

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
PLANS FOR PROPOSED
BRIDGE REPLACEMENT
STP - OFF SYSTEM

CH 29 (GLENARM ROAD)
SECTION 13-00100-01-BR
PROJECT BROS-0167(078)
SANGAMON COUNTY

C-96-231-14

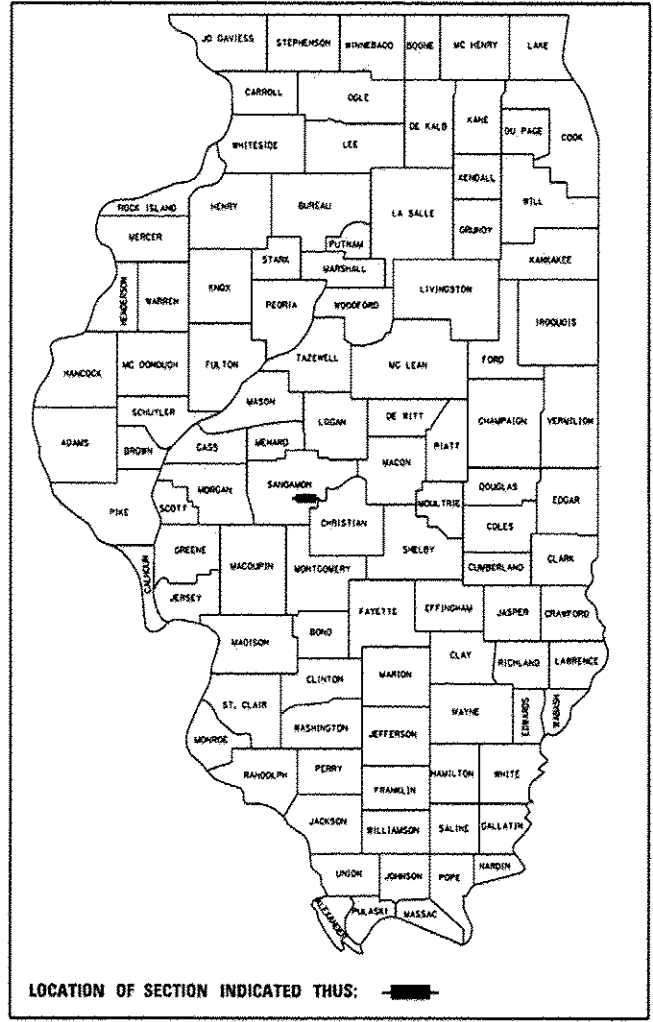
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1643	13-00100-01-BR	SANGAMON	23	1
		ILLINOIS	CONTRACT NO. 93622	

INDEX OF SHEETS

- 1 COVER SHEET
- 2 GENERAL NOTES AND SUMMARY OF QUANTITIES
- 3-4 TYPICAL SECTIONS AND ENTRANCE DETAILS
- 5-6 PLAN AND PROFILE SHEETS
- 7-17 STRUCTURE PLANS
- 18-23 CROSS SECTIONS

HIGHWAY STANDARDS

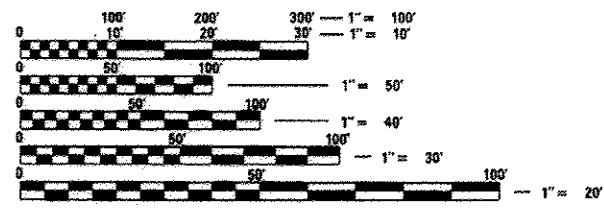
- 000001-06 STANDARD SYMBOLS, ABBREVIATIONS & PATTERNS
- 280001-07 TEMPORARY EROSION CONTROL SYSTEMS
- 515001-03 NAME PLATE FOR BRIDGES
- 630301-06 SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
- 631032-08 TRAFFIC BARRIER TERMINAL, TYPE 6A
- 635006-03 REFLECTOR AND TERMINAL MARKER PLACEMENT
- 701901-03 TRAFFIC CONTROL DEVICES
- BLR 21-9 TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS



FUNCTIONAL CLASSIFICATION: MINOR COLLECTOR
 DESIGN SPEED = 40 MPH
 2032 ADT = 268

UTILITY COMPANIES

AMEREN CIPS (NORTH)
MR. MARK WINSON
PH: (217) 221-0825



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

PROJECT ENGINEER: CORY W. CHAMBERLAIN, P.E., S.E.
PROJECT MANAGER: SCOTT D. SANFORD, P.E., S.E.

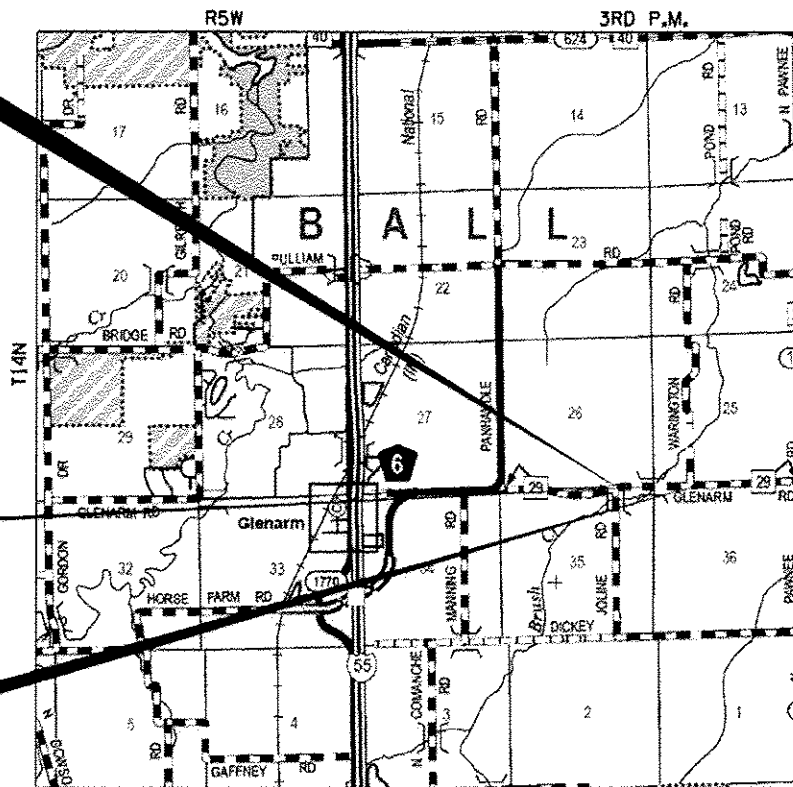


CONTRACT NO. 93622

BEGIN IMPROVEMENT
STA. 97 + 00.00

BRIDGE REPLACEMENT
STA. 100 + 00.00
EXIST SN 084-3038
PROP SN 084-3438

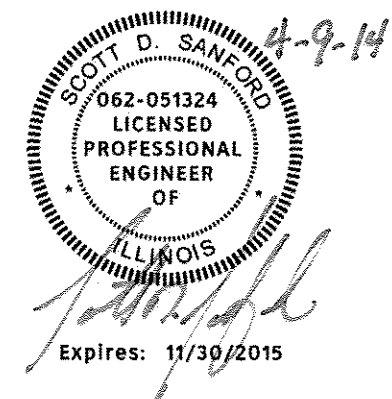
END IMPROVEMENT
STA. 103 + 00.00



LOCATION MAP SCALE
LOCATION MAP

TOTAL LENGTH = 600.00 FEET (0.114 MI)
 NET LENGTH = 600.00 FEET (0.114 MI)

BRIDGE REPLACEMENT WITH A 3-SPAN PRECAST PRESTRESSED CONCRETE DECK BEAM BRIDGE ON CONCRETE PILE BENT ABUTMENTS AND DRILLED SHAFT PIERS, 2" (MIN.) HMA WEARING SURFACE, 169'-4" BACK TO BACK OF ABUTMENTS, 33'-0" FACE TO FACE OF RAIL AND 35° SKEW.



APPROVED 4/9/14 20 14
 COUNTY ENGINEER

PASSED 04-10 20 14
Jessie J. J.
 DISTRICT SIX ENGINEER OF LOCAL ROADS AND STREETS

Ron Chamberlain
 DISTRICT SIX ENGINEER OF CONSTRUCTION

Released For Bid Based on Limited Review 04-10 20 14
Ron D'Amico
 DEPUTY DIRECTOR OF HIGHWAYS
 REGION FOUR ENGINEER
 STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

SUMMARY OF QUANTITIES

PAY ITEM #	DESCRIPTION	UNIT	TOTAL
20200100	EARTH EXCAVATION	CU YD	48
20300100	CHANNEL EXCAVATION	CU YD	656
20400800	FURNISHED EXCAVATION	CU YD	249
28000400	PERIMETER EROSION BARRIER	FOOT	1,215
28100109	STONE RIPRAP, CLASS A5	SQ YD	1,350
28200200	FILTER FABRIC	SQ YD	1,350
35100700	AGGREGATE BASE COURSE, TYPE A 8"	SQ YD	589
40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	11
40300100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	440
40300300	BITUMINOUS MATERIALS (COVER AND SEAL COATS)	GALLON	1,763
40300500	COVER COAT AGGREGATE	TON	39
40300600	SEAL COAT AGGREGATE	TON	17
40603310	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50	TON	84
44000100	PAVEMENT REMOVAL	SQ YD	104
48100700	AGGREGATE SHOULDERS, TYPE A 8"	SQ YD	204
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
50200100	STRUCTURE EXCAVATION	CU YD	186
50300225	CONCRETE STRUCTURES	CU YD	96.6
50400505	PRECAST PRESTRESSED CONCRETE DECK BEAMS (27" DEPTH)	SQ FT	5,509
50800105	REINFORCEMENT BARS	POUND	11,540
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	38,910
50901050	STEEL RAILING, TYPE SM	FOOT	339
51201600	FURNISHING STEEL PILES HP 12X53	FOOT	374
51202305	DRIVING PILES	FOOT	374
51203600	TEST PILE STEEL HP12X53	EACH	1
51204650	PILE SHOES	EACH	12
51500100	NAME PLATES	EACH	1
51602000	PERMANENT CASING	FOOT	253
51603000	DRILLED SHAFT IN SOIL	CU YD	90.9
51604000	DRILLED SHAFT IN ROCK	CU YD	52.4
58100200	WATERPROOFING MEMBRANE SYSTEM	SQ YD	613
58300100	PORTLAND CEMENT MORTAR FAIRING COURSE	FOOT	1,002
59300100	CONTROLLED LOW-STRENGTH MATERIAL	CU YD	72
63100087	TRAFFIC BARRIER TERMINAL, TYPE 6A	EACH	4
63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	4
67100100	MOBILIZATION	L SUM	1
70101830	TRAFFIC CONTROL AND PROTECTION, BLR 21	L SUM	1
78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	4
X2501000	SEEDING, CLASS 2 (SPECIAL)	ACRE	0.4
20001900	ASBESTOS BEARING PAD REMOVAL	EACH	18

* SPECIAL PROVISION

CONSTRUCTION TYPE CODE: 0011

Δ SPECIALTY ITEMS

GENERAL NOTES

- WHERE PERMANENT SURVEY MARKERS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE DISTURBED. THE CONTRACTOR SHALL PROTECT AND PRESERVE ALL PROPERTY MARKERS AND MONUMENTS UNTIL THE OWNER AND AN AUTHORIZED SURVEYOR HAS WITNESSED OR OTHERWISE REFERENCED THE LOCATION.
- THE ENGINEER SHALL NOT GUARANTEE THE WORK OF ANY CONTRACTOR OR SUBCONTRACTOR, SHALL HAVE NO SUPERVISION OF THE PERSONS DOING THE WORK, SHALL HAVE NO CHARGE OF THE WORK, SHALL NOT BE RESPONSIBLE FOR SAFETY IN, ON, OR ABOUT THE JOB SITE OR HAVE ANY CONTROL OF THE SAFETY OR ADEQUACY OF ANY EQUIPMENT, BUILDING COMPONENT, SCAFFOLDING, SUPPORT, FORMS OR OTHER WORK AIDS.
- THE FOLLOWING RATES WERE USED IN CALCULATION QUANTITIES FOR THIS PROJECT:

AGGREGATE SURFACE COURSE:	2.05 TONS/CU YD
BITUMINOUS MATERIALS (PRIME COAT):	0.30 GAL/SO YD
BITUMINOUS MATERIALS (COVER AND SEAL COAT):	0.35 GAL/SO YD
COVER AND SEAL COAT AGGREGATE:	23 LBS/SO YD
HOT MIX ASPHALT:	112 LBS/SQ YD/INCH
- CONTRACTOR SHALL FOLLOW CONSTRUCTION REQUIREMENTS OF SECTION 611 WHEN EXISTING FIELD TILE IS ENCOUNTERED UNLESS DIRECTED OTHERWISE BY THE ENGINEER. THIS WORK WILL BE PAID FOR IN ACCORDANCE WITH ARTICLE 109.04 OF THE STANDARD SPECIFICATIONS.
- THE CONTRACTOR SHALL REPLACE ALL STREET SIGNS REMOVED DURING CONSTRUCTION AS NEAR AS POSSIBLE TO THEIR ORIGINAL LOCATION OR AS DETERMINED BY THE ENGINEER. THIS WORK SHALL NOT BE PAID FOR SEPARATELY BUT SHALL BE CONSIDERED AS INCLUDED IN THE CONTRACT UNIT PRICES FOR THE WORK ITEMS SPECIFIED.
- THE PROPOSED GRADE ELEVATIONS SHOWN ON THE PLAN AND PROFILE SHEETS AND CROSS SECTION SHEETS ARE THE ELEVATIONS FOR THE FINISHED SURFACE AT THE LOCATIONS INDICATED.
- UTILITIES ARE SHOWN IN ACCORDANCE WITH THE BEST AVAILABLE INFORMATION AND THEIR TRUE LOCATION IS NOT GUARANTEED TO BE AS SHOWN ON THE PLANS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT LOCATION OF THE UTILITIES AND CARRY ON HIS/HER WORK OPERATIONS ACCORDINGLY.

HOT-MIX ASPHALT MIXTURE REQUIREMENTS			
ITEM	AGGREGATE COMPOSITION	ASPHALT GRADE	DESIGN AIR VOIDS
HMA SURFACE CSE	IL-9.5 MIX "C"	PG 64-22	4.0% @ N50

HOT-MIX ASPHALT QUANTITIES BASED ON 112 LB./SQ. YD./INCH

GUARDRAIL SCHEDULE

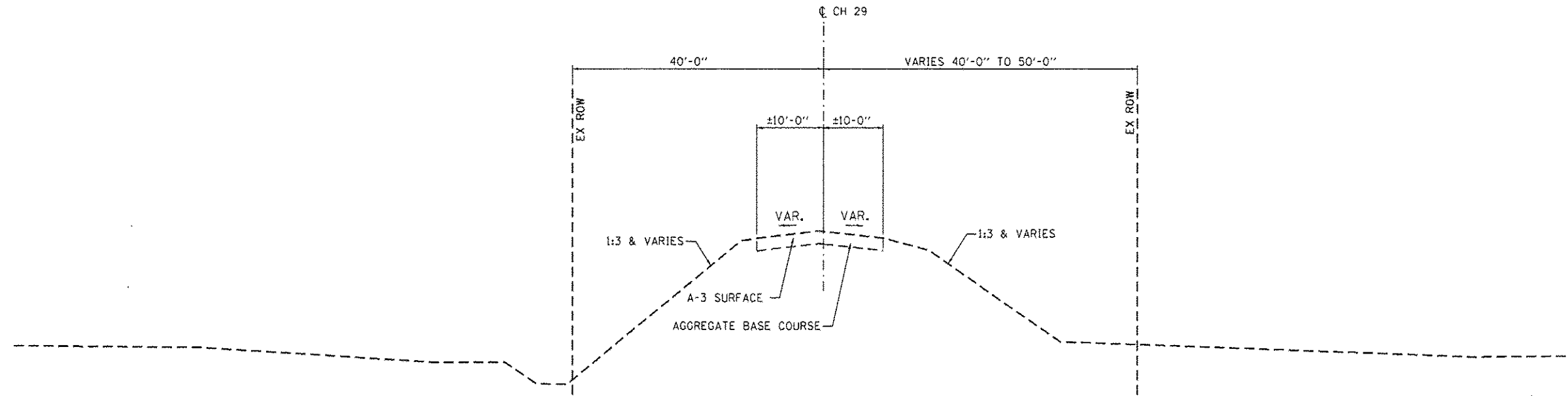
LOCATION	63100087 TRAFFIC BARRIER TERMINAL, TYPE 6A (EACH)	63100167 TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT (EACH)
STA. 98+33.13 TO STA. 98+83.13, LT		1
STA. 98+83.13 TO STA. 99+26.88, LT	1	
STA. 98+10.03 TO STA. 98+60.03, RT		1
STA. 98+60.03 TO STA. 99+03.78, RT	1	
STA. 100+96.22 TO STA. 101+39.97, LT	1	
STA. 101+39.97 TO STA. 101+89.97, LT		1
STA. 100+73.12 TO STA. 101+16.87, RT	1	
STA. 101+16.87 TO STA. 101+66.87, RT		1
TOTAL	4	4

EARTHWORK SCHEDULE

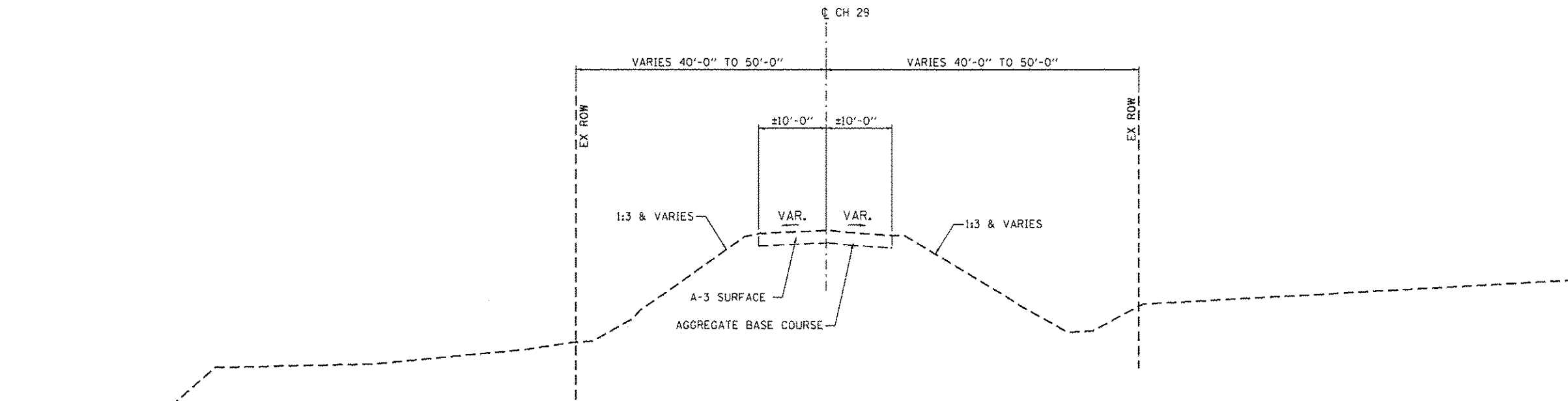
LOCATION	20200100	23000100	FOR INFORMATIONAL ONLY		20400800
	EARTH EXCAVATION	CHANNEL EXCAVATION	EXCAVATION TO BE USED IN EMBANKMENT (ADJUSTED FOR SHRINKAGE) (EXC. x 0.75)	EMBANKMENT (FILL)	EARTHWORK BALANCE WASTE(+) AND SHORTAGE (-)
	CU. YD.	CU. YD.	CU. YD.	CU. YD.	CU. YD.
STA. 97+00 TO STA. 99+15.33	18		14	368	-354
STA. 99+15.33 TO STA. 100+84.67		656	369		369
STA. 100+84.67 TO STA. 103+00	30		23	287	-264
TOTAL	48	656	406	655	-249

EARTH EXCAVATION SHRINKAGE FACTOR = 25% CHANNEL EX USED IN EMBANKMENT = 75%

** 93622



EXISTING TYPICAL SECTION
 STA. 97+00.00 TO STA. 100+00.00
 (LOOKING EAST)



EXISTING TYPICAL SECTION
 STA. 100+00.00 TO STA. 103+00.00
 (LOOKING EAST)

93622

Design firm
 no. 184001036



USER NAME * g.jameson	DESIGNED - JAC	REVISED
FILE NAME * TYPICAL_SHT.dgn	CHECKED - SDS	REVISED
PLOT SCALE * 20,0000 ' / IN.	DRAWN - GSJ	REVISED
PLOT DATE * 4/8/2014	CHECKED - SDS	REVISED

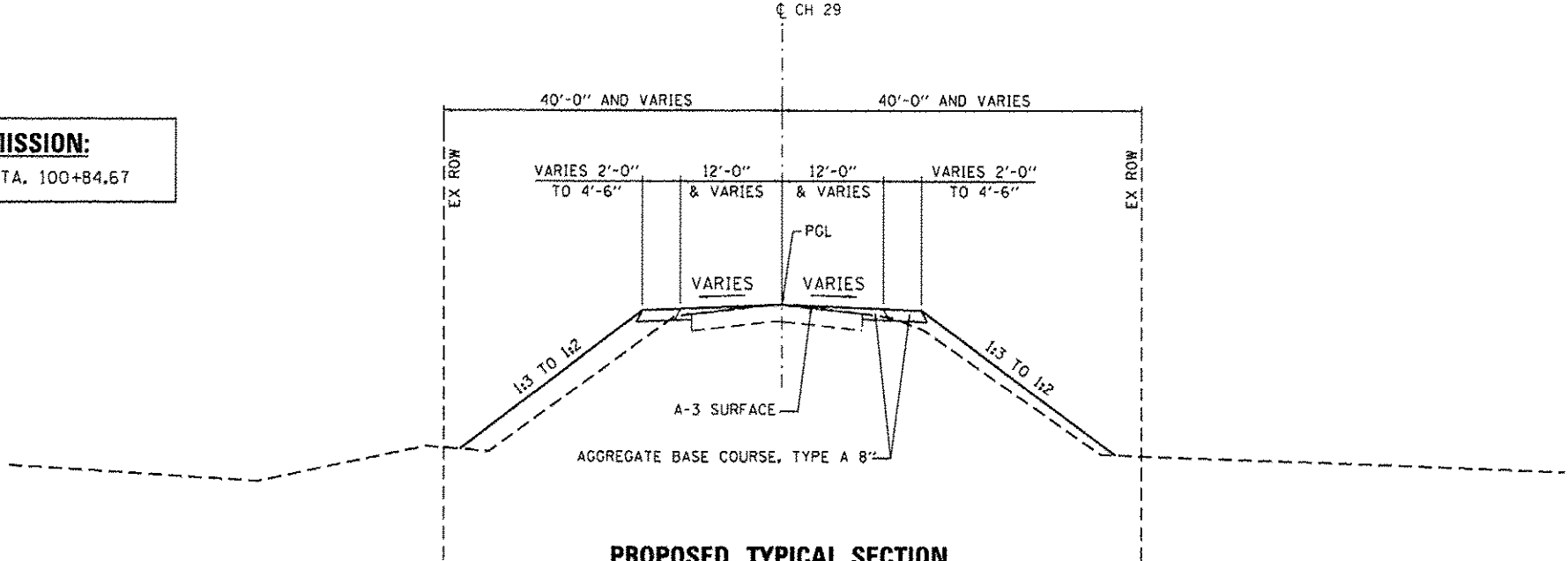
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

