

INDEX OF SHEETS

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701901	TRAFFIC CONTROL DEVICES
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B.L.R. 22-5	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS (TWO-LANE TWO-WAY RURAL TRAFFIC) (ROAD CLOSED TO THRU TRAFFIC)

SUMMARY OF QUANTITIES

QUANTITY	UNIT	ITEM	CODE NO.
75.00	UNIT	TREE REMOVAL (6 TO 15 UNITS DIAMETER)	20100110
143.00	UNIT	TREE REMOVAL (OVER 15 UNITS DIAMETER)	20100210
544.00	CU YD	EARTH EXCAVATION	20200100
394.00	CU YD	CHANNEL EXCAVATION	20300100
1031.00	CU YD	FURNISHED EXCAVATION	20400800
0.60	ACRE	SEEDING, CLASS 2 (SPECIAL)	25001000
5.00	EACH	TEMPORARY DITCH CHECKS	28000300
16.00	TON	AGGREGATE (EROSION CONTROL)	28001000
370.00	TON	STONE DUMPED RIPRAP, CLASS A4	28100807
62.00	TON	STONE RIPRAP DITCH	28102600
400.00	TON	AGGREGATE SURFACE COURSE, TYPE B	40200800
1.00	EACH	REMOVAL OF EXISTING STRUCTURES	50100100
22.60	CU YD	CONCRETE STRUCTURES	50300225
2.60	CU YD	CONCRETE ENCASEMENT	50300280
1800.00	SQ FT	PRECAST PRESTRESSED CONCRETE DECK BEAMS (33" DEPTH)	50400605
2680.00	POUND	REINFORCEMENT BARS	50800105
150.00	FOOT	STEEL RAILING, TYPE S1	50900205
550.00	FOOT	FURNISHING STEEL PILES HP10X42	51201400
550.00	FOOT	DRIVING PILES	51202305
1.00	EACH	NAME PLATES	51500100
14.00	EACH	FURNISHING AND ERECTING RIGHT-OF-WAY MARKERS	66600105
1.00	L SUM	MOBILIZATION	67100100

DESIGN DESIGNATION:
DESIGN SPEED: 30 MPH
HIGHWAY CLASS - LOCAL ROAD
EXISTING STRUCTURE NO.: 024-3080
PROPOSED STRUCTURE NO.: 024-3134
CURRENT A.D.T. = 100
CONTRACT NO. 95534

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

STATE OF ILLINOIS

DEPARTMENT OF TRANSPORTATION

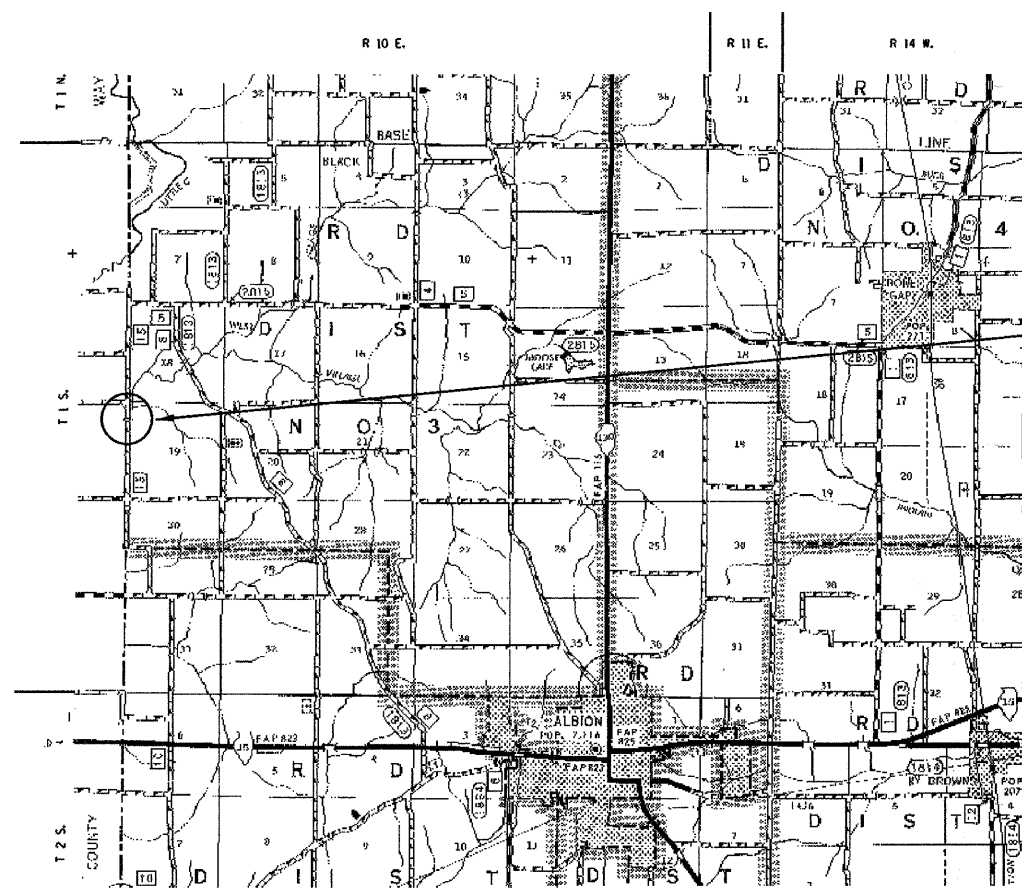
PLANS FOR PROPOSED FEDERAL AID - H.B.P. PROJECT

C.H. 15 EDWARDS COUNTY SECTION 06-00060-00-BR

WAYNE COUNTY SECTION 05-00115-00-BR

PROJECT NO. BROS-047(27) JOB NO. C-97-022-08

CONTRACT #95534 WEST VILLAGE CREEK



LAYOUT
APPROXIMATE SCALE 1 INCH = 1 MILE



GROSS LENGTH	625.00 FT	0.118 MILES
OMISSIONS	0.00 FT	0.00 MILES
NET LENGTH	625.00 FT	0.118 MILES

PLAN	1" = 50'	0 50' 100'
PROFILE	1" = 50'	0 50' 100'
PROFILE VERT.	1" = 5'	0 5' 10'
CROSS SECTION	1" = 5'	0 5' 10'

SECTION 06-00060-00-BR
BEGINS STATION 1+85

STATION 5+00, STRUCTURE NO. 024-3134
A 75' SINGLE SPAN PRECAST PRESTRESSED
CONCRETE DECK BEAM BRIDGE (33" DEPTH),
24' ROADWAY, 0.00% GRADE, 25° RT FORWARD
SKEW.

SECTION 06-00060-00-BR
ENDS STATION 8+10

APPROVED 10-29 20 07
[Signature]
COUNTY ENGINEER

PASSED 11-7 20 07
[Signature]
DISTRICT SEVEN ENGINEER OF
LOCAL ROADS & STREETS

Releasing For
Bid Based on
Limited Review 11-7 20 07
[Signature]
DEPUTY DIRECTOR OF HIGHWAYS,
REGION FOUR ENGINEER

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

C.H.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
15	06-00060-00-BR	EDWARDS	12	1
FED. ROAD DIST. NO. 7 ILLINOIS		FED. AID PROJECT		
PROJECT # BROS-047(27)		CONTRACT # 95534		
LET JOB # H0611008D		WEST VILLAGE CREEK		

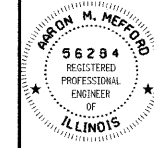
323 W. 3RD ST.
P.O. BOX 160
MT. CARMEL, IL
62863
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FAX:
(618)-263-3327

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FAX:
(812)-385-2812



PROFESSIONAL
DESIGN FIRM
LAND SURVEY &
PROFESSIONAL
ENGINEERING
CORPORATION
184-000887
(62-032435)(35-002769)



AARON M. MEFFORD
NAME
[Signature]
SIGNATURE
10-29-07
DATE
11-30-09
EXPIRES

COUNTY HIGHWAY 15
WEST VILLAGE CREEK
EDWARDS COUNTY, ILLINOIS

SHEET TITLE:

TITLE SHEET

SCALE: VARIES

BY: ANM

DATE: 10/29/07

REV:

1 OF 12

SHEETS

SHEET NO.

1

THIS SECTION SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PLANS, SPECIAL PROVISIONS AND "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", ADOPTED JANUARY 1, 2007.

THE WORK INVOLVED ON THIS SECTION CONSISTS OF THE REMOVAL OF THE EXISTING STRUCTURE, THE CONSTRUCTION OF A 75 FOOT LONG SINGLE SPAN PRECAST, PRESTRESSED CONCRETE DECK BEAM BRIDGE, EARTH APPROACHES, AGGREGATE SURFACE COURSE AND OTHER MISCELLANEOUS ITEMS NECESSARY TO COMPLETE THIS SECTION.

ALL ELEVATIONS ARE BASED ON U.S.G.S. MEAN SEA LEVEL DATUM.

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONTACT ALL THE UTILITIES, AFFECTING THE PROJECT, PRIOR TO CONSTRUCTION.

J.U.L.I.E. 1-800-892-0123

VERIZON
618-395-6191

ELLERY WATER CORP.
618-445-2858

NOTE: CONSTRUCT SPECIAL DITCH

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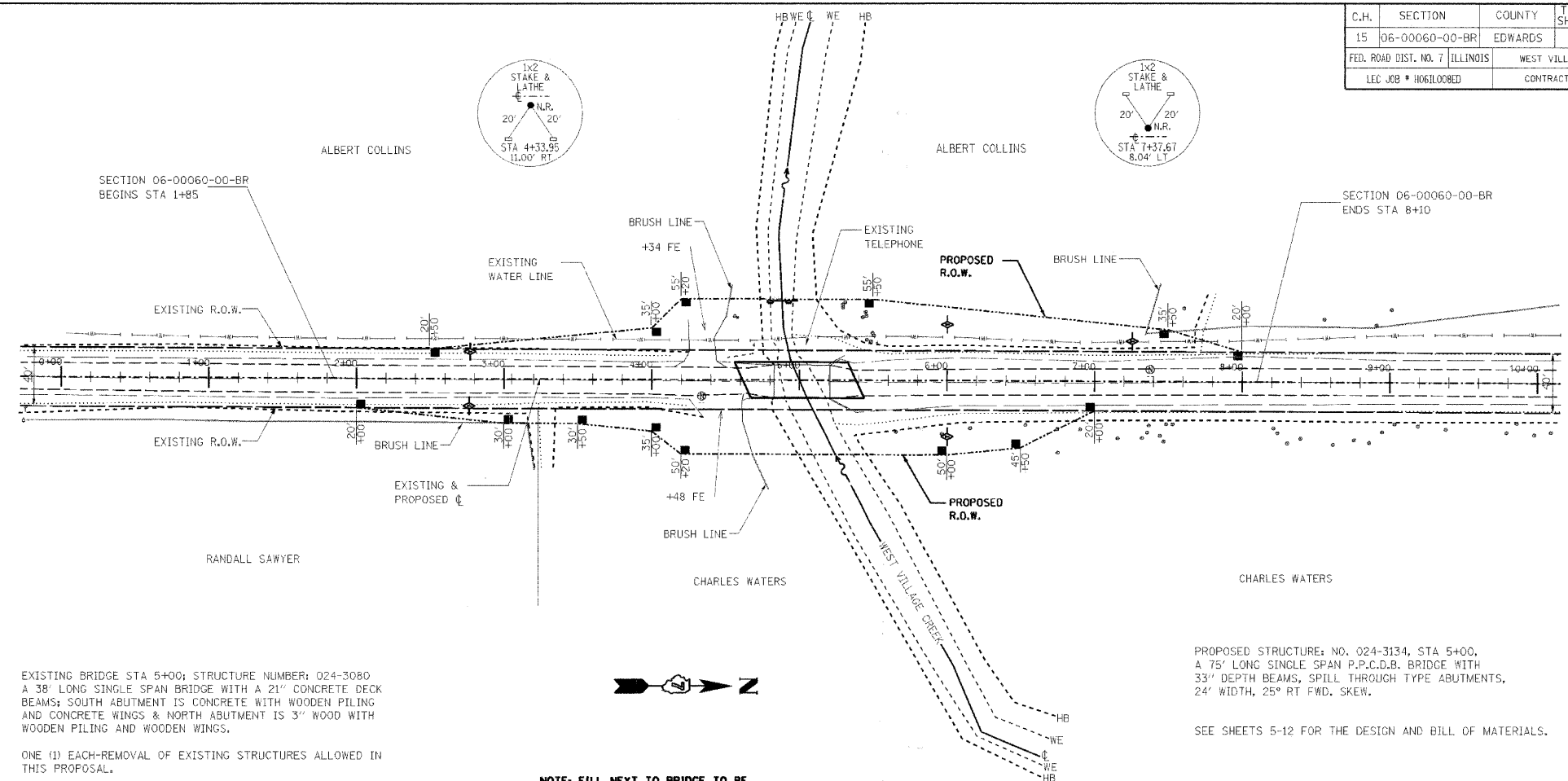
STA 2+00 TO STA 4+00 RT
STA 2+50 TO STA 4+00 LT
STA 5+25 TO STA 7+00 RT
STA 5+24 TO STA 8+00 LT

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NOTE: CONSTRUCT STONE RIPRAP DITCH

STA 5+25 TO STA 5+75 RT (0.62 TON/LIN FT)
STA 5+24 TO STA 5+74 LT (0.62 TON/LIN FT)
62 TON STONE RIPRAP DITCH ALLOWED IN PROPOSAL.

SEE SHEET NO. 12 FOR STONE RIPRAP DITCH DETAIL.



