04-27-12 LETTING ITEM 118

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
885	6B-3	POPE	41	1
D-99-020-10	ILLINOIS	CONTRACT NO. 78165		

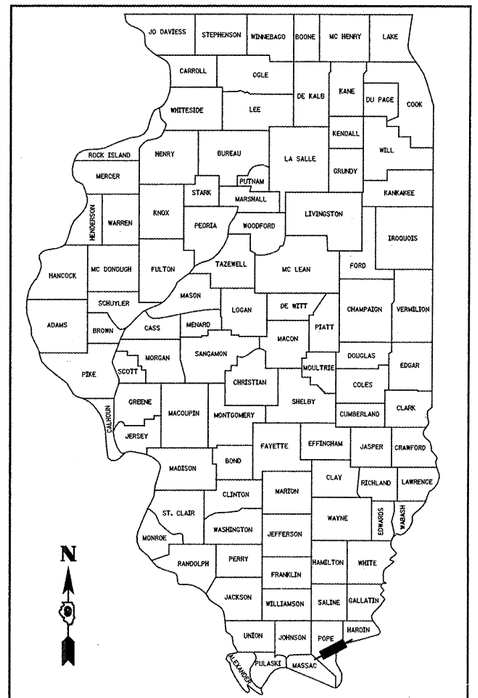
INDEX OF SHEETS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROPOSED
HIGHWAY PLANS

FAP ROUTE 885 (IL 146)
SECTION 6B-3
PROJECT ACF-0885(045)
POPE COUNTY
C-99-020-10
STRUCTURE REPLACEMENT OVER
LITTLE GRAND PIERRE CREEK

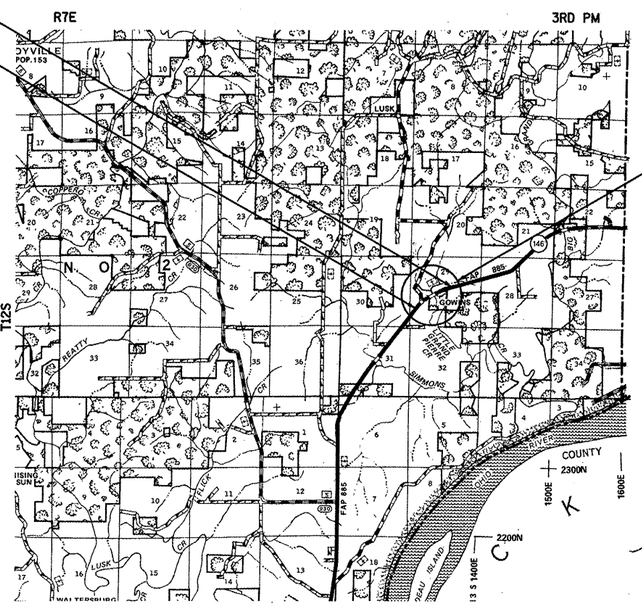
D-99-020-10



LOCATION OF SECTION INDICATED THUS: –

IMPROVEMENT BEGINS STA 1372+42.50

IMPROVEMENT ENDS STA 1374+09.50



AREA LOCATION PLAN

SCALE 0 1 2 3 4 5 MILES; 0 5000 10000 15000 20000 25000 FEET

PROJECT LOCATION
BRIDGE REPLACEMENT
EX SN 076-0026
PR SN 076-0030
STA 1373+26.00 0° SKEW
95'-0" BK TO BK ABUTMENTS
35'-2" STRUCTURE WIDTH

GROSS LENGTH = 167.00 FT. = 0.032 MILE
NET LENGTH = 167.00 FT. = 0.032 MILE

FUNCTIONAL CLASSIFICATION: MINOR ARTERIAL (NON-URBAN)
ADT: 1520 (2008) ADTT: 9%
2028 ADT = 1850
P.U. = 90.5% S.U. = 6.8% M.U. = 2.7%
ROAD DISTRICT #2

0 50' 100' —— 1"= 50'

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

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

PROJECT MANAGER DAVID PICHE
DISTRICT 9 NO. (618) 549-2171

CONTRACT NO. 78165

MARY COOMBE BLOXDORF 43208 REGISTERED PROFESSIONAL ENGINEER OF ILLINOIS

Mary Coombe Bloxdorf
ILLINOIS PROFESSIONAL NO 43208
EXPIRES 11-30-13
DATE: 01.04.12

Coombe-Bloxdorf P.C.
-CIVIL ENGINEERS-
-STRUCTURAL ENGINEERS-
-LAND SURVEYORS-
Design Firm License No. 184-002703

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED January 23rd 2012
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

March 23 2012
John D. Baranzelli P.E. by acting
ENGINEER OF DESIGN AND ENVIRONMENT

March 23 2012
William R. Troy by acting
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

LIST OF HIGHWAY STANDARDS

STANDARD NO.	DESRIPTION
000001-06	STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS
001001-02	AREAS OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH AND OF A FOOT
280001-06	TEMPORARY EROSION CONTROL SYSTEMS
420001-07	PAVEMENT JOINTS
420401-08	BRIDGE APPROACH PAVEMENT CONNECTOR
515001-03	NAME PLATE FOR BRIDGES
630001-10	STEEL PLATE BEAM GUARDRAIL
630201-06	PCC/HMA STABILIZATION AT STEEL PLATE BEAM GUARDRAIL
630301-05	SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
631031-10	TRAFFIC BARRIER TERMINAL, TYPE 6
635006-03	REFLECTOR AND TERMINAL MARKER PLACEMENT
635011-02	REFLECTOR MARKER AND MOUNTING DETAILS
701001-02	OFF-RD OPERATIONS, 2L, 2W, MORE THAN 4.5 m (15') AWAY
701006-03	OFF-RD OPERATIONS, 2L, 2W, 4.5 m (15') TO 600 M (24") AWAY FROM PAVEMENT EDGE
701201-04	LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS ≥ 45 MPH
701301-04	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701321-12	LANE CLOSURE, 2L, 2W, BRIDGE REPAIR WITH BARRIER
701326-04	LANE CLOSURE, 2L, 2W, PAVEMENT WIDENING, FOR SPEEDS ≥ 45 MPH
701901-02	TRAFFIC CONTROL DEVICES
704001-07	TEMPORARY CONCRETE BARRIER
780001-03	TYPICAL PAVEMENT MARKINGS
601101-01	CONCRETE HEADWALL FOR PIPE DRAIN

GENERAL NOTES

1) THE THICKNESS OF HOT MIX ASPHALT MIXTURE SHOWN ON THE PLANS IS THE NOMINAL THICKNESS. DEVIATIONS FROM THE NOMINAL THICKNESS WILL BE PERMITTED WHEN SUCH DEVIATIONS OCCUR DUE TO IRREGULARITIES IN THE EXISTING SURFACE OR BASE ON WHICH THE HOT MIX ASPHALT MIXTURE IS PLACED.

2) ALL OBSTRUCTIONS WHICH ARE WITHIN THE CLEAR ZONE SHOWN ON THE TYPICAL SECTION, AND ARE NOT SHIELDED BY THE PROPOSED GUARDRAIL, SHALL BE REMOVED BETWEEN STATION 1372+32.5 AND STATION 1374+19.5. TYPICAL OBSTRUCTIONS ARE HEADWALLS, FOUNDATIONS, ETC. WHICH PROJECT 100 mm (4 IN.) OR MORE ABOVE THE GROUNDLINE; AND TREES WHICH WILL MATURE TO A DIAMETER OF 100 mm (4 IN.) OR GREATER.

3) IF SO DIRECTED BY THE ENGINEER, DITCHES ADJACENT TO EMBANKMENTS SHALL BE CONSTRUCTED PRIOR TO STARTING THE CONSTRUCTION OF THE EMBANKMENT FILL.

4) FACTORS USED FOR ESTIMATING PLAN QUANTITIES ARE AS FOLLOWS AND SHALL NOT BE USED FOR THE BASIS OF FINAL QUANTITIES:

ALL HOT MIX ASPHALT	2.392 METRIC TONS/CU. METER (2.016 TONS/CU.YD.)
ALL AGGREGATE	2.43 METRIC TONS/CU. METER (2.05 TONS/CU.YD.)
BITUMINOUS MATERIALS:	
ON PAVEMENT	0.41 LITERS/SQ. METER (0.09 GAL./SQ.YD.)
INTERMEDIATE.LIFTS(FOG COAT)	0.20 LITERS/SQ. METER (0.04 GAL./SQ.YD.)
ON AGGREGATE SURFACE	1.45 LITERS/SQ. METER (0.32 GAL./SQ.YD.)
AGGREGATE (PRIME COAT)	0.0016 METRIC TONS/SQ. METER (0.0015 TONS/SQ.YD.)
RIPRAP	1.78 METRIC TONS/CU. METER (1.50 TONS/CU.YD.)

5) TREES SHALL BE PRESERVED THROUGHOUT THIS SECTION AS SHOWN ON THE PLANS AND AS DIRECTED BY THE ENGINEER. GENERALLY, TREES OUTSIDE THE CLEAR ZONE, AND WHICH DO NOT INTERFERE WITH CONSTRUCTION, SHALL NOT BE DISTURBED.

6) EARTHWORK COMPACTION SHALL BE TO THE SATISFACTION OF THE ENGINEER.

7) THE QUANTITY OF SHORT TERM PAVEMENT MARKING SHOWN IN THE PLANS IS BASED ON ONE APPLICATION EACH FOR THE PRIME COAT AND THE SURFACE COURSE.

8) WHEN WIDENING FLEXIBLE BASE PAVEMENT, THE CONTRACTOR SHALL TRIM EXISTING SURFACE AND BASE TO A FIRM, NEAR VERTICAL PLANE BEFORE CONSTRUCTING THE WIDENING. THE COST OF THIS REQUIREMENT IS INCLUDED IN THE UNIT PRICE BID FOR THE BASE COURSE WIDENING.

9) AT ALL LOCATIONS WHERE THE PROPOSED HOT MIX ASPHALT OR CONCRETE PAVEMENT JOINS AN EXISTING HOT MIX ASPHALT OR CONCRETE PAVEMENT, A FULL DEPTH SAWED JOINT SHALL BE CONSTRUCTED. THE COST OF THIS JOINT WILL BE INCLUDED IN THE COST OF THE TYPE OF PAVEMENT BEING CONSTRUCTED.

10) EXISTING PIPE UNDERDRAIN OUTLETS IN THE FORESLOPES OR MEDIAN SLOPES SHALL BE PRESERVED AND PROTECTED DURING CONSTRUCTION. ANY DAMAGE TO AN UNDERDRAIN OUTLET RESULTING FROM CONSTRUCTION ACTIVITY SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

11) PRIOR TO PLACEMENT OF THE FINAL PAVEMENT MARKINGS THE RESIDENT ENGINEER SHOULD CONTACT THE BUREAU OF OPERATIONS AND ARRANGE FOR INSPECTION AND APPROVAL OF THE PAVEMENT MARKING LAYOUT.

12) IN ADDITION TO THE REQUIREMENTS OF ARTICLE 107.16 THE CONTRACTOR SHALL PROTECT THE SURFACE OF ALL BRIDGE DECKS AND BRIDGE APPROACH PAVEMENTS IN A MANNER SATISFACTORY TO THE ENGINEER BEFORE ANY EQUIPMENT IS ALLOWED TO CROSS THE STRUCTURE. PROTECTION SHALL BE PROVIDED FOR ALL EQUIPMENT AS DEFINED IN ARTICLE 101.16 REGARDLESS IF TRACK MOUNTED OR WHEELED.

13) THE ADVANCE DETECTOR LOOPS ARE TYPICALLY LOCATED 275 FEET IN ADVANCE OF THE STOP BAR. THE BUREAU OF OPERATIONS SHOULD APPROVE THE LOOP LOCATIONS PRIOR TO INSTALLATION.

14) THE CENTERLINE PAVEMENT MARKING SHOULD BE REMOVED FROM THE STOP BAR TO THE SAND ATTENUATORS OR DRUMS. EDGE LINE PAVEMENT MAKRING SHOULD BE REMOVED IF A 10 FOOT LANE WIDTH CANNOT BE MAINTAINED. TEMPORARY EDGE LINES SHOULD BE INSTALLED WHEN THE EDGE LINES ARE REMOVED.

15) VERTICAL PANELS SHOWN ON STANDARD 701321 WILL NOT BE REQUIRED ON THE STAGE II NEW BRIDGE PARAPET. THE BARRIER WALL REFLECTORS SHALL BE INSTALLED PRIOR TO OPENING TO TRAFFIC.

16) ANY TIME THE CONCRETE BARRIER IS NOT IN THE PROPER POSITION, FLAGGERS SHALL BE IN PLACE TO CONTROL TRAFFIC. THE TEMPORARY TRAFFIC SIGNALS SHALL BE SET TO FLASH ALL RED.

17) THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE BASED ON FIELD INVESTIGATION AND THE BEST INFORMATION AVAILABLE. THE CONTRACTOR SHALL OBTAIN EXACT UTILITY LOCATIONS FROM THE UTILITY COMPANIES AND BY FIELD INVESTIGATION. THE FOLLOWING STANDARD UTILITY DEPTHS WERE USED IF INFORMATION WAS UNAVAILABLE:
TELEPHONE / FIBER OPTIC – 2 FEET
GAS – 2.5 FEET
CABLE TV – 1.5 FEET
ELECTRIC – 3 FEET
SANITARY SEWER – 2.5 FEET
WATER – 4 FEET

18) COMMITMENTS:
NONE AS OF MARCH 9, 2012.

Prepared By: Joe Adam Lewis
DISTRICT STUDIES & PLANS ENGINEER

Examined By:
DISTRICT LAND ACQUISITION ENGINEER

Examined By:
DISTRICT PROGRAM DEVELOPMENT ENGINEER

Examined By:
DISTRICT OPERATIONS ENGINEER

Examined By:
DISTRICT PROJECT IMPLEMENTATION ENGINEER

Examined By:
DISTRICT CONSTRUCTION ENGINEER

Examined By:
DISTRICT MATERIALS ENGINEER

Approved By:
DEPUTY DIRECTOR OF HIGHWAYS, REGION 5 ENGINEER

11/23 2012
DATE

Coombe-Bloxdorf P.C.
-CIVIL ENGINEERS-
-STRUCTURAL ENGINEERS-
-LAND SURVEYORS-
Design Firm License No. 184-002703

FILE NAME = c:\pw_work\pwidot\lavenderba\d0293530\d078165-sht-002-gennotes.dgn	USER NAME = lavenderba	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
CB PROJECT NO 00056-14	PLOT DATE = 1/9/2012	DATE - / /	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES, STANDARDS AND COMMITMENTS

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

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
885	6B-3	POPE	41	2
		CONTRACT NO. 78165		
		ILLINOIS FED. AID PROJECT		

SUMMARY OF QUANTITIES

	CODE NO.	ITEM	UNIT	STP FUNDING 80% FEDERAL 20% STATE 0011
	20200100	EARTH EXCAVATION	CU YD	111
*	25000200	SEEDING, CLASS 2	ACRE	0.25
*	25000350	SEEDING, CLASS 7	ACRE	0.25
*	25000400	NITROGEN FERTILIZER NUTRIENT	POUND	12
*	25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	8
*	25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	8
*	25000700	AGRICULTURAL GROUND LIMESTONE	TON	0.2
*	25100115	MULCH, METHOD 2	ACRE	0.5
	28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	10
	28000400	PERIMETER EROSION BARRIER	FOOT	1207
	28100107	STONE RIPRAP, CLASS A4	SQ YD	183
	28200200	FILTER FABRIC	SQ YD	183

SUMMARY OF QUANTITIES

CODE NO.	ITEM	UNIT	STP FUNDING 80% FEDERAL 20% STATE 0011
35600716	HOT-MIX ASPHALT BASE COURSE WIDENING, 10"	SQ YD	135
40300100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	8
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	87
40600990	TEMPORARY RAMP	SQ YD	14
40603320	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N90	TON	7
42001430	BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)	SQ YD	45
44000100	PAVEMENT REMOVAL	SQ YD	70
44004250	PAVED SHOULDER REMOVAL	SQ YD	106
48203029	HOT-MIX ASPHALT SHOULDERS, 8"	SQ YD	231
48203037	HOT-MIX ASPHALT SHOULDERS, 10"	SQ YD	309
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
50200100	STRUCTURE EXCAVATION	CU YD	186

* SPECIALTY ITEM

FILE NAME = c:\pw_work\pwidot\lavender-ba\d0293530\c78165-sht-003-soq.dgn	USER NAME = $USER$	DESIGNED -	REVISED -
		DRAWN - CFC	REVISED -
	PLOT SCALE = 2.0000 ' / in.	CHECKED - CCJ	REVISED -
CB PROJECT NO 08056-14	PLOT DATE = 1/23/2012	DATE - / /	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

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

Coombe-Bloxdorf P.C.
-CIVIL ENGINEERS-
-STRUCTURAL ENGINEERS-
-LAND SURVEYORS-
Design Firm License No. 184-002703

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
885	6B-3	POPE	41	3
		CONTRACT NO. 78165		
		ILLINOIS FED. AID PROJECT		

SUMMARY OF QUANTITIES			STP FUNDING
CODE NO.	ITEM	UNIT	80% FEDERAL 20% STATE 0011
50300225	CONCRETE STRUCTURES	CU YD	53.4
50300255	CONCRETE SUPERSTRUCTURE	CU YD	243.2
50300260	BRIDGE DECK GROOVING	SQ YD	524
50300280	CONCRETE ENCASEMENT	CU YD	4.2
50300300	PROTECTIVE COAT	SQ YD	664
50500105	FURNISHING AND ERECTING STRUCTURAL STEEL	L SUM	1
50500505	STUD SHEAR CONNECTORS	EACH	984
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	59660
50800515	BAR SPLICERS	EACH	610
51100300	SLOPE WALL 6"	SQ YD	106
51201610	FURNISHING STEEL PILES HP12X63	FOOT	366
51202305	DRIVING PILES	FOOT	366

SUMMARY OF QUANTITIES				STP FUNDING
	CODE NO.	ITEM	UNIT	80% FEDERAL 20% STATE 0011
	51204650	PILE SHOES	EACH	12
	51500100	NAME PLATES	EACH	1
	52100520	ANCHOR BOLTS, 1"	EACH	24
	59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	81
*	63000001	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	425
*	63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	4
*	63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	3
*	63100169	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) FLARED	EACH	1
	63200310	GUARDRAIL REMOVAL	FOOT	729
	67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	3
	67100100	MOBILIZATION	L SUM	1
	70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	1

* SPECIALTY ITEM

Coombe-Bloxdorf P.C.
-CIVIL ENGINEERS-
-STRUCTURAL ENGINEERS-
-LAND SURVEYORS-
Design Firm License No. 184-002703

FILE NAME = c:\pw_work\pwidot\lavenderba\d0293530\d078165-sht-004-soq.dgn	USER NAME = #USER#	DESIGNED -	REVISED -
		DRAWN - CFC	REVISED -
	PLOT SCALE = 2.0000 ' / in.	CHECKED - CCJ	REVISED -
CB PROJECT NO 08056-14	PLOT DATE = 1/23/2012	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.
885	6B-3	POPE	41	4
		CONTRACT NO. 78165		
	ILLINOIS	FED. AID PROJECT		

	SUMMARY OF QUANTITIES			STP FUNDING
	CODE NO.	ITEM	UNIT	80% FEDERAL 20% STATE 0011
	70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1
	70100500	TRAFFIC CONTROL AND PROTECTION, STANDARD 701326	L SUM	1
	70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DAY	10
	70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1
	70106700	TEMPORARY RUMBLE STRIPS	EACH	6
	70106800	CHANGEABLE MESSAGE SIGN	CAL MO	1
	70300100	SHORT TERM PAVEMENT MARKING	FOOT	405
	70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	1686
	70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	613
	70400100	TEMPORARY CONCRETE BARRIER	FOOT	412.5
	70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	387.5
*	78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	1686

	SUMMARY OF QUANTITIES			STP FUNDING
	CODE NO.	ITEM	UNIT	80% FEDERAL 20% STATE 0011
*	78200410	GUARDRAIL MARKERS, TYPE A	EACH	11
*	78200510	BARRIER WALL MARKERS, TYPE A	EACH	6
*	78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	4
	78300100	PAVEMENT MARKING REMOVAL	SQ FT	562
	86200300	UNINTERRUPTABLE POWER SUPPLY, EXTENDED	EACH	1
	X2070304	POROUS GRANULAR EMBANKMENT SPECIAL	CU YD	142
	Z0004552	APPROACH SLAB REMOVAL	SQ YD	107
	Z0026407	TEMPORARY SHEET PILING	SQ FT	302
	Z0030250	IMPACT ATTENUATORS, TEMPORARY (NON- REDIRECTIVE), TEST LEVEL 3	EACH	2
	Z0030350	IMPACT ATTENUATORS, RELOCATE (NON- REDIRECTIVE), TEST LEVEL 3	EACH	2
	Z0046304	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	137
	Z0073410	TEMPORARY SUPPORT SYSTEM, LOCATION 1	EACH	1

*SPECIALTY ITEM

Coombe-Bloxdorf P.C.
-CIVIL ENGINEERS-
-STRUCTURAL ENGINEERS-
-LAND SURVEYORS-
Design Firm License No. 184-002703

FILE NAME = c:\pw_work\pwidot\lavenderba\d0293530\d78165-sht-005-soq.dgn	USER NAME = $USER$	DESIGNED -	REVISED -
		DRAWN - CFC	REVISED -
	PLOT SCALE = 2.0000 ' / in.	CHECKED - CCJ	REVISED -
CB PROJECT NO 08056-14	PLOT DATE = 1/23/2012	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.
885	6B-3	POPE	41	5
		CONTRACT NO. 78165		
	ILLINOIS FED. AID PROJECT			

SUMMARY OF QUANTITIES			STP FUNDING
CODE NO.	ITEM	UNIT	80% FEDERAL 20% STATE 0011
Z0073420	TEMPORARY SUPPORT SYSTEM, LOCATION 2	EACH	1
+ Z0076600	TRAINEES	HOUR	500

+0042

FILE NAME = c:\pw_work\pwidot\lavenderba\d0293530\d78165-sht-006-soq.dgn CB PROJECT NO 08056-14	USER NAME = $USER$ PLOT SCALE = 2.0000 ' / in. PLOT DATE = 1/23/2012	DESIGNED - DRAWN - CFC CHECKED - CCJ DATE - / /	REVISED - REVISED - REVISED - REVISED -

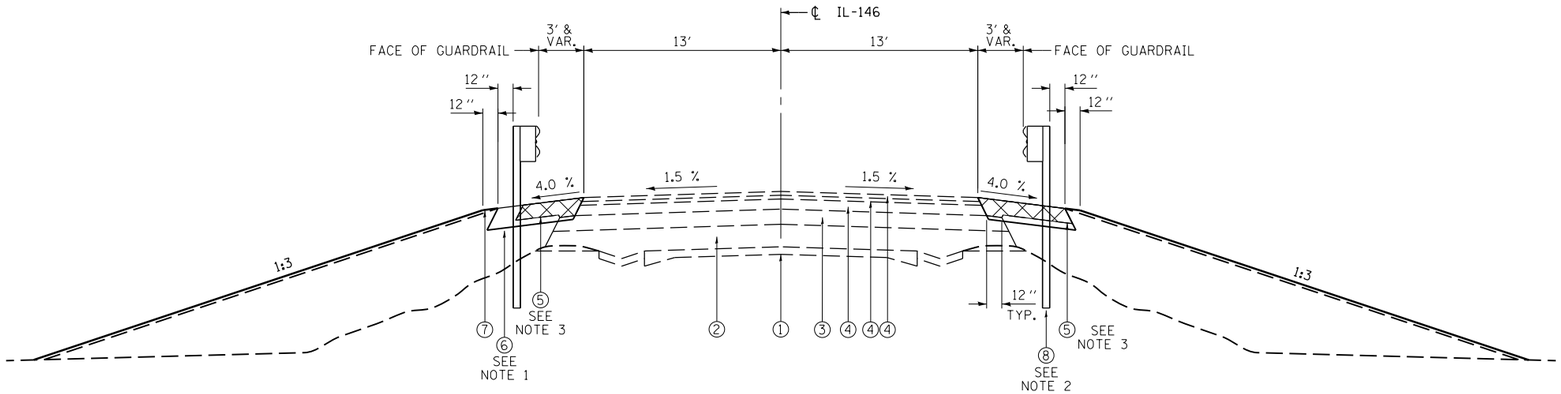
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

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

Coombe-Bloxdorf P.C.
-CIVIL ENGINEERS-
-STRUCTURAL ENGINEERS-
-LAND SURVEYORS-
Design Firm License No. 184-002703

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
885	6B-3	POPE	41	6
		CONTRACT NO. 78165		
	ILLINOIS	FED. AID PROJECT		



EXISTING & PROPOSED IL-146
TYPICAL SECTION

STA. 1370+59.79 TO STA. 1372+42.50

STA. 1372+42.50 TO STA. 1372+48.50	BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)
STA. 1372+48.50 TO STA. 1372+78.50	BRIDGE APPROACH PAVEMENT
STA. 1372+78.50 TO STA. 1373+73.50	PROPOSED STRUCTURE SN 076-0030
STA. 1373+73.50 TO STA. 1374+03.50	BRIDGE APPROACH PAVEMENT
STA. 1374+03.50 TO STA 1374+09.50	BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)

STA. 1374+09.50 TO STA. 1376+42.09

① EX PCC PAVEMENT WITH CONC GUTTERS
② EX GRANULAR EMBANKMENT, SPECIAL VAR. (6" MIN)
③ EX HMA BASE COURSE
④ EX HMA RESURFACING LIFTS (7" TOTAL RESURFACING THICKNESS)
⑤ EX AGGREGATE SHOULDERS, TYPE A (6") TO BE REMOVED
⑥ PR HMA BASE COURSE WIDENING, 10" OR HMA SHOULDER, 8" OR 10"
⑦ PR EARTH SHOULDER
⑧ PR GUARDRAIL AND TERMINAL SECTIONS (EX GUARDRAIL TO BE REMOVED)

HMA MIXTURE REQUIREMENTS

LOCATION(S):	HOT-MIX ASPHALT SURFACE COURSE	HOT-MIX ASPHALT BASE COURSE WIDENING	HOT-MIX ASPHALT SHOULDERS
MIXTURE USE(S):	HOT-MIX ASPHALT SURFACE COURSE, MIX C, N90	HOT-MIX ASPHALT BINDER COURSE, N90, IL 19.0	HOT-MIX ASPHALT SHOULDERS
AC/PG:	PG 64-22	PG 64-22	PG 58-22
RAP % (MAX):	10	10	50
DESIGN AIR VOIDS:	4.0%, 90 GYRATION DESIGN	4.0%, 90 GYRATION DESIGN	2.0%, 30 GYRATION DESIGN
MIXTURE COMPOSITION: (GRADATION MIXTURE)	IL-9.5 MM OR IL 12.5 MM	IL-19.0 MM	HMA SHOULDERS
FRICTION AGGREGATE:	C SURFACE	NONE	NONE

THE HOT MIX ASPHALT BASE COURSE WIDENING, 10" CONSTRUCTED IN PRE-STAGE I MAY BE INCORPORATED INTO THE FINAL HOT-MIX ASPHALT SHOULDERS, 8" DURING STAGE II CONSTRUCTION IF APPROVED BY THE ENGINEER, SUCH CHANGE WILL NOT BE A CAUSE FOR ADDITIONAL COMPENSATION, BUT THE CONTRACTOR WILL BE PAID FOR THE ACTUAL QUANTITY FURNISHED AT THE UNIT PRICE BID FOR THE WORK.

