06-14-13 LETTING ITEM 182

TR	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
156	02-04116-00-BR	BOND	28	1
	SN 003-3414	CONTRACT NO. 97521		
	ILLINOIS	FEDERAL AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SURFACE TRANSPORTATION PROGRAM–BRIDGE

DETAIL PLANS FOR
TR 156 (DUDLEYVILLE ROAD)
OVER LITTLE BEAVER CREEK
SECTION 02–04116–00–BR
BOND COUNTY
MILLS ROAD DISTRICT

PROJECT NO. BROS–0005(125)

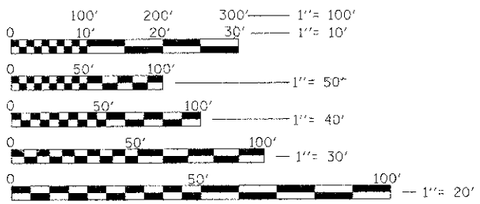
JOB NO. C–98–345–11

LOCATION OF SECTION INDICATED THUS: ▬

INDEX OF SHEETS

HIGHWAY STANDARDS

000001-06	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
280001-07	TEMPORARY EROSION CONTROL SYSTEMS
515001-03	NAME PLATE FOR BRIDGES
542301-03	PRECAST REINFORCED CONCRETE FLARED END SECTION
630001-10	STEEL PLATE BEAM GUARDRAIL
630301-06	SHOULDER WIDENING FOR TYPE 1, (SPECIAL) GUARDRAIL TERMINALS
631032-08	TRAFFIC BARRIER TERMINAL, TYPE 6A
635006-03	REFLECTOR AND TERMINAL MARKER PLACEMENT
701901-02	TRAFFIC CONTROL DEVICES



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.

DESIGN CLASSIFICATION

LOCAL ROAD (NON-URBAN) ADT = 400-750
CURRENT ADT = 200 (2010)
DESIGN ADT = 400 (2032)
DESIGN SPEED = 40 MPH

UTILITIES:

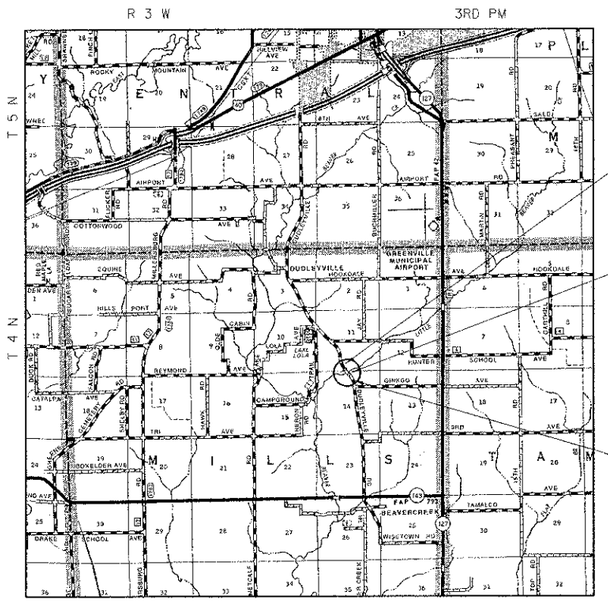
CALL J.U.L.I.E. BEFORE YOU DIG
1-800-892-0123 OR 811

TELEPHONE:
AT&T
O'FALLON, IL. 62269
(618) 346-6422

ELECTRIC:
SOUTHWESTERN ELECTRIC COOP
HIGHLAND, IL. 62249
(618) 664-1025

WATER:
BOND/MADISON WATER CO.
208 ACADEMY STREET
POCAHONTAS, IL. 62275
(618) 659-0900

GAS:
AMEREN IP
HILLSBORO, IL. 62049
(217) 532-8270
ATTN. JACOB COLBERT
(217) 412-8639



SECTION 02-04116-00-BR
BEGINS STA 12+50

PROJECT LOCATION
EXISTING SN 003-3405
PROPOSED STRUCTURE NO. 003-3414 STATION 18+48
THREE SIMPLE SPANS (35'-50'-35'), PRECAST PRESTRESSED CONCRETE DECK BEAMS (21") ON SPILL THRU PILE BENT ABUTMENTS AND PILE BENT PIERS MEASURING 120'-0" B-B OF THE ABUTMENTS WITH A 28'-0" CLEAR ROADWAY WIDTH.

SECTION 02-04116-00-BR
ENDS STA 26+00

N

SCALE IN MILES
0 1 2

LOCATION MAP

NET LENGTH OF PROJECT = 1,350 FEET = 0.256 MILES

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

APPROVED March 27 20 13
ROAD COMMISSIONER

APPROVED March 27 20 13
COUNTY ENGINEER

PASSED April 19 20 13
DISTRICT 8 ENGINEER OF LOCAL ROADS AND STREETS

RELEASING FOR BID BASED UPON LIMITED REVIEW April 19 20 13
DEPUTY DIRECTOR OF HIGHWAYS
REGION 5 ENGINEER

HMG ENGINEERS SURVEYORS

LARRY D. GOWLER JR. 052-052200 REGISTERED PROFESSIONAL ENGINEER OF ILLINOIS

LARRY D. GOWLER JR. DATE: 4/5/13
REGISTERED PROFESSIONAL
ENGINEER IN ILLINOIS, NO. 52900 EXPIRES: NOVEMBER 30, 2013

CONTRACT NO. 97521

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

HMG ENGINEERS, INC. LAKE RD., P.O. BOX 70 CARLYLE, IL 62231 (618) 594-3711 WWW.HMGENGINEERS.COM

HMG NO. 5119

GENERAL NOTES

1. ALL ELEVATIONS REFER TO USGS MEAN SEA LEVEL DATUM.

2. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MAY HAVE BEEN CAUSED BY THE CONTRACTOR'S FAILURE TO LOCATE AND PRESERVE ANY AND ALL EXISTING UNDERGROUND UTILITIES. THE APPROXIMATE LOCATIONS OF THE KNOWN UTILITIES SHOWN ON THE PLANS REPRESENTS THE BEST INFORMATION AVAILABLE AT THE TIME OF DESIGN.

3. ALL UTILITY RELOCATIONS SHALL BE BY THE RESPECTIVE UTILITIES:
   a. NOTE THE BURIED 12" HIGH PRESSURE DOT GAS TRANSMISSION LINE TO AVOID ON THE EAST SIDE IS IN AMEREN'S EASEMENT AND THE CONTRACTOR SHALL COMPLY WITH AMEREN'S SPECIAL REQUIREMENTS (SHOWN ON THIS SHEET) AND IT'S REPRESENTATIVE.
   b. EXISTING WATER LINE ON THE WEST SIDE OF THE ROAD IS TO BE ABANDONED FROM APPROXIMATELY STATION 12+75± TO STATION 22+75± AND RELOCATED AFTER PROJECT IS COMPLETE.
   c. TELEPHONE LINE TO BE RELOCATED PRIOR TO CONSTRUCTION.

4. THE CONTRACTOR SHALL GIVE AT LEAST TWO WEEKS NOTICE BEFORE BEGINNING CONSTRUCTION SO THE ENGINEER MAY GIVE ADEQUATE NOTICE TO ALL EMERGENCY, SCHOOL AND POSTAL SERVICES.

5. THE CONTRACTOR SHALL EXERCISE CARE IN PERFORMING REMOVALS SO AS NOT TO DISRUPT ADJOINING FEATURES THAT ARE TO REMAIN IN PLACE. ANY DAMAGE CAUSED TO ADJOINING FEATURES AS A RESULT OF THE CONTRACTOR'S NEGLIGENCE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE ENGINEER.

6. THE PRIME CONTRACTOR SHALL BE RESPONSIBLE FOR TRAFFIC CONTROL AND PROTECTION.

7. ADDITIONAL BITUMINOUS REQUIREMENTS:
   a. THE ENGINEER SHALL BE THE SOLE JUDGE CONCERNING CURING TIME FOR THE VARIOUS BITUMINOUS LIFTS.
   b. A PRESET GRADE CONTROL STRINGLINE SHALL BE USED FOR HMA SURFACE ON THE BRIDGE.

8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING POSITIVE DRAINAGE IN THE DISTURBED AREAS, TO THE SATISFACTION OF THE ENGINEER. ANY GRADING SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR EARTH EXCAVATION, AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

9. ALL AREAS THAT ARE DISTURBED BEYOND THE SEEDING LIMITS SHALL BE GRADED AND SEEDING RE-ESTABLISHED BY THE CONTRACTOR AT HIS/HER EXPENSE. IN THE SAME MANNER AS FINAL GRADING WORK PER THE SPECIFICATIONS, TO THE SATISFACTION OF THE ENGINEER.

10. IF ASH TREES ARE REMOVED ON THE PROJECT, THE CONTRACTOR SHALL BECOME FAMILIAR WITH AND COMPLY WITH MEASURES SPECIFIED BY THE ILLINOIS DEPARTMENT OF AGRICULTURE (IDOA) TO PREVENT THE SPREAD OF THE EMERALD ASH BORER. THE IDOA INFORMATION FOR ASH TREE REMOVAL CAN BE FOUND ON THE IDOA WEBSITE AT WWW.AGR.STATE.IL.US/EAB.

11. ALL SAW CUTTING OF THE EXISTING SURFACES SHALL BE INCLUDED IN THE COST OF THE VARIOUS ITEMS OF WORK INVOLVED. THE DEPTH OF THE SAW CUT SHALL BE SUFFICIENT TO ALLOW A CLEAN, STRAIGHT EDGE TO BE VISIBLE WHERE THE PROPOSED IMPROVEMENTS MEET THE EXISTING FEATURES.

12. GRADING SHALL BE DONE BY HAND AROUND LIGHT POLES, UTILITY POLES, SIGN POSTS, SHRUBS, TREES OR OTHER NATURAL OR MAN-MADE OBJECTS WHERE FILLS OR CUTS ARE ADJACENT TO THESE ITEMS. IT IS THE INTENT THAT THE LIMITS OF CONSTRUCTION BE SUCH AS TO PRESERVE, IN THE ORIGINAL STATE, AS MUCH AREA AS POSSIBLE. THE DECISION AS TO ITEMS TO REMAIN IN PLACE SHALL BE DIRECTED BY THE ENGINEER. THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE CONSIDERED INCLUDED IN THE CONTRACT UNIT PRICE FOR EARTH EXCAVATION, AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

13. REMOVAL OF EXISTING AGGREGATE AND OIL & CHIP SURFACE WILL BE MEASURED AND PAID FOR AT THE CONTRACT UNIT PRICE FOR EARTH EXCAVATION, AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

14. ALL ENTRANCES WITHIN THE PROJECT LIMITS SHALL REMAIN ACCESSIBLE, AS DIRECTED BY THE ENGINEER, THROUGHOUT THE TIME OF CONSTRUCTION.

15. REMOVAL OF EXISTING ROW MARKERS WITHIN THE PROJECT LIMITS, FENCES AND DITCH CHECKS OR OTHER OBSTRUCTIONS NOT PAID FOR ELSEWHERE, SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR EARTH EXCAVATION, AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

16. REMOVAL OF EXISTING GUARDRAIL SHALL BE CONSIDERED IN THE CONTRACT UNIT PRICE OF REMOVAL OF EXISTING STRUCTURES, AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

17. THE FOLLOWING ITEMS SHALL HAVE THE LISTED RESTRICTIONS, ALSO SEE SPECS.

ITEM	RESTRICTION
AGGREGATE BASE COURSE, TYPE B	SHALL MEET REQUIREMENTS OF ARTICLE 351.05(a) EXCEPT THE BEARING RATIO AND THE DENSITY TESTING SHALL NOT BE REQUIRED. THE MOISTURE CONTENT SHALL BE PUGGED AT 6% - 8%. AGGREGATE SHALL BE PROOF ROLLED TO THE SATISFACTION OF THE ENGINEER.
PIPE CULVERTS, CLASS A	ONLY REINFORCED CONCRETE PIPE SHALL BE ALLOWED.
TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	THE PAY LENGTH SHALL BE MODIFIED TO 53.125' TO INCLUDE 3.125' OF GUARDRAIL PROVIDED BEYOND THE TYPICAL 50' PAY LENGTH TO MEET THE NEXT TYPICAL SPLICE LOCATION FOR THE CURRENT STANDARD. THIS SHALL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE COST OF TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

SPECIAL REQUIREMENTS REGARDING WORK AROUND AMEREN'S DOT GAS TRANSMISSION LINE

1. NO ASPECT OF THIS PROJECT SHALL REMOVE PERMANENT COVER OVER THE PIPELINE SUCH THAT THERE IS LESS THAN 36" OF SOIL COVER OVER THE PIPELINE.

2. THERE SHALL BE A MINIMUM OF 12" OF SEPARATION BETWEEN THE GAS PIPELINE AND ANY OTHER FACILITY OR STRUCTURE.

3. PROPOSED FACILITY CONSTRUCTION EQUIPMENT SHALL NOT DRIVE ACROSS GAS MAIN, WITHOUT ADEQUATE SOIL COVER/PROTECTION.
   a. THE PIPELINE HAS ONLY BEEN EVALUATED FOR STANDARD AASHTO TRAFFIC LOADING, NOT FOR CONSTRUCTION LOADS. IF THE CONTRACTOR PLANS TO DRIVE EQUIPMENT OVER THE PIPELINE, HE SHOULD EITHER PROVIDE DETAILED LOAD INFORMATION TO JACOB COLBERT AT AMEREN FOR ANALYSIS OR HAVE AN OUTSIDE ENGINEER REVIEW HIS LOADINGS TO PREVENT DAMAGE TO THE PIPE.
   b. CONSIDER INSTALLING STEEL PLATES OR WOOD MATTING ABOVE UNPROTECTED GAS MAIN.

4. ANY EXCAVATION EXPOSING THE GAS MAIN MUST BE BACKFILLED WITH CLEAN SOIL OR SAND WITHIN 12" OF THE GAS FACILITY TO PREVENT COATING DAMAGE. ROCK BACKFILL IS NOT ACCEPTABLE.
   a. ANY EXCAVATION WITHIN 15 FT. OF THE GAS MAIN WILL BE MONITORED BY AMEREN PERSONNEL.
   b. NO MORE THAN 22 FT. OF 12" GAS MAIN SHOULD BE EXPOSED AT A TIME, UNLESS SUPPORTED TO PREVENT SAG AND ADDITIONAL STRESS.

5. GAS EASEMENT REQUIRES ACCESSIBILITY FOR FUTURE MAINTENANCE WORK.

6. CONTRACTOR SHALL ADHERE TO J.U.L.I.E. LOCATE LAWS WHILE WORKING NEAR GAS MAIN.

7. BEFORE REMOVING STUMPS IN CLOSE PROXIMITY TO AMEREN'S EASEMENT, AS DETERMINED BY AMEREN, A TRENCH SHALL BE CUT BETWEEN THE STUMPS AND THE PIPELINE WHILE UNDER THE GUIDANCE AND SUPERVISION OF AMEREN. THE TRENCH SHALL BE MADE WITH A TRENCHER THAT WILL EXTEND TO A DEPTH OF AT LEAST 1 FT. BELOW THE INVERT OF THE PIPELINE AND BE CAPABLE OF CUTTING TREE ROOTS. STUMP REMOVAL MAY BE DONE AFTER THIS WORK IS COMPLETE. COST FOR THIS WORK SHALL BE INCLUDED IN THE COST FOR TREE REMOVAL.

COMMITMENTS

1. A TREE CLEARING RESTRICTION IS PRESENT BETWEEN APRIL 1 AND SEPTEMBER 30 DUE TO POTENTIAL INDIANA BAT HABITAT.

2. TREE REMOVAL FROM STA. 22+00 TO STA. 25+00 ON THE EAST SIDE OF THE ROADWAY SHALL BE SALVAGED FOR PROPERTY OWNER ON THE EAST SIDE. THE TREES ARE TO BE CUT OFF ABOVE THE STUMP AND PUSHED/DRUG TO A LOCATION NEAR THE PROJECT UNDER THE DIRECTION OF THE COUNTY ENGINEER. REMAINING STUMPS SHALL BE REMOVED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

APPLICATION RATES

THE FOLLOWING RATES OF APPLICATION HAVE BEEN USED IN CALCULATING PLAN QUANTITIES:

NITROGEN FERTILIZER NUTRIENT	90 LBS/ACRE	BITUMINOUS CONCRETE	112 LBS/SY/IN
PHOSPHORUS FERTILIZER NUTRIENT	90 LBS/ACRE	BITUMINOUS MATERIALS (PRIME COAT)	
POTASSIUM FERTILIZER NUTRIENT	90 LBS/ACRE	BITUMINOUS/OIL & CHIP SURFACE	0.08 GAL/SY
MULCH METHOD 2	2 TONS/ACRE	AGGREGATE SURFACE	0.375 GAL/SY
GRANULAR MATERIAL	2.05 TONS/CY	AGGREGATE (PRIME COAT)	
RIPRAP	1.6 TONS/CY	BITUMINOUS/OIL & CHIP SURFACE	3 LBS/SY
TEMPORARY DITCH CHECKS	10 FT/DITCH CHECK	AGGREGATE SURFACE	5 LBS/SY
TEMPORARY EROSION CONTROL SEEDING	100 LBS./ACRE	A-3 BITUMINOUS SURFACE TREATMENT	
AGGREGATE DITCH CHECKS	3 TONS/CHECK	3 COATS OF HFE - 150	0.375 GAL/SY
		COVER COAT AGGREGATE	20 LBS/SY
		SEAL COAT AGGREAGATE	20 LBS/SY

FILE NAME =	USER NAME = USERDESCR.	DESIGNED - K.M.M.	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 20.2000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 4/5/2013	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

SCALE: | SHEET NO. OF SHEETS | STA. | TO STA.

TR	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
156	02-04116-00-BR	BOND	28	2
	SN 003-3414	CONTRACT NO. 97521		
	ILLINOIS FED. AID PROJECT			

HMC NO 5119

SUMMARY OF QUANTITIES

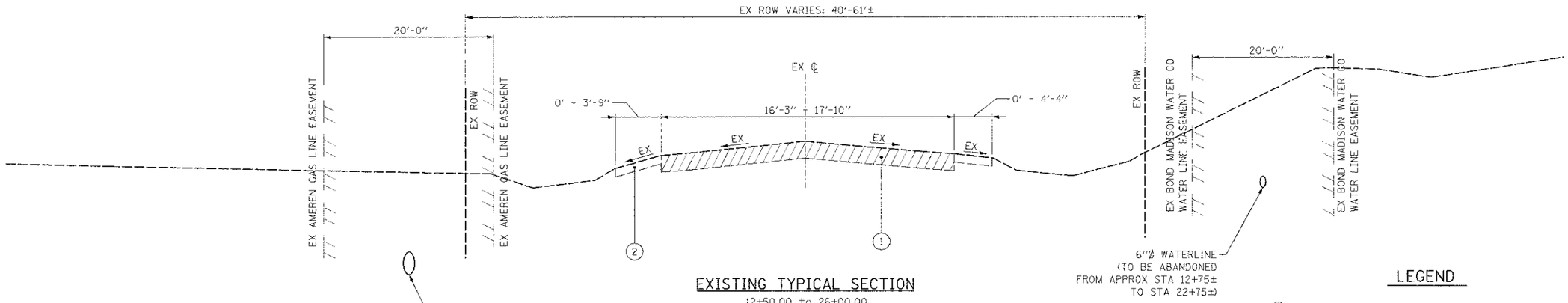
SPEC. PROV.	SPECIALTY ITEM	CODE NO.	ITEM DESCRIPTION	UNIT	TOTAL QUANTITY
*		20100500	TREE REMOVAL, ACRES	ACRE	0.8
*		20200100	EARTH EXCAVATION	CU YD	1,915
*		20300100	CHANNEL EXCAVATION	CU YD	901
*		20400800	FURNISHED EXCAVATION	CU YD	670
	#	25000210	SEEDING, CLASS 2A	ACRE	1.5
	#	25000400	NITROGEN FERTILIZER NUTRIENT	POUND	135
	#	25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	135
	#	25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	135
	#	25100115	MULCH, METHOD 2	ACRE	1.5
	#	28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	150
		28000305	TEMPORARY DITCH CHECKS	FOOT	100
		28000315	AGGREGATE DITCH CHECKS	TON	12
		28000400	PERIMETER EROSION BARRIER	FOOT	484
		28000500	INLET AND PIPE PROTECTION	EACH	2
*		28100807	STONE DUMPED RIPRAP, CLASS A4	TON	345
*		35101400	AGGREGATE BASE COURSE, TYPE B	TON	1,330
		40300100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	1,118
		40300300	BITUMINOUS MATERIALS (COVER AND SEAL COATS)	GALLON	2,977
		40300500	COVER COAT AGGREGATE	TON	55
		40300600	SEAL COAT AGGREGATE	TON	28
		40603310	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50	TON	62
		48100100	AGGREGATE SHOULDERS, TYPE A	TON	384
		50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
		50105220	PIPE CULVERT REMOVAL	FOOT	53
		50200100	STRUCTURE EXCAVATION	CU YD	74
		50300225	CONCRETE STRUCTURES	CU YD	53.8
		50300280	CONCRETE ENCASEMENT	CU YD	32.7
		50400405	PRECAST PRESTRESSED CONCRETE DECK BEAMS (21" DEPTH)	SQ FT	3,318
		50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	7,560
	#	50901050	STEEL RAILING, TYPE SM	FOOT	240

SPEC. PROV.	SPECIALTY ITEM	CODE NO.	ITEM DESCRIPTION	UNIT	TOTAL QUANTITY
		51201400	FURNISHING STEEL PILES HP10X42	FOOT	370
		51201610	FURNISHING STEEL PILES HP12X63	FOOT	368
		51202305	DRIVING PILES	FOOT	738
		51203400	TEST PILE STEEL HP10X42	EACH	1
		51203610	TEST PILE STEEL HP12X63	EACH	1
		51500100	NAME PLATES	EACH	1
*		542A0220	PIPE CULVERTS, CLASS A, TYPE 1 15"	FOOT	72
		54213660	PRECAST REINFORCED CONCRETE FLARED END SECTIONS 15"	EACH	4
		58100200	WATERPROOFING MEMBRANE SYSTEM	SQ YD	370
		58300100	PORTLAND CEMENT MORTAR FAIRING COURSE	FOOT	712
		59300100	CONTROLLED LOW-STRENGTH MATERIAL	CU YD	23.8
	#	63100087	TRAFFIC BARRIER TERMINAL, TYPE 6A	EACH	4
*	#	63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	4
		67100100	MOBILIZATION	L SUM	1
	#	78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	4
		Z0001900	ASBESTOS BEARING PAD REMOVAL	EACH	42
*		Z0013798	CONSTRUCTION LAYOUT	L SUM	1
	#	A2007116	TREE, QUERCUS RUBRA (RED OAK), 2" CALIPER, BALLED AND BURLAPPED	EACH	6
	#	B2001116	TREE, CERCIS CANADENSIS (EASTERN REDBUD), 2" CALIPER, TREE FORM, BALLED AND BURLAPPED	EACH	10
*		X7010216	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	L SUM	1