EXISTING TYPICAL SECTIONS
 CH 29

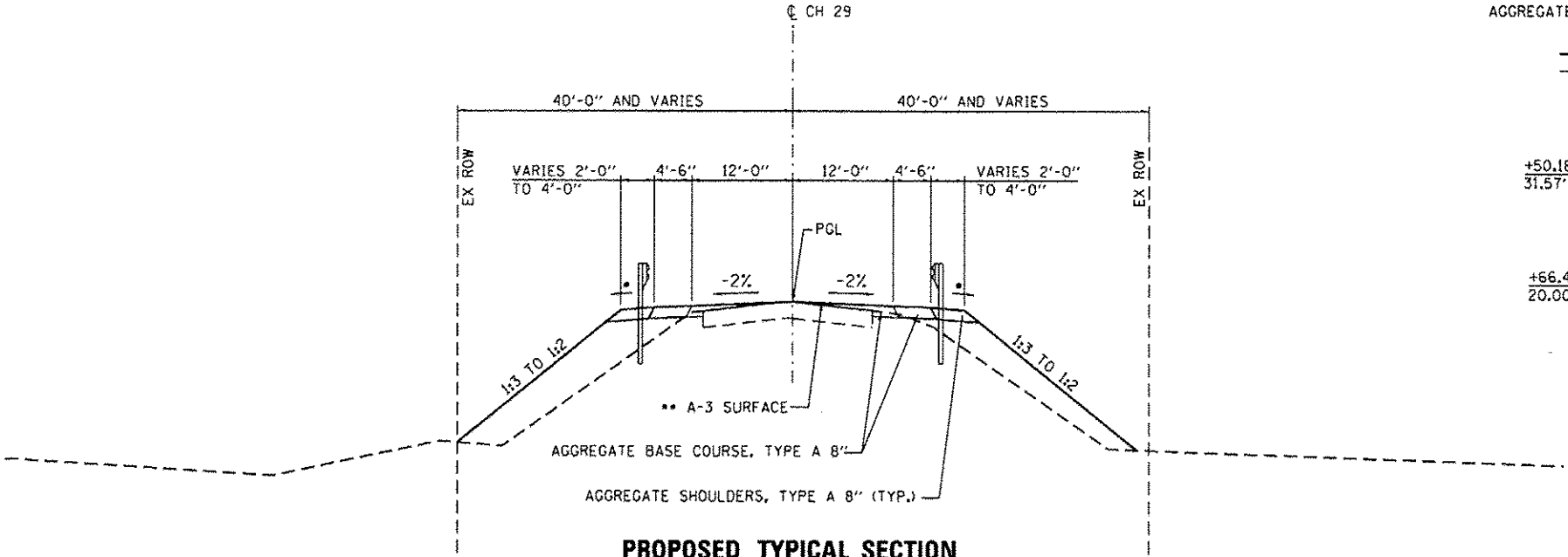
SCALE: 1" = 10' SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1643	13-00100-01-BR	SANGAMON	23	3
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				

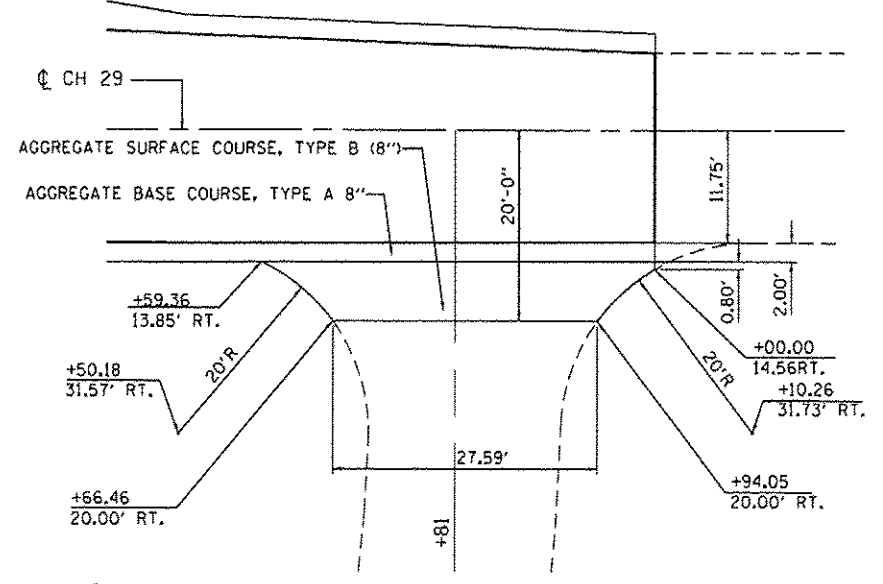
BRIDGE OMISSION:
STA. 99+15.33 TO STA. 100+84.67



PROPOSED TYPICAL SECTION
STA. 97+00.00 TO STA. 98+00.00
STA. 102+00.00 TO STA. 103+00.00
(LOOKING EAST)



PROPOSED TYPICAL SECTION
STA. 98+00.00 TO STA. 99+15.33
STA. 100+84.67 TO STA. 102+00.00
(LOOKING EAST)

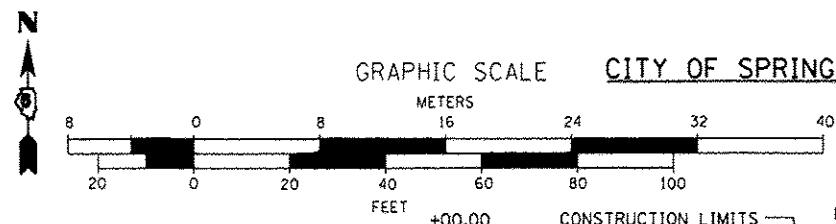


ENTRANCE DETAIL
STA. 102+81, RT.

- = -4%
- USE A-3 SURFACE AND/OR AGGREGATE SURFACE AS NEEDED TO MODIFY EXISTING CROSS SLOPE.

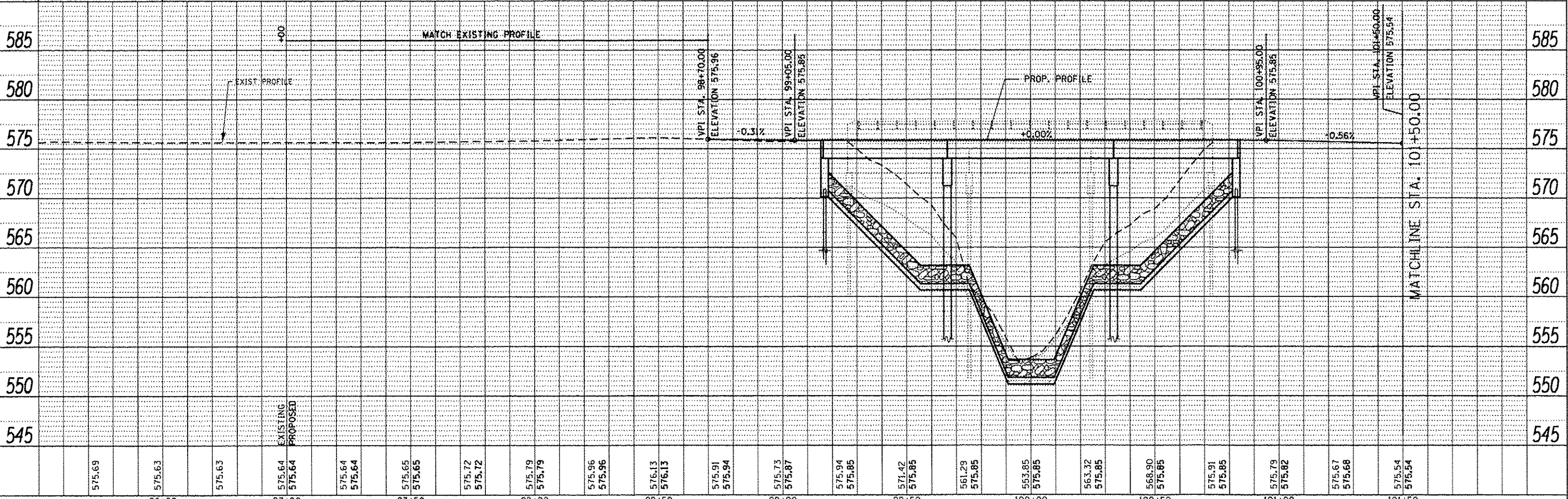
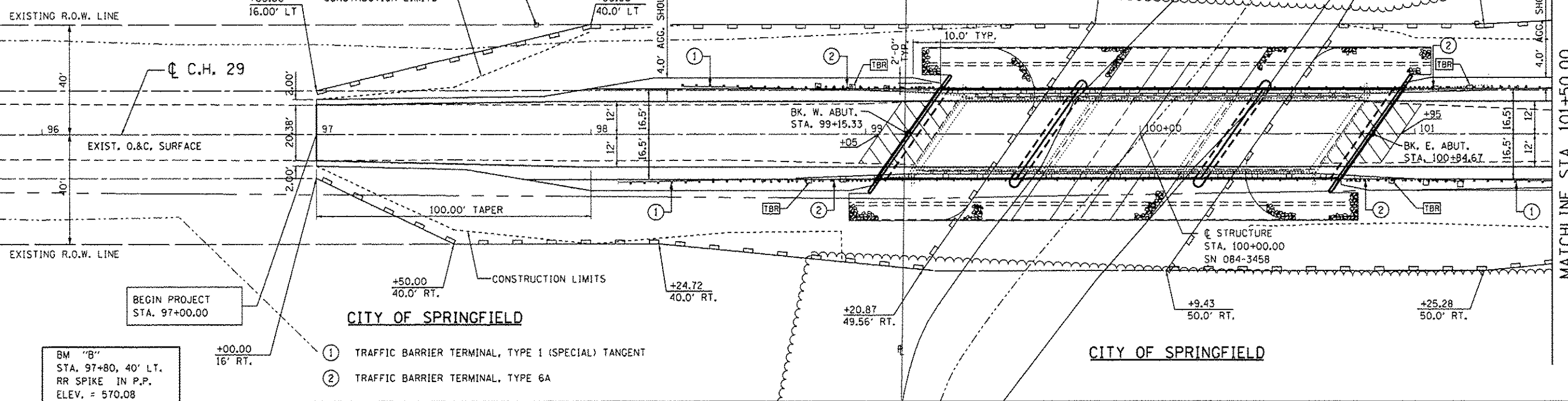
93622

design firm no. 194001036 wbks engineers • planners • land surveyors	USER NAME • gjemason	DESIGNED - JAC	REVISED	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PROPOSED TYPICAL SECTIONS CH 29		F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	FILE NAME • TYPICAL_S41.dgn	CHECKED - SDS	REVISED		1643	13-00100-01-BR	SANGAMON	23	4		
PLDT SCALE • 20,000' / IN.	DRAWN - CSJ	REVISED			SCALE: 1" = 10'	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	ILLINOIS FED. AID PROJECT		
PLDT DATE • 4/8/2014	CHECKED - SDS	REVISED									



LEGEND

- TBR TO BE REMOVED
- PERIMETER EROSION BARRIER
- PAVEMENT REMOVAL



PLAN

DATE	
BY	
CHECKED	
DATE	
NO.	

PROFILE

DATE	
BY	
CHECKED	
DATE	
NO.	

<p>engineers • planners • land surveyors</p>	USER NAME • g.johnson FILE NAME • PLAN_AND_PROFILE.dgn PLOT SCALE • 48,000 / IN. PLOT DATE • 4/8/2014	DESIGNED - JAC CHECKED - SDS DRAWN - GSJ CHECKED - SDS	REVISED REVISED REVISED REVISED	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PLAN AND PROFILE - CH29	SCALE: 1" = 20' SHEET NO. 1 OF 2 SHEETS STA. 97+00.00 TO STA. 101+50.00	F.A.S. RTE. 1643 SECTION 13-00100-01-BR COUNTY SANGAMON TOTAL SHEETS 23 SHEET NO. 5	CONTRACT NO.
	ILLINOIS FED. AID PROJECT							

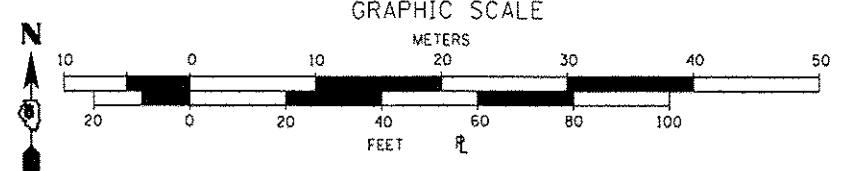
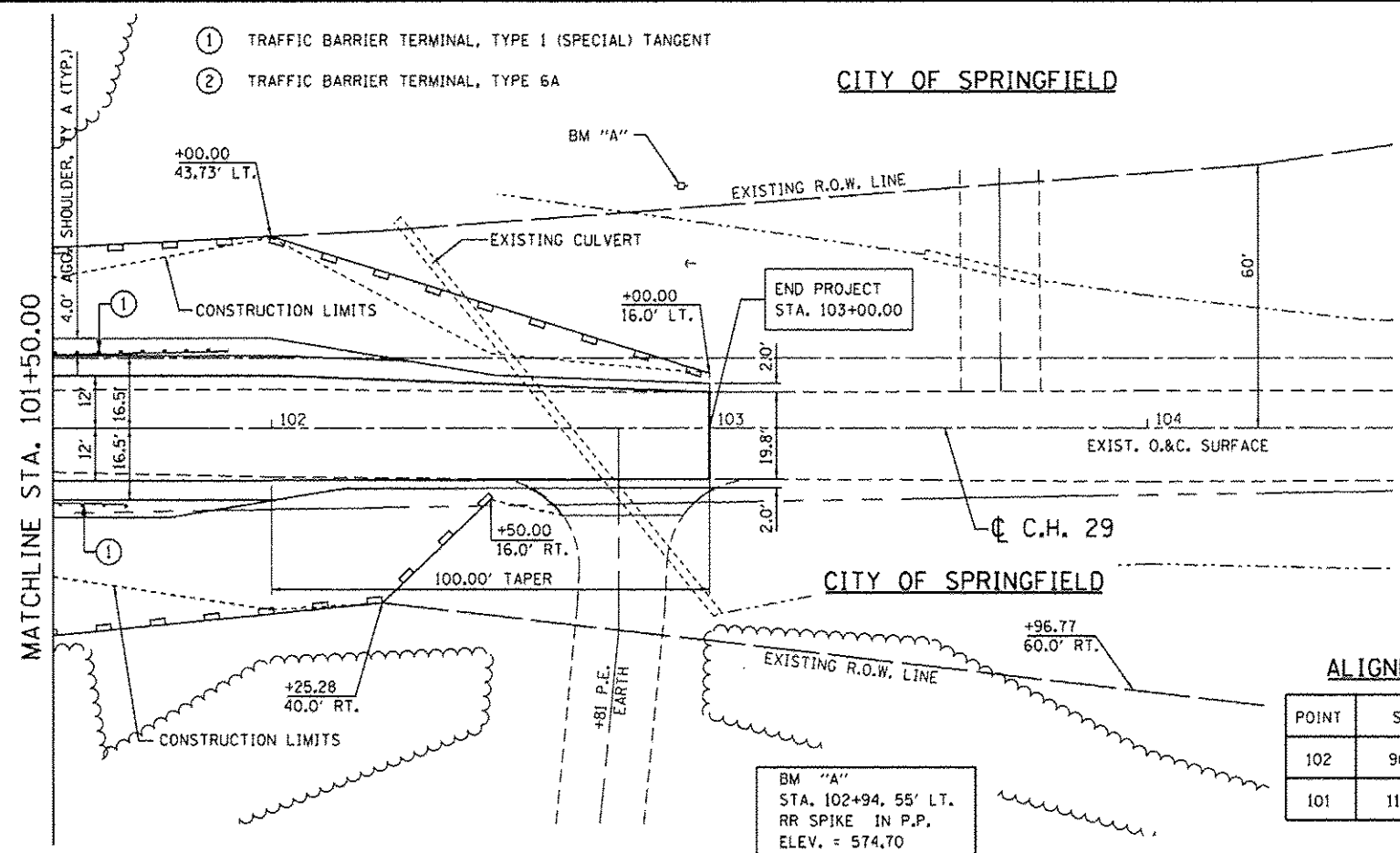
93622

PLAN	SUBMITTED	DATE
	NOTED	
	DESIGNED	
	CHECKED	
	DRAWN	
	DATE	

PROFILE	SUBMITTED	DATE
	NOTED	
	DESIGNED	
	CHECKED	
	DRAWN	
	DATE	

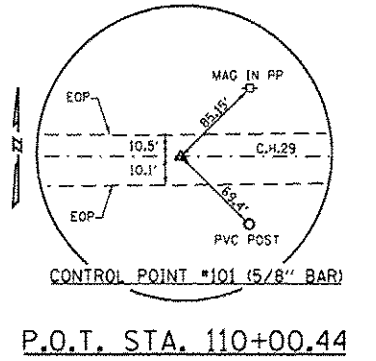
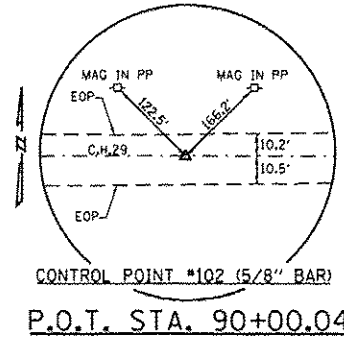
- ① TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT
- ② TRAFFIC BARRIER TERMINAL, TYPE 6A

CITY OF SPRINGFIELD



LEGEND

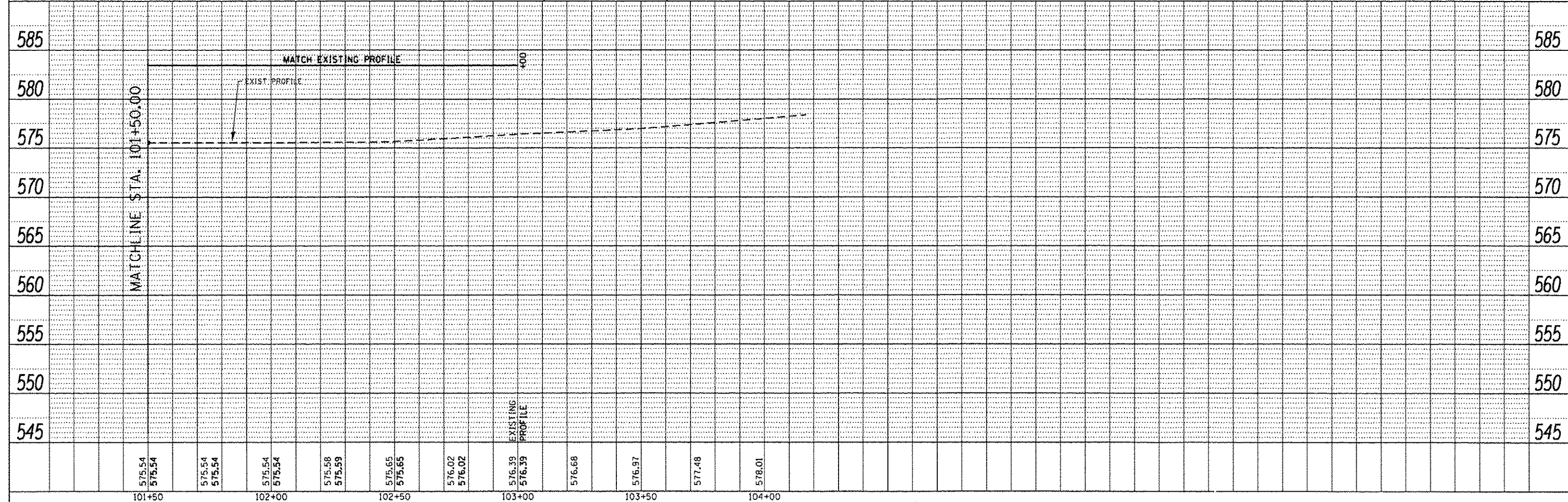
- TO BE REMOVED
- PERIMETER EROSION BARRIER
- PAVEMENT REMOVAL



ALIGNMENT COORDINATES CH 29

POINT	STATION	N	E
102	90+00.04	1,078,351.7320	2,452,520.8600
101	110+00.44	1,078,410.1420	2,454,520.4080

BM "A"
STA. 102+94.55' LT.
RR SPIKE IN P.P.
ELEV. = 574.70



Design firm: **whks**
no. 184001036
engineers • planners • land surveyors

USER NAME • gjameson	DESIGNED - JAC	REVISED
FILE NAME • PLAN_AND_PROFILE.dgn	CHECKED - SDS	REVISED
PLOT SCALE • 48.0000' / 1"	DRAWN - GSJ	REVISED
PLOT DATE • 4/8/2014	CHECKED - SDS	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE - CH29

SCALE: 1" = 20' SHEET NO. 2 OF 2 SHEETS STA. 101+50.00 TO STA. 103+00.00

F.A.S. RTE. 1643	SECTION 13-00100-01-BR	COUNTY SANGAMON	TOTAL SHEETS 23	SHEET NO. 6
CONTRACT NO.				ILLINOIS FED. AID PROJECT

93622

Benchmark: BM "A" Railroad spike in South face of wood power pole, Sta. 102+94.55' Lt., Elevation 574.7
 Existing Structure: S.N. 084-3038 was built in 1961 as FAS Route 1643 (CH 29) Section 100B. The existing structure is a three span PPC deck beam superstructure supported on timber pile bent abutments and precast concrete pile bent piers, 148'-6" back to back of abutments, 28'-0" out to out. Road to be closed during construction.
 No salvage

BRUSH CREEK
 BUILT 20 BY
 SANGAMON COUNTY
 SEC. 13-00100-01-BR
 STATION 100+00
 STR. NO. 084-3438 LOADING HL-93
NAME PLATE
 See Std. 515001

