

SUMMARY OF QUANTITIES

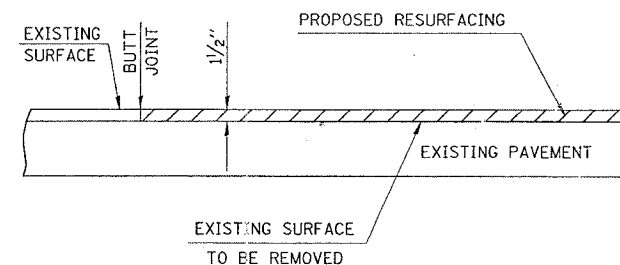
CONTRACT NO. 76121				
TR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
336A	31BR	MADISON	11	2
STA.	N/A	TO STA.	N/A	
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SUMMARY OF QUANTITIES			TOTAL QUANTITIES	CONSTRUCTION TYPE CODE	
CODE NO	ITEM	UNIT		I000	X02B-2A
20100110	TREE REMOVAL (6 TO 15 UNITS DIAMETER)	UNIT	48	48	
20100210	TREE REMOVAL (OVER 15 UNITS DIAMETER)	UNIT	46	46	
20200100	EARTH EXCAVATION	CU YD	414	414	
20200500	EARTH EXCAVATION (WIDENING)	CU YD	11	11	
20201200	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL	CU YD	97		97
20700220	POROUS GRANULAR EMBANKMENT	CU YD	97		97
25000200	SEEDING, CLASS 2	ACRE	0.25	0.25	
25100105	MULCH, METHOD 1	ACRE	0.25	0.25	
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	17	17	
28000300	TEMPORARY DITCH CHECKS	EACH	8	8	
28100107	STONE RIPRAP, CLASS A4	SQ YD	450		450
28200200	FILTER FABRIC FOR USE WITH RIPRAP	SQ YD	450		450
31101200	SUB-BASE GRANULAR MATERIAL, TYPE B 4"	SQ YD	25	25	
31101400	SUB-BASE GRANULAR MATERIAL, TYPE B 6"	SQ YD	159	159	
35600100	BITUMINOUS CONCRETE BASE COURSE WIDENING 6 INCHES	SQ YD	25	25	
40600200	BITUMINOUS MATERIALS (PRIME COAT)	TON	0.1	0.1	
40600300	AGGREGATE (PRIME COAT)	TON	0.4	0.4	
44000006	BITUMINOUS SURFACE REMOVAL 1 1/2"	SQ YD	245	245	
44000100	PAVEMENT REMOVAL	SQ YD	145	145	
48101200	AGGREGATE SHOULDERS, TYPE B	TON	43	43	
48202600	BITUMINOUS SHOULDERS SUPERPAVE 8"	SQ YD	60	60	
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1		1
50105220	PIPE CULVERT REMOVAL	FOOT	209	209	
50200100	STRUCTURE EXCAVATION	CU YD	290	290	
50800105	REINFORCEMENT BARS	POUND	31980		31980
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	430		430
51500100	NAME PLATES	EACH	1		1
54003000	CONCRETE BOX CULVERTS	CU YD	185.7		185.7
54213663	PRECAST REINFORCED CONCRETE FLARED END SECTIONS 18"	EACH	3	3	
54213669	PRECAST REINFORCED CONCRETE FLARED END SECTIONS 24"	EACH	1	1	
54215418	CAST-IN-PLACE REINFORCED CONCRETE END SECTIONS 18"	EACH	2	2	
54215424	CAST-IN-PLACE REINFORCED CONCRETE END SECTIONS 24"	EACH	1	1	
54248500	CONCRETE HEADWALLS	CU YD	30		30
54248510	CONCRETE COLLAR	CU YD	0.5	0.5	
542D0220	PIPE CULVERTS, CLASS D, TYPE 1 15"	FOOT	27	27	

