TWP. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
281	15-21124-00-BR	BUREAU	35	1
	WHA= 1302016	CONTRACT NO. 87698		
	ILLINOIS FED. AID PROJECT			

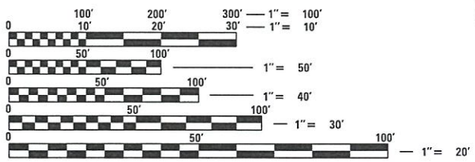
04-26-2019 LETTING ITEM 144

INDEX OF SHEETS:

STANDARDS:

000001-07	STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS
280001-07	TEMPORARY EROSION CONTROL SYSTEMS
515001-03	NAME PLATE FOR BRIDGES
542401-03	METAL FLARED END SECTION FOR PIPE CULVERTS
630001-12	STEEL PLATE BEAM GUARDRAIL
630301-09	SHOULDER WIDENING FOR TYPE I (SPECIAL) GUARDRAIL TERMINALS
635001-02	DELINEATORS
701901-08	TRAFFIC CONTROL DEVICES
720001-01	SIGN PANEL MOUNTING DETAILS
720011-01	METAL POSTS FOR SIGNS, MARKERS & DELINEATORS
728001-01	TELESCOPING STEEL SIGN SUPPORT
729001-01	APPLICATIONS OF TYPES A & B METAL POSTS (FOR SIGNS & MARKERS)
782006	GUARDRAIL AND BARRIER WALL REFLECTOR MOUNTING DETAILS
BLR 21-9	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS
BLR 22-7	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS

FOR LIST OF UTILITIES SEE SHEET NO. 3



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 – IPN
PROJECT MANAGER – BKC

CONTRACT NO. 87698

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

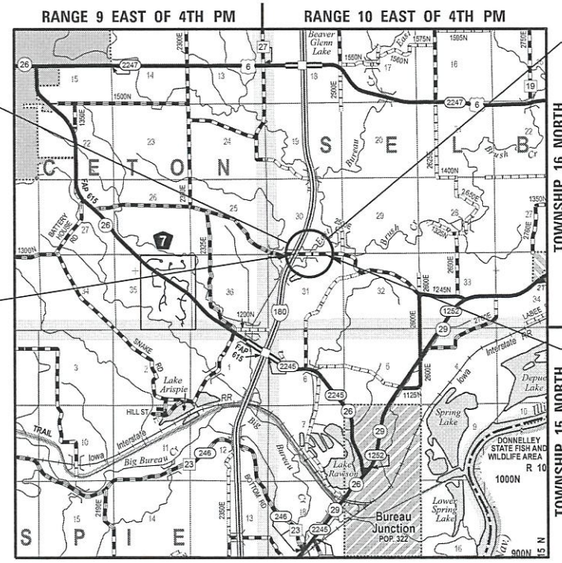
PLANS FOR PROPOSED FEDERAL AID PROJECT SURFACE TRANSPORTATION RURAL – BRIDGE (FY–19)

TR 281 (1300 N AVE)
SECTION 15–21124–00–BR
PROJECT KBD9(822)
STRUCTURE REPLACEMENT
SELBY ROAD DISTRICT
BUREAU COUNTY

C–93–013–19

LOCATION OF SECTION INDICATED THUS:- ■

LOCATION MAP SCALE 0 1 2 4 MILES



EXISTING STRUCTURE: SN 006-4304
A THREE SPAN (46'-0":46'-1":46'-0") PPC DECK BEAM BRIDGE ON PILE BENT PIERS AND SPILL-THRU ABUTMENTS AT STA. 20+05. SKEWED 30° LEFT AHEAD.

PROPOSED STRUCTURE: SN 006-4314
A SINGLE SPAN (137'-6") PPC IL-BEAM BRIDGE ON SPILL-THRU ABUTMENTS AT STATION 20+00. SKEWED 30° LEFT AHEAD.

CONSTRUCTION BEGINS STATION 16+45.00

CONSTRUCTION ENDS STATION 22+55.00

FUNCTIONAL CLASSIFICATION
LOCAL ROAD (NON–URBAN)
DESIGN SPEED 30 MPH
2018 ADT = 156
3R GUIDELINES

GROSS LENGTH = 610 FT = 0.116 MILE
NET LENGTH = 610 FT = 0.116 MILE

BUREAU COUNTY HIGHWAY DEPARTMENT

APPROVED 2-25-19 2019
SELBY TOWNSHIP ROAD COMMISSIONER

APPROVED February 5th 2019
BUREAU COUNTY ENGINEER

PASSED 2/22 2019
DISTRICT 3 LOCAL ROADS & STREETS ENGINEER

RELEASING FOR BID BASED ON LIMITED REVIEW 3/22 2019
REGION 2 ENGINEER

BRIAN K. CONVERSE 062-048141 LICENSED PROFESSIONAL ENGINEER OF ILLINOIS

DATE: 2/5/2019
EXPIRES 11/30/19

WILLETT HOFMANN & ASSOCIATES INC
ENGINEERING ARCHITECTURE LAND SURVEYING
809 EAST 2ND STREET, DIXON, IL 61021-0367
T: 815-284-3381 DESIGN FIRM: #184-000918

SUMMARY OF QUANTITIES

CONSTRUCTION TYPE CODE: 0010

	CODE NO.	ITEM	UNIT	QUANTITY
	20100500	TREE REMOVAL, ACRES	ACRE	0.19
	20300100	CHANNEL EXCAVATION	CU YD	555
	25100630	EROSION CONTROL BLANKET	SQ YD	5701
	28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	118
	28000305	TEMPORARY DITCH CHECKS	FOOT	45
	28000400	PERIMETER EROSION BARRIER	FOOT	1384
	28000500	INLET AND PIPE PROTECTION	EACH	1
*	40200100	AGGREGATE SURFACE COURSE, TYPE A	TON	615
*	40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	179
*	50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
	50200100	STRUCTURE EXCAVATION	CU YD	142
*	50300225	CONCRETE STRUCTURES	CU YD	70.8
	50300255	CONCRETE SUPERSTRUCTURE	CU YD	141.8
	50300260	BRIDGE DECK GROOVING	SQ YD	503
	50300300	PROTECTIVE COAT	SQ YD	548
	50301350	CONCRETE SUPERSTRUCTURE (APPROACH SLAB)	CU YD	68.5
*	50401330	FURNISHING AND ERECTING PRECAST PRESTRESSED CONCRETE BEAMS, IL54	FOOT	694
	50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	59480
Δ	50900205	STEEL RAILING, TYPE S1	FOOT	284.0
	51200958	FURNISHING METAL SHELL PILES 14" X 0.250"	FOOT	414.0
	51202305	DRIVING PILES	FOOT	414.0
	51203200	TEST PILE METAL SHELLS	EACH	2
	51204650	PILE SHOES	EACH	14
	51500100	NAME PLATES	EACH	1
	54262718	METAL FLARED END SECTIONS 18"	EACH	2
	542D1063	PIPE CULVERTS, CLASS D, TYPE 2 18"	FOOT	45
	59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	88.0
Δ	63000001	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	138
Δ	63100075	TRAFFIC BARRIER TERMINAL, TYPE 5A	EACH	4
Δ *	63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	5
	63200310	GUARDRAIL REMOVAL	FOOT	46
	67100100	MOBILIZATION	L SUM	1
Δ	78200005	GUARDRAIL REFLECTORS, TYPE A	EACH	9
*	Z0001900	ASBESTOS BEARING PAD REMOVAL	EACH	48
*	Z0013798	CONSTRUCTION LAYOUT	L SUM	1
*	Z0046304	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	149
*	X2020410	EARTH EXCAVATION (SPECIAL)	CU YD	1308
*	X2070302	POROUS GRANULAR EMBANKMENT, SPECIAL	TON	491
*	X2501100	SEEDING, CLASS 3 (SPECIAL)	ACRE	1.18
*	X2810214	STONE RIPRAP, CLASS A7 (SPECIAL)	TON	1807
*	X7010216	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	L SUM	1

*SEE SPECIAL PROVISIONS

Δ SPECIALTY ITEMS

WILLETT HOFMANN & ASSOCIATES INC
ENGINEERING ARCHITECTURE SURVEYING
609 EAST 24TH STREET, DIXON, IL 61021-0162
T 815.284.3381 DESIGN FIRM # 184.000935

DESIGNED -	BKC	REVISED -
CHECKED -	PLP	REVISED -
DRAWN -	RDA	REVISED -
CHECKED -	BKC	REVISED -

BUREAU COUNTY
T.R. 281 (1300 N. AVE.) OVER E. BUREAU CREEK
STATION 20+00

SUMMARY OF QUANTITIES

SHEET NO. 1 OF 1 SHEETS

TWP. TRE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
281	15-21124-00-BR	BUREAU	35	2
	WHA* 1302D16	CONTRACT NO. 87698		
	ILLINOIS FED. AID PROJECT KBD9(822)			

GENERAL NOTES:

EXISTING STRUCTURES (INCLUDING FOUNDATIONS, WALLS, CISTERNS, WELLS, OR OTHER UNDERGROUND STRUCTURES) WITHIN THE RIGHT OF WAY SHALL BE REMOVED IN ACCORDANCE WITH ARTICLE 501.04 AND 501.05 OF THE STANDARD SPECIFICATIONS, WITHOUT ADDITIONAL COMPENSATION, UNLESS OTHERWISE NOTED IN THE PLANS OR SPECIAL PROVISIONS.

NO OVERHAUL HAS BEEN COMPUTED AND NONE SHALL BE PAID FOR FROM ANY SOURCE.

THE CONTRACTOR SHALL SEED ALL DISTURBED AREAS WITHIN THE PROJECT LIMITS.

ALL UTILITY POLES, GAS PIPES, ETC. IN THE WAY OF THE IMPROVEMENTS SHALL BE MOVED BY THE UTILITIES PRIOR TO CONSTRUCTION AND SHALL NOT BE INCLUDED IN THE CONTRACT. THE CONTRACTOR SHALL NOTIFY THE RESPECTIVE UTILITIES TO MAKE THE NECESSARY ADJUSTMENTS PRIOR TO CONSTRUCTION.

THE FINAL TOP FOUR INCHES OF SOIL IN ANY RIGHT-OF-WAY AREA DISTURBED BY THE CONTRACTOR MUST BE A COHESIVE SOIL CAPABLE OF SUPPORTING VEGETATION AND APPROVED BY THE ENGINEER.

THE LOCATION AND ELEVATION OF THE VARIOUS UNDERGROUND UTILITIES AS SHOWN ON THE PLANS ARE NOT TO BE TAKEN AS EXACT. THE CONTRACTOR SHALL USE SPECIAL CARE WHEN CONDUCTING CONSTRUCTION OPERATIONS NEAR THEM TO PREVENT DAMAGE.

THE LOCATION OF EXISTING FIELD TILES AND ANY OTHER PUBLIC OR PRIVATE UTILITIES AS SHOWN IN THE PLANS ARE NOT TO BE TAKEN AS EXACT. EXACT LOCATION OF ALL FIELD TILES AND UTILITIES IS TO BE DETERMINED IN THE FIELD BY THE CONTRACTOR.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING UTILITY PROPERTY DURING CONSTRUCTION OPERATIONS AS OUTLINED IN ARTICLE 107.31 OF THE STANDARD SPECIFICATIONS. ANY UTILITY PROPERTY DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE OWNER AT THE CONTRACTOR'S EXPENSE.

THE UTILITIES LOCATED WITHIN THE PROJECT LIMITS OR IMMEDIATELY ADJACENT TO THE PROJECT CONSTRUCTION LIMITS INCLUDE:

AMEREN ILLINOIS (NORTH)
ATTN: MARTIN FULLER
1050 W. BLVD.
BELLEVILLE, IL 62222
(618) 236-6281
MFULLER@AMEREN.COM

COMCAST
ATTN: MARTHA GIERAS
688 INDUSTRIAL DRIVE
ELMHURST, IL 60126
(630) 600-6352
MARTHA_GIERAS@CABLE.COMCAST.NET

FRONTIER COMMUNICATIONS
ATTN: TERRY SPURGEON
111 S. MAIN ST
KEWANEE, IL 61443
(309) 853-6293
TERRY.SPURGEON@FTR.COM

US GEOLOGICAL SURVEY
ATTN: SHAWN CUTSHAW
650 N. PEACE RD.
SUITE G
DEKALB, IL 60115
(815) 752-2038
SCUTSHAW@USGS.GOV

A NATIONWIDE 404 PERMIT HAS BEEN ISSUED FOR THIS PROJECT AND THE CONDITIONS OF THAT PERMIT MUST BE ADHERED TO.

WHERE SECTION OR SUBSECTION MONUMENTS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE REMOVED. THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL PROPERTY MARKERS, MONUMENTS, AND RIGHT OF WAY PINS UNTIL THE OWNER, AN AUTHORIZED SURVEYOR, OR AGENT HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION.

EXISTING MAIL BOXES, STREET SIGNS AND TRAFFIC SIGNS THAT ARE WITHIN THE CONSTRUCTION LIMITS SHALL BE REMOVED BY THE CONTRACTOR. COST OF REMOVAL TO BE INCLUDED IN THE CONTRACT UNIT PRICE BID PER CUBIC YARD FOR EARTH EXCAVATION (SPECIAL).

WHERE THE PROPOSED CONSTRUCTION MEETS AN EXISTING BITUMINOUS SURFACE, OR WHERE SAWING IS STATED ON THE PLANS, THE EXISTING SHALL BE SAWED IN A NEAT, STRAIGHT LINE. COST OF SAWING TO BE INCLUDED IN THE CONTRACT UNIT PRICE BID PER CUBIC YARD FOR EARTH EXCAVATION (SPECIAL).

ALL BORROW/WASTE/USE SITES MUST BE APPROVED BY THE DEPARTMENT PRIOR TO REMOVING ANY MATERIAL FROM THE PROJECT OR INITIATING ANY EARTHMOVING ACTIVITIES, INCLUDING TEMPORARY STOCKPILING OUTSIDE THE LIMITS OF CONSTRUCTION.

BRIDGE FLOWS MUST BE MAINTAINED THROUGHOUT THE PROJECT. NORMAL FLOW SHALL BE ALLOWED TO PASS AT THE RATE IT ENTERS THE JOB SITE. HIGH FLOWS SHALL BE ALLOWED TO PASS WITHOUT CAUSING DAMAGE TO UPSTREAM PROPERTIES.

COMMITMENTS

1. ALL TREE CLEARING SHALL TAKE PLACE BETWEEN OCTOBER 1st AND MARCH 31st TO SATISFY USFWS BAT REQUIREMENTS.
2. THE CURRENT BAT ASSESSMENT IS VALID UNTIL 11/29/2020; THE CONTRACTOR SHALL BE RESPONSIBLE FOR UPDATING ANY EXPIRED ASSESSMENT AND RESUBMITTING TO THE ENGINEER.

SCHEDULE OF QUANTITIES

TR 281 EARTHWORK TOTALS

LOCATION	EARTH EXCAVATION (SPECIAL)	EARTH EXCAVATION ADJUSTED FOR SHRINKAGE 25%	CHANNEL EXCAVATION	CHANNEL EXCAVATION ADJUSED FOR SHRINKAGE & WASTE 37.5% (75% X 50%)	*EMBANKMENT	*FURNISHED EXCAVATION
	CU YD	CU YD	CU YD	CU YD	CU YD	CU YD
STA 16+45 - 22+55	1308	980	635	397	2465	1088
PROJECT TOTAL	1308	980	635	397	2465	1088

*X2020410

*FOR INFORMATION ONLY, SEE SPECIAL PROVISIONS FOR EARTH EXCAVATION (SPECIAL)

SCHEDULE OF QUANTITIES – CONT.

TREE REMOVAL, ACRES

STATION	ACRE	REMARKS
LT STA 16+87 - 17+40	0.02	EDGE OF SHLDR TO EX ROW
LT STA 20+86 - 22+54	0.07	EDGE OF SHLDR TO EX ROW
RT STA 16+66 - 16+83	0.01	EDGE OF SHLDR TO EX ROW
RT STA 17+26 - 19+34	0.09	EDGE OF SHLDR TO EX ROW
PROJECT TOTAL	0.19	
20100500		

EROSION CONTROL BLANKET

STATION	SQ. YD.	REMARKS
LT STA 16+45 - 18+31	1677	
LT STA 18+55 - 19+98	740	
LT STA 20+62 - 22+55	766	
RT STA 16+45 - 16+91	383	
RT STA 17+14 - 19+47	1323	
RT STA 20+09 - 22+55	812	
PROJECT TOTAL	5701	
25100630		

TEMPORARY EROSION CONTROL SEEDING

STATION	POUND	REMARKS
LT STA 16+45 - 18+31	35	
LT STA 18+55 - 19+98	15	
LT STA 20+62 - 22+55	16	
RT STA 16+45 - 16+91	8	
RT STA 17+14 - 19+47	27	
RT STA 20+09 - 22+55	17	
PROJECT TOTAL	118	
28000250		

TEMPORARY DITCH CHECKS

STATION	FOOT	REMARKS
LT STA 19+25	15	
LT STA 21+10	20	
RT STA 20+75	10	
PROJECT TOTAL	45	
28000305		

SCHEDULE OF QUANTITIES – CONT.

PERIMETER EROSION BARRIER

STATION	FOOT	REMARKS
LT STA 16+45	89	
LT STA 16+45 - 19+65	320	
LT STA 19+65	17	
LT STA 19+65 - 19+98	33	
LT STA 19+92 - 19+98	13	
LT STA 20+62 - 20+55	200	
LT STA 20+55	34	
RT STA 16+45	79	
RT STA 16+45 - 19+47	314	
RT STA 20+09 - 20+10	2	
RT STA 20+09 - 20+55	246	
RT 20+55	37	
PROJECT TOTAL	1384	
28000400		

INLET AND PIPE PROTECTION

STATION	EACH	REMARKS
FEL STA 18+43	1	
PROJECT TOTAL	1	
28000500		

AGGREGATE SURFACE COURSE, TYPE A

STATION	TON	REMARKS
STA 16+45 - 19+00	384	12"
STA 21+00 - 22+55	231	12"
PROJECT TOTAL	615	
*40200100		

AGGREGATE SURFACE COURSE, TYPE B

STATION	TON	REMARKS
FEL STA 18+43	91	8"
FER STA 17+03	88	8"
PROJECT TOTAL	179	
*40200800		

METAL FLARED END SECTIONS 18"

STATION	EACH	REMARKS
FEL STA 18+43	2	
PROJECT TOTAL	2	
54262718		

WILLETT HOFMANN & ASSOCIATES INC
ENGINEERING ARCHITECTURE LAND SURVEYING
809 EAST 2ND STREET, DIXON, IL 61021-0367
T: 815-284-3381 DESIGN FIRM: #184-000918

DESIGNED - BKC	REVISED -	
CHECKED - PLP	REVISED -	
DRAWN - RDA	REVISED -	
CHECKED - BKC	REVISED -	

BUREAU COUNTY
T.R. 281 (1300 N. AVE.) OVER E. BUREAU CREEK
STATION 20+00

GENERAL NOTES AND SCHEDULE OF QUANTITIES

SHEET NO. 1 OF 2 SHEETS

TWP. TRE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
281	15-21124-00-BR	BUREAU	35	3
	WHA# 1302D16	CONTRACT NO. 87698		
	ILLINOIS FED. AID PROJECT KBD9(822)			

SCHEDULE OF QUANTITIES – CONT.

PIPE CULVERTS, CLASS D, TYPE 2 18"

STATION	FOOT	REMARKS
FEL STA 18+43	45	
PROJECT TOTAL	45	
542D1063		

STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS

STATION	FOOT	REMARKS
LT STA 17+04 - 17+29	25	
LT STA 20+91 - 21+54	63	
RT STA 18+59 - 19+09	50	
PROJECT TOTAL	138	
63000001		

TRAFFIC BARRIER TERMINAL, TYPE 5A

STATION	EACH	REMARKS
NORTHWEST QUADRANT	1	
SOUTHWEST QUADRANT	1	
NORTHEAST QUADRANT	1	
SOUTHEAST QUADRANT	1	
PROJECT TOTAL	4	
63100075		

TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT

STATION	EACH	REMARKS
LT STA 17+81	1	
LT STA 18+71	1	
LT STA 22+05	1	
RT STA 17+82	1	
RT STA 21+29	1	
PROJECT TOTAL	5	
*63100167		

GUARDRAIL REMOVAL

STATION	FOOT	REMARKS
LT STA 17+04 - 17+50	46	
PROJECT TOTAL	46	
63200310		

SCHEDULE OF QUANTITIES – CONT.

TERMINAL MARKER – DIRECT APPLIED

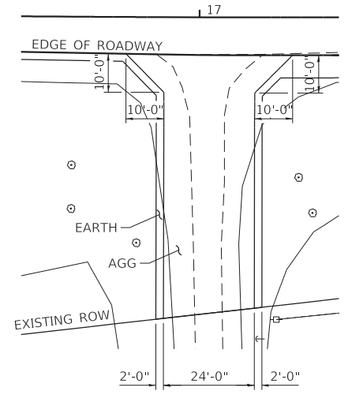
STATION	EACH	REMARKS
LT STA 17+81	1	
LT STA 18+71	1	
LT STA 22+05	1	
RT STA 17+82	1	
RT STA 21+29	1	
PROJECT TOTAL	5	FOR INFORMATION ONLY, SEE SPECIAL PROVISIONS FOR TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT
72501000		

GUARDRAIL REFLECTORS, TYPE A

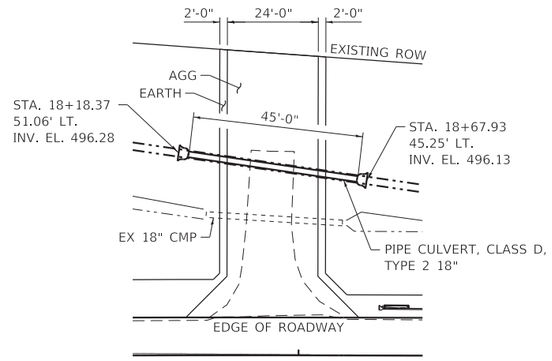
STATION	EACH	REMARKS
LT STA 17+04 - 17+81	1	NW OF BRIDGE
LT STA 18+71 - 22+05	4	S GUARDRAIL & RAILINGS OF BRIDGE
RT STA 17+82 - 21+29	4	N GUARDRAIL & RAILINGS OF BRIDGE
PROJECT TOTAL	9	
78200005		

SEEDING, CLASS 3 (SPECIAL)

STATION	ACRE	REMARKS
LT STA 16+45 - 18+31	0.35	
LT STA 18+55 - 19+98	0.15	
LT STA 20+62 - 22+55	0.16	
RT STA 16+45 - 16+91	0.08	
RT STA 17+14 - 19+47	0.27	
RT STA 20+09 - 22+55	0.17	
PROJECT TOTAL	1.18	
*X2501100		



F.E.R. STATION 17+03



F.E.L. STATION 18+43

WILLETT HOFMANN & ASSOCIATES INC
ENGINEERING ARCHITECTURE LAND SURVEYING
809 EAST 2ND STREET, DIXON, IL 61021-0367
T: 815-284-3381 DESIGN FIRM: #184-000918

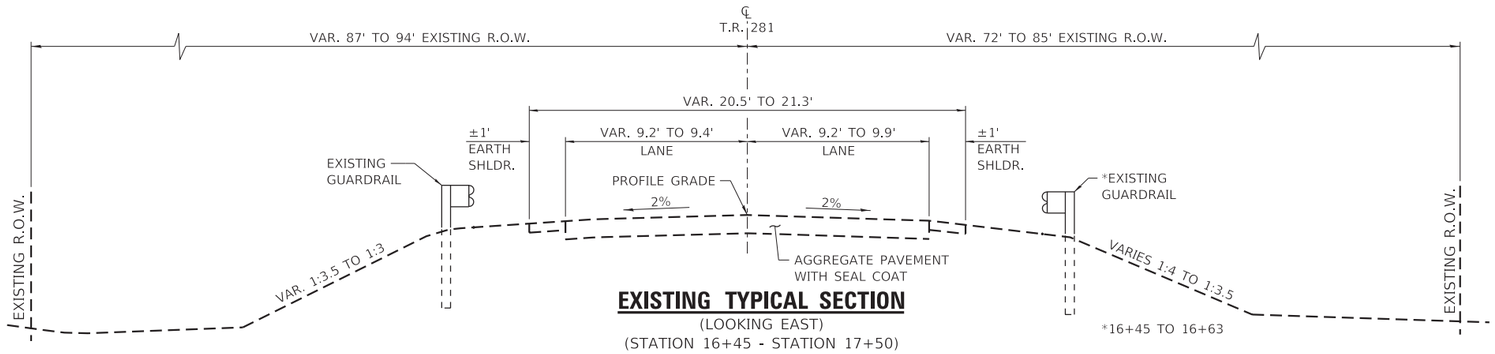
DESIGNED - BKC	REVISED -	
CHECKED - PLP	REVISED -	
DRAWN - RDA	REVISED -	
CHECKED - BKC	REVISED -	

BUREAU COUNTY
T.R. 281 (1300 N. AVE.) OVER E. BUREAU CREEK
STATION 20+00

GENERAL NOTES AND SCHEDULE OF QUANTITIES

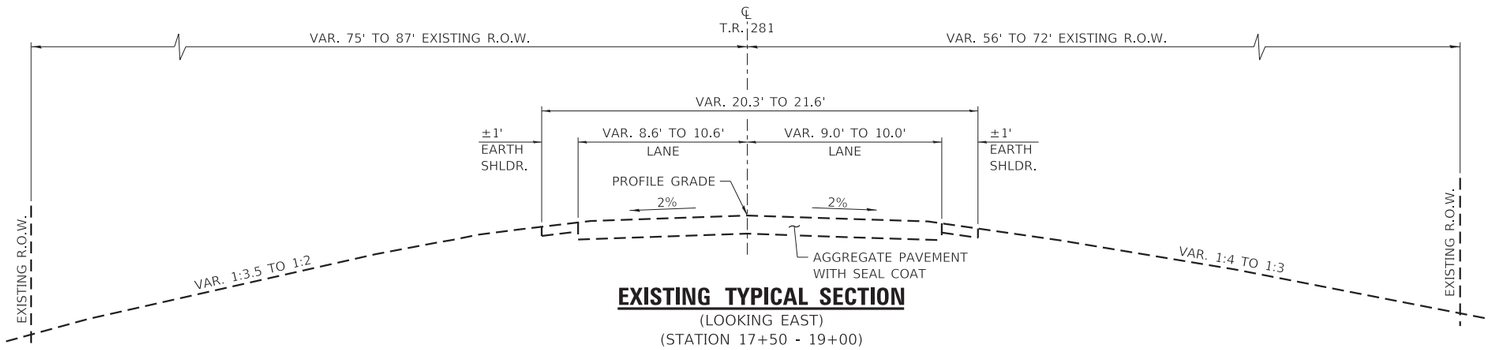
SHEET NO. 2 OF 2 SHEETS

TWP. TRE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
281	15-21124-00-BR	BUREAU	35	4
	WHA* 1302D16	CONTRACT NO. 87698		
	ILLINOIS FED. AID PROJECT KBD9(822)			



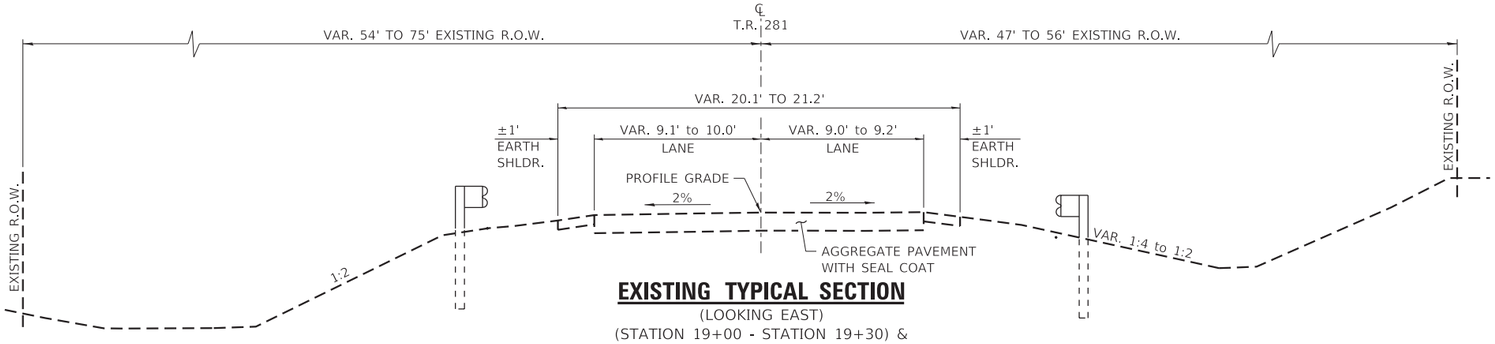
EXISTING TYPICAL SECTION

(LOOKING EAST)
(STATION 16+45 - STATION 17+50)



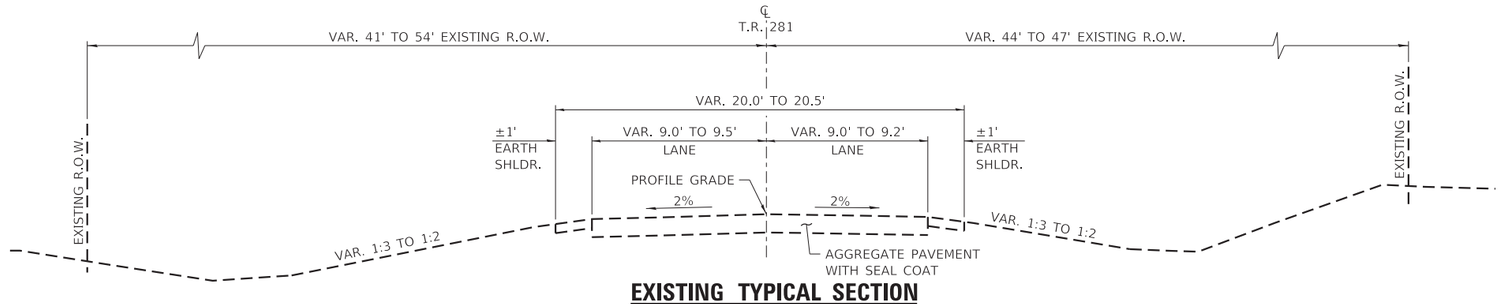
EXISTING TYPICAL SECTION

(LOOKING EAST)
(STATION 17+50 - 19+00)