FILE NAME =	USER NAME = USERDESCR.	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES
PLOT SCALE = 76.2000 '/ IN.		DRAWN -	REVISED -		SCALE: / SHEET NO. OF SHEETS / STA. / TO STA.
PLOT DATE = 4/8/2013		CHECKED -	REVISED -		
		DATE -	REVISED -		

TR	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
156	02-04116-00-BR	BOND	28	3
	SN 003-3414	CONTRACT NO. 97521		
	ILLINOIS FED. AID PROJECT			

HMG NO. 5119



EXISTING TYPICAL SECTION

12+50.00 to 26+00.00

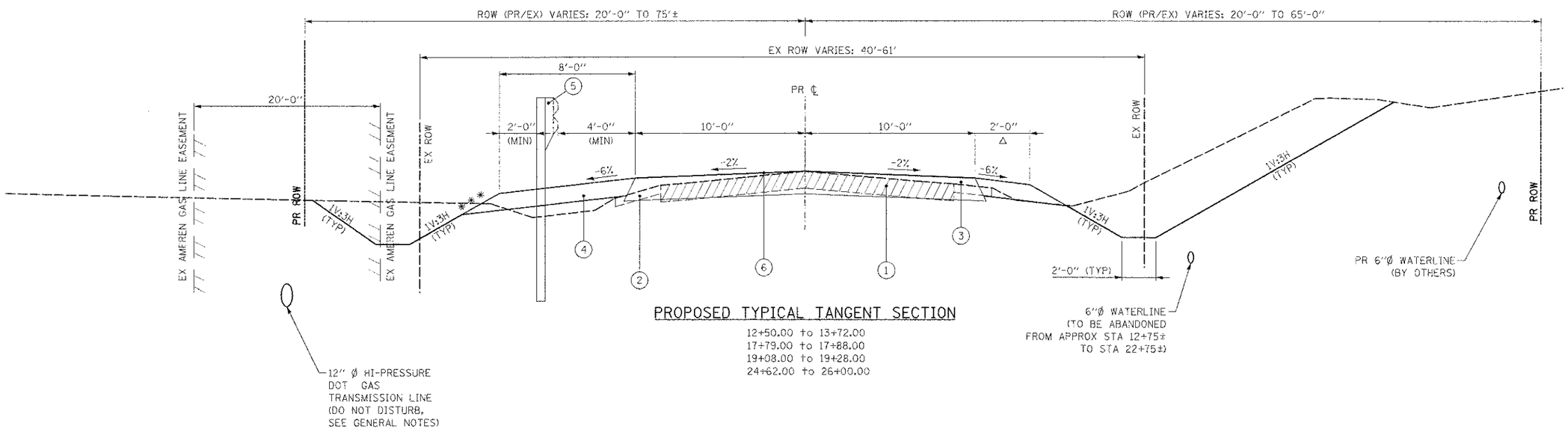
NOTES:

*** GUARDRAIL MAY BE LOCATED ON ONE SIDE, BOTH SIDES OR NEITHER SIDE. ADDITIONALLY, THE FORESLOPES TRANSITION FROM 1V:3H TO 1V:2H AT THE BACK OF THE ABUTMENTS WHILE BEHIND GUARDRAIL. SEE PLAN AND PROFILE SHEET FOR EXACT LOCATIONS.

△ SHOULDER WIDTHS WILL TYPICALLY BE 2'-0", BUT WILL VARY FROM 2'-0" TO 8'-0" NEAR THE GUARDRAIL. SEE PLAN AND PROFILE SHEET FOR LIMITS OF SHOULDER WIDTH TRANSITIONS.

LEGEND

1. EXISTING ROADWAY (6"± AGGREGATE BASE AND BITUMINOUS SURFACE TREATMENT)
2. EXISTING SHOULDER (EARTH/AGGREGATE)
3. AGGREGATE BASE COURSE, 8" (11" AT BACK OF ABUTMENT PER ARTICLE 351.07)
4. AGGREGATE SHOULDERS, 6"
5. GUARDRAIL/TRAFFIC BARRIER TERMINAL
6. A-3 BITUMINOUS SURFACE TREATMENT, 20' WIDE



PROPOSED TYPICAL TANGENT SECTION

12+50.00 to 13+72.00
17+79.00 to 17+88.00
19+08.00 to 19+28.00
24+62.00 to 26+00.00

FILE NAME =	USER NAME = USERDESCR	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 5.2000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 4/9/2013	DATE -	REVISED -

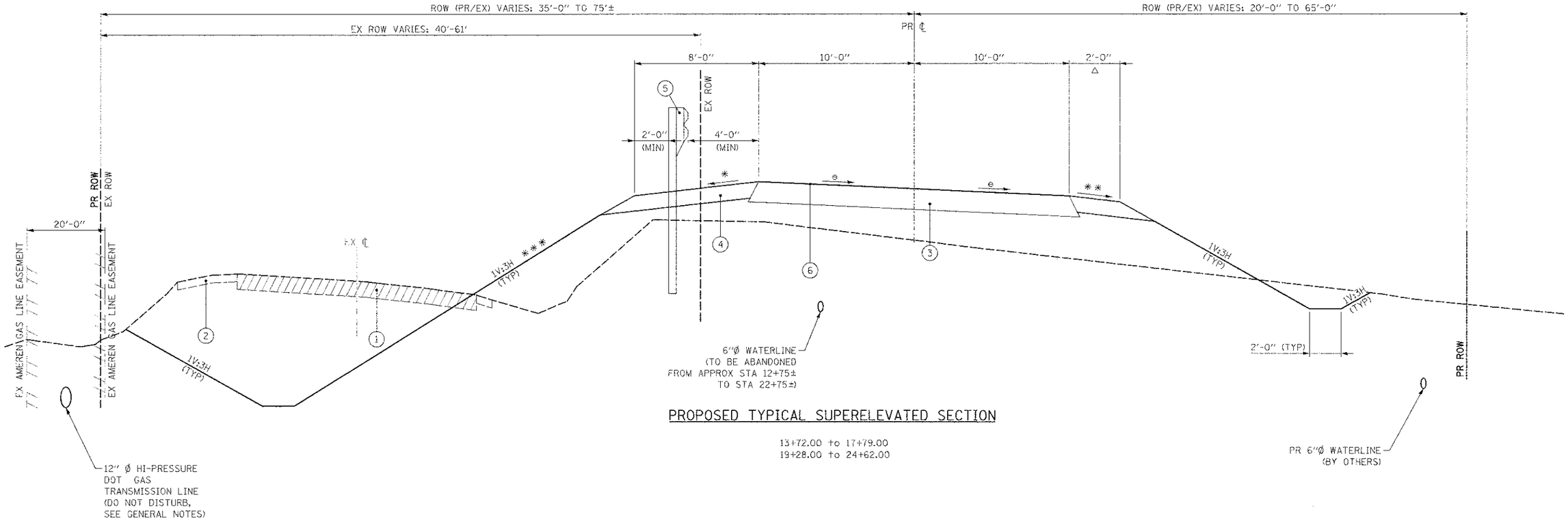
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL ROADWAY SECTIONS

SCALE: | SHEET NO. 1 OF 2 SHEETS | STA. | TO STA.

TR	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
156	02-04116-00-BR	BOND	28	4
	SN 003-3414	CONTRACT NO. 97521		
	ILLINOIS FED. AID PROJECT			

HMG NO. 5119



PROPOSED TYPICAL SUPERELEVATED SECTION

13+72.00 to 17+79.00
19+28.00 to 24+62.00

LEGEND

1. EXISTING ROADWAY (6"± AGGREGATE BASE AND BITUMINOUS SURFACE TREATMENT)
2. EXISTING SHOULDER (EARTH/AGGREGATE)
3. AGGREGATE BASE COURSE, 8" (11" AT BACK OF ABUTMENT PER ARTICLE 351.07)
4. AGGREGATE SHOULDERS, 6"
5. GUARDRAIL/TRAFFIC BARRIER TERMINAL
6. A-3 BITUMINOUS SURFACE TREATMENT, 20' WIDE

NOTES:

* WHEN THE SUPERELEVATION RATE OF THE PAVEMENT (e) IS BETWEEN 0% AND 4%, THE SHOULDER SLOPE SHALL BE 6%. WHEN THE SUPERELEVATION RATE OF THE PAVEMENT (e) EXCEEDS 4%, THE AGGREGATE SHOULDER SHALL BE SLOPED SO THAT THE ALGEBRAIC DIFFERENCE BETWEEN PAVEMENT SLOPE AND AGGREGATE SHOULDER SLOPE IS NOT GREATER THAN 10%.

** THE SHOULDER'S SLOPE SHALL BE 6% OR THE SAME AS THE SUPERELEVATION RATE OF THE PAVEMENT (e) AFTER THE PAVEMENT SLOPE EXCEEDS 6%.

*** GUARDRAIL MAY BE LOCATED ON ONE SIDE, BOTH SIDES OR NEITHER SIDE. ADDITIONALLY, THE FORESLOPES TRANSITION FROM 1V:3H TO 1V:2H AT THE BACK OF THE ABUTMENTS WHILE BEHIND GUARDRAIL. SEE PLAN AND PROFILE SHEET FOR EXACT LOCATIONS.

△ SHOULDER WIDTHS WILL TYPICALLY BE 2'-0", BUT WILL VARY FROM 2'-0" TO 8'-0" NEAR THE GUARDRAIL. SEE PLAN AND PROFILE SHEET FOR LIMITS OF SHOULDER WIDTH TRANSITIONS.

FILE NAME = ...\ENGINE 04 05_TYPICALS 5119.dgn	USER NAME = USERPROFILE	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TYPICAL ROADWAY SECTIONS	TR	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED -			156	02-04116-00-BR	BOND	28	5
	PLOT SCALE = 5.000 ' / IN.	CHECKED -	REVISED -				SN 003-3414	CONTRACT NO. 97521		
	PLOT DATE = 4/8/2013	DATE -	REVISED -		SCALE:	SHEET NO. 2 OF 2 SHEETS	STA.	TO STA.	ILLINOIS FED. AID PROJECT		

HMG NO. 5119

EARTHWORK SCHEDULE

LOCATION	A	B	C	D	E = C - D
	CHANNEL EXCAVATION	EARTH EXCAVATION	EXCAVATION ADJUSTED FOR SHRINKAGE/LOSS	REQUIRED FILL	BALANCE: WASTE (+) OR SHORTAGE (-)
	CU YD	CU YD	CU YD	CU YD	CU YD
STA 12+50.00 TO STA 17+88.00 (NORTH ABUTMENT)		205.8	154.4	1,073.0	-918.7
STA 17+88.00 (NORTH ABUTMENT) TO STA 19+08.00 (SOUTH ABUTMENT)	900.3		506.4	175.6	330.8
STA 19+08.00 (SOUTH ABUTMENT) TO STA 26+00.00		1,707.1	1,280.3	1,365.8	-85.5
TOTAL	900.3	1,912.9	1,941.1	2,614.4	-673.3
USE	901	1,915	1,945	2,615	-670

NOTES:
QUANTITIES ESTIMATED FROM CROSS-SECTION END AREAS.
SCHEDULE ASSUMES A 25% SHRINKAGE/LOSS FACTOR. (CHANNEL EXCAVATION ADJUSTED FOR LOSS AND SHRINKAGE)
COLUMN "A" - CUT MATERIAL FROM THE CHANNEL (CHANNEL EXCAVATION)
COLUMN "B" - CUT MATERIAL OUTSIDE THE CHANNEL (EARTH EXCAVATION)
COLUMN "C" - CUT MATERIAL ADJUSTED FOR SHRINKAGE/LOSS AND SUITABLE FOR EMBANKMENT (NOT A PAY ITEM)
COLUMN "D" - REQUIRED FILL MATERIAL (NOT A PAY ITEM)
COLUMN "E" - BALANCE OF CUT MATERIAL AND FILL MATERIAL (FURNISHED EXCAVATION)

PIPE CULVERT SCHEDULE

LOCATION	PIPE CULVERT REMOVAL	PIPE CULVERTS, CLASS A, TYPE 1 15"	PRECAST REINFORCED CONCRETE FLARED END SECTIONS 15"
	FOOT	FOOT	EACH
ENTRANCE 14+60 RT STA 14+46.03 20.88' 478.05 TO STA 14+73.89 22.50' 477.34	22	32	2
24+60 LT STA 24+41.90 19.03' 503.84 TO STA 24+78.07 19.50' 504.20	31	40	2
TOTAL	53	72	4
USE	53	72	4

PAVING SCHEDULE

LOCATION	AGGREGATE BASE COURSE, TYPE B	BITUMINOUS MATERIALS (PRIME COAT)	BITUMINOUS MATERIALS (COVER AND SEAL COATS)	COVER COAT AGGREGATE	SEAL COAT AGGREGATE	AGGREGATE SHOULDERS, TYPE A
	TON	GALLON	GALLON	TON	TON	TON
STA 12+50.00 TO STA 17+88.00	564	487	1295	24	12	176
BRIDGE OMISSION						
STA 19+08.00 TO STA 26+00.00	729	631	1682	31	16	208
ENTRANCES						
STA 14+60.00 RT	15					
STA 24+60.00 LT	17					
STA 24+64.00 RT	5					
TOTAL	1,330	1,118	2,977	55	28	384
USE	1,330	1,118	2,977	55	28	384

TREE REMOVAL SCHEDULE

LOCATION							TREE REMOVAL, ACRES
							ACRE
STA	16+07.00	RT	TO	STA	18+35.00	RT	0.11
STA	18+09.00	RT	TO	STA	23+91.00	RT	0.59
STA	18+97.00	LT	TO	STA	19+77.00	LT	0.01
STA	20+45.00	LT	TO	STA	24+38.00	LT	0.07
TOTAL							0.78
USE							0.8

TREE PLANTING SCHEDULE

LOCATION				TREE, QUERCUS RUBRA (RED OAK), 2" CALIPER, BALLED AND BURLAPPED	TREE, CERCIS CANADENSIS (EASTERN REDBUD), 2" CALIPER, TREE FORM, BALLED AND BURLAPPED
				EACH	EACH
STA	17+90.00	55.00'	RT	1	
STA	19+50.00	65.00'	LT		1
STA	19+75.00	50.00'	LT	1	
STA	20+00.00	65.00'	LT		1
STA	20+20.00	50.00'	RT	1	
STA	20+25.00	45.00'	LT	1	
STA	20+50.00	58.00'	LT		1
STA	20+60.00	40.00'	RT		1
STA	20+75.00	40.00'	LT	1	
STA	21+00.00	39.00'	RT		1
STA	21+00.00	54.00'	LT		1
STA	21+25.00	39.00'	LT	1	
STA	21+40.00	39.00'	RT		1
STA	21+75.00	39.00'	LT		1
STA	21+80.00	39.00'	RT		1
STA	22+25.00	34.00'	LT		1
TOTAL				6	10
USE				6	10

HMA MIXTURE REQUIREMENTS

ROUTE	TR 156
SECTION	02-04116-00-BR
COUNTY	BOND
CONTRACT	97521

DESCRIPTION: DUDLEYVILLE RD. OVER LITTLE BEAVER CREEK

20 YR. ESAL'S: 0.06

MIXTURE USE	SURFACE
AC/PG	PG 64-22
RAP % (MAX)	10%
DESIGN AIR VOIDS	4.0% @ Ndes=50
MIX COMPOSITION (GRADATION MIXTURE)	IL 9.5
FRICTION AGG	MIXTURE C

SPECIFIED BARS FOR TEST SAMPLES

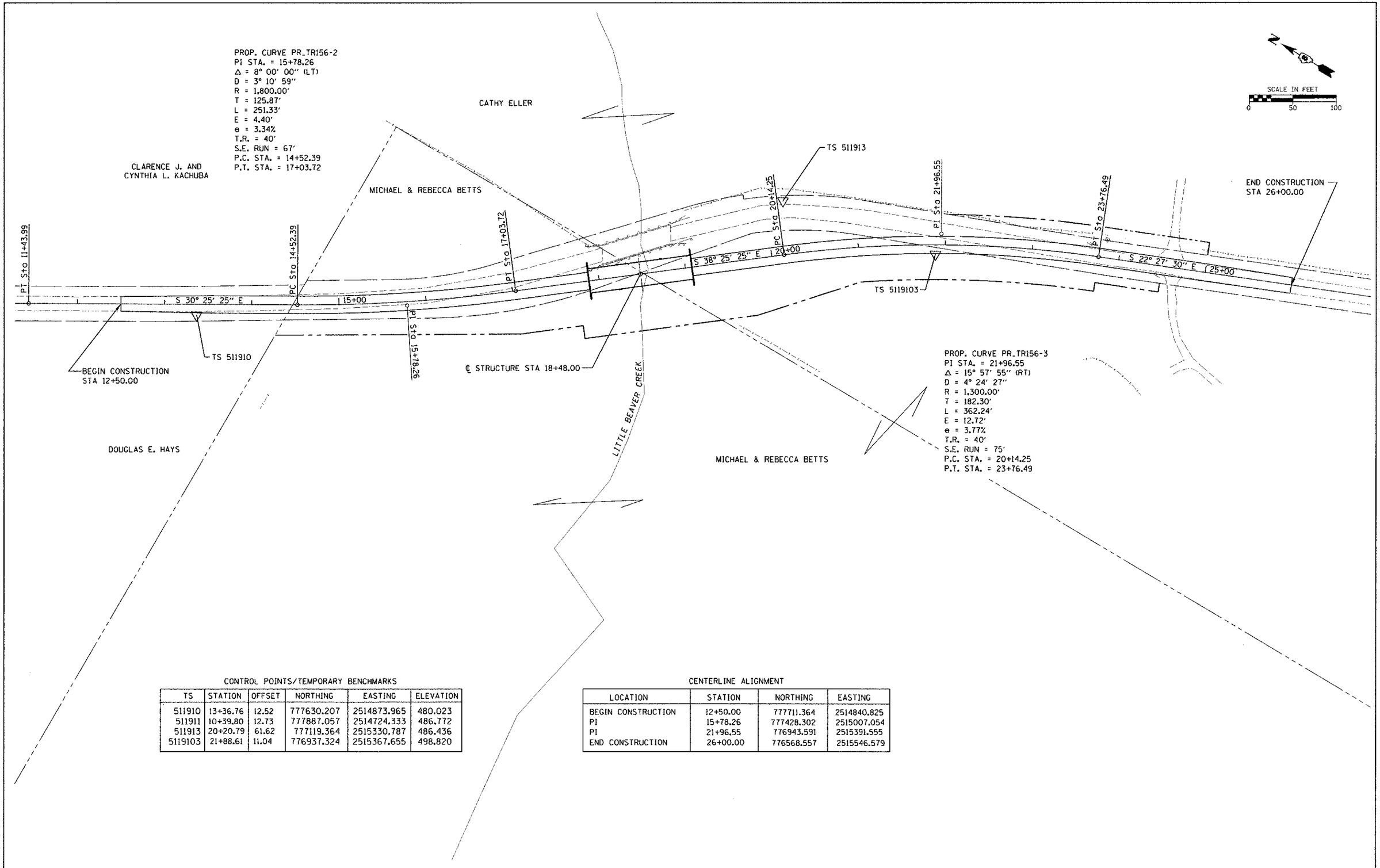
BAR	NO.	SIZE	LENGTH	SHAPE
h(E)	2	#7	10'-7"	
p_1(E)	1	#4	28'-2"	
u(E)	2	#6	11'-1"	
v(E)	2	#5	8'-9"	

THESE BARS SHALL BE IDENTICAL TO AND DELIVERED WITH THE BARS OF THE SAME MARK LISTED IN THE STRUCTURE SHEETS. ONE BAR OF EACH OF THESE MARKS WILL BE SELECTED BY THE ENGINEER TO BE USED AS A TEST SAMPLE. TEST BARS WILL NOT BE MEASURED FOR PAYMENT IN ACCORDANCE WITH ARTICLE 508.07 OF THE STANDARD SPECIFICATIONS.

THIS CHART ASSUMES THAT ALL BARS OF THE SAME SIZE ON THE JOB WILL HAVE THE SAME SOURCE. IF BARS OF THE SAME SIZE ON THE JOB HAVE DIFFERENT SOURCES, THEN THE CONTRACTOR SHALL SUPPLY ADDITIONAL BARS FROM OTHER SOURCES FOR SAMPLING BY THE ENGINEER AT NO ADDITIONAL COST.

