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INDEX OF DRAWINGS 06/17/2022 LETTING ITEM 214

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STANDARDS

SEE SHEET NO. 2

UTILITIES

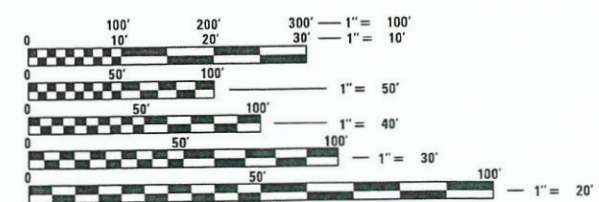
SEE SHEET NO. 2

ATTENTION CONTRACTORS

THE ILLINOIS DEPARTMENT OF TRANSPORTATION BUREAU OF MATERIALS AND PHYSICAL RESEARCH, "PROJECT PROCEDURES GUIDE" IS APPLICABLE TO THIS PROJECT.

FUNCTIONAL CLASSIFICATION

LOCAL ROAD (RURAL)
DESIGN SPEED - 50 MPH
2017 ADT - 550
3R GUIDELINES



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.

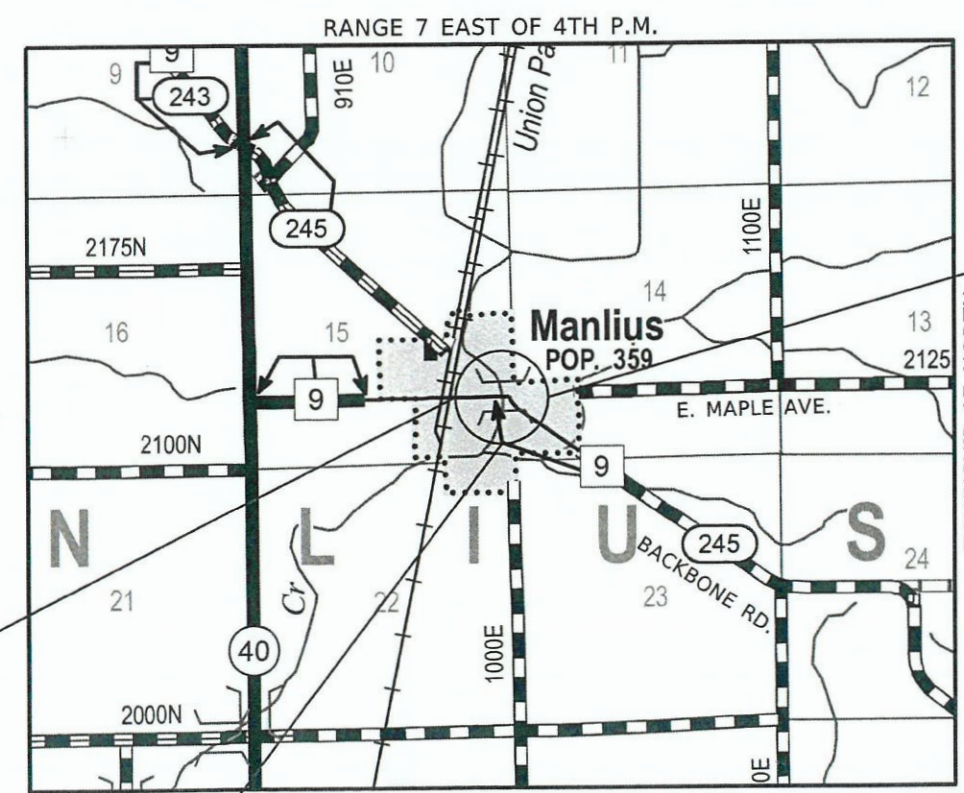
J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123
OR 811

PROJECT ENGINEER – JORDAN K. PRIMUS, P.E.
PROJECT MANAGER – MICHAEL R. LESLIE, S.E., P.E.
CONTRACT NO. 87778

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PLANS FOR PROPOSED FEDERAL AID PROJECT SURFACE TRANSPORTATION PROGRAM - BRIDGE (FY-23)

F.A.S. 245 (E. MAPLE AVENUE) OVER HICKORY CREEK
SECTION 18-00267-00-BR
PROJECT NUMBER UVDS(442)
STRUCTURE REPLACEMENT
VILLAGE OF MANLIUS
BUREAU COUNTY
C-93-013-22



PROJECT BEGINS
STATION 18+85

PROJECT ENDS
STATION 21+71.21

NOT TO SCALE

PROPOSED STRUCTURE: S.N. 006-7100
A SINGLE SPAN (80'-0") PRECAST PRESTRESSED
CONCRETE DECK BEAM BRIDGE ON SPILL-THRU
ABUTMENTS, SKEWED 25° RT. AHEAD.

GROSS LENGTH = 408 FEET = 0.08 MILES

NET LENGTH = 286 FEET = 0.05 MILES

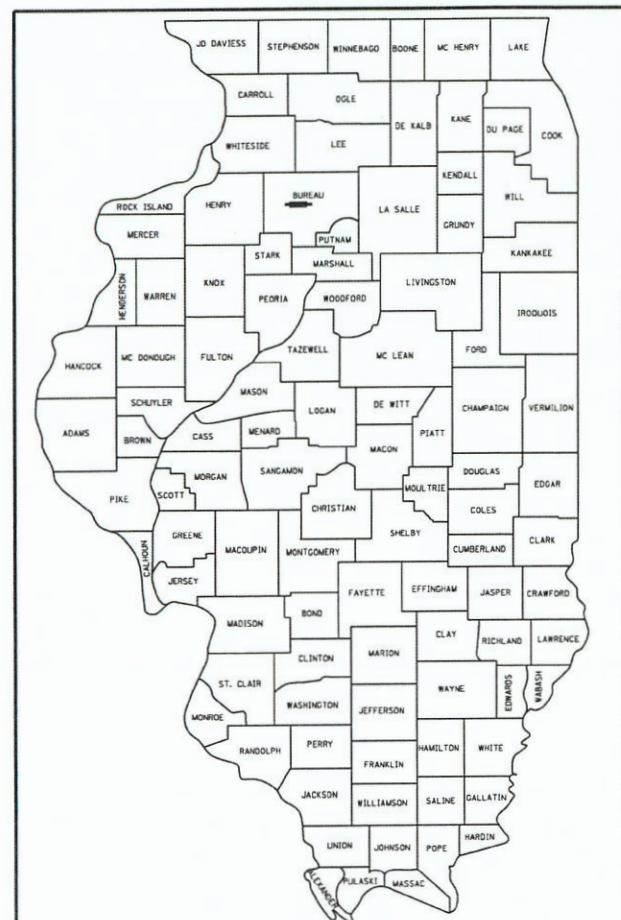


Know what's below.
Call before you dig.



DATE: 4-6-22
EXPIRES 11/30/23

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
245	18-00267-00-BR	BUREAU	22	1
WHA# 1520D18			CONTRACT NO. 87778	
ILLINOIS FED. AID PROJECT				



LOCATION OF SECTION INDICATED THIS: -

BUREAU COUNTY HIGHWAY DEPARTMENT	
APPROVED	<i>Hean 14</i> 2022 BUREAU COUNTY ENGINEER
PASSED	<i>April 14</i> 2022 DISTRICT 3 LOCAL ROADS & STREETS ENGINEER
RELEASING FOR BID BASED ON LIMITED REVIEW	<i>April 14</i> 2022 REGION 2 ENGINEER

**PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS**

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

FILE: S:\PROJECTS\2018\1520D18\MANLIUS\DESIGN\CAD_SHEETS\1520D18_Cover_Sheet.dgn

HIGHWAY STANDARDS

- 000001-08 STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
- 001001-02 AREAS OF REINFORCEMENT BARS
- 001006 DECIMAL OF AN INCH AND OF A FOOT
- 280001-07 TEMPORARY EROSION CONTROL SYSTEMS
- 515001-04 NAME PLATE FOR BRIDGE
- 542401-04 METAL FLARED END SECTION FOR PIPE CULVERTS
- 701201-05 LANE CLOSURE, 2L, 2W, DAY ONLY FOR SPEEDS > 45 MPH
- 701301-04 LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
- 701311-03 LANE CLOSURE, 2L, 2W, MOVING OPERATIONS - DAY ONLY
- 701901-08 TRAFFIC CONTROL DEVICES
- 720001-01 SIGN PANEL MOUNTING DETAILS
- 720006-04 SIGN PANEL ERECTION DETAILS
- 720011-01 METAL POSTS FOR SIGN MARKERS & DELINEATORS
- 728001-01 TELESCOPING STEEL SIGN SUPPORT
- 729001-01 APPLICATIONS OF TYPES A & B METAL POSTS (FOR SIGNS & MARKERS)
- 780001-05 TYPICAL PAVEMENT MARKINGS

B.L.R. 21-9 TYPICAL APPLICATION OF TRAFFIC CONROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS

B.L.R. 22-7 TYPICAL APPLICATION OF TRAFFIC CONROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS (TWO-LANE TWO WAY RURAL TRAFFIC) (ROAD CLOSED TO THRU TRAFFIC)

UTILITY GENERAL NOTES

THE CONTRACTOR IS REQUIRED TO PROTECT THE VARIOUS UTILITIES DURING CONSTRUCTION. ANY DAMAGE THAT OCCURS TO THE VARIOUS UTILITIES DURING CONSTRUCTION SHALL BE REPAIRED AT THE CONTRACTORS EXPENSE. AS OUTLINED IN ARTICLE 107.39 OF THE STANDARD SPECIFICATIONS.

IT IS THE CONTRACTORS RESPONSIBILITY TO CONTACT JULIE AND COORDINATE THE UTILITY LOCATE (JULIE'S NUMBER IS 800 - 892 - 0123). A MINIMUM OF 48 HOURS ADVANCED NOTICE IS REQUIRED FOR NON-EMERGENCY WORK. THE FOLLOWING LISTED UTILITIES ARE LOCATED WITHIN THE PROJECT LIMITS OR IMMEDIATELY ADJACENT TO THE PROJECT CONSTRUCTION LIMITS, AND ARE MEMBERS OF JULIE:

FRONTIER COMMUNICATIONS (NORTH) ADDRESS: 112 ELM STREET SYCAMORE, IL 60178	AMEREN IP (NORTH) ADDRESS: 1050 W. BLVD. BELLEVILLE, IL 62222
CONTACT: KALIN HINSHAW PHONE: 815 - 895 - 1515 EMAIL: KALIN.HINSHAW@FTR.COM	CONTACT: NATHAN HILL PHONE: 618 - 301 - 5327 EMAIL: NHILL2@AMEREN.COM

VILLAGE OF MANLIUS ADDRESS: 105 MAPLE STREET PO BOX 323 MANLIUS, IL 61338	MEDIACOM ADDRESS: 3900 26TH AVENUE MOLINE, IL 61265
CONTACT: EDWARD MIRANDA (VILLAGE PRESIDENT) PHONE: 815 - 445 - 2954	CONTACT: JEFFREY ALLEN PHONE: 309 - 743 - 4855 (C) 845 - 867 - 0962 EMAIL: JALLEN4@MEDIACOMCC.COM

IF THERE ARE ANY UTILITIES WHICH ARE NOT MEMBERS OF JULIE THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR DETERMINING THIS AND REQUESTING SAID UTILITIES TO FIELD VERIFY AND MARK PERTINENT UTILITY LOCATIONS.

IDOT IS NOT A MEMBER OF JULIE. IF YOU ARE NEAR ANY OVERHEAD LIGHTING, INTERSECTION LIGHTING OR TRAFFIC SIGNALS, CONTACT THE IDOT TRAFFIC OFFICE AT LEAST 48 HOURS PRIOR TO WORK.

THE APPLICABLE PORTIONS OF ARTICLE 105.07 OF THE STANDARD SPECIFICATIONS SHALL APPLY EXCEPT FOR THE FOLLOWING: THE CONTRACTOR SHALL BE RESPONSIBLE TO LOCATE THE VERTICAL DEPTHS OF THE UNDERGROUND UTILITIES WHICH MAY INTERFERE WITH CONSTRUCTION OPERATIONS. THIS WORK WILL NOT BE MEASURED OR PAID FOR SEPARATELY, BUT SHALL BE CONSIDERED AS INCLUDED IN THE UNIT BID PRICES FOR THE ITEM OF CONSTRUCTION INVOLVED.

THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ALL FIELD TILES, UNDERGROUND AND SURFACE UTILITIES AS OUTLINED IN SECTION 107 OF THE STANDARD SPECIFICATIONS. ANY FIELD TILE OR UTILITY DAMAGED DURING CONSTRUCTION REGARDLESS IF THEY ARE SHOW ON THE PLANS SHALL BE REPAIRED IN ACCORDANCE WITH SECTION 611 OF THE STANDARD SPECIFICATIONS. THIS WORK SHALL BE CONSIDERED AS INCLUDED IN THE UNIT BID PRICES OF THE CONTRACT. NO ADDITIONAL COMPENSATION WILL BE PROVIDED. ANY UTILITY PROPERTY DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE OWNER AT THE CONTRACTOR'S EXPENSE.

GENERAL NOTES

ALL REFERENCES TO THE STANDARD SPECIFICATIONS SHALL REFER TO THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION ADOPTED JANUARY 1, 2022. ALL SECTIONS OF THE SPECIFICATIONS SHALL BE FOLLOWED UNLESS OTHERWISE SPECIFIED WITHIN THESE GENERAL NOTES, PLANS OR PROJECT SPECIFICATIONS.

THE CONTRACTOR SHALL VERIFY THAT THE QUANTITIES SHOWN IN THESE PLAN AND CONTRACT DOCUMENTS ARE SUBSTANTIALLY CORRECT; AND SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO THE BID DATE.

THE CONTRACTOR SHALL NOTIFY THE ENGINEER AT LEAST 48 HOURS PRIOR TO THE START OF CONSTRUCTION IN ORDER TO ARRANGE FOR APPROPRIATE CONSTRUCTION INSPECTION. WORK PERFORMED OR MATERIALS AND EQUIPMENT INSTALLED WITHOUT INSPECTION MAY BE CONSIDERED UNACCEPTABLE AT THE DISCRETION OF THE ENGINEER AND MY HAVE TO BE REPLACED AT NO COST TO THE ENGINEER OR OWNER.

IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO ENSURE THAT ALL EQUIPMENT, MATERIAL AND CONSTRUCTION METHODS ADHERE TO THE REQUIREMENTS AND STIPULATIONS OF THE MOST CURRENT ADDITION OF THE ILLINOIS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION. ALL CONSTRUCTION MATERIALS WITHIN THE RIGHT-OF-WAY MUST BE IDOT CERTIFIED. DOCUMENTATION OF MATERIAL CERTIFICATION SHALL BE SUBMITTED TO THE ENGINEER PRIOR TO INSTALLATION FOR APPROVAL. ALL CONSTRUCTION MATERIAL NEEDING INSPECTION SHALL BE DONE ACCORDING TO THE LATEST IDOT PROJECT AND PROCEDURES GUIDE.

FINAL INSPECTION OF THE WORK PERFORMED UNDER THIS CONTRACT WILL BE DONE BY THE ENGINEER OR DEPARTMENT / OWNER PRIOR TO FINAL ACCEPTANCE. DEFECTS SHALL BE CORRECTED BY THE CONTRACTOR WITHOUT COST TO THE OWNER PRIOR TO ISSUANCE OF THE FINAL PAYMENT. ALL WORK PERFORMED UNDER THIS CONTRACT SHALL BE GUARANTEED WITH REGARD TO WORKMANSHIP AND MATERIALS FOR A PERIOD OF ONE YEAR AFTER DATE OF FINAL PAYMENT OF THE CONTRACTOR. DEFECTS WHICH ARISE DURING THE GUARANTEE PERIOD SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT NO EXPENSE TO THE OWNER WITHIN 30 DAYS OF RECEIVING NOTIFICATION OF THE DEFECT.