EXISTING TYPICAL SECTION

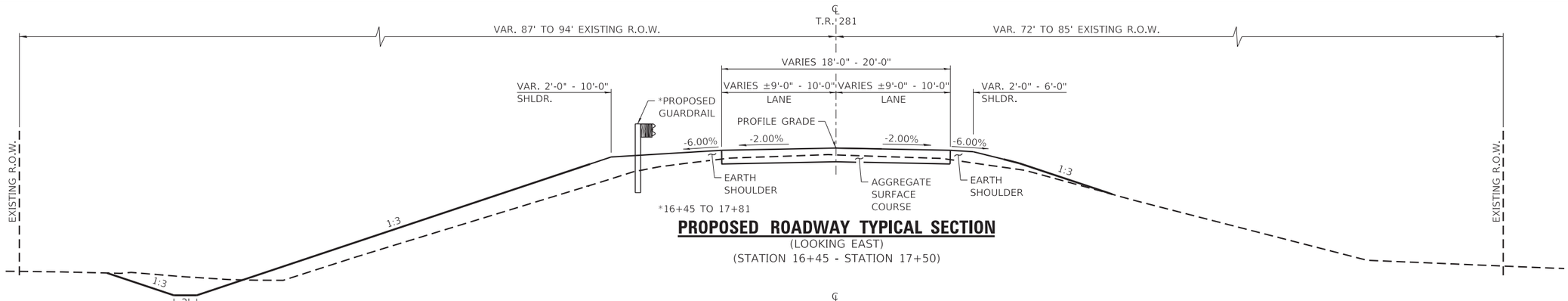
(LOOKING EAST)
(STATION 19+00 - STATION 19+30) &
(STATION 20+80 - STATION 21+00)



EXISTING TYPICAL SECTION

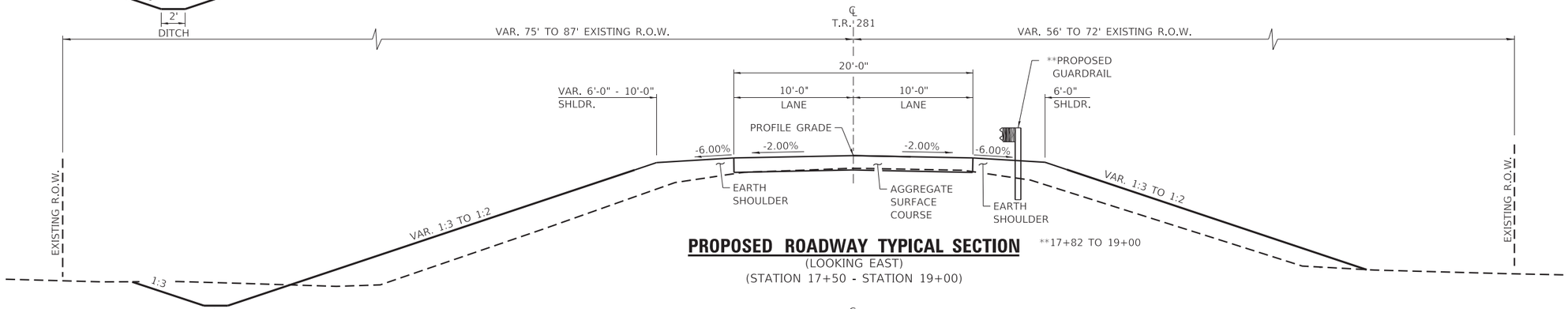
(LOOKING EAST)
(STATION 21+00 - STATION 22+55)

WILLETT HOFMANN & ASSOCIATES INC ENGINEERING ARCHITECTURE LAND SURVEYING 809 EAST 2ND STREET, DIXON, IL 61021-0367 T: 815-284-3381 DESIGN FIRM: #184-000918	DESIGNED - BKC CHECKED - PLP DRAWN - RDA CHECKED - BKC	REVISED - REVISED - REVISED - REVISED -	**BUREAU COUNTY** **T.R. 281 (1300 N. AVE.) OVER E. BUREAU CREEK** **STATION 20+00**	**EXISTING ROADWAY TYPICAL SECTIONS** SHEET NO. 1 OF 2 SHEETS	TWP. TRE. 281 | SECTION 15-21124-00-BR | COUNTY BUREAU | TOTAL SHEETS 35 | SHEET NO. 5 WHA* 1302D16 | CONTRACT NO. 87698 ILLINOIS | FED. AID PROJECT KBD9(822)



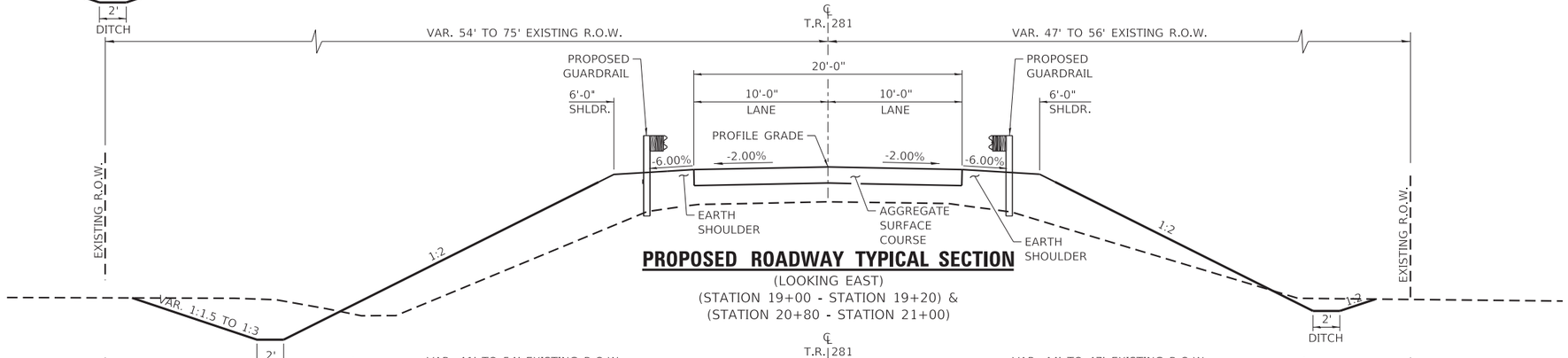
PROPOSED ROADWAY TYPICAL SECTION

(LOOKING EAST)
(STATION 16+45 - STATION 17+50)



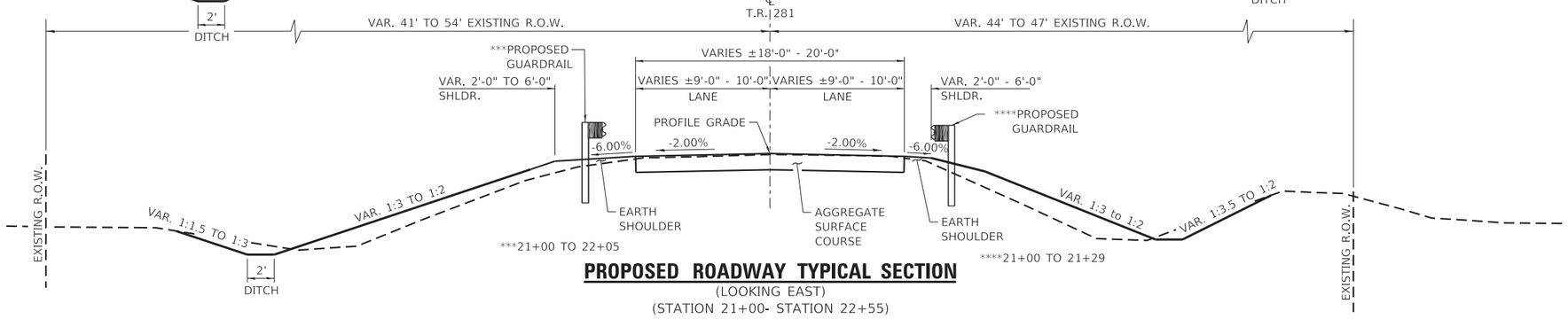
PROPOSED ROADWAY TYPICAL SECTION

(LOOKING EAST)
(STATION 17+50 - STATION 19+00)



PROPOSED ROADWAY TYPICAL SECTION

(LOOKING EAST)
(STATION 19+00 - STATION 19+20) &
(STATION 20+80 - STATION 21+00)



PROPOSED ROADWAY TYPICAL SECTION

(LOOKING EAST)
(STATION 21+00- STATION 22+55)

WILLETT HOFMANN & ASSOCIATES INC
ENGINEERING ARCHITECTURE LAND SURVEYING
809 EAST 2ND STREET, DIXON, IL 61021-0367
T: 815-284-3381 DESIGN FIRM: #184-000918

DESIGNED - BKC	REVISED -	
CHECKED - PLP	REVISED -	
DRAWN - RDA	REVISED -	
CHECKED - BKC	REVISED -	

BUREAU COUNTY
T.R. 281 (1300 N. AVE.) OVER E. BUREAU CREEK
STATION 20+00

PROPOSED ROADWAY TYPICAL SECTIONS

SHEET NO. 2 OF 2 SHEETS

TWP. TRE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
281	15-21124-00-BR	BUREAU	35	6
	WHA* 1302D16	CONTRACT NO. 87698		
	ILLINOIS FED. AID PROJECT KBD9(822)			

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BENCH MARK #403: TOP OF WINGWALL W. OF STRUCTURE ±14' RT. OF STA. ±12+31 ELEV. 528.63

BENCH MARK #400: PUNCH MARK IN GUARDRAIL SUPPORT POST ±17' LT. OF STA. ±17+35 ELEV. 509.44

BENCH MARK #401: FOUND CHSLD "□" ON NE WINGWALL ON STRUCTURE 12.5' LT. OF STA. ±20+75, ELEV. 504.31

*SEE SPECIAL PROVISIONS

PROP. CURVE TR281ACUR1

PI STA. = 17+12.47	E = 0.25'
Δ = 0° 54' 36" (LT)	e = N/A
D = 0° 42' 58"	T.R. = N/A
R = 8,000.00'	S.E. RUN = N/A
T = 63.53'	P.C. STA. = 16+48.94
L = 127.06'	P.T. STA. = 17+75.99

PROP. CURVE TR281ACUR2

PI STA. = 18+18.95	E = 0.12'
Δ = 0° 36' 55" (RT)	e = N/A
D = 0° 42' 58"	T.R. = N/A
R = 8,000.00'	S.E. RUN = N/A
T = 42.96'	P.C. STA. = 17+75.99
L = 85.92'	P.T. STA. = 18+61.91

EXISTING STRUCTURE: S.N. 006-4304
A THREE SPAN (46'-0":46'-1":46'-0") PPC DECK BEAM BRIDGE ON PILE BENT PIERS AND SPILL-THRU ABUTMENTS AT STA. 20+05. SKEWED 30° LEFT AHEAD.

PROPOSED STRUCTURE: S.N. 006-4314
A SINGLE SPAN (137'-6") PPC IL-BEAM BRIDGE ON SPILL-THRU ABUTMENTS AT STATION 20+00. 30° SKEWED LEFT AHEAD.

SCALE: 1"=20'

EARTH EXCAVATION (SPECIAL) = 1,308 CU YD
FURNISHED EXCAVATION = 1,088 CU YD.
(INFORMATION ONLY - SEE SPECIAL PROVISIONS)
FURNISHED EXCAVATION = EMBANKMENT - ⅔(EARTH EX. + ½ CHANNEL EX.)

Know what's below. Call before you dig.

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 NOTATNS CHKD

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DESIGNED - GFS	REVISED -
CHECKED - IPN	REVISED -
DRAWN - RDA	REVISED -
CHECKED - PLP	REVISED -

WILLETT HOFMANN & ASSOCIATES INC
ENGINEERING ARCHITECTURE LAND SURVEYING
809 EAST 2ND STREET, DIXON, IL 61021-0367
T: 815-284-3381 DESIGN FIRM: #184-000918

BUREAU COUNTY
T.R. 281 (1300 N. AVE.) OVER E. BUREAU CREEK
STATION 20+00

PLAN & PROFILE

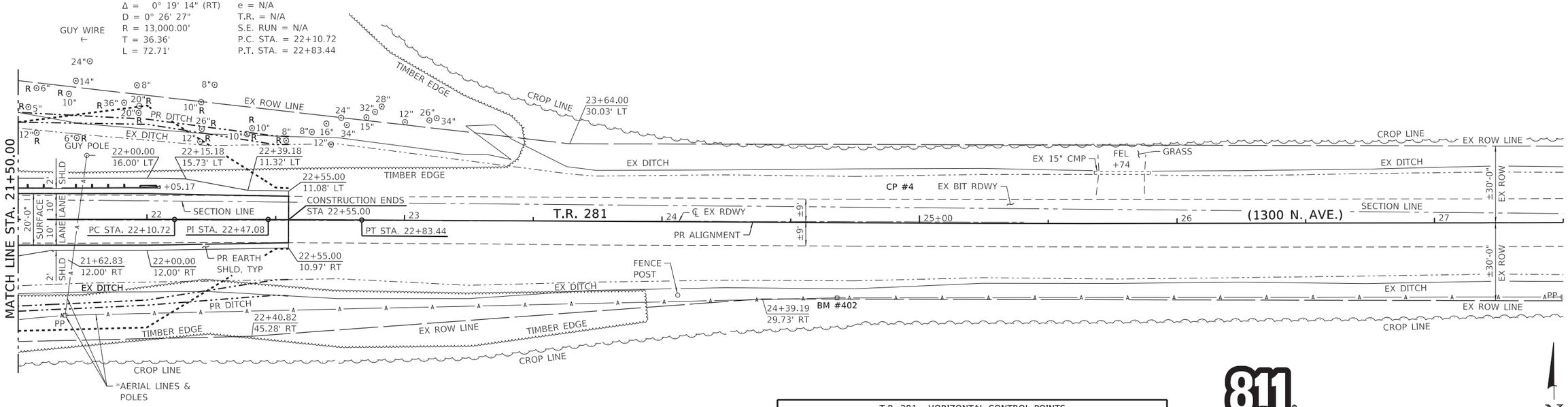
SCALE: 1" = 20'-0" | SHEET NO. 1 OF 2 SHEETS | STA. 16+50.00 TO STA. 21+50.00

TWP. TRE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
281	15-21124-00-BR	BUREAU	35	7
	WHA* 1302D16	CONTRACT NO. 87698		
	ILLINOIS FED. AID PROJECT KBD9(822)			

BENCH MARK #402: RR SPIKE IN 2ND PP E OF STRUCTURE
±28' RT. OF STA. ±24+63,
ELEV. 500.47

PROP. CURVE TR281ACUR3

PI STA. = 22+47.08	E = 0.05'
Δ = 0° 19' 14" (RT)	e = N/A
D = 0° 26' 27"	T.R. = N/A
R = 13,000.00'	S.E. RUN = N/A
T = 36.36'	P.C. STA. = 22+10.72
L = 72.71'	P.T. STA. = 22+83.44



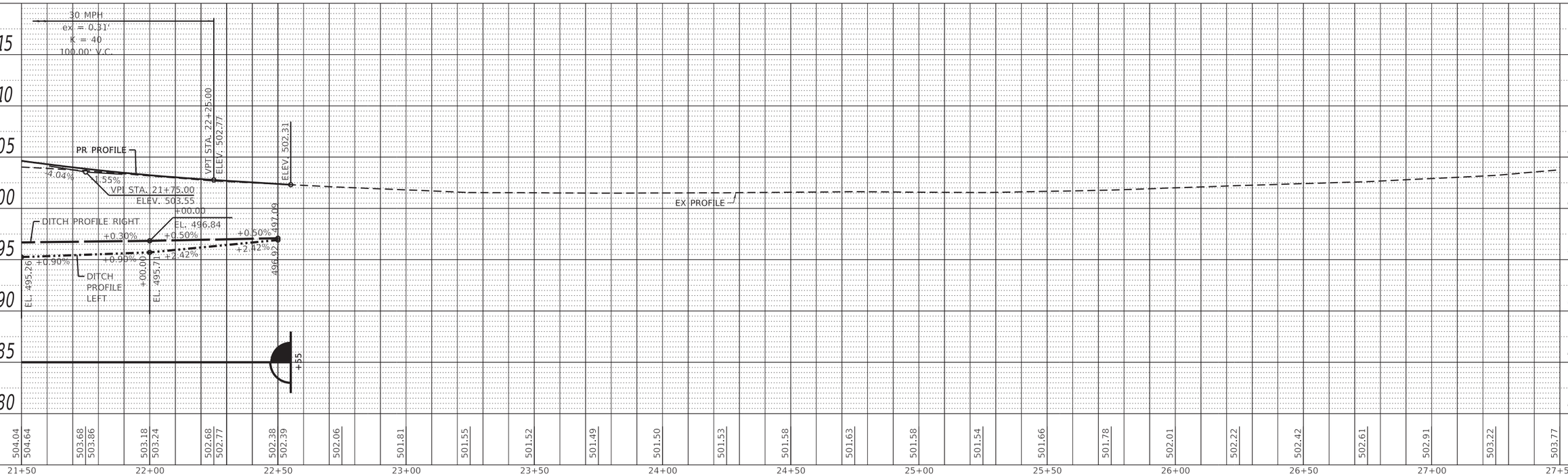
*SEE SPECIAL PROVISIONS

T.R. 281 - HORIZONTAL CONTROL POINTS

PT #	STA	N	E	ELEV.	DESCRIPTION
1	12.5' RT. 16+45.89	1701142.32	2511707.57	512.10	⅝" IP
2	12.8' LT. 18+74.00	1701167.58	2511935.82	505.96	⅝" IP
3	12.1' RT. 21+23.00	1701141.81	2512184.72	503.91	⅝" IP
4	19.9' LT. 24+87.23	1701171.19	2512549.17	499.40	⅝" IP

811 Know what's **below.** **Call** before you dig.

SCALE: 1"=20'
0' 20' 40' 60'

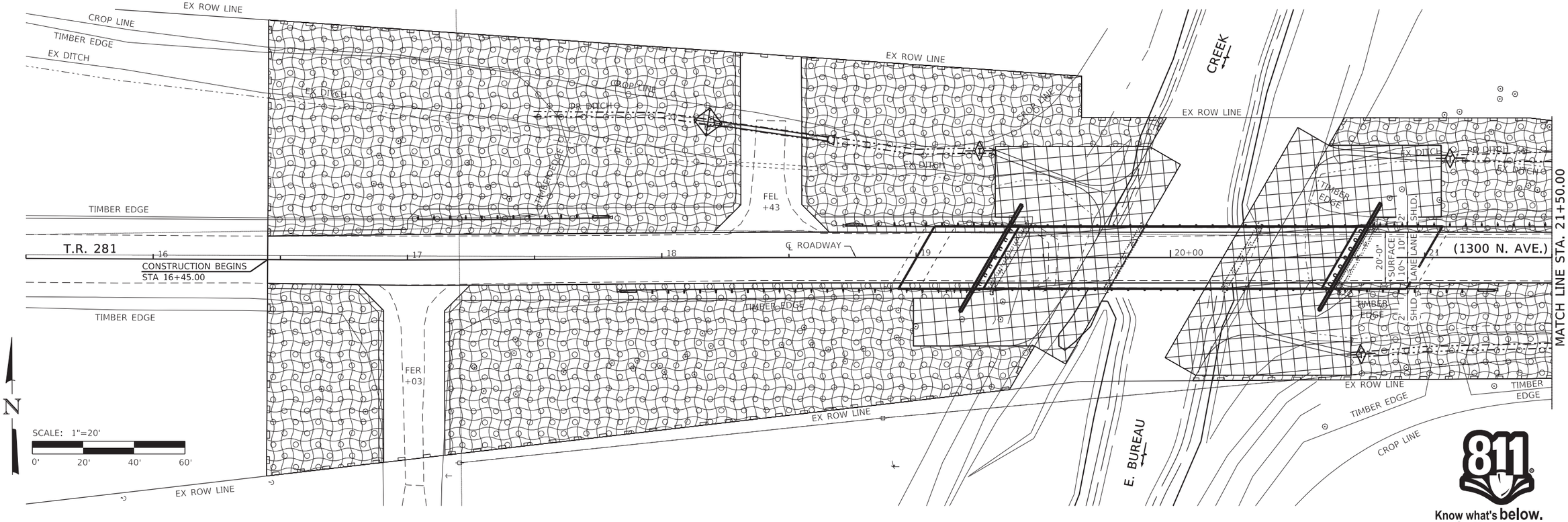


WILLETT HOFMANN & ASSOCIATES INC ENGINEERING ARCHITECTURE LAND SURVEYING 809 EAST 2ND STREET, DIXON, IL 61021-0367 T: 815-284-3381 DESIGN FIRM: #184-000918	DESIGNED - GFS	REVISED -	**BUREAU COUNTY** **T.R. 281 (1300 N. AVE.) OVER E. BUREAU CREEK** **STATION 20+00**
	CHECKED - IPN	REVISED -	
	DRAWN - RDA	REVISED -	
	CHECKED - PLP	REVISED -	

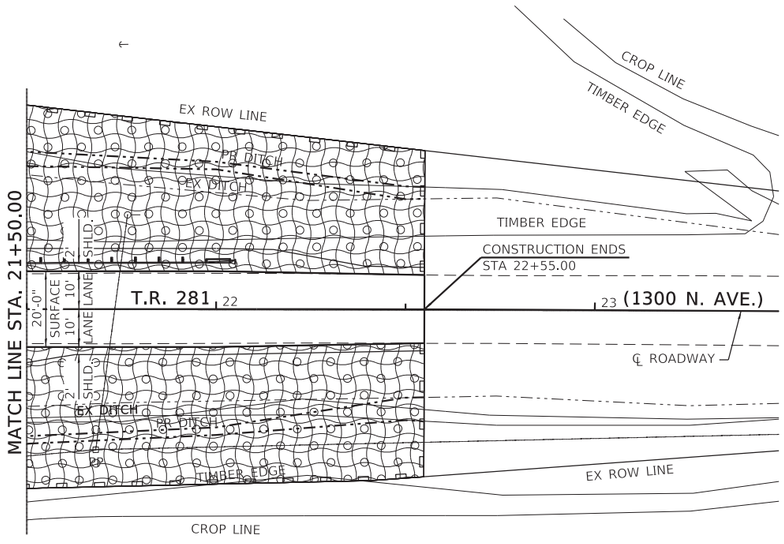
PLAN & PROFILE

SCALE: 1" = 20'-0" | SHEET NO. 2 OF 2 SHEETS | STA. 21+50.00 TO STA. 27+50.00

TWP. TRE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
281	15-21124-00-BR	BUREAU	35	8
	WHA* 1302D16	CONTRACT NO. 87698		
	ILLINOIS FED. AID PROJECT KBD9(822)			



Know what's **below.**
Call before you dig.



EROSION CONTROL NOTES

THE SOIL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE INSPECTED WEEKLY AND AFTER ½" OF RAIN OR MORE BY THE INDIVIDUAL ON SITE IN CHARGE OF SOIL EROSION AND SEDIMENT CONTROL DURING THE CONSTRUCTION OF THE PROJECT.

PERIMETER EROSION BARRIER SHALL COMPLY WITH SECTION 280 OF THE STANDARD SPECIFICATIONS AND SHALL BE PLACED AS SHOWN ON THE EROSION CONTROL PLAN AND IN ACCORDANCE WITH STATIONS SHOWN ON THE SCHEDULE OF QUANTITIES SHEET OR AS DIRECTED BY THE ENGINEER.

SILT FENCE SHALL BE INSTALLED FOLLOWING THE COMPLETION AND STABILIZATION OF ALL AREAS ADJACENT TO THE ON-SITE DRAINAGES. THE SILT FENCE WILL REMAIN IN PLACE UNTIL THE CONTRIBUTING AREA IS STABILIZED.

FOR SEEDING, CLASS 3 (SPECIAL) SEE SPECIAL PROVISIONS.

EROSION CONTROL BLANKET SHALL BE PLACED IN DITCHES AND TO ALL DISTURBED AREAS AS SHOWN ON THIS EROSION CONTROL PLAN SHEET AND IN ACCORDANCE WITH SECTION 251 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

THE USE OF GREEN DYE IN THE EROSION CONTROL BLANKET IS NOT ACCEPTABLE.

TEMPORARY DITCH CHECKS SHALL COMPLY WITH SECTION 280 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND STANDARD 280001-07.

TEMPORARY DITCH CHECKS SHALL BE PLACED AT STATIONS CALLED OUT IN THE SCHEDULE OF QUANTITIES OR AS DIRECTED BY THE ENGINEER.

STOCKPILES OF SOIL AND OTHER BUILDING MATERIALS TO REMAIN IN PLACE MORE THAN THREE (3) DAYS SHALL BE FURNISHED WITH EROSION AND SEDIMENT CONTROL MEASURES (I.E. PERIMETER SILT FENCE). STOCKPILES TO REMAIN IN PLACE FOR 14 DAYS OR MORE SHALL RECEIVE TEMPORARY SEEDING.

ALL ADJACENT ENTRANCES MUST BE KEPT CLEAR OF DEBRIS. INSPECTED DAILY AND CLEANED WHEN NECESSARY.

LEGEND

- PERIMETER EROSION BARRIER
- SEEDING, CLASS 3 (SPECIAL)
- TEMPORARY DITCH CHECKS
- EROSION CONTROL BLANKET
- INLET AND PIPE PROTECTION
- STONE RIPRAP, CLASS A7 (SPECIAL)

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
EROSION CONTROL BLANKET	SQ YD	5,701
TEMPORARY EROSION CONTROL SEEDING	POUND	118
TEMPORARY DITCH CHECKS	FOOT	45
PERIMETER EROSION BARRIER	FOOT	1,384
INLET AND PIPE PROTECTION	EACH	1
SEEDING, CLASS 3 (SPECIAL)	ACRE	1.18
STONE RIPRAP, CLASS A7 (SPECIAL)	TON	1,807

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BUREAU COUNTY
T.R. 281 (1300 N. AVE.) OVER E. BUREAU CREEK
STATION 20+00

EROSION CONTROL PLAN

SCALE: 1" = 20'-0" | SHEET NO. 1 OF 2 SHEETS | STA. 16+45.00 TO STA. 22+55.00

TWP. TRE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
281	15-21124-00-BR	BUREAU	35	9
WHA* 1302D16		CONTRACT NO. 87698		
ILLINOIS	FED. AID PROJECT KBD9(822)			

STORM WATER POLLUTION PREVENTION PLAN

THE FOLLOWING PLAN IS ESTABLISHED AND INCORPORATED IN THE PROJECT TO DIRECT THE CONTRACTOR IN THE PLACEMENT OF TEMPORARY EROSION CONTROL SYSTEMS AND TO PROVIDE A STORM SEWER WATER POLLUTION PREVENTION PLAN FOR COMPLIANCE UNDER NPDES.

THE PURPOSE OF THIS PLAN IS TO MINIMIZE EROSION WITHIN THE CONSTRUCTION SITE AND TO LIMIT SEDIMENTS FROM LEAVING THE CONSTRUCTION SITE BY UTILIZING PROPER TEMPORARY EROSION CONTROL SYSTEMS AND PROVIDING GROUND COVER WITHIN A REASONABLE AMOUNT OF TIME.

CERTAIN EROSION CONTROL FACILITIES SHALL BE INSTALLED BY THE CONTRACTOR AT THE BEGINNING OF CONSTRUCTION. OTHER ITEMS SHALL BE INSTALLED BY THE CONTRACTOR AS DIRECTED BY THE ENGINEER ON A CASE BY CASE SITUATION DEPENDING ON THE CONTRACTOR'S SEQUENCE OF ACTIVITIES, TIME OF YEAR, AND EXPECTED WEATHER CONDITIONS.

THE CONTRACTOR SHALL INSTALL PERMANENT EROSION CONTROL SYSTEMS AND SEEDING WITHIN A TIME FRAME SPECIFIED HEREIN AND AS DIRECTED BY THE ENGINEER, THEREFORE MINIMIZING THE AMOUNT OF AREA SUSCEPTIBLE TO EROSION AND REDUCING THE AMOUNT OF TEMPORARY SEEDING. THE ENGINEER WILL DETERMINE IF ANY TEMPORARY EROSION CONTROL SYSTEMS SHOWN IN THE PLAN CAN BE DELETED AND IF ANY ADDITIONAL TEMPORARY EROSION CONTROL SYSTEMS, WHICH ARE NOT INCLUDED IN THIS PLAN, SHALL BE ADDED. THE CONTRACTOR SHALL PERFORM ALL WORK AS DIRECTED BY THE ENGINEER AND AS SHOWN IN STANDARD 280001 OF THE PLANS.

SECTION 280, TEMPORARY EROSION CONTROL, OF THE STANDARD SPECIFICATIONS ADDITIONALLY SUPPLEMENTS THIS PLAN.

SITE DESCRIPTION

DESCRIPTION OF CONSTRUCTION ACTIVITY:

1. THE PROJECT CONSISTS OF A BRIDGE REPLACEMENT ON T.R. 281 OVER E. BUREAU CREEK & APPROACH ROADWAY WORK THERETO.

2. CONSTRUCTION INCLUDES EARTH EXCAVATION, ENTRANCES, CHANNEL EXCAVATION, VARIOUS PAVEMENT ITEMS, CULVERT ITEMS AND OTHER MISCELLANEOUS ITEMS OF CONSTRUCTION.

