

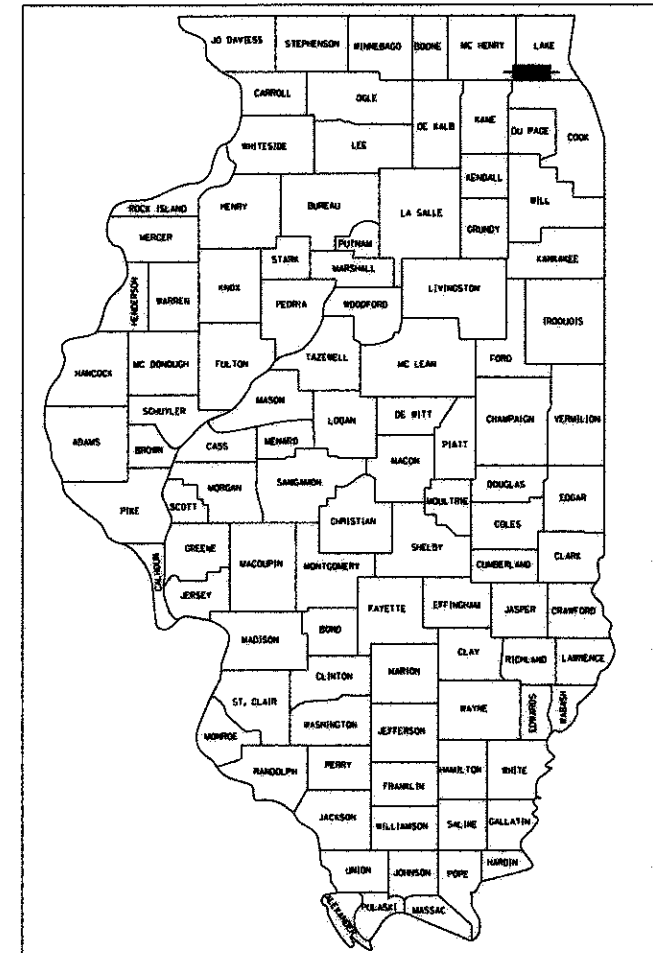
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**PLANS FOR
PROPOSED FEDERAL
AID HIGHWAY**
**WOODLAND DRIVE OVER FLINT CREEK
BRIDGE REPLACEMENT**

SECTION NO. 09-00010-00-BR
PROJECT NO. BRM-9003(504)
JOB NO. C-91-123-10
VILLAGE OF LAKE BARRINGTON
LAKE COUNTY

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	09-00010-00-BR	LAKE	41	1
FED. ROAD DIST. NO. 1		ILLINOIS	CONTRACT NO. 63716	

SECTION NO. 09-00010-00-BR
CONTRACT NO. 63716



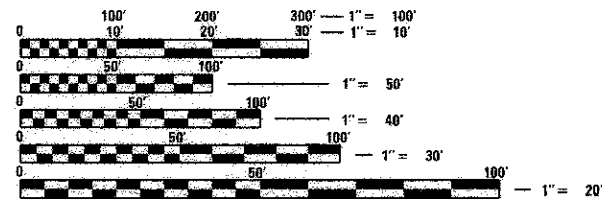
LOCATION OF SECTION INDICATED THUS: - [Black Box] -

FOR INDEX OF SHEETS, SEE SHEET NO. 2
FOR HIGHWAY STANDARDS, SEE SHEET NO. 2

DESIGN DESIGNATION = LOCAL ROAD
TRAFFIC = < 500 VPD
POSTED SPEED LIMIT = 25 MPH

PROJECT LOCATED IN THE
VILLAGE OF LAKE BARRINGTON

PROGRAM AND OFFICE ENGINEER: CHARLES F. RIDDLE, P.E. (847) 705-4406 SCHAUMBURG, IL

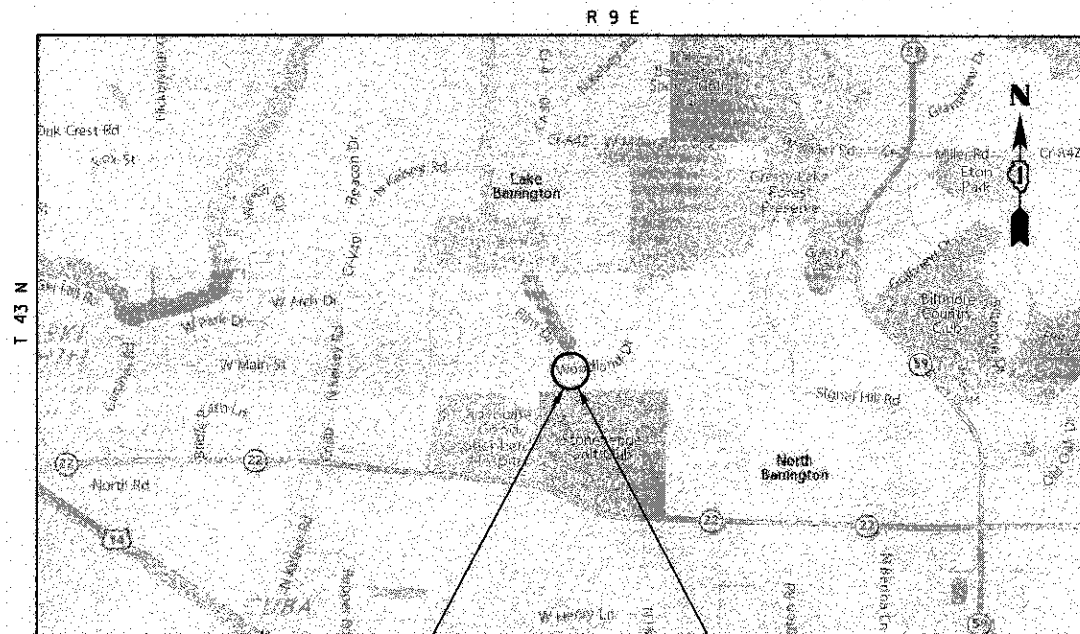


FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

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



NAME: RICK YOUNG
EXP. 11/30/2013
DATE:
SHT NO. 1-13, 30-41

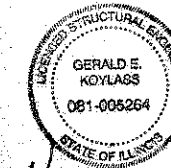


LOCATION MAP
N.T.S.

BEGIN IMPROVEMENT
STA 13+26.58 @ WOODLAND DR.
END IMPROVEMENT:
STA 14+16.58 @ WOODLAND DR.

BRIDGE REPLACEMENT
STA. 13+71.58
EXISTING SN 049-6750
PROPOSED SN 049-6751

GROSS AND NET LENGTH = 90 FT. = 0.017 MILE



NAME: GERALD KOYLARS
EXP. 11/30/2012
DATE:
SHT NO. 14-29

CONTRACT NO. 63716

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS	
APPROVED	MAY 4, 2012 <i>Car Martin</i> VILLAGE ENGINEER
PASSED	MAY 22, 2012 <i>Colbert</i> DISTRICT 1 ENGINEER LOCAL ROADS AND STREETS
RELEASED FOR BID BASED ON LIMITED REVIEW	MAY 24, 2012 <i>Diane M. O'Keefe</i> DEPUTY DIRECTOR OF HIGHWAYS, REGION 1 ENGINEER

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

McDonough Associates Inc.
Engineers/Architects
180 North Stetson Avenue - Suite 1500
Chicago, Illinois 60601 Phone: (312) 946-8600

INDEX OF SHEETS

SHEET NO.	DRAWING NO.	DESCRIPTION
1	CV-1	COVER SHEET
2	IS-1	INDEX OF SHEETS, HIGHWAY STANDARDS, GENERAL NOTES AND COMMITMENTS
3-7	SQ-1 to SQ-5	SUMMARY OF QUANTITIES
8	TYP-1	TYPICAL SECTIONS AND SCHEDULES
9	AT-1	ALIGNMENTS, TIES, AND BENCHMARKS
10	PP-1	EXISTING AND PROPOSED PLAN AND PROFILE
11	MOT-1	MAINTENANCE OF TRAFFIC GENERAL NOTES AND TYPICAL SECTIONS
12	MOT-2	MAINTENANCE OF TRAFFIC STAGE I AND STAGE II
13	EC-1	EROSION AND SEDIMENT CONTROL GENERAL NOTES, STRATEGY AND PLAN
14		GENERAL PLAN AND ELEVATION
15		STAGED CONSTRUCTION AND DRAINAGE DETAILS
16		TEMPORARY CONCRETE BARRIER
17		SUPERSTRUCTURE
18		SUPERSTRUCTURE DETAILS
19		27"X36" PPC DECK BEAM
20		27"X36" PPC DECK BEAM DETAILS
21		27"X48" PPC DECK BEAM
22		27"X48" PPC DECK BEAM DETAILS
23-24		TIMBER RAILING
25		ABUTMENTS
26		BAR SPLICER ASSEMBLY DETAILS
27		METAL SHELL PILE DETAILS
28-29		SOIL BORING LOGS
30	BD-51	DISTRICT 1 DETAIL - BENCHING DETAIL FOR EMBANKMENT WIDENING
31-36	XS-PRE-1 to XS-PRE-6	WOODLAND DRIVE PRE-STAGE CROSS SECTIONS
37-41	XS-1 to XS-5	WOODLAND DRIVE CROSS SECTIONS

HIGHWAY STANDARDS

STANDARD NO.	TITLE
000001-06	STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS
001001-02	AREAS OF REINFORCEMENT BARS
202001-01	EARTH MEDIAN DITCH CHECK
280001-06	TEMPORARY EROSION CONTROL SYSTEMS
420001-07	PAVEMENT JOINTS
515001-03	NAME PLATE FOR BRIDGES
601101-01	CONCRETE HEADWALL FOR PIPE DRAINS
635006-03	REFLECTOR AND TERMINAL MARKER PLACEMENT
635011-02	REFLECTOR MARKER AND MOUNTING DETAILS
701301-04	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701321-12	LANE CLOSURE, 2L, 2W BRIDGE REPAIR WITH BARRIER
701901-02	TRAFFIC CONTROL DEVICES
704001-07	TEMPORARY CONCRETE BARRIER
BLR 14-10	PORTLAND CEMENT CONCRETE PAVEMENT (NONREINFORCED)
BLR 23-4	TRAFFIC BARRIER TERMINAL TYPE 1
BLR 26-3	STEEL PLATE BEAM GUARDRAIL 29" (731mm) HEIGHT
BLR 27-1	TRAFFIC BARRIER TERMINAL 5A

GENERAL NOTES

- BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL J.U.L.I.E. AT (800) 892-0123 OR 811 FOR FIELD LOCATIONS OF BURIED ELECTRIC, TELEPHONE AND GAS UTILITIES. 48 HOUR NOTIFICATION IS REQUIRED.
- MEMBERS OF JULIE KNOWN TO BE WITHIN THE LIMITS OF THE IMPROVEMENT ARE: COMED, NICOR GAS, COMCAST AND AT&T.
- ANY REFERENCE TO A STANDARD IN THESE PLANS SHALL BE INTERPRETED TO MEAN THE EDITION AS INDICATED BY THE SUBNUMBER SHOWN IN THE LIST OF STANDARDS OR THE COPY INCLUDED IN THESE PLANS.
- THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH UTILITY COMPANIES, VILLAGE OF LAKE BARRINGTON, AND LAKE COUNTY.
- DO NOT SCALE PLANS FOR CONSTRUCTION DIMENSIONS.
- IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND CONDITIONS EXISTING IN THE FIELD PRIOR TO CONSTRUCTION AND ORDERING OF MATERIALS
- THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE ACCESS TO ABUTTING PROPERTY AT ALL TIMES DURING THE CONSTRUCTION OF THIS PROJECT.
- THE LOCATIONS OF EXISTING DRAINAGE STRUCTURES, STORM SEWER, WATER MAIN, SANITARY SEWER, AND OTHER PUBLIC OR PRIVATE UTILITIES AS SHOWN ON THE PLANS IS APPROXIMATE, AND THEIR EXACT LOCATION IS TO BE DETERMINED IN THE FIELD BY THE CONTRACTOR. THIS WORK SHALL BE PER ARTICLES 105.07 AND 107.31 OF THE STANDARD SPECIFICATIONS. WHEN REQUIRED, LOCATING UTILITIES SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER FOOT FOR EXPLORATION TRENCH, SPECIAL.
- 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.
- SAWING OF REMOVAL ITEMS AS NOTED ON THE PLANS, SPECIFIED IN THE STANDARD SPECIFICATIONS, OR AS REQUIRED BY THE ENGINEER SHALL BE INCLUDED IN THE COST OF THE ITEM BEING REMOVED.
- ONLY THOSE TREES DESIGNATED BY THE ENGINEER, LISTED IN THE TREE REMOVAL SCHEDULE, OR SHOWN IN THE PLANS SHALL BE REMOVED. THE CONTRACTOR SHALL PROTECT ALL REMAINING TREES FROM DAMAGE DUE TO HIS OPERATIONS.
- ALL DAMAGE TO EXISTING PAVEMENT MARKINGS OR RAISED REFLECTIVE PAVEMENT MARKERS OUTSIDE THE REMOVAL LIMITS SHOWN ON THE PLANS SHALL BE REPLACED AT NO ADDITIONAL COST TO THE DEPARTMENT.

COMMITMENTS

- (NONE)

FILE NAME = 10030-SHT-INDEX-GENNOTE.dgn	USER NAME = jehart	DESIGNED - MJT	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	INDEX OF SHEETS, HIGHWAY STANDARDS, GENERAL NOTES AND COMMITMENTS	SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA. TO STA.	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
		DRAWN - MJT	REVISED -							09-0010-00-BR	LAKE	41	2	
		CHECKED - EJG	REVISED -							IS-1				
		DATE - 05/14/12	REVISED -										CONTRACT NO. 63716	
													ILLINOIS FED. AID PROJECT	

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE	
				HBP FUNDING	
				80% FED 20% LAKE BARRINGTON ROADWAY 0011 URBAN	80% FED 20% LAKE BARRINGTON BRIDGE SN 049-6751 0011 URBAN
20100110	TREE REMOVAL (6 TO 15 UNITS DIAMETER)	UNIT	66	66	
20200100	EARTH EXCAVATION	CU YD	12	12	
20201200	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL	CU YD	87	87	
20300100	CHANNEL EXCAVATION	CU YD	296		296
20400800	FURNISHED EXCAVATION	CU YD	148	148	
21101615	TOPSOIL FURNISH AND PLACE, 4"	SQ YD	680	680	
25000210	SEEDING, CLASS 2A	ACRE	0.20	0.20	
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	18	18	
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	18	18	
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	18	18	
25100115	MULCH, METHOD 2	ACRE	0.4	0.4	
25100630	EROSION CONTROL BLANKET	SQ YD	670	670	
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	40	40	
28000305	TEMPORARY DITCH CHECKS	FOOT	56	56	

• DENOTES SPECIALTY ITEM

FILE NAME =	USER NAME = jehrhert
18232-SHT-S0001.dgn	
PLOT SCALE = 1/4"	CHECKED -
PLOT DATE = 05/14/12	DATE - 05/14/12

DESIGNED -	REVISED -
DRAWN -	REVISED -
CHECKED -	REVISED -
DATE - 05/14/12	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES			
SCALE: N.T.S.	SHEET NO. 1 OF 5 SHEETS	STA.	TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	09-0010-00-BR	LAKE	41	3
	SQ-1	CONTRACT NO.	63716	
ILLINOIS FED. AID PROJECT				

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE	
				HBP FUNDING	
				80% FED 20% LAKE BARRINGTON ROADWAY	80% FED 20% LAKE BARRINGTON BRIDGE SN 049-6751
				0011 URBAN	0011 URBAN
28000400	PERIMETER EROSION BARRIER	FOOT	464	464	
28100107	STONE RIPRAP, CLASS A4	SQ YD	398		398
28200200	FILTER FABRIC	SQ YD	440		440
31101400	SUBBASE GRANULAR MATERIAL, TYPE B 6"	SQ YD	80	80	
42000201	PORTLAND CEMENT CONCRETE PAVEMENT 7" (JOINTED)	SQ YD	78	78	
42001300	PROTECTIVE COAT	SQ YD	78	78	
44000100	PAVEMENT REMOVAL	SQ YD	274	274	
48101498	AGGREGATE SHOULDERS, TYPE B 4"	SQ YD	198	198	
50101500	REMOVAL OF EXISTING SUPERSTRUCTURES	EACH	1		1
50102400	CONCRETE REMOVAL	CU YD	111		111
50200100	STRUCTURE EXCAVATION	CU YD	213		213
50300225	CONCRETE STRUCTURES	CU YD	30.3		30.3
50300260	BRIDGE DECK GROOVING	SQ YD	185		185
50300280	CONCRETE ENCASEMENT	CU YD	6.6		6.6

• DENOTES SPECIALTY ITEM

FILE NAME =	10030-SHT-S0002.dgn
USER NAME =	jehrhert
PLOT SCALE =	1:1
PLOT DATE =	05/14/12

DESIGNED -	REVISOR -
DRAWN -	REVISOR -
CHECKED -	REVISOR -
DATE -	05/14/12

DESIGNED -	REVISOR -
DRAWN -	REVISOR -
CHECKED -	REVISOR -
DATE -	05/14/12

DESIGNED -	REVISOR -
DRAWN -	REVISOR -
CHECKED -	REVISOR -
DATE -	05/14/12

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES			
SCALE:	N.T.S.	SHEET NO. 2 OF 5 SHEETS	STA. TO STA.

F.A.P. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	09-00010-00-BR	LAKE	41	4
	S0-2	CONTRACT NO. 63716		
ILLINOIS FED. AID PROJECT				

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE	
				HBP FUNDING	
				80% FED 20% LAKE BARRINGTON ROADWAY	80% FED 20% LAKE BARRINGTON BRIDGE SN 049-6751
				0011 URBAN	0011 URBAN
50300300	PROTECTIVE COAT	SO YD	185		185
50400505	PRECAST PRESTRESSED CONCRETE DECK BEAMS (27" DEPTH)	SQ FT	1,658		1,658
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	7,310		7,310
50800515	BAR SPLICERS	EACH	109		109
51200956	FURNISHING METAL SHELL PILES 12" X 0.179"	FOOT	430		430
51202305	DRIVING PILES	FOOT	430		430
51203200	TEST PILE METAL SHELLS	EACH	2		2
51500100	NAME PLATES	EACH	1		1
59100100	GEOCOMPOSITE WALL DRAIN	SO YD	36		36
• 63000001	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	50.0	50.0	
• 63100075	TRAFFIC BARRIER TERMINAL, TYPE 5A	EACH	2	2	
67100100	MOBILIZATION	L SUM	1	1	
• 70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1	1	
70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	1,600	1,600	

• DENOTES SPECIALTY ITEM

FILE NAME = 10030-SHT-50083.dgn

USER NAME = jehrhart
 PLOT SCALE = 1/1
 PLOT DATE = 05/14/12

DESIGNED -
 DRAWN -
 CHECKED -
 DATE - 05/14/12

REVISED -
 REVISED -
 REVISED -
 REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: N.T.S. SHEET NO. 3 OF 5 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	09-00010-00-BR	LAKE	41	5
	SQ-3	CONTRACT NO. 63716		
[ILLINOIS] FED. AID PROJECT				

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE	
				HBP FUNDING	
				80% FED 20% LAKE BARRINGTON ROADWAY	80% FED 20% LAKE BARRINGTON BRIDGE SN 049-6751
				0011 URBAN	0011 URBAN
70300280	TEMPORARY PAVEMENT MARKING - LINE 24"	FOOT	22	22	
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	630	630	
70400100	TEMPORARY CONCRETE BARRIER	FOOT	326	326	
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	245	245	
• 78200410	GUARDRAIL MARKERS, TYPE A	EACH	8	8	
* 78200530	BARRIER WALL MARKERS, TYPE C	EACH	22	22	
• 78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	2	2	
• A2002920	TREE, CELTIS OCCIDENTALIS (COMMON HACKBERRY), 2-1/2" CALIPER, BALLED AND BURLAPPED	EACH	2	2	
• A2004420	TREE, GINKGO BILOBA (GINKGO), 2-1/2" CALIPER, BALLED AND BURLAPPED	EACH	2	2	
• A2018720	TREE, ULMUS CARPINIFOLIA MORTON, (ACCOLADE ELM), 2-1/2" CALIPER, BALLED AND BURLAPPED	EACH	2	2	
• LR631020	TRAFFIC BARRIER TERMINAL, TYPE 1	EACH	2	2	
X2070304	POROUS GRANULAR EMBANKMENT, SPECIAL	CU YD	87		87
X2130010	EXPLORATION TRENCH, SPECIAL	FOOT	25	25	
X5030305	CONCRETE WEARING SURFACE, 5"	SQ YD	185		185

• DENOTES SPECIALTY ITEM

FILE NAME = 10030-SHT-50004.dgn	USER NAME = johrhart	DESIGNED - DRAWN -	REVISED - REVISED -
PLOT SCALE = 1/4"	CHECKED -	REVISED -	REVISED -
PLOT DATE = 05/14/12	DATE - 05/14/12	REVISED -	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

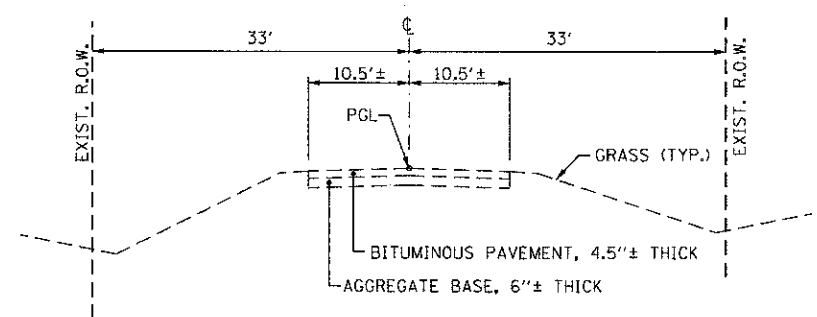
SUMMARY OF QUANTITIES

SCALE: N.T.S. SHEET NO. 4 OF 5 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION 09-00010-00-BR	COUNTY LAKE	TOTAL SHEETS 41	SHEET NO. 6
SQ-4			CONTRACT NO. 63716	
ILLINOIS FED. AID PROJECT				

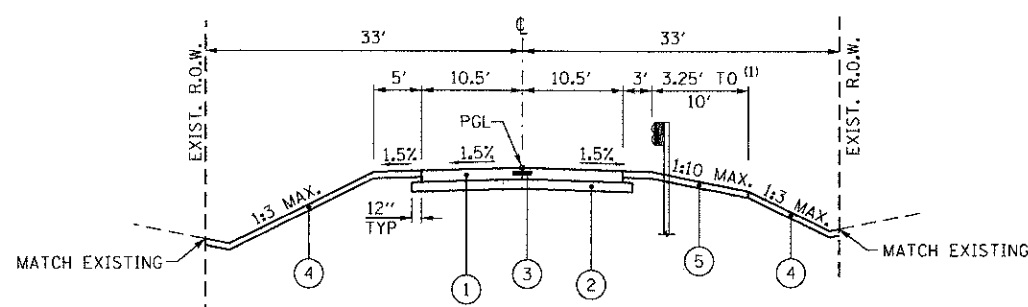
CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE	
				HBP FUNDING	
				80% FED 20% LAKE BARRINGTON ROADWAY	80% FED 20% LAKE BARRINGTON BRIDGE SN 049-6751
				0011 URBAN	0011 URBAN
X7010216	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	L SUM	1	1	
Z0013798	CONSTRUCTION LAYOUT	L SUM	1	1	
Z0026407	TEMPORARY SHEET PILING	SO FT	700		700
Z0030260	IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3	EACH	4	4	
Z0030332	IMPACT ATTENUATORS, RELOCATE (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3	EACH	3	3	
Z0046304	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	76		76
Z0062456	TEMPORARY PAVEMENT	SO YD	152	152	
• XX008679	TIMBER RAILING	FOOT	117		117

• DENOTES SPECIALTY ITEM



EXISTING WOODLAND DRIVE

STA. 13+26.58 TO STA. 13+52.5±
 STA. 13+90.4± TO STA. 14+16.58

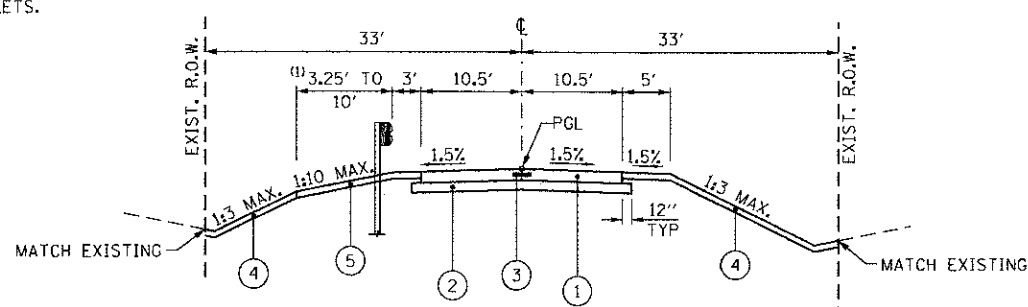


PROPOSED WOODLAND DRIVE

STA. 13+26.58 TO STA. 13+42.99

BRIDGE OMMISION

STA. 13+42.99 TO STA. 14+00.17



PROPOSED WOODLAND DRIVE

STA. 14+00.17 TO STA. 14+16.58

LEGEND - PROPOSED

- ① PORTLAND CEMENT CONCRETE PAVEMENT 7" (JOINTED)
- ② SUBBASE GRANULAR MATERIAL, TYPE B 6"
- ③ LONGITUDINAL CONSTRUCTION JOINT NO. 6 TIE BARS AT 30" CTRS.
- ④ TOPSOIL FURNISH AND PLACE, 4" AND SEEDING, CLASS 2A
- ⑤ AGGREGATE STABILIZATION (PAID FOR AS AGGREGATE SHOULDERS, TYPE B 4")

(1) FOR GUARDRAIL AND SHOULDER WIDENING LIMITS, SEE PLAN SHEETS.

TREE REMOVAL (6 TO 15 UNITS DIAMETER)				
DWG#	STATION	OFFSET	RT/LT	DIAMETER
PP-1	13+79.3	18.6	LT	10
	13+85.4	19.9	LT	8
	13+93.1	23.2	LT	12
	13+94.7	17.4	RT	12
	13+96.1	23.6	LT	12
	14+62.4	25.1	LT	12
TOTAL =				66

EARTHWORK SUMMARY

ROADWAY	EARTH EXCAVATION	TOPSOIL / UNSUITABLE EXCAVATION	EXCAVATION TO BE USED IN EMBANKMENT ADJUSTED FOR SHRINKAGE*	EMBANKMENT	EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-)
	CU. YD.	CU. YD.	CU. YD.	CU. YD.	CU. YD.
TEMPORARY PAVEMENT WOODLAND	0	50	0	110	-110
PROPOSED WOODLAND	12	37	12	50	-38
TOTAL	12	87	12	160	-148

EARTHWORK SUMMARY

DESCRIPTION	QUANTITY	UNIT
EARTH EXCAVATION	12	CU YD
FURNISHED EXCAVATION	148	CU YD
REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL	87	CU YD

NOTES:
 1. EXISTING TOPSOIL WILL BE REMOVED AND HAULED OFFSITE AND PAID FOR AS "REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL."
 2. FOR QUANTITY CALCULATIONS THE AVERAGE EXISTING TOPSOIL THICKNESS IS ASSUMED TO BE 4".

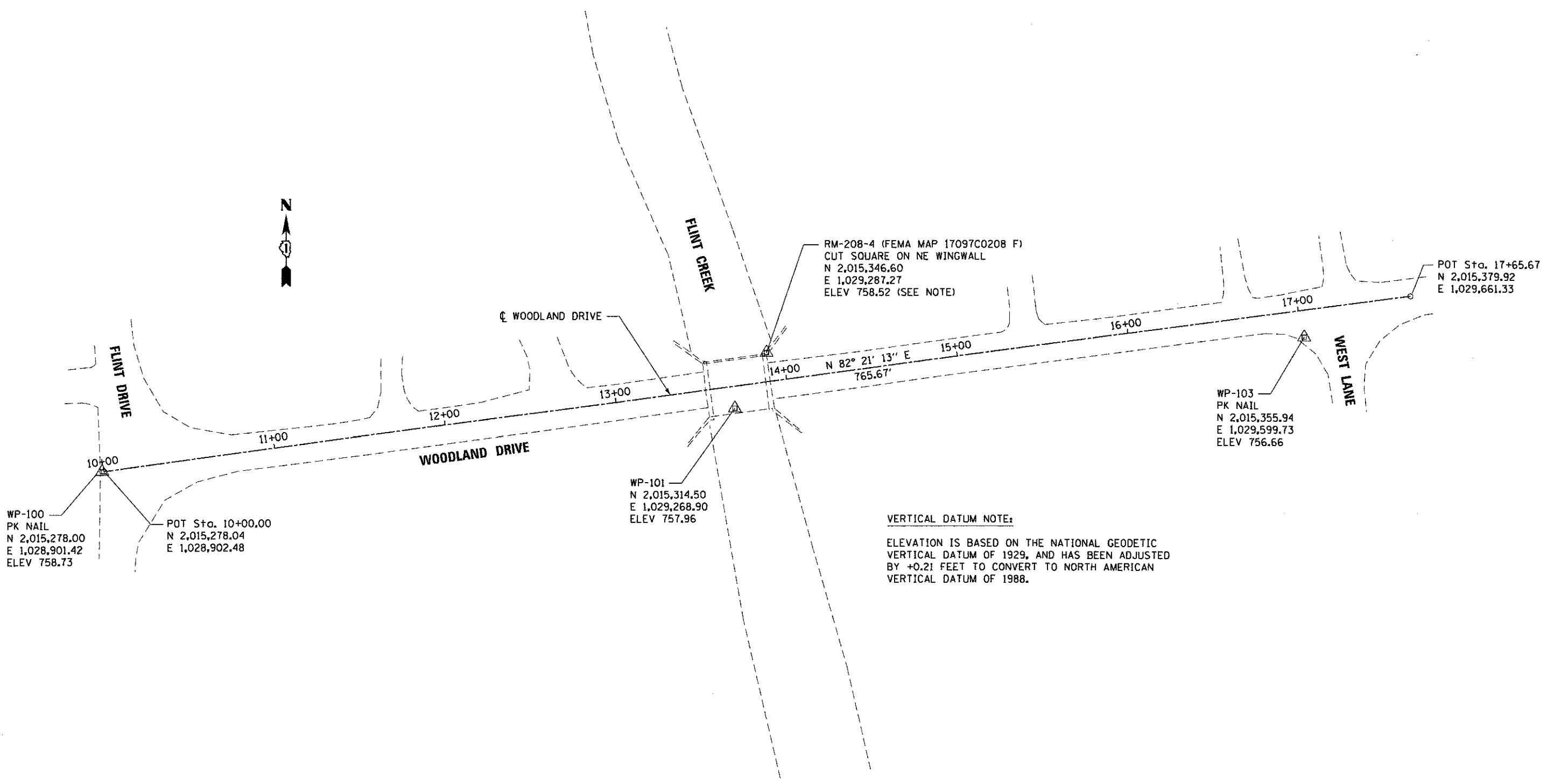
* ASSUME 15% FOR SHRINKAGE

HOT-MIX ASPHALT MIXTURE REQUIREMENTS	
MIXTURE TYPE	AIR VOIDS
TEMPORARY PAVEMENT (4 1/4")	4% @ 50 Gyr.
- HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50 (IL 9.5 mm), 2" - HOT-MIX ASPHALT BINDER COURSE, IL-19.0 mm, 2 1/4"	

- NOTES:**
- 1. THE UNIT WEIGHT USED TO CALCULATE ALL HMA SURFACE MIXTURE QUANTITIES IS 112 LBS/SQ YD/IN.
 - 2. THE "AC TYPE" FOR POLYMERIZED HMA MIXES SHALL BE "SBS/SBR PG 76-22" AND FOR NON-POLYMERIZED HMA THE "AC TYPE" SHALL BE "PG 64-22" UNLESS MODIFIED BY DISTRICT ONE SPECIAL PROVISIONS.
 - 3. FOR "PERCENT OF RAP" SEE DISTRICT ONE SPECIAL PROVISIONS.

McDonough Associates Inc.
 Engineers / Architects
 182 North Station Ave. Chicago, Illinois 60601

FILE NAME = 10030-SHT-TYPICAL01.dgn	USER NAME = jehrbart	DESIGNED - ---	REVISED - ---	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TYPICAL SECTIONS AND SCHEDULES OF QUANTITIES	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = 1:10	DRAWN - ---	REVISED - ---			09-00010-00-BR	LAKE	41	8	
	PLOT DATE = 05/14/12	CHECKED - EJG	REVISED - ---			TYP-1		CONTRACT NO. 63716		
				SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.		ILLINOIS FED. AID PROJECT	



VERTICAL DATUM NOTE:
 ELEVATION IS BASED ON THE NATIONAL GEODETIC VERTICAL DATUM OF 1929, AND HAS BEEN ADJUSTED BY +0.21 FEET TO CONVERT TO NORTH AMERICAN VERTICAL DATUM OF 1988.