THE CONTRACTOR SHALL CAREFULLY PRESERVE ALL PROPERTY MARKERS AND SECTION OR SUBSECTION MONUMENTS ENCOUNTERED UNTIL AN OWNER, AUTHORIZED SURVEYOR, OR AGENT HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION. ANY PROPERTY MARKERS AND SECTION OR SUBSECTION MONUMENTS, UNLESS REFERENCED, DAMAGED BY THE CONTRACTOR SHALL BE REPLACED AT THE EXPENSE OF THE CONTRACTOR.

EXISTING MAIL BOXES, STREET SIGNS AND TRAFFIC SIGNS THAT ARE WITHIN THE CONSTRUCTION LIMITS SHALL BE REMOVED, PROTECTED AND RESET BY THE CONTRACTOR WITH NO ADDITIONAL COMPENSATION. THE COST OF REMOVING AND RESETTING IS TO BE INCLUDED IN THE CONTRACT UNIT PRICE PER CUBIC YARD FOR EARTH EXCAVATION (SPECIAL). THE CONTRACTOR SHALL VERIFY THE LOCATIONS WITH THE ENGINEER PRIOR TO RESETTING.

SPECIAL CARE SHALL BE TAKEN BY THE CONTRACTOR TO PROTECT EXISTING TREES. NO ROOTS SHALL REMAIN EXPOSED FOR LONGER THAN 24 HOURS. ALL TREE PROTECTION MEASURES SHALL BE IN ACCORDANCE WITH ARTICLE 201.05 OF THE STANDARD SPECIFICATIONS.

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

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

THE FINAL TOP FOUR INCHES OF SOIL IN ANY RIGHT-OF-WAY AREA DISTURBED BY THE CONTRACTOR MUST BE CAPABLE OF SUPPORTING VEGETATION. THE SOIL PROPERTIES MUST MATCH THAT OF THE PROPERTIES OF LOCAL SOILS. THE COST OF THIS WORK SHALL BE INCLUDED IN THE CONTRACT UNIT BID PRICE PER SQUARE YARD FOR TOPSOIL FURNISH AND PLACE 4". NO ADDITIONAL COMPENSATION WILL BE PROVIDED.

SEE CROSS SECTION SHEETS WITHIN THIS PLAN SET FOR DETAILS ON SPECIAL DITCHES AND DESIRED FORE SLOPES, DITCH DEPTHS, AND BACK SLOPES.

ACCESS SHALL BE MAINTAINED TO ALL LOCAL RESIDENCIES AND BUSINESSES WITHIN THE LIMITS OF CONSTRUCTION FOR THE DURATION OF CONSTRUCTION. TEMPORARY AGGREGATE DRIVES SHALL BE INSTALLED AS NEEDED, AND AS DIRECTED BY THE ENGINEER. THIS AGGREGATE SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER TON OF AGGREGATE FOR TEMPORARY ACCESS.

PAVEMENT MARKINGS SHALL BE DONE ACCORDING TO STANDARD 780001, EXCEPT AS FOLLOWS:

1. ALL WORDS, SUCH AS "ONLY" SHALL BE 8 FEET HIGH.
2. ALL NON-FREEWAY ARROWS SHALL BE THE LARGE SIZE.
3. THE DISTANCE BETWEEN YELLOW NO-PASSING LINES SHALL BE 8 INCHES. NOT 7 INCHES, AS SHOWN IN THE DETAIL OF TYPICAL LANE AND EDGE LINES.

ALL PAVEMENT SHALL BE CLEANED AND FREE OF DEBRIS PRIOR TO ANY PAVEMENT MARKING OPERATIONS.

ALL PAVEMENT SHALL BE CLEANED AND "FRESH OIL" SIGNS SHALL BE PLACED AT ALL INTERSECTIONS OF THE STREETS APPROACHING THE CONSTRUCTION SITE PRIOR TO APPLYING BITUMINOUS MATERIALS (PRIME COAT) AND (TACK COAT).

THE AREA TO BE PRIMED SHALL BE LIMITED TO THAT WHICH CAN BE COVERED WITH HMA ON THE NEXT DAYS PRODUCTIVITY, BUT NO MORE THAN FIVE (5) DAYS IN ADVANCE OF THE PLACEMENT OF HMA, UNLESS APPROVED BY THE ENGINEER.

GENERAL NOTES (CONT.)

TEMPORARY HMA RAMPS SHALL BE INSTALLED AS NEEDED ON MAINLINE AND SIDE STREETS. THE COSTS FOR THE RAMPS SHALL BE INCLUDED IN THE CONTRACT UNIT BID PRICE PER TON OF HOT-MIX ASPHALT SURFACE COURSE. NO ADDITIONAL COMPENSATION WILL BE PROVIDED.

ALL DUST ON-SITE SHALL BE CONTROLLED BY THE USE OF WATER BASED PRODUCTS ONLY. NO OILS OR PETROLEUM BASED AGENTS SHALL BE PERMITTED FOR DUST CONTROL.

DURING CONSTRUCTION OPERATIONS, THE CONTRACTOR SHALL INSURE POSITIVE SITE DRAINAGE AT THE CONCLUSION OF EACH DAY. SITE DRAINAGE MAY BE ACHIEVED BY DITCHING, PUMPING OR ANY OTHER METHOD ACCEPTABLE TO THE ENGINEER. THE CONTRACTOR'S FAILURE TO PROVIDE THE ABOVE WILL PRECLUDE ANY POSSIBLE ADDED COMPENSATION REQUIRED DUE TO DELAYS OR UNSTABLE MATERIALS CREATED AS A RESULT THEREOF.

AT THE END OF EACH WORK DAY, THE CONTRACTOR SHALL SWEEP OR CLEAN (NOT FLUSH) ANY CONSTRUCTION MATERIAL FROM THE STREET TO PREVENT TRACKING. THE ENGINEER SHALL HAVE AUTHORIZATION TO DETERMINE THE ADEQUACY OF THE CONTRACTOR'S EROSION CONTROL EFFORTS. THE DEPARTMENT / OWNER SHALL HAVE AUTHORITY TO SUSPEND OR LIMIT THE CONTRACTOR'S OPERATIONS PENDING ADEQUATE PERFORMANCE.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL EROSION CONTROL MEASURES THROUGHOUT THE COURSE OF THE PROJECT. THE COST FOR ALL MAINTAINED AND ADJUSTMENTS TO THE EROSION CONTROL MEASURES SHALL BE INCLUDED IN THE CONTRACT UNIT BID PRICE FOR EACH EROSION CONTROL DEVICE.

ANYTIME DURING CONSTRUCTION OPERATIONS, ANY DEBRIS ARE DEPOSITED INTO THE FLOW LINE OF ANY DRAINAGE STRUCTURE, DITCHES, ETC., SUCH THAT THE NATURAL FLOW LINE HAS BEEN OBSTRUCTED. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO REMOVE THIS DEBRIS PRIOR TO THE CLOSE OF EACH WORKING DAY, AND ENSURE POSITIVE DRAINAGE THROUGH ALL STRUCTURES, STORM SEWERS, DITCHES, ETC. AT THE CONCLUSION OF CONSTRUCTION OPERATIONS FOR THIS PROJECT ALL DRAINAGE STRUCTURES, AND FLOW LINES SHALL BE FREE FROM DIRT AND DERBIES.

PROJECT CONTROL

VERTICAL CONTROL			
BENCHMARK	STATION	ELEVATION	DESCRIPTION
400	31.25' LT STA: 16+79.23	696.93	"M" IN MUELLER, FIRE HYDRANT @ NW CORNER OF MAPLE & 3RD ST
401	60.31' RT STA: 20+17.07	693.93	CHISLED "□" WEST END OF SOUTH HEADWALL ON STR.
402	35.88' RT STA: 22+47.63	699.64	RR SPIKE IN 1ST PP EAST OF PRINCETON RD SOUTH SIDE OF MAPLE AVE

HORIZONTAL CONTROL					
POINT #	STATION	NORTHING	EASTING	ELEVATION	DESCRIPTION
CP#1	218.11' LT STA: 15+36.84	1744995.64	2433240.15	696.85	112 821 CAP
CP#2	18.50' LT STA: 17+66.26	1744800.83	2433473.67	694.13	112 821 CAP
CP#3	18.85' RT STA: 19+70.99	1744768.52	2433679.35	694.01	112 821 CAP
CP#4	211.63' RT STA: 21+85.77	1744585.67	2433904.92	697.42	112 821 CAP
CP#5	16.47' RT STA: 23+54.20	1744789.79	2434062.35	699.87	112 821 CAP

REVISION	DATE	BY	REMARKS

DESIGNED	JKP
DRAWN	DAN
REVIEWED	JKP
APPROVED	JRL

BUREAU COUNTY
F.A.S. 245 (E. MAPLE AVE.) OVER HICKORY CREEK
STATION 20+00



GENERAL NOTES AND
HORIZONTAL AND VERTICAL CONTROL
SHEET NO. 1 OF 1 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
245	18-00267-00-BR	BUREAU	22	2
WHA* 1520D18		CONTRACT NO. 87778		
ILLINOIS FED. AID PROJECT				

SUMMARY OF QUANTITIES

PAY CODE	PAY ITEM	UNIT	QUANTITY
	NAME		
20100110	TREE REMOVAL (6 TO 15 UNITS DIAMETER)	UNIT	48
20201200	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL	CU YD	174
21101615	TOPSOIL FURNISH AND PLACE, 4"	SQ YD	2,111
25000210	SEEDING, CLASS 2A	ACRE	0.5
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	45
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	45
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	45
25100630	EROSION CONTROL BLANKET	SQ YD	2,111
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	47
28000400	PERIMETER EROSION BARRIER	FOOT	640
28000500	INLET AND PIPE PROTECTION	EACH	3
* 30300112	AGGREGATE SUBGRADE IMPROVEMENT - 12"	SQ YD	1,175
35101400	AGGREGATE BASE COURSE, TYPE B	TON	110
40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	26

* INDICATES SPECIAL PROVISION
 △ INDICATES SPECIALTY ITEM

PAY CODE	PAY ITEM	UNIT	QUANTITY
	NAME		
40201000	AGGREGATE FOR TEMPORARY ACCESS	TON	28
40600275	BITUMINOUS MATERIALS (PRIME COAT)	POUND	2,939
40600290	BITUMINOUS MATERIALS (TACK COAT)	POUND	245
40603080	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50	TON	168
40604050	HOT-MIX ASPHALT SURFACE COURSE, IL-9.5, MIX "C", N50	TON	122
44000100	PAVEMENT REMOVAL	SQ YD	1,285
48101200	AGGREGATE SHOULDERS, TYPE B	TON	86
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	81,370
51200957	FURNISHING METAL SHELL PILES 12" X 0.250"	FOOT	414
51202305	DRIVING PILES	FOOT	414
51203200	TEST PILE METAL SHELLS	EACH	2
51500100	NAME PLATES	EACH	1
* 54003000	CONCRETE BOX CULVERTS	CU YD	430.4

* INDICATES SPECIAL PROVISION
 △ INDICATES SPECIALTY ITEM

REVISION	DATE	BY	REMARKS	DESIGNED	JKP
				DRAWN	DAN
				REVIEWED	JKP
				APPROVED	MRL

BUREAU COUNTY
 F.A.S. 245 (E. MAPLE AVE.) OVER HICKORY CREEK
 STATION 20+00



WILLETT HOFMANN
 ASSOCIATES, INC.
 ENGINEERING, ARCHITECTURE, LAND SURVEYING
 809 EAST 2ND STREET, DECATUR, IL 62521-4367
 T: 815-234-3381 DESIGN FIRM #134-060918

SUMMARY OF QUANTITIES
 SHEET NO. 1 OF 2 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
245	18-00267-00-BR	BUREAU	22	3
WHA# 1520018		CONTRACT NO. 87778		
ILLINOIS/FED. AID PROJECT				

SUMMARY OF QUANTITIES

PAY CODE	PAY ITEM	UNIT	QUANTITY
	NAME		
54262718	METAL FLARED END SECTIONS 18"	EACH	2
542D0223	PIPE CULVERTS, CLASS D, TYPE 1 18"	FOOT	32
59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	411
63200310	GUARDRAIL REMOVAL	FOOT	216
67100100	MOBILIZATION	L SUM	1
△ 78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	158
△ 78001180	PAINT PAVEMENT MARKING - LINE 24"	FOOT	25
* Z0013798	CONSTRUCTION LAYOUT	L SUM	1
* X0900064	MEMBRANE WATERPROOFING SYSTEM FOR BURIED STRUCTURES	SQ YD	300
* X2020410	EARTH EXCAVATION (SPECIAL)	CU YD	1,480
* X2070302	POROUS GRANULAR EMBANKMENT, SPECIAL	TON	772
* X7010216	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	L SUM	1

* INDICATES SPECIAL PROVISION
 △ INDICATES SPECIALTY ITEM

REVISION	DATE	BY	REMARKS

DESIGNED	JKP
DRAWN	DAN
REVIEWED	JKP
APPROVED	MR

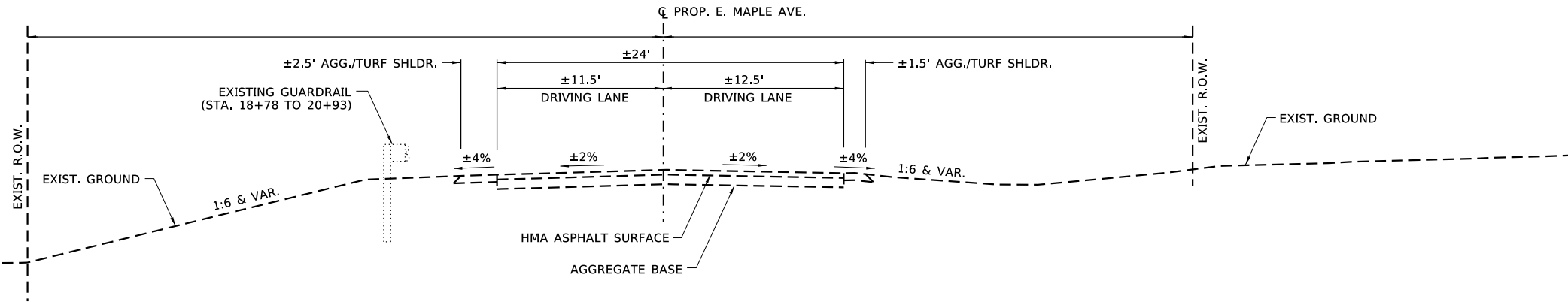
BUREAU COUNTY
F.A.S. 245 (E. MAPLE AVE.) OVER HICKORY CREEK
STATION 20+00



SUMMARY OF QUANTITIES

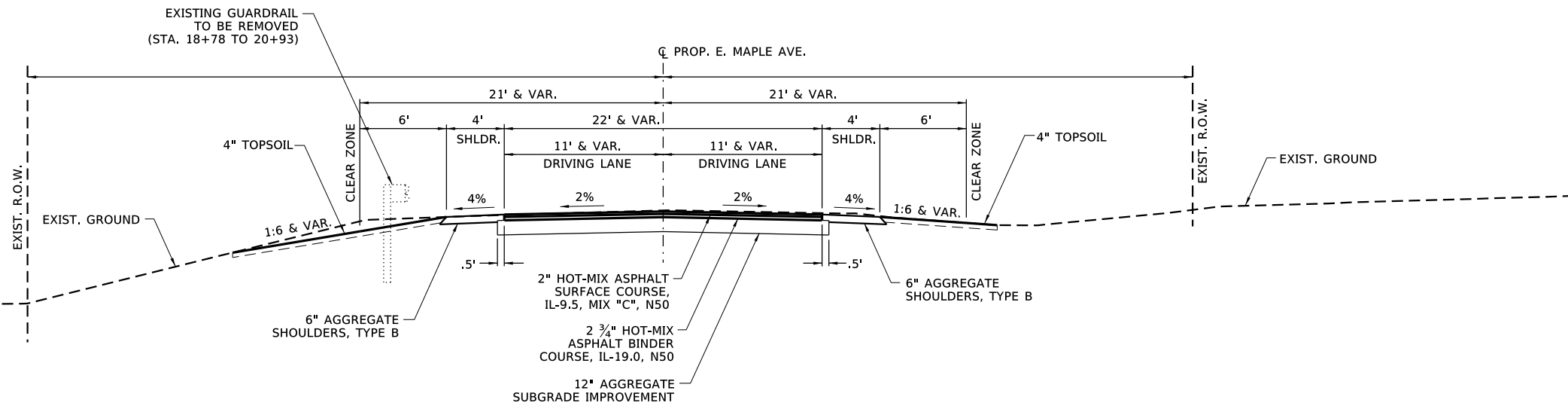
SHEET NO. 2 OF 2 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
245	18-00267-00-BR	BUREAU	22	4
WHA* 1520018		CONTRACT NO. 87778		
ILLINOIS FED. AID PROJECT				