DESCRIPTION OF INTENDED SEQUENCE FOR MAJOR CONSTRUCTION ACTIVITIES WHICH WILL DISTURB SOILS FOR MAJOR PORTIONS OF THE CONSTRUCTION SITE:

1. EARTH EXCAVATION.
2. CHANNEL EXCAVATION.
3. FURNISHED EXCAVATION.
4. EARTHSHOULDERS AND RELATED APPURTENANCES.
5. PLACEMENT OF PERMANENT EROSION CONTROL INCLUDING SEEDING AND RIPRAP.

AREA OF CONSTRUCTION SITE:

THE TOTAL AREA OF THE CONSTRUCTION SITE IS ESTIMATED TO BE 1.76 ACRES OF WHICH 1.76 ACRES WILL BE DISTURBED BY EXCAVATION, GRADING, AND OTHER ACTIVITIES.

OTHER REPORTS, STUDIES AND PLANS WHICH AID IN THE DEVELOPMENT OF THE STORM WATER POLLUTION PREVENTION PLAN AS REFERENCED DOCUMENTS:

1. INFORMATION OF THE SOILS AND TERRAIN WITHIN THE SITE WAS OBTAINED FROM SOIL BORINGS THAT WERE UTILIZED FOR THE DEVELOPMENT OF THE PROPOSED TEMPORARY EROSION CONTROL SYSTEMS.

2. PROJECT PLAN DOCUMENTS, SPECIFICATIONS AND SPECIAL PROVISIONS, AND PLAN DRAWINGS INDICATING DRAINAGE PATTERNS AND APPROXIMATE SLOPES ANTICIPATED AFTER GRADING ACTIVITIES WERE UTILIZED FOR THE PROPOSED PLACEMENT OF THE TEMPORARY EROSION CONTROL SYSTEMS.

DRAINAGE TRIBUTARIES AND SENSITIVE AREAS RECEIVING RUNOFF FROM THIS CONSTRUCTION SITE:

E. BUREAU CREEK

CONTROLS – EROSION CONTROLS AND SEDIMENT CONTROL

DESCRIPTION OF STABILIZATION PRACTICES AT THE BEGINNING OF CONSTRUCTION.

1. THE DRAWINGS, SPECIFICATIONS AND SPECIAL PROVISIONS WILL ENSURE THAT EXISTING VEGETATION IS PRESERVED WHERE ATTAINABLE AND DISTURBED PORTIONS OF THE SITE WILL BE STABILIZED. STABILIZATION PRACTICES INCLUDE: TEMPORARY SEEDING, PERMANENT SEEDING, PERIMETER EROSION BARRIER, AND OTHER APPROPRIATE MEASURES AS DIRECTED BY THE ENGINEER. STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN 7 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED.

   (A) AREAS OF EXISTING VEGETATION (WOOD AND GRASSLANDS) OUTSIDE THE PROPOSED CONSTRUCTION LIMITS SHALL BE IDENTIFIED BY THE ENGINEER FOR PRESERVING AND SHALL BE PROTECTED FROM CONSTRUCTION ACTIVITIES.

   (B) DEAD, DISEASED, OR UNSUITABLE VEGETATION WITHIN THE SITE SHALL BE REMOVED AS DIRECTED BY THE ENGINEER, ALONG WITH REQUIRED TREE REMOVAL.

   (C) AS SOON AS REASONABLE ACCESS IS AVAILABLE TO ALL LOCATIONS WHERE WATER DRAINS AWAY FROM THE PROJECT, TEMPORARY DITCH CHECKS AND PERIMETER EROSION BARRIER SHALL BE INSTALLED AS CALLED OUT IN THIS PLAN AND DIRECTED BY THE ENGINEER.

   (D) BARE AND SPARSELY VEGETATED GROUND IN HIGHLY ERODIBLE AREAS AS DETERMINED BY THE ENGINEER SHALL BE TEMPORARILY SEEDED AT THE BEGINNING OF CONSTRUCTION WHERE NO CONSTRUCTION ACTIVITIES ARE EXPECTED WITHIN 7 DAYS.

   (E) AT LOCATIONS WHERE A SIGNIFICANT AMOUNT OF WATER DRAINS INTO THE CONSTRUCTION ZONE FROM OUTSIDE AREAS (ADJACENT LANDOWNERS), TEMPORARY DITCH CHECKS WILL BE UTILIZED TO LOCALLY DIVERT WATER, REDUCE FLOW RATES, AND COLLECT OUTSIDE SILTATION INSIDE THE RIGHT-OF-WAY LINE.

2. ESTABLISHMENT OF THESE TEMPORARY EROSION CONTROL MEASURES WILL HAVE ADDITIONAL BENEFITS TO THE PROJECT. DESIRABLE GRASS SEED WILL BECOME ESTABLISHED IN THESE AREAS AND WILL SPREAD SEEDS ONTO THE CONSTRUCTION SITE UNTIL PERMANENT SEEDING/MOWING AND OVER SEEDING CAN BE COMPLETED.

DESCRIPTION OF STABILIZATION PRACTICES DURING CONSTRUCTION:

1. DURING CONSTRUCTION, AREAS OUTSIDE THE CONSTRUCTION LIMITS AS OUTLINED PREVIOUSLY HEREIN SHALL BE PROTECTED. THE CONTRACTOR SHALL NOT USE THIS AREA FOR STAGING (EXCEPT AS DESCRIBED ON THE PLANS AND DIRECTED BY THE ENGINEER), PARKING OF VEHICLES OR CONSTRUCTION EQUIPMENT, STORAGE OF MATERIALS, OR OTHER CONSTRUCTION RELATED ACTIVITIES.

   (A) WITHIN THE CONSTRUCTION LIMITS, AREAS WHICH MAY BE SUSCEPTIBLE TO EROSION AS DETERMINED BY THE ENGINEER SHALL REMAIN UNDISTURBED UNTIL FULL SCALE CONSTRUCTION IS UNDERWAY TO PREVENT UNNECESSARY SOIL EROSION.

   (B) EARTH STOCKPILES SHALL BE TEMPORARILY SEEDED IF THEY ARE TO REMAIN UNUSED FOR MORE THAN 14 DAYS.

   (C) AS CONSTRUCTION PROCEEDS, THE CONTRACTOR SHALL INSTITUTE THE FOLLOWING AS DIRECTED BY THE ENGINEER:

      I. PLACE TEMPORARY EROSION CONTROL FACILITIES AT LOCATIONS SHOWN ON THE PLANS.

      II. TEMPORARILY SEED ERODIBLE BARE EARTH ON A WEEKLY BASIS TO MINIMIZE THE AMOUNT OF ERODIBLE SURFACE AREA WITHIN THE CONTRACT LIMITS.

   (D) EXCAVATED AREAS AND EMBANKMENT SHALL BE PERMANENTLY SEEDED IMMEDIATELY AFTER FINAL GRADING. IF NOT, THEY SHALL BE TEMPORARILY SEEDED IF NO CONSTRUCTION ACTIVITY IN THE AREA IS PLANNED FOR 7 DAYS.

   (E) CONSTRUCTION EQUIPMENT SHALL BE STORED AND FUELED ONLY AT DESIGNATED LOCATIONS. ALL NECESSARY MEASURES SHALL BE TAKEN TO CONTAIN ANY FUEL OR OTHER POLLUTANT IN ACCORDANCE WITH EPA WATER QUALITY REGULATIONS. LEAKING EQUIPMENT OR SUPPLIES SHALL BE IMMEDIATELY REPAIRED OR REMOVED FROM THE SITE.

   (F) THE RESIDENT ENGINEER SHALL INSPECT THE PROJECT DAILY DURING CONSTRUCTION ACTIVITIES. INSPECTION SHALL ALSO BE DONE WEEKLY AND AFTER RAINS OF 1/2 INCH OR GREATER OR EQUIVALENT SNOWFALL DURING THE WINTER SHUTDOWN PERIOD. THE PROJECT SHALL ADDITIONALLY BE INSPECTED BY THE CONSTRUCTION FIELD ENGINEER ON A BI-WEEKLY BASIS TO DETERMINE THAT EROSION CONTROL EFFORTS ARE IN PLACE AND EFFECTIVE AND IF OTHER EROSION CONTROL WORK IS NECESSARY.

   (G) SEDIMENT COLLECTED DURING CONSTRUCTION OF THE VARIOUS TEMPORARY EROSION CONTROL SYSTEMS SHALL BE DISPOSED OF ON THE SITE ON A REGULAR BASIS AS DIRECTED BY THE ENGINEER. THE COST OF THIS MAINTENANCE SHALL BE INCLUDED IN THE UNIT BID PRICE FOR VARIOUS TEMPORARY EROSION CONTROL PAY ITEMS.

   (H) THE TEMPORARY EROSION CONTROL SYSTEMS SHALL BE REMOVED AS DIRECTED BY THE ENGINEER AFTER USE IS NO LONGER NEEDED OR NO LONGER FUNCTIONING. THE COST OF THIS REMOVAL SHALL BE INCLUDED IN THE UNIT BID PRICE FOR VARIOUS TEMPORARY EROSION CONTROL PAY ITEMS.

DESCRIPTION OF STRUCTURAL PRACTICES AFTER FINAL GRADING

1. TEMPORARY EROSION CONTROL SYSTEMS SHALL BE LEFT IN PLACE WITH PROPER MAINTENANCE UNTIL PERMANENT EROSION CONTROL IS IN PLACE AND WORKING PROPERLY AND ALL PROPOSED TURF AREAS SEEDED AND ESTABLISHED.

2. ONCE PERMANENT EROSION CONTROL SYSTEMS AS PROPOSED IN THE PLANS ARE FUNCTIONAL AND ESTABLISHED, TEMPORARY ITEMS SHALL BE REMOVED, CLEANED UP, AND DISTURBED TURF RESEEDED.

MAINTENANCE AFTER CONSTRUCTION

1. CONSTRUCTION IS COMPLETE AFTER ACCEPTANCE BY IDOT'S FINAL INSPECTION. MAINTENANCE UP TO THIS DATE WILL BE BY THE CONTRACTOR.

MISCELLANEOUS

ALL EROSION CONTROL PRODUCTS FURNISHED SHALL BE SPECIFICALLY RECOMMENDED BY THE MANUFACTURER FOR THE USE SPECIFIED IN THE EROSION CONTROL PLAN. PRIOR TO THE APPROVAL AND USE OF THE PRODUCT, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER A NOTARIZED CERTIFICATION BY THE PRODUCER STATING THE INTENDED USE OF THE PRODUCT AND THAT THE PHYSICAL PROPERTIES REQUIRED FOR THIS APPLICATION ARE MET OR EXCEEDED. THE CONTRACTOR SHALL PROVIDE MANUFACTURER INSTALLATION PROCEDURES TO FACILITATE THE ENGINEER IN CONSTRUCTION INSPECTION.

WILLETT HOFMANN & ASSOCIATES INC
ENGINEERING ARCHITECTURE LAND SURVEYING
809 EAST 2ND STREET, DIXON, IL 61021-0367
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DESIGNED - BKC	REVISED -	
CHECKED - PLP	REVISED -	
DRAWN - RDA	REVISED -	
CHECKED - BKC	REVISED -	

BUREAU COUNTY
T.R. 281 (1300 N. AVE.) OVER E. BUREAU CREEK
STATION 20+00

EROSION CONTROL PLAN

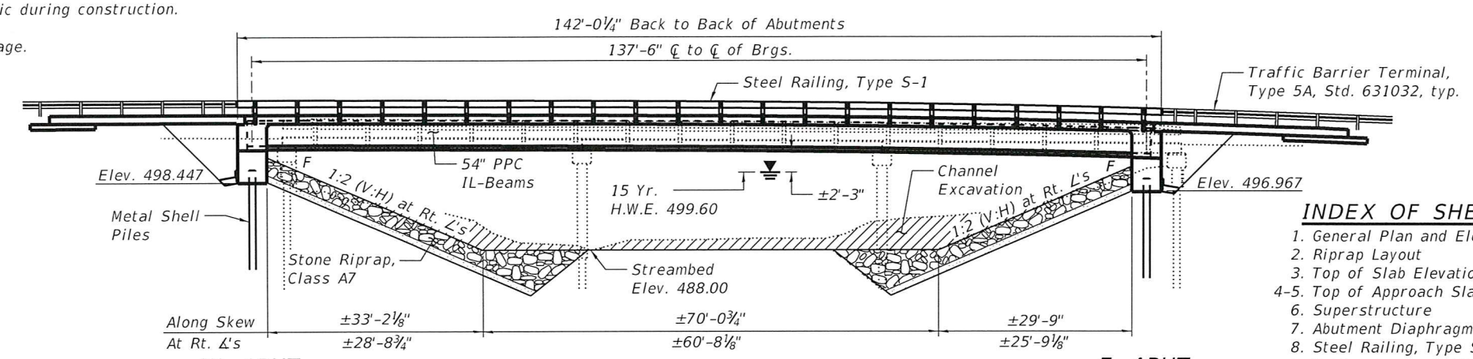
SCALE: 1" = 20'-0" | SHEET NO. 2 OF 2 SHEETS | STA. 16+45.00 TO STA. 22+55.00

TWP. TRE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
281	15-21124-00-BR	BUREAU	35	10
	WHA* 1302D16	CONTRACT NO. 87698		
	ILLINOIS FED. AID PROJECT KBD9(822)			

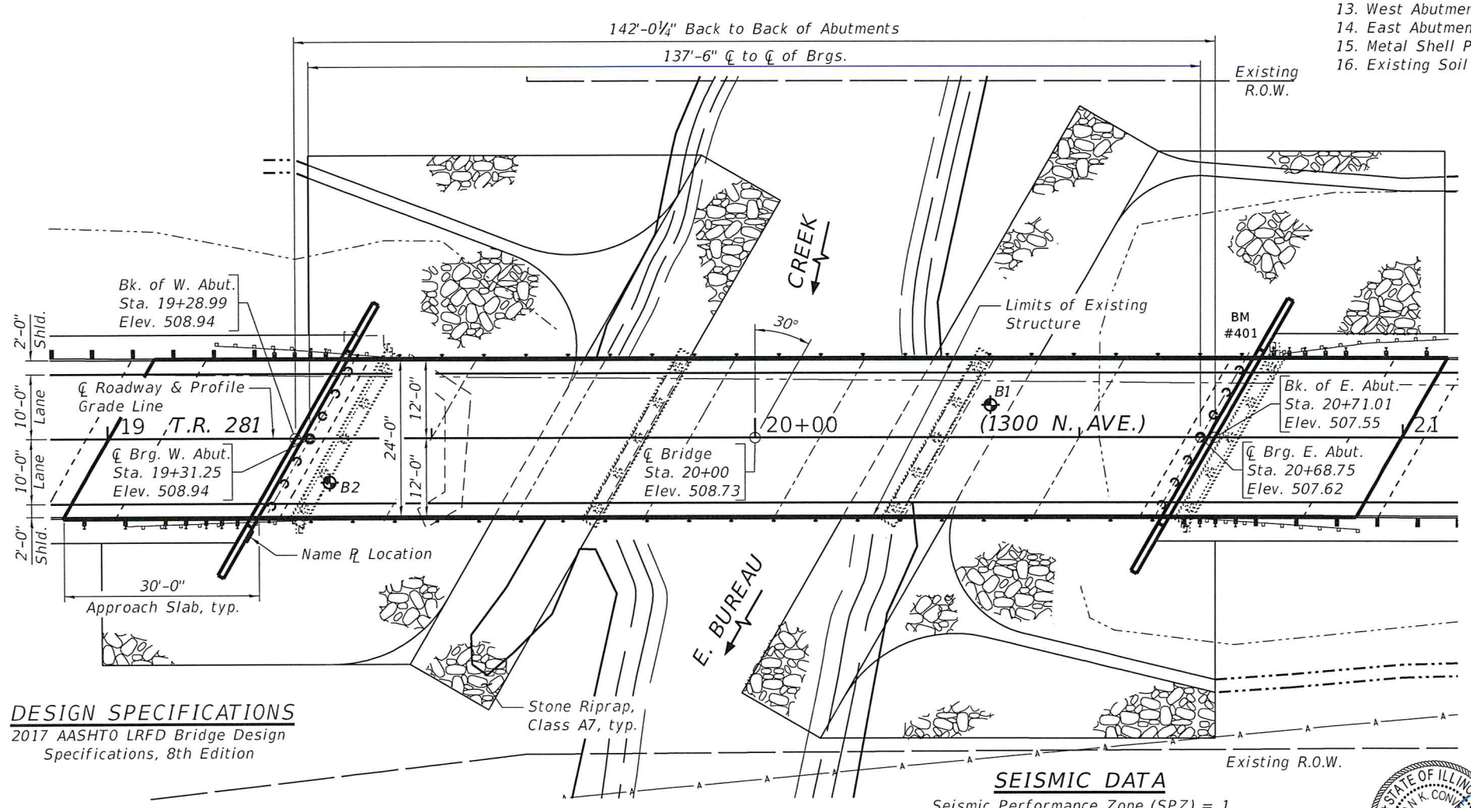
EXISTING STRUCTURE: S.N. 006-4304 A Three Span (46'-0":46'-1":46'-0") PPC Deck Beam Bridge on Pile Bent Piers and Spill-Thru Abutments at Sta. 20+05. Skewed 30° Left Ahead. Road shall be closed to traffic during construction.

No salvage.

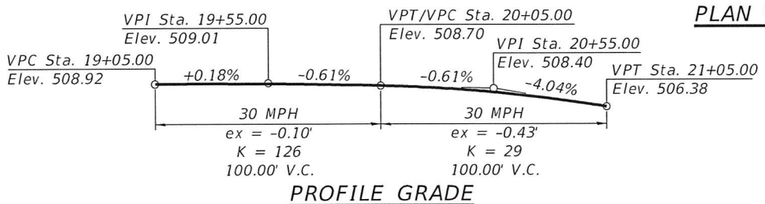
BENCH MARK #401: Found Chisled "□" on NE Wingwall on Strucutre 12.5' Lt. of Sta. ±20+75, El. 504.31



ELEVATION VIEW



PLAN VIEW



PROFILE GRADE
Along Roadway ℄

INDEX OF SHEETS

BILL OF MATERIAL - BRIDGE

	ITEM	UNIT	SUB.	SUPER.	TOTAL
	Channel Excavation	Cu. Yd.	555	———	555
*	Stone Riprap, Class A7 (Special)	Ton	1,807	———	1,807
	Removal Of Existing Structures	Each	———	———	1
*	Structure Excavation	Cu. Yd.	142	———	142
	Concrete Structures	Cu. Yd.	70.8	———	70.8
	Concrete Superstructure	Cu. Yd.	———	141.8	141.8
**	Bridge Deck Grooving	Sq. Yd.	———	503	503
**	Protective Coat	Sq. Yd.	———	548	548
	Concrete Superstructure (Approach Slab)	Cu. Yd.	———	68.5	68.5
	Furnishing & Erecting Precast Prestressed Concrete I-Beams, IL54	Foot	———	694	694
	Reinforcement Bars, Epoxy Coated	Pound	9,480	50,000	59,480
	Steel Railing, Type S-1	Foot	———	284.0	284.0
	Furnishing Metal Shell Piles 14"x0.250"	Foot	414.0	———	414.0
	Driving Piles	Foot	414.0	———	414.0
	Pile Shoes	Each	14	———	14
	Test Pile Metal Shells	Each	2	———	2
	Name Plates	Each	1	———	1
*	Porous Granular Embankment (Special)	Ton	491	———	491
	Geocomposite Wall Drain	Sq. Yd.	88.0	———	88.0
*	Asbestos Bearing Pad Removal	Each	———	48	48
*	Pipe Underdrains for Structures 4"	Foot	149	———	149

* See Special Provisions

** Includes 30' Bridge Approach Pavements.

GENERAL NOTES:

Reinforcement bars designated (E) shall be epoxy coated.

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

DESIGN STRESSES

FIELD UNITS

f'c = 4,000 psi (Superstructure)
f'c = 3,500 psi (Substructure)
fy = 60,000 psi (Reinforcement)

PRECAST PRESTRESSED UNITS

f'c = 8,500 psi
f'ci = 7,000 psi
fpu = 270,000 psi (9/10" Ø Low Lax Strands)
fpbt = 202,300 psi (9/10" Ø Low Lax Strands)

LOADING HL-93

Allow 50#/Sq. Ft. for future wearing surface.

EAST BUREAU CREEK
BUILT 2019 BY
BUREAU COUNTY
SECTION 15-21124-00-BR
STATION 20+00
STR. NO. 006-4314 LOADING HL-93

NAME PLATE LETTERING

See Std. 515001

WATERWAY INFORMATION

Drainage Area = 99.3 sq. mi. Low Grade Elev. 501.49 @ Sta. 23+75.00

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 Elev. Exist.	Headwater Elev. Prop.
	10	5,940	733	762	499.3	1.0	0.7	500.3	500.0
Design	15	6,867	765	794	499.6	1.3	0.9	500.9	500.5
OVT Existing	25	7,920	799	828	499.9	1.6	1.3	501.5	501.2
OVT Proposed	50	9,470	848	877	500.4	1.9	1.6	502.3	502.0
Base	100	11,000	891	921	500.8	2.1	1.9	502.9	502.7
Max. Calc.	500	14,800	963	994	501.4	3.5	3.3	504.9	504.7

DESIGN SPECIFICATIONS

2017 AASHTO LRFD Bridge Design Specifications, 8th Edition

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (SD1) = 0.097g
Design Spectral Acceleration at 0.2 sec. (SDS) = 0.158g
Soil Site Class = D

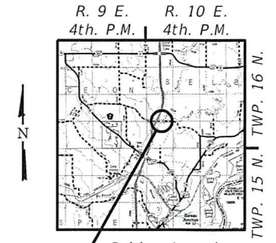
DESIGN SCOUR ELEVATION TABLE

Event / Limit State	Design Scour Elevations (ft.) W. Abut.	E. Abut.	Item 113
Q100	498.41	497.10	8
Q200	498.41	497.10	
Design	498.41	497.10	
Check	498.41	497.10	

STATE OF ILLINOIS
BRIAN K. CONNELLY
081-005213
DIXON, IL
STRUCTURAL ENGINEER

DATE: 2/8/2019
EXPIRES 11/30/20

"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 COMPLIES WITH REQUIREMENTS OF THE CURRENT 'AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES'."



LOCATION SKETCH

GENERAL PLAN AND ELEVATION
T.R. 281 (1300 N. AVE.)
OVER E. BUREAU CREEK
SECTION 15-21124-00-BR
SELBY TOWNSHIP
BUREAU COUNTY
STATION 20+00
STRUCTURE NO. 006-4314

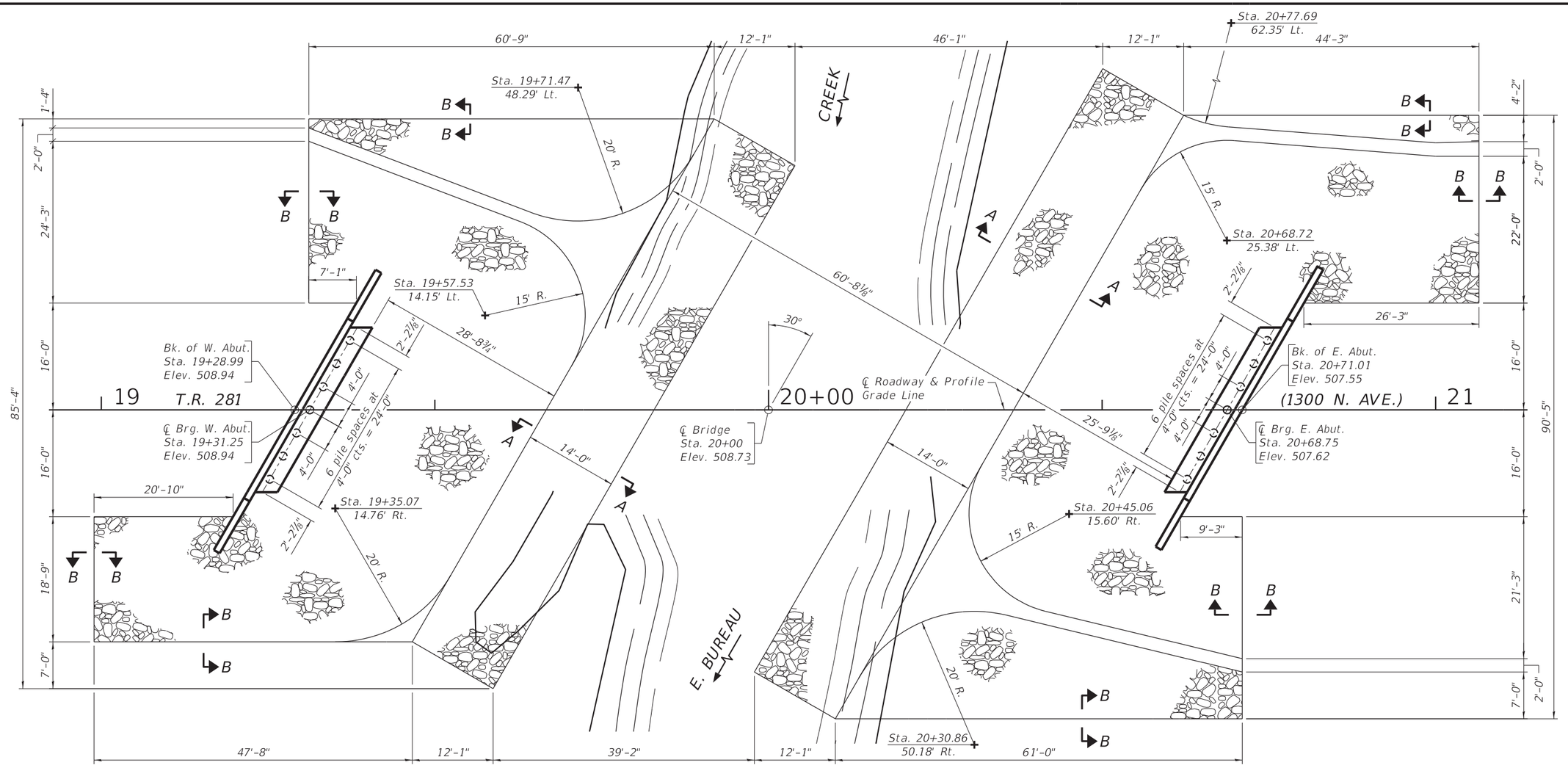
WILLETT HOFMANN & ASSOCIATES INC
ENGINEERING ARCHITECTURE LAND SURVEYING
809 EAST 2ND STREET, DIXON, IL 61021-0367
T: 815-284-3381 DESIGN FIRM: #184-000918

DESIGNED -	BKC	REVISED -
CHECKED -	PLP	REVISED -
DRAWN -	FDL	REVISED -
CHECKED -	BKC	REVISED -

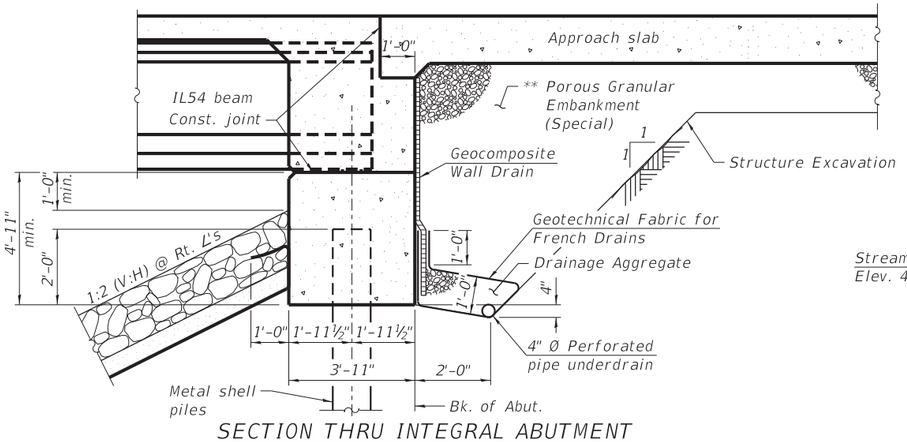
BUREAU COUNTY
T.R. 281 (1300 N. AVE.) OVER E. BUREAU CREEK
STATION 20+00

STRUCTURAL SHEET NO. 1 OF 16 SHEETS

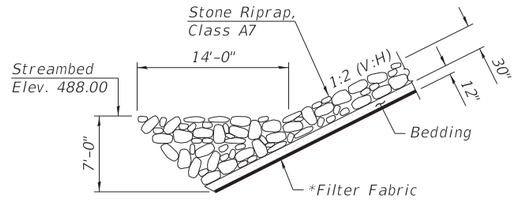
TWP. TRE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
281	15-21124-00-BR	BUREAU	35	11
	WHA* 1302D16	CONTRACT NO. 87698		
	ILLINOIS FED. AID PROJECT KBD9(822)			



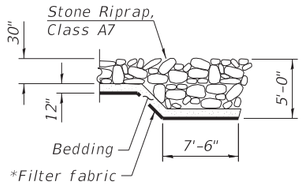
PLAN VIEW



SECTION THRU INTEGRAL ABUTMENT
(Horiz. dim. @ Rt. ℄'s)



SECTION A-A



SECTION B-B

BILL OF MATERIAL

Item	Unit	Quantity
Stone Riprap, Class A7 (Special)	Ton	1,807

*Cost to be included with Stone Riprap, Class A7.

