4-29-05 Letting, Item 071

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2661	00-00095-11-BR	LAKE	28	1
COVER SHEET				
C-91-169-00	ILLINOIS			

CONTRACT NO.: 83789

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

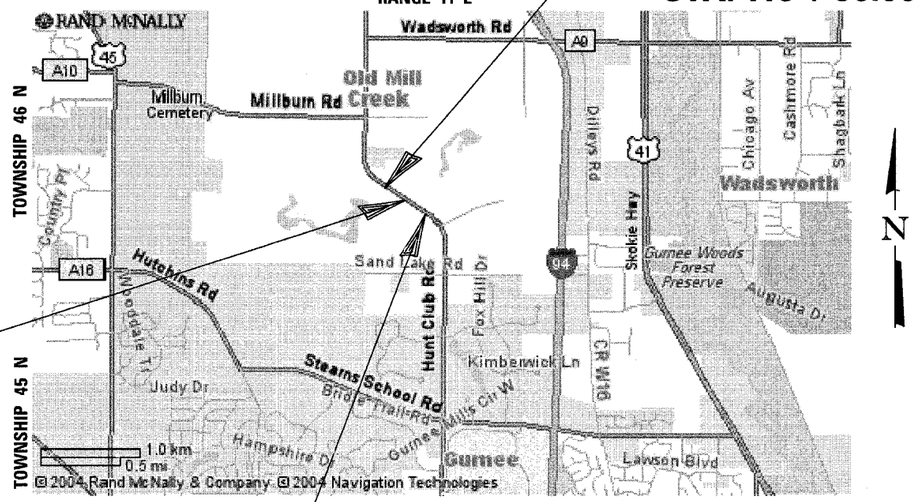
PROPOSED FEDERAL AID PROJECT
REPLACEMENT BRIDGE

PROJECT LOCATION: FAU 2661 HUNT CLUB ROAD OVER MILL CREEK
SN 049-3072
SECTION: 00-00095-11-BR
PROJECT No.: BRM-7003 (873)
LAKE COUNTY
JOB NO: C-91-169-00

INDEX OF SHEETS

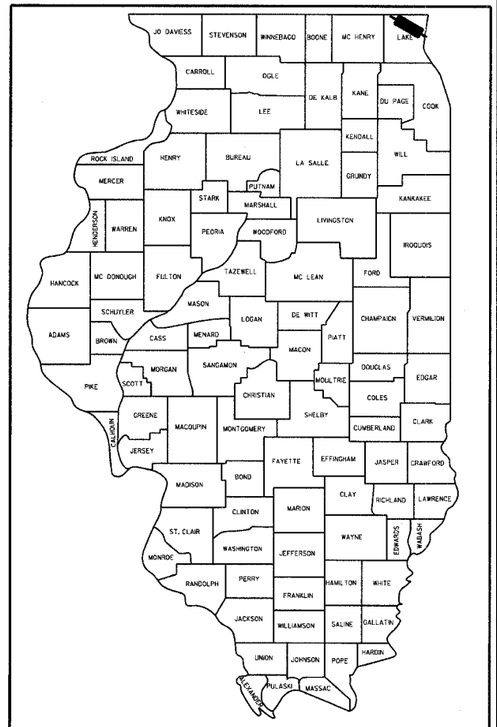
Bridge Replacement over Mill Creek to include:
Removal of the existing 30' clear width, single span steel stringer/multi-beam/girder and cast-in-place concrete decking bridge and construction of a new bridge with 40' clear width, single span, integral abutment, composite steel beam @ 77' back to back abutments supported on steel H piles.
SN 049-3072
STA. 116+60.00

PROJECT ENDS
STA. 119 + 50.00



MAP: NOT TO SCALE
WARREN AND NEWPORT TOWNSHIPS

PROJECT BEGINS
STA. 113 + 31.22



LOCATION OF SECTION INDICATED THUS: –

McCLURE ENGINEERING ASSOCIATES, INC.
2728 Grand Ave. Waukegan, Ill. 60085 TEL 847-336-7100 FAX 847-336-7155 EMAIL wk@mcclureengineering.com
Design Firm License: Illinois #184-000816

ROAD	STATION	STATION	LENGTH
HUNT CLUB ROAD	113+31.22	119+50.00	618.78 FEET
NET LENGTH OF IMPROVEMENT (MILES)			0.12 MILES

DESIGN DESIGNATION

HUNT CLUB ROAD 1737 (25) MAJOR COLLECTOR 1.47 (B-20)
POSTED SPEED: 45 MPH
ADT = 11,100 (2000)

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

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

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

CONTRACT NO. 83789

ALI A. GHARAMTI
081-005060 LICENSED STRUCTURAL ENGINEER OF MOLINE STATE OF ILLINOIS

McCLURE ENGINEERING ASSOCIATES, INC.
QUAD CITY DIVISION

ALI A. GHARAMTI
LICENSED STRUCTURAL ENGINEER OF MOLINE
NO. 081-005060
EXPIRATION DATE 11/30/06

CYNTHIA R. FLOWER
062-053717 REGISTERED PROFESSIONAL ENGINEER ILLINOIS

McCLURE ENGINEERING ASSOCIATES, INC.
WAUKEGAN DIVISION

11/29/04

CYNTHIA R. FLOWER
ILLINOIS LICENSED PROFESSIONAL ENGINEER
NO. 062-053717
EXPIRATION DATE 11/30/05

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED Dec 29 2004
Martin J Buechler
COUNTY ENGINEER

January 4, 2005
Richard J Parker
BUREAU OF LOCAL ROADS AND STREETS

January 4, 2005
Diane O'Keefe /RP
DISTRICT ENGINEER

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

FEDERAL AID DESIGN ENGINEER: CHARLES RIDDLE: TEL:847-705-4406
McCLURE ENGINEERING ASSOCIATES INC.: 2728 GRAND AVENUE WAUKEGAN, IL 60085; TEL: 847-336-7100, FAX: 847-336-7155

MEAI PROJECT No. 02-30-04-103

COVER.dgn 12/29/2004 9:31:18 AM

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2661	00-00095-II-BR	LAKE	28	3
SUMMARY OF QUANTITIES				
C-91-169-00	ILLINOIS			

CONTRACT NO.: 83789

SPECIALTY ITEMS		CODED PAY ITEM	ITEM DESCRIPTION	UNIT	QUANTITIES CONSTRUCTION TYPE CODE I000-2A	Y031-IF	X071-2A	TOTAL
	*	20100110	TREE REMOVAL (6 TO 15 INCHES DIAMETER)	UNIT	38	0	0	38
	*	20100210	TREE REMOVAL (OVER 15 INCHES DIAMETER)	UNIT	58	0	0	58
		20200100	EARTH EXCAVATION	CU YD	268	0	0	268
	*	20201200	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL	CU YD	223	0	0	223
		20300100	CHANNEL EXCAVATION	CU YD	0	0	898	898
		20400800	FURNISHED EXCAVATION	CU YD	431	0	0	431
		20700220	POROUS GRANULAR EMBANKMENT	CU YD	0	0	189	189
B	*	21101615	TOPSOIL FURNISH AND PLACE, 4"	SQ YD	1829	0	0	1829
B	*	25000210	SEEDING, CLASS 2A	ACRE	0.07	0	0	0
B	*	25000300	SEEDING, CLASS 3	ACRE	0.27	0	0	0
B		25000400	NITROGEN FERTILIZER NUTRIENT	POUND	34	0	0	34
B		25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	34	0	0	34
B		25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	34	0	0	34
B		25100120	MULCH METHOD 2	TON	0.14	0	0	0
	*	25100640	EROSION CONTROL FABRIC	SQ YD	1262	0	0	1262
B		25200200	SUPPLEMENTAL WATERING	UNIT	11	0	0	11
	*	28000300	TEMPORARY DITCH CHECK	EACH	5	0	0	5
	*	28000400	PERIMETER EROSION BARRIER	FOOT	1142	0	0	1142
		28100107	STONE RIPRAP CLASS A4	SQ YD	0	0	506	506
		28200100	FILTER FABRIC FOR USE WITH RIPRAP	SQ YD	0	0	527	527
		28400100	GABIONS	CU YD	0	0	21	21
	*	40600100	BITUMINOUS MATERIALS (PRIME COAT)	GALLONS	1640	0	0	1640
		42001165	BRIDGE APPROACH PAVEMENT	SQ YD	302	0	0	302
	*	44000006	BITUMINOUS SURFACE REMOVAL 1 1/2"	SQ YD	413	0	0	413
	*	44201761	CLASS D PATCHES, TYPE I, 10 INCH	SQ YD	3	0	0	3
	*	44201765	CLASS D PATCHES, TYPE II, 10 INCH	SQ YD	4	0	0	4
	*	44201769	CLASS D PATCHES, TYPE III, 10 INCH	SQ YD	10	0	0	10
	*	44201771	CLASS D PATCHES, TYPE IV, 10 INCH	SQ YD	7	0	0	7
		44300100	AREA REFLECTIVE CRACK CONTROL TREATMENT	SQ YD	558	0	0	558
	*	48100100	AGGREGATE SHOULDERS, TYPE A	TON	55	0	0	55
	*	48200400	BITUMINOUS SHOULDERS, 6"	SQ YD	799	0	0	799
	*	50100100	REMOVAL OF EXISTING STRUCTURE	EACH	0	0	1	1
		50200100	STRUCTURE EXCAVATION	CU YD	0	0	225	225
		50300225	CONCRETE STRUCTURES	CU YD	0	0	36	36
		50300255	CONCRETE SUPERSTRUCTURE	CU YD	0	0	113	113
		50300260	BRIDGE DECK GROOVING	SQ YD	0	0	325	325
		50300275	CONCRETE HANDRAIL	CU YD	0	0	16	16
	*	50300300	PROTECTIVE COAT	SQ YD	0	0	419	419
		50500105	FURNISHING AND ERECTING STRUCTURAL STEEL	LUMP SUM	0	0	1	1
		50500505	STUD SHEAR CONNECTORS	EACH	0	0	1134	1134
		50800205	REINFORCEMENT BARS EPOXY COATED	POUND	0	0	28690	28690
		51201600	FURNISHING STEEL PILES - HP12X53	FOOT	0	0	864	864
		51202700	DRIVING STEEL PILES	FOOT	0	0	864	864
		51203600	TEST PILES STEEL - HP12X53	EACH	0	0	2	2
	*	51205200	TEMPORARY SHEET PILING	SQ FT	0	0	1578	1578
		51500100	NAME PLATES	EACH	0	0	1	1

SPECIALTY ITEMS		CODED PAY ITEM	ITEM DESCRIPTION	UNIT	QUANTITIES CONSTRUCTION TYPE CODE I000-2A	Y031-IF	X071-2A	TOTAL
		54200640	PIPE CULVERTS, TYPE 1, CORRUGATED STEEL OR ALUMINUM CULVERT PIPE, 15"	FOOT	27	0	0	27
		54213867	STEEL END SECTIONS, 12"	EACH	2	0	0	2
		54213870	STEEL END SECTIONS, 15"	EACH	2	0	0	2
		60103500	PIPE DRAINS, CORRUGATED STEEL 12"	FOOT	35	0	0	35
		60900315	TYPE D INLET BOX, STANDARD 609006	EACH	2	0	0	2
		60900515	CONCRETE THRUST BLOCKS	EACH	2	0	0	2
		63000000	STEEL PLATE BEAM GUARDRAIL, TYPE A	FOOT	405	0	0	405
		63100070	TRAFFIC BARRIER TERMINAL, TYPE 5	EACH	4	0	0	4
		63200310	GUARDRAIL REMOVAL	FOOT	456	0	0	456
		66410410	CHAIN LINK FENCE TO BE RELOCATED	FOOT	184	0	0	184
		70101700	TRAFFIC CONTROL AND PROTECTION	LUMP SUM	1	0	0	1
B	*	70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	0	4	0	4
B		70300100	SHORT-TERM PAVEMENT MARKING	FOOT	124	0	0	124
B		70300625	TEMPORARY PAINT PAVEMENT MARKING LINE, 4"	FOOT	2476	0	0	2476
B		70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	2600	0	0	2600
B	*	70400100	TEMPORARY CONCRETE BARRIER	FOOT	414	0	0	414
B		70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	414	0	0	414
B		78000200	THERMOPLASTIC PAVEMENT MARKING LINE- 4"	FOOT	964	0	0	964
B	*	78000300	THERMOPLASTIC PAVEMENT MARKING LINE- 5"	FOOT	964	0	0	964
B	*	78001110	PAINT PAVEMENT MARKING LINE- 4"	FOOT	274	0	0	274
B	*	78001120	PAINT PAVEMENT MARKING LINE- 5"	FOOT	274	0	0	274
	*	78200400	GUARDRAIL REFLECTORS	EACH	17	0	0	17
B	*	A2006716	TREE, QUERCUS MACROCARPA (BUR OAK), 2" CALIPER, BALLED AND BURLAPPED	EACH	3	0	0	3
B	*	A2004216	TREE, FRAXINUS PENNSYLVANICA SUMMIT (SUMMIT GREEN ASH), 2" CALIPER, BALLED AND BURLAPPED	EACH	3	0	0	3
	*	X4066426	BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIX "D", N70	TON	174	0	0	174
	*	X4066616	BITUMINOUS CONCRETE BINDER COURSE, SUPERPAVE, IL 19.0L, N70	TON	741	0	0	741
	*	X4066770	LEVELING BINDER (MACHINE METHOD) SUPERPAVE, N70	TON	20	0	0	20
	*	X6700405	ENGINEER'S FIELD OFFICE, TYPE A (MODIFIED)	CAL MO.	8	0	0	8
	*	X7015050	PORTABLE CHANGEABLE MESSAGE SIGN	CAL MO.	8	0	0	8
	*	XX001302	ENERGY DISSIPATOR (SPECIAL)	EACH	4	0	0	4
	*	XX004878	MAINTENANCE OF TEMPORARY EROSION CONTROL SYSTEMS	LUMP SUM	1	0	0	1
	*	Z0000990	AGGREGATE FOR TEMPORARY ACCESS	TON	7	0	0	7
	*	Z0002600	BAR SPLICERS	EACH	0	0	333	333
	*	Z0013798	CONSTRUCTION LAYOUT	LUMP SUM	1	0	0	1
		XX006128	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL)	EACH	4	0	0	4

SHEET		INDEX OF SCHEDULES
SCH-1	1	SCHEDULE OF EARTH EXCAVATION/EMBANKMENT QUANTITIES
SCH-1	2	SCHEDULE OF SEEDING AND RELATED ITEMS
SCH-1	3	SCHEDULE OF PAVEMENT MATERIALS
SCH-1	4	SCHEDULE OF TOPSOIL STRIPPING
SCH-1	5	SCHEDULE OF TREES
SCH-1	6	SCHEDULE OF GUARDRAIL AND RELATED ITEMS
SCH-1	7	SCHEDULE OF SEWER PIPING
SCH-1	8	SCHEDULE OF PAVEMENT MARKINGS
SCH-1	9	SCHEDULE OF REMOVAL ITEMS
SCH-1	10	SCHEDULE OF EROSION CONTROL MEASURES

REVISIONS NAME	DATE
MCCLURE ENGINEERING	02/03/05

ILLINOIS DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: VERT. N.T.S. HORIZ. N.T.S.
DATE

DRAWN BY AJP
CHECKED BY CRF

SUM.dgn 2/4/2005 11:45:19 AM

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2661	00-00095-11-BR	LAKE	28	2
GENERAL NOTES AND SPECIAL SYMBOLS				
C-91-169-00	ILLINOIS			

CONTRACT NO.: 83789

GENERAL NOTES

1. ALL CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH THE FOLLOWING:

   A) THE STATE OF ILLINOIS "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" ADOPTED JANUARY 1, 2002 AND THE SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS, ADOPTED JANUARY 1, 2004.

   B) THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, THE MILLENIUM EDITION, DATED DECEMBER 28, 2001.

   C) THE DETAILS IN THESE PLANS AND THE SPECIAL PROVISIONS INCLUDED IN THE CONTRACT DOCUMENTS.

2. THE CONTRACTOR WILL BE REQUIRED TO RELOCATE OR REMOVE AND REPLACE ALL ROAD SIGNS WHICH INTERFERE WITH HIS CONSTRUCTION OPERATIONS, AND TO TEMPORARILY RESET ALL SUCH SIGNS DURING CONSTRUCTION OPERATIONS. THIS WORK WILL BE CONSIDERED AS INCIDENTAL TO THE CONTRACT.

   ALL WORK INVOLVING SIGNS SHALL BE GOVERNED BY THE FOLLOWING REQUIREMENTS:

   A) SIGNS SHALL NOT BE MOVED UNTIL PROGRESS OF WORK NECESSITATES IT.

   B) EVERY SIGN REMOVED MUST BE RE-ERECTED AT A TEMPORARY LOCATION IN A WORKMANLIKE MANNER AND BE VISIBLE TO TRAFFIC FOR WHICH IT IS INTENDED. ALL SUCH SIGNS MUST BE MAINTAINED STRAIGHT AND CLEAN FOR THE DURATION OF THE TEMPORARY SETTING.

   C) ALL SIGNS SHALL BE RE-ERECTED IN PERMANENT LOCATIONS AS THE ROADWAY IS COMPLETED. HORIZONTAL LOCATION FROM THE EDGE OF PAVEMENT SHALL BE AS DESIGNATED BY THE ENGINEER.

   D) ALL UNUSED SIGNS WILL BE RETURNED TO THE COUNTY.

   E) LONGER POSTS MAY BE REQUIRED AT SOME TEMPORARY OR PERMANENT SIGN LOCATIONS TO MAINTAIN PROPER SIGN ELEVATIONS.

3. WHERE SECTION OR SUBSECTION MONUMENTS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE THE MONUMENTS ARE REMOVED. THE CONTRACTOR SHALL CAREFULLY PRESERVE ALL PROPERTY MARKS AND MONUMENTS UNTIL THE OWNER, AUTHORIZED SURVEYOR OR AGENT HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION.

4. PUBLIC AND PRIVATE UTILITIES: THE CONTRACTOR WILL BE REQUIRED TO ASCERTAIN THE EXACT LOCATIONS OF UTILITIES AND EXERCISE CARE DURING HIS CONSTRUCTION OPERATIONS SO AS NOT TO DAMAGE THEM.

5. SEE SPECIAL PROVISIONS FOR CONSTRUCTION TRAILER, PAVEMENT MARKING PAINT AND TRAFFIC CONTROL AND PROTECTION.

6. DRAINAGE:

   A) THE COST OF CONNECTING EXISTING STORM SEWERS TO THE PROPOSED DRAINAGE SYSTEM AND CONNECTING PROPOSED STORM SEWER TO EXISTING STRUCTURES SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT; HOWEVER, THE NECESSARY PIPE USED WILL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR STORM SEWER OR PIPE CULVERT OF THE SIZE REQUIRED.

   B) ALL EXISTING DRAINAGE FACILITIES, HEADWALLS AND FENCES NO LONGER REQUIRED, IN THE OPINION OF THE ENGINEER, SHALL BE REMOVED. THE COST OF REMOVAL OF EXISTING PIPE CULVERTS, STORM SEWERS, DRAINAGE STRUCTURES, CONCRETE HEADWALLS, FENCING OR IMPROVEMENTS AND WHICH ARE NOT SHOWN TO BE REMOVED AS A SEPARATE PAY ITEM SHALL BE INCIDENTAL TO THE CONTRACT.

   ANY OF THESE MATERIALS CONSIDERED SUITABLE FOR SALVAGE BY THE ENGINEER SHALL BE STORED WITHIN THE RIGHT-OF-WAY FOR LATER REMOVAL BY THE LAKE COUNTY DIVISION OF TRANSPORTATION. UNUSABLE MATERIALS SHALL BE DISPOSED OF OUTSIDE THE LIMITS OF THE RIGHT-OF-WAY IN ACCORDANCE WITH SECTION 202.03 OF THE STANDARD SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER.

   THIS WORK WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED. TRENCH BACKFILL AND/OR PAVEMENT REPLACEMENT AND/OR AGGREGATE BASE COURSE TYPE A (SPECIAL) WILL BE PAID FOR WHEN THE WORK LIES UNDER EXISTING PAVEMENT AREAS.

   C) LOOSE MATERIAL DEPOSITED IN THE FLOW LINE OF DITCHES, GUTTERS, OR DRAINAGE STRUCTURES DURING THE CONSTRUCTION OPERATION SO THAT THE NATURAL FLOW OF WATER IS OBSTRUCTED SHALL BE REMOVED AT THE CLOSE OF EACH WORKING DAY. AT THE CONCLUSION OF THE CONSTRUCTION OPERATIONS, ALL DRAINAGE STRUCTURES SHALL BE FREE FROM ALL DIRT AND DEBRIS. THIS WORK WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCIDENTAL TO THE CONTRACT.

   D) FRAME ELEVATIONS GIVEN ON THE PLANS ARE ONLY TO ASSIST THE CONTRACTOR IN DETERMINING THE APPROXIMATE OVERALL HEIGHT OF THE STRUCTURE. FRAMES ON ALL NEW STRUCTURES WILL BE ADJUSTED TO THE FINAL ELEVATIONS OF THE AREA IN WHICH THEY ARE LOCATED AS PART OF THE STRUCTURE COST.

   E) UNLESS OTHERWISE NOTED, LOCATIONS SHOWN ON THE PLANS ARE EDGE OF PAVEMENT FOR STRUCTURES IN THE CURB, OTHERWISE IT IS TO THE CENTER OF STRUCTURES. FLAT TOPS AND CONES ARE TO BE TURNED SO THAT THE FRAME IS CLOSEST TO THE CENTER LINE OF THE ROAD, UNLESS OTHERWISE NOTED ON THE STRUCTURE IN THE PLANS. ALL FLAT TOPS AND CONES SHALL BE ECCENTRIC.

   F) BITUMINOUS OR CONCRETE PAVEMENT CROSSINGS SHALL NOT BE LEFT IN GRAVEL OVERNIGHT. THIS WILL INCLUDE THE MAIN ROAD, SIDE STREETS, PRIVATE ENTRANCES, COMMERCIAL ENTRANCES AND PARKING AREAS. TEMPORARY BITUMINOUS PATCHING AT THE CONTRACTOR'S EXPENSE MAY BE USED IN LIEU OF IMMEDIATE PAVEMENT REPLACEMENT.

   G) AT LOCATIONS WHERE THE PROPOSED STORM SEWER CROSSES OVER UTILITIES, A 4" STYROFOAM CUSHION SHALL BE PLACED UNDER THE STORM SEWER WHEN DIRECTED TO DO SO BY THE ENGINEER. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.

7. DRIVEWAYS OR ENTRANCES

   A) EXISTING BITUMINOUS, CONCRETE AND GRAVEL DRIVEWAYS AND ENTRANCES SHALL BE SURFACED TO THE RIGHT-OF-WAY WITH 2-1/2" BITUMINOUS SURFACE COURSE.

   B) EXISTING FIELD ENTRANCES SHALL BE BUILT UP IN PLACE TO THE RIGHT-OF-WAY WITH AGGREGATE SHOULDER MATERIAL.

   C) THE CONTRACTOR SHALL CONSTRUCT ALL COMMERCIAL AND PRIVATE DRIVEWAYS IN ACCORDANCE WITH THE PLANS AND/OR AS DIRECTED BY THE ENGINEER.

8. THE THICKNESS OF BITUMINOUS MIXTURES SHOWN IN THE PLANS IS NOMINAL. DEVIATIONS MAY OCCUR DUE TO IRREGULARITIES IN THE SURFACE OR BASE ON WHICH THE BITUMINOUS MIXTURE IS PLACED.

9. ANY REFERENCE TO STANDARDS IN THE PLANS OR SPECIAL PROVISIONS SHALL BE INTERPRETED TO BE THE DEPARTMENT'S LATEST REVISION OF THE STANDARD.

10. ALL ELEVATIONS SHOWN ON THESE PLANS ARE ON U.S.G.S. DATUM.

11. THE CONTRACTOR'S ATTENTION IS CALLED TO THE FACT THAT SOME QUANTITIES ARE GIVEN IN BOTH SUMMARY FORM AND ON THE PLAN SHEETS. CARE SHOULD BE TAKEN TO AVOID DUPLICATION OF QUANTITIES.

12. ALL DIMENSIONS SHOWN ARE TO THE EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.

SPECIAL SYMBOLS

(TR 1) TRENCH BACKFILL - CUBIC YARDS

[2] PAVEMENT REPLACEMENT - SQUARE YARDS

IDOT STANDARDS

000001-04	Standard Symbols, Abbreviations and Patterns
280001-02	Temporary Erosion Control Systems
420001-05	Pavement Joints
420401-05	Bridge Approach Pavement
421001-01	Bar Reinforcement for CRC Pavement
442201-01	Class D&D Patches
482001	Bituminous Shoulder Adjacent to Flexible Pavement
515001-02	Name Plate for Bridges
542401-00	Metal End Section for Pipe Culverts
609006-02	Bridge Approach Pavement (Drain Detail)
630001-05	Steel Plate Beam Guardrail
630201-05	PCC/Bituminous Stabilization of Steel Plate Beam Guardrail
631026-02	Traffic Barrier Terminals, Type 5 & 5A
635006-02	Reflector and Terminal Marker Placement
635011-01	Reflector Marker and Mounting Details
701321-09	Lane Closure 2L, 2W Bridge Repair with Barrier
702001-05	Traffic Control Devices
704001-02	Temporary Concrete Barrier
720006	Sign Panel Erection Details

LCDOT STANDARDS

LC 1005	Triangular Silt Dike
LC 1014	Shoulder Break at Traffic Barrier Terminal, Type 1 Special
LC 1019	Shoulder Break at Traffic Barrier Terminal, Type 1 Special
LC 4010	Bituminous Apron for Aggregate Field Entrance (Special)
LC 7002	Modified Standard 701501-02
LC 7004	Modified Standard 701606-02
LC 7006	Direction Indicator Barricades
LC 7008	Modified Standard 701011

REVISIONS	
NAME	DATE
MCCLURE ENGINEERING	02/03/05

ILLINOIS DEPARTMENT OF TRANSPORTATION

GENERAL NOTES AND SPECIAL SYMBOLS

SCALE: VERT. N.T.S.
HORIZ. N.T.S.

