11-16-07 Letting, Item 092

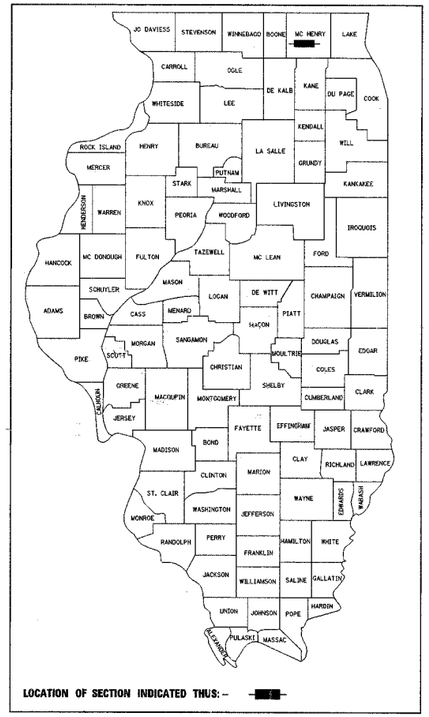
CONTRACT NO. 62340

F.A. ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-1-B	MCHENRY	77	1
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

77+2=79

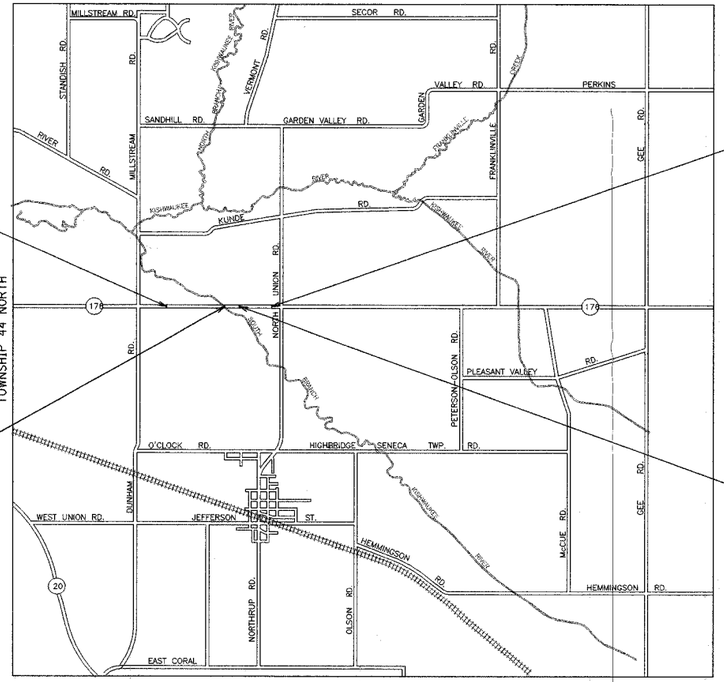
D-91-488-01

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
PLANS FOR PROPOSED
FEDERAL AID HIGHWAY
F.A.P. ROUTE 533 (IL RTE 176)
OVER THE SOUTH BRANCH OF THE KISHWAUKEE RIVER
BRIDGE REMOVAL AND REPLACEMENT AND
ROADWAY PROFILE ADJUSTMENT
SECTION 119R-1-B
PROJECT NO. ACBRF-0533(088)
MCHENRY COUNTY
C-91-488-01



LOCATION OF SECTION INDICATED THUS: –■–

PROJECT LOCATED IN UNINCORPORATED MCHENRY COUNTY



BEGIN PROJECT STA 28+50

END PROJECT STA 87+50

S.N. EXISTING: 056-0004 (STA 50+00)
S.N. PROPOSED: 056-0071 STA. (51+00)
REMOVE EXISTING 78.3 FOOT THREE-SPAN, CLOSED ABUTMENT STRUCTURE AND REPLACE WITH A 410' FOUR-SPAN, STEEL PLATE GIRDER SRUCTURE

SN PROPOSED: 056-0073 STA 55+65
OVERFLOW STRUCTURE.
THREE CELL, EACH 12' x 4'
CAST IN PLACE BOX CULVERT

SENECA TOWNSHIP
SCALE 1"= 2500 FEET

GROSS AND NET LENGTH OF PROJECT: 3900 FT (0.739 MI)

0 5' 10' 1"= 5'
0 10' 20' 30' 1"= 10'
0 50' 100' 1"= 20'
0 50' 100' 1"= 50'
0 100' 200' 300' 1"= 100'

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. 62340

FOR INDEX OF SHEETS, SEE SHEET NO. 2

TRAFFIC DATA
EXISTING ADT
8,300 (1999)
DESIGN ADT
9,960 (2019)
SPEED LIMIT 55 MPH

DESIGN DESIGNATION
OTHER PRINCIPAL ARTERIAL
9960 (19) ARTERIAL 3.73 (FD-20)

DISTRICT ONE PLAN PREPARATION ENGINEER: JOSE DOMINGUEZ (847) 705-4232

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED 6-27 20 07

DEPUTY DIRECTOR OF HIGHWAYS, REGION 1 ENGINEER

October 12, 20 07

Acting ENGINEER OF DESIGN AND ENVIRONMENT

October 12, 20 07

DIRECTOR, DIVISION OF HIGHWAYS

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

DONALD E. JANKAUSKAS 62-33470 REGISTERED PROFESSIONAL ENGINEER OF ILLINOIS
Lic. Exp 11-30-07

GRAEF ANHALT SCHLOEMER and Associates Inc.

GRAEF, ANHALT, SCHLOEMER & ASSOCIATES, INC.
ENGINEERS & SCIENTISTS
8501 W. Higgins Road; Suite 280
Chicago, Illinois 60631
(773) 399-0112

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CONTRACT NO. 62340

F.A. ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-1-B	McHENRY	77	2
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

INDEX OF SHEETS

ILLINOIS ROUTE 176
DISTRICT ONE STANDARDS LIST

BD-01 DRIVEWAY DETAILS DISTANCE BETWEEN R.O.W. AND FACE OF CURB/EDGE OF SHOULDER >= 4.5m (15')

BD-02 DRIVEWAY DETAILS DISTANCE BETWEEN R.O.W. AND FACE OF CURB < 4.5m (15')

BD-22 PAVEMENT PATCHING FOR HOT-MIX ASPHALT SURFACED PAVEMENT

BD-32 BUTT JOINT AND HOT-MIX ASPHALT TAPER DETAILS

BD-34 DETAILS FOR STEEL PLATE BEAM GUARD RAIL ADJACENT TO CURB AND GUTTER STABILIZATION AT TBT TY 1 SPECIAL

TC-10 TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS

TC-11 TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT)

TC-13 DISTRICT ONE TYPICAL PAVEMENT MARKINGS

TC-21 TYPICAL MARKING FOR CLOSING STATE HIGHWAYS

TC-22 TEMPORARY INFORMATION SIGNING

STATE STANDARDS

STD. NO.	DESCRIPTION
000001-04	STANDARD SYMBOLS, ABBREVATIONS AND PATTERNS
001001-01	AREAS OF REINFORCEMENT BARS
280001-03	TEMPORARY EROSION CONTROL SYSTEMS
406201	MAILBOX TURNOUT
420401-05	BRIDGE APPROACH PAVEMENT
442201-02	CLASS C AND D PATCHES
482001-01	HOT MIX ASPHALT SHOULDER DETAILS - ADJACENT TO FLEXIBLE PAVEMENT
482011-02	HOT MIX ASPHALT SHOULDER STRIPS/SHOULDERS WITH RESURFACING OR WIDENING AND RESURFACING PROJECTS
515001-02	NAME PLATE FOR BRIDGES
542301-01	PRECAST REINFORCED CONCRETE FLARED END SECTION
542306-01	PRECAST REINFORCED CONCRETE ELLIPTICAL FLARED END SECTION
542311	GRATING FOR CONCRETE FLARED END SECTION FOR 600 MM (24") THRU 1300 MM (54") PIPE
542401	METAL END SECTION FOR PIPE CULVERTS
542406	METAL END SECTION FOR PIPE ARCHES
601101	CONCRETE HEADWALL FOR PIPE DRAIN
602401-01	MANHOLE, TYPE A
602406-02	MANHOLE, TYPE A, 1800mm (72") DIAMETER
602601-01	PRECAST REINFORCED CONCRETE FLAT SLAB TOP
602701-01	CAST IRON STEPS
604001-02	FRAME AND LIDS, TYPE 1
606001-03	CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER
630001-07	STEEL PLATE BEAM GUARDRAIL
630101-07	GUARDRAIL MOUNTED ON EXISTING CULVERTS
630201-04	PCC/HOT MIX ASPHALT STABILIZATION AT STEEL PLATE BEAM GUARDRAIL
630301-04	SHOULDER WIDENING FOR TYPE 1 GUARDRAIL TERMINALS
631031-06	TRAFFIC BARRIER TERMINAL, TYPE 6
635006-02	REFLECTOR AND TERMINAL MARKER PLACEMENT
635011-01	REFLECTOR MARKER AND MOUNTING DETAILS
701001-01	OFF ROAD OPERATIONS, 2L, 2W, MORE THAN 4.5m (15') MIN AWAY
701006-02	OFF ROAD OPERATIONS, 2L 2W, 4.5m (15') TO 600mm (24") FROM PAVEMENT EDGE
701011-01	OFF ROAD MOVING OPERATIONS, 2L 2W, DAY ONLY
702001-06	TRAFFIC CONTROL DEVICES
780001-01	TYPICAL PAVEMENT MARKINGS
781001-02	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS

HOT MIX ASPHALT MIXTURE REQUIREMENTS

OPERATION	ITEM	AC TYPE	VOIDS	MIX TYPE
ROADWAY RECONSTRUCT. (FULL-DEPTH)	2" HOT MIX ASPHALT SURFACE COURSE, MIX "D",IL 9.5mm, N50	PG 64-22	4% @ 50 GYR	SAME AS ITEM
	11" HOT MIX ASPHALT BINDER COURSE, IL-19.0mm, N50	PG 64-22•	4% @ 50 GYR	SAME AS ITEM
ROADWAY RESURFACING	2" HOT MIX ASPHALT SURFACE COURSE, IL 9.5mm, MIX "D", N50	PG 64-22	4% @ 50 GYR	SAME AS ITEM
	LEVELING BINDER (MACHINE METHOD), IL-9.5mm, N50, 1" & VAR	PG 64-22•	4% @ 50 GYR	SAME AS ITEM
HOT-MIX ASPHALT DRIVEWAY PAVEMENT	2" HOT MIX ASPHALT SURFACE COURSE, IL 9.5mm, MIX "C", N50	PG 64-22	4% @ 50 GYR	SAME AS ITEM
	HOT MIX ASPHALT BASE COURSE, 6" (PE) OR 8"(CE)	PG 64-22•	4% @ 50 GYR	BINDER IL 19.0mm
HOT-MIX ASPHALT SHOULDER	HOT MIX ASPHALT SHOULDER, 8"	PG 64-22•	2% @ 30 GYR	HOT MIX SHOULDER
PAVEMENT PATCHING	CLASS D PATCHES, 9" TYPE I, II, III, IV	PG 64-22•	4% @ 70 GYR	BINDER IL-19.0mm
	HOT MIX ASPHALT REPLACEMENT OVER PATCHES 2"	PG 64-22•	4% @ 70 GYR	BINDER IL-19.0mm
TEMPORARY RAMP	TEMPORARY RAMP THICKNESS VARIES	PG 64-22•	4% @ 70 GYR	BINDER IL-9.5mm

THE UNIT WEIGHT USED TO CALCULATE ALL HOT-MIX ASPHALT SURFACE COURSES IS 112LBS/SQ YD/INCH
• WHEN RAP EXCEEDS 20%, THE NEW ASPHALT BINDER IN THE MIX SHALL BE PG 58-22

GENERAL NOTES

1. BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL "J.U.L.I.E." (JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION), (800) 892-0123 FOR FIELD LOCATIONS OF BURIED ELECTRIC, TELEPHONE, CABLE AND GAS FACILITIES. (48 HOUR NOTIFICATION IS REQUIRED).

2. THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH UTILITY COMPANIES.

3. THE CONTRACTOR WILL NOT BE ALLOWED TO SET UP A YARD OR FIELD OFFICE ON STATE PROPERTY WITHOUT WRITTEN PERMISSION FROM THE DEPARTMENT.

4. WHEN MILLED PAVEMENT IS OPEN TO TRAFFIC THE MAXIMUM GRADE DIFFERENTIAL BETWEEN PASSES OF THE MILLING MACHINE SHALL NOT EXCEED 1½INCHES WHERE THE SPEED LIMIT IS 45 MPH (80KM/H) OR LESS AND 1 INCH (25mm) WHERE THE SPEED LIMIT IS GREATER THAN 45 MPH (80KM/H). WITH WRITTEN APPROVAL FROM THE ENGINEER, A MAXIMUM GRADE DIFFERENTIAL OF 3 INCHES (75mm) MAY BE ALLOWED IF THE EDGE OF THE MILLING IS SLOPED A MINIMUM 1:3 (V:H).

5. BUTT JOINTS WILL BE INSTALLED AT THE ENDS OF ALL RESURFACING (WHERE RESURFACING MEETS EXISTING PAVEMENT), IN ACCORDANCE WITH THE "BUTT JOINT AND HMA TAPER DETAILS" SHEET INCLUDED IN THE PLANS, UNLESS OTHERWISE SPECIFIED.

6. DURING CONSTRUCTION, AGGREGATE SURFACE COURSE TYPE B WILL ALSO BE USED TO PROVIDE TEMPORARY RAMPS AT INTERSECTIONS, BUILDING ENTRANCES, AND AS DETERMINED BY THE ENGINEER FOR PEDESTRIAN MOVEMENT.

7 ACCESS SHALL BE PROVIDED AT ALL TIMES TO PROPERTIES ABUTTING THE PROPOSED IMPROVEMENT.

8 THE RESIDENT ENGINEER SHALL CONTACT DEBBIE HANLON AREA TRAFFIC FIELD TECHNICIAN AT 847 438-2300 TWO WEEKS PRIOR TO INSTALLING FINAL PAVEMENT MARKINGS.

9 A QUANTITY OF POROUS GRANULAR EMBANKMENT, SUBGRADE (50 CY) AND GEOTECHNICAL FABRIC FOR GROUND STABILIZATION (120 SY) HAS BEEN INCLUDED IN THE PLANS FOR USE FOR EXISTING SOIL CONDITIONS PRIOR TO BUILDING ANY EMBANKMENT. THE QUANTITY PROVIDED IS AN ESTIMATE AND THE ACTUAL DEPTH AND EXTENT OF SUBGRADE TREATMENT WILL BE DETERMINED AT THE TIME OF CONSTRUCTION BY THE ENGINEER OR SOILS INSPECTOR.

COMMITMENTS

1. IT IS ANTICIPATED THAT THIS CONSTRUCTION WILL TAKE ONE CONSTRUCTION SEASON APPROXIMATELY NINE MONTHS. McHENRY COUNTY REQUESTS THAT THE DETOUR DURATION BE KEPT TO A MINIMUM. MHENRY COUNTY ALSO REQUESTS THAT NOTIFICATION BE PROVIDED AT A MINIMUM TWO WEEKS IN ADVANCE OF ANY DETOUR POSTING

2. McHENRY COUNTY REQUIRES THAT ALL EMERGENGY SERVICES IN THE AREA SHALL BE NOTIFIED IN WRITING AT LEAST 72 HOURS PRIOR TO THE CLOSURE OF ILLINOIS ROUTE 176

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

ILLINOIS ROUTE 176 OVER THE SOUTH BRANCH OF THE KISHWAUKEE RIVER

INDEX OF DRAWINGS, HIGHWAY STANDARDS GENERAL NOTES & COMMITMENTS

DRAWN BY: WS
DATE: 6-04-07 CHECKED BY: RJS

GRAEF ANHALT SCHLOEMER

GRAEF, ANHALT, SCHLOEMER & ASSOCIATES, INC.
CHICAGO, ILLINOIS

Rev.

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CONTRACT NO. 62340

F.A. ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-1-B	McHENRY	77	3
STA.	TO STA.			
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

SUMMARY OF QUANTITIES

	CODED PAY ITEM	DESCRIPTION	UNIT	TOTAL QUANTITY 80% FED. 20% STATE	ROADWAY QUANTITY I000-2A	BRIDGE QUANTITY X071-2A	CULVERT QUANTITY X028-2A
	A2000114	TREE, ACER X FREEMANII 'AUTUMN BLAZE' (AUTUMN BLAZE FREEMAN MAPLE), 1-3/4" CALIPER, BALLED AND BURLAPPED	EACH	9	9		
	A2002370	TREE, BETULA NIGRA (RIVER BIRCH), 8' HEIGHT, CLUMP FORM, BALLED AND BURLAPPED	EACH	21	21		
	A2003014	TREE, CELTIS OCCIDENTALIS PRAIRIE PRIDE (PRAIRIE PRIDE HACKBERRY), 1-3/4" CALIPER, BALLED AND BURLAPPED	EACH	8	8		
	A2005020	TREE, GYMNOCLADUS DIOICUS (KENTUCKY COFFEETREE), 2-1/2" CALIPER, BALLED AND BURLAPPED	EACH	10	10		
	A2005116	TREE, JUGLANS NIGRA (BLACK WALNUT), 2" CALIPER, BALLED AND BURLAPPED	EACH	11	11		
	A2006514	TREE, QUERCUS BICOLOR (SWAMP WHITE OAK), 1-3/4" CALIPER, BALLED AND BURLAPPED	EACH	14	14		
	A2006714	TREE, QUERCUS MACROCARPA (BUR OAK), 1-3/4" CALIPER, BALLED AND BURLAPPED	EACH	13	13		
	A2007316	TREE, SALIX ALBA TRISTIS (GOLDEN WEEPING WILLOW), 2" CALIPER, BALLED AND BURLAPPED	EACH	7	7		
*	A2007716	TREE, TAXODIUM DISTICHUM SHAWNEE BRAVE (SHAWNEE BRAVE BALD CYPRESS), 2" CALIPER, BALLED AND BURLAPPED	EACH	26	26		
	B2000864	TREE, AMELANCHIER X GRANDIFLORA COLE'S SELECT (COLE'S SELECT SERVICEBERRY), 5' HEIGHT, SHRUB FORM, BALLED AND BURLAPPED	EACH	9	9		
	B2001666	TREE, CRATAEGUS CRUSGALLI INERIS (THORNLESS COCKSPUR HAWTHORN), 6' HEIGHT, SHRUB FORM, BALLED AND BURLAPPED	EACH	13	13		
	C2C006G3	SHRUB, ARONIA MELANOCARPA 'VIKING' (VIKING BLACK CHOKEBERRY), CONTAINER GROWN, 3-GALLON	EACH	298	298		
	C2C01736	SHRUB, CORNUS SERICEA CARDINAL (CARDINAL REDOSIER DOGWOOD), 3" CONTAINER	EACH	268	268		
	C2C09636	SHRUB, SAMBUCUS CANADENSIS (AMERICAN ELDER), 3' HEIGHT, CONTAINER	EACH	111	111		
	C2O11836	SHRUB, VIBURNUM DENTATUM MORTON (NORTHERN BURGUNDY ARROWWOOD VIBURNUM), 3' HEIGHT, BALLED AND BURLAPPED	EACH	194	194		
	D2002272	EVERGREEN, PICEA PUNGENS GLAUCA (COLORADO BLUE SPRUCE), 6' HEIGHT, BALLED AND BURLAPPED	EACH	32	32		
	D2002772	EVERGREEN, PINUS NIGRA (AUSTRIAN PINE), 6' HEIGHT, BALLED AND BURLAPPED	EACH	9	9		
	20100110	TREE REMOVAL (6 TO 15 UNIT DIAMETER)	UNIT	1,292	1,292		
	20100210	TREE REMOVAL (OVER 15 UNIT DIAMETER)	UNIT	784	784		
	20101000	TEMPORARY FENCE	FOOT	650	650		
	20101100	TREE TRUNK PROTECTION	EACH	1	1		
	20200100	EARTH EXCAVATION	CU YD	4,773	4,773		
	20201200	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL	CU YD	9,620	9,620		
	20300100	CHANNEL EXCAVATION	CU YD	20	20		
	20400800	FURNISHED EXCAVATION	CU YD	14,273	14,273		
	20700400	POROUS GRANULAR EMBANKMENT, SPECIAL	CU YD	166		166	
	20700420	POROUS GRANULAR EMBANKMENT, SUBGRADE	CU YD	1,247	1,247		
	21001000	GEOTECHNICAL FABRIS FOR GROUND STABILIZATION	SQ YD	2,494	2,494		
*	21101615	TOPSOIL FURNISH AND PLACE, 4"	SQ YD	17,799	17,799		
*	21101805	COMPOST FURNISH AND PLACE, 2"	SQ YD	15,007	15,007		
*	21400100	GRADING AND SHAPING DITCHES	FOOT	100	100		
*	25000210	SEEDING, CLASS 2A	ACRE	4	4		
*	25000300	SEEDING CLASS 3	ACRE	6	6		
*	25000400	NITROGEN FERTILIZER NUTRIENT	POUND	613	613		

	CODED PAY ITEM	DESCRIPTION	UNIT	TOTAL QUANTITY 80% FED. 20% STATE	ROADWAY QUANTITY I000-2A	BRIDGE QUANTITY X071-2A	CULVERT QUANTITY X028-2A
*	25000500	PHOSPHOROUS FERTILIZER NUTRIENT	POUND	613	613		
*	25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	613	613		
	25100630	EROSION CONTROL BLANKET	SQ YD	17,799	17,799		
	28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	2,190	2,190		
	28000300	TEMPORARY DITCH CHECKS	EACH	44	44		
	28000400	PERIMETER EROSION BARRIER	FOOT	8,123	8,123		
	28000500	INLET AND PIPE PROTECTION	EACH	2	2		
	28000510	INLET FILTERS	EACH	2	2		
	28100105	STONE RIPRAP, CLASS A3	SQ YD	1,455	1,455		
	28100109	STONE RIPRAP, CLASS A5	SQ YD	820	69	476	275
	28200100	FILTER FABRIC	SQ YD	820	69	476	275
	35501308	HOT-MIX ASPHALT BASE COURSE, 6"	SQ YD	686	686		
	35501316	HOT-MIX ASPHALT BASE COURSE, 8"	SQ YD	360	360		
	40600200	BITUMINOUS MATERIALS (PRIME COAT)	TON	2	2		
	40600400	MIXTURE FOR JOINTS, CRACKS AND FLANGEWAYS	TON	1	1		
	40600625	LEVELING BINDER (MACHINE METHOD), N50	TON	79	79		
	40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	24	24		
	40601005	HOT-MIX ASPHALT REPLACEMENT OVER PATCHES	TON	8	8		
	40603310	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50	TON	117	117		
	40603335	HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50	TON	123	123		
	40701941	HOT-MIX ASPHALT PAVEMENT (FULL-DEPTH), 13"	SQ YD	7,650	7,650		
	42001165	BRIDGE APPROACH PAVEMENT	SQ YD	264	264		
	42001430	BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)	SQ YD	59	59		
	44000100	PAVEMENT REMOVAL	SQ YD	9,377	9,377		
	44000161	HOT-MIX ASPHALT SURFACE REMOVAL, 3"	SQ YD	1,520	1,520		
	44000200	DRIVEWAY PAVEMENT REMOVAL	SQ YD	378	378		
	44000600	SIDEWALK REMOVAL	SQ FT	140	140		
	44002220	HOT-MIX ASPHALT REMOVAL OVER PATCHES, 5"	SQ YD	29	29		
	44004250	PAVED SHOULDER REMOVAL	SQ YD	2,924	2,924		
	44201757	CLASS D PATCHES, TYPE III, 9 INCH	SQ YD	24	24		
	44300900	STRIP REFLECTIVE CRACK CONTROL TREATMENT SYSTEM A	FOOT	1,650	1,650		
	48101600	AGGREGATE SHOULDER, TYPE B, 8"	SQ YD	2,283	2,283		
	48203029	HOT-MIX ASPHALT SHOULDERS, 8"	SQ YD	4,168	4,168		
	50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1		1	
	50105220	PIPE CULVERT REMOVAL	FOOT	399	399		

Rev.

*SPECIALTY ITEMS

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

ILLINOIS ROUTE 176 OVER THE SOUTH BRANCH OF THE KISHWAUKEE RIVER

SUMMARY OF QUANTITIES

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

DATE: 6-04-07

DRAWN BY: WS

CHECKED BY: RJS

GRAEF ANHALT SCHLOEMER

GRAEF, ANHALT, SCHLOEMER & ASSOCIATES, INC.
CHICAGO, ILLINOIS

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CONTRACT NO. 62340

F.A. ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-1-B	McHENRY	77	4
STA.		TO STA.		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

SUMMARY OF QUANTITIES

CODED PAY ITEM	DESCRIPTION	UNIT	TOTAL QUANTITY 80% FED. 20% STATE	ROADWAY QUANTITY I000-2A	BRIDGE QUANTITY X071-2A	CULVERT QUANTITY X028-2A
50200100	STRUCTURE EXCAVATION	CU YD	413		413	
50200300	COFFERDAM EXCAVATION	CU YD	143		143	
50200500	COFFERDAMS	EACH	1		1	
50300100	FLOOR DRAINS	EACH	47		47	
50300225	CONCRETE STRUCTURES	CU YD	229.4		229.4	
50300255	CONCRETE SUPERSTRUCTURE	CU YD	509		509	
50300260	BRIDGE DECK GROOVING	SQ YD	1,803		1,803	
50300265	SEAL COAT CONCRETE	CU YD	61.1		61.1	
50300280	CONCRETE ENCASEMENT	CU YD	8.1		8.1	
50300300	PROTECTIVE COAT	SQ YD	2,403	264	2,139	
50500305	ERECTING STRUCTURAL STEEL	L SUM	1		1	
50500505	STUD SHEAR CONNECTORS	EACH	5,004		5,004	
50800105	REINFORCEMENT BARS	POUND	36,620			36,620
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	157,070		157,070	
50800515	BAR SPLICERS	EACH	88		88	
51200958	FURNISHING METAL SHELL PILES 14" x 0.250"	FOOT	3,389		3,389	
51202305	DRIVING PILES	FOOT	3,389		3,389	
51203200	TEST PILE METAL SHELLS	EACH	5		5	
51500100	NAME PLATES	EACH	2		1	1
52000110	PREFORMED JOINT STRIP SEAL	FOOT	89		89	
52100210	ERECTING ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	12		12	
52100220	ERECTING ELASTOMERIC BEARING ASSEMBLY, TYPE II	EACH	12		12	
52100530	ANCHOR BOLTS, 1 1/4"	EACH	48		48	
52100540	ANCHOR BOLTS, 1 1/2"	EACH	24		24	
54003000	CONCRETE BOX CULVERTS	CU YD	190.3			190.3
542A0229	PIPE CULVERTS, CLASS A, TYPE 1 24"	FOOT	45	45		
542D0220	PIPE CULVERTS, CLASS D, TYPE 1 15"	FOOT	458	458		
542D5470	PIPE CULVERTS, CLASS D, TYPE 1, EQUIVALENT ROUND-SIZE 15"	FOOT	29	29		
54213450	END SECTIONS 15"	EACH	20	20		
54213669	PRECAST REINFORCED CONCRETE FLARED END SECTION 24"	EACH	2	2		
54214290	END SECTIONS, EQUIVALENT ROUND-SIZE 15"	EACH	2	2		
54214509	PRECAST REINFORCED CONCRETE FLARED END SECTIONS, EQUIVALENT ROUND-SIZE 24"	EACH	2	2		
55034300	STORM SEWERS, TYPE 1, REINFORCED CONCRETE ELLIPICAL PIPE, SPAN 30, RISE 19	FOOT	597	597		
58700300	CONCRETE SEALER	SQ FT	664		664	
59000200	EPOXY CRACK INJECTION	FOOT	20		20	
59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	98		98	
60100060	CONCRETE HEADWALLS FOR PIPE DRAINS	EACH	16	16		
60107600	PIPE UNDERDRAINS 4"	FOOT	529	529		
60109580	PIPE UNDERDRAIN FOR STRUCTURES 4"	FOOT	124		124	
60221100	MANHOLES, TYPE A, 5'-DIAMETER, TYPE 1 FRAME, CLOSED LID	EACH	1	1		
60223800	MANHOLES, TYPE A, 6'-DIAMETER, TYPE 1 FRAME, CLOSED LID	EACH	1	1		
60600605	CONCRETE CURB, TYPE B	FOOT	120	120		
* 63000000	STEEL PLATE BEAM GUARDRAIL, TYPE A	FOOT	775	775		
* 63000025	STEEL PLATE BEAM GUARDRAIL, ATTACHED TO STRUCTURES	FOOT	100	100		
* 63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	4	4		
* 63100167	TRAFFIC BARRIER TERMINAL, TYPE 1, SPECIAL (TANGENT)	EACH	4	4		
63200310	GUARDRAIL REMOVAL	FOOT	343	343		
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	12	12		
67100100	MOBILIZATION	L SUM	1	1		
70102550	TRAFFIC CONTROL AND PROTECTION FOR TEMPORARY DETOUR	EACH	1	1		
70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	200	200		
70106800	CHANGEABLE MESSAGE SIGN	CAL MO	12	12		
* 78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	10,290	10,290		
* 78008210	POLYUREA PAVEMENT MARKING - LINE 4" TYPE I	FOOT	1,410	1,410		
* 78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	43	43		
* 78100105	RAISED REFLECTIVE PAVEMENT MARKER (BRIDGE)	EACH	6	6		
* 78200410	GUARDRAIL MARKERS, TYPE A	EACH	15	15		
* 78200520	BARRIER WALL MARKERS, TYPE B	EACH	12	12		
* 78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	4	4		
X0322256	TEMPORARY INFORMATION SIGNING	SQ FT	53	53		
X0325305	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SQ FT	20		20	
X5020501	UNDERWATER STRUCTURE EXCAVATION PROTECTION - LOCATION 1	EACH	1		1	
Z0001050	AGGREGATE SUBGRADE 12"	SQ YD	11,675	11,675		
Z0013798	CONSTRUCTION LAYOUT	L SUM	1	1		
Z0022800	FENCE REMOVAL	FOOT	1,062	1,062		
X0325879	FURNISHING AND INSTALLING TIED ANCHOR ROD ASSEMBLY	EACH	5		5	
© Z0076600	TRAINEES	HOUR	1000	1000		

© Y080
* SPECIALTY ITEMS

Rev.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
ILLINOIS ROUTE 176 OVER THE SOUTH BRANCH OF THE KISHWAUKEE RIVER
SUMMARY OF QUANTITIES
SCALE: VERT. N.T.S. HORIZ.
DATE: 6-04-07
DRAWN BY: WS
CHECKED BY: RJS

GRAEF, ANHALT, SCHLOEMER & ASSOCIATES, INC.
CHICAGO, ILLINOIS

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CONTRACT NO. 62340

F.A. ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-1-B	McHENRY	77	5
STA.		TO STA.		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

REMOVAL AND PATCHING SCHEDULE

STATION TO STATION STA TO STA		HOT MIX ASPHALT SURFACE REMOVAL BUTT-JOINT SQ YD 40600980	HOT MIX ASPHALT SURFACE REMOVAL 3" SQ YD 44000161	PAVEMENT REMOVAL SQ YD 44000100	SIDEWALK REMOVAL SQ FT 44000600	PAVED SHOULDER REMOVAL SQ YD 44004250	PAVEMENT PATCHING CLASS D TYPE III 9 INCH SQ YD 44201757	GUARDRAIL REMOVAL FOOT 63200310	FENCE REMOVAL FOOT Z0022800
28+00	43+00	12	1252	2796	140	1086	24		2528
43+00	58+00			4206		1090		343	1859
58+00	72+00	12	268	2375		748			1062
TOTAL		24	1,520	9,377	140	2,924	24	343	5,449

PAVEMENT MARKING SCHEDULE

STATION TO STATION STA TO STA		THERMOPLASTIC PAVEMENT MARKING LINE 4-INCH FOOT 78000200	POLYUREA PAVEMENT MARKING TYPE 1 LINE 4-INCH FOOT 78008210	RAISED REFLECT PAVEMENT MARKER EACH 78100100	RAISED REFLECT PAVEMENT MARK BRIDGE EACH 78100105	GUARDRAIL MARKERS TYPE A EACH 78200410	BARRIER WALL MARKERS TYPE B EACH 78200520	TERMINAL MARKER DIRECT APPLIED EACH 78201000
19+45	43+00	4350	0	18				
43+00	72+00	5940	1410	25	6	15	12	4
TOTAL		10,290	1,410	43	6	15	12	4

LANDSCAPING SCHEDULE

STATION TO STATION STA TO STA		TOPSOIL FURNISH AND PLACE 4 INCH SQ YD 21101615	COMPOST FURNISH AND PLACE 2 INCH SQ YD 21101805	SEEDING CLASS 2A ACRE 25000210	SEEDING CLASS 5A ACRE 25000322	NITROGEN FERTILIZER NUTRIENT POUND 25000400	PHOSPHOROUS FERTILIZER NUTRIENT POUND 25000500	POTASSIUM FERTILIZER NUTRIENT POUND 25000600	STONE RIPRAP CLASS A5 SQ YD 28100109	FILTER FABRIC FOR USE WITH RIPRAP SQ YD 28200100
19+45	43+00	5,989	6,689	1.2	1.4	236	236	236	15	15
43+00	72+00	11,810	8,318	2.4	1.7	377	377	377	55	55
TOTAL		17,799	15,007	4	3	613	613	613	70	70

STATION	CONCRETE HEADWALLS FOR PIPE DRAINS LEFT	RIGHT	PIPE UNDERDRAINS LEFT	RIGHT
35+00	1	1	32	32
42+85	1	1	32	32
44+85	1	1	32	32
48+00	1	1	35	40
57+00	1	1	35	35
60+05	1	1	32	32
63+00	1	1	32	32
66+00	1	1	32	32
TOTALS	16	16	529	

STATION TO STATION FROM	TO	OFFSET	POROUS GRANULAR EMBANKMENT SUBGRADE CU YD	GEOTECHNICAL FABRIC FOR GROUND STABILIZATION SQ YD	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL CU YD
47+50	49+45	LEFT	184	368	184
47+50	49+45	RIGHT	195	390	195
53+55	57+50	LEFT	373	746	373
53+55	58+50	RIGHT	495	990	495
		TOTALS	1,247	2,494	1,247

EROSION CONTROL AND TEMPORARY FENCE SCHEDULE

STATION TO STATION STA TO STA		TREE TRUNK PROTECTION EACH 20101100	EROSION CONTROL BLANKET SQ YD 25100630	TEMPORARY DITCH CHECKS EACH 28000300	PERIMETER EROSION BARRIER FOOT 28000400	INLET AND PIPE PROTECTION EACH 28000500	INLET FILTERS EACH 28000510	TEMPORARY FENCE FOOT 20101000
19+45	43+00		5815	14	3021	1	1	650
43+00	72+00	1	13115	30	5102	1	1	
TOTAL		1	18,930	44	8,123	2	2	650

DRIVEWAY SCHEDULE

LOCATION STATION		OFFSET	HOT MIX ASPHALT SURFACE COURSE, MIX "C", N50 TON 40603310	DRIVEWAY PAVEMENT REMOVAL SQ YD 44000200	HOT MIX ASPHALT BASE COURSE 6 INCH SQ YD 35501308	HOT-MIX ASPHALT BASE COURSE 8 INCH SQ YD 35501316
30+04.60	**	RT	6.3			56.1
31+27.40		LT	6.6	37.7	58.8	
37+12.50		LT	11.4	104.1	101.4	
31+50.00	*	LT	0.9		7.9	
37+50.00	*	LT	0.9		7.9	
45+57.00		RT	10.9			97.4
46+00.00	*	LT	0.9		7.7	
46+35.00		LT	8.1		72.1	
47+36.50		RT	6.8	77.0		60.6
48+40.00		LT		54.0		
58+66.00		LT	23.6		211.1	
61+80.00	*	LT	0.7		6.6	
62+08.75		LT	10.3	105.4	91.7	
65+00.00		RT	16.3			145.7
65+20.00	*	LT	0.7		6.2	
65+35.50		LT	6.6		58.8	
67+03.00		LT	6.3		56.1	
TOTAL			117	378	628	360

*MAILBOX RETURNS

**FIELD ENTRANCE

DRAINAGE SCHEDULE

STATION TO STATION STA TO STA		GRADING AND SHAPING DITCHES FOOT 20200800	PIPE CULVERT REMOVAL FOOT 50105220	PIPE CULVERTS CLASS D, TYPE 1 15 INCH FOOT 542D0220	END SECTIONS 15 INCH EACH 54213450	PRECAST REINFORCED CONC. F.E.S., 24 INCH EACH 54213669	END SECTIONS EQUIVALENT ROUND-SIZE 15" EACH 54214290	PRECAST REINF. CONC. F.E.S. EQUIV ROUND 24" EACH 54214509	STORM SEWERS TYP 1 REINF. CONC. ELLIP SPAN 30 RISE 19 FOOT 55034300	MANHOLES TYPE A, 5' DIA. TYPE 1 FR AND CL EACH 60221100	PIPE CULVERTS CLASS A, TYPE 1 24 INCH FOOT 542A0229	PIPE CULVERTS CLASS D, TYPE 1 EQU. ROUND 15" FOOT 542D5470
28+00	43+00		195	108	6	2					45	
43+00	58+00	100	123	173	6			2	597	2		
58+00	72+00		81	177	8		2					29
TOTAL		100	399	458	20	2	2	2	597	2	45	29

PAVEMENT AND GUARDRAIL AND BARRIER TERMINALS SCHEDULE

STATION TO STATION STA TO STA		BRIDGE APPROACH PAVEMENT SQ YD 42001165	BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE) SQ YD 42001430	AGGRAGATE SHOULDER TYPE B, 8 INCH SQ YD 48101600	HOT MIX ASPHALT SHOULDER 8 INCH SQ YD 48203029	STEEL PLATE BEAM GUARDRAIL TYPE A FOOT 63000000	TRAFFIC BARRIER TERMINAL TYPE 6 EACH 63100085	TRAFFIC BARRIER TERMINAL TYPE 1 SPECIAL (TANGENT) EACH 63100167	HOT MIX ASPHALT SURFACE COUTRSE MIX "D", N50 TON 40603335	LEVELING BINDER (MACHINE METHOD) IL 9.5, N50 TON 40600625	HOT MIX ASPHALT PAVEMENT (FULL DEPTH), 13 INCH SQ YD 40701941	AGGREGATE SUB-GRADE 12 INCH SQ YD Z0001050
28+00	43+00			1245	1289				101	101	2667	3667
43+00	58+00	264	59	308	1980	875	4	4			2748	4832
58+00	72+00			730	900				22	22	2267	3176
TOTAL		264	59	2283	4,168	875	4	4	123	123	7,650	11,675

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

ILLINOIS ROUTE 176 OVER THE SOUTH BRANCH OF THE KISHWAUKEE RIVER

SCHEDULE QUANTITIES

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

DATE: 6-04-07

DRAWN BY: JB

CHECKED BY: RJS

GRAEF, ANHALT, SCHLOEMER & ASSOCIATES, INC.
CHICAGO, ILLINOIS

FILE: H:\Jobs2002\20024023\CAD\IDOT_Trans\dgn\00\Item&Road_Schedule.dgn
DATE: 04-Jun-07 13:56

CONTRACT NO. 62340

F.A. ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-1-B	McHENRY	77	6
STA.		TO STA.		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

TREE REMOVAL - LEFT

LOCATION		TREE REMOVAL 6 TO 15 UNITS 20100110	TREE REMOVAL OVER 15 UNITS 20100210
STATION	OFFSET		
32+23	27		37
37+40	52	14	
37+60	50	6	
37+77	50	6	
37+94	50	6	
38+11	50	6	
38+28	50	6	
38+45	50	6	
38+62	50	6	
38+79	50	6	
38+96	50	6	
39+14	50	6	
39+31	50	6	
39+48	50	6	
39+65	50	6	
39+82	50	6	
39+99	50	6	
40+16	50	6	
40+33	50	6	
40+50	50	6	
40+67	50	6	
40+85	50	6	
41+02	50	6	
41+19	50	6	
41+36	50	6	
41+53	50	6	
41+70	50	6	
41+87	50	6	
42+04	50	6	
42+21	50	6	
42+38	50	6	
42+56	50	6	
42+73	50	6	
42+90	50	6	
43+07	50	6	
43+24	50	6	
43+41	50	6	
43+58	50	6	
43+75	50	6	
43+92	50	6	
44+09	50	6	
44+27	50	6	
44+44	50	6	
44+61	50	6	
44+78	50	6	

LOCATION		TREE REMOVAL 6 TO 15 UNITS 20100110	TREE REMOVAL OVER 15 UNITS 20100210
STATION	OFFSET		
44+95	50	6	
45+12	50	6	
45+29	50	6	
45+46	50	6	
45+63	50	6	
46+30	47	5	
46+40	47	5	
46+50	47	5	
46+60	47	5	
46+70	47	5	
46+80	47	5	
46+90	47	5	
47+00	47	5	
47+10	47	5	
47+20	47	5	
47+30	47	5	
47+40	47	5	
47+50	47	5	
47+60	47	5	
47+70	47	5	
47+80	47	5	
47+90	47	5	
48+00	47	5	
48+10	47	5	
48+20	47	5	
48+67	50	8	
48+70	50	8	
48+73	50	8	
50+91	45	6	
50+91	45	10	
50+91	45	12	
51+00	44	12	
51+09	42	8	
51+11	39	6	
51+26	43	6	
51+26	43	8	
51+26	43		20
51+28	45	6	
51+28	45	8	
51+28	45		20
51+78	42	6	
51+78	42	10	
51+78	44	6	
51+78	44	10	
54+77	47	10	

LOCATION		TREE REMOVAL 6 TO 15 UNITS 20100110	TREE REMOVAL OVER 15 UNITS 20100210
STATION	OFFSET		
54+80	50	10	
54+80	50	10	
54+90	50	10	
54+92	50	10	
54+94	50	7	
59+01	43	6	
59+01	43	6	
59+01	43	8	
59+01	43	8	
59+01	43	8	
59+18	43	6	
59+18	43	6	
59+18	43	12	
59+18	43	12	
61+74	38	10	
61+74	38	10	
61+95	46	5	
62+22	46	5	
63+75	40	6	
63+79	40	6	
63+86	40	6	
63+87	40	6	
63+93	40	6	
63+97	40	6	
64+20	41	6	
64+72	35	6	
64+95	38	6	
64+95	38	6	
66+18	36		25
66+65	34		31
TOTAL		759	133

TREE REMOVAL - RIGHT

LOCATION		TREE REMOVAL 6 TO 15 UNITS 20100110	TREE REMOVAL OVER 15 UNITS 20100210
STATION	OFFSET		
30+59	39	7	
30+62	40	6	
30+78	39	6	
30+86	35		17
31+25	30	6	
31+28	39	8	
31+40	35	6	
31+56	38		24
32+05	40	8	
32+05	40	8	
32+75	40		22
32+75	40		23
32+75	40		24
33+58	39	8	
33+68	37	14	
34+12	40	11	
34+24	40	7	
34+24	40	7	
34+59	40	6	
34+59	40	7	
34+71	40	6	
34+74	38	6	
34+84	40	6	
34+84	40	7	
34+97	40	8	
35+16	40	13	
35+20	41	6	
35+20	41	10	
35+20	41		16
43+11	43		17
43+17	42		17
43+23	42	14	
43+50	44	10	
43+70	40		38
44+06	40		18
44+11	40	15	
44+23	40		24
44+42	40		24
44+57	42	15	
44+62	41		22
45+03	40	6	
45+03	40	6	
45+03	40	8	
45+03	40	15	
45+22	48		30

LOCATION		TREE REMOVAL 6 TO 15 UNITS 20100110	TREE REMOVAL OVER 15 UNITS 20100210
STATION	OFFSET		
45+25	51	8	
45+68	51	4	
45+82	52	6	
45+94	50	6	
46+05	49	10	
46+18	47		18
46+33	48		20
46+51	51		18
46+52	48		24
46+62	47		36
46+63	50	6	
46+86	48	6	
46+99	48	12	
47+27	38		27
48+26	62	2	
48+48	60	2	
48+93	57		42
49+34	42		21
49+34	46	12	
49+46	45	7	
49+46	50		18
49+60	43		17
49+68	40	7	
49+68	40	8	
49+68	40	12	
49+74	47		24
50+51	37	10	
50+51	37	10	
50+65	38	12	
50+91	37	6	
50+91	37	7	
50+91	37	8	
50+91	37	12	
50+96	37	12	
51+13	43	12	
51+22	49	8	
51+22	49		20
52+00	37		16
52+68	43	8	
52+68	43	13	
52+68	43	14	
53+56	38	15	
54+77	38		34
65+25	42	12	
TOTAL		533	651

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

ILLINOIS ROUTE 176 OVER THE SOUTH BRANCH OF THE KISHWAUKEE RIVER

SCHEDULE OF QUANTITIES

SCALE: VERT. N.T.S.
HORIZ.
DATE: 6-04-07

DRAWN BY: JB
CHECKED BY: RJS

GRAEF, ANHALT, SCHLOEMER & ASSOCIATES, INC.
CHICAGO, ILLINOIS

FILE: H:\Jobs2002\20024023\CADD\IDOT_Trans\dgn\00TreeSchedule.dgn
DATE: 04-Jun-07 13:58

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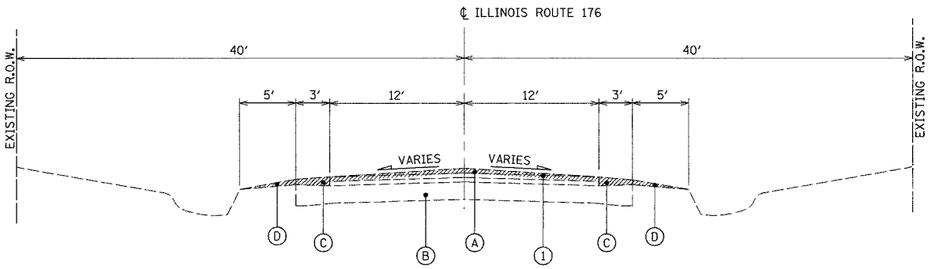
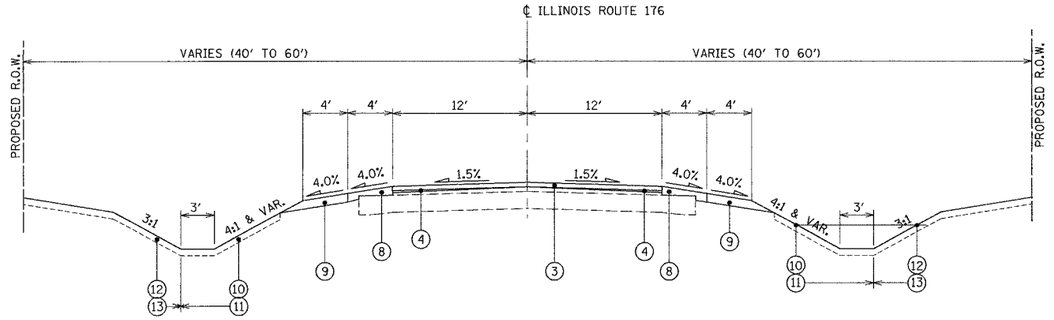
CONTRACT NO. 62340

F.A. ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-1-B	McHENRY	77	7
STA.		TO STA.		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



EXISTING TYPICAL SECTION

STA. 28+50 TO STA. 33+00
STA. 66+50 TO STA. 67+50



PROPOSED TYPICAL SECTION

STA. 28+50 TO STA. 33+00
STA. 66+50 TO STA. 67+50

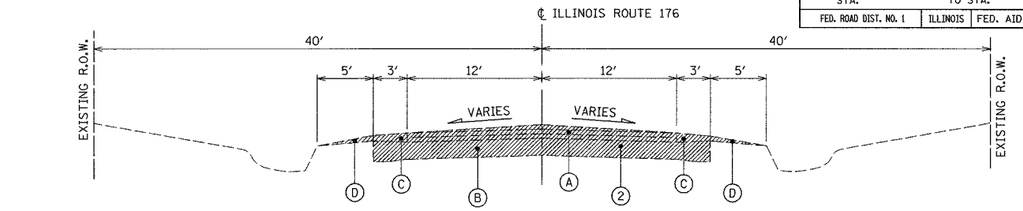
LEGEND :

EXISTING CONDITIONS:

- (A) HOT MIX ASPHALT SURFACE ± 5″
- (B) P.C.C. BASE COURSE (VARIES 7″-9″)
- (C) HOT MIX ASPHALT SHOULDER (DEPTH VARIES)
- (D) AGGREGATE SHOULDER
- ▨ ITEM TO BE REMOVED

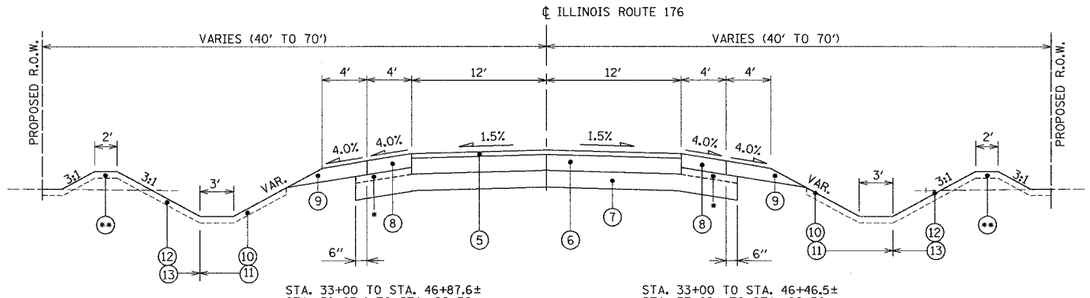
PROPOSED IMPROVEMENTS:

- (1) HMA SURFACE REMOVAL, 3 ″
- (2) PAVEMENT REMOVAL
- (3) HOT MIX ASPHALT SURFACE COURSE, MIX "D", N50, 2 ″
- (4) LEVELING BINDER (MACHINE METHOD), N50 (1″ & VARIES)
- (5) HOT MIX ASPHALT SURFACE COURSE, MIX "D", N50, 2″ } HOT-MIX ASPHALT PAVEMENT (FULL DEPTH) 13″
- (6) HOT MIX ASPHALT BINDER COURSE, IL-19, N50, 11″ }
- (7) AGGREGATE SUBGRADE, 12″
- (8) HOT MIX ASPHALT SHOULDER, 8″
- (9) AGGREGATE SHOULDER, TYPE B, 8″
- (10) TOPSOIL FURNISH AND PLACE, 4″
- (11) SEEDING CLASS 2A AND EROSION CONTROL BLANKET
- (12) COMPOST FURNISH AND PLACE, 2″
- (13) SEEDING CLASS 3 & 5A
- (14) STEEL PLATE BEAM GUARDRAIL, TYPE A
- (15) RIP RAP CLASS A3, 8″



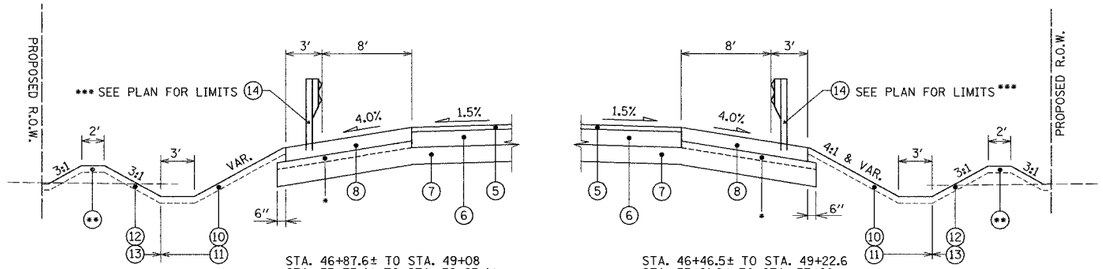
EXISTING TYPICAL SECTION

STA. 33+00 TO STA. 49+45
STA. 53+55 TO STA. 66+50



STA. 33+00 TO STA. 46+87.6±
STA. 58+83.4 TO STA. 66+50

STA. 33+00 TO STA. 46+46.5±
STA. 57+98± TO STA. 66+50



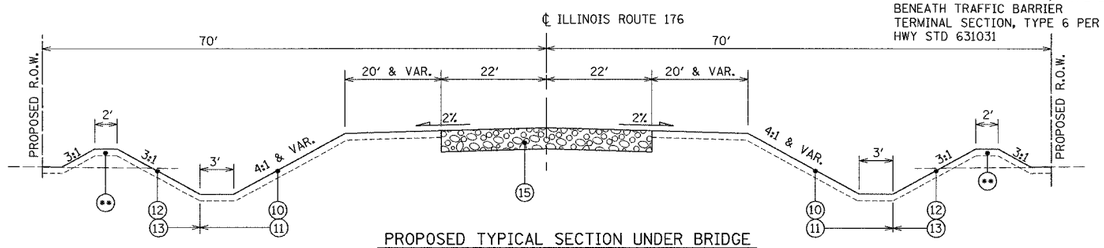
STA. 46+87.6± TO STA. 49+08
STA. 53+77.4± TO STA. 58+83.4±

STA. 46+46.5± TO STA. 49+22.6
STA. 53+91.9± TO STA. 57+98±

PROPOSED TYPICAL SECTION

STA. 33+00 TO STA. 49+15.34
STA. 53+84.66 TO STA. 66+50

- • ADDITIONAL AGGREGATE THICKNESS INCIDENTAL TO (7)
- •• SEE CROSS SECTIONS FOR BERM LIMITS
- ••• PROVIDE CONCRETE CURB, TYPE B BENEATH TRAFFIC BARRIER TERMINAL SECTION, TYPE 6 PER HWY STD 631031



PROPOSED TYPICAL SECTION UNDER BRIDGE

STA. 50+00± TO STA. 53+40±

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

ILLINOIS ROUTE 176 OVER THE SOUTH BRANCH OF THE KISHWAUKEE RIVER

TYPICAL SECTIONS

SCALE: VERT. N.T.S.
HORIZ.
DATE: 6-04-07

DRAWN BY: WS
CHECKED BY: RJS

GRAEF, ANHALT, SCHLOEMER & ASSOCIATES, INC.
CHICAGO, ILLINOIS

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DATE: 04-Jun-07 14:01

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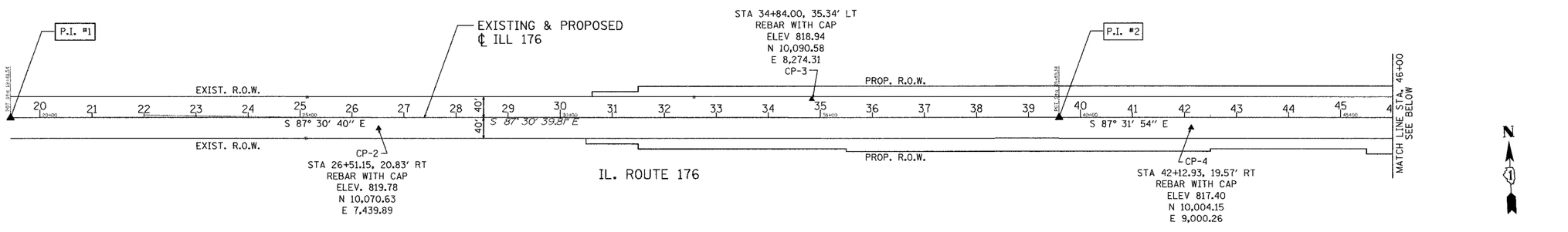
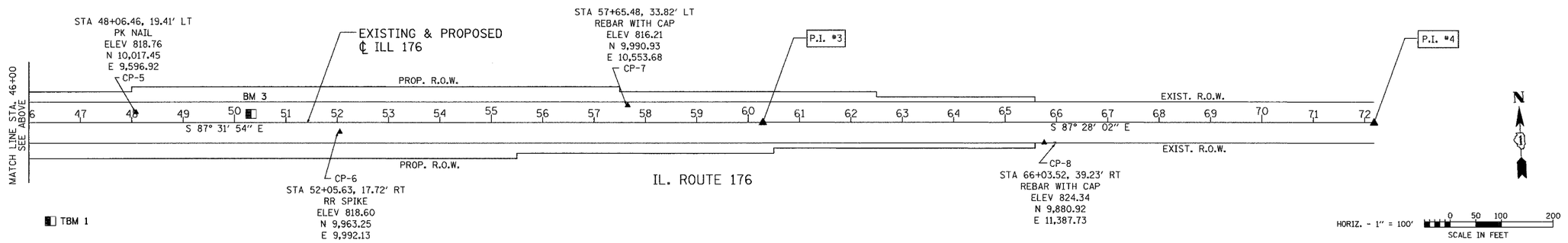
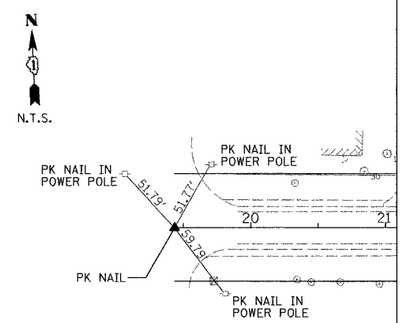
CONTRACT NO. 62340