NOTES

1. HMA BASE COURSE WIDENING, 10" STATION RANGES
   RT STA. 1371+34.00 TO STA. 1372+73.91
   RT STA. 1373+73.39 TO STA. 1375+15.00

   HMA SHOULDER, 10" STATION RANGES
   LT STA. 1371+34.00 TO STA. 1372+42.50
   RT STA. 1371+23.63 TO STA. 1372+73.91
   LT STA. 1374+09.50 TO STA. 1375+15.00

   HMA SHOULDER, 8" STATION RANGES
   LT STA. 1370+50.62 TO STA. 1371+34.00
   LT STA. 1375+15.00 TO STA. 1376+56.87
   RT STA. 1375+15.00 TO STA. 1376+05.61

2. PROPOSED GUARDRAIL CONSIST OF:
   TRAFFIC BARRIER TERMINAL - TYPE 6
   STEEL PLATE BEAM GUARDRAIL, TYPE A
   TRAFFIC BARRIER TERMINAL - TYPE 1 (SP)
   SEE SCHEDULE FOR STATIONING

3. AGG SHOULDER REMOVAL WILL NOT BE PAID FOR SEPARATELY. IT WILL BE CONSIDERED PART OF EARTH EXCAVATION.

Coombe-Bloxdorf P.C.
-CIVIL ENGINEERS-
-STRUCTURAL ENGINEERS-
-LAND SURVEYORS-
Design Firm License No. 184-002703

FILE NAME = c:\pw_work\pwidot\lavenderba\d0293530\d078165-sht-007-typical-section.dgn	USER NAME = $USER$	DESIGNED -	REVISED -
		DRAWN - CFC	REVISED -
	PLOT SCALE = 10.000000 ' / in.	CHECKED - MCB	REVISED -
CB JOB NO 08056-14	PLOT DATE = 1/23/2012	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL-146 TYPICAL SECTION

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

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
885	6B-3	POPE	41	7
		CONTRACT NO. 78165		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SUMMARY OF EARTHWORK

LOCATION	20200100 EARTH EXCAVATION	EXCAVATION TO BE USED IN EMBANKMENT, ADJUSTED FOR SHRINKAGE (25%)	EMBANKMENT	WASTE (BORROW)	EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-)
	CU YD	CU YD	CU YD	CU YD (1)	CU YD
STA 1370+50 TO 1372+73	42.6	32.0	50.9	(18.95)	-18.95
STA 1373+73 TO 13766+50	68.5	51.4	70.4	(19.03)	-37.98
TOTAL	**111**	**83**	**121**	**(38)**	**-38**

NOTES:
1- NO PAYMENT WILL BE ALLOWED FOR OVERHAUL
2- BORROW MATERIAL SHALL BE FURNISHED FROM THE STRUCTURE EXCAVATION (50200100)

APPROACH SLAB REMOVAL SCHEDULE

APPROXIMATE STATION	WIDTH	APPROXIMATE LOCATION	Z0004552 APPROACH SLAB REMOVAL
	FT		SQ. YD
1372+55.57 to 1372+75.57	24	EX SN 076-0026	53.33
1373+76.49 to 1373+96.49	24	EX SN 076-0026	53.33
TOTAL			**107**

PAVEMENT REMOVAL SCHEDULE

APPROXIMATE STATION	WIDTH	44000100 PAVEMENT REMOVAL
	FT	SQ. YD
1372+42.50 TO 1372+55.57	24	34.85
1373+96.49 TO 1374+09.50	24	34.69
TOTAL		**70**

PAVED SHOULDER REMOVAL SCHEDULE

APPROXIMATE STATION	WIDTH	44004250 PAVED SHOULDER REMOVAL
	FT	SQ. YD
RT STA 1371+34.00 TO STA 1372+75.57	3.042	47.84
RT STA 1373+76.49 TO STA 1375+15.00	3.759	57.85
TOTAL		**106**

PERIMETER EROSION BARRIER

LOCATION	28000400 PERIMETER EROSION BARRIER
	FT
LT SIDE	658
RT SIDE	549
TOTALS	**1207**

HMA BASE COURSE WIDENING SCHEDULE

LOCATION	35600716 HMA BASE COURSE WIDENING, 10"
	SQ YD
RT STA 1371+34.00 TO STA 1372+73.91	48
RT STA 1373+73.39 TO STA 1375+15.00	87
TOTAL	**135**

HMA SHOULDER SCHEDULE

LOCATION (STATION TO STATION)	48203029 HMA SHOULDER, 8"	48203037 HMA SHOULDER, 10"
	SQ YD	SQ YD
LT STA 1370+50.62 TO STA 1371+34.00	60.5	
LT STA 1371+34.00 TO STA 1372+42.50		75.7
LT STA 1374+09.50 TO STA 1375+15.00		76.1
RT STA 1371+23.63 TO STA 1372+73.91		157.6
LT STA 1375+15.00 TO STA 1376+55.87	105.4	
RT STA 1375+15.00 TO STA 1376+05.61	65.3	
TOTAL	**231**	**309**

TEMPORARY CONCRETE BARRIER SCHEDULE

LOCATION	70400100 TEMP CONC BARRIER	70400200 TEMP CONC BARRIER, RELOCATE
	FT	FT
STAGE I		
STA 1371+17.32 TO STA 1372+17.00	100	
STA 1372+17.00 TO STA 1374+29.50	212.5	
STA 1374+29.50 TO STA 1375+29.18	100	
STAGE II		
STA 1371+42.34 TO STA 1372+42.00		100
STA 1372+42.00 TO STA 1374+29.50		187.5
STA 1374+29.50 TO STA 1375+29.10		100
TOTALS	**412.5**	**387.5**

IMPACT ATTENUATORS, TEMPORARY (NON REDIRECTIVE), TEST LEVEL 3

LOCATION	Z0030250 IMPACT ATTENUATOR	Z0030350 IMPACT ATTENUATOR, RELOCATE
	EACH	EACH
STAGE I		
STA 1371+17.32	1	
STA 1375+29.18	1	
STAGE II		
STA 1371+42.34		1
STA 1375+29.10		1
TOTALS	**2**	**2**

BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE) SCHEDULE

LOCATION STA TO STA	WIDTH	42001430 BR APPR PVT CONN (FLEX)
	FT	SQ. YD
1372+42.50 TO 1372+48.50	33	22.5
1374+03.50 TO 1374+09.50	33	22.5
TOTAL		**45**

SEEDING SCHEDULE

STATION TO STATION	25000200 SEEDING CLASS 2	25000350 SEEDING CLASS 7	25000400 NITROGEN FERTILIZER NUTRIENTS	25000500 PHOSPHOROUS FERTILIZER NUTRIENTS	25000600 POTASSIUM FERTILIZER NUTRIENTS	25000700 AGRICULTURAL GROUND LIMESTONE	25100115 MULCH METHOD 2	28000250 TEMPORARY EROSION CONTROL SEEDING
	ACRES	ACRES	LBS	LBS	LBS	TON	ACRES	LBS
LT STA 1370+50 TO 1372+50	0.012	0.012	1.6	1.1	1.1	0.02	0.025	1.228
LT STA 1374+00 TO 1376+50	0.008	0.008	1.0	0.7	0.7	0.02	0.016	0.794
RT STA 1370+50 TO 1372+50	0.030	0.030	3.9	2.7	2.7	0.06	0.060	2.977
RT STA 1374+00 TO 1376+50	0.042	0.042	5.4	3.7	3.7	0.08	0.083	4.163
TOTALS	**0.25 ***	**0.25 ***	**12**	**8**	**8**	**0.2**	**0.50 ***	**10**

* TOTALS ARE ROUNDED UP TO MINIMUM VALUE SHOWN IN BDE FIG. 64-1A

Coombe-Bloxdorf P.C.
-CIVIL ENGINEERS-
-STRUCTURAL ENGINEERS-
-LAND SURVEYORS-
Design Firm License No. 184-002703

WORK ZONE PAVEMENT MARKING REMOVAL SCHEDULE		
LOCATION STATION TO STATION	LENGTH (FT)	70301000 REMOVAL (SQ FT)
SHORT-TERM EDGE LINES STA 1369+53.00 TO 1377+02.40 PRIOR TO SURF CSE	749.4	25
SHORT-TERM SKIP-DASH STA 1369+53.00 TO 1377+02.40 PRIOR TO SURF CSE	749.4	26
TEMPORARY EDGE LINES STA 1369+53.00 TO 1377+02.40 PRIOR TO FINAL MKG	749.4	500
TEMPORARY SKIP-DASH STA 1369+53.00 TO 1377+02.40 PRIOR TO FINAL MKG	749.4	62
TOTAL		**613**

STONE RIPRAP SCHEDULE			
APPROXIMATE STATION	LT/RT	28100107 STONE RIPRAP, CL A4 SQ YD	28200200 FILTER FABRIC SQ YD
1372+48.5	LT	86.5	86.5
1372+48.5	RT	97	97
TOTAL		**183**	**183**

PAINT PAVEMENT MARKING SCHEDULE				
LOCATION STATION TO STATION (FROM STOP BAR TO STOP BAR)	LENGTH FT	78001110 4" YELLOW SKIP-DASH FT	4" WHITE SOLID FT	70300220 4" TEMP PVT MARKING LN FT
IL 146 STA 1369+53.00 TO STA 1377+02.40	749.40	187.3	1498.8	1686.1
TOTAL	**749.4**	**1686**		**1686**

GUARDRAIL REMOVAL SCHEDULE	
LOCATION	63200310 GUARDRAIL REMOVAL FT
SE QUADRANT SN 076-0026	220
NE QUADRANT SN 076-0026	184
SW QUADRANT SN 076-0026	178
NW QUADRANT SN 076-0026	147
TOTAL	**729**

PAVEMENT MARKING REMOVAL SCHEDULE		
LOCATION STATION TO STATION	LENGTH FT	78300100 REMOVAL SQ FT
CENTERLINE (4") STA 1369+53 TO STA 1377+02.40	749.4	62.45
EDGE LINES (4") STA 1369+53 TO STA 1377+02.40	749.4	499.60
TOTAL		**562**

GUARDRAIL SCHEDULE						
STATION	63000001 SPBGR TY A FOOT	63100085 TBT TY 6 EACH	63100167 TBT TY 1, SP - TANG EACH	63100169 TBT TY 1, SP - FL EACH	78200410 G/R MKR TY A EACH	78201000 TERM MKR DIR. APP. EACH
LT STA 1370+57.86 TO STA 1371+07.86			1			1
LT STA 1371+07.86 TO STA 1372+20.36	112.5				2	
LT STA 1372+20.36 TO STA 1372+66.00		1			1	
LT STA 1373+86.00 TO STA 1374+31.64		1				
LT STA 1374+31.64 TO STA 1375+81.64	150				2	
LT STA 1375+81.64 TO STA 1376+31.64			1		1	1
RT STA 1371+20.36 TO STA 1371+70.36				1		1
RT STA 1371+70.36 TO STA 1372+20.36	50.0				1	
RT STA 1372+20.36 TO STA 1372+66.00		1			1	
RT STA 1373+86.00 TO STA 1374+31.64		1				
RT STA 1374+31.64 TO STA 1375+44.14	112.5				2	
RT STA 1375+44.14 TO STA 1375+94.14			1		1	1
TOTALS	**425**	**4**	**3**	**1**	**11**	**4**

SHORT TERM PAVEMENT MARKING SCHEDULE		
LOCATION STATION TO STATION	LENGTH FT	70300100 SHORT TERM (3 APPS) FT
4" SKIP-DASH CENTERLINE STA 1369+53.00 TO STA 1377+02.40	749.4	224.8
SHORT-TERM EDGE LINES STA 1369+53.00 TO STA 1377+02.40	749.4	179.9
TOTAL		**405**

PAVEMENT SCHEDULE					
APPROX. LOCATION	WIDTH FT	LOCATION DESCRIPTION	40600982 HMA SURFACE REMOVAL - BUTT JOINT SQ. YD	40300100 BIT MATERIALS (PRIME COAT) GAL	40603320 HMA SURF CSE SUPER, MIX C, N90 1-1/2" TON
1374+39.5	26	END OF JOB	86.67	7.80	7.28
TOTAL			**87**	**8**	**7**

TEMPORARY RAMP SCHEDULE			
APPROX. LOCATION	WIDTH FT	DESCRIPTION	40600990 TEMPORARY RAMP SQ. YD
1374+39.5	26	END OF JOB	14.44
TOTAL			**14**

Coombe-Bloxdorf P.C.
-CIVIL ENGINEERS-
-STRUCTURAL ENGINEERS-
-LAND SURVEYORS-
Design Firm License No. 184-002703

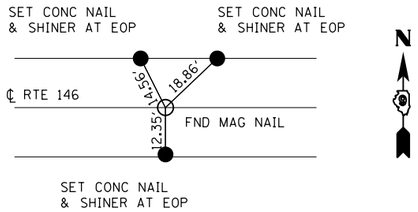
FILE NAME = c:\pw_work\pwidot\lavenderba\d0293530\d078165-sht-009-schedule.dgn	USER NAME = $USER$	DESIGNED -	REVISED -
		DRAWN - CFC	REVISED -
	PLOT SCALE = 100.000000 ' / in.	CHECKED - CCJ	REVISED -
CB PROJECT NO 08056-14	PLOT DATE = 1/23/2012	DATE - / /	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

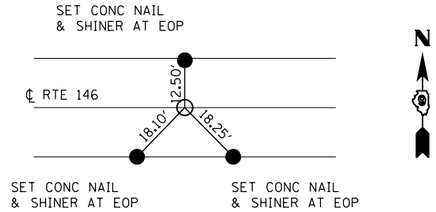
SCHEDULE OF QUANTITIES

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

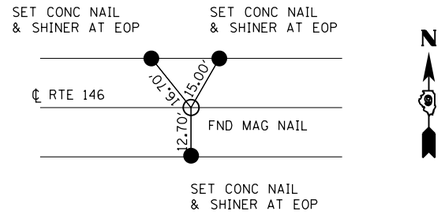
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
885	6B-3	POPE	41	9
		CONTRACT NO. 78165		
		ILLINOIS FED. AID PROJECT		



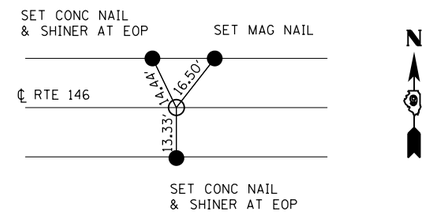
STA 1366+00
N 283881.4152
E 946755.8728



PT STA 1367+91.97 BK =
STA 1367+92.48 AH
N 283796.7763
E 946583.5865

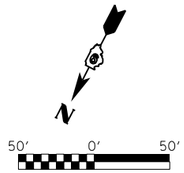


STA 1379+00
N 283283.5710
E 945602.1483

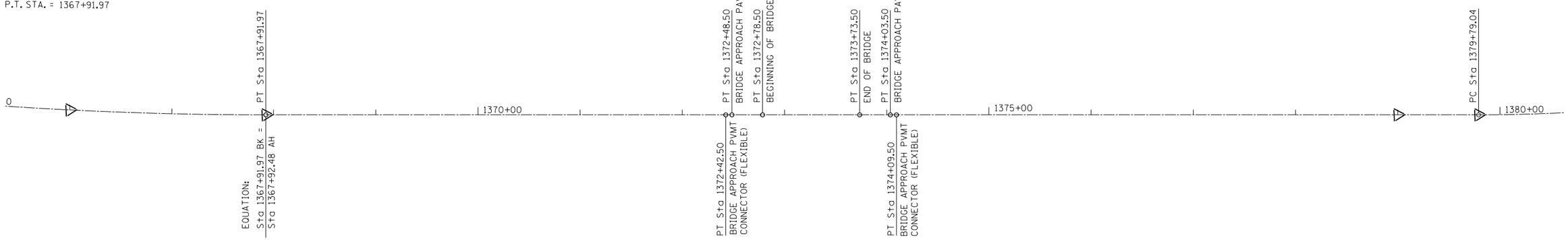


STA 1379+79.04
N 283246.9440
E 945532.1040

EXIST. CURVE 1
PI STA. = 1364+00.04
Δ = 11° 49' 09" (LT)
D = 1° 30' 09"
R = 3,813.54'
T = 394.74'
L = 786.67'
E = 20.37'
e = -----
T.R. = -----
S.E. RUN = -----
P.C. STA. = 1360+05.30
P.T. STA. = 1367+91.97



EXIST. CURVE 2
PI STA. = 1383+45.22
Δ = 25° 13' 29" (LT)
D = 3° 30' 04"
R = 1,636.51'
T = 366.17'
L = 720.48'
E = 40.47'
e = -----
T.R. = -----
S.E. RUN = -----
P.C. STA. = 1379+79.04
P.T. STA. = 1386+99.52



BM M-14 CHISELED □ ON THE NW WINGWALL
OF STRUCTURE 076-0026 ELEVATION = 363.58

STATION	NORTHING	EASTING
1372+42.50	283588.244912	946184.797443
1372+48.50	283585.464618	946179.480493
1372+78.50	283571.563145	946152.895740
1373+73.50	283527.541816	946068.710691
1374+03.50	283513.640344	946042.125938
1374+09.50	283510.860049	946036.808988

Coombe-Bloxdorf P.C.
-CIVIL ENGINEERS-
-STRUCTURAL ENGINEERS-
-LAND SURVEYORS-
Design Firm License No. 184-002703

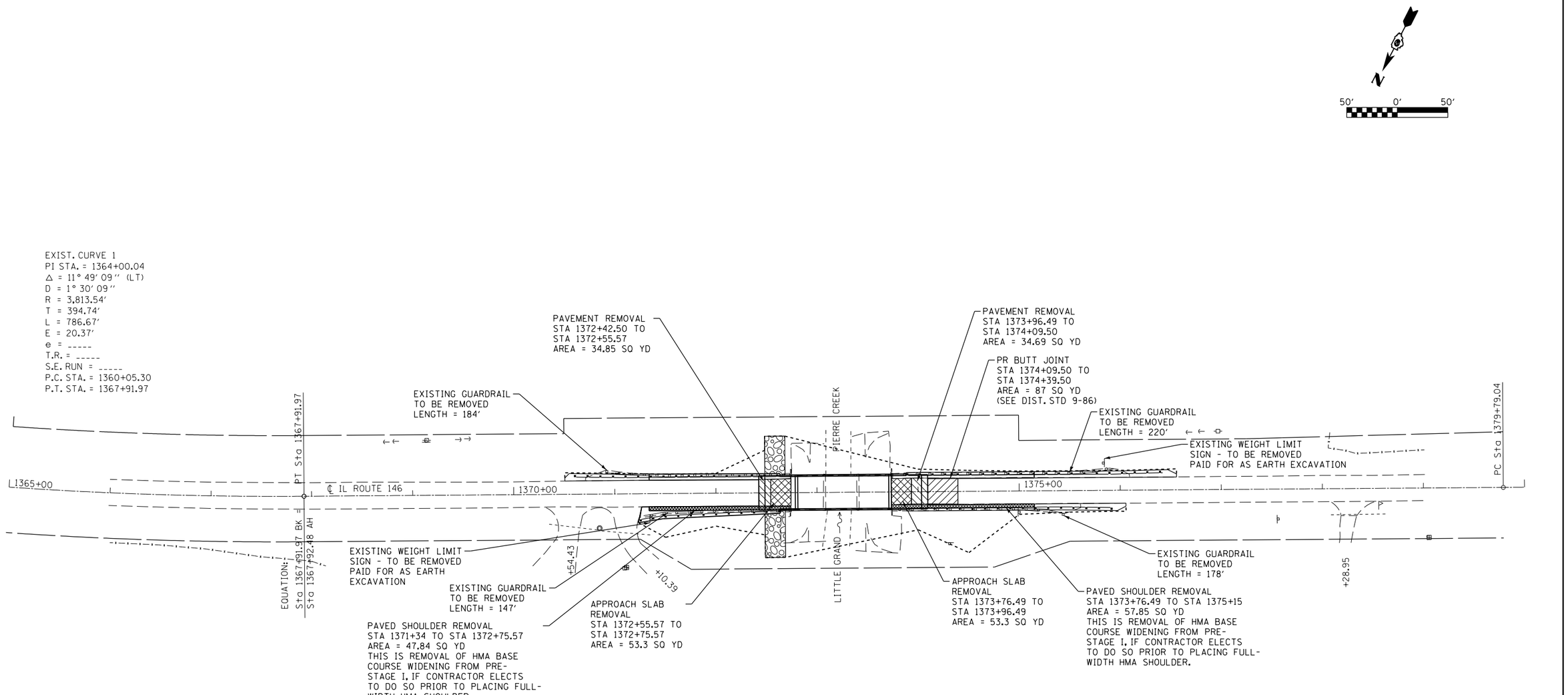
FILE NAME = c:\pw_work\pwidot\lavenderba\d0293530\d078165-sht-010-atb.dgn	USER NAME = $USER$	DESIGNED -	REVISED -
		DRAWN - CFC	REVISED -
	PLOT SCALE = 100.000000 ' / in.	CHECKED - CCJ	REVISED -
CB PROJECT NO 08056-14	PLOT DATE = 1/23/2012	DATE - / /	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ALIGNMENT, TIES AND BENCHMARK

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
885	6B-3	POPE	41	10
		CONTRACT NO. 78165		
	ILLINOIS FED. AID PROJECT			



Coombe-Bloxdorf P.C.
-CIVIL ENGINEERS-
-STRUCTURAL ENGINEERS-
-LAND SURVEYORS-
Design Firm License No. 184-002703

FILE NAME = c:\pw_work\pwidot\lavenderba\d0293530\d078165-sht-011-removal-plan.dgn	USER NAME = $USER$	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 100.000000 ' / in.	CHECKED -	REVISED -
CB PROJECT NO 08056-14	PLOT DATE = 1/23/2012	DATE - / /	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL ROUTE 146
REMOVAL PLAN

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
885	6B-3	POPE	41	11
		CONTRACT NO. 78165		
	ILLINOIS FED. AID PROJECT			

EXIST. CURVE 1
PI STA. = 1364+00.04
Δ = 11° 49′ 09″ (LT)
D = 1° 30′ 09″
R = 3,813.54′
T = 394.74′
L = 786.67′
E = 20.37′
e = _____
T.R. = _____
S.E. RUN = _____
P.C. STA. = 1360+05.30
P.T. STA. = 1367+91.97

PR 30′ BRIDGE APPROACH SLAB (TYP)
PR 6′ BRIDGE APPR PVMT CONNECTOR - FLEXIBLE (TYP) (SEE STD 420401) TIE INTO EXISTING PAVEMENT
PR 6′ HMA SHOULDER, 10″ LT STA 1371+34.00 - STA 1372+42.50
PR HMA SHLD, 8″ VAR WDTH - SEE STD 630201 LT STA 1370+50.62 TO STA 1371+34.00
PR TBT-TY 6 OR SPBGR, TY A OR TBT-TY 1 (SP) TANGENT
1370+50.00 75.00′ LT
1370+50.00 60.00′ LT
184′ EX G/R REMOVAL
STONE RIPRAP CLASS A4 W/ FILTER FABRIC
CONSTRUCTION LIMITS
PR 30′ BRIDGE APPROACH SLAB (TYP)
PR 6′ BRIDGE APPR PVMT CONNECTOR - FLEXIBLE (TYP) (SEE STD 420401) TIE INTO EXISTING PAVEMENT
220′ EX G/R REMOVAL
PR 6′ HMA SHOULDER, 10″ LT STA 1374+09.50 - STA 1375+15.00
STA 1374+39.50 PR BUTT JOINT
1375+00.00 75.00′ LT
1375+00.00 50.00′ LT
PR HMA SHLD, 8″ VAR WDTH - SEE STD 630201 LT STA 1375+15 TO STA 1376+55.87
WEIGHT LIMIT 10 TONS
1377+25.00 50.00′ LT
PR TBT - TY 6 OR SPBGR, TY A OR TBT - TY 1 (SP) TANGENT
PC Sta 1379+79.04
EXISTING ROW
GAS LINE (CIPS)
PT Sta 1367+91.97
℄ IL ROUTE 146
HMA
13′
L1365+00
1370+00
1375+00
EQUATION:
Sta 1367+91.97 BK =
Sta 1367+92.48 AH
24″ CMP
PE HMA +54.43
PE HMA +10.39
1371+25.00 45.00′ RT
1371+75.00 75.00′ RT
WEIGHT LIMIT 10 TON AXLE 40 TON GROSS
PIERRE CREEK
LITTLE GRAND
147′ EX G/R REMOVAL
PR TBT-TY 6 OR SPBGR, TY A OR TBT-TY 1 (SP) FLARED 24:1 FLARE RATIO
PR 6′ & VAR. HMA SHOULDER, 10″ RT STA 1371+23.63 TO STA 1372+73.91
CONSTRUCTION LIMITS
STONE RIPRAP CLASS A4 W/ FILTER FABRIC
PR 6′ HMA BASE COURSE WIDENING, 10″ RT STA 1373+73.39 - STA 1375+15.00
CURVE AHEAD
1374+75.00 75.00′ RT
FIBER OPTIC (SHAWNEE PHONE CO)
178′ EX G/R REMOVAL
1375+50.00 50.00′ RT
CROSS ROAD AHEAD
+28.95 PE HMA
18″ CMP
PR HMA SHLD, 8″ VAR WDTH - SEE STD 630201 RT STA 1375+15 TO STA 1376+05.61
PR TBT - TY 6 OR SPBGR, TY A OR TBT - TY 1 (SP) TANGENT

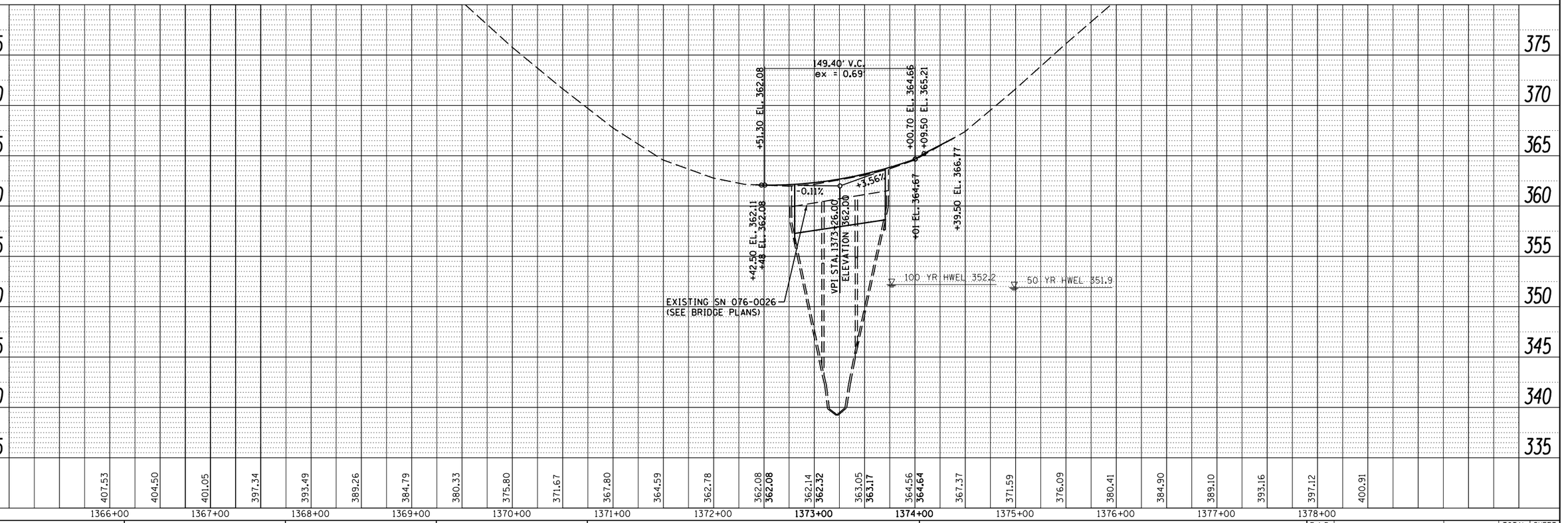
50′ 0′ 50′

EX STRUCTURE NO 076-0026-3 SIMPLE SPANS PRECAST PRESTRESSED CONCRETE DECK BEAMS (17″ DEPTH), 101′-11″ BK -BK OF ABUTMENTS, SPILL-THRU ABUTMENTS WITH CONCRETE SLOPEWALLS, SOLID CONCRETE PIERS, 35′-2″ 0-0 DECK, 0° SKEW, CL STA. 1373+26.09

PR STRUCTURE-1 SPAN STEEL PLATE GIRDER BRIDGE ON INTEGRAL ABUTMENTS, 95′-0″ BK-BK ABUTMENTS, 35′-2″ 0-0 DECK, 0° SKEW, CL STA. 1373+26.00.

PLAN
BY | DATE
SURVEYED
PLOTTED
ALIGNMENT CHECKED
RT. OF WAY CHECKED
CADD FILE NAME
NOTE BOOK
NO.

PROFILE
BY | DATE
SURVEYED
PLOTTED
PROFILE CHECKED
BM. NOTED
STRUCTURE NOTATNS CHKD
NOTE BOOK
NO.



FILE NAME = c:\pw_work\pwidot\lavenderba\d0293530\d978165-sht-012-plnprf-il-146.dgn	USER NAME = $USER$	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 100.000000 ′ / in.	CHECKED -	REVISED -
CB JOB NO 08056-14	PLOT DATE = 1/23/2012	DATE - / /	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE
IL ROUTE 146 OVER LITTLE GRAND PIERRE CREEK
SCALE: | SHEET NO. OF SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
885	6B-3	POPE	41	12
		CONTRACT NO. 78165		
		ILLINOIS FED. AID PROJECT		

PRIOR TO STAGE I CONSTRUCTION

1. INSTALL ALL NECESSARY ITEMS IN ACCORDANCE WITH TRAFFIC CONTROL AND PROTECTION STANDARD 701326 TO CONSTRUCT HMA BASE COURSE WIDENING, 10'' AS SHOWN ON THE PLANS RT.