DATE

DRAWN BY AJP

CHECKED BY CRF

GEN.dgn 2/3/2005 8:17:36 AM

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2661	00-00095-11-BR	LAKE	28	4
SCHEDULE OF QUANTITIES				
C-91-169-00	ILLINOIS			

CONTRACT NO.: 83789

1

HUNT CLUB ROAD OVER MILL CREEK — QTO BY: AP
SCHEDULE OF EARTH EXCAVATION/EMBANKMENT QUANTITIES — CHECKED BY: CRF

		EARTH EXCAVATION			EARTH EMBANKEMENT		
STATION	DISTANCE (FT)	AREA (SQ FT)	AVG AREA (SQ FT)	VOLUME (CU YD)	AREA (SQ FT)	AVG AREA (SQ FT)	VOLUME (CU YD)
HUNT CLUB ROAD							
113+31.22		0.00			0.00		
	18.78		9.11	6.33		0.13	0.09
113+50.00		18.21			0.26		
	50.00		31.89	59.05		2.93	5.43
114+00.00		45.56			5.60		
	31.22		40.01	46.26		6.61	7.64
114+31.22		34.46			7.62		
	18.78		31.84	22.15		10.60	7.37
114+50.00		29.22			13.58		
	50.00		24.27	44.94		32.55	60.27
115+00.00		19.31			51.51		
	50.00		18.91	35.02		51.76	95.85
115+50.00		18.51			52.01		
	50.00		14.74	27.29		51.15	94.71
116+00.00		10.96			50.28		
	21.50		5.48	4.36		25.16	20.03
116+21.50		0.00			0.03		
116+98.50		0.08			0.00		
	1.50		0.21	0.01		44.59	2.48
117+00.00		0.34			89.18		
	50.00		0.41	0.75		67.01	124.09
117+50.00		0.47			44.84		
	50.00		0.46	0.84		41.00	75.92
118+00.00		0.44			37.15		
	50.00		1.11	2.06		31.61	58.53
118+50.00		1.78			26.06		
	50.00		4.41	8.16		14.17	26.23
119+00.00		7.03			2.27		
	50.00		5.62	10.41		1.14	2.10
119+50.00		4.21			0.00		
	1.00		2.11	0.08		0.00	0.00
119+51.00		0.00			0.00		
SUBTOTAL EARTH EXCAVATION				267.70	SUBTOTAL FILL		580.74

SUMMARY OF EARTHWORK ITEMS

ITEM	UNSUITABLE	EARTH EX.	ITEM	EMBANK.
CROSS SECTION SUBTOTAL		268	CROSS SECTION SUBTOTAL	581
ESTIMATED UNDER CUT (7% OF CUT QUANTITY)	19	19	COMPACTION FACTOR (20% OF FILL)	116
ESTIMATED TOPSOIL STRIPPING	203	203		
TOTALS	223	490		697
BALANCE (CUT - FILL) (+)EXCESS (-) BORROW		-430		

3

HUNT CLUB OVER MILL CREEK — QTO BY:AP
SCHEDULE OF PAVEMENT MATERIALS — CHECKED BY:CRF

BEGIN STATION	END STATION	OFFSET (LT/RT)	DESC	AREA (SQ FT)	AGG SHLDRS TY A, SPL (TON)	BS REM MILLING (SQ YD)	AREA REF CRACK (SQ YD)	BC SC SUPER MIX D, N70 (TON)	BC SC BINDER MIX D, N70 (TON)	LEVELING BINDER VARIABLE (TON)	BIT SHOULDER 6" (SQ YD)	BRIDGE APPROACH PAVEMENT (SQ YD)	PRIME COAT (SQ YD)
113+31.22	113+50.00	RT	AGG SHOULDERS	38	2								
113+31.22	113+92.25		GRIND & OVERLAY	1704		190	190	16					190
113+31.22	114+22.68	LT	AGG SHOULDERS	418	16								
113+31.22	115+91.50		SURFACE COURSE	7277				68					809
113+31.22	116+21.50	RT	BIT SHOULDER	2182							243		243
113+92.25	114+10.15		LEVELING BINDER	501			56			8			56
114+00.00		LT	FIELD ENTRANCE	373	14								
114+10.15	115+91.50		BINDER COURSE	5078					456				565
114+18.68	116+21.50	LT	BIT SHOULDER	1371							153		153
114+39.76	114+64.05	LT	AGG SHOULDERS	45	2								
115+91.50	116+21.50		APPROACH PAVEMENT	1233								137	
116+98.50	117+28.50		APPROACH PAVEMENT	1233								137	
116+98.50	118+78.99	RT	BIT SHOULDER	1231							137		137
116+98.50	119+37.90	LT	BIT SHOULDER	1732							193		193
117+28.50	118+66.67		BINDER COURSE	3869					217				430
117+28.50	119+50.00		SURFACE COURSE	6203				58					690
118+59.72	119+50.00	RT	AGG SHOULDERS	336	13								
118+66.67	118+90.97		LEVELING BINDER	680			76			10			76
118+90.97	119+50.00		GRIND & OVERLAY	1659		185	185	16					185
119+19.09	119+50.00	LT	AGG SHOULDERS	79	3								
SUBTOTAL					50	375	507	158	673	18	726	274	3727
10% CONTINGENCY					5	38	51	16	67	2	73	27	373
TOTAL					**55**	**413**	**558**	**174**	**740**	**20**	**799**	**302**	**4100**
BITUMINOUS MATERIALS (PRIME COAT) (0.4 GALLONS/SQ YD)													**1640**

4

HUNT CLUB ROAD OVER MILL CREEK — QTO BY: AP
SCHEDULE OF TOPSOIL STRIPPING — CHECKED BY: CRF

FROM	TO	LT/RT	TOPSOIL STRIP AREA (SQ YD)
113+31.22	116+00.00	LT	465
113+31.22	116+08.31	RT	630
117+17.00	119+25.00	LT	368
117+14.55	119+25.00	RT	367
SUBTOTAL (SQ YD)			1830
ASSUMED 4" THICKNESS			0.33
TOTAL (CU YD)			**203**

5

HUNT CLUB OVER MILL CREEK — QTO BY:AP
SCHEDULE OF TREES — CHECKED BY:CRF

STATION	OFFSET	LT/RT	BUR OAK	GREEN ASH
114+25.00	35.0	RT	1	
114+50.00	36.0	RT		1
114+75.00	36.0	RT	1	
115+00.00	36.0	RT		1
115+38.00	37.0	RT	1	
115+77.00	38.0	RT		1
TOTAL			**3**	**3**

7

HUNT CLUB OVER MILL CREEK — QTO BY:AP
SCHEDULE OF SEWER PIPING — CHECKED BY:CRF

BEGIN STATION	LT/RT	END STATION	LT/RT	METAL END SECTION, 12" (EACH)	METAL END SECTION, 15" (EACH)	TYPE D INLET BOX STD. 609006 (EACH)	PIPE DRAINS, CS, 12" (FOOT)	CONCRETE THRUST BLOCKS (EACH)	PIPE CULVERT, 15" (FT)
114+16.22	LT	114+46.22	LT						27
114+16.22	LT				1				
114+46.22	LT				1				
117+07.88	LT			1		1	19	1	
117+07.88	RT			1		1	16	1	
TOTAL				**2**	**2**	**2**	**35**	**2**	**27**

8

HUNT CLUB OVER MILL CREEK — QTO BY:AP
SCHEDULE OF PAVEMENT MARKINGS — CHECKED BY:CRF

BEGIN STATION	END STATION	PAVEMENT MARKING LINE: THERMOPLASTIC 4" (FOOT)	THERMOPLASTIC 5" (FOOT)	PAINT 4" (FOOT)	PAINT 5" (FOOT)	SHORT TERM 4" (FOOT)	TEMPORARY 4" (FOOT)	REMOVAL 4" (FOOT)
113+31.22	115+91.50	521	521			52	1042	1094
115+91.50	117+28.50			274	274	27	548	575
117+28.50	119+50.00	443	443			44	886	930
TOTAL		**964**	**964**	**274**	**274**	**124**	**2476**	**2600**

9

HUNT CLUB ROAD OVER MILL CREEK — QTO BY:AP
SCHEDULE OF REMOVAL ITEMS — CHECKED BY:CRF

BEGIN STATION	END STATION	LT/RT	GUARDRAIL REMOVAL (FOOT)	FENCE RELOCATION (FOOT)	TREE -15" (INCHES)	TREE +15" (INCHES)
113+98.74		RT			12	
113+99.65		RT			14	
114+00.59		RT			12	
114+16.74		RT				20
114+56.93		RT				20
114+69.51		RT				18
115+47.67	116+36.67	RT	89			
115+47.89	116+36.73	LT	89			
116+82.62	118+21.47	RT	139			
116+82.63	118+21.35	LT	139			
116+98.66	118+82.57	LT		184		
TOTAL			**456**	**184**	**38**	**58**

2

HUNT CLUB ROAD OVER MILL CREEK — QTO BY: AP
SCHEDULE OF SEEDING AND RELATED ITEMS — CHECKED BY: CRF

BEGIN STATION	END STATION	LT/RT	F&P TS 4" (SQ YD)	SEEDING CL 2A (ACRE)	SEEDING CL 3 (ACRE)	MULCH METHOD 2 (TON)	EROSION CONTROL FABRIC (SQ YD)
113+31.22	113+75.00	RT		0.019		0.038	
113+31.22	114+22.68	LT		0.031		0.062	
113+31.22	116+00.00	LT	419				
113+31.22	116+08.31	RT	491				
113+75.00	116+21.50	RT			0.088		397
114+39.76	114+75.00	LT		0.013		0.027	
114+75.00	116+11.50	LT			0.046		203
116+00.00	116+35.94	LT	54				
116+08.31	116+35.82	RT	46				
116+83.42	117+17.00	LT	52				
116+84.97	117+14.34	RT	51				
116+98.50	119+25.00	RT			0.067		295
117+14.55	119+25.00	RT	298				
117+08.50	119+25.00	LT			0.055		252
117+17.00	119+25.00	LT	251				
SUBTOTAL			1662	0.063	0.237	0.127	1147
10% CONTINGENCY			166	0.006	0.024	0.013	115
TOTAL			**1828**	**0.07**	**0.26**	**0.14**	**1262**

TOTAL SEEDING CLASS 2A, AND 3 (ACRE)	0.33
NITROGEN FERTILIZER @ 90.0 LBS/ACRE	34
PHOSPHORUS FERTILIZER @ 90.0 LBS/ACRE	34
POTASSIUM FERTILIZER @ 90 LBS/ACRE	34
SUPPLEMENTAL WATERING 2"(3 GAL/SY)/(1000 GAL/UNIT)	11

6

HUNT CLUB OVER MILL CREEK — QTO BY: AP
SCHEDULE OF GUARDRAIL AND RELATED ITEMS — CHECKED BY: CRF

BEGIN STATION	LT/RT	END STATION	LT/RT	SPBG TERMINAL TYPE 1, SPECIAL (EACH)	SPBG TERMINAL TYPE 5 (EACH)	SPBG (FT)
113+90.00	RT			1		
114+40.00	RT	116+08.25	RT			168
114+98.00	LT			1		
115+48.00	LT	116+08.25	LT			60
115+90.00	LT	116+21.50	LT		1	
115+90.00	RT	116+21.50	RT		1	
116+98.50	LT	117+30.00	LT		1	
116+98.50	RT	117+30.00	RT		1	
117+11.75	LT	118+30.00	LT			118
117+11.75	RT	117+71.00	RT			59
118+21.00	RT			1		
118+80.00	LT			1		
TOTAL				**4**	**4**	**405**
GUARDRAIL REFLECTORS = 25/FOOT						**17**

10

HUNT CLUB ROAD OVER MILL CREEK — QTO BY:AP
SCHEDULE OF EROSION CONTROL MEASURES — CHECKED BY:CRF

BEGIN STATION	END STATION	LT/RT	PERIMETER EROSION BARRIER (FOOT)	TEMP DITCH CHECK, SPECIAL (EACH)
113+31.22	114+22.68	LT	92	
113+31.22	116+35.82	RT	320	
114+00.00		RT		1
114+39.76	116+34.81	LT	208	
114+50.00		LT		1
115+00.00		RT		1
115+50.00		LT		1
116+00.00		RT		1
116+83.42	119+25.00	LT	257	
116+84.97	119+25.00	RT	265	
TOTAL			**1142**	**5**

REVISIONS	
NAME	DATE
MCCLURE ENGINEERING	02/03/05

ILLINOIS DEPARTMENT OF TRANSPORTATION

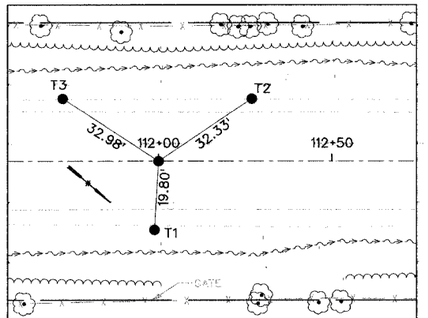
SCHEDULE OF QUANTITIES

SCALE: VERT. N.T.S. HORIZ. N.T.S.
DATE
DRAWN BY AJP
CHECKED BY CRF

SCH.dgn 2/4/2005 11:32:01 AM

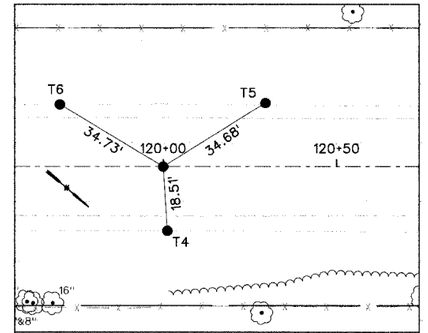
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2661	00-00095-I-BR	LAKE	28	5
ALIGNMENT, TIE AND BENCHMARK PLAN				
C-91-169-00	ILLINOIS			

CONTRACT NO.: 83789



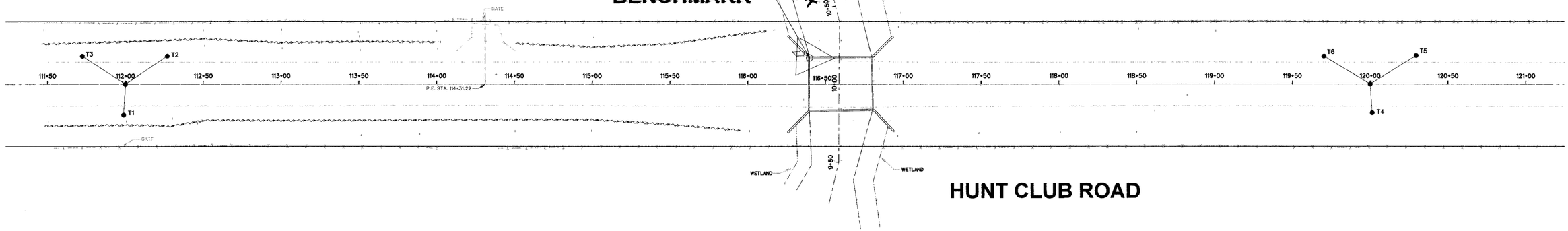
	NORTHING	EASTING	ELEVATION	DESCRIPTION
P.O.T. STA. 112+00	4633.86	5033.09		PK NAIL
TIE				
T1	4633.63	5052.90	686.01	SPIKE
T2	4659.83	5013.84		SPIKE
T3	4605.37	5016.49		SPIKE

SCALE 1" = 20'



	NORTHING	EASTING	ELEVATION	DESCRIPTION
P.O.T. STA. 120+00	5432.92	4994.42		PK NAIL
TIE				
T4	5435.01	5012.81	682.63	SPIKE
T5	5461.50	4974.75		SPIKE
T6	5402.31	4978.04		SPIKE

SCALE 1" = 20'



CONTROL / BENCHMARK DATA

PROJECT BENCHMARK — CHISLED "□" ON RIGHT UPSTREAM WINGWALL
STA 116+39.7, 17' LT
EL. 686.12

REVISIONS	
NAME	DATE
MCCLURE ENGINEERING	02/03/05

ILLINOIS DEPARTMENT OF TRANSPORTATION

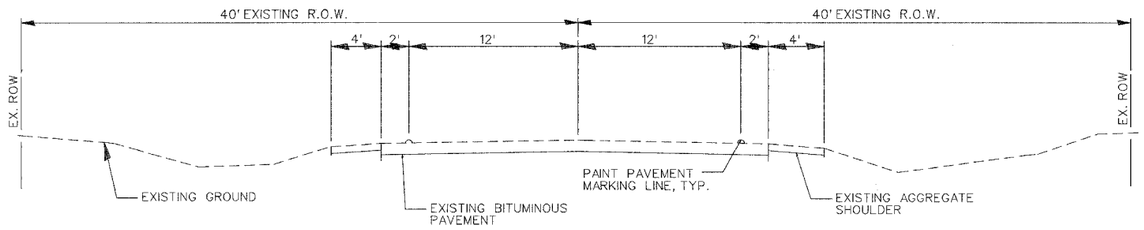
ALIGNMENT, TIE AND BENCHMARK PLAN

SCALE: VERT. 1" = 30'
HORIZ. 1" = 30'
DATE

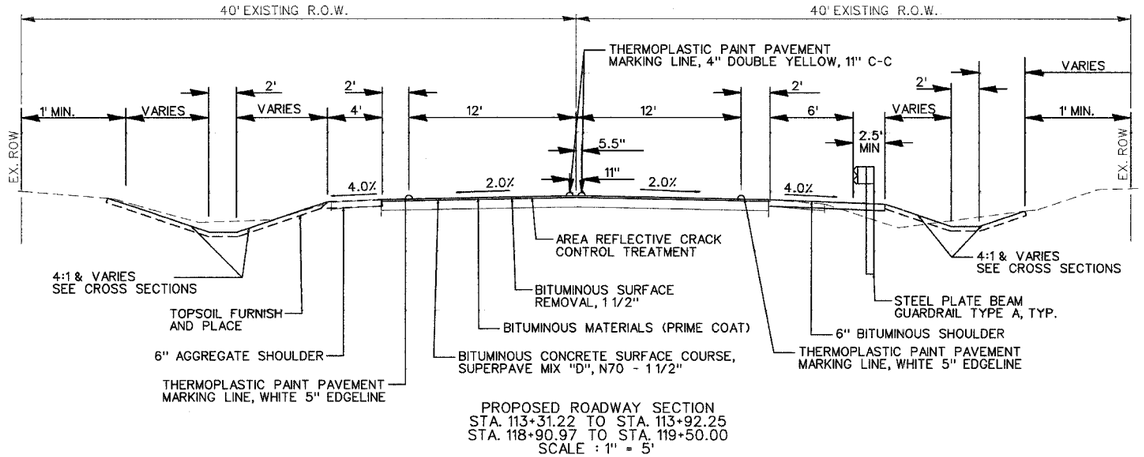
DRAWN BY AJP
CHECKED BY CRF

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2661	00-00095-1-BR	LAKE	28	6
C-91-169-00	ILLINOIS			

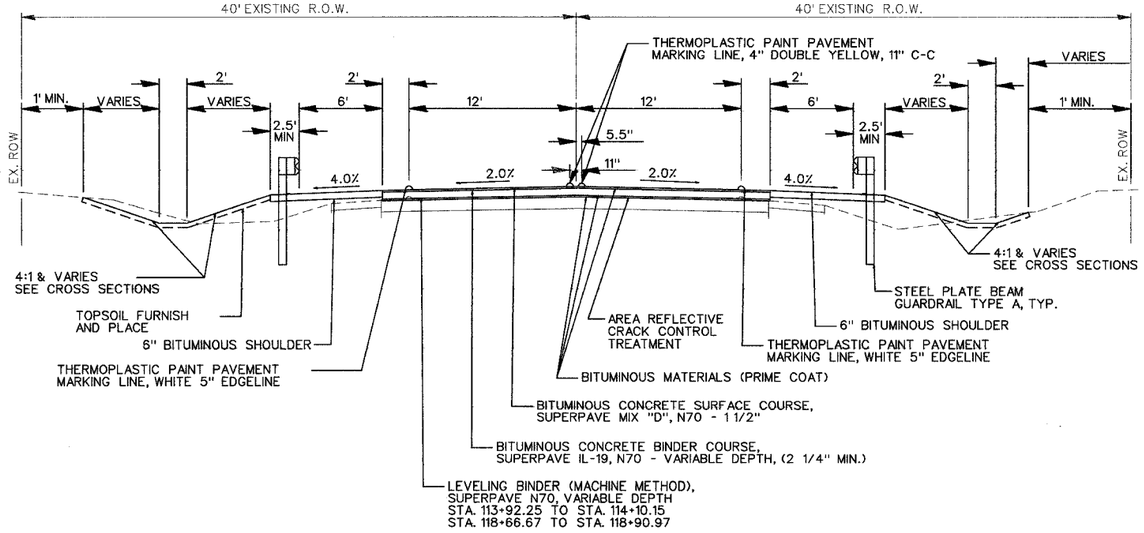
CONTRACT NO.: 83789



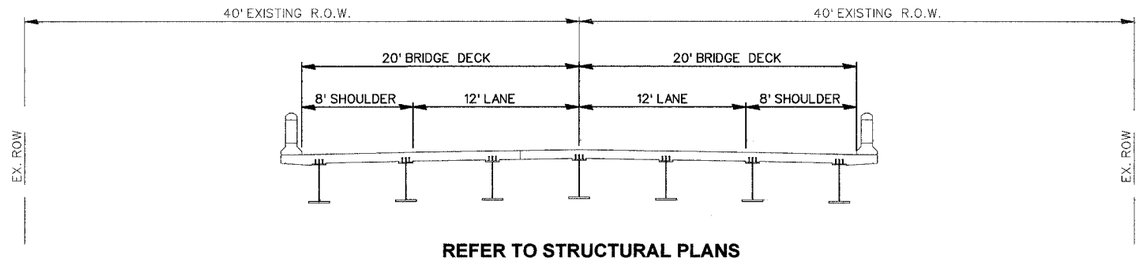
EXISTING ROADWAY SECTION
SCALE : 1" = 5'



PROPOSED ROADWAY SECTION
STA. 113+31.22 TO STA. 113+92.25
STA. 118+90.97 TO STA. 119+50.00
SCALE : 1" = 5'



PROPOSED ROADWAY SECTION
STA. 113+92.25 TO STA. 116+21.50
STA. 116+98.50 TO STA. 118+90.97
SCALE : 1" = 5'



REFER TO STRUCTURAL PLANS

MILL CREEK

PROPOSED BRIDGE SECTION
STA. 116+21.50 TO STA. 116+98.50
SCALE : 1" = 5'

STRUCTURAL DESIGN TRAFFIC: YEAR 2005

PV = 16,501 SU = 695 MU = 174

ROAD/STREET CLASSIFICATION: CLASS 2

PERCENT OF STRUCTURAL DESING TRAFFIC IN DESIGN LANE:

P = 95% S = 4% M = 1%

TRAFFIC FACTOR: ACTUAL TF = 1.47 AC TYPE = PG 64-22

MINIMUM TF =

PG GRADE: BINDER = 64.22 (N70) SURFACE = 64.22 (N70)

SUBGRADE SUPPORT RATING:

SSR = POOR (STA. 113+31 TO 119+50)

ITEM	UNIT	AC TYPE	VOIDS	MAX RAP %	LIFT THICKNESS
BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIX "D", N70	TON	PG 64-22	4% @ 70 Gyr.	10	1-1/2"
BITUMINOUS CONCRETE BINDER COURSE, SUPERPAVE, IL-19, N70	TON	PG 64-22	4% @ 70 Gyr.	15	2-1/4"
LEVELING BINDER (MACHINE METHOD), SUPERPAVE N70	TON	PG 64-22	4% @ 70 Gyr.	10	3/4" - 2"

REVISIONS NAME	DATE
MCCLURE ENGINEERING	02/03/05

ILLINOIS DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS

SCALE: VERT. 1" = 5'
HORIZ. 1" = 5'

DATE

DRAWN BY AJP

CHECKED BY CRF

TS.dgn 2/3/2005 8:19:16 AM

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2661	00-00095-4-BR	LAKE	28	7
EROSION AND SEDIMENT CONTROL PLAN				
C-91-169-00	ILLINOIS			

CONTRACT NO.: 83789

EROSION CONTROL PLAN
& STORMWATER POLLUTION PREVENTION PLAN

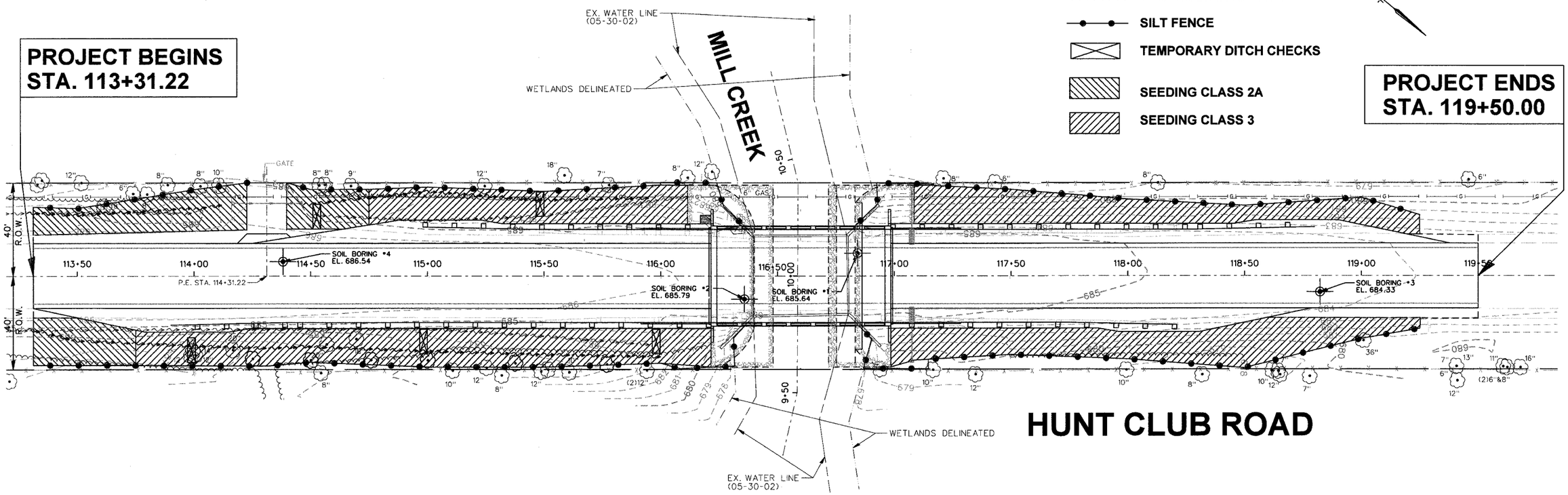
THIS PROJECT DISTURBS 0.73 ACRES OF TOTAL LAND AREA. COMPLIANCE WITH THE NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES) STORMWATER PERMIT IS NECESSARY IF A PROJECT DISTURBS 1 OR MORE ACRES OF TOTAL LAND AREA; AN NPDES STORMWATER PERMIT WILL NOT BE REQUIRED FOR THIS PROJECT.

LEGEND

- EXISTING DITCH LINE
- PROPOSED DITCH LINE
- SILT FENCE
- TEMPORARY DITCH CHECKS
- SEEDING CLASS 2A
- SEEDING CLASS 3

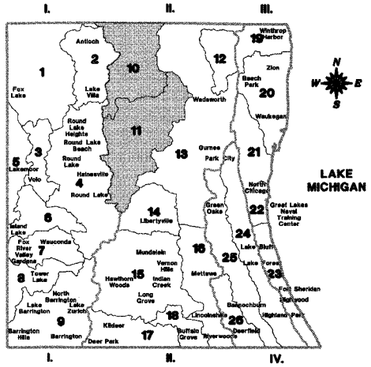
PROJECT BEGINS STA. 113+31.22

PROJECT ENDS STA. 119+50.00



HUNT CLUB ROAD

DRAINAGE BASINS OF LAKE COUNTY



I. FOX RIVER WATERSHED
1. Upper Fox River
2. Sequoit Creek
3. Fish Lake Drain
4. Squaw Creek
5. Lower Fox River
6. Mutton Creek
7. Slocum Lake Drain
8. Tower Lake Drain
9. Flint Creek

II. DES PLAINES RIVER WATERSHED
10. North Mill Creek
11. Mill Creek
12. Newport Drainage Ditch
13. Upper Des Plaines River
14. Bull Creek
15. Indian Creek
16. Lower Des Plaines River
17. Buffalo Creek
18. Aptakisic Creek

III. LAKE MICHIGAN WATERSHED
19. Kellogg Creek
20. Dead River
21. Waukegan River
22. Pettibone Creek
23. Bluff/Ravine

IV. CHICAGO RIVER WATERSHED
24. Skokie River
25. Middle Fork
26. West Fork

GENERAL NOTES FOR EROSION CONTROL

A. SOIL DISTURBANCE SHALL BE CONDUCTED IN SUCH A MANNER AS TO MINIMIZE EROSION. SOIL STABILIZATION MEASURES SHALL CONSIDER THE TIME OF YEAR, SITE CONDITIONS AND THE USE OF TEMPORARY OR PERMANENT MEASURES.