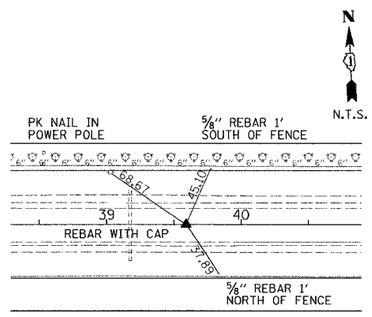
F.A. ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-1-B	McHENRY	77	8
STA.		TO STA.		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



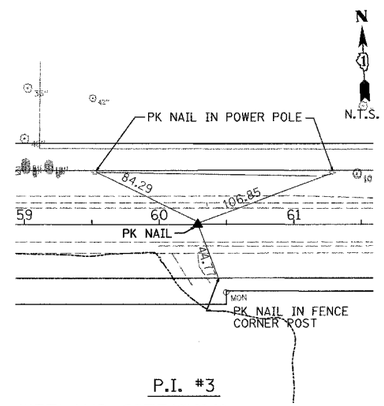




P.I. #1
STA. 19+43.54,
ELEV. = 822.14'
N 10,122.17
E 6,733.86

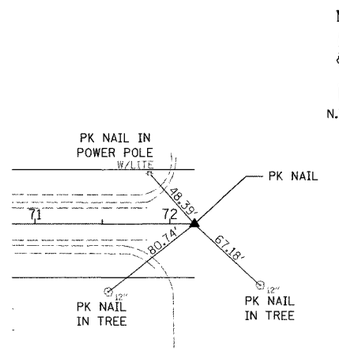


P.I. #2
STA. 39+59.14
ELEV. = 818.60'
N 10,034.64
E 8,747.56



P.I. #3
STA. 60+28.60
ELEV. = 816.21'
N 9,945.51
E 10,815.09

WETLAND SITE



P.I. #4
STA. 72+18.32
ELEV. = 828.07'
N 9,892.94
E 12,003.66

BENCH MARKS

NO.	DESCRIPTION	ELEVATION
BM-3	CHISELED "□" ON TOP OF WINGWALL AT SOUTHWEST CORNER OF IL 176 BRIDGE OVER THE SOUTH BRANCH OF THE KISHWAUKEE RIVER. STA 50+30, 17' LT.	818.19
TBM-1	THE NORTHWEST CORNER OF THE TOP STEP OF HOUSE AT 18017 RTE 176 STA 46+44, 189' RT.	823.80

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
ILLINOIS ROUTE 176 OVER THE SOUTH BRANCH OF THE KISHWAUKEE RIVER

ALIGNMENT, TIES, & BENCH MARKS

SCALE: VERT.
HORIZ.
DATE: 6-04-07
DRAWN BY: WS
CHECKED BY: RJS

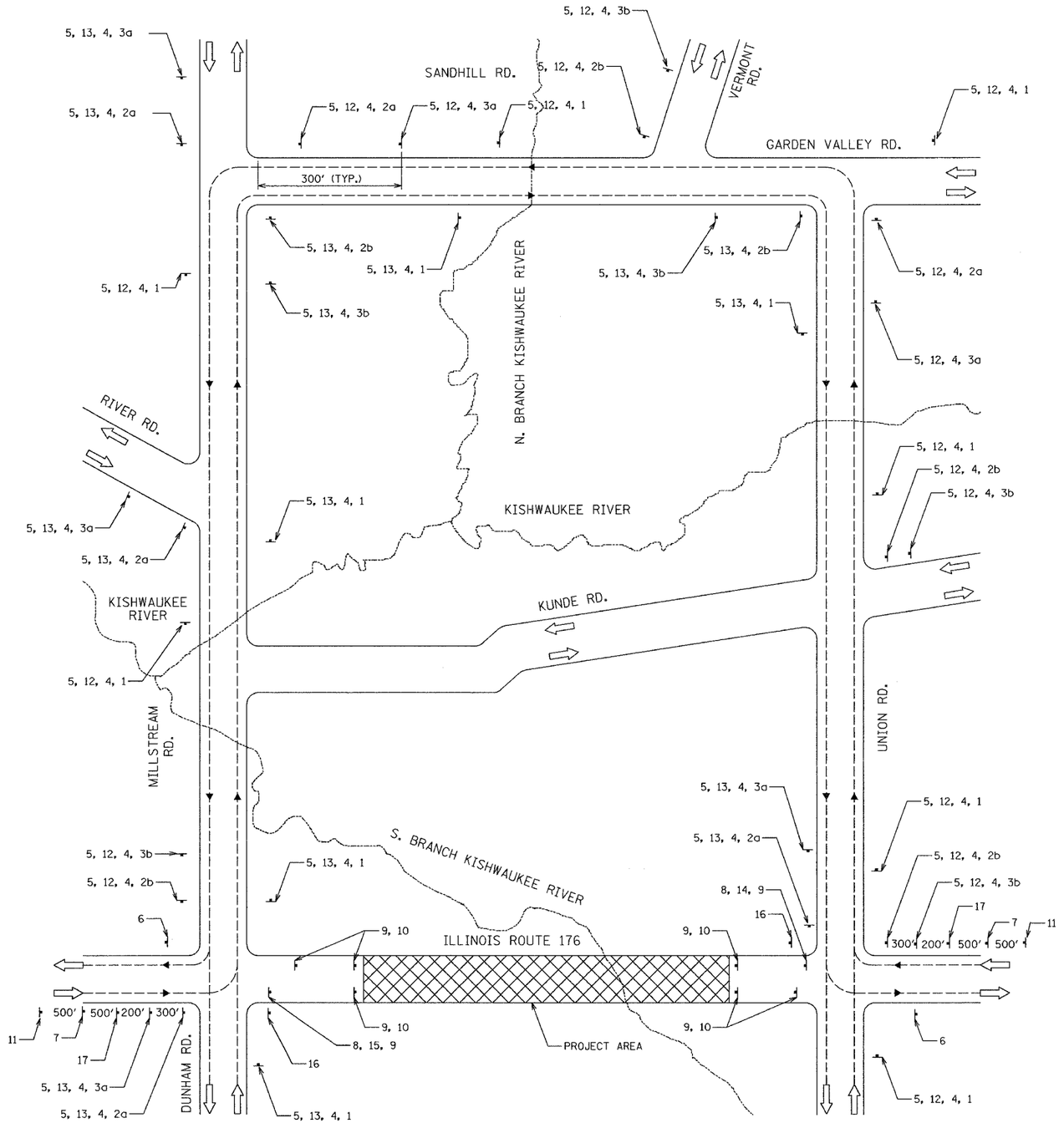
GRAEF, ANHALT, SCHLOEMER & ASSOCIATES, INC.
CHICAGO, ILLINOIS

FILE: H:\Jobs2002\20024023\CADD\DOT_Trans\dgn\00\ALIGNMENT.dgn
DATE: 04-Jun-07 14:10

\dgn\00\ALIGNMENT.dgn 8/17/2007 3:04:39 AM

CONTRACT NO. 62340

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-1-B	McHENRY	77	9
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

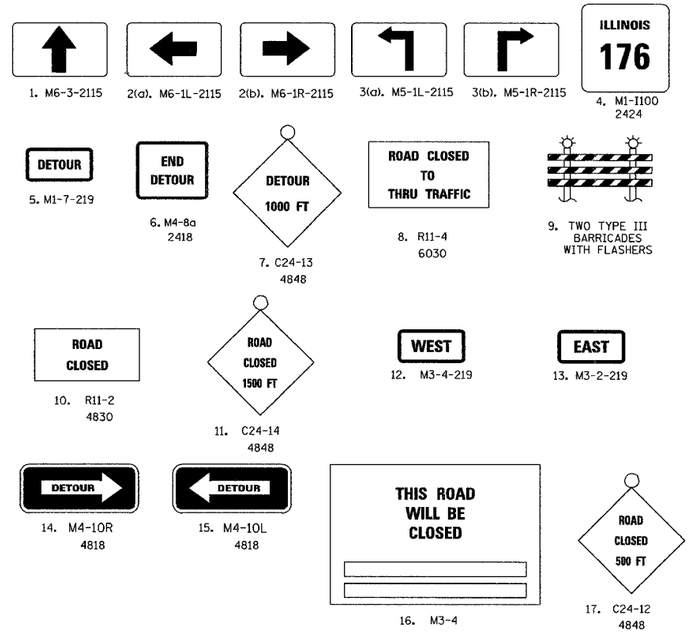


DETOUR PLAN

N.T.S.

DETOUR NOTES

1. IDOT SHALL BE NOTIFIED 72 HOURS PRIOR TO PUTTING THE DETOUR IN EFFECT AND IMMEDIATELY AFTER THE DETOUR HAS BEEN REMOVED.
2. McHENRY COUNTY SHALL BE NOTIFIED AT LEAST TWO WEEKS PRIOR TO PLACING DETOUR POSTING.
3. THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN AND REMOVE ALL TEMPORARY SIGN SUPPORTS. AFTER REMOVING THE SUPPORTS, THE CONTRACTOR SHALL FILL HOLES (IF ANY) AND RESTORE THE GROUND TO ITS ORIGINAL CONDITION AND ELEVATION. PLACING OF GRAVEL, SOD, OR SEED SHALL BE INCLUDED IN THE UNIT BID PRICE FOR "TRAFFIC CONTROL & PROTECTION FOR TEMPORARY DETOUR".
4. ALL SIGNS, SUPPORTS AND POSITIONING SHALL BE IN ACCORDANCE WITH THE ILLINOIS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.
5. ALL WARNING SIGNS IN TEMPORARY TRAFFIC CONTROL ZONES SHALL HAVE A BLACK LEGEND ON AN ORANGE BACKGROUND, UNLESS OTHERWISE NOTED.
6. ALL EXISTING SIGNS THAT CONFLICT WITH THE DETOUR SHALL BE COVERED.
7. EACH TYPE III BARRICADE SHALL BE EQUIPPED WITH TWO FLASHING AMBER LIGHTS.
8. THE CONTRACTOR SHALL ERECT SIGN NO. 16 AT LEAST 48 HOURS IN ADVANCE OF THE CLOSURE.
9. ALL ENTRANCES ON CLOSED IL 176 MUST BE OPEN FOR TRAFFIC DURING THE ENTIRE CONSTRUCTION PERIOD.
10. SEE DISTRICT ONE 'TYPICAL MARKING FOR CLOSING STATE HIGHWAYS', TC-21 FOR ADDITIONAL DETAILS



LEGEND

- DETOUR ROUTE
- PROJECT AREA
- DETOUR SIGN

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

ILLINOIS ROUTE 176 OVER THE SOUTH BRANCH OF THE KISHWAUKEE RIVER

DETOUR PLAN

SCALE: VERT. NONE HORIZ.
DATE 6-04-07
DRAWN BY TMM
CHECKED BY RJS

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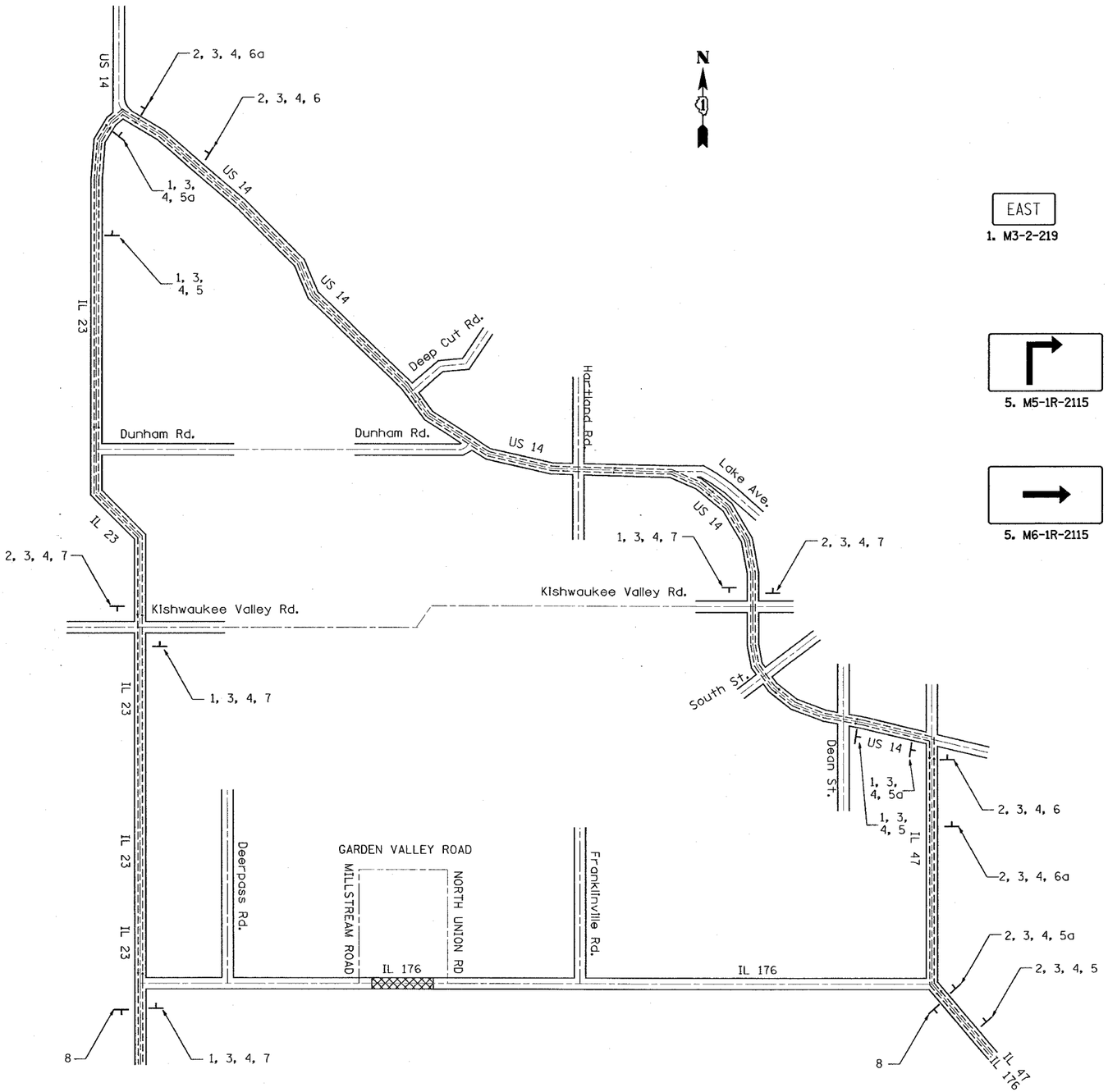
CONTRACT NO. 62340

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-1-8	McHENRY	77	9A
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



EAST
1. M3-2-219

WEST
2. M3-4-219

ILLINOIS 176
3. M1-I100

CLASS II TRUCK ROUTE DETOUR
4. M1-I100 2424

5. M5-1R-2115

6. M5-1L-2115

7. M6-3-2115

END DETOUR
8. M4-8a 2418

5. M6-1R-2115

6. M6-1L-2115

LEGEND
--- DETOUR ROUTE
DETOUR SIGN
PROJECT AREA

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

ILLINOIS ROUTE 176 OVER THE SOUTH BRANCH OF THE KISHWAUKEE RIVER

CLASS II TRUCK ROUTE DETOUR PLAN

SCALE: VERT.
HORIZ.
DATE

DRAWN BY
CHECKED BY

PLOT DATE = 9/18/2007
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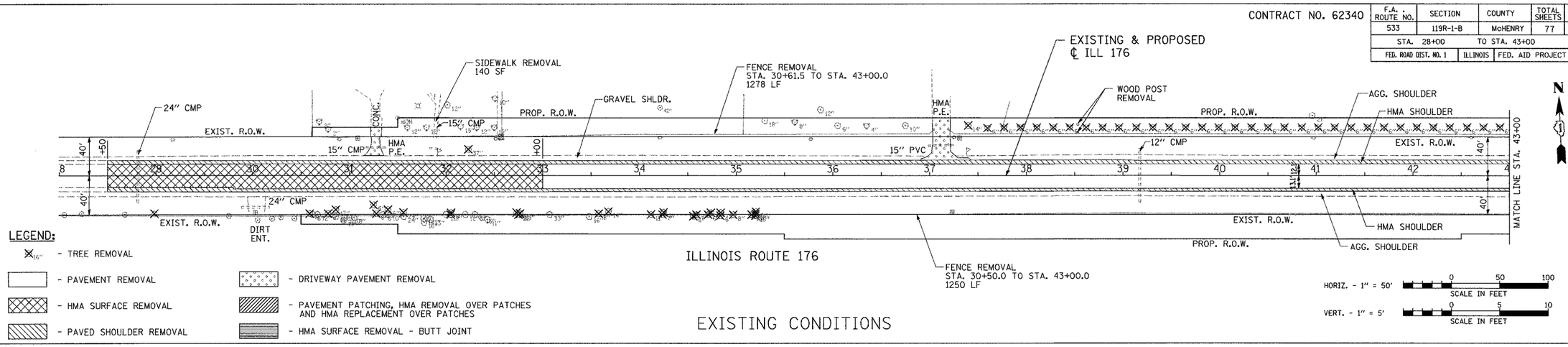
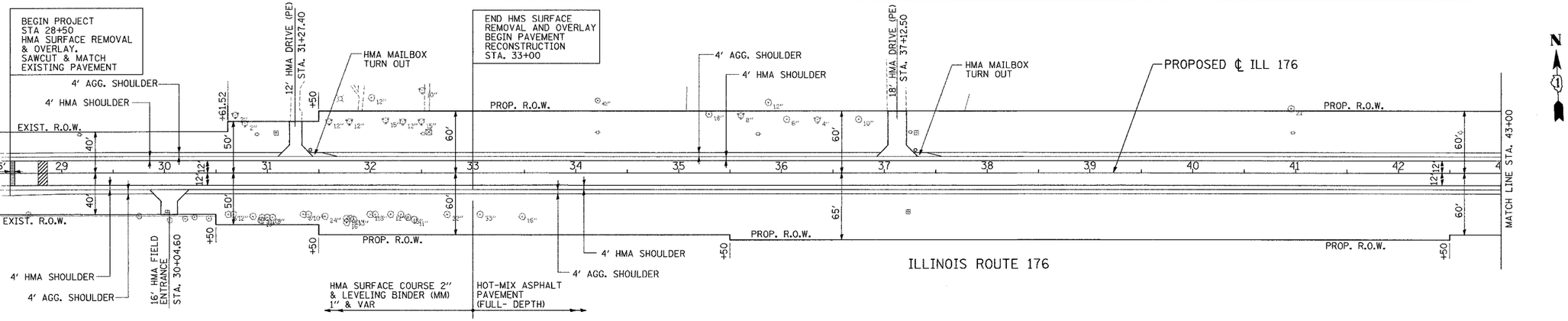
PLOT SCALE = 600.000 ' / IN.
USER NAME = smithkl

CONTRACT NO. 62340

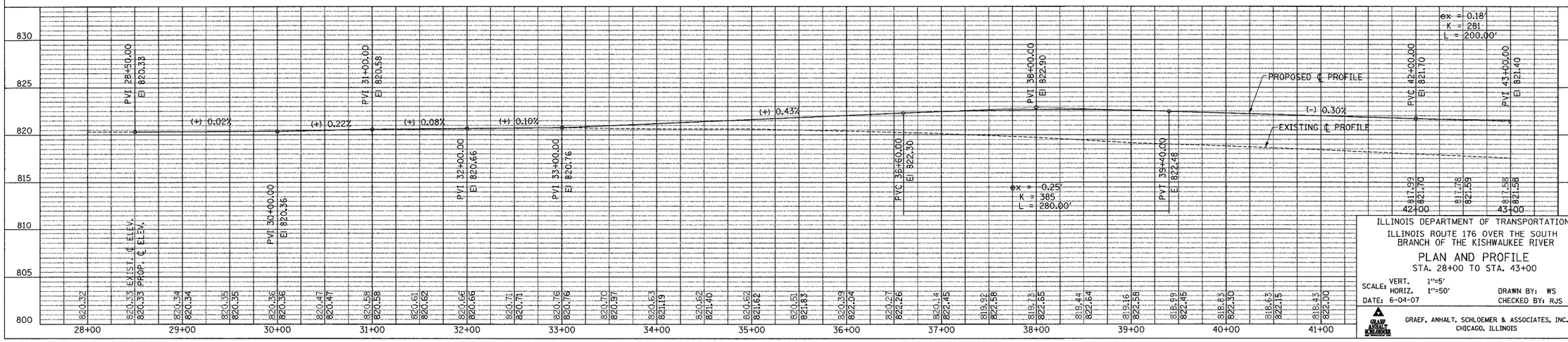
F.A. ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-1-B	McHENRY	77	10
STA. 28+00	TO STA. 43+00			
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



EXISTING CONDITIONS



PROPOSED IMPROVEMENTS



ILLINOIS DEPARTMENT OF TRANSPORTATION
ILLINOIS ROUTE 176 OVER THE SOUTH BRANCH OF THE KISHWAUKEE RIVER

PLAN AND PROFILE
STA. 28+00 TO STA. 43+00

SCALE: VERT. 1″=5′ HORIZ. 1″=50′
DRAWN BY: WS
DATE: 6-04-07
CHECKED BY: RJS

GRAEF, ANHALT, SCHLOEMER & ASSOCIATES, INC.
CHICAGO, ILLINOIS

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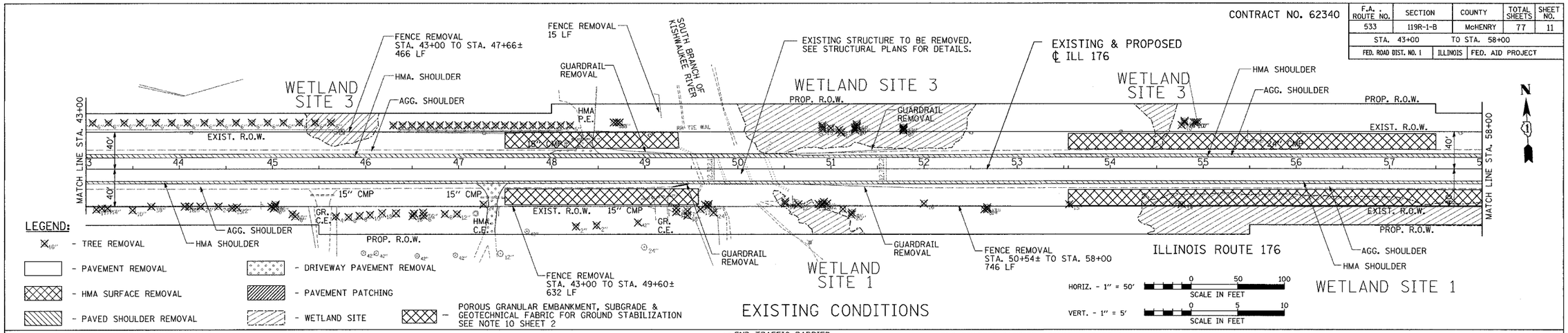
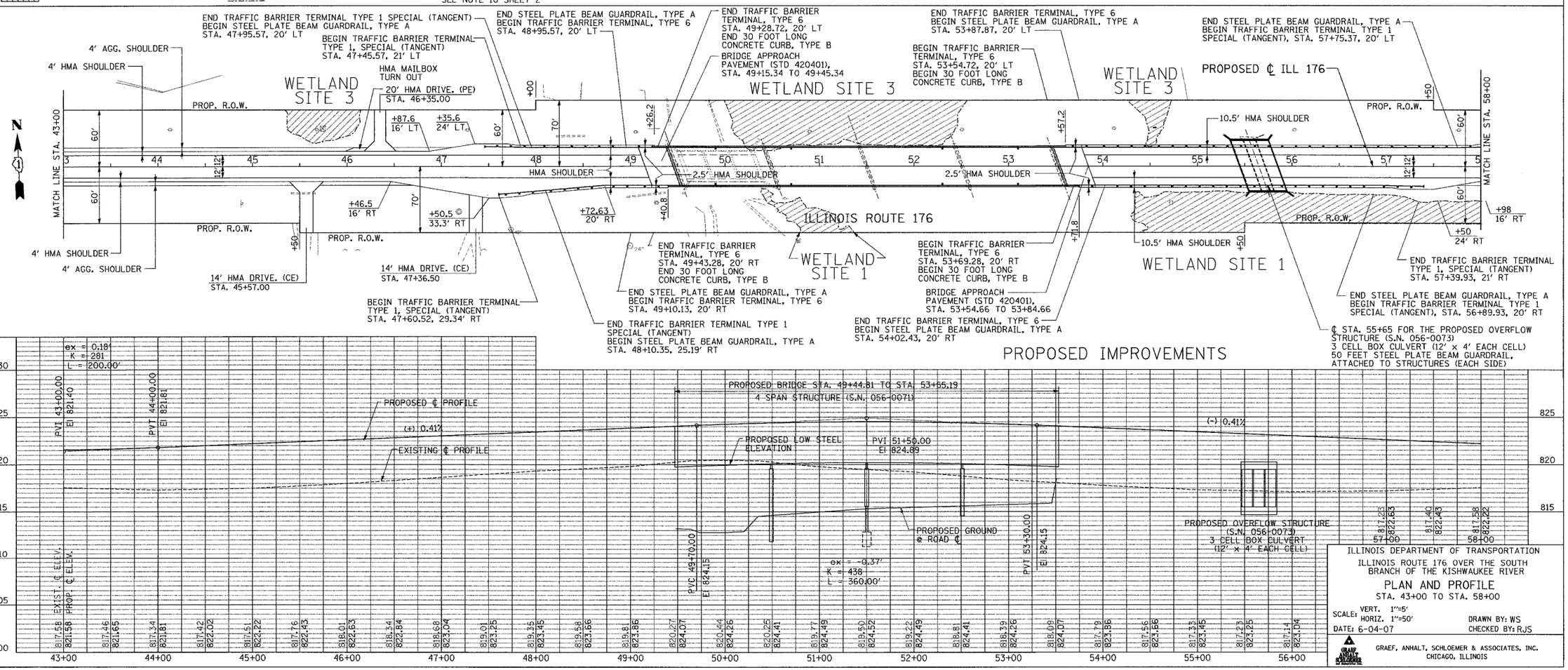
DATE: 04-Jun-07 15:01

CONTRACT NO. 62340

F.A. ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-1-B	McHENRY	77	11
STA. 43+00	TO STA. 58+00			
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		





ILLINOIS DEPARTMENT OF TRANSPORTATION
ILLINOIS ROUTE 176 OVER THE SOUTH BRANCH OF THE KISHWAUKEE RIVER
PLAN AND PROFILE
STA. 43+00 TO STA. 58+00

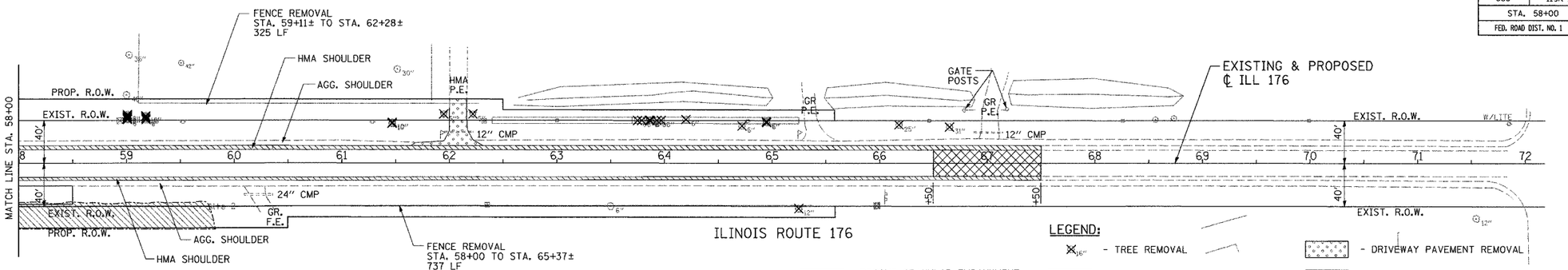
SCALE: VERT. 1"=5'
HORIZ. 1"=50'
DRAWN BY: WS
DATE: 6-04-07
CHECKED BY: RJS

GRAEF, ANHALT, SCHLOEMER & ASSOCIATES, INC.
CHICAGO, ILLINOIS

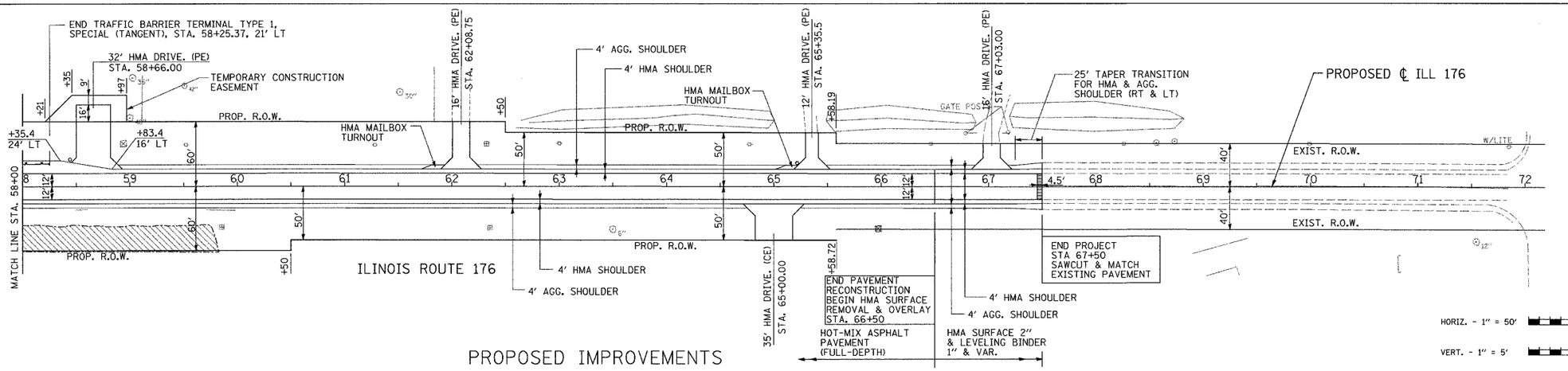
FILE: H:\Jobs2002\20024023\CADD\DOT_Trans\dgn\00\plan03.dgn
DATE: 04-Jun-07 17:19

CONTRACT NO. 62340

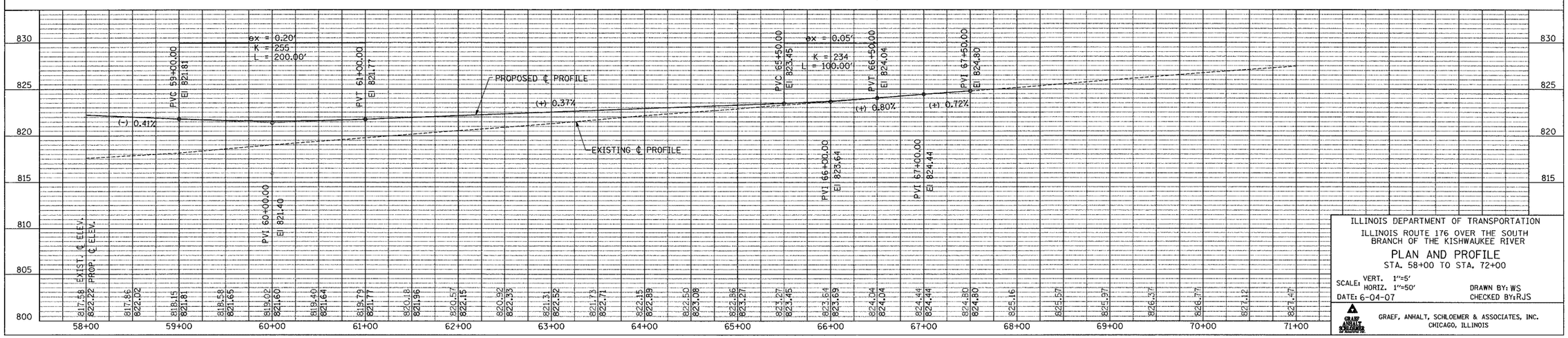
F.A. ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-1-B	McHENRY	77	12
STA. 58+00	TO STA. 72+00			
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



EXISTING CONDITIONS



PROPOSED IMPROVEMENTS



ILLINOIS DEPARTMENT OF TRANSPORTATION
ILLINOIS ROUTE 176 OVER THE SOUTH BRANCH OF THE KISHWAUKEE RIVER

PLAN AND PROFILE
STA. 58+00 TO STA. 72+00

SCALE: VERT. 1"=5'
HORIZ. 1"=50'
DRAWN BY: WS
CHECKED BY: RJS
DATE: 6-04-07

GRAEF, ANHALT, SCHLOEMER & ASSOCIATES, INC.
CHICAGO, ILLINOIS

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DATE: 04-Jun-07 11:21

CONTRACT NO. 62340

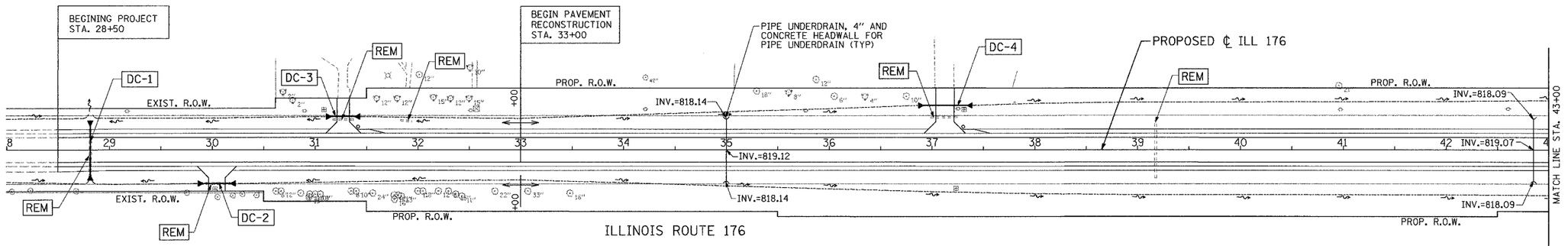
F.A.U. ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-1-B	McHENRY	77	13
ILLINOIS PROJECT				

DC-1
PIPE CULVERT - 24" DIA. RCP
CLASS A, TYPE 1
45' @ 0.18%
SOUTH F.E.S. - STA. 28+81.60, 29' RT
INV. 816.43
NORTH F.E.S. - STA. 28+81.60, 28' LT
INV. 816.33

DC-2
PIPE CULVERT - 15" DIA.
CLASS D, TYPE 1
32' @ 0.43%
EAST F.E.S. - STA. 30+22.50, 32.5' RT
INV. 817.47
WEST F.E.S. - STA. 29+86.50, 32.5' RT
INV. 817.31

DC-3
PIPE CULVERT - 15" DIA.
CLASS D, TYPE 1
28' @ 0.30%
EAST F.E.S. - STA. 31+43.50, 32' LT
INV. 817.56
WEST F.E.S. - STA. 31+11.00, 32' LT
INV. 817.46

DC-4
PIPE CULVERT - 15" DIA.
CLASS D, TYPE 1
48' @ 0.35%
EAST F.E.S. - STA. 37+39.00, 43' LT
INV. 816.49
WEST F.E.S. - STA. 36+87.00, 43' LT
INV. 816.67



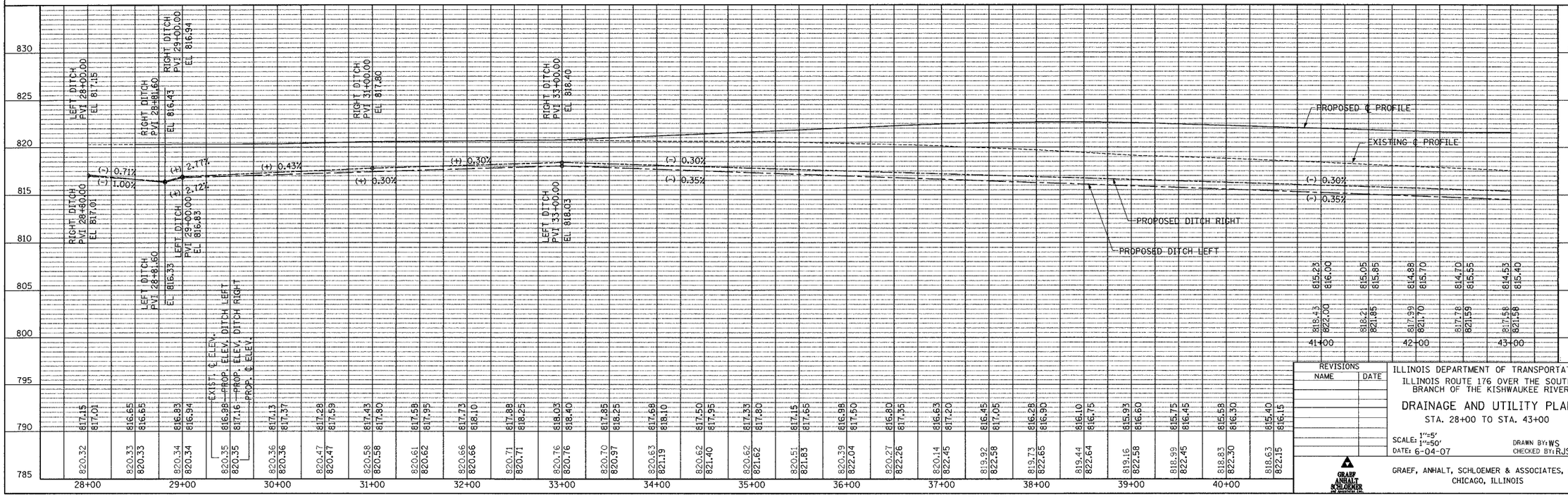
LEGEND:

- PROPOSED STRUCTURE
- PROPOSED STORM PIPE
- DC-1 — CULVERT
- REM — UTILITY ITEM TO BE REMOVED
- DITCH FLOWLINE

NOTES:

FOR DRIVEWAY CULVERTS
POLYVINYL CHLORIDE (PVC)
AND POLYETHYLENE (PE)
PIPES WILL NOT BE PERMITTED.

HORIZ. - 1" = 50' — 0 50 100 SCALE IN FEET
VERT. - 1" = 5' — 0 5 10 SCALE IN FEET



REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
ILLINOIS ROUTE 176 OVER THE SOUTH BRANCH OF THE KISHWAUKEE RIVER

DRAINAGE AND UTILITY PLAN
STA. 28+00 TO STA. 43+00

SCALE: 1"=5' / 1"=50'
DATE: 6-04-07
DRAWN BY: WS
CHECKED BY: RJS

GRAEF, ANHALT, SCHLOEMER & ASSOCIATES, INC.
CHICAGO, ILLINOIS

PLAN and PROFILE

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DATE: 04-Jun-07 11:27

CONTRACT NO. 62340

F.A.U. ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-1-B	McHENRY	77	14
ILLINOIS PROJECT				

DC-5

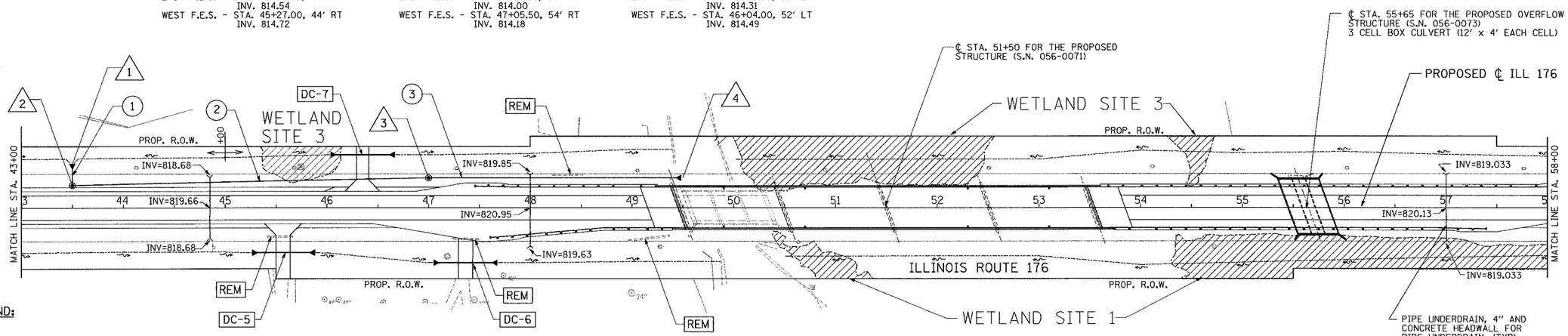
PIPE CULVERT - 15" DIA.
CLASS D, TYPE 1
57' @ 0.30%
EAST F.E.S. - STA. 45+88.00, 44' RT
INV. 814.54
WEST F.E.S. - STA. 45+27.00, 44' RT
INV. 814.72

DC-6

PIPE CULVERT - 15" DIA.
CLASS D, TYPE 1
58' @ 0.30%
EAST F.E.S. - STA. 47+67.50, 54' RT
INV. 814.00
WEST F.E.S. - STA. 47+05.50, 54' RT
INV. 814.18

DC-7

PIPE CULVERT - 15" DIA.
CLASS D, TYPE 1
58' @ 0.30%
EAST F.E.S. - STA. 46+66.00, 52' LT
INV. 814.31
WEST F.E.S. - STA. 46+04.00, 52' LT
INV. 814.49



LEGEND:

- PROPOSED STRUCTURE
- PROPOSED STORM PIPE
- DC-1 CULVERT
- REM UTILITY ITEM TO BE REMOVED
- DITCH FLOWLINE

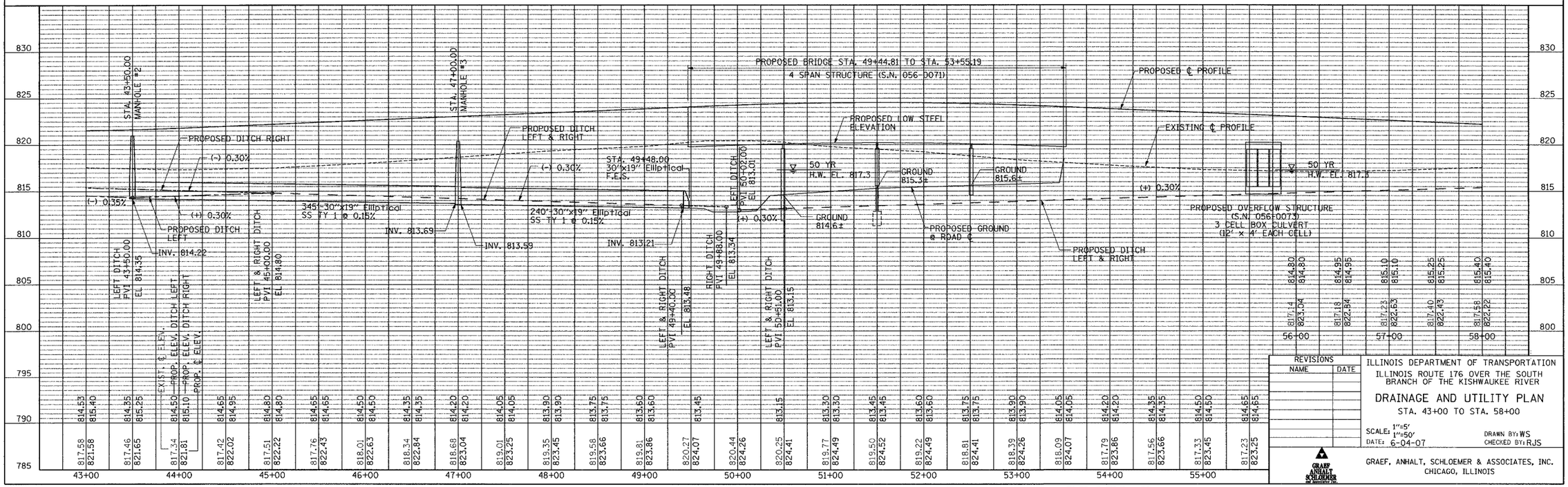
NOTES:

FOR DRIVEWAY CULVERTS POLYVINYL CHLORIDE (PVC) AND POLYETHYLENE (PE) PIPES WILL NOT BE PERMITTED.

1. 30"x19" CONCRETE ELLIPTICAL F.E.S STA.43+50.00, 43' LT INV.: 814.35
2. MANHOLE TY A, 6' DIA. TYPE 1 FR & CL STA. 43+50.00, 22' LT RIM: 821.00 INV.: 814.32 N INV.: 814.22 E
3. MANHOLE TY A, 5' DIA. TYPE 1 FR & CL STA.47+00.00, 29' LT RIM: 820.35 INV.: 813.69 W INV.: 813.59 E
4. 30"x19" CONCRETE ELLIPTICAL F.E.S STA.49+50.00, 29' LT INV.: 813.21

1. STORM SEWER, CLASS A, TY 1 30"x19" RC ELLIPTICAL PIPE 12' @ 0.15%
2. STORM SEWER, CLASS A, TY 1 30"x19" RC ELLIPTICAL PIPE 345' @ 0.15%
3. STORM SEWER, CLASS A, TY 1 30"x19" RC ELLIPTICAL PIPE 240' @ 0.15%

HORIZ. - 1" = 50' SCALE IN FEET (0, 50, 100)
VERT. - 1" = 5' SCALE IN FEET (0, 5, 10)



REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
ILLINOIS ROUTE 176 OVER THE SOUTH BRANCH OF THE KISHWAUKEE RIVER

DRAINAGE AND UTILITY PLAN
STA. 43+00 TO STA. 58+00

SCALE: 1"=5' 1"=50'
DATE: 6-04-07
DRAWN BY: WS
CHECKED BY: RJS

GRAEF, ANHALT, SCHLOEMER & ASSOCIATES, INC.
CHICAGO, ILLINOIS

PLAN and PROFILE

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DATE: 04-Jun-07 11:29

CONTRACT NO. 62340

F.A.U. ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-1-B	McHENRY	77	15
ILLINOIS PROJECT				

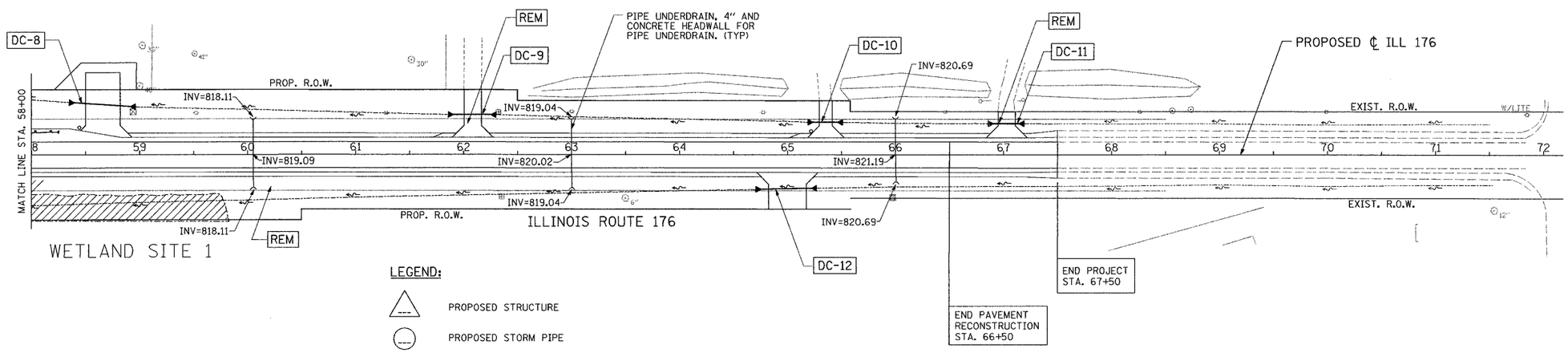
DC-8
PIPE CULVERT - 15" DIA.
CLASS D, TYPE 1
57' @ 0.30%
EAST F.E.S. - STA. 58+96.00, 42.2' LT
INV. 816.69
WEST F.E.S. - STA. 58+35.00, 48.2' LT
INV. 816.51

DC-9
PIPE CULVERT - 15" DIA.
CLASS D, TYPE 1
40' @ 0.87%
EAST F.E.S. - STA. 62+30.00, 37' LT
INV. 818.01
WEST F.E.S. - STA. 61+86.00, 37' LT
INV. 817.62

DC-10
PIPE CULVERT - 15" DIA.
CLASS D, TYPE 1
28' @ 0.87%
EAST F.E.S. - STA. 65+51.00, 30.20' LT
INV. 820.81
WEST F.E.S. - STA. 65+19.00, 30.20' LT
INV. 820.54

DC-11 (*)
PIPE CULVERT - 13"x17" ARCH PIPE
CLASS D, TYPE 1
29' @ 0.87%
EAST F.E.S. - STA. 67+19.00, 29' LT
INV. 822.28
WEST F.E.S. - STA. 66+86.50, 29' LT
INV. 822.00

DC-12
PIPE CULVERT - 15" DIA.
CLASS D, TYPE 1
52' @ 0.87%
EAST F.E.S. - STA. 65+27.00, 30.60' RT
INV. 820.60
WEST F.E.S. - STA. 64+71.00, 31.70' RT
INV. 820.12



LEGEND:

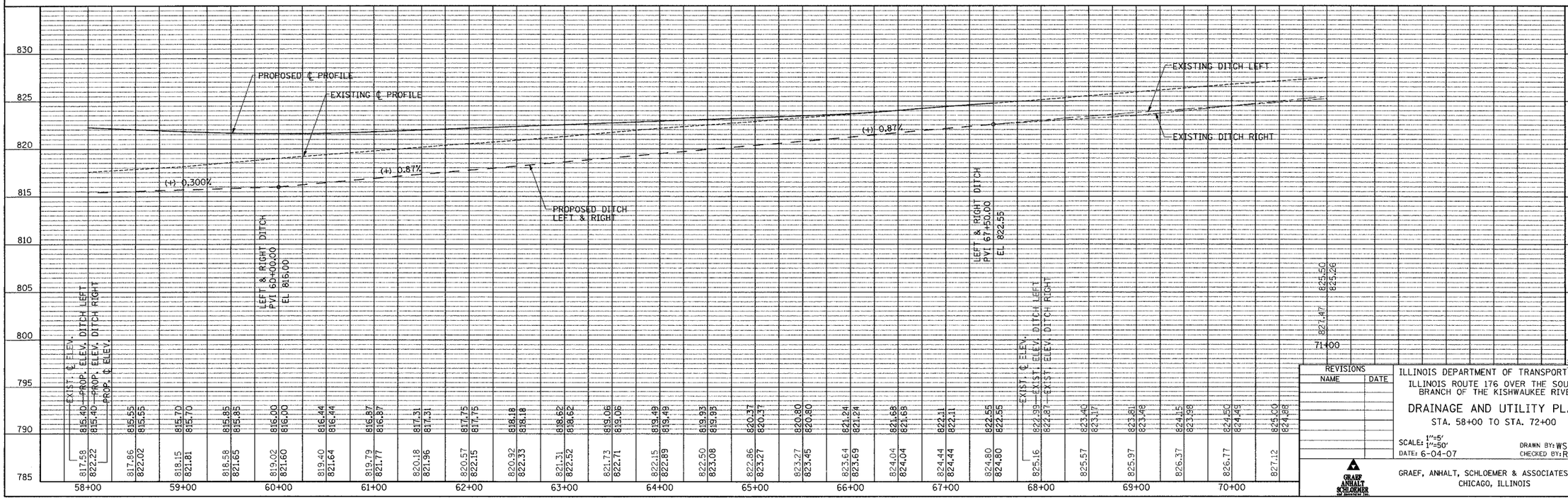
- PROPOSED STRUCTURE
- PROPOSED STORM PIPE
- DC-1 CULVERT
- REM UTILITY ITEM TO BE REMOVED
- DITCH FLOWLINE

NOTES:

FOR DRIVEWAY CULVERTS POLYVINYL CHLORIDE (PVC) AND POLYETHYLENE (PE) PIPES WILL NOT BE PERMITTED.