McDonough Associates Inc.
 Engineers / Architects
 180 North Stearns Ave., Chicago, Illinois 60601

FILE NAME = 10030-SHT-ATB01.dgn
 USER NAME = Jehrhart

DESIGNED - MJT	REVISED -
DRAWN - MJT	REVISED -
CHECKED - E.JG	REVISED -
DATE - 05/14/12	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

ALIGNMENT, TIES, AND BENCHMARKS

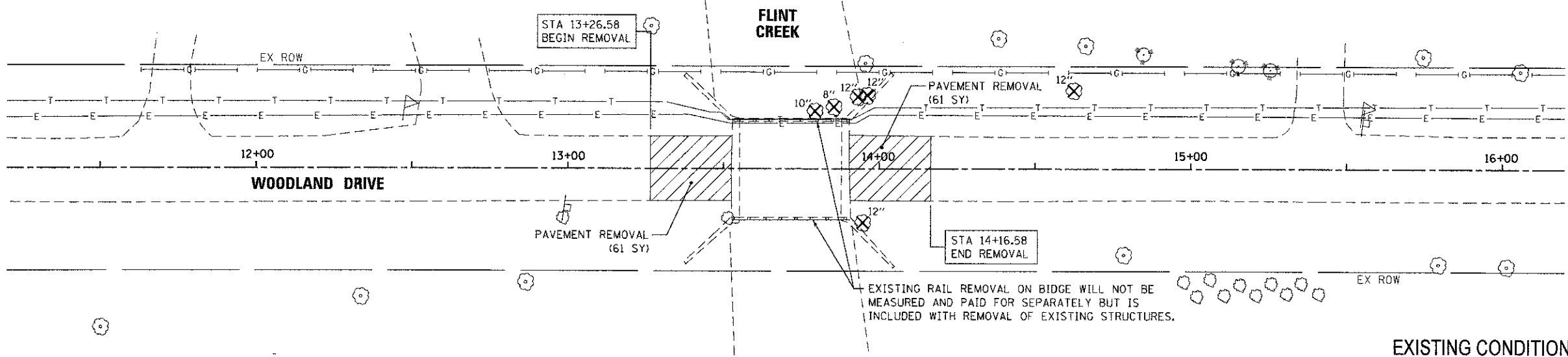
SCALE: 1"=30' SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	09-00010-00-BR	LAKE	41	9
	AT-1			
ILLINOIS FED. AID PROJECT			CONTRACT NO. 63716	

PLAN	SURVEYED	DATE
	PLOTTED	
	CHECKED	
	BY	
	NO. OF WAY CHECKED	
	CADD FILE NAME	

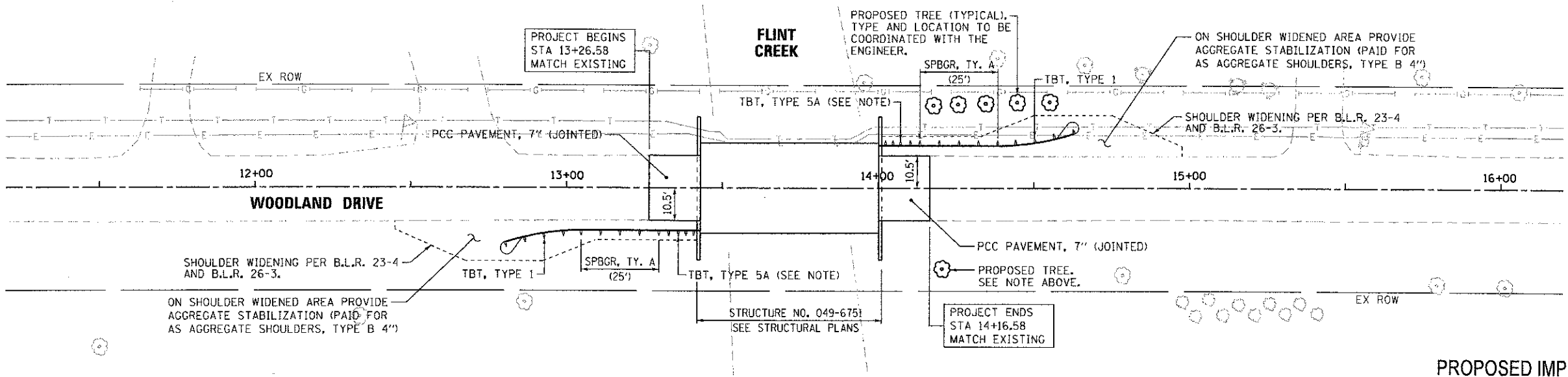
PROFILE	SURVEYED	DATE
	PLOTTED	
	CHECKED	
	BY	
	NO. OF WAY CHECKED	
	STRUCTURE NOTATION CHRD	

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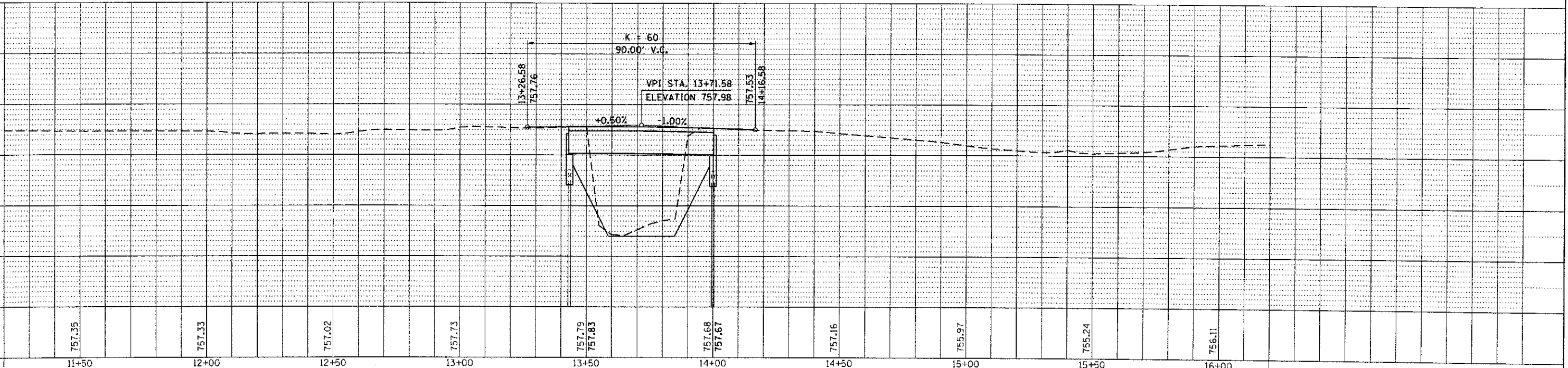
EXISTING LEGEND
 PAVEMENT REMOVAL, 4.5' (±) THICK
 15" TREE REMOVAL WITH UNIT DIA.

EXISTING CONDITIONS AND REMOVALS



TBT TYPE 5A NOTE:
 TRANSITION TBT TYPE 5A TO MEET CLULAM TIMBER RAILING AS DETAILED IN THE STRUCTURAL DRAWINGS, AND PROVIDE ADDITIONAL END SHOE PER BLR STANDARD 26-3. ALL COSTS ASSOCIATED WITH COMPLYING WITH THESE REQUIREMENTS SHALL BE INCLUDED IN THE COST OF THE TBT TYPE 5A.

PROPOSED IMPROVEMENTS



FILE NAME = 10030-SHT-PLAN01.dgn	USER NAME = jahhart	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING AND PROPOSED PLAN AND PROFILE				F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = 1:20	DRAWN -	REVISED -		SCALE: 1" = 20'	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	09-0010-00-BR	LAKE	41	10	
	PLOT DATE = 05/14/12	CHECKED -	REVISED -						PP-1				
		DATE = 05/14/12	REVISED -						CONTRACT NO. 63716				

STAGES OF CONSTRUCTION
GENERAL NOTES

1. THE ENGINEER SHALL BE INFORMED 72 HOURS IN ADVANCE OF ANY CHANGE TO THE STAGING PLANS, OR ANY CHANGE IN STAGE.
2. THE CONTRACTOR WILL BE REQUIRED TO MAINTAIN ACCESS TO ALL DRIVEWAYS WITHIN THE PROJECT LIMITS, UNLESS OTHERWISE SHOWN.
3. THE CONTRACTOR SHALL PLACE MESSAGE SIGNS WITH THE APPROPRIATE INFORMATION TO INFORM MOTORISTS OF UPCOMING CONSTRUCTION ACTIVITIES. THE MESSAGE SIGNS SHALL BE IN PLACE TWO WEEKS PRIOR TO START OF CONSTRUCTION ACTIVITIES. ALL COSTS ASSOCIATED WITH THE SIGNS SHALL BE CONSIDERED PART OF THE LUMP SUM PRICE FOR TRAFFIC CONTROL AND PROTECTION (SPECIAL).

SEQUENCE OF CONSTRUCTION: PRE-STAGE

TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH IDOT STANDARD 701301-04.
CONSTRUCT TEMPORARY PAVEMENT AS SHOWN IN THE STAGE I PLANS.
INSTALL TEMPORARY TRAFFIC SIGNAL.

PLACE TRAFFIC CONTROL DEVICES AND TEMPORARY PAVEMENT MARKINGS AS SHOWN IN THE STAGE I PLANS.

SEQUENCE OF CONSTRUCTION: STAGE I

TRAFFIC CONTROL SHALL BE AS SHOWN IN THE STAGE I PLANS.

CONSTRUCT SOUTH HALF (±) OF BRIDGE STRUCTURE AND EASTBOUND PAVEMENT LANES. INSTALL GUARDRAIL FOR EASTBOUND APPROACH TO BRIDGE STRUCTURE

INSTALL TEMPORARY PAVEMENT AS SHOWN IN THE STAGE II PLANS.

SEQUENCE OF CONSTRUCTION: STAGE II

PLACE TRAFFIC CONTROL DEVICES AND TEMPORARY PAVEMENT MARKINGS AS SHOWN IN THE STAGE II PLANS.

TRAFFIC CONTROL SHALL BE AS SHOWN IN THE STAGE II PLANS.

CONSTRUCT NORTH HALF (±) OF BRIDGE STRUCTURE AND WESTBOUND PAVEMENT LANES. INSTALL GUARDRAIL FOR WESTBOUND APPROACH TO BRIDGE STRUCTURE.

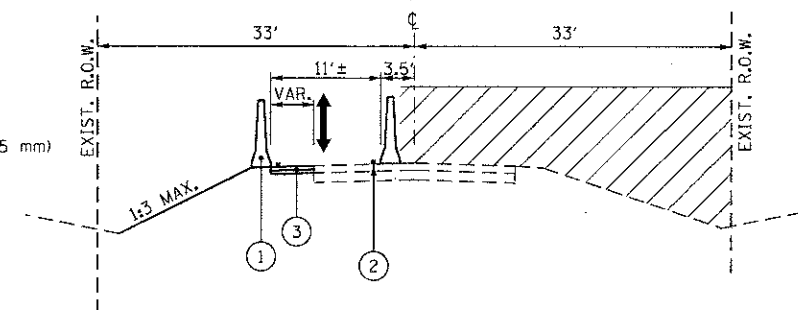
SEQUENCE OF CONSTRUCTION: POST-STAGE II

TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH IDOT STANDARD 701301-04.
REMOVE TEMPORARY PAVEMENT AND RESTORE AREA AS APPROPRIATE.

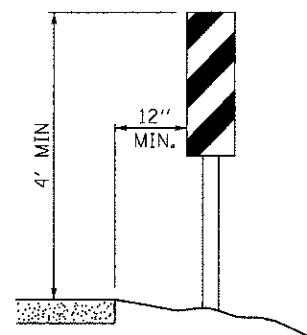
LEGEND

- ① TEMPORARY CONCRETE BARRIER ⁽¹⁾
- ② TEMPORARY PAVEMENT MARKING - LINE 4"
- ③ TEMPORARY PAVEMENT, 4 1/4"
(a) 2" HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50 (IL 9.5 mm)
(b) 2 1/4" HOT-MIX ASPHALT BINDER COURSE (IL-19.0 mm)

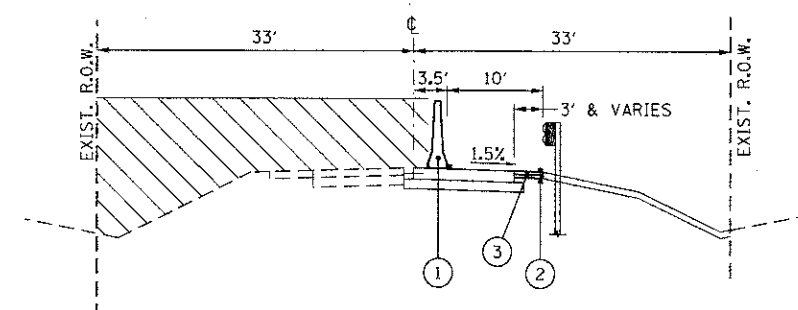
⁽¹⁾ DRUMS WITH STEADY BURNING BI-DIRECTIONAL LIGHT AND VERTICAL PANELS WILL ALSO BE REQUIRED TO PROVIDE DELINEATION THROUGH THE WORK ZONE. SEE STAGE I AND STAGE II PLAN FOR LOCATIONS.



STAGE I - WOODLAND DRIVE



VERTICAL PANELS
(POST MOUNTED, ONE EACH SIDE)

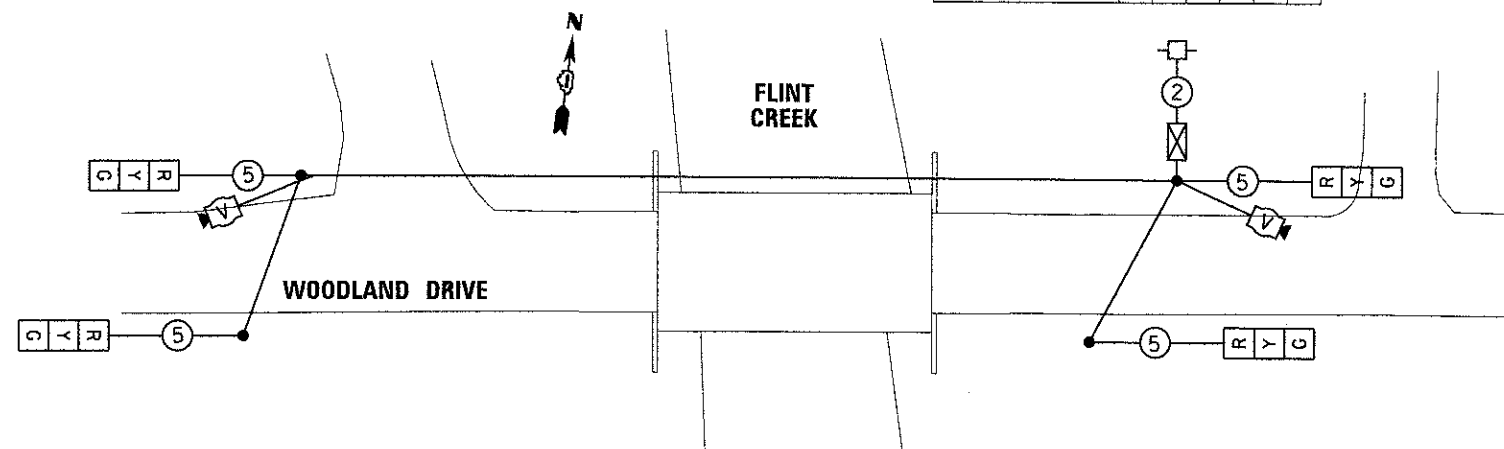


STAGE II - WOODLAND DRIVE

TEMPORARY BRIDGE TRAFFIC SIGNALS

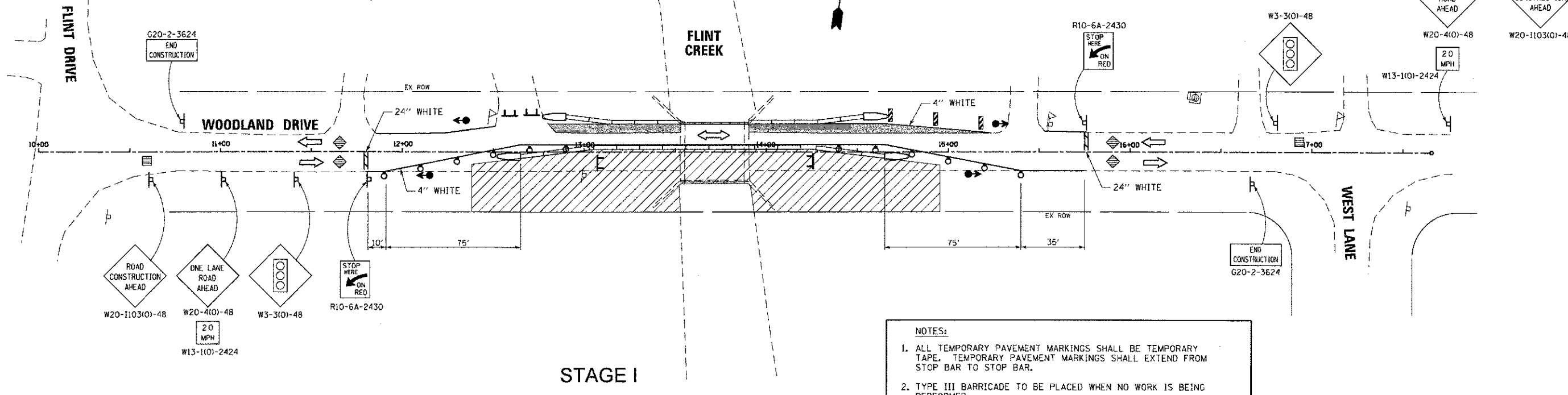
A TEMPORARY TRAFFIC SIGNAL SHALL BE REQUIRED DUE TO STAGE CONSTRUCTION OF THE BRIDGE. TRAFFIC SIGNALS SHALL BE OPERATIONAL ONLY WHEN ALL TRAFFIC CONTROLS ARE IN PLACE. THE TEMPORARY TRAFFIC SIGNAL SHALL BE INSTALLED IN ACCORDANCE WITH SECTION 701.18(B)(2), EXCEPT WHERE MODIFIED BY THE SPECIAL PROVISIONS. ALSO, VEHICLE DETECTION SHALL BE VIA MICROWAVE VEHICLE SENSORS OR A VIDEO VEHICLE DETECTION SYSTEM.

TRAFFIC SIGNAL SEQUENCE						
PHASE	A			B		
INTERVAL	1	2	3	4	5	6
EASTBOUND	G	Y	R	R	R	R
WESTBOUND	R	R	R	G	Y	R



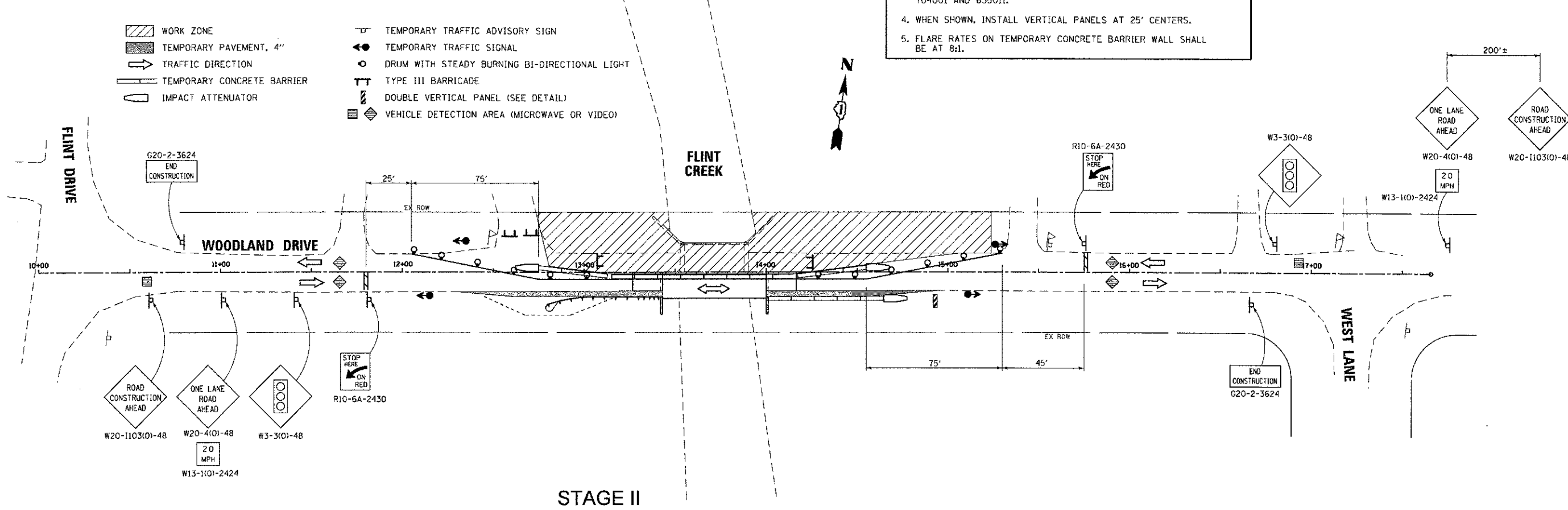
TEMPORARY CABLE PLAN

- WORK ZONE
- TEMPORARY PAVEMENT, 4"
- TRAFFIC DIRECTION
- TEMPORARY CONCRETE BARRIER
- IMPACT ATTENUATOR
- TEMPORARY TRAFFIC ADVISORY SIGN
- TEMPORARY TRAFFIC SIGNAL
- DRUM WITH STEADY BURNING BI-DIRECTIONAL LIGHT
- TYPE III BARRICADE
- DOUBLE VERTICAL PANEL (SEE DETAIL)
- VEHICLE DETECTION AREA (MICROWAVE OR VIDEO)



- NOTES:**
- ALL TEMPORARY PAVEMENT MARKINGS SHALL BE TEMPORARY TAPE. TEMPORARY PAVEMENT MARKINGS SHALL EXTEND FROM STOP BAR TO STOP BAR.
 - TYPE III BARRICADE TO BE PLACED WHEN NO WORK IS BEING PERFORMED.
 - INSTALL BARRIER WALL MARKERS AT 25' CENTERS. SEE STANDARDS 704001 AND 635011.
 - WHEN SHOWN, INSTALL VERTICAL PANELS AT 25' CENTERS.
 - FLARE RATES ON TEMPORARY CONCRETE BARRIER WALL SHALL BE AT 8:1.

- WORK ZONE
- TEMPORARY PAVEMENT, 4"
- TRAFFIC DIRECTION
- TEMPORARY CONCRETE BARRIER
- IMPACT ATTENUATOR
- TEMPORARY TRAFFIC ADVISORY SIGN
- TEMPORARY TRAFFIC SIGNAL
- DRUM WITH STEADY BURNING BI-DIRECTIONAL LIGHT
- TYPE III BARRICADE
- DOUBLE VERTICAL PANEL (SEE DETAIL)
- VEHICLE DETECTION AREA (MICROWAVE OR VIDEO)



McDonough Associates Inc.
 Engineers / Architects
 180 North Station Ave. Chicago, Illinois 60601

FILE NAME = 10030-SHT-MOT02.dgn	USER NAME = johrhart	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	MAINTENANCE OF TRAFFIC STAGE I AND STAGE II	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	PLOT SCALE = 1:30	DRAWN -	REVISED -			09-00010-00-BR	LAKE	41	12		
	PLOT DATE = 05/14/12	CHECKED -	REVISED -			MOT-2		CONTRACT NO. 63716			
		DATE = 05/14/12	REVISED -			ILLINOIS FED. AID PROJECT					
SCALE: 1" = 30'						SHEET NO. 2 OF 2 SHEETS		STA.	TO STA.		

EROSION AND SEDIMENT CONTROL GENERAL NOTES




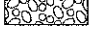
1. THE PURPOSE OF THE EROSION AND SEDIMENT CONTROL MEASURES INCLUDED FOR THIS PROJECT IS TO LIMIT THE SEDIMENT POLLUTION IMPACT OF ANY STORM WATER DISCHARGES THAT ORIGINATE ON THIS SITE OR OFF-SITE FLOWS THAT FLOW OVER THE DISTURBED AREAS ON DOWNSTREAM AREAS.
 2. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT SEDIMENT TRANSPORT OFF THE SITE IS REDUCED BY A COMBINATION OF MINIMIZATION OF EROSION AT THE SOURCE AND INSTALLATION OF SPECIFIC MEASURES TO CONTROL OR REDUCE THE TRANSPORT OF SEDIMENT.
 3. TO THE MAXIMUM EXTENT POSSIBLE, ALL FLOWS ORIGINATING OFF THE CONSTRUCTION SITE WILL BE DIVERTED AROUND DISTURBED AREAS OR WILL BE CONVEYED THROUGH THE SITE IN A MANNER THAT UNTREATED ON-SITE RUNOFF DOES NOT MIX WITH THE OFF-SITE RUNOFF.
 4. ALL RUNOFF ORIGINATING ON DISTURBED AREAS ASSOCIATED WITH THIS PROJECT WILL PASS THROUGH ONE OR MORE MEASURES THAT WILL MINIMIZE THE OFF-SITE SEDIMENT IMPACTS OF THE CONSTRUCTION ACTIVITY.
 5. DISTURBED AREAS ARE TO BE PROTECTED FROM EROSION IN A TIMELY MANNER. UPON COMPLETION OF GRADING OR CONSTRUCTION, THE AREA WILL BE STABILIZED (USING PERMANENT MEASURES WHEN POSSIBLE) WITHIN 7 CALENDAR DAYS. TEMPORARY STABILIZATION THROUGH USE OF GROUND COVER, MULCHING, OR OTHER APPROVED MEASURES WILL BE INSTALLED WITHIN 7 DAYS WHENEVER SITE DEVELOPMENT WORK, GRADING OR OTHER EARTH DISTURBING ACTIVITIES CEASE TO BE CONTINUOUS FOR A PERIOD EXCEEDING 14 CALENDAR DAYS. THE 7/14 DAY REQUIREMENT IS TAKEN TO MEAN THAT THE STABILIZATION OPERATION IS COMPLETE OR NEARING COMPLETION IN THE DEFINED TIME.
 6. THE CONTRACTOR SHALL DESIGNATE ONE OF HIS EMPLOYEES AS RESPONSIBLE FOR IMPLEMENTATION OF THE EROSION AND SEDIMENT CONTROL PLAN ON ALL DISTURBED AREAS. THIS PERSON IS TO BE KNOWLEDGEABLE ABOUT INSTALLATION AND MAINTENANCE OF THE REQUIRED MEASURES AND IS TO HAVE TAKEN AN APPROVED EROSION AND SEDIMENT CONTROL COURSE. THIS EMPLOYEE IS TO HAVE THE AUTHORITY TO CARRY OUT THE IMPLEMENTATION OF ANY INSTRUCTIONS CONCERNING THE EROSION AND SEDIMENT CONTROL PLAN GIVEN BY THE ENGINEER. ALL MEASURES WILL BE INSPECTED BY THIS INDIVIDUAL AND THE ENGINEER ON A REGULAR BASIS (AT LEAST ONCE EVERY 7 DAYS) AND AFTER RAINFALL EVENTS GREATER THAN 0.5 INCH, OR SNOW FALL EQUIVALENT.
 7. SEDIMENT CONTROL MEASURES SUCH AS DITCH CHECKS, SILT FENCE, EROSION CONTROL BLANKET, ETC. SHALL BE MAINTAINED FOR THE DURATION OF THE PROJECT. SILT FENCE AND DITCH CHECKS SHALL HAVE SEDIMENT REMOVED WHEN IT REACHES 50% THE HEIGHT OF THE CONTROL DEVICE. THESE SPOILS WILL BE REMOVED TO AN APPROVED SITE.
 8. EXCAVATION TO BE USED FOR EMBANKMENTS SHALL NOT BE STOCKPILED UNLESS PERIMETER CONTROLS ARE UTILIZED. WHEN THIS MATERIAL IS STOCKPILED FOR THE CONVENIENCE OF THE CONTRACTOR THE COST OF THE CONTROLS ARE BORNE BY THE CONTRACTOR. IF THE MATERIAL IS STOCKPILED AT THE DIRECTION OF THE ENGINEER THE DEPARTMENT WILL ASSUME THE COSTS OF THE CONTROLS.
 9. IN AREAS WHERE A PERMANENT VEGETATIVE COVER IS PRACTICABLE AND INCLUDED IN THE CONTRACT DOCUMENTS, A SPECIAL EFFORT SHOULD BE MADE TO ESTABLISH A COVER AS SOON AS A DISTURBED AREA IS BROUGHT TO FINAL GRADE.
10. THE CONTRACTOR IS ADVISED THAT SOME IN-STREAM WORK IS REQUIRED TO PLACE THE RIP RAP SLOPEWALL. SEDIMENT LADEN DEWATERING DISCHARGE MUST BE DIRECTED TO AN APPROVED SEDIMENT TRAPPING MEASURE PRIOR TO RELEASE FROM THE SITE. THE CONTRACTOR WILL BE REQUIRED TO PROVIDE AN IN-STREAM WORK PLAN PRIOR TO STARTING CONSTRUCTION. ALL COSTS ASSOCIATED WITH PROVIDING THIS PLAN AND CONFORMING TO ITS REQUIREMENTS SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT.

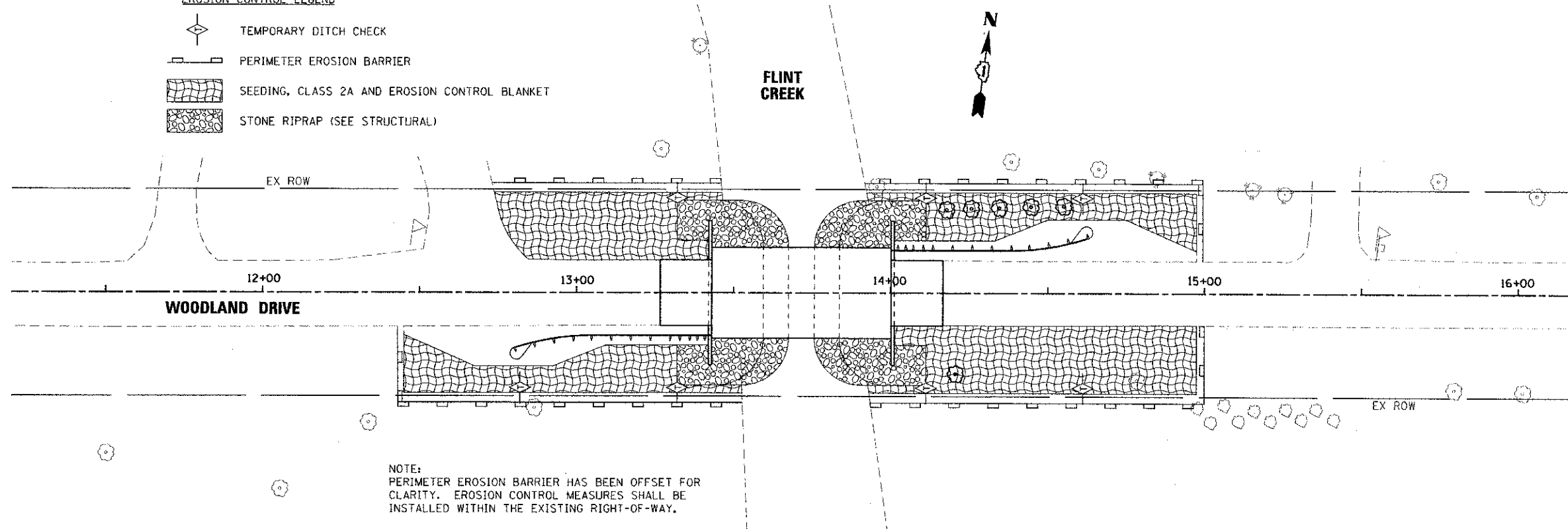
EROSION AND SEDIMENT CONTROL STRATEGY

DISTURBED AREA: 0.30 ACRES
RECEIVING WATERS: FLINT CREEK

- A. INSTALL PERIMETER EROSION BARRIER.
- B. CLEAR AND GRUB, REMOVE EXISTING TREES AND VEGETATION AS REQUIRED.
- C. INSTALL TEMPORARY DITCH CHECKS.
- D. STABILIZE DISTURBED AREAS IN A TIMELY MANNER, PER THE REQUIREMENTS IN THE NOTES. WHEN POSSIBLE, UTILIZE PERMANENT MEASURES. TEMPORARY EROSION CONTROL SEEDING AND MULCH, METHOD 2 SHALL BE USED IF PERMANENT MEASURES CAN NOT BE INSTALLED.
- E. INSPECT AND MAINTAIN ALL EROSION AND SEDIMENT CONTROL MEASURES FOR THE DURATION OF CONSTRUCTION.
- F. WHEN FINAL STABILIZATION IS ESTABLISHED, REMOVE ALL TEMPORARY MEASURES.