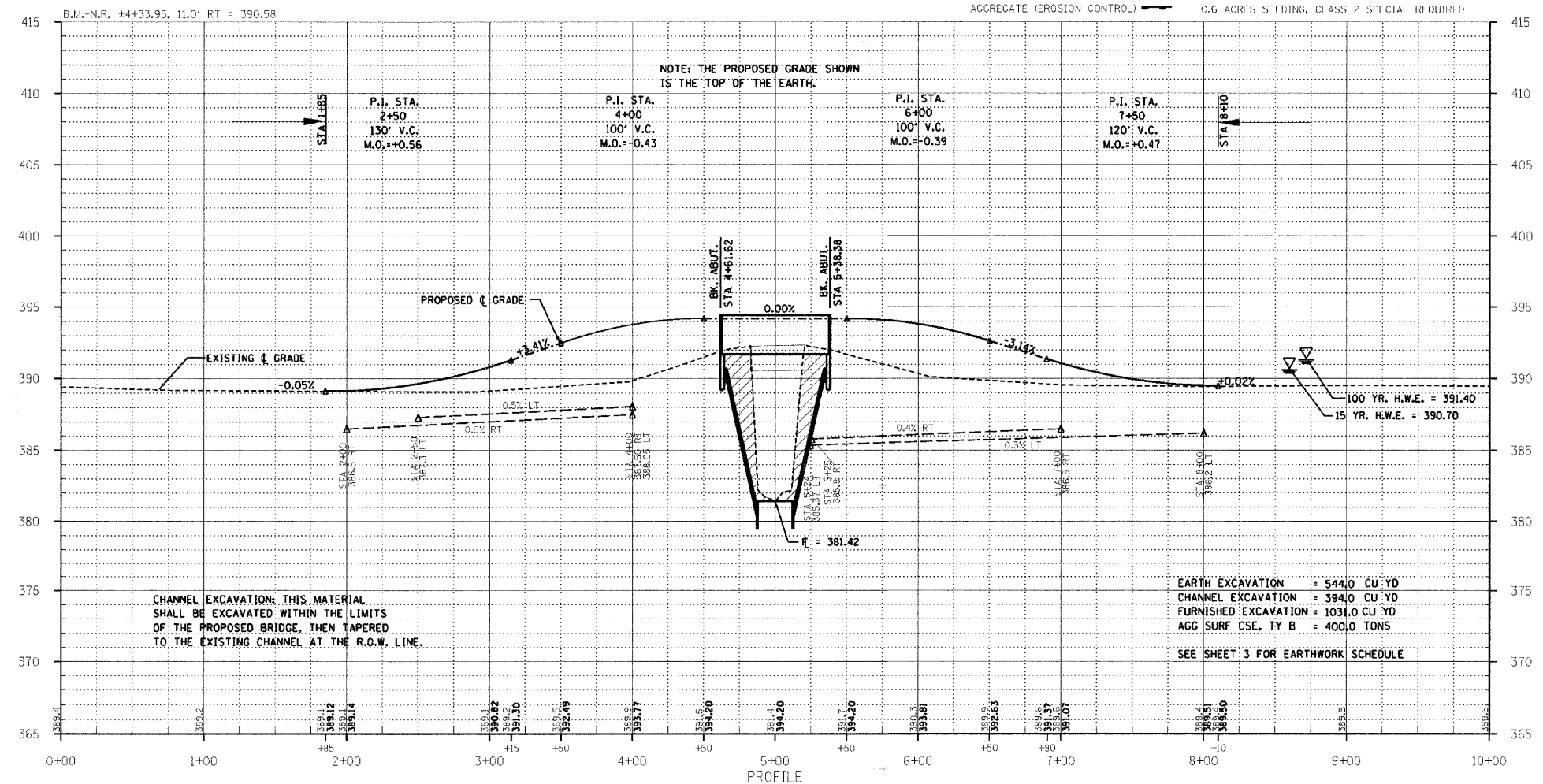
PROPOSED STRUCTURE: NO. 024-3134, STA 5+00,
A 75' LONG SINGLE SPAN P.P.C.D.B. BRIDGE WITH
33" DEPTH BEAMS, SPILL THROUGH TYPE ABUTMENTS,
24' WIDTH, 25° RT FWD. SKEW.

SEE SHEETS 5-12 FOR THE DESIGN AND BILL OF MATERIALS.

NOTE: FILL NEXT TO BRIDGE TO BE
AGGREGATE SURFACE COURSE

RIGHT-OF-WAY MARKERS ■
TEMPORARY DITCH CHECKS ◆
AGGREGATE (EROSION CONTROL) —

75.0 UNITS-TREE REMOVAL (6 TO 15 UNITS DIAMETER)
143.0 UNITS-TREE REMOVAL (OVER 15 UNITS DIAMETER)
0.6 ACRES SEEDING, CLASS 2 SPECIAL REQUIRED



CHANNEL EXCAVATION: THIS MATERIAL SHALL BE EXCAVATED WITHIN THE LIMITS OF THE PROPOSED BRIDGE, THEN TAPERED TO THE EXISTING CHANNEL AT THE R.O.W.

EARTH EXCAVATION	= 544.0 CU YD
CHANNEL EXCAVATION	= 394.0 CU YD
FURNISHED EXCAVATION:	= 1031.0 CU YD
AGG SURF CSE, T.Y B	= 400.0 TONS

SEE SHEET 3 FOR EARTHWORK SCHEDULE



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(62-032435)/(35-002769)

AARON M. MEFFORD
NAME
Aaron Mefford
SIGNATURE
10-29-07
DATE
11-30-09
EXPIRES

COUNTY HIGHWAY 15
WEST VILLAGE CREEK
EDWARDS COUNTY, ILLINOIS

SHEET TITLE:

HYDRAULIC DATA

SCALE:	VARES
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BY:	AMM
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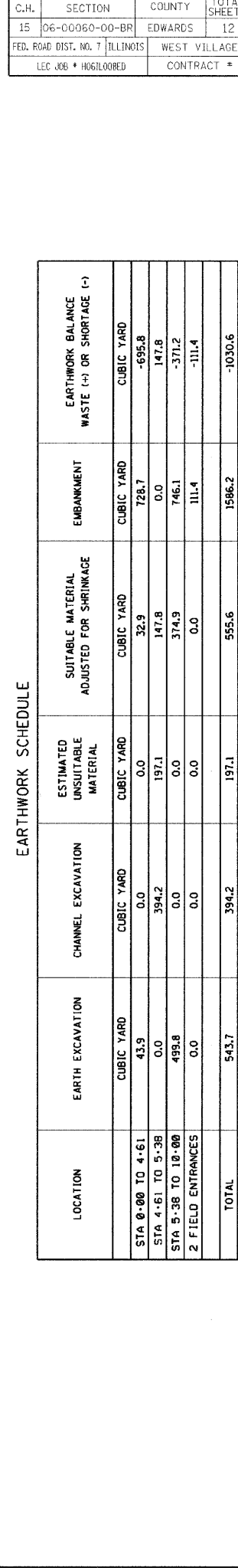
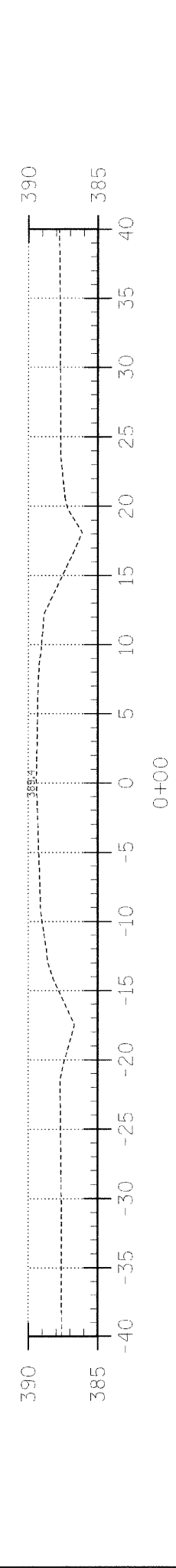
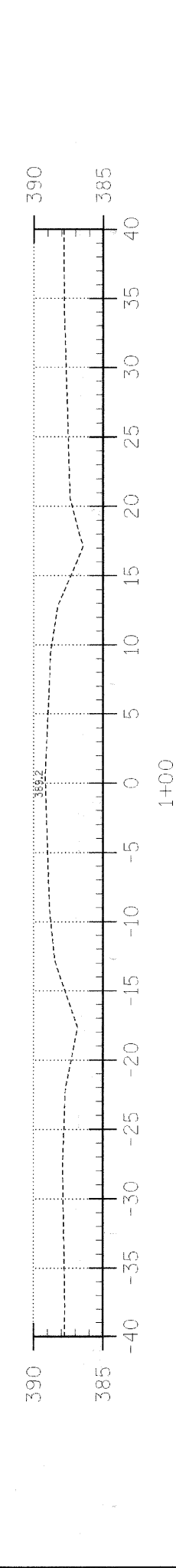
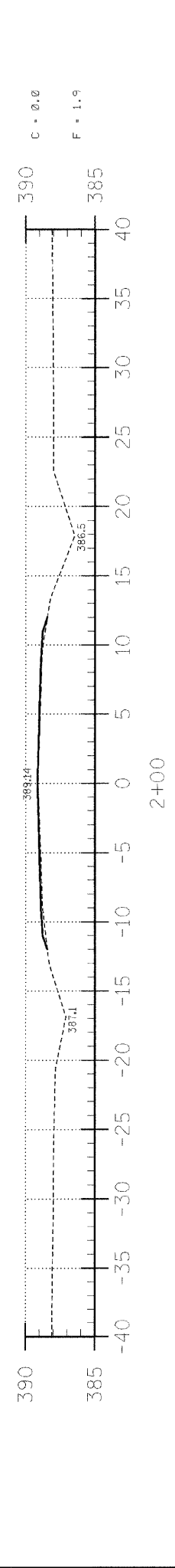
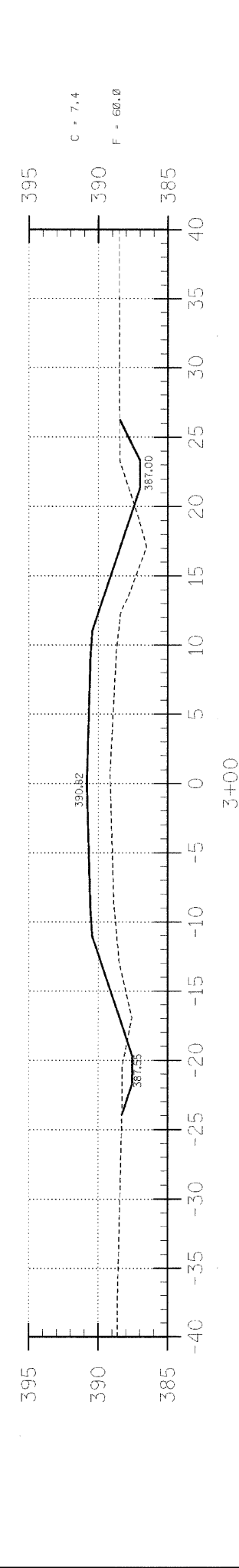
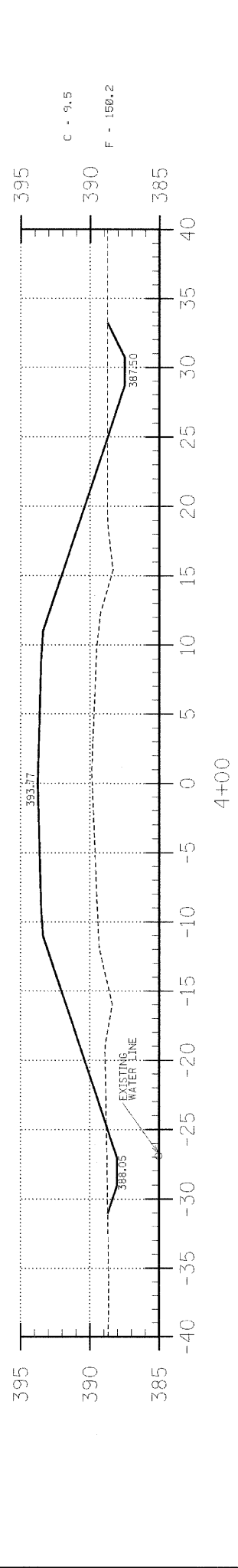
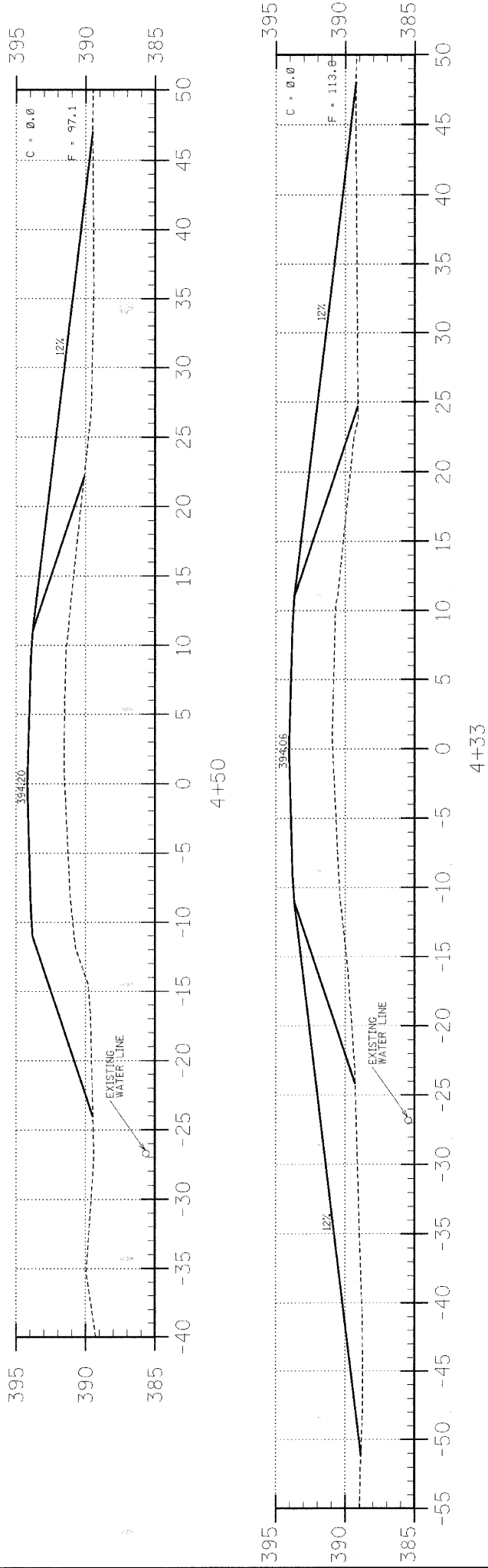
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2	DE	12
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SHEETS