(*) PIPE AND END SECTIONS SHALL BE PAID AS PIPE CULVERTS, CLASS D, TYPE 1, EQUIVALENT ROUND-SIZE 15"

HORIZ. - 1" = 50' 0 50 100 SCALE IN FEET
VERT. - 1" = 5' 0 5 10 SCALE IN FEET



	EXIST. ℄ E.L.EV.	PROP. ELEV. DITCH LEFT	PROP. ELEV. DITCH RIGHT	PROP. ℄ ELEV.
58+00	817.58	815.40	815.40	822.22
	817.86	815.55	815.55	822.02
59+00	818.15	815.70	815.70	821.81
	816.58	815.85	815.85	821.65
60+00	819.02	816.00	816.00	821.60
	819.40	816.44	816.44	821.64
61+00	819.79	816.87	816.87	821.77
	820.18	817.31	817.31	821.96
62+00	820.57	817.75	817.75	822.15
	820.92	818.18	818.18	822.33
63+00	821.31	818.62	818.62	822.52
	821.73	819.06	819.06	822.71
64+00	822.15	819.49	819.49	822.89
	822.50	819.93	819.93	823.08
65+00	822.86	820.37	820.37	823.27
	823.27	820.80	820.80	823.45
66+00	823.64	821.24	821.24	823.69
	824.04	821.68	821.68	824.04
67+00	824.44	822.11	822.11	824.44
	824.80	822.55	822.55	824.80
68+00	825.16	822.99	822.87	822.65
	825.57	823.40	823.17	
69+00	825.97	823.81	823.48	
	826.37	824.15	823.98	
70+00	826.77	824.50	824.49	
	827.12	825.00	824.88	

PLAN and PROFILE

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
ILLINOIS ROUTE 176 OVER THE SOUTH BRANCH OF THE KISHWAUKEE RIVER
DRAINAGE AND UTILITY PLAN
STA. 58+00 TO STA. 72+00
SCALE: 1"=5' 1"=50' DRAWN BY: WS
DATE: 6-04-07 CHECKED BY: RJS

GRAEF, ANHALT, SCHLOEMER & ASSOCIATES, INC.
CHICAGO, ILLINOIS

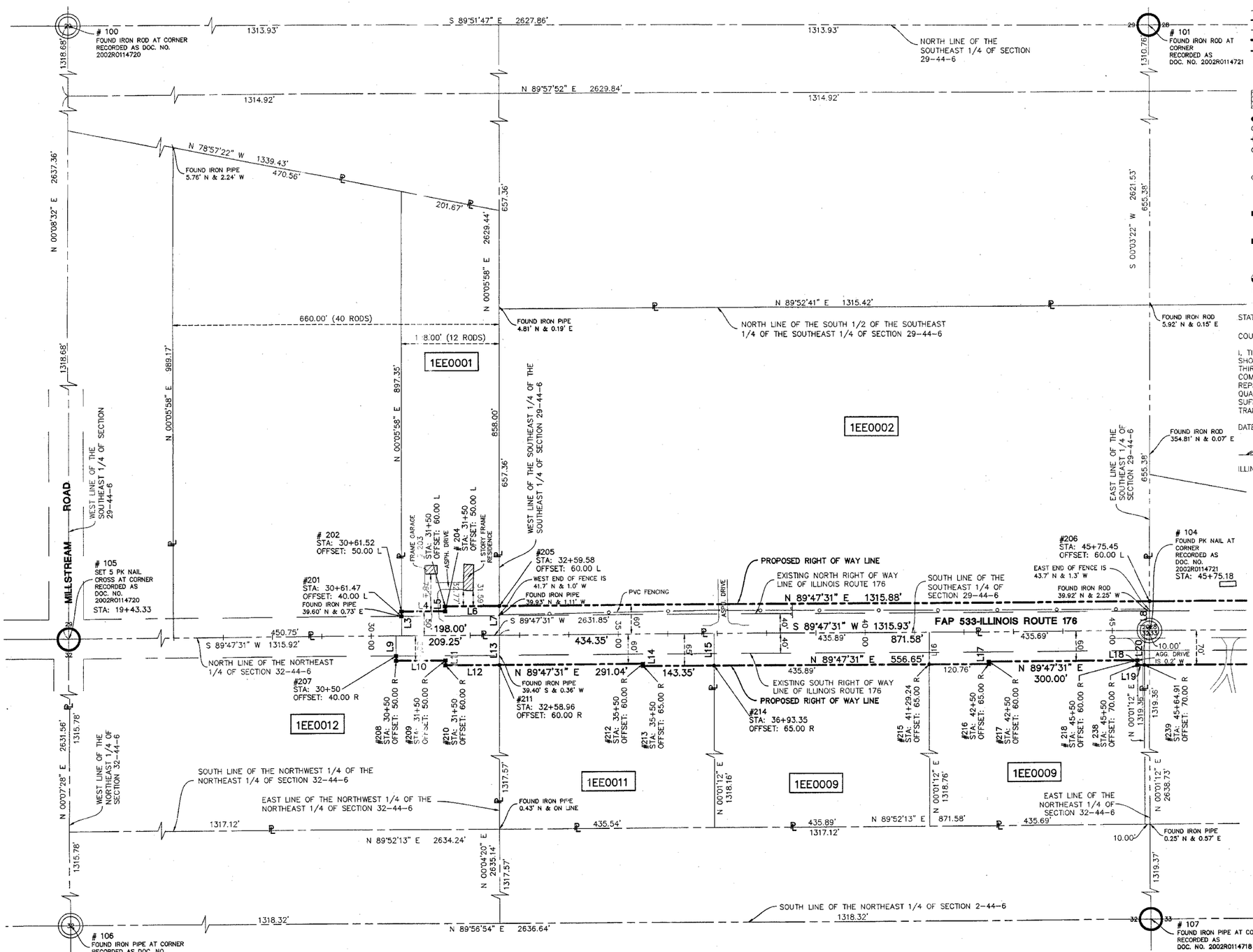
FILE: H:\Jobs2002\20024023\CAD\IDOT_Trans\dgn\00plan_ut1104.dgn
DATE: 04-Jun-07 17:31

PART OF SEC. 28, 29, 32 AND 33, T44N, R6E OF THE 3RD P.M., McHENRY COUNTY, ILLINOIS

CONTRACT 62340

PARCEL No.	OWNER	TOTAL HOLDING (ACRES)	PART TAKEN (ACRES)	PREVIOUSLY DEDICATED (ACRES)	REMAINDER	EASEMENT AREA (ACRES)	PERMANENT INDEX NUMBER	PURPOSE OF EASEMENT	ACQUIRED BY
1EE0001	ROGER L. BILLIE D. STICKLES	3.9894	0.2524	0.1818	3.7370	N/A	12-29-400-005	N/A	
1EE0002	PATRICK H. & ANITA E. TURNER	19.8247	1.8126	1.2084	18.0121	N/A	12-29-400-007	N/A	
1EE0009	JESUS & FRANCISCA MONTEMAYOR	26.3864	1.2679	0.8004	25.1185	N/A	12-32-200-005 & 006	N/A	
1EE0011	MARCELO & SYLVIA MONTEMAYOR	13.1588	0.6148	0.3989	12.5440	N/A	12-32-200-004	N/A	
1EE0012	BETT & SARAH E. GIESEKE, EAN J. GIESEKE, JEREMY A. GIESEKE	39.7938	0.2651	0.1921	39.5287	N/A	12-32-200-001	N/A	

LINE TABLE								
LINE	BEARING	LENGTH	LINE	BEARING	LENGTH	LINE	BEARING	LENGTH
L3	S 00°05'58" W	50.00'	L9	S 00°12'29" E	50.00'	L15	N 00°01'12" E	65.00'
L4	N 89°47'31" E	88.48'	L10	N 89°47'31" E	100.00'	L16	N 00°01'12" E	65.00'
L5	N 00°12'29" W	10.00'	L11	S 00°12'29" E	10.00'	L17	N 00°12'29" W	5.00'
L6	N 89°47'31" E	109.58'	L12	N 89°47'31" E	108.96'	L18	S 00°11'56" E	10.00'
L7	S 00°05'58" W	60.00'	L13	N 00°04'20" E	60.00'	L19	N 89°47'31" E	14.91'
L8	S 00°03'22" W	60.00'	L14	S 00°12'29" E	5.00'	L20	N 00°01'12" E	70.00'



F.A. ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-1-B	McHENRY	77	16
ILLINOIS PROJECT				
STA. ___+__	TO STA. ___+__			

LEGEND

- SECTION CORNER (9 10 16 15)
- SECTION LINE
- QUARTER SECTION LINE
- QUARTER, QUARTER SECTION LINE
- PLATTED LOT LINE
- PROPERTY (DEED) LINE
- APL APPARENT PROPERTY LINE
- CENTERLINE
- EXISTING RIGHT OF WAY LINE
- PROPOSED RIGHT OF WAY LINE
- PROPOSED EASEMENT
- 129.32' MEASURED DIMENSION
- 129.32'(COMP.) COMPUTED DIMENSION
- ( ) RECORD DATA
- EXISTING BUILDING
- ● IRON ROD SET
- ○ IRON PIPE OR ROD FOUND
- + CUT CROSS FOUND OR SET
- ○ T1 T2 T3 **THESE STAKES REFERENCE FOUND OR SET MONUMENTATION.** SET 5/8 INCH IRON ROD FLUSHED WITH GROUND TO TIE FOUND IRON STAKE. IDENTIFIED BY COLORED PLASTIC CAP BEARING SURVEYORS REGISTRATION NUMBER.
- ○ BT1 BT2 BT3 **THESE STAKES, IN CULTIVATED AREAS, REFERENCE FOUND OR SET MONUMENTATION.** BURIED 5/8 INCH IRON ROD 20 INCHES BELOW GROUND TO TIE FOUND IRON STAKE. IDENTIFIED BY COLORED PLASTIC CAP BEARING SURVEYORS REGISTRATION NUMBER.
- ■ **STAKING OF PROPOSED RIGHT OF WAY.** SET DIVISION OF HIGHWAYS SURVEY MARKER TO MONUMENT THE POSITION SHOWN. IDENTIFIED BY INSCRIPTION DATA AND SURVEYORS REGISTRATION NUMBER.
- ■ M **STAKING OR PROPOSED RIGHT OF WAY IN CULTIVATED AREAS.** BURIED 5/8 INCH METAL ROD 20 INCHES BELOW GROUND TO MARK FUTURE SURVEY MARKER POSITION. IDENTIFIED BY COLOR PLASTIC CAP BEARING SURVEYORS REGISTRATION NUMBER.
- PERMANENT SURVEY MARKER, I D O T STD. 2135 (TO BE SET BY OTHERS)
- □ RIGHT OF WAY STAKING PROPOSED TO BE SET.
- ☼ LIGHT STANDARD
- ♦ PK NAIL SET
- o REPLACED AFTER CONSTRUCTION

STATE OF ILLINOIS)
)SS
COUNTY OF LAKE)

I, TIMOTHY J. MURPHY, DO HEREBY DECLARE THAT I HAVE SURVEYED THE PLAT OF HIGHWAYS SHOWN HEREON SECTIONS 28, 29, 32 AND 33, TOWNSHIP 44 NORTH RANGE 6 EAST OF THE THIRD PRINCIPAL MERIDIAN, McHENRY COUNTY, ILLINOIS; THAT THE SURVEY IS TRUE AND COMPLETE AS SHOWN TO THE BEST OF MY KNOWLEDGE AND BELIEF; THAT THE PLAT CORRECTLY REPRESENTS SAID SURVEY; THAT ALL MONUMENTS FOUND AND ESTABLISHED ARE OF PERMANENT QUALITY AND OCCUPY THE POSITIONS SHOWN THEREON AND THAT THE MONUMENTS ARE SUFFICIENT TO ENABLE THE SURVEY TO BE RETRACED. MADE FOR THE DEPARTMENT OF TRANSPORTATION, STATE OF ILLINOIS.

DATED AT VERNON HILLS, ILLINOIS THIS 16TH DAY OF DECEMBER A.D., 2002.

Timothy J. Murphy

ILLINOIS PROFESSIONAL LAND SURVEYOR No. 2870; EXPIRES NOVEMBER 30, 2004

TIMOTHY J. MURPHY ILLINOIS PROFESSIONAL LAND SURVEYOR NO. 2870 VERNON HILLS, ILLINOIS

COORDINATE TABLE		
POINT NO.	NORTHING	EASTING
100	2038285.305033	922942.439593
101	2038279.028451	925570.291207
104	2035657.501196	925567.725049
105	2035647.950339	922935.886829
106	2033016.394345	922930.172671
107	2033018.774044	925566.804600
201	2035692.007729	924053.873756
202	2035702.007870	924053.891097
203	2035712.328887	924142.332491
204	2035702.328953	924142.368780
205	2035712.726537	924251.909981
206	2035717.501761	925567.783747
207	2035611.966651	924042.696044
208	2035601.966717	924042.732333
209	2035602.329611	924142.731675
210	2035592.329677	924142.767964
211	2035592.725098	924251.730406
212	2035593.781255	924542.765330
213	2035588.781288	924542.783475
214	2035589.301481	924686.128181
215	2035590.883302	925122.015310
216	2035591.321549	925242.776866
217	2035596.321516	925242.760721
218	2035597.410235	925542.759277
238	2035587.410261	925542.793988
239	2035587.464357	925557.700697

BEARINGS AND DISTANCES SHOWN HEREON ARE BASED ON ILLINOIS STATE PLANE COORDINATES, EAST ZONE, NORTH AMERICAN DATUM OF 1983. NGS CONTROL POINTS PID AJ2962 AND AJ2951 WERE RECOVERED AND USED FOR CONVERSIONS. VALUES SHOWN HEREON ARE "GRID" NOT "GROUND".

COMBINED SCALE FACTOR (GRID TO GROUND) = 1.00002105044

IDOT6- 3308 SHEET 1 IS A COVER SHEET AND IS NOT RECORDED

MANHARD CONSULTING LTD. ENGINEERS • SURVEYORS • PLANNERS 900 WOODLANDS PARKWAY VERNON HILLS, IL 60061 PH: 847/634-5550 FAX: 847/634-0095

PLAT OF HIGHWAYS
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
FAP 533-ILLINOIS ROUTE 176

SECTION 119R-1-B McHENRY COUNTY
PROJECT JOB NO. R91-048-01
STATION 30+50 TO STATION 65+58.77
SCALE: 1" = 100' SHEET 2 OF 4

BUREAU OF LAND ACQUISITION
201 WEST CENTER COURT
SCHAUMBURG, ILLINOIS 60196

REVISION DATE	DESCRIPTION	BY
12/16/02	REVISED OWNERS AND ADDED MONUMENT RECORDING DATA	WW
04/12/02	REVISED PARCEL BOUNDARIES	RYB

R.O.W. PLAT NOTEBOOK NO. | MADE | CHECKED | INKED | BY | DATE

Dec 16, 2002 - 09:33 Dwg Name: P:\dot6\dwg\Surv\Final Drawings\Plat of Highways\02-ID0T6-38.dwg Updated By: bwright

RECORDING REQUESTED BY AND RECORDED ON AS DOCUMENT NO.

PART OF SEC. 28, 29, 32 AND 33, T44N, R6E OF THE 3RD P.M., McHENRY COUNTY, ILLINOIS

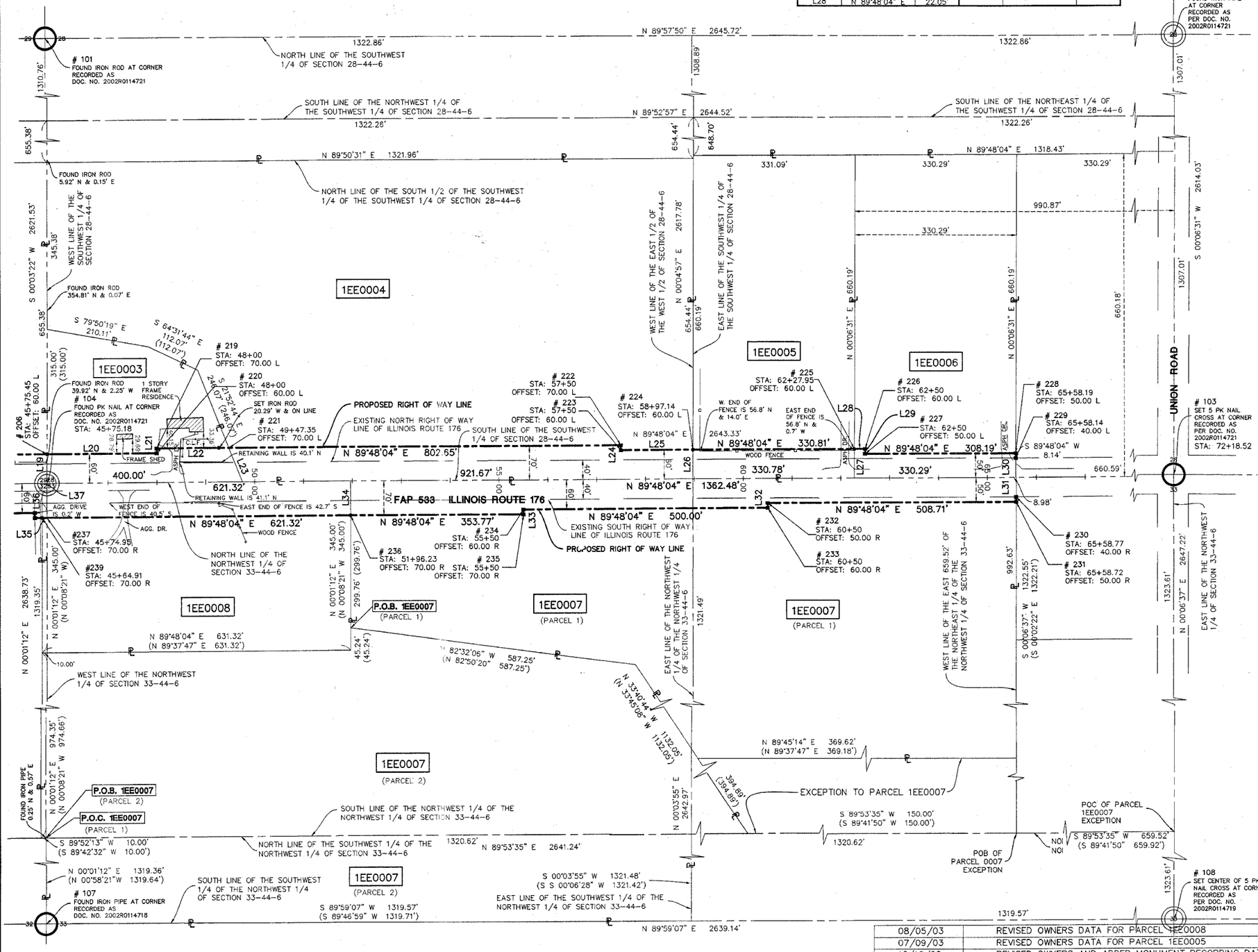
CONTRACT 62340

PARCEL No.	OWNER	TOTAL HOLDING (ACRES)	PART TAKEN (ACRES)	PREVIOUSLY DEDICATED (ACRES)	REMAINDER	EASEMENT AREA (ACRES)	PERMANENT INDEX NUMBER	PURPOSE OF EASEMENT	ACQUIRED BY
1EE0003	EUGENE E. & STEPHANIE R. LOGOTHETTI	2.2352	0.5686	0.3599	1.6666	N/A	12-28-300-002	N/A	
1EE0004	CENTRAL LAND MANAGEMENT, INC., AN ILLINOIS CORP.	17.6378	1.4699	0.8537	16.1679	N/A	12-28-300-001	N/A	
1EE0005	HARRIS TRUST & SAVINGS BANK TR# HTX 7071	5.0155	0.4557	0.3038	4.5598	N/A	12-28-300-015	N/A	
1EE0006	PAUL W. & ANN M. OSTRANDER	5.0058	0.3842	0.3033	4.6216	N/A	12-28-300-016	N/A	
1EE0007	SOUTH BRANCH NURSERIES, INC.	93.4775	1.8411	1.2511	91.6364	N/A	12-33-100-012	N/A	
1EE0008	JAMES R. PARKER AND KATHRYN M. PARKER	5.0001	1.0145	0.5797	3.9856	N/A	12-33-100-013	N/A	

LINE TABLE

LINE	BEARING	LENGTH	LINE	BEARING	LENGTH
L19	N 00°03'22" E	60.00'	L29	S 00°11'56" E	10.00'
L20	N 89°48'04" E	224.55'	L30	S 00°11'56" E	50.00'
L21	N 00°11'56" W	10.00'	L31	S 00°11'56" E	50.00'
L22	N 89°48'04" E	147.35'	L32	S 00°11'56" E	10.00'
L23	S 21°52'44" E	75.33'	L33	S 00°11'56" E	10.00'
L24	S 00°11'56" E	10.00'	L34	N 00°01'12" E	70.00'
L25	N 89°48'04" E	147.14'	L35	S 89°47'31" W	10.00'
L26	S 00°04'57" W	60.00'	L36	N 00°01'12" E	70.00'
L27	S 00°06'31" W	60.00'	L37	N 89°46'07" E	10.00'
L28	N 89°48'04" E	22.05'			

F.A. ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-1-B	MCHENRY	77	17
ILLINOIS PROJECT				
STA. ___+__		TO STA. ___+__		



LEGEND

9 10 / 16 15	SECTION CORNER
— - - - —	SECTION LINE
— — — —	QUARTER SECTION LINE
— - —	QUARTER, QUARTER SECTION LINE
———	PLATTED LOT LINE
—℞—	PROPERTY (DEED) LINE
APL	APPARENT PROPERTY LINE
— — —	CENTERLINE
— — —	EXISTING RIGHT OF WAY LINE
— — —	PROPOSED RIGHT OF WAY LINE
———	PROPOSED EASEMENT
129.32'	MEASURED DIMENSION
129.32'(COMP.)	COMPUTED DIMENSION
( )	RECORD DATA
▨	EXISTING BUILDING

●	IRON ROD SET	ɸ	PK NAIL SET
○	IRON PIPE OR ROD FOUND	○	REPLACED AFTER CONSTRUCTION
✚	CUT CROSS FOUND OR SET		
○ T1 T2 T3	**THESE STAKES REFERENCE FOUND OR SET MONUMENTATION.** SET 5/8 INCH IRON ROD FLUSHED WITH GROUND TO TIE FOUND IRON STAKE. IDENTIFIED BY COLORED PLASTIC CAP BEARING SURVEYORS REGISTRATION NUMBER.		
○ BT1 BT2 BT3	**THESE STAKES, IN CULTIVATED AREAS, REFERENCE FOUND OR SET MONUMENTATION.** BURIED 5/8 INCH IRON ROD 20 INCHES BELOW GROUND TO TIE FOUND IRON STAKE. IDENTIFIED BY COLORED PLASTIC CAP BEARING SURVEYORS REGISTRATION NUMBER.		
■	**STAKING OF PROPOSED RIGHT OF WAY.** SET DIVISION OF HIGHWAYS SURVEY MARKER TO MONUMENT THE POSITION SHOWN. IDENTIFIED BY INSCRIPTION DATA AND SURVEYORS REGISTRATION NUMBER.		
■ M	**STAKING OR PROPOSED RIGHT OF WAY IN CULTIVATED AREAS.** BURIED 5/8 INCH METAL ROD 20 INCHES BELOW GROUND TO MARK FUTURE SURVEY MARKER POSITION. IDENTIFIED BY COLOR PLASTIC CAP BEARING SURVEYORS REGISTRATION NUMBER.		
◕	PERMANENT SURVEY MARKER, I D O T STD. 2135 (TO BE SET BY OTHERS)		
□	RIGHT OF WAY STAKING PROPOSED TO BE SET.		
⌖	LIGHT STANDARD		

STATE OF ILLINOIS)
)SS
COUNTY OF LAKE)

I, TIMOTHY J. MURPHY, DO HEREBY DECLARE THAT I HAVE SURVEYED THE PLAT OF HIGHWAYS SHOWN HEREON SECTIONS 28, 29, 32 AND 33, TOWNSHIP 44 NORTH RANGE 6 EAST OF THE THIRD PRINCIPAL MERIDIAN, McHENRY COUNTY, ILLINOIS; THAT THE SURVEY IS TRUE AND COMPLETE AS SHOWN TO THE BEST OF MY KNOWLEDGE AND BELIEF; THAT THE PLAT CORRECTLY REPRESENTS SAID SURVEY; THAT ALL MONUMENTS FOUND AND ESTABLISHED ARE OF PERMANENT QUALITY AND OCCUPY THE POSITIONS SHOWN THEREON AND THAT THE MONUMENTS ARE SUFFICIENT TO ENABLE THE SURVEY TO BE RETRACED. MADE FOR THE DEPARTMENT OF TRANSPORTATION, STATE OF ILLINOIS.

DATED AT VERNON HILLS, ILLINOIS THIS 5TH DAY OF AUGUST A.D., 2003.

Timothy J. Murphy

ILLINOIS PROFESSIONAL LAND SURVEYOR No. 2870; EXPIRES NOVEMBER 30, 2004

TIMOTHY J. MURPHY
ILLINOIS PROFESSIONAL LAND SURVEYOR NO. 2870
VERNON HILLS, ILLINOIS

COORDINATE TABLE

POINT NO.	NORTHING	EASTING
101	2038279.028451	925570.291207
102	2038280.701481	928216.003374
103	2035666.676528	928211.043500
104	2035657.501196	925567.725049
107	2033018.774044	925566.804600
108	2033019.457170	928205.946800
206	2035717.501761	925567.783747
219	2035718.281212	925792.335428
220	2035728.281152	925792.300717
221	2035728.792622	925939.650169
222	2035731.578716	926742.294993
223	2035721.578776	926742.329705
224	2035722.089520	926889.469755
225	2035723.237806	927220.279037
226	2035723.314336	927242.326692
227	2035713.314397	927242.361404
228	2035714.384173	927550.552832
229	2035704.384047	927550.533858
230	2035624.386713	927551.440857
231	2035614.386586	927551.421604
232	2035612.620775	927042.709721
233	2035602.620835	927042.744432
234	2035600.885275	926542.747444
235	2035590.885335	926542.782155
236	2035589.657366	925592.753167
237	2035587.500646	925567.700632

BEARINGS AND DISTANCES SHOWN HEREON ARE BASED ON ILLINOIS STATE PLANE COORDINATES, EAST ZONE, NORTH AMERICAN DATUM OF 1983. NGS CONTROL POINTS PID AJ2962 AND AJ2951 WERE RECOVERED AND USED FOR CONVERSIONS. VALUES SHOWN HEREON ARE "GRID" NOT "GROUND".

COMBINED SCALE FACTOR (GRID TO GROUND) = 1.00002105044

IDOT6- 3308

SHEET 1 IS A COVER SHEET AND IS NOT RECORDED

RECEIVED
PLATS & LEGALS

RECEIVED
PLATS & LEGALS

MANHARD CONSULTING LTD.
ENGINEERS • SURVEYORS • PLANNERS
900 WOODLANDS PARKWAY VERNON HILLS, IL 60061
PH: 847/634-5550 FAX: 847/634-0095

PLAT OF HIGHWAYS
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
FAP 533-ILLINOIS ROUTE 176

SECTION 119R-1-B
PROJECT
STATION 30+50
SCALE: 1" = 100'

McHENRY COUNTY
JOB NO. R91-048-01
TO STATION 65+58.77
SHEET 3 OF 4

BUREAU OF LAND ACQUISITION
201 WEST CENTER COURT
SCHAUMBURG, ILLINOIS 60196

REVISION DATE	DESCRIPTION	BY
08/05/03	REVISED OWNERS DATA FOR PARCEL 1EE0008	TJM
07/09/03	REVISED OWNERS DATA FOR PARCEL 1EE0005	TJM
12/16/02	REVISED OWNERS AND ADDED MONUMENT RECORDING DATA	WWW
04/12/02	REVISED PARCEL BOUNDARIES	RYB

DATE	BY

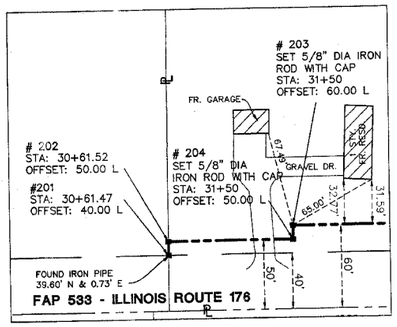
R.O.W. PLAT	MADE	
	CHECKED	
	NOTEBOOK NO.	

Aug 05, 2003 - 12:36 Dwg Name: P:\Idot6\dwg\Surv\Final Drawings\Plat of Highways\03-IDOT6-SR.dwg Updated By: tmurphy

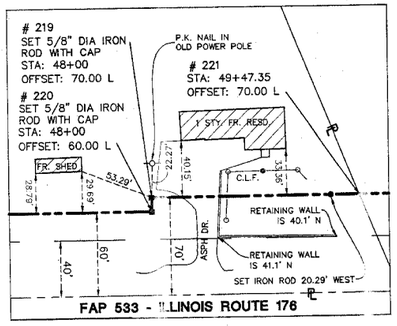
PART OF SEC. 28, 29, 32 AND 33, T44N, R6E OF THE 3RD P.M., McHENRY COUNTY, ILLINOIS

CONTRACT 62340

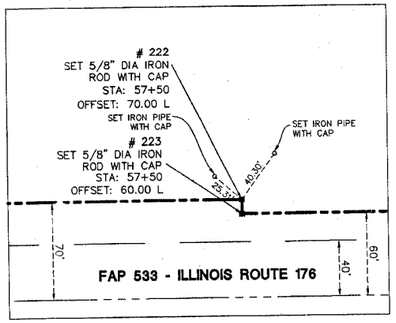
F.A. ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-1-B	McHENRY	77	18
ILLINOIS PROJECT				
STA. ___+__	TO STA. ___+__			



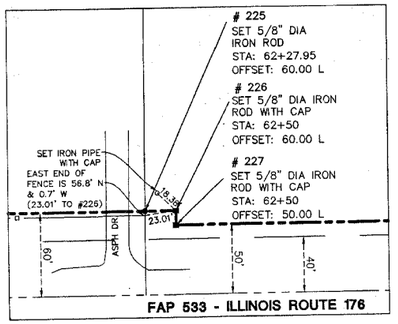
DETAIL OF POINT NO. 203
1" = 50'



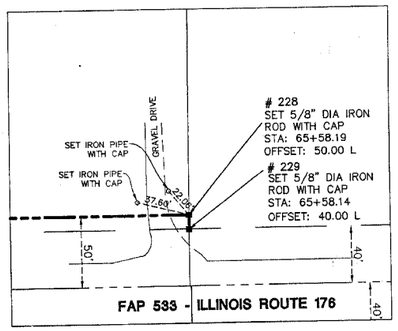
DETAIL OF POINT NO. 219
1" = 50'



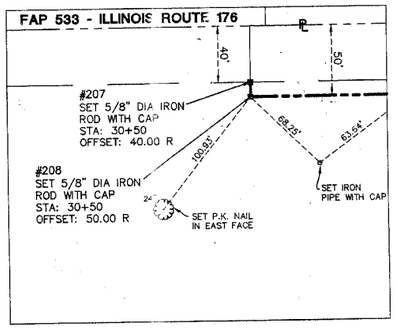
DETAIL OF POINT NO. 222
1" = 50'



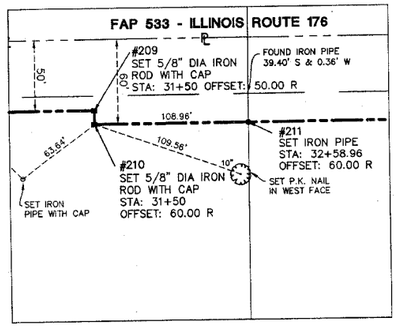
DETAIL OF POINT NO. 226
1" = 50'



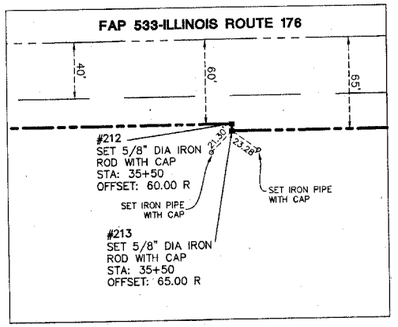
DETAIL OF POINT NO. 228
1" = 50'



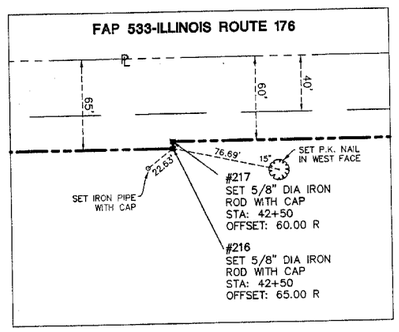
DETAIL OF POINT NO. 208
1" = 50'



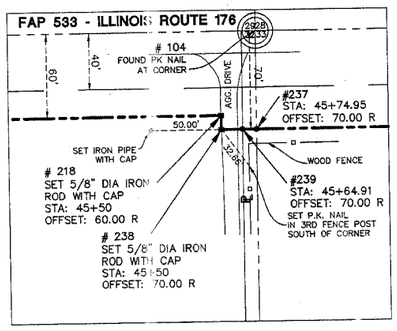
DETAIL OF POINT NO. 209
1" = 50'



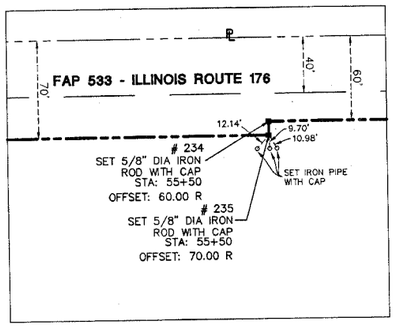
DETAIL OF POINT NO. 213
1" = 50'



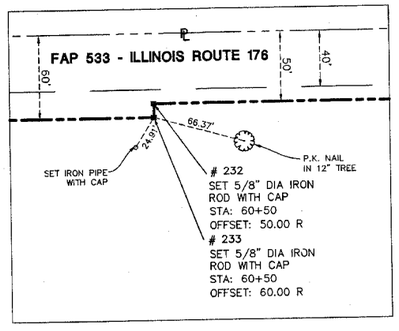
DETAIL OF POINT NO. 216
1" = 50'



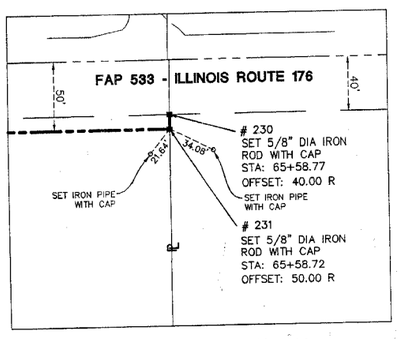
DETAIL OF POINT NO. 238
1" = 50'



DETAIL OF POINT NO. 235
1" = 50'



DETAIL OF POINT NO. 233
1" = 50'



DETAIL OF POINT NO. 231
1" = 50'

COORDINATE TABLE			COORDINATE TABLE		
POINT NO.	NORTHING	EASTING	POINT NO.	NORTHING	EASTING
201	2035692.007729	924053.873756	221	2035728.792622	925939.650169
202	2035702.007870	924053.891097	222	2035731.578716	926742.294993
203	2035712.327887	924142.332491	223	2035721.578775	926742.329705
204	2035702.3[illegible]953	924142.368780	224	2035722.089520	926889.469755
205	2035712.726537	924251.909981	225	2035723.237806	927220.279037
206	2035717.501761	925587.783747	226	2035723.314336	927242.326692
207	2035611.966651	924042.696044	227	2035713.314397	927242.361404
208	2035601.966717	924042.732333	228	2035714.384173	927550.552832
209	2035602.329611	924142.731675	229	2035704.384047	927550.533858
210	2035592.329677	924142.767964	230	2035624.386713	927551.440857
211	2035592.725098	924251.730406	231	2035614.386586	927551.421604
212	2035593.781255	924542.765330	232	2035612.620775	927042.709721
213	2035588.781288	924542.783475	233	2035602.620835	927042.744432
214	2035589.301481	924686.128181	234	2035600.885275	926542.747444
215	2035590.883302	925122.015310	235	2035590.885335	926542.782155
216	2035591.321549	925242.778866	236	2035589.657366	925592.753187
217	2035596.321516	925242.760721	237	2035587.500646	925567.700632
218	2035597.410235	925542.759277	238	2035587.410261	925542.793988
219	2035718.281212	925792.335428	239	2035587.464357	925557.700697
220	2035728.281152	925792.300717			

LEGEND

- SECTION CORNER (9 10 / 16 15)
- SECTION LINE
- QUARTER SECTION LINE
- QUARTER, QUARTER SECTION LINE
- PLATTED LOT LINE
- PROPERTY (DEED) LINE
- APL — APPARENT PROPERTY LINE
- CENTERLINE
- EXISTING RIGHT OF WAY LINE
- PROPOSED RIGHT OF WAY LINE
- PROPOSED EASEMENT
- 129.32' — MEASURED DIMENSION
- 129.32'(COMP.) — COMPUTED DIMENSION
- ( ) — RECORD DATA
- EXISTING BUILDING
- ● IRON ROD SET
- ○ IRON PIPE OR ROD FOUND
- + CUT CROSS FOUND OR SET
- ⧫ PK NAIL SET
- ○ REPLACED AFTER CONSTRUCTION
- ○ T1 T2 T3 **THESE STAKES REFERENCE FOUND OR SET MONUMENTATION.** SET 5/8 INCH IRON ROD FLUSHED WITH GROUND TO TIE FOUND IRON STAKE. IDENTIFIED BY COLORED PLASTIC CAP BEARING SURVEYORS REGISTRATION NUMBER.
- ○ BT1 BT2 BT3 **THESE STAKES, IN CULTIVATED AREAS, REFERENCE FOUND OR SET MONUMENTATION.** BURIED 5/8 INCH IRON ROD 20 INCHES BELOW GROUND TO TIE FOUND IRON STAKE. IDENTIFIED BY COLORED PLASTIC CAP BEARING SURVEYORS REGISTRATION NUMBER.
- ■ **STAKING OF PROPOSED RIGHT OF WAY.** SET DIVISION OF HIGHWAYS SURVEY MARKER TO MONUMENT THE POSITION SHOWN. IDENTIFIED BY INSCRIPTION DATA AND SURVEYORS REGISTRATION NUMBER.
- ■ M **STAKING OR PROPOSED RIGHT OF WAY IN CULTIVATED AREAS.** BURIED 5/8 INCH METAL ROD 20 INCHES BELOW GROUND TO MARK FUTURE SURVEY MARKER POSITION. IDENTIFIED BY COLOR PLASTIC CAP BEARING SURVEYORS REGISTRATION NUMBER.
- PERMANENT SURVEY MARKER, I D O T STD. 2135 (TO BE SET BY OTHERS)
- □ RIGHT OF WAY STAKING PROPOSED TO BE SET.
- ☼ LIGHT STANDARD

STATE OF ILLINOIS)
)SS
COUNTY OF LAKE)

I, TIMOTHY J. MURPHY, DO HEREBY DECLARE THAT I HAVE SURVEYED THE PLAT OF HIGHWAYS SHOWN HEREON SECTIONS 28, 29, 32 AND 33, TOWNSHIP 44 NORTH RANGE 6 EAST OF THE THIRD PRINCIPAL MERIDIAN, McHENRY COUNTY, ILLINOIS; THAT THE SURVEY IS TRUE AND COMPLETE AS SHOWN TO THE BEST OF MY KNOWLEDGE AND BELIEF; THAT THE PLAT CORRECTLY REPRESENTS SAID SURVEY; THAT ALL MONUMENTS FOUND AND ESTABLISHED ARE OF PERMANENT QUALITY AND OCCUPY THE POSITIONS SHOWN THEREON AND THAT THE MONUMENTS ARE SUFFICIENT TO ENABLE THE SURVEY TO BE RETRACED. MADE FOR THE DEPARTMENT OF TRANSPORTATION, STATE OF ILLINOIS.

DATED AT VERNON HILLS, ILLINOIS THIS 16TH DAY OF DECEMBER A.D., 2002.

Timothy J. Murphy

ILLINOIS PROFESSIONAL LAND SURVEYOR No. 2870; EXPIRES NOVEMBER 30, 2004

TIMOTHY J. MURPHY — ILLINOIS PROFESSIONAL LAND SURVEYOR NO. 2870 — VERNON HILLS, ILLINOIS

BEARINGS AND DISTANCES SHOWN HEREON ARE BASED ON ILLINOIS STATE PLANE COORDINATES, EAST ZONE, NORTH AMERICAN DATUM OF 1983. NGS CONTROL POINTS PID AJ2962 AND AJ2951 WERE RECOVERED AND USED FOR CONVERSIONS. VALUES SHOWN HEREON ARE "GRID" NOT "GROUND".

COMBINED SCALE FACTOR (GRID TO GROUND) = 1.00002105044

IDOT6– 3308

SHEET 1 IS A COVER SHEET AND IS NOT RECORDED

MANHARD CONSULTING LTD. — ENGINEERS • SURVEYORS • PLANNERS
900 WOODLANDS PARKWAY VERNON HILLS, IL 60061
PH: 847/934-5550 FAX: 847/934-0025

PLAT OF HIGHWAYS
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
FAP 533–ILLINOIS ROUTE 176

SECTION 119R–1–B — McHENRY COUNTY
PROJECT — JOB NO. R91–048–01
STATION 30+50 — TO STATION 65+58.77
SCALE: 1" = 50' — SHEET 4 OF 4

BUREAU OF LAND ACQUISITION
201 WEST CENTER COURT
SCHAUMBURG, ILLINOIS 60196

REVISION DATE	DESCRIPTION	BY
12/16/02	REVISED OWNERS AND ADDED MONUMENT RECORDING DATA	WWW
04/12/02	REVISED PARCEL BOUNDARIES	RYB

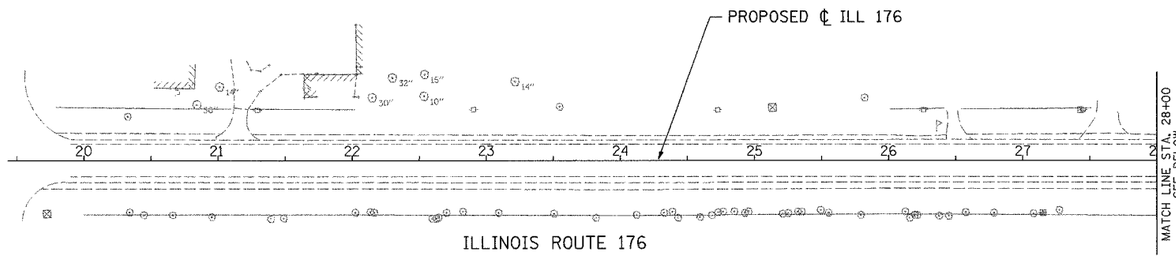
RECORDING: RECORDED ON — AS DOCUMENT NO.

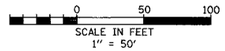
	DATE
	BY
CADE	
CHECKED	
INKED	
R.O.W. PLAT	
NOTEBOOK NO.	

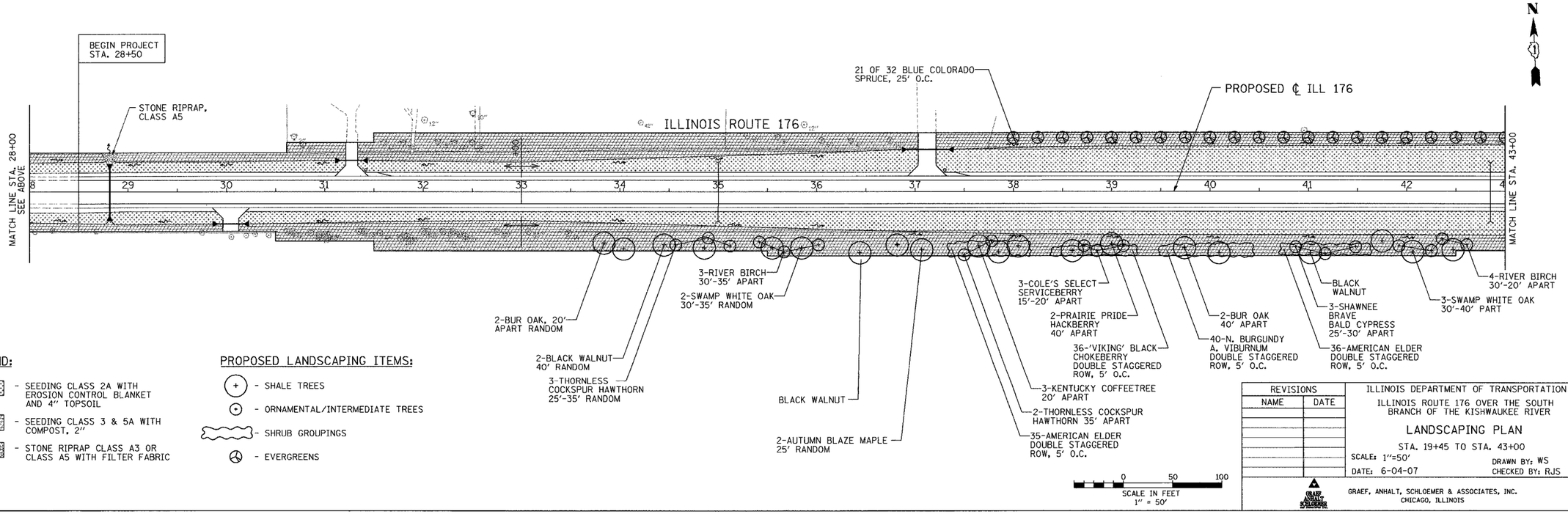
Dec 16, 2002 – 09:38 Dwg Name: P:\Jobs6\Dwg\Surv\Final Drawings\Plat of Highways\04-ROUTE-SB.dwg Updated By: bwright

CONTRACT NO. 62340

F.A. ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-1-B	McHENRY	77	19
STA.		TO STA.		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		







LEGEND:

- SEEDING CLASS 2A WITH EROSION CONTROL BLANKET AND 4" TOPSOIL
- SEEDING CLASS 3 & 5A WITH COMPOST, 2"
- STONE RIPRAP CLASS A3 OR CLASS A5 WITH FILTER FABRIC

PROPOSED LANDSCAPING ITEMS:

- SHALE TREES
- ORNAMENTAL/INTERMEDIATE TREES
- SHRUB GROUPINGS
- EVERGREENS

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

ILLINOIS ROUTE 176 OVER THE SOUTH BRANCH OF THE KISHWAUKEE RIVER

LANDSCAPING PLAN

STA. 19+45 TO STA. 43+00

SCALE: 1"=50'

DRAWN BY: WS

DATE: 6-04-07

CHECKED BY: RJS

GRAEF, ANHALT, SCHLOEMER & ASSOCIATES, INC.
CHICAGO, ILLINOIS

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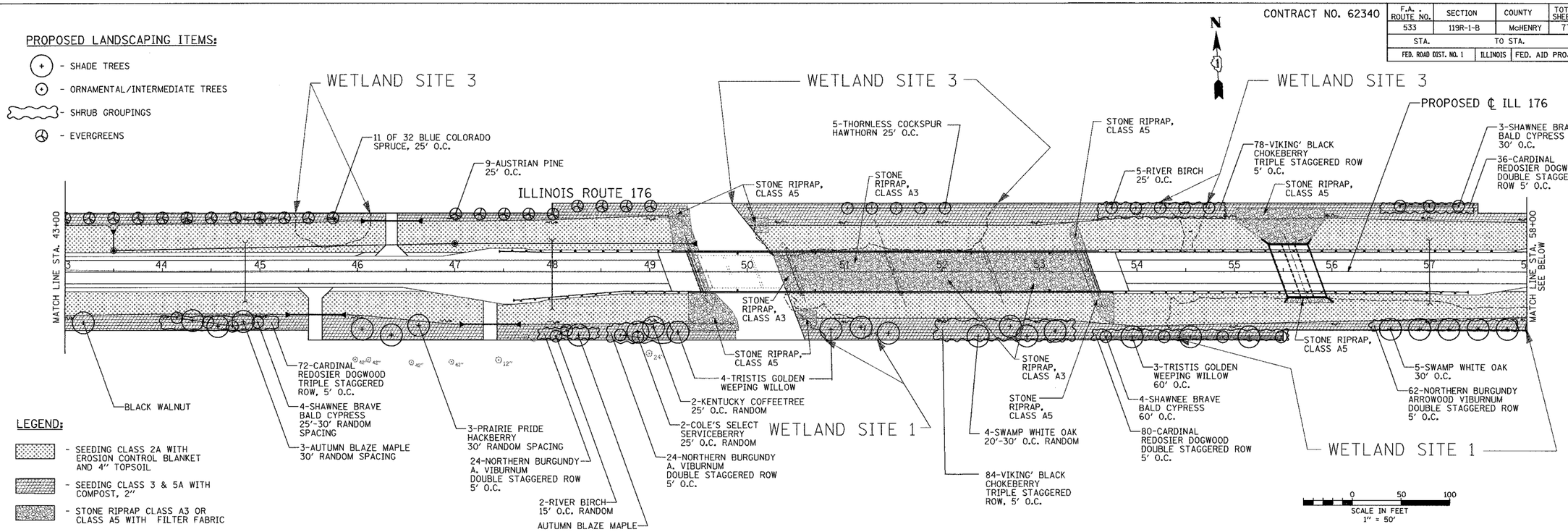
DATE: 04-Jun-07 17:43

CONTRACT NO. 62340

F.A. ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-1-B	McHENRY	77	20
STA.		TO STA.		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

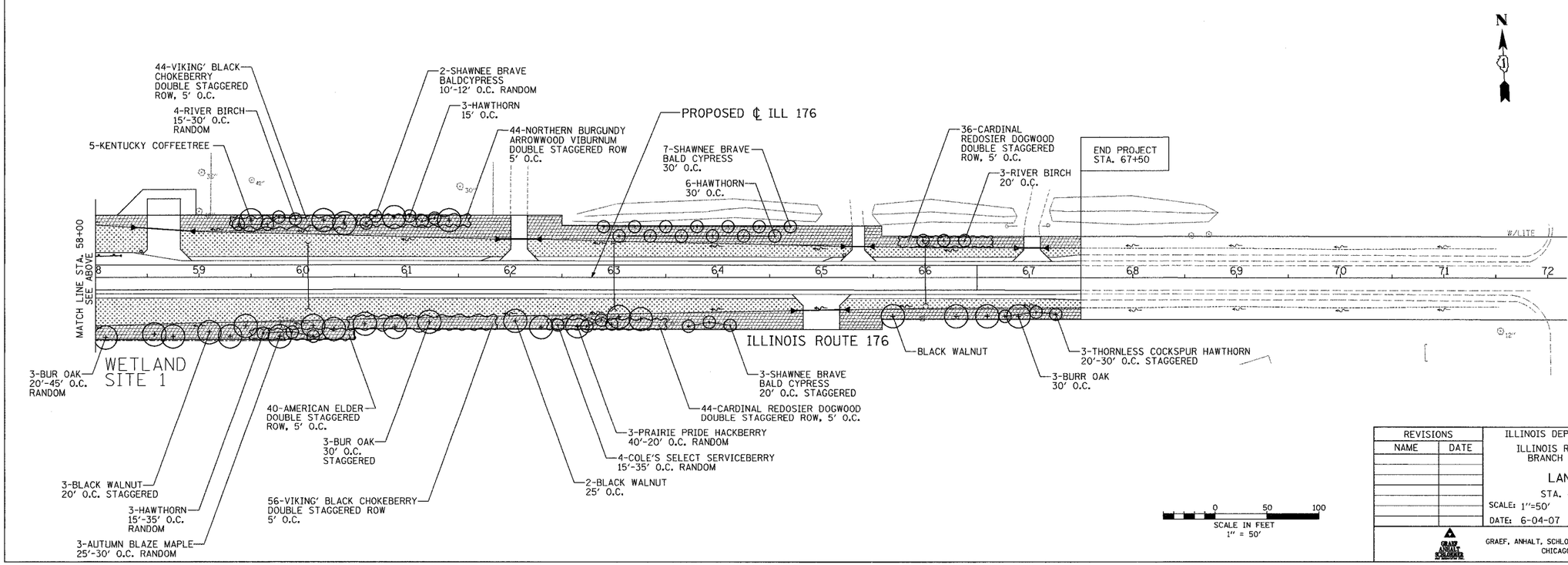
PROPOSED LANDSCAPING ITEMS:

- (+) - SHADE TREES
- (+) - ORNAMENTAL/INTERMEDIATE TREES
- SHRUB GROUPINGS
- EVERGREENS



LEGEND:

- SEEDING CLASS 2A WITH EROSION CONTROL BLANKET AND 4" TOPSOIL
- SEEDING CLASS 3 & 5A WITH COMPOST, 2"
- STONE RIPRAP CLASS A3 OR CLASS A5 WITH FILTER FABRIC



REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

ILLINOIS ROUTE 176 OVER THE SOUTH BRANCH OF THE KISHWAUKEE RIVER

LANDSCAPING PLAN

STA. 43+00 TO STA. 72+00

SCALE: 1"=50' DRAWN BY: WS

DATE: 6-04-07 CHECKED BY: RJS

GRAEF, ANHALT, SCHLOEMER & ASSOCIATES, INC.
CHICAGO, ILLINOIS

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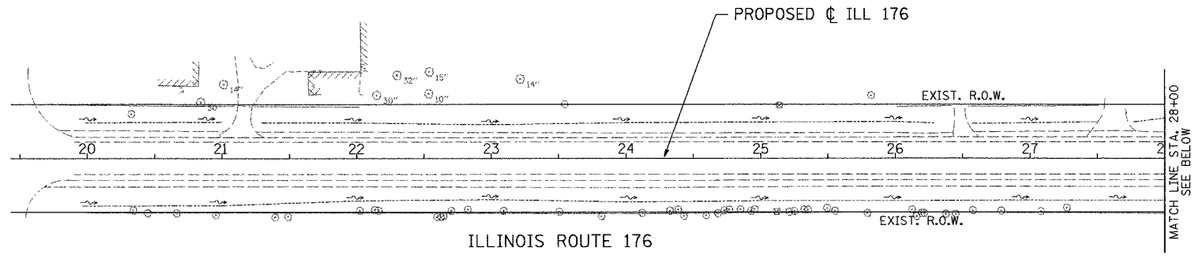
CONTRACT NO. 62340

F.A. ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-1-B	McHENRY	77	21
STA.	TO STA.			
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

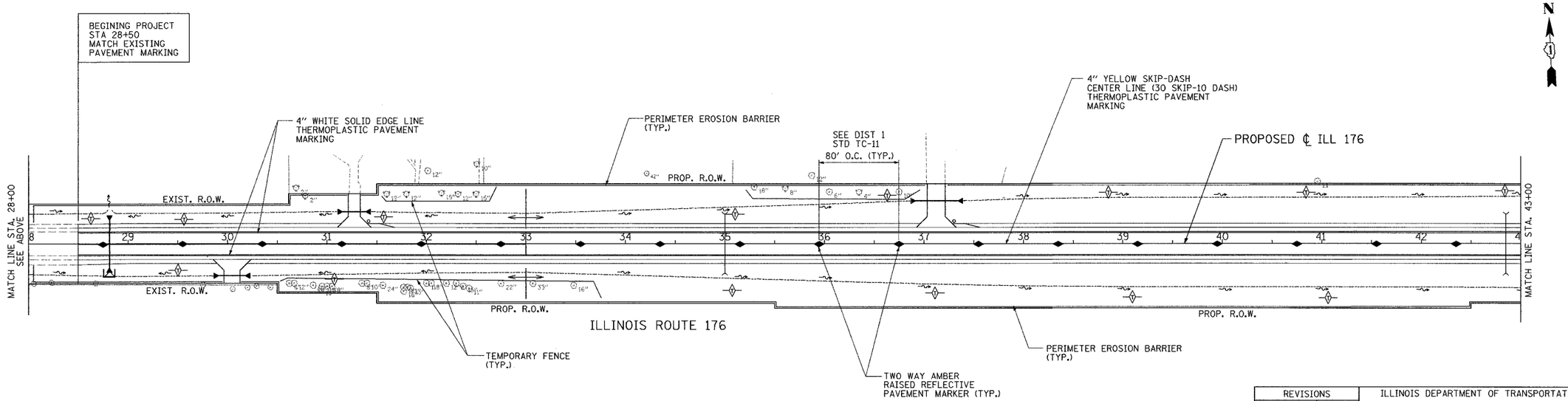


N

SCALE IN FEET
1" = 50'

LEGEND:

- PERIMETER EROSION BARRIER (SILT FILTER FENCE)
- TEMPORARY FENCE
- TEMPORARY DITCH CHECKS
- INLET AND PIPE PROTECTION
- FLOWLINE FOR EXISTING SWALE/DITCH
- FLOWLINE FOR PROPOSED SWALE/DITCH



N

SCALE IN FEET
1" = 50'

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

ILLINOIS ROUTE 176 OVER THE SOUTH BRANCH OF THE KISHWAUKEE RIVER

PAVEMENT MARKING AND EROSION CONTROL PLAN

STA. 19+45 TO STA. 43+00

SCALE: 1"=50' DRAWN BY: WS

DATE: 6-04-07 CHECKED BY: RJS

GRAEF, ANHALT, SCHLOEMER & ASSOCIATES, INC.
CHICAGO, ILLINOIS

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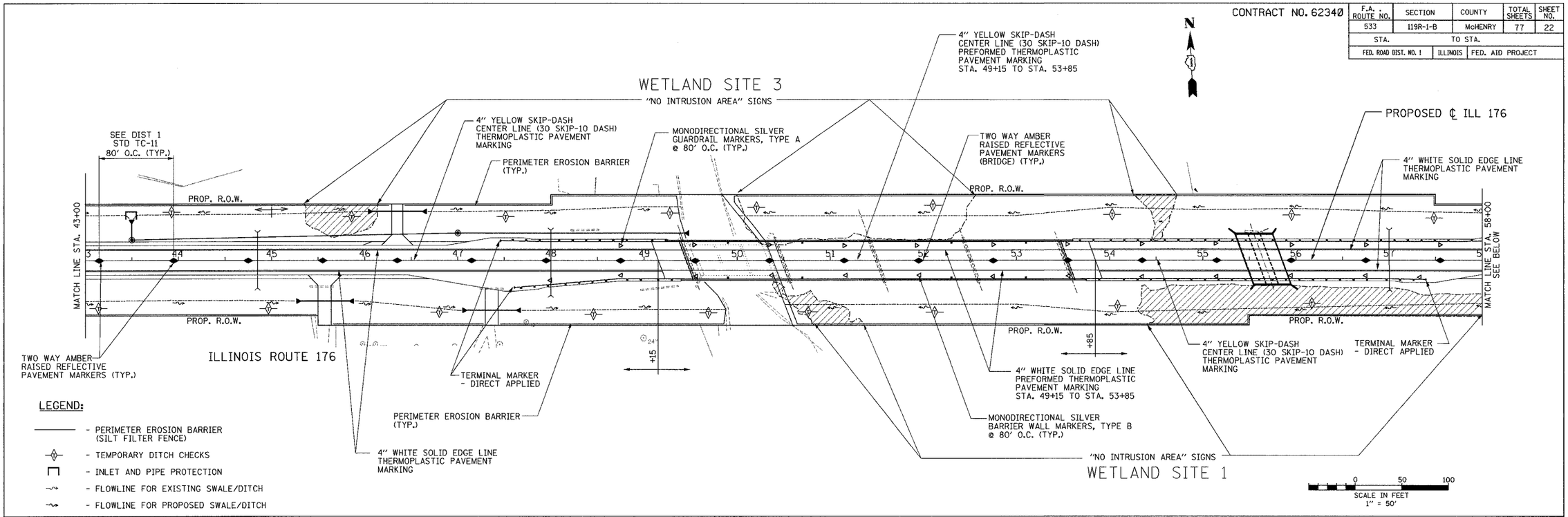
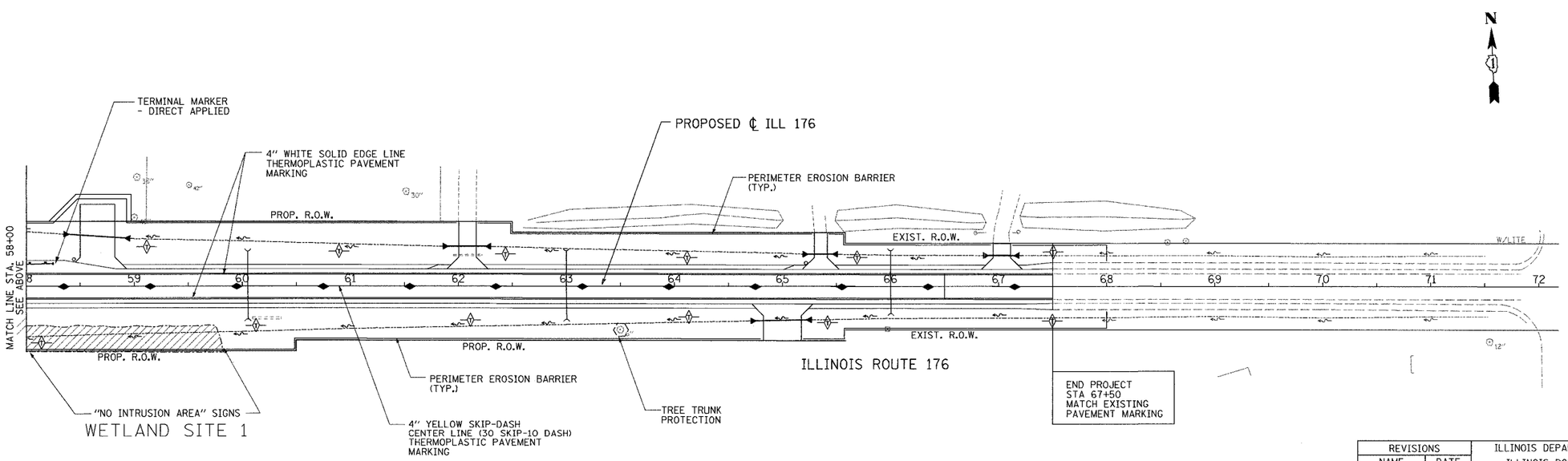
CONTRACT NO. 62340

F.A. ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-1-B	McHENRY	77	22
STA.	TO STA.			
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		





REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

ILLINOIS ROUTE 176 OVER THE SOUTH BRANCH OF THE KISHWAUKEE RIVER

PAVEMENT MARKING AND EROSION CONTROL PLAN

STA. 43+00 TO STA. 72+00

SCALE: 1"=50' DRAWN BY: WS

DATE: 6-04-07 CHECKED BY: RJS

GRAEF, ANHALT, SCHLOEMER & ASSOCIATES, INC.
CHICAGO, ILLINOIS

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B.M. - Northwest corner of top step at house with address 18017 IL Rte. 176, El. 823.80

Existing Structure: S.N. 056-0004, built in 1932 as SBI-67. Reconstructed in 1971. The existing structure consists of a 3 (simple) span PPC deck beam superstructure on pile supported closed abutments and pile supported piers. The structure is ±78'-5" Bk. to Bk. abutments and 33'-0" O. to O. deck. The structure is to be removed and replaced, however, the West Abutment will remain in place.