FILE NAME = ...\SCHEDULES_5119.dgn	USER NAME = USERNAME	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SCHEDULES	TR	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED -			156	02-04116-00-BR	BOND	28	6
	PLOT SCALE = 200.0000 ' / IN.	CHECKED -	REVISED -				SN 003-3414	CONTRACT NO. 97521		
	PLOT DATE = 4/8/2013	DATE	REVISED -		SCALE:	SHEET NO. OF SHEETS STA.	TO STA.	ILLINOIS FED. AID PROJECT		

HMC NO. 5119



CONTROL POINTS/TEMPORARY BENCHMARKS

TS	STATION	OFFSET	NORTHING	EASTING	ELEVATION
511910	13+36.76	12.52	777630.207	2514873.965	480.023
511911	10+39.80	12.73	777887.057	2514724.333	486.772
511913	20+20.79	61.62	777119.364	2515330.787	486.436
5119103	21+88.61	11.04	776937.324	2515367.655	498.820

CENTERLINE ALIGNMENT

LOCATION	STATION	NORTHING	EASTING
BEGIN CONSTRUCTION	12+50.00	777711.364	2514840.825
PI	15+78.26	777428.302	2515007.054
PI	21+96.55	776943.591	2515391.555
END CONSTRUCTION	26+00.00	776568.557	2515546.579

FILE NAME = $FILEL$	USER NAME = $USER$	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = $SCALE$	CHECKED -	REVISED -
	PLOT DATE = $DATE$	DATE -	REVISED -

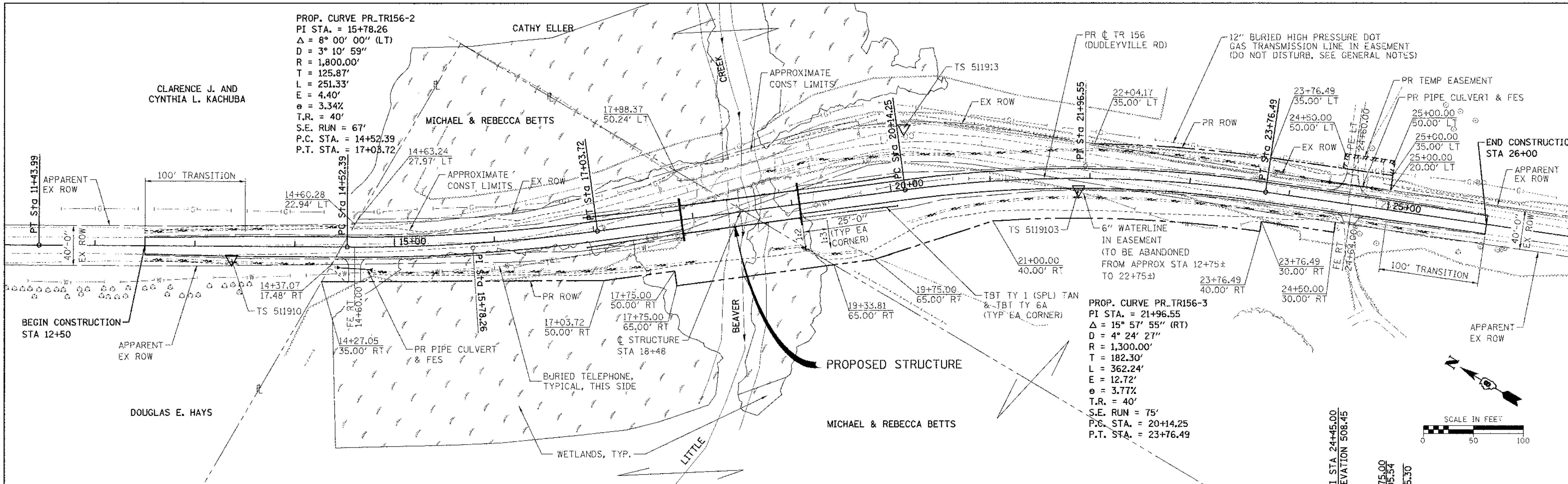
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

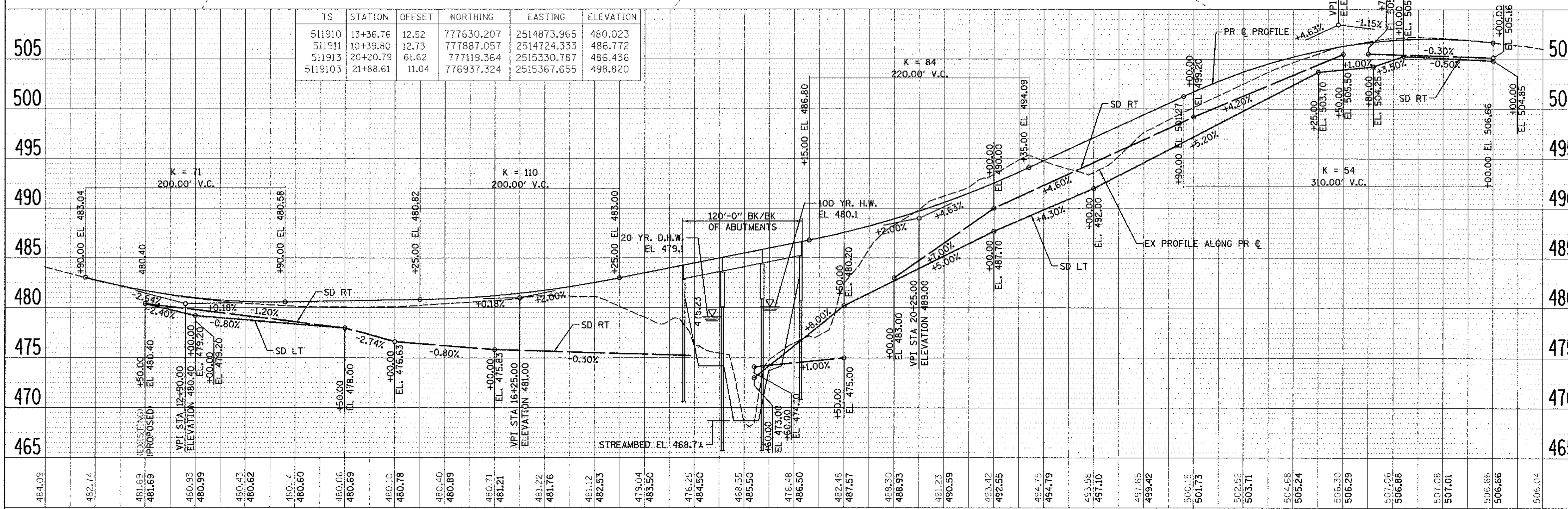
ALIGNMENT, TIES AND BENCHMARK

SCALE: | SHEET NO. OF SHEETS | STA. | TO STA.

TR	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
156	02-04116-00-BR	BOND	28	7
	SN 003-3414	CONTRACT NO. 97521		
	ILLINOIS FED. AID PROJECT			

HMG NO. 5119



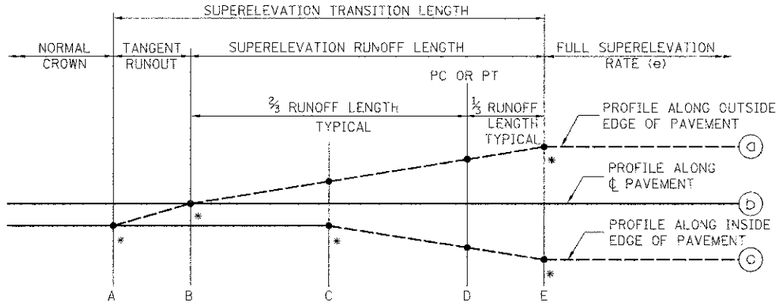


TS	STATION	OFFSET	NORTHING	EASTING	ELEVATION
511910	13+36.76	12.52	777630.207	2514873.965	480.023
511911	10+39.80	12.73	777887.057	2514724.333	486.772
511913	20+20.79	61.62	777119.364	2515330.787	486.436
5119103	21+88.61	11.04	776937.324	2515367.655	498.820

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE PROPOSED ROADWAY

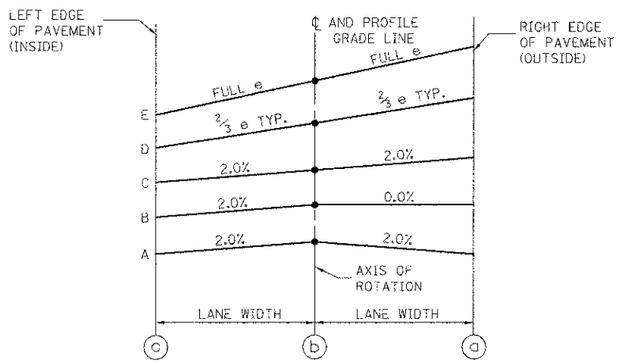
TR	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
156	02-04116-00-BR	BOND	28	8
	SN 003-3414	CONTRACT NO. 97521		



* ROUND ALL BREAKPOINTS IN FIELD

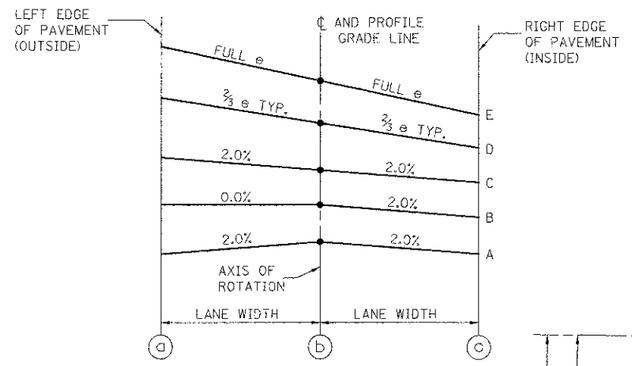
POINTS	CURVE 2		CURVE 3	
E	14+79	16+72	20+43	23+47
D	14+52.39	17+03.72	20+14.25	23+76.49
C	14+52	16+99	20+08	23+82
B	14+12	17+39	19+68	24+22
A	13+72	17+79 NON-TYPICAL DUE TO PROXIMITY TO BRIDGE	19+28	24+62

SUPERELEVATION DETAILS



SUPERELEVATION DETAILS

LEFT CURVE



SUPERELEVATION DETAILS

RIGHT CURVE

PROPOSED CURVE 2

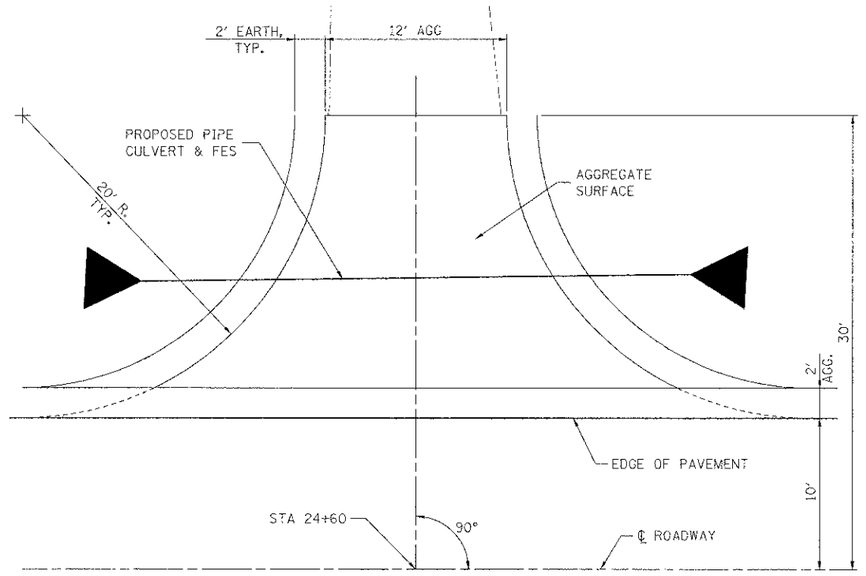
	STA	LT EOS	LT EOP	PGE	RT EOP	RT EOS
	13+50.	480.30	480.42	480.62	480.42	480.30
	13+75.	480.25	480.37	480.57	480.38	480.26
	14+00.	480.28	480.40	480.60	480.54	480.42
	14+25.	480.32	480.44	480.64	480.71	480.59
	14+50.	480.37	480.49	480.69	480.88	480.76
	14+75.	480.30	480.42	480.73	481.05	480.93
	15+00.	480.32	480.44	480.78	481.11	480.99
	15+25.	480.37	480.49	480.82	481.15	481.03
	15+50.	480.44	480.56	480.89	481.23	481.11
	15+75.	480.57	480.69	481.02	481.36	481.24
	16+00.	480.76	480.88	481.21	481.55	481.43
	16+25.	481.00	481.12	481.46	481.79	481.67
#	16+50.	481.22	481.42	481.76	482.09	481.89
#	16+75.	481.34	481.79	482.11	482.43	481.98
#	17+00.	481.85	482.33	482.53	482.72	482.24
#	17+25.	482.32	482.80	483.00	483.07	482.59
#	17+50.	482.82	483.30	483.50	483.44	482.96
#	17+75.	483.32	483.80	484.00	483.82	483.34
#	17+88.	483.99	484.10	484.26	484.10	483.99

* Indicates Sections within Guardrail Widening and/or Transitions.

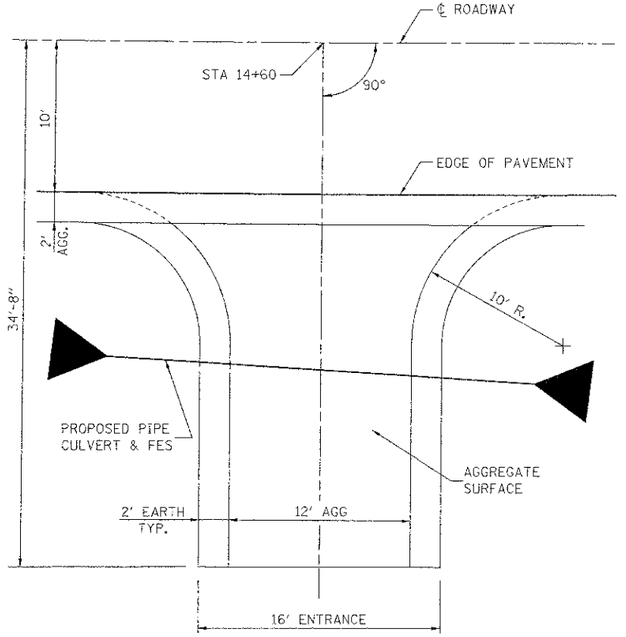
PROPOSED CURVE 3

	STA	LT EOS	LT EOP	PGE	RT EOP	RT EOS
#	19+25.	486.33	486.81	487.01	486.81	486.33
#	19+50.	487.00	487.48	487.57	487.37	486.89
#	19+75.	487.77	488.25	488.22	488.02	487.54
#	20+00.	488.61	489.09	488.93	488.73	488.25
#	20+25.	489.60	490.01	489.72	489.44	489.03
#	20+50.	490.81	490.97	490.59	490.21	490.05
	20+75.	491.73	491.91	491.53	491.16	491.04
	21+00.	492.81	492.93	492.55	492.17	492.05
	21+25.	493.90	494.02	493.64	493.26	493.14
	21+50.	495.05	495.17	494.79	494.42	494.30
	21+75.	496.21	496.33	495.95	495.58	495.46
	22+00.	497.37	497.49	497.11	496.73	496.61
	22+25.	498.53	498.65	498.27	497.89	497.77
	22+50.	499.69	499.81	499.43	499.05	498.93
	22+75.	500.85	500.97	500.59	500.21	500.09
	23+00.	501.99	502.11	501.74	501.36	501.24
	23+25.	503.05	503.17	502.79	502.41	502.29
	23+50.	503.97	504.09	503.73	503.36	503.24
	23+75.	504.66	504.78	504.54	504.31	504.19
	24+00.	505.23	505.35	505.24	505.04	504.92
	24+25.	505.69	505.81	505.82	505.62	505.50
	24+50.	506.03	506.15	506.29	506.09	505.97
	24+75.	506.31	506.43	506.63	506.43	506.31

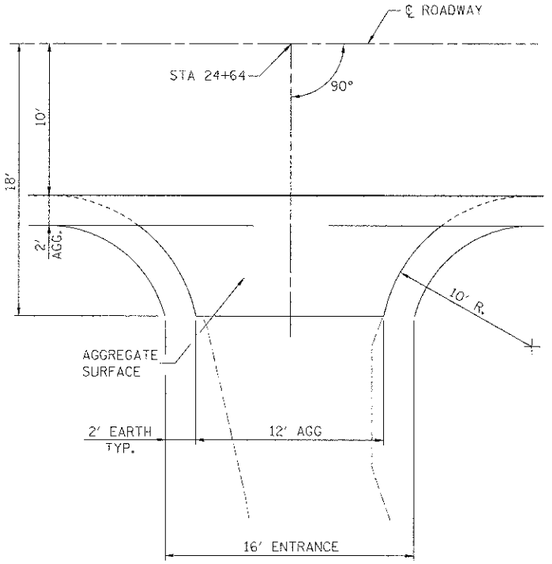
* Indicates Sections within Guardrail Widening and/or Transitions.



PE LT
STA 24+60



FE RT
STA 14+60



FE RT
STA 24+64

FILE NAME -	USER NAME - JUSERDESCR	DESIGNED -	REVISED -	
		DRAWN -	REVISED -	
	PLOT SCALE = 5.8889 ' / IN.	CHECKED -	REVISED	
	PLOT DATE = 4/5/2013	DATE	REVISED	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROADWAY AND ENTRANCE DETAILS

SCALE: | SHEET NO. OF SHEETS | STA. | TO STA.

TR	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
156	02-04116-00-BR	BOND	28	9
	SN 003-3414	CONTRACT NO. 97521		
	ILLINOIS FED. AID PROJECT			

HMG NO. 5119

CATHY A. ELLER

CLARENCE J. AND
CYNTHIA L. KACHUBA

THE CONTRACTOR SHALL NOTE THE CLOSE PROXIMITY OF THE 12" GAS LINE TO THE EXISTING ABUTMENT AND EXERCISE CARE IN EXISTING STRUCTURE REMOVAL AND CONSULT AMEREN AND THE ENGINEER AS REQUIRED.

MICHAEL & REBECCA BETTS

12" BURIED HIGH PRESSURE DOT GAS TRANSMISSION LINE IN EASEMENT (DO NOT DISTURB, SEE GENERAL NOTES)

EX ℄ TR 156
(DUDLEYVILLE RD)

REMOVE EXISTING FENCE AS REQUIRED AND AS DIRECTED BY THE ENGINEER. ALL COSTS SHALL BE INCLUDED IN EARTH EXCAVATION. SEE GENERAL NOTES.

REMOVE EXISTING ROW MARKERS WITHIN PROJECT LIMITS. ALL COSTS SHALL BE INCLUDED IN COST OF EARTH EXCAVATION. SEE GENERAL NOTES.

EXISTING 15" CMP CULVERT TO BE REMOVED

EX ROW

40' EX ROW

EX ROW VARIES 40'-61'±

6" WATERLINE IN EASEMENT (TO BE ABANDONED)

EXISTING 15" RCP CULVERT TO BE REMOVED

REMOVE EXISTING GUARDRAIL. ALL COSTS SHALL BE INCLUDED IN COST OF REMOVAL OF STRUCTURES, SEE GENERAL PLAN AND ELEVATION AND GENERAL NOTES.

BURIED TELEPHONE, TYPICAL, THIS SIDE

DOUGLAS E. HAYS

MICHAEL & REBECCA BETTS

CREEK

BEAVER

LITTLE

N

SCALE IN FEET
0 50 100

505
500
495
490
485
480
475
470
465

100 YR. H.W.
EL 480.1

20 YR. D.H.W.
EL 479.1

EX PROFILE ALONG EX ℄

EXISTING

484.09 482.74 481.69 480.93 480.47 480.21 480.17 480.14 480.44 480.73 481.27 481.91 482.30 482.69 468.12 482.96 484.20 485.42 487.87 490.38 492.68 494.97 497.24 499.57 501.93 504.23 506.00 506.96 507.16 506.80 506.23

12+00 13+00 14+00 15+00 16+00 17+00 18+00 19+00 20+00 21+00 22+00 23+00 24+00 25+00 26+00

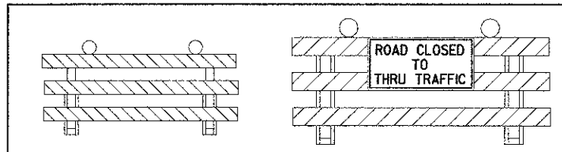
FILE NAME:	USER NAME = USERDESIGN	DESIGNED -	REVISED
	PLOT SCALE = 50.0000 ' / IN.	DRAWN -	REVISED
	PLOT DATE = 4/19/2013	CHECKED -	REVISED
		DATE	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

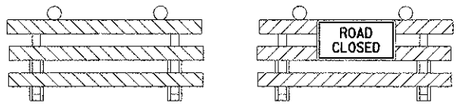
PLAN & PROFILE EXISTING ROADWAY & REMOVALS

SCALE: | SHEET NO. OF SHEETS | STA. | TO STA.

TR RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
156	02-04116-00-BR	BOND	28	10
	SN 003-3414	CONTRACT NO. 97521		
	ILLINOIS FED. AID PROJECT			



LOCATION Ⓑ



LOCATION Ⓐ

NOTES:

1. ENGINEER MAY MODIFY SIGN PLACEMENT TO MEET FIELD CONDITIONS.
2. ALL ADVANCED WARNING SIGNS SHALL BE 48" x 48" AND HAVE A BLACK LEGEND ON A FLUORESCENT ORANGE REFLECTORIZED BACKGROUND.
3. ALL ADVANCED WARNING SIGNS SHALL INCLUDE LOW INTENSITY FLASHING LIGHTS.
4. DETOUR SIGNING ASSEMBLY SHALL MAINTAIN THE HEIGHT TO THE BOTTOM OF THE LOWEST SIGN NO LESS THAN 5 FEET ABOVE THE EDGE OF PAVEMENT.
5. ALL TYPE III BARRICADES SHALL REQUIRE A MINIMUM OF FOUR SANDBAGS PER BARRICADE FOR STABILIZATION.
6. AT LOCATIONS WHERE TYPE III BARRICADES ARE STAGGERED THE "ROAD CLOSED TO THRU TRAFFIC" SIGN SHALL BE PLACED ON THE FRONT BARRICADE.
7. ALL ITEMS OF WORK INVOLVED WITH THE ROAD CLOSURE WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER LUMP SUM FOR TRAFFIC CONTROL AND PROTECTION, (SPECIAL).
8. THE CONTRACTOR SHALL NOTIFY THE RESIDENT ENGINEER 72 HOURS PRIOR TO CLOSURE.

N

DETOUR MAP WITH SIGNING

LEGEND

T POST MOUNTED SIGN

FLASHING LIGHT

* INDICATES 200' TYPICAL TO FIRST SIGN OR TO MEET FIELD CONDITIONS.

FILE NAME =	USER NAME = USERDESGR.	DESIGNED - K.M.M	REVISED	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DETOUR MAP	TR	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
R:\SURVEY\...\DetourPlan_SIGN.dgn		DRAWN - K.H.L.	REVISED			156	02-04116-00-BR	BOND	28	11
	PLOT SCALE = 242.0000 ' / IN.	CHECKED - L.O.G.	REVISED				SN 003-3414	CONTRACT NO. 97521		
	PLOT DATE = 4/4/2013	DATE	REVISED		SCALE:	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	ILLINOIS FED. AID PROJECT	

CLARENCE J. &
CYNTHIA L. KACHUBA

MICHAEL &
REBECCA BETTS

CATHY A. ELLER

DOUGLAS E. HAYS

MICHAEL &
REBECCA BETTS

CATHY A. ELLER

MICHAEL &
REBECCA BETTS

BEGIN CONSTRUCTION
STA. 12+50

40' EX ROW

SPECIAL DITCH, RT

EXISTING WATER MAIN

SPECIAL DITCH, LT

20' GAS EASEMENT, TYP.

LIMITS OF CONSTRUCTION

EX ROW

15+00

FE RT
STA 14+60

PROPOSED
PIPE CULVERT
& FES

EX ROW

20' WATER EASEMENT TYP.