SHEET NO. _____

2



LOCATION	EARTH EXCAVATION	CHANNEL EXCAVATION	ESTIMATED UNSUITABLE MATERIAL	SUITABLE MATERIAL ADJUSTED FOR SHRINKAGE	EMBANKMENT	EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-)
STA 0+00 TO 4+61	CUBIC YARD 43.9	CUBIC YARD 0.0	CUBIC YARD 0.0	CUBIC YARD 32.9	CUBIC YARD 728.7	CUBIC YARD -695.8
STA 4+61 TO 5+38	CUBIC YARD 0.0	CUBIC YARD 394.2	CUBIC YARD 197.1	CUBIC YARD 147.8	CUBIC YARD 0.0	CUBIC YARD 147.8
STA 5+38 TO 10+00	CUBIC YARD 499.8	CUBIC YARD 0.0	CUBIC YARD 0.0	CUBIC YARD 374.9	CUBIC YARD 746.1	CUBIC YARD -371.2
2 FIELD ENTRANCES	CUBIC YARD 0.0	CUBIC YARD 0.0	CUBIC YARD 0.0	CUBIC YARD 0.0	CUBIC YARD 111.4	CUBIC YARD -111.4
TOTAL	543.7	394.2	197.1	555.6	1586.2	-1030.6

C.H.1506-00960-00-BRILLINOISLEC JOB # HOGILOORED

SECTION06-00960-00-BRILLINOISWEST VILLAGE CREEKCONTRACT # 95534

TOTAL SHEETS12

SHEET NO.3

323 W. 3RD. ST.
P.O. BOX 160
MT. CARMEL, IL 62863

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FAX: (618)-263-3327

405 W. STATE ST.
SUITE 1
PRINCETON, IN 47670

PHONE: (812)-386-7611
FAX: (812)-385-2812

PROFESSIONAL DESIGN FIRM
LAND SURVEY & PROFESSIONAL ENGINEERING CORPORATION
184-000887
(62-032435)(35-002769)

AARON M. MEFFORD
REGISTERED PROFESSIONAL ENGINEER OF ILLINOIS
56284

NAME
SIGNATURE
DATE
11-30-09
EXPIRES

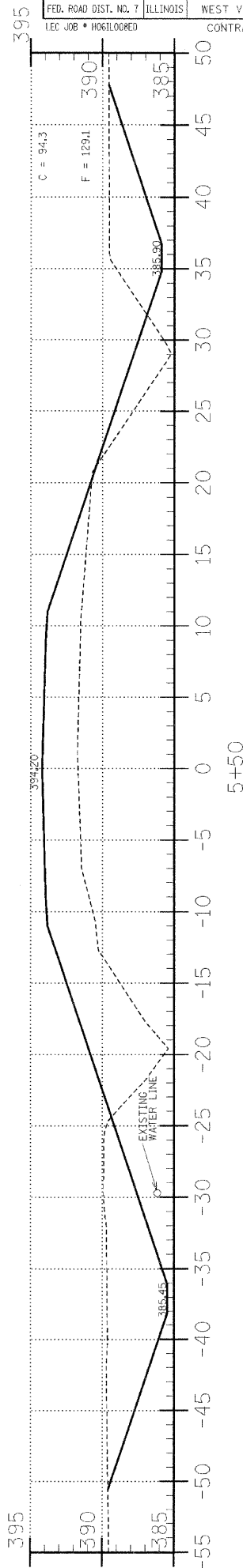
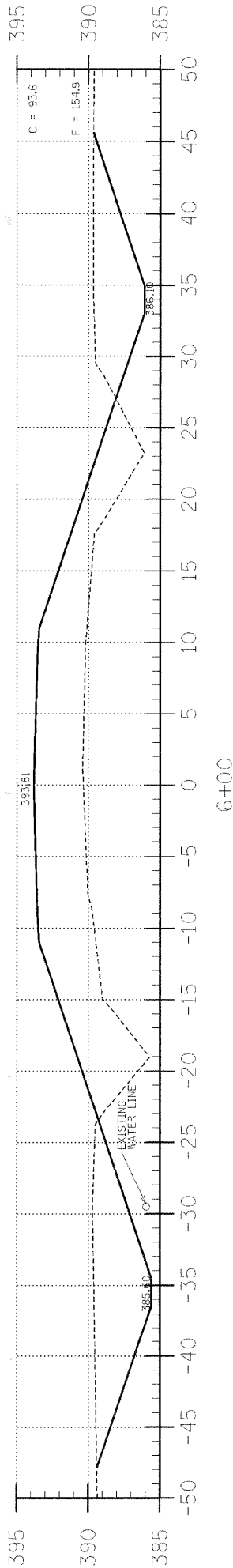
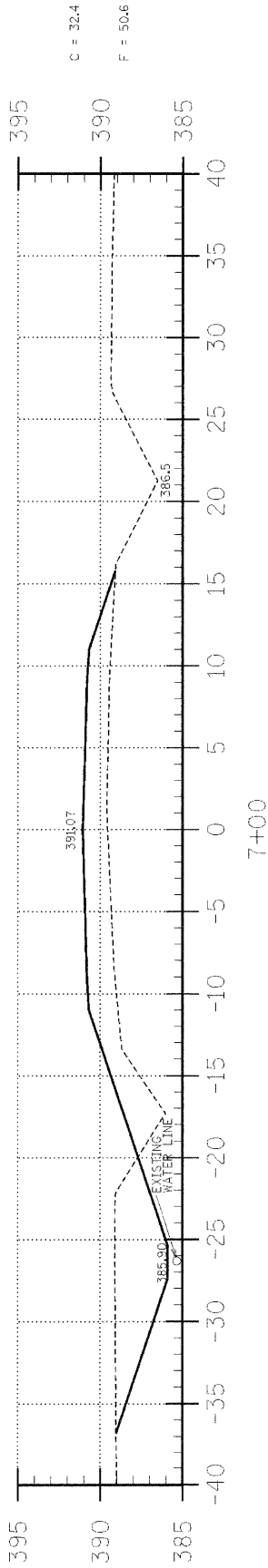
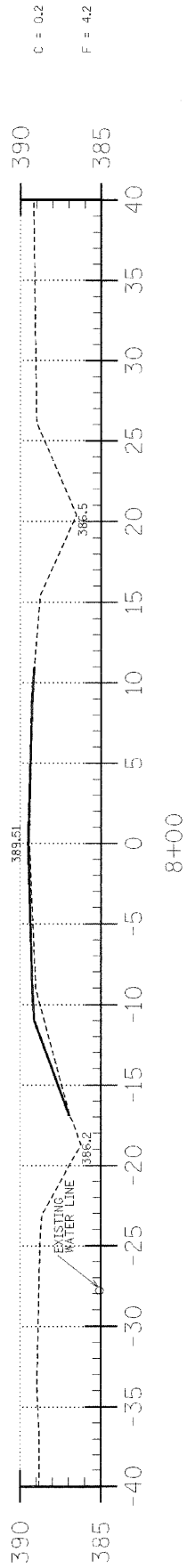
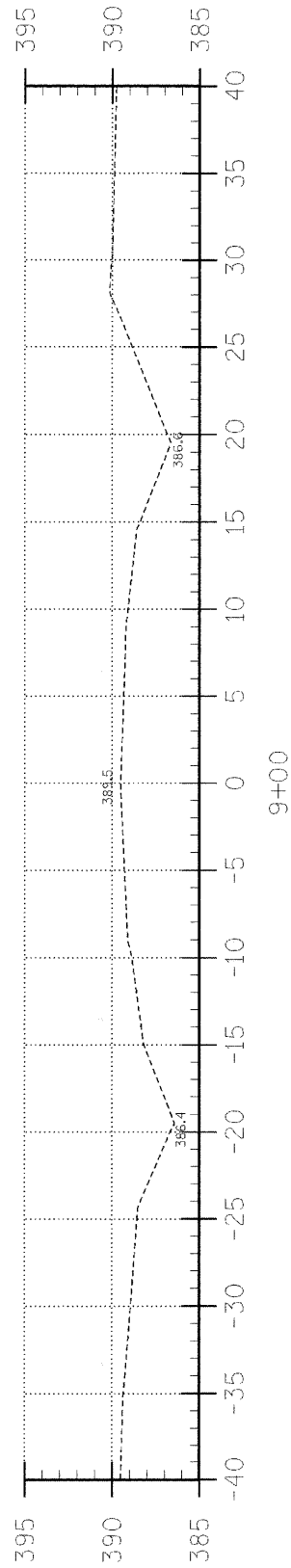
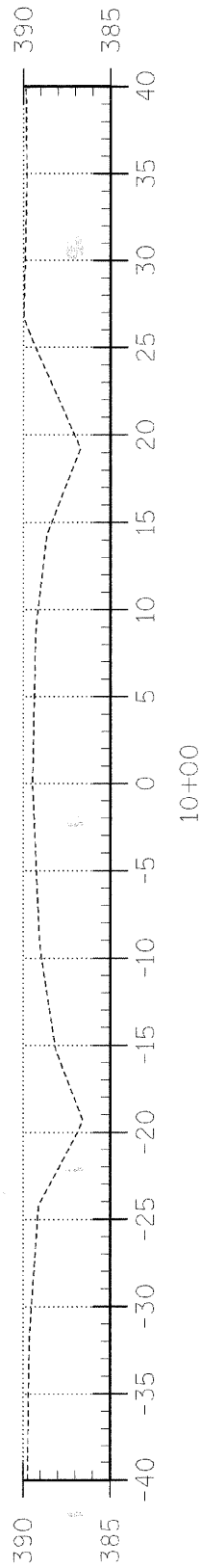
COUNTY HIGHWAY 15
WEST VILLAGE CREEK
EDWARD COUNTY, ILLINOIS

SHEET TITLE:
CROSS-SECTIONS

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BY: AMM
DATE: 5/16/07
REV:

3 OF 12
SHEETS

SHEET NO.
3



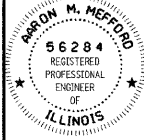
C.H.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
15	06-00060-00-BR	EDWARDS	12	4
FED. ROAD DIST. NO. 7		ILLINOIS	WEST VILLAGE CREEK	
LEC JOB # H061008D			CONTRACT # 95534	

323 W. 3RD ST.
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PROFESSIONAL
DESIGN FIRM
LAND SURVEY &
PROFESSIONAL
ENGINEERING
CORPORATION
184-000887
(62-032435)(35-002769)



AARON M. MEFFORD
NAME
SIGNATURE
DATE
11-30-09
EXPIRES

COUNTY HIGHWAY 15
WEST VILLAGE CREEK
EDWARD COUNTY, ILLINOIS

SHEET TITLE:

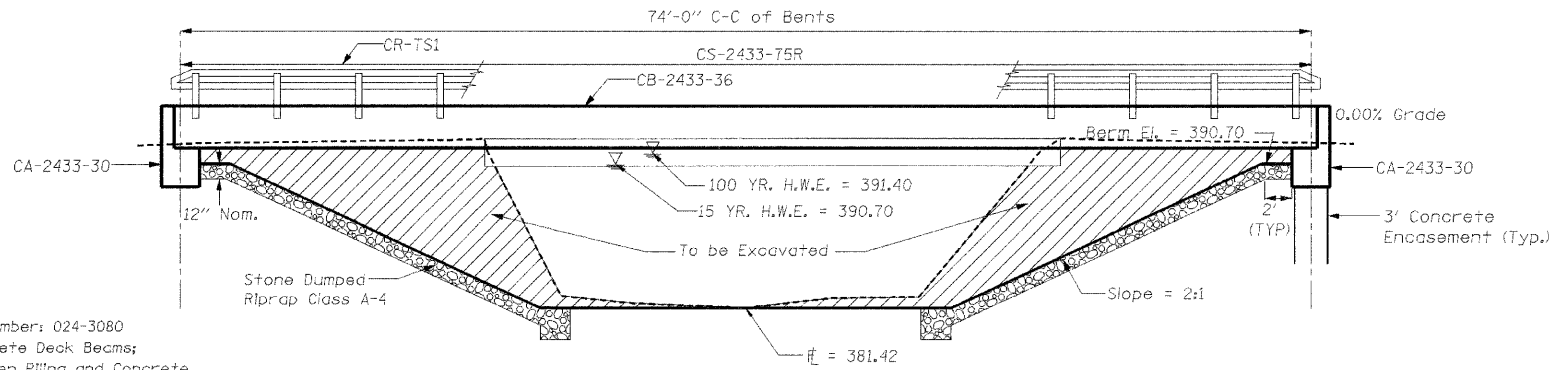
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4	OF	12
SHEETS		

