04-29-11 LETTING ITEM 151

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	McDONOUGH	119	1
	ILLINOIS	CONTRACT NO. 68482		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

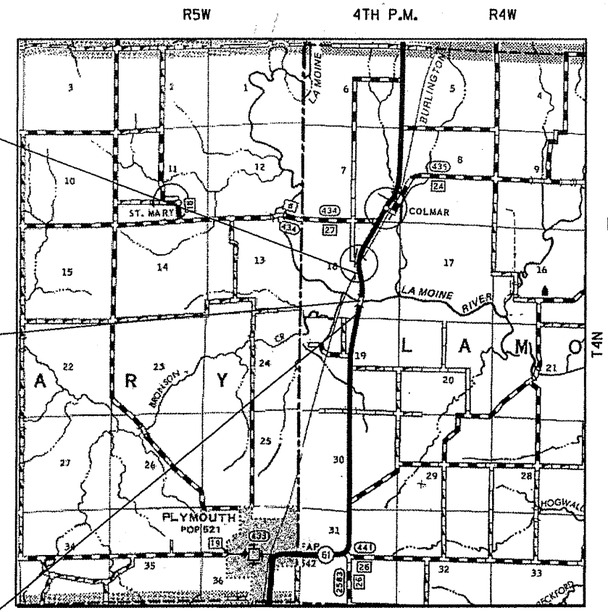
PROPOSED
HIGHWAY PLANS

FAP ROUTE 542 (IL 61)
SECTION 105BR–1
PROJECT BRF-0542(005)
BRIDGE REPLACEMENT
McDONOUGH COUNTY
C–94–073–05

INDEX OF SHEETS
SEE SHEET NO. 2

HIGHWAY STANDARDS
SEE SHEET NO. 2

DISTRICT 4 STANDARDS
SEE SHEET NO. 2



GROSS LENGTH = 2,225.00 FT. = 0.421 MILE
NET LENGTH = 2,225.00 FT. = 0.421 MILE

N

LOCATION MAP
NOT TO SCALE

100' 200' 300' — 1"= 100'
0 10' 20' 30' — 1"= 10'
0 50' 100' — 1"= 50'
0 50' 100' — 1"= 40'
0 50' 100' — 1"= 30'
0 50' 100' — 1"= 20'

FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

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

PROJECT ENGINEER: RICH DOTSON (309) 671–3455
PROJECT MANAGER: TERRISA WORSFOLD (309) 671–3465
CONTRACT NO. 68482
CATALOG NO. 033063–00D

WHKS & CO. ENGINEERING
7018 KINGSMILL CT.,
SPRINGFIELD, IL
(217) 483-9457
DESIGN FIRM #184001036

JAMES A. COLBROOK, JR.
047577
LICENSED PROFESSIONAL ENGINEER
OF
ILLINOIS

James A. Colbrook Jr
12-17-10

Expires: 11-30-11

D–94–064–05

LOCATION OF SECTION INDICATED THUS: –

FUNCTIONAL CLASSIFICATION: MINOR ARTERIAL (RURAL)
DESIGN SPEED = 60 MPH
POSTED SPEED = 55 MPH
ADT: 1200 (2007); 1384 (2030)
PV 91.6% SU = 4.2% MU = 4.2%

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED DEC 17 20 10
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER
February 4 20 11
Scott E. Stitt, P.E. /BC
ENGINEER OF DESIGN AND ENVIRONMENT
February 4 20 11
Christine M. Reed /BC
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

INDEX OF SHEETS

HIGHWAY STANDARDS

000001-06	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001001-02	AREAS OF REINFOREMENT BARS
001006	DECIMAL OF AN INCH AND OF A FOOT
280001-05	TEMPORARY EROSION CONTROL SYSTEMS
482001-02	HMA SHOULDER ADJACENT TO FLEXIBLE PAVEMENT
515001-03	NAME PLATE FOR BRIDGES
630001-09	STEEL PLATE BEAM GUARDRAIL
666001-01	RIGHT OF WAY MARKERS
701001-02	OFF-RD OPERATIONS, 2L, 2W, MORE THAN 15' (4.5M) AWAY
701006-03	OFF-RD OPERATIONS, 2L, 2W, 15' (4.5M) TO 24" (600MM) FROM PAVEMENT EDGE
701201-04	LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS ≥ 45 MPH
701306-03	LANE CLOSURE, 2L, 2W, SLOW MOVING OPERATIONS DAY ONLY, FOR SPEEDS ≥ 45 MPH
701321-11	LANE CLOSURE, 2L, 2W, BRIDGE REPAIR WITH BARRIER
701326-04	LANE CLOSURE, 2L, 2W, PAVEMENT WIDENING, FOR SPEEDS ≥ 45 MPH
701901-01	TRAFFIC CONTROL DEVICES
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720001-01	SIGN PANEL MOUNTING DETAILS
720006-02	SIGN PANEL ERECTION DETAILS
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729001-01	APPLICATIONS OF TYPES A & B METAL POSTS (FOR SIGNS & MARKERS)
781001-03	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS
601101-01	CONCRETE HEADWALL FOR PIPE DRAIN
631031-09	TRAFFIC BARRIER TERMINAL, TYPE 6
701311-03	

DISTRICT 4 STANDARDS

205001-04	SLOPE STEPS DETAIL
205101-04	SETTLEMENT PLATFORM
281001-04	RIPRAP DITCH FOR EROSION PROTECTION
406101-04	BUTT JOINTS (3 SHTS)
630101-04	GUARDRAIL EROSION CONTROL TREATMENTS (2 SHTS)
635101-04	GUARDRAIL AND BARRIER WALL DELINEATION (3 SHTS)
780001-04	TYPICAL PAVEMENT MARKINGS (2 SHTS)

COMMITMENTS:

COMMITMENTS ARE NOT TO BE ALTERED WITHOUT THE WRITTEN APPROVAL OF ALL PARTIES TO WHICH THE COMMITMENT WAS MADE.

THERE ARE NO COMMITMENTS AT THIS TIME.

STRUCTURAL DESIGN TRAFFIC: YEAR 2021

PV = 91.6% SU = 4.2% MU = 4.2%

ROADWAY/STREET CLASSIFICATION: CLASS III

PERCENT OF STRUCTURAL DESIGN TRAFFIC IN DESIGN TRAFFIC IN DESIGN LANE:

P = 50% S = 50% M = 50%

TRAFFIC FACTOR: ACTUAL TF = 0.29 AC TYPE = AC - 20

MINIMUM TF = 3.79

PG GRADE: BINDER 64-22 SURFACE = 64-22

SUBGRADE SUPPORT RATING:

SSR = POOR

THE FOLLOWING MIXTURE REQUIREMENTS ARE APPLICABLE FOR THIS PROJECT.

MIXTURE USE(S):	SURFACE COURSE	BINDER COURSE	HMA SHOULDER (SURFACE LIFT)	HMA SHOULDER (LOWER LIFTS)
AC/PG:	PG64-22	PG64-22	PG64-22	PG64-22
RAP% (MAX): **	15%	25%	15%	30%
DESIGN AIR VOIDS:	4.0%@N=50	4.0%@N=50	3.0%@N=50	4.0%@N=50
MIXTURE COMPOSITION: (GRADATION MIXTURE)	IL 9.5 OR IL 12.5	IL 19.0	IL 9.5 OR IL 12.5	IL 19.0
FRICTION AGGREGATE:	MIXTURE D	N.A.	MIXTURE C	N.A.

NOTES:
INDIVIDUAL LIFT THICKNESS OF EACH MIX TYPE WILL BE NO LESS THAN 3 X NOMINAL MAXIMUM AGGREGATE SIZE AND NO MORE THAN 6 X NOMINAL MAXIMUM AGGREGATE SIZE.

3.0% @ N50 SURFACE USED FOR TOP LIFT SHOULDER DUE TO TRAFFIC LOADING OF STAGED CONSTRUCTION.

** IF RAP OPTION IS SELECTED, THE ASPHALT CEMENT GRADE MAY NEED TO BE ADJUSTED. THIS WILL BE DETERMINED BY THE ENGINEER.

POLYMERIZED BITUMINOUS MATERIAL (PRIME COAT) RATES

SURFACE TYPE	ESTIMATED TRUCK APPLICATION RATE	RESIDUAL RATE
MILLED (HMA OR PCC)	0.08 GAL/S.Y. (0.00034 TON/S.Y.)	0.04 GAL/S.Y.
EXISTING PAVEMENT (NOT MILLED)	0.05 GAL/S.Y. (0.00022 TON/S.Y.)	0.025 GAL/S.Y.
FOG COAT (BETWEEN LIFTS)	0.05 GAL/S.Y. (0.00022 TON/S.Y.)	0.025 GAL/S.Y.

USER NAME = gjameson	DESIGNED -	REVISED -
FILE NAME = D468482-sht-hgw sta.dgn	CHECKED -	REVISED -
PLOT DATE = 1/31/2011	DRAWN -	REVISED -
PLOT TIME = 2:44:08 PM	CHECKED -	REVISED -

WHKS & CO. ENGINEERING
7018 KINGSMILL CT.,
SPRINGFIELD, IL
(217) 483-9457
DESIGN FIRM #184001036

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

INDEX OF SHEETS, HIGHWAY STANDARDS, MIXTURE REQUIREMENTS AND COMMITMENTS

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

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	McDONOUGH	117	2
		CONTRACT NO. 68482		
	ILLINOIS	FED. AID PROJECT		

GENERAL NOTES

AVAILABILITY OF ELECTRONIC FILES
MICROSTATION AND GEOPAK FILES OF THIS PROJECT WILL BE MADE AVAILABLE TO THE CONTRACTOR. IF THERE IS A CONFLICT BETWEEN THE ELECTRONIC FILES AND THE PRINTED CONTRACT PLANS AND DOCUMENTS, THE PRINTED CONTRACT PLANS AND DOCUMENTS SHALL TAKE PRECEDENCE OVER THE ELECTRONIC FILES. THE CONTRACTOR SHALL ACCEPT ALL RISK ASSOCIATED WITH USING THE ELECTRONIC FILES AND SHALL HOLD THE DEPARTMENT HARMLESS FOR ANY ERRORS OR OMISSIONS IN THE ELECTRONIC FILES AND THE DATA CONTAINED THEREIN. ERRORS OR DELAYS RESULTING FROM THE USE OF THE ELECTRONIC FILES BY THE CONTRACTOR SHALL NOT RESULT IN AN EXTENSION OF TIME FOR ANY INTERIM OR FINAL COMPLETION DATE OR SHALL NOT BE CONSIDERED CAUSE FOR ADDITIONAL COMPENSATION. THE CONTRACTOR SHALL NOT USE, SHARE, OR DISTRIBUTE THESE ELECTRONIC FILES EXCEPT FOR THE PURPOSE OF CONSTRUCTING THIS CONTRACT. ANY CLAIMS BY THIRD PARTIES DUE TO USE OR ERRORS SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL INCLUDE THIS DISCLAIMER WITH THE TRANSFER OF THESE ELECTRONIC FILES TO ANY OTHER PARTIES AND SHALL INCLUDE APPROPRIATE LANGUAGE BINDING THEM TO SIMILAR RESPONSIBILITIES.

UTILITIES - LOCATIONS/INFORMATION ON PLANS
THE LOCATIONS OF EXISTING WATER MAINS, GAS MAINS, SEWERS, ELECTRIC POWER LINES, TELEPHONE LINES AND OTHER UTILITIES AS SHOWN ON THE PLANS ARE BASED ON CAREFUL FIELD INVESTIGATION AND THE BEST INFORMATION AVAILABLE, BUT THEY ARE NOT GUARANTEED. UNLESS ELEVATIONS ARE SHOWN --- ALL UTILITY LOCATIONS SHOWN ON THE CROSS SECTIONS ARE BASED ON THE APPROXIMATE DEPTH SUPPLIED BY THE UTILITY COMPANY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ASCERTAIN THEIR EXACT LOCATION FROM THE UTILITY COMPANIES AND BY FIELD INSPECTION.

PROPERTY OWNER ACCESS REQUIREMENT
ACCESS MUST BE MAINTAINED TO ALL EXISTING PROPERTIES DURING CONSTRUCTION PER ARTICLE 107.09 UNLESS ARRANGEMENTS ARE MADE IN WRITING BY THE CONTRACTOR WITH THE PROPERTY OWNERS WITH A COPY TO THE ENGINEER FOR SHORT-TERM CLOSURES.

TREE REMOVAL
THE DISTRICT FOUR TREE COMMITTEE SHOULD BE CONTACTED AND PRIOR APPROVAL OBTAINED FOR ANY TREE REMOVAL BEYOND THE LIMITS/LOCATIONS INCLUDED IN THE PLANS.

ENVIRONMENTAL REVIEWS
PRIOR TO THE USE OF ANY PROPOSED BORROW AREAS, USE AREAS (TEMPORARY ACCESS ROADS, DETOURS, RUN-AROUNDS, ETC.) AND/OR WASTE AREAS, THE CONTRACTOR SHALL FILE THE REQUIRED ENVIRONMENTAL RESOURCE REQUEST SURVEYS ACCORDING TO SECTION 107.22 OF THE STANDARD SPECIFICATIONS. THESE SURVEYS ARE REQUIRED IN ORDER FOR THE DEPARTMENT TO CONDUCT CULTURAL AND BIOLOGICAL RESOURCE SURVEYS FOR THE PROPOSED SITE.PRIOR TO ANY WASTE MATERIALS BEING REMOVED FROM THE CONSTRUCTION SITE THE REQUIRED ENVIRONMENTAL RESOURCE SURVEYS WILL NEED TO BE OBTAINED AND FILED BY THE CONTRACTOR. EXCESS WASTE PRODUCTS REMOVED FROM THE CONSTRUCTION SITE SHALL BE DISPOSED OF AS REQUIRED IN SECTION 202.03 OF THE STANDARD SPECIFICATIONS. ANY PROTRUDING METAL BARS SHALL BE REMOVED PRIOR TO THE DISPOSAL OF BROKEN CONCRETE AT APPROVED DISPOSAL SITES. THE REQUIRED ENVIRONMENTAL RESOURCE DOCUMENTATION SHALL INCLUDE THE FOLLOWING:

BDE FORM 2289 (ENVIRONMENTAL SURVEY REQUEST)
A LOCATION MAP SHOWING THE SIZE LIMITS AND LOCATION OF THE USE AREA
SIGNED PROPERTY OWNER AGREEMENT FORM - D4 PI0100
COLOR PHOTOGRAPHS DEPICTING THE USE AREA
BORROW AREA ENTRY AGREEMENT FORM - D4 PI0101

PLEASE NOTE THAT A MINIMUM OF TWO WEEKS SHALL BE ALLOWED FOR THE DISTRICT TO OBTAIN THE REQUIRED ENVIRONMENTAL CLEARANCES.

PAVEMENT STATION NUMBERS & PLACEMENT
THE CONTRACTOR SHALL PROVIDE LABOR AND MATERIALS REQUIRED TO IMPRINT PAVEMENT STATION NUMBERS IN THE FINISHED SURFACE OF THE PAVEMENT AND/OR OVERLAY. THE NUMBERS SHALL BE APPROXIMATELY ¾ INCH (20 MM) WIDE, 5 INCHES (125 MM) HIGH AND 5/8 INCH (15 MM) DEEP.

THE PAVEMENT STATION NUMBERS SHALL BE INSTALLED AS SPECIFIED HEREIN:

INTERVAL - 200 FEET
BOTTOM OF NUMBERS - 6 INCHES (150 MM) FROM THE INSIDE EDGE OF THE PAVEMENT MARKING

LOCATION:

-2, 3, & 5 LANE PAVEMENTS - RIGHT EDGE OF PAVEMENT IN DIRECTION OF INCREASING STATIONS
MULTI-LANE DIVIDED ROADWAYS - OUTSIDE EDGE OF PAVEMENT IN BOTH DIRECTIONS
RAMPS - ALONG BASELINE EDGE OF PAVEMENT

POSITION - STATIONS SHALL BE PLACED SO THEY CAN BE READ FROM THE ADJACENT SHOULDER FORMAT - ENGLISH (METRIC) PAVEMENT STATIONS SHALL USE THIS FORMAT "XXX (XX+XOO)"

WHERE X REPRESENTS THE PAVEMENT STATION

THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT WILL BE INCLUDED IN THE COST OF THE ASSOCIATED PAVEMENT AND/OR OVERLAY PAY ITEMS.

BUTT JOINT CUTTING TIME RESTRICTION
BUTT JOINTS SHALL NOT BE MILLED MORE THAN THREE (3) DAYS PRIOR TO PLACEMENT OF THE HMA SURFACE COURSE.

PAVING SURFACE COURSE
CONTINUOUS PAVING OPERATIONS ON THE MAIN ROADWAY SHALL BE MAINTAINED AT ALL TIMES DURING THE CONSTRUCTION OF THE HOT-MIX ASPHALT SURFACE. NO INTERRUPTIONS FOR SIDE ROADS, ENTRANCES, TURN LANES, ETC. WILL BE ALLOWED.

ORDERING LENGTH CONFIRMATION - DRAINAGE ITEMS
THE CONTRACTOR SHALL CONSULT WITH THE ENGINEER IN REGARD TO THE EXACT LENGTH OF THE BOX/PIPE CULVERTS, STORM SEWERS, AND/OR PIPE DRAINS REQUIRED PRIOR TO ORDERING THESE ITEMS.

RIGHT-OF-WAY MARKERS
WHEN INSTALLING RIGHT-OF-WAY MAKERS, CARE SHALL BE TAKEN TO NOT DISTURB ANY EXISTING PROPERTY/RIGHT-OF-WAY PINS. IF A PROPERTY/RIGHT-OF-WAY PIN IS FOUND AT THE LOCATION OF A PROPOSED RIGHT-OF-WAY MARKER, THE MARKER SHALL BE PLACED ONE (1) FOOT IN FRONT OF THE PIN.

ENGINEERS FIELD OFFICE
ADD THE FOLLOWING SENTENCE TO THE END OF PARAGRAPH 670.02 (I) AND 670.04 (E):

ALL OF THE TELEPHONE LINES PROVIDED SHALL HAVE UNPUBLISHED NUMBERS.

NO PASSING ZONE VERIFICATION

THE RESIDENT SHALL CONTACT OPERATIONS TO VERIFY THE LOCATION OF NO PASSING ZONES PRIOR TO PLACEMENT OF CENTERLINE STRIPING.

STATUS OF UTILITIES

NAME AND ADDRESS OF UTILITY	TYPE	LOCATION	ESTIMATED DATE RELOCATION COMPLETE
ADAMS TELEPHONE COMPANY	PEDESTAL	STA. 756+38. 33' LT.	ADJUST PRIOR TO CONSTRUCTION
ADAMS TELEPHONE COMPANY	BURIED TELEPHONE	STA. 759+00 TO STA. 773+25 LT	RELOCATE PRIOR TO CONSTRUCTION

J.U.L.I.E. 1-800-892-0123

THE ABOVE REPRESENTS THE BEST INFORMATION OF THE DEPARTMENT, AND IS INCLUDED SOLELY FOR THE CONVENIENCE OF THE BIDDER. THE APPLICABLE PROVISIONS OF ARTICLES 105.07 AND 107.20 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION SHALL APPLY.

THE CONTRACTOR SHOULD NOTIFY THE ENGINEER, IN WRITING, OF ANY UTILITY ADJUSTMENT OR REMOVAL, WHICH HAS NOT BEEN COMPLETED AS REQUIRED FOR THE CONTRACTOR'S OPERATIONS. A REQUEST, FOR AN EXTENSION OF TIME ONLY, WILL BE CONSIDERED TO THE EXTENT THE CONTRACTOR'S OPERATIONS WERE AFFECTED.

PROJECT SPECIFIC
ALL CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH THE STATE OF ILLINOIS "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, ADOPTED JANUARY 1, 2007", THESE PLANS AND THE SPECIAL PROVISIONS INCLUDED IN THE CONTRACT DOCUMENTS.

EXCEPT AS NOTED ON THE PLANS, PAVEMENT GRADES SHOWN ARE AT THE TOP OF PAVEMENT SURFACES.

THE ENGINEER WILL BE THE SOLE JUDGE CONCERNING CURING TIME FOR THE VARIOUS BITUMINOUS LIFTS.

ALL ELEVATIONS REFERRING TO U.S.G.S. MEAN SEA LEVEL DATUM.

ABANDONED UNDERGROUND UTILITIES THAT CONFLICT WITH CONSTRUCTION SHALL BE DISPOSED OF OUTSIDE THE LIMITS OF THE RIGHT OF WAY ACCORDING TO ARTICLE 202.03 OF THE STANDARD SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER. THIS WORK WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF EARTH EXCAVATION.

ANY REFERENCE TO A STANDARD IN THESE PLANS SHALL BE INTERPRETED TO MEAN THE EDITION AS INDICATED BY THE SUBNUMBER LISTED UNDER THE HIGHWAY STANDARDS OR THE COPY OF THE STANDARD INCLUDED IN THESE PLANS.

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

AGGREGATE (PRIME COAT)	0.002	TON/SQ YD
HOT-MIX ASPHALT	112	LBS/SQ YD/INCH
AGGREGATE SHOULDERS, TYPE B	2.05	TON/CU YD
STONE RIPRAP	1.50	TON/CU YD
COARSE AGGREGATE FILL	2.05	TON/CU YD
ROCK FILL	2.05	TON/CU YD

FORTY-EIGHT HOURS BEFORE STARTING EXCAVATION THE CONTRACTOR SHALL CALL J.U.L.I.E. (1-800-892-0123) TO HAVE THE LOCATION OF EXISTING UTILITIES STAKED. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING AND PROTECTING ALL EXISTING UNDERGROUND UTILITIES.

THE CONTRACTOR'S OPERATIONS AND TEMPORARY STORAGE ACTIVITIES SHALL BE LIMITED TO THE WORK AREA AND/OR CONSTRUCTION LIMITS. ANY ADDITIONAL STAGING AREAS ADJACENT TO THE PROJECT AREA ARE SUBJECT TO PRIOR APPROVAL BY THE ENGINEER AND MUST NOT CONFLICT WITH EXISTING SIDE ROADS, INTERSECTIONS, DRIVEWAYS, OR DRAINAGE. ALL OPERATIONS SHALL BE SUBJECT TO REGULATORY REQUIREMENTS PERMITTED FOR THIS PROJECT. NO ADDITIONAL COMPENSATION WILL BE ALLOWED TO THE CONTRACTOR FOR COMPLIANCE WITH THE ABOVE REQUIREMENTS.

THE CONTRACTOR SHALL INSPECT ALL EROSION AND SEDIMENT CONTROL MEASURES WEEKLY AND AFTER EACH RAINFALL EVENT EQUAL TO ½" OR MORE.

DISTURBED AREAS SHALL RECEIVE PERMANENT STABILIZATION WITHIN 7 DAYS OF COMPLETION OF CONSTRUCTION ACTIVITIES. TEMPORARY STABILIZATION OF WORK AREAS IS REQUIRED FOR ALL AREAS REMAINING UNDISTURBED FOR 14 DAYS, UNLESS WORK RESUMES PRIOR TO 21 DAYS. TEMPORARY STABILIZATION MUST BE APPROVED BY THE ENGINEER.

THE CONTRACTOR SHALL INSTALL ALL EROSION CONTROL MEASURES PRIOR TO STARTING ANY OTHER CONSTRUCTION WORK AT THE SITE.

ALL STATIONS AND OFFSETS ARE REFERENCED FROM THE PROPOSED CENTERLINE ALIGNMENT.

THE EXISTING AND PROPOSED CROSS SECTIONS HAVE BEEN PLOTTED ALONG THE PROPOSED CENTERLINE ALIGNMENT.

THE CONTRACTOR WILL BE REQUIRED TO RELOCATE OR REMOVE AND REPLACE ALL ROAD SIGNS WHICH INTERFERE WITH CONSTRUCTION OPERATIONS AND TEMPORARILY RESET ALL SUCH SIGNS DURING ALL STAGES OF CONSTRUCTION. THIS WORK SHALL BE INCLUDED IN THE COST OF THIS CONTRACT.

ALL SAW CUTS NECESSARY TO COMPLETE THE WORK AS DETAILED IN THESE PLANS SHALL BE INCLUDED IN THE COST FOR THE VARIOUS PAY ITEMS INVOLVED.

USER NAME = gjameson	DESIGNED -	REVISED -
FILE NAME = D468482-sht-gennotes.dgn	CHECKED -	REVISED -
PLOT DATE = 1/31/2011	DRAWN -	REVISED -
PLOT TIME = 2:44:29 PM	CHECKED -	REVISED -

WHKS & CO. ENGINEERING
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

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

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	McDONOUGH	117	3
		CONTRACT NO. 68482		
	ILLINOIS	FED. AID PROJECT		

	PAY ITEM	DESCRIPTION	UNIT	ROADWAY 0004 80% FED 20% STATE	ROADWAY 0004 100% STATE	80% FED 20% STATE BRIDGE 0011	TOTAL
	20100500	TREE REMOVAL, ACRES	ACRE	3.1			3.1
	20200100	EARTH EXCAVATION	CU YD	6,990			6,990
	20200500	EARTH EXCAVATION (WIDENING)	CU YD	229			229
	20201200	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL	CU YD	2,969			2,969
	20300100	CHANNEL EXCAVATION	CU YD	1,335			1,335
	20400800	FURNISHED EXCAVATION	CU YD	14,609			14,609
	21001000	GEOTECHNICAL FABRIC FOR GROUND STABILIZATION	SQ YD	4,621			4,621
	21101615	TOPSOIL FURNISH AND PLACE, 4"	SQ YD	20,484			20,484
*	25000210	SEEDING, CLASS 2A	ACRE	1.8			1.8
*	25000300	SEEDING, CLASS 3	ACRE	2.8			2.8
*	25000400	NITROGEN FERTILIZER NUTRIENT	POUND	531			531
*	25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	531			531
*	25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	531			531
*	25003210	INTERSEEDING, CLASS 2A	ACRE	1.2			1.2
*	25100115	MULCH, METHOD 2	ACRE	1.5			1.5
*	25100635	HEAVY DUTY EROSION CONTROL BLANKET	SQ YD	14,937			14,937
	28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	1,395			1,395
	28000305	TEMPORARY DITCH CHECKS	FOOT	253			253
	28000400	PERIMETER EROSION BARRIER	FOOT	2,078			2,078
	28000500	INLET AND PIPE PROTECTION	EACH	4			4
	28100109	STONE RIPRAP, CLASS A5	SQ YD			356	356
	28100227	STONE RIPRAP, CLASS B4	TON	235			235
	28200200	FILTER FABRIC	SQ YD	235		356	591
	31100100	SUBBASE GRANULAR MATERIAL, TYPE A	TON	1,199			1,199
	31101810	SUBBASE GRANULAR MATERIAL, TYPE B 12"	SQ YD	95			95
	31101900	SUBBASE GRANULAR MATERIAL, TYPE C	TON	758			758
	35600714	HOT-MIX ASPHALT BASE COURSE WIDENING, 9 1/2"	SQ YD	1,166			1,166
	35600724	HOT-MIX ASPHALT BASE COURSE WIDENING, 12"	SQ YD	29			29
	40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	300			300
	40600115	POLYMERIZED BITUMINOUS MATERIALS (PRIME COAT)	GALLON	1,874			1,874
	40600300	AGGREGATE (PRIME COAT)	TON	100			100

• SPECIALTY ITEMS

	PAY ITEM	DESCRIPTION	UNIT	ROADWAY 0004 80% FED 20% STATE	ROADWAY 0004 100% STATE	80% FED 20% STATE BRIDGE 0011	TOTAL
	40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	1,245			1,245
	40600990	TEMPORARY RAMP	SQ YD	675			675
	40603080	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50	TON	4,838			4,838
	40603335	HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50	TON	417			417
	44000100	PAVEMENT REMOVAL	SQ YD	204			204
	44000151	HOT-MIX ASPHALT SURFACE REMOVAL, 1/2"	SQ YD	708			708
	44000200	DRIVEWAY PAVEMENT REMOVAL	SQ YD	553			553
	44000400	GUTTER REMOVAL	FOOT	45			45
	44004250	PAVED SHOULDER REMOVAL	SQ YD	804			804
	48101600	AGGREGATE SHOULDERS, TYPE B 8"	SQ YD	838			838
	48203100	HOT-MIX ASPHALT SHOULDERS	TON	965			965
	50100100	REMOVAL OF EXISTING STRUCTURES	EACH			1	1
	50104400	CONCRETE HEADWALL REMOVAL	EACH	1			1
	50105220	PIPE CULVERT REMOVAL	FOOT	221			221
	50200100	STRUCTURE EXCAVATION	CU YD			633	633
	50200300	COFFERDAM EXCAVATION	CU YD			352	352
	50202901	COFFERDAM (LOCATION -1)	EACH			1	1
	50300100	FLOOR DRAINS	EACH			26	26
	50300225	CONCRETE STRUCTURES	CU YD	1.4		489.1	490.5
	50300255	CONCRETE SUPERSTRUCTURES	CU YD			759.0	759.0
	50300260	BRIDGE DECK GROOVING	SQ YD			1,812.0	1,812.0
	50300265	SEAL COAT CONCRETE	CU YD			61.5	61.5
	50300280	CONCRETE ENCASEMENT	CU YD			22.5	22.5
	50300300	PROTECTIVE COAT	SQ YD			2,359	2,359
	50401105	FURNISHING AND ERECTING PRECAST PRESTRESSED CONCRETE I-BEAMS, 54 IN.	FOOT			2,814	2,814
	50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND			39,260	39,260
	50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	40		228,360	228,400
	50800515	BAR SPLICERS	EACH			1,893	1,893
	51201600	FURNISHING STEEL PILES HP12X53	FOOT			1,301	1,301
	51201800	FURNISHING STEEL PILES HP14X73	FOOT			1,305	1,305
	51202000	FURNISHING STEEL PILES HP14X102	FOOT			2,112	2,112

• SPECIALTY ITEMS

USER NAME = gjameson	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100.0000 ' / IN.	CHECKED -	REVISED -
PLOT DATE = 12/21/2010	DATE -	REVISED -

WHKS & co. ENGINEERING
7018 KINGSMILL CT., SPRINGFIELD, IL (217) 483-9457 DESIGN FIRM #184001036

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: NTS | SHEET NO. 1 OF 3 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	McDONOUGH	117	4
		CONTRACT NO. 68482		
		ILLINOIS FED. AID PROJECT		

	PAY ITEM	DESCRIPTION	UNIT	ROADWAY 0004 80% FED 20% STATE	ROADWAY 0004 100% STATE	80% FED 20% STATE BRIDGE 0011	TOTAL
	51202305	DRIVING PILES	FOOT			4,718	4,718
	51203600	TEST PILE STEEL HP12X53	EACH			1	1
	51203800	TEST PILE STEEL HP14X73	EACH			1	1
	51204000	TEST PILE STEEL PH14X102	EACH			4	4
	51204650	PILE SHOES	EACH			76	76
	51500100	NAME PLATES	EACH			1	1
	52000110	PREFORMED JOINT STRIP SEAL	FOOT			68	68
	52100020	ELASTOMERIC BEARING ASSEMBLY, TYPE II	EACH			12	12
	52100520	ANCHOR BOLTS, 1"	EACH			24	24
	542D0223	PIPE CULVERTS, CLASS D, TYPE 1 18"	FOOT	69			69
	542D0229	PIPE CULVERTS, CLASS D, TYPE 1 24"	FOOT	163			163
	54213453	END SECTIONS 18"	EACH	4			4
	54213459	END SECTIONS 24"	EACH	4			4
	58700300	CONCRETE SEALER	SQ FT			798	798
	59100100	GEOCOMPOSITE WALL DRAIN	SQ YD			58	58
	60500060	REMOVING INLETS	EACH	3			3
	60100060	CONCRETE HEADWALLS FOR PIPE DRAINS	EACH	2			2
	60107600	PIPE UNDERDRAINS 4"	FOOT	148			148
	60108100	PIPE UNDERDRAINS 4" (SPECIAL)	FOOT	68			68
*	63000001	STEEL PLATE BEAM GUARD RAIL, TYPE A, 6 FOOT POSTS	FOOT	687.5			687.5
*	63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	4			4
*	63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	5			5
	63200310	GUARDRAIL REMOVAL	FOOT	770			770
	63301210	REMOVE AND REERECT STEEL PLATE BEAM GUARDRAIL, TYPE A	FOOT	625.0			625.0
	66600105	FURNISHING AND ERECTING RIGHT OF WAY MARKERS	EACH	15			15
	66700205	PERMANENT SURVEY MARKERS, TYPE 1	EACH	4			4
	67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	16			16
	67000600	ENGINEER'S FIELD LABORATORY	CAL MO	16			16
	67100100	MOBILIZATION	L SUM	1			1
	70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1			1
	70100500	TRAFFIC CONTROL AND PROTECTION, STANDARD 701326	L SUM	1			1

▪ SPECIALTY ITEMS

	PAY ITEM	DESCRIPTION	UNIT	ROADWAY 0004 80% FED 20% STATE	ROADWAY 0004 100% STATE	80% FED 20% STATE BRIDGE 0011	TOTAL
	70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	487			487
	70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1			1
	70106700	TEMPORARY RUMBLE STRIPS	EACH	6			6
	70106800	CHANGEABLE MESSAGE SIGN	CAL MO	16			16
	70300100	SHORT TERM PAVEMENT MARKING	FOOT	1,136			1,136
	70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	8,205			8,205
	70300280	TEMPORARY PAVEMENT MARKING - LINE 24"	FOOT	26			26
	70300520	PAVEMENT MARKING TAPE, TYPE III 4"	FOOT	1,094			1,094
	70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	2,062			2,062
	70400100	TEMPORARY CONCRETE BARRIER	FOOT	1,625.0			1,625.0
	70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	1,625.0			1,625.0
	70500100	TEMPORARY STEEL PLATE BEAM GUARD RAIL, TYPE A	FOOT	87.5			87.5
	70500665	TEMPORARY TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	2			2
*	72000100	SIGN PANEL - TYPE 1	SQ FT	40			40
*	72800100	TELESCOPING STEEL SIGN SUPPORT	FOOT	60			60
*	78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	6,550			6,550
*	78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	21			21
*	78200410	GUARDRAIL MARKERS, TYPE A	EACH	27			27
*	78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	5			5
	78300100	PAVEMENT MARKING REMOVAL	SQ FT	739			739
	81100300	CONDUIT ATTACHED TO STRUCTURE, 1" DIA., GALVANIZED STEEL	FOOT	286			286
	Z0001002	GUARDRAIL AGGREGATE EROSION CONTROL	TON	353			353
	Z0001900	ASBESTOS BEARING PAD REMOVAL	EACH			168	168
	Z0013798	CONSTRUCTION LAYOUT	L SUM	1			1
	Z0018002	DRAINAGE SCUPPERS, DS-11	EACH			4	4
	Z0023600	FILLING EXISTING CULVERTS	EACH	1			1
	Z0026407	TEMPORARY SHEET PILING	SQ FT			1,904	1,904
	Z0028462	GEOTEXTILE RETAINING WALL	SQ FT	303			303
▪	Z0030260	IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3	EACH	3			3
▪	Z0030330	IMPACT ATTENUATORS, RELOCATE (FULLY REDIRECTIVE), TEST LEVEL 3	EACH	2			2

▪ SPECIALTY ITEMS

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	DRAWN -	REVISED -
PLOT SCALE = 100.0000 ' / IN.	CHECKED -	REVISED -
PLOT DATE = 12/21/2010	DATE -	REVISED -

WHKS & CO. ENGINEERING
7018 KINGSMILL CT., SPRINGFIELD, IL
(217) 483-9457
DESIGN FIRM #184001036

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: NTS | SHEET NO. 2 OF 3 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	McDONOUGH	117	5
		CONTRACT NO. 68482		
	ILLINOIS FED. AID PROJECT			

PAY ITEM	DESCRIPTION	UNIT	ROADWAY 0004		80% FED 20% STATE	TOTAL
			80% FED 20% STATE	100% STATE	BRIDGE 0011	
Z0034105	MATERIAL TRANSFER DEVICE	TON	907			907
Z0046304	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT			148	148
Z0054500	ROCK FILL	TON	4,825			4,825
Z0065100	SETTLEMENT PLATFORMS	EACH	1			1
X0323149	TEMPORARY MECHANICALLY STABILIZED EARTH RETAINING WALL	SQ FT			278	278
X0325672	RELOCATE EXISTING GAGE HOUSE	L SUM	1			1.0
~~X2020500~~	~~EARTH EXCAVATION (ROCKFILL)~~	~~CU YD~~	~~2,362~~			~~2,362~~
X2070304	POROUS GRANULAR EMBANKMENT, SPECIAL	CU YD			130	130
• X2503100	MOWING	UNIT		115		115
X4401198	HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH	SQ YD	627			627
X4402720	GUTTER REMOVAL (SPECIAL)	FOOT	819			819
X5020501	UNDERWATER STRUCTURE EXCAVATION PROTECTION - LOCATION 1	EACH			1	1
X5080600	MECHANICAL SPLICERS	EACH			310	310
X6660410	REMOVE RIGHT OF WAY MAKERS	EACH	5			5
X7010216	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	L SUM	1			1
• X7050167	TEMPORARY TRAFFIC BARRIER TERMINAL, TYPE 1, SPECIAL (TANGENT)	EACH	2			2
X3112700	COARSE AGGREGATE FILL	TON	1,627			1,627

• SPECIALTY ITEMS

USER NAME = gjameson	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / IN.	CHECKED -	REVISED -	
PLOT DATE = 12/21/2010	DATE -	REVISED -	

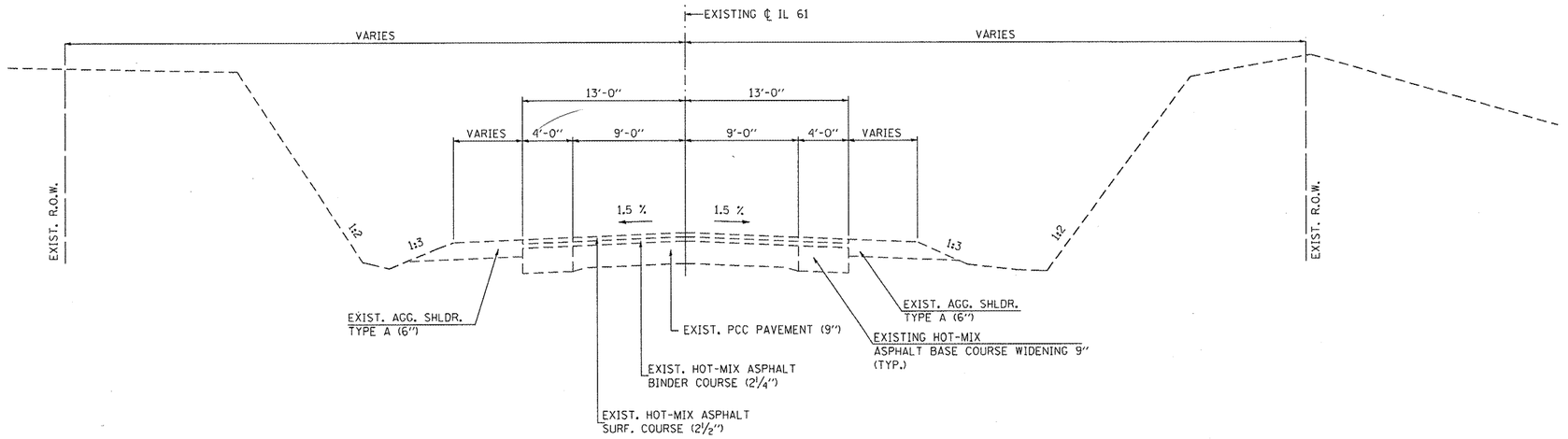
WHKS & CO. ENGINEERING
7018 KINGSMILL CT.,
SPRINGFIELD, IL
(217) 483-9457
DESIGN FIRM #184001036

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

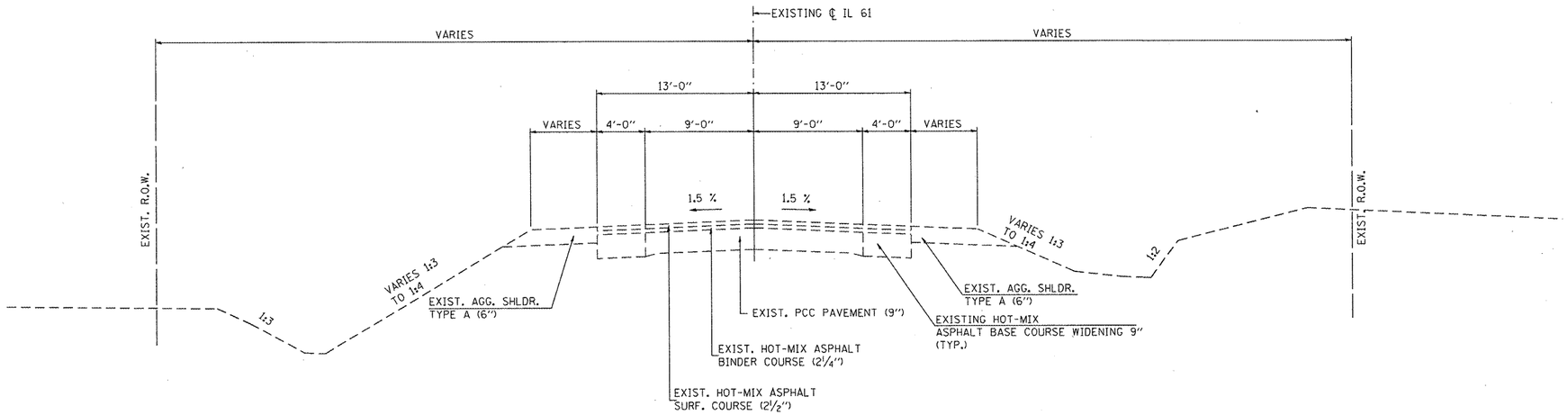
SCALE: NTS | SHEET NO. 3 OF 3 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	McDONOUGH	117	6
		CONTRACT NO. 68482		
	ILLINOIS FED. AID PROJECT			



EXISTING TYPICAL SECTION

STA. 751+00 TO STA. 753+50



EXISTING TYPICAL SECTION

STA. 753+50 TO STA. 756+57
STA. 760+10 TO STA. 765+14

BRIDGE OMISSION:
STA. 756+57 TO STA. 761+10

USER NAME = gjameson	DESIGNED - JAC	REVISED -
	DRAWN - DLH	REVISED -
PLOT SCALE = 10.0000 ' / IN.	CHECKED -	REVISED -
PLOT DATE = 12/21/2010	DATE -	REVISED -

WHKS & CO. ENGINEERING
7018 KINGSMILL CT.,
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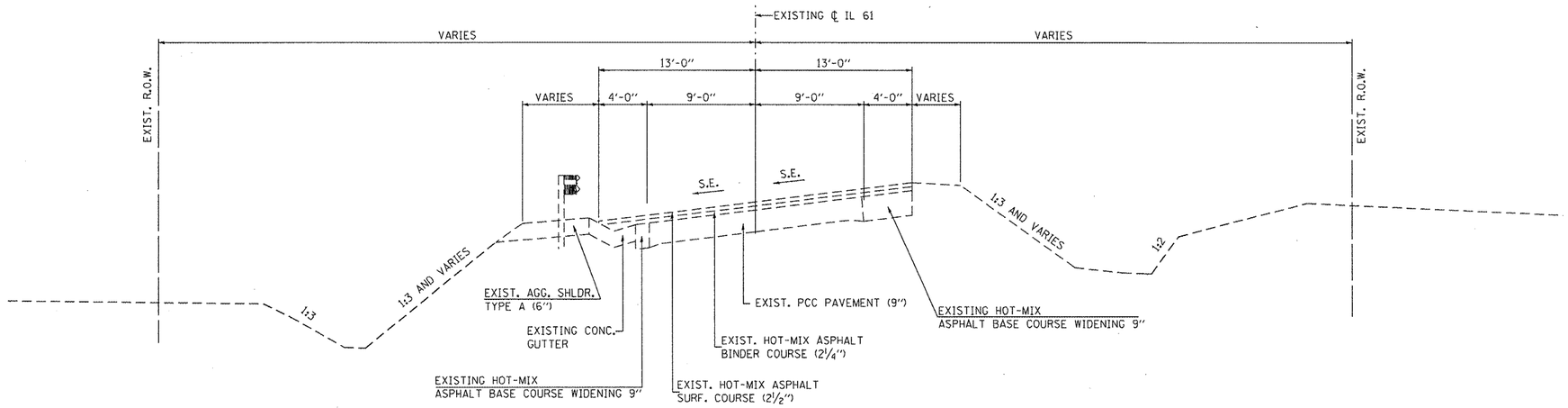
(217) 483-9457
DESIGN FIRM #184001036

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS

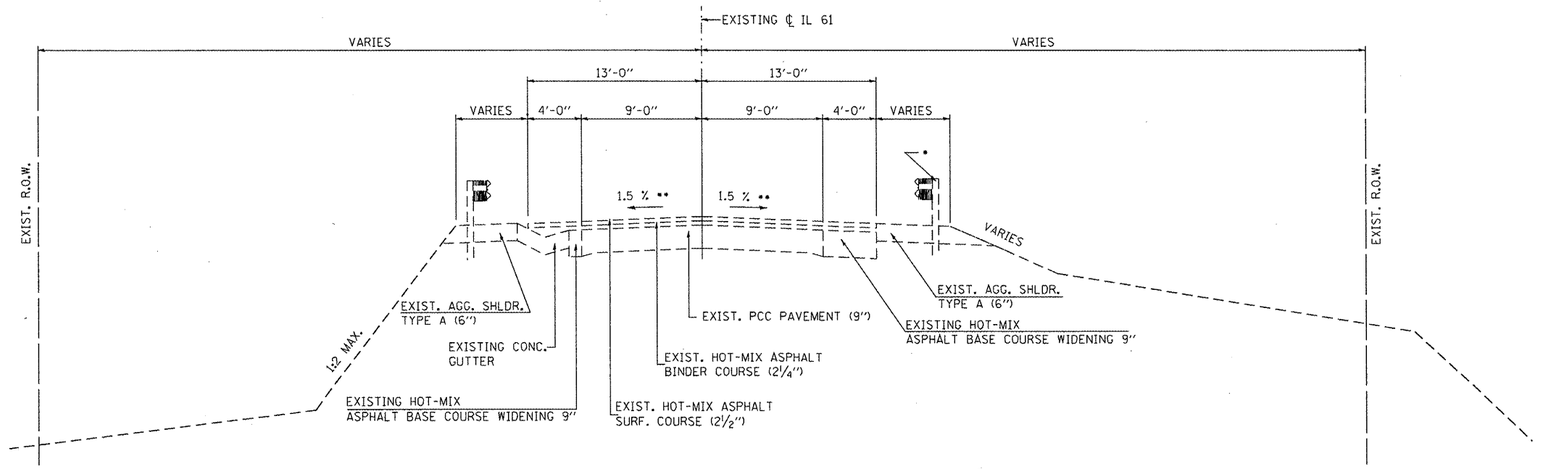
SCALE: 1" = 10' (H) | SHEET NO. 1 OF 7 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	MCDONOUGH	117	7
		CONTRACT NO. 68482		
	ILLINOIS FED. AID PROJECT			



EXISTING TYPICAL SECTION

STA. 765+14 TO STA. 770+50



EXISTING TYPICAL SECTION

STA. 770+50 TO STA. 773+25

* EXISTING GUARDRAIL FROM STA. 766+40± TO STA. 769+50±

** PAVEMENT CROSS SLOPE AT STA. 773+25 IS 0.50 %

USER NAME = gjameson	DESIGNED - JAC	REVISED -
	DRAWN - DLH	REVISED -
PLOT SCALE = 10.0000 ' / IN.	CHECKED -	REVISED -
PLOT DATE = 12/21/2010	DATE -	REVISED -

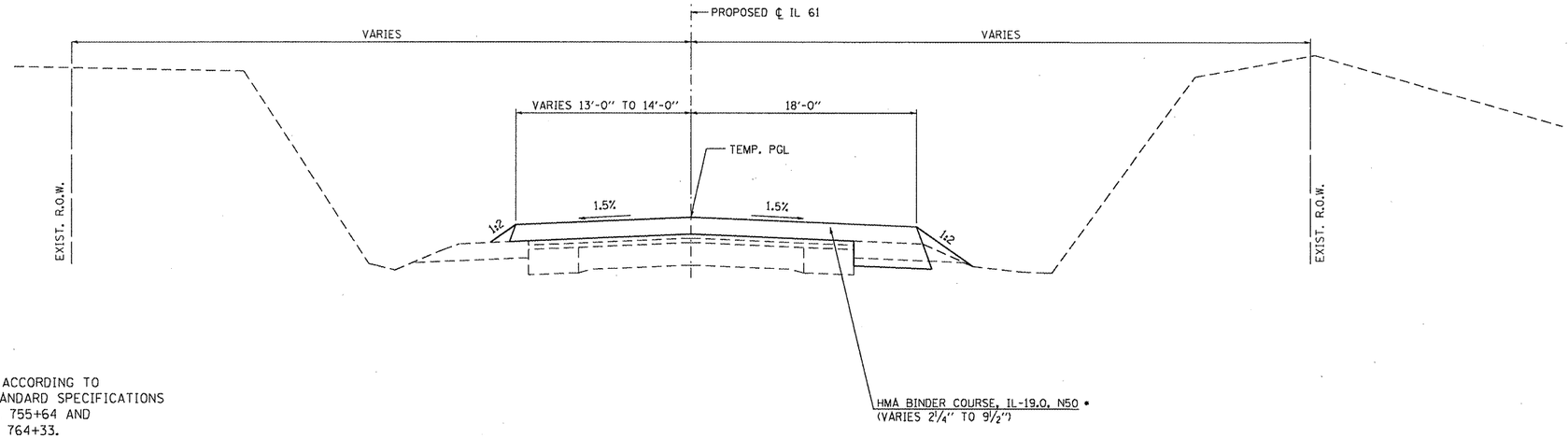
WHKS & CO. ENGINEERING
7018 KINGSMILL CT., SPRINGFIELD, IL (217) 483-9457 DESIGN FIRM #184001036

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS

SCALE: 1" = 10' (H) | SHEET NO. 2 OF 7 SHEETS | STA. | TO STA.

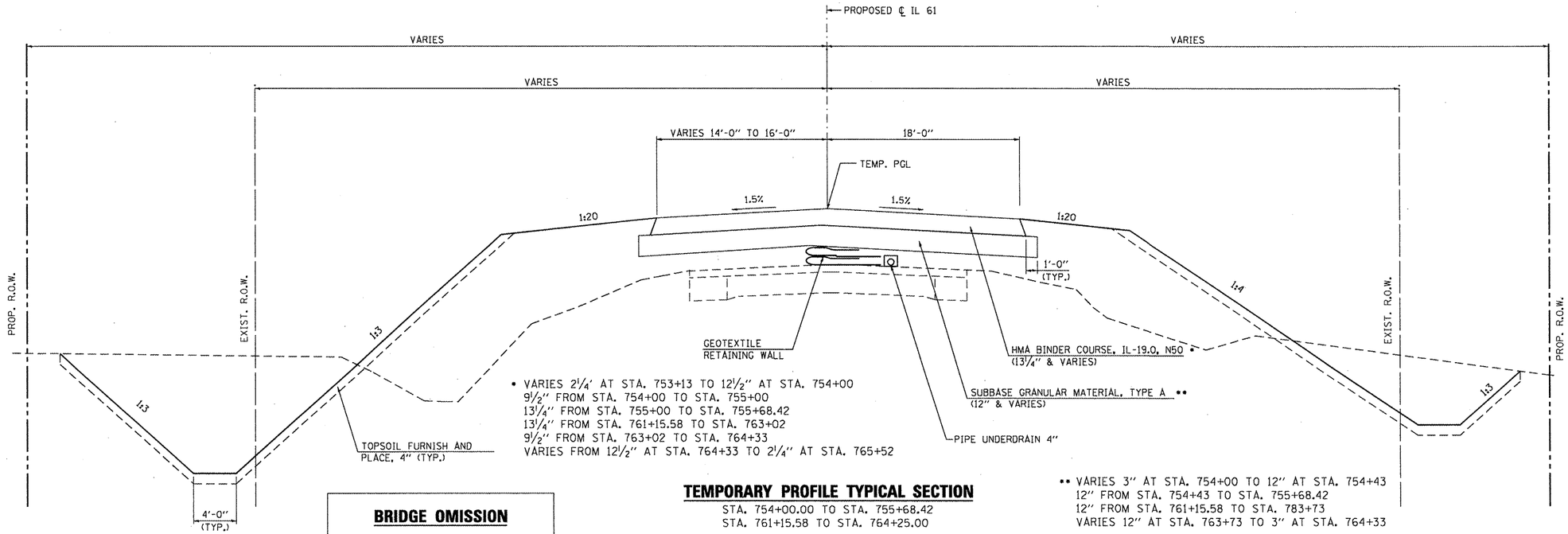
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	MCDONOUGH	117	8
		CONTRACT NO. 68482		
	ILLINOIS FED. AID PROJECT			



NOTES:
BREAK EXISTING PAVEMENT ACCORDING TO ARTICLE 205.03 OF THE STANDARD SPECIFICATIONS FROM STA. 754+00 TO STA. 755+64 AND FROM STA. 761+40 TO STA. 764+33.

TEMPORARY PROFILE TYPICAL SECTION

STA. 752+50.00 TO STA. 754+00.00



• VARIES 2¼" AT STA. 753+13 TO 12½" AT STA. 754+00
9½" FROM STA. 754+00 TO STA. 755+00
13¼" FROM STA. 755+00 TO STA. 755+68.42
13¼" FROM STA. 761+15.58 TO STA. 763+02
9½" FROM STA. 763+02 TO STA. 764+33
VARIES FROM 12½" AT STA. 764+33 TO 2¼" AT STA. 765+52

•• VARIES 3" AT STA. 754+00 TO 12" AT STA. 754+43
12" FROM STA. 754+43 TO STA. 755+68.42
12" FROM STA. 761+15.58 TO STA. 783+73
VARIES 12" AT STA. 763+73 TO 3" AT STA. 764+33

BRIDGE OMISSION

STA. 755+68.42 TO STA. 761+15.58

TEMPORARY PROFILE TYPICAL SECTION

STA. 754+00.00 TO STA. 755+68.42
STA. 761+15.58 TO STA. 764+25.00

USER NAME = gjameson	DESIGNED - JAC	REVISED -
	DRAWN - DLH	REVISED -
PLOT SCALE = 10.0000 ' / IN.	CHECKED -	REVISED -
PLOT DATE = 12/21/2010	DATE -	REVISED -

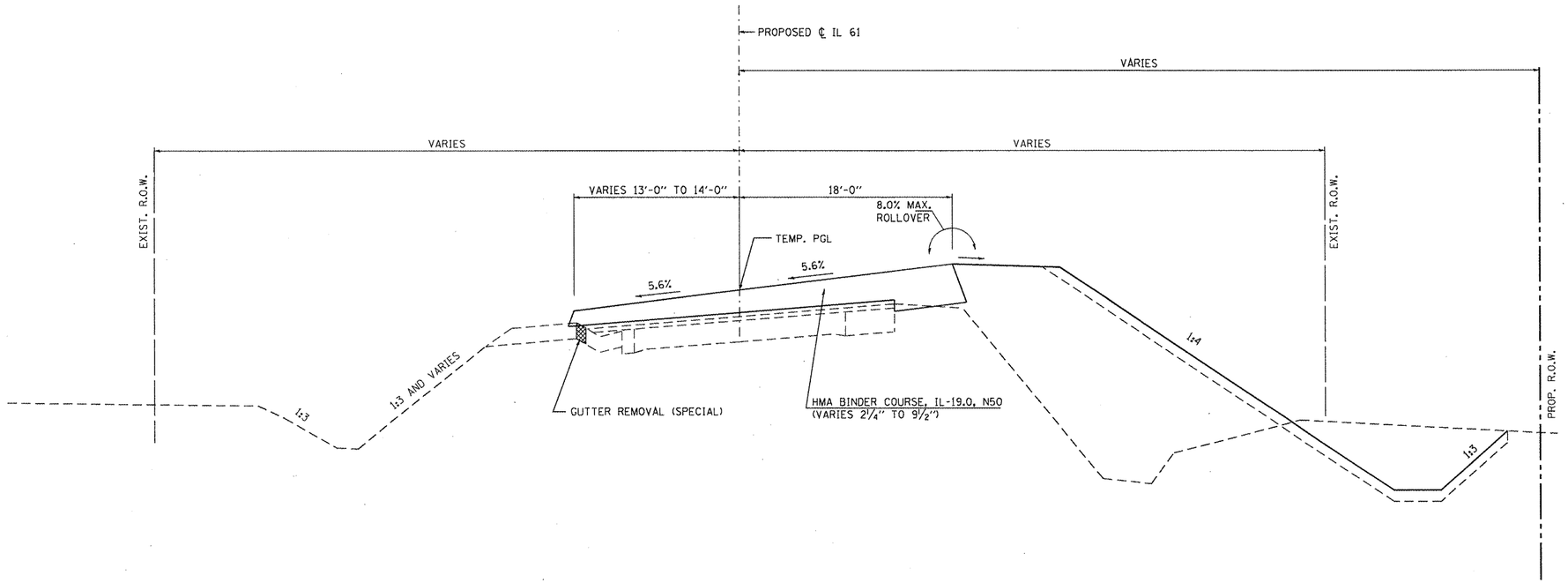
WHKS & CO. ENGINEERING
7018 KINGSMILL CT., SPRINGFIELD, IL (217) 483-0457 DESIGN FIRM #184001036

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS

SCALE: 1" = 10' (H) | SHEET NO. 3 OF 7 SHEETS | STA. | TO STA.

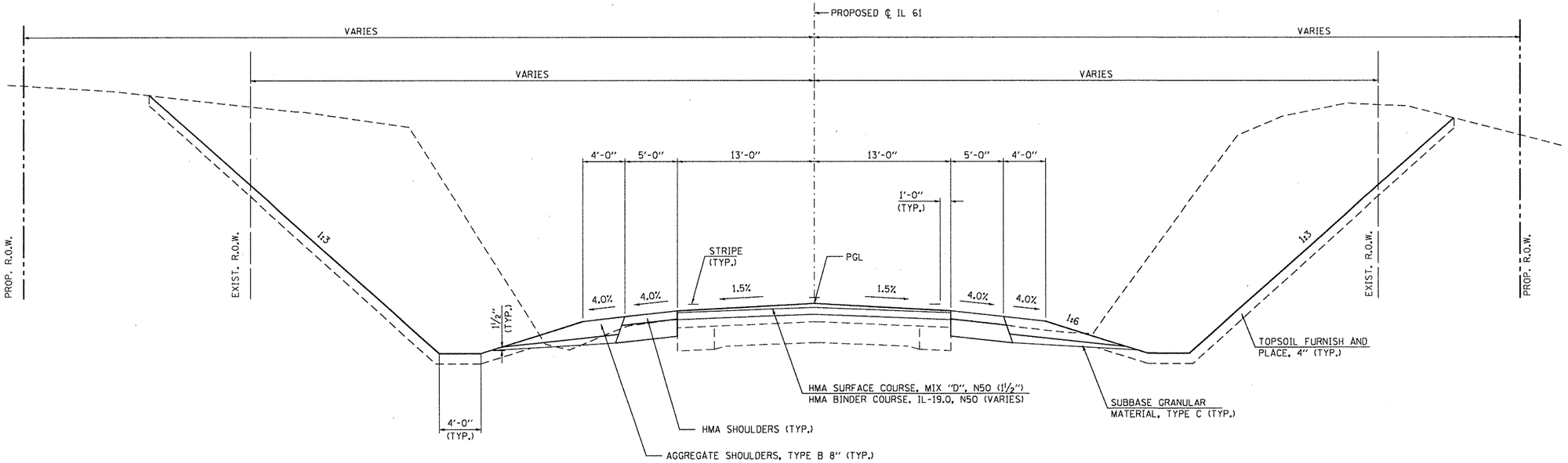
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	MCDONOUGH	117	9
		CONTRACT NO. 68482		
		ILLINOIS FED. AID PROJECT		



TEMPORARY PROFILE TYPICAL SECTION

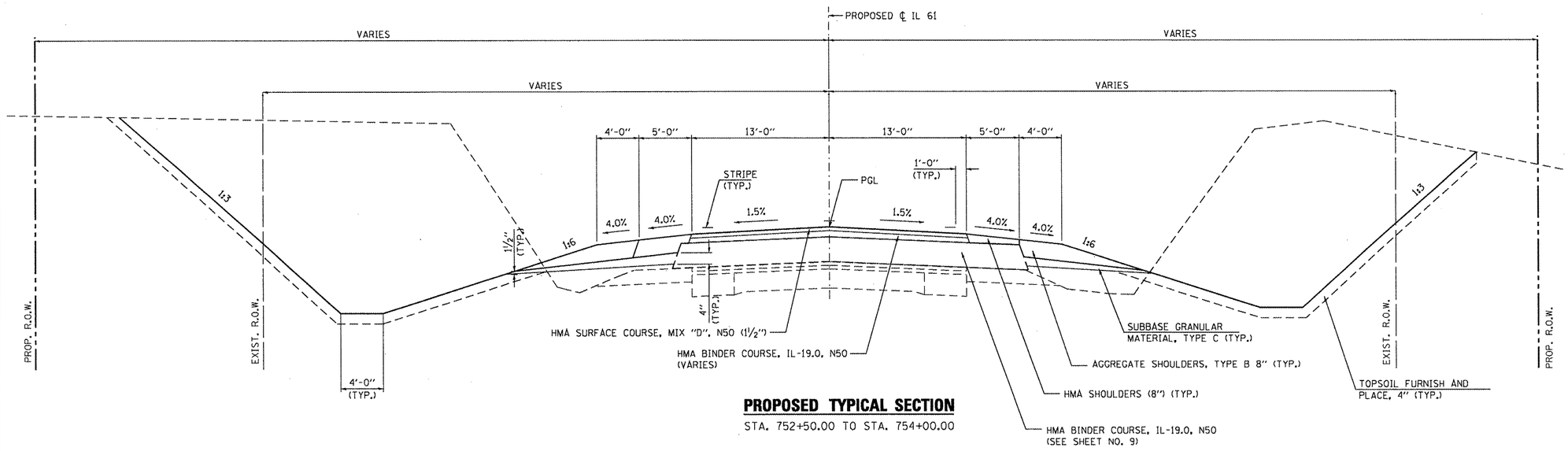
STA. 764+25.00 TO STA. 766+55.00

USER NAME = gjameson	DESIGNED - JAC	REVISED -	WHKS & co. ENGINEERING	7018 KINGSMILL CT., SPRINGFIELD, IL (217) 483-9457 DESIGN FIRM #184001036	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TYPICAL SECTIONS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	DRAWN - DLH	REVISED -					542	105BR-1	MCDONOUGH	117	10
PLOT SCALE = 10.0000 ' / IN.	CHECKED -	REVISED -							CONTRACT NO. 68482		
PLOT DATE = 12/21/2010	DATE -	REVISED -				SCALE: 1" = 10' (H) SHEET NO. 4 OF 7 SHEETS STA. TO STA.			ILLINOIS FED. AID PROJECT		



PROPOSED TYPICAL SECTION

STA. 751+00 TO STA. 752+50



PROPOSED TYPICAL SECTION

STA. 752+50.00 TO STA. 754+00.00

USER NAME = gjameson	DESIGNED - JAC	REVISED -
	DRAWN - DLH	REVISED -
PLOT SCALE = 10.0000 ' / IN.	CHECKED -	REVISED -
PLOT DATE = 12/21/2010	DATE -	REVISED -

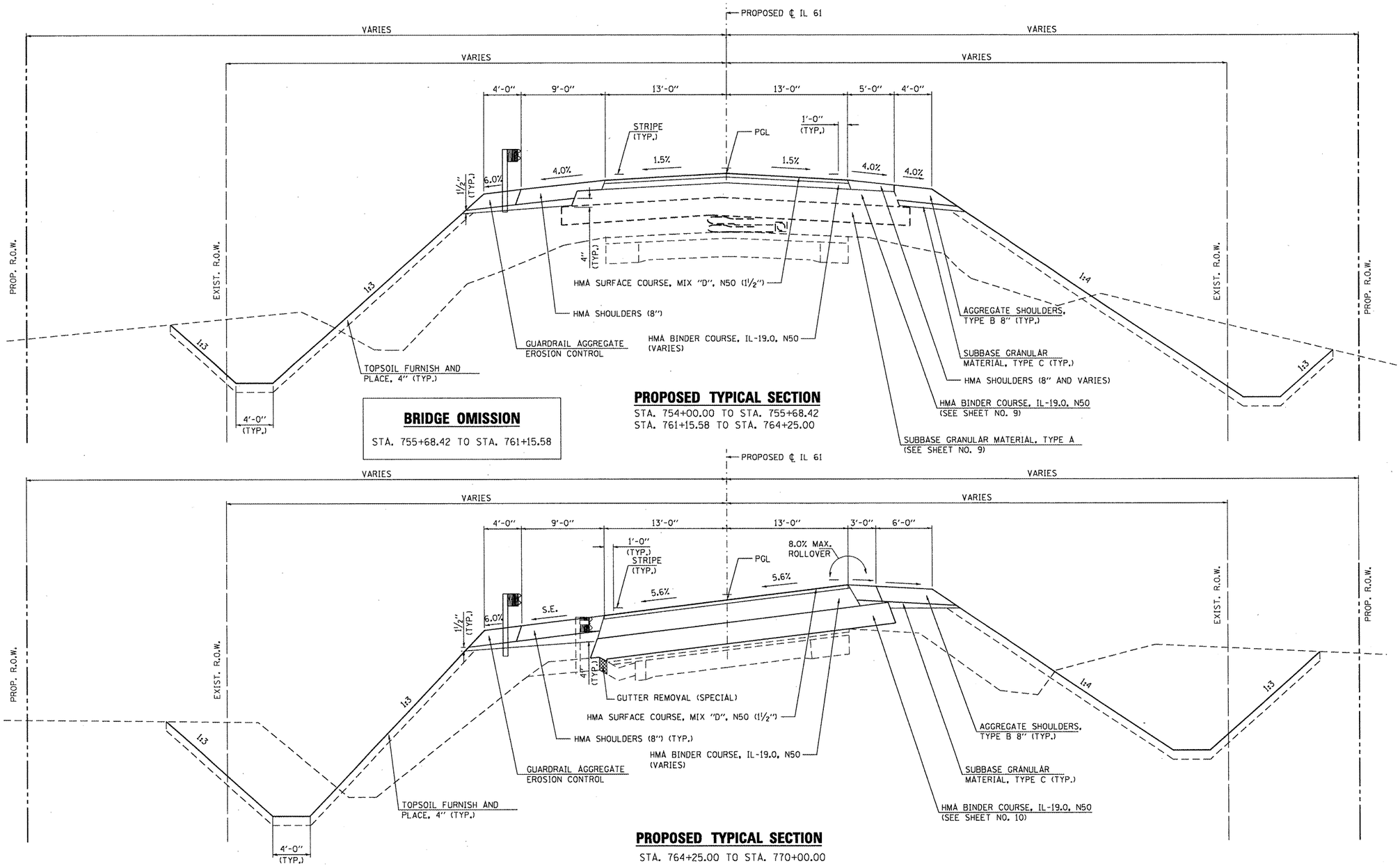
WHKS & CO. ENGINEERING
7018 KINGSMILL CT., SPRINGFIELD, IL (217) 483-9457 DESIGN FIRM #184001038

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS

SCALE: 1" = 10' (H) | SHEET NO. 5 OF 7 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	MCDONOUGH	117	11
		CONTRACT NO. 68482		
		ILLINOIS FED. AID PROJECT		



BRIDGE OMISSION

STA. 755+68.42 TO STA. 761+15.58

PROPOSED TYPICAL SECTION

STA. 754+00.00 TO STA. 755+68.42
STA. 761+15.58 TO STA. 764+25.00

PROPOSED TYPICAL SECTION

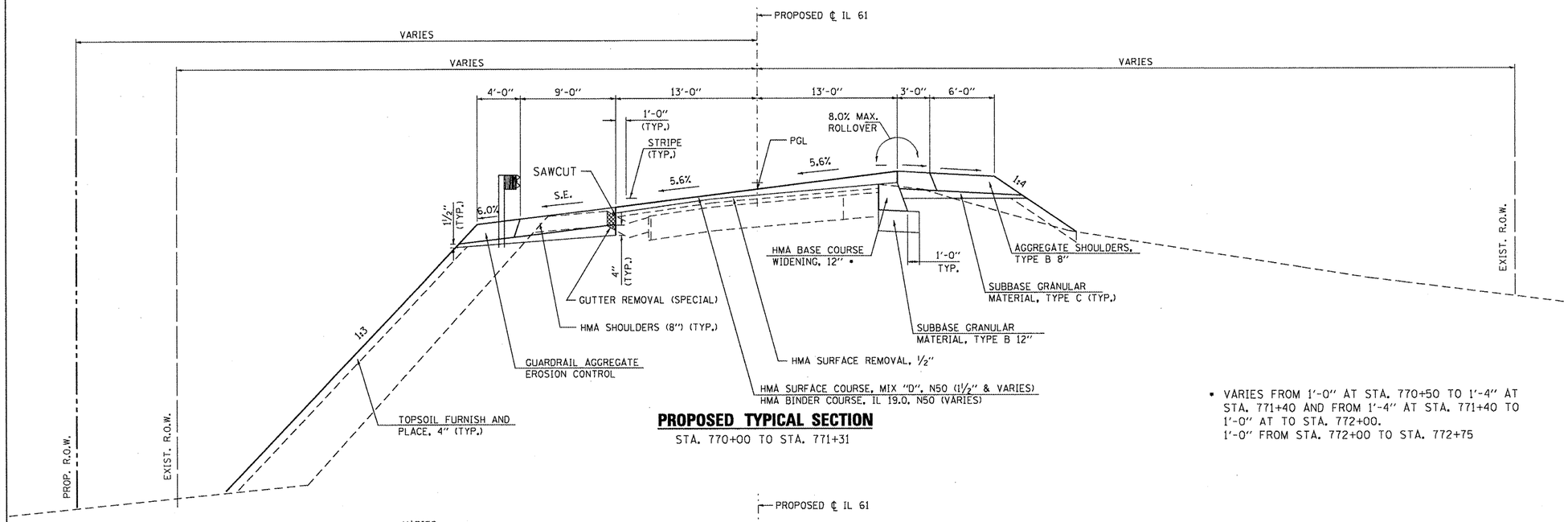
STA. 764+25.00 TO STA. 770+00.00

USER NAME = gjameson	DESIGNED - JAC	REVISED -	WHKS & CO. ENGINEERING	7018 KINGSMILL CT., SPRINGFIELD, IL (217) 483-9457 DESIGN FIRM #184001036	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	DRAWN - DLH	REVISED -			
PLOT SCALE = 10.0000 ' / IN.	CHECKED -	REVISED -			
PLOT DATE = 12/21/2010	DATE -	REVISED -			

TYPICAL SECTIONS

SCALE: 1" = 10' (H) | SHEET NO. 6 OF 7 SHEETS | STA. | TO STA.