PR ROW VARIES

60' EX ROW

LIMITS OF CONSTRUCTION

RE-GRADE DITCH

BEAVER CREEK

℄ STRUCTURE
STA. 18+48

SPECIAL DITCH, LT

EXISTING 12" BURIED HIGH
PRESSURE DOT GAS TRANSMISSION
LINE IN EASEMENT (DO NOT
DISTURB, SEE GENERAL NOTES)

SPECIAL DITCH, RT

MATCHLINE STA 20+00

PROPOSED STRUCTURE

LITTLE

PR ROW

SCALE IN FEET
0 30 60

N

TREE PLANTING LEGEND

PROPOSED TREE

EROSION CONTROL LEGEND

PERIMETER EROSION BARRIER
AGGREGATE DITCH CHECK
TEMPORARY DITCH CHECK
FLOW DIRECTION
INLET & PIPE PROTECTION

GENERAL NOTES:

1. LAYOUT OF TREES MAY BE ADJUSTED IN THE FIELD BY THE ENGINEER FOR VARYING GROUND CONDITIONS.

SPECIAL DITCH, LT

EXISTING 12" BURIED HIGH
PRESSURE DOT GAS TRANSMISSION
LINE IN EASEMENT (DO NOT
DISTURB, SEE GENERAL NOTES)

PR ROW

MATCHLINE STA 20+00

20+00

PR ROW

EXISTING WATER MAIN

75' PR ROW

20' WATER EASEMENT, TYP.

SPECIAL DITCH, RT

PROPOSED
PIPE CULVERT
& FES

FE LT
STA 24+60

PROPOSED TEMPORARY
CONSTRUCTION EASEMENT

65' PR ROW

20' GAS EASEMENT, TYP.

25+00

FE RT
STA 24+64

END CONSTRUCTION
STA. 26+00

40' EX ROW

SCALE IN FEET
0 30 60

N

RIPRAP

6" SADDLE

24" MIN. OR AS APPLICABLE

ELEVATION

FLOW

24"

6'± MIN.

PLAN

AGGREGATE DITCH CHECK

GENERAL NOTES:

1. CONTRACTOR SHALL CONSULT JOB SPECIFICATIONS FOR MORE INFORMATION.
2. LAYOUT OF EROSION CONTROL MEASURES MAY BE ADJUSTED IN FIELD BY ENGINEER FOR VARYING GROUND CONDITIONS.
3. AGGREGATE DITCH CHECKS SHALL BE PLACED ACCORDING TO THE DETAILS SHOWN ON THIS SHEET AND AS DIRECTED BY THE ENGINEER.
4. TEMORARY DITCH CHECKS SHALL BE URETHANE FOAM/GEOTEXTILE DITCH CHECKS.
5. HAY OR STRAW BALES SHALL NOT BE USED FOR DITCH CHECKS.
6. CONTRACTOR SHALL PROVIDE STABILIZED CONSTRUCTION ENTRANCES AS NECESSARY TO MINIMIZE OFF SITE VEHICLE TRACKING OF SOIL AND DEBRIS. SEE SPECS.
7. ALL DISTURBED AREAS SHALL RECEIVE TEMPORARY EROSION CONTROL SEEDING AS DESCRIBED IN SPECS. UNTIL PERMANENT STABILIZATION CAN BE PERFORMED.
8. THE COUNTY WILL ASSUME RESPONSIBILITY FOR MAINTAINING EROSION CONTROL MEASURES THROUGH FINAL STABILIZATION AFTER IDOT ACCEPTANCE OF WORK BY CONTRACTOR.

FILE NAME =	USER NAME = USERNAME	DESIGNED - K.M.M	REVISED -
		DRAWN - K.H.L.	REVISED -
	PLOT SCALE = 100.0000 ' / IN.	CHECKED L.D.G.	REVISED -
	PLOT DATE = 4/5/2013	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TREE PLANTING AND EROSION CONTROL PLAN

SCALE: | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

TR	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
156	02-04116-00-BR	BOND	28	12
	SN 003-3414	CONTRACT NO. 97521		
	ILLINOIS FED. AID PROJECT			

HMG ENGINEERS, INC. LAKE RD., P.O. BOX 70 CARLYLE, IL 62231 (618) 594-3711 WWW.HMGENGINEERS.COM

HMG NO 5119

BENCHMARK: TBM — R.R. Spike in 16" Elm Tree, Sta. 19+38.4, 60' Lt., El. 477.58

EXISTING STRUCTURE

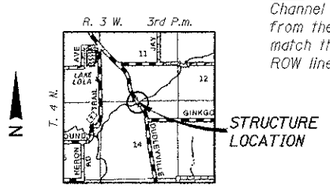
SN 003-3405

Existing structure consists of a three span precast concrete bridge deck supported on pile bent piers and closed pile bent abutments measuring 83.3' back to back of abutments and 22.7' out to out of bridge deck. Approximately 100' of approach guardrail shall be removed as part of Removal of Existing Structures.

The Contractor shall remove and dispose of the existing structure in accordance with Section 501 of the Standard Specifications.

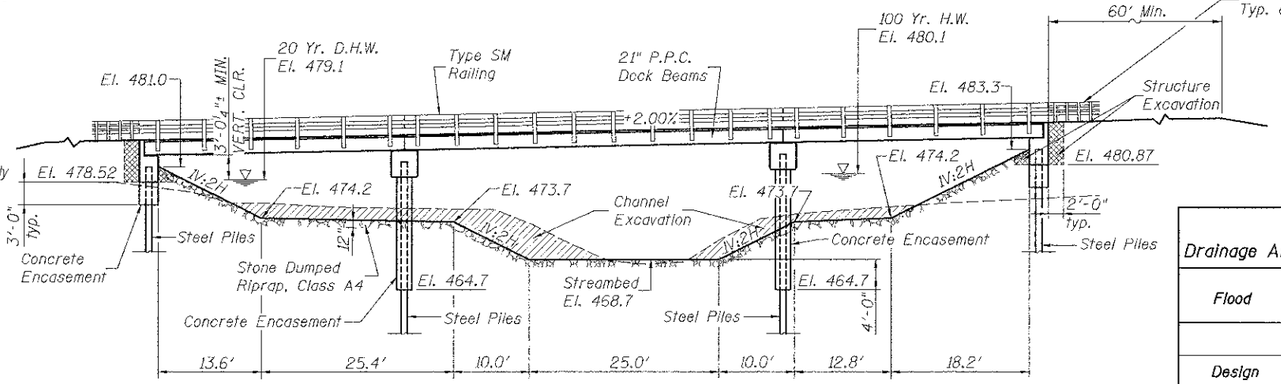
The existing roadway will be closed to traffic during the construction period.

SALVAGE: No Salvage



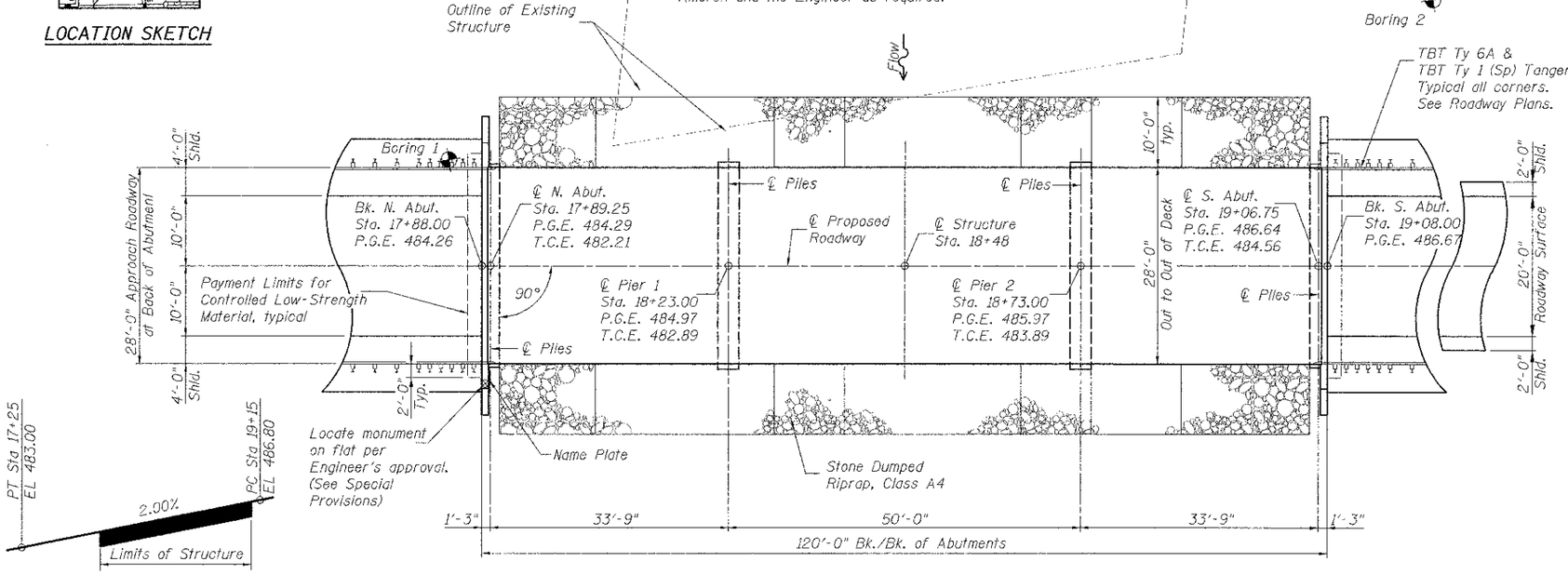
LOCATION SKETCH

Note: Channel excavation shall be transitioned from the edge of the proposed deck to match the existing channel at the ROW line.



ELEVATION

The contractor shall note the close proximity of the 12" gas line to the existing abutment and exercise care in existing structure removal and proposed construction. Consult Ameren and the Engineer as required.



PROFILE GRADE

Along Proposed ℄ TR 156 (Dudleyville Rd.)

T.C.E. = Top of Cap Elevation

PLAN

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (Feet)	N. Abut.	Pier 1	Pier 2	S. Abut.
	475.52	464.70	464.70	477.87

WATERWAY INFORMATION

Drainage Area = 13.3 Sq. Mi.

Existing Overtopping El. = 480.2 @ Sta. 14+50

Proposed Overtopping El. = 480.57 @ Sta. 13+75

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
	10	2,270	568	616	478.6	0.2	0.1	478.8	478.7
Design	20	2,780	603	659	479.1	0.3	0.2	479.4	479.3
Base	100	4,230	706	766	480.1	0.7	0.5	480.8	480.6
Overtop Exist.	23±	2,950	613	N/A	479.2	0.3	N/A	479.5	N/A
Overtop Prop.	50±	3,650	N/A	723	479.7	N/A	0.3	N/A	480.0
Max. Calc.	N/A								

INDEX OF BRIDGE SHEETS

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER.	SUB.	TOTAL
Channel Excavation	Cu. Yd.	———	———	901
Stone Dumped Riprap, Class A4	Ton	———	———	345
Hot-Mix Asphalt Surface Course, Mix "C", N50	Ton	62	———	62
Removal of Existing Structures	Each	———	———	1
Structure Excavation	Cu. Yd.	———	74	74
Concrete Structures	Cu. Yd.	———	53.8	53.8
Concrete Encasement	Cu. Yd.	———	32.7	32.7
Prec. Pres. Conc. Dk. Bms. (21" Depth)	Sq. Ft.	3,318	———	3,318
Reinforcement Bars, Epoxy Coated	Pound	———	7,560	7,560
Steel Railing, Type SM	Foot	240	———	240
Furnishing Steel Piles HP 10x42	Foot	———	370	370
Furnishing Steel Piles HP 12x63	Foot	———	368	368
Driving Piles	Foot	———	738	738
Test Pile Steel HP 10x42	Each	———	1	1
Test Pile Steel HP 12x63	Each	———	1	1
Name Plates	Each	———	———	1
Waterproofing Membrane System	Sq. Yd.	370	———	370
Portland Cement Mortar Fairing Course	Foot	712	———	712
Controlled Low-Strength Material	Cu. Yd.	———	———	23.8
Asbestos Bearing Pad Removal	Foot	———	42	42

DESIGN SPECIFICATIONS

2010 AASHTO LRFD Bridge Design Specifications

LOADING HL-93

Allow 50 p.s.f. for future wearing surface

DESIGN STRESSES

PRECAST PRESTRESSED UNITS

f'c = 6,000 p.s.i.
f'ci = 5,000 p.s.i.
f's = 270,000 p.s.i.
f'si = 201,960 p.s.i.

FIELD UNITS

f'c = 3,500 p.s.i.
fy = 60,000 p.s.i. (reinf.)
fy = 50,000 p.s.i. (M270 Grade 50)

SEISMIC DATA

Seismic Performance Zone (SPZ): 2
Design Spectral Acceleration at 1.0 sec. (S_{D1}): = 0.242 g
Design Spectral Acceleration at 2.0 sec. (S_{DS}): = 0.546 g
Soil Site Class = D

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

Bradley G. Hummert Date: 4/8/13

Bradley G. Hummert
Licensed Structural Engineer
in Illinois No. 081-005428

Expires: November 30, 2014

BRADLEY G. HUMMERT 081-005428 LICENSED STRUCTURAL ENGINEER STATE OF ILLINOIS CARLYLE

GENERAL PLAN & ELEVATION
TR 156 (DUDLEYVILLE ROAD)
OVER LITTLE BEAVER CREEK
SECTION 02-04116-00-BR
BOND COUNTY
STATION 18+48
SN 003-3414

FILE NAME =	USER NAME = USERUSER	DESIGNED - K.M.M	REVISED -
		DRAWN - K.H.L.	REVISED -
	PLOT SCALE = 10.0000 '/ IN.	CHECKED - L.D.G.	REVISED -
	PLOT DATE = 4/8/2013	DATE	REVISED -

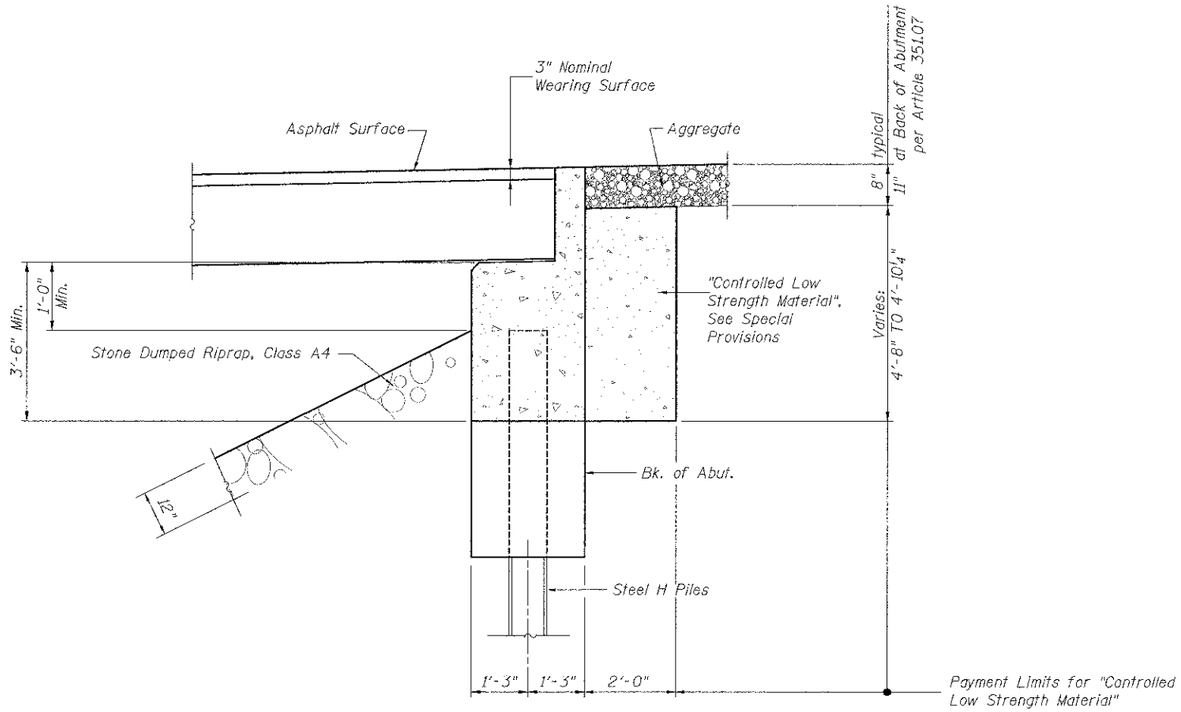
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN & ELEVATION

SCALE: | SHEET NO. 1 OF 10 SHEETS | STA. | TO STA.

TR	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
156	02-04116-00-BR	BOND	28	13
	SN 003-3414	CONTRACT NO. 97521		
	ILLINOIS FED. AID PROJECT			

HMG NO 5119



SECTION THRU ABUTMENT

GENERAL NOTES

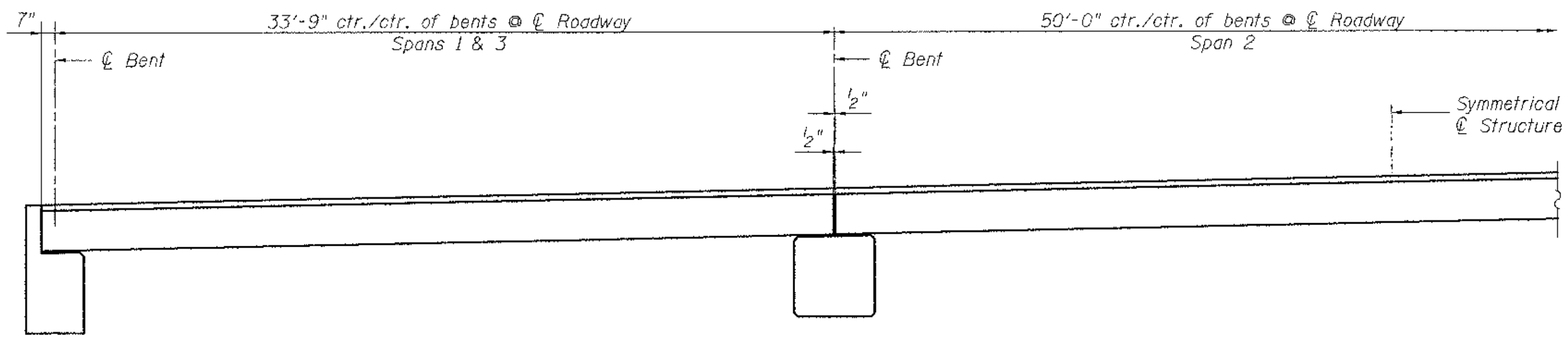
1. The Contractor shall drive two (2) test piles, one at the South Abutment and one at Pier 1, in permanent locations, as directed by the Engineer, before ordering remaining piles.
2. Hot-mix asphalt surface course overlay for the bridge deck shall be constructed in accordance with applicable portions of Section 582 of the Standard Specifications.
3. Waterproofing membrane system for the bridge shall be in accordance with material and construction requirements of the applicable portions of Section 581 of the Standard Specifications.
4. Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.
5. Reinforcement bars designated (E) shall be epoxy coated.
6. Deck beams shall be cleaned to the satisfaction of the Engineer before placing the waterproofing membrane system.
7. The embankment configuration shown shall be the minimum that must be placed and compacted prior to construction of the abutments.
8. Locate survey monument on flat area of bridge wingwall per Engineer's approval. (See Special Provisions)

Little Beaver Creek
Built 201 by
Bond County
Section 02-04116-00-BR
Proj. No. BROS-0005(125)
Station 18+48
SN 003-3414 Loading HL 93

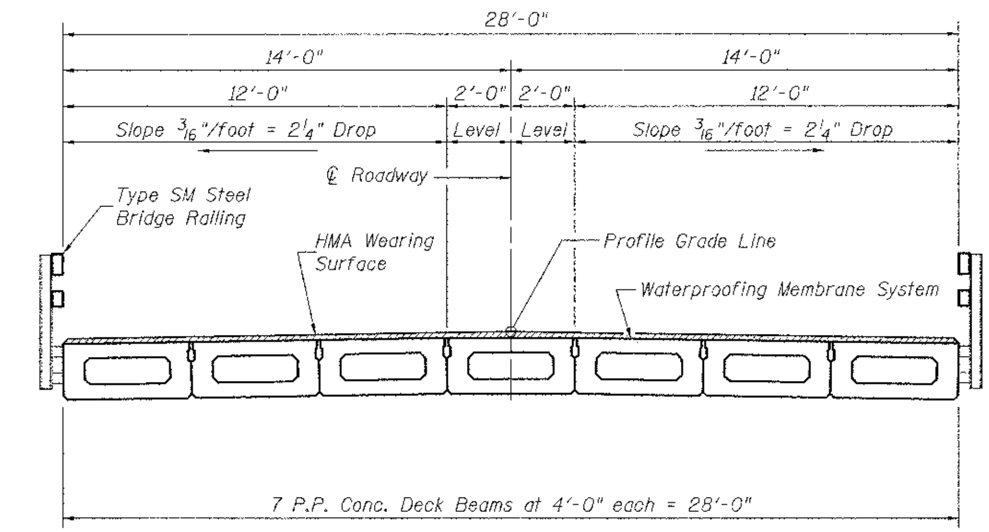
NAME PLATE

Locate Name Plate as shown in Plan View. See Std. 515001.

