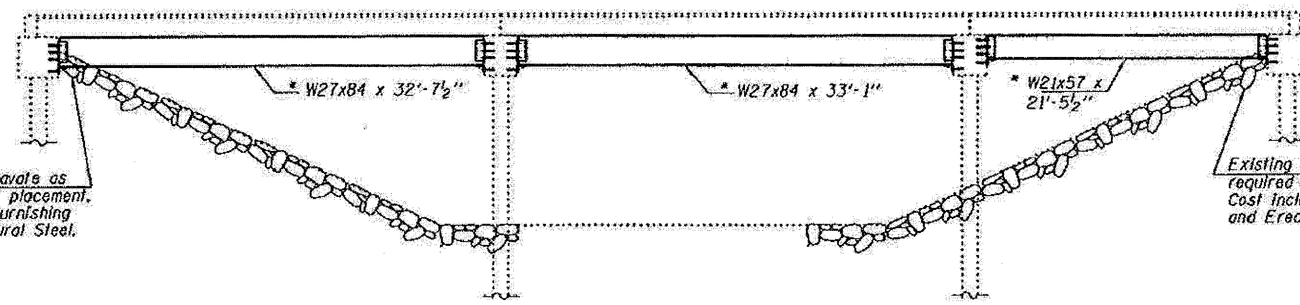
* Contractor is to verify beam length prior to ordering material. Other sections meeting the section modulus requirements shown may be allowed subject to approval by the Bureau of Bridges and Structures. Maximum Girder depth = 27" for Spans 1 & 2 and 27" for Span 3. No additional payment will be allowed if the contractor chooses a heavier steel section than the one specified in the plans. (Min Sx = 214 in³ for Spans 1 & 2 and 111 in³ for Span 3)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

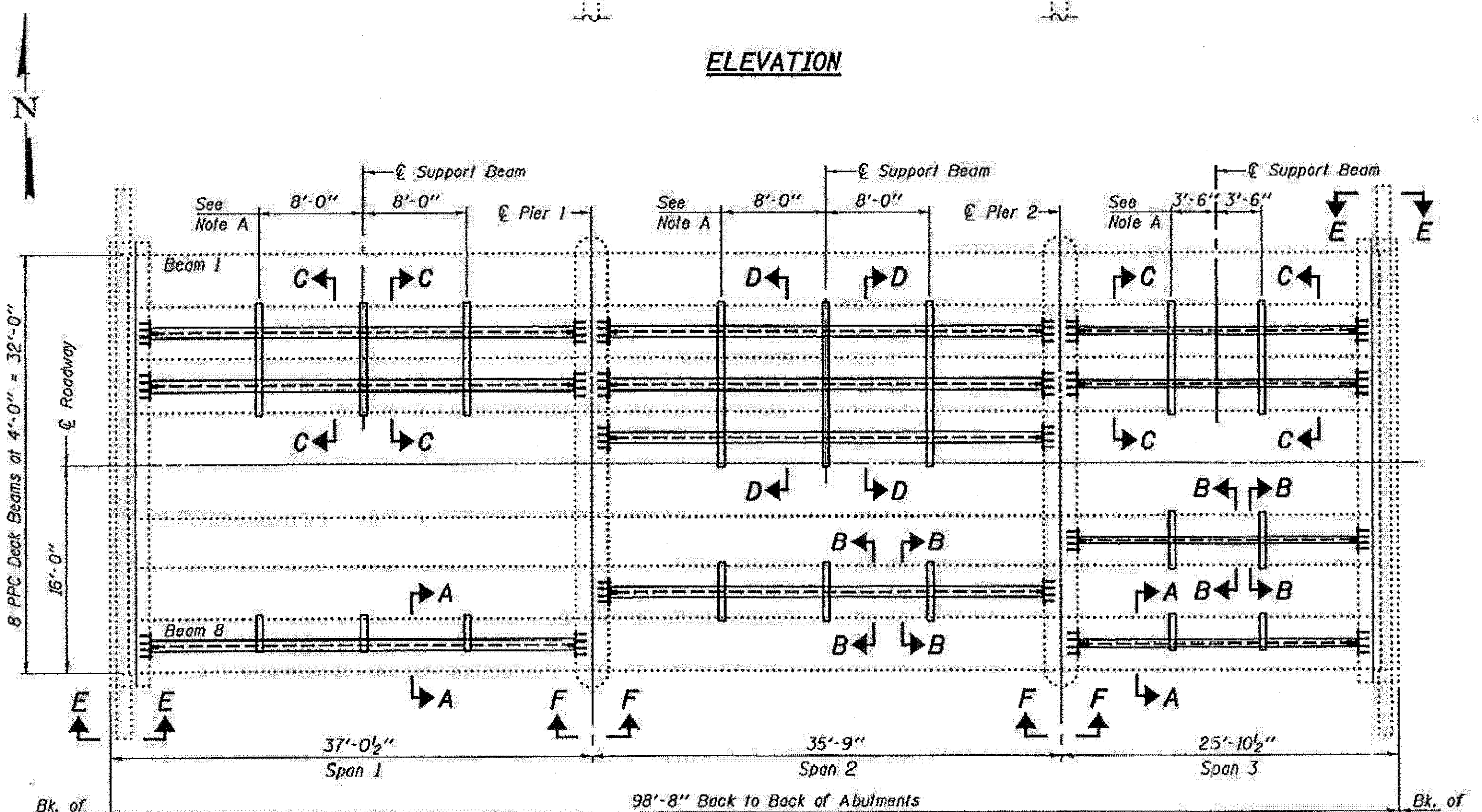
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA 587		BUREAU	6	5
FED. ROAD DIST. NO. 2		ILLINOIS	FED. AID PROJECT	

SHEET NO. 1
2 SHEETS

Contract Number: 66830



ELEVATION



PLAN

NOTE A:
℄ Transverse tie ℞'s (3 per spans 1 & 2, and 2 per span 3). Place additional shims at midpoints between tie ℞'s. Securely weld shims to top flange of support beam. Minimum shim size is 6" x flange width.

GENERAL NOTES

All structural steel shall conform to AASHTO Classification M-270 Gr. 36. unless otherwise noted.

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.

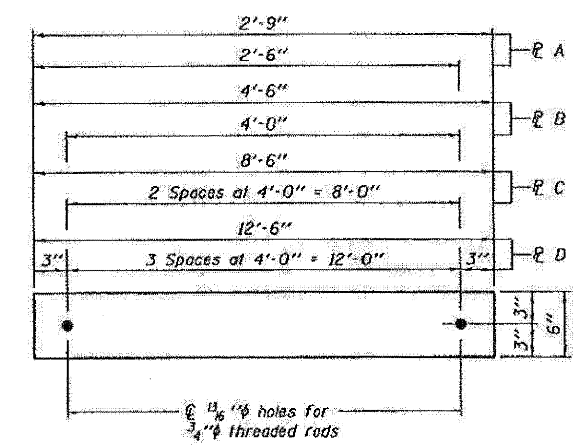
The contractor is advised that the existing PPC Deck Beams are in a deteriorated condition with reduced load carrying capacity. It is the contractors responsibility to account for the condition of the beams when developing construction procedures.

See Section 584 of the Standard Specifications for Epoxy Grouting of Threaded Rods; Minimum embedment 9".

If the contractor's procedure for placement of beams involves placement of cranes or other heavy equipment on the bridge, a detailed procedure shall be submitted to the Engineer for approval. The procedure shall include calculations, prepared and sealed by an Illinois Licensed Structural Engineer, verifying that the equipment and procedure used will not overstress the existing beams. To distribute load to multiple beams and protect the existing surface, in all cases a double layer mat of heavy timbers shall be used at all times under crane tracks or wheels and any outriggers in the down position. If necessary, shims shall be used under the crane mat to ensure uniform contact with the underlying beams.

The cost of epoxy grouting threaded rods on the pier cap, abutments and beams shall be included with Furnishing and Erecting Structural Steel.

The Contractor has the option of using used steel. See Special Provisions.



TRANSVERSE TIE ℞'S

℞ A ½" x 2'-9" x 6" (5 Req'd)
℞ B ½" x 4'-6" x 6" (5 Req'd)
℞ C ½" x 8'-6" x 6" (5 Req'd)
℞ D ½" x 12'-6" x 6" (3 Req'd)

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Furnishing and Erecting Structural Steel	Pound	30100

DESIGNED [signature]
CHECKED [signature]
DRAWN Steffen
CHECKED VKU DAB

APRIL 15, 2008
EXAMINED [signature] ENGINEER OF STRUCTURAL SERVICES
PASSED [signature] ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS RALPH E. ANDERSON 081-004625 SPRINGFIELD LICENSED STRUCTURAL ENGINEER

Expires: November 30, 2008

EXISTING PLANS FOR INFORMATION ONLY
S.N. 006–0147

PLAN & ELEVATION
F.A. RT. 587 OVER
PIKE CREEK
BUREAU COUNTY
SN 006-0147

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DELTA ENGINEERING GROUP, LLC	USER NAME = kkhan	DESIGNED DB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING PLAN – STRUCTURE
		DRAWN DB	REVISED -		
	PLOT SCALE = $SCALE$	CHECKED AS	REVISED -		
	PLOT DATE = 10/11/2011	DATE OCTOBER 14, 2011	REVISED -		SCALE: NTS · SHEET NO. 50 OF 61 SHEETS · STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
587	(22 BR)BR	BUREAU	61	50
		CONTRACT NO. 66995		
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			