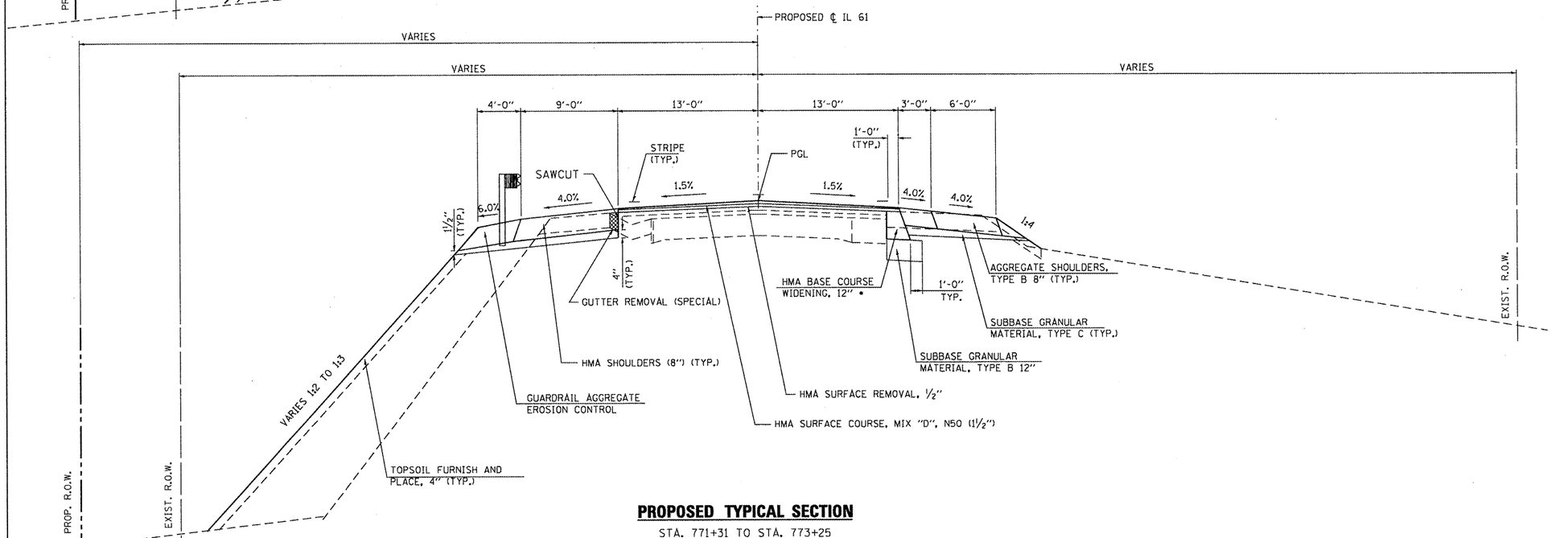
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	MCDONOUGH	117	12
		CONTRACT NO. 68482		
		ILLINOIS FED. AID PROJECT		



PROPOSED TYPICAL SECTION

STA. 770+00 TO STA. 771+31

• VARIES FROM 1'-0" AT STA. 770+50 TO 1'-4" AT STA. 771+40 AND FROM 1'-4" AT STA. 771+40 TO 1'-0" AT TO STA. 772+00.
1'-0" FROM STA. 772+00 TO STA. 772+75



PROPOSED TYPICAL SECTION

STA. 771+31 TO STA. 773+25

USER NAME = gjameson	DESIGNED - JAC	REVISED -
PLOT SCALE = 10.0000 ' / IN.	DRAWN - DLH	REVISED -
PLOT DATE = 12/21/2010	CHECKED -	REVISED -
	DATE -	REVISED -

WHKS & CO. ENGINEERING
7018 KINGSMILL CT., SPRINGFIELD, IL (217) 483-9457 DESIGN FIRM #184001036

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS

SCALE: 1" = 10' (H) | SHEET NO. 7 OF 7 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	MCDONOUGH	117	13
		CONTRACT NO. 68482		
	ILLINOIS	FED. AID PROJECT		

LOCATION			2800305 TEMPORARY DITCH CHECKS	28000500 INLET AND PIPE PROTECTION	28000400 PERIMETER EROSION BARRIER	28100227 STONE RIPRAP, CLASS B4			28200200 FILTER FABRIC
STATION	STATION	OFFSET	(FOOT)	(EACH)	(FOOT)	(SQ YD)	TON/CY	(TON)	(SQ YD)
751+42		27' LT	17.5						
751+42		27' RT	17.5						
751+84		30' LT	17.5						
751+94		30' RT	17.5						
752+26		33' LT	17.5						
752+50		32' RT	17.5						
752+50	75360	RT				159	1.5	159	159
752+68		37' LT	17.5						
752+86		42' RT	17.5						
753+10		40' LT	17.5						
753+25	757+50	RT			521				
753+25		61' RT	16						
753+37		44' LT		1					
753+83	754+48	LT				73	1.5	73	73
754+25		55' LT	13						
754+25	759+81	LT			416				
758+80	759+50	LT			116				
758+80	758+88	RT			106				
758+88	759+00	RT				3	1.5	3	3
759+25		91' RT	13						
759+25		39' LT	13						
762+48		87' RT		1					
762+72		76' LT		1					
765+00		87' RT	14.5						
765+00		73' LT	13						
767+00		80' LT	13						
767+47		100' RT		1					
769+00	773+25	LT			409				
769+00	773+25	RT			510				
TOTAL			253	4	2,078			235	235

LOCATION		66600105 FURNISHING AND ERECTING RIGHT OF WAY MARKERS	66700205 PERMANENT SURVEY MARKERS, TYPE 1	X6660410 REMOVE RIGHT OF WAY MARKERS
STATION	OFFSET	(EACH)	(EACH)	(EACH)
751+00.00	54.62' LT	1		
751+00.00	44.07' RT	1		
751+50.00	70.00' LT	1		
751+98.00	49.00' RT			1
752+36.00	58.00' RT			1
752+50.00	70.00' LT	1		
753+25.00	62.05' LT	1		
753+60.00	90.00' RT	1		
754+00.00	CL		1	
755+95.00	17.10' RT		1	
756+46.73	115.00' RT	1		1
761+46.73	115.00' RT	1		1
761+50.00	105.00' LT	1		
762+34.00	85.00' RT			1
762+37.93	115.00' RT	1		
764+63.83	105.00' LT	1		
764+63.83	CL		1	
767+00.00	112.00' RT	1		
768+00.00	105.00' LT	1		
769+03.34	132.65' RT	1		
771+80.85	120.00' LT	1		
771+80.85	CL		1	
TOTAL		15	4	5

LOCATION	20200100 EARTH EXCAVATION	20200500 EARTH EXCAVATION (WIDENING)	20300100 CHANNEL EXCAVATION	EARTH EXCAVATION ADJUSTED FOR SHRINKAGE	EMBANKMENT	20400800 EARTHWORK BALANCE WASTE(+) AND SHORTAGE (-)	21101615 TOPSOIL FURNISH AND PLACE, 4"
	(CU YD)	(CU YD)	(CU YD)	(CU YD)	(CU YD)	(CU YD)	(SQ YD)
STA. 751+00 TO STA. 752+50	1,558	30		1,191	9	1,182	1,009
STA. 752+50 TO STA. 756+23	1,390	63		1,090	2,925	-1,835	3,008
STA. 755+76.08 TO STA. 766+57			1,335	1,001		1,001	
STA. 759+00 TO STA. 766+55	3,343	80		2,567	8,628	-6,061	9,118
STA. 766+55 TO STA. 773+25	699	56		566	9,462	-8,896	7,349
TOTAL	6,990	229	1,335	6,415	21,024	-14,609	20,484

SHRINKAGE FACTOR FOR EARTH EXCAVATION = 25%

LOCATION			20201200 REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL	Z0054500 ROCK FILL	COARSE AGGREGATE FILL	21001000 GEOTECHNICAL FABRIC FOR GROUND STABILIZATION
STATION	STATION	OFFSET	(CU YD)	(TON)	(TON)	(SQ YD)
754+00.00	755+50.00	RT	1,906	2,768	945	2,687
761+00.00	773+00.00	LT	244	411	142	395
762+25.00	768+50.00	RT	819	1,646	540	1,539
TOTAL			2,969	4,825	1,627	4,621

USER NAME = gjameson	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100.0000 ' / IN.	CHECKED -	REVISED -
PLOT DATE = 1/31/2011	DATE -	REVISED -

WHKS & co. ENGINEERING
7018 KINGSMILL CT., SPRINGFIELD, IL (217)483-9457 DESIGN FIRM #184001036

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES

SCALE: NTS | SHEET NO. 1 OF 7 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	McDONOUGH	117	14
		CONTRACT NO. 68482		
		ILLINOIS FED. AID PROJECT		

LOCATION			25000210 SEEDING, CLASS 2A	25000300 SEEDING, CLASS 3	25003210 INTERSEEDING, CLASS 2A	25000400 NITROGEN FERTILIZER NUTRIENT		25000500 PHOSPORUS FERTILIZER NUTRIENT		25000600 POTASSIUM FERTILIZER NUTRIENT		25100115 MULCH, METHOD 2	25100635 HEAVEY DUTY EROSION CONTROL BLANKET	28000250 TEMPORARY EROSION CONTROL SEEDING		
						RATE	(POUND)	RATE	(POUND)	RATE	(POUND)			RATE	APPLICATIONS	(POUND)
STATION	STATION	LT/RT	(ACRE)	(ACRE)	(ACRE)	(LBS/ACRE)		(LBS/ACRE)		(LBS/ACRE)		(ACRE)	(SQ YD)	(LBS/ACRE)		
751+00.00	752+50.00	LT	0.03	0.13	0.02	90	17	90	17	90	17	0.02	649	100	3	48
752+50.00	753+52.00	LT	0.04	0.06	0.01	90	10	90	10	90	10	0.02	336	100	3	30
753+68.00	756+23.00	LT	0.02	0.19	0.04	90	23	90	23	90	23	0.02	890	100	3	63
759+00.00	762+10.00	LT	0.10	0.28	0.08	90	42	90	42	90	42	0.08	1,336	100	3	114
762+26.00	766+55.00	LT	0.03	0.59	0.19	90	73	90	73	90	73	0.03	2,843	100	3	186
766+55.00	773+25.00	LT		1.08	0.18	90	114	90	114	90	114		5,476	100	3	324
751+00.00	752+50.00	RT	0.02	0.09	0.02	90	12	90	12	90	12	0.01	496	100	3	33
752+50.00	756+23.00	RT	0.36	0.04	0.13	90	48	90	48	90	48	0.33	181	100	3	120
759+00.00	762+02.00	RT	0.15	0.19	0.06	90	36	90	36	90	36	0.13	986	100	3	102
762+18.00	766+55.00	RT	0.65	0.11	0.13	90	81	90	81	90	81	0.56	888	100	3	228
766+55.00	773+25.00	RT	0.41	0.08	0.34	90	75	90	75	90	75	0.34	856	100	3	147
			1.8	2.8	1.2		531		531		531	1.50	14,937			1,395

LOCATION			50104400 CONCRETE HEADWALL REMOVAL	50105220 PIPE CULVERT REMOVAL	542D0223 PIPE CULVERTS, CLASS D, TYPE 1 18"	542D0229 PIPE CULVERTS, CLASS D, TYPE 1 24"	54213453 END SECTIONS 18"	54213459 END SECTIONS 24"	60500060 REMOVING INLETS	Z0023600 FILLING EXISTING CULVERTS	44000400 GUTTER REMOVAL	X4402720 GUTTER REMOVAL (SPECIAL)
STATION	STATION	OFFSET	(EACH)	(FOOT)	(FOOT)	(FOOT)	(EACH	(EACH	(EACH)	(EACH)	(FOOT)	(FOOT)
753+62		26' LT		19								
762+18		74' RT		50								
762+18		48' LT		44								
767+22		87' RT		32								
761+97		47' LT	1									
763+60		47' LT			36		2					
762+12		90' RT				65		2				
762+15		78' LT				98		2				
767+23		97' RT			33		2					
765+01		15' LT		37					1			
765+01	773+20	13' LT										819
769+00		13' LT		39					1			
772+75		14' RT							1	1		
772+75	773+20	13' RT									45	
TOTAL			1	221	69	163	4	4	3	1	45	819

LOCATION			20100500 TREE REMOVAL, ACRES
STATION	STATION	OFFSET	(ACRES)
751+00	756+60	LT	0.37
751+00	755+50	RT	0.36
759+24	759+93	LT	0.04
759+00	764+00	RT	0.47
762+55	764+00	LT	0.07
764+00	773+25	LT	1.12
764+00	767+00	RT	0.39
766+90	769+00	RT	0.31
TOTAL			3.13

USER NAME = gjameson
PLOT SCALE = 100.0000 ' / IN.
PLOT DATE = 12/21/2010

DESIGNED	-	REVISED -
DRAWN	-	REVISED -
CHECKED	-	REVISED -
DATE	-	REVISED -

WHKS & CO. ENGINEERING
7018 KINGSMILL CT., SPRINGFIELD, IL
(217) 483-9457
DESIGN FIRM #184001036

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES

SCALE: NTS | SHEET NO. 2 OF 7 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	McDONOUGH	117	15
		CONTRACT NO. 68482		
	ILLINOIS	FED. AID PROJECT		

LOCATION			40600982 HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	44000100 PAVEMENT REMOVAL	44000151 HOT-MIX ASPHALT SURFACE REMOVAL, 1/2"	44000200 DRIVEWAY PAVEMENT REMOVAL	44004250 PAVED SHOULDER REMOVAL	X4401198 HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH
STATION	STATION	OFFSET	(SQYD)	(SQYD)	(SQYD)	(SQYD)	(SQYD)	(SQYD)
TEMPORARY PROFILE								
752+50.00	752+80.00	LT	47					
752+50.00	752+80.00	RT	44					
752+80.00	753+13.00	LT						55
752+80.00	753+13.00	RT						48
765+52.00	766+25.00	LT						130
765+52.00	766+25.00	RT						106
766+25.00	766+55.00	LT	54					
766+25.00	766+55.00	RT	44					
PROPOSED PROFILE								
751+00.00	751+30.00	LT	44					
751+00.00	751+30.00	RT	44					
751+30.00	751+50.00	LT						29
751+30.00	751+50.00	RT						29
751+50.00	751+95.00	LT	83					
751+50.00	751+95.00	RT	83					
752+56.00	756+57.00	RT					313	
754+93.50	755+68.42	LT	150					
754+93.50	755+68.42	RT	109					
755+65.00	756+27.00			180				
761+10.00	762+53.00	LT					125	
761+10.00	761+18.00			24				
761+10.00	765+84.00	RT					366	
761+15.58	762+10.00	LT	137					
761+15.58	762+10.00	RT	189					
762+10.00		RT				471		
762+10.00	762+68.00	LT						84
762+10.00	762+68.00	RT						116
762+18.00		LT				82		
769+95.00	770+40.00	LT	65					
769+95.00	770+40.00	RT	65					
770+40.00	770+50.00	LT						15
770+40.00	770+50.00	RT						15
770+50.00	772+95.00				708			
772+95.00	773+25.00		87					
TOTAL			1,245	204	708	553	804	627

LOCATION	50300225 CONCRETE STRUCTURES	50800205 REINFORCEMENT BARS, EPOXY COATED	81100300 CONDUIT ATTACHED TO STRUCTURE, 1" DIA. GALVANIZED STEEL
	CU. YD.	POUND	FOOT
USGS STREAM GAGE HOUSE PAD	1.4	40	286
TOTAL	1.4	40	286

USER NAME = gjameson	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100.0000 ' / IN.	CHECKED -	REVISED -
PLOT DATE = 12/21/2010	DATE -	REVISED -

WHKS & CO. ENGINEERING
7018 KINGSMILL CT.,
SPRINGFIELD, IL.
(217) 483-9457
DESIGN FIRM #184001038

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES

SCALE: NTS | SHEET NO. 3 OF 7 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	McDONOUGH	117	16
		CONTRACT NO. 68482		
	ILLINOIS	FED. AID PROJECT		

LOCATION			63000001 STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	63100085 TRAFFIC BARRIER TERMINAL, TYPE 6	63100167 TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	63200310 GUARDRAIL REMOVAL	63301210 REMOVE AND REERECT STEEL PLATE BEAM GUARDRAIL, TYPE A	78200410 GUARDRAIL MARKERS, TYPE A	78201000 TERMINAL MARKER - DIRECT APPLIED
STATION	STATION	OFFSET	(FOOT)	(EACH)	(EACH)	(FOOT)	(FOOT)	(EACH)	(EACH)
755+55.00	756+57.00	LT				102			
755+56.00	756+57.00	RT				101			
761+10.00	762+12.00	LT				102			
761+10.00	761+87.00	RT				77			
766+40.00	767+00.00	LT				60			
766+40.00	769+68.00	RT				328			
762+37.50	762+87.50	LT			1				1
762+87.50	767+00.00	LT	412.5						
767+00.00	773+25.00	LT					625.0	7	
753+80.67	762+05.83	LT						10	
753+80.67	754+30.67	LT			1				1
754+30.67	755+43.17	LT	112.5						
755+43.17	755+86.92	LT		1					
760+87.08	761+30.83	LT		1					
761+30.83	761+55.83	LT	25.0						
761+55.83	762+05.83	LT			1				1
753+68.17	761+93.33	RT						10	
753+68.17	754+18.17	RT			1				1
754+18.17	755+43.17	RT	125.0						
755+43.17	755+86.92	RT		1					
760+87.08	761+30.83	RT		1					
761+30.83	761+43.33	RT	12.5						
761+43.33	761+93.33	RT			1				1
TOTAL			687.5	4	5	770	625.0	27	5

LOCATION			Z0028462 GEOTEXTILE RETAINING WALL	60107600 PIPE UNDERDRAINS 4"	60108100 PIPE UNDERDRAINS 4" (SPECIAL)	60100060 CONCRETE HEADWALLS FOR PIPE DRAINS
STATION	STATION	OFFSET	(SQ FT)	(FOOT)	(FOOT)	(EACH)
755+33.00	755+87.42	RT	107			
755+33.00	755+87.00	4' RT		54		
755+33.00	755+87.00	RT			36	
755+87.00		43' RT				1
761+02.58	761+96.00	RT	196			
761+02.58	761+96.00	4' RT		94		
761+55.00	761+55.00	RT			32	
761+55.00		39' RT				1
TOTAL			303	148	68	2

LOCATION	NUMBER OF POSTS	72800100 TELESCOPING STEEL SIGN SUPPORTS	NUMBER OF SIGN PANELS	72000100 SIGN PANEL - TYPE 1 SQ FT
		(FOOT)		
RT. STA. 764+63 TO 771+80	4	60	8	40
(AT 200' SPACING)				
TOTAL		60		40

Notes:

1. SIGN DESIGNATIONS ARE W1-8R-2430 and W1-8L-2430. (2' X2.5' = 5 SQ FT PER PANEL)
2. SEE HIGHWAY STANDARDS 728001 AND 729001 FOR INSTALLATION DETAILS
3. ALL SIGN PANELS SHALL BE BOLTED TO METAL POSTS WITH STAINLESS STEEL FASTENERS.
4. CONTACT TRAFFIC OPERATIONS AREA TECHNICIAN RANDY HARTZ AT (309) 734-3721 TO VERIFY POST LOCATIONS.

USER NAME = gjameson	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100.0000 ' / IN.	CHECKED -	REVISED -
PLOT DATE = 12/21/2010	DATE -	REVISED -

WHKS & CO. ENGINEERING
7016 KINGSMILL CT., SPRINGFIELD, IL
(217) 483-9457
DESIGN FIRM #184001036

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES

SCALE: NTS | SHEET NO. 4 OF 7 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	McDONOUGH	117	17
		CONTRACT NO. 68482		
	ILLINOIS	FED. AID PROJECT		

LOCATION			TYPE	COLOR	70300100 SHORT TERM PAVEMENT MARKING	70300220 TEMPORARY PAVEMENT MARKING - LINE 4"	70300280 TEMPORARY PAVEMENT MARKING - LINE 24"	70300520 PAVEMENT MARKING TAPE, TYPE III 4"	70301000 WORK ZONE PAVEMENT MARKING REMOVAL	78001110 PAINT PAVEMENT MARKING - LINE 4"	78100100 RAISED REFLECTIVE PAVEMENT MARKERS	78300100 PAVEMENT MARKING REMOVAL
STATION	STATION	OFFSET			(FOOT)	(FOOT)	(FOOT)	(FOOT)	(SQ FT)	(FOOT)	(EACH)	(SQ FT)
STAGE I												
749+77	752+00	CL										20
751+47	767+67	LT										540
766+50	769+18	CL										179
STAGE II												
749+77		RT	SOLID	WHITE			13					
749+87	768+58	RT	SOLID	YELLOW		1,871						
749+87	751+50	RT							55			
767+25	768+58								45			
751+47	767+67	LT	SOLID	YELLOW		1,620						
769+18		LT	SOLID	WHITE			13					
WINTER SHUT DOWN												
750+35	755+68.42		SOLID	YELLOW		533						
761+15.58	769+08		SOLID	YELLOW		792						
751+45	755+68.42		SOLID	YELLOW		423						
761+15.58	767+25		SOLID	YELLOW		609						
STAGE III												
749+77		RT	SOLID	WHITE					26			
750+35	755+68.42		SOLID	YELLOW		533			178			
755+68.42	761+15.58	RT	SOLID	YELLOW				547	183			
761+15.58	769+08		SOLID	YELLOW		792			264			
751+45	755+68.42		SOLID	YELLOW		423			141			
755+68.42	761+15.58	RT	SOLID	YELLOW				547	183			
761+15.58	767+25		SOLID	YELLOW		609			203			
769+18		LT	SOLID	WHITE					26			
STAGE IV												
751+00	773+25	CL	SKIP DASH	YELLOW	224				150			
ASSUME THREE APPLICATIONS DURING CONSTRUCTION												
OF 4" BINDER COURSE LIFTS SOUTH OF LAMOINE RIVER												
751+00	755+68.42	CL	SKIP DASH	YELLOW	144				96			
ASSUME EIGHT APPLICATIONS DURING CONSTRUCTION												
OF 4" BINDER COURSE LIFTS NORTH OF LAMOINE RIVER												
761+15.58	770+50	CL	SKIP DASH	YELLOW	768				512			
751+00	773+25	LT	SOLID	WHITE						2,225		
751+00	768+50	CL	SKIP DASH	YELLOW						440		
761+40	768+50	CL	SOLID	YELLOW						710		
768+50	773+25	CL	DOUBLE SOLID	YELLOW						950		
751+00	773+25	RT	SOLID	WHITE						2,225		
751+00	755+68.42	CL									6	
761+15.58	773+25	CL									15	
TOTAL					1,136	8,205	26	1,094	2,062	6,550	21	739

USER NAME = gjameson	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100.0000 ' / IN.	CHECKED -	REVISED -
PLOT DATE = 12/21/2018	DATE -	REVISED -

WHKS & CO. ENGINEERING
7018 KINGSMILL CT., SPRINGFIELD, IL (217) 483-9457 DESIGN FIRM #184001036

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES

SCALE: NTS | SHEET NO. 5 OF 7 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	McDONOUGH	117	18
		CONTRACT NO. 68482		
	ILLINOIS FED. AID PROJECT			

LOCATION			31100100 SUBBASE GRANULAR MATERIAL, TYPE A	31101810 SUBBASE GRANULAR MATERIAL, TYPE B 12"	31101900 SUBBASE GRANULAR MATERIAL, TYPE C	35600714 HOT-MIX ASPHALT BASE COURSE WIDENING, 9 1/2"	40200800 AGGREGATE SURFACE COURSE, TYPE B	40600115 POLYMERIZED BITUMINOUS MATERIALS (PRIME COAT)	40600300 AGGREGATE (PRIME COAT)	40600990 TEMPORARY RAMP	40603080 HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50	40603335 HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50	48101600 AGGREGATE SHOULDERS, TYPE B 8"	48203100 HOT-MIX ASPHALT SHOULDERS	Z0001002 GUARDRAIL AGGREGATE EROSION CONTROL	35600724 HOT-MIX ASPHALT BASE COURSE WIDENING, 12"
STATION	STATION	OFFSET	(TON)	(SQ YD)	(TON)	(SQ YD)	(TON)	(GALLON)	(TON)	(SQYD)	(TON)	(TON)	(SQYD)	(TON)	(TON)	(SQYD)
TEMPORARY PROFILE																
752+50.00	755+68.42	LT						99	9		237					
752+50.00	755+68.42	RT						89	9		327					
754+00.00	755+68.42	RT	230													
754+00.00	755+68.42	LT	176													
761+15.58	764+33.00	RT	448													
761+15.58	764+33.00	LT	345													
761+15.58	766+55.00	LT						177	10		428					
761+15.58	766+55.00	RT						157	10		636					
PROPOSED PROFILE																
751+00.00	751+05.00									15						
751+00.00	753+34.17	RT											86			
751+00.00	753+49.00	LT											92			
751+00.00	755+68.42							230	12		496	120				
751+00.00	755+68.42	LT			99									122		
751+00.00	755+68.42	RT			104									144		
751+50.00	751+57.50									22						
753+34.17	755+84.42	RT													47	
753+60.00		LT					24									
753+68.00	755+84.42	LT													43	
755+55.92	755+68.42									44						
755+63.42	755+68.42									18						
760+89.58	762+02.00	RT													20	
760+89.58	762+10.00	LT													22	
761+15.58	761+20.58									18						
761+15.58	761+28.08									44						
761+15.58	770+40.00										2,714					
761+15.58	773+25.00							1,122	50			297				
761+15.58	773+25.00	LT			307									483		
761+15.58	773+25.00	RT			248									216		
762+10.00		RT					75									
762+18.00		LT					67									
762+26.00	773+25.00	LT													221	
766+05.00		RT					134									
766+21.00	773+25.00	RT											660			
770+32.50	770+40.00									22						
770+50.00	772+75.00	RT		95												29
773+20.00	773+25.00									15						

CONTINUED ON NEXT SHEET

USER NAME = gjameson
PLOT SCALE = 100.0000 ' / IN.
PLOT DATE = 12/21/2010

DESIGNED	-	REVISED -
DRAWN	-	REVISED -
CHECKED	-	REVISED -
DATE	-	REVISED -

WHKS & CO. ENGINEERING
7018 KINGSMILL CT., SPRINGFIELD, IL
(217) 483-9457
DESIGN FIRM #184001036

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES

SCALE: NTS | SHEET NO. 6 OF 7 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	McDONOUGH	117	19
		CONTRACT NO. 68482		
	ILLINOIS FED. AID PROJECT			

LOCATION			31100100 SUBBASE GRANULAR MATERIAL, TYPE A	31101810 SUBBASE GRANULAR MATERIAL, TYPE B 12"	31101900 SUBBASE GRANULAR MATERIAL, TYPE C	35600714 HOT-MIX ASPHALT BASE COURSE WIDENING, 9 1/2"	40200800 AGGREGATE SURFACE COURSE, TYPE B	40600115 POLYMERIZED BITUMINOUS MATERIALS (PRIME COAT)	40600300 AGGREGATE (PRIME COAT)	40600990 TEMPORARY RAMP	40603080 HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50	40603335 HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50	48101600 AGGREGATE SHOULDERS, TYPE B 8"	48203100 HOT-MIX ASPHALT SHOUDERS	Z0001002 GUARDRAIL AGGREGATE EROSION CONTROL	35600724 HOT-MIX ASPHALT BASE COURSE WIDENING, 12"
STATION	STATION	OFFSET	(TON)	(SQ YD)	(TON)	(SQ YD)	(TON)	(GALLON)	(TON)	(SQYD)	(TON)	(TON)	(SQYD)	(TONS)	(TON)	(SQYD)
STAGE I																
751+26.00	756+57.00	LT				400										
761+10.00	770+50.00	LT				653										
STAGE II																
751+26.00	752+50.00	RT				57										
766+55.00	767+83.00	RT				56										
STAGE IV																
751+50.00	755+68.42									130						
761+15.58	770+50.00									347						
TOTAL			1,199	95	758	1,166	300	1,874	100	675	4,838	417	838	965	353	29

LOCATION			70106500 TEMPORARY BRIDGE TRAFFIC SIGNALS	70106700 TEMPORARY RUMBLE STRIPS	70400100 TEMPORARY CONCRETE BARRIER	70400200 RELOCATE TEMPORARY CONCRETE BARRIER	70500100 TEMPORARY STEEL PLATE BEAM GUARDRAIL, TYPE A	70500665 TEMPORARY TRAFFIC BARRIER TERMINAL, TYPE 6	X7050167 TEMPORARY TRAFFIC BARRIER TERMINAL, TYPE 1, SPECIAL (TANGENT)	Z0030260 IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3	Z0030330 IMPACT ATTENUATORS, RELOCATE (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3
STATION	STATION	DESCRIPTION	(EACH)	(EACH)	(FOOT)	(FOOT)	(FOOT)	(EACH)	(EACH)	(EACH)	(EACH)
STAGE I											
771+00										1	
STAGE II											
732+77				1							
737+77				1							
742+77				1							
749+77	769+18		1								
751+35	767+60				1625.0						
751+35										1	
767+60										1	
776+18				1							
781+18				1							
786+18				1							
STAGE III											
751+35	767+60					1625.0					
751+35											1
754+18.17	754+68.17	RT							1		
754+68.17	755+43.17	RT					75.0				
755+43.17	755+86.92	RT						1			
760+87.08	761+30.83	RT						1			
761+30.83	761+43.33	RT					12.5				
761+43.33	761+93.33	RT							1		
767+60											1
TOTAL			1	6	1625.0	1625.0	87.5	2	2	3	2

USER NAME = gjameson	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100.0000 ' / IN.	CHECKED -	REVISED -
PLOT DATE = 12/21/2010	DATE -	REVISED -

WHKS & CO. ENGINEERING
7010 KINGSMILL CT., SPRINGFIELD, IL (217) 483-9457 DESIGN FIRM #184001036

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES

SCALE: NTS | SHEET NO. 7 OF 7 SHEETS | STA. | TO STA.

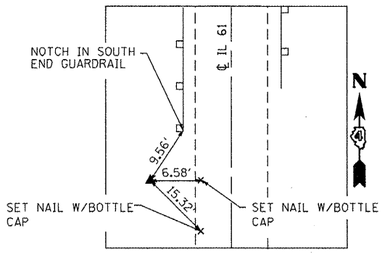
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	McDONOUGH	117	20
		CONTRACT NO. 68482		
		ILLINOIS FED. AID PROJECT		

ALIGNMENT COORDINATES			
EXISTING IL 61			
POINT EX1	P.O.T. STA. 736+59.15	N 1333132.89	E 2092851.78
POINT EX2	T.S. STA. 763+47.70	N 1335787.35	E 2093293.51
POINT EX3	P.I. STA. 765+93.83	N 1336030.14	E 2093333.92
POINT EX4	S.C. STA. 767+16.59	N 1336153.19	E 2093338.76
POINT EX5	P.I. STA. 768+20.35	N 1336256.88	E 2093342.85
POINT EX6	C.S STA. 769+23.77	N 1336360.10	E 2093332.31
POINT EX7	P.I. STA. 770+46.92	N 1336482.61	E 2093319.82
POINT EX8	S.T. STA. 772+92.66	N 1336722.42	E 2093264.37
POINT EX9	P.O.T. STA. 775+93.89	N 1337015.90	E 2093196.51
POINT EX10	P.I. STA. 768+24.60	N 1336257.78	E 2093371.80
PROPOSED IL 61			
POINT PR1	P.O.T. STA. 736+59.15	N 1333132.89	E 2092851.78
•	P.O.T. STA. 754+00.00	N 1334850.13	E 2093137.55
•	P.O.T. STA. 755+95.00, 17.1' RT.	N 1335039.68	E 2093186.43
POINT PR2	P.C. STA. 764+63.83	N 1335899.53	E 2093312.18
POINT PR3	P.I. STA. 768+27.01	N 1336257.78	E 2093371.80
• POINT PR4	P.T. STA. 771+80.85	N 1336611.62	E 2093289.99
POINT PR5	P.O.T. STA. 773+25.00	N 1336752.07	E 2093257.52

• PERMANENT SURVEY MARKERS, TYPE 1

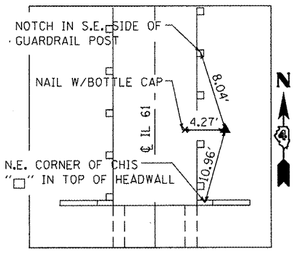
EXIST. CURVE SPLGW
PI STA. = 768+24.60
Δ = 22° 28′ 00″ (LT)
Δc = 8° 04′ 48″ (LT)
Dc = 3° 54′ 00″
Ts = 476.90′
Es = 32.63′
Ls = 368.89′
Lc = 207.18′
Rc = 1,469.12
LT = 246.13′
ST = 123.15′
TS STA. = 763+47.70
SC STA. = 767+16.59
CS STA. = 769+23.77
ST STA. = 772+92.66

PROP. CURVE IL61A
PI STA. = 768+27.01
Δ = 22° 28′ 00″ (LT)
D = 3° 08′ 00″
R = 1,828.59′
T = 363.18′
L = 717.02′
E = 35.72′
P.C. STA. = 764+63.83
P.T. STA. = 771+80.85



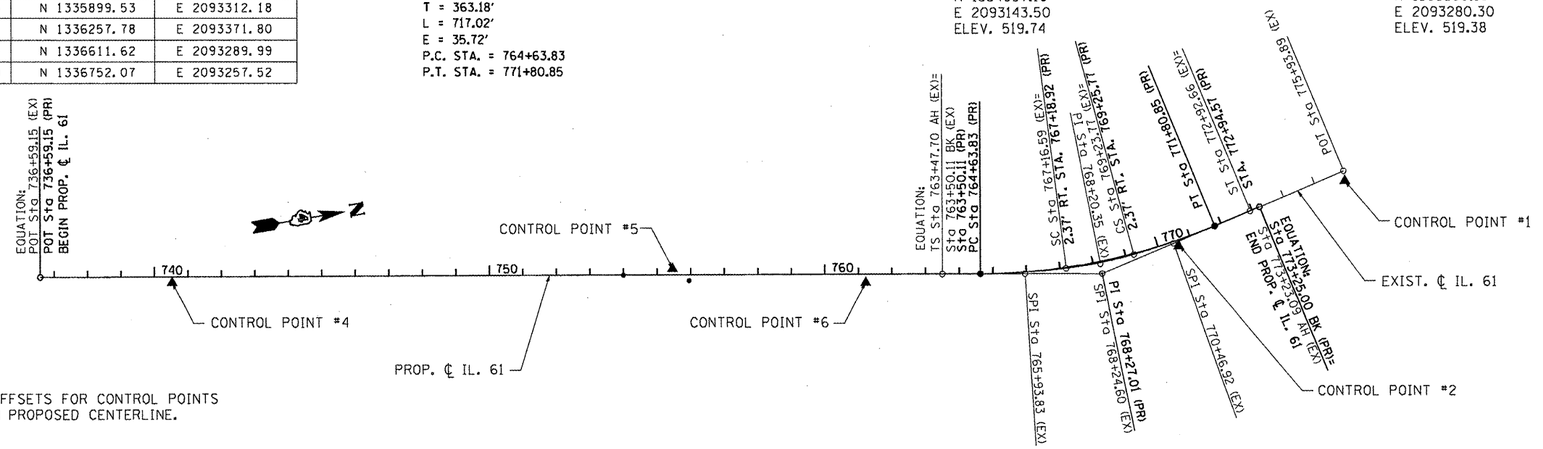
CONTROL POINT #5

5 REBAR SET
STA. 755+45.95, 18.25 LT.
N 1334997.10
E 2093143.50
ELEV. 519.74



CONTROL POINT #6

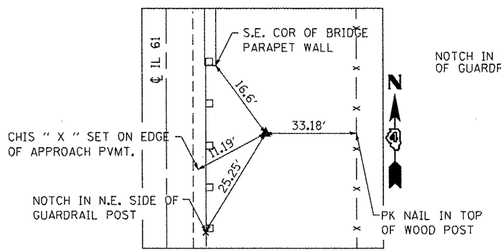
5 REBAR SET
STA. 761+21.86, 24.58 RT.
N 1335558.16
E 2093280.30
ELEV. 519.38



NOTES:
STATIONS AND OFFSETS FOR CONTROL POINTS ARE GIVEN FROM PROPOSED CENTERLINE.

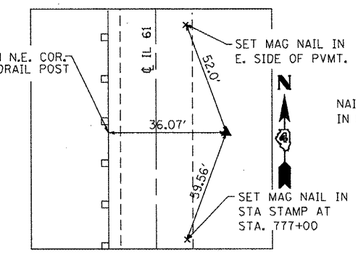
LEGEND

• PERMANENT SURVEY MARKER



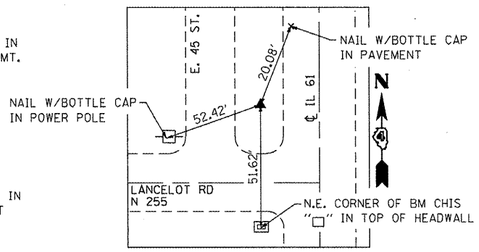
CONTROL POINT #1

4 REBAR SET
STA. 775+86.97, 27.82′ RT.
N 1337015.43
E 2093225.18
ELEV. 562.79



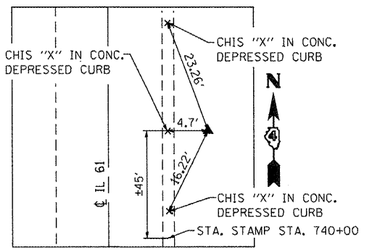
CONTROL POINT #2

4 REBAR SET
STA. 770+60.74, 17.29 RT.
N 1336496.57
E 2093330.25
ELEV. 541.71



CONTROL POINT #3

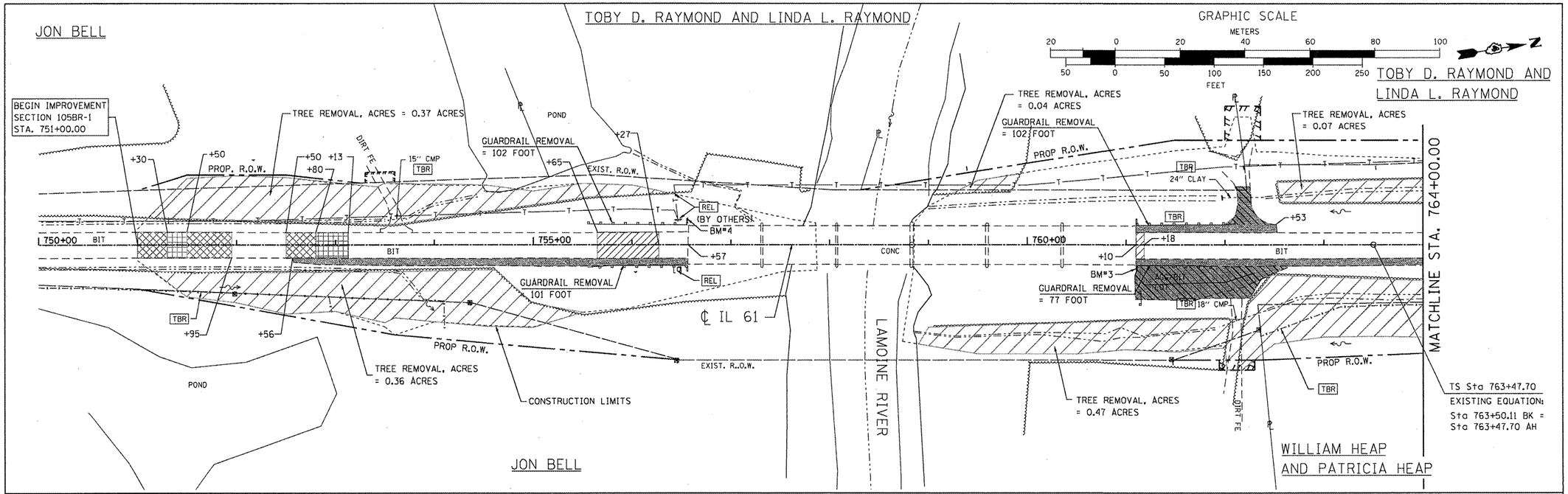
4 REBAR SET
STA. N/A, OFFSET N/A
N 1332349.82
E 2093330.25
ELEV. 598.73

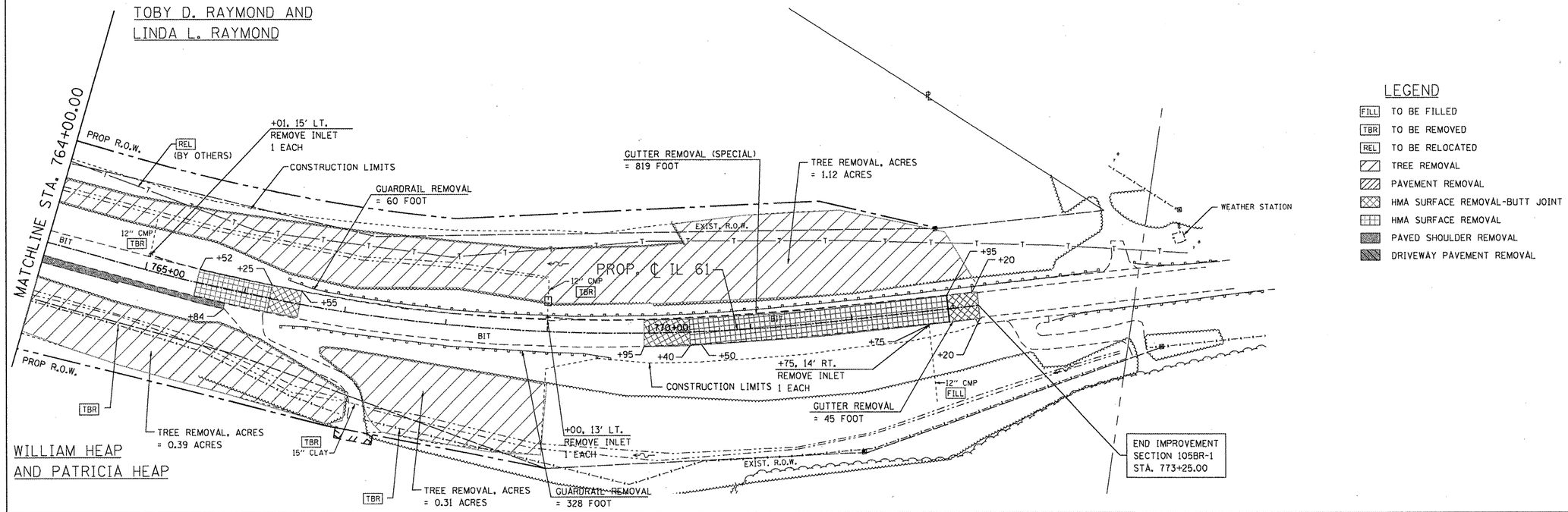


CONTROL POINT #4

4 REBAR SET
STA. 740+52.65, 17.41 RT.
N 1333518.20
E 2092933.55
ELEV. 554.52

USER NAME = gjameson	DESIGNED -	REVISED -	WHKS & CO. ENGINEERING	7018 KINGSMILL CT., SPRINGFIELD, IL (217) 483-9457 DESIGN FIRM #184001036	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	ALIGNMENT & TIES	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	DRAWN -	REVISED -					542	105BR-1	McDONOUGH	117	21
PLOT SCALE = 400.0000 ′ / IN.	CHECKED -	REVISED -							CONTRACT NO. 68482		
PLOT DATE = 12/21/2010	DATE -	REVISED -				SCALE: 1" = 400′ | SHEET NO. 1 OF 1 SHEETS | STA. 736+59.15 TO STA. 775+93.89			ILLINOIS FED. AID PROJECT		





USER NAME = gjameson	DESIGNED -	REVISED -
FILE NAME = D468482-sht-removal	CHECKED -	REVISED -
PLOT DATE = 12/21/2010	DRAWN -	REVISED -
PLOT TIME = 10:27:27 AM	CHECKED -	REVISED -

WHKS & CO. ENGINEERING
7018 KINGSMILL CT.,
SPRINGFIELD, IL
(217) 483-9457
DESIGN FIRM #184001036

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

REMOVAL PLAN SHEET

SCALE: 1"=50' | SHEET NO. 1 OF 1 SHEETS | STA. 751+00 TO STA. 773+25

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	McDONOUGH	117	22
		CONTRACT NO. 68482		
FED. ROAD DIST. NO. 4	ILLINOIS	FED. AID PROJECT		

SS1 PIPE UNDERDRAINS 4" = 54 FOOT

SS2 STA. 755+87
PIPE UNDERDRAINS 4" (SPECIAL) = 36 FOOT
CONCRETE HEADWALLS FOR PIPE DRAINS = 1 EACH (43' RT.)
INV= 520.50

SS3 PIPE UNDERDRAINS 4" = 94 FOOT

SS4 STA. 761+55,
PIPE UNDERDRAINS 4" (SPECIAL) = 32 FOOT
CONCRETE HEADWALLS FOR PIPE DRAINS = 1 EACH (39' RT.)
INV= 520.00

LEGEND

STONE RIPRAP, CLASS B4

BEGIN IMPROVEMENT
SECTION 105BR-1
STA. 751+00.00

STA. 753+60, 47' LT.
PIPE CULVERTS, CLASS D, TYPE 1 18" = 36 FOOT
END SECTIONS 18" = 2 EACH
USFL = 520.30
DSFL = 516.50

① TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT

② STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS

③ TRAFFIC BARRIER TERMINAL, TYPE 6

SEE SCHEDULE OF QUANTITIES FOR STATION LIMITS

STA. 762+15, 78' LT.
PIPE CULVERTS, CLASS D, TYPE 1 24" = 98 FOOT
END SECTIONS 24" = 2 EACH
USFL = 506.86
DSFL = 506.31

STA. 762+12, 90' RT.
PIPE CULVERTS, CLASS D, TYPE 1 24" = 65 FOOT
END SECTIONS 24" = 2 EACH
USFL = 507.64
DSFL = 507.26

GRAPHIC SCALE
METERS 20 0 20 40 60 80 100
FEET 50 0 50 100 150 200 250

TOBY D. RAYMOND AND LINDA L. RAYMOND

JON BELL

WILLIAM HEAP AND PATRICIA HEAP

POND

PROP. R.O.W.

EXIST. R.O.W.

PROP. ℄ IL 61

STA. 755+90, 21' RT.
SETTLEMENT PLATFORM

CONSTRUCTION LIMITS

GAGE HOUSE

STA. 758+37.00
℄ PROP. STRUCTURE
S.N. 055-0083

STA. 758+83.50
℄ EXIST. STRUCTURE
SN 055-0010

LAMOINE RIVER

AGG/BIT LOT

9' HMA SHLDR.
4' GUARDRAIL AGG.
EROSION CONTROL

5' HMA SHLDR.
4' AGG SHLDR.

MATCHLINE STA. 764+00.00

BM #5 - STA. 745+64, 30' LT.
CHISLED "□" ON TOP CENTER OF NORTH HEADWALL UNDER P.E.
ELEV. 536.74

BM #4 - STA. 756+56, 23' LT.
CHISLED "□" ON TOP OF SW WING WALL - ELEV. 520.60

BM #3 - STA. 761+10, 22' RT.
CHISLED "□" ON TOP OF NE WING WALL - ELEV. 520.61

500.00' V.C.
ex = 1.92'
K = 163

500.00' V.C.
ex = -1.43'
K = 219

PROPOSED PROFILE

EXIST PROFILE

CHANNEL EXCAVATION

SPECIAL DITCH, RT

SPECIAL DITCH, LT

750+00 751+00 752+00 753+00 754+00 755+00 756+00 757+00 758+00 759+00 760+00 761+00 762+00 763+00 764+00

528.96	527.96	526.94 / 526.94	525.95 / 526.08	524.98 / 525.37	524.05 / 524.82	523.21 / 524.42	522.53 / 524.17	521.98 / 524.08	521.52 / 524.14	521.08 / 524.36	520.71 / 524.73	520.57 / 525.25	520.69 / 525.79	510.57 / 526.22
508.75 / 526.54	506.42 / 526.74	502.71 / 526.82	509.23 / 526.80	511.46 / 526.65	511.33 / 526.40	510.32 / 526.03	513.20 / 525.54	520.66 / 525.00	520.72 / 524.46	520.82 / 523.97	520.86 / 523.67	520.81 / 523.54	520.82 / 523.60	

USER NAME = gjameson	DESIGNED -	REVISED -	WHKS & Co. ENGINEERING
FILE NAME = D468482-sht-plan.dgn	CHECKED -	REVISED -	7018 KINGSMILL CT., SPRINGFIELD, IL (217) 483-9457 DESIGN FIRM #184001036
PLOT DATE = 12/21/2010	DRAWN -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
PLOT TIME = 10:27:33 AM	CHECKED -	REVISED -	PROPOSED PLAN AND PROFILE SHEET

SCALE: 1" = 50' | SHEET NO. 1 OF 2 SHEETS | STA. 751+00.00 TO STA. 764+00.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	McDONOUGH	117	23
		CONTRACT NO. 68482		
	ILLINOIS	FED. AID PROJECT		

TOBY D. RAYMOND AND
LINDA L. RAYMOND

GRAPHIC SCALE
METERS
20 0 20 40 60 80 100
50 0 50 100 150 200 250
FEET

+63.83
105.00' LT

STEEL PLATE BEAM GUARDRAIL,
TYPE A, 6 FOOT POST

STA. 767+00 TO STA. 773+25, LT.
REMOVE AND REERECT STEEL
PLATE BEAM GUARDRAIL,
TYPE A = 625 FOOT

9' HMA SHLDR.
4' GUARDRAIL AGG.
EROSION CONTROL

+80.85
120.00' LT

+94.37
80.00' LT

+00.00
105.00' LT

PROP R.O.W.

CONSTRUCTION LIMITS

MATCHLINE STA. 764+00.00

PC Sta 764+63.83

EXIST. R.O.W.

WEATHER STATION

PT Sta 771+80.85

100'
TAPER

12.03'

11.85'

12" CMP

PROP. ℄ IL 61

12" CMP

765+00

770+00

775+00

BIT

5" HMA SHLDR.
4" AGG SHLDR.
7" HMA SHLDR.
6" AGG SHLDR.

12" CMP
50'
TAPER

CONSTRUCTION LIMITS

EXIST. ℄ IL 61

PI Sta 768+26.00

6" AGG SHLDR.

3" HMA SHLDR.

Sta 773+23.09 (EX) EQUATION
Sta 773+25.00 (PR) BK =
AH

SEE PROPOSED DRIVEWAY PLAN AND
PROFILE AND DRIVEWAY DETAILS SHEET

+00
112' RT

+03.34
132.65' LT

EXIST. R.O.W.

WILLIAM HEAP
AND PATRICIA HEAP

STA. 767+23. 97' RT.
PIPE CULVERTS, CLASS D, TYPE 1 18" = 33 FOOT
END SECTIONS 18" = 2 EACH
USFL = 510.13
DSFL = 509.91

END IMPROVEMENT
SECTION 105BR-1
STA. 773+25.00

LEGEND

STONE RIPRAP, CLASS B4

PROP. CURVE IL61A
PI STA. = 768+27.01
Δ = 22° 28' 00" (LT)
D = 3° 08' 00"
R = 1,828.59'
T = 363.18'
L = 717.02'
E = 35.72'
e = 5.6%
T.R. = 40'
S.E. RUN = 149'
BEGIN SE TRANSITION AT STA. 763+25
BEGIN FULL SE AT STA. 765+14
END FULL SE AT STA. 771+31
END SE TRANSITION AT STA. 773+20
P.C. STA. = 764+63.83
P.T. STA. = 771+80.85

840.00' V.C.
ex = 6.40'
K = 138

MILL AND RESURFACE

PROPOSED PROFILE

EXIST PROFILE

-1.08%

+5.01%

PVI STA. 766+30.00
ELEV. 519.80

MATCHLINE

VPT STA. 770+50.00
ELEV. 540.84

+5.01%

STA. 773+25
ELEV. 554.61

+00. RT.
ELEV. 508.40

+0.58%

+0.50%

SPECIAL DITCH, RT

SPECIAL DITCH, LT

+00. RT.
ELEV. 510.90

+00. LT.
ELEV. 510.00

+00. LT.
ELEV. 507.50

540 535 530 525 520 515 510 505 500

555 550 545 540 535 530 525 520

520.82 523.60 | 520.95 523.84 | 521.29 524.26 | 521.90 524.86 | 522.70 525.64 | 523.75 526.60 | 525.02 527.75 | 526.55 529.08 | 528.37 530.58 | 530.44 532.27 | 532.95 534.14 | 535.48 536.19 | 538.12 538.43 | 540.76 540.84 | 543.42 543.50 | 546.08 546.16 | 548.69 548.77 | 551.22 551.30 | 553.47 553.55

764+00 765+00 766+00 767+00 768+00 769+00 770+00 771+00 772+00 773+00

USER NAME = gjameson	DESIGNED -	REVISED -	
FILE NAME = D468482-sht-plan.dgn	CHECKED -	REVISED -	
PLOT DATE = 12/21/2010	DRAWN -	REVISED -	
PLOT TIME = 10:27:39 AM	CHECKED -	REVISED -	

WHKS & CO.
ENGINEERING

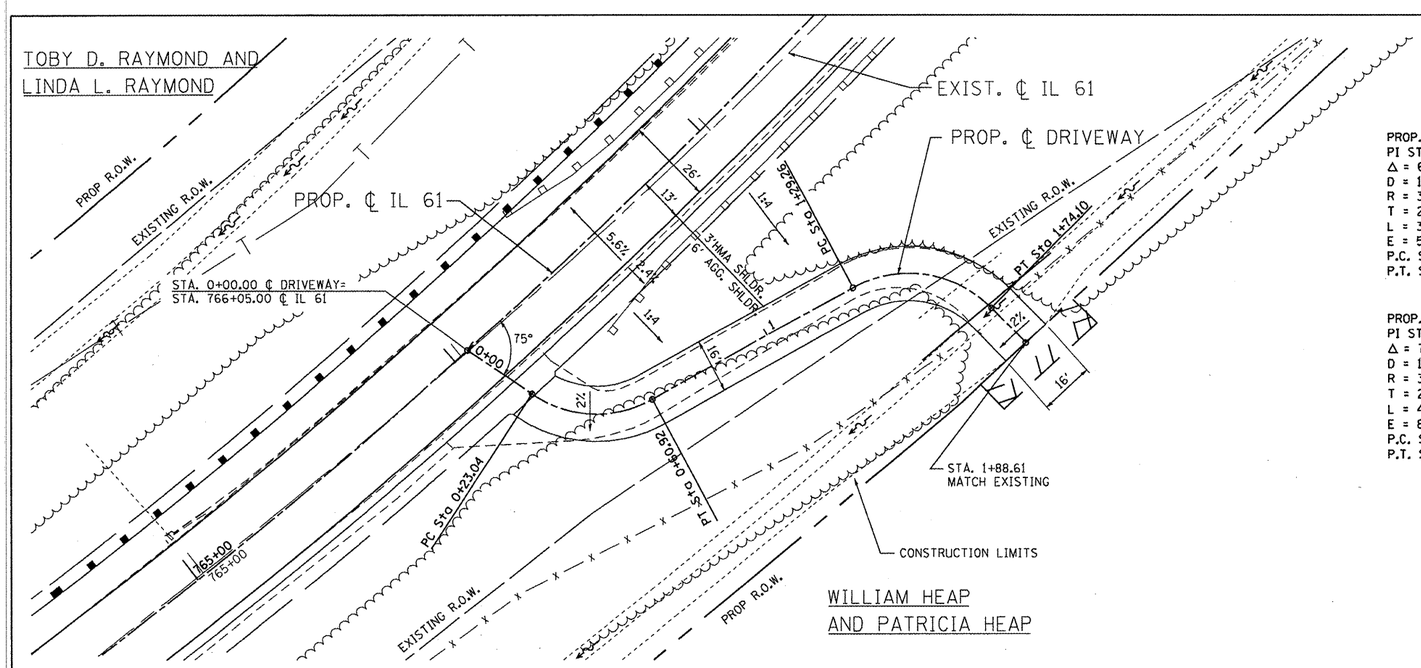
7018 KINGSMILL CT.,
SPRINGFIELD, IL
(217) 483-9457
DESIGN FIRM #184001036

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED PLAN AND PROFILE SHEET

SCALE: 1" = 50' | SHEET NO. 2 OF 2 SHEETS | STA. 764+00.00 TO STA. 773+25.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	McDONOUGH	114	24
		CONTRACT NO. 68482		
	ILLINOIS FED. AID PROJECT			



GRAPHIC SCALE

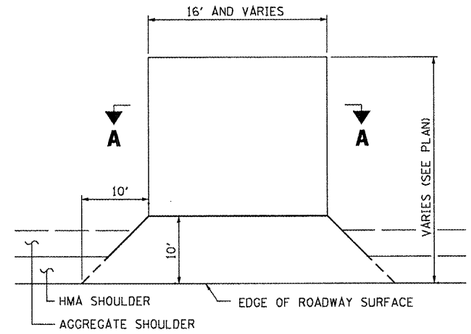
METERS: 8 0 8 16 24 32 40

FEET: 20 0 20 40 80 100 120

N

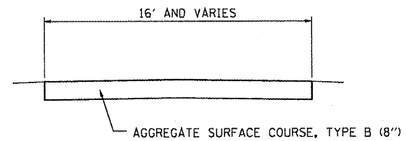
PROP. CURVE D1
PI STA. = 0+44.07
Δ = 62° 00' 23" (LT)
D = 163° 42' 08"
R = 35.00'
T = 21.03'
L = 37.88'
E = 5.83'
P.C. STA = 0+23.04
P.T. STA = 0+60.92

PROP. CURVE D2
PI STA. = 1+55.35
Δ = 73° 24' 50" (RT)
D = 163° 42' 08"
R = 35.00'
T = 26.09'
L = 44.85'
E = 8.66'
P.C. STA = 1+29.26
P.T. STA = 1+74.10



TYPICAL FIELD ENTRANCE PLAN

STA. 753+60.00, LT.
STA. 762+10.00, RT.
STA. 762+18.00, LT.
STA. 766+05.00 RT.



TYPICAL SECTION THRU ENTRANCE (A-A)

USER NAME = gjameson	DESIGNED -	REVISED -	
FILE NAME = D468482-sht-plan-DV.dgn	CHECKED -	REVISED -	
PLOT DATE = 12/21/2018	DRAWN -	REVISED -	
PLOT TIME = 10:27:44 AM	CHECKED -	REVISED -	

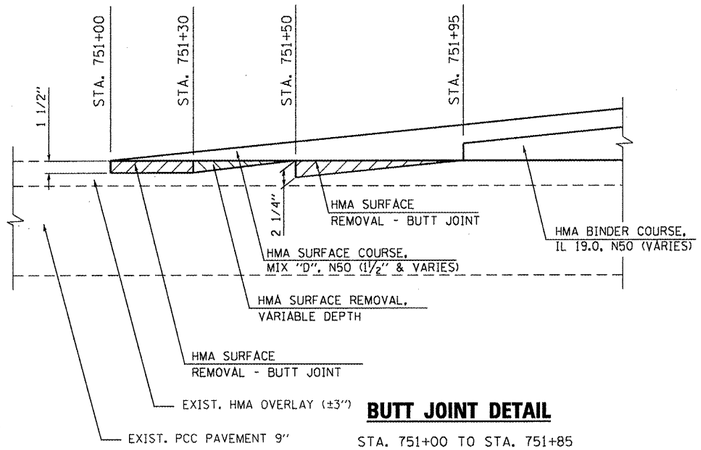
WHKS & CO. ENGINEERING
7018 KINGSMILL CT.,
SPRINGFIELD, IL
(217) 483-9457
DESIGN FIRM #184001036

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED DRIVEWAY PLAN AND PROFILE AND DRIVEWAY DETAIL SHEET

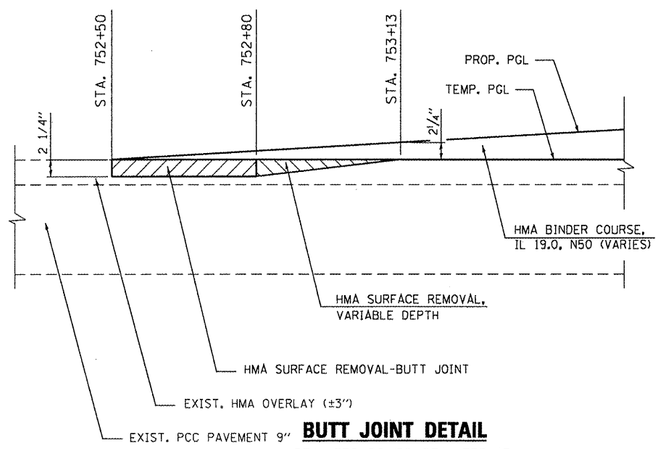
SCALE: 1" = 20' | SHEET NO. 1 OF 1 SHEETS | STA. 0+00.00 TO STA. 1+88.61

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	McDONOUGH	117	25
		CONTRACT NO. 68482		
		ILLINOIS FED. AID PROJECT		



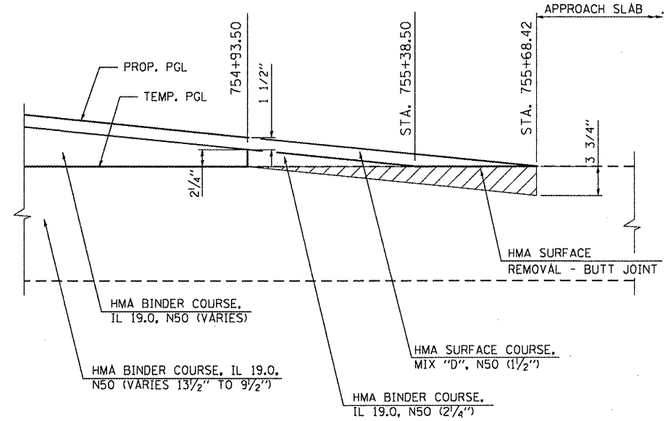
BUTT JOINT DETAIL

STA. 751+00 TO STA. 751+85



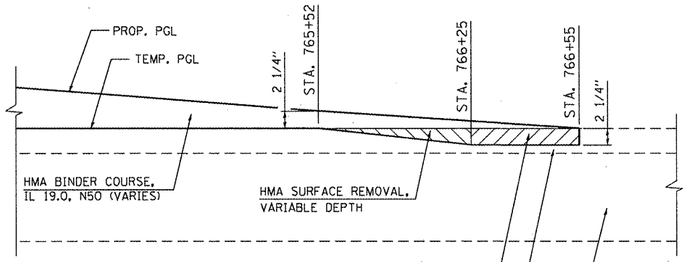
BUTT JOINT DETAIL

STA. 752+50 TO STA. 753+13



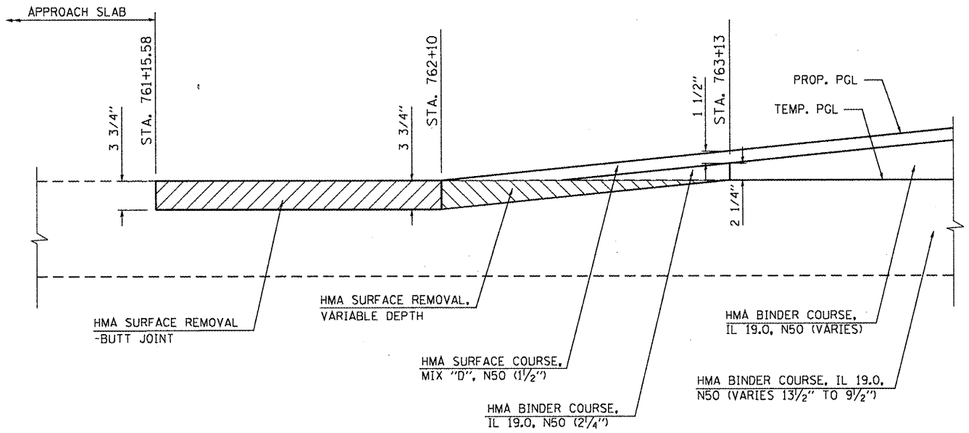
BUTT JOINT DETAIL

STA. 754+93.50 TO STA. 755+68.42



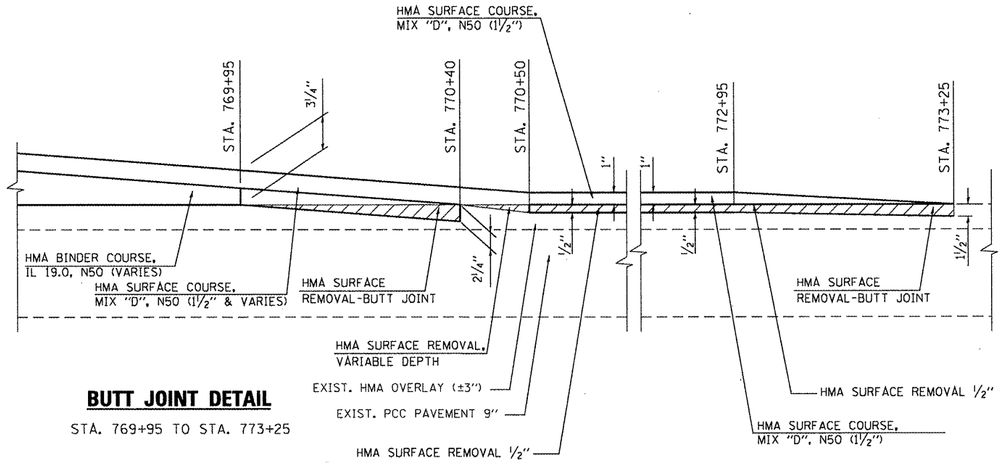
BUTT JOINT DETAIL

STA. 765+52 TO STA. 766+55



BUTT JOINT DETAIL

STA. 761+15.58 TO STA. 763+13

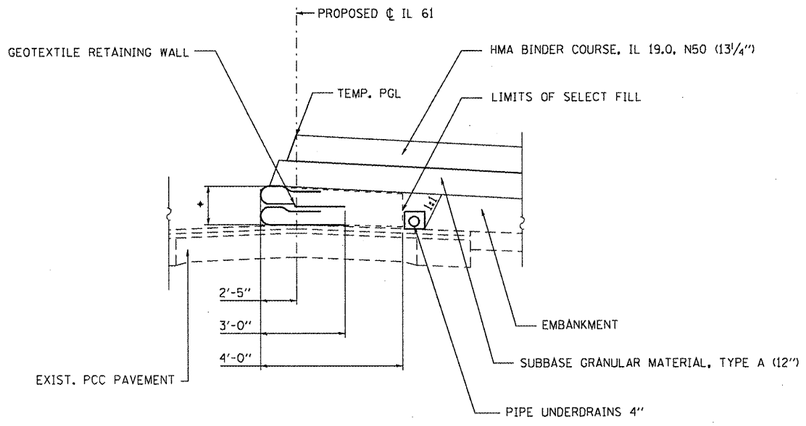


BUTT JOINT DETAIL

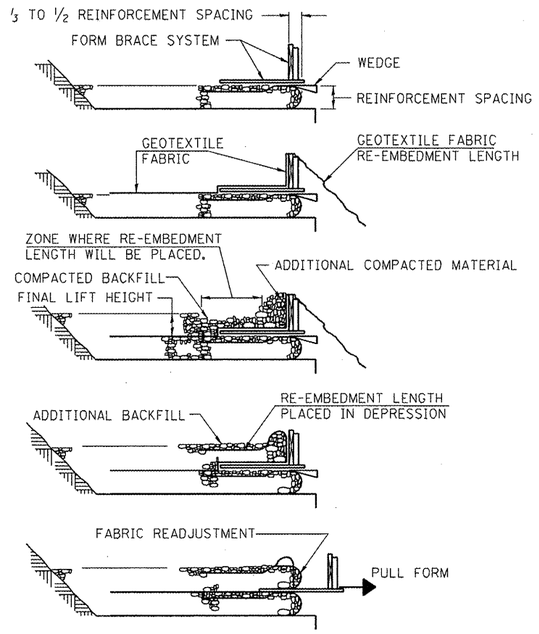
STA. 769+95 TO STA. 773+25

USER NAME = gjameson	DESIGNED - JAC	REVISED -	WHKS & CO. ENGINEERING	7018 KINGSMILL CT., SPRINGFIELD, IL (217) 483-9457 DESIGN FIRM #184001036	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BUTT JOINT DETAILS	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
PLOT SCALE = 10.0 '/ IN.	DRAWN - DLH	REVISED -					542	105BR-1	MCDONOUGH	117	26
PLOT DATE = 12/21/2010	CHECKED -	REVISED -				SCALE: NTS / SHEET NO. 1 OF 1 SHEETS / STA. / TO STA.			CONTRACT NO. 68482		
	DATE -	REVISED -							ILLINOIS FED. AID PROJECT		

• VARIES 1'-6" AT STA. 755+33.00 TO 2'-5" AT STA. 755+87.42
VARIES 2'-8" AT STA. 761+02.58 TO 1'-6" AT STA. 761+96.00



TYPICAL SECTION



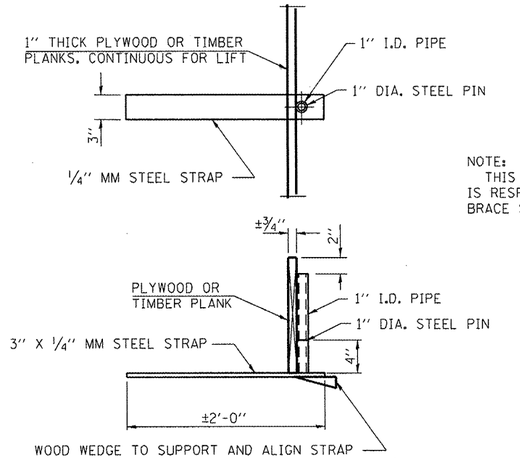
1. PLACE FORM BRACE SYSTEM ON COMPLETED REINFORCEMENT LEVEL; BACK FROM THE FINISHED FABRIC FACE A DISTANCE OF ⅓ TO ½ THE REINFORCEMENT SPACING.
2. POSITION FABRIC SO THAT THE REQUIRED RE-EMBEDMENT LENGTH EXTENDS OVER THE TOP OF THE FORM BRACE AND THE DESIGN REINFORCEMENT WIDTH IS PLACED WITH NO SLACK AGAINST THE PREVIOUS LEVEL.
3. COMPACT BACKFILL MATERIAL IN LIFTS TO FINAL LIFT HEIGHT, CREATE (±3") DEPRESSION IN ZONE WHERE RE-EMBEDMENT LENGTH WILL BE LOCATED AND PLACE ADDITIONAL HEIGHT OF COMPACTED MATERIAL AGAINST FORM BRACE.
4. FOLD FABRIC RE-EMBEDMENT LENGTH BACK OVER FORM BRACE INTO ZONE WHERE DEPRESSION WAS MADE IN BACKFILL AND PLACE ADDITIONAL COMPACTED BACKFILL, (±3") TO EMBED FABRIC AND BRING TO FINAL LIFT HEIGHT.
5. PULL FORM BRACE OUTWARD ALLOWING FABRIC FACE TO SLIGHTLY READJUST TO FORM TIGHT ROUND FACE AND LEVEL WITH PLAN REINFORCEMENT SPACING.

GEOTEXTILE WALL CONSTRUCTION PROCEDURE

NOTES: THE GEOTEXTILE FABRIC SHALL HAVE A MINIMUM ALLOWABLE TENSILE STRENGTH (T MIN.) OF 45 LB./IN. AS DETERMINED BY THE PROCEDURE STATED IN THE SPECIAL PROVISIONS. THE COMPUTATIONS SUPPORTING THE DETERMINATION OF (T MIN.) SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

BILL OF MATERIAL

ITEM	UNIT	TOTAL
GEOTEXTILE RETAINING WALL	SQ. FT.	303



NOTE:
THIS IS A SUGGESTED DETAIL. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN OF THE FORM BRACE SYSTEM TO BE USED.

SUGGESTED GEOTEXTILE TEMPORARY FORM BRACE SYSTEM DETAIL

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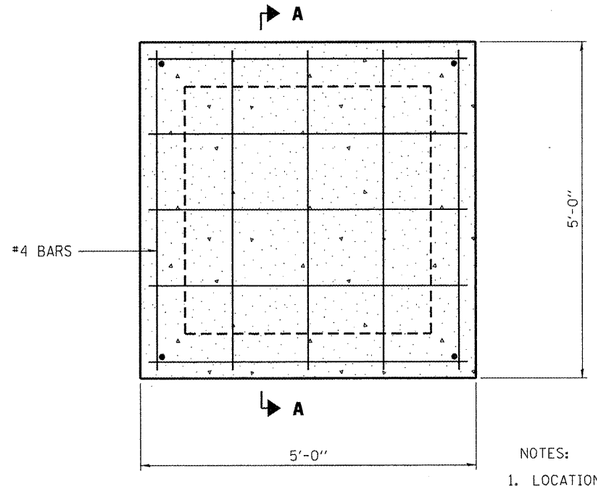
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

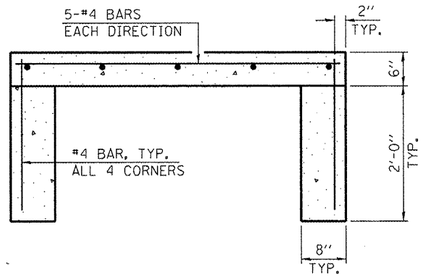
GEOTEXTILE RETAINING WALL

SCALE: N.T.S. | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	MCDONOUGH	117	27
		CONTRACT NO. 68482		
		ILLINOIS FED. AID PROJECT		



PLAN



SECTION A-A

NOTES:

1. LOCATION OF USGS STREAM GAGE HOUSE PAD TO BE DETERMINED DURING CONSTRUCTION. SEE SPECIAL PROVISION.
2. REINFORCEMENT BARS SHALL BE EPOXY COATED.
3. CONCRETE AND REINFORCEMENT FOR GAGE HOUSE PAD SHALL BE PAID FOR AS "CONCRETE STRUCTURES" AND "REINFORCEMENT BARS, EPOXY COATED".
4. EXCAVATION TO PLACE GAGE HOUSE PAD SHALL BE ACCORDING TO SECTION 502 OF THE STANDARD SPECIFICATIONS AND THE COST SHALL BE INCLUDED WITH "CONCRETE STRUCTURES".
5. USGS STREAM GAGE HOUSE WILL BE ATTACHED TO THE CONCRETE PAD WITH 1/2" CONCRETE ANCHORS.

GAGE HOUSE PAD

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STATE OF ILLINOIS
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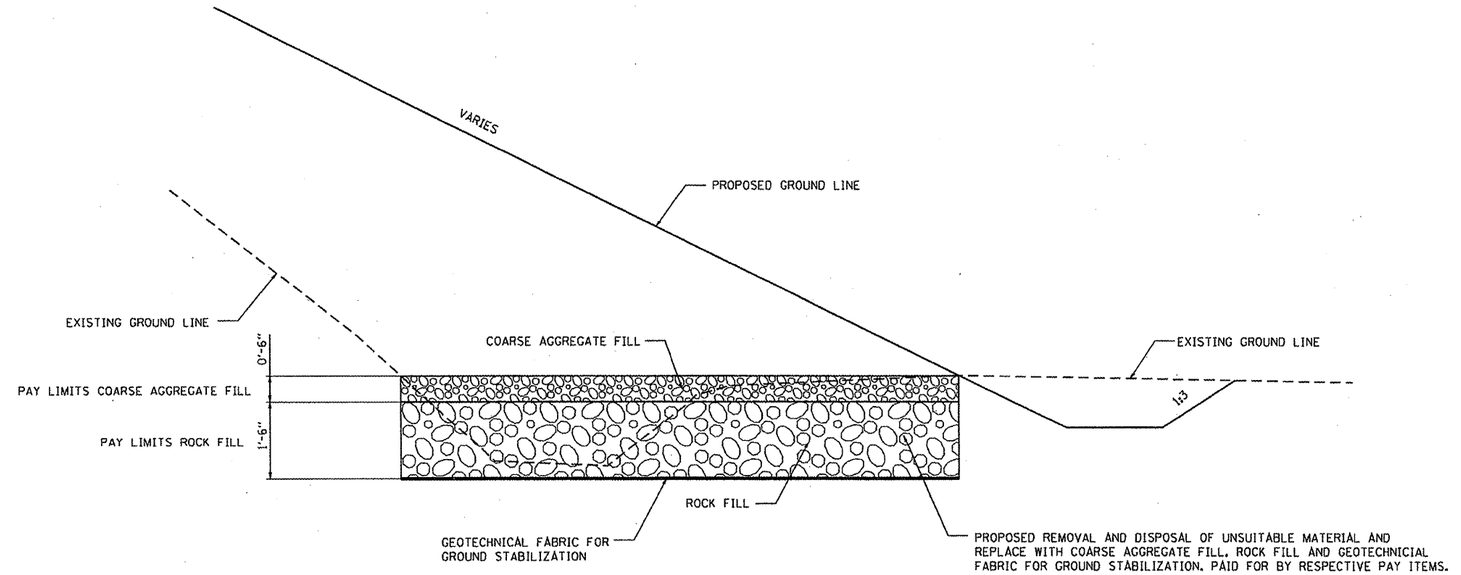
USGS STREAM GAGE HOUSE PAD DETAIL

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	McDONOUGH	117	28
		CONTRACT NO. 68482		
	ILLINOIS FED. AID PROJECT			



UNDERCUT DETAIL

281

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	DRAWN - DLH	REVISED -
PLOT SCALE = 5.0 '/ IN.	CHECKED -	REVISED -
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STATE OF ILLINOIS
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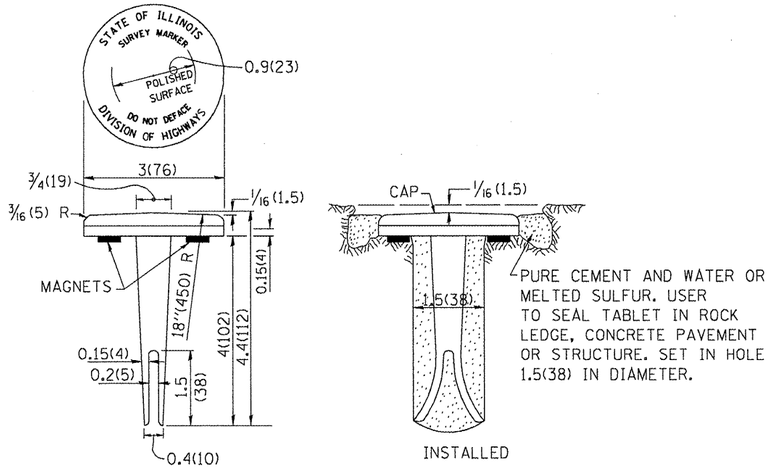
UNDERCUT DETAIL

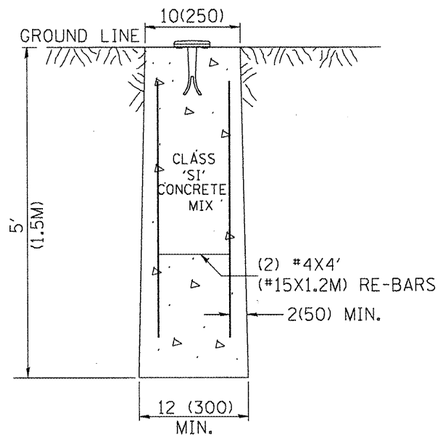
SCALE: NTS | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	MCDONOUGH	117	28A
		CONTRACT NO. 68482		
	ILLINOIS FED. AID PROJECT			

PERMANENT SURVEY MARKERS



TYPE I



MARKER CAST IN PLACE
TYPE II

GENERAL NOTES

1. ALL TYPE II MARKERS SHALL BE CAST IN PLACE, AND PRECAST MARKERS WILL NOT BE ALLOWED.
2. TWO PERMANENT MAGNETS, EACH HAVING A DIAMETER OF 3/4 (19) AND A THICKNESS OF 1/4 (6), OR EQUIVALENT, SHALL BE ATTACHED TO THE UNDERSIDE OF THE TABLET WITH AN APPROVED EPOXY BONDING AGENT.
3. THE LOCATION OF THE MARKERS SHALL BE IN ACCORDANCE WITH THE PLANS IN GENERAL, THE MARKERS WILL BE PLACED AT THE P.C.'S, P.I.'S AND P.T.'S LOCATED WITHIN THE PAVEMENT OF HORIZONTAL CURVES AND SPACES ALONG THE TANGENTS IN A WAY THAT A MINIMUM OF TWO MARKERS ARE ALWAY INTER-VISIBLE, AND NOT TO EXCEED 1000' (300M).
4. THE MARKERS SHALL BE PLACED UNDER THE DIRECTION OF THE ENGINEER AND SHALL BE INSTALLED IN A WORKMANLIKE MANNER IN ORDER THAT THERE WILL BE NO FURTHER SETTLEMENT OR HORIZONTAL SHIFTING. THE MONUMENTS SHALL BE PLACED IN A WAY THAT THE SURVEY POINT WILL FALL WITHIN THE PORTION OF THE PLAQUE PROVIDED FOR THAT PURPOSE.
5. THE PROJECT DESIGNATION, THE CENTERLINE STATION, THE SURVEY POINT, AND THE ELEVATION SHALL BE PERMANENTLY MARKED BY THE USE OF METAL DIES AFTER MARKER HAS BEEN INSTALLED.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE NOTED.

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STATE OF ILLINOIS
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PERMANENT SURVEY MARKERS DETAIL

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	McDONOUGH	117	29
		CONTRACT NO. 68482		
	ILLINOIS FED. AID PROJECT			

GENERAL STAGING NOTES

1. POSITIVE DRAINAGE SHALL BE MAINTAINED AT ALL TIMES.

2. ACCESS TO ALL ENTRANCES IMPACTED BY THE CONSTRUCTION SHALL BE MAINTAINED AT ALL TIMES. TEMPORARY CLOSURE OF ACCESS MUST BE AGREED TO IN WRITING BY THE PROPERTY OWNER AND A COPY SUBMITTED TO THE ENGINEER.

3. USE AGGREGATE AT DRIVEWAYS AS REQUIRED TO MAINTAIN TEMPORARY ACCESS AND AT THE DIRECTION OF THE ENGINEER.

4. CONTRACTOR SHALL REMOVE EXISTING PAVEMENT MARKINGS WHERE REQUIRED TO AVOID CONFLICT WITH TEMPORARY PAVEMENT MARKINGS.

5. ALL REQUIRED SIGNS SHOWN IN STAGING PLANS SHALL BE INCLUDED IN THE COST OF THE TRAFFIC CONTROL PAY ITEMS.

6. TEMPORARY PAVEMENT MARKING ON EXISTING PAVEMENT SHALL BE PAINT.

7. TEMPORARY PAVEMENT MARKING ON NEW PAVEMENT SHALL BE PAVEMENT MARKING TAPE, TYPE III.

TEMPORARY BRIDGE TRAFFIC SIGNAL NOTES

1. TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH STANDARD 701321 EXCEPT WHERE MODIFIED IN THE PLANS AND SPECIAL PROVISIONS.

2. TWO PHASE SIGNAL OPERATION IS REQUIRED. THE ENGINEER OF TRAFFIC SHALL APPROVE ALL TIMING PARAMETERS. THE CONTRACTOR SHALL CONTACT PAUL GRANT, DISTRICT 4 TRAFFIC SIGNAL TECHNICIAN, AT (309) 671-4474, FORTY-EIGHT HOURS PRIOR TO SIGNAL TURN ON.

3. THE CONTRACTOR SHALL INSTALL A CONVENTIONAL TRAFFIC SIGNAL INSTALLATION THAT HAS ALL OF THE REQUIRED FUNCTIONALITY DESCRIBED WITHIN THE CONTRACT PLANS AND SPECIAL PROVISIONS. THE USE OF SOLAR POWERED TRAILER MOUNTED TRAFFIC SIGNALS WILL NOT BE ALLOWED.

4. THE CONTRACTOR SHALL FURNISH AND INSTALL ONE PEDESTRIAN PUSHBUTTON, SIGN, AND SIGN SUPPORT FOR EACH APPROACH TO PROVIDE ADDITIONAL TIME TO ACCOMMODATE HORSE DRAWN CARRIAGES AND OTHER SLOW MOVING VEHICLES. THE PUSHBUTTON AND SIGN SHALL BE INSTALLED TWENTY FEET FROM THE STOP BAR AND BE LOCATED WHERE THE BUTTONS CAN BE EASILY ACCESSED. THE SIGN SHALL HAVE A TWO INCH TEXT HEIGHT AND SHALL READ "HORSE CARRIAGES PUSH BUTTON FOR ADDITIONAL SIGNAL TIME".

5. THE CONTRACTOR SHALL INSTALL DETECTOR LOOPS FOR USE WITH THE TEMPORARY TRAFFIC SIGNALS IN ACCORDANCE WITH HIGHWAY STANDARD 701321.

6. THE ADVANCED DETECTOR LOOPS FOR BOTH MAINLINE APPROACHES SHALL BE LOCATED 100 FT. FROM THE STOP BAR.

7. DETECTOR LOOP LEAD-IN CABLE SHALL BE #14 TWISTED SHIELDED TO ENSURE RELIABLE OPERATION.

8. ALL DETECTOR LOOPS SHALL HAVE SIX TURNS.

9. ALL TRAFFIC SIGNAL SECTIONS SHALL HAVE 12" DIAMETER LED LENSES.

10. THE TEMPORARY TRAFFIC SIGNAL HEADS SHALL BE PLACED AT THE LOCATIONS INDICATED ON THE PLAN SHEETS OR DIRECTED BY THE ENGINEER.

11. THE CONTRACTOR SHALL FURNISH AND INSTALL A TEMPORARY ELECTRICAL SERVICE FOR THE TRAFFIC SIGNALS. POWER FOR THE TEMPORARY ELECRICAL SERVICE SHALL BE OBTAINED FROM THE EXISTING ROADWAY WEATHER INFORMATION SYSTEM LOCATED AT THE STRUCTURE CROSSING THE BNSF RAILROAD TRACKS (STATION 775+40). THE CONTRACTOR SHALL PROVIDE ELECTRICAL CABLE, WOOD POLES, SERVICE DISCONNECT, AND ALL OTHER ITEMS REQUIRED FOR THE TEMPORARY SERVICE INSTALLATION. THE CONTRACTOR SHALL FIELD VERIFY THE DISTANCE FROM THE TEMPORARY TRAFFIC SIGNALS TO THE TEMPORARY ELECTRICAL SERVICE PRIOR TO BIDDING.

12. THE TEMPORARY TRAFFIC SIGNAL INSTALLATION SHALL CONFORM TO ALL MUTCD REQUIREMENTS.

13. THE CONTRACTOR SHALL FURNISH AND INSTALL ONE SOLAR POWERED YELLOW FLASHING BEACON PER APPROACH FOR IL 61. THE BEACONS SHALL BE MOUNTED ON THE SIGNAL AHEAD SIGNS WHICH ARE TO BE LOCATED 1000 FT. IN ADVANCE OF THE BRIDGE TRAFFIC SIGNALS. THE FLASHING BEACONS SHALL CONFORM TO THE SPECIFICATIONS CONTAINED IN THE SPECIAL PROVISIONS AND THE CONTRACTOR SHALL SUBMIT CATALOG CUT SHEETS FOR THE BEACONS TO THE DEPARTMENT FOR APPROVAL. AFTER REMOVAL OF THE TEMPORARY BRIDGE TRAFFIC SIGNALS, THE CONTRACTOR SHALL DELIVER THE FLASHERS TO THE DEPARTMENT.

14. ALL LABOR, EQUIPMENT, AND MATERIALS REQUIRED TO COMPLY WITH THESE REQUIREMENTS AND PLAN SHEET DETAILS SHALL BE INCLUDED IN THE CONTRACT BID PRICE FOR THE TEMPORARY BRIDGE TRAFFIC SIGNAL INSTALLATION. THERE WILL BE NO ADDITIONAL COMPENSATION.

STAGE I CONSTRUCTION

1. REMOVE HMA SHOULDER, HMA DRIVEWAY PAVEMENT, GUARDRAIL, CONCRETE GUTTER AND INLETS ALONG THE WEST SIDE OF IL. 61.

2. CONSTRUCT HMA BASE COURSE WIDENING ON THE WEST EDGE OF PAVEMENT AND TEMPORARY BEAM SUPPORTS. USE TRAFFIC CONTROL STANDARD 701326.