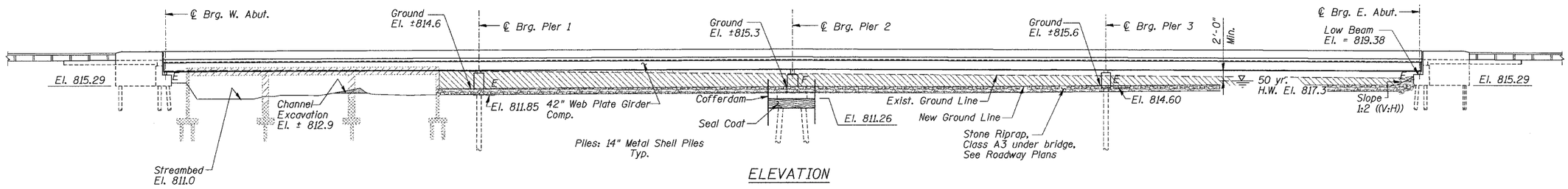
No Stage Construction. Traffic will be detoured during construction.

No Salvage.

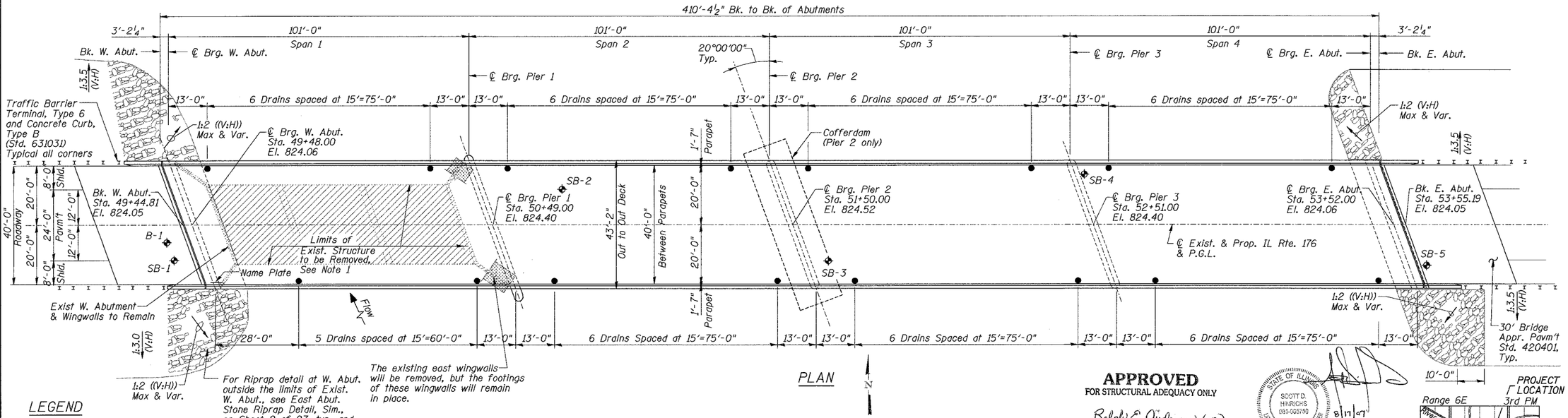
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-1-B	McHenry	77	23
FED. ROAD DIST. XXXX	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 1 OF 27 SHEETS

Contract #62340



ELEVATION



PLAN

For Riprap detail at W. Abut. outside the limits of Exist. W. Abut., see East Abut. Stone Riprap Detail, Sim., on Sheet 2 of 27, typ. and Roadway Plans

The existing east wingwalls will be removed, but the footings of these wingwalls will remain in place.

LEGEND

- Existing Structure to be Removed
- Existing Structure to Remain in Place
- Stone Riprap, Class A5
- Earth Excavation See Roadway Plans
- Channel Excavation See Roadway Plans

SB-1 - Soil Boring

B-1 - Previous Boring at W. Abutment from 1996 Streambed Scour Study

DESIGNED	S.S.T.
CHECKED	S.D.H.
DRAWN	E.B.
CHECKED	S.S.T.

STATION 51+50
BUILT 200_ BY
STATE OF ILLINOIS
F.A.P. RTE 533 SEC. 119R-1-B
LOADING HS20
STR. NO. 056-0071

NAME PLATE
See Std. 515001

WATERWAY INFORMATION

Drainage Area = 72.7 mi² Low Grade Elev. 822.5 ft @ Sta. 55+00 - 56+00

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
Overtop	2	1408	285		816.2	1.0		817.2	
-	10	2035	320	709	816.7	1.1	0.3	817.8	817.0
Design	50	3034	363	922	817.3	0.9	0.4	818.2	817.7
Base	100	3913	398	1100	817.8	0.8	0.5	818.6	818.3
Max. Calc.	500	5736	430	1389	818.6	0.5	0.6	819.1	819.2

NOTE:

1. Top of existing abutments is braced by existing superstructure. Removal of existing superstructure shall not occur until top of Exist. West Abutment has been secured to New West Abutment. See Sheet 12 of 27 for details.

APPROVED
FOR STRUCTURAL ADEQUACY ONLY

Ralph E. Anderson (TBD)
ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS
SCOTT D. HINRICHS
061-005750
LICENSED STRUCTURAL ENGINEER
8/17/07
EXPIRES: 11/30/08

DESIGN SPECIFICATIONS

1996 AASHTO with 1997, 1998, 1999, 2000 and 2002 Interims.

DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)
fy = 50,000 psi (Structural Steel M270 Grade 50)

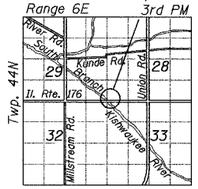
SEISMIC DATA

Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.035g
Site Coefficient (S) = 1.0

LOADING HS20-44

Allow 50 #/ sq. ft. for Future Wearing Surface

PROJECT LOCATION



LOCATION SKETCH

GENERAL PLAN
IL Route 176 over
South Branch of the Kishwaukee River
F.A.P. RTE 533, SECTION 119R-1-B
McHENRY COUNTY
STATION 51+50.00
DATE: 08-17-07 S.N. 056-0071

GRAEF, ANHALT, SCHLOEMER & ASSOCIATES INC
CHICAGO ILLINOIS

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ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-1-B	McHenry	77	24
FED. ROAD DIST. XXXX	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 2 OF 27 SHEETS

Contract #62340

GENERAL NOTES

Fasteners shall be AASHTO M164 Typed 1, mechanically galvanized bolts. Bolts $\frac{7}{8}$" dia., holes $\frac{15}{16}$" dia., unless otherwise noted.

Calculated weight of Structural Steel = 405,802 lbs. (M 270, Gr. 50)
39,888 lbs. (M 270, Gr. 36)

No field welding is permitted except as specified in the the contract documents.

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

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

The embankment configuration shown shall be the minimum embankment that must be constructed prior to construction of the abutments.

Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of $\frac{1}{8}$ inch (0.01 ft.). Adjustment shall be made either by grinding the surface or by shimming the bearings.

The Contractor shall drive test piles to 110% of the nominal required bearing specified in production locations at substructures specified or approved by the Engineer before ordering the remainder of the piles.

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

When the deck pour is stopped for the day at one or more of the transverse bonded construction joints in the deck pouring sequence as shown, the next pour shall not be made until both of the following requirements are met:

1. At least 72 hours shall have elapsed from the end of the previous pour.
2. The concrete strength shall have attained a minimum flexural strength of 650 psi or a minimum compressive strength of 3500 psi.

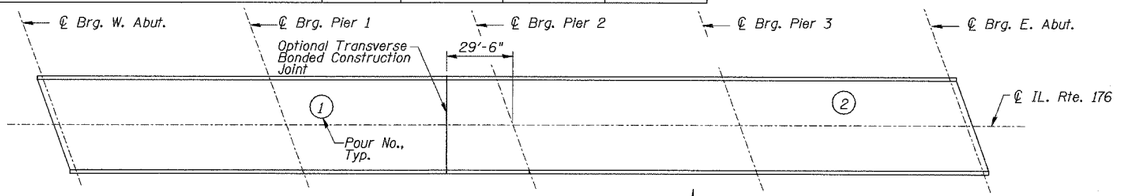
The Inorganic zinc rich primer /Acrylic/ Acrylic Paint System shall be used for shop and field painting of new structural steel except where otherwise noted. The color of the final finish coat for all interior steel surfaces shall be gray, Munsell No. 5B7/1. The color of the final finish coat for the exterior and bottom flange of the fascia beams shall be Reddish Brown, Munsell No. 2.5YR 3/4. See special provision for "Cleaning and Painting New Metal Structures".

Quantities for Epoxy Crack Injection and Structural Repair of Concrete (Depth Equal to or Less than 5 In.) have been estimated. Actual quantities will be determined by the Engineer in the field. Payment will be made for actual quantities furnished.

The Metal Shell piles shall be according to ASTM A 252 Grade 3.

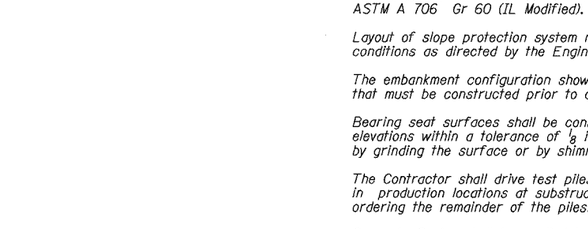
TOTAL BILL OF MATERIAL

ITEMS	UNITS	SUPER-STRUCTURE	SUB-STRUCTURE	TOTAL
Porous Granular Embankment (Special)	CU YD	-	166	166
Stone Riprap, Class A5	SQ YD	-	476	476
Filter Fabric	SQ YD	-	476	476
Removal of Existing Structures	EACH	1	-	1
Structure Excavation	CU YD	-	413	413
Cofferdam Excavation	CU YD	-	143	143
Cofferdams	EACH	-	1	1
Floor Drains	EACH	47	-	47
Concrete Structures	CU YD	-	229.4	229.4
Concrete Superstructure	CU YD	509.0	-	509.0
Bridge Deck Grooving	SQ YD	1,803	-	1,803
Seal Coat Concrete	CU YD	-	61.1	61.1
Concrete Encasement	CU YD	-	8.1	8.1
Protective Coat	SQ YD	2,139	-	2,139
Erecting Structural Steel	L. SUM	1	-	1
Stud Shear Connectors	EACH	5,004	-	5,004
Reinforcement Bars, Epoxy Coated	LB	138,010	19,060	157,070
Bar Splicers	EACH	-	88	88
Furnishing Metal Shell Piles 14" x 0.250"	FOOT	-	3,389	3,389
Driving Piles	FOOT	-	3,389	3,389
Test Pile Metal Shells	EACH	-	5	5
Name Plates	EACH	1	-	1
Preformed Joint Strip Seal	FOOT	89	-	89
Erecting Elastomeric Bearing Assembly, Type I	EACH	12	-	12
Erecting Elastomeric Bearing Assembly, Type II	EACH	12	-	12
Anchor Bolts 1 1/4"	EACH	-	48	48
Anchor Bolts 1 1/2"	EACH	-	24	24
Concrete Sealer	SQ FT	-	664	664
Epoxy Crack Injection	FOOT	-	20	20
Geocomposite Wall Drain	SQ YD	-	98	98
Pipe Underdrains for Structures 4"	FOOT	-	124	124
Structural Repair of Concrete (Depth Equal to or Less than 5 In.)	SQ FT	-	20	20
Underwater Structure Excavation Protection-Location 1	EACH	-	1	1
Furnishing and Installing Tied Anchor Rod Assembly	EACH	-	5	5

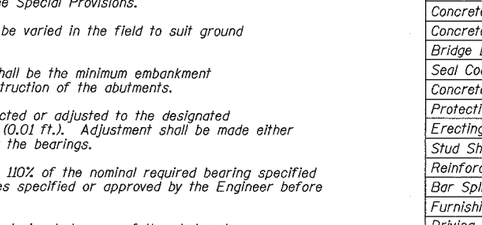


DECK POURING SEQUENCE

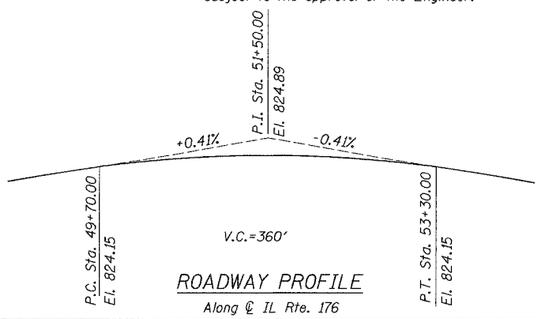
The Contractor may submit an alternate pouring sequence subject to the approval of the Engineer.



EAST ABUTMENT STONE RIPRAP DETAIL



WEST ABUTMENT STONE RIPRAP DETAIL



ROADWAY PROFILE

Along ℄ IL Rte. 176

DESIGNED	S.S.T.
CHECKED	S.D.H.
DRAWN	E.B.
CHECKED	S.S.T.

GENERAL NOTES AND TOTAL BILL OF MATERIAL
IL Route 176 over
South Branch of the Kishwaukee River
F.A.P. RTE 533, SECTION 119R-1-B
McHENRY COUNTY
STATION 51+50.00
DATE: 08-17-07 S.N. 056-0071

GRAEF, ANHALT, SCHLOEMER & ASSOCIATES INC
CHICAGO ILLINOIS

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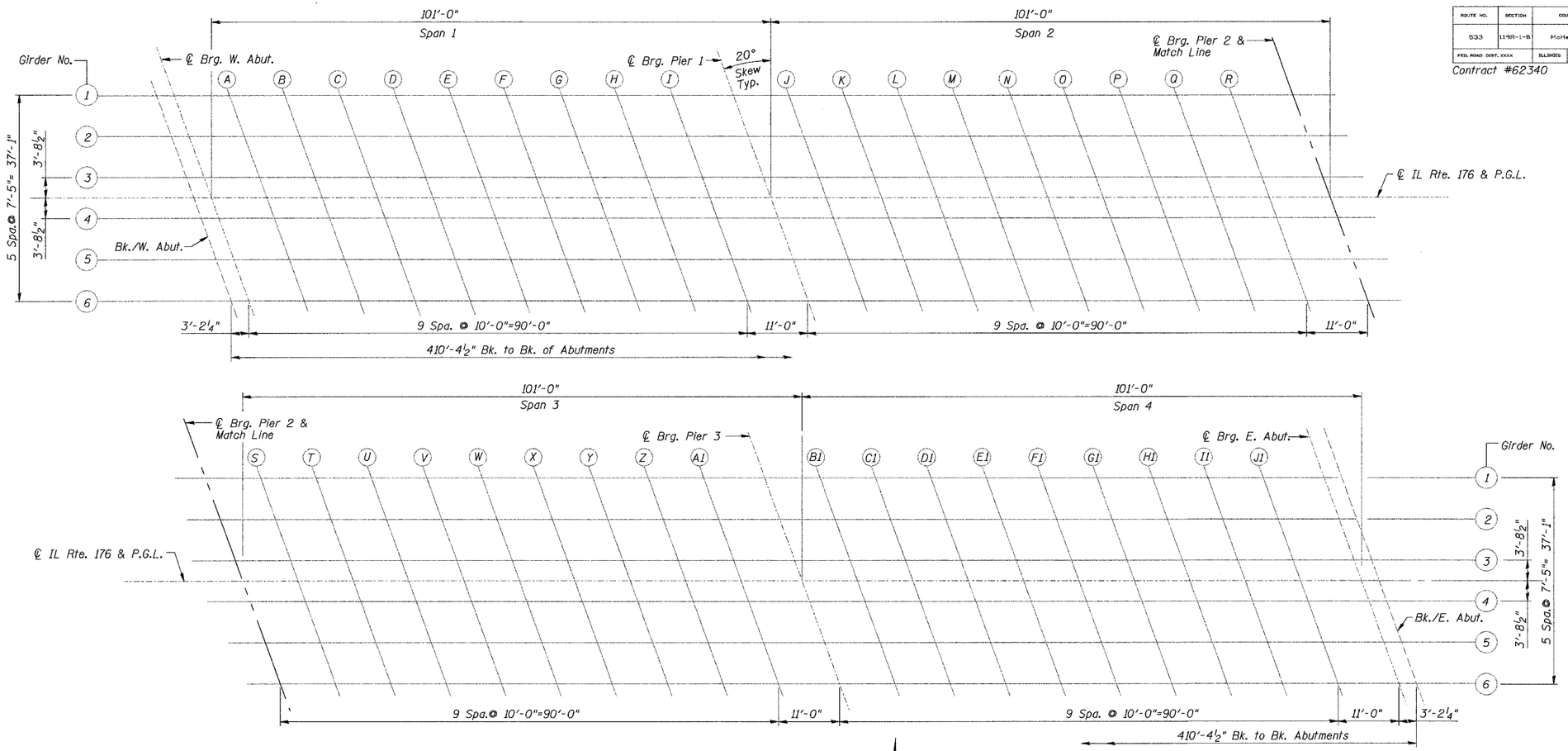
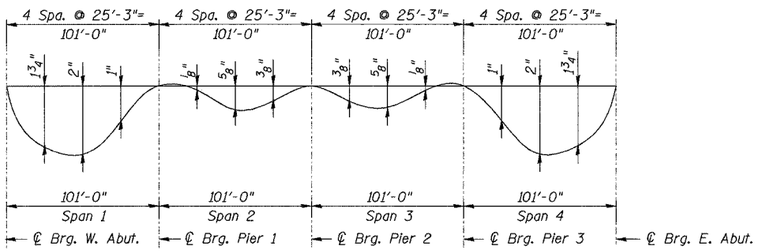
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-1-B	McHenry	77	25
FED. ROAD DIST. XXXX	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 3 OF 27 SHEETS

Contract #62340



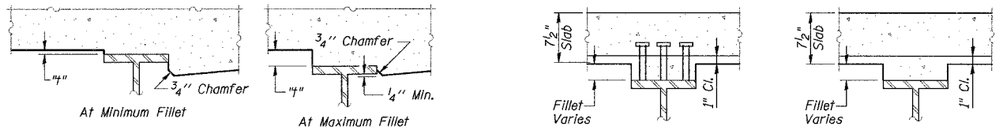
PLAN



DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete deck and all superimposed dead loads except future wearing surface.)

NOTE:
The above deflections are not for use in the field if the engineer is working from the Theoretical Grade Elevations Adjusted for Dead Load Deflection as shown on Sheets 4 and 5 of 27.



To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown above. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown on Sheets 4 and 5 of 27, minus slab thickness, equals the fillet heights "t" above top flange of beams.

FILLET HEIGHTS

DESIGNED	S.S.T.
CHECKED	S.D.H.
DRAWN	E.B.
CHECKED	S.S.T.

TOP OF DECK SLAB ELEVATIONS (1 OF 3)

IL Route 176 over
South Branch of the Kishwaukee River
F.A.P. RTE 533, SECTION 119R-1-B
McHENRY COUNTY
STATION 51+50.00
DATE: 08-17-07 S.N. 056-0071

GRAEF, ANHALT, SCHLOEMER & ASSOCIATES INC
CHICAGO ILLINOIS

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ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-1-B	McHenry	77	26
FED. ROAD DIST. XXXX	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 4 OF 27 SHEETS

Contract #62340

GIRDER 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. W. Abut.	49+38.06	-18.542	823.71	823.71
℄ BRG. W. Abut.	49+41.25	-18.542	823.72	823.72
A	49+51.25	-18.542	823.76	823.83
B	49+61.25	-18.542	823.80	823.92
C	49+71.25	-18.542	823.84	824.00
D	49+81.25	-18.542	823.88	824.06
E	49+91.25	-18.542	823.92	824.09
F	50+01.25	-18.542	823.96	824.11
G	50+11.25	-18.542	823.99	824.10
H	50+21.25	-18.542	824.02	824.09
I	50+31.25	-18.542	824.05	824.08
℄ BRG. PIER 1	50+42.25	-18.542	824.08	824.08
J	50+52.25	-18.542	824.10	824.10
K	50+62.25	-18.542	824.12	824.13
L	50+72.25	-18.542	824.14	824.16
M	50+82.25	-18.542	824.16	824.20
N	50+92.25	-18.542	824.17	824.22
O	51+02.25	-18.542	824.18	824.23
P	51+12.25	-18.542	824.19	824.23
Q	51+22.25	-18.542	824.20	824.23
R	51+32.25	-18.542	824.21	824.21
℄ BRG. PIER 2	51+43.25	-18.542	824.21	824.21
S	51+53.25	-18.542	824.21	824.22
T	51+63.25	-18.542	824.21	824.23
U	51+73.25	-18.542	824.20	824.24
V	51+83.25	-18.542	824.20	824.25
W	51+93.25	-18.542	824.19	824.24
X	52+03.25	-18.542	824.18	824.22
Y	52+13.25	-18.542	824.16	824.19
Z	52+23.25	-18.542	824.15	824.15
A1	52+33.25	-18.542	824.13	824.13
℄ BRG. PIER 3	52+44.25	-18.542	824.11	824.11
B1	52+54.25	-18.542	824.09	824.11
C1	52+64.25	-18.542	824.06	824.13
D1	52+74.25	-18.542	824.03	824.15
E1	52+84.25	-18.542	824.00	824.15
F1	52+94.25	-18.542	823.97	824.14
G1	53+04.25	-18.542	823.94	824.11
H1	53+14.25	-18.542	823.90	824.06
I1	53+24.25	-18.542	823.86	823.98
J1	53+34.25	-18.542	823.82	823.89
℄ BRG. E. Abut.	53+45.25	-18.542	823.78	823.78
BK. E. Abut.	53+48.44	-18.542	823.76	823.76

GIRDER 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. W. Abut.	49+40.76	-11.125	823.86	823.86
℄ BRG. W. Abut.	49+43.95	-11.125	823.88	823.88
A	49+53.95	-11.125	823.92	823.98
B	49+63.95	-11.125	823.96	824.08
C	49+73.95	-11.125	824.00	824.15
D	49+83.95	-11.125	824.04	824.21
E	49+93.95	-11.125	824.08	824.25
F	50+03.95	-11.125	824.11	824.26
G	50+13.95	-11.125	824.14	824.25
H	50+23.95	-11.125	824.17	824.24
I	50+33.95	-11.125	824.20	824.23
℄ BRG. PIER 1	50+44.95	-11.125	824.23	824.23
J	50+54.95	-11.125	824.25	824.25
K	50+64.95	-11.125	824.27	824.28
L	50+74.95	-11.125	824.29	824.31
M	50+84.95	-11.125	824.30	824.34
N	50+94.95	-11.125	824.32	824.37
O	51+04.95	-11.125	824.33	824.38
P	51+14.95	-11.125	824.34	824.38
Q	51+24.95	-11.125	824.35	824.37
R	51+34.95	-11.125	824.35	824.36
℄ BRG. PIER 2	51+45.95	-11.125	824.35	824.35
S	51+55.95	-11.125	824.35	824.36
T	51+65.95	-11.125	824.35	824.38
U	51+75.95	-11.125	824.35	824.39
V	51+85.95	-11.125	824.34	824.39
W	51+95.95	-11.125	824.33	824.38
X	52+05.95	-11.125	824.32	824.36
Y	52+15.95	-11.125	824.30	824.33
Z	52+25.95	-11.125	824.29	824.29
A1	52+35.95	-11.125	824.27	824.27
℄ BRG. PIER 3	52+46.95	-11.125	824.25	824.25
B1	52+56.95	-11.125	824.22	824.25
C1	52+66.95	-11.125	824.20	824.27
D1	52+76.95	-11.125	824.17	824.28
E1	52+86.95	-11.125	824.14	824.29
F1	52+96.95	-11.125	824.11	824.28
G1	53+06.95	-11.125	824.07	824.25
H1	53+16.95	-11.125	824.04	824.19
I1	53+26.95	-11.125	824.00	824.11
J1	53+36.95	-11.125	823.95	824.02
℄ BRG. E. Abut.	53+47.95	-11.125	823.91	823.91
BK. E. Abut.	53+51.14	-11.125	823.90	823.90

GIRDER 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. W. Abut.	49+43.46	-3.708	823.99	823.99
℄ BRG. W. Abut.	49+46.65	-3.708	824.00	824.00
A	49+56.65	-3.708	824.04	824.10
B	49+66.65	-3.708	824.08	824.20
C	49+76.65	-3.708	824.12	824.28
D	49+86.65	-3.708	824.16	824.33
E	49+96.65	-3.708	824.20	824.37
F	50+06.65	-3.708	824.23	824.38
G	50+16.65	-3.708	824.26	824.37
H	50+26.65	-3.708	824.29	824.36
I	50+36.65	-3.708	824.32	824.35
℄ BRG. PIER 1	50+47.65	-3.708	824.34	824.34
J	50+57.65	-3.708	824.37	824.36
K	50+67.65	-3.708	824.39	824.39
L	50+77.65	-3.708	824.40	824.43
M	50+87.65	-3.708	824.42	824.46
N	50+97.65	-3.708	824.43	824.48
O	51+07.65	-3.708	824.44	824.49
P	51+17.65	-3.708	824.45	824.49
Q	51+27.65	-3.708	824.46	824.48
R	51+37.65	-3.708	824.46	824.47
℄ BRG. PIER 2	51+48.65	-3.708	824.46	824.46
S	51+58.65	-3.708	824.46	824.47
T	51+68.65	-3.708	824.46	824.49
U	51+78.65	-3.708	824.46	824.50
V	51+88.65	-3.708	824.45	824.50
W	51+98.65	-3.708	824.44	824.49
X	52+08.65	-3.708	824.43	824.46
Y	52+18.65	-3.708	824.41	824.43
Z	52+28.65	-3.708	824.39	824.40
A1	52+38.65	-3.708	824.37	824.37
℄ BRG. PIER 3	52+49.65	-3.708	824.35	824.35
B1	52+59.65	-3.708	824.33	824.36
C1	52+69.65	-3.708	824.30	824.37
D1	52+79.65	-3.708	824.27	824.38
E1	52+89.65	-3.708	824.24	824.39
F1	52+99.65	-3.708	824.21	824.38
G1	53+09.65	-3.708	824.17	824.35
H1	53+19.65	-3.708	824.14	824.29
I1	53+29.65	-3.708	824.10	824.22
J1	53+39.65	-3.708	824.05	824.12
℄ BRG. E. Abut.	53+50.65	-3.708	824.01	824.01
BK. E. Abut.	53+53.84	-3.708	824.00	824.00

CENTERLINE & P.G.L.

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. W. Abut.	49+44.81	0.000	824.05	824.05
℄ BRG. W. Abut.	49+48.00	0.000	824.06	824.06
A	49+58.00	0.000	824.10	824.17
B	49+68.00	0.000	824.14	824.26
C	49+78.00	0.000	824.18	824.34
D	49+88.00	0.000	824.22	824.40
E	49+98.00	0.000	824.26	824.43
F	50+08.00	0.000	824.29	824.44
G	50+18.00	0.000	824.32	824.43
H	50+28.00	0.000	824.35	824.42
I	50+38.00	0.000	824.38	824.41
℄ BRG. PIER 1	50+49.00	0.000	824.40	824.40
J	50+59.00	0.000	824.43	824.42
K	50+69.00	0.000	824.45	824.45
L	50+79.00	0.000	824.46	824.49
M	50+89.00	0.000	824.48	824.52
N	50+99.00	0.000	824.49	824.54
O	51+09.00	0.000	824.50	824.55
P	51+19.00	0.000	824.51	824.55
Q	51+29.00	0.000	824.52	824.54
R	51+39.00	0.000	824.52	824.53
℄ BRG. PIER 2	51+50.00	0.000	824.52	824.52
S	51+60.00	0.000	824.52	824.53
T	51+70.00	0.000	824.52	824.54
U	51+80.00	0.000	824.51	824.55
V	51+90.00	0.000	824.50	824.55
W	52+00.00	0.000	824.49	824.54
X	52+10.00	0.000	824.48	824.52
Y	52+20.00	0.000	824.46	824.49
Z	52+30.00	0.000	824.45	824.45
A1	52+40.00	0.000	824.43	824.42
℄ BRG. PIER 3	52+51.00	0.000	824.40	824.40
B1	52+61.00	0.000	824.38	824.41
C1	52+71.00	0.000	824.35	824.42
D1	52+81.00	0.000	824.32	824.44
E1	52+91.00	0.000	824.29	824.44
F1	53+01.00	0.000	824.26	824.43
G1	53+11.00	0.000	824.22	824.40
H1	53+21.00	0.000	824.19	824.34
I1	53+31.00	0.000	824.15	824.27
J1	53+41.00	0.000	824.10	824.17
℄ BRG. E. Abut.	53+52.00	0.000	824.06	824.06
BK. E. Abut.	53+55.19	0.000	824.05	824.05

DESIGNED	S.S.T.
CHECKED	S.D.H.
DRAWN	E.B.
CHECKED	S.S.T.

TOP OF DECK SLAB ELEVATIONS
(2 OF 3)
IL Route 176 over
South Branch of the Kishwaukee River
F.A.P. RTE 533, SECTION 119R-1-B
McHENRY COUNTY
STATION 51+50.00
DATE: 08-17-07 S.N. 056-0071

GRAEF, ANHALT, SCHLOEMER & ASSOCIATES INC
CHICAGO ILLINOIS

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ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-1-B	McHenry	77	27
FED. ROAD DIST. XXXX	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 5 OF 27 SHEETS

Contract #62340

GIRDER 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. W. Abut.	49+46.16	3.708	824.00	824.00
℄ BRG. W. Abut.	49+49.35	3.708	824.01	824.01
A	49+59.35	3.708	824.05	824.11
B	49+69.35	3.708	824.09	824.21
C	49+79.35	3.708	824.13	824.29
D	49+89.35	3.708	824.17	824.34
E	49+99.35	3.708	824.21	824.38
F	50+09.35	3.708	824.24	824.39
G	50+19.35	3.708	824.27	824.38
H	50+29.35	3.708	824.30	824.37
I	50+39.35	3.708	824.32	824.35
℄ BRG. PIER 1	50+50.35	3.708	824.35	824.35
J	50+60.35	3.708	824.37	824.37
K	50+70.35	3.708	824.39	824.40
L	50+80.35	3.708	824.41	824.43
M	50+90.35	3.708	824.42	824.46
N	51+00.35	3.708	824.44	824.49
O	51+10.35	3.708	824.45	824.50
P	51+20.35	3.708	824.45	824.50
Q	51+30.35	3.708	824.46	824.49
R	51+40.35	3.708	824.46	824.47
℄ BRG. PIER 2	51+51.35	3.708	824.46	824.46
S	51+61.35	3.708	824.46	824.47
T	51+71.35	3.708	824.46	824.48
U	51+81.35	3.708	824.45	824.49
V	51+91.35	3.708	824.44	824.50
W	52+01.35	3.708	824.43	824.48
X	52+11.35	3.708	824.42	824.46
Y	52+21.35	3.708	824.41	824.43
Z	52+31.35	3.708	824.39	824.40
A1	52+41.35	3.708	824.37	824.37
℄ BRG. PIER 3	52+52.35	3.708	824.34	824.34
B1	52+62.35	3.708	824.32	824.35
C1	52+72.35	3.708	824.29	824.36
D1	52+82.35	3.708	824.26	824.38
E1	52+92.35	3.708	824.23	824.38
F1	53+02.35	3.708	824.20	824.37
G1	53+12.35	3.708	824.16	824.34
H1	53+22.35	3.708	824.13	824.28
I1	53+32.35	3.708	824.08	824.20
J1	53+42.35	3.708	824.04	824.11
℄ BRG. E. Abut.	53+53.35	3.708	824.00	824.00
BK. E. Abut.	53+56.54	3.708	823.99	823.99

GIRDER 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. W. Abut.	49+48.86	11.125	823.90	823.90
℄ BRG. W. Abut.	49+52.05	11.125	823.91	823.91
A	49+62.05	11.125	823.95	824.01
B	49+72.05	11.125	823.99	824.11
C	49+82.05	11.125	824.03	824.19
D	49+92.05	11.125	824.07	824.24
E	50+02.05	11.125	824.10	824.28
F	50+12.05	11.125	824.14	824.29
G	50+22.05	11.125	824.17	824.28
H	50+32.05	11.125	824.19	824.26
I	50+42.05	11.125	824.22	824.25
℄ BRG. PIER 1	50+53.05	11.125	824.25	824.25
J	50+63.05	11.125	824.27	824.26
K	50+73.05	11.125	824.29	824.29
L	50+83.05	11.125	824.30	824.32
M	50+93.05	11.125	824.32	824.36
N	51+03.05	11.125	824.33	824.38
O	51+13.05	11.125	824.34	824.39
P	51+23.05	11.125	824.34	824.39
Q	51+33.05	11.125	824.35	824.38
R	51+43.05	11.125	824.35	824.36
℄ BRG. PIER 2	51+54.05	11.125	824.35	824.35
S	51+64.05	11.125	824.35	824.36
T	51+74.05	11.125	824.35	824.37
U	51+84.05	11.125	824.34	824.38
V	51+94.05	11.125	824.33	824.38
W	52+04.05	11.125	824.32	824.37
X	52+14.05	11.125	824.31	824.35
Y	52+24.05	11.125	824.29	824.31
Z	52+34.05	11.125	824.27	824.28
A1	52+44.05	11.125	824.25	824.25
℄ BRG. PIER 3	52+55.05	11.125	824.23	824.23
B1	52+65.05	11.125	824.20	824.23
C1	52+75.05	11.125	824.17	824.25
D1	52+85.05	11.125	824.15	824.26
E1	52+95.05	11.125	824.11	824.26
F1	53+05.05	11.125	824.08	824.25
G1	53+15.05	11.125	824.04	824.22
H1	53+25.05	11.125	824.00	824.16
I1	53+35.05	11.125	823.96	824.08
J1	53+45.05	11.125	823.92	823.99
℄ BRG. E. Abut.	53+56.05	11.125	823.88	823.88
BK. E. Abut.	53+59.24	11.125	823.86	823.86

GIRDER 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. W. Abut.	49+51.56	18.542	823.76	823.76
℄ BRG. W. Abut.	49+54.75	18.542	823.78	823.78
A	49+64.75	18.542	823.82	823.88
B	49+74.75	18.542	823.86	823.98
C	49+84.75	18.542	823.90	824.05
D	49+94.75	18.542	823.93	824.11
E	50+04.75	18.542	823.97	824.14
F	50+14.75	18.542	824.00	824.15
G	50+24.75	18.542	824.03	824.14
H	50+34.75	18.542	824.06	824.13
I	50+44.75	18.542	824.08	824.11
℄ BRG. PIER 1	50+55.75	18.542	824.11	824.11
J	50+65.75	18.542	824.13	824.12
K	50+75.75	18.542	824.15	824.15
L	50+85.75	18.542	824.16	824.18
M	50+95.75	18.542	824.18	824.21
N	51+05.75	18.542	824.19	824.24
O	51+15.75	18.542	824.20	824.25
P	51+25.75	18.542	824.20	824.24
Q	51+35.75	18.542	824.21	824.23
R	51+45.75	18.542	824.21	824.22
℄ BRG. PIER 2	51+56.75	18.542	824.21	824.21
S	51+66.75	18.542	824.21	824.21
T	51+76.75	18.542	824.20	824.23
U	51+86.75	18.542	824.19	824.24
V	51+96.75	18.542	824.18	824.23
W	52+06.75	18.542	824.17	824.22
X	52+16.75	18.542	824.16	824.20
Y	52+26.75	18.542	824.14	824.16
Z	52+36.75	18.542	824.12	824.13
A1	52+46.75	18.542	824.10	824.10
℄ BRG. PIER 3	52+57.75	18.542	824.08	824.08
B1	52+67.75	18.542	824.05	824.08
C1	52+77.75	18.542	824.02	824.09
D1	52+87.75	18.542	823.99	824.11
E1	52+97.75	18.542	823.96	824.11
F1	53+07.75	18.542	823.93	824.10
G1	53+17.75	18.542	823.89	824.06
H1	53+27.75	18.542	823.85	824.00
I1	53+37.75	18.542	823.81	823.93
J1	53+47.75	18.542	823.77	823.83
℄ BRG. E. Abut.	53+58.75	18.542	823.72	823.72
BK. E. Abut.	53+61.94	18.542	823.71	823.71

DESIGNED	S.S.T.
CHECKED	S.D.H.
DRAWN	E.B.
CHECKED	S.S.T.

TOP OF DECK SLAB ELEVATIONS
(3 OF 3)
IL Route 176 over
South Branch of the Kishwaukee River
F.A.P. RTE 533, SECTION 119R-1-B
McHENRY COUNTY
STATION 51+50.00
DATE: 08-17-07 S.N. 056-0071

GRAEF, ANHALT, SCHLOEMER & ASSOCIATES INC
CHICAGO ILLINOIS

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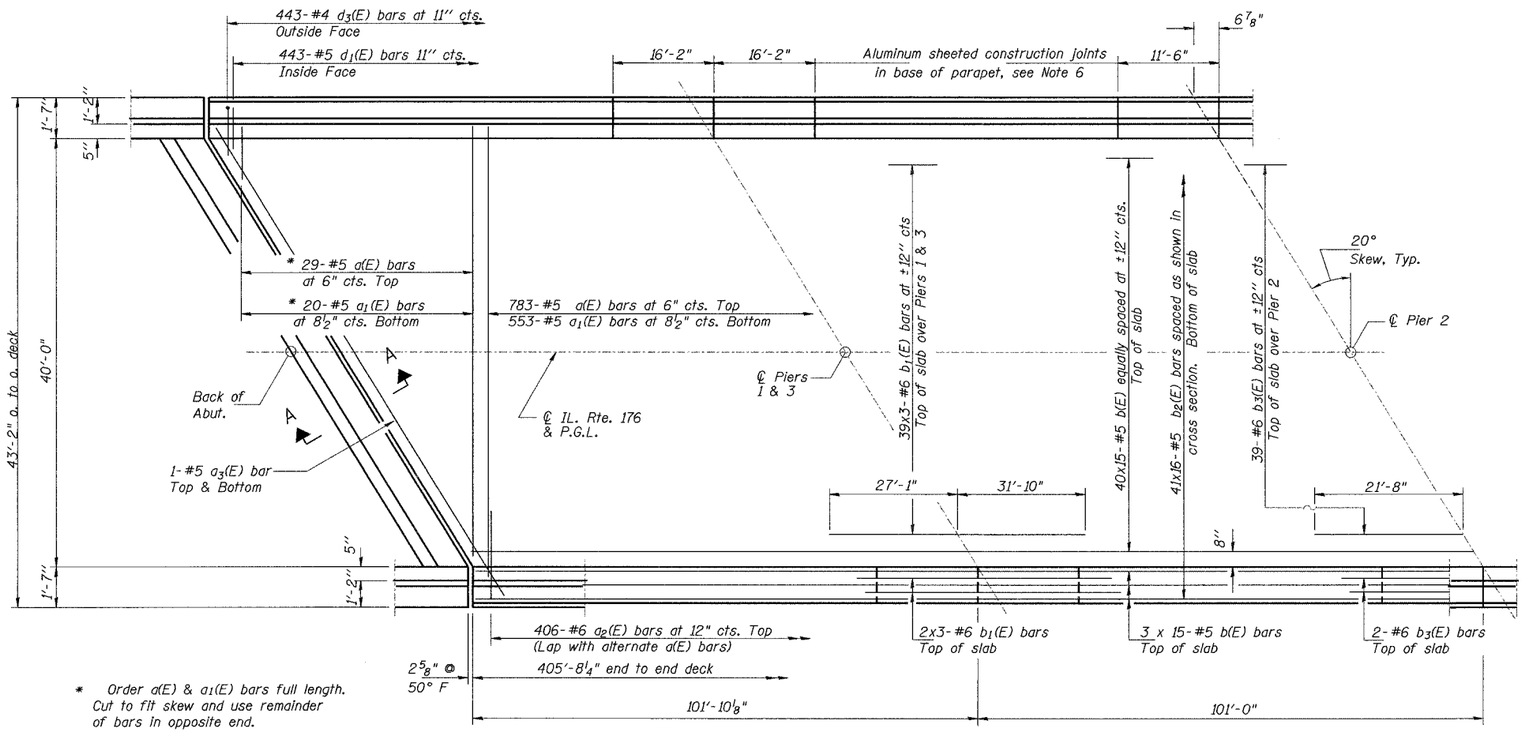
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-1-B	McHenry	77	28
FED. ROAD DIST. XXXX	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 6 OF 27 SHEETS

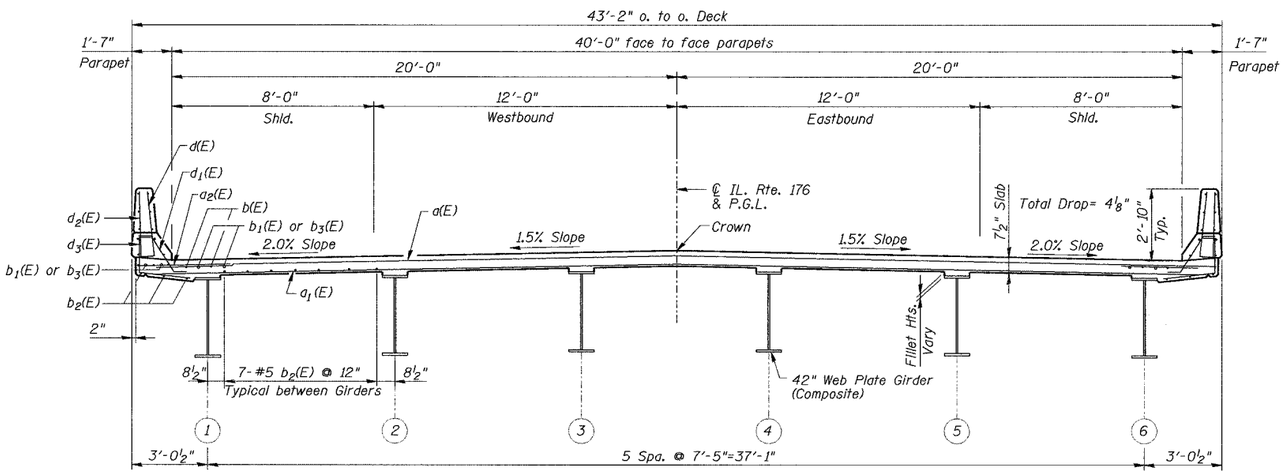
Contract #62340



* Order a(E) & a1(E) bars full length. Cut to fit skew and use remainder of bars in opposite end.

HALF PLAN

Symmetrical about ℄ of Pier 2



SECTION THRU BRIDGE

(Looking East)

Min. Lap Length

Bars #4 - 1'-8"
Bars #5 - 2'-2"
Bars #6 - 2'-7"
Bars #8 - 4'-6"

NOTES:

1. See Sheet 7 of 27 for Section A-A, superstructure details and Bill of Material.
2. Reinforcement bars designated (E) shall be epoxy coated.
3. Bars indicated thus 20 x 3-#5 indicates 20 lines of bars with 3 lengths per line.
4. See Sheet 7 of 27 for parapet reinforcement.
5. For location of Floor Drains, See Sheet 1 of 27.
6. For additional parapet joint locations, see Half Parapet Inside Elevation on Sheet 7 of 27.
7. Dimensions are based on a Rolled Rail Strip Seal Joint, deck dimensions may require adjustments to satisfy the details on Base Sheet EJ-SSJ as shown on Sheet 18 of 27.

DESIGNED	S.D.H.
CHECKED	S.S.T.
DRAWN	E.B.
CHECKED	S.D.H.

DECK PLAN AND CROSS SECTION
IL Route 176 over
South Branch of the Kishwaukee River
F.A.P. RTE 533, SECTION 119R-1-B
McHENRY COUNTY
STATION 51+50.00
S.N. 056-0071

DATE: 08-17-07

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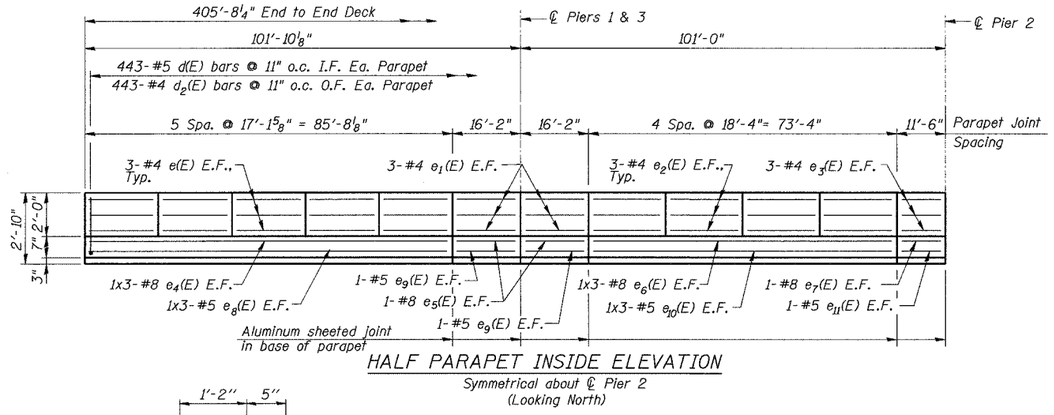
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-1-B	McHenry	77	29
FED. ROAD DIST. XXXX	ILLINOIS	FED. AID PROJECT-		

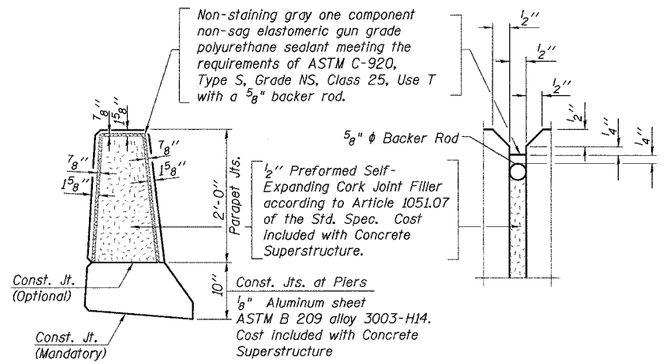
SHEET NO. 7 OF 27 SHEETS

Contract #62340



HALF PARAPET INSIDE ELEVATION

Symmetrical about ℄ Pier 2
(Looking North)



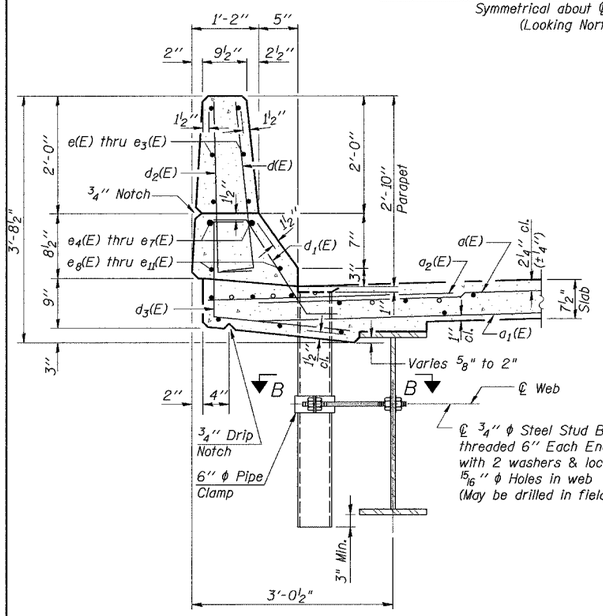
PARAPET JOINT DETAILS

SUPERSTRUCTURE BILL OF MATERIAL

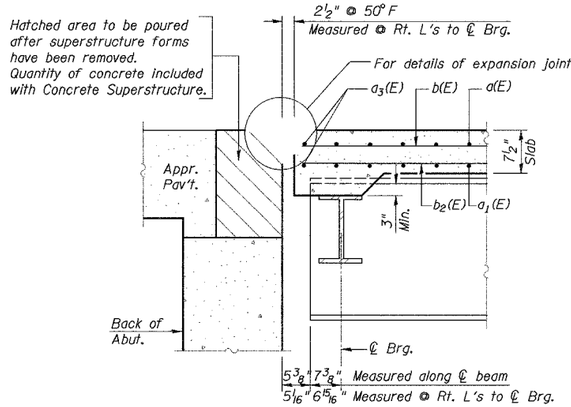
Bar	No.	Size	Length	Shape
d(E)	812	#5	42'-6"	——
d_1(E)	573	#5	42'-2"	——
d_2(E)	812	#6	6'-0"	——
d_3(E)	4	#5	44'-3"	——
b(E)	690	#5	29'-1"	——
b_1(E)	258	#6	21'-5"	——
b_2(E)	656	#5	27'-5"	——
b_3(E)	43	#6	43'-4"	——
d(E)	886	#5	3'-0"	⌟
d_1(E)	886	#5	2'-5"	⌞
d_2(E)	886	#4	3'-0"	⌟
d_3(E)	886	#4	3'-7"	⌞
e(E)	120	#4	16'-9"	——
e_1(E)	48	#4	15'-10"	——
e_2(E)	96	#4	18'-0"	——
e_3(E)	24	#4	11'-2"	——
e_4(E)	24	#8	31'-6"	——
e_5(E)	16	#8	15'-10"	——
e_6(E)	24	#8	27'-4"	——
e_7(E)	8	#8	11'-2"	——
e_8(E)	24	#5	29'-11"	——
e_9(E)	16	#5	15'-10"	——
e_{10}(E)	24	#5	25'-10"	——
e_{11}(E)	8	#5	11'-2"	——
Floor Drains		Each	47	
Concrete Superstructure		Cu. Yd.	509.0	
Bridge Deck Grooving		Sq. Yd.	1,803	
Protective Coat		Sq. Yd.	2,139	
Reinforcement Bars, Epoxy Coated		Pound	138,010	

Reinforcement bars designated (E) shall be epoxy coated.

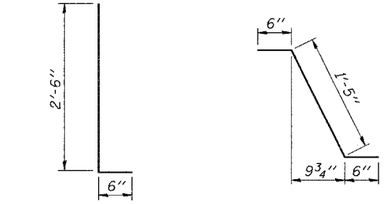
Bars indicated thus 1 x 3-#5 etc. indicates 1 line of bars with 3 lengths per line.



SECTION THRU PARAPET

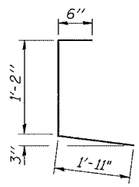


SECTION A-A



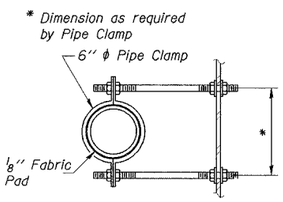
BARS d(E) & d_2(E)

BAR d_1(E)

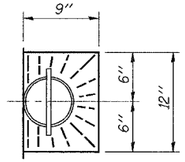


BAR d_3(E)

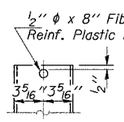
DESIGNED	S.D.H.
CHECKED	S.S.T.
DRAWN	E.B.
CHECKED	S.D.H.



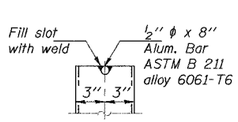
SECTION B-B



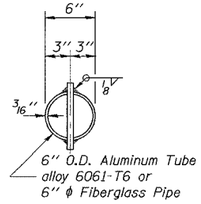
TOP PLAN



FIBERGLASS PIPE



ALUMINUM TUBE



TOP PLAN

(Showing Aluminum Tube)

Notes:

The exterior surfaces of the floor drains shall be painted with the finish coat as specified in the special provisions for Cleaning and Painting New Metal Structures. The exterior surfaces of the drains shall be cleaned according to Steel Structures Painting Council's Spec. SSPC-SP1 prior to painting.

Fiberglass pipe shall conform to ASTM D 2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum.