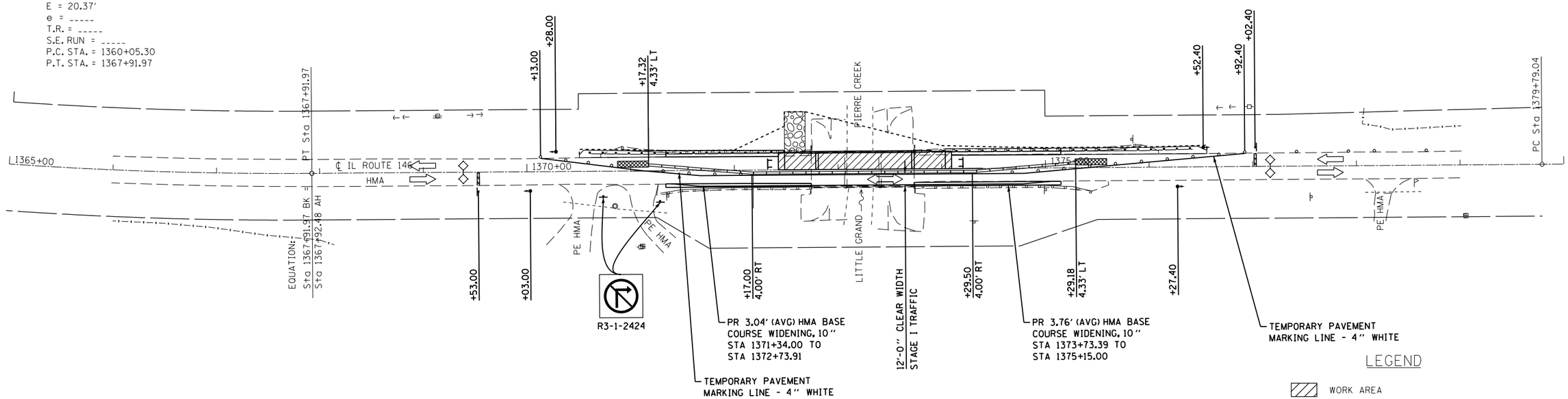
2. INSTALL TEMPORARY TRAFFIC SIGNALS, TEMPORARY CONCRETE BARRIER, AND OTHER TRAFFIC CONTROL IN ACCORDANCE WITH STANDARD 701321 AND AS SHOWN ON STAGE I TRAFFIC DETAILS. ALSO PLACE TEMPORARY RUMBLE STRIPS AT LOCATIONS SHOWN ON STANDARD 701321.

STAGE I SEQUENCE OF CONSTRUCTION

1. SHIFT TRAFFIC TO RIGHT (WESTBOUND) LANE.

2. COMPLETE STAGE I STRUCTURAL, GUARDRAIL, SHOULDER WORK AND TEMPORARY RAMPS.

EXIST. CURVE 1
PI STA. = 1364+00.04
△ = 11° 49' 09'' (LT)
D = 1° 30' 09''
R = 3,813.54'
T = 394.74'
L = 786.67'
E = 20.37'
e = _____
T.R. = _____
S.E. RUN = _____
P.C. STA. = 1360+05.30
P.T. STA. = 1367+91.97



LEGEND

- WORK AREA
- SIGN (SEE STD 701321)
- DRUM WITH STEADY BURNING LIGHT
- TRAFFIC SIGNAL
- TEMPORARY CONCRETE BARRIER
- IMPACT ATTENUATOR, TEMPORARY (NON-REDIRECTIVE)
- TYPE III BARRICADE W/ LIGHTS
- DETECTOR LOOPS
- DIRECTION OF TRAFFIC

GENERAL NOTES

REFER TO STANDARDS:
701001 - OFF-RD OPERATIONS, 2L, 2W, MORE THAN 15' AWAY
701006 - OFF-RD OPERATIONS, 2L, 2W, 15' TO 24'' FROM PAVEMENT EDGE
701201 - LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS >= 45 MPH
701321 - LANE CLOSURE, 2L, 2W, BRIDGE REPAIR WITH BARRIER
701326 - LANE CLOSURE, 2L, 2W, PAVEMENT WIDENING, FOR SPEEDS >= 45 MPH
701901 - TRAFFIC CONTROL DEVICES
704001 - TEMPORARY CONCRETE BARRIER

Coombe-Bloxdorf P.C.
-CIVIL ENGINEERS-
-STRUCTURAL ENGINEERS-
-LAND SURVEYORS-
Design Firm License No. 184-002703

FILE NAME = c:\pw_work\pwidot\lavenderba\d0293530\d078165-sht-013-staging-stage-1.dgn	USER NAME = $USER$	DESIGNED -	REVISED -
	PLOT SCALE = 100.000000 ' / in.	DRAWN -	REVISED -
	PLOT DATE = 1/23/2012	CHECKED -	REVISED -
CB PROJECT NO 08056-14		DATE - / /	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL ROUTE 146
STAGE I TRAFFIC CONTROL

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
885	6B-3	POPE	41	13
		CONTRACT NO. 78165		
		ILLINOIS FED. AID PROJECT		

STAGE II SEQUENCE OF CONSTRUCTION

1. RELOCATE BARRIER WALL AND IMPACT ATTENUATORS AND PUT IN PLACE OTHER TRAFFIC CONTROL MEASURES FOR STAGE II AS REQUIRED BY STANDARD 701321 AND AS SHOWN ON STAGE II TRAFFIC DETAILS.

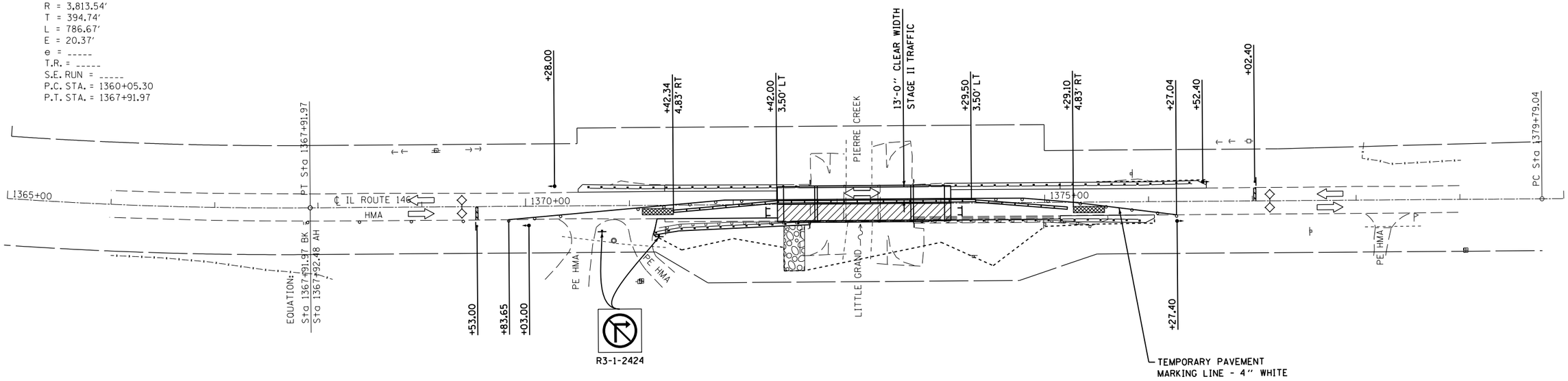
2. ONCE TRAFFIC IS DIRECTED TO STAGE II (EASTBOUND) TRAFFIC LANES, COMPLETE STAGE II STRUCTURAL, GUARDRAIL, SHOULDER WORK AND TEMPORARY RAMPS.

3. REMOVE STAGE II TRAFFIC CONTROL AND COMPLETE RESURFACING OF PAVEMENT AND SHOULDERS AT THE LOCATIONS SHOWN IN THE PLANS.

N

50' 0' 50'

EXIST. CURVE 1
PI STA. = 1364+00.04
△ = 11° 49' 09" (LT)
D = 1° 30' 09"
R = 3,813.54'
T = 394.74'
L = 786.67'
E = 20.37'
e = -----
T.R. = -----
S.E. RUN = -----
P.C. STA. = 1360+05.30
P.T. STA. = 1367+91.97



LEGEND

- WORK AREA
- SIGN (SEE STD 701321)
- DRUM WITH STEADY BURNING LIGHT
- TRAFFIC SIGNAL
- TEMPORARY CONCRETE BARRIER
- IMPACT ATTENUATOR, TEMPORARY (NON-REDIRECTIVE)
- TYPE III BARRICADE W/ LIGHTS
- DETECTOR LOOPS
- DIRECTION OF TRAFFIC

GENERAL NOTES

REFER TO STANDARDS:
701001 - OFF-RD OPERATIONS, 2L, 2W, MORE THAN 15' AWAY
701006 - OFF-RD OPERATIONS, 2L, 2W, 15' TO 24" FROM PAVEMENT EDGE
701201 - LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS >= 45 MPH
701321 - LANE CLOSURE, 2L, 2W, BRIDGE REPAIR WITH BARRIER
701326 - LANE CLOSURE, 2L, 2W, PAVEMENT WIDENING, FOR SPEEDS >= 45 MPH
701901 - TRAFFIC CONTROL DEVICES
704001 - TEMPORARY CONCRETE BARRIER

Coombe-Bloxdorf P.C.
-CIVIL ENGINEERS-
-STRUCTURAL ENGINEERS-
-LAND SURVEYORS-
Design Firm License No. 184-002703

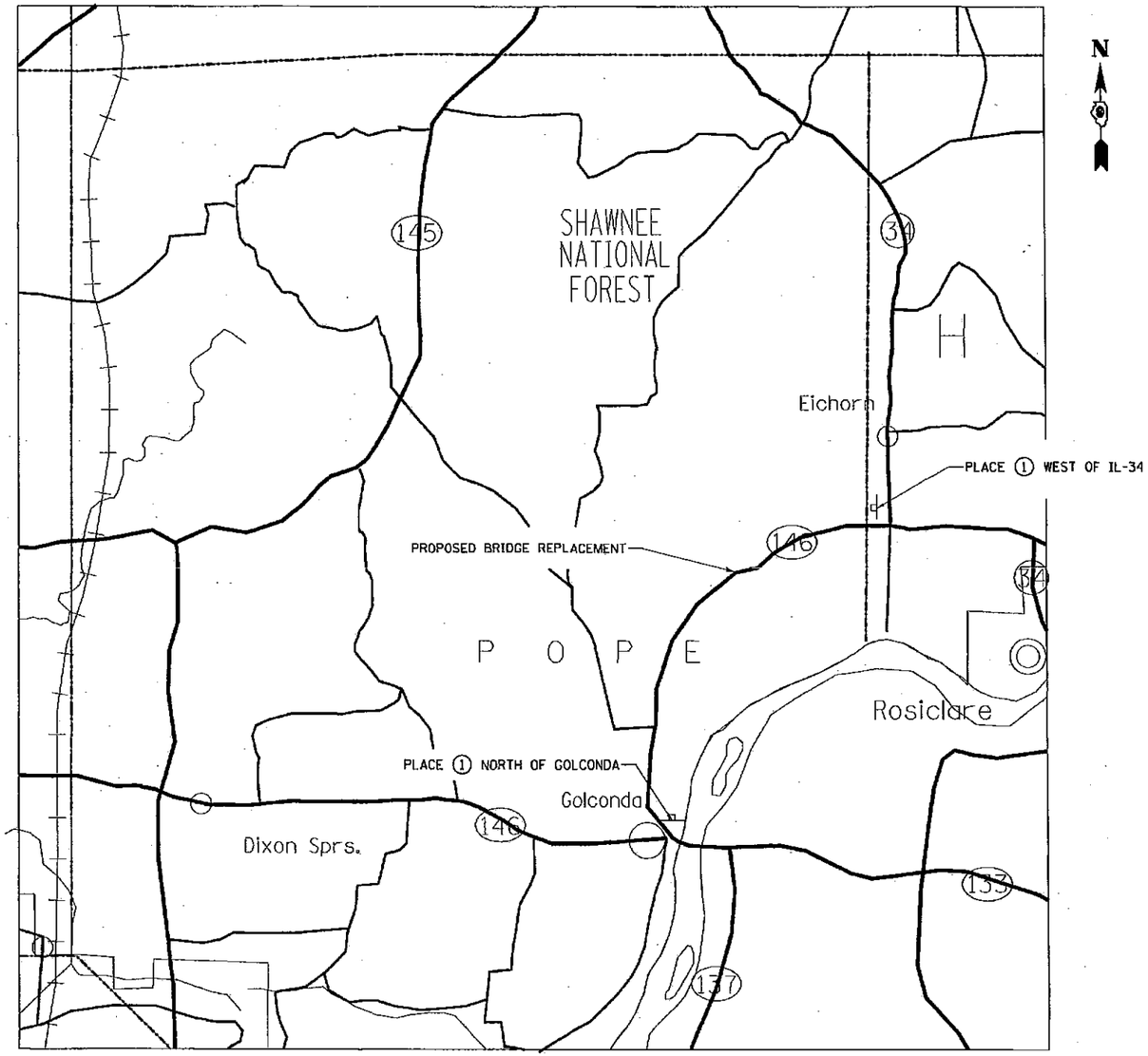
FILE NAME =	USER NAME = $USER$	DESIGNED -	REVISED -
c:\pw_work\pwidot\lavenderba\d0293530\d078165-sht-014-staging-stage-ii.dgn		DRAWN -	REVISED -
	PLOT SCALE = 100.000000 ' / in.	CHECKED -	REVISED -
CB PROJECT NO 08056-14	PLOT DATE = 1/23/2012	DATE - / /	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL ROUTE 146
STAGE II TRAFFIC CONTROL

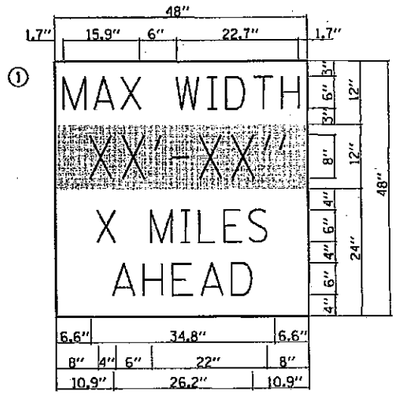
SCALE: | SHEET NO. OF SHEETS | STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
885	6B-3	POPE	41	14
		CONTRACT NO. 78165		
		ILLINOIS FED. AID PROJECT		



DETOUR SIGNING PLAN

SIGN LEGEND



W12-1103

W12-1103 (WIDTH IS 8D):
NO BORDER, BLACK ON WHITE:
"MAX WIDTH" D:
NO BORDER, BLACK ON ORANGE:
"XX'-XX"" D:
NO BORDER, BLACK ON WHITE:
"X MILES" D: "AHEAD" D

DETOUR NOTES

1. THE CONTRACTOR SHALL FURNISH THE POSTS AND ERECT THE SIGNS AT THE LOCATIONS AS DIRECTED BY THE ENGINEER. ALL SIGNS SHALL BE POST MOUNTED.
2. THE ABOVE NOTED WORK, INCLUDING SIGNS, POSTS, HARDWARE, AND LABOR SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE, EACH, FOR TRAFFIC CONTROL AND PROTECTION, STD 701321 AND NO OTHER COMPENSATION WILL BE ALLOWED.
3. THE WIDTH SHOWN ON THE W12-1103 SIGN SHALL BE 10'-6" FOR STAGE I AND 11'-6" ON STAGE II OR AS DIRECTED BY THE ENGINEER. THE "X" MILES AHEAD WILL BE DETERMINED BY THE ENGINEER.

Coombe-Bloxdorf P.C.
-CIVIL ENGINEERS-
-STRUCTURAL ENGINEERS-
-LAND SURVEYORS-
Design Firm License No. 184-002703

FILE NAME = ...\v8-na\d978165-sht-015-sign.dgn	USER NAME = CFC...	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 2.000000 ' / IN.	CHECKED -	REVISED -
CB PROJECT NO 98056-14	PLOT DATE = 1/5/2012	DATE - / /	REVISED -

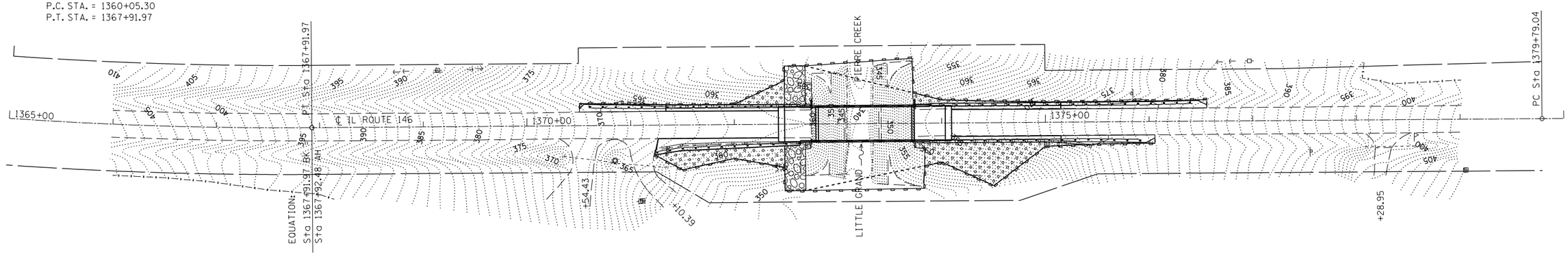
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WIDE LOAD DETOUR SIGNING

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

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
885	68-3	POPE	41	15
		CONTRACT NO. 78165		
	ILLINOIS FED. AID PROJECT			

EXIST. CURVE 1
PI STA. = 1364+00.04
△ = 11° 49' 09'' (LT)
D = 1° 30' 09''
R = 3,813.54'
T = 394.74'
L = 786.67'
E = 20.37'
e = -----
T.R. = -----
S.E. RUN = -----
P.C. STA. = 1360+05.30
P.T. STA. = 1367+91.97



INTENDED SEQUENCE

1. PLACEMENT OF PERIMETER EROSION BARRIER PRIOR TO COMMENCEMENT OF ANY WORK. SEE STANDARD 280001.
2. PLACEMENT OF TEMPORARY SEEDING ON GRADED SURFACES NOT HAVING PERMANENT SEEDING APPLIED.
3. PLACEMENT OF EROSION CONTROL BLANKET AFTER FINAL GRADING.
4. ONGOING MAINTENANCE OF EROSION CONTROL ELEMENTS PER THE APPLICABLE STANDARDS AND PROVISIONS.
5. REMOVE TEMPORARY EROSION CONTROL ELEMENTS AFTER FINAL GRADING AND PERMANENT SEEDING ESTABLISHED AS APPROVED BY THE ENGINEER.

EROSION CONTROL NOTES

1. MAJOR GRADING SLOPES ALONG THE PROPOSED ROADWAY ARE 3:1 MAX.
2. SOILS DISTURBANCE SHALL ONLY OCCUR WITHIN THE AREAS SHOWN.
3. RECEIVING WATER FOR DRAINAGE FROM PROJECT IS LITTLE GRAND PIERRE CREEK. LITTLE GRAND PIERRE CREEK IS A TRIBUTARY TO THE OHIO RIVER.

EROSION CONTROL LEGEND

PERIMETER EROSION BARRIER

SEEDING & MULCHING

Coombe-Bloxdorf P.C.
-CIVIL ENGINEERS-
-STRUCTURAL ENGINEERS-
-LAND SURVEYORS-
Design Firm License No. 184-002703

FILE NAME = c:\pw_work\pwidot\lavenderba\d0293530\d178165-sht-016-erosion-control.dgn	USER NAME = $USER$	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 100.000000 ' / in.	CHECKED -	REVISED -
CB PROJECT NO 08056-14	PLOT DATE = 1/23/2012	DATE - / /	REVISED -

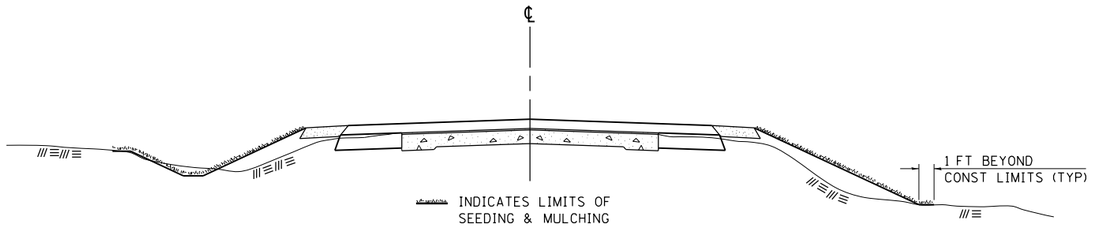
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL ROUTE 146
EROSION CONTROL DETAILS

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
885	6B-3	POPE	41	16
		CONTRACT NO. 78165		
	ILLINOIS	FED. AID PROJECT		

SEEDING & MULCHING



GENERAL NOTES

IN GENERAL, ALL EARTH SURFACES DISTURBED DURING CONSTRUCTION OPERATIONS SHALL BE SEEDED AND MULCHED UPON COMPLETION OF ALL GRADING OPERATIONS.

FERTILIZER NUTRIENTS AND LIMESTONE SHALL BE APPLIED TO ALL SEEDED AREAS.

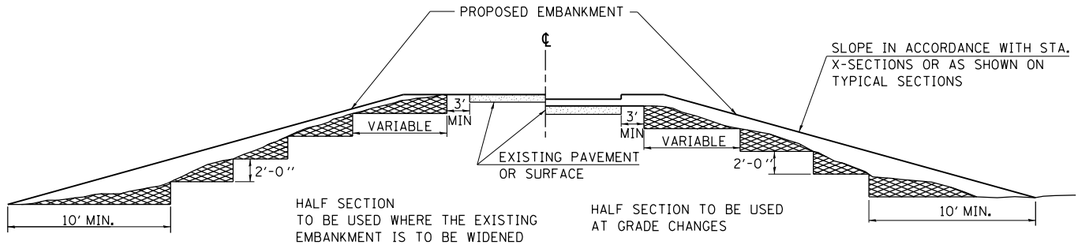
THE RATES OF APPLICATION OF FERTILIZER, MULCH AND LIMESTONE SHALL BE AS SPECIFIED IN THE SPECIAL PROVISIONS.

SECTIONS 250 AND 251 OF THE STANDARD SPECIFICATIONS SHALL GOVERN THIS WORK EXCEPT AS SPECIFIED HEREIN OR AS NOTED IN THE SPECIAL PROVISIONS.

STD. 9-12

REVISIONS	
REDRAWN	2-15-89
REVISED	8-15-94
REVISED	6-3-99
REVISED	3-27-08

TYPICAL CROSS SECTION SHOWING STEP CONSTRUCTION ON EXISTING FILL

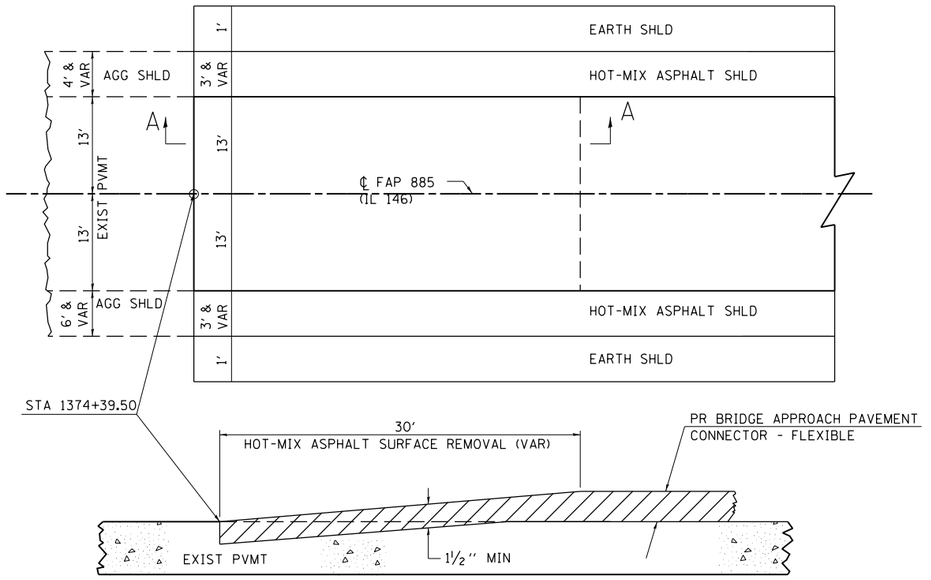


MATERIAL TO BE REMOVED AND REPLACED IN THE EMBANKMENT IN ACCORDANCE WITH ART. 205.04 OF THE STANDARD SPECIFICATION. COST TO BE INCLUDED IN THE VARIOUS ITEMS OF EXCAVATION AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED BECAUSE OF THIS WORK.