3. PLACE EROSION CONTROL BLANKET AND TEMPORARY EROSION CONTROL SEEDING ON DISTURBED SLOPES.

STAGE II CONSTRUCTION

1. INSTALL TEMPORARY CONCRETE BARRIERS, TEMPORARY IMPACT ATTENUATORS AND TEMPORARY TRAFFIC SIGNALS AS SHOWN ON THE STAGING PLANS. INSTALL OTHER TRAFFIC CONTROL AND PROTECTION USING HIGHWAY STANDARD 701321.

2. REMOVE EAST HALF OF EXISTING BRIDGE.

3. REMOVE GUARDRAIL, HMA SHOULDERS, HMA DRIVEWAY PAVEMENT, AND PIPE CULVERTS ALONG THE EAST SIDE OF IL. 61.

4. CONSTRUCT EAST HALF OF THE PROPOSED BRIDGE (BRIDGE PLAN STAGE I), GEOTEXTILE RETAINING WALL, HMA BINDER COURSE, SUBBASE GRANULAR MATERIAL, EMBANKMENT AND HMA BASE COURSE WIDENING.

5. INSTALL SETTLEMENT PLATFORM TO MONITOR SETTLEMENT OF EMBANKMENT.

6. INSTALL EROSION CONTROL ITEMS AS SHOWN ON THE EROSION CONTROL PLANS.

WINTER SHUT DOWN

1. INSTALL TEMPORARY CONCRETE BARRIERS, TEMPORARY IMPACT ATTENUATORS, TEMPORARY GUARDRAIL AND TEMPORARY TRAFFIC SIGNALS AS SHOWN ON THE STAGE III PLANS. INSTALL OTHER TRAFFIC CONTROL AND PROTECTION USING HIGHWAY STANDARD 701321.

2. TEMPORARY PAVEMENT MARKING SHALL BE PAINT ON THE HMA SURFACES. NO STRIPING SHALL BE PLACED ON THE PROPOSED CONCRETE BRIDGE DECK OR APPROACH PAVEMENTS.

3. SHIFT TRAFFIC AS SHOWN ON THE STAGE III PLANS.

4. CONSTRUCT EMBANKMENT AND SUBBASE GRANULAR MATERIAL ON THE WEST SIDE TO BEGIN THE SETTLEMENT PERIOD.

STAGE III CONSTRUCTION

1. REMOVE WEST HALF OF EXISTING BRIDGE.

2. REMOVE GUARDRAIL, HMA SHOULDERS, HMA DRIVEWAY PAVEMENT AND PIPE CULVERTS ALONG THE WEST SIDE OF IL 61.

3. CONSTRUCT WEST HALF OF THE PROPOSED BRIDGE (BRIDGE PLAN STAGE II), HMA BINDER COURSE, SUBBASE GRANULAR MATERIAL AND EMBANKMENT.

4. INSTALL EROSION CONTROL ITEMS AS SHOWN ON THE EROSION CONTROL PLANS.

STAGE IV CONSTRUCTION

1. CONSTRUCT HMA BASE COURSE WIDENING ON THE EAST EDGE OF PAVEMENT.

2. CONSTRUCT HMA BINDER COURSE IN 4" LIFTS ALTERNATING BETWEEN THE NORTHBOUND AND SOUTHBOUND LANES TO BRING THE PAVEMENT WITHIN 3¾" OF THE FINAL PROFILE GRADE LINE. USE TRAFFIC CONTROL STANDARD 701201.

3. MILL PAVEMENT AT APPROACH PAVEMENTS AND BEGINNING AND ENDING LIMITS OF PROJECT.

4. CONSTRUCT HMA SHOULDERS, AGGREGATE SHOULDERS, GUARDRAIL AND REMAINING EMBANKMENT.

5. CONSTRUCT FINAL 2¼" HMA BINDER COURSE LIFT.

6. CONSTRUCT FINAL 1½" HMA SURFACE COURSE LIFT.

7. PLACE FINAL STRIPING.

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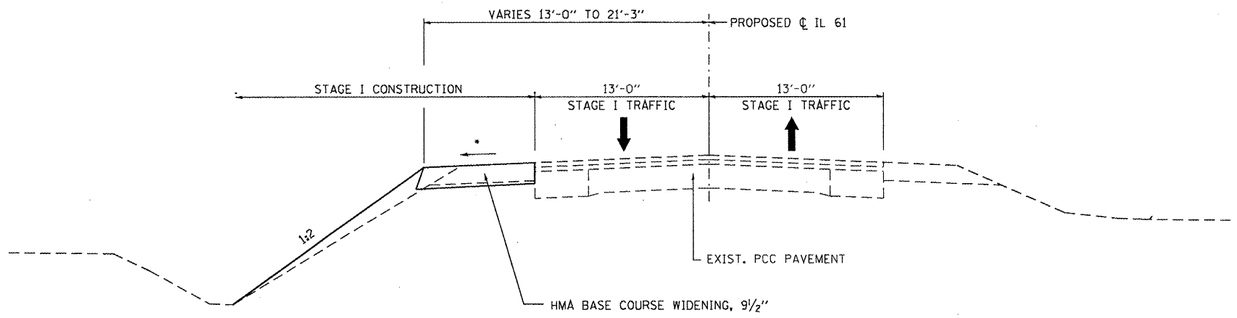
GENERAL STAGING NOTES AND STAGE CONSTRUCTION SEQUENCE

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	McDONOUGH	117	30
		CONTRACT NO. 68482		
		ILLINOIS FED. AID PROJECT		



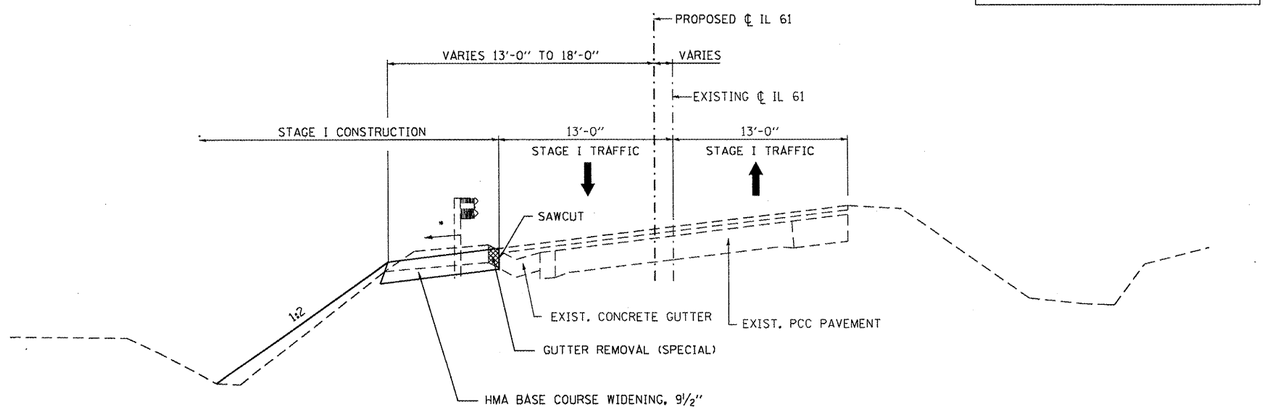
TYPICAL SECTION FOR STAGE I CONSTRUCTION

STA. 751+26 TO STA. 763+50

• MATCH EXISTING PAVEMENT CROSS SLOPE

BRIDGE OMISSION

STA. 756+57.00 TO STA. 761+10.00



TYPICAL SECTION FOR STAGE I CONSTRUCTION

STA. 763+50 TO STA. 770+50

USER NAME = gjameson	DESIGNED - JAC	REVISED -
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STATE OF ILLINOIS
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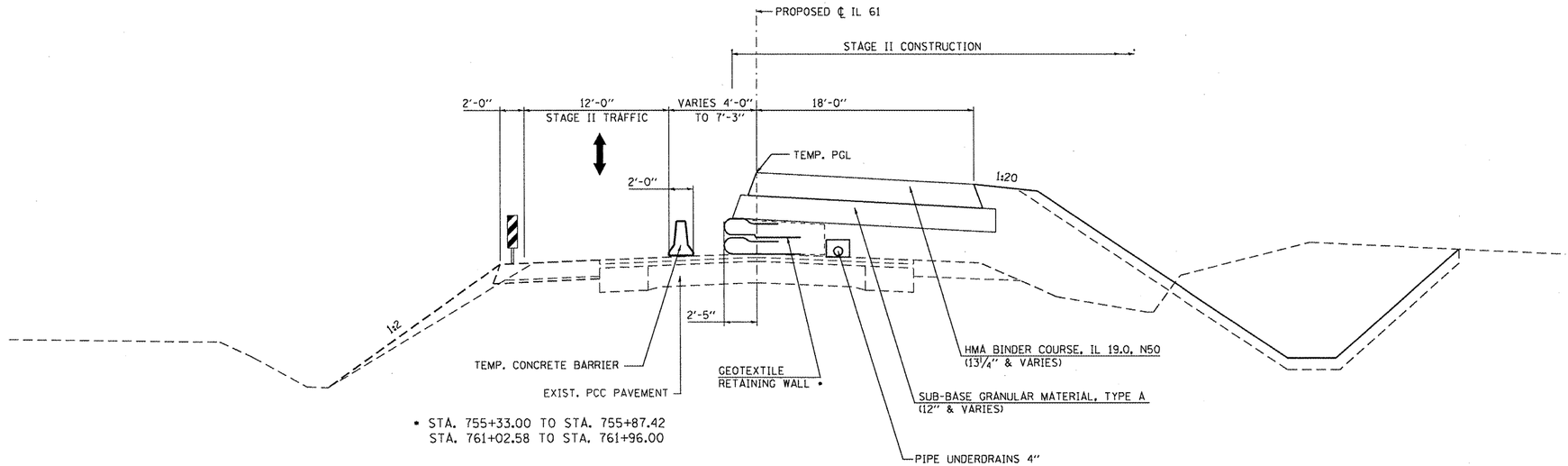
STAGING TYPICAL SECTIONS

SCALE: 1" = 10' (H) | SHEET NO. 1 OF 2 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	MCDONOUGH	117	31
		CONTRACT NO. 68482		
		ILLINOIS FED. AID PROJECT		



• STA. 755+33.00 TO STA. 755+87.42
STA. 761+02.58 TO STA. 761+96.00

TYPICAL SECTION FOR STAGE II CONSTRUCTION

NOTES:

1. SEE SHEETS NOS. 9 AND 10 FOR PROPOSED TYPICAL SECTIONS.

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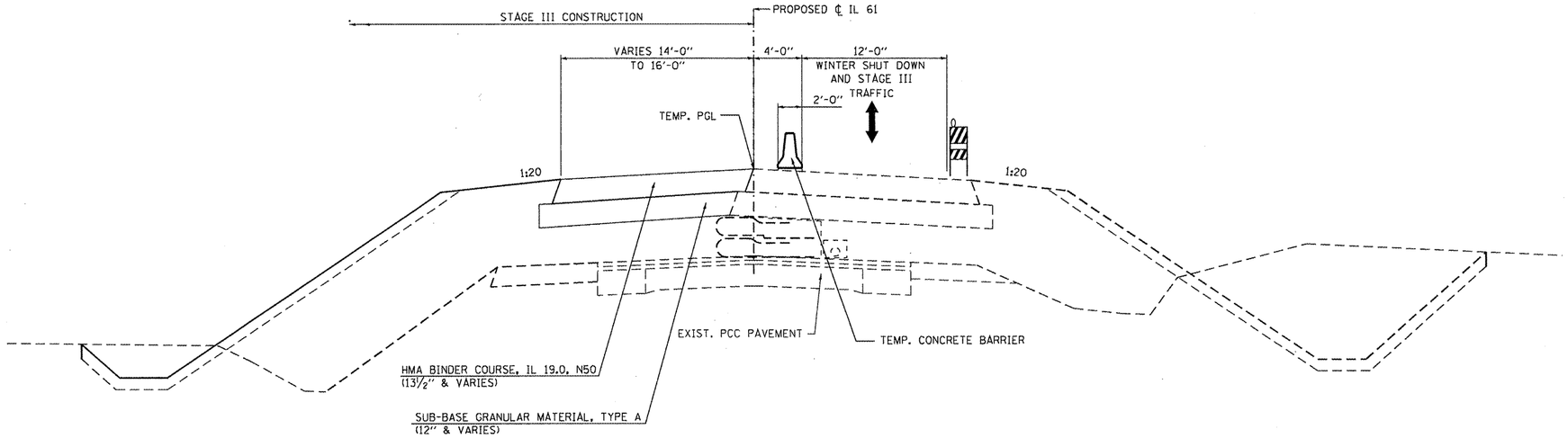
STAGING TYPICAL SECTIONS

SCALE: 1" = 10' (H) | SHEET NO. 2 OF 2 SHEETS | STA. | TO STA.

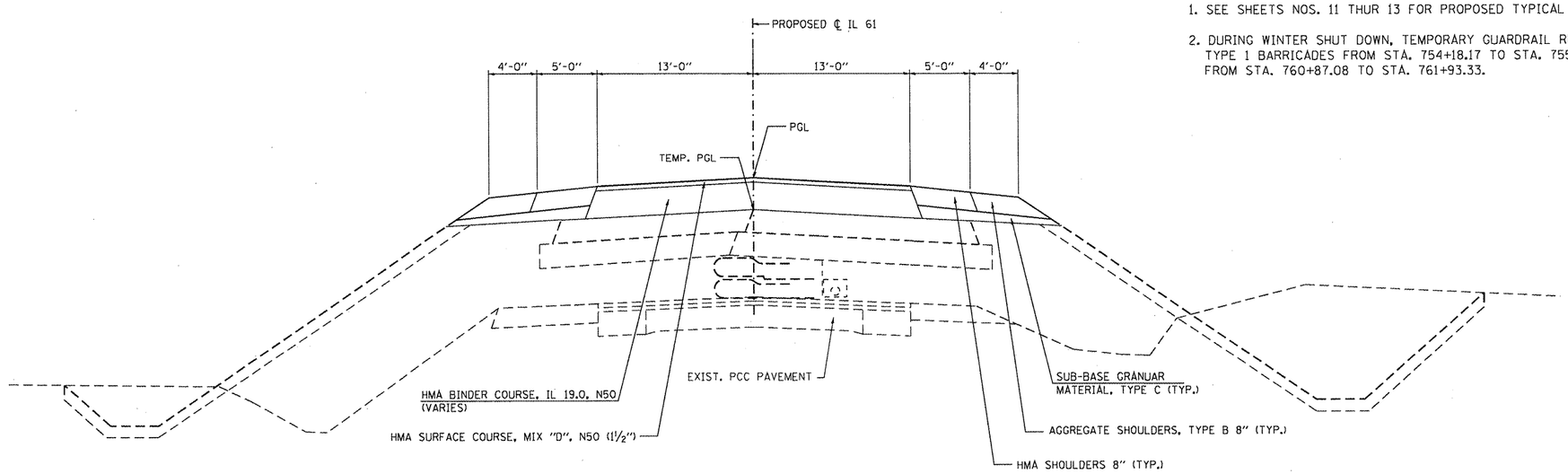
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	MCDONOUGH	117	32
		CONTRACT NO. 68482		
	ILLINOIS FED. AID PROJECT			



TYPICAL SECTION FOR WINTER SHUT DOWN AND STAGE III CONSTRUCTION

NOTES:

1. SEE SHEETS NOS. 11 THUR 13 FOR PROPOSED TYPICAL SECTIONS.
2. DURING WINTER SHUT DOWN, TEMPORARY GUARDRAIL REPLACES TYPE 1 BARRICADES FROM STA. 754+18.17 TO STA. 755+86.92 AND FROM STA. 760+87.08 TO STA. 761+93.33.



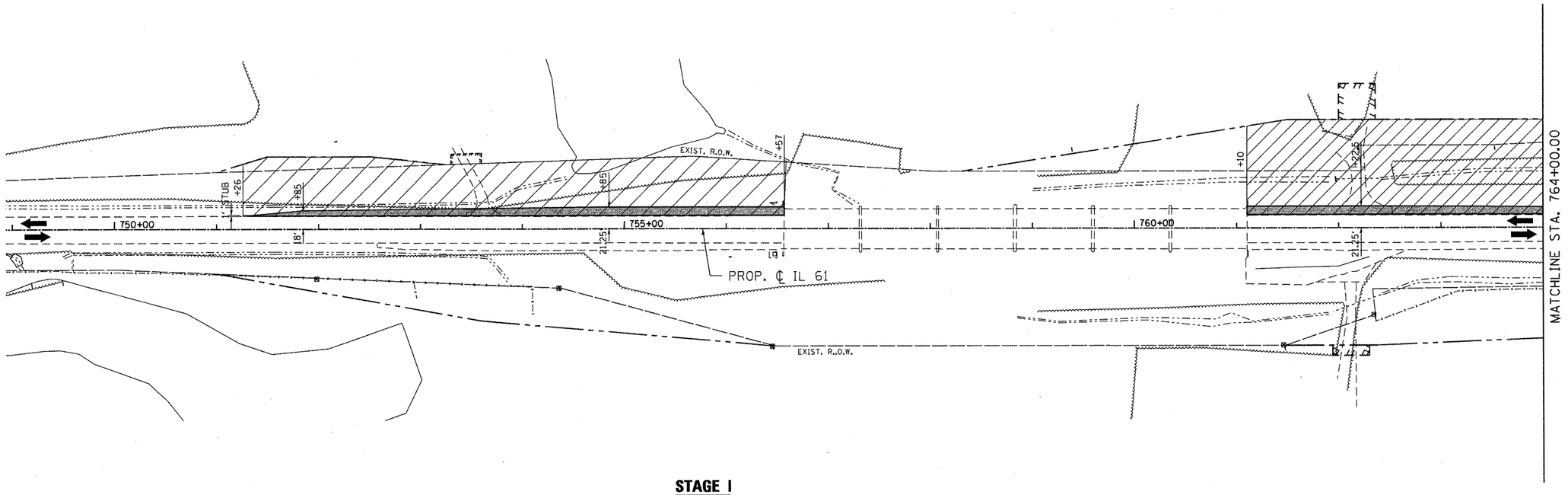
TYPICAL SECTION FOR STAGE IV CONSTRUCTION

USER NAME = gjameson	DESIGNED - JAC	REVISED -	WHKS & CO. ENGINEERING	7018 KINGSMILL CT., SPRINGFIELD, IL (217) 483-9457 DESIGN FIRM #184001036	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
PLOT SCALE = 10.0000 ' / IN.	DRAWN - DLH	REVISED -			
PLOT DATE = 12/21/2010	CHECKED -	REVISED -			
	DATE -	REVISED -			

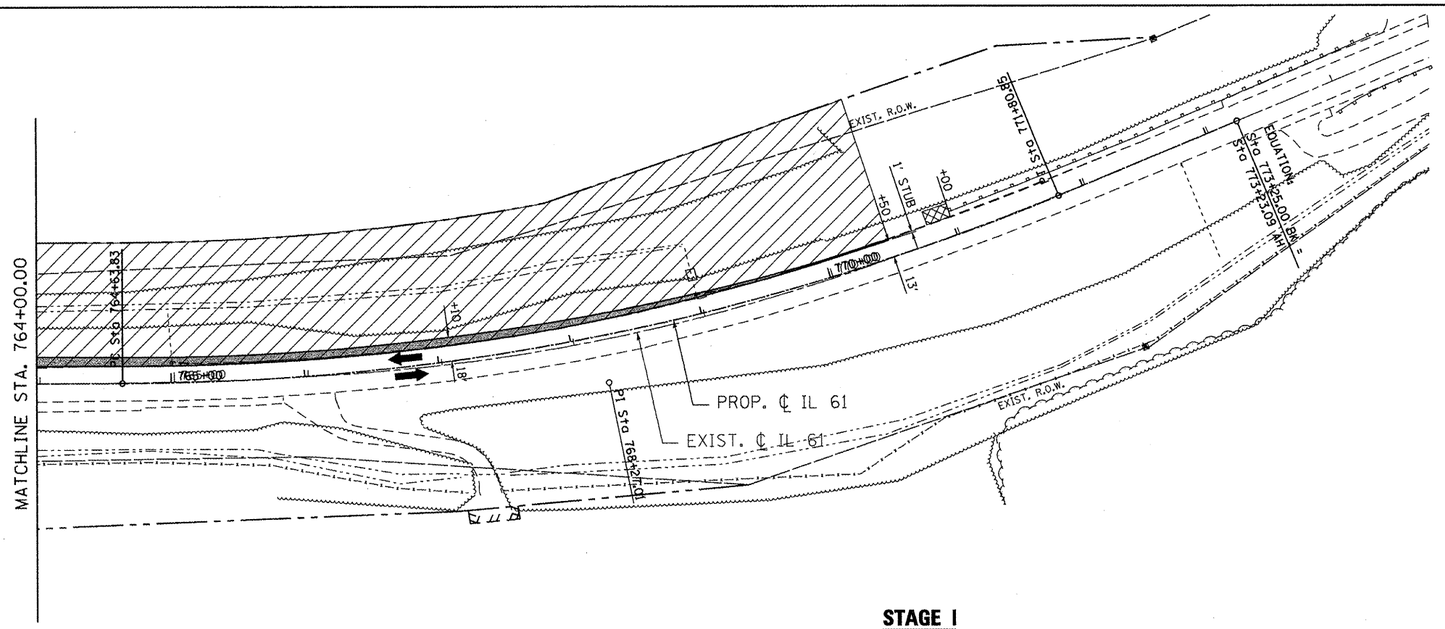
STAGING TYPICAL SECTIONS

SCALE: 1" = 10' (H) | SHEET NO. 2 OF 2 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	MCDONOUGH	117	33
		CONTRACT NO. 68482		
		ILLINOIS FED. AID PROJECT		



STAGE I



LEGEND

- TEMPORARY TRAFFIC SIGNAL
- AREA OF CONSTRUCTION
- DIRECTION OF TRAFFIC
- PAVEMENT WIDENING
- TEMPORARY CONCRETE BARRIER
- IMPACT ATTENUATOR
- GEOTEXTILE RETAINING WALL

NOTES:

TRAFFIC CONTROL IN ACCORDANCE WITH HIGHWAY STANDARD 701326.

GRAPHIC SCALE

METERS: 50 0 50 100 150 200 250

FEET: 50 0 50 100 150 200 250

STAGE I

USER NAME = gjamison	DESIGNED -	REVISED -
FILE NAME = D468482-stage I sheet	CHECKED -	REVISED -
PLOT DATE = 12/21/2010	DRAWN -	REVISED -
PLOT TIME = 10:28:11 AM	CHECKED -	REVISED -

WHKS & co. ENGINEERING
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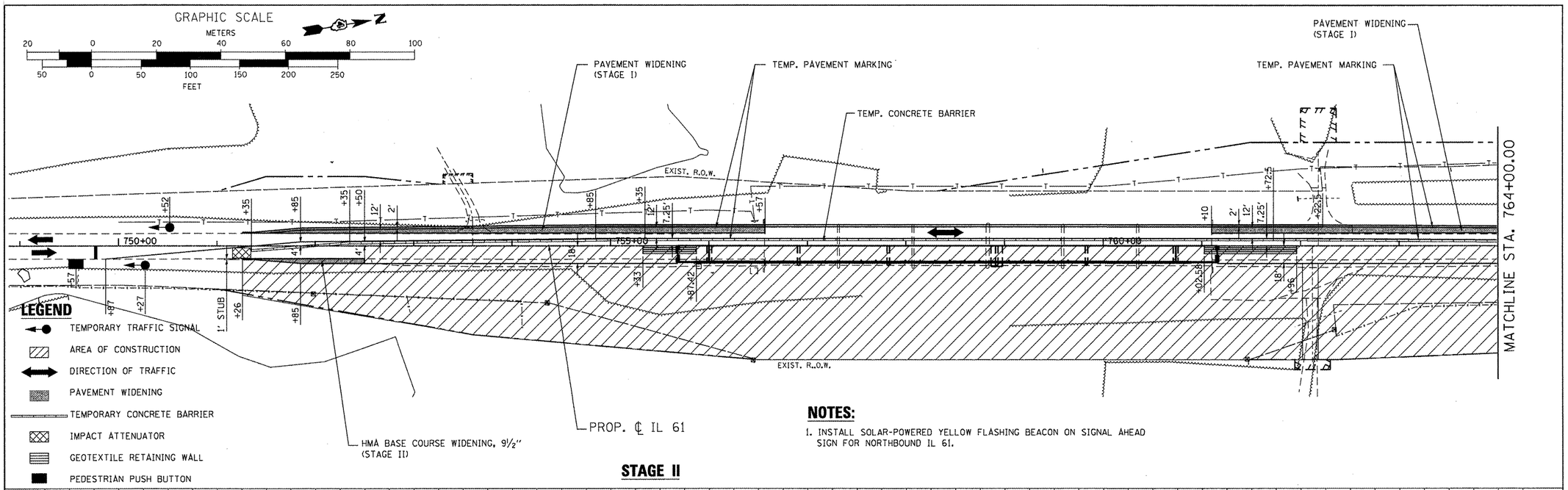
SPRINGFIELD, IL
(217) 483-9457
DESIGN FIRM #184001036

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLANS – STAGE I
IL 61 OVER LAMOINE RIVER

SCALE: 1"=50' | SHEET NO. 1 OF 1 SHEETS | STA. 750+00.00 TO STA. 773+25.00

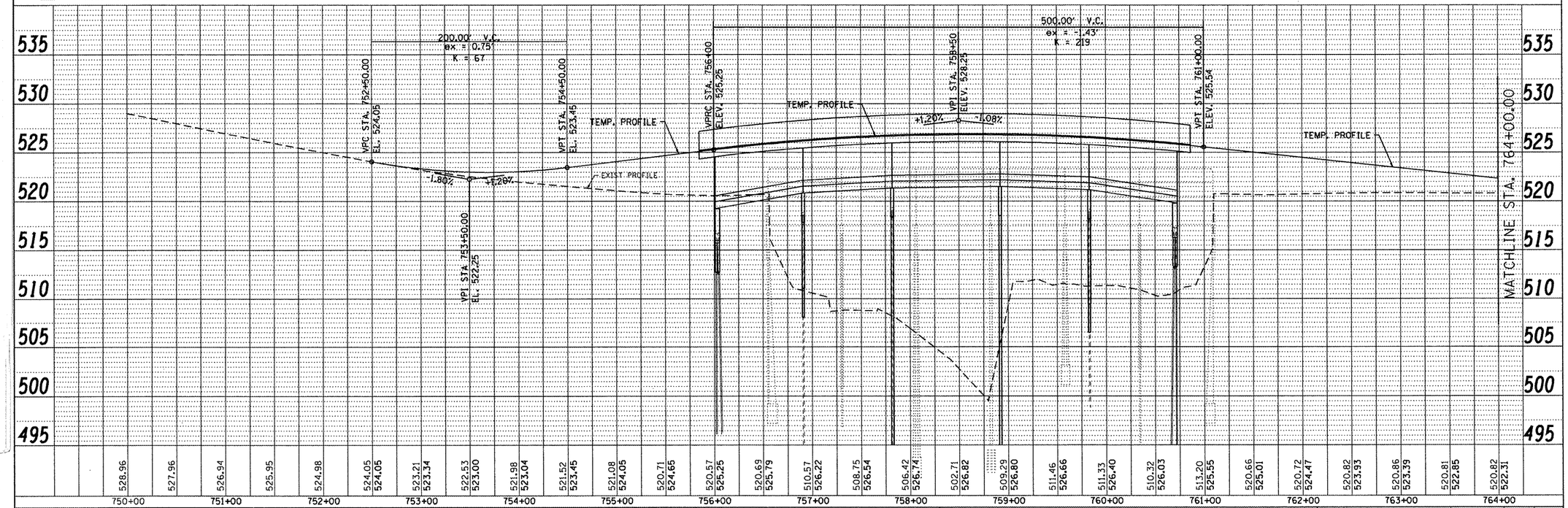
T.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	MCDONOUGH	117	34
		CONTRACT NO. 68482		
		ILLINOIS FED. AID PROJECT		



STAGE II

NOTES:

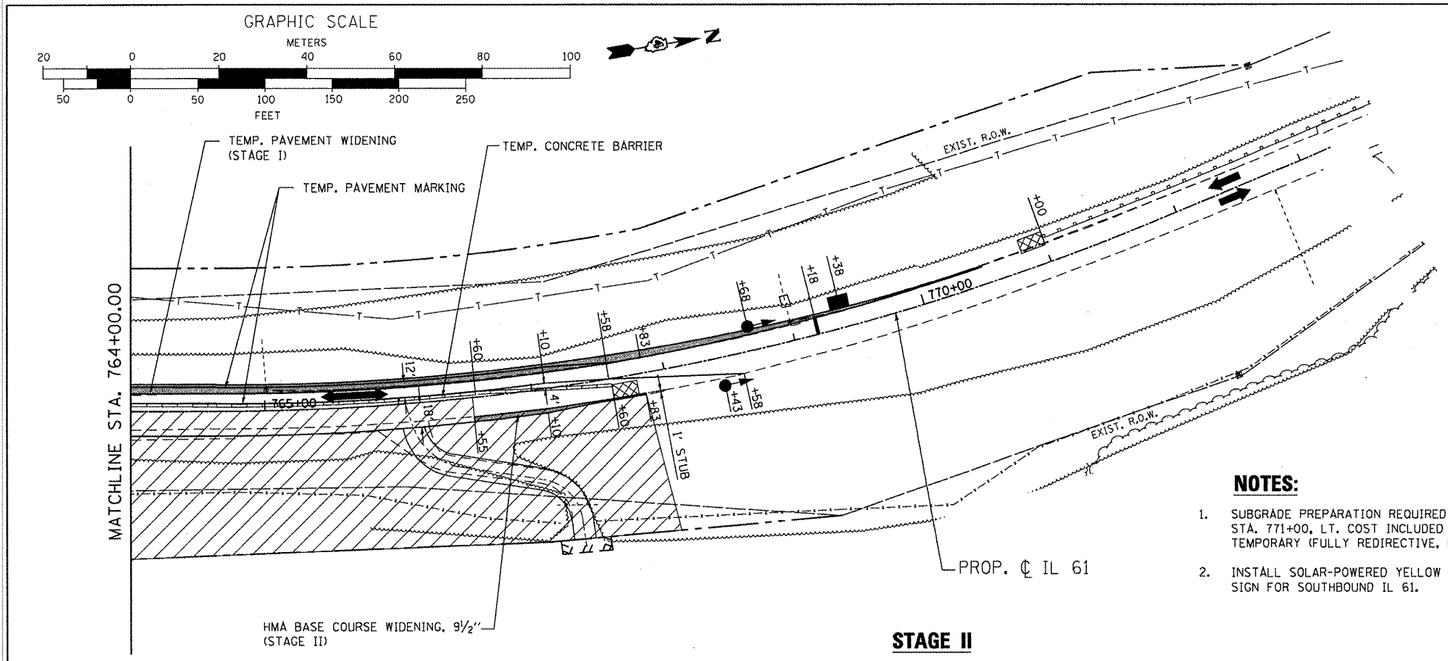
1. INSTALL SOLAR-POWERED YELLOW FLASHING BEACON ON SIGNAL AHEAD SIGN FOR NORTHBOUND IL 61.



USER NAME = gjameson	DESIGNED -	REVISED -	WHKS & CO. ENGINEERING
FILE NAME = D468482-stage 2 sheet	CHECKED -	REVISED -	7018 KINGSMILL CT., SPRINGFIELD, IL (217) 483-9457 DESIGN FIRM #184001036
PLOT DATE = 12/21/2010	DRAWN -	REVISED -	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**
PLOT TIME = 10:28:16 AM	CHECKED -	REVISED -	SCALE: 1" = 50' | SHEET NO. 1 OF 2 SHEETS | STA. 751+00.00 TO STA. 764+00.00

TRAFFIC CONTROL PLANS – STAGE II
IL 61 OVER LAMOINE RIVER

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	McDONOUGH	117	35
		CONTRACT NO. 68482		
	ILLINOIS	FED. AID PROJECT		



STAGE II

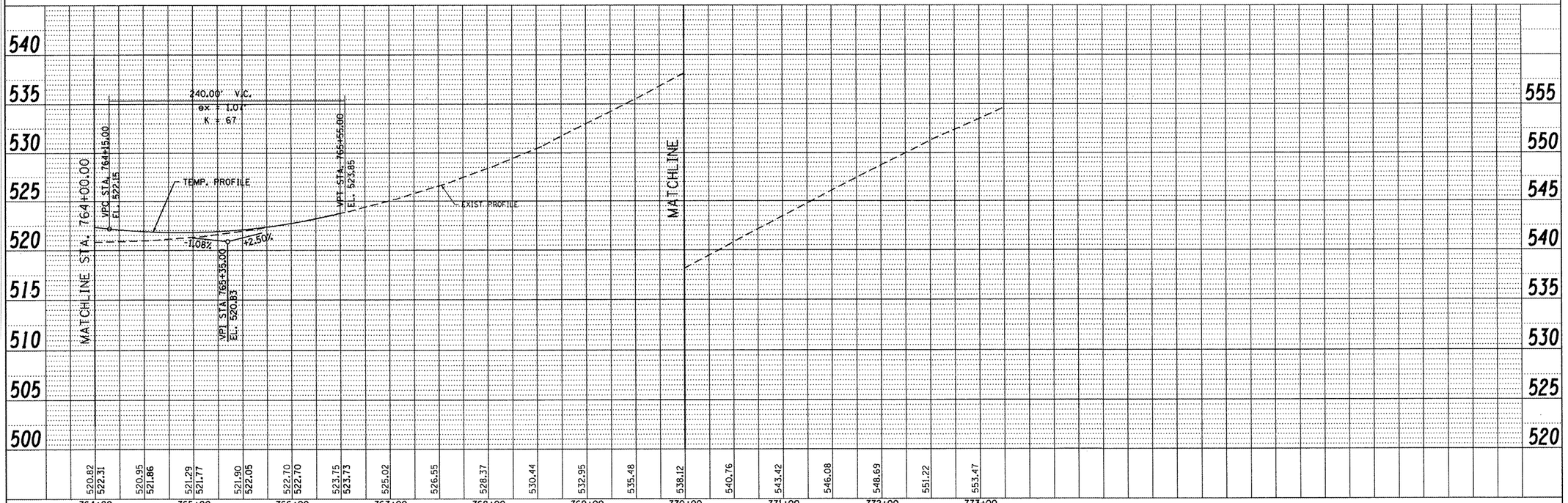
LEGEND

- TEMPORARY TRAFFIC SIGNAL
- AREA OF CONSTRUCTION
- DIRECTION OF TRAFFIC
- PAVEMENT WIDENING
- TEMPORARY CONCRETE BARRIER
- IMPACT ATTENUATOR
- GEOTEXTILE RETAINING WALL
- PEDESTRIAN PUSH BUTTON

NOTES:

1. SUBGRADE PREPARATION REQUIRED FOR IMPACT ATTENUATOR AT STA. 771+00, LT. COST INCLUDED IN IMPACT ATTENUATOR, TEMPORARY (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3.
2. INSTALL SOLAR-POWERED YELLOW FLASHING BEACON ON SIGAL AHEAD SIGN FOR SOUTHBOUND IL 61.

PROP. CURVE IL61A
PI STA. = 768+27.01
Δ = 22° 28' 00" (LT)
D = 3° 08' 00"
R = 1,828.59'
T = 363.18'
L = 717.02'
E = 35.72'
e = 5.6%
T.R. = 40'
S.E. RUN = 149'
BEGIN SE TRANSITION AT STA. 763+25
BEGIN FULL SE AT STA. 765+14
END FULL SE AT STA. 771+31
END SE TRANSITION AT STA. 773+20
P.C. STA. = 764+63.83
P.T. STA. = 771+80.85



USER NAME = gjameson	DESIGNED -	REVISED -	
FILE NAME = D468482-stage 2 sheet	CHECKED -	REVISED -	
PLOT DATE = 12/21/2018	DRAWN -	REVISED -	
PLOT TIME = 10:28:20 AM	CHECKED -	REVISED -	

WHKS & CO. ENGINEERING
7018 KINGSMILL CT.,
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(217) 483-9457
DESIGN FIRM #184001036

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLANS – STAGE II
IL 61 OVER LAMOINE RIVER

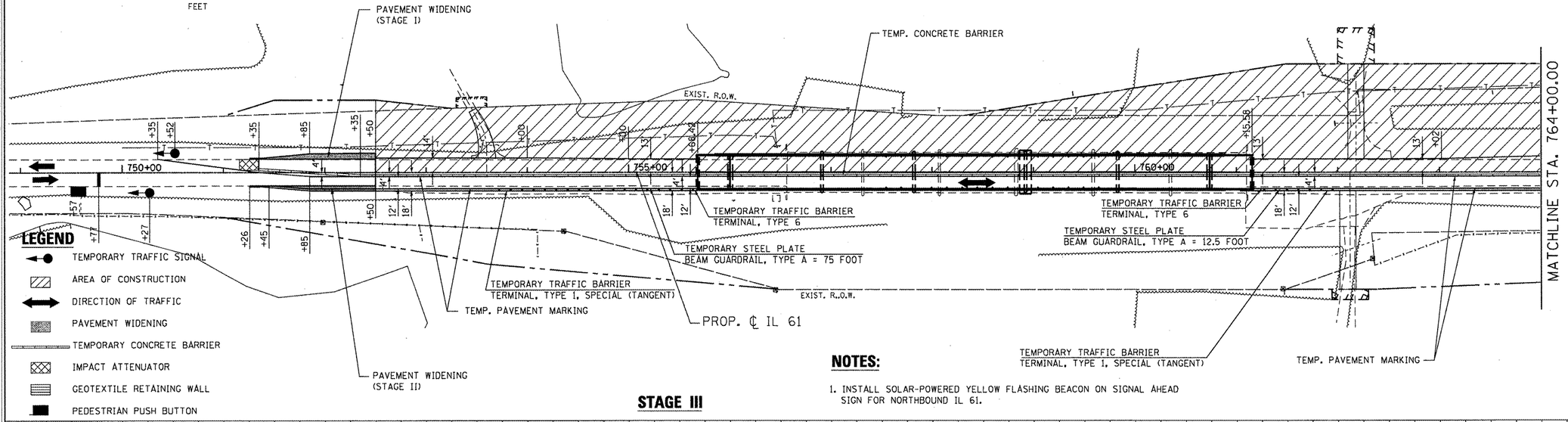
SCALE: 1" = 50' | SHEET NO. 2 OF 2 SHEETS | STA. 764+00.00 TO STA. 773+25.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	McDONOUGH	117	36
		CONTRACT NO. 68482		
	ILLINOIS FED. AID PROJECT			

GRAPHIC SCALE

METERS: 20 0 20 40 60 80 100

FEET: 50 0 50 100 150 200 250



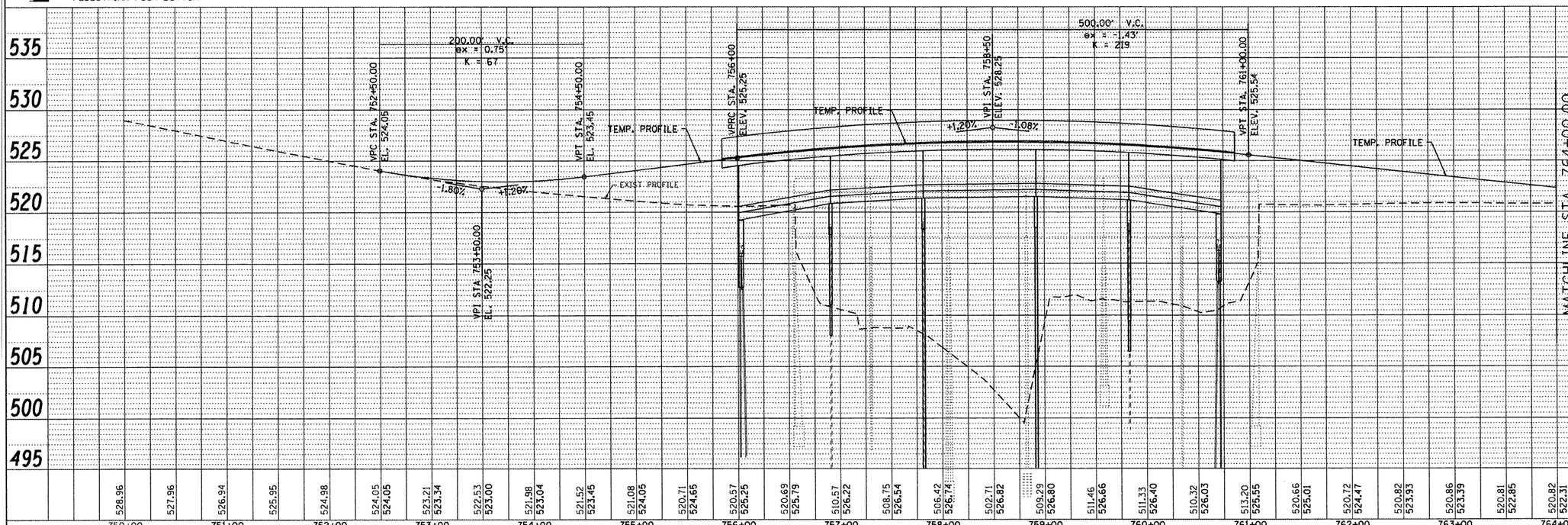
LEGEND

- TEMPORARY TRAFFIC SIGNAL
- AREA OF CONSTRUCTION
- DIRECTION OF TRAFFIC
- PAVEMENT WIDENING
- TEMPORARY CONCRETE BARRIER
- IMPACT ATTENUATOR
- GEOTEXTILE RETAINING WALL
- PEDESTRIAN PUSH BUTTON

STAGE III

NOTES:

1. INSTALL SOLAR-POWERED YELLOW FLASHING BEACON ON SIGNAL AHEAD SIGN FOR NORTHBOUND IL 61.



750+00	751+00	752+00	753+00	754+00	755+00	756+00	757+00	758+00	759+00	760+00	761+00	762+00	763+00	764+00
528.96	527.96	526.94	525.95	524.98	524.05 / 524.05	523.21 / 523.34	522.53 / 523.00	521.98 / 523.04	521.52 / 523.45	521.08 / 524.05	520.71 / 524.65	520.57 / 525.25	520.69 / 525.79	510.57 / 526.22	508.75 / 526.54	506.42 / 526.74	502.71 / 526.82	509.29 / 526.80	511.46 / 526.66	511.33 / 526.40	510.32 / 526.03	513.20 / 525.55	520.66 / 525.01	520.72 / 524.47	520.82 / 523.93	520.86 / 523.39	520.81 / 522.85	520.82 / 522.31

USER NAME = gjameson	DESIGNED -	REVISED -	
FILE NAME = D468482-stage 3 sheet.dgn	CHECKED -	REVISED -	
PLOT DATE = 12/21/2010	DRAWN -	REVISED -	
PLOT TIME = 10:28:25 AM	CHECKED -	REVISED -	

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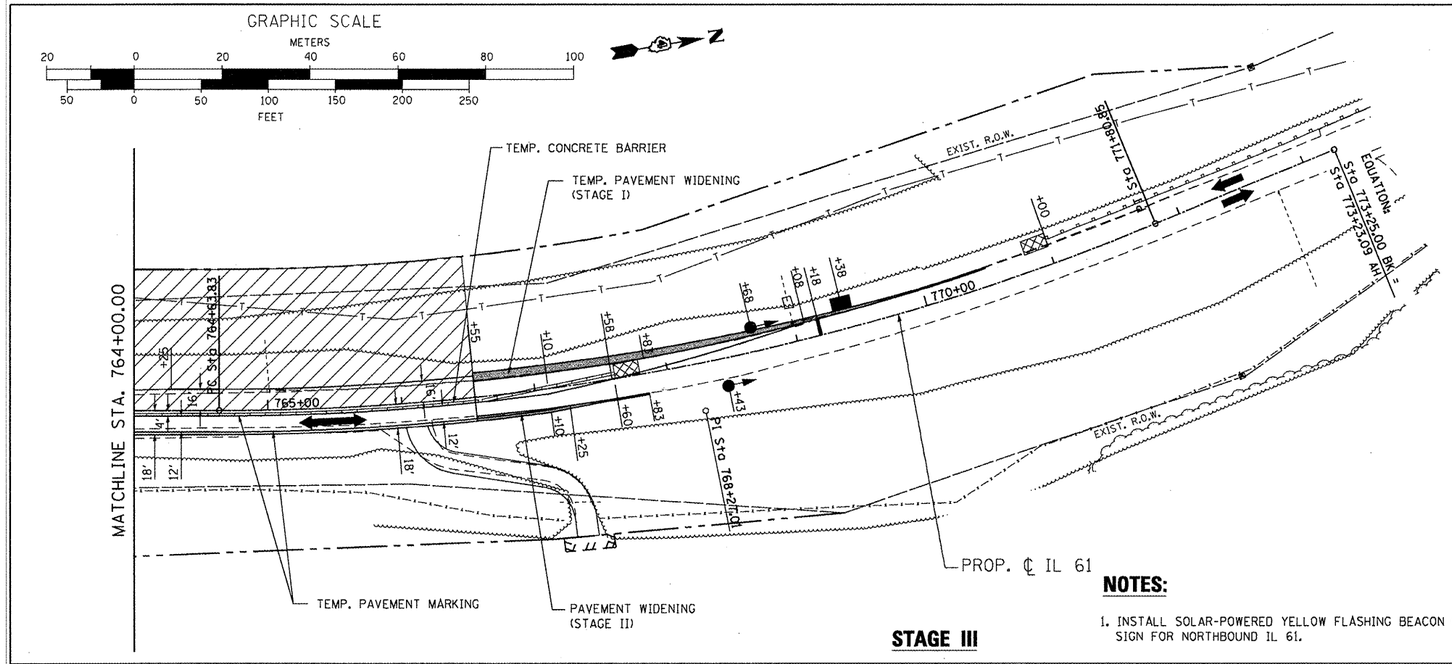
(217) 483-9457
DESIGN FIRM #184001036

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLANS – STAGE III
IL 61 OVER LAMOINE RIVER

SCALE: 1" = 50' | SHEET NO. 1 OF 2 SHEETS | STA. 751+00.00 TO STA. 764+00.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	McDONOUGH	117	37
		CONTRACT NO. 68482		
		ILLINOIS FED. AID PROJECT		



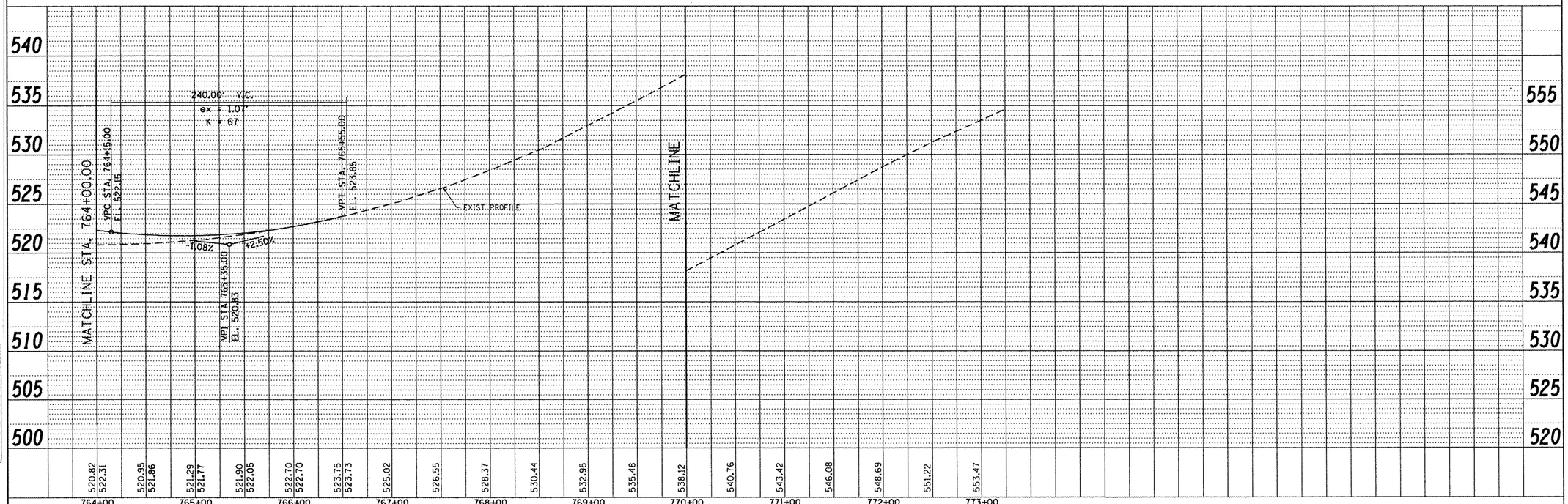
LEGEND

◄●	TEMPORARY TRAFFIC SIGNAL
▨	AREA OF CONSTRUCTION
⟷	DIRECTION OF TRAFFIC
▒	PAVEMENT WIDENING
═	TEMPORARY CONCRETE BARRIER
☒	IMPACT ATTENUATOR
▤	GEOTEXTILE RETAINING WALL
■	PEDESTRIAN PUSH BUTTON

PROP. CURVE IL61A
PI STA. = 768+27.01
Δ = 22° 28′ 00″ (LT)
D = 3° 08′ 00″
R = 1,828.59′
T = 363.18′
L = 717.02′
E = 35.72′
e = 5.6%
T.R. = 40′
S.E. RUN = 149′
BEGIN SE TRANSITION AT STA. 763+25
BEGIN FULL SE AT STA. 765+14
END FULL SE AT STA. 771+31
END SE TRANSITION AT STA. 773+20
P.C. STA. = 764+63.83
P.T. STA. = 771+80.85

NOTES:

1. INSTALL SOLAR-POWERED YELLOW FLASHING BEACON ON SIGNAL AHEAD SIGN FOR NORTHBOUND IL 61.



USER NAME = gjameson	DESIGNED -	REVISED -
FILE NAME = D468482-stage 3 sheet.dgn	CHECKED -	REVISED -
PLOT DATE = 12/21/2010	DRAWN -	REVISED -
PLOT TIME = 10:28:29 AM	CHECKED -	REVISED -

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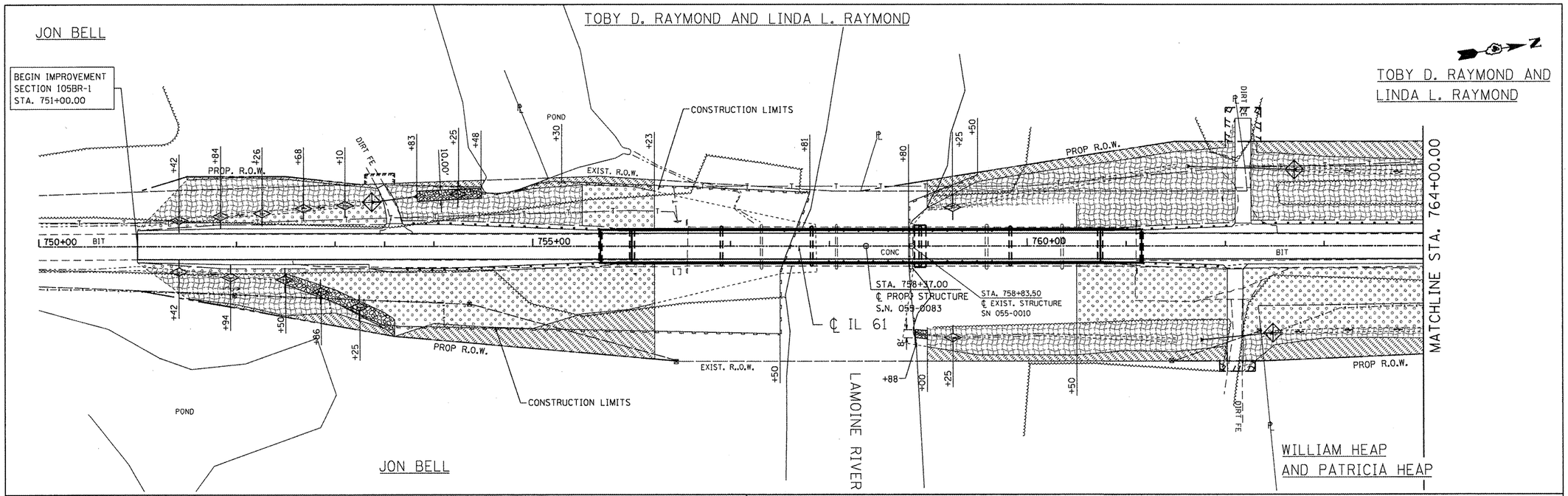
ENGINEERING
7018 KINGSMILL CT.,
SPRINGFIELD, IL
(217) 483-9457
DESIGN FIRM #184001036

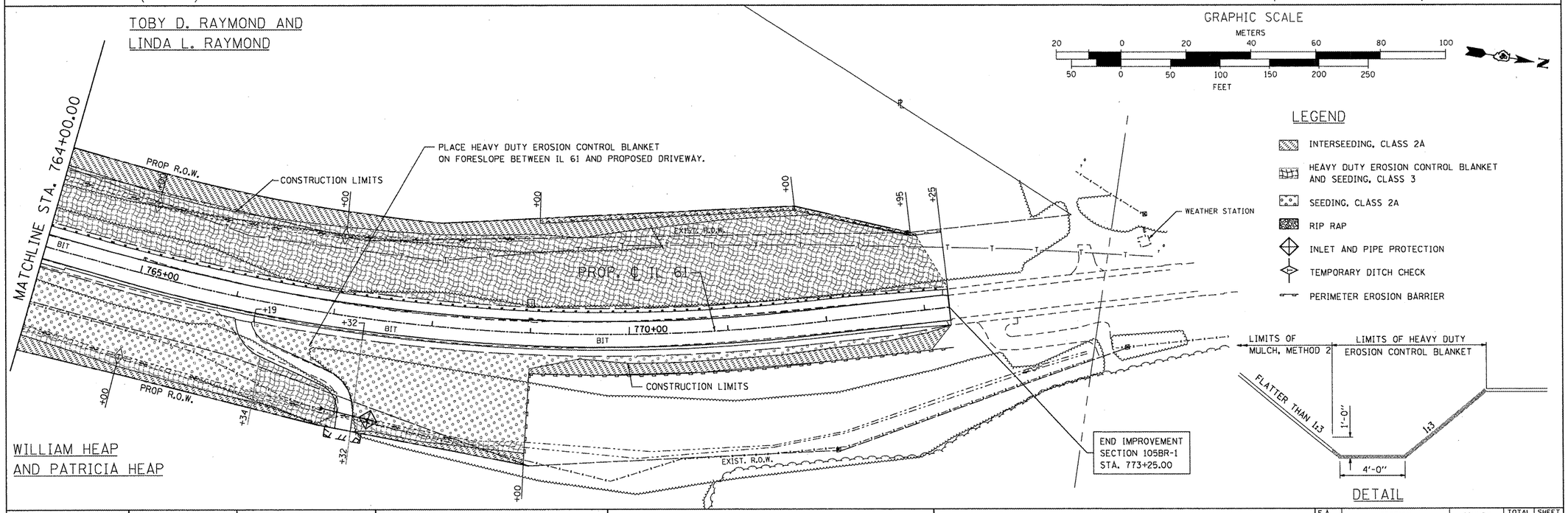
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLANS – STAGE III
IL 61 OVER LAMOINE RIVER

SCALE: 1″ = 50′ | SHEET NO. 2 OF 2 SHEETS | STA. 764+00.00 TO STA. 773+25.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	McDONOUGH	117	38
		CONTRACT NO. 68482		
	ILLINOIS FED. AID PROJECT			





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FILE NAME = D468482-sht-erosion-control	CHECKED -	REVISED -
PLOT DATE = 12/21/2010	DRAWN -	REVISED -
PLOT TIME = 10:28:41 AM	CHECKED -	REVISED -

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SPRINGFIELD, IL
(217) 483-9457
DESIGN FIRM #184001036

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EROSION CONTROL PLANS

SCALE: 1" = 50' | SHEET NO. 1 OF 1 SHEETS | STA. 751+00.00 TO STA. 773+25.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	McDONOUGH	117	39
		CONTRACT NO. 68482		
FED. ROAD DIST. NO. 4	ILLINOIS	FED. AID PROJECT		

LEGEND

PROPOSED TEMPORARY EASEMENT LINE

PROPOSED RIGHT OF WAY LINE

EXISTING RIGHT OF WAY LINE

NORTHWEST CORNER OF THE NORTHEAST QUARTER OF SECTION 18

WEST LINE OF THE SOUTHEAST QUARTER SECTION 18

N 00° 52' 38" E 5,425.40' CORNER TO CORNER

SOUTHWEST CORNER OF THE SOUTHEAST QUARTER OF SECTION 18

S 87° 54' 23" E 2,684.14' CORNER TO CORNER

4AJA001

JON BELL AS TRUSTEE OF THE JON BELL REVOCABLE TRUST

LAMOINE RIVER

4AJA002

TOBY D. RAYMOND & LINDA L. RAYMOND

PROPOSED ROW LINE

751+50.00 70.00'

751+00.00 54.62'

752+50.00 70.00'

753+25.00 62.05'

753+30.00 62.22'

753+30.00 72.22'

753+60.00 73.20'

753+60.00 63.20'

PROPOSED TEMPORARY EASEMENT LINE

EXISTING ROW LINE

758+31.56 55.00'

STA. 748+55.30

755+00

760+00

765+00

762+00.00 140.00'

762+00.00 105.00'

761+50.00 105.00'

762+36.00 140.00'

762+36.00 105.00'

764+63.83 105.00'

PROPOSED TEMPORARY EASEMENT LINE

PROPOSED ROW LINE

768+00.00 105.00'

771+80.85 120.00'

772+94.37 80.00'

EXISTING ROW LINE

PT

ST

PROPOSED ℄ FA 542 (IL 61)

170+00

PC

CS

SC

TS

EXISTING ℄ FA 542 (IL 61)

751+00.00 44.07'

753+60.00 90.00'

EXISTING ROW LINE

PROPOSED ROW LINE

756+46.73 115.00'

761+46.73 115.00'

761+94.00 115.00'

761+94.00 125.00'

762+37.93 115.00'

762+30.00 115.00'

762+30.00 125.00'

PROPOSED TEMPORARY EASEMENT LINE

PROPOSED ROW LINE

767+00.00 112.00'

767+07.00 112.31'

767+07.00 122.31'

767+42.00 114.26'

767+42.00 124.26'

769+03.34 132.65'

EXISTING ROW LINE

PROPOSED TEMPORARY EASEMENT LINE

4AJA003

WILLIAM HEAP AND PATRICIA HEAP AS CO-TRUSTEES OF THE WILLIAM HEAP REVOCABLE TRUST & THE PATRICIA HEAP REVOCABLE TRUST

SOUTH LINE OF THE SOUTHEAST QUARTER SECTION 18

4AJA001

JON BELL AS TRUSTEE OF THE JON BELL REVOCABLE TRUST

SOUTHEAST CORNER OF SECTION 18

EXIST. CURVE DATA

PI STA. = 768+22.73
Δ = 22° 22' 40" (LT)
Ts = 486.74'
Δc = 8° 31' 06" (LT)
Dc = 3° 45' 26"
Lc = 226.72'
θs = 6° 55' 47" (LT)
Ls = 368.89'
Rs = 1,525.00'
T.S. STA. = 763+40.27
S.C. STA. = 767+09.16
C.S. STA. = 769+35.88
S.T. STA. = 773+04.77

PROP. CURVE DATA

PI STA. = 768+27.01
Δ = 22° 28' 00" (LT)
D = 03° 08' 00"
R = 1,828.59'
T = 363.18'
L = 717.02'
E = 35.72'
P.C. STA. = 764+63.83
P.T. STA. = 771+80.85

BEARINGS SHOWN BASED ON STATE PLANE COORDINATE SYSTEM, WEST ZONE. NAD 83 (2007 ADJUSTMENT)

COORDINATES AND DISTANCES SHOWN ARE GROUND COORDINATES. ILLINOIS STATE PLANE WEST ZONE COORDINATES (GRID) CAN BE DETERMINED BY MULTIPLYING GROUND COORDINATES BY A GRID FACTOR OF 0.99996682.

SECTION CORNER COORDINATE INFORMATION		
SECTION CORNER	NORTH	EAST
SE CORNER SECTION 18	1334226.427	2095411.397
SW CORNER, SE 1/4, SECTION 18	1334324.484	2092729.044
NW CORNER, NE 1/4, SECTION 18	1339749.248	2092812.099

McDONOUGH COUNTY
SECTION 18 T4N R4W, 4TH PM

N

80' 0 80' 160'

SCALE: 1" = 80'

FILE NAME	USER NAME = gjameson	DESIGNED -	REVISED -
I:\jobs\idot_d-4\7026.3\cadd\cadd sheets\D468482-SHT-ROW PLAN.dgn		DRAWN - JWD	REVISED -
	PLOT SCALE = 160.0000 ' / IN.	CHECKED - GLW	REVISED -
	PLOT DATE = 12/21/2010	DATE - 05/07/2010	REVISED -

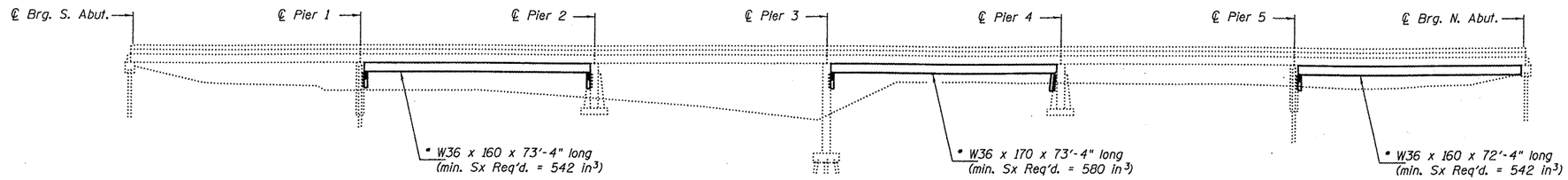
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

RIGHT OF WAY PLANS

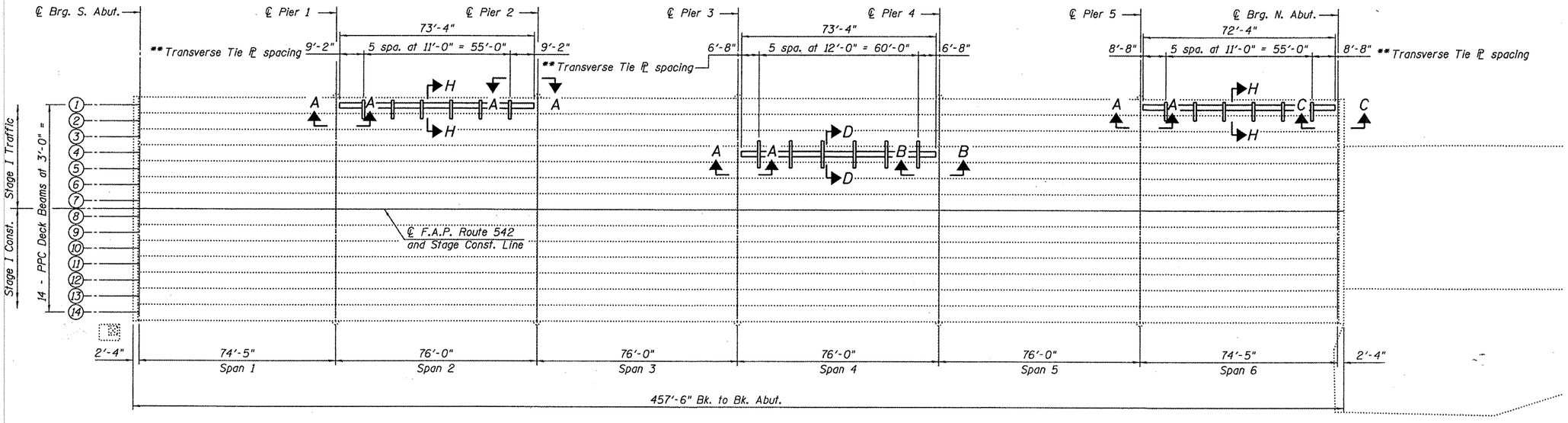
SCALE: 1"=80' | PROJECT | SHEET NO. 1 OF 1 SHEETS | JOB NO. R-94-008-09 | STA. 751+00 TO STA. 772+94.37

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	McDONOUGH	117	40
		CONTRACT NO. 68482		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

LIN ENGINEERING, LTD.



ELEVATION



NOTES

The structural steel for the temporary steel beams shall conform to AASHTO Classification M-270 Gr. 50, all other structural steel shall conform to AASHTO Classification M-270 Gr. 36, unless otherwise noted.

Plan dimensions and details relative to existing plans are subject to routine variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished based upon the unit price bid for the work.

See Section 584 of the Standard Specifications for Epoxy Grouting of Threaded Rods: Min. embedment 9". The cost of epoxy grouting threaded rods shall be included with Furnishing and Erecting Structural Steel.

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

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

Installation of the temporary support beam at the N. Abutment may require additional excavation or added measures to properly install the temporary support beams. Contractor shall field measure and determine procedure for placing the beam. The procedure shall be submitted to the Department for approval. Cost included with Furnishing and Erecting Structural Steel.

Any dewatering required for the installation of the support columns shall be included in the cost for Furnishing and Erecting Structural Steel.

Contractor is responsible for the stability of the temporary support beams during transport, installation, removal and salvage. Contractor shall incorporate temporary bracing as appropriate to provide stability. Any temporary measures used shall remain in place until the temporary beam is fully installed.

PLAN

LICENSED STRUCTURAL ENGINEER
CORY W. CHAMBERLAIN
081-005882
STATE OF ILLINOIS
12-21-10
Exp 11-30-12

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Furnishing and Erecting Structural Steel	Pound	39,260

* Contractor is to verify beam length prior to ordering material. Other sections meeting the section modulus requirements shown may be allowed subject to approval by the Bureau of Bridges and Structures. Maximum Beam Depth = 36". No additional payment will be allowed if Contractor chooses a heavier steel section than the one specified in the plans.

** Transverse tie ℄'s (5 per span min.). Place additional shims at midpoints between tie ℄'s. Securely weld shims to top flange of support beam. Minimum shim size is 6" x flange width. Spacing may be adjusted to miss adjacent transverse tie ℄'s.

APPROVED
For Structural Adequacy Only
Engineer of Bridges & Structures

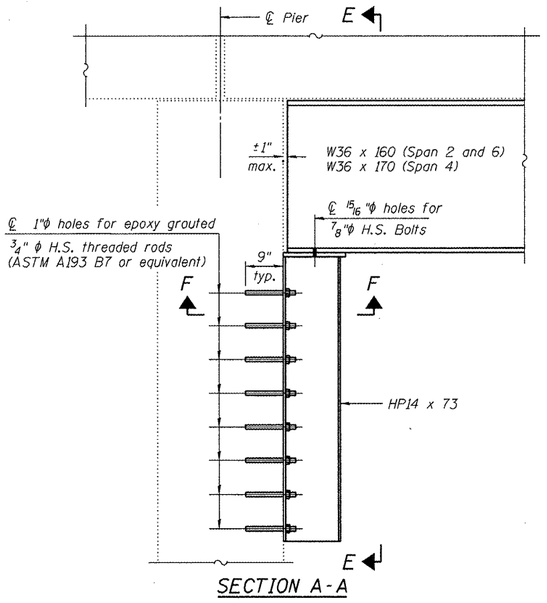
USER NAME = dhaberling	DESIGNED - BRD/FLL	REVISED -	
FILE NAME = 0650083-68482.dgn	CHECKED - SDS/JHP	REVISED -	
PLOT DATE = 12/21/2010	DRAWN - DLH	REVISED -	
PLOT TIME = 10:47:20 AM	CHECKED - CWC/SDS	REVISED -	

WHKS & CO. ENGINEERING
7018 KINGSMILL CT., SPRINGFIELD, IL
(217) 483-9457
DESIGN FIRM #184001036

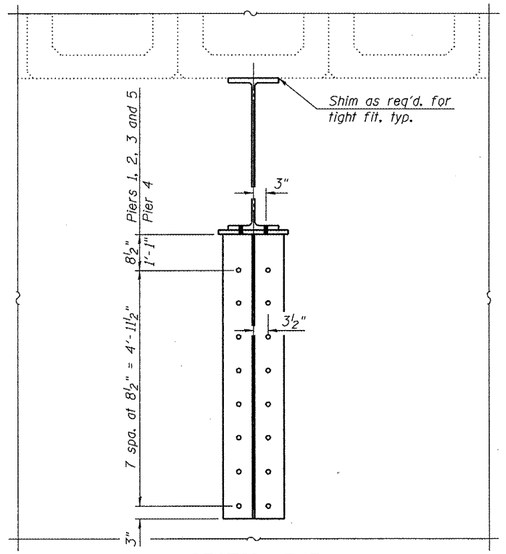
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY BEAM SUPPORT DETAILS FOR PRE STAGE I TRAFFIC
S.N. 055-0010
SHEET NO. 1 OF 2 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	MCDONOUGH	117	40A
		CONTRACT NO. 68482		
		ILLINOIS FED. AID PROJECT		



SECTION A-A



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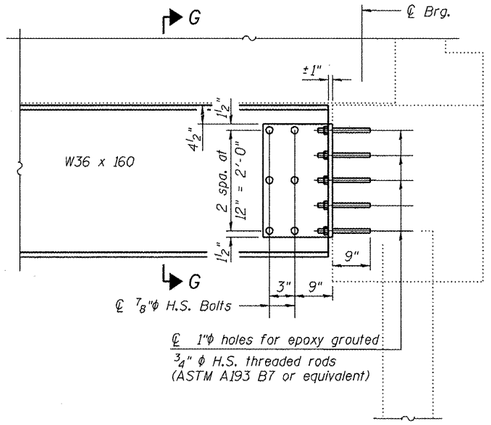

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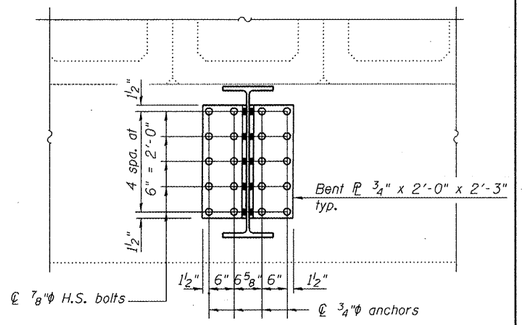

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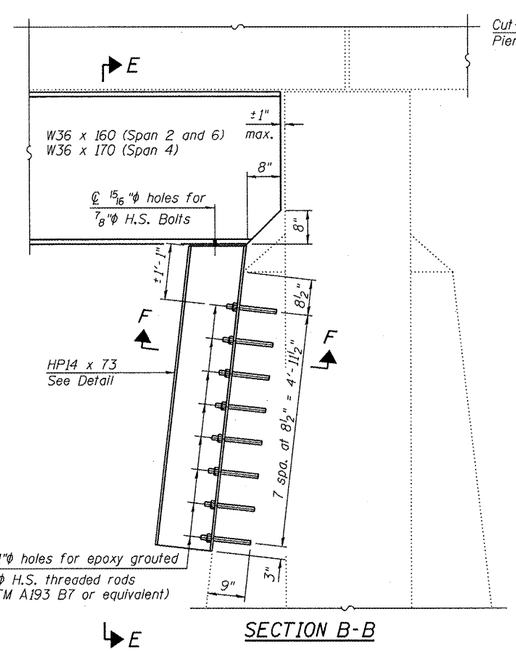

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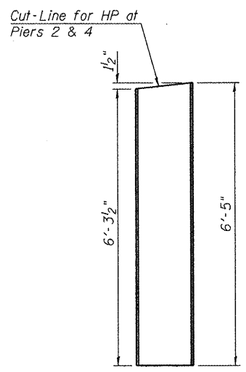
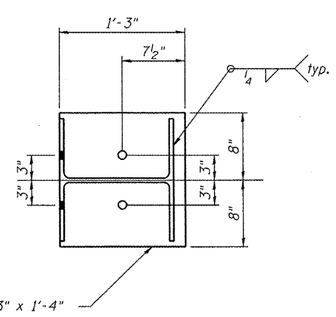


HP14 x 73 DETAIL
(1 Req'd.)



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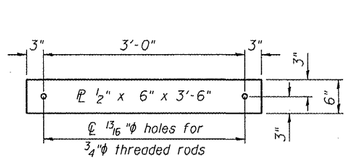
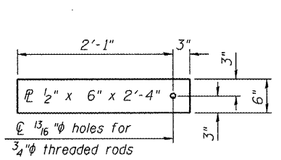


TRANSVERSE TIE ℄
(6 req'd.)



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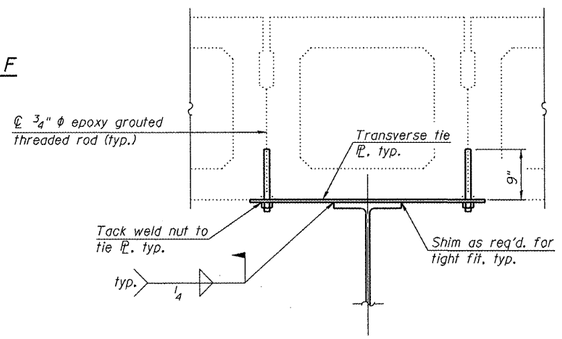

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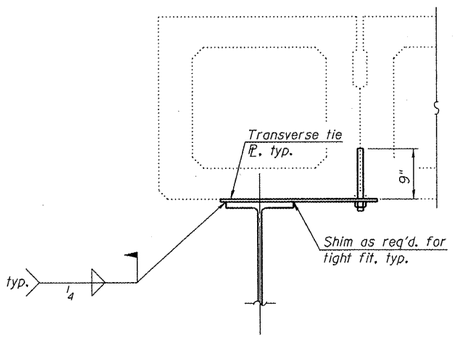

SECTION H-H

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PLOT DATE = 12/21/2010	DRAWN - DLH	REVISED -	
PLOT TIME = 10:49:15 AM	CHECKED - CWC/SDS	REVISED -	

WHKS & CO. ENGINEERING
7018 KINGSMILL CT., SPRINGFIELD, IL
(217) 483-9457
DESIGN FIRM #184001036

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY BEAM SUPPORT DETAILS FOR PRE STAGE I TRAFFIC
S.N. 055-0010

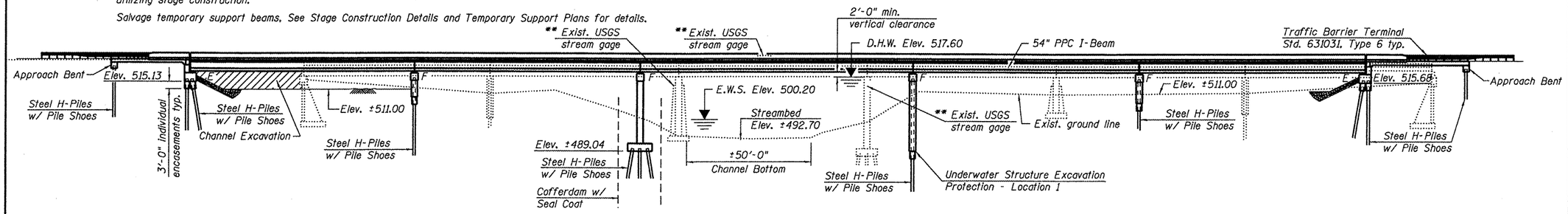
SHEET NO. 2 OF 2 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	MCDONOUGH	117	40B
		CONTRACT NO. 68482		
		ILLINOIS FED. AID PROJECT		

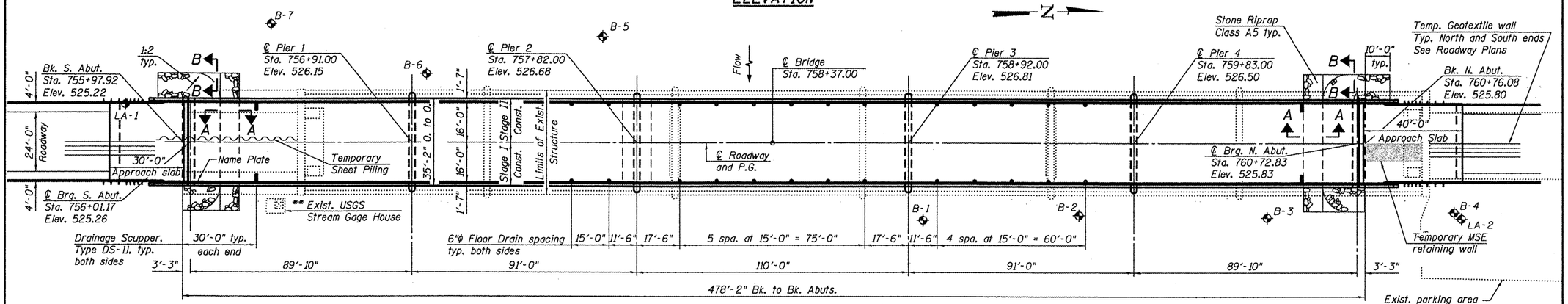
Bench Mark: WR3 Chiseled "□" top of northeast wingwall S.N. 055-0010. Elevation 520.608

Existing Structure: S.N. 055-0010 built in 1931 as S.B.I. Route 99 Section 105C. In 1977 as F.A. Route 36, Section 105BR at Station 758+83.5. The original 3-span truss superstructure was removed and replaced with two 3-span units of 33" precast, prestressed concrete deck beams with bituminous wearing surface. The existing abutments and solid wall piers were modified and widened and two additional solid wall pile bent piers and one solid wall pier on pile supported footing were added. 457'-6" back-to-back abutments, 42'-0" out-to-out deck. Structure to be removed and replaced utilizing stage construction.

Salvage temporary support beams, See Stage Construction Details and Temporary Support Plans for details.



ELEVATION



PLAN

** Exist. USGS Stream Gage House and instrumentation shall be removed and relocated. See Special Provisions.

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	S. Abut.	Pier 1	Pier 2	Pier 3	Pier 4	N. Abut.
	515.13	476.7	476.7	476.7	505.00	515.68

WATERWAY INFORMATION

Drainage Area = 655 Sq. Mi. Prop. Low Grade Elev. 523.2 ℄ Sta. - 764+59.25
Exist. Low Grade Elev. 520.80 ℄ Sta. - 756+04.75

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	21,200	3100	3123	515.4	1.1	1.0	516.5	516.4
Design	50	34,600	4060	4097	517.6	2.8	2.6	520.4	520.2
Base	100	40,800	4127	4505	518.5	3.3	3.3	521.8	521.8
Overtop (Exist.)	55	36,100	4127		517.9	2.9		520.8	
Overtop (Prop.)	200	47,100		4870	519.3		3.9		523.2

LICENSED STRUCTURAL ENGINEER
CORY W. CHAMBERLAIN
081-005882
STATE OF ILLINOIS
12-21-10
Exp 11-30-12

LOADING HL-93

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

DESIGN SPECIFICATIONS

2007 AASHTO LRFD Bridge Design Specifications with 2008, 2009 Interims

DESIGN STRESSES

FIELD UNITS

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

PRECAST PRESTRESSED UNITS (Span 3)

f'c = 7,000 psi
f'ci = 6,000 psi
f pu = 270,000 psi (1/2" ϕ low lax strands)
f pbt = 201,960 psi (1/2" ϕ low lax strands)

PRECAST PRESTRESSED UNITS (Spans 1,2,4,5)

f'c = 6,000 psi
f'ci = 5,000 psi
f pu = 270,000 psi (1/2" ϕ low lax strands)
f pbt = 201,960 psi (1/2" ϕ low lax strands)

SEISMIC DATA

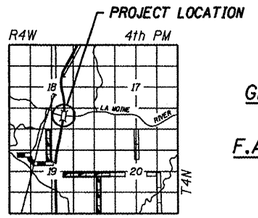
Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.113g
Design Spectral Acceleration at 0.2 sec. (S_{DS}) = 0.173g
Soil Site Class = D

STATION 758+37.00
BUILT 20 BY
STATE OF ILLINOIS
F.A.P. RT. 542 SEC. 105BR-1
LOADING HL-93
STRUCTURE NO. 055-0083

NAME PLATE

See Std. 515001

APPROVED
For Structural Adequacy Only
Engineer of Bridges & Structures



LOCATION SKETCH

GENERAL PLAN AND ELEVATION
IL 61 OVER LAMOINE RIVER
F.A.P. ROUTE 542 - SEC. 105BR-1
MCDONOUGH COUNTY
STATION 758+37.00
STRUCTURE NO. 055-0083

USER NAME = dheberling	DESIGNED - BRD/FLL	REVISED -	WHKS & CO. ENGINEERING	7018 KINGSMILL CT., SPRINGFIELD, IL (217) 483-9457 DESIGN FIRM #184001036
FILE NAME = 055s083-68482.dgn	CHECKED - SDS/JHP	REVISED -		
PLOT DATE = 12/21/2010	DRAWN - DLH	REVISED -		
PLOT TIME = 10:14:58 AM	CHECKED - CWC/SDS	REVISED -		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION
S.N. 055-0083
SHEET NO. 1 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	MCDONOUGH	117	41
		CONTRACT NO. 68482		
		ILLINOIS FED. AID PROJECT		

GENERAL NOTES

Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.