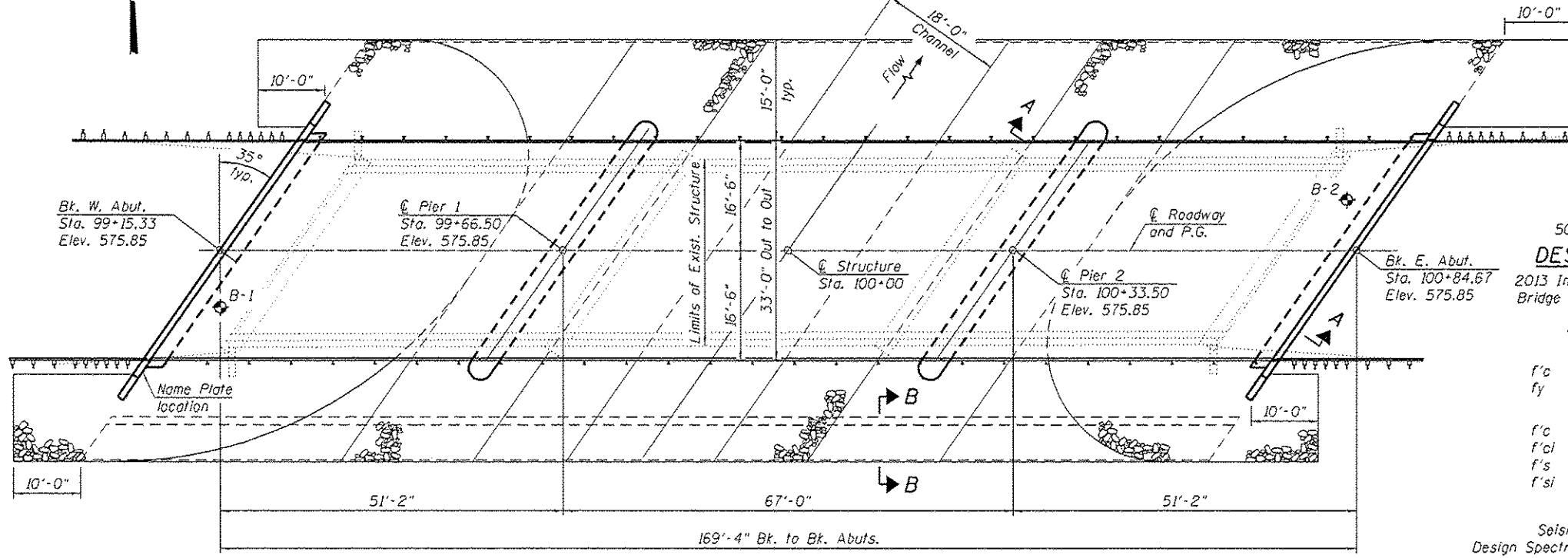
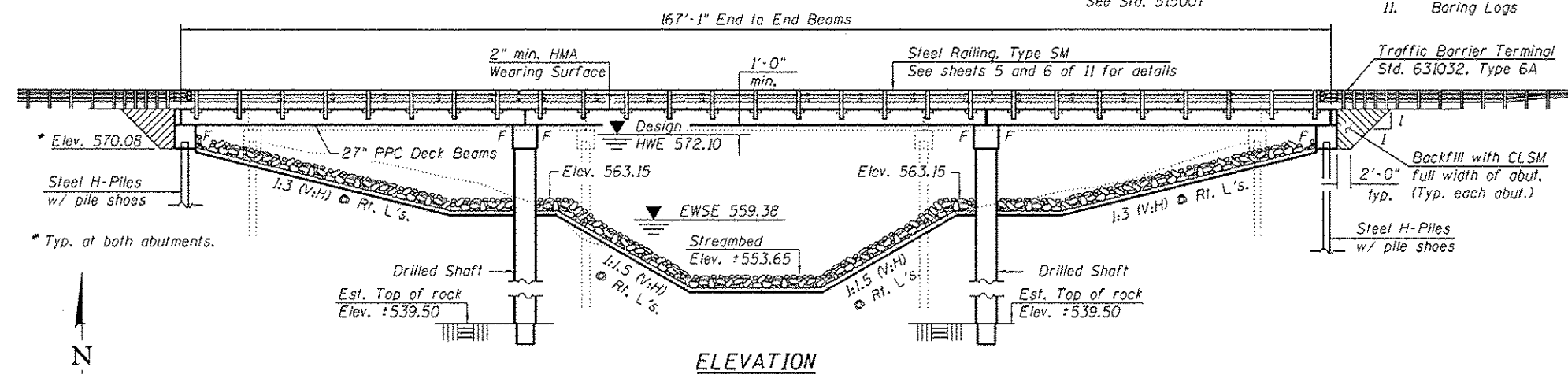
- INDEX OF SHEETS**
1. General Plan and Elevation
 - 2.-4. PPC Deck Beam Details
 5. Superstructure Details
 6. Steel Railing, Type SM
 7. West Abutment
 8. East Abutment
 9. Piers
 10. HP Pile Details
 11. Boring Logs

GENERAL NOTES

Reinforcement bars designated (E) shall be epoxy coated.
 Protective coat shall not be applied to surfaces to which Waterproofing Membrane System is applied.
 Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.
 Construction permits: The requirements of the INDR-Office of Water Resources have been fulfilled in accordance with Statewide Permit No. 2.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Channel Excavation	Cu. Yd.		656	656
Stone Riprap, Class A5	Sq. Yd.		1,350	1,350
Filter Fabric	Sq. Yd.		1,350	1,350
Hot-Mix Asphalt Surface Course, Mix "C", NSO	Ton	84		84
Removal of Existing Structures	Each	1		1
Structure Excavation	Cu. Yd.		186	186
Concrete Structures	Cu. Yd.		96.6	96.6
Precast Prestressed Concrete Deck Beams (27" Depth)	Sq. Ft.	5,509		5,509
Reinforcement Bars	Pound		11,540	11,540
Reinforcement Bars, Epoxy Coated	Pound		38,910	38,910
Steel Railing, Type SM	Foot	339		339
Furnishing Steel Piles HP12 x 53	Foot		374	374
Driving Piles	Foot		374	374
Test Pile Steel HP12 x 53	Each		1	1
Pile Shoes	Each		12	12
Name Plates	Each	1		1
Permanent Casing	Foot		253	253
Drilled Shaft in Soil	Cu. Yd.		90.9	90.9
Drilled Shaft in Rock	Cu. Yd.		52.4	52.4
Waterproofing Membrane System	Sq. Yd.	613		613
Portland Cement Mortar Fairing Course	Foot	1,002		1,002
Controlled Low-Strength Material	Cu. Yd.		72	72
Asbestos Bearing Pad Removal	Each		18	18



LOADING HL-93

50 psf future wearing surface.

DESIGN SPECIFICATIONS

2013 Interim Revisions to AASHTO LRFD Bridge Design Specifications, 6th Edition

DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi
 fy = 60,000 psi (Reinforcement)

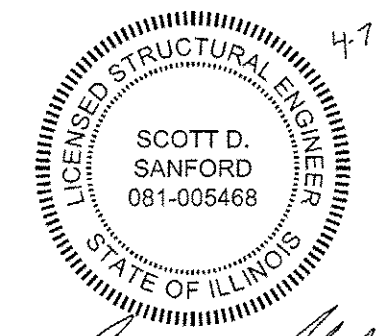
PRECAST UNITS

f'c = 6,000 psi
 f'ci = 5,000 psi
 f's = 270,000 psi (1/2" low-lax strands)
 f'si = 201,960 psi (1/2" low-lax strands)

SEISMIC DATA

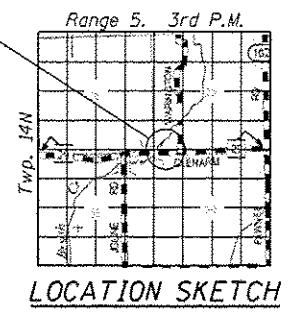
Seismic Performance Zone (SPZ) = 1
 Design Spectral Acceleration at 1.0 sec. (S₀₁) = 0.115g
 Design Spectral Acceleration at 0.2 sec. (S₀₅) = 0.230g
 Soil Site Class = C

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



Signature
 Expires: 11/30/2014

GENERAL PLAN AND ELEVATION
 CH 29 (GLENARM ROAD)
 OVER BRUSH CREEK
 SECTION 13-00100-01-BR
 SANGAMON COUNTY
 STATION 100+00
 STRUCTURE NO. 084-3438



DESIGN SCOUR ELEVATION TABLE

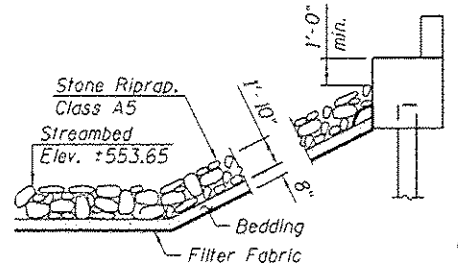
Design Scour Elevation (ft.)	W. Abut.	Pier 1	Pier 2	E. Abut.
	570.08	555.31	555.31	570.08

WATERWAY INFORMATION

Drainage Area = 37 sq. mi. Exist. Low Grade Elev. = 575.54 @ Sta. 101+50
 Prop. Low Grade Elev. = 575.54 @ Sta. 101+50

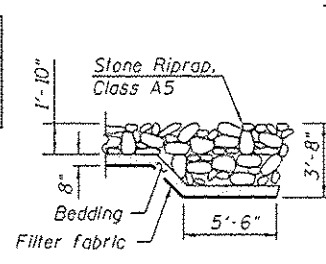
Flood	Freq. Yr.	C.F.S.	Opening Sq. Ft.		Nat. H.W.E.		Head - Ft.		Headwater El.	
			Exist.	Prop.	H.W.E.	Exist.	Prop.	Exist.	Prop.	
Design	20	3710	969	1189	572.1	0.3	0.1	572.4	572.2	
Base	100	5480	1128	1340	573.9	0.6	0.3	574.5	574.2	
Max. Calc.	500	7320	1128	1340	575.4	0.9	0.6	576.3	576.0	

PLAN

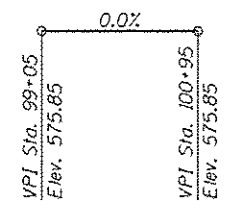


LEGEND

Soil Boring location.



PROPOSED PROFILE GRADE
 (Along E Roadway)

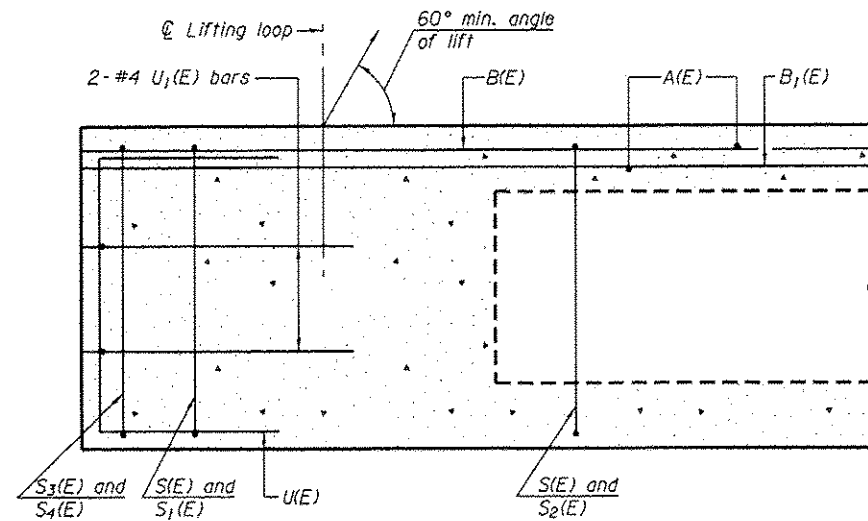


USER NAME	DESIGNED	REVISOR
dheberling	BRD	
FILE NAME = 0843038-00000.dgn	CHECKED - SBC	REVISOR
PLOT SCALE = 0.20000 1" = 10'	DRAWN - DLH	REVISOR
PLOT DATE = 4/14/2014	CHECKED - SBC	REVISOR

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

SHEET NO. 1 OF 11 SHEETS

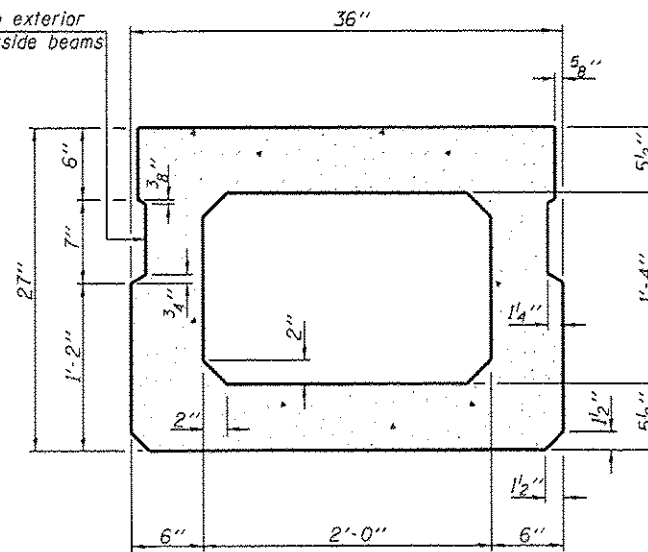
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1643	13-00100-01-BR	SANGAMON	23	7
			CONTRACT NO. 93622	



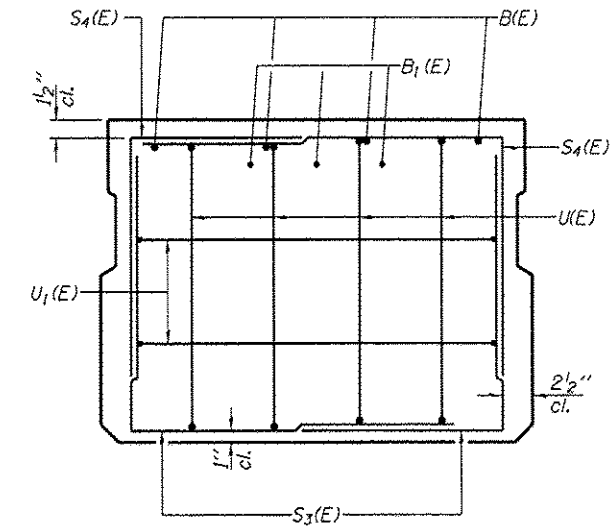
SECTION A-A

* Rail post anchor devices to be cast into exterior face of outside beams. See sheets 5 and 6 of 11 for locations.

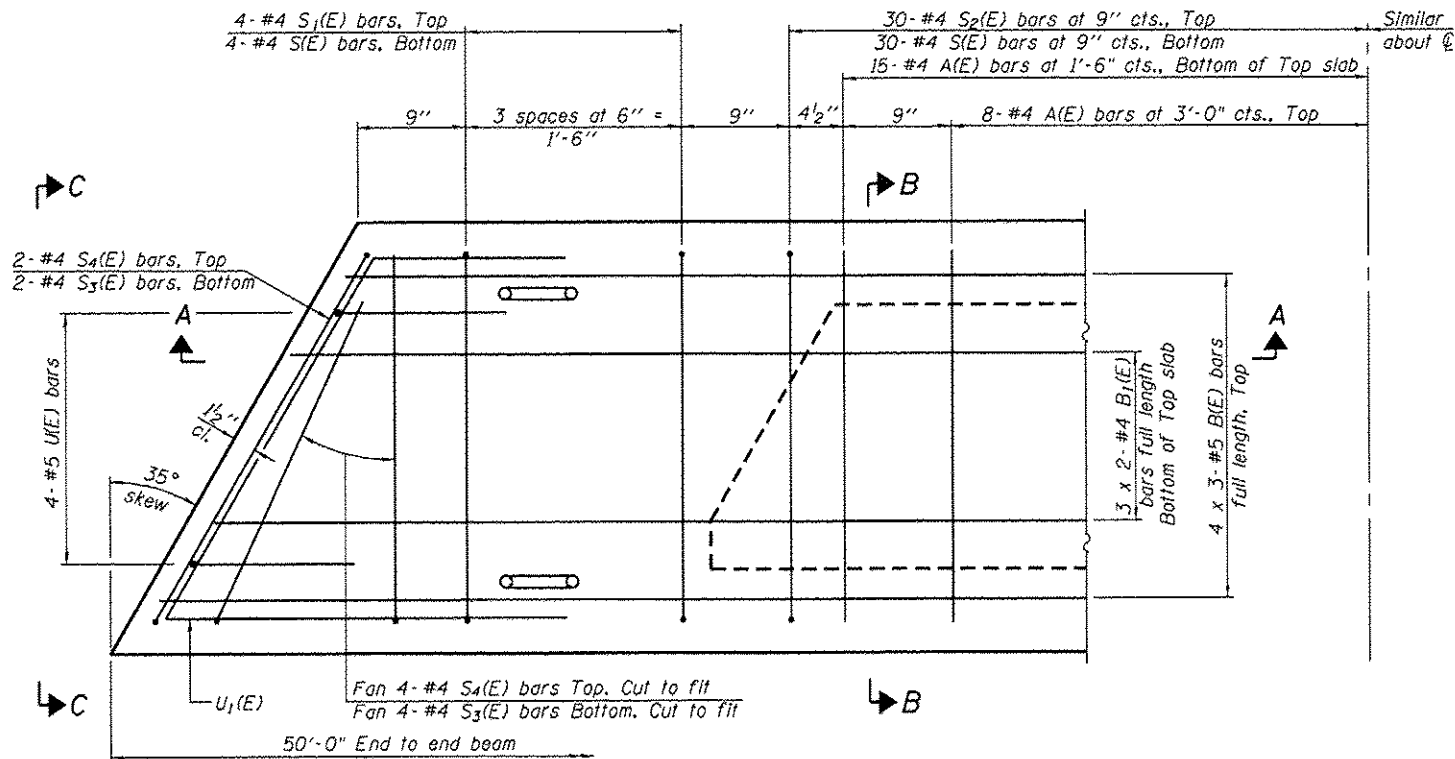
* Omit key on exterior face of outside beams



SECTION B-B
(Showing dimensions)

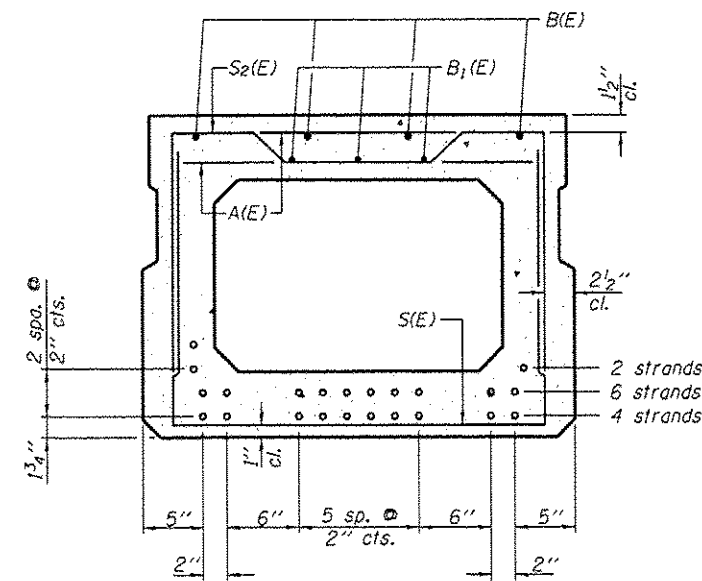


VIEW C-C



PLAN VIEW

Note: Spacing of S(E) and S2(E) bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.



SECTION B-B

(Showing reinforcement and permissible strand locations)
Note: Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.

BAR LIST
ONE BEAM ONLY
(For information only)

Bar	No.	Size	Length	Shape
A(E)	46	#4	2'-7"	—
B(E)	12	#5	18'-4"	—
B1(E)	6	#4	26'-0"	—
S(E)	68	#4	6'-5"	┌
S1(E)	8	#4	5'-11"	┌
S2(E)	60	#4	6'-2"	┌
S3(E)	12	#4	4'-3"	┌
S4(E)	12	#4	4'-0"	┌
U(E)	8	#5	4'-6"	┌
U1(E)	4	#4	7'-4"	┌

Bars indicated thus 20 x 3-#5 etc. indicates 20 line of bars with 3 lengths per line.

Note:
See sheets 3, 4 and 5 of 11 for additional details and Bill of Material.

MINIMUM BAR LAP

#4 bar = 2'-0"
#5 bar = 2'-6"

PD-2736-L 7-1-10



USER NAME • g.jameson	DESIGNED - BRD	REVISED
FILE NAME • 0043038-02000.dgn	CHECKED - SBC	REVISED
PLOT SCALE • 0:2.0000 1' / IN.	DRAWN - DLH	REVISED
PLOT DATE • 4/8/2014	CHECKED - SBC	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

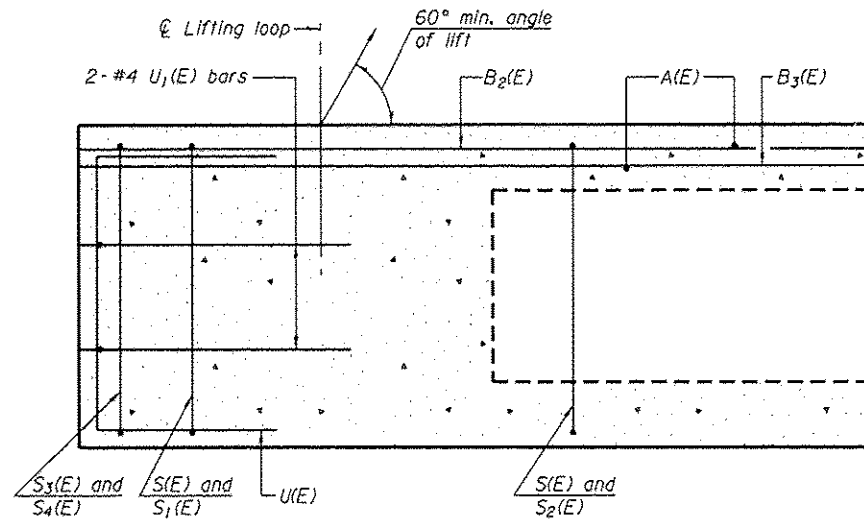
27" x 36" PPC DECK BEAM (SPANS 1 AND 3)
STRUCTURE NO. 084-3438

SHEET NO. 2 OF 11 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1643	13-00100-01-BR	SANGAMON	23	8
CONTRACT NO.				