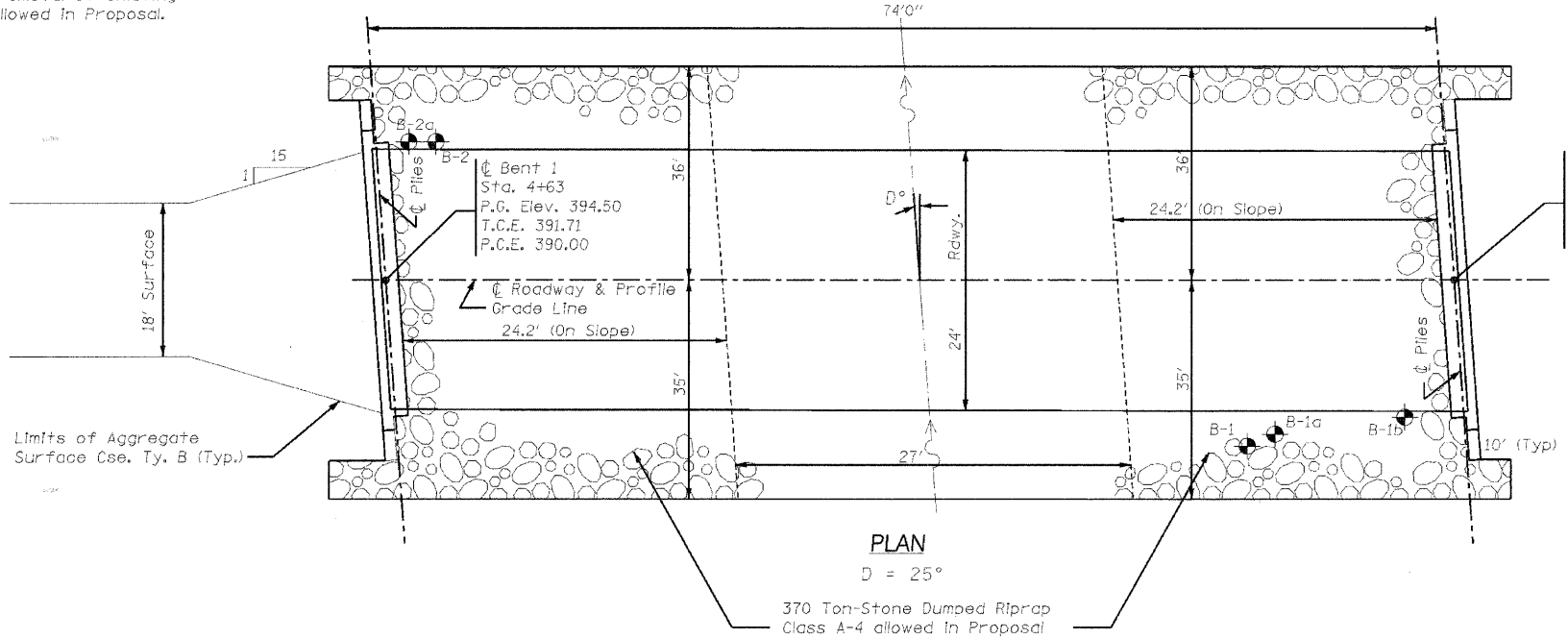
SHEET NO.
4

B.M. N.R. ±4+33.95, 11.0' RT.
Elev. = 390.58



Existing Bridge Sta 5+00; Structure Number: 024-3080
A 38' Single Span Bridge with 21" Concrete Deck Beams;
South Abutment is Concrete with Wooden Piling and Concrete Wings & North Abutment is 3" Wood with Wooden Piling and Wooden Wings.

One (1) each removal of existing structures allowed in Proposal.



NOTE: All items deemed fit for use on other County projects shall become the property of the County. These items shall be stored along the R.O.W. at no additional cost to the project.

NOTE: The Article or Section Numbers Referencing the Standard Specifications for Road and Bridge Construction as shown on the Standard Bridge Plan Sheets Included with the contract plans should be interpreted as referring to the current edition of the Standard Specification (Adopted January 1, 2007) as shown in the "Article/Section No. Reference Table."

ARTICLE/SECTION NO. REFERENCE TABLE		
Previous No.	Current No.	
504.06	504.06	
505.04	505.04	
1006.05	1006.05	
1006.32	1006.32	
1060.07	1060.07	
STD 631026	STD 631026	

SOUTH ABUT. PILE DATA		
Type:	Steel Piles HP10X42	
Nominal Required Bearing:	246 Kips	
Allowable Resistance Available:	82 Kips	
Estimated Length:	54 Feet/Pile	
Number Required:	5	

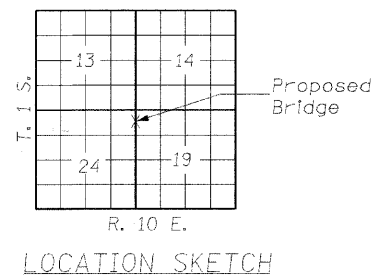
NORTH ABUT. PILE DATA		
Type:	Steel Piles HP10X42	
Nominal Required Bearing:	246 Kips	
Allowable Resistance Available:	82 Kips	
Estimated Length:	56 Feet/Pile	
Number Required:	5	

DESIGN SPECIFICATIONS
2002 AASHTO
HS 20-44 Loading, Load Factor Design

STATION 5+00
WEST VILLAGE CREEK
SEC. 06-00060-00-BR BUILT 20
PROJECT NO. BR05-047(27)
EDWARDS COUNTY
LOADING HS 20-44
STR. NO. 024-3134

LETTERING FOR NAME PLATE
Locate Name Plate at the Southeast Corner of the Bridge (See Sd. CN)

WATERWAY INFORMATION									
Drainage Area = 29.4 Sq. Mi. Low Grade Elev. = 389.12 At Sta. 1+85									
Flood	Freq. Yr.	Q C.F.S.	Opening Sq.Ft.		Natural H.W.E.	Head-Ft.		Headwater El.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Design	15	3216	230.2	399.1	390.7	9.63	0.49	400.33	391.19
Base	100	5040	230.2	444.5	391.4	23.67	0.95	415.07	392.35
Max. Calc.	500	6513							



GENERAL NOTES

- The Contractor shall drive one test pile, as specified, in a permanent location as directed by the Engineer before ordering the remaining piles.
- See Special Provisions for boring logs.
- A Corrosion Inhibitor, as covered in the Special Provisions, shall be used in the concrete for Precast Prestressed Concrete Deck Beams.
- The Hot-Mix Surf. Cse. and the Waterproofing Membrane System shown in these Plans shall not be provided.

Item	Unit	Super	Sub. Piers	Abuts.	Total
Removal of Existing Structures	L Sum				1
Hot-Mix Asphalt Surf. Cse.	Tons				
Waterproofing Membrane System	Sq.Yds.				
Concrete Structures	Cu.Yds.			22.6	22.6
P.P. Conc. Dk. Bm. 33" Dp.	Sq.Ft.	1800			1800
Steel Railing, Type S1	Lin.Ft.	150			150
Reinforcement Bars	Lbs.		2680		2680
Furnishing Steel Piles HP10X42	Lin.Ft.		550		550
Driving Piles	Lin.Ft.		550		550
Name Plates	Each		1		1
Concrete Encasement	Cu.Yds.		2.6		2.6

NOTE: Four (4) Each Curled End Sections required. Item to be included in Steel Railing.

INDEX OF SHEETS

- General Plan & Elevation
- Standard CS-2433-75R
- Standard CB-2433-36
- Standard CA-2433-30
- Standard CR-TS1
- Standard CN
- Standard CX-1

GENERAL PLAN & ELEVATION	
COUNTY	ROUTE 15
OVER	WEST VILLAGE CREEK
SECTION	06-00060-00-BR
EDWARDS	COUNTY
STATION	5+00

405 W. STATE ST.
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PHONE: (812)-386-7611
FAX: (812)-385-2812

LAMAC
ENGINEERING CO.

PROFESSIONAL LAND SURVEYING FIRM:
048-00082
PROFESSIONAL ENGINEERING CORPORATION:
184-00087

AARON M. MEFFORD
REGISTERED PROFESSIONAL ENGINEER
OF ILLINOIS
56284
10-29-07
11-30-09
EXPIRES

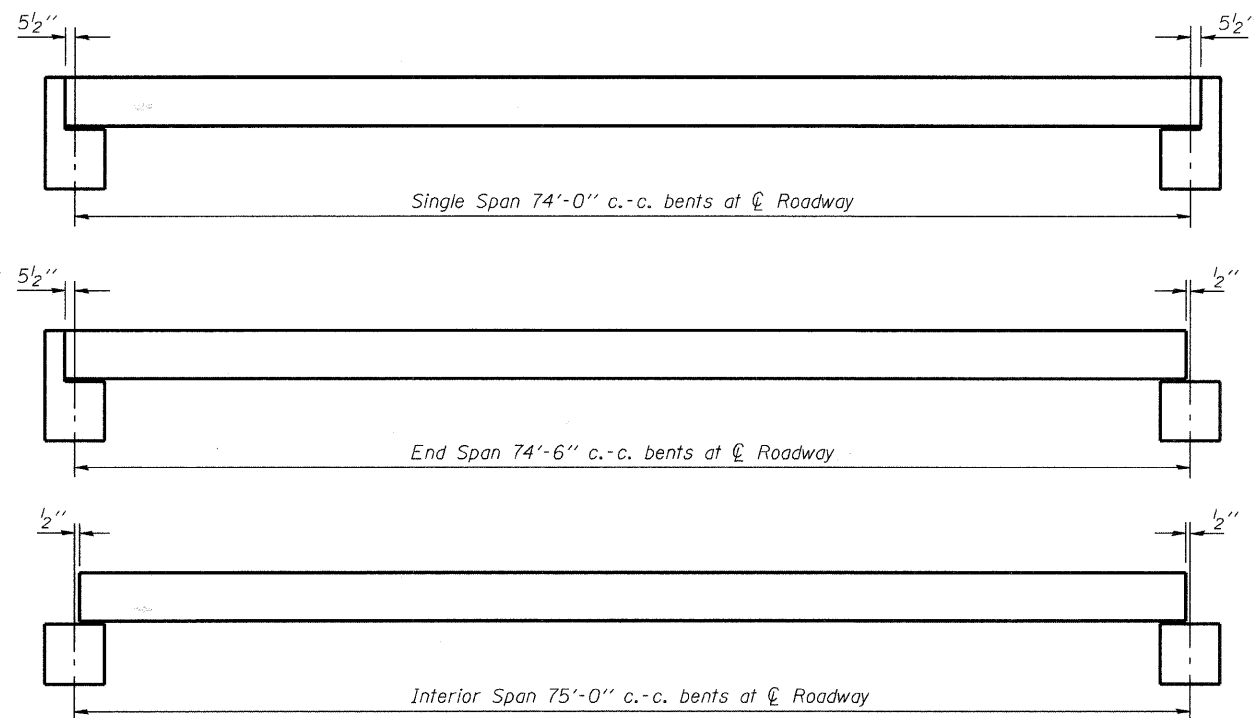
COUNTY HIGHWAY 15
WEST VILLAGE CREEK
EDWARDS COUNTY, ILLINOIS

SHEET TITLE:
GENERAL PLAN AND ELEVATION

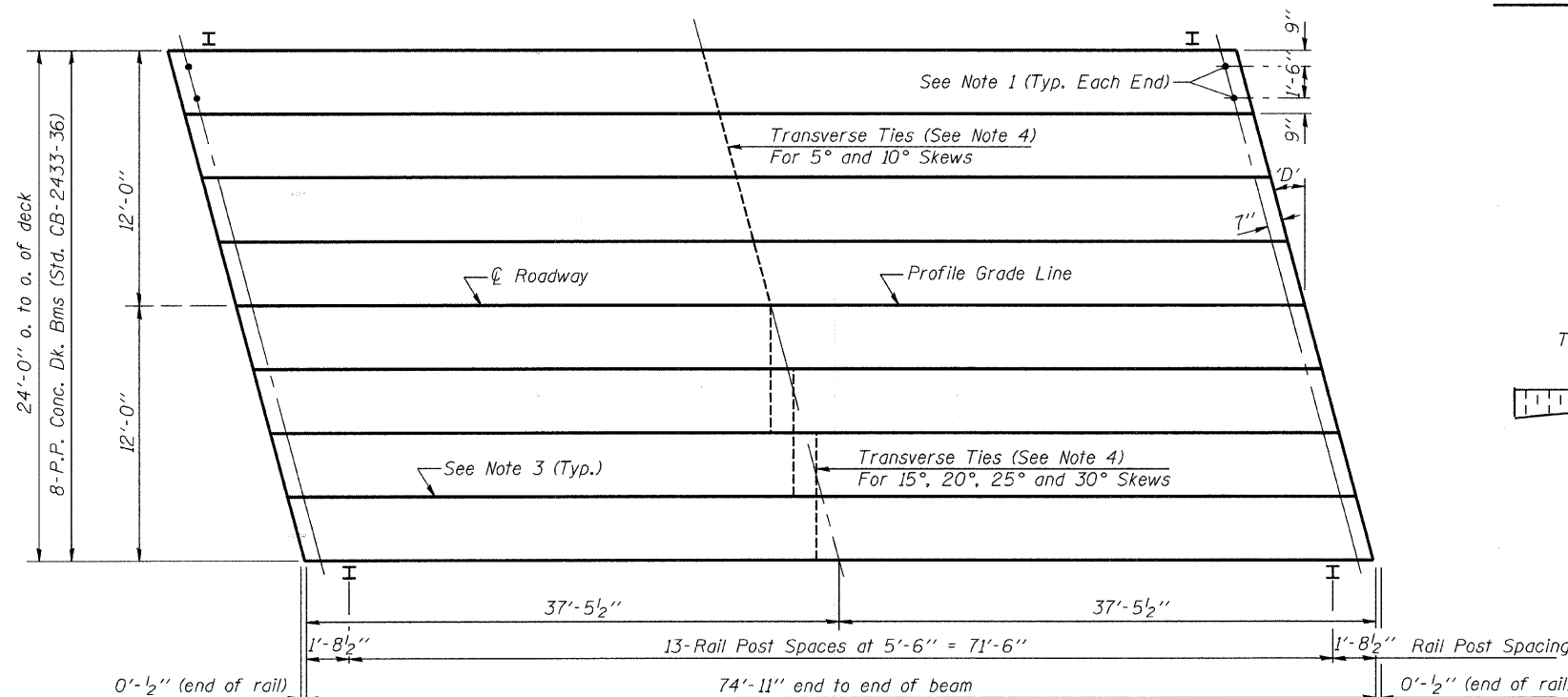
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BY: A.M.M.
DATE: 10/29/07
REV:

5 OF 12
SHEETS

SHEET NO.
5



TYPICAL ELEVATIONS

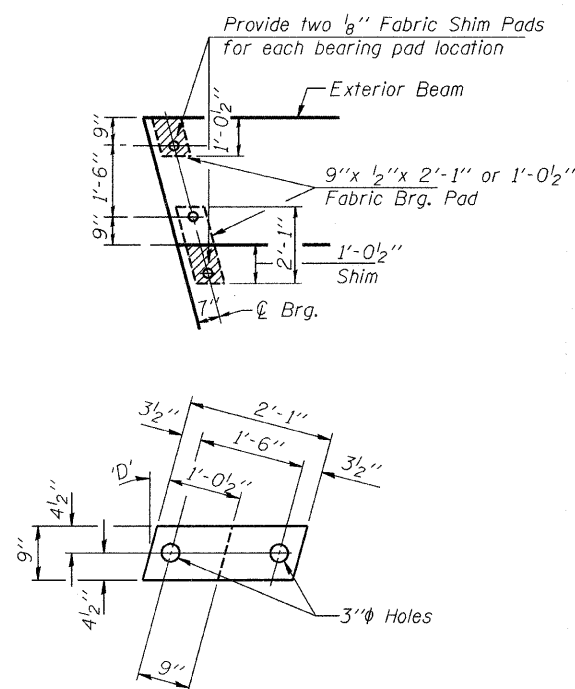


PLAN

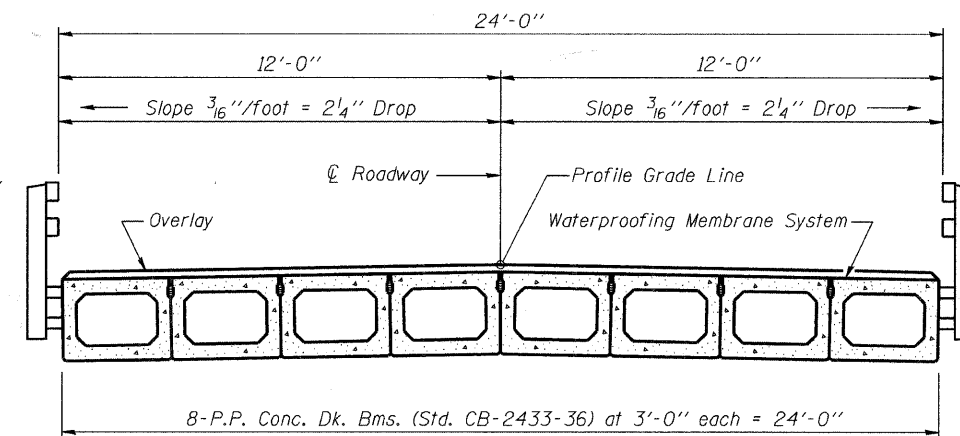
("D" = Designated Skew Angle)

NOTES

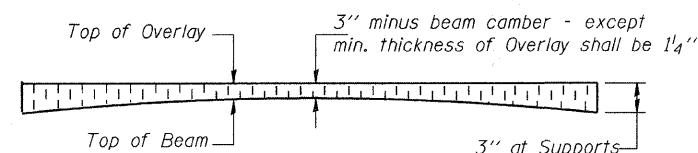
- After beams have been erected, holes shall be drilled into substructure and anchor dowels placed. Dowel holes shall be filled with non-shrink grout to top of beam and allowed to cure min. 24 hrs. prior to grouting the shear keys.
- Nominal 1" joint at Centerline Pier shall be filled with non-shrink grout.
- Longitudinal keys shall be grouted.
- The 1" rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets that receive transverse tie bar outside shall be filled with grout after transverse tie assembly is in place.



1/2" FABRIC BRG. PAD DETAILS



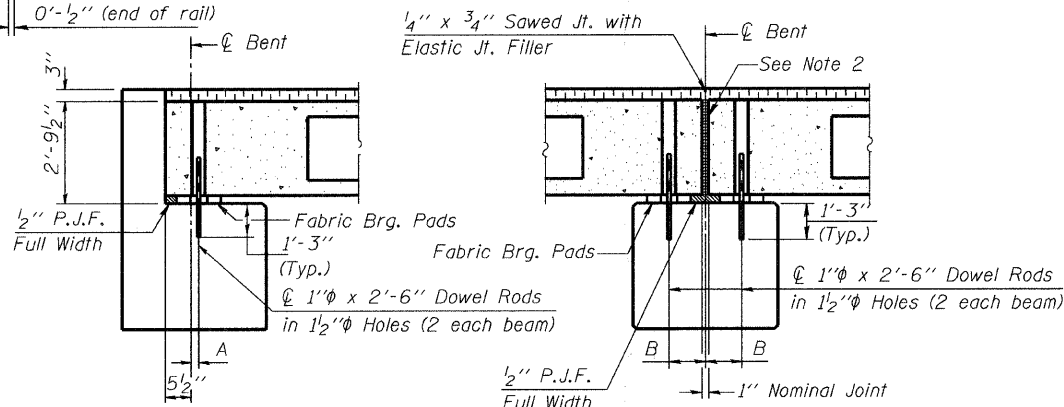
CROSS SECTION



PROFILE OF OVERLAY

DIMENSIONS 'A' AND 'B'

'D'	5°	10°	15°	20°	25°	30°
A	1 1/2"	1 5/8"	1 3/4"	1 7/8"	2 1/4"	2 5/8"
B	7 1/2"	7 5/8"	7 3/4"	8"	8 1/4"	8 5/8"



SECTION AT ABUTS.
(Along Centerline Beams)

SECTION AT PIERS
(Along Centerline Beams)

QUANTITIES FOR ONE SPAN

P.P. Conc. Dk. Bm. 33" Dp.	1800 Sq. Ft.
Steel Railing	150 Ft.
Waterproofing Membrane System	200.0 Sq. Yds
Portland Cement Mortar	525 Ft.
Fairing Course	

Note: Quantity of overlay for one span = 23.0 Tons

P.P.C. DECK BEAM
SUPERSTRUCTURE

24' RDWY.	33" BMS.	75' SPAN	RIGHT
STANDARD CS-2433-75R			

Illinois Department of Transportation

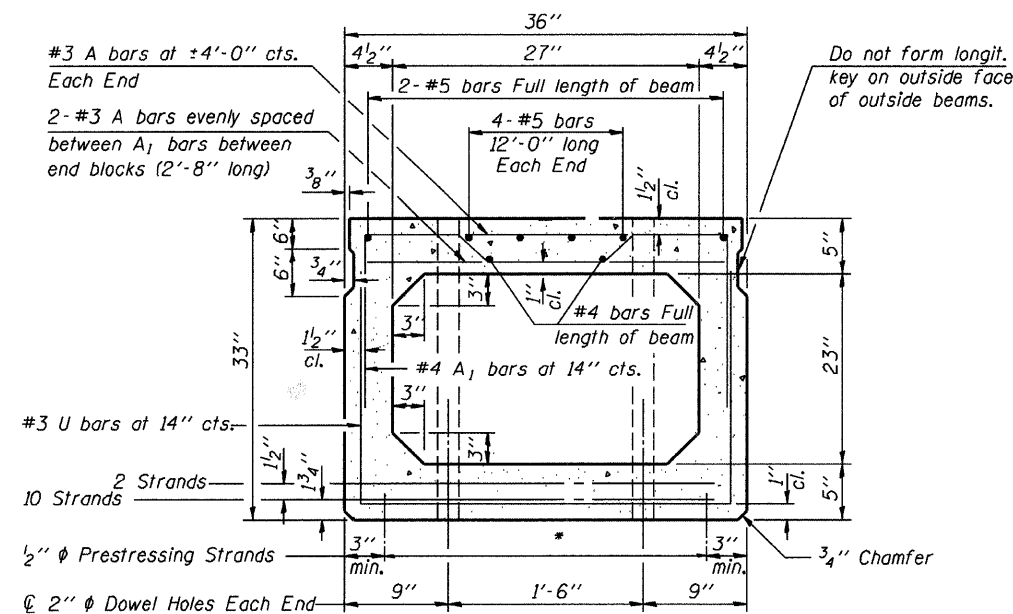
PASSED APRIL 4, 2005

Thomas J. Donagan, Jr.
Engineer of Bridge Design

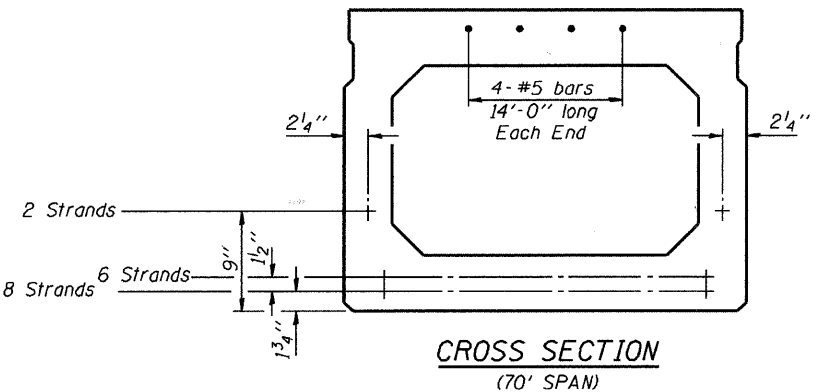
APPROVED APRIL 4, 2005

Ralph E. Anderson
Engineer of Bridges and Structures

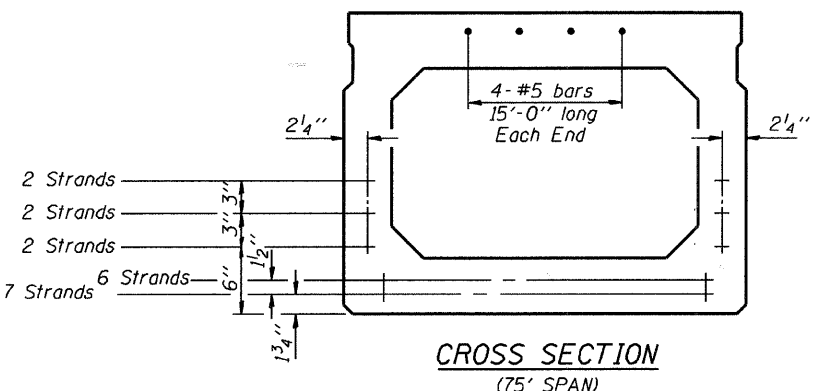
ISSUED 4-4-2005



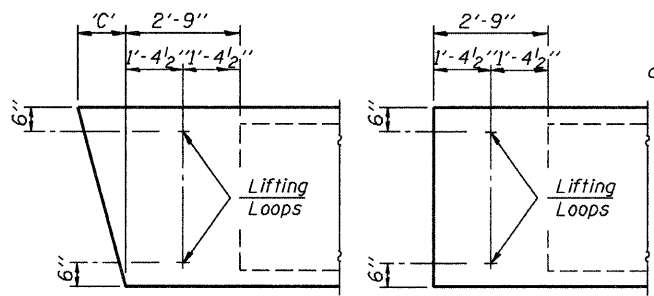
CROSS SECTION
(60' SPAN)



CROSS SECTION
(70' SPAN)

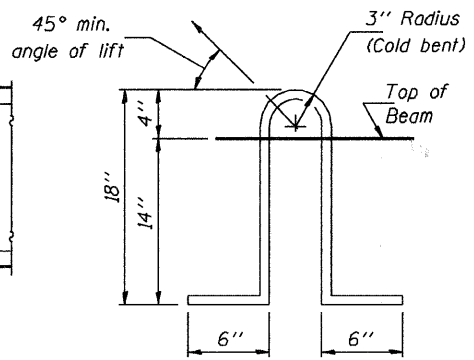


CROSS SECTION
(75' SPAN)



END BLOCK DETAILS

Each beam shall have four Lifting Loops, two at each end of beam cast in locations shown above. Loops shall be burned off after beams have been erected.



LIFTING LOOP DETAIL

Lifting loops shall be 3, 1/2" ϕ -270 ksi strands, as shown. Alternate approved lifting devices are also acceptable.

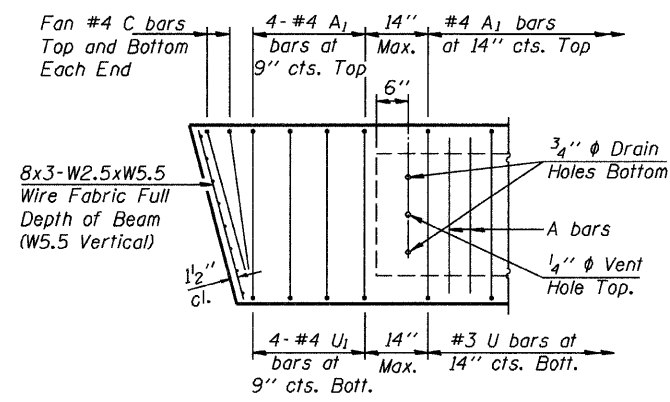
DIMENSION 'C'

Skew Angle 'D'	0°	5°	10°	15°	20°	25°	30°
Dimension 'C' (Inches)	0	3 3/8	6 3/8	9 5/8	13 1/8	16 3/4	20 3/4

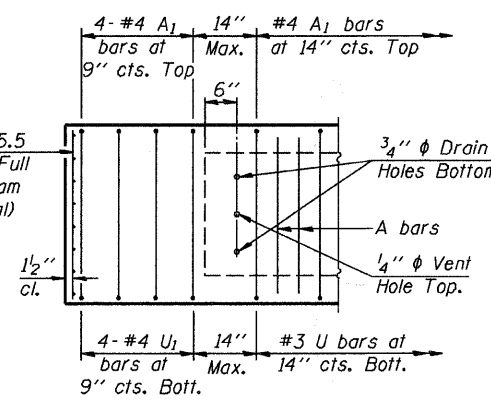
* TRANSVERSE STRAND PLACEMENT GUIDELINES

- Place strands symmetrically about centerline of beam.
- The minimum distance from center to center of strands in all directions shall be 2".
- The minimum clearance from strand to dowel hole shall be 1/2".
- The minimum clearance from strand to void shall be 1 1/2".

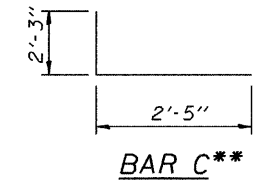
Vertical placement of strands shall not be adjusted to satisfy the above guidelines.