FILE NAME = g:\zp101101\cadd sheets\rdwySN-006-0183-50exist-structure.dgn

PLAN NOTE BOOK NO. SURVEYED PLOTTED ALIGNMENT CHECKED R.T. OF WAY CHECKED CADD FILE NAME BY DATE

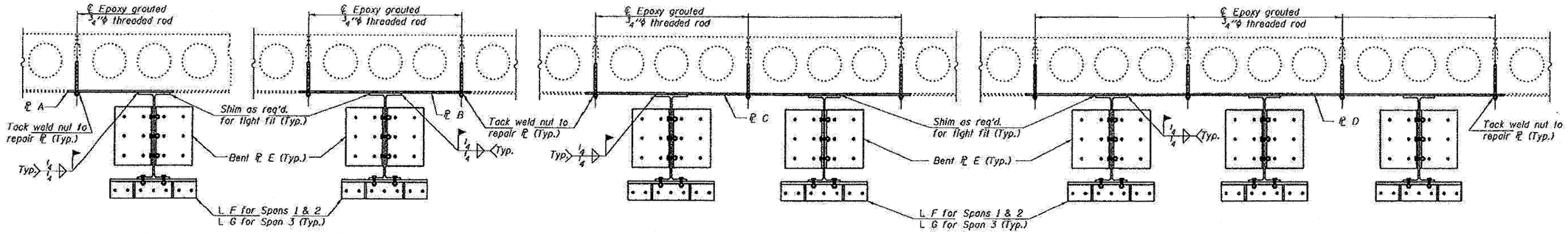
PROFILE NOTE BOOK NO. SURVEYED PLOTTED GRADES CHECKED B.M. NOTED STRUCTURE NOTATNS CHKD BY DATE

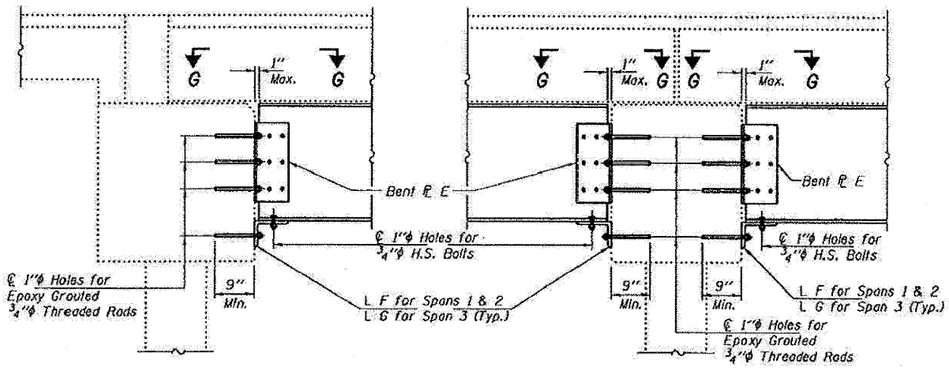
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

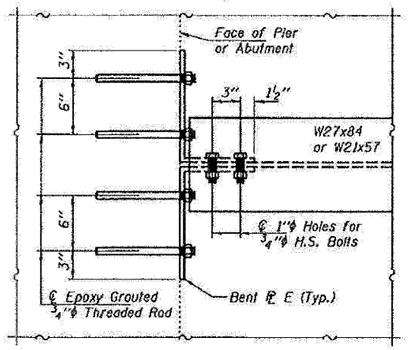
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA 587		BUREAU	6	6
FED. ROAD DIST. NO.		STATE	FED. AID PROJECT	

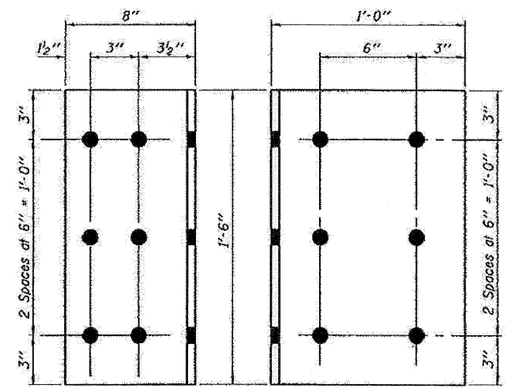
SHEET NO. 2
2 SHEETS

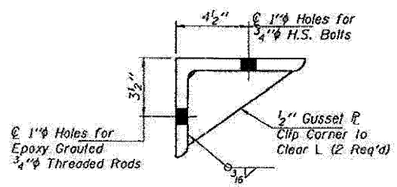
Contract Number: 66830

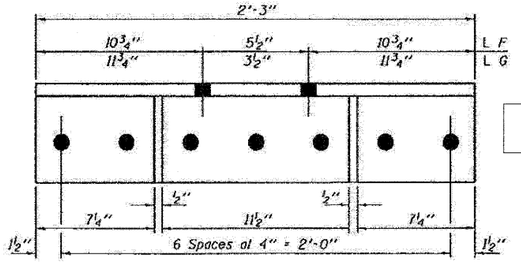












EXISTING PLANS FOR INFORMATION ONLY
S.N. 006-0147

REPAIR DETAILS
F.A. RT. 587 OVER
PIKE CREEK
BUREAU COUNTY
SN 006-0147

DESIGNED	VHV
CHECKED	DAB
DRAWN	Steffen
CHECKED	VHV DAB

APRIL 15, 2008
EXAMINED — ENGINEER OF STRUCTURAL SERVICES
PASSED — ENGINEER OF BRIDGES AND STRUCTURES

PLAN / PROFILE
SURVEYED
PLOTTED
ALIGNMENT CHECKED
R/W, NOTED
STRUCTURE NOTATNS CHKD
NOTE BOOK
NO.
DATE
BY

...\deck beams fy08\0060147.dan 15-Apr-08 11:14:09

DELTA ENGINEERING GROUP, LLC

USER NAME = kkhan	DESIGNED DB	REVISED -	
	DRAWN DB	REVISED -	
PLOT SCALE = $SCALE$	CHECKED AS	REVISED -	
PLOT DATE = 10/11/2011	DATE OCTOBER 14, 2011	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

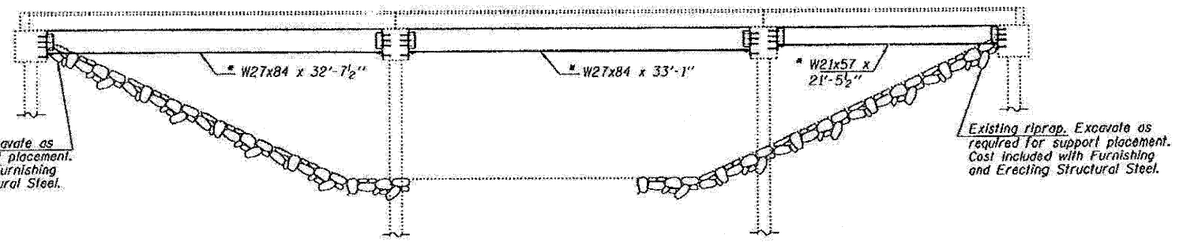
EXISTING PLAN – STRUCTURE
SCALE: NTS | SHEET NO. 51 OF 61 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
587	(22 BR)BR	BUREAU	61	51
		CONTRACT NO. 66995		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

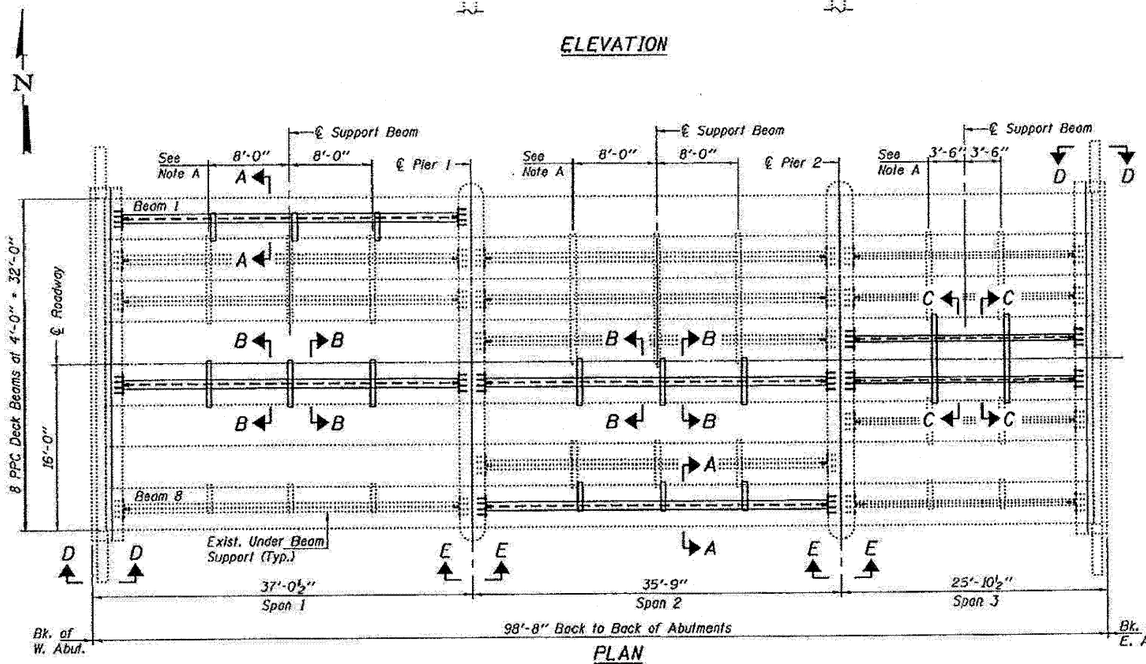
FILE NAME = g:\zp1211101\cadd sheets\rdwySN-006-0183-51exist-structure.dgn

* Contractor is to verify beam length prior to ordering material. Other sections meeting the section modulus requirements shown may be allowed subject to approval by the Bureau of Bridges and Structures. Maximum Girder depth = 27" for Spans 1 & 2 and 27" for Span 3. No additional payment will be allowed if the contractor chooses a heavier steel section than the one specified in the plans. (Min Sx = 214 in^3 for Spans 1 & 2 and 111 in^3 for Span 3)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



ELEVATION



PLAN

NOTE A:
℄ Transverse tie ℄'s (3 per spans 1 & 2, and 2 per span 3). Place additional shims at midpoints between tie ℄'s. Securely weld shims to top flange of support beam. Minimum shim size is 6" x flange width.
Adjust spacing of new Transverse Tie ℄'s to miss existing Transverse Tie ℄'s.

DESIGNED Victor M. Veliz
CHECKED
DRAWN Kyle M. Steffen
CHECKED

APRIL 19, 2010
EXAMINED
PASSED
ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS
RALPH E. ANDERSON
081-004625
SPRINGFIELD
LICENSED STRUCTURAL ENGINEER

Expires: November 30, 2010

GENERAL NOTES

All structural steel shall conform to AASHTO Classification M-270 Gr. 36, unless otherwise noted.