ILLINOIS FED. AID PROJECT

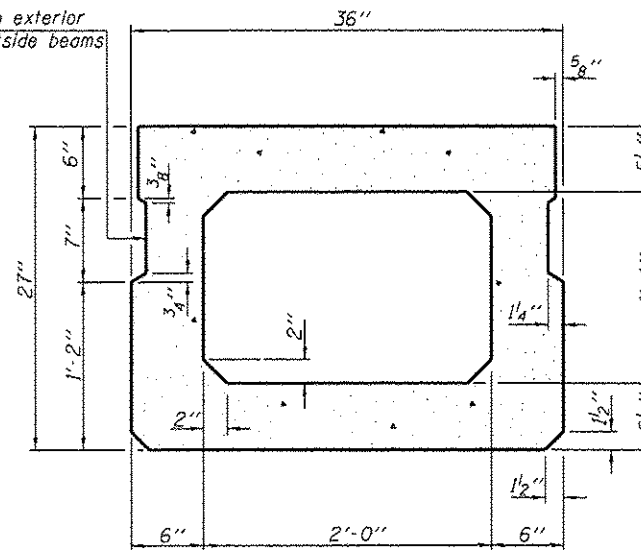
93622



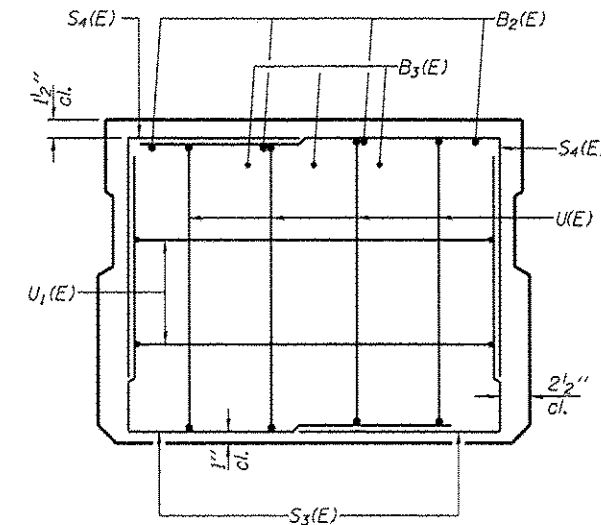
SECTION A-A

* Roll post anchor devices to be cast into exterior face of outside beams. See sheets 5 and 6 of 11 for locations.

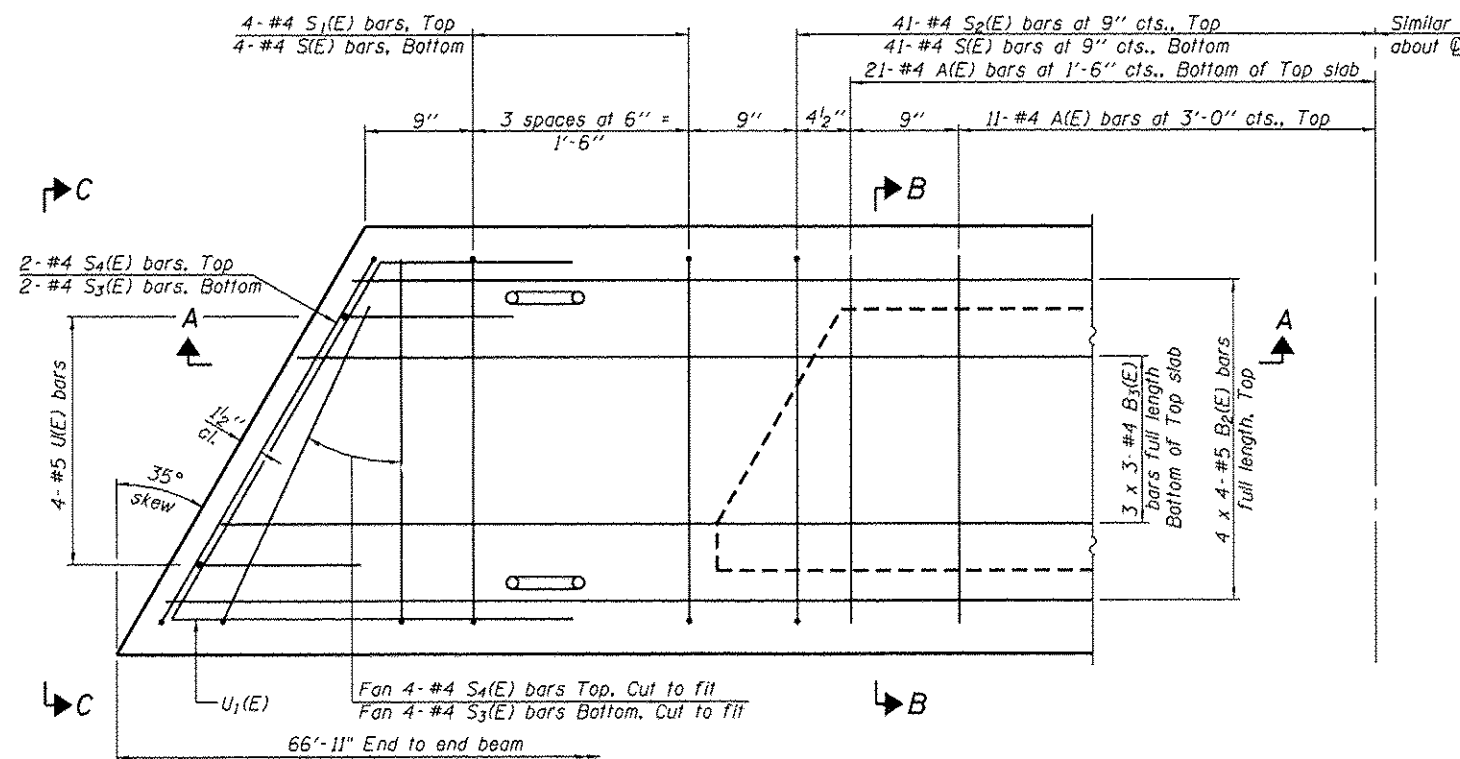
* Omit key on exterior face of outside beams



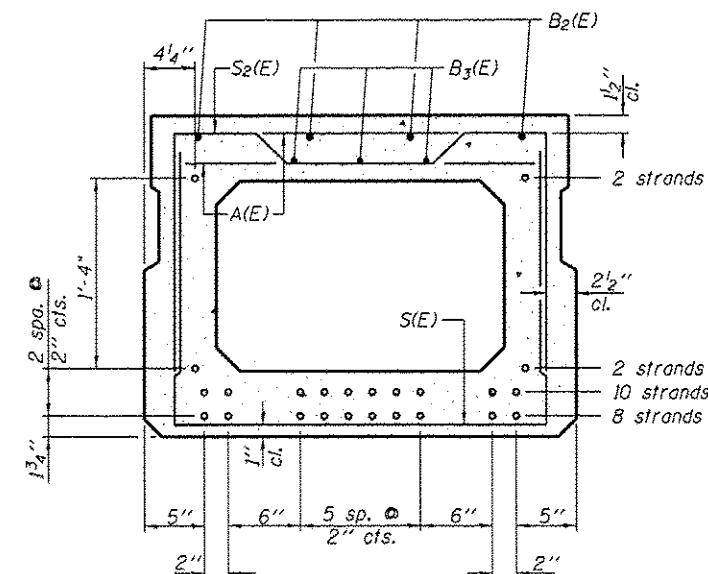
SECTION B-B
(Showing dimensions)



VIEW C-C



PLAN VIEW



SECTION B-B

(Showing reinforcement and permissible strand locations)
Note: Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.

BAR LIST
ONE BEAM ONLY
(For information only)

Bar	No.	Size	Length	Shape
A(E)	64	#4	2'-7"	—
B2(E)	16	#5	18'-8"	—
B3(E)	9	#4	23'-8"	—
S(E)	90	#4	6'-5"	U
S1(E)	8	#4	5'-11"	U
S2(E)	82	#4	6'-2"	U
S3(E)	12	#4	4'-3"	U
S4(E)	12	#4	4'-0"	U
U(E)	8	#5	4'-6"	U
U1(E)	4	#4	7'-4"	U

Bars indicated thus 20 x 3-#5 etc. indicates 20 line of bars with 3 lengths per line.

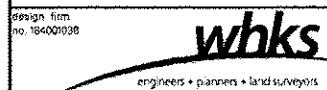
Note:
See sheets 2, 4 and 5 of 11 for additional details and Bill of Material.

Note: Spacing of S(E) and S2(E) bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.

MINIMUM BAR LAP

#4 bar = 2'-0"
#5 bar = 2'-6"

PD-2736-L 7-1-10



USER NAME • g.jamison	DESIGNED • BRD	REVISED
FILE NAME • 0843038-02020.dgn	CHECKED • SBC	REVISED
PLOT SCALE • 0:2.0000 1" = 1"	DRAWN • DLH	REVISED
PLOT DATE • 4/8/2014	CHECKED • SBC	REVISED

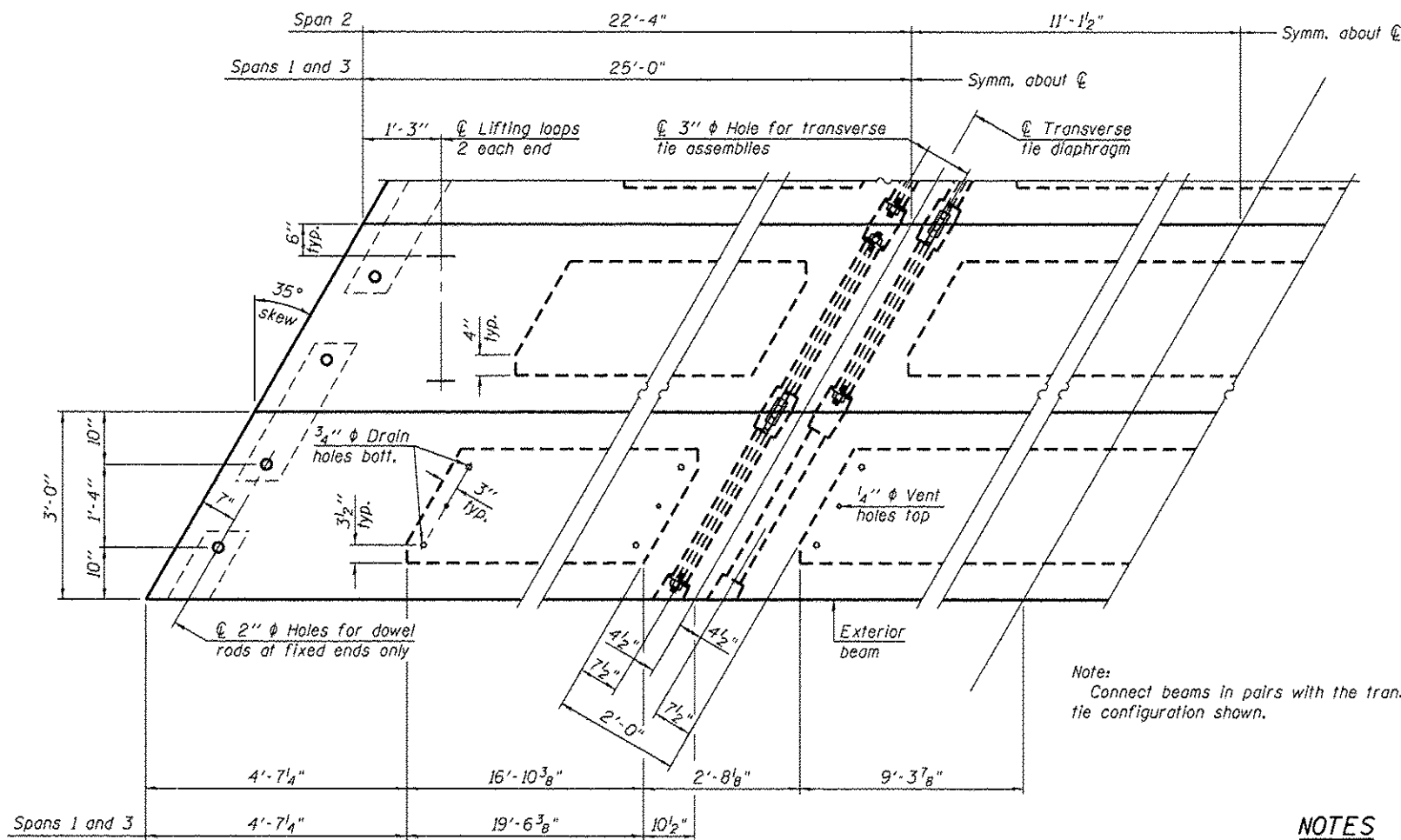
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

27" x 36" PPC DECK BEAM (SPAN 2)
STRUCTURE NO. 084-3438

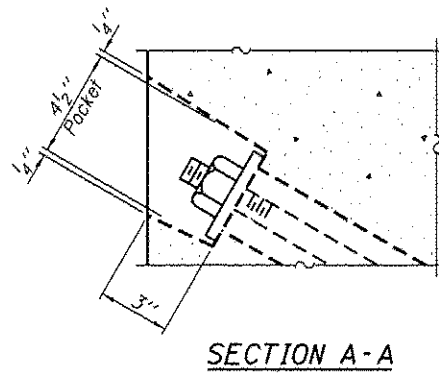
SHEET NO. 3 OF 11 SHEETS

F.A.S. RTE. 1643	SECTION 13-00100-01-BR	COUNTY SANGAMON	TOTAL SHEETS 23	SHEET NO. 9
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				

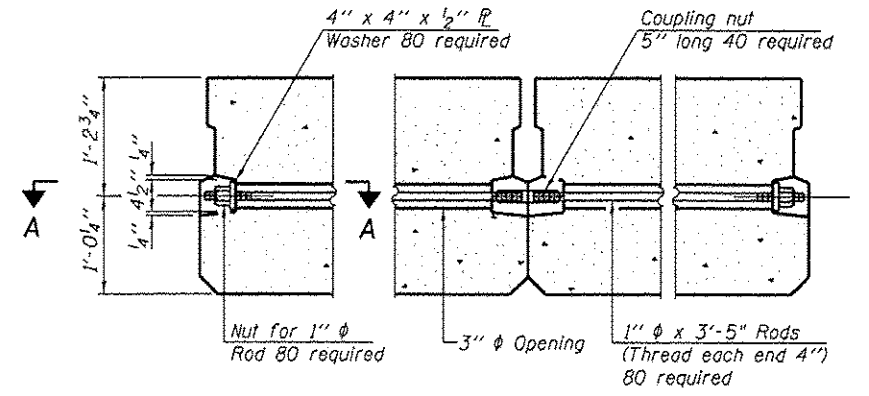
93022



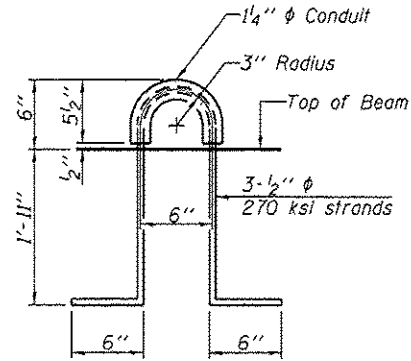
PLAN VIEW



SECTION A-A



TYPICAL TRANSVERSE TIE ASSEMBLY

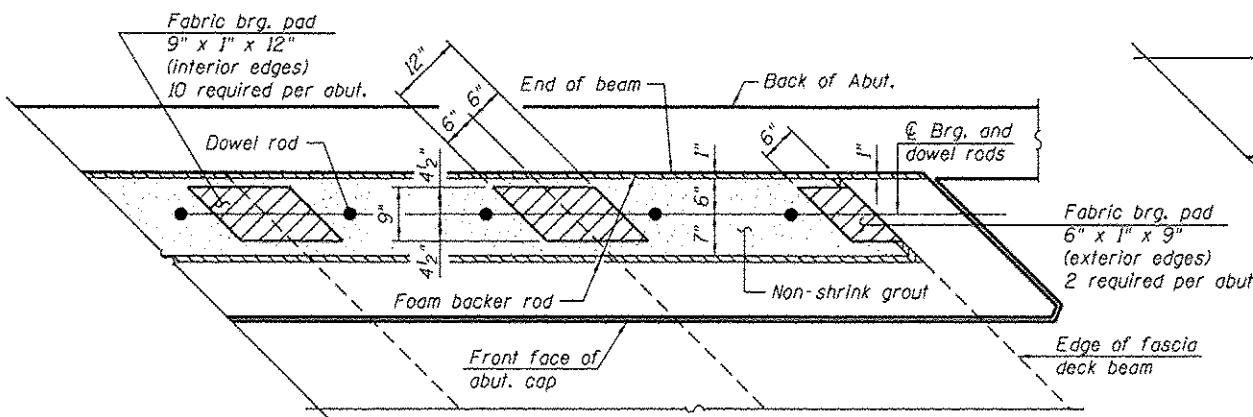


LIFTING LOOP DETAIL

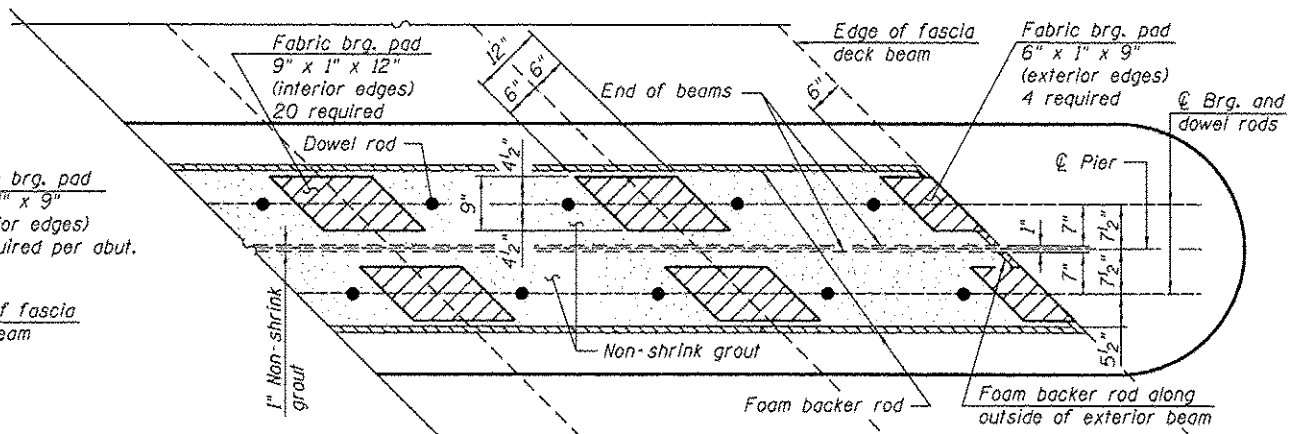
Note:
Connect beams in pairs with the transverse tie configuration shown.

NOTES

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in. The 1" rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place. Reinforcement bars shall conform to ASTM A 706, Grade 60. A minimum 2 1/2" lifting pin shall be used to engage the lifting loops during handling. Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams. Compressive strength of prestressed concrete, f'c, shall be 6000 psi. Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.

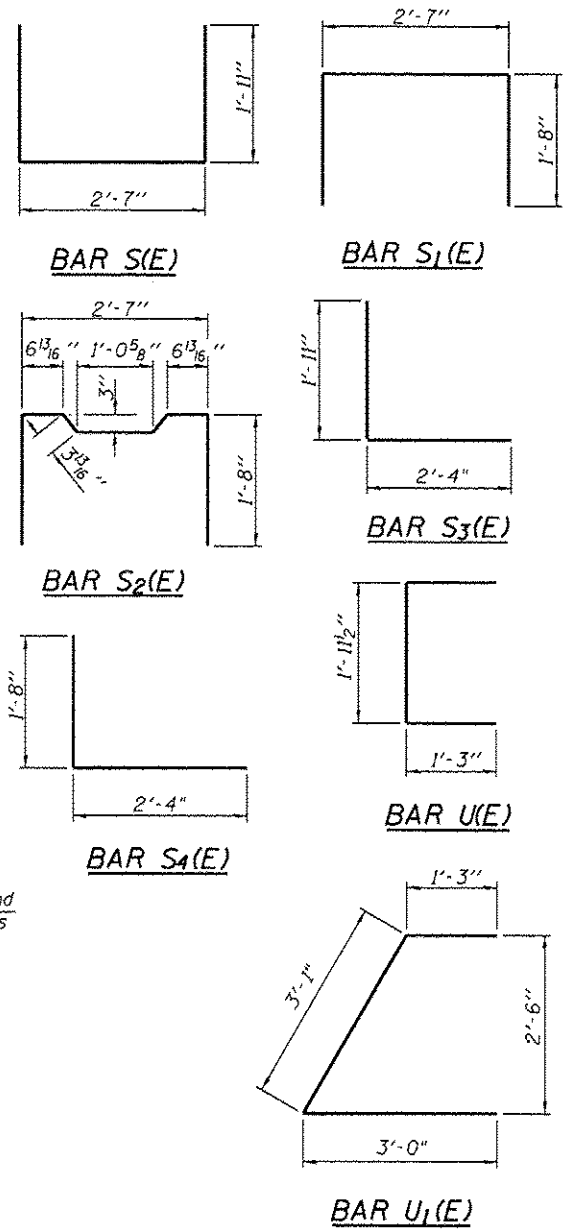


ABUTMENT BEARING DETAILS



PIER BEARING DETAILS

Notes:
The bearing seat surfaces shall be adjusted by shimming the bearing to assure firm and even bearing prior to placement of grout. 2-1/8" fabric adjusting shims of the dimensions of the exterior bearing pad shown shall be provided for each bearing. See sheet 5 of 11 for Section thru Abutment and Section thru Pier.



