F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315	120BR-1	MCLEAN	49	1
FED. ROAD DIST. NO.	ILLINOIS	CONTRACT NO. 70524		

1-15-10 Letting, Item 205

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

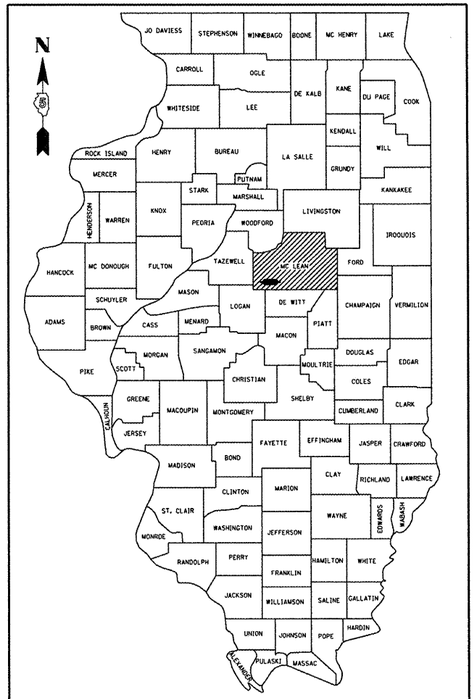
FOR INDEX OF SHEETS, SEE SHEET NO. 2

PROPOSED
HIGHWAY PLANS

FAP ROUTE 315 (US 136)
SECTION 120BR-1
PROJECT ACF-0315(057)
MCLEAN COUNTY
C-95-045-06
BRIDGE REPLACEMENT
PRAIRIE CREEK
7 MILES WEST OF US 51

SECTION 120-BR-1 INCLUDES:
EXISTING S.N. 057-0091 AT STA. 126+95.70
CARRYING F.A.P. RTE. 315 (US 136)
OVER PRAIRIE CREEK
TO BE REMOVED AND REPLACED WITH
A NEW 39'-2" WIDE THREE SPAN CONTINUOUS
STEEL BEAM BRIDGE (S.N. 057-2045) WITH A
157' SPAN AND INTERGRAL ABUTMENTS.

D-95-044-06



LOCATION OF SECTION INDICATED THUS: –

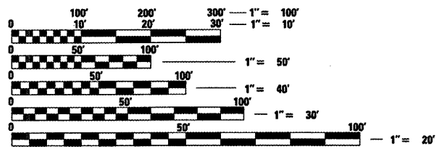
OTHER PRINCIPAL ARTERIAL
F.A.P. 315 (US 136)
ADT (2007) = 2,700
PV = 63.5% SU = 11.4% MU = 25.1%
DESIGN SPEED = 55 MPH

JAMES PAUL BIGGERS
25136
REGISTERED
PROFESSIONAL
ENGINEER
OF
ILLINOIS

JAMES PAUL BIGGERS, P.E.
DATE 10/16/09
LICENSE EXPIRES 11/30/09

PLANS PREPARED BY:

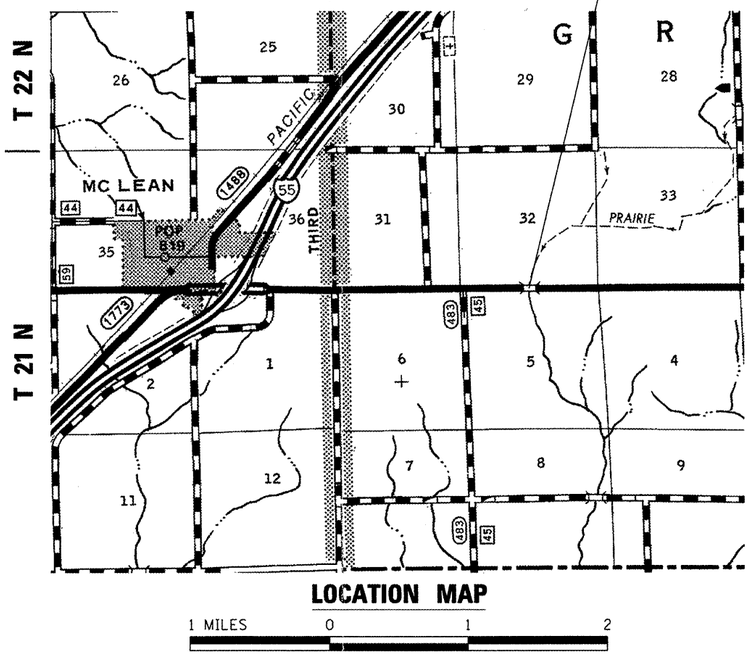
JOHNSON, DEPP & QUISENBERRY
CONSULTING ENGINEERS
6450 South Sixth Street Road, Suite B Springfield, Illinois 62712
Phone: (217) 529-4534 Fax: (217) 529-8278



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

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

PROJECT ENGINEER NANCY FASIG
PROJECT MANAGER JASON STULTS
DISTRICT 5 NO. (217)465-4181
CONTRACT NO. 70524



LOCATION MAP

1 MILES 0 1 2

GROSS LENGTH = 1030.00 FEET = 0.195 MILES
NET LENGTH = 1030.00 FEET = 0.195 MILES

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED 10/20 20 09
Joseph R. Crowley
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER
December 4, 20 09
Charles J. Ingersoll
ENGINEER OF DESIGN AND ENVIRONMENT
December 4, 20 09
Christine M. Reed
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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INDEX OF SHEETS

HIGHWAY STANDARDS

000001-05	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001001-02	AREAS OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH AND OF A FOOT
280001-05	TEMPORARY EROSION CONTROL SYSTEMS
420001-07	PAVEMENT JOINTS
420401-08	BRIDGE APPROACH PAVEMENT CONNECTOR
421001-02	BAR REINFORCEMENT FOR CRC PAVEMENT
482011-03	HMA SHLD. STRIPS/SHLDS. WITH RESURFACING OR WIDENING AND RESURFACING PROJECTS
515001-03	NAME PLATE FOR BRIDGES
542401-01	METAL END SECTION FOR PIPE CULVERTS
630001-08	STEEL PLATE BEAM GUARDRAIL
630301-05	SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
631011-06	TRAFFIC BARRIER TERMINAL, TYPE 2
631031-08	TRAFFIC BARRIER TERMINAL, TYPE 6
635006-03	REFLECTOR AND TERMINAL MARKER PLACEMENT
635011-02	REFLECTOR MARKER AND MOUNTING DETAILS
667101-01	PERMANENT SURVEY MARKERS
701001-02	OFF-ROAD OPERATIONS, 2L, 2W, MORE THEN 15' (4.5 M) AWAY
701006-03	OFF-ROAD OPERATIONS, 2L, 2W, 15' (4.5 M) TO 24" (600 MM) FROM PAVEMENT EDGE
701201-03	LANE CLOSURE, 2L, 2W, DAY ONLY FOR SPEEDS ≥ 45 MPH
701311-03	LANE CLOSURE, 2L, 2W, MOVING OPERATIONS - DAY ONLY
701316-04	LANE CLOSURE, 2L, 2W, BRIDGE REPAIR, FOR SPEEDS ≥ 45MPH
701331-03	LANE CLOSURE, 2L, 2W, WITH RUN-AROUND, FOR SPEEDS ≥ 45MPH
701901-01	TRAFFIC CONTROL DEVICES
780001-02	TYPICAL PAVEMENT MARKINGS
781001-03	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS
886001-01	DETECTOR LOOP INSTALLATIONS
886006-01	TYPICAL LAYOUTS FOR DETECTION LOOPS

GENERAL NOTES

G.N.-100
ENGLISH UNITS OF MEASUREMENT SHALL GOVERN OVER AND SUPERSEDE ANY METRIC UNITS SHOWN IN THIS CONTRACT. WHERE INCLUDED, METRIC UNITS ARE FOR INFORMATION ONLY.

G.N.-105.09A
ALL ELEVATIONS SHOWN IN THE PLANS ARE BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988. (NAVD 88)

G.N.-107.31
UTILITY LINES WERE PLOTTED FROM INFORMATION FURNISHED BY THE VARIOUS UTILITY COMPANIES INVOLVED (QUALITY LEVEL C &/OR QUALITY LEVEL D) AND THE ACCURACY SHOULD BE CONSIDERED APPROXIMATE ONLY.

UTILITY COMPANIES MAY BE ADJUSTING THEIR FACILITIES DURING CONSTRUCTION. THE CONTRACTOR SHALL COOPERATE WITH THESE ORGANIZATIONS WHILE THESE ADJUSTMENTS ARE BEING PERFORMED. J.U.L.I.E. - JOINT UTILITY LOCATION INFORMATION FOR EXCAVATORS SYSTEM (800) 892-0123 OR 811.

G.N.-201
TREES THAT INTERFERE WITH THE CONSTRUCTION OPERATIONS SHALL BE REMOVED AS DIRECTED BY THE ENGINEER. ANY TREE DUE TO ITS LOCATION AND DEEMED SUITABLE FOR SAVING BY THE ENGINEER SHALL BE PROTECTED DURING CLEARING AND SUBSEQUENT CONSTRUCTION OPERATIONS.

G.N.-250C(SPL)
TEMPORARY EROSION CONTROL SEEDING IS INCLUDED IN THIS CONTRACT TO SEED DISTURBED EARTH DURING TIME PERIODS WHEN PERMANENT SEEDING IS NOT ALLOWED. SOME OR ALL OF THE TEMPORARY EROSION CONTROL SEEDING WILL BE DELETED IF IT IS POSSIBLE TO PLACE PERMANENT SEEDING ON DISTURBED EARTH AT THE TIME OF THEIR COMPLETION.

SEEDING, CLASS 7 IS INCLUDED IN THIS CONTRACT TO SEED THE RUNAROUND.

G.N.-406
THE QUANTITIES INCLUDED IN THE PLANS FOR HOT-MIX ASPHALT RESURFACING ARE INTENDED TO GIVE THE COVERAGE SHOWN ON THE TYPICAL CROSS SECTIONS. IT IS NOT INTENDED TO INCREASE THE THICKNESS OF THE HOT-MIX ASPHALT MIXTURE IN ORDER TO USE ALL OF THE QUANTITIES INCLUDED IN THE CONTRACT.

G.N.-406.05B
ALL LEVELING BINDER OR BINDER SHALL BE GIVEN A FOG COAT OF PRIME BEFORE THE SURFACE COURSE IS PLACED WHEN DIRECTED BY THE ENGINEER.

THE FOG COAT WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER GALLON FOR BITUMINOUS MATERIAL (PRIME COAT) AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

G.N.-406H
THE FOLLOWING MIXTURE REQUIREMENTS ARE APPLICABLE FOR THIS PROJECT:

MIXTURE USE	SURFACE & SHOULDER	LEVELING BINDER	BRIDGE APPR CONN (FLEX) & TEMP PAVE (OPTION) - HMA
AC/PG	PG 64-22	PG 64-22	PG 64-22
RAP % (MAX)	15%	25%	25%
DESIGN AIR VOIDS	4.0% @ Ndes=50	4.0% @ Ndes=50	4.0% @ Ndes=50
MIX COMPOSITION	IL 9.5	IL 9.5	IL 19.0
FRICTION AGGREGATE	MIX C	N/A	N/A

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

G.N.-542
BEFORE ORDERING PIPE CULVERTS, THE CONTRACTOR SHALL CONSULT THE ENGINEER FOR THE EXACT LENGTHS.

G.N.-631
IF THE CONTRACTOR ELECTS TO USE THE ALTERNATE MOUNTING METHOD OF THRU DRILLING THE MOUNTING HOLES FOR THE TRAFFIC BARRIER TERMINALS, TYPE 6, THE HOLES SHALL BE DRILLED USING A CORE DRILL. A HAMMER DRILL WILL NOT BE ALLOWED.

G.N.-667
THE RESIDENT ENGINEER SHALL CONTACT THE PROGRAM DEVELOPMENT CHIEF OF SURVEYS PRIOR TO THE PRE-CONSTRUCTION CONFERENCE FOR INSTRUCTION AS TO SETTING OF TEMPORARY OR PERMANENT TIES FOR CENTERLINE ALIGNMENT CONTROL SURVEY MARKERS (PC'S, PT'S, AND PI'S). PROJECT IMPLEMENTATION PERSONNEL WILL BE RESPONSIBLE FOR SETTING THESE MARKERS.

G.N.-703A
SHORT TERM PAVEMENT MARKING SHALL BE APPLIED TO THE PAVEMENT AFTER ANY OF THE FOLLOWING: COLD MILLING AND/OR PLACING BITUMINOUS MATERIALS (PRIME COAT), LEVELING BINDER (MACHINE METHOD), BINDER AND SURFACE COURSES. SHORT TERM PAVEMENT MARKING PLACED ON THE SURFACE, SHALL COINCIDE WITH THE FINAL PAVEMENT STRIPING. SHORT TERM PAVEMENT MARKING PLACED PRIOR TO THE SURFACE SHALL COINCIDE WITH THE EXISTING PAVEMENT MARKINGS. USE 4 FEET PER 40 FEET (OR 10% PER STATION).

G.N.-781
RAISED REFLECTIVE PAVEMENT MARKERS SHALL BE PLACED IN ACCORDANCE WITH STANDARD 781001, AND THE DETAILS SHOWN IN THE PLANS. IF THERE IS ANY DISCREPANCY BETWEEN THE STANDARD AND THE DETAILS IN THE PLANS, THE DETAILS IN THE PLANS SHALL GOVERN. THE FINAL PAVEMENT MARKINGS SHALL BE IN PLACE PRIOR TO PLACING THE RAISED REFLECTIVE PAVEMENT MARKERS AND THE RAISED REFLECTIVE PAVEMENT MARKERS SHALL BE PLACED MIDWAY IN THE 30 FOOT (9 m) SPACE BETWEEN THE DASHED CENTERLINE STRIPES (WHEN APPLICABLE).

G.N.-1004.01
COARSE AGGREGATE GRADATION CA-10 MAY BE USED WHENEVER COARSE AGGREGATE CA-6 IS SPECIFIED IN THE STANDARD SPECIFICATIONS.

G.N.-Z0038
AN ALUMINUM TABLET OF THE TYPE SHOWN ON STANDARD 667101 SHALL BE PLACED ON THE PROPOSED STRUCTURE AS DIRECTED BY THE ENGINEER. THE BENCH MARK ELEVATION WILL BE ESTABLISHED AND MARKED BY THE DEPARTMENT. THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR PERMANENT BENCH MARKS.

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

GRANULAR MATERIALS	1.8	TONS / CU YD
BITUMINOUS MAT PRIME COAT	0.08 0.375	GAL / SQ YD OR GAL / SQ YD
AGGREGATE PRIME COAT	0.002	TONS / SQ YD
HMA RESURFACING	112	LBS / SQ YD / IN
SHORT TERM PAVEMENT MARKING	4	FT / 40 FT OF APPLICATION

COMMITMENTS

NO COMMITMENTS

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		DRAWN -	REVISED -
	PLOT SCALE = 40.0000 ' / IN.	CHECKED -	REVISED -
Johnson, Depp & Quisenberry CONSULTING ENGINEERS Springfield, Illinois	PLOT DATE = 10/20/2009	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

INDEX OF SHEETS, HIGHWAY STANDARDS
GENERAL NOTES, COMMITMENTS

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

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315	120BR-1	MCLEAN	49	2
		CONTRACT NO. 70524		
		ILLINOIS FED. AID PROJECT		

SUMMARY OF QUANTITIES

	CODE NO.	ITEM	UNIT	TOTAL QUANTITY	FAP 315 (US 136) RURAL TWO-LANE 80% FEDERAL 20% STATE HBP S.N. 057-0245 X071-2A
	20100210	TREE REMOVAL (OVER 15 UNITS DIAMETER)	UNIT	18	18
	20200100	EARTH EXCAVATION	CU YD	3030	3030
	20400800	FURNISHED EXCAVATION	CU YD	755	755
	20700400	POROUS GRANULAR EMBANKMENT, SPECIAL	CU YD	108	108
	21101505	TOPSOIL EXCAVATION AND PLACEMENT	CU YD	990	990
	21301052	EXPLORATION TRENCH 52" DEPTH	FOOT	1030	1030
*	25000210	SEEDING, CLASS 2A	ACRE	1.5	1.5
*	25000350	SEEDING, CLASS 7	ACRE	0.75	0.75
*	25000400	NITROGEN FERTILIZER NUTRIENT	POUND	135	135
*	25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	135	135
*	25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	135	135
*	25100115	MULCH, METHOD 2	ACRE	1.25	1.25
*	25100630	EROSION CONTROL BLANKET	SQ YD	2115	2115
	28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	150	150
	28000305	TEMPORARY DITCH CHECKS	FOOT	180	180
	28000400	PERIMETER EROSION BARRIER	FOOT	750	750
	28100107	STONE RIPRAP, CLASS A4	SQ YD	1679	1679
	28200200	FILTER FABRIC	SQ YD	1679	1679
	40600100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	215	215
	40600300	AGGREGATE (PRIME COAT)	TON	6	6
	40600625	LEVELING BINDER (MACHINE METHOD), N50	TON	5	5
	40600990	TEMPORARY RAMP	SQ YD	121	121
	40603310	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50	TON	194	194
	42001430	BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)	SQ YD	50	50
	44000100	PAVEMENT REMOVAL	SQ YD	1639	1639
	44000198	HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH	SQ YD	2316	2316
	44004000	PAVED DITCH REMOVAL	FOOT	740	740
	48101200	AGGREGATE SHOULDERS, TYPE B	TON	219	219
	48102100	AGGREGATE WEDGE SHOULDER, TYPE B	TON	17	17
	48203100	HOT-MIX ASPHALT SHOULDERS	TON	49	49
	50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1	1

LEGEND:

* SPECIALTY ITEMS

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Johnson, Depp & Quisenberry CONSULTING ENGINEERS Springfield, Illinois	PLOT DATE = 10/20/2009	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315	120BR-1	MCLEAN	49	3
		CONTRACT NO. 70524		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SUMMARY OF QUANTITIES

	CODE NO.	ITEM	UNIT	TOTAL QUANTITY	FAP 315 (US 136) RURAL TWO-LANE 80% FEDERAL 20% STATE HBP S.N. 057-0245 X071-2A
	50105220	PIPE CULVERT REMOVAL	FOOT	51	51
	50200100	STRUCTURE EXCAVATION	CU YD	238	238
	50300100	FLOOR DRAINS	EACH	20	20
	50300225	CONCRETE STRUCTURES	CU YD	138.3	138.3
	50300255	CONCRETE SUPERSTRUCTURE	CU YD	337.5	337.5
	50300260	BRIDGE DECK GROOVING	SQ YD	820	820
	50300280	CONCRETE ENCASEMENT	CU YD	6.8	6.8
	50300300	PROTECTIVE COAT	SQ YD	1033	1033
	50500105	FURNISHING AND ERECTING STRUCTURAL STEEL	L SUM	1	1
	50500505	STUD SHEAR CONNECTORS	EACH	3744	3744
	50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	90610	90610
	50800515	BAR SPLICERS	EACH	80	80
	51200959	FURNISHING METAL SHELL PILES 14" X 0.312"	FOOT	1039	1039
	51202305	DRIVING PILES	FOOT	1039	1039
	51203200	TEST PILE METAL SHELLS	EACH	2	2
	51204650	PILE SHOES	EACH	28	28
	51500100	NAME PLATES	EACH	1	1
	52100520	ANCHOR BOLTS, 1"	EACH	48	48
	542D0223	PIPE CULVERTS, CLASS D, TYPE 1 18"	FOOT	50	50
	54213453	END SECTIONS 18"	EACH	2	2
	5422D072	PIPE CULVERTS, CLASS D, TYPE 2 72" (TEMPORARY)	FOOT	210	210
	59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	68	68
	60109580	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	144	144
*	63000001	STEEL PLATE BEAM GUARD RAIL, TYPE A, 6 FOOT POSTS	FOOT	362.5	362.5
*	63100045	TRAFFIC BARRIER TERMINAL, TYPE 2	EACH	1	1
*	63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	4	4
*	63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	3	3
	63200310	GUARDRAIL REMOVAL	FOOT	425	425
*	63300725	STEEL PLATE BEAM GUARDRAIL (SHORT RADIUS)	FOOT	31.25	31.25
	67000500	ENGINEER'S FIELD OFFICE, TYPE B	CAL MO	6	6
	67100100	MOBILIZATION	L SUM	1	1

LEGEND:

* SPECIALTY ITEMS

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Johnson, Depp & Quisenberry CONSULTING ENGINEERS Springfield, Illinois	PLOT SCALE = 20.0000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 10/20/2009	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315	120BR-1	MCLEAN	49	4
		CONTRACT NO. 70524		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SUMMARY OF QUANTITIES

	CODE NO.	ITEM	UNIT	TOTAL QUANTITY	FAP 315 (US 136) RURAL TWO-LANE 80% FEDERAL 20% STATE HBP S.N. 057-0245 X071-2A
	70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1	1
	70101800	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	L SUM	1	1
	70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1	1
	70106700	TEMPORARY RUMBLE STRIP	EACH	6	6
	70300100	SHORT-TERM PAVEMENT MARKING	FOOT	192	192
	70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	2320	2320
	70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	805	805
*	78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	2320	2320
*	78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	12	12
*	78100105	RAISED REFLECTIVE PAVEMENT MARKER (BRIDGE)	EACH	2	2
*	78200410	GUARDRAIL MARKERS, TYPE A	EACH	16	16
*	78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	3	3
	78300100	PAVEMENT MARKING REMOVAL	SQ FT	173	173
	78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	14	14
	X0324865	DIAMOND GRINDING (BRIDGE SECTION)	SQ YD	772	772
	X5020501	UNDERWATER STRUCTURE EXCAVATION PROTECTION - LOCATION 1	EACH	1	1
	X5020502	UNDERWATER STRUCTURE EXCAVATION PROTECTION - LOCATION 2	EACH	1	1
	Z0001900	ASBESTOS BEARING PAD REMOVAL	EACH	84	84
	Z0013798	CONSTRUCTION LAYOUT	L SUM	1	1
	Z0038700	PERMANENT BENCH MARKS	EACH	1	1
	X0326790	TEMPORARY PAVEMENT (OPTION)	SQ YD	1268	1268

LEGEND:

* SPECIALTY ITEMS

SHEET NO. 3 OF 3

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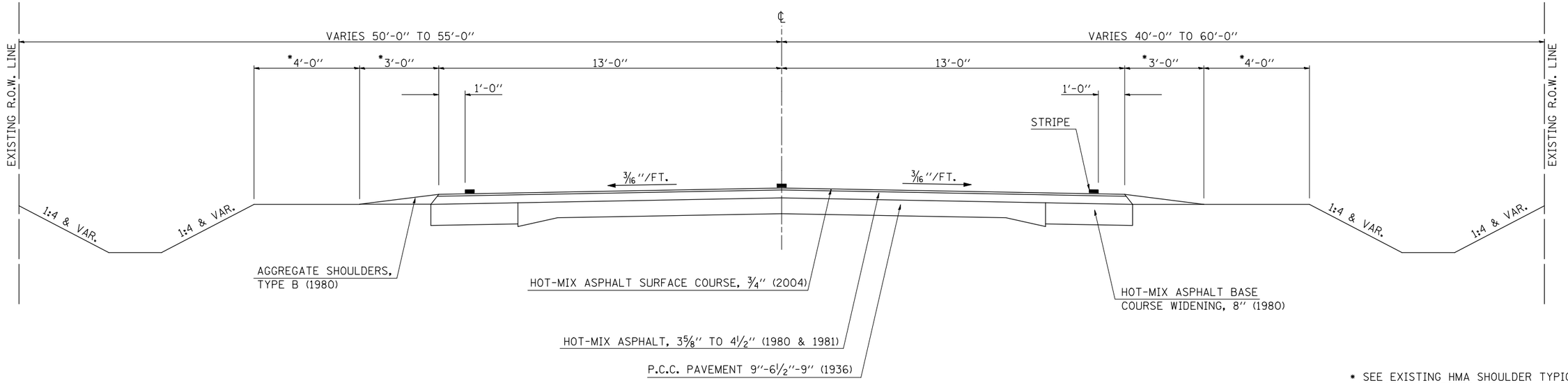
Johnson, Depp & Quisenberry CONSULTING ENGINEERS Springfield, Illinois	PLOT SCALE = 20.0000 ' / IN.	CHECKED -	REVISED -		SCALE:	SHEET NO. OF SHEETS	STA. TO STA.			CONTRACT NO. 70524		
	PLOT DATE = 10/20/2009	DATE -	REVISED -					FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

EXISTING TYPICAL CROSS SECTION

STATION	TO	STATION
120+00.00		135+00.00

OMISSION FOR EXISTING BRIDGE
STATION 126+10.38 TO STATION 127+81.14

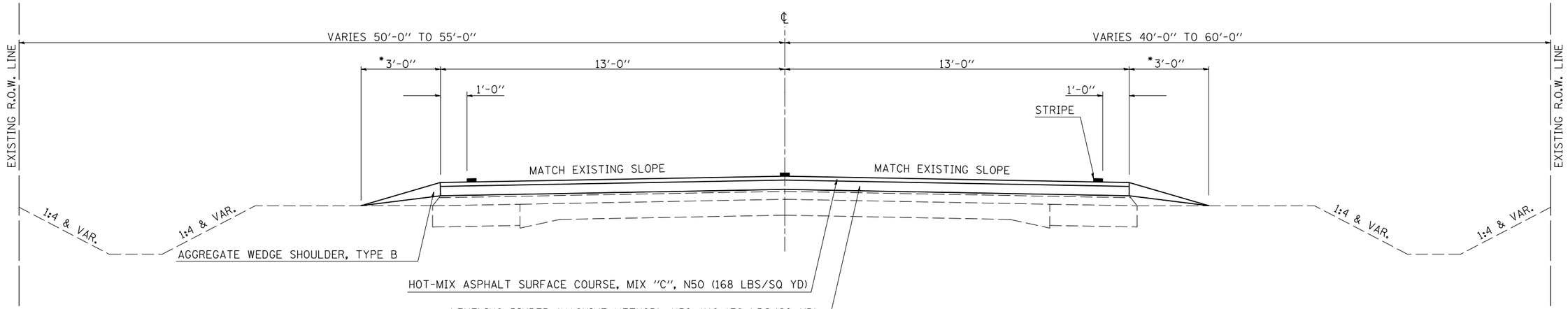


* SEE EXISTING HMA SHOULDER TYPICAL
LT. STA. 124+77 TO LT. STA. 129+28
RT. STA. 124+58 TO RT. STA. 129+19

PROPOSED TYPICAL CROSS SECTION

STATION	TO	STATION
122+25.00		125+87.20 (BRIDGE APPROACH SLAB)
128+04.20 (BRIDGE APPROACH SLAB)		132+55.00

OMISSION FOR BRIDGE & BRIDGE APPROACH SLAB
STATION 125+87.20 TO STATION 128+04.20



NOTE: SEE PAVING THICKNESS TRANSITION DETAIL.

* SEE PROPOSED HMA SHOULDER TYPICAL
LT. STA. 124+77 TO LT. STA. 129+28
RT. STA. 124+58 TO RT. STA. 129+19

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		DRAWN -	REVISED -
Johnson, Depp & Quisenberry CONSULTING ENGINEERS Springfield, Illinois	PLOT SCALE = 40.0000 ′ / IN.	CHECKED -	REVISED -
	PLOT DATE = 10/20/2009	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

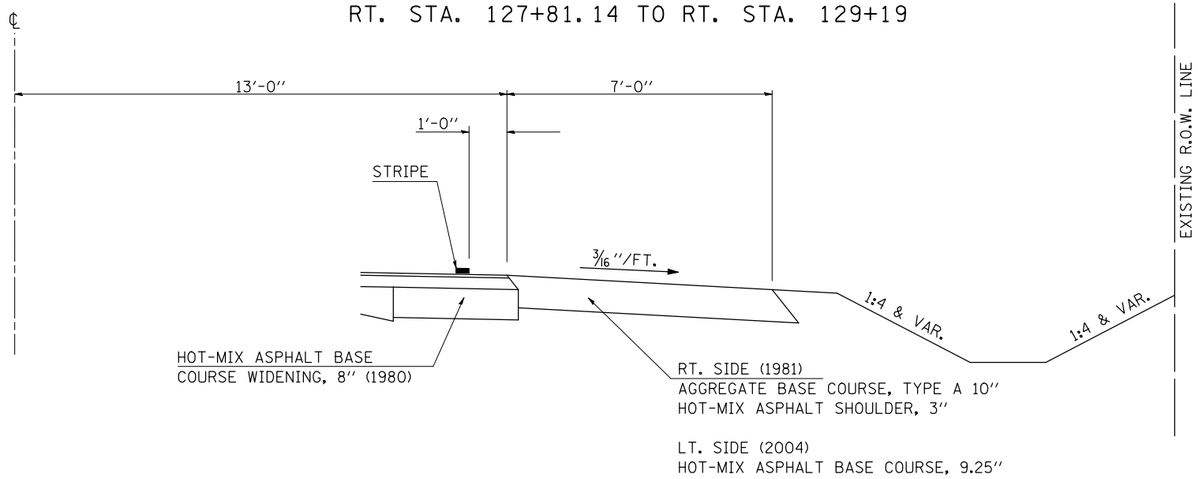
TYPICAL SECTIONS

SCALE: NONE | SHEET NO. OF SHEETS | STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315	120BR-1	MCLEAN	49	6
		CONTRACT NO. 70524		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

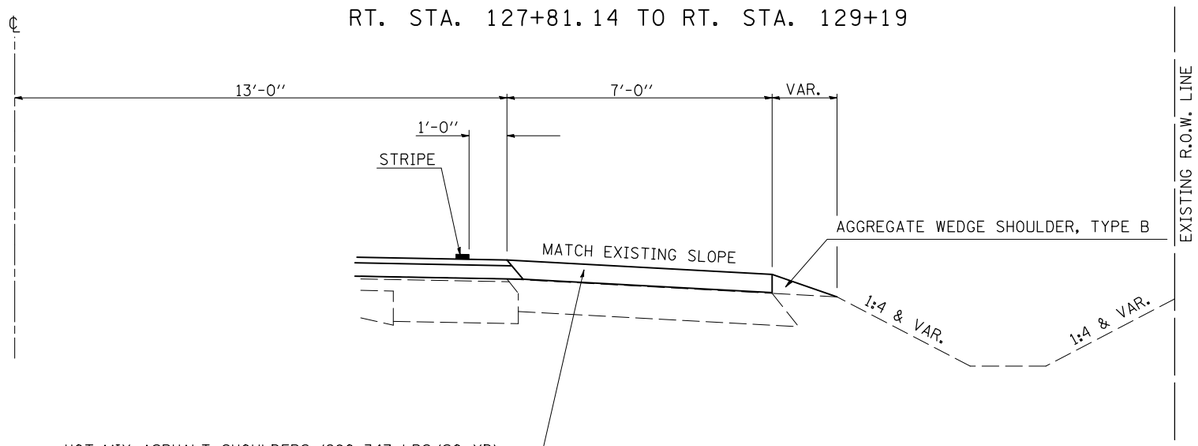
EXISTING HMA SHOULDER TYPICAL CROSS SECTION

STATION	TO	STATION
LT. STA.	124+77 TO LT. STA.	126+10.38
LT. STA.	127+81.14 TO LT. STA.	129+28
RT. STA.	124+58 TO RT. STA.	126+10.38
RT. STA.	127+81.14 TO RT. STA.	129+19



PROPOSED HMA SHOULDER TYPICAL CROSS SECTION

STATION	TO	STATION
LT. STA.	124+77 TO LT. STA.	126+10.38
LT. STA.	127+81.14 TO LT. STA.	129+28
RT. STA.	124+58 TO RT. STA.	126+10.38
RT. STA.	127+81.14 TO RT. STA.	129+19



NOTE: SEE PAVING THICKNESS TRANSITION DETAIL.