SUMMARY OF QUANTITIES			TOTAL QUANTITIES	CONSTRUCTION TYPE CODE	
CODE NO	ITEM	UNIT		I000	X02B-2A
542D0223	PIPE CULVERTS, CLASS D, TYPE 1 18"	FOOT	52	52	
542D0229	PIPE CULVERTS, CLASS D, TYPE 1 24"	FOOT	169	169	
* 63000000	STEEL PLATE BEAM GUARD RAIL, TYPE A	FOOT	500	500	
* 63000025	STEEL PLATE BEAM GUARD RAIL, ATTACHED TO STRUCTURES	FOOT	50	50	
* 63100167	TRAFFIC BARRIER TERMINAL TYPE 1, SPECIAL (TANGENT)	EACH	4	4	
66410400	CHAIN LINK FENCE TO BE REMOVED AND RE-ERECTED	FOOT	375	375	
66600105	FURNISHING AND ERECTING RIGHT-OF-WAY MARKERS	EACH	10	10	
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	4	4	
67100100	MOBILIZATION	L SUM	1	1	
70101800	TRAFFIC CONTROL AND PROTECTION (SPECIAL)	L SUM	1	1	
* 72000100	SIGN PANEL - TYPE 1	SQ FT	5	5	
* 78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	824	824	
X4066414	BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE. MIX "C", N50	TON	41	41	
X4066614	BITUMINOUS CONCRETE BINDER COURSE, SUPERPAVE. IL-19.0, N50	TON	80	80	
78200410	GUARDRAIL MARKERS, TYPE A	EACH	10	10	
78200530	TERMINAL MARKER - DIRECT APPLIED	EACH	4	4	

PAVEMENT MIX

MIXTURE USE	SURFACE	BSE CSE	BINDER	SHOULDERS
AC/PG	PG 64-22	PG 58-22	PG 64-22	PG 58-22
RAP % (MAX)	15%	30%	15%	30%
DESIGN AIR VOIDS	4.0% @ Ndes=50	2.0% @ Ndes=50	4.0% @ Ndes=50	2.0% @ Ndes=30
MIX COMPOSITION (GRAVIMETRIC MIXTURE)			IL 19.0	
FRICITION AGG.	MIXTURE C	BSE CSE	MIXTURE B	BAM



MILLING DETAIL
 STA. 42+20 TO STA. 42+75
 STA. 43+65 TO STA. 44+20

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
SUMMARY OF QUANTITIES,
PVMT MIX & MILLING DETAIL
 TR 336A
 SECTION 31BR
 MADISON COUNTY
 DATE _____
 DRAWN BY _____
 CHECKED BY _____

PLOT DATE = 2/11/2005
 FILE NAME = c:\projects\76121\plan\quant.txd
 PLOT SCALE = 43.9999 / IN.
 REFERENCE = #REF#

*SPECIALTY ITEMS

Rev. 6-6-06

EXISTING STRUCTURE:

S.N. 060-0270. Original structure is a simple open-span structure, 16' wide, reinforced concrete slab deck supported by concrete abutments, built prior to 1911. The original structure was widened to 20' in 1911 under FA Section P-15d and widened again with a double box culvert, with two 10' x 10' cells on each side in 1931 under SBI 11 Section 47-B. Existing structure will be removed and replaced with a cast-in-place double box culvert with two 11' x 11' cells. The existing road will be closed to through traffic during construction and detours provided.

Salvage: No salvage.

STRUCTURAL NOTES:

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

All construction joints shall be bonded.