Plan dimensions and details relative to existing plans are subject to nominal construction 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 at the unit price bid for the work.

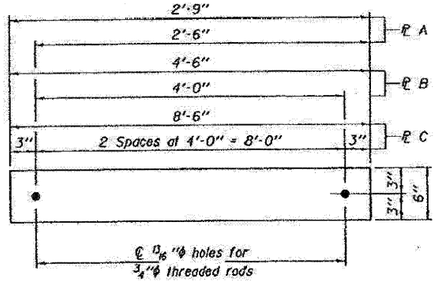
The Contractor is advised that the existing PPC Deck Beams are in a deteriorated condition with reduced load carrying capacity. It is the contractors responsibility to account for the condition of the beams when developing construction procedures.

See Section 584 of the Standard Specifications for Epoxy Grouting of Threaded Rods; Minimum embedment 9".

If the contractor's procedure for placement of beams involves placement of cranes or other heavy equipment on the bridge, a detailed procedure shall be submitted to the Engineer for approval. The procedure shall include calculations, prepared and sealed by an Illinois Licensed Structural Engineer, verifying that the equipment and procedure used will not overstress the existing beams. To distribute load to multiple beams and protect the existing surface, in all cases a double layer mat of heavy timbers shall be used at all times under crane tracks or wheels and any outriggers in the down position. If necessary, shims shall be used under the crane mat to ensure uniform contact with the underlying beams.

The cost of epoxy grouting threaded rods on the pier cap, abutments and beams shall be included with Furnishing and Erecting Structural Steel.

The Contractor has the option of using used steel. See Special Provisions.



TRANSVERSE TIE ℄'S

℄ A ½" x 2'-9" x 6" (6 Req'd)
℄ B ½" x 4'-6" x 6" (6 Req'd)
℄ C ½" x 8'-6" x 6" (2 Req'd)

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Furnishing and Erecting Structural Steel	Pound	16,750

EXISTING PLANS FOR INFORMATION ONLY
S.N. 006-0147

PLAN & ELEVATION
F.A. RTE. 587 OVER PIKE CREEK
SN 006-0147

SHEET NO. 1	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2 SHEETS	587	(22-BR)1-1	BUREAU	6	5
			CONTRACT NO. 66A46		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

PLAN / PROFILE: SURVEYED, PLOTTED, CROSS SECTIONS CHECKED, ALIGNMENT CHECKED, R.O.W. CHECKED, STRUCTURE NOTATIONS CHKD, CADD FILE NAME, NOTE BOOK, NO., BY, DATE

00501424.dgn 19-Apr-10 09:37:38

DELTA ENGINEERING GROUP, LLC

USER NAME = kkhan	DESIGNED DB	REVISED -
	DRAWN DB	REVISED -
PLOT SCALE = #SCALE#	CHECKED AS	REVISED -
PLOT DATE = 10/11/2011	DATE OCTOBER 14, 2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

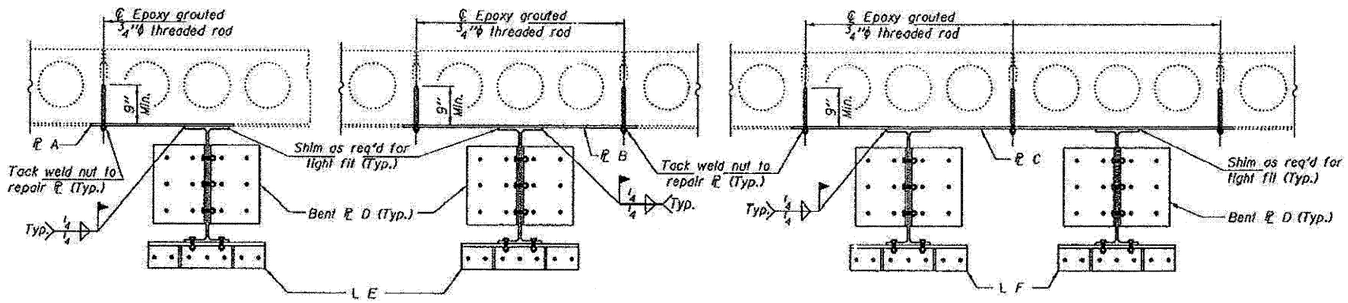
EXISTING PLAN - STRUCTURE

SCALE: NTS | SHEET NO. 52 OF 61 SHEETS | STA. | TO STA.

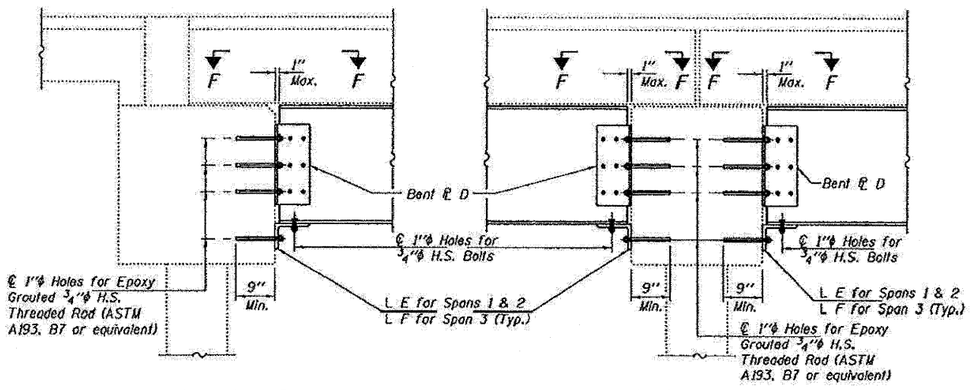
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
587	(22 BR)BR	BUREAU	61	52
		CONTRACT NO. 66995		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FILE NAME = g:\zpl01101\cadd sheets\rdwySN-006-0183-52exist-structure.dgn

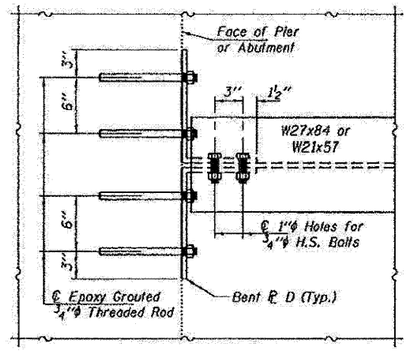
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



SECTION A-A SECTION B-B SECTION C-C



SECTION D-D SECTION E-E



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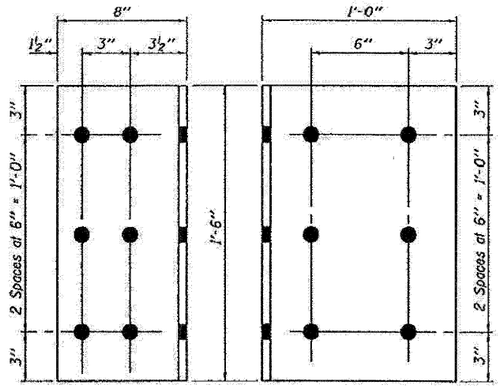
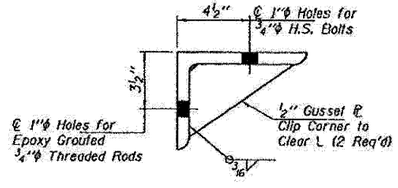
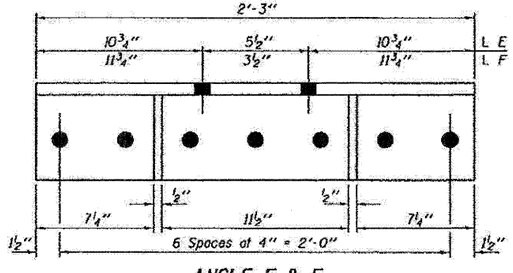


BENT ℄ D
Bent ℄ ½" x 1'-6" x 1'-8"
(24 Required)



TYPICAL SECTION
THRU ANGLE E & F



ANGLE E & F
L 8 x 6 x ¾ x 2'-3"
L E (8 Required)
L F (4 Required)

EXISTING PLANS FOR INFORMATION ONLY
S.N. 006-0147

REPAIR DETAILS
F.A. RTE. 587 OVER PIKE CREEK
SN 006-0147

DESIGNED	VHV	
CHECKED	DAB	
DRAWN	Kyle M. Steffen	
CHECKED	VHV	DAB

APRIL 19, 2010
EXAMINED — ENGINEER OF STRUCTURAL SERVICES
PASSED — Ralph E. Anderson, ENGINEER OF BRIDGES AND STRUCTURES

SHEET NO. 2	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2 SHEETS	587	(22-BRI)-1	BUREAU	6	6
			CONTRACT NO. 66A46		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

PLAN: SURVEYED, PLOTTED, QUANTITIES CHECKED, ALIGNMENT CHECKED, RT. OF WAY CHECKED, CADD FILE NAME, NOTE BOOK, NO., BY, DATE
PROFILE: SURVEYED, PLOTTED, QUANTITIES CHECKED, BM. NOTED, STRUCTURE NOTATNS CHKD, NOTE BOOK, NO., BY, DATE

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DELTA ENGINEERING GROUP, LLC
CONSULTING ENGINEERING, CONSTRUCTION MANAGEMENT, SURVEYING
111 W. JACKSON BLVD, SUITE 916, CHICAGO, IL 60604

USER NAME = kkhan	DESIGNED DB	REVISED -	
	DRAWN DB	REVISED -	
PLOT SCALE = $SCALE$	CHECKED AS	REVISED -	
PLOT DATE = 10/11/2011	DATE OCTOBER 14, 2011	REVISED -	