** Pay Limits of Porous Granular Embankment (Special) shall extend to 2'-0" in from the end of each wingwall.

*** All drainage system components shall extend to 2'-0" from end of each wingwall except an outlet pipe shall extend until intersecting with the side slopes. The pipes shall drain into concrete headwalls. Cost of concrete headwalls and all components to be included with Pipe Underdrains for Structures. (See Special Provisions)

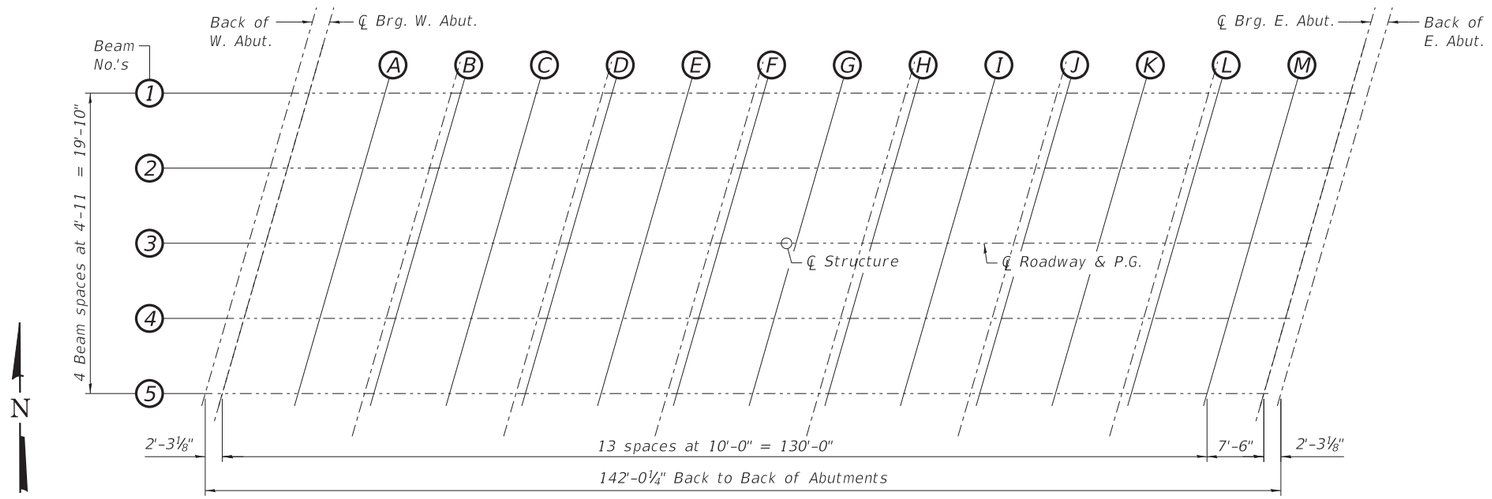
WILLETT HOFMANN & ASSOCIATES INC
ENGINEERING ARCHITECTURE LAND SURVEYING
809 EAST 2ND STREET, DIXON, IL 61021-0367
T: 815-284-3381 DESIGN FIRM: #184-000918

DESIGNED - BKC	REVISED -	
CHECKED - PLP	REVISED -	
DRAWN - FDL	REVISED -	
CHECKED - BKC	REVISED -	

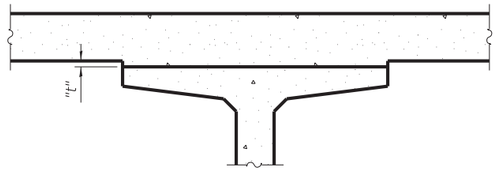
BUREAU COUNTY
T.R. 281 (1300 N. AVE.) OVER E. BUREAU CREEK
STATION 20+00

RIPRAP LAYOUT
STRUCTURE NO. 006-4314
STRUCTURAL SHEET NO. 2 OF 16 SHEETS

TWP. TRE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
281	15-21124-00-BR	BUREAU	35	12
	WHA* 1302D16	CONTRACT NO. 87698		
	ILLINOIS FED. AID PROJECT KBD9(822)			

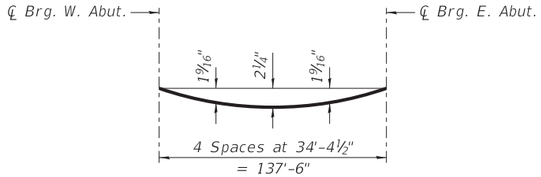


PLAN VIEW



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

FILLET HEIGHTS



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 below.

BEAM 1

Location	Station	Offset Lt.	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of W. Abut.	19+34.72	9.92	508.74	508.74
℄ Brg. W. Abut.	19+36.98	9.92	508.74	508.74
A	19+46.98	9.92	508.73	508.77
B	19+56.98	9.92	508.71	508.79
C	19+66.98	9.92	508.68	508.80
D	19+76.98	9.92	508.65	508.79
E	19+86.98	9.92	508.60	508.77
F	19+96.98	9.92	508.55	508.74
G	20+06.98	9.92	508.49	508.68
H	20+16.98	9.92	508.41	508.59
I	20+26.98	9.92	508.29	508.46
J	20+36.98	9.92	508.14	508.28
K	20+46.98	9.92	507.95	508.06
L	20+56.98	9.92	507.73	507.80
M	20+66.98	9.92	507.47	507.50
℄ Brg. E. Abut.	20+74.48	9.92	507.26	507.26
Bk. of E. Abut.	20+76.74	9.92	507.19	507.19

BEAM 2

Location	Station	Offset Lt.	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of W. Abut.	19+31.85	4.96	508.84	508.84
℄ Brg. W. Abut.	19+34.11	4.96	508.84	508.84
A	19+44.11	4.96	508.83	508.87
B	19+54.11	4.96	508.81	508.90
C	19+64.11	4.96	508.79	508.91
D	19+74.11	4.96	508.76	508.90
E	19+84.11	4.96	508.72	508.89
F	19+94.11	4.96	508.67	508.85
G	20+04.11	4.96	508.61	508.80
H	20+14.11	4.96	508.54	508.72
I	20+24.11	4.96	508.43	508.59
J	20+34.11	4.96	508.28	508.42
K	20+44.11	4.96	508.10	508.21
L	20+54.11	4.96	507.89	507.96
M	20+64.11	4.96	507.65	507.68
℄ Brg. E. Abut.	20+71.61	4.96	507.44	507.44
Bk. of E. Abut.	20+73.87	4.96	507.37	507.37

CENTERLINE OF ROADWAY & P.G. & BEAM 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of W. Abut.	19+28.99	0.00	508.94	508.94
℄ Brg. W. Abut.	19+31.25	0.00	508.94	508.94
A	19+41.25	0.00	508.93	508.97
B	19+51.25	0.00	508.92	509.00
C	19+61.25	0.00	508.90	509.01
D	19+71.25	0.00	508.87	509.01
E	19+81.25	0.00	508.83	509.00
F	19+91.25	0.00	508.78	508.96
G	20+01.25	0.00	508.73	508.91
H	20+11.25	0.00	508.66	508.84
I	20+21.25	0.00	508.56	508.73
J	20+31.25	0.00	508.43	508.57
K	20+41.25	0.00	508.26	508.37
L	20+51.25	0.00	508.06	508.13
M	20+61.25	0.00	507.82	507.85
℄ Brg. E. Abut.	20+68.75	0.00	507.62	507.62
Bk. of E. Abut.	20+71.01	0.00	507.56	507.56

BEAM 4

Location	Station	Offset Rt.	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of W. Abut.	19+26.13	4.96	508.84	508.84
℄ Brg. W. Abut.	19+28.39	4.96	508.84	508.84
A	19+38.39	4.96	508.84	508.88
B	19+48.39	4.96	508.82	508.91
C	19+58.39	4.96	508.80	508.92
D	19+68.39	4.96	508.78	508.92
E	19+78.39	4.96	508.74	508.91
F	19+88.39	4.96	508.70	508.88
G	19+98.39	4.96	508.64	508.83
H	20+08.39	4.96	508.58	508.76
I	20+18.39	4.96	508.49	508.66
J	20+28.39	4.96	508.37	508.51
K	20+38.39	4.96	508.21	508.32
L	20+48.39	4.96	508.02	508.09
M	20+58.39	4.96	507.79	507.82
℄ Brg. E. Abut.	20+65.89	4.96	507.60	507.60
Bk. of E. Abut.	20+68.15	4.96	507.54	507.54

BEAM 5

Location	Station	Offset Rt.	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of W. Abut.	19+23.26	9.92	508.74	508.74
℄ Brg. W. Abut.	19+25.52	9.92	508.74	508.74
A	19+35.52	9.92	508.74	508.78
B	19+45.52	9.92	508.73	508.81
C	19+55.52	9.92	508.71	508.83
D	19+65.52	9.92	508.69	508.83
E	19+75.52	9.92	508.65	508.82
F	19+85.52	9.92	508.61	508.79
G	19+95.52	9.92	508.56	508.75
H	20+05.52	9.92	508.50	508.68
I	20+15.52	9.92	508.42	508.59
J	20+25.52	9.92	508.31	508.45
K	20+35.52	9.92	508.16	508.27
L	20+45.52	9.92	507.98	508.05
M	20+55.52	9.92	507.76	507.79
℄ Brg. E. Abut.	20+63.02	9.92	507.58	507.58
Bk. of E. Abut.	20+65.28	9.92	507.52	507.52

WILLETT HOFMANN & ASSOCIATES INC
ENGINEERING ARCHITECTURE LAND SURVEYING
809 EAST 2ND STREET, DIXON, IL 61021-0367
T: 815-284-3381 DESIGN FIRM: #184-000918

DESIGNED -	BKC	REVISED -
CHECKED -	PLP	REVISED -
DRAWN -	FDL	REVISED -
CHECKED -	BKC	REVISED -

BUREAU COUNTY
T.R. 281 (1300 N. AVE.) OVER E. BUREAU CREEK
STATION 20+00

TOP OF SLAB ELEVATIONS
STRUCTURE NO. 006-4314
STRUCTURAL SHEET NO. 3 OF 17 SHEETS

TWP. TRE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
281	15-21124-00-BR	BUREAU	35	13
	WHA* 1302D16	CONTRACT NO. 87698		
	ILLINOIS FED. AID PROJECT KBD9(822)			

LEFT EDGE OF SHOULDER

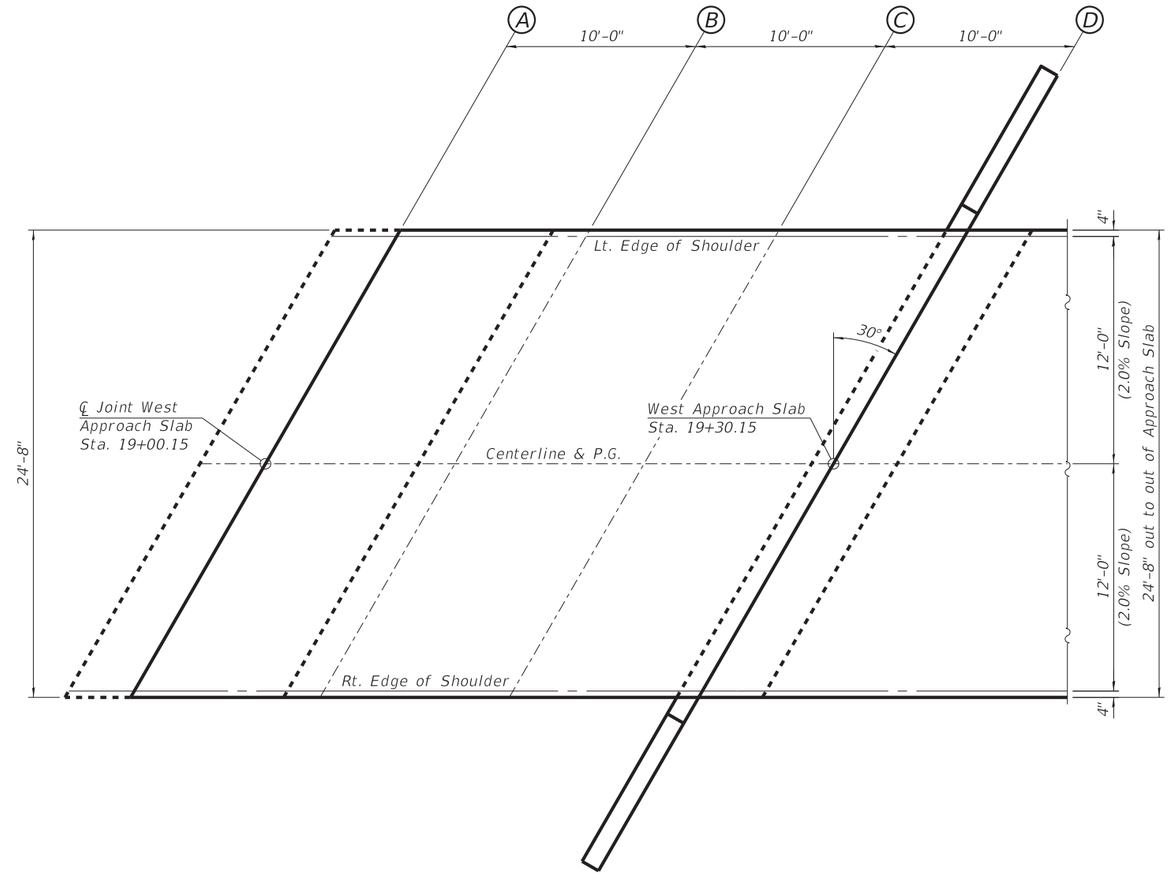
Location	Station	Offset Lt.	Theoretical Grade Elevations
A	19+07.07	12	508.68
B	19+17.07	12	508.70
C	19+27.07	12	508.70
D	19+37.07	12	508.70

CENTERLINE & P.G.

Location	Station	Offset	Theoretical Grade Elevations
A	19+00.15	0	508.91
B	19+10.15	0	508.93
C	19+20.15	0	508.94
D	19+30.15	0	508.94

RIGHT EDGE OF SHOULDER

Location	Station	Offset Rt.	Theoretical Grade Elevations
A	18+93.22	12	508.66
B	19+03.22	12	508.68
C	19+13.22	12	508.69
D	19+23.22	12	508.70



N

PLAN VIEW

WILLETT HOFMANN & ASSOCIATES INC ENGINEERING ARCHITECTURE LAND SURVEYING 809 EAST 2ND STREET, DIXON, IL 61021-0367 T: 815-284-3381 DESIGN FIRM: #184-000918	DESIGNED - BKC CHECKED - PLP DRAWN - FDL CHECKED - BKC	REVISED - REVISED - REVISED - REVISED -	**BUREAU COUNTY** **T.R. 281 (1300 N. AVE.) OVER E. BUREAU CREEK** **STATION 20+00**

TOP OF WEST APPROACH SLAB ELEVATIONS
STRUCTURE NO. 006-4314
STRUCTURAL SHEET NO. 4 OF 16 SHEETS

TWP. TRE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
281	15-21124-00-BR	BUREAU	35	14
	WHA* 1302D16	CONTRACT NO. 87698		
	ILLINOIS FED. AID PROJECT KBD9(822)			

LEFT EDGE OF SHOULDER

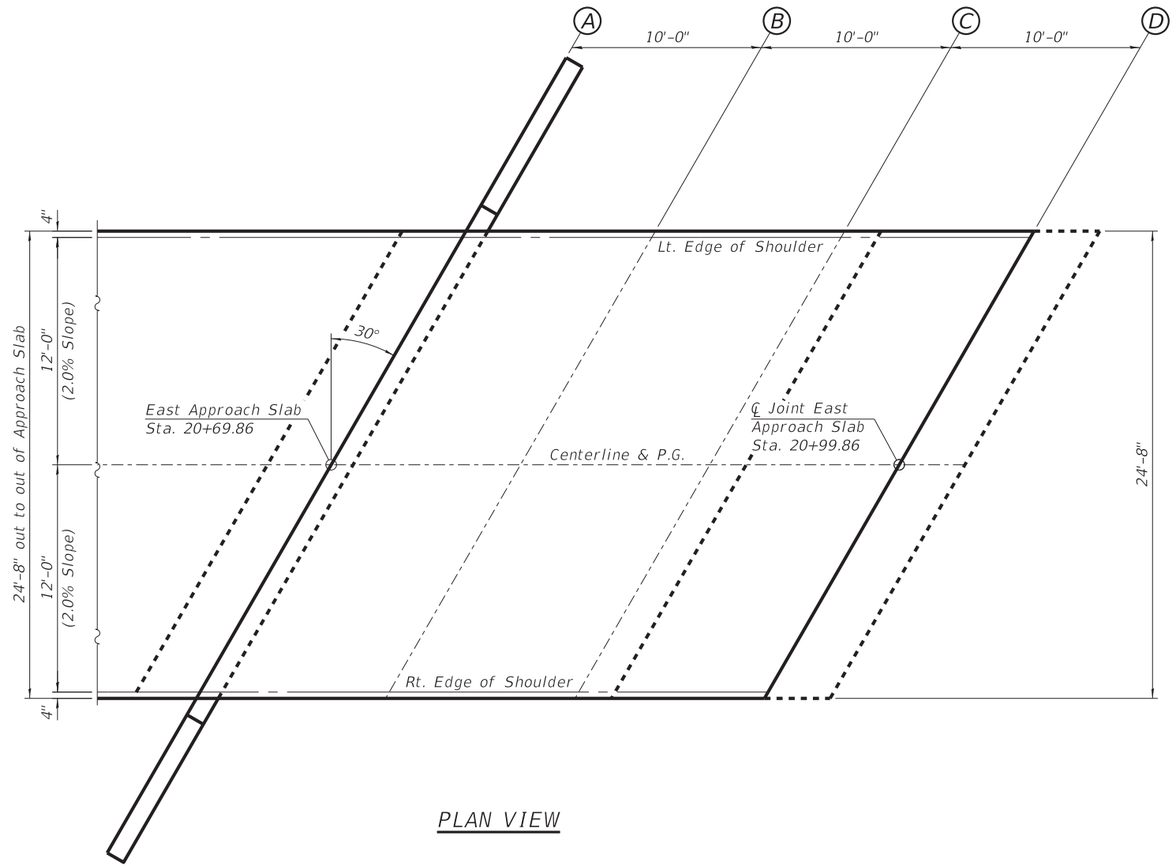
Location	Station	Offset Lt.	Theoretical Grade Elevations
A	20+76.79	12	507.14
B	20+86.79	12	506.82
C	20+96.79	12	506.46
D	21+06.79	12	506.07

CENTERLINE & P.G.

Location	Station	Offset	Theoretical Grade Elevations
A	20+69.86	0	507.35
B	20+79.86	0	507.05
C	20+89.86	0	506.71
D	20+99.86	0	506.34

RIGHT EDGE OF SHOULDER

Location	Station	Offset Rt.	Theoretical Grade Elevations
A	20+62.93	12	507.54
B	20+72.93	12	507.26
C	20+82.93	12	506.95
D	20+92.93	12	506.60



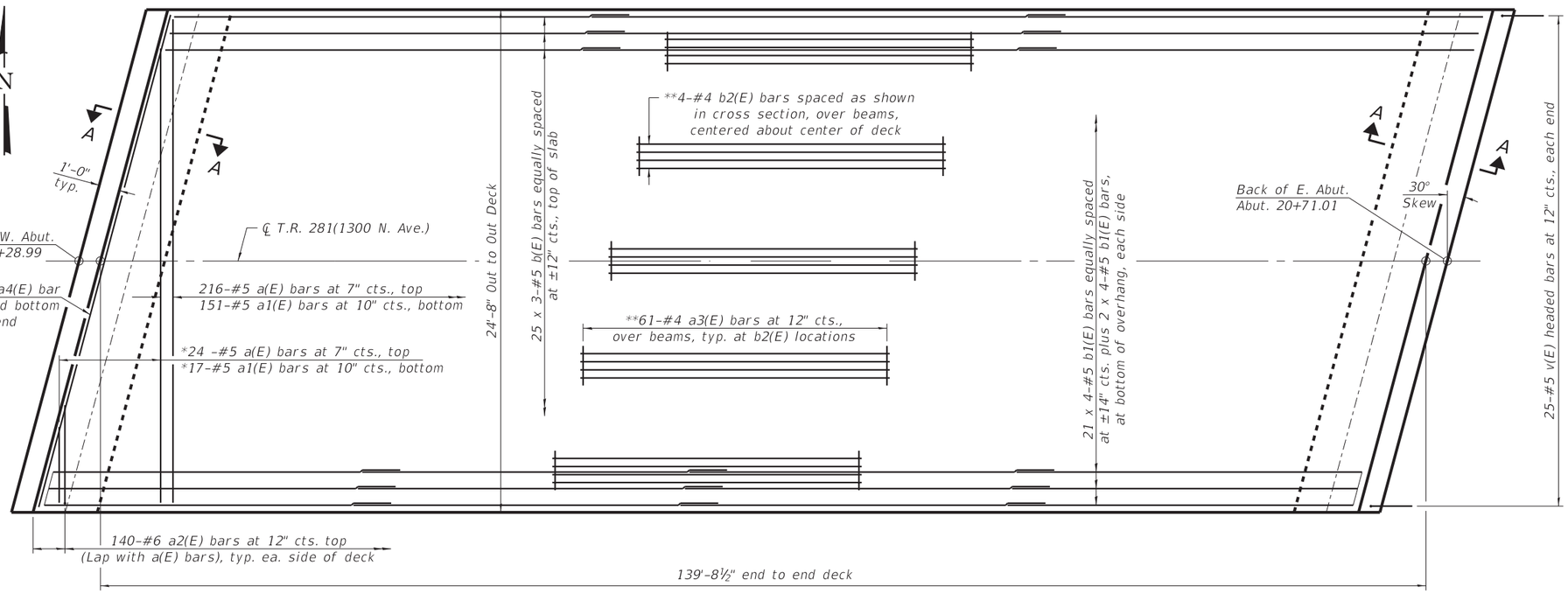
PLAN VIEW

N

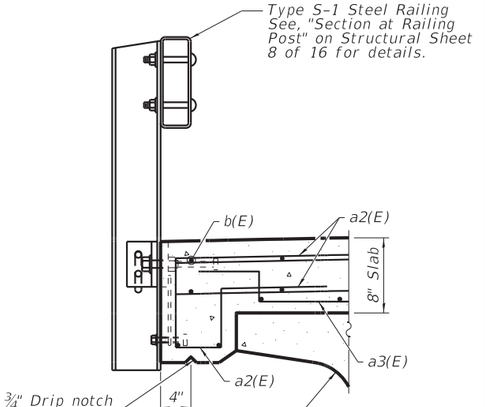
DESIGNED - BKC	REVISED -	BUREAU COUNTY T.R. 281 (1300 N. AVE.) OVER E. BUREAU CREEK STATION 20+00	TOP OF EAST APPROACH SLAB ELEVATIONS STRUCTURE NO. 006-4314 STRUCTURAL SHEET NO. 5 OF 16 SHEETS
CHECKED - PLP	REVISED -		
DRAWN - FDL	REVISED -		
CHECKED - BKC	REVISED -		

WILLETT HOFMANN & ASSOCIATES INC
ENGINEERING ARCHITECTURE LAND SURVEYING
809 EAST 2ND STREET, DIXON, IL 61021-0367
T: 815-284-3381 DESIGN FIRM: #184-000918

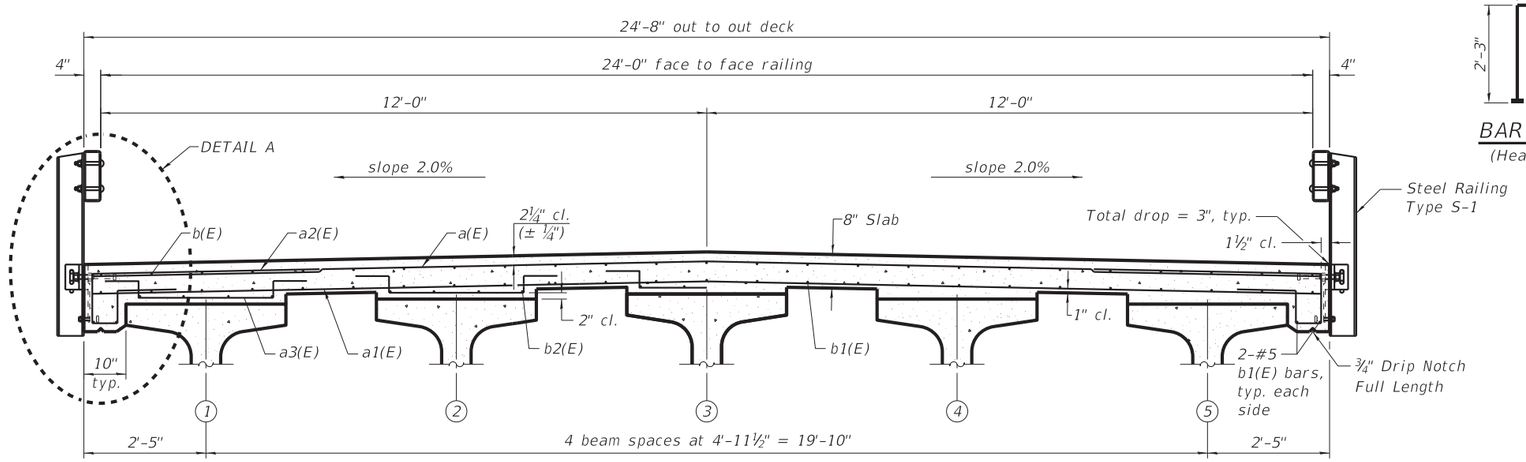
TWP. TRE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
281	15-21124-00-BR	BUREAU	35	15
	WHA* 1302D16	CONTRACT NO. 87698		
	ILLINOIS FED. AID PROJECT KBD9(822)			



PLAN



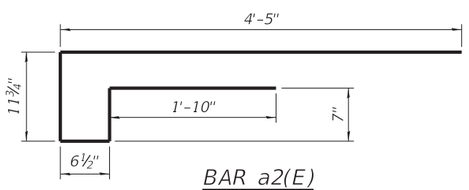
DETAIL A



IN SPAN

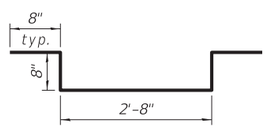
CROSS SECTION
(Looking East)

AT ABUTMENTS

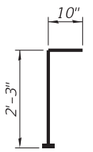


BAR a2(E)

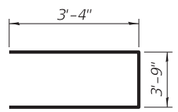
MIN. BAR LAPS	
BAR	LAP
#4	2'-7"
#5	3'-3"
#6	3'-10"



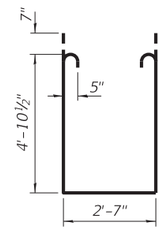
BAR a3(E)



BAR v(E)
(Headed)



BAR s(E)



BAR s1(E)

SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	240	#5	24'-5"	
a1(E)	168	#5	24'-5"	
a2(E)	280	#6	8'-4"	
a3(E)	305	#4	5'-4"	
a4(E)	4	#5	28'-2"	
b(E)	75	#5	48'-8"	
b1(E)	100	#5	37'-4"	
b2(E)	20	#4	60'-0"	
m(E)	12	#6	28'-2"	
m1(E)	32	#6	4'-0"	
m2(E)	16	#6	1'-10"	
m3(E)	8	#6	1'-9"	
m4(E)	4	#6	8"	
m5(E)	20	#5	4'-0"	
s(E)	24	#5	10'-5"	
s1(E)	24	#5	13'-6"	
v(E)	50	#5	3'-1"	
Concrete Superstructure		Cu. Yds.	141.8	
Bridge Deck Grooving		Sq. Yd.	503	
Protective Coat		Sq. Yd.	548	
Reinforcement Bars, Epoxy Coated		Pound	25,220	

NOTES:

For Section A-A and Diaphragm Details, see Structural Sheet 7 of 16.

See Structural Sheet 8 of 16 for Steel Railing Details.

Bars indicated thus 31x3-#5 etc. indicates 31 lines of bars with 3 lengths per line.

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

** Required where fillet exceeds 2½", exact number of a3(E) bars & length of b2(E) bars to be determined during construction.

*** Reinforcement bars in the top of the deck may be placed with a 1½" min. cl. in the area of the rail post anchor devices. The studs of the anchor devices shall be placed below the top reinforcement bars and the outermost longitudinal reinforcement bar shall be placed directly above the studs of the rail post anchor device.