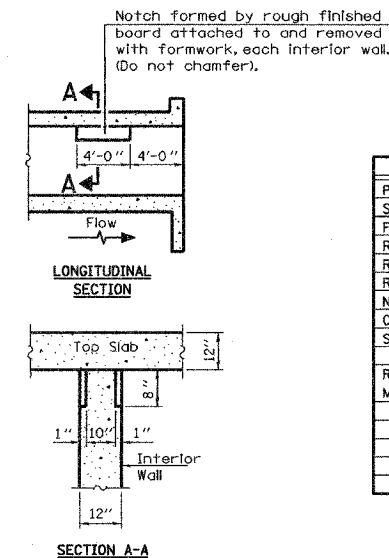
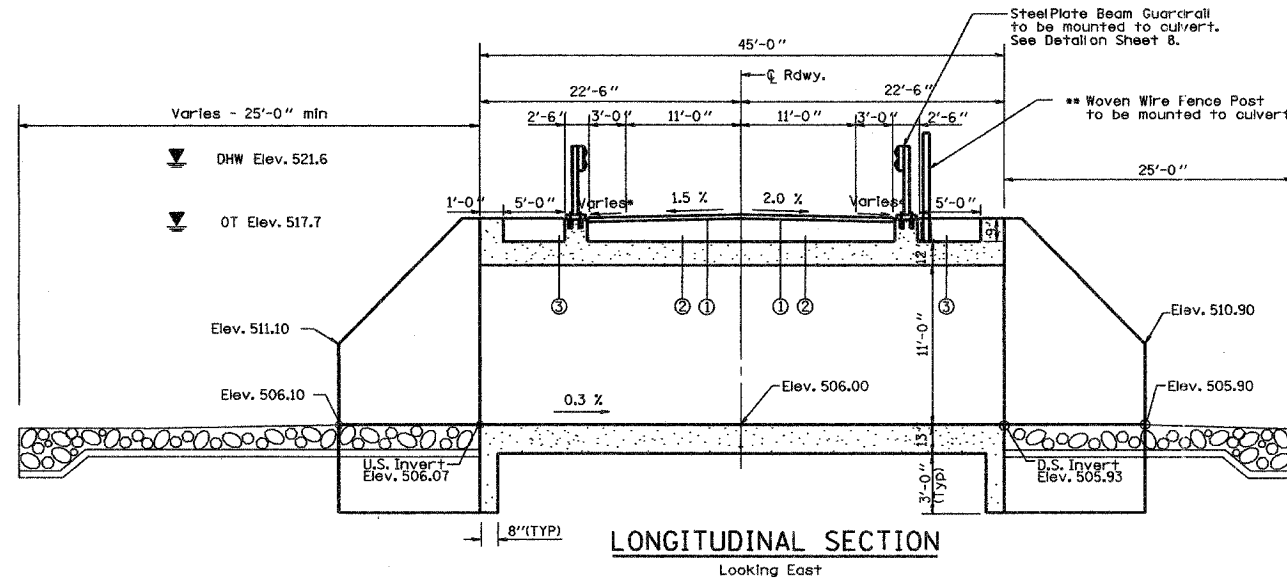
Reinforcement bars shall conform to the requirements of AASHTO M31 or M322 Grade 60.

Precast alternate is not allowed.

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

Excavation behind existing side walls shall be done before removing the existing top slab.

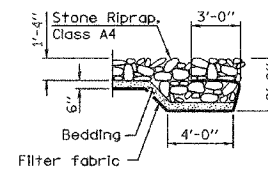
T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
336A	31BR	MADISON	11	6
STA. N/A	TO STA. N/A			
FED. ROAD DIST. NO. 8		ILLINOIS	FED. AID PROJECT	
Contract No. 76121				



TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Porous Granular Embankment	CU YD	97
Stone Riprap, Class A4	SQ YD	450
Filter Fabric	SQ YD	450
Removal of Existing Structures	Each	1
Reinforcement Bars	Pound	31980
Reinforcement Bars, Epoxy Coated	Pound	430
Name Plates	Each	1
Concrete Box Culverts	CU YD	185.7
Steel Plate Beam Guardrail, Attached to Structures	Foot	50
Removal and Disposal of Unsuitable Material	CU YD	97

SECTION A-A PHOEBE NESTING SITE DETAILS (Downstream End Only)



Shoulder Slope varies from 2.0% to 4.0%

LEGEND

- ① Proposed Bituminous Concrete Surface Course
- ② Proposed Bituminous Concrete Binder Course
- ③ Proposed Aggregate Shoulders