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Johnson, Depp & Quisenberry CONSULTING ENGINEERS Springfield, Illinois	PLOT SCALE = 40.0000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 10/20/2009	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS

SCALE: NONE | SHEET NO. OF SHEETS | STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315	120BR-1	MCLEAN	49	7
		CONTRACT NO. 70524		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

TREE REMOVAL (OVER 15 UNITS DIAMETER)

LOCATION	UNIT
42' LT., STA. 127+49	18
TOTAL =	18

EARTH EXCAVATION
FURNISHED EXCAVATION

LOCATION	EXCAVATION	EMBANKMENT	EARTH EXCAVATION W/SHRINKAGE	EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-)
	CU YD	CU YD	CU YD	CU YD
MAINLINE	5.3	120.4	4.0	-116.4
RUNAROUND	320.3	2590.7	240.7	-2350.0
RUNAROUND REMOVAL	2700.3	312.9	2025.4	1712.5
TOTAL =	3025.9	3024.0	2270.1	-753.9

USED SHRINKAGE FACTOR = 0.25

EARTH EXCAVATION = 3030 CU YD

FURNISHED EXCAVATION = 755 CU YD

TOPSOIL EXCAVATION AND PLACEMENT

LOCATION	CU YD
RUNAROUND	990
TOTAL =	990

EXPLORATION TRENCH 52" DEPTH

LOCATION	FOOT
RT. STA. 122+25 TO RT. STA. 132+55	1030
TOTAL =	1030

SEEDING, CLASS 2A

LOCATION	ACRE
STA. 122+00 TO STA. 131+50	1.5
TOTAL =	1.5

SEEDING, CLASS 7

LOCATION	ACRE
RUNAROUND	0.75
TOTAL =	0.75

NITROGEN FERTILIZER NUTRIENT

LOCATION	POUND
STA. 122+00 TO STA. 131+50	135
TOTAL =	135

PHOSPHORUS FERTILIZER NUTRIENT

LOCATION	POUND
STA. 122+00 TO STA. 131+50	135
TOTAL =	135

POTASSIUM FERTILIZER NUTRIENT

LOCATION	POUND
STA. 122+00 TO STA. 131+50	135
TOTAL =	135

MULCH, METHOD 2

LOCATION	ACRE
STA. 122+00 TO STA. 131+50	1.25
TOTAL =	1.25

EROSION CONTROL BLANKET

LOCATION	SQ YD
(USE ON SLOPES 1:3 OR STEEPER)	
STA. 122+00 TO STA. 131+50	2115
TOTAL =	2115

TEMPORARY EROSION CONTROL SEEDING

LOCATION	POUND
STA. 122+00 TO STA. 131+50	150
TOTAL =	150

TEMPORARY DITCH CHECKS

LOCATION	FOOT
RT. STA. 123+00	12
RT. STA. 123+50	12
RT. STA. 123+80	12
RT. STA. 124+10	12
RT. STA. 124+40	12
RT. STA. 125+15	12
RT. STA. 125+80	12
RT. STA. 126+50	24
RT. STA. 127+50	24
RT. STA. 128+50	12
RT. STA. 129+00	12
RT. STA. 129+50	12
RT. STA. 130+00	12
TOTAL =	180

PERIMETER EROSION BARRIER

LOCATION	FOOT
RT. STA. 123+25 TO RT. STA. 130+75	750
TOTAL =	750

STONE RIPRAP, CLASS A4

REPLACEMENT FOR EX. PAVED DITCH REMOVED FOR RUNAROUND

LOCATION	SQ YD
RT. STA. 122+53 TO RT. STA. 126+40	258
RT. STA. 127+56 TO RT. STA. 131+09	235
TOTAL =	493

FILTER FABRIC

(FOR STONE RIPRAP, CLASS A4 DITCH

LOCATION	SQ YD
RT. STA. 122+53 TO RT. STA. 126+40	258
RT. STA. 127+56 TO RT. STA. 131+09	235
TOTAL =	493

BITUMINOUS MATERIALS (PRIME COAT)

LOCATION	GAL
STA. 122+25 TO STA. 124+58	54
STA. 124+58 TO STA. 124+77	6
STA. 124+77 TO STA. 125+81.20	37
STA. 128+10.20 TO STA. 129+19	39
STA. 129+19 TO STA. 129+28	3
STA. 129+28 TO STA. 132+55	76
TOTAL =	215

AGGREGATE (PRIME COAT)

LOCATION	TON
STA. 122+25 TO STA. 124+58	1.3
STA. 124+58 TO STA. 124+77	0.1
STA. 124+77 TO STA. 125+81.20	0.9
STA. 128+10.20 TO STA. 129+19	1.0
STA. 129+19 TO STA. 129+28	0.1
STA. 129+28 TO STA. 132+55	1.9
TOTAL =	5.3
USE	6.0 TON

LEVELING BINDER (MACHINE METHOD), N50

LOCATION	TON
STA. 125+68 TO STA. 125+81.20	3
STA. 128+10.20 TO STA. 128+22	2
TOTAL =	5

TEMPORARY RAMP

LOCATION	SQ YD
STA. 122+25	14
STA. 125+81.20	50
STA. 128+10.20	43
STA. 132+55	14
TOTAL =	121

HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50

LOCATION	TON
STA. 122+25 TO STA. 125+81.20	86
STA. 128+10.20 TO STA. 132+55	108
TOTAL =	194

BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)

LOCATION	SQ YD
STA. 125+81.20 TO STA. 125+87.20	25
STA. 128+04.20 TO STA. 128+10.20	25
TOTAL =	50

PAVEMENT REMOVAL

LOCATION	SQ YD
RUNAROUND:	
RT. STA. 121+92 TO RT. STA. 132+10	1268
MAINLINE:	
STA. 125+81.20 TO STA. 126+30.80	184
STA. 127+60.50 TO STA. 128+10.20	187
TOTAL =	1639

HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH

LOCATION	SQ YD
STA. 122+25 TO STA. 124+58	673
STA. 124+58 TO STA. 124+77	70
STA. 124+77 TO STA. 125+50	324
STA. 128+58 TO STA. 129+19	271
STA. 129+19 TO STA. 129+28	33
STA. 129+28 TO STA. 132+55	945
TOTAL =	2316

PAVED DITCH REMOVAL

LOCATION	FOOT
RT. STA. 122+53 TO RT. STA. 126+40	387
RT. STA. 127+56 TO RT. STA. 131+09	353
TOTAL =	740

AGGREGATE SHOULDERS, TYPE B

LOCATION	TON
RUNAROUND:	
STA. 122+00 TO STA. 132+00	219
TOTAL =	219

AGGREGATE WEDGE SHOULDER, TYPE B

LOCATION	TON
STA. 122+00 TO STA. 132+00	17
TOTAL =	17

HOT-MIX ASPHALT SHOULDERS

LOCATION	TON
RT. STA. 124+58 TO RT. STA. 125+81.20	13
LT. STA. 124+77 TO LT. STA. 125+81.20	11
RT. STA. 128+10.20 TO RT. STA. 129+19	12
LT. STA. 128+10.20 TO LT. STA. 129+28	13
TOTAL =	49

PIPE CULVERT REMOVAL

LOCATION	FOOT
34' RT., STA. 131+33	51
TOTAL =	51

PIPE CULVERTS, CLASS D, TYPE 1 18"

LOCATION	FOOT
34' RT., STA. 131+33	50
TOTAL =	50

END SECTIONS 18"

LOCATION	EACH
34' RT., STA. 131+33	2
TOTAL =	2

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	PLOT SCALE = 100.0000 ' / IN.	DRAWN -	REVISED -
Johnson, Depp & Quisenberry CONSULTING ENGINEERS Springfield, Illinois	PLOT DATE = 10/20/2009	CHECKED -	REVISED -
		DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULES OF QUANTITIES

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315	120BR-1	MCLEAN	49	8
		CONTRACT NO. 70524		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

PIPE CULVERTS, CLASS D, TYPE 2 72" (TEMPORARY)

LOCATION	FOOT
66' RT., STA. 127+03	210
TOTAL =	210

STEEL PLATE BEAM GUARD RAIL, TYPE A, 6 FOOT POSTS

LOCATION	FOOT
RT. STA. 124+08.85 TO RT. STA. 125+58.85	150.0
LT. STA. 128+32.15 TO LT. STA. 129+82.15	150.0
RT. STA. 128+32.15 TO RT. STA. 128+94.65	62.5
TOTAL =	362.5

TRAFFIC BARRIER TERMINAL, TYPE 2

LOCATION	EACH
LT. STA. 125+36.00	1
TOTAL =	1

TRAFFIC BARRIER TERMINAL, TYPE 6

LOCATION	EACH
LT. STA. 125+58.85 TO LT. STA. 126+02.00	1
RT. STA. 125+58.85 TO RT. STA. 126+02.00	1
LT. STA. 127+89.00 TO LT. STA. 128+32.15	1
RT. STA. 127+89.00 TO RT. STA. 128+32.15	1
TOTAL =	4

TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT

LOCATION	EACH
RT. STA. 123+58.85 TO RT. STA. 124+08.85	1
RT. STA. 128+94.65 TO RT. STA. 129+44.65	1
LT. STA. 129+82.15 TO LT. STA. 130+32.15	1
TOTAL =	3

GUARDRAIL REMOVAL

LOCATION	FOOT
RT. STA. 125+09 TO RT. STA. 126+24	115
LT. STA. 125+46 TO LT. STA. 126+24	78
LT. STA. 127+67 TO LT. STA. 128+83	116
RT. STA. 127+67 TO RT. STA. 128+83	116
TOTAL =	425

STEEL PLATE BEAM GUARDRAIL (SHORT RADIUS)

LOCATION	FOOT
LT. STA. 125+36.00 TO LT. STA. 125+58.85	31.25
TOTAL =	31.25

ENGINEER'S FIELD OFFICE, TYPE B

LOCATION	CAL MO
SECTION 120BR-1	6
TOTAL =	6

MOBILIZATION

LOCATION	L SUM
SECTION 120BR-1	1
TOTAL =	1

TRAFFIC CONTROL AND PROTECTION, STANDARD 701201

LOCATION	L SUM
SECTION 120BR-1	1
TOTAL =	1

TRAFFIC CONTROL AND PROTECTION, (SPECIAL)

LOCATION	L SUM
SECTION 120BR-1	1
TOTAL =	1

TEMPORARY BRIDGE TRAFFIC SIGNALS

LOCATION	EACH
SEE TRAFFIC CONTROL PLAN	1
TOTAL =	1

TEMPORARY RUMBLE STRIP

LOCATION (SEE STANDARD 701316)	EACH
RT. STA. 104+00	1
RT. STA. 109+00	1
RT. STA. 114+00	1
LT. STA. 140+00	1
LT. STA. 145+00	1
LT. STA. 150+00	1
TOTAL =	6

SHORT-TERM PAVEMENT MARKING

LOCATION	FOOT
RESURFACING:	
STA. 122+25 TO STA. 132+55 (YELLOW SKIP-DASH)	192
TOTAL =	192

TEMPORARY PAVEMENT MARKING - LINE 4"

LOCATION	FOOT
STA. 122+25 TO STA. 132+55 (YELLOW SKIP-DASH)	260
LT. STA. 122+25 TO LT. STA. 132+55 (WHITE EDGELINE)	1030
RT. STA. 122+25 TO RT. STA. 132+55 (WHITE EDGELINE)	1030
TOTAL =	2320

WORK ZONE PAVEMENT MARKING REMOVAL

LOCATION	SQ FT
SHORT TERM MARKINGS - SURFACE CSE. ONLY	
STA. 122+25 TO STA. 132+55 (YELLOW SKIP-DASH)	32
TEMPORARY PAVEMENT MARKINGS	
STA. 122+25 TO STA. 132+55 (YELLOW SKIP-DASH)	87
LT. STA. 122+25 TO LT. STA. 132+55 (WHITE EDGELINE)	343
RT. STA. 122+25 TO RT. STA. 132+55 (WHITE EDGELINE)	343
TOTAL =	805

PAINT PAVEMENT MARKING - LINE 4"

LOCATION	FOOT
STA. 122+25 TO STA. 132+55 (YELLOW SKIP-DASH)	260
LT. STA. 122+25 TO LT. STA. 132+55 (WHITE EDGELINE)	1030
RT. STA. 122+25 TO RT. STA. 132+55 (WHITE EDGELINE)	1030
TOTAL =	2320

RAISED REFLECTIVE PAVEMENT MARKER

LOCATION	EACH
STA. 122+25.00 TO STA. 126+17.20	5
STA. 127+74.20 TO STA. 132+55.00	7
TOTAL =	12

RAISED REFLECTIVE PAVEMENT MARKER (BRIDGE)

LOCATION	EACH
STA. 126+17.20 TO STA. 127+74.20	2
TOTAL =	2

GUARDRAIL MARKERS, TYPE A

LOCATION	EACH
RT. STA. 123+58.85 TO RT. STA. 126+02.00	4
LT. STA. 125+36.00 TO LT. STA. 126+02.00	4
LT. STA. 127+89.00 TO LT. STA. 130+32.15	4
RT. STA. 127+89.00 TO RT. STA. 129+44.65	4
TOTAL =	16

TERMINAL MARKER - DIRECT APPLIED

LOCATION	EACH
RT. STA. 123+58.85	1
RT. STA. 129+44.65	1
LT. STA. 130+32.15	1
TOTAL =	3

PAVEMENT MARKING REMOVAL

LOCATION	SQ FT
MAINLINE:	
STA. 121+00 (WHITE STOP BAR)	24
STA. 121+00 TO STA. 122+50 (YELLOW SKIP-DASH)	13
RT. STA. 121+90 TO RT. STA. 123+00 (WHITE EDGELINE)	37
RT. STA. 131+00 TO RT. STA. 132+10 (WHITE EDGELINE)	37
STA. 131+50 TO STA. 133+00 (YELLOW SKIP-DASH)	13
STA. 133+00 (WHITE STOP BAR)	24
RUNAROUND:	
RT. STA. 10+00 TO RT. STA. 10+37 (WHITE EDGELINE)	12
RT. STA. 20+66 TO RT. STA. 21+05 (WHITE EDGELINE)	13
TOTAL =	173

RAISED REFLECTIVE PAVEMENT MARKER REMOVAL

LOCATION	EACH
STA. 122+25 TO STA. 132+55	14
TOTAL =	14

CONSTRUCTION LAYOUT

LOCATION	L SUM
SECTION 120BR-1	1
TOTAL =	1

PERMANENT BENCH MARKS

LOCATION	EACH
S.N. 057-2045	1
TOTAL =	1

TEMPORARY PAVEMENT (OPTION)

LOCATION	SQ YD
RUNAROUND:	
RT. STA. 121+92 TO RT. STA. 132+10	1268
TOTAL =	1268

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		DRAWN -	REVISED -
Johnson, Depp & Quisenberry CONSULTING ENGINEERS Springfield, Illinois	PLOT SCALE = 100.0000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 10/20/2009	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULES OF QUANTITIES

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315	120BR-1	MCLEAN	49	9
		CONTRACT NO. 70524		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

GENERAL NOTE: THE HORIZONTAL CURVES PROPOSED FOR THE TEMPORARY RUNAROUND ARE RADII OF 820 FEET BASED ON A DESIGN SPEED OF 40 MPH (POST RUNAROUND 35 MPH).

SEE RUNAROUND TYPICAL FOR HORIZONTAL LAYOUT INFORMATION

STA 127+03, 66' RT
70' TRIPLE - PIPE CULVERTS, CLASS D
TYPE 2 72" (TEMPORARY) 210 L.F.
U.S.F.L. = 660.80
D.S.F.L. = 660.50

STA 131+33, 34' RT
REMOVE EXIST. 18" CMP
PROP. PIPE CULVERTS, CLASS D
TYPE 1 18" 50 L.F.
W/END SECTIONS 18"
U.S.F.L. = 674.90
D.S.F.L. = 674.75

RT. STA. 122+53 TO RT. STA. 126+40
RT. STA. 127+56 TO RT. STA. 131+09
REMOVE EXISTING PAVED DITCH
REPLACE WITH STONE RIPRAP, CLASS A4
UPON REMOVAL OF THE TEMPORARY RUNAROUND.

RT. STA. 123+25 TO RT. STA. 130+75
PERIMETER EROSION BARRIER

◇ TEMPORARY DITCH CHECK

WATERWAY INFORMATION (TEMPORARY)

FLOOD	FREQ. YR.	(CFS)	OPENING (SF)	HEADWATER ELEV.
DESIGN	2	591	85	670.76

VEL.(2) = 6.97 FPS

BM#1 R.R. SPIKE SET IN TOP OF S.W. STUMP IN CLUSTER OF (5) STUMPS 49.3' LT. STA. 125+43.8, ELEV. 675.47

BM#2 R.R. SPIKE IN FIRST P.P.WEST OF EAST FIELD ENTRANCE 53.5' RT. STA. 130+76.8, ELEV. 679.83

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Johnson, Depp & Quisenberry CONSULTING ENGINEERS Springfield, Illinois	PLOT DATE = 10/20/2009	CHECKED -	REVISED -	
		DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FAP ROUTE 315 (US 136)

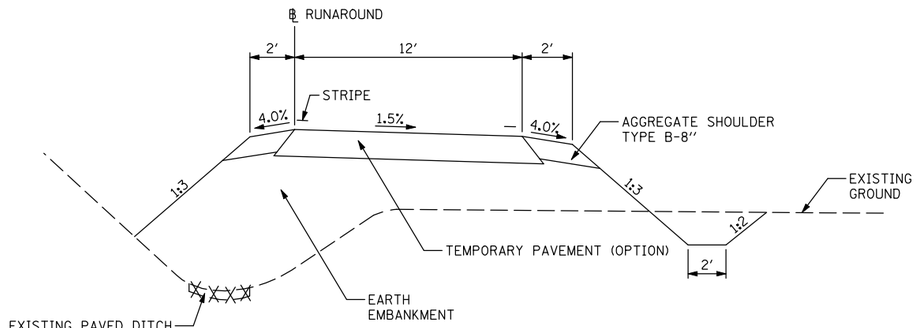
SCALE: 1" = 50' | SHEET NO. OF SHEETS | STA. 120+00 TO STA. 135+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315	120BR-1	MCLEAN	49	10

CONTRACT NO. 70524

FED. ROAD DIST. NO. | ILLINOIS | FED. AID PROJECT

PLAN	NOTE BOOK NO.	SURVEYED PLOTTED ALIGNMENT CHECKED R.T. OF WAY CHECKED CADD FILE NAME	BY	DATE
PROFILE	NOTE BOOK NO.	SURVEYED PLOTTED GRADES CHECKED B.M. NOTED STRUCTURE NOTATIONS CHK'D	BY	DATE

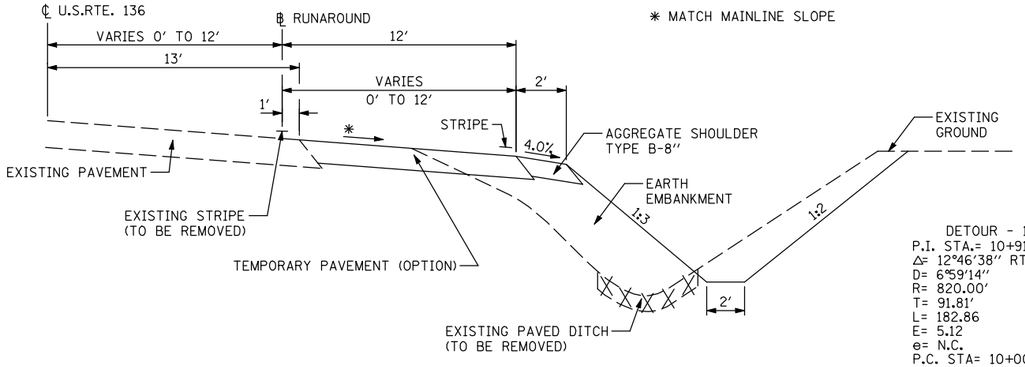


TYPICAL SECTION FOR RUNAROUND

STA. 11+50 TO STA. 19+50

NOTE:
UPON REMOVAL OF THE RUNAROUND, REGRADE DISTURBED AREA BACK TO THE ORIGINAL GROUND CONDITIONS.

REMOVE EXISTING PAVED DITCH DURING CONSTRUCTION OF THE RUNAROUND. CONSTRUCT STONE RIPRAP, CLASS A4 DITCH TO ORIGINAL PAVED DITCH GRADE AND LOCATION UPON REMOVAL OF THE RUNAROUND.



TYPICAL SECTION FOR RUNAROUND

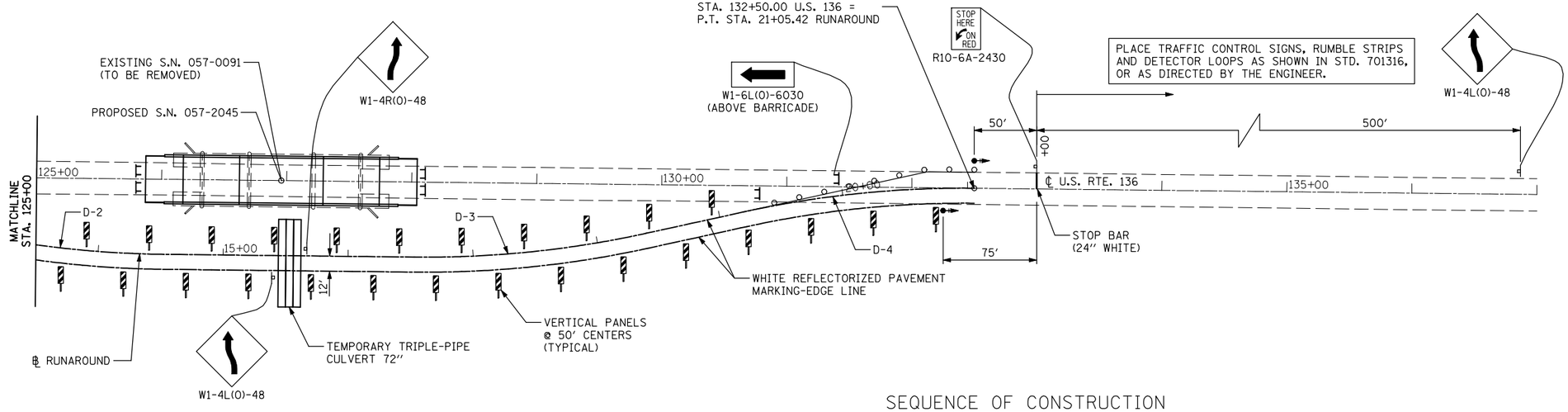
STA. 10+00 TO STA. 11+50
STA. 19+50 TO STA. 21+05.42

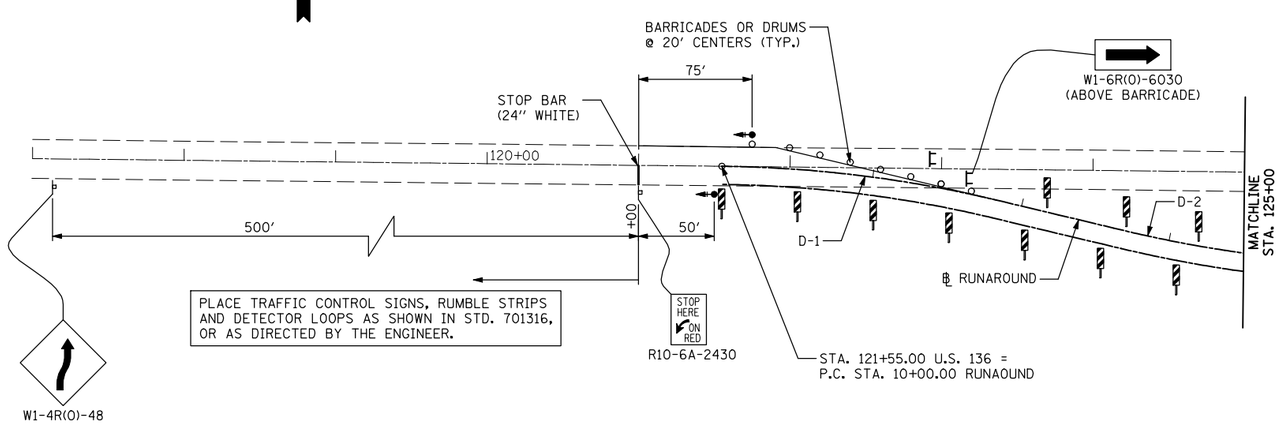
DETOUR - 1	DETOUR - 2
P.I. STA.= 10+91.81	P.I. STA.= 13+62.35
Δ= 12°46′38″ RT.	Δ= 12°46′38″ LT.
D= 6°59′14″	D= 6°59′14″
R= 820.00′	R= 820.00′
T= 91.81′	T= 91.81′
L= 182.86	L= 182.86
E= 5.12	E= 5.12
e= N.C.	e= N.C.
P.C. STA= 10+00.00	P.C. STA= 12+70.54
P.T. STA= 11+82.86	P.T. STA= 14+53.40

DETOUR - 3	DETOUR - 4
P.I. STA.= 17+46.76	P.I. STA.= 20+12.86
Δ= 12°59′29″ LT.	Δ= 12°59′29″ RT.
D= 6°59′14″	D= 6°59′14″
R= 820.00′	R= 820.00′
T= 93.37′	T= 93.37′
L= 185.93	L= 185.93
E= 5.30	E= 5.30
e= N.C.	e= N.C.
P.C. STA= 16+53.40	P.C. STA= 19+19.49
P.T. STA= 18+39.33	P.T. STA= 21+05.42

SYMBOLS

- PROPOSED SIGNAL HEAD W/ BACK PLATE
- SIGN
- TYPE III BARRICADE
- BARRICADE OR DRUM WITH MONODIRECTIONAL STEADY BURNING LIGHT
- VERTICAL PANEL





SEQUENCE OF CONSTRUCTION

1. CONSTRUCT TEMPORARY RUNAROUND.
2. INSTALL TRAFFIC SIGNALS, SIGNS, RUMBLE STRIPS, DETECTOR LOOPS, VERTICAL PANELS, ETC. ACCORDING TO THESE DETAILS AND APPLICABLE PORTIONS OF STANDARDS 701316 & 701331.
3. DIVERT TRAFFIC TO RUNAROUND, CONSTRUCT NEW STRUCTURE, AND INSTALL GUARDRAIL AS SHOWN ELSEWHERE IN THESE PLANS.
4. PLACE TRAFFIC BACK ONTO U.S. RTE. 136. REMOVE RUNAROUND RESTORING DISTURBED AREA BACK TO ORIGINAL CONDITIONS.
5. UNDER TRAFFIC, COLDMILL, RESURFACE AND STRIPE ROADWAY AS SHOWN ELSEWHERE IN THESE PLANS AND COMPLETE ALL REMAINING WORK.

NOTES:
RUNAROUND DESIGN SPEED 40MPH (POST RUNAROUND 35MPH).

TRAFFIC CONTROL TO BE PAID FOR AT THE CONTRACT UNIT PRICE PER LUMP SUM FOR TRAFFIC CONTROL AND PROTECTION, (SPECIAL).

CONTRACTOR TO MAINTAIN ACCESS TO PROPERTIES DURING CONSTRUCTION.

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		DRAWN -	REVISED -
Johnson, Depp & Quisenberry CONSULTING ENGINEERS Springfield, Illinois	PLOT SCALE = 200.0000 ′ / IN.	CHECKED -	REVISED -
	PLOT DATE = 10/20/2009	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN

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

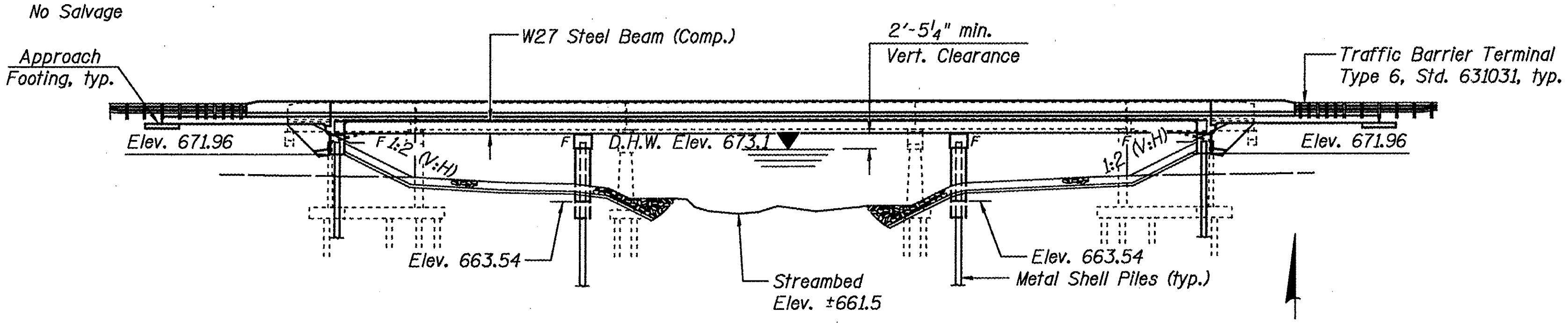
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315	120BR-1	MCLEAN	49	11
		CONTRACT NO. 70524		
		ILLINOIS FED. AID PROJECT		

Bench Mark: Railroad spike in first power pole, located west of east field entrance, Elevation 679.83

Existing Structure: S.N. 057-0091 was built in 1936 as F.A. 119 Section 120 B. at Station 126+95.70. In 1982, the R.C. Deck Girder Bridge superstructure was removed and widened with PPC Deck Beams as F.A. 53, Section 120 BR, Station 126+95.70. In 2008, five (5) PPC Deck Beams were removed and replaced as FAP 315 (US 136), Section D5 Beam Replacement 2008-1, Contract 70669. The substructure consists of closed abutments and solid wall concrete piers. The Bk. to Bk. dimension measures 126'-11" while the O.-O. width measures 42'-0". The structure is to be removed and replaced. Traffic is to be diverted south of the structure using a one lane runaround with temporary signals and temporary culvert structure.

No Salvage

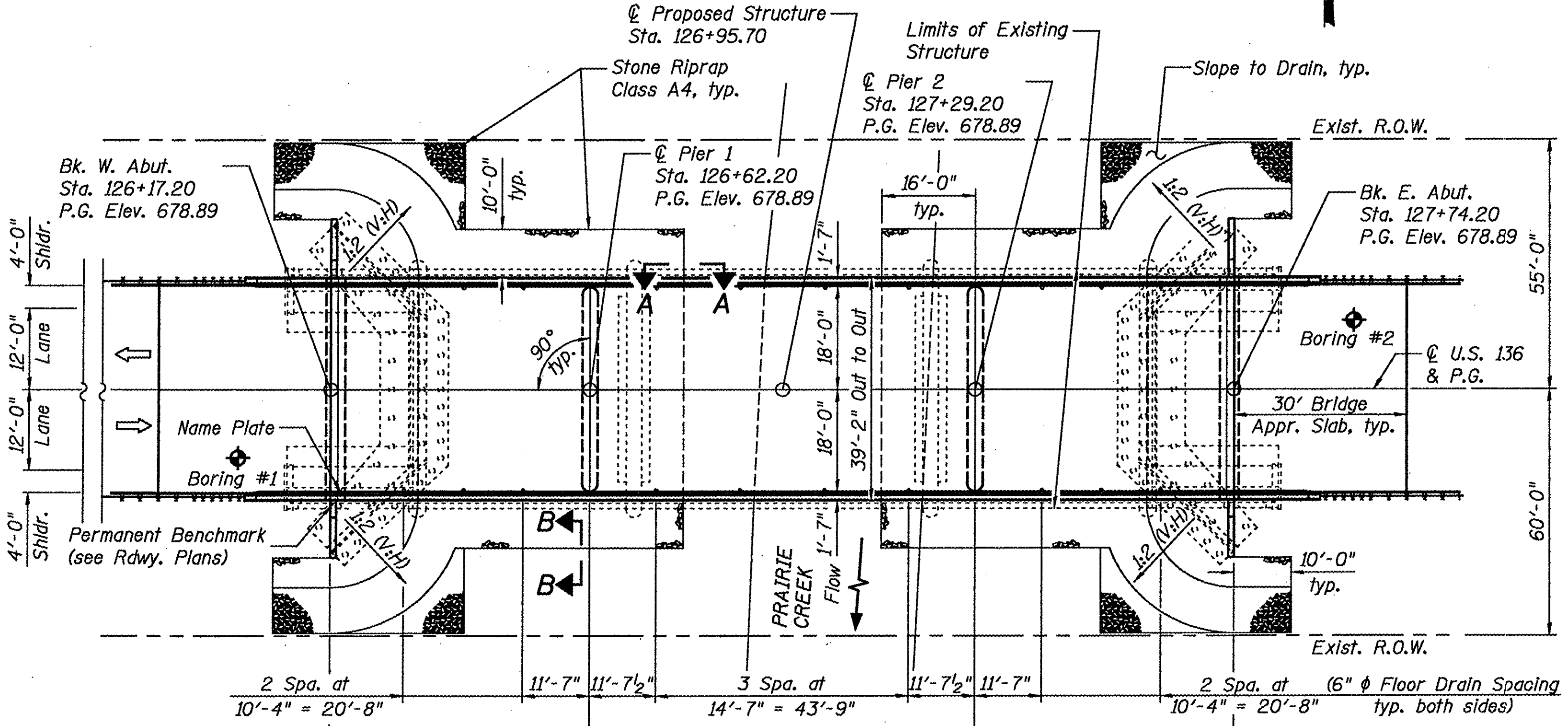
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



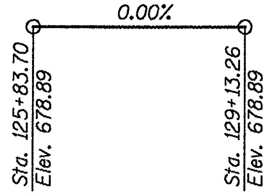
ELEVATION

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	W. Abut.	Pier 1	Pier 2	E. Abut.
	671.9	653.5	653.5	671.9



PLAN



PROFILE GRADE

(along ℄ roadway)

The profile grade shows the final elevations after grinding. Up to ¼" will be ground off the bridge deck and approach slab.