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ENGINEERING ARCHITECTURE LAND SURVEYING
809 EAST 2ND STREET, DIXON, IL 61021-0367
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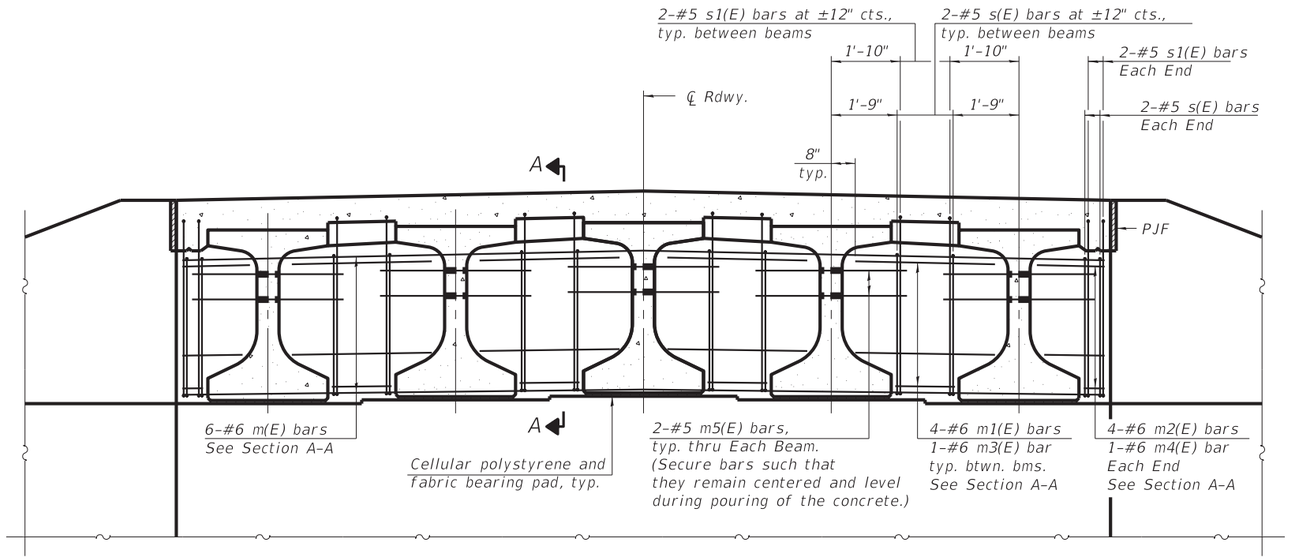
DRAWN - FDL	REVISED -	
CHECKED - BKC	REVISED -	

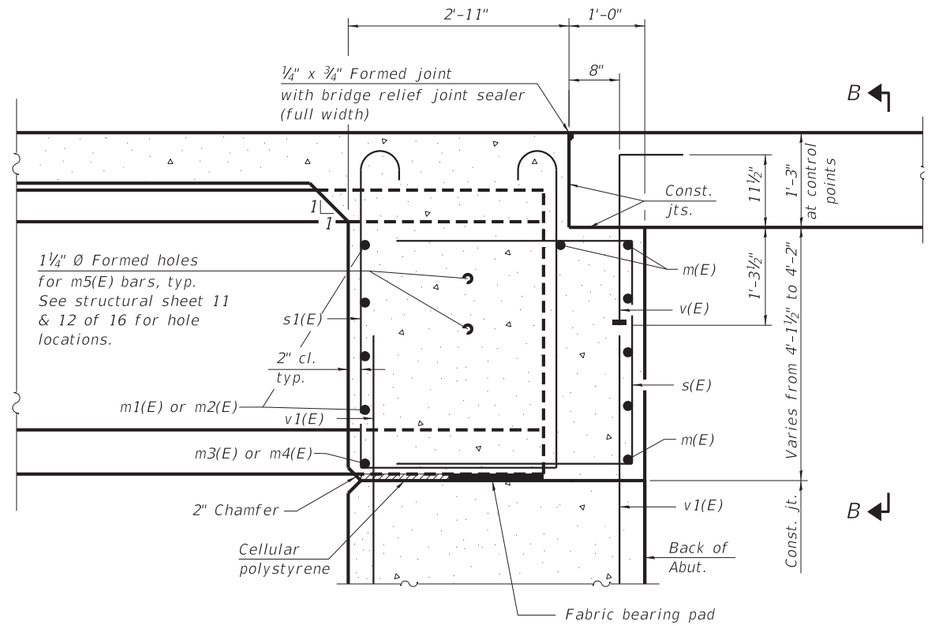
BUREAU COUNTY
T.R. 281 (1300 N. AVE.) OVER E. BUREAU CREEK
STATION 20+00

SUPERSTRUCTURE DETAILS
STRUCTURE NO. 006-4314
STRUCTURAL SHEET NO. 6 OF 16 SHEETS

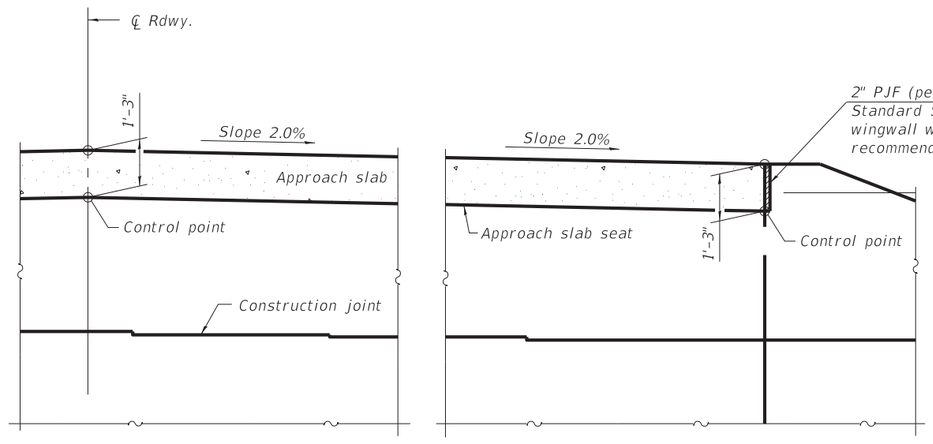
TWP. TRE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
281	15-21124-00-BR	BUREAU	35	16
	WHA* 1302D16	CONTRACT NO. 87698		
	ILLINOIS FED. AID PROJECT KBD9(822)			



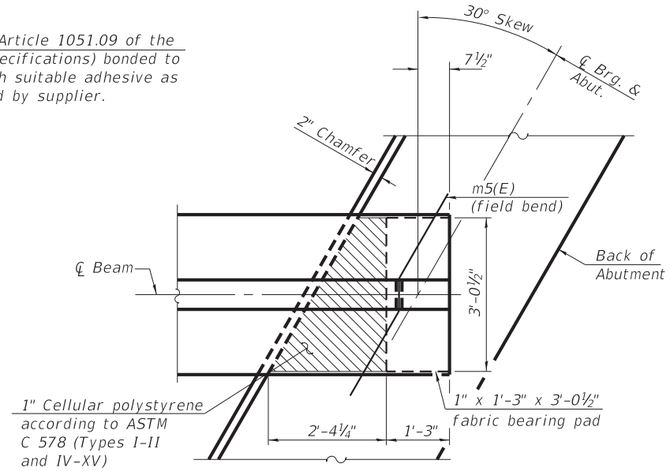
DIAPHRAGM AT ABUTMENT
(Typical East & West Abutments)



SECTION A-A
(at Rt. ∠'s)



SECTION B-B



PLAN AT ABUTMENT
(Showing bottom flange of beam)

NOTES:

Reinforcement bars in diaphragm are billed with superstructure on structural sheet 6 of 16.

Concrete in diaphragm is included with Concrete Superstructure on structural sheet 6 of 16.

For details of bars s(E), s1(E) and v(E) see structural sheet 6 of 16.

The s(E) and s1(E) bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams.

The approach slab seat shall have a constant slope determined from the control points shown.

Cost of cellular polystyrene is included with Concrete Superstructure.

Beams shall be braced for stability during erection and remain braced until deck is poured and cured.

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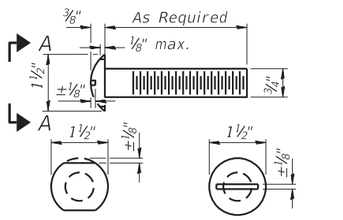
DRAWN - FDL	REVISED -	
CHECKED - BKC	REVISED -	

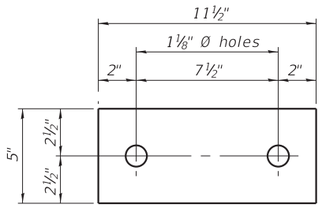
BUREAU COUNTY
T.R. 281 (1300 N. AVE.) OVER E. BUREAU CREEK
STATION 20+00

ABUTMENT DIAPHRAGM DETAILS
STRUCTURE NO. 006-4314
STRUCTURAL SHEET NO. 7 OF 16 SHEETS

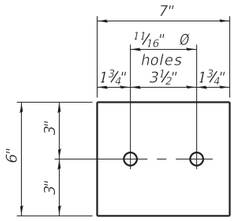
TWP. TRE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
281	15-21124-00-BR	BUREAU	35	17
	WHA* 1302D16	CONTRACT NO. 87698		
	ILLINOIS FED. AID PROJECT KBD9(822)			



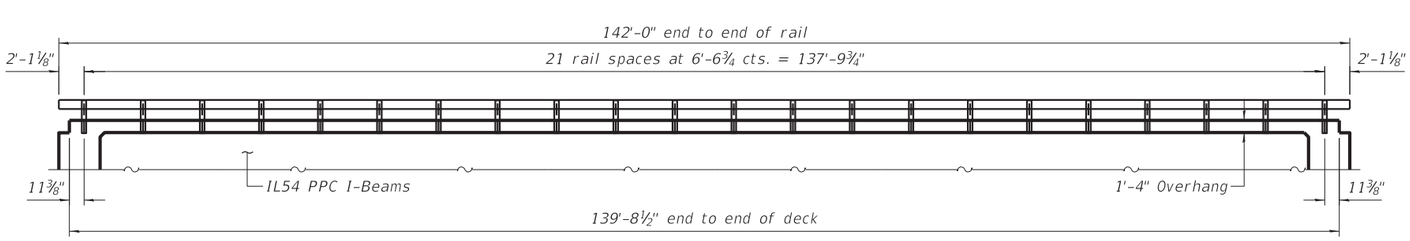
VIEW A-A
ROUND HEAD BOLT



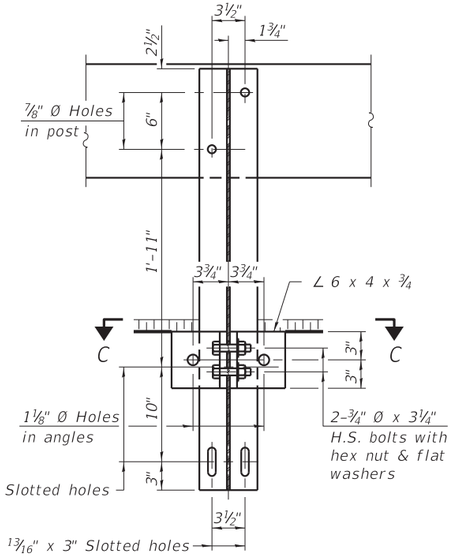
PL 5/8" x 11 1/2" x 5"



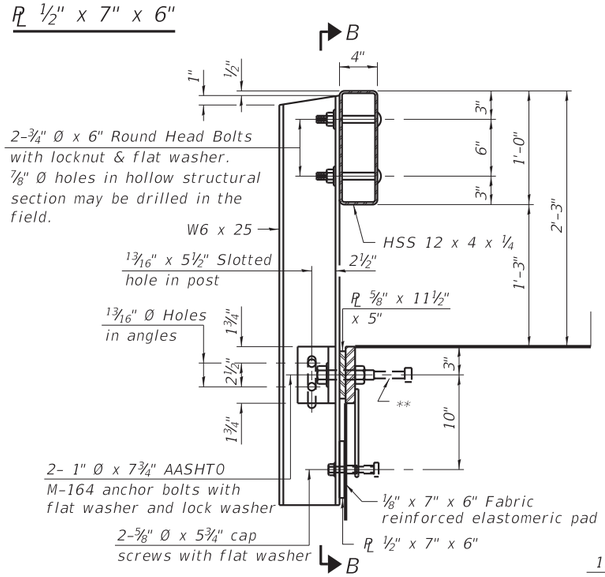
PL 1/2" x 7" x 6"



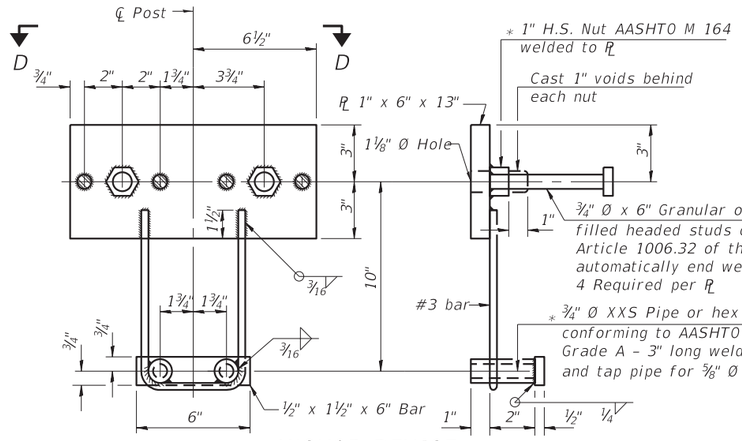
ELEVATION VIEW



SECTION B-B



SECTION AT RAILING POST



ANCHOR DEVICE

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

SPLICE DIMENSIONS

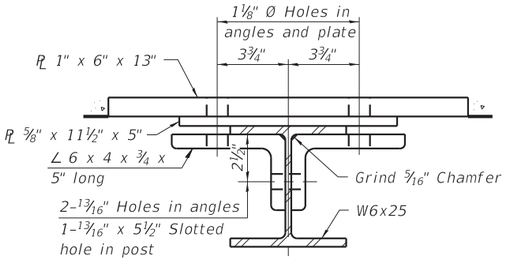
T	D	A	B	C	E
≤ 4"	2 1/2"	1'-8"	2"	4"	2 1/2"
> 4" ≤ 6 1/2"	3 3/4"	2'-0"	2 1/2"	5 1/2"	3 1/2"
> 6 1/2" ≤ 9"	5"	2'-4"	3 1/2"	6 1/2"	9"
> 9" ≤ 13"	7"	2'-10"	4 1/2"	8 1/2"	11"
Rail Splice	1/4"	1'-8"	2"	4"	——

T = Total movement at expansion joint as shown on the design plans.

Notes:
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 S-1.

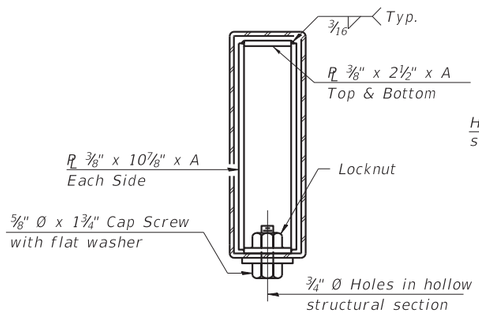
All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.

** 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. The anchorage studs may be bent down 1/2" to accommodate the top reinforcement bar placement.

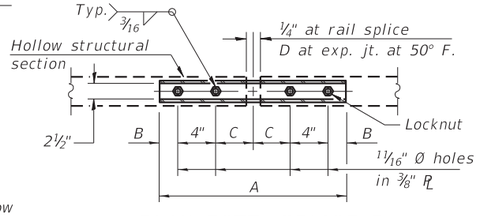


SECTION C-C

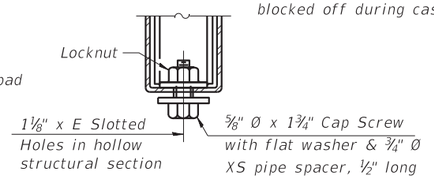
(10'-9" Maximum Post Spacing)



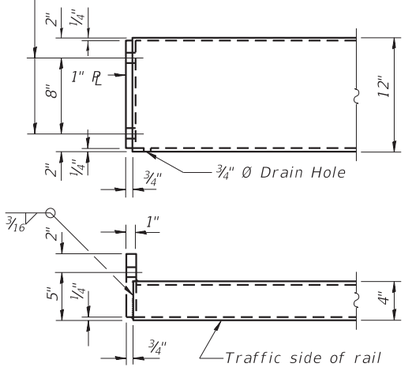
SECTIONS AT RAIL SPLICE



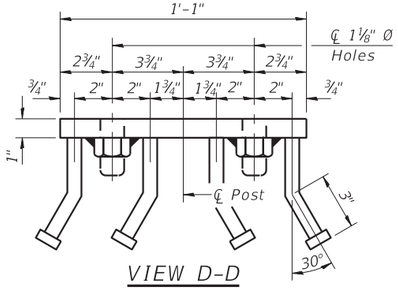
PLAN-BOTT. SPLICE PL TYPICAL



RAIL SPLICE CONNECTION AT EXPANSION JT.



END OF RAIL DETAILS



VIEW D-D

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type S-1	Foot	284

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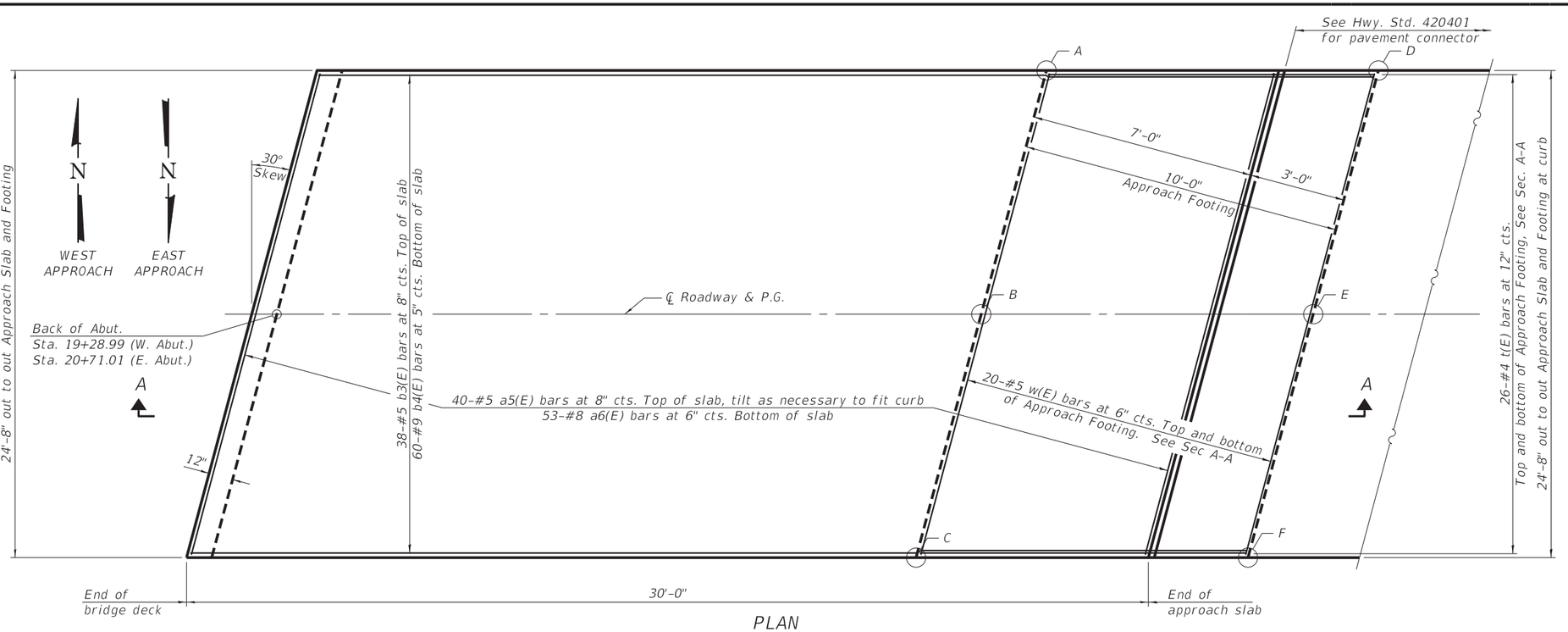
DRAWN - FDL	REVISED -	
CHECKED - BKC	REVISED -	

BUREAU COUNTY
T.R. 281 (1300 N. AVE.) OVER E. BUREAU CREEK
STATION 20+00

STEEL RAILING, TYPE S-1
STRUCTURE NO. 006-4314
STRUCTURAL SHEET NO. 8 OF 16 SHEETS

TWP. TRE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
281	15-21124-00-BR	BUREAU	35	18
	WHA* 1302D16	CONTRACT NO. 87698		
	ILLINOIS FED. AID PROJECT KBD9(822)			



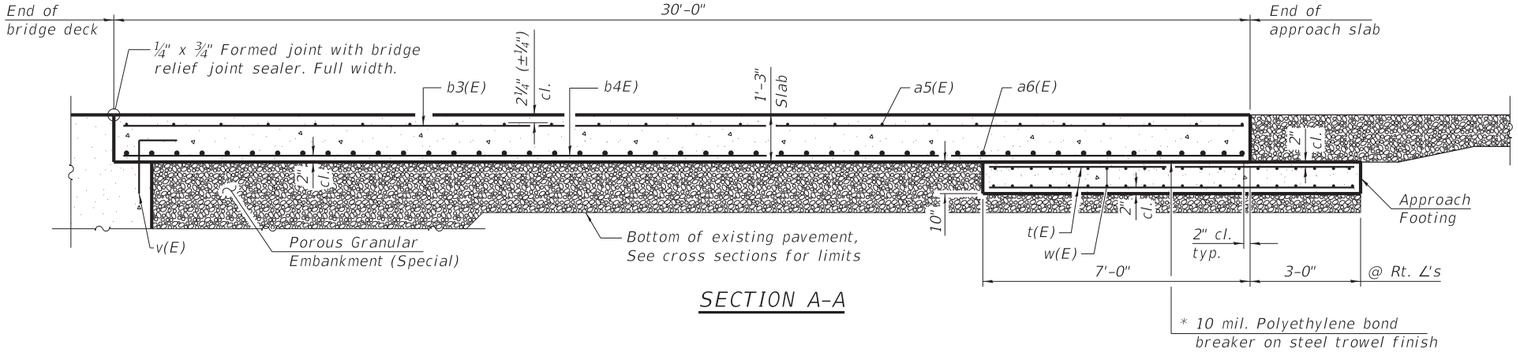
PLAN

TOP AND BOTTOM ELEVATIONS FOR APPROACH FOOTING

	West Approach		East Approach	
Point	Top	Bottom	Top	Bottom
A	507.41	506.58	505.08	504.25
B	507.76	506.84	505.59	504.76
C	507.44	506.60	505.60	504.76
D	507.39	506.56	504.61	503.78
E	507.64	506.82	505.15	504.32
F	507.42	506.58	505.18	504.35

TWO APPROACHES BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a5(E)	80	#5	28'-2"	——
a6(E)	106	#8	28'-2"	——
b3(E)	76	#5	29'-8"	——
b4(E)	120	#9	29'-8"	——
t(E)	104	#4	9'-8"	——
w(E)	80	#5	28'-2"	——
Concrete Superstructure (Approach Slab)		Cu. Yd.	68.5	
Concrete Structures		Cu. Yd.	17.6	
Reinforcement Bars, Epoxy Coated		Pound	26,260	



SECTION A-A

NOTES:

Approach slab shall be paid for as Concrete Superstructure (Approach Slab).

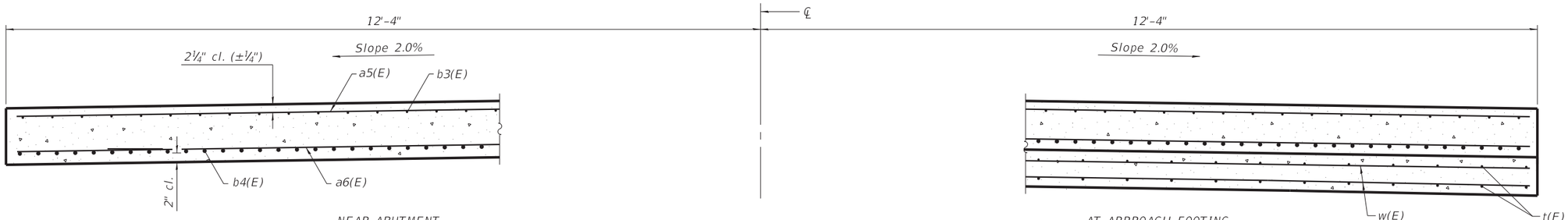
Approach footing concrete shall be paid for as Concrete Structures.

The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.

Cost of excavation for approach footing included with Concrete Structures.

For Granular Backfill for Structures and drainage treatment details, see Structural Sheet 2 of 16.

*Cost included with Concrete Superstructure (Approach Slab).



NEAR ABUTMENT

CROSS SECTION
(Looking Upstation)

AT APPROACH FOOTING

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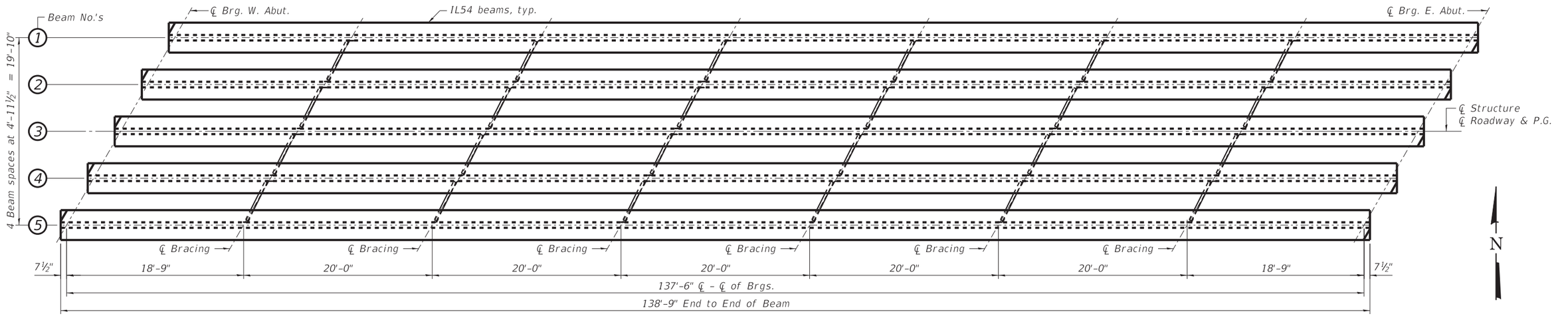
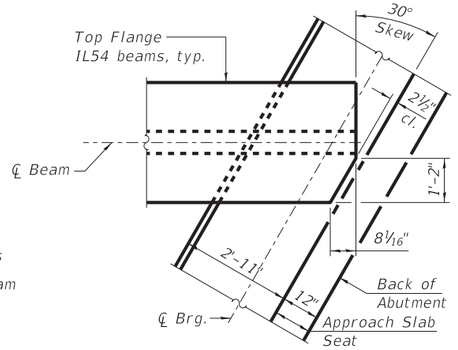
T.R. 281 (1300 N. AVE.) OVER E. BUREAU CREEK
STATION 20+00

BRIDGE APPROACH SLAB DETAILS
STRUCTURE NO. 006-4314
STRUCTURAL SHEET NO. 9 OF 16 SHEETS

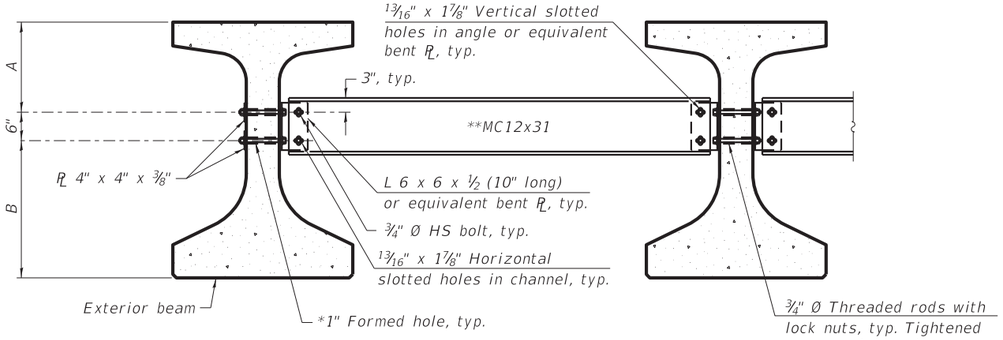
TWP. TRE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
281	15-21124-00-BR	BUREAU	35	19
	WHA= 1302D16	CONTRACT NO. 87698		
	ILLINOIS FED. AID PROJECT KBD9(822)			



FRAMING PLAN



TOP FLANGE CLIP DETAIL



NOTES:

All material for bracing shall be hot dip galvanized according to AASHTO M111 unless otherwise noted.

Two hardened washers are required for each set of oversized holes.

All holes shall be 15/16" Ø unless otherwise noted.

5/16" x 3" x 3" PL washers are required over all slotted holes.

All bolts, threaded rods, and hardware shall be galvanized according to AASHTO M232.

Threaded rods shall be ASTM F 1554 Grade 55.

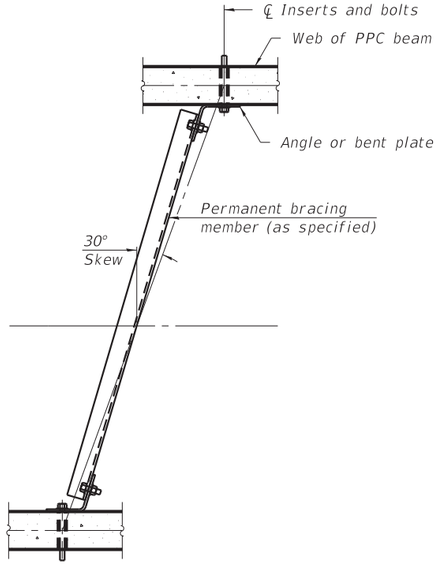
Bracing shall be installed as beams are erected and tightened as soon as possible during erection.

Permanent bracing shall not be paid for separately, but shall be included in the cost of Furnishing and Erecting Precast Prestressed Concrete Beams.

Beam	A	B
IL54	1'-7"	2'-5"

* Fabricator shall locate to miss strands within permissible tolerances.

** Alternate MC12x35 channels are permitted to facilitate material acquisition.



PLAN

(When skewed bracing is specified)

PERMANENT BRACING DETAILS FOR IL54 BEAMS

INTERIOR BEAM MOMENT TABLE		0.5 Span
I	(in^4)	357,078
I'	(in^4)	644,492
Sb	(in^3)	14,731
Sb'	(in^3)	19,534
St	(in^3)	11,999
St'	(in^3)	30,678
DC1	(k/')	1.514
M_{DC1}	('k)	3,578
DC2	(k/')	0.04
M_{DC2}	('k)	95
DW	(k/')	0.247
M_{DW}	('k)	583
$M_{(L+IM)}$	('k)	1,412
LLDF		0.319
$M_{(L+IM)1}$	('k)	2,470
$M_{(L+IM)2}$	('k)	2,046

INTERIOR BEAM REACTION TABLE		Abut.
LLDF		0.548
OCF		———
R_{DC1}	(k)	104
R_{DC2}	(k)	2.8
R_{DW}	(k)	17
R_{L1}	(k)	58.0
R_{IM1}	(k)	15.1
R_{L2}	(k)	81.8
R_{IM2}	(k)	19.0
R_{Total}	(k)	196.9

I: Non-composite moment of inertia of beam section ($in.^4$).
I': Composite moment of inertia of beam section ($in.^4$).
Sb: Non-composite section modulus for the bottom fiber of the prestressed beam ($in.^3$).
Sb': Composite section modulus for the bottom fiber of the prestressed beam ($in.^3$).
St: Non-composite section modulus for the top fiber of the prestressed beam ($in.^3$).
St': Composite section modulus for the top fiber of the prestressed beam ($in.^3$).
DC1: Un-factored non-composite dead load (kips/ft.).
M_{DC1}: Un-factored moment due to non-composite dead load (kip-ft.).
DC2: Un-factored long-term composite (superimposed excluding future wearing surface) dead load (kips/ft.).
M_{DC2}: Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).
DW: Un-factored long-term composite (superimposed future wearing surface only) dead load (kips/ft.).
M_{DW}: Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft).
M_{L+IM}: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).
$(L+IM)1$: HL93 design loading that was used in the STRENGTH I Limit State.
$(L+IM)2$: 120 kip Permit Truck with lane load that was used in the STRENGTH II and SERVICE III Limit States.