B. SOIL EROSION AND SEDIMENT CONTROL FEATURES SHALL BE CONSTRUCTED PRIOR TO THE COMMENCEMENT OF HYDROLOGIC DISTURBANCE OF UPLAND AREAS.

C. DISTURBED AREAS SHALL BE STABILIZED WITH TEMPORARY OR PERMANENT MEASURES WITHIN 14 CALENDAR DAYS OF THE END OF ACTIVE HYDROLOGIC DISTURBANCE, OR REDISTURBANCE.

D. AREAS OR EMBANKMENTS HAVING SLOPES GREATER THAN OR EQUAL TO 3H:1V, AND APPROVED BY THE ENFORCEMENT OFFICER, SHALL BE STABILIZED WITH SOD, MAT, BLANKET OR FABRIC IN COMBINATION WITH SEEDING.

E. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION IS ACHIEVED OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED.

F. ALL TEMPORARY AND PERMANENT EROSION CONTROL MEASURES MUST BE MAINTAINED AND REPAIRED AS NEEDED. THE PROPERTY OWNER SHALL BE ULTIMATELY RESPONSIBLE FOR MAINTENANCE AND REPAIR.

G. A STABILIZED MAT OF AGGREGRATE UNDERLAIN WITH FILTER CLOTH (OR OTHER APPROPRIATE MEASURE) SHALL BE LOCATED AT ANY POINT WHERE TRAFFIC WILL BE ENTERING OR LEAVING A CONSTRUCTION SITE TO OR FROM A PUBLIC RIGHT-OF-WAY, STREET, ALLEY OR PARKING AREA. ANY SEDIMENT OR SOIL REACHING AN IMPROVED PUBLIC RIGHT-OF-WAY, STREET, ALLEY OR PARKING AREA SHALL BE REMOVED BY SCRAPING OR STREET CLEANING AS ACCUMULATIONS WARRANT AND TRANSPORTED TO A CONTROLLED SEDIMENT DISPOSAL AREA.

H. SOIL STOCKPILES SHALL NOT BE LOCATED IN A FLOOD PRONE AREA OR A DESIGNATED BUFFER PROTECTING WATERS OF THE UNITED STATES OR ISOLATED WATERS OF LAKE COUNTY.

I. IF DEWATERING SERVICES ARE USED, ADJOINING PROPERTIES AND DISCHARGE LOCATIONS SHALL BE PROTECTED FROM EROSION. DISCHARGES SHALL BE ROUTED THROUGH AN EFFECTIVE SEDIMENT CONTROL MEASURE (e.g. SEDIMENT TRAP, SEDIMENT BASIN, OR OTHER APPROPRIATE MEASURE.

J. THE EROSION CONTROL MEASURES INDICATED ON THE PLANS ARE THE MINIMUM REQUIREMENTS. ADDITIONAL MEASURES MAY BE REQUIRED, AS DIRECTED BY THE ENGINEER OR GOVERNING AGENCY.

K. PERIMETER EROSION BARRIER SHALL BE INSTALLED AT LOCATIONS SPECIFIED IN THE PLANS AT 1 FOOT OR MORE OUTSIDE THE TOE OF SLOPE OR INSIDE THE RIGHT-OF-WAY WHICHEVER IS CLOSER TO THE CENTERLINE, OR AS DIRECTED BY THE ENGINEER PRIOR TO THE START OF ANY EARTHWORK, CULVERT, OR STORM SEWER CONSTRUCTION.

L. THE PERIMETER EROSION BARRIER SHALL REMAIN IN PLACE UNTIL ALL DISTURBED AREAS HAVE BEEN STABILIZED WITH VEGETATION. AT THIS TIME, THE PERIMETER EROSION BARRIER SHALL BE REMOVED AND THE AREAS DAMAGED BY THE FENCE INSTALLATION RESTORED.

M. THE INSTALLATION, REMOVAL AND THE RESTORATION OF THE AREA DISTURBED BY THE PERIMETER EROSION BARRIER INSTALLATION IS INCLUDED IN THE PAY ITEM PERIMETER EROSION BARRIER.

N. THE DITCH CHECKS, SPECIAL SHALL BE INSTALLED AS SHOWN ON THE SPECIAL DETAIL LC1005 AS GRADING PROGRESSES THROUGH THE PROJECT.

O. UNLESS OTHERWISE DESIGNATED, ALL RESTORATION AREAS SHALL BE SEEDED WITH CLASS 4A AND COVERED WITH EROSION CONTROL BLANKET.

APPLICABLE STANDARDS, SPECIFICATIONS, AND SPECIAL PROVISIONS FOR EROSION AND SEDIMENT CONTROL

SPECIAL PROVISION FOR TEMPORARY DITCH CHECK
SPECIAL PROVISION FOR PERIMETER EROSION BARRIER
SPECIAL PROVISION FOR EROSION CONTROL FABRIC
SPECIAL PROVISION FOR SEEDING
IDOT HIGHWAY STANDARD 280001
LCDOT STANDARD DETAIL LC1005

SEQUENCE OF EROSION CONTROL OPERATIONS

1. INSTALL PERIMETER EROSION BARRIER AND WETLAND PROTECTION BARRIERS AT LOCATIONS SPECIFIED IN THE PLANS PRIOR TO THE START OF ANY EARTHWORK.
2. BEGIN CONSTRUCTION AND INSTALL TEMPORARY DITCH CHECKS AS WORK PROGRESSES.
3. PLACE SOD AT THE SIDE SLOPES OF THE CREEK AS SHOWN TO ELIMINATE THE EROSION AT THESE AREAS.
4. THE TEMPORARY DITCH CHECKS ARE TO REMAIN IN PLACE UNTIL THE AREA IS STABILIZED WITH SEEDING AND BLANKET.
5. SEEDING SHALL BE COMPLETED IN STAGES AS SECTIONS OF THE CONSTRUCTION ARE COMPLETED AS DEFINED IN THE SPECIAL PROVISIONS OR WHEN THE CONSTRUCTION WILL BE SHUT DOWN FOR THE SEASON. ALSO ANY STOCKPILES OF DIRT TO BE USED IN THE NEXT SEASON SHALL BE SEEDED WITH TEMPORARY SEED AND MULCHED.
6. WHEN THE PROJECT HAS BEEN STABILIZED WITH VEGETATION THE PERIMETER EROSION BARRIER SHALL BE REMOVED AND THE AREAS DAMAGED BY THE FENCE INSTALLATION RESTORED.

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

EROSION AND SEDIMENT CONTROL PLAN

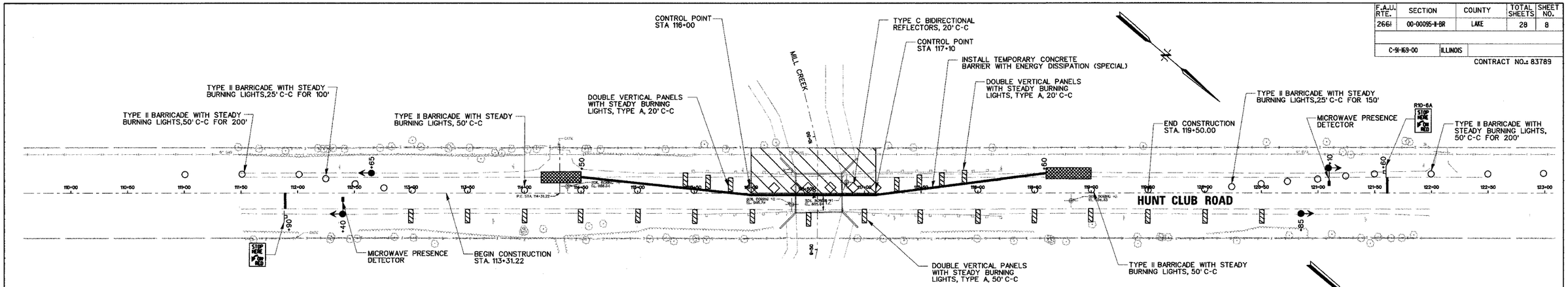
SCALE: VERT. 1" = 20'
HORIZ. 1" = 20'
DATE

DRAWN BY AJP
CHECKED BY CRF

ESC.dgn 12/30/2004 1:45:56 PM

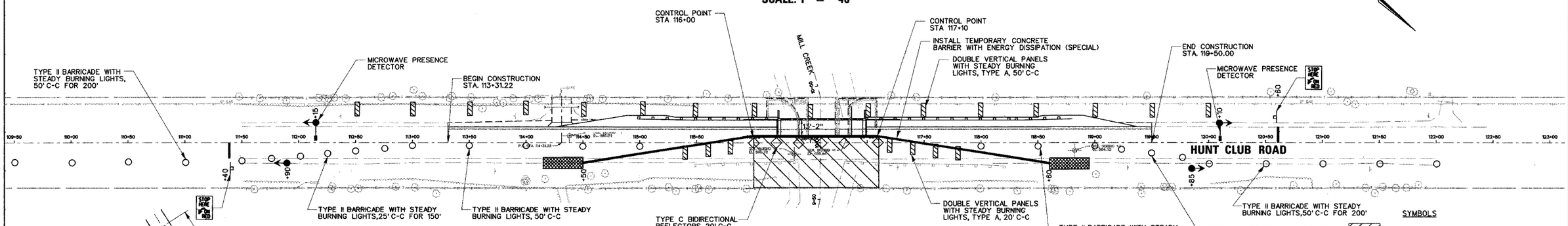
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2661	00-00095-11-BR	LAKE	28	8
C-91-169-00	ILLINOIS			

CONTRACT NO.: 83789



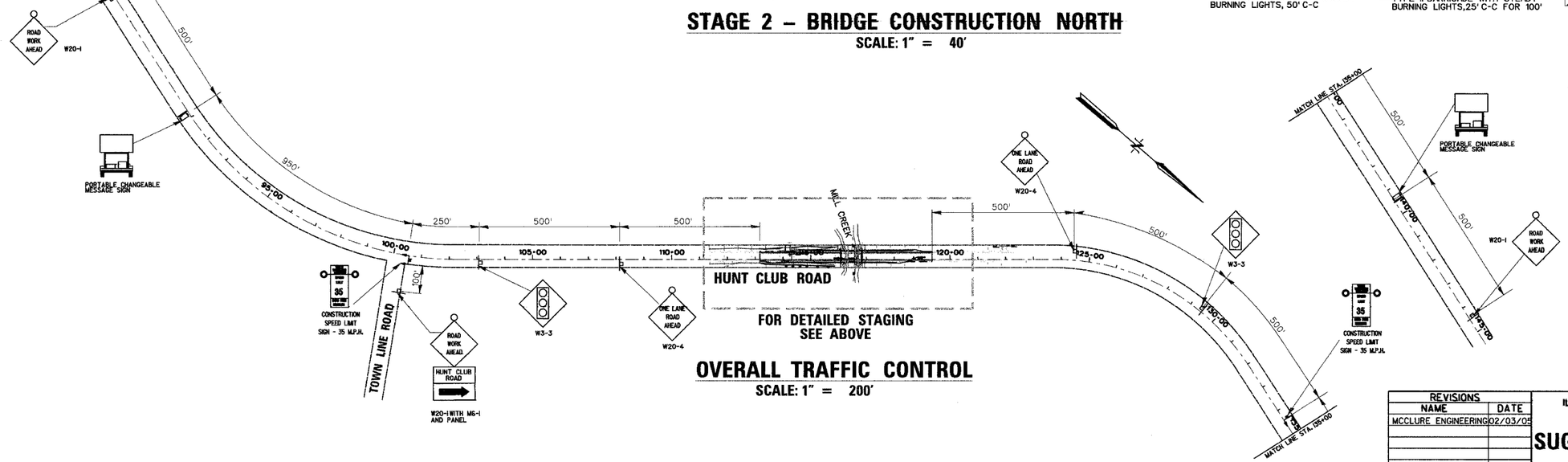
STAGE 1 – BRIDGE CONSTRUCTION SOUTH

SCALE: 1" = 40'



STAGE 2 – BRIDGE CONSTRUCTION NORTH

SCALE: 1" = 40'



OVERALL TRAFFIC CONTROL

SCALE: 1" = 200'

SYMBOLS

- WORK AREA
- TYPE II BARRICADE, NON METALLIC
- SIGN WITH PERMANENT SUPPORT
- ARROW BOARD
- BARRICADE TYPE II NON METALLIC WITH TYPE A FLASHING LIGHT
- DOUBLE VERTICAL PANEL WITH STEADY BURNING LIGHT, TYPE A
- TRAFFIC SIGNAL
- TYPE C BIDIRECTIONAL REFLECTOR
- MICROWAVE PRESENCE DETECTOR
- ENERGY DISSIPATION (SPECIAL)

REVISIONS	
NAME	DATE
MCCLURE ENGINEERING	02/03/05

ILLINOIS DEPARTMENT OF TRANSPORTATION

SUGGESTED STAGED TRAFFIC CONTROL PLAN

SCALE: VERT. 1" = 40'
HORIZ. 1" = 40'

DRAWN BY AJP
CHECKED BY CRF
DATE

Sstc-1.DGN 2/3/2005 8:32:05 AM

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2661	00-00095-11-BR	LAKE	28	9
PLAN & PROFILE STA. 113+50.00 TO STA.120+00.00				
C-91-169-00	ILLINOIS			

CONTRACT NO.: 83789

PROJECT BEGINS STA. 113+31.22

PROJECT ENDS STA. 119+50.00

HUNT CLUB ROAD

COORDINATE REPLACEMENT OF EXISTING GAUGING STATION AND PLATFORM WITH USGS

STA 116+21.50, 20' LT END TRAFFIC BARRIER TERMINAL TYPE 5

STA 116+08.25, 20' LT END STEEL PLATE BEAM GUARDRAIL

STA 114+98.05, 21' LT PROPOSED TRAFFIC BARRIER TERMINAL TYPE 1, SPECIAL, TYP. (SEE NOTE)

STA 114+16.22, 31' LT 15" FES INV. 684.03

PROPOSED AGGREGATE SHOULDER

STA 114+46.22, 31' LT 15" FES INV. 683.73

GATE

EX. R.O.W.

STA 115+48.05 20' LT BEGIN STEEL PLATE BEAM GUARDRAIL

MILL CREEK

EX. WATER LINE (05-30-02)

WETLANDS DELINEATED

STA 116+98.50, 20' LT BEGIN TRAFFIC BARRIER TERMINAL TYPE 5

RELOCATE FENCE STA. 116+98.66 - STA. 118+82.57

STA. 117+07.54, 39' LT 12" CS FES INV. 677.78

19LF PIPE DRAINS, CS 12"

STA. 117+07.54, 20' LT TYPE D INLET BOX, STANDARD 609006 E/P 686.83

118+80.03, 21' LT PROPOSED TRAFFIC BARRIER TERMINAL TYPE 1, SPECIAL, TYP. (SEE NOTE)

STA 117+11.75, 20' LT BEGIN STEEL PLATE BEAM GUARDRAIL

118+30.03, 20' LT END STEEL BEAM GUARDRAIL

PROPOSED AGGREGATE SHOULDER

BITUMINOUS SHOULDER

+92.25

+91.50

+28.50

15" CMP 27 LF @ 1.0%

SOIL BORING #4 EL. 686.54

SOIL BORING #3 EL. 685.79

SOIL BORING #1 EL. 685.64

SOIL BORING #3 EL. 684.33

P.E. STA. 114+31.22

STA. 114+75, 36' RT PROPOSED BUR OAK

EX. AGGREGATE SHOULDER

EX. BITUMINOUS PAVEMENT

STEEL PLATE BEAM GUARDRAIL, TYP.

BITUMINOUS OVERLAY

BITUMINOUS SHOULDER

40.0' EX. R.O.W.

+90.97

PROPOSED AGGREGATE SHOULDER

STA. 116+00, 36' RT PROPOSED GREEN ASH

PROPOSED BRIDGE REFER TO STRUCTURAL DRAWINGS

REMOVE GUARDRAIL

STA. 113+90.00, 21' RT PROPOSED TRAFFIC BARRIER TERMINAL TYPE 1, SPECIAL, TYP. (SEE NOTE)

STA. 114+00.59, 32-34' RT REMOVE TREES

STA. 114+16.74, 32' RT REMOVE TREE

STA. 114+25, 35' RT PROPOSED BUR OAK

STA. 114+40.00 20' RT BEGIN STEEL PLATE BEAM GUARDRAIL

STA. 114+56.93, 29' RT REMOVE TREE

STA. 114+50, 36' RT PROPOSED GREEN ASH

STA. 115+38, 37' RT PROPOSED BUR OAK

STA. 114+69.51, 27' RT REMOVE TREE

STA. 115+77, 38' RT PROPOSED GREEN ASH

STA 116+08.25, 20' RT END STEEL PLATE BEAM GUARDRAIL

STA 116+21.50, 20' RT END TRAFFIC BARRIER TERMINAL TYPE 5

STA. 116+21.50 ABUTMENT

HUNT CLUB ROAD BRIDGE OVER MILL CREEK REFER TO STRUCTURAL PLANS

STA. 116+98.50 ABUTMENT

STA. 117+11.75', 20' RT BEGIN STEEL PLATE BEAM GUARDRAIL

STA. 117+07.54, 37' RT 12" CS FES INV. 679.73

19LF PIPE DRAINS, CS 12"

STA. 117+07.54, 20' RT TYPE D INLET BOX, STANDARD 609006 E/P 686.83

STA 116+98.50, 20' RT BEGIN TRAFFIC BARRIER TERMINAL TYPE 5

STA. 117+71.03 20' RT END STEEL PLATE BEAM GUARDRAIL

STA 118+21.03, 21' RT PROPOSED TRAFFIC BARRIER TERMINAL TYPE 1, SPECIAL, TYP. (SEE NOTE)

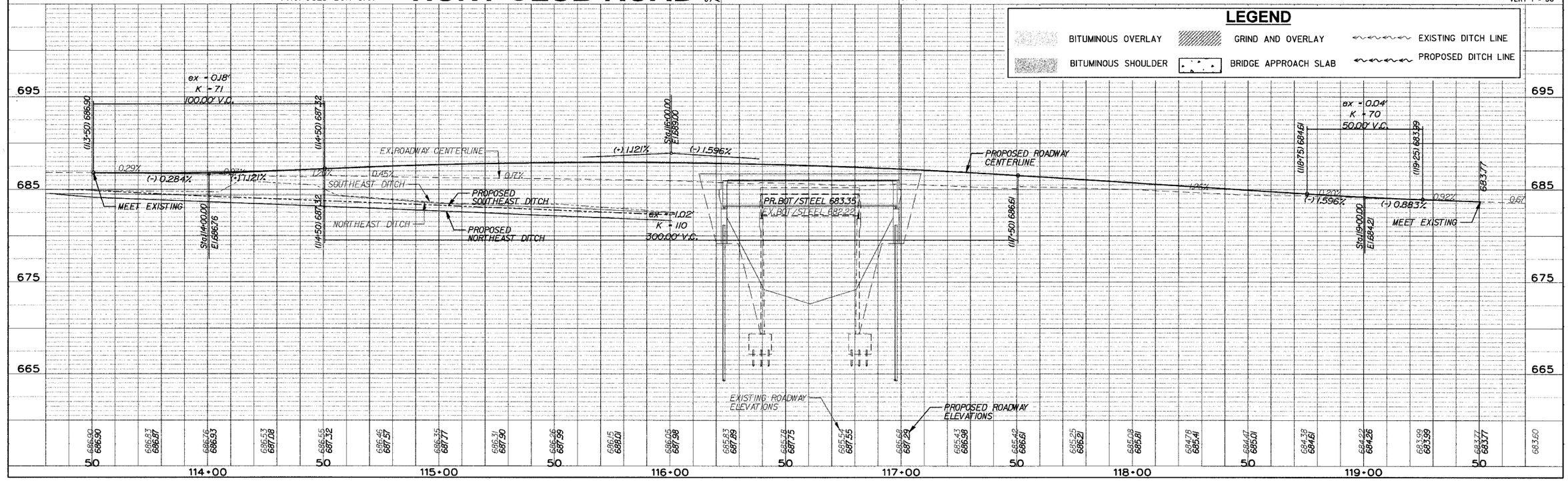
* NOTE: SEE DETAILS LC1018 AND LC1019

SCALE: HORIZ 1" = 20'
VERT 1" = 50'

LEGEND

BITUMINOUS OVERLAY — GRIND AND OVERLAY — EXISTING DITCH LINE

BITUMINOUS SHOULDER — BRIDGE APPROACH SLAB — PROPOSED DITCH LINE



MCCLURE ENGINEERING 02/03/05

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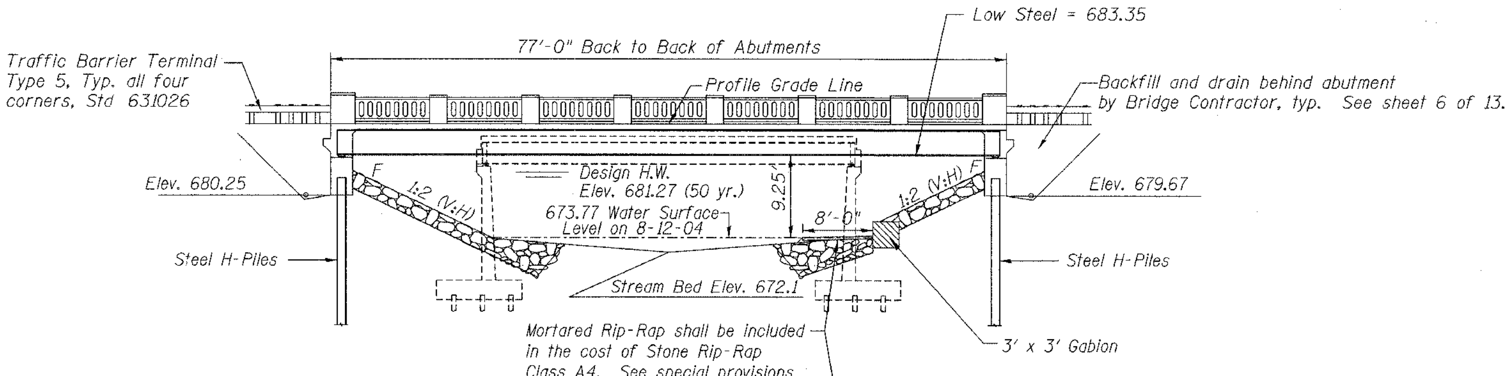
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2661	00-00095-11-BR	LAKE	28	10
GENERAL PLAN AND ELEVATION				
C-91-169-00	ILLINOIS			

CONTRACT NO.: 83789

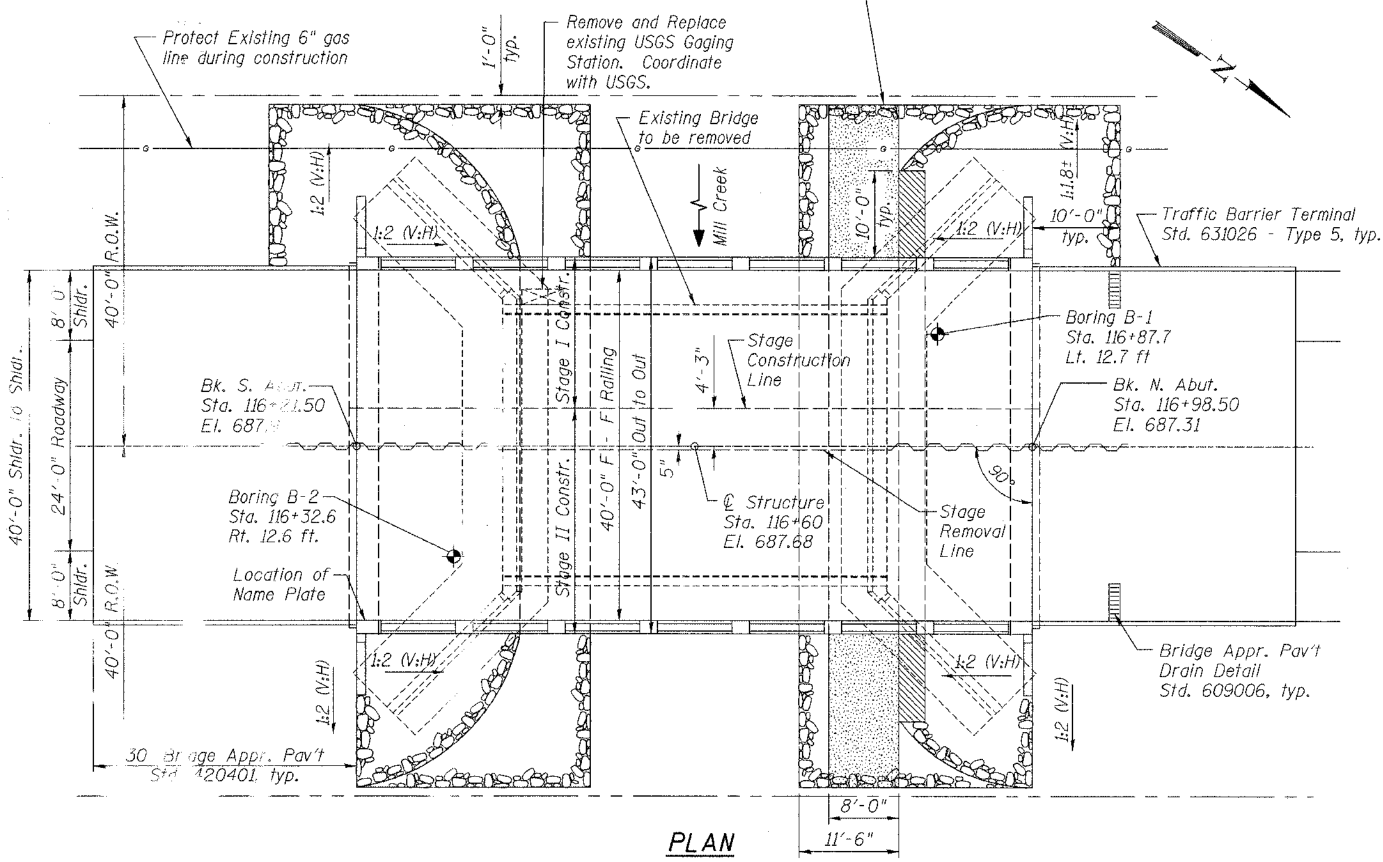
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BENCH MARK:
Chisled "□" in the Southwest wingwall of S.N. 049-3016
Elevation = 686.12 Sta. 116+39.7, 17' Left

EXISTING STRUCTURE:
S.N. 049-3016, Estimated to have been constructed in 1949 consists of one steel beam span with 7" concrete deck and vertical concrete abutments. The structure length is approximately 42 ft. Bk. to Bk. of abutments. The contractor is to remove the existing structure as required. (No Salvage) The road shall be kept open to traffic at all times of construction by means of staged construction.