STD. 9-16

REVISIONS	
REDRAWN	2-15-89
REVISED	8-15-94
CHECKED	6-3-99
RESIZED	5-7-08

BUTT JOINT



SECTION A-A

STD. 9-86

REVISIONS	
DRAWN	10-17-90
REVISED	01-11-07
REVISED	
REVISED	~~3-25-08~~

Coombe-Bloxdorf P.C.
-CIVIL ENGINEERS-
-STRUCTURAL ENGINEERS-
-LAND SURVEYORS-
Design Firm License No. 184-002703

FILE NAME = c:\pw_work\pwidot\lavenderba\d0293530\d078165-sht-017-details.dgn	USER NAME = $USER$	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
CB PROJECT NO 08056-14	PLOT DATE = 1/23/2012	DATE - / /	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

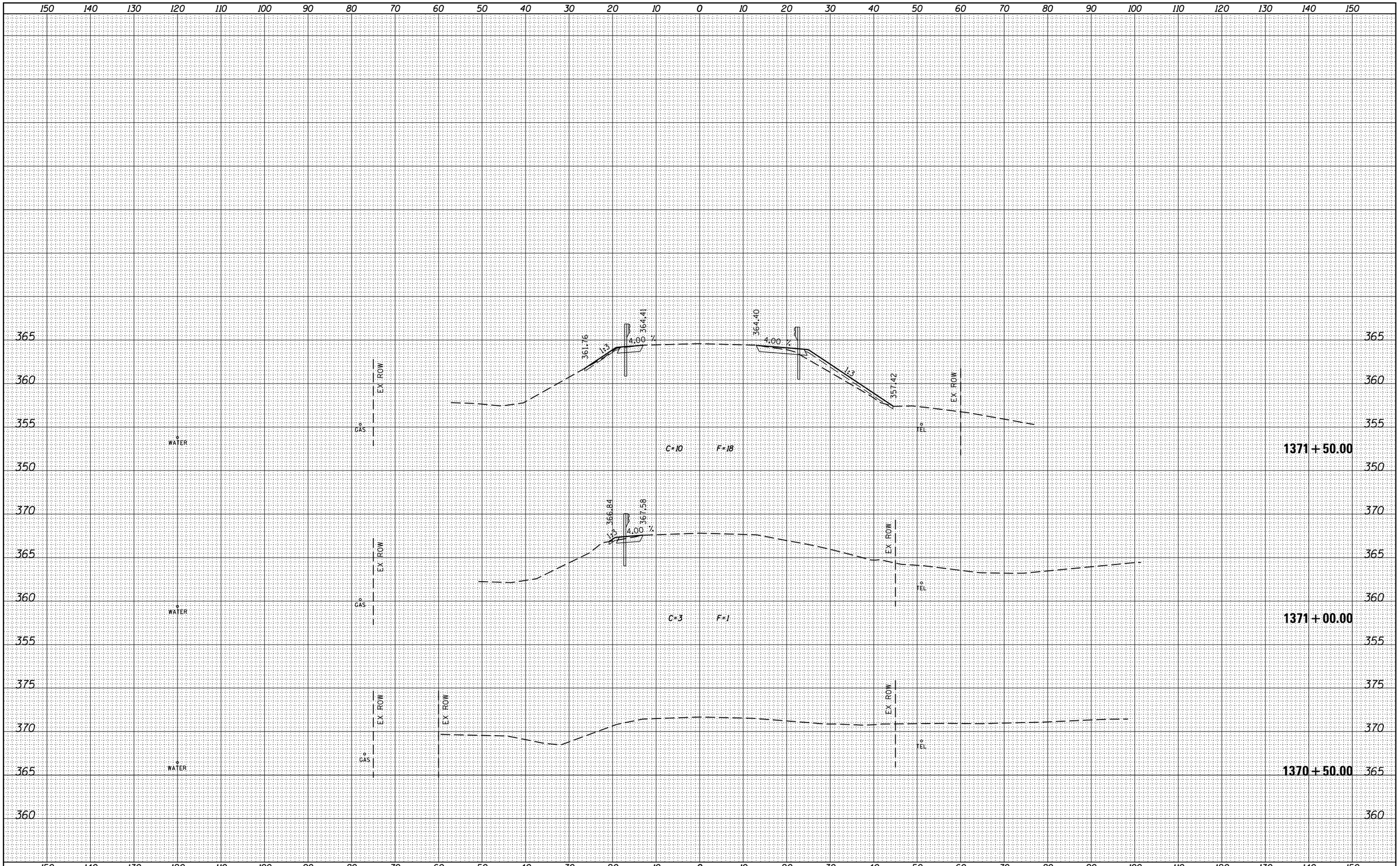
DISTRICT 9 STANDARDS

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

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
885	6B-3	POPE	41	17
		CONTRACT NO. 78165		
		ILLINOIS	FED. AID PROJECT	

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

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



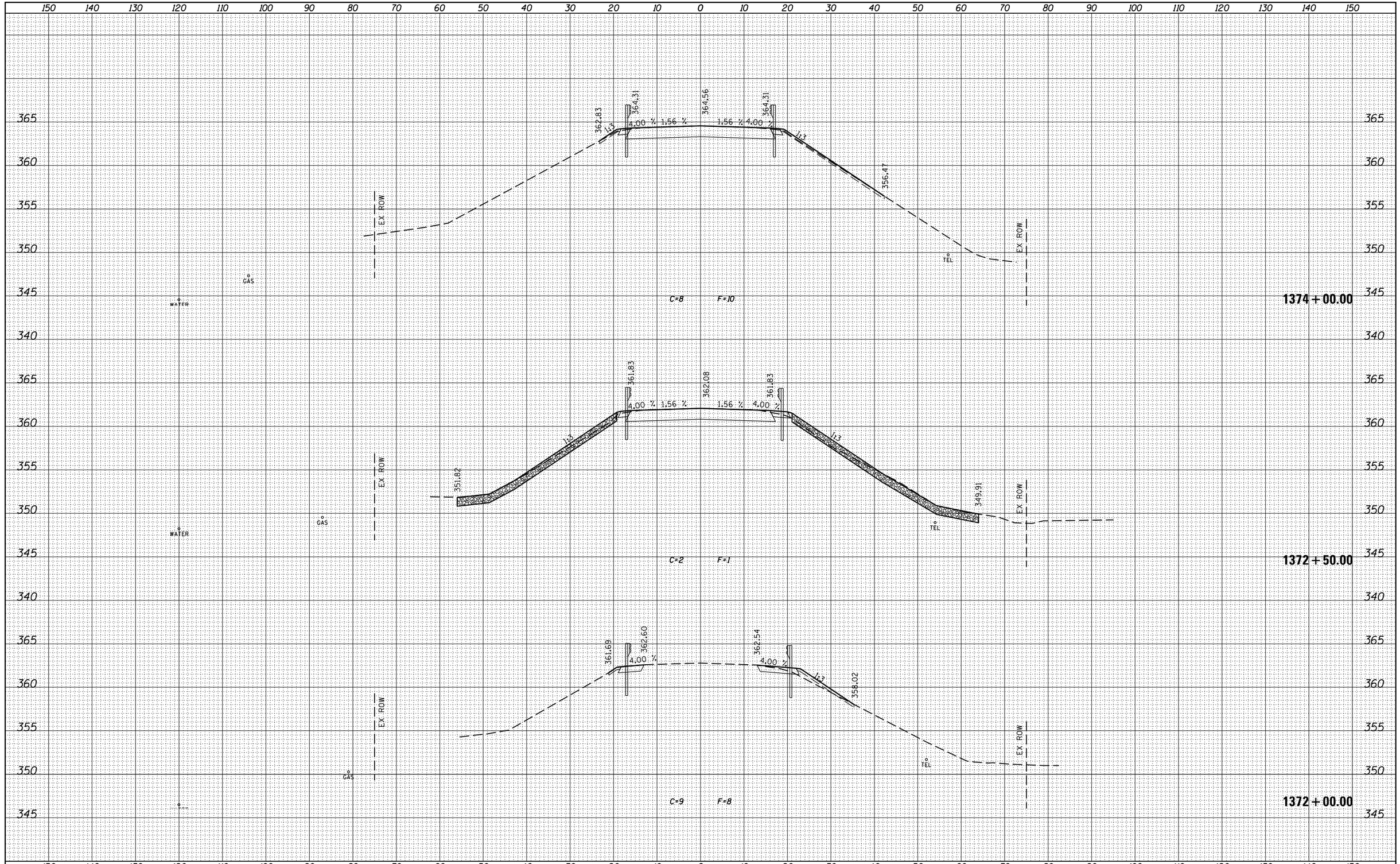
FILE NAME = c:\pw_work\pwidot\lavenderba\d0293530\d978165-sht-018-xssht-il-146.dgn	USER NAME = $USER$	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 20.000000 ' / in.	CHECKED -	REVISED -
CB PROJECT NO 08056-14	PLOT DATE = 1/23/2012	DATE - / /	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS – IL 146

SCALE: | SHEET NO. OF SHEETS | STA. 1370+50.00 STA. 1371+50.00

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
885	6B-3	POPE	41	18
		CONTRACT NO. 78165		
	ILLINOIS FED. AID PROJECT			



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

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

FILE NAME = c:\pw_work\pwidot\lavenderba\d0293530\d978165-sht-018-xssht-il-146.dgn	USER NAME = $USER$	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 20.000000 ' / in.	CHECKED -	REVISED -
CB PROJECT NO 00056-14	PLOT DATE = 1/23/2012	DATE - / /	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

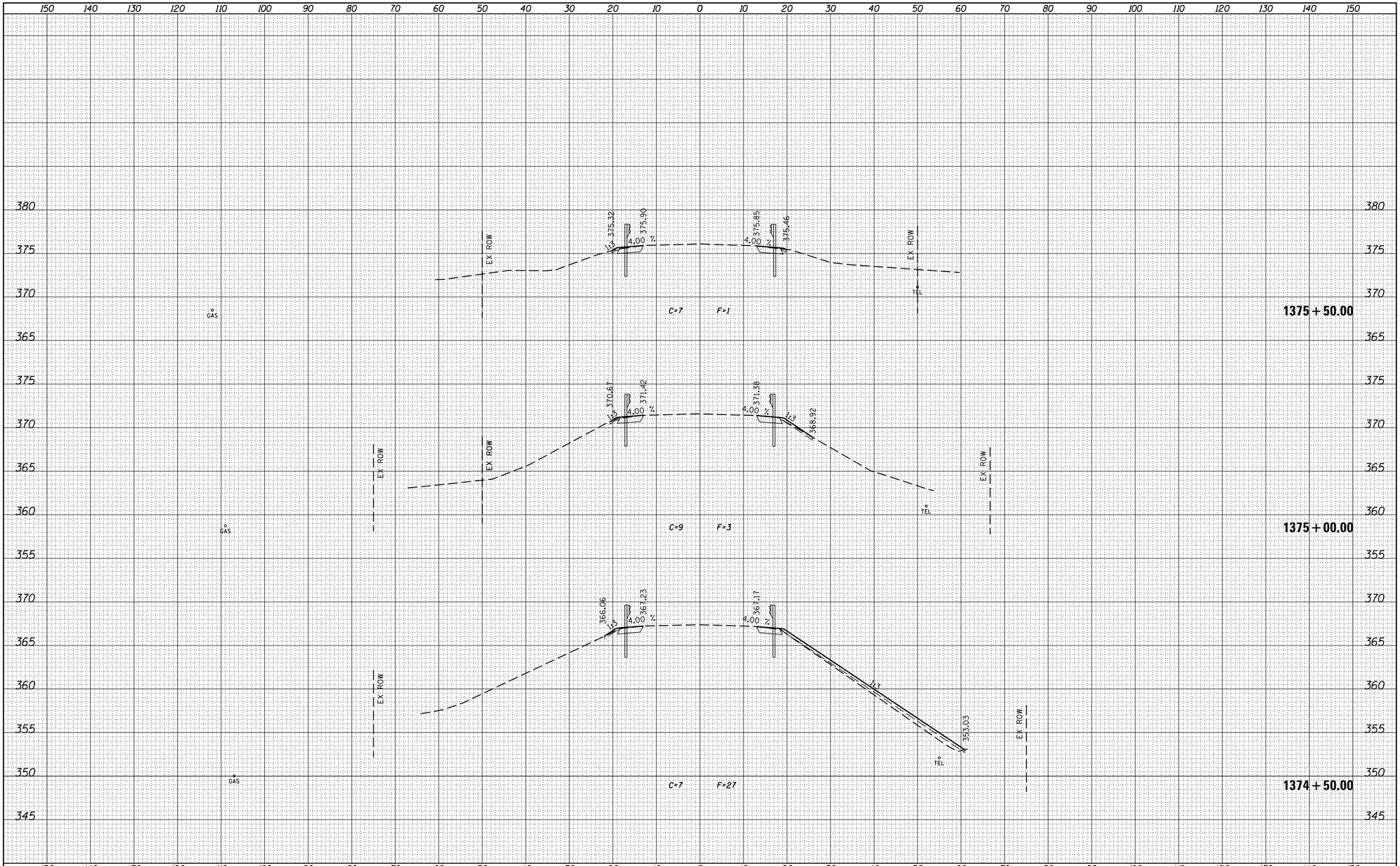
CROSS SECTIONS – IL 146

SCALE: | SHEET NO. OF SHEETS | STA. 1372+00.00 STA. 1374+00.00

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
885	6B-3	POPE	41	19
		CONTRACT NO. 78165		
	ILLINOIS FED. AID PROJECT			

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

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



FILE NAME = c:\pw_work\pwidot\lavenderba\d0293530\d978165-sht-018-xssht-il-146.dgn	USER NAME = $USER$	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 20.000000 ' / in.	CHECKED -	REVISED -
CB PROJECT NO 80056-14	PLOT DATE = 1/23/2012	DATE - / /	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

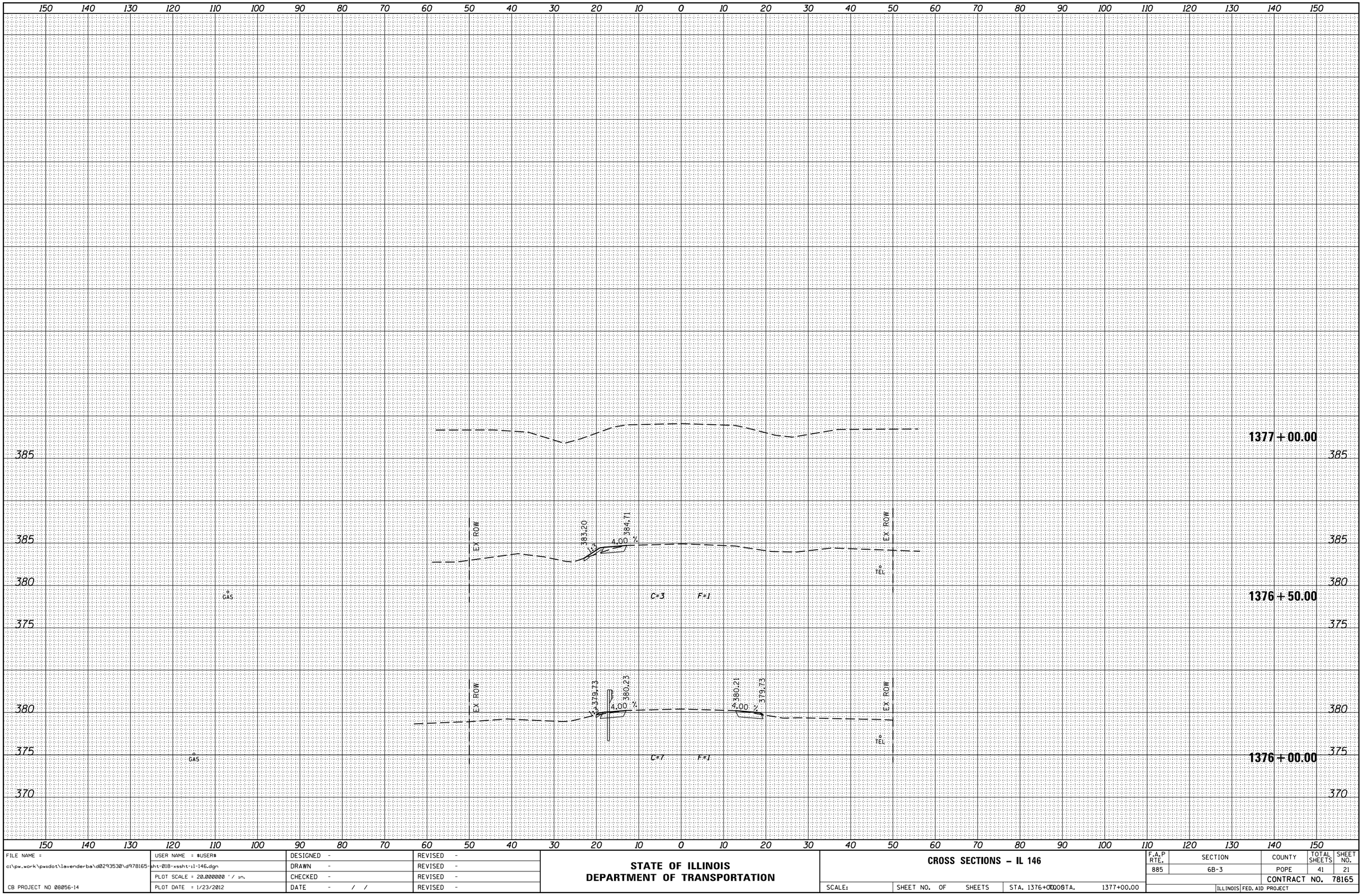
CROSS SECTIONS – IL 146

SCALE: | SHEET NO. OF SHEETS | STA. 1374+50.00 STA. 1375+50.00

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
885	6B-3	POPE	41	20
		CONTRACT NO. 78165		
	ILLINOIS FED. AID PROJECT			

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

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



FILE NAME =	USER NAME = $USER$	DESIGNED -	REVISED -
c:\pw_work\pwidot\lavenderba\d0293530\d978165-sht-018-xssht-il-146.dgn		DRAWN -	REVISED -
	PLOT SCALE = 20.000000 ' / in.	CHECKED -	REVISED -
CB PROJECT NO 08056-14	PLOT DATE = 1/23/2012	DATE - / /	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS – IL 146

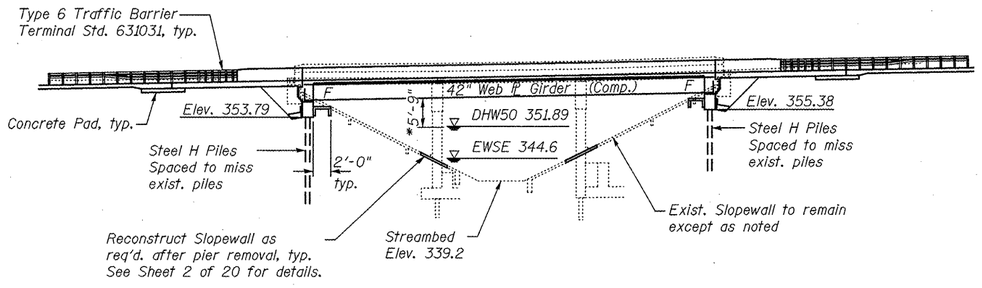
SCALE: | SHEET NO. OF SHEETS | STA. 1376+00.00 STA. 1377+00.00

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
885	6B-3	POPE	41	21
		CONTRACT NO. 78165		
	ILLINOIS FED. AID PROJECT			

Bench Mark: Chiseled square on SW wingwall of existing structure SN 076-0026, Elev. 363.58

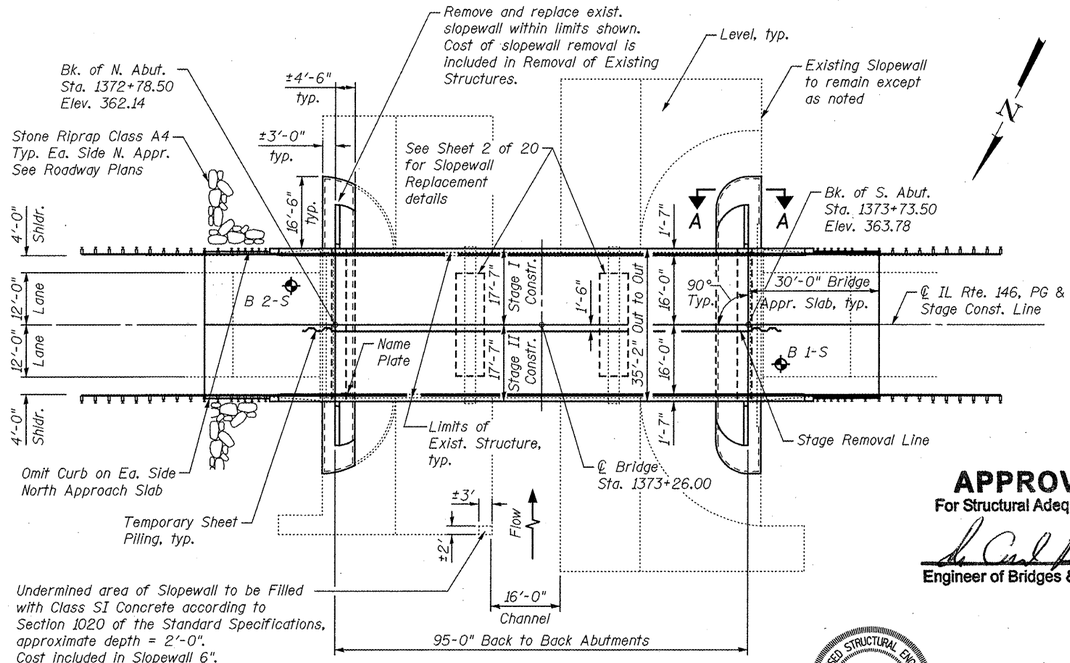
Existing Structure: SN 076-0026 built in 1979 as part of F.A. Rte. 885, Section (6B-1)BR. The existing superstructure consists of three simply supported spans of 17" PPC Deck Beams with a bituminous overlay. The existing structure is supported by open abutments and pile bent piers which incorporate part of the closed abutments from the original 1925 structure. The existing concrete slopewalls are to remain below the proposed berm elevations. The existing structure is 101'-11" back to back of abutments and 35'-2" out to out of deck. The structure is to be removed and replaced with one lane of traffic to be maintained using staged construction.

No Salvage



*Min. vertical clearance

ELEVATION



PLAN

WATERWAY INFORMATION

Drainage Area = 3.05 Sq. Mi. Low Grade Elev. 362.08 @ Sta. 1372+50

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.
Min. Calc.	10	1675	387	417	351.34	0.15	0.06	351.49	351.40
Design	50	2612	419	452	351.89	0.31	0.13	352.20	352.02
Base	100	3026	437	470	352.18	0.39	0.17	352.57	352.35
Overtopping									
Max. Calc.	500	4109	487	524	352.98	0.65	0.31	353.63	353.29

10 year velocity through existing structure = 4.59 fps
10 year velocity through proposed structure = 4.31 fps

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	N. Abut.	S. Abut.
	353.8	355.4

STATION 1373+26.00
BUILT 20__ BY
STATE OF ILLINOIS
F.A.P. RTE. 885 SEC. 6B-3
LOADING HL 93
STRUCTURE NO. 076-0030

NAME PLATE

See Std. 515001

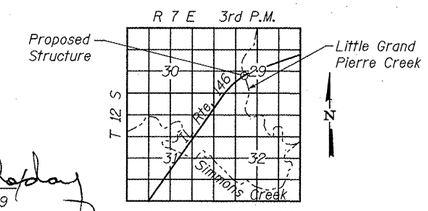
PROFILE GRADE

(along ℄ IL Rte 146)

Notes:
See Sheet 2 of 20 for Section A-A and additional slopewall details.

APPROVED
For Structural Adequacy Only

Engineer of Bridges & Structures



LOCATION SKETCH

LICENSED STRUCTURAL ENGINEER
MARY COOMBE BLOXDORF
4859
SPRINGFIELD
STATE OF ILLINOIS

ILLINOIS STRUCTURAL NO. 4859
EXPIRES 11/30/12
DATE: 01/04/12

INDEX OF SHEETS

DESIGN SPECIFICATIONS

2010 AASHTO LRFD Bridge Design Specifications

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) = 2
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.28g
Design Spectral Acceleration at 0.2 sec. (S_{DS}) = 0.77g
Soil Site Class = C

LOADING HL 93

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

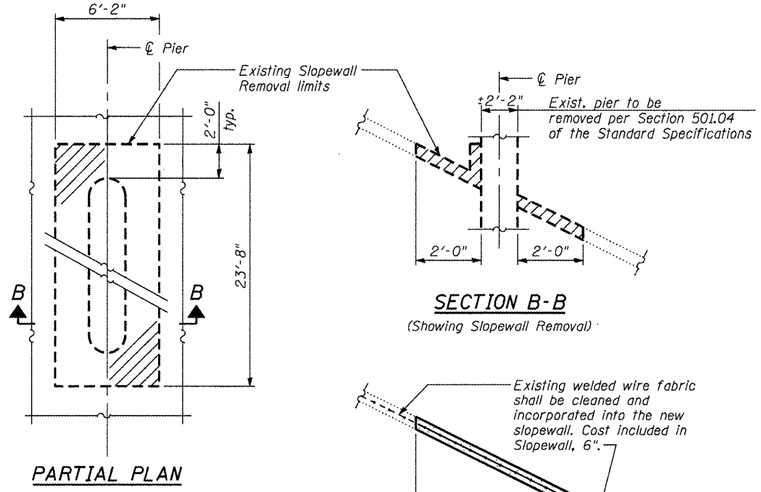
GENERAL PLAN AND ELEVATION
IL 146 OVER LITTLE GRAND PIERRE CREEK
F.A.P. RTE. 885 SECTION 6B-3
POPE COUNTY
STATION 1373+26.00
STRUCTURE NUMBER 076-0030

Coombe-Bloxdorf P.C.
-CIVIL ENGINEERS-
-STRUCTURAL ENGINEERS-
-LAND SURVEYORS-
Design Firm License No. 184-002703

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
885	6B-3	POPE	41	22
		CONTRACT NO. 78165		
		ILLINOIS FED. AID PROJECT		

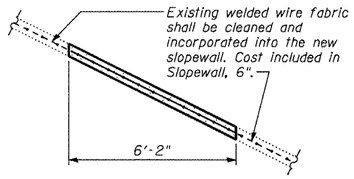
FILE NAME = ...\0760030-78165-001-gpe.dgn	USER NAME = _CFC_	DESIGNED - CME	REVISED -
		CHECKED - MCB	REVISED -
	PLOT SCALE = 32#0.002000 '# / IN.	DRAWN - CFC/MML	REVISED -
CB PROJECT NO 08056-14	PLOT DATE = 1/5/2012	CHECKED - CME	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



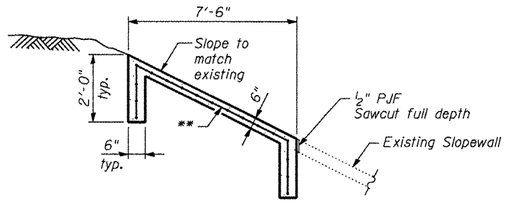
PARTIAL PLAN

SECTION B-B
(Showing Slopewall Removal)



SECTION B-B
(Showing Slopewall Replacement)

Notes:
Hatching denotes slopewall removal.
Cost of slopewall removal is included in Removal of Existing Structures.



SECTION A-A

GENERAL NOTES

Fasteners shall be AASHTO M164 Type 1, mechanically galvanized bolts in painted areas and M164 Type 3 in unpainted areas. Bolts $\frac{3}{4}$" ϕ, holes $\frac{15}{16}$" ϕ, unless otherwise noted.

Calculated weight of Structural Steel = 102,440 lbs.

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

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

Reinforcement bars designated (E) shall be epoxy coated.

Slipforming of parapets will not be allowed.

Structural steel shall only be painted for a distance equal to the depth of embedment into the concrete cap plus 3 inches. Painted areas shall be primed in the shop with a Department approved zinc rich primer. Field painting will not be required.

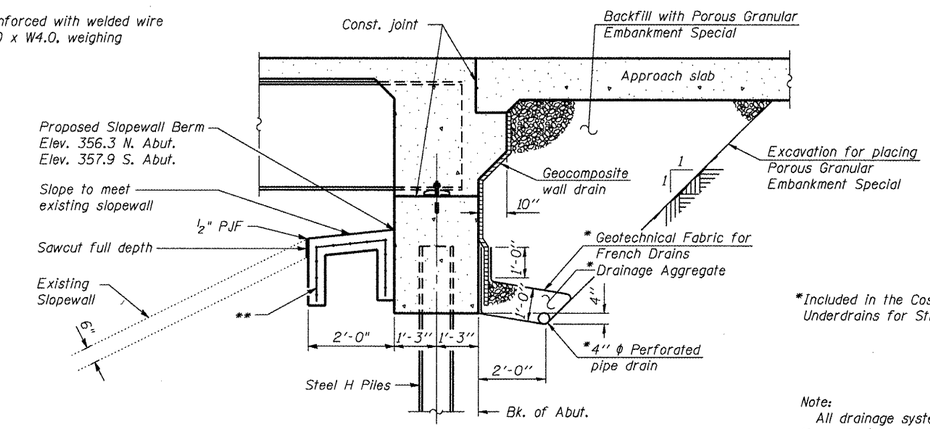
If the Contractor elects to use cantilever forming brackets on the exterior beams or girders, the brackets shall be placed at the same locations as required for the hardwood blocks in Article 503.06(b) of the Standard Specifications. If additional cantilever forming brackets are required, hardwood blocking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

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Porous Granular Embankment, Special	Cu. Yd.		142	142
Removal of Existing Structures	Each			1
Structure Excavation	Cu. Yd.		186	186
Concrete Structures	Cu. Yd.		53.4	53.4
Concrete Superstructure	Cu. Yd.	243.2		243.2
Bridge Deck Grooving	Sq. Yd.	524		524
Concrete Encasement	Cu. Yd.		4.2	4.2
Protective Coat	Sq. Yd.	664		664
Furnishing and Erecting Structural Steel	L. Sum	1		1
Stud Shear Connectors	Each	984		984
Reinforcement Bars, Epoxy Coated	Pound	50810	8850	59660
Bar Splicers	Each	586	24	610
Slopewall 6"	Sq. Yd.		106	106
Furnishing Steel Piles HP 12 x 63	Foot		366	366
Driving Piles	Foot		366	366
Pile Shoes	Each		12	12
Name Plates	Each	1		1
Anchor Bolts, 1"	Each	24		24
Geocomposite Wall Drain	Sq. Yd.		81	81
Temporary Sheet Piling	Sq. Ft.		302	302
Pipe Underdrains for Structures 4"	Foot		137	137
Temporary Support System Location 1	Each		1	1
Temporary Support System Location 2	Each		1	1

EXISTING SLOPEWALL REMOVAL AND REPLACEMENT DETAILS AT PIERS

** Slopewall shall be reinforced with welded wire fabric, 6" x 6" - W4.0 x W4.0, weighing 58 lbs. per 100 sq. ft.



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).