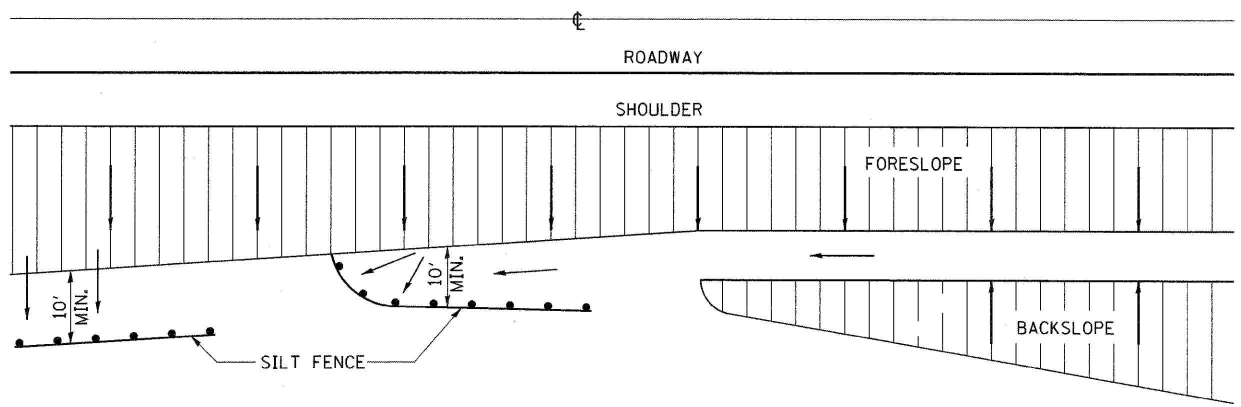
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

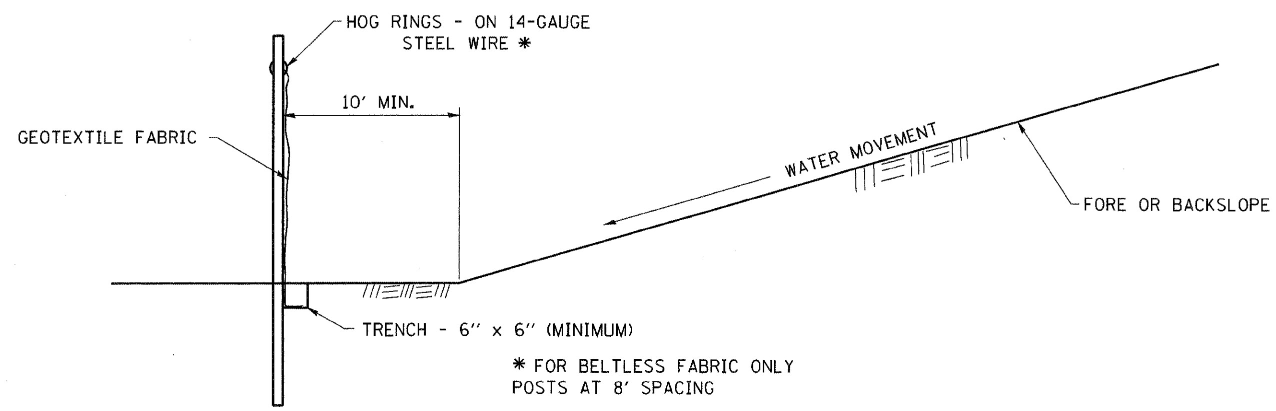
EXISTING PLAN – STRUCTURE

SCALE: NTS | SHEET NO. 53 OF 61 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
587	(22 BRI)BR	BUREAU	61	53
		CONTRACT NO. 66995		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

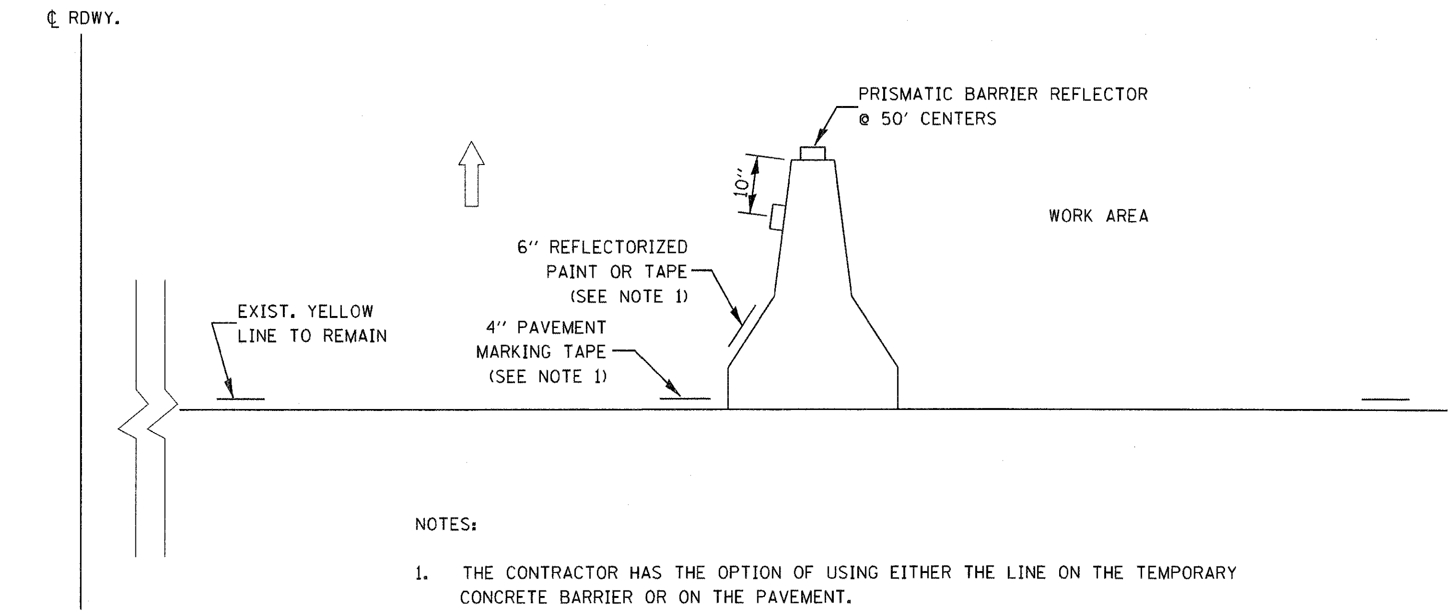
FILE NAME = g:\zpl01101\cadd sheets\rdwySN-006-0183-53exist-structure.dgn





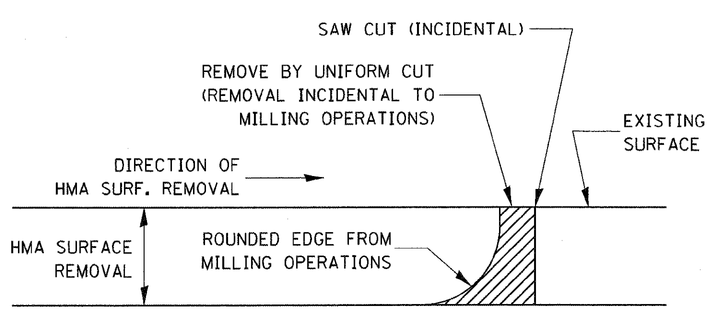
DETAILS OF SILT FENCE

EROSION CONTROL DETAILS FOR SILT FENCE



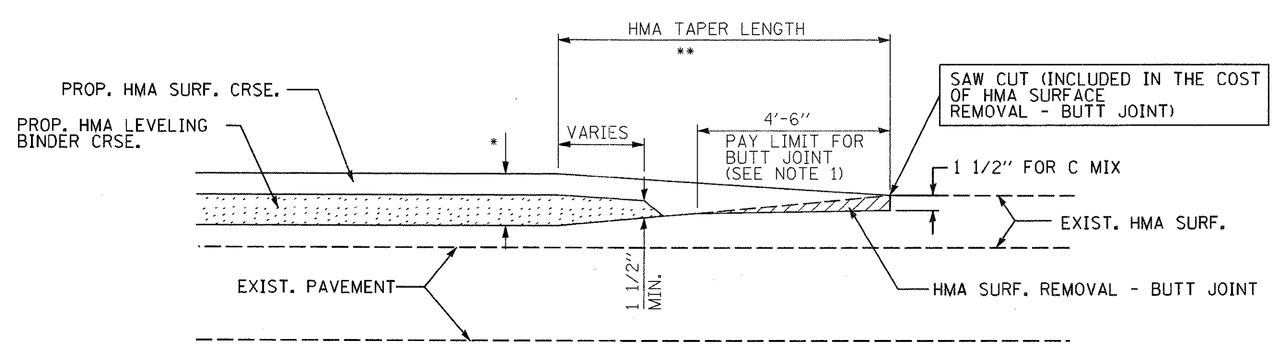
NOTES:

1. THE CONTRACTOR HAS THE OPTION OF USING EITHER THE LINE ON THE TEMPORARY CONCRETE BARRIER OR ON THE PAVEMENT.
2. THE COLOR OF THE REFLECTORS AND PAVEMENT/BARRIER MARKING LINE WILL VARY WITH STAGING AND SHALL MATCH THE EXISTING LINE IN THE WORK AREA.
3. THE COST OF THE REFLECTORS AND THE PAVEMENT/BARRIER MARKING LINE IS INCLUDED IN THE COST OF THE TEMPORARY CONCRETE BARRIER.



NOTE:
WHEN MILLING OPERATIONS PRODUCE A ROUNDED EDGE, THEN A SAW CUT SHALL BE USED TO MANUFACTURE A PERPENDICULAR EDGE AS SHOWN IN THE DETAIL. THE ENGINEER SHALL BE THE SOLE JUDGE CONCERNING THE USE OF THIS DETAIL

HMA DETAIL AT BUTT JOINTS

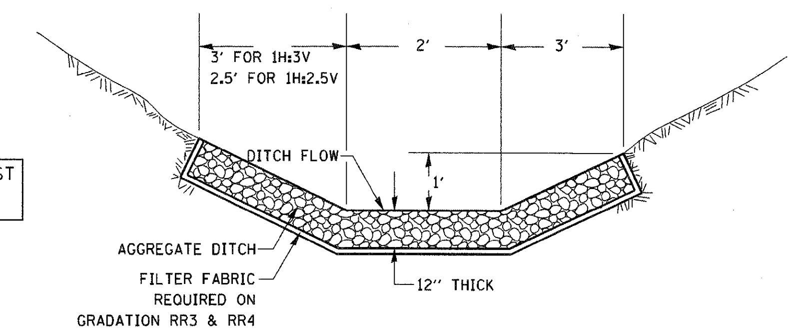


• SEE TYPICAL SECTIONS FOR MILLING THICKNESS.