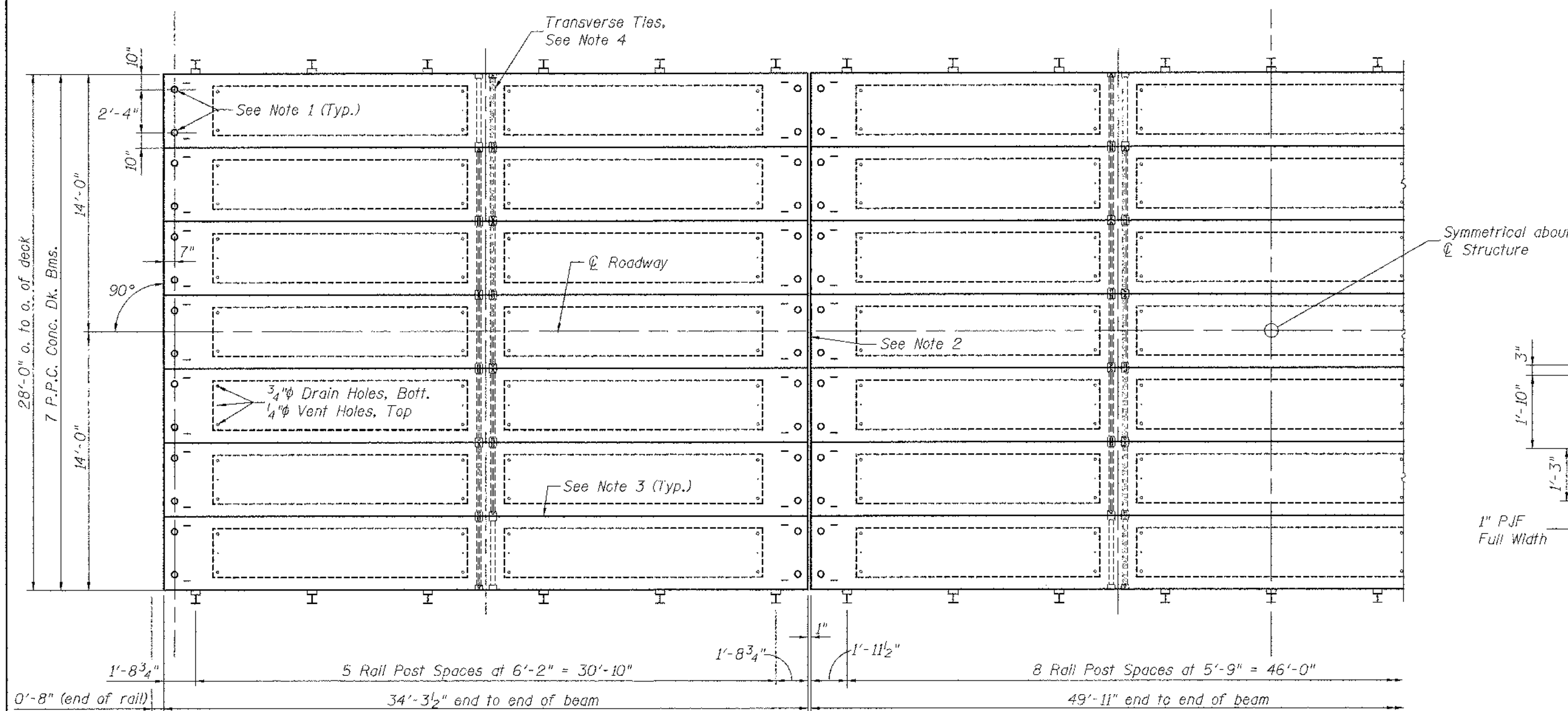
FILE NAME: h:\511\Structure\sn003414_detail02_5119.dgn	USER NAME = USERPROFILE	DESIGNED - K.M.M	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL DATA	TR	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN - K.M.L.	REVISED -			156	02-04116-00-BR	BOND	28	14
	PLOT SCALE = 10.0000 ' / IN.	CHECKED - L.O.G.	REVISED -		SCALE:	SHEET NO. 2 OF 10 SHEETS	STA.	TO STA.	SN 003-3414	CONTRACT NO. 97521
	PLOT DATE = 2/8/2013	DATE -	REVISED -						ILLINOIS FED. AID PROJECT	



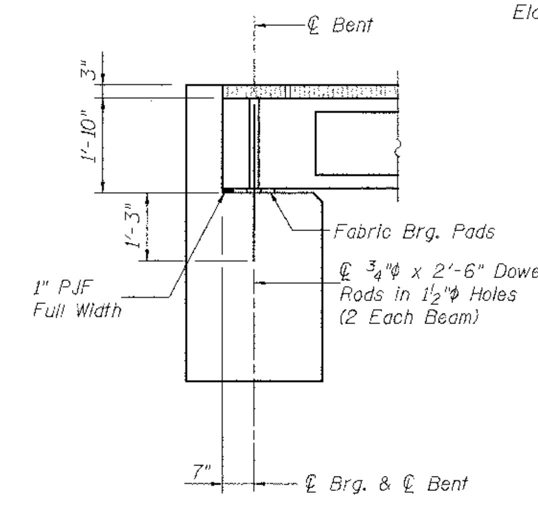
PARTIAL ELEVATION



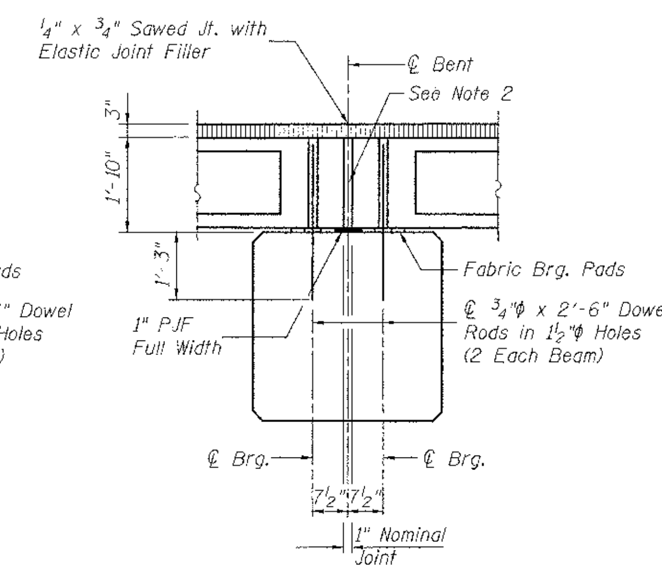
CROSS SECTION



PARTIAL PLAN



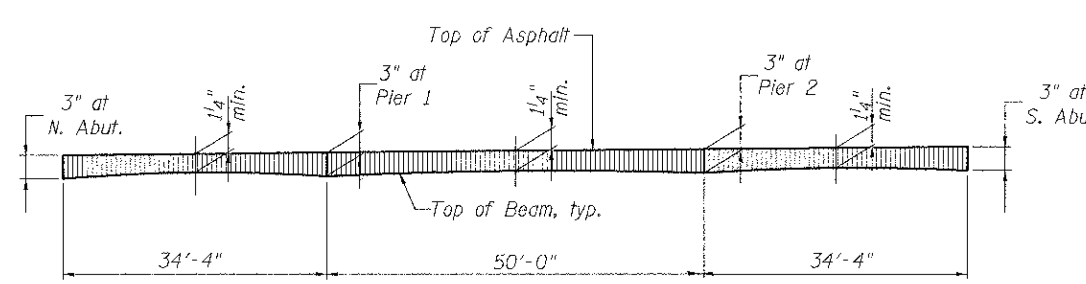
SECTION AT ABUTS.
(Along ℄ Beams)



SECTION AT PIERS
(Along ℄ Beams)

NOTES

1. After beams have been erected, holes shall be drilled into substructure and anchor dowels placed. Dowel holes shall be filled with non-shrink grout to top of beam and allowed to cure min. 24 hrs. prior to grouting the shear keys.
2. Nominal 1" joint at ℄ Pier shall be filled with non-shrink grout. 1" Dimension may vary to accomodate tolerance in beam lengths.
3. Longitudinal keys shall be grouted.
4. The 1"φ rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets that receive transverse tie bars outside shall be filled with grout after transverse tie assembly is in place.



PROFILE OF OVERLAY

BILL OF MATERIAL

Item	Unit	Quantity
Portland Cement Mortar Fairing Course	Foot	712
Waterproofing Membrane System	Sq. Yd.	370
Hot-Mix Asphalt Surf. Cse., Mix "C", N50	Ton	62

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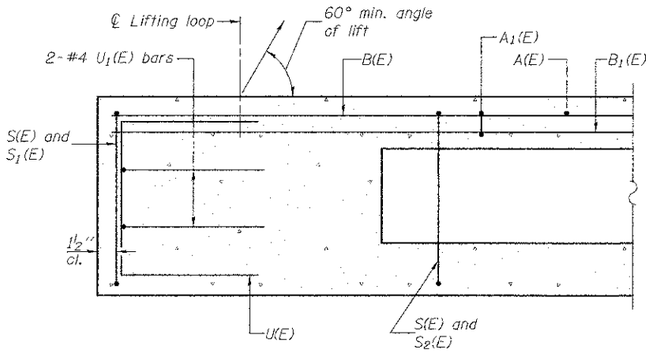
	PLOT SCALE = 4.0000 ' / IN.	DRAWN - K.H.L.	REVISED -	
	PLOT DATE = 4/8/2013	CHECKED - L.D.G.	REVISED -	
		DATE -	REVISED -	

SUPERSTRUCTURE

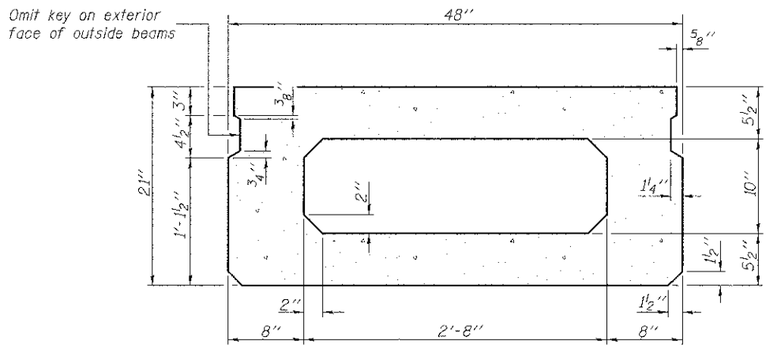
SCALE: | SHEET NO. 3 OF 10 SHEETS | STA. TO STA.

TR	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
156	02-04116-00-BR	BOND	28	15
	SN 003-3414	CONTRACT NO. 97521		
	ILLINOIS FED. AID PROJECT			

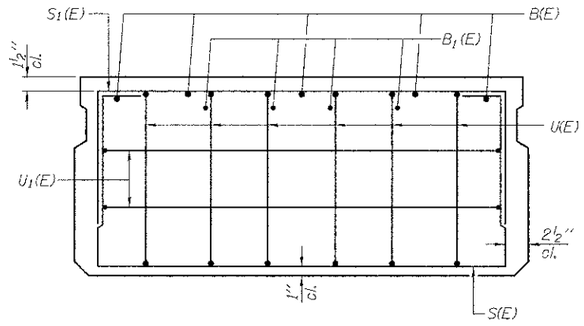
HMG NO 5119



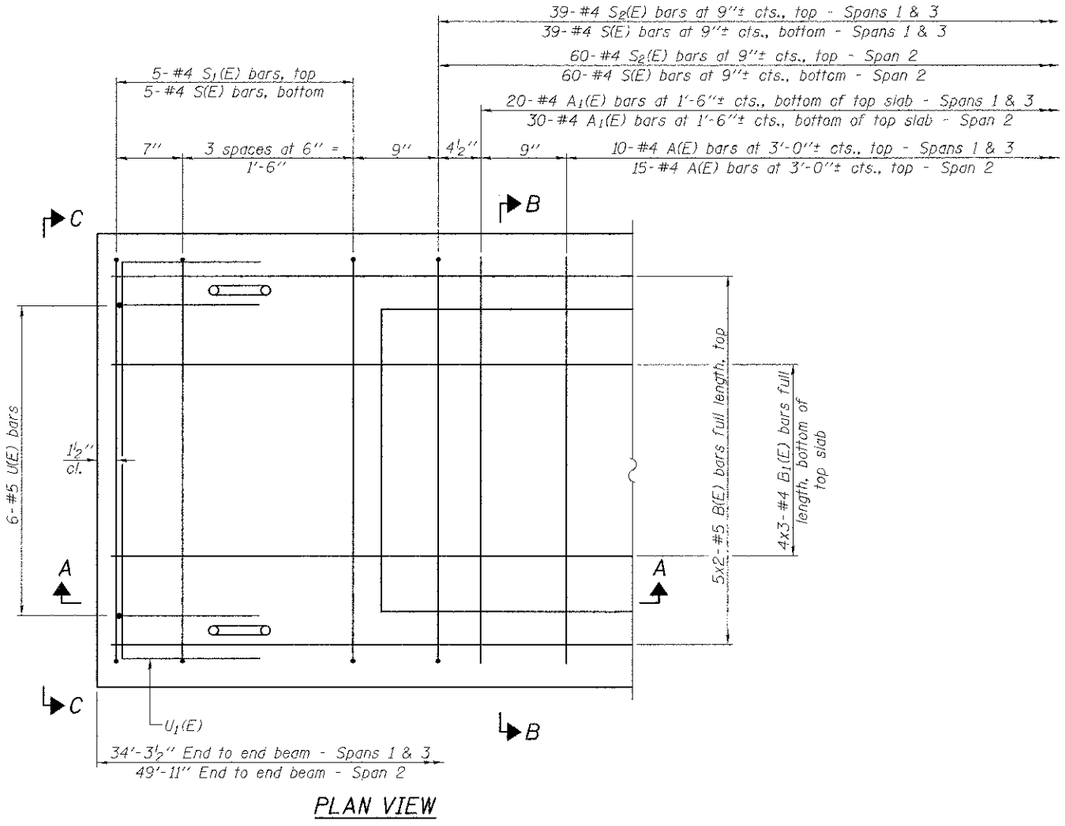
SECTION A-A



SECTION B-B
(Showing dimensions)



VIEW C-C

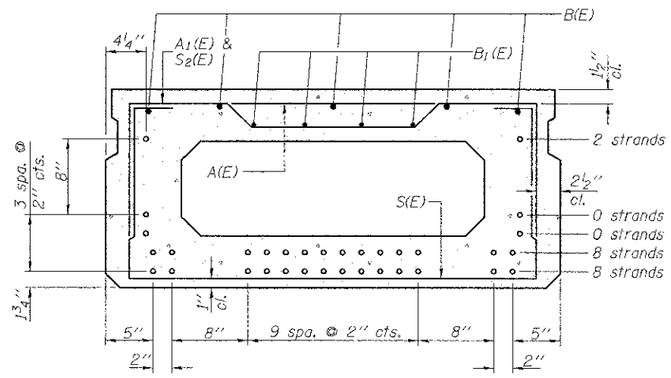


PLAN VIEW

Note: Spacing of S(E) and S_2(E) bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.

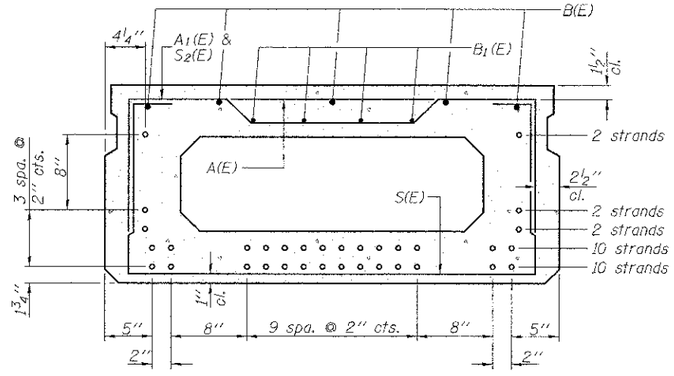
MINIMUM BAR LAP

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



SECTION B-B - SPANS 1 & 3
(Showing reinforcement and permissible strand locations)

18 -½"Φ Strands
(8 Strands $1\frac{3}{4}$" up, 8 Strands $3\frac{3}{4}$" up,
2 Strands $15\frac{3}{4}$" up)



SECTION B-B - SPANS 2
(Showing reinforcement and permissible strand locations)

26 -½"Φ Strands
(10 Strands $1\frac{3}{4}$" up, 10 Strands $3\frac{3}{4}$" up,
2 Strands $5\frac{3}{4}$" up, 2 Strands $7\frac{3}{4}$" up, 2 Strands $15\frac{3}{4}$" up)

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

BAR LIST - SPANS 1 & 3
ONE BEAM ONLY
(For Information Only)

Bar	No.	Size	Length	Shape
A(E)	10	#4	3'-7"	—
A_1(E)	20	#4	3'-10"	~
B(E)	10	#5	18'-4"	—
B_1(E)	12	#4	12'-9"	—
S(E)	49	#4	7'-5"	⊔
S_1(E)	10	#4	5'-11"	⊓
S_2(E)	39	#4	6'-2"	⊓
U(E)	12	#5	4'-0"	⊏
U_1(E)	4	#4	6'-0"	⊓

Note: See sheet 5 of 10 for additional details and Bill of Material.

BAR LIST - SPANS 2
ONE BEAM ONLY
(For Information Only)

Bar	No.	Size	Length	Shape
A(E)	15	#4	3'-7"	—
A_1(E)	30	#4	3'-10"	~
B(E)	10	#5	26'-1"	—
B_1(E)	12	#4	17'-11"	—
S(E)	70	#4	7'-5"	⊔
S_1(E)	10	#4	5'-11"	⊓
S_2(E)	60	#4	6'-2"	⊓
U(E)	12	#5	4'-0"	⊏
U_1(E)	4	#4	6'-0"	⊓

Note: See sheet 5 of 10 for additional details and Bill of Material.

PD-2148-0 7-1-10

FILE NAME =	USER NAME = JUSERDESGR.	DESIGNED - K.M.M	REVISED -
		DRAWN - K.H.L.	REVISED -
	PLOT SCALE = 3.0000 ' / IN.	CHECKED - L.D.G.	REVISED -
	PLOT DATE = 4/5/2013	DATE -	REVISED -

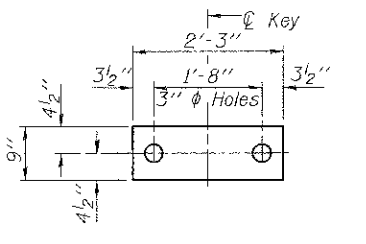
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

21" x 48" PPC DECK BEAM

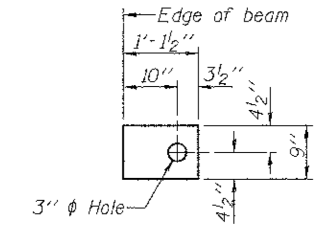
SCALE: | SHEET NO. 4 OF 10 SHEETS | STA. | TO STA.

TR	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
156	02-04116-00-BR	BOND	28	16
	SN 003-3414	CONTRACT NO. 97521		
	ILLINOIS FED. AID PROJECT			

HMG NO 5119



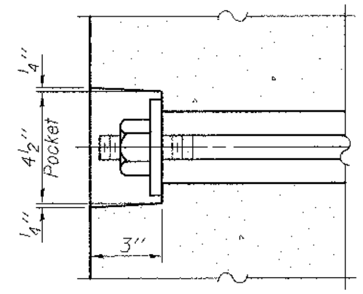
FABRIC BEARING PAD
(Interior)



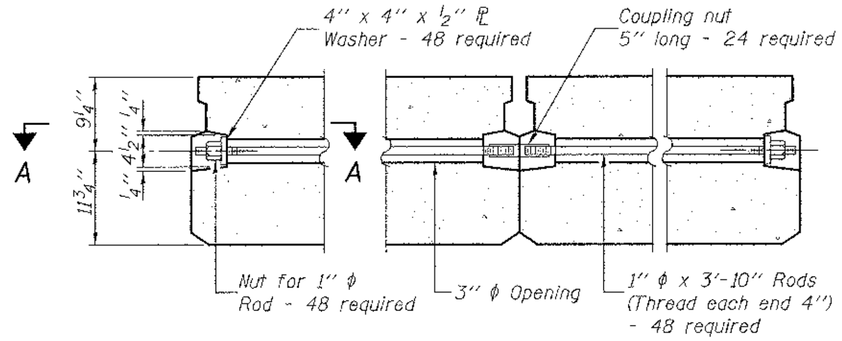
FABRIC BEARING PAD
(Exterior)

FIXED

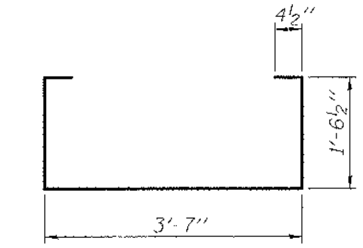
Notes:
All bearing pads shall be 1" thick.
Omit holes when using expansion bearings.
Expansion bearing pad shall be bonded to the substructure.



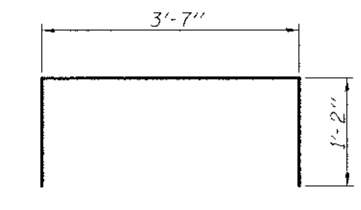
SECTION A-A



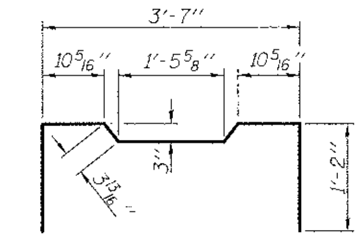
TYPICAL TRANSVERSE TIE ASSEMBLY



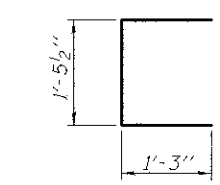
BAR S(E)



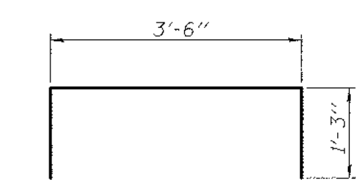
BAR S1(E)



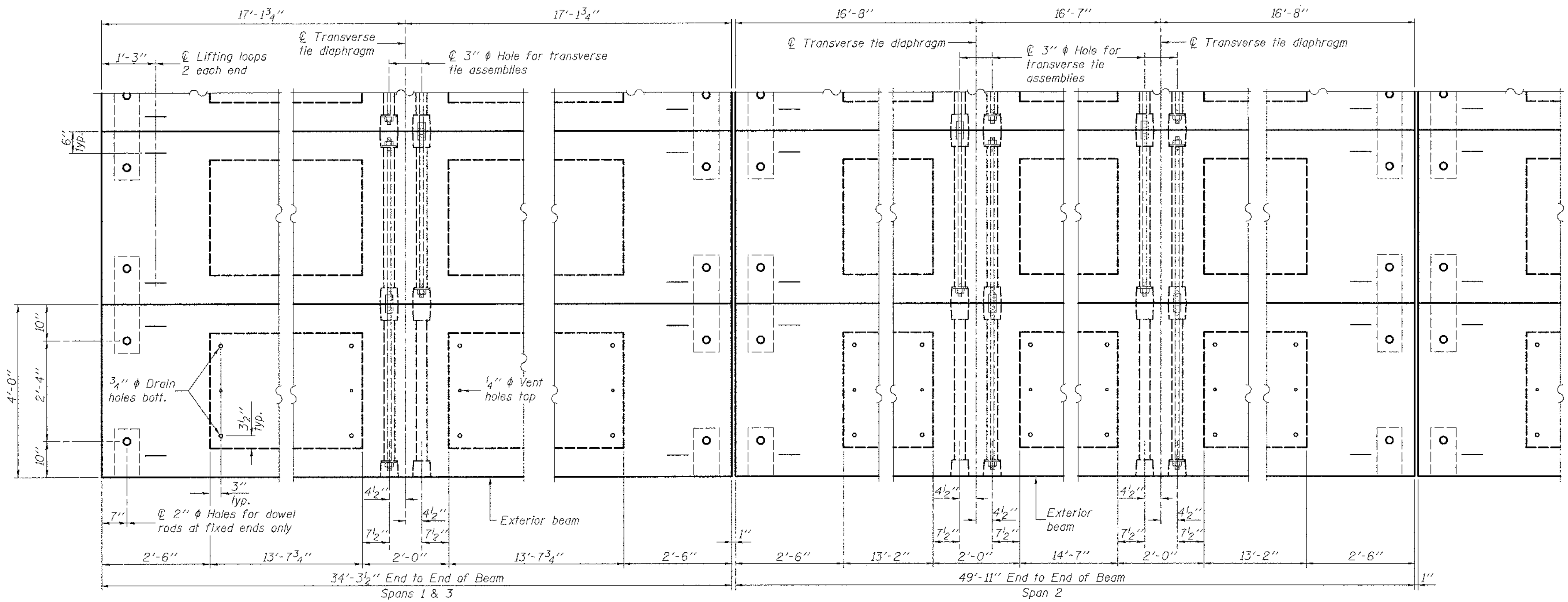
BAR S2(E)



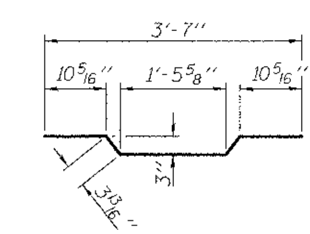
BAR U(E)



BAR U1(E)



PLAN VIEW



BAR A1(E)

NOTES

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

The 1" ϕ rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.