APPROVED
For Structural Adequacy Only

Ralph E. Anderson (TJD)
Engineer of Bridges & Structures

Johnson, Depp & Quisenberry
CONSULTING ENGINEERS
Springfield, Illinois

DESIGNED:	JDQ	DRAWN:	P. Ray
CHECKED:	DCD	CHECKED:	DCD

STATE OF ILLINOIS DAVID C. DEPP 081-005117 LICENSED STRUCTURAL ENGINEER

Signed: David Depp
Date: 10-14-2009
Lic. Expires: 11-30-2010

WATERWAY INFORMATION

Drainage Area = 11.93 sq. mi. Exist. Low Grade Elev. 678.49 ft. @ Sta. 126+00; Prop. Low Grade Elev. 678.89 ft. @ Sta. 126+95.70

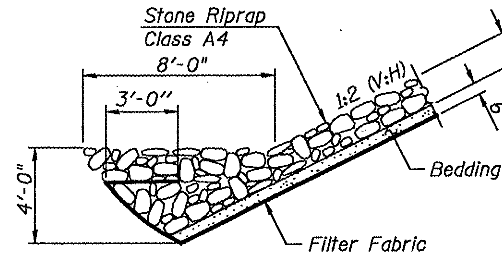
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
	10	1472	780	780	671.9	0.1	0.1	672.0	672.0
Design	50	2393	935	967	673.1	0.2	0.2	673.3	673.3
Base	100	2805	989	1024	673.5	0.3	0.2	673.8	673.7
Overtopping									
Max. Calc.	500	3816	1116	1155	674.4	0.4	0.3	674.8	674.7

INDEX OF SHEETS

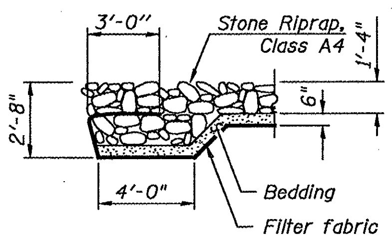
STATION 126+95.70
BUILT ____ BY
STATE OF ILLINOIS
F.A.P. RTE. 315 SEC. 120BR-1
LOADING HL-93
STR. NO. 057-0245

NAME PLATE

See Std. 515001



SECTION A-A



SECTION B-B

LOADING HL-93

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

DESIGN SPECIFICATIONS

2007 AASHTO LRFD Bridge Design Specifications with 2008 Interims

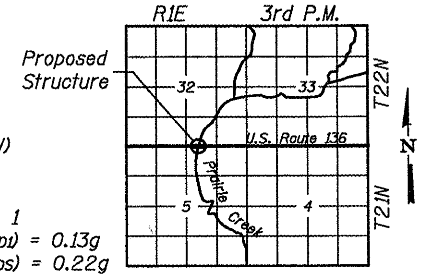
DESIGN STRESSES

FIELD UNITS

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

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (SD1) = 0.13g
Design Spectral Acceleration at 0.2 sec. (SDS) = 0.22g
Soil Site Class = D



LOCATION SKETCH

GENERAL NOTES

Fasteners shall be AASHTO M164 Type 1, mechanically galvanized bolts in painted areas and M164 Type 3 in unpainted areas. Bolts ⅞ in. ϕ, holes 15/16 in. ϕ, unless otherwise noted.

All structural steel shall be AASHTO M 270 Grade 50W.

Calculated weight of Structural Steel = 107,700 lbs.

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

Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions. Reinforcement bars designated (E) shall be epoxy coated.

Slipforming of the parapets is not allowed.

If the Contractor elects to use cantilever forming brackets on the exterior beams or girders, the brackets shall be placed at the same locations as required for the hardwood blocks in Article 503.06(b) of the Standard Specifications. If additional cantilever forming brackets are required, hardwood blocking shall be wedged between the exterior and first interior beam at each of these additional bracket locations.

Structural steel shall only be painted for a distance equal to the depth of embedment into the concrete cap plus 3 inches. Those areas shall be primed in the shop with a Department approved zinc rich primer. No field painting shall be required. All structural steel shall be cleaned as specified in the Special Provision for "Surface Preparation and Painting Requirements for Weathering Steel".

Bearing seat surfaces shall be constructed or adjusted to their designated elevations within a tolerance of ⅛ inch (0.01 ft.). Adjustment shall be made either by grinding the surface or by shimming the bearings.

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

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 piles.

The existing bearing pads at Pier 1 and both Abutments contain asbestos. The Contractor shall take appropriate precautions to deal with the presence and disposal of asbestos on this project. See Special Provisions.

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

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Porous Granular Embankment, Special	Cu Yd	--	108	108
Stone Riprap, Class A4	Sq Yd	--	1186	1186
Filter Fabric	Sq Yd	--	1186	1186
Removal Of Existing Structures	Each	1	--	1
Structure Excavation	Cu Yd	--	238	238
Floor Drains	Each	20	--	20
Concrete Structures	Cu Yd	23.3	115.0	138.3
Concrete Superstructure	Cu Yd	337.5	--	337.5
Bridge Deck Grooving	Sq Yd	820	--	820
Concrete Encasement	Cu Yd	--	6.8	6.8
Protective Coat	Sq Yd	1033	--	1033
Furnishing And Erecting Structural Steel	L Sum	1	--	1
Stud Shear Connectors	Each	3744	--	3744
Reinforcement Bars, Epoxy Coated	Pound	81370	9240	90610
Bar Splicers	Each	80	--	80
Furnishing Metal Shell Piles 14" x 0.312"	Foot	--	1039	1039
Driving Piles	Foot	--	1039	1039
Test Pile Metal Shells	Each	--	2	2
Pile Shoes	Each	--	28	28
Name Plates	Each	1	--	1
Anchor Bolts, 1"	Each	--	48	48
Geocomposite Wall Drain	Sq Yd	--	68	68
Pipe Underdrains For Structures 4"	Foot	--	144	144
Underwater Struct. Excav. Protection - Loc. 1	Each	--	1	1
Underwater Struct. Excav. Protection - Loc. 2	Each	--	1	1
Diamond Grinding (Bridge Section)	Sq Yd	772	--	772
Asbestos Bearing Pad Removal	Each	--	84	84

GENERAL PLAN & ELEVATION
U.S. 136 OVER PRAIRIE CREEK
STRUCTURE NO. 057-0245

SHEET 1 OF 17	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	315	120BR-1	MCLEAN	49	12
		STA. 126+95.70	CONTRACT NO. 70524		
	FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			

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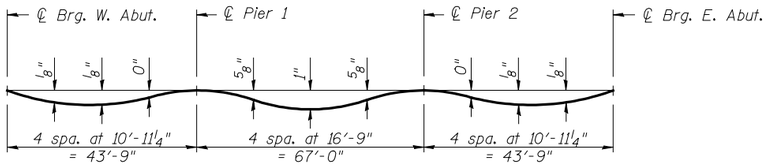
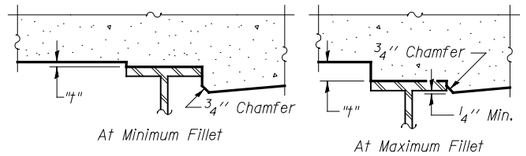


DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only.)

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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



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

The slab is to be ground after curing to achieve smoothness, but the slab is not to be ground to elevations below the "Theoretical Grade Elevations" shown below. For grinding the deck, see Special Provisions.

FILLET HEIGHTS

NOTE: Expected fillet height "t" varies from 1/2" (at Abuts. & Piers) to 1 3/4" (at midspan 2).

BEAM 1

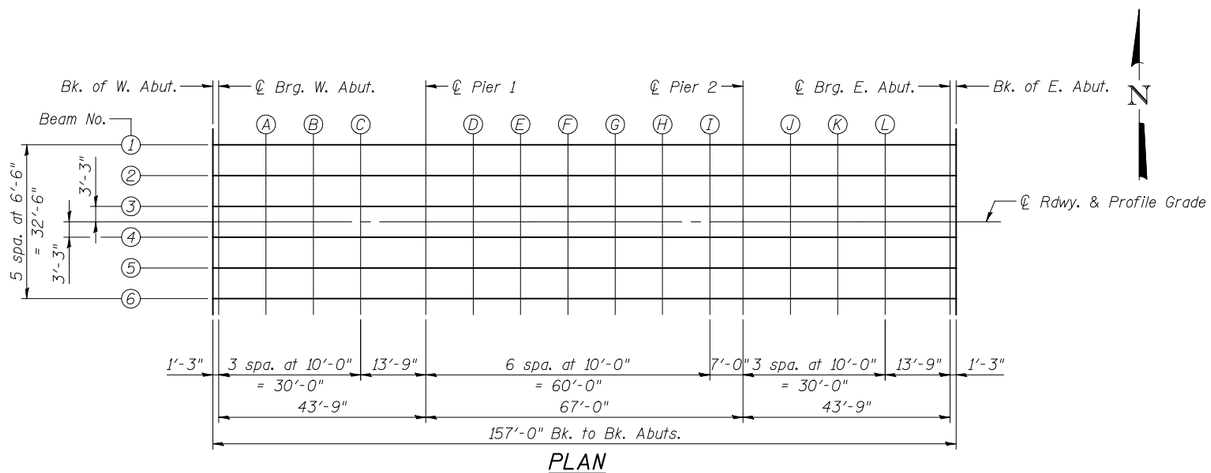
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. W. Abut.	126+17.20	-16.25	678.61	678.63
℄ Brg. W. Abut.	126+18.45	-16.25	678.61	678.63
A	126+28.45	-16.25	678.61	678.64
B	126+38.45	-16.25	678.61	678.64
C	126+48.45	-16.25	678.61	678.64
℄ Pier 1	126+62.20	-16.25	678.61	678.63
D	126+72.20	-16.25	678.61	678.66
E	126+82.20	-16.25	678.61	678.69
F	126+92.20	-16.25	678.61	678.71
G	127+02.20	-16.25	678.61	678.71
H	127+12.20	-16.25	678.61	678.68
I	127+22.20	-16.25	678.61	678.65
℄ Pier 2	127+29.20	-16.25	678.61	678.63
J	127+39.20	-16.25	678.61	678.63
K	127+49.20	-16.25	678.61	678.64
L	127+59.20	-16.25	678.61	678.64
℄ Brg. E. Abut.	127+72.95	-16.25	678.61	678.63
Bk. E. Abut.	127+74.20	-16.25	678.61	678.63

BEAM 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. W. Abut.	126+17.20	-9.75	678.74	678.76
℄ Brg. W. Abut.	126+18.45	-9.75	678.74	678.76
A	126+28.45	-9.75	678.74	678.77
B	126+38.45	-9.75	678.74	678.77
C	126+48.45	-9.75	678.74	678.76
℄ Pier 1	126+62.20	-9.75	678.74	678.76
D	126+72.20	-9.75	678.74	678.79
E	126+82.20	-9.75	678.74	678.82
F	126+92.20	-9.75	678.74	678.84
G	127+02.20	-9.75	678.74	678.83
H	127+12.20	-9.75	678.74	678.81
I	127+22.20	-9.75	678.74	678.78
℄ Pier 2	127+29.20	-9.75	678.74	678.76
J	127+39.20	-9.75	678.74	678.76
K	127+49.20	-9.75	678.74	678.77
L	127+59.20	-9.75	678.74	678.77
℄ Brg. E. Abut.	127+72.95	-9.75	678.74	678.76
Bk. E. Abut.	127+74.20	-9.75	678.74	678.76

BEAM 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. W. Abut.	126+17.20	-3.25	678.84	678.86
℄ Brg. W. Abut.	126+18.45	-3.25	678.84	678.86
A	126+28.45	-3.25	678.84	678.87
B	126+38.45	-3.25	678.84	678.87
C	126+48.45	-3.25	678.84	678.86
℄ Pier 1	126+62.20	-3.25	678.84	678.86
D	126+72.20	-3.25	678.84	678.89
E	126+82.20	-3.25	678.84	678.92
F	126+92.20	-3.25	678.84	678.94
G	127+02.20	-3.25	678.84	678.93
H	127+12.20	-3.25	678.84	678.91
I	127+22.20	-3.25	678.84	678.88
℄ Pier 2	127+29.20	-3.25	678.84	678.86
J	127+39.20	-3.25	678.84	678.86
K	127+49.20	-3.25	678.84	678.87
L	127+59.20	-3.25	678.84	678.87
℄ Brg. E. Abut.	127+72.95	-3.25	678.84	678.86
Bk. E. Abut.	127+74.20	-3.25	678.84	678.86



PLAN

TOP OF SLAB ELEVATIONS
U.S. 136 OVER PRAIRIE CREEK
STRUCTURE NO. 057-0245

Johnson, Depp & Quisenberry
CONSULTING ENGINEERS
Springfield, Illinois

DESIGNED:	JDQ	DRAWN:	P. Ray
CHECKED:	DCD	CHECKED:	DCD

E-S1 10-1-08

SHEET 2 OF 17	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	315	120BR-1	MCLEAN	49	13
		STA. 126+95.70	CONTRACT NO. 70524		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

℄ RDWY. & PROFILE GRADE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. W. Abut.	126+17.20	0.00	678.89	678.91
℄ Brg. W. Abut.	126+18.45	0.00	678.89	678.91
A	126+28.45	0.00	678.89	678.92
B	126+38.45	0.00	678.89	678.92
C	126+48.45	0.00	678.89	678.91
℄ Pier 1	126+62.20	0.00	678.89	678.91
D	126+72.20	0.00	678.89	678.94
E	126+82.20	0.00	678.89	678.97
F	126+92.20	0.00	678.89	678.99
G	127+02.20	0.00	678.89	678.99
H	127+12.20	0.00	678.89	678.96
I	127+22.20	0.00	678.89	678.93
℄ Pier 2	127+29.20	0.00	678.89	678.91
J	127+39.20	0.00	678.89	678.91
K	127+49.20	0.00	678.89	678.92
L	127+59.20	0.00	678.89	678.92
℄ Brg. E. Abut.	127+72.95	0.00	678.89	678.91
Bk. E. Abut.	127+74.20	0.00	678.89	678.91

BEAM 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. W. Abut.	126+17.20	3.25	678.84	678.86
℄ Brg. W. Abut.	126+18.45	3.25	678.84	678.86
A	126+28.45	3.25	678.84	678.87
B	126+38.45	3.25	678.84	678.87
C	126+48.45	3.25	678.84	678.86
℄ Pier 1	126+62.20	3.25	678.84	678.86
D	126+72.20	3.25	678.84	678.89
E	126+82.20	3.25	678.84	678.92
F	126+92.20	3.25	678.84	678.94
G	127+02.20	3.25	678.84	678.93
H	127+12.20	3.25	678.84	678.91
I	127+22.20	3.25	678.84	678.88
℄ Pier 2	127+29.20	3.25	678.84	678.86
J	127+39.20	3.25	678.84	678.86
K	127+49.20	3.25	678.84	678.87
L	127+59.20	3.25	678.84	678.87
℄ Brg. E. Abut.	127+72.95	3.25	678.84	678.86
Bk. E. Abut.	127+74.20	3.25	678.84	678.86

BEAM 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. W. Abut.	126+17.20	9.75	678.74	678.76
℄ Brg. W. Abut.	126+18.45	9.75	678.74	678.76
A	126+28.45	9.75	678.74	678.77
B	126+38.45	9.75	678.74	678.77
C	126+48.45	9.75	678.74	678.76
℄ Pier 1	126+62.20	9.75	678.74	678.76
D	126+72.20	9.75	678.74	678.79
E	126+82.20	9.75	678.74	678.82
F	126+92.20	9.75	678.74	678.84
G	127+02.20	9.75	678.74	678.83
H	127+12.20	9.75	678.74	678.81
I	127+22.20	9.75	678.74	678.78
℄ Pier 2	127+29.20	9.75	678.74	678.76
J	127+39.20	9.75	678.74	678.76
K	127+49.20	9.75	678.74	678.77
L	127+59.20	9.75	678.74	678.77
℄ Brg. E. Abut.	127+72.95	9.75	678.74	678.76
Bk. E. Abut.	127+74.20	9.75	678.74	678.76

BEAM 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. W. Abut.	126+17.20	16.25	678.61	678.63
℄ Brg. W. Abut.	126+18.45	16.25	678.61	678.63
A	126+28.45	16.25	678.61	678.64
B	126+38.45	16.25	678.61	678.64
C	126+48.45	16.25	678.61	678.64
℄ Pier 1	126+62.20	16.25	678.61	678.63
D	126+72.20	16.25	678.61	678.66
E	126+82.20	16.25	678.61	678.69
F	126+92.20	16.25	678.61	678.71
G	127+02.20	16.25	678.61	678.71
H	127+12.20	16.25	678.61	678.68
I	127+22.20	16.25	678.61	678.65
℄ Pier 2	127+29.20	16.25	678.61	678.63
J	127+39.20	16.25	678.61	678.63
K	127+49.20	16.25	678.61	678.64
L	127+59.20	16.25	678.61	678.64
℄ Brg. E. Abut.	127+72.95	16.25	678.61	678.63
Bk. E. Abut.	127+74.20	16.25	678.61	678.63

Johnson, Depp & Quisenberry
CONSULTING ENGINEERS
Springfield, Illinois

DESIGNED: JDQ	DRAWN: P. Ray
CHECKED: DCD	CHECKED: DCD

TOP OF SLAB ELEVATIONS
U.S. 136 OVER PRAIRIE CREEK
STRUCTURE NO. 057-0245

SHEET 3 OF 17	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	315	120BR-1	MCLEAN	49	14
		STA. 126+95.70	CONTRACT NO. 70524		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LEFT CURB LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
End W. Appr. Slab	125+87.20	-18.00	678.58	678.60
A1	125+97.20	-18.00	678.58	678.60
B1	126+07.20	-18.00	678.58	678.60
Bk. W. Abut.	126+17.20	-18.00	678.58	678.60
Bk. E. Abut.	127+74.20	-18.00	678.58	678.60
A2	127+84.20	-18.00	678.58	678.60
B2	127+94.20	-18.00	678.58	678.60
End E. Appr. Slab	128+04.20	-18.00	678.58	678.60

LEFT EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
End W. Appr. Slab	125+87.20	-12.00	678.70	678.72
A1	125+97.20	-12.00	678.70	678.72
B1	126+07.20	-12.00	678.70	678.72
Bk. W. Abut.	126+17.20	-12.00	678.70	678.72
Bk. E. Abut.	127+74.20	-12.00	678.70	678.72
A2	127+84.20	-12.00	678.70	678.72
B2	127+94.20	-12.00	678.70	678.72
End E. Appr. Slab	128+04.20	-12.00	678.70	678.72

℄ RDWY. & PROFILE GRADE

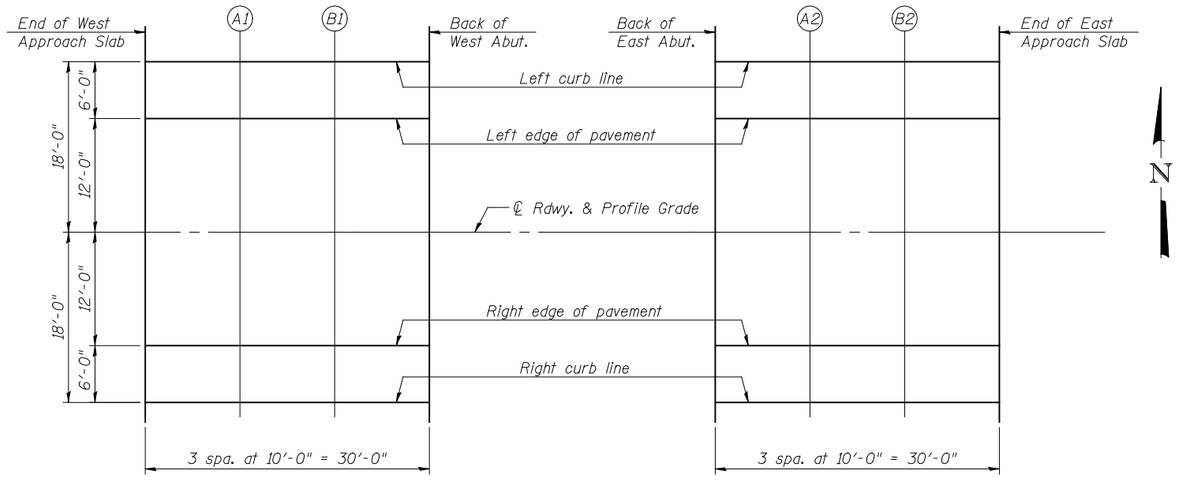
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
End W. Appr. Slab	125+87.20	0.00	678.89	678.91
A1	125+97.20	0.00	678.89	678.91
B1	126+07.20	0.00	678.89	678.91
Bk. W. Abut.	126+17.20	0.00	678.89	678.91
Bk. E. Abut.	127+74.20	0.00	678.89	678.91
A2	127+84.20	0.00	678.89	678.91
B2	127+94.20	0.00	678.89	678.91
End E. Appr. Slab	128+04.20	0.00	678.89	678.91

RIGHT EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
End W. Appr. Slab	125+87.20	12.00	678.70	678.72
A1	125+97.20	12.00	678.70	678.72
B1	126+07.20	12.00	678.70	678.72
Bk. W. Abut.	126+17.20	12.00	678.70	678.72
Bk. E. Abut.	127+74.20	12.00	678.70	678.72
A2	127+84.20	12.00	678.70	678.72
B2	127+94.20	12.00	678.70	678.72
End E. Appr. Slab	128+04.20	12.00	678.70	678.72

RIGHT CURB LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
End W. Appr. Slab	125+87.20	18.00	678.58	678.60
A1	125+97.20	18.00	678.58	678.60
B1	126+07.20	18.00	678.58	678.60
Bk. W. Abut.	126+17.20	18.00	678.58	678.60
Bk. E. Abut.	127+74.20	18.00	678.58	678.60
A2	127+84.20	18.00	678.58	678.60
B2	127+94.20	18.00	678.58	678.60
End E. Appr. Slab	128+04.20	18.00	678.58	678.60



PLAN

TOP OF APPROACH SLAB ELEVATIONS
U.S. 136 OVER PRAIRIE CREEK
STRUCTURE NO. 057-0245

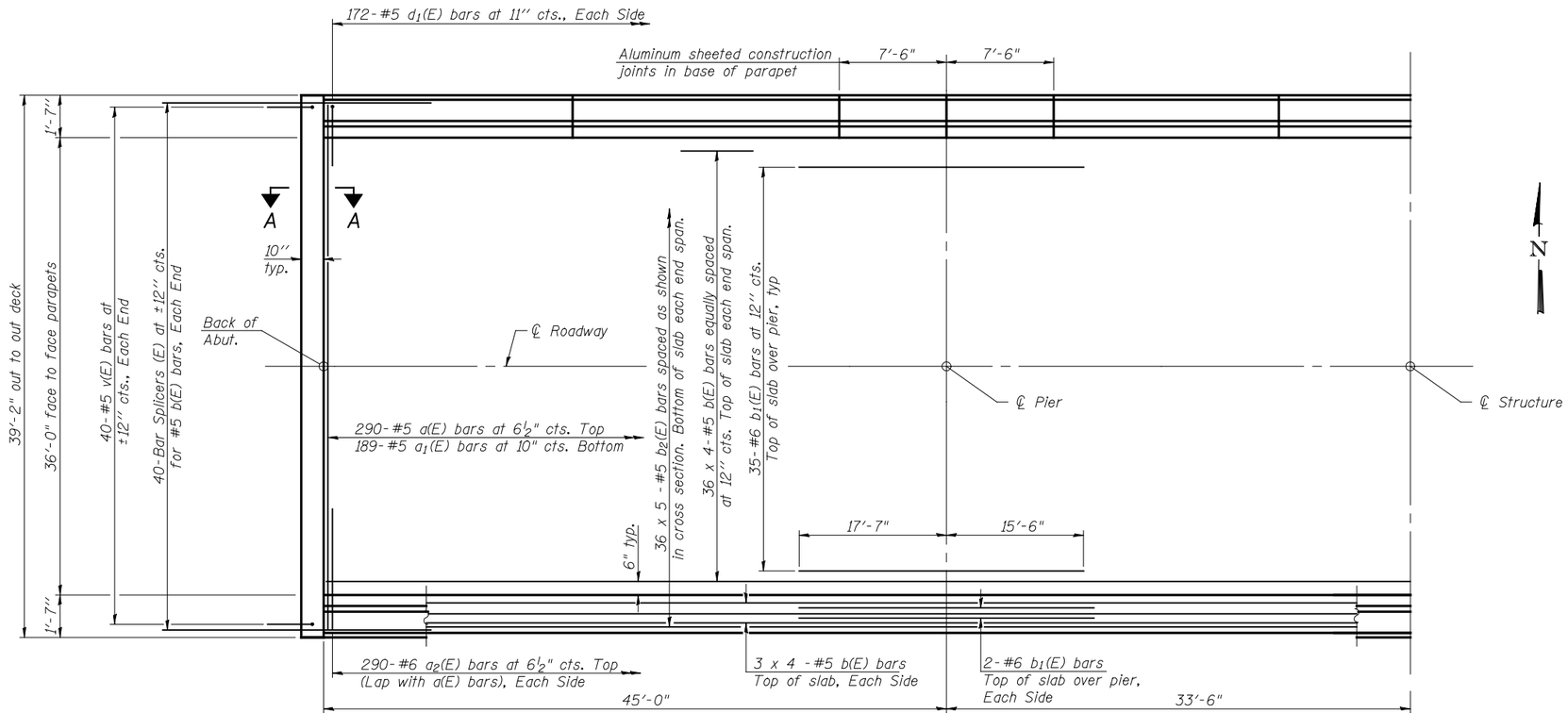
SHEET 4 OF 17	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	315	120BR-1	MCLEAN	49	15
		STA. 126+95.70	CONTRACT NO. 70524		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

Johnson, Depp & Quisenberry
CONSULTING ENGINEERS
Springfield, Illinois

DESIGNED:	JDQ	DRAWN:	P. Ray
CHECKED:	DCD	CHECKED:	DCD

E-AS1 10-1-08

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

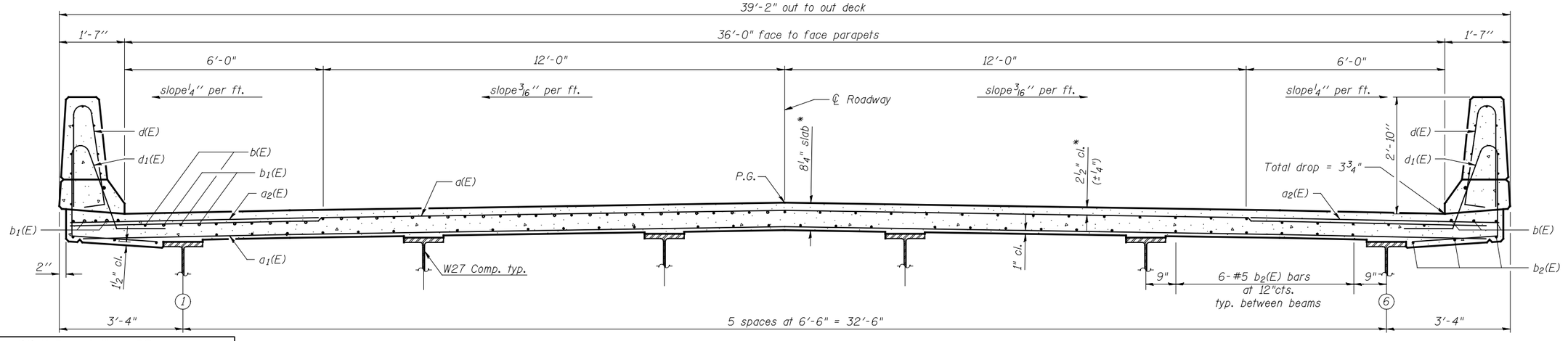


PARTIAL PLAN

MINIMUM BAR LAP

#5 bar = 1'-8''

Notes:
See sheets 6 and 7 of 17 for superstructure details.
Bars indicated thus 36 x 4-#5 etc. indicates 36 lines of bars with 4 lengths per line.
See sheet 7 of 17 for parapet reinforcement and Superstructure Bill of Material.
See sheet 6 of 17 for Section A-A.
All reinforcement shall be placed as shown symmetric about ℄ structure.
See sheet 15 of 17 for Bar Splicer details.



NEAR PIER

NEAR MIDSPAN

CROSS SECTION

(Looking East)

* Before grinding according to Bridge Smoothness Specification.

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Consulting Engineers & Land Surveyors
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Hillsboro, IL 62049
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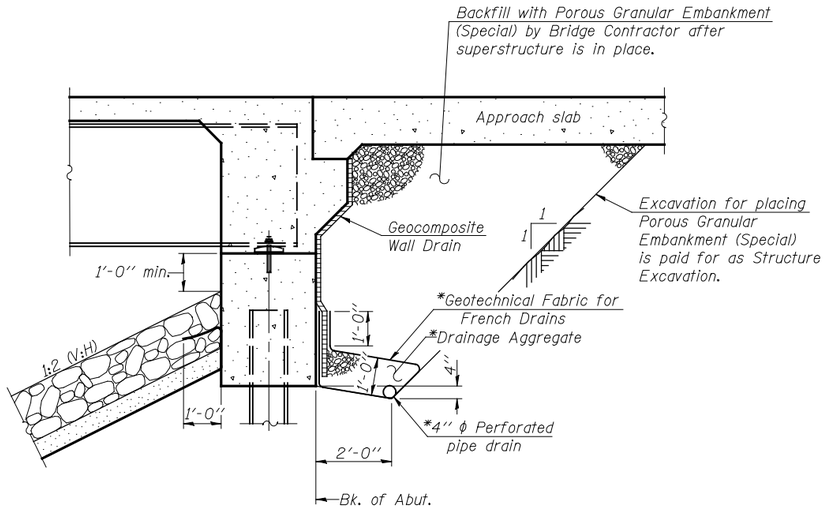
Fax: 217.532.6300
PROFESSIONAL DESIGN No. 184-002754

DESIGNED:	CMF	DRAWN:	RNH
CHECKED:	TMM	CHECKED:	TMM

SUPERSTRUCTURE
U.S. 136 OVER PRAIRIE CREEK
STRUCTURE NO. 057-0245

SHEET 5 OF 17	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	315	120BR-1	MCLEAN	49	16
		STA. 126+95.70	CONTRACT NO. 70524		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

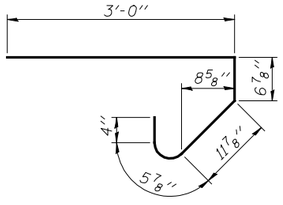
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



SECTION THRU INTEGRAL ABUTMENT

*Included in the cost of Pipe Underdrains for Structures.

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 Standard Specifications and Highway Standard 601101).