EXISTING SECTION - E. MAPLE AVENUE

STA. 18+85.00 TO 21+71.21



TYPICAL PROPOSED SECTION - E. MAPLE AVENUE

STA. 18+85.00 TO 21+71.21

HMA MIXTURE REQUIREMENT TABLE		
LOCATIONS:	ENTIRE PROJECT	ENTIRE PROJECT
MIXTURE USE(S):	HMA SURFACE	HMA BINDER
BINDER GRADE (PG):	PG 64-22	PG 64-22
DESIGN AIR VOIDS:	4.0% @ N50	4.0% @ N50
MIXTURE COMPOSITION: (MIXTURE GRADATION)	IL 9.5	IL 19.0
FRICTION AGGREGATE:	MIXTURE C	N/A
MIXTURE WEIGHT:	112 LBS / SY / INCH	
QUALITY MANAGEMENT PROGRAM:	QC/QA	QC/QA
SUBLOT SIZE:	N/A	N/A
DENSITY TEST METHOD:	CORES/NUCLEAR	CORES/NUCLEAR
MATERIAL TRANSFER DEVICE (REQUIRED):	NO	NO

**HOT-MIX ASPHALT PAVEMENT
STRUCTURAL DESIGN
E. MAPLE AVENUE**

STRUCTURAL DESIGN TRAFFIC (S.D.T.) = YEAR 2031
CLASS III STREET

USE	P.V.	88	}	675 ADT
2" HOT-MIX ASPHALT SURFACE COURSE, MIX "C" N50	S.U.	7		
2 3/4" HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50	M.U.	5		
12" AGGREGATE SUB-GRADE IMPROVEMENT				

REVISION	DATE	BY	REMARKS

DESIGNED	JKP
DRAWN	DAN
REVIEWED	JKP
APPROVED	MRL

**BUREAU COUNTY
F.A.S. 245 (E. MAPLE AVE.) OVER HICKORY CREEK
STATION 20+00**



TYPICAL SECTIONS

SHEET NO. 1 OF 1 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
245	18-00267-00-BR	BUREAU	22	5
WHA# 1520D18		CONTRACT NO. 87778		
ILLINOIS FED. AID PROJECT				

E. MAPLE AVENUE EARTHWORK QUANTITIES

LOCATION	* EARTH EXCAVATION (SPECIAL) X2020410* CU YD	(A) EARTH EXCAVATION ADJUSTED FOR SHRINKAGE 25% CU YD	* CHANNEL EXCAVATION (SPECIAL) X2020410* CU YD	(B) CHANNEL EXCAVATION ADJUSTED FOR SHRINKAGE 40% CU YD	(C) EMBANKMENT * CU YD	(A+B) - (C) EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-) CU YD
E. MAPLE AVENUE STA. 18+85 TO 21+83.35	965	724	515	309	147	886
TOTALS	965		515			886

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

TREE REMOVAL (6 TO 15 UNITS DIAMETER)

STATION	UNIT	REMARKS
E. MAPLE AVENUE		
20+09 RT 77'	14	
20+51 RT 53'	10	
20+57 RT 58'	10	
20+65 RT 62'	14	
PROJECT TOTAL	48	

20100110

REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL

STATION	CU YD	REMARKS
E. MAPLE AVENUE		
ENTIRE PROJECT	174	20% OF PAVED AREA (2FT DEPTH) CONTINGENCY ITEM
PROJECT TOTAL	174	

20201200

TOPSOIL FURNISH AND PLACE, 4"

STATION	SQ YD	REMARKS
E. MAPLE AVENUE		
RT 17+75 to 19+72	359	
LT 18+62 to 21+10	694	
RT 19+87 to 21+03	831	
LT 21+21 to 21+39	31	
RT 21+29 to 21+17	176	
LT 21+57 - 21+71	20	
PROJECT TOTAL	2,111	

21101615

SEEDING, CLASS 2A

STATION	ACRE	REMARKS
E. MAPLE AVENUE		
RT 17+75 to 19+72	0.08	
LT 18+62 to 21+10	0.15	
RT 19+87 to 21+03	0.20	
LT 21+21 to 21+39	0.01	
RT 21+29 to 21+17	0.05	
LT 21+57 - 21+71	0.01	
PROJECT TOTAL	0.50	

25000210

SCHEDULE OF QUANTITIES

NITROGEN FERTILIZER NUTRIENT

STATION	POUND	REMARKS
E. MAPLE AVENUE		
ENTIRE PROJECT	45	90 LBS / ACRE
PROJECT TOTAL	45	

25000400

PHOSPHORUS FERTILIZER NUTRIENT

STATION	POUND	REMARKS
E. MAPLE AVENUE		
ENTIRE PROJECT	45	90 LBS / ACRE
PROJECT TOTAL	45	

25000500

POTASSIUM FERTILIZER NUTRIENT

STATION	POUND	REMARKS
E. MAPLE AVENUE		
ENTIRE PROJECT	45	90 LBS / ACRE
PROJECT TOTAL	45	

25000600

EROSION CONTROL BLANKET

STATION	SQ YD	REMARKS
E. MAPLE AVENUE		
RT 17+75 to 19+72	359	
LT 18+62 to 21+10	694	
RT 19+87 to 21+03	831	
LT 21+21 to 21+39	31	
RT 21+29 to 21+17	176	
LT 21+57 - 21+71	20	
PROJECT TOTAL	2,111	

25100630

TEMPORARY EROSION CONTROL SEEDING

STATION	POUND	REMARKS
E. MAPLE AVENUE		
RT 17+75 to 19+72	8	
LT 18+62 to 21+10	15	
RT 19+87 to 21+03	18	
LT 21+21 to 21+39	1	
RT 21+29 to 21+17	4	
LT 21+57 - 21+71	1	
PROJECT TOTAL	47	100 POUNDS PER ACRE

28000250

PERIMETER EROSION BARRIER

STATION	FOOT	REMARKS
E. MAPLE AVENUE		
RT 17+75 to 19+67	210	
LT 18+57 to 19+42	100	
RT 19+83 to 20+12	48	
LT 20+16 to 21+10	102	
RT 20+62 to 21+03	72	
RT 21+29 to 22+17	108	
PROJECT TOTAL	640	

28000400

INLET AND PIPE PROTECTION

STATION	EACH	REMARKS
E. MAPLE AVENUE		
36.1' RT 19+63.6	1	PROPOSED 18" END SECT.
32.4' LT 21+28.9	1	EXISTING 15" END SECT.
66.6' RT 21+36.4	1	EXISTING 18" END SECT.
PROJECT TOTAL	3	

28000500

AGGREGATE SUBGRADE IMPROVEMENT - 12"

STATION	SQ YD	REMARKS
E. MAPLE AVENUE		
18+85.00 to 21+71.21	788	12" ROAD BASE (MAINLINE)
RT 20+22.76 to 21+83.35	387	12" ROAD BASE (BACKBONE ROAD)
PROJECT TOTAL	1,175	

30300112

AGGREGATE BASE COURSE, TYPE B

STATION	TON	REMARKS
E. MAPLE AVENUE		
PE 19+79 RT	75	8" BENEATH HMA
PE 21+48 LT	35	8" BENEATH HMA
		CALCS. BASED ON 2.05 TON / CU YD
PROJECT TOTAL	110	

35101400

AGGREGATE SURFACE COURSE, TYPE B

STATION	TON	REMARKS
E. MAPLE AVENUE		
FEL 21+16	26	FIELD ENTRANCE 8" DEPTH
		CALCS. BASED ON 2.05 TON / CU YD
PROJECT TOTAL	26	

40200800

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REVISION	DATE	BY	REMARKS

DESIGNED	JKP
DRAWN	DAN
REVIEWED	JKP
APPROVED	MRL

BUREAU COUNTY
F.A.S. 245 (E. MAPLE AVE.) OVER HICKORY CREEK
STATION 20+00



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

SCHEDULE OF QUANTITIES

SHEET NO. 1 OF 2 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
245	18-00267-00-BR	BUREAU	22	6
WHA# 1520D18		CONTRACT NO. 87778		
ILLINOIS FED. AID PROJECT				

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SCHEDULE OF QUANTITIES

AGGREGATE FOR TEMPORARY ACCESS		
STATION	TON	REMARKS
E. MAPLE AVENUE		
PER 19+79	18	TEMPORARY PRIVATE ENTRANCE
CONTINGENCY	10	
		CALCS. BASED ON 2.05 TON / CU YD
PROJECT TOTAL	28	
40201000		

PAVEMENT REMOVAL		
STATION	SQ YD	REMARKS
E. MAPLE AVENUE		
E. MAPLE AVE.	765	APPROXIMATELY 22FT - 24FT WIDE
BACKBONE ROAD	290	APPROACH TO INTERSECTION
PE 19+79 RT	230	BITUMINOUS DRIVEWAY PAVEMENT
PROJECT TOTAL	1,285	
44000100		

PAINT PAVEMENT MARKING - LINE 4"		
STATION	FOOT	REMARKS
E. MAPLE AVENUE		
18+85 - 21+71.21	80	YELLOW 10'-30' SKIP-DASH AT C
RT 21+15	78	DBL YELLOW C @ BACKBONE RD
PROJECT TOTAL	158	
78001110		

BITUMINOUS MATERIALS (PRIME COAT)		
STATION	POUND	REMARKS
E. MAPLE AVENUE		
18+85 - 21+71.21	1,583	MAINLINE
RT 20+22.76 - 21+83.35	855	BACKBONE ROAD APPROACH
PER 19+79	332	PRIVATE ENTRANCE
PEL 21+48	169	PRIVATE ENTRANCE
		CALCS. BASED ON 0.25 LBS / SF (ON AGG)
PROJECT TOTAL	2,939	
40600275		

AGGREGATE SHOULDERS, TYPE B		
STATION	TON	REMARKS
E. MAPLE AVENUE		
LT 18+62.44 - 20+97.31	34	6"
LT 21+67.32 - 21+71.21	1	6"
RT 17+82.80 - 19+65.76	24	6"
RT 19+92.73 - 21+04.52	14	6" (BACKBONE ROAD)
RT 21+23.19 - 22+17.14	13	6" (BACKBONE ROAD)
		CALCS. BASED ON 2.05 TON / CU YD
PROJECT TOTAL	86	
48101200		

PAINT PAVEMENT MARKING - LINE 24"		
STATION	FOOT	REMARKS
E. MAPLE AVENUE		
RT 21+15	25	WHITE STOP BAR @ BACKBONE RD
PROJECT TOTAL	25	
78001180		

BITUMINOUS MATERIALS (TACK COAT)		
STATION	POUND	REMARKS
E. MAPLE AVENUE		
18+85 - 21+71.21	159	MAINLINE
RT 20+22.76 - 21+83.35	86	BACKBONE ROAD APPROACH
		BASED ON 0.025 LBS / SF (ON HMA)
PROJECT TOTAL	245	
40600290		

METAL FLARED END SECTIONS 18"		
STATION	EACH	REMARKS
E. MAPLE AVENUE		
37.4' RT 19+68.8	1	
52.9' RT 19+92.8	1	
PROJECT TOTAL	2	
54262718		

HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50		
STATION	TON	REMARKS
E. MAPLE AVENUE		
18+85 - 21+71.21	109	2 3/4" (MAINLINE)
RT 20+22.76 - 21+83.35	59	2 3/4" (RETURN - BACKBONE ROAD)
		CALCS. BASED ON 112 LBS / SY / INCH
PROJECT TOTAL	168	
40603080		

PIPE CULVERTS, CLASS D, TYPE 1 18"		
STATION	FOOT	REMARKS
E. MAPLE AVENUE		
RT 19+68.8 to 19+92.8	32	PER 19+79 ENTRANCE CULVERT
PROJECT TOTAL	32	
542D0223		

HOT-MIX ASPHALT SURFACE COURSE, IL - 9.5, MIX "C", N50		
STATION	TON	REMARKS
E. MAPLE AVENUE		
18+85 - 21+71.21	79	2" (MAINLINE)
RT 20+22.76 - 21+83.35	43	2" (BACKBONE ROAD APPROACH)
PER 19+79	17	2" (PRIVATE ENTRANCE)
PEL 21+48	9	2" (PRIVATE ENTRANCE)
		CALCS. BASED ON 112 LBS/SY/INCH
PROJECT TOTAL	125	
40604050		

GUARDRAIL REMOVAL		
STATION	FOOT	REMARKS
E. MAPLE AVENUE		
LT 18+78 to 20+94	216	
PROJECT TOTAL	216	
63200310		

REVISION	DATE	BY	REMARKS

DESIGNED	JKP
DRAWN	DAN
REVIEWED	JKP
APPROVED	MRL

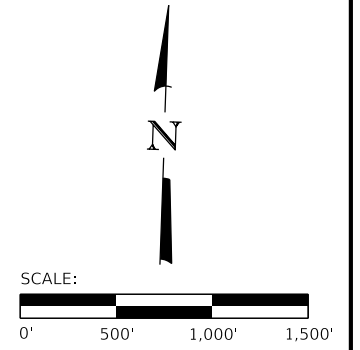
BUREAU COUNTY
F.A.S. 245 (E. MAPLE AVE.) OVER HICKORY CREEK
STATION 20+00



SCHEDULE OF QUANTITIES



SHEET NO. 2 OF 2 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
245	18-00267-00-BR	BUREAU	22	7
WHA# 1520D18		CONTRACT NO. 87778		
ILLINOIS FED. AID PROJECT				



Know what's below.
Call before you dig.