ELEVATION



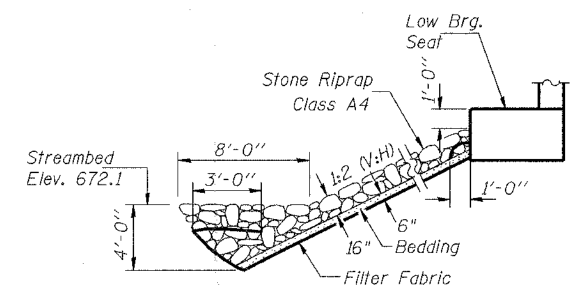
PLAN

GENERAL NOTES

Reinforcement bars shall conform to the requirements of AASHTO M31, M42 or M53 Grade 60.
Layout of slope protection system may be varied in the field to suit ground condition as directed by the Engineer.
The Contractor shall drive one (1) steel HP12 x 53 test pile in a permanent location at both Abutments as directed by the Engineer before ordering the remainder of piles.
Fasteners shall be high strength bolts. Bolts $^7/_8$"φ, open holes $^{15}/_{16}$"φ, unless otherwise noted.
Calculated mass of Structural Steel = 75,780 lbs (M270 Grade 50)
The main load carrying member components subject to tensile stress shall conform to the Supplemental Requirements for Notch Toughness Zone 2. These components are the tension flanges and web.
Field welding of construction accessories will not be permitted to the bottom flange of girders. Field welding in other areas will be permitted only when approved by the Engineer.
The Inorganic zinc rich primer / Acrylic / Acrylic Paint System shall be used for shop and field painting of new structural steel except where otherwise noted. The color of the final finish coat for all interior steel surfaces shall be gray, Munsell No. 5B 7/1. The color of the final finish coat for the exterior and bottom flange of the fascia beams shall be Blue, Munsell No. 10B-3/6. See Special Provision for "Cleaning and Painting New Metal Structures".
The embankment configuration shown shall be the minimum embankment that must be constructed prior to construction of the abutments.
Anchor bolts shall be set before bolting diaphragms over supports.
All exposed concrete edges shall have a $^3/_4$" x 45 deg. chamfer, except where shown otherwise. Chamfer on vertical edges shall be continued a minimum of one foot below finished ground level.
Do not scale dimensions for construction, scale applies only to full size drawings.
No construction joints except those shown on the plans will be allowed unless ordered by the Engineer.
After the girders are set, all elevations for determining fillet heights shall be taken at one time.
Contractor to protect all utilities during construction. See Plan and Profile sheet in Roadway Plans for further information.
Excavation behind existing abutment walls shall be done before removing the existing superstructure. The Contractor shall sawcut the existing abutments at the stage removal line before Stage I removal.
all construction joints shall be bonded.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Channel Excavation	Cu. Yd.		898	898
Porous Granular Embankment	Cu. Yd.		189	189
Stone Riprap, Class A4	Sq. Yd.		506	506
Filter Fabric for use w/Riprap	Sq. Yd.		527	527
Gabions	Cu. Yd.		21	21
Removal of Existing Structure	Each	1		1
Structure Excavation	Cu. Yd.		225	225
Concrete Structures	Cu. Yd.		35.4	35.4
Concrete Superstructure	Cu. Yd.	112.3		112.3
Bridge Deck Grooving	Sq. Yd.	325		325
Concrete Handrail	Cu. Yd.	15.6		15.6
Protective Coat	Sq. Yd.	419		419
Furnishing & Erecting Structural Steel	Pound	75,780		75,780
Stud Shear Connectors	Each	1134		1134
Reinforcement Bars, Epoxy Coated	Pound	25,110	3580	28,690
Furnishing Steel Piles - HP12x53	Feet		864	864
Driving Steel Piles	Feet		864	864
Test Piles Steel HP12x53	Each		2	2
Temporary Sheet Piling	Sq. Ft.		1573	1578
Name Plates	Each	1		1
Bar Splicers	Each	321	12	333



STONE RIPRAP ANCHOR DETAIL

LOADING HS20-44

Allow 50 psf for future wearing surface.

DESIGN SPECIFICATIONS

2002 AASHTO Standard Specifications for Highway Bridges

DESIGN STRESSES

FIELD UNITS

f'_c = 3,500 psi
f_y = 60,000 psi (reinforcement)
f_y = 50,000 psi (structural steel)

SEISMIC DATA

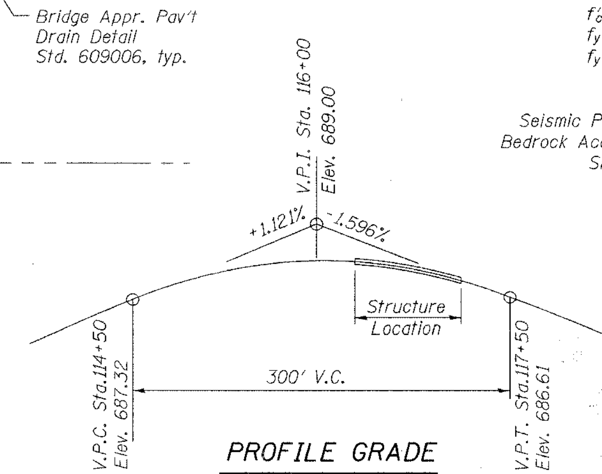
Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.034
Site Coefficient (S) = 1.0

STATION 116+60
BUILT 20__ BY
LAKE COUNTY
HUNT CLUB ROAD (CO. HW. 15)
SECTION 00-00095-11-BR
LOADING HS20-44
STR. NO. 049-3072

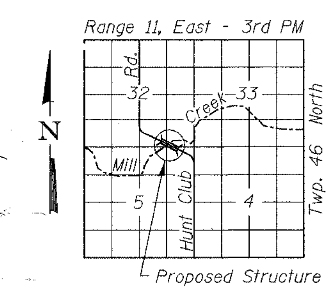
NAME PLATE

See Std. 515001

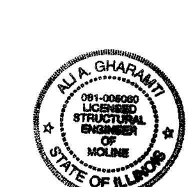
INDEX OF SHEETS



PROFILE GRADE
ALONG ℄ ROADWAY



LOCATION SKETCH



Signature
Date 12/30/04
Exp. Date 11/30/06

WATERWAY INFORMATION

Drainage Area = 61.9 sq. mi.			Low Grade Elev. = 687.25 @ Sta. 116+60						
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Nat. H.W.E.	Head-Ft.		Headwater El.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Design	50	2645	312	433	681.27	0.51	0.14	681.78	681.41
Base	100	3220	326	467	681.70	0.83	0.28	682.59	682.04
Overtopping									
Max. Calc.	500	4386	364	514	682.48	2.11	0.66	684.59	683.14

PLANS PREPARED BY
McCLURE ENGINEERING ASSOCIATES, INC.
4700 Kennedy Drive East Moline, Illinois 61244
(309) 792-9350 FAX (309) 792-8974
Design Firm License: Illinois #184-000836

GENERAL PLAN AND ELEVATION
HUNT CLUB ROAD OVER MILL CREEK
SECTION 00-00095-11-BR
LAKE COUNTY
STATION 116+60.00
STRUCTURE NO. 049-3072

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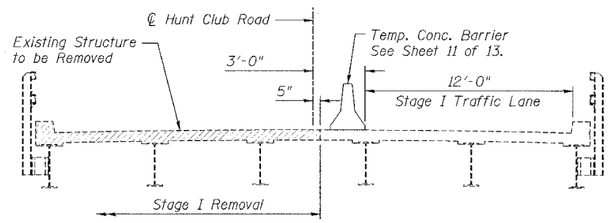
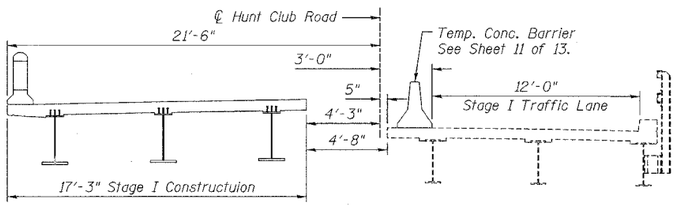
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2661	00-00095-11-BR	LAKE	28	11
STAGE CONSTRUCTION DETAILS				
C-91-169-00	ILLINOIS			

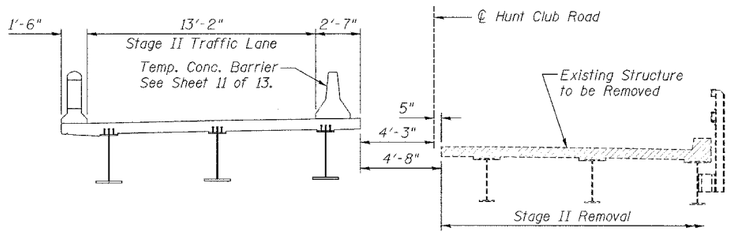
CONTRACT NO.: 83789



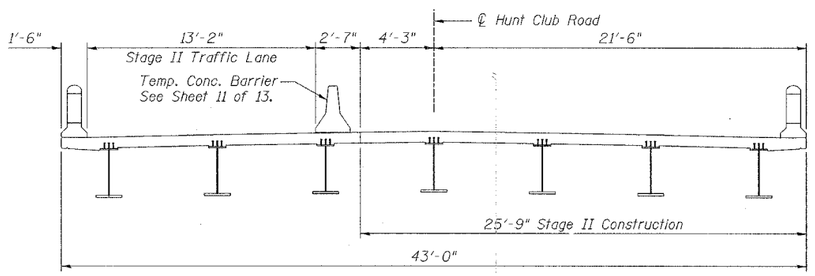
STAGE I REMOVAL



STAGE I CONSTRUCTION

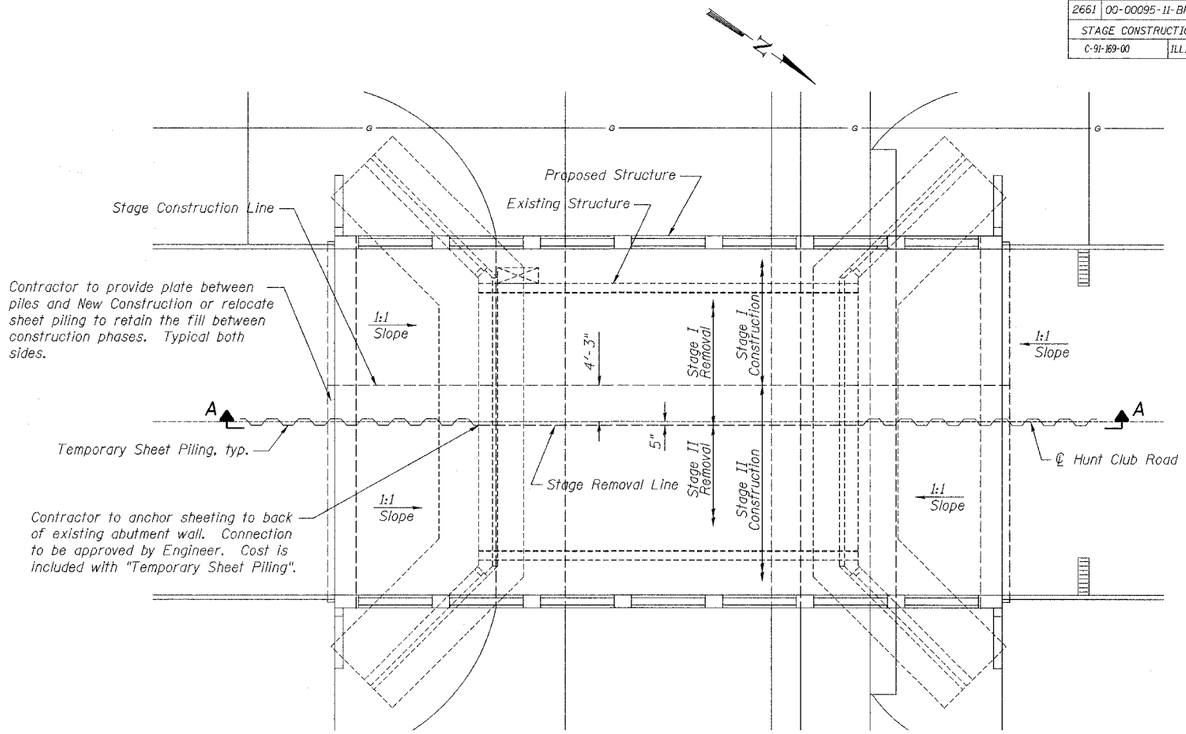


STAGE II REMOVAL

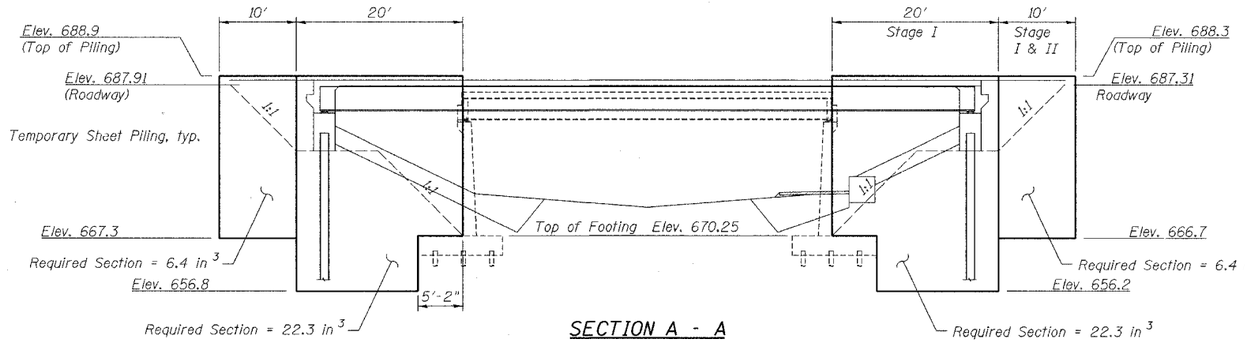


STAGE II CONSTRUCTION

All views looking North.



PLAN



SECTION A - A

ALI A. GHARAMTI
081-005080
LICENSED STRUCTURAL ENGINEER
OF
MOLINE
STATE OF ILLINOIS

Signature
Date 12/30/04
Rev. Date 12/30/04

NOTE:
If the Contractor chooses to alter the temporary cantilevered sheet piling design requirements shown on the plans for lesser design requirements, then full design submittals with the required seals will be expected by the Engineer, for review and approval.
The Existing Structure shall be removed in accordance with Article 501 of the Standard Specifications.

STAGE CONSTRUCTION DETAILS
HUNT CLUB ROAD OVER
MILL CREEK
SECTION 00-00095-11-BR
LAKE COUNTY
STATION 116+60.00
STRUCTURE NO. 049-3072

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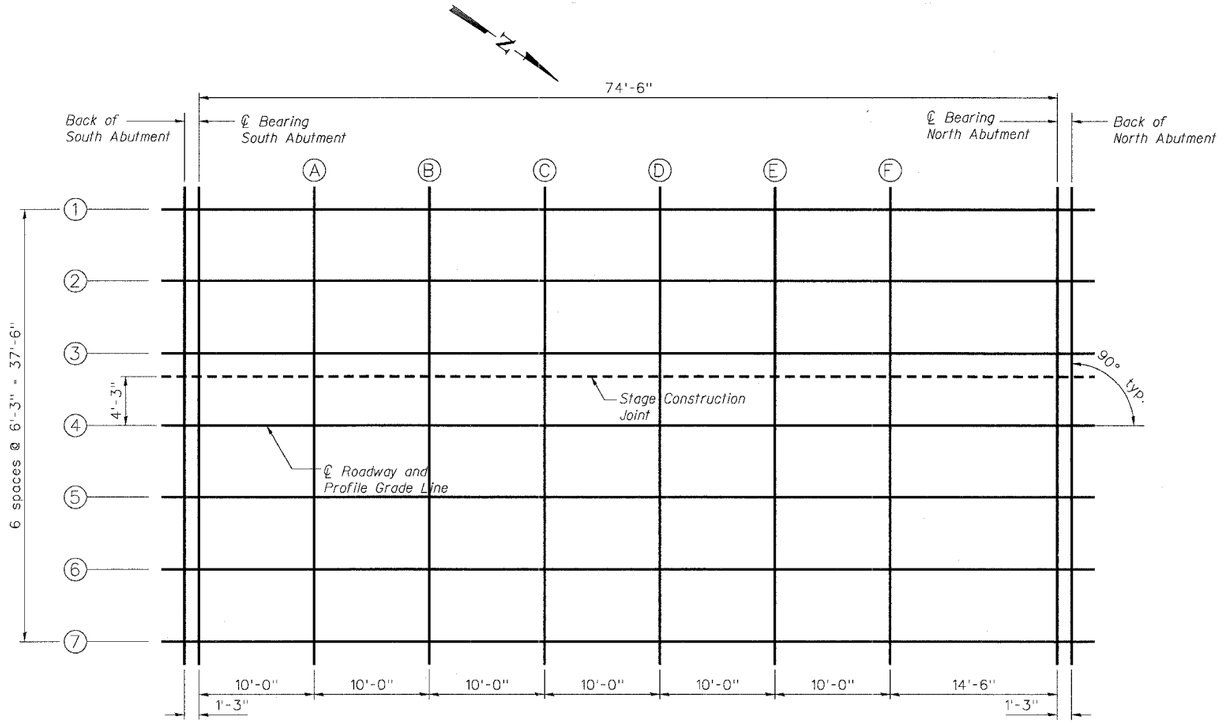
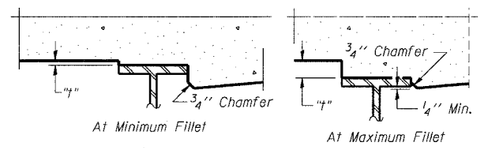
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2661	00-00095-11-BR	LAKE	28	12
TOP OF SLAB ELEVATIONS				
C-91-169-00	ILLINOIS			

CONTRACT NO.: 83789

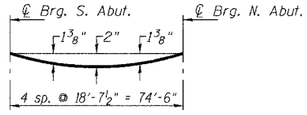


PLAN



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

FILLET HEIGHTS



DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only.)

Note: The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown below.

BEAM 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back S. Abut	116+21.50	-18.750	687.581	687.581
CL S. Abut	116+22.75	-18.750	687.576	687.576
A	116+32.75	-18.750	687.527	687.595
B	116+42.75	-18.750	687.469	687.591
C	116+52.75	-18.750	687.402	687.558
D	116+62.75	-18.750	687.326	687.487
E	116+72.75	-18.750	687.241	687.381
F	116+82.75	-18.750	687.147	687.241
CL N. Abut	116+97.25	-18.750	686.994	686.994
Back N. Abut	116+98.50	-18.750	686.980	686.980

BEAM 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back S. Abut	116+21.50	-12.500	687.711	687.711
CL S. Abut	116+22.75	-12.500	687.706	687.706
A	116+32.75	-12.500	687.657	687.725
B	116+42.75	-12.500	687.599	687.721
C	116+52.75	-12.500	687.532	687.688
D	116+62.75	-12.500	687.456	687.617
E	116+72.75	-12.500	687.371	687.511
F	116+82.75	-12.500	687.277	687.371
CL N. Abut	116+97.25	-12.500	687.124	687.124
Back N. Abut	116+98.50	-12.500	687.110	687.110

BEAM 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back S. Abut	116+21.50	-6.250	687.811	687.811
CL S. Abut	116+22.75	-6.250	687.806	687.806
A	116+32.75	-6.250	687.757	687.825
B	116+42.75	-6.250	687.699	687.821
C	116+52.75	-6.250	687.632	687.788
D	116+62.75	-6.250	687.556	687.717
E	116+72.75	-6.250	687.471	687.611
F	116+82.75	-6.250	687.377	687.471
CL N. Abut	116+97.25	-6.250	687.224	687.224
Back N. Abut	116+98.50	-6.250	687.210	687.210

STAGE CONSTRUCTION JOINT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back S. Abut	116+21.50	-4.250	687.843	687.843
CL S. Abut	116+22.75	-4.250	687.838	687.838
A	116+32.75	-4.250	687.789	687.857
B	116+42.75	-4.250	687.731	687.853
C	116+52.75	-4.250	687.664	687.820
D	116+62.75	-4.250	687.588	687.749
E	116+72.75	-4.250	687.503	687.643
F	116+82.75	-4.250	687.409	687.503
CL N. Abut	116+97.25	-4.250	687.256	687.256
Back N. Abut	116+98.50	-4.250	687.242	687.242

BEAM 4, P.G.L. AND ℄ BRIDGE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back S. Abut	116+21.50	0.000	687.909	687.909
CL S. Abut	116+22.75	0.000	687.904	687.904
A	116+32.75	0.000	687.855	687.923
B	116+42.75	0.000	687.797	687.919
C	116+52.75	0.000	687.730	687.886
D	116+62.75	0.000	687.654	687.815
E	116+72.75	0.000	687.569	687.709
F	116+82.75	0.000	687.475	687.569
CL N. Abut	116+97.25	0.000	687.322	687.322
Back N. Abut	116+98.50	0.000	687.308	687.308

BEAM 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back S. Abut	116+21.50	6.250	687.811	687.811
CL S. Abut	116+22.75	6.250	687.806	687.806
A	116+32.75	6.250	687.757	687.825
B	116+42.75	6.250	687.699	687.821
C	116+52.75	6.250	687.632	687.788
D	116+62.75	6.250	687.556	687.717
E	116+72.75	6.250	687.471	687.611
F	116+82.75	6.250	687.377	687.471
CL N. Abut	116+97.25	6.250	687.224	687.224
Back N. Abut	116+98.50	6.250	687.210	687.210

BEAM 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back S. Abut	116+21.50	12.500	687.711	687.711
CL S. Abut	116+22.75	12.500	687.706	687.706
A	116+32.75	12.500	687.657	687.725
B	116+42.75	12.500	687.599	687.721
C	116+52.75	12.500	687.532	687.688
D	116+62.75	12.500	687.456	687.617
E	116+72.75	12.500	687.371	687.511
F	116+82.75	12.500	687.277	687.371
CL N. Abut	116+97.25	12.500	687.124	687.124
Back N. Abut	116+98.50	12.500	687.110	687.110

BEAM 7

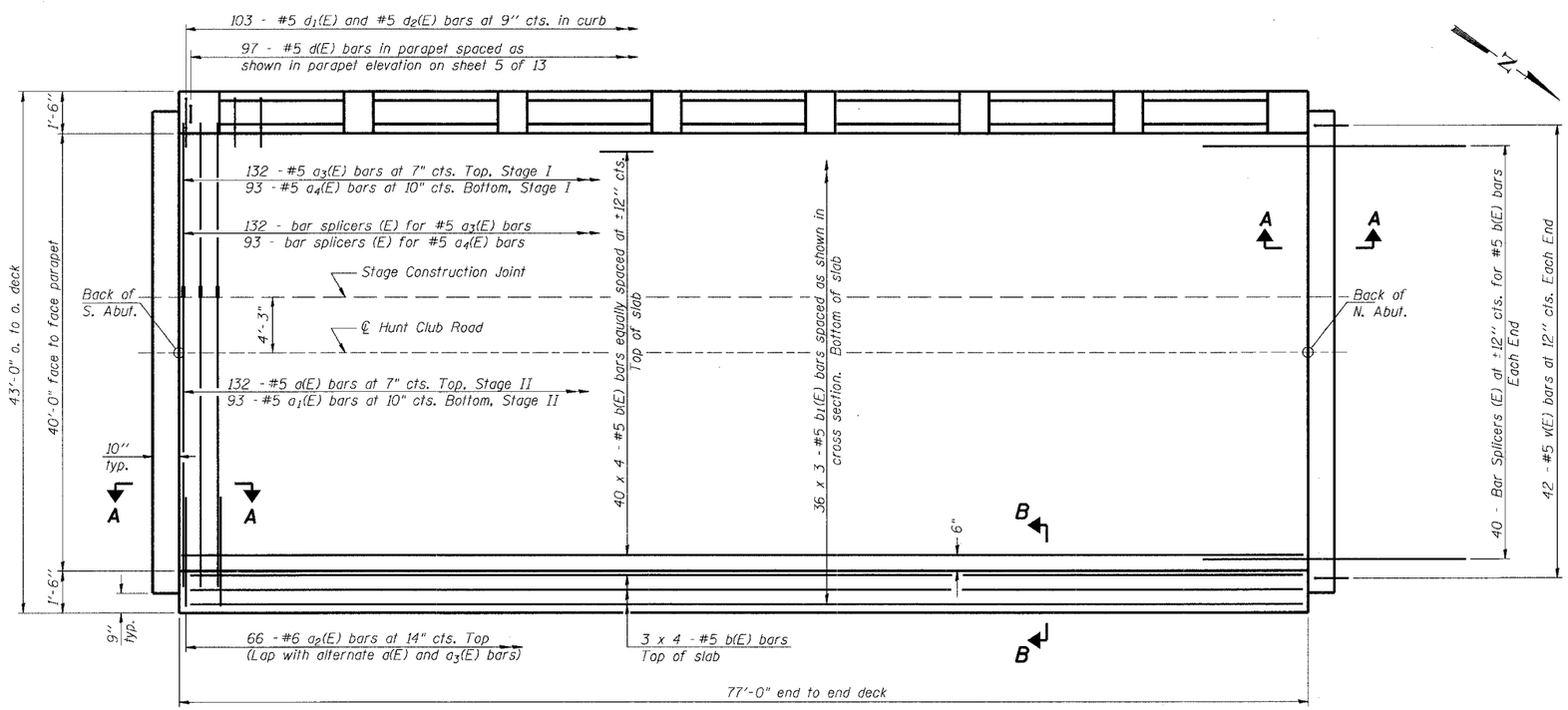
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back S. Abut	116+21.50	18.750	687.581	687.581
CL S. Abut	116+22.75	18.750	687.576	687.576
A	116+32.75	18.750	687.527	687.595
B	116+42.75	18.750	687.469	687.591
C	116+52.75	18.750	687.402	687.558
D	116+62.75	18.750	687.326	687.487
E	116+72.75	18.750	687.241	687.381
F	116+82.75	18.750	687.147	687.241
CL N. Abut	116+97.25	18.750	686.994	686.994
Back N. Abut	116+98.50	18.750	686.980	686.980

TOP OF SLAB ELEVATIONS
HUNT CLUB ROAD OVER
MILL CREEK
SECTION 00-00095-11-BR
LAKE COUNTY
STATION 116+60.00
STRUCTURE NO. 049-3072

03 Top of Slab.dgn 12/30/2004 2:07:55 PM

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2661	00-00095-11-BR	LAKE	28	13
SUPERSTRUCTURE				
C-91-169-00	ILLINOIS			

CONTRACT NO.: 83789



PLAN

Notes:

See Sheet 5 of 13 for superstructure details and Bill of Material.

Reinforcement bars designated (E) shall be epoxy coated.

Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.

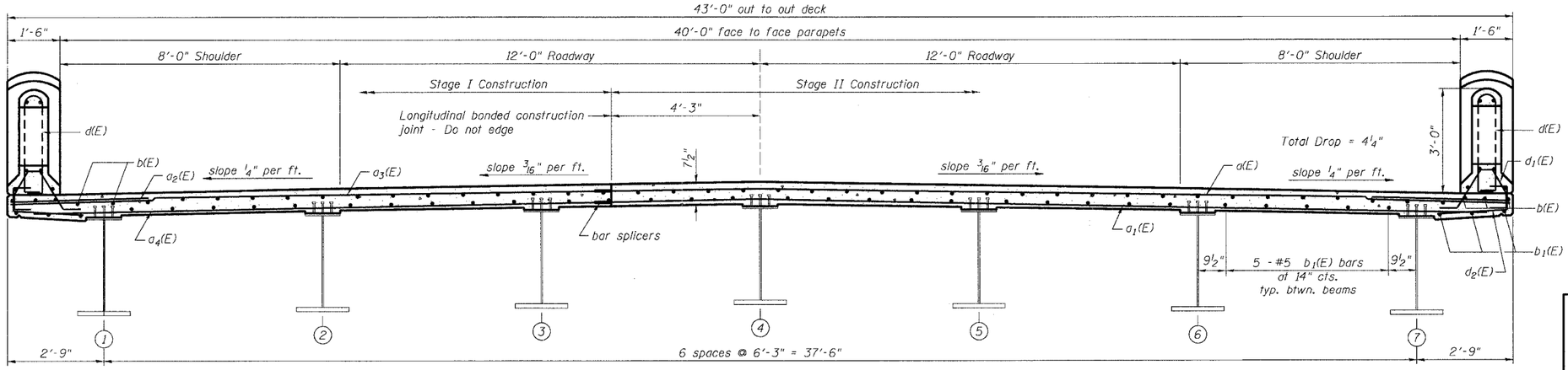
See Sheet 5 of 13 for parapet reinforcement.