•• 10'-0" PER 1" RESURFACING

NOTE:
THE BUTT JOINT SHALL BE CONSTRUCTED IMMEDIATELY UPON REMOVAL OF THE EXISTING HMA SURFACE.
TAPER FOR TEMPORARY RAMP AT A RATE OF 3'-0" PER 1 INCH OF MILLING THICKNESS.

TYPICAL BUTT JOINT AND HMA TAPER FOR MILLING AND RESURFACING



CLASS A4 WILL BE REQUIRED ON THIS PROJECT AT THE LOCATION SHOWN ON THE PLANS.

THIS WORK SHALL BE DONE ACCORDING TO SECTION 283 OF THE STANDARD SPECIFICATION. AGGREAGTE DITCH WILL BE MEASURED FOR PAYMENT IN PLACE AND THE VOLUME COMPUTED IN TONS. AGGREGATE DITCH WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER TON FOR AGGREGATE DITCH.

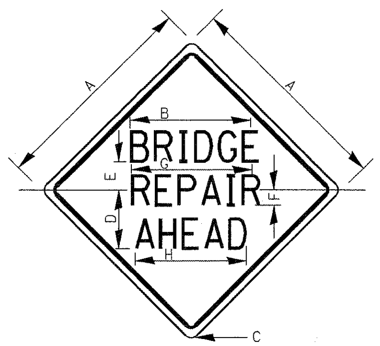
AGGREGATE DITCH FOR FLEXIBLE DITCH LINING

DELTA ENGINEERING GROUP, LLC	USER NAME = kkhan	DESIGNED DB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DETAILS
		DRAWN DB	REVISED -		
	PLOT SCALE = $SCALE$	CHECKED AS	REVISED -		
	PLOT DATE = 10/11/2011	DATE OCTOBER 14, 2011	REVISED -		SCALE: NONE | SHEET NO. 54 OF 61 SHEETS | STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
587	(22 BR)BR	BUREAU	61	54
		CONTRACT NO. 66995		
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			

FILE NAME = g:\zp101101\cadd sheets\rdwySN-006-0183-54district-cadetl-sht1.dgn

WIDTH RESTRICTION SIGN PLACEMENT	STAGE I TEXT	STAGE II TEXT
AFTER BRIDGE CONSTRUCTION AHEAD SIGN (EAST BOUND)	11'-0"	10'-6"
AFTER BRIDGE CONSTRUCTION AHEAD SIGN (WEST BOUND)	11'-0"	10'-6"



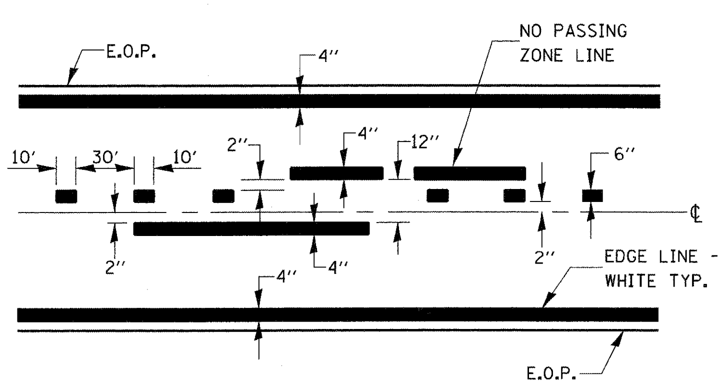
COLOR: LEGEND AND BORDER BLACK NON-REFLECTORIZED
BACKGROUND ORANGE REFLECTORIZED

SIGN SIZE	DIMENSIONS							
	A	B	C	D	E	F	G	H
36 x 36	36.0	22.3	2.25	10.8	5.6	3.0	21.9	20.7
48 x 48	48.0	26.0	3.0	14.5	7.5	3.5	25.5	24.1

SIGN SIZE	SERIES			MARGIN	BORDER	BLANK STD.
	LINES					
	1	2	3			
36 x 36	5C	5C	5C	0.6	0.8	B4-36D
48 x 48	7C	7C	7C	0.8	1.2	B4-48D

ALL DIMENSIONS IN INCHES.

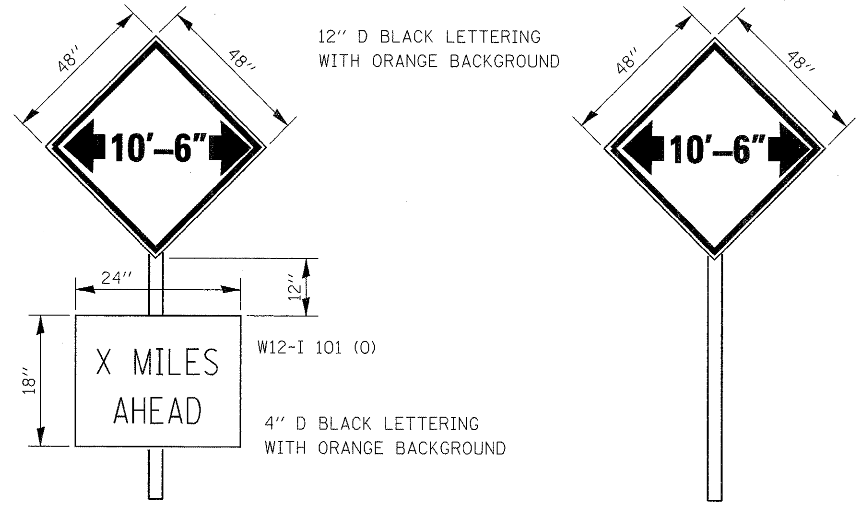
ILLINOIS STANDARD W21-I102



CENTERLINE & NO PASSING ZONE LINES - YELLOW

(SEE TYPICAL SECTIONS)

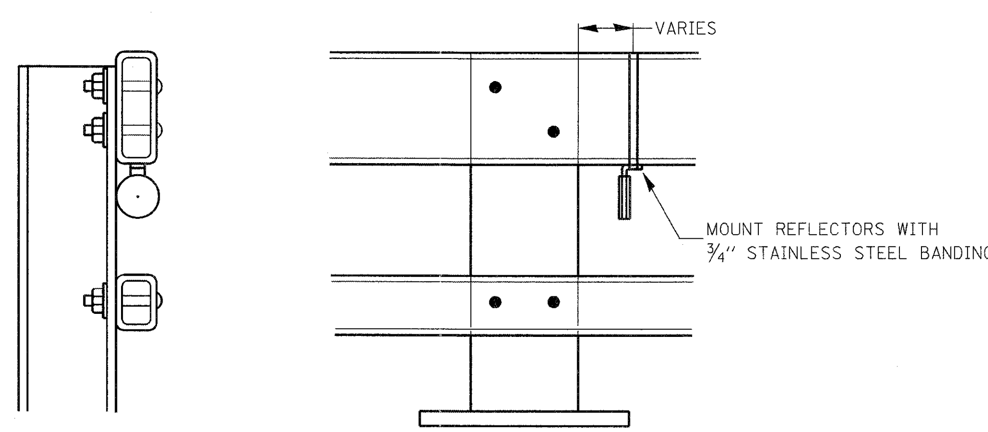
PAVEMENT MARKING



A TOTAL OF FOUR POST MOUNTED SIGNS ARE REQUIRED:
FOR WESTBOUND TRAFFIC, ONE SIGN SHALL BE PLACED AT THE JUNCTION OF IL 251 AND US 34.
FOR EASTBOUND TRAFFIC, ONE SIGN SHALL BE PLACED AT THE JUNCTION OF US 34 AND IL 92.
ONE SIGN IN EACH DIRECTION SHALL ALSO BE PLACED AFTER THE ROAD CONSTRUCTION AHEAD SIGN.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE ENGINEER TO MEET THIS REQUIREMENT.

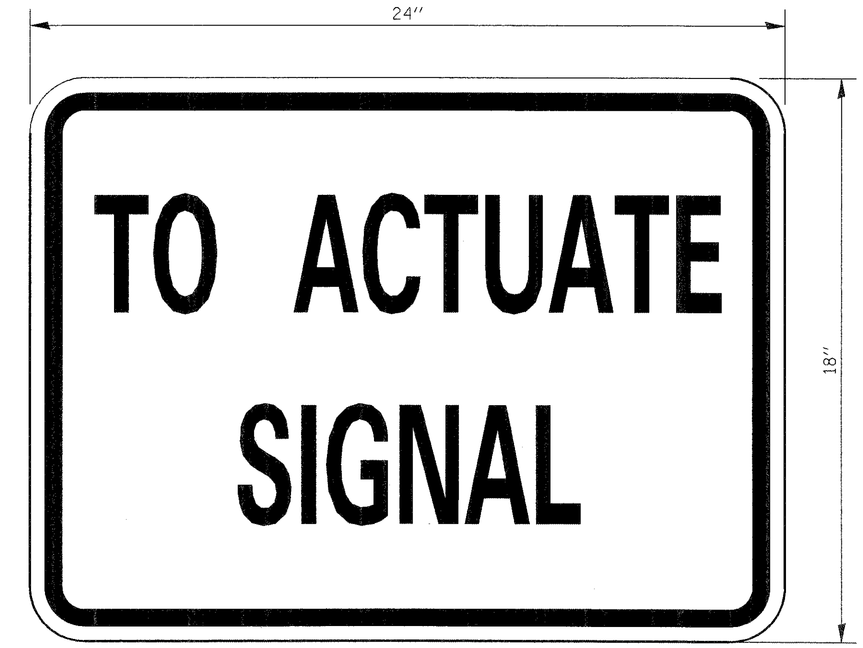
WIDTH RESTRICTION SIGNING DETAILS



NOTES

1. REFLECTORS SHALL MEET THE REQUIREMENTS OF ARTICLE 1097.03 OF THE STANDARD SPECIFICATIONS.
2. FURNISHING AND INSTALLING THE COMPLETE REFLECTOR UNIT WILL WILL BE PAID AT THE CONTRACT UNIT PRICE EACH FOR GUARD RAIL MARKERS.