LEGEND

-  R11-3A ADVANCED WARNING SIGNS MOUNTED TO TYPE III BARRICADES PLACED ALONG THE SHOULDER FOR TRAFFIC APPROACHING THE WORK ZONE.
MESSAGE: ROAD CLOSED
X.X MILES AHEAD
LOCAL TRAFFIC ONLY
-  W20-3 ROAD CLOSED AHEAD & ROAD CLOSED 500FT ADVANCED WARNING SIGNS. PLACED ON ALL MAIN ROADS AND SIDE ROADS APPROACHING THE WORK ZONE PER IDOT STANDARD B.L.R. 21-9 & 22-7

REVISION	DATE	BY	REMARKS

DESIGNED	JKP
DRAWN	DAN
REVIEWED	JKP
APPROVED	MRL

BUREAU COUNTY
F.A.S. 245 (E. MAPLE AVE.) OVER HICKORY CREEK
STATION 20+00



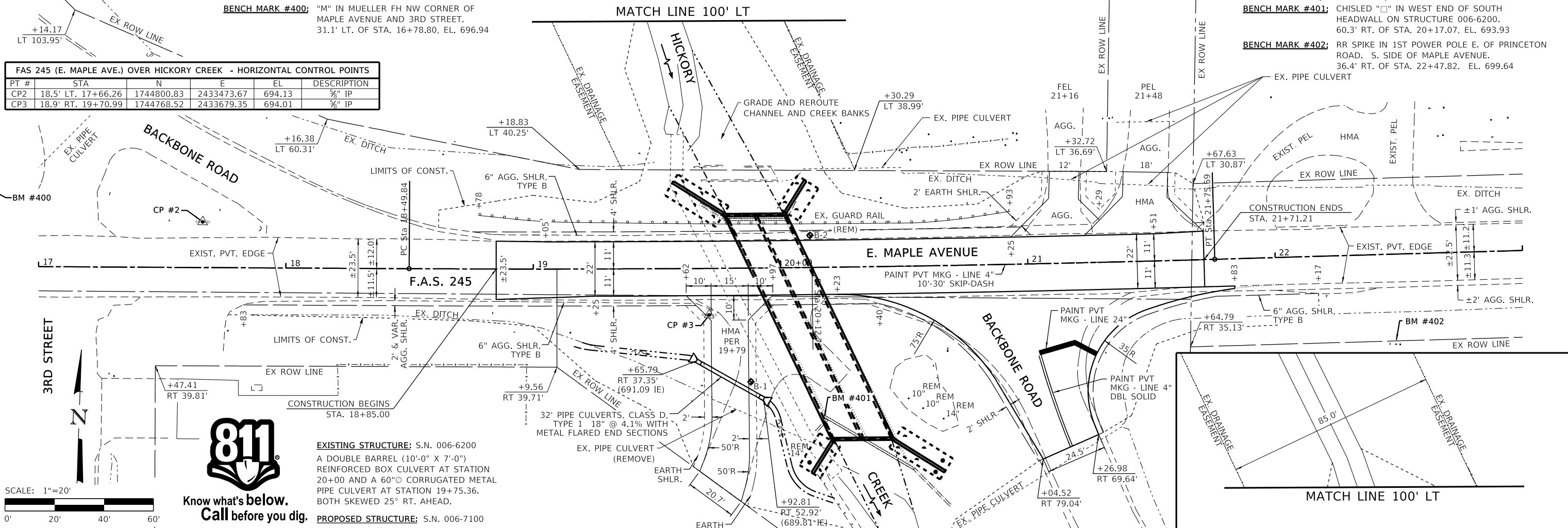
WILLET HOFMANN & ASSOCIATES INC
ENGINEERING ARCHITECTURE LAND SURVEYING
809 EAST 2ND STREET, DIXON, IL 61021-0367
T: 815-284-3381 DESIGN FIRM: #184-000918

TRAFFIC CONTROL
ADVANCED WARNING PLAN
SHEET NO. 1 OF 1 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
245	18-00267-00-BR	BUREAU	22	8
WHA# 1520D18		CONTRACT NO. 87778		
ILLINOIS FED. AID PROJECT				

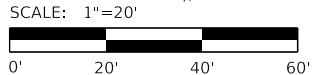
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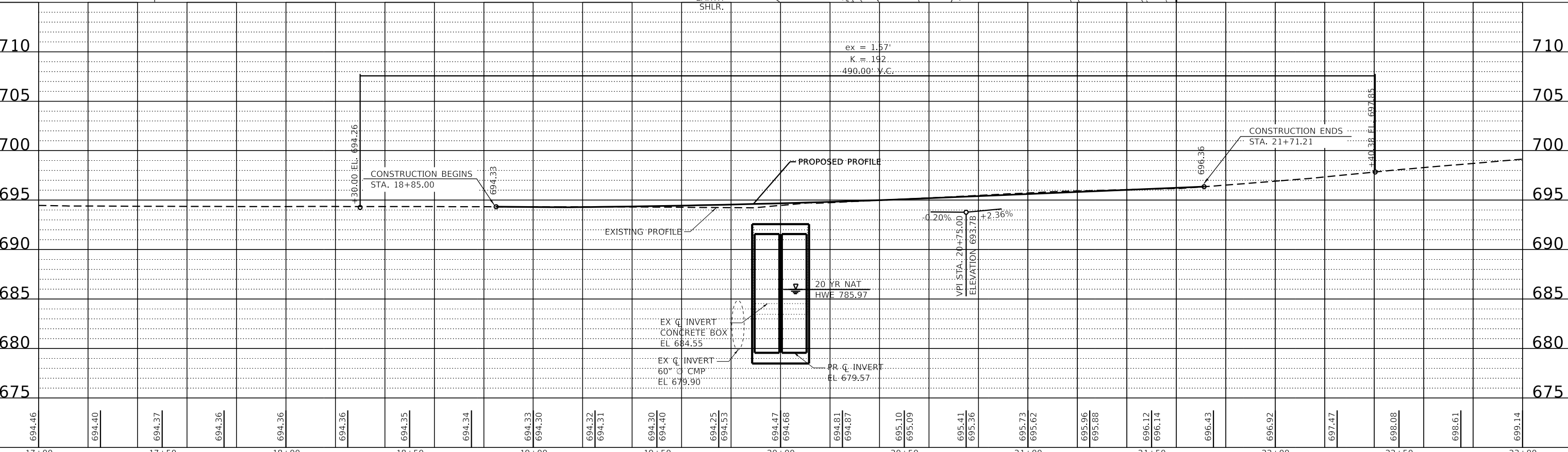
FAS 245 (E. MAPLE AVE.) OVER HICKORY CREEK - HORIZONTAL CONTROL POINTS

PT #	STA	N	E	EL	DESCRIPTION
CP2	18.5' LT. 17+66.26	1744800.83	2433473.67	694.13	3/4" IP
CP3	18.9' RT. 19+70.99	1744768.52	2433679.35	694.01	3/4" IP



EXISTING STRUCTURE: S.N. 006-6200
 A DOUBLE BARREL (10'-0" X 7'-0")
 REINFORCED BOX CULVERT AT STATION
 20+00 AND A 60" CORRUGATED METAL
 PIPE CULVERT AT STATION 19+75.36.
 BOTH SKEWED 25° RT. AHEAD.

PROPOSED STRUCTURE: S.N. 006-7100



REVISION	DATE	BY	REMARKS

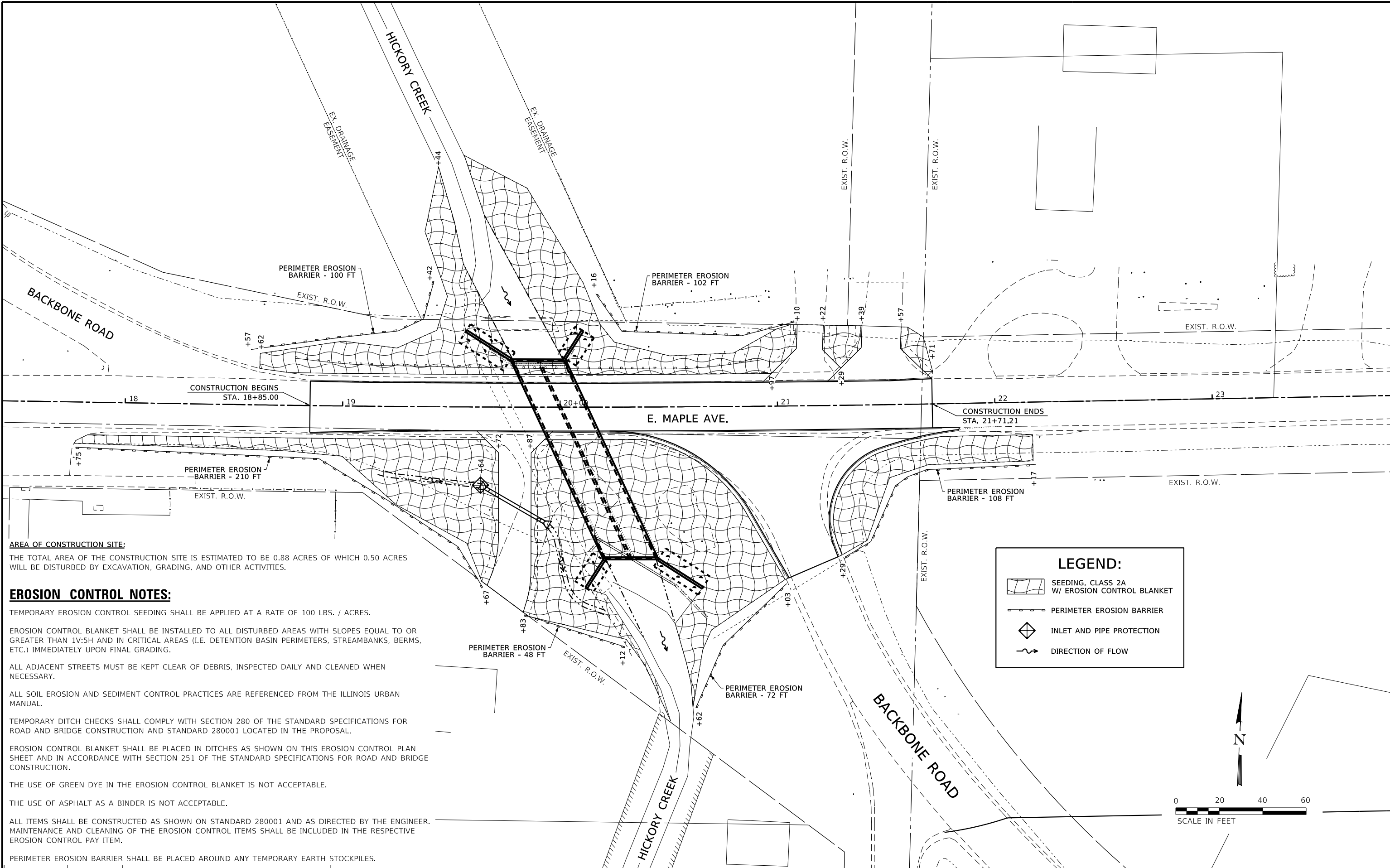
DESIGNED	JKP
DRAWN	DAN
REVIEWED	JKP
APPROVED	MRL

BUREAU COUNTY
F.A.S. 245 (E. MAPLE AVE.) OVER HICKORY CREEK
STATION 20+00

PLAN AND PROFILE
 SCALE: 1" = 20'-0"
 SHEET 1 OF 2 SHEETS
 STA. 15+00.00 TO STA. 21+00.00

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
245	18-00267-00-BR	BUREAU	22	9
WHA# 1520D18		CONTRACT NO. 87778		
ILLINOIS FED. AID PROJECT				

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AREA OF CONSTRUCTION SITE:
 THE TOTAL AREA OF THE CONSTRUCTION SITE IS ESTIMATED TO BE 0.88 ACRES OF WHICH 0.50 ACRES WILL BE DISTURBED BY EXCAVATION, GRADING, AND OTHER ACTIVITIES.

EROSION CONTROL NOTES:

TEMPORARY EROSION CONTROL SEEDING SHALL BE APPLIED AT A RATE OF 100 LBS. / ACRES.

EROSION CONTROL BLANKET SHALL BE INSTALLED TO ALL DISTURBED AREAS WITH SLOPES EQUAL TO OR GREATER THAN 1V:5H AND IN CRITICAL AREAS (I.E. DETENTION BASIN PERIMETERS, STREAMBANKS, BERMS, ETC.) IMMEDIATELY UPON FINAL GRADING.

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

ALL SOIL EROSION AND SEDIMENT CONTROL PRACTICES ARE REFERENCED FROM THE ILLINOIS URBAN MANUAL.

TEMPORARY DITCH CHECKS SHALL COMPLY WITH SECTION 280 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND STANDARD 280001 LOCATED IN THE PROPOSAL.

EROSION CONTROL BLANKET SHALL BE PLACED IN DITCHES 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.

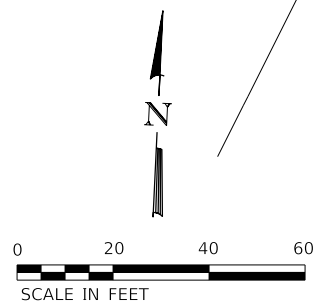
THE USE OF ASPHALT AS A BINDER IS NOT ACCEPTABLE.

ALL ITEMS SHALL BE CONSTRUCTED AS SHOWN ON STANDARD 280001 AND AS DIRECTED BY THE ENGINEER. MAINTENANCE AND CLEANING OF THE EROSION CONTROL ITEMS SHALL BE INCLUDED IN THE RESPECTIVE EROSION CONTROL PAY ITEM.

PERIMETER EROSION BARRIER SHALL BE PLACED AROUND ANY TEMPORARY EARTH STOCKPILES.

LEGEND:

- SEEDING, CLASS 2A W/ EROSION CONTROL BLANKET
- PERIMETER EROSION BARRIER
- INLET AND PIPE PROTECTION
- DIRECTION OF FLOW



REVISION	DATE	BY	REMARKS

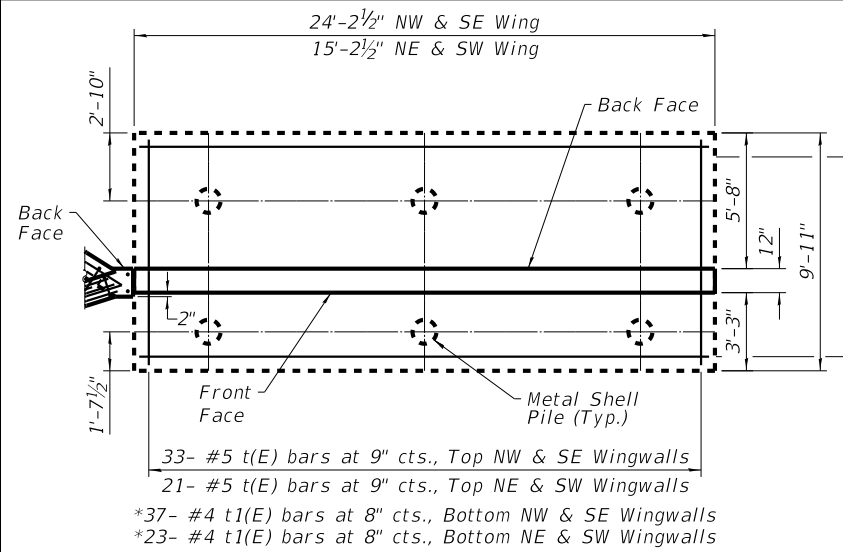
DESIGNED	JKP
DRAWN	DAN
REVIEWED	JKP
APPROVED	MRL

BUREAU COUNTY
F.A.S. 245 (E. MAPLE AVE.) OVER HICKORY CREEK
STATION 20+00

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

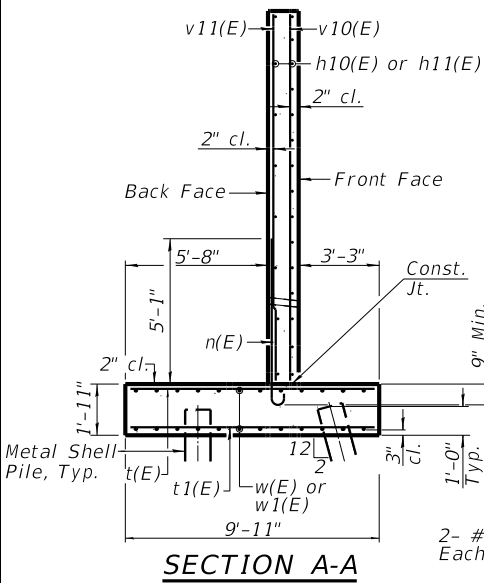
EROSION CONTROL PLAN
SHEET NO. 1 OF 1 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
245	18-00267-00-BR	BUREAU	22	10
WHA# 1520D18		CONTRACT NO. 87778		
ILLINOIS FED. AID PROJECT				