BILL OF MATERIAL

Precast Prestressed Conc. Deck Bms. (27" depth)	Sq. Ft.	5,509
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USER NAME • g.jameson	DESIGNED - BRD	REVISED
FILE NAME • 0843038-02020.dgn	CHECKED - SBC	REVISED
PLOT SCALE • 1/2" = 1'-0"	DRAWN - DLH	REVISED
PLOT DATE • 4/8/2014	CHECKED - SBC	REVISED

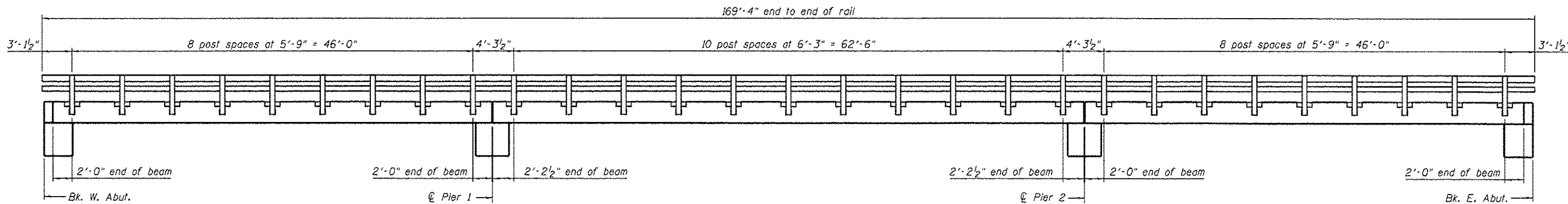
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

27" x 36" PPC DECK BEAM DETAILS
STRUCTURE NO. 084-3438

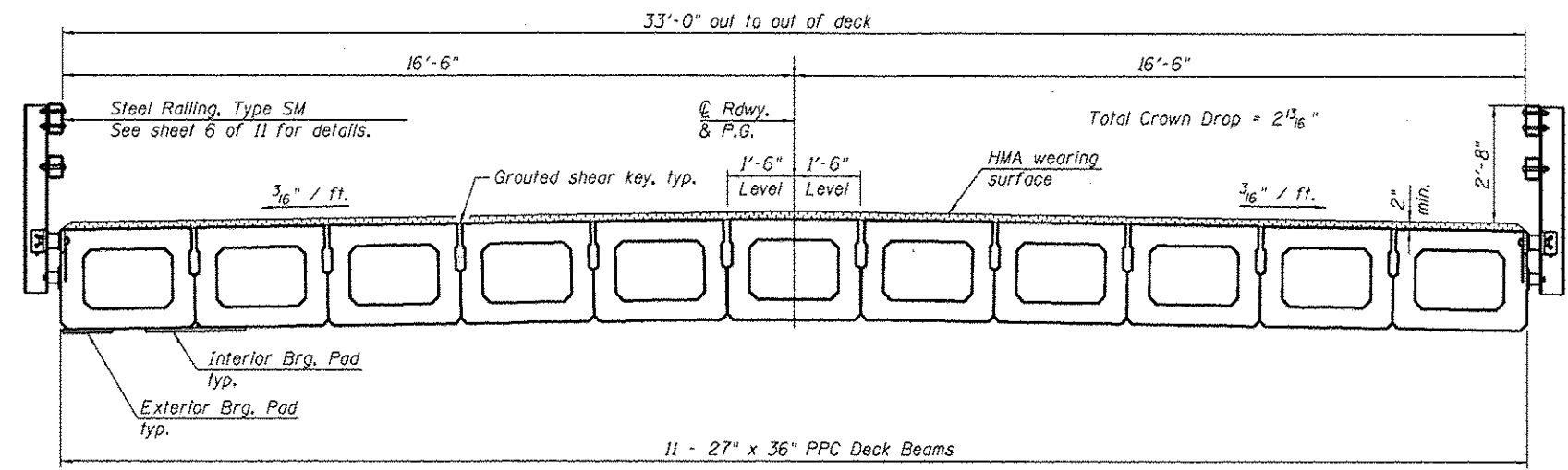
SHEET NO. 4 OF 11 SHEETS

F.A.S. RTE. 1643	SECTION 13-00100-01-BR	COUNTY SANGAMON	TOTAL SHEETS 23	SHEET NO. 10
CONTRACT NO.			ILLINOIS FED. AID PROJECT	

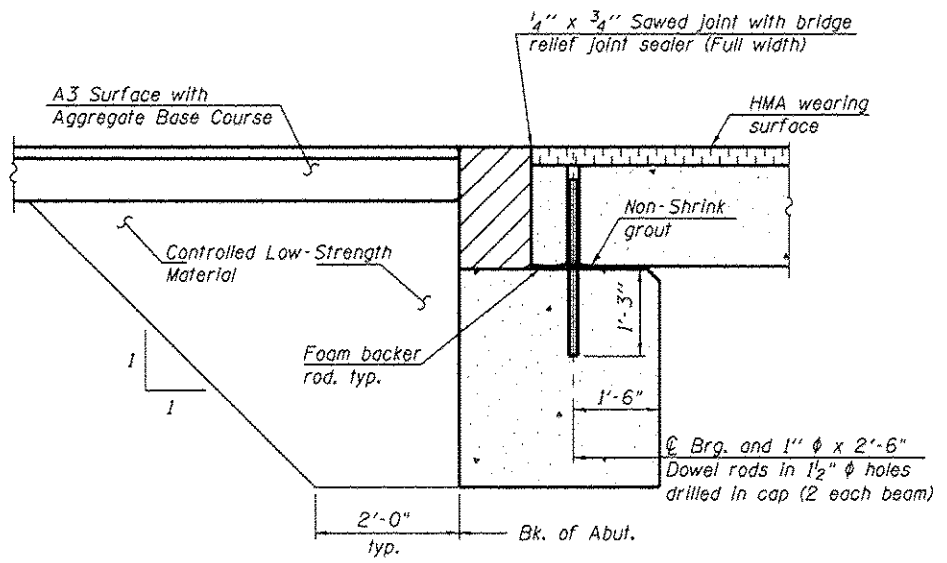
93022



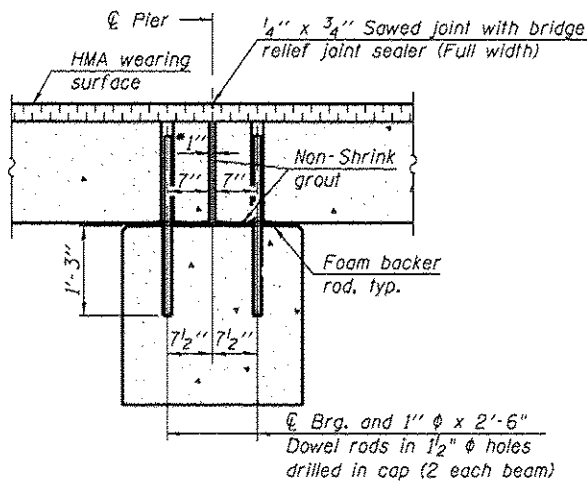
RAIL POST SPACING



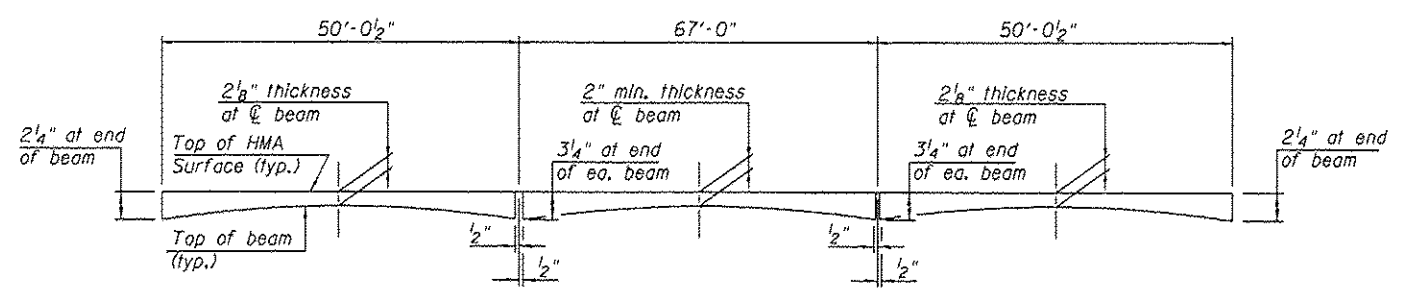
CROSS SECTION
(Looking East)



SECTION THRU ABUTMENT
(Horizontal dimensions are at Rt. L's)



SECTION THRU PIER
(Horizontal dimensions are at Rt. L's)



HOT-MIX ASPHALT WEARING SURFACE PROFILE
(For information only)

Notes:
Dowel rods at ends of deck beams shall be installed, non-shrink grout placed and cured for a minimum of 24 hrs prior to grouting the shear keys. Cost included with Precast Prestressed Concrete Deck Beams (27" Depth). See sheet 4 of 11 for Bearing Details.

* 1" Jt. shall be filled with non-shrink grout. 1" dimension may vary to accommodate tolerance in beam lengths.



USER NAME • g.jameson	DESIGNED - BRD	REVISIONS
FILE NAME • 0843038-00000.dgn	CHECKED - SBC	REVISIONS
PLOT SCALE • 0/2,000 1" = 10'	DRAWN - DLH	REVISIONS
PLOT DATE • 4/8/2014	CHECKED - SBC	REVISIONS

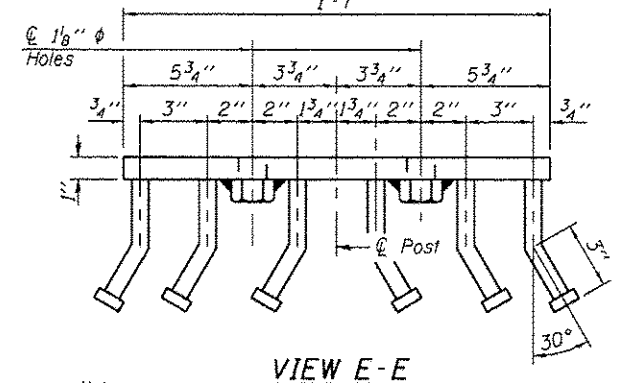
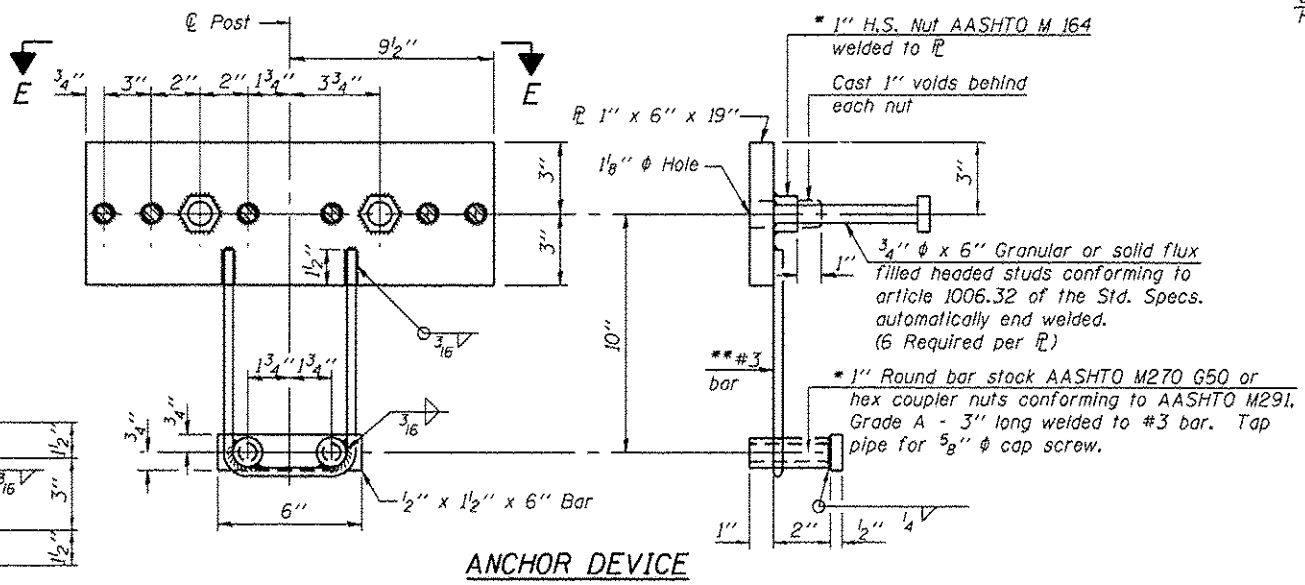
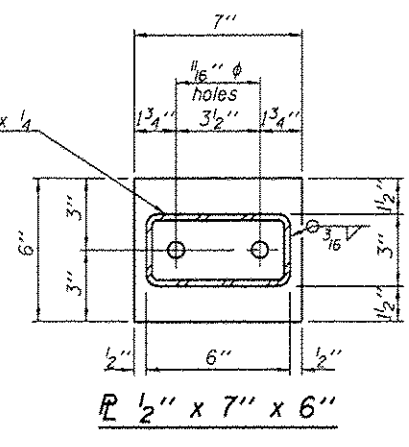
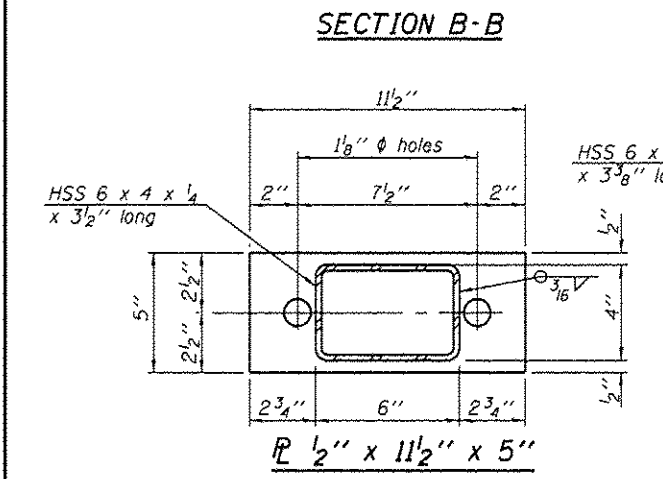
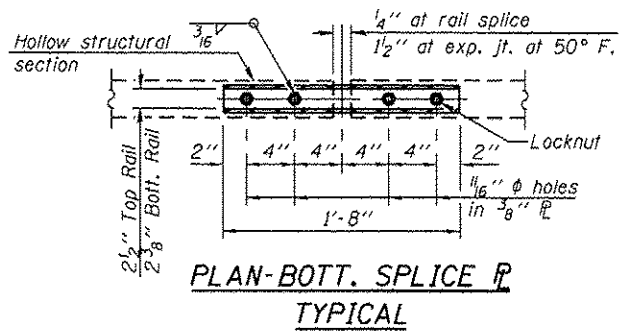
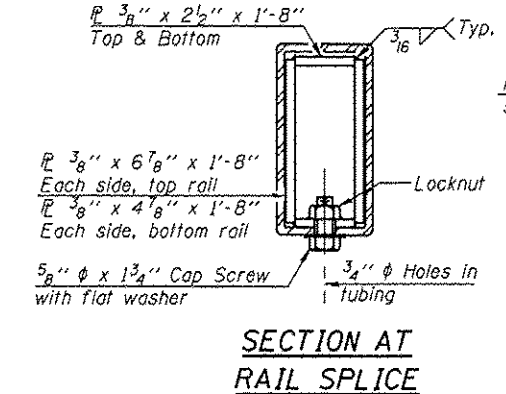
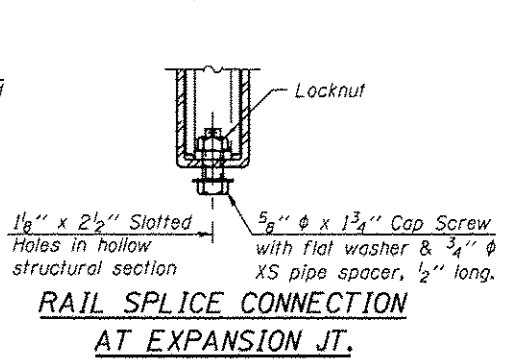
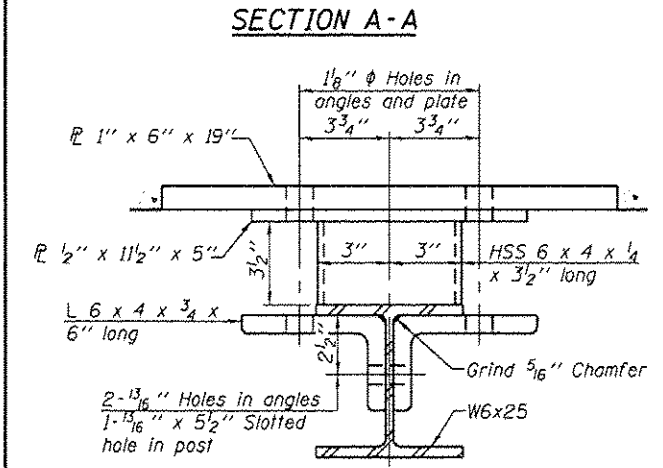
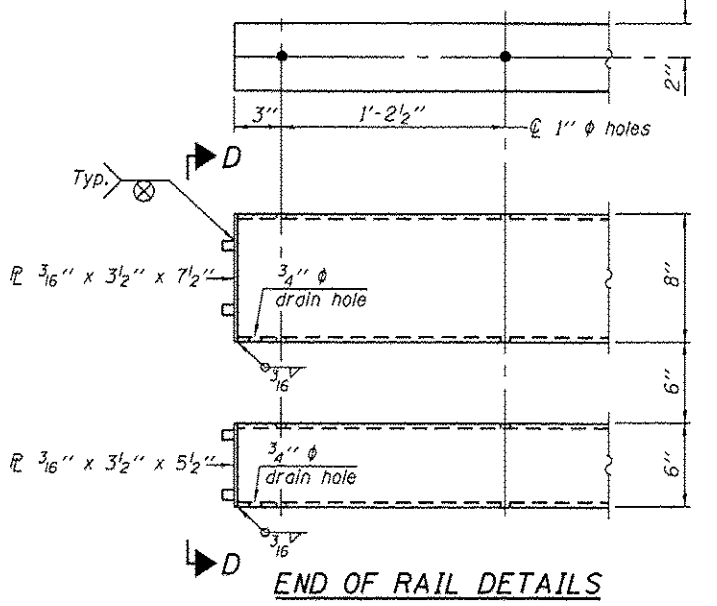
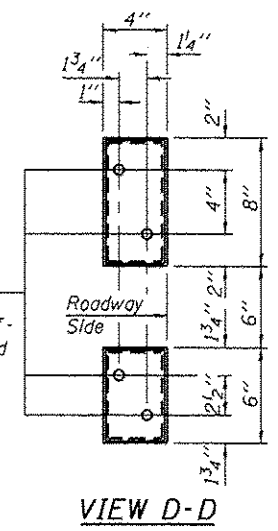
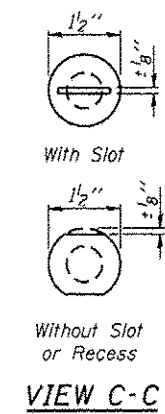
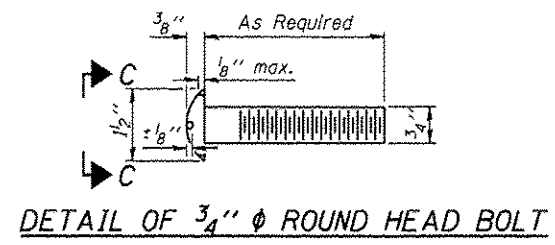
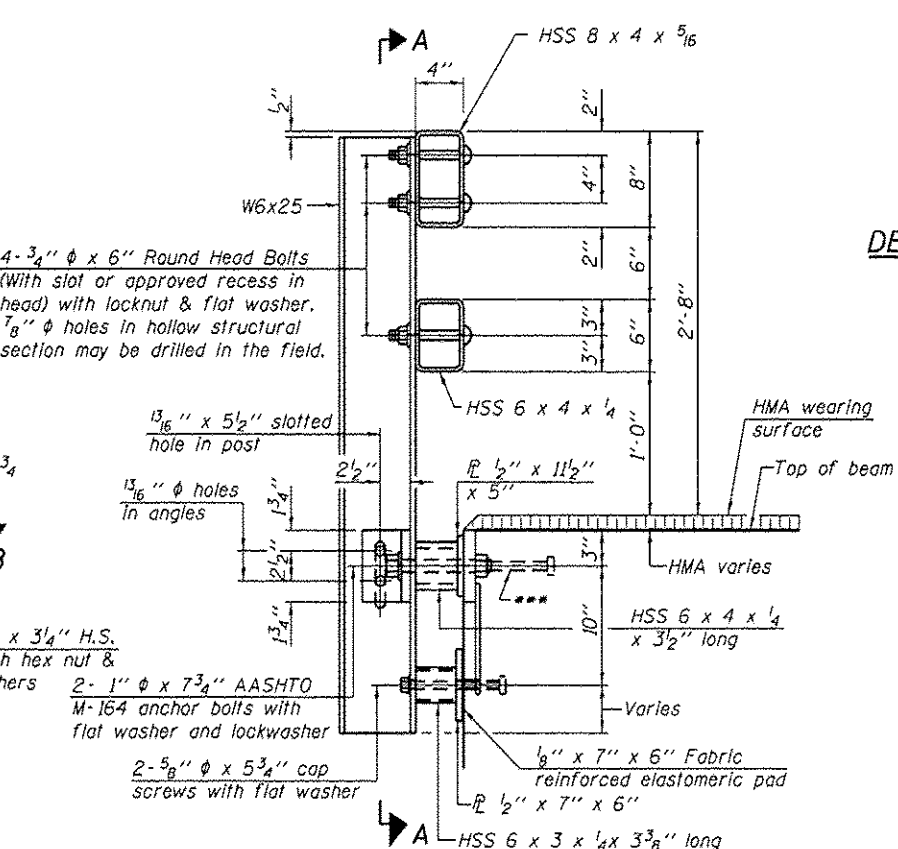
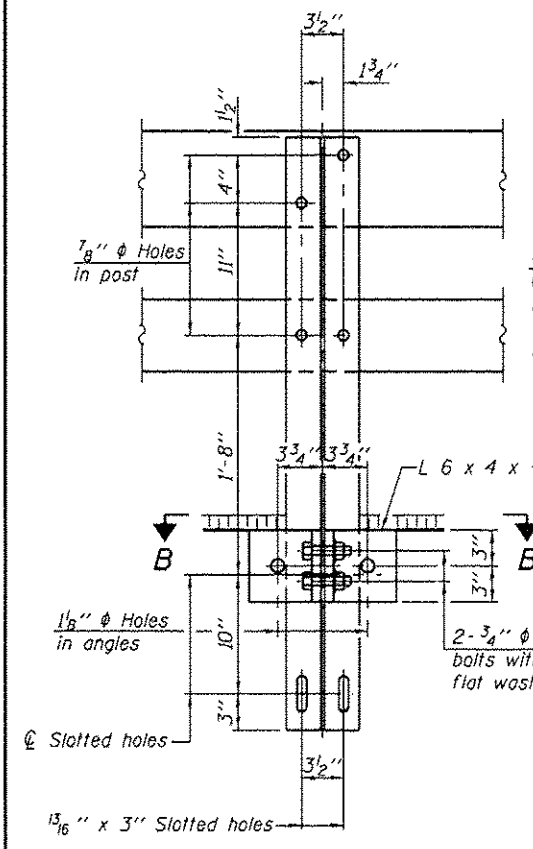
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE DETAILS
STRUCTURE NO. 084-3438

SHEET NO. 5 OF 11 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1643	13-00100-01-BR	SANGAMON	23	11
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				

93622



Notes:
 All field drilled holes shall be coated with an approved zinc rich paint before erection.
 For multi-span bridges, sufficient 1/4" x 6" x 1'-2" galvanized steel shims shall be provided to align rail between adjacent spans. Cost included with Steel Railing, Type SM.
 All steel rail members shall be galvanized according to Article 509.05 of the Standard Specifications.
 *** The studs of the anchor devices shall be placed below the top reinforcement bars and the outermost longitudinal reinforcement bar shall be placed directly above the studs of the rail post anchor device.