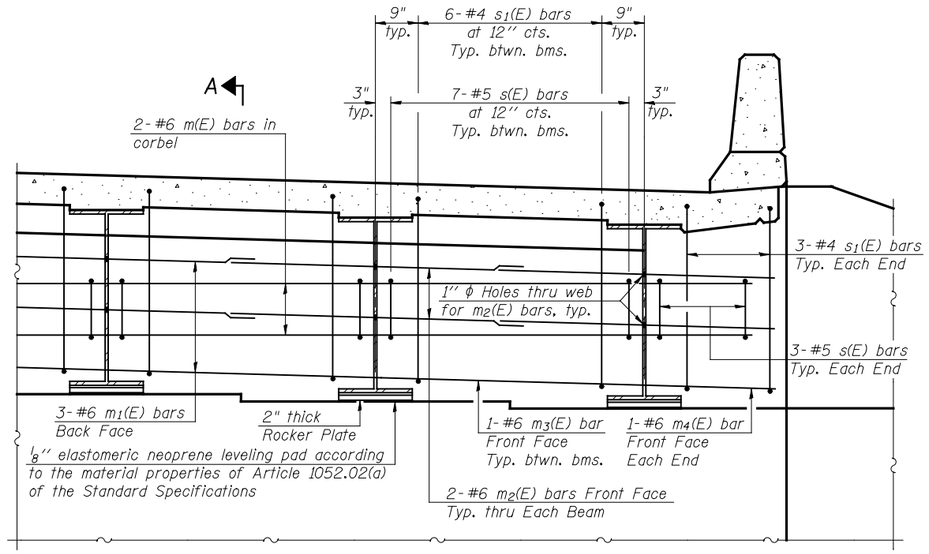


BAR s(E)

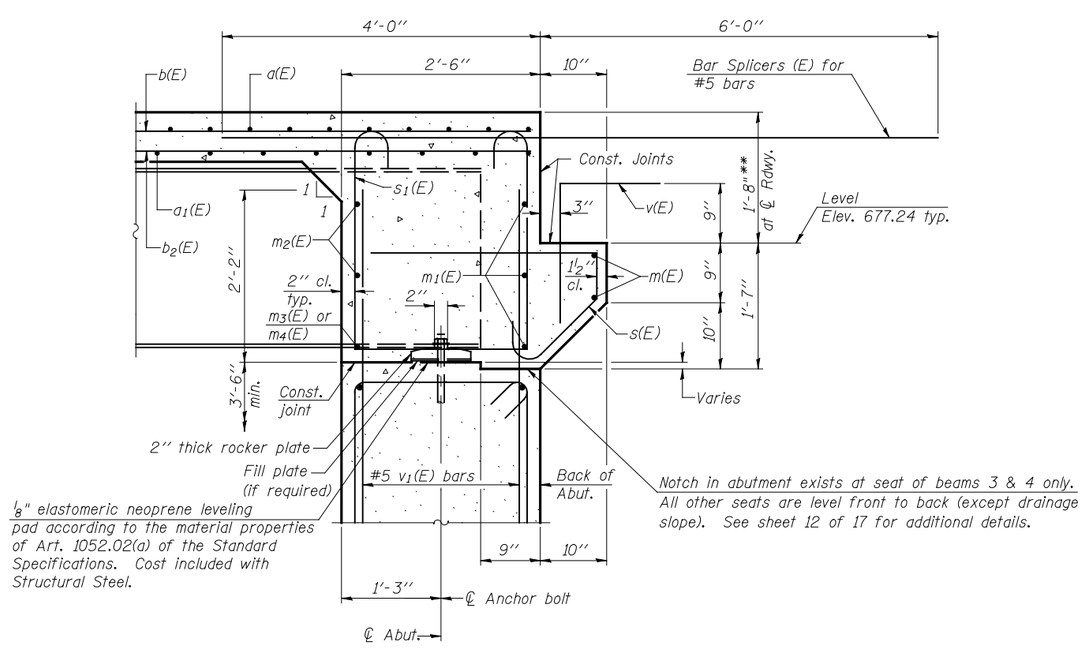
Notes:
Reinforcement bars in diaphragm are billed with superstructure on sheet 7 of 17.
Concrete in diaphragm is included with Concrete Superstructure on sheet 7 of 17.
For details of bar $s_1(E)$ see sheet 7 of 17.
Bar $v_1(E)$ is billed with the abutments on sheet 12 of 17.

MIN. BAR LAP

#6 bar = 2'-9"



DIAPHRAGM ELEVATION AT ABUTMENT



SECTION A-A

** Before grinding according to Bridge Smoothness Specification.

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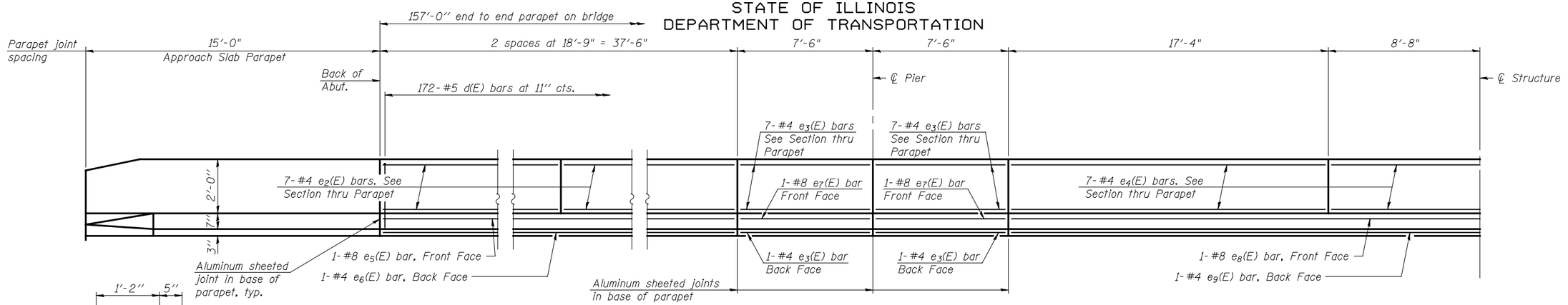
DESIGNED:	CMF	DRAWN:	RNH
CHECKED:	TMM	CHECKED:	TMM

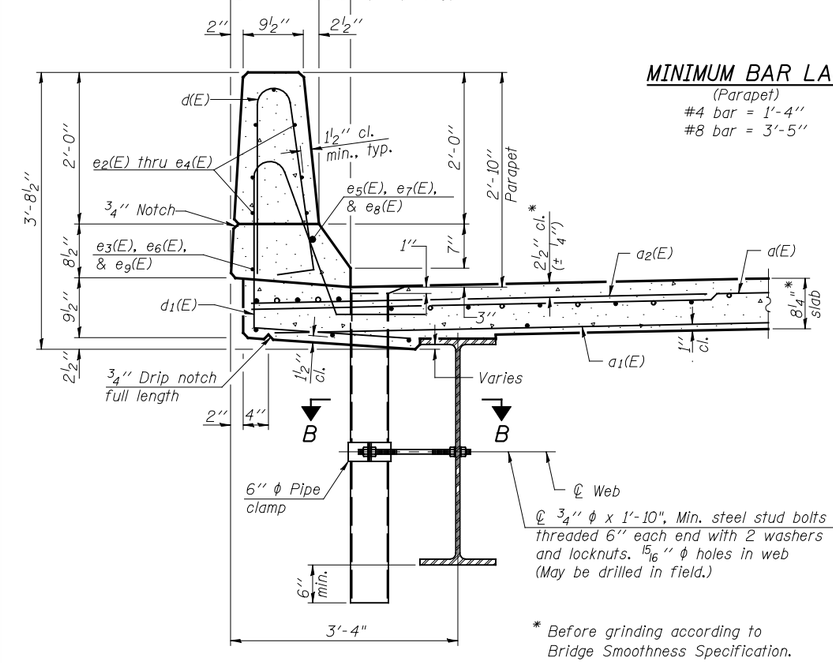
INTEGRAL ABUTMENT DIAPHRAGM DETAILS
U.S. 136 OVER
PRAIRIE CREEK
STRUCTURE NO. 057-0245

SHEET 6 OF 17	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	315	120BR-1	MCLEAN	49	17
		STA. 126+95.70	CONTRACT NO. 70524		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



INSIDE ELEVATION OF PARAPET



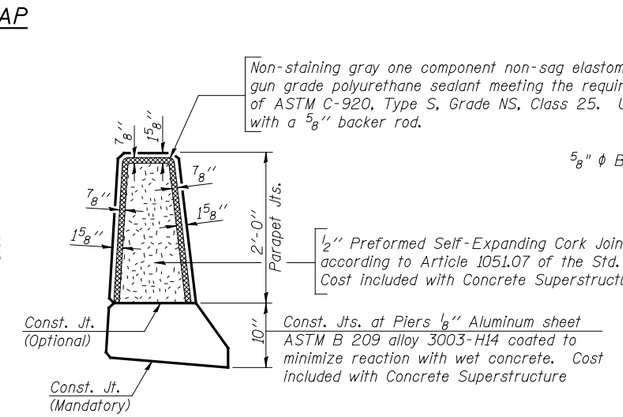
SECTION THRU PARAPET

℄ ¾" ϕ x 1'-10", Min. steel stud bolts threaded 6" each end with 2 washers and locknuts. 15/16" ϕ holes in web (May be drilled in field.)

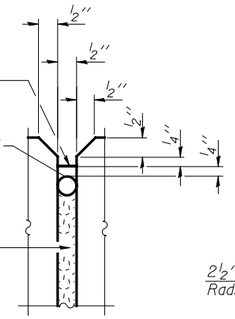
* Before grinding according to Bridge Smoothness Specification.

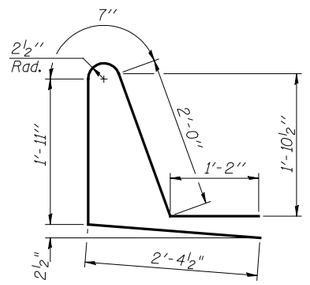
MINIMUM BAR LAP

(Parapet)
#4 bar = 1'-4"
#8 bar = 3'-5"



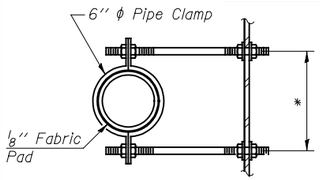
PARAPET JOINT DETAILS





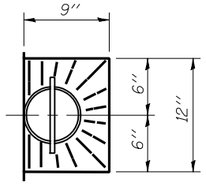
BAR d1(E)

Notes:
The exterior surfaces of the floor drains need not be painted.
Fiberglass pipe shall conform to ASTM D 2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum.
All parapet joints and reinforcement shall be placed as shown symmetric about ℄ structure.
See sheet 8 and 9 of 17 for Approach Slabs and Approach Parapets.

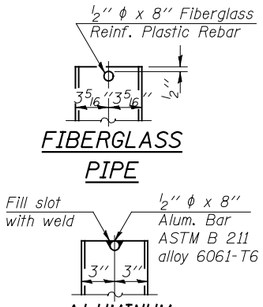


SECTION B-B

*Dimension as required by Pipe Clamp

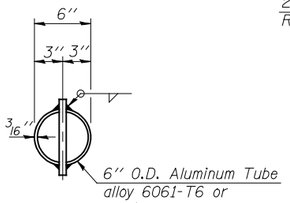


TOP PLAN



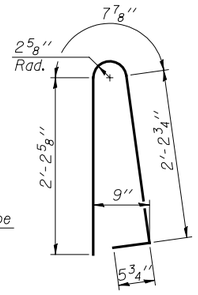
FIBERGLASS PIPE

ALUMINUM TUBE

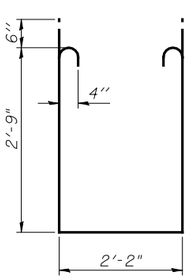


TOP PLAN

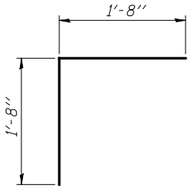
(Showing Aluminum Tube)



BAR d(E)



BAR s1(E)



BAR v(E)

SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d(E)	290	#5	38'-6"	
a1(E)	189	#5	37'-11"	
a2(E)	580	#6	6'-0"	
b(E)	168	#5	40'-5"	
b1(E)	78	#6	33'-1"	
b2(E)	180	#5	32'-8"	
d(E)	344	#5	5'-7"	
d1(E)	344	#5	8'-1"	
e2(E)	56	#4	18'-6"	
e3(E)	64	#4	7'-3"	
e4(E)	42	#4	17'-1"	
e5(E)	4	#8	37'-3"	
e6(E)	4	#4	37'-3"	
e7(E)	8	#8	7'-3"	
e8(E)	4	#8	27'-7"	
e9(E)	4	#4	26'-7"	
m(E)	4	#6	38'-10"	
m1(E)	6	#6	38'-10"	
m2(E)	24	#6	8'-10"	
m3(E)	10	#6	6'-2"	
m4(E)	4	#6	3'-0"	
s(E)	82	#5	5'-5"	
s1(E)	72	#4	8'-8"	
v(E)	80	#5	3'-4"	
Reinforcement Bars, Epoxy Coated		Pound	51,010	
Concrete Superstructure		Cu. Yds.	217.9	

SUPERSTRUCTURE DETAILS
U.S. 136 OVER PRAIRIE CREEK
STRUCTURE NO. 057-0245

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PROFESSIONAL DESIGN No. 184-002754

DESIGNED:	CMF	DRAWN:	RNH
CHECKED:	TMM	CHECKED:	TMM

SHEET 7 OF 17	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	315	120BR-1	MCLEAN	49	18
		STA. 126+95.70	CONTRACT NO. 70524		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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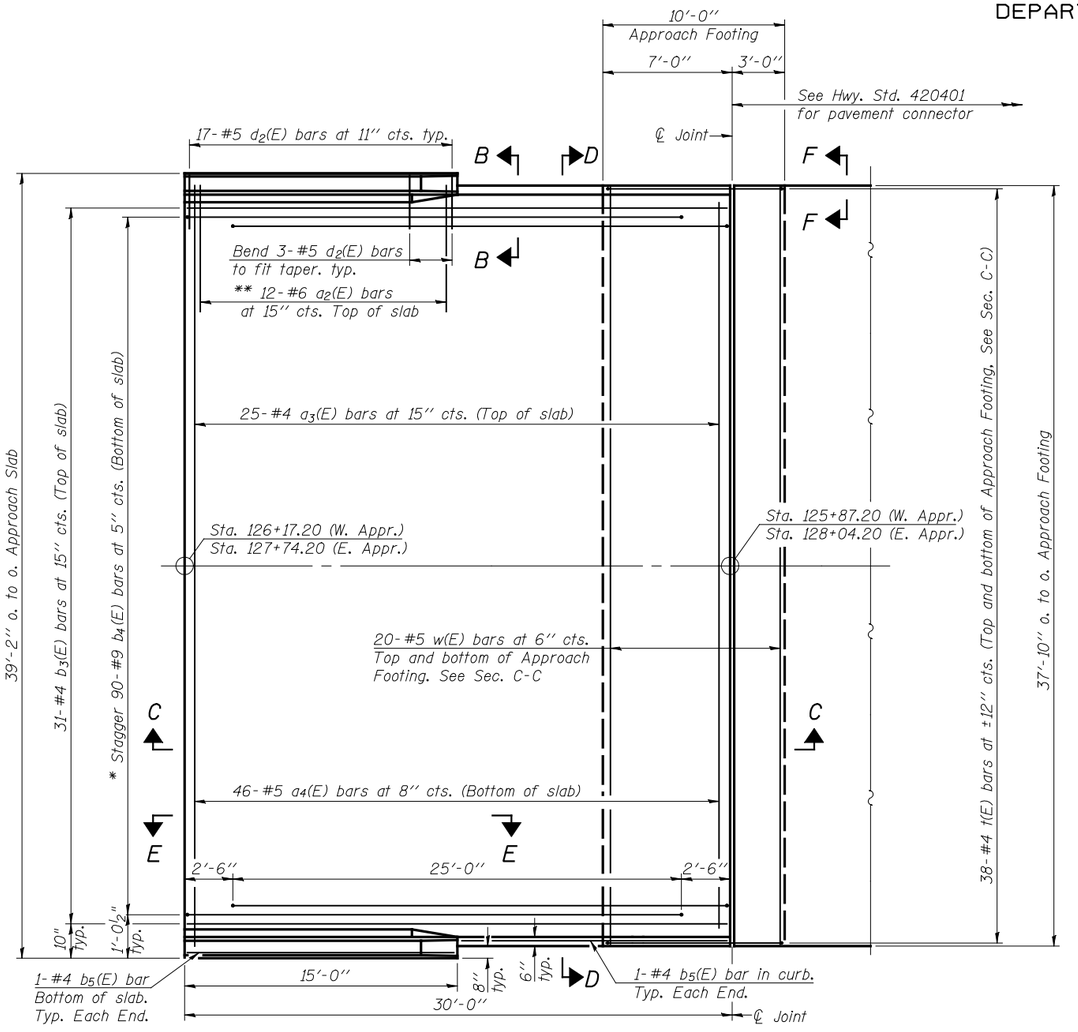
USER: RNH
DATE: 09/30/2009 14:48

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

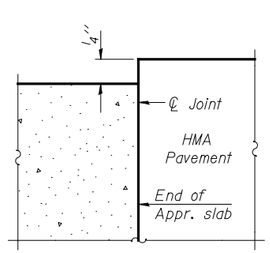
Notes:
See sheet 9 of 17 for Sections C-C & D-D and View E-E.
$a_3(E)$, $a_4(E)$, and w(E) bar spacings measured perpendicular to ℄ Rdwy.



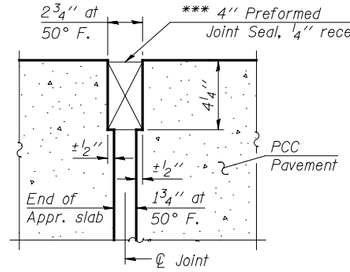
PLAN

* Tilt #9 $b_4(E)$ bars as required to maintain clearance.
** Alternate with $a_3(E)$ bars, typ. ea. parapet.

*** Cost included with Concrete Superstructure.

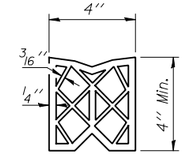


FLEXIBLE PAVEMENT

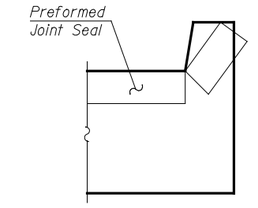


RIGID PAVEMENT

DETAIL A

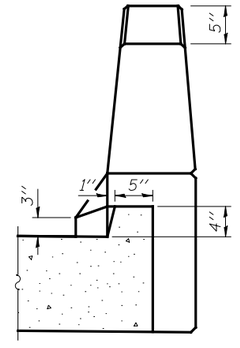


PREFORMED JOINT SEAL



VIEW F-F

Angle Preformed Joint Seal at 45° at curbs when req'd for drainage.



VIEW B-B

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DESIGNED:	CMF	DRAWN:	RNH
CHECKED:	TMM	CHECKED:	TMM

(Sheet 1 of 2)

BRIDGE APPROACH SLAB DETAILS
U.S. 136 OVER PRAIRIE CREEK
STRUCTURE NO. 057-0245

SHEET 8 OF 17	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	315	120BR-1	MCLEAN	49	19
		STA. 126+95.70	CONTRACT NO. 70524		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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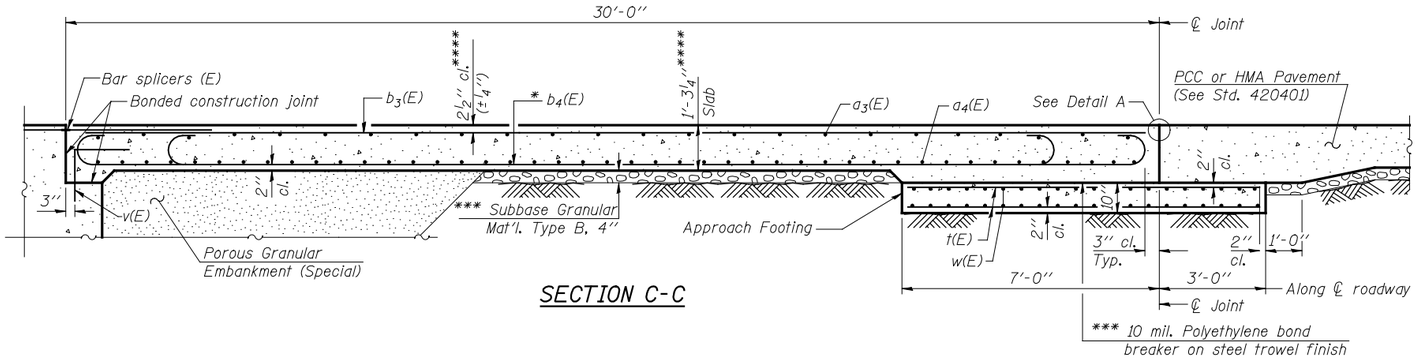
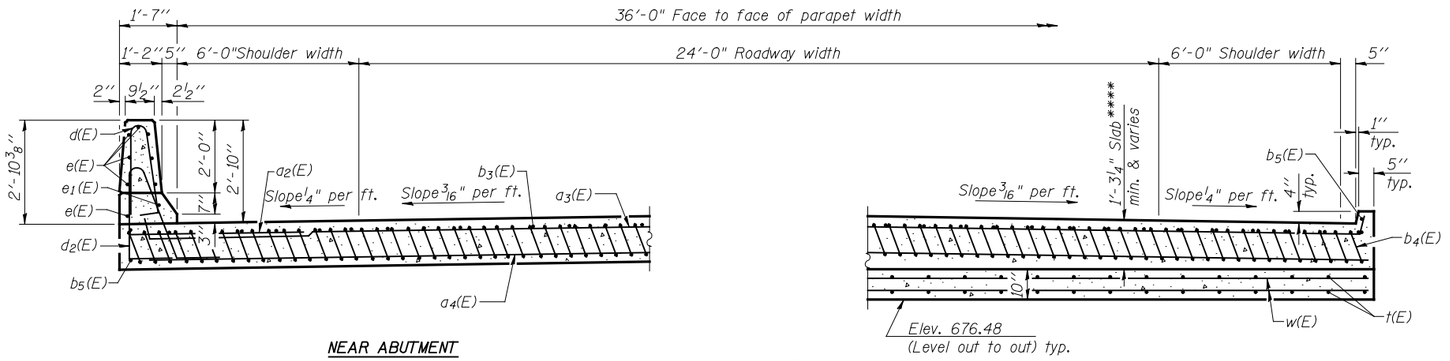
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



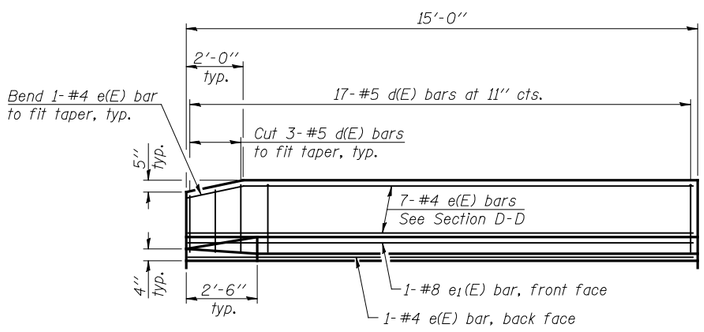
SECTION C-C



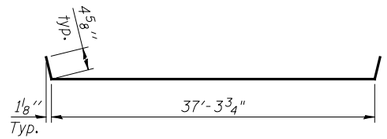
NEAR ABUTMENT

SECTION D-D
(See Plan for dimensions not shown)

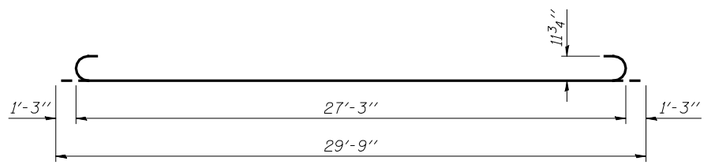
AT APPROACH FOOTING



VIEW E-E



BAR a_3(E)



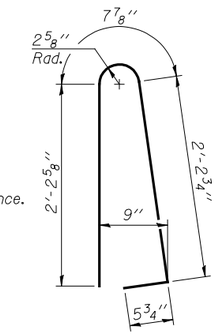
BAR b_4(E)

Notes:
See sheet 8 of 17 for Detail A and View B-B.
Approach slab and parapet concrete shall be paid for as Concrete Superstructure.
Approach footing concrete shall be paid for as Concrete Structures.
Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
For v(E) bar details, see sheet 7 of 17.
The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.
For bar splicer details, see sheet 15 of 17.
Cost of excavation for approach footing included with Concrete Structures.
For Porous Granular Embankment (Special) and drainage treatment details, see sheet 6 of 17.

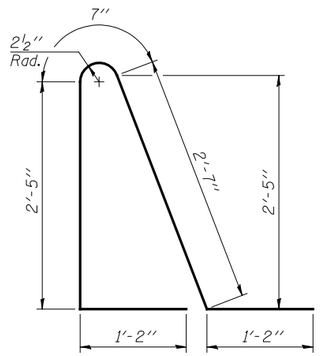
* Tilt #9 b_4(E) bars as required to maintain clearance.

*** Cost included with Concrete Superstructure.

**** Before grinding according to Bridge Smoothness Specification



BAR d(E)



BAR d_2(E)

TWO APPROACHES
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a_2(E)	48	#6	6'-0"	
a_3(E)	50	#4	38'-1"	
a_4(E)	92	#5	37'-6"	
b_3(E)	62	#4	29'-8"	
b_4(E)	180	#9	29'-9"	
b_5(E)	8	#4	14'-8"	
d(E)	68	#5	5'-7"	
d_2(E)	68	#5	7'-11"	
e(E)	32	#4	14'-8"	
e_1(E)	4	#8	14'-8"	
t(E)	152	#4	9'-8"	
w(E)	80	#5	37'-6"	
Concrete Superstructure			Cu. Yd.	119.6
Concrete Structures			Cu. Yd.	23.3
Reinforcement Bars, Epoxy Coated			Pound	30,360

McDonough-Whitlow, P.C.
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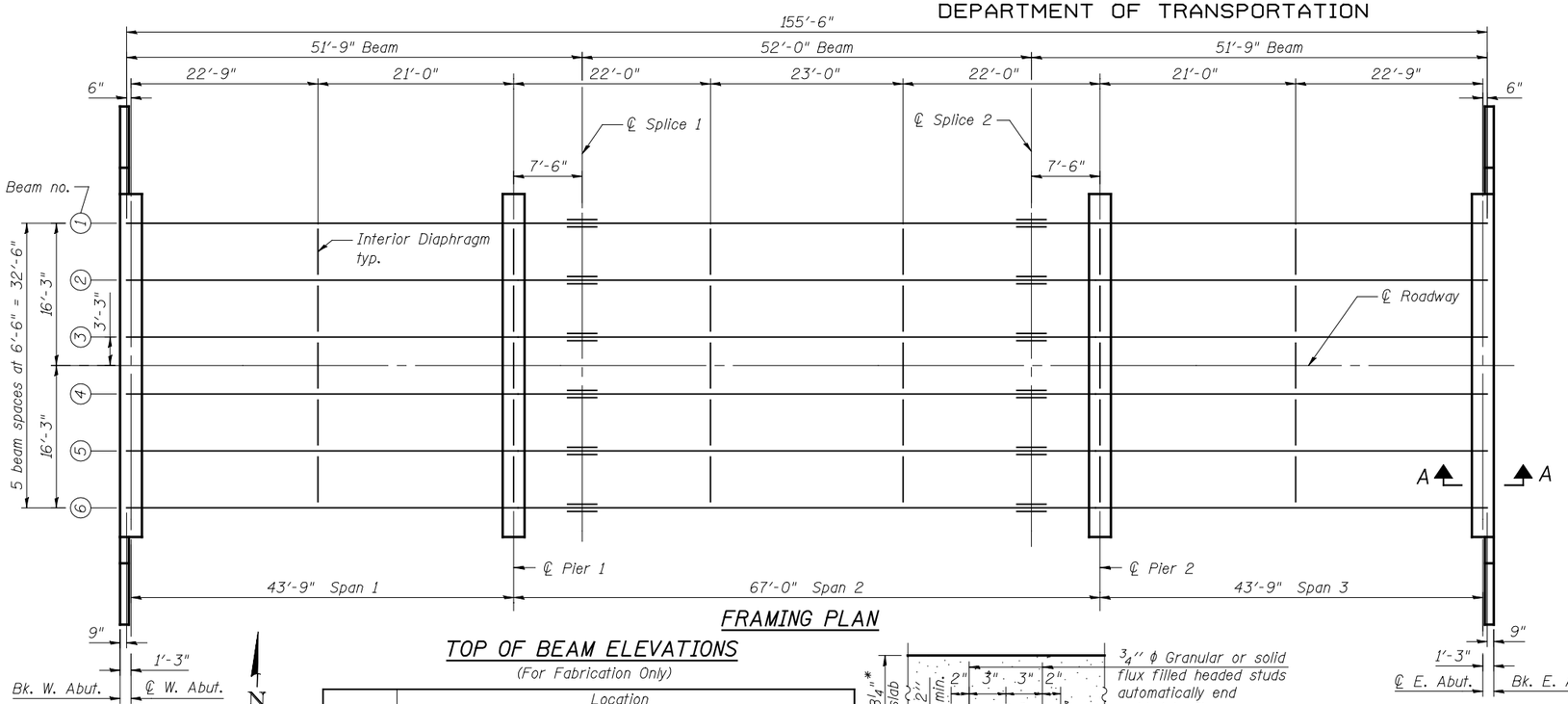
DESIGNED:	CMF	DRAWN:	RNH
CHECKED:	TMM	CHECKED:	TMM

(Sheet 2 of 2)

BRIDGE APPROACH SLAB DETAILS
U.S. 136 OVER
PRAIRIE CREEK
STRUCTURE NO. 057-0245

SHEET 9 OF 17	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	315	120BR-1	MCLEAN	49	20
		STA. 126+95.70	CONTRACT NO. 70524		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

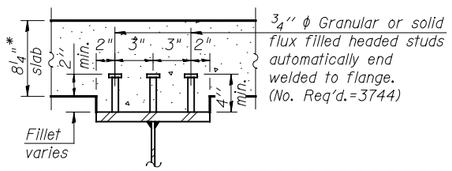


FRAMING PLAN

TOP OF BEAM ELEVATIONS

(For Fabrication Only)

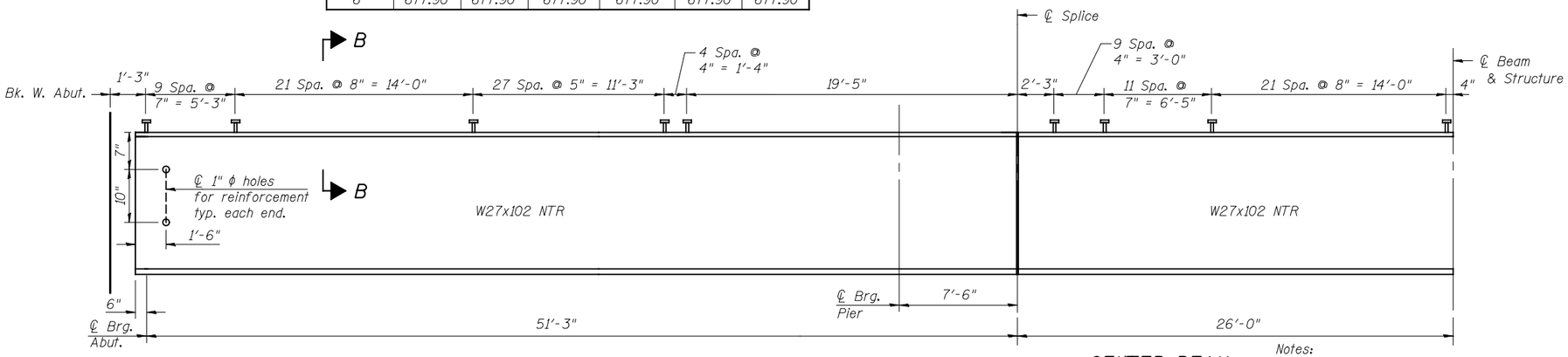
Beam	Location					
	℄ Brg. W. Abut.	℄ Brg. Pier 1	℄ Splice 1	℄ Splice 2	℄ Brg. Pier 2	℄ Brg. E. Abut.
1	677.90	677.90	677.90	677.90	677.90	677.90
2	678.03	678.03	678.03	678.03	678.03	678.03
3	678.13	678.13	678.13	678.13	678.13	678.13
4	678.13	678.13	678.13	678.13	678.13	678.13
5	678.03	678.03	678.03	678.03	678.03	678.03
6	677.90	677.90	677.90	677.90	677.90	677.90



SECTION B-B

* Before grinding according to Bridge Smoothness Specification

INTERIOR GIRDER REACTION TABLE			
		Abut.	Pier
R_{DC1}	(k)	11.2	49.3
R_{DC2}	(k)	2.4	9.2
R_{DW}	(k)	4.7	18.5
R_{L+IM}	(k)	58.8	91.5
R_{Total}	(k)	77.1	168.5



OUTSIDE BEAM

(Full beam, typ.)

CENTER BEAM

(Half beam)

BEAM ELEVATION

Space Stud Shear Connectors symmetrically about the centerline of structure.