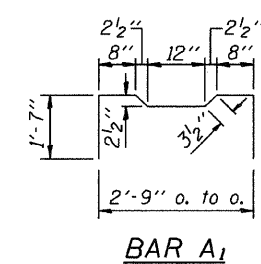
END REINFORCEMENT
(SKEWED)



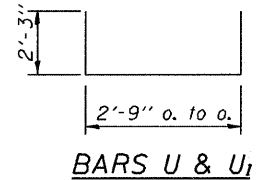
END REINFORCEMENT
(RIGHT ANGLE)



BAR C**



BAR A₁



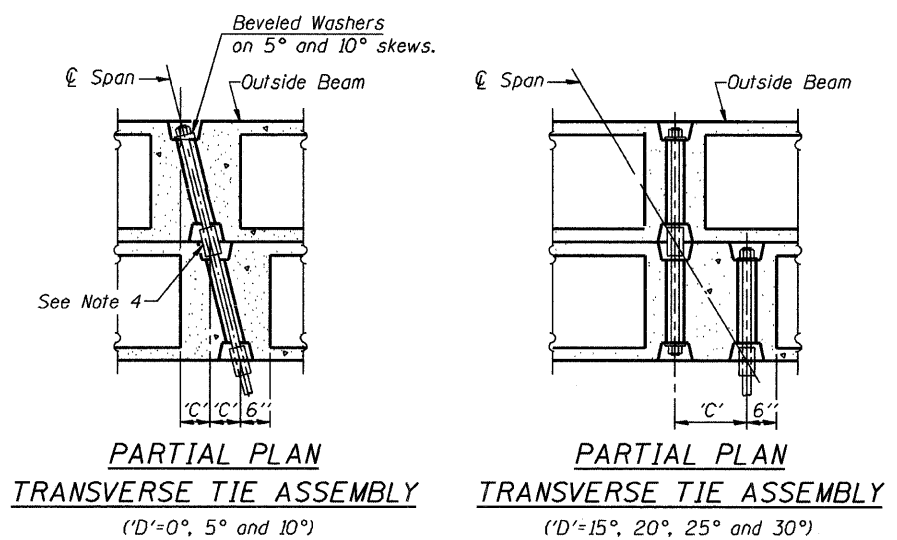
BARS U & U₁

DESIGN STRESSES

$f'_c = 5,000$ p.s.i.
 $f'_{ci} = 4,000$ p.s.i.
 $f'_s = 270,000$ p.s.i. (1/2" ϕ Strand)
 $f_{si} = 201,960$ p.s.i. (1/2" ϕ Strand)
 $f_y = 60,000$ p.s.i.

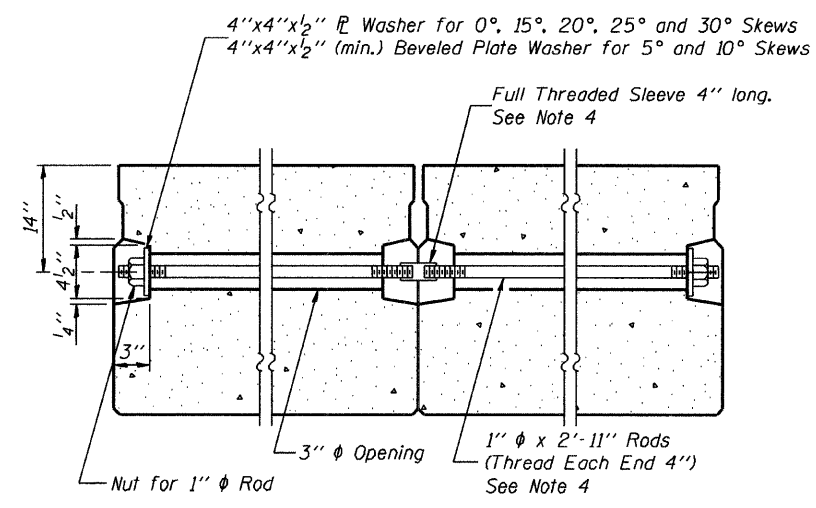
MIN. BAR LAP

#4 bars = 1'-4"
#5 bars = 1'-8"



PARTIAL PLAN
TRANSVERSE TIE ASSEMBLY

PARTIAL PLAN
TRANSVERSE TIE ASSEMBLY



SECTION ALONG TRANSVERSE TIE ASSEMBLY

NOTES

- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.
- The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 square inches.
- Reinforcement bars shall conform to the requirements of AASHTO M-31 or M-322, Grade 60.
- On 0°, 5° and 10° skews, alternate approved transverse tie rods of increased segmental length are acceptable.
- Rail Post anchor devices shall be cast into outside beam as elsewhere specified.
- When a Waterproofing Membrane System is specified, the top surface of the beams shall be screeded with a straightedge and finished with a hand float. The finished surface shall be free of depressions or high spots with sharp corners and the top edge of keys shall be rounded or chamfered a minimum of 1/4".
- Keyway surfaces shall be cleaned to remove form oil or other bond breaking material prior to shipment of the beams. Cleaning shall be done by sandblasting the keyway areas between the top of the beam and the bottom edge of the key.

Illinois Department of Transportation
PASSED APRIL 4, 2005
Thane S. Romagosa
Engineer of Bridge Design
APPROVED APRIL 4, 2005
Ralph E. (Redman)
Engineer of Bridges and Structures
ISSUED 4-4-2005

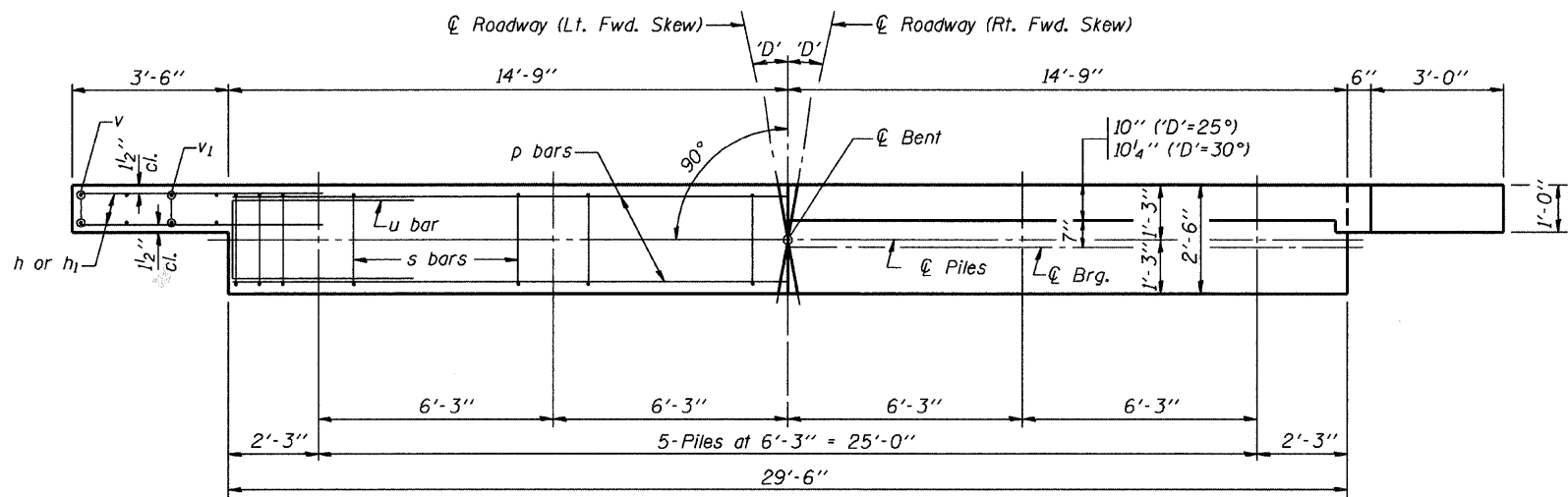
NOTE:

The std. reinf. and dimensions shown on the 60' span cross section is typical for all spans, except as shown.

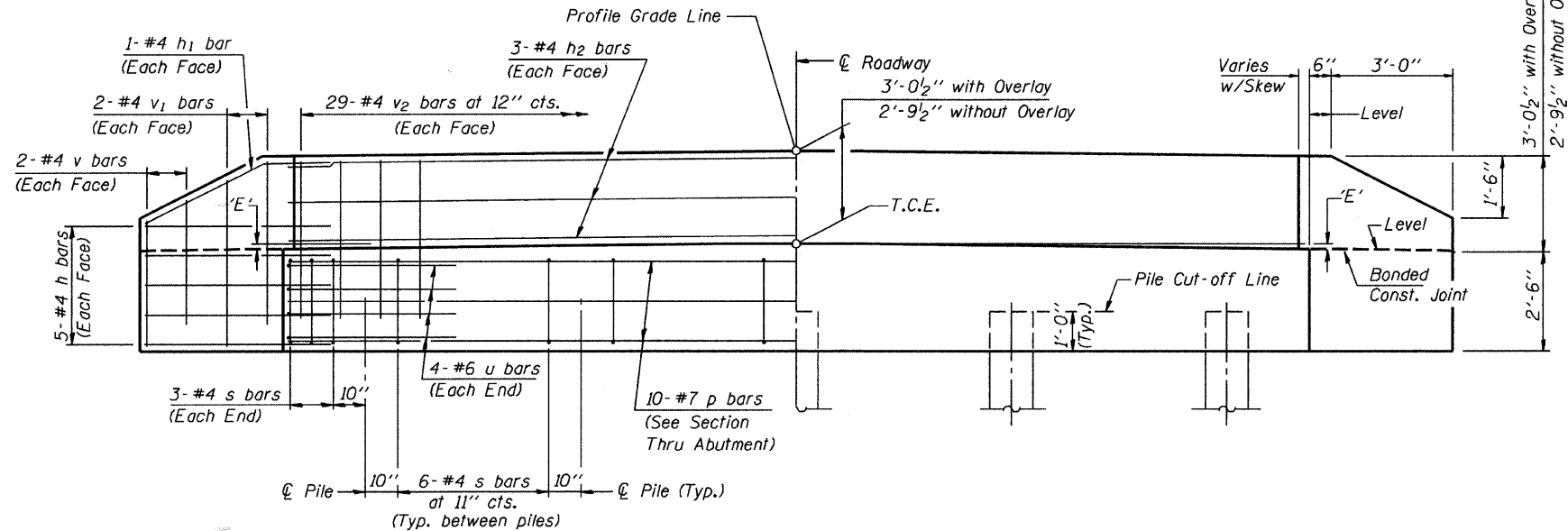
**NOTE:

The following number of C bars shall be used:
Skew No.
5° and 10° — 1
15° and 20° — 2
25° and 30° — 3

P.P.C. DECK BEAM DETAILS
24' ROADWAY 33" x 36" BEAMS
STANDARD CB-2433-36



PLAN
('D'=Designated Skew Angle)



ELEVATION

DIMENSION 'E'

GRADE	'D'=25°		'D'=30°	
	UPGRADE END	DOWNGRADE END	UPGRADE END	DOWNGRADE END
0%	2 1/2"	2 1/2"	2 3/8"	2 3/8"
Over 0% to 1%	2 5/8"	2 7/8"	2"	2 7/8"
Over 1% to 2%	1 3/8"	3 5/8"	1"	3 3/4"
Over 2% to 3%	5/8"	4 3/8"	1/8"	4 5/8"
Over 3% to 4%	0"	5 1/8"	—	—

NOTES

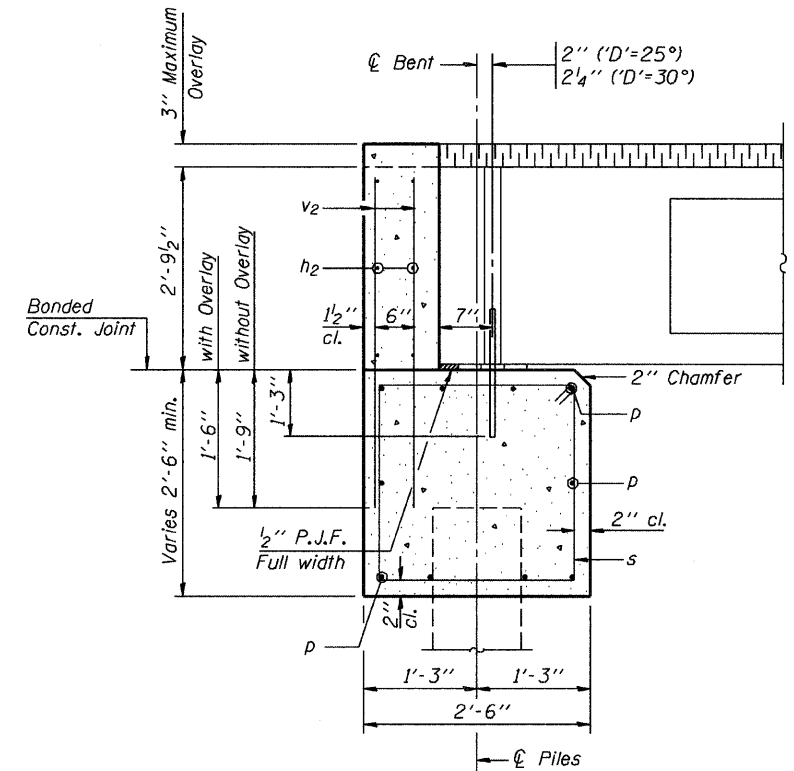
- The Backwall and the portion of the Wingwalls above the bonded construction joint shall be cast against the in-place beam.
- Reinforcement bars shall conform to the requirements of A.A.S.H.T.O. M-31 or M-322, Grade 60.
- Space reinforcement in cap to miss anchor bolts.