Reinforcement bars shall conform to ASTM A 706, Grade 60.

Two ⅛" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.

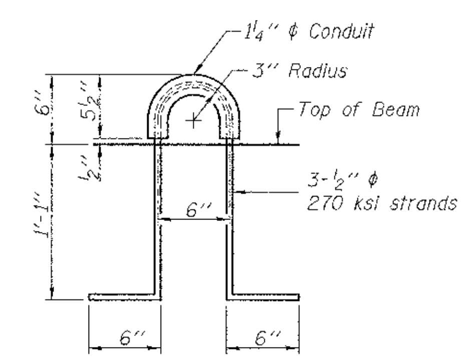
A minimum 2½" ϕ lifting pin shall be used to engage the lifting loops during handling.

Corrosion Inhibitor, per Article 1020.05(b)(12) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.

Compressive strength of prestressed concrete, f'c, shall be 6000 psi.

Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.

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



LIFTING LOOP DETAIL

BILL OF MATERIAL

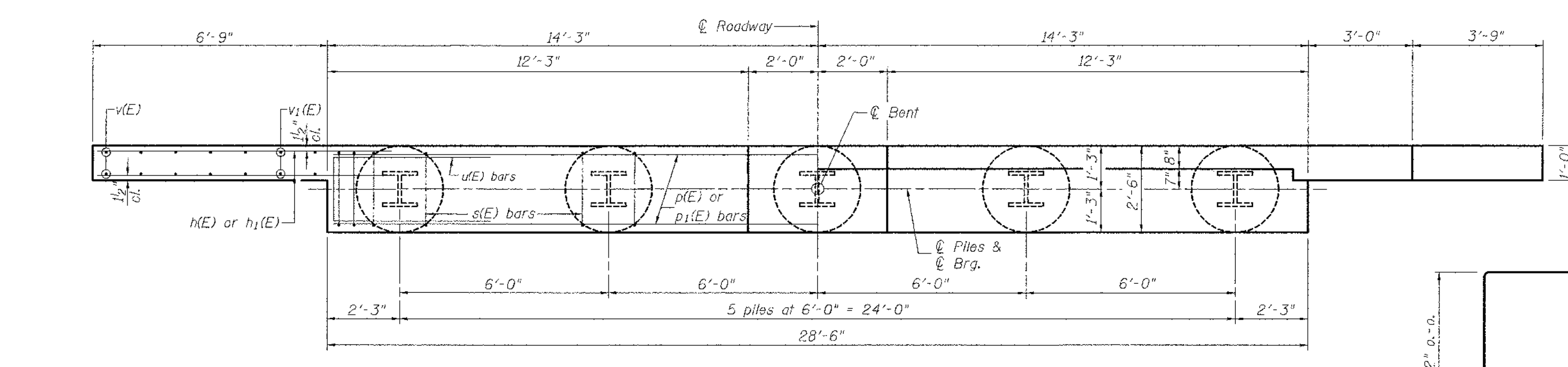
Precast Prestressed Conc. Deck Bms. (21" depth)	Sq. Ft.	3,318

PD-2148-0D 7-1-10

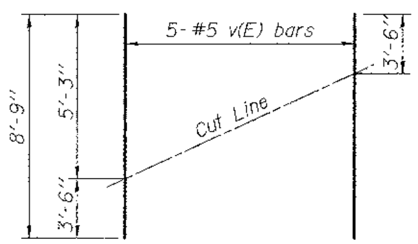
FILE NAME =	USER NAME =	DESIGNED - K.M.M.	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	21" x 48" PPC DECK BEAM DETAILS	F.A. RTE. 156	SECTION 02-04116-00-BR	COUNTY BOND	TOTAL SHEETS 28	SHEET NO. 17
	PLOT SCALE =	DRAWN - K.H.L.	REVISED -			SN 003-3414		CONTRACT NO. 97521		
	PLOT DATE = 4/3/2013	CHECKED - L.D.G.	REVISED -		SCALE: SHEET NO. 5 OF 10 SHEETS STA. TO STA.	ILLINOIS FED. AID PROJECT				
		DATE	REVISED -							

HMG ENGINEERS, INC. LAKE RD., P.O. BOX 70 CARLYLE, IL 62231 (618) 594-5771 WWW.HMGENGINEERS.COM

HMG NO 5119

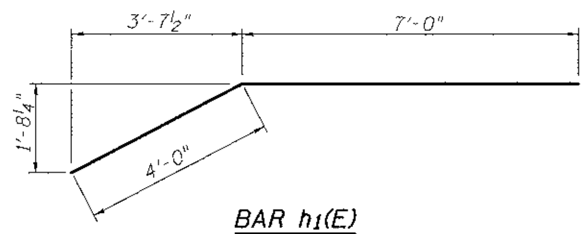


PLAN

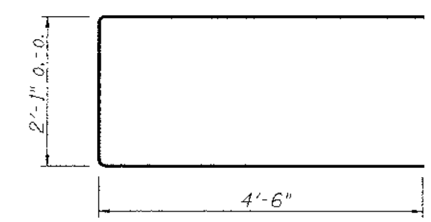


FIELD CUTTING DIAGRAM

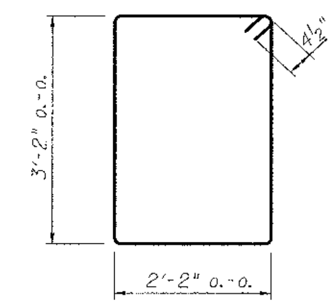
Order v(E) bars full length. Cut as shown and use remainder of bars in opposite face.



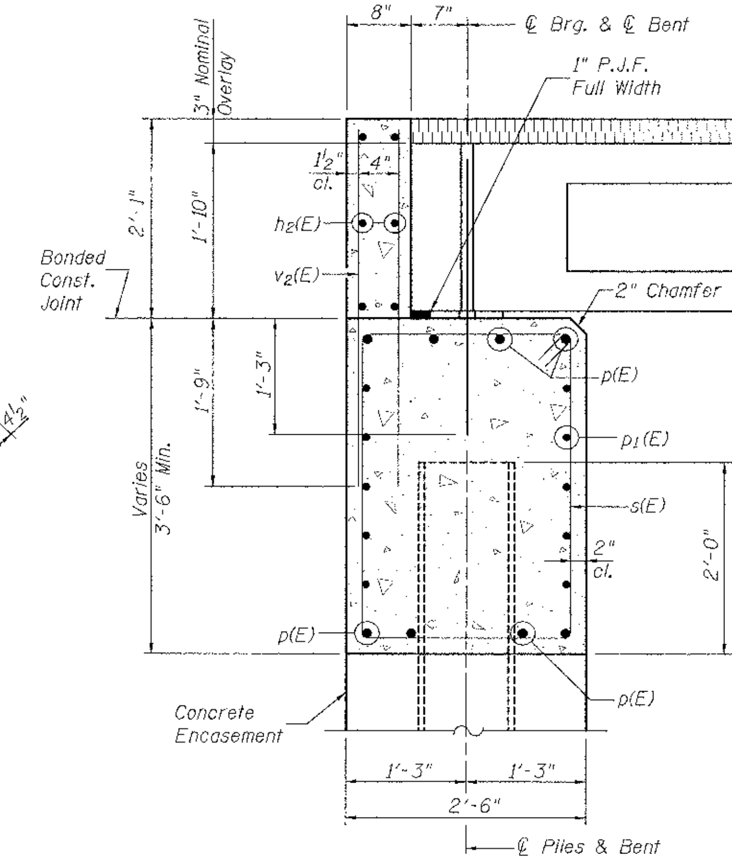
BAR $h_1(E)$



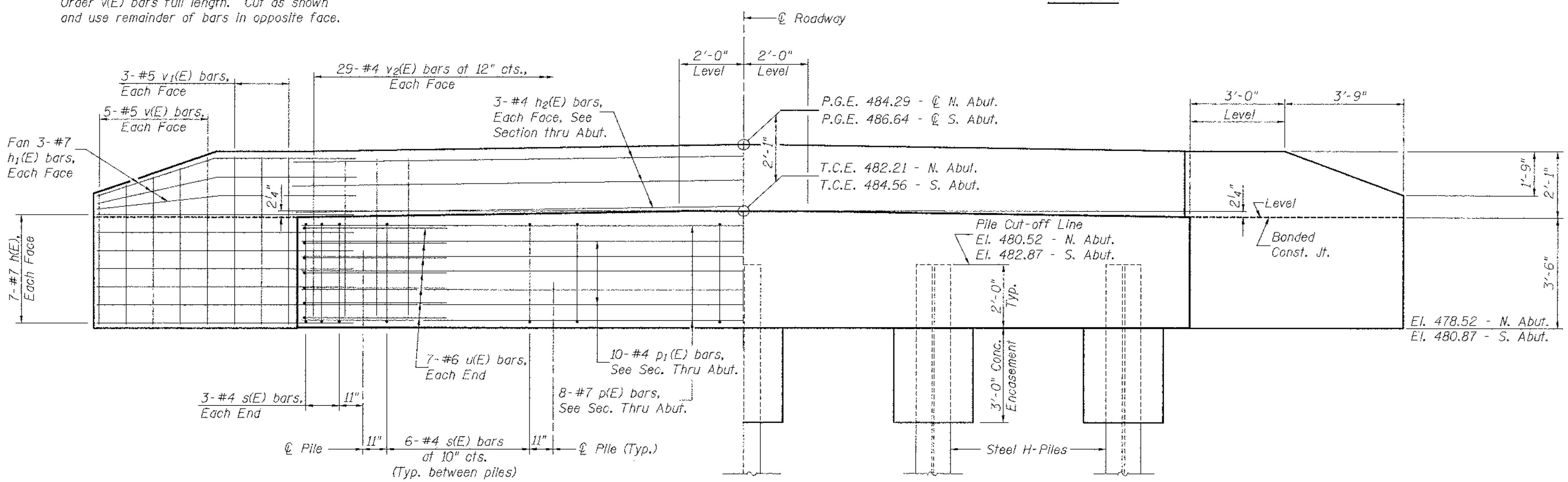
BAR u(E)



BAR s(E)



SECTION THRU ABUTMENT



ELEVATION

NOTES

1. The Backwall and the portion of the Wingwalls above the bonded construction joint shall be cast against the in-place beams.
2. Space reinforcement in cap to miss dowel rods.

PILE DATA

	N. ABUT.	S. ABUT.
Type:	Steel HP 10x42	Steel HP 10x42
Nominal Required Bearing:	335 k	335 k
Factored Resistance Available:	184 k	184 k
Est. Length:	50 ft.	30 ft.
No. Production Piles:	5	4
No. Test Piles:	0	1

BILL OF MATERIAL FOR ONE ABUTMENT

Bar	No.	Size	Length	Shape
h(E)	28	#7	10'-7"	
$h_1(E)$	12	#7	11'-0"	
$h_2(E)$	6	#4	28'-6"	
p(E)	8	#7	28'-2"	
$p_1(E)$	10	#4	28'-2"	
s(E)	30	#4	11'-5"	
u(E)	14	#6	11'-1"	
v(E)	10	#5	8'-9"	
$v_1(E)$	12	#5	5'-4"	
$v_2(E)$	58	#4	3'-9"	
Concrete Structures			Cu. Yd.	13.5
Reinforcement Bars, Epoxy Coated			Pound	2,410
Concrete Encasement			Cu. Yd.	2.7
Furnishing Steel Piles HP 10x42 - North Abutment			Foot	250
Furnishing Steel Piles HP 10x42 - South Abutment			Foot	120
Driving Steel Piles - North Abut.			Foot	250
Driving Steel Piles - South Abut.			Foot	120
Test Pile Steel HP 10x42 - South Abutment			Each	1

For Details of Piles and Concrete Encasement, See Sheet 9 of 10.

FILE NAME =	USER NAME =	DESIGNED - K.M.M	REVISED -
		DRAWN - K.H.L.	REVISED -
	PLOT SCALE =	CHECKED - L.D.C.	REVISED -
	PLOT DATE = 4/5/2013	DATE	REVISED -

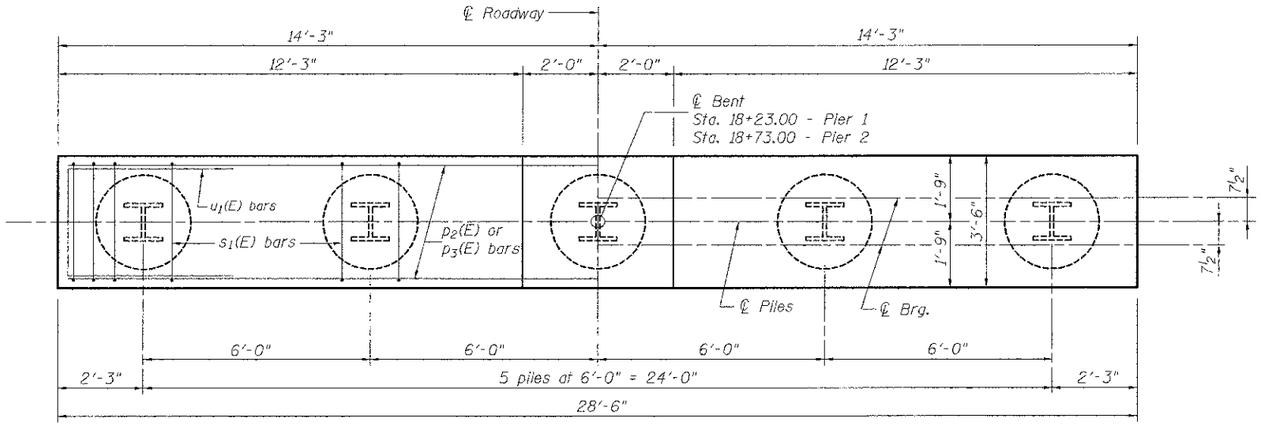
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PILE BENT ABUTMENT

SCALE: | SHEET NO. 6 OF 10 SHEETS | STA. | TO STA.

TR	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
156	02-04116-00-BR	BOND	28	18
	SN 003-3414	CONTRACT NO. 97521		
	ILLINOIS FED. AID PROJECT			

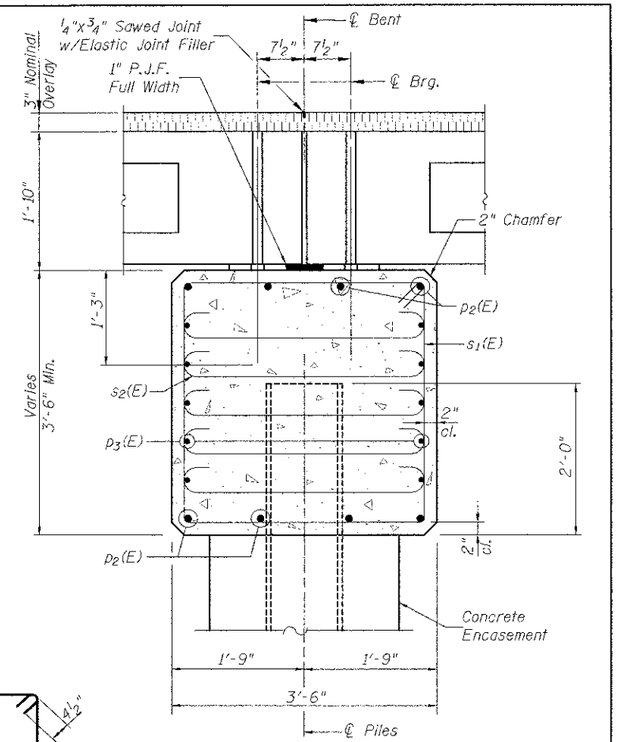
HMG NO 5119



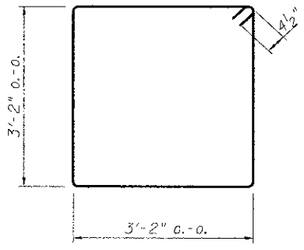
PLAN

PILE DATA

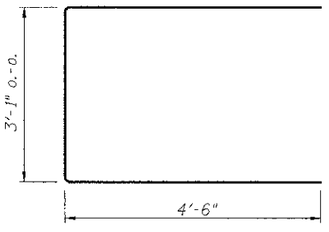
	PIER 1	PIER 2
Type:	Steel HP 12x63	Steel HP 12x63
Nominal Required Bearing:	497 k	497 k
Factored Resistance Available:	273 k	273 k
Est. Length:	52 ft.	32 ft.
No. Production Piles:	4	5
No. Test Piles:	1	0



SECTION THRU PIER
(at Right Angles)



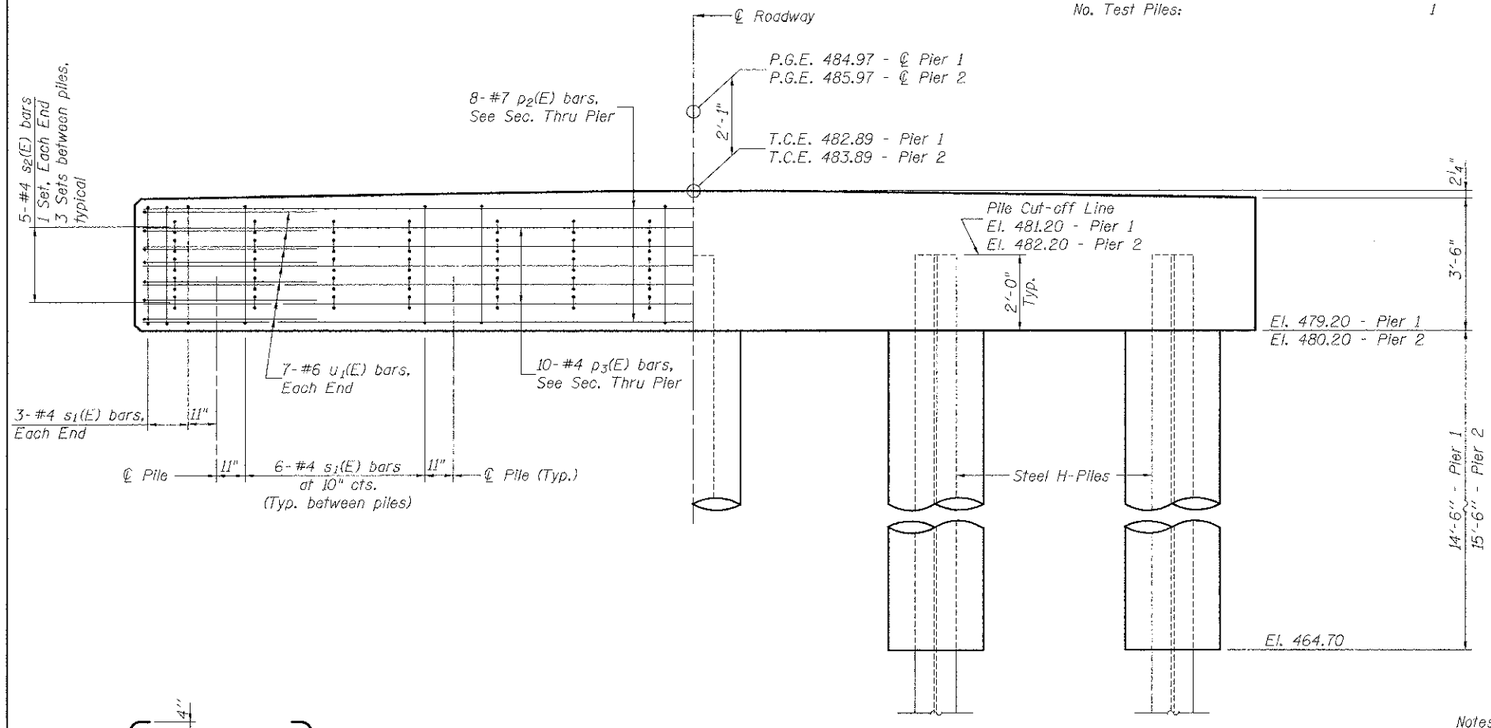
BAR s_1(E)



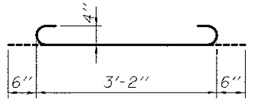
BAR u_1(E)

BILL OF MATERIAL
FOR ONE PIER

Bar	No.	Size	Length	Shape
p_2(E)	8	#7	28'-2"	——
p_3(E)	10	#4	28'-2"	——
s_1(E)	30	#4	13'-5"	
s_2(E)	70	#4	4'-2"	
u_1(E)	14	#6	12'-1"	
Concrete Structures			Cu. Yd.	13.3
Concrete Encasement - Pier 1			Cu. Yd.	13.2
Concrete Encasement - Pier 2			Cu. Yd.	14.1
Reinforcement Bars, Epoxy Coated			Pound	1,370
Furnishing Steel Piles HP 12x63 - Pier 1			Foot	208
Furnishing Steel Piles HP 12x63 - Pier 2			Foot	160
Driving Steel Piles - Pier 1			Foot	208
Driving Steel Piles - Pier 2			Foot	160
Test Pile Steel HP 12x63 - Pier 1			Each	1



ELEVATION



BAR s_2(E)

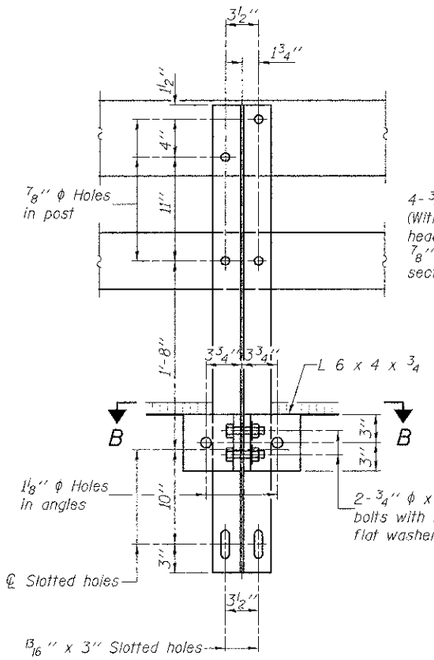
Notes:

For details of piles and concrete encasement see sheet 9 of 10.