INTERIOR GIRDER MOMENT TABLE					
			0.4 Sp. 1 0.6 Sp. 3	Pier 1 or 2	0.5 Sp. 2
	I_s	(in^4)	3,620	3,620	3,620
	$I_c(n)$	(in^4)	10,439	--	10,439
	$I_c(3n)$	(in^4)	7,764	--	7,764
	S_s	(in^3)	267	267	267
	$S_c(n)$	(in^3)	405	--	405
	$S_c(3n)$	(in^3)	367	--	367
	DC1	(k/')	0.783	0.783	0.783
	M_{DC1}	('k)	80	260	179
	DC2	(k/')	0.150	0.150	0.150
	M_{DC2}	('k)	18	41	44
	DW	(k/')	0.300	0.300	0.300
	M_{DW}	('k)	37	81	87
	M_{L+IM}	('k)	421	319	638
	M_u (Strength I)	('k)	915	1,057	1,526
*	$\phi_f M_n$, $\phi_f M_{nc}$	('k)	2,155	1,113	2,155
	f_s DC1	(ksi)	3.6	11.7	8.0
	f_s DC2	(ksi)	0.6	1.8	1.4
	f_s DW	(ksi)	1.2	3.6	2.8
	f_s 1.3(L+IM)	(ksi)	16.2	18.6	24.6
	f_s (Service II)	(ksi)	21.6	35.8	36.9
**	f_s (Total)(Strength I)	(ksi)	--	--	--
	V_f	(k)	20.0	--	19.0

* Compact sections
** Non-Compact and slender sections

I_s, S_s: Non-composite moment of inertia and section modulus of the steel section used for computing f_s (Total-Strength I, and Service II) due to non-composite dead loads ($in.^4$ and $in.^3$).

$I_c(n)$, $S_c(n)$: Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing f_s (Total-Strength I, and Service II) due to short-term composite live loads ($in.^4$ and $in.^3$).

$I_c(3n)$, $S_c(3n)$: Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing f_s (Total-Strength I, and Service II) due to long-term composite (superimposed) dead loads ($in.^4$ and $in.^3$).

Z: Plastic Section Modulus of the steel section in non-composite areas. Omit line in Moment Table if not used in design calculations ($in.^3$).

DC1: Un-factored non-composite dead load (kips/ft.).

M_{DC1}: Un-factored moment due to non-composite dead load (kip-ft.).

DC2: Un-factored long-term composite (superimposed excluding future wearing surface) dead load (kips/ft.).

M_{DC2}: Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).

DW: Un-factored long-term composite (superimposed future wearing surface only) dead load (kips/ft.).

M_{DW}: Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).

M_{L+IM}: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).

M_u (Strength I): Factored design moment (kip-ft.).
$1.25\ (M_{DC1} + M_{DC2}) + 1.5\ M_{DW} + 1.75\ M_{L+IM}$

$\phi_f M_n$: Compact composite positive moment capacity computed according to Article 6.10.7.1 (kip-ft.).

$\phi_f M_{nc}$: Compact non-composite negative moment capacity computed according to Article A6.1.1 (kip-ft.).

f_s (Service II): Sum of stresses as computed from the moments below (ksi).
$M_{DC1} + M_{DC2} + M_{DW} + 1.3\ M_{L+IM}$

f_s (Total)(Strength I): Sum of stresses as computed from the moments below on non-compact section (ksi).
$1.25\ (M_{DC1} + M_{DC2}) + 1.5\ M_{DW} + 1.75\ M_{L+IM}$

V_f: Maximum factored shear range in composite portion of span computed according to Article 6.10.10.

BILL OF MATERIAL

Item	Unit	Total
Furnishing and Erecting Structural Steel	L. Sum	1
Stud Shear Connectors	Each	3744
Anchor Bolts, 1"	Each	48

Notes:

All structural steel shall be AASHTO M270 Gr. 50W.

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 anchor rods.

Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.

See sheet 11 of 17 for details of splices, bearings, and diaphragms.

See sheet 6 of 17 for Section A-A.

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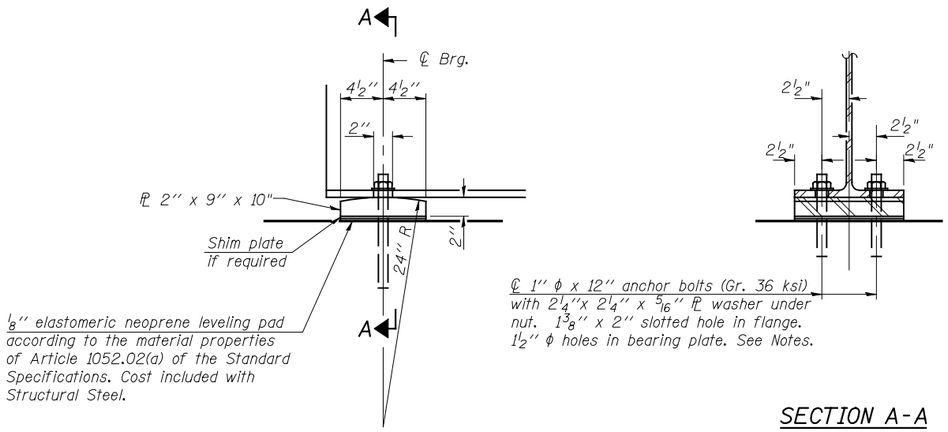
PROFESSIONAL DESIGN No. 184-002754

DESIGNED:	CMF	DRAWN:	RNH
CHECKED:	TMM	CHECKED:	TMM

STRUCTURAL STEEL & FRAMING PLAN
U.S. 136 OVER PRAIRIE CREEK
STRUCTURE NO. 057-0245

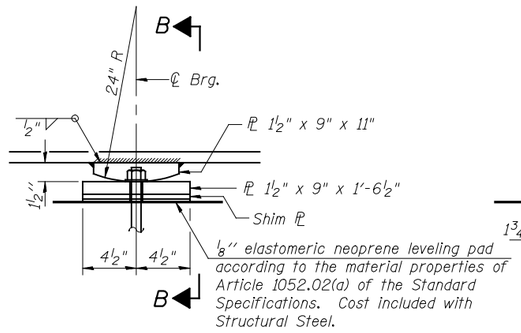
SHEET 10 OF 17	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	315	120BR-1	MCLEAN	49	21
		STA. 126+95.70	CONTRACT NO. 70524		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

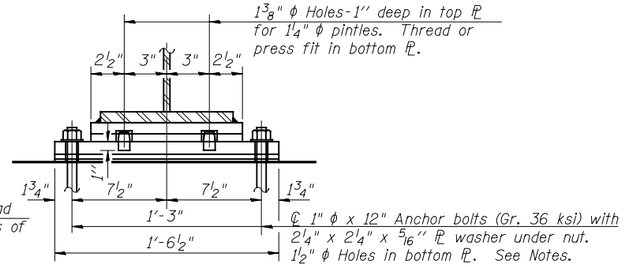


ELEVATION AT ABUTMENT

SECTION A-A



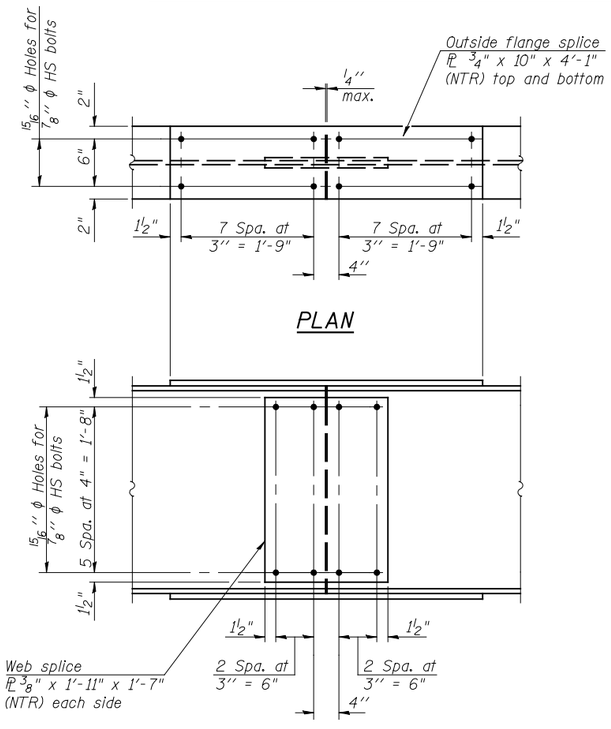
ELEVATION AT PIER



SECTION B-B

FIXED BEARING

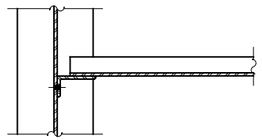
FIXED BEARING AT INTEGRAL ABUTMENT



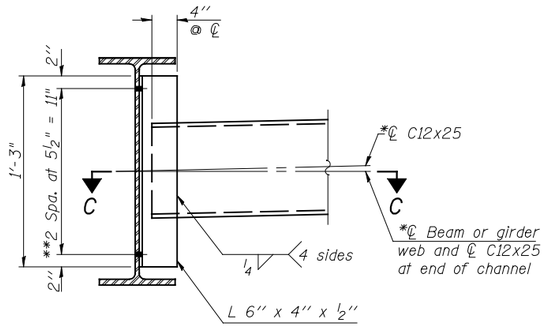
PLAN

ELEVATION

SPLICE DETAIL
(12 - Required)

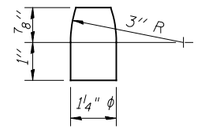


SECTION C-C



INTERIOR DIAPHRAGM

Two hardened washers required for each set of oversized holes.
*Alternate channels (C12x30) are permitted to facilitate material acquisition. Calculated weight of structural steel is based on the lighter section.
The alternate, if utilized, shall be provided at no additional cost to the Department.
**¾" ϕ HS bolts, 15/16" ϕ holes



PINTLE

Notes:
Structural steel for splices, diaphragms, connecting plates, and bearing plates shall be AASHTO M270, Grade 50W.
Anchor bolts shall be ASTM F 1554 all-thread (or an Engineer approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.
Anchor bolts of fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.
Drilled and set anchor bolts shall be set according to Article 521.06 of the Standard Specifications.
Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.
Two ⅛" adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.

BEARING, SPLICE, AND DIAPHRAGM DETAILS
U.S. 136 OVER PRAIRIE CREEK
STRUCTURE NO. 057-0245

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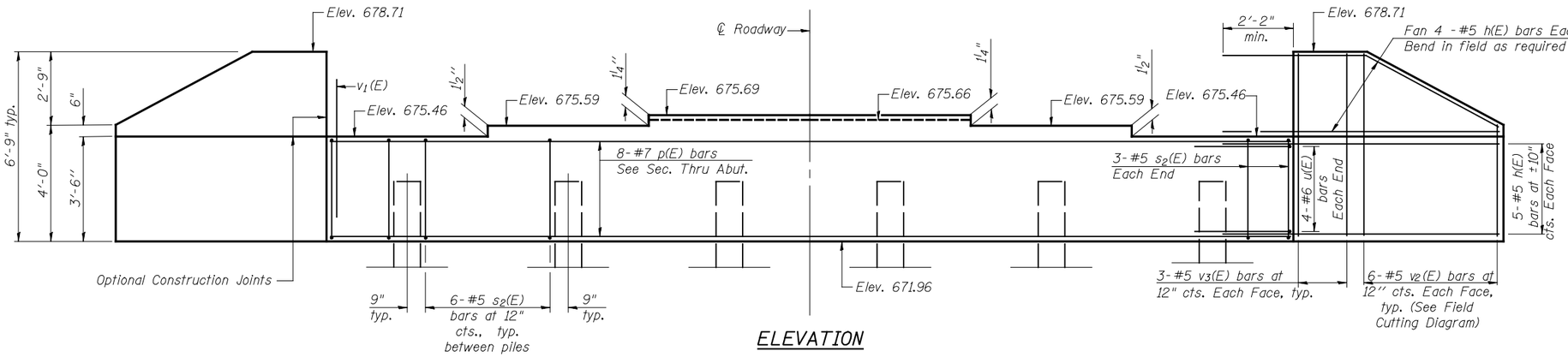
PROFESSIONAL DESIGN No. 184-002754

DESIGNED:	CMF	DRAWN:	RNH
CHECKED:	TMM	CHECKED:	TMM

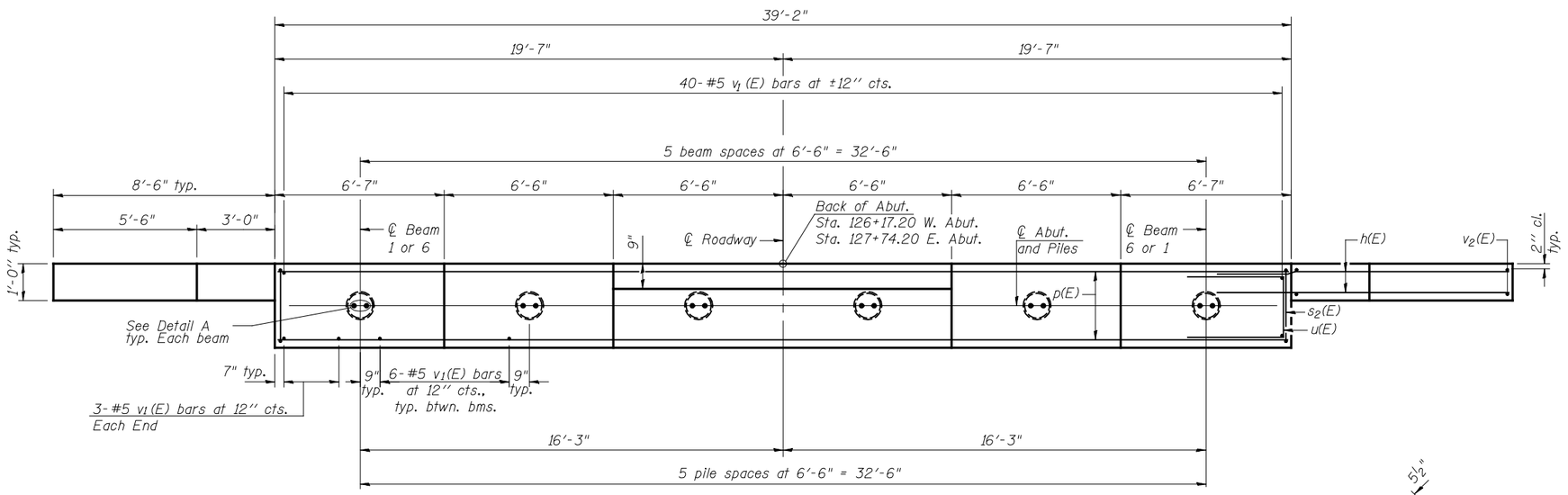
	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
SHEET 11 OF 17	315	120BR-1	MCLEAN	49	22
		STA. 126+95.70	CONTRACT NO. 70524		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

Notes:
Pour steps monolithically with cap.
The Test Pile(s) shall be driven to 110 percent of the Nominal Required Bearing indicated on the pile data information.
Drive one (1) Test Pile in a production location at the West Abutment.
For details of piles see sheet 14 of 17.

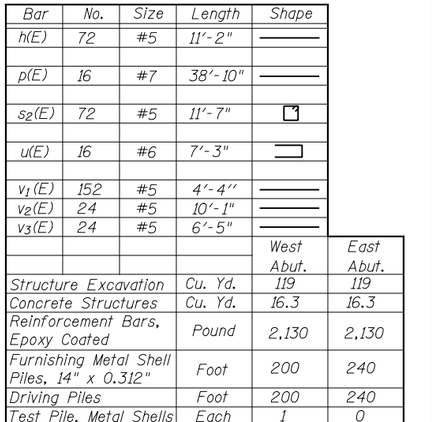
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



ELEVATION



PLAN



SEC. THRU ABUT.

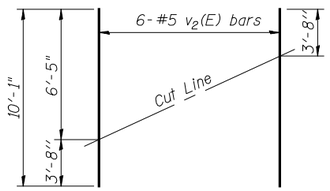
TWO ABUTMENTS BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	72	#5	11'-2"	
p(E)	16	#7	38'-10"	
s2(E)	72	#5	11'-7"	
u(E)	16	#6	7'-3"	
v1(E)	152	#5	4'-4"	
v2(E)	24	#5	10'-1"	
v3(E)	24	#5	6'-5"	

		West Abut.	East Abut.
Structure Excavation	Cu. Yd.	119	119
Concrete Structures	Cu. Yd.	16.3	16.3
Reinforcement Bars, Epoxy Coated	Pound	2,130	2,130
Furnishing Metal Shell Piles, 14" x 0.312"	Foot	200	240
Driving Piles	Foot	200	240
Test Pile, Metal Shells	Each	1	0
Pile Shoes	Each	6	6

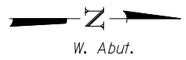
PILE DATA

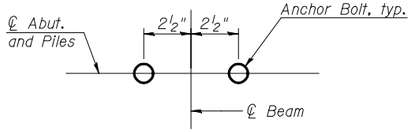
Type: Metal Shell 14"ϕ x 0.312" walls with Pile Shoes
Nominal Required Bearing: W. Abut: 435 kips, E. Abut: 370 kips
Factored Resistance Available: 135 kips
Est. Length: 40'
No. Production Piles: 11
No. Test Piles: 1



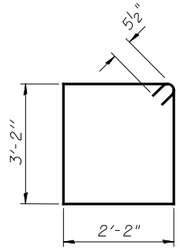
FIELD CUTTING DIAGRAM

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

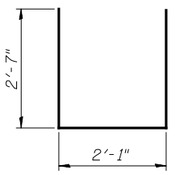




DETAIL A



BAR s2(E)



BAR u(E)

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DESIGNED:	CMF	DRAWN:	RNH
CHECKED:	TMM	CHECKED:	TMM

ABUTMENTS
U.S. 136 OVER
PRAIRIE CREEK
STRUCTURE NO. 057-0245

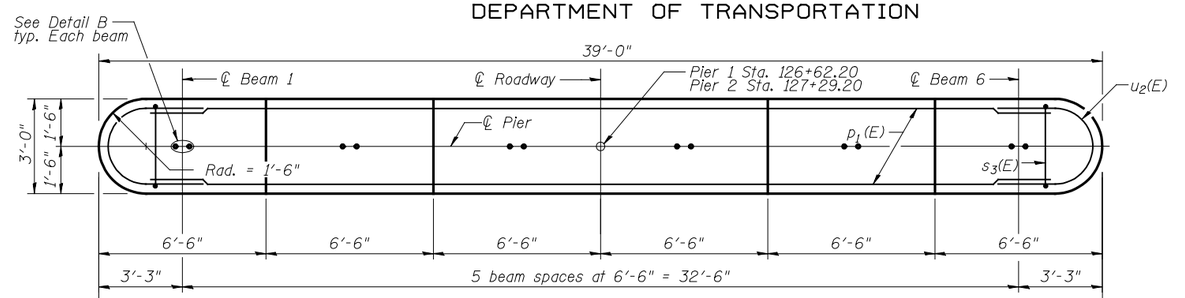
SHEET 12 OF 17	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	315	120BR-1	MCLEAN	49	23
		STA. 126+95.70	CONTRACT NO. 70524		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

Notes:
Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.
For details of piles and Concrete Encasement, see sheet 14 of 17.
The Test Pile(s) shall be driven to 110 percent of the Nominal Required Bearing indicated on the pile data information.
Drive one (1) Test Pile in a production location at Pier 2.
If a portion of the pier wall or concrete encasement is under water, reinforcement may be placed underwater into forms. Concrete shall be tremied according to Article 503.08 of the Standard Specifications to an elevation of 1'-0" above the water line at the time of construction.

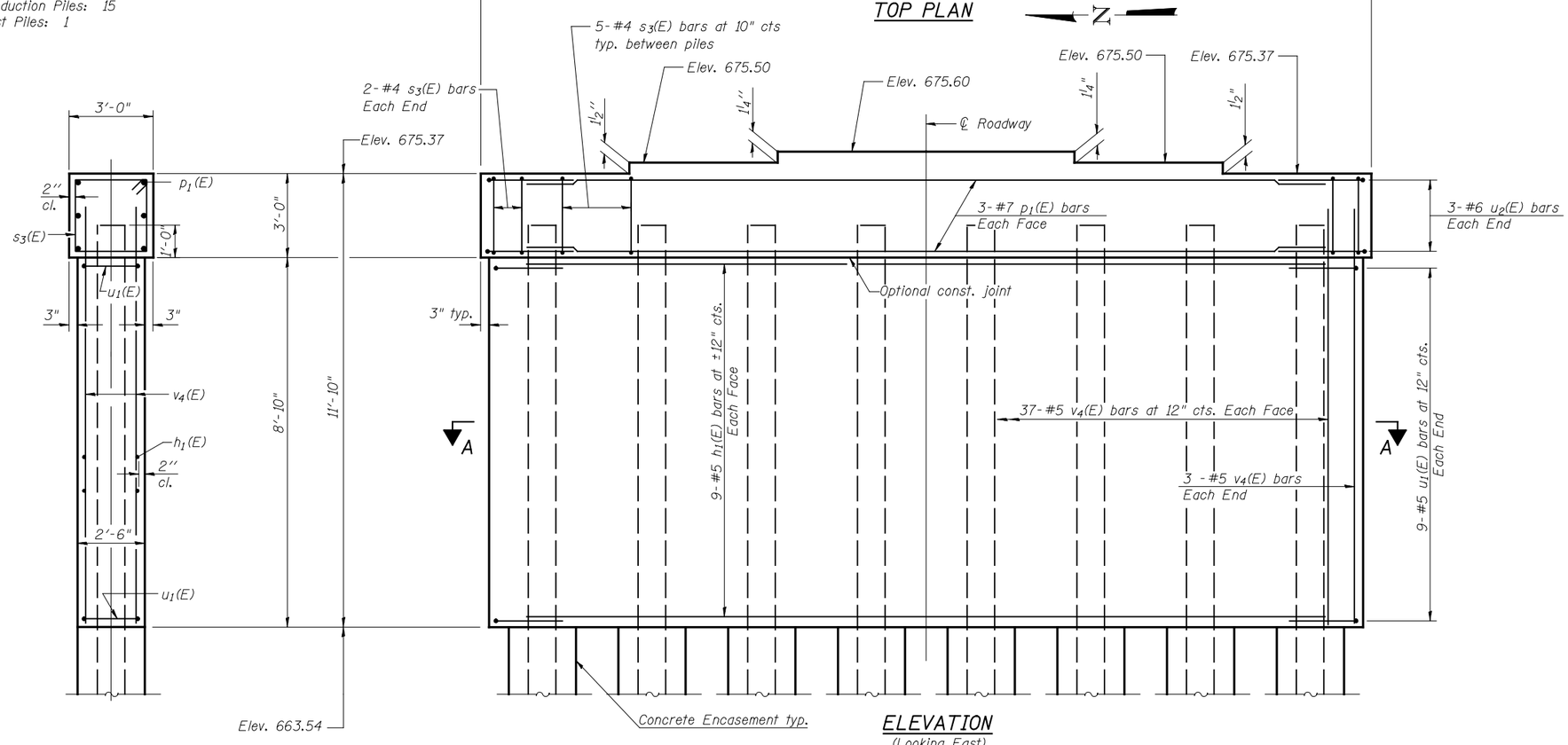
PILE DATA

Type: Metal Shell 14"ϕ x 0.312" walls with Pile Shoes
Nominal Required Bearing: Pier 1: 390 kips Pier 2: 410 kips
Factored Resistance Available: 175 kips
Est. Length: Pier 1: 39' Pier 2: 41'
No. Production Piles: 15
No. Test Piles: 1

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

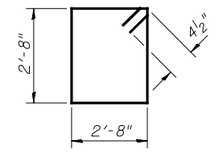


TOP PLAN

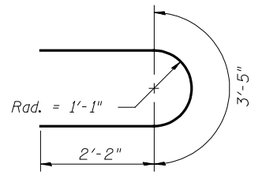


ELEVATION
(Looking East)

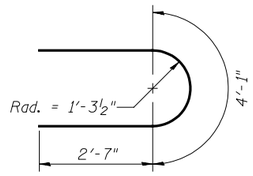
END VIEW



BAR s_3(E)



BAR u_1(E)

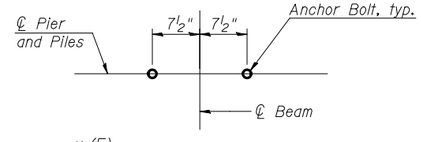


BAR u_2(E)

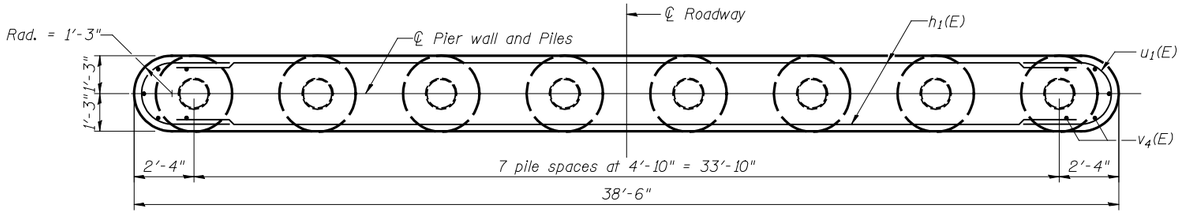
TWO PIERS
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h_1(E)	36	#5	36'-0"	——
p_1(E)	12	#7	36'-0"	——
s_3(E)	78	#4	11'-5	□
u_1(E)	36	#5	7'-9"	⊃
u_2(E)	12	#6	9'-3"	⊃
v_4(E)	160	#5	10'-2"	——

		Pier 1	Pier 2
Concrete Structures	Cu. Yd.	41.2	41.2
Reinforcement Bars, Epoxy Coated	Pound	2,490	2,490
Furnishing Metal Shell Piles, 14" x 0.312"	Foot	312	287
Driving Piles	Foot	312	287
Test Pile, Metal Shells	Each	0	1
Pile Shoes	Each	8	8
Concrete Encasement	Cu. Yd.	3.4	3.4
Underwater Structure Excavation Protection-Location 1	Each	1	0
Underwater Structure Excavation Protection-Location 2	Each	0	1



DETAIL B



SECTION A-A

PIERS
U.S. 136 OVER
PRAIRIE CREEK
STRUCTURE NO. 057-0245

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PROFESSIONAL DESIGN No. 184-002754

DESIGNED:	CMF	DRAWN:	RNH
CHECKED:	TMM	CHECKED:	TMM

SHEET 13 OF 17	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	315	120BR-1	MCLEAN	49	24
		STA. 126+95.70	CONTRACT NO. 70524		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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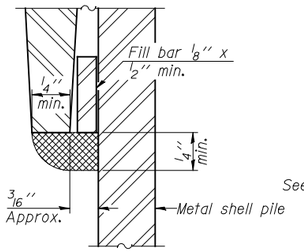
USER: RNH
DATE: 09/30/2009 14:48

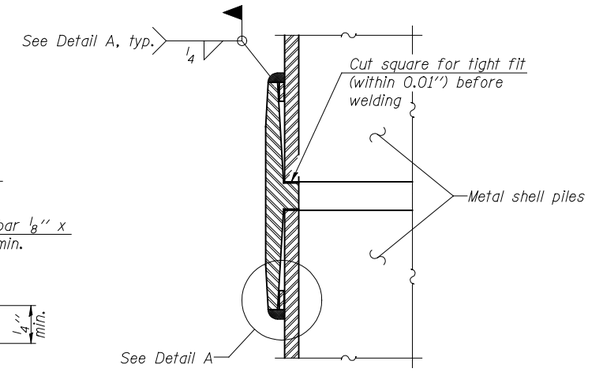
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

METAL SHELL PILE TABLE

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

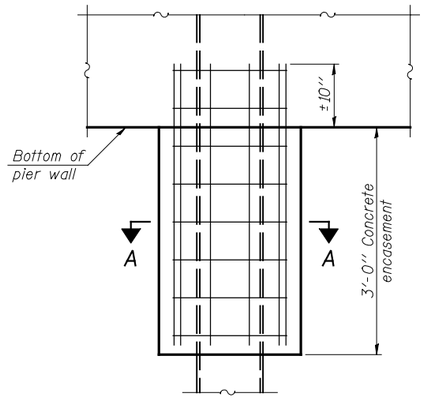


DETAIL A

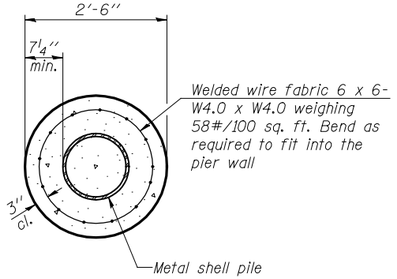


Notes:
The 1/8″ x 1/2″ min. fill bar may be constructed of 2 bars with a 1/8″ max. gap between them.
Pile segments shall be driven to solid contact with splicer before welding.

WELDED COMMERCIAL SPLICE



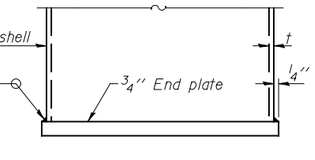
ELEVATION



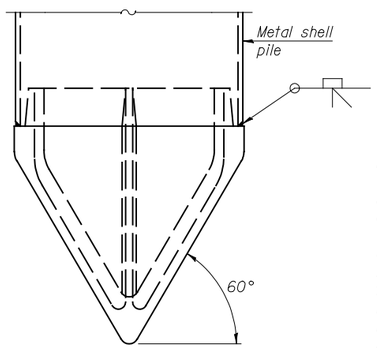
SECTION A-A

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

CONCRETE ENCASEMENT AT PIERS



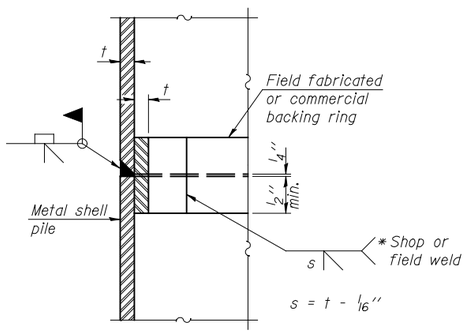
END PLATE ATTACHMENT



Note A:
When called for on the plans, the Contractor shall furnish metal shell pile shoes consisting of a single piece conical pile point as shown. The pile shoes shall be cast in one piece steel according to either ASTM A 148 Grade 90-60 or AASHTO M 103 Grade 65-35 and shall provide full bearing over the full circumference of the metal shell pile. The pile shoe shall have tapered leads to assure proper alignment and fitting and shall be secured to the pile with a circumferential weld.

METAL SHELL PILE SHOE ATTACHMENT

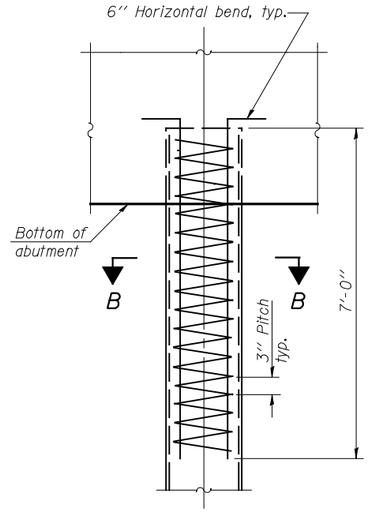
(See Note A)



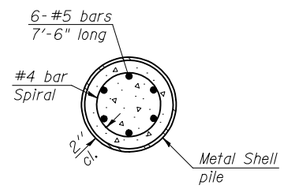
COMPLETE PENETRATION WELD SPLICE

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

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



ELEVATION



SECTION B-B

METAL SHELL REINFORCEMENT AT ABUTMENTS

McDonough-Whitlow, P.C.
Consulting Engineers & Land Surveyors
138 East Wood Street
Hillsboro, IL 62049
Phone: 217.532.9233
Fax: 217.532.6300
PROFESSIONAL DESIGN No. 184-002754

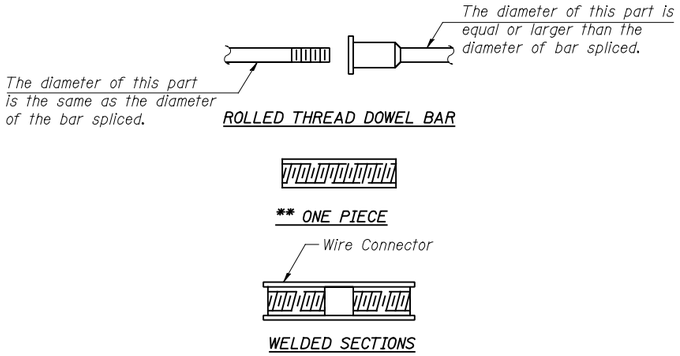
DESIGNED:	CMF	DRAWN:	RNH
CHECKED:	TMM	CHECKED:	TMM

F-MS 10-1-08

METAL SHELL PILE DETAILS
U.S. 136 OVER PRAIRIE CREEK
STRUCTURE NO. 057-0245

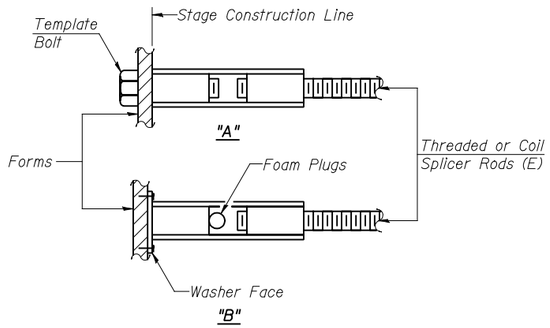
SHEET 14 OF 17	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	315	120BR-1	MCLEAN	49	25
		STA. 126+95.70	CONTRACT NO. 70524		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



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.