DECK DETAILS
IL Route 176 over
South Branch of the Kishwaukee River
F.A.P. RTE 533, SECTION 119R-1-B
McHENRY COUNTY
STATION 51+50.00
DATE: 08-17-07 S.N. 056-0071

GRAEF, ANHALT, SCHLOEMER & ASSOCIATES INC
CHICAGO ILLINOIS

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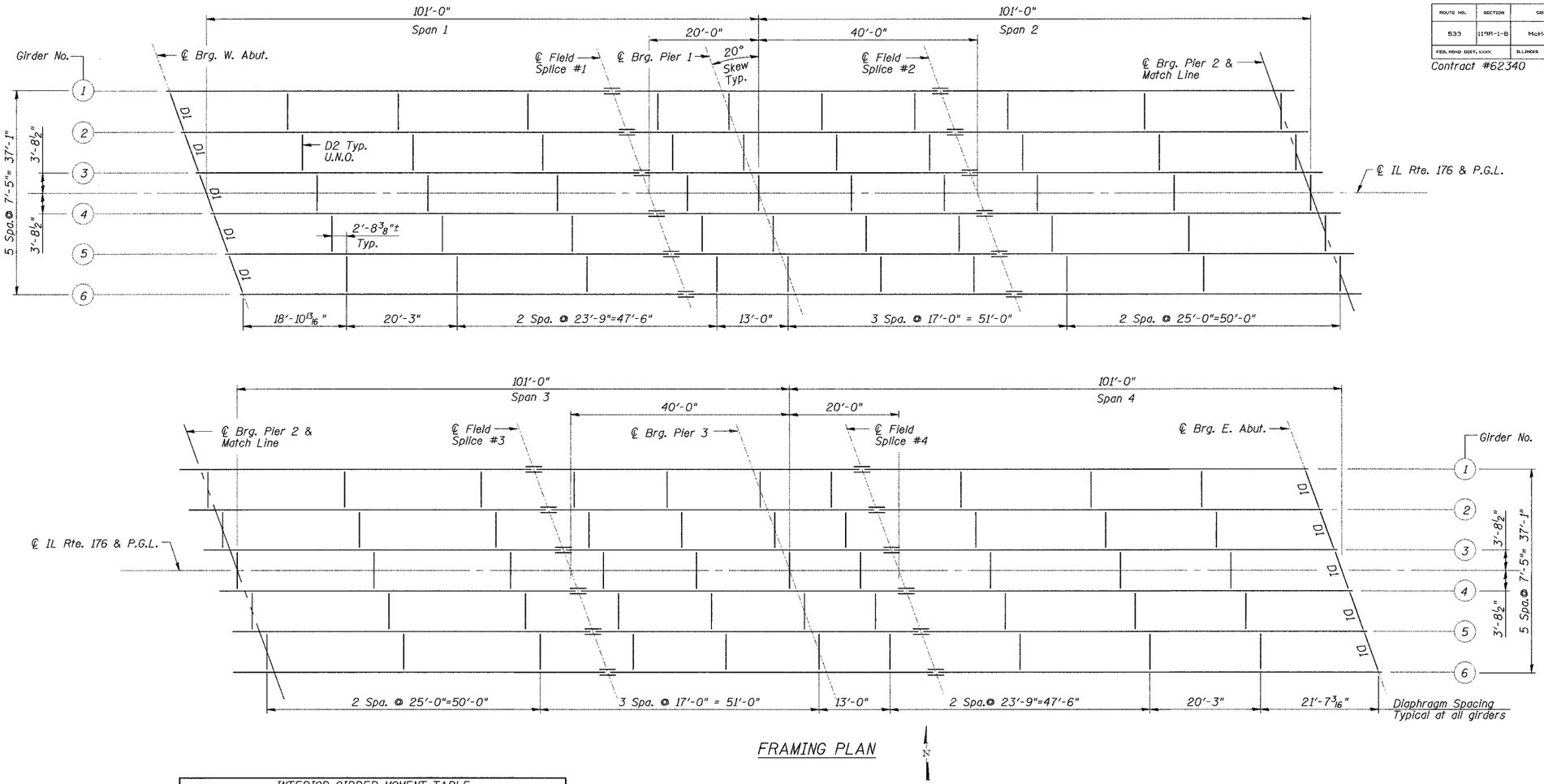
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-1-B	McHenry	77	30
FED. ROAD DIST. XXXX	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 8 OF 27 SHEETS

Contract #62340



FRAMING PLAN

INTERIOR GIRDER MOMENT TABLE					
		0.4 Sp. 1 & 0.6 Sp. 4	Pier 1 & Pier 3	0.5 Sp. 2 & 0.5 Sp. 3	Pier 2
Is	(in^4)	13635	20816	13962	13962
Ic (n)	(in^4)	376.33	-	32950	-
Ic (3n)	(in^4)	27184	-	24684	-
Ss	(in^3)	728.8	930.1	638.1	638.1
Sc (n)	(in^3)	1013.0	-	859.9	-
Sc (3n)	(in^3)	931.6	-	790.6	-
D℄	(k/ft.)	0.89	1.45	0.90	1.41
M℄	('k)	642	1600	295	930
S℄	(k/ft.)	0.51	-	0.51	-
Ms℄	('k)	415	-	221	-
M℄	('k)	869	630	750	518
M (Imp)	('k)	192	139	166	115
5_3[M℄+M(Imp)]	('k)	1768	1282	1527	1055
Ma	('k)	3678	3749	2662	2582
Mu	('k)	4210	-	4276	-
fs℄ non-comp	(k.s.i.)	10.58	20.65	5.56	17.48
fs℄ (comp)	(k.s.i.)	5.34	-	3.36	-
$fs5_3$(℄+Imp)	(k.s.i.)	20.95	16.52	21.31	19.82
fs (Overload)	(k.s.i.)	36.87	37.17	30.23	37.30
fs (Total)	(k.s.i.)	-	48.36	-	48.55
VR	(k)	57.48	-	50.47	-

INTERIOR GIRDER REACTION TABLE				
		E. & W. Abut.	Pier 1 & 3	Pier 2
R℄	(k)	54.1	164.5	127.3
R℄	(k)	43.2	69.1	65.3
Imp.	(k)	9.6	15.3	14.5
R (Total)	(k)	106.9	248.9	207.1

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.

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

Note:
Work this Sheet with Sheets 9 and 10 of 27.

Ma (Applied Moment)=1.3[M℄ + Ms℄ + 5_3(M℄ + M(Imp))].
The Plastic Moment capacity (Mu) is computed according to AASHTO 10.48.1 and 10.50.1.1.
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))].

DESIGNED	S.S.T.
CHECKED	S.D.H.
DRAWN	E.B.
CHECKED	S.S.T.

FRAMING PLAN
IL Route 176 over
South Branch of the Kishwaukee River
F.A.P. RTE 533, SECTION 119R-1-B
McHENRY COUNTY
STATION 51+50.00
DATE: 08-17-07 S.N. 056-0071

GRAEF, ANHALT, SCHLOEMER & ASSOCIATES INC
CHICAGO ILLINOIS

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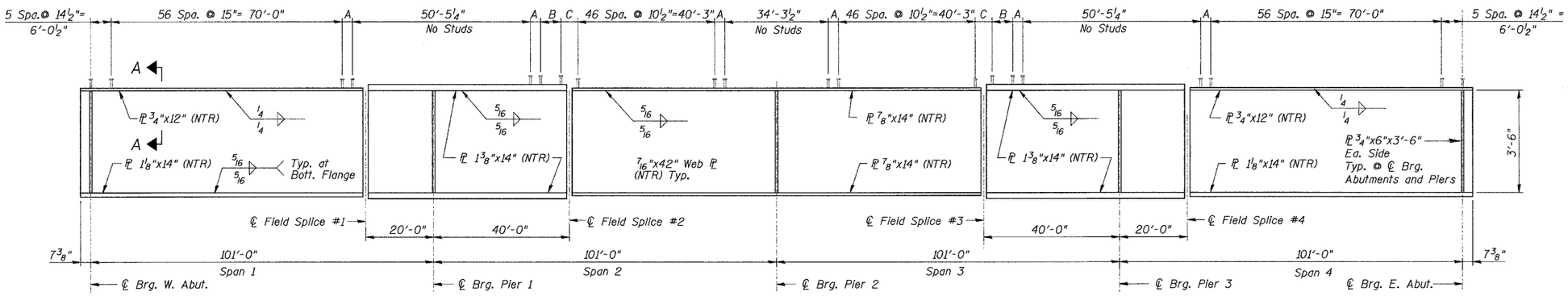
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-1-B	McHenry	77	31
FED. ROAD DIST. XXXX	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 9 OF 27 SHEETS

Contract #62340



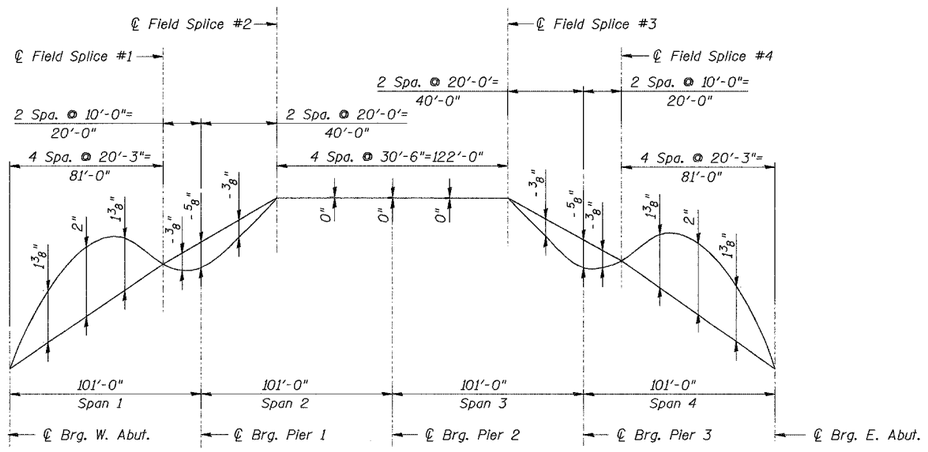
A = 5 Spa. @ 4" = 1'-8"
B = 11 Spa. @ 10½" = 9'-7½"
C = 3'-6" (See Field Splice #2 and #3 Detail on Sheet 10 of 27)

GIRDER ELEVATION

TOP OF GIRDER WEB ELEVATIONS

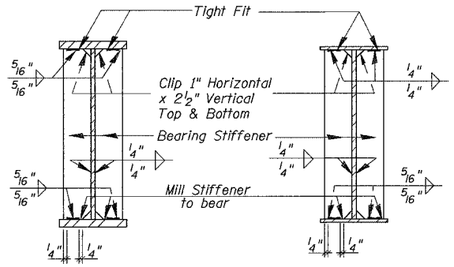
(For Fabrication Use Only)

Girder No.	℄ Brg. W. Abut.	Splice #1	℄ Brg. Pier 1	Splice #2	℄ Brg. Pier 2	Splice #3	℄ Brg. Pier 3	Splice #4	℄ Brg. E. Abut.
1	822.971	823.225	823.216	823.342	823.355	823.361	823.247	823.262	823.026
2	823.126	823.376	823.366	823.490	823.499	823.501	823.385	823.399	823.159
3	823.248	823.495	823.484	823.605	823.610	823.609	823.490	823.503	823.260
4	823.260	823.503	823.490	823.609	823.610	823.605	823.484	823.495	823.248
5	823.159	823.399	823.385	823.501	823.499	823.490	823.366	823.376	823.126
6	823.026	823.262	823.247	823.361	823.355	823.342	823.216	823.225	822.971



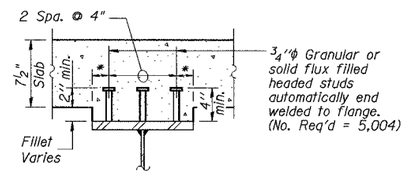
CAMBER DIAGRAM

Camber includes correction for vertical curve.
Upward camber is positive.



SECTION AT PIER

SECTION AT ABUTMENT



SECTION A-A

* = 2" for 12" wide flange
* = 3" for 14" wide flange

Notes:

1. Work this Sheet with Sheets 8 and 10 of 27.
2. Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.
3. All Structural Steel on this Sheet shall be AASHTO M270 Grade 50 Steel.
4. Longitudinal dimensions for Girder are shown horizontal, exclusive of rise.
5. All cross frames or diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual cross frames or diaphragms at supports may be temporarily disconnected to install bearing anchors.

BILL OF MATERIAL

Item	Unit	Quantity
Furnishing and Erecting Structural Steel	L. Sum	1
Stud Shear Connectors	Each	5,004

DESIGNED	S.S.T.
CHECKED	S.D.H.
DRAWN	E.B.
CHECKED	S.S.T.

GIRDER ELEVATION
IL Route 176 over
South Branch of the Kishwaukee River
F.A.P. RTE 533, SECTION 119R-1-B
McHENRY COUNTY
STATION 51+50.00
DATE: 08-17-07 S.N. 056-0071

GRAEF, ANHALT, SCHLOEMER & ASSOCIATES INC
CHICAGO ILLINOIS

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8/17/2007
11:49:44 AM

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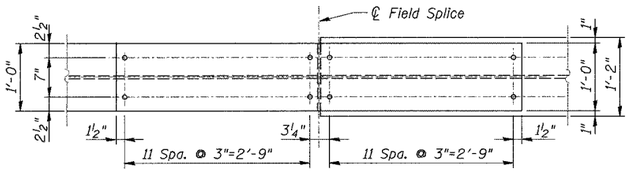
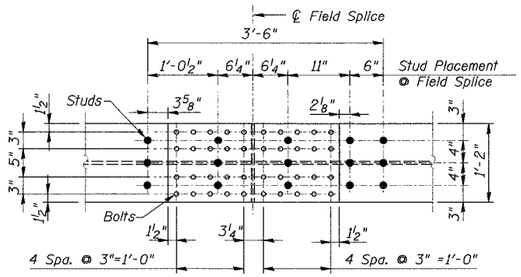
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-1-B	McHenry	77	32
FED. ROAD DIST. XXXX	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 10 OF 27 SHEETS

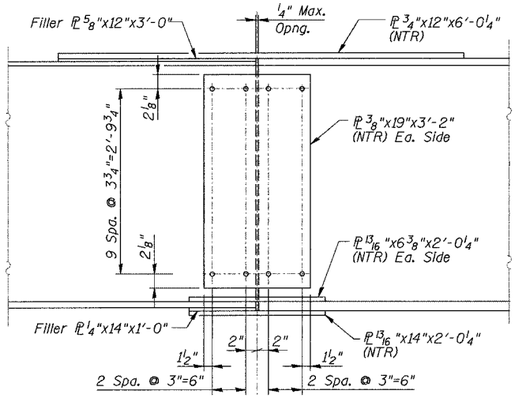
Contract #62340



TOP PLAN



TOP PLAN



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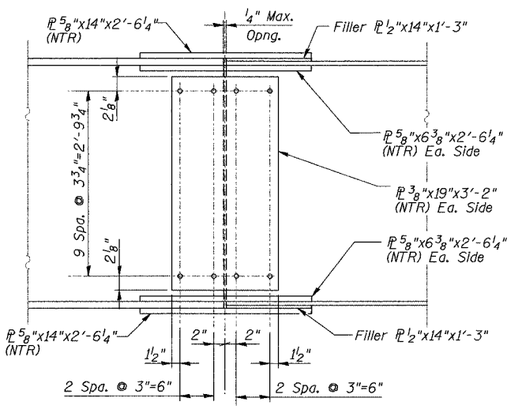
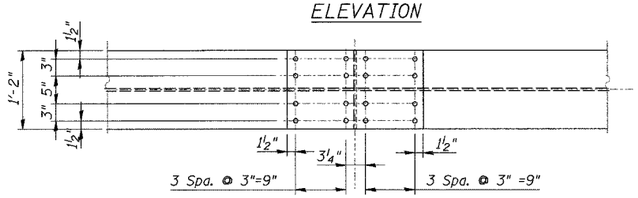
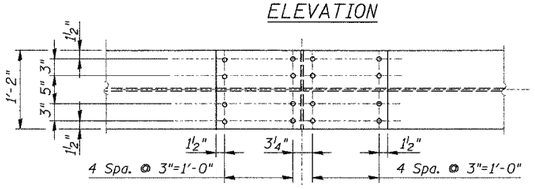


ELEVATION



BOTTOM PLAN



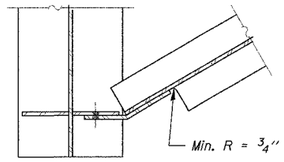
BOTTOM PLAN

FIELD SPLICE #1
FIELD SPLICE #4 (OPP. HAND)

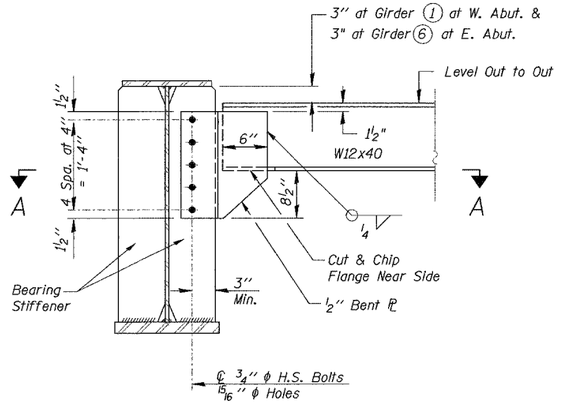
FIELD SPLICE #2
FIELD SPLICE #3 (OPP. HAND)

Notes:

1. Two hardened washers shall be required over all oversized holes.
2. All Structural Steel on this Sheet shall be AASHTO M270 Grade 50 except diaphragms and diaphragm connecting plates which shall be AASHTO M270 Grade 36.
3. Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.

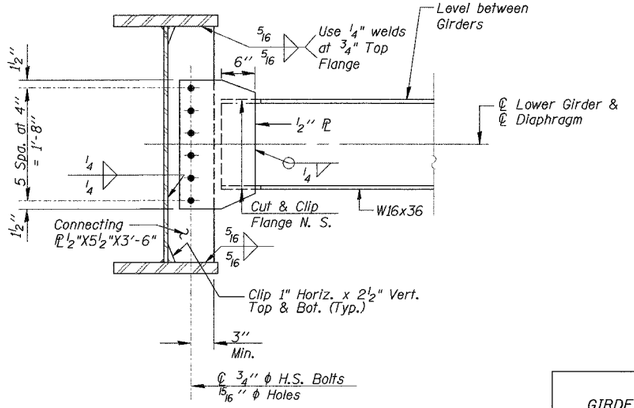


SECTION A-A



END DIAPHRAGM, D1

10 Required



INTERIOR DIAPHRAGM, D2

95 Required

DESIGNED	S.S.T.
CHECKED	S.D.H.
DRAWN	E.B.
CHECKED	S.S.T.

GIRDER AND FRAMING DETAILS
IL Route 176 over
South Branch of the Kishwaukee River
F.A.P. RTE 533, SECTION 119R-1-B
McHENRY COUNTY
STATION 51+50.00
DATE: 08-17-07 S.N. 056-0071

GRAEF, ANHALT, SCHLOEMER & ASSOCIATES INC
CHICAGO ILLINOIS

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8/17/2007
11:50:32 AM

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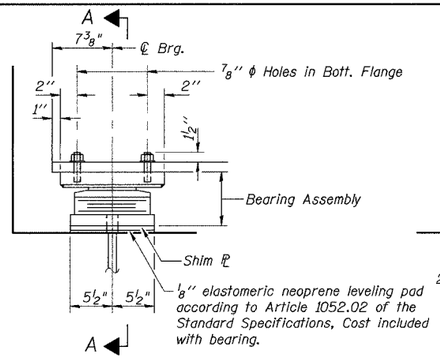
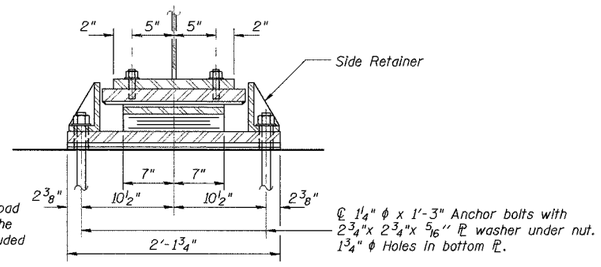
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-1-B	McHenry	77	33
FED. ROAD DIST. XXXX		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 11 OF 27 SHEETS

Contract #62340

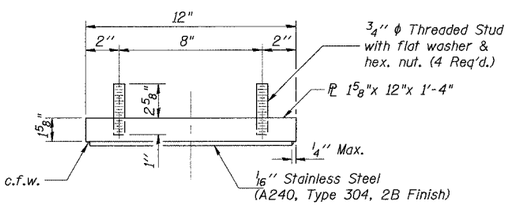


ELEVATION

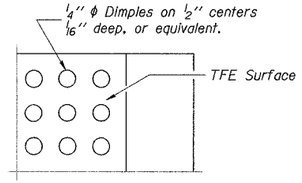


SECTION A-A

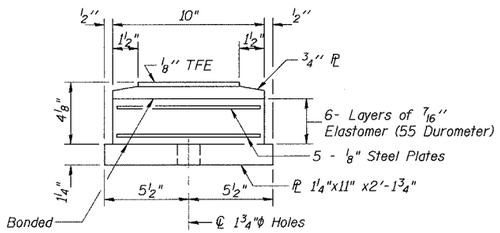
TYPE II ELASTOMERIC EXP. BRG. AT ABUTMENTS



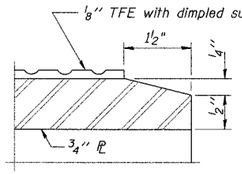
TOP BEARING ASSEMBLY



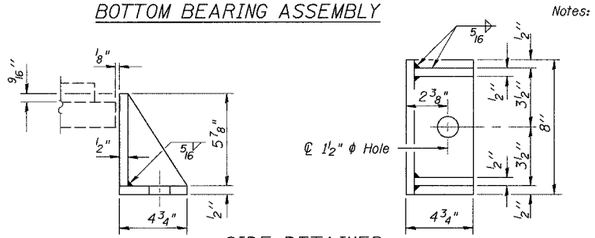
PLAN-TFE SURFACE



BOTTOM BEARING ASSEMBLY



SECTION THRU TFE

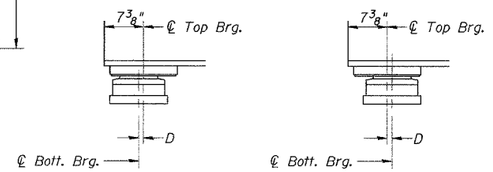


SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. Weight included with Structural Steel. Fy=36 ksi.

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

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



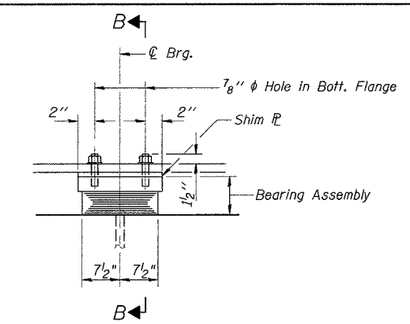
SETTING ANCHOR BOLTS AT EXP. BRG.

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

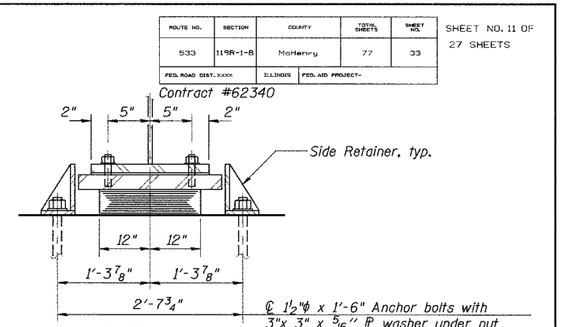
DESIGNED	S.S.T.
CHECKED	S.D.H.
DRAWN	E.B.
CHECKED	S.S.T.

BILL OF MATERIAL

Item	Unit	Total
Erecting Elastomeric Bearing Assembly Type II	Each	12

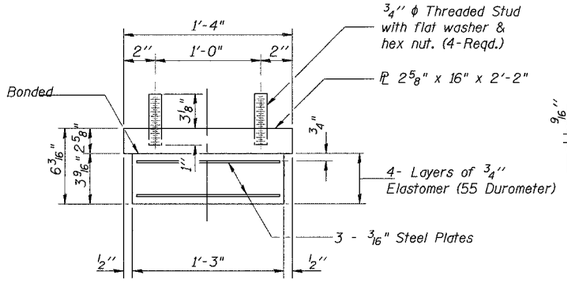


ELEVATION



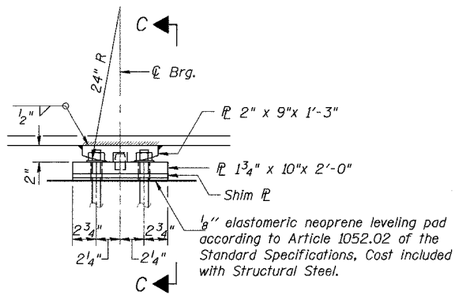
SECTION B-B

TYPE I ELASTOMERIC EXP. BRG. AT PIER 1 & 3

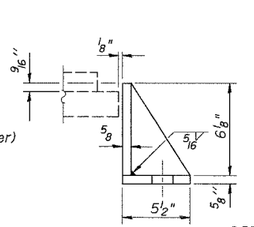


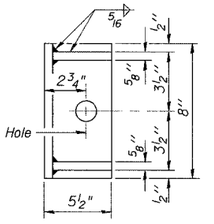
BEARING ASSEMBLY

Note: Shim plates shall not be placed under Bearing Assembly.



ELEVATION AT PIER



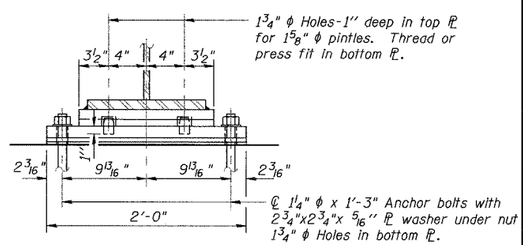


SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. Weight included with Structural Steel. Fy=36 ksi.

Item	Unit	Total
Erecting Elastomeric Bearing Assembly Type I	Each	12

BILL OF MATERIAL



SECTION C-C

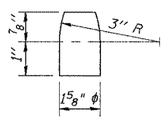
FIXED BEARING AT PIER 2

(6 Req'd)

Notes:

Anchor bolts at fixed bearings may be built into the masonry.
See Sheet 19 of 27 for Anchor Bolt installation.
All Structural Steel on this sheet to be AASHTO M-270, Grade 50 Unless Noted Otherwise.

Two 1/8 in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.



PINTLE

ELASTOMERIC EXPANSION & FIXED BEARINGS
IL Route 176 over
South Branch of the Kishwaukee River
F.A.P. RTE 533, SECTION 119R-1-B
McHENRY COUNTY
STATION 51+50.00
DATE: 08-17-07 S.N. 056-0071

GRAEF, ANHALT, SCHLOEMER & ASSOCIATES INC
CHICAGO ILLINOIS

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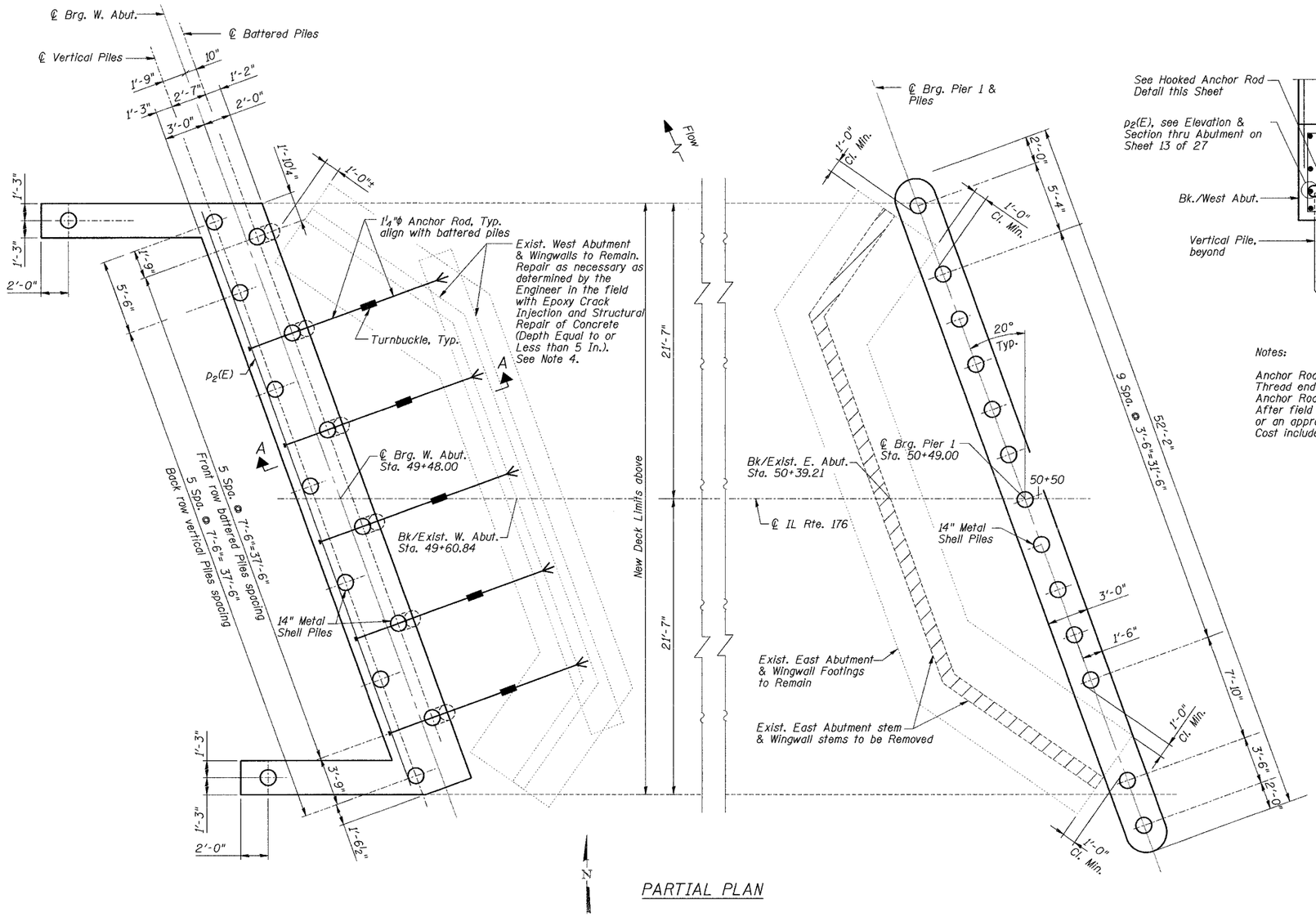
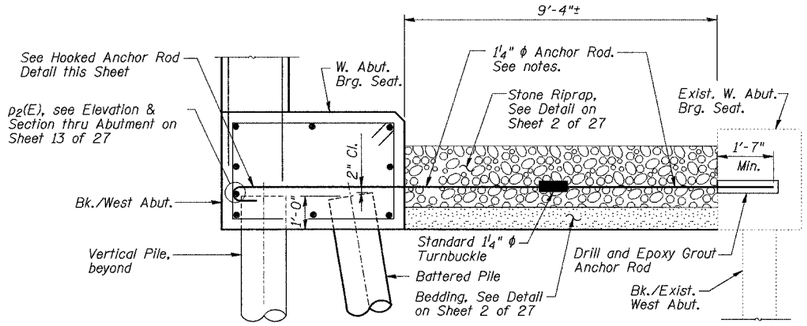
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-1-B	McHenry	77	34
FED. ROAD DIST. XXXX	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 12 OF 27 SHEETS

Contract #62340



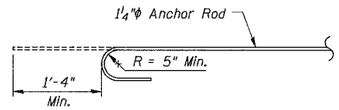
PARTIAL PLAN



SECTION A-A

Notes:

Anchor Rods shall conform to the requirements of AASHTO M 270, Grade 36.
Thread end of Anchor Rod at Turnbuckle min. 9".
Anchor Rods and Turnbuckle shall be given one shop coat of Inorganic Zinc Rich Primer.
After field installation, tied Anchor Rods and Turnbuckle shall be wrapped with "Tapecoat-CT" or an approved equal in accordance with the manufacturer's recommendations.
Cost included in payment for Pay Item "Furnishing and Installing Tied Anchor Rod Assembly".



HOOKED ANCHOR ROD DETAIL

BILL OF MATERIAL

Item	Unit	Total
Epoxy Crack Injection	Foot	20
Stuctural Repair of Concrete (Depth Equal to or Less than 5 In.)	Sq. Ft.	20
Furnishing and Installing Tied Anchor Rod Assembly	Each	5

LEGEND

- Existing Structure to remain in place
- Existing Structure to be removed
- New Structures

Notes:

1. Work this Sheet with Sheets 13 and 15 of 27.
2. Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
3. Top of exist. abutments are braced by exist. superstructure. Removal of existing superstructure shall not occur until top of Existing West Abutment has been secured to New West Abutment. See Section A-A this Sheet.
4. Quantities for Epoxy Crack Injection and Structural Repair of Concrete (Depth Equal to or Less than 5 In.) have been estimated. Actual quantities will be determined by the Egineer in the field. Payment will be made for actual quantities furnished.

DESIGNED	S.S.T.
CHECKED	S.D.H.
DRAWN	E.B.
CHECKED	S.S.T.

WEST ABUTMENT & PIER 1
PILE LAYOUT
IL Route 176 over
South Branch of the Kishwaukee River
F.A.P. RTE 533, SECTION 119R-1-B
McHENRY COUNTY
STATION 51+50.00
DATE: 08-17-07 S.N. 056-0071

GRAEF, ANHALT, SCHLOEMER & ASSOCIATES INC
CHICAGO ILLINOIS

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8/17/2007
11:23:05 AM

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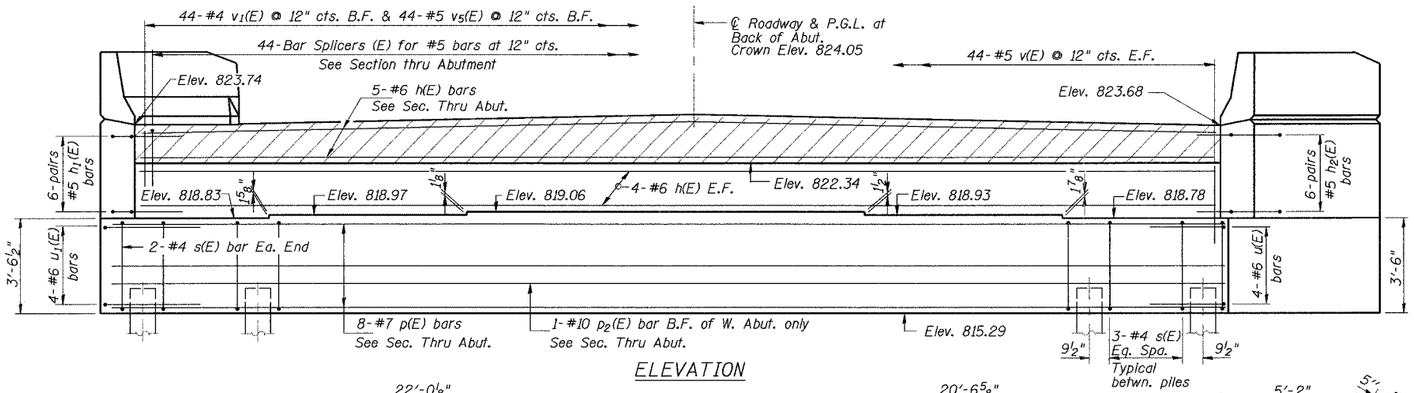
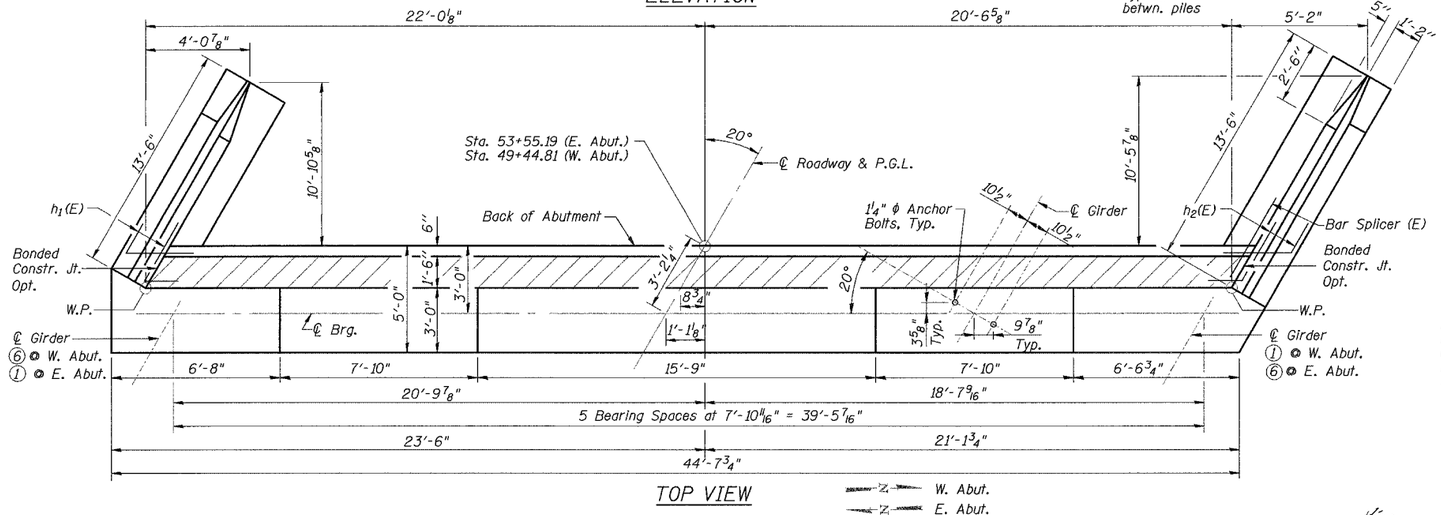
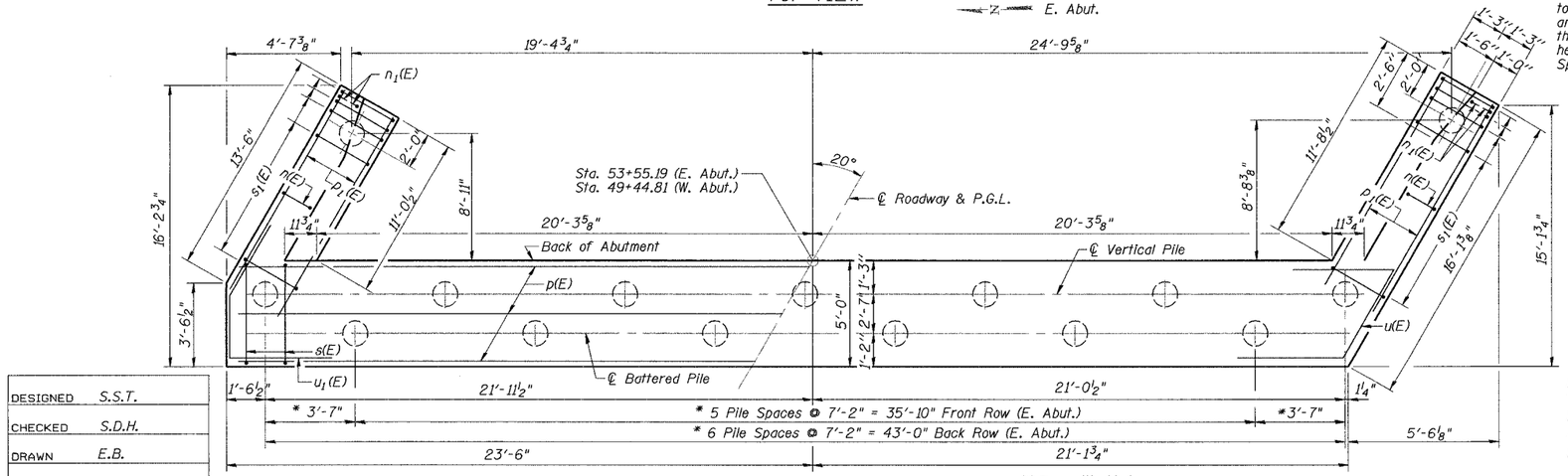
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-1-B	McHenry	27	35
FED. ROAD DIST. XXXX	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 13 OF 27 SHEETS

Contract #62340



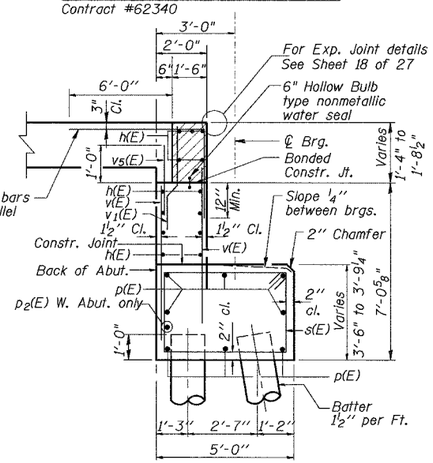




PLAN-PILE CAP

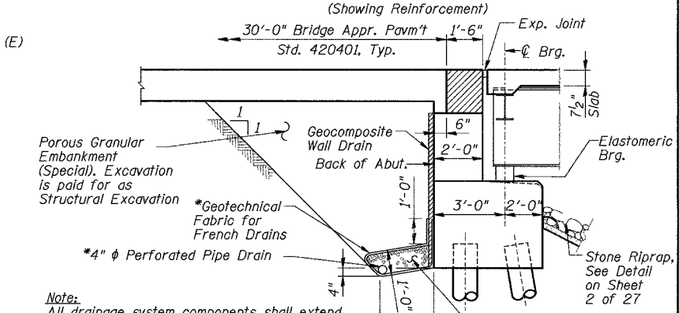
* Dimensions and pile spacing are for E. Abut. only. See Sheet 12 of 27 for pile location at W. Abut.

DESIGNED	S.S.T.
CHECKED	S.D.H.
DRAWN	E.B.
CHECKED	S.S.T.



SECTION THRU ABUTMENT

(Showing Reinforcement)



Note:
All drainage system components shall extend to 2'-0" from the end of each wingwall except an outlet pipe shall extend until intersecting with the side slopes. The pipes shall drain into concrete headwalls (See Article 601.05 of the Std. Specifications and Highway Std. 601101).

* Included in the cost of Pipe Underdrains for Structures.

SECTION THRU ABUTMENT

(Showing Details)

Notes:

1. Hatched area to be poured after superstructure forms have been removed. Quantity of concrete included with Concrete Superstructure. For additional details of reinforcement bars at hatched area, see Section A-A on Sheet 7 of 27.
2. Space reinforcement in cap to miss anchor bolts.
3. Pour steps monolithically with cap.
4. For anchor rods at W Abut., See Partial Plan & Section A-A on Sheet 12 of 27.
5. Concrete Sealer shall be applied to the top of seats, front face of backwall, and front face of abutment stem.

PILE DATA

Pile Type and Size: Metal Shell 14" dia. x ¼" Walls
Nominal Required Bearing: 300 kips
Allowable Resistance Available: 100 kips
Estimated Pile Length: 55 ft. @ West Abut.
79 ft. @ East Abut.
Number of Production Piles: 14 at each Abut.
Number of Test Piles: 1 at each Abut.

WEST & EAST ABUTMENTS
IL Route 176 over
South Branch of the Kishwaukee River
F.A.P. RTE 533, SECTION 119R-1-B
McHENRY COUNTY
STATION 51+50.00
DATE: 08-17-07 S.N. 056-0071

GRAEF, ANHALT, SCHLOEMER & ASSOCIATES INC
CHICAGO ILLINOIS

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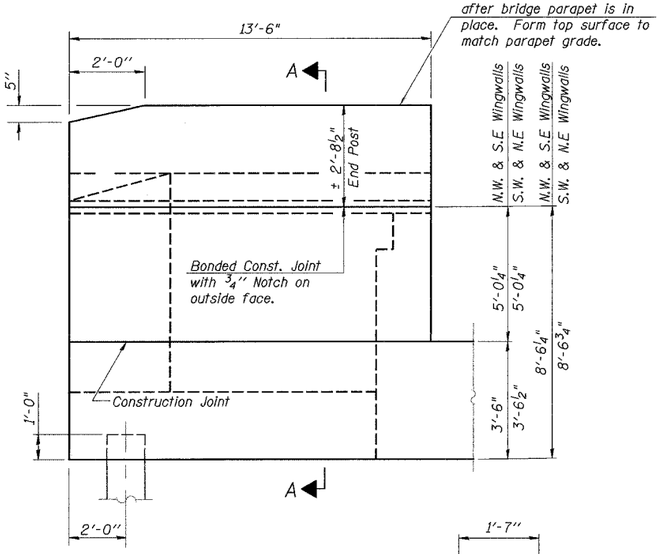
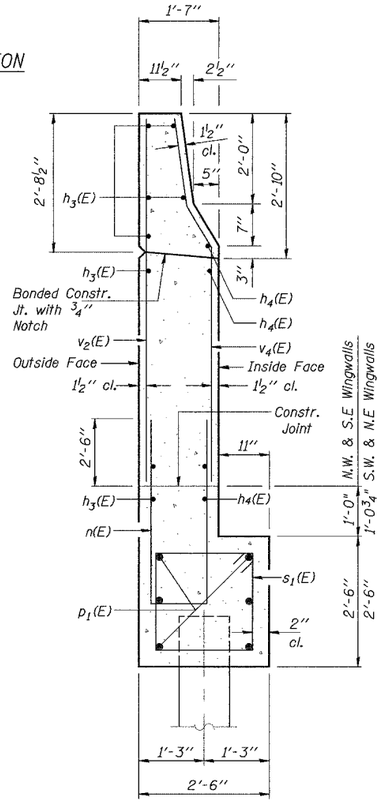
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-1-B	McHenry	77	36
FED. ROAD DIST. XXXX	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 14 OF 27 SHEETS

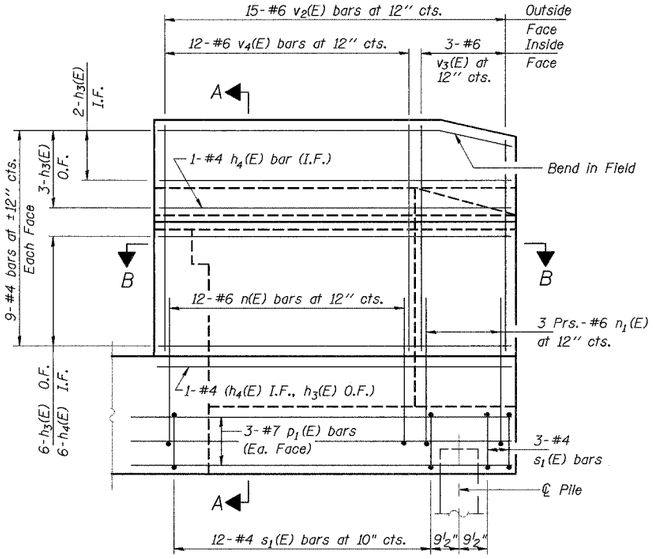
Contract #62340



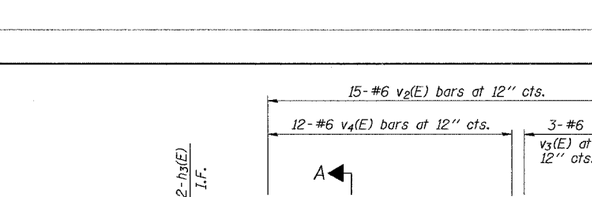
WING WALL ELEVATION
Showing Dimensions



SECTION A-A



WING WALL ELEVATION
Showing Reinforcement



SECTION B-B

Notes:

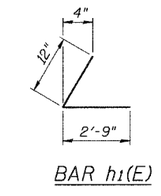
1. Reinforcement bars designated (E) shall be epoxy coated.
2. Quantity of concrete in end post included with Concrete Superstructure on sheet 7 of 27 .

EAST ABUTMENT BILL OF MATERIAL

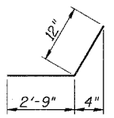
Bar	No.	Size	Length	Shape
h(E)	13	#6	42'-3"	
h1(E)	12	#5	3'-9"	
h2(E)	12	#5	3'-9"	
h3(E)	24	#4	12'-2"	
h4(E)	16	#4	12'-2"	
n(E)	24	#6	11'-0"	
n1(E)	12	#6	5'-0"	
p(E)	8	#7	44'-3"	
p1(E)	12	#7	13'-2"	
s(E)	40	#4	16'-5"	
s1(E)	30	#4	11'-5"	
u(E)	4	#6	11'-11"	
u1(E)	4	#6	9'-8"	
v(E)	88	#5	5'-3"	
v1(E)	44	#4	3'-0"	
v2(E)	30	#6	7'-6"	
v3(E)	6	#6	7'-5"	
v4(E)	24	#6	7'-8"	
v5(E)	44	#5	2'-6"	
Porous Granular Embankment		Cu. Yd.	83	
Structure Excavation		Cu. Yd.	106	
Concrete Structures		Cu. Yd.	55.0	
Reinforcement Bars, Epoxy Coated		Pound	4,940	
Bar Splicers		Each	44	
Furnishing Metal Shell Piles 14" x 0.250"		Foot	770	
Driving Piles		Foot	770	
Test Pile Metal Shells		Each	1	
Concrete Sealer		Sq. Ft.	332	
Geocomposite Wall Drain		Sq. Yd.	49	
Pipe Underdrains for Structures 4"		Foot	62	

WEST ABUTMENT BILL OF MATERIAL

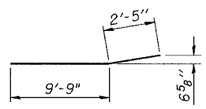
Bar	No.	Size	Length	Shape
h(E)	13	#6	42'-3"	
h1(E)	12	#5	3'-9"	
h2(E)	12	#5	3'-9"	
h3(E)	24	#4	12'-2"	
h4(E)	16	#4	12'-2"	
n(E)	24	#6	11'-0"	
n1(E)	12	#6	5'-0"	
p(E)	8	#7	44'-3"	
p1(E)	12	#7	13'-2"	
p2(E)	1	#10	44'-3"	
s(E)	40	#4	16'-5"	
s1(E)	30	#4	11'-5"	
u(E)	4	#6	11'-11"	
u1(E)	4	#6	9'-8"	
v(E)	88	#5	5'-3"	
v1(E)	44	#4	3'-0"	
v2(E)	30	#6	7'-6"	
v3(E)	6	#6	7'-5"	
v4(E)	24	#6	7'-8"	
v5(E)	44	#5	2'-6"	
Porous Granular Embankment		Cu. Yd.	83	
Structure Excavation		Cu. Yd.	133	
Concrete Structures		Cu. Yd.	55.0	
Reinforcement Bars, Epoxy Coated		Pound	5,130	
Bar Splicers		Each	44	
Furnishing Metal Shell Piles 14" x 0.250"		Foot	1,106	
Driving Piles		Foot	1,106	
Test Pile Metal Shells		Each	1	
Concrete Sealer		Sq. Ft.	332	
Geocomposite Wall Drain		Sq. Yd.	49	
Pipe Underdrains for Structures 4"		Foot	62	



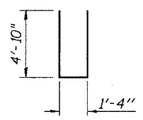
BAR h1(E)



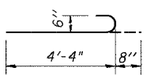
BAR h2(E)



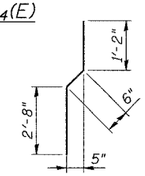
BAR h4(E)



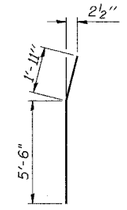
BAR n(E)



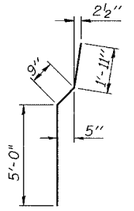
BAR n1(E)



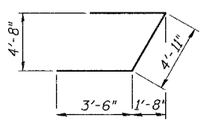
BAR v1(E)



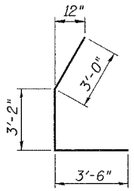
BAR v3(E)



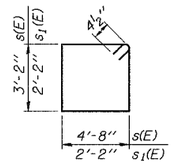
BAR v4(E)



BAR u(E)



BAR u1(E)



BARS s(E) & s1(E)

DESIGNED	S.S.T.
CHECKED	S.D.H.
DRAWN	E.B.
CHECKED	S.S.T.

ABUTMENT WINGWALL AND DETAILS
IL Route 176 over
South Branch of the Kishwaukee River
F.A.P. RTE 533, SECTION 119R-1-B
McHENRY COUNTY
STATION 51+50.00
DATE: 08-17-07 S.N. 056-0071

GRAEF, ANHALT, SCHLOEMER & ASSOCIATES INC.
CHICAGO ILLINOIS

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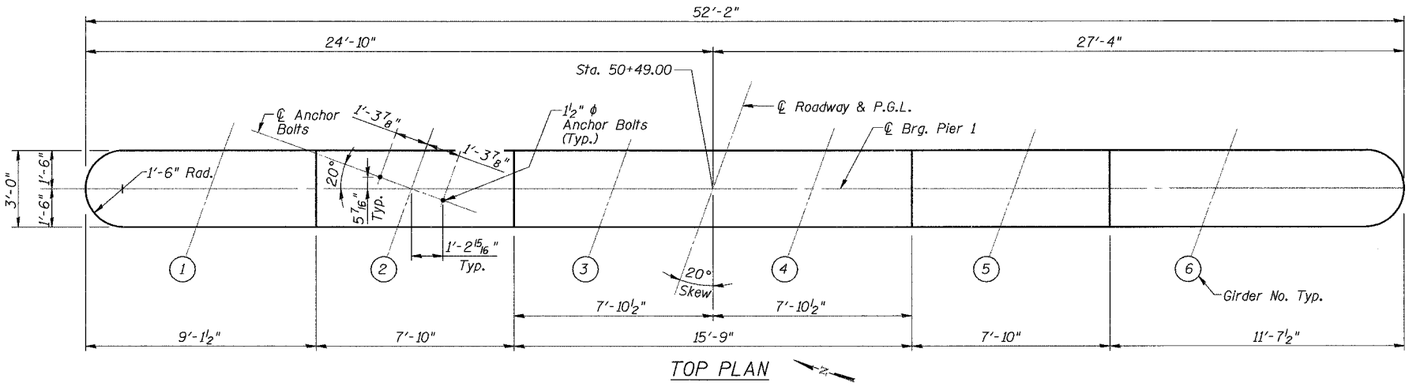
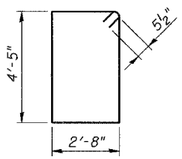
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-1-B	McHenry	27	37
FED. ROAD DIST. XXXX	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 15 OF 27 SHEETS

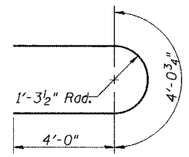
Contract #62340



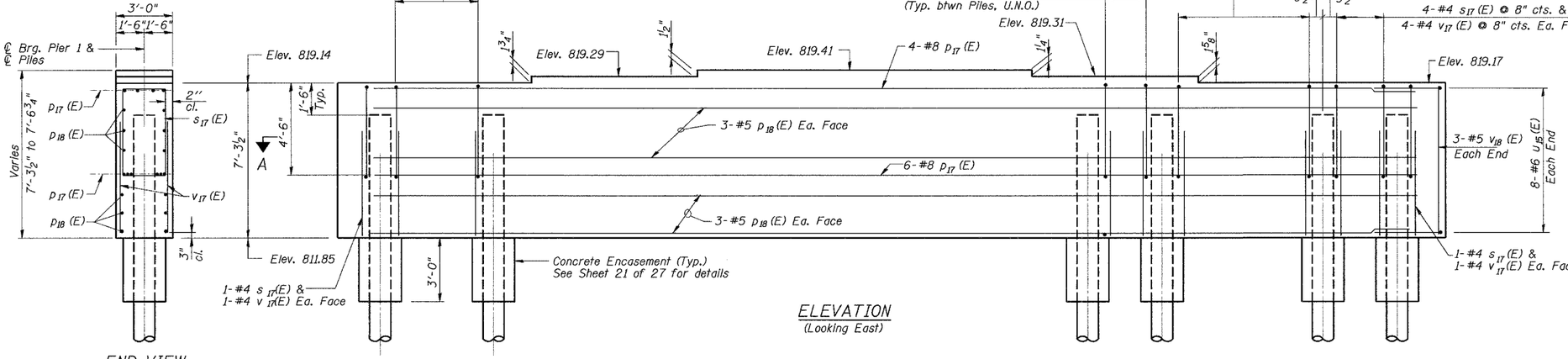
TOP PLAN



BAR s_{17} (E)



BAR u_{15} (E)



ELEVATION
(Looking East)

END VIEW

BILL OF MATERIAL

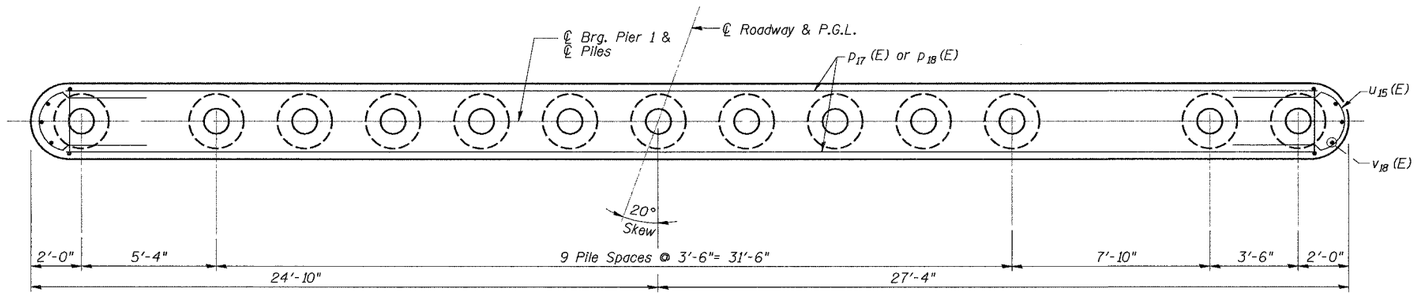
Bar	No.	Size	Length	Shape
p_{17} (E)	10	#8	49'-0"	——
p_{18} (E)	12	#5	49'-0"	——
s_{17} (E)	59	#4	15'-1"	□
u_{15} (E)	16	#6	12'-1"	⊃
v_{17} (E)	118	#4	4'-3"	——
v_{18} (E)	6	#5	6'-10"	——
Structure Excavation		Cu. Yd.	122	
Concrete Structures		Cu. Yd.	42.3	
Concrete Encasement		Cu. Yd.	4.2	
Reinforcement Bars, Epoxy Coated		Pound	3,180	
Furnishing Metal Shell Piles 14" x 0.250"		Foot	516	
Driving Piles		Foot	516	
Test Pile Metal Shells		Each	1	
Underwater Structure Excavation Protection-Location 1		Each	1	

Reinforcement Bars designated (E) shall be epoxy coated.

PILE DATA

Pile Type and Size: Metal Shell 14" dia. x ¼" Walls
Nominal Required Bearing: 390 kips
Allowable Resistance Available: 130 kips
Estimated Pile Length: 43 ft.