See Sheet 6 fo 13 for Section A-A.

See Sheet 5 fo 13 for Section B-B.

MIN. BAR LAP

#5 bar = 2'-2'



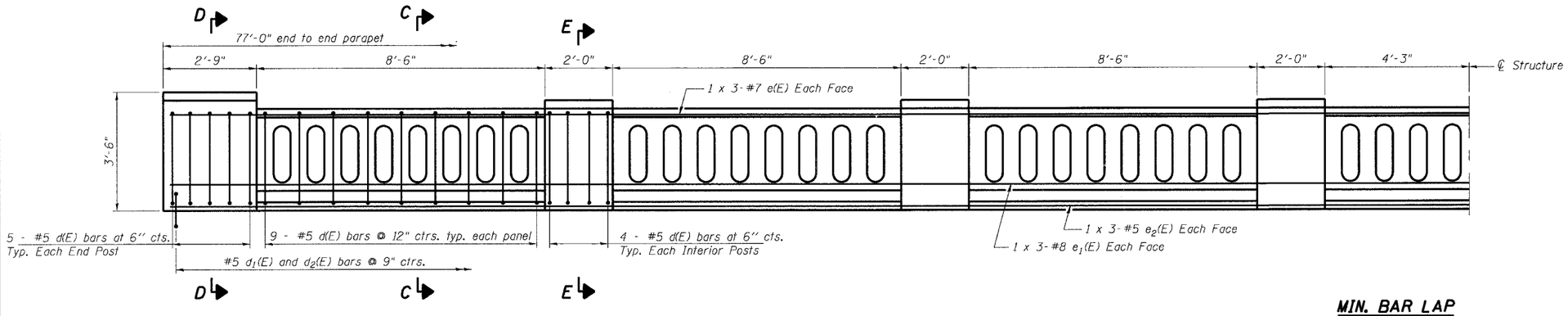
CROSS SECTION

(Looking North)

SUPERSTRUCTURE
HUNT CLUB ROAD OVER
MILL CREEK
SECTION 00-00095-11-BR
LAKE COUNTY
STATION 116+60.00
STRUCTURE NO. 049-3072

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2661	00-00095-11-BR	LAKE	28	14
SUPERSTRUCTURE DETAILS				
C-91-169-00	ILLINOIS			

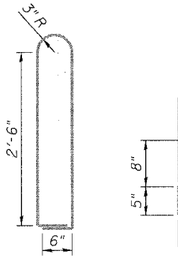
CONTRACT NO.: 83789



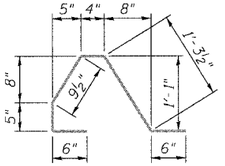
INSIDE HALF ELEVATION OF PARAPET

MIN. BAR LAP

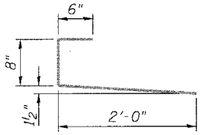
#5 bar = 2'-2"
#7 bar = 3'-5"
#8 bar = 4'-6"



BAR d(E)



BAR $d_1(E)$

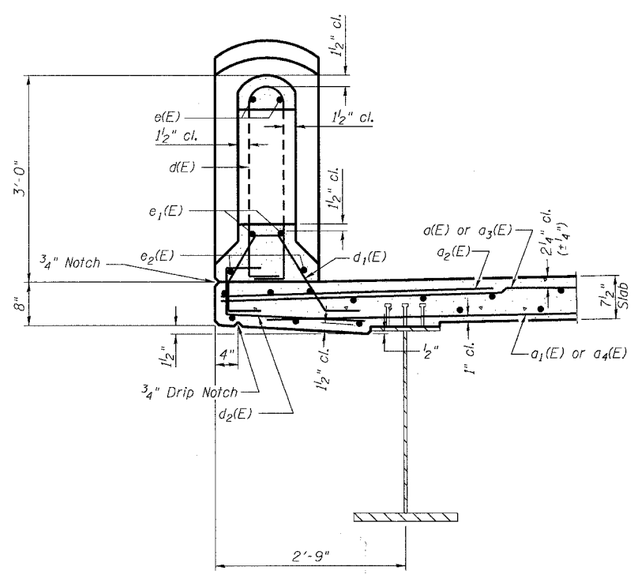


BAR $d_2(E)$

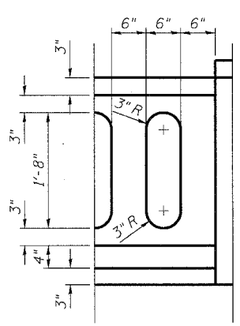
SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d(E)	132	#5	25'-6"	——
$d_1(E)$	93	#5	24'-9"	——
$d_2(E)$	132	#6	4'-6"	——
$d_3(E)$	132	#5	17'-0"	——
$d_4(E)$	93	#5	16'-3"	——
b(E)	184	#5	20'-9"	——
$b_1(E)$	108	#5	27'-0"	——
d(E)	194	#5	6'-10"	⬭
$d_1(E)$	206	#5	3'-10"	⌒
$d_2(E)$	206	#5	3'-2"	⌐
e(E)	12	#7	27'-11"	——
$e_1(E)$	12	#8	28'-7"	——
$e_2(E)$	12	#5	27'-1"	——
m(E)	4	#6	16'-3"	——
$m_1(E)$	6	#6	17'-0"	——
$m_2(E)$	20	#6	9'-0"	——
$m_3(E)$	10	#6	6'-0"	——
$m_4(E)$	4	#6	2'-5"	——
$m_5(E)$	4	#6	24'-9"	——
$m_6(E)$	6	#6	25'-6"	——
$m_7(E)$	2	#6	1'-9"	——
$m_8(E)$	2	#6	4'-0"	——
$m_9(E)$	4	#6	6'-6"	——
$m_{10}(E)$	4	#6	8'-9"	——
s(E)	84	#5	6'-11"	⊐
$s_1(E)$	84	#4	10'-0"	⊔
v(E)	84	#5	3'-0"	⌐
Reinforcement Bars, Epoxy Coated		Pound	25,110	
Concrete Superstructure		Cu. Yds.	112.3	
Bar Splicers		Each	321	
Concrete Handrail		Cu. Yd.	15.6	
Protective Coat		Sq. Yd.	419	

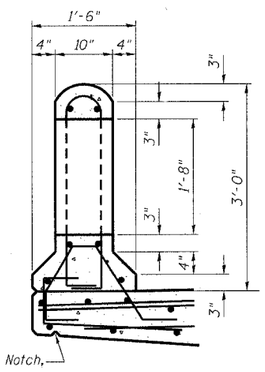
Reinforcement bars designated (E) shall be epoxy coated.
Bars indicated thus 1 x 3-#5 etc. indicates 1 line of bars with 3 lengths per line.



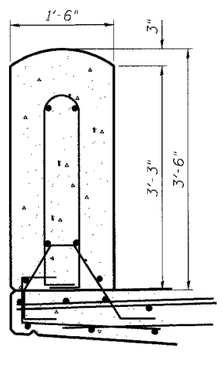
SECTION B - B THRU PARAPET
(Showing Reinforcement)



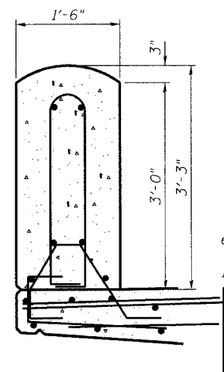
TYPICAL RAIL OPENING



SECTION C -C
(Showing Concrete Dimensions)



SECTION D - D

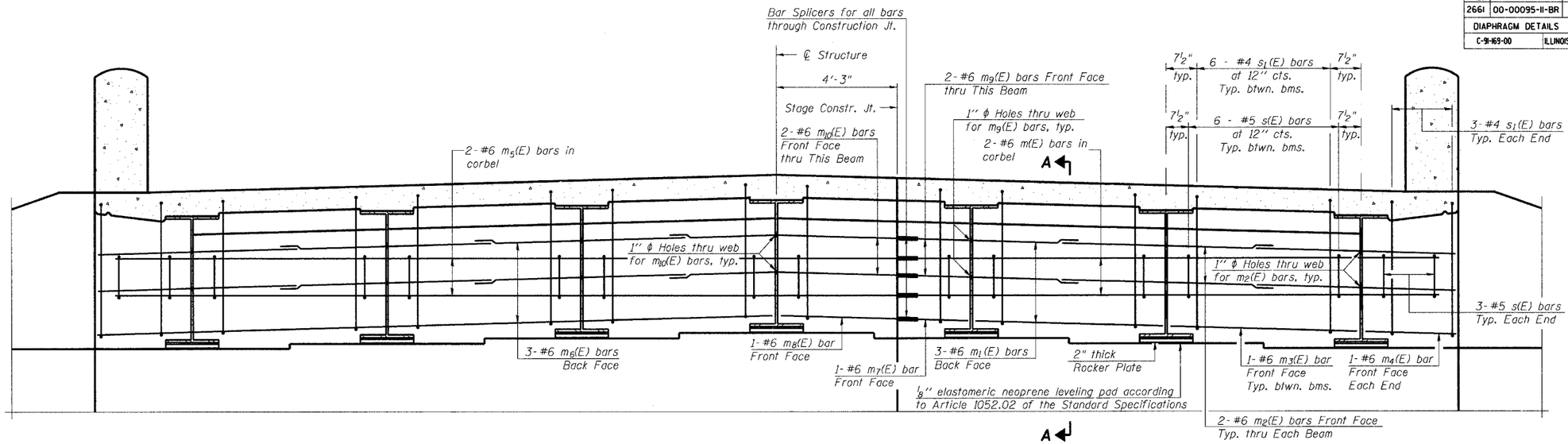


SECTION E - E

SUPERSTRUCTURE DETAILS
HUNT CLUB ROAD OVER
MILL CREEK
SECTION 00-00095-11-BR
LAKE COUNTY
STATION 116+60.00
STRUCTURE NO. 049-3072

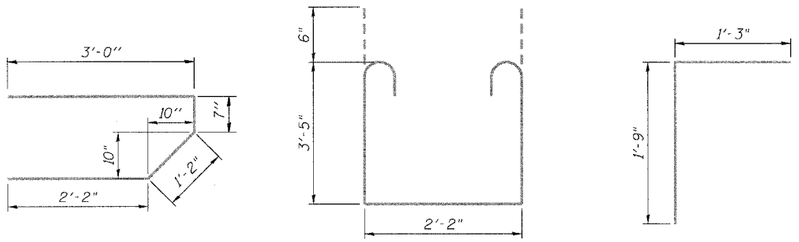
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2661	00-00095-11-BR	LAKE	28	15
DIAPHRAGM DETAILS				
C-91-169-00	ILLINOIS			

CONTRACT NO.: 83789



DIAPHRAGM ELEVATION AT ABUTMENT

(Looking South)

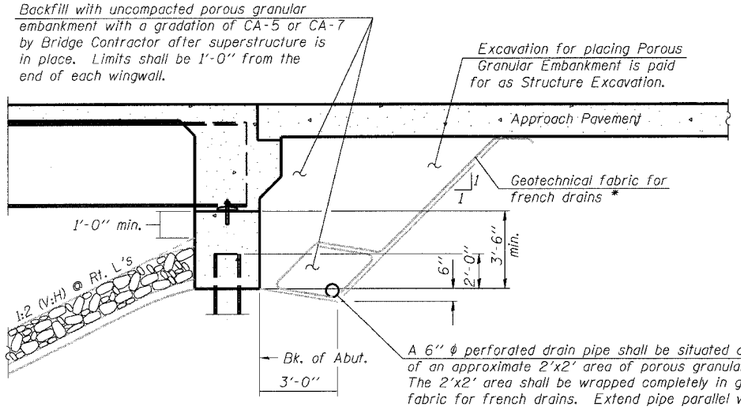


BAR s(E) | BAR s_1(E) | BAR v(E)

Notes:
Reinforcement bars in diaphragm are billed with superstructure on sheet 5 of 13.
Concrete in diaphragm is included with Concrete Superstructure on sheet 5 of 13.
The s(E) and s_1(E) bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams.
For anchor bolt details see sheet 10 of 13.

MIN. BAR LAP

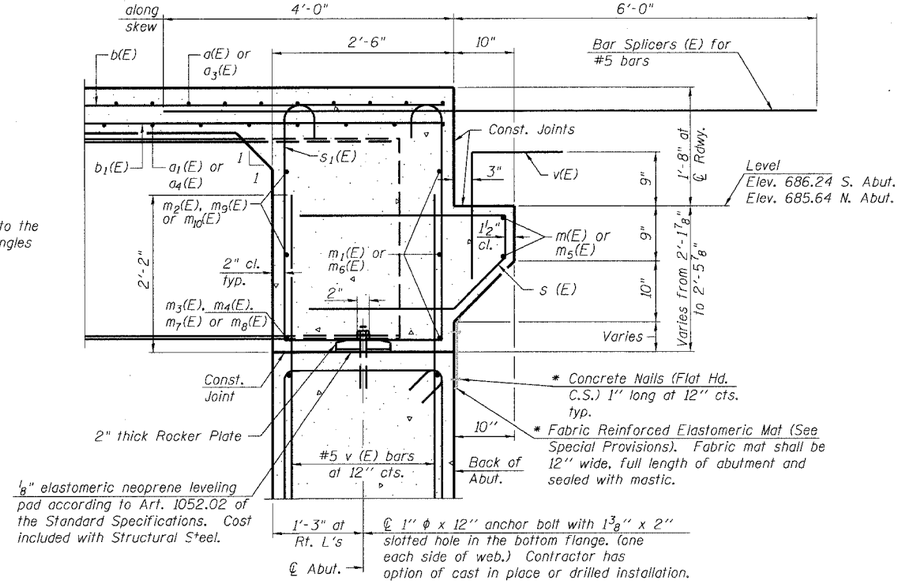
#6 bar = 2'-9"



* Included in the cost of Porous Granular Embankment.

SECTION THRU INTEGRAL ABUTMENT

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



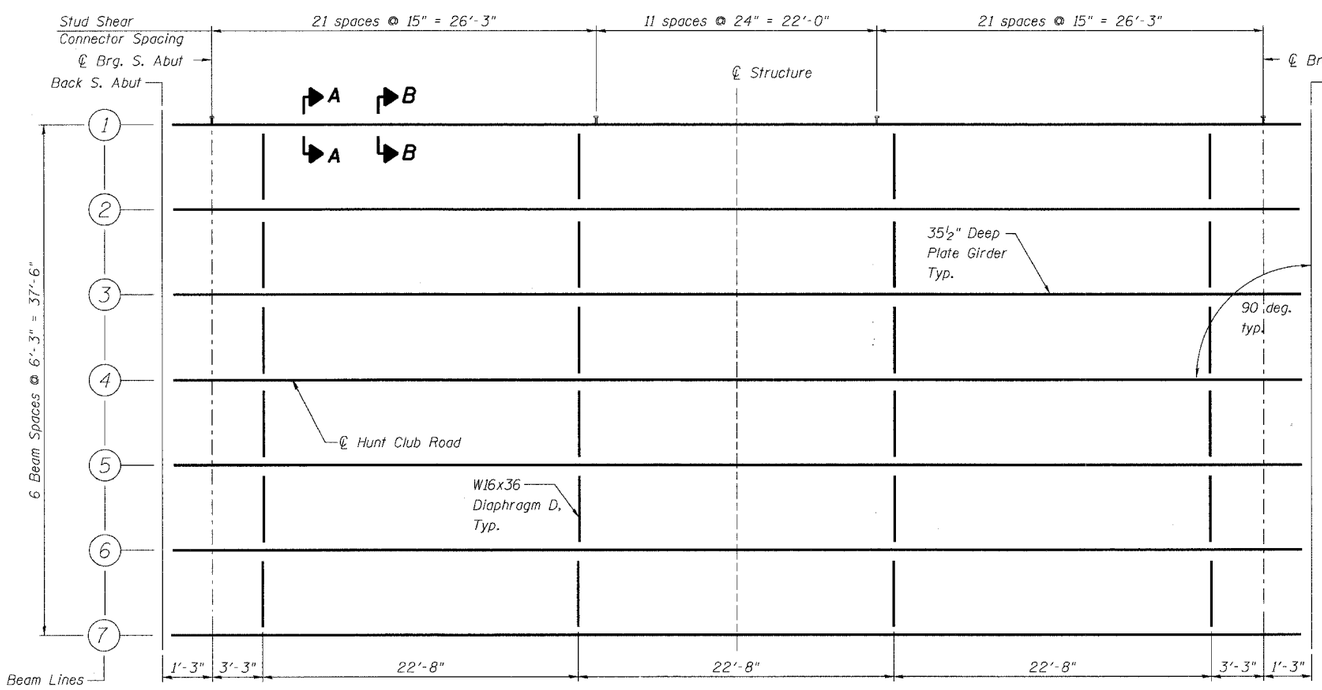
SECTION A-A

Dimensions at right angles to abutment, except as shown.
* Cost included with Concrete Superstructure.

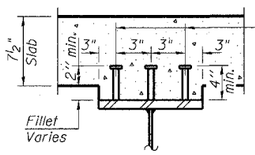
DIAPHRAGM DETAILS
HUNT CLUB ROAD OVER
MILL CREEK
SECTION 00-00095-11-BR
LAKE COUNTY
STATION 116+60.00
STRUCTURE NO. 049-3072

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2661	00-00095-11-BR	LAKE	28	16
FRAMING PLAN AND DETAILS				
C-91-163-00	ILLINOIS			

CONTRACT NO.: 83789

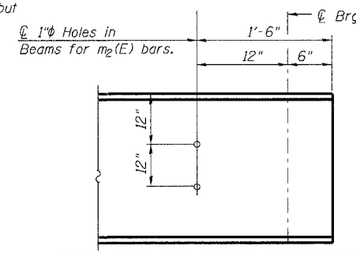


FRAMING PLAN



¾" ϕ Granular or solid flux filled headed studs, automatically end welded to flange. (1134 Req'd.)

SECTION A-A



TYP. END OF BEAM ELEVATION

INTERIOR GIRDER MOMENT TABLE		Midpoint of Span
Is	(in^4)	8063
Ic (n)	(in^4)	22214
Ic (3n)	(in^4)	16087
Ss	(in^3)	515
Sc (n)	(in^3)	719
Sc (3n)	(in^3)	660
℄	(k/ft.)	0.735
M℄	('k)	510
s℄	(k/ft.)	0.400
Ms℄	('k)	278
M℄	('k)	603
M (Imp)	('k)	151
$5/3[M℄ + M(Imp)]$	('k)	1257
Ma	('k)	2659
fs℄ non-comp	(k.s.i.)	11.9
fs℄ (comp)	(k.s.i.)	5.1
$fs\,5/3(℄ + Imp)$	(k.s.i.)	21.0
fs (Overload)	(k.s.i.)	38.0
fs (Total)	(k.s.i.)	49.4
VR	(k)	45.5

INTERIOR GIRDER REACTION TABLE		Abutments
R℄	(k)	42.3
R℄	(k)	35.8
Imp.	(k)	9.0
R (Total)	(k)	87.1

Is and Ss are the moment of inertia and section modulus of the steel section used in computing fs (Total & Overload).

$Ic_{(n)}$ and $Sc_{(n)}$ are the moment of inertia and section modulus of the composite section used in computing stresses due to Live Load.

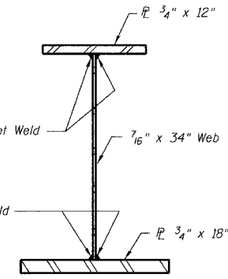
$Ic_{(3n)}$ and $Sc_{(3n)}$ are the moment of inertia and section modulus of the composite section used in computing stresses due to superimposed dead loads. (see AASHTO 10.38)

VR is the maximum Live Load + Impact shear range in span.

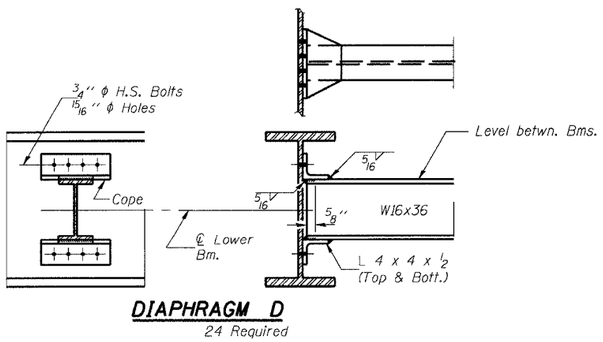
Ma (Applied Moment)=1.3[M℄ + Ms℄ + 5/3(M℄ + M(Imp))].

fs (Overload) is the sum of the stresses due to M℄ + Ms℄ + 5/3(M℄ + M(Imp)).

fs (Total) (Non-compact section) is the sum of the stresses due to 1.3[M℄ + Ms℄ + 5/3(M℄ + M(Imp))].



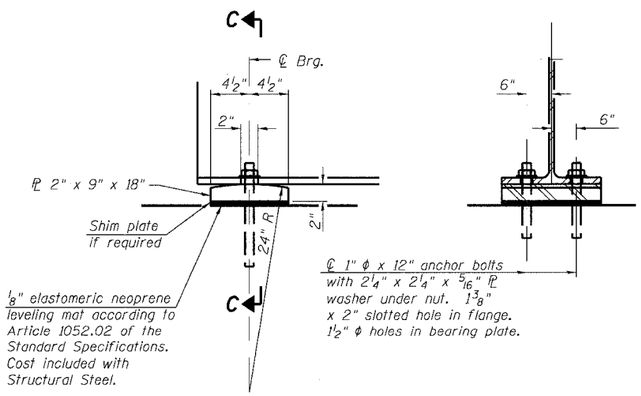
SECTION B-B



DIAPHRAGM D

24 Required

Note:
Two hardened washers shall be required over all oversize holes for diaphragms.

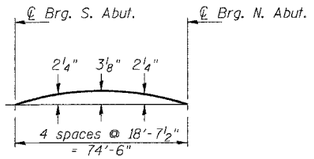


ELEVATION AT ABUTMENT

SECTION C-C

Notes: Anchor bolts at fixed bearings may be built into the masonry.
See sheet 10 of 13 for Anchor Bolt installation.

FIXED BEARING



WEB CAMBER DIAGRAM

TOP OF WEB ELEVATIONS

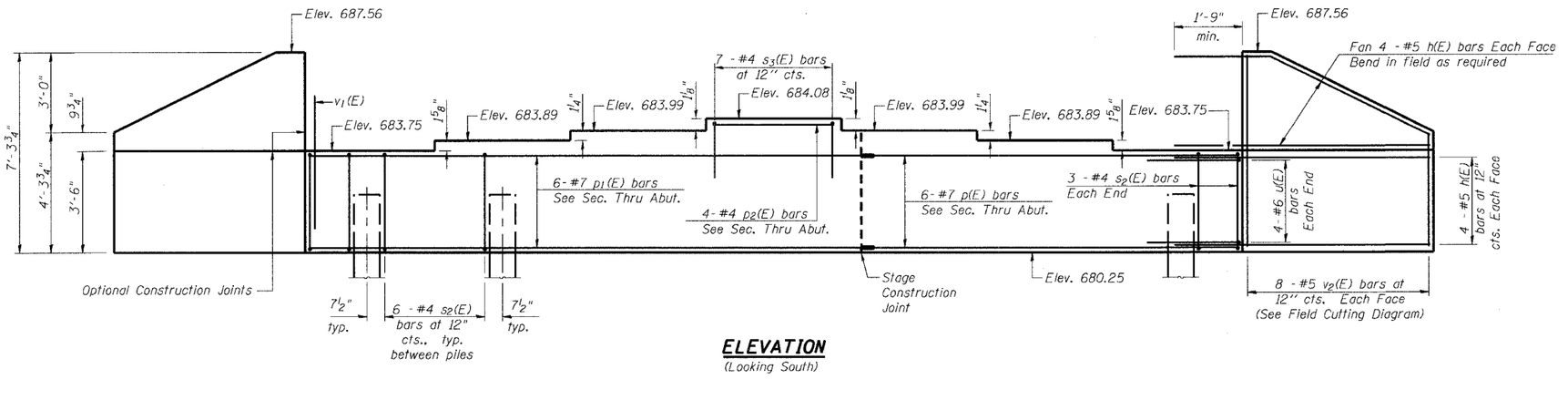
Beam No.	℄ Brg. South Abutment	℄ Brg. North Abutment
1	686.826	686.244
2	686.956	686.374
3	687.056	686.474
4	687.154	686.572
5	687.056	686.474
6	686.956	686.374
7	686.826	686.244

Note: Welded Plate Girders shall be AASHTO M 270 Grade 50, "NTR". All other structural steel shall be AASHTO M 270 Grade 50. ("NTR" denotes members to which Notch Toughness Requirements are applicable).

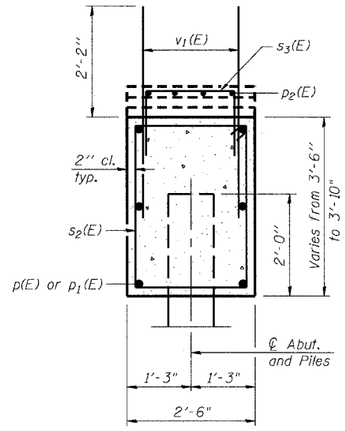
FRAMING PLAN AND DETAILS
HUNT CLUB ROAD OVER
MILL CREEK
SECTION 00-00095-11-BR
LAKE COUNTY
STATION 116+60.00
STRUCTURE NO. 049-3072

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2661	00-00095-11-BR	LAKE	28	17
SOUTH ABUTMENT DETAILS				
C-91-169-00	ILLINOIS			

CONTRACT NO.: 83789



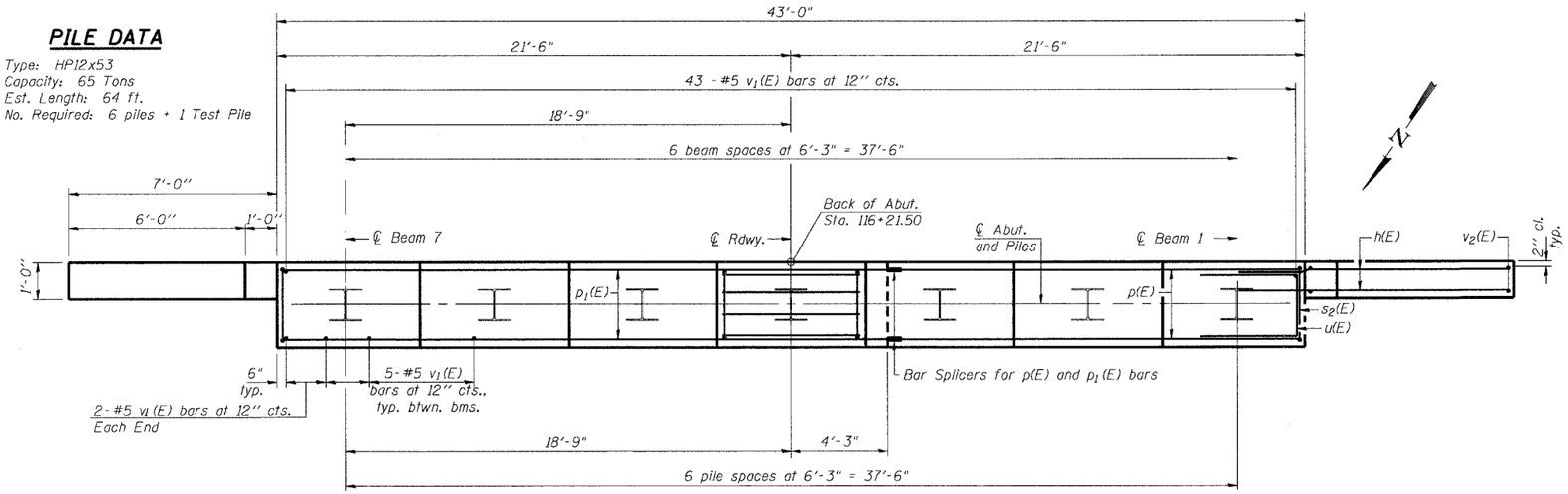
ELEVATION
(Looking South)



SEC. THRU ABUT.