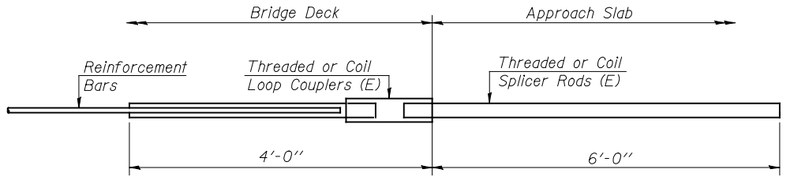
Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

① Minimum Capacity (Tension in kips) = 1.25 x fy x A_t

② Minimum *Pull-out Strength (Tension in kips) = 0.66 x fy x A_t

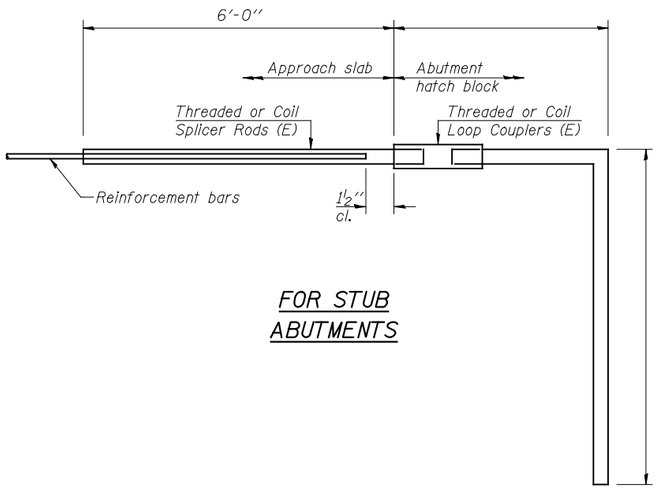
Where fy = Yield strength of lapped reinforcement bars in ksi.
A_t = Tensile stress area of lapped reinforcement bars.
* = 28 day concrete

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	7.9
#5	2'-2"	23.0	12.3
#6	2'-7"	33.1	17.4
#7	3'-5"	45.1	23.8
#8	4'-6"	58.9	31.3
#9	5'-9"	75.0	39.6
#10	7'-3"	95.0	50.3
#11	9'-0"	117.4	61.8



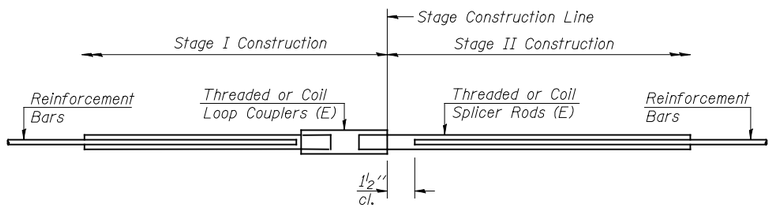
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 12.3 kips - tension
No. Required = 80



FOR STUB ABUTMENTS

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 12.3 kips - tension
No. Required =



STANDARD

Bar Size	No. Assemblies Required	Location

McDonough-Whitlow, P.C.
Consulting Engineers & Land Surveyors
138 East Wood Street
Hillsboro, IL 62049
Phone: 217.532.9233
Fax: 217.532.6300
PROFESSIONAL DESIGN No. 184-002754

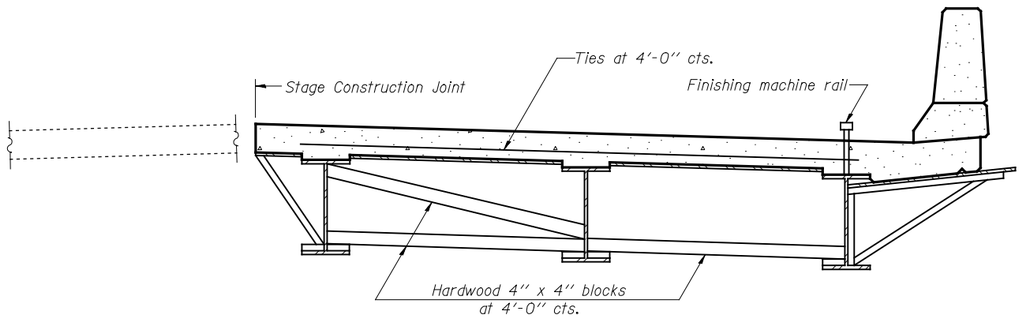
DESIGNED:	CMF	DRAWN:	RNH
CHECKED:	TMM	CHECKED:	TMM

BSD-1 10-1-08

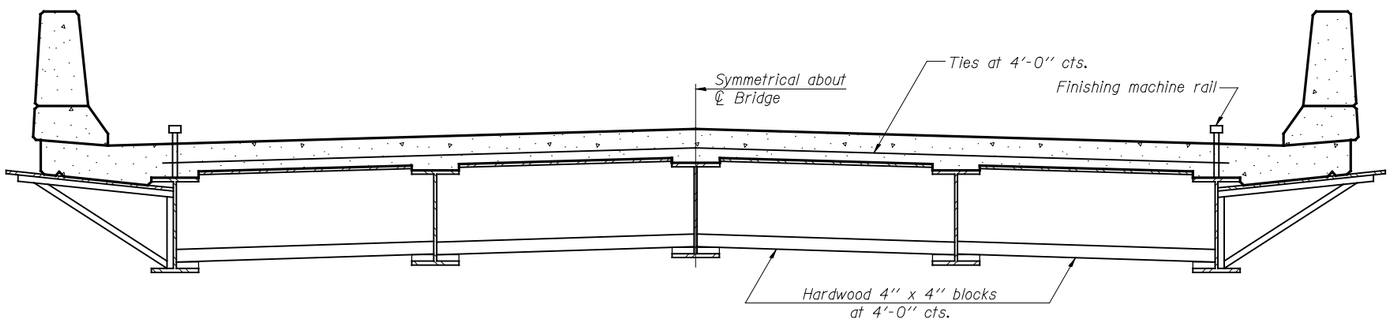
BAR SPLICER ASSEMBLY DETAILS
U.S. 136 OVER PRAIRIE CREEK
STRUCTURE NO. 057-0245

SHEET 15 OF 17	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	315	120BR-1	MCLEAN	49	26
		STA. 126+95.70	CONTRACT NO. 70524		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



FORM BRACES FOR
STAGE CONSTRUCTION



FORM BRACES FOR
STAGE CONSTRUCTION

When cantilever forming brackets are used, the work shall be done according to Article 503.06(b) of the Standard Specifications, except as modified below and in the details shown on this sheet.

The finishing machine rails shall be placed on the top flange of the exterior beams.

The beams or girders, supporting cantilever forming brackets, shall be tied together at 4 foot intervals.

For Standard construction, or Stage Construction the Hardwood bracing materials shall be placed as shown between webs of beams in each bay.

McDonough-Whitlow, P.C.
Consulting Engineers & Land Surveyors
138 East Wood Street
Hillsboro, IL 62049
Phone: 217.532.9233
Fax: 217.532.6300
PROFESSIONAL DESIGN No. 184-002754

DESIGNED:	CMF	DRAWN:	RNH
CHECKED:	TMM	CHECKED:	TMM

SB-1 10-1-08

CANTILEVER FORMING BRACKETS
FOR SUPERSTRUCTURES WITH
W27 BEAMS AND SMALLER
U.S. 136 OVER
PRAIRIE CREEK
STRUCTURE NO. 057-0245

SHEET 16 OF 17	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	315	120BR-1	MCLEAN	49	27
		STA. 126+95.70	CONTRACT NO. 70524		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FORM NO. B. D. 137 REV. 9-88 — Sh. 1 of 2 Sh.

SW 1/4 SW 1/4 SE 1/4 SEC. 32 T22N R1E 3P.M. 6

BRIDGE FOUNDATION BORING LOG

PROJECT
ROUTE FA 119 RT 136
SEC. 120 BR
COUNTY McLean
Boring No. 1 W. Abut.
Station 126+01
Offset 12' RT

BRIDGE FA 119 Over Prairie Creek
STA. 126+95.70
Date 4-30-79
Bored By K. Whittington
Checked By B. Pickard

Surface Water El. 664.7
Groundwater El. at Completion —
After — Hours —

Ground Surface 678.5	0				
MEDIUM DARK BROWN SILTY CLAY LOAM	676.5				
STIFF DARK BROWN TO BLACK SILTY CLAY LOAM	674.5	9	1.1 B	30	
VERY STIFF DARK BROWN SILTY CLAY LOAM	-5 672.0	10	*2.5 S	27	
STIFF GRAY TO BLACK SILTY CLAY TILL	669.5	17	1.8 B	25	
VERY STIFF BLACK SILTY CLAY LOAM	-10 667.0	17	3.9 S	21	
MEDIUM BLACK SILTY CLAY LOAM	664.5	6	0.9 B	28	
MEDIUM YELLOWISH BROWN CLAY LOAM	-15 663.0	2	0.88	28	
VERY LOOSE SANDY CLAY	662.0	3	—	21	
MEDIUM TO STIFF GRAY SANDY CLAY	658.5	8	0.9 B	29	
	-20	6	1.2P	21	
MEDIUM BROWNISH GRAY COARSE SAND TO FINE GRAVEL AND WATER		16	—	14	

MEDIUM GRAY TOTAN COARSE SAND AND FINE GRAVEL	-25 650.0	20	—	19
		16	—	12
		60	—	10
MEDIUM GRAY CLAY LOAM TILL	-30 647.0	7	0.9 B	24
STIFF GRAY CLAY LOAM TILL	644.5	9	1.6 B	22
MEDIUM GRAY CLAY LOAM TILL	-35 642.0	12	0.7 B	18
HARD OLIVE GRAY SILTY CLAY TILL	637.0	46	8.5 S	14
	-40	67	7.4 S	11
LOOSE TAN COARSE SAND	634.5	2	—	—
DENSE COARSE SAND AND GRAVEL	-45			

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

Qu – Unconfined Compressive Strength – t/sf

w – Water Content – percentage of oven dry weight – %.

Type failure:
B – Bulge Failure
S – Shear Failure
E – Estimated Value
P – Penetrometer

FORM NO. B. D. 137 REV. 9-88 — Sh. 2 of 2 Sh.

BRIDGE FOUNDATION BORING LOG

FA 119
Sec. 120BR
McLean County
Boring 1

DENSE TAN COARSE SAND AND GRAVEL	-45 633.0	41	—	13
VERY STIFF GRAY SANDY CLAY LOAM TILL	632.0	21	3.1S	10
DENSE BROWN COARSE SAND AND FINE GRAVEL		76	—	10
	-50 627.5	—	—	—
	-55			
	-60			
	-65			
	-70			
	-75			
	-80			
	-85			
	-90			
	-95			

FORM NO. B. D. 137 REV. 9-88 — Sh. 1 of 1 Sh.

BRIDGE FOUNDATION BORING LOG

PROJECT FA119 Rt 136
ROUTE
SEC. 120 BR
COUNTY McLean
Boring No. 2 W. Abut.
Station 127+95
Offset 12' LT

BRIDGE FA 119 Over Prairie Creek
STA. 126+ 95.70
Date 4-30-79
Bored By K. Whittington
Checked By R. Pickard

Surface Water El. 664.7
Groundwater El. at Completion —
After — Hours —

Ground Surface 678.5	0				
MEDIUM BROWN SILTY CLAY LOAM FILL	676.0				
STIFF BROWN SILTY CLAY TILL FILL	674.0	7	1.6 B	27	
MEDIUM MOTTLED GRAY BLACK SILTY CLAY LOAM TILL FILL	-5 671.5	5	0.6 S	28	
VERY STIFF BLACK SILTY CLAY LOAM	669.0	14	2.3 B	24	
STIFF BLACK SILTY CLAY LOAM	-10	8	1.0 P	29	
	664.0	7	1.3 B	37	
LOOSE BLACK SANDY LOAM AND SAND	-15 661.5	4	—	26	
MEDIUM GRAY SILT WITH VERY THIN SAND LAYERS THROUGHOUT	659.5	20	1.0 P	18	
DENSE BROWN SILTY LOAM	-20	34	—	23	

DENSE BROWN SILTY LOAM	655.5	10	—	17
MEDIUM GRAY SAND	-25 650.5	19	—	49
MEDIUM GRAY SILTY CLAY LOAM	649.0	13	—	21
MEDIUM GRAY SILTY CLAY TILL	-30	7	0.8 B	23
	644.0	7	0.8 B	22
STIFF GRAY SILTY CLAY LOAM TILL	-35 641.5	12	1.0 B	16
HARD GRAY SILTY CLAY LOAM TILL		49	5.7 B	11
	-40 636.5	75	5.7 B	10
DENSE COARSE BROWN SAND		77	—	14
	-45			

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

Qu – Unconfined Compressive Strength – t/sf

w – Water Content – percentage of oven dry weight – %.

Type failure:
B – Bulge Failure
S – Shear Failure
E – Estimated Value
P – Penetrometer

McDonough-Whitlow, P.C.
Consulting Engineers & Land Surveyors
138 East Wood Street
Hillsboro, IL 62049
Phone: 217.532.9235
Fax: 217.532.6300
PROFESSIONAL DESIGN No. 184-002754

DESIGNED: CMF	DRAWN: RNH
CHECKED: TMM	CHECKED: TMM

SOIL BORINGS
U.S. 136 OVER PRAIRIE CREEK
STRUCTURE NO. 057-0245

SHEET 17 OF 17	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	315	120BR-1	MCLEAN	49	28
		STA. 126+95.70	CONTRACT NO. 70524		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

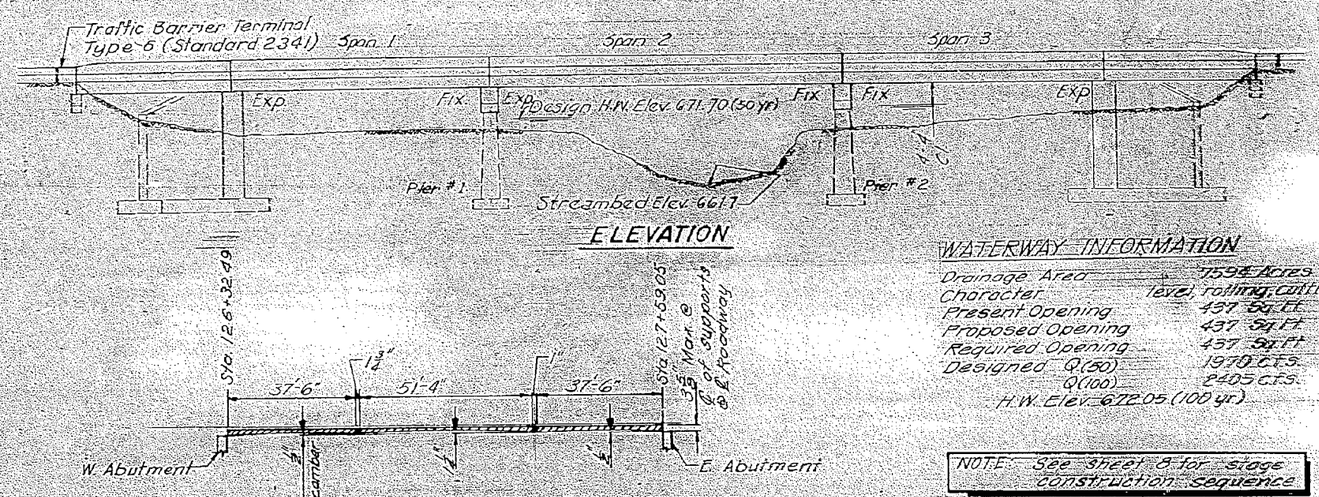
Bench Mark #113 Chiseled "S" N.E. Wingwall Elev. 678.58
Existing Structure Built as F.A. 119 Sec. 120-B.R.P.H. in 1936. R.C.D.G. with Conc. piers & closed R.C. Abuts @ Sta 126+95.3. Span R.C.D.G. to be removed. Replace with P.C.C. Deck Bms. using Stage Construction & temp. Bridgerail No Salvage. Exist. Structure No. 057-0091. See Special Provisions for deck removal sequence.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Keyway surfaces shall be cleaned to remove form oil or other bond breaking material prior to shipment of the beams. Cleaning shall be done by sandblasting the keyway areas between top of the beam and the bottom edge of the key.

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 53	120BR	MC LEAN	30	10
FED. ROAD DIST. NO. 7	RAILROAD	FED. AID PROJECT		

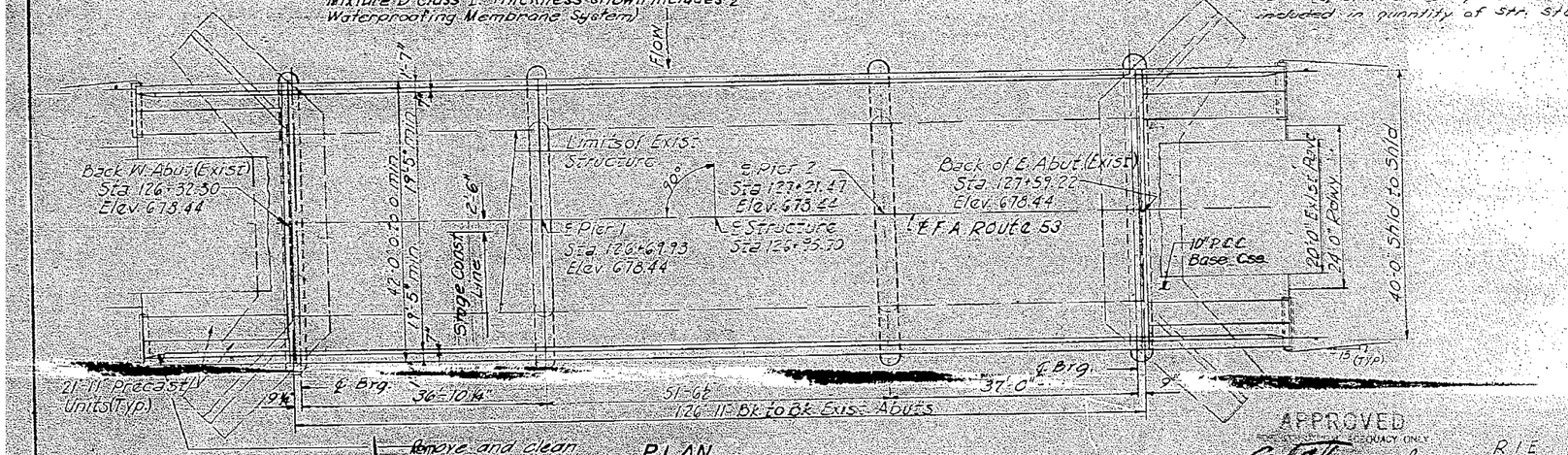
SHEET NO. 1
SHEETS 8



ELEVATION

BITUMINOUS SURFACE PROFILE

(Limits of Bituminous Concrete Surface Course Mixture D Class I. Thickness shown includes ½" Waterproofing Membrane System)



PLAN

PROFILE GRADE

LOADING H 20 OR 44 (NON CONSTR.)

STA. 126+95.70
BUILT 198_ BY
STATE OF ILLINOIS
F.A. RT. 53 SEC. 120 BR
F.A. PROJ. BH-F-53(36)
LOADING HS 20
STR. NO. 057-0091

NAME PLATE
SEE STANDARD 2113

WATERWAY INFORMATION

Drainage Area	7598 Acres
Character	level, rolling, cultivated
Present Opening	437 Sq. Ft.
Proposed Opening	437 Sq. Ft.
Required Opening	437 Sq. Ft.
Designed Q(50)	1970 C.F.S.
Q(100)	2405 C.F.S.

H.W. Elev. 672.05 (100 yr.)

NOTE: See Sheet 8 for stage construction sequence

Expansion guards which are not cast in the precast unit shall be fabricated and erected in accordance with Art. 503.07(c) of the Std. Specs and are included in quantity of Str. Steel.

THE "STATE OF ILLINOIS STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" Adopted 10-1-79 SHALL APPLY.

CONCRETE: CLASS X CONCRETE SHALL BE USED THROUGHOUT EXCEPT FOR PRECAST PRESTRESSED UNITS. SEE THE APPLICABLE SPECIFICATIONS FOR CONCRETE REQUIREMENTS FOR PRECAST PRESTRESSED UNITS.

REINFORCEMENT BARS SHALL CONFORM TO AASHTO M-31 OR M-53, GRADE 60.

Expansion bolts shall consist of approved exp. anchors, providing min. proof load = 4,080# and ¾"ø x 12" hooked bolts.

ALL STRUCTURAL STEEL SHALL BE SHOP PAINTED WITH 2 COATS OF BASIC LEAD SILICO CHROMATE PAINT

ALL BAR BEND DIMENSIONS ARE SHOWN OUT TO OUT OF BARS

THE CONCRETE RAIL SECTION ABOVE THE TOP OF THE DECK BEAM SHALL BE CONSTRUCTED OF CLASS X CONCRETE, EXCEPT THE AGGREGATES SHALL CONFORM TO THE REQUIREMENTS FOR HANDRAIL CONCRETE.

PROTECTIVE COAT SHALL NOT BE APPLIED TO SURFACES TO WHICH WATERPROOFING MEMBRANE SYSTEM IS APPLIED

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL DIMENSIONS AND CONDITIONS EXISTING IN THE FIELD PRIOR TO CONSTRUCTION AND ORDERING OF MATERIALS

THE TOP SURFACE OF THE BEAMS SHALL BE FINISHED IN ACCORDANCE WITH ARTICLE 505.06 OF THE STANDARD SPECIFICATIONS EXCEPT THAT THE SURFACE SHALL NOT BE ROUGHENED BY BROOMING. THE FINISHED SURFACE SHALL BE FREE OF DEPRESSIONS OR HIGH SPOTS WITH SHARP CORNERS, AND THE TOP EDGE OF KEYS SHALL BE ROUNDED OR CHAMFERED A MIN. OF ¼".

BILL OF MATERIALS

ITEM	UNIT	QUANTITY SUPERSTR.	QUANTITY SUBSTR.	QUANTITY TOTAL
BIT. CONC. SURFACE CSE., MIX. D, CL. I	TON	80.4	---	80.4
PORTLAND CEMENT CONCRETE BASE COURSE 10"	SQ. YD.	---	---	34
PAVEMENT FABRIC	SQ. YD.	---	---	50
REM. OF EXIST. SUPER-STRUCTURES	EACH	1	---	1
CONC. REMOVAL	CU. YD.	---	17.9	17.9
EXPANSION BOLTS 3/4" ø 9"	EACH	---	104	104
PROTECTIVE COAT	SQ. YD.	135	---	135
CLASS "X" CONC.	CU. YD.	44.6	59.2	103.8
3/4" ø ANCHOR BOLTS, 12"	EACH	---	---	60
PRECAST CONCRETE BRIDGE SLABS	SQ. FT.	658	---	658
PRECAST PRESTRESSED CONC. DECK BEAM 21"	SQ. FT.	5306	---	5306
WATERPROOFING MEMBRANE SYSTEM	SQ. YD.	545	---	545
STRUCTURAL STEEL	LB.	8031	---	8031
REINFORCEMENT BARS	LB.	4530	10,000	14,530
REINFORCEMENT BARS (EPOXY COATED)	LB.	365	---	365
NAME PLATES	EACH	---	---	1
PAVEMENT REMOVAL	SQ. YD.	---	---	14
PAVEMENT REPLACEMENT	SQ. YD.	---	---	16
PREFORMED JOINT SEAL 2"	LIN. FT.	126	---	126
TEMP. BRIDGERAIL	LIN. FT.	127	---	127
PORTLAND CEMENT MORTAR FAIRING COURSE	LIN. FT.	1642	---	1642

EXPANSION

10-8-76 Woodrow C. Chenault, Jr.
DATE WOODROW C. CHENAULT, JR
ILL. REG. STRUCTURAL ENGINEER
NO. 3567

APPROVED
FOR ACCURACY ONLY
Carl E. Thummanapalli
Engineer of Bridges & Structures

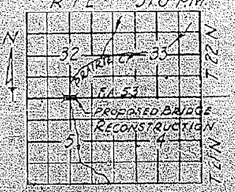
DESIGN STRESSES

FIELD UNITS	PRECAST UNITS
f'_c = 3500 p.s.i.	f'_c = 4500 psi
f_y = 60,000 p.s.i.	f_c = 1800 psi
n = 9	f_s = 20000 psi
	n = 8

PRECAST PRESTR. UNITS
f'_c = 5000 psi
f'_{ci} = 4000 psi
f_s = 270,000 lb/sq in Strands
f_s = 189,000 lb/sq in Strands

Allow 5% for future wearing surface
1977 AASHTO-1978, 1979, 1980-1981 Interim Specifications

LOCATION SKETCH



GENERAL PLAN & ELEVATION
F.A. ROUTE 53
OVER PRAIRIE CREEK
SECTION 120 BR
MCLEAN COUNTY
STATION 126+75.10

FILE NAME =	USER NAME = stultsjw	DESIGNED -	REVISED -
c:\pw_work\PWIDOT\STULTSJW\d0169514\D570524-sht-exbridge.dgn		DRAWN -	REVISED -
Johnson, Depp & Quisenberry CONSULTING ENGINEERS Springfield, Illinois	PLOT SCALE = 40.00 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 10/20/2009	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN / ELEVATION OF EXISTING BRIDGE
(FOR INFORMATION ONLY)

SCALE: NONE | SHEET NO. OF SHEETS | STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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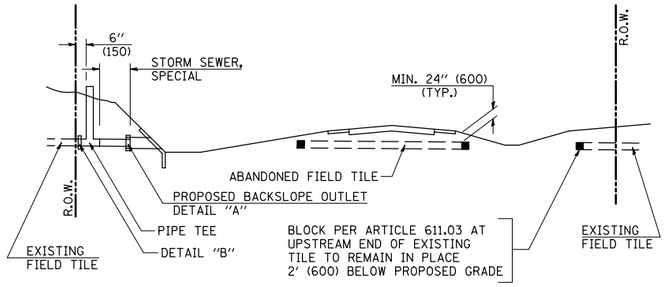
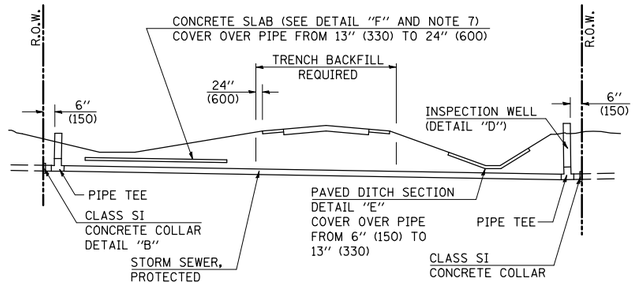
		CONTRACT NO. 70524		
		ILLINOIS FED. AID PROJECT		



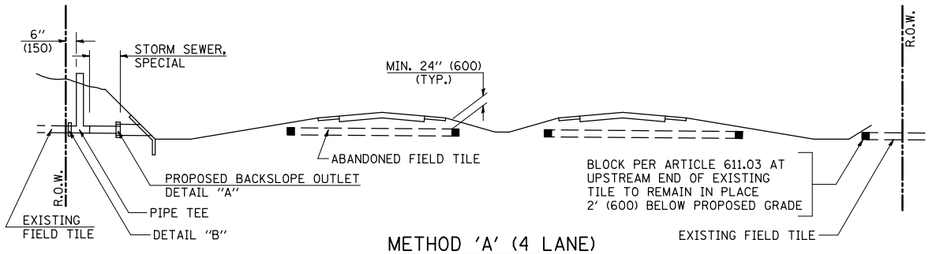
METHOD 'A' (2 LANE)

STORM SEWER FLOW LINE ABOVE PROPOSED DITCH FLOW LINE



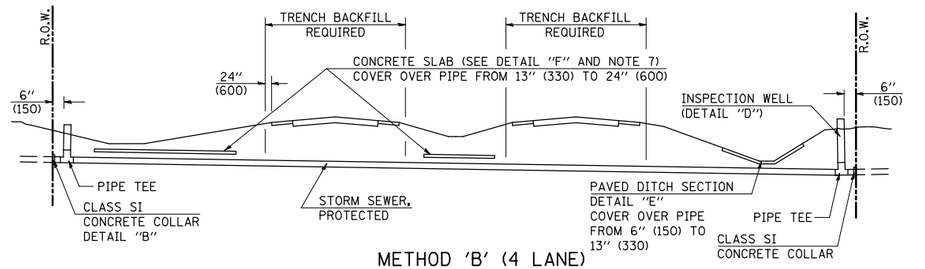
METHOD 'B' (2 LANE)

STORM SEWER LESS THAN 2' (600 mm) BELOW DITCH FLOW LINE AND STORM SEWERS CROSSING UNDER PAVEMENT AND PAVED DITCH



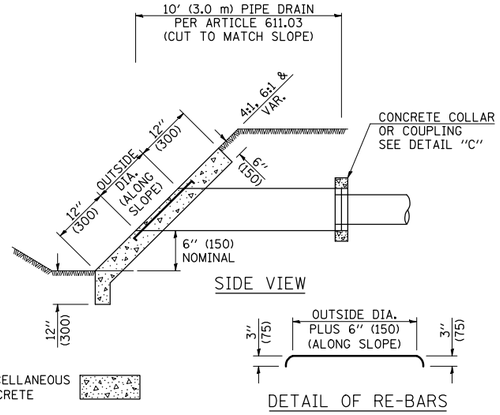
METHOD 'A' (4 LANE)

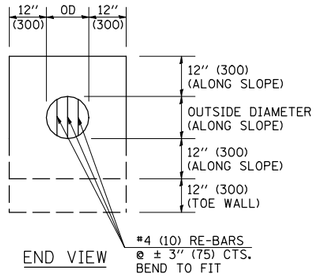
STORM SEWER FLOW LINE ABOVE PROPOSED DITCH FLOW LINE



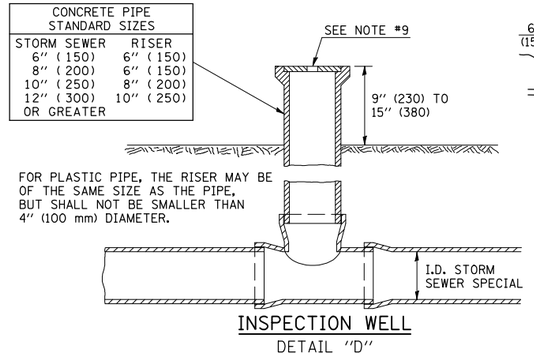
METHOD 'B' (4 LANE)

STORM SEWER LESS THAN 2' (600 mm) BELOW DITCH FLOW LINE AND STORM SEWERS CROSSING UNDER PAVEMENTS AND PAVED DITCHES



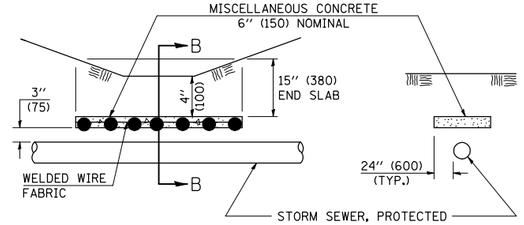


CONCRETE PIPE STANDARD SIZES	
STORM SEWER	RISER
6" (150)	6" (150)
8" (200)	6" (150)
10" (250)	8" (200)
12" (300) OR GREATER	10" (250)



INSPECTION WELL

DETAIL "D"

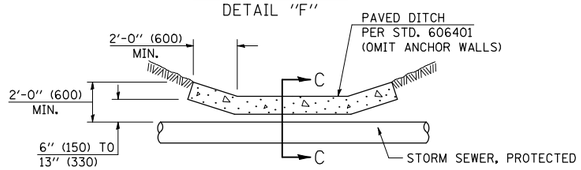


SLAB ELEVATION

SECTION B-B

CONCRETE SLAB

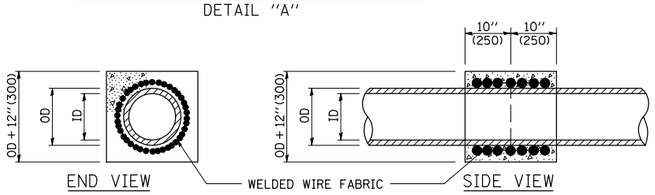
DETAIL "F"



PAVED DITCH ELEVATION

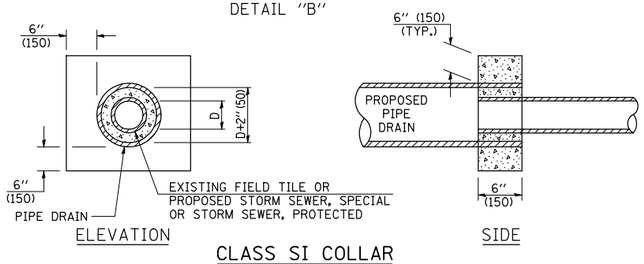
HEADWALL FOR BACKSLOPE OUTLET

DETAIL "A"



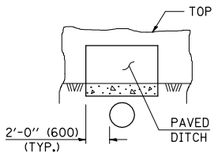
CONCRETE COLLAR

DETAIL "B"



CLASS SI COLLAR

DETAIL "C"



SECTION C-C

PAVED DITCH

DETAIL "E"

GENERAL NOTES

1. EXISTING FIELD TILE ENCOUNTERED BY EXPLORATION TRENCH SHALL BE INSPECTED BY THE ENGINEER FOR UNOBSTRUCTED FLOW WITHIN THE LIMITS OF THE RIGHT-OF-WAY.
2. ONLY FIELD TILE THAT DOES NOT HAVE SATISFACTORY FLOW AND OR HAS VISIBLE SIGNS OF DETERIORATION (SINK HOLES, ETC.) SHALL BE REPLACED WITHIN THE LIMITS OF THE RIGHT-OF-WAY IN ACCORDANCE WITH METHOD "B".
3. INSPECTION WELLS SHALL BE CONSTRUCTED APPROXIMATELY 6" (150 mm) INSIDE OF BOTH RIGHT-OF-WAY LINES AT ALL FIELD TILE LOCATIONS.
4. EXISTING FIELD TILE ABANDONED UNDER EXISTING PAVEMENTS OR PAVED SHOULDERS SHALL BE FILLED WITH FLOWABLE GROUT AS DIRECTED BY THE ENGINEER. THIS WORK WILL BE PAID FOR ACCORDING TO ARTICLE 109.04.
5. NON-CIRCULAR FIELD TILE SHALL BE REPLACED WITH STORM SEWER, SPECIAL OF AT LEAST THE SAME CROSS SECTIONAL AREA. ALL EXISTING FIELD TILE SHALL BE REPLACED WITH STORM SEWER OF THE TYPE REQUIRED FOR THE MINIMUM DEPTH OF COVER.
6. THE 6" (150 mm) CONCRETE SLAB OR DITCH LINING SHALL BE POURED THE LENGTH OF THE TRENCH AT ALL DITCH FLOW LINE LOCATIONS WITHIN THE RIGHT-OF-WAY WITH LESS THAN 2' (600 mm) OF EARTH COVER. MISCELLANEOUS CONCRETE SHALL BE USED ACCORDING TO SECTION 611.
7. ALL MISCELLANEOUS SLABS, APRONS AND DITCH LININGS SHALL BE REINFORCED WITH WELDED WIRE FABRIC AS SHOWN FOR PAVED DITCH IN STANDARD 606401.
8. HEADWALL FOR BACKSLOPE OUTLET MAY BE USED FOR PIPE DRAIN DIAMETERS UP TO 10" (250 mm). SPECIAL DESIGNS WILL BE REQUIRED FOR LARGER SIZES.
9. THE INSPECTION WELL LID FOR P.C.C. PIPE SHALL BE CONSTRUCTED OF 3/8" (10 mm) CAST IRON AND PROVIDED WITH A 1" (25 mm) DIAMETER HOLE IN CENTER. THE LID FOR THE OTHER PIPE MATERIALS SHALL BE A GRATE ASSEMBLY PREFABRICATED FOR AND COMPATIBLE WITH THE PIPE SYSTEM.