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type SM	Foot	339

** 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".

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

R-34HMAWS 7-1-10



USER NAME	DESIGNED	REVISIONS
qjameson	BRD	
084303B-00000.dgn	SBC	
012.0000 '1' / IN.	DLH	
4/8/2014	SBC	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

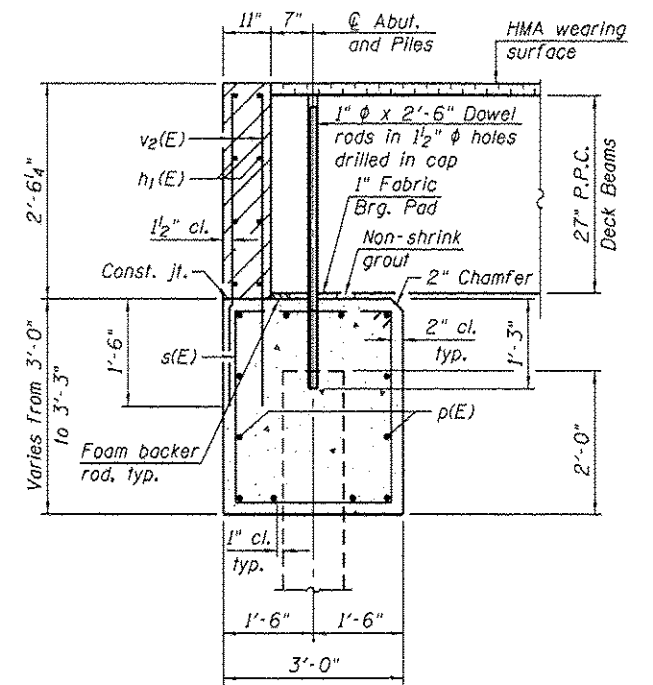
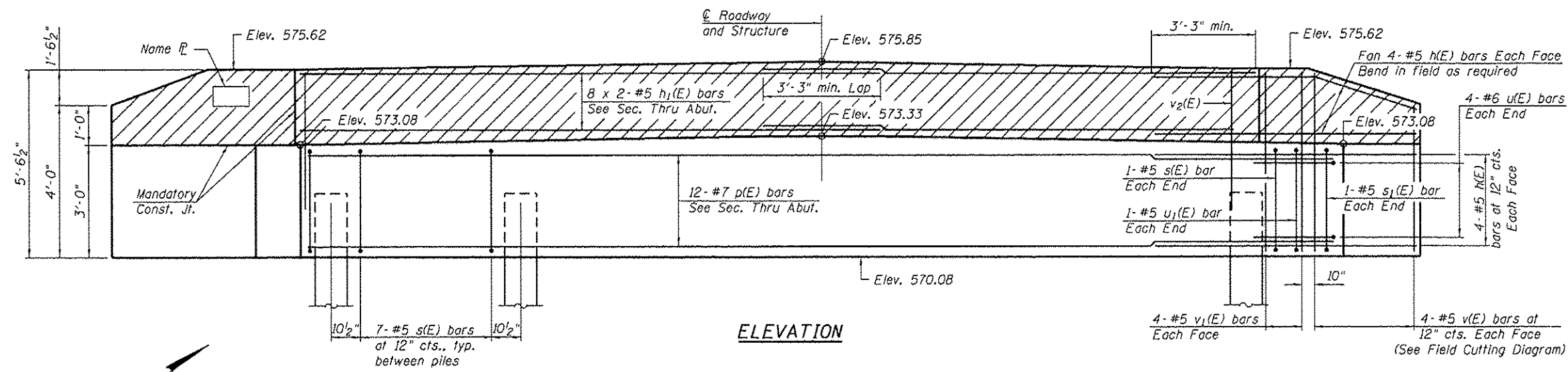
STEEL RAILING, TYPE SM WITH HOT-MIX ASPHALT WEARING SURFACE
STRUCTURE NO. 084-3438

F.A.S. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1643	13-00100-01-BR	SANGAMON	23	12

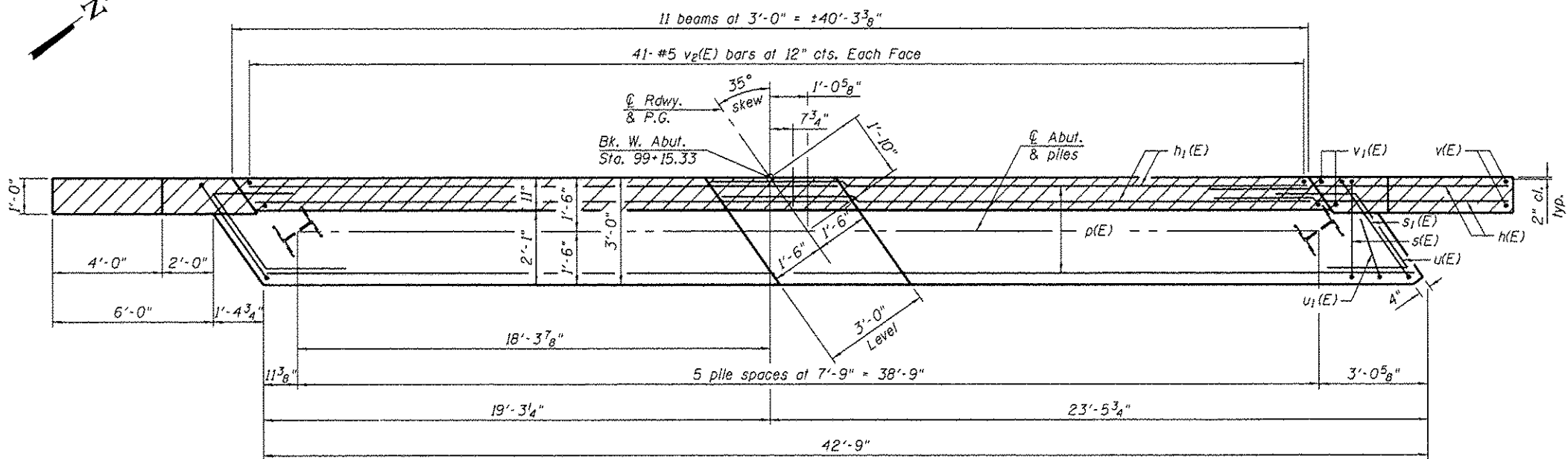
SHEET NO. 6 OF 11 SHEETS

ILLINOIS FED. AID PROJECT

93622



SECTION THRU ABUTMENT
(Horizontal dimensions are at Rt. L's.)



PLAN

BILL OF MATERIAL

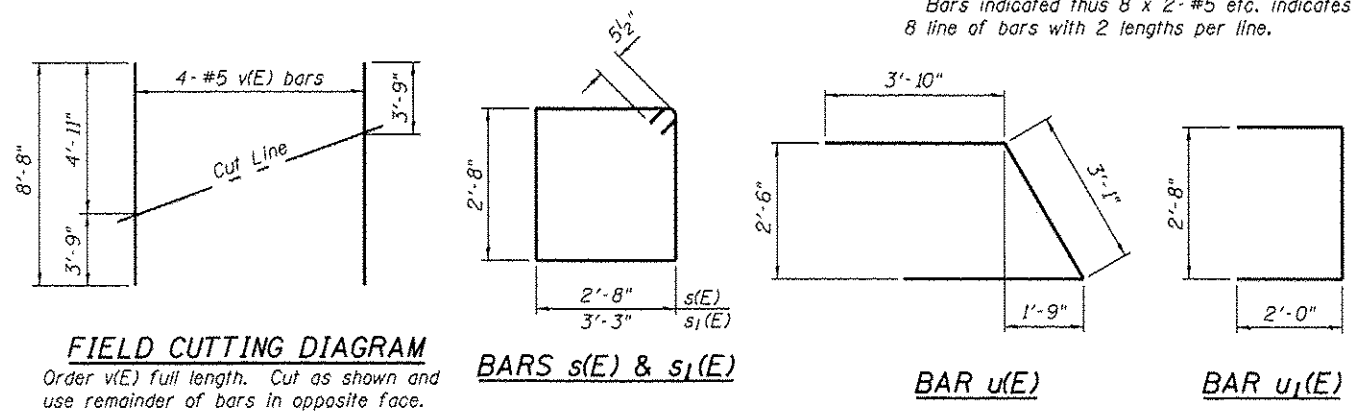
Bar	No.	Size	Length	Shape
h(E)	32	#5	10'-9"	—
h1(E)	16	#5	21'-8"	—
p(E)	12	#7	42'-5"	—
s(E)	37	#5	11'-7"	□
s1(E)	2	#5	12'-9"	□
u(E)	8	#6	10'-9"	⌋
u1(E)	2	#5	6'-8"	⌋
v(E)	8	#5	8'-8"	—
v1(E)	16	#5	5'-3"	—
v2(E)	82	#5	3'-10"	—
Structure Excavation		Cu. Yd.	93	
Concrete Structures		Cu. Yd.	20.7	
Reinforcement Bars, Epoxy Coated		Pound	2,870	
Furnishing Steel Piles HP12 x 53		Foot	170	
Driving Piles		Foot	170	
Test Pile Steel HP12 x 53		Each	1	
Pile Shoes		Each	6	

PILE DATA

Type: HP12 x 53
 Nominal Required Bearing: 297 kips
 Factored Resistance Available: 193 kips
 Est. Length: 34 ft.
 No. Production Piles: 5
 No. Test Piles: 1 (Driven in Production Location)
 Piles Shoes: 6

Notes:
 The hatched area shall be poured after the beams are in place. The backwall shall be cast against the beams. Cast top of wingwall flush with exterior beam face after beams have been erected.
 If pile interferes with dowel embedment, reduce dowel embedment so dowel is at the top of the pile (min. embedment = 1'-0").
 For Pile Details, see sheet 10 of 11.

Bars indicated thus 8 x 2-#5 etc. indicates 8 line of bars with 2 lengths per line.



FIELD CUTTING DIAGRAM
Order v(E) full length. Cut as shown and use remainder of bars in opposite face.

BARS s(E) & s1(E)

BAR u(E)

BAR u1(E)

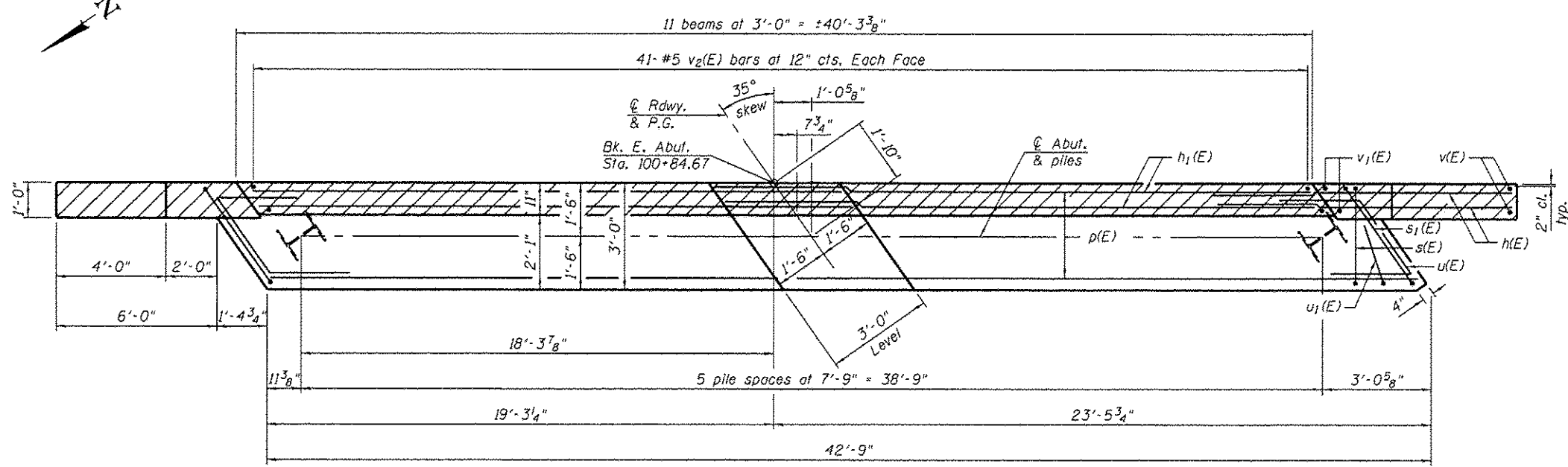
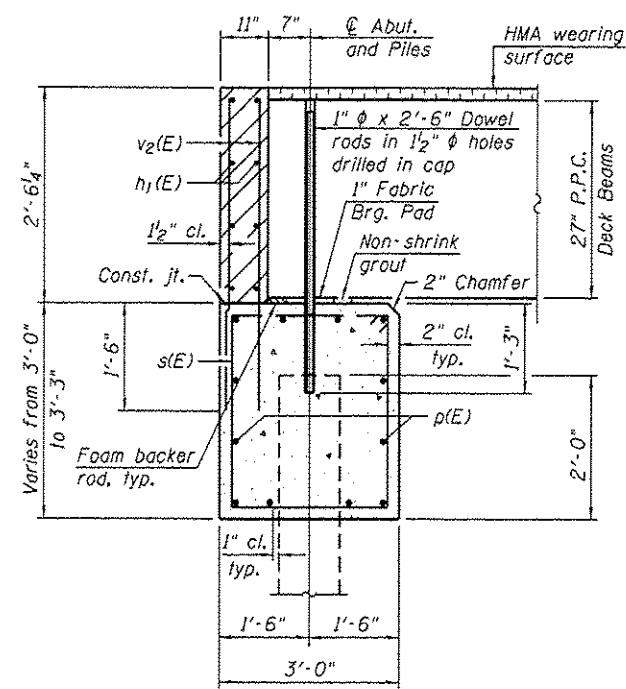
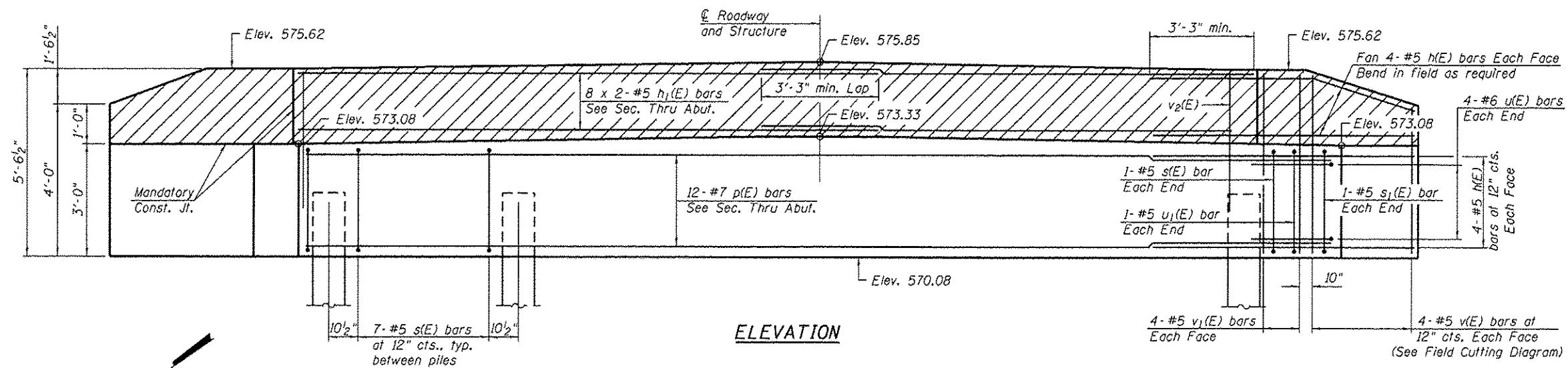


USER NAME • g.jameson	DESIGNED - BRD	REVISED
FILE NAME • 0843830-02200.dgn	CHECKED - SBC	REVISED
PLOT SCALE • 0.25000 1" = 10'	DRAWN - DLH	REVISED
PLOT DATE • 4/8/2014	CHECKED - SBC	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WEST ABUTMENT
STRUCTURE NO. 084-3438
SHEET NO. 7 OF 11 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1643	13-00100-01-BR	SANGAMON	23	13
CONTRACT NO. ILLINOIS FED. AID PROJECT 93622				



SECTION THRU ABUTMENT
(Horizontal dimensions are at Rt. L's.)

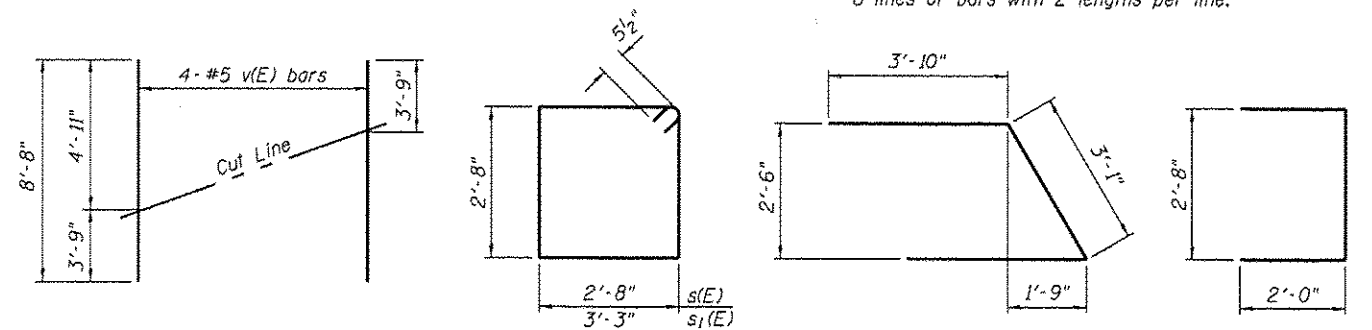
BILL OF MATERIAL

Bar No.	Size	Length	Shape
h(E)	32 #5	10'-9"	—
h1(E)	16 #5	21'-8"	—
p(E)	12 #7	42'-5"	—
s(E)	37 #5	11'-7"	□
s1(E)	2 #5	12'-9"	□
u(E)	8 #6	10'-9"	⌋
u1(E)	2 #5	6'-8"	⌋
v(E)	8 #5	8'-8"	—
v1(E)	16 #5	5'-3"	—
v2(E)	82 #5	3'-10"	—
Structure Excavation	Cu. Yd.	93	
Concrete Structures	Cu. Yd.	20.7	
Reinforcement Bars, Epoxy Coated	Pound	2,870	
Furnishing Steel Piles HP12 x 53	Foot	204	
Driving Piles	Foot	204	
Pile Shoes	Each	6	

PILE DATA

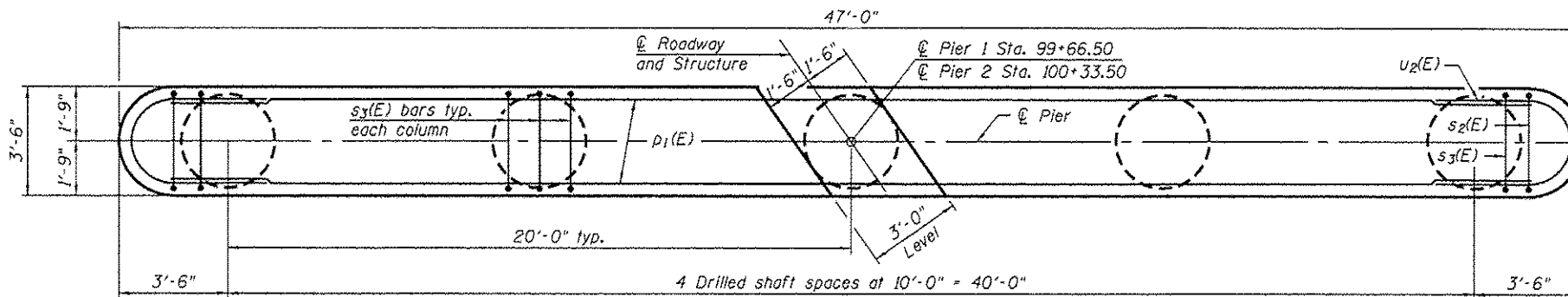
Type: HP12 x 53
 Nominal Required Bearing: 335 kips
 Factored Resistance Available: 218 kips
 Est. Length: 34 ft.
 No. Production Piles: 6
 No. Test Piles: 0
 Pile Shoes: 6

Notes:
 The hatched area shall be poured after the beams are in place. The backwall shall be cast against the beams. Cast top of wingwall flush with exterior beam face after beams have been erected.
 If pile interferes with dowel embedment, reduce dowel embedment so dowel is at the top of the pile (min. embedment = 1'-0").
 For Pile Details, see sheet 10 of 11.

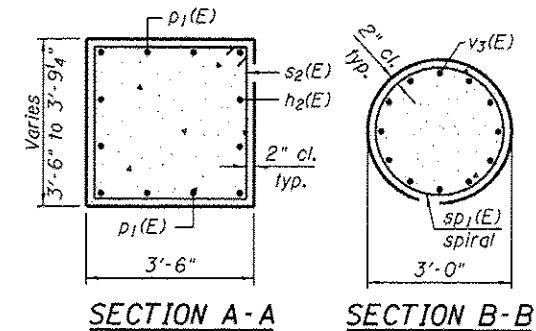


Bars indicated thus 8 x 2-#5 etc. indicates 8 lines of bars with 2 lengths per line.