PILE DATA

Type: HP12x53
Capacity: 65 Tons
Est. Length: 64 ft.
No. Required: 6 piles + 1 Test Pile

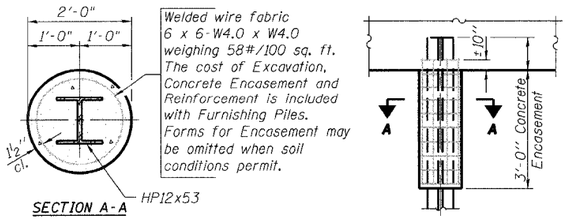


PLAN

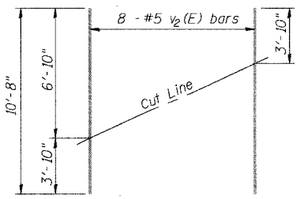
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	32	#5	8'-9"	
p(E)	6	#7	17'-1"	
p1(E)	6	#7	25'-7"	
p2(E)	4	#4	5'-11"	
s2(E)	42	#4	11'-5"	
s3(E)	7	#4	5'-5"	
u(E)	8	#6	7'-5"	
v1(E)	77	#5	4'-4"	
v2(E)	16	#5	10'-8"	
Concrete Structures		Cu. Yd.	17.7	
Reinforcement Bars, Epoxy Coated		Pound	1790	
Structure Excavation		Cu. Yd.		
Bar Splicers		Each	6	
Furnishing Steel Piles HP12x53		Feet	384	
Driving Steel Piles		Feet	384	
Test Pile, Steel HP12x53		Each	1	

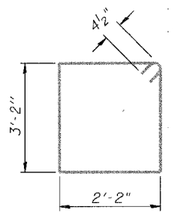
Notes: Pour steps monolithically with cap.
Reinforcement bars designated (E) shall be epoxy coated.
All exposed concrete edges shall have a 3/4" x 45 deg. chamfer, except where shown otherwise. Chamfer on vertical edges shall be continued a minimum of 12" below finished ground level.
Place reinforcement in abutment to miss anchor bolts.



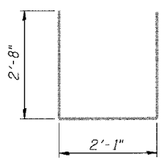
PILE ENCASEMENT DETAIL



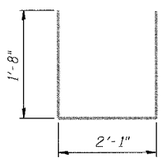
FIELD CUTTING DIAGRAM
Order v2(E) full length. Cut as shown and use remainder of bars in opposite face.



BAR s2(E)



BAR u(E)

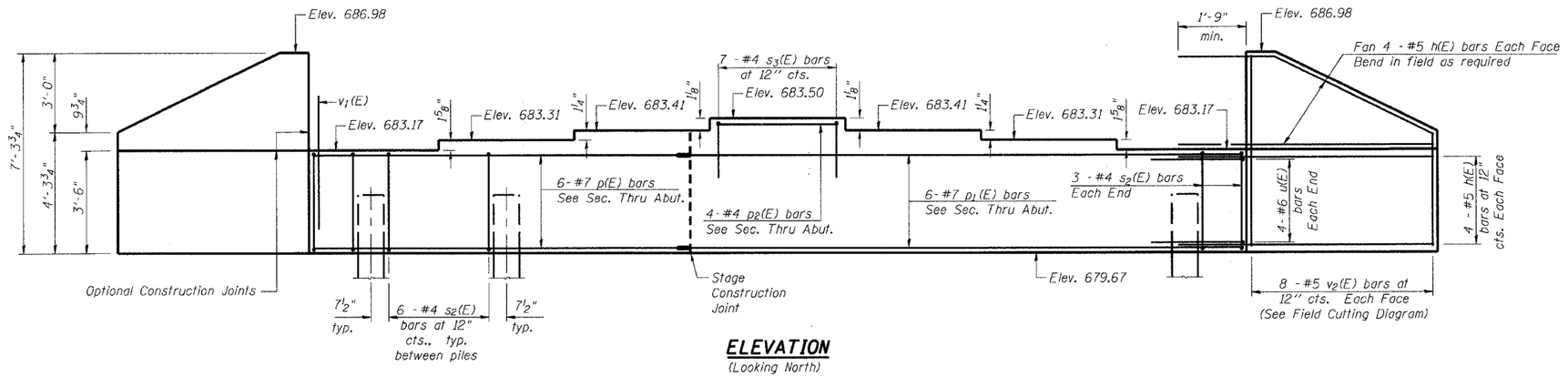


BAR s3(E)

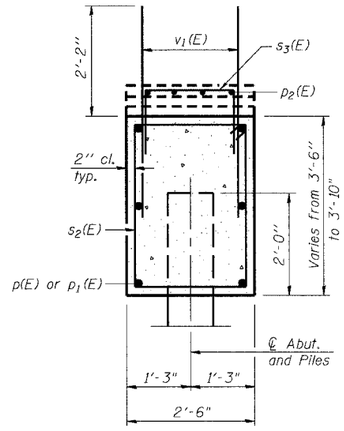
SOUTH ABUTMENT DETAILS
HUNT CLUB ROAD OVER
MILL CREEK
SECTION 00-00095-11-BR
LAKE COUNTY
STATION 116+60.00
STRUCTURE NO. 049-3072

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2661	00-00095-11-BR	LAKE	28	18
NORTH ABUTMENT DETAILS				
C-91-169-00	ILLINOIS			

CONTRACT NO.: 83789



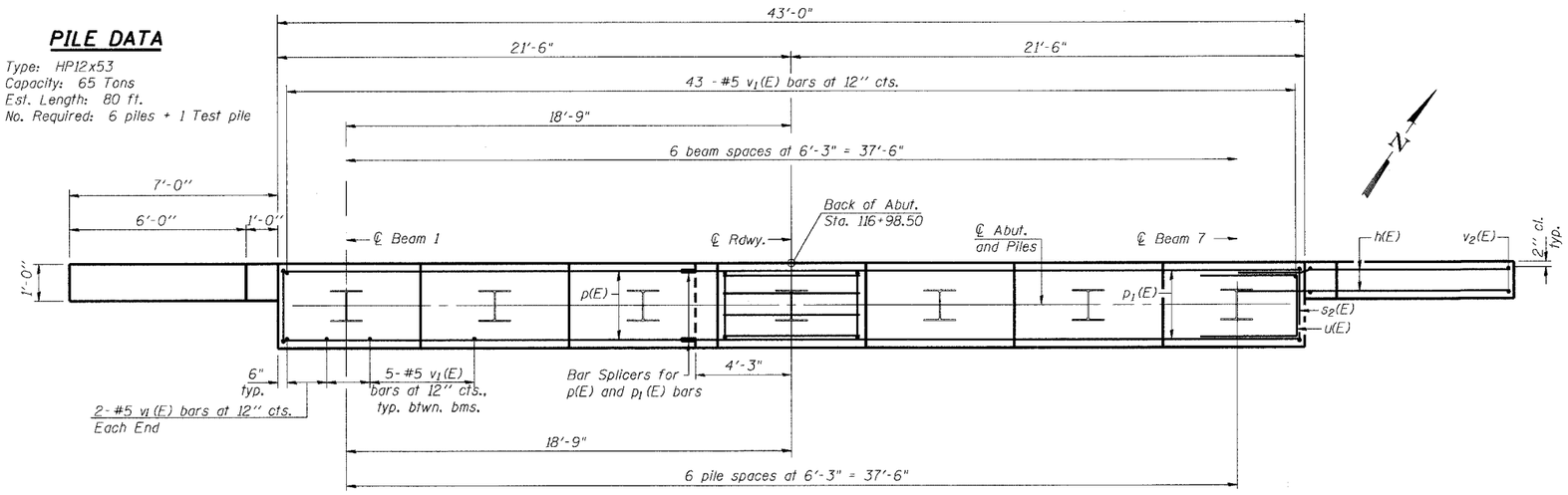
ELEVATION
(Looking North)



SEC. THRU ABUT.

PILE DATA

Type: HP12x53
Capacity: 65 Tons
Est. Length: 80 ft.
No. Required: 6 piles + 1 Test pile

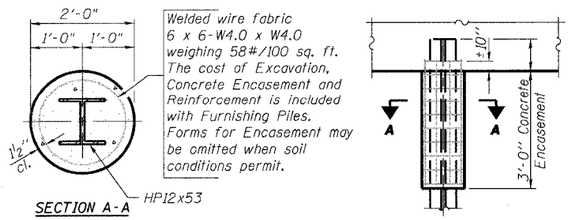


PLAN

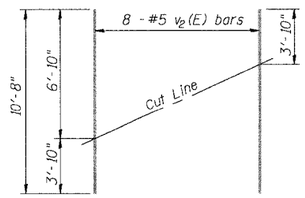
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	32	#5	8'-9"	
p(E)	6	#7	17'-1"	
p1(E)	6	#7	25'-7"	
p2(E)	4	#4	5'-11"	
s2(E)	42	#4	11'-5"	
s3(E)	7	#4	5'-5"	
u(E)	8	#6	7'-5"	
v1(E)	77	#5	4'-4"	
v2(E)	16	#5	10'-8"	
Concrete Structures		Cu. Yd.	17.7	
Reinforcement Bars, Epoxy Coated		Pound	1790	
Structure Excavation		Cu. Yd.		
Bar Splicers		Each	6	
Furnishing Steel Piles HP12x53		Feet	480	
Driving Steel Piles		Feet	480	
Test Pile, Steel HP12x53		Each	1	

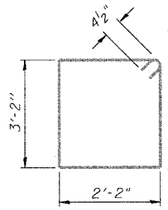
Notes: Pour steps monolithically with cap.
Reinforcement bars designated (E) shall be epoxy coated.
All exposed concrete edges shall have a 3/4" x 45 deg. chamfer, except where shown otherwise. Chamfer on vertical edges shall be continued a minimum of 12" below finished ground level.
Place reinforcement in abutment to miss anchor bolts.



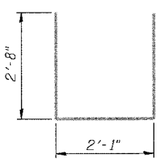
PILE ENCASEMENT DETAIL



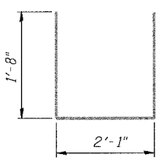
FIELD CUTTING DIAGRAM
Order v2(E) full length. Cut as shown and use remainder of bars in opposite face.



BAR s2(E)



BAR u(E)



BAR s3(E)

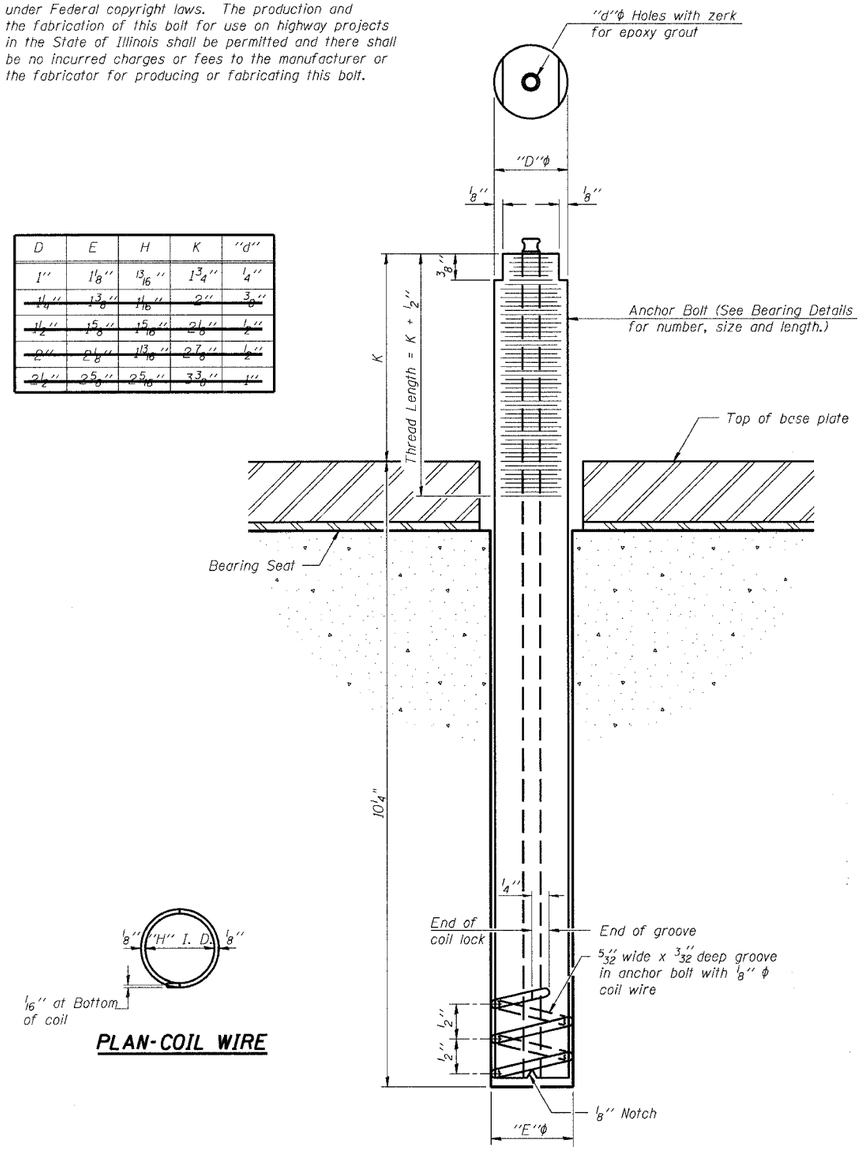
NORTH ABUTMENT DETAILS
HUNT CLUB ROAD OVER MILL CREEK
SECTION 00-00095-11-BR
LAKE COUNTY
STATION 116+60.00
STRUCTURE NO. 049-3072

09 North Abut.dgn 12/30/2004 2:14:25 PM

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2661	00-00095-11-BR	LAKE	28	19
ANCHOR BOLT DETAILS				
C-91-169-00	ILLINOIS			

CONTRACT NO.: 83789

D	E	H	K	"d"
1"	1 1/8"	13/16"	1 3/4"	1/4"
~~1 1/4"~~	~~1 3/8"~~	~~1 1/16"~~	~~2"~~	~~3/8"~~
~~1 1/2"~~	~~1 5/8"~~	~~1 5/16"~~	~~2 1/8"~~	~~1/2"~~
~~2"~~	~~2 1/8"~~	~~1 13/16"~~	~~2 7/8"~~	~~1/2"~~
~~2 1/2"~~	~~2 5/8"~~	~~2 5/16"~~	~~3 3/8"~~	~~1"~~



ILLINOIS COIL-LOCK ANCHOR BOLT

PLAN-COIL WIRE

MATERIALS FOR ILLINOIS COIL-LOCK ANCHOR BOLT

The anchor bolt shall be fabricated from cold drawn or hot finished seamless carbon steel mechanical tubing conforming to ASTM A 519, Grade 1026, CW and supplied with hexagonal nuts and cut washers.

The coil wire shall be made of any suitable soft steel wire.

The finished anchor bolt shall be cleaned of rust and other foreign materials and wrapped or packaged to prevent contamination until they are installed.

The epoxy grout shall be a two-component, epoxy resin bonding system conforming to ASTM C 881, Type I, Grade 1 and of a Class suitable for the temperature at installation.

INSTALLATION PROCEDURE for the ILLINOIS COIL-LOCK ANCHOR BOLT

1. With the coil wire in place, the bolt shall be inserted into the hole and turned clockwise to a snug fit in the hole. Nut and washer shall be placed on the bolt. The nut shall be tensioned until the steel base plates are held securely to the concrete bearing seat.
2. Epoxy grout shall be pumped through the zerk fitting with a pressure gun. Pumping shall continue until the epoxy overflows the hole around the bolt shank. After pumping is discontinued, excess epoxy shall be immediately wiped off.

ALTERNATE ANCHOR BOLTS

The Contractor may use, at his option, the capsule or the adhesive cartridge type anchor rods that have been previously tested and given a prior approval by the Department. The Contractor shall install these anchor rods in pre-drilled holes according to the manufacturer's recommendations and procedures.

The capsule or the adhesive cartridge type anchor rods shall be a two part system composed of:

1. A threaded rod stud with nut and washer of the type specified.
2. A sealed glass capsule or a sealed glass adhesive cartridge containing premeasured amounts of the adhesive chemical.

Location	Type
Abutments	A307

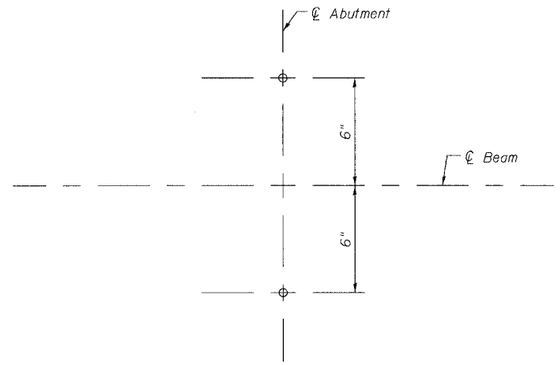
ASTM F 1554 Grade 105, ASTM A 449 and AASHTO M 314 Grade 105 anchor bolts may be substituted for the anchor bolts shown above.

GENERAL NOTES

Holes in the masonry for anchor bolts shall be drilled through the base plates to the diameter and depth shown or according to the manufacturer's recommendation after beams or girders have been erected and adjusted.

Prior to setting the bolts, the holes shall be dry and all dust and loose particles shall be removed by the use of compressed air or vacuuming.

The anchor bolts, furnished and installed and including the epoxy grout or capsules shall not be paid for separately but shall be included in the unit bid price for Furnishing and Erecting Structural Steel.

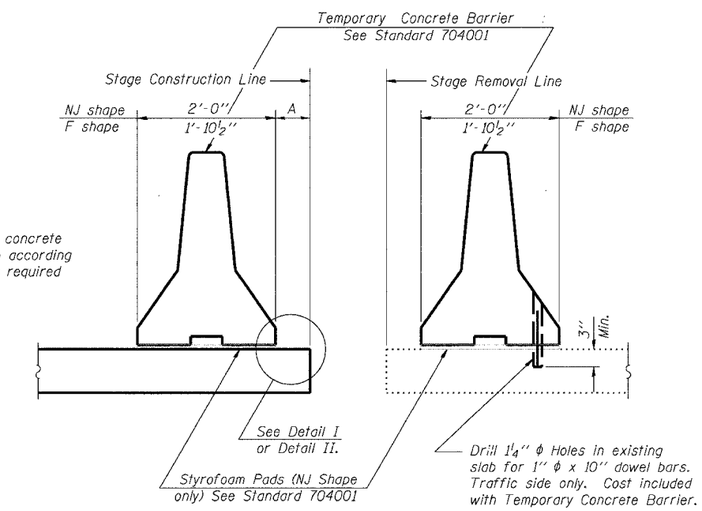


ACHOR BOLT LAYOUT DETAIL FOR ABUTMENTS

ANCHOR BOLT DETAILS
HUNT CLUB ROAD OVER
MILL CREEK
SECTION 00-00095-11-BR
LAKE COUNTY
STATION 116+60.00
STRUCTURE NO. 049-3072

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2661	00-00095-11-BR	LAKE	28	20
TEMPORARY CONCRETE BARRIER				
C-91-169-00	ILLINOIS			

CONTRACT NO.: 83789



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

NEW SLAB **EXISTING SLAB**

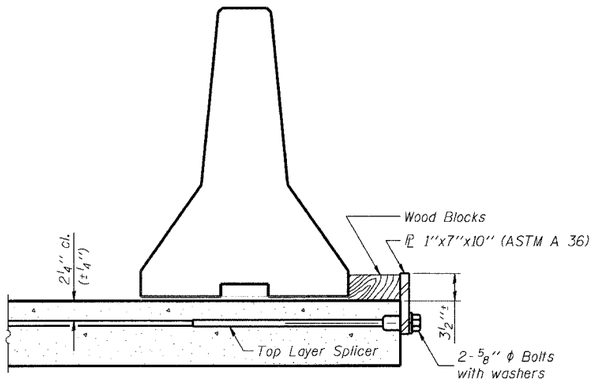
NOTES

Detail I - With Bar Splicer or Couplers:
Connect one (1) 1"x7"x10" steel ℄ to the top layer of couplers with 2-⅝" ϕ bolts screwed to coupler at approximate ℄ of each barrier panel.

Detail II - With Extended Reinforcement Bars:
Connect one (1) 1"x7"x10" steel ℄ to the concrete slab with 2-⅝" ϕ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate ℄ of each barrier panel.

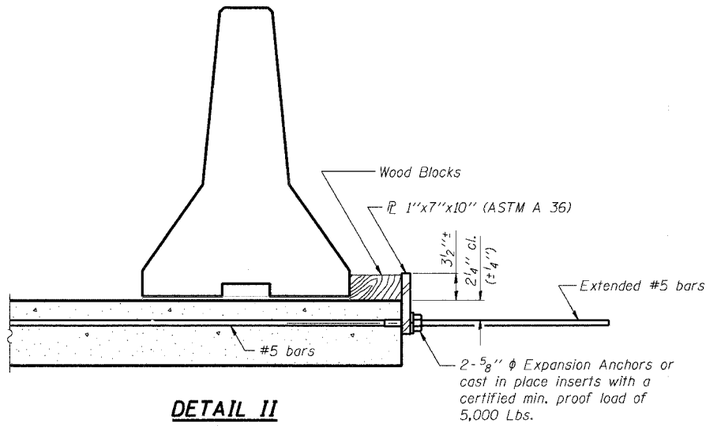
Cost of anchorage is included with Temporary Concrete Barrier.

SECTIONS THRU SLAB



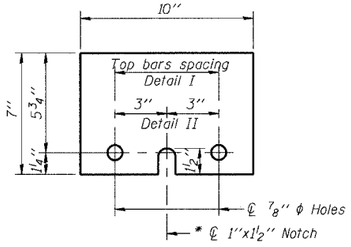
DETAIL I

The 1"x7"x10" Plate shall not be removed until Stage II Construction forms and reinforcement bars are in place.



DETAIL II

The 1"x7"x10" 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.



℄ 1"x7"x10"

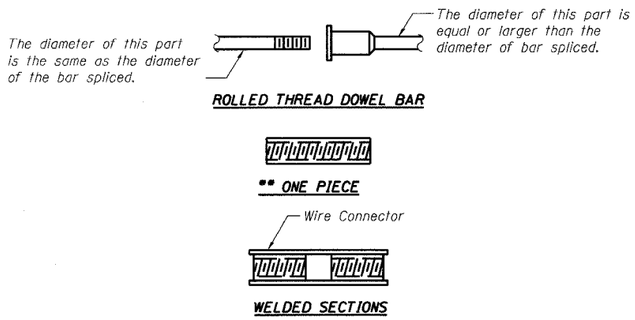
* Required only with Detail II

TEMPORARY CONCRETE BARRIER
HUNT CLUB ROAD OVER
MILL CREEK
SECTION 00-00095-11-BR
LAKE COUNTY
STATION 116+60.00
STRUCTURE NO. 049-3072

R-27 9-01-03

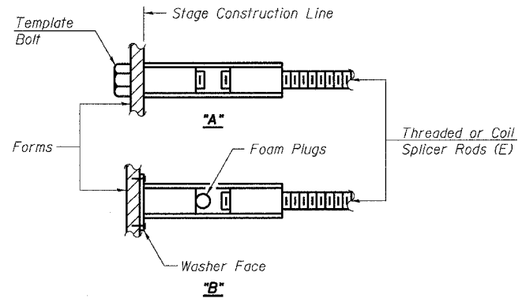
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2661	00-00095-11-BR	LAKE	28	21
BAR SPLICER DETAILS				
C-91-159-00	ILLINOIS			

CONTRACT NO.: 83789



BAR SPLICER ASSEMBLY ALTERNATIVES

** Heavy Hex Nuts conforming to ASTM A 563, Grade C, D or DH may be used.



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.

NOTES

Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.

Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.

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

Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars.

Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

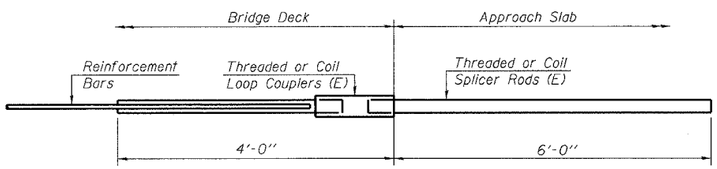
① Minimum Capacity (Tension in kips) = $1.25 \times fy \times A_t$

② Minimum *Pull-out Strength (Tension in kips) = $1.25 \times fs_{allow} \times A_t$

Where fy = Yield strength of lapped reinforcement bars in ksi.
fs_{allow} = Allowable tensile stress in lapped reinforcement bars in ksi (Service Load)
A_t = Tensile stress area of lapped reinforcement bars.
* = 28 day concrete

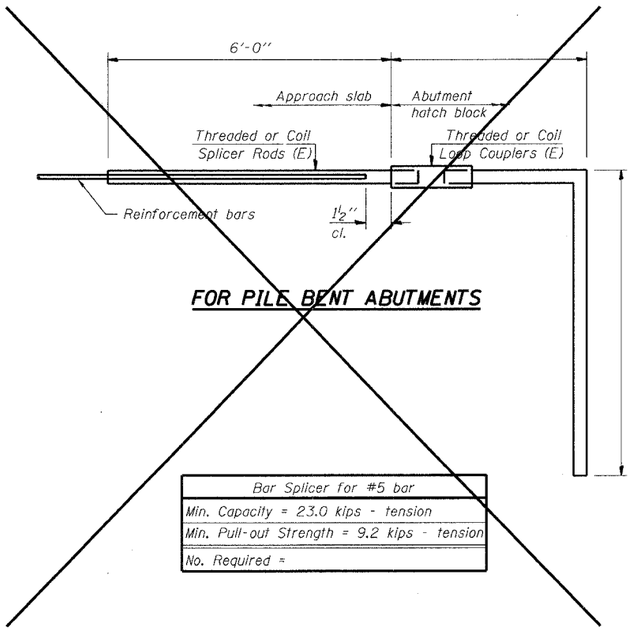
BAR SPLICER ASSEMBLIES			
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#4	1'-8"	14.7	5.9
#5	2'-0"	23.0	9.2
#6	2'-7"	33.1	13.3
#7	3'-5"	45.1	18.0
#8	4'-6"	58.9	23.6
#9	5'-9"	75.0	30.0
#10	7'-3"	95.0	38.0
#11	9'-0"	117.4	46.8

Bar splicer assemblies shall be according to Section 508 of the Standard Specifications, except as noted. The furnishing and installation of bar splicer assemblies will be measured and paid for at the contract unit price each for "BAR SPLICERS."