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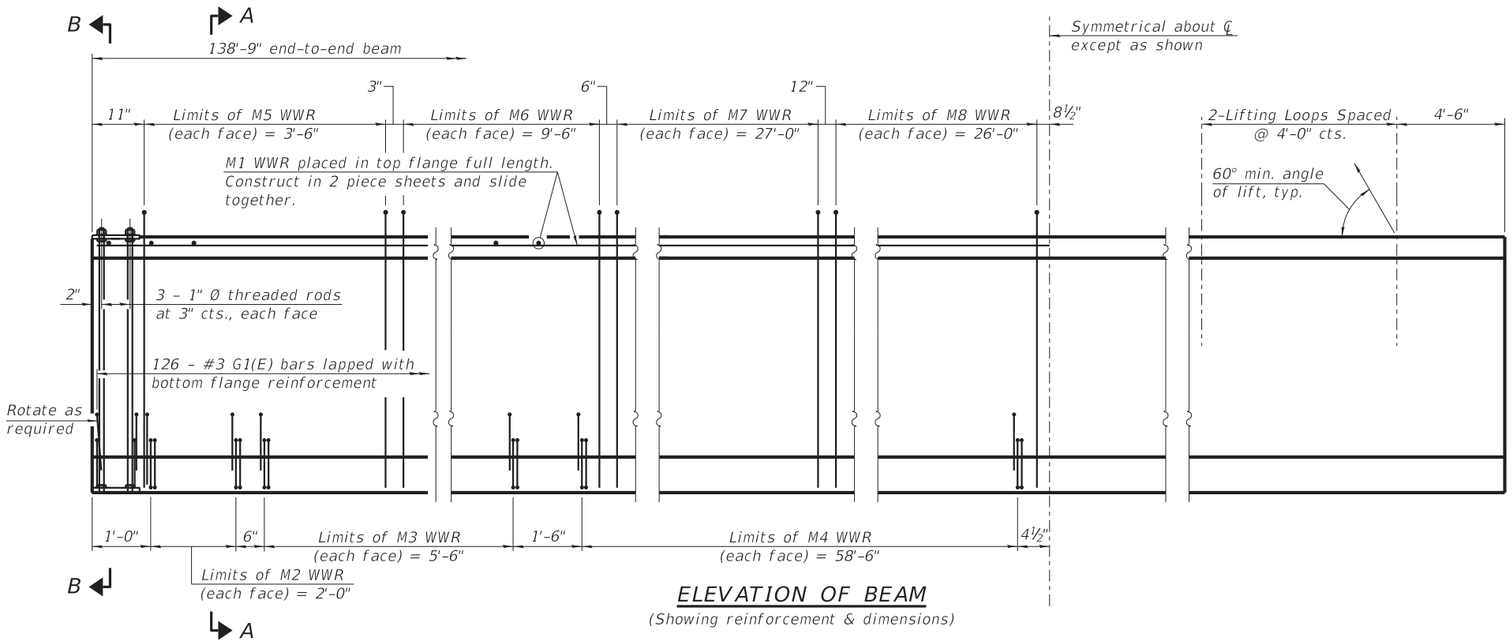
DRAWN -	FDL	REVISED -
CHECKED -	BKC	REVISED -

BUREAU COUNTY
T.R. 281 (1300 N. AVE.) OVER E. BUREAU CREEK
STATION 20+00

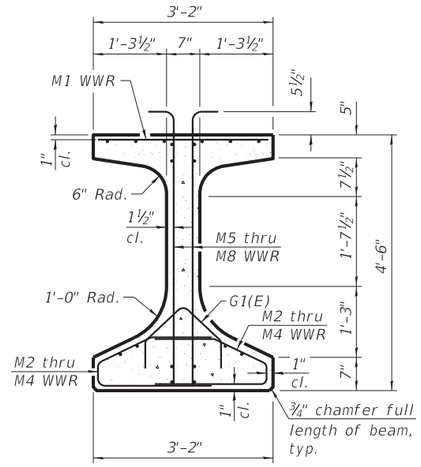
FRAMING DETAILS
STRUCTURE NO. 006-4314
STRUCTURAL SHEET NO. 10 OF 16 SHEETS

TWP. TRE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
281	15-21124-00-BR	BUREAU	35	20
	WHA* 1302D16	CONTRACT NO. 87698		
	ILLINOIS FED. AID PROJECT KBD9(822)			

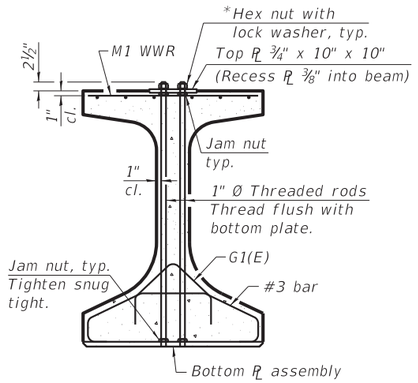


ELEVATION OF BEAM

(Showing reinforcement & dimensions)

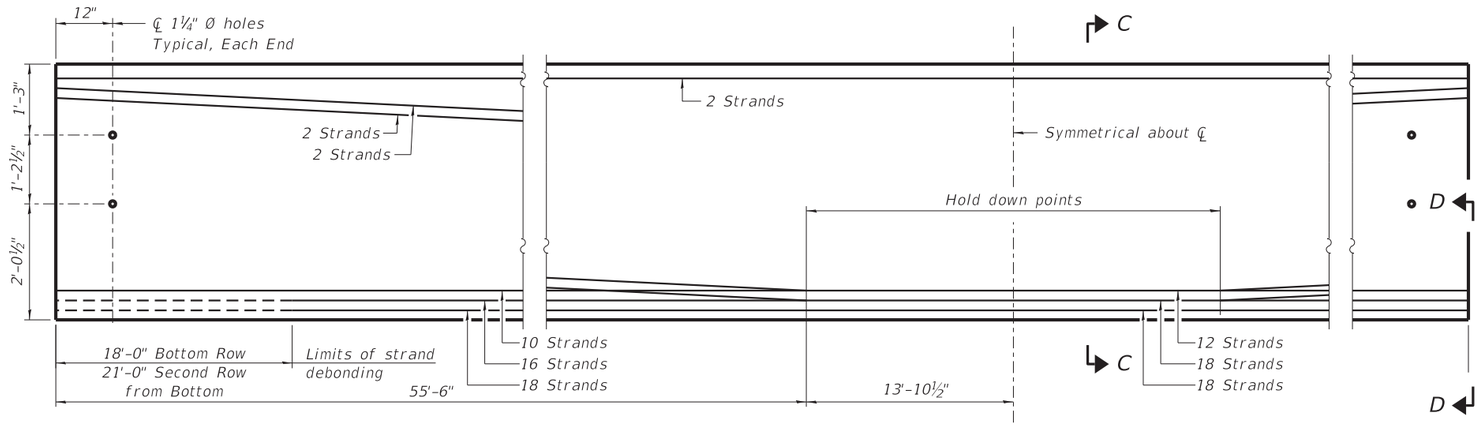


SECTION A-A



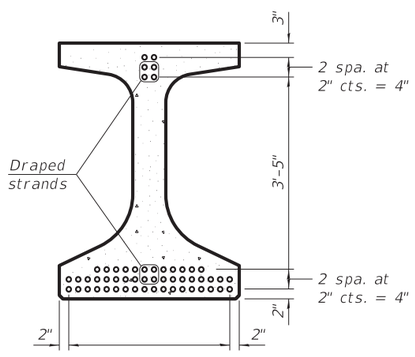
SECTION B-B

* Only tighten sufficiently to compress lock washers



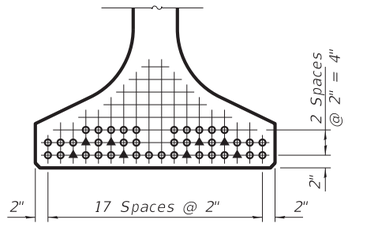
ELEVATION OF BEAM

(Showing prestressing steel)



SECTION C-C

(50 - 0.6" Ø 270 ksi strands)



VIEW D-D

○ Fully bonded strand

▲ Partially debonded strand

SECTION C-C

See Structural Sheet 12 of 16 for additional details and Bill of Material.

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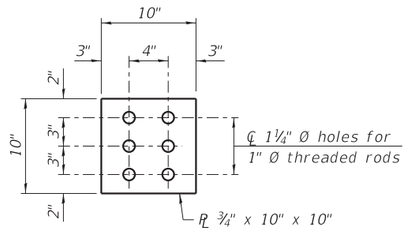
ENGINEERING ARCHITECTURE LAND SURVEYING
809 EAST 2ND STREET, DIXON, IL 61021-0367
T: 815-284-3381 DESIGN FIRM: #184-000918

DESIGNED - BKC	REVISED -	
CHECKED - PLP	REVISED -	
DRAWN - FDL	REVISED -	
CHECKED - BKC	REVISED -	

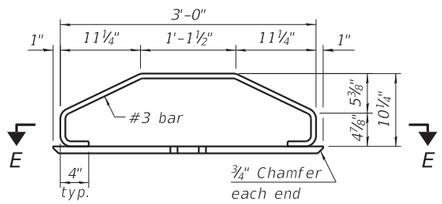
BUREAU COUNTY
T.R. 281 (1300 N. AVE.) OVER E. BUREAU CREEK
STATION 20+00

IL54 BEAM
STRUCTURE NO. 006-4314
STRUCTURAL SHEET NO. 11 OF 16 SHEETS

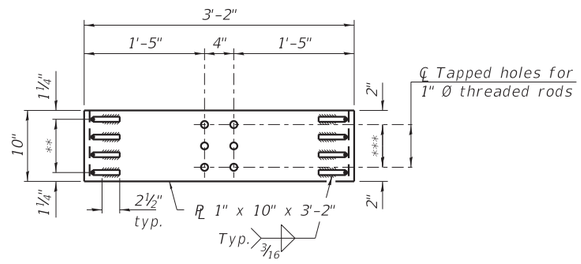
TWP. TRE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
281	15-21124-00-BR	BUREAU	35	21
	WHA* 1302D16	CONTRACT NO. 87698		
	ILLINOIS FED. AID PROJECT KBD9(822)			



PLAN - TOP PLATE



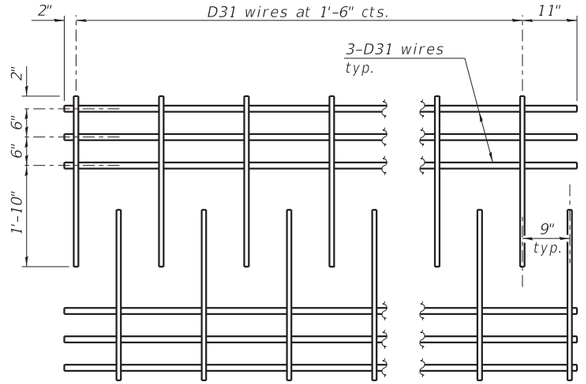
ELEVATION - BOTTOM PLATE ASSEMBLY



SECTION E-E

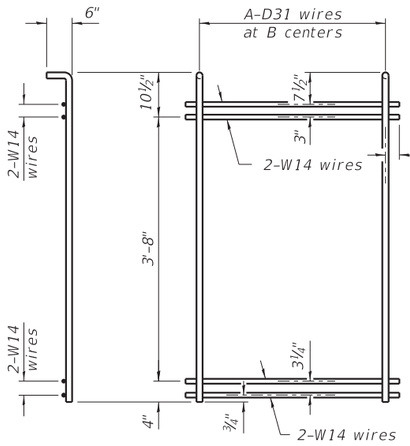
** 3 Spaces at 2½" = 7½"

*** 2 Spaces at 3" = 6"



M1 WWR DETAIL

When multiple sheets of M1 WWR are required along the beam length, #5(E) bars (5'-0" long) shall be used to splice the longitudinal D31 wires together (Min. Lap 2'-2").



M5 THRU M8 WWR DETAIL

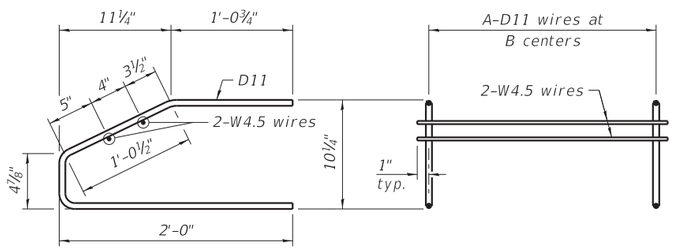
(See Table of Dimensions)

TABLE OF DIMENSIONS

SPAN 1

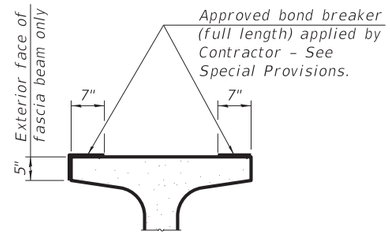
WWR	A	B
M2	9	3"
M3	12	6"
M4	40	1'-6"
M5	15	3"
M6	20	6"
M7	28	1'-0"
M8	14	2'-0"

BAR G1(E)



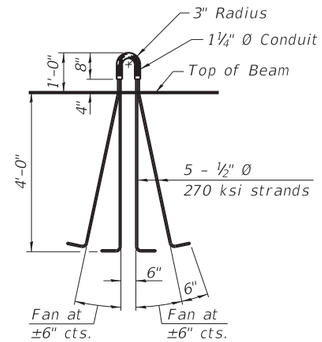
M2 THRU M4 WWR DETAIL

(See Table of Dimensions)



SECTION THRU TOP FLANGE

(Showing limits of bond breaker)



LIFTING LOOP DETAIL

BILL OF MATERIAL

Item	Unit	Total
Furnishing and Erecting Precast Prestressed Concrete Beams, IL54	Ft.	694

NOTES:

Inserts for ¾" Ø threaded dowel rods, when specified, are to be two strut, ferrule type for interior beams and single ferrule, flared loop type for exterior beams.

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter for beam strands shall be 0.6" and the nominal cross-sectional area shall be 0.217 sq. in. The nominal diameter for lifting loops shall be ½" and the nominal cross sectional area shall be 0.153 sq. in.

The beams shall have a final concrete compressive strength, f'c, of 8500 psi and a release concrete compressive strength, f'ci, of 7000 psi.

A minimum 2½" Ø lifting pin shall be used to engage the lifting loops during handling.

The top and bottom PL's shall be AASHTO M270 Grade 50.

The top PL's and bottom PL assemblies shall be galvanized according to AASHTO M111. The threaded rods, nuts and washers shall be galvanized according to AASHTO M232.

Threaded rods shall be ASTM F 1554 Grade 55.

Beams shall not be released from the fabricator until they have attained 45 days of age or older.

Welded Wire Reinforcement (WWR) shall conform to ASTM A884 with a Class A, Type 1 epoxy coating.

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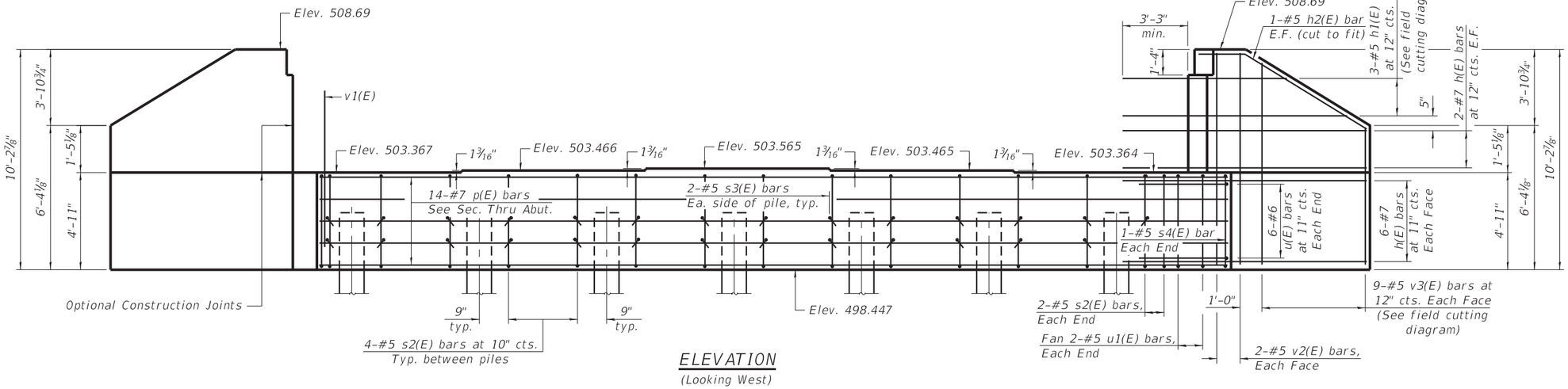
DRAWN - FDL	REVISED -	
CHECKED - BKC	REVISED -	

BUREAU COUNTY
T.R. 281 (1300 N. AVE.) OVER E. BUREAU CREEK
STATION 20+00

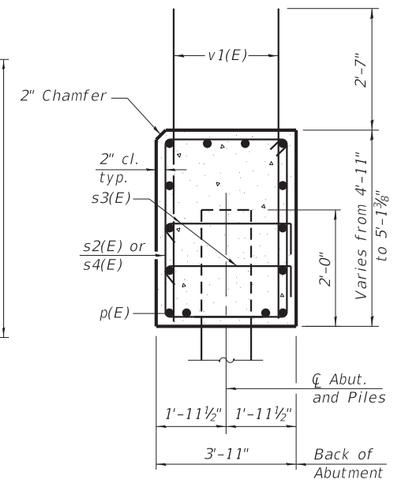
IL54 BEAM DETAILS
STRUCTURE NO. 006-4314
STRUCTURAL SHEET NO. 12 OF 16 SHEETS

TWP. TRE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
281	15-21124-00-BR	BUREAU	35	22
	WHA* 1302D16	CONTRACT NO. 87698		
	ILLINOIS FED. AID PROJECT KBD9(822)			

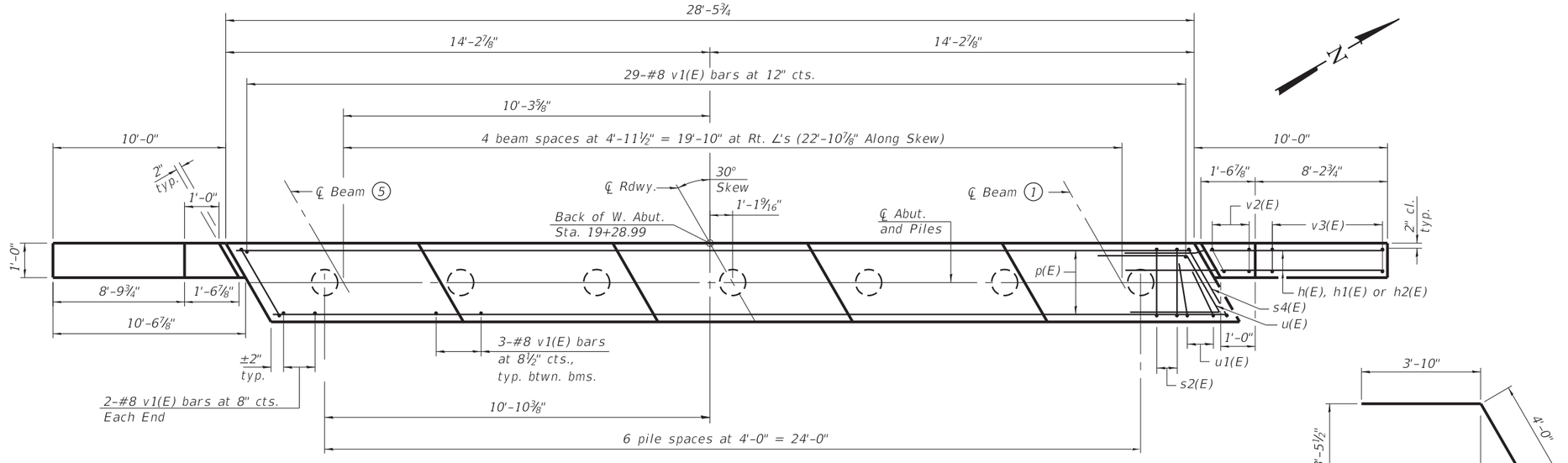
Notes:
Pour steps monolithically with cap.



ELEVATION
(Looking West)

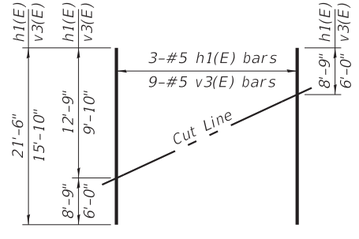


SEC. THRU ABUT.
Dimensions at right angles to abutment.

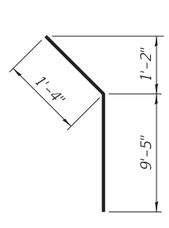


PLAN

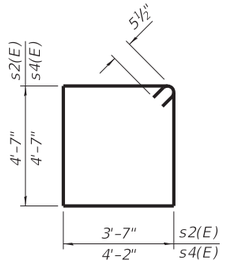
PILE DATA
Type: Metal Shell Piles, 14" Ø x 0.25"
Nominal Required Bearing: 404 k
Factored Resistance Available: 222 k
Est. Length: 32'
No. Production Piles: 6
No. Test Piles: 1



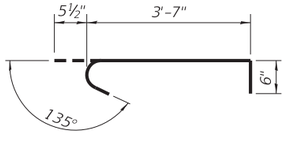
FIELD CUTTING DIAGRAM
Order h1(E) and v3(E) full length. Cut as shown and use remainder of bars in opposite face.



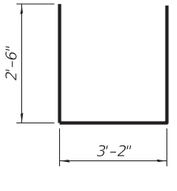
BAR h2(E)



BAR s2(E) & s4(E)



BAR s3(E)



BAR u1(E)

BAR u(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	32	#7	15'-4"	
h1(E)	6	#5	21'-6"	
h2(E)	4	#5	10'-0"	
p(E)	14	#7	28'-2"	
s2(E)	28	#5	17'-3"	
s3(E)	28	#5	4'-7"	
s4(E)	2	#5	18'-5"	
u(E)	12	#6	11'-8"	
u1(E)	4	#5	8'-2"	
v1(E)	45	#8	5'-11"	
v2(E)	8	#5	9'-10"	
v3(E)	18	#5	15'-10"	
Structure Excavation	Cu. Yd.		98	
Concrete Structures	Cu. Yd.		26.6	
Reinforcement Bars, Epoxy Coated	Pound		4,000	
Furnishing Metal Shell Piles 14" x 0.250"	Foot		192	
Driving Piles	Foot		192	
Test Pile, Metal Shell Piles 14" x 0.250"	Each		1	
Pile Shoes	Each		7	
Geocomposite Wall Drain	Sq. Yd.		44	
Pipe Underdrain for Structures 4"	Foot		74	
Porous Granular Embankment (Special)	Ton		261	

NOTES:
For details of piles see Structural Sheet 15 of 16.

For drainage details, see Structural Sheet 2 of 16.

Pour steps monolithically with cap.

All exposed edges shall have ¾" chamfers, except as noted.

WILLETT HOFMANN & ASSOCIATES INC
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809 EAST 2ND STREET, DIXON, IL 61021-0367
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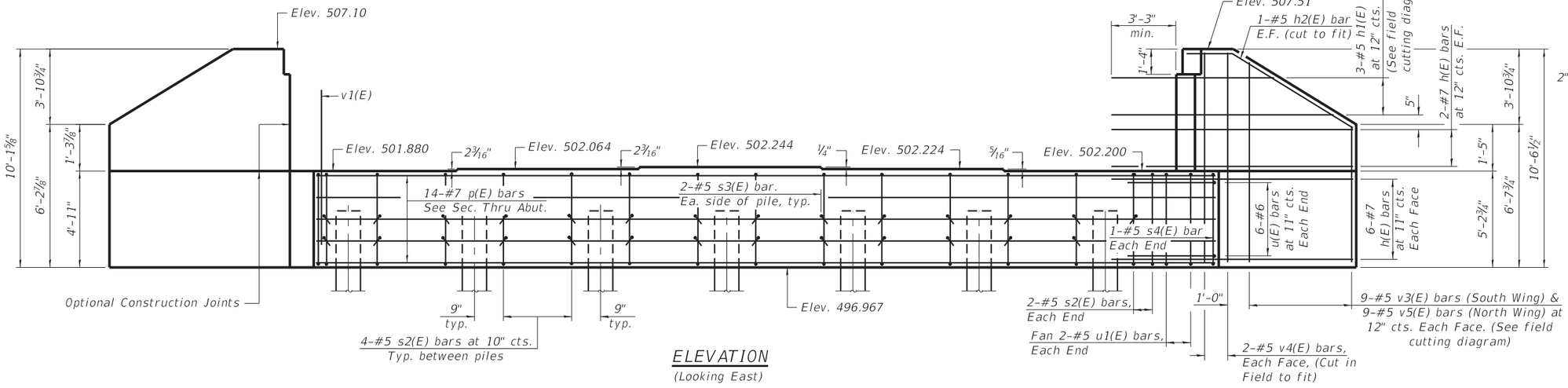
DESIGNED - BKC	REVISED -	
CHECKED - PLP	REVISED -	
DRAWN - FDL	REVISED -	
CHECKED - BKC	REVISED -	

BUREAU COUNTY
T.R. 281 (1300 N. AVE.) OVER E. BUREAU CREEK
STATION 20+00

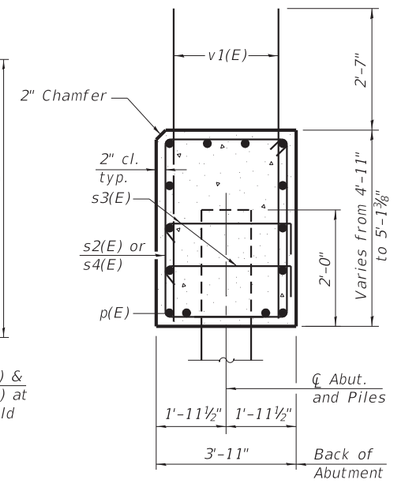
WEST ABUTMENT DETAILS
STRUCTURE NO. 006-4314
STRUCTURAL SHEET NO. 13 OF 16 SHEETS

TWP. TRE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
281	15-21124-00-BR	BUREAU	35	23
	WHA# 1302D16	CONTRACT NO. 87698		
	ILLINOIS FED. AID PROJECT KBD9(822)			

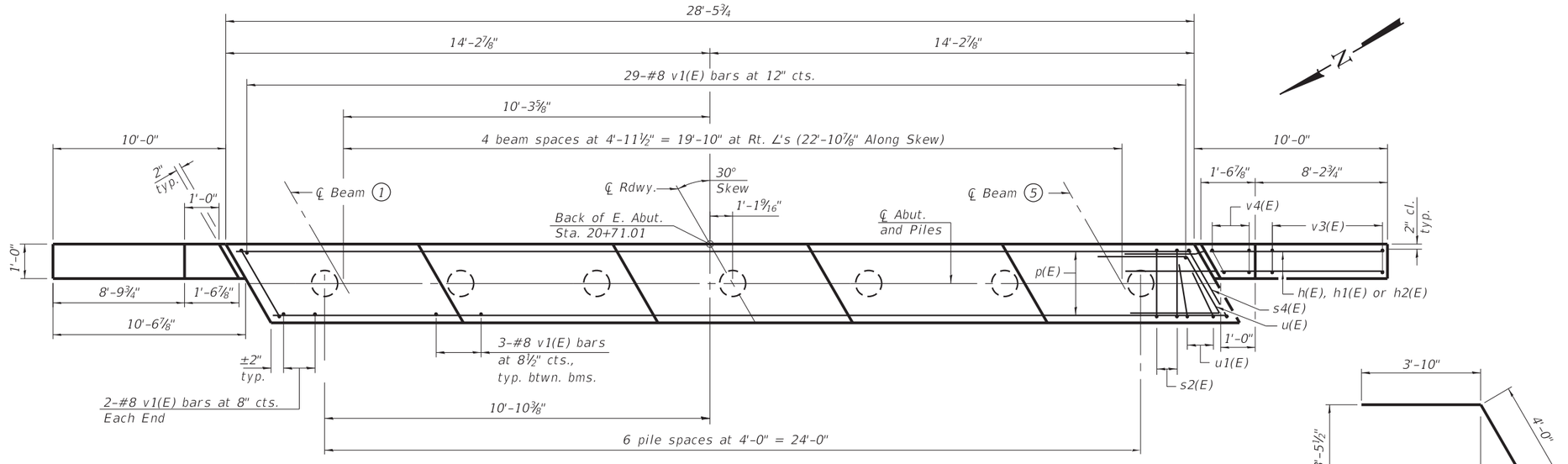
Notes:
Pour steps monolithically with cap.