Reinforcement bars designated (E) shall be epoxy coated.

Concrete Sealer shall be applied to the designated areas of the abutments.

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

In lieu of the hammer selection criteria and use of the FHWA Modified Gates formula specified in Section 512 of the Standard Specifications, the Contractor shall conduct a wave equation analysis to establish the driving criteria at all pile foundations which specify a nominal required bearing above 600 kips. The analysis and calculations shall be submitted to the Engineer for approval.

Seal coat thickness design is based on the Estimated Water Surface Elevation (EWSE). Cofferdam design details and proposed changes in seal coat thickness shall be submitted to the Engineer for approval with the cofferdam design.

All test piles shall be instrumented for Dynamic Pile Monitoring. The time between initial driving and re-tapping shall be a minimum of 10 days. See Special Provisions

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

Slip forming of concrete parapet is not allowed.

Current ratings on file for Existing Structure

Inventory: HS6.0
Operating: HS10.0
Live Load Restrictions: Yes (15 tons)

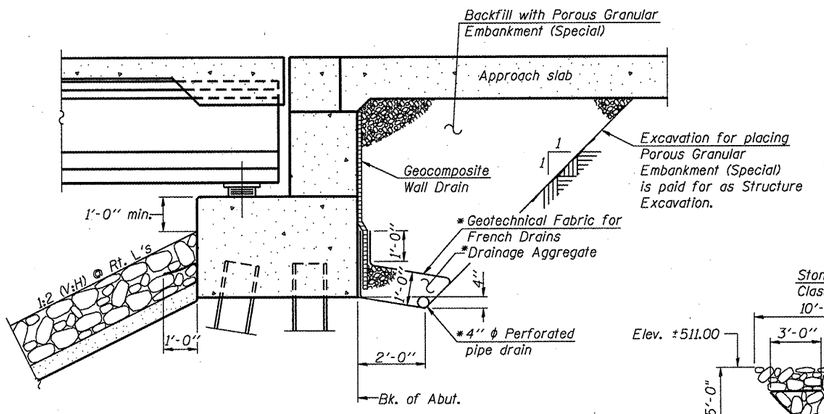
Inventory and Operating Ratings and Live Load Restrictions are provided for information only. Inventory and Operating Ratings are based on HS loading and configuration. Live Load Restrictions are based on Illinois legal loads and configurations. The Ratings and Live Load Restrictions are not necessarily representative of capacities to support the Contractor's equipment.

The Contractor is advised that the existing structure contains members that are in a deteriorated condition with reduced load carrying capacity. It is the Contractor's responsibility to account for the condition of the existing structure when developing construction procedures for the complete or partial removal, or replacement of the structure. An Existing Structure Information Package is available upon request as noted in the Special Provisions.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Stone Riprap, Class A5	Sq. Yd.		356	356
Filter Fabric	Sq. Yd.		356	356
Removal of Existing Structures	Each			1
Structure Excavation	Cu. Yd.		633	633
Cofferdam Excavation	Cu. Yd.		352	352
Cofferdam (Location - 1)	Each		1	1
Floor Drains	Each	26		26
Concrete Structures	Cu. Yd.		489.1	489.1
Concrete Superstructure	Cu. Yd.	759.0		759.0
Bridge Deck Grooving	Sq. Yd.	1,812		1,812
Seal Coat Concrete	Cu. Yd.		61.5	61.5
Concrete Encasement	Cu. Yd.		22.5	22.5
Protective Coat	Sq. Yd.	2,359		2,359
Furnishing And Erecting Precast Prestressed Concrete I-Beams, 54"	Foot	2,814		2,814
Reinforcement Bars, Epoxy Coated	Pound	180,920	47,440	228,360
Bar Splicers	Each	1,602	291	1,893
Furnishing Steel Piles HP 12x53	Foot		1,301	1,301
Furnishing Steel Piles HP 14x73	Foot		1,305	1,305
Furnishing Steel Piles HP 14x102	Foot		2,112	2,112
Driving Piles	Foot		4,718	4,718
Test Pile Steel HP 12x53	Each		1	1
Test Pile Steel HP 14x73	Each		1	1
Test Pile Steel HP 14x102	Each		4	4
Pile Shoes	Each		76	76
Name Plates	Each	1		1
Preformed Joint Strip Seal	Foot	68		68
Elastomeric Bearing Assembly, Type II	Each	12		12
Anchor Bolts, 1"	Each	24		24
Concrete Sealer	Sq. Ft.		798	798
Geocomposite Wall Drain	Sq. Yd.		58	58
Temporary Mechanically Stabilized Earth Retaining Wall	Sq. Ft.		278	278
Porous Granular Embankment, Special	Cu. Yd.		130	130
Underwater Structure Excavation Protection - Location 1	Each		1	1
Mechanical Splicers	Each		310	310
Asbestos Bearing Pad Removal	Each		168	168
Drainage Scuppers, DS-11	Each	4		4
Temporary Sheet Piling	Sq. Ft.		1,904	1,904
Pipe Underdrains for Structures 4"	Foot		148	148

INDEX OF SHEETS

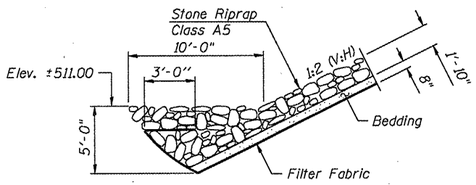


*Included in the cost of Pipe Underdrains for Structures.

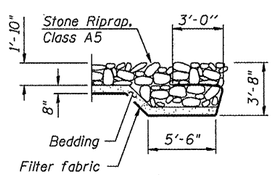
SECTION THRU PILE SUPPORTED STUB ABUTMENT

(Horiz. dim. @ Rt. L's)

Note:
All drainage system components shall extend parallel to the abutment back wall until they intersect the wingwalls or 2'-0" from the end of the wingwalls when the wings are parallel to the abutment. The pipe shall extend under the wingwall, if necessary, until intersecting the side slopes. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101).



SECTION A-A



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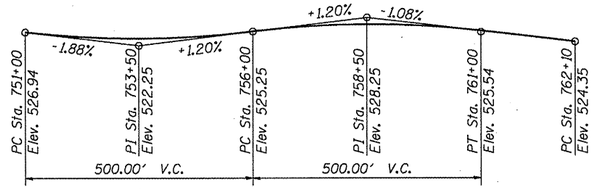

PROFILE GRADE

(along ℄ IL 61)

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PLOT DATE = 1/31/2011	DRAWN - DLH	REVISED -	
PLOT TIME = 3:33:11 PM	CHECKED - CWC/SDS	REVISED -	

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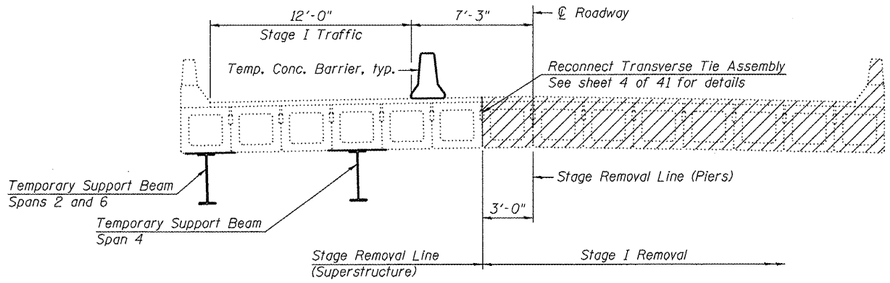
7018 KINGSMILL CT., SPRINGFIELD, IL
(217) 483-9457
DESIGN FIRM #184001036

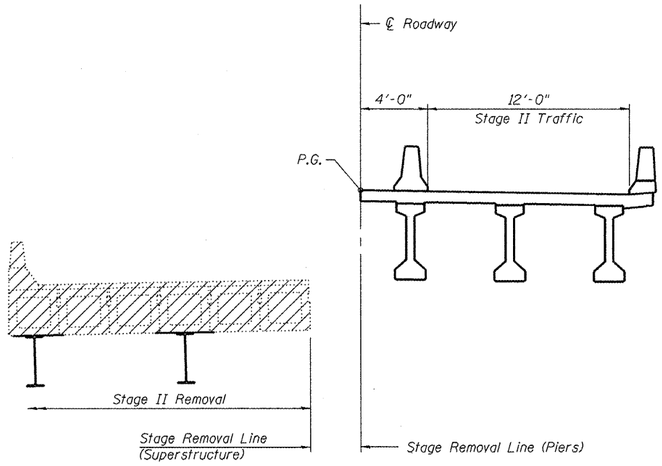
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL DATA
S.N. 055-0083
SHEET NO. 2 OF 41 SHEETS

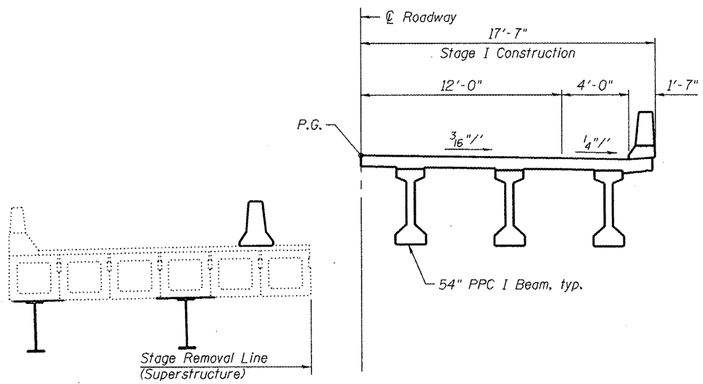
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	MCDONOUGH	117	42
		CONTRACT NO. 68482		
		ILLINOIS FED. AID PROJECT		



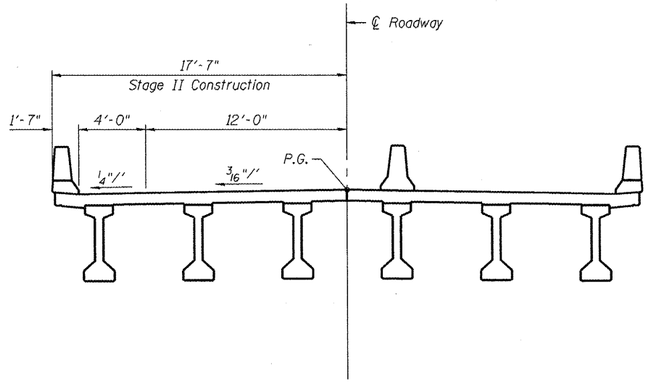
STAGE I REMOVAL



STAGE II REMOVAL



STAGE I CONSTRUCTION



STAGE II CONSTRUCTION

Notes:

All Cross Sections are looking North.

Hatched area indicates Removal of Existing Structures.

See sheet 5 of 41 for Temporary Concrete Barrier details. See Roadway Plans for quantity.

Existing abutments shall not be removed in stages. Any necessary removal of the existing abutments shall be performed after Stage I construction is complete and traffic is shifted to Stage II traffic lane.

Temporary Support Beams shall be in place prior to shifting traffic or performing any removal of the existing structure. See Temporary Support Beam details in Roadway Plans.

During demolition of Stage II Construction steel beam supports to be salvaged and remain the property of the State. Contractor to deliver beams to: IDOT Bridge Maintenance Yard, 604 Camp Street, East Peoria, IL 61611. IDOT personnel can provide equipment necessary to assist with unloading, coordinate with Brian Ruder (309)699-3822. Cost included with Removal of Existing Structures.

USER NAME = dheberling	DESIGNED - BRD/FLL	REVISED -	
FILE NAME = 8550083-68482.dgn	CHECKED - SDS/JHP	REVISED -	
PLOT DATE = 12/21/2010	DRAWN - DLH	REVISED -	
PLOT TIME = 10:30:00 AM	CHECKED - CWC/SDS	REVISED -	

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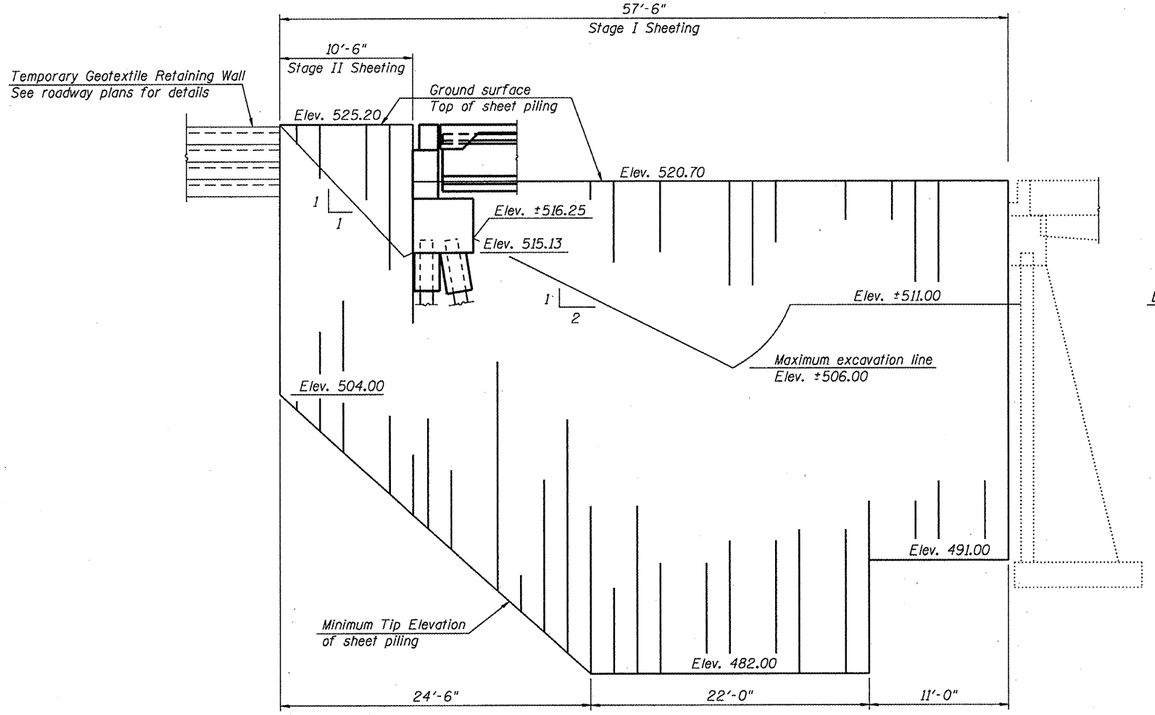
7018 KINGSMILL CT.,
SPRINGFIELD, IL
(217) 483-9457
DESIGN FIRM #184001036

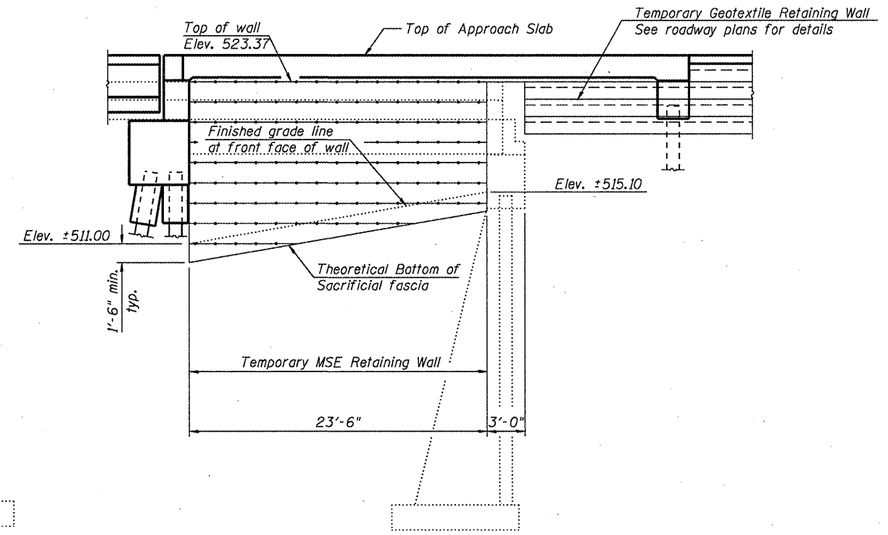
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE CONSTRUCTION DETAILS
S.N. 055-0083
SHEET NO. 3 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	MCDONOUGH	117	43
		CONTRACT NO. 68482		
	ILLINOIS FED. AID PROJECT			



TEMPORARY SHEET PILING - SOUTH ABUTMENT



TEMPORARY MSE RETAINING WALL - NORTH ABUTMENT

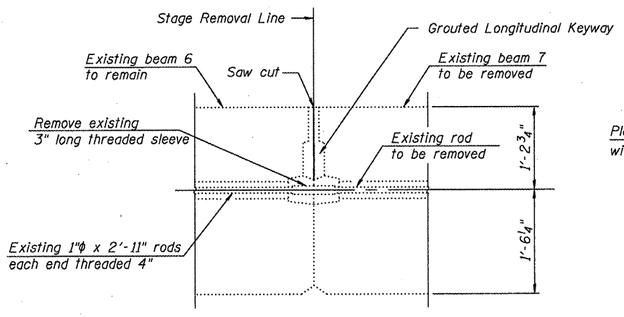
If the Contractor chooses to alter the Temporary Cantilevered Sheet Piling design requirements shown on the plans, a design submittal including plan details and calculations will be required for a review and acceptance by the Engineer.

The Contractor shall connect the first sheet to the existing abutment wall to ensure stability of sheets driven to the top of the existing footing. This connection shall be reviewed and excepted by the Engineer and included in the cost of Temporary Sheet Piling.

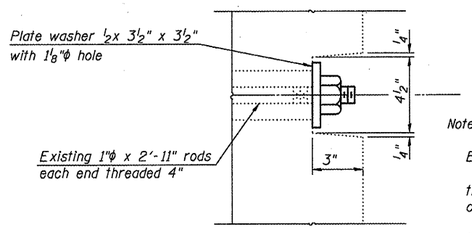
Minimum Required Section Modulus = 18.4 in^3/ft.

BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Temporary Sheet Piling	Sq. Ft.		1,904	1,904
Temporary Mechanically Stabilized Earth Retaining Wall	Sq. Ft.		278	278
Structure Excavation	Cu. Yd.		14	14



BEAM REMOVAL DETAIL
AT TRANSVERSE TIE



EXISTING BEAM 6
TRANSVERSE TIE RECONNECTION
(18 Locations)

Notes:

Contractor may salvage existing plate washers on East fascia beams or provide new plate washers.

Contractor is responsible for Lateral Stability of beams during transverse tie removal. Removal of transverse tie assembly shall be considered in SARS Analysis.

Cost of re-connecting of transverse tie assembly included with "Removal of Existing Structures".

USER NAME = flowry	DESIGNED - BRD/FLL	REVISED - 1/24/11	WHKS & CO. ENGINEERING	7018 KINGSMILL CT., SPRINGFIELD, IL (217) 483-9457 DESIGN FIRM #184001036
FILE NAME = 0550083-68482.dgn	CHECKED - SDS/JHP	REVISED -		
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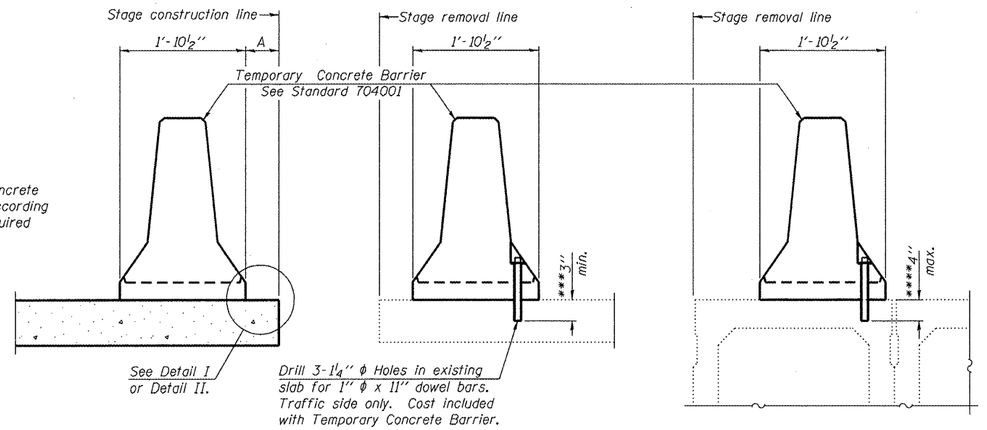
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE CONSTRUCTION DETAILS
S.N. 055-0083
SHEET NO. 4 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	MCDONOUGH	117	44
		CONTRACT NO. 68482		
	ILLINOIS FED. AID PROJECT			

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



NEW SLAB | EXISTING SLAB | EXISTING DECK BEAM

NOTES

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

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

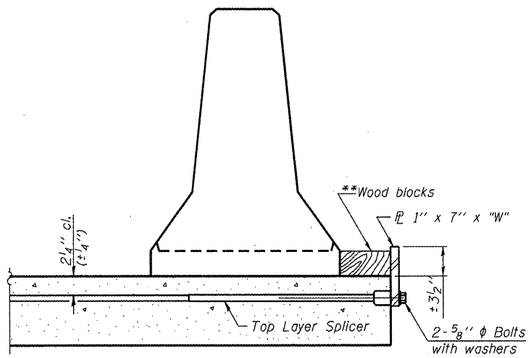
Cost of anchorage is included with Temporary Concrete Barrier.

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

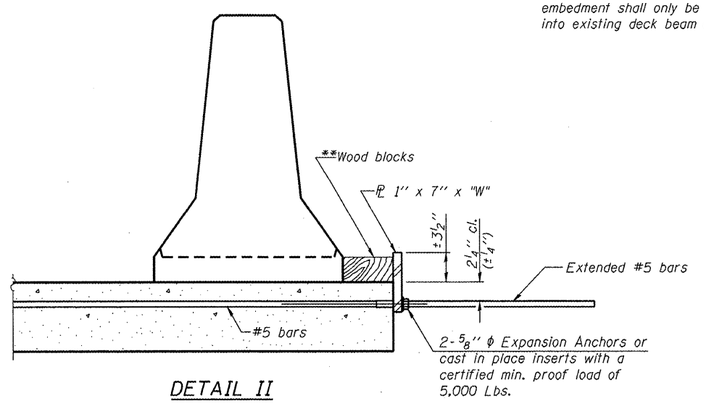
SECTIONS THRU SLAB OR DECK BEAM

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

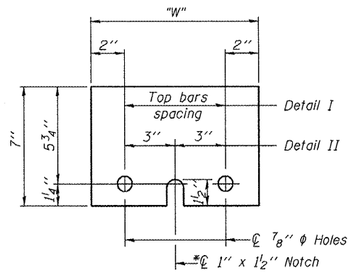
**** If existing deck beam is to remain in place after stage construction, embedment shall only be into wearing surface and not into existing deck beam concrete.



DETAIL I



DETAIL II



STEEL RETAINER ℙ 1" x 7" x "W"

* Required only with Detail II

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

"W" = Top bars spacing + 4"

R-27 7-1-10

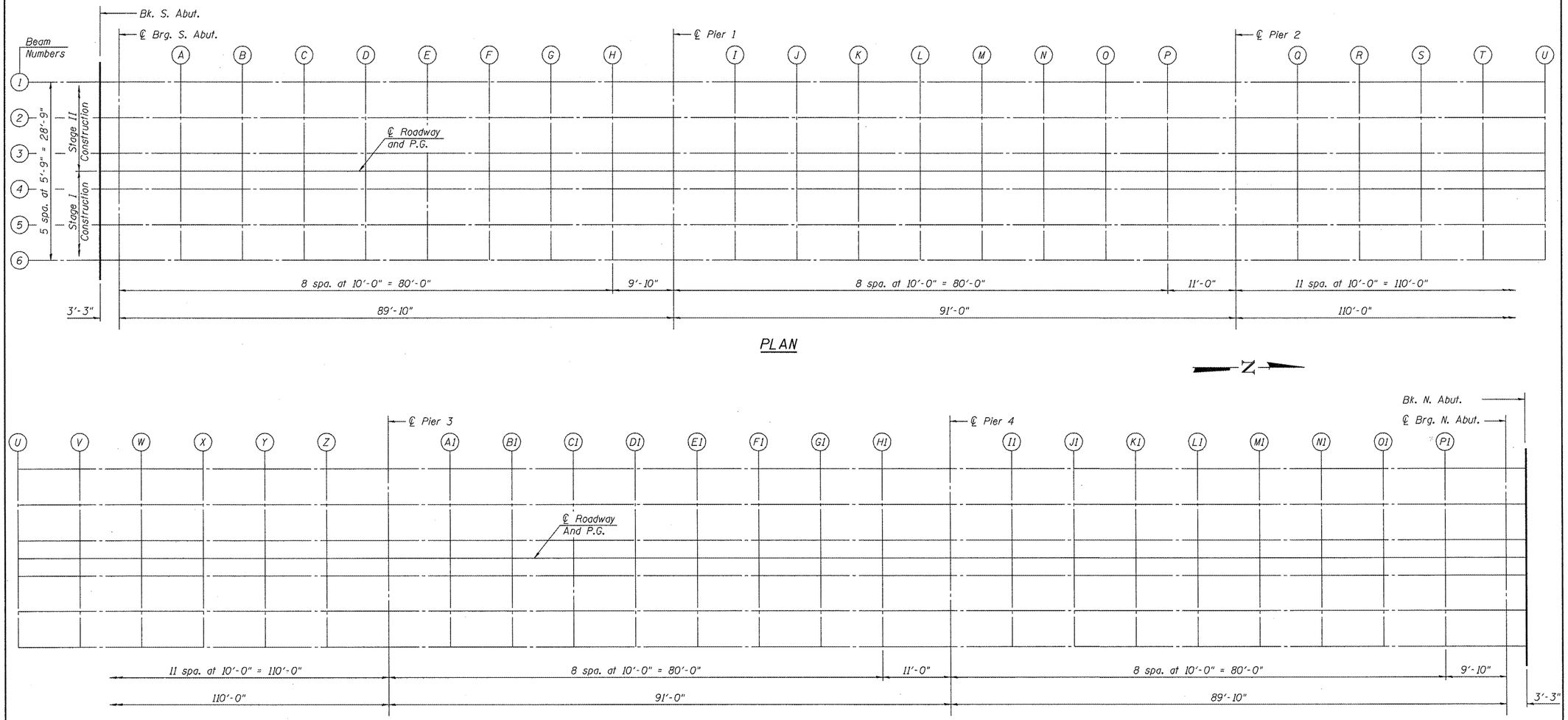
USER NAME = dhoberling	DESIGNED - BRD/FLL	REVISED -
FILE NAME = 0550083-68482.dgn	CHECKED - SDS/JHP	REVISED -
PLOT DATE = 12/21/2010	DRAWN - DLH	REVISED -
PLOT TIME = 10:30:04 AM	CHECKED - CWC/SDS	REVISED -

WHKS & CO. ENGINEERING
7018 KINGSMILL CT., SPRINGFIELD, IL
(217) 483-9457
DESIGN FIRM #184001036

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION
S.N. 055-0083
SHEET NO. 5 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	MCDONOUGH	117	45
		CONTRACT NO. 68482		
	ILLINOIS FED. AID PROJECT			



Note:
Work this sheet with sheets 7 - 9 of 41.

USER NAME = dhebarling	DESIGNED - BRD/FLL	REVISED -	
FILE NAME = 8550083-68482.dgn	CHECKED - SDS/JHP	REVISED -	
PLOT DATE = 12/21/2010	DRAWN - DLH	REVISED -	
PLOT TIME = 10:30:07 AM	CHECKED - CWC/SDS	REVISED -	

WHKS & CO. ENGINEERING
7018 KINGSMILL CT.,
SPRINGFIELD, IL
(217) 483-9457
DESIGN FIRM #184001036

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATION LOCATION PLAN
S.N. 055-0083
SHEET NO. 6 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	MCDONOUGH	117	46
		CONTRACT NO. 68482		
	ILLINOIS FED. AID PROJECT			

BEAM 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. S. Abut.	755+97.92	-14.375	524.98	524.98
℄ Brg. S. Abut.	756+01.17	-14.375	525.03	525.03
A	756+11.17	-14.375	525.14	525.17
B	756+21.17	-14.375	525.26	525.31
C	756+31.17	-14.375	525.36	525.43
D	756+41.17	-14.375	525.47	525.54
E	756+51.17	-14.375	525.57	525.64
F	756+61.17	-14.375	525.66	525.73
G	756+71.17	-14.375	525.75	525.80
H	756+81.17	-14.375	525.84	525.86
℄ Pier 1	756+91.00	-14.375	525.92	525.92
I	757+01.00	-14.375	525.99	526.02
J	757+11.00	-14.375	526.06	526.11
K	757+21.00	-14.375	526.13	526.19
L	757+31.00	-14.375	526.19	526.26
M	757+41.00	-14.375	526.25	526.32
N	757+51.00	-14.375	526.31	526.37
O	757+61.00	-14.375	526.35	526.40
P	757+71.00	-14.375	526.40	526.42
℄ Pier 2	757+82.00	-14.375	526.44	526.44
Q	757+92.00	-14.375	526.48	526.52
R	758+02.00	-14.375	526.51	526.59
S	758+12.00	-14.375	526.53	526.65
T	758+22.00	-14.375	526.55	526.69
U	758+32.00	-14.375	526.57	526.72
V	758+42.00	-14.375	526.58	526.73
W	758+52.00	-14.375	526.59	526.73
X	758+62.00	-14.375	526.59	526.71
Y	758+72.00	-14.375	526.59	526.67
Z	758+82.00	-14.375	526.58	526.62
℄ Pier 3	758+92.00	-14.375	526.57	526.57
A1	759+02.00	-14.375	526.56	526.58
B1	759+12.00	-14.375	526.54	526.58
C1	759+22.00	-14.375	526.51	526.57
D1	759+32.00	-14.375	526.48	526.56
E1	759+42.00	-14.375	526.45	526.52
F1	759+52.00	-14.375	526.41	526.48
G1	759+62.00	-14.375	526.37	526.42
H1	759+72.00	-14.375	526.32	526.35
℄ Pier 4	759+83.00	-14.375	526.26	526.26
I1	759+93.00	-14.375	526.21	526.23
J1	760+03.00	-14.375	526.15	526.19
K1	760+13.00	-14.375	526.08	526.15
L1	760+23.00	-14.375	526.01	526.08
M1	760+33.00	-14.375	525.93	526.01
N1	760+43.00	-14.375	525.85	525.92
O1	760+53.00	-14.375	525.77	525.82
P1	760+63.00	-14.375	525.68	525.71
℄ Brg. N. Abut.	760+72.83	-14.375	525.59	525.59
BK. N. Abut.	760+76.08	-14.375	525.56	525.56

BEAM 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. S. Abut.	755+97.92	-8.625	525.08	525.08
℄ Brg. S. Abut.	756+01.17	-8.625	525.13	525.13
A	756+11.17	-8.625	525.25	525.27
B	756+21.17	-8.625	525.36	525.41
C	756+31.17	-8.625	525.47	525.53
D	756+41.17	-8.625	525.57	525.64
E	756+51.17	-8.625	525.67	525.74
F	756+61.17	-8.625	525.76	525.83
G	756+71.17	-8.625	525.85	525.90
H	756+81.17	-8.625	525.94	525.96
℄ Pier 1	756+91.00	-8.625	526.02	526.02
I	757+01.00	-8.625	526.09	526.12
J	757+11.00	-8.625	526.17	526.21
K	757+21.00	-8.625	526.23	526.29
L	757+31.00	-8.625	526.30	526.36
M	757+41.00	-8.625	526.35	526.42
N	757+51.00	-8.625	526.41	526.47
O	757+61.00	-8.625	526.46	526.50
P	757+71.00	-8.625	526.50	526.52
℄ Pier 2	757+82.00	-8.625	526.54	526.54
Q	757+92.00	-8.625	526.58	526.62
R	758+02.00	-8.625	526.61	526.69
S	758+12.00	-8.625	526.63	526.74
T	758+22.00	-8.625	526.66	526.79
U	758+32.00	-8.625	526.67	526.82
V	758+42.00	-8.625	526.68	526.83
W	758+52.00	-8.625	526.69	526.82
X	758+62.00	-8.625	526.69	526.80
Y	758+72.00	-8.625	526.69	526.77
Z	758+82.00	-8.625	526.69	526.72
℄ Pier 3	758+92.00	-8.625	526.68	526.68
A1	759+02.00	-8.625	526.66	526.68
B1	759+12.00	-8.625	526.64	526.68
C1	759+22.00	-8.625	526.62	526.68
D1	759+32.00	-8.625	526.59	526.65
E1	759+42.00	-8.625	526.55	526.62
F1	759+52.00	-8.625	526.51	526.58
G1	759+62.00	-8.625	526.47	526.52
H1	759+72.00	-8.625	526.42	526.45
℄ Pier 4	759+83.00	-8.625	526.37	526.37
I1	759+93.00	-8.625	526.31	526.33
J1	760+03.00	-8.625	526.25	526.29
K1	760+13.00	-8.625	526.18	526.25
L1	760+23.00	-8.625	526.11	526.18
M1	760+33.00	-8.625	526.04	526.11
N1	760+43.00	-8.625	525.96	526.02
O1	760+53.00	-8.625	525.87	525.92
P1	760+63.00	-8.625	525.78	525.81
℄ Brg. N. Abut.	760+72.83	-8.625	525.69	525.69
BK. N. Abut.	760+76.08	-8.625	525.66	525.66

BEAM 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. S. Abut.	755+97.92	-2.875	525.17	525.17
℄ Brg. S. Abut.	756+01.17	-2.875	525.22	525.22
A	756+11.17	-2.875	525.34	525.36
B	756+21.17	-2.875	525.45	525.50
C	756+31.17	-2.875	525.56	525.62
D	756+41.17	-2.875	525.66	525.73
E	756+51.17	-2.875	525.76	525.83
F	756+61.17	-2.875	525.85	525.92
G	756+71.17	-2.875	525.94	525.99
H	756+81.17	-2.875	526.03	526.05
℄ Pier 1	756+91.00	-2.875	526.11	526.11
I	757+01.00	-2.875	526.18	526.21
J	757+11.00	-2.875	526.26	526.30
K	757+21.00	-2.875	526.32	526.38
L	757+31.00	-2.875	526.39	526.45
M	757+41.00	-2.875	526.44	526.51
N	757+51.00	-2.875	526.50	526.56
O	757+61.00	-2.875	526.55	526.59
P	757+71.00	-2.875	526.59	526.61
℄ Pier 2	757+82.00	-2.875	526.63	526.63
Q	757+92.00	-2.875	526.67	526.71
R	758+02.00	-2.875	526.70	526.78
S	758+12.00	-2.875	526.72	526.83
T	758+22.00	-2.875	526.75	526.88
U	758+32.00	-2.875	526.76	526.91
V	758+42.00	-2.875	526.77	526.92
W	758+52.00	-2.875	526.78	526.91
X	758+62.00	-2.875	526.78	526.89
Y	758+72.00	-2.875	526.78	526.86
Z	758+82.00	-2.875	526.78	526.81
℄ Pier 3	758+92.00	-2.875	526.77	526.77
A1	759+02.00	-2.875	526.75	526.77
B1	759+12.00	-2.875	526.73	526.77
C1	759+22.00	-2.875	526.71	526.76
D1	759+32.00	-2.875	526.68	526.74
E1	759+42.00	-2.875	526.64	526.71
F1	759+52.00	-2.875	526.60	526.67
G1	759+62.00	-2.875	526.56	526.61
H1	759+72.00	-2.875	526.51	526.54
℄ Pier 4	759+83.00	-2.875	526.46	526.46
I1	759+93.00	-2.875	526.40	526.42
J1	760+03.00	-2.875	526.34	526.38
K1	760+13.00	-2.875	526.27	526.34
L1	760+23.00	-2.875	526.20	526.27
M1	760+33.00	-2.875	526.13	526.20
N1	760+43.00	-2.875	526.05	526.11
O1	760+53.00	-2.875	525.96	526.01
P1	760+63.00	-2.875	525.87	525.90
℄ Brg. N. Abut.	760+72.83	-2.875	525.78	525.78
BK. N. Abut.	760+76.08	-2.875	525.75	525.75

USER NAME = dhoberling	DESIGNED - BRD/FLL	REVISED -	
FILE NAME = 0550083-68482.dgn	CHECKED - SDS/JHP	REVISED -	
PLOT DATE = 12/21/2010	DRAWN - DLH	REVISED -	
PLOT TIME = 10:30:08 AM	CHECKED - CWC/SDS	REVISED -	

WHKS & CO. ENGINEERING
7018 KINGSMILL CT., SPRINGFIELD, IL
(217) 483-9457
DESIGN FIRM #184001036

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS
S.N. 055-0083
SHEET NO. 7 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	MCDONOUGH	117	47
		CONTRACT NO. 68482		
		ILLINOIS FED. AID PROJECT		

℄ RDWY., P.G., & STAGE CONST. JT.

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. S. Abut.	755+97.92	0.000	525.22	525.22
℄ Brg. S. Abut.	756+01.17	0.000	525.26	525.26
A	756+11.17	0.000	525.38	525.41
B	756+21.17	0.000	525.49	525.54
C	756+31.17	0.000	525.60	525.67
D	756+41.17	0.000	525.71	525.78
E	756+51.17	0.000	525.80	525.88
F	756+61.17	0.000	525.90	525.96
G	756+71.17	0.000	525.99	526.03
H	756+81.17	0.000	526.07	526.10
℄ Pier 1	756+91.00	0.000	526.15	526.15
I	757+01.00	0.000	526.23	526.25
J	757+11.00	0.000	526.30	526.34
K	757+21.00	0.000	526.37	526.43
L	757+31.00	0.000	526.43	526.50
M	757+41.00	0.000	526.49	526.56
N	757+51.00	0.000	526.54	526.60
O	757+61.00	0.000	526.59	526.64
P	757+71.00	0.000	526.64	526.66
℄ Pier 2	757+82.00	0.000	526.68	526.68
Q	757+92.00	0.000	526.71	526.75
R	758+02.00	0.000	526.74	526.82
S	758+12.00	0.000	526.77	526.88
T	758+22.00	0.000	526.79	526.92
U	758+32.00	0.000	526.81	526.95
V	758+42.00	0.000	526.82	526.96
W	758+52.00	0.000	526.83	526.96
X	758+62.00	0.000	526.83	526.94
Y	758+72.00	0.000	526.83	526.90
Z	758+82.00	0.000	526.82	526.86
℄ Pier 3	758+92.00	0.000	526.81	526.81
A1	759+02.00	0.000	526.79	526.82
B1	759+12.00	0.000	526.77	526.82
C1	759+22.00	0.000	526.75	526.81
D1	759+32.00	0.000	526.72	526.79
E1	759+42.00	0.000	526.69	526.76
F1	759+52.00	0.000	526.65	526.71
G1	759+62.00	0.000	526.61	526.65
H1	759+72.00	0.000	526.56	526.58
℄ Pier 4	759+83.00	0.000	526.50	526.50
I1	759+93.00	0.000	526.44	526.47
J1	760+03.00	0.000	526.38	526.43
K1	760+13.00	0.000	526.32	526.38
L1	760+23.00	0.000	526.25	526.32
M1	760+33.00	0.000	526.17	526.24
N1	760+43.00	0.000	526.09	526.15
O1	760+53.00	0.000	526.01	526.05
P1	760+63.00	0.000	525.92	525.94
℄ Brg. N. Abut.	760+72.83	0.000	525.83	525.83
BK. N. Abut.	760+76.08	0.000	525.80	525.80

BEAM 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. S. Abut.	755+97.92	2.875	525.17	525.17
℄ Brg. S. Abut.	756+01.17	2.875	525.22	525.22
A	756+11.17	2.875	525.34	525.36
B	756+21.17	2.875	525.45	525.50
C	756+31.17	2.875	525.56	525.62
D	756+41.17	2.875	525.66	525.73
E	756+51.17	2.875	525.76	525.83
F	756+61.17	2.875	525.85	525.92
G	756+71.17	2.875	525.94	525.99
H	756+81.17	2.875	526.03	526.05
℄ Pier 1	756+91.00	2.875	526.11	526.11
I	757+01.00	2.875	526.18	526.21
J	757+11.00	2.875	526.26	526.30
K	757+21.00	2.875	526.32	526.38
L	757+31.00	2.875	526.39	526.45
M	757+41.00	2.875	526.44	526.51
N	757+51.00	2.875	526.50	526.56
O	757+61.00	2.875	526.55	526.59
P	757+71.00	2.875	526.59	526.61
℄ Pier 2	757+82.00	2.875	526.63	526.63
Q	757+92.00	2.875	526.67	526.71
R	758+02.00	2.875	526.70	526.78
S	758+12.00	2.875	526.72	526.83
T	758+22.00	2.875	526.75	526.88
U	758+32.00	2.875	526.76	526.91
V	758+42.00	2.875	526.77	526.92
W	758+52.00	2.875	526.78	526.91
X	758+62.00	2.875	526.78	526.89
Y	758+72.00	2.875	526.78	526.86
Z	758+82.00	2.875	526.78	526.81
℄ Pier 3	758+92.00	2.875	526.77	526.77
A1	759+02.00	2.875	526.75	526.77
B1	759+12.00	2.875	526.73	526.77
C1	759+22.00	2.875	526.71	526.76
D1	759+32.00	2.875	526.68	526.74
E1	759+42.00	2.875	526.64	526.71
F1	759+52.00	2.875	526.60	526.67
G1	759+62.00	2.875	526.56	526.61
H1	759+72.00	2.875	526.51	526.54
℄ Pier 4	759+83.00	2.875	526.46	526.46
I1	759+93.00	2.875	526.40	526.42
J1	760+03.00	2.875	526.34	526.38
K1	760+13.00	2.875	526.27	526.34
L1	760+23.00	2.875	526.20	526.27
M1	760+33.00	2.875	526.13	526.20
N1	760+43.00	2.875	526.05	526.11
O1	760+53.00	2.875	525.96	526.01
P1	760+63.00	2.875	525.87	525.90
℄ Brg. N. Abut.	760+72.83	2.875	525.78	525.78
BK. N. Abut.	760+76.08	2.875	525.75	525.75

BEAM 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. S. Abut.	755+97.92	8.625	525.08	525.08
℄ Brg. S. Abut.	756+01.17	8.625	525.13	525.13
A	756+11.17	8.625	525.25	525.27
B	756+21.17	8.625	525.36	525.41
C	756+31.17	8.625	525.47	525.53
D	756+41.17	8.625	525.57	525.64
E	756+51.17	8.625	525.67	525.74
F	756+61.17	8.625	525.76	525.83
G	756+71.17	8.625	525.85	525.90
H	756+81.17	8.625	525.94	525.96
℄ Pier 1	756+91.00	8.625	526.02	526.02
I	757+01.00	8.625	526.09	526.12
J	757+11.00	8.625	526.17	526.21
K	757+21.00	8.625	526.23	526.29
L	757+31.00	8.625	526.30	526.36
M	757+41.00	8.625	526.35	526.42
N	757+51.00	8.625	526.41	526.47
O	757+61.00	8.625	526.46	526.50
P	757+71.00	8.625	526.50	526.52
℄ Pier 2	757+82.00	8.625	526.54	526.54
Q	757+92.00	8.625	526.58	526.62
R	758+02.00	8.625	526.61	526.69
S	758+12.00	8.625	526.63	526.74
T	758+22.00	8.625	526.66	526.79
U	758+32.00	8.625	526.67	526.82
V	758+42.00	8.625	526.68	526.83
W	758+52.00	8.625	526.69	526.82
X	758+62.00	8.625	526.69	526.80
Y	758+72.00	8.625	526.69	526.77
Z	758+82.00	8.625	526.69	526.72
℄ Pier 3	758+92.00	8.625	526.68	526.68
A1	759+02.00	8.625	526.66	526.68
B1	759+12.00	8.625	526.64	526.68
C1	759+22.00	8.625	526.62	526.68
D1	759+32.00	8.625	526.59	526.65
E1	759+42.00	8.625	526.55	526.62
F1	759+52.00	8.625	526.51	526.58
G1	759+62.00	8.625	526.47	526.52
H1	759+72.00	8.625	526.42	526.45
℄ Pier 4	759+83.00	8.625	526.37	526.37
I1	759+93.00	8.625	526.31	526.33
J1	760+03.00	8.625	526.25	526.29
K1	760+13.00	8.625	526.18	526.25
L1	760+23.00	8.625	526.11	526.18
M1	760+33.00	8.625	526.04	526.11
N1	760+43.00	8.625	525.96	526.02
O1	760+53.00	8.625	525.87	525.92
P1	760+63.00	8.625	525.78	525.81
℄ Brg. N. Abut.	760+72.83	8.625	525.69	525.69
BK. N. Abut.	760+76.08	8.625	525.66	525.66

USER NAME = dhaberling	DESIGNED - BRD/FLL	REVISED -
FILE NAME = 0550083-68482.dgn	CHECKED - SDS/JHP	REVISED -
PLOT DATE = 12/21/2010	DRAWN - DLH	REVISED -
PLOT TIME = 10:30:13 AM	CHECKED - CWC/SDS	REVISED -

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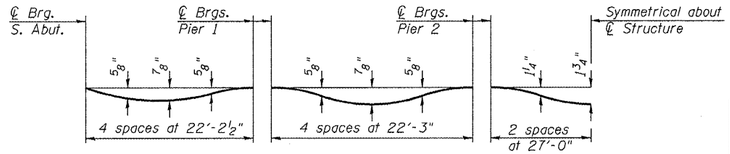
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS
S.N. 055-0083
SHEET NO. 8 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	MCDONOUGH	117	48
		CONTRACT NO. 68482		
		ILLINOIS FED. AID PROJECT		



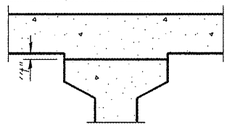
DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only.)

Note:
The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown below and on sheets 7 - 8 of 41.

BEAM 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	755+97.92	14.375	524.98	524.98
℄ Brg. S. Abut.	756+01.17	14.375	525.03	525.03
A	756+11.17	14.375	525.14	525.17
B	756+21.17	14.375	525.26	525.31
C	756+31.17	14.375	525.36	525.43
D	756+41.17	14.375	525.47	525.54
E	756+51.17	14.375	525.57	525.64
F	756+61.17	14.375	525.66	525.73
G	756+71.17	14.375	525.75	525.80
H	756+81.17	14.375	525.84	525.86
℄ Pier 1	756+91.00	14.375	525.92	525.92
I	757+01.00	14.375	525.99	526.02
J	757+11.00	14.375	526.06	526.11
K	757+21.00	14.375	526.13	526.19
L	757+31.00	14.375	526.19	526.26
M	757+41.00	14.375	526.25	526.32
N	757+51.00	14.375	526.31	526.37
O	757+61.00	14.375	526.35	526.40
P	757+71.00	14.375	526.40	526.42
℄ Pier 2	757+82.00	14.375	526.44	526.44
Q	757+92.00	14.375	526.48	526.52
R	758+02.00	14.375	526.51	526.59
S	758+12.00	14.375	526.53	526.65
T	758+22.00	14.375	526.55	526.69
U	758+32.00	14.375	526.57	526.72
V	758+42.00	14.375	526.58	526.73
W	758+52.00	14.375	526.59	526.73
X	758+62.00	14.375	526.59	526.71
Y	758+72.00	14.375	526.59	526.67
Z	758+82.00	14.375	526.58	526.62
℄ Pier 3	758+92.00	14.375	526.57	526.57
A1	759+02.00	14.375	526.56	526.58
B1	759+12.00	14.375	526.54	526.58
C1	759+22.00	14.375	526.51	526.57
D1	759+32.00	14.375	526.48	526.56
E1	759+42.00	14.375	526.45	526.52
F1	759+52.00	14.375	526.41	526.48
G1	759+62.00	14.375	526.37	526.42
H1	759+72.00	14.375	526.32	526.35
℄ Pier 4	759+83.00	14.375	526.26	526.26
I1	759+93.00	14.375	526.21	526.23
J1	760+03.00	14.375	526.15	526.19
K1	760+13.00	14.375	526.08	526.15
L1	760+23.00	14.375	526.01	526.08
M1	760+33.00	14.375	525.93	526.01
N1	760+43.00	14.375	525.85	525.92
O1	760+53.00	14.375	525.77	525.82
P1	760+63.00	14.375	525.68	525.71
℄ Brg. N. Abut.	760+72.83	14.375	525.59	525.59
Bk. N. Abut.	760+76.08	14.375	525.56	525.56



To determine "t": After all precast prestressed beams have been erected, elevations of the top flanges of the beams shall be taken at intervals shown on sheet 6 of 41. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflections" shown on sheet 7 thru 9 of 41, minus slab thickness, equals the fillet heights "t" above top flanges of beams.

FILLET HEIGHTS

USER NAME = dheberling	DESIGNED - BRD/FLL	REVISED -
FILE NAME = 0550083-68482.dgn	CHECKED - SDS/JHP	REVISED -
PLOT DATE = 12/21/2010	DRAWN - DLH	REVISED -
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS
S.N. 055-0083
SHEET NO. 9 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	MCDONOUGH	117	49
		CONTRACT NO. 68482		
	ILLINOIS FED. AID PROJECT			

WEST EDGE OF SHOULDER

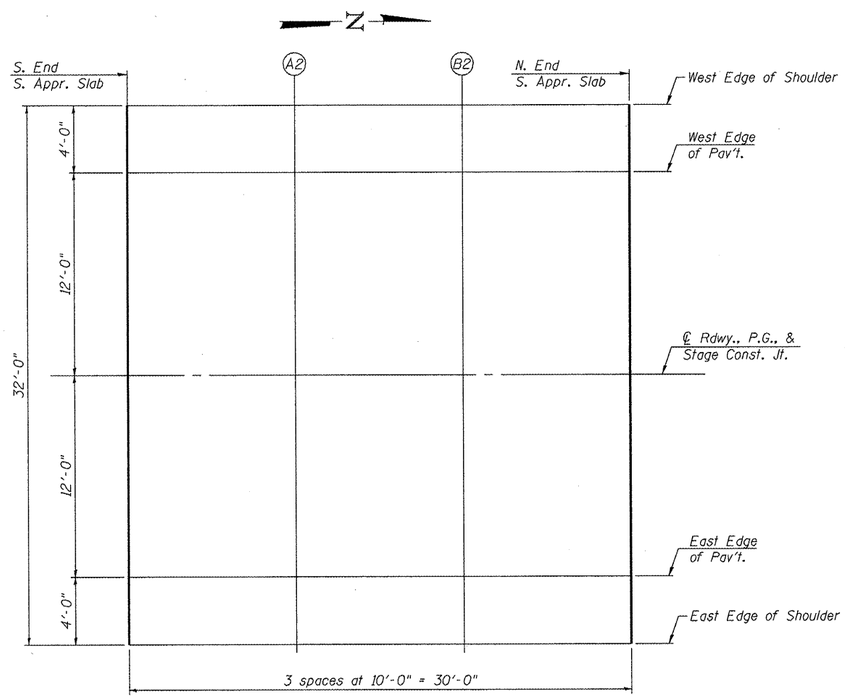
Location	Station	Offset	Theoretical Grade Elevations
S. End S. Appr. Slab	755+68.42	-16.00	524.62
A2	755+78.42	-16.00	524.73
B2	755+88.42	-16.00	524.84
N. End S. Appr. Slab	755+98.42	-16.00	524.95

WEST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
S. End S. Appr. Slab	755+68.42	-12.00	524.70
A2	755+78.42	-12.00	524.81
B2	755+88.42	-12.00	524.92
N. End S. Appr. Slab	755+98.42	-12.00	525.03

℄ RDWY., P.G., & STAGE CONST. JT.

Location	Station	Offset	Theoretical Grade Elevations
S. End S. Appr. Slab	755+68.42	0.00	524.89
A2	755+78.42	0.00	525.00
B2	755+88.42	0.00	525.11
N. End S. Appr. Slab	755+98.42	0.00	525.22



PLAN

EAST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
S. End S. Appr. Slab	755+68.42	12.00	524.70
A2	755+78.42	12.00	524.81
B2	755+88.42	12.00	524.92
N. End S. Appr. Slab	755+98.42	12.00	525.03

EAST EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
S. End S. Appr. Slab	755+68.42	16.00	524.62
A2	755+78.42	16.00	524.73
B2	755+88.42	16.00	524.84
N. End S. Appr. Slab	755+98.42	16.00	524.95

USER NAME = dhoberling	DESIGNED - BRD/FLL	REVISED -	
FILE NAME = 0550083-68482.dgn	CHECKED - SDS/JHP	REVISED -	
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOUTH APPROACH SLAB ELEVATIONS
S.N. 055-0083
SHEET NO. 10 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	MCDONOUGH	117	50
		CONTRACT NO. 68482		
	ILLINOIS FED. AID PROJECT			

WEST EDGE OF SHOULDER

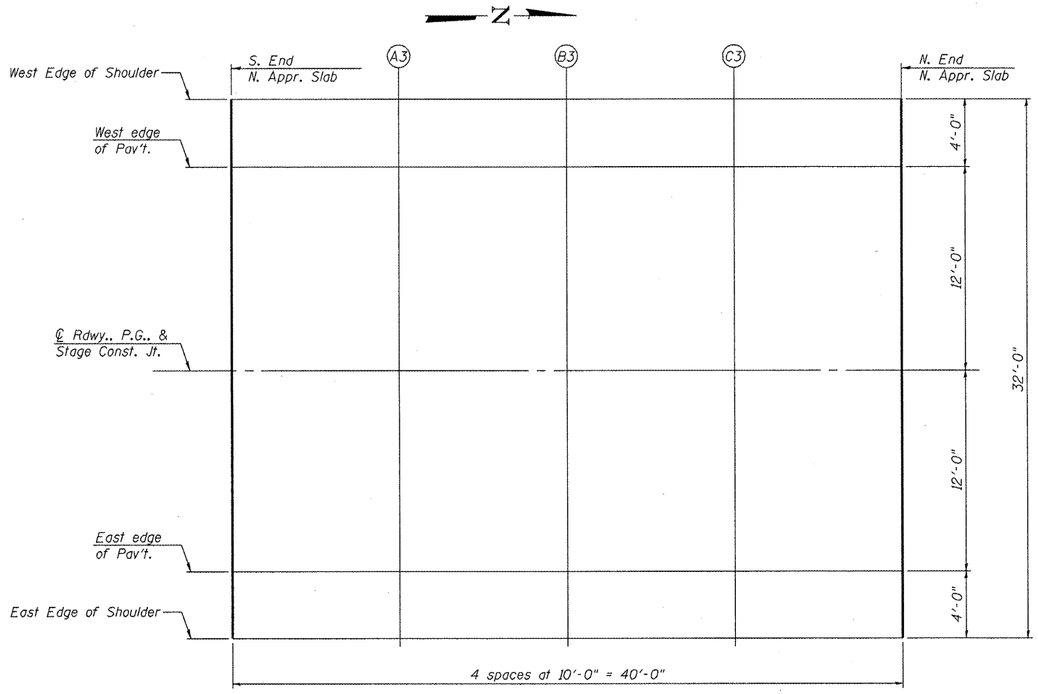
Location	Station	Offset	Theoretical Grade Elevations
S. End N. Appr. Slab	760+75.58	-16.00	525.53
A3	760+85.58	-16.00	525.43
B3	760+95.58	-16.00	525.33
C3	761+05.58	-16.00	525.21
N. End N. Appr. Slab	761+15.58	-16.00	525.10

WEST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
S. End N. Appr. Slab	760+75.58	-12.00	525.61
A3	760+85.58	-12.00	525.51
B3	760+95.58	-12.00	525.41
C3	761+05.58	-12.00	525.29
N. End N. Appr. Slab	761+15.58	-12.00	525.18

℄ RDWY., P.G., & STAGE CONST. JT.

Location	Station	Offset	Theoretical Grade Elevations
S. End N. Appr. Slab	760+75.58	0.00	525.80
A3	760+85.58	0.00	525.70
B3	760+95.58	0.00	525.60
C3	761+05.58	0.00	525.48
N. End N. Appr. Slab	761+15.58	0.00	525.37



PLAN

EAST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
S. End N. Appr. Slab	760+75.58	12.00	525.61
A3	760+85.58	12.00	525.51
B3	760+95.58	12.00	525.41
C3	761+05.58	12.00	525.29
N. End N. Appr. Slab	761+15.58	12.00	525.18

EAST EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
S. End N. Appr. Slab	760+75.58	16.00	525.53
A3	760+85.58	16.00	525.43
B3	760+95.58	16.00	525.33
C3	761+05.58	16.00	525.21
N. End N. Appr. Slab	761+15.58	16.00	525.10

USER NAME = dhoberling	DESIGNED - BRD/FLL	REVISED -	
FILE NAME = 0552083-68482.dgn	CHECKED - SDS/JHP	REVISED -	
PLOT DATE = 12/21/2010	DRAWN - DLH	REVISED -	
PLOT TIME = 10:30:22 AM	CHECKED - CWC/SDS	REVISED -	

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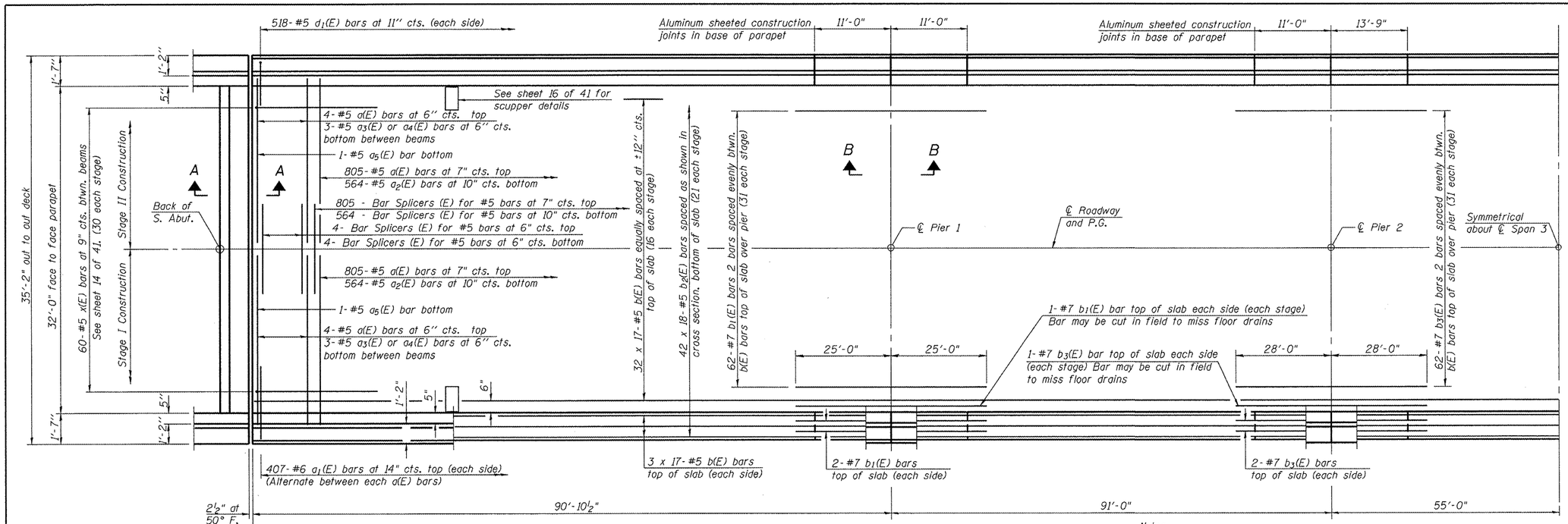
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NORTH APPROACH SLAB ELEVATIONS
S.N. 055-0083
SHEET NO. 11 OF 41 SHEETS

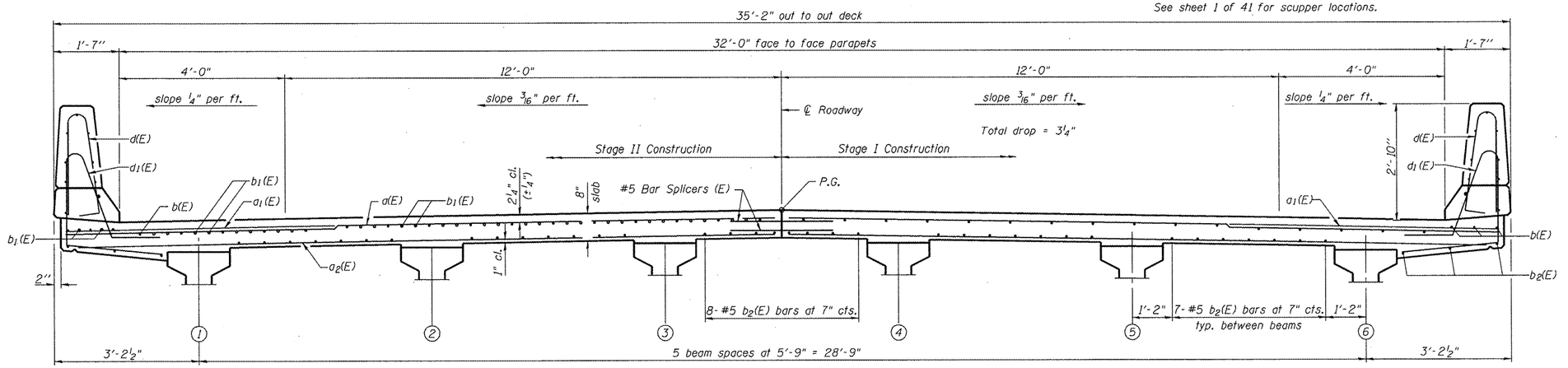
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	MCDONOUGH	117	51
		CONTRACT NO. 68482		
	ILLINOIS FED. AID PROJECT			



PARTIAL PLAN

Notes:
See sheet 13 of 41 for superstructure details and Bill of Material.
For Section A-A and B-B details see sheet 14 of 41.
Bars indicated thus 20 x 3- #5 etc. indicates 20 lines of bars with 3 lengths per line.
See sheet 13 of 41 for parapet reinforcement.
See sheet 32 of 41 for bar splicer details.
See sheet 1 of 41 for scupper locations.

MINIMUM BAR LAP
#5 bar = 2'-7"



NEAR PIER

CROSS SECTION
(Looking North)

NEAR MIDSPAN

PI-2-0 7-1-10

USER NAME = dheberling	DESIGNED - BRD/FLL	REVISED -	
FILE NAME = 0550083-68482.dgn	CHECKED - SDS/JHP	REVISED -	
PLOT DATE = 12/21/2010	DRAWN - DLH	REVISED -	
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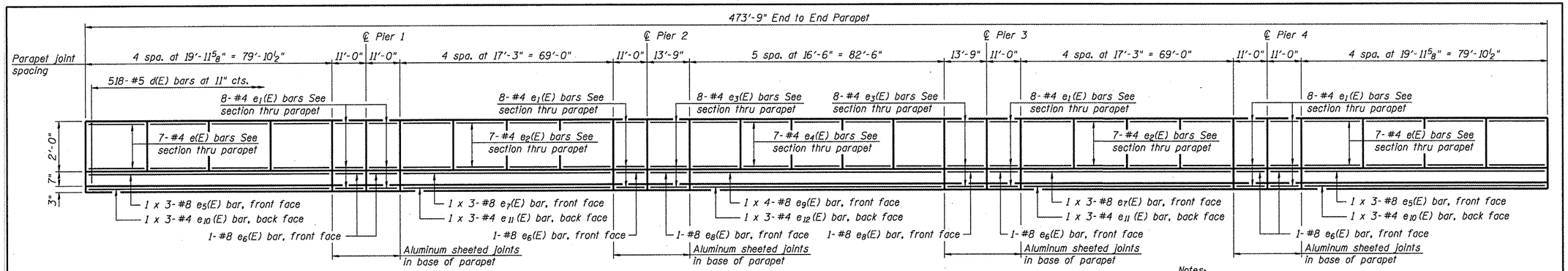
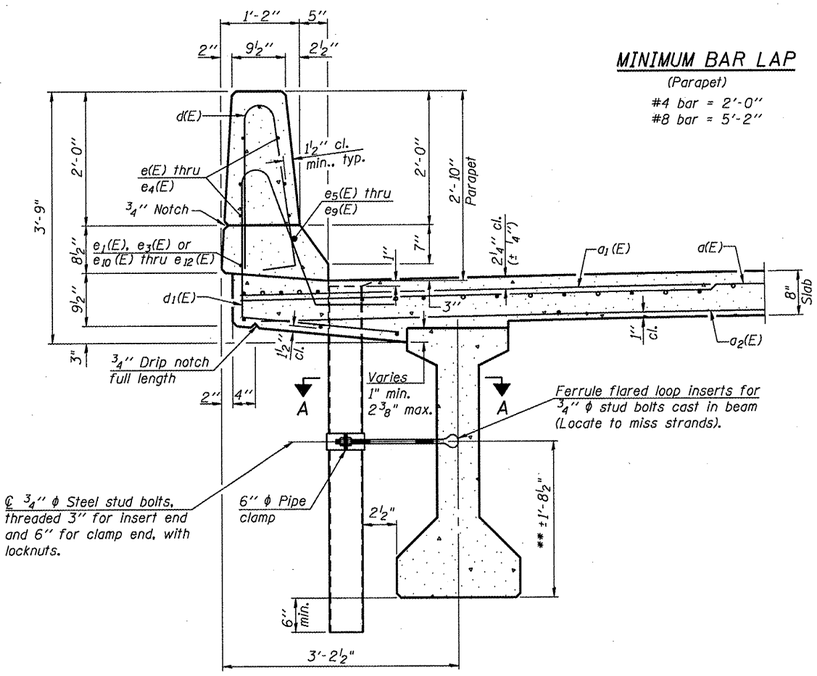
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE
S.N. 055-0083
SHEET NO. 12 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	MCDONOUGH	117	52
		CONTRACT NO. 68482		
	ILLINOIS FED. AID PROJECT			





MINIMUM BAR LAP

(Parapet)

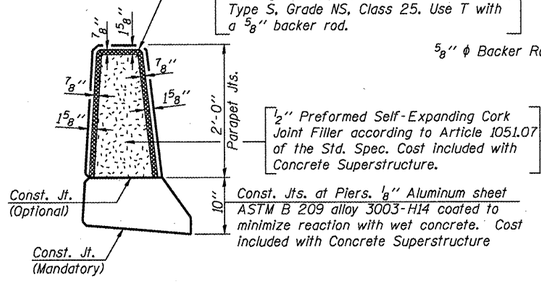
#4 bar = 2'-0"

#8 bar = 5'-2"

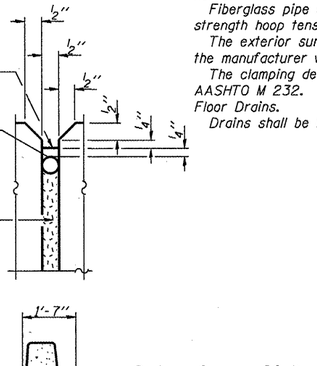
SECTION THRU PARAPET

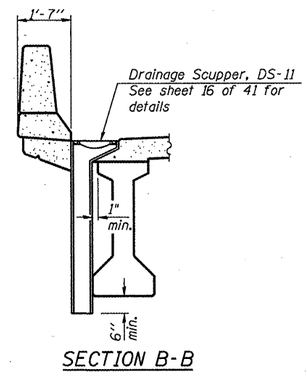
**For insert locations See sheet 20 and 21 of 41.

INSIDE ELEVATION OF PARAPET

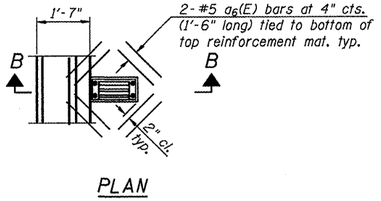


PARAPET JOINT DETAILS



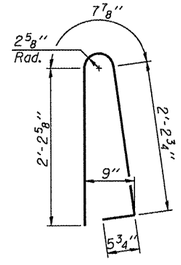


SECTION B-B

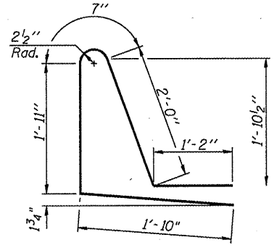


PLAN

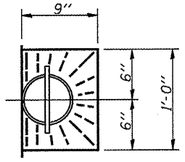
Note:
Cut longitudinal reinforcement to clear drainage scuppers.



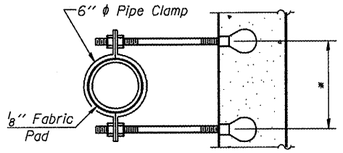
BAR d(E)



BAR d1(E)

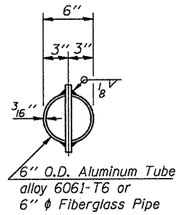


TOP PLAN



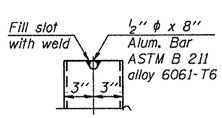
SECTION A-A

*Dimension as required by Pipe Clamp

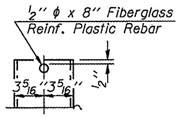


TOP PLAN

(Showing Aluminum Tube)



ALUMINUM TUBE



FIBERGLASS PIPE

Notes:

Fiberglass pipe shall conform to ASTM D2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum.

The exterior surfaces of the floor drains shall be coated or pigmented by the manufacturer with a color that matches the concrete.

The clamping device and inserts shall be galvanized according to AASHTO M 232. Cost of clamping device and inserts included with Floor Drains.

Drains shall be located clear of all diaphragms.

SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d(E)	1,626	#5	17'-2"	——
d1(E)	814	#6	6'-6"	——
d2(E)	1,128	#5	16'-5"	——
d3(E)	24	#5	5'-0"	——
d4(E)	12	#5	2'-4"	——
d5(E)	4	#5	13'-10"	——
d6(E)	32	#5	1'-6"	——
b(E)	646	#5	30'-4"	——
b1(E)	136	#7	50'-0"	——
b2(E)	756	#5	28'-9"	——
b3(E)	136	#7	56'-0"	——
d(E)	1,036	#5	5'-7"	
d1(E)	1,036	#5	7'-6"	
e(E)	112	#4	19'-8"	——
e1(E)	96	#4	10'-9"	——
e2(E)	112	#4	17'-0"	——
e3(E)	32	#4	13'-6"	——
e4(E)	70	#4	16'-3"	——
e5(E)	12	#8	30'-0"	——
e6(E)	12	#8	10'-9"	——
e7(E)	12	#8	26'-5"	——
e8(E)	4	#8	13'-6"	——
e9(E)	8	#8	24'-6"	——
e10(E)	12	#4	27'-11"	——
e11(E)	12	#4	24'-3"	——
e12(E)	6	#4	28'-9"	——
m(E)	96	#6	4'-7"	——
m1(E)	48	#6	2'-4"	——
m2(E)	32	#6	3'-7"	——
m3(E)	16	#6	1'-8"	——
m4(E)	24	#8	5'-10"	——
s(E)	104	#4	13'-0"	
x(E)	60	#6	7'-5"	
Concrete Superstructure			Cu. Yds.	612.3
Reinforcement Bars, Epoxy Coated			Lbs.	154,170

Bars indicated thus 1 x 3-#5 etc. indicates 1 line of bars with 3 lengths per line.

USER NAME = flowry	DESIGNED - BRD/FLL	REVISED - 1/24/11	
FILE NAME = 0550083-68482.dgn	CHECKED - SDS/JHP	REVISED -	
PLOT DATE = 1/31/2011	DRAWN - DLH	REVISED -	
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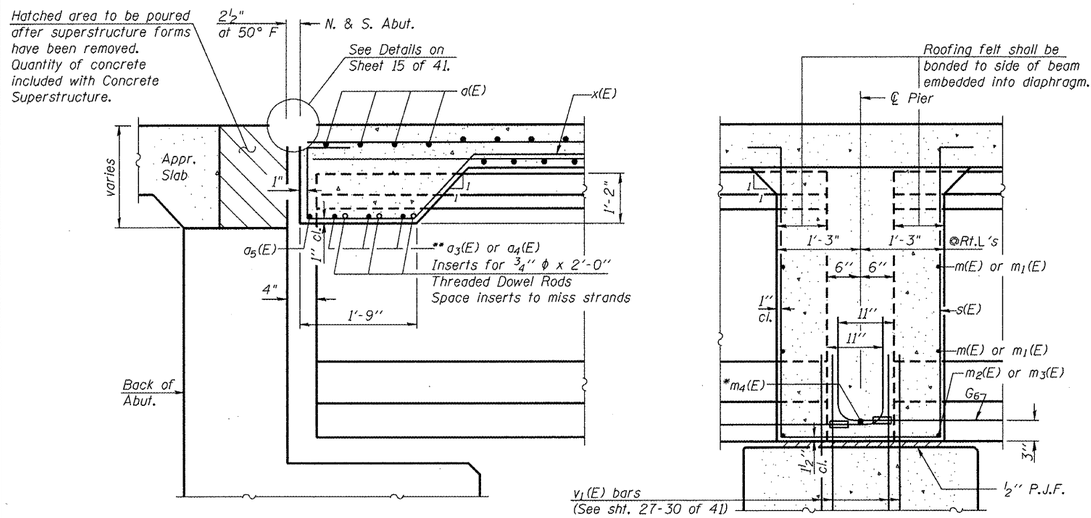
7018 KINGSMILL CT., SPRINGFIELD, IL (217) 483-9457 DESIGN FIRM #184001036

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE DETAILS
S.N. 055-0083

SHEET NO. 13 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	MCDONOUGH	117	53
		CONTRACT NO. 68482		
	ILLINOIS FED. AID PROJECT			



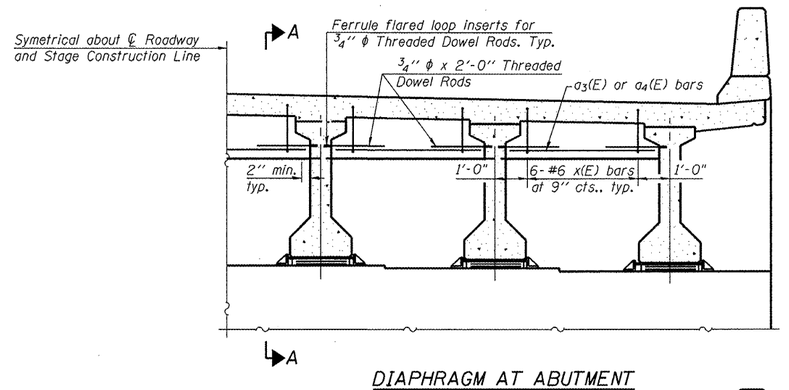
SECTION A-A AT ABUTMENT
(at Rt. Ls)

SECTION B-B AT PIER
(Fixed)

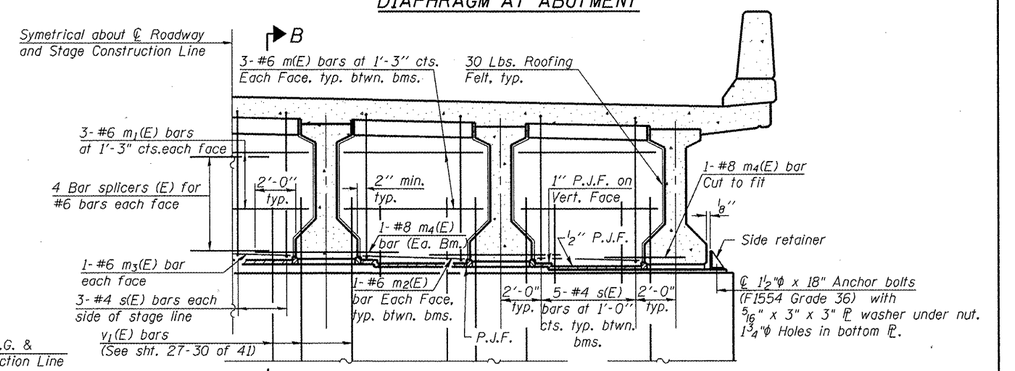
* Tightly fasten the #8 bars together with No. 9 wire ties.

** $a_3(E)$ typ. btwn. beams
$a_4(E)$ each side of stage line btwn. beams

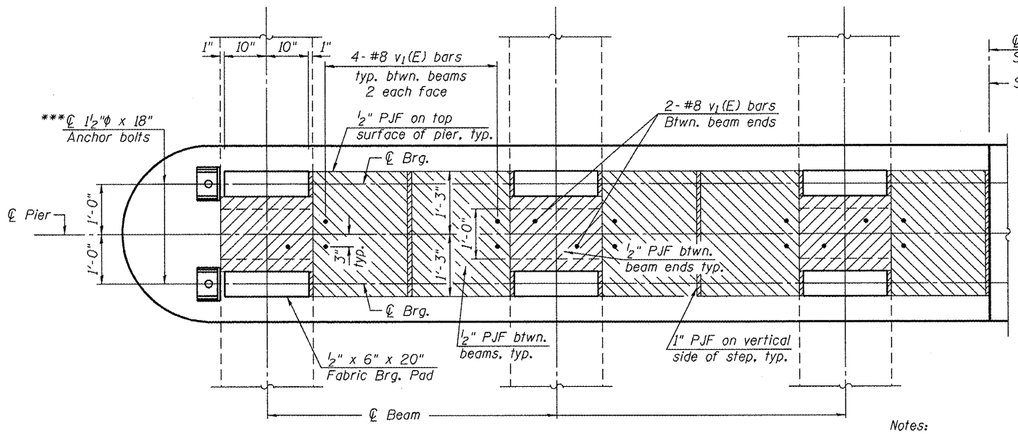
*** ℄ 1½"ϕ x 18" anchor bolts with 3" x 3" x 5/16" ℄ washer under nut. Holes in cap to be drilled after beams are in place.



DIAPHRAGM AT ABUTMENT



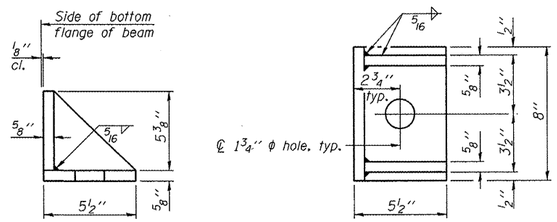
DIAPHRAGM AT PIER
(Fixed)



PARTIAL PLAN AT PIER CAPS

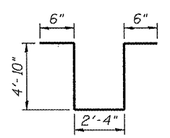
℄ Roadway, P.G. & Stage Construction Line

Symm. about ℄

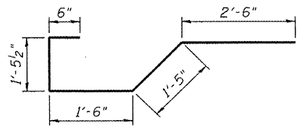


SIDE RETAINER
(2 required each side of pier).
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

Notes:
Reinforcement bars in diaphragm are billed with superstructure on sheet 13 of 41.
Concrete in diaphragm is included with Concrete Superstructure on sheet 13 of 41.
The s(E) and x(E) bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams.
Cost of 30 Lb. roofing felt is included with Concrete Superstructure.
Horizontal dimensions for Sec. B-B are along ℄ of beam unless otherwise noted.
The side retainer shall be galvanized after shop fabrication according to AASHTO M111.
See sheet 32 of 41 for Bar Splicer Details.
Cost of Side Retainer and Anchor Bolts included with Concrete Structures.