EROSION CONTROL LEGEND

-  TEMPORARY DITCH CHECK
-  PERIMETER EROSION BARRIER
-  SEEDING, CLASS 2A AND EROSION CONTROL BLANKET
-  STONE RIPRAP (SEE STRUCTURAL)



Bench Mark: #100 PK Nail in pavement at west end of intersection of Flint Dr. and Woodland Dr. Elev. 758.73
(Northing: 2015278.00, Easting: 1028901.42)

Existing Structure: S.N. 049-6750 built in 1968. Structure is a single span bridge consisting of nonstandard precast prestressed concrete box beams supported by closed abutments of unknown footing type. 36'-0" bk. to bk. abutments. 32'-4" out to out deck. Structure to be removed and replaced using stage construction. Existing footing to remain.

No salvage

WATERWAY INFORMATION

Drainage Area = 23.2 sq mi		Low Grade Elev. 755.24 @ Sta. 15+50							
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Head - Ft.		Headwater El.		
			Exist.	Prop.	H.W.E. Exist.	Prop.	Exist.	Prop.	
Design	10	558	125	157	751.66	0.04	0.04	751.70	751.70
	30	779	151	193	752.43	0.07	0.07	752.50	752.50
Base/Max Calc.	50	872	160	206	752.68	0.08	0.08	752.76	752.76
	100	1023	173	225	753.06	0.10	0.10	753.16	753.16

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	W. Abut.	E. Abut.
	749.15	749.01

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Channel Excavation	Cu Yd		296	296
Stone Riprap, Class A4	Sq Yd		398	398
Filter Fabric	Sq Yd		440	440
Removal Of Existing Superstructures	Each	1		1
Concrete Removal	Cu Yd		111	111
Structure Excavation	Cu Yd		213	213
Concrete Structures	Cu Yd		30.3	30.3
Bridge Deck Grooving	Sq Yd	185		185
Concrete Encasement	Cu Yd		6.6	6.6
Protective Coat	Sq Yd	185		185
Precast Prestressed Concrete Deck Beams (27" Depth)	Sq Ft	1,658		1,658
Reinforcement Bars, Epoxy Coated	Pound	2,740	4,570	7,310
Bar Splicers	Each	81	28	109
Furnishing Metal Shell Piles 12" X 0.179"	Foot		430	430
Driving Piles	Foot		430	430
Test Pile Metal Shells	Each		2	2
Name Plates	Each	1		1
Geocomposite Wall Drain	Sq Yd		36	36.0
Porous Granular Embankment, Special	Cu Yd		87	87
Concrete Wearing Surface, 5"	Sq Yd	185		185
Temporary Sheet Piling	Sq Ft		700	700
Pipe Underdrains For Structures 4"	Foot		76	76
Timber Railing	Foot	117		117

INDEX OF SHEETS

1. General Plan and Elevation
2. Staged Construction and Drainage Details
3. Temporary Concrete Barrier
4. Superstructure
5. Superstructure Details
6. 27"x36" PPC Deck Beam
7. 27"x36" PPC Deck Beam Details
8. 27"x48" PPC Deck Beam
9. 27"x48" PPC Deck Beam Details
10. Timber Railing
11. Timber Railing
12. Abutments
13. Bar Splicer Assembly Details
14. Metal Shell Pile Details
15. Soil Boring Logs
16. Soil Boring Logs

DESIGN SPECIFICATIONS

2010 AASHTO LRFD Bridge Design Specifications with 2010 Interims

LOADING HL-93

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

DESIGN STRESSES

FIELD UNITS

$f'_c = 3,500$ psi
 $f_y = 60,000$ psi (Reinforcement)

PRECAST PRESTRESSED UNITS

$f'_c = 6,000$ psi
 $f'_ci = 5,000$ psi
 $f_{pu} = 270,000$ psi (1/2" ϕ low relax. strands)
 $f_{pb} = 201,960$ psi (1/2" ϕ low relax. strands)

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.080g
Design Spectral Acceleration at 0.2 sec. (S_{D5}) = 0.139g
Soil Site Class = D

FLINT CREEK
BUILT 2011 BY
VILLAGE OF LAKE BARRINGTON
SEC. 09-00010-00-BR
STATION 13+71.58
STR. NO. 049-6751 LOADING HL-93

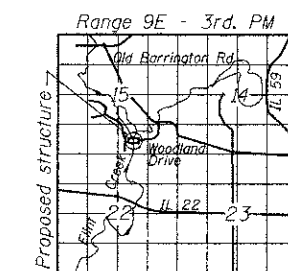
NAME PLATE

See Std. 515001

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.
- Layout of slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.
- The Contractor is advised that the existing southern fascia beam is in deteriorated condition with reduced load carrying capacity and care should be taken with construction equipment and removal procedures.
- The cost of any dewatering necessary for placement of filter fabric and riprap shall be included in the cost of Channel Excavation.

GENERAL PLAN AND ELEVATION
WOODLAND DRIVE OVER FLINT CREEK
SEC. 09-00010-00-BR
LAKE COUNTY
STATION 13+71.58
STRUCTURE NO. 049-6751



LOCATION SKETCH

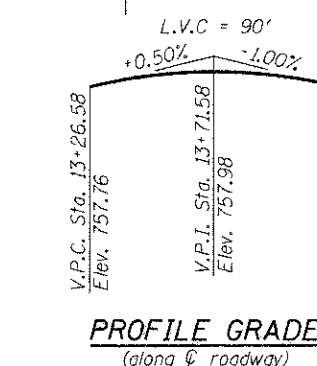


I certify that to the best of knowledge, information and belief, this bridge design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with requirements of the current AASHTO Standard Specifications for Highway Bridges.

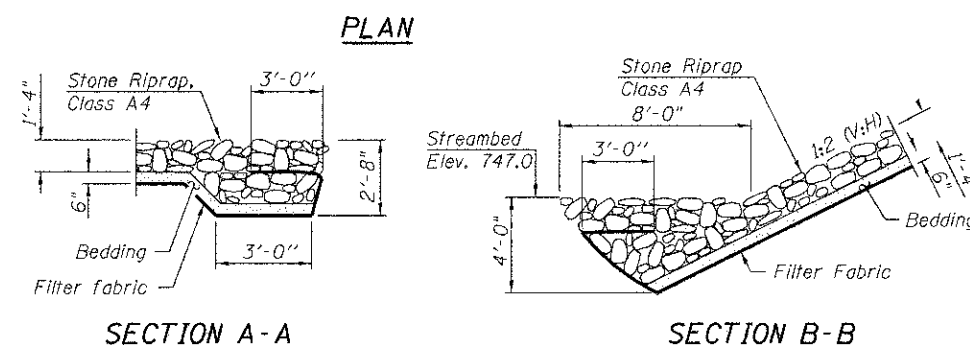
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 1 OF 16 SHEETS

F.A. RTL.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	09-00010-00-BR	LAKE	41	14
			CONTRACT NO.	63716
ILLINOIS FED. AID PROJECT				



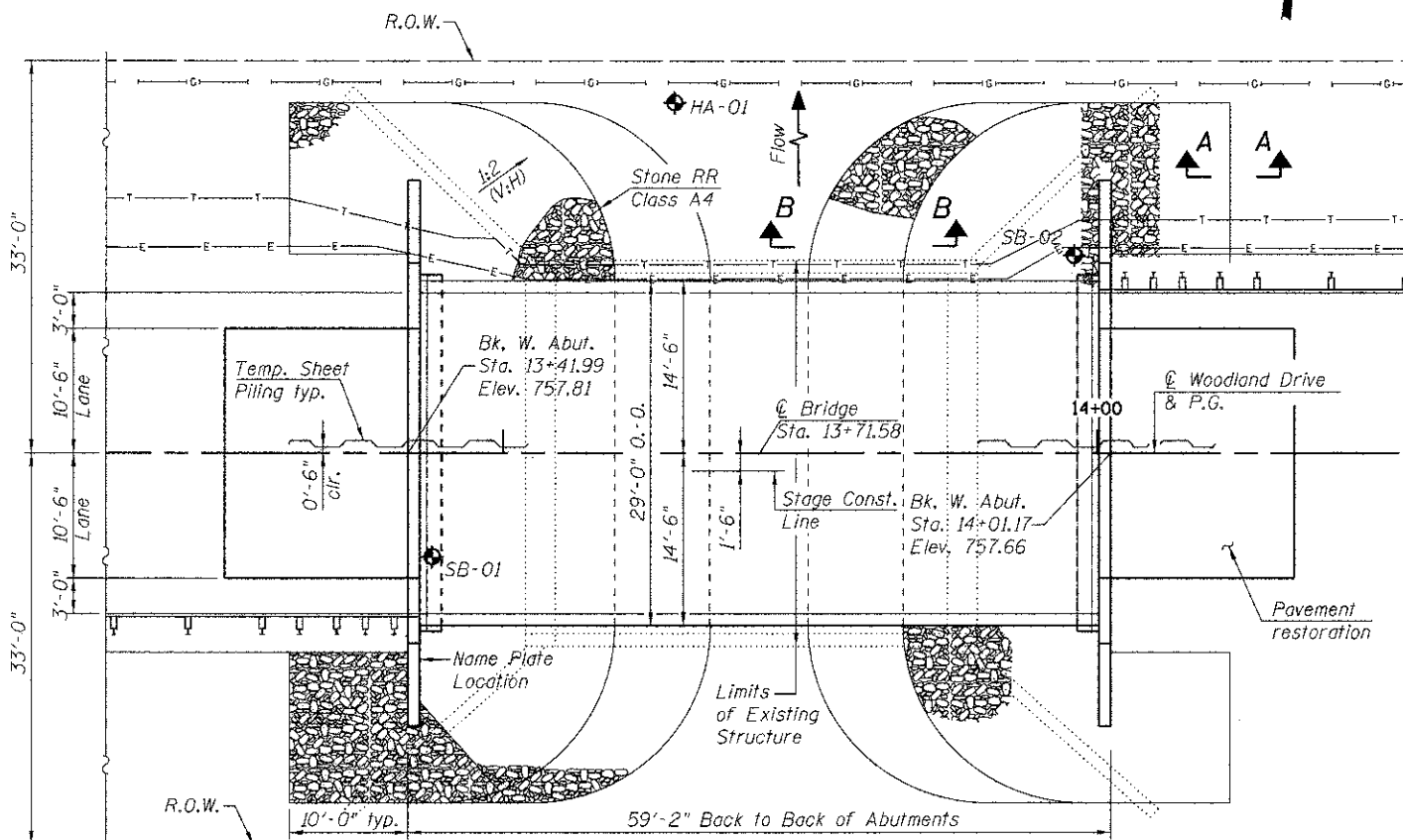
PROFILE GRADE
(along \hat{C} roadway)



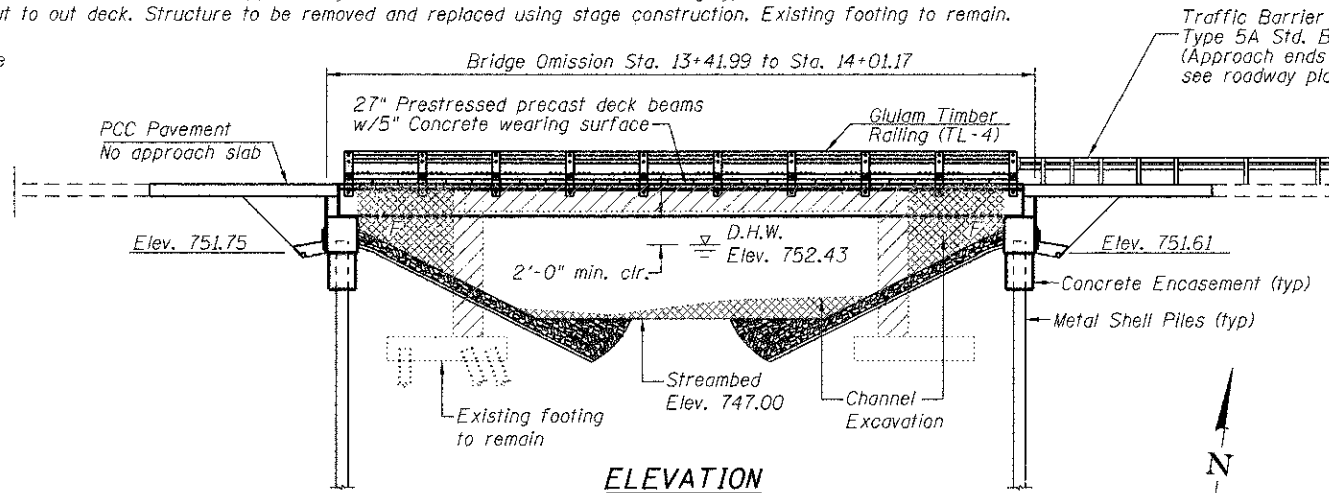
SECTION A-A

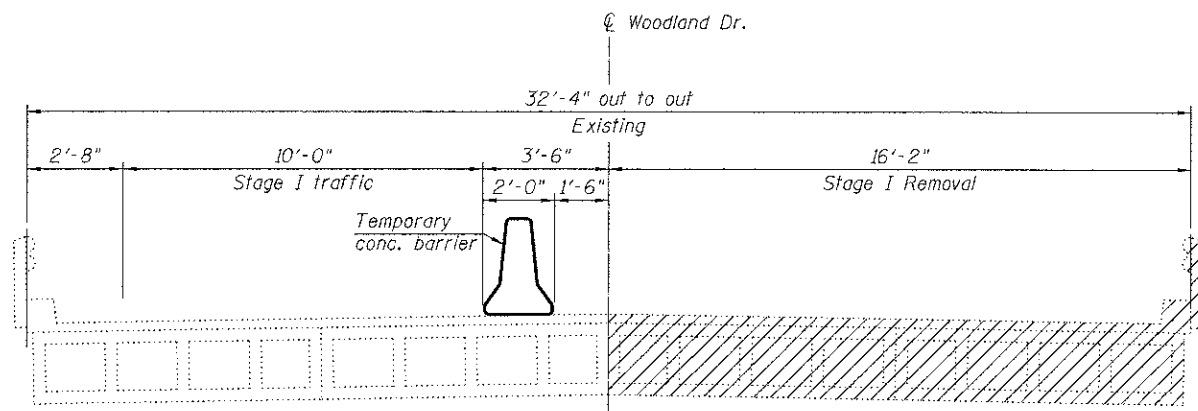
SECTION B-B

PLAN

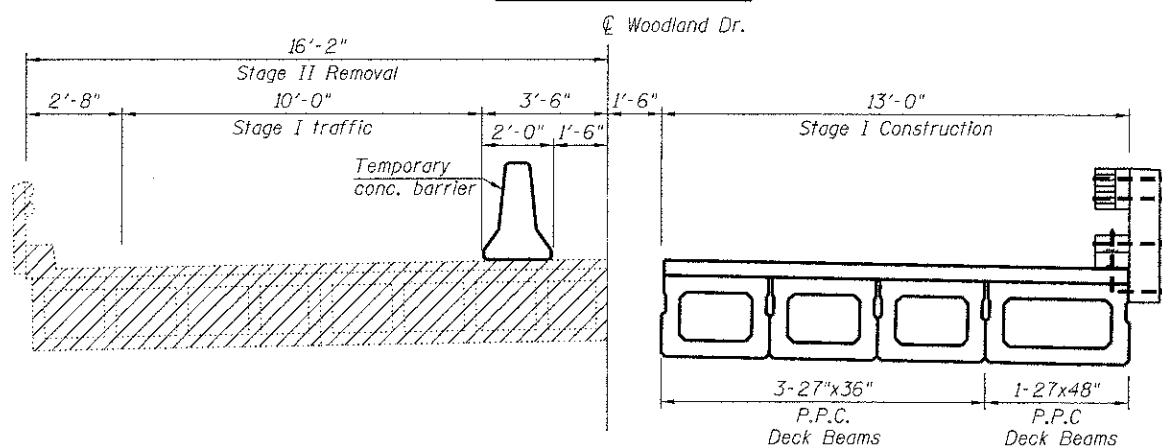


ELEVATION

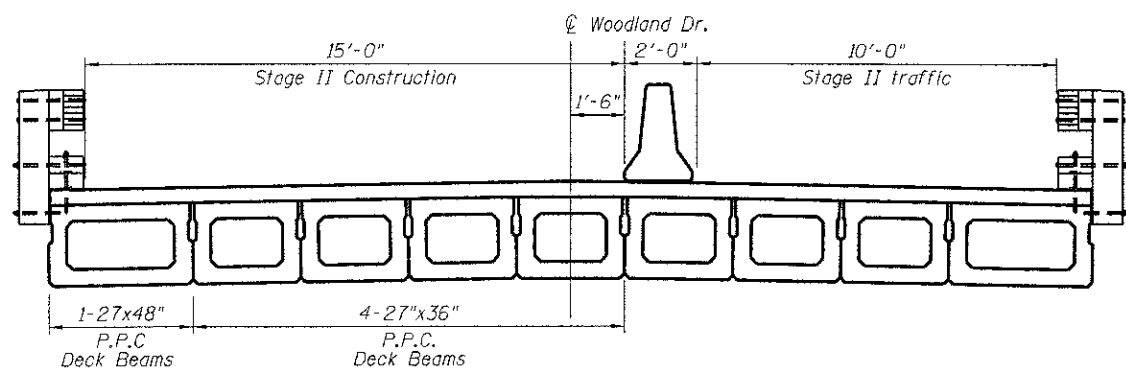




STAGE I REMOVAL



**STAGE I CONSTRUCTION
STAGE II REMOVAL**



STAGE II CONSTRUCTION

STAGE CONSTRUCTION

Notes:

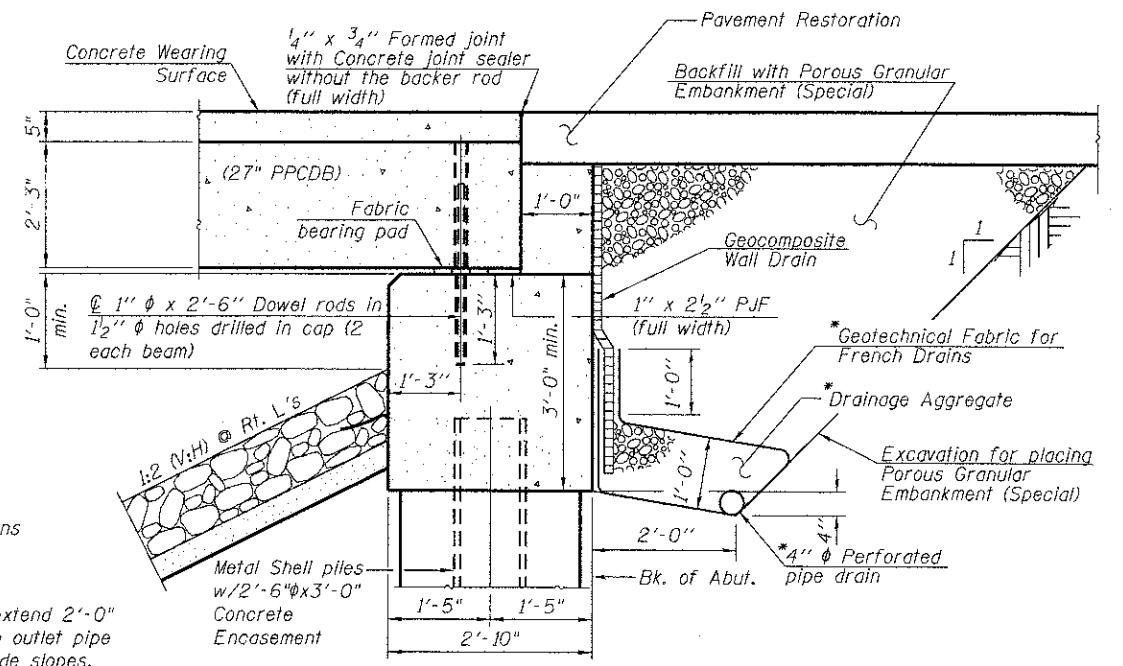
If the Contractor chooses to alter the temporary cantilevered sheet piling design requirements shown on the plans, a design submittal including plan details and calculations will be required for review and acceptance by the Engineer.

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 accepted by the Engineer and included in the cost for Temporary Sheet Piling.

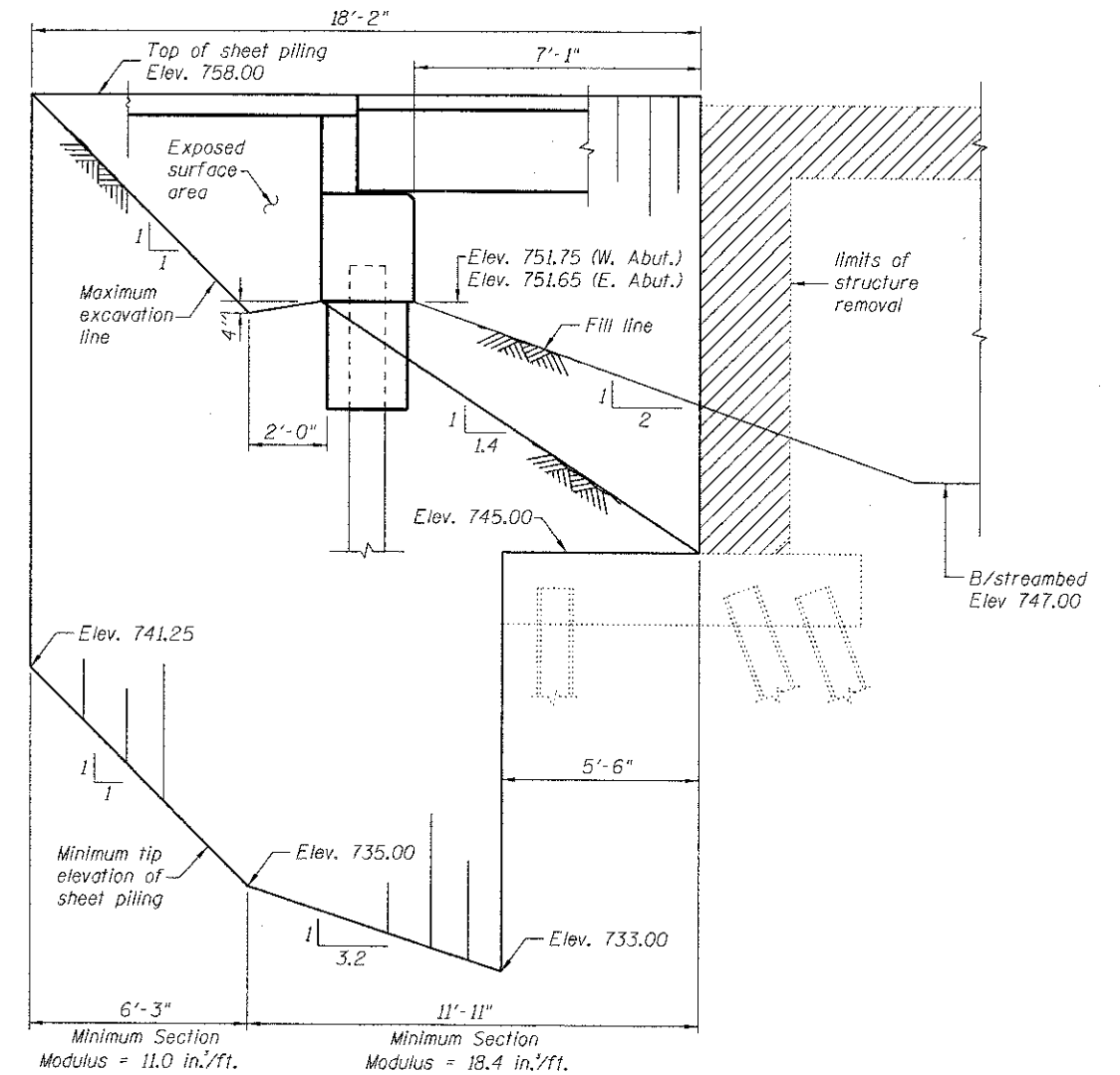
All dimensions relative to the existing abutment are assumptions and need to be field verified. There are no existing plans for the structure.

* Included in the cost of Pipe Underdrains for Structures 4.

Note:
All drainage system components shall extend 2'-0" from the end of each wingwall except an outlet pipe shall extend until intersecting with the side slopes. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 60110.)

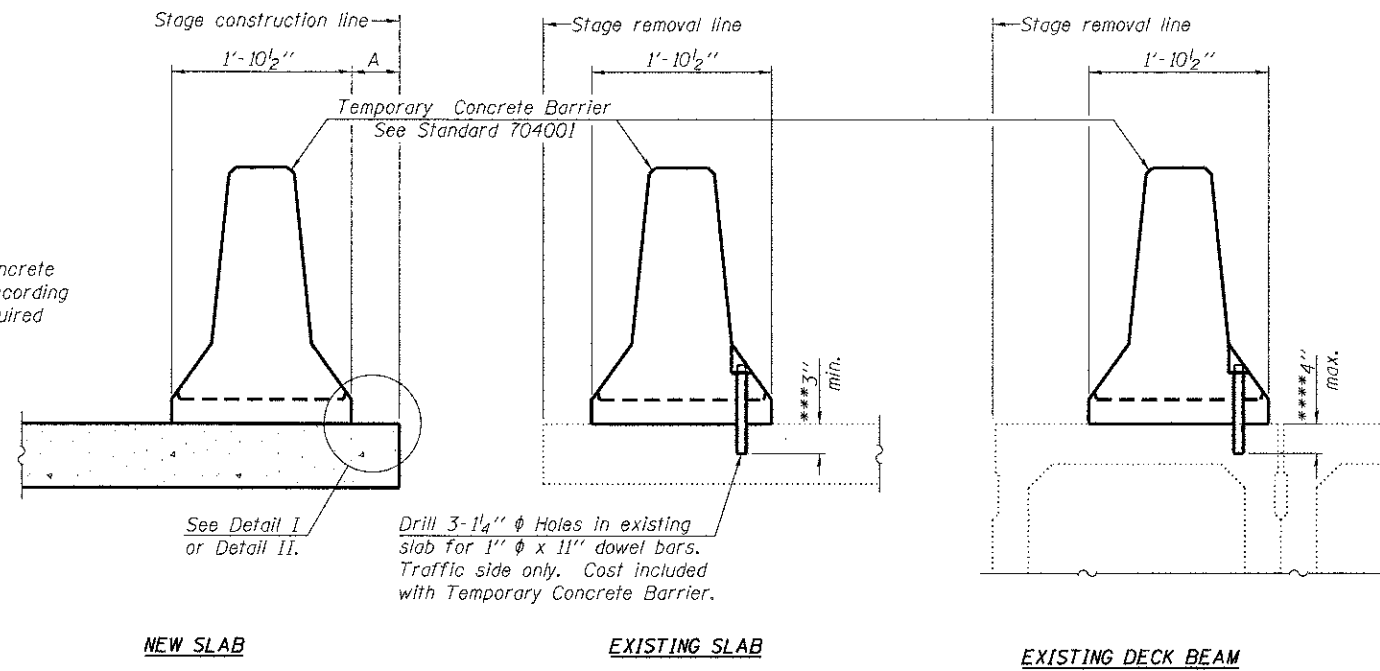


SECTION THRU ABUTMENT



TEMPORARY SHEET PILING

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".



SECTIONS THRU SLAB OR DECK BEAM

NOTES

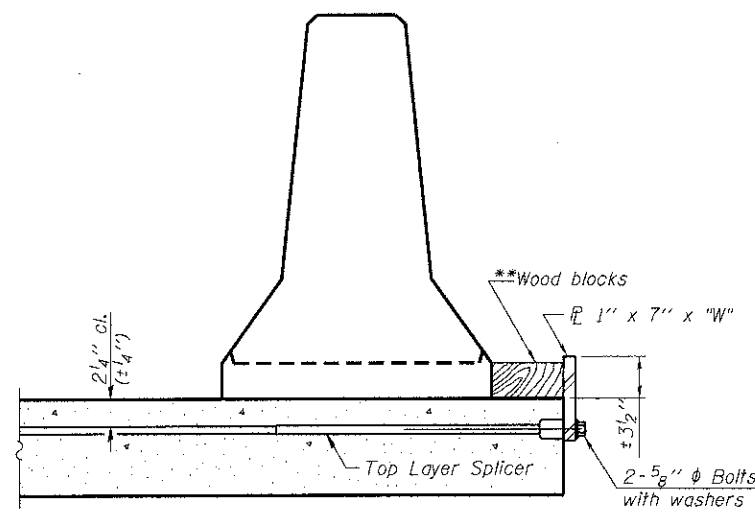
Detail I - With Bar Splicer or Couplers:
Connect one (1) 1" x 7" x "W" steel \bar{P} to the top layer of couplers with 2-5/8" ϕ bolts screwed to coupler at approximate \bar{C} of each barrier panel.

Detail II - With Extended Reinforcement Bars:
Connect one (1) 1" x 7" x "W" steel \bar{P} to the concrete slab or concrete wearing surface with 2-5/8" ϕ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate \bar{C} of each barrier panel.

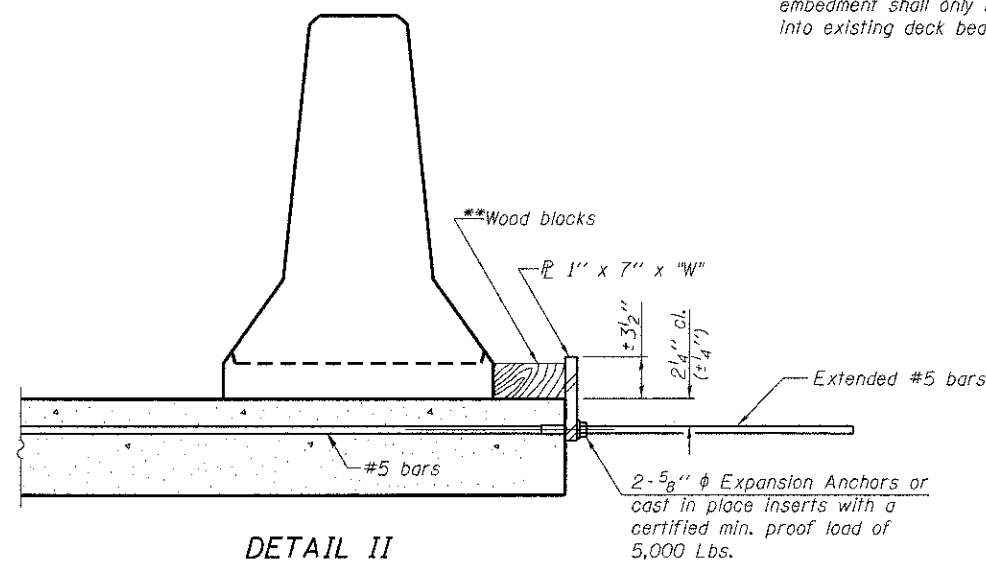
Cost of anchorage is included with Temporary Concrete Barrier. The 1" x 7" x "W" plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.

*** 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.

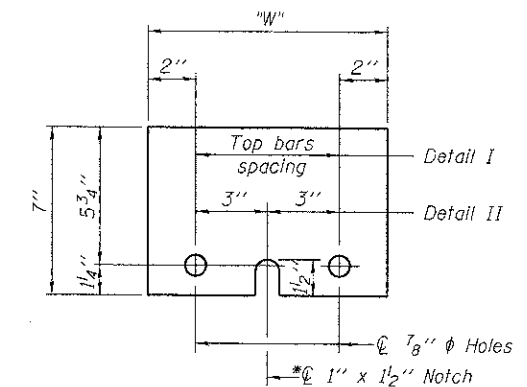
**** If existing deck beam is to remain in place after stage construction, embedment shall only be into wearing surface and not into existing deck beam concrete.