LOADING HS20-44

ALLOW 50*/SQ. FT. FOR FUTURE WEARING SURFACE

DESIGN SPECIFICATIONS

1996 AASHTO WITH 1997 THROUGH 2002 INTERIMS

DESIGN STRESSES

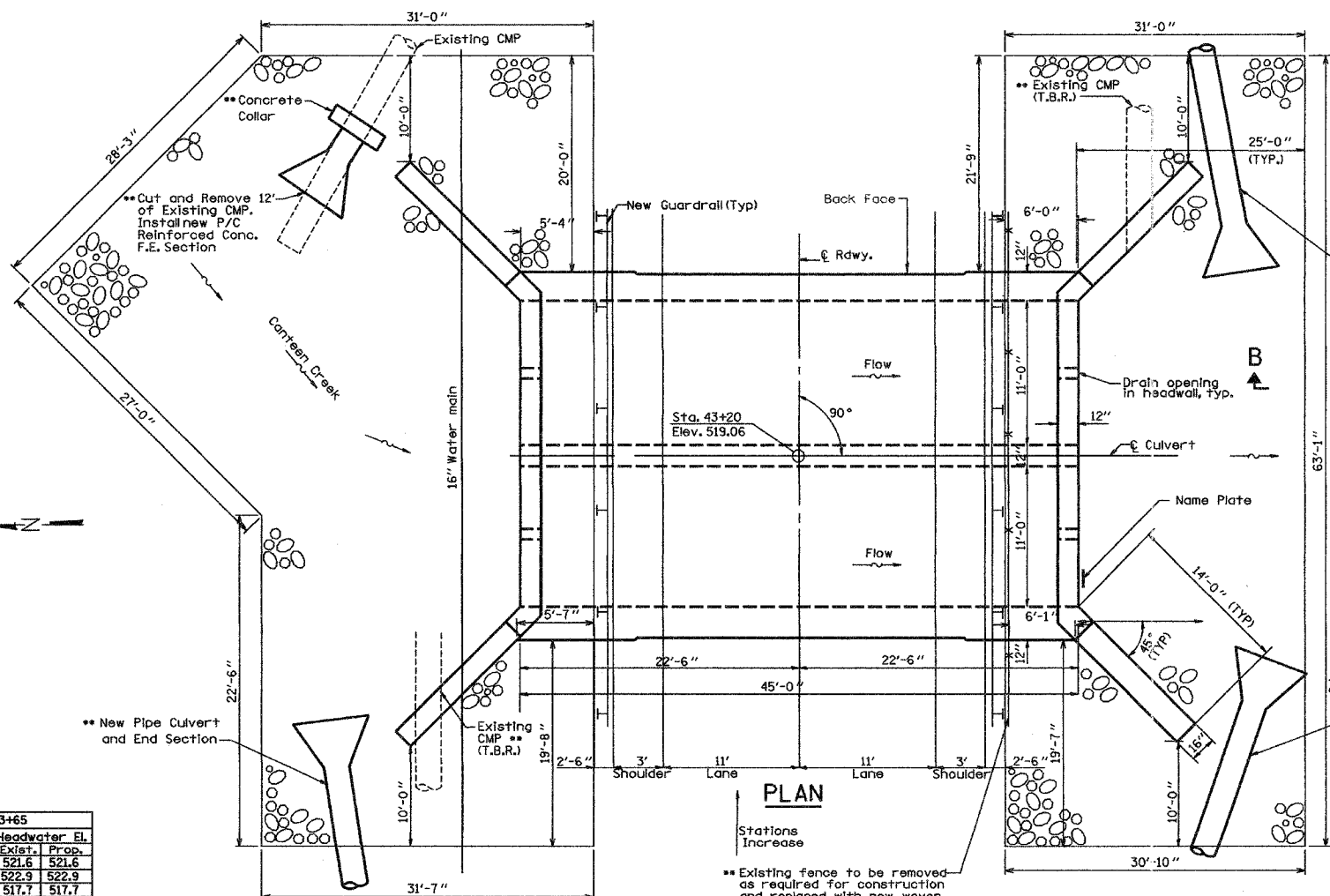
FIELD UNITS
 $f_c = 3,500$ psi
 $f_y = 60,000$ PSI (REINFORCEMENT)