BARS s(E)



BAR x(E)

USER NAME = dheberling	DESIGNED - BRD/FLL	REVISED -	
FILE NAME = 0550083-68482.dgn	CHECKED - SDS/JHP	REVISED -	
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PLOT TIME = 10:30:31 AM	CHECKED - CWC/SDS	REVISED -	

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STATE OF ILLINOIS
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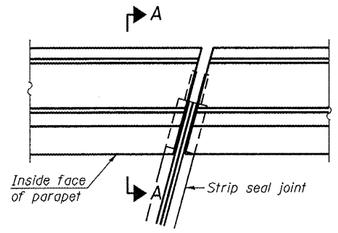
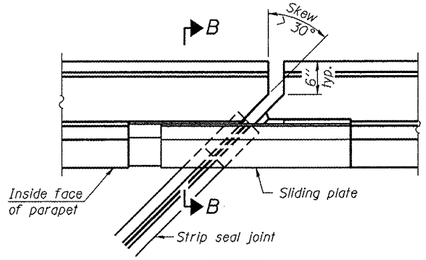
SUPERSTRUCTURE DETAILS
S.N. 055-0083
SHEET NO. 14 OF 41 SHEETS

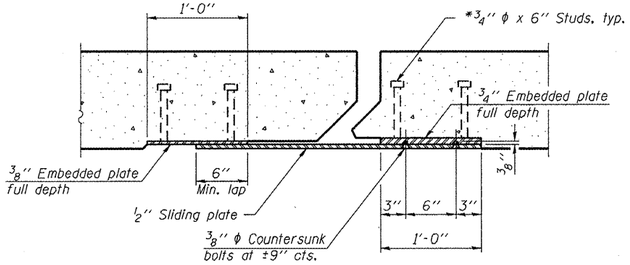
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	MCDONOUGH	117	54
		CONTRACT NO. 68482		
		ILLINOIS FED. AID PROJECT		



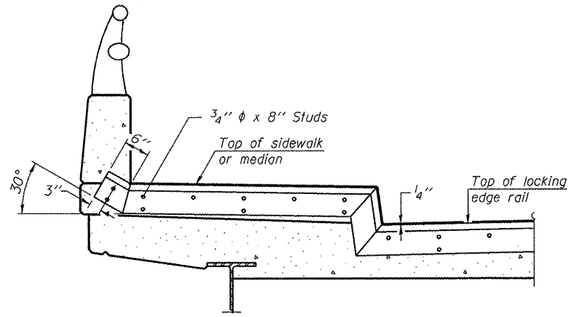
PLAN
(For skews ≤ 30°)



PLAN
(For skews > 30°)
Showing point block

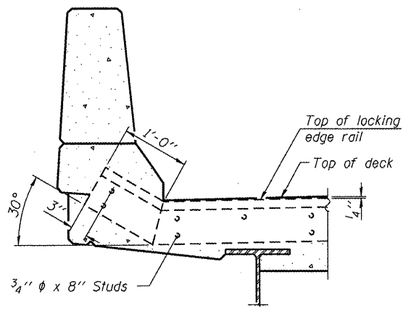


SECTION C-C

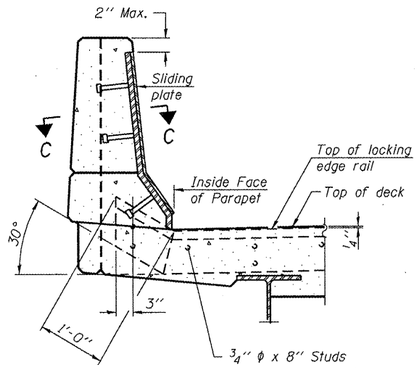


TYPICAL END TREATMENT AT SIDEWALK OR MEDIAN

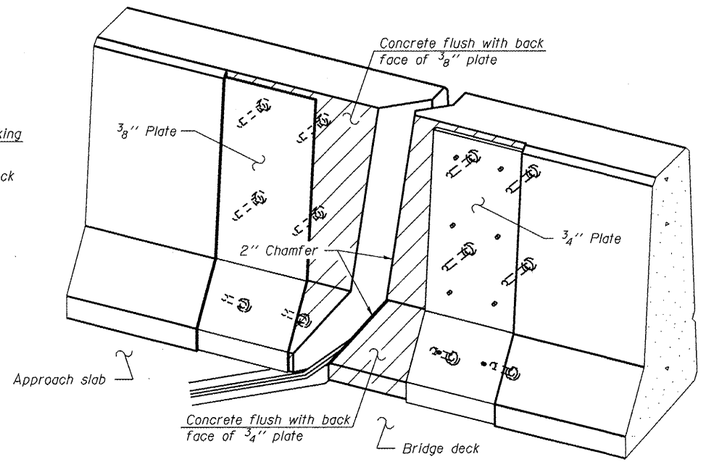
Shorter plates with a single row of studs at 12" cts. may be necessary on medians which are shallower than 9". See manufacturer's recommendation.



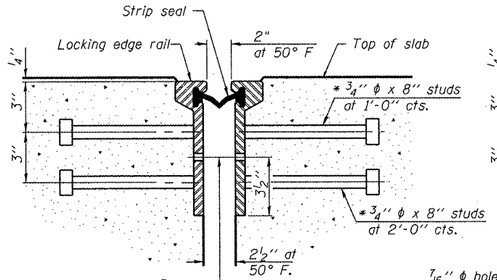
SECTION A-A



SECTION B-B

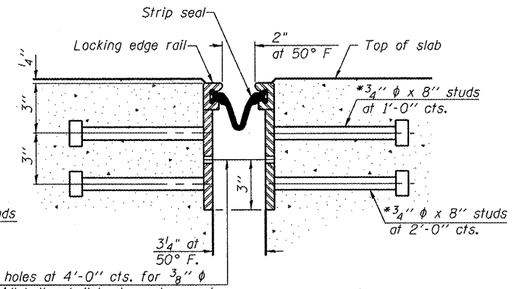


TRIMETRIC VIEW
(Showing back plates only)



7/16" ϕ holes at 4'-0" cts. for 3/8" ϕ bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

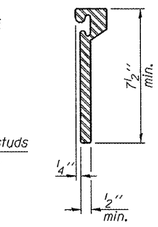
SECTION THRU ROLLED RAIL JOINT



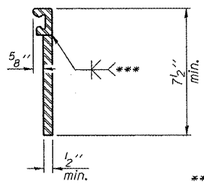
7/16" ϕ holes at 4'-0" cts. for 3/8" ϕ bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

SECTION THRU WELDED RAIL JOINT

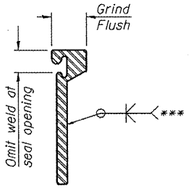
* Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.



ROLLED EXTRUDED RAIL



WELDED RAIL



*** Back gouge not required if complete joint penetration is verified by mock-up.

LOCKING EDGE RAIL SPLICE

The inside of the locking edge rail groove shall be free of weld residue.

Rolled rail shown, welded rail similar.

LOCKING EDGE RAILS

Notes:

The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of 4 inches.

The Locking Edge Rails depicted are conceptual only. except for the minimum dimensions shown. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed. Locking Edge Rails may be spliced at slope discontinuities.

The manufacturer's recommended installation methods shall be followed.

The joint opening and deck dimensions detailed on the superstructure are based on a rolled rail expansion joint. If the Contractor elects to use the welded rail expansion joint, the opening and deck dimensions shall be modified according to the dimensions detailed on this sheet. Required modifications shall be made at no additional cost to the State.

All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.

Maximum space between rail segments at stage lines shall be 3/16", sealed with a suitable sealant.

Parapet plates and anchorage studs for skews > 30° included in the cost of Preformed Joint Strip Seal.

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	68

EJ-SSJ 7-1-10

USER NAME = dhoberling	DESIGNED - BRD/FLL	REVISED -	
FILE NAME = 05S2083-68482.dgn	CHECKED - SDS/JHP	REVISED -	
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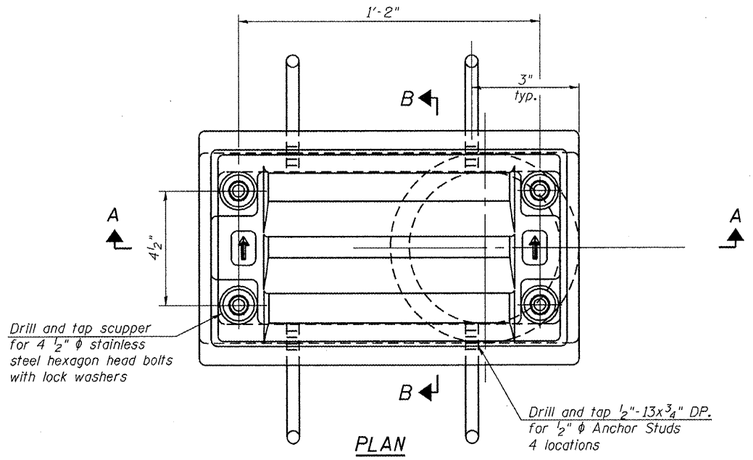
DEPARTMENT OF TRANSPORTATION

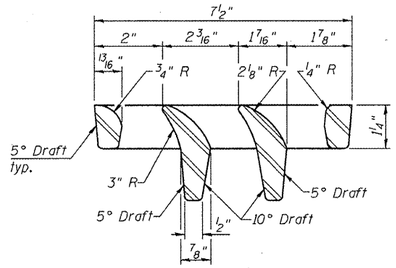
PREFORMED JOINT STRIP SEAL
S.N. 055-0083

SHEET NO. 15 OF 41 SHEETS

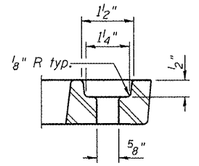
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	MCDONOUGH	117	55
		CONTRACT NO. 68482		
		ILLINOIS FED. AID PROJECT		



PLAN



VANE GRATE DETAIL



BOLT HOLE DETAIL

Notes:

All cast iron parts shall be gray iron conforming to the requirements of AASHTO M 105, Class 35B.

Bolts, anchor studs, washers and nuts shall conform to the requirements of ASTM A 307 and shall be galvanized according to AASHTO M 232.

Downspouts located on the exterior side of a painted steel fascia beam shall be painted with the finish coat specified for the exterior side of the fascia beam.

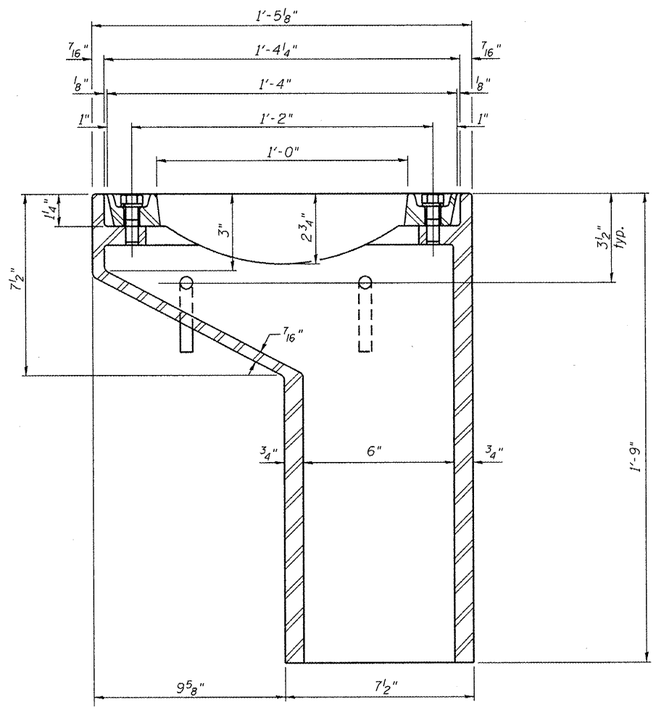
As an alternate, bolts, anchor studs, washers and nuts may be stainless steel according to Article 1006.29(d) of the Standard Specifications.

Structural steel weldments of equal sections and of the same configuration may be substituted for the cast iron scupper frame. Fillet or full penetration welds shall be used for the weldments. Details shall be submitted to the Engineer for approval. Structural steel weldments shall not be substituted for the cast iron scupper grate. Structural steel frames and downspouts shall be galvanized according to AASHTO M111.

The Contractor shall take appropriate measures to assure that Protective Coat is not applied to the scupper.

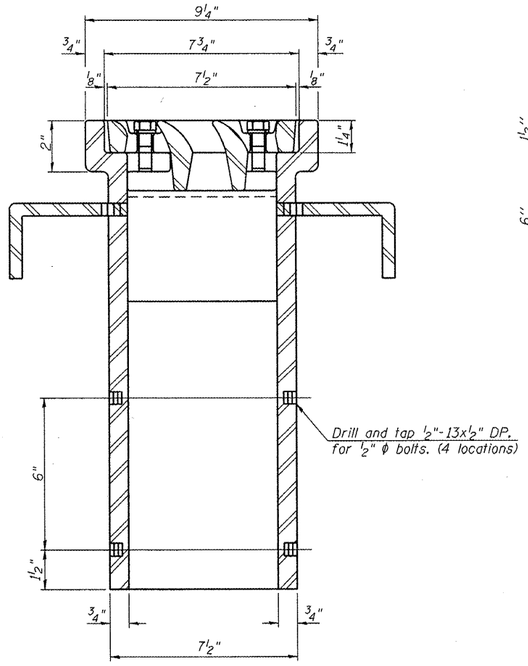
Cost of the Grate, Frame, Downspout, Anchor Studs, Bolts, Washers and Nuts including complete installation of the scupper shall be paid for at the contract unit price each for Drainage Scupper, DS-11.

Alternate fiberglass downspout conforming to ASTM D 2996 with a short-time rupture strength hoop tensile stress of 30,000 psi min. may be used in lieu of the cast iron or steel equivalent.

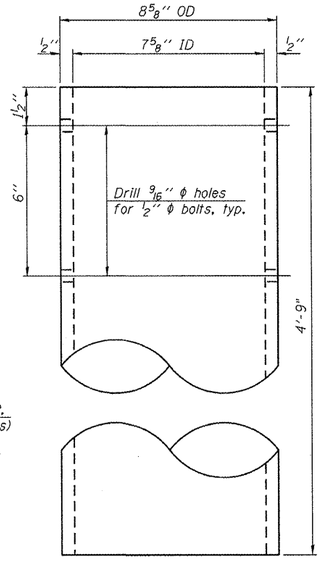


SECTION A-A

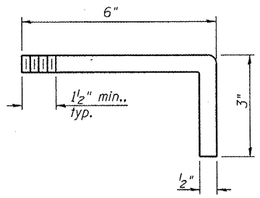
See sheet 13 of 41 for scupper location relative to parapet.



SECTION B-B



DOWNSPOUT



ANCHOR STUD DETAIL

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scupper, DS-11	Each	4

DS-11 7-1-10

USER NAME = dhoberling	DESIGNED - BRD/FLL	REVISED -	
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PLOT DATE = 12/21/2010	DRAWN - DLH	REVISED -	
PLOT TIME = 10:30:37 AM	CHECKED - CWC/SDS	REVISED -	

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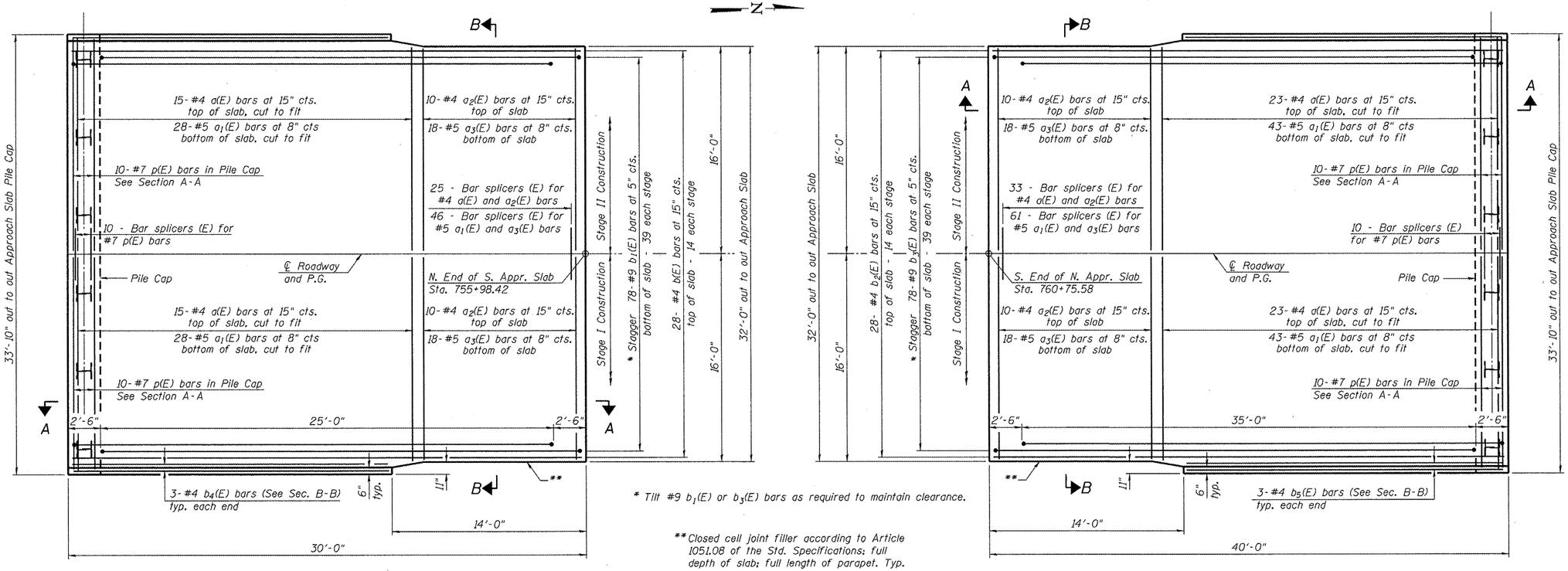
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DRAINAGE SCUPPER, DS-11
S.N. 055-0083
SHEET NO. 16 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	MCDONOUGH	117	56
		CONTRACT NO. 68482		
	ILLINOIS	FED. AID PROJECT		



SOUTH APPROACH SLAB PLAN

NORTH APPROACH SLAB PLAN

(Sheet 1 of 2)

USER NAME = dheberling	DESIGNED - BRD/FLL	REVISED -	
FILE NAME = 0550083-68482.dgn	CHECKED - SDS/JHP	REVISED -	
PLOT DATE = 12/21/2010	DRAWN - DLH	REVISED -	
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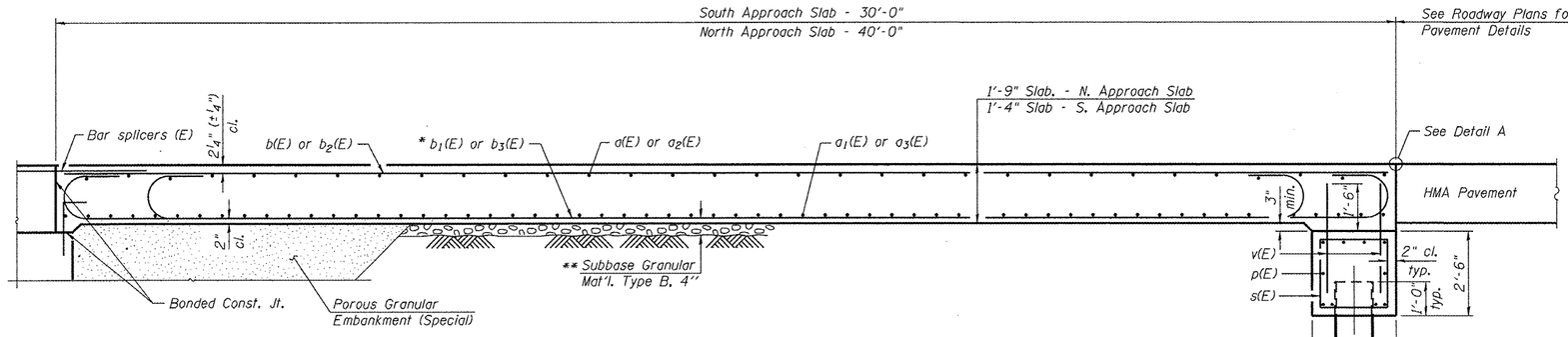
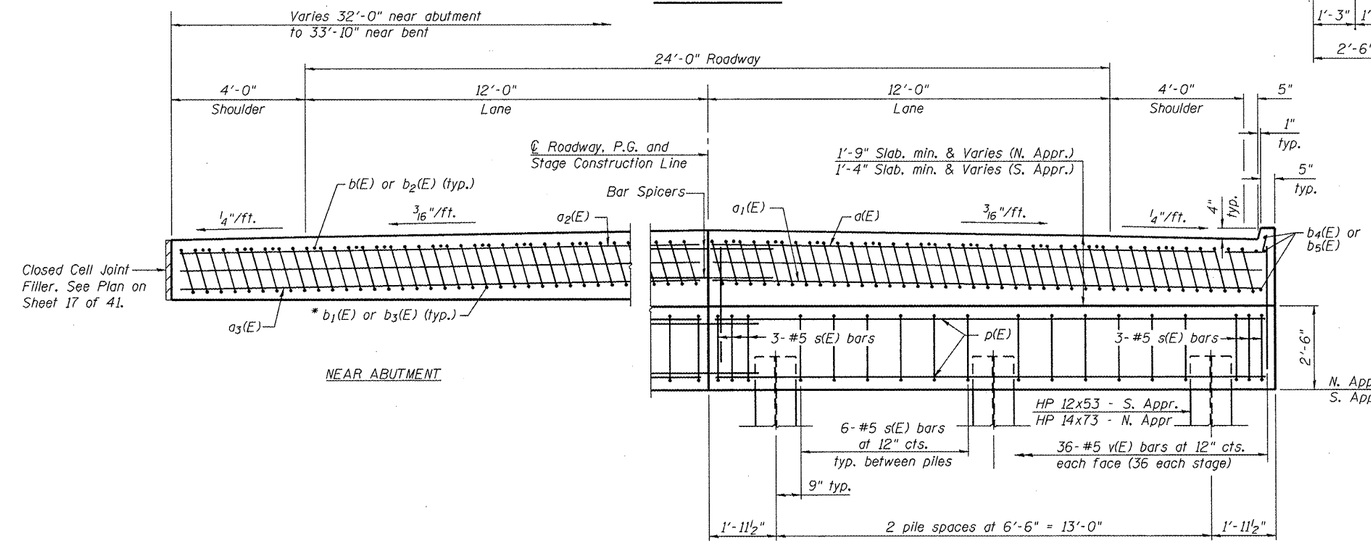
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BRIDGE APPROACH SLAB DETAILS
S.N. 055-0083
SHEET NO. 17 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	MCDONOUGH	117	57
		CONTRACT NO. 68482		
	ILLINOIS FED. AID PROJECT			



SECTION A-A



NEAR ABUTMENT

AT APPROACH PILE CAP

S. APPR. PILE DATA

Type: HP 12x53 w/ Pile Shoes
Nominal Required Bearing: 261 k
Factored Resistance Available: 100 k
Est. Length: 63'-0"
No. Production Piles: 6
No. Test Piles: 0

N. APPR. PILE DATA

Type: HP 14x73 w/ Pile Shoes
Nominal Required Bearing: 518 k
Factored Resistance Available: 100 k
Est. Length: 73'-0"
No. Production Piles: 6
No. Test Piles: 0

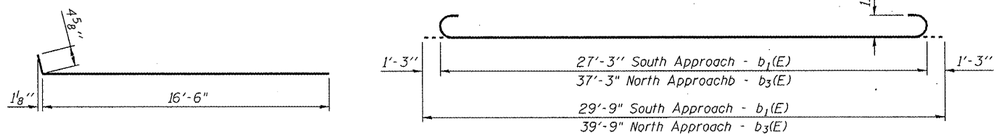
Notes:
Approach slab concrete shall be paid for as Concrete Superstructure.
Approach Pile Cap concrete shall be paid for as Concrete Structures.
Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
For bar splicer details, see sheet 32 of 41.
Cost of excavation for approach pile cap included with Concrete Structures.
For Porous Granular Embankment (Special) and drainage treatment details, see sheet 2 of 41.

* Tilt #9 b1(E) or b3(E) bars as required to maintain clearance.

** Cost included with Concrete Superstructure.

SECTION B-B

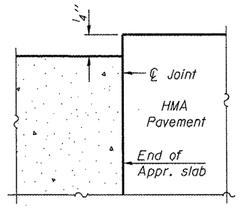
(See plan for dimensions not shown.)



BAR d(E)

BAR b1(E) or b3(E)

BARS s(E)



DETAIL A

TWO APPROACHES BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d(E)	76	#4	16'-11"	
a1(E)	142	#5	16'-7"	
a2(E)	40	#4	15'-8"	
a3(E)	72	#5	15'-8"	
b(E)	28	#4	29'-8"	
b1(E)	78	#9	29'-9"	
b2(E)	28	#4	39'-8"	
b3(E)	78	#9	39'-9"	
b4(E)	6	#4	15'-8"	
b5(E)	6	#4	25'-8"	
p(E)	40	#7	16'-7"	
s(E)	36	#5	9'-7"	
v(E)	72	#5	3'-0"	
Concrete Structures			Cu. Yd.	15.8
Concrete Superstructure			Cu. Yd.	146.7
Reinforcement Bars, Epoxy Coated			Pound	26,750
Furnishing Steel Piles HP 12x53			Foot	378
Furnishing Steel Piles HP 14x73			Foot	438
Driving Piles			Foot	816
Pile Shoes			Each	12

USER NAME = dheberling	DESIGNED - BRD/FLL	REVISED -	
FILE NAME = 0550083-68482.dgn	CHECKED - SDS/JHP	REVISED -	
PLOT DATE = 12/21/2010	DRAWN - DLH	REVISED -	
PLOT TIME = 10:38:42 AM	CHECKED - CWC/SDS	REVISED -	

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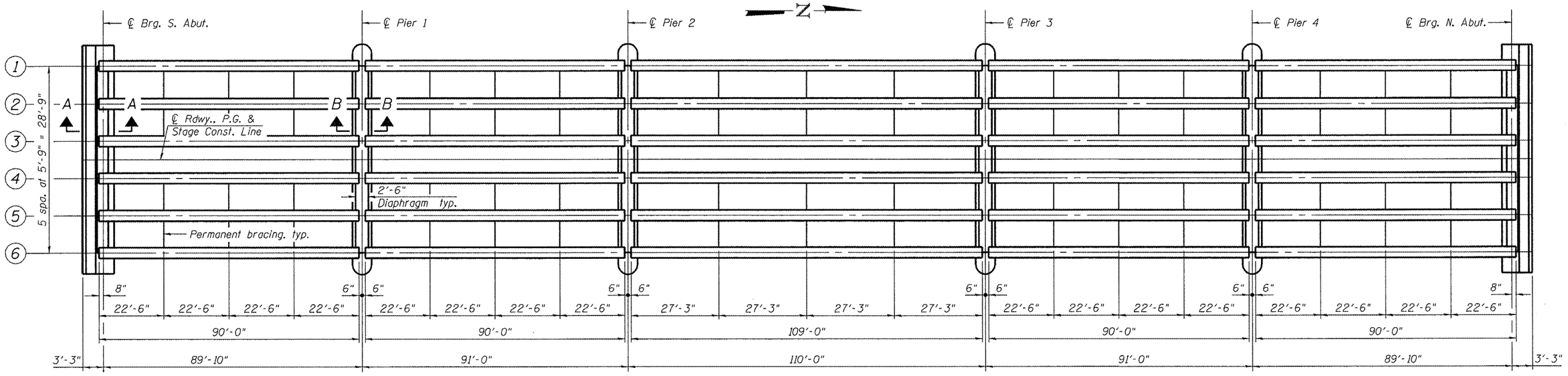
DEPARTMENT OF TRANSPORTATION

BRIDGE APPROACH SLAB DETAILS
S.N. 055-0083
SHEET NO. 18 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	MCDONOUGH	117	58
		CONTRACT NO. 68482		
		ILLINOIS FED. AID PROJECT		



FRAMING PLAN

See sheet 14 of 41 for Section A-A and B-B.

INTERIOR BEAM MOMENT TABLE						
		0.4 Sp. 1 0.6 Sp. 5	Pier 1 Pier 4	0.5 Sp. 2 0.5 Sp. 4	Pier 2 Pier 3	0.5 Sp. 3
I	(in^4)	213,715	213,715	213,715	213,715	213,715
I'	(in^4)	484,854	-	484,854	-	473,941
S_b	(in^3)	8,559	8,559	8,559	8,559	8,559
S_b'	(in^3)	12,571	-	12,571	-	12,466
S_t	(in^3)	7,362	7,362	7,362	7,362	7,362
S_t'	(in^3)	31,423	-	31,423	-	29,658
DC1	(k/')	1.22	1.22	1.22	1.22	1.22
M_{DC1}	('k)	1.230	-	1.236	-	1.819
DC2	(k/')	0.15	0.15	0.15	0.15	0.15
M_{DC2}	('k)	99	114	29	123	96
DW	(k/')	0.29	0.29	0.29	0.29	0.29
M_{DW}	('k)	183	204	53	219	171
M_{LL+IM}	(k/')	1.079	1.003	882	1.031	1.045

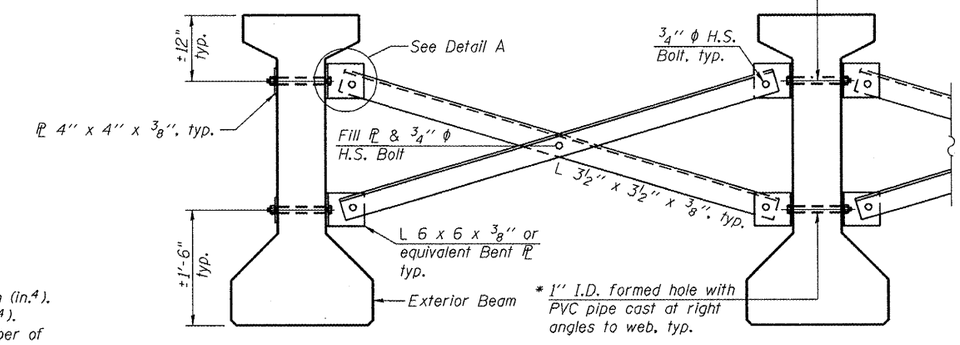
INTERIOR BEAM REACTION TABLE						
		Abut.	Pier 1 Span 1 Pier 4 Span 5	Pier 1 Span 2 Pier 4 Span 4	Pier 2 Span 2 Pier 3 Span 4	Pier 2 Span 3 Pier 3 Span 3
	R_{DC1} (k)	54.4	54.4	54.5	54.5	66.1
*	R_{DC2} (k)	5.5	7.5	7.4	7.6	7.6
*	R_{DW} (k)	9.8	13.3	13.3	13.6	13.6
*	$R_{℄+IM}$ (k)	77.4	72.5	72.5	74.0	74.0
	R_{Total} (k)	147.1	147.7	147.7	149.7	161.3

* The total R_{DC2}, R_{DW} and $R_{℄+IM}$ are assumed to be distributed evenly to each bearing line at a pier regardless of the span ratios. The bearing design at a pier is based on the maximum reactions of either span.

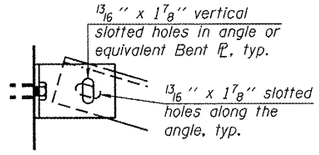
I: Non-composite moment of inertia of beam section ($in.^4$).
I': Composite moment of inertia of beam section ($in.^4$).
S_b: Non-composite section modulus for the bottom fiber of the prestressed beam ($in.^3$).
S_b': Composite section modulus for the bottom fiber of the prestressed beam ($in.^3$).
S_t: Non-composite section modulus for the top fiber of the prestressed beam ($in.^3$).
S_t': Composite section modulus for the top fiber of the prestressed beam ($in.^3$).
DC1: Un-factored non-composite dead load (kips/ft.).
M_{DC1}: Un-factored moment due to non-composite dead load (kip-ft.).
DC2: Un-factored long-term composite (superimposed excluding future wearing surface) dead load (kips/ft.).
M_{DC2}: Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).
DW: Un-factored long-term composite (superimposed future wearing surface only) dead load (kips/ft.).
M_{DW}: Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft).
$M_{℄+IM}$: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).

* Fabricator shall locate to miss strands within permissible tolerances.

$\frac{3}{4}$" ϕ A307 Bolts with lock nuts., typ. Bolts through the concrete web shall be tightened to snug tight only.



Notes:
All material for bracing shall be hot dip galvanized according to AASHTO M111 unless otherwise noted.
Two hardened washers are required for each set of oversized holes.
All holes shall be $\frac{15}{16}$"ϕ unless otherwise noted.
$\frac{5}{16}$" x 3" x 3" plate washers are required over all slotted holes.
All bolts shall be galvanized according to AASHTO M232.
Bracing shall be installed as beams are erected and tightened as soon as possible during erection.
Permanent bracing shall not be paid for separately, but shall be included in the cost of Furnishing and Erecting Precast Prestressed Concrete I-Beams.



DETAIL A

PERMANENT BRACING DETAILS FOR 54" PPC I-BEAMS

USER NAME = dheberling	DESIGNED - BRD/FLL	REVISED -	
FILE NAME = 0550083-68482.dgn	CHECKED - SDS/JHP	REVISED -	
PLOT DATE = 12/21/2010	DRAWN - DLH	REVISED -	
PLOT TIME = 10:30:45 AM	CHECKED - CWC/SDS	REVISED -	

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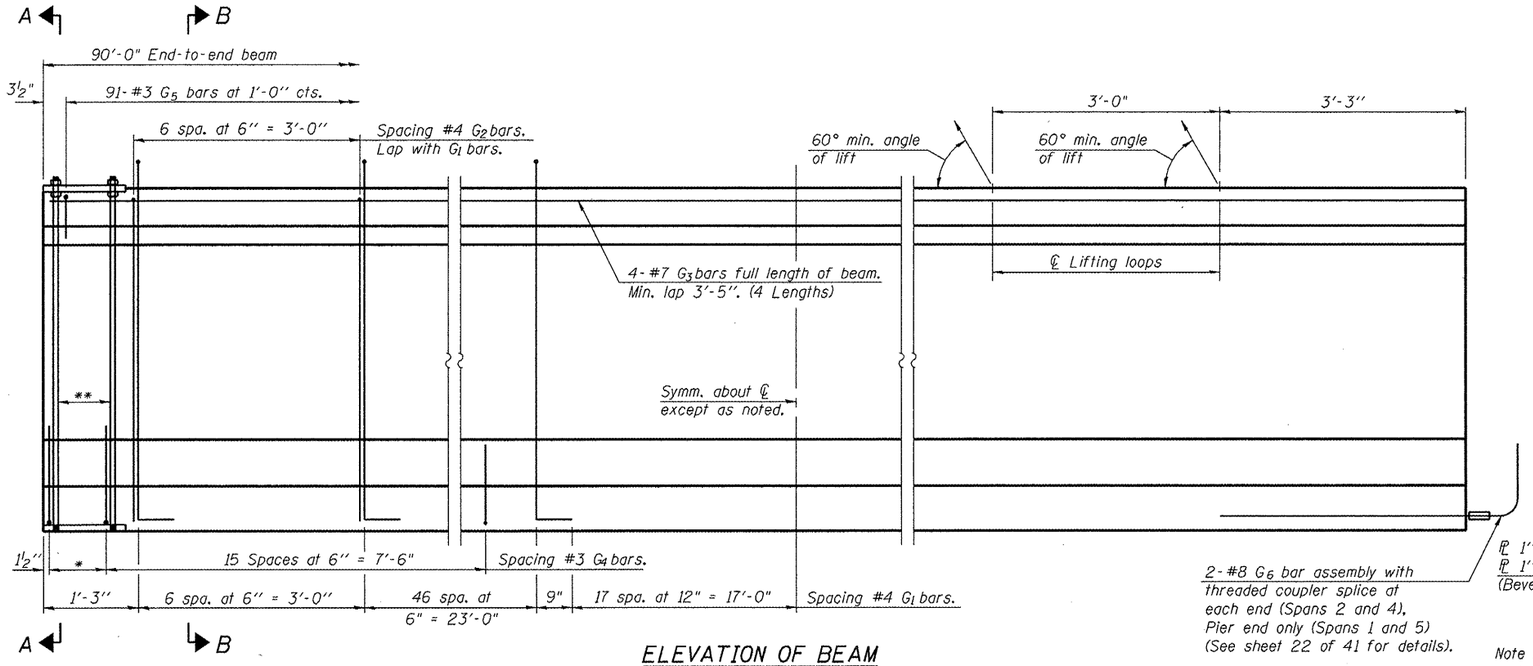
DESIGN FIRM #184001036

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FRAMING PLAN
S.N. 055-0083
SHEET NO. 19 OF 41 SHEETS

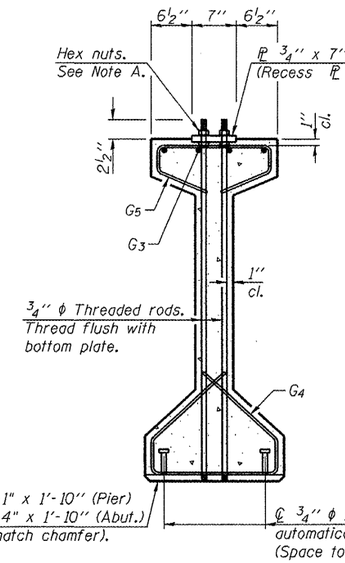
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	MCDONOUGH	117	59
		CONTRACT NO. 68482		
	ILLINOIS FED. AID PROJECT			



ELEVATION OF BEAM
(Showing reinforcement & dimensions)

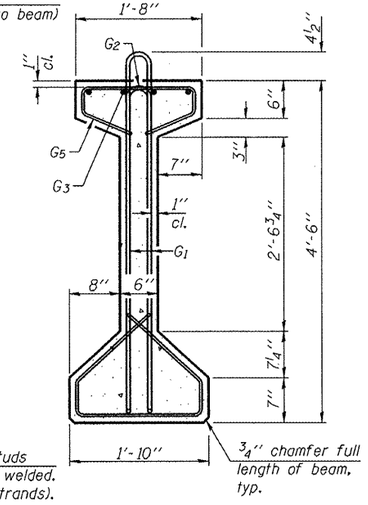
* 3 spaces at 3" = 9".
** 4-¾" ϕ threaded dowel rods at 3" cts., Each Face.

**** See details on sheet 19 of 41 for number and location of holes.

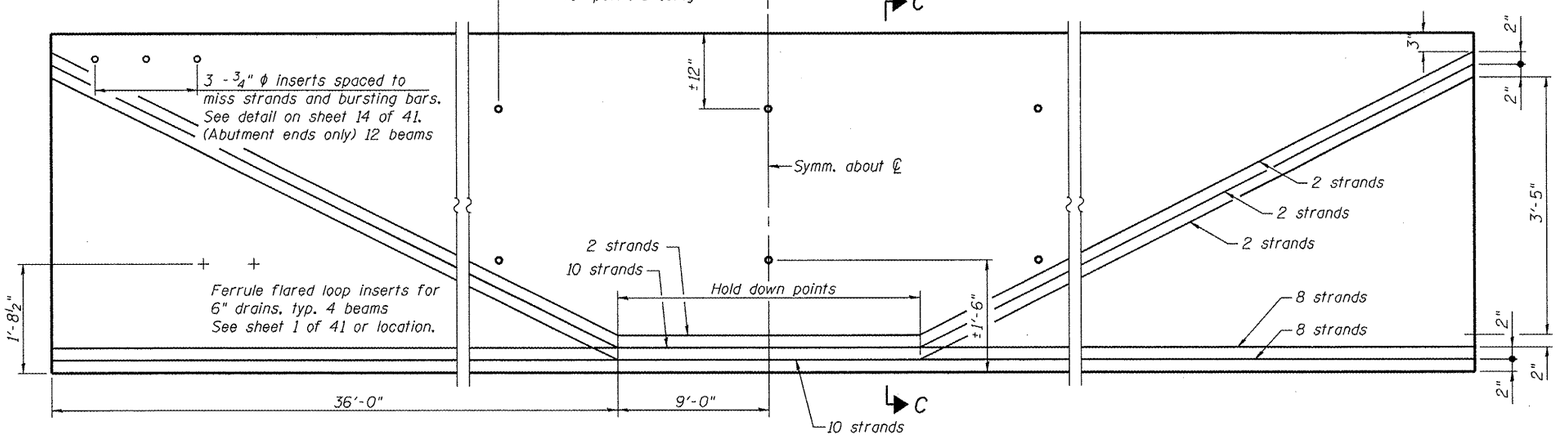


SECTION A-A

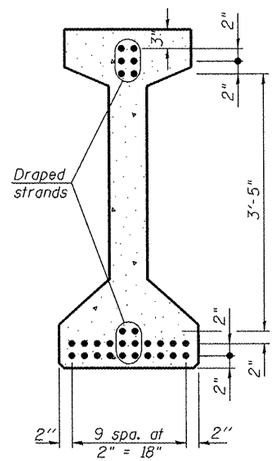
Note A:
Hex nuts (top and bottom) with lock washers (top). Only tighten sufficiently to compress lock washers.



SECTION B-B



ELEVATION OF BEAM
(Showing prestressing steel)



SECTION C-C

*** BAR LIST ONE BEAM ONLY (SPANS 1 AND 5)

Bar	No.	Size	Length	Shape
G_1	141	#4	10'-5"	
G_2	14	#4	8'-8"	
G_3	16	#7	25'-0"	
G_4	38	#3	4'-11"	
G_5	91	#3	3'-5"	
G_6	2	#8	6'-6"	

***For information only

*** BAR LIST ONE BEAM ONLY (SPANS 2 AND 4)

Bar	No.	Size	Length	Shape
G_1	141	#4	10'-5"	
G_2	14	#4	8'-8"	
G_3	16	#7	25'-0"	
G_4	38	#3	4'-11"	
G_5	91	#3	3'-5"	
G_6	4	#8	6'-6"	

***For information only

Notes:
See sheet 22 of 41 for additional details and Bill of Material.
Required release strength, f'ci, shall be 5,000 psi.

PI-4-54 7-1-10

USER NAME = dheberling	DESIGNED - BRD/FLL	REVISED -	
FILE NAME = 0550083-68482.dgn	CHECKED - SDS/JHP	REVISED -	
PLOT DATE = 12/21/2010	DRAWN - DLH	REVISED -	
PLOT TIME = 10:30:48 AM	CHECKED - CWC/SDS	REVISED -	

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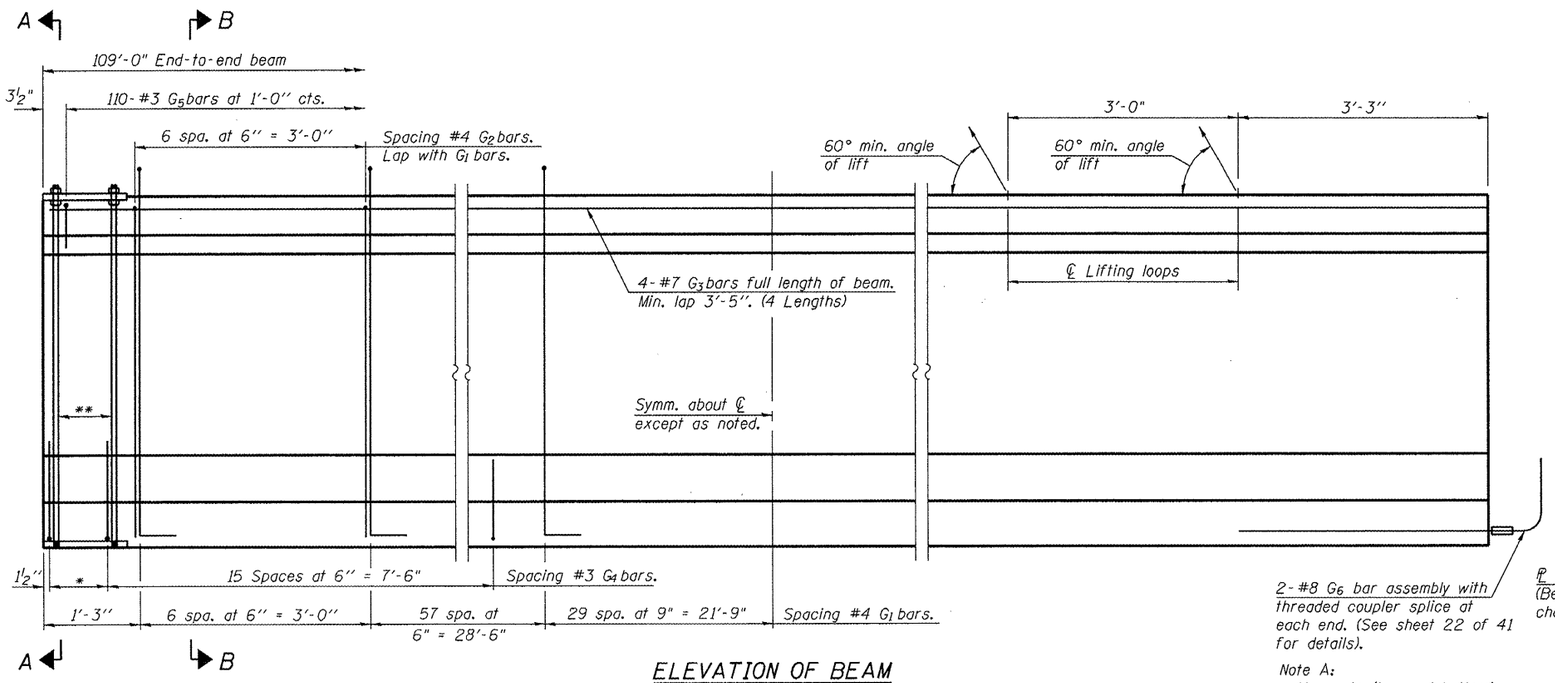
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

54" PPC I-BEAM – SPANS 1, 2, 4 & 5
S.N. 055-0083
SHEET NO. 20 OF 41 SHEETS

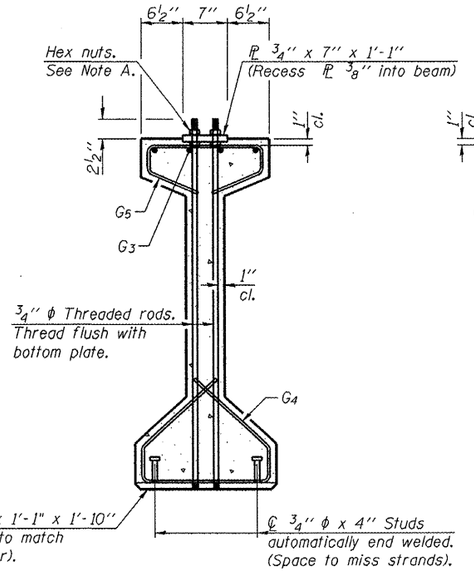
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	MCDONOUGH	117	60
		CONTRACT NO. 68482		
		ILLINOIS FED. AID PROJECT		



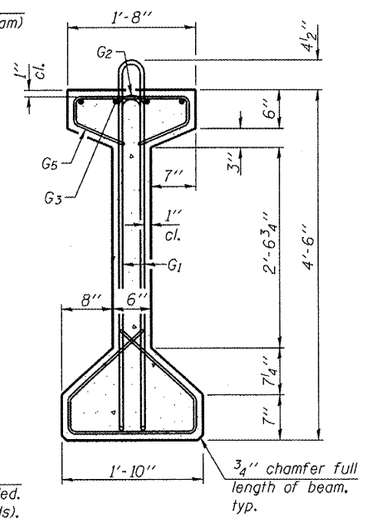
ELEVATION OF BEAM
(Showing reinforcement & dimensions)

2- #8 G_6 bar assembly with threaded coupler splice at each end. (See sheet 22 of 41 for details).

Note A:
Hex nuts (top and bottom) with lock washers (top). Only tighten sufficiently to compress lock washers.

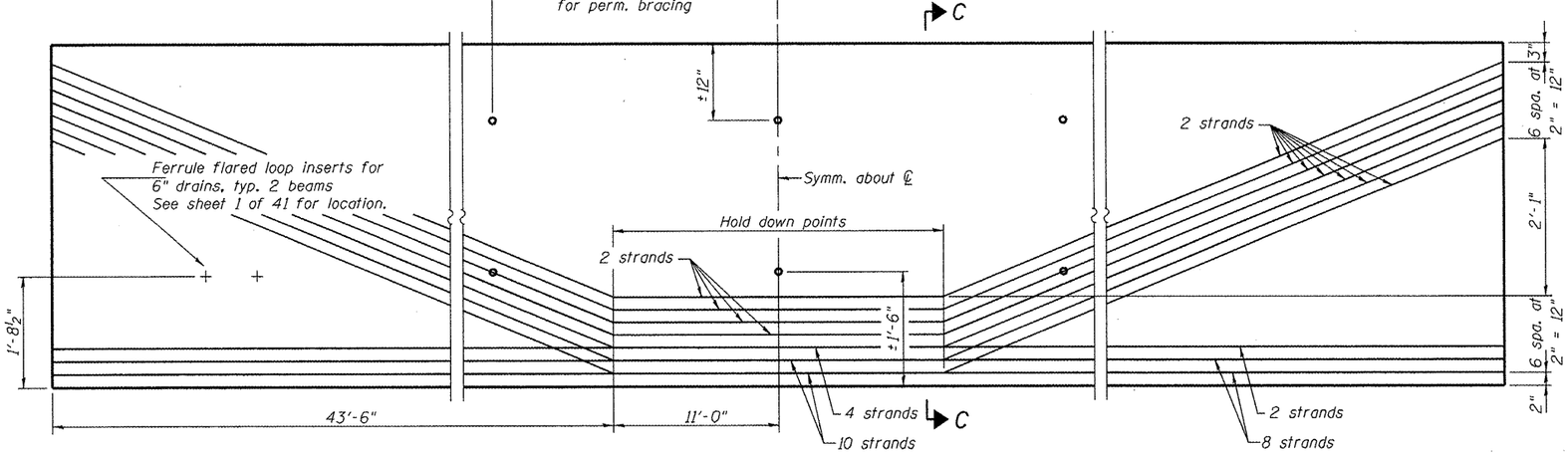


SECTION A-A



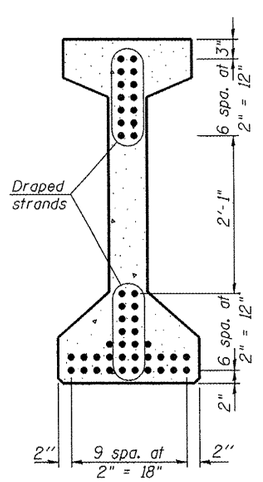
SECTION B-B

* 3 spaces at 3" = 9".
** 4- ¾" ϕ threaded dowel rods at 3" cts., Each Face.



ELEVATION OF BEAM
(Showing prestressing steel)

**** See details on sheet 19 of 41 for number and location of holes.



SECTION C-C

*** BAR LIST
ONE BEAM ONLY

Bar	No.	Size	Length	Shape
G_1	185	#4	10'-5"	⊓L
G_2	14	#4	8'-8"	⊓
G_3	16	#7	29'-9"	—
G_4	38	#3	4'-11"	⌓
G_5	110	#3	3'-5"	⊂⊃
G_6	4	#8	6'-6"	⌒

***For information only

Notes:
See sheet 22 of 41 for additional details and Bill of Material.
Required release strength, f'ci, shall be 6,000 psi.

PI-4-54 7-1-10

USER NAME = dheberling	DESIGNED - BRD/FLL	REVISED -	
FILE NAME = 0550083-68482.dgn	CHECKED - SDS/JHP	REVISED -	
PLOT DATE = 12/21/2010	DRAWN - DLH	REVISED -	
PLOT TIME = 10:30:51 AM	CHECKED - CWC/SDS	REVISED -	

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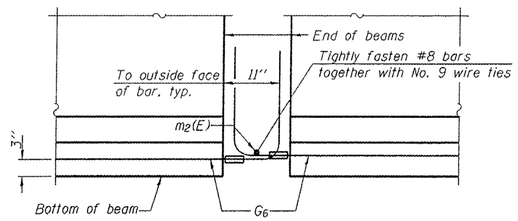
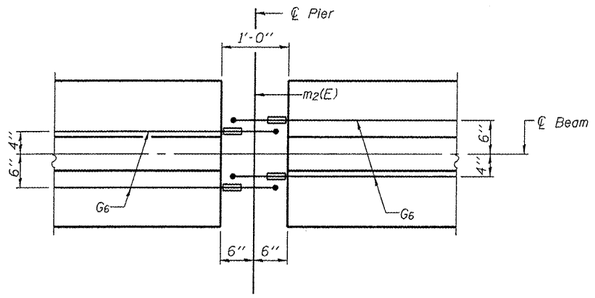
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

54" PPC I-BEAM – SPAN 3
S.N. 055-0083
SHEET NO. 21 OF 41 SHEETS

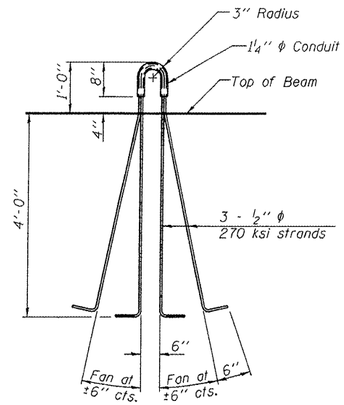
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	MCDONOUGH	117	61
		CONTRACT NO. 68482		
	ILLINOIS FED. AID PROJECT			



ELEVATION OF BEAM AT PIER



PLAN OF BEAM AT PIER



LIFTING LOOP DETAIL

NOTES

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

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

Reinforcement bars shall conform to ASTM A 706, Grade 60. (See Special Provisions).

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

Tilt G_6 bars when necessary to maintain 1½" clearance.

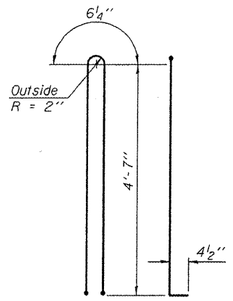
The top and bottom plates shall be AASHTO M270 Grade 50.

The bottom plates and studs shall be galvanized according to AASHTO M111. Top plates and threaded rods need not be galvanized.

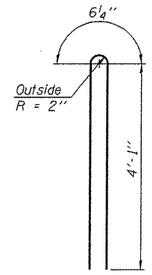
Threaded rods shall be ASTM F 1554 Grade 55.

The G_6 bar assembly shall be capable of developing 125 percent of the yield strength of the grade 60 reinforcement bar components. The assembly shall allow completion of the splice without turning of the hook bar. The hook bar shall be threaded such that the entire coupler can be threaded onto the hook bar.

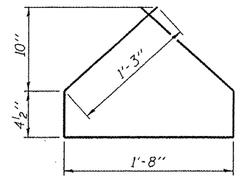
Beams requiring G_6 bar assemblies shall not be released from the fabricator until they have attained 45 days of age or older.



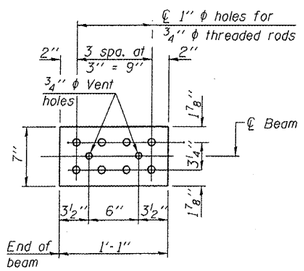
BAR G1



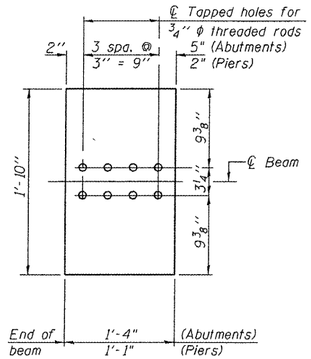
BAR G2



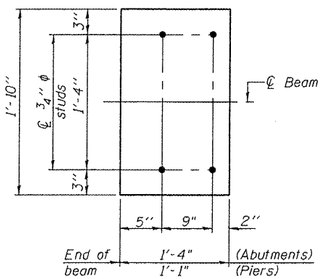
BAR G4



TOP PLATE

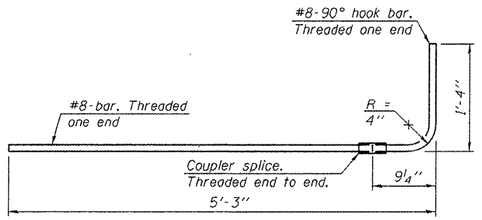


BOTTOM PLATE
(Showing threaded rods)

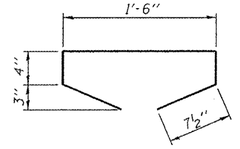


BOTTOM PLATE
(Showing studs)

See bearing details for pintle hole locations when required.



G6 BAR ASSEMBLY



BAR G5

BILL OF MATERIAL

Item	Unit	Total
Furnishing and Erecting Precast Prestressed Concrete I-Beams, 54"	Ft.	2,814

PI-4-54D 7-1-10

USER NAME = dheberling	DESIGNED - BRD/FLL	REVISED -	
FILE NAME = 0550083-68482.dgn	CHECKED - SDS/JHP	REVISED -	
PLOT DATE = 12/21/2010	DRAWN - DLH	REVISED -	
PLOT TIME = 10:30:53 AM	CHECKED - CWC/SDS	REVISED -	

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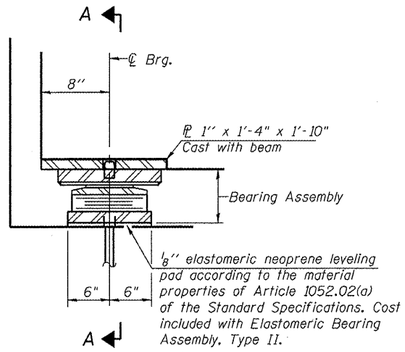
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

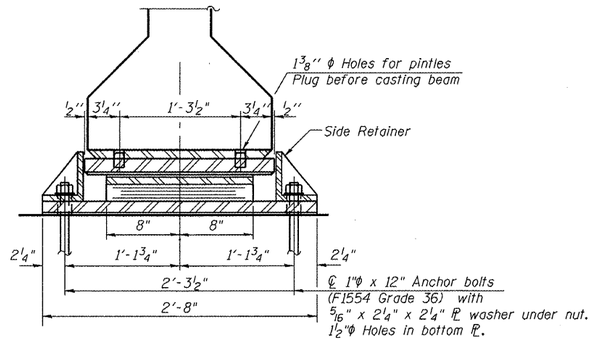
54" PPC I-BEAM DETAILS S.N. 055-0083

SHEET NO. 22 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	MCDONOUGH	117	62
		CONTRACT NO. 68482		
	ILLINOIS FED. AID PROJECT			

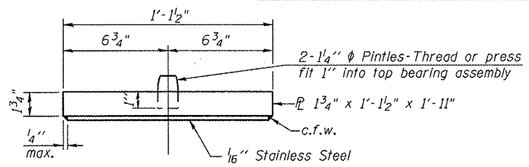


SECTION AT ABUT.

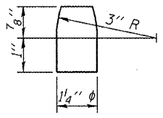


SECTION A-A

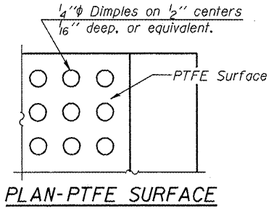
TYPE II ELASTOMERIC EXP. BRG.



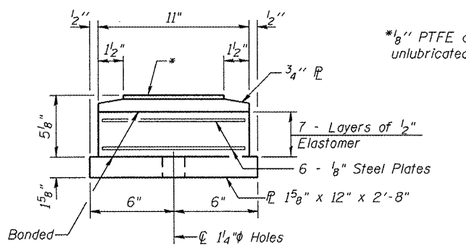
TOP BEARING ASSEMBLY



PINTLE

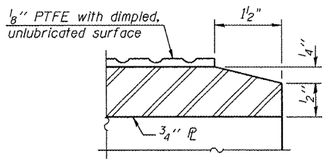


PLAN-PTFE SURFACE

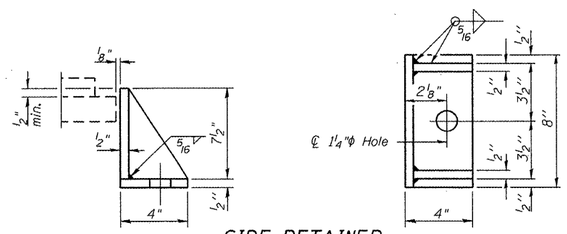


*1/8" PTFE dimpled, unlubricated

BOTTOM BEARING ASSEMBLY

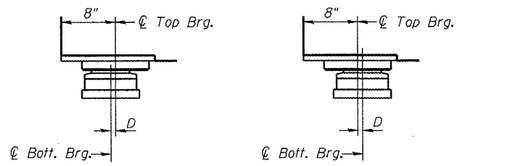


SECTION THRU PTFE



SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.



BELOW 50°F. (Move bott. brg. away from fixed brg.)

ABOVE 50°F. (Move bott. brg. toward fixed brg.)

SETTING ANCHOR BOLTS AT EXP. BRG.

D=1/8" per each 100° of expansion for every 15° temp. change from the normal temp. of 50°F.

Notes:

Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

Anchor bolts for Type II bearings shall be placed in holes in the concrete drilled through holes in the bottom bearing plate after members are in place. Side retainers shall be placed after bolts are installed.

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

Side retainers and other steel members required for the bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type II.

The 1/8" PTFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.

Bonding of 1/8" PTFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.

See sheet 22 of 41 for additional details of plate cast with beam.

All (embedded and separate) bearing plates, side retainers, anchor bolts, nuts, washers and pintles shall be galvanized according to AASHTO M111 or M232 as applicable.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly, Type II	Each	12
Anchor Bolts, 1"	Each	24

PI-2E-2 7-1-10

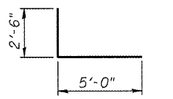
USER NAME = dhebering	DESIGNED - BRD/FLL	REVISED -	
FILE NAME = 0550083-68482.dgn	CHECKED - SDS/JHP	REVISED -	
PLOT DATE = 12/21/2010	DRAWN - DLH	REVISED -	
PLOT TIME = 10:30:55 AM	CHECKED - CWC/SDS	REVISED -	

WHKS & co. ENGINEERING
7018 KINGSMILL CT., SPRINGFIELD, IL (217) 483-9457 DESIGN FIRM #184001036

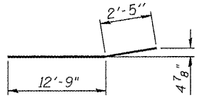
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

BEARING DETAILS
S.N. 055-0083
SHEET NO. 23 OF 41 SHEETS

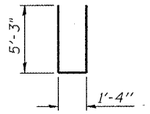
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	MCDONOUGH	117	63
		CONTRACT NO. 68482		
	ILLINOIS FED. AID PROJECT			



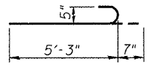
BAR $h_2(E)$



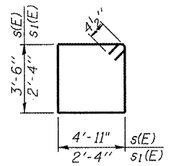
BAR $h_4(E)$



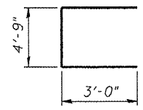
BAR $n(E)$



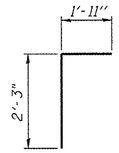
BAR $n_1(E)$



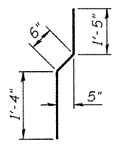
BARS $s(E)$ & $s_1(E)$



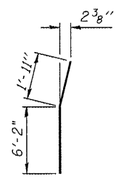
BAR $u(E)$



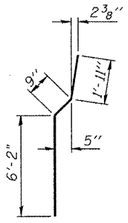
BAR $v(E)$



BAR $v_1(E)$



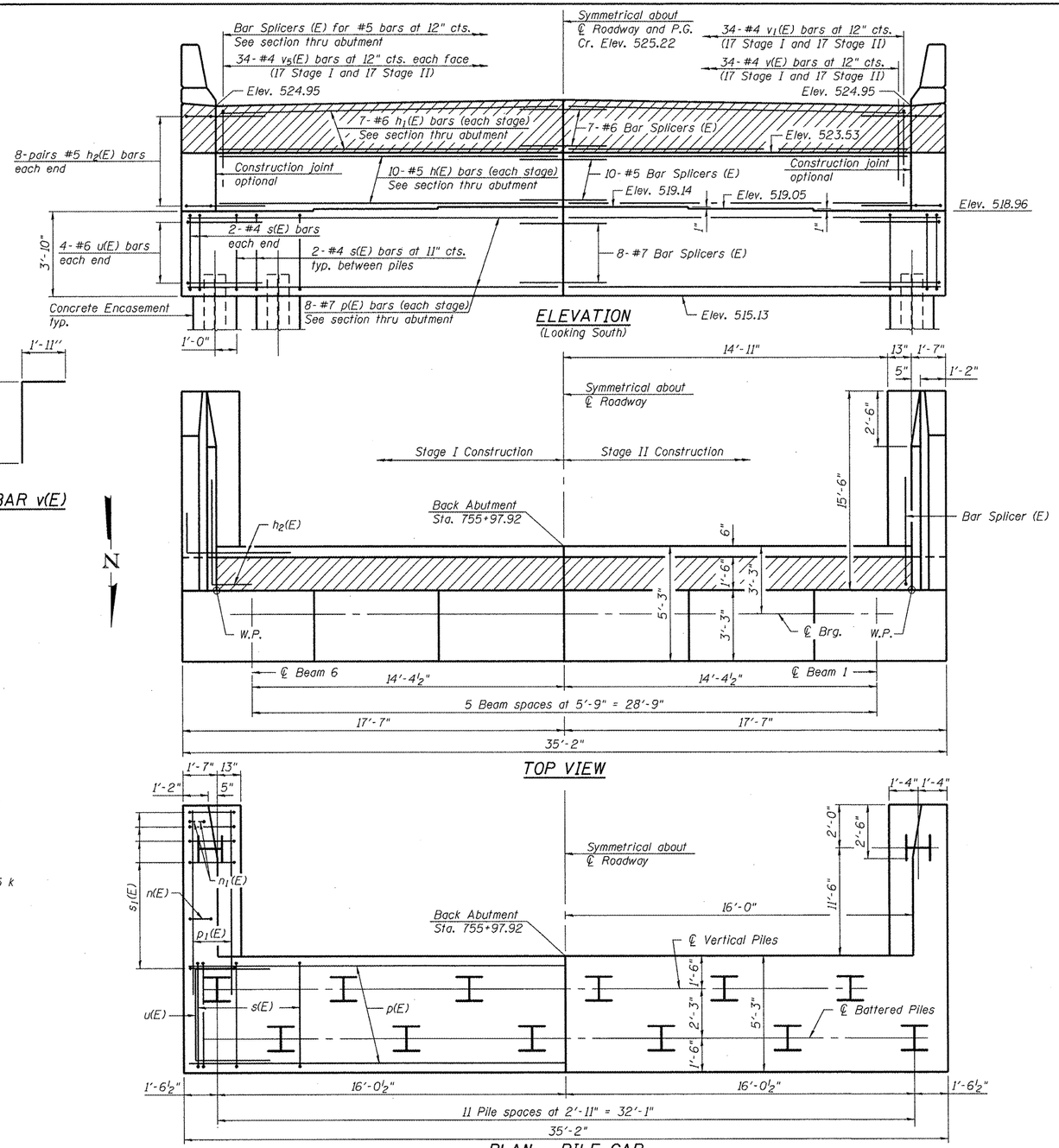
BAR $v_3(E)$



BAR $v_4(E)$

PILE DATA

Type: HP 12x53 w/ Pile Shoes
Nominal Required Bearing: 351
Factored Resistance Available: 145 k
Est. Length: 71'-0"
No. Production Piles: 13
No. Test Piles: 1



SOUTH ABUTMENT BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	20	#5	15'-9"	
$h_1(E)$	14	#6	15'-9"	
$h_2(E)$	32	#5	7'-6"	
$h_3(E)$	26	#4	15'-3"	
$h_4(E)$	18	#4	15'-2"	
n(E)	26	#5	11'-10"	
$n_1(E)$	12	#5	5'-10"	
p(E)	16	#7	17'-3"	
$p_1(E)$	12	#7	18'-0"	
s(E)	26	#4	17'-7"	
$s_1(E)$	30	#4	10'-1"	
u(E)	8	#6	10'-9"	
v(E)	34	#5	4'-2"	
$v_1(E)$	34	#4	3'-3"	
$v_2(E)$	32	#5	8'-6"	
$v_3(E)$	6	#5	8'-1"	
$v_4(E)$	26	#5	8'-10"	
$v_5(E)$	68	#4	6'-10"	
Structure Excavation		Cu. Yd.	132	
Concrete Structures		Cu. Yd.	56.8	
Concrete Encasement		Cu. Yd.	4.9	
Reinforcement Bars, Epoxy Coated		Pound	4,500	
Furnishing Steel Piles HP 12x53		Foot	923	
Driving piles		Foot	923	
Test Piles Steel HP 12x53		Each	1	
Pile Shoes		Each	14	

For details of Bar Splicers, see sheet 32 of 41.
For details of piles and Concrete Encasement, see sheet 31 of 41.

A-1 7-1-10

USER NAME = dhoberling	DESIGNED -	BRD/FLL	REVISED -
FILE NAME = 0550083-68482.dgn	CHECKED -	SDS/JHP	REVISED -
PLOT DATE = 12/21/2010	DRAWN -	DLH	REVISED -
PLOT TIME = 10:38:58 AM	CHECKED -	CWC/SDS	REVISED -

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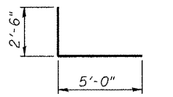
(217) 483-9457
DESIGN FIRM #184001036

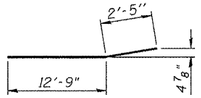
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOUTH ABUTMENT
S.N. 055-0083
SHEET NO. 24 OF 41 SHEETS

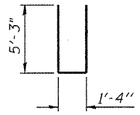
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	MCDONOUGH	117	64
		CONTRACT NO. 68482		
		ILLINOIS FED. AID PROJECT		



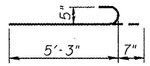
BAR $h_2(E)$



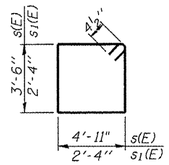
BAR $h_4(E)$



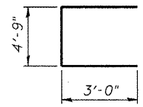
BAR $n(E)$



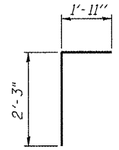
BAR $n_1(E)$



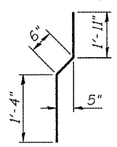
BARS $s(E)$ & $s_1(E)$



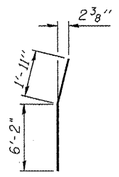
BAR $u(E)$



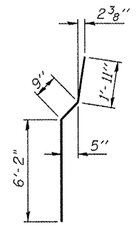
BAR $v(E)$



BAR $v_6(E)$



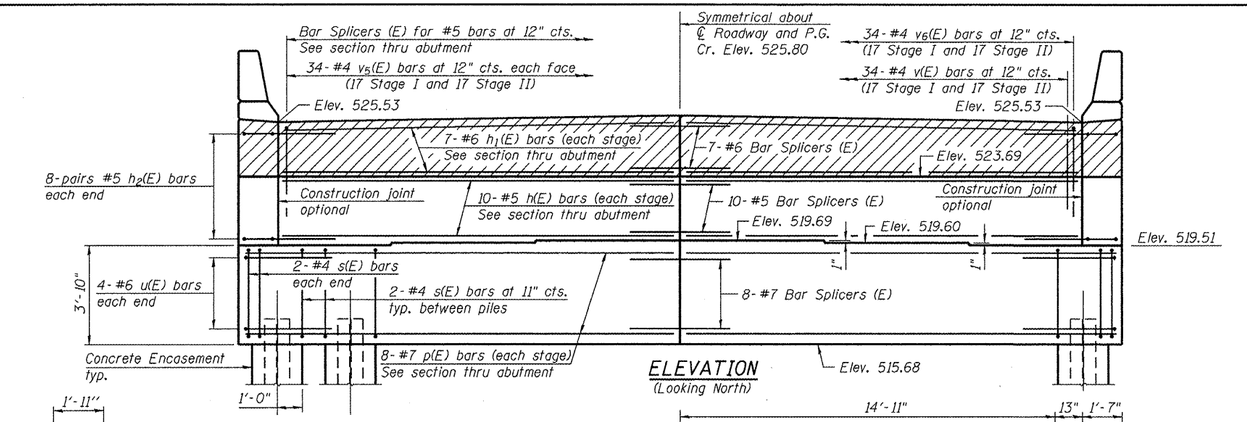
BAR $v_3(E)$

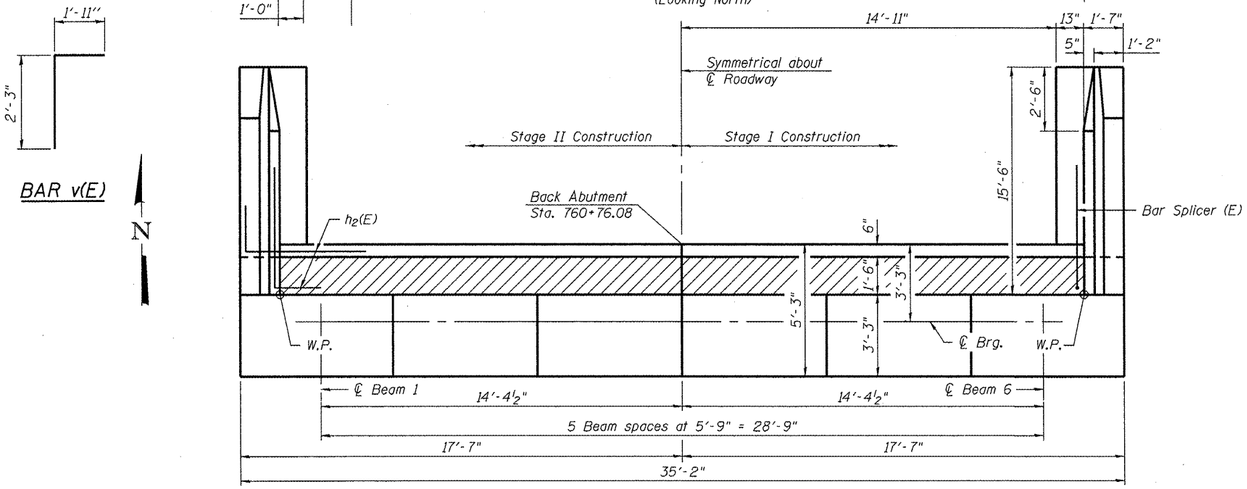


BAR $v_4(E)$

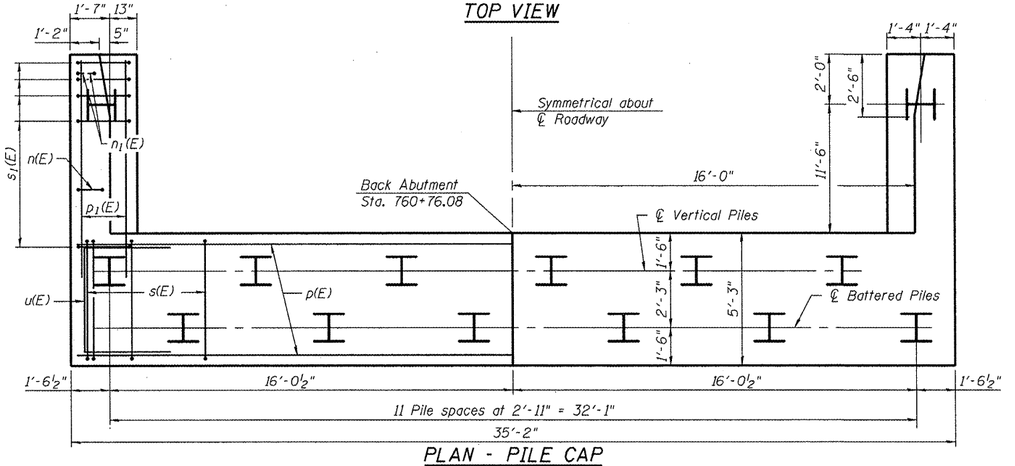
PILE DATA

Type: HP 14x102 w/ Pile Shoes
Nominal Required Bearing: 645
Factored Resistance Available: 160 k
Est. Length: 69'-0"
No. Production Piles: 13
No. Test Piles: 1





TOP VIEW



PLAN - PILE CAP

NORTH ABUTMENT
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	20	#5	15'-9"	
$h_1(E)$	14	#6	15'-9"	
$h_2(E)$	32	#5	7'-6"	
$h_3(E)$	26	#4	15'-3"	
$h_4(E)$	18	#4	15'-2"	
n(E)	26	#5	11'-10"	
$n_1(E)$	12	#5	5'-10"	
p(E)	16	#7	17'-3"	
$p_1(E)$	12	#7	18'-0"	
s(E)	26	#4	17'-7"	
$s_1(E)$	30	#4	10'-1"	
u(E)	8	#6	10'-9"	
v(E)	34	#5	4'-2"	
$v_2(E)$	32	#5	8'-6"	
$v_3(E)$	6	#5	8'-1"	
$v_4(E)$	26	#5	8'-10"	
$v_5(E)$	68	#4	6'-10"	
$v_6(E)$	34	#4	3'-9"	

Structure Excavation	Cu. Yd.	132
Concrete Structures	Cu. Yd.	55.5
Concrete Encasement	Cu. Yd.	7.7
Reinforcement Bars, Epoxy Coated	Pound	4,520
Furnishing Steel Piles HP 14x102	Foot	897
Driving piles	Foot	897
Test Piles Steel HP 14x102	Each	1
Pile Shoes	Each	14

For details of Bar Splicers, see sheet 32 of 41.
For details of piles and Concrete Encasement, see sheet 32 of 41.