ELEVATION
(Looking East)

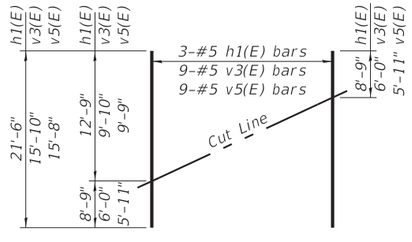


SEC. THRU ABUT.
Dimensions at right angles to abutment.

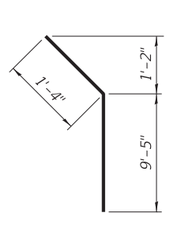


PLAN

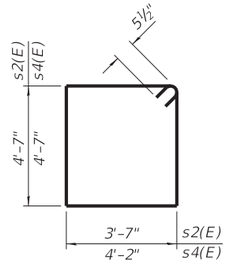
PILE DATA
Type: Metal Shell Piles, 14" Ø x 0.25"
Nominal Required Bearing: 404 k
Factored Resistance Available: 222 k
Est. Length: 37'
No. Production Piles: 6
No. Test Piles: 1



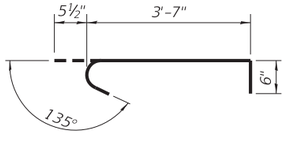
FIELD CUTTING DIAGRAM
Order h1(E), v3(E) and v5(E) full length. Cut as shown and use remainder of bars in opposite face.



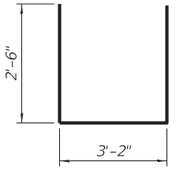
BAR h2(E)



BAR s2(E) & s4(E)



BAR s3(E)



BAR u1(E)

BAR u(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	32	#7	15'-4"	
h1(E)	6	#5	21'-6"	
h2(E)	4	#5	10'-0"	
p(E)	14	#7	28'-2"	
s2(E)	28	#5	17'-3"	
s3(E)	28	#5	4'-7"	
s4(E)	2	#5	18'-5"	
u(E)	12	#6	11'-8"	
u1(E)	4	#5	8'-2"	
v1(E)	45	#8	5'-11"	
v3(E)	9	#5	15'-10"	
v4(E)	8	#5	10'-2"	
v5(E)	9	#5	15'-8"	
Structure Excavation		Cu. Yd.	44	
Concrete Structures		Cu. Yd.	26.6	
Reinforcement Bars, Epoxy Coated		Pound	4,000	
Furnishing Metal Shell Piles 14" x 0.250"		Foot	222	
Driving Piles		Foot	222	
Test Pile, Metal Shell Piles 14" x 0.250"		Each	1	
Pile Shoes		Each	7	
Geocomposite Wall Drain		Sq. Yd.	44	
Pipe Underdrain for Structures 4"		Foot	75	
Porous Granular Embankment (Special)		Ton	230	

NOTES:
For details of piles see Structural Sheet 15 of 16.

For drainage details, see Structural Sheet 2 of 16.

Pour steps monolithically with cap.

All exposed edges shall have 3/4" chamfers, except as noted.

WILLETT HOFMANN & ASSOCIATES INC
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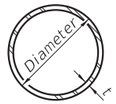
CHECKED - PLP	REVISED -	
DRAWN - FDL	REVISED -	
CHECKED - BKC	REVISED -	

BUREAU COUNTY
T.R. 281 (1300 N. AVE.) OVER E. BUREAU CREEK
STATION 20+00

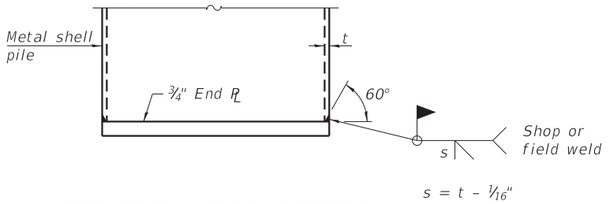
EAST ABUTMENT DETAILS
STRUCTURE NO. 006-4314
STRUCTURAL SHEET NO. 14 OF 16 SHEETS

TWP. TRE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
281	15-21124-00-BR	BUREAU	35	24
	WHA# 1302D16	CONTRACT NO. 87698		
	ILLINOIS FED. AID PROJECT KBD9(822)			



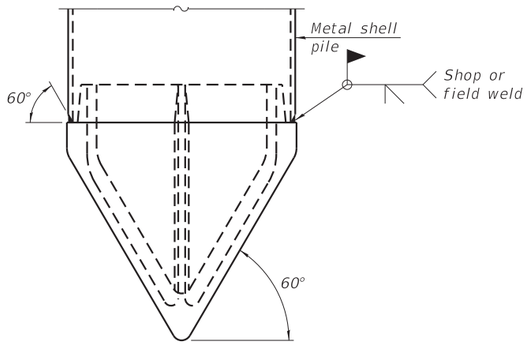
METAL SHELL PILE TABLE

Designation and outside diameter	Wall thickness t	Weight per foot (Lbs./ft.)	Inside volume ($yd.^3/ft.$)
PP12	0.250"	31.37	0.0267
PP14	0.250"	36.71	0.0368
PP14	0.312"	45.61	0.0361
PP16	0.312"	52.32	0.0478
PP16	0.375"	62.64	0.0470



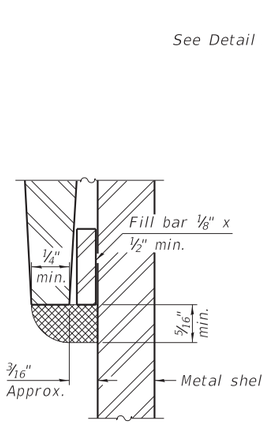
$s = t - 1/16"$

END PLATE ATTACHMENT

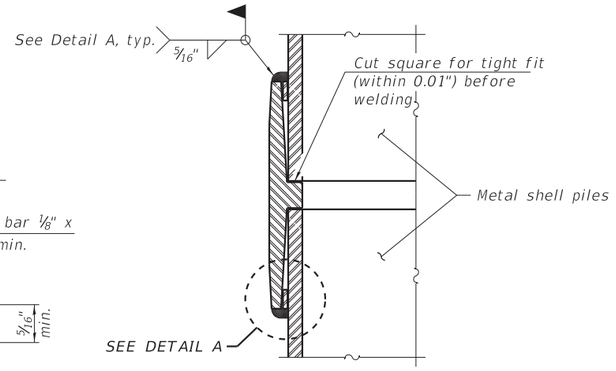


PILE SHOE ATTACHMENT

(When called for on the plans, the Contractor shall furnish metal shell pile shoes consisting of a single piece conical pile point as shown. The pile shoes shall be cast in one piece steel according to either ASTM A 148 Grade 90-60 or AASHTO M 103 Grade 65-35 and shall provide full bearing over the full circumference of the metal shell pile. The pile shoe shall have tapered leads to assure proper alignment and fitting and shall be secured to the pile with a circumferential weld).



DETAIL A

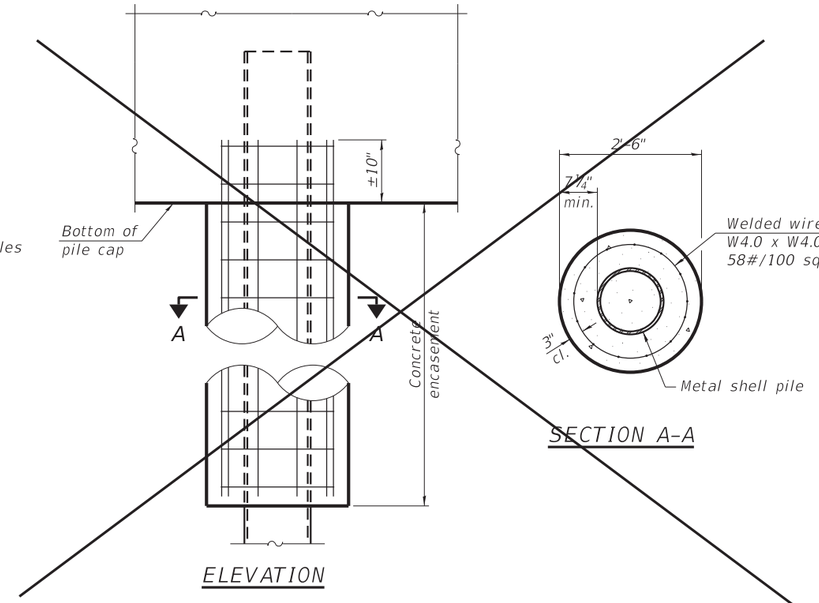


WELDED COMMERCIAL SPLICE

NOTES:

The ⅛" x ½" min. fill bar may be constructed of 2 bars with a ⅛" max. gap between them.

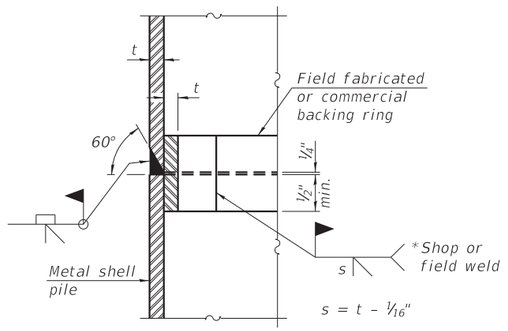
Pile segments shall be driven to solid contact with splicer before welding.



ELEVATION

SECTION A-A

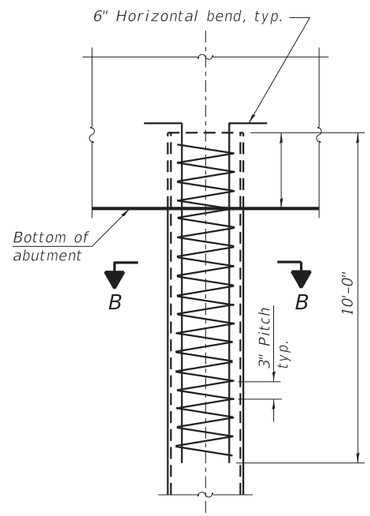
INDIVIDUAL PILE CONCRETE ENCASEMENT AT PIERS



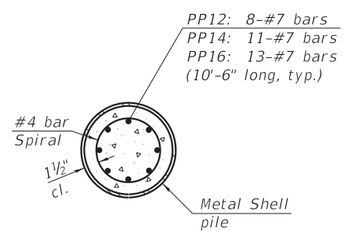
$s = t - 1/16"$

COMPLETE PENETRATION WELD SPLICE

*Field fabricated backing ring may be made from pile shell by removing segment to allow reducing circumference and vertically rejoin with partial joint penetration weld.



ELEVATION



SECTION B-B

REINFORCEMENT AT ABUTMENTS

NOTE:

The metal shell piles shall be according to Article 1006.05 of the Standard Specifications.

DESIGNED - BKC	REVISED -	
CHECKED - PLP	REVISED -	
DRAWN - FDL	REVISED -	
CHECKED - BKC	REVISED -	

WILLETT HOFMANN & ASSOCIATES INC
ENGINEERING ARCHITECTURE LAND SURVEYING
809 EAST 2ND STREET, DIXON, IL 61021-0367
T: 815-284-3381 DESIGN FIRM: #184-000918

BUREAU COUNTY
T.R. 281 (1300 N. AVE.) OVER E. BUREAU CREEK
STATION 20+00

METAL SHELL PILE DETAILS
STRUCTURE NO. 006-4314
STRUCTURAL SHEET NO. 15 OF 16 SHEETS

TWP. TRE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
281	15-21124-00-BR	BUREAU	35	25
	WHA* 1302D16	CONTRACT NO. 87698		
	ILLINOIS FED. AID PROJECT KBD9(822)			

TEI-2

TESTING ENGINEERS, INC.
809 EAST SECOND ST.
DIXON, ILLINOIS

LOG OF BORING NO. 1

PROJECT SEARLS RIDGE ROAD BRIDGE JOB NO. 737
CLIENT Bureau County Highway Department ORDER NO.
ARCHITECT-ENGINEER Willett, Hofmann & Associates, Inc.
LOCATION Northeast corner Northwest Quarter of Section 31, Township 16 North, Range 10 East of the Fourth Principal Meridian See Boring Location Plan
DATUM U.S.G.S.

ELEV.	SOIL DESCRIPTION	DEPTH	SAMPLE NO.	SAMPLE TYPE	DIST. REC.	N	ϒ	Q_u	w%
503.2		0.0							
501.7	See NOTE 1: Sheet 1/2	1.5							
	Stiff dark brown changing to black GRAVELLY SANDY SILT	5	1	SS		11		1.1P	12.1
			2	SS		7		1.1P	16.6
			3	SS		7		0.9P	16.0
		10	4	SS		6		0.6P	15.2
491.2	See NOTE 2: Sheet 1/2	12.0	5	SS		9		0.2	21.4
488.7	Medium to dense light brown fine to medium SAND and GRAVEL	14.5	6	SS		12			
		20	7	SS		16			
		25	8	SS		22			
	NOTE 1: Brown fine to medium SAND and GRAVEL	30	9	SS		23			
	NOTE 2: Loose to medium brown CLAYEY SILTY SAND with some fine to medium gravel	35	10	SS		28			
		40	11	SS		31			

TEI-2

TESTING ENGINEERS, INC.
809 EAST SECOND ST.
DIXON, ILLINOIS

LOG OF BORING NO. 2

PROJECT SEARLS RIDGE ROAD BRIDGE JOB NO. 737
CLIENT Bureau County Highway Department ORDER NO.
ARCHITECT-ENGINEER Willett, Hofmann & Associates, Inc.
LOCATION Northeast corner Northwest Quarter of Section 31, Township 16 North, Range 10 East of the Fourth Principal Meridian See Boring Location Plan
DATUM U.S.G.S.

ELEV.	SOIL DESCRIPTION	DEPTH	SAMPLE NO.	SAMPLE TYPE	DIST. REC.	N	ϒ	Q_u	w%
503.3		0.0							
501.8	Brown medium SAND and GRAVEL with some clay	2.5	1	SS		5		0.7P	19.2
	Medium to stiff dark brown SILT - trace of fine sand	5	2	SS		5		0.7P	19.8
			3	SS		7		1.1P	24.0
493.3	Loose light brown fine to coarse SAND	10.0	4	SS		6			
			5	SS		10			
488.3	Very stiff to stiff brownish grey to dark brown SILTY CLAY with some organic material	15.0	6	SS		17		3.5P	21.8
		20	7	SS		16		1.4P	54.4 21.9
480.3	Medium to dense light brown fine to medium SAND and fine to medium GRAVEL	23.0							
		25	8	SS		22			
		30	9	SS		32			
		35	10	SS		34			
		40	11	SS		28			

TEI-2

TESTING ENGINEERS, INC.
809 EAST SECOND ST.
DIXON, ILLINOIS

LOG OF BORING NO. 1

PROJECT SEARLS RIDGE ROAD BRIDGE JOB NO. 737
CLIENT Bureau County Highway Department ORDER NO.
ARCHITECT-ENGINEER Willett, Hofmann & Associates, Inc.
LOCATION Northeast corner Northwest Quarter of Section 31, Township 16 North, Range 10 East of the Fourth Principal Meridian See Boring Location Plan
DATUM U.S.G.S.

ELEV.	SOIL DESCRIPTION	DEPTH	SAMPLE NO.	SAMPLE TYPE	DIST. REC.	N	ϒ	Q_u	w%
463.2		40.0	11	SS		31			
	Dense light brown fine to medium SAND and GRAVEL	45	12	SS		30			
		50	13	SS		38			
		55	14	SS		42			
441.7	End of Boring	61.5	15	SS		41			

Drilled By BW Checked FJH
Inspector
Boring Started 2-21-72
Boring Completed 2-21-72
Sheet 2 of 2 Sheets

WATER LEVELS
While Drilling -12.0' (491.2)
On Completion -12.0' (491.2)
After ___ Hours
After ___ Hours

TEI-2

TESTING ENGINEERS, INC.
809 EAST SECOND ST.
DIXON, ILLINOIS

LOG OF BORING NO. 2

PROJECT SEARLS RIDGE ROAD BRIDGE JOB NO. 737
CLIENT Bureau County Highway Department ORDER NO.
ARCHITECT-ENGINEER Willett, Hofmann & Associates, Inc.
LOCATION Northeast corner Northwest Quarter of Section 31, Township 16 North, Range 10 East of the Fourth Principal Meridian See Boring Location Plan
DATUM U.S.G.S.

ELEV.	SOIL DESCRIPTION	DEPTH	SAMPLE NO.	SAMPLE TYPE	DIST. REC.	N	ϒ	Q_u	w%
463.3		40.0	11	SS		28			
	Medium to dense light brown fine to coarse SAND and fine to medium GRAVEL	45	12	SS		29			
		50	13	SS		29			
			14	SS		30			
446.8	End of Boring	56.5							

Drilled By BW Checked FJH
Inspector
Boring Started 2-21-72
Boring Completed 2-21-72
Sheet 2 of 2 Sheets

WATER LEVELS
While Drilling -13.5' (489.8)
On Completion -12.2' (491.1)
After ___ Hours
After ___ Hours

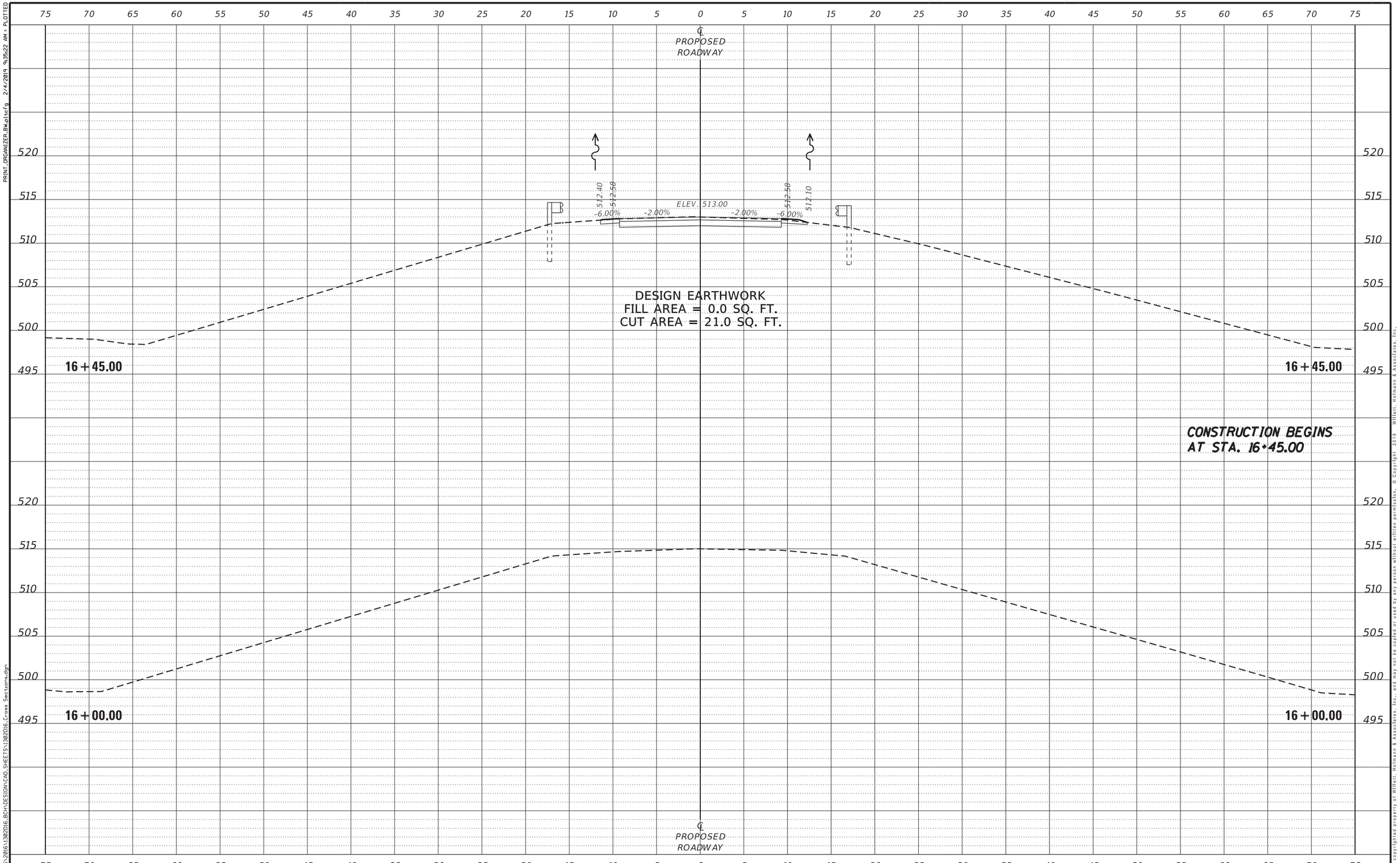
WILLETT HOFMANN & ASSOCIATES INC
ENGINEERING ARCHITECTURE LAND SURVEYING
809 EAST 2ND STREET, DIXON, IL 61021-0367
T: 815-284-3381 DESIGN FIRM: #184-000918

DESIGNED - BKC	REVISED -		
CHECKED - PLP	REVISED -		
DRAWN - FDL	REVISED -		
CHECKED - BKC	REVISED -		

BUREAU COUNTY
T.R. 281 (1300 N. AVE.) OVER E. BUREAU CREEK
STATION 20+00

EXISTING SOIL BORING LOGS
STRUCTURE NO. 006-4314
STRUCTURAL SHEET NO. 16 OF 16 SHEETS

TWP. TRE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
281	15-21124-00-BR	BUREAU	35	26
	WHA* 1302D16	CONTRACT NO. 87698		
	ILLINOIS FED. AID PROJECT KBD9(822)			



WILLETT HOFMANN & ASSOCIATES INC
ENGINEERING ARCHITECTURE LAND SURVEYING
809 EAST 2ND STREET, DIXON, IL 61021-0367
T: 815-284-3381 DESIGN FIRM: #184-000918

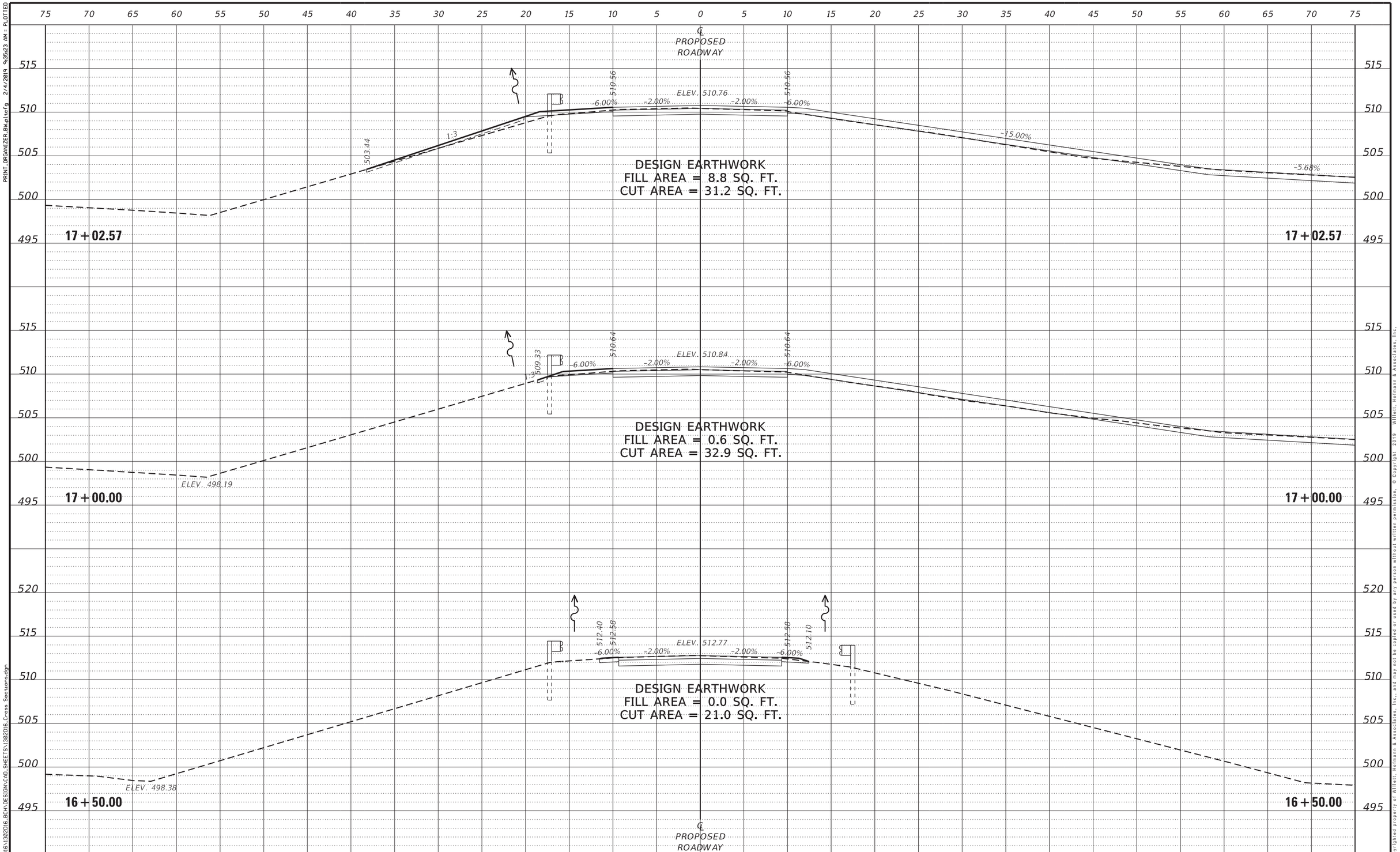
DESIGNED - BKC	REVISED -	
CHECKED - PLP	REVISED -	
DRAWN - RDA	REVISED -	
CHECKED - BKC	REVISED -	

BUREAU COUNTY
T.R. 281 (1300 N. AVE.) OVER E. BUREAU CREEK
STATION 20+00

CROSS SECTIONS

SCALE: 1" = 5'-0" | SHEET NO. 1 OF 9 SHEETS | STA. 16+00.00 TO STA. 16+45.00

TWP. TRE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
281	15-21124-00-BR	BUREAU	35	27
	WHA* 1302D16	CONTRACT NO. 87698		
	ILLINOIS FED. AID PROJECT KBD9(822)			



WILLETT HOFMANN & ASSOCIATES INC
ENGINEERING ARCHITECTURE LAND SURVEYING
809 EAST 2ND STREET, DIXON, IL 61021-0367
T: 815-284-3381 DESIGN FIRM: #184-000918

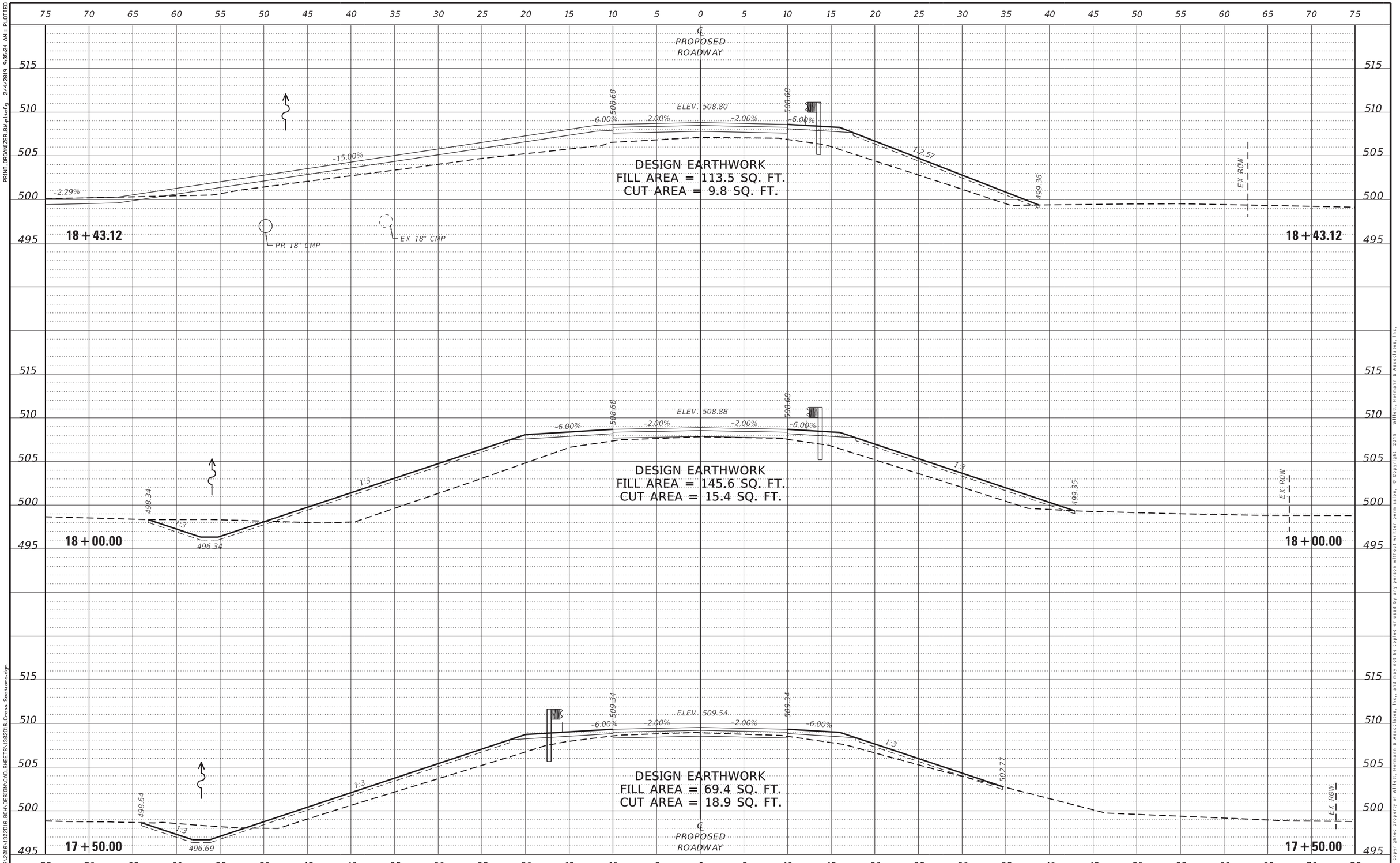
DESIGNED - BKC	REVISED -	
CHECKED - PLP	REVISED -	
DRAWN - RDA	REVISED -	
CHECKED - BKC	REVISED -	