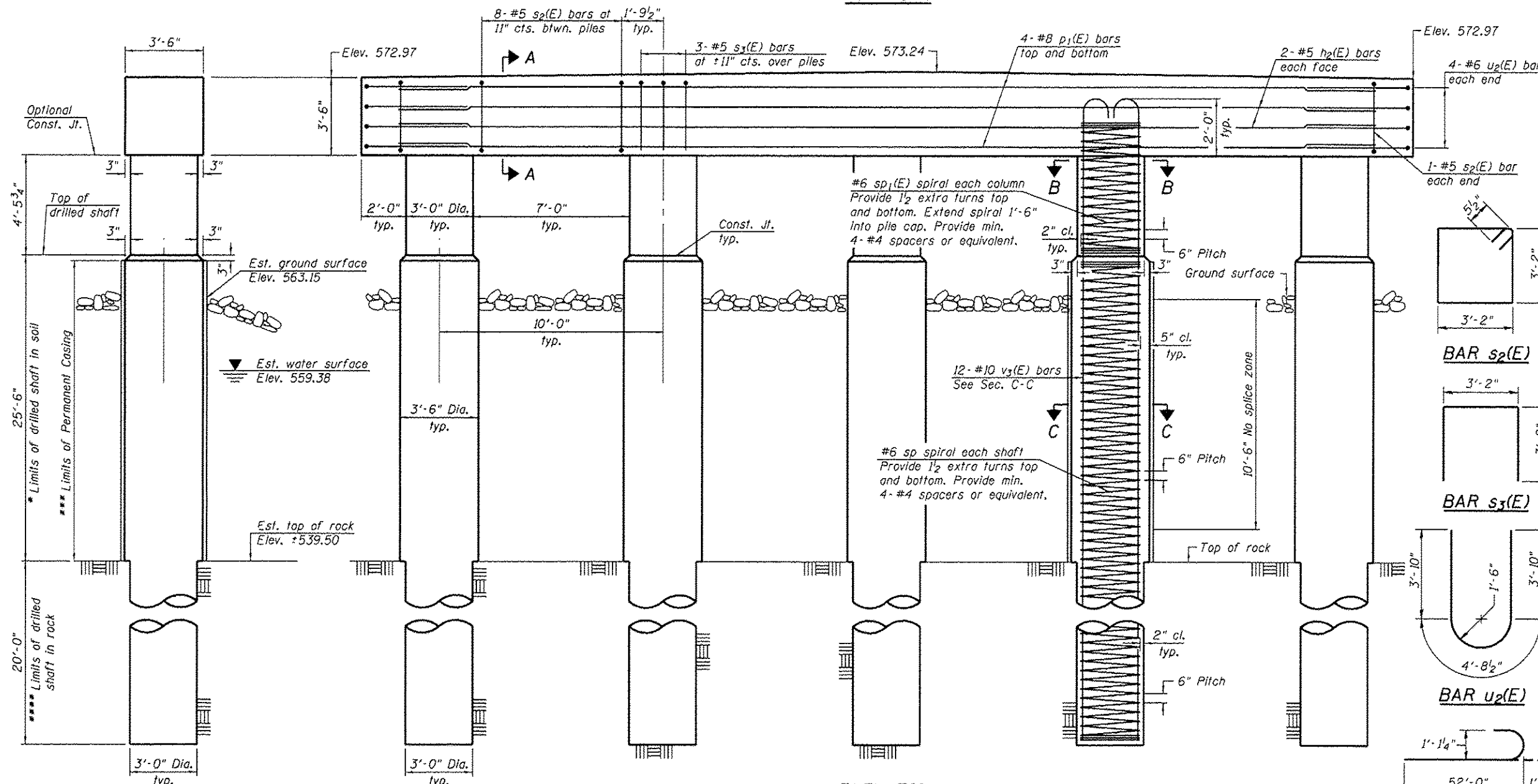
93622



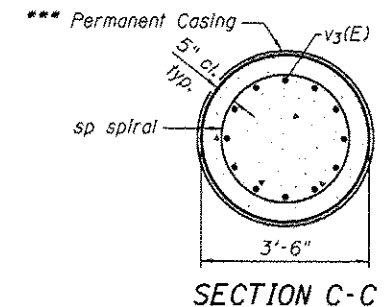
TOP PLAN



SECTION A-A SECTION B-B



ELEVATION
(Looking East)



SECTION C-C

BILL OF MATERIAL
TWO PIERS

Bar	No.	Size	Length	Shape
h ₂ (E)	8	#5	43'-6"	—
p ₁ (E)	16	#8	43'-6"	—
s ₂ (E)	68	#5	13'-7"	□
s ₃ (E)	30	#5	9'-6"	U
sp	10	#6	45'-4"	≡≡≡
sp ₁ (E)	10	#6	5'-10"	≡≡≡
u ₂ (E)	16	#6	12'-5"	—
v ₃ (E)	120	#10	53'-5"	—
Concrete Structures	Cu. Yd.		55.2	
Reinforcement Bars, Epoxy Coated	Pound		33,170	
Reinforcement Bars	Pound		11,540	
Drilled Shaft in Soil	Cu. Yd.		90.9	
Drilled Shaft in Rock	Cu. Yd.		52.4	
Permanent Casing	Foot		253	

Minimum lap for spirals = 3'-0"
Minimum lap for epoxy spirals = 4'-6"
* Length is height of spiral.

If the Contractor elects to use mechanical splicers to facilitate construction of the drilled shafts, locations of the mechanical splicers shall be approved by the Engineer of Record prior to ordering materials. Such variations shall not be cause for additional compensation for a change in scope of work and shall be included in the cost of the contract.

END VIEW

Individual drilled shaft excavations should be backfilled with concrete as soon as possible and in no instance should a shaft excavation in rock be left open overnight.

The Contractor is responsible for determining the casing thickness and the actual bottom of casing elevation, to be used at each drilled shaft. See Article 516.06(d) of the Standard Specifications. The limits of casing shall be adjusted as necessary, and as approved, such that the actual pay length of the casing extends to the as-encountered top of rock at each shaft.

If the prevailing water surface elevation during construction is consistently different than estimated on the plans, the contractor may propose an adjustment to the top of the drilled shaft elevation as part of their installation procedure. The top of all drilled shafts within a substructure unit shall be constructed to the same elevation and extend above the prevailing water surface. The quantities and reinforcement detailing are based on the top of shaft and the estimated elevations shown and may change based on the actual elevations encountered at each shaft and the final top of shaft elevation.



USER NAME	DESIGNED	REVISIONS
FILE NAME	CHECKED	REVISIONS
PLOT SCALE	DRAWN	REVISIONS
PLOT DATE	CHECKED	REVISIONS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

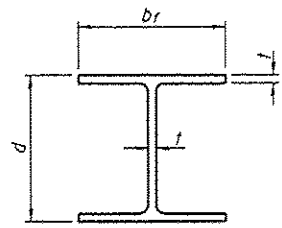
PIERS
STRUCTURE NO. 084-3438

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1643	13-00100-01-BR	SANGAMON	23	15
CONTRACT NO.				

SHEET NO. 9 OF 11 SHEETS

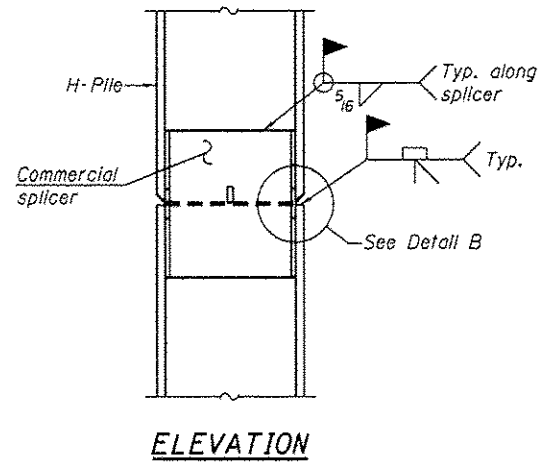
ILLINOIS FED. AID PROJECT

93622

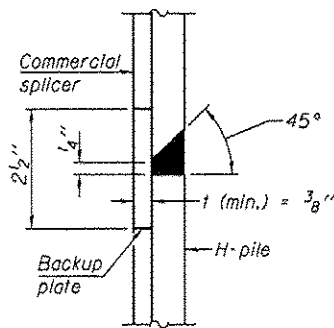


STEEL PILE TABLE

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

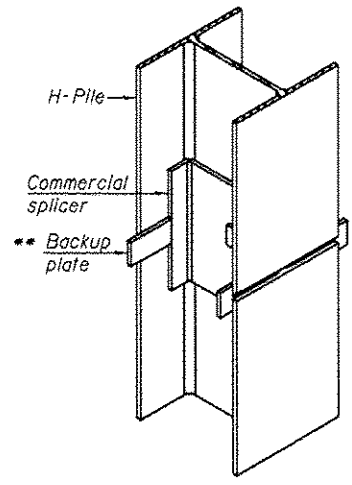


ELEVATION

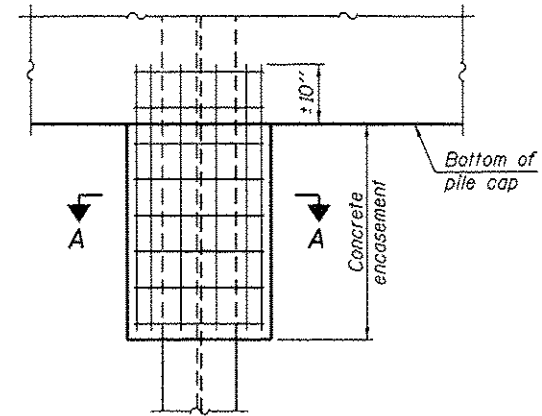


DETAIL "B"

WELDED COMMERCIAL SPLICE

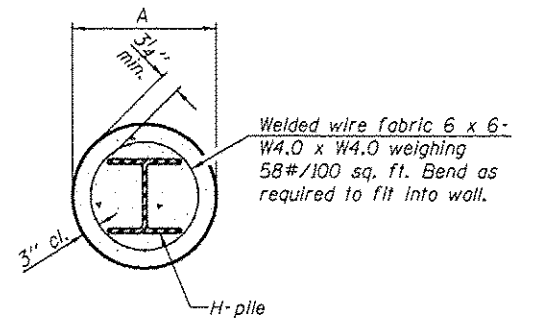


ISOMETRIC VIEW



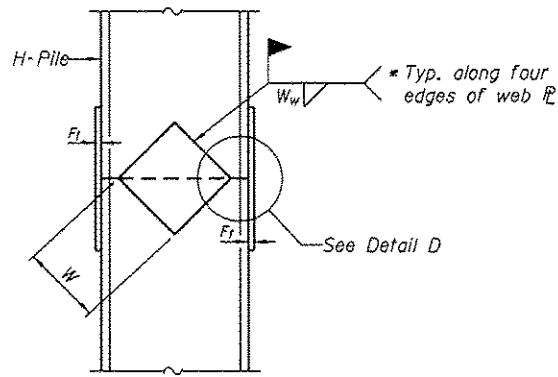
ELEVATION

PILE ENCASEMENT



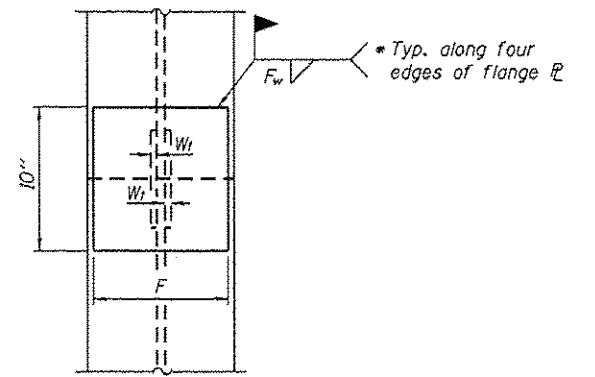
Note:
Forms for encasement may be omitted when soil conditions permit.

SECTION A-A



ELEVATION

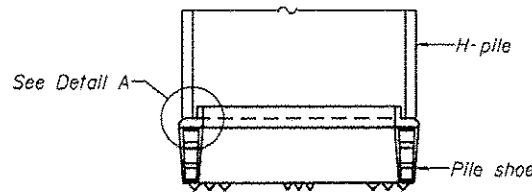
DETAIL D



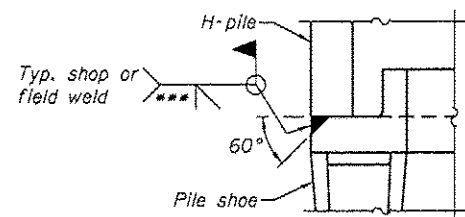
END VIEW

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

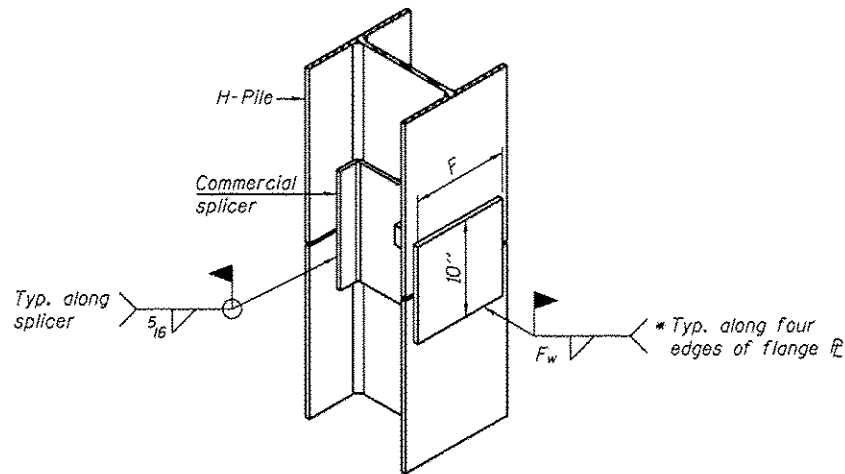


ELEVATION



DETAIL A

H-PILE SHOE ATTACHMENT



ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE ALTERNATE

- * Interrupt welds 1/4" from end of web and/or each flange.
- ** Remove portions of backup plates that extend outside the flanges.
- *** Weld size per pile shoe manufacturer (3/16" min.).

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

F-HP 1-27-12



USER NAME • gjameson	DESIGNED - BRD	REVISED
FILE NAME • 0043030-00000.dgn	CHECKED - SBC	REVISED
PLOT SCALE • 0:2.0000 1' / IN.	DRAWN - DLH	REVISED
PLOT DATE • 4/8/2014	CHECKED - SBC	REVISED

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**HP PILE DETAILS
STRUCTURE NO. 084-3438**

SHEET NO. 10 OF 11 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1643	13-00100-01-BR	SANGAMON	23	16
CONTRACT NO.				
[ILLINOIS] FED. AID PROJ. 33622				

SOIL BORING LOG

ROUTE 29 DESCRIPTION SANGAMON CO. BRIDGE BORINGS LOGGED BY TH

SECTION 36 LOCATION CH 29 OVER BRUSH CREEK

COUNTY SANGAMON STRUCTURE NO. (Exist) X (Prop.)

BORING NO. B-1 DRILLING METHOD HOLLOW STEM HAMMER TYPE 40# SAFETY HAMMER

Station	99+15.66	Surface Water Elev.	(ft.)	E	D	B	U	M			
Offset	8.549 RT	Groundwater Elev.	(ft.)	L	E	L	C	O			
Ground Surface Elev.	575.46 (ft.)	First Encounter	552.92 (ft.)	P	P	O	S	I			
		Upon Completion	560.46 (ft.)	T	T	W	Q	S			
		After 24 Hrs.	565.96 (ft.)	H	H	S	u	T			
				V	V	S	Qu	T			
SOIL DESCRIPTION	(ft.)	(ft.)	/6"	(tsf)	(%)	SOIL DESCRIPTION	(ft.)	(ft.)	/6"	(tsf)	(%)
8" ASPHALT						CLAY - A-6	52.4				
						Bluish-Gray, moist, hard, low plasticity, trace gravel	35	34	60-2	2.4	14.8
SILTY CLAY - A-4			6		24.1	SHALE					
Dark Brown, moist, stiff, low plasticity, with organics			8			Gray, moist, hard, weathered			60-2		11.5
SILTY CLAY - A-4			5	4	24.1	END OF BORING @ 40.0 FT.	40		60-3		17.3
Dark Gray, moist, stiff, low plasticity, with organics			5	5							
SILTY CLAY - A-4			3		21.6						
Brown, moist, stiff, low plasticity			6								
LOAM - A-4			10	4	22.1						
Gray, moist, firm-stiff, low plasticity			7	9							
SANDY LOAM - A-4			7		25.6						
Dark Gray, moist, stiff-very stiff, low plasticity			8								
LOAM - A-4			15	3	27.2						
Gray, moist, firm-stiff, low plasticity			4								
SANDY LOAM - A-4			1		22.8						
Gray, moist, soft-firm, low plasticity			2	2							
SILTY LOAM - A-4			20	2	29.0						
Gray, moist, firm, low plasticity			2	4							
CLAY - A-6			5		25.3						
Brown-Mottled-Gray, moist, stiff, low plasticity			6	6							
SILTY CLAY LOAM - A-4			25	3	29.9						
Gray, moist, firm-stiff, low plasticity			3	5							
SAND - A-3			3		24.4						
Gray, saturated, medium dense, medium-coarse, with gravel			13								
			12								
			6		15.4						
			8								

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer).
The Standard Penetration Test (SPT) N Value is per (AASHTO T206)

BBS 137 (9/05)

SOIL BORING LOG

ROUTE 29 DESCRIPTION SANGAMON CO. BRIDGE BORINGS LOGGED BY TH

SECTION 36 LOCATION CH 29 OVER BRUSH CREEK

COUNTY SANGAMON STRUCTURE NO. (Exist) X (Prop.)

BORING NO. B-2 DRILLING METHOD HOLLOW STEM HAMMER TYPE 40# SAFETY HAMMER

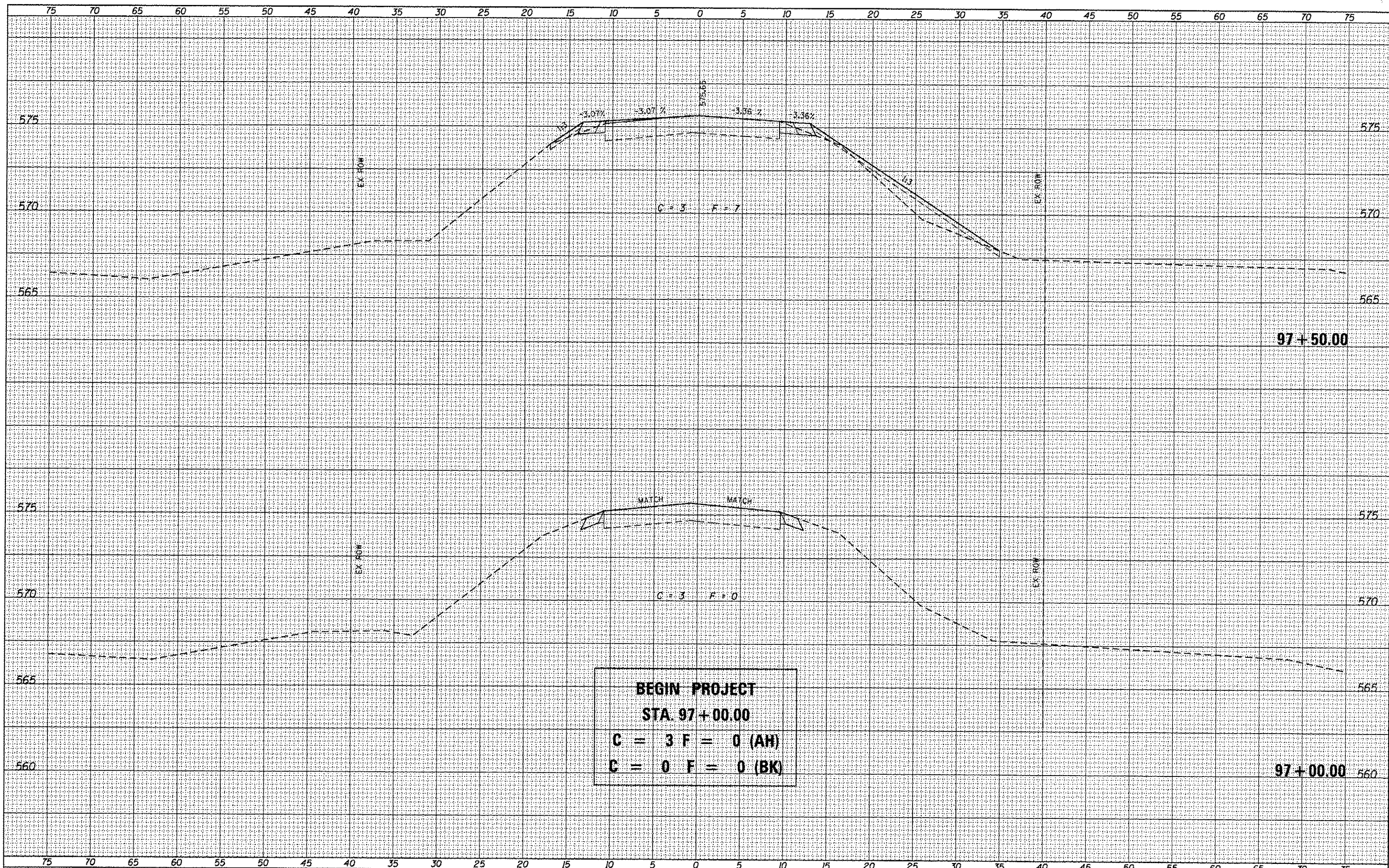
Station	100+83.03	Surface Water Elev.	(ft.)	E	D	B	U	M			
Offset	7.563 LT	Groundwater Elev.	(ft.)	L	E	L	C	O			
Ground Surface Elev.	575.66 (ft.)	First Encounter	548.68 (ft.)	P	P	O	S	I			
		Upon Completion	557.68 (ft.)	T	T	W	Q	S			
		After Hrs.	(ft.)	H	H	S	u	T			
				V	V	S	Qu	T			
SOIL DESCRIPTION	(ft.)	(ft.)	/6"	(tsf)	(%)	SOIL DESCRIPTION	(ft.)	(ft.)	/6"	(tsf)	(%)
8" ASPHALT						gravel	15				
						SHALE	35	16	60-4	1.6	16.5
SILTY CLAY - A-4			3		29.0	Gray, moist, hard, weathered					
Dark Brown, moist, stiff, low plasticity, with organics			4								
CLAY - A-6			5	3	25.6	END OF BORING @ 40.0 FT.					
Brown, moist, stiff, low plasticity			4								
CLAY - A-6			7	1.9	26.8						
Dark Brown-Mottled-Brown, moist, stiff, low plasticity			8								
SILTY CLAY - A-4			10	4	24.3						
Dark Brown, moist, stiff, low plasticity			6								
CLAY - A-6			3		23.0						
Dark Gray, moist, stiff, low plasticity			5	7							
SILTY CLAY - A-4 Gray, moist, stiff-very stiff, low plasticity			15	3	24.1						
			7	9							
SILTY CLAY LOAM - A-4			3		24.8						
Brown-Mottled-Gray, moist, stiff, low plasticity			5	6							
SILT - A-4			20	2	31.1						
Gray-Mottled-Brown, moist, soft-firm, low plasticity			2	2							
CLAY - A-6			2	4	27.9						
			4								
SILTY CLAY LOAM - A-4			25	1	24.0						
Brown, moist, firm, low plasticity			3	6							
CLAY LOAM - A-6			2		23.4						
Gray-Mottled-Brown, moist, firm, low plasticity			2	3							
SAND SEAM			30	5	13.9						
			12								
			8								
CLAY - A-6			7		16.8						
Gray, moist, very stiff, low plasticity, trace			13								

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer).
The Standard Penetration Test (SPT) N Value is per (AASHTO T206)

BBS 137 (9/05)

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PLOTTED	
NOTE BOOK	
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ORIGINAL SURVEY	
DESIGNED	
PLOTTED	
NOTE BOOK	
AREAS CHECKED	
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Design firm
no. 184001036