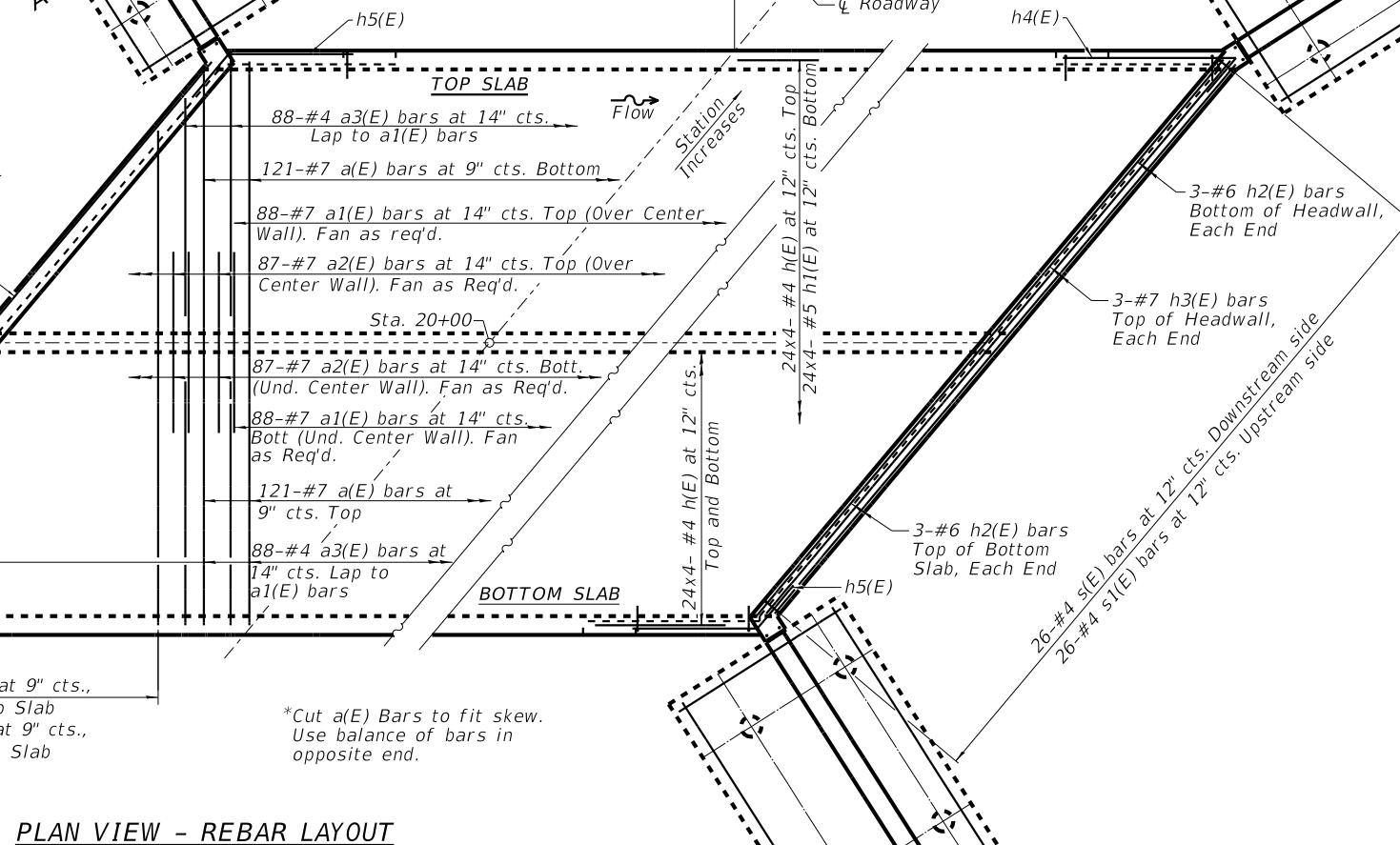
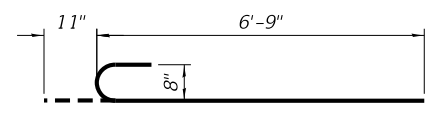
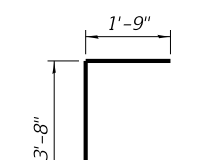
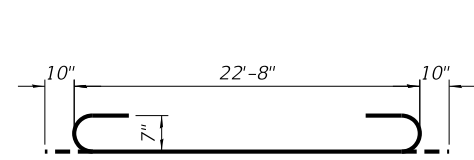
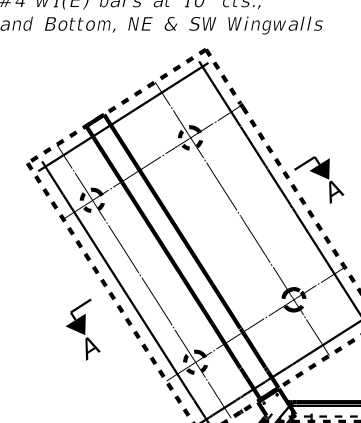
WINGWALL FOOTING PLAN

(See Section A-A this sheet)
*Adjust as required to avoid piles.



SECTION A-A

See Wing Wall Footing Plan this sheet for footing reinforcement

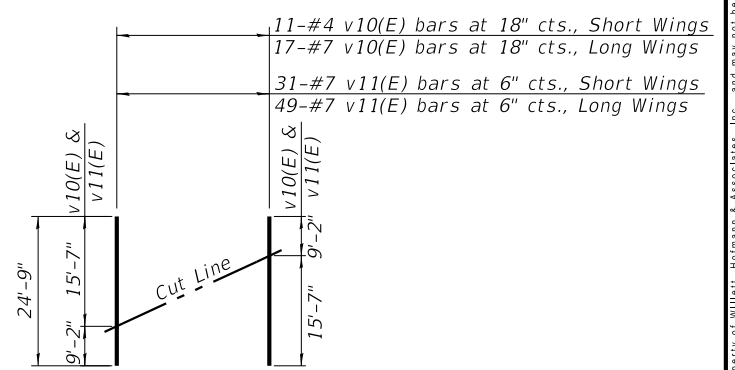
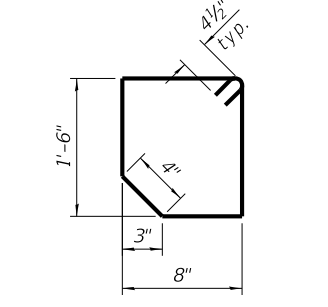
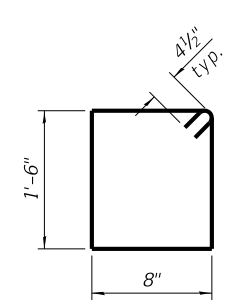
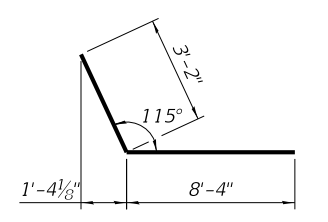
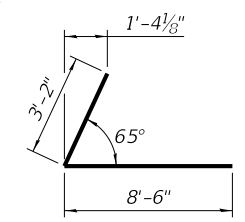


PLAN VIEW - REBAR LAYOUT

SHOWING HEADWALL

SHOWING CUTOFF WALL

Size	Lap
#4	2'-7"
#5	3'-2"
#6	3'-10"
#7	4'-5"
#8	5'-1"



FIELD CUTTING DIAGRAM

Order v10(E) and v11(E) full length. Cut as shown and use remainder of bars in opposite wing.

REVISION	DATE	BY	REMARKS

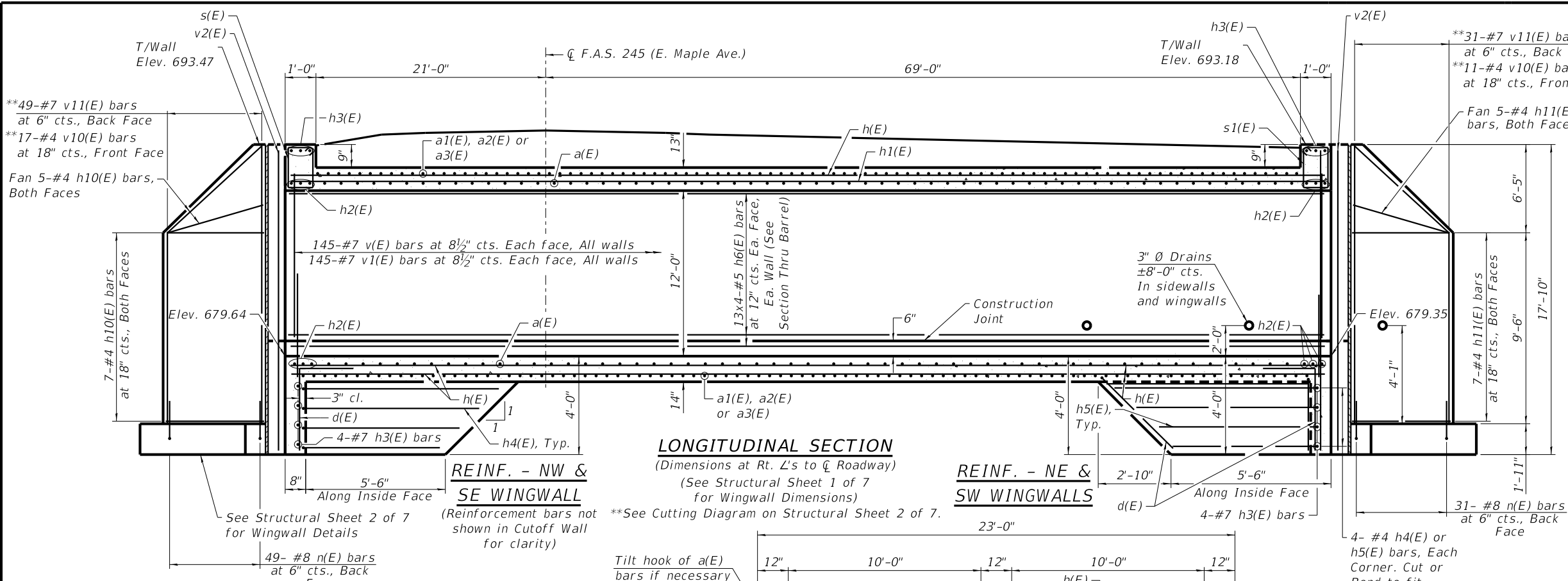
DESIGNED	JKP
DRAWN	DAN
REVIEWED	JKP
APPROVED	MRL

BUREAU COUNTY
F.A.S. 245 (E. MAPLE AVE.) OVER HICKORY CREEK
STATION 20+00

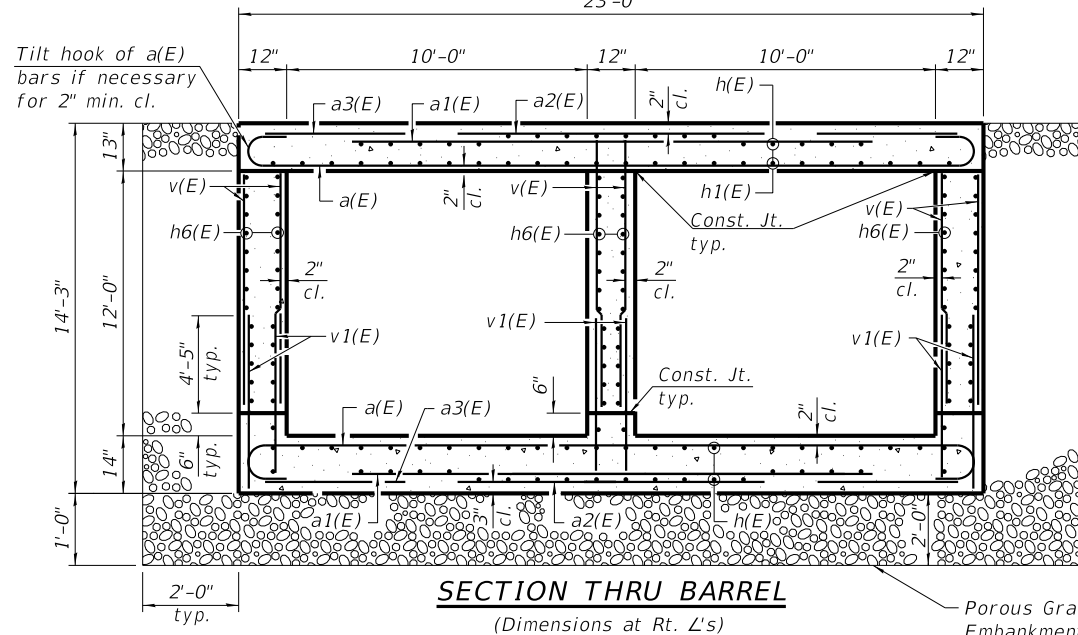
WILLET HOFMANN & ASSOCIATES, INC.
ENGINEERING ARCHITECTURE LAND SURVEYING
809 EAST 2ND STREET, DIXON, IL 61021-0367
T: 815-284-3381 DESIGN FIRM: #184-000918

BOX CULVERT DETAILS - REINFORCEMENT
STRUCTURE NO. 006-7100
STRUCTURAL SHEET NO. 2 OF 7 SHEETS

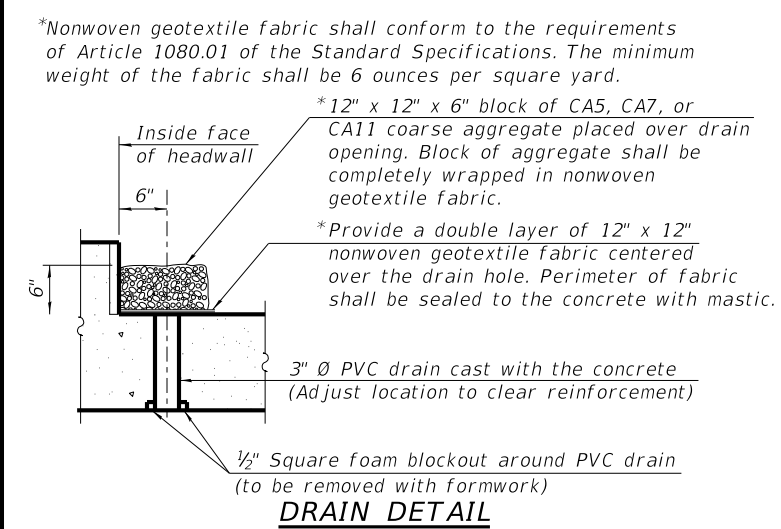
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
245	18-00267-00-BR	BUREAU	22	12
WHA# 1520D18		CONTRACT NO. 87778		
ILLINOIS FED. AID PROJECT				



LONGITUDINAL SECTION
(Dimensions at Rt. L's to C Roadway)
(See Structural Sheet 1 of 7 for Wingwall Dimensions)
*See Cutting Diagram on Structural Sheet 2 of 7.

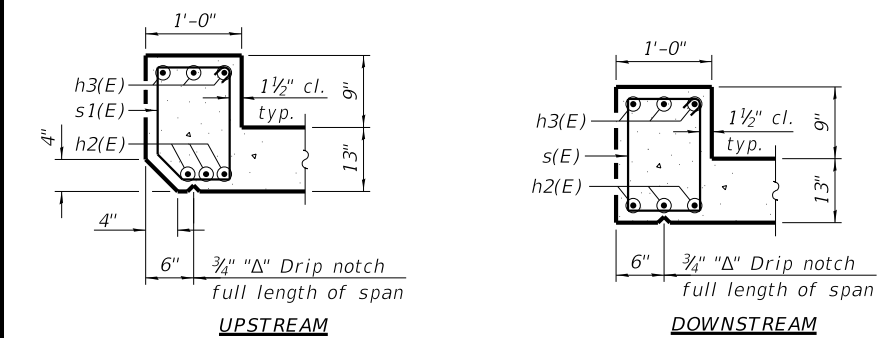


SECTION THRU BARREL
(Dimensions at Rt. L's)

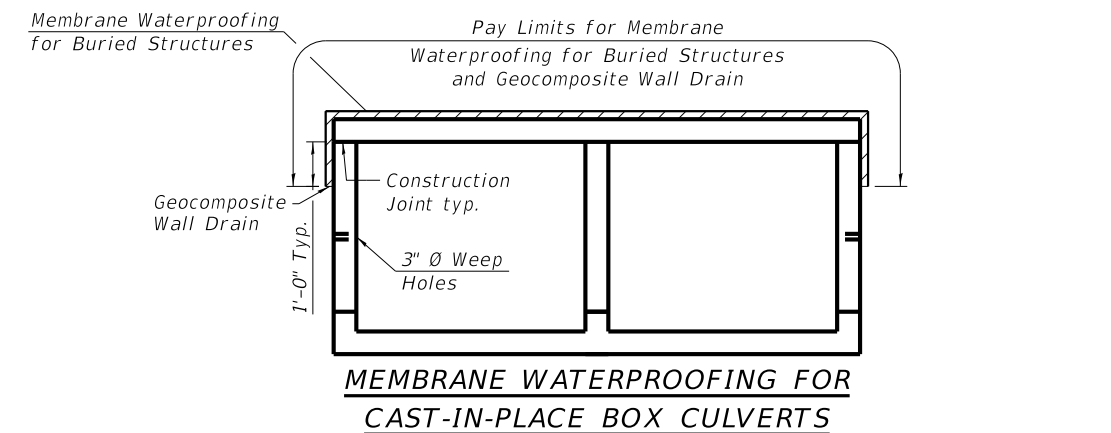


DRAIN DETAIL

(All costs associated with furnishing and constructing the above drain detail will not be measured for payment but shall be included in the contract unit price for the associated work.)