DETAIL I



DETAIL II



STEEL RETAINER \bar{P} 1" x 7" x "W"

* Required only with Detail II

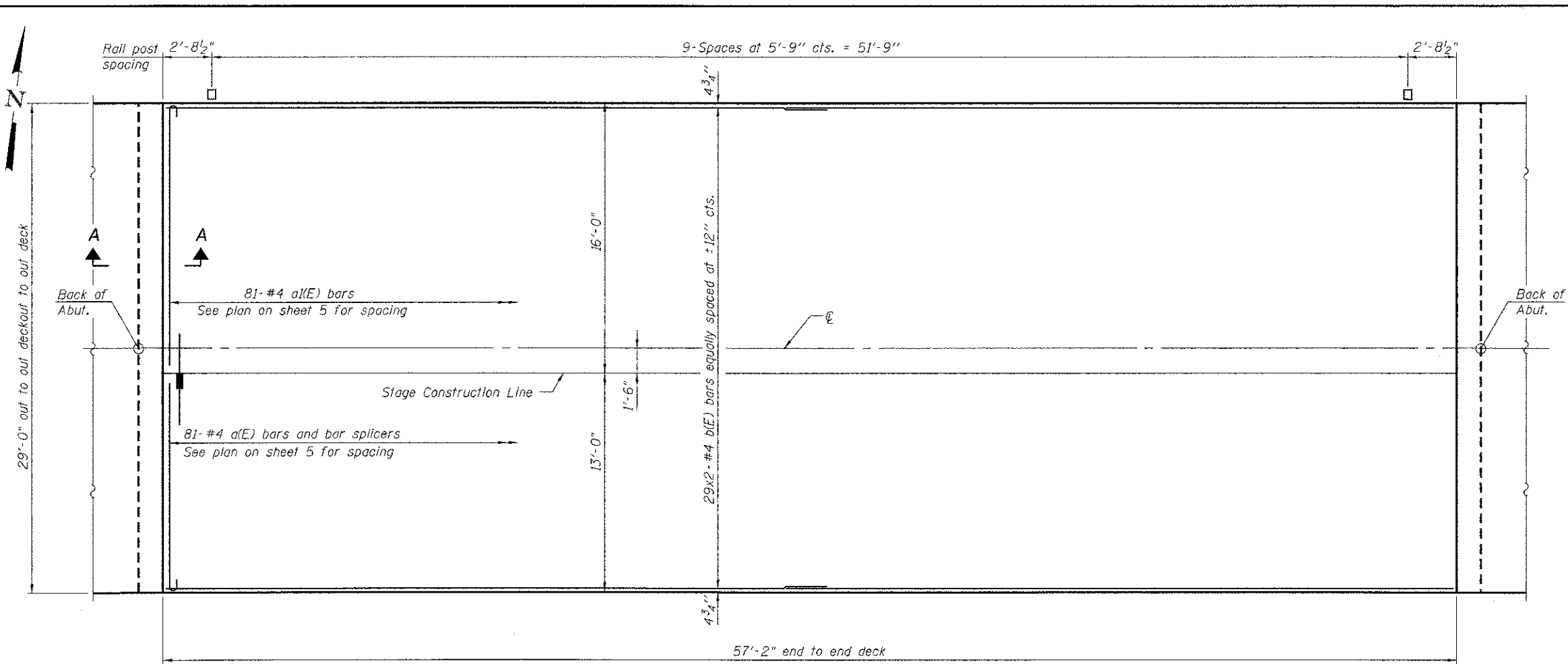
** Wood blocks may be omitted when required to provide minimum stage traffic lane width. When the wood blocks are omitted, the concrete barrier shall be in direct contact with the steel retainer plate.

"W" = Top bars spacing + 4"

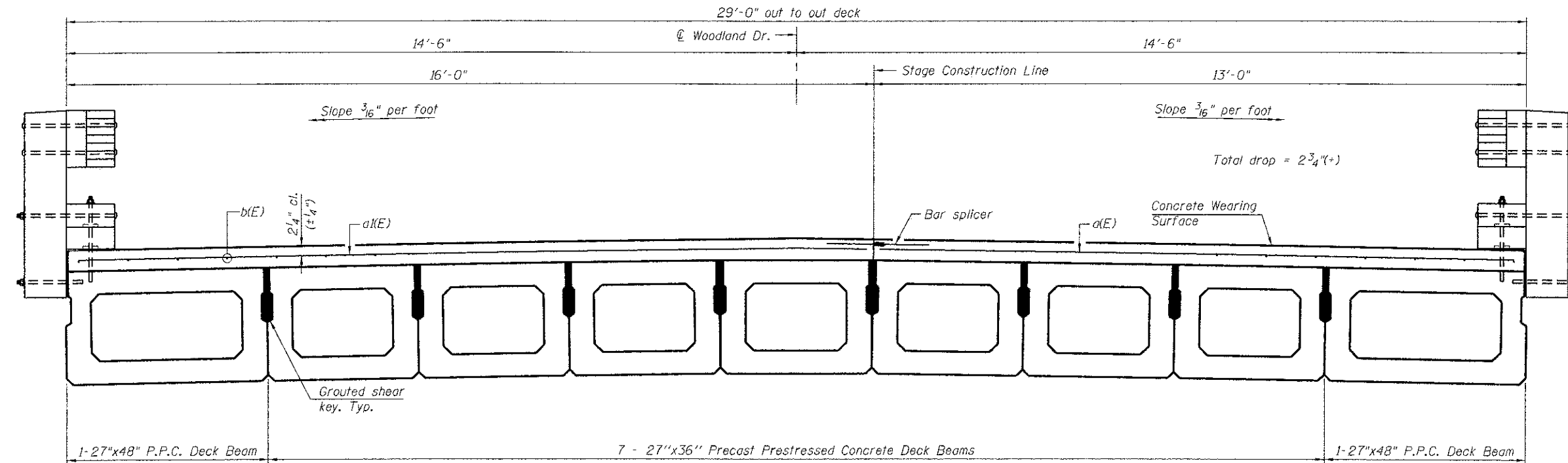
R-27

7-1-10

FILE NAME * 2495751-203-Temp Barrier.dgn	USER NAME * Jehrbert	DESIGNED - AMV	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION STRUCTURE NO. 049-9751	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
McDonough Associates Inc. Engineers / Architects 180 North Station Ave., Chicago, Illinois 60691	PLOT SCALE * 1:8.9833333	CHECKED - JCE	REVISED -			09-00010-00-BR	LAKE	41	16	
PLOT DATE * 05/14/12	CHECKED - JCE	REVISED -	CONTRACT NO. 63716			ILLINOIS FED. AID PROJECT				



PLAN



CROSS SECTION
(Looking East)

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

SECTION A-A

Notes:
All concrete wearing surfaces shall be placed prior to pouring the roadway pavement.
See sheets 7 & 9 for fabric bearing pad details.

Notes:
See sheet 5 of 16 for Superstructure Details and Bill of Material.
Bars indicated thus 20 x 2-#4 etc. indicates 20 lines of bars with 2 lengths per line.

FILE NAME = 0496751-004-Super.dgn
McDonough Associates Inc.
Engineers & Architects
100 North State Street, Chicago, Illinois 60601

USER NAME = jehrhart
DESIGNED - AMV
CHECKED - JCE
DRAWN - AMV
CHECKED - JCE
PLOT SCALE = 1:80000000
PLOT DATE = 05/14/12

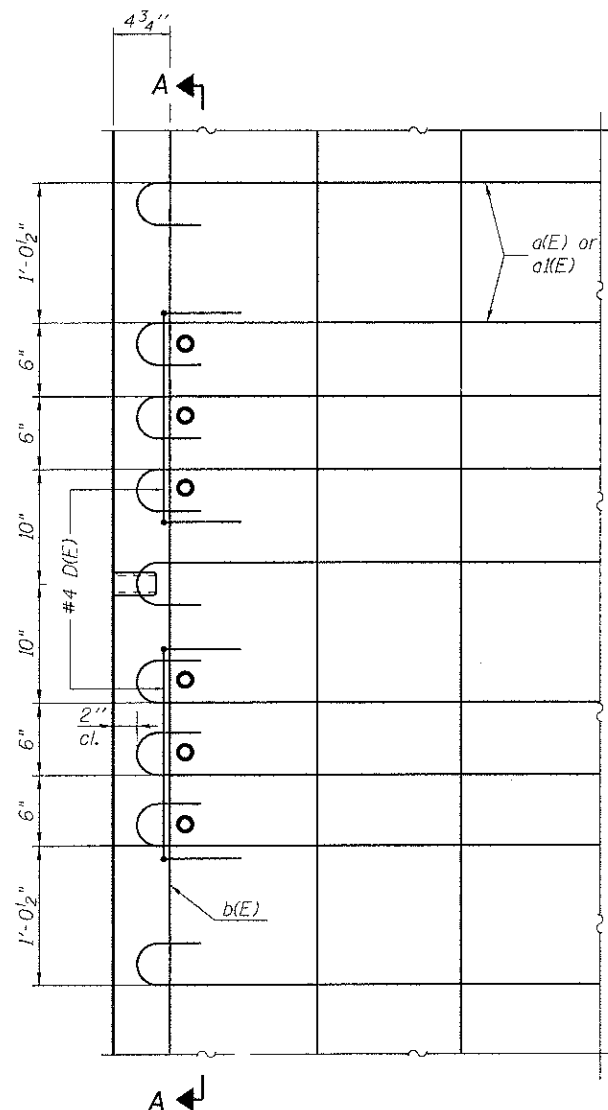
REVISED -
REVISED -
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE
STRUCTURE NO. 049-6751

SHEET NO. 4 OF 16 SHEETS

F.A.-RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	09-00010-00-BR	LAKE	41	17
				CONTRACT NO. 63716
ILLINOIS FED. AID PROJECT				

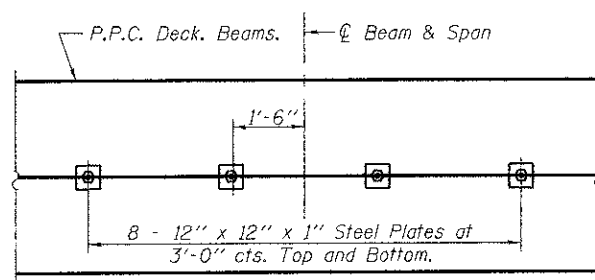


PLAN

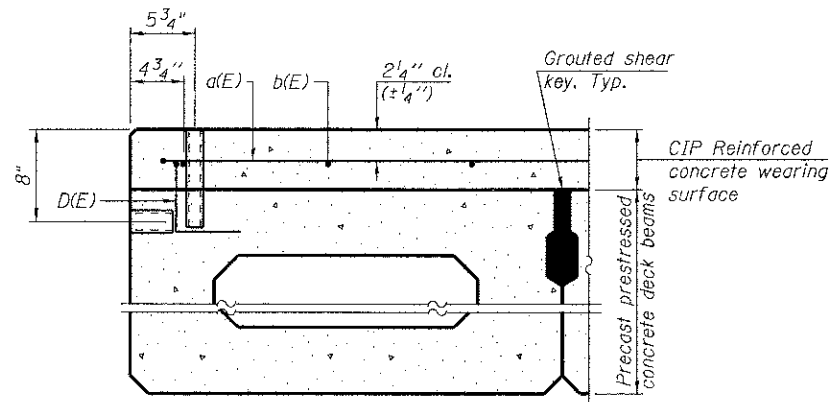
(Typ. wearing surface reinforcement)

Notes:

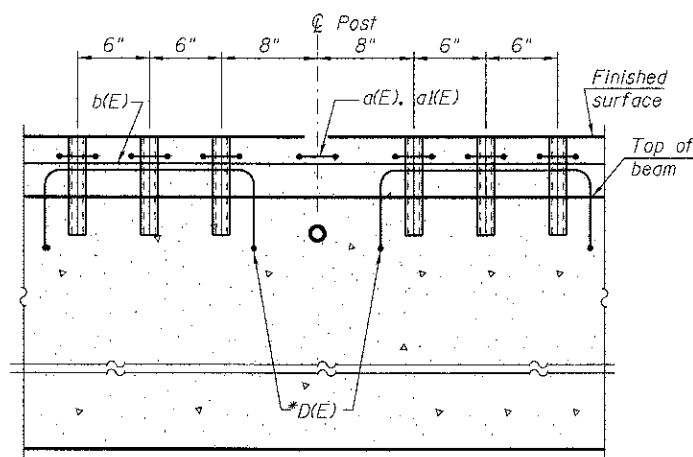
Formwork necessary for the wearing surface may be secured utilizing the bottom rail anchorage inserts and/or additional inserts cast into the beam.



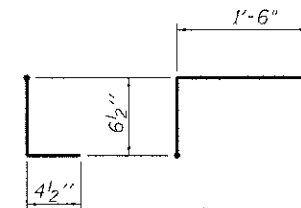
PLAN



SECTION THRU FASCIA BEAM

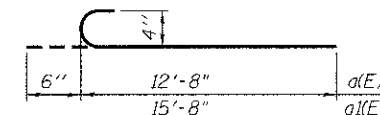


SECTION A-A

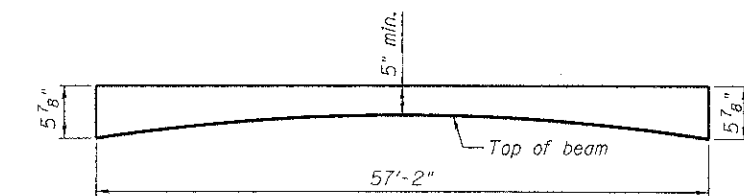


BAR D(E)

* Place 2-#4 D(E) bars in beam at each post location as shown. D(E) bar included in cost of beam.



BARS a(E) and a(E)



ANTICIPATED CONCRETE WEARING SURFACE PROFILE
(For information only)

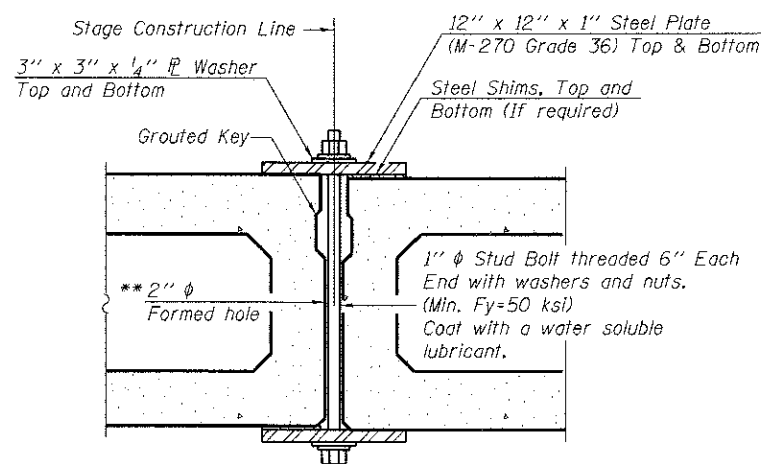
MINIMUM BAR LAP

#4 bar = 2'-0"

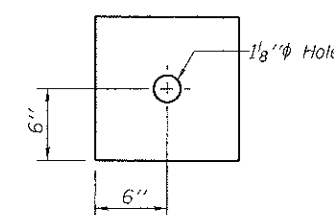
SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length	Shape	
a(E)	81	#4	13'-2"	C	
a(E)	81	#4	16'-2"	C	
b(E)	58	#4	29'-9"	—	
Reinforcement Bars, Epoxy Coated				Pound	2,740
Concrete Wearing Surface, 5"				Sq. Yd.	185

Bars indicated thus 29 x 2-#4 etc. indicates 29 line of bars with 2 lengths per line.



SECTION



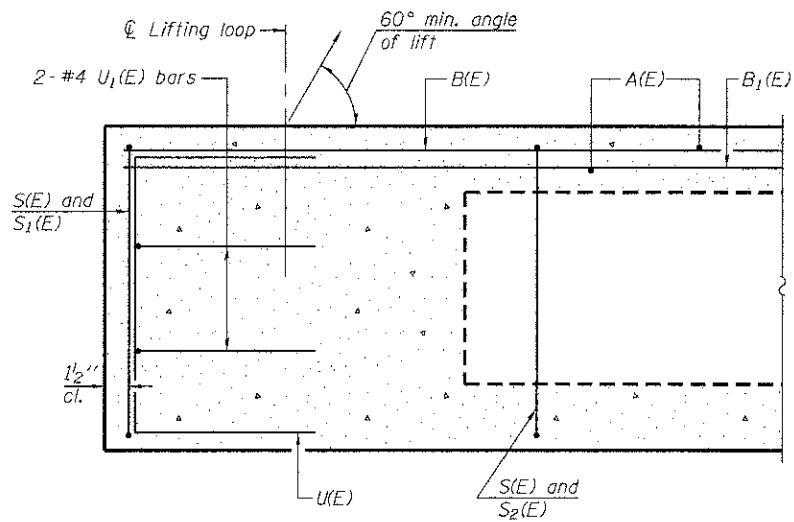
CLAMPING PLATE

SHEAR KEY CLAMPING DETAILS AT STAGE CONST. JT.

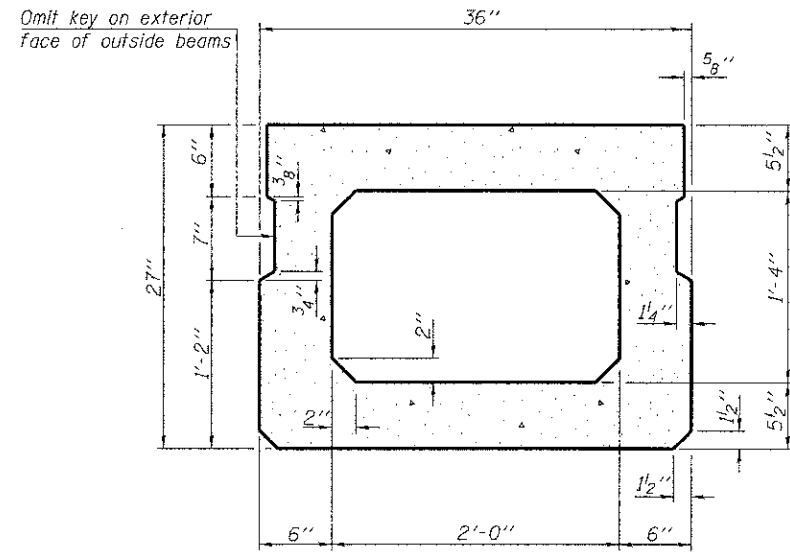
Cost included with Precast Prestressed Concrete Deck Beams.

See Stage Construction Details for traffic lanes.

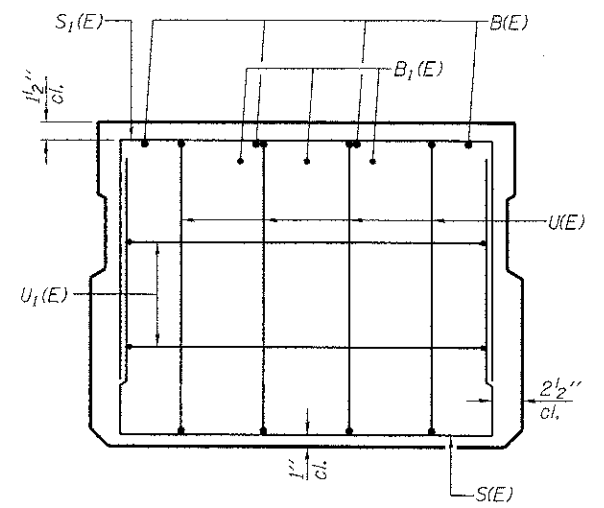
** Cast semicircular recesses in the sides of each beam adjacent to the stage construction line. These recesses should align to form a hole at the appropriate locations for the clamping device bolts.



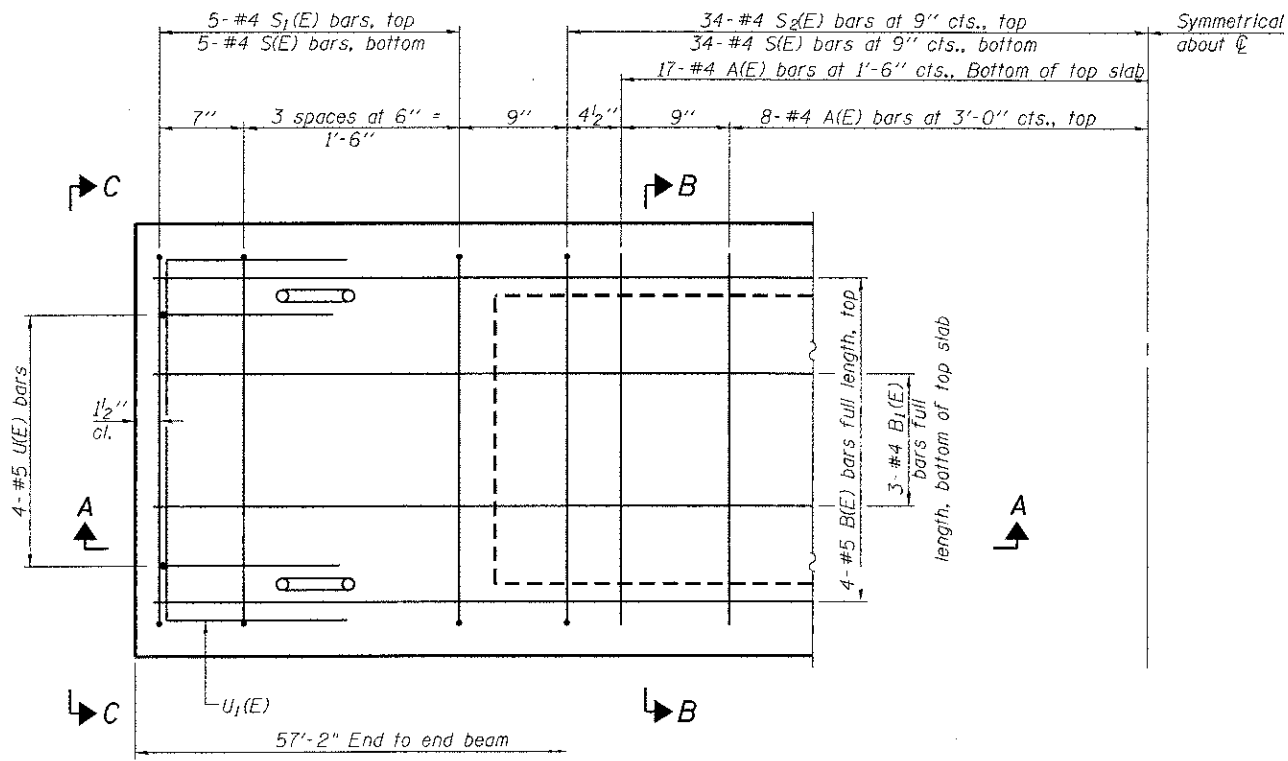
SECTION A-A



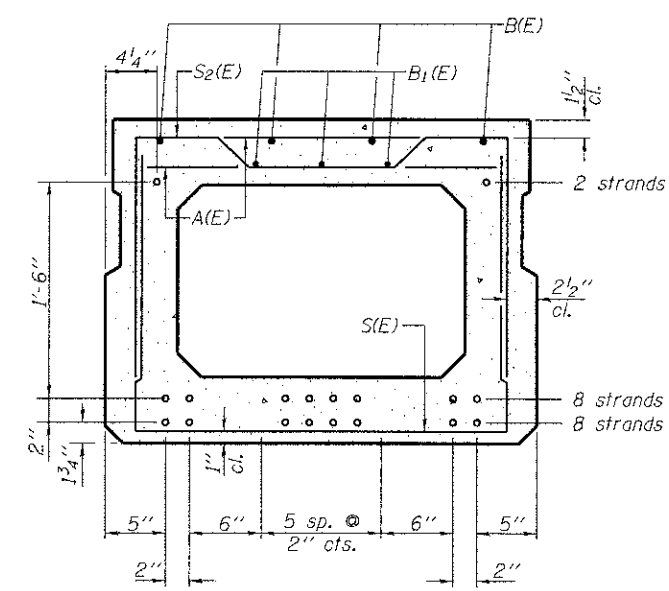
SECTION B-B
(Showing dimensions)



VIEW C-C



PLAN VIEW



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

BAR LIST
ONE BEAM ONLY
(For information only)

Bar	No.	Size	Length	Shape
A(E)	50	#4	2'-7"	—
B(E)	4	#5	56'-10"	—
B1(E)	3	#4	56'-10"	—
S(E)	78	#4	6'-5"	⌊
S1(E)	10	#4	5'-11"	⌊
S2(E)	68	#4	6'-2"	⌊
U(E)	8	#5	4'-6"	⌊
U1(E)	4	#4	5'-0"	⌊

Note: See sheet 7 of for additional details and Bill of Material.

MINIMUM BAR LAP

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

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

PD-2736-0

7-1-10

FILE NAME = 0496751-006-Deck Beam36.dgn
McDonough Associates Inc.
Engineers / Architects
180 North Station Ave., Chicago, Illinois 60601

USER NAME = jehrbert
DESIGNED - JCE
CHECKED - GEK
DRAWN - JCE
CHECKED - GEK
PLOT SCALE = 1:0.0033333
PLOT DATE = 05/14/12

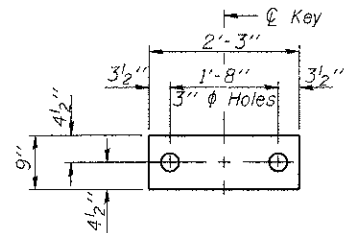
DESIGNED - JCE
CHECKED - GEK
DRAWN - JCE
CHECKED - GEK
REVISED -
REVISED -
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

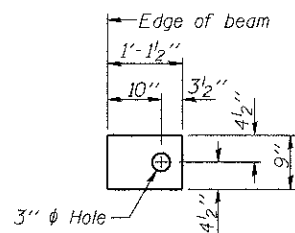
27" x 36" PPC DECK BEAM
STRUCTURE NO. 049-6751

SHEET NO. 6 OF 16 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	09-0010-00-BR	LAKE	41	19
CONTRACT NO. 63716			ILLINOIS FED. AID PROJECT	



FABRIC BEARING PAD
(Interior)

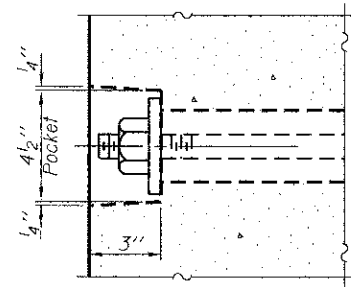


FABRIC BEARING PAD
(Exterior)

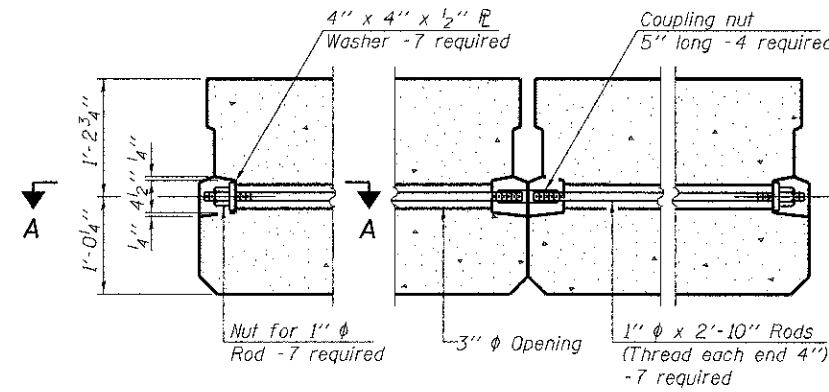
FIXED

Notes:

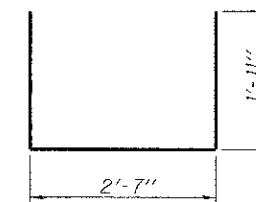
- All bearing pads shall be 1" thick.
- Omit holes when using expansion bearings.
- Expansion bearing pad shall be bonded to the substructure.



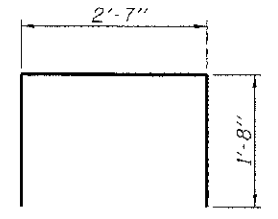
SECTION A-A



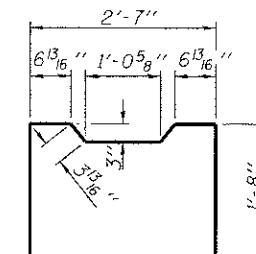
TYPICAL TRANSVERSE TIE ASSEMBLY



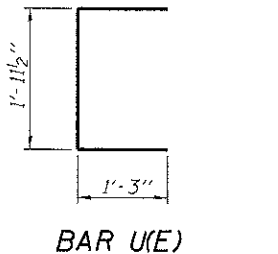
BAR S(E)



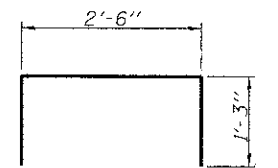
BAR S1(E)



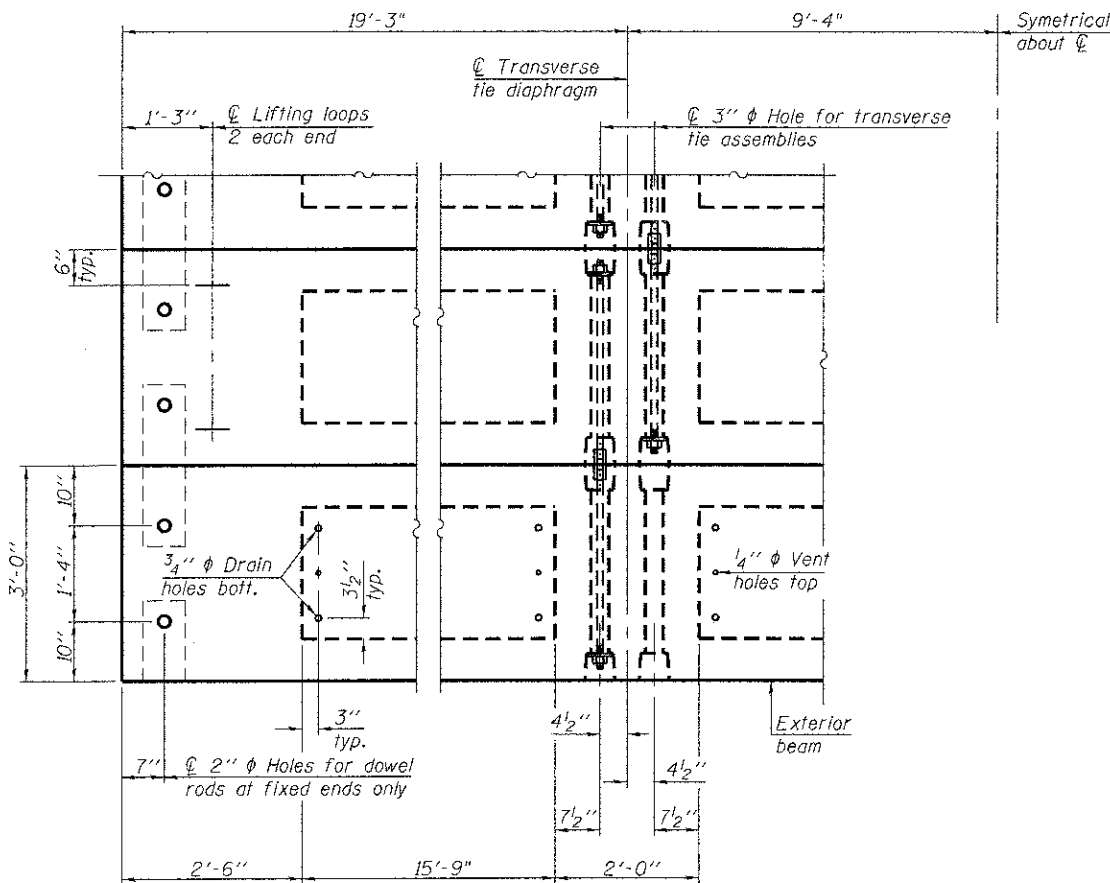
BAR S2(E)



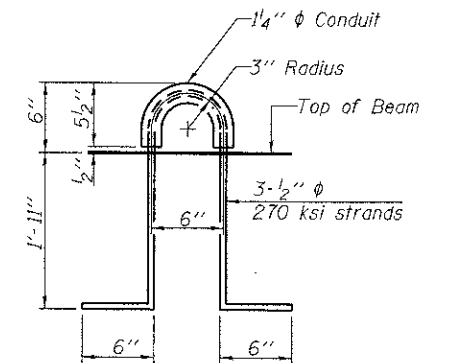
BAR U(E)



BAR U1(E)



PLAN VIEW



LIFTING LOOP DETAIL

NOTES

- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in.
- The 1" diameter rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.
- Reinforcement bars shall conform to ASTM A 706, Grade 60. (See Special Provisions).
- Two 1/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
- A minimum 2 1/2" diameter lifting pin shall be used to engage the lifting loops during handling.
- Corrosion Inhibitor, per Article 1020.05(b)(12) and 1021.06 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.
- Compressive strength of prestressed concrete, f'c, shall be 6000 psi.
- Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.