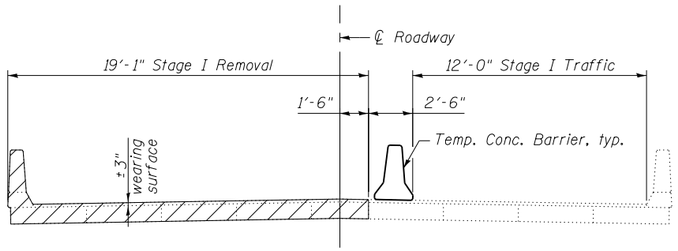
Coombe-Bloxdorf P.C.
-CIVIL ENGINEERS-
-STRUCTURAL ENGINEERS-
-LAND SURVEYORS-
Design Firm License No. 184-002703

FILE NAME = ...\0760030-78165-002-gen_data.dgn	USER NAME = _CFC.	DESIGNED -	REVISED -
		CHECKED -	REVISED -
	PLOT SCALE = 31:11.997542 '/ IN.	DRAWN - CFC/MML	REVISED -
CB PROJECT NO 08056-14	PLOT DATE = 3/5/2012	CHECKED - CME	REVISED -

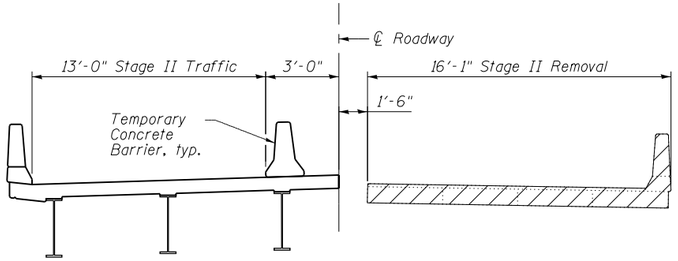
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL DATA
STRUCTURE NO. 076-0030
SHEET NO. 2 OF 20 SHEETS

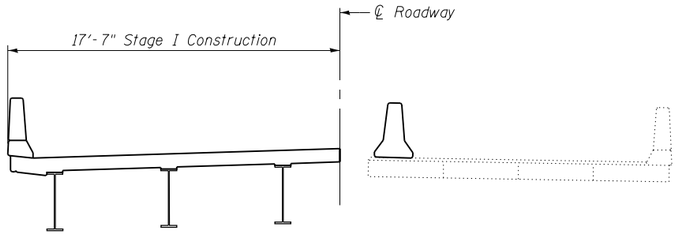
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
885	68-3	POPE	41	23
		CONTRACT NO. 78165		
		ILLINOIS FED. AID PROJECT		



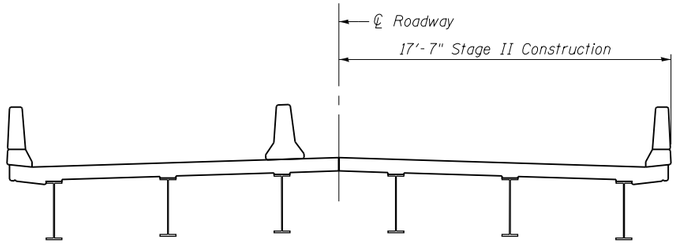
STAGE I REMOVAL
(Looking South)



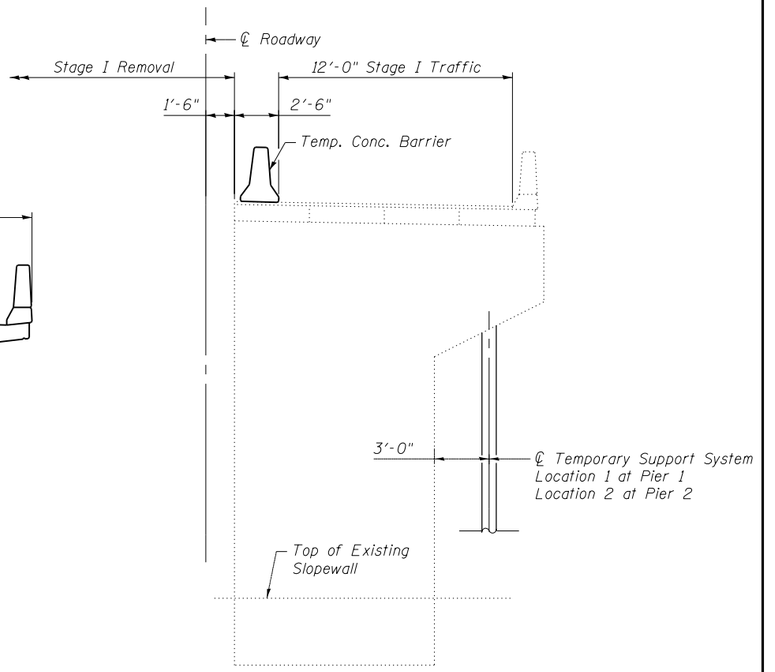
STAGE II REMOVAL
(Looking South)



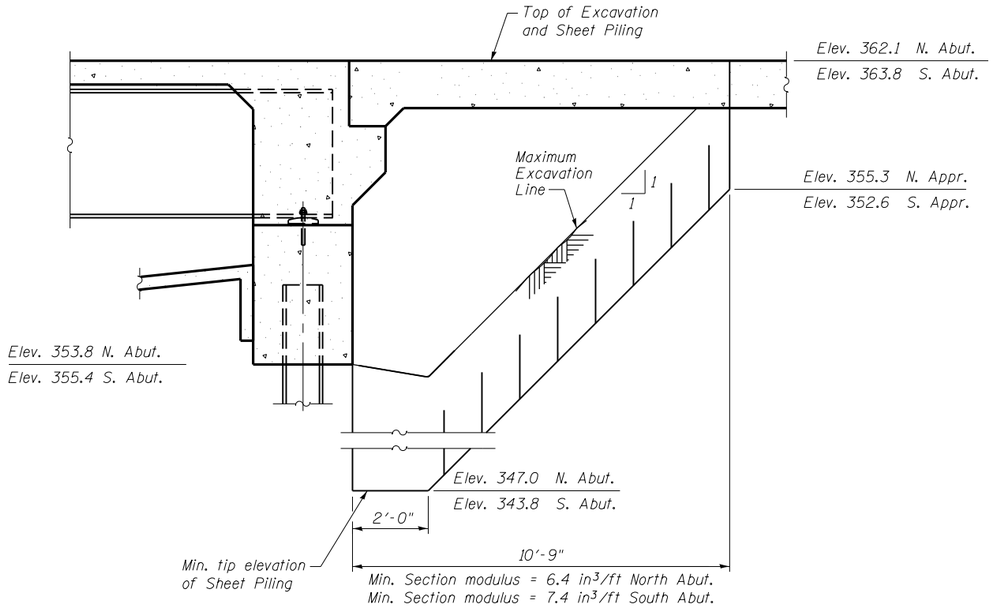
STAGE I CONSTRUCTION
(Looking South)



STAGE II CONSTRUCTION
(Looking South)



TEMPORARY SUPPORT SYSTEM AT PIERS
(Looking South)



TEMPORARY SHEET PILING

Notes:

For quantity of Temporary Concrete Barrier, see roadway plans.

Hatched area indicates Removal of Existing Structures.

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

Each temporary support shall be capable of supporting a vertical load of 250 kips and a lateral load of 25 kips.

The temporary supports shall be in place prior to Stage I Removal and shall remain in place until removal of deck beams in Stage II Removal is completed.

See Special Provisions for Temporary Support System.

Removal of Existing Temporary Bracing, located under Beam 3 in Span 1 and under Beam 2 in Span 2, is included in Removal of Existing Structures.

Coombe-Bloxdorf P.C.
-CIVIL ENGINEERS-
-STRUCTURAL ENGINEERS-
-LAND SURVEYORS-
Design Firm License No. 184-002703

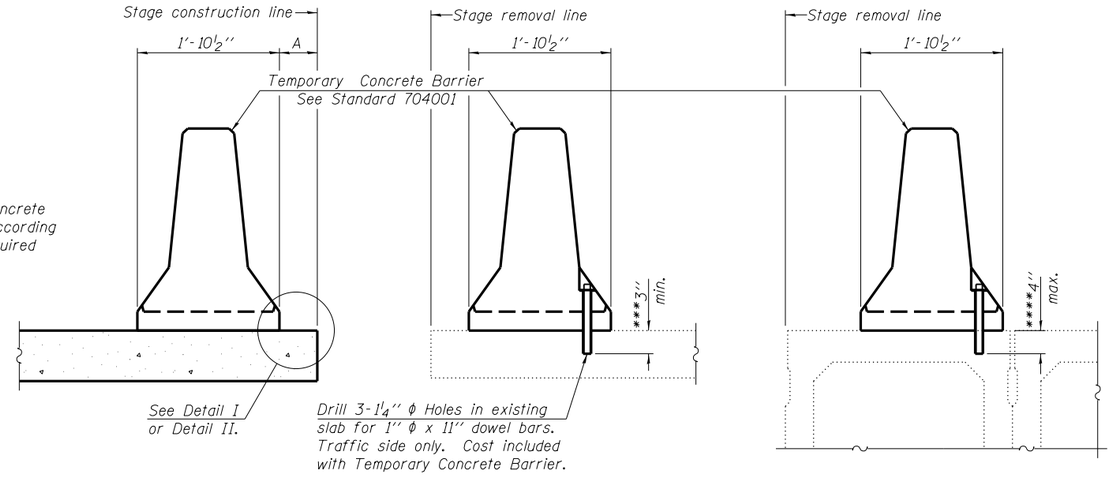
FILE NAME = c:\pw_work\pwidot\lavenderba\d0293530\D760030-78165-003-staging.dgn	USER NAME = $USER$	DESIGNED -	REVISED -
		CHECKED -	REVISED -
	PLOT SCALE = 21.3.998490 '' / in.	DRAWN - CFC/MML	REVISED -
CB PROJECT NO 08056-14	PLOT DATE = 1/23/2012	CHECKED - CME	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE CONSTRUCTION DETAILS
STRUCTURE NO. 076-0030
SHEET NO. 3 OF 20 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
885	6B-3	POPE	41	24
		CONTRACT NO. 78165		
		ILLINOIS FED. AID PROJECT		

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



NEW SLAB

EXISTING SLAB

EXISTING DECK BEAM

NOTES

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

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

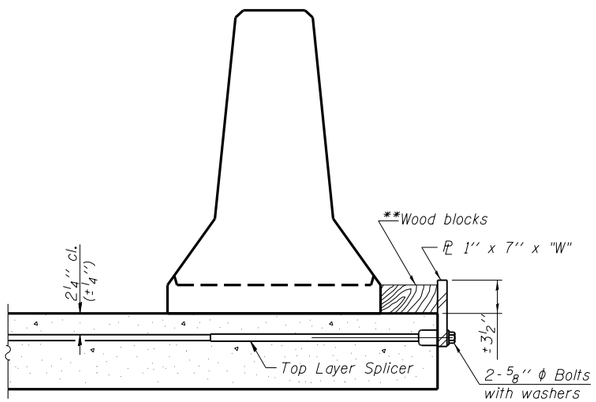
Cost of anchorage is included with Temporary Concrete Barrier.

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

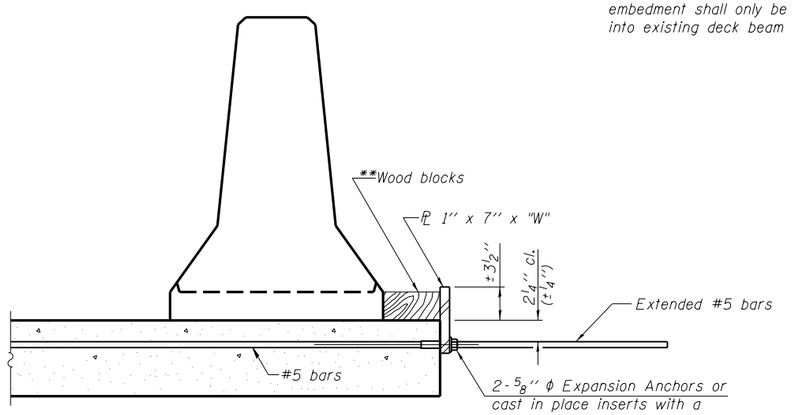
SECTIONS THRU SLAB OR DECK BEAM

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

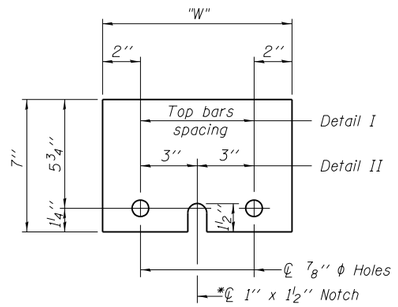
**** If existing deck beam is to remain in place after stage construction, embedment shall only be into wearing surface and not into existing deck beam concrete.



DETAIL I



DETAIL II



STEEL RETAINER ℙ 1'' x 7'' x ''W''

* Required only with Detail II

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

"W" = Top bars spacing + 4''

R-27

7-1-10

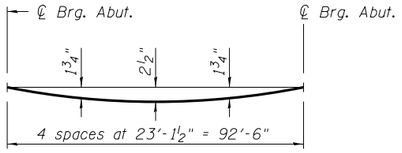
FILE NAME = c:\pw_work\pwidot\lavenderba\d0293530\I760030-78165-004-TCB.dgn	USER NAME = $USER$	DESIGNED - CME	REVISED -
		CHECKED - MCB	REVISED -
	PLOT SCALE = 0:2.000000 ':' / in.	DRAWN - CFC/MML	REVISED -
CB PROJECT NO 08056-14	PLOT DATE = 1/23/2012	CHECKED - CME	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION
STRUCTURE NO. 076-0030
SHEET NO. 4 OF 20 SHEETS

Coombe-Bloxdorf P.C.
-CIVIL ENGINEERS-
-STRUCTURAL ENGINEERS-
-LAND SURVEYORS-
Design Firm License No. 184-002703

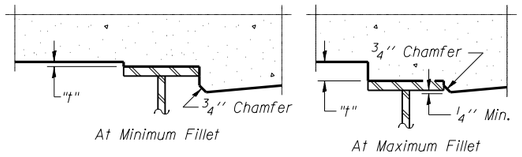
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
885	6B-3	POPE	41	25
		CONTRACT NO. 78165		
	ILLINOIS FED. AID PROJECT			



DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only.)

Note:
The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown below and on Sheet 6 of 20.



To determine "t": After all structural steel has been erected, elevations of the top flanges of the girders shall be taken at intervals shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown below and on Sheet 6 of 20, minus slab thickness, equals the fillet heights "t" above top flange of girders.

FILLET HEIGHTS

GIRDER 1

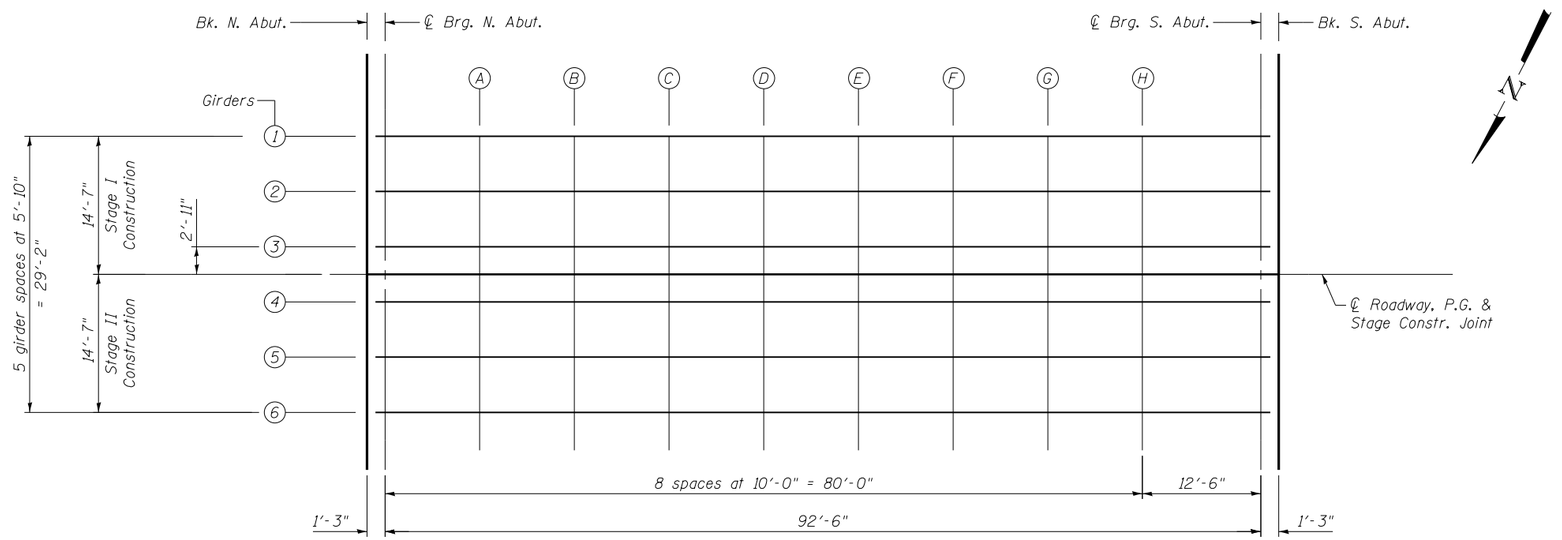
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk N Abut	137278.50	-14.58	361.90	361.90
CL Brg N Abut	137279.75	-14.58	361.91	361.91
A	137289.75	-14.58	361.98	362.05
B	137299.75	-14.58	362.08	362.21
C	137309.75	-14.58	362.20	362.37
D	137319.75	-14.58	362.34	362.54
E	137329.75	-14.58	362.51	362.72
F	137339.75	-14.58	362.70	362.89
G	137349.75	-14.58	362.92	363.07
H	137359.75	-14.58	363.17	363.25
CL Brg S Abut	137372.25	-14.58	363.50	363.50
Bk S Abut	137373.50	-14.58	363.54	363.54

GIRDER 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk N Abut	137278.50	-8.75	362.01	362.01
CL Brg N Abut	137279.75	-8.75	362.01	362.01
A	137289.75	-8.75	362.08	362.15
B	137299.75	-8.75	362.18	362.31
C	137309.75	-8.75	362.30	362.48
D	137319.75	-8.75	362.45	362.65
E	137329.75	-8.75	362.61	362.82
F	137339.75	-8.75	362.81	362.99
G	137349.75	-8.75	363.03	363.17
H	137359.75	-8.75	363.27	363.35
CL Brg S Abut	137372.25	-8.75	363.61	363.61
Bk S Abut	137373.50	-8.75	363.64	363.64

GIRDER 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk N Abut	137278.50	-2.92	362.10	362.10
CL Brg N Abut	137279.75	-2.92	362.10	362.10
A	137289.75	-2.92	362.18	362.24
B	137299.75	-2.92	362.27	362.40
C	137309.75	-2.92	362.39	362.57
D	137319.75	-2.92	362.54	362.74
E	137329.75	-2.92	362.71	362.91
F	137339.75	-2.92	362.90	363.09
G	137349.75	-2.92	363.12	363.26
H	137359.75	-2.92	363.36	363.45
CL Brg S Abut	137372.25	-2.92	363.70	363.70
Bk S Abut	137373.50	-2.92	363.74	363.74



PLAN

Coombe-Bloxdorf P.C.
-CIVIL ENGINEERS-
-STRUCTURAL ENGINEERS-
-LAND SURVEYORS-
Design Firm License No. 184-002703

FILE NAME = c:\pw_work\pwidot\lavenderba\d0293530\I760030-78165-005-TOS.dgn	USER NAME = $USER$	DESIGNED - CME	REVISED -
	PLOT SCALE = 16.0000 ' / in.	CHECKED - MCB	REVISED -
CB PROJECT NO 08056-14	PLOT DATE = 1/23/2012	DRAWN - CFC/MML	REVISED -
		CHECKED - CME	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS
STRUCTURE NO. 076-0030
SHEET NO. 5 OF 20 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
885	6B-3	POPE	41	26
		CONTRACT NO. 78165		
	ILLINOIS FED. AID PROJECT			

℄ ROADWAY, P.G. & STAGE CONSTRUCTION JOINT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk N Abut	137278.50	0.00	362.14	362.14
CL Brg N Abut	137279.75	0.00	362.15	362.15
A	137289.75	0.00	362.22	362.29
B	137299.75	0.00	362.32	362.45
C	137309.75	0.00	362.44	362.61
D	137319.75	0.00	362.58	362.79
E	137329.75	0.00	362.75	362.96
F	137339.75	0.00	362.95	363.13
G	137349.75	0.00	363.16	363.31
H	137359.75	0.00	363.41	363.49
CL Brg S Abut	137372.25	0.00	363.75	363.75
Bk S Abut	137373.50	0.00	363.78	363.78

GIRDER 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk N Abut	137278.50	2.92	362.10	362.10
CL Brg N Abut	137279.75	2.92	362.10	362.10
A	137289.75	2.92	362.18	362.24
B	137299.75	2.92	362.27	362.40
C	137309.75	2.92	362.39	362.57
D	137319.75	2.92	362.54	362.74
E	137329.75	2.92	362.71	362.91
F	137339.75	2.92	362.90	363.09
G	137349.75	2.92	363.12	363.26
H	137359.75	2.92	363.36	363.45
CL Brg S Abut	137372.25	2.92	363.70	363.70
Bk S Abut	137373.50	2.92	363.74	363.74

GIRDER 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk N Abut	137278.50	8.75	362.01	362.01
CL Brg N Abut	137279.75	8.75	362.01	362.01
A	137289.75	8.75	362.08	362.15
B	137299.75	8.75	362.18	362.31
C	137309.75	8.75	362.30	362.48
D	137319.75	8.75	362.45	362.65
E	137329.75	8.75	362.61	362.82
F	137339.75	8.75	362.81	362.99
G	137349.75	8.75	363.03	363.17
H	137359.75	8.75	363.27	363.35
CL Brg S Abut	137372.25	8.75	363.61	363.61
Bk S Abut	137373.50	8.75	363.64	363.64

GIRDER 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk N Abut	137278.50	14.58	361.90	361.90
CL Brg N Abut	137279.75	14.58	361.91	361.91
A	137289.75	14.58	361.98	362.05
B	137299.75	14.58	362.08	362.21
C	137309.75	14.58	362.20	362.37
D	137319.75	14.58	362.34	362.54
E	137329.75	14.58	362.51	362.72
F	137339.75	14.58	362.70	362.89
G	137349.75	14.58	362.92	363.07
H	137359.75	14.58	363.17	363.25
CL Brg S Abut	137372.25	14.58	363.50	363.50
Bk S Abut	137373.50	14.58	363.54	363.54

Coombe-Bloxdorf P.C.
-CIVIL ENGINEERS-
-STRUCTURAL ENGINEERS-
-LAND SURVEYORS-
Design Firm License No. 184-002703

FILE NAME = c:\pw_work\pwidot\lavenderba\d0293530\D760030-78165-006-TOS.dgn	USER NAME = $USER$	DESIGNED - CME	REVISED -
	PLOT SCALE = 0:2.000001 ':' / in.	CHECKED - MCB	REVISED -
CB PROJECT NO 08056-14	PLOT DATE = 1/23/2012	DRAWN - CFC/MML	REVISED -
		CHECKED - CME	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS
STRUCTURE NO. 076-0030
SHEET NO. 6 OF 20 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
885	6B-3	POPE	41	27
		CONTRACT NO. 78165		
	ILLINOIS FED. AID PROJECT			

EAST EDGE OF SHOULDER

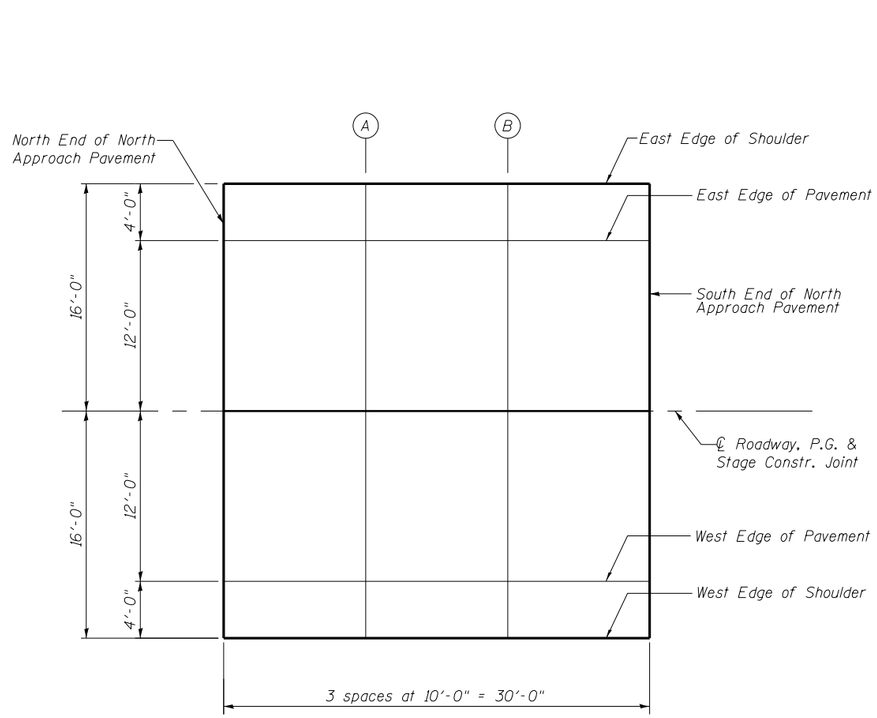
Location	Station	Offset	Theoretical Grade Elevations
N. End N. Approach	137248.50	-16.00	361.81
A	137258.50	-16.00	361.81
B	137268.50	-16.00	361.83
S. End N. Approach	137278.50	-16.00	361.87

EAST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
N. End N. Approach	137248.50	-12.00	361.90
A	137258.50	-12.00	361.89
B	137268.50	-12.00	361.91
S. End N. Approach	137278.50	-12.00	361.96

℄ ROADWAY, P.G. & STAGE CONSTR. JT.

Location	Station	Offset	Theoretical Grade Elevations
N. End N. Approach	137248.50	0.00	362.09
A	137258.50	0.00	362.08
B	137268.50	0.00	362.10
S. End N. Approach	137278.50	0.00	362.14



PLAN

WEST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
N. End N. Approach	137248.50	12.00	361.90
A	137258.50	12.00	361.89
B	137268.50	12.00	361.91
S. End N. Approach	137278.50	12.00	361.96

WEST EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
N. End N. Approach	137248.50	16.00	361.81
A	137258.50	16.00	361.81
B	137268.50	16.00	361.83
S. End N. Approach	137278.50	16.00	361.87

E-AS 7-1-10

FILE NAME = c:\pw_work\pwidot\lavenderba\d0293530\0760830-78165-007-TOS_n_appr.dgn	USER NAME = $USER$	DESIGNED - CME	REVISED -
	PLOT SCALE = 10.000116 '' / in.	CHECKED - MCB	REVISED -
CB PROJECT NO 08056-14	PLOT DATE = 1/23/2012	DRAWN - CFC/MML	REVISED -
		CHECKED - CME	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF NORTH APPROACH SLAB ELEVATIONS
STRUCTURE NO. 076-0030
SHEET NO. 7 OF 20 SHEETS

Coombe-Bloxdorf P.C.
-CIVIL ENGINEERS-
-STRUCTURAL ENGINEERS-
-LAND SURVEYORS-
Design Firm License No. 184-002703

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
885	6B-3	POPE	41	28
		CONTRACT NO. 78165		
	ILLINOIS FED. AID PROJECT			

EAST EDGE OF SHOULDER

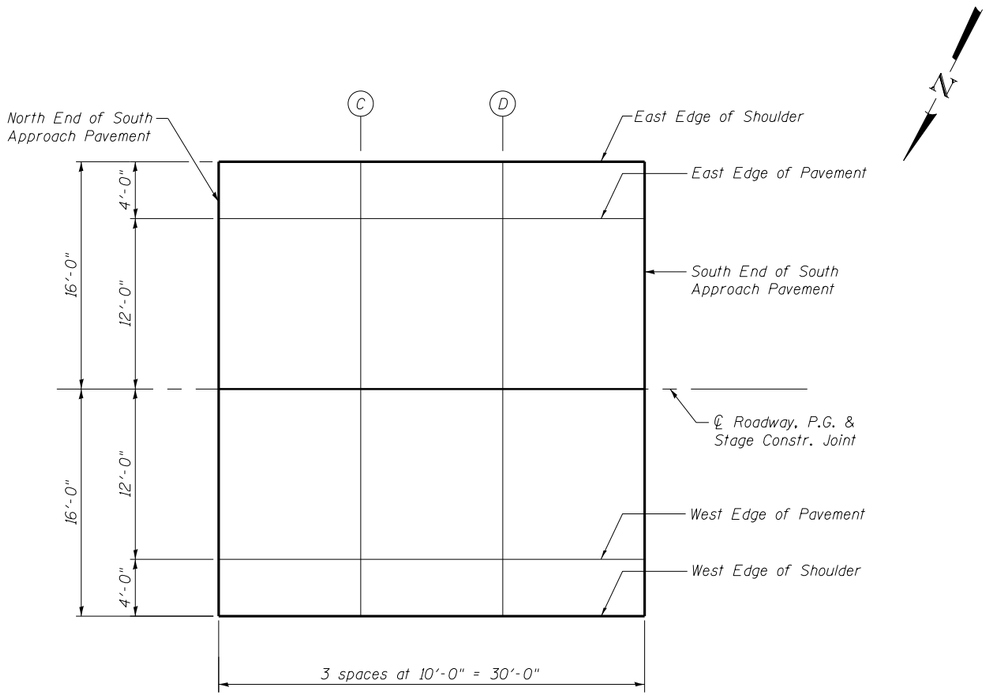
Location	Station	Offset	Theoretical Grade Elevations
N End S Approach	137373.50	-16.00	363.51
C	137383.50	-16.00	363.81
D	137393.50	-16.00	364.14
S End S Approach	137403.50	-16.00	364.49

EAST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
N End S Approach	137373.50	-12.00	363.59
C	137383.50	-12.00	363.90
D	137393.50	-12.00	364.22
S End S Approach	137403.50	-12.00	364.57

℄ ROADWAY, P.G. & STAGE CONSTR. JT.