Number of Production Piles: 12
Number of Test Piles: 1



SECTION A-S

PIER 1

Notes:

1. Space reinforcement in cap to miss anchor bolts.
2. Pour steps monolithically with cap.
3. Work this Sheet With Sheet 12 of 27

DESIGNED	S.S.T.
CHECKED	S.D.H.
DRAWN	E.B.
CHECKED	S.S.T.

PIER 1
IL Route 176 over
South Branch of the Kishwaukee River
F.A.P. RTE 533, SECTION 119R-1-B
McHENRY COUNTY
STATION 51+50.00
DATE: 08-17-07 S.N. 056-0071

GRAEF, ANHALT, SCHLOEMER & ASSOCIATES INC
CHICAGO ILLINOIS

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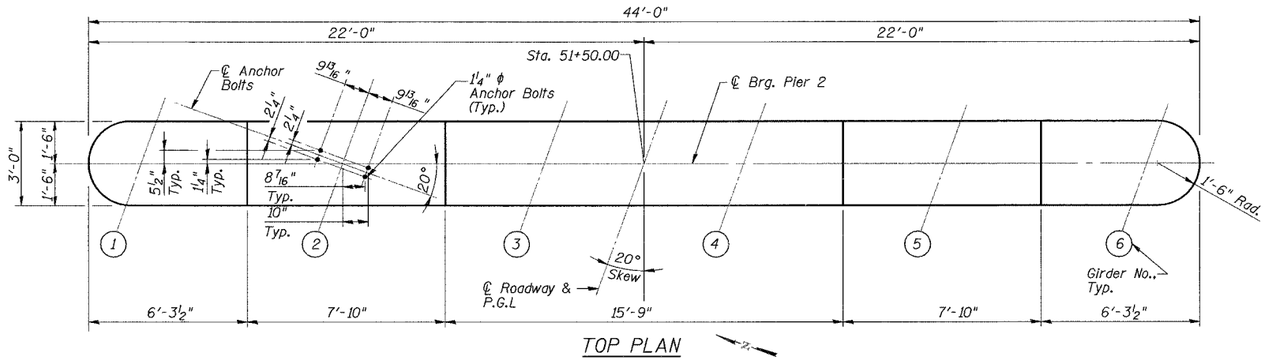
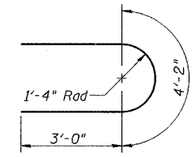
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-1-B	McHenry	77	38
FED. ROAD DIST. XXXX	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 16 OF 27 SHEETS

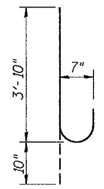
Contract #62340



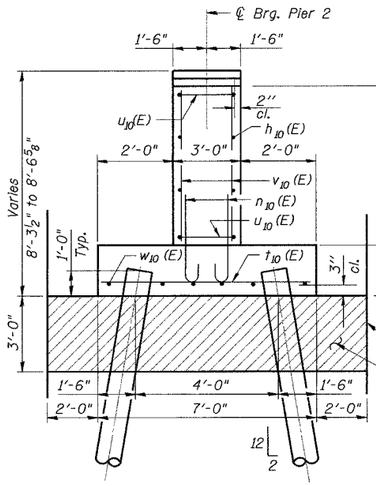
TOP PLAN



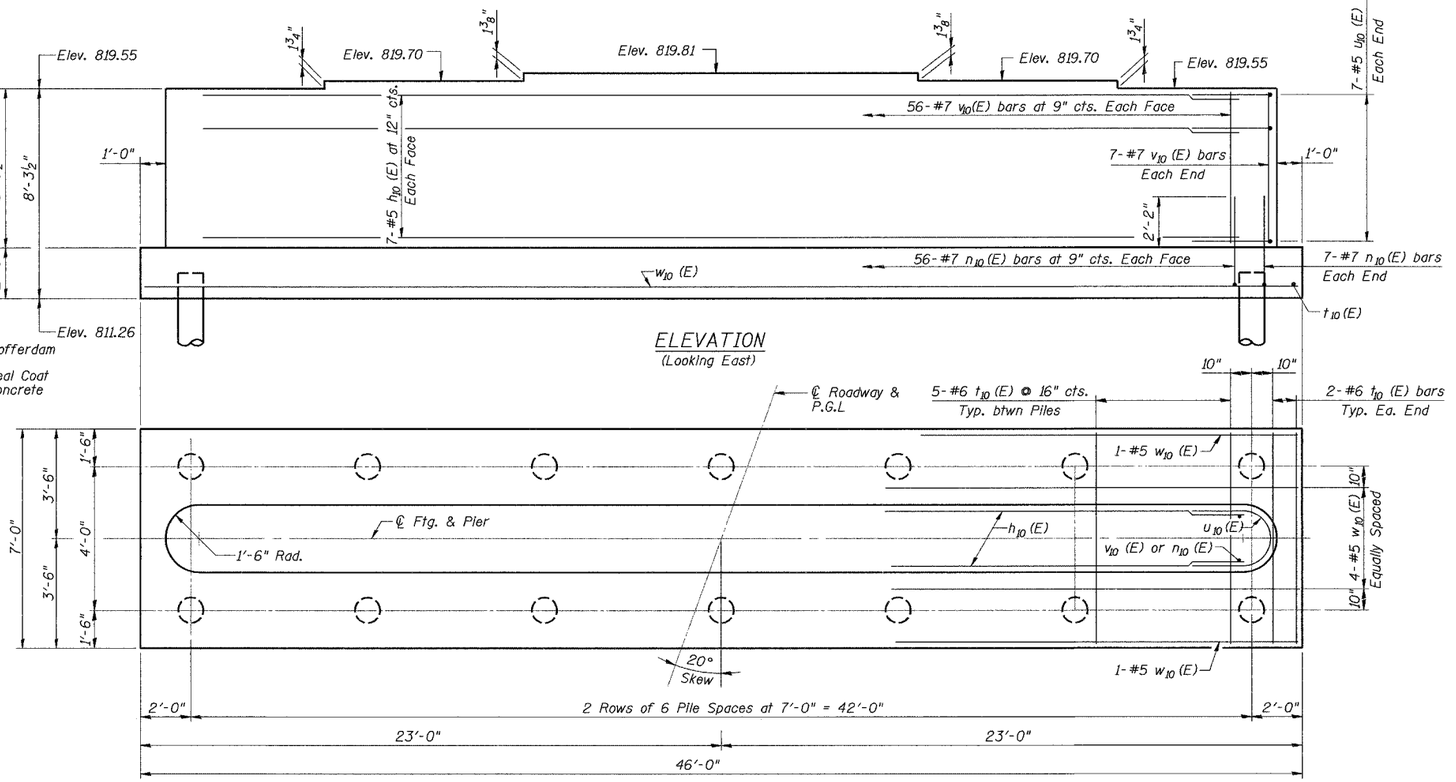
BAR u_{10} (E)



BAR n_{10} (E)



END VIEW



ELEVATION
(Looking East)

FOOTING PLAN

PIER 2

PILE DATA

Pile Type and Size: Metal Shell 14" dia. x 1/4" Walls
Nominal Required Bearing: 306 kips
Allowable Resistance Available: 102 kips
Estimated Pile Length: 42 ft.

Number of Production Piles: 13
Number of Test Piles: 1

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h_{10} (E)	14	#5	41'-0"	——
n_{10} (E)	126	#7	4'-8"	⊃
t_{10} (E)	34	#6	6'-6"	——
u_{10} (E)	14	#5	10'-2"	⊃
v_{10} (E)	126	#7	6'-0"	——
w_{10} (E)	6	#5	45'-6"	——
Cofferdam Excavation		Cu. Yd.	143	
Cofferdams		Each	1	
Concrete Structures		Cu. Yd.	54.7	
Seal Coat Concrete		Cu. Yd.	61.1	
Reinforcement Bars, Epoxy Coated		Pound	4,110	
Furnishing Metal Shell Piles 14" x 0.250"		Foot	546	
Driving Piles		Foot	546	
Test Pile Metal Shells		Each	1	

Reinforcement Bars designated (E) shall be epoxy coated.

Notes:

1. The cofferdam design Water Elevation = 816.3
2. The plan dimensions of the Seal Coat Concrete is 11' x 50'.
3. The Seal-Coat Concrete thickness is 3'-0".
4. Space reinforcement in cap to miss anchor bolts.
5. Pour steps monolithically with cap.

DESIGNED	S.S.T.
CHECKED	S.D.H.
DRAWN	E.B.
CHECKED	S.S.T.

PIER 2
IL Route 176 over
South Branch of the Kishwaukee River
F.A.P. RTE 533, SECTION 119R-1-B
McHENRY COUNTY
STATION 51+50.00
DATE: 08-17-07 S.N. 056-0071

GRAEF, ANHALT, SCHLOEMER & ASSOCIATES INC
CHICAGO ILLINOIS

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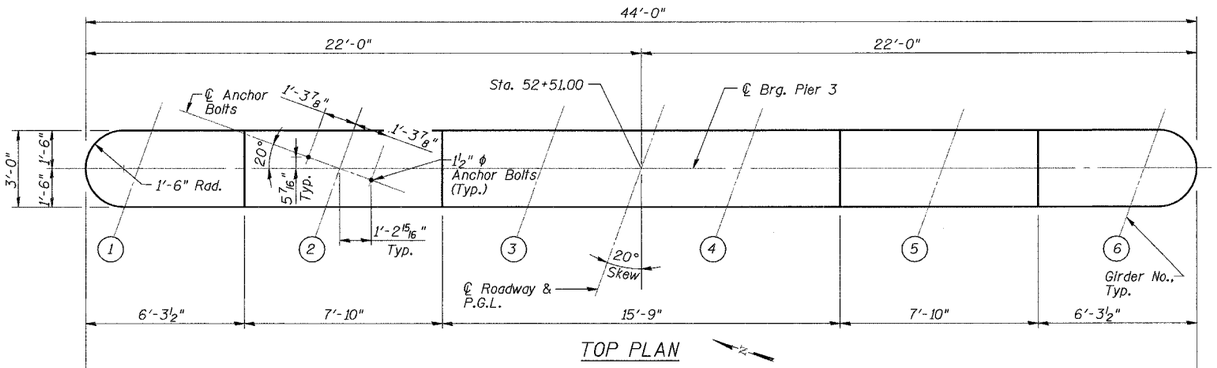
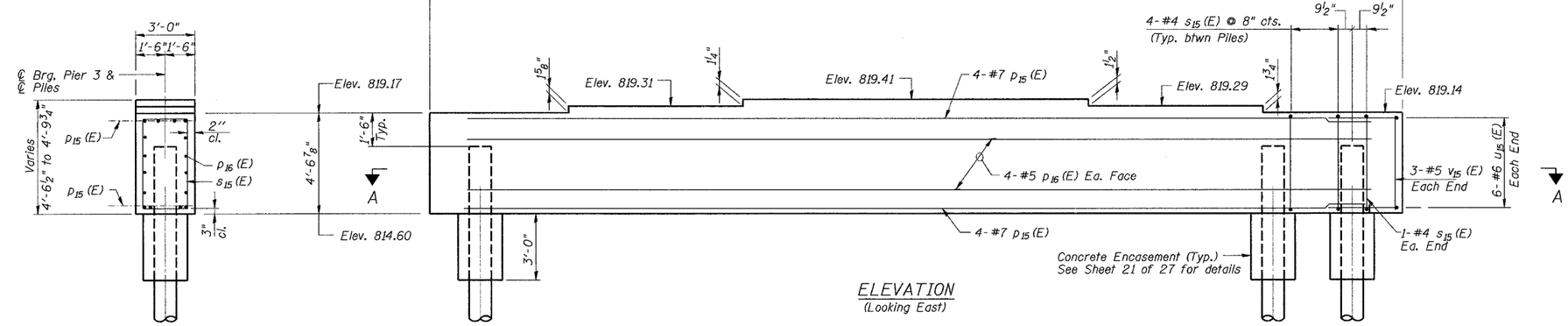
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-1-B	McHenry	77	39
FED. ROAD DIST. XXXX	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 17 OF 27 SHEETS

Contract #62340

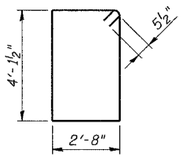


TOP PLAN

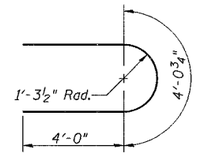


ELEVATION
(Looking East)

END VIEW



BAR s_{15} (E)



BAR u_{15} (E)

BILL OF MATERIAL

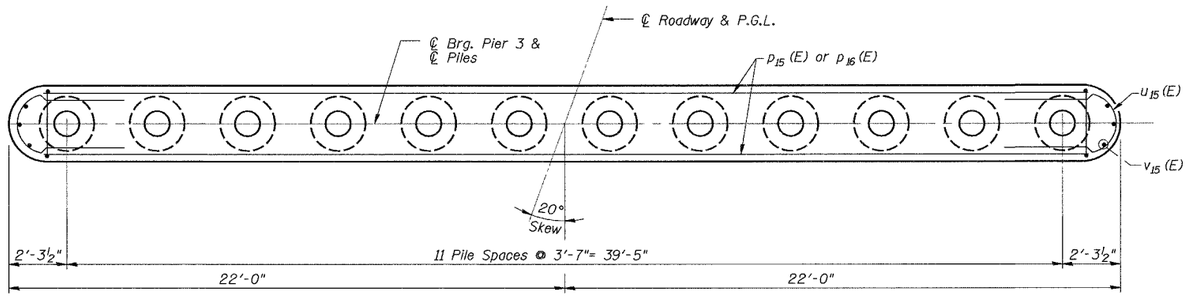
Bar	No.	Size	Length	Shape
p_{15} (E)	8	#7	41'-0"	——
p_{16} (E)	8	#5	41'-0"	——
s_{15} (E)	46	#4	14'-6"	□
u_{15} (E)	12	#6	12'-1"	⊃
v_{15} (E)	6	#5	4'-1"	——
Structure Excavation			Cu. Yd.	52
Concrete Structures			Cu. Yd.	22.4
Concrete Encasement			Cu. Yd.	3.9
Reinforcement Bars, Epoxy Coated			Pound	1,700
Furnishing Metal Shell Piles 14" x 0.250"			Foot	451
Driving Piles			Foot	451
Test Pile Metal Shells			Each	1

Reinforcement Bars designated (E) shall be epoxy coated.

PILE DATA

Pile Type and Size: Metal Shell 14" dia. x ¼" Walls
Nominal Required Bearing: 390 kips
Allowable Resistance Available: 130 kips
Estimated Pile Length: 41 ft.

Number of Production Piles: 11
Number of Test Piles: 1



SECTION A-A

PIER 3

Notes:

1. Space reinforcement in cap to miss anchor bolts.
2. Pour steps monolithically with cap.

DESIGNED	S.S.T.
CHECKED	S.D.H.
DRAWN	E.B.
CHECKED	S.S.T.

PIER 3
IL Route 176 over
South Branch of the Kishwaukee River
F.A.P. RTE 533, SECTION 119R-1-B
McHENRY COUNTY
STATION 51+50.00
DATE: 08-17-07 S.N. 056-0071

GRAEF, ANHALT, SCHLOEMER & ASSOCIATES INC
CHICAGO ILLINOIS

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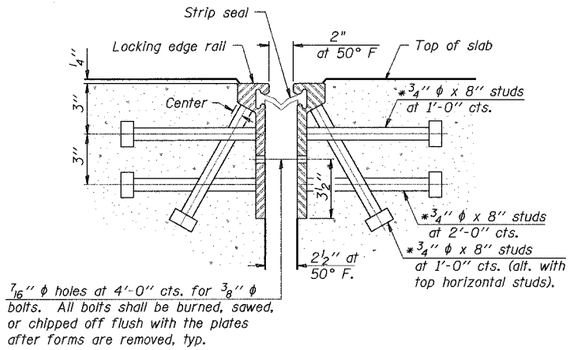
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-1-B	McHenry	77	48
FED. ROAD DIST. XXXX	ILLINOIS	FED. AID PROJECT-		

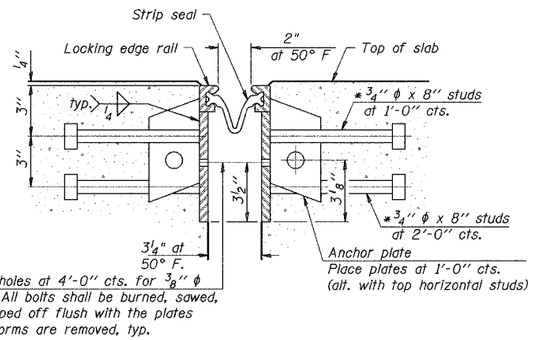
SHEET NO. 18 OF 27 SHEETS

Contract #62340

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



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



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

Notes:

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

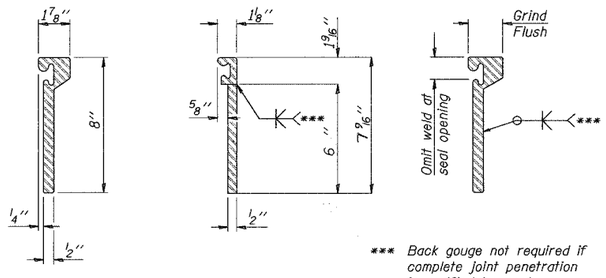
The height and thickness of the Locking Edge Rails shown are minimum dimensions. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed. Locking Edge Rails may be spliced at slope discontinuities and stage construction joints.

The manufacturer's recommended installation methods shall be followed.

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

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

SECTION THRU ROLLED RAIL JOINT

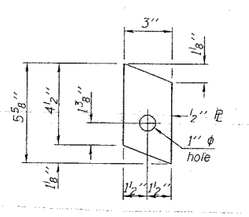


*** Back gouge not required if complete joint penetration is verified by mock-up.

ROLLED (EXTRUDED) RAIL

WELDED RAIL

SECTION THRU WELDED RAIL JOINT

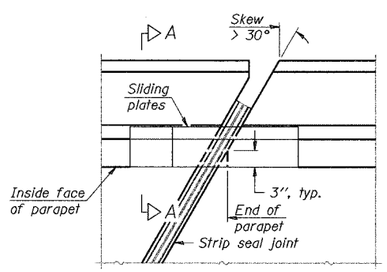


ANCHOR PLATE (for welded rail)

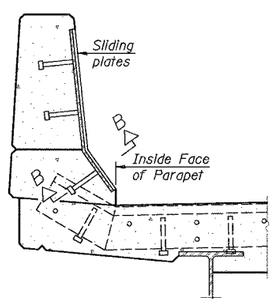
LOCKING EDGE RAIL SPLICE

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

LOCKING EDGE RAILS

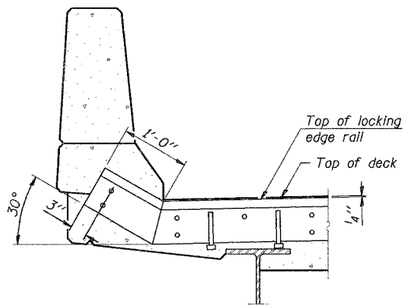


PLAN

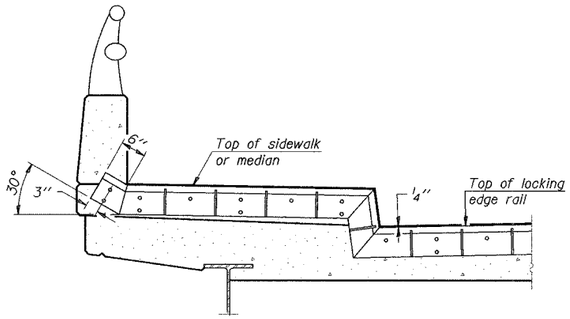


SECTION A-A

POINT BLOCK DETAILS (for skews > 30°)



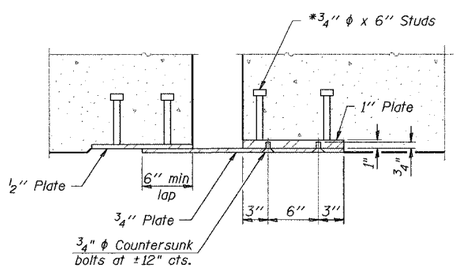
AT PARAPET



AT SIDEWALK OR MEDIAN

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

TYPICAL END TREATMENTS



SECTION B-B

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	89

DESIGNED	S.S.T.
CHECKED	S.D.H.
DRAWN	E.B.
CHECKED	S.S.T.

EJ-SSJ 9-3-2007

PREFORMED JOINT STRIP SEAL

IL Route 176 over
South Branch of the Kishwaukee River
F.A.P. RTE 533, SECTION 119R-1-B
McHENRY COUNTY
STATION 51+50.00
DATE: 08-17-07 S.N. 056-0071

GRAEF, ANHALT, SCHLOEMER & ASSOCIATES INC
CHICAGO ILLINOIS

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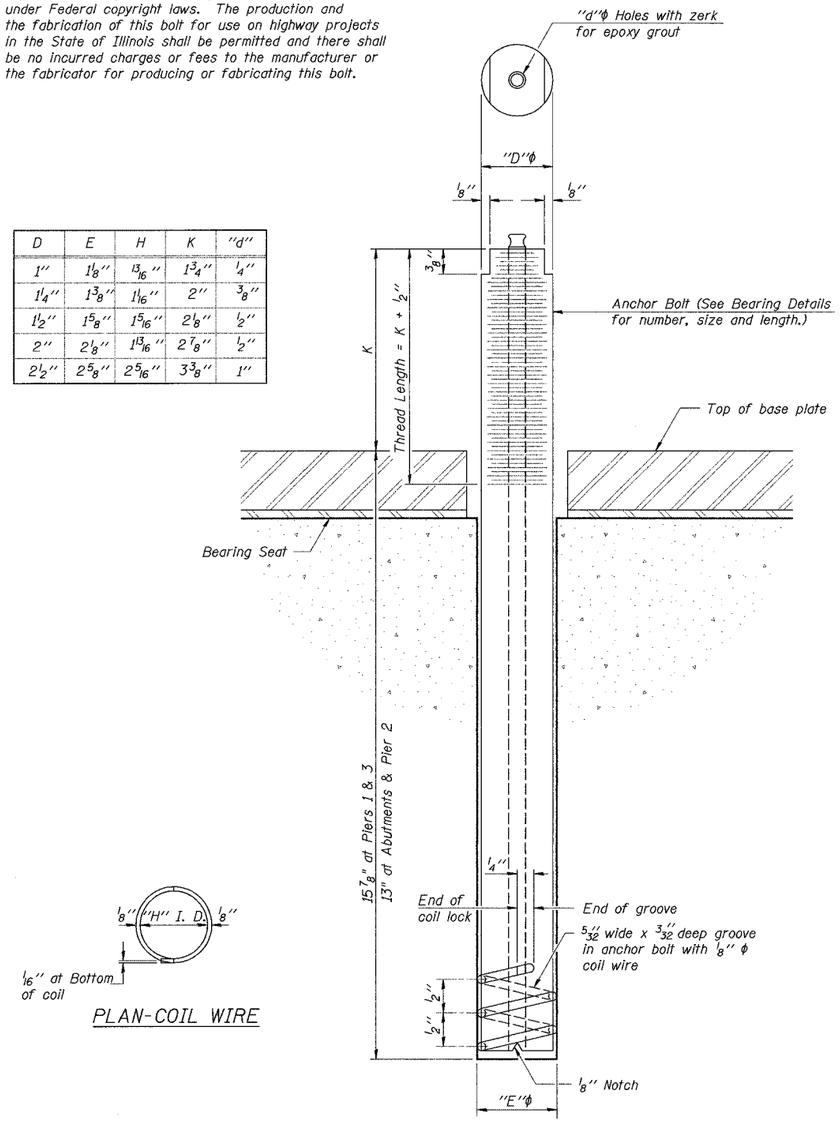
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-1-B	McHenry	77	41
FED. ROAD DIST. XXXX	ILLINOIS	FED. AID PROJECT-		

Contract #62340

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
Pier 1	A325
Pier 2	A325
Pier 3	A325
Abutments	A325

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.

BILL OF MATERIAL

Item	Unit	Quantity
Anchor Bolts 1 1/4	Each	48
Anchor Bolts 1 1/2"	Each	24

DESIGNED	S.S.T.
CHECKED	S.D.H.
DRAWN	E.B.
CHECKED	S.S.T.

ABB-1 4-30-99

ANCHOR BOLT DETAILS

IL Route 176 over
South Branch of the Kishwaukee River
F.A.P. RTE 533, SECTION 119R-1-B
McHENRY COUNTY
STATION 51+50.00

DATE: 08-17-07 S.N. 056-0071

GRAEF, ANHALT, SCHLOEMER & ASSOCIATES INC
CHICAGO ILLINOIS

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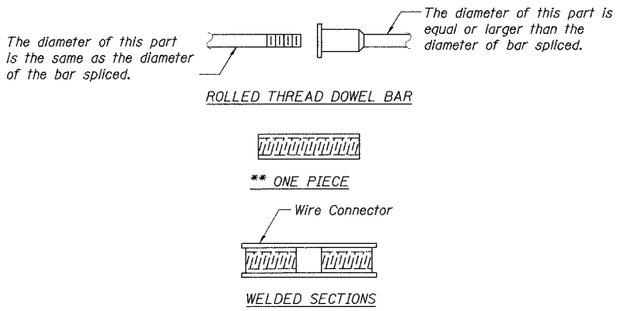
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-1-B	McHenry	77	42
FED. ROAD DIST. XXXX	ILLINOIS	FED. AID PROJECT-		

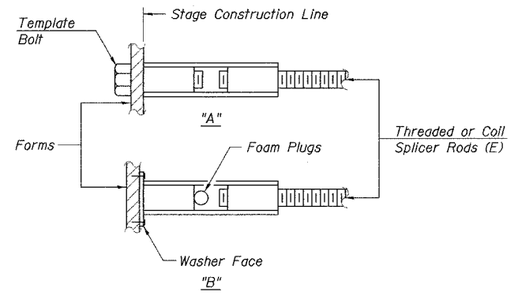
SHEET NO. 20 OF 27 SHEETS

Contract #62340



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:

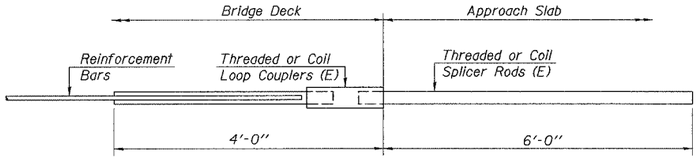
① Minimum Capacity (Tension in kips) = $1.25 \times fy \times A_t$

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

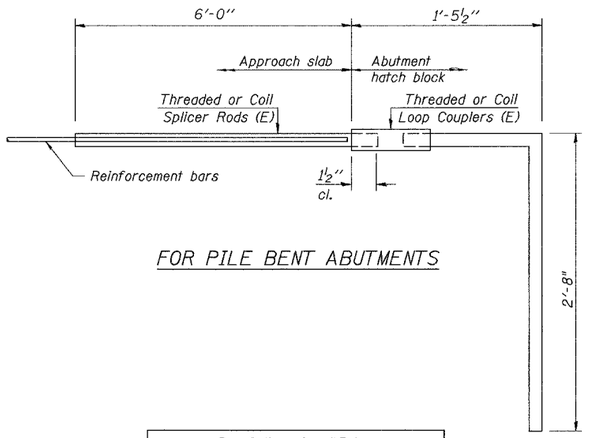
BAR SPLICER ASSEMBLIES			
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#4	1'-8"	14.7	5.9
#5	2'-0"	23.0	9.2
#6	2'-7"	33.1	13.3
#7	3'-5"	45.1	18.0
#8	4'-6"	58.9	23.6
#9	5'-9"	75.0	30.0
#10	7'-3"	95.0	38.0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



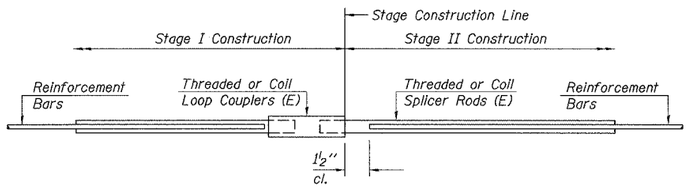
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

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



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 = 88



STANDARD

Bar Size	No. Assemblies Required	Location

DESIGNED	S.S.T.
CHECKED	S.D.H.
DRAWN	E.B.
CHECKED	S.S.T.

BSD-1 10-31-02

BAR SPLICER ASSEMBLY DETAILS

IL Route 176 over
South Branch of the Kishwaukee River
F.A.P. RTE 533, SECTION 119R-1-B
McHENRY COUNTY
STATION 51+50.00
DATE: 08-17-07 S.N. 056-0071

GRAEF, ANHALT, SCHLOEMER & ASSOCIATES INC
CHICAGO ILLINOIS

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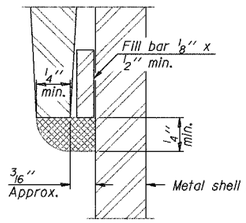
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-1-B	McHenry	77	43
FED. ROAD DIST. XXXX	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 21 OF 27 SHEETS

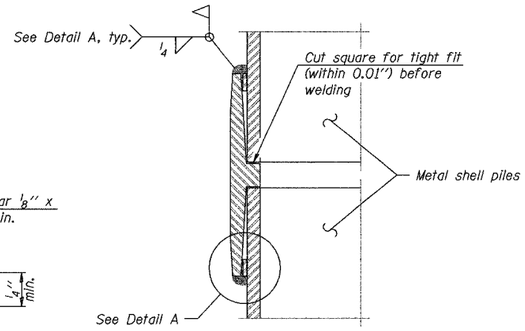
Contract #62340

METAL SHELL PILE TABLE

Designation	Wall thickness t	Weight per foot (Lbs./ft.)	Inside volume (yd.³/ft.)	Encasement diameter A
PP12	0.179″	22.60	0.0274	30″
PP12	0.250″	31.37	0.0267	30″
PP14	0.250″	36.71	0.0368	30″
PP14	0.312″	45.61	0.0361	30″

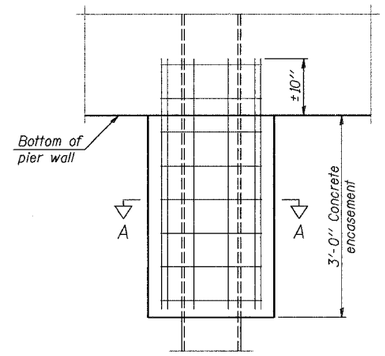


DETAIL A

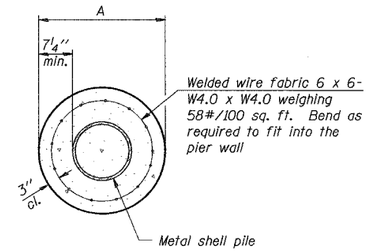


Notes:
The 1/8″ x 1/2″ min. fill bar may be constructed of 2 bars with a 1/8″ max. gap between them.
Pile segments shall be driven to solid contact with splicer before welding.

WELDED COMMERCIAL SPLICE



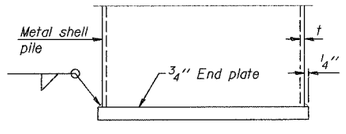
ELEVATION



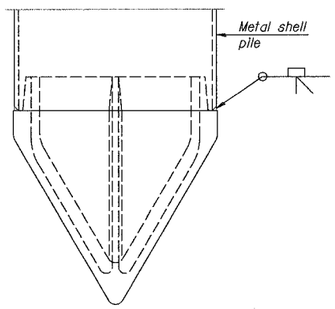
SECTION A-A

Notes:
See Metal Shell Pile Table for dimension "A".
Forms for encasement may be omitted when soil conditions permit.

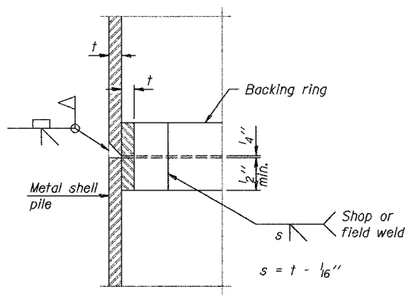
CONCRETE ENCASEMENT AT PIERS



END PLATE ATTACHMENT

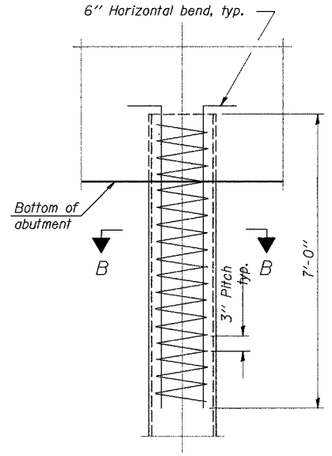


METAL SHELL PILE SHOE ATTACHMENT



COMPLETE PENETRATION WELD SPLICE

Backing ring made from pile shell. Remove segment to allow reducing circumference and vertically rejoin with partial joint penetration weld.



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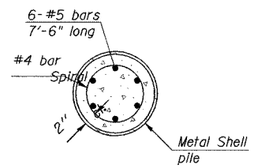

SECTION B-B

METAL SHELL REINFORCEMENT AT ABUTMENTS

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

DESIGNED	S.S.T.
CHECKED	S.D.H.
DRAWN	E.B.
CHECKED	S.S.T.
F-MS	11-1-06

CONCRETE PILE DETAILS
IL Route 176 over
South Branch of the Kishwaukee River
F.A.P. RTE 533, SECTION 119R-1-B
McHENRY COUNTY
STATION 51+50.00
DATE: 08-17-07 S.N. 056-0071

GRAEF, ANHALT, SCHLOEMER & ASSOCIATES INC
CHICAGO ILLINOIS

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ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-1-B	McHenry	77	44
FED. ROAD DIST. XXXX	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 22 OF 27 SHEETS

Contract #62340

Geo Services, Inc.
Geotechnical, Environmental and Civil Engineering
805 Amherst Court, Suite 204
Naperville, Illinois 60565
(630) 305-9186

SOIL BORING LOG

PAGE 1 of 2
DATE June 21, 2002
LOGGED BY JR
GSI JOB No. 0209

ROUTE FAP Rte. 533
TWNSHP Seneca
COUNTY McHenry
STRUCT. NO. 056-0071
Station 51+50
BORING NO. SB-1
Station 49+42
Offset 12' Right (South)
Ground Surface Elev. 818.0 ft

DESCRIPTION Illinois Route 176 over the S. Branch of the Kishwaukee River
LOCATION TWP 44 N, R 6E on the south boundary of Sec 28
DRILLING METHOD 3.25" Hollow Stem Auger HAMMER TYPE CME Automatic

Surface Water Elev. N/A
Stream Bed Elev. N/A
Groundwater Elevation:
First Encounter 813.0 ft
Upon Completion N/A ft
After N/A Hrs. N/A ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	
				8.0" Apshalt, 4.0" Concrete
	-			
	-			CONCRETE
	-	-	-	
	4			
	2			SANDY CLAY LOAM-dark brown-loose (FILL)
-5	2	NP	13	
	1			SANDY ORGANIC TOPSOIL (wet)
	2			
	2	NP	53	
	2			Fine to Medium SAND-brown-loose to medium dense (A-3)
-10	4	NP	13	
	3			
	2			
-15	3	NP	19	
	3			
	5			
	5	NP	16	
	3			
	5			
-20	8	NP	18	
	4			Fine to Medium SAND-brown-loose (A-3)
	6			
	6	NP	20	
	4			Fine to Medium SAND-gray-medium dense (A-3)
	3			
	7			
-25	10	NP	NR	
	4			
	8			
	8	NP	21	
	6			
	6			
-30	7	NP	20	
	8			
	9			
	11	NP	21	
	6			
	9			
-35	14	NP	NR	
	9			Fine to Medium SAND-trace large gravel-gray-very loose to medium dense (A-3)
	12			
	12	NP	12	
	6			
	8			
-40	7	NP	13	

The Unconfined Compressive Strenght (UCS) Failure Mode is Indicated by (B-Bulge, S-Shear, P-Penetrometer) ST-Shelby Tube Sample
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in italics above moist (%)

Geo Services, Inc.
Geotechnical, Environmental and Civil Engineering
805 Amherst Court, Suite 204
Naperville, Illinois 60565
(630) 305-9186

SOIL BORING LOG

PAGE 2 of 2
DATE June 21, 2002
LOGGED BY JR
GSI JOB No. 0209

ROUTE FAP Rte. 533
TWNSHP Seneca
COUNTY McHenry
STRUCT. NO. 056-0071
Station 51+50
BORING NO. SB-1
Station 49+42
Offset 12' Right (South)
Ground Surface Elev. 818.0 ft

DESCRIPTION Illinois Route 176 over the S. Branch of the Kishwaukee River
LOCATION TWP 44 N, R 6E on the south boundary of Sec 28
DRILLING METHOD 3.25" Hollow Stem Auger HAMMER TYPE CME Automatic

Surface Water Elev. N/A
Stream Bed Elev. N/A
Groundwater Elevation:
First Encounter 813.0 ft
Upon Completion N/A ft
After N/A Hrs. N/A ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	
	4			Fine to Medium SAND-trace large gravel-gray-very loose to medium dense (A-3)
	6			
	9	NP	21	
	4			
-45	11	NP	NR	
	4			
	6	NP	NR	
	1			
-50	1	NP	NR	
	15			Fine to Coarse SAND-trace to some large gravel-gray-medium dense to very dense (A-1b)
	20			
	14	NP	12	
	8			
	10			
-55	12	NP	7	
	10			
	20			
	22	NP	6	
	12			
	19			
-60	22	NP	18	
	16			Fine to Coarse SAND-trace to some large gravel-gray-medium dense to very dense (A-1b)
	24			
	29	NP	16	
	14			
	26			
-65	30	NP	NR	
	6			
	3			
	6	NP	16	
	10			
	20			
-70	20	NP	NR	
	12			Fine to Medium SAND-trace large grave-gray-dense to very dense (A-3)
	20			
	26	NP	9	
	18			
	29			
-75	31	NP	NR	
	20			
	30			
	38	NP	11	
	24			
	35			END OF BORING @ 80.0'
-80	39	NP	NR	

The Unconfined Compressive Strenght (UCS) Failure Mode is Indicated by (B-Bulge, S-Shear, P-Penetrometer) ST-Shelby Tube Sample
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in italics above moist (%)

DESIGNED	S.S.T.
CHECKED	S.D.H.
DRAWN	E.B.
CHECKED	S.S.T.

BORING LOGS (SHEET 1 of 6)
IL Route 176 over
South Branch of the Kishwaukee River
F.A.P. RTE 533, SECTION 119R-1-B
McHENRY COUNTY
STATION 51+50.00
DATE: 08-17-07 *S.N. 056-0071*

GRAEF, ANHALT, SCHLOEMER & ASSOCIATES INC
CHICAGO ILLINOIS

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ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-1-B	McHenry	77	45
FED. ROAD DIST. XXXX	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 23 OF 27 SHEETS

Contract #62340

Geo Services, Inc.
Geotechnical, Environmental and Civil Engineering
805 Amherst Court, Suite 204
Naperville, Illinois 60565
(630) 305-9186

SOIL BORING LOG

PAGE 1 of 2
DATE June 21, 2002
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GSI JOB No. 0209

ROUTE FAP Rte. 533
TWNSHP Seneca
COUNTY McHenry
STRUCT. NO. 056-0071
Station 51+50
BORING NO. SB-2
Station 50+72
Offset 12' Left (North)
Ground Surface Elev. 819.5 ft

DESCRIPTION Illinois Route 176 over the S. Branch of the Kishwaukee River
LOCATION TWP 44 N, R 6E on the south boundary of Sec 28
DRILLING METHOD 3.25" Hollow Stem Auger HAMMER TYPE CME Automatic

Surface Water Elev. N/A
Stream Bed Elev. N/A
Groundwater Elevation:
First Encounter 811.0 ft
Upon Completion N/A
After N/A Hrs. N/A ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	
				10" Asphalt
	21			
	8			Sand, Gravel and Topsoil-dark brown and black-very loose to medium dense (FILL)
	10	NP	9	
	9			
	10			
-5	8	NP	11	
	3			
	1			
	1	NP	6	
	4			Fine to Coarse SAND-dark brown-loose to medium dense (A-1b) Possible FILL
-10	2	NP	17	
	4			
	3			Fine to Coarse SAND-trace gravel-gray-loose (A-1b)
	2	NP	12	
	8			
	4			
-15	5	NP	12	
	13			
	4			Fine to Medium Sand-gray-loose to medium dense (A-3)
	7	NP	19	
	10			
	8			
-20	5	NP	19	
	3			Fine to Medium SAND-gray-loose to medium dense (A-3)
	3			
	4	NP	17	
	28			
	3			
-25	8	NP	19	
	5			
	4			
	7	NP	19	
	15			
	7			Fine to Coarse SAND-some gravel-gray-medium dense to dense (A-1b)
-30	6	NP	15	
	16			
	16			
	10	NP	16	
	10			
	10			
-35	10	NP	7	
	22			
	18			
	8	NP	6	
	16			
	8			
-40	7	NP	14	

The Unconfined Compressive Strenght (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) ST-Shelby Tube Sample
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in Italics above moist (%)

Geo Services, Inc.
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(630) 305-9186

SOIL BORING LOG

PAGE 2 of 2
DATE June 21, 2002
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GSI JOB No. 0209

ROUTE FAP Rte. 533
TWNSHP Seneca
COUNTY McHenry
STRUCT. NO. 056-0071
Station 51+50
BORING NO. SB-2
Station 50+72
Offset 12' Left (North)
Ground Surface Elev. 819.5 ft

DESCRIPTION Illinois Route 176 over the S. Branch of the Kishwaukee River
LOCATION TWP 44 N, R 6E on the south boundary of Sec 28
DRILLING METHOD 3.25" Hollow Stem Auger HAMMER TYPE CME Automatic

Surface Water Elev. N/A
Stream Bed Elev. N/A
Groundwater Elevation:
First Encounter 811.0 ft
Upon Completion N/A
After N/A Hrs. N/A ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	
	26			Fine to Coarse SAND-some gravel-gray-medium dense to dense (A-1b)
	26			
	18	NP	6	
	16			
-45	20	NP	10	
	24			Fine to Medium SAND-gray-dense to very dense (A-3)
	26			
	26	NP	13	
	22			
-50	21	NP	20	
	26			Fine to Coarse SAND-trace to some gravel-gray-medium dense to very dense (A-1b)
	31			
	31	NP	9	
	16			
-55	28	NP	12	
	17			
	29			
	32	NP	10	
	32			
-60	7	NP	10	
	24			Fine to Coarse SAND-trace to some gravel-gray-medium dense to very dense (A-1b)
	31			
	33	NP	10	
	11			
	30			
-65	32	NP	10	
	30			
	10			
	6	NP	9	
	28			
	28			
-70	26	NP	14	
				END OF BORING @ 70.0'
-75				
-80				

The Unconfined Compressive Strenght (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) ST-Shelby Tube Sample
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in Italics above moist (%)

DESIGNED	S.S.T.
CHECKED	S.D.H.
DRAWN	E.B.
CHECKED	S.S.T.

BORING LOGS (SHEET 2 of 6)
IL Route 176 over
South Branch of the Kishwaukee River
F.A.P. RTE 533, SECTION 119R-1-B
McHENRY COUNTY
STATION 51+50.00
DATE: 08-17-07 S.N. 056-0071

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ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-1-B	McHenry	77	46
FED. ROAD DIST. XXXX	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 24 OF 27 SHEETS

Contract #62340

Geo Services, Inc.
Geotechnical, Environmental and Civil Engineering
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(630) 305-9186

SOIL BORING LOG

PAGE 1 of 2
DATE June 21, 2002
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GSI JOB No. 0209

ROUTE FAP Rte. 533
DESCRIPTION Illinois Route 176 over the S. Branch of the Kishwaukee River
TWNSHP Seneca
LOCATION TWP 44 N, R 6E on the south boundary of Sec 28
COUNTY McHenry
DRILLING METHOD 3.25" Hollow Stem Auger HAMMER TYPE CME Automatic
STRUCT. NO. 056-0071
Station 51+50
BORING NO. SB-3
Station 51+62
Offset 15' Right (South)
Ground Surface Elev. 819.0 ft

Surface Water Elev. N/A
Stream Bed Elev. N/A
Groundwater Elevation:
First Encounter 813.0 ft
Upon Completion N/A ft
After N/A Hrs. N/A ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	
				15.0" Asphalt
	4			
	5			Sand, Gravel and Topsoil-dark brown and black-medium dense (FILL)
	6	NP	13	
	2			Sandy TOPSOIL-dark brown to black
-5	3	NP	29	
	1			Organic Sandy CLAY-trace peat-black
	3			
	2	NP	65	
	3			Fine to Medium SAND-trace gravel-brown-loose (A-3)
	1			
-10	1	NP	18	
	6			
	3			
	4	NP	16	
	2			Fine to Medium SAND-trace gravel-gray-loose to medium dense (A-3)
	4			
-15	5	NP	19	
	2			
	4			
	4	NP	22	
	3			
	4			
-20	6	NP	16	
				Fine to Medium SAND-trace gravel-gray-loose to medium dense (A-3)
	3			
	4			
-25	8	NP	12	
	11			Fine to Medium SAND-trace gravel-gray-medium dense to dense (A-3)
	28			
	11	NP	13	
	15			
	12			
-30	8	NP	14	
	13			
	12			
	12	NP	14	
	29			Fine to Coarse SAND-some gravel-gray-dense (A-1b)
	22			
-35	17	NP	6	
	11			Fine to Medium SAND-trace gravel-gray-medium dense to dense (A-3)
	10			
	7	NP	13	
	27			
	15			
-40	11	NP	17	

The Unconfined Compressive Strenght (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) ST-Shelby Tube Sample
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in italics above moist (%)

DESIGNED	S.S.T.
CHECKED	S.D.H.
DRAWN	E.B.
CHECKED	S.S.T.

Geo Services, Inc.
Geotechnical, Environmental and Civil Engineering
805 Amherst Court, Suite 204
Naperville, Illinois 60565
(630) 305-9186

SOIL BORING LOG

PAGE 2 of 2
DATE June 21, 2002
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ROUTE FAP Rte. 533
DESCRIPTION Illinois Route 176 over the S. Branch of the Kishwaukee River
TWNSHP Seneca
LOCATION TWP 44 N, R 6E on the south boundary of Sec 28
COUNTY McHenry
DRILLING METHOD 3.25" Hollow Stem Auger HAMMER TYPE CME Automatic
STRUCT. NO. 056-0071
Station 51+50
BORING NO. SB-3
Station 51+62
Offset 15' Right (South)
Ground Surface Elev. 819.0 ft

Surface Water Elev. N/A
Stream Bed Elev. N/A
Groundwater Elevation:
First Encounter 813.0 ft
Upon Completion N/A ft
After N/A Hrs. N/A ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	
	15			Fine to Medium SAND-trace gravel-gray-medium dense to dense (A-3)
	18			
	14	NP	20	
	22			Fine to Coarse SAND-some gravel-gray-medium dense (A-1b)
-45	8			
	9	NP	9	
	26			Fine to Medium SAND-trace gravel-gray-medium dense (A-3)
	10			
	9	NP	14	
	15			
	11			
-50	12	NP	16	
	18			Fine to Coarse SAND-trace gravel-gray-dense to very dense (A-1b)
	24			
	10	NP	10	
	26			
	18			
-55	20	NP	9	
	26			
	30			
	36	NP	8	
	20			
	18			
-60	14	NP	10	
				Fine to Coarse SAND-trace gravel-gray-medium dense (A-1b)
	4			
	5			
	5	NP	10	
	4			Fine to Medium SAND-trace gravel-gray-very loose to medium dense (A-3)
-65	1			
	1	NP	20	
	7			
	8			
	11	NP	15	
	4			
	4			
-70	8	NP	11	
				END OF BORING @ 70.0'
-75				
-80				

The Unconfined Compressive Strenght (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) ST-Shelby Tube Sample
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in italics above moist (%)

BORING LOGS (SHEET 3 of 6)
IL Route 176 over
South Branch of the Kishwaukee River
F.A.P. RTE 533, SECTION 119R-1-B
McHENRY COUNTY
STATION 51+50.00
DATE: 08-17-07 *S.N. 056-0071*

GRAEF, ANHALT, SCHLOEMER & ASSOCIATES INC
CHICAGO ILLINOIS

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ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-1-B	McHenry	77	47
FED. ROAD DIST. XXXX	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 25 OF 27 SHEETS

Contract #62340

Geo Services, Inc.

Geotechnical, Environmental and Civil Engineering
805 Amherst Court, Suite 204
Naperville, Illinois 60565
(630) 305-9186

SOIL BORING LOG

PAGE 1 of 2
DATE June 21, 2002
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ROUTE FAP Rte. 533
TWNSHP Seneca
COUNTY McHenry
STRUCT. NO. 056-0071
Station 51+50
BORING NO. SB-4
Station 52+48
Offset 17' Left (North)
Ground Surface Elev. 818.5 ft

DESCRIPTION Illinois Route 176 over the S. Branch of the Kishwaukee River
LOCATION TWP 44 N, R 6E on the south boundary of Sec 28
DRILLING METHOD 3.25" Hollow Stem Auger HAMMER TYPE CME Automatic

Surface Water Elev. N/A
Stream Bed Elev. N/A
Groundwater Elevation:
First Encounter 813.5 ft
Upon Completion N/A
After N/A Hrs. N/A ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	
				4.0" Asphalt
	3		xx	SANDY TOPSOIL -trace gravel-dark brown-loose (Apparent FILL)
	2			
	3	NP	18	Fine to Medium SAND-trace gravel-gray-medium dense to dense (A-3)
	2			
-5	2			Fine to Coarse SAND-trace gravel-brown-loose (A-1/A-3)
	3	NP	NR	
	3			
	3			Medium to Coarse SAND-some gravel-brown-loose (A-1b)
	5	NP	8	
	2			
	3			Fine to Medium SAND-trace gravel-brown-loose (A-3)
-10	3	NP	13	
	2			
	1			
	2	NP	16	
	2			
	2			
-15	3	NP	19	
	2			
	3			Fine to Medium SAND-trace gravel-gray-medium dense to dense (A-3)
	5	NP	24	
	5			
	7			
-20	8	NP	18	
	7			
	11			
	18	NP	15	
	8			
	14			
-25	16	NP	17	
	6			
	9			
	12	NP	16	
	8			
	15			
-30	8	NP	13	
	8			
	14			
	10	NP	14	
	15			
	24			
-35	10	NP	18	
	16			
	20			
	10	NP	17	
	15			
	27			
-40	15	NP	19	

The Unconfined Compressive Strenght (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) ST-Shelby Tube Sample
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in Italics above moist (%)

Geo Services, Inc.

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SOIL BORING LOG

PAGE 2 of 2
DATE June 21, 2002
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ROUTE FAP Rte. 533
TWNSHP Seneca
COUNTY McHenry
STRUCT. NO. 056-0071
Station 51+50
BORING NO. SB-4
Station 52+48
Offset 17' Left (North)
Ground Surface Elev. 818.5 ft

DESCRIPTION Illinois Route 176 over the S. Branch of the Kishwaukee River
LOCATION TWP 44 N, R 6E on the south boundary of Sec 28
DRILLING METHOD 3.25" Hollow Stem Auger HAMMER TYPE CME Automatic

Surface Water Elev. N/A
Stream Bed Elev. N/A
Groundwater Elevation:
First Encounter 813.5 ft
Upon Completion N/A
After N/A Hrs. N/A ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	
	14			Fine to Medium SAND-trace gravel-gray-medium dense to dense (A-3)
	26			
	20	NP	NR	
	10			
	16			
-45	18	NP	19	
	11			
	15			
	22	NP	13	
	12			
	19			
-50	23	NP	14	
	12			
	16			
	19	NP	18	
	14			
	20			
-55	25	NP	12	
	10			
	18			
	26	NP	15	
	15			
	32			
-60	34	NP	11	
	19			Fine to Medium SAND-trace gravel-gray-medium dense to dense (A-3)
	30			
	33	NP	16	
	22			
	40			
-65	39	NP	15	
				END OF BORING @ 80.0'
-70				
-75				
-80				

The Unconfined Compressive Strenght (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) ST-Shelby Tube Sample
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) the Unit Dry Weight (pcf) is noted in Italics above moist (%)

DESIGNED	S.S.T.
CHECKED	S.D.H.
DRAWN	E.B.
CHECKED	S.S.T.

BORING LOGS (SHEET 4 of 6)
IL Route 176 over
South Branch of the Kishwaukee River
F.A.P. RTE 533, SECTION 119R-1-B
McHENRY COUNTY
STATION 51+50.00
DATE: 08-17-07 S.N. 056-0071

GRAEF, ANHALT, SCHLOEMER & ASSOCIATES INC
CHICAGO ILLINOIS

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ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-1-B	McHenry	77	48
FED. ROAD DIST. XXXX	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 26 OF 27 SHEETS

Contract #62340

Geo Services, Inc.
Geotechnical, Environmental and Civil Engineering
805 Amherst Court, Suite 204
Naperville, Illinois 60565
(630) 305-9186

SOIL BORING LOG

PAGE 1 of 3
DATE June 21, 2002
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ROUTE FAP Rte. 533
TWNSHP Seneca
COUNTY McHenry
STRUCT. NO. 056-0071
Station 51+50
BORING NO. SB-5
Station 53+63
Offset 14 Right (South)
Ground Surface Elev. 817.5 ft

DESCRIPTION Illinois Route 176 over the S. Branch of the Kishwaukee River
LOCATION TWP 44 N, R 6E on the south boundary of Sec 28
DRILLING METHOD 3.25" Hollow Stem Auger HAMMER TYPE CME Automatic

Surface Water Elev. N/A
Stream Bed Elev. N/A
Groundwater Elevation:
First Encounter 813.5 ft
Upon Completion N/A
After N/A Hrs. N/A ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	
	2			6.0" Asphalt, 6.0" Sand and Gravel
	2			SANDY TOPSOIL -trace gravel-black-loose (Apparent FILL)
	2	NP	14	
	5			
-5	6			Fine to Medium SAND-trace gravel-brown-loose to medium dense (A-3)
	5	NP	20	
	3			
	3			
	6	NP	11	
	8			
-10	4			Fine to Medium SAND-trace gravel-gray-very loose to medium dense (A-3)
	4	NP	14	
	1			
	1			
	1	NP	20	
	2			
-15	1			
	1	NP	18	
	2			
	2			
	2	NP	22	
	3			
-20	4			
	6	NP	19	

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	
	4			Fine to Medium SAND-trace gravel-gray-very loose to medium dense (A-3)
	2			
	3	NP	15	
	3			
-25	3			
	3	NP	19	
	3			
	3			
	5	NP	NR	
	3			
-30	3			
	3	NP	11	
	5			Fine to Coarse SAND-trace gravel-gray-medium dense (A-1b)
	4			
	8	NP	9	
	8			
-35	6			
	4	NP	7	
	7			Fine to Medium SAND-trace to some gravel-gray-loose to dense (A-3)
	5			
	5	NP	14	
	2			
-40	2			
	1	NP	16	

The Unconfined Compressive Strenght (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) ST-Shelby Tube Sample
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in Italics above moist (%)

Geo Services, Inc.
Geotechnical, Environmental and Civil Engineering
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(630) 305-9186

SOIL BORING LOG

PAGE 2 of 3
DATE June 21, 2002
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ROUTE FAP Rte. 533
TWNSHP Seneca
COUNTY McHenry
STRUCT. NO. 056-0071
Station 51+50
BORING NO. SB-5
Station 53+63
Offset 14' Right (South)
Ground Surface Elev. 817.5 ft

DESCRIPTION Illinois Route 176 over the S. Branch of the Kishwaukee River
LOCATION TWP 44 N, R 6E on the south boundary of Sec 28
DRILLING METHOD 3.25" Hollow Stem Auger HAMMER TYPE CME Automatic

Surface Water Elev. N/A
Stream Bed Elev. N/A
Groundwater Elevation:
First Encounter 813.5 ft
Upon Completion N/A
After N/A Hrs. N/A ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	
	8			Fine to Medium SAND-trace to some gravel-gray-loose to dense (A-3)
	6			
	9	NP	13	
	1			
-45	3			
	5	NP	15	
	8			
	6			
	7	NP	NR	CLAY to CLAY LOAM-gray-stiff to very stiff (A-4/A-6)
	7			
-50	8			
	8	NP	13	
	17			
	13			
	14	NP	12	
	3			
-55	5			
	8	NP	11	
	9			
	4			
	4	NP	11	
	3			Fine to Medium SAND-trace gravel-gray-dense (A-3)
-60	2			
	3	NP	8	

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	
	4			Fine to Medium SAND-trace to some gravel-gray-loose to dense (A-3)
	5			
	13	NP	14	
	12			
	21			
-65	23	NP	NR	
	13			
	7			
	4	1.5P	11	
	4			
	6			
-70	7	2.0P	11	
	8			
	7			
	7	1.25P	11	
	7			
	12			
-75	22	3.25P	11	
	7			
	15			
	19	2.5P	16	
	11			
	17			
-80	26	NP	14	

The Unconfined Compressive Strenght (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) ST-Shelby Tube Sample
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in Italics above moist (%)

DESIGNED	S.S.T.
CHECKED	S.D.H.
DRAWN	E.B.
CHECKED	S.S.T.