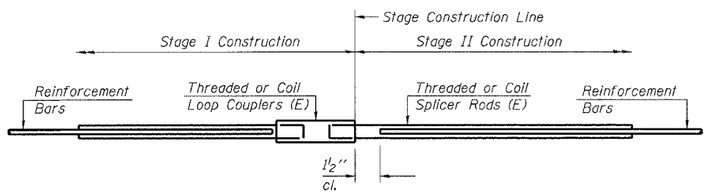
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 9.2 kips - tension
No. Required = 80



FOR PILE BENT ABUTMENTS

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 9.2 kips - tension
No. Required =



STANDARD

Bar Size	No. Assemblies Required	Location
#5	225	Deck
#6	16	Diaphragms
#7	12	Abutments

BAR SPLICER DETAILS
HUNT CLUB ROAD OVER MILL CREEK
SECTION 00-00095-11-BR
LAKE COUNTY
STATION 116+60.00
STRUCTURE NO. 049-3072

BSD-1 9-01-03

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2661	00-00095-11-BR	LAKE	28	22
BORING LOGS				
C-91-169-00	ILLINOIS			

CONTRACT NO.: 83789

SOIL AND MATERIAL CONSULTANTS, INC.
Arlington Heights, Illinois (847) 870-0544

SOIL BORING LOG 1

Client: McCLURE ENGINEERING ASSOCIATES, INC.
Reference: Hunt Club Road Improvements, Lake County, IL
Logged By: DA Page: 1 of 3
File No. 16610 Date Drilled: 6/6/02
Comments:
Equipment: ☒ CME 45B ☐ CME 55 ☐ Hand Auger ☐ Other

depth, ft.	CLASSIFICATION	standard penetration X	moisture content Δ	dry unit weight, lbs./cu.ft. ɣ	unconfined compressive strength ○
	Elevation 685.6' Existing Surface				
	Asphalt - 10.0"				
	Brown silt,some clay,trace sand & gravel, damp-very damp,loose - Fill	6	9.0		
5		5	12.0		
		5	9.5		
	676.6'				
10	Gray-black-brown silt,some clay & sand, trace gravel,very damp,loose - Fill	5	14.9		
		5	10.5		
	671.6'				
15	Gray-black clay & silt,trace sand & gravel, 669.6' very damp-damp,tough - Fill	12	19.0		
	668.1' Concrete Foundation				
	Limestone,very damp-saturated		17.5		
	Wood fragments,very damp,medium dense-Fill 663.6'	28	118.4		
20	Gray silt,some clay & gravel,trace sand, damp,medium dense	18	19.2		
	662.6'				
	Gray clay,some silt,trace sand & gravel, damp,tough	9	28.0	96.2	1.6
25		8	23.8	108.0	1.8
		9	22.3	112.0	1.5
30	655.1'				
	Gray silt,some clay,trace sand,damp-very 652.6' damp,loose	9	21.9		
	Gray clay,some silt,trace sand & gravel, damp,very tough	11	22.8	109.0	2.3
35	649.1'				
	Gray clay,some silt,trace sand & gravel, damp,tough to very tough	8	23.4	107.6	1.8
40		10	26.3	99.8	2.1

Water encountered at 17.5 feet during drilling operations (W.D.).
Water recorded at feet on completion of drilling operations (A.D.).
Water recorded at feet hours after completion of drilling operations (A.D.).

G-303

SOIL AND MATERIAL CONSULTANTS, INC.
Arlington Heights, Illinois (847) 870-0544

SOIL BORING LOG 1

Client: McCLURE ENGINEERING ASSOCIATES, INC.
Reference: Hunt Club Road Improvements, Lake County, IL
Logged By: DA Page: 2 of 3
File No. 16610 Date Drilled: 6/6/02
Comments:
Equipment: ☒ CME 45B ☐ CME 55 ☐ Hand Auger ☐ Other

depth, ft.	CLASSIFICATION	standard penetration X	moisture content Δ	dry unit weight, lbs./cu.ft. ɣ	unconfined comp. strength ○
	Elevation				
	Gray clay,some silt,trace sand & gravel, very damp-damp,tough to very tough	14	22.2	111.6	1.5
45		11	22.8	111.9	1.9
		11	20.2	112.7	2.3
50		15	22.7	111.6	2.6
		14	16.8	134.9	2.6
55					
	625.6'				
60	Gray clay,some silt,trace sand & gravel, damp-very damp,tough to very tough	9	23.2	109.3	2.2
		12	23.5	109.9	1.8
65					
		14	25.6	107.4	2.1
70	613.6'				
	Gray fine-medium sand,some coarse sand & gravel,very damp-saturated,medium dense 611.1'	18	11.2 20.5	112.6	2.3
75	Gray clay,some silt,trace sand & gravel, damp,very tough				
		13	25.8	105.4	2.4
80					

Water encountered at 17.5 feet during drilling operations (W.D.).
Water recorded at feet on completion of drilling operations (A.D.).
Water recorded at feet hours after completion of drilling operations (A.D.).

G-303b

SOIL AND MATERIAL CONSULTANTS, INC.
Arlington Heights, Illinois (847) 870-0544

SOIL BORING LOG 1

Client: McCLURE ENGINEERING ASSOCIATES, INC.
Reference: Hunt Club Road Improvements, Lake County, IL
Logged By: DA Page: 3 of 3
File No. 16610 Date Drilled: 6/6/02
Comments:
Equipment: ☒ CME 45B ☐ CME 55 ☐ Hand Auger ☐ Other

depth, ft.	CLASSIFICATION	standard penetration X	moisture content Δ	dry unit weight, lbs./cu.ft. ɣ	unconfined comp. strength ○
	Elevation				
	Gray clay,some silt,trace sand & gravel, damp,very tough				
85		15	26.3	103.4	2.9
	598.1'				
90	Gray clay,some silt,trace sand & gravel, damp,tough to very tough	16	17.7	120.6	1.2
	590.6'				
95	End of Boring	27	15.0	119.6	2.2
100					
105					
110					
115					
120					

Water encountered at 17.5 feet during drilling operations (W.D.).
Water recorded at feet on completion of drilling operations (A.D.).
Water recorded at feet hours after completion of drilling operations (A.D.).

G-303c

BORING B-1

SOIL AND MATERIAL CONSULTANTS, INC.
Arlington Heights, Illinois (847) 870-0544

SOIL BORING LOG 2

Client: McCLURE ENGINEERING ASSOCIATES, INC.
Reference: Hunt Club Road Improvements, Lake County, IL
Logged By: DA Page: 1 of 2
File No. 16610 Date Drilled: 7/10/02
Comments:
Equipment: ☒ CME 45B ☐ CME 55 ☐ Hand Auger ☐ Other

depth, ft.	CLASSIFICATION	standard penetration X	moisture content Δ	dry unit weight, lbs./cu.ft. ɣ	unconfined compressive strength ○
	Elevation 685.8' Existing Surface				
	Bituminous concrete - 11.0"				
	Brown fine-medium sand,some gravel,trace coarse sand,damp,medium dense - Fill	11	4.4		
5		11	5.3		
	679.3'				
	Brown fine-medium sand,some gravel,trace coarse sand,damp,loose to medium dense Fill	6	5.3		
10		18	5.8		
	674.3'				
	Gray-black clay,some silt,trace sand & gravel,damp-very damp,stiff to tough Fill	4	23.4		
15		5	19.0		
		5	21.8	117.3	1.0
	666.8'				
20	665.8' (a) see page 2 of 2	7	16.2	122.0	3.3
	Gray clay,some silt,trace sand & gravel, very damp-damp,tough to very tough	10	16.4		
25		11	29.2	95.8	2.8
	657.3'	17	22.0	109.8	3.4
	Gray clay,some silt,trace sand & gravel, very damp-damp,tough to hard	9	29.6	99.7	1.4
30		21	18.4	114.3	4.4
		31	16.8	117.6	5.9
35		29	17.1	117.8	5.7
	647.3'				
40	645.8' (b) see page 2 of 2	12	23.4	108.8	1.8

Water encountered at 11.0 feet during drilling operations (W.D.).
Water recorded at 35.0 feet on completion of drilling operations (A.D.).
Water recorded at feet hours after completion of drilling operations (A.D.).

G-303

SOIL AND MATERIAL CONSULTANTS, INC.
Arlington Heights, Illinois (847) 870-0544

SOIL BORING LOG 2

Client: McCLURE ENGINEERING ASSOCIATES, INC.
Reference: Hunt Club Road Improvements, Lake County, IL
Logged By: DA Page: 2 of 2
File No. 16610 Date Drilled: 7/10/02
Comments:
Equipment: ☒ CME 45B ☐ CME 55 ☐ Hand Auger ☐ Other

depth, ft.	CLASSIFICATION	standard penetration X	moisture content Δ	dry unit weight, lbs./cu.ft. ɣ	unconfined comp. strength ○
	Elevation				
	Gray clay,some silt,trace sand & gravel, damp,tough to very tough	12	23.6	109.8	1.8
45		13	21.2	109.0	2.2
		9	20.6	108.7	2.1
50	635.8'	12	20.3	118.0	3.4
	End of Boring				
	(a) Gray clay,some silt,trace sand & gravel,damp,very tough				
60	(b) Gray clay,some silt,trace sand & gravel,very damp-damp,tough				
65					
70					
75					
80					

Water encountered at 11.0 feet during drilling operations (W.D.).
Water recorded at 35.0 feet on completion of drilling operations (A.D.).
Water recorded at feet hours after completion of drilling operations (A.D.).

G-303b

BORING B-2

SOIL AND MATERIAL CONSULTANTS, INC.

General Notes

SAMPLE CLASSIFICATION

Soil sample classification is based on the Unified Soil Classification System, the Standard Practice for Description and Identification of Soils (Visual-Manual Procedure), ASTM D-2488, the Standard Test Method for Classification of Soils for Engineering Purposes, ASTM D-2487(when applicable), and the modifiers noted below.

CONSISTENCY OF COHESIVE SOILS

Term	Qu -tons/sq. ft.	N (unreliable)
Very Soft	0.00 - 0.25	0 - 2
Soft	0.26 - 0.49	3 - 4
Stiff	0.50 - 0.99	5 - 8
Tough	1.00 - 1.99	9 - 15
Very Tough	2.00 - 3.99	16 - 30
Hard	4.00 - 7.99	30 +
Very Hard	8.00 +	

RELATIVE DENSITY OF GRANULAR SOILS

Term	N - blows/foot
Very Loose	0 - 4
Loose	5 - 9
Medium Dense	10 - 29
Dense	30 - 49
Very Dense	50 +

IDENTIFICATION AND TERMINOLOGY

Term		Size Range
Boulder		over 8 in.
Cobble		3 in. to 8 in.
Gravel	-coarse	1 in. to 3 in.
	-medium	3/8 in. to 1 in.
	-fine	#4 sieve to 3/8 in.
Sand	-coarse	#10 sieve to #4 sieve
	-medium	#40 sieve to #10 sieve
	-fine	#200 sieve to #40 sieve
Silt		0.002 mm to #200 sieve
Clay		smaller than 0.002 mm

Modifying Term	Percent by Weight
Trace	1 - 10
Little	11 - 20
Some	21 - 35
And	36 - 50

Moisture Condition

Dry
Damp
Very Damp
Saturated

DRILLING, SAMPLING & SOIL PROPERTY SYMBOLS

CF - Continuous Flight Auger
HS - Hollow Stem Auger
HA - Hand Auger
RD - Rotary Drilling
AX - Rock Core, 1-3/16 in. diameter
BX - Rock Core, 1-5/8 in. diameter
NX - Rock Core, 2-1/8 in. diameter
S - Sample Number
T - Type of Sample
J - Jar
AS - Auger Sample
SS - Split-spoon (2 in. O.D. with 1-3/8 in. I.D.)
ST - Shelby Tube (2 in. O.D. with 1-7/8 in. I.D.)
R - Recovery Length, in.
B - Blows/ 6 in. interval, Standard Penetration Test (SPT)
N - Blows/ foot to drive 2 in. O.D. split-spoon sampler with 140 lb. hammer falling 30 in., (STP)
Pen. - Pocket Penetrometer reading, tons/ sq. ft.
W - Water Content, % of dry weight
Uw - Dry Unit Weight of soil, lbs./ cu. ft.
Qu - Unconfined Compressive Strength, tons/ sq. ft.
Str - % Strain at Qu.
WL - Water Level
WD - While Drilling
AD - After Drilling
DCI - Dry Cave-in
WCI - Wet Cave-in
LL - Liquid Limit, %
PL - Plastic limit, %
PI - Plasticity Index (LL-PL)
LI - Liquidity Index [(W-PL)/PI]

NOTE:
See Sheet 1 of 13 for Boring Locations.

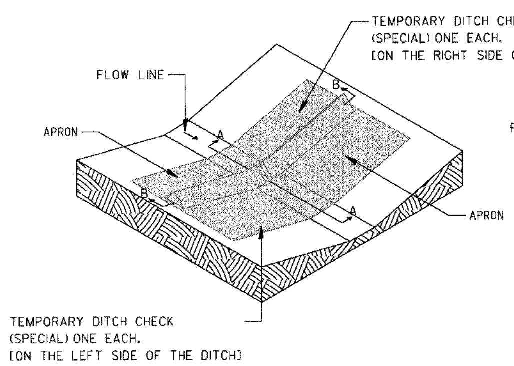
BORING LOGS
HUNT CLUB ROAD OVER MILL CREEK
SECTION 00-00095-11-BR
LAKE COUNTY
STATION 116+60.00
STRUCTURE NO. 049-3072

13 Borings.dgn 12/30/2004 2:17:22 PM

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2661	00-00095-II-BR	LAKE	28	23

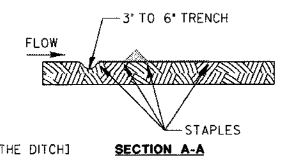
C-91-169-00 ILLINOIS

CONTRACT NO.: 83789

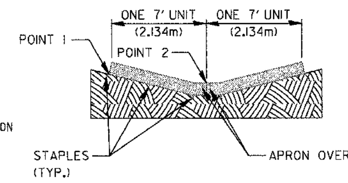


TEMPORARY DITCH CHECK (SPECIAL) ONE EACH.
[ON THE LEFT SIDE OF THE DITCH]

SILT DIKE UNIT ISOMETRIC



SECTION A-A



SECTION B-B

STAPLES SHALL BE PLACED WHERE THE UNITS OVERLAP AND IN THE CENTER OF THE 7' UNIT AS SHOWN ON THE DIAGRAM.

POINT 1 MUST BE HIGHER THAN POINT 2 TO INSURE THAT WATER FLOWS OVER THE DIKE AND NOT AROUND THE ENDS.

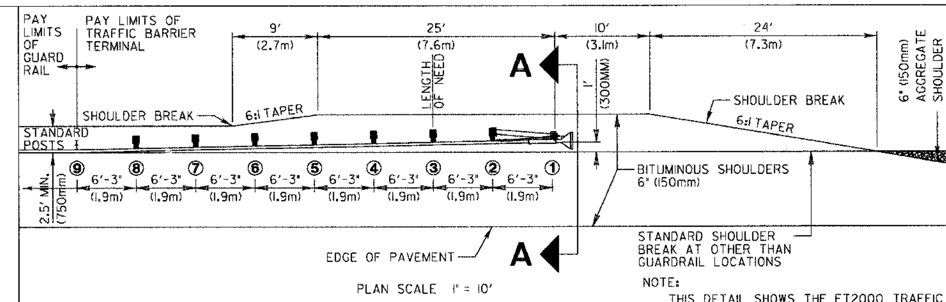
NOTE:
THE INSTALLATION SHOWN ABOVE WOULD BE PAID FOR AS TWO EACH TEMPORARY DITCH CHECK (SPECIAL).

SCALE: 1" = 5'

REVISIONS	DATE
DUAL DIMENSIONS	10/23/01

LakeCounty Division of Transportation — APPROVED BY: G. N. WIESNER DATE: JULY 23, 1999

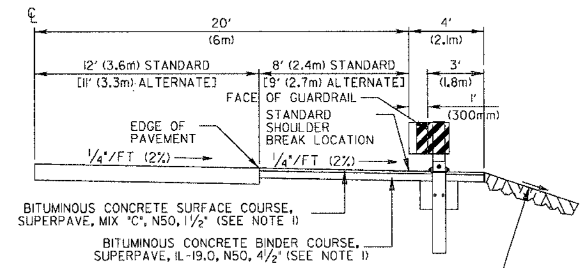
TRIANGULAR SILT DIKE INSTALLATION FOR ROADWAY DITCH OR DRAINAGE DITCH LC1005



NOTE:
THIS DETAIL SHOWS THE ET2000 TRAFFIC BARRIER TERMINAL MANUFACTURED BY SYRO STEEL. AN I.D.O.T. APPROVED EQUIVALENT MAY BE SUBSTITUTED WITH THE APPROVAL OF ENGINEER. HOWEVER IT SHOULD BE NOTED THAT DIFFERENT QUANTITIES APPLY FOR OTHER TRAFFIC BARRIER TERMINALS.

THE ET2000 IS SET BACK 1' (300mm) AT POST NUMBER 1. THE SETBACK IS STARTED AT THE GUARD RAIL SECTION PRIOR TO THE TERMINAL AND CONTINUED BACK AT A 1:50 RATIO.

A MODIFIED LOCATION OF SHOULDER BREAK MAY ALSO BE REQUIRED FOR OTHER TERMINALS. REFER TO MANUFACTURER AND I.D.O.T. DRAWINGS FOR SPECIFICS.



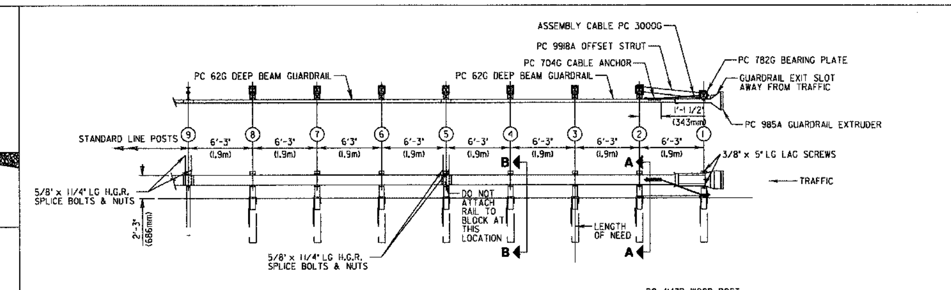
SECTION A-A
SECTION SCALE 1" = 5'

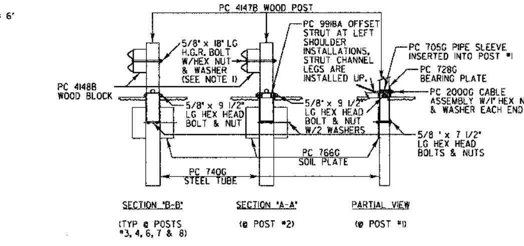
NOTE 1: IF PAVED SHOULDER IS BEING BUILT IN CONJUNTION WITH A ROAD IMPROVEMENT, THEN THE BITUMINOUS MIXES WOULD BE THOSE USED ON THE ROAD IN ORDER TO AVOID MULTIPLE MIX REQUIREMENTS

REVISIONS	DATE
DUAL DIMENSIONS	02/12/02
SUPERPAVE	07/13/04

LakeCounty Division of Transportation — APPROVED BY: G. N. WIESNER DATE: AUG. 5, 1999

SHOULDER BREAK AT TRAFFIC BARRIER TERMINAL, TYPE 1 SPECIAL LC1014





NOTE:
SECTION "B-B" IS SIMILAR @ POST #5 EXCEPT RAIL IS NOT ATTACHED.

BILL OF MATERIAL

PC	QTY	DESCRIPTION
60G	1	DEEP BEAM GUARD RAIL (12GA)
62G	1	DEEP BEAM GUARD RAIL (12GA)
705G	1	PIPE SLEEVE
766G	8	SOIL PLATE
4148B	7	WOOD BLOCK
4147B	8	WOOD POST
740G	8	STEEL TUBE
782G	1	BEARING PLATE
704A	1	CABLE ANCHOR
3000G	1	CABLE ASSEMBLY
9918G	1	OFFSET STRUT
985A	1	GUARDRAIL EXTRUDER
		HARDWARE
3497G	8	5/8"⌀ x 9 1/2" HEX HD BOLT
3580G	7	5/8"⌀ x 18" H.G.R. POST BOLT
3360G	16	5/8"⌀ x 1 1/4" H.G.R. SPLICE BOLT
3478G	16	5/8"⌀ x 7 1/2" HEX HD BOLT
3340G	47	5/8" H.G.R. NUT
3300G	11	5/8" WASHER
3264G	2	3/8"⌀ x 5" LAG SCREW
3910G	2	1" HEX NUT
3900G	2	1" WASHER

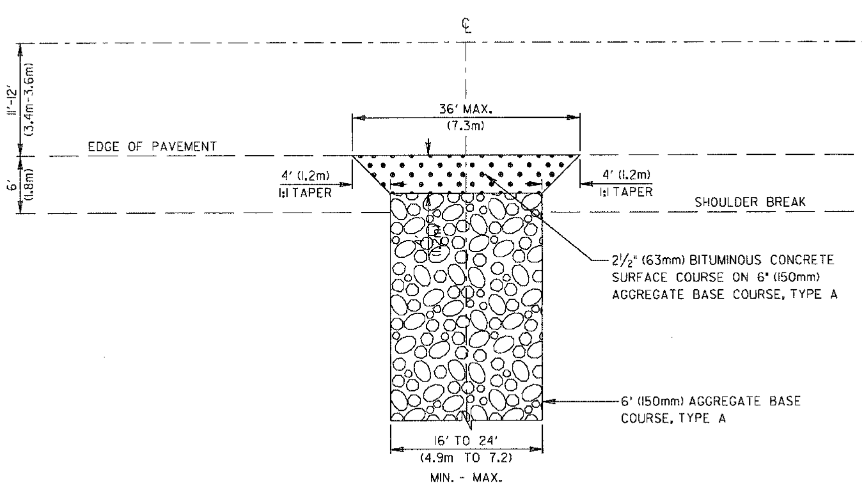
NOTES:
1. THE 5/8" FLAT WASHER IS USED UNDER THE NUT, BEHIND THE POST ONLY. NO WASHER IS USED AT THE RAIL
2. THE BREAKAWAY POSTS @ LOCATIONS #5, 6, 7 & 8 MAY BE AS SHOWN OR MAY UTILIZE POSTS AS SHOWN IN OPTION "B" WITHOUT FOUNDATION TUBES. (SEE DRAWING NO SS 241.) POSTS @ LOCATIONS #1, 2, 3 & 4 MUST USE FOUNDATION TUBES.
3. THE ER-2000 WAS TESTED ON FLAT & LEVEL TERRAIN. IT IS NOT RECOMMENDED ON SLOPES.
4. MANUFACTURER SUGGESTS CUSTOMER TO PROVIDE REFLECTORIZATION OF TERMINAL.

ET-2000 PLAN, ELEVATION & SECTIONS OPTION "A" 1994 EDITION SYRO, INC. SS 240

REVISIONS	DATE
DUAL DIMENSIONS	02/12/02
NUMBER & TITLE	07/08/04

LakeCounty Division of Transportation — APPROVED BY: G. N. WIESNER DATE: AUG. 6, 1999

TRAFFIC BARRIER TERMINAL, TYPE 1 SPECIAL LC1019



DESIGN NOTE:
USE THIS BITUMINOUS APRON DETAIL FOR AGGREGATE FIELD ENTRANCES ALONG ROADS THAT DO NOT HAVE A MINIMUM 2' (0.6m) PAVED SHOULDER. USE THE APRON FOR FIELD ENTRANCES BEHIND CURB AND GUTTER IF A BITUMINOUS SHOULDER BEHIND THE CURB AND GUTTER DOES NOT EXIST.

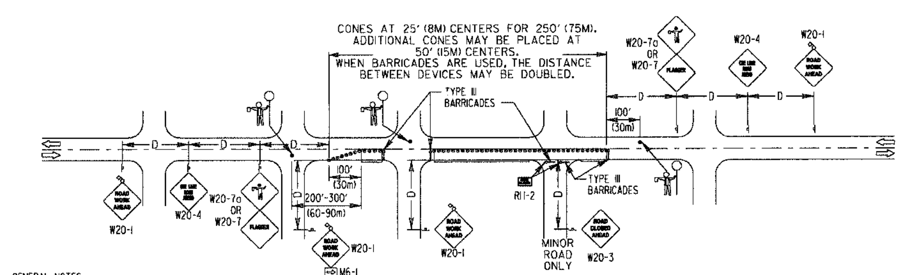
SCALE: 1" = 10'

REVISIONS	DATE
DUAL DIMENSIONS	03/08/02
DEL TY A (SPEC)	04/25/02

LakeCounty Division of Transportation — APPROVED BY: G. N. WIESNER DATE: NOV. 18, 1999

BITUMINOUS APRON FOR AGGREGATE FIELD ENTRANCE (SPECIAL) LC4010

CONES AT 25' (8M) CENTERS FOR 250' (75M). ADDITIONAL CONES MAY BE PLACED AT 50' (15M) CENTERS. WHEN BARRICADES ARE USED, THE DISTANCE BETWEEN DEVICES MAY BE DOUBLED.



GENERAL NOTES

1. All warning signs shall have minimum dimensions of 48"x48" (1.2M x 1.2M). The engineer may approve signs measuring 36"x36" (900MM x 900MM) when the posted speed limit is 30 mph (50km/h) or less.

2. All signs not on the traveled way shall be post mounted if the closure time exceeds four calendar days. All signs shall be posted with the bottom of the sign not less than 7' (2.1M) above the edge of pavement. 'NO PARKING' signs shall be installed throughout the work area at the discretion of the engineer.

3. The flagger shall be in sight of each other or in direct communication at all times. When no work is being performed, the flaggers will not be required. If the flaggers are not present, the flagger sign shall be removed, covered or turned away from traffic.

4. Barricades with Type C steady burning lights shall be used in lieu of cones for night operation. All cones and barricades shall be in accordance with Standard 702001.

5. When necessary, additional flaggers shall be positioned so as to regulate side street traffic.

6. Construction operations shall be confined to one lane, leaving the opposite lane open to traffic.

7. If the work operation is performed between 9:00 am and 3:00 pm and the work does not exceed 15 minutes, the traffic protection shall be as shown for Standard 701301. Signs, when required, shall be at the spacing specified in the Advance Warning Sign Spacing Table.

8. If the work area is in the parking lane and the parking exists during work hours, a 'ROAD WORK AHEAD' sign shall be installed in advance of the work area at the spacing specified in the Advance Warning Sign Spacing Table and the area protected with cones or barricades.

SYMBOLS
- WORK AREA
- CONE OR BARRICADE
- SIGN ON PORTABLE OR PERMANENT SUPPORT
- ARROW BOARD
- TYPE II BARRICADE W/TYPE A FLASHING LIGHT
- FLAGGER WITH TRAFFIC CONTROL SIGN

9. Type A flashing lights shall be used on each approach in advance of the work area during hours of darkness and installed above the first two signs in each series and the high level warning devices.

10. Longitudinal dimensions may be adjusted to fit field conditions.

11. The location of the construction warning signs shall be determined by the speed limit posted on the road or street on which the construction warning signs are installed.