SECTION THRU HEADWALL



MEMBRANE WATERPROOFING FOR CAST-IN-PLACE BOX CULVERTS

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	268	7	24'-4"	U
a1(E)	176	7	13'-7"	—
a2(E)	174	7	3'-11"	—
a3(E)	192	4	7'-2"	—
d(E)	84	4	5'-5"	L
h(E)	288	4	27'-3"	—
h1(E)	96	5	27'-8"	—
h2(E)	12	6	24'-5"	—
h3(E)	14	7	24'-5"	—
h4(E)	8	4	11'-8"	L
h5(E)	8	4	11'-6"	L
h6(E)	312	5	27'-8"	—
h10(E)	24	4	23'-10"	—
h11(E)	24	4	14'-10"	—
n(E)	160	8	7'-8"	U
s(E)	26	4	5'-1"	U
s1(E)	26	4	4'-11"	U
t(E)	108	5	9'-7"	—
t1(E)	120	4	9'-7"	—
v(E)	870	7	11'-8"	—
v1(E)	870	7	5'-10"	—
v2(E)	8	4	17'-5"	—
v10(E)	28	4	24'-9"	—
v11(E)	80	7	24'-9"	—
w(E)	24	4	23'-10"	—
w1(E)	24	4	14'-10"	—
Removal of Existing Structures Each 1				
Reinforcement Bars, Epoxy Coated Pound 81,370				
Name Plates Each 1				
Concrete Box Culverts Cu. Yd. 430.4				
Membrane Waterproofing for Buried Structures Sq. Yd. 300				
Porous Granular Embankment, Special Ton 772				
Furnishing Metal Shell Piles 12" x 0.25" Foot 414				
Driving Piles Foot 414				
Test Pile Metal Shell Each 2				
Geocomposite Wall Drain Sq. Yd. 411				

NOTES:

- Precast option not allowed.
- All exposed edges shall be chamfered 3/4" unless otherwise noted.
- Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60.
- Bars indicated thus 13x4-#5 etc. indicates 13 lines of bars with 4 lengths per line.
- See Structural Sheet 2 of 7 for minimum lap lengths.
- Pay limits for Porous Granular Embankment, Special shall extend to 2'-0" from end of each wingwall.

REVISION	DATE	BY	REMARKS

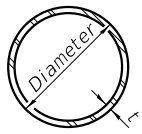
DESIGNED	JKP
DRAWN	DAN
REVIEWED	JKP
APPROVED	MRL

BUREAU COUNTY
F.A.S. 245 (E. MAPLE AVE.) OVER HICKORY CREEK
STATION 20+00



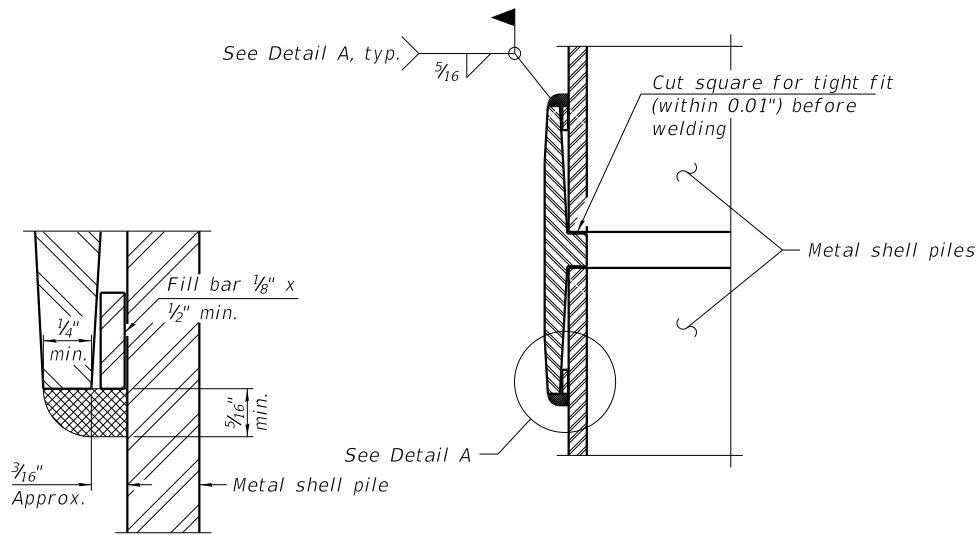
BOX CULVERT DETAILS - SECTIONS
STRUCTURE NO. 006-7100
STRUCTURAL SHEET NO. 3 OF 7 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
245	18-00267-00-BR	BUREAU	22	13
WHA# 1520D18			CONTRACT NO. 87778	
ILLINOIS FED. AID PROJECT				

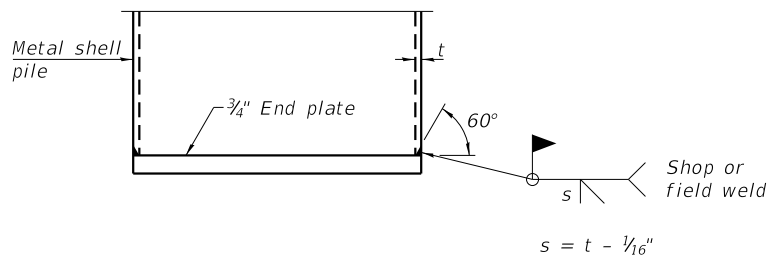
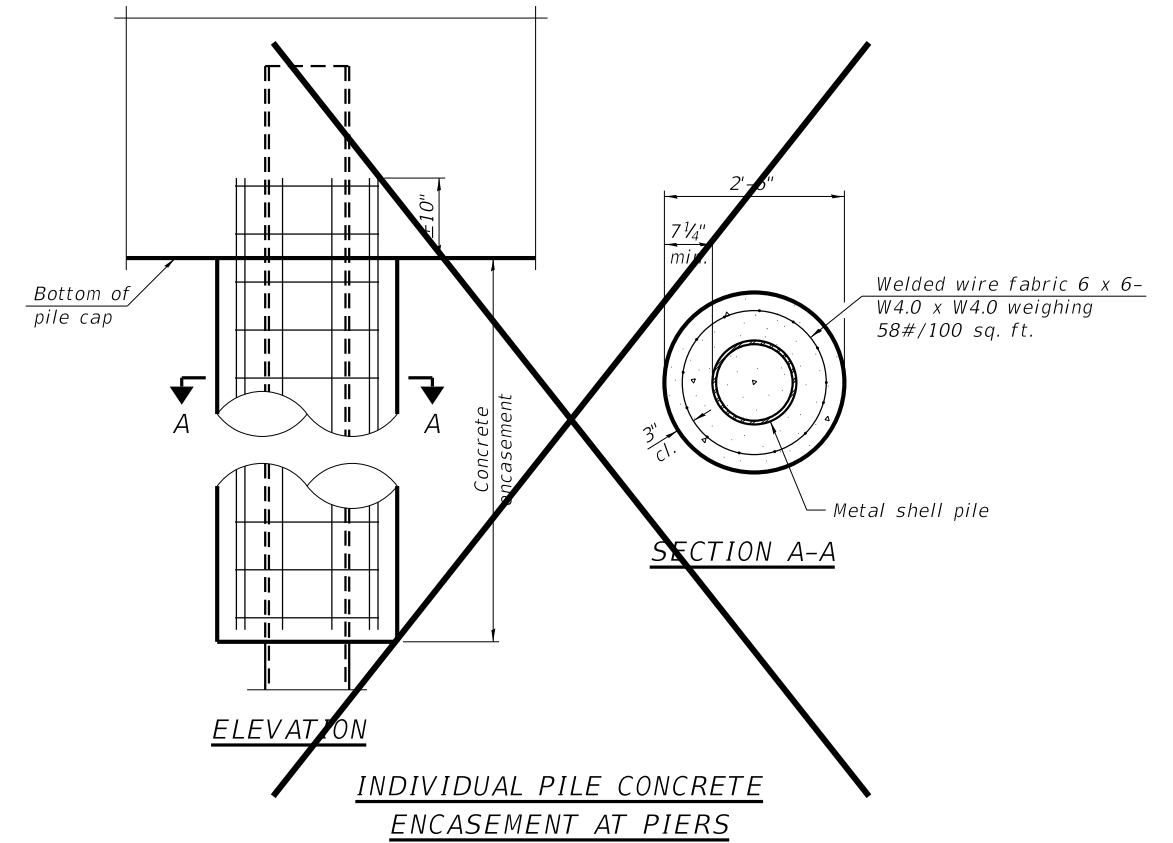


METAL SHELL PILE TABLE

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

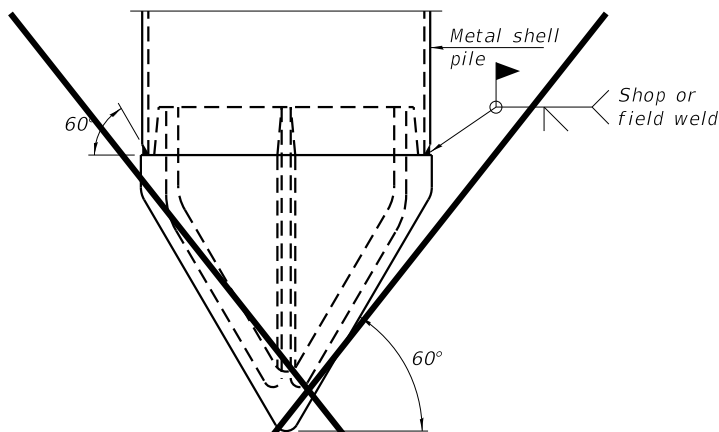


DETAIL A



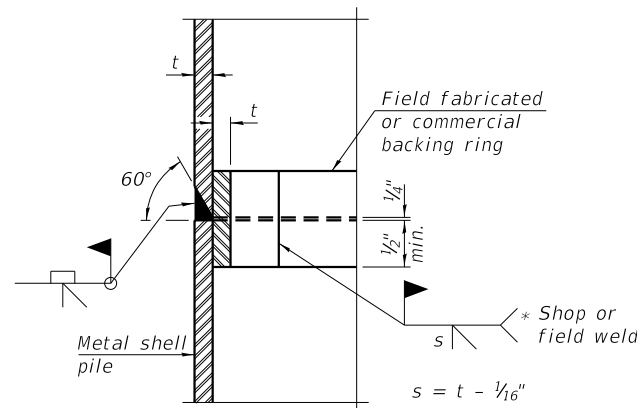
END PLATE ATTACHMENT

WELDED COMMERCIAL SPLICE
 Notes:
 The 1/8" x 1/2" min. fill bar may be constructed of 2 bars with a 1/8" max. gap between them.
 Pile segments shall be driven to solid contact with splicer before welding.



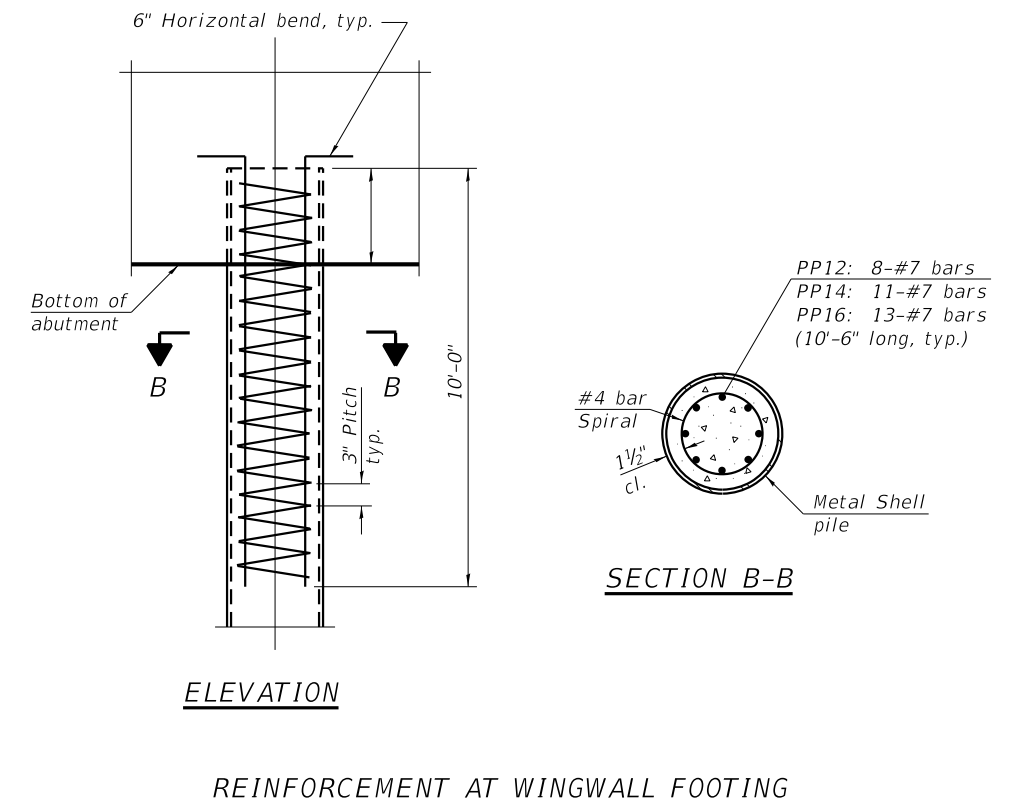
PILE SHOE ATTACHMENT

(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).