CANTEEN CREEK
 BUILT 200 BY
 STATE OF ILLINOIS
 MADISON COUNTY
 SEC. 31BR
 STA. 43+20.00
 STR. NO. 060-2045 LOADING HS20-44

NAME PLATE
 See Std. 515001

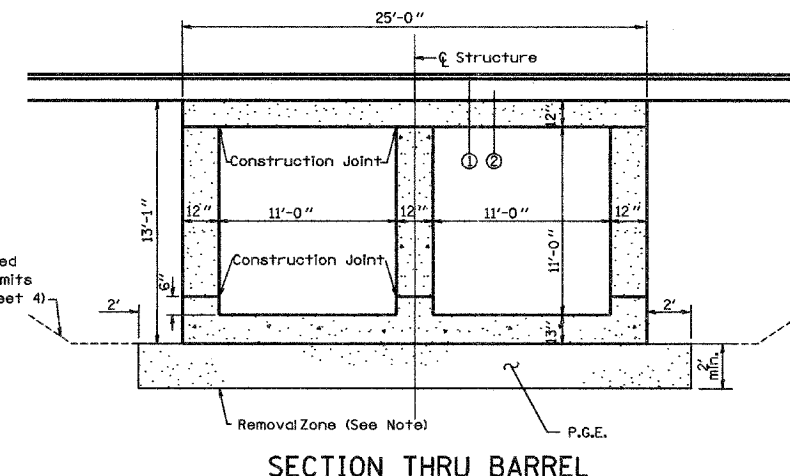
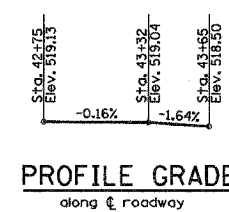
WATERWAY INFORMATION

Drainage Area = 4.08 sq. mi		Low Grade Elev. 518.5 @ Sta. 43+65		Natural H.W.E.		Head - Ft.		Headwater El.	
Flood	Freq. Yr.	Opening C.F.S.	Sq. Ft. Exlet.	Exlet.	Prop.	Exlet.	Prop.	Exlet.	Prop.
Design	50	732	200.0	242.0	518.7	2.9	2.9	521.6	521.6
Base	100	850	200.0	242.0	519.0	3.9	3.9	522.9	522.9
Overtopping	6	398	200.0	242.0	516.6	1.1	1.1	517.7	517.7
Max. Calc.	500	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A



Existing fence to be removed as required for construction and replaced with new woven wire fence at same offset as existing fence

See roadway plans.



Note: Remove two feet of soil beneath the footprint of the box culvert. The footprint will extend two feet beyond the perimeter of the culvert. The contractor shall replace with Porous Granular Embankment. Excavation shall be paid for as Removal and Disposal of Unsuitable Material.