Location	Station	Offset	Theoretical Grade Elevations
N End S Approach	137373.50	0.00	363.78
C	137383.50	0.00	364.08
D	137393.50	0.00	364.41
S End S Approach	137403.50	0.00	364.76



PLAN
South Approach

WEST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
N End S Approach	137373.50	12.00	363.59
C	137383.50	12.00	363.90
D	137393.50	12.00	364.22
S End S Approach	137403.50	12.00	364.57

WEST EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
N End S Approach	137373.50	16.00	363.51
C	137383.50	16.00	363.81
D	137393.50	16.00	364.14
S End S Approach	137403.50	16.00	364.49

E-AS 7-1-10

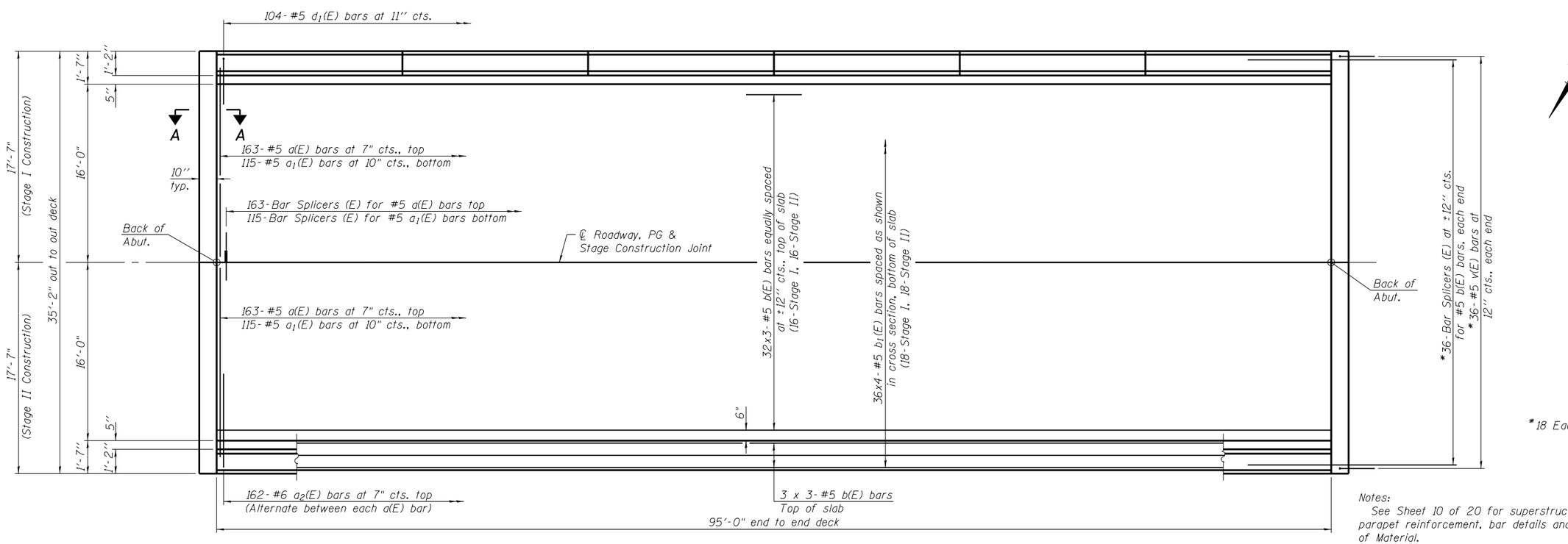
FILE NAME = c:\pw_work\pwidot\lavenderba\d0293530\D760830-78165-008-TOS_S_appr.dgn	USER NAME = $USER$	DESIGNED - CME	REVISED -
	PLOT SCALE = 10.000116 ' / in.	CHECKED - MCB	REVISED -
CB PROJECT NO 08056-14	PLOT DATE = 1/23/2012	DRAWN - CFC/MML	REVISED -
		CHECKED - CME	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SOUTH APPROACH SLAB ELEVATIONS
STRUCTURE NO. 076-0030
SHEET NO. 8 OF 20 SHEETS

Coombe-Bloxdorf P.C.
-CIVIL ENGINEERS-
-STRUCTURAL ENGINEERS-
-LAND SURVEYORS-
Design Firm License No. 184-002703

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
885	6B-3	POPE	41	29
		CONTRACT NO. 78165		
	ILLINOIS FED. AID PROJECT			



PLAN

Notes:

See Sheet 10 of 20 for superstructure details, parapet reinforcement, bar details and Bill of Material.

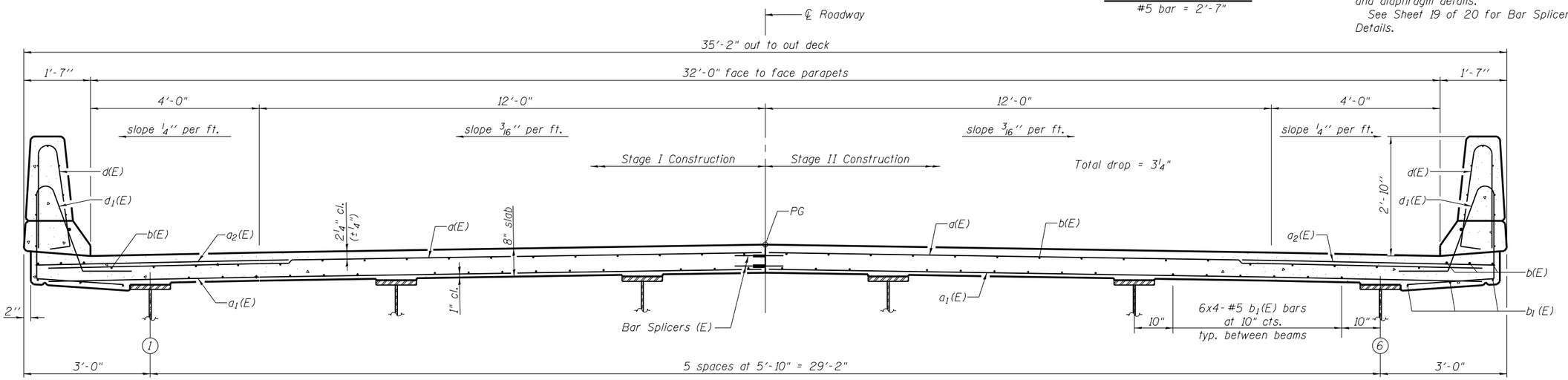
Bars indicated thus 32 x 3-#5 etc. indicates 32 lines of bars with 3 lengths per line.

See Sheet 11 of 20 for Section A-A and diaphragm details.

See Sheet 19 of 20 for Bar Splicer Assembly Details.

MINIMUM BAR LAP

#5 bar = 2'-7"



CROSS SECTION

(Looking South)

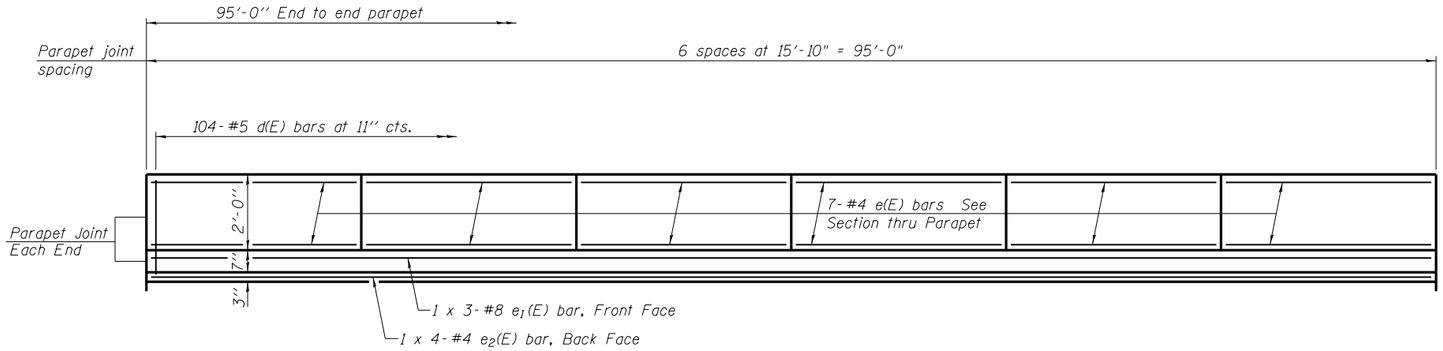
Coombe-Bloxdorf P.C.
-CIVIL ENGINEERS-
-STRUCTURAL ENGINEERS-
-LAND SURVEYORS-
Design Firm License No. 184-002703

FILE NAME = c:\pw_work\pwidot\lavenderba\d0293530\D760030-78165-009-superstructure.dgn	USER NAME = $USER$	DESIGNED - CME	REVISED -
		CHECKED - MCB	REVISED -
	PLOT SCALE = 0:2.000002 ' / in.	DRAWN - CFC/MML	REVISED -
CB PROJECT NO 08056-14	PLOT DATE = 1/23/2012	CHECKED - CME	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE
STRUCTURE NO. 076-0030
SHEET NO. 9 OF 20 SHEETS

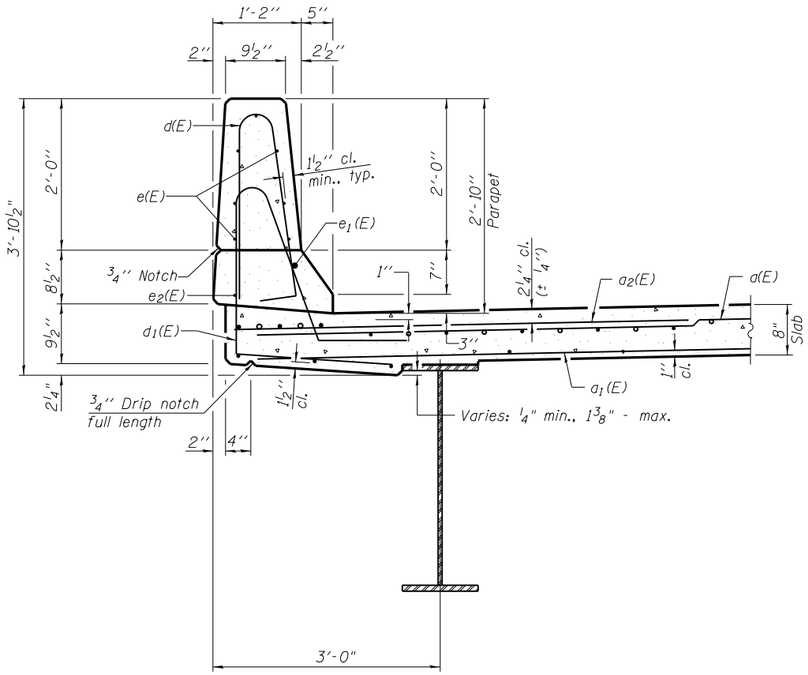
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
885	6B-3	POPE	41	30
		CONTRACT NO. 78165		
		ILLINOIS FED. AID PROJECT		



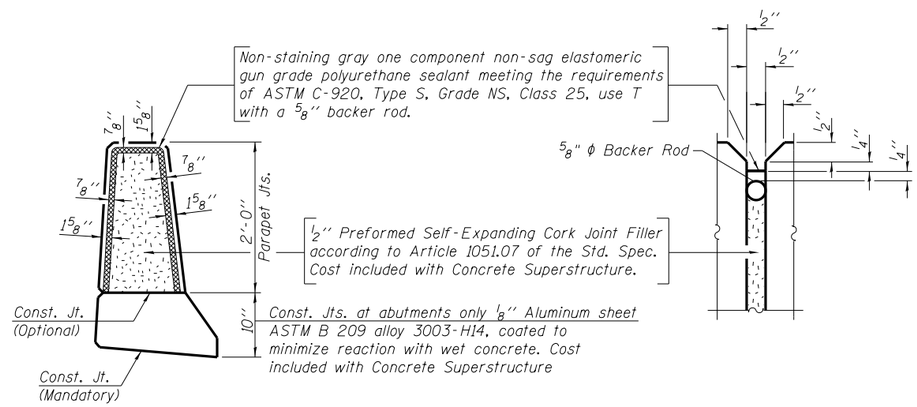
INSIDE ELEVATION OF PARAPET

MINIMUM BAR LAP

(Parapet)
#4 bar = 2'-0"
#8 bar = 5'-2"

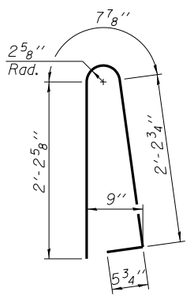


SECTION THRU PARAPET

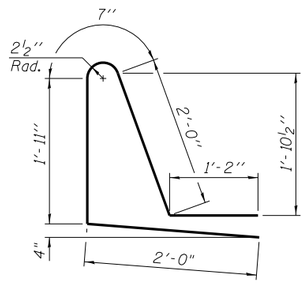


PARAPET JOINT DETAILS

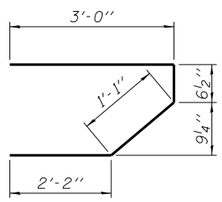
BAR s1(E)



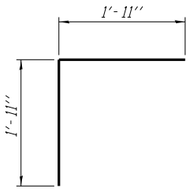
BAR d(E)



BAR d1(E)



BAR s(E)



BAR v(E)

SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	326	#5	16'-11"	——
a1(E)	230	#5	16'-7"	——
a2(E)	324	#6	6'-6"	——
b(E)	114	#5	33'-4"	——
b1(E)	144	#5	25'-8"	——
d(E)	208	#5	5'-7"	⌊
d1(E)	208	#5	7'-8"	⌊
e(E)	84	#4	15'-6"	——
e1(E)	6	#8	35'-0"	——
e2(E)	8	#4	25'-2"	——
m(E)	20	#6	17'-3"	——
m1(E)	24	#6	8'-0"	——
m2(E)	8	#6	5'-6"	——
m3(E)	8	#6	2'-7"	——
s(E)	92	#5	6'-10"	⊐
s1(E)	82	#4	11'-4"	⊔
v(E)	72	#5	3'-10"	⌐
Reinforcement Bars, Epoxy Coated			Pound	27620
Concrete Superstructure			Cu. Yds.	137.5
Bar Splicers			Each	364

Bars indicated thus 1 x 4 - #4 etc. indicates 1 line of bars with 4 lengths per line.

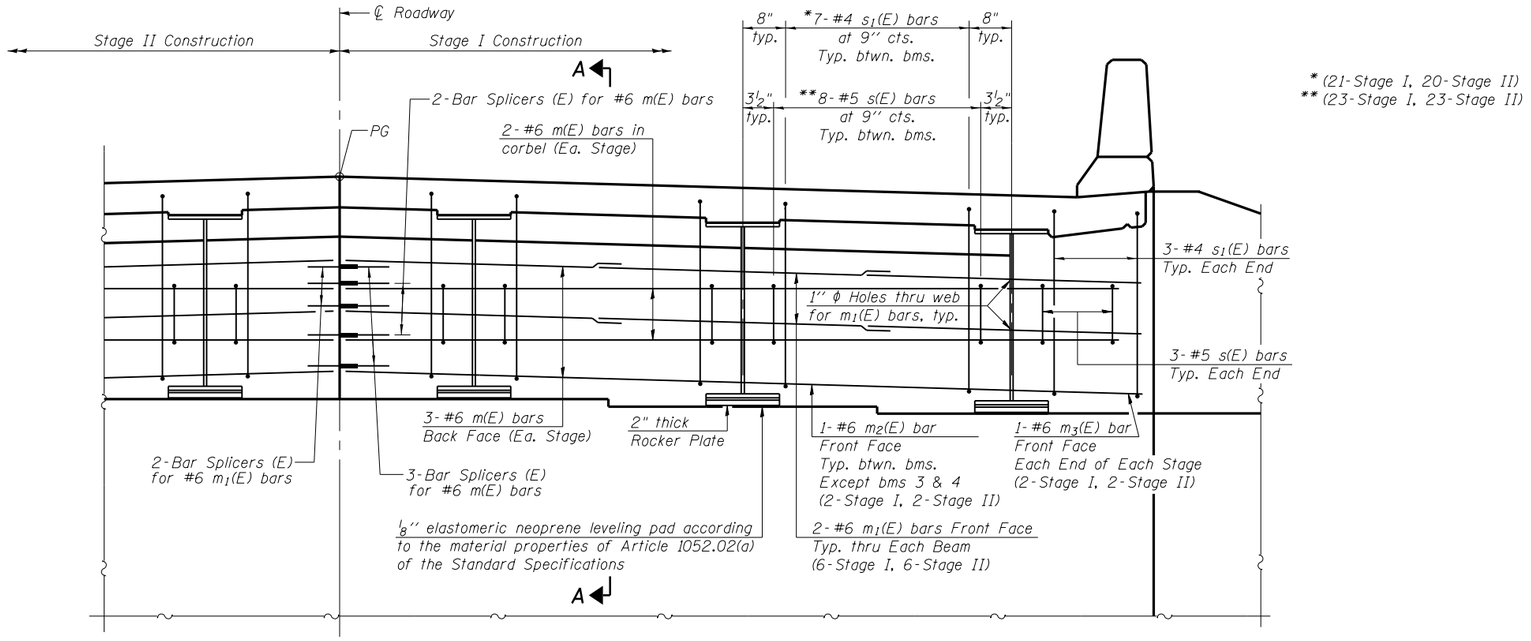
Coombe-Bloxdorf P.C.
-CIVIL ENGINEERS-
-STRUCTURAL ENGINEERS-
-LAND SURVEYORS-
Design Firm License No. 184-002703

FILE NAME = c:\pw_work\pwidot\lavenderba\d0293530\0760030-78165-010-superstr_det.dgn	USER NAME = $USER$	DESIGNED - CME	REVISED -
	PLOT SCALE = 0:2.000002 ' / in.	CHECKED - MCB	REVISED -
CB PROJECT NO 08056-14	PLOT DATE = 1/23/2012	DRAWN - CFC/MML	REVISED -
		CHECKED - CME	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE DETAILS
STRUCTURE NO. 076-0030
SHEET NO. 10 OF 20 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
885	6B-3	POPE	41	31
		CONTRACT NO. 78165		
	ILLINOIS FED. AID PROJECT			



DIAPHRAGM ELEVATION AT ABUTMENT

(Looking North at N. Abutment)

Notes:

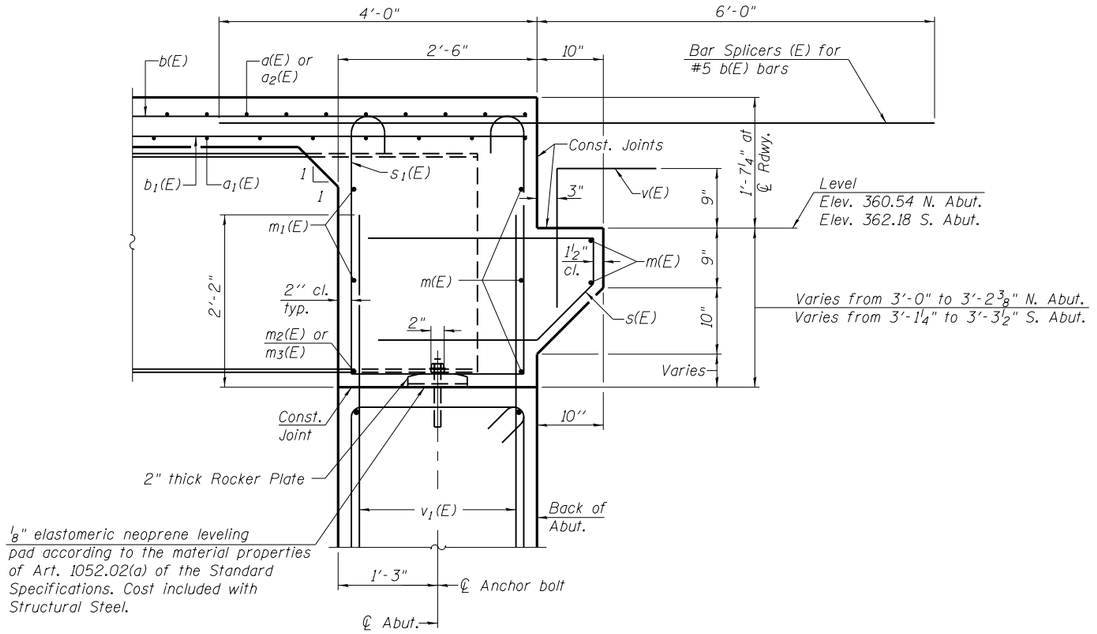
Reinforcement bars in diaphragm are billed with superstructure on sheet 10 of 20.

Concrete in diaphragm is included with Concrete Superstructure on sheet 10 of 20 .

For details of bars s(E), s_1(E) & v(E), see sheet 10 of 20.

MIN. BAR LAP

#6 bar = 3'-4"



SECTION A-A

Coombe-Bloxdorf P.C.
-CIVIL ENGINEERS-
-STRUCTURAL ENGINEERS-
-LAND SURVEYORS-
Design Firm License No. 184-002703

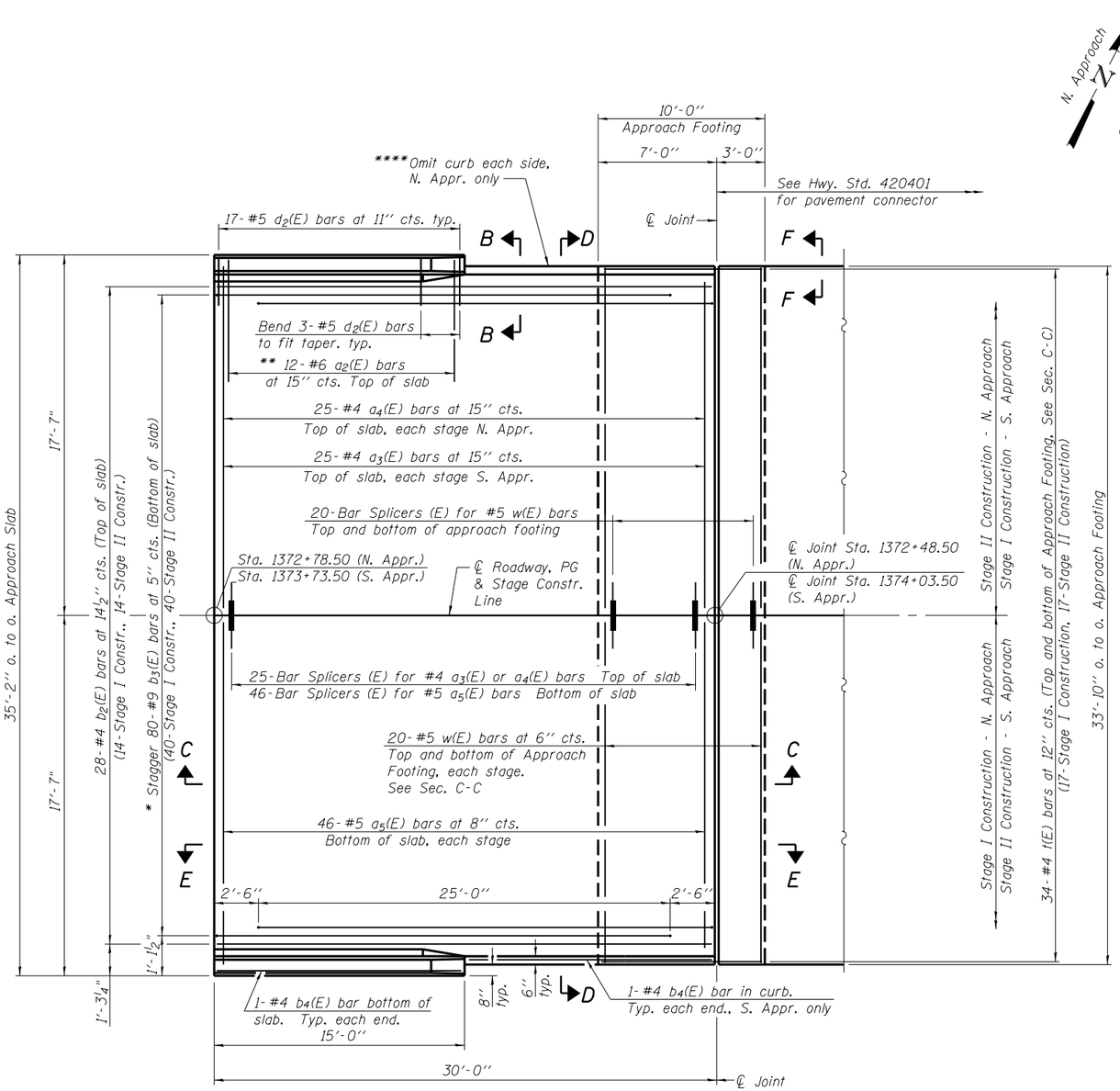
FILE NAME = c:\pw_work\pwidot\lavenderba\d0293530\0760030-78165-011-diaphragm.dgn	USER NAME = $USER$	DESIGNED - CME	REVISED -
		CHECKED - MCB	REVISED -
	PLOT SCALE = 0:2.000002 ':' / in.	DRAWN - CFC/MML	REVISED -
CB PROJECT NO 08056-14	PLOT DATE = 1/23/2012	CHECKED - CME	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

INTEGRAL ABUTMENT DIAPHRAGM DETAILS
STRUCTURE NO. 076-0030
SHEET NO. 11 OF 20 SHEETS

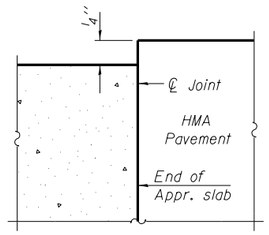
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
885	6B-3	POPE	41	32
		CONTRACT NO. 78165		
	ILLINOIS FED. AID PROJECT			

Notes:
See sheet 13 of 20 for Sections C-C & D-D and View E-E.
See sheet 19 of 20 for Bar Splicer Assembly Details.
Threaded couplers for Bar Splicer Assembly shall be installed in Stage I Construction.

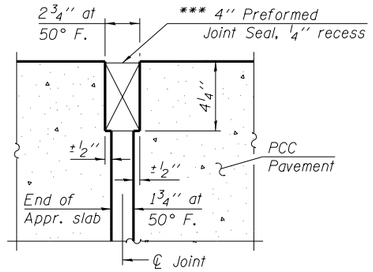


PLAN

*** Cost included with Concrete Superstructure.

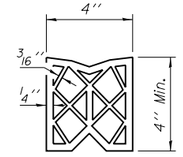


FLEXIBLE PAVEMENT

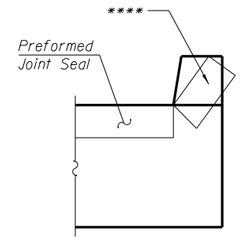


RIGID PAVEMENT

DETAIL A

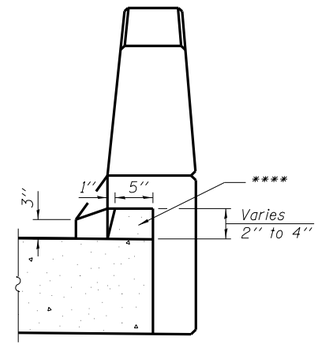


PREFORMED JOINT SEAL



VIEW F-F

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



VIEW B-B

* Tilt #9 b_3(E) bars as required to maintain clearance.
** Space between a_3(E) or a_4(E) bars, typ. ea. parapet.