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

DISTRICT 5 DETAIL NO. 61101011A

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Johnson, Depp & Quisenberry CONSULTING ENGINEERS Springfield, Illinois	PLOT SCALE = 100.0000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 10/20/2009	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FIELD TILE SYSTEMS (TREATMENT OF EXISTING)

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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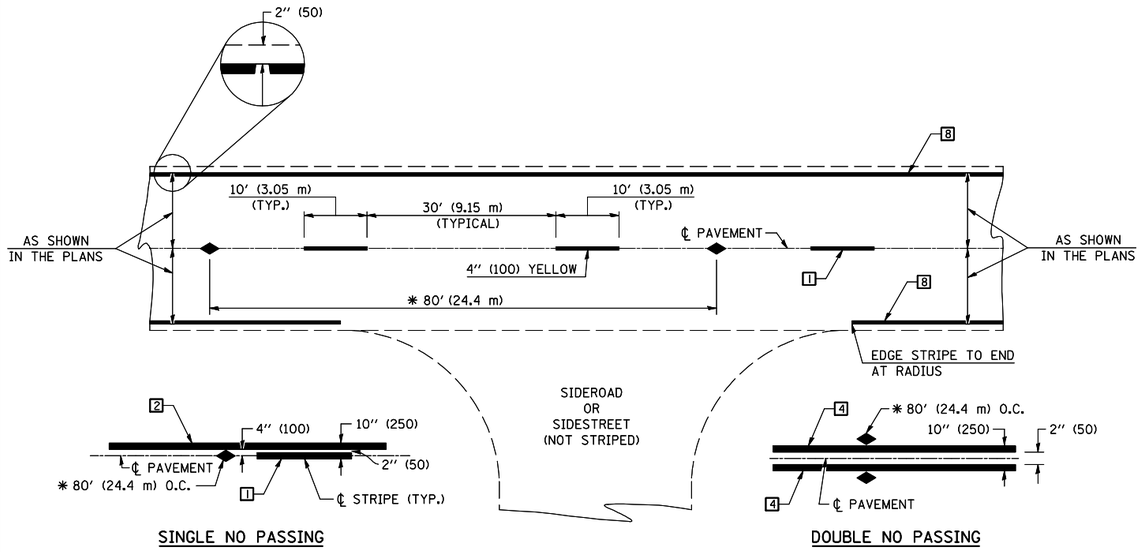
		CONTRACT NO. 70524		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



SINGLE NO PASSING

DOUBLE NO PASSING

* REDUCE TO 40' (12.2 m) O.C. ON CURVES WITH POSTED OR ADVISORY SPEEDS OF 45 mph (70 km/h) OR LESS.

TWO LANE/TWO WAY

TYPICAL PAVEMENT MARKING LEGEND

1 4" (100) SKIP-DASH (YELLOW)

2 4" (100) SOLID (YELLOW)

3 12" (300) DIAGONAL (YELLOW)

4 4" (100) DOUBLE YELLOW (NARROW)

5 RESERVED

6 RESERVED

7 4" (100) SKIP-DASH (WHITE)

8 4" (100) SOLID (WHITE)

9 12" (300) DIAGONAL (WHITE)

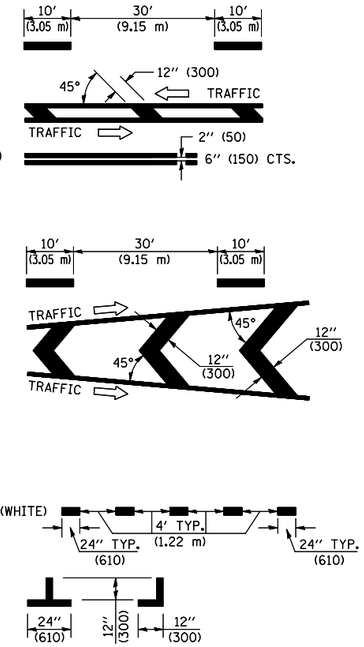
10 6" (150) SOLID (WHITE)

11 24" (600) STOP BAR (WHITE)

12 8" (200) SOLID (WHITE)

13 4" (100) LANE LINE EXTENSIONS (WHITE)

14 4" (100) PARKING WHITE



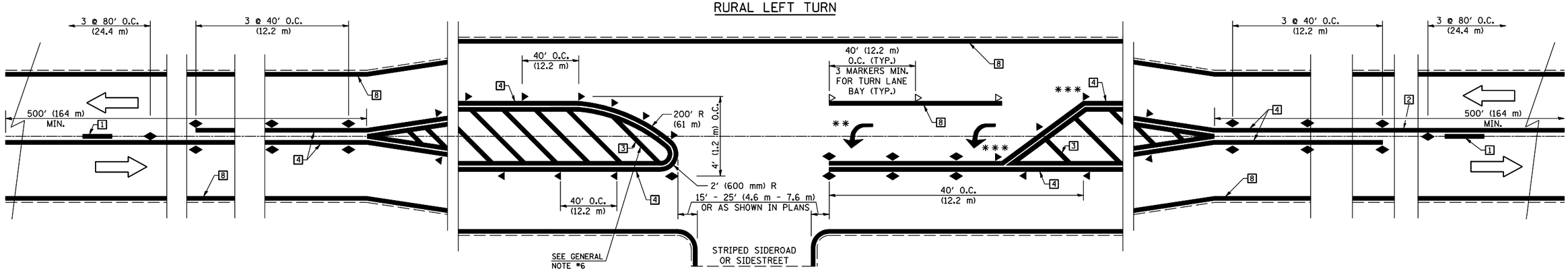
TYPICAL PAVEMENT MARKERS LEGEND

◆ TWO-WAY AMBER MARKER

▶ ONE-WAY AMBER MARKER

▷ ONE-WAY CRYSTAL MARKER

RURAL LEFT TURN



*** REDUCE SPACING IF NECESSARY TO ASSURE MARKERS AT CORNER POINTS.

** TURN ARROWS SHALL BE PLACED AS SHOWN ON SHEET #2.

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

DISTRICT 5 DETAIL NO. 7800AAAA

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	PLOT DATE = 10/20/2009	CHECKED -	REVISED -
		DATE -	REVISED -

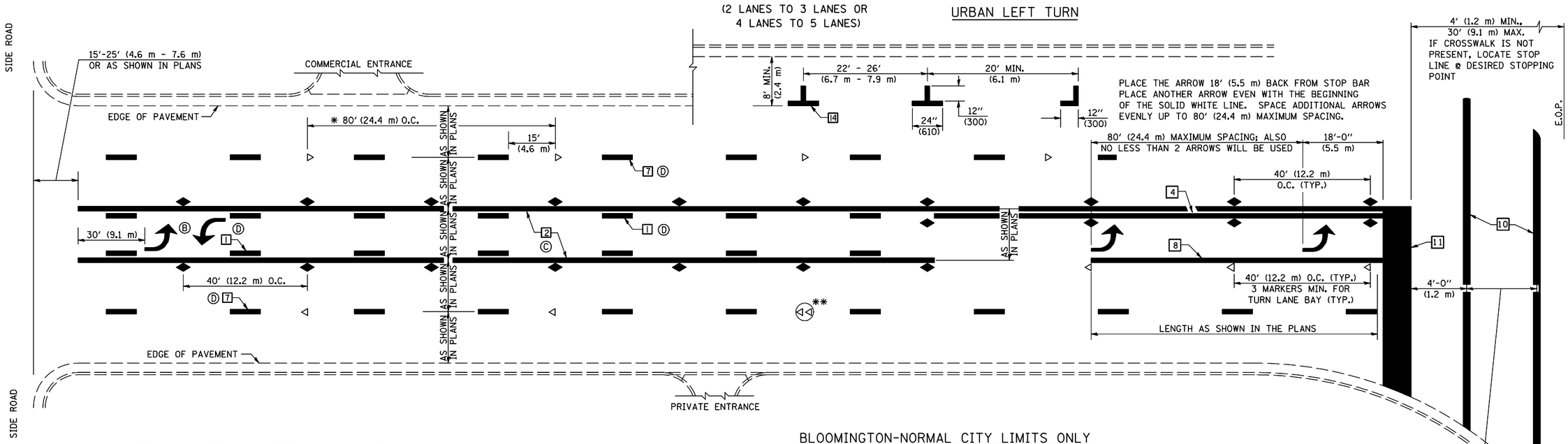
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING AND MARKERS (RURAL & URBAN APPLICATIONS)

SCALE: | SHEET NO. 1 OF 4 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315	120BR-1	MCLEAN	49	31
		CONTRACT NO. 70524		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

URBAN LEFT TURN



* REDUCE TO 40 FEET (12.2 METERS) ON CENTER ON CURVES WHERE ADVISORY SPEEDS ARE 10 MPH (15 km/h) LOWER THAN POSTED SPEEDS.

** DOUBLE LANE LINE MARKERS SHALL BE SPECIFIED AND SPACED AS SHOWN IN HIGHWAY STANDARD 781001 FOR MULTI-LANE DIVIDED AND UNDIVIDED HIGHWAYS.

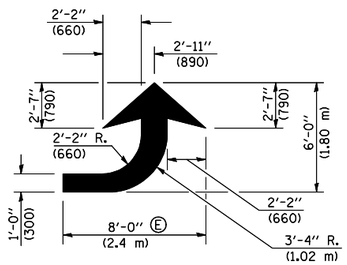
GENERAL NOTES:

Ⓑ TURN ARROW PAIRS SHALL BE PLACED AT 250' (75 m) INTERVALS AND SHALL BE EVENLY SPACED BETWEEN BOTH ENDS OF THE BIDIRECTIONAL LEFT TURN LANE.

Ⓒ THE SOLID YELLOW PAVEMENT MARKINGS [2] SHOULD GENERALLY START OR END NEAR THE RADIUS POINT OF EACH STREET RETURN EXCEPT WHERE ONE OR BOTH ENDS WOULD INCLUDE STOP BARS.

Ⓓ THE SKIP-DASH PAVEMENT MARKINGS [1] OR [7] SHOULD BE CENTERED BETWEEN BOTH ENDS OF EACH CITY BLOCK AND SHALL BE PLACED SO THEY LINE UP ACROSS FROM EACH OTHER. SEE EXAMPLE ON SHEET 2 OF 3.

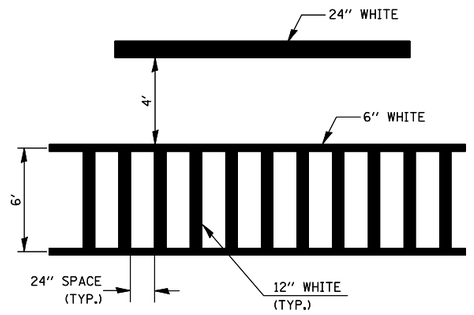
Ⓔ USE LARGE ARROW SIZE FOR BOTH RURAL AND URBAN LOCATIONS. (SEE LAST PAGE OF SECTION 780x FOR SYMBOLS TABLE)



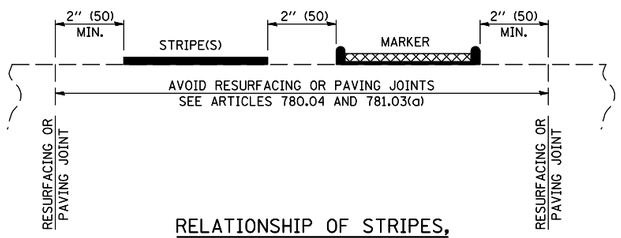
LEFT ARROW

REVERSE FOR RIGHT ARROW
AREA = 15.6 SQ. FT. (1.47 m^2)
(WHITE)

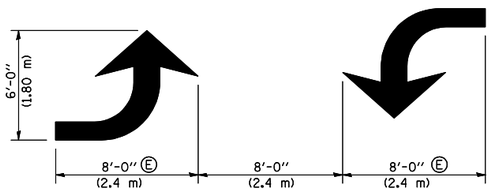
BLOOMINGTON-NORMAL CITY LIMITS ONLY



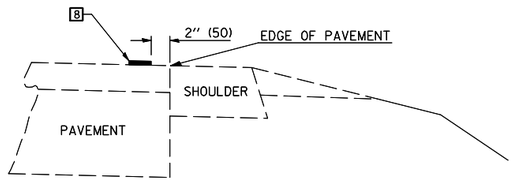
TYPICAL SPACING FOR
CROSSWALKS & STOP BARS



RELATIONSHIP OF STRIPES,
MARKERS AND JOINTS



TYPICAL DOUBLE
TURN ARROWS (WHITE)



RELATIONSHIP OF EDGE LINE TO EDGE OF PAVEMENT

(SAFETY SHOULDER OR PAVED SURFACE)
SEE ARTICLE 780.04

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

DISTRICT 5 DETAIL NO. 7800AAAA

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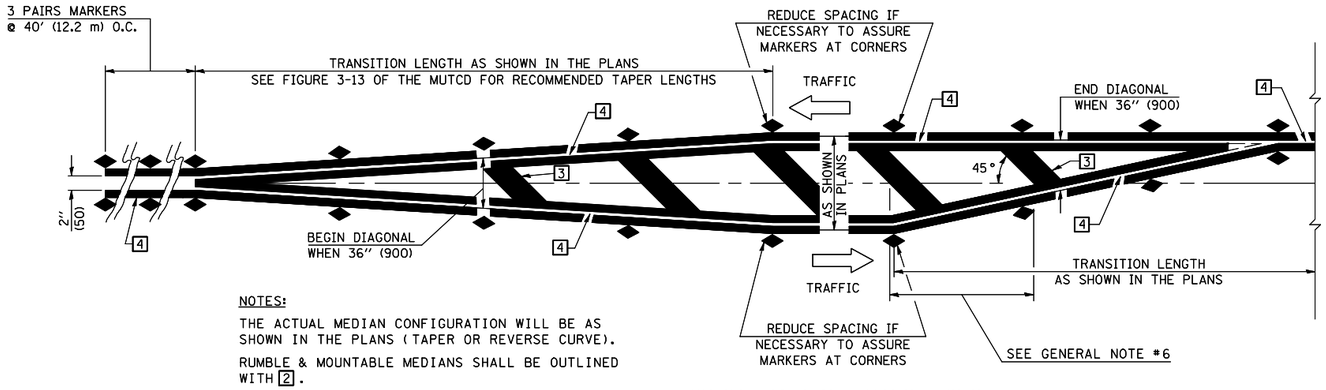
Johnson, Depp & Quisenberry CONSULTING ENGINEERS Springfield, Illinois	PLOT SCALE = 100.0000 ' / IN.	DRAWN -	REVISED -
	PLOT DATE = 10/20/2009	CHECKED -	REVISED -
		DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING AND MARKERS
(RURAL & URBAN APPLICATIONS)

SCALE: | SHEET NO. 2 OF 4 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315	120BR-1	MCLEAN	49	32
		CONTRACT NO. 70524		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



NOTES:

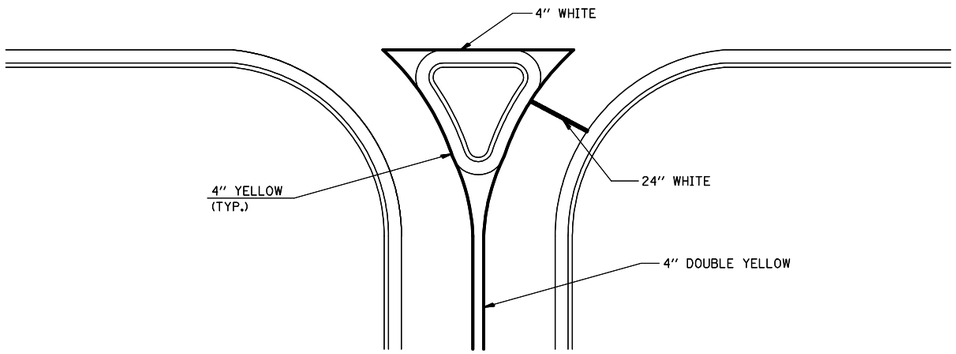
THE ACTUAL MEDIAN CONFIGURATION WILL BE AS SHOWN IN THE PLANS (TAPER OR REVERSE CURVE).

RUMBLE & MOUNTABLE MEDIANS SHALL BE OUTLINED WITH [2].

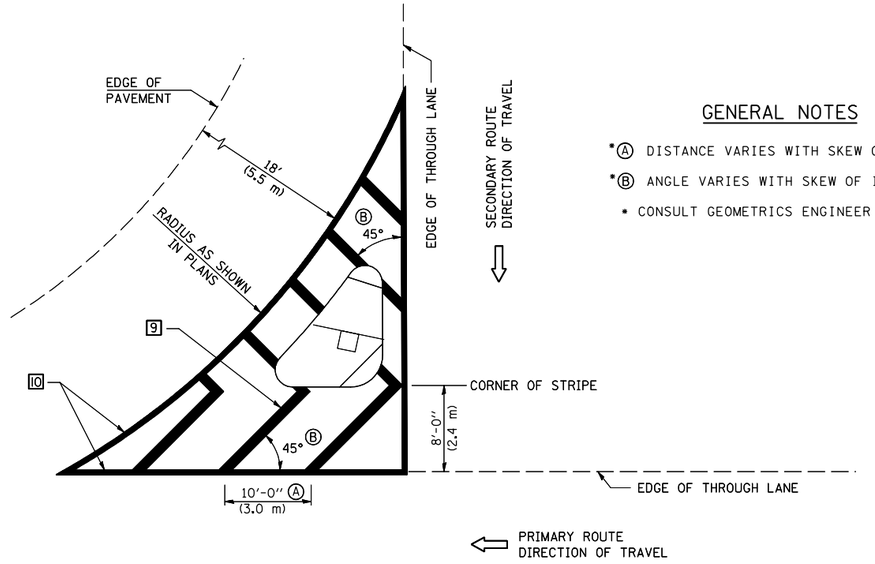
TYPICAL MEDIAN TRANSITIONS

GENERAL NOTES

1. WHEN MEDIANS ARE PRESENT, PAVEMENT MARKINGS ARE TO BE PLACED ADJACENT TO MEDIANS.
2. SOME OF THE INFORMATION INCLUDED WITH THIS DETAIL MAY NOT BE APPLICABLE TO THIS IMPROVEMENT.
3. PAVEMENT MARKINGS ARE TO BE EXTENDED THROUGH OMISSIONS WHEN APPLICABLE.
4. A STRIPING KEY IS AVAILABLE ELSEWHERE AND SHALL BE SHOWN WHERE THE QUANTITIES ARE LISTED.
5. FINAL PAVEMENT MARKINGS SHALL BE IN PLACE PRIOR TO PLACING ANY RAISED REFLECTIVE PAVEMENT MARKERS.
6. THE FOLLOWING CRITERIA SHALL BE USED FOR SELECTING THE DIAGONAL PAVEMENT MARKING SPACING,
   <30 MPH USE 15' (<50 km/h USE 4.5 m)
   30-45 MPH USE 20' (50-75 km/h USE 6.0 m)
   >45 MPH USE 30' (>75 km/h USE 9.0 m)



RIGHT IN - RIGHT OUT ACCESS



GENERAL NOTES

*Ⓐ DISTANCE VARIES WITH SKEW OF INTERSECTION.

*Ⓑ ANGLE VARIES WITH SKEW OF INTERSECTION.

* CONSULT GEOMETRICS ENGINEER

ISLAND

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

DISTRICT 5 DETAIL NO. 7800AAAA

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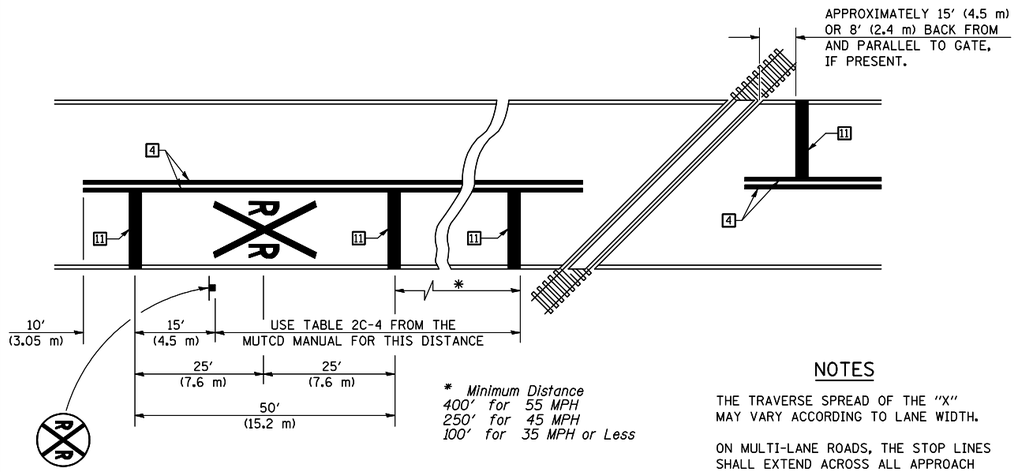
	PLOT DATE = 10/20/2009	CHECKED -	REVISED -
		DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING AND MARKERS (RURAL & URBAN APPLICATIONS)

SCALE: | SHEET NO. 3 OF 4 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315	120BR-1	MCLEAN	49	33
		CONTRACT NO. 70524		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



PAVEMENT MARKINGS AT RAILROAD-HIGHWAY GRADE CROSSING

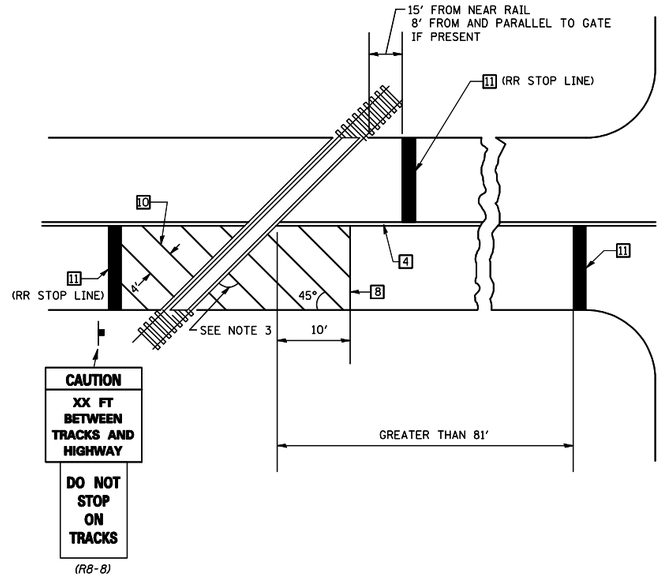
NOTES

THE TRAVERSE SPREAD OF THE "X" MAY VARY ACCORDING TO LANE WIDTH.

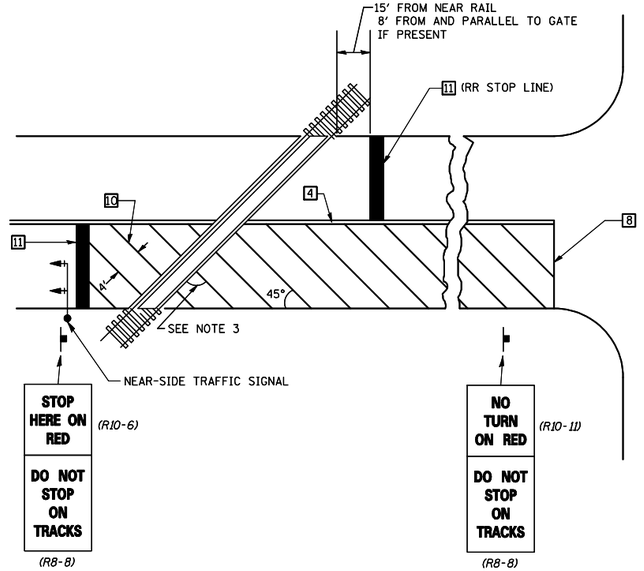
ON MULTI-LANE ROADS, THE STOP LINES SHALL EXTEND ACROSS ALL APPROACH LANES AND SEPARATE RXR SYMBOLS SHALL BE PLACED ADJACENT TO EACH OTHER IN EACH LANE.

WHEN THE PAVEMENT MARKING SYMBOL IS USED, A PORTION OF THE SYMBOL SHOULD BE LOCATED DIRECTLY ADJACENT TO THE ADVANCE WARNING SIGN (W10-1) AS PLACED BY TABLE II-1, CONDITION B OF THE MUTCD.

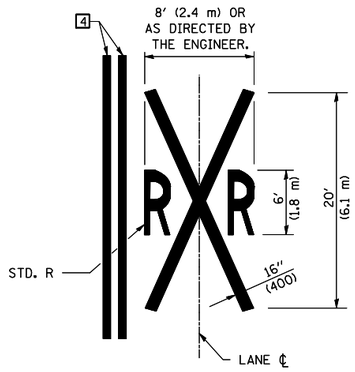
RAILROAD CROSSING WITH INTERCONNECT ONLY



RAILROAD CROSSING WITH INTERCONNECT AND PRE-SIGNALS



SUPPLEMENTAL PAVEMENT MARKING TREATMENT FOR RAILROAD-HIGHWAY GRADE CROSSING



GENERAL NOTES

1. SUPPLEMENTAL PAVEMENT MARKINGS TO BE INSTALLED ONLY ON APPROACHES TO INTERSECTIONS CONTROLLED BY TRAFFIC SIGNALS WHICH ARE INTERCONNECTED WITH THE RAILROAD WARNING SIGNALS.
2. EXTEND PAVEMENT MARKINGS TO THE INTERSECTION ONLY WHERE NEAR-SIDE TRAFFIC SIGNALS ARE USED.
3. WHERE THE ANGLE BETWEEN THE DIAGONAL PAVEMENT MARKINGS AND THE TRACK WOULD BE LESS THAN 20°, THE PAVEMENT MARKINGS SHOULD BE PLACED IN THE OPPOSITE DIRECTION FROM THAT SHOWN.

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

DISTRICT 5 DETAIL NO. 7800AAAA

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Johnson, Depp & Quisenberry CONSULTING ENGINEERS Springfield, Illinois	PLOT SCALE = 100.0000 ′ / IN.	DRAWN -	REVISED -	
	PLOT DATE = 10/20/2009	CHECKED -	REVISED -	
		DATE -	REVISED -	

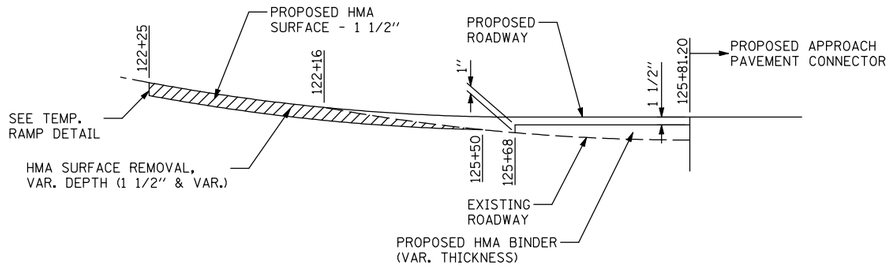
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING AND MARKERS (RURAL & URBAN APPLICATIONS)

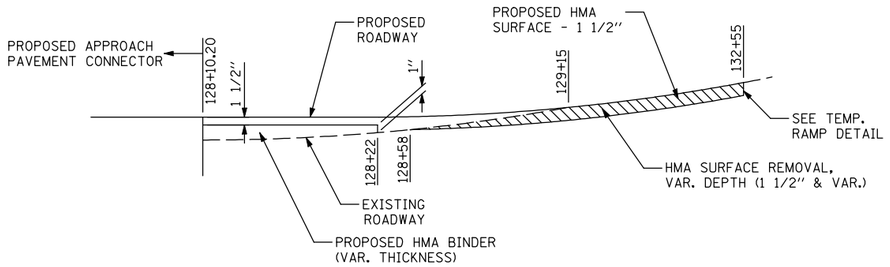
SCALE: | SHEET NO. 4 OF 4 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315	120BR-1	MCLEAN	49	34
		CONTRACT NO. 70524		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

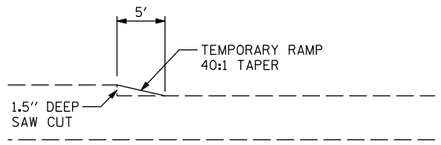
PAVING THICKNESS TRANSITION DETAILS



WEST END



EAST END



TEMPORARY RAMP DETAIL

FILE NAME = c:\pw_work\PWIDOT\STULTSJW\d0169514\D570524-sht-details.dgn	USER NAME = stultsjw	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DETAILS			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
Johnson, Depp & Quisenberry CONSULTING ENGINEERS Springfield, Illinois	PLOT SCALE = 100.0000 ' / IN.	CHECKED -	REVISED -					315	120BR-1	MCLEAN	49	35
	PLOT DATE = 10/20/2009	DATE -	REVISED -		SCALE:	SHEET NO. OF SHEETS	STA. TO STA.			CONTRACT NO. 70524		
										ILLINOIS FED. AID PROJECT		

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

690
685
680

EXIST. R.O.W.