REFLECTOR MOUNTING DETAIL FOR STEEL RAIL



SIZE: 24" x 18"

4" CAPITAL LETTERS - BLACK

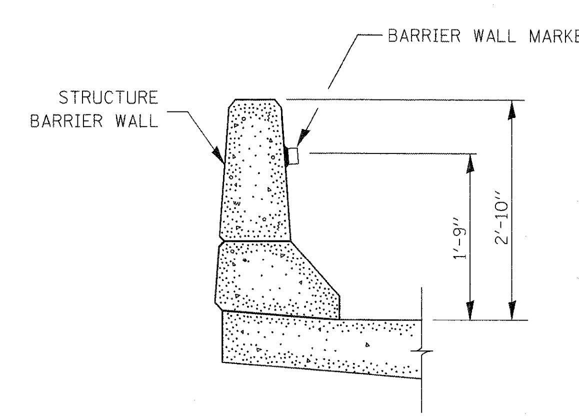
½" BORDER - BLACK

WHITE REFLECTIVE - TYPE B ENGINEERING GRADE SHEETING

GENERAL NOTE:

THIS SIGN SHALL BE INSTALLED AT THE STOP LINE AS DIRECTED BY THE ENGINEER.

STOP LINE SIGN FOR TEMPORARY SIGNALS



BARRIER WALL MARKER

DELTA ENGINEERING GROUP, LLC	USER NAME = kkhan	DESIGNED DB	REVISED -
		DRAWN DB	REVISED -
	PLOT SCALE = $SCALE$	CHECKED AS	REVISED -
	PLOT DATE = 10/11/2011	DATE OCTOBER 14, 2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DETAILS

SCALE: NONE | SHEET NO. 55 OF 61 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
587	(22 BR)BR	BUREAU	61	55
		CONTRACT NO. 66995		
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			

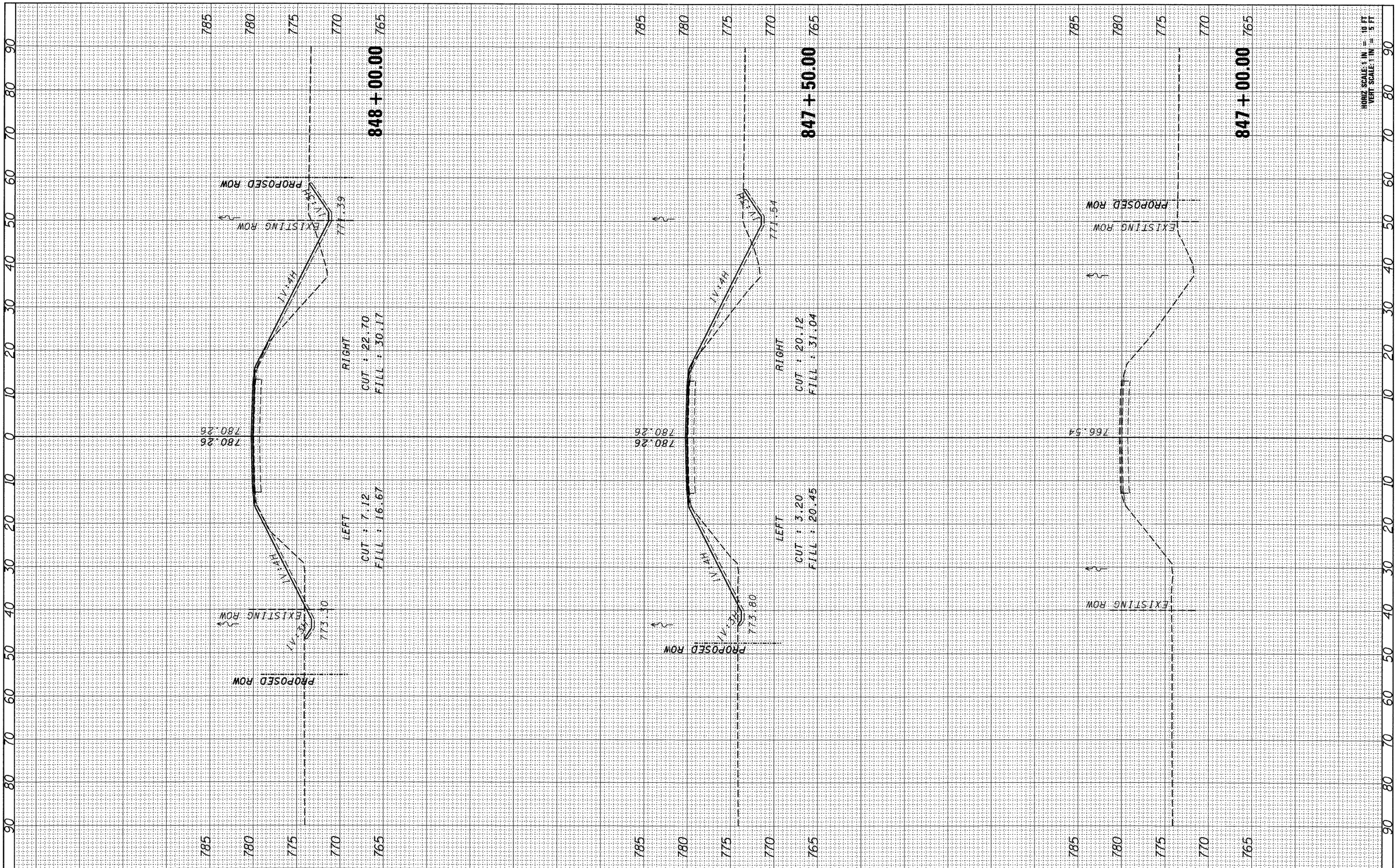
FILE NAME = g:\zp101101\cadd sheets\rdwySN-006-0183-55district-cadetl-sht2.dgn

PLAN | NOTE BOOK | NO. | SURVEYED | PLOTTED | ALIGNMENT CHECKED | RT. OF WAY CHECKED | CADD FILE NAME | BY | DATE

PROFILE | NOTE BOOK | NO. | SURVEYED | PLOTTED | GRADES CHECKED | B.M. NOTED | STRUCTURE NOTATIONS CHK'D | BY | DATE

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

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



DELTA ENGINEERING GROUP, LLC
CONSULTING ENGINEERS, CONSTRUCTION MANAGERS, SURVEYORS
111 W JACKSON BLVD, SUITE 915
CHICAGO, IL 60604

USER NAME = kkhan	DESIGNED - DB	REVISED -	
	DRAWN - DB	REVISED -	
PLOT SCALE = $SCALE$	CHECKED - AS	REVISED -	
PLOT DATE = 10/11/2011	DATE - OCTOBER 14, 2011	REVISED -	

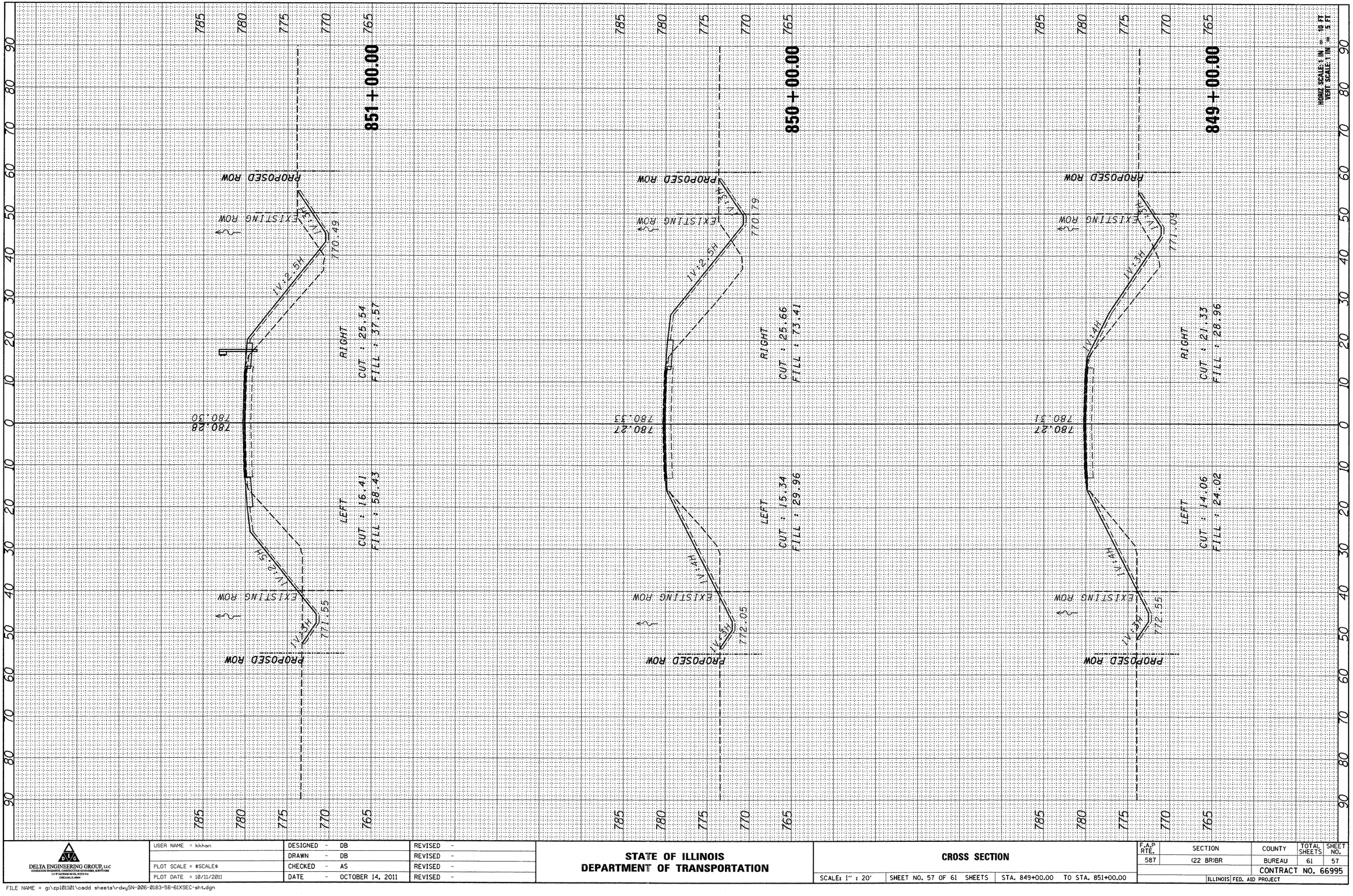
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTION

SCALE: 1" : 20' | SHEET NO. 56 OF 61 SHEETS | STA. 847+00 | TO STA. 848+00

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
587	(22 BR)BR	BUREAU	61	56
		CONTRACT NO. 66995		
	ILLINOIS	FED. AID PROJECT		

FILE NAME = g:\zpl0111101\cadd sheets\rdwySN-006-0183-56-61XSEC-sht.dgn



HORZ SCALE: 1 IN = 10 FT
VERT SCALE: 1 IN = 5 FT

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

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

DELTA ENGINEERING GROUP, LLC
CONSULTING ENGINEERS, CONSTRUCTION MANAGERS, SURVEYORS
111 W JACKSON BLVD, SUITE 910
CHICAGO, IL 60604

USER NAME = kkhan	DESIGNED - DB	REVISED -
	DRAWN - DB	REVISED -
PLOT SCALE = $SCALE$	CHECKED - AS	REVISED -
PLOT DATE = 10/11/2011	DATE - OCTOBER 14, 2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTION

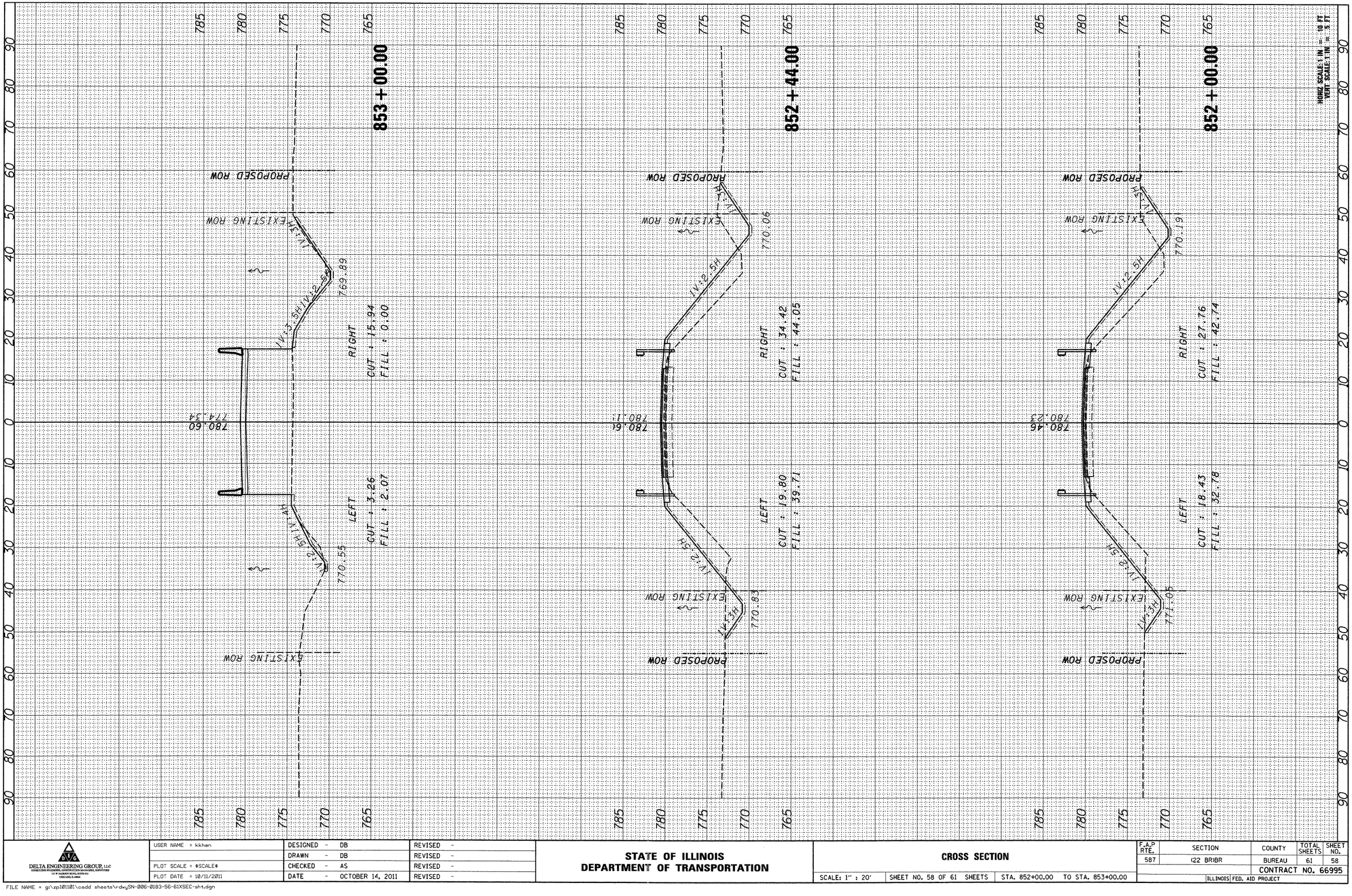
SCALE: 1" : 20' | SHEET NO. 57 OF 61 SHEETS | STA. 849+00.00 TO STA. 851+00.00

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
587	(22 BR)BR	BUREAU	61	57
		CONTRACT NO. 66995		
	ILLINOIS	FED. AID PROJECT		

FILE NAME = g:\zp101101\cadd sheets\rdwySN-006-0183-56-61XSEC-sht.dgn

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

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



DELTA ENGINEERING GROUP, LLC
CONSULTING ENGINEERS, CONSTRUCTION MANAGERS, SURVEYORS
111 W JACKSON BLVD, SUITE 910
CHICAGO, IL 60604

USER NAME = kkhan	DESIGNED - DB	REVISED -	
	DRAWN - DB	REVISED -	
PLOT SCALE = #SCALE#	CHECKED - AS	REVISED -	
PLOT DATE = 10/11/2011	DATE - OCTOBER 14, 2011	REVISED -	

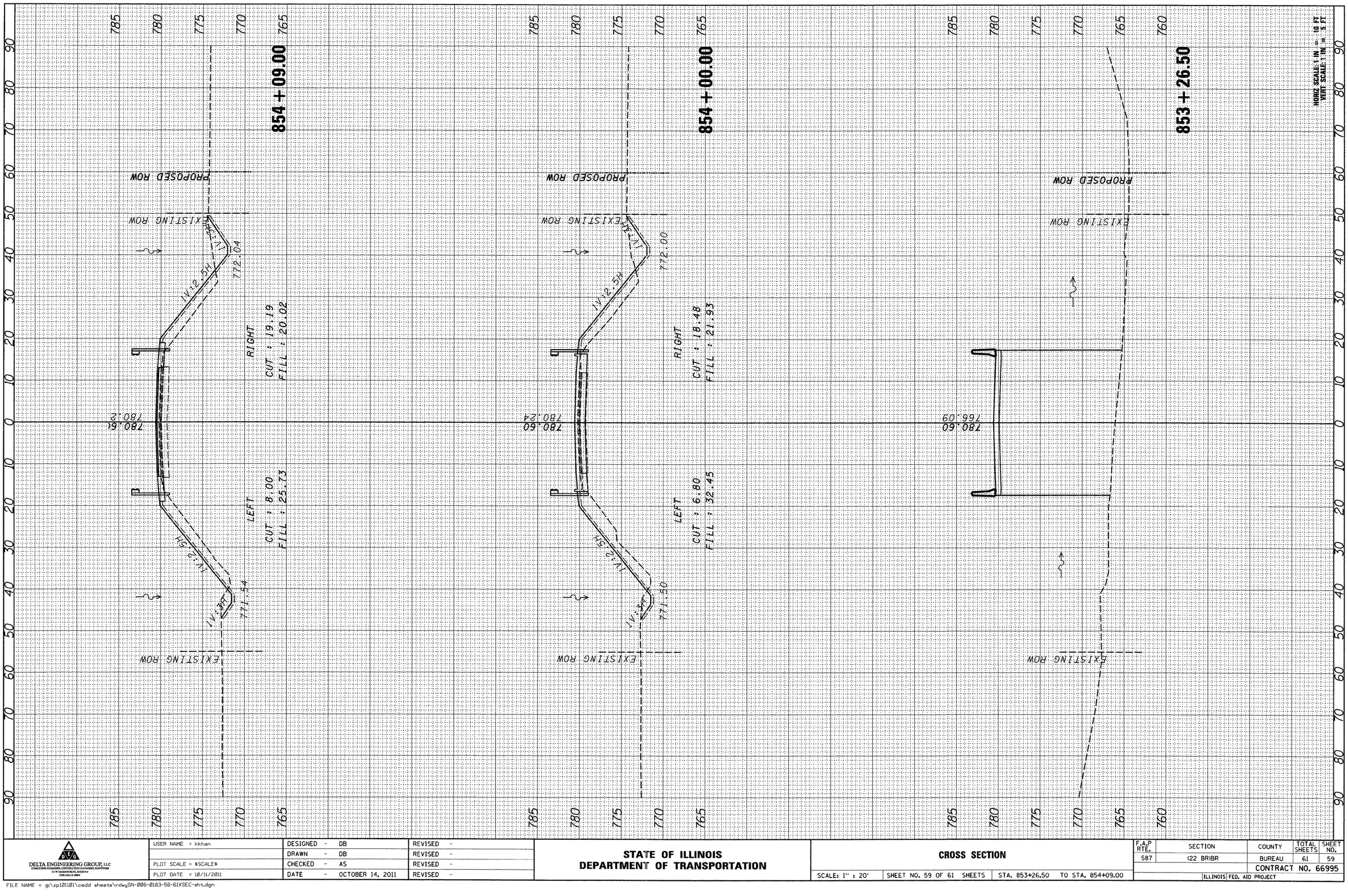
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTION

SCALE: 1" : 20' | SHEET NO. 58 OF 61 SHEETS | STA. 852+00.00 TO STA. 853+00.00

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
587	(22 BR)BR	BUREAU	61	58
		CONTRACT NO. 66995		
	ILLINOIS	FED. AID PROJECT		

FILE NAME = g:\zp1011101\cadd sheets\rdwySN-006-0183-56-61XSEC-sht.dgn



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

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

DELTA ENGINEERING GROUP, LLC
CONSULTING ENGINEERS, CONSTRUCTION MANAGERS, SURVEYORS
111 W JACKSON BLVD, SUITE 910
CHICAGO, IL 60604