A-1 7-1-10

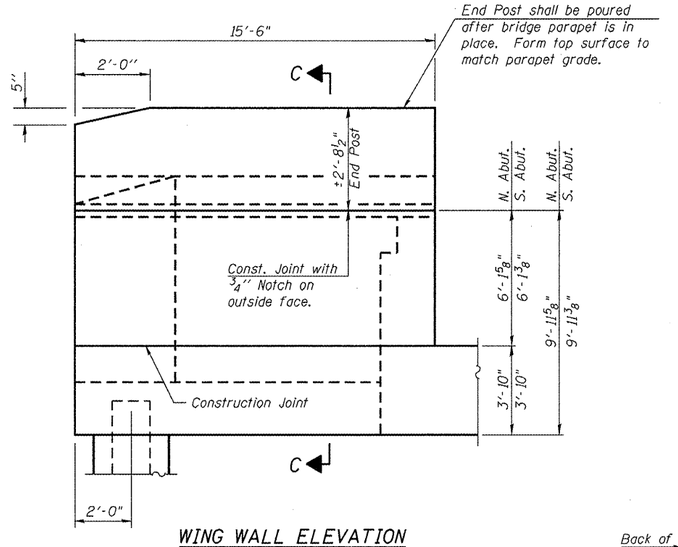
USER NAME = dheberling	DESIGNED - BRD/FLL	REVISED -	
FILE NAME = 0550083-68482.dgn	CHECKED - SDS/JHP	REVISED -	
PLOT DATE = 12/21/2010	DRAWN - DLH	REVISED -	
PLOT TIME = 10:31:01 AM	CHECKED - CWC/SDS	REVISED -	

WHKS & CO. ENGINEERING
7018 KINGSMILL CT.,
SPRINGFIELD, IL
(217) 483-9457
DESIGN FIRM #184001036

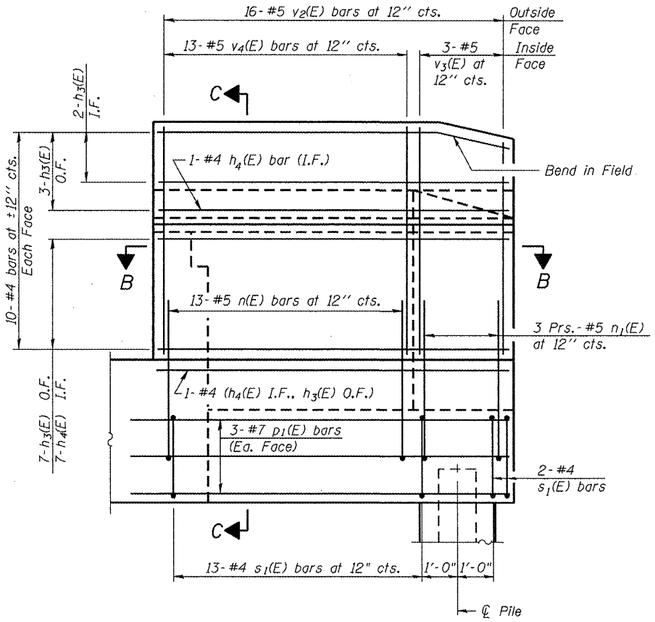
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NORTH ABUTMENT
S.N. 055-0083
SHEET NO. 25 OF 41 SHEETS

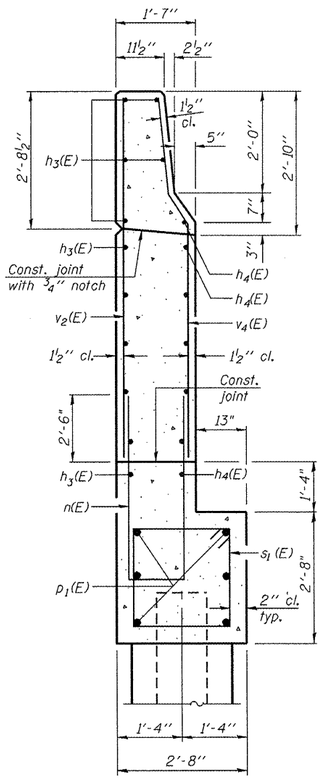
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	MCDONOUGH	117	65
		CONTRACT NO. 68482		
		ILLINOIS FED. AID PROJECT		

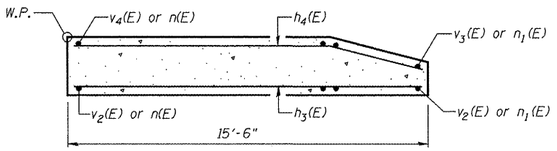


WING WALL ELEVATION
Showing Dimensions



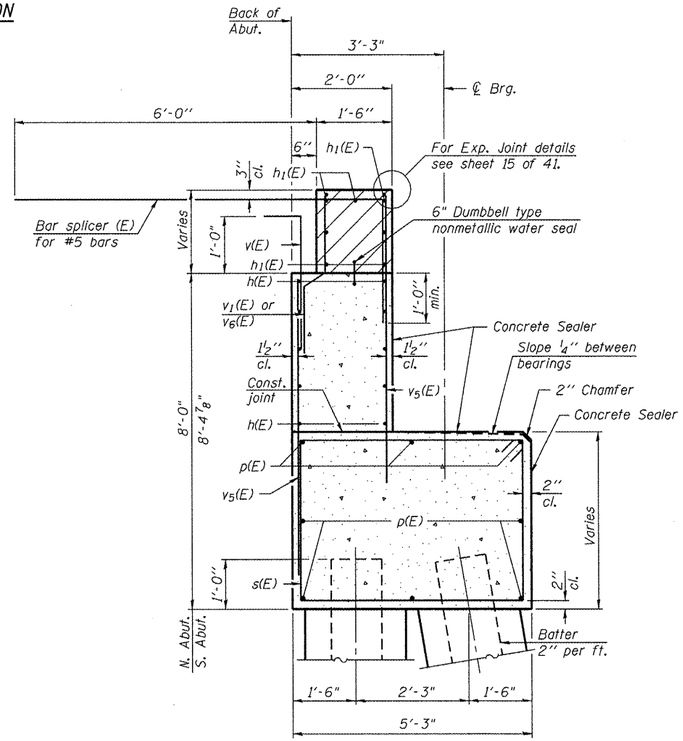
WING WALL ELEVATION
Showing Reinforcement





SECTION B-B

SECTION C-C



SEC. THRU ABUT.

Notes:
Hatched area to be poured after superstructure false work has been removed. Quantity of concrete included with Concrete Superstructure.
Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.
Quantity of concrete in end post included with Concrete Superstructure on sheet 13 of 41.
For Concrete Encasement details, see sheet 31 of 41.

A-1-D 7-1-10

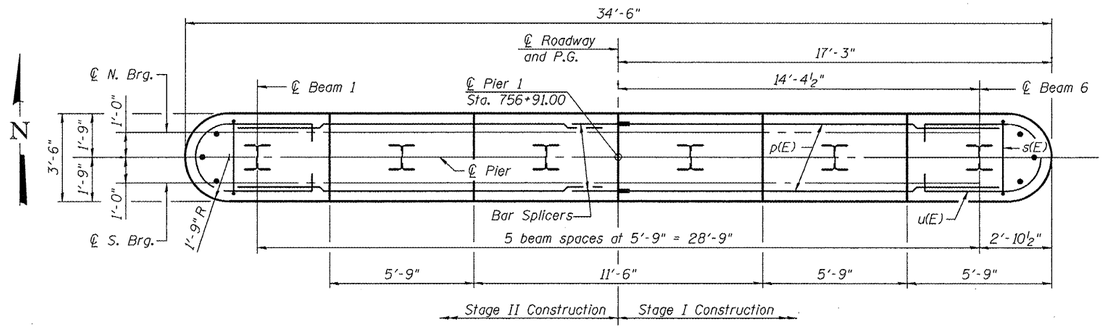
USER NAME = dheberling	DESIGNED - BRD/FLL	REVISED -	
FILE NAME = 0550083-68482.dgn	CHECKED - SDS/JHP	REVISED -	
PLOT DATE = 12/21/2010	DRAWN - DLH	REVISED -	
PLOT TIME = 10:31:04 AM	CHECKED - CWC/SDS	REVISED -	

WHKS & co. ENGINEERING
7018 KINGSMILL CT., SPRINGFIELD, IL
(217) 483-9457
DESIGN FIRM #184001036

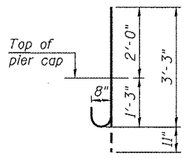
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ABUTMENT DETAILS
S.N. 055-0083
SHEET NO. 26 OF 41 SHEETS

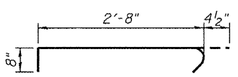
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	MCDONOUGH	117	66
		CONTRACT NO. 68482		
		ILLINOIS FED. AID PROJECT		



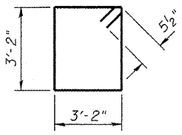
TOP PLAN



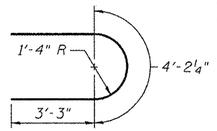
BAR $v_1(E)$



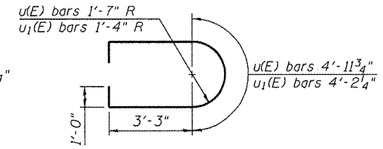
BAR $s_1(E)$



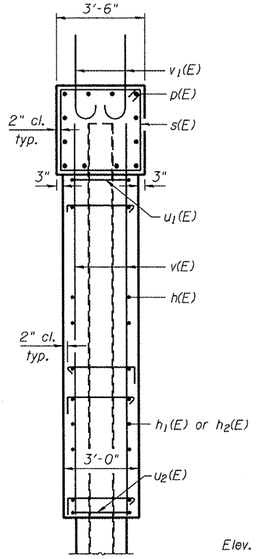
BAR s(E)



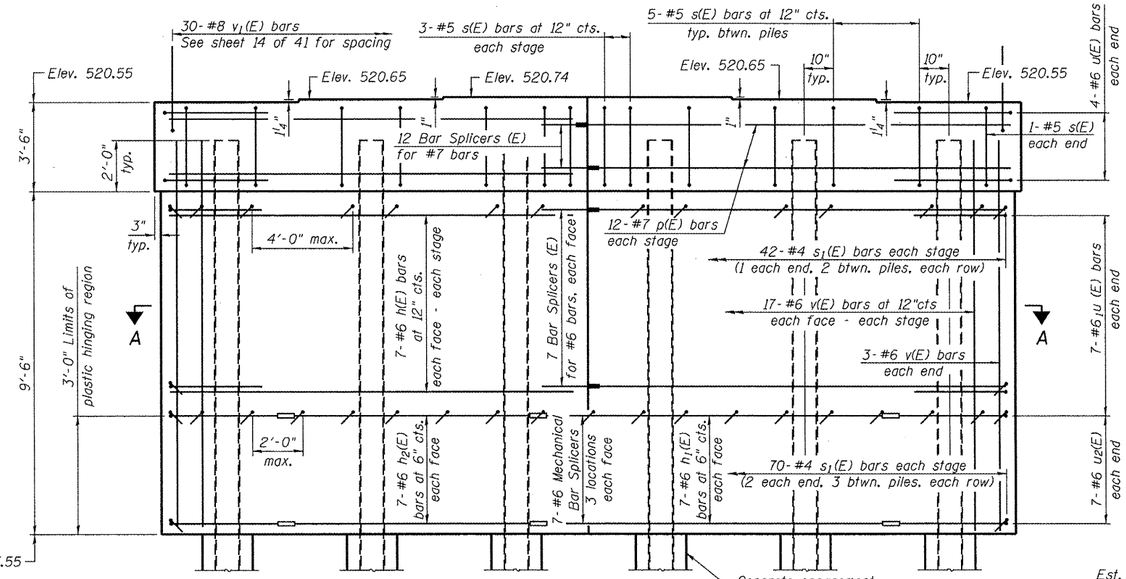
BARS $u_2(E)$



BARS u(E) & $u_1(E)$



END VIEW



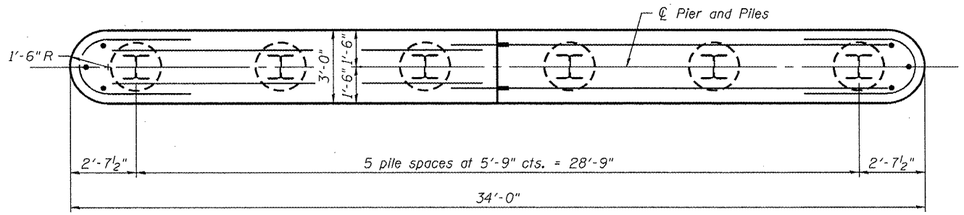
ELEVATION
(Looking North)

PIER 1
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	28	#6	15'-4"	——
$h_1(E)$	14	#6	13'-3"	——
$h_2(E)$	14	#6	11'-3"	——
p(E)	24	#7	15'-6"	——
s(E)	28	#5	13'-7"	⊓
$s_1(E)$	224	#4	3'-9"	⊔
u(E)	8	#6	13'-6"	⊃⊂
$u_1(E)$	14	#6	12'-8"	⊃⊂
$u_2(E)$	14	#6	10'-8"	⊃⊂
v(E)	74	#6	11'-6"	——
$v_1(E)$	30	#8	4'-2"	⊃⊂
Structure Excavation		Cu. Yd.	34	
Concrete Structures		Cu. Yd.	51.0	
Concrete Encasement		Cu. Yd.	3.3	
Reinforcement Bars, Epoxy Coated		Pound	5,150	
Furnishing Steel Piles HP 14x102		Foot	385	
Driving piles		Foot	385	
Test Piles Steel HP 14x102		Each	1	
Pile Shoes		Each	6	

PILE DATA

Type: HP 14x102 w/ Pile Shoes
Nominal Required Bearing: 810 k
Factored Resistance Available: 405 k
Est. Length: 77'-0"
No. Production Piles: 5
No. Test Piles: 1



SECTION A-A

Notes:
Pour steps monolithically with cap.
For details of piles and encasement, see sheet 31 of 41.
For details of Bar Splicers and Mechanical Splicers see sheet 32 of 41.

USER NAME = dheberling	DESIGNED - BRD/FLL	REVISED -	
FILE NAME = 0550083-68482.dgn	CHECKED - SDS/JHP	REVISED -	
PLOT DATE = 12/21/2010	DRAWN - DLH	REVISED -	
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STATE OF ILLINOIS
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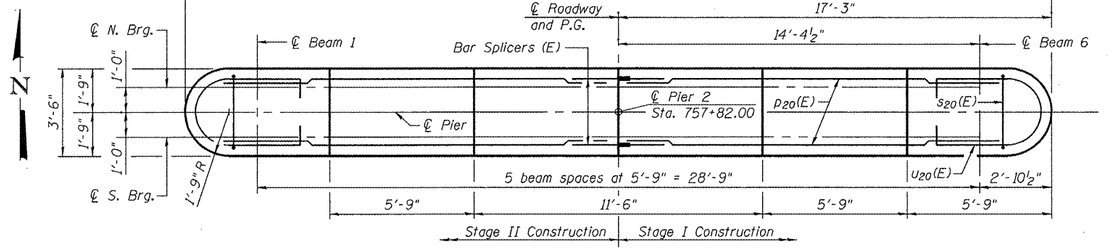
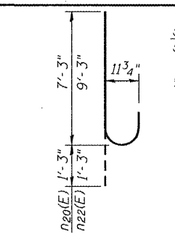
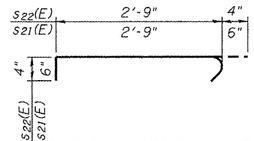
PIER 1
S.N. 055-0083
SHEET NO. 27 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	MCDONOUGH	117	67
		CONTRACT NO. 68482		
		ILLINOIS FED. AID PROJECT		

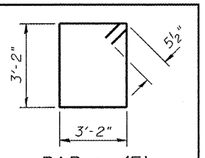


TOP PLAN



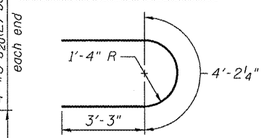


BARS $s_{21}(E)$ & $s_{22}(E)$

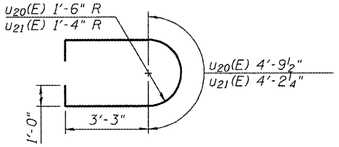


BAR $s_{20}(E)$

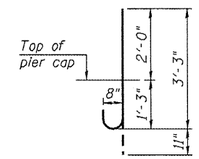
BAR $n_{20}(E)$ & $n_{21}(E)$



BAR $u_{22}(E)$



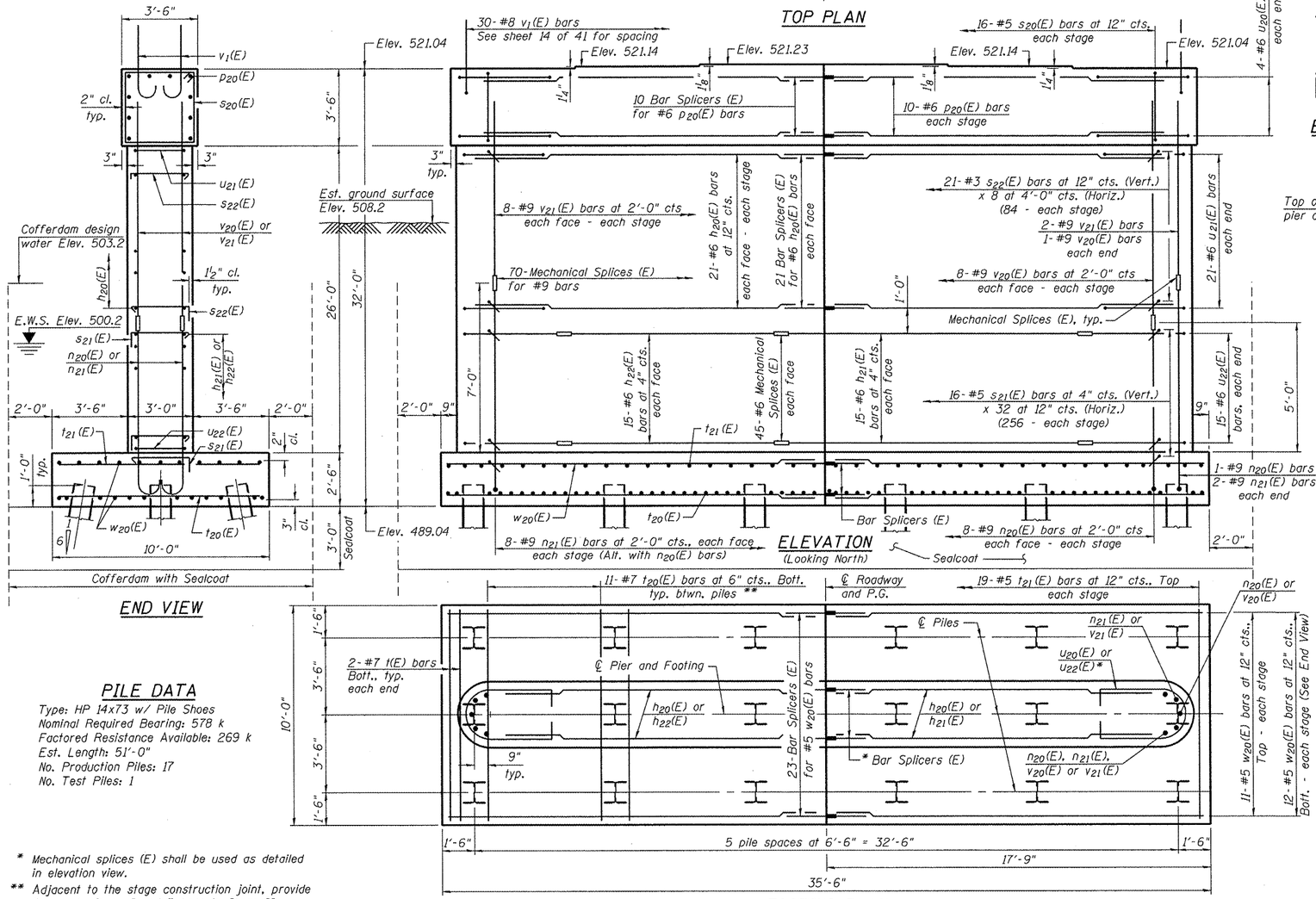
BARS $u_{20}(E)$ & $u_{21}(E)$



BAR $v_1(E)$

PIER 2
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
$h_{20}(E)$	84	#6	15'-4"	——
$h_{21}(E)$	30	#6	13'-3"	——
$h_{22}(E)$	30	#6	11'-0"	——
$n_{20}(E)$	34	#9	8'-6"	⊃
$n_{21}(E)$	36	#9	10'-6"	⊃
$p_{20}(E)$	20	#6	15'-4"	——
$s_{20}(E)$	32	#5	13'-7"	□
$s_{21}(E)$	512	#5	3'-9"	⊔
$s_{22}(E)$	168	#3	3'-5"	⊔
$t_{20}(E)$	59	#7	9'-8"	——
$t_{21}(E)$	38	#5	9'-8"	——
$u_{20}(E)$	8	#6	13'-4"	⊃⊂
$u_{21}(E)$	42	#6	12'-8"	⊃⊂
$u_{22}(E)$	30	#6	10'-8"	⊃⊂
$v_1(E)$	30	#8	4'-2"	⊃
$v_{20}(E)$	34	#9	24'-0"	——
$v_{21}(E)$	36	#9	22'-0"	——
$w_{20}(E)$	46	#5	17'-5"	——
Structure Excavation		Cu. Yd.	103	
Cofferdam Excavation		Cu. Yd.	352	
Cofferdam (Location 1)		Each	1	
Seal Coat Concrete		Cu. Yd.	61.5	
Concrete Structures		Cu. Yd.	145	
Reinforcement Bars, Epoxy Coated		Pound	18,060	
Furnishing Steel Piles HP 14x73		Foot	867	
Driving piles		Foot	867	
Test Piles Steel HP 14x73		Each	1	
Pile Shoes		Each	18	



ELEVATION
(Looking North)

END VIEW

PILE DATA

Type: HP 14x73 w/ Pile Shoes
Nominal Required Bearing: 578 k
Factored Resistance Available: 269 k
Est. Length: 51'-0"
No. Production Piles: 17
No. Test Piles: 1

FOOTING PLAN

* Mechanical splices (E) shall be used as detailed in elevation view.

** Adjacent to the stage construction joint, provide 6 bars in Stage I and 5 bars in Stage II.

Notes:

Pour steps monolithically with cap.
For details of piles, see sheet 31 of 41.
Seal coat designed for E.W.S. Elevation shown.
The $s_{21}(E)$ and $s_{22}(E)$ cross-tie bars shall be placed so that the 90° hooked ends of two successive cross-ties alternate end for end.
For details of Bar Splicers and Mechanical Splicers see sheet 32 of 41.
Mechanical splices designated (E) shall be epoxy coated.

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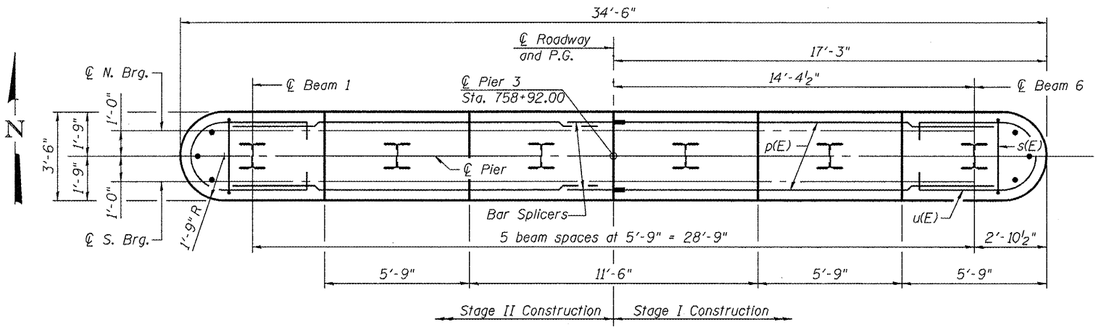
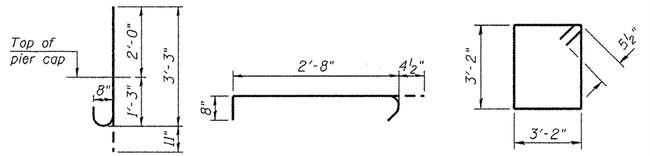
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 2
S.N. 055-0083
SHEET NO. 28 OF 41 SHEETS

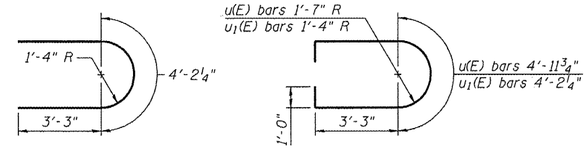
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	MCDONOUGH	117	68
		CONTRACT NO. 68482		
		ILLINOIS FED. AID PROJECT		



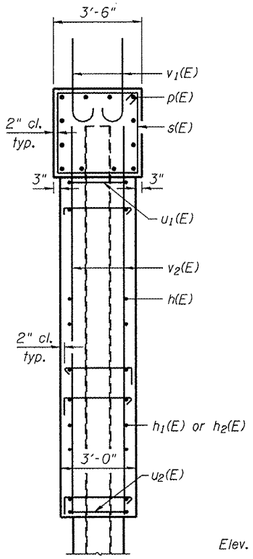
TOP PLAN



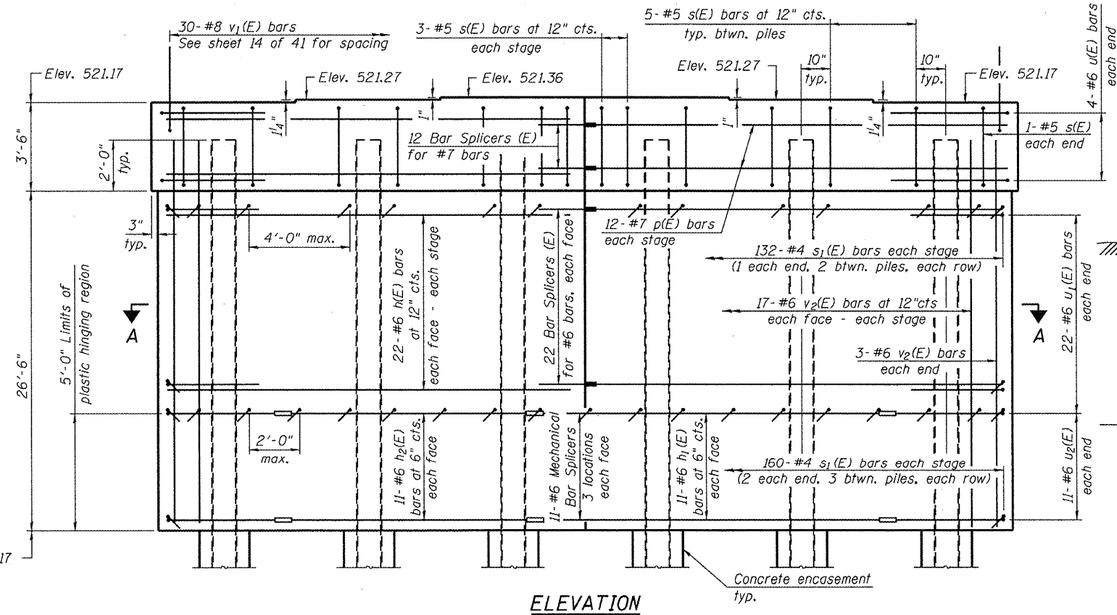
BAR $v_1(E)$ BAR $s_1(E)$ BAR s(E)



BARS $u_2(E)$ BARS u(E) & $u_1(E)$



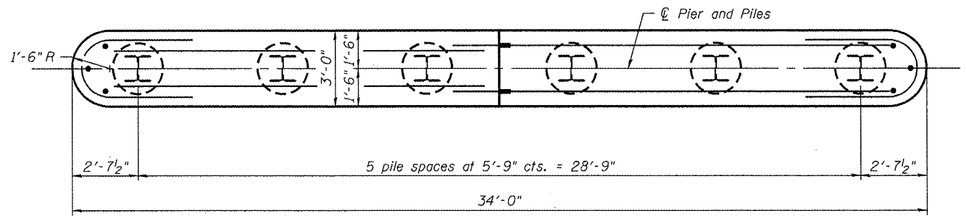
END VIEW



ELEVATION
(Looking North)

PILE DATA

Type: HP 14x102 w/ Pile Shoes
Nominal Required Bearing: 810 k
Factored Resistance Available: 405 k
Est. Length: 82'-0"
No. Production Piles: 5
No. Test Piles: 1



SECTION A-A

PIER 3
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	88	#6	15'-4"	——
$h_1(E)$	22	#6	13'-3"	——
$h_2(E)$	22	#6	11'-3"	——
p(E)	24	#7	15'-6"	——
s(E)	28	#5	13'-7"	□
$s_1(E)$	484	#4	3'-9"	⊔
u(E)	8	#6	13'-6"	⊃
$u_1(E)$	44	#6	12'-8"	⊃
$u_2(E)$	22	#6	10'-8"	⊃
$v_1(E)$	30	#8	4'-2"	⊃
$v_2(E)$	74	#6	28'-6"	——
Structure Excavation		Cu. Yd.	187	
Concrete Structures		Cu. Yd.	114	
Concrete Encasement		Cu. Yd.	3.3	
Reinforcement Bars, Epoxy Coated		Pound	10.060	
Furnishing Steel Piles HP 14x102		Foot	410	
Driving piles		Foot	410	
Test Piles Steel HP 14x102		Each	1	
Pile Shoes		Each	6	
Underwater Structure Excavation Protection, Location 1		Each	1	

Notes:

Pour steps monolithically with cap.

For details of piles and encasement, see sheet 31 of 41.

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

For details of Bar Splicers and Mechanical Splicers see sheet 32 of 41.

USER NAME = dheberling	DESIGNED - BRD/FLL	REVISED -	
FILE NAME = 8550083-68482.dgn	CHECKED - SDS/JHP	REVISED -	
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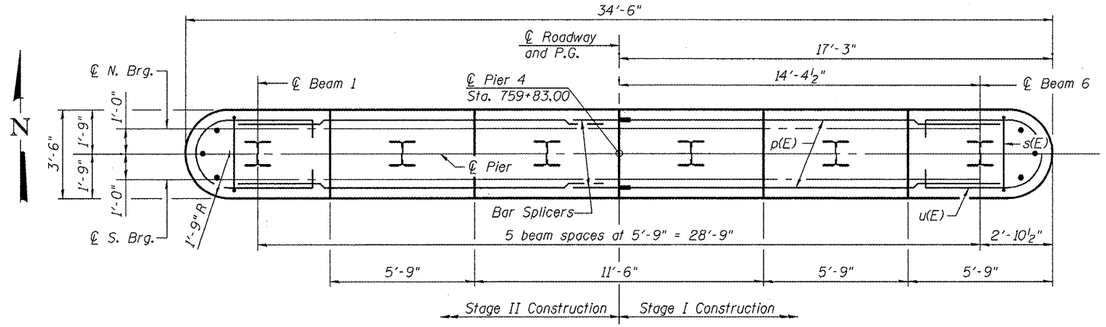
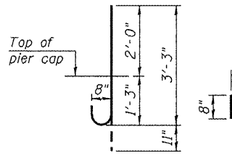
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 3
S.N. 055-0083
SHEET NO. 29 OF 41 SHEETS

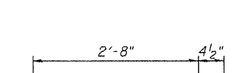
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	MCDONOUGH	117	69
		CONTRACT NO. 68482		
	ILLINOIS FED. AID PROJECT			



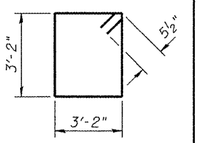
TOP PLAN



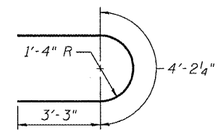
BAR v_1(E)



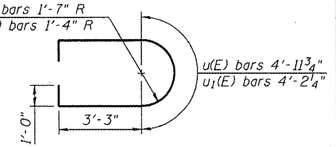
BAR s_1(E)



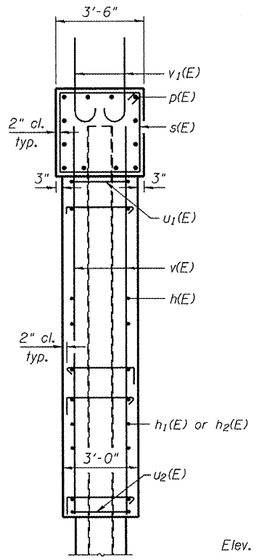
BAR s(E)



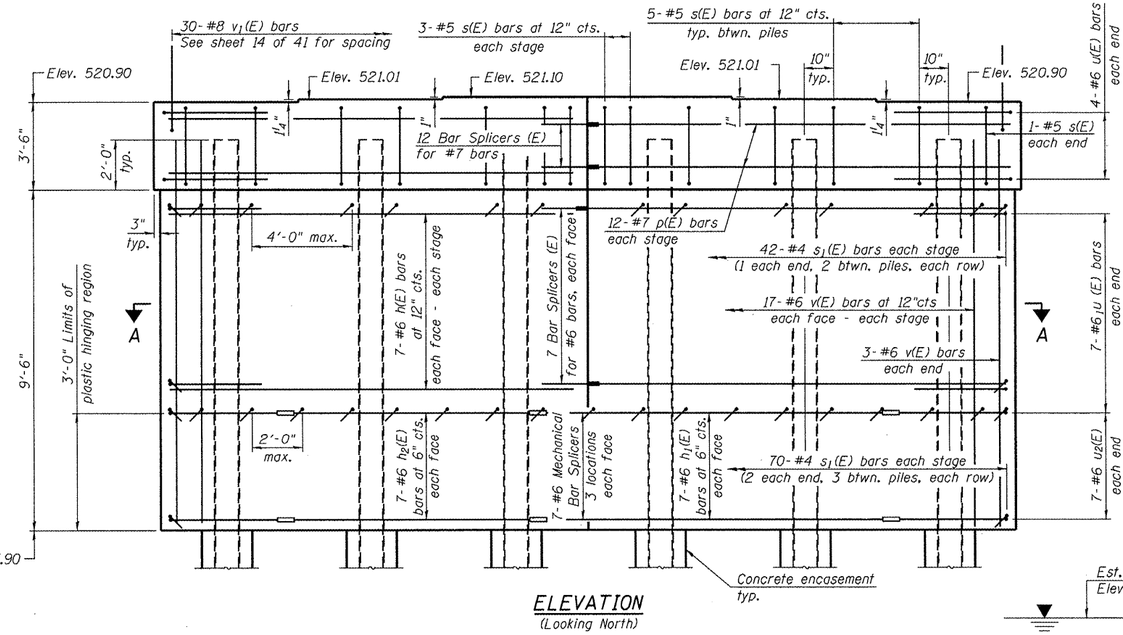
BARS u_2(E)



BARS u(E) & u_1(E)



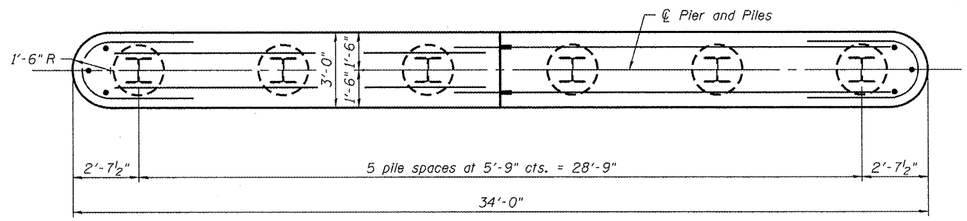
END VIEW



ELEVATION
(Looking North)

PILE DATA

Type: HP 14x102 w/ Pile Shoes
Nominal Required Bearing: 810 k
Factored Resistance Available: 405 k
Est. Length: 84'-0"
No. Production Piles: 5
No. Test Piles: 1



SECTION A-A

PIER 4
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	28	#6	15'-4"	——
h_1(E)	14	#6	13'-3"	——
h_2(E)	14	#6	11'-3"	——
p(E)	24	#7	15'-6"	——
s(E)	28	#5	13'-7"	□
s_1(E)	224	#4	3'-9"	⌙
u(E)	8	#6	13'-6"	⊃
u_1(E)	14	#6	12'-8"	⊃
u_2(E)	14	#6	10'-8"	⊃
v(E)	74	#6	11'-6"	——
v_1(E)	30	#8	4'-2"	⌙
Structure Excavation		Cu. Yd.	31	
Concrete Structures		Cu. Yd.	51	
Concrete Encasement		Cu. Yd.	3.3	
Reinforcement Bars, Epoxy Coated		Pound	5,150	
Furnishing Steel Piles HP 14x102		Foot	420	
Driving piles		Foot	420	
Test Piles Steel HP 14x102		Each	1	
Pile Shoes		Each	6	

Notes:

Pour steps monolithically with cap.
For details of piles and encasement, see sheet 31 of 41.
For details of Bar Splicers and Mechanical Splicers see sheet 32 of 41.

USER NAME = dheberling	DESIGNED - BRD/FLL	REVISED -	
FILE NAME = 0550083-68482.dgn	CHECKED - SDS/JHP	REVISED -	
PLOT DATE = 12/21/2010	DRAWN - DLH	REVISED -	
PLOT TIME = 10:31:16 AM	CHECKED - CWC/SDS	REVISED -	

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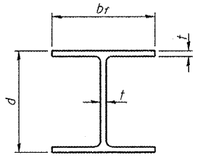
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

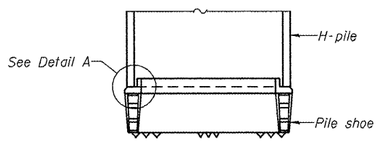
PIER 4
S.N. 055-0083
SHEET NO. 30 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	MCDONOUGH	117	70
		CONTRACT NO. 68482		
		ILLINOIS FED. AID PROJECT		

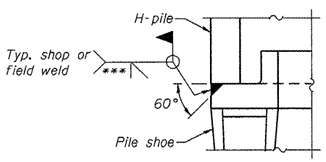


STEEL PILE TABLE

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

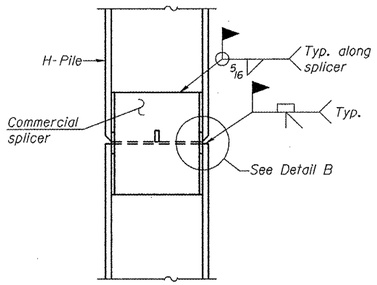


ELEVATION

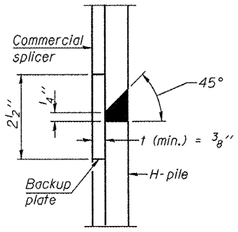


DETAIL A

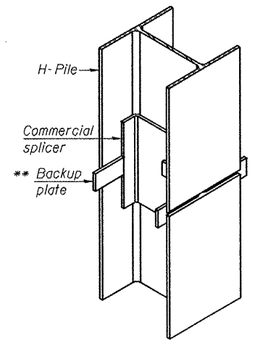
H-PILE SHOE ATTACHMENT



ELEVATION

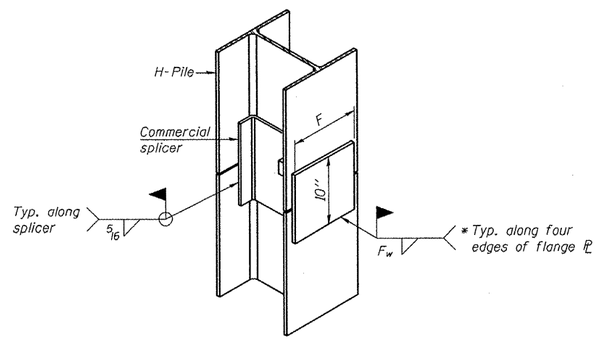


DETAIL "B"



ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE



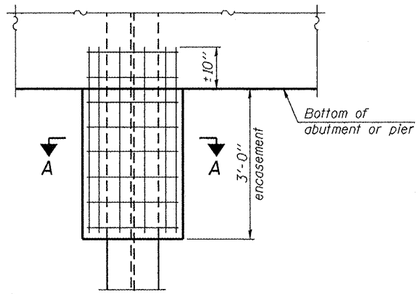
ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE ALTERNATE

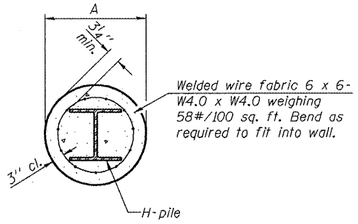
* Interrupt welds 1/4" from end of web and/or each flange.

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

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



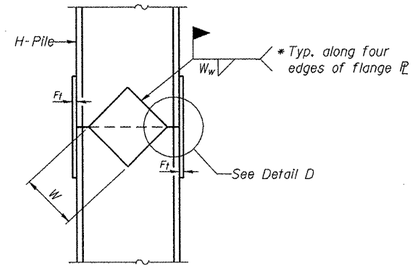
ELEVATION



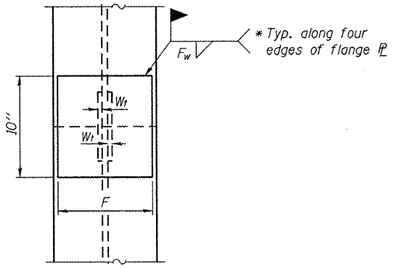
SECTION A-A

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

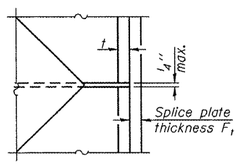
PILE ENCASEMENT



ELEVATION



END VIEW



DETAIL D

Designation	F	F_f	F_w	W	W_f	W_w
HP 14x117	12 1/2"	1"	7/8"	7 3/4"	5/8"	1/2"
x102	12 1/2"	7/8"	3/4"	7 3/4"	5/8"	1/2"
x89	12 1/2"	3/4"	11/16"	7 3/4"	5/8"	1/2"
x73	12 1/2"	5/8"	9/16"	7 3/4"	5/8"	1/2"
HP 12x84	10"	7/8"	11/16"	6 1/2"	5/8"	1/2"
x74	10"	7/8"	11/16"	6 1/2"	5/8"	1/2"
x63	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
x53	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
HP 10x57	8"	3/4"	9/16"	5 1/4"	1/2"	3/8"
x42	8"	5/8"	9/16"	5 1/4"	1/2"	3/8"
HP 8x36	7"	5/8"	7/16"	4 1/4"	1/2"	3/8"

WELDED PLATE FIELD SPLICE

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

F-HP 7-1-10

USER NAME = dhoberling	DESIGNED - BRD/FLL	REVISED -	
FILE NAME = 0550083-68482.dgn	CHECKED - SDS/JHP	REVISED -	
PLOT DATE = 12/21/2010	DRAWN - DLH	REVISED -	
PLOT TIME = 10:31:19 AM	CHECKED - CWC/SDS	REVISED -	

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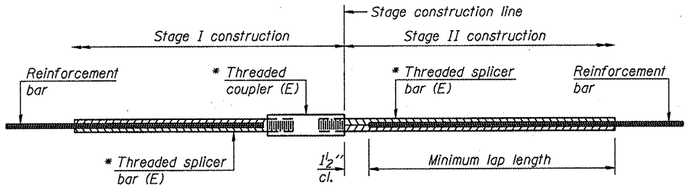
DESIGN FIRM #184001036

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

HP PILE DETAILS
S.N. 055-0083
SHEET NO. 31 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	MCDONOUGH	117	71
		CONTRACT NO. 68482		
	ILLINOIS FED. AID PROJECT			



STANDARD BAR SPLICER ASSEMBLY

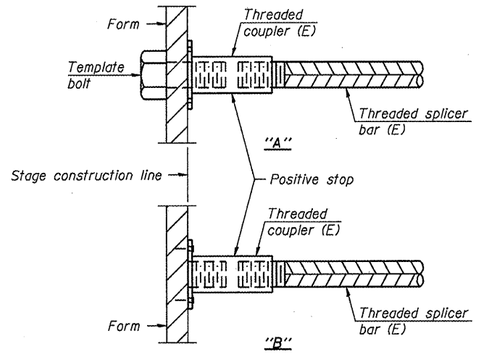
Minimum Lap Lengths					
Bar size to be spliced	Table 1	Table 2	Table 3	Table 4	Table 5
3, 4	1'-5"	1'-11"	2'-1"	2'-4"	2'-3"
5	1'-9"	2'-5"	2'-7"	2'-11"	2'-10"
6	2'-1"	2'-11"	3'-1"	3'-6"	3'-4"
7	2'-9"	3'-10"	4'-2"	4'-8"	4'-6"
8	3'-8"	5'-1"	5'-5"	6'-2"	5'-10"
9	4'-7"	6'-5"	6'-10"	7'-9"	7'-5"

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

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

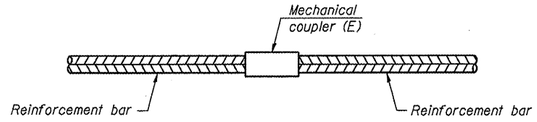
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length
North Abut.	5	10	4
North Abut.	6	7	4
North Abut.	7	8	4
South Abut.	5	10	4
South Abut.	6	7	4
South Abut.	7	8	4
Pier 1 Wall	6	14	4
Pier 1 Cap	7	12	4
Pier 2 Wall	6	42	4
Pier 2 Ftg.	5	23	4
Pier 3 Wall	6	44	4
Pier 3 Cap	7	12	4
Pier 4 Wall	6	14	4
Pier 4 Cap	7	12	4
Top of Deck	5	813	4
Bottom of Deck	5	572	4
Diaphragms	4	32	4
North Approach	4	33	4
North Approach	5	61	4
North Approach	7	10	4
South Approach	4	25	4
South Approach	5	46	4
South Approach	7	10	4



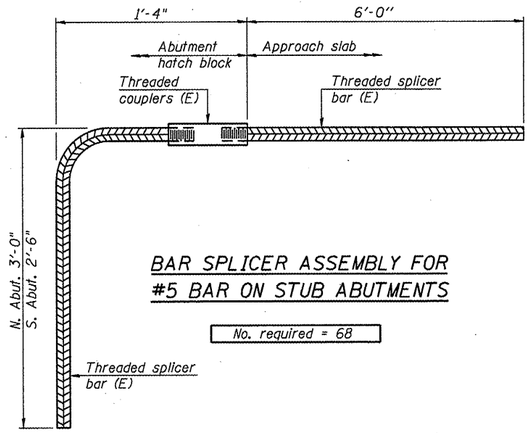
INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.
"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
(E) : Indicates epoxy coating.



STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required
Pier 1	#6	42
Pier 2	#6	90
Pier 2	#9	70
Pier 3	#6	66
Pier 4	#6	42



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. required = 68

NOTES

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

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

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

See special provision for Mechanical Splicers.

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

BSD-1 7-1-10

USER NAME = flowry	DESIGNED - BRD/FLL	REVISED - 1/24/11	
FILE NAME = 0550083-68482.dgn	CHECKED - SDS/JHP	REVISED -	
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DESIGN FIRM #184001036

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
S.N. 055-0083
SHEET NO. 32 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	MCDONOUGH	117	72
		CONTRACT NO. 68482		
	ILLINOIS FED. AID PROJECT			

Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation

SOIL BORING LOG

Date 3/15/06

ROUTE FAP 542 (IL 61) DESCRIPTION IL 61 over Lamoine R. 1mi. S. of Colmar LOGGED BY JAR

SECTION 105BR-1 LOCATION SW 1/4 of the SE 1/4, SEC. 18, TWP. 4N, RNG. 4W, 4TH PM

COUNTY McDonough DRILLING METHOD HSA HAMMER TYPE AUTOMATIC

STRUCT. NO. Exist. 055-0010
Station 758+83.50

BORING NO. 1 (Pier 3)
Station 759+07 (EX)
Offset 32.70 ft Rt
Ground Surface Elev. 513.87 ft

Surface Water Elev. ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter 498.9 ft
Upon Completion N/A ft
After 24 Hrs. 506.6 ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Dk. Brown/ Brown SILTY CLAY			
	1		
	1		14
	2		
509.87			
Brown CLAY	1		
-5	1	2.3	19
	3	P	
	1		
	1		
▼	2	1.5	25
	2	P	
	1		
-10	2	1.1	28
	2	B	
502.37			
Gray SILTY CLAY	H		
	1	0.4	33
	1	B	
	H		
▼ -15	1	0.9	34
	1	B	
	1		
	1	0.7	34
	2	B	
494.87			
Gray SILTY CLAY LOAM	1		
-20	1	0.5	28

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Gray SILTY CLAY LOAM (continued)	2	B	
	1		
	2	0.9	30
	1	B	
	2		
wood	-25 2		
	3		
	H		
	H	0.6	24
	2	B	
1" sand seam	1		
-30	1	0.6	27
	2	B	
	H		
	1	0.6	27
	3	B	
479.87			
Brown Cse GRAVEL w/ SAND	3		11
479.12			
-35 Gray/Brown SANDY CLAY LOAM	2	0.8	21
	2	P	
477.37			
Gray SANDY LOAM	2		
	2		22
	3		
474.87			
Gray CLAY 474.37	2	1.1	23
-40 Brown Cse SAND & GRAVEL	5	B	16

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation

SOIL BORING LOG

Date 3/15/06

ROUTE FAP 542 (IL 61) DESCRIPTION IL 61 over Lamoine R. 1mi. S. of Colmar LOGGED BY JAR

SECTION 105BR-1 LOCATION SW 1/4 of the SE 1/4, SEC. 18, TWP. 4N, RNG. 4W, 4TH PM

COUNTY McDonough DRILLING METHOD HSA HAMMER TYPE AUTOMATIC

STRUCT. NO. Exist. 055-0010
Station 758+83.50

BORING NO. 1 (Pier 3)
Station 759+07 (EX)
Offset 32.70 ft Rt
Ground Surface Elev. 513.87 ft

Surface Water Elev. ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter 498.9 ft
Upon Completion N/A ft
After 24 Hrs. 506.6 ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Brown Cse SAND & GRAVEL (continued)	6		
	4		
	3		10
	4		
	2		
-45	2		13
	4		
	5		
-50	5		19
	6		
459.87			
Gray SILTY CLAY	4		
-55	5	4.5	25
	7	B	
454.87			
Gray Cse SAND & GRAVEL	11		
-60	25		15

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Gray Cse SAND & GRAVEL (continued)	40		
	2		
-65	30		11
	36		
	14		
-70	7		12
	10		
440.87			
LIMESTONE 440.75	100		
very hard drilling; auger refusal	Ø1.5"		
End of Boring			
-75			
-80			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, form 137 (Rev. 8-99)

USER NAME = dhoberling	DESIGNED - BRD/FLL	REVISED -	
FILE NAME = 0550083-68482.dgn	CHECKED - SDS/JHP	REVISED -	
PLOT DATE = 12/21/2010	DRAWN - DLH	REVISED -	
PLOT TIME = 10:31:23 AM	CHECKED - CWC/SDS	REVISED -	

WHKS & CO. ENGINEERING
7018 KINGSMILL CT.,
SPRINGFIELD, IL
(217) 483-9457
DESIGN FIRM #184001036

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS
STRUCTURE NO. 055-0083
SHEET NO. 33 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	McDONOUGH	117	73
		CONTRACT NO. 68482		
	ILLINOIS FED. AID PROJECT			

Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation

SOIL BORING LOG

Date 3/24/06

ROUTE FAP 542 (IL 61) DESCRIPTION IL 61 over Lamoine R. 1mi. S. of Colmar LOGGED BY JAR

SECTION 105BR-1 LOCATION SW 1/4 of the SE 1/4, SEC. 18, TWP. 4N, RNG. 4W, 4TH PM

COUNTY McDonough DRILLING METHOD HSA HAMMER TYPE AUTOMATIC

STRUCT. NO. Exist. 055-0010
Station 758+83.50

BORING NO. 2 (Pier 4)
Station 759+70 (EX)
Offset 29.20 ft Rt
Ground Surface Elev. 512.41 ft

Surface Water Elev. ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter 497.4 ft ▼
Upon Completion N/A ft
After 24 Hrs. 504.4 ft ▽

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Brown, Grey SILTY CLAY LOAM			
	1		
	2	1.3	21
	2	P	
508.41			
Brown, Grey CLAY	1		
-5	1	1.0	22
	2	B	
	2		
	3	1.3	22
▽	3	B	
	2		
-10	3	1.2	25
	3	B	
500.91			
Grey SILTY CLAY	1		
	2	0.9	27
	2	B	
	2		
▼-15	2	0.9	26
	3	B	
	1		
1" sand seam	2	0.7	22
	3	B	
	1		
-20	3	0.7	24
Grey SILTY CLAY (continued)	4	B	
	1		
488.41			
Brown Fine-Coarse SAND	1		
-25	2		21
	2		
	3		
	4		24
	7		
	1		
-30	5		18
	6		
480.91			
Brown, Grey Coarse SAND and GRAVEL	2		
	4		15
	6		
478.41			
Grey SANDY CLAY LOAM with gravels	4		
-35	3	1.2	17
	4	B	
475.91			
Grey Coarse SAND and GRAVEL	4		
	8		12
	8		
	6		
-40	7		9

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation

SOIL BORING LOG

Date 3/24/06

ROUTE FAP 542 (IL 61) DESCRIPTION IL 61 over Lamoine R. 1mi. S. of Colmar LOGGED BY JAR

SECTION 105BR-1 LOCATION SW 1/4 of the SE 1/4, SEC. 18, TWP. 4N, RNG. 4W, 4TH PM

COUNTY McDonough DRILLING METHOD HSA HAMMER TYPE AUTOMATIC

STRUCT. NO. Exist. 055-0010
Station 758+83.50

BORING NO. 2 (Pier 4)
Station 759+70 (EX)
Offset 29.20 ft Rt
Ground Surface Elev. 512.41 ft

Surface Water Elev. ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter 497.4 ft ▼
Upon Completion N/A ft
After 24 Hrs. 504.4 ft ▽

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Grey Coarse SAND and GRAVEL (continued)	11		
	7		
	16		11
	14		
	12		
-45	9		12
	12		
463.41			
Grey SILTY CLAY	4		
-50	5	3.1	27
	7	B	
	5		
-55	5	3.1	27
	7	B	
453.41			
Grey Coarse SAND and GRAVEL	14		
-60	24		12
Grey Coarse SAND and GRAVEL (continued)	34		
	12		
-65	14		16
	20		
	5		
Cobbles/Boulders @ 73.25' 439.16	100/4"		9
End of Boring			
-70			
-75			
-80			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, form 137 (Rev. 8-99)

USER NAME = dheberling	DESIGNED - BRD/FLL	REVISED -	
FILE NAME = 0550083-68482.dgn	CHECKED - SDS/JHP	REVISED -	
PLOT DATE = 12/21/2010	DRAWN - DLH	REVISED -	
PLOT TIME = 10:31:25 AM	CHECKED - CWC/SDS	REVISED -	

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS
STRUCTURE NO. 055-0083
SHEET NO. 34 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	McDONOUGH	117	74
		CONTRACT NO. 68482		
		ILLINOIS FED. AID PROJECT		

Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation

SOIL BORING LOG

Date 4/18/06

ROUTE FAP 542 (IL 61) DESCRIPTION IL 61 over Lamoine R. 1mi. S. of Colmar LOGGED BY JAR

SECTION 105BR-1 LOCATION SW 1/4 of the SE 1/4, SEC. 18, TWP. 4N, RNG. 4W, 4TH PM

COUNTY McDonough DRILLING METHOD HSA HAMMER TYPE AUTOMATIC

STRUCT. NO. Exist. 055-0010
Station 758+83.50

BORING NO. 3 (Pier 5)
Station 760+46 (EX)
Offset 30.20 ft Rt
Ground Surface Elev. 511.35 ft

Surface Water Elev. ____ ft
Stream Bed Elev. ____ ft

Groundwater Elev.:
First Encounter 492.2 ft ▼
Upon Completion N/A ft
After 24 Hrs. 507.9 ft ▽

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
▼	1		
Brown, Grey CLAY	1	1.3	25
-5	2	P	
	H		
	1	1.1	25
	2	B	
	1		
	3	1.2	23
-10	3	B	
	1		
	3	1.8	24
	5	B	
497.85			
Brown, Grey SILTY CLAY	1		
	2	0.3	25
-15	2	B	
	1		
	1	0.3	25
	2	B	
	1		
▼			
	2	0.6	23
-20	2	B	

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Brown, Grey SILTY CLAY (continued) 490.35			
Brown, Grey SILTY LOAM	H		
	1	0.2	23
3" wet sand	2	B	
487.85			
Grey Fine-Medium SAND	1		
	3		21
-25	4		
485.35			
Grey Fine SAND well sorted	H		
	2		
	2		
	H		
	3		
-30	4		
480.35			
Grey Medium-Coarse SAND and GRAVEL	1		
	3		18
	5		
	H		
	2		15
-35	3		
	4		
	7		4
-40	8		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation

SOIL BORING LOG

Date 4/18/06

ROUTE FAP 542 (IL 61) DESCRIPTION IL 61 over Lamoine R. 1mi. S. of Colmar LOGGED BY JAR

SECTION 105BR-1 LOCATION SW 1/4 of the SE 1/4, SEC. 18, TWP. 4N, RNG. 4W, 4TH PM

COUNTY McDonough DRILLING METHOD HSA HAMMER TYPE AUTOMATIC

STRUCT. NO. Exist. 055-0010
Station 758+83.50

BORING NO. 3 (Pier 5)
Station 760+46 (EX)
Offset 30.20 ft Rt
Ground Surface Elev. 511.35 ft

Surface Water Elev. ____ ft
Stream Bed Elev. ____ ft

Groundwater Elev.:
First Encounter 492.2 ft ▼
Upon Completion N/A ft
After 24 Hrs. 507.9 ft ▽

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Grey Medium-Coarse SAND and GRAVEL (continued)			
467.85			
Grey SILTY CLAY/ CLAY	3		
	4	2.9	28
-45	6	B	
	3		
	5	2.9	28
-50	5	B	
	3		
	5	2.3	29
-55	5	B	
452.85			
Grey Coarse SAND and GRAVEL	8		
	22		12
-60	40		

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Grey Coarse SAND and GRAVEL (continued)			
	3		
	5		16
-65	12		
	12		
	15		13
-70	30		
	15		
	10		17
-75	14		
-80			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, form 137 (Rev. 8-99)

USER NAME = dhebarling	DESIGNED - BRD/FLL	REVISED -	
FILE NAME = 0552083-68482.dgn	CHECKED - SDS/JHP	REVISED -	
PLOT DATE = 12/21/2010	DRAWN - DLH	REVISED -	
PLOT TIME = 10:31:27 AM	CHECKED - CWC/SDS	REVISED -	

WHKS & CO. ENGINEERING
7018 KINGSMILL CT., SPRINGFIELD, IL (217) 483-9457 DESIGN FIRM #184001036

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS
STRUCTURE NO. 055-0083
SHEET NO. 35 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	McDONOUGH	117	75
		CONTRACT NO. 68482		
	ILLINOIS FED. AID PROJECT			

Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation

SOIL BORING LOG

Date 4/18/06

ROUTE FAP 542 (IL 61) DESCRIPTION IL 61 over Lamoine R. 1mi. S. of Colmar LOGGED BY JAR

SECTION 105BR-1 LOCATION SW 1/4 of the SE 1/4, SEC. 18, TWP. 4N, RNG. 4W, 4TH PM

COUNTY McDonough DRILLING METHOD HSA HAMMER TYPE AUTOMATIC

STRUCT. NO. Exist. 055-0010
Station 758+83.50

BORING NO. 3 (Pier 5)
Station 760+46 (EX)
Offset 30.20 ft Rt
Ground Surface Elev. 511.35 ft

Surface Water Elev. ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter 492.2 ft
Upon Completion N/A ft
After 24 Hrs. 507.9 ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Grey Coarse SAND and GRAVEL (continued)				
		9		
		6		18
	-85	9		
	-90			
	417.85			
Grey Hard LIMESTONE	417.81	100 @0.5'		
End of Boring	-95			
	-100			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation

SOIL BORING LOG

Date 4/20/06

ROUTE FAP 542 (IL 61) DESCRIPTION IL 61 over Lamoine R. 1mi. S. of Colmar LOGGED BY JAR

SECTION 105BR-1 LOCATION SW 1/4 of the SE 1/4, SEC. 18, TWP. 4N, RNG. 4W, 4TH PM

COUNTY McDonough DRILLING METHOD HSA HAMMER TYPE AUTOMATIC

STRUCT. NO. Exist. 055-0010
Station 758+83.50

BORING NO. 4 (N. Abut)
Station 761+21 (EX)
Offset 28.00 ft Rt
Ground Surface Elev. 519.07 ft

Surface Water Elev. ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter 503.1 ft
Upon Completion N/A ft
After 24 Hrs. 513.6 ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
		2		
Brown CLAY		3	1.7	21
		3	B	
	-5			
	513.57			
Grey SILTY CLAY		1		
		2	0.8	22
		1	P	
	511.07			
Grey, Brown CLAY		3		
		4	3.7	17
		6	B	
	-10			
		1		
		3	1.2	24
		3	B	
	506.07			
Grey, Brown SILTY CLAY		1		
		2	0.5	26
		2		
	-15			
	503.57			
Grey, Brown CLAY		2		
		2	1.2	25
		3	B	
		1		
		3	1.4	26
		4	B	
	-20			
Grey, Brown CLAY (Continued)	498.57			
Grey, Brown SILTY CLAY		2		
		1	0.5	25
		2	B	
		1		
		2	0.4	27
		2	B	
	-25			
		1		
		2	0.3	26
		3	P	
	491.07			
Grey Fine SAND		1		
		1		24
		2		
	-30			
		3		
		4		22
		4		
		3		
		6		22
		8		
	-35			
	481.07			
Grey Fine-Medium SAND and GRAVEL		1		
		6		18
		5		
	-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, form 137 (Rev. 8-99)

USER NAME = dheberling	DESIGNED - BRD/FLL	REVISED -	
FILE NAME = 0550083-68482.dgn	CHECKED - SDS/JHP	REVISED -	
PLOT DATE = 12/21/2010	DRAWN - DLH	REVISED -	
PLOT TIME = 10:31:28 AM	CHECKED - CWC/SDS	REVISED -	

WHKS & CO. ENGINEERING
7018 KINGSMILL CT., SPRINGFIELD, IL (217) 483-9457 DESIGN FIRM #184001036

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS
STRUCTURE NO. 055-0083
SHEET NO. 36 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	McDONOUGH	117	76
		CONTRACT NO. 68482		
	ILLINOIS FED. AID PROJECT			

Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation

SOIL BORING LOG

Date 4/20/06

ROUTE FAP 542 (IL 61) DESCRIPTION IL 61 over Lamoine R. 1mi. S. of Colmar LOGGED BY JAR

SECTION 105BR-1 LOCATION SW 1/4 of the SE 1/4, SEC. 18, TWP. 4N, RNG. 4W, 4TH PM

COUNTY McDonough DRILLING METHOD HSA HAMMER TYPE AUTOMATIC

STRUCT. NO. Exist. 055-0010
Station 758+83.50

BORING NO. 4 (N. Abut)
Station 761+21 (EX)
Offset 28.00 ft Rt
Ground Surface Elev. 519.07 ft

Surface Water Elev. ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter 503.1 ft ▼
Upon Completion N/A ft
After 24 Hrs. 513.6 ft ▽

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Grey Fine-Medium SAND and GRAVEL (continued)			
476.07			
Brown Medium-Coarse SAND and GRAVEL	9		
	9		12
	7		
-45			
471.07			
Grey CLAY	3		
	4	0.6	26
	4	B	
-50			
	3		
	5	2.5	30
	6	B	
-55			
	4		
	6	2.9	26
	8	B	
-60			

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Grey CLAY (continued)			
456.07			
Grey Coarse SAND and GRAVEL	1		
	2		17
	5		
-65			
451.07			
Grey GRAVELS (limestone) and Coarse SAND	8		
	26		12
	42		
-70			
	11		
	11		10
	13		
-75			
	14		
	14		13
	29		
-80			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation

SOIL BORING LOG

Date 4/20/06

ROUTE FAP 542 (IL 61) DESCRIPTION IL 61 over Lamoine R. 1mi. S. of Colmar LOGGED BY JAR

SECTION 105BR-1 LOCATION SW 1/4 of the SE 1/4, SEC. 18, TWP. 4N, RNG. 4W, 4TH PM

COUNTY McDonough DRILLING METHOD HSA HAMMER TYPE AUTOMATIC

STRUCT. NO. Exist. 055-0010
Station 758+83.50

BORING NO. 4 (N. Abut)
Station 761+21 (EX)
Offset 28.00 ft Rt
Ground Surface Elev. 519.07 ft

Surface Water Elev. ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter 503.1 ft ▼
Upon Completion N/A ft
After 24 Hrs. 513.6 ft ▽

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Grey GRAVELS (limestone) and Coarse SAND (continued)			
	11		
	14		15
	13		
-85			
	12		
	13		3
	14		
-90			
	3		
	10		17
	27		
-95			
	9		
420.17	100		14
AUGER REFUSAL @ 98.9'	@5"		
End of Boring			
-100			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, form 137 (Rev. 8-99)

USER NAME = dheberling	DESIGNED - BRD/FLL	REVISED -	
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PLOT TIME = 10:31:30 AM	CHECKED - CWC/SDS	REVISED -	

WHKS & co. ENGINEERING
7018 KINGSMILL CT.,
SPRINGFIELD, IL
(217) 483-9457
DESIGN FIRM #184001036

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS
STRUCTURE NO. 055-0083
SHEET NO. 37 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	McDONOUGH	117	77
		CONTRACT NO. 68482		
		ILLINOIS FED. AID PROJECT		

Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation

SOIL BORING LOG

Date 4/25/06

ROUTE FAP 542 (IL 61) DESCRIPTION IL 61 over Lamoine R. 1mi. S. of Colmar LOGGED BY JAR

SECTION 105BR-1 LOCATION SW 1/4 of the SE 1/4, SEC. 18, TWP. 4N, RNG. 4W, 4TH PM

COUNTY McDonough DRILLING METHOD HSA HAMMER TYPE AUTOMATIC

STRUCT. NO. Exist. 055-0010
Station 758+83.50

BORING NO. 5 (Pier 2)
Station 757+77 (EX)
Offset 42.50 ft Lt
Ground Surface Elev. 515.80 ft

Surface Water Elev. ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter 501.8 ft
Upon Completion N/A ft
After 24 Hrs. 508.7 ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
	1		
	2	1.3	29
	3	P	
511.80			
Brown, Light Brown, Grey SILTY CLAY	1		
-5	2	0.7	21
	2	B	
	1		
	3	1.5	21
	3	B	
	1		
-10	3	0.8	23
	2	B	
	H		
	1	0.5	27
	2	B	
	1		
-15	1	0.2	27
	1	B	
	1		
	1	0.2	24
	1	B	
	H		
-20	H	0.2	24
	2	B	
Brown, Light Brown, Grey SILTY CLAY (continued)	1		
	1	0.7	25
	2	B	
491.80			
Grey SANDY LOAM	1		
-25	1	<0.25	4
	2	P	
489.30			
Grey Medium SAND	2		
	1		19
	5		
	5		
-30	5		15
	4		
484.30			
Grey Medium-Coarse SAND and GRAVEL	3		
	5		16
	9		
481.80			
Grey CLAY	2		
-35	3	1.0	21
	3	P	
476.80			
Grey Medium-Coarse SAND and GRAVEL	3		
-40	5		18

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation

SOIL BORING LOG

Date 4/25/06

ROUTE FAP 542 (IL 61) DESCRIPTION IL 61 over Lamoine R. 1mi. S. of Colmar LOGGED BY JAR

SECTION 105BR-1 LOCATION SW 1/4 of the SE 1/4, SEC. 18, TWP. 4N, RNG. 4W, 4TH PM

COUNTY McDonough DRILLING METHOD HSA HAMMER TYPE AUTOMATIC

STRUCT. NO. Exist. 055-0010
Station 758+83.50

BORING NO. 5 (Pier 2)
Station 757+77 (EX)
Offset 42.50 ft Lt
Ground Surface Elev. 515.80 ft

Surface Water Elev. ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter 501.8 ft
Upon Completion N/A ft
After 24 Hrs. 508.7 ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Grey Medium-Coarse SAND and GRAVEL (continued)	9		
	1		
-45	2		18
	4		
466.80			
Grey CLAY	2		
-50	4	3.3	27
	6	B	
461.80			
Grey SANDY LOAM	H		
-55	H	1.0	28
	H	P	
456.80			
Grey Coarse SAND and GRAVEL	9		
-60	9		13
Grey Coarse SAND and GRAVEL (continued)	16		
	2		
-65	7		17
	18		
	17		
-70	100 @5"		10
441.80			
LIMESTONE (hard drilling @ 74') 441.72	100 @1"		
End of Boring -75			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
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BBS, form 137 (Rev. 8-99)

USER NAME = dheberling	DESIGNED - BRD/FLL	REVISED -	
FILE NAME = 0550083-68482.dgn	CHECKED - SDS/JHP	REVISED -	
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WHKS & CO. ENGINEERING
7018 KINGSMILL CT., SPRINGFIELD, IL
(217) 483-9457
DESIGN FIRM #184001036

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS
STRUCTURE NO. 055-0083
SHEET NO. 38 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	McDONOUGH	117	78
		CONTRACT NO. 68482		
		ILLINOIS FED. AID PROJECT		

Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation

SOIL BORING LOG

Date 4/26/06

ROUTE FAP 542 (IL 61) DESCRIPTION IL 61 over Lamoine R. 1mi. S. of Colmar LOGGED BY JAR

SECTION 105BR-1 LOCATION SW 1/4 of the SE 1/4, SEC. 18, TWP. 4N, RNG. 4W, 4TH PM

COUNTY McDonough DRILLING METHOD HSA HAMMER TYPE AUTOMATIC

STRUCT. NO. Exist. 055-0010
Station 758+83.50

BORING NO. 6 (Pier 1)
Station 757+06 (EX)
Offset 27.50 ft Lt
Ground Surface Elev. 515.83 ft

Surface Water Elev. ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter 501.8 ft
Upon Completion N/A ft
After 24 Hrs. 507.7 ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Brown SILTY CLAY	H		
-5	H	0.3	26
	1	B	
	H		
	2	0.2	26
506.83	1	B	
Brown Fine SAND	1		
-10	2		22
	2		
504.33			
Brown, Grey SANDY CLAY	H		
	H	<0.25	32
	2	P	
501.83			
Brown SILTY CLAY	H		
-15	1	<0.25	28
	1	P	
	1		
	1	0.5	26
496.83	1	P	
Greenish-Grey SANDY CLAY w/ traces of wood chips	1		
-20	1	1.0	93

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
	2	P	
Greenish-Grey SANDY CLAY w/ traces of wood chips (continued) 494.33			
Grey Medium-Coarse SAND and GRAVEL	1		
	3		15
	2		
	2		
-25	3		45
	5		
489.33			
Grey CLAY	2		
	1	0.4	28
	2	B	
	H		
-30	1	0.4	28
	3	B	
484.33			
Grey Medium-Coarse SAND and GRAVEL	H		
	2		17
	6		
	3		
-35	3		24
	3		
476.83			
Grey CLAY	2		
-40	5	3.3	30

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
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BBS, form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation

SOIL BORING LOG

Date 4/26/06

ROUTE FAP 542 (IL 61) DESCRIPTION IL 61 over Lamoine R. 1mi. S. of Colmar LOGGED BY JAR

SECTION 105BR-1 LOCATION SW 1/4 of the SE 1/4, SEC. 18, TWP. 4N, RNG. 4W, 4TH PM

COUNTY McDonough DRILLING METHOD HSA HAMMER TYPE AUTOMATIC

STRUCT. NO. Exist. 055-0010
Station 758+83.50

BORING NO. 6 (Pier 1)
Station 757+06 (EX)
Offset 27.50 ft Lt
Ground Surface Elev. 515.83 ft

Surface Water Elev. ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter 501.8 ft
Upon Completion N/A ft
After 24 Hrs. 507.7 ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Grey CLAY (continued)	7	B	
	3		
-45	7	5.4	25
	9	B	
	2		
-50	3	2.3	28
	5	B	
	2		
-55	6	2.9	28
	7	B	
456.83			
Grey Coarse SAND and GRAVEL	4		
-60	14		13

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Grey Coarse SAND and GRAVEL (continued)	19		
	10		
-65	12		16
	11		
	5		
445.83 -70	45		10
Lt. Grey LIMESTONE	65ø1"		
441.43	100		17
End of Boring -75	ø5"		
-80			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
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PLOT TIME = 10:31:34 AM	CHECKED - CWC/SDS	REVISED -	

WHKS & CO. ENGINEERING
7018 KINGSMILL CT.,
SPRINGFIELD, IL
(217) 483-9457
DESIGN FIRM #184001036

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS
STRUCTURE NO. 055-0083
SHEET NO. 39 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	McDONOUGH	117	79
		CONTRACT NO. 68482		
	ILLINOIS FED. AID PROJECT			

Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation

SOIL BORING LOG

Date 4/27/06

ROUTE FAP 542 (IL 61) DESCRIPTION IL 61 over Lamoine R. 1mi. S. of Colmar LOGGED BY JAR

SECTION 105BR-1 LOCATION SW 1/4 of the SE 1/4, SEC. 18, TWP. 4N, RNG. 4W, 4TH PM

COUNTY McDonough DRILLING METHOD HSA HAMMER TYPE AUTOMATIC

STRUCT. NO. Exist. 055-0010
Station 758+83.50

BORING NO. 7 (S. Abut)
Station 756+43 (EX)
Offset 47.50 ft Lt
Ground Surface Elev. 515.18 ft

Surface Water Elev. ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter 503.8 ft ▼
Upon Completion N/A ft
After 24 Hrs. 511.4 ft ▽

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Brown, Grey SANDY LOAM	2		
▼	1	0.5	23
	2	P	
-5			
509.68			
Brown, Grey SILTY CLAY	2		
	1	<0.25	29
	2	P	
	1		
	1	0.4	32
	1	B	
-10			
	H		
▼	1	0.4	35
trace of water	1	B	
502.18			
Grey CLAY w/ silt and sand seams & tr of organics	H		
	1	0.6	30
	2	B	
-15			
499.68			
Grey SILTY CLAY	1		
	1	0.4	28
	2	B	
497.18			
Grey Fine SAND	3		
	4		25
	4		
-20			
Grey Fine SAND (continued)	2		
	4		10
	6		
492.18			
Grey SAND & GRAVEL	6		
	2		5
	5		
-25			
	6		
	8		13
	10		
	3		
	3		13
	9		
-30			
	15		
	20		14
	20		
482.18			
Grey CLAY LOAM	5		
	9	3.9	15
	12	B	
-35			
477.18			
Grey CLAY	H		
	1	1.5	25
2" sand seam	2	P	
-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
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BBS, form 137 (Rev. 8-99)

Illinois Department of Transportation
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SOIL BORING LOG

Date 4/27/06

ROUTE FAP 542 (IL 61) DESCRIPTION IL 61 over Lamoine R. 1mi. S. of Colmar LOGGED BY JAR

SECTION 105BR-1 LOCATION SW 1/4 of the SE 1/4, SEC. 18, TWP. 4N, RNG. 4W, 4TH PM

COUNTY McDonough DRILLING METHOD HSA HAMMER TYPE AUTOMATIC

STRUCT. NO. Exist. 055-0010
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Ground Surface Elev. 515.18 ft

Surface Water Elev. ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter 503.8 ft ▼
Upon Completion N/A ft
After 24 Hrs. 511.4 ft ▽

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Grey CLAY (continued)			
472.18			
Grey CLAY/SILTY CLAY	4		
	7	2.1	24
	10	B	
-45			
	4		
	5	4.1	27
	7	B	
-50			
	3		
	4	2.1	30
	6	B	
-55			
457.18			
Grey Medium-Coarse SAND and GRAVEL	6		
	3		18
	5		
-60			
Grey Medium-Coarse SAND and GRAVEL (continued)			
	8		
	8		15
	10		
1" clay seam -65			
	6		
4" clay seam	20		13
	19		
445.18 -70			
Lt Grey LIMESTONE began hard drilling @ 70'			
	100 @1"		5
AUGER REFUSAL @ 74.5' 440.68			
End of Boring -75			
-80			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, form 137 (Rev. 8-99)

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FILE NAME = 0550083-68482.dgn	CHECKED - SDS/JHP	REVISED -	
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PLOT TIME = 10:31:35 AM	CHECKED - CWC/SDS	REVISED -	

WHKS & co. ENGINEERING
7018 KINGSMILL CT.,
SPRINGFIELD, IL
(217) 483-9457
DESIGN FIRM #184001036

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS
STRUCTURE NO. 055-0083
SHEET NO. 40 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	McDONOUGH	117	80
		CONTRACT NO. 68482		
	ILLINOIS FED. AID PROJECT			

Wang Engineering, Inc.
Consulting Geotechnical and Environmental Engineers
wangeng@wangeng.com
1145 N Main Street
Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

BORING LOG LA-1

WEI Job No.: 760-01-01

Client: WHKS & Co.
Project: IL Rte 61 over the LaMoine R., McDonough Co.
Location: NW1/4 SE1/4 Section 18 T4N R4W 4th PM

Datum: NGVD
Elevation: 525.00 ft
North: ft
East: ft
Station: 755+85
Offset: 15.3 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		--% Clay = 18.4%-- --C_c = 0.193--	5				P U S H	< 0.25 P	30
	502.2 / 501.7	Brown and gray, fine SAND / Soft, gray CLAY	6				P U S H	0.25 P	27
	501.0	Boring terminated at 24.00 ft	25						
		Stiff, brown and gray CLAY	10						
	514.4 / 514.2	Wood and root debris / Very soft to medium stiff, gray CLAY to SILTY CLAY with wood debris	15		1		P U S H	1.50 P	
					2		P U S H	NR	
		--L_L=34%, P_I=21%-- --% Gravel = 0.0%-- --% Sand = 14.5%-- --% Silt = 67.2%--	20		3		P U S H	< 0.25 P	
					4		P U S H	< 0.25 P	
			30						
			35						
			40						

WANGENGINC 7600101.GPJ WANGENG.GDT 4/2/09

GENERAL NOTES

Begin Drilling: 11-03-2008 Complete Drilling: 11-03-2008
Drilling Contractor: Wang Testing Services Drill Rig: Mobile B-57 TMR
Driller: K&J Logger: FB Checked by: MLS
Drilling Method: 3.25" Diameter HSA; Boring Backfilled Upon Completion

WATER LEVEL DATA

While Drilling: ▽ N/A
At Completion of Drilling: ▼ N/A
Time After Drilling: NA
Depth to Water: ▼ NA

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

Wang Engineering, Inc.
Consulting Geotechnical and Environmental Engineers
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1145 N Main Street
Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

BORING LOG LA-2

WEI Job No.: 760-01-01

Client: WHKS & Co.
Project: IL Rte 61 over the LaMoine R., McDonough Co.
Location: NW1/4 SE1/4 Section 18 T4N R4W 4th PM

Datum: NGVD
Elevation: 520.00 ft
North: ft
East: ft
Station: 761+25
Offset: 30.5 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	499.5	Brown and gray SILT to SILTY LOAM / Medium stiff to stiff, brown and gray CLAY with some SILT				1	P U S H	0.75 P	22
						2	P U S H	1.00 P	23
	496.0	Brown and gray, fine SAND to SANDY LOAM	25			3	P U S H	NP	24
	494.0	Boring terminated at 26.00 ft							
			5						
			10						
			15						
			20						
			30						
			35						
			40						

WANGENGINC 7600101.GPJ WANGENG.GDT 4/2/09

GENERAL NOTES

Begin Drilling: 11-03-2008 Complete Drilling: 11-03-2008
Drilling Contractor: Wang Testing Services Drill Rig: Mobile B-57 TMR
Driller: K&J Logger: FB Checked by: MLS
Drilling Method: 3.25" Diameter HSA; Boring Backfilled Upon Completion

WATER LEVEL DATA

While Drilling: ▽ N/A
At Completion of Drilling: ▼ N/A
Time After Drilling: NA
Depth to Water: ▼ NA

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

USER NAME = dhoberling	DESIGNED - BRD/FLL	REVISED -	
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PLOT DATE = 12/21/2010	DRAWN - DLH	REVISED -	
PLOT TIME = 10:31:38 AM	CHECKED - CWC/SDS	REVISED -	