BILL OF MATERIAL

Material	Sq. Ft.	Quantity
Precast Prestressed Conc. Deck Ems. (27" depth)		1,201

PD-2736-0D

7-1-10

McDonough Associates Inc.
Engineers / Architects
180 North Station Ave., Chicago, Illinois 60601

DESIGNED	REVISIONS
JCE	
GEK	
JCE	
GEK	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

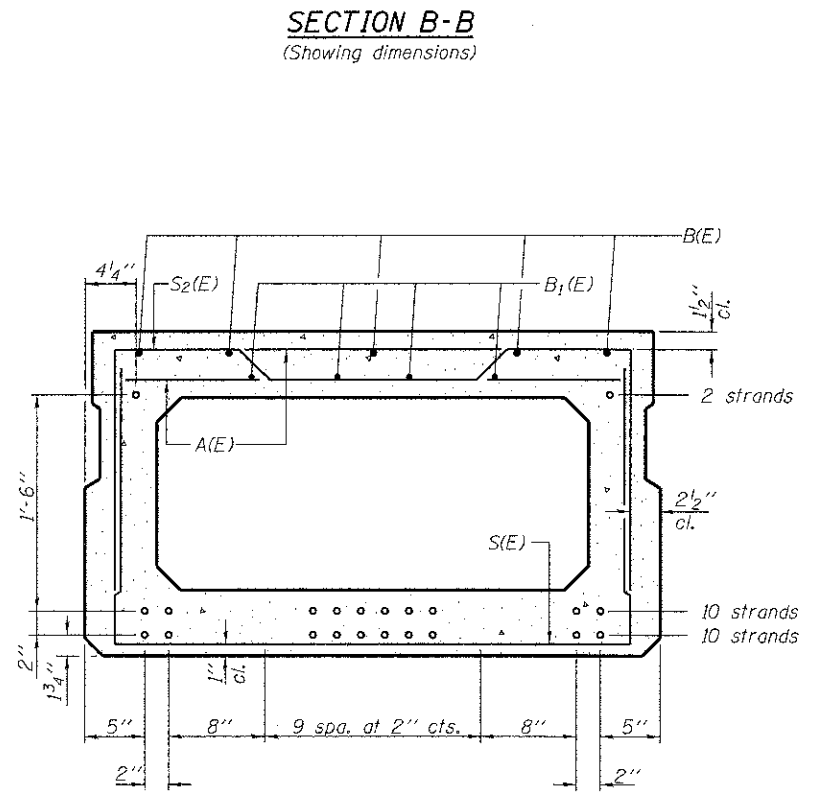
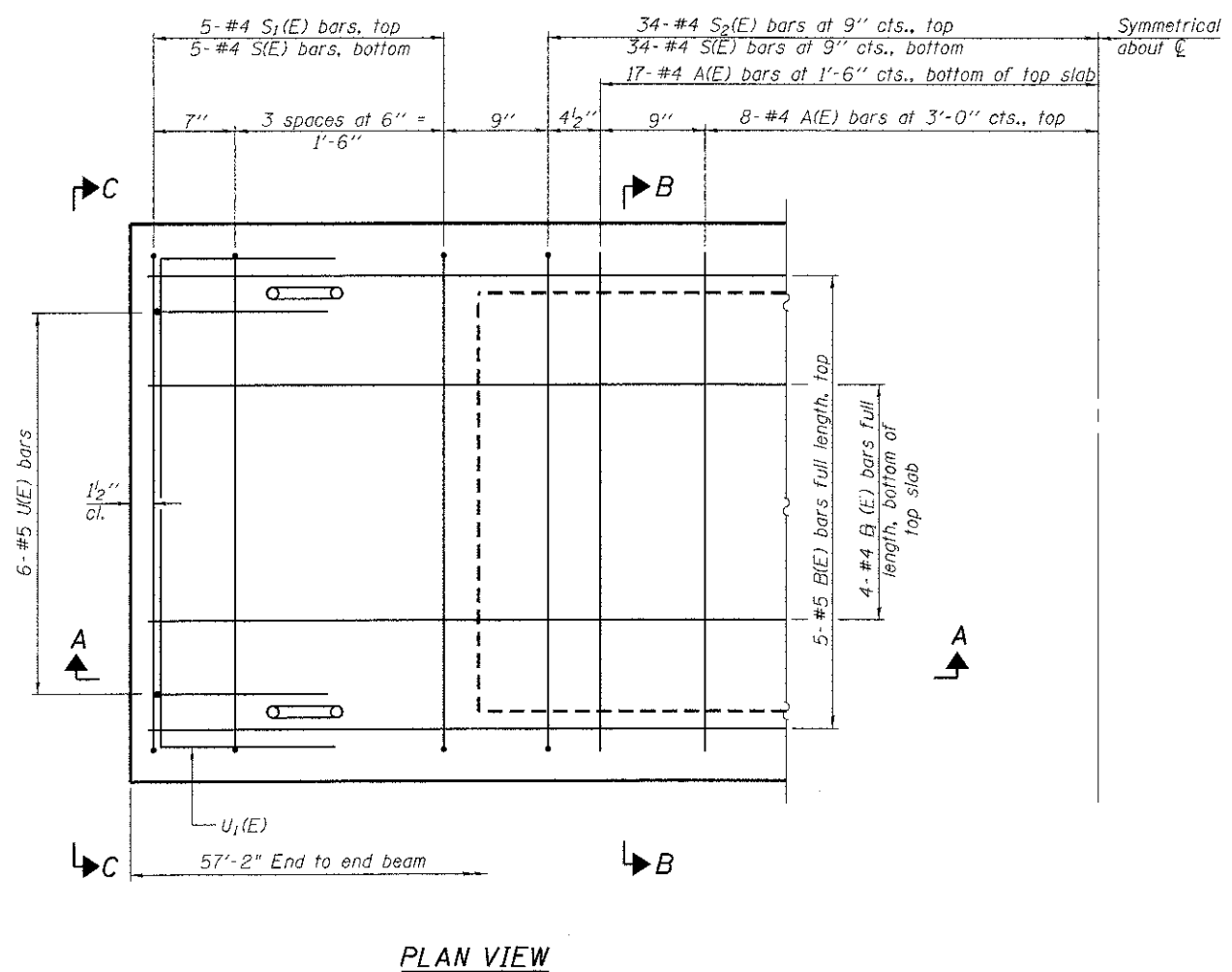
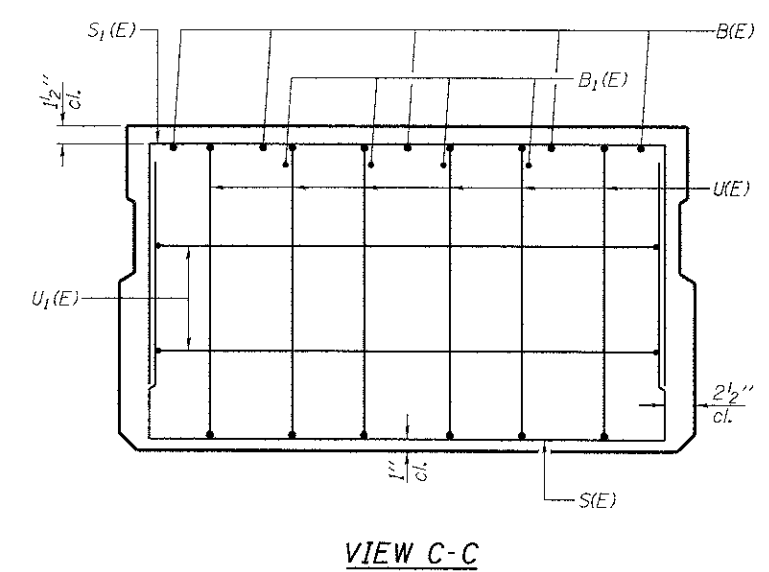
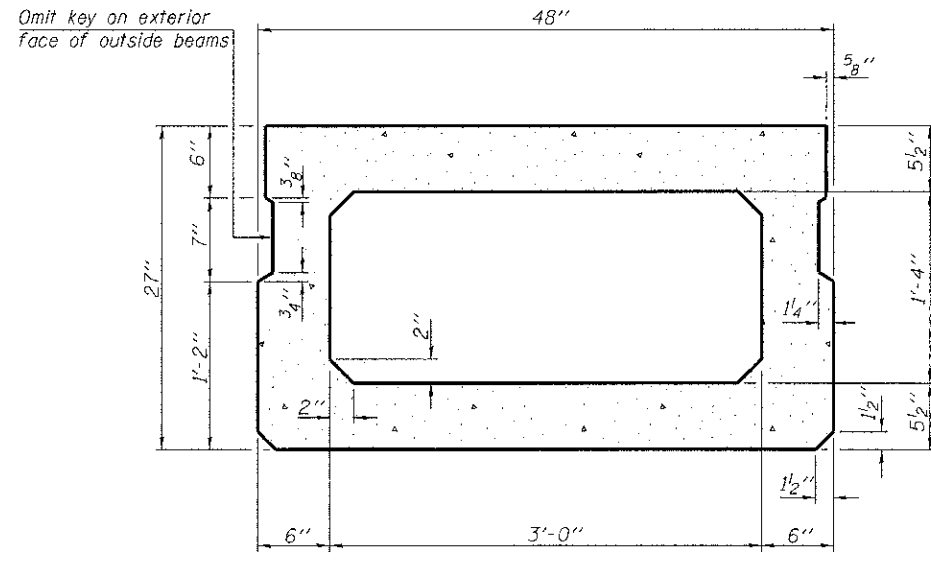
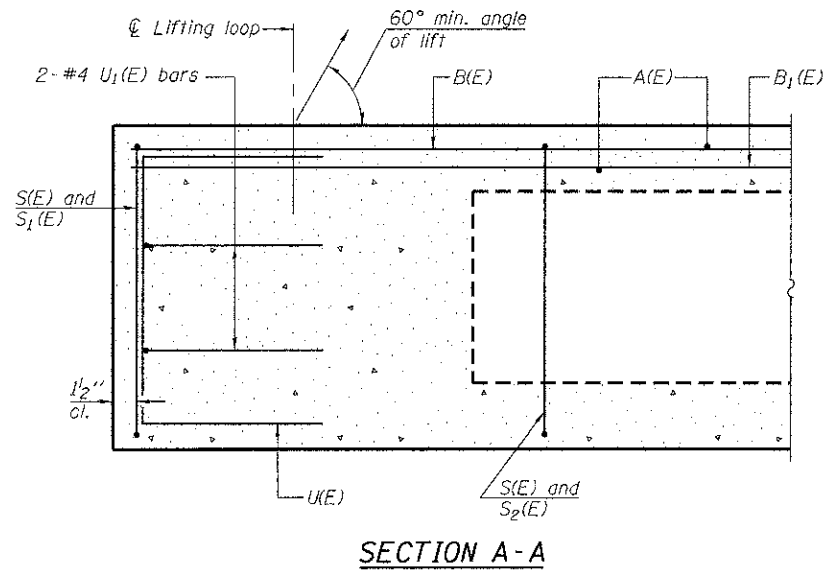
27" x 36" PPC DECK BEAM DETAILS
STRUCTURE NO. 049-6751

SHEET NO. 7 OF 16 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	09-00010-00-BR	LAKE	41	20

CONTRACT NO. 63716

ILLINOIS FED. AID PROJECT



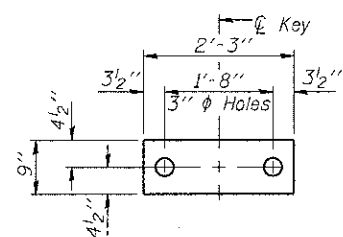
BAR LIST
ONE BEAM ONLY
(For information only)

Bar	No.	Size	Length	Shape
A(E)	50	#4	3'-7"	—
B(E)	5	#5	56'-10"	—
B1(E)	4	#4	56'-10"	—
S(E)	78	#4	7'-5"	U
S1(E)	10	#4	6'-11"	U
S2(E)	68	#4	7'-2"	U
UK(E)	12	#5	4'-6"	C
U1(E)	4	#4	6'-0"	C

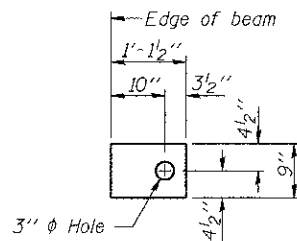
SECTION B-B
(Showing reinforcement and permissible strand locations)
Note: Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.

MINIMUM BAR LAP
#4 bar = 2'-0"
#5 bar = 2'-6"

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



FABRIC BEARING PAD
(Interior)

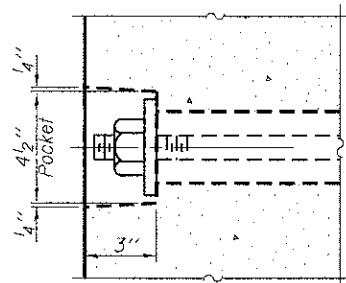


FABRIC BEARING PAD
(Exterior)

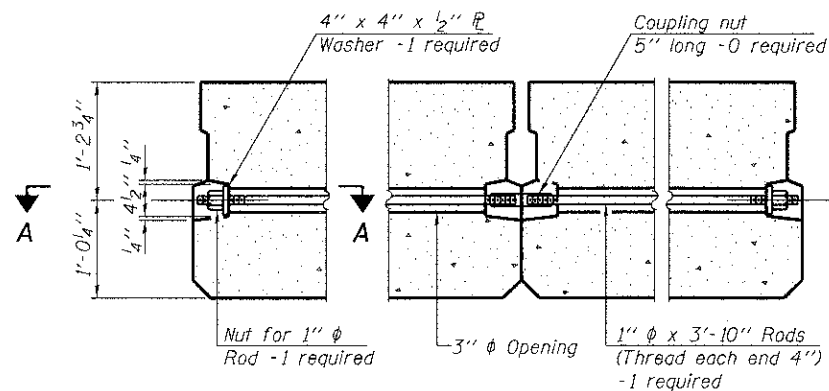
FIXED

Notes:

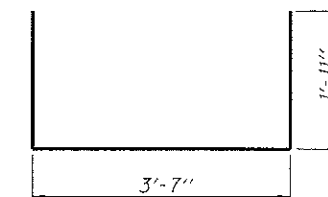
- All bearing pads shall be 1" thick.
- Omit holes when using expansion bearings.
- Expansion bearing pad shall be bonded to the substructure.



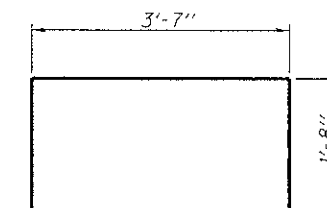
SECTION A-A



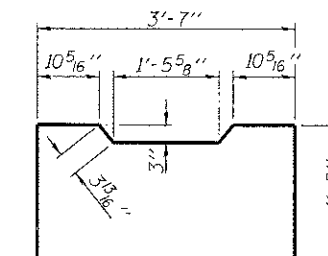
TYPICAL TRANSVERSE TIE ASSEMBLY



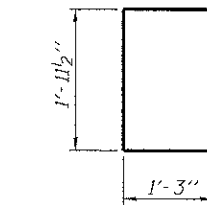
BAR S(E)



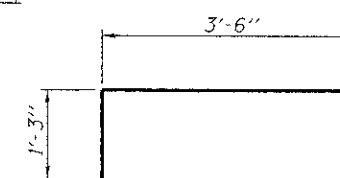
BAR S1(E)



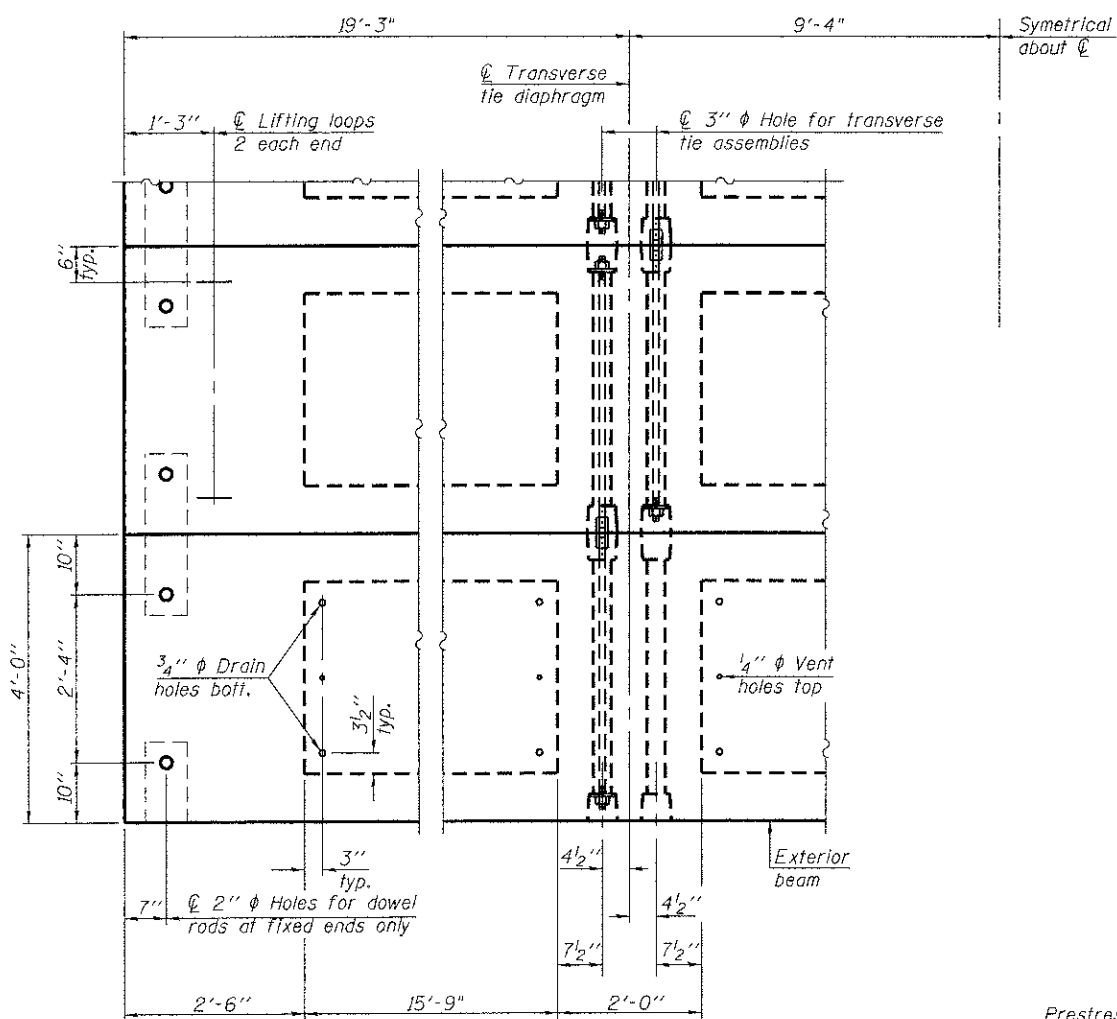
BAR S2(E)



BAR U(E)

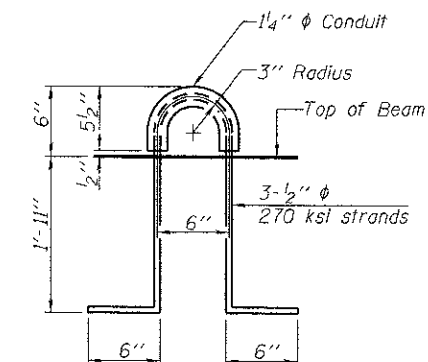


BAR U1(E)



PLAN VIEW

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



LIFTING LOOP DETAIL

NOTES

- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in.
- The 1" rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.
- Reinforcement bars shall conform to ASTM A 706, Grade 60. (See Special Provisions).
- Two 1/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
- A minimum 2 1/2" diameter lifting pin shall be used to engage the lifting loops during handling.
- Corrosion Inhibitor, per Article 1020.05(b)(12) and 1021.06 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.
- Compressive strength of prestressed concrete, f'c, shall be 6000 psi.
- Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.

BILL OF MATERIAL

Precast Prestressed Conc. Deck Bms. (27" depth)	Sq. Ft.	458
---	---------	-----

PD-2748-0D

7-1-10

McDonough Associates Inc.
Engineers & Architects
140 North Station Ave. Chicago, Illinois 60601

USER NAME = jehrhert
DESIGNED - JCE
CHECKED - GEK
DRAWN - JCE
CHECKED - GEK
PLOT SCALE = 1:10.0033333
PLOT DATE = 05/14/12

DESIGNED - JCE
CHECKED - GEK
DRAWN - JCE
CHECKED - GEK
REVISIONS

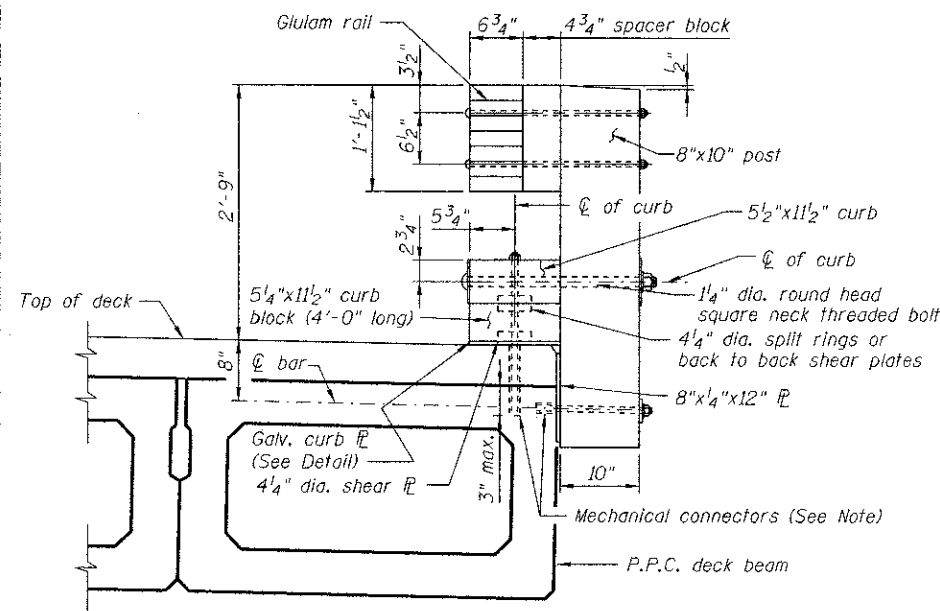
REVISIONS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

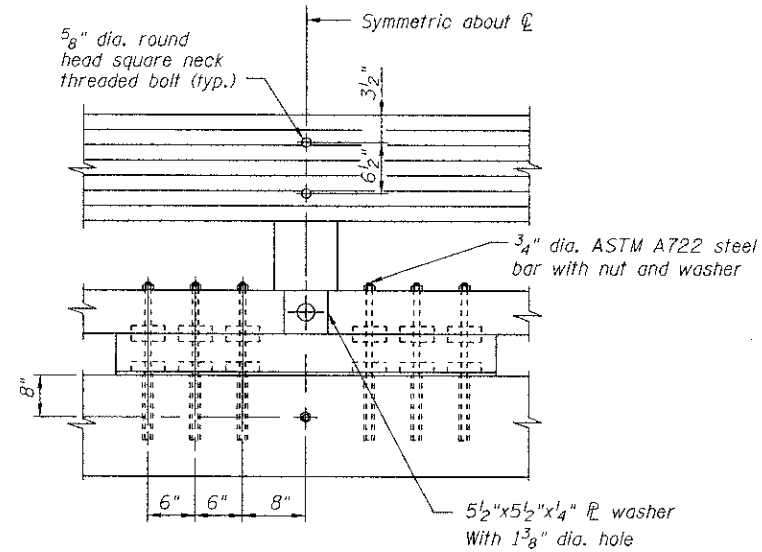
27" x 48" PPC DECK BEAM DETAILS
STRUCTURE NO. 049-6751

SHEET NO. 9 OF 16 SHEETS

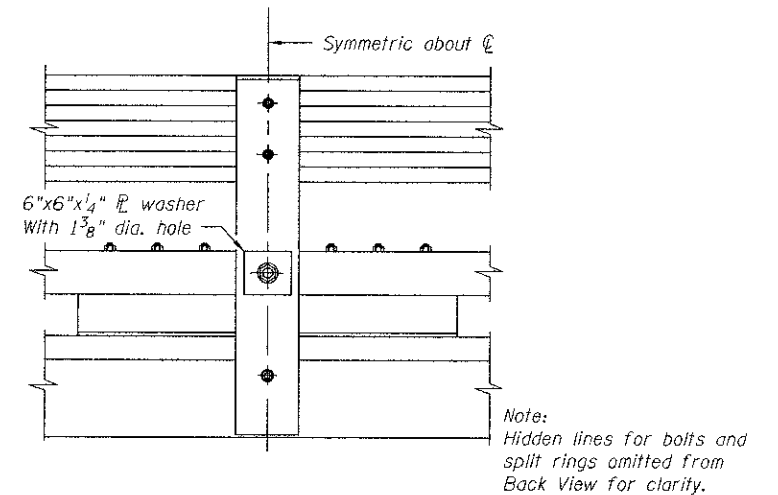
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	09-00010-00-BR	LAKE	41	22
CONTRACT NO. 63716			ILLINOIS FED. AID PROJECT	



TYPICAL WOOD RAIL MOUNTED ON CONCRETE DECK

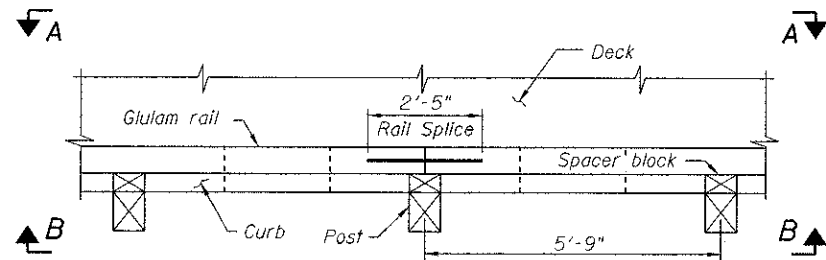


TYPICAL WOOD RAIL ELEVATION (FRONT VIEW)

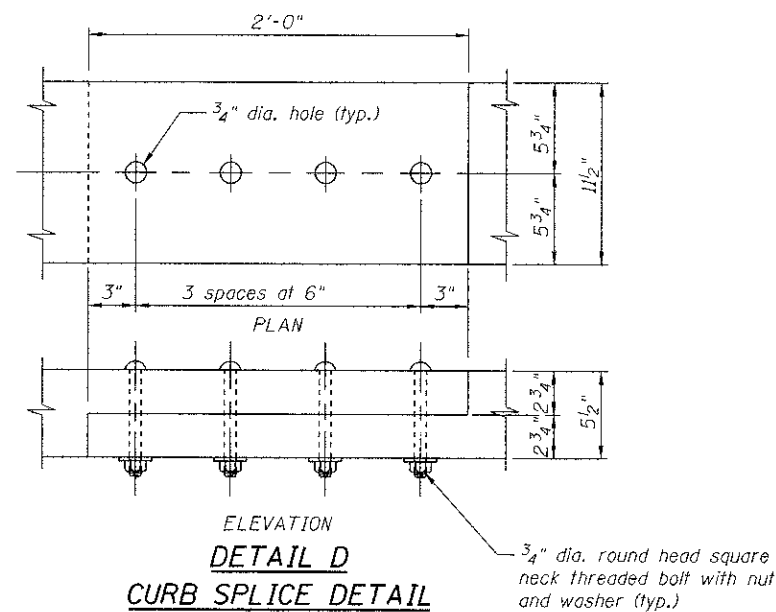


TYPICAL WOOD RAIL ELEVATION (BACK VIEW)

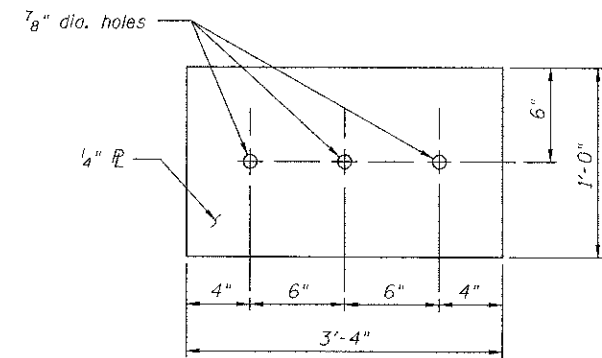
Note: Hidden lines for bolts and split rings omitted from Back View for clarity.



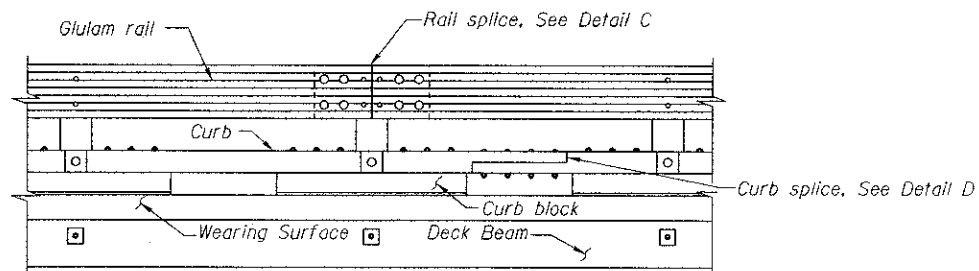
PLAN OF WOOD RAILING



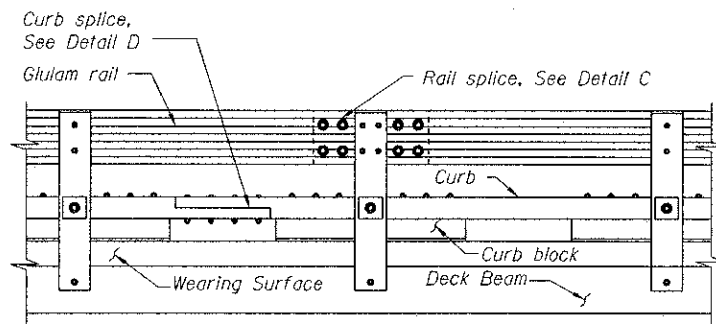
ELEVATION DETAIL D CURB SPLICE DETAIL



CURB PLATE DETAIL



ELEVATION A-A



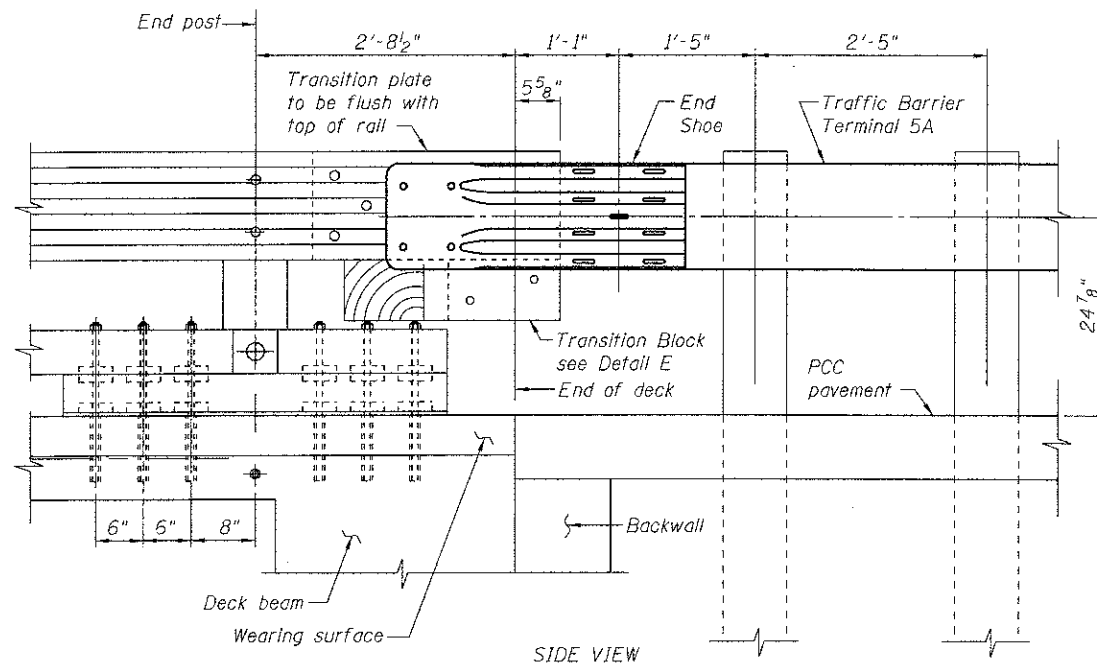
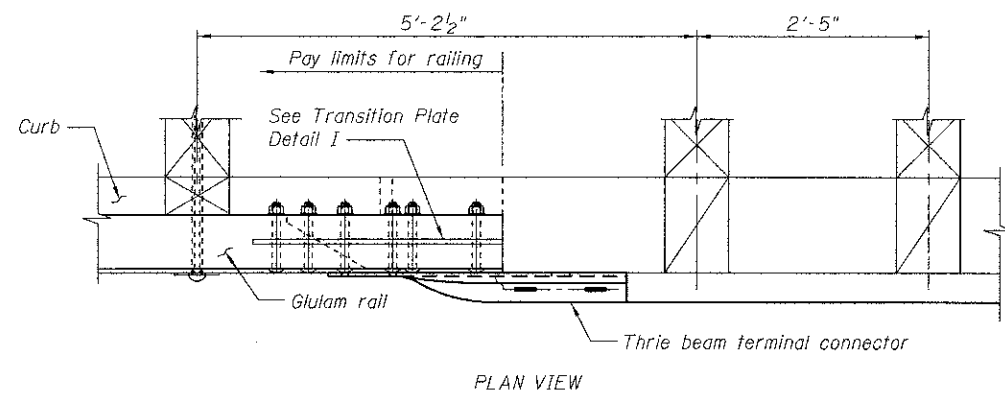
ELEVATION B-B

BILL OF MATERIAL

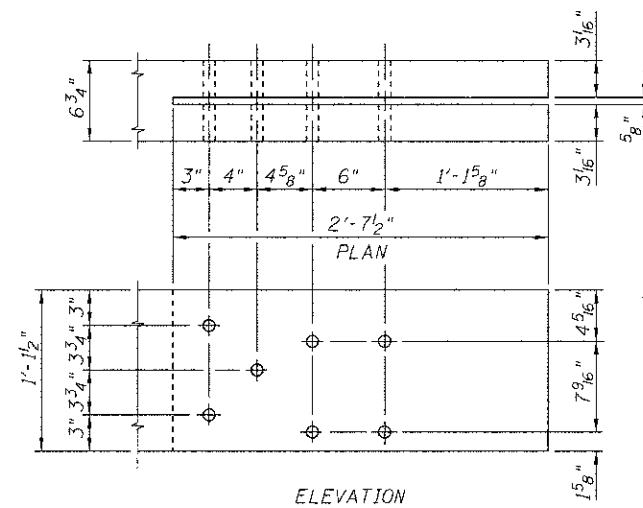
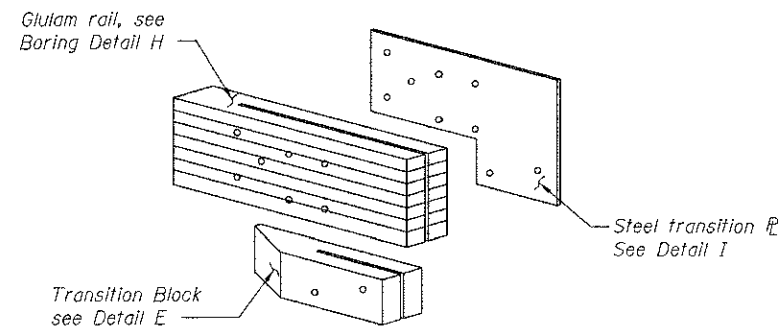
Timber Railing	Foot	117
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Notes:

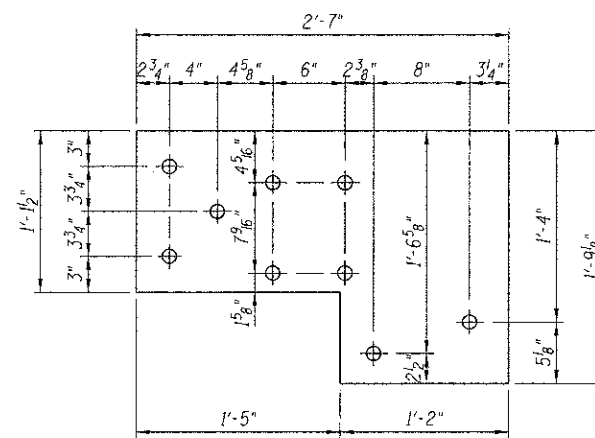
Curb and post connections to the 5" concrete overlay and PPC Deck Beams shall be made with embedded studs, bolted inserts or thru-bolts. The mechanical connectors shall have a minimum ultimate shear capacity of 16 kips.