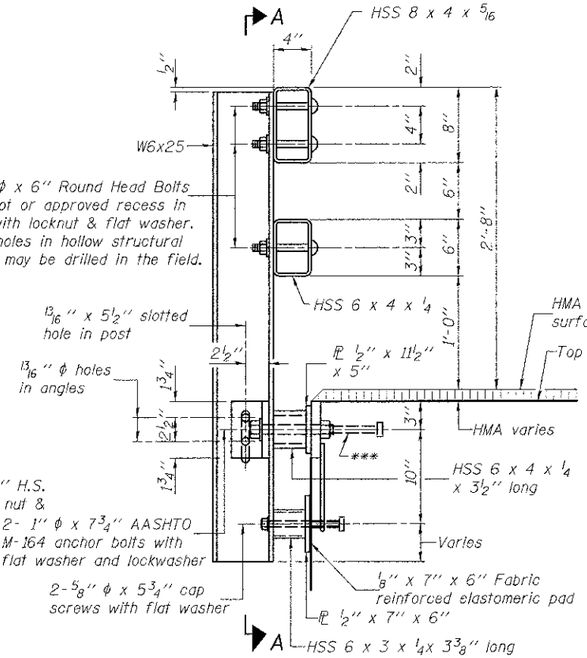
Space reinforcement in pile cap to miss dowel rods.

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

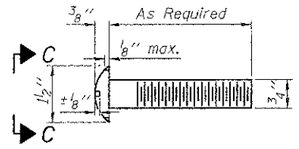
FILE NAME: D:\SHEETING\dgn\PLpier.dgn	USER NAME = USERUSER	DESIGNED - K.M.M	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PIER DETAILS	TR	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN - K.H.L.	REVISED -			156	02-04116-00-BR	BOND	28	19
	PLOT SCALE = 2.0000 ' / IN.	CHECKED - L.D.G.	REVISED -				SN 003-3414	CONTRACT NO. 97521		
	PLOT DATE = 4/5/2013	DATE -	REVISED -		SCALE:	SHEET NO. 7 OF 10 SHEETS	STA.	TO STA.	ILLINOIS FED. AID PROJECT	



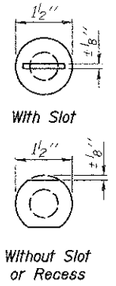
SECTION A-A



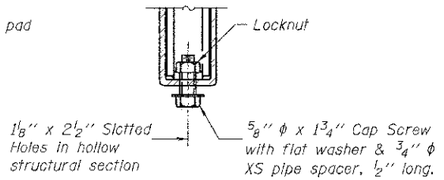
SECTION AT RAIL POST



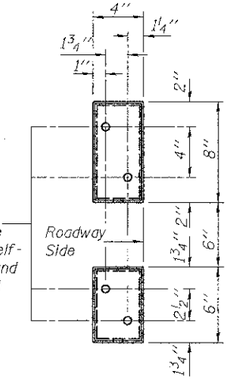
DETAIL OF 3/4" ϕ ROUND HEAD BOLT



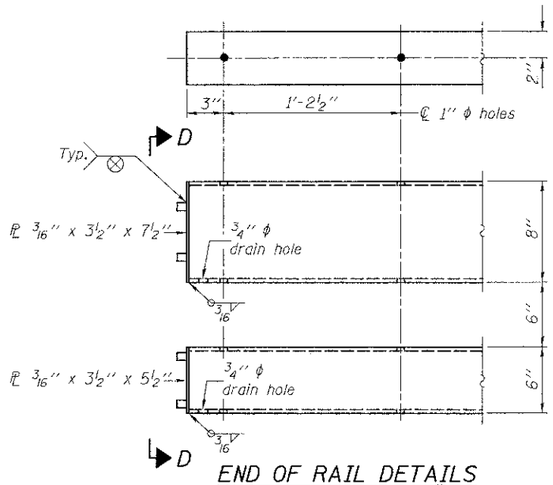
VIEW C-C



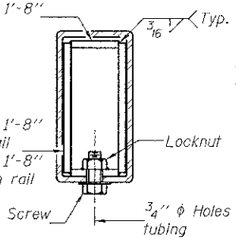
RAIL SPLICE CONNECTION AT EXPANSION JT.



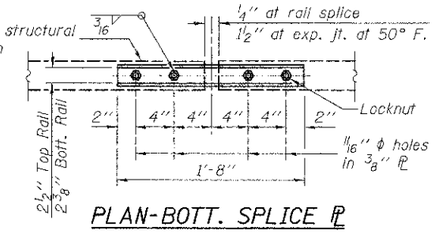
VIEW D-D



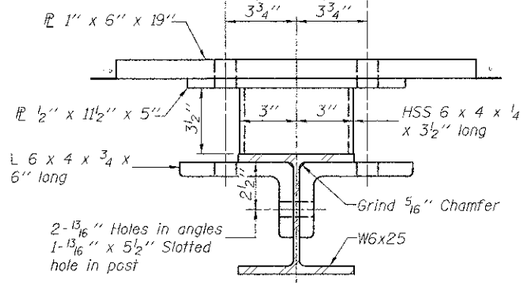
END OF RAIL DETAILS



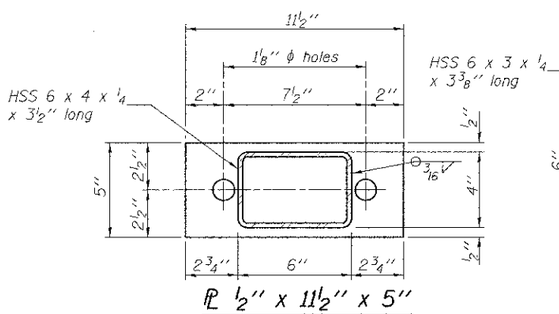
SECTION AT RAIL SPLICE



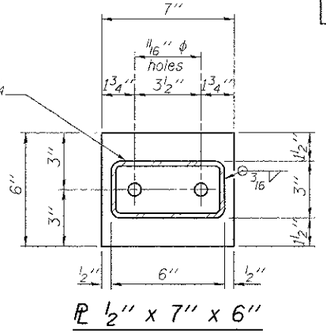
PLAN-BOTT. SPLICE PL TYPICAL



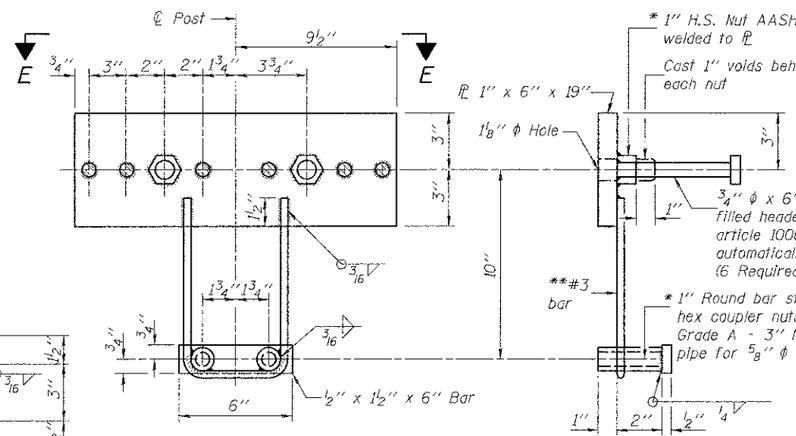
SECTION B-B



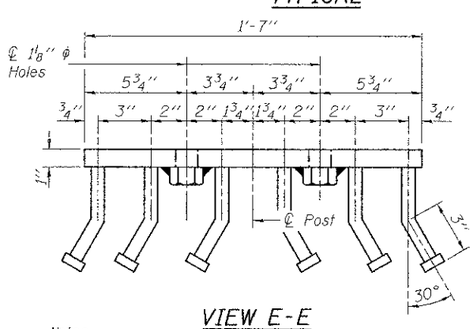
PL 1/2" x 11 1/2" x 5"



PL 1/2" x 7" x 6"



ANCHOR DEVICE



VIEW E-E

Notes:

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

For multi-span bridges, sufficient 1/4" x 6" x 1'-2" galvanized steel shims shall be provided to align rail between adjacent spans. Cost included with Steel Railing, Type SM.

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

*** The studs of the anchor devices shall be placed below the top reinforcement bars and the outermost longitudinal reinforcement bar shall be placed directly above the studs of the rail post anchor device.

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type SM	Foot	240

R-34HMAWS 7-1-10 (6'-3" Maximum Post Spacing) (1 1/4" minimum to 3 1/8" maximum HMA thickness)

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

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

FILE NAME:	USER NAME = USERDESIGN	DESIGNED - K.M.M	REVISED
		DRAWN - K.H.L.	REVISED
	PLOT SCALE = 4.0000 ' / IN.	CHECKED - L.D.G.	REVISED
	PLOT DATE = 3/2/2013	DATE	REVISED

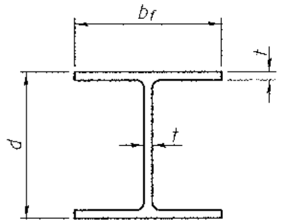
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STEEL RAILING, TYPE SM WITH HOT-MIX ASPHALT WEARING SURFACE

SCALE: | SHEET NO. 8 OF 10 SHEETS | STA. | TO STA.

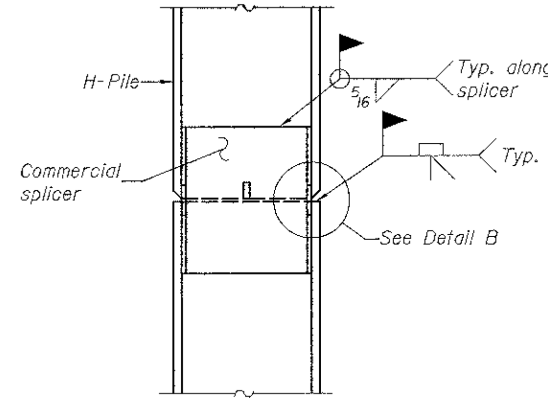
TR	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
156	02-04116-00-BR	BOND	28	20
	SN 003-3414	CONTRACT NO. 97521		
	ILLINOIS FED. AID PROJECT			

HMG NO 5119

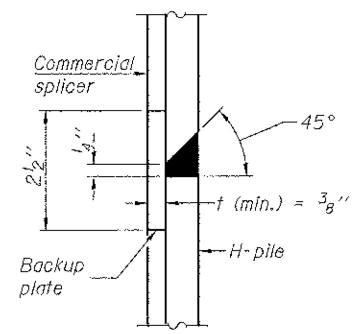


STEEL PILE TABLE

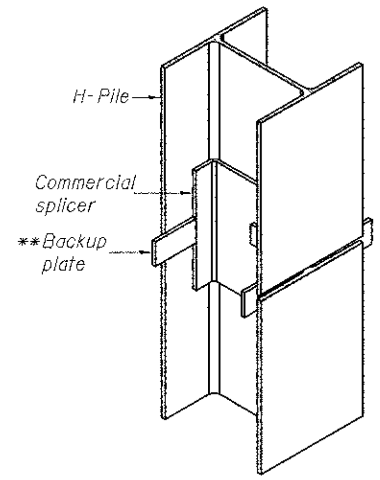
Designation	Depth d	Flange width b_f	Web and Flange thickness t	Encasement diameter A	
HP 14x117	14¼"	14⅞"	13/16"	30"	
x102	14"	14¾"	11/16"	30"	
x89	13⅞"	14¾"	⅝"	30"	
x73	13⅝"	14⅝"	½"	30"	
HP 12x84	12¼"	12¼"	11/16"	~~24"~~	30"
x74	12⅛"	12¼"	⅝"	~~24"~~	30"
x63	12"	12⅛"	½"	~~24"~~	30"
x53	11¾"	12"	7/16"	~~24"~~	30"
HP 10x57	10"	10¼"	9/16"	24"	
x42	9¾"	10⅛"	7/16"	24"	
HP 8x36	8"	8⅛"	7/16"	18"	



ELEVATION

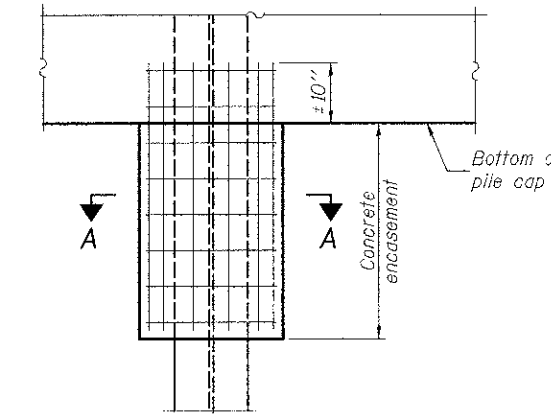


DETAIL "B"



ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE



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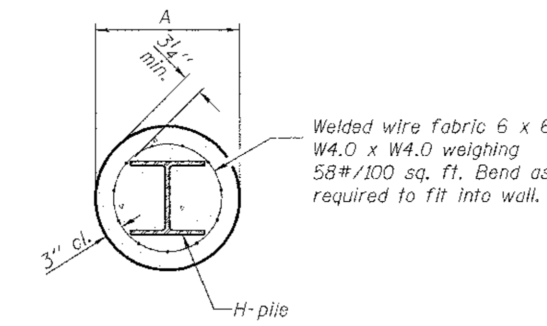
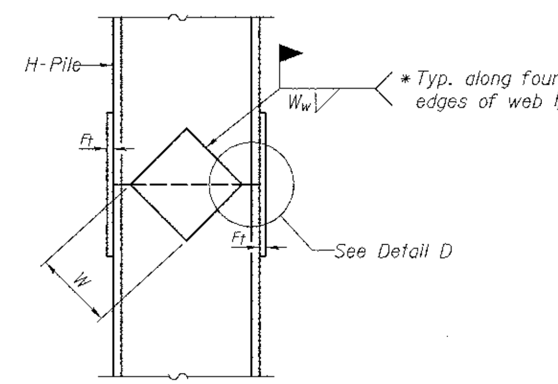


Note:
Forms for encasement may be omitted when soil conditions permit.

SECTION A-A

PILE ENCASEMENT



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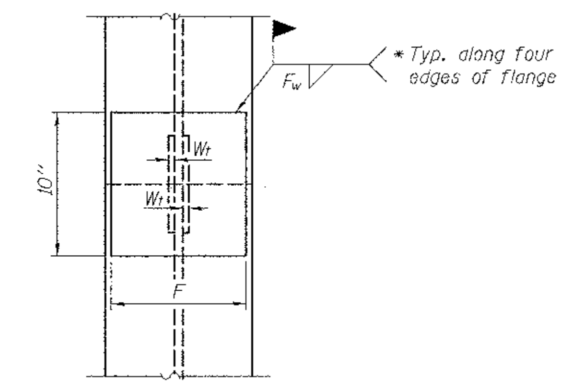
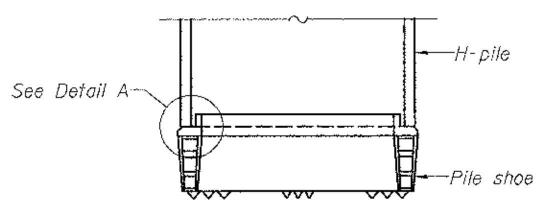


END VIEW



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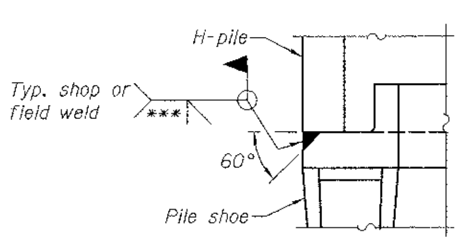
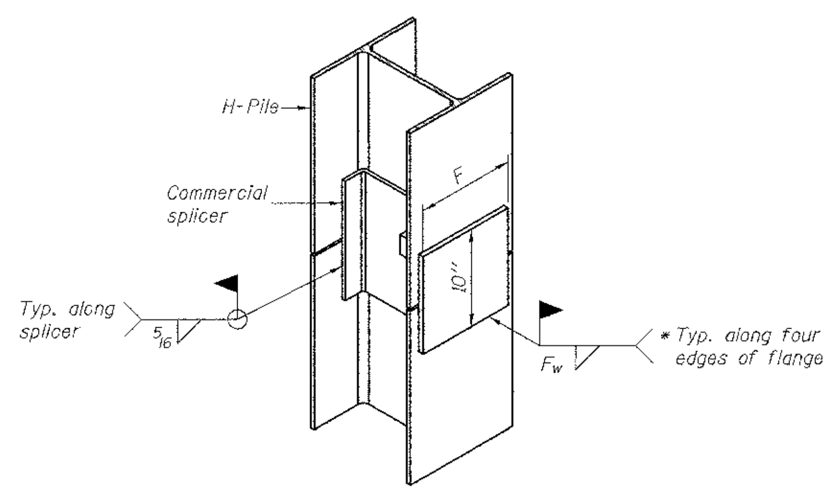


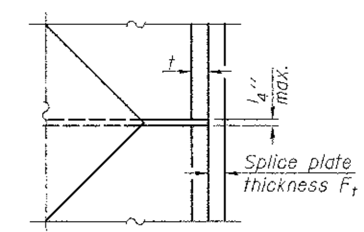
DETAIL A

H-PILE SHOE ATTACHMENT



ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE ALTERNATE



DETAIL D

Designation	F	F_t	F_w	W	W_f	W_w
HP 14x117	12½"	1"	⅞"	7¾"	⅝"	½"
x102	12½"	⅞"	¾"	7¾"	⅝"	½"
x89	12½"	¾"	11/16"	7¾"	⅝"	½"
x73	12½"	⅝"	9/16"	7¾"	⅝"	½"
HP 12x84	10"	⅞"	11/16"	6½"	⅝"	½"
x74	10"	⅞"	11/16"	6½"	⅝"	½"
x63	10"	⅝"	½"	6½"	½"	⅜"
x53	10"	⅝"	½"	6½"	½"	⅜"
HP 10x57	8"	¾"	9/16"	5¼"	½"	⅜"
x42	8"	⅝"	9/16"	5¼"	½"	⅜"
HP 8x36	7"	⅝"	7/16"	4¼"	½"	⅜"

WELDED PLATE FIELD SPLICE

* Interrupt welds ¼" from end of web and/or each flange.

** Remove portions of backup plates that extend outside the flanges.

*** Weld size per pile shoe manufacturer (5/16" min.).

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

HOLCOMB FOUNDATION ENGINEERING INC.
P.O. Box 88 618-529-5262
Carbondale, Il. 62903 618-457-8991 fax
Page 1 of 2

Bridge Foundation Boring Log

Project: H-06118 Bridge Exis. Structure No. 003-3405 Date: 05-18-06
Section: Station Bored by: D. Russell
Route: Checked By: T. Holcomb
County: Bond

Boring No: 1
Station:
Offset:

Surface Water Elev.
Ground Water Elev. During Drilling 469.5
Upon Completion plugged

Elevation	N	Qu tsf	w %
Ground Surface 482.0 0			
6" Oil & Chip & Crushed Stone			
Brown Silty CLAY (A-6) w/sand			
	7	2.1B	20
	5	2.2B	20
476.0			
Gray Mottled Silty CLAY (A-6) to Clayey Silt (A-4)			
	8	1.4B	23
	2	0.3P	28
	3	0.5B	23
468.5			
Gray Mottled Silty CLAY (A-6) with sand	3	0.9S	22
466.0			
Gray Clayey SAND (A-2-4)	4	0.8B	20
464.5			
Brown Mottled Gray Clayey SAND (A-2-4)			
462.0 -20	8	1.7B	20
Gray Fine SAND (A-2-4)			
	4	---	20

sand (continued)

Elevation	N	Qu tsf	w %
458.0			
Brown Sandy CLAY (A-6) with pebbles	15	6.8B	13
-25	29	5.2B	13
-30	42	7.4B	12
	75	6.0S	12
-35			
444.0			
Gray Sandy CLAY (A-6) with pebbles			
-40	50	6.8B	11
	33	6.5S	11

N = Standard Penetration Test Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with a 140 lbs. hammer falling 30"

Qu-Unconfined Compressive Strength in tons/sq.ft. w-Water Content-percentage of oven dry weight-%

B = Bulge Failure
S = Shear Failure
E = Estimated Value
P = Penetrometer

HOLCOMB FOUNDATION ENGINEERING INC.
P.O. Box 88 618-529-5262
Carbondale, Il. 62903 618-457-8991 fax
Page 2 of 2

Bridge Foundation Boring Log

Project: H-06118 Bridge Exis. Structure No. 003-3405 Date: 05-18-06
Section: Station Bored by: D. Russell
Route: Checked By: T. Holcomb
County: Bond

Boring No: 1
Station:
Offset:

Surface Water Elev.
Ground Water Elev. During Drilling 469.5
Upon Completion plugged

Elevation	N	Qu tsf	w %
sandy clay (continued)			
-45			
-50	60/6"	---	9
-55	60/4"	---	12
422.5			
End of Boring @ -59.5'	60/5"	---	10
-60			
-65			
-70			
-75			
-80			
-85			

N = Standard Penetration Test Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with a 140 lbs. hammer falling 30"

Qu-Unconfined Compressive Strength in tons/sq.ft. w-Water Content-percentage of oven dry weight-%

B = Bulge Failure
S = Shear Failure
E = Estimated Value
P = Penetrometer

HOLCOMB FOUNDATION ENGINEERING INC.
P.O. Box 88 618-529-5262
Carbondale, Il. 62903 618-457-8991 fax
Page 1 of 1

Bridge Foundation Boring Log

Project: H-06118 Bridge Exis. Structure No. 003-3405 Date: 05-18-06
Section: Station Bored by: D. Russell
Route: Checked By: T. Holcomb
County: Bond

Boring No: 2
Station:
Offset:

Surface Water Elev.
Ground Water Elev. During Drilling 474.9
Upon Completion 464.4

Elevation	N	Qu tsf	w %
Ground Surface 482.4 0			
8" Sand, Crushed Stone, Cinders			
Brown Mottled Gray Silty CLAY (A-6)			
	7	1.8B	18
478.4			
Gray Clayey SILT (A-4)	3	1.0B	20
	0	0.3B	31
474.4			
Gray Mottled Brown Silty CLAY (A-6)			
	8	1.4B	23
471.4			
Brown Mottled Gray Silty CLAY (A-6) with sand and pebbles	17	2.3S	20
-15	32	5.0S	13
	38	5.3S	11
-20	36	7.8S	11
	42	7.5S	11

silty clay (continued)

Elevation	N	Qu tsf	w %
458.4			
Brown Mottled Gray Medium SAND (A-2-4) with pebbles	100/6"	---	12
-25	100/5"	7.9S	10
453.9			
Brown Fine SAND (A-2-4) with clay seams and pebbles	144	---	20
-30			
449.4			
Gray Silty CLAY (A-6) with sand and pebbles	101	7.4S	10
-35			
442.4	59	6.6S	9
End of Boring @ -40.0'			
-40			
-45			