TEL.
4" GAS

685.12

EXIST. R.O.W.

FIBER OPTIC

121 + 00.00

690
685
680

686.54

120 + 50.00

690
685
680

687.96

120 + 00.00

690
685
680

℄ U.S. RTE. 136

EXISTING
PROPOSED

0 5 10 0 VERT.
HORIZ.

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

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

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

FILE NAME = c:\pw_work\PWIDOT\STULTSJW\d0169514\D570524-sht-xssht.dgn	USER NAME = stultsjw	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 20.0000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 10/20/2009	DATE -	REVISED -

Johnson, Depp & Quisenberry
CONSULTING ENGINEERS
Springfield, Illinois

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTION

SCALE: | SHEET NO. OF SHEETS | STA. 120+00.00 TO STA. 121+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315	120BR-1	MCLEAN	49	36
		CONTRACT NO. 70524		
	ILLINOIS	FED. AID PROJECT		

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

685
680
675

EXIST. R.O.W.

681.94
681.94

1:3

EXIST. R.O.W.

TEL.
4" GAS

EX. FL. 679.76

FIBER OPTIC

122 + 50.00

	C	F
MAINLINE	0	0
RUNAROUND	4	1
RUNAROUND REMOVAL	1	3
TS EXC & PL	0	0

EXIST. R.O.W.

682.85

EXIST. R.O.W.

TEL.
4" GAS

FIBER OPTIC

122 + 00.00

	C	F
MAINLINE	0	0
RUNAROUND	0	0
RUNAROUND REMOVAL	0	0
TS EXC & PL	0	0

690
685
680
675

EXIST. R.O.W.

683.99

EXIST. R.O.W.

TEL.
4" GAS

FIBER OPTIC

121 + 50.00

℄ U.S. RTE. 136

EXISTING
PROPOSED

0 10
HORIZ.
0 5
VERT.

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

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

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

FILE NAME = c:\pw_work\PWIDOT\STULTSJW\d0169514\D570524-sht-xssht.dgn	USER NAME = stultsjw	DESIGNED -	REVISED -
Johnson, Depp & Quisenberry CONSULTING ENGINEERS Springfield, Illinois	PLOT SCALE = 20.0000 ' / IN.	DRAWN -	REVISED -
	PLOT DATE = 10/20/2009	CHECKED -	REVISED -
		DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTION

SCALE: | SHEET NO. OF SHEETS | STA. 121+50.00 TO STA. 122+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315	120BR-1	MCLEAN	49	37

CONTRACT NO. 70524

ILLINOIS FED. AID PROJECT

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

685 680 675 670

EXIST. R.O.W.

679.74 679.81

678.56

1:2 1:3 1:3 1:2

EXIST. R.O.W.

PR. T.E.

FL. 674.45

EX. R.O.W.

TEL. 4" GAS

FIBER OPTIC

124 + 00.00

	C	F
MAINLINE	0	2
RUNAROUND	2	41
RUNAROUND REMOVAL	45	2
TS EXC & PL	35	35

EXIST. R.O.W.

680.38 680.38

679.80

1:3 1:2

EXIST. R.O.W.

PR. T.E.

FL. 676.95

TEL. 4" GAS

FIBER OPTIC

123 + 50.00

NOTE:
REMOVE THE EXISTING PAVED DITCH (RT. SIDE)
CONST. STONE RIPRAP, CLASS A4 DITCH
TO SAME GRADE & LOCATION AS THE EXISTING PAVED
DITCH UPON REMOVAL OF THE RUNAROUND.

	C	F
MAINLINE	0	2
RUNAROUND	1	18
RUNAROUND REMOVAL	19	1
TS EXC & PL	22	22

NOTE: RESTORE GROUND DISTURB BY THE CONSTRUCTION OF THE RUNAROUND TO ORIGINAL CONDITIONS UPON REMOVAL OF THE RUNAROUND.

EXIST. R.O.W.

681.02 681.09

680.84 ℄ RUNAROUND

EXIST. R.O.W.

PR. T.E.

1:3 1:2

12" (TYP.)

FL. 678.36

TEL. 4" GAS

FIBER OPTIC

℄ U.S. RTE. 136

EXISTING
PROPOSED

123 + 00.00

	C	F
MAINLINE	0	0
RUNAROUND	13	8
RUNAROUND REMOVAL	10	12
TS EXC & PL	8	8

0 10 HORIZ.
0 5 VERT.

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

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

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		DRAWN -	REVISED -
PLOT SCALE = 20.0000 ' / IN.		CHECKED -	REVISED -
PLOT DATE = 10/20/2009		DATE -	REVISED -

Johnson, Depp & Quisenberry
CONSULTING ENGINEERS
Springfield, Illinois

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTION

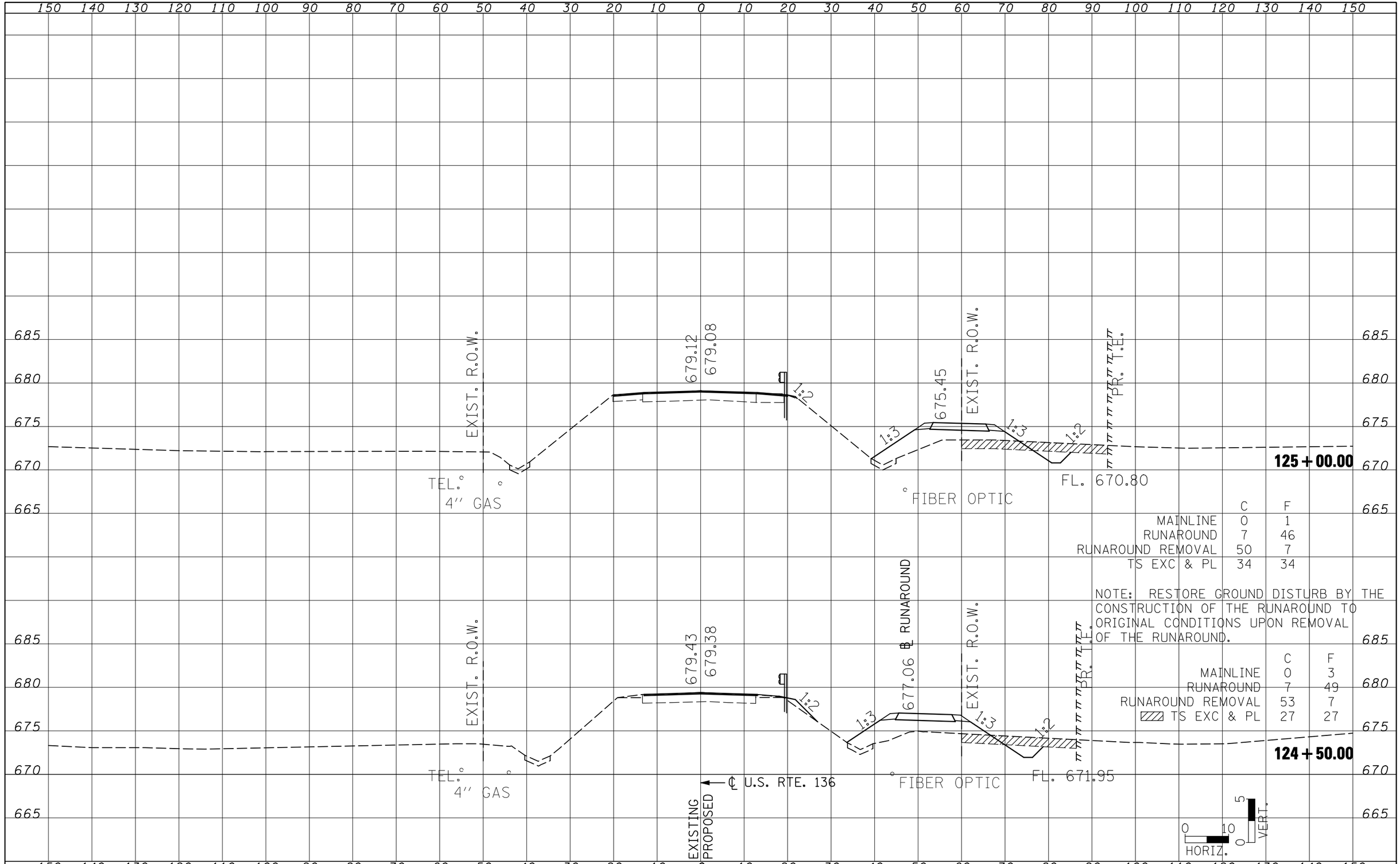
SCALE: | SHEET NO. OF SHEETS | STA. 123+00.00 TO STA. 124+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315	120BR-1	MCLEAN	49	38

CONTRACT NO. 70524

ILLINOIS FED. AID PROJECT

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



FILE NAME =	USER NAME = stultsjw	DESIGNED -	REVISED -
c:\pw_work\PWIDOT\STULTSJW\d0169514\D570524-sht-xssht.dgn		DRAWN -	REVISED -
Johnson, Depp & Quisenberry CONSULTING ENGINEERS Springfield, Illinois	PLOT SCALE = 20.0000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 10/20/2009	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTION

SCALE: | SHEET NO. OF SHEETS | STA. 124+50.00 TO STA. 125+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315	120BR-1	MCLEAN	49	39
		CONTRACT NO. 70524		
		ILLINOIS FED. AID PROJECT		

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

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

685 680 675 670 665

EXIST. R.O.W.

678.80 678.92

1:2 1:2

℄ RUNAROUND

674.21

EXIST. R.O.W.

1:3 1:3 1:2

PR. T.E.

FL. 669.65

125 + 50.00

TEL.

4" GAS

FIBER OPTIC

	C	F
MAINLINE	0	2
RUNAROUND	9	38
RUNAROUND REMOVAL	42	9
TS EXC & PL	41	41

NOTE: RESTORE GROUND DISTURB BY THE CONSTRUCTION OF THE RUNAROUND TO ORIGINAL CONDITIONS UPON REMOVAL OF THE RUNAROUND.

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

685 680 675 670 665

+25 F.E. (AGG.)

EXIST. R.O.W.

678.96 678.99

125 + 25.00

TEL.

4" GAS

EX. 24" CMP

EL. 669.26

℄ U.S. RTE. 136

EXISTING

PROPOSED

0 10 HORIZ.

0 5 VERT.

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

FILE NAME = c:\pw_work\PWIDOT\STULTSJW\d0169514\D570524-sht-xssht.dgn	USER NAME = stultsjw	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 20.0000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 10/20/2009	DATE -	REVISED -

Johnson, Depp & Quisenberry
CONSULTING ENGINEERS
Springfield, Illinois

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTION

SCALE: | SHEET NO. OF SHEETS | STA. 125+25.00 TO STA. 125+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315	120BR-1	MCLEAN	49	40
		CONTRACT NO. 70524		
	ILLINOIS FED. AID PROJECT			

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

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

685 680 675 670 665 660

EXIST. R.O.W.

TEL.

4" GAS

678.54 678.89

℄ RUNAROUND

673.03 EXIST. R.O.W.

1:3 1:3 1:2

PR. T.E.

FL. 667.35

126 + 50.00

FIBER OPTIC APPROX. 7' DEEP ACROSS CREEK

NOTE: RESTORE GROUND DISTURB BY THE CONSTRUCTION OF THE RUNAROUND TO ORIGINAL CONDITIONS UPON REMOVAL OF THE RUNAROUND.

	C	F
MAINLINE	0	0
RUNAROUND	27	63
RUNAROUND REMOVAL	67	27
TS EXC & PL	57	57

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

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

685 680 675 670 665 660

EXIST. R.O.W.

TEL.

4" GAS

678.49 678.89

PROP. PAVEMENT REMOVAL

PROP. BRIDGE APPR. SLAB

1:2 1:2

℄ U.S. RTE. 136

EXISTING

PROPOSED

673.41 EXIST. R.O.W.

1:3 1:3 1:2

PR. T.E.

FL. 668.50

126 + 00.00

FIBER OPTIC

	C	F
MAINLINE	1	14
RUNAROUND	13	47
RUNAROUND REMOVAL	51	13
TS EXC & PL	49	49

0 10 HORIZ.

0 5 VERT.

FILE NAME = c:\pw_work\PWIDOT\STULTSJW\d0169514\D570524-sht-xssht.dgn	USER NAME = stultsjw	DESIGNED -	REVISED -
Johnson, Depp & Quisenberry CONSULTING ENGINEERS Springfield, Illinois	PLOT SCALE = 20.0000 ' / IN.	DRAWN -	REVISED -
	PLOT DATE = 10/20/2009	CHECKED -	REVISED -
		DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTION

SCALE: | SHEET NO. OF SHEETS | STA. 126+00.00 TO STA. 126+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315	120BR-1	MCLEAN	49	41
		CONTRACT NO. 70524		
	ILLINOIS FED. AID PROJECT			

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

680 675 670 665 660

678.61 678.89

EXIST. R.O.W.

TEL.

4" GAS

673.06 EXIST. R.O.W.

1:3 1:3 1:2

PR. T.E.

FL. 667.60

127 + 50.00

FIBER OPTIC APPROX. 7' DEEP ACROSS CREEK

	C	F
MAINLINE	0	0
RUNAROUND	17	90
RUNAROUND REMOVAL	94	17
TS EXC & PL	57	57

NOTE: RESTORE GROUND DISTURB BY THE CONSTRUCTION OF THE RUNAROUND TO ORIGINAL CONDITIONS UPON REMOVAL OF THE RUNAROUND.

685 680 675 670 665 660 655 650

678.59 678.89

EXIST. R.O.W.

TEL.

4" GAS

℄ RUNAROUND

673.00 EXIST. R.O.W.

1:3 1:3

PROP. TRIPLE PIPE CULVERT, CLASS D, TYPE 2 72" (TEMP.)

FL. 660.80

PR. T.E.

FL. 660.50

127 + 00.00

FIBER OPTIC APPROX. 7' DEEP

	C	F
MAINLINE	0	0
RUNAROUND	0	579
RUNAROUND REMOVAL	583	0
TS EXC & PL	0	0

℄ U.S. RTE. 136

EXISTING PROPOSED

0 10 HORIZ.

0 5 VERT.

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

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

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

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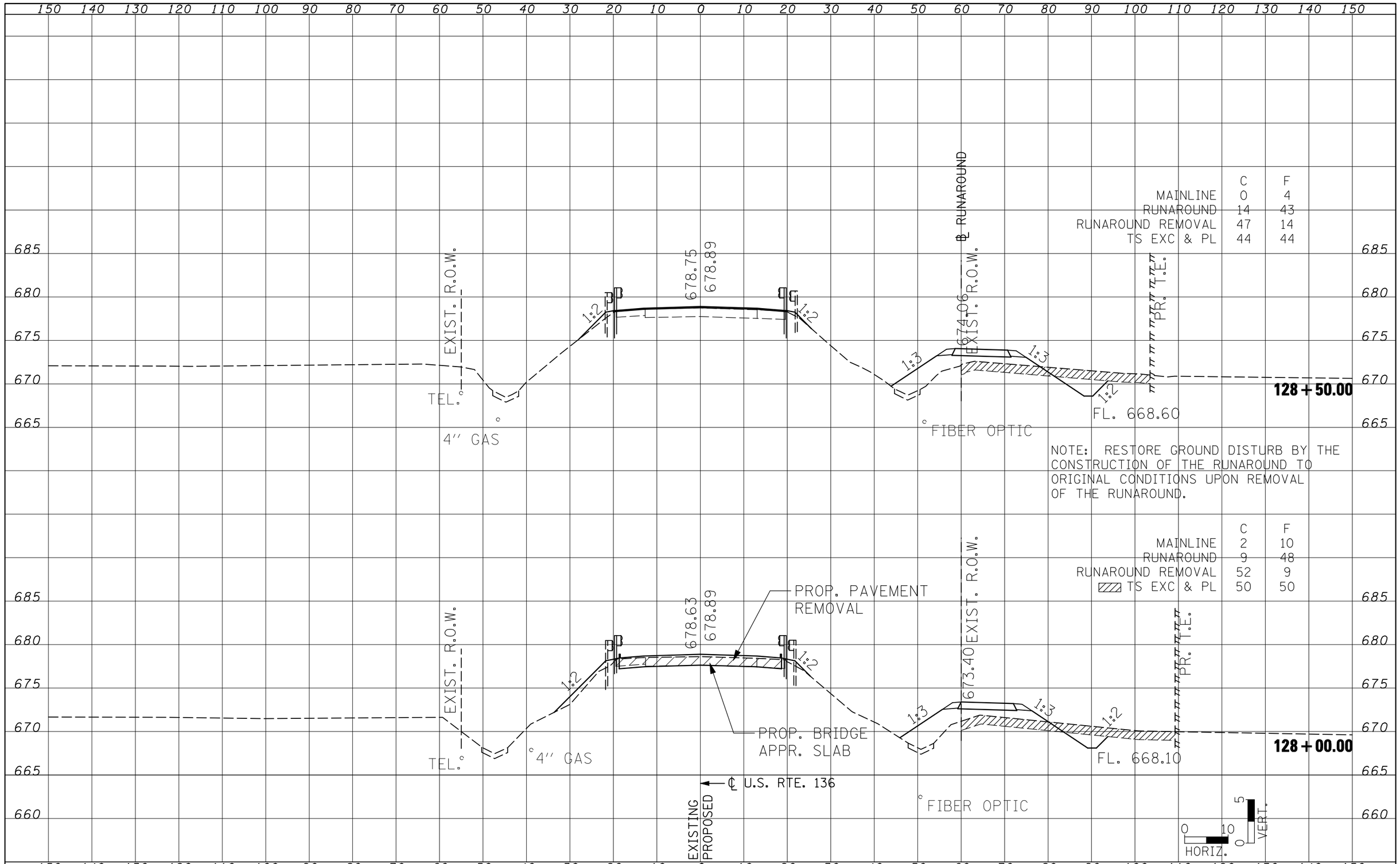
Johnson, Depp & Quisenberry CONSULTING ENGINEERS Springfield, Illinois	PLOT SCALE = 20.0000 ' / IN.	DRAWN -	REVISED -
	PLOT DATE = 10/20/2009	CHECKED -	REVISED -
		DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTION

SCALE: | SHEET NO. OF SHEETS | STA. 127+00.00 TO STA. 127+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315	120BR-1	MCLEAN	49	42
		CONTRACT NO. 70524		
	ILLINOIS FED. AID PROJECT			



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

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

FILE NAME = c:\pw_work\PWIDOT\STULTSJW\d0169514\D570524-sht-xssht.dgn	USER NAME = stultsjw	DESIGNED -	REVISED -
Johnson, Depp & Quisenberry CONSULTING ENGINEERS Springfield, Illinois		DRAWN -	REVISED -
	PLOT SCALE = 20.0000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 10/20/2009	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

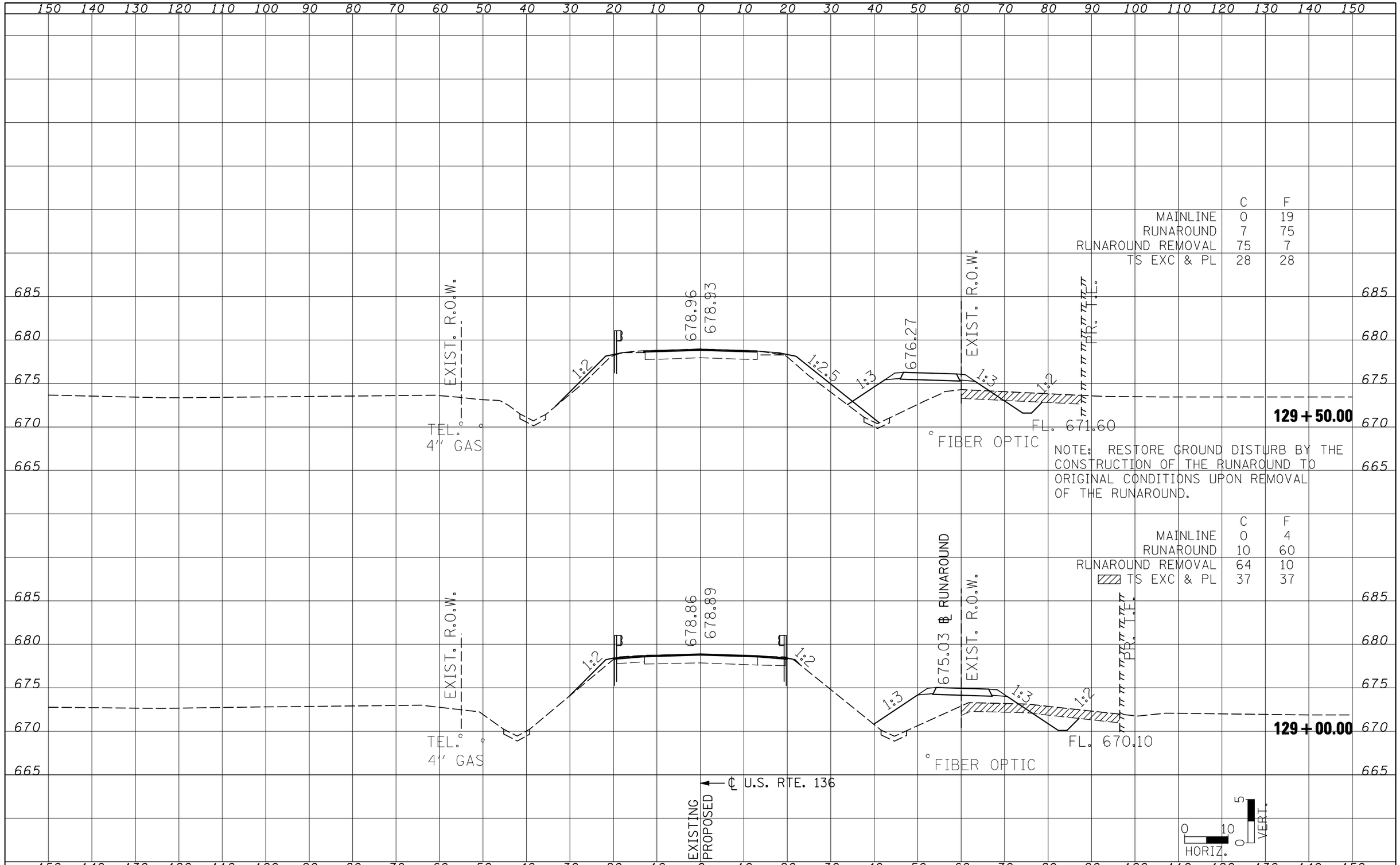
CROSS SECTION

SCALE: | SHEET NO. OF SHEETS | STA. 128+00.00 TO STA. 128+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315	120BR-1	MCLEAN	49	43
		CONTRACT NO. 70524		
	ILLINOIS FED. AID PROJECT			

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

	C	F
MAINLINE	0	19
RUNAROUND	7	75
RUNAROUND REMOVAL	75	7
TS EXC & PL	28	28



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

	C	F
MAINLINE	0	4
RUNAROUND	10	60
RUNAROUND REMOVAL	64	10
TS EXC & PL	37	37

FILE NAME =	USER NAME = stultsjw	DESIGNED -	REVISED -
c:\pw_work\PWIDOT\STULTSJW\d0169514\D570524-sht-xssht.dgn		DRAWN -	REVISED -
Johnson, Depp & Quisenberry CONSULTING ENGINEERS Springfield, Illinois	PLOT SCALE = 20.0000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 10/20/2009	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTION

SCALE: | SHEET NO. OF SHEETS | STA. 129+00.00 TO STA. 129+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315	120BR-1	MCLEAN	49	44
		CONTRACT NO. 70524		
	ILLINOIS FED. AID PROJECT			

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

685
680
675
670

EXIST. R.O.W.

TEL.
4" GAS

679.45
679.40

1:3

678.56

1:3
1:2

EXIST. R.O.W.

PR. T.E.

FL. 674.60

FIBER OPTIC

	C	F
MAINLINE	0	1
RUNAROUND	10	73
RUNAROUND REMOVAL	77	10
TS EXC & PL	10	10

130 + 50.00

NOTE: RESTORE GROUND DISTURB BY THE CONSTRUCTION OF THE RUNAROUND TO ORIGINAL CONDITIONS UPON REMOVAL OF THE RUNAROUND.

685
680
675
670

EXIST. R.O.W.

TEL.
4" GAS

679.05
679.10

℄ RUNAROUND

677.11

1:2
1:3
1:3
1:2

EXIST. R.O.W.

PR. T.E.

FL. 673.10

FIBER OPTIC

	C	F
MAINLINE	0	5
RUNAROUND	9	77
RUNAROUND REMOVAL	81	9
TS EXC & PL	19	19

130 + 00.00

℄ U.S. RTE. 136

EXISTING
PROPOSED

0 10
HORIZ.
0 5
VERT.

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

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

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

FILE NAME = c:\pw_work\PWIDOT\STULTSJW\d0169514\D570524-sht-xssht.dgn	USER NAME = stultsjw	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 20.0000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 10/20/2009	DATE -	REVISED -

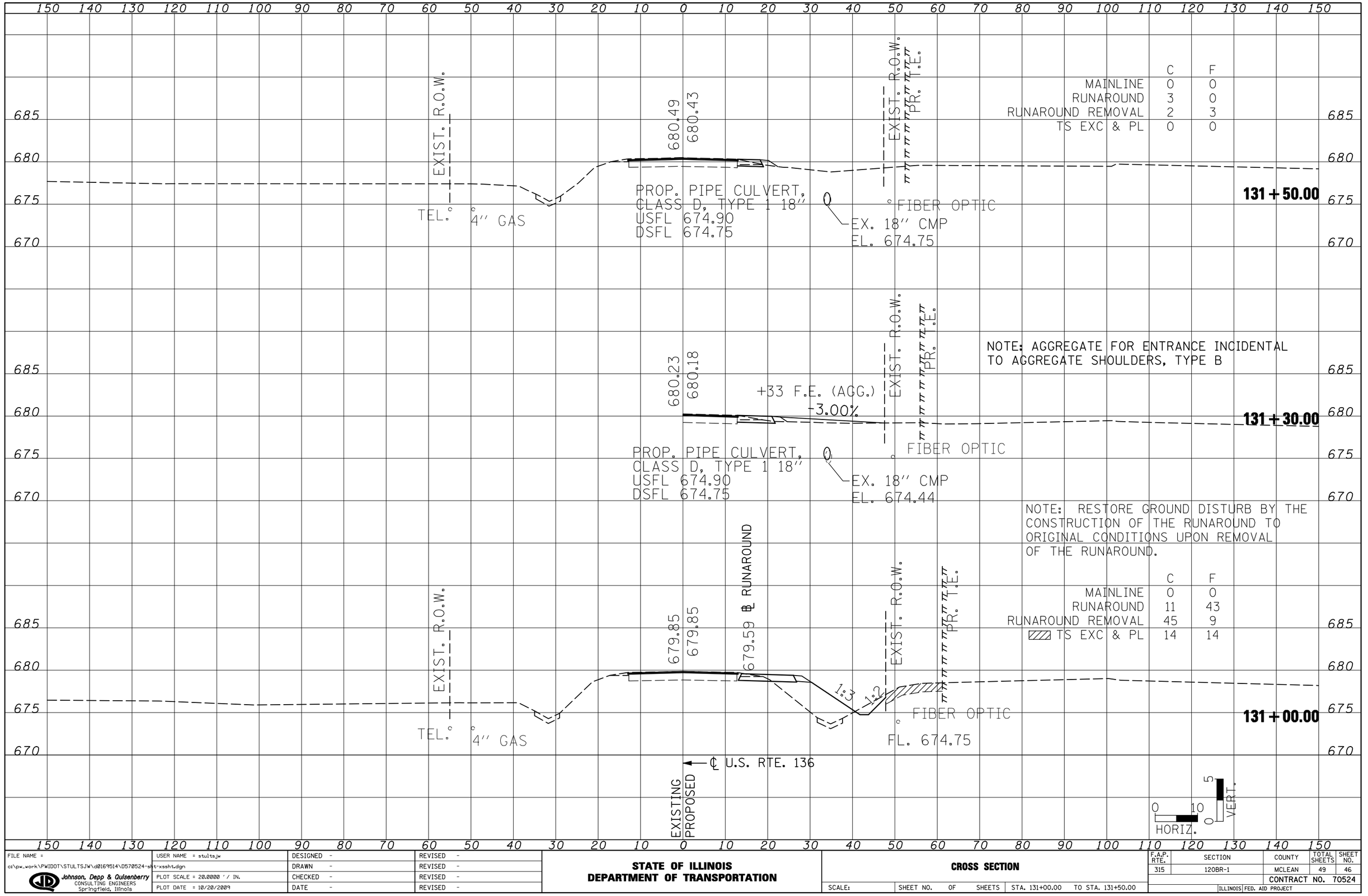
Johnson, Depp & Quisenberry
CONSULTING ENGINEERS
Springfield, Illinois

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTION

SCALE: | SHEET NO. OF SHEETS | STA. 130+00.00 TO STA. 130+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315	120BR-1	MCLEAN	49	45
		CONTRACT NO. 70524		
	ILLINOIS FED. AID PROJECT			



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

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

FILE NAME = c:\pw_work\PWIDOT\STULTSJW\d0169514\D570524-sht-xssht.dgn	USER NAME = stultsjw	DESIGNED -	REVISED -
Johnson, Depp & Quisenberry CONSULTING ENGINEERS Springfield, Illinois	PLOT SCALE = 20.0000 ' / IN.	DRAWN -	REVISED -
	PLOT DATE = 10/20/2009	CHECKED -	REVISED -
		DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTION

SCALE: | SHEET NO. OF SHEETS | STA. 131+00.00 TO STA. 131+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315	120BR-1	MCLEAN	49	46
		CONTRACT NO. 70524		
	ILLINOIS FED. AID PROJECT			

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

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

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

685
680
675

EXIST. R.O.W.

TEL. ° ° 4" GAS

682.86

EXIST. R.O.W.

° FIBER OPTIC

133 + 00.00

	C	F
MAINLINE	0	0
RUNAROUND	0	0
RUNAROUND REMOVAL	0	0
TS EXC & PL	0	0

EXIST. R.O.W.

TEL. ° ° 4" GAS

682.00 682.00

EXIST. R.O.W.

° FIBER OPTIC

132 + 50.00

	C	F
MAINLINE	0	0
RUNAROUND	0	0
RUNAROUND REMOVAL	0	0
TS EXC & PL	0	0

EXIST. R.O.W.

TEL. ° ° 4" GAS

681.13 681.15

EXIST. R.O.W.

° FIBER OPTIC

132 + 00.00

← ℄ U.S. RTE. 136

EXISTING
PROPOSED

0 10 HORIZ.
0 5 VERT.

FILE NAME = c:\pw_work\PWIDOT\STULTSJW\d0169514\D570524-sht-xssht.dgn	USER NAME = stultsjw	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 20.0000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 10/20/2009	DATE -	REVISED -

Johnson, Depp & Quisenberry
CONSULTING ENGINEERS
Springfield, Illinois

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTION

SCALE: | SHEET NO. OF SHEETS | STA. 132+00.00 TO STA. 133+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315	120BR-1	MCLEAN	49	47
		CONTRACT NO. 70524		
		ILLINOIS FED. AID PROJECT		

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

690
685

686.61

134 + 50.00

690
685

685.23

134 + 00.00

690
685
680

684.04

133 + 50.00

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

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

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

FILE NAME = c:\pw_work\PWIDOT\STULTSJW\d0169514\D570524-sht-xssht.dgn	USER NAME = stultsjw	DESIGNED -	REVISED -
Johnson, Depp & Quisenberry CONSULTING ENGINEERS Springfield, Illinois		DRAWN -	REVISED -
	PLOT SCALE = 20.0000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 10/20/2009	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTION

SCALE: | SHEET NO. OF SHEETS | STA. 133+50.00 TO STA. 134+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315	120BR-1	MCLEAN	49	48
		CONTRACT NO. 70524		
	ILLINOIS	FED. AID PROJECT		

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

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

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

690

685

688.00

690

685

135 + 00.00

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

FILE NAME = c:\pw_work\PWIDOT\STULTSJW\d0169514\D570524-sht-xssht.dgn	USER NAME = stultsjw	DESIGNED -	REVISED -
		DRAWN -	REVISED -
Johnson, Depp & Quisenberry CONSULTING ENGINEERS Springfield, Illinois	PLOT SCALE = 20.0000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 10/20/2009	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTION

SCALE: | SHEET NO. OF SHEETS | STA. 135+00.00 TO STA. 135+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315	120BR-1	MCLEAN	49	49
		CONTRACT NO. 70524		
	ILLINOIS	FED. AID PROJECT		