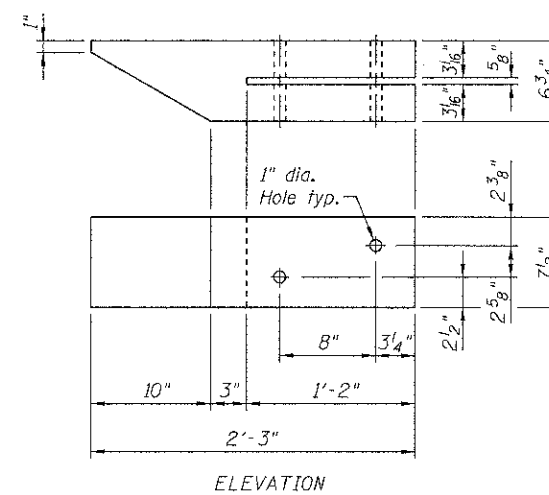
TRANSITION CONNECTION DETAILS



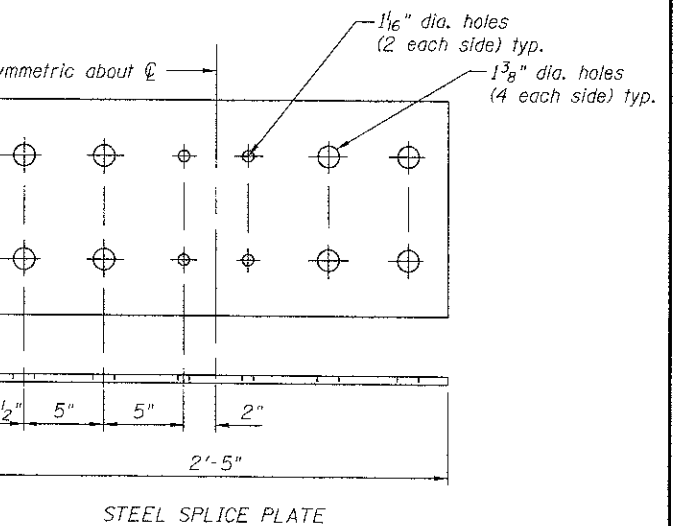
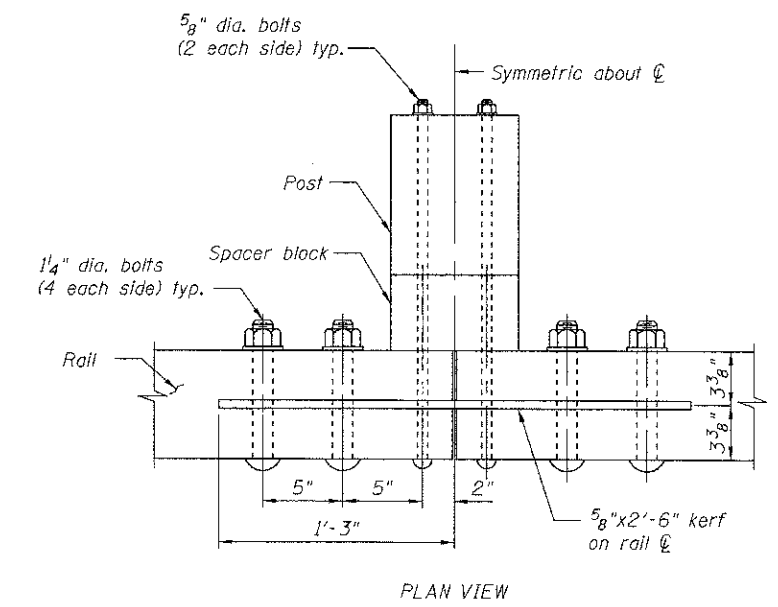
TRANSITION GLULAM RAIL BORING DETAIL



TRANSITION PLATE



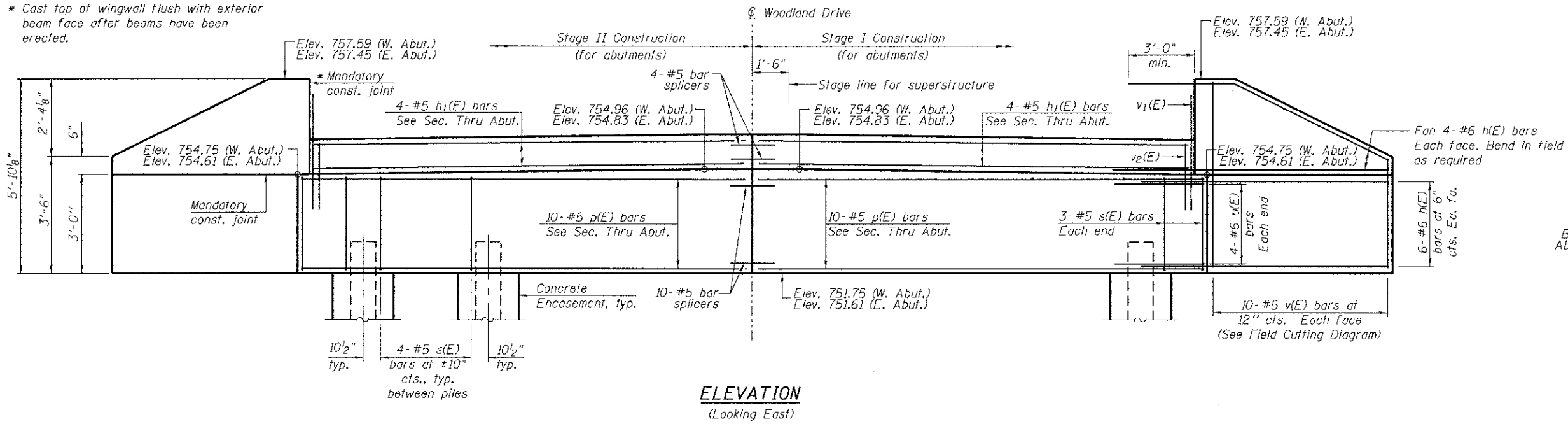
TRANSITION BLOCK



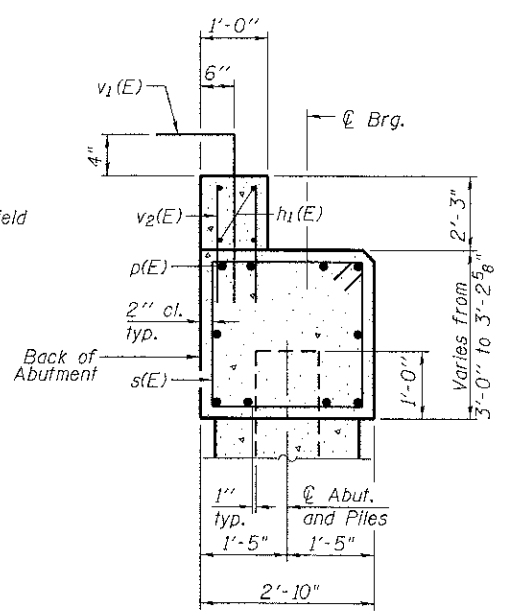
RAIL SPLICE DETAILS

Notes:
For Details E, G, H and I, See BD-RT3E.

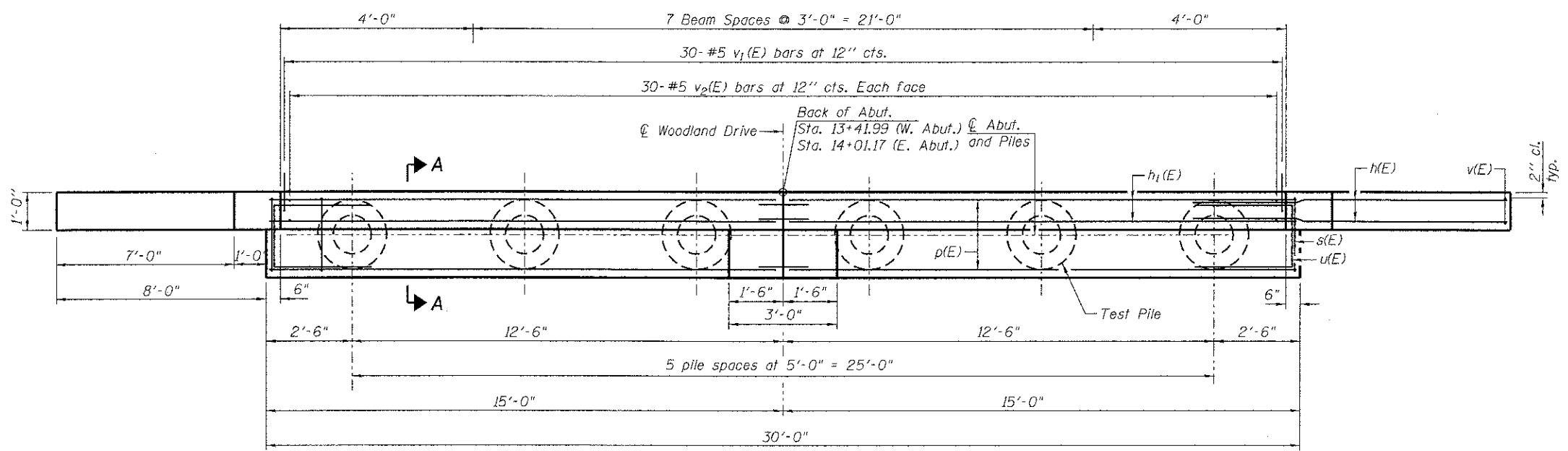
* Cast top of wingwall flush with exterior beam face after beams have been erected.



ELEVATION
(Looking East)



SECTION A-A



PLAN

**BILL OF MATERIAL
FOR EAST AND WEST ABUTMENTS**

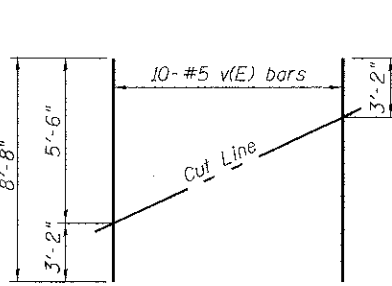
Bar	No.	Size	Length	Shape
h(E)	80	#6	11'-8"	—
h1(E)	16	#5	14'-2"	—
p(E)	40	#5	14'-8"	—
s(E)	52	#5	10'-11"	□
u(E)	16	#6	7'-5"	⊔
v(E)	80	#5	8'-8"	—
v1(E)	60	#5	5'-0"	└
v2(E)	120	#5	4'-1"	—
Structure Excavation		Cu. Yd.	213	
Concrete Structures		Cu. Yd.	30.3	
Reinforcement Bars, Epoxy Coated		Pound	4,570	
Furnishing Metal Shell Piles 12" X 0.179"		Foot	430	
Driving Piles		Foot	430	
Test Pile Metal Shells		Each	2	
Concrete Encasement		Cu. Yd.	6.6	
Bar Splicers		Each	28	

WEST ABUTMENT PILE DATA

Type: Metal Shell 12" ϕ w/.179" Walls
Nominal Required Bearing: 218k
Factored Resistance Available: 120k
Est. Length: 39 ft
No. Production Piles: 5
No. Test Piles: 1

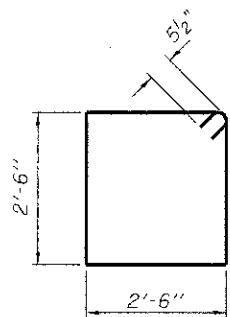
EAST ABUTMENT PILE DATA

Type: Metal Shell 12" ϕ w/.179" Walls
Nominal Required Bearing: 218k
Factored Resistance Available: 120k
Est. Length: 47
No. Production Piles: 5
No. Test Piles: 1

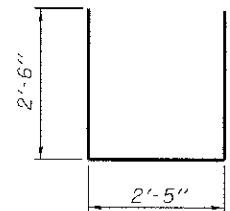


FIELD CUTTING DIAGRAM

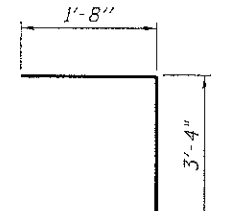
Order v(E) bars full length. Cut as shown and use remainder of bars in opposite face.



BAR s(E)

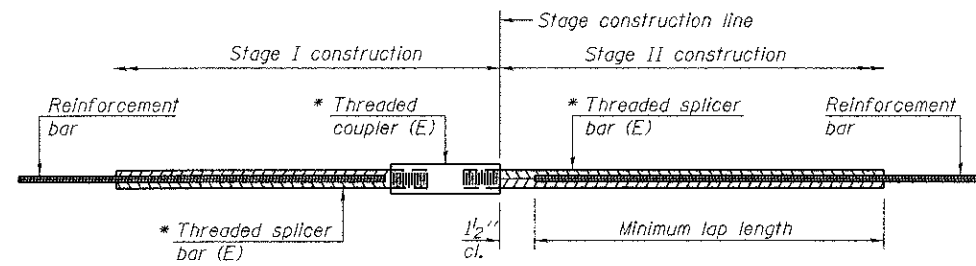


BAR u(E)



BAR v1(E)

Notes:
For details of piles and Concrete Encasement, see sheet 14 of 16.
Cast backwall after beams and concrete wearing surface, if applicable, have been erected.
For details of bar splicers see Sheet 13.



STANDARD BAR SPLICER ASSEMBLY

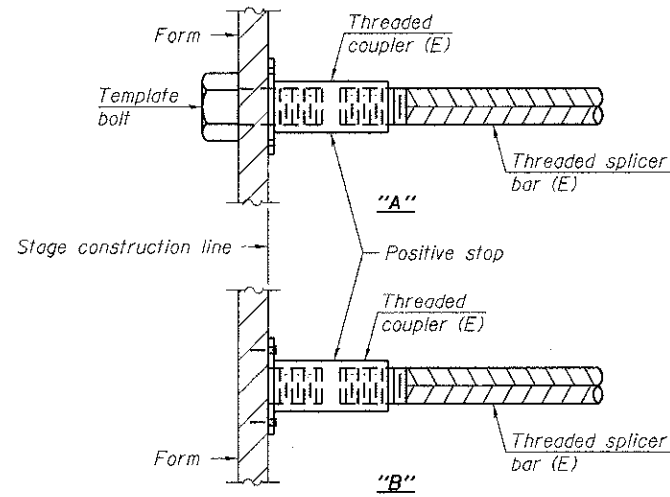
Minimum Lap Lengths					
Bar size to be spliced	Table 1	Table 2	Table 3	Table 4	Table 5
3, 4	1'-5"	1'-11"	2'-1"	2'-4"	2'-3"
5	1'-9"	2'-5"	2'-7"	2'-11"	2'-10"
6	2'-1"	2'-11"	3'-1"	3'-6"	3'-4"
7	2'-9"	3'-10"	4'-2"	4'-8"	4'-6"
8	3'-8"	5'-1"	5'-5"	6'-2"	5'-10"
9	4'-7"	6'-5"	6'-10"	7'-9"	7'-5"

- 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 + 1/2" + thread length

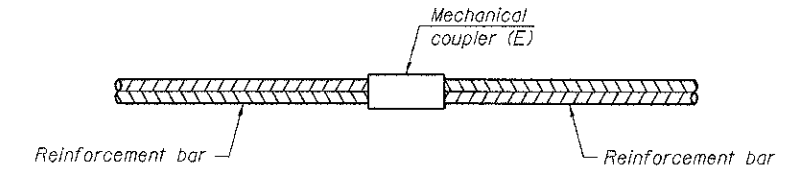
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length
Deck	#4	81	3
E. Abut.	#5	14	4
W. Abut.	#5	14	4



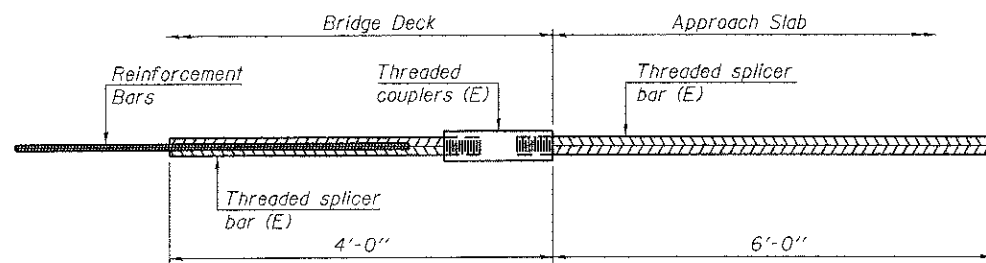
INSTALLATION AND SETTING METHODS

- "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.



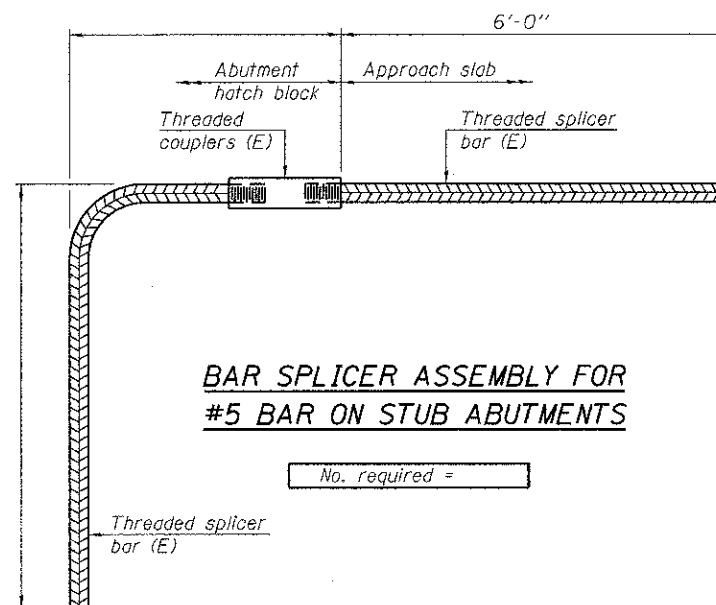
STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required



BAR SPLICER ASSEMBLY FOR #5 BAR ON INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

No. required =



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

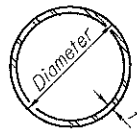
No. required =

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.

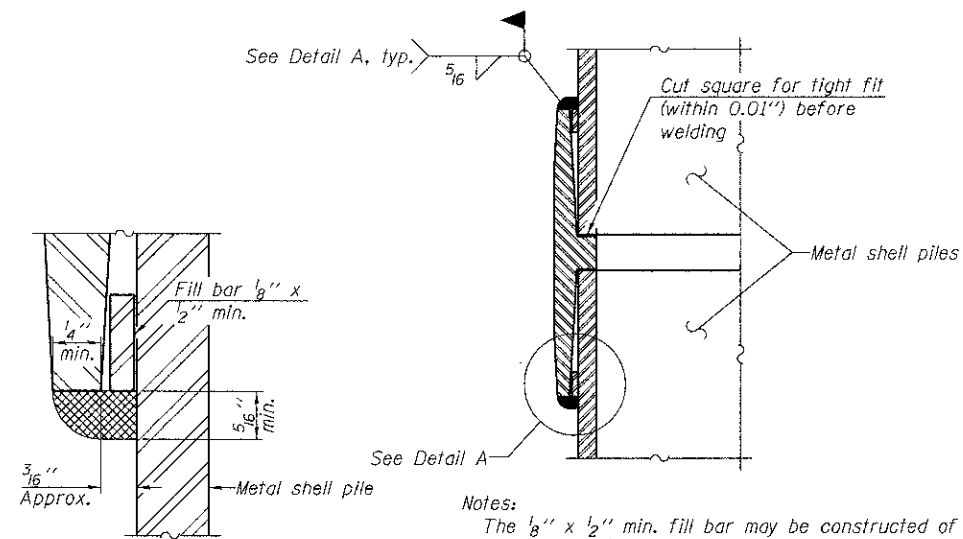
BSD-1

7-1-10



METAL SHELL PILE TABLE

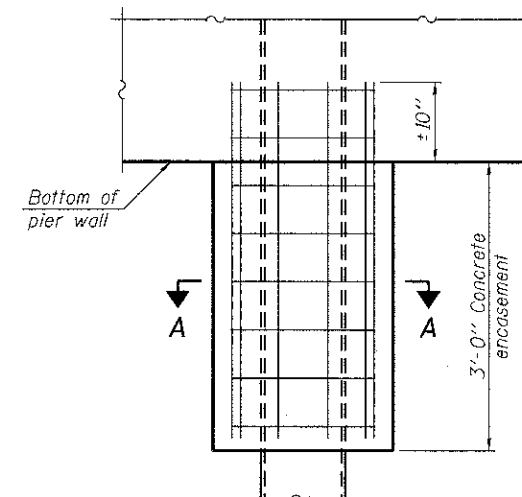
Designation and outside diameter	Wall thickness t	Weight per Foot (Lbs./ft.)	Inside volume (yd. ³ /ft.)
PP12	0.179"	22.60	0.0274
PP12	0.250"	31.37	0.0267
PP14	0.250"	36.71	0.0368
PP14	0.312"	45.61	0.0361



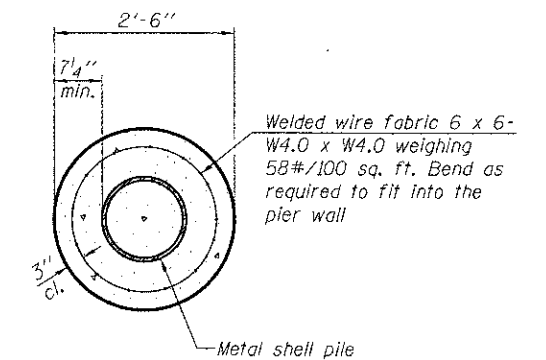
DETAIL A

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

WELDED COMMERCIAL SPLICE



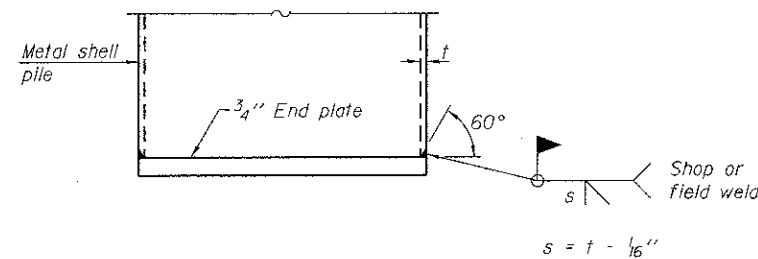
ELEVATION



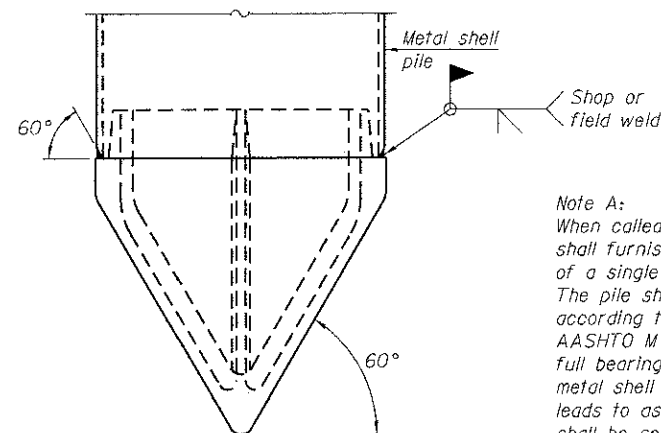
SECTION A-A

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

CONCRETE ENCASEMENT

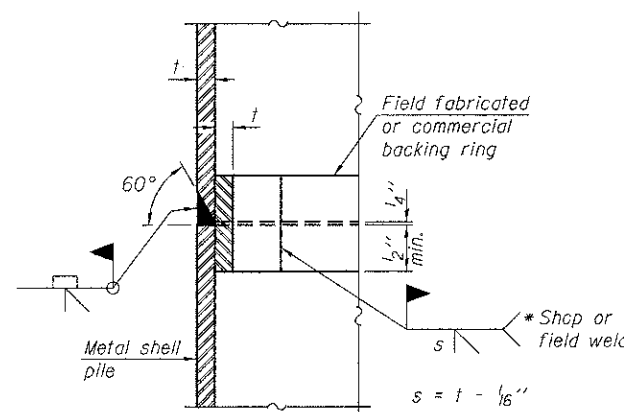


END PLATE ATTACHMENT



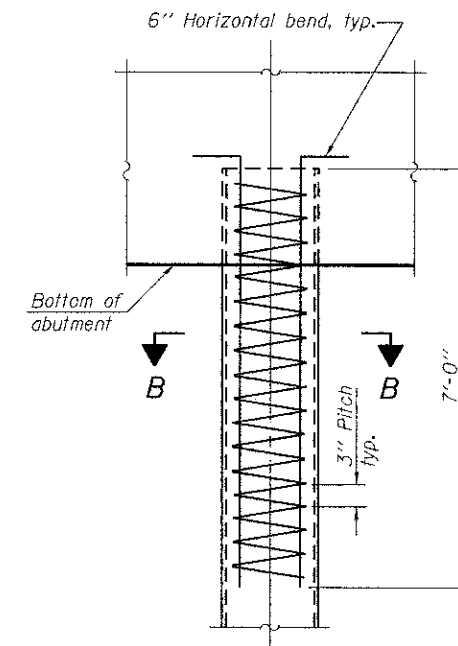
METAL SHELL PILE SHOE ATTACHMENT

(See Note A)

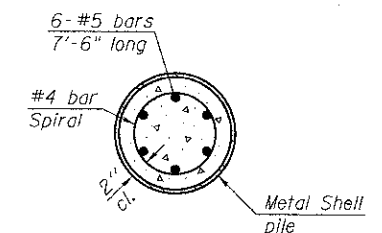


COMPLETE PENETRATION WELD SPLICE

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



ELEVATION



SECTION B-B

METAL SHELL REINFORCEMENT

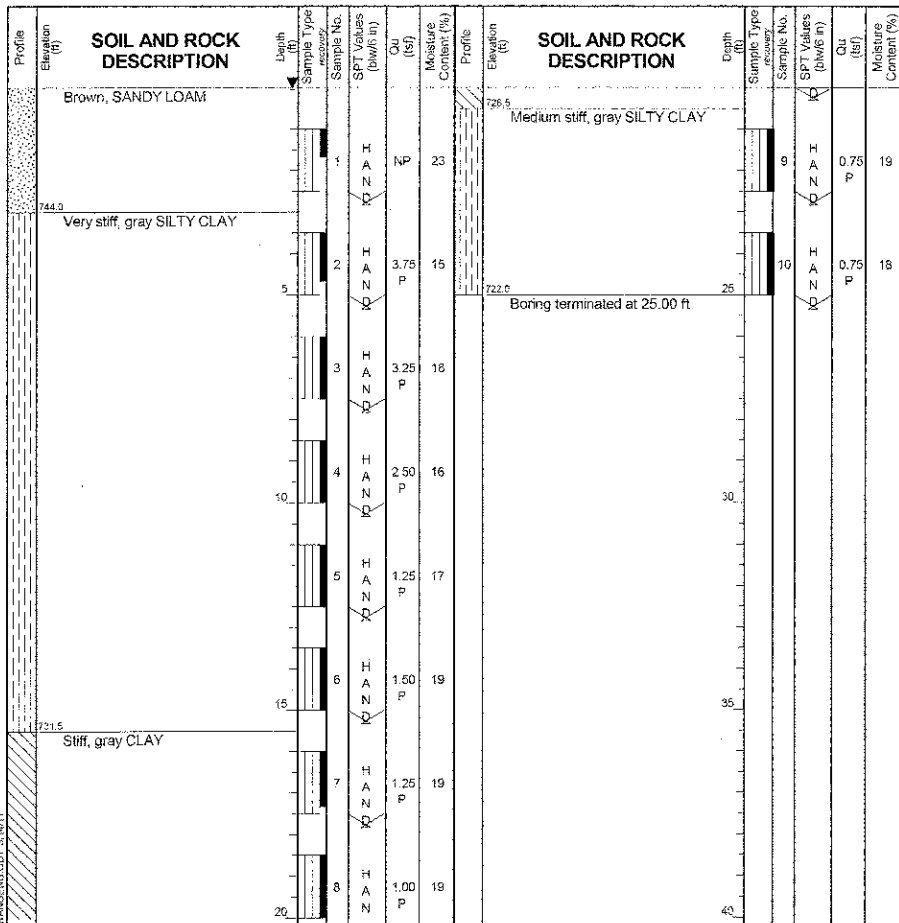
Note:
 The metal shell piles shall be according to ASTM A 252 Grade 3.