Drawing Not to Scale

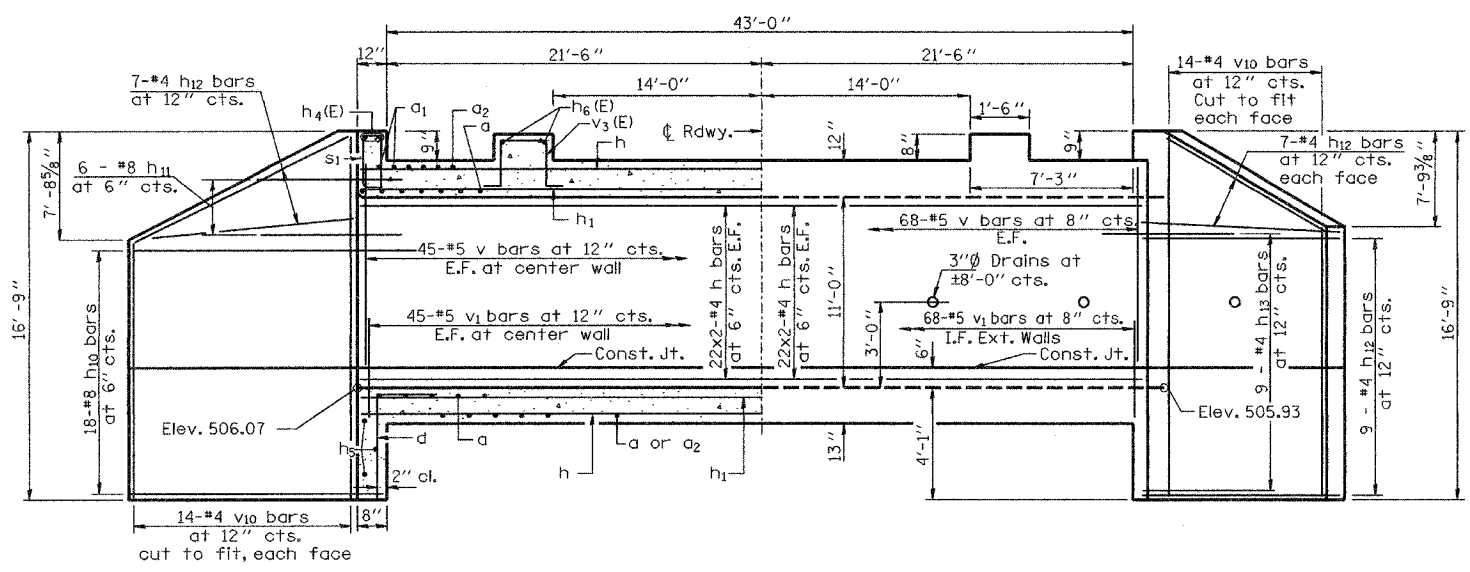
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
CULVERT GENERAL PLAN
 STRUCTURE NO. 060-2045
 TR 336A
 SECTION 31BR
 MADISON COUNTY
 DRAWN BY
 CHECKED BY

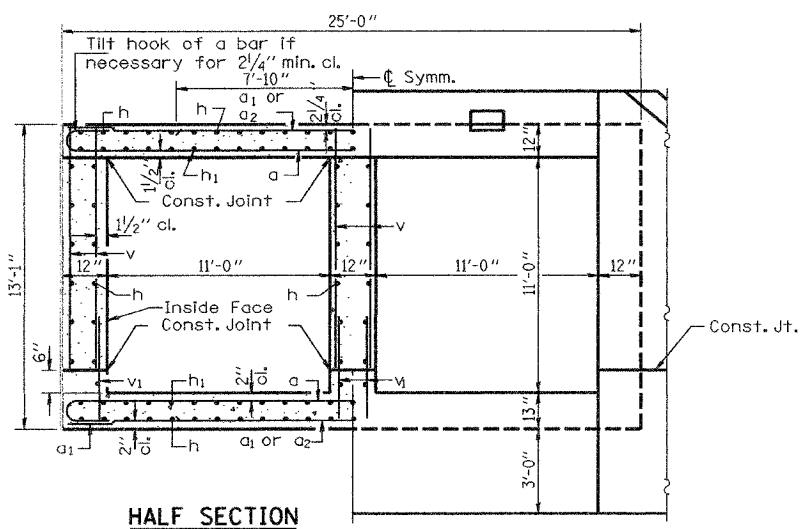
DESIGNED <i>Tom Rantakari</i>	200
CHECKED <i>[Signature]</i>	EXAMINED
DRAWN <i>CKB / SDH</i>	PASSED
CHECKED <i>TJK / PDC</i>	ENGINEER OF BRIDGES AND STRUCTURES

EXPIRES 11-30-2006

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
336A	31BR	MADISON	11	7
STA.	N/A	TO STA.	N/A	
FED. ROAD DIST. NO. 8	ILLINOIS	FED. AID PROJECT		
Contract #76121				



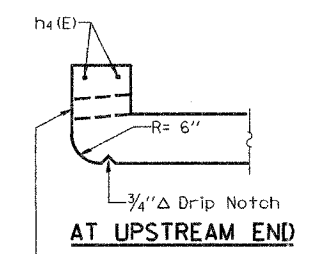
REINFORCEMENT BACK FACE
HALF LONG. SECTION Showing bars in Center Wall
HALF ELEVATION Showing bars in Outside Wall
REINFORCEMENT FRONT FACE