N = Standard Penetration Test Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with a 140 lbs. hammer falling 30"

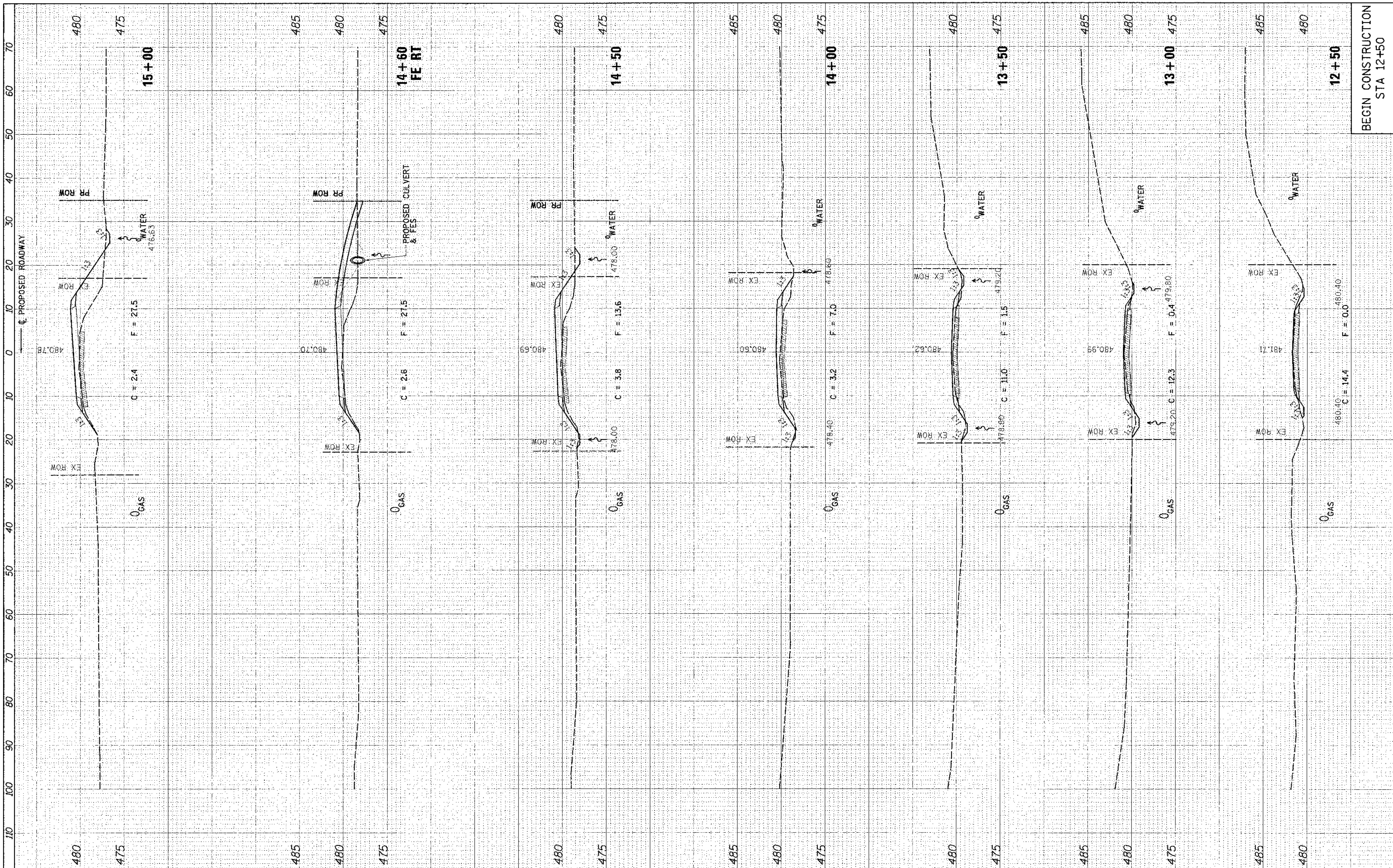
Qu-Unconfined Compressive Strength in tons/sq.ft. w-Water Content-percentage of oven dry weight-%

B = Bulge Failure
S = Shear Failure
E = Estimated Value
P = Penetrometer

FILE NAME:	USER NAME = USERPROFILE	DESIGNED - K.M.M	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SOIL BORING LOGS	TR	SECTION
		DRAWN - K.H.L.	REVISED -			156	02-04116-00-BR
	PLOT SCALE = 1.0000 ' / IN.	CHECKED - L.D.G.	REVISED -				SN 003-3414
	PLOT DATE = 3/27/2013	DATE	REVISED -		SCALE: SHEET NO. 10 OF 10 SHEETS STA. TO STA.		

COUNTY	TOTAL SHEETS	SHEET NO.
BOND	28	22
CONTRACT NO. 97521		
ILLINOIS FED. AID PROJECT		

HMG NO 5119



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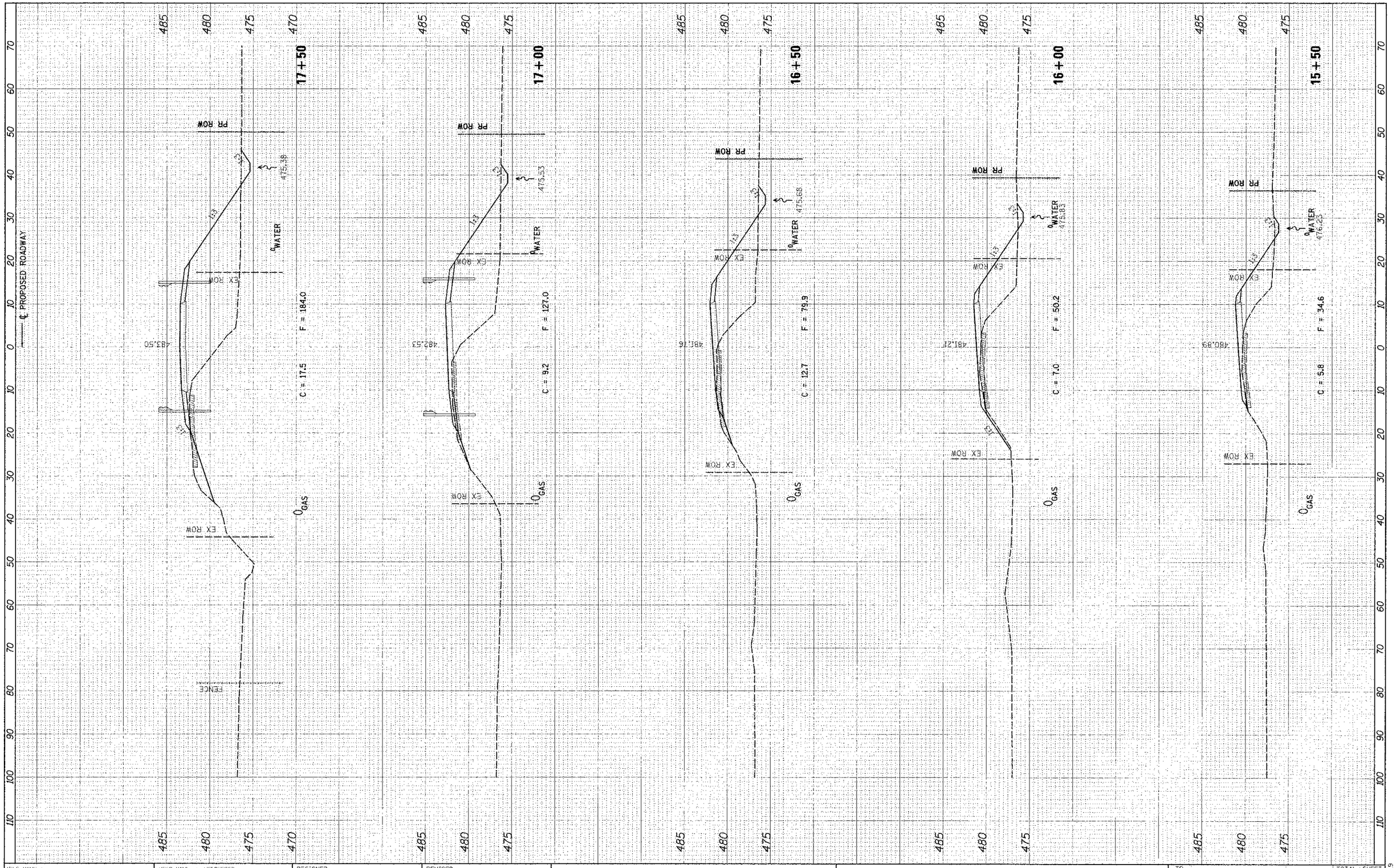
		DRAWN	REVISED	
	PLOT SCALE = 10.0000 ' / IN.	CHECKED	REVISED	
	PLOT DATE = 4/9/2013	DATE	REVISED	

CROSS SECTIONS
EXISTING & PROPOSED ROADWAY

SCALE: | SHEET NO. 1 OF 6 SHEETS | STA. 12+50 TO STA. 14+99

TR	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
156	02-04116-00-BR	BOND	28	23
		CONTRACT NO. 97521		
	ILLINOIS FED. AID PROJECT			

HMG NO. 5119



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	PLOT SCALE = 10.0000 ' / IN.	CHECKED -	REVISED -		
	PLOT DATE = 1/8/2021	DATE -	REVISED -		SCALE: SHEET NO. 2 OF 6 SHEETS STA. 15+50 TO STA. 17+50

TR	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
156	02-04116-00-BR	BOND	28	24
		CONTRACT NO. 97521		
		ILLINOIS FED. AID PROJECT		

HWG NO. 5119

BRIDGE OMISSION
STA 17+88 TO
STA 19+08

17+88

℄ PROPOSED ROADWAY

PR ROW

EX ROW

FENCE

Q_{WATER}

Q_{GAS}

4:3

C = 70.1 F = 264.6

485.26

475.27

19+08

C = 151.4 F = 422.5

486.56

474.58

19+50

C = 93.7 F = 310.8

481.57

475.00

20+00

C = 133.5 F = 22.1

488.33

482.70

480.20

476.84

FILE NAME =	USER NAME = HSHROPSHI	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 40.0000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 4/18/2013	DATE	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
EXISTING & PROPOSED ROADWAY

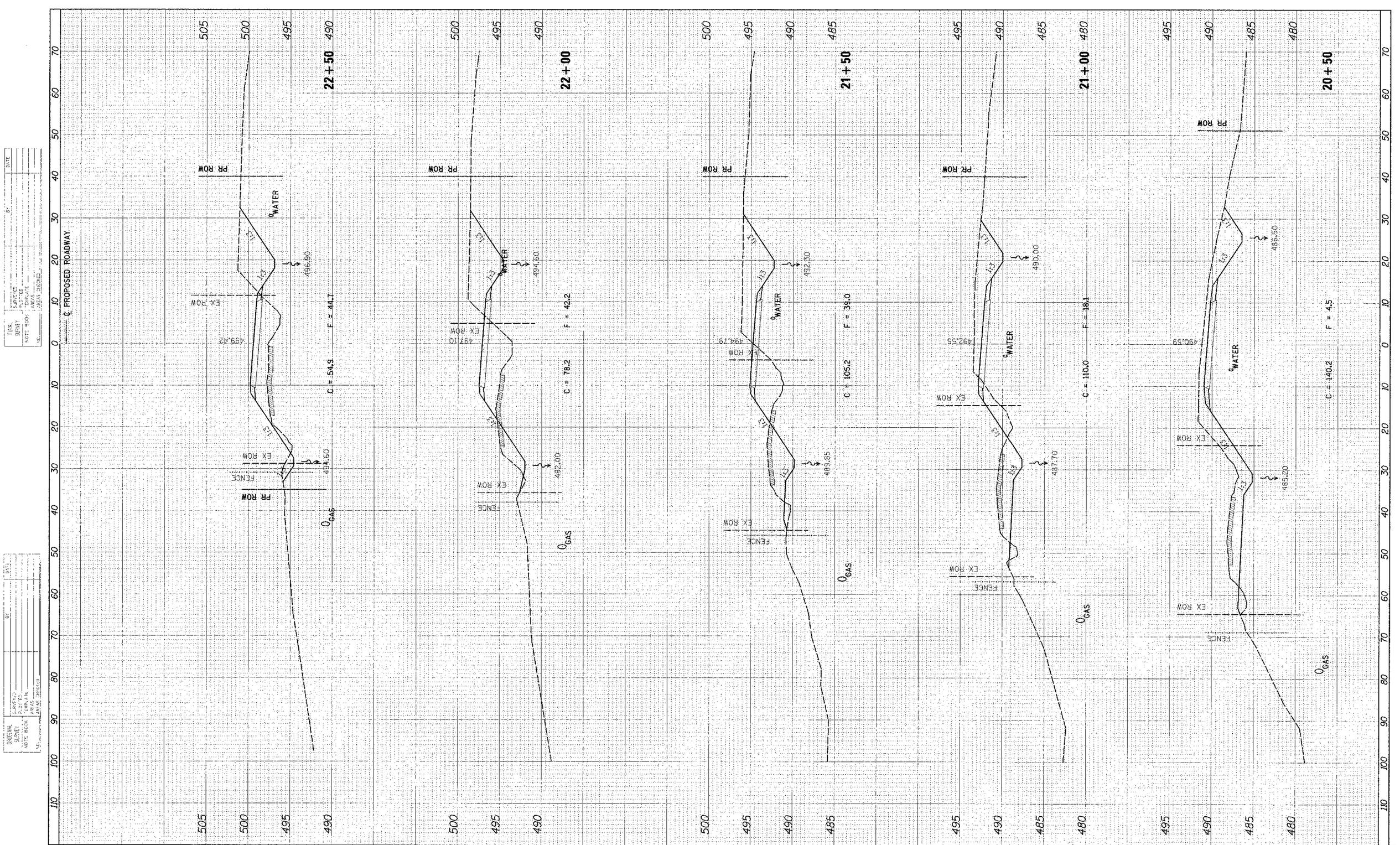
SCALE: | SHEET NO. 3 OF 6 SHEETS | STA. 17+88 | TO STA. 20+00

TR	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
156	02-04116-00-BR	BOND	28	25

CONTRACT NO. 97521

ILLINOIS FED. AID PROJECT

HMG NO. 5119



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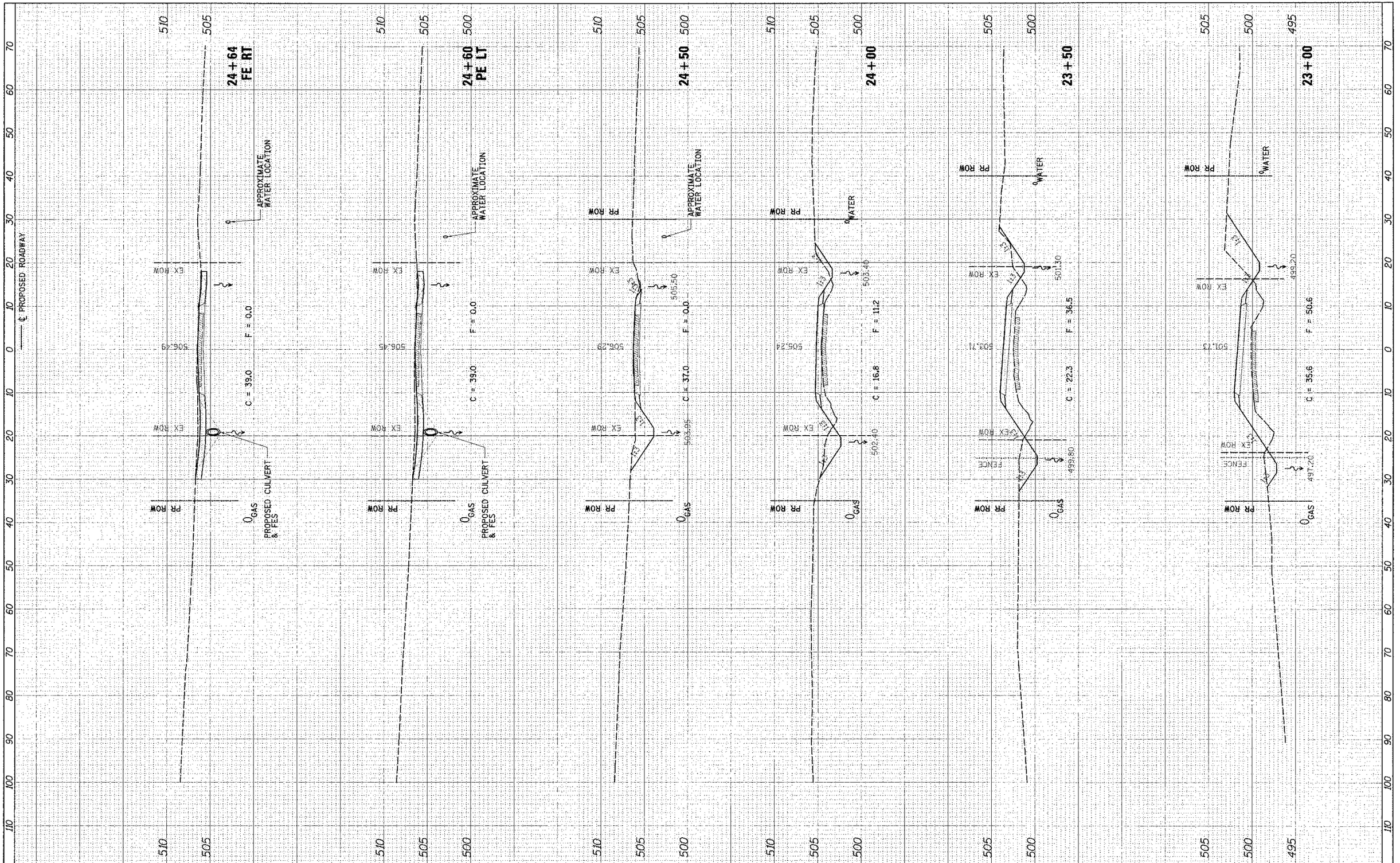
	PLOT DATE = 4/9/2015	CHECKED	REVISED -		
		DATE	REVISED -		

TR	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
156	02-04116-00-BR	BOND	28	26

CONTRACT NO. 97521

ILLINOIS FED. AID PROJECT

RMG NO. 5119



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	PLOT DATE = 4/8/2013	DATE	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

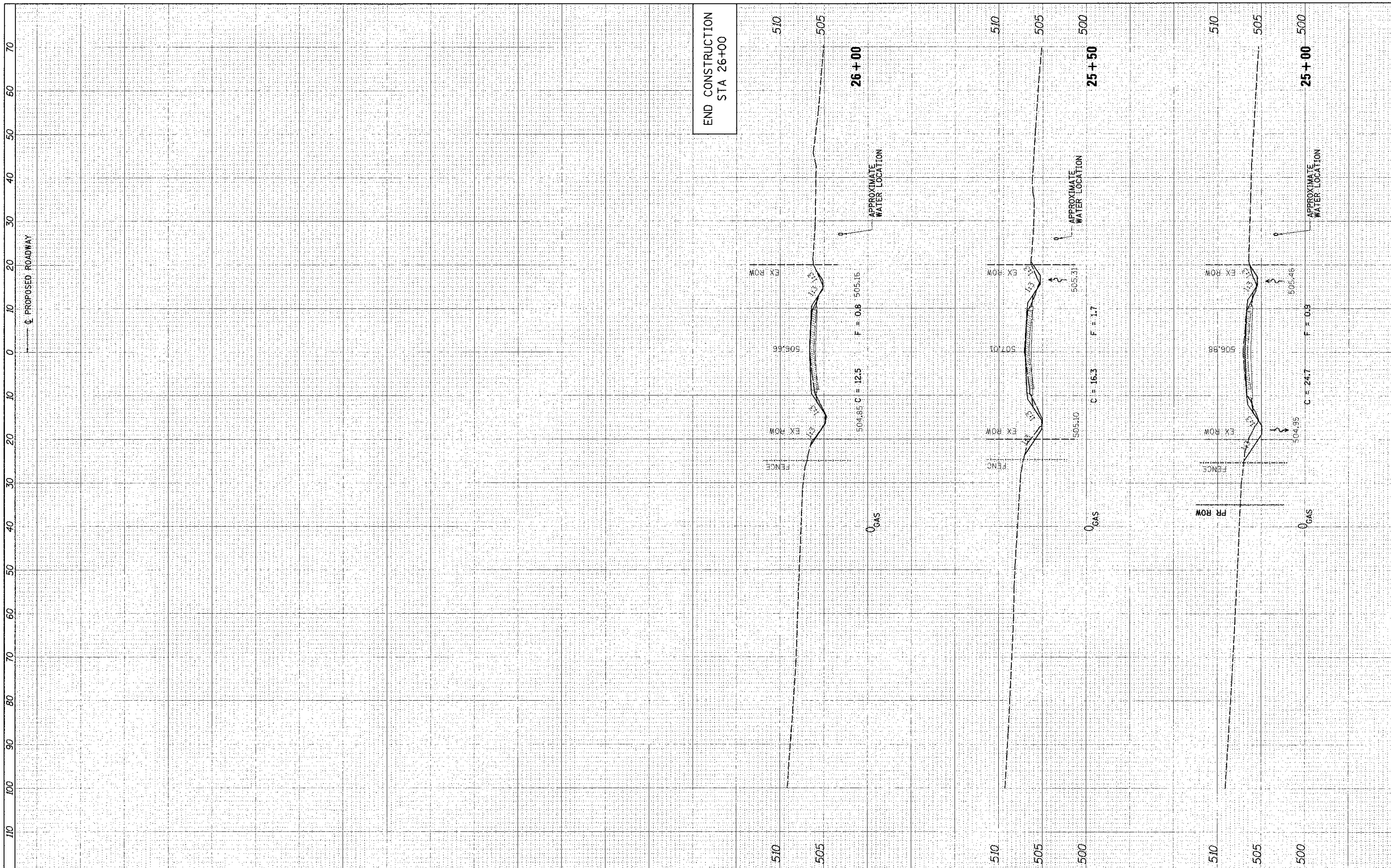
CROSS SECTIONS
EXISTING & PROPOSED ROADWAY

SCALE: | SHEET NO. 5 OF 6 SHEETS | STA. 23+00 | TO STA. 24+63

TR	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
156	02-04116-00-BR	BOND	28	27

CONTRACT NO. 97521
ILLINOIS FED. AID PROJECT

HNR NO. 5119



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	PLOT SCALE = 10.0000 ' / IN.	DRAWN -	REVISED -		SCALE:
	PLOT DATE = 4/8/2013	CHECKED -	REVISED		SHEET NO. 6 OF 6 SHEETS
		DATE	REVISED		STA. 25+00 TO STA. 26+00

TR	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
156	02-04116-00-BR	BOND	28	28
		CONTRACT NO. 97521		
ILLINOIS FED. AID PROJECT				

HMG NO. 5119