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BORING LOG HA-01
 WEI Job No.: 201-42-01
 Client: McDonough Associates, Inc.
 Project: Woodland Drive Bridge over Flint Creek
 Location: Lake Barrington, Lake County

Datum: NGVD
 Elevation: 747.01 ft
 North: 2015355.77 ft
 East: 1028259.77 ft
 Station: 13+64.4E
 Offset: 29.5 LT

Page 1 of 1



GENERAL NOTES
 Begin Drilling: 09-07-2010 Complete Drilling: 09-07-2010
 Drilling Contractor: WTS Drill Rig: Hand Auger
 Driller: K&J Logger: K. Mohammed Checked by: M. di Reyes
 Drilling Method: Jack hammer driven geoprobe and hand operated piston sampler, continuous sampling

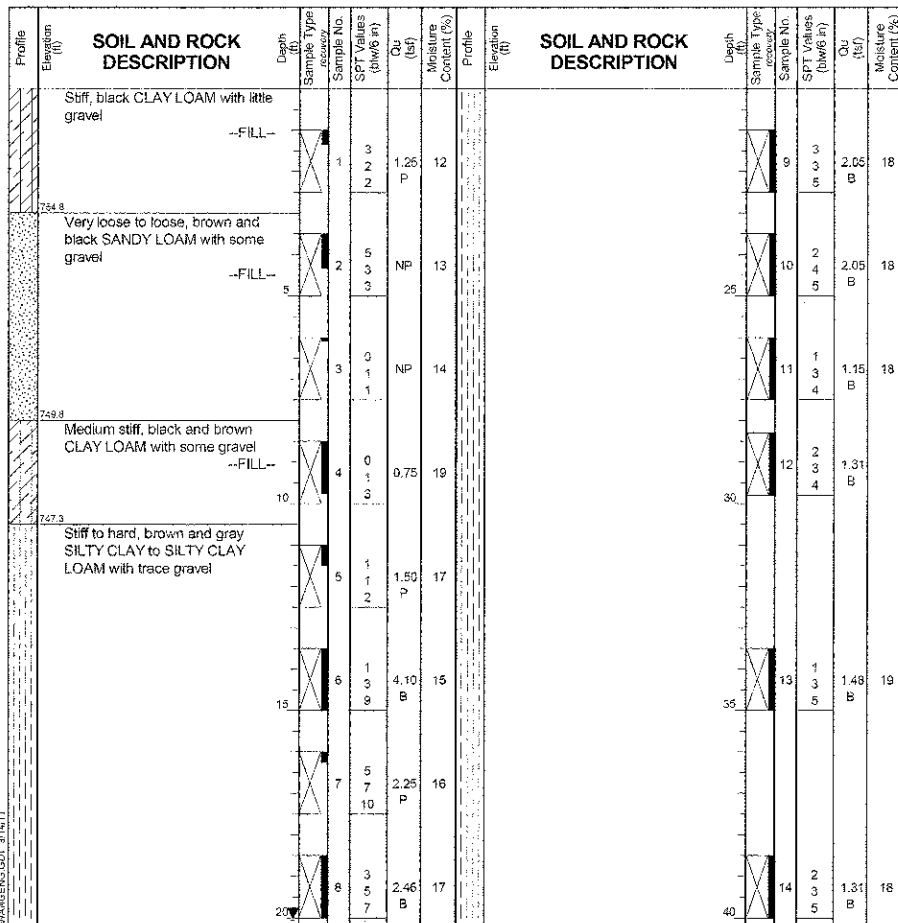
WATER LEVEL DATA
 White Drilling: 0.00 ft
 At Completion of Drilling: 0.00 ft
 Time After Drilling: NA
 Depth to Water: NA
 The stratification lines represent the approximate boundary between soil types. The actual transition may be gradual.

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BORING LOG SB-01
 WEI Job No.: 201-42-01
 Client: McDonough Associates, Inc.
 Project: Woodland Drive Bridge over Flint Creek
 Location: Lake Barrington, Lake County

Datum: NGVD
 Elevation: 757.83 ft
 North: 2015315.19 ft
 East: 1029244.61 ft
 Station: 13+44.03
 Offset: 8.71 RT

Page 1 of 2



GENERAL NOTES
 Begin Drilling: 09-02-2010 Complete Drilling: 09-02-2010
 Drilling Contractor: K&S Drilling Drill Rig: CME 75
 Driller: Ruben/Ed Logger: C. Marin Checked by: M. di Reyes
 Drilling Method: 3.25 IDA HSA; Boring backfilled upon completion

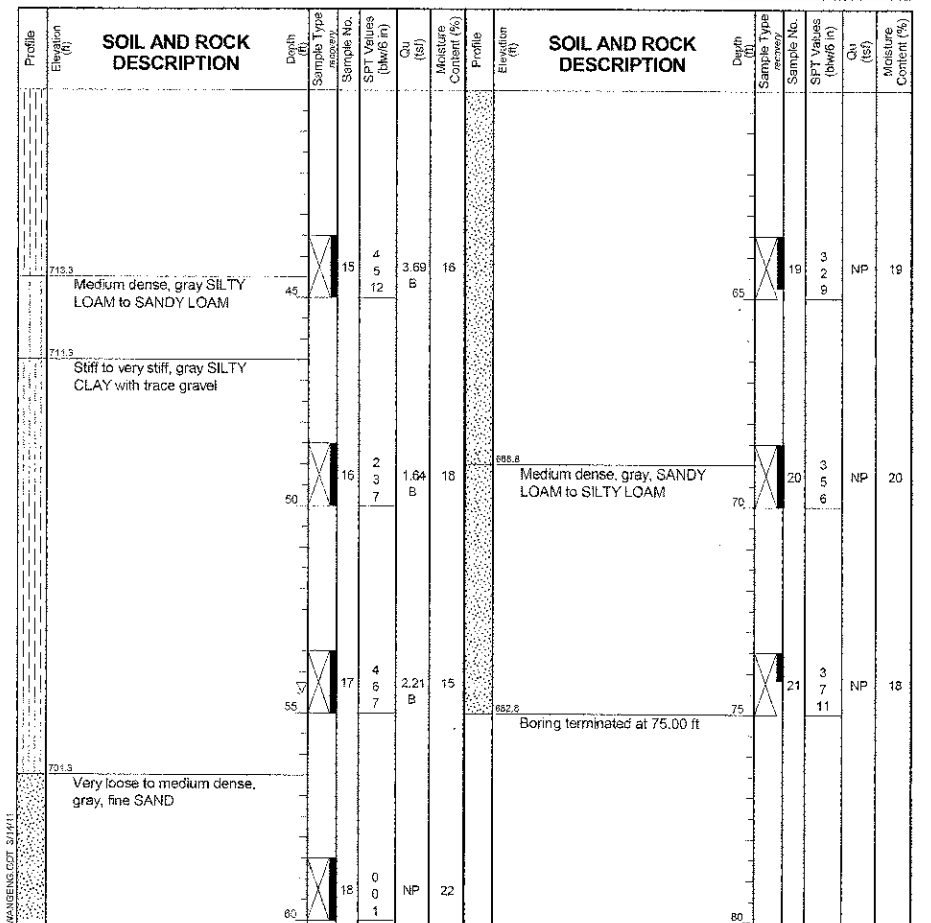
WATER LEVEL DATA
 White Drilling: 54.50 ft
 At Completion of Drilling: 20.00 ft
 Time After Drilling: NA
 Depth to Water: NA
 The stratification lines represent the approximate boundary between soil types. The actual transition may be gradual.

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BORING LOG SB-01
 WEI Job No.: 201-42-01
 Client: McDonough Associates, Inc.
 Project: Woodland Drive Bridge over Flint Creek
 Location: Lake Barrington, Lake County

Datum: NGVD
 Elevation: 757.83 ft
 North: 2015315.19 ft
 East: 1029244.61 ft
 Station: 13+44.03
 Offset: 8.71 RT

Page 2 of 2



GENERAL NOTES
 Begin Drilling: 09-02-2010 Complete Drilling: 09-02-2010
 Drilling Contractor: K&S Drilling Drill Rig: CME 75
 Driller: Ruben/Ed Logger: C. Marin Checked by: M. di Reyes
 Drilling Method: 3.25 IDA HSA; Boring backfilled upon completion

WATER LEVEL DATA
 White Drilling: 54.50 ft
 At Completion of Drilling: 20.00 ft
 Time After Drilling: NA
 Depth to Water: NA
 The stratification lines represent the approximate boundary between soil types. The actual transition may be gradual.

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BORING LOG SB-02
 WEI Job No.: 201-42-01
 Client: McDonough Associates, Inc.
 Project: Woodland Drive Bridge over Flint Creek
 Location: Lake Barrington, Lake County

Datum: NGVD
 Elevation: 757.74 ft
 North: 2015347.52 ft
 East: 1029294.77 ft
 Station: 13+98.05
 Offset: 16.7 LT

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/in)	Cu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/in)	Cu (tsf)	Moisture Content (%)
757.74	5.4-inch thick ASPHALT PAVEMENT	0					757.74		0				
756.0	6-inch thick GRAVEL BASE COURSE	0.5	1	2 3 3	1.25	7	756.0		0.5	9	2 3 5	1.89	18
753.7	Stiff, black and brown CLAY LOAM with gravel	1	2	3 5 6	NP	9	753.7		1	25	2 3 3	1.31	19
753.7	Very loose to medium dense, brown SANDY GRAVEL	1.5	3	4 3 2	NP	7	753.7		1.5	30	2 3 4	0.98	19
747.2	Soft, dark gray CLAY LOAM with little gravel	2	4	2 1 2	NP	8	747.2		2	35	2 3 5	1.38	18
744.7	Medium stiff, gray SILTY CLAY	2.5	5	0 0 1	0.33	16	744.7		2.5	40	1 3 4	1.56	19
742.2	Stiff to very stiff, gray CLAY with trace gravel	3	6	1 3 4	0.82	15	742.2		3	45	1 1 3	1.97	23
742.2		3.5	7	5 7 8	2.54	16	742.2		3.5	50	1 1 3	NP	18
742.2		4	8	2 3 4	1.39	19	742.2		4	55	1 1 3	NP	18

GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling	09-01-2010	Complete Drilling	09-01-2010
Drilling Contractor	K&S Drilling	Drill Rig	CME 75
Driller	Ruben/Ed	Logger	A. Kurnia
Checked by	M. di Reyes	Drilling Method	3.25 IDA HSA; Boring backfilled upon completion
At Completion of Drilling	Washed	Time After Drilling	NA
Depth to Water	NA	The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.	
White Drilling	12.00 ft		

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BORING LOG SB-02
 WEI Job No.: 201-42-01
 Client: McDonough Associates, Inc.
 Project: Woodland Drive Bridge over Flint Creek
 Location: Lake Barrington, Lake County

Datum: NGVD
 Elevation: 757.74 ft
 North: 2015347.52 ft
 East: 1029294.77 ft
 Station: 13+98.05
 Offset: 16.7 LT

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/in)	Cu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/in)	Cu (tsf)	Moisture Content (%)
757.74		0					757.74		0				
756.0		0.5	9	2 3 5	1.89	18	756.0		0.5	19	2 3 10	NP	20
753.7		1	25	2 3 3	1.31	19	753.7		1	24	2 3 1	NP	20
753.7		1.5	30	2 3 4	0.98	19	753.7		1.5	20	3 4 6	NP	20
747.2		2	35	2 3 5	1.38	18	747.2		2	70	1 1 3	1.97	23
744.7		2.5	40	1 3 4	1.56	19	744.7		2.5	75	3 10 19	NP	8
742.2		3	45	1 1 3	1.97	23	742.2		3	80	1 1 3	NP	18
742.2		3.5	50	1 1 3	NP	18	742.2		3.5	85	8 11 16	NP	20

GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling	09-01-2010	Complete Drilling	09-01-2010
Drilling Contractor	K&S Drilling	Drill Rig	CME 75
Driller	Ruben/Ed	Logger	A. Kurnia
Checked by	M. di Reyes	Drilling Method	3.25 IDA HSA; Boring backfilled upon completion
At Completion of Drilling	Washed	Time After Drilling	NA
Depth to Water	NA	The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.	
White Drilling	12.00 ft		

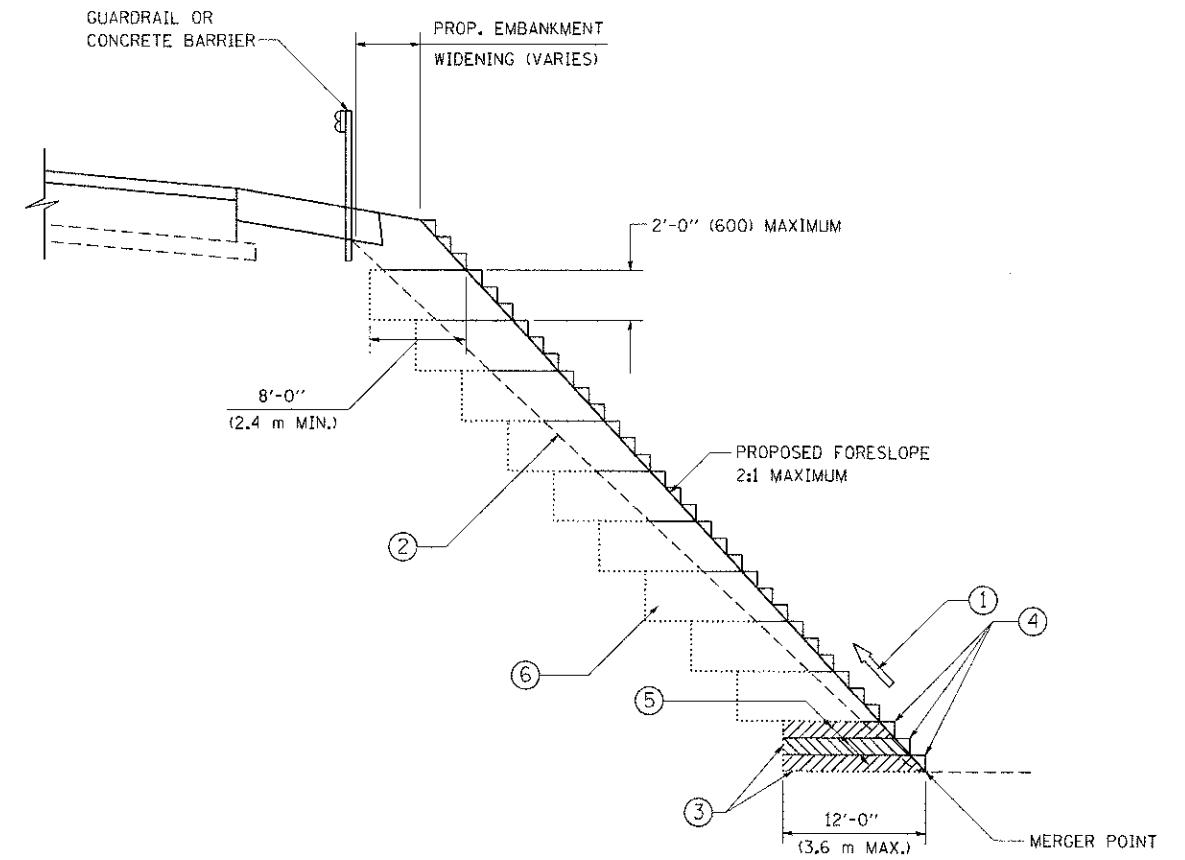
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BORING LOG SB-02
 WEI Job No.: 201-42-01
 Client: McDonough Associates, Inc.
 Project: Woodland Drive Bridge over Flint Creek
 Location: Lake Barrington, Lake County

Datum: NGVD
 Elevation: 757.74 ft
 North: 2015347.52 ft
 East: 1029294.77 ft
 Station: 13+98.05
 Offset: 16.7 LT

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/in)	Cu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/in)	Cu (tsf)	Moisture Content (%)
757.74		0					757.74		0				
756.0		0.5	19	2 3 10	NP	20	756.0		0.5	23	2 3 1	NP	20
753.7		1	24	2 3 1	NP	20	753.7		1	25	5 8 13	NP	20
753.7		1.5	20	3 4 6	NP	20	753.7		1.5	26	8 11 16	NP	20
747.2		2	70	1 1 3	1.97	23	747.2		2				
744.7		2.5	75	3 10 19	NP	8	744.7		2.5				
742.2		3	80	1 1 3	NP	18	742.2		3				
742.2		3.5	85	8 11 16	NP	20	742.2		3.5				

GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling	09-01-2010	Complete Drilling	09-01-2010
Drilling Contractor	K&S Drilling	Drill Rig	CME 75
Driller	Ruben/Ed	Logger	A. Kurnia
Checked by	M. di Reyes	Drilling Method	3.25 IDA HSA; Boring backfilled upon completion
At Completion of Drilling	Washed	Time After Drilling	NA
Depth to Water	NA	The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.	
White Drilling	12.00 ft		



TYPICAL BENCHING DETAIL
FOR EMBANKMENT

NOTES:

- ① CONSTRUCT SUCCEEDING BENCH CUTS AND EMBANKMENT PLACEMENT AND COMPACTION FROM BOTTOM TO TOP IN STAIRSTEP FASHION.
- ② EXISTING FORESLOPE PREPARED IN ACCORDANCE WITH ARTICLE 205.03 OF THE STANDARD SPECIFICATIONS.
- ③ BENCH CUT EXISTING SLOPE TYPICAL FOR EACH STEP.
- ④ TRIM TO FINAL SLOPE.
- ⑤ EQUAL 8-INCH (200) LIFTS OF EMBANKMENT COMPACTED IN ACCORDANCE WITH ARTICLE 205.05 OF THE STANDARD SPECIFICATIONS.
- ⑥ EXCAVATION OF BENCH CUTS WITHIN EXISTING EMBANKMENT WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER CUBIC METER OR CUBIC YARD FOR "EARTH EXCAVATION". THIS PRICE WILL INCLUDE ALL LABOR AND MATERIAL, NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
- ⑦ SLOPES SHALL BE BENCHED ACCORDING TO THIS DETAIL WHEN THE SLOPE IS STEEPER THAN 4:1 AND THE HEIGHT IS GREATER THAN 5' (1.5 m).

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

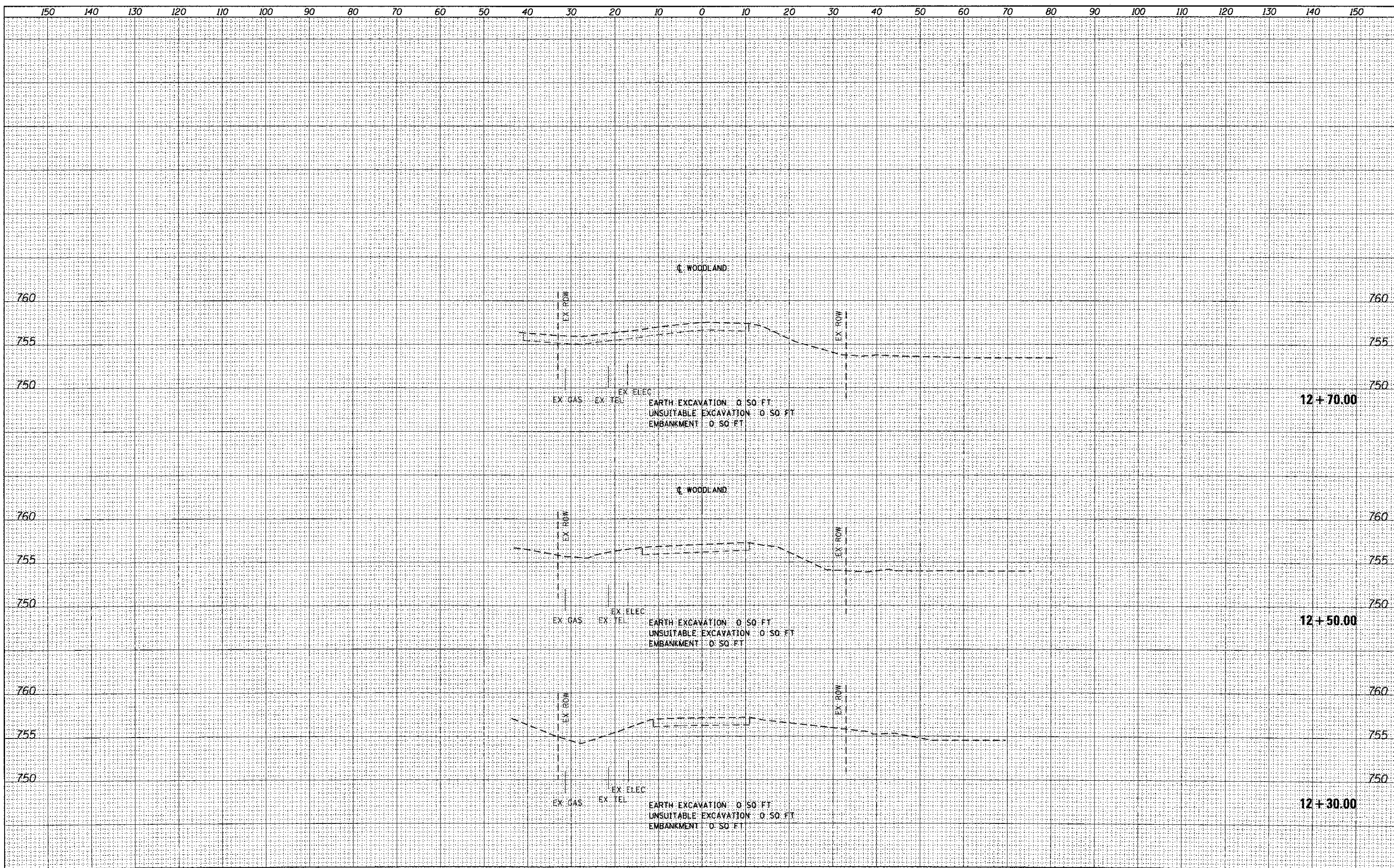
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		DRAWN - CADD	REVISED -
		CHECKED - S.E.B.	REVISED -
		DATE - 06-16-04	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BENCHING DETAIL FOR EMBANKMENT WIDENING		F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
SCALE: NONE			09-00010-00-BR	LAKE	41	30
SHEET NO. 1 OF 1 SHEETS		BD-51		CONTRACT NO. 63716		
STA. TO STA.		FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

FINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
NO.	EMPLATE		
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ORIGINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
NO.	EMPLATE		
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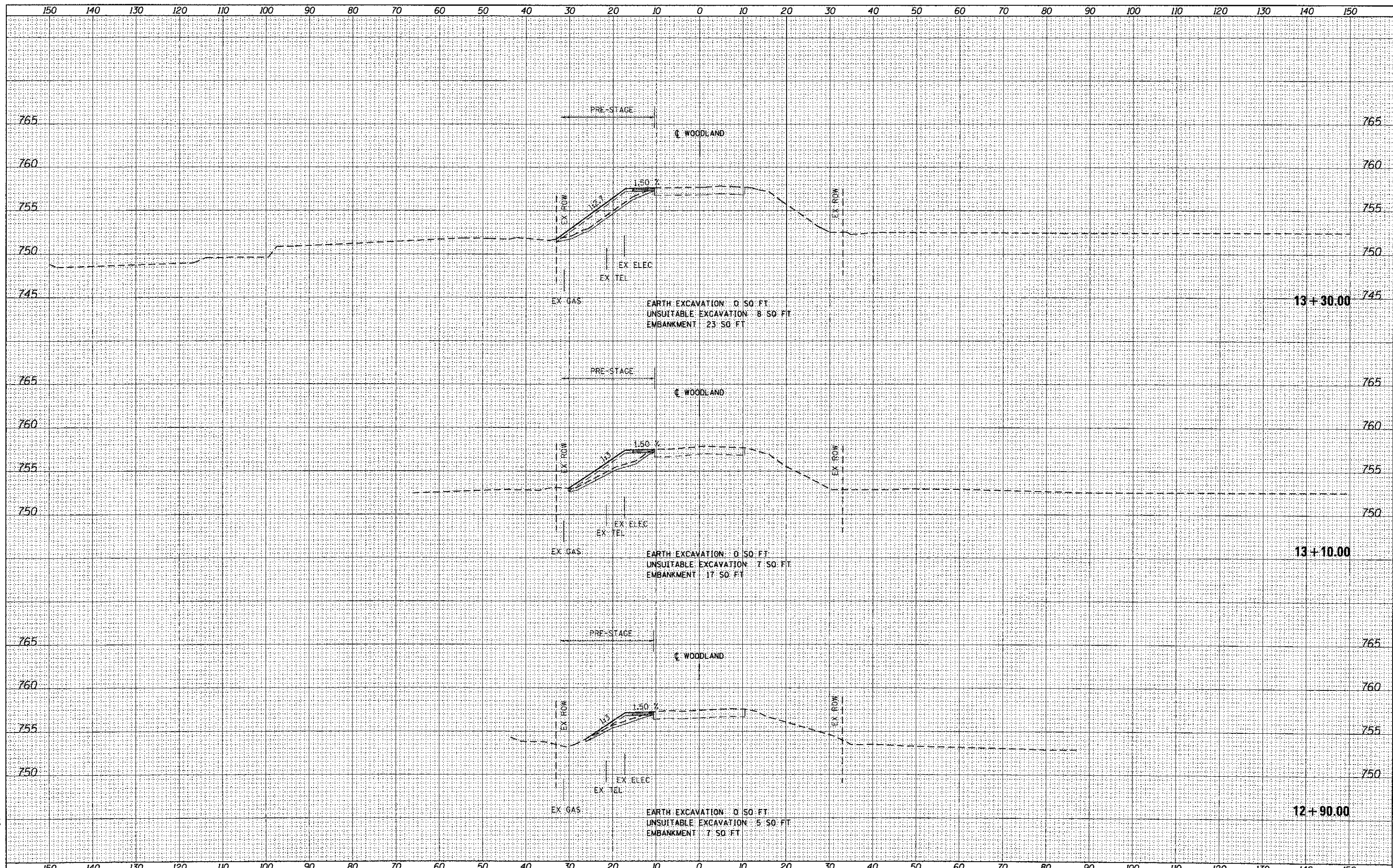


McDonough Associates Inc.
Engineers / Architects
180 North Station Ave. Chicago, Illinois 60601

FILE NAME = 18038-SHT-XSHT10.dgn	USER NAME = jehhart	DESIGNED - JCL	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	WOODLAND DRIVE PRE-STAGE CROSS SECTIONS	SCALE: 1"=10'H; 1"=5'V SHEET NO. 1 OF 11 SHEETS STA. 12+30.00 TO STA. 12+70.00	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = 1:10	DRAWN - JCL	REVISED -					09-0010-00-BR	LAKE	41	31
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		DATE - 05/14/12	REVISED -					CONTRACT NO. 63716			

DATE	
BY	
FINAL SURVEY	
PLOTTED	
NOTE BOOK	
AREAS CHECKED	

DATE	
BY	
ORIGINAL SURVEY	
PLOTTED	
NOTE BOOK	
AREAS CHECKED	



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FILE NAME =	10038-SHT-X55H110.dgn
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USER NAME =	jahrhart
DESIGNED -	JCL
DRAWN -	JCL
CHECKED -	EJG
DATE -	05/14/12

REVISD -	
REVISD -	
REVISD -	
REVISD -	

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

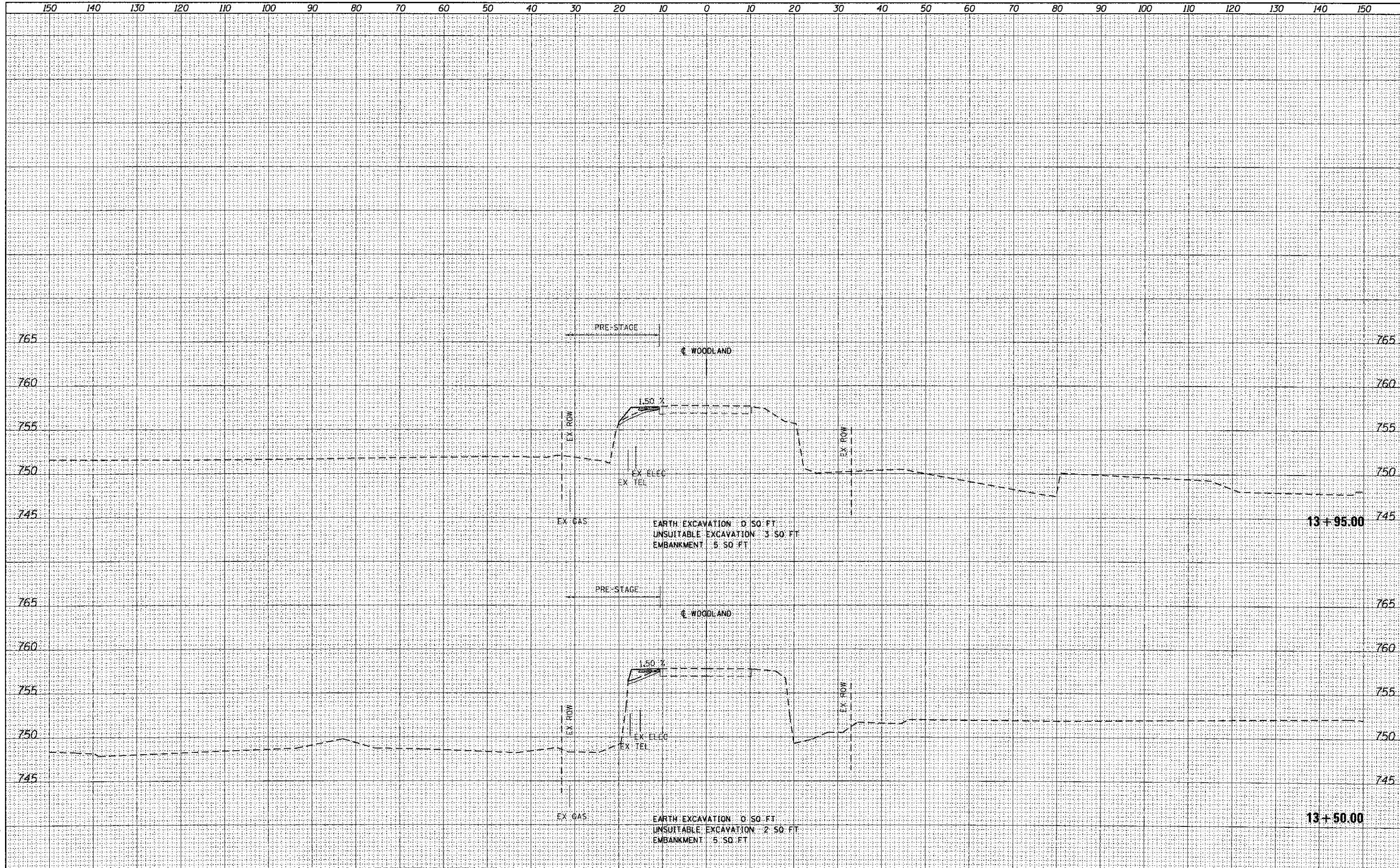
WOODLAND DRIVE PRE-STAGE CROSS SECTIONS

SCALE: 1"=10'H; 1/4"=5' V SHEET NO. 2 OF 11 SHEETS STA. 12+90.00 TO STA. 13+30.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	09-00010-00-BR	LAKE	41	32
XS-PRE-02			CONTRACT NO. 63716	
ILLINOIS FED. AID PROJECT				

DATE	
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SKIPPED	
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TEMPLATE	
NOTE BOOK	
AREAS CHECKED	

DATE	
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SKIPPED	
PLOTTED	
TEMPLATE	
NOTE BOOK	
AREAS CHECKED	



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FILE NAME =	10030-SHT-XSSHT10.dgn
USER NAME =	jehhart
DESIGNED -	JCL
DRAWN -	JCL
CHECKED -	EJG
DATE -	05/14/12
REVISIONS	
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REVISED -	
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REVISED -	

SECTION	09-0010-00-BR
COUNTY	LAKE
CONTRACT NO.	63716
TOTAL SHEETS	41
SHEET NO.	33

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

WOODLAND DRIVE PRE-STAGE CROSS SECTIONS

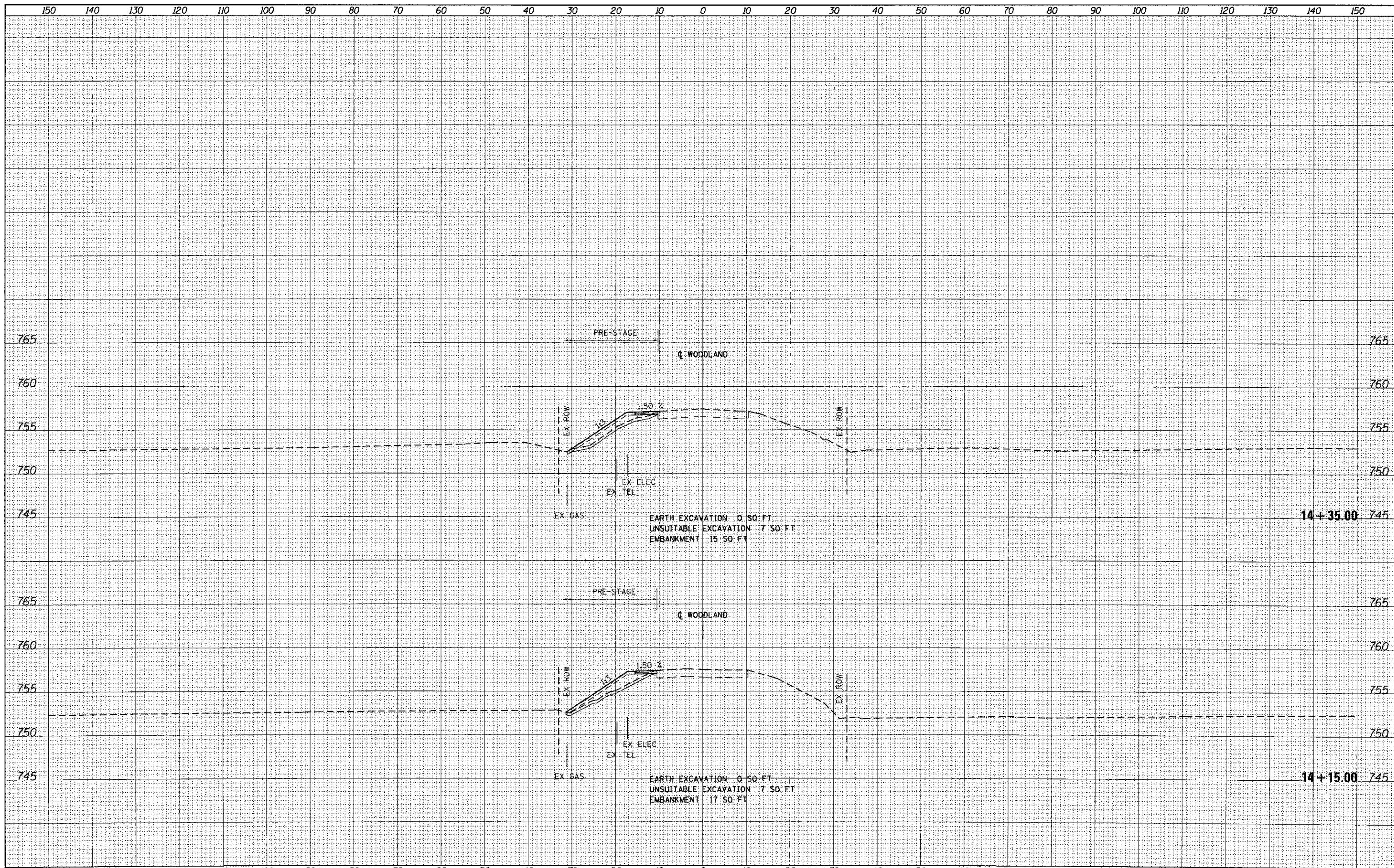
SCALE: 1"=10'H; 1"=5'V SHEET NO. 3 OF 11 SHEETS STA. 13+50.00 TO STA. 13+95.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	09-0010-00-BR	LAKE	41	33
	XS-PRE-03			