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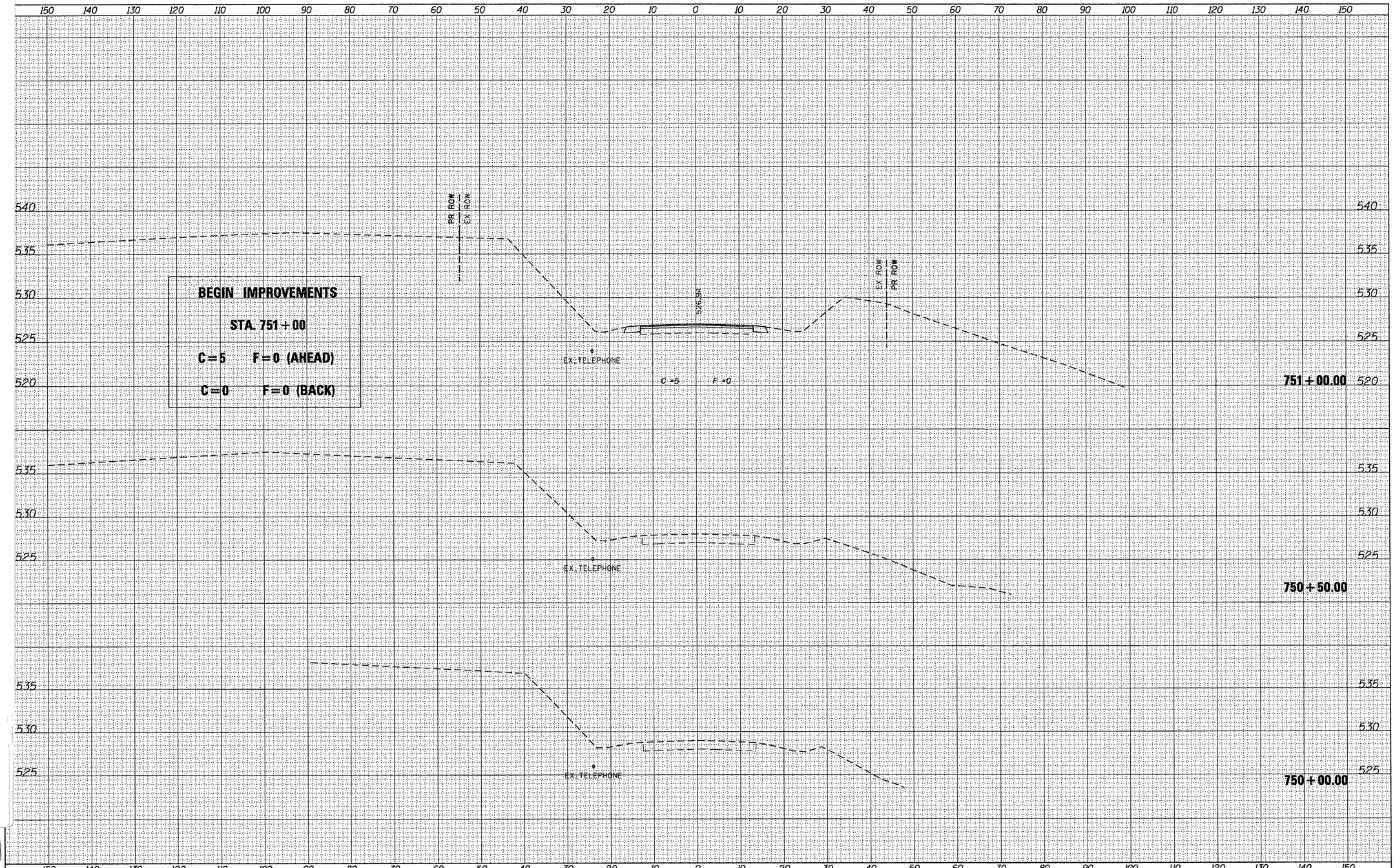
SOIL BORING LOGS
STRUCTURE NO. 055-0083
SHEET NO. 41 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	McDONOUGH	117	81
		CONTRACT NO. 68482		
		ILLINOIS FED. AID PROJECT		



USER NAME = gjameson	DESIGNED -	REVISED -	WHKS & CO. ENGINEERING	7018 KINGSMILL CT., SPRINGFIELD, IL (217) 483-9457 DESIGN FIRM #184001036	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
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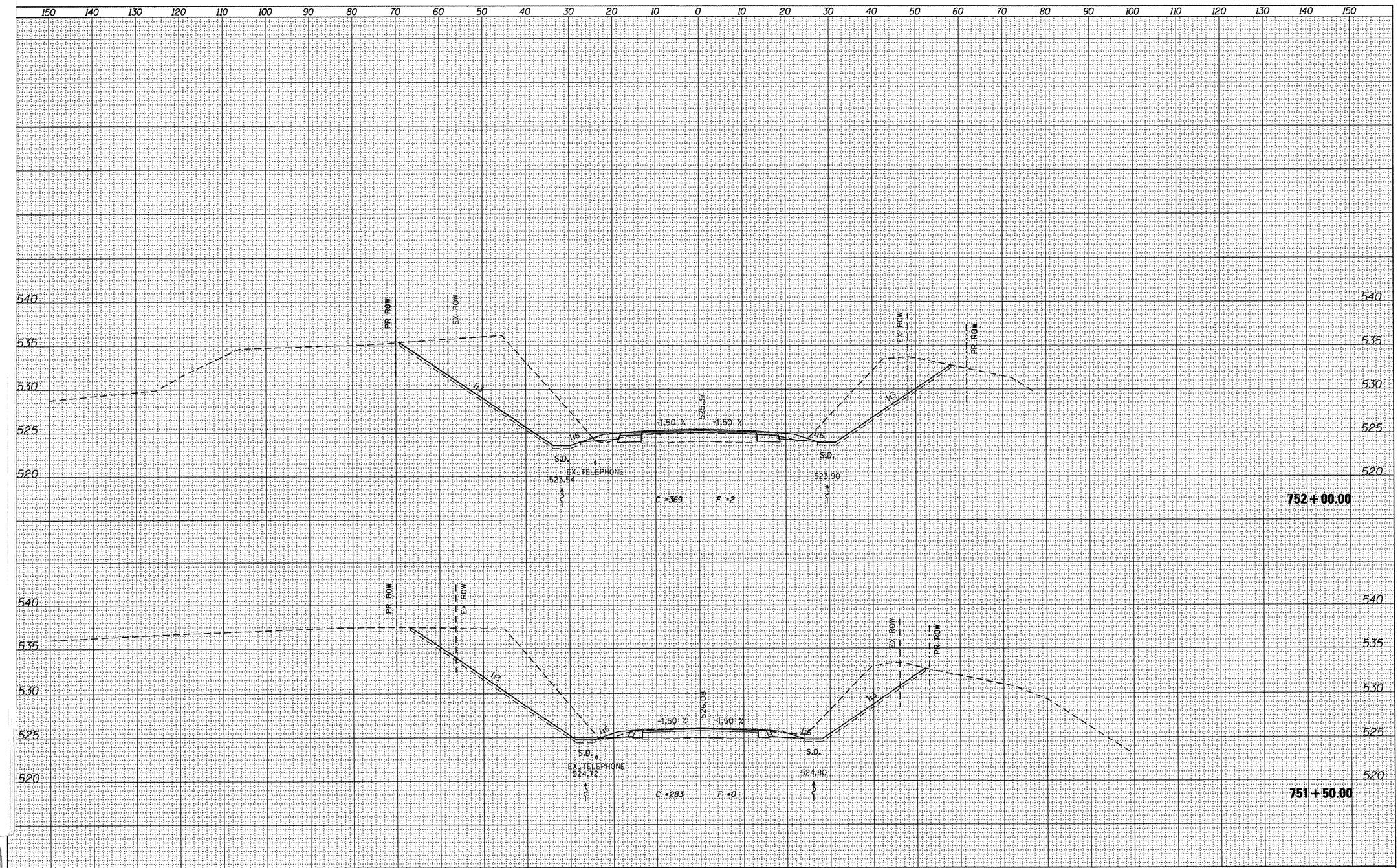
CROSS SECTIONS
IL 61 OVER LAMOINE RIVER

SCALE: | SHEET NO. OF SHEETS | STA. 750+00.00 TO STA. 751+00.00

T.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	MCDONOUGH	117	82

CONTRACT NO. 68482

ILLINOIS FED. AID PROJECT



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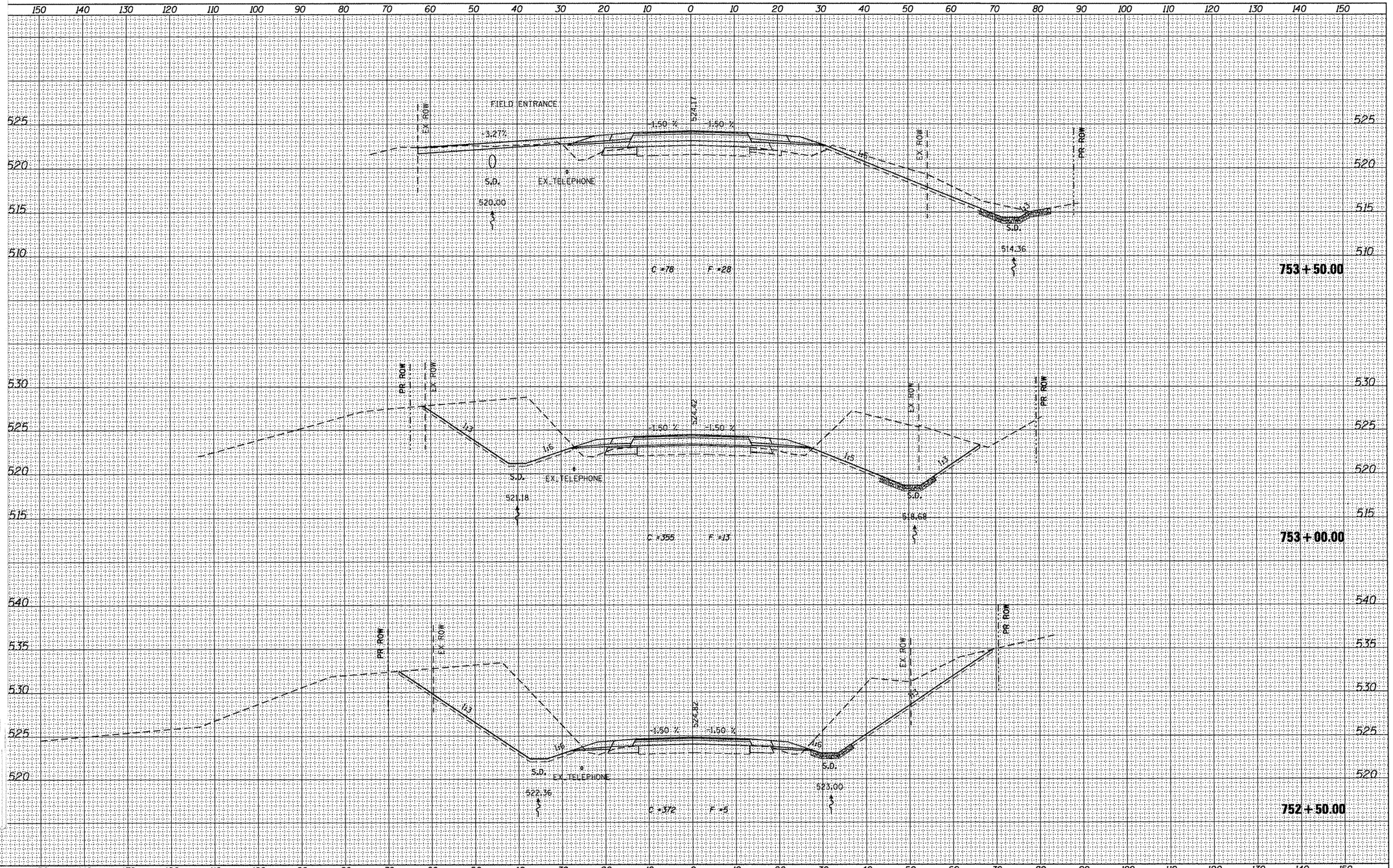
CROSS SECTIONS
IL 61 OVER LAMOINE RIVER

SCALE: | SHEET NO. OF SHEETS | STA. 751+50.00 TO STA. 752+00.00

T.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	MCDONOUGH	117	83
		CONTRACT NO. 68482		
	ILLINOIS FED. AID PROJECT			



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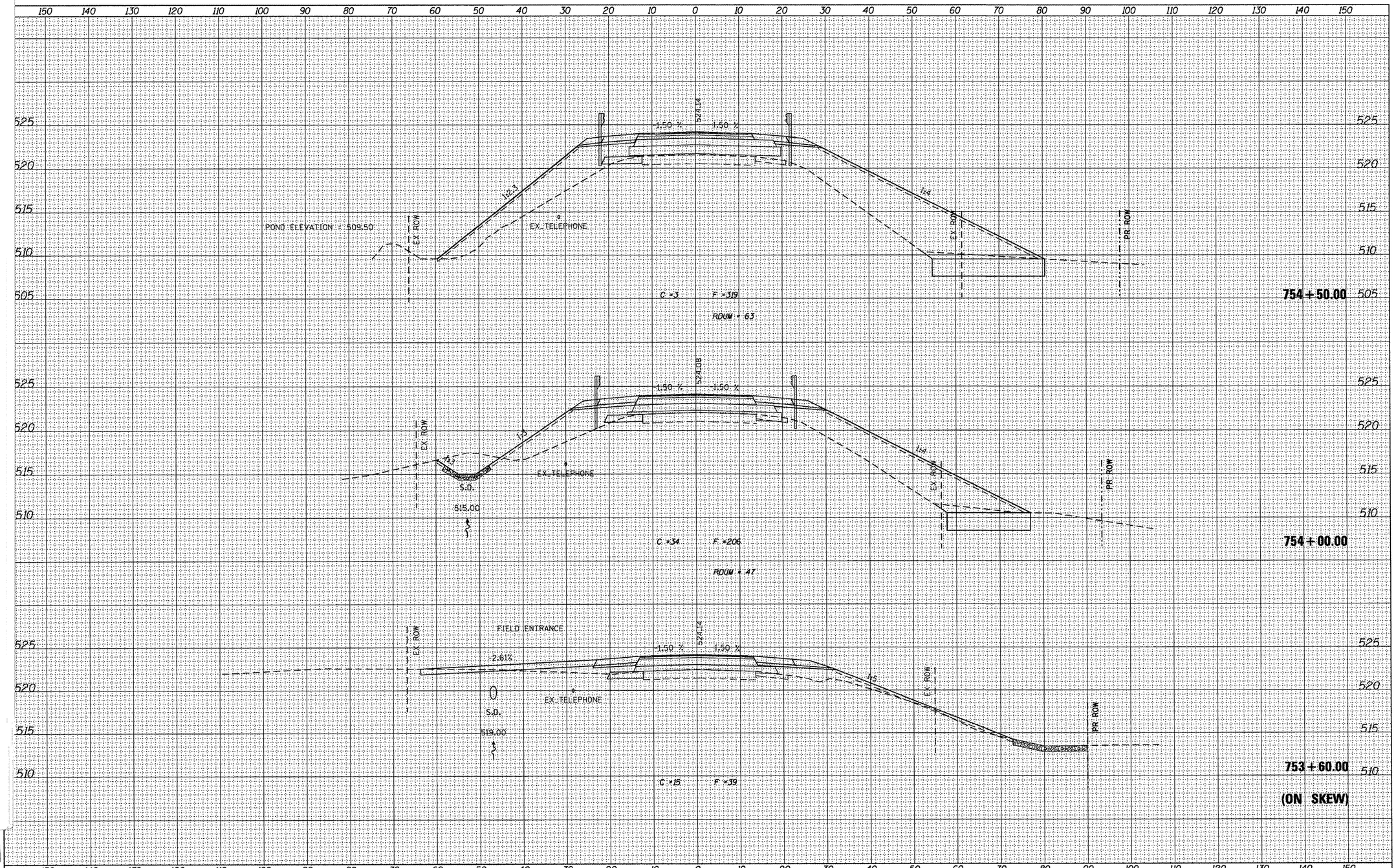
CROSS SECTIONS
IL 61 OVER LAMOINE RIVER

SCALE: | SHEET NO. OF SHEETS | STA. 752+50.00 TO STA. 753+50.00

T.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	MCDONOUGH	117	84
		CONTRACT NO. 68482		
	ILLINOIS FED. AID PROJECT			



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CROSS SECTIONS
IL 61 OVER LAMOINE RIVER

SCALE: | SHEET NO. OF SHEETS | STA. 753+60.00 TO STA. 754+50.00

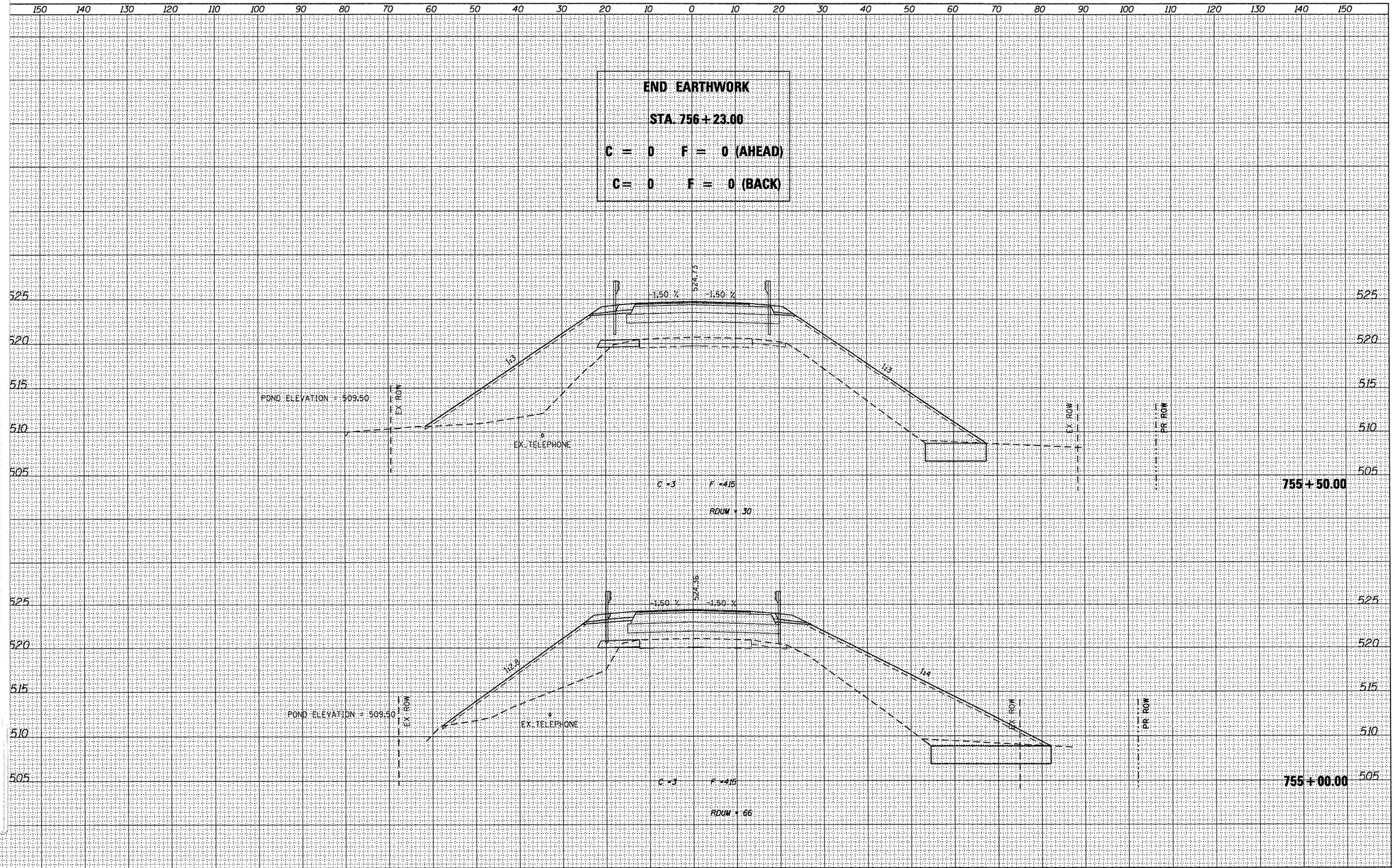
T.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	MCDONOUGH	117	85
		CONTRACT NO. 68482		
		ILLINOIS FED. AID PROJECT		

END EARTHWORK

STA. 756+23.00

C = 0 F = 0 (AHEAD)

C= 0 F = 0 (BACK)



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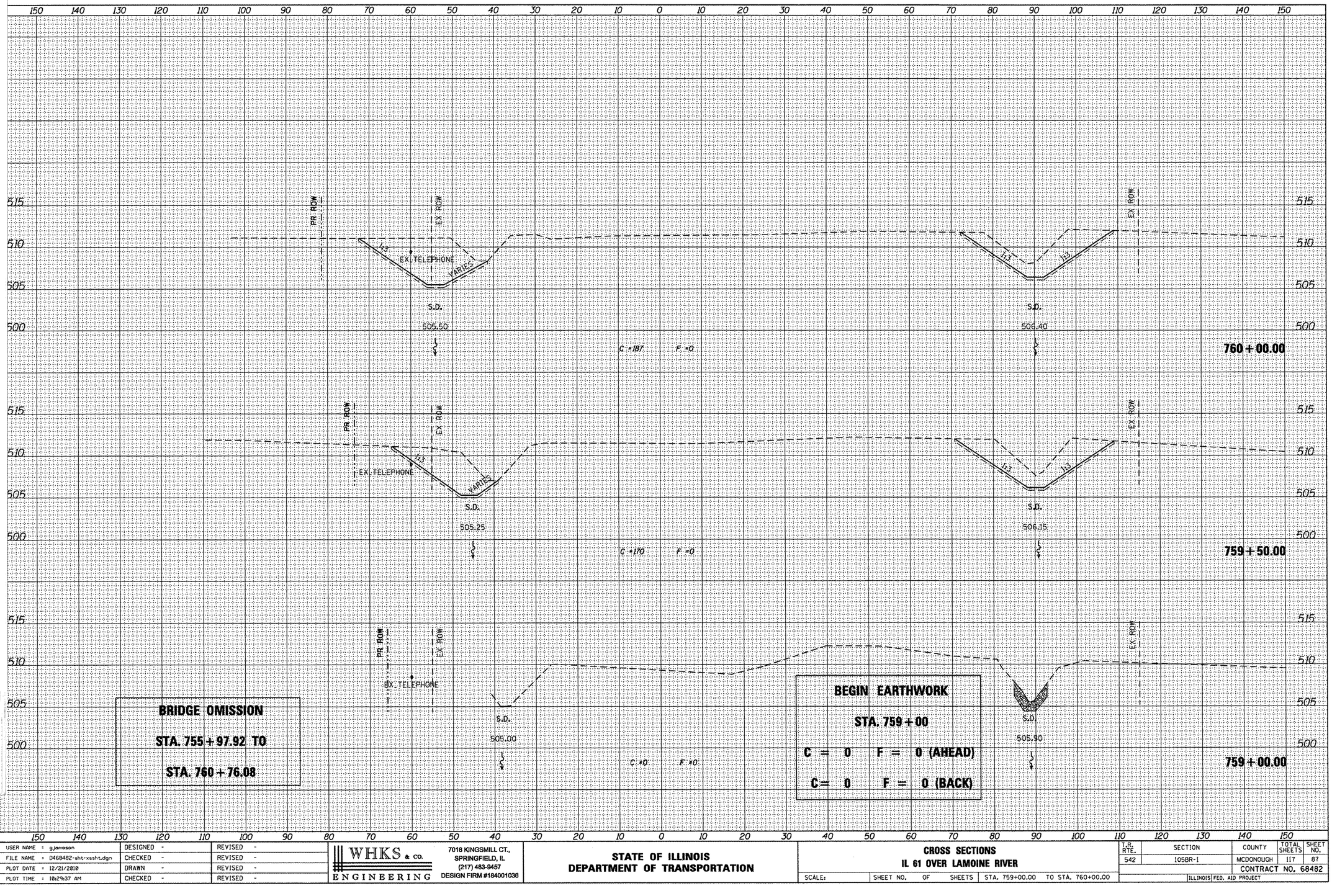
CROSS SECTIONS
IL 61 OVER LAMOINE RIVER

SCALE: | SHEET NO. OF SHEETS | STA. 755+00.00 TO STA. 755+50.00

T.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	MCDONOUGH	117	86
		CONTRACT NO. 68482		
	ILLINOIS FED. AID PROJECT			



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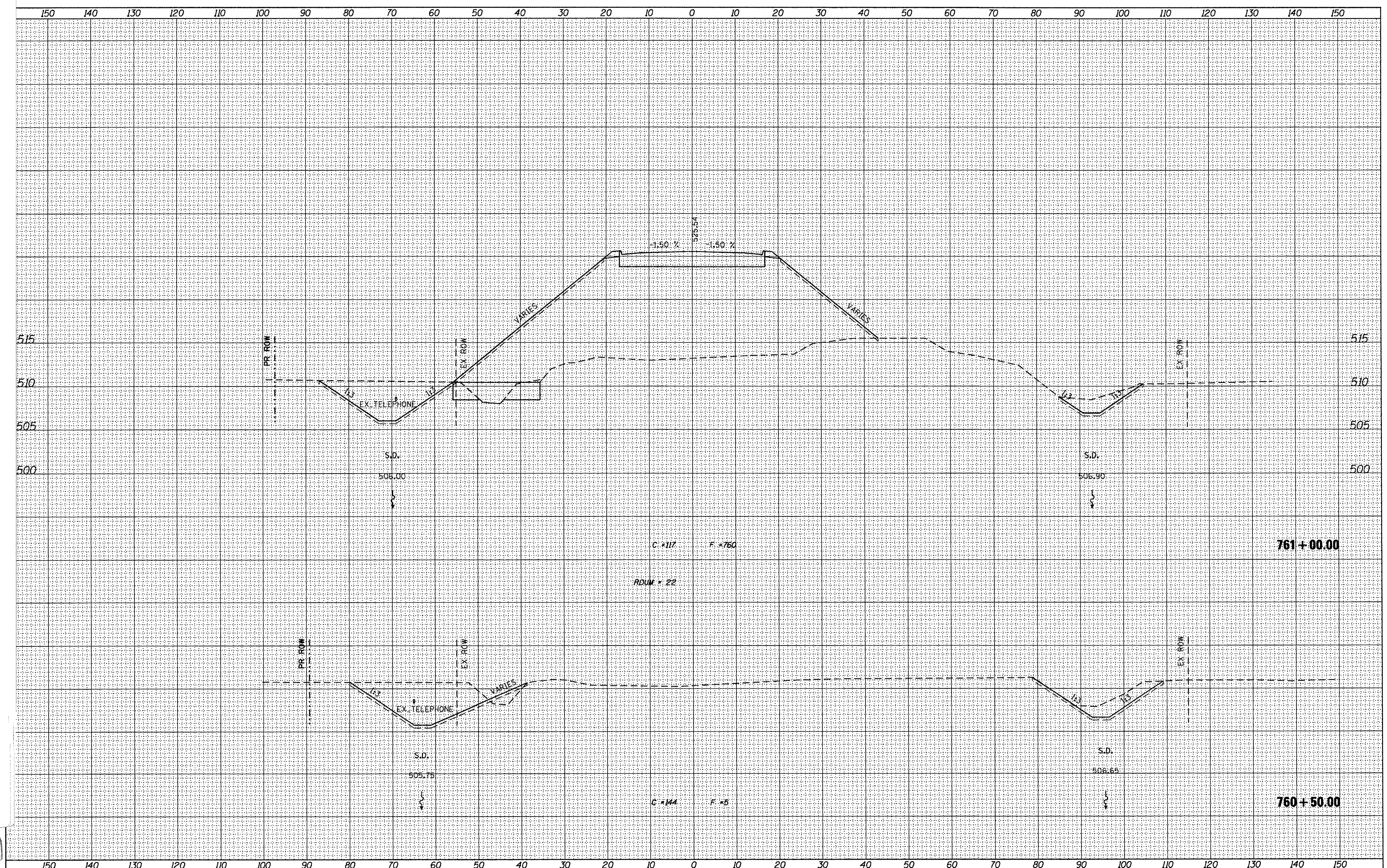
CROSS SECTIONS
IL 61 OVER LAMOINE RIVER

SCALE: | SHEET NO. OF SHEETS | STA. 759+00.00 TO STA. 760+00.00

T.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	MCDONOUGH	117	87
		CONTRACT NO. 68482		
	ILLINOIS FED. AID PROJECT			



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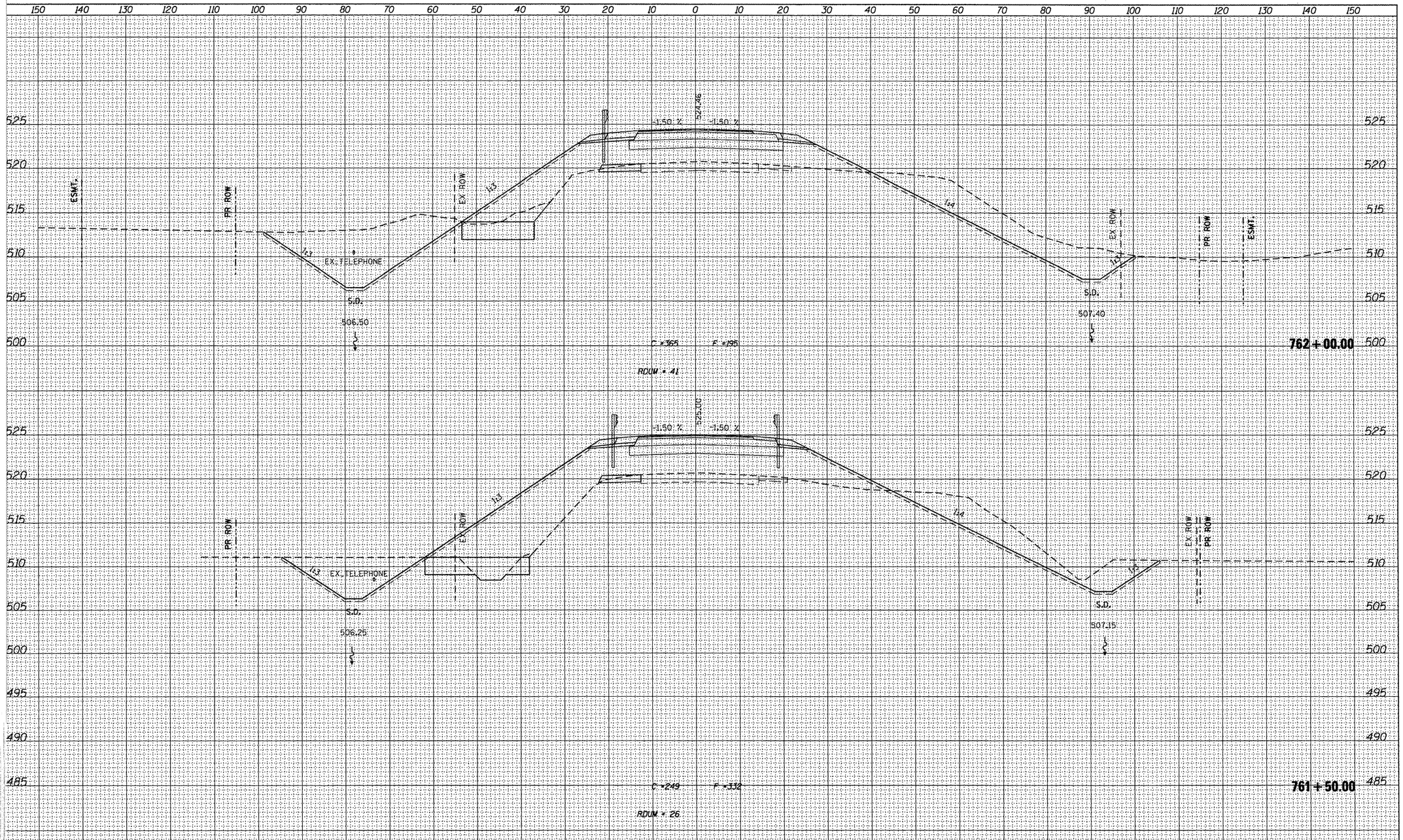
CROSS SECTIONS
IL 61 OVER LAMOINE RIVER

SCALE: | SHEET NO. OF SHEETS | STA. 760+50.00 TO STA. 761+00.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	MCDONOUGH	117	88

CONTRACT NO. 68482

ILLINOIS FED. AID PROJECT



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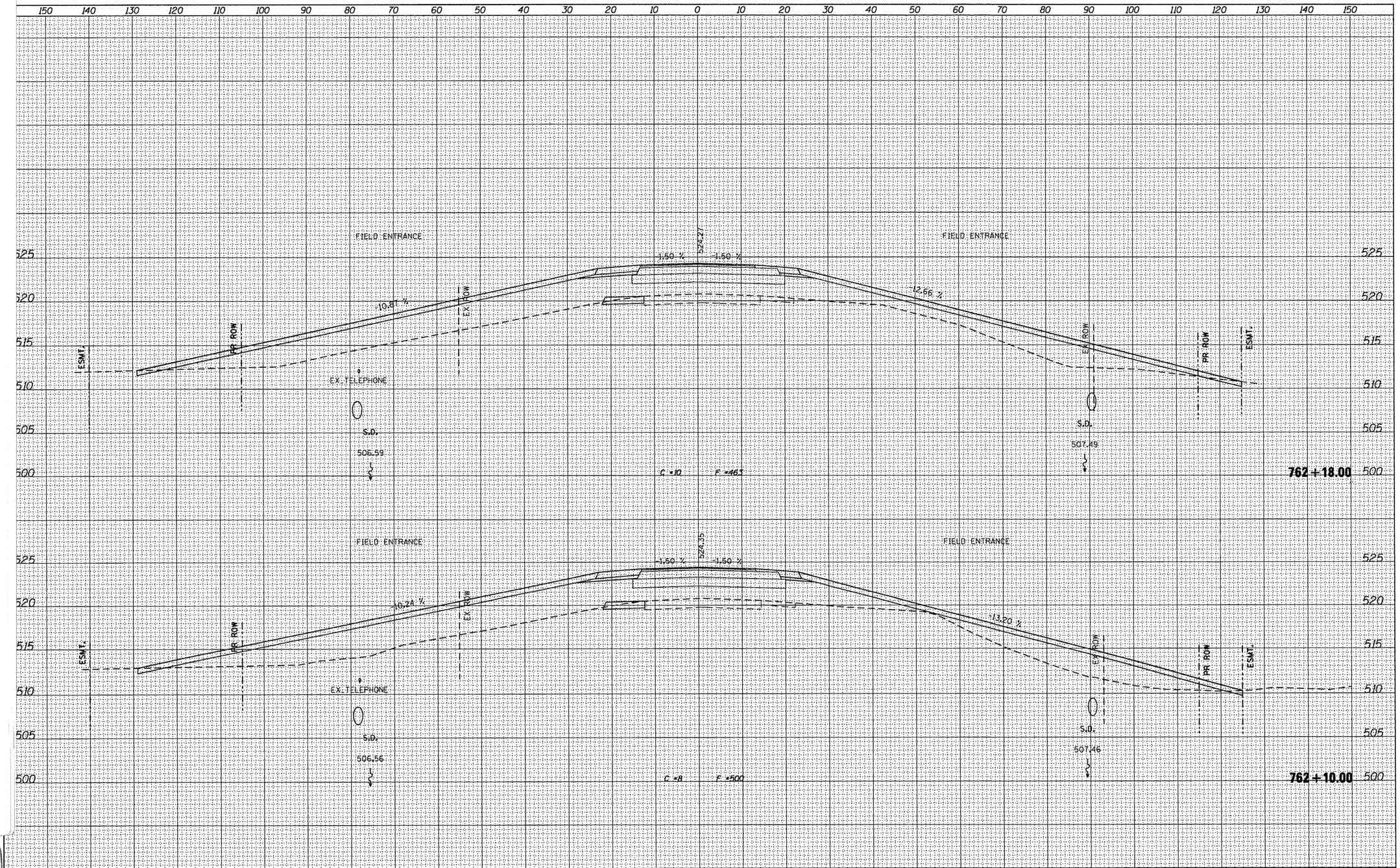
PLOT DATE = 12/21/2010	DRAWN -	REVISED -			
PLOT TIME = 10:29:41 AM	CHECKED -	REVISED -			

CROSS SECTIONS
IL 61 OVER LAMOINE RIVER

SCALE: | SHEET NO. OF SHEETS | STA. 761+50.00 TO STA. 762+00.00

T.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	MCDONOUGH	117	89
		CONTRACT NO. 68482		
		ILLINOIS FED. AID PROJECT		



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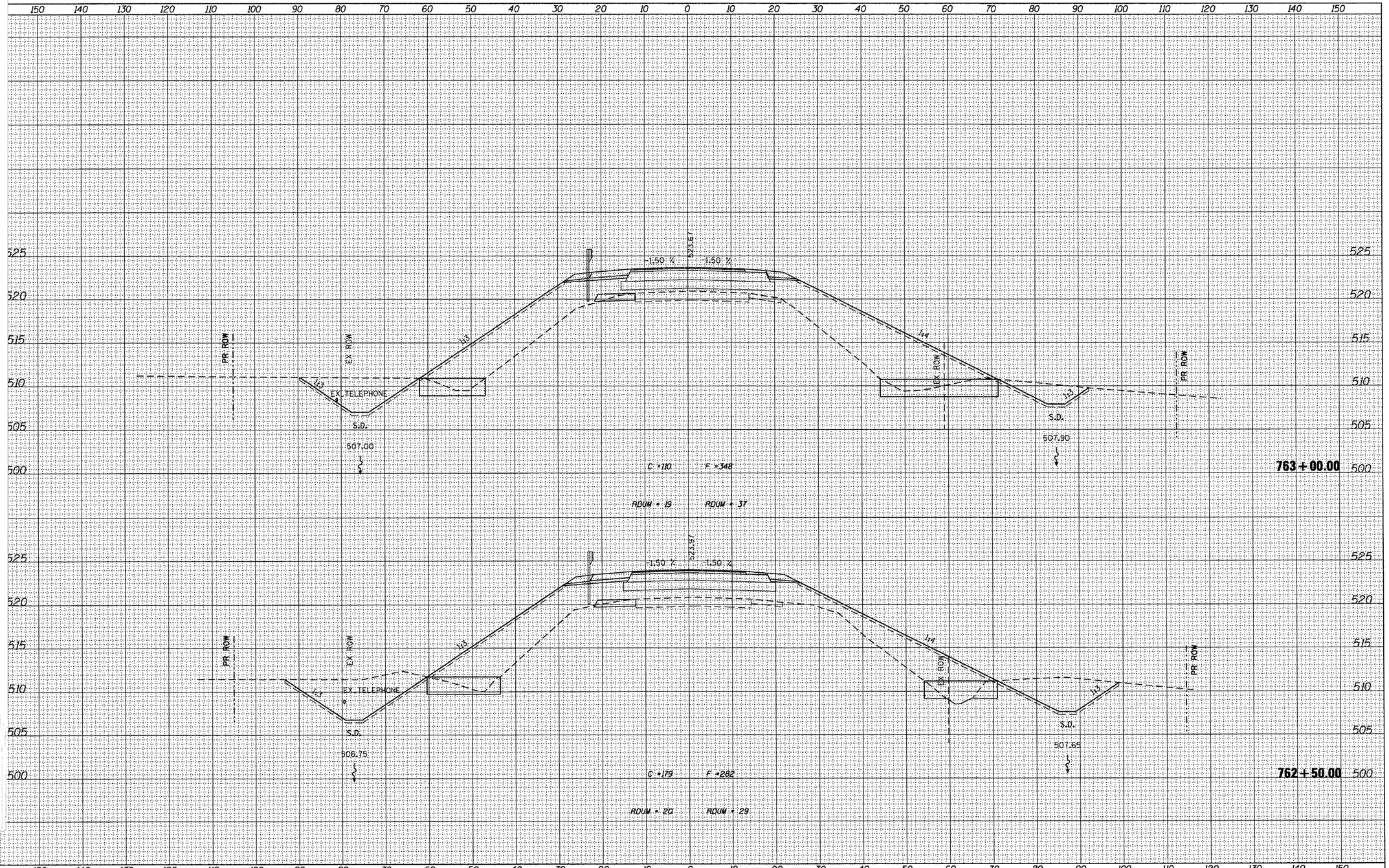
CROSS SECTIONS
IL 61 OVER LAMOINE RIVER

SCALE: | SHEET NO. OF SHEETS | STA. 762+10.00 TO STA. 762+18.00

T.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	MCDONOUGH	117	90
		CONTRACT NO. 68482		
		ILLINOIS FED. AID PROJECT		



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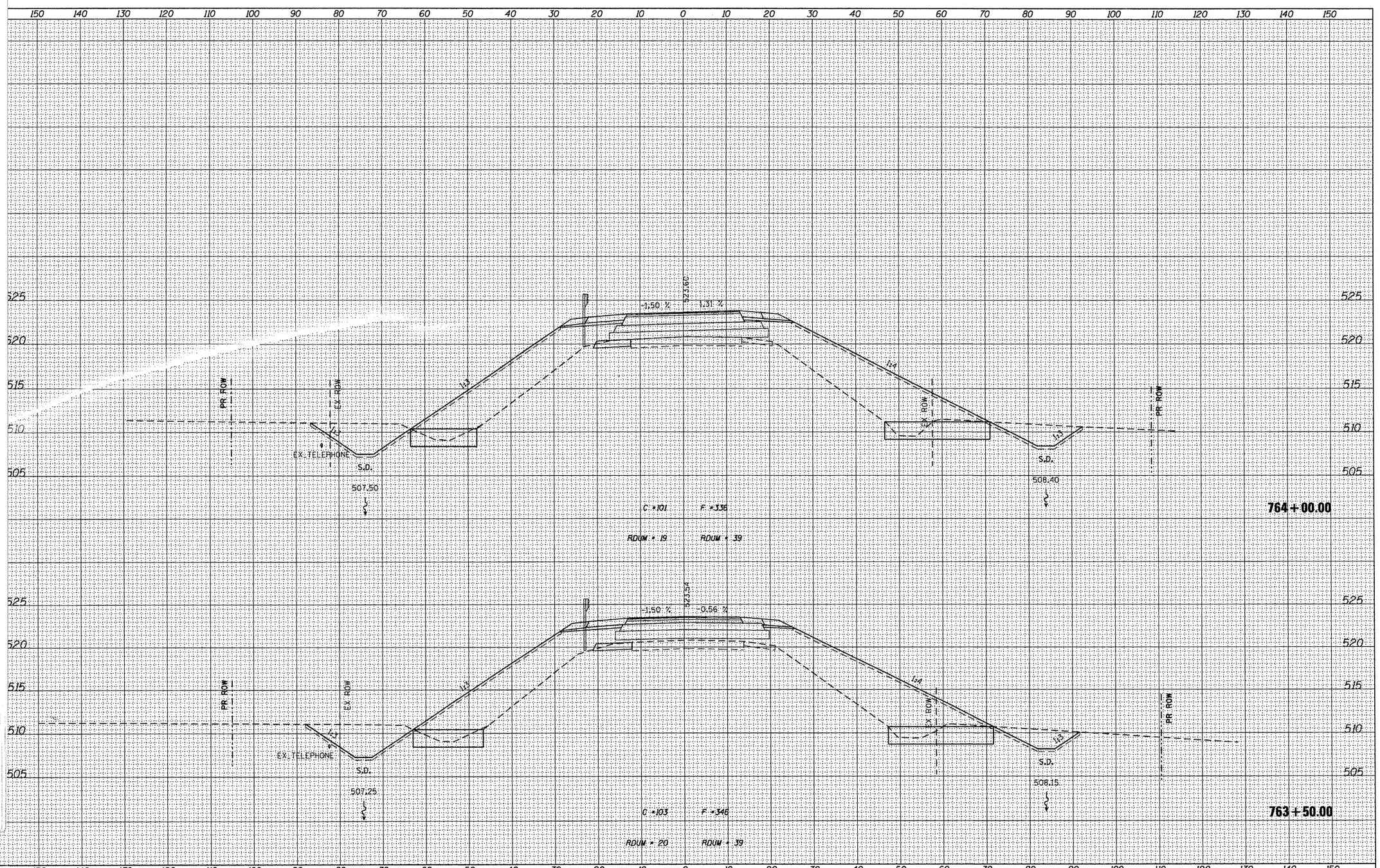
FILE NAME = D468482-sht-xssht.dgn	CHECKED -	REVISED -	7018 KINGSMILL CT., SPRINGFIELD, IL (217) 483-9457 DESIGN FIRM #184001036
PLOT DATE = 12/21/2010	DRAWN -	REVISED -	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**
PLOT TIME = 10:29:46 AM	CHECKED -	REVISED -	

CROSS SECTIONS
IL 61 OVER LAMOINE RIVER

SCALE: | SHEET NO. OF SHEETS | STA. 762+50.00 TO STA. 763+00.00

T.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	MCDONOUGH	117	91
		CONTRACT NO. 68482		
		ILLINOIS FED. AID PROJECT		



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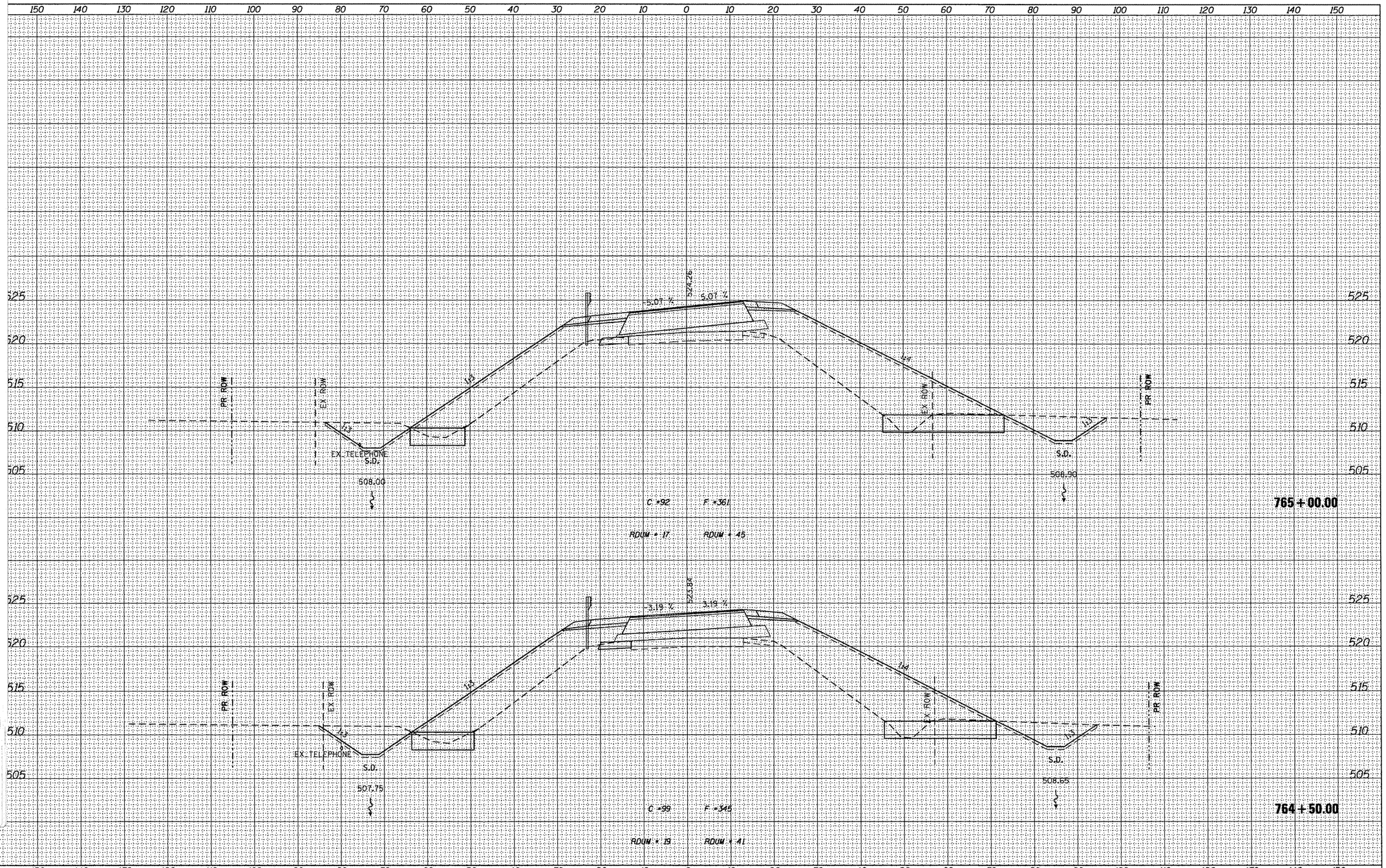
CROSS SECTIONS
IL 61 OVER LAMOINE RIVER

SCALE: | SHEET NO. OF SHEETS | STA. 763+50.00 TO STA. 764+00.00

T.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	MCDONOUGH	117	92
		CONTRACT NO. 68482		
	ILLINOIS FED. AID PROJECT			



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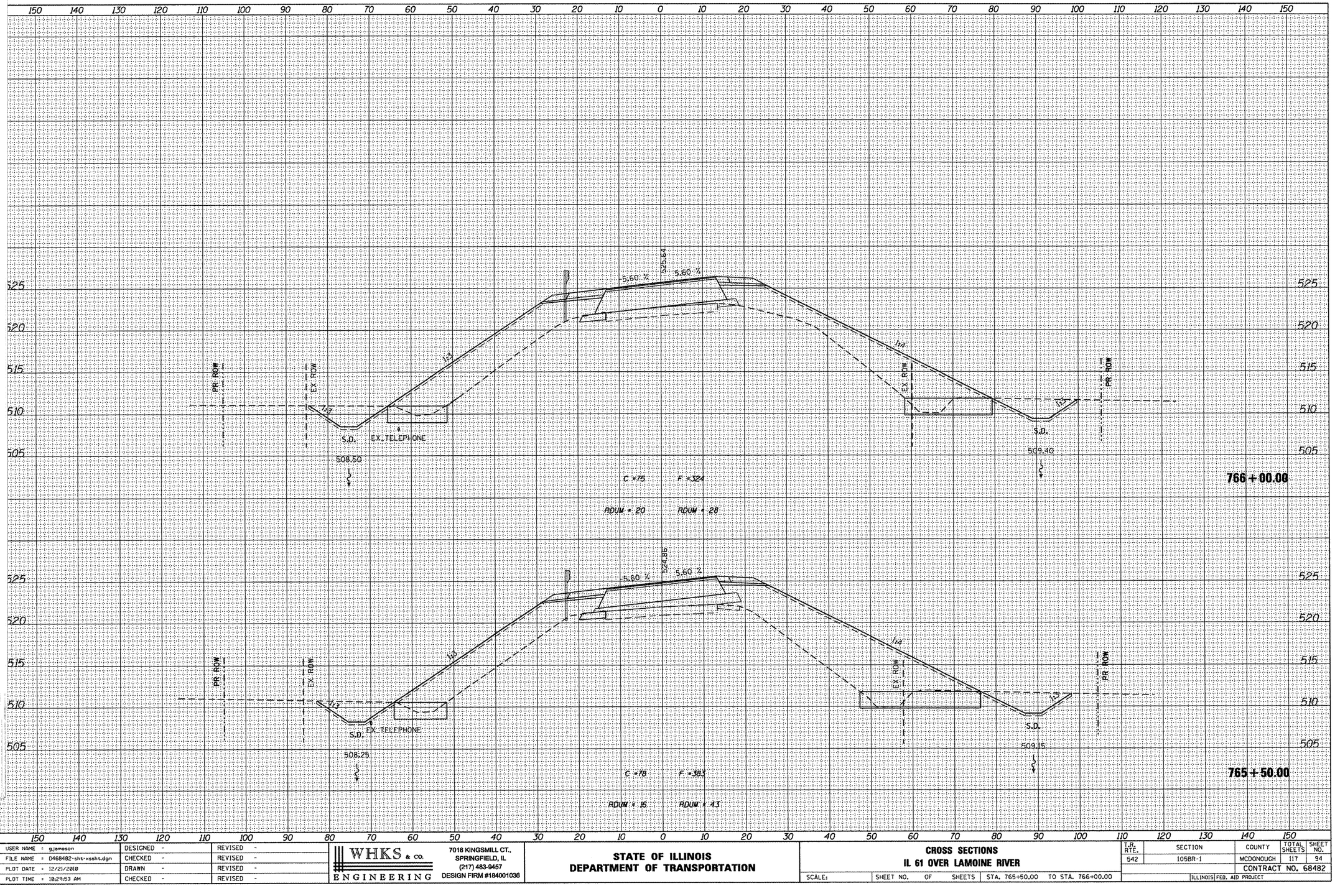
PLOT DATE = 12/21/2010	DRAWN -	REVISED -			
PLOT TIME = 10:29:50 AM	CHECKED -	REVISED -			

CROSS SECTIONS
IL 61 OVER LAMOINE RIVER

SCALE: | SHEET NO. OF SHEETS | STA. 764+50.00 TO STA. 765+00.00

T.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	MCDONOUGH	117	93
		CONTRACT NO. 68482		
		ILLINOIS FED. AID PROJECT		



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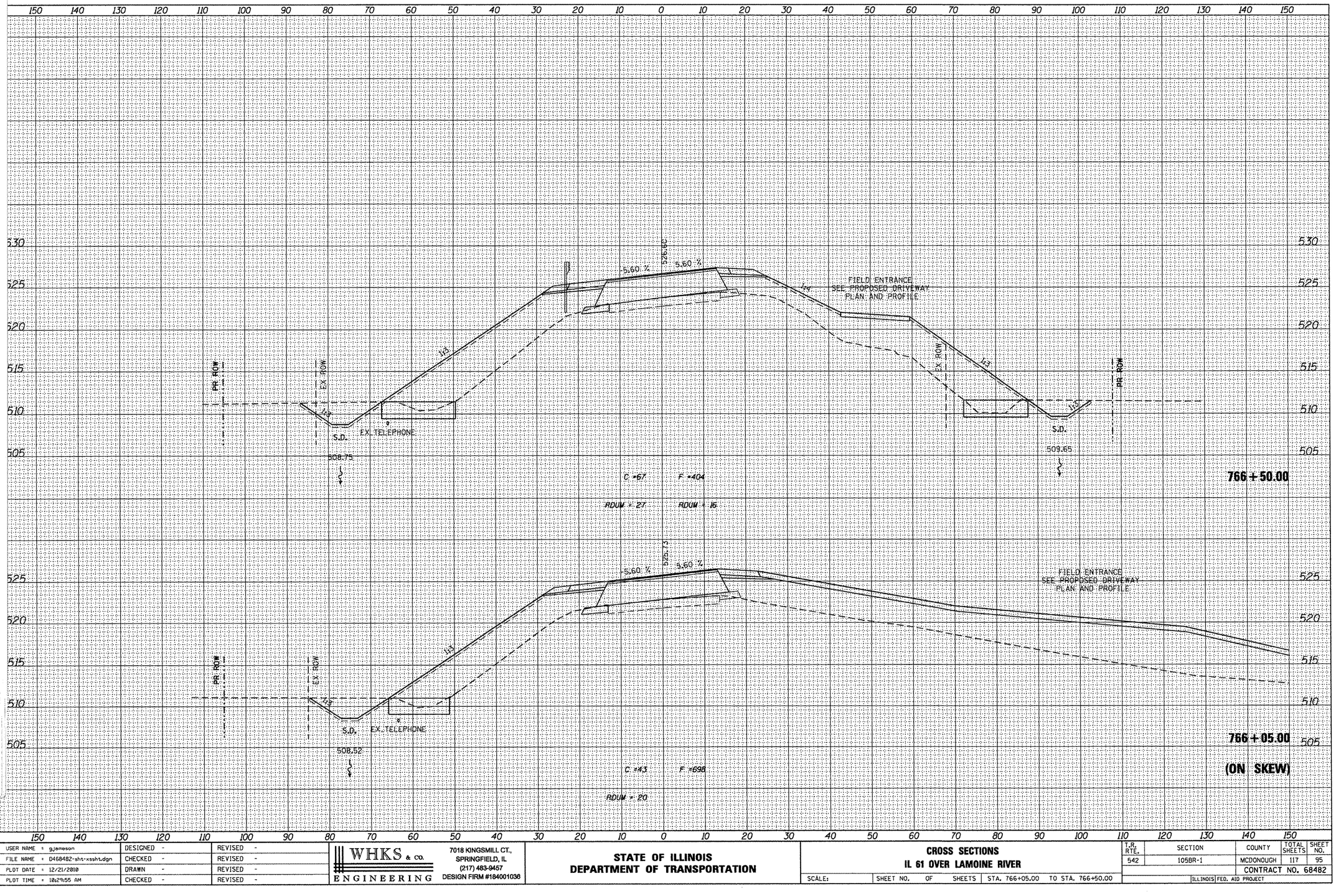
CROSS SECTIONS
IL 61 OVER LAMOINE RIVER

SCALE: | SHEET NO. OF SHEETS | STA. 765+50.00 TO STA. 766+00.00

T.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	MCDONOUGH	117	94
		CONTRACT NO. 68482		
		ILLINOIS FED. AID PROJECT		



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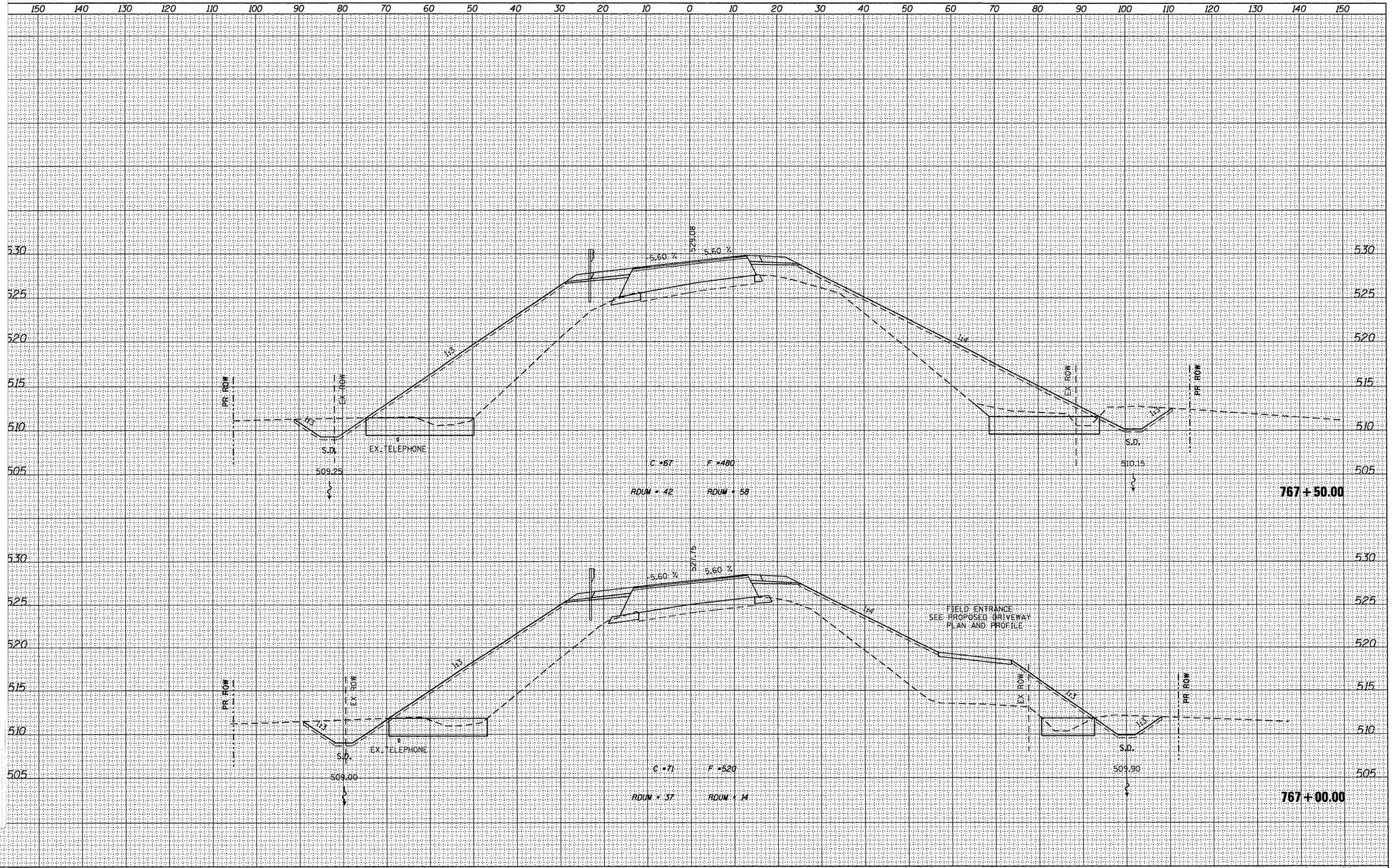
CROSS SECTIONS
IL 61 OVER LAMOINE RIVER

SCALE: | SHEET NO. OF SHEETS | STA. 766+05.00 TO STA. 766+50.00

T.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	MCDONOUGH	117	95
		CONTRACT NO. 68482		
	ILLINOIS FED. AID PROJECT			



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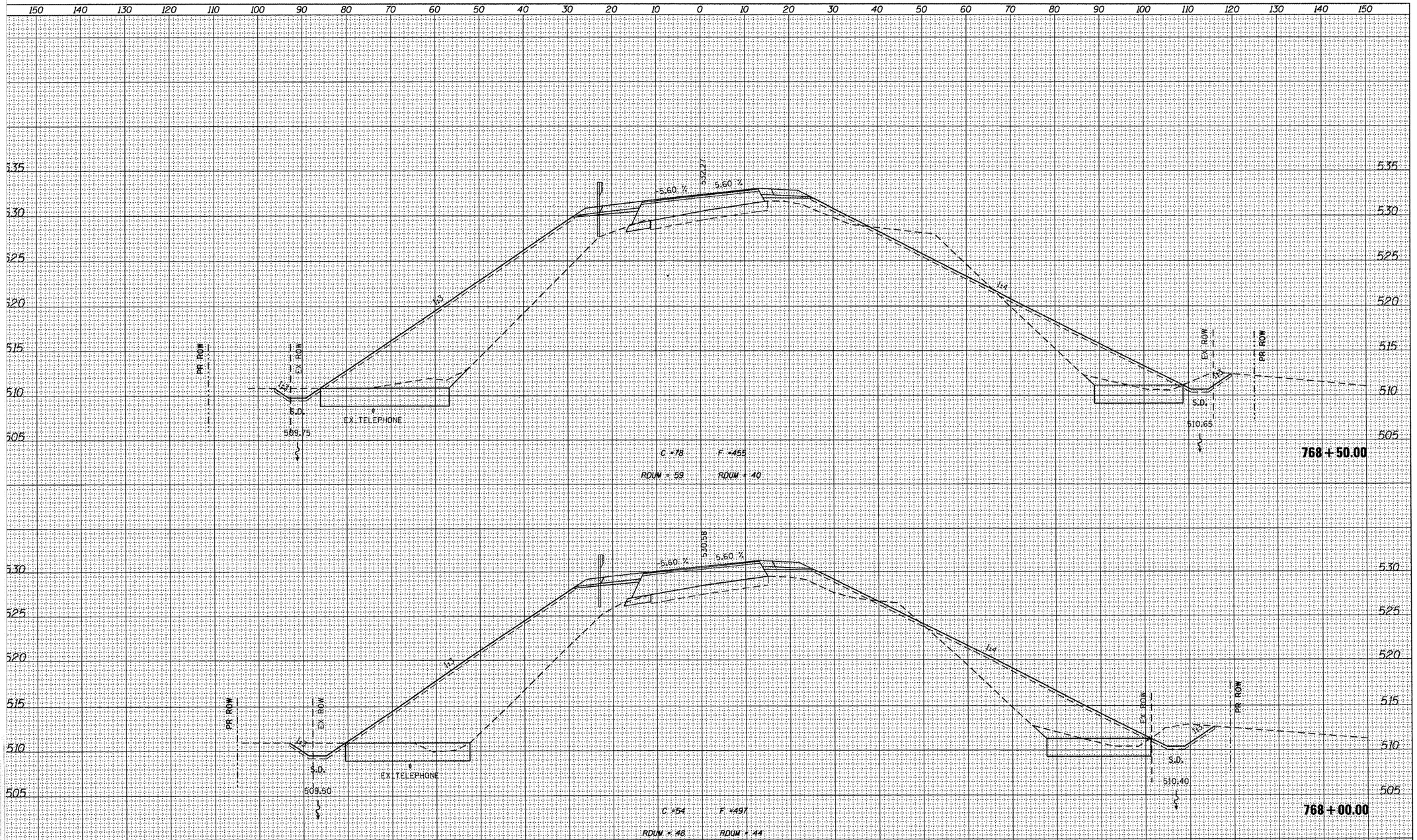
CROSS SECTIONS
IL 61 OVER LAMOINE RIVER

SCALE: | SHEET NO. OF SHEETS | STA. 767+00.00 TO STA. 767+50.00

T.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	MCDONOUGH	117	96
		CONTRACT NO. 68482		
		ILLINOIS FED. AID PROJECT		



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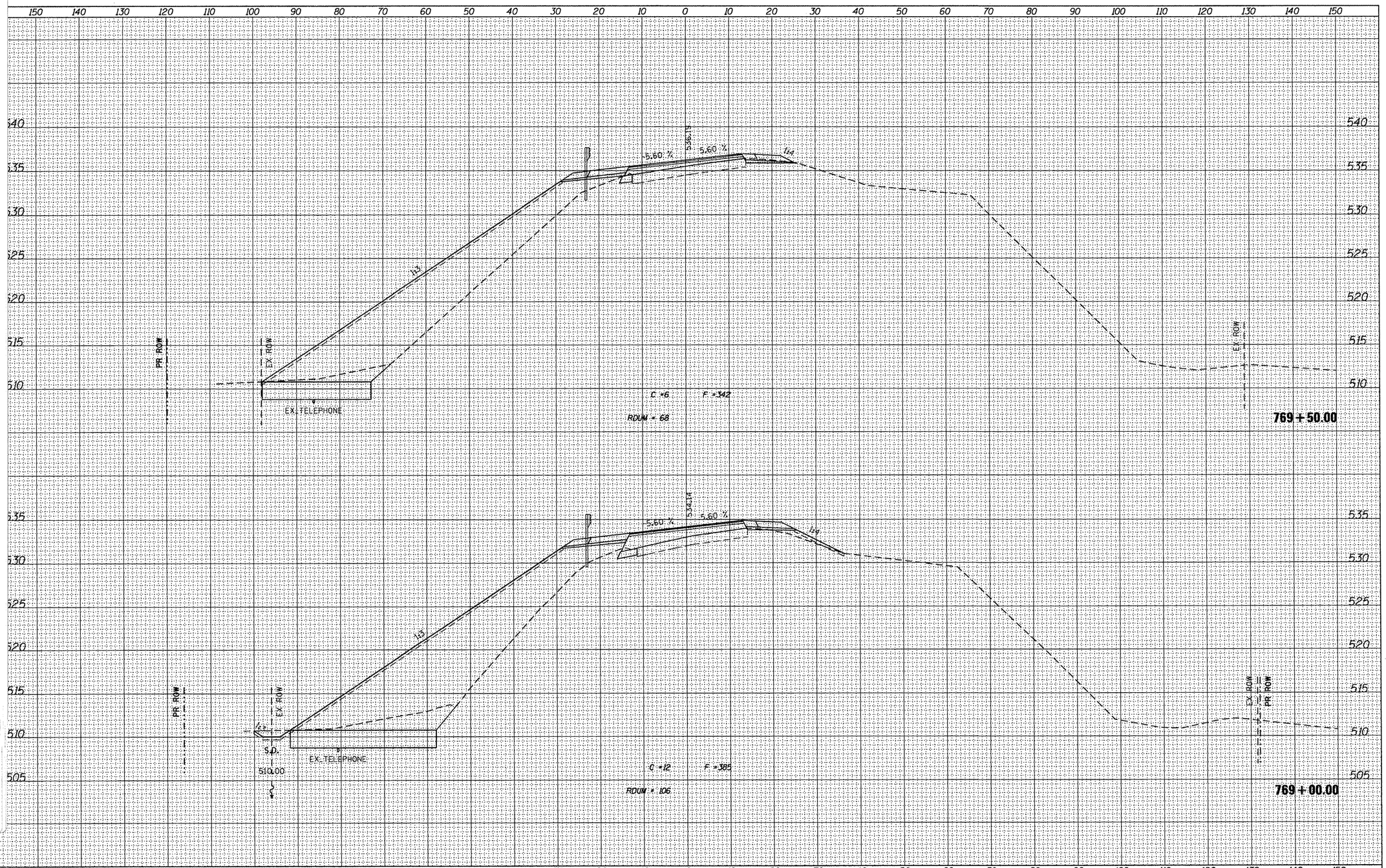
CROSS SECTIONS
IL 61 OVER LAMOINE RIVER

SCALE: | SHEET NO. OF SHEETS | STA. 768+00.00 TO STA. 768+50.00

T.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	MCDONOUGH	117	97
		CONTRACT NO. 68482		
		ILLINOIS FED. AID PROJECT		



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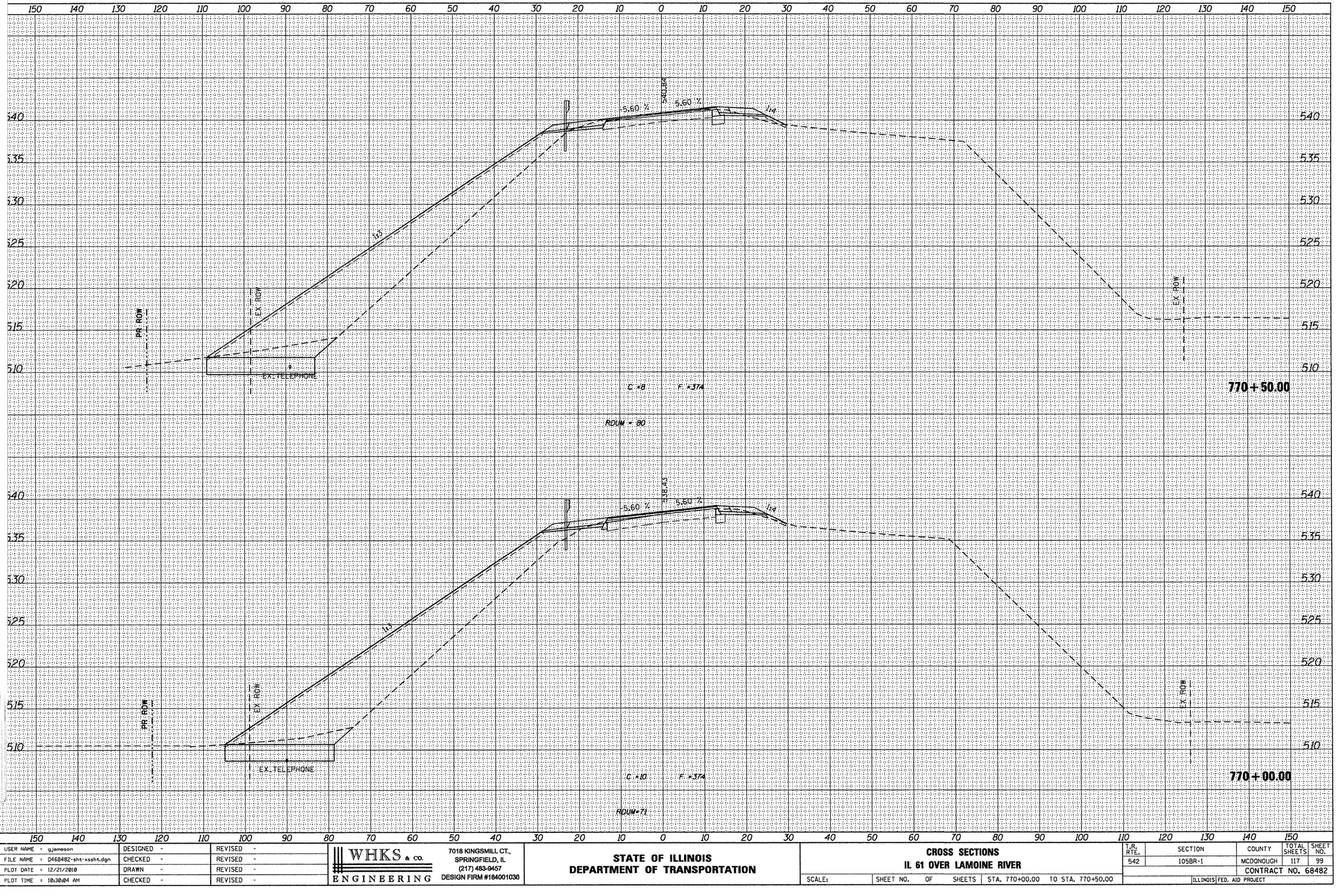
CROSS SECTIONS
IL 61 OVER LAMOINE RIVER

SCALE: | SHEET NO. OF SHEETS | STA. 769+00.00 TO STA. 769+50.00

T.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	MCDONOUGH	117	98
		CONTRACT NO. 68482		
	ILLINOIS FED. AID PROJECT			



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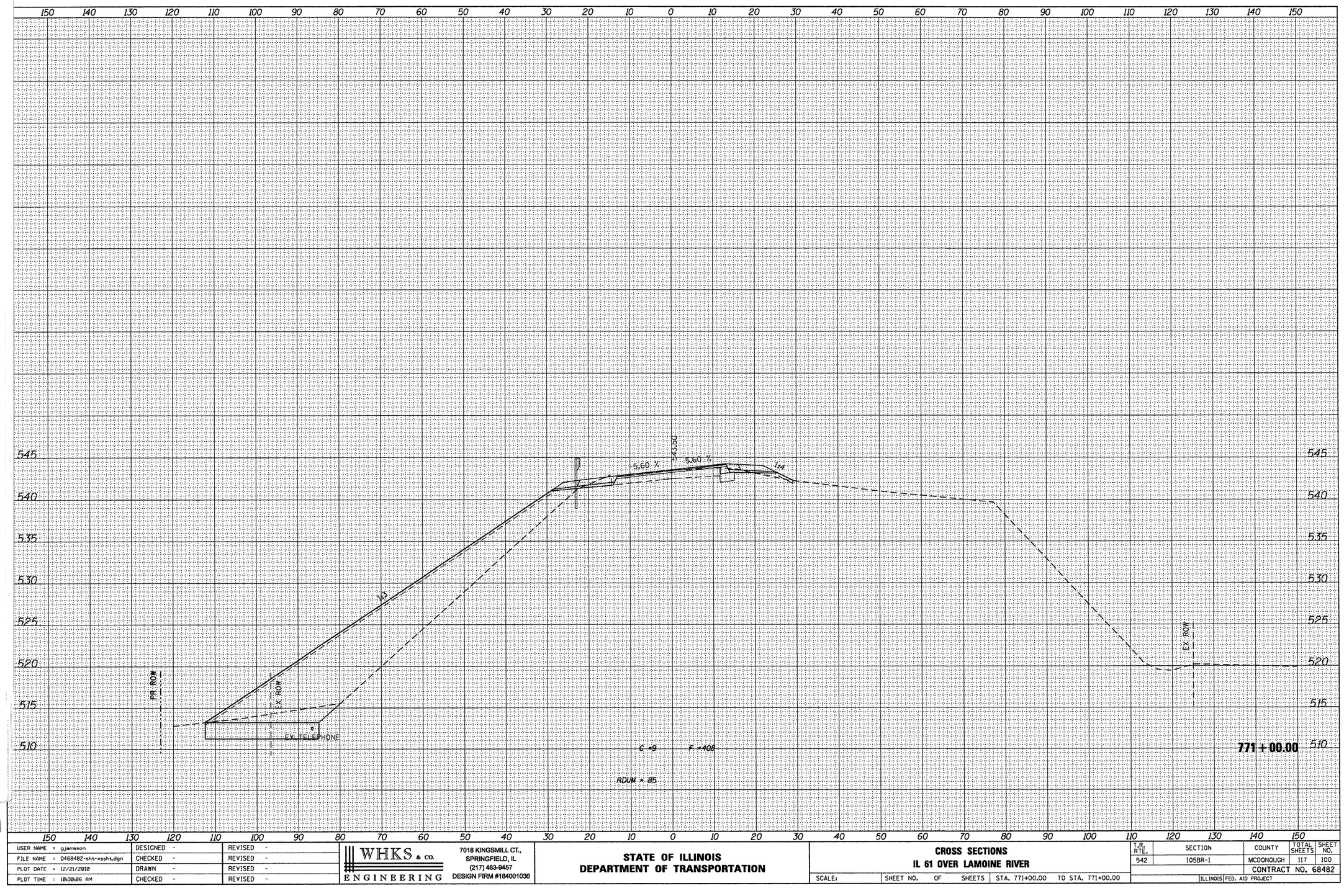
CROSS SECTIONS
IL 61 OVER LAMOINE RIVER

SCALE: | SHEET NO. OF SHEETS | STA. 770+00.00 TO STA. 770+50.00

T.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	MCDONOUGH	117	99
		CONTRACT NO. 68482		
	ILLINOIS FED. AID PROJECT			



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PLOT TIME = 10:30:06 AM	CHECKED -	REVISED -	

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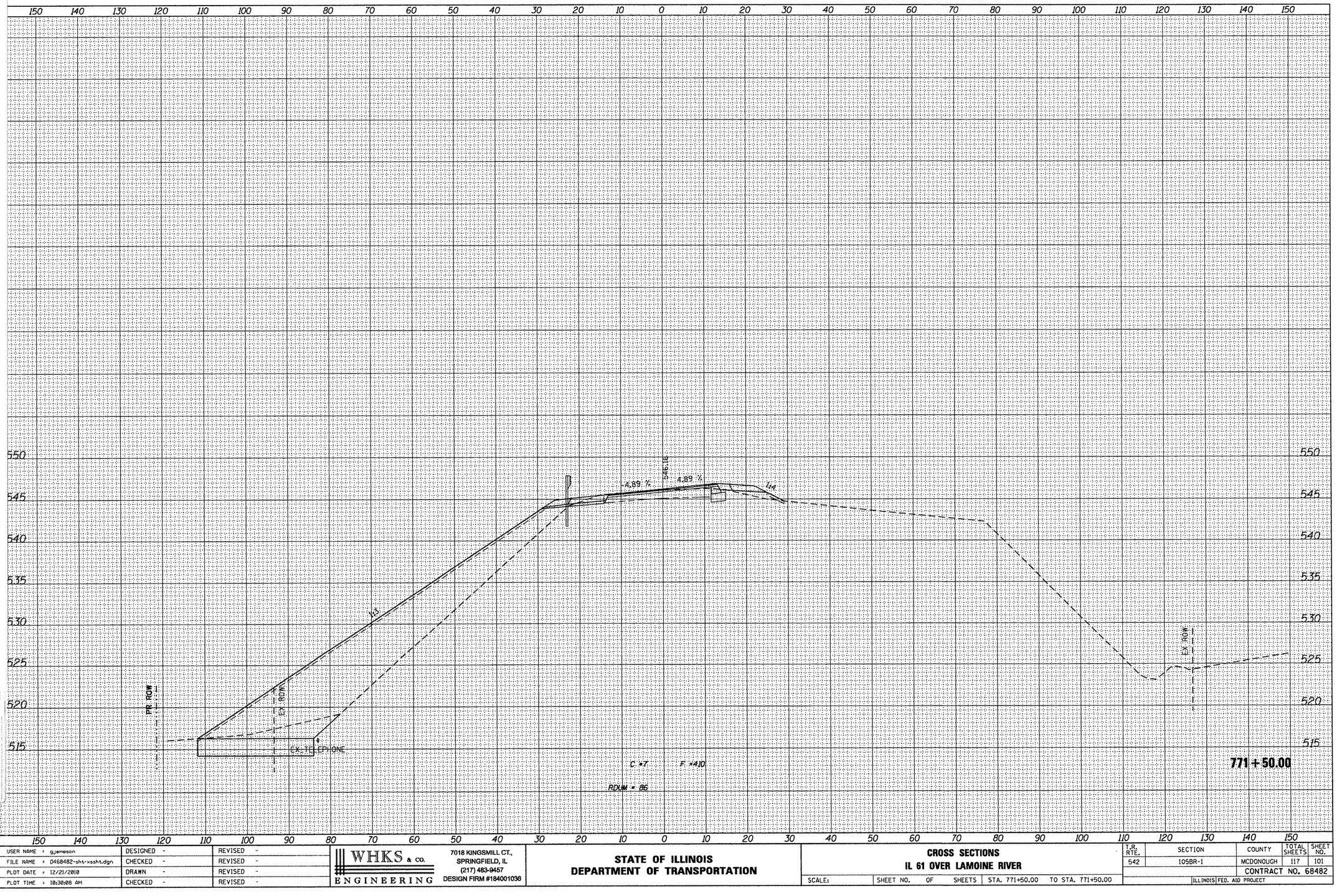
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
IL 61 OVER LAMOINE RIVER

SCALE: | SHEET NO. OF SHEETS | STA. 771+00.00 TO STA. 771+00.00

T.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	MCDONOUGH	117	100
		CONTRACT NO. 68482		
	ILLINOIS FED. AID PROJECT			