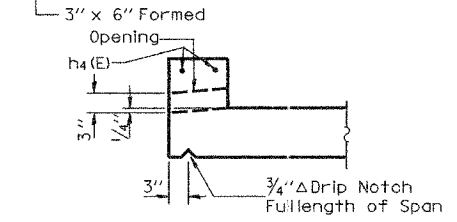
HALF SECTION THRU BARREL
HALF END ELEVATION

CONCRETE BOX CULVERT BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a	154	#6	26'-1"	C
a1	60	#6	24'-9"	C
a2	116	#6	15'-8"	C
d	48	#5	5'-6"	J
h	364	#4	23'-6"	—
h1	100	#6	24'-0"	—
h4(E)	4	#6	24'-9"	—
h5	6	#5	24'-9"	—
h6(E)	4	#5	24'-8"	—
h10	72	#8	17'-2"	—
h11	24	#8	8'-0"	—
h12	92	#4	13'-8"	—
h13	36	#4	8'-0"	—
s	24	#4	4'-11"	D
s1	24	#4	4'-9"	D
v	362	#5	11'-3"	—
v1	226	#5	3'-6"	—
v3(E)	50	#4	5'-5"	J
v10	112	#4	16'-5"	—
v11	2	#4	3'-6"	—
Concrete Box Culverts			Cu. Yd.	1185.71
Reinforcement Bars, Epoxy Coated			Pound	430
Reinforcement Bars			Pound	31980