USER NAME = kkhan	DESIGNED - DB	REVISED -	
	DRAWN - DB	REVISED -	
PLOT SCALE = $SCALE$	CHECKED - AS	REVISED -	
PLOT DATE = 10/11/2011	DATE - OCTOBER 14, 2011	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTION

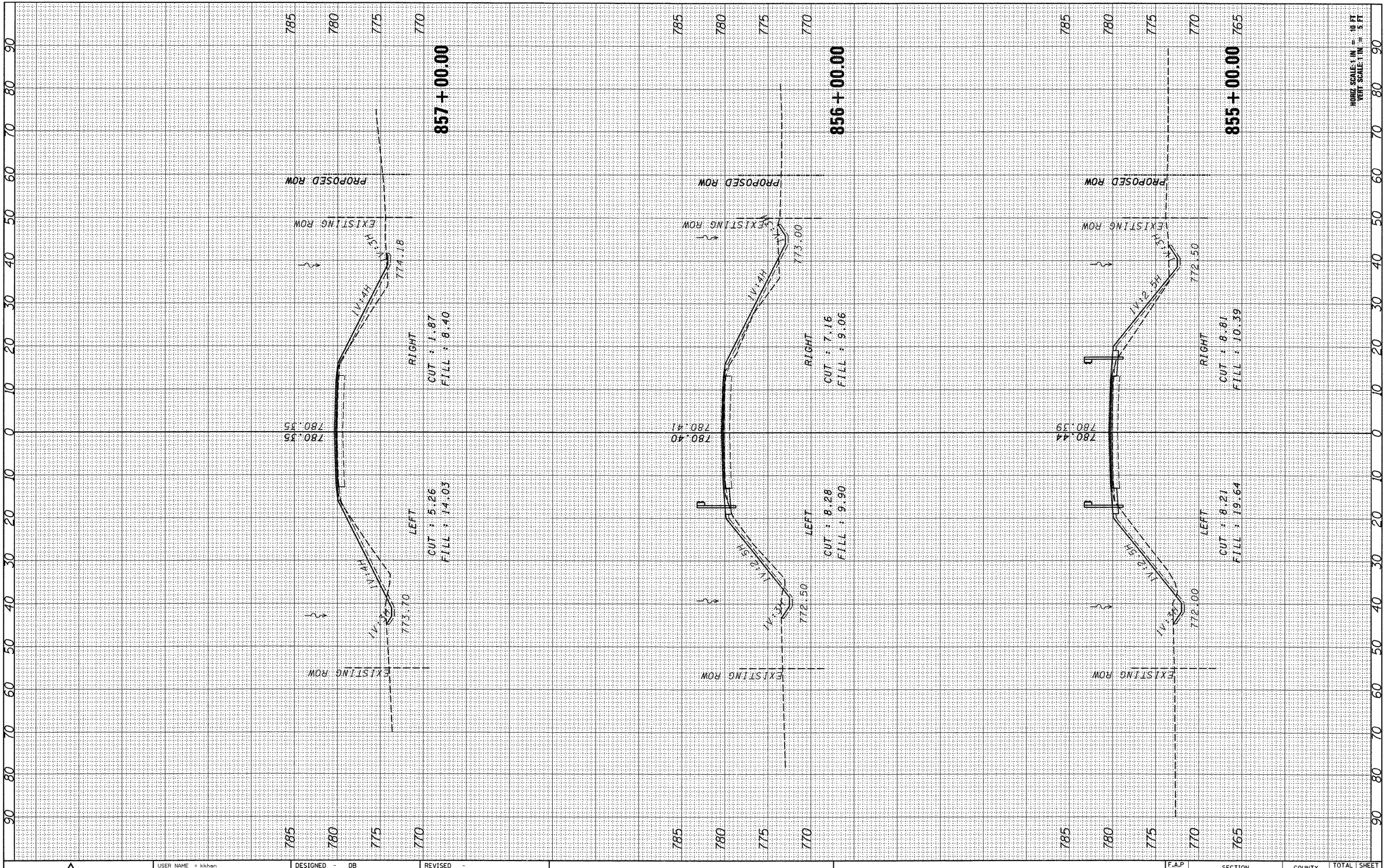
SCALE: 1" : 20' | SHEET NO. 59 OF 61 SHEETS | STA. 853+26.50 TO STA. 854+09.00

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
587	(22 BR)BR	BUREAU	61	59
		CONTRACT NO. 66995		
	ILLINOIS FED. AID PROJECT			

FILE NAME = g:\zp101101\cadd sheets\rdwySN-006-0183-56-61XSEC-sht.dgn

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

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



DELTA ENGINEERING GROUP, LLC
CONSULTING ENGINEERING, CONSTRUCTION MANAGEMENT, SURVEYING
111 W JACKSON BLVD, SUITE 910
CHICAGO, IL 60604

USER NAME = kkhan	DESIGNED - DB	REVISED -	
	DRAWN - DB	REVISED -	
PLOT SCALE = *SCALE*	CHECKED - AS	REVISED -	
PLOT DATE = 10/11/2011	DATE - OCTOBER 14, 2011	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTION

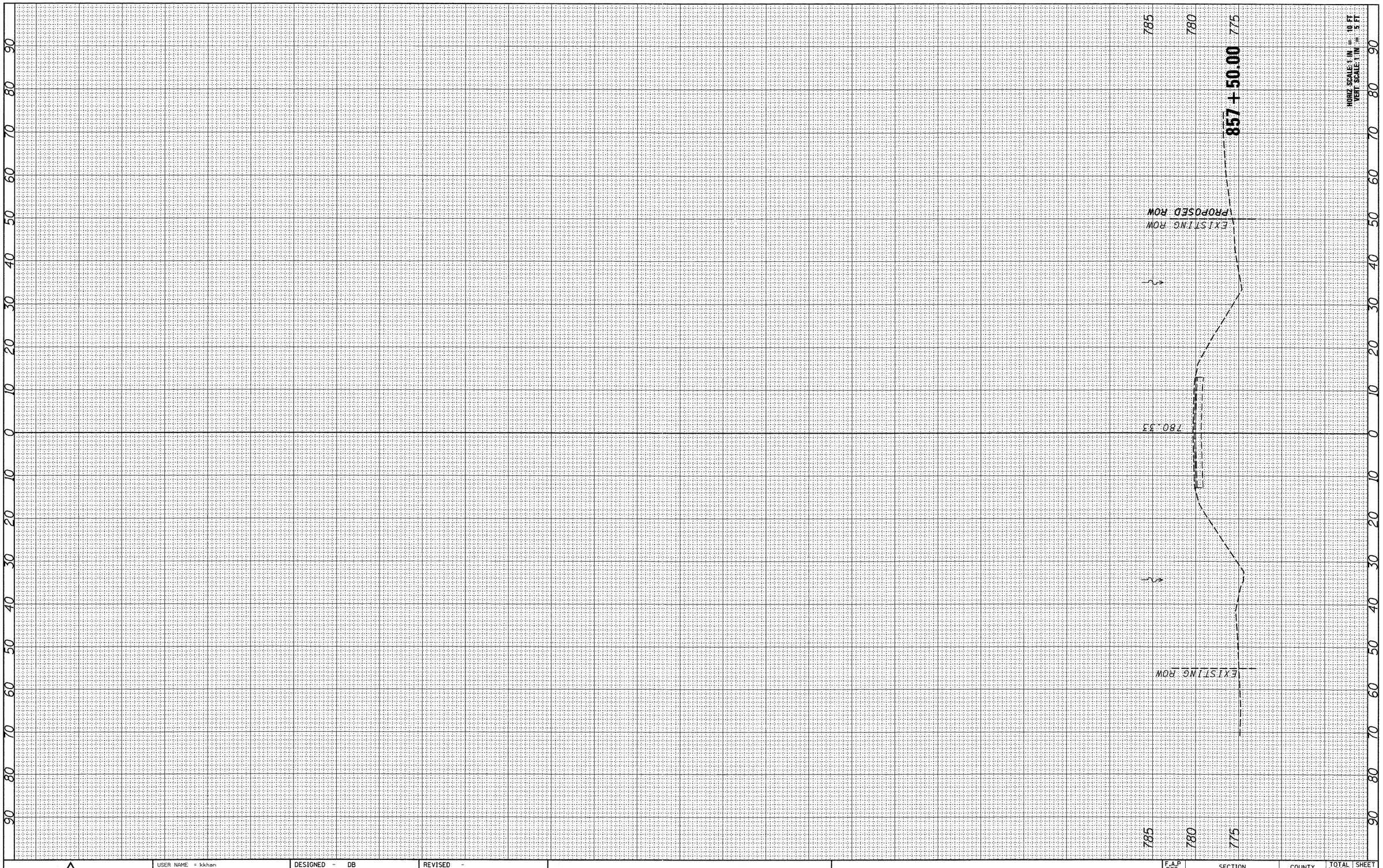
SCALE: 1" : 20' | SHEET NO. 60 OF 61 SHEETS | STA. 855+00.00 TO STA. 857+00.00

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
587	(22 BR)BR	BUREAU	61	60
		CONTRACT NO. 66995		
	ILLINOIS	FED. AID PROJECT		

FILE NAME = g:\zp101101\cadd sheets\rdwySN-006-0183-56-61XSEC-sht.dgn

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

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



DELTA ENGINEERING GROUP, LLC
CONSULTING ENGINEERS, CONSTRUCTION MANAGERS, SURVEYORS
111 W JACKSON BLVD, SUITE 910
CHICAGO, IL 60604

USER NAME = kkhan	DESIGNED - DB	REVISED -	
	DRAWN - DB	REVISED -	
PLOT SCALE =	CHECKED - AS	REVISED -	
PLOT DATE = 10/11/2011	DATE - OCTOBER 14, 2011	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTION

SCALE: 1" : 20' | SHEET NO. 61 OF 61 SHEETS | STA. 857+50.00 TO STA. 857+50.00

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
587	(22 BR)BR	BUREAU	61	61
		CONTRACT NO. 66995		
	ILLINOIS	FED. AID PROJECT		

FILE NAME = g:\zp101101\cadd sheets\rdwySN-206-0183-56-61XSEC-sht.dgn