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USER NAME	• gjameson	DESIGNED	- JAC	REVISED	
FILE NAME	• XS_SHT_CH_29.dgn	CHECKED	- SDS	REVISED	
PLOT SCALE	• 10,0000' / IN.	DRAWN	- GSJ	REVISED	
PLOT DATE	• 4/8/2014	CHECKED	- SDS	REVISED	

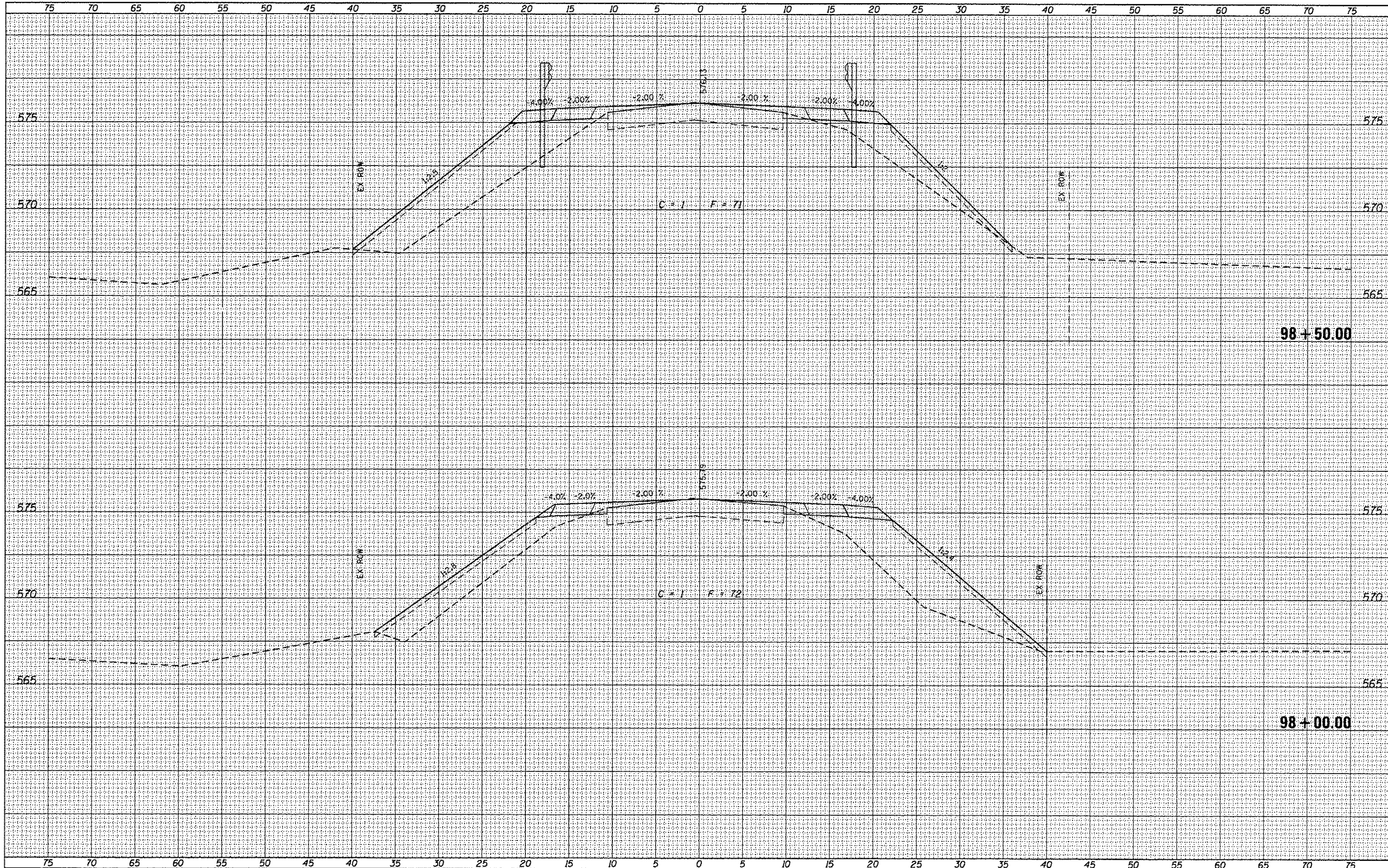
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTION - CH 29
SCALE: 1" = 10'
SHEET NO. 1 OF 6 SHEETS
STA. 97+00.00 TO STA. 97+50.00

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1643	13-00100-01-BR	SANGAMON	23	18
CONTRACT NO.				
ILLINOIS FED. AID PROJECT 93622				

DATE	
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STARTED	
SURVEY	
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NOTE BOOK	
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Design firm
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USER NAME	• gjamason	DESIGNED	- JAC	REVISED	
FILE NAME	• XS_SHT.CH.29.dgn	CHECKED	- SDS	REVISED	
PLOT SCALE	• 10.0000' / 1"	DRAWN	- GSJ	REVISED	
PLOT DATE	• 4/6/2014	CHECKED	- SDS	REVISED	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTION - CH 29

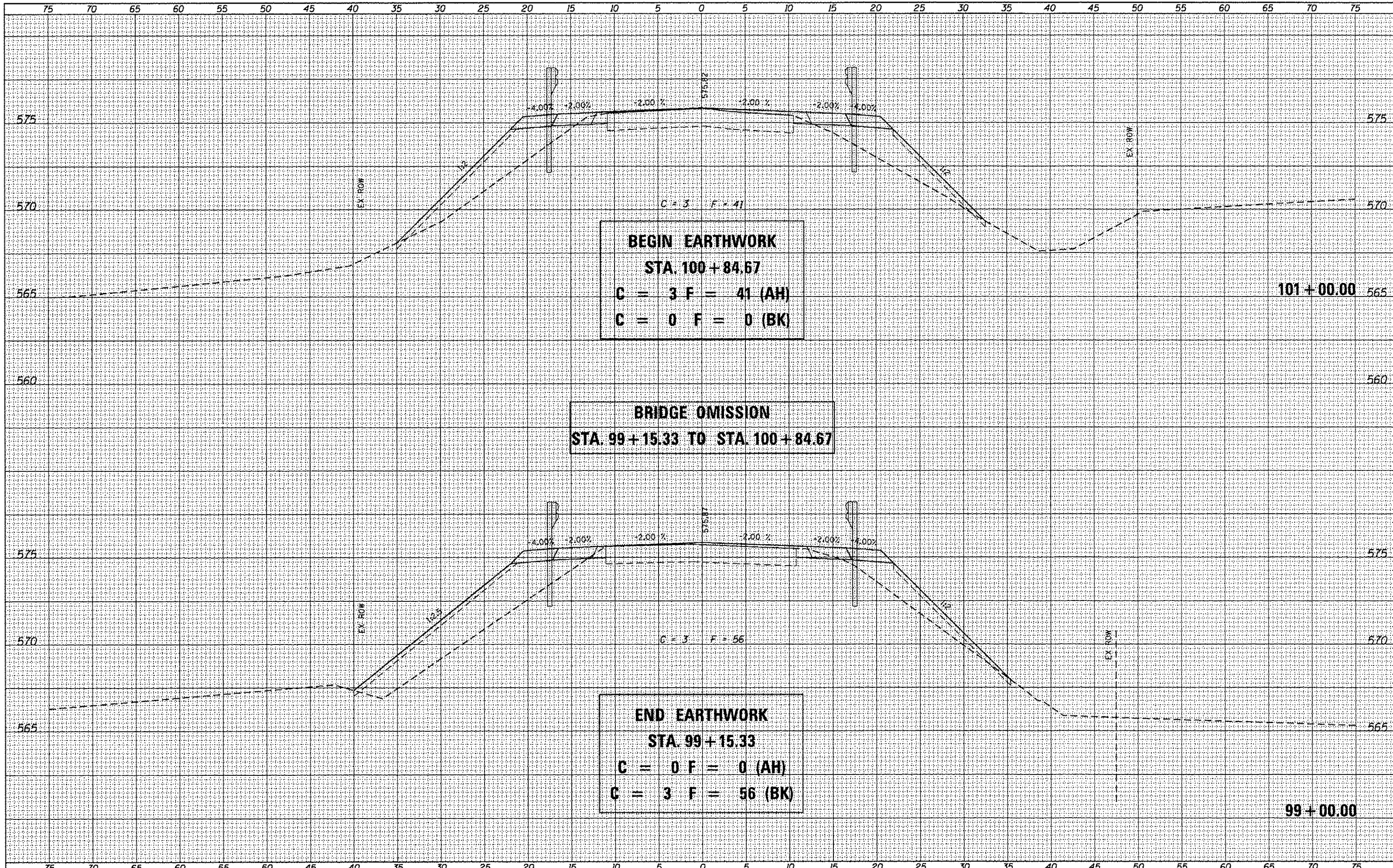
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F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1643	13-00100-01-BR	SANGAMON	23	19
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				

93622

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



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USER NAME	g.jensen	DESIGNED	JAC	REVISED	
FILE NAME	x5.SHT.CH.29.dgn	CHECKED	SDS	REVISED	
PLOT SCALE	1/8" = 1' IN.	DRAWN	GS.	REVISED	
PLOT DATE	4/8/2014	CHECKED	SDS	REVISED	

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

CROSS SECTION - CH 29

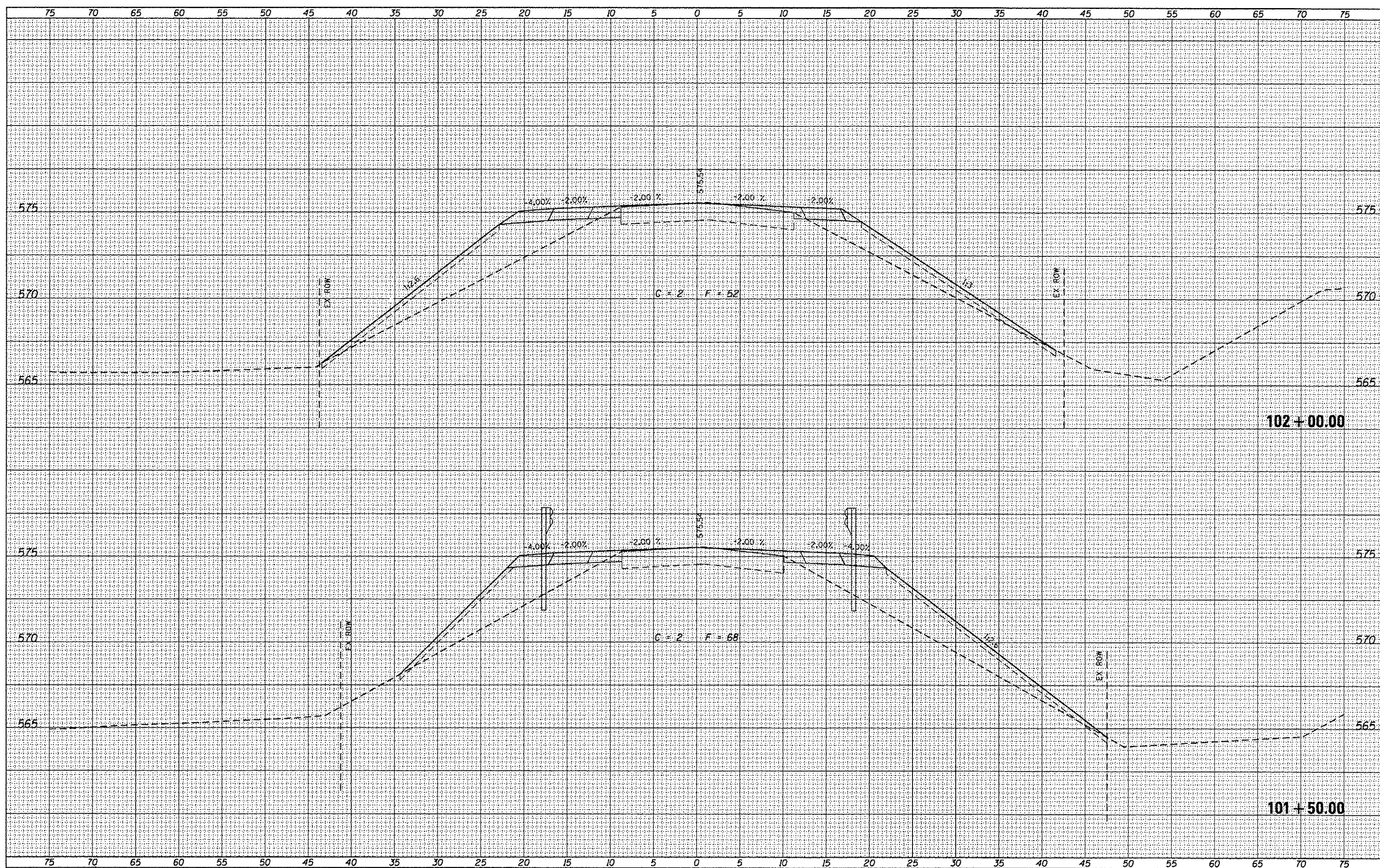
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1643	13-00100-01-BR	SANGAMON	23	20
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				

93622

DATE	
BY	
FINAL SURVEY	
REVISED	
PLOTTED	
NOTE BOOK	
NO.	

DATE	
BY	
ORIGINAL SURVEY	
REVISED	
PLOTTED	
NOTE BOOK	
NO.	



design firm
no. 184001036

USER NAME	* gjameson	DESIGNED	- JAC	REVISED	
FILE NAME	* XS_SHT_CH.29.dgn	CHECKED	- SDS	REVISED	
PLOT SCALE	* 18.0000' / IN.	DRAWN	- GSJ	REVISED	
PLOT DATE	* 4/8/2014	CHECKED	- SDS	REVISED	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTION - CH 29

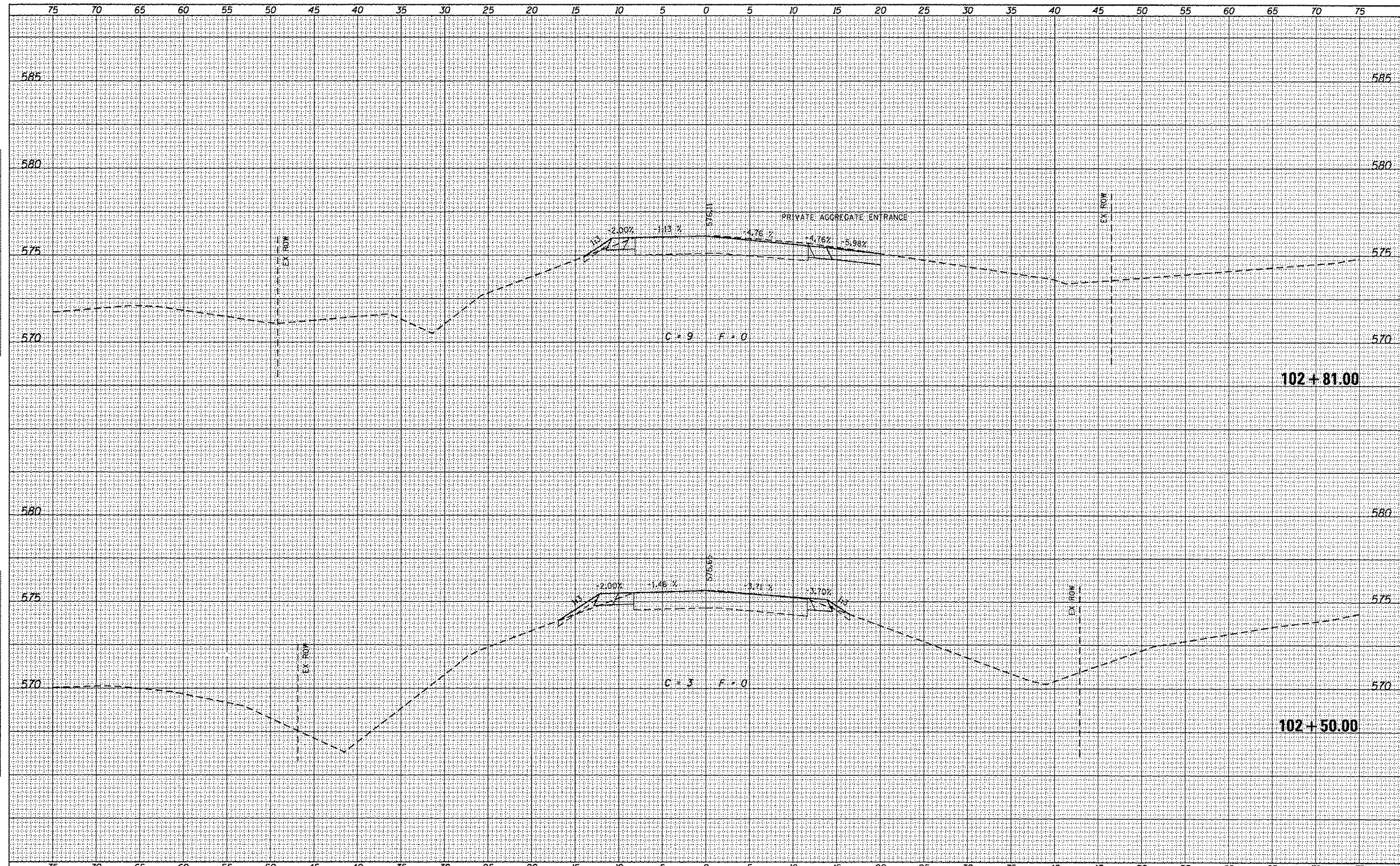
SCALE: 1" = 10'
SHEET NO. 4 OF 6 SHEETS
STA. 101+50.00 TO STA. 102+00.00

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1643	13-00100-01-BR	SANGAMON	23	21
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				

93622

DATE	
BT	
WORKED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
FINAL SURVEY	
NOTE BOOK	
NO.	

DATE	
BT	
WORKED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
ORIGINAL SURVEY	
NOTE BOOK	
NO.	



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no. 184001036

USER NAME	• g.jameson	DESIGNED	- JAC	REVISED	
FILE NAME	• XS_SHT_CH_29.dgn	CHECKED	- SDS	REVISED	
PLOT SCALE	• 1/8,0000" = 1'	DRAWN	- GSJ	REVISED	
PLOT DATE	• 4/8/2014	CHECKED	- SDS	REVISED	

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

CROSS SECTION - CH 29

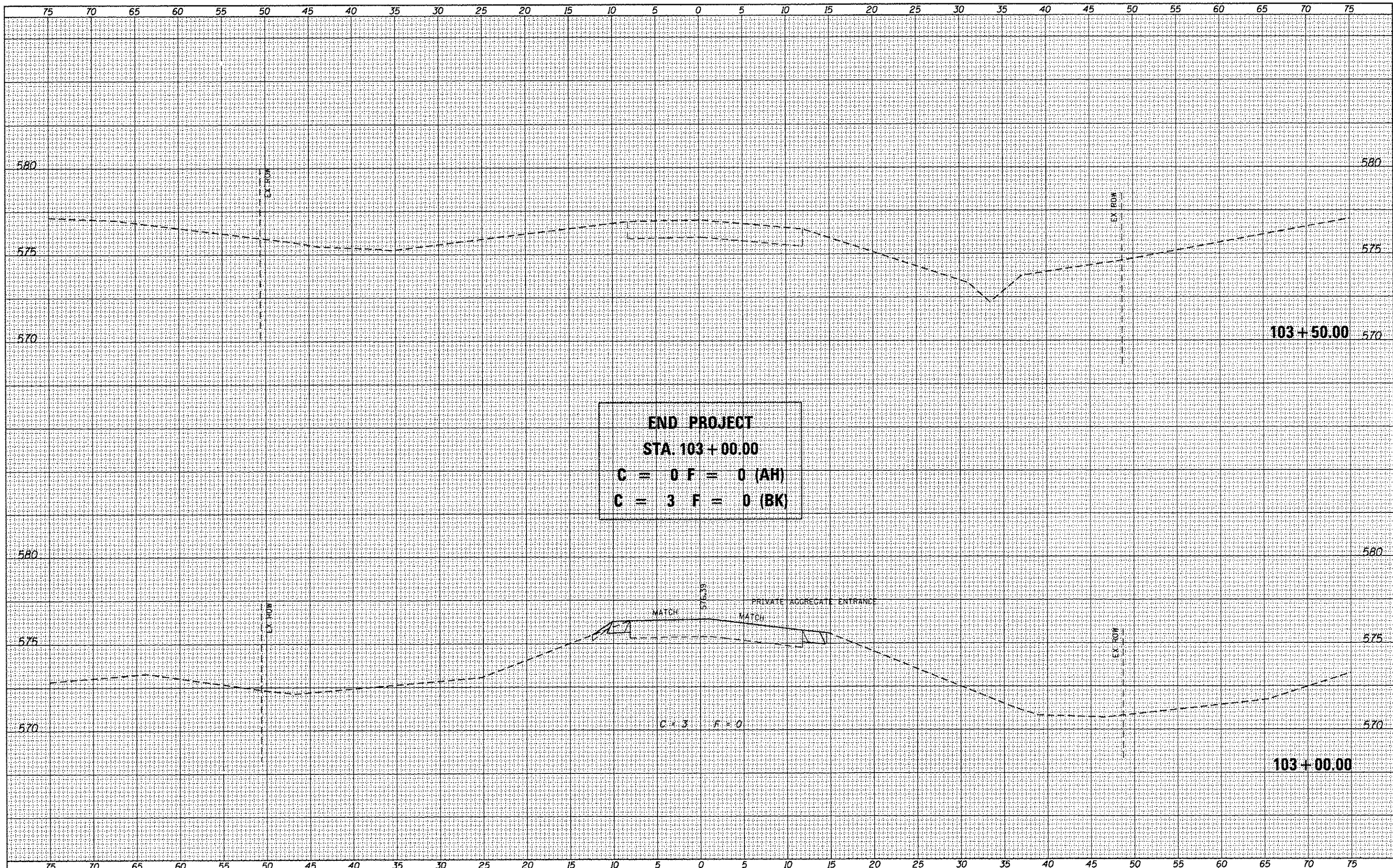
SCALE: 1" = 10' SHEET NO. 5 OF 6 SHEETS STA. 102+50.00 TO STA. 103+00.00

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1643	13-00100-01-BR	SANGAMON	23	22
CONTRACT NO.			ILLINOIS FED. AID PROJECT	

93622

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

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



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USER NAME	gjemason	DESIGNED	JAC	REVISED
FILE NAME	XS_SHT_CH_29.dgn	CHECKED	SDS	REVISED
PLOT SCALE	10.0000' / IN.	DRAWN	GSJ	REVISED
PLOT DATE	4/8/2014	CHECKED	SDS	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTION - CH 29
SCALE: 1" = 10'
SHEET NO. 6 OF 6 SHEETS
STA. 103+00.00 TO STA. 103+50.00

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1643	13-00100-01-BR	SANGAMON	23	23
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				

93622