BUREAU COUNTY
T.R. 281 (1300 N. AVE.) OVER E. BUREAU CREEK
STATION 20+00

CROSS SECTIONS

SCALE: 1" = 5'-0" | SHEET NO. 2 OF 9 SHEETS | STA. 16+50.00 TO STA. 17+02.57

TWP. TRE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
281	15-21124-00-BR	BUREAU	35	28
	WHA* 1302D16	CONTRACT NO. 87698		
	ILLINOIS FED. AID PROJECT KBD9(822)			



WILLETT HOFMANN & ASSOCIATES INC
ENGINEERING ARCHITECTURE LAND SURVEYING
809 EAST 2ND STREET, DIXON, IL 61021-0367
T: 815-284-3381 DESIGN FIRM: #184-000918

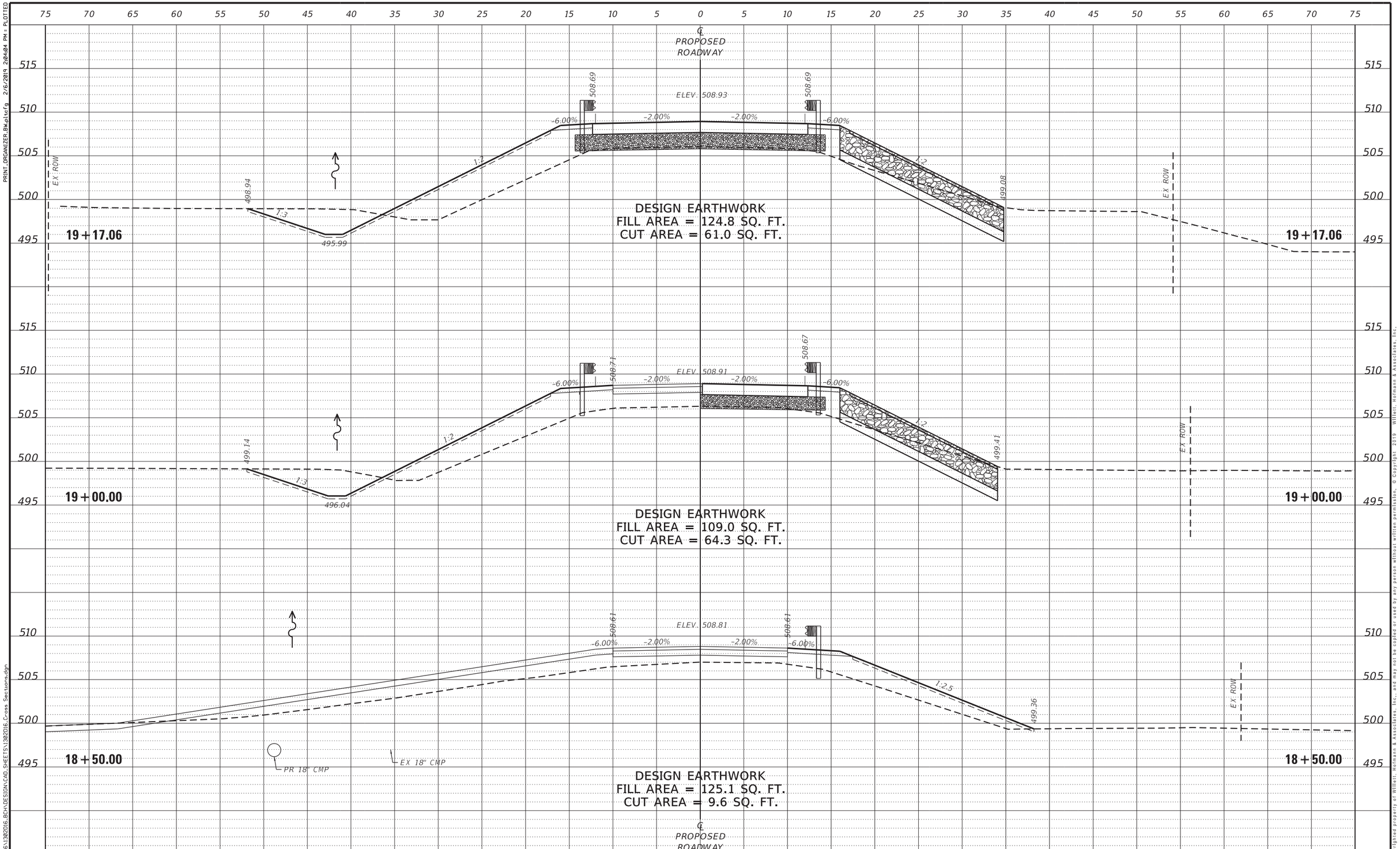
DESIGNED - BKC	REVISED -	
CHECKED - PLP	REVISED -	
DRAWN - RDA	REVISED -	
CHECKED - BKC	REVISED -	

BUREAU COUNTY
T.R. 281 (1300 N. AVE.) OVER E. BUREAU CREEK
STATION 20+00

CROSS SECTIONS

SCALE: 1" = 5'-0" | SHEET NO. 3 OF 9 SHEETS | STA. 17+50.00 TO STA. 18+43.12

TWP. TRE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
281	15-21124-00-BR	BUREAU	35	29
	WHA# 1302D16	CONTRACT NO. 87698		
	ILLINOIS FED. AID PROJECT KBD9(822)			



WILLETT HOFMANN & ASSOCIATES INC
ENGINEERING ARCHITECTURE LAND SURVEYING
809 EAST 2ND STREET, DIXON, IL 61021-0367
T: 815-284-3381 DESIGN FIRM: #184-000918

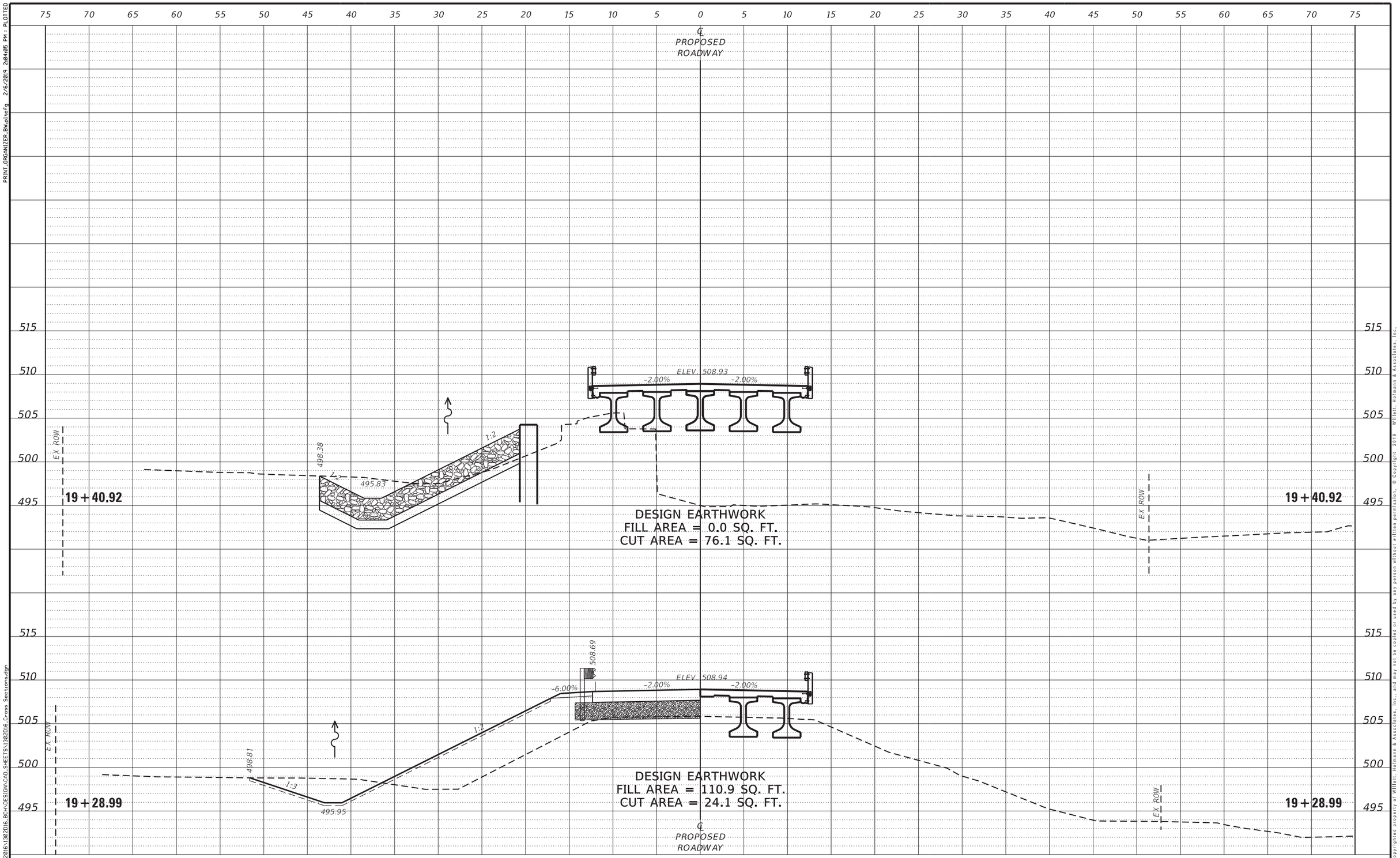
DESIGNED - BKC	REVISED -	
CHECKED - PLP	REVISED -	
DRAWN - RDA	REVISED -	
CHECKED - BKC	REVISED -	

BUREAU COUNTY
T.R. 281 (1300 N. AVE.) OVER E. BUREAU CREEK
STATION 20+00

CROSS SECTIONS

SCALE: 1" = 5'-0" | SHEET NO. 4 OF 9 SHEETS | STA. 18+50.00 TO STA. 19+17.06

TWP. TRE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
281	15-21124-00-BR	BUREAU	35	30
	WHA* 1302D16	CONTRACT NO. 87698		
	ILLINOIS FED. AID PROJECT KBD9(822)			



WILLETT HOFMANN & ASSOCIATES INC
ENGINEERING ARCHITECTURE LAND SURVEYING
809 EAST 2ND STREET, DIXON, IL 61021-0367
T: 815-284-3381 DESIGN FIRM: #184-000918

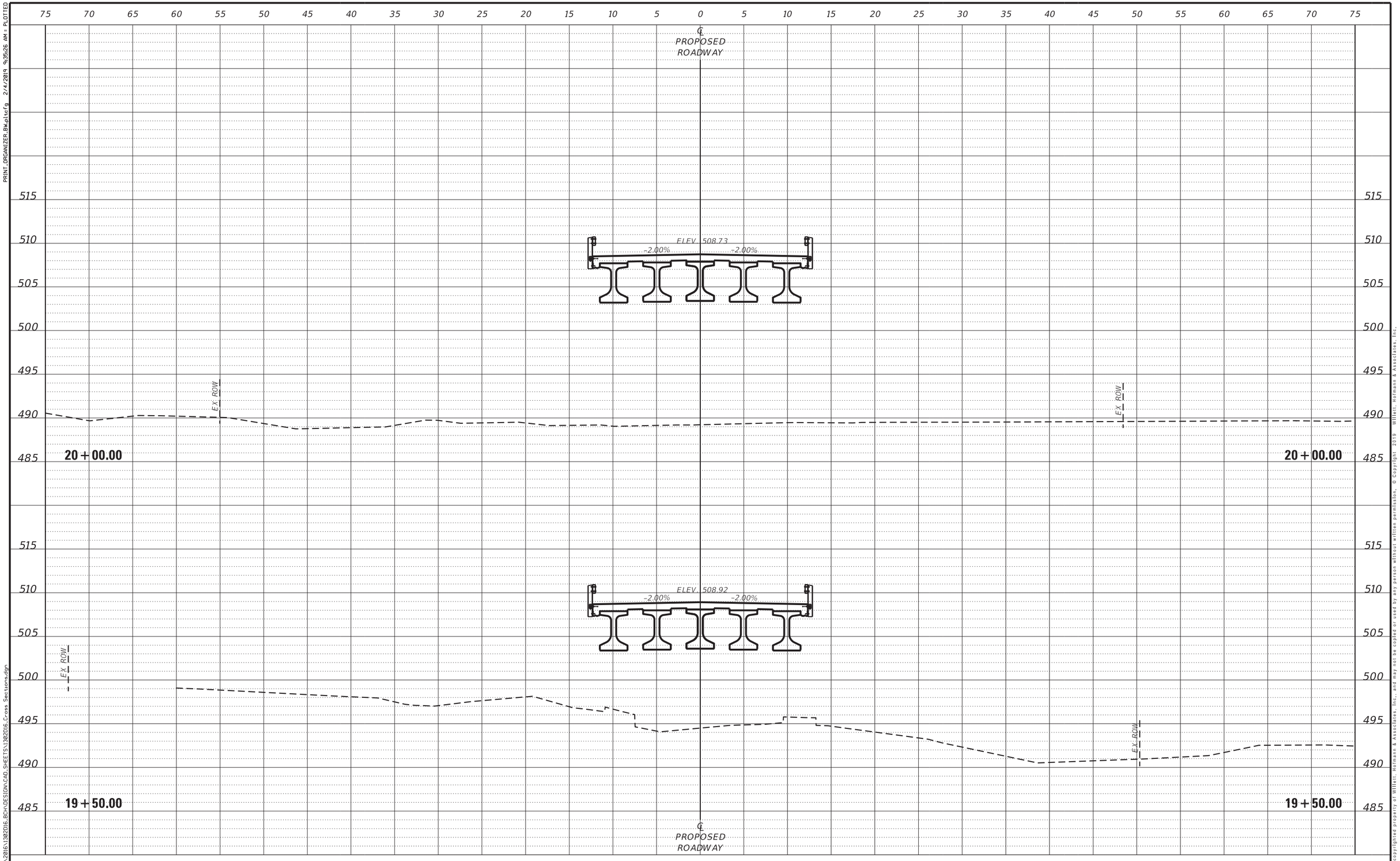
DESIGNED - BKC	REVISED -	
CHECKED - PLP	REVISED -	
DRAWN - RDA	REVISED -	
CHECKED - BKC	REVISED -	

BUREAU COUNTY
T.R. 281 (1300 N. AVE.) OVER E. BUREAU CREEK
STATION 20+00

CROSS SECTIONS

SCALE: 1" = 5'-0" | SHEET NO. 5 OF 9 SHEETS | STA. 19+28.99 TO STA. 19+40.92

TWP. TRE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
281	15-21124-00-BR	BUREAU	35	31
	WHA* 1302D16	CONTRACT NO. 87698		
	ILLINOIS FED. AID PROJECT KBD9(822)			

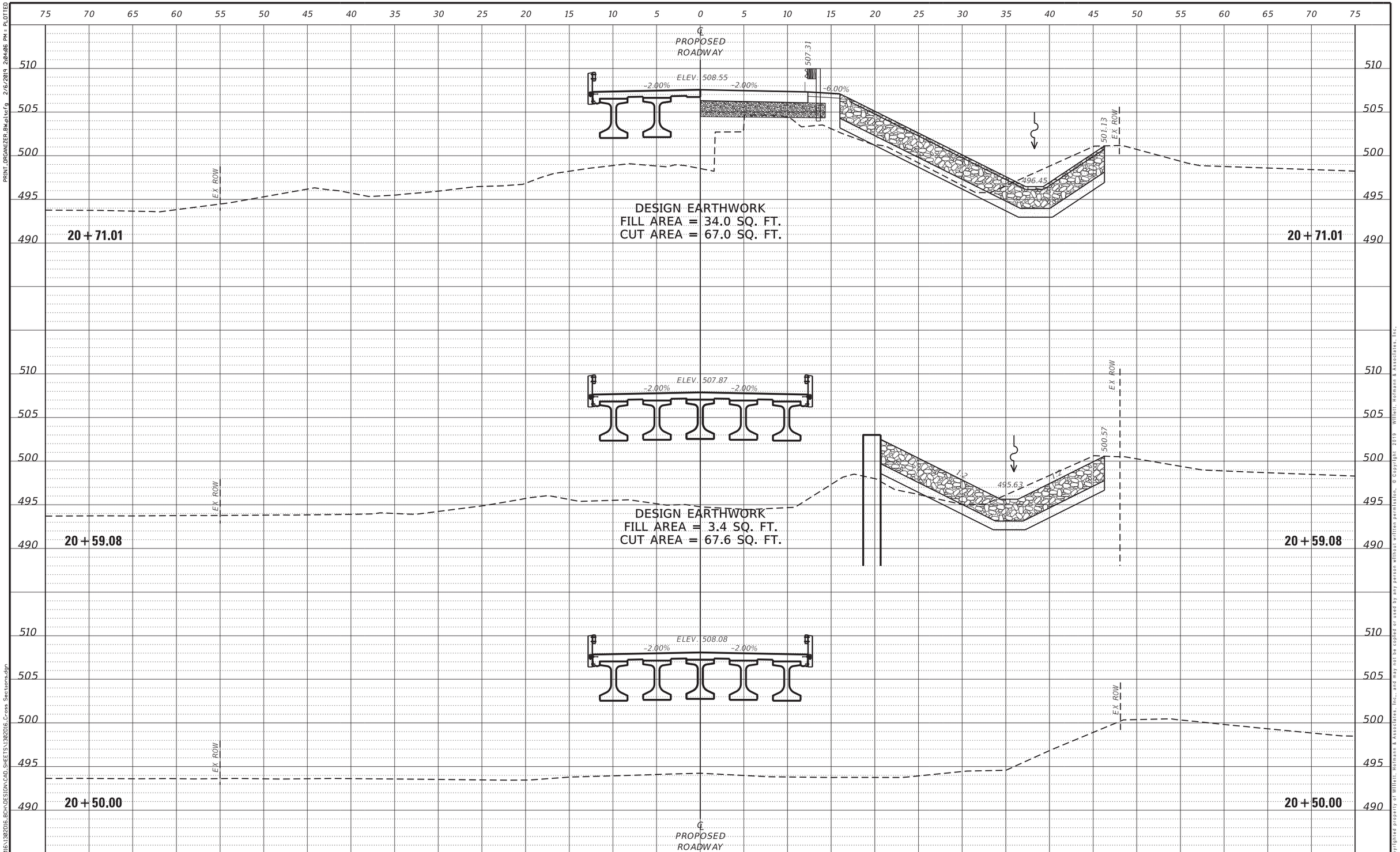


WILLETT HOFMANN & ASSOCIATES INC ENGINEERING ARCHITECTURE LAND SURVEYING 809 EAST 2ND STREET, DIXON, IL 61021-0367 T: 815-284-3381 DESIGN FIRM: #184-000918	DESIGNED - BKC CHECKED - PLP DRAWN - RDA CHECKED - BKC	REVISED - REVISED - REVISED - REVISED -	**BUREAU COUNTY** **T.R. 281 (1300 N. AVE.) OVER E. BUREAU CREEK** **STATION 20+00**

CROSS SECTIONS

SCALE: 1" = 5'-0" | SHEET NO. 6 OF 9 SHEETS | STA. 19+50.00 TO STA. 20+00.00

TWP. TRE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
281	15-21124-00-BR	BUREAU	35	32
	WHA* 1302D16	CONTRACT NO. 87698		
	ILLINOIS FED. AID PROJECT KBD9(822)			



WILLETT HOFMANN & ASSOCIATES INC
ENGINEERING ARCHITECTURE LAND SURVEYING
809 EAST 2ND STREET, DIXON, IL 61021-0367
T: 815-284-3381 DESIGN FIRM: #184-000918

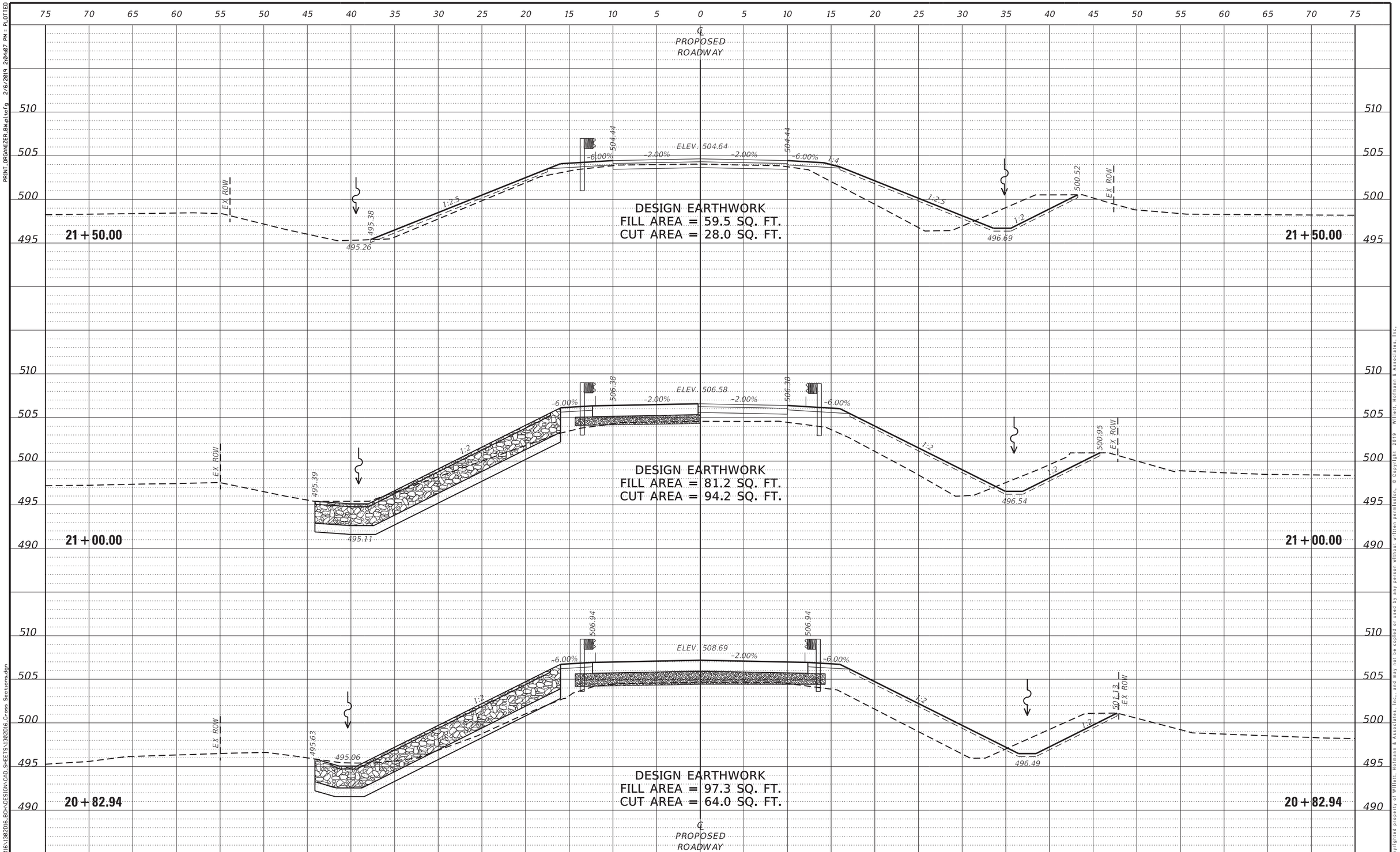
DESIGNED	BKC	REVISED	-
CHECKED	PLP	REVISED	-
DRAWN	RDA	REVISED	-
CHECKED	BKC	REVISED	-

BUREAU COUNTY
T.R. 281 (1300 N. AVE.) OVER E. BUREAU CREEK
STATION 20+00

CROSS SECTIONS

SCALE: 1" = 5'-0" | SHEET NO. 7 OF 9 SHEETS | STA. 20+50.00 TO STA. 20+71.01

TWP. TRE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
281	15-21124-00-BR	BUREAU	35	33
	WHA* 1302D16	CONTRACT NO. 87698		
	ILLINOIS FED. AID PROJECT KBD9(822)			



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WILLETT HOFMANN & ASSOCIATES INC
ENGINEERING ARCHITECTURE LAND SURVEYING
809 EAST 2ND STREET, DIXON, IL 61021-0367
T: 815-284-3381 DESIGN FIRM: #184-000918

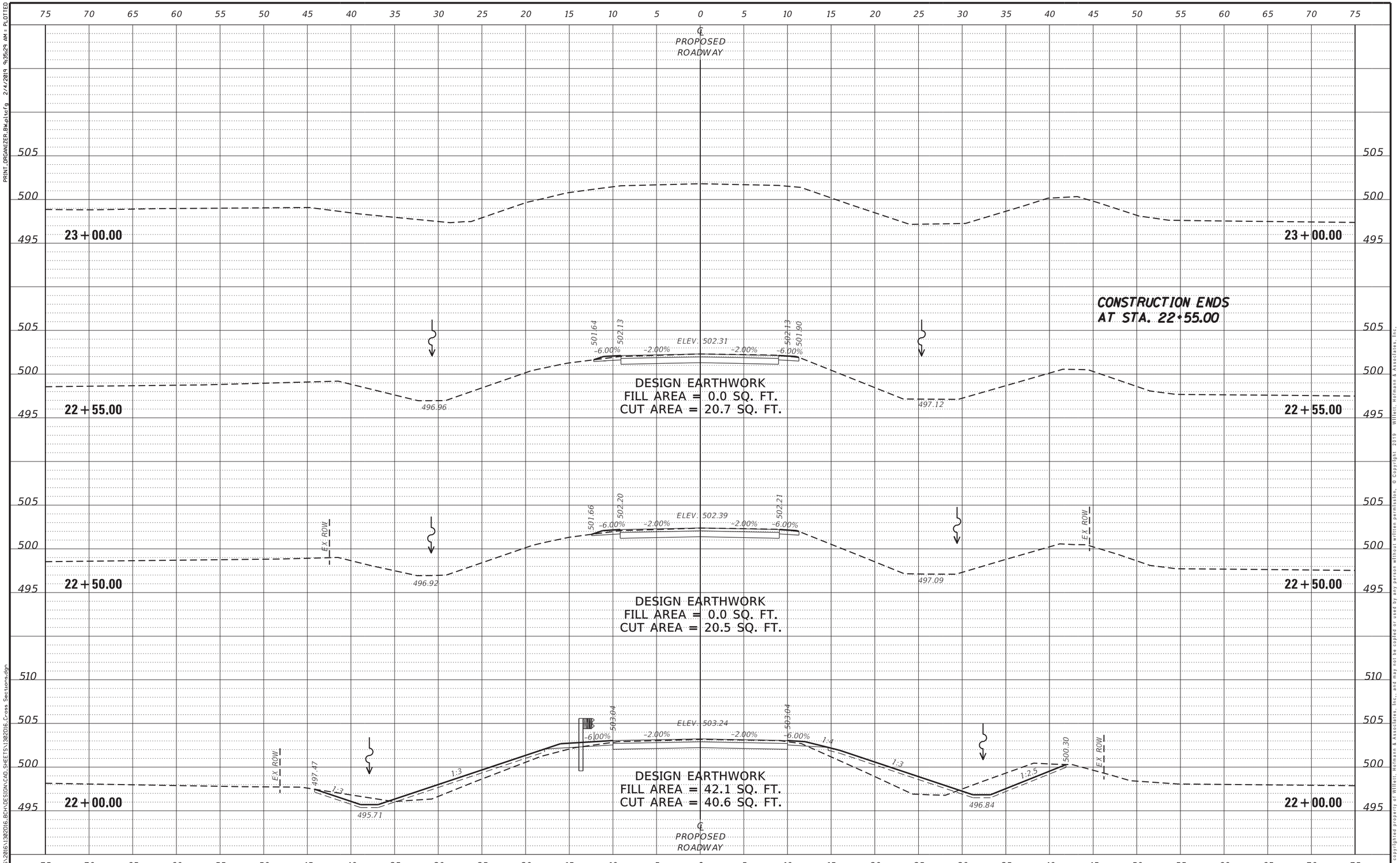
DESIGNED - BKC	REVISED -	
CHECKED - PLP	REVISED -	
DRAWN - RDA	REVISED -	
CHECKED - BKC	REVISED -	

BUREAU COUNTY
T.R. 281 (1300 N. AVE.) OVER E. BUREAU CREEK
STATION 20+00

CROSS SECTIONS

SCALE: 1'' = 5'-0'' | SHEET NO. 8 OF 9 SHEETS | STA. 20+82.94 TO STA. 21+50.00

TWP. TRE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
281	15-21124-00-BR	BUREAU	35	34
	WHA* 1302D16	CONTRACT NO. 87698		
	ILLINOIS FED. AID PROJECT KBD9(822)			



WILLETT HOFMANN & ASSOCIATES INC
ENGINEERING ARCHITECTURE LAND SURVEYING
809 EAST 2ND STREET, DIXON, IL 61021-0367
T: 815-284-3381 DESIGN FIRM: #184-000918

DESIGNED - BKC	REVISED -	
CHECKED - PLP	REVISED -	
DRAWN - RDA	REVISED -	
CHECKED - BKC	REVISED -	

BUREAU COUNTY
T.R. 281 (1300 N. AVE.) OVER E. BUREAU CREEK
STATION 20+00

CROSS SECTIONS

SCALE: 1" = 5'-0" | SHEET NO. 9 OF 9 SHEETS | STA. 22+00.00 TO STA. 23+00.00

TWP. TRE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
281	15-21124-00-BR	BUREAU	35	35
	WHA* 1302D16	CONTRACT NO. 87698		
	ILLINOIS FED. AID PROJECT KBD9(822)			