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PLOT DATE = 12/21/2010	DRAWN -	REVISED -
PLOT TIME = 10:30:08 AM	CHECKED -	REVISED -

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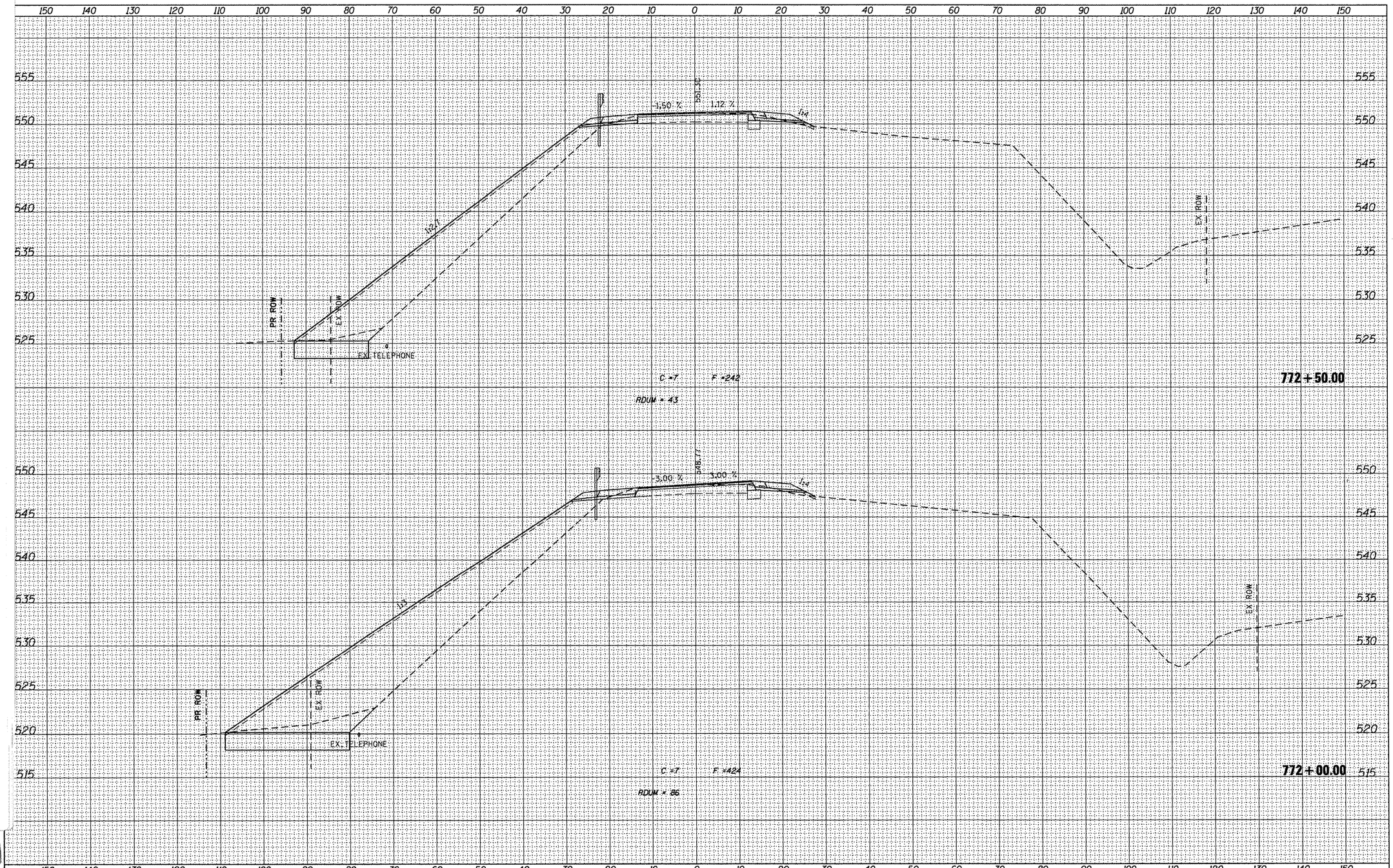
CROSS SECTIONS
IL 61 OVER LAMOINE RIVER

SCALE: | SHEET NO. OF SHEETS | STA. 771+50.00 TO STA. 771+50.00

T.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	MCDONOUGH	117	101

CONTRACT NO. 68482

ILLINOIS | FED. AID PROJECT



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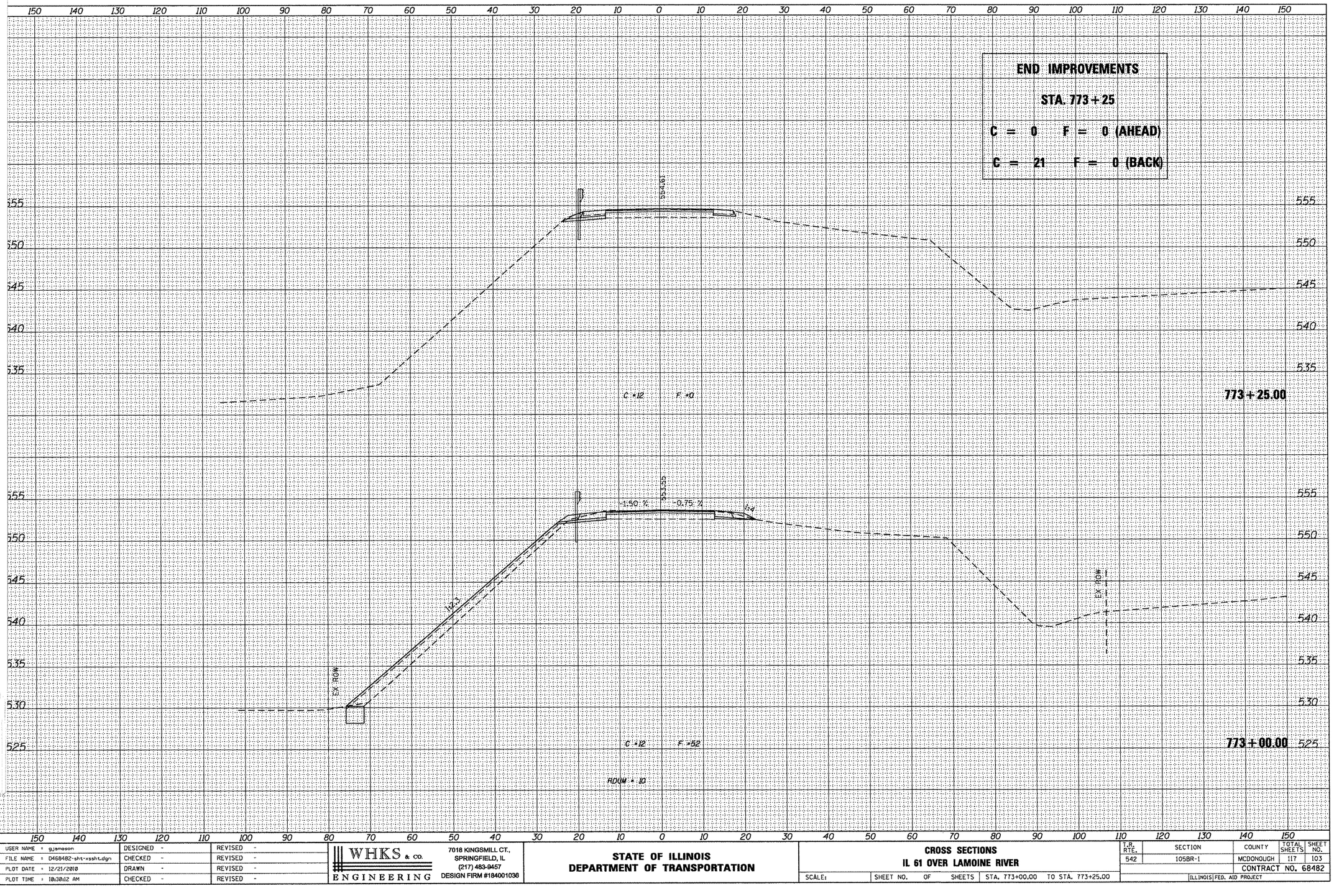
CROSS SECTIONS
IL 61 OVER LAMOINE RIVER

SCALE:	SHEET NO. OF SHEETS	STA. 772+00.00 TO STA. 772+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	MCDONOUGH	117	102
		CONTRACT NO. 68482		
		ILLINOIS FED. AID PROJECT		



USER NAME = gjamason	DESIGNED -	REVISED -	
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PLOT TIME = 10:30:12 AM	CHECKED -	REVISED -	

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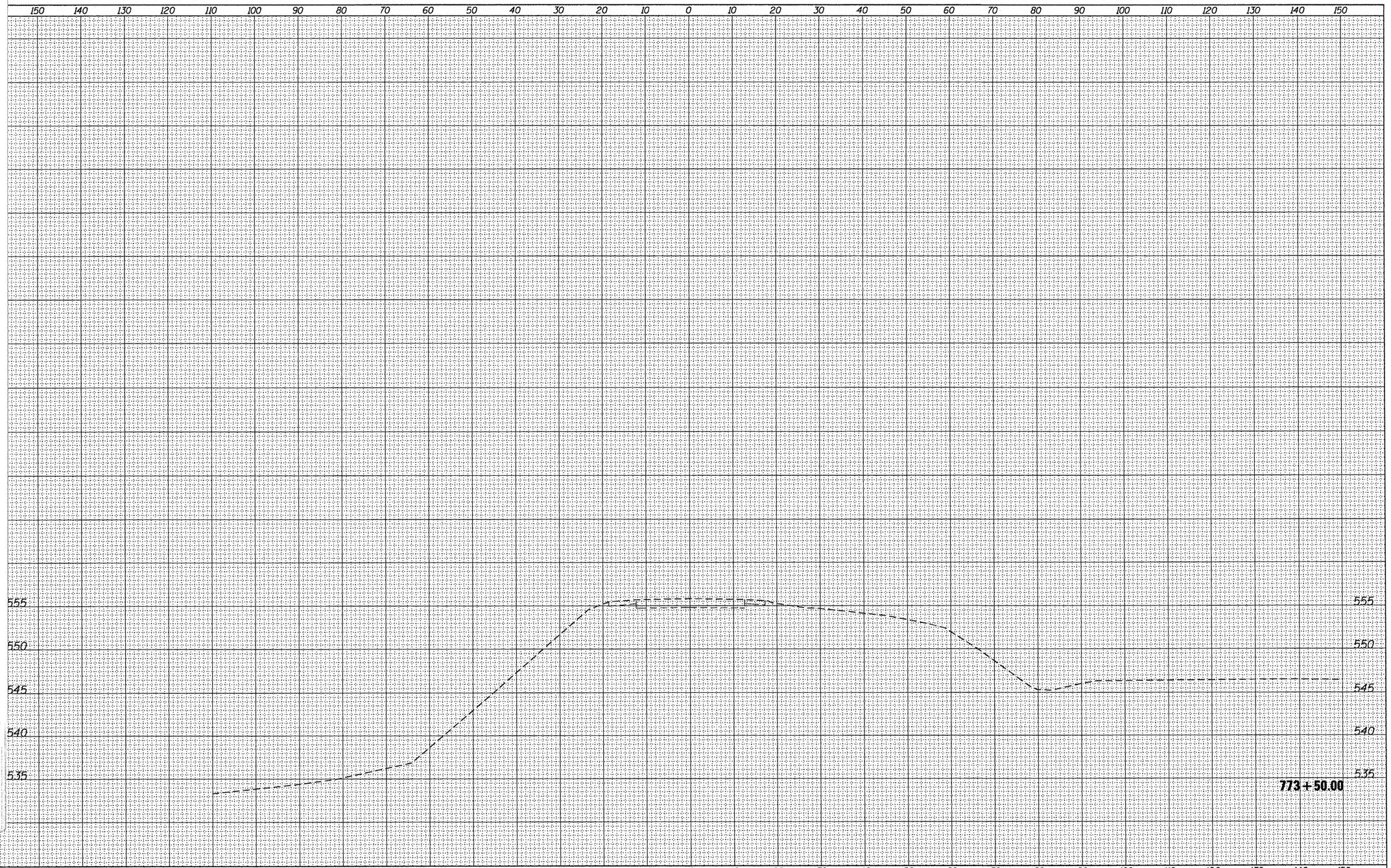
CROSS SECTIONS
IL 61 OVER LAMOINE RIVER

SCALE: | SHEET NO. OF SHEETS | STA. 773+00.00 TO STA. 773+25.00

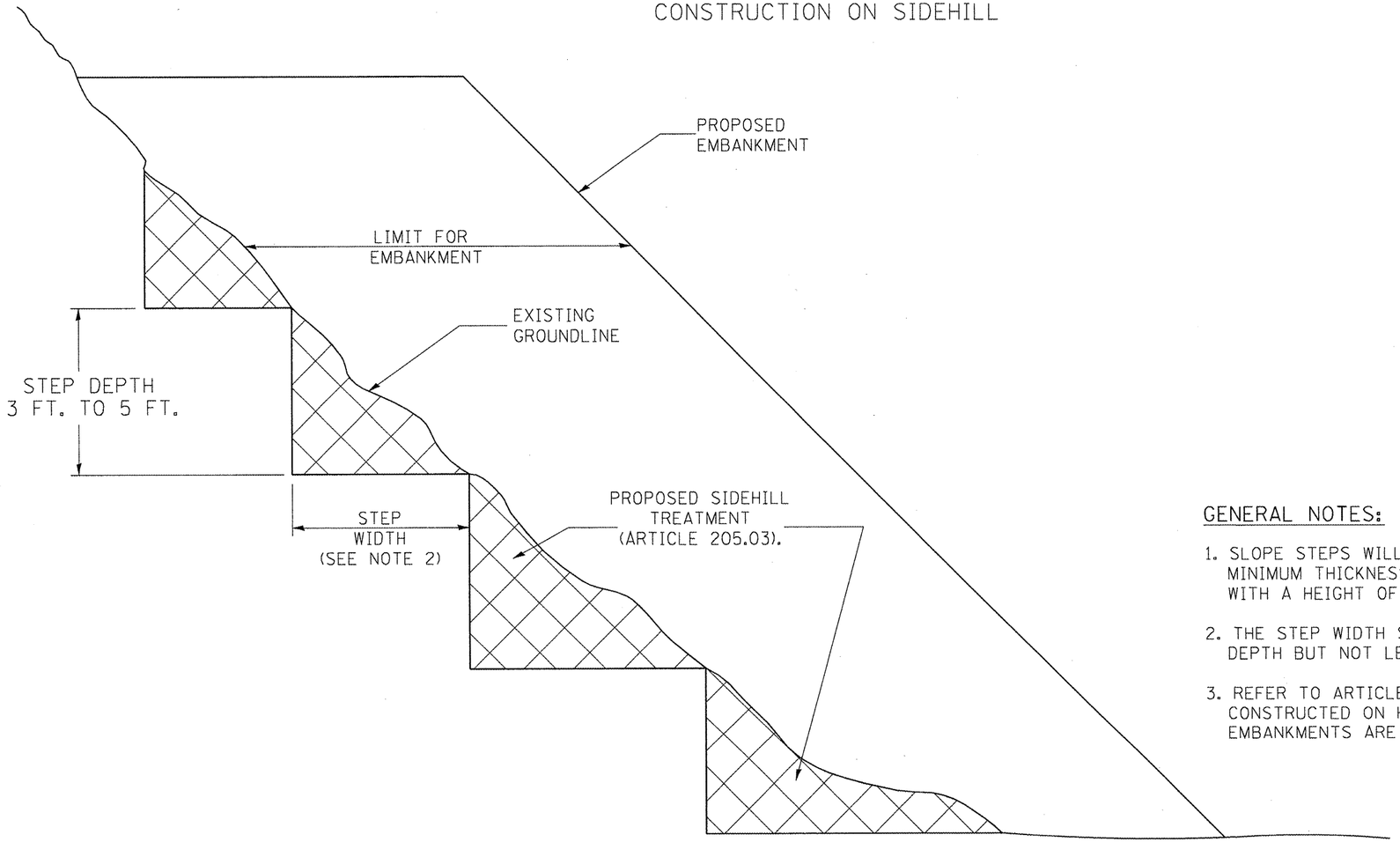
T.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	MCDONOUGH	117	103
		CONTRACT NO. 68482		
	ILLINOIS FED. AID PROJECT			



USER NAME = gjameson	DESIGNED -	REVISED -	WHKS & CO. ENGINEERING	7018 KINGSMILL CT., SPRINGFIELD, IL (217) 483-9457 DESIGN FIRM #184001036	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CROSS SECTIONS IL 61 OVER LAMOINE RIVER	T.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FILE NAME = D468482-sht-xssht.dgn	CHECKED -	REVISED -					542	105BR-1	MCDONOUGH	117	104
PLOT DATE = 12/21/2010	DRAWN -	REVISED -							CONTRACT NO. 68482		
PLOT TIME = 10:30:14 AM	CHECKED -	REVISED -				SCALE: SHEET NO. OF SHEETS STA. 773+50.00 TO STA. 773+50.00			ILLINOIS FED. AID PROJECT		

SLOPE STEPS DETAIL

TYPICAL CROSS-SECTION EMBANKMENT
CONSTRUCTION ON SIDEHILL



GENERAL NOTES:

1. SLOPE STEPS WILL BE REQUIRED FOR ALL 12(300) MINIMUM THICKNESS "SILVER FILLS" AND ON A FILLS WITH A HEIGHT OF 10'(3.0M).

2. THE STEP WIDTH SHALL BE TWICE THE STEP DEPTH BUT NOT LESS THAN 6 FEET.

3. REFER TO ARTICLE 205.03 FOR EMBANKMENT TO BE CONSTRUCTED ON HILLSIDE OR SLOPES, OR IF EXISTING EMBANKMENTS ARE TO BE WIDENED.

REPLACEMENT MATERIAL:

STANDARD EMBANKMENT
(IN ACCORDANCE WITH
205 OF THE STANDARD SPECIFACATION).

All dimensions are in inches (millimeters) unless otherwise noted.

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FILE NAME = D468482-sht-DIST4	CHECKED -	REVISED -
PLOT DATE = 12/21/2018	DRAWN -	REVISED -
PLOT TIME = 11:31:41 AM	CHECKED -	REVISED -

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STATE OF ILLINOIS
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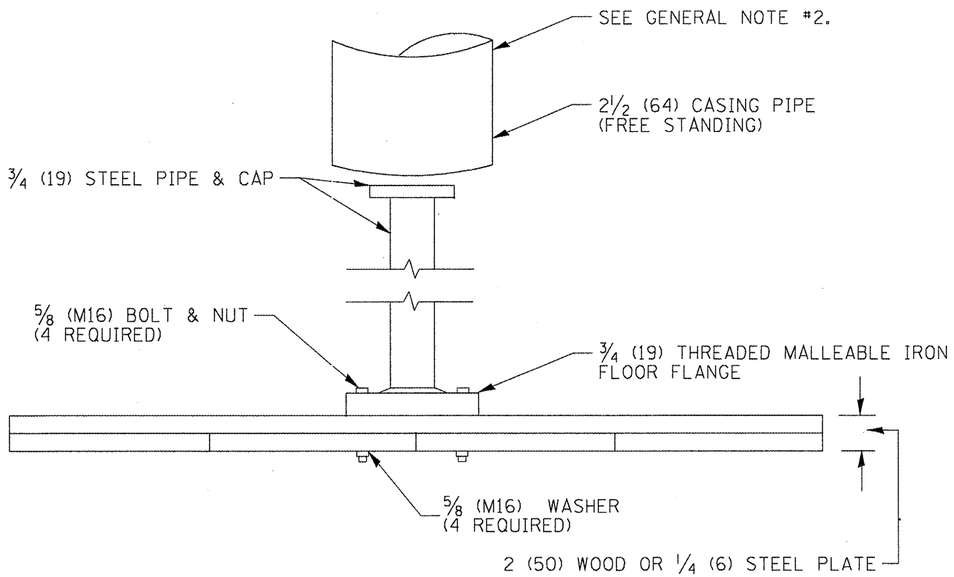
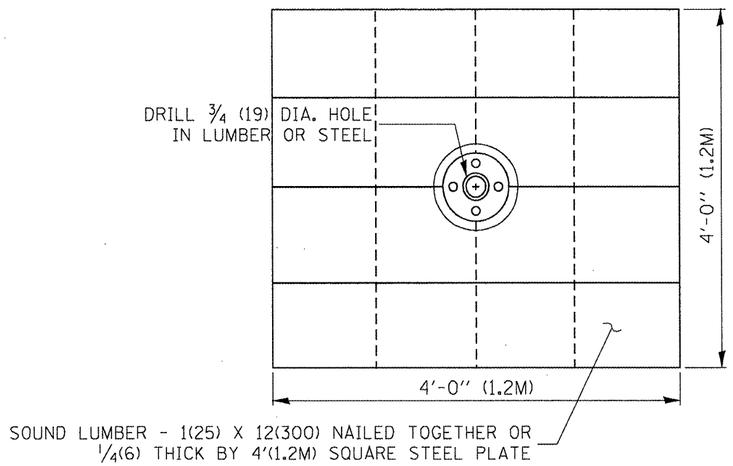
SLOPE STEPS DETAIL
DISTRICT 4 STANDARD

SCALE: N.T.S. | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	McDONOUGH	117	105
		CONTRACT NO. 68482		
		ILLINOIS FED. AID PROJECT		





GENERAL NOTES:

1. SETTLEMENT PLATFORM SHALL BE IN ACCORDANCE WITH THE APPICABLE PORTIONS OF ARTICLE 204.06 OF THE STANDARD SPECIFICATIONS.

2. DO NOT INSTALL CASING PIPE UNTIL AFTER ONE SECTION OF ¾''(19 MM) HAS BEEN COVERED WITH EARTH. THE CASING PIPE SHOULD NOT REST ON PLATFORM.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE NOTED.

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FILE NAME = D468482-sht-DIST4	CHECKED -	REVISED -
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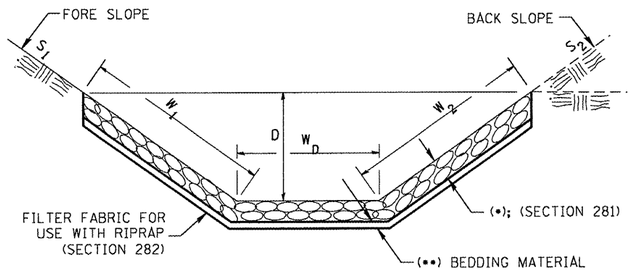
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SETTLEMENT PLATFORM
DISTRICT 4 STANDARD

SCALE: N.T.S. | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	McDONOUGH	117	106
		CONTRACT NO. 68482		
	ILLINOIS FED. AID PROJECT			

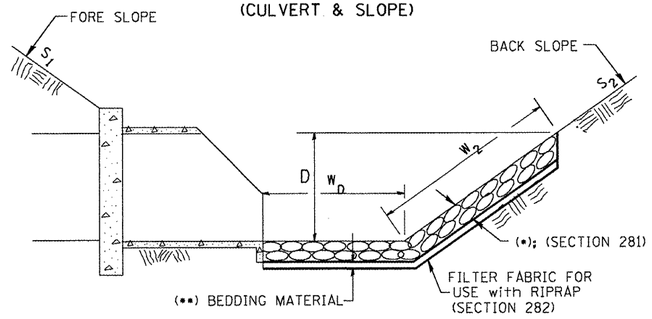
CASE 1
(DITCH)



(*)				
LOCATION	WIDTH (1)	LENGTH	RIPRAP	FABRIC
STA TO STA	lin ft (m)	lin ft (m)	tons (m tons)	sq yds (m^2)
TOTAL				

(1) WIDTH = $W_1 + W_2 + W_D$

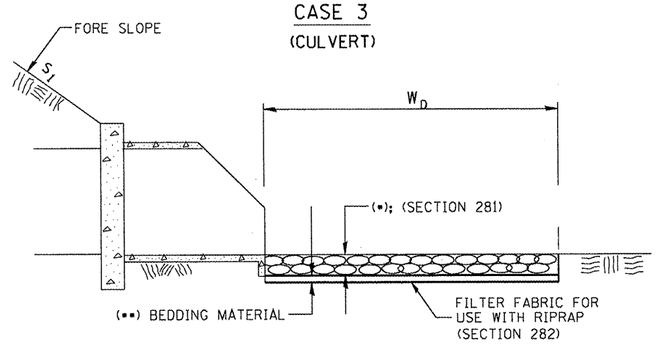
CASE 2
(CULVERT & SLOPE)



(*)				
LOCATION	WIDTH (1)	LENGTH	RIPRAP	FABRIC
STA TO STA	lin ft (m)	lin ft (m)	tons (m tons)	sq yds (m^2)
TOTAL				

(1) WIDTH = $W_2 + W_D$

CASE 3
(CULVERT)



(*)				
LOCATION	WIDTH (1)	LENGTH	RIPRAP	FABRIC
STA TO STA	lin ft (m)	lin ft (m)	tons (m tons)	sq yds (m^2)
TOTAL				

(1) WIDTH = W_D

All slope ratios are expressed as units of vertical displacement to units of horizontal displacement (V:H).

All dimensions are in inches (millimeters) unless otherwise noted.

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FILE NAME = D468482-sht-DIST4 STANDARDS.dgn	CHECKED -	REVISED -
PLOT DATE = 12/21/2018	DRAWN -	REVISED -
PLOT TIME = 11:31:44 AM	CHECKED -	REVISED -

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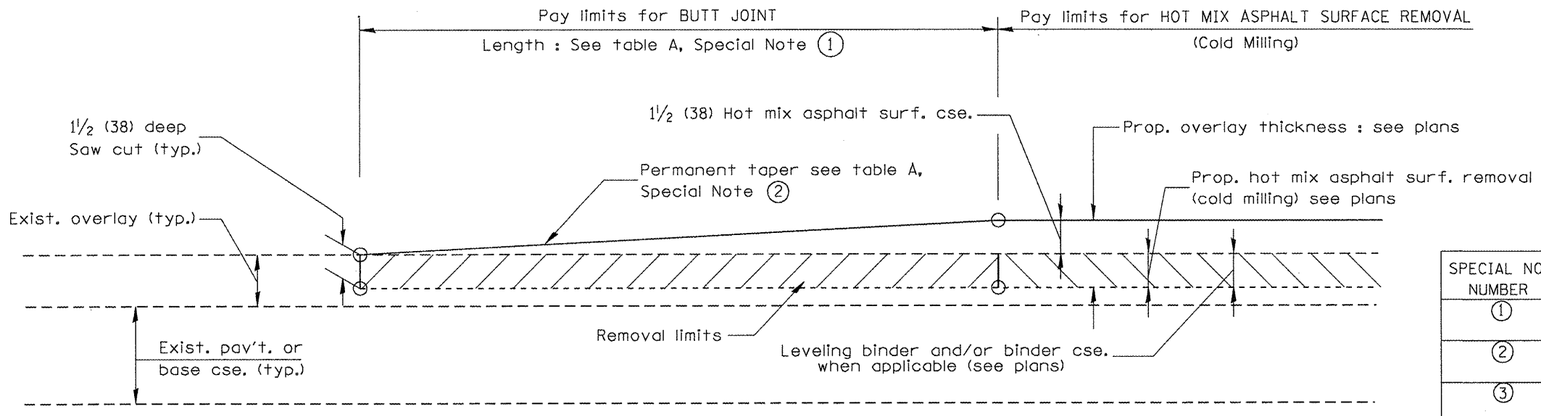
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

RIPRAP DITCH FOR EROSION PROTECTION
DISTRICT 4 STANDARDS

SCALE: N.T.S. | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	McDONOUGH	117	107
		CONTRACT NO. 68482		
	ILLINOIS FED. AID PROJECT			



CASE 1 : WITH HOT MIX ASPHALT SURFACE REMOVAL (COLD MILLING)

TABLE A
(LENGTHS AND TAPER RATES)

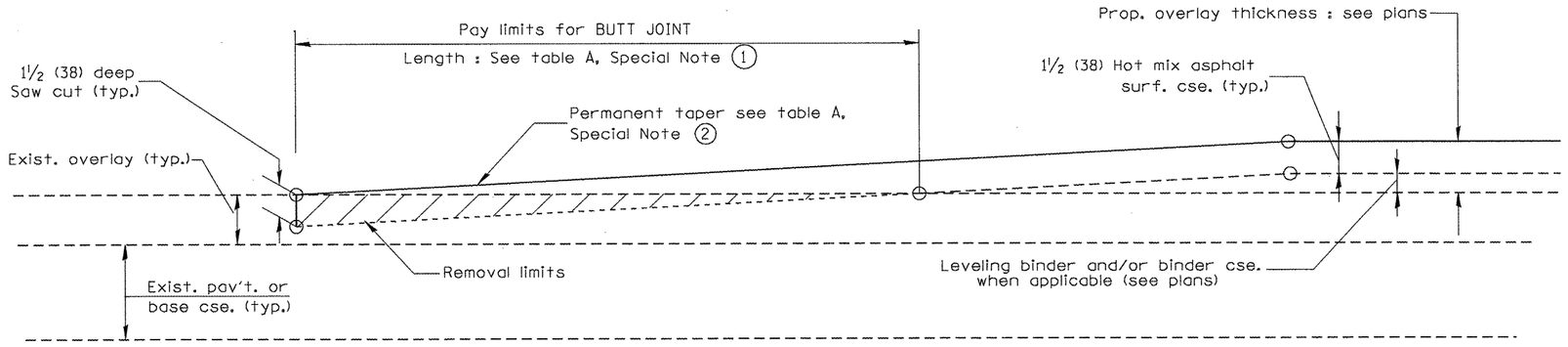
SPECIAL NOTE NUMBER	ELEMENT	MAINLINE INTERSTATES & 4-LANE EXPRESSWAYS	ALL OTHERS
(1)	LENGTH OF BUTT JOINT	60'(18.0 m)	30'(9.0 m)
(2)	PERMANENT TAPER RATE	1:480	1:240
(3)	TEMPORARY RAMP TAPER RATE	1:80	1:40
(4)	TEMPORARY RAMP LENGTH	10'(3.0 m)	5'(1.5 m)
(5)	LENGTH OF BUTT JOINT	10'(3.0 m)	10'(3.0 m)

GENERAL NOTES

1. The work shall be done in accordance with Article 406.08 and the Special Provision for Butt Joints.

2. The pavement surface to be removed may be either bituminous or P.C. concrete. The work shall be performed in accordance with Article 440.04 and the Special Provisions for Butt Joints.

3. The saw cut joints shall be primed just prior to the placing of bituminous material. The work will be in accordance with the applicable portions of Article 406.05.



CASE 2 : NO HOT MIX ASHALT SURFACE REMOVAL (COLD MILLING)

All dimensions are in inches (millimeters) unless otherwise noted.

USER NAME = gjameson	DESIGNED -	REVISED -
FILE NAME = D468482-sht-DIST4	CHECKED -	REVISED -
PLOT DATE = 12/21/2010	DRAWN -	REVISED -
PLOT TIME = 11:31:46 AM	CHECKED -	REVISED -

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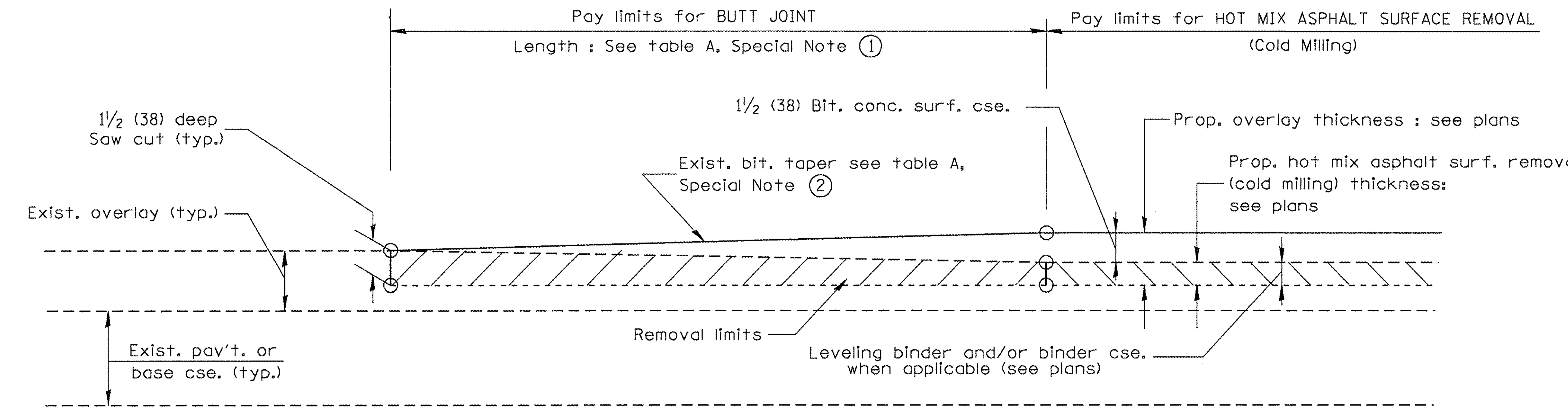
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

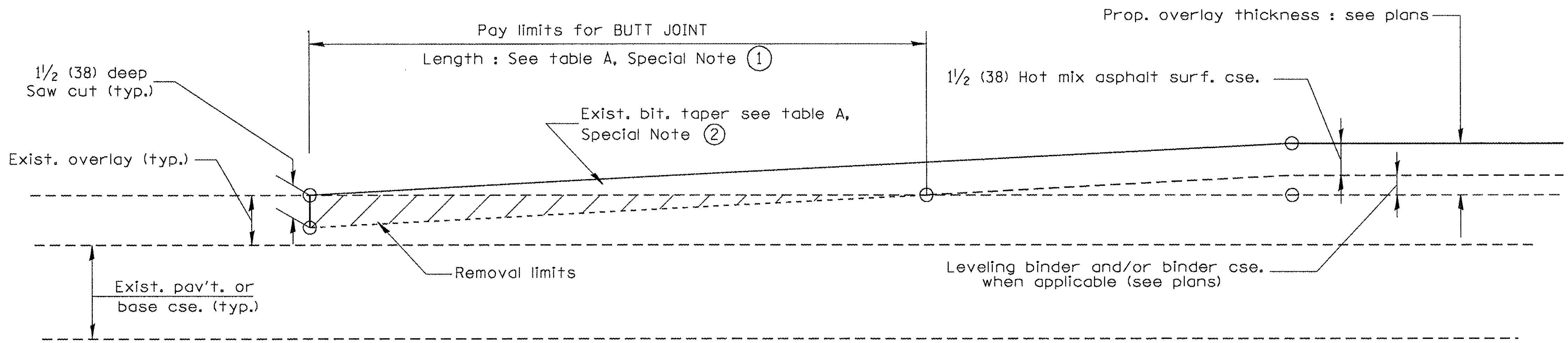
BUTT JOINTS
DISTRICT 4 STANDARDS

SCALE: N.T.S. | SHEET NO. 1 OF 3 SHEETS | STA. | TO STA.

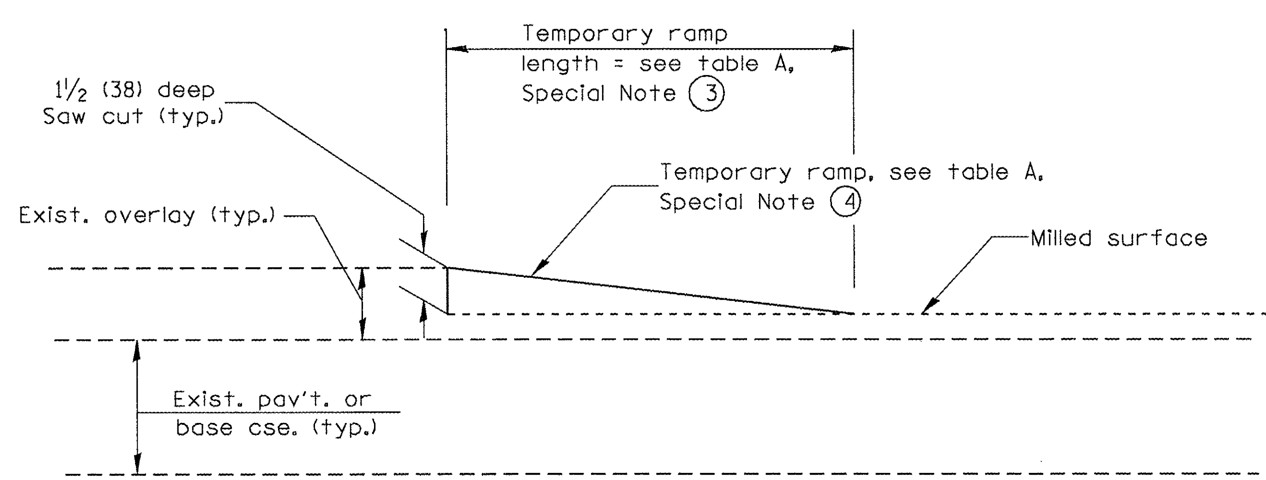
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	McDONOUGH	117	108
		CONTRACT NO. 68482		
	ILLINOIS FED. AID PROJECT			



CASE 3 : WITH HOT MIX ASPHALT SURFACE REMOVAL (COLD MILLING)
TIE-IN TO EXISTING BITUMINOUS TAPER



CASE 4 : NO HOT MIX ASPHALT SURFACE REMOVAL (COLD MILLING)
TIE-IN TO EXISTING BITUMINOUS TAPER



DETAIL TEMPORARY RAMP

All dimensions are in inches (millimeters) unless otherwise noted.

USER NAME = gjameson	DESIGNED -	REVISED -
FILE NAME = D468482-sht-DIST4 STANDARD.dgn	CHECKED -	REVISED -
PLOT DATE = 12/21/2010	DRAWN -	REVISED -
PLOT TIME = 11:31:49 AM	CHECKED -	REVISED -

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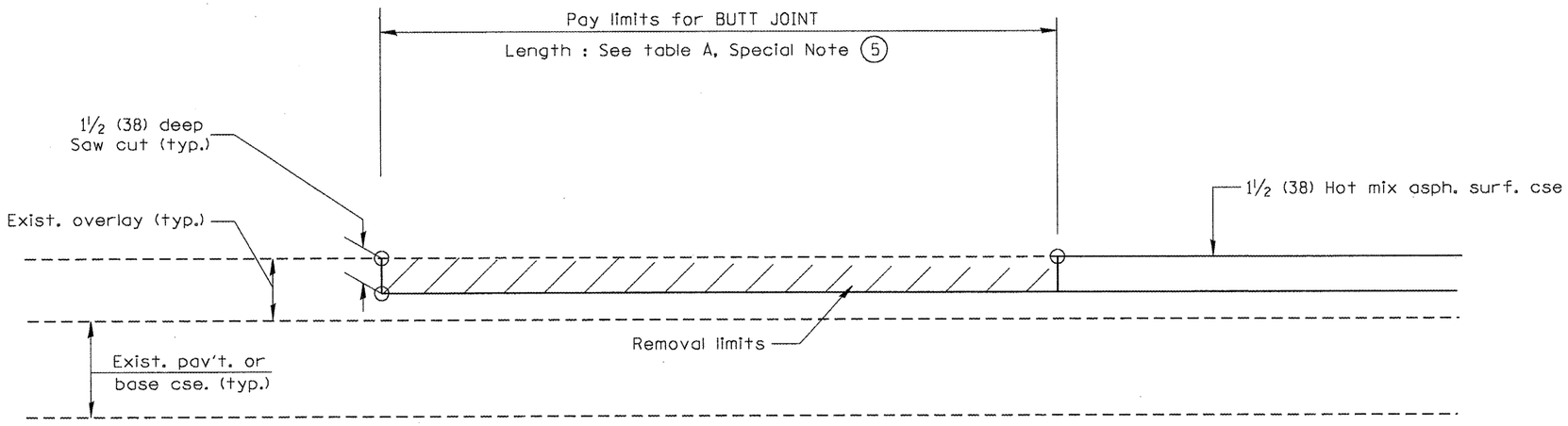
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BUTT JOINTS
DISTRICT 4 STANDARDS

SCALE: N.T.S. | SHEET NO. 2 OF 3 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	McDONOUGH	117	109
		CONTRACT NO. 68482		
		ILLINOIS FED. AID PROJECT		



CASE 5 : WITH HOT MIX ASPHALT SURFACE REMOVAL (COLD MILLING)
TIE-IN TO EXISTING BITUMINOUS TAPER

All dimensions are in inches (millimeters) unless otherwise noted.

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PLOT DATE = 12/21/2010	CHECKED -	REVISED -
PLOT TIME = 11:31:51 AM		REVISED -

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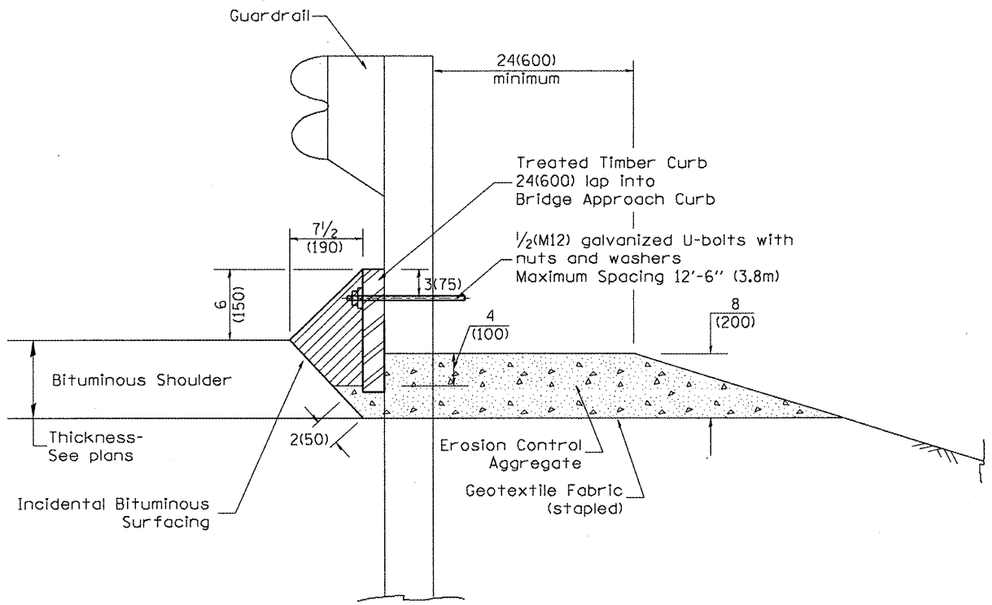
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

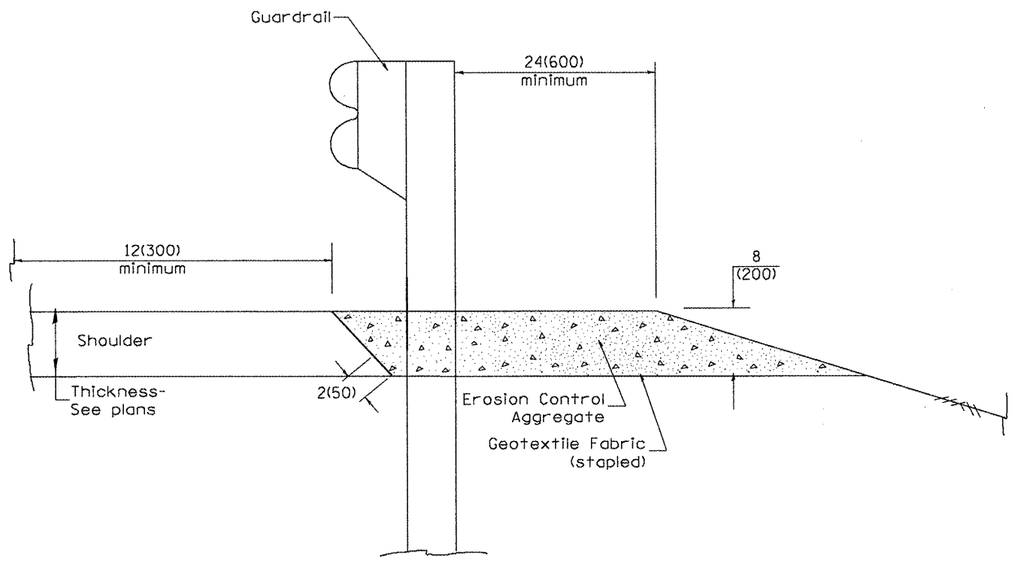
BUTT JOINTS
DISTRICT 4 STANDARDS

SCALE: N.T.S.	SHEET NO. 3 OF 3 SHEETS	STA.	TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	McDONOUGH	117	110
		CONTRACT NO. 68482		
	ILLINOIS	FED. AID PROJECT		



TYPICAL SECTION WITH EROSION CONTROL CURB



TYPICAL SECTION WITHOUT EROSION CONTROL CURB

GENERAL NOTES: EROSION CONTROL CURB

1. This work shall consist of grading as needed, installing hardware and treated timber boards, furnishing and placing mastic material and incidental bituminous surfacing in front of Steel Plate Beam Guardrail in accordance with Plan Details.

2. Timber shall be treated in accordance with Article 1007.12. All preservatives specified in the article will be allowed. Waterborne preservatives "asa" and "cca" shall have a minimum retention of 0.40 lbs./cu. ft. (6.4 kg/m³)

GENERAL NOTES: GUARDRAIL AGGREGATE EROSION CONTROL

1. This work shall consist of grading as needed, furnishing and installing geotextile fabric and staples, and furnishing, placing and shaping crushed aggregate around and behind Steel Plate Beam Guardrail posts in accordance with Plan Details.

2. Before placing the aggregate and the Geotextile Fabric, weeds and grass shall be removed from the area to be covered.

3. After the area has been prepared, and in a dry condition, the Geotextile fabric shall be placed with a 12(300) minimum overlap. A knife cut for guardrail post installation is necessary.

4. The aggregate shall be deposited, compacted and shaped by either mechanical or hand methods, in a manner reasonably true to line and grade.

5. The Contractor shall have the option of placing the guardrail before or after the Geotextile Fabric and Aggregate are in place. If the guardrail is placed after the Geotextile Fabric and Aggregate, then any voids must be filled and the aggregate returned to line and grade.

6. Materials shall meet the following requirements:

   A. The crushed aggregate shall be CA1 gradation in accordance with Article 1004.01(c) of the Standard Specifications.

   B. The Geotextile Fabric shall be nonwoven fabric in accordance with Article 1080.02 of the Standard Specifications.

All dimensions are in inches (millimeters) unless otherwise noted.

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FILE NAME = D468482-sht-DIST4 STANDARDdgn-	CHECKED -	REVISED -
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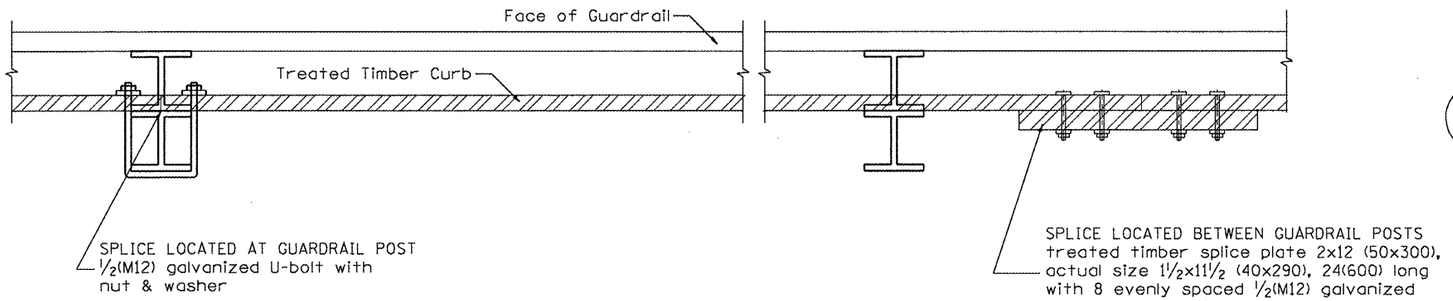
GUARDRAIL EROSION CONTROL TREATMENTS
DISTRICT 4 STANDARDS

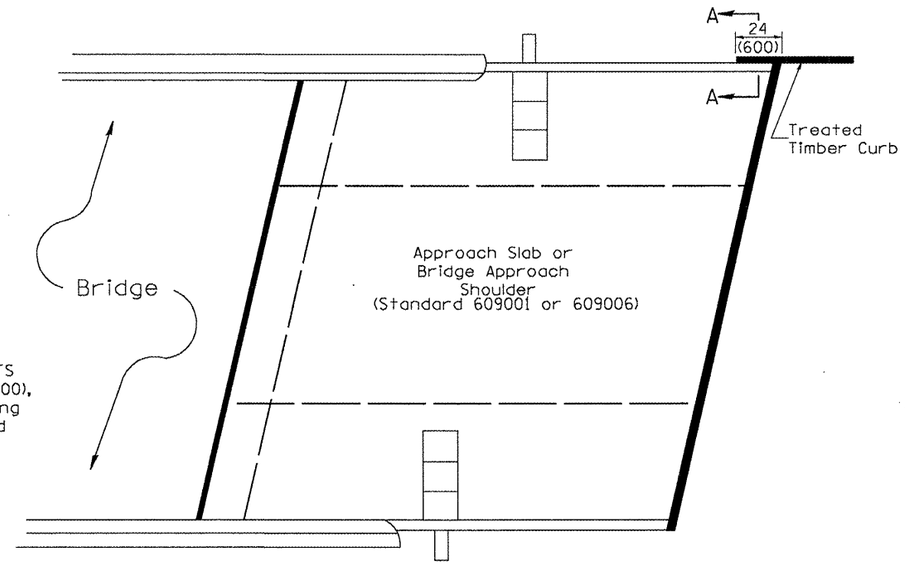
SCALE: N.T.S. | SHEET NO. 1 OF 2 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	McDONOUGH	117	111
		CONTRACT NO. 68482		
	ILLINOIS	FED. AID PROJECT		



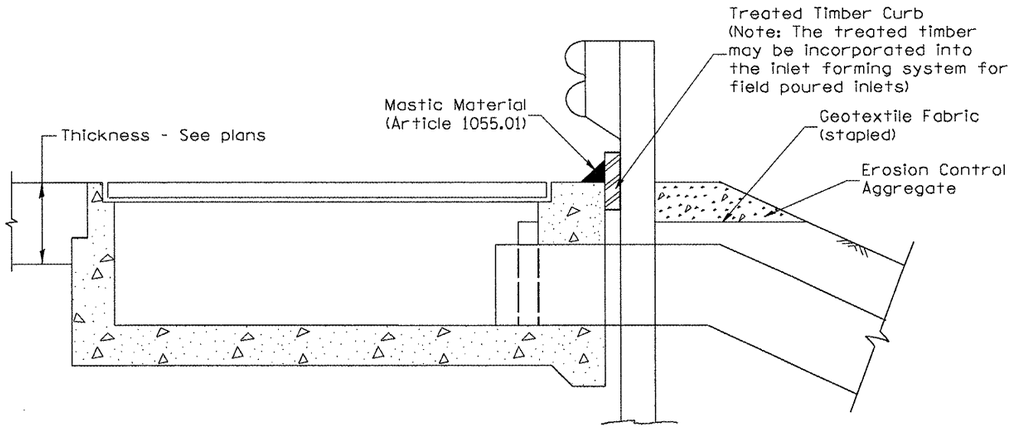
DETAIL A

(Typical Treated Timber Splices)

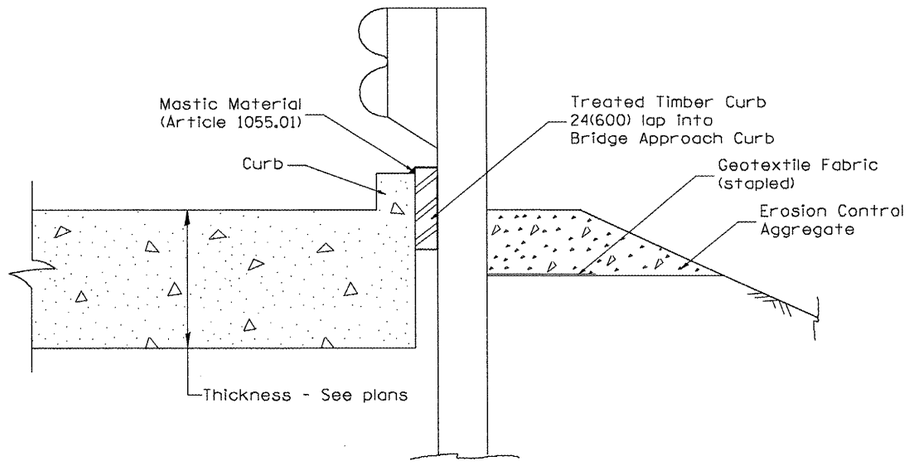


PLAN VIEW

APPROACH SLAB OR BRIDGE APPROACH SHOULDER
(STANDARD 609001 or 609006)



TYPICAL SECTION WITH EROSION CONTROL CURB AT INLETS TYPE E & F (STANDARD 610001)



SECTION A-A

TYPICAL SECTION WITH EROSION CONTROL CURB
AT BRIDGE APPROACH CURB
(STANDARD 609001 OR 609006)

All dimensions are in inches (millimeters) unless otherwise noted.

USER NAME = gjameson	DESIGNED -	REVISED -
FILE NAME = D468482-sht-DIST4 STANDARDS.dgn	CHECKED -	REVISED -
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STATE OF ILLINOIS
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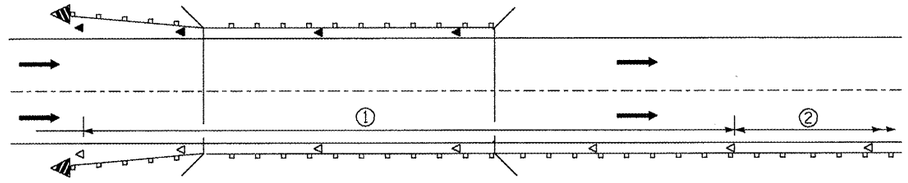
GUARDRAIL EROSION CONTROL TREATMENTS
DISTRICT 4 STANDARDS

SCALE: N.T.S. | SHEET NO. 2 OF 2 SHEETS | STA. | TO STA.

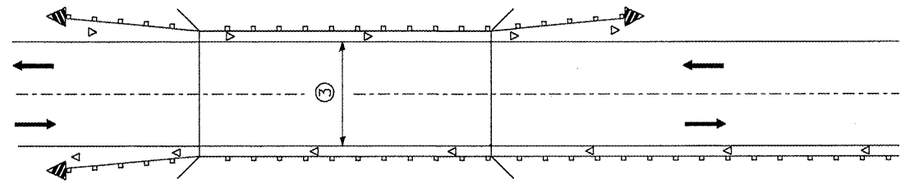
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	McDONOUGH	117	112
		CONTRACT NO. 68482		
		ILLINOIS FED. AID PROJECT		



① Spacing 80 ft. (24 m) max. for first 400 ft. (122 m) or curve spacing shown in Standard 635001, whichever is less (min. 4 reflectors regardless of length).

② After 400 ft. (122 m), transition to normal delineator spacing shown in Standard 635001, and continue as required.

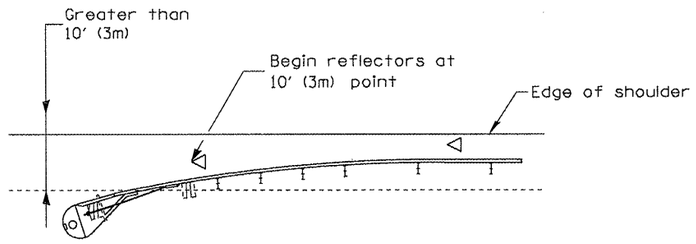
ONE-WAY TRAFFIC



③ Bidirectional silver/silver should be used in lieu of monodirectional silver on both sides of two-lane bridges where the bridge pavement is less than 24 (610) wider than the pavement approaching the bridge.

TWO-WAY TRAFFIC

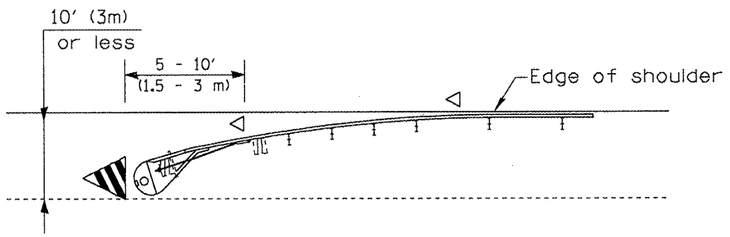
GUARDRAIL / BARRIER WALL / BRIDGE RAIL REFLECTORS



NOTE: Omit terminal marker when terminal over 10' (3m) from edge of paved shoulder or break point of unpaved shoulder, or when terminal buried in backslope.

Traffic Barrier Terminal Type(•) and/or Turned-Down Terminal

[Terminal over 10' (3m) from edge of shoulder]
•See Plans for Type



Traffic Barrier Terminal Type(•) and/or Turned-Down Terminal

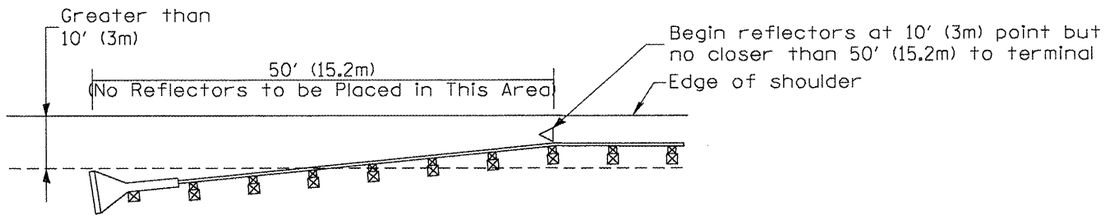
[Terminal over 10' (3m) or less from edge of shoulder]
•See Plans for Type

LEGEND

◁ Monodirectional silver

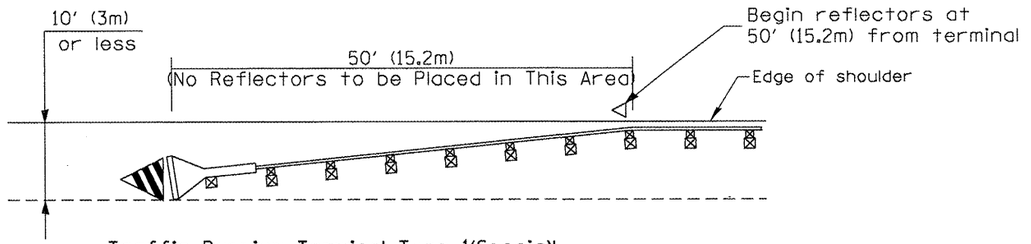
◀ Monodirectional amber

Terminal Marker - Black/Yellow
Left or Right as appropriate



NOTE: Omit terminal marker when terminal over (10') from edge of paved shoulder or break point of unpaved shoulder.

Traffic Barrier Terminal Type 1 (Special)
[Terminal over 10' (3m) from edge of shoulder]



Traffic Barrier Terminal Type 1(Special)
[Terminal 10' (3m) or less from edge of shoulder]

TERMINAL MARKER PLACEMENT

All dimensions are in inches (millimeters) unless otherwise noted.

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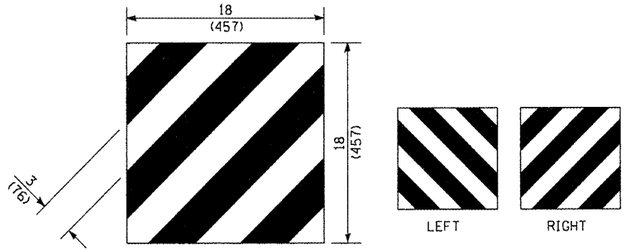
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

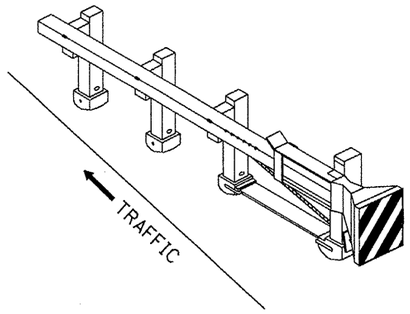
GUARDRAIL AND BARRIER WALL DELINEATION
DISTRICT 4 STANDARDS

SCALE: N.T.S. | SHEET NO. 1 OF 3 SHEETS | STA. | TO STA.

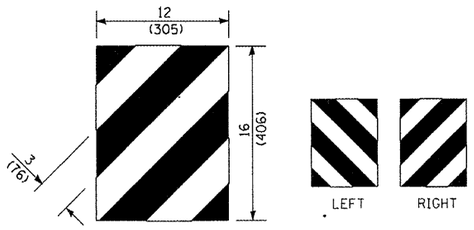
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	McDONOUGH	117	113
		CONTRACT NO. 68482		
	ILLINOIS FED. AID PROJECT			



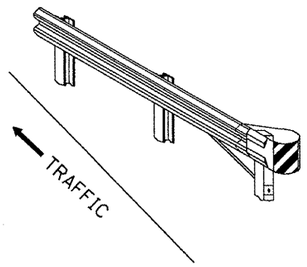
For Traffic Barrier Terminal Type 1 (Special)



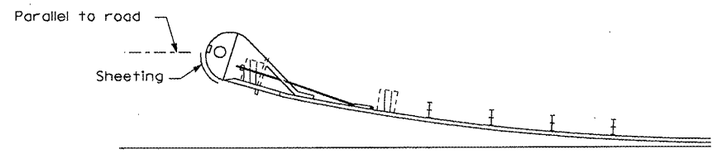
Standard Treatment - Direct Applied Sheeting
Traffic Barrier Terminal Type 1 (Special)



For Traffic Barrier Terminal Type (•)
and Post Mount
• See Plans for Type



Standard Treatment - Direct Applied Sheeting
Traffic Barrier Terminal Type (•)
• See Plans for Type



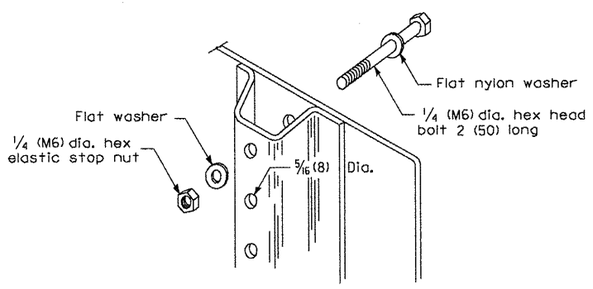
Sheeting Position for
Traffic Barrier Terminal Type (•)
• See Plans for Type

TERMINAL MARKER DETAILS

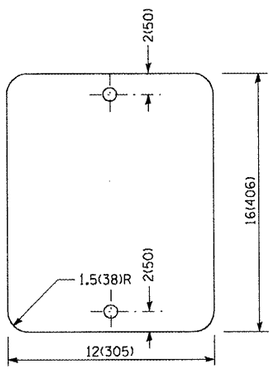
Color: Black / Yellow reflectorized

OM - I100 (L or R) Direct applied reflective sheeting

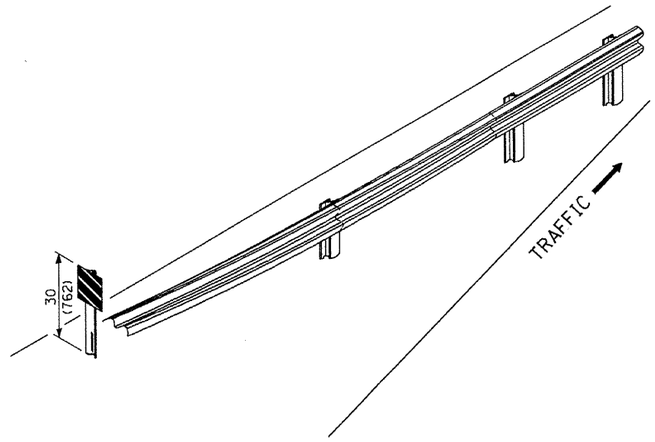
OM - I200 (L or R) Post mounted



DETAIL OF MOUNTING TERMINAL MARKER TO POST



STANDARD TERMINAL MARKER



ALTERNATE TREATMENT - POST MOUNTED
(For turned-down terminal where sheeting cannot be direct applied)

POST MOUNTED TERMINAL MARKER ASSEMBLY

TERMINAL MARKER TREATMENTS

All dimensions are in inches (millimeters) unless otherwise noted.

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STATE OF ILLINOIS
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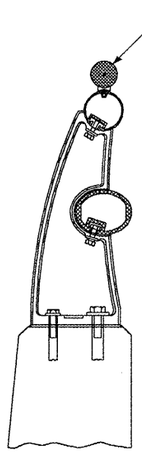
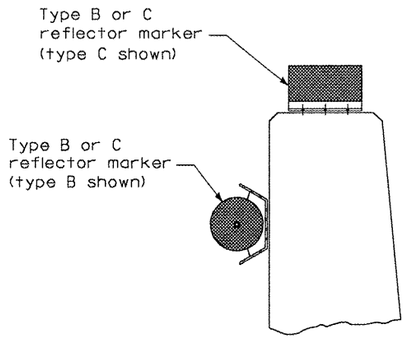
GUARDRAIL AND BARRIER WALL DELINEATION
DISTRICT 4 STANDARDS

SCALE: N.T.S. | SHEET NO. 2 OF 3 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	McDONOUGH	117	114
		CONTRACT NO. 68482		
	ILLINOIS FED. AID PROJECT			

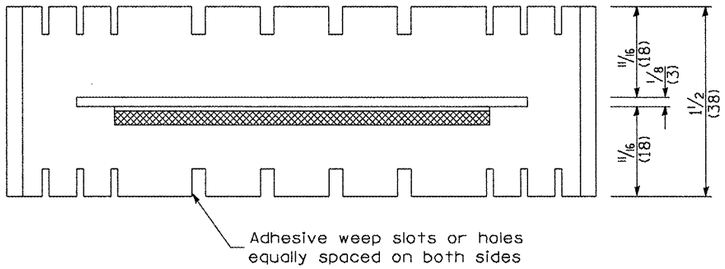


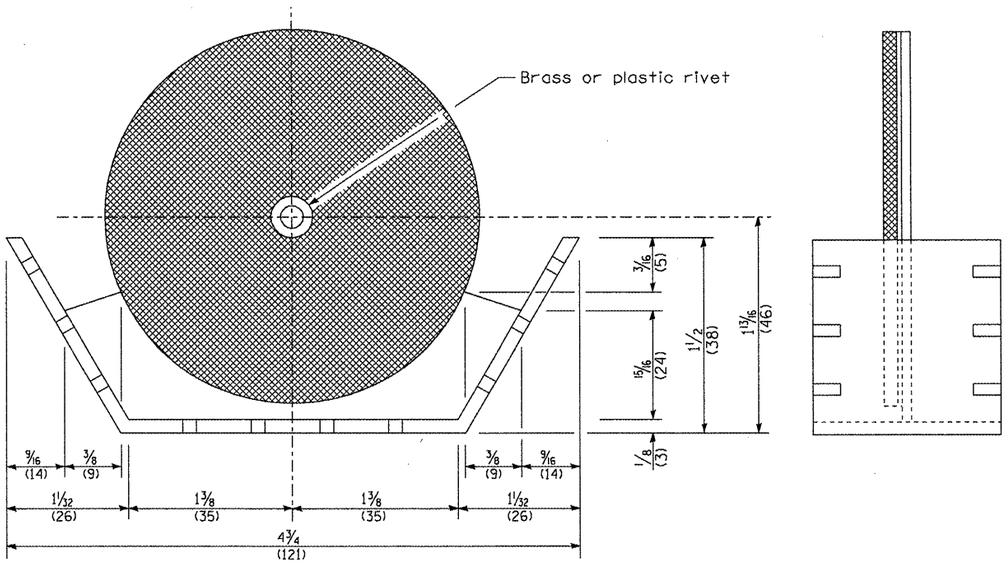
TYPICAL MOUNTING DETAIL
FOR BRIDGE RAIL REFLECTOR



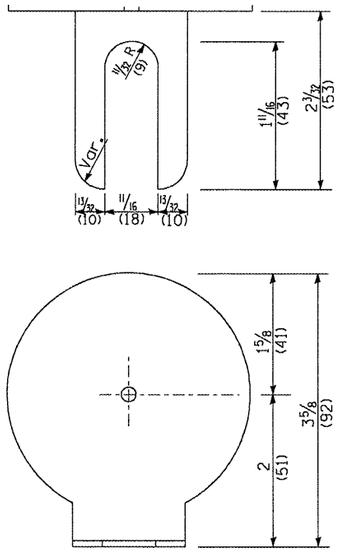
TYPICAL MOUNTING DETAIL
FOR BARRIER WALL REFLECTOR

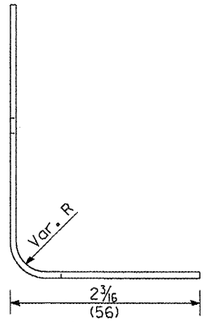
REFLECTOR MOUNTING



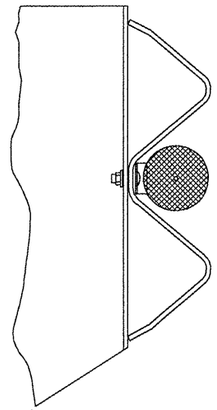


REFLECTOR MARKER TYPE B

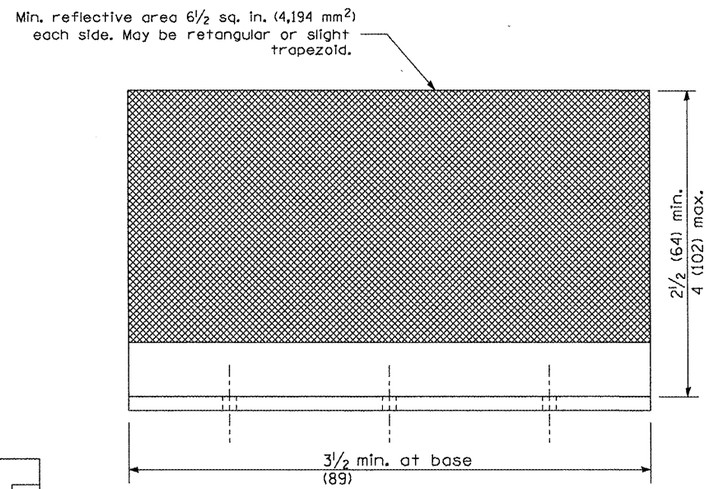




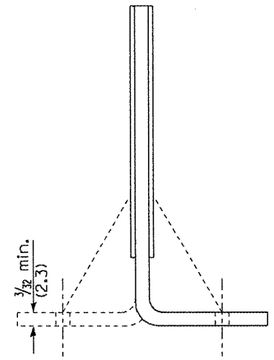
REFLECTOR MARKER TYPE A



TYPICAL GUARDRAIL MOUNTING WITH
REFLECTOR MARKER TYPE A



REFLECTOR MARKER TYPE C



Cross section may be "T"
or "L" shaped and may have
side supports at ends.

REFLECTORS

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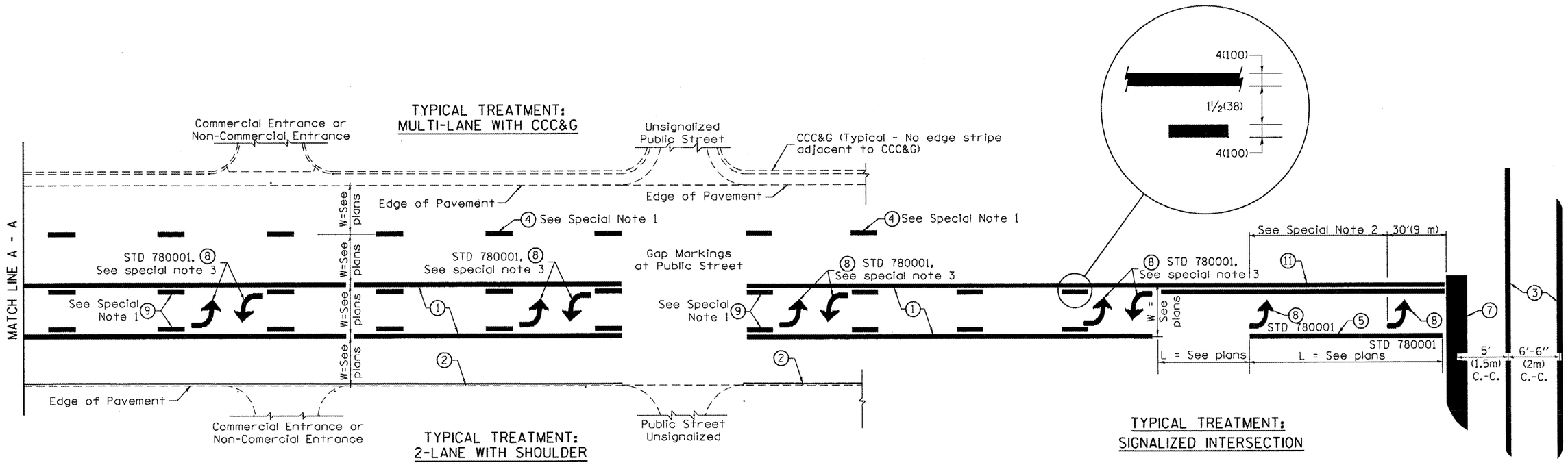
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GUARDRAIL AND BARRIER WALL DELINEATION
DISTRICT 4 STANDARDS

SCALE: N.T.S. | SHEET NO. 3 OF 3 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	McDONOUGH	117	115
		CONTRACT NO. 68482		
		ILLINOIS FED. AID PROJECT		



FLUSH PAVED MEDIAN: TWO-WAY LEFT TURN LANE WITH ONE-WAY LEFT TURN LANE AT SIGNALIZED INTERSECTION

TYPICAL PAVEMENT MARKING LEGEND

(Note: This is a District Standard Legend.
Some elements may not apply to specific project.)

1. 4(100) Solid (Yellow)
2. 4(100) Solid (White)
3. 2-6(150) Crosswalk @ 6'-6" (2m)min C.-C. (White)
   2-8(200) Crosswalk @ 6'-6" (2m)min C.-C. (White) (When traffic signals are present.)
4. 6(150) Skip-Dash (White) — 10' (3.05m) / 30' (9.14m) / 10' (3.05m) (See Special Note 1)
5. 8(200) Solid (White)
6. 12(300) Diagonal (White) (Item 6 is shown on Std. 780001)
7. 24(600) Stop Bar (White)
8. Letters & Arrows — 33' (10m) (See Std. 780001 and Special Notes 2 & 3)
9. 4(100) Skip-Dash (Yellow) — 10' (3.05m) / 30' (9.14m) / 10' (3.05m) (See Special Note 1)
10. 12(300) Diagonal (Yellow) (See Table A) — 45°
11. 4(100) Double Solid (Yellow) — 11(280) C.-C. — See Table A

SPECIAL NOTES

1. Skip-Dash markings will be centered between both ends of city blocks and shall be placed in alignment transversly across the pavement.
2. The following shall apply to arrows located in one-way left turn lanes:
   A. A minimum of two (2) arrows is required.
   B. The maximum spacing between arrows is 80' (24 m).
   C. Arrows shall be evenly spaced if three (3) or more are required.
3. The following shall apply to arrow pairs located in two-way left turn lanes:
   A. A minimum of two (2) arrow pairs is required.
   B. The maximum spacing between arrow pairs is 200' (61 m).
   C. Arrow pairs shall be evenly spaced if three (3) or more are required.
   D. The spacing between Bi Directional Left Turn Arrows is 33' (10 m).

GENERAL NOTES

1. Refer to State Standard 780001 for additional Pavement Markings including letters & arrows.
2. See Plans for Pavement Markings adjacent to curbed islands and medians, and through lane reductions.

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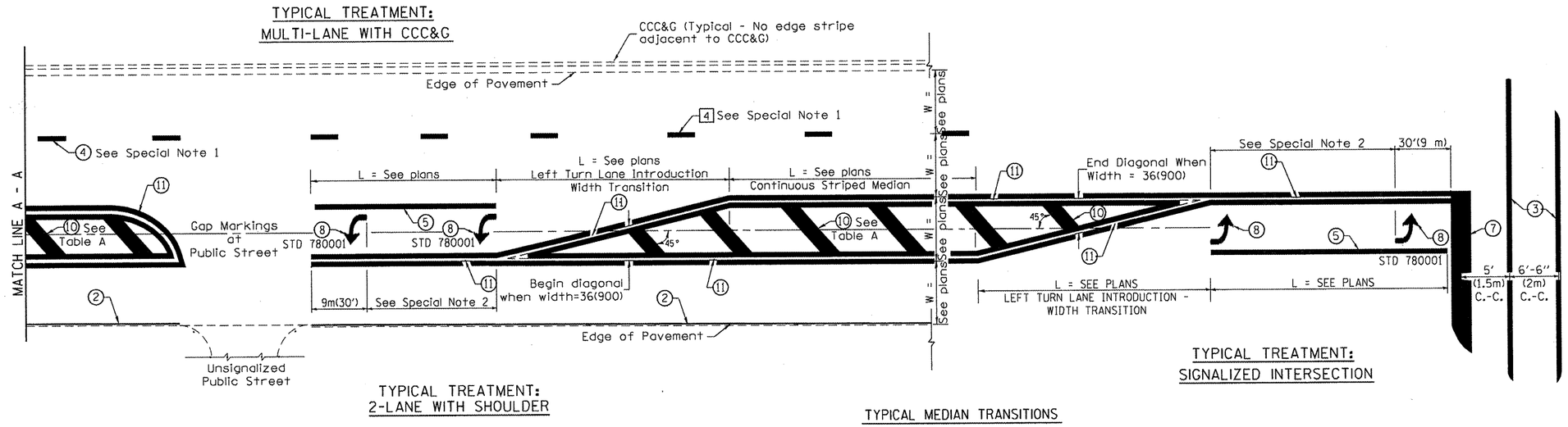
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL PAVEMENT MARKINGS
DISTRICT 4 STANDARDS

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	McDONOUGH	117	116
		CONTRACT NO. 68482		
	ILLINOIS FED. AID PROJECT			

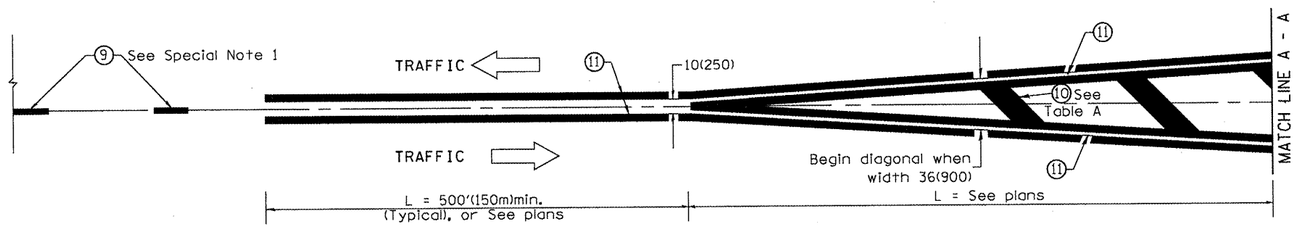


FLUSH PAVED MEDIAN: RESTRICTED LEFT TURN LANE

TABLE A

RECOMMENDED SPACING BETWEEN DIAGONAL LINES

SPEED LIMIT RANGE	CONTINUOUS	INTERSECTION CHANNELIZATION (Includes Width Transitions for Median and Left Turn Lane Introductions)
Less Than 30 mph (50 km/h)	50' (15m)	15' (5m)
30 - 45 mph (50 - 70 km/h)	75' (23m)	20' (6m)
Over 45 mph (70 km/h)	150' (46m)	30' (9m)



MEDIAN INTRODUCTION - WIDTH TRANSITIONS

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TYPICAL PAVEMENT MARKINGS
DISTRICT 4 STANDARDS

SCALE: N.T.S. | SHEET NO. 2 OF 2 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	105BR-1	McDONOUGH	117	117
		CONTRACT NO. 68482		
	ILLINOIS FED. AID PROJECT			