MAXIMUM PILE LOADS

SPAN	TONS
60'	36
70'	40
75'	41

DESIGN STRESSES

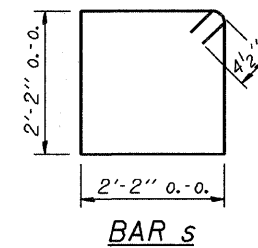
$f'_c = 3,500$ psi
 $f_y = 60,000$ psi



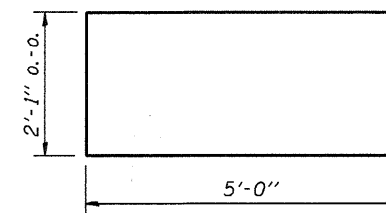
SECTION THRU ABUTMENT
(At Right Angles)

BILL OF MATERIAL
FOR ONE ABUTMENT

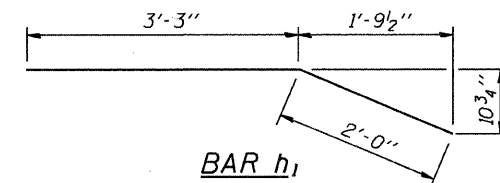
Bar	No.	Size	Length	Shape
h	20	#4	5'-0"	—
h1	4	#4	5'-3"	—
h2	6	#4	29'-2"	—
p	10	#7	29'-2"	—
s	30	#4	9'-5"	□
u	8	#6	12'-1"	□
v	8	#4	3'-8"	—
v1	8	#4	4'-8"	—
v2	58	#4	4'-5"	—
Concrete Structures			11.3 Cu. Yds.	
Reinforcement Bars			1340 Lb.	



BAR s



BAR u

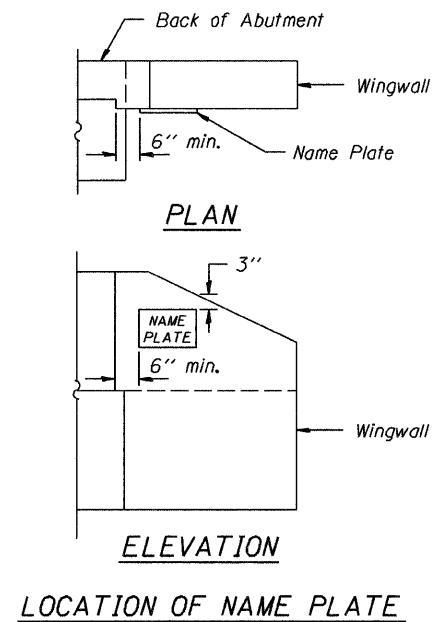
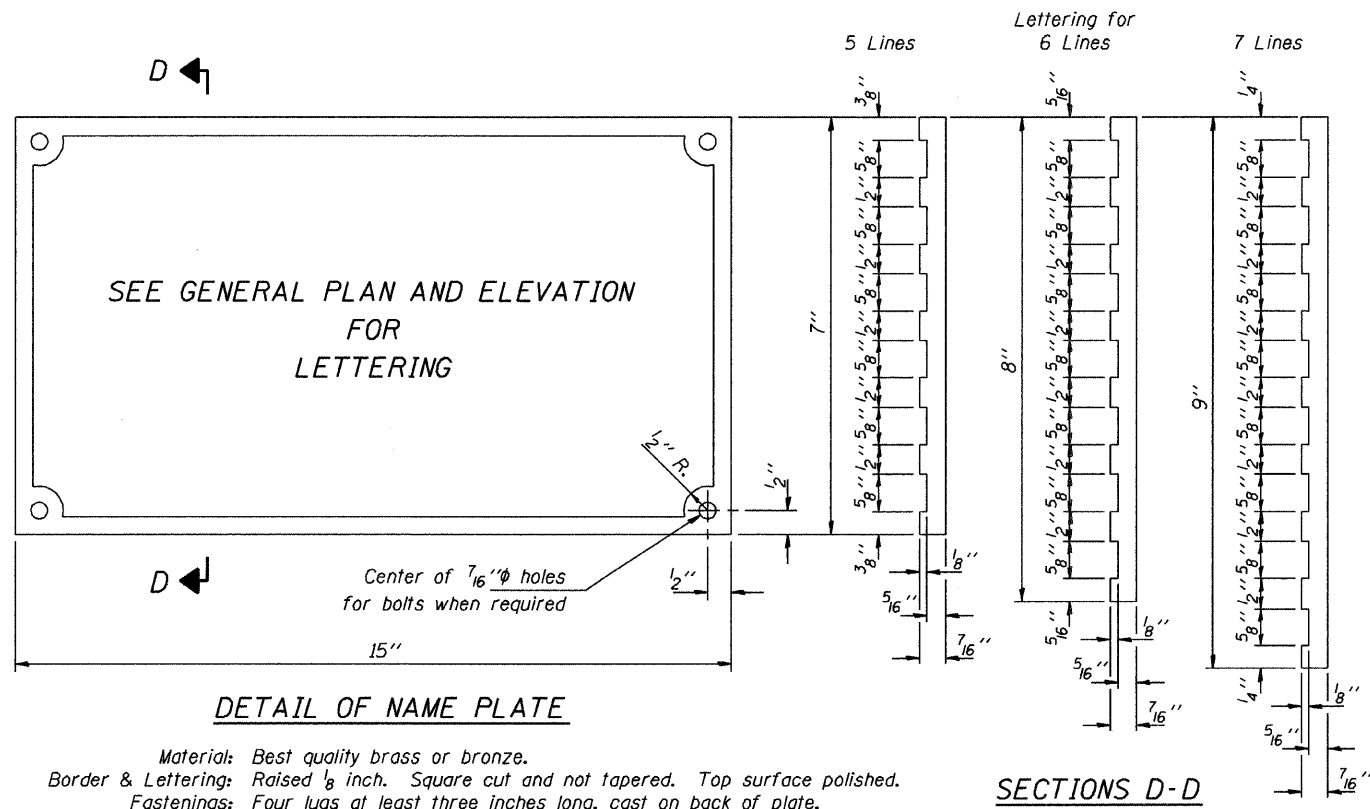


BAR h1

P.P.C. DECK BEAMS
PILE BENT ABUTMENT

24' RDWY. 33" BMS. 'D'=25° OR 30°

STANDARD CA-2433-30



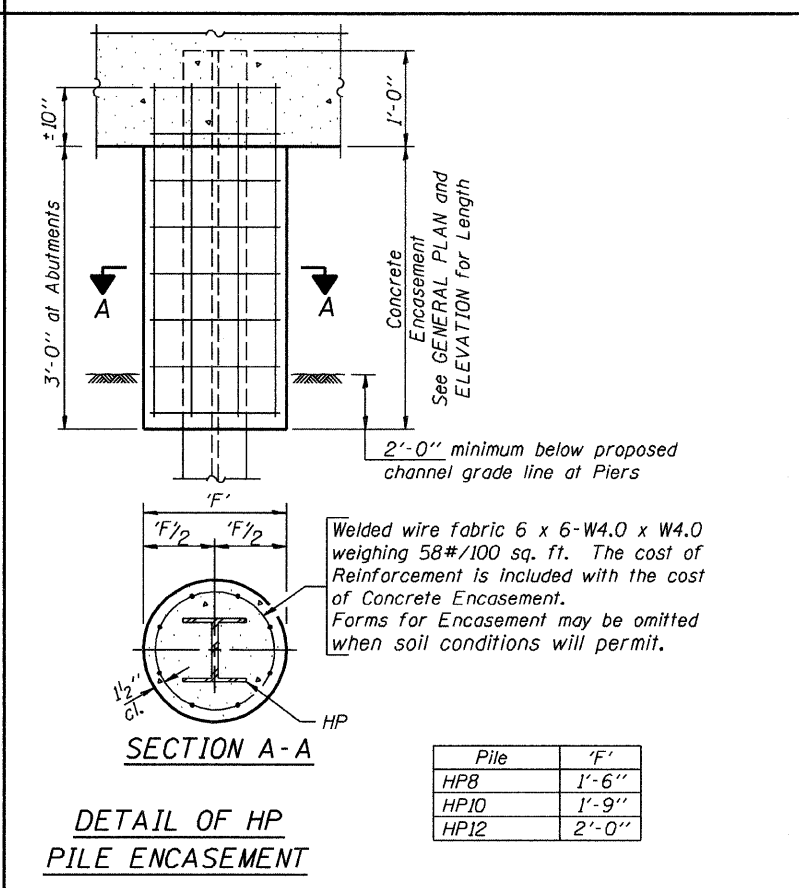
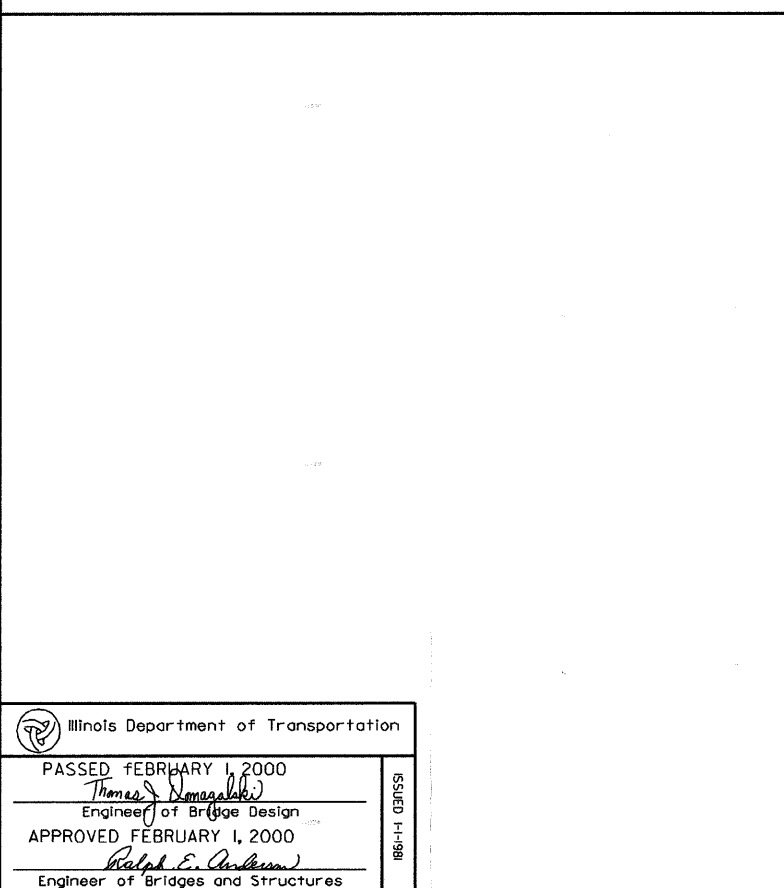
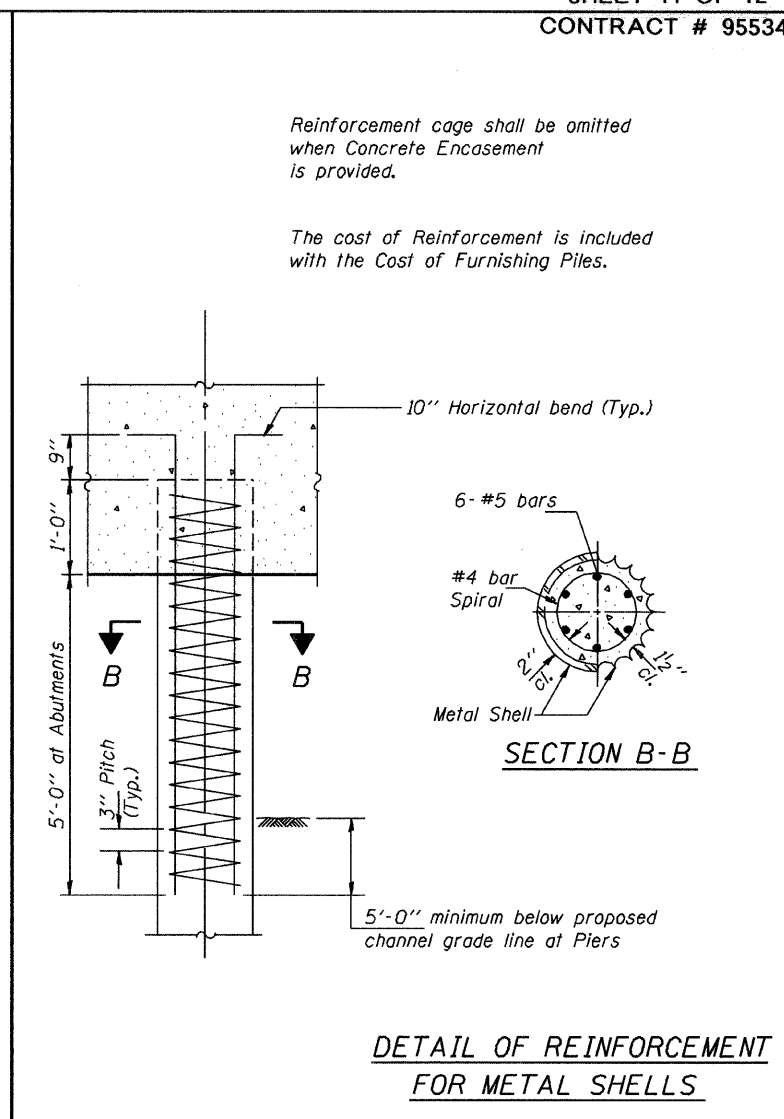
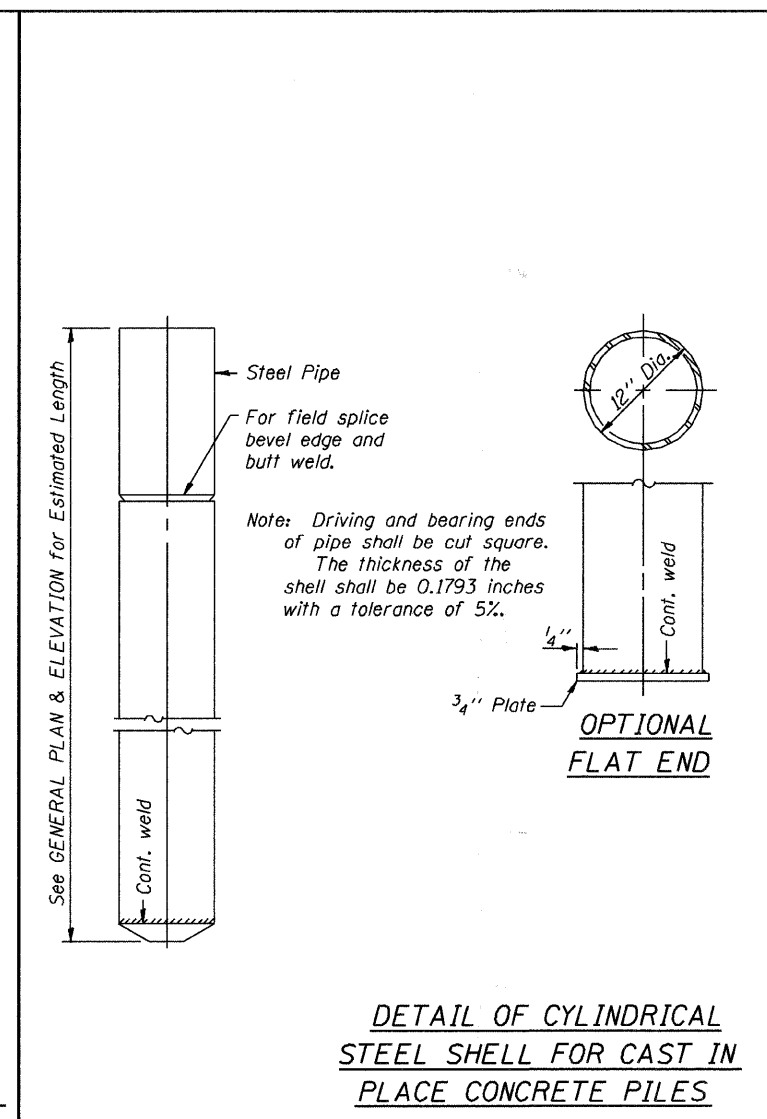
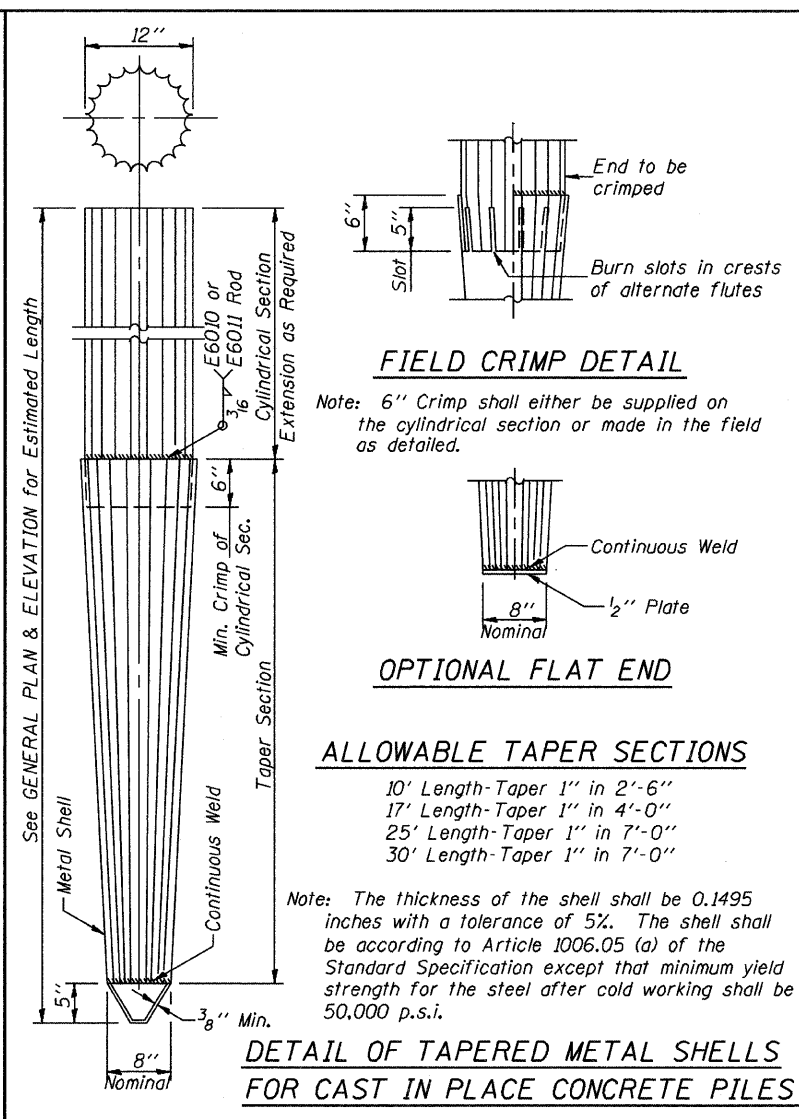
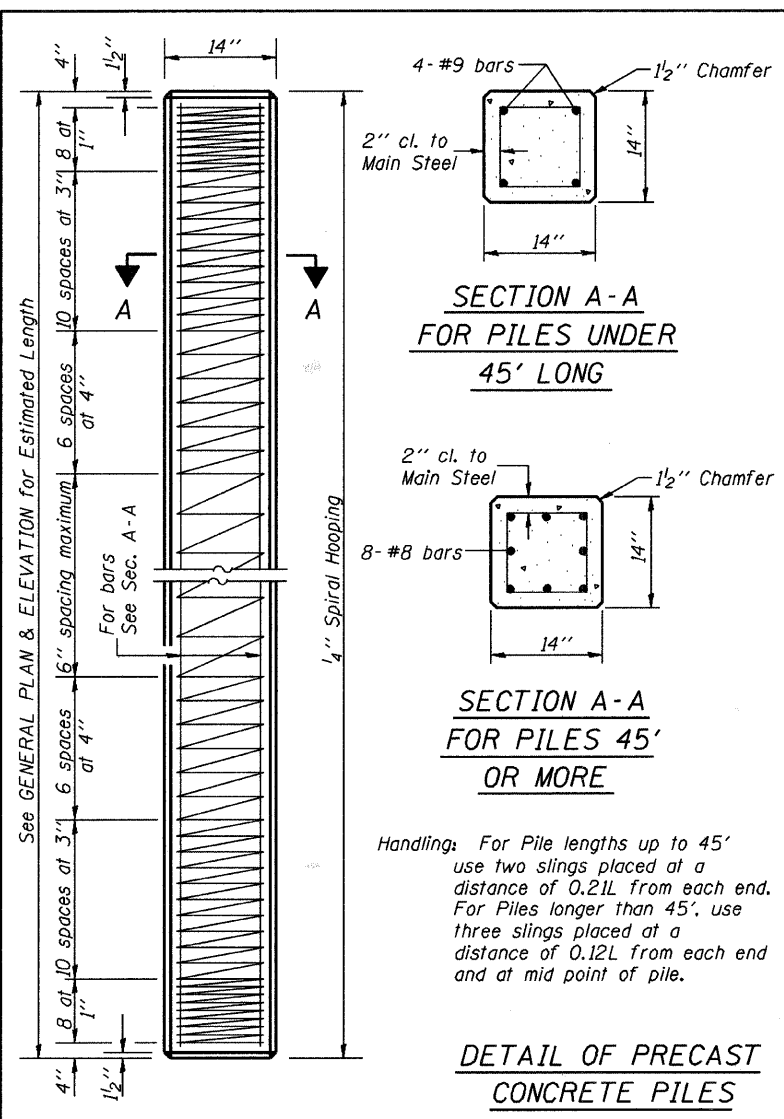
Illinois Department of Transportation