BORING LOGS (SHEET 5 of 6)
IL Route 176 over
South Branch of the Kishwaukee River
F.A.P. RTE 533, SECTION 119R-1-B
McHENRY COUNTY
STATION 51+50.00
DATE: 08-17-07 S.N. 056-0071

GRAEF, ANHALT, SCHLOEMER & ASSOCIATES INC
CHICAGO ILLINOIS

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BM #8 11.69'/7/8/ 10-5-191-98-2C-1301.124

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-1-B	McHenry	77	49
FED. ROAD DIST. XXXX	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 27 OF 27 SHEETS

Contract #62340

Geo Services, Inc.
Geotechnical, Environmental and Civil Engineering
805 Amherst Court, Suite 204
Naperville, Illinois 60565
(630) 305-9186

SOIL BORING LOG

DATE June 21, 2002

LOGGED BY CC

GSI JOB No. 0209

ROUTE FAP Rte. 533

DESCRIPTION Illinois Route 176 over the S. Branch of the Kishwaukee River

TWNSHP Seneca

LOCATION TWP 44 N. R 6E on the south boundary of Sec 28

COUNTY McHenry

DRILLING METHOD 3.25" Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO. 056-0071

Station 51+50

BORING NO. SB-5

Station 53+63

Offset 14' Right (South)

Ground Surface Elev. 817.5 ft

Surface Water Elev. N/A

Stream Bed Elev. N/A

Groundwater Elevation:

First Encounter Upon Completion 813.5 ft

After N/A Hrs. N/A ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Fine to Medium SAND-trace gravel-gray-dense (A-3) Driller's Observation	10						
	16 16	NP	NR				
SANDY CLAY-trace gravel-gray-stiff (A-6)	8						
-85	11 17	1.5P	10	-105			
END OF BORING @ 85.0'							
-90				-110			
-95				-115			
-100				-120			

The Unconfined Compressive Strenght (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) ST-Shelby Tube Sample
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in Italics above moist (%)

DESIGNED	S.S.T.
CHECKED	S.D.H.
DRAWN	E.B.
CHECKED	S.S.T.

BORING LOGS (SHEET 6 of 6)
IL Route 176 over
South Branch of the Kishwaukee River
F.A.P. RTE 533, SECTION 119R-1-B
McHENRY COUNTY
STATION 51+50.00
DATE: 08-17-07 *S.N. 056-0071*
GRAEF, ANHALT, SCHLOEMER & ASSOCIATES INC
CHICAGO ILLINOIS

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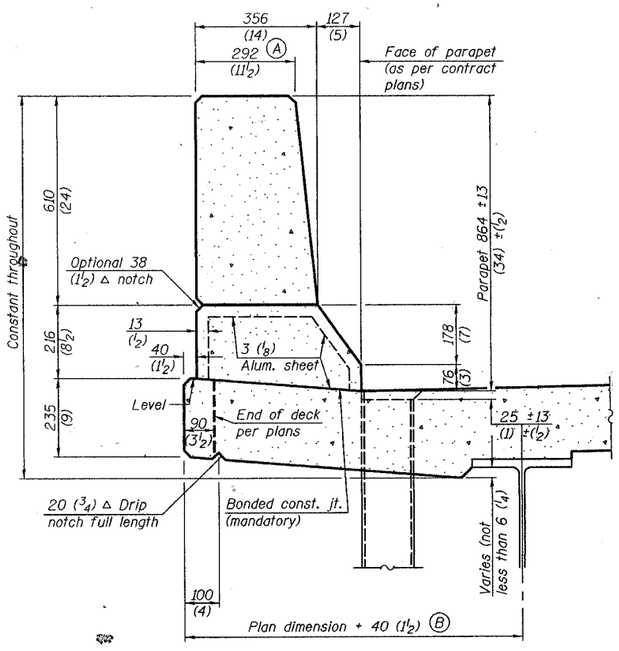
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

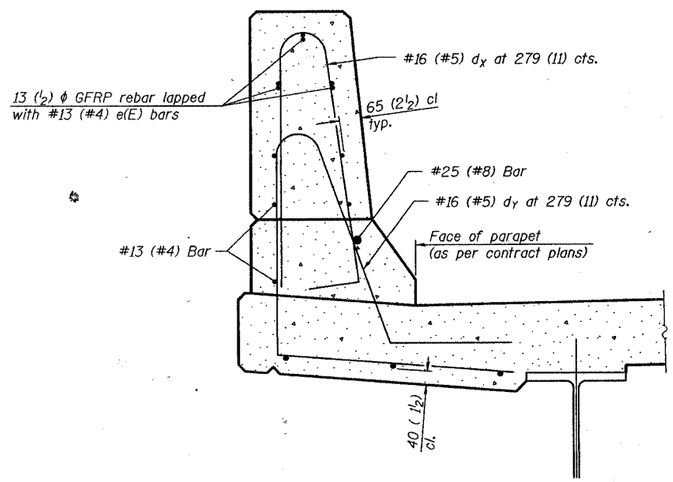
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 533	119R-1-B	McHenry	77	49A.
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO.
SHEETS

Contract # 62340



SECTION
(Showing dimensions)



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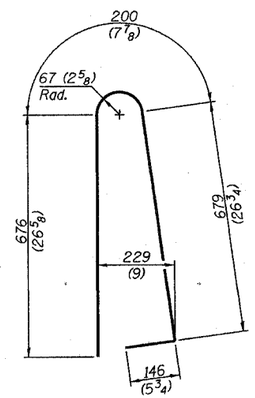
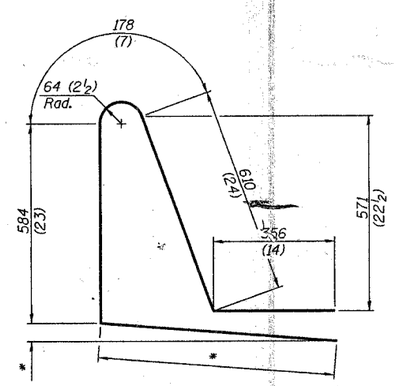
(Showing required reinforcement)



BAR dx(e)

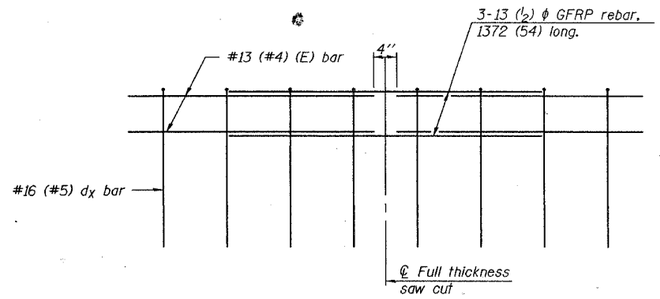


BAR dy(e)
* Per contract plans

GENERAL NOTES

All dimensions shall remain the same as shown on contract plans, except dimensions A and B which are to be revised as shown to provide additional clearance. Additional concrete needed to revise dimension A and B= 0.0422 m /m (.0165 cu. yds./ft.) of parapet.

Place aluminum sheet in curb portion at and near piers. Full thickness saw cut at all other locations. Adjust/add joint locations to maintain 3 to 6 meter (10 to 20 foot) spacing.



GFRP REBAR STIFFENING DETAIL
(Place as shown in parapet section)

CONCRETE PARAPET SLIPFORMING OPTION

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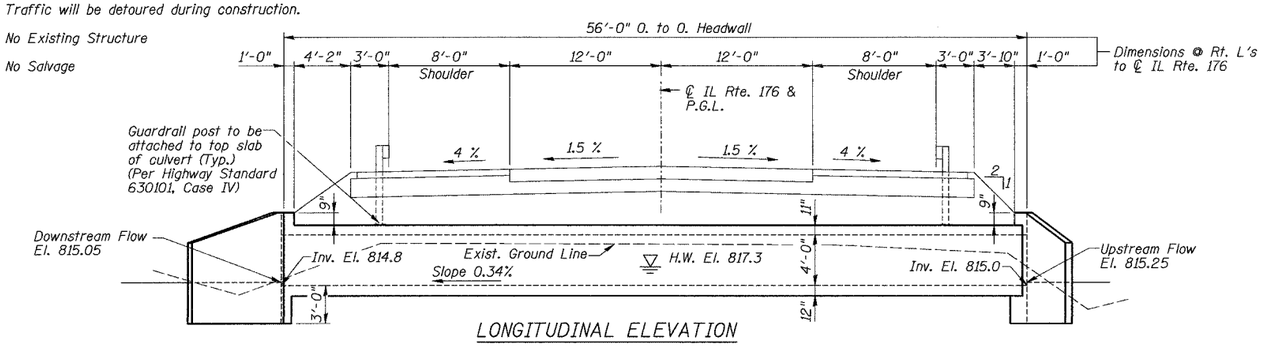
B.M. - PK Nail at Centerline of Roadway
at Sta. 72+18.32, Elev. 828.07

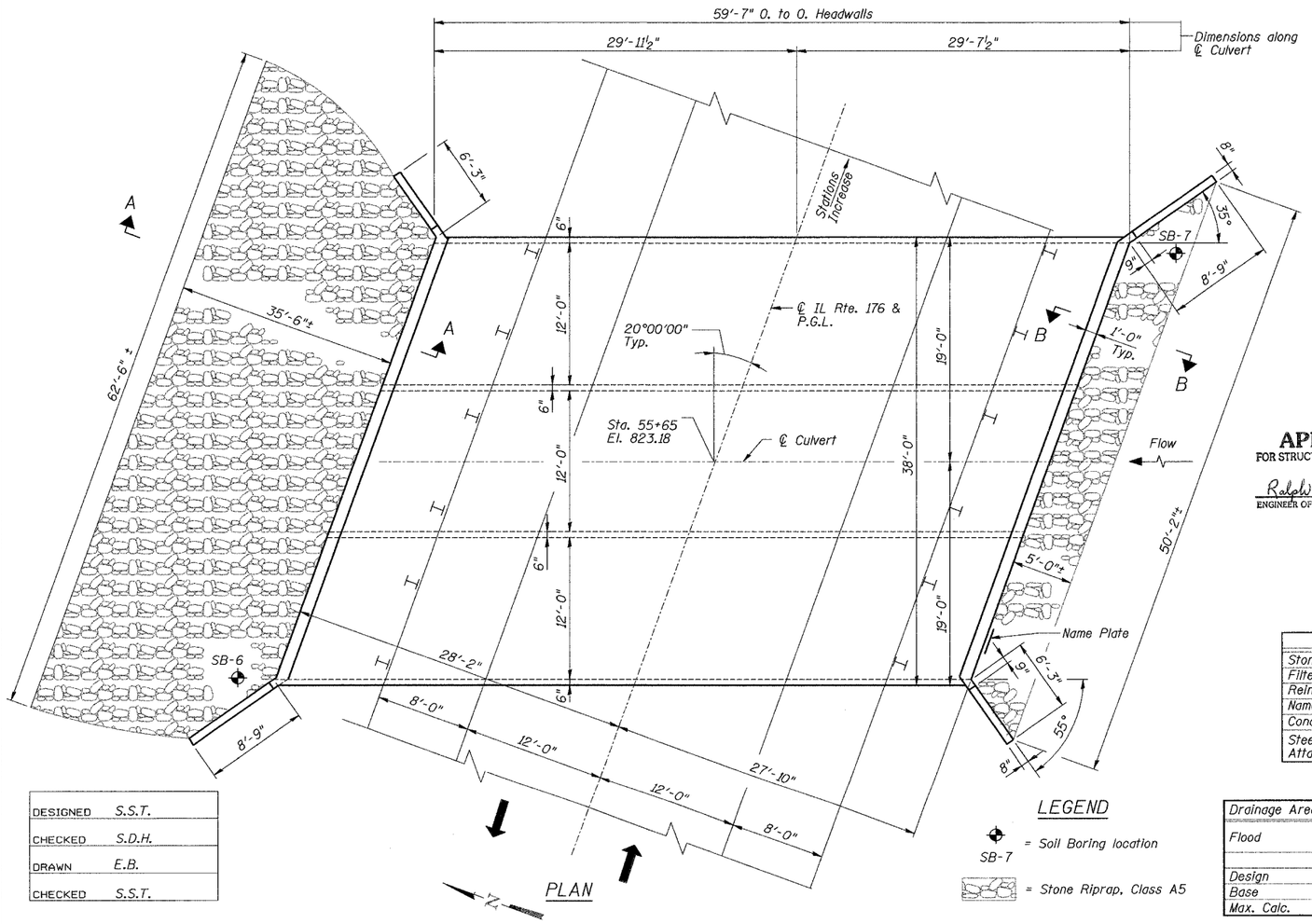
Traffic will be detoured during construction.

No Existing Structure

No Salvage



LONGITUDINAL ELEVATION



PLAN

LEGEND

SB-7 = Soil Boring location

= Stone Riprap, Class A5

DESIGNED	S.S.T.
CHECKED	S.D.H.
DRAWN	E.B.
CHECKED	S.S.T.

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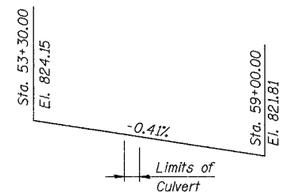
STATION 55+65
BUILT 200_ BY
STATE OF ILLINOIS
F.A.P. RT. 533 SEC. 119R-1-B
LOADING HS20
STR. NO. 056-0073

NAME PLATE
See Std. 515001



PROFILE GRADE LINE
along ℄ IL Rte. 176

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-1-B	McHenry	77	50
FED. ROAD DIST. XXXX	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 1 OF 5 SHEETS

Contract #62340

GENERAL NOTES

A distance half the length of the wingwall but not less than 6 feet of the barrel shall be poured monolithically with the wingwalls.

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

Precast alternate is not allowed.

For backfilling and embankment, see Standard Specifications. Backfill shall be CA-5 or CA-7. Cost included in payment for Concrete Box Culverts.

For guardrail post spacing, see Roadway Plans.

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

DESIGN SPECIFICATIONS

1996 AASHTO with 1997, 1998, 1999, 2000 and 2002 Interims

DESIGN STRESSES

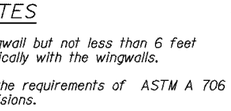
FIELD UNITS

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

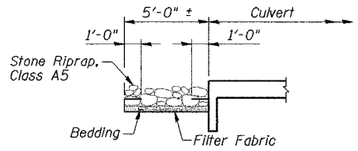
LOADING HS20-44

Allow 50 #/ sq. ft. for Future Wearing Surface

SECTION A-A
(Stone Riprap at downstream side of culvert)

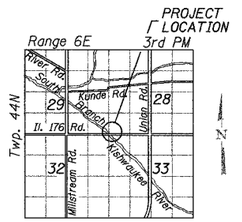


APPROVED
FOR STRUCTURAL ADEQUACY ONLY
Ralph E. Anderson (TSR)
ENGINEER OF BRIDGES AND STRUCTURES



SECTION B-B
(Stone Riprap at upstream side of culvert)

PROJECT LOCATION



LOCATION SKETCH

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Stone Riprap, Class A5	Sq. Yd.	275
Filter Fabric	Sq. Yd.	275
Reinforcement Bars	Pound	36,620
Name Plates	Each	1
Concrete Box Culverts	Cu. Yd.	190.3
Steel Plate Beam Guardrail, Attached to Structures	Foot	100

WATERWAY INFORMATION

Drainage Area = 72.7 mi² Low Grade Elev. 822.5 ft @ Sta. 55+00 - 56+00

Flood	Freq. Yr.	Q ft³/s	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
	10	60		43	816.7		0.3		817.0
Design	50	65		65	817.3		0.4		817.7
Base	100	70		83	817.8		0.5		818.3
Max. Calc.	500	81		112	818.6		0.6		819.2

GENERAL PLAN
IL Route 176 over South Branch of the Kishwaukee River (Overflow Site)
F.A.P. RTE 533, SECTION 119R-1-B
McHENRY COUNTY
STATION 55+65.00
DATE: 08-17-07 S.N. 056-0073

GRAEF, ANHALT, SCHLOEMER & ASSOCIATES INC
CHICAGO ILLINOIS

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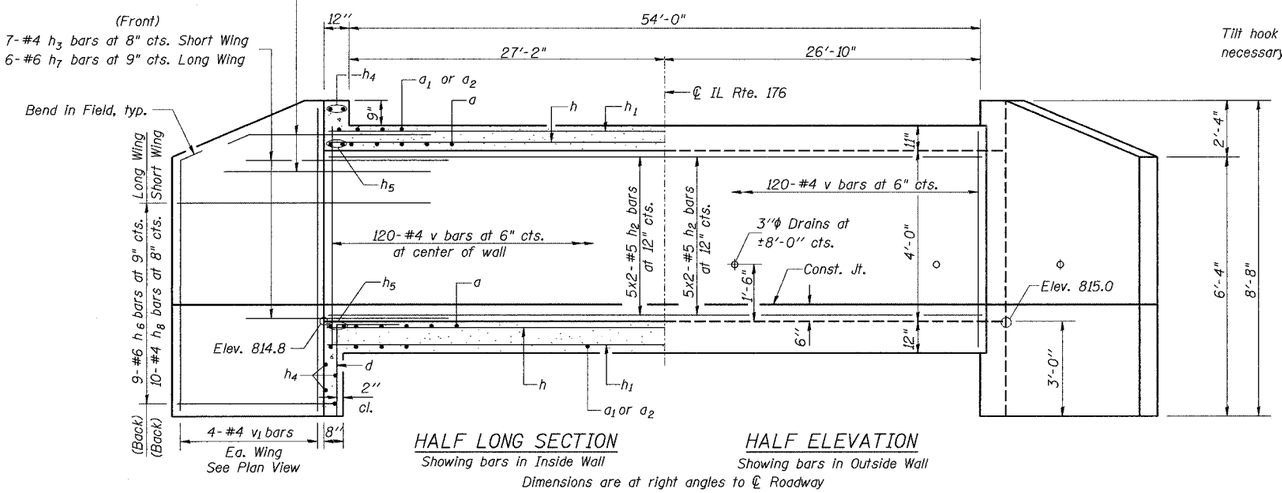
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-1-B	McHenry	77	51
FED.ROAD DIST. XXXX	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 2 OF 5 SHEETS

Contract #62340

(Back)
3-#4 h_3 bars at 8" cts. Short Wing
3-#6 h_7 bars at 9" cts. Long Wing

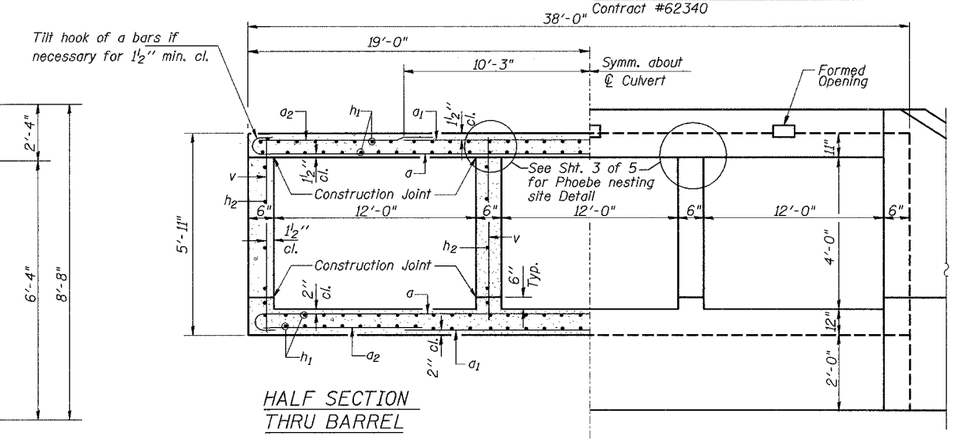
(Front)
7-#4 h_3 bars at 8" cts. Short Wing
6-#6 h_7 bars at 9" cts. Long Wing



HALF LONG SECTION
Showing bars in Inside Wall

HALF ELEVATION
Showing bars in Outside Wall

Dimensions are at right angles to ℄ Roadway



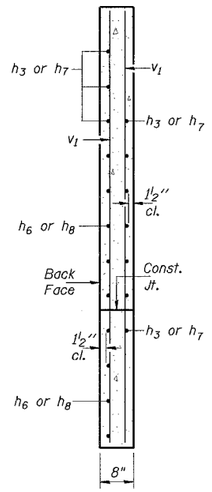
HALF SECTION THRU BARREL

HALF END ELEVATION

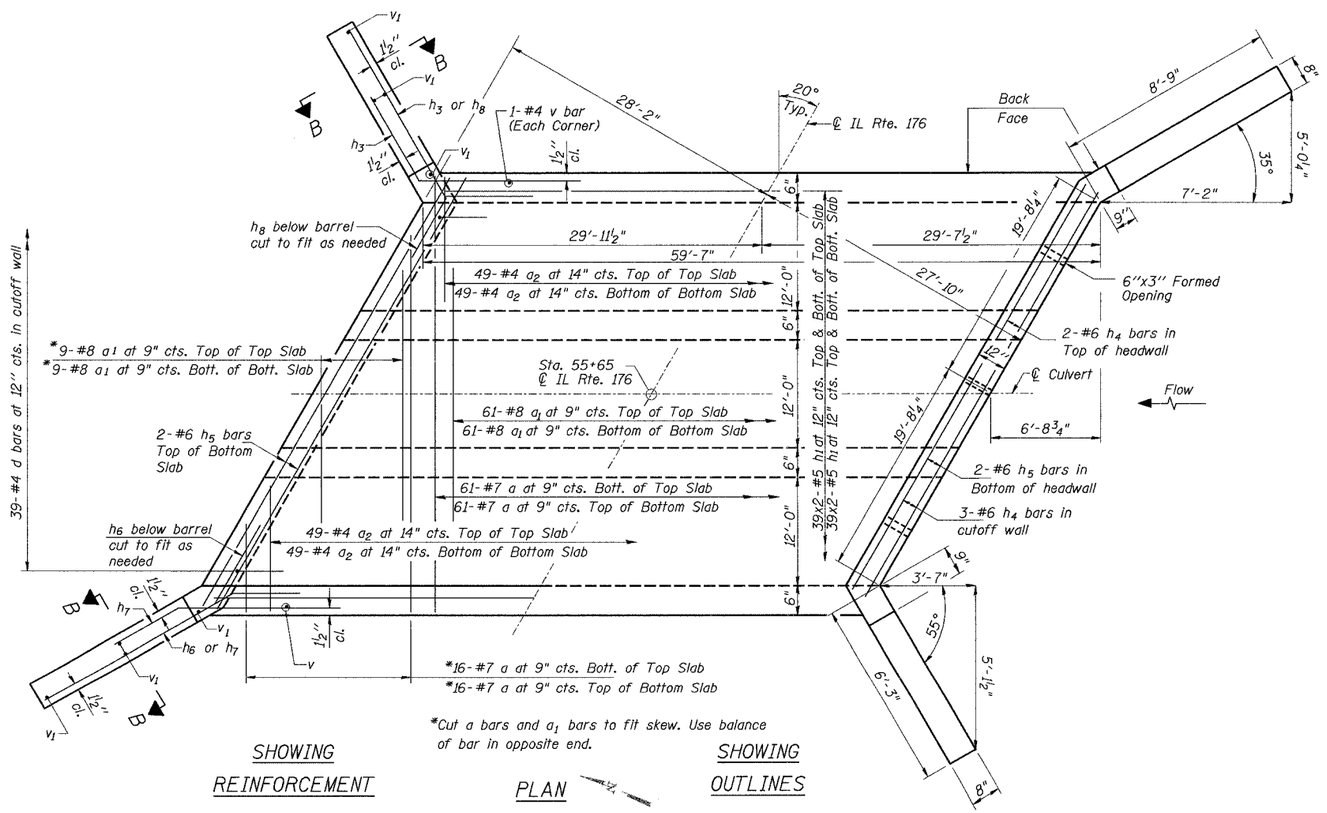
Notes:

A distance of half the length of the wingwall but not less than six feet of the barrel shall be poured monolithically with the wingwalls.

Bars indicated thus 39x2-#4 etc. indicates 39 lines of bars with 2 lengths per line.



SECTION B-B



*Cut a bars and a_1 bars to fit skew. Use balance of bar in opposite end.

SHOWING REINFORCEMENT

PLAN

SHOWING OUTLINES

MINIMUM BAR LAP

Location	Barrels	Wingwalls
Size	Lap	Lap
#4	1'-4"	1'-8"
#5	1'-8"	2'-2"
#6	2'-0"	2'-7"

DESIGNED	S.S.T.
CHECKED	S.D.H.
DRAWN	E.B.
CHECKED	S.S.T.

CULVERT DETAILS

IL Route 176 over South Branch of the Kishwaukee River (Overflow Site)

F.A.P. RTE 533, SECTION 119R-1-B

McHENRY COUNTY

STATION 55+65.00

DATE: 08-17-07 S.N. 056-0073

GRAEF, ANHALT, SCHLOEMER & ASSOCIATES INC
CHICAGO ILLINOIS

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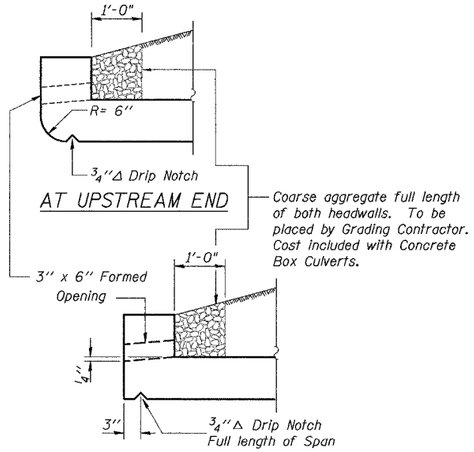
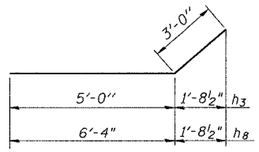
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-1-B	McHenry	77	52
FED. ROAD DIST. XXX		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 3 OF 5 SHEETS

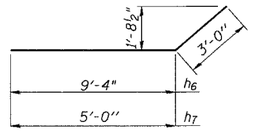
Contract #62340



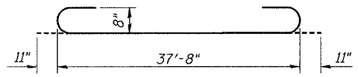
DRAIN DETAIL



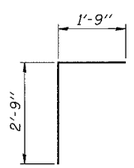
BARS h_3 & h_8



BARS h_6 & h_7



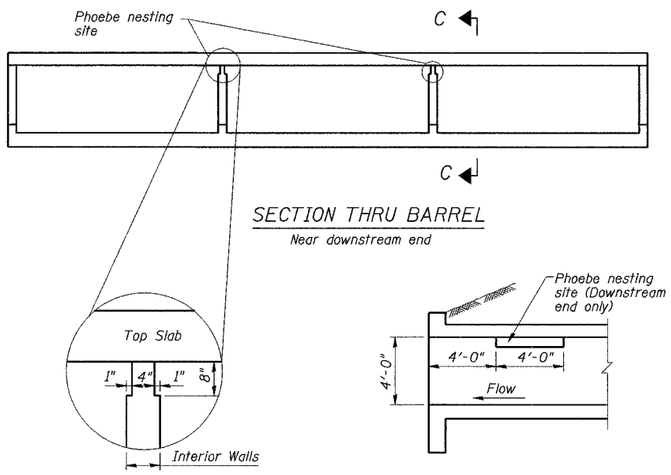
BAR a



BAR d

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a	154	#7	39'-6"	
a_1	140	#8	20'-6"	
a_2	196	#4	9'-6"	
d	78	#4	4'-6"	
h_1	312	#5	30'-9"	
h_2	40	#5	30'-9"	
h_3	20	#4	8'-0"	
h_4	10	#6	39'-8"	
h_5	8	#6	40'-1"	
h_6	18	#6	12'-4"	
h_7	18	#6	8'-0"	
h_8	20	#4	9'-4"	
v	484	#4	5'-7"	
v_1	16	#4	8'-4"	
Concrete Box Culverts		Cu. Yd.	190.3	
Reinforcement Bars		Pound	36,620	



SECTION THRU BARREL

Near downstream end

Note:

Notch formed by rough-finished board attached to and removed with formwork.

SECTION C-C

DESIGNED	S.S.T.
CHECKED	S.D.H.
DRAWN	E.B.
CHECKED	S.S.T.

REINFORCEMENT DETAILS
IL Route 176 over South Branch of the Kishwaukee River (Overflow Site)
F.A.P. RTE 533, SECTION 119R-1-B
McHENRY COUNTY
STATION 55+65.00
DATE: 08-17-07 S.N. 056-0073

GRAEF, ANHALT, SCHLOEMER & ASSOCIATES INC
CHICAGO ILLINOIS

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ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-1-B	McHenry	77	53
FED. ROAD DIST. XXXX	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 4 OF 5 SHEETS

Contract #62340

Geo Services, Inc.
Geotechnical, Environmental and Civil Engineering
805 Amherst Court, Suite 204
Naperville, Illinois 60565
(630) 305-9186

SOIL BORING LOG

PAGE 1 of 2
DATE June 21, 2002
LOGGED BY JR
GSI JOB No. 0209

ROUTE FAP Rte. 533 DESCRIPTION Illinois Route 176 over the S. Branch of the Kishwaukee River
TWNSHP Seneca LOCATION TWP 44 N, R 6E on the south boundary of Sec 28
COUNTY McHenry DRILLING METHOD 3.25" Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO. 056-0073
Station 55+65
BORING NO. SB-6
Station 55+33
Offset 17' Left (North)
Ground Surface Elev. 817.0 ft

Surface Water Elev. N/A
Stream Bed Elev. N/A
Groundwater Elevation:
First Encounter 813.5 ft
Upon Completion N/A ft
After N/A Hrs. N/A ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	
				5.5" TOPSOIL
	3			
	2			Fine to Coarse SAND and GRAVEL-brown-loose (A-1a) FILL
	2	NP	13	
	3			
	3			
-5	2	NP	7	
	2			SANDY CLAY LOAM-dark brown-loose (A-2-6) Possible FILL
	3			
	2	NP	15	
	4			Fine to Medium SAND-trace gravel-brown to gray-medium dense to dense (A-3)
	5			
-10	7	NP	14	
	4			
	6			
	6	NP	16	
	3			
	5			
-15	8	NP	18	
	3			
	5			
	5	NP	14	
	4			
	6			
-20	6	NP	15	

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	
	4			Fine to Medium SAND-trace gravel-brown to gray-medium dense to dense (A-3)
	7			
	6	NP	18	
	7			
	14			
-25	16	NP	14	
	6			
	13			
	11	NP	13	
	9			
	12			
-30	13	NP	16	
	7			
	11			
	15	NP	16	
	4			
	10			
-35	5	NP	15	
	5			
	11			
	10	NP	24	
	7			
	13			
-40	16	NP	16	

The Unconfined Compresaive Strenght (UCS) Failure Mode is Indicated by (B-Bulge, S-Shear, P-Penetrometer) ST-Shelby Tube Sample
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in Italics above moist (%)

Geo Services, Inc.
Geotechnical, Environmental and Civil Engineering
805 Amherst Court, Suite 204
Naperville, Illinois 60565
(630) 305-9186

SOIL BORING LOG

PAGE 2 of 2
DATE June 21, 2002
LOGGED BY JR
GSI JOB No. 0209

ROUTE FAP Rte. 533 DESCRIPTION Illinois Route 176 over the S. Branch of the Kishwaukee River
TWNSHP Seneca LOCATION TWP 44 N, R 6E on the south boundary of Sec 28
COUNTY McHenry DRILLING METHOD 3.25" Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO. 056-0073
Station 55+65
BORING NO. SB-6
Station 55+33
Offset 17' Left (North)
Ground Surface Elev. 817.0 ft

Surface Water Elev. N/A
Stream Bed Elev. N/A
Groundwater Elevation:
First Encounter 813.5 ft
Upon Completion N/A ft
After N/A Hrs. N/A ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	
	5			Fine to Medium SAND-trace gravel-brown to gray-medium dense to dense (A-3)
	6			
	7	NP	25	
				END OF BORING @ 42.5'
-45				
-50				
-55				
-60				

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
-65			
-70			
-75			
-80			

The Unconfined Compressive Strenght (UCS) Failure Mode is Indicated by (B-Bulge, S-Shear, P-Penetrometer) ST-Shelby Tube Sample
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in Italics above moist (%)

DESIGNED	S.S.T.
CHECKED	S.D.H.
DRAWN	E.B.
CHECKED	S.S.T.

BORING LOGS (SHEET 1 of 2)
IL Route 176 over South Branch of the Kishwaukee River (Overflow Site)
F.A.P. RTE 533, SECTION 119R-1-B
McHENRY COUNTY
STATION 55+65.00
DATE: 08-17-07 S.N. 056-0073
GRAEF, ANHALT, SCHLOEMER & ASSOCIATES INC
CHICAGO ILLINOIS

N:\Jobs2006\plot\07\176cdr-Borlog.dgn
8/17/2007
10:39:47 AM

S:\dot\09\176cl-Borlog.dgn 8/17/2007 10:36:48 AM

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-1-B	McHenry	77	54
FED. ROAD DIST. XXX<	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 5 OF 5 SHEETS

Contract #62340

PAGE 1 of 2

DATE June 26, 2002

LOGGED BY JR

GSI JOB No. 0209

Geo Services, Inc.
Geotechnical, Environmental and Civil Engineering
805 Amherst Court, Suite 204
Naperville, Illinois 60565
(630) 305-9186

SOIL BORING LOG

ROUTE FAP Rte. 533 DESCRIPTION Illinois Route 176 over the S. Branch of the Kishwaukee River

TWNSHP Seneca LOCATION TWP 44 N, R 6E on the south boundary of Sec 28

COUNTY McHenry DRILLING METHOD 3.25" Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO. 056-0073
Station 55+65
BORING NO. SB-7
Station 56+10
Offset 15' South (Right)
Ground Surface Elev. 817.0 ft

Surface Water Elev. N/A
Stream Bed Elev. N/A
Groundwater Elevation:
First Encounter 812.5 ft
Upon Completion N/A ft
After N/A Hrs. N/A ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)	
				8.0" Asphalt
	4			
	2			SANDY TOPSOIL-black-loose (Possible FILL)
	2	NP	28	
	7			Fine to Coarse GRAVEL-brown-loose (A-1a) Possible FILL
	5			
-5	4	NP	6	
	3			Fine to Coarse SAND-trace to some gravel-brown-loose to medium dense (A-1b)
	3			
	6	NP	13	
	2			
	4			
-10	7	NP	11	
	3			Fine to Medium SAND-trace gravel-gray-very loose to medium dense (A-3)
	1			
	2	NP	16	
	2			
	5			
-15	5	NP	16	
	6			
	4			
	4	NP	10	
	6			
	6			
-20	6	NP	19	
	2			Fine to Medium SAND-trace gravel-gray-very loose to medium dense (A-3)
	3			
	4	NP	15	
	2			
	3			
-25	1	NP	15	
	14			Fine to Coarse SAND-trace to some gravel-gray-medium dense to dense (A-3)
	16			
	16	NP	10	
	16			
	17			
-30	21	NP	7	
	8			Fine to Medium SAND-trace gravel-gray-medium dense (A-3)
	8			
	8	NP	10	
	14			
	15			
-35	17	NP	6	
	14			
	6			
	6	NP	15	
	6			
	7			
-40	7	NP	8	

The Unconfined Compressive Strenght (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) ST-Shelby Tube Sample
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in italics above moist (%)

PAGE 2 of 2

DATE June 26, 2002

LOGGED BY JR

GSI JOB No. 0209

Geo Services, Inc.
Geotechnical, Environmental and Civil Engineering
805 Amherst Court, Suite 204
Naperville, Illinois 60565
(630) 305-9186

SOIL BORING LOG

ROUTE FAP Rte. 533 DESCRIPTION Illinois Route 176 over the S. Branch of the Kishwaukee River

TWNSHP Seneca LOCATION TWP 44 N, R 6E on the south boundary of Sec 28

COUNTY McHenry DRILLING METHOD 3.25" Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO. 056-0073
Station 55+65
BORING NO. SB-7
Station 56+10
Offset 15' South (Right)
Ground Surface Elev. 817.0 ft

Surface Water Elev. N/A
Stream Bed Elev. N/A
Groundwater Elevation:
First Encounter 812.5 ft
Upon Completion N/A ft
After N/A Hrs. N/A ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)	
	6			Fine to Medium SAND-trace gravel-gray-medium dense (A-3)
	7			
	6	NP	16	
	8			Fine to Medium SAND-some gravel-gray-medium dense (A-3)
	10			
-45	11	NP	8	
				END OF BORING @ 45.0'
-50				
-55				
-60				
-65				
-70				
-75				
-80				

The Unconfined Compressive Strenght (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) ST-Shelby Tube Sample
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in italics above moist (%)

DESIGNED	S.S.T.
CHECKED	S.D.H.
DRAWN	E.B.
CHECKED	S.S.T.

BORING LOGS (SHEET 2 of 2)
IL Route 176 over South Branch of the Kishwaukee River (Overflow Site)
F.A.P. RTE 533, SECTION 119R-1-B
McHENRY COUNTY
STATION 55+65.00
DATE: 08-17-07 S.N. 056-0073

GRAEF, ANHALT, SCHLOEMER & ASSOCIATES INC
CHICAGO ILLINOIS

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\\Plot\06\176Gul-Borlog-2.dgn 8/17/2007 10:38:27 AM

CONTRACT NO.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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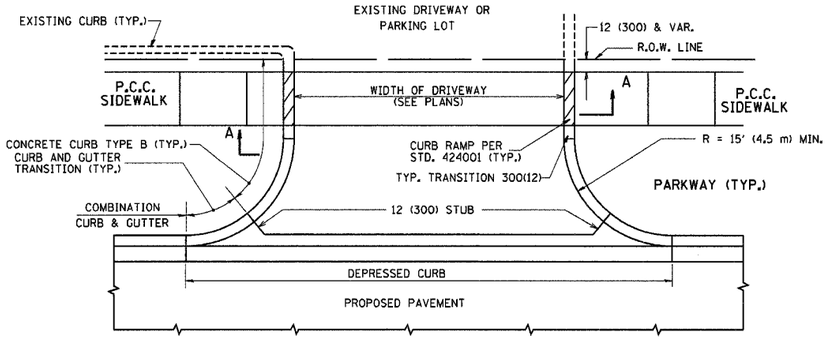
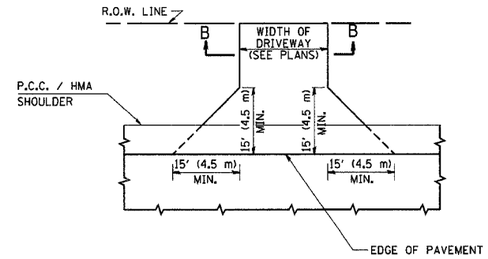
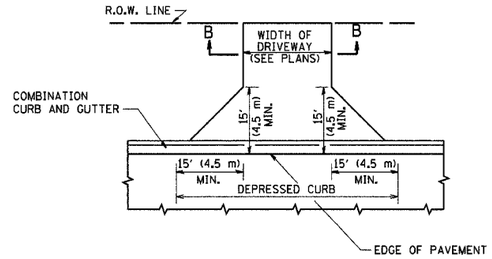
STA.		TO STA.		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



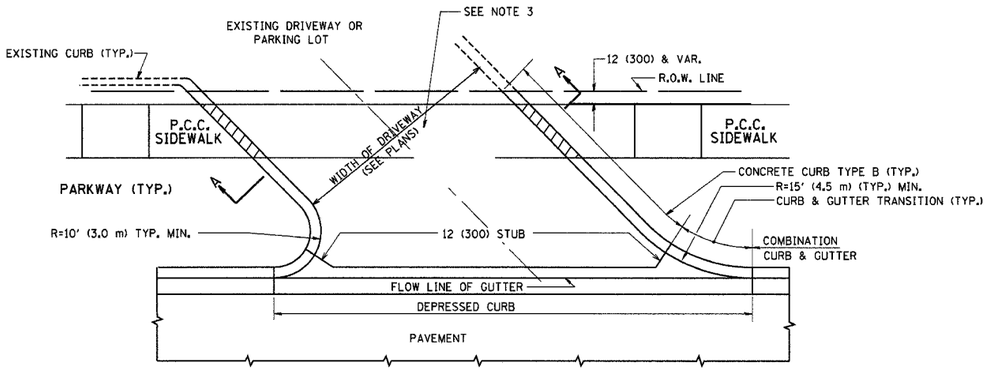
WITH CONCRETE CURB, TYPE B



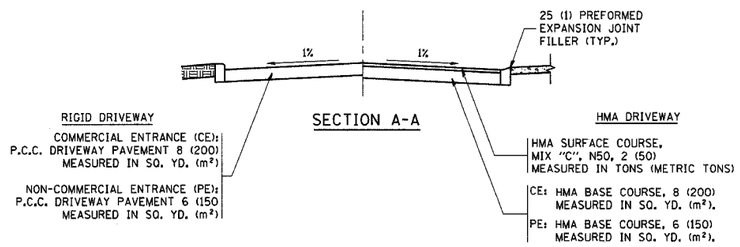
ADJACENT TO P.C.C. / HMA SHOULDER

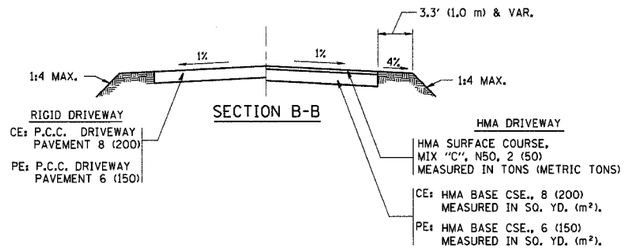


ADJACENT TO CURB AND GUTTER



WITH CONCRETE CURB, TYPE B





RURAL FIELD ENTRANCE (FE)

HMA SURFACE COURSE, MIX "C", N50, 2 (50) MEASURED IN TONS (METRIC TONS)

AGGREGATE BASE CSE., TYPE A 8 (200) MEASURED IN SQ. YD. (m²).

GENERAL NOTES:

DRIVEWAY SLOPES, LOCATIONS, & GEOMETRIC LAYOUT SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "HANDBOOK FOR POLICY ON PERMITS FOR ACCESS DRIVEWAYS TO STATE HIGHWAYS". FOR FURTHER LAYOUT REQUIREMENTS, REFER TO ILLUSTRATIONS IN THE PERMIT HANDBOOK. DRIVEWAYS SHALL BE REPLACED IN KIND, UNLESS OTHERWISE NOTED ON THE PLANS.

COMMERCIAL DRIVEWAYS SHALL BE CONSTRUCTED WITH CONCRETE CURB, TYPE B RETURNS EXCEPT WHEN THE SIDEWALK EDGE IS 4 FEET (1.2 METERS) OR LESS FROM THE BACK OF CURB, CONSTRUCT A FLARE DRIVEWAY WITHOUT CURB.

THE RESIDENT ENGINEER SHALL CONTACT THE TRAFFIC PERMIT OFFICE AT 847/ 705-4131 FOR ANY QUESTIONS ON DRIVEWAYS SHOWN IN THE PLANS; SPECIFICALLY IN REFERENCE TO ADDITIONAL AND/OR RELOCATION/REMOVAL OF A DRIVEWAY.

COMBINATION CONCRETE CURB & GUTTER SHALL BE MEASURED STRAIGHT ACROSS THE DRIVEWAY. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR THE CURB & GUTTER TRANSITION.

1 (25) PREFORMED EXPANSION JOINT FILLER WILL NOT BE PAID SEPARATELY, BUT SHALL BE CONSIDERED INCLUDED IN THE COST OF THE P.C.C. DRIVEWAY PAVEMENT OR P.C.C. SIDEWALK.

WHEN THE P.C.C. SIDEWALK EXTENDS THROUGH THE DRIVEWAY, THE THICKNESS OF THE SIDEWALK IN THE DRIVEWAY AREA SHALL BE THE SAME AS THE DRIVEWAY THICKNESS. SIDEWALK WILL BE PAID FOR AS P.C.C. SIDEWALK OF THE THICKNESS SPECIFIED. SIDEWALK CROSS SLOPE THRU DRIVEWAY AREA TO BE A MAXIMUM OF 1:50.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE NOTED

REVISIONS	
NAME	DATE
R. SHAH	11-04-95
J. POLLASTRINI	08-12-96
J. POLLASTRINI	12-14-96
A. ABBAS	03-21-97
T. HOLTZ	04-08-97
M. GOMEZ	04-06-01
P. LOFLEUR	04-15-03
R. BORO	01-01-07

ILLINOIS DEPARTMENT OF TRANSPORTATION

DRIVEWAY DETAILS DISTANCE BETWEEN R.O.W. AND FACE OF CURB & EDGE OF SHOULDER >= 15' (4.5 m)

SCALE: VERT. NONE HORIZ.

DRAWN BY

CHECKED BY

BD0156-07 (BD-01)

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CONTRACT NO.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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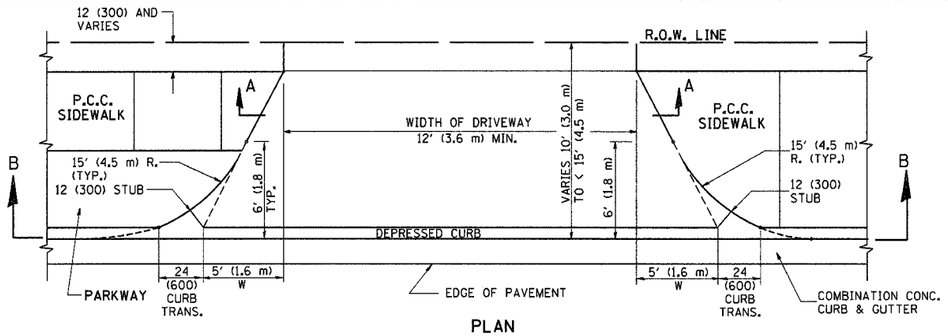
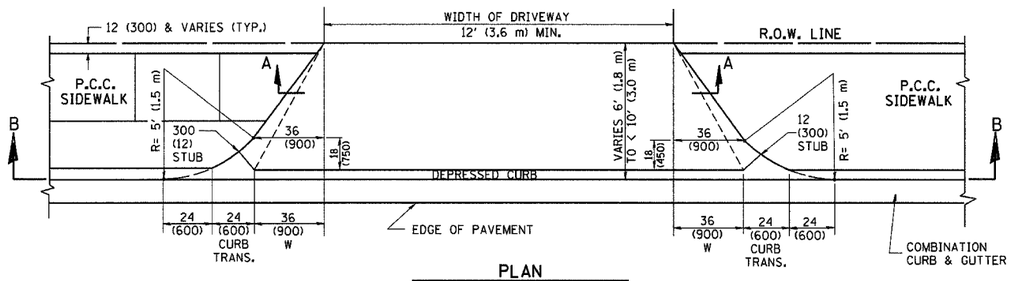
STA.		TO STA.		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



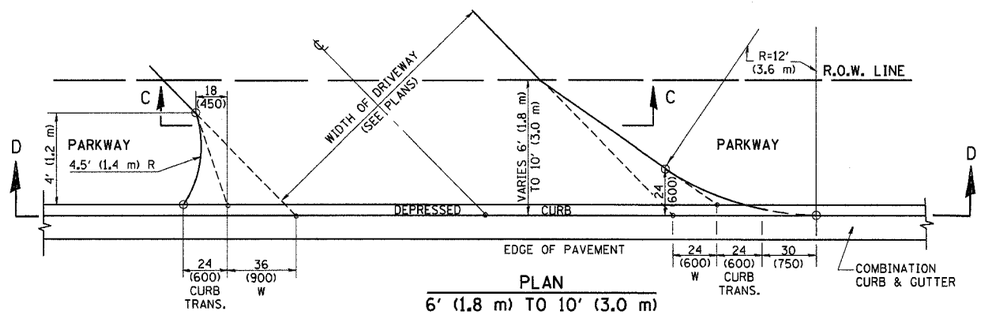
PLAN

10' (3.0 m) TO < 15' (4.5 m)



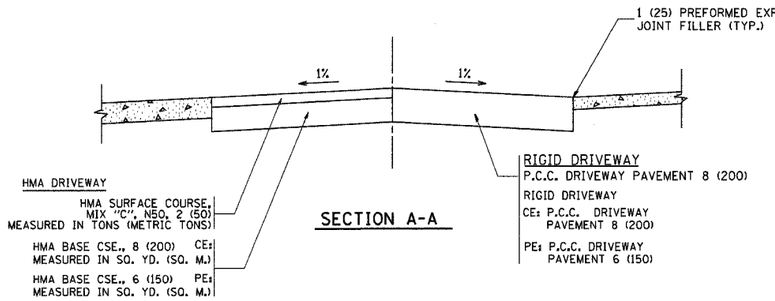
PLAN

6' (1.8 m) TO < 10' (3.0 m)

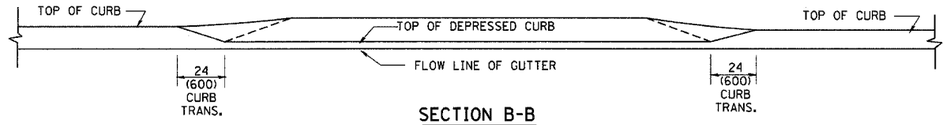


PLAN

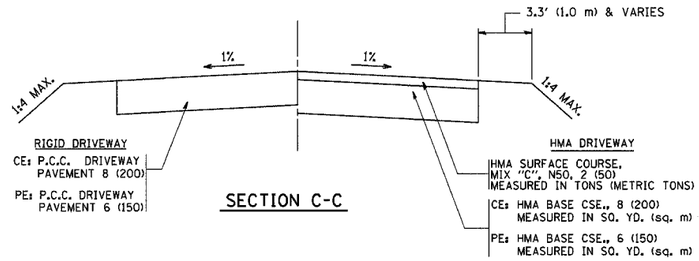
6' (1.8 m) TO 10' (3.0 m)



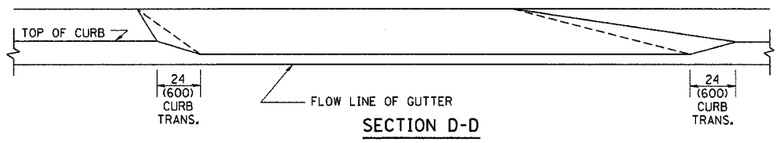
SECTION A-A



SECTION B-B



SECTION C-C



SECTION D-D

GENERAL NOTES

DRIVEWAY SLOPES, LOCATIONS, & GEOMETRIC LAYOUT SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "HANDBOOK FOR POLICY ON PERMITS FOR ACCESS DRIVEWAYS TO STATE HIGHWAYS". FOR FURTHER LAYOUT REQUIREMENTS, REFER TO ILLUSTRATION 10 IN THE PERMIT HANDBOOK. WHERE SIDEWALKS EXIST, DRIVEWAYS SHALL BE REPLACED WITH RIGID PAVEMENT. WHERE NO SIDEWALKS EXIST, DRIVEWAYS SHALL BE REPLACED IN KIND. SIDEWALK CROSS SLOPE THRU DRIVEWAY AREA TO BE A MAXIMUM OF 1:50.

WHEN THE DISTANCE BETWEEN R.O.W. AND THE BACK OF CURB IS EQUAL TO OR LESS THAN 8' (2.4 m), THE P.C.C. SIDEWALK SHALL EXTEND TO THE BACK OF CURB.

THE RESIDENT ENGINEER SHALL CONTACT THE TRAFFIC PERMIT OFFICE AT 847/ 705-4131 FOR ANY QUESTIONS ON DRIVEWAYS SHOWN IN THE PLANS; SPECIFICALLY IN REFERENCE TO ADDITIONAL AND/OR RELOCATION/REMOVAL OF A DRIVEWAY.

COMBINATION CONCRETE CURB & GUTTER SHALL BE MEASURED STRAIGHT ACROSS THE DRIVEWAY. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR THE CURB & GUTTER TRANSITION.

THE 1 (25) PREFORMED EXPANSION JOINT FILLER WILL NOT BE PAID SEPARATELY, BUT SHALL BE CONSIDERED INCLUDED IN THE COST OF THE P.C.C. DRIVEWAY PAVEMENT OR P.C.C. SIDEWALK.

"W" VARIES FROM 36 (900) TO 5' (1.5 m) PROPORTIONAL TO THE LENGTH (L), FROM 6' (1.8 m) TO 10' (3 m).

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

REVISIONS	
NAME	DATE
R. SHAH	11/06/95
J. POLLASTRINI	08/12/96
J. POLLASTRINI	12/14/96
A. ABBAS	03/21/97
T. HOLTZ	04/08/97
M. GOMEZ	04/06/01
P. LaFLEUR	04/15/03
R. BORO	01/01/07

ILLINOIS DEPARTMENT OF TRANSPORTATION

DRIVEWAY DETAILS DISTANCE BETWEEN ROW AND FACE OF CURB < 15' (4.5 m)

SCALE: VERT. NONE HORIZ.

DRAWN BY

CHECKED BY

BD400-02 (BD-02)

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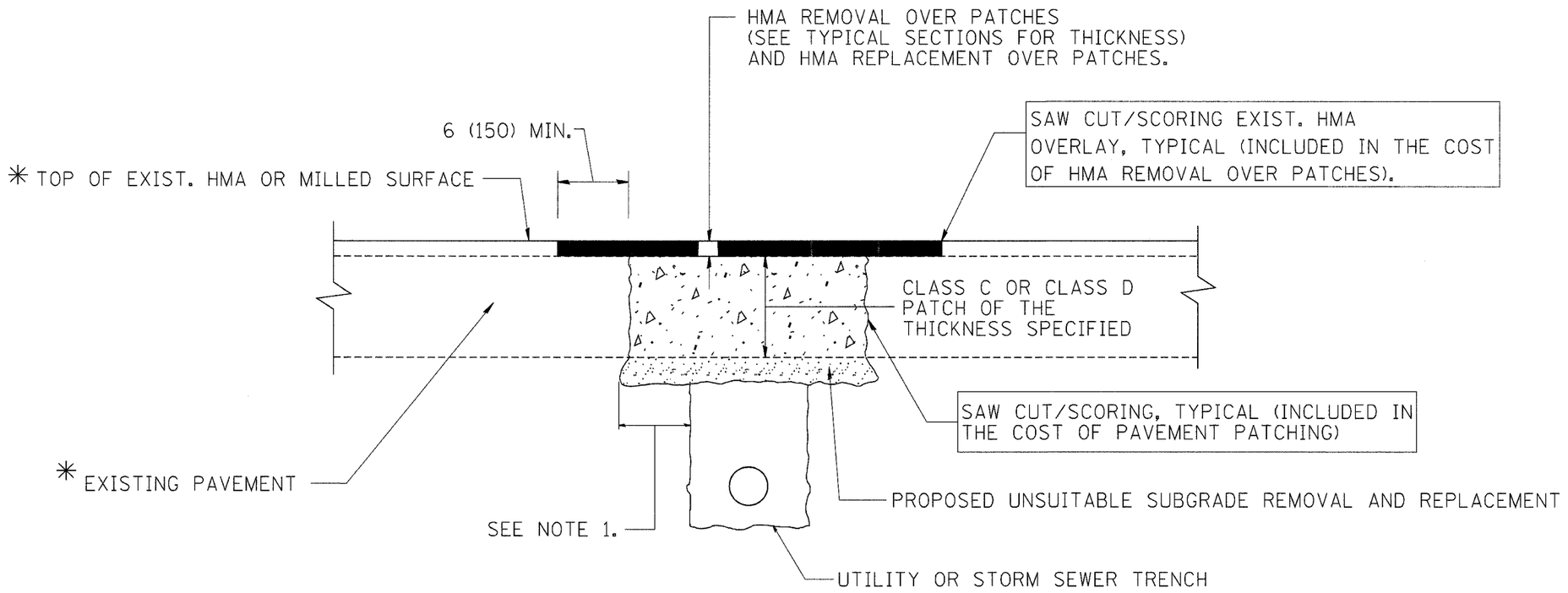
USER NAME = bauerdl

CONTRACT NO.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-1-B	McHENRY	77	57
STA.		TO STA.		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



* SEE TYPICAL SECTIONS FOR THICKNESS AND MATERIALS

NOTES:

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

SEQUENCE OF CONSTRUCTION

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

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

REVISIONS	
NAME	DATE
R. SHAH	10/25/94
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
ART ABBAS	04/27/98
R. BORO	01/01/07

ILLINOIS DEPARTMENT OF TRANSPORTATION

PAVEMENT PATCHING FOR HMA SURFACED PAVEMENT

SCALE: VERT. NONE HORIZ. DRAWN BY CHECKED BY

BD400-04 (BD-22)

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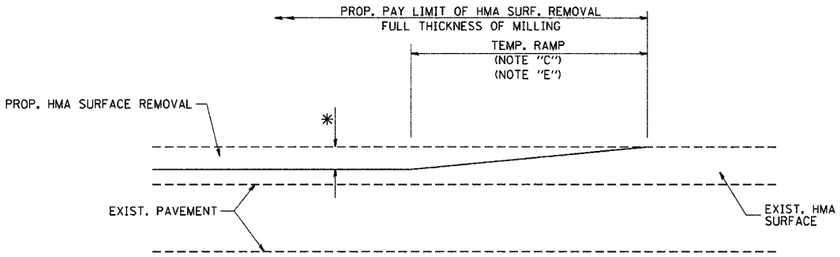
CONTRACT NO.