(Sheet 1 of 2)

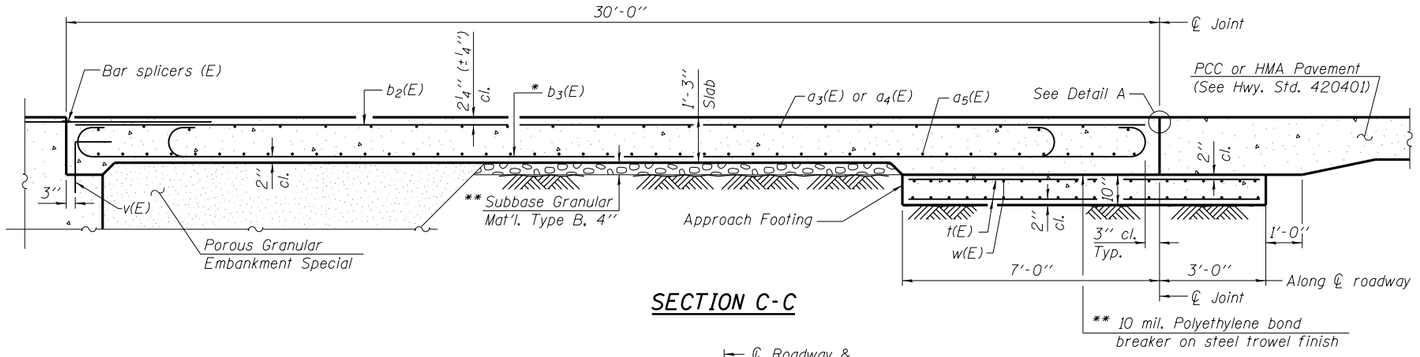
Coombe-Bloxdorf P.C.
-CIVIL ENGINEERS-
-STRUCTURAL ENGINEERS-
-LAND SURVEYORS-
Design Firm License No. 184-002703

FILE NAME = c:\pw_work\pwidot\lavenderba\d0293530\0760030-78165-012-appr-slabl.dgn	USER NAME = $USER$	DESIGNED - CME	REVISED -
		CHECKED - MCB	REVISED -
	PLOT SCALE = 0:2.000002 ':' / in.	DRAWN - CFC/MML	REVISED -
CB PROJECT NO 08056-14	PLOT DATE = 1/23/2012	CHECKED - CME	REVISED -

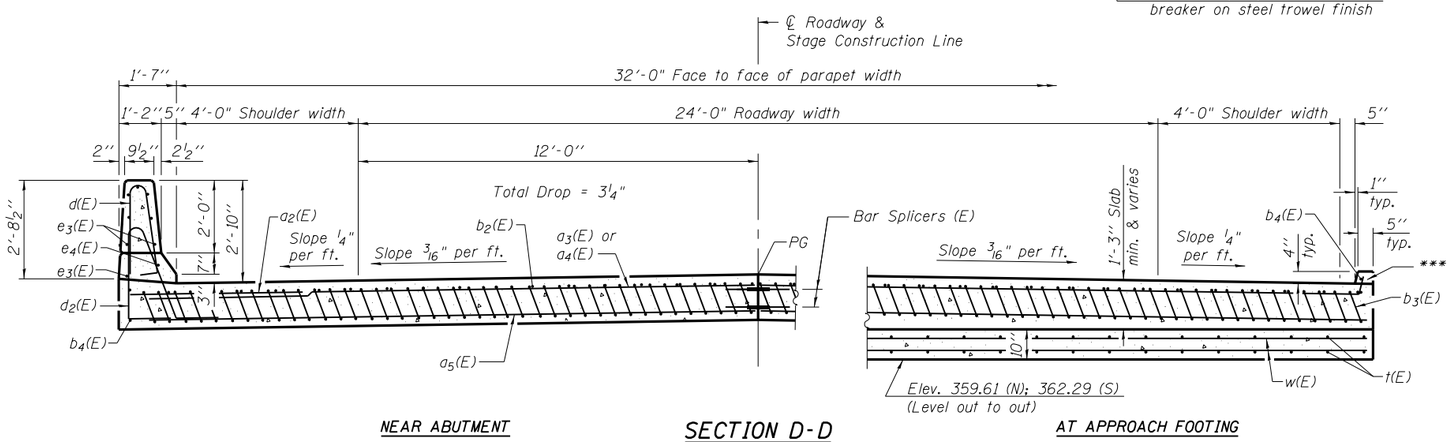
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BRIDGE APPROACH SLAB DETAILS
STRUCTURE NO. 076-0030
SHEET NO. 12 OF 20 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
885	6B-3	POPE	41	33
		CONTRACT NO. 78165		
	ILLINOIS FED. AID PROJECT			



SECTION C-C

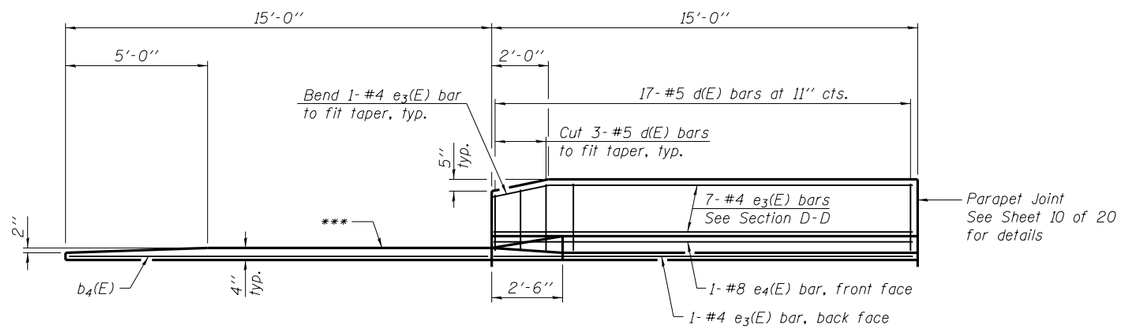


NEAR ABUTMENT

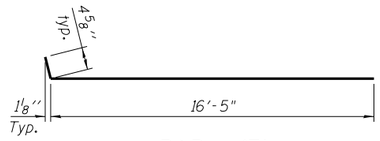
SECTION D-D

(See Plan for dimensions not shown)

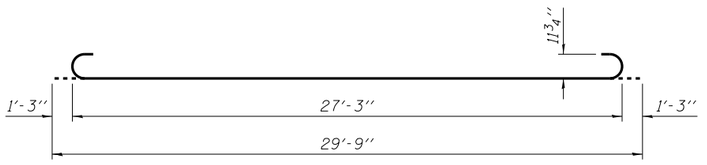
AT APPROACH FOOTING



VIEW E-E



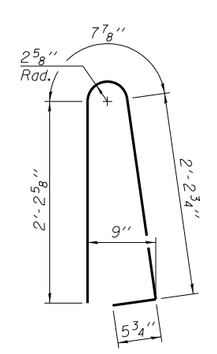
BAR a3(E)



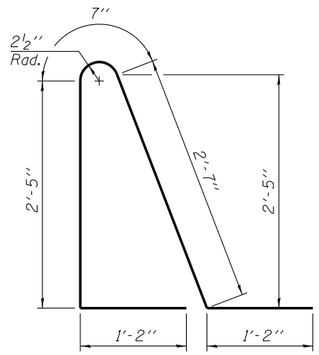
BAR b3(E)

Notes:

See sheet 12 of 20 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 10 of 20.
The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.
For bar splicer details, see sheet 19 of 20.
Threaded couplers for Bar Splicer Assembly shall be installed in Stage I Construction.
Cost of excavation for approach footing included with Concrete Structures.
For Porous Granular Embankment Special and drainage treatment details, see sheet 2 of 20.
For additional parapet details, see sheet 10 of 20.



BAR d(E)



BAR d2(E)

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

** Cost included with Concrete Superstructure.

*** Omit curb each side, N. Appr. only

TWO APPROACHES BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a2(E)	48	#6	6'-6"	
a3(E)	50	#4	16'-10"	
a4(E)	50	#4	16'-5"	
a5(E)	184	#5	16'-5"	
b2(E)	56	#4	29'-8"	
b3(E)	160	#9	29'-9"	
b4(E)	6	#4	14'-8"	
d(E)	68	#5	5'-7"	
d2(E)	68	#5	7'-11"	
e3(E)	32	#4	14'-8"	
e4(E)	4	#8	14'-8"	
t(E)	136	#4	9'-8"	
w(E)	160	#5	16'-7"	
Concrete Superstructure			Cu. Yd.	105.7
Concrete Structures			Cu. Yd.	20.8
**** Reinforcement Bars, Epoxy Coated			Pound	26840
Bar Splicers			Cu. Yd.	222

**** 23,190 (Superstructure)
3650 (Substructure)

Coombe-Bloxdorf P.C.
-CIVIL ENGINEERS-
-STRUCTURAL ENGINEERS-
-LAND SURVEYORS-
Design Firm License No. 184-002703

FILE NAME = c:\pw_work\pwidot\lavenderba\d0293530\0760030-78165-013-appr-slab2.dgn	USER NAME = $USER$	DESIGNED - CME	REVISED -
	PLOT SCALE = 0:2.000002 ':' / in.	CHECKED - MCB	REVISED -
CB PROJECT NO 08056-14	PLOT DATE = 1/23/2012	DRAWN - CFC/MML	REVISED -
		CHECKED - CME	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BRIDGE APPROACH SLAB DETAILS
STRUCTURE NO. 076-0030
SHEET NO. 13 OF 20 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
885	6B-3	POPE	41	34
		CONTRACT NO. 78165		
	ILLINOIS FED. AID PROJECT			

TOP OF WEB ELEVATIONS

(for fabrication only)

Location	Girder 1	Girder 2	Girder 3	Girder 4	Girder 5	Girder 6
℄ N. Abut.	361.07	361.18	361.27	361.27	361.18	361.07
℄ S. Abut.	362.67	362.77	362.87	362.87	362.77	362.67

INTERIOR GIRDER MOMENT TABLE		
		0.5 Sp. 1
I_s	(in^4)	15174
$I_c(n)$	(in^4)	37961
$I_c(3n)$	(in^4)	27396
S_s	(in^3)	802
$S_c(n)$	(in^3)	1067
$S_c(3n)$	(in^3)	981
DC1	(k/')	0.79
M_{DC1}	('k)	845
DC2	(k/')	0.15
M_{DC2}	('k)	160
DW	(k/')	0.27
M_{DW}	('k)	289
M_{L+IM}	('k)	1296
M_u (Strength I)	('k)	3958
$\phi_f M_n$	('k)	5146
f_s DC1	(ksi)	12.6
f_s DC2	(ksi)	2.0
f_s DW	(ksi)	3.5
f_s (L+IM)	(ksi)	14.6
f_s (Service II)	(ksi)	37.1
$0.95R_hF_{yf}$	(ksi)	47.5
Vf	(k)	24.7

INTERIOR GIRDER REACTION TABLE		
		Abutment
R_{DC1}	(k)	36.5
R_{DC2}	(k)	6.9
R_{DW}	(k)	12.5
R_{L+IM}	(k)	76.7
R_{Total}	(k)	132.6

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) in uncracked sections, 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) in uncracked sections, due to long-term composite (superimposed) dead loads ($in.^4$ and $in.^3$).

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.).

f_s DC1: Un-factored stress at edge of flange for controlling steel flange due to vertical non-composite dead loads as calculated below (ksi).
M_{DC1} / S_{nc}

f_s DC2: Un-factored stress at edge of flange for controlling steel flange due to vertical composite dead loads as calculated below (ksi).
M_{DC2} / $S_c(3n)$ or M_{DC2} / $S_c(cr)$ as applicable.

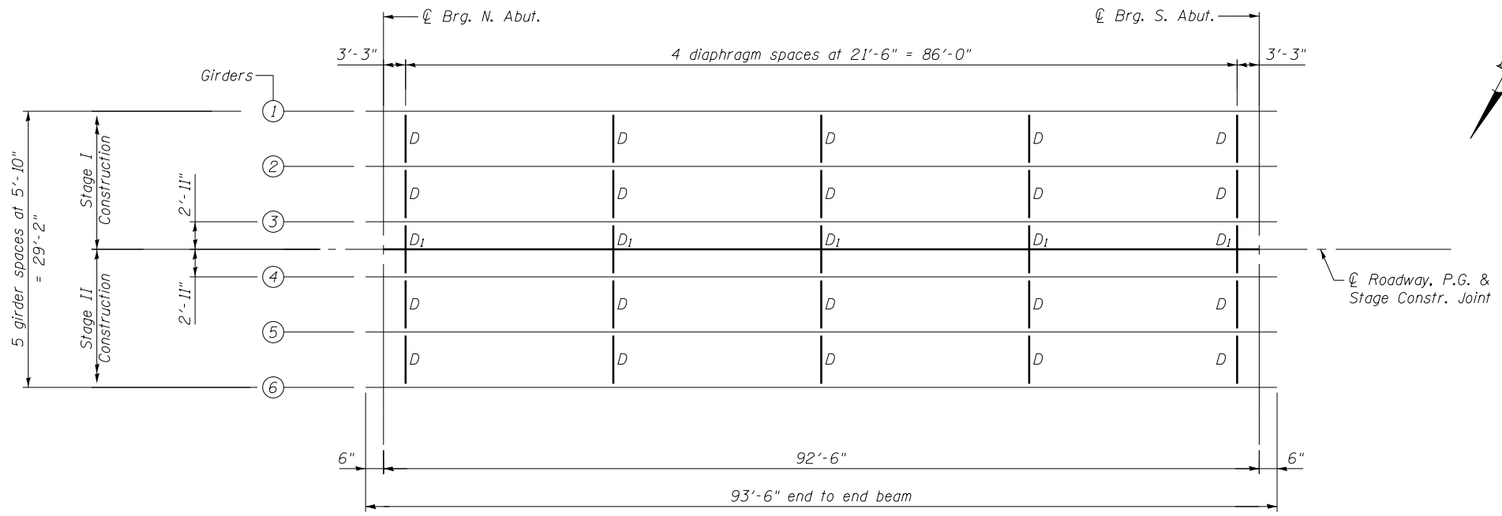
f_s DW: Un-factored stress at edge of flange for controlling steel flange due to vertical composite future wearing surface loads as calculated below (ksi).
M_{DW} / $S_c(3n)$ or M_{DW} / $S_c(cr)$ as applicable.

f_s (L+IM): Un-factored stress at edge of flange for controlling steel flange due to vertical composite live plus impact loads as calculated below (ksi).
M_{L+IM} / $S_c(n)$ or M_{L+IM} / $S_c(cr)$ as applicable.

f_s (Service II): Sum of stresses as computed below (ksi).
f_{sDC1} + f_{sDC2} + f_{sDW} + 1.3 f_s(L+IM)

$0.95R_hF_yf$: Composite stress capacity for Service II loading according to Article 6.10.4.2 (ksi).

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



PLAN

See Sheet 15 of 20 for Structural Steel Details

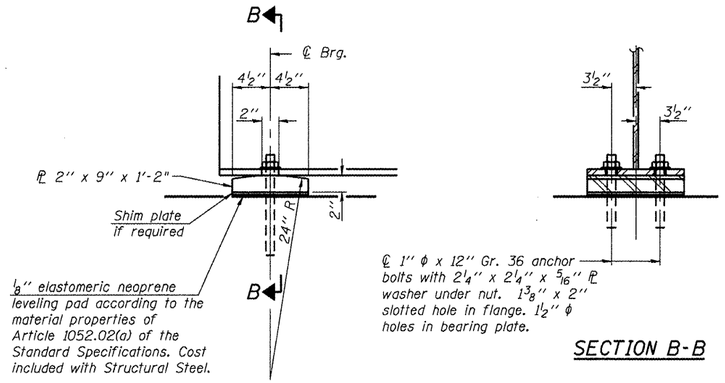
Coombe-Bloxdorf P.C.
-CIVIL ENGINEERS-
-STRUCTURAL ENGINEERS-
-LAND SURVEYORS-
Design Firm License No. 184-002703

FILE NAME = c:\pw_work\pwidot\lavenderba\d0293530\0760030-78165-014-framing-det.dgn	USER NAME = $USER$	DESIGNED - CME	REVISED -
		CHECKED - MCB	REVISED -
	PLOT SCALE = 16.0000174 '/ in.	DRAWN - CFC/MML	REVISED -
CB PROJECT NO 08056-14	PLOT DATE = 1/23/2012	CHECKED - CME	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FRAMING PLAN
STRUCTURE NO. 076-0030
SHEET NO. 14 OF 20 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
885	6B-3	POPE	41	35
		CONTRACT NO. 78165		
	ILLINOIS FED. AID PROJECT			



ELEVATION AT ABUTMENT

SECTION B-B

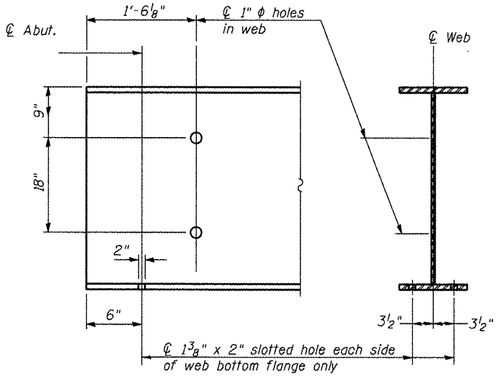
FIXED BEARING

Notes:

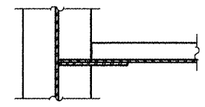
Anchor bolts shall be ASTM F1554 all-thread (or an Engineer approved alternate material) of the grade(s) and diameter(s) specified. The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.

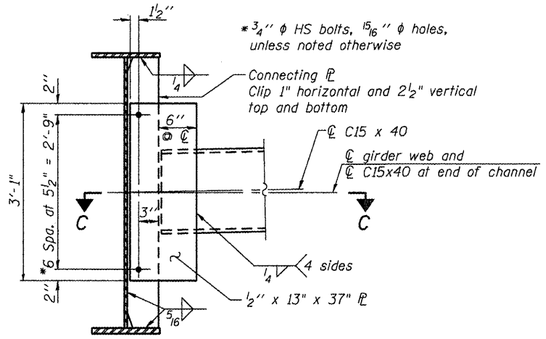
Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.



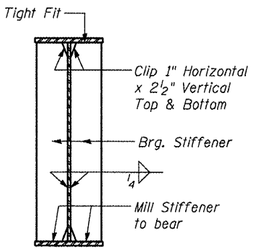
END OF GIRDER DETAIL
(Showing required hole locations)



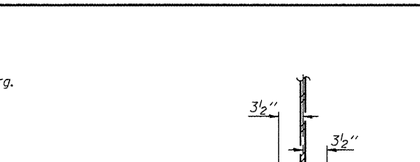
SECTION C-C



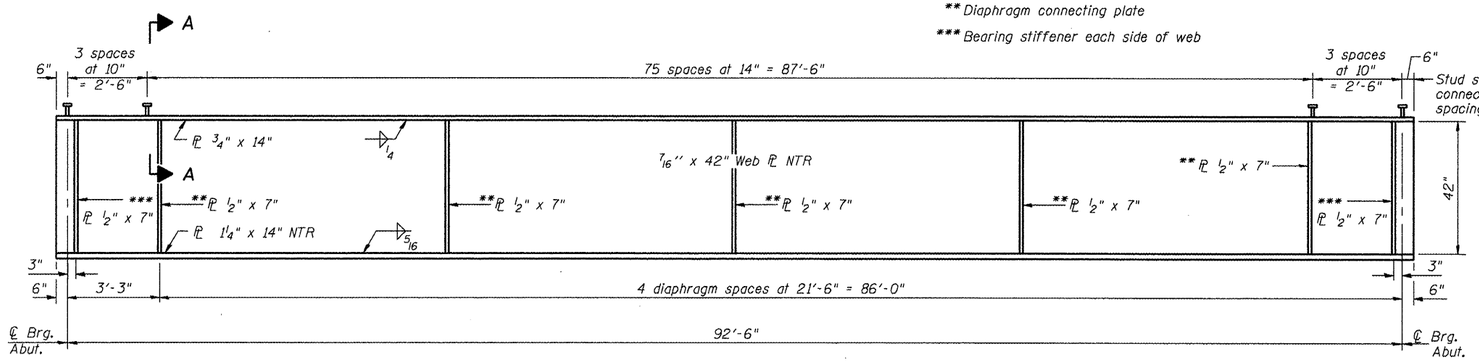
INTERIOR DIAPHRAGMS D & D_1
(25 req'd: 20 - D, 5 - D_1)



SECTION AT ABUTMENT



SECTION A-A



SECTION A-A

** Diaphragm connecting plate

*** Bearing stiffener each side of web

Load carry components designated "NTR" shall conform to the Impact Testing Requirements, Zone 2.

Notes:

Two hardened washers required for each set of oversized and slotted holes.

Alternate channels C15x50 are permitted to facilitate material acquisition. Calculated weight of structural steel is based on C15x40 sections. The alternate, if utilized, shall be provided at no extra cost to the department.

Diaphragm D_1 is similar to Diaphragm D except that the connecting plate welded to girder and the ½" plate welded to diaphragm shall both have 13/16" x 1⅞" slotted holes with ¼" plate washers covering the entire slot. The bolts for the slotted holes shall only be finger tight prior to pouring the deck and then tightened after completion of the pour. The slots shall be positioned so the bolts start at one end of the slot with no concrete load and finish near the opposite end under deck load.

All diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual diaphragms at supports may be temporarily disconnected to install bearing anchor rods.

The girders will not be cambered.

BILL OF MATERIAL

Item	Unit	Each
Anchor Bolts, 1"	Each	24

Coombe-Bloxdorf P.C.
-CIVIL ENGINEERS-
-STRUCTURAL ENGINEERS-
-LAND SURVEYORS-
Design Firm License No. 184-002703

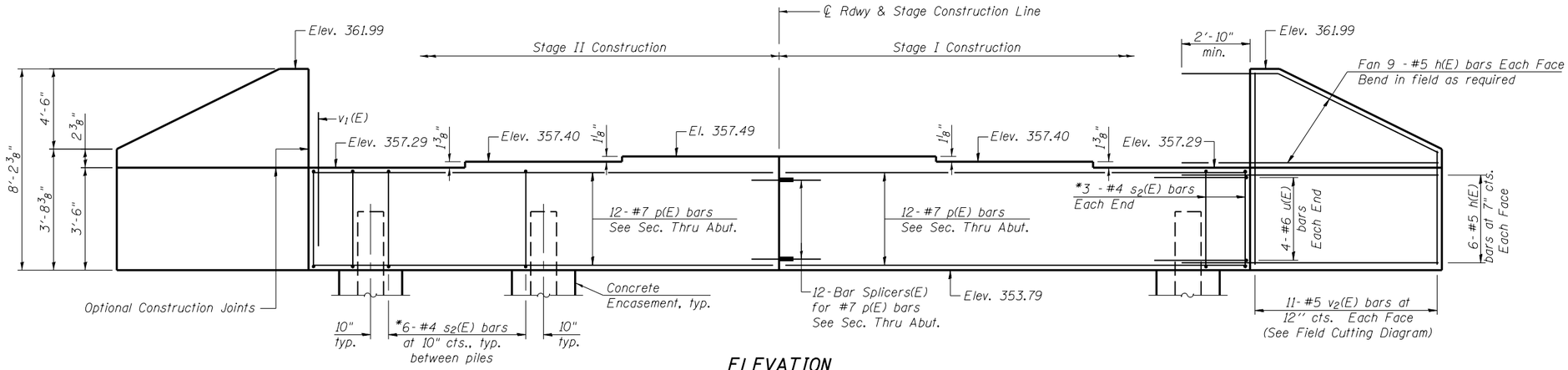
FILE NAME = ...\0760030-78165-B15-steel-det.dgn	USER NAME = .CFC.	DESIGNED - CME	REVISED -
		CHECKED - MCB	REVISED -
	PLOT SCALE = 0:2.000002 ':' / IN.	DRAWN - CFC/MML	REVISED -
CB PROJECT NO 08056-14	PLOT DATE = 3/5/2012	CHECKED - CME	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STRUCTURAL STEEL DETAILS
STRUCTURE NO. 076-0030
SHEET NO. 15 OF 20 SHEETS

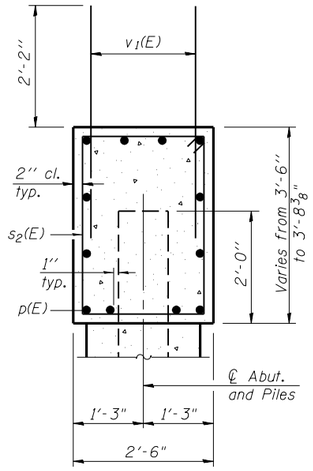
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
885	68-3	POPE	41	36
		CONTRACT NO. 78165		
		ILLINOIS FED. AID PROJECT		

Notes:
Pour steps monolithically with cap.

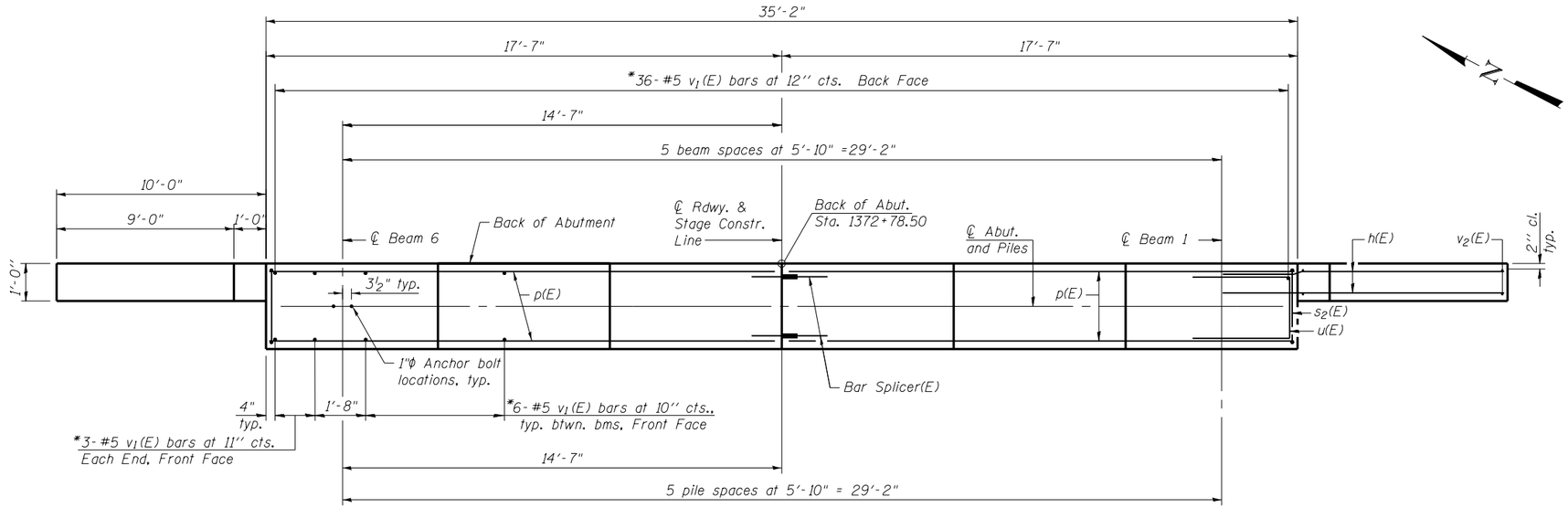


ELEVATION

*18 - #4 $s_2(E)$ bars Each Stage
18 - #5 $v_1(E)$ bars Each Face, Each Stage



SEC. THRU ABUT.



PLAN

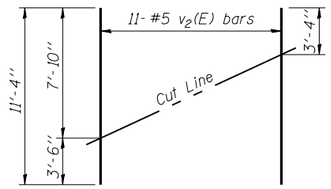
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	60	#5	12'-8"	——
p(E)	24	#7	17'-3"	——
s2(E)	36	#4	11'-5"	□
u(E)	8	#6	8'-9"	⊐
v1(E)	72	#5	4'-4"	——
v2(E)	22	#5	11'-4"	——
Structure Excavation		Cu. Yd.		96.2
Concrete Structures		Cu. Yd.		16.3
Reinforcement Bars, Epoxy Coated		Pound		2600
Furnishing Steel Piles HP12x63		Foot		186
Driving Piles		Foot		186
Pile Shoes		Each		6
Concrete Encasement		Cu. Yd.		2.1
Bar Slicers		Each		12

For details of Bar Splicers, see sheet 19 of 20.
For details of piles and Concrete Encasement, see sheet 18 of 20.

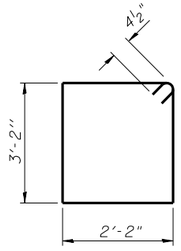
PILE DATA

Type: HP12x63
Nominal Required Bearing: 497 kips
Factored Resistance Available: 273 kips
Est. Length: 31 Ft.
No. Production Piles: 6
No. Test Piles: 0

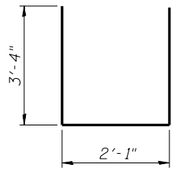


FIELD CUTTING DIAGRAM

Order $v_2(E)$ full length. Cut as shown and use remainder of bars in opposite face.