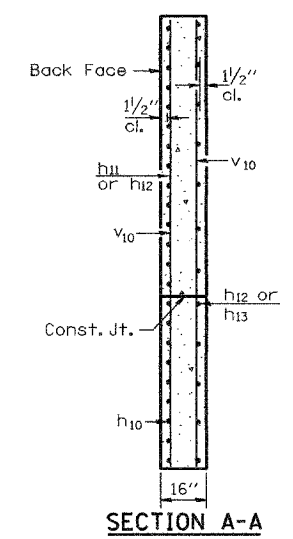
AT UPSTREAM END



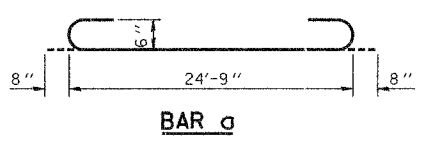
AT DOWNSTREAM END



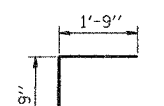
DRAIN DETAIL



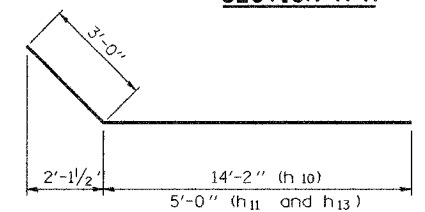
SECTION A-A



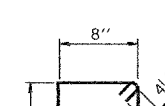
BAR a



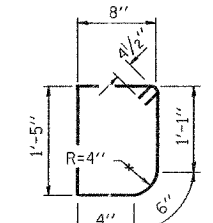
BAR d



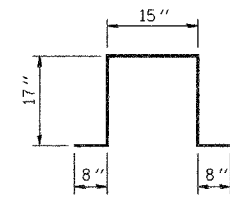
BAR h10, h11 & h13



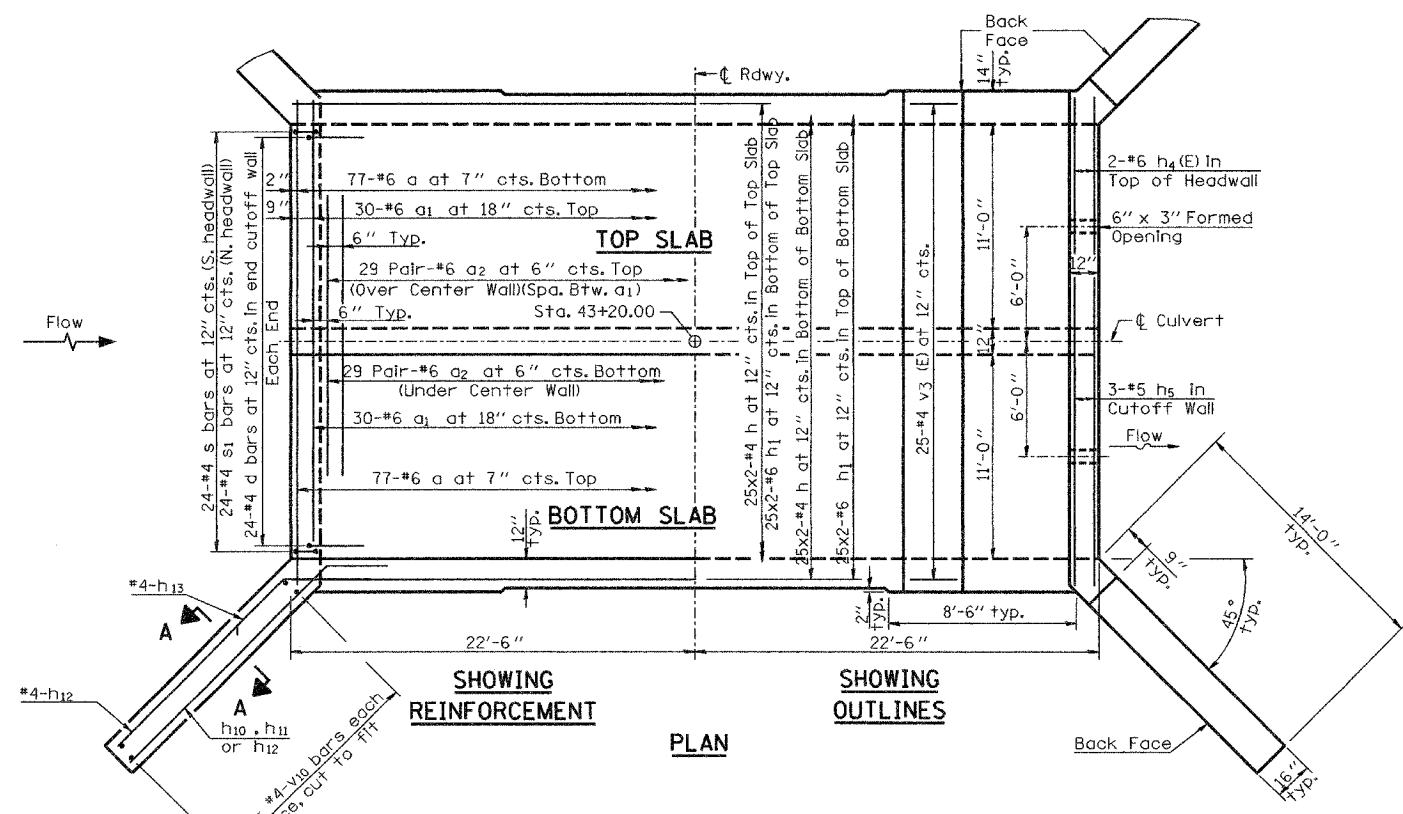
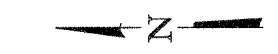
BAR s



BAR s1



BAR v3(E)



PLAN

Notes:
 Reinforcement bars designated (E) shall be epoxy coated.
 Bars indicated thus 12x4-#5 etc. indicates 12 lines of bars with 4 lengths per line.
 E.F. = Each Face
 I.F. = Inside Face
 The Northeast wingwall and the 16\"/>

DESIGNED Tom L. Kurtenbach
 CHECKED Pat D. Claussen
 DRAWN JTC
 CHECKED TLC / PDC

EXAMINED Thomas J. Domagala
 PASSED Ralph E. Anderson
 ENGINEER OF BRIDGES AND STRUCTURES

Drawing not to Scale

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
CULVERT
CULVERT DETAILS
 STRUCTURE NO. 060-2045
 TR 336A
 SECTION 31BR
 MADISON COUNTY