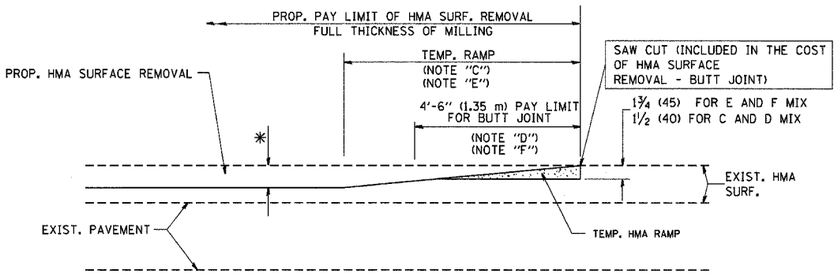
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-1 B	MCHENRY	77	58
STA.		TO STA.		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



MILLED TEMPORARY RAMP

(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

OPTION 1

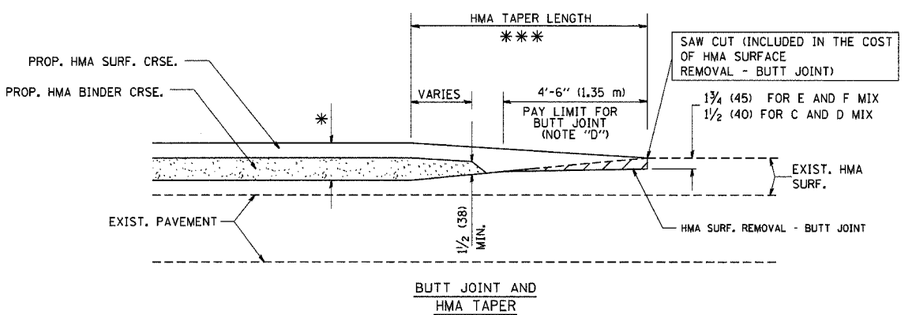


HMA CONSTRUCTED TEMPORARY RAMP

(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

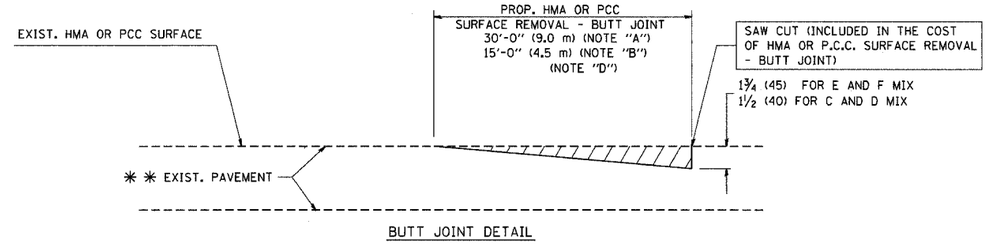
OPTION 2

TYPICAL TEMPORARY RAMP

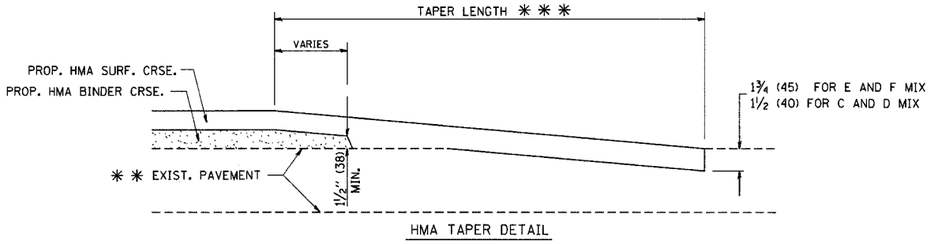


BUTT JOINT AND HMA TAPER

TYPICAL BUTT JOINT AND HMA TAPER FOR MILLING AND RESURFACING



BUTT JOINT DETAIL



HMA TAPER DETAIL

TYPICAL BUTT JOINT AND HMA TAPER FOR RESURFACING ONLY

** PC CONCRETE, HMA OR HMA RESURFACED PAVEMENT.

NOTES

A: MAINLINE ROADWAYS AND MAJOR SIDE ROADS.

B: MINOR SIDE ROADS.

C: THE TEMP. RAMP SHALL BE CONSTRUCTED IMMEDIATELY UPON REMOVAL OF THE EXISTING HMA SURFACE.

D: THE BUTT JOINT SHALL BE CONSTRUCTED IMMEDIATELY PRIOR TO PLACING THE PROPOSED HMA COURSES.

E: TAPER THE TEMP. RAMP AT A RATE OF 3'-0" (900 mm) PER 1 INCH (25 mm) OF MILLING THICKNESS.

F: INSTALLATION AND REMOVAL OF THE 4'-6" (1.35 m) TEMP. RAMP IS INCLUDED IN COST OF HMA SURFACE REMOVAL - BUTT JOINT

G: SEE ARTICLE 406.08 AND 406.14 OF THE STANDARD SPECIFICATIONS FOR "HMA AND/OR PCC SURFACE REMOVAL, BUTT JOINT".

* SEE TYPICAL SECTIONS FOR MILLING THICKNESS.

*** 20'-0" (6.1 m) PER 1 (25) RESURFACING (NOTE "A")
10'-0" (3.0 m) PER 1 (25) RESURFACING (NOTE "B")

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

BASIS OF PAYMENT:

THE BUTT JOINT WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE YARD (SQUARE METER) FOR "HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT" OR FOR "PORTLAND CEMENT CONCRETE SURFACE REMOVAL- BUTT JOINT".

REVISIONS	
NAME	DATE
M. DE YONG	6-13-90
M. DE YONG	7-3-90
M. DE YONG	3-27-92
R. SHAH	09/09/94
R. SHAH	10/25/94
A. ABBAS	03/21/97
M. GOMEZ	04/06/01
R. BORO	01/01/07

ILLINOIS DEPARTMENT OF TRANSPORTATION

BUTT JOINT AND HMA TAPER DETAILS

SCALE: VERT. NONE, HORIZ. NONE

DRAWN BY

CHECKED BY

BD400-05 (VI=BD32)

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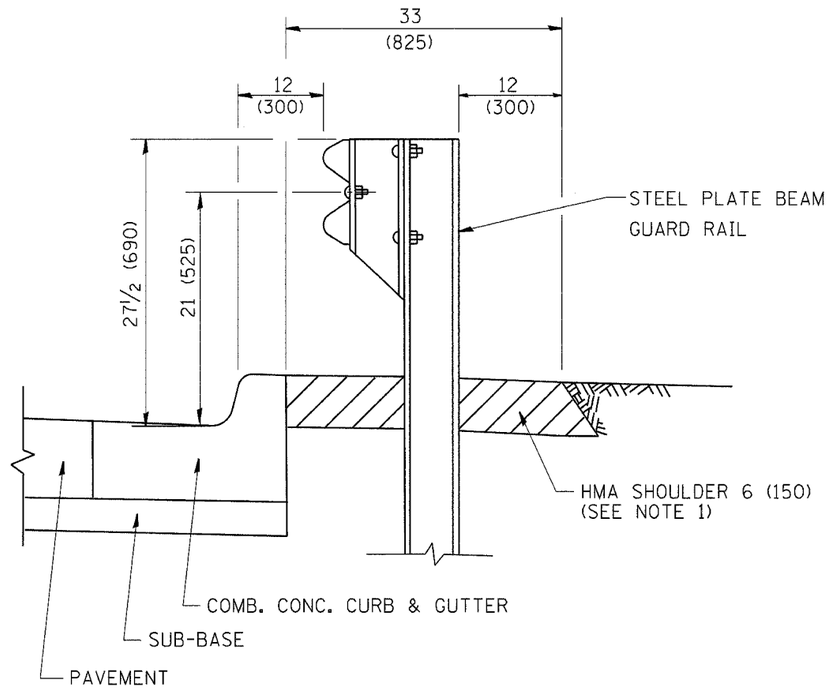
USER NAME = bauerdl



NOTES: 1. THE HMA SHOULDER SHALL EXTEND UNDER THE TRAFFIC BARRIER TERMINAL

2. GUARD RAIL MAY BE PLACED AT THE BACK OF CURB WHEN DIRECTED BY THE ENGINEER.

BASIS OF PAYMENT: HMA SHOULDER 6 (150) WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE YARD (SQUARE METER) FOR "HOT-MIX ASPHALT SHOULDER 6" (150 mm)".

STEEL PLATE BEAM GUARD RAIL AND TRAFFIC BARRIER TERMINAL, OF THE TYPE SPECIFIED WILL BE PAID FOR SEPARATELY.

DETAILS FOR STEEL PLATE BEAM GUARD RAIL ADJACENT TO CURB AND GUTTER

[FOR ROADWAY SPEED 35 MPH (60 kmh) TO 45 MPH (70 kmh)]

PLOT DATE = 3/5/2007
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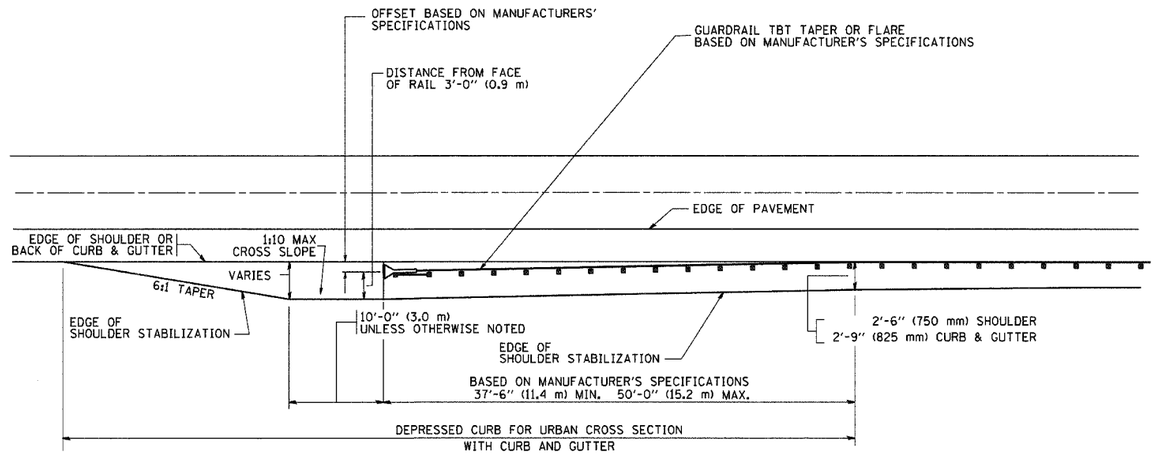
PLOT SCALE = 69.8088 ' / IN.
USER NAME = bauer-rl

CONTRACT NO.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-1-B	MCHENRY	77	59
STA.	TO STA.			
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



STABILIZATION AT TBT TY. 1 SPL.

TBT = TRAFFIC BARRIER TERMINAL

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

REVISIONS	
NAME	DATE
M. DE YONG	09-22-90
M. DE YONG	07-14-92
R. SHAH	09/09/94
R. SHAH	10/25/94
R. SHAH	02/23/95
A. ABBAS	03/21/97
E. GOMEZ	08/28/00
R. BORO	01/01/07

ILLINOIS DEPARTMENT OF TRANSPORTATION

DETAILS FOR STEEL PLATE BEAM GUARD RAIL ADJACENT TO CURB AND GUTTER STABILIZATION AT TBT TY 1 SPL.

SCALE: VERT. NONE HORIZ.

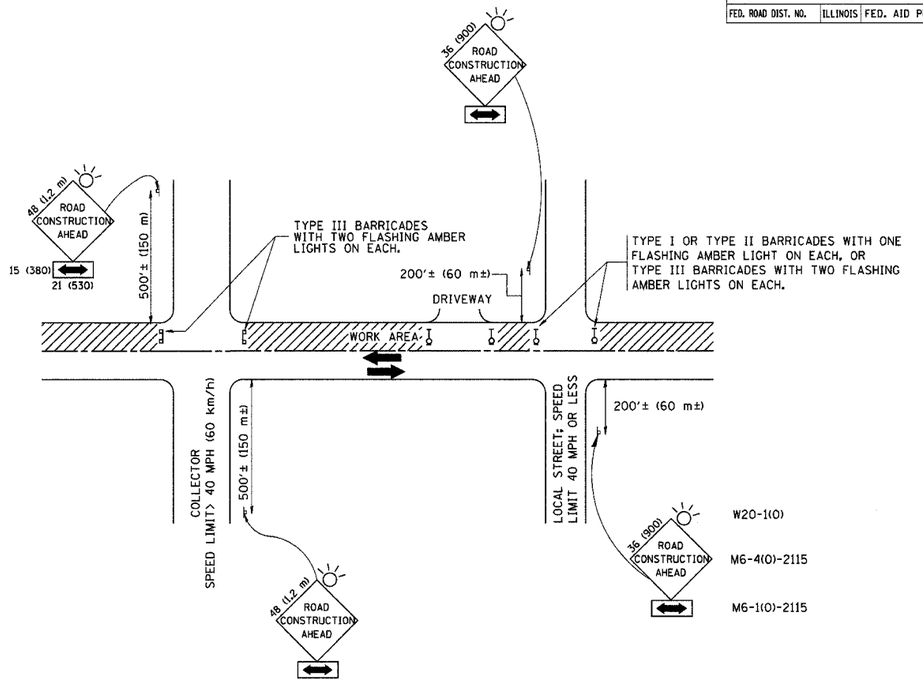
DRAWN BY jls

CHECKED BY

BD600-10 (BD 34)

CONTRACT NO.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
583	1119R-1-B	McHENRY	77	60
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS

NOTES:

A. FOR NO LANE RESTRICTION ON THE SIDE ROAD OR DRIVEWAYS

1. SIDE ROAD WITH A SPEED LIMIT OF 40 MPH (60 km/h) OR LESS AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
   a) ONE **ROAD CONSTRUCTION AHEAD** SIGN 36 x 36 (900x900) WITH A FLASHER AND FLAG MOUNTED ON IT APPROXIMATELY 200' (60 m) IN ADVANCE OF THE MAIN ROUTE.
   b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE I, TYPE II OR TYPE III BARRICADES. 1/3 OF THE CROSS SECTION OF THE CLOSED PORTION.
2. SIDE ROAD WITH A SPEED LIMIT GREATER THAN 40 MPH (60 km/h) AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
   a) ONE **ROAD CONSTRUCTION AHEAD** SIGN 48 x 48 (1.2 m x 1.2 m) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 500' (150 m) IN ADVANCE OF THE MAIN ROUTE.
   b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE III BARRICADES. 1/2 OF THE CROSS SECTION OF THE CLOSED PORTION.
3. WHEN THE SIDE ROAD LIES BETWEEN THE BEGINNING OF THE MAINLINE SIGNING AND THE WORK ZONE, A SINGLE HEADED ARROW (M6-1) SHALL BE USED IN LIEU OF THE DOUBLE HEADED ARROW (M6-4).

B. FOR A LANE CLOSURE ON A SIDE ROAD OR DRIVEWAY:

USE APPLICABLE PORTIONS OF THE TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES (STD. 701501, STD. 701606 OR THE APPROPRIATE STANDARD). THE SPACING OF SIGNS AND BARRICADES SHALL BE ADJUSTED FOR FIELD CONDITIONS AS DIRECTED BY THE ENGINEER. THE DIRECTIONAL ARROW SHALL BE COVERED OR REMOVED WHEN NO LONGER CONSISTENT WITH THE SIDE ROAD LANE CLOSURE.

C. ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAY UNLESS OTHERWISE NOTED.

D. THE TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS SHALL BE INCIDENTAL TO THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

All dimensions are in millimeters (inches) unless otherwise shown.

REVISIONS	
NAME	DATE
LHA	6/89
T. RAMMACHER	09/08/94
J. OBERLE	10/18/95
A. HOUSEH	03/06/96
A. HOUSEH	10/15/96
T. RAMMACHER	01/06/00

ILLINOIS DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS

SCALE: NONE

DRAWN BY

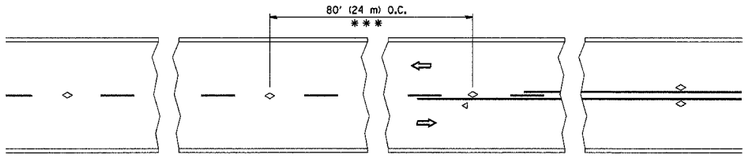
CHECKED BY

TC-10

PLOT DATE = 3/6/2007
FILE NAME = k:\dist\civil\tc10.dgn
PLOT SCALE = 1.000 '/ IN.
USER NAME = bauerdl

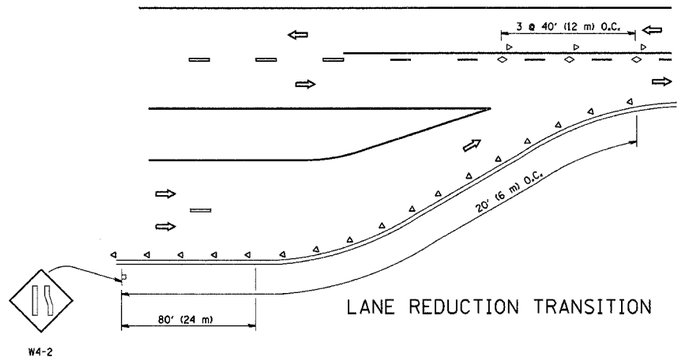
CONTRACT NO.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-1-B	McHENRY	77	61
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

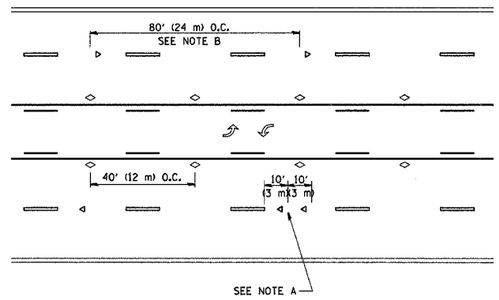


* * * REDUCE TO 40' (12 m) O.C. ON CURVES WITH POSTED OR ADVISORY SPEED 45 M.P.H. (70 km/h) OR LESS.

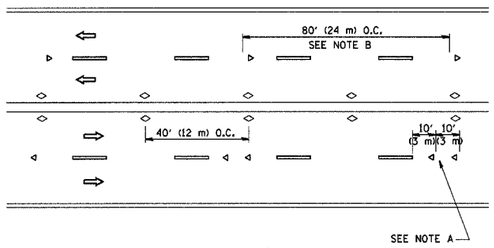
TWO-LANE/TWO-WAY



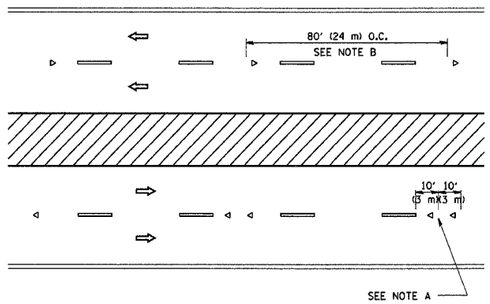
LANE REDUCTION TRANSITION



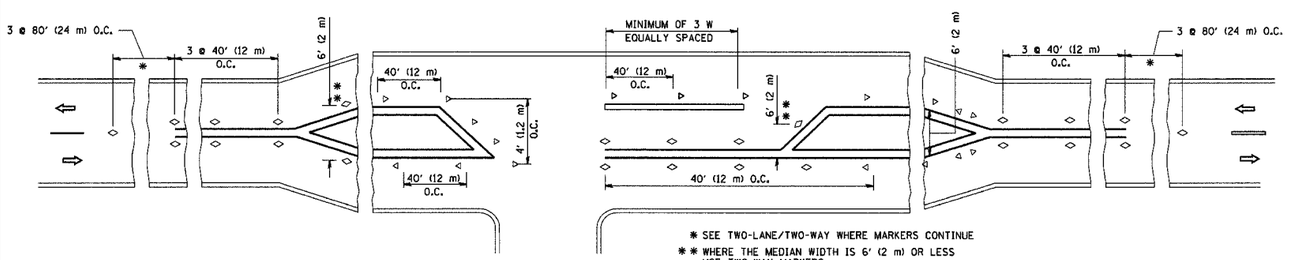
TWO-WAY LEFT TURN



MULTI-LANE/UNDIVIDED



MULTI-LANE/DIVIDED



* SEE TWO-LANE/TWO-WAY WHERE MARKERS CONTINUE

** WHERE THE MEDIAN WIDTH IS 6' (2 m) OR LESS USE TWO-WAY MARKERS.

LEFT TURN

GENERAL NOTES

1. MARKERS USED WITH DASHED LINES SHALL BE CENTERED IN THE GAP BETWEEN SEGMENTS.
2. MARKERS USED ADJACENT TO SOLID LINES SHALL BE OFFSET 2 TO 3 (50 TO 75) TOWARD TRAFFIC AS SHOWN.
3. MARKERS THROUGH TANGENTS LESS THAN 500' (150 m) IN LENGTH BETWEEN CURVES SHALL BE INSTALLED AT THE LESSER OF THE TWO CURVE SPACINGS.

LANE MARKER NOTES

B. REDUCE TO 40' (12 m) O.C. ON CURVES WHERE ADVISORY SPEEDS ARE 10 M.P.H (20 km/h) LOWER THAN POSTED SPEEDS.

A. USE DOUBLE LANE LINE MARKERS SPACED AS SHOWN.

SYMBOLS

- YELLOW STRIPE
- WHITE STRIPE
- ONE-WAY AMBER MARKER
- ONE-WAY CRYSTAL MARKER (W/O)
- TWO-WAY AMBER MARKER

DESIGN NOTES

1. DOUBLE LANE LINE MARKERS SHALL BE USED UNLESS SPECIFIED OTHERWISE.
2. EXCEPT AS SHOWN ON THE LANE REDUCTION TRANSITION AND FREEWAY EXIT RAMP DETAIL, MARKERS ARE NOT TO BE SPECIFIED ON RIGHT EDGE LINES.
3. THE EXACT MARKER LIMITS, SPACING, AND COLOR SHOULD BE INCLUDED IN THE PLANS.
4. MARKERS SHOULD NOT BE USED ALONGSIDE CURBS EXCEPT FOR EXTREMELY SHORT SECTIONS OF CURBS WHERE NOT MORE THAN TWO MARKERS WOULD BE INVOLVED.

All dimensions are in inches (millimeters) unless otherwise shown.

REVISIONS NAME	DATE
T. RAMMACHER	09-19-94
T. RAMMACHER	03-12-99
T. RAMMACHER	01-06-00

ILLINOIS DEPARTMENT OF TRANSPORTATION

TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT)

SCALE: NONE

DRAWN BY CADD

CHECKED BY TC-11

PLOT DATE = 3/6/2007
FILE NAME = K:\district1\util.dgn
PLOT SCALE = 50.0000 '/ IN.
USER NAME = baumerdl

CONTRACT NO.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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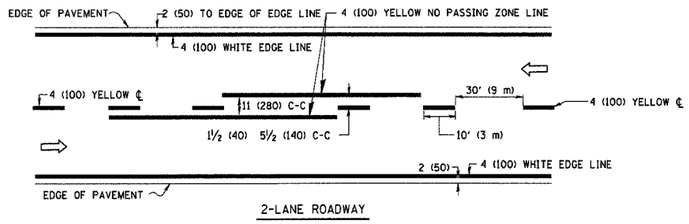
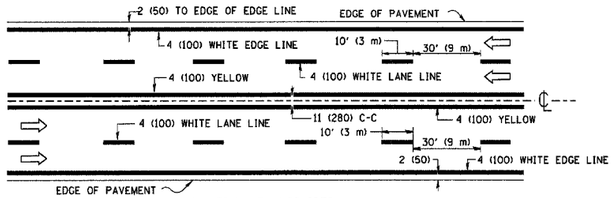
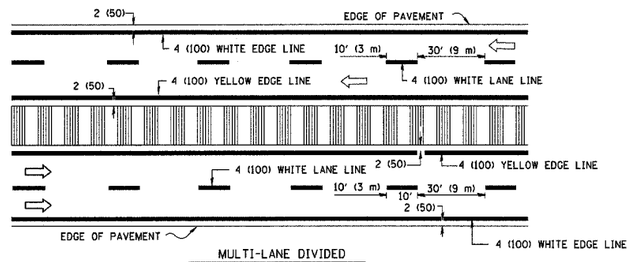
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



2-LANE ROADWAY



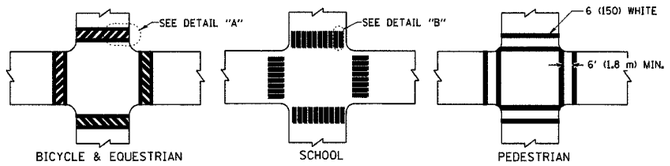
MULTI-LANE UNDIVIDED

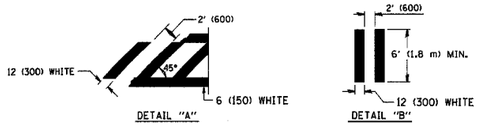


MULTI-LANE DIVIDED
WITH MOUNTABLE MEDIAN

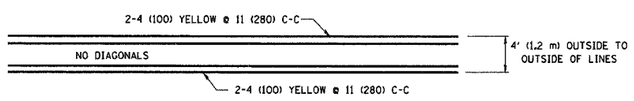
NOTE: MEDIANS WITH BARRIER CURB DO NOT REQUIRE AN EDGE LINE

TYPICAL LANE AND EDGE LINE MARKING

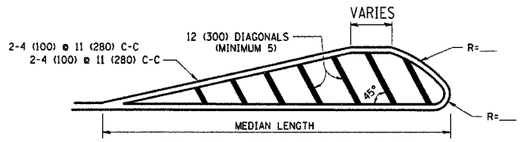




TYPICAL CROSSWALK MARKING



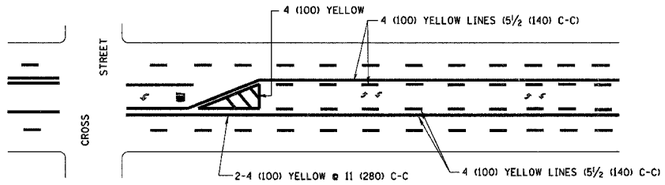
4' (1.2 m) WIDE MEDIANS ONLY



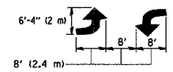
FOR MEDIAN LENGTHS WHERE DIAGONAL SPACING CANNOT BE ATTAINED, USE 5 (FIVE) EQUALLY SPACED DIAGONAL LINES.

DIAGONAL LINE SPACING: 50' (15 m) C-C (LESS THAN 30MPH (50 km/h))
75' (25 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h))
150' (45 m) C-C (MORE THAN 45MPH (70 km/h))

MEDIANS OVER 4' (1.2 m) WIDE

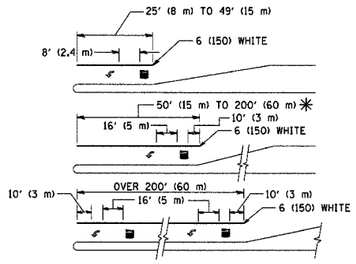


A MINIMUM OF TWO PAIRS OF TURN ARROWS SHALL BE USED, WHITE IN COLOR. ADDITIONAL PAIRS SHALL BE PLACED AT 200' (60 m) TO 300' (90 m) INTERVALS.



MEDIAN WITH TWO-WAY LEFT TURN LANE

TYPICAL PAINTED MEDIAN MARKING

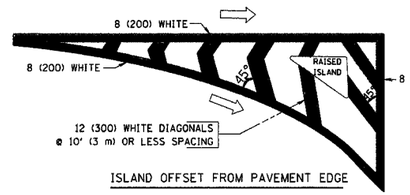


FULL SIZE LETTERS 8' (2.4 m) AND ARROWS SHALL BE USED.
↰ AREA = 15.6 SQ. FT. (1.5 m²) ONLY AREA = 20.8 SQ. FT. (1.9 m²)

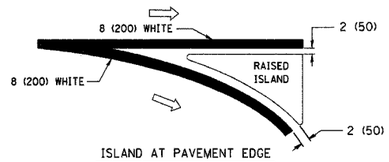
✳ TURN LANES IN EXCESS OF 400' (120 m) IN LENGTH MAY HAVE AN ADDITIONAL SET OF ARROW - "ONLY" INSTALLED MIDWAY BETWEEN THE OTHER TWO SETS OF ARROW - "ONLY".

TYPICAL LEFT (OR RIGHT) TURN LANE

TYPICAL TURN LANE MARKING



ISLAND OFFSET FROM PAVEMENT EDGE



ISLAND AT PAVEMENT EDGE

TYPICAL ISLAND MARKING

TYPE OF MARKING	WIDTH OF LINE	PATTERN	COLOR	SPACING / REMARKS
CENTERLINE ON 2 LANE PAVEMENT	4 (100)	SKIP-DASH	YELLOW	10' (3 m) LINE WITH 30' (9 m) SPACE
CENTERLINE ON MULTI-LANE UNDIVEDED PAVEMENT	2 @ 4 (100)	SOLID	YELLOW	11 (280) C-C
NO PASSING ZONE LINES: FOR ONE DIRECTION FOR BOTH DIRECTIONS	4 (100) 2 @ 4 (100)	SOLID SOLID	YELLOW YELLOW	5½ (140) C-C FROM SKIP-DASH CENTERLINE 11 (280) C-C OMIT SKIP-DASH CENTERLINE BETWEEN
LANE LINES	4 (100) 5 (125) ON FREEWAYS	SKIP-DASH SKIP-DASH	WHITE WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE
DOTTED LINES (EXTENSIONS OF CENTER, LANE OR TURN LANE MARKINGS)	SAME AS LINE BEING EXTENDED	SKIP-DASH	SAME AS LINE BEING EXTENDED	2' (600) LINE WITH 6' (1.8 m) SPACE
EDGE LINES	4 (100)	SOLID	YELLOW-LEFT WHITE-RIGHT	OUTLINE MOUNTABLE MEDIANS IN YELLOW; EDGE LINES ARE NOT USED NEXT TO BARRIER CURB
TURN LANE MARKINGS	6 (150) LINE; FULL SIZE LETTERS & SYMBOLS (8' (2.4m))	SOLID	WHITE	SEE TYPICAL TURN LANE MARKING DETAIL
TWO WAY LEFT TURN MARKING	2 @ 4 (100) EACH DIRECTION 8' (2.4m) LEFT ARROW	SKIP-DASH AND SOLID IN PAIRS	YELLOW WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE FOR SKIP-DASH; 5½ (140) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL
CROSSWALK LINES (PEDESTRIAN) A. DIAGONALS (BIKE & EQUESTRIAN) B. LONGITUDINAL BARS (SCHOOL)	2 @ 6 (150) 12 (300) @ 45° 12 (300) @ 90°	SOLID SOLID SOLID	WHITE WHITE WHITE	NOT LESS THAN 6' (1.8 m) APART 2' (600) APART 2' (600) APART SEE TYPICAL CROSSWALK MARKING DETAILS.
STOP LINES	24 (600)	SOLID	WHITE	PLACE 4' (1.2 m) IN ADVANCE OF AND PARALLEL TO CROSSWALK, IF PRESENT. OTHERWISE, PLACE AT DESIRED STOPPING POINT, PARALLEL TO CROSSROAD CENTERLINE, WHERE POSSIBLE
PAINTED MEDIANS	2 @ 4 (100) WITH 12 (300) DIAGONALS @ 45° NO DIAGONALS USED FOR 4' (1.2 m) WIDE MEDIANS	SOLID	YELLOW: TWO WAY TRAFFIC WHITE: ONE WAY TRAFFIC	11 (280) C-C FOR THE DOUBLE LINE SEE TYPICAL PAINTED MEDIAN MARKING.
GORE MARKING AND CHANNELIZING LINES	8 (200) WITH 12 (300) DIAGONALS @ 45°	SOLID	WHITE	DIAGONALS: 15' (4.5 m) C-C (LESS THAN 30MPH (50 km/h)) 20' (6 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h)) 30' (9 m) C-C (OVER 45MPH (70 km/h))
RAILROAD CROSSING	24 (600) TRANSVERSE LINES; "RR" 15 6' (1.8 m) LETTERS; 16 (400) LINE FOR "X"	SOLID	WHITE	SEE STATE STANDARD 780001 AREA OF: "R"=3.6 SQ. FT. (0.33 m²) EACH "X"=54.0 SQ. FT. (5.0 m²)
SHOULDER DIAGONALS	12 (300) @ 45°	SOLID	WHITE - RIGHT YELLOW - LEFT	50' (15 m) C-C (LESS THAN 30MPH (50 km/h)) 75' (25 m) C-C (30 MPH (50 km/h) TO 45MPH (70 km/h)) 150' (45 m) C-C (OVER 45MPH (70 km/h))

FOR FURTHER DETAILS ON PAVEMENT MARKING REFER TO STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND STATE STANDARD 780001.

All dimensions are in inches (millimeters) unless otherwise shown.

REVISIONS NAME	DATE
EVERS	03-19-90
T. RAMMACHER	10-27-94
ALEX HOUSEH	10-09-96
ALEX HOUSEH	10-17-96
T. RAMMACHER	01-06-00

ILLINOIS DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
TYPICAL PAVEMENT MARKINGS

SCALE: NONE

DRAWN BY CADD

CHECKED BY

TC-13

PLOT DATE = 3/6/2007
FILE NAME = c:\projects\tc13.dgn
PLOT SCALE = 50.000 ' / IN.
USER NAME = bauerdl

CONTRACT NO.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-1-B	McHENRY	77	63
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

ROUTE MARKERS

- 30 — FOR U.S. ROUTES M1-40-2424
- ILL 53 — FOR ILLINOIS ROUTES M1-50-2424
- MAIN STREET — R.R. UNMARKED ROUTES SPECIAL 24" x 18" VARIABLE 4" BLACK LETTERS ON WHITE REFLECTIVE BACKGROUND

ARROWS SIGNS

- M5-1L-2115
- M5-1R-2115
- M6-1L-2115
- M6-1R-2115
- M6-3-2115

CARDINAL DIRECTION & DETOUR SIGNS

- NORTH M3-1-219
- EAST M3-2-219
- SOUTH M3-3-219
- WEST M3-4-219
- DETOUR M1-7-219

DETOUR AHEAD · DETOUR EAST · DETOUR WEST · DETOUR · 300' · MINOR STREET · MAJOR STREET · END DETOUR · STATE ROUTE · COMPLETELY CLOSED PORTION · PARTIALLY CLOSED PORTION · ROAD CLOSED · ROAD CLOSED 500 FT · ROAD CLOSED 1000 FT · ROAD CLOSED 1500 FT · C24-12-4848 · C24-13-4848 · C24-14-4848 · TYPE III BARICADES · (2) OR MORE · (2) · ROAD CLOSED TO THRU TRAFFIC · 500' · 200'

REVISIONS NAME	DATE
	10/18/02

ILLINOIS DEPARTMENT OF TRANSPORTATION

TYPICAL MARKING FOR CLOSING STATE HIGHWAYS

SCALE: NONE

DRAWN BY

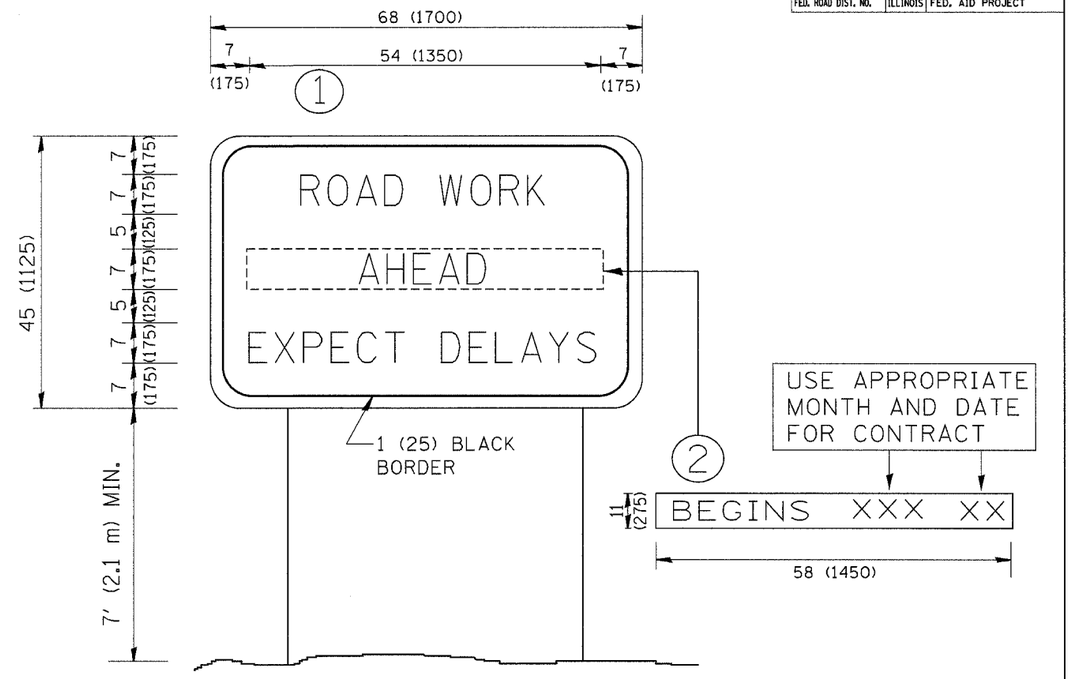
CHECKED BY

TC-21

PLOT DATE = 3/7/2007
FILE NAME = k:\dist\prod\tc21.dgn
PLOT SCALE = 50.0000 '/ IN.
USER NAME = bauerdl

CONTRACT NO.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
583	119R-1-B	McHENRY	77	64
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



NOTES:

1. USE BLACK LETTERING ON ORANGE BACKGROUND.
2. ERECT SIGNS IN ADVANCE OF THE LOCATION FOR THE "ROAD CONSTRUCTION AHEAD" SIGN AT LOCATIONS AS DIRECTED BY THE ENGINEER.
3. ERECT SIGN (1) WITH INSTALLED PANEL (2) ONE WEEK PRIOR TO THE START OF CONSTRUCTION.
4. REMOVE PANEL (2) SOON AFTER THE START OF CONSTRUCTION.
5. SEE SPECIAL PROVISION FOR "TEMPORARY INFORMATION SIGNING" FOR ADDITIONAL INFORMATION.
6. ONE SIGN ASSEMBLY EQUALS 25.70 SQ. FT. (2.3 SQ. M.)
7. SHALL BE PAID FOR AS TEMPORARY INFORMATION SIGNING.

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

REVISIONS	
NAME	DATE
R. MIRS	9-15-97
R. MIRS	12-11-97
T. RAMMACHER	2-2-99
C. JUCIUS	1-31-07

ILLINOIS DEPARTMENT OF TRANSPORTATION

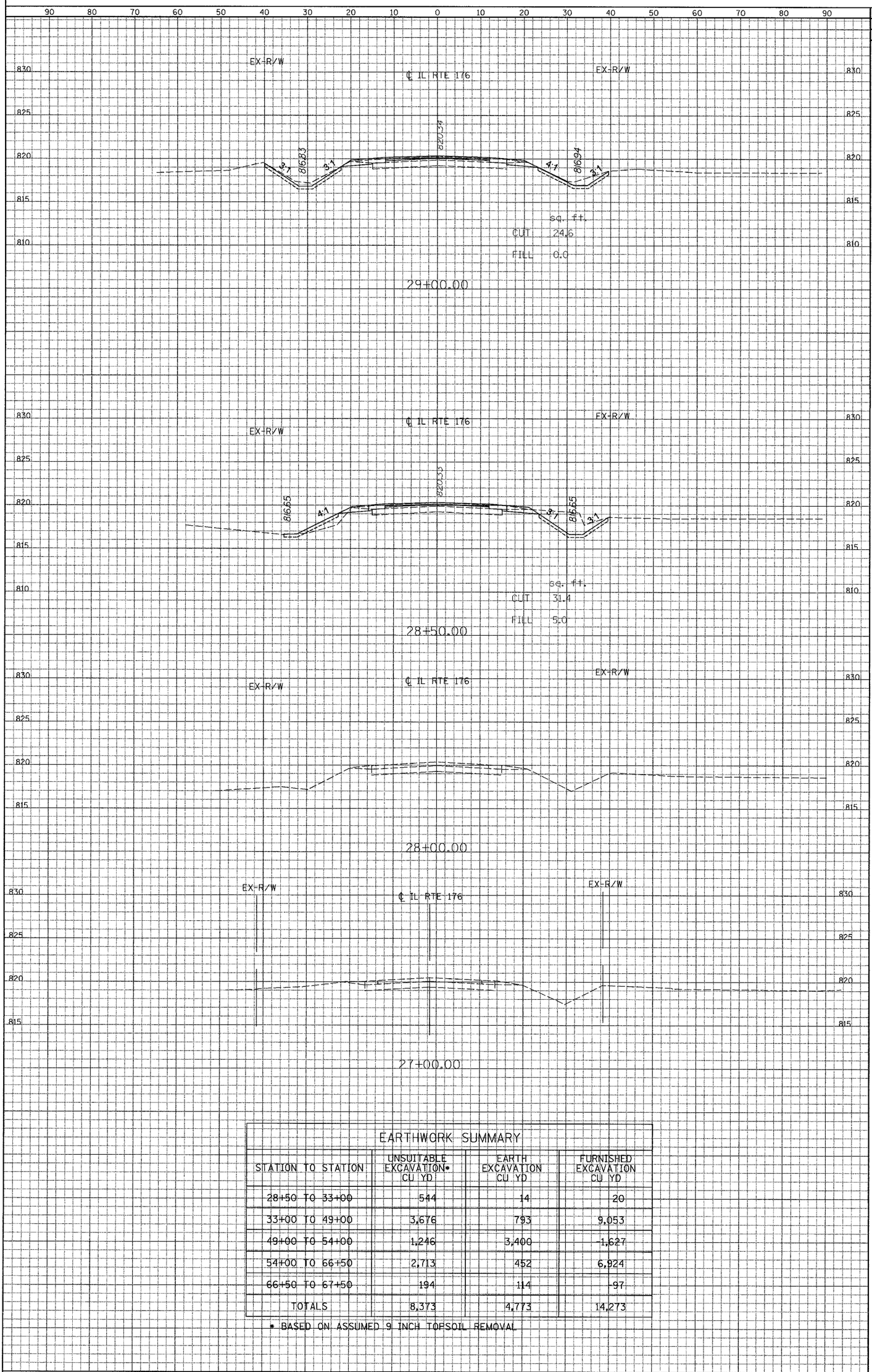
ARTERIAL ROAD INFORMATION SIGN

SCALE: NONE

DRAWN BY DESIGN

CHECKED BY TC22

PLOT DATE = 3/9/2007
FILE NAME = c:\projects\tc22.dgn
PLOT SCALE = 50.0000 '/ IN.
USER NAME = bauerdl



END AREAS	
EXCAV. SQ. FT.	EMB. SQ. FT.

EARTHWORK SUMMARY

STATION TO STATION	UNSUITABLE EXCAVATION* CU YD	EARTH EXCAVATION CU YD	FURNISHED EXCAVATION CU YD
28+50 TO 33+00	544	14	20
33+00 TO 49+00	3,676	793	9,053
49+00 TO 54+00	1,246	3,400	-1,627
54+00 TO 66+50	2,713	452	6,924
66+50 TO 67+50	194	114	-97
TOTALS	8,373	4,773	14,273

* BASED ON ASSUMED 9 INCH TOPSOIL REMOVAL

CONTRACT NO. 62340

FED. ROAD DIST. NO.	F.A.P. RTE.	SECTION
ILLINOIS	533	1198-1-B
TO STA.	COUNTY	TOTAL SHEETS NO.
	MCHENRY	77
FED. AID PROJECT		SHEET NO. 65

GRAEF, ANHALT, SCHLOEMER & ASSOCIATES, INC.
ENGINEERS & SCIENTISTS
8501 W. Higgins Road Suite 280
Chicago, Illinois 60631
(773) 399-0112

ILLINOIS DEPARTMENT OF TRANSPORTATION

F. A. P. ROUTE 533 (IL ROUTE 176)

CROSS SECTIONS

SCALE: HORIZ. 1" = 10'

VERT. 1" = 5'

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CONTRACT NO. 62340

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-1-B	MCHENRY	77	66
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

END AREAS

EMB. SQ. FT.	EXCAV. SQ. FT.

F. A. P. ROUTE 533 (IL ROUTE 176)

CROSS SECTIONS

SCALE: HORIZ. 1" = 10'

VERT. 1" = 5'

P-R/W
EX-R/W
℄ IL RTE 176
820.67
818.10
4:1
3:1
sq. ft.
CUT 14.5
FILL 4.5
32+00.00
820.66
817.73
4:1
3:1
P-R/W
EX-R/W
℄ IL RTE 176
820.60
172.8:1
0
PIPE CULVERT
15" DIA
31+27.40
820.58
817.80
4:1
sq. ft.
CUT 16.3
FILL 0.5
31+00.00
820.37
817.43
4:1
3:1
146.1
0
PIPE CULVERT
15" DIA
30+04.60

ILLINOIS DEPARTMENT
OF TRANSPORTATION

GRAEF, ANHALT, SCHLOEMER & ASSOCIATES, INC.
ENGINEERS & SCIENTISTS
8501 W. Higgins Road Suite 280
Chicago, Illinois 60631
(773) 399-0112

GRAEF ANHALT SCHLOEMER and Associates, Inc.

CONTRACT NO. 62340

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-1-B	MCHENRY	77	67
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

END AREAS

EXCAV. SQ. FT.	EMB. SQ. FT.

SCALE: HORIZ. 1" = 10'
VERT. 1" = 5'

F. A. P. ROUTE 533 (IL ROUTE 176)

CROSS SECTIONS

ILLINOIS DEPARTMENT
OF TRANSPORTATION

GRAEF, ANHALT, SCHLOEMER & ASSOCIATES, INC.
CONSULTING ENGINEERS & SCIENTISTS
8501 West Higgins Road, Suite 280
Chicago, Illinois 60631
(773) 399-0112

CONTRACT NO. 62340

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-1-B	MCHENRY	77	68
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

END AREAS

EXCAV. SQ. FT.	EMB. SQ. FT.

SCALE: HORIZ. 1" = 10'
VERT. 1" = 5'

F. A. P. ROUTE 533 (IL ROUTE 176)

CROSS SECTIONS

P-R/W
EX-R/W
℄ IL RTE 176
820.00
816.30
822.50
3:1
4:1
SQ. FT.
CUT 41.7
FILL 169.9
40+00.00
820.50
816.80
822.58
CUT 69.5
FILL 182.4
39+00.00
820.50
816.90
822.65
CUT 78.8
FILL 142.4
38+00.00
816.58
822.49
2:1
PIPE CULVERT
15" DIA
37+12.50

ILLINOIS DEPARTMENT
OF TRANSPORTATION

GRAEF, ANHALT, SCHLOEMER & ASSOCIATES, INC.
CONSULTING ENGINEERS & SURVEYORS
8501 W. Higgins Road, Suite 280
Chicago, Illinois 60631
(773) 399-0112

CONTRACT NO. 62340	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	533	119R-1-B	MCHENRY	77	69
	STA.		TO STA.		
	FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

END AREAS

EXCAV. SQ. FT.	EMB. SQ. FT.

SCALE: HORIZ. 1" = 10'
VERT. 1" = 5'

F. A. P. ROUTE 533 (IL ROUTE 176)

CROSS SECTIONS

ILLINOIS DEPARTMENT
OF TRANSPORTATION

GRAEF, ANHALT, SCHLOEMER & ASSOCIATES, INC.
ENGINEERS & SCIENTISTS
8501 W. Higgins Road Suite 280
Chicago, Illinois 60631
(773) 399-0112

GRAEF-ANHALT-SCHLOEMER
an AMERIPRISE co.

CONTRACT NO. 62340

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-1-B	MCHENRY	77	70
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

END AREAS	
EXCAV. SQ. FT.	EMB. SQ. FT.

SCALE: HORIZ. 1" = 10'
VERT. 1" = 5'

F. A. P. ROUTE 533 (IL ROUTE 176)

CROSS SECTIONS

46+35.00

℄ IL RTE 176
N
N
28

P-R/W
EX-R/W
12:1
PIPE CULVERT
15" DIA

46+00.00

℄ IL RTE 176
N
N
28

P-R/W
EX-R/W
3:1
814.50
5:1
SQ. FT.
CUT 93.2
FILL 278.4
SS. TY. 1 30"x19"
RC ELLIPTICAL PIPE
4:1
814.50
5:1
815.60

45+57.00

℄ IL RTE 176
N
N
28

P-R/W
EX-R/W
15.6:1
PIPE CULVERT
15" DIA

45+00.00

℄ IL RTE 176
N
N
28

P-R/W
EX-R/W
3:1
814.80
3:1
SQ. FT.
CUT 80.3
FILL 251.5
SS. TY. 1 30"x19"
RC ELLIPTICAL PIPE
4:1
814.80
5:1
815.80

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GRAEF ANHALT SCHLOEMER

ILLINOIS DEPARTMENT OF TRANSPORTATION

CONTRACT NO. 62340

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-1-B	MCHENRY	77	71
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

END AREAS

	EMB.	EXCAV.
SQ. FT.		SQ. FT.

P-R/W
EX-R/W
℄ IL RTE 176
8423.8
8413.90
3:1
96.5 sq. ft.
CUT
FILL 261.4
48+00.00
5:1
SS. TY 1 30"x19" RC ELLIPTICAL PIPE

P-R/W
EX-R/W
12.9:1
PIPE CULVERT 15" DIA
℄ IL RTE 176
8423.8
47+36.50

P-R/W
EX-R/W
℄ IL RTE 176
8423.8
8414.20
3.5:1
86.4 sq. ft.
CUT
FILL 234.4
8415.60
3:1
5:1
SS. TY 1 30"x19" RC ELLIPTICAL PIPE
MANHOLE TY A, 5' DIA
47+00.00

SCALE: HORIZ. 1" = 10'
VERT. 1" = 5'

F. A. P. ROUTE 533 (IL ROUTE 176)

CROSS SECTIONS

ILLINOIS DEPARTMENT OF TRANSPORTATION

GRAEF, ANHALT, SCHLOEMER & ASSOCIATES, INC.
ENGINEERS & SCIENTISTS
8501 W. Higgins Road, Suite 280
Chicago, Illinois 60631
(773) 399-0112

CONTRACT NO. 62340

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-1-B	MCHENRY	77	72
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

END AREAS	
EXCAV. SQ. FT.	EMB. SQ. FT.

F. A. P. ROUTE 533 (IL ROUTE 176)

SCALE: HORIZ. 1" = 10'
VERT. 1" = 5'

CROSS SECTIONS

52+00.00 — ℄ IL RTE 176 — 824.49
Sq. ft. CUT 209.7 FILL 17.3
816.00 / 813.60 / 5:1 / 4:1

51+00.00 — ℄ IL RTE 176 — 824.49
Sq. ft. CUT 284.3 FILL 6.4
816.00 / 813.30 / 5:1 / 4:1

50+00.00 — ℄ IL RTE 176 — 824.26
Sq. ft. CUT 501.9 FILL 0
813.60 / 3:1

49+00.00 — ℄ IL RTE 176 — 824.26
Sq. ft. CUT 163.2 FILL 204.9
813.60 / 3:1 / 3:1

P-R/W — EX-R/W

GRAEF, ANHALT, SCHLOEMER & ASSOCIATES, INC.
CONSULTING ENGINEERS & PLANNERS
8501 W. Higgins Road: Suite 280
Chicago, Illinois 60631
(773) 399-0112

GRAEF ANHALT SCHLOEMER

ILLINOIS DEPARTMENT OF TRANSPORTATION

CONTRACT NO. 62340

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-1-B	MCHENRY	77	73
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

END AREAS

	EXCAV. SQ. FT.	EMB. SQ. FT.
53+00.00		
54+00.00		
55+00.00		
56+00.00		

SCALE: HORIZ. 1" = 10'
VERT. 1" = 5'

F. A. P. ROUTE 533 (IL ROUTE 176)

CROSS SECTIONS

ILLINOIS DEPARTMENT
OF TRANSPORTATION

GRAEF, ANHALT, SCHLOEMER & ASSOCIATES, INC.
CONSULTING ENGINEERS & PLANNERS
8501 W. Higgins Road Suite 280
Chicago, Illinois 60631
(773) 399-0112

CONTRACT NO. 62340

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-1-B	MCHENRY	77	74
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

END AREAS

EXCAV. SQ. FT.	EMB. SQ. FT.

GRAEF, ANHALT, SCHLOEMER & ASSOCIATES, INC.
ENGINEERS & SCIENTISTS
8501 W. Higgins Road Suite 280
Chicago, Illinois 60631
(773) 399-0102

ILLINOIS DEPARTMENT
OF TRANSPORTATION

F. A. P. ROUTE 533 (IL ROUTE 176)

CROSS SECTIONS

SCALE: HORIZ. 1" = 10'
VERT. 1" = 5'

CONTRACT NO. 62340

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-1-B	MCHENRY	77	75
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

END AREAS	EMB.	SQ. FT.
	EXCAV.	SQ. FT.

SCALE: HORIZ. 1" = 10'
VERT. 1" = 5'

F. A. P. ROUTE 533 (IL ROUTE 176)

CROSS SECTIONS

ILLINOIS DEPARTMENT
OF TRANSPORTATION

GRAEF, ANHALT, SCHLOEMER & ASSOCIATES, INC.
CONSULTING ENGINEERS & LAND SURVEYORS
8501 W. Higgins Road, Suite 280
Chicago, Illinois 60631
(773) 399-0112

GRAEF ANHALT SCHLOEMER

END AREAS	
EMB. SQ. FT.	
EXCAV. SQ. FT.	

CONTRACT NO. 62340

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-1-B	MCHENRY	77	76
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

F. A. P. ROUTE 533 (IL ROUTE 176)

CROSS SECTIONS

SCALE: HORIZ. 1" = 10'

VERT. 1" = 5'

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ENGINEERS & SCIENTISTS
8501 W. Higgins Road, Suite 280
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ILLINOIS DEPARTMENT
OF TRANSPORTATION

CONTRACT NO. 62340

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-1-B	MCHENRY	77	77
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

END AREAS

EXCAV. SQ. FT.	EMB. SQ. FT.

68+00.00 — ℄ IL RTE 176 — EX-R/W — 824.80 — 822.55 — 4:1 — 3:1 — CUT 0 — FILL 423 sq. ft.

67+50.00 — ℄ IL RTE 176 — EX-R/W — 824.80 — 822.55 — 4:1 — 3:1 — CUT 0 — FILL 0

67+03.00 — ℄ IL RTE 176 — EX-R/W — 824.96 — 821.24 — 4:1 — 4:1 — 41.1 — PIPE CULVERT 17"x13" ELLIPTICAL — CUT 0 — FILL 0

66+00.00 — ℄ IL RTE 176 — EX-R/W — 824.39 — 821.24 — 3:1 — 3:1 — CUT 683 sq. ft. — FILL 0

SCALE: HORIZ. 1" = 10'
VERT. 1" = 5'

F. A. P. ROUTE 533 (IL ROUTE 176)

CROSS SECTIONS

ILLINOIS DEPARTMENT
OF TRANSPORTATION

GRAEF, ANHALT, SCHLOEMER & ASSOCIATES, INC.
ENGINEERS & SCIENTISTS
8501 W. Higgins Road Suite 280
Chicago, Illinois 60631
(773) 399-0112