BAR $s_2(E)$



BAR u(E)

Coombe-Bloxdorf P.C.
-CIVIL ENGINEERS-
-STRUCTURAL ENGINEERS-
-LAND SURVEYORS-
Design Firm License No. 184-002703

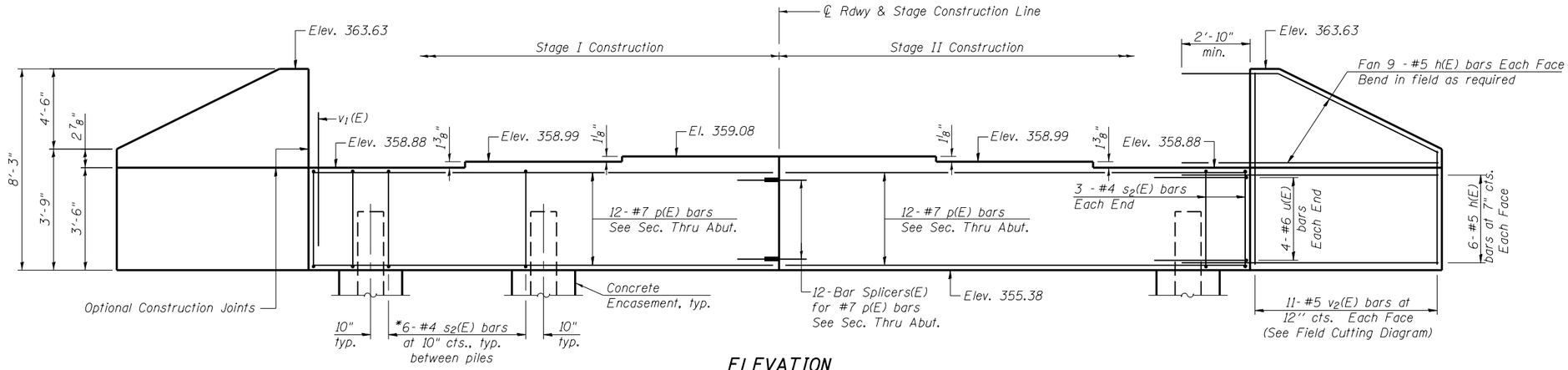
FILE NAME = c:\pw_work\pwidot\lavenderba\d0293530\0760030-78165-016-n-abut-det.dgn	USER NAME = $USER$	DESIGNED - CME	REVISED -
		CHECKED - MCB	REVISED -
	PLOT SCALE = 0.2.000002 ' / in.	DRAWN - CFC/MML	REVISED -
CB PROJECT NO 08056-14	PLOT DATE = 1/23/2012	CHECKED - CME	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NORTH ABUTMENT
STRUCTURE NO. 076-0030
SHEET NO. 16 OF 20 SHEETS

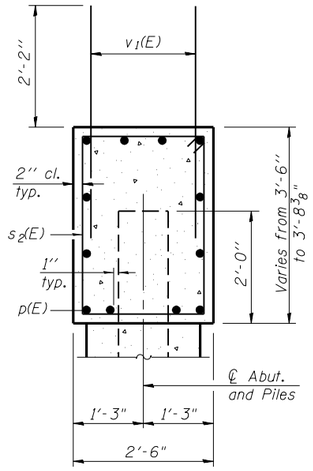
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
885	6B-3	POPE	41	37
		CONTRACT NO. 78165		
		ILLINOIS FED. AID PROJECT		

Notes:
Pour steps monolithically with cap.

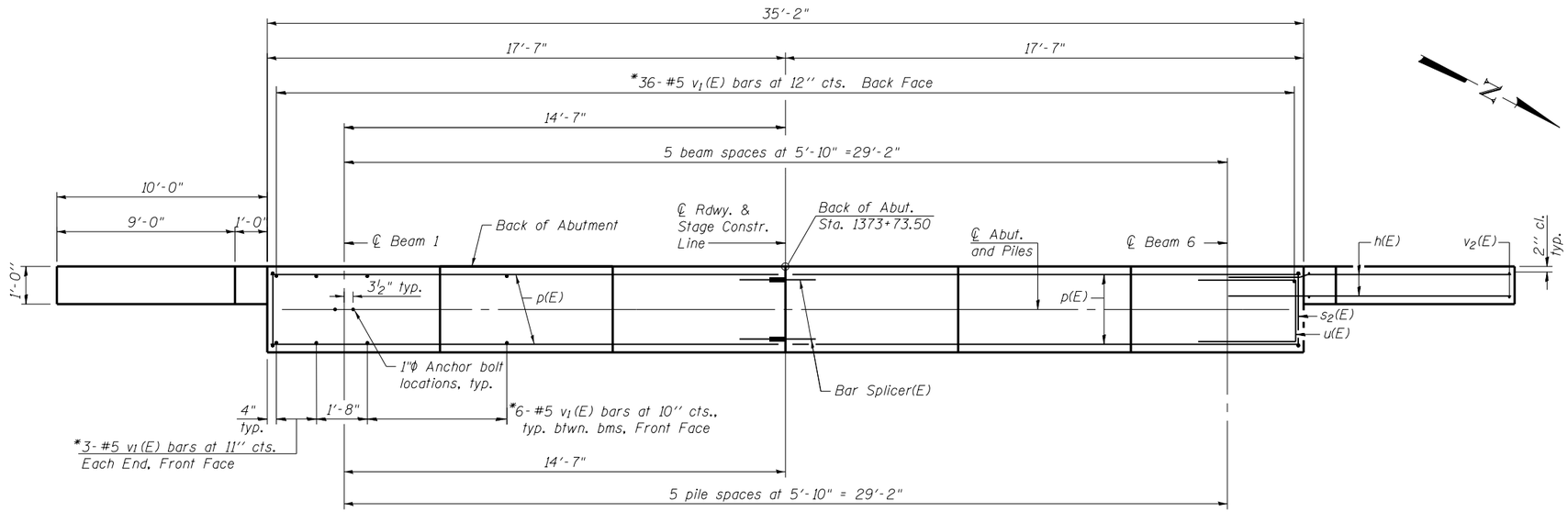


ELEVATION

*18 - #4 $s_2(E)$ bars Each Stage
18 - #5 $v_1(E)$ bars Each Face, Each Stage



SEC. THRU ABUT.



PLAN

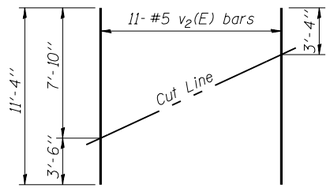
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	60	#5	12'-8"	——
p(E)	24	#7	17'-3"	——
s2(E)	36	#4	11'-5"	□
u(E)	8	#6	8'-9"	⊐
v1(E)	72	#5	4'-4"	——
v2(E)	22	#5	11'-4"	——
Structure Excavation		Cu. Yd.		96.2
Concrete Structures		Cu. Yd.		16.3
Reinforcement Bars, Epoxy Coated		Pound		2600
Furnishing Steel Piles HP12x63		Foot		180
Driving Piles		Foot		180
Pile Shoes		Each		6
Concrete Encasement		Cu. Yd.		2.1
Bar Slicers		Each		12

For details of Bar Splicers, see sheet 19 of 20.
For details of piles and Concrete Encasement, see sheet 18 of 20.

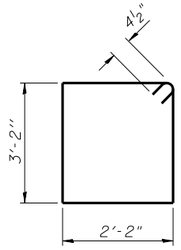
PILE DATA

Type: HP12x63
Nominal Required Bearing: 497 kips
Factored Resistance Available: 273 kips
Est. Length: 30 Ft.
No. Production Piles: 6
No. Test Piles: 0

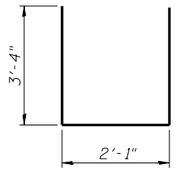


FIELD CUTTING DIAGRAM

Order $v_2(E)$ full length. Cut as shown and use remainder of bars in opposite face.



BAR $s_2(E)$



BAR u(E)

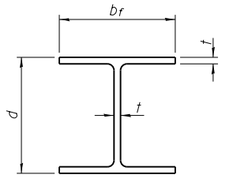
Coombe-Bloxdorf P.C.
-CIVIL ENGINEERS-
-STRUCTURAL ENGINEERS-
-LAND SURVEYORS-
Design Firm License No. 184-002703

FILE NAME = c:\pw_work\pwidot\lavenderba\d0293530\0760030-78165-017-s-abut-det.dgn	USER NAME = $USER$	DESIGNED - CME	REVISED -
		CHECKED - MCB	REVISED -
	PLOT SCALE = 0.2.000002 '/ in.	DRAWN - CFC/MML	REVISED -
CB PROJECT NO 08056-14	PLOT DATE = 1/23/2012	CHECKED - CME	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

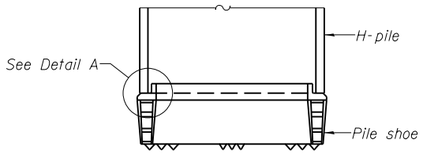
SOUTH ABUTMENT
STRUCTURE NO. 076-0030
SHEET NO. 17 OF 20 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
885	6B-3	POPE	41	38
		CONTRACT NO. 78165		
	ILLINOIS FED. AID PROJECT			

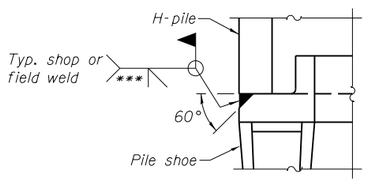


STEEL PILE TABLE

Designation	Depth d	Flange width b_f	Web and Flange thickness t	Encasement diameter A
HP 14x117	$14\frac{1}{4}''$	$14\frac{7}{8}''$	$\frac{13}{16}''$	30''
x102	14''	$14\frac{3}{4}''$	$\frac{11}{16}''$	30''
x89	$13\frac{7}{8}''$	$14\frac{3}{4}''$	$\frac{5}{8}''$	30''
x73	$13\frac{5}{8}''$	$14\frac{5}{8}''$	$\frac{1}{2}''$	30''
HP 12x84	$12\frac{1}{4}''$	$12\frac{1}{4}''$	$\frac{11}{16}''$	24''
x74	$12\frac{1}{8}''$	$12\frac{1}{4}''$	$\frac{5}{8}''$	24''
x63	12''	$12\frac{1}{8}''$	$\frac{1}{2}''$	24''
x53	$11\frac{3}{4}''$	12''	$\frac{7}{16}''$	24''
HP 10x57	10''	$10\frac{1}{4}''$	$\frac{9}{16}''$	24''
x42	$9\frac{3}{4}''$	$10\frac{1}{8}''$	$\frac{7}{16}''$	24''
HP 8x36	8''	$8\frac{1}{8}''$	$\frac{7}{16}''$	18''

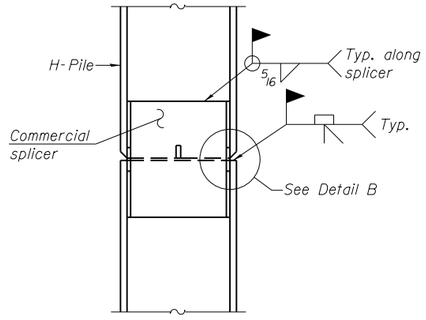


ELEVATION

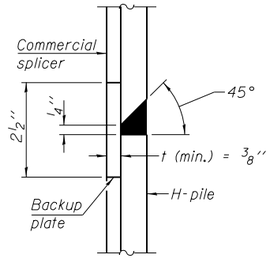


DETAIL A

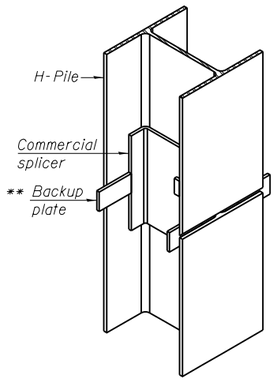
H-PILE SHOE ATTACHMENT



ELEVATION

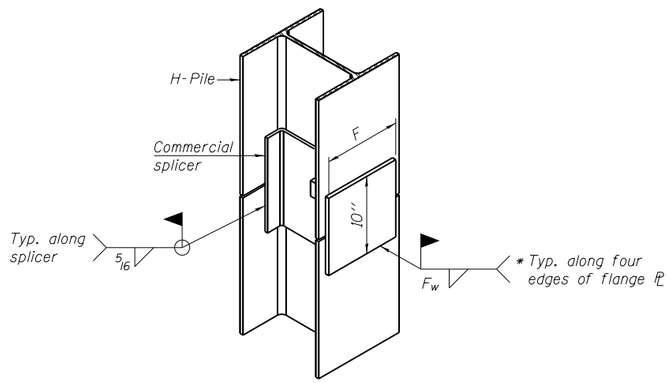


DETAIL "B"



ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE



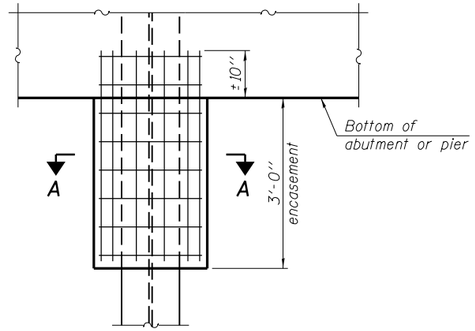
ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE ALTERNATE

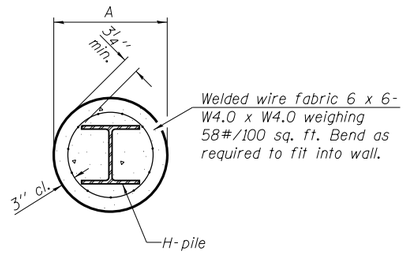
* Interrupt welds $\frac{1}{4}''$ from end of web and/or each flange.

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

*** Weld size per pile shoe manufacturer ($\frac{5}{16}''$ min.).



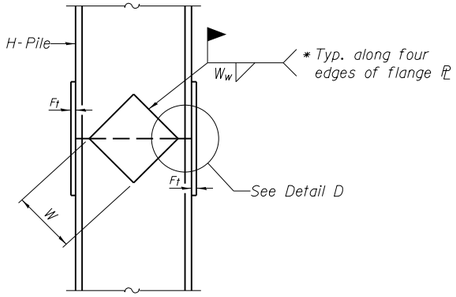
ELEVATION



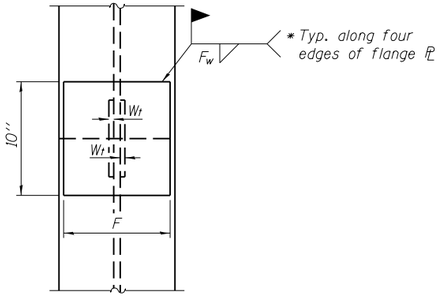
Note:
Forms for encasement may be omitted when soil conditions permit.

SECTION A-A

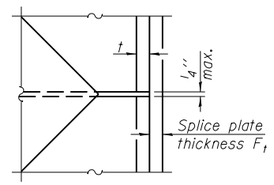
PILE ENCASEMENT



ELEVATION



END VIEW



DETAIL D

Designation	F	F_t	F_w	W	W_t	W_w
HP 14x117	$12\frac{1}{2}''$	1''	$\frac{7}{8}''$	$7\frac{3}{4}''$	$\frac{5}{8}''$	$\frac{1}{2}''$
x102	$12\frac{1}{2}''$	$\frac{7}{8}''$	$\frac{3}{4}''$	$7\frac{3}{4}''$	$\frac{5}{8}''$	$\frac{1}{2}''$
x89	$12\frac{1}{2}''$	$\frac{3}{4}''$	$\frac{11}{16}''$	$7\frac{3}{4}''$	$\frac{5}{8}''$	$\frac{1}{2}''$
x73	$12\frac{1}{2}''$	$\frac{5}{8}''$	$\frac{9}{16}''$	$7\frac{3}{4}''$	$\frac{5}{8}''$	$\frac{1}{2}''$
HP 12x84	10''	$\frac{7}{8}''$	$\frac{11}{16}''$	$6\frac{1}{2}''$	$\frac{5}{8}''$	$\frac{1}{2}''$
x74	10''	$\frac{7}{8}''$	$\frac{11}{16}''$	$6\frac{1}{2}''$	$\frac{5}{8}''$	$\frac{1}{2}''$
x63	10''	$\frac{5}{8}''$	$\frac{1}{2}''$	$6\frac{1}{2}''$	$\frac{1}{2}''$	$\frac{3}{8}''$
x53	10''	$\frac{5}{8}''$	$\frac{1}{2}''$	$6\frac{1}{2}''$	$\frac{1}{2}''$	$\frac{3}{8}''$
HP 10x57	8''	$\frac{3}{4}''$	$\frac{9}{16}''$	$5\frac{1}{4}''$	$\frac{1}{2}''$	$\frac{3}{8}''$
x42	8''	$\frac{5}{8}''$	$\frac{9}{16}''$	$5\frac{1}{4}''$	$\frac{1}{2}''$	$\frac{3}{8}''$
HP 8x36	7''	$\frac{5}{8}''$	$\frac{7}{16}''$	$4\frac{1}{4}''$	$\frac{1}{2}''$	$\frac{3}{8}''$

WELDED PLATE FIELD SPLICE

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

Coombe-Bloxdorf P.C.
-CIVIL ENGINEERS-
-STRUCTURAL ENGINEERS-
-LAND SURVEYORS-
Design Firm License No. 184-002703

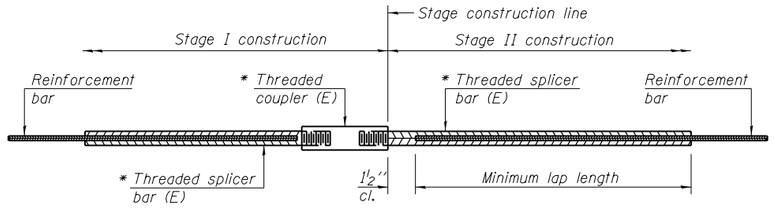
F-HP 7-1-10

FILE NAME = c:\pw_work\pwidot\lavenderba\d0293530\D760030-78165-018-pile-det.dgn	USER NAME = $USER$	DESIGNED - CME	REVISED -
		CHECKED - MCB	REVISED -
	PLOT SCALE = 0:2.000002 '' / in.	DRAWN - CFC/MML	REVISED -
CB PROJECT NO 08056-14	PLOT DATE = 1/23/2012	CHECKED - CME	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

HP PILE DETAILS
STRUCTURE NO. 076-0030
SHEET NO. 18 OF 20 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
885	6B-3	POPE	41	39
		CONTRACT NO. 78165		
		ILLINOIS FED. AID PROJECT		



STANDARD BAR SPLICER ASSEMBLY

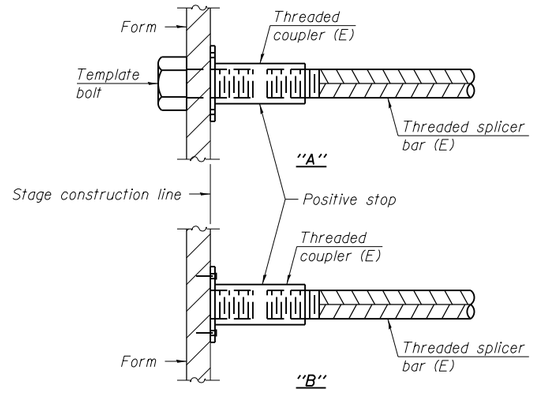
Minimum Lap Lengths					
Bar size to be spliced	Table 1	Table 2	Table 3	Table 4	Table 5
3, 4	1'-5"	1'-11"	2'-1"	2'-4"	2'-3"
5	1'-9"	2'-5"	2'-7"	2'-11"	2'-10"
6	2'-1"	2'-11"	3'-1"	3'-6"	3'-4"
7	2'-9"	3'-10"	4'-2"	4'-8"	4'-6"
8	3'-8"	5'-1"	5'-5"	6'-2"	5'-10"
9	4'-7"	6'-5"	6'-10"	7'-9"	7'-5"

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

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

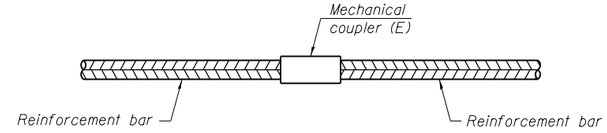
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length
Deck	#5	278	3
Diaphragms	#6	14	4
Approach Slabs	#4	50	4
Approach Slabs	#5	172	3
Abutments	#7	24	5



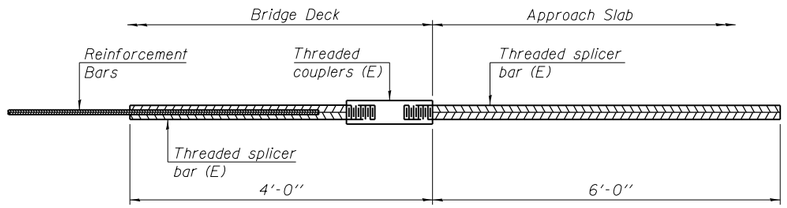
INSTALLATION AND SETTING METHODS

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



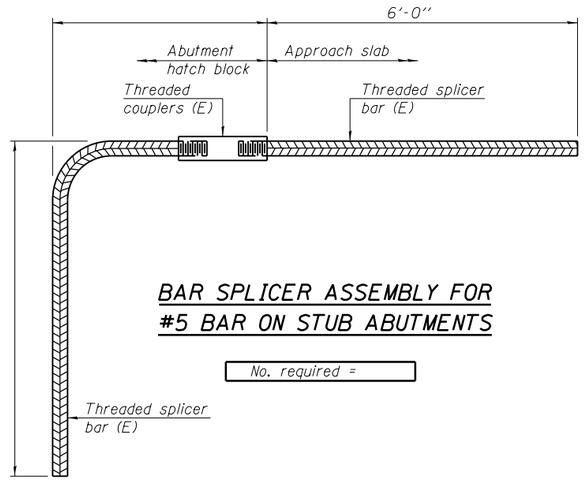
STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required



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

No. required = 72



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. required =

NOTES

Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.
All reinforcement shall be lapped and tied to the splicer bars.
Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.
See special provision for Mechanical Splicers.
See approved list of bar splicer assemblies and mechanical splicers for alternatives.

Coombe-Bloxdorf P.C.
-CIVIL ENGINEERS-
-STRUCTURAL ENGINEERS-
-LAND SURVEYORS-
Design Firm License No. 184-002703

BSD-1 7-1-10

FILE NAME = c:\pw_work\pwidot\lavenderba\d0293530\D760030-78165-019-splicer-det.dgn	USER NAME = $USER$	DESIGNED - CME	REVISED -
	PLOT SCALE = 0:2.000002 ' / in.	CHECKED - MCB	REVISED -
CB PROJECT NO 08056-14	PLOT DATE = 1/23/2012	DRAWN - CFC/MML	REVISED -
		CHECKED - CME	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
STRUCTURE NO. 076-0030
SHEET NO. 19 OF 20 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
885	6B-3	POPE	41	40
		CONTRACT NO. 78165		
	ILLINOIS	FED. AID PROJECT		

ILLINOIS DEPARTMENT OF TRANSPORTATION
District Nine Materials

Bridge Foundation Boring Log

FAP 885 (IL 146) Over Little Grand Pierre Creek — Sheet 1 of 1

Route: FAP 885 (IL 146) Structure Number: 076-0026 — Date: 7/6/2010

Section (6B-1)BR — Bored By: R Moberly

County: Pope — Location: 3.1 Mi West of Hardin County — Checked By: R Graeff

Boring No 1-S
Station 1373+90
Offset 9' Rt CL
Ground Surface 364.0 Ft

Surf Wat Elev: 336.9
Ground Water Elevation
when Drilling 333.5
At Completion
At: Hrs:

DEPTH	BLOWS	Qu tsf	W%	DESCRIPTION
				Asphalt and concrete over crushed aggregate
362.0				
	3			Stiff, moist, brown and grey,
	3	1.5B	21	Silty Clay A7-6
	3			
359.5				
5.0	4			Loose, damp, brown, broken
	5			Sandstone gravel with Clay
	3			
357.0				
	WH			Soft, very moist, grey, Silty Clay
	WH	0.4B	25	to Silty Clay Loam A-6
	1			
354.5				
10.0	1			Medium, very moist, grey, Silty
	1	0.6B	25	Clay to Silty Clay Loam A-6
	1			
352.0				
	1			Medium, very moist, grey, Silty
	1	0.6B	21	Clay to Silty Clay Loam A-6
	1			w/ some broken Sandstone
				gravel
349.5				
15.0	1			Stiff, moist, grey, Silty Clay A-6
	2	1.6B	22	with some broken Sandstone
	2			gravel
	2			
	3	1.6B	16	
	3			
344.5				
20.0	1			Soft, very moist, grey, Silty Clay
	1	0.4B	25	A-6 with some broken
	1			Sandstone gravel
	WH			
	3	0.3B	22	
	8			
339.5				
25.0	4			Loose, moist, brown broken

DEPTH	BLOWS	Qu tsf	W%	DESCRIPTION
	4			Sandstone gravel with some Clay
	5			
337.0				
	1			Stiff, moist, grey mottled brown,
	5	1.5B	24	Clay A7-6 with some broken
	6			Sandstone gravel
334.5				
30.0	2			Medium, very moist, grey, Sandy
	6	0.9S	15	Clay Loam A-6 with broken
	15			Sandstone gravel
332.0				
	6			Medium dense, very moist, grey,
	6			broken Sandstone Gravel 331.0
	100/4"			Hard, dry, brown,Sandstone 330.5
35.0				Very Dense, dry, grey, Limestone
				Cored 33.3 to 38.3 feet
				100% Recovery; 72% RQD
325.5				
40.0				Very Dense, dry, grey, Limestone
				Cored 38.3 to 43.3 feet
				100% Recovery; 64% RQD
				xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
				To convert "N" values to "N60"
				multiply by 1.25
				xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
320.5				
				Hard, dry, grey, Limestone with
				Clay Shale layers
45.0				
				Cored 43.3 to 48.3 feet
				54% Recovery; 16% RQD
				xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
				Free water observed at 30.5 feet
				Elevation referenced to BM at
				NW wingwall; Elev.= 363.6 feet
315.5				xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
				Bottom of hole = 48.3 feet
50.0				

N-Std Pentr Test: 2" OD Sampler,140# Hammer, 30" Fall (Type Fail. B-Bulge S-Shear E-Estimated P-Penetrometer)

ILLINOIS DEPARTMENT OF TRANSPORTATION
District Nine Materials

Bridge Foundation Boring Log

FAP 885 (IL 146) Over Little Grand Pierre Creek — Sheet 1 of 1

Route: FAP 885 (IL 146) Structure Number: 076-0026 — Date: 7/7/2010

Section (6B-1)BR — Bored By: R Moberly

County: Pope — Location: 3.1 Mi West of Hardin County — Checked By: R Graeff

Boring No 2-S
Station 1372+56
Offset 10' LT CL
Ground Surface 361.9 Ft

Surf Wat Elev: 336.9
Ground Water Elevation
when Drilling 339.9
At Completion
At: Hrs:

DEPTH	BLOWS	Qu tsf	W%	DESCRIPTION
				Asphalt and concrete over crushed aggregate
359.9				
	2			Very stiff, moist, brown, Silty Clay
	3	2.3B	19	A-6
	3			
357.4				
5.0	1			Medium to soft, very moist, grey
	1	0.5B	23	and brown, Silty Clay A-6
	2			
	WH			
	1	0.4B	25	
	1			
352.4				
10.0	WH			Stiff, moist, grey, Silt Loam A-4
	4	1.8S	18	
	5			
349.9				
	WH			Medium, very moist, grey, Silty
	2	0.7B	24	Clay Loam A-6
	4			
347.4				
15.0	1			Medium, moist, grey,Silt Loam
	3	0.9S	17	A-4
	5			
344.9				
	WH			Very soft, very moist, grey, Silt
	1	0.2B	26	Loam to Silty Clay Loam A-4
	WH			
20.0	WH			
	WH	0.2B	23	
	WH			
339.9				
	WH			Medium dense, moist, brown Clay
	1	0.2B	21	w/ broken Sandstone gravel
	2			
337.4				
25.0	5			

DEPTH	BLOWS	Qu tsf	W%	DESCRIPTION
	6			Medium dense, moist, brown,
	7			broken Sandstone gravel with
				Clay
	3			
	7			
	7			
30.0	3			
	7			
	12			
329.9				
	1			Stiff, moist, grey mottled brown,
	3	1.4B	33	Clay A7-6
	7			
327.9				
35.0				Hard, damp to dry, grey,
				Limestone over Clay Shale
				Cored 33.8 to 38.8 feet
				84% Recovery; 34% RQD
322.9				
40.0				Hard, dry, grey, Limestone with
				Clay Shale layers
				Cored 38.8 to 43.8 feet
				84% Recovery; 43% RQD
				Boring stopped due to rig break-
317.9				down.
45.0				Bottom of hole = 43.8 feet
				Free water observed at 22.0 feet
				Elevation referenced to BM @
				NW wingwall; Elev.= 363.6 feet
				To convert "N" values to "N60"
				multiply by 1.25
50.0				

N-Std Pentr Test: 2" OD Sampler,140# Hammer, 30" Fall (Type Fail. B-Bulge S-Shear E-Estimated P-Penetrometer)

Coombe-Bloxdorf P.C.
-CIVIL ENGINEERS-
-STRUCTURAL ENGINEERS-
-LAND SURVEYORS-
Design Firm License No. 184-002703

FILE NAME = c:\pw_work\pwidot\lavenderba\d0293530\0760030-78165-020-borings.dgn	USER NAME = $USER$	DESIGNED - CME	REVISED -
	PLOT SCALE = 0:2.000000 ' / in.	CHECKED - MCB	REVISED -
CB PROJECT NO. 08056-14	PLOT DATE = 1/23/2012	DRAWN - CFC	REVISED -
		CHECKED - CME	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS
STRUCTURE NO. 076-0030
SHEET NO. 20 OF 20 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
885	6B-3	POPE	41	41
		CONTRACT NO. 78165		
	ILLINOIS FED. AID PROJECT			