PASSED APRIL 4, 2005
Thomas J. Romagosa
Engineer of Bridge Design

APPROVED APRIL 4, 2005
Ralph E. Anderson
Engineer of Bridges and Structures

ISSUED 7-1-1995

NAME PLATE
STANDARD CN



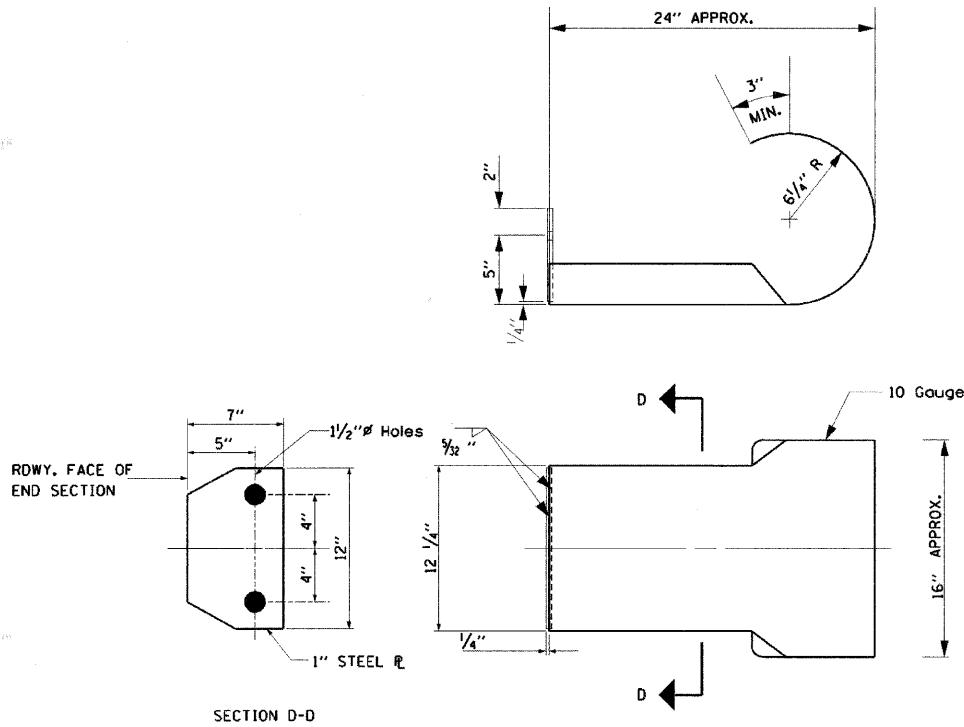
QUANTITIES/FT. OF ENCASEMENT (STEEL PILES)		
Pile Size	Item	Quantity
HP8	Concrete Encasement	0.063 C.Y.
HP10	Concrete Encasement	0.086 C.Y.
HP12	Concrete Encasement	0.112 C.Y.

(METAL SHELL PILES)		
Pile Size	Item	Quantity
12" Dia.	Concrete Encasement	0.087 C.Y.

PILE DETAILS		
STANDARD CX-1		

Illinois Department of Transportation
PASSED FEBRUARY 1, 2000
Theresa J. Domagala
Engineer of Bridge Design
APPROVED FEBRUARY 1, 2000
Ralph E. Anderson
Engineer of Bridges and Structures

CURLED END SECTION DETAIL



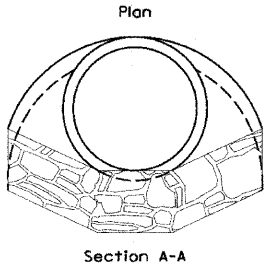
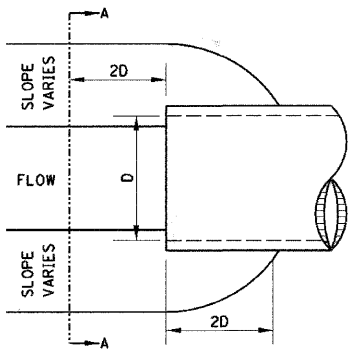
ALL OTHER STEEL SHAPES AND PLATES SHALL CONFORM TO THE REQUIREMENTS OF A.A.S.H.T.O. DESIGNATION M-183 EXCEPT POSTS AND ANGLES SHALL CONFORM TO A.A.S.H.T.O. M-223, GRADE 50.

BOLTS, CAP SCREWS, AND NUTS SHALL CONFORM TO THE REQUIREMENT OF A.S.T.M. DESIGNATION A-307 EXCEPT FOR HIGH STRENGTH BOLTS, NUTS, AND WASHERS NOTED WHICH SHALL CONFORM TO A.A.S.H.T.O. DESIGNATION M-164.

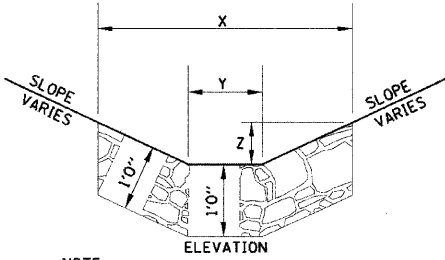
ALL BOLTS, NUTS, CAP SCREWS, WASHERS, AND LOCK WASHERS SHALL BE GALVINIZED IN ACCORDANCE WITH A.A.S.H.T.O. DESIGNATION M-232.

ALL FIELD DRILLED HOLES SHALL BE COATED WITH AN APPROVED ZINC RICH PAINT BEFORE ERRECTION.

STONE RIPRAP DITCH DESIGN



NOTE: FOR PLACEMENT, QUALITY GRADATION AND OTHER MISCELLANEOUS REQUIREMENTS FOR STONE RIPRAP DITCH-SEE SPECIAL PROVISIONS.



NOTE:

BOTTOM OF DITCH	SLOPE		
	1 1/2:1	2:1	3:1
2 FT	X= 5 FT	6 FT	8 FT
	Y= 2 FT	2 FT	2 FT
	Z= 1 FT	1 FT	1 FT
	0.40	0.48	0.62
	TON/LIN. FT		

	1 1/2:1	2:1	3:1
3 FT	X= 6 FT	7 FT	9 FT
	Y= 3 FT	3 FT	3 FT
	Z= 1 FT	1 FT	1 FT
	0.48	0.56	0.70
	TON/LIN. FT		

	1 1/2:1	2:1	3:1
4 FT	X= 7 FT	8 FT	10 FT
	Y= 4 FT	4 FT	4 FT
	Z= 1 FT	1 FT	1 FT
	0.56	0.64	0.78
	TON/LIN. FT		