12. Form BT 725 is required.

ADVANCE WARNING SIGN SPACING TABLE POSTED SPEED	DISTANCE BETWEEN SIGNS (D)
40 MPH OR LESS	200'
45-50 MPH	350'
55 MPH	500'
ADVANCE WARNING SIGN SPACING TABLE - METRIC POSTED SPEED	**DISTANCE BETWEEN SIGNS (D)**
60 km/h OR LESS	60m
70-80 km/h	105m
90 km/h	150m

NOT TO SCALE

MODIFIED STANDARD 701501-02

REVISIONS	DATE
NEW SPEC.-JPS	1/1/97
REMOVED FLAGS-JPS	3/14/97
SPACING REV.-JPS	1/29/98
TYPE II BARRICADES-JPS	12/7/98
REVISED DIST. CHART ADDED STAND. NO.-JPS	3/10/99
SCALE, FONT, SIZE--GNW	12/14/99
DUAL DIMENSIONS	03/25/02

LakeCounty Division of Transportation — APPROVED BY: ANTHONY KHAWAJA DATE: DEC 14, 1995

TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES HIGHWAY CONSTRUCTION, CONTRACT MAINTENANCE AND UTILITY OPERATIONS
TWO LANE, TWO WAY, UNDIVIDED, LANE CLOSURE DAY OR NIGHT OPERATIONS
WHERE, AT ANY TIME, ANY VEHICLE, EQUIPMENT, WORKERS OR THEIR ACTIVITIES ENCROACH ON THE PAVEMENT DURING SHOULDER OPERATIONS, OR WHERE CONSTRUCTION REQUIRES LANE CLOSURES. LC7002

GENERAL NOTES:

1. All warning signs shall have minimum dimensions of 48" x 48" (1.2m x 1.2m).

2. All signs not on the traveled way shall be post mounted if the closure time exceeds Four calender days. All signs shall be posted with the bottom of the sign not less than 7' (2.1m) above the edge of pavement. 'NO PARKING' signs shall be installed throughout the work area at the discretion of the engineer.

3. The distance 'L' shall be defined as:

SPEED	FORMULA
40 mph or less	$L = (WS^2)/60$
(60 km/h) or less	$L = (WS^2)/150$

where W = Width of Closure in FEET (meters) and S = Normal Posted Speed Limit in MPH (km/h)

45 mph (70 km/h) or greater, L = LANE WIDTH x SPEED LIMIT
Lane Width in FEET (meters);
Speed Limit in MPH (km/h).

4. Type II barricades with Type C steady burning lights shall be used in lieu of cones for night operations. All cones and barricades shall be in accordance with Standard 702001.

5. Type A flashing lights shall be used on each approach in advance of the work area during hours of darkness and installed above the first two signs in each series and the high level warning devices.

6. If the work operation is performed between 9:00 am and 3:00 pm and the work does not exceed 15 minutes, the traffic protection shall be as shown for Standard 701301. Signs, when required, shall be at the spacing specified in the Advance Warning Sign Spacing Table.

7. If the work area is in the parking lane and the parking exists during work hours, a 'ROAD WORK AHEAD' sign shall be installed in advance of work area at the spacing specified in the Advance Warning Sign Spacing Table and the area protected with cones or barricades.

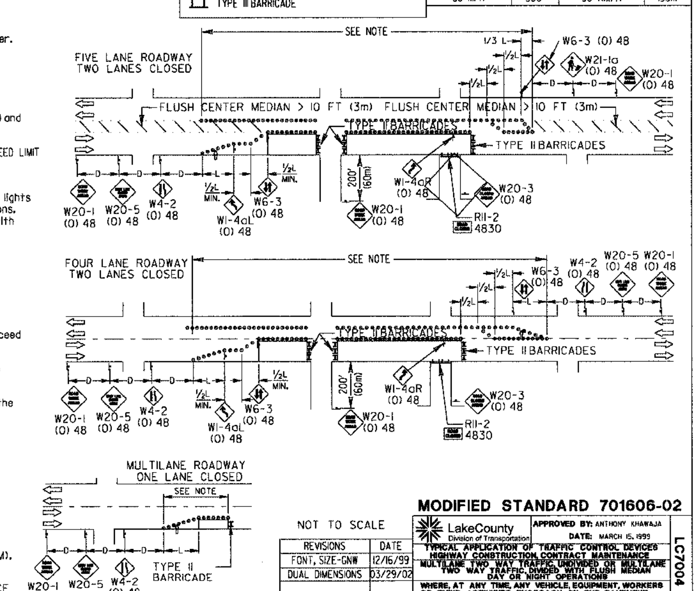
8. Longitudinal dimensions may be adjusted to fit field conditions.

10. Form BT 725 is required.

NOTE:
CONES AT 25' (8M) CENTERS FOR 250' (75M). ADDITIONAL CONES MAY BE PLACED AT 50' (15M) CENTERS. WHEN BARRICADES ARE USED, THE DISTANCE BETWEEN DEVICES MAY BE DOUBLED.

SYMBOLS
- WORK AREA
- CONE OR BARRICADE
- SIGN ON PORTABLE OR PERMANENT SUPPORT
- ARROW BOARD
- TYPE II BARRICADE
- TYPE III BARRICADE

ADVANCE WARNING SIGN SPACING TABLE	DISTANCE BETWEEN SIGNS	ADVANCE WARNING SIGN SPACING TABLE - METRIC	DISTANCE BETWEEN SIGNS
POSTED SPEED	(D)	POSTED SPEED	(D)
40 MPH OR LESS	200'	60 km/h OR LESS	60m
45-50 MPH	350'	70-80 km/h	105m
55 MPH	500'	90 km/h	150m



NOT TO SCALE

MODIFIED STANDARD 701606-02

REVISIONS	DATE
FONT, SIZE-GNW	12/16/99
DUAL DIMENSIONS	03/29/02

LakeCounty Division of Transportation — APPROVED BY: ANTHONY KHAWAJA DATE: MARCH 15, 1999

TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES HIGHWAY CONSTRUCTION, CONTRACT MAINTENANCE
MULTILANE TWO WAY TRAFFIC, UNDIVIDED OR MULTILANE TWO WAY TRAFFIC, DIVIDED WITH FLUSH MEDIAN DAY OR NIGHT OPERATIONS
WHERE, AT ANY TIME, ANY VEHICLE, EQUIPMENT, WORKERS OR THEIR ACTIVITIES ENCROACH ON THE PAVEMENT REQUIRING CLOSURE OF ONE OR MORE TRAFFIC LANES LC7004

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

DETAILS

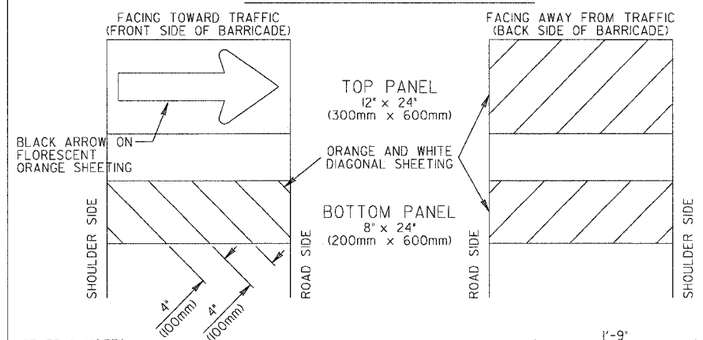
SCALE: VERT. N.T.S. HORIZ. N.T.S.
DATE

DRAWN BY AJP
CHECKED BY CRF

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2661	00-00095-11-BR	LAKE	28	24
C-91-169-00	ILLINOIS			

CONTRACT NO.: 83789

DIRECTION INDICATOR BARRICADES

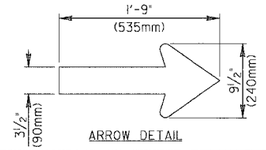


GENERAL NOTES

1) Direction Indicator Barricades shall be constructed from non-metallic Type II barricades meeting the requirements of Article 702.03 (e) of the Standard Specifications.

2) The Direction Indicator Barricades shall be equipped with Type C steady burning lights if used to channelize traffic during the hours of darkness.

3) The reflective sheeting for the top panel shall be Type AZ fluorescent orange. The diagonal panels shall have orange and white Type A or better reflective sheeting.



ARROW DETAIL

REVISIONS	DATE
DUAL DIMENSIONS	4/15/02

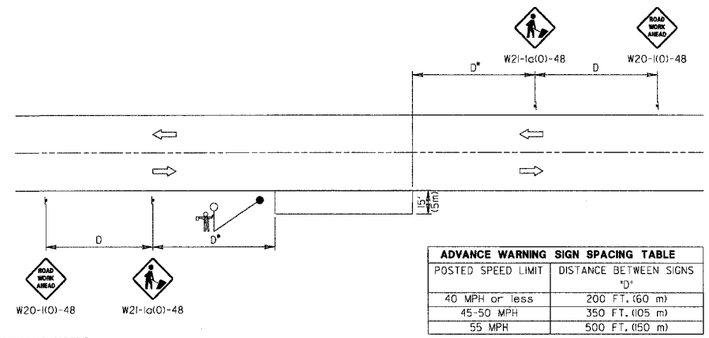
Lake County Division of Transportation

APPROVED BY: ANTHONY KHAWAJA
DATE: JAN. 27, 2000

TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES
HIGHWAY CONSTRUCTION, CONTRACT MAINTENANCE

DIRECTION INDICATOR BARRICADES

LC7006



ADVANCE WARNING SIGN SPACING TABLE	
POSTED SPEED LIMIT	DISTANCE BETWEEN SIGNS "D"
40 MPH or less	200 FT. (60 m)
45-50 MPH	350 FT. (105 m)
55 MPH	500 FT. (150 m)

GENERAL NOTES

This special details used at any time, any vehicle, equipment, workers or their activities require a stationary, intermittent or continous moving operation within 15 feet (5 m) of the traffic lane, where the average speed is 1mph (2 km) or less.

- Minimum distance "D" is shown in the Advance Warning Sign Spacing Table. If the work is a moving operation, the maximum distance "D" may be extended to ½ the length required for one normal working day's operation or 4 miles (6.4 km), whichever is less.

If the work operation does not exceed 60 minutes, traffic control may be in accordance with I.D.O.T. Highway Standard 701301.

SYMBOLS

WORK AREA

SIGN ON PORTABLE OR PERMANENT SUPPORT

FLAGGER WITH TRAFFIC CONTROL SIGN WHEN REQUIRED

MODIFIED STANDARD 701011

REVISIONS	DATE

Lake County Division of Transportation

APPROVED BY: A. KHAWAJA
DATE: 01/20/2003

TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES
HIGHWAY CONSTRUCTION, CONTRACT MAINTENANCE
AND UTILITY OPERATIONS

TWO LANE, TWO WAY OFF-ROAD OPERATIONS
DAY ONLY OPERATIONS

LC7008

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

DETAILS

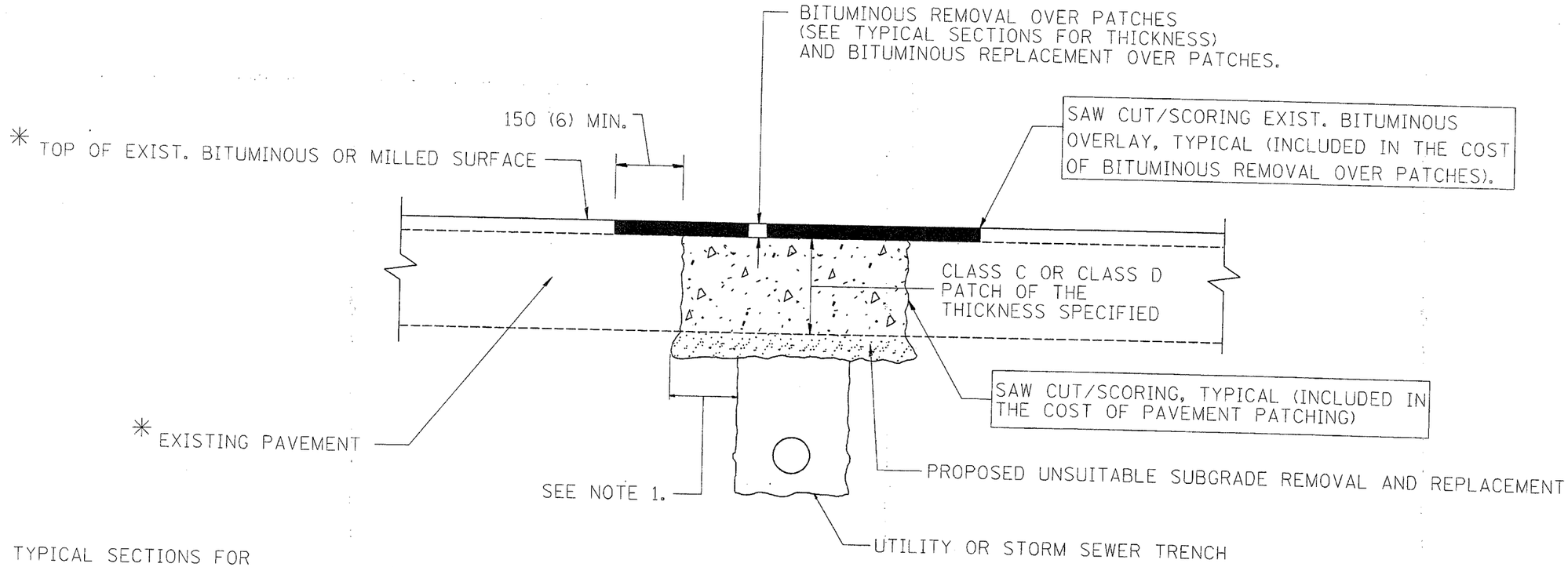
SCALE: VERT. N.T.S.
HORIZ. N.T.S.
DATE

DRAWN BY AJP
CHECKED BY CRF

DET-1-2.dgn 12/30/2004 2:53:35 PM

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2661	00-00095-11-BR	LAKE	28	25
PAVEMENT PATCHING FOR BIT. SURFACE PAVEMENT				
C-91-169-00	ILLINOIS			

CONTRACT NO.: 83789



* SEE TYPICAL SECTIONS FOR THICKNESS AND MATERIALS

NOTES:

1. THE WIDTH OF THE FULL DEPTH PATCH OVER A TRENCH SHALL BE 300 (12) WIDER ON EACH SIDE OF THE TRENCH.
2. FOR METHOD OF MEASUREMENT AND BASIS OF PAYMENT, SEE SPECIAL PROVISION "PATCHING WITH BITUMINOUS OVERLAY REMOVAL".

SEQUENCE OF CONSTRUCTION

1. REMOVE THE EXISTING BITUMINOUS MATERIAL OVER THE AREA TO BE PATCHED.
2. REMOVE AND REPLACE FULL DEPTH PATCHES
3. REPLACE BITUMINOUS MATERIAL OVER THE AREA TO BE PATCHED.

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

REVISIONS		REVISIONS	
NAME	DATE	NAME	DATE
R. SHAH	10/25/94	ART ABBAS	04/27/98
R. SHAH	01/14/95		
R. SHAH	03/23/95		
R. SHAH	04/24/95		
A. HOUSEH	03/15/96		
A. ABBAS	03/21/97		
A. ABBAS	01/20/98		

ILLINOIS DEPARTMENT OF TRANSPORTATION

PAVEMENT PATCHING FOR BITUMINOUS SURFACED PAVEMENT

SCALE: NONE

DATE 08/07/2002

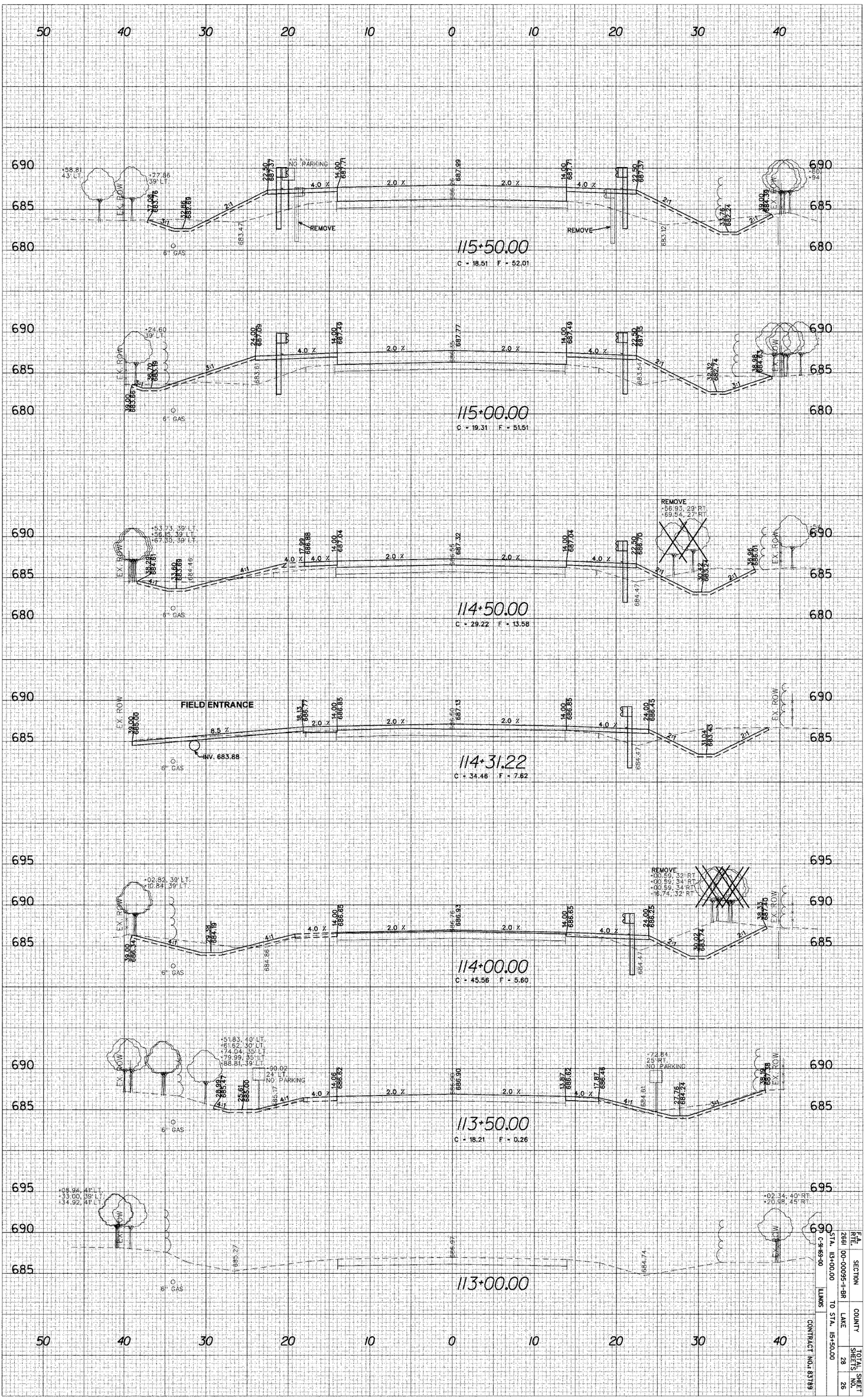
DRAWN BY

CHECKED BY

VI-BD22
w:\diststd\bd22.dgn LV=35
Wednesday August 07, 2002 @ 10:09:41 AM

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

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



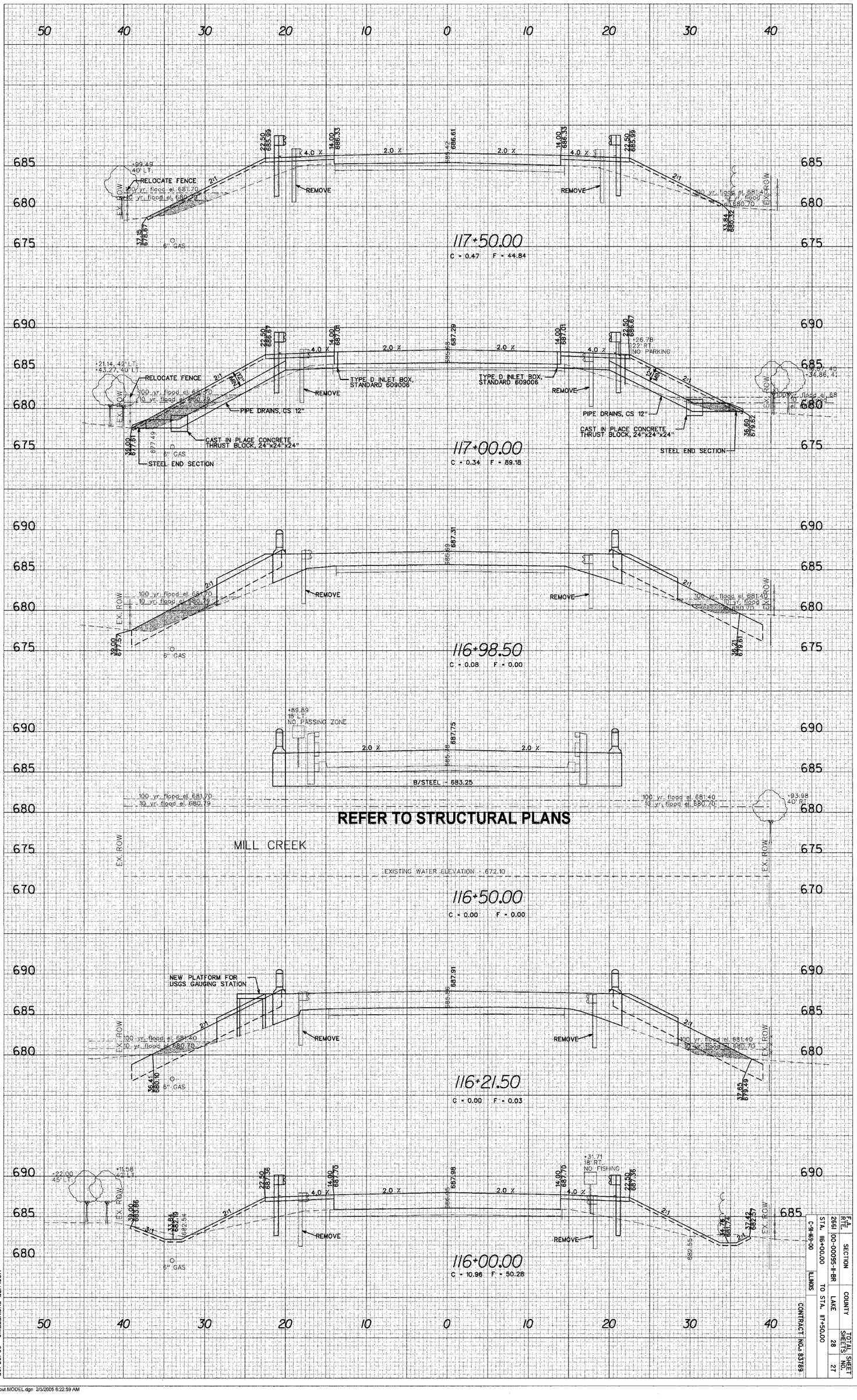
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2661	00-00095-4-BR	LAKE	28	26
STA. 113+00.00		ILLINOIS		
TO STA. 115+50.00		CONTRACT NO.: 83789		

MCCLURE ENGINEERING 02/03/05

xsectlayout MODEL.dgn 2/3/2005 8:22:39 AM

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

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



F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2661	00-00095-#-BR	LAKE	28	27
STA. 115+00.00				
C-98+69.00	ILLINOIS	TO STA. 117+50.00		

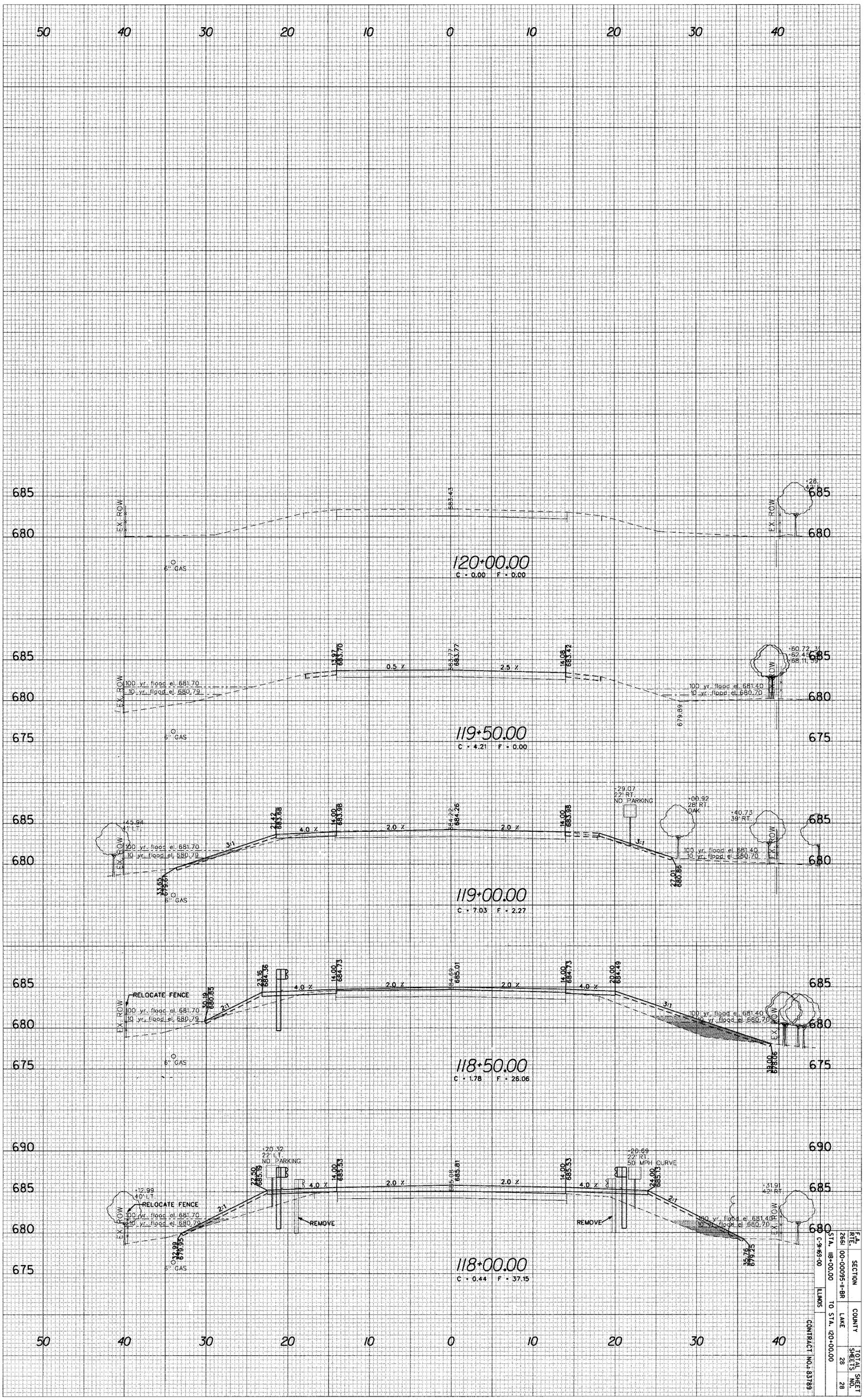
CONTRACT NO.: 83789

MCCLURE ENGINEERING 02/03/05

xseclayout MODEL.dgn 2/3/2005 8:22:59 AM

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

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



F.A. RTE.	SECTION		
266	00-00095-11-BR	COUNTY	TOTAL SHEETS
STA. 118+00.00		LAKE	28
TO STA. 120+00.00			SHEET NO.
C-96-60-00		ILLINOIS	28
		CONTRACT NO.: 83789	

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