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

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

REVISION	DATE	BY	REMARKS

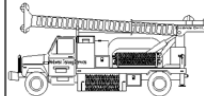
DESIGNED	JKP
DRAWN	DAN
REVIEWED	JKP
APPROVED	MRL

BUREAU COUNTY
F.A.S. 245 (E. MAPLE AVE.) OVER HICKORY CREEK
STATION 20+00



METAL SHELL PILE DETAILS
STRUCTURE NO. 006-7100
STRUCTURAL SHEET NO. 4 OF 7 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
245	18-00267-00-BR	BUREAU	22	14
WHA# 1520D18		CONTRACT NO. 87778		
ILLINOIS FED. AID PROJECT				

	Midwest Testing Services, Inc. 3705 Progress Blvd. Peru, IL 61354	BORING LOG Sheet <u>1</u> of <u>3</u>	Phone: 815-223-6696 Fax: 815-223-6659 e-mail: mts37@comcast.net
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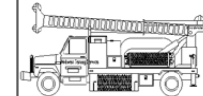
Client: Willet Hofmann & Associates
 Project Name: Section 18-00267-00-BR
 Project Site: East Maple Avenue Over Hickory Creek
Manlius, Illinois

Boring No. B-1
 Surface Elev. 693.10
 Auger Depth 61' Rotary Depth NA
 Start Date 10/19/19 Finish Date 10/19/19

Location: 46' Right of Station 19+88

(DEPTH) *ELEV.	DESCRIPTION OF MATERIALS	Graphic Log	Depth in feet	SAMPLES						DRILLED BY	REMARKS
				Sample No.	Sample Type	Qu (TSF)	N Value (Blows)	Bulge / Shear	Moisture (%)		
693.10											
692.10			1								
691.10			2								
690.10	Stiff Black & Brown Clay And Silty Clay (Fill)		3	1	SS	1.5	7	S	14		
689.10			4								
688.10			5								
687.10			6	2	SS	1.0	5	B	22		
686.10			7								
685.10			8	3	SS	2.0	10	B	14		
684.10			9								
683.10			10								
682.10			11								
681.10			12								
680.10			13	5	SS	2.8	12	B	12		
679.10	Very Stiff Brownish Gray Clay Till With Sand Seams		14								
678.10			15								
677.10			16	6	SS	2.5	13	B	14		
676.10			17								
675.10			18	7	SS	2.3	14	S	13		
674.10			19								
673.10			20	8	SS	2.6	15	B	15		

Groundwater Data: No groundwater at time of subsurface investigation.
 Comments:

	Midwest Testing Services, Inc. 3705 Progress Blvd. Peru, IL 61354	BORING LOG Sheet <u>2</u> of <u>3</u>	Phone: 815-223-6696 Fax: 815-223-6659 e-mail: mts37@comcast.net
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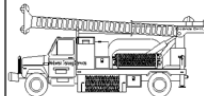
Client: Willet Hofmann & Associates
 Project Name: Section 18-00267-00-BR
 Project Site: East Maple Avenue Over Hickory Creek
Manlius, Illinois

Boring No. B-1
 Surface Elev. 693.10
 Auger Depth 61' Rotary Depth NA
 Start Date 10/19/19 Finish Date 10/19/19

Location: 46' Right of Station 19+88

(DEPTH) ELEV.	DESCRIPTION OF MATERIALS	Graphic Log	Depth in feet	SAMPLES						DRILLED BY	REMARKS
				Sample No.	Sample Type	Qu (TSF)	N Value (Blows)	Bulge / Shear	Moisture (%)		
672.10											
671.10			22								
670.10			23	9	SS	2.4	15	S	14		
669.10			24								
668.10			25								
667.10			26	10	SS	2.8	16	S	14		
666.10			27								
665.10			28	11	SS	2.5	15	B	14		
664.10	Very Stiff Gray Clay Till		29								
663.10			30								
662.10			31	12	SS	3.6	17	B	14		
661.10			32								
660.10			33								
659.10			34								
658.10			35	13	SS	---	22	----	24		
657.10	Medium Gray Silt		36								
656.10			37								
655.10			38								
654.10	Very Stiff Gray Clay Till With Sand Seams		39								
653.10			40								
652.10			41	14	SS	3.3	18	S	13		

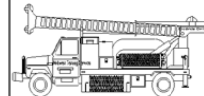
Groundwater Data: No groundwater at time of subsurface investigation.
 Comments:

	Midwest Testing Services, Inc. 3705 Progress Blvd. Peru, IL 61354	BORING LOG Sheet <u>3</u> of <u>3</u>	Phone: 815-223-6696 Fax: 815-223-6659 e-mail: mts37@comcast.net
	Client: <u>Willet Hofmann & Associates</u> Project Name: <u>Section 18-00267-00-BR</u> Project Site: <u>East Maple Avenue Over Hickory Creek</u> <u>Manlius, Illinois</u>	Boring No. <u>B-1</u> Surface Elev. <u>693.10</u> Auger Depth <u>61'</u> Rotary Depth <u>NA</u> Start Date <u>10/19/19</u> Finish Date <u>10/19/19</u>	

Location: 46' Right of Station 19+88

(DEPTH) ELEV.	DESCRIPTION OF MATERIALS	Graphic Log	Depth in feet	SAMPLES						DRILLED BY	REMARKS
				Sample No.	Sample Type	Qu (TSF)	N Value (Blows)	Bulge / Shear	Moisture (%)		
651.10											
650.10			43								
649.10			44								
648.10			45	15	SS	3.6	20	S	13		
647.10			46								
646.10			47								
645.10			48								
644.10			49								
643.10			50	16	SS	3.8	24	S	12		
642.10	Very Stiff Gray Clay Till With Sand Seams		51								
641.10			52								
640.10			53								
639.10			54								
638.10			55	17	SS	3.7	21	S	12		
637.10			56								
636.10			57								
635.10			58								
634.10			59								
633.10			60								
632.10			61	18	SS	3.5	20	S	12		
631.10			62								

Groundwater Data: No groundwater at time of subsurface investigation.
 Comments:

	Midwest Testing Services, Inc. 3705 Progress Blvd. Peru, IL 61354	BORING LOG Sheet <u>1</u> of <u>3</u>	Phone: 815-223-6696 Fax: 815-223-6659 e-mail: mts37@comcast.net
	Client: <u>Willet Hofmann & Associates</u> Project Name: <u>Section 18-00267-00-BR</u> Project Site: <u>East Maple Avenue Over Hickory Creek</u> <u>Manlius, Illinois</u>	Boring No. <u>B-2</u> Surface Elev. <u>694.40</u> Auger Depth <u>61'</u> Rotary Depth <u>NA</u> Start Date <u>10/19/19</u> Finish Date <u>10/19/19</u>	

Location: 13' Left of Station 20+12

(DEPTH) *ELEV.	DESCRIPTION OF MATERIALS	Graphic Log	Depth in feet	SAMPLES						DRILLED BY	REMARKS
				Sample No.	Sample Type	Qu (TSF)	N Value (Blows)	Bulge / Shear	Moisture (%)		
694.40											
693.40			1								
692.40			2								
691.40	Medium Black Silty Clay (Fill)		3	1	SS	0.8	3	B	23		
690.40			4								
689.40			5	2	SS	0.8	4	B	22		
688.40			6								
687.40			7								
686.40	Stiff Black Silty Clay (Fill)		8	3	SS	1.2	5	B	20		
685.40			9								
684.40			10	4	SS	1.1	4	B	21		
683.40			11								
682.40	Stiff Black And Brown Silty Clay (Fill)		12								
681.40			13	5	SS	1.2	4	B	21		
680.40			14								
679.40			15								
678.40	Very Stiff Brownish Gray Clay Till With Sand Seams		16	6	SS	2.5	12	B	15		
677.40			17								
676.40			18	7	SS	2.3	12	B	14		
675.40			19								
674.40			20	8	SS	2.4	13	B	15		

Groundwater Data: No groundwater at time of subsurface investigation.
 Comments:

REVISION	DATE	BY	REMARKS	DESIGNED	JKP
				DRAWN	DAN
				REVIEWED	JKP
				APPROVED	MRL

BUREAU COUNTY
F.A.S. 245 (E. MAPLE AVE.) OVER HICKORY CREEK
STATION 20+00



BORING LOGS

STRUCTURAL SHEET NO. 6 OF 7 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
245	18-00267-00-BR	BUREAU	22	16
WHA# 1520D18		CONTRACT NO. 87778		
ILLINOIS FED. AID PROJECT				

	Midwest Testing Services, Inc.	BORING LOG	Phone: 815-223-6696
	3705 Progress Blvd. Peru, IL 61354		Fax: 815-223-6659 e-mail: mts37@comcast.net

Client: Willet Hofmann & Associates
 Project Name: Section 18-00267-00-BR
 Project Site: East Maple Avenue Over Hickory Creek
Manlius, Illinois

Boring No. B-2
 Surface Elev. 694.40
 Auger Depth 61' Rotary Depth NA
 Start Date 10/19/19 Finish Date 10/19/19

Location: 13' Left of Station 20+12

(DEPTH) ELEV.	DESCRIPTION OF MATERIALS	Graphic Log	Depth in feet	SAMPLES						DRILLED BY	REMARKS
				Sample No.	Sample Type	Qu (TSF)	N Value (Blows)	Bulge / Shear	Moisture (%)		
673.40											
672.40			22								
671.40			23	9	SS	2.3	13	B	15		
670.40			24								
669.40			25								
668.40			26	10	SS	2.4	13	B	14		
667.40			27								
666.40			28	11	SS	2.2	12	B	15		
665.40			29								
664.40			30								
663.40	Very Stiff Gray Clay Till		31	12	SS	2.7	14	B	13		
662.40			32								
661.40			33								
660.40			34								
659.40			35								
658.40			36	13	SS	2.8	15	B	13		
657.40			37								
656.40			38								
655.40			39								
654.40			40								
653.40			41	14	SS	2.3	14	B	14		

Groundwater Data: No groundwater at time of subsurface investigation.
 Comments:

	Midwest Testing Services, Inc.	BORING LOG	Phone: 815-223-6696
	3705 Progress Blvd. Peru, IL 61354		Fax: 815-223-6659 e-mail: mts37@comcast.net

Client: Willet Hofmann & Associates
 Project Name: Section 18-00267-00-BR
 Project Site: East Maple Avenue Over Hickory Creek
Manlius, Illinois

Boring No. B-2
 Surface Elev. 694.40
 Auger Depth 61' Rotary Depth NA
 Start Date 10/19/19 Finish Date 10/19/19

Location: 13' Left of Station 20+12

(DEPTH) ELEV.	DESCRIPTION OF MATERIALS	Graphic Log	Depth in feet	SAMPLES						DRILLED BY	REMARKS
				Sample No.	Sample Type	Qu (TSF)	N Value (Blows)	Bulge / Shear	Moisture (%)		
652.40											
651.40			43								
650.40			44								
649.40			45								
648.40	Very Stiff Gray Clay Till With Sand Seams		46	15	SS	3.3	16	S	18		
647.40			47								
646.40			48								
645.40			49								
644.40			50								
643.40	Dense Gray Fine Sand		51	16	SS	---	35	---	---		
642.40			52								
641.40			53								
640.40			54								
639.40	Very Stiff Gray Clay Till With Sand Seams		55								
638.40			56	17	SS	3.4	18	B	13		
637.40			57								
636.40			58								
635.40			59								
634.40			60								
633.40			61	18	SS	3.1	16	B	14		
632.40	Boring Terminated		62								

Groundwater Data: No groundwater at time of subsurface investigation.
 Comments:

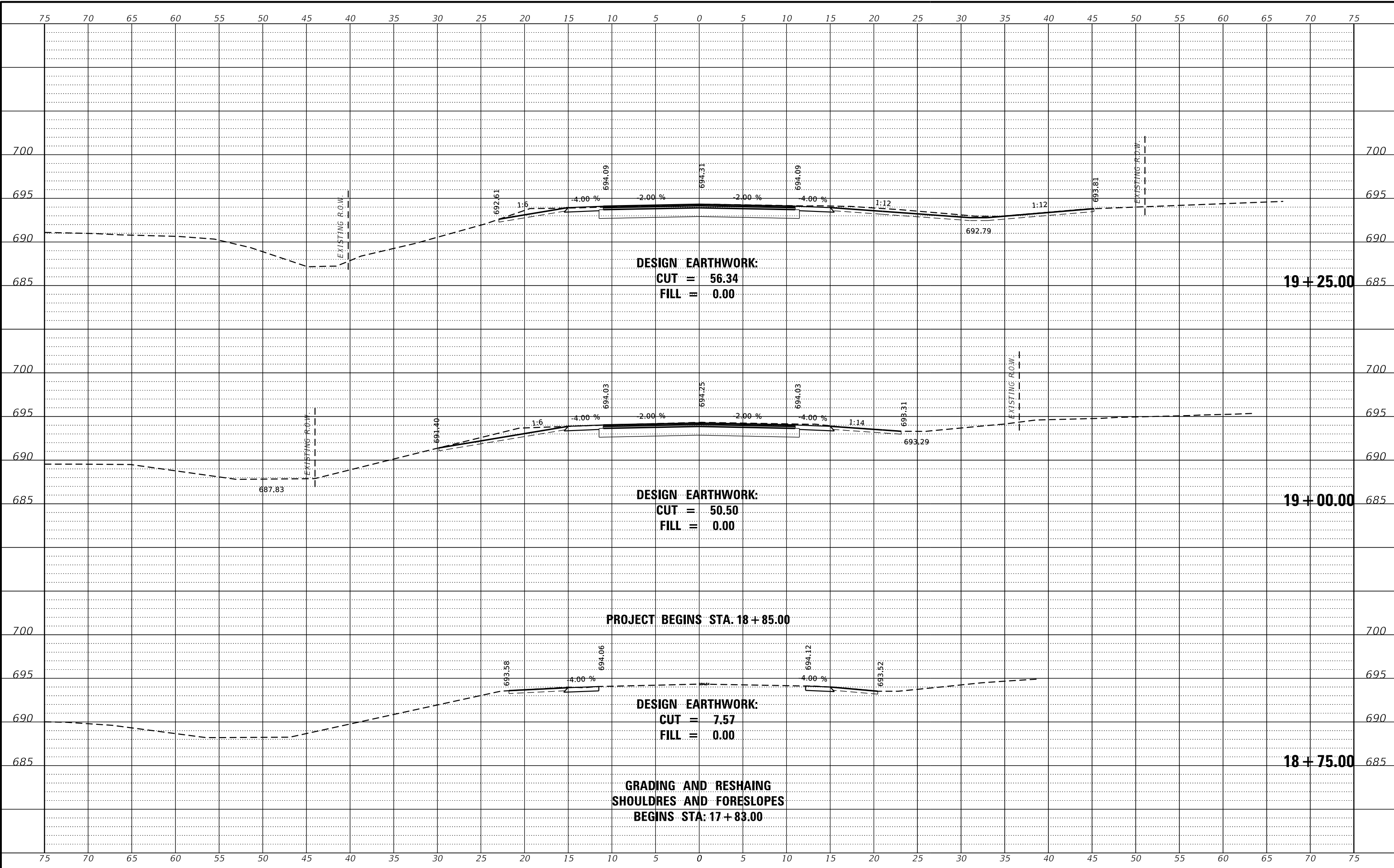
REVISION	DATE	BY	REMARKS
DESIGNED	JKP		
DRAWN	DAN		
REVIEWED	JKP		
APPROVED	MRL		

BUREAU COUNTY
F.A.S. 245 (E. MAPLE AVE.) OVER HICKORY CREEK
STATION 20+00

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

BORING LOGS
STRUCTURAL SHEET NO. 7 OF 7 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
245	18-00267-00-BR	BUREAU	22	17
WHA# 1520D18		CONTRACT NO. 87778		
ILLINOIS FED. AID PROJECT				