ILLINOIS FED. AID PROJECT

DATE	
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PLOTTED	
NOTE BOOK	
AREAS CHECKED	

DATE	
BY	
SURVEYED	
PLOTTED	
NOTE BOOK	
AREAS CHECKED	



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 180 North Stearns Ave. Chicago, Illinois 60611

FILE NAME =	10030-SHT-XSSH118.dgn
USER NAME =	jehchart
DESIGNED -	JCL
DRAWN -	JCL
CHECKED -	EJG
PLLOT SCALE =	1:10
PLLOT DATE =	05/14/12

DESIGNED -	JCL	REVISED -	
DRAWN -	JCL	REVISED -	
CHECKED -	EJG	REVISED -	
DATE -	05/14/12	REVISED -	

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

WOODLAND DRIVE PRE-STAGE CROSS SECTIONS

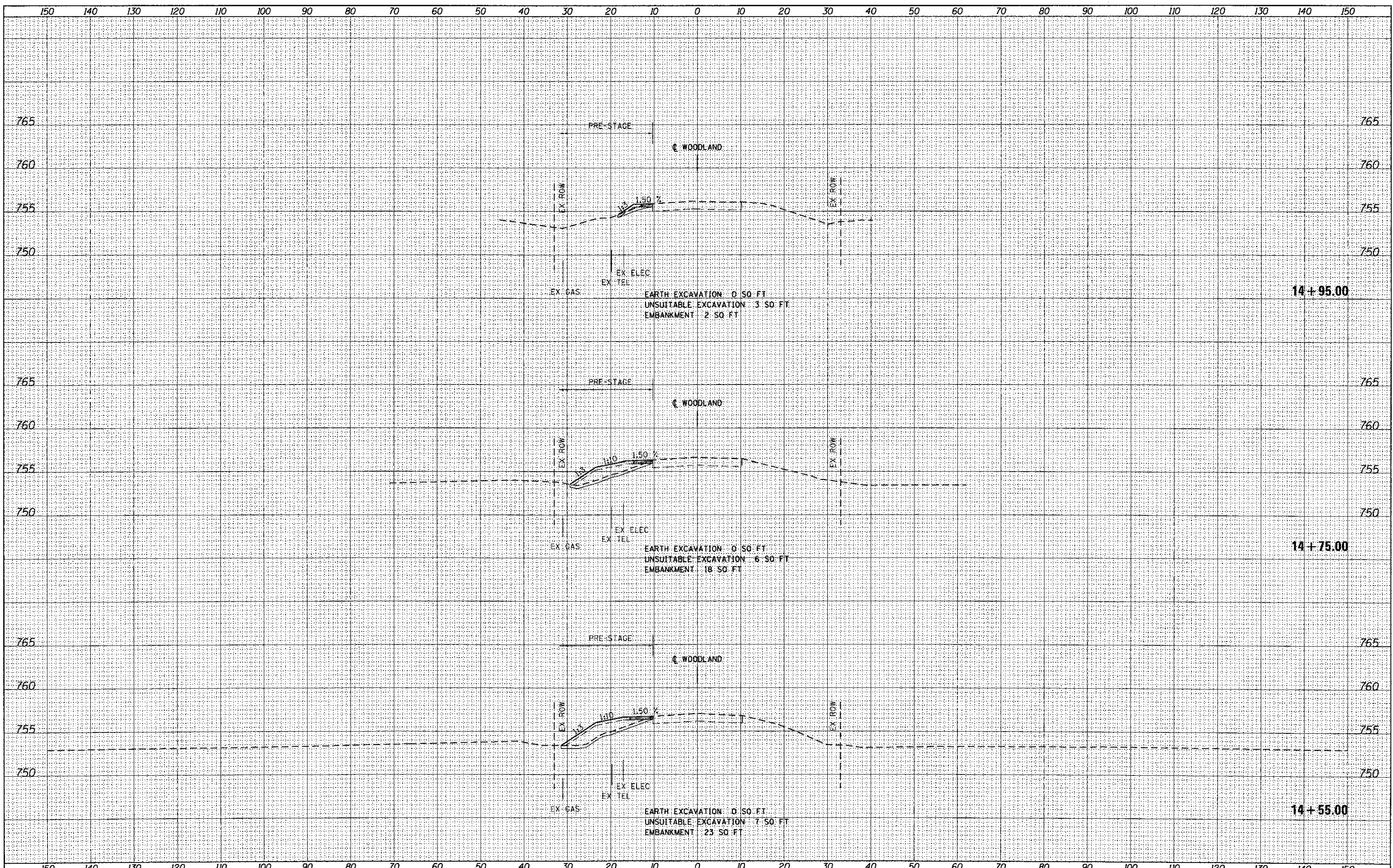
SCALE: 1"=10'H; 1"=5'V SHEET NO. 4 OF 11 SHEETS STA. 14+15.00 TO STA. 14+35.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	09-0010-00-BR	LAKE	41	34
	XS-PRE-04			CONTRACT NO. 63716
				ILLINOIS FED. AID PROJECT

DATE	
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SURVEYED	
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NOTE BOOK	
AREAS CHECKED	

DATE	
BY	
SURVEYED	
PLOTTED	
NOTE BOOK	
AREAS CHECKED	

McDonough Associates Inc.
 Engineers/Architects
 180 North Station Ave. Chicago, Illinois 60611



FILE NAME =	10030-SHT-XSSH110.dgn
USER NAME =	jehrhart
DESIGNED -	JCL
DRAWN -	JCL
CHECKED -	EJG
DATE -	05/14/12

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REVISIED -	
REVISIED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WOODLAND DRIVE PRE-STAGE CROSS SECTIONS
SCALE: 1"=10'H/1"=5'V
SHEET NO. 5 OF 11 SHEETS
STA. 14+55.00 TO STA. 14+95.00

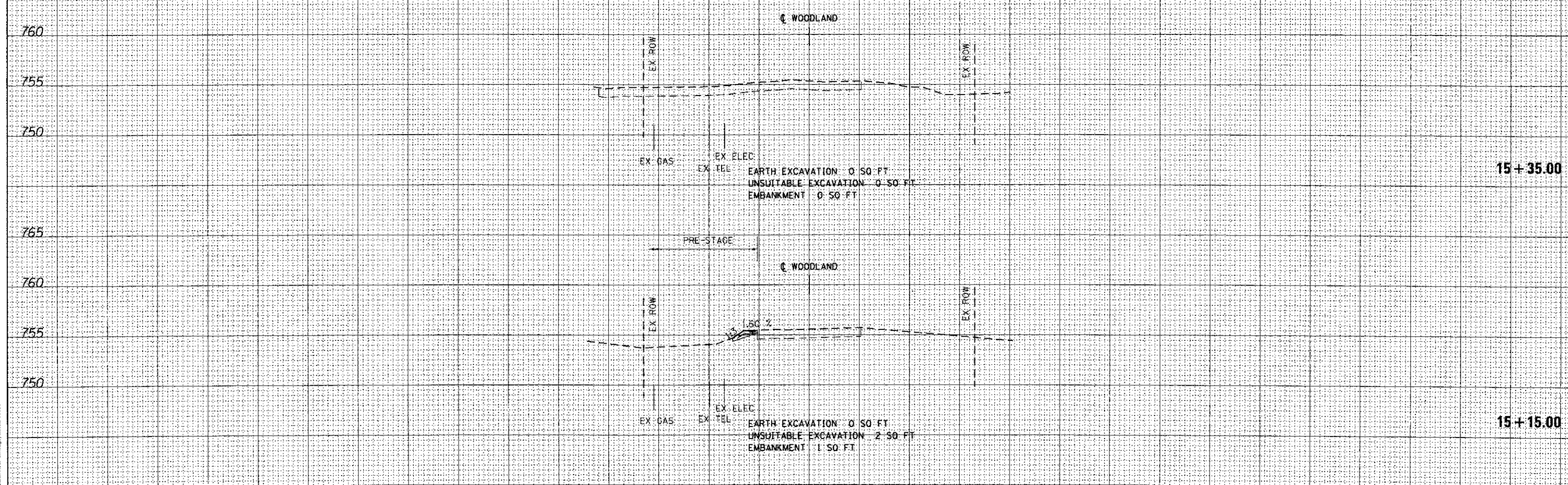
SECTION	09-00010-00-BR
COUNTY	LAKE
TOTAL SHEETS	41
SHEET NO.	35
CONTRACT NO.	63716
ILLINOIS FED. AID PROJECT	

FILE NAME =	10030-SHT-XSSH110.dgn
USER NAME =	jehrhart
DESIGNED -	JCL
DRAWN -	JCL
CHECKED -	EJG
DATE -	05/14/12

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

BY	DATE

ORIGINAL SURVEY	SURVEYED	DATE
NOTE BOOK	PLOTTED	
	TEMPLATE	
	AREAS	
	CHECKED	



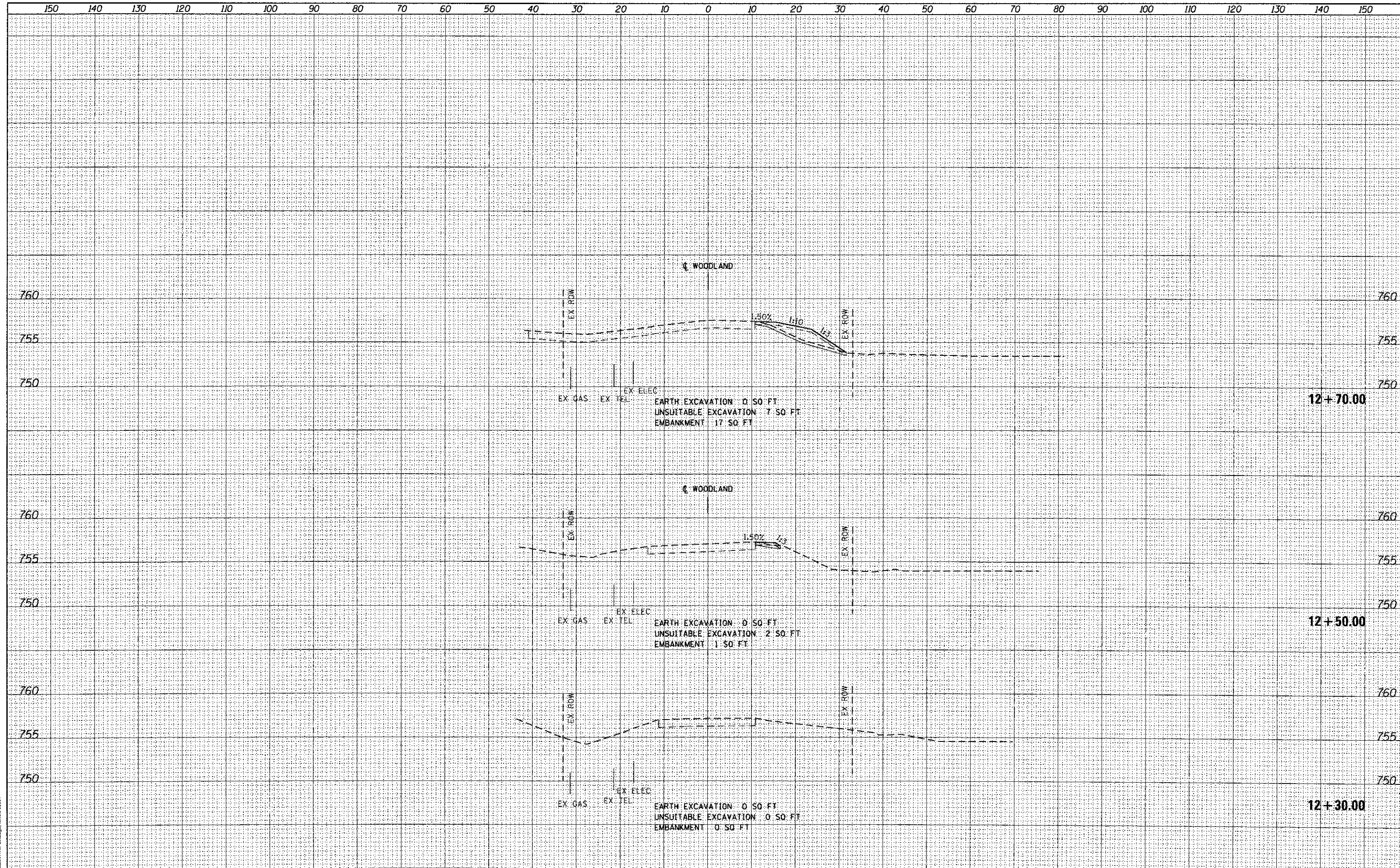
McDonough Associates Inc.
Engineers/Architects
100 North Shelton Ave. Chicago, Illinois 60661

FILE NAME = 10030-SHT-XSSH110.dgn	USER NAME = jehrhert	DESIGNED - JCL	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	WOODLAND DRIVE PRE-STAGE CROSS SECTIONS				F.A.P. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
PLOT SCALE = 1"=10'	CHECKED - EJG	REVISED -			09-00010-00-BR	LAKE	41	36					
PLOT DATE = 05/14/12	DATE - 05/14/12	REVISED -			X8-PRE-06	CONTRACT NO. 63716							
					SCALE: 1"=10'H; 1"=5' V SHEET NO. 6 OF 11 SHEETS STA. 15+15.00 TO STA. 15+35.00				ILLINOIS FED. AID PROJECT				

BY _____ DATE _____
 ORIGINAL SURVEY _____
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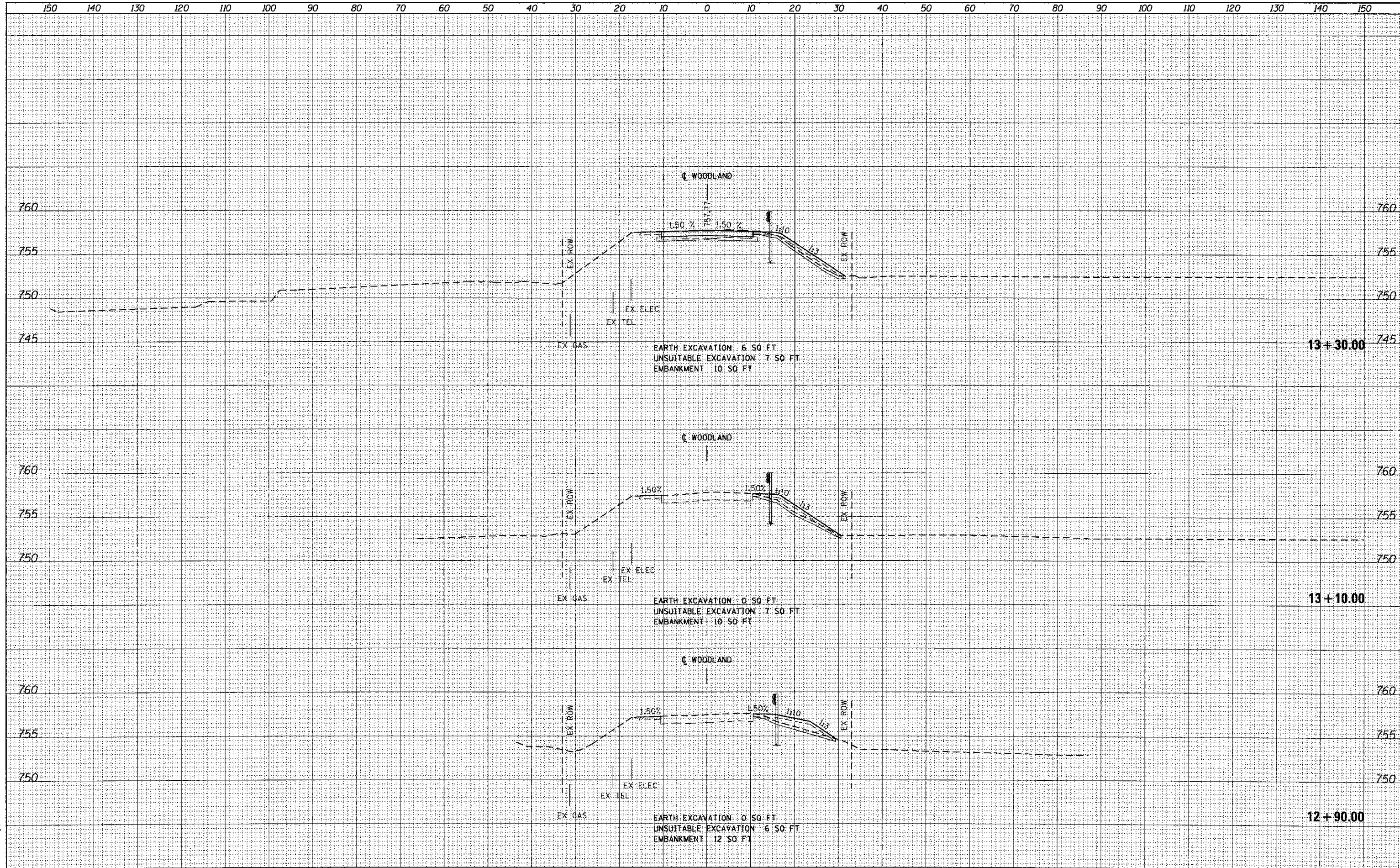
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 Engineers / Architects
 100 North Blanton Ave., Chicago, Illinois 60607



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

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

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 180 North LaSalle Ave. Chicago, Illinois 60601

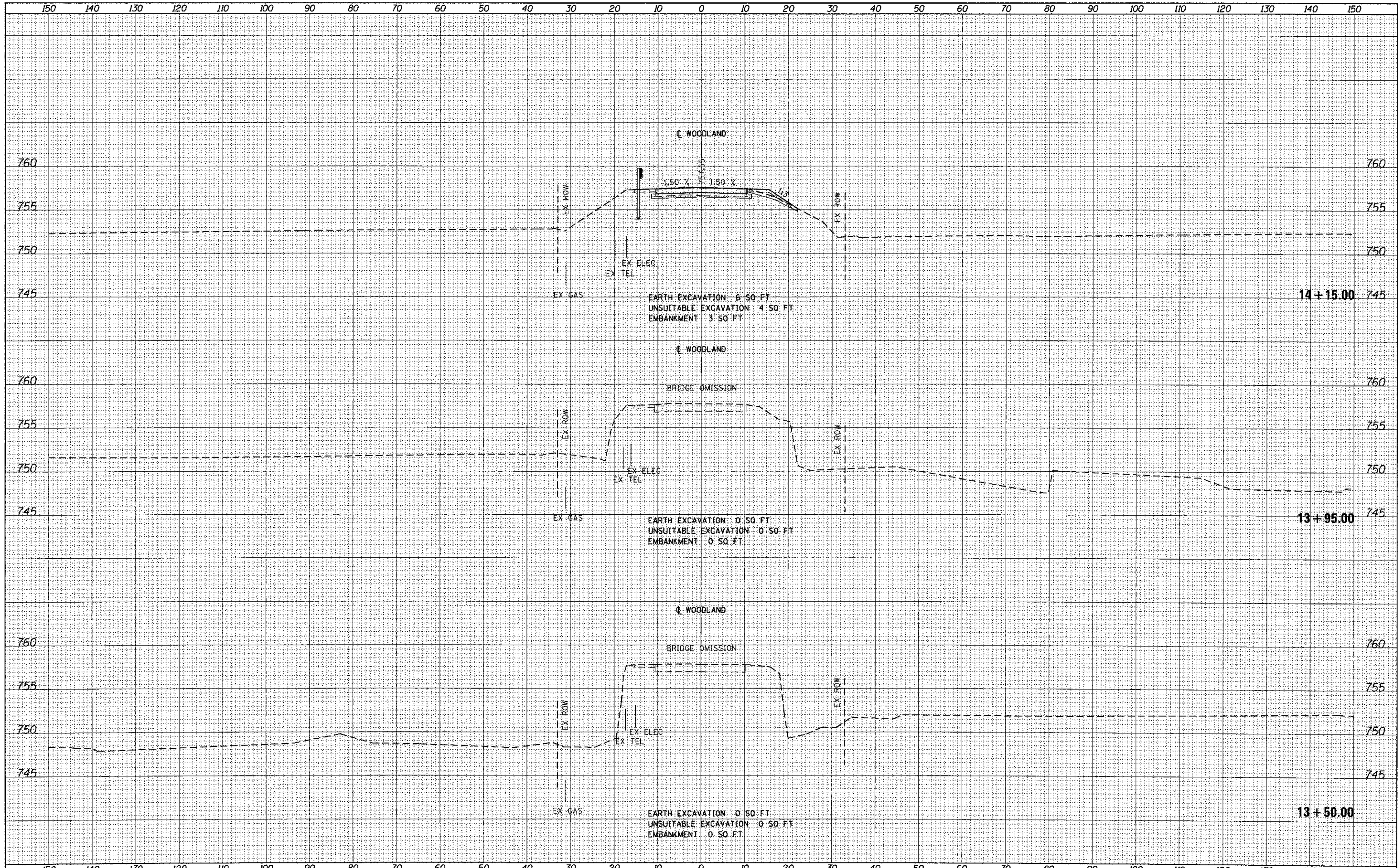


FILE NAME = 100238-SHT-XSSHT01.dgn	USER NAME = jshbert	DESIGNED - JCL	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	WOODLAND DRIVE CROSS SECTIONS SCALE: 1"=10'H @ 1"=5' V SHEET NO. 8 OF 11 SHEETS STA. 12+90.00 TO STA. 13+30.00	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN - JCL	REVISED -			09-00010-00-BR	LAKE	41	38	
		CHECKED - EUG	REVISED -			XS-02				
		DATE - 05/14/12	REVISED -			CONTRACT NO. 63716				

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ORIGINAL SURVEY	
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ORIGINAL SURVEY	
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AREAS CHECKED	

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 Engineers / Architects
 180 North Bichar Ave. Chicago, Illinois 60601

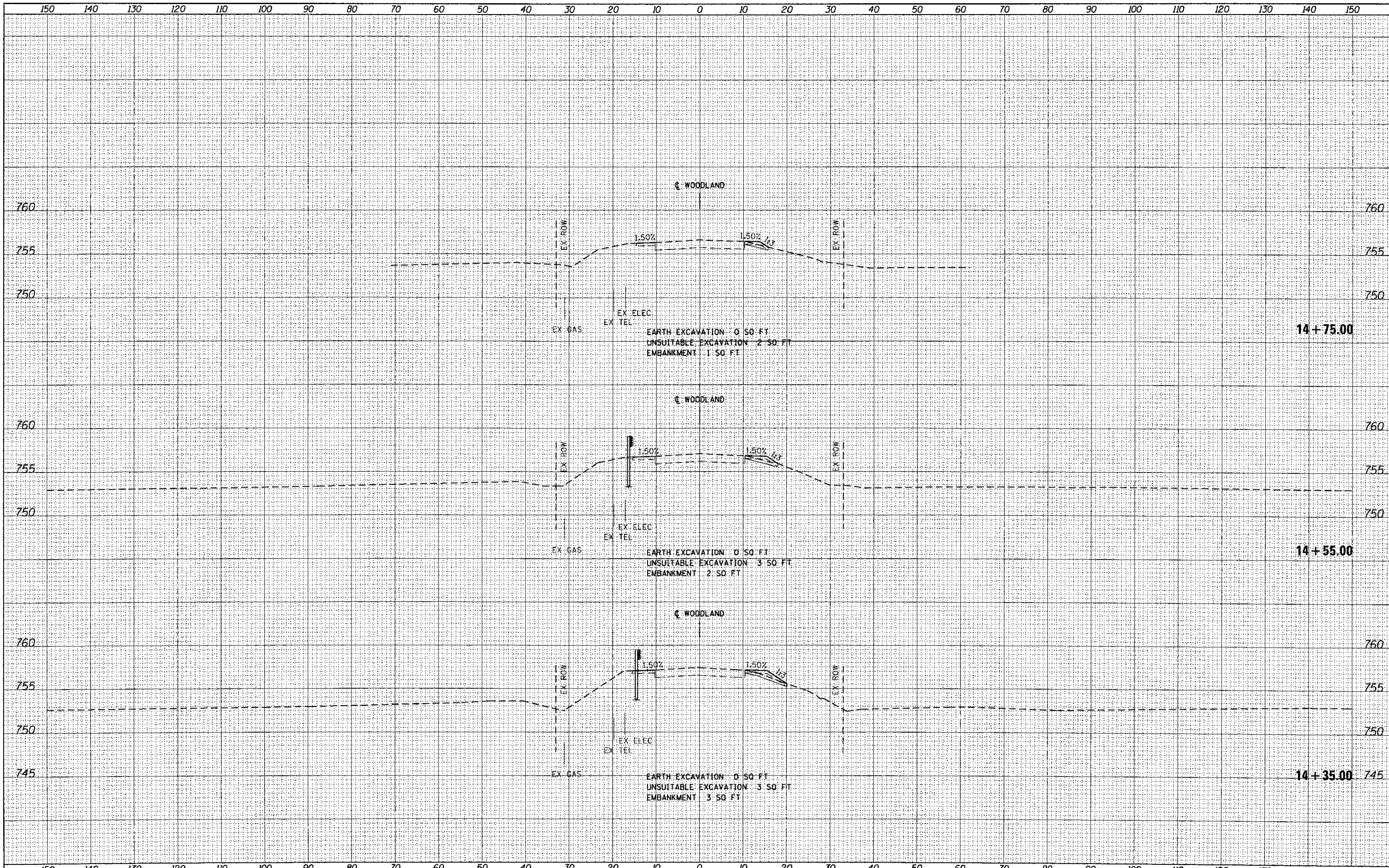


FILE NAME = 10030-SHT-XSSH01.dgn	USER NAME = jahrbert	DESIGNED - JCL	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	WOODLAND DRIVE CROSS SECTIONS SCALE: 1"=10'H; 1"=5'V SHEET NO. 9 OF 11 SHEETS STA. 13+50.00 TO STA. 14+15.00	SECTION 09-00010-00-BR COUNTY LAKE TOTAL SHEETS 41 SHEET NO. 39
PLOT SCALE = 1:10	CHECKED - E.J.G.	REVISIED -	CONTRACT NO. 63716			
PLOT DATE = 05/14/12	DATE - 05/14/12	REVISIED -	ILLINOIS FED. AID PROJECT			

BY	DATE
FINAL SURVEYED	
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NOTE BOOK	
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ORIGINAL SURVEYED	
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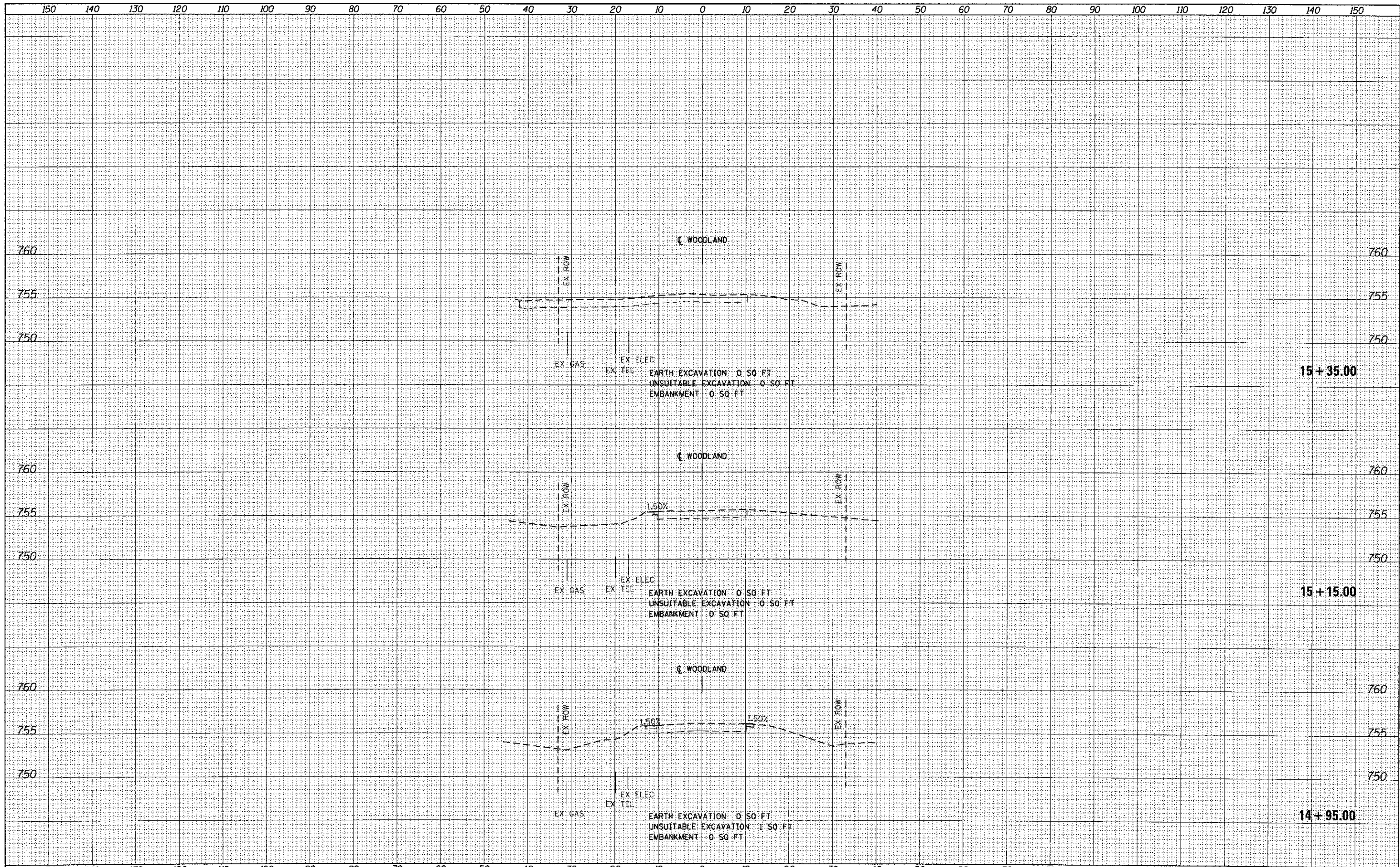
McDonough Associates Inc.
 Engineers / Architects
 140 North Bluff Ave. Chicago, Illinois 60651



FILE NAME = 100230-SHT-XSSH01.dgn	USER NAME = jsh/hart	DESIGNED - JCL	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	WOODLAND DRIVE CROSS SECTIONS	SCALE: 1"=10'H 1/2"=5'V SHEET NO. 10 OF 11 SHEETS STA. 14+35.00 TO STA. 14+75.00	SECTION 09-0010-00-BR COUNTY LAKE TOTAL SHEETS 41 SHEET NO. 40
PLOT SCALE = 1:10	CHECKED - E.JG	REVISED -	XS-04 CONTRACT NO. 63716				
PLOT DATE = 05/14/12	DATE - 05/14/12	REVISED -					
ILLINOIS FED. AID PROJECT							

DATE	
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PLOTTED	
NOTE BOOK	
AREAS CHECKED	

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NOTE BOOK	
AREAS CHECKED	



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 Engineers/Architects
 160 North Bicknell Ave. Chicago, Illinois 60601

FILE NAME = 12030-SHT-XSSH101.dgn	USER NAME = jehart	DESIGNED - JCL	REVISIED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	WOODLAND DRIVE CROSS SECTIONS	SCALE: 1"=10'H; 1"=5'V SHEET NO. 11 OF 11 SHEETS STA. 14+95.00 TO STA. 15+35.00	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
PLOT SCALE = 1/10	CHECKED - EJC	REVISIED -	09-00010-00-BR					LAKE	41	41	
PLOT DATE = 05/14/12	DATE - 05/14/12	REVISIED -	XS-05					CONTRACT NO. 63716			
								ILLINOIS FED. AID PROJECT			