REVISION	DATE	BY	REMARKS

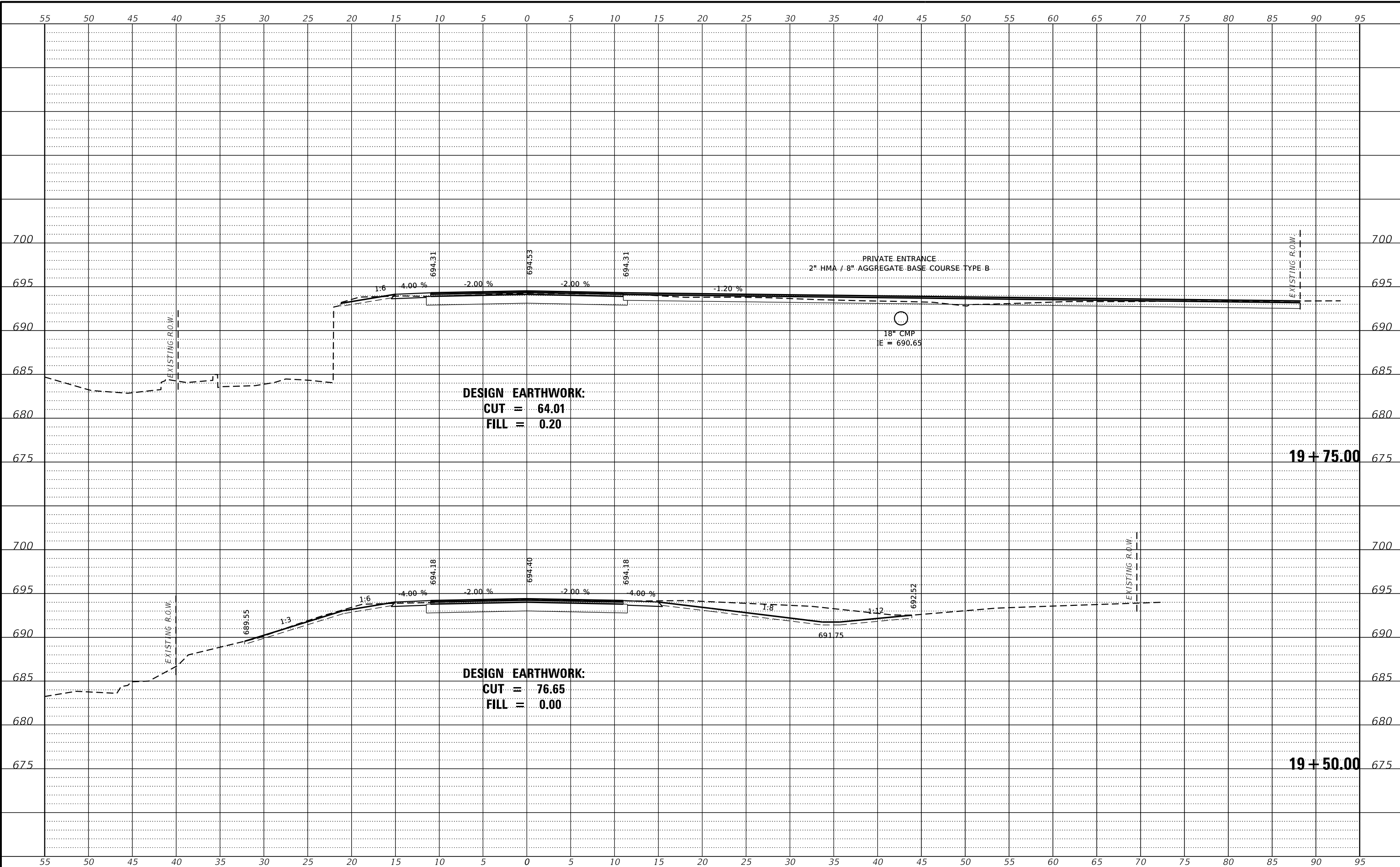
DESIGNED	JKP
DRAWN	DAN
REVIEWED	JKP
APPROVED	MRL

BUREAU COUNTY
F.A.S. 245 (E. MAPLE AVE.) OVER HICKORY CREEK
STATION 20+00



CROSS SECTIONS
STA: 18+75.00 to 19+25.00
SHEET NO. 1 OF 5 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
245	18-00267-00-BR	BUREAU	22	18
WHA# 1520D18		CONTRACT NO. 87778		
ILLINOIS FED. AID PROJECT				



DESIGN EARTHWORK:
CUT = 64.01
FILL = 0.20

DESIGN EARTHWORK:
CUT = 76.65
FILL = 0.00

REVISION	DATE	BY	REMARKS

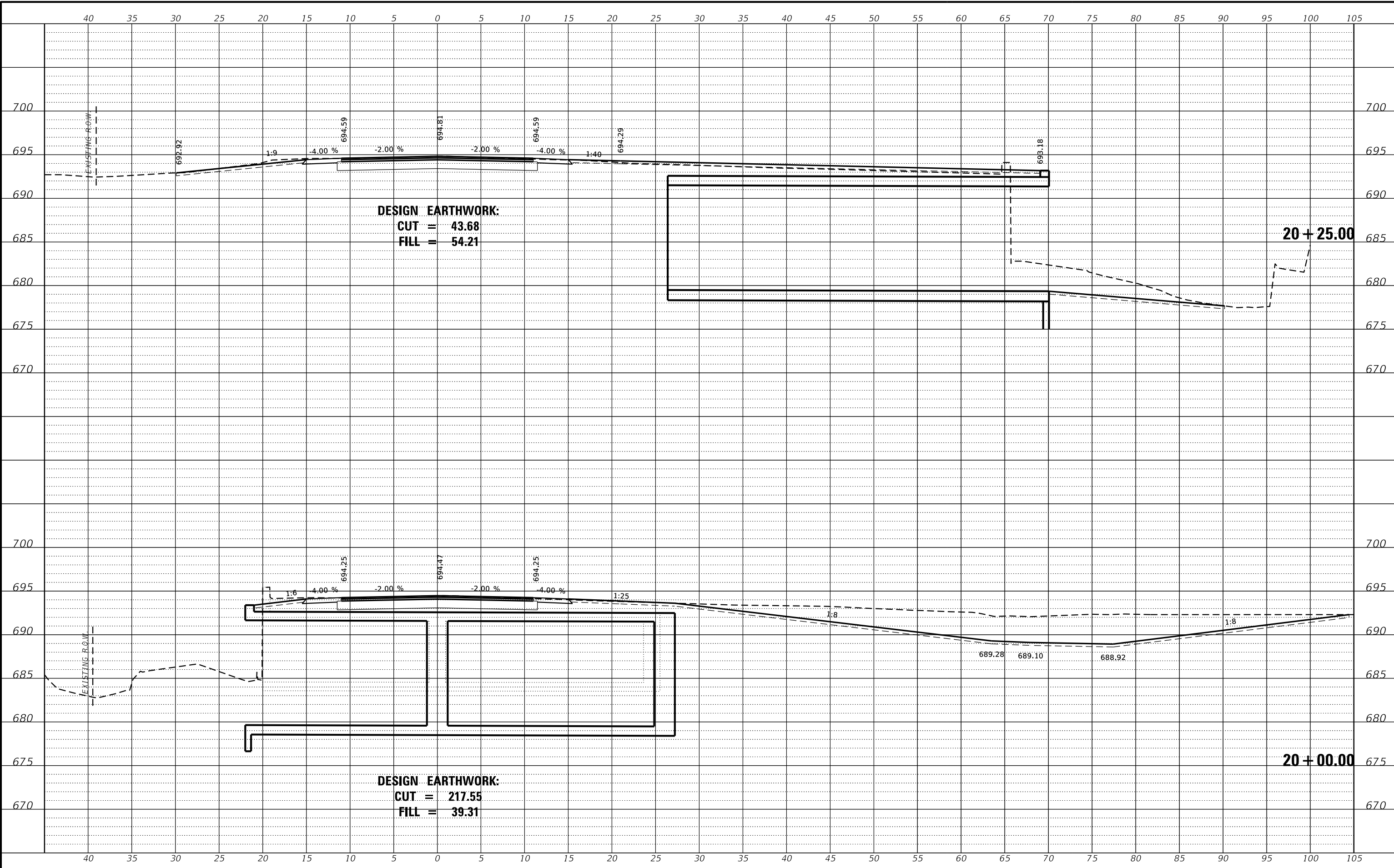
DESIGNED	JKP
DRAWN	DAN
REVIEWED	JKP
APPROVED	MRL

BUREAU COUNTY
F.A.S. 245 (E. MAPLE AVE.) OVER HICKORY CREEK
STATION 20+00



CROSS SECTIONS
STA: 19+50.00 to 19+75.00
SHEET NO. 2 OF 5 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
245	18-00267-00-BR	BUREAU	22	19
WHA# 1520D18		CONTRACT NO. 87778		
ILLINOIS FED. AID PROJECT				



REVISION	DATE	BY	REMARKS

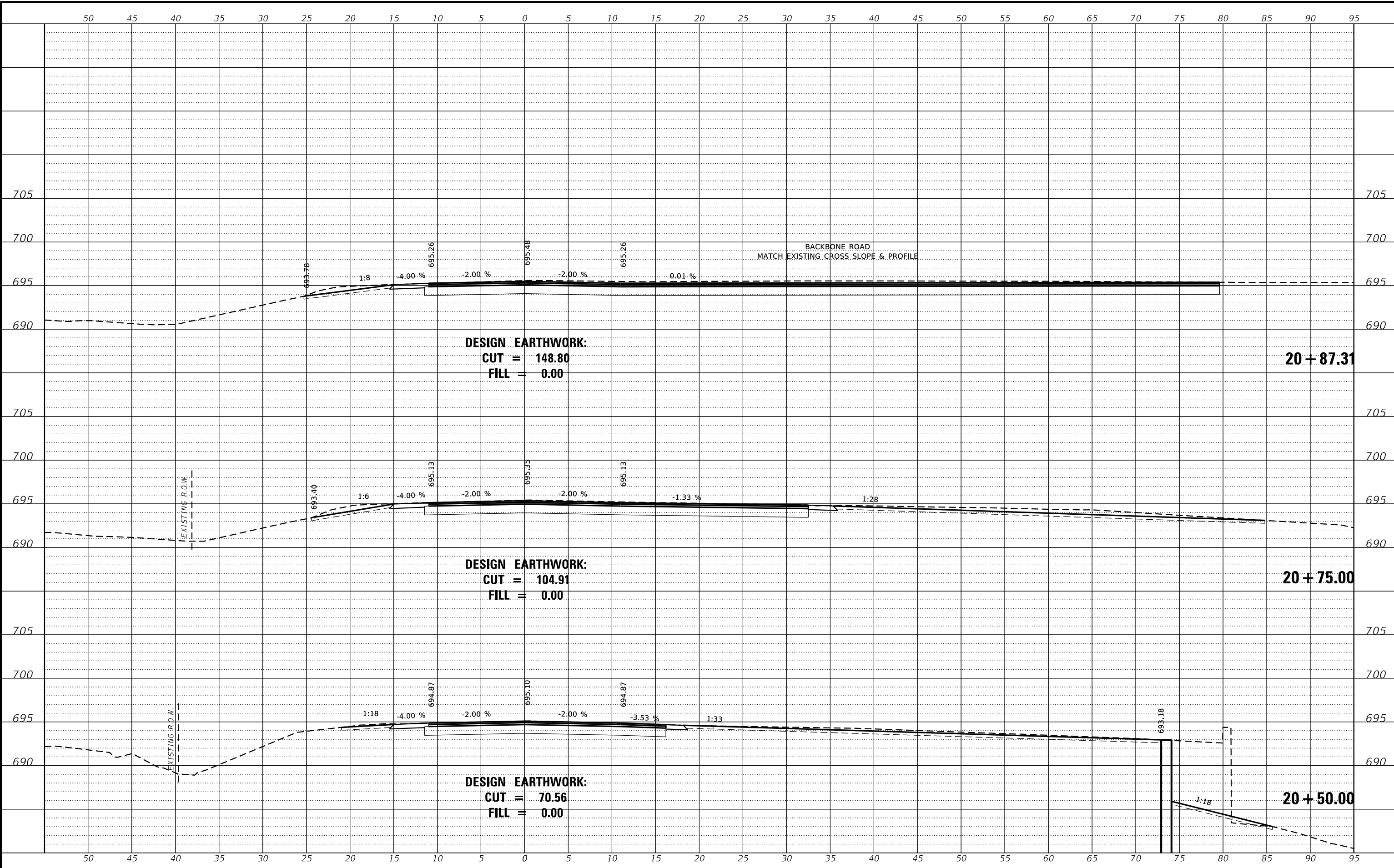
DESIGNED	JKP
DRAWN	DAN
REVIEWED	JKP
APPROVED	MRL

BUREAU COUNTY
F.A.S. 245 (E. MAPLE AVE.) OVER HICKORY CREEK
STATION 20+00



CROSS SECTIONS
STA: 20+00.00 to 20+25.00
SHEET NO. 3 OF 5 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
245	18-00267-00-BR	BUREAU	22	20
WHA# 1520D18		CONTRACT NO. 87778		
ILLINOIS FED. AID PROJECT				



REVISION	DATE	BY	REMARKS

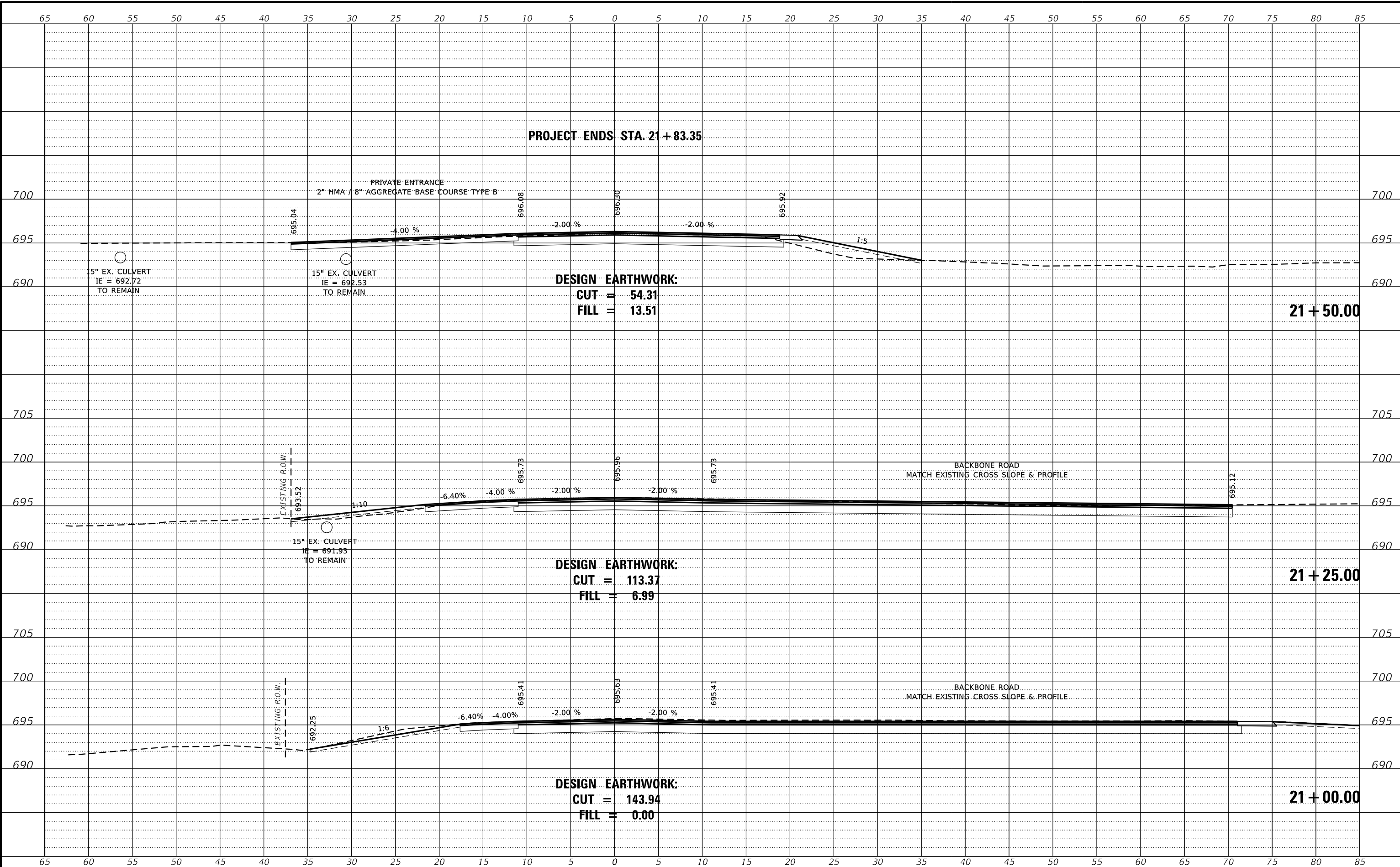
DESIGNED	JKP
DRAWN	DAN
REVIEWED	JKP
APPROVED	MRL

**BUREAU COUNTY
F.A.S. 245 (E. MAPLE AVE.) OVER HICKORY CREEK
STATION 20+00**



**CROSS SECTIONS
STA: 20+50.00 to 20+87.31
SHEET NO. 4 OF 5 SHEETS**

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
245	18-00267-00-BR	BUREAU	22	21
WHA# 1520D18		CONTRACT NO. 87778		
ILLINOIS FED. AID PROJECT				



REVISION	DATE	BY	REMARKS

DESIGNED	JKP
DRAWN	DAN
REVIEWED	JKP
APPROVED	MRL

BUREAU COUNTY
F.A.S. 245 (E. MAPLE AVE.) OVER HICKORY CREEK
STATION 20+00



CROSS SECTIONS
STA: 21+00.00 to 21+50.00
SHEET NO. 5 OF 5 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
245	18-00267-00-BR	BUREAU	22	22
WHA# 1520D18		CONTRACT NO. 87778		
ILLINOIS FED. AID PROJECT				