

1-18-13 LETTING ITEM 081

FOR INDEX OF SHEETS, SEE SHEET NO. 2
FOR SUMMARY OF QUANTITIES, SEE SHEET NO. 3

STRUCTURES
S.N. 057-0116: IMPACT ATTENUATOR
CRASHWALL EXTENSION

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

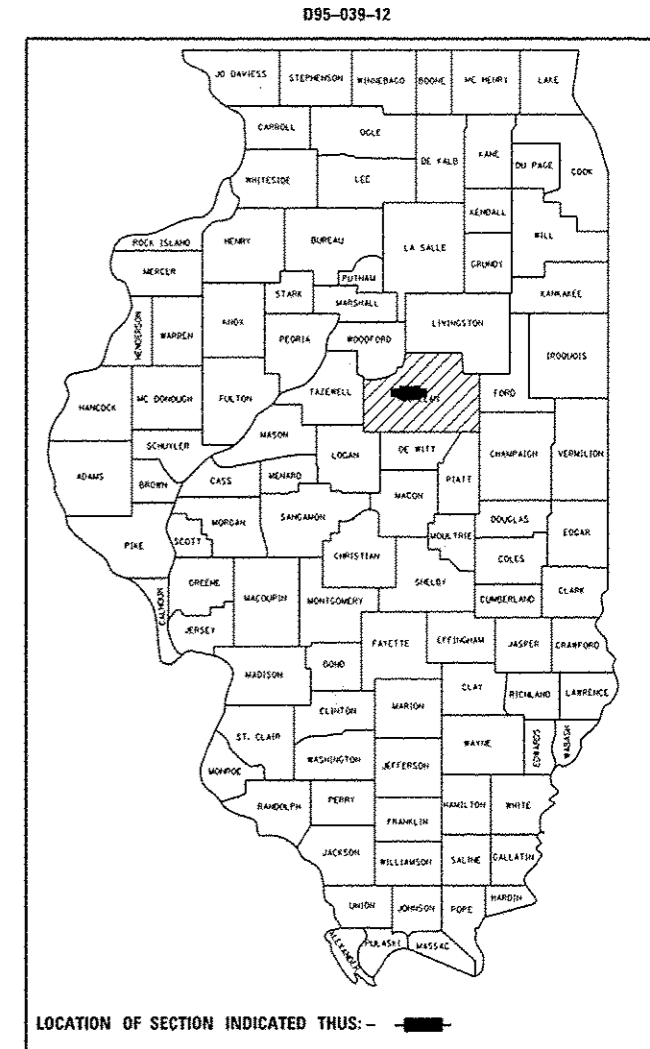
PROPOSED HIGHWAY PLANS

FAI ROUTE 74 (I-74) ✓
SECTION (57-20)I ✓
PROJECT ESP-074-4(238)127
IMPACT ATTENUATOR
MCLEAN COUNTY

AT EAST RD. 1 MI. E. OF I-55 BUSN

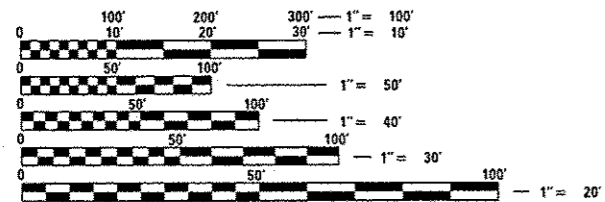
C-95-026-06

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(57-20)I	MCLEAN	13	1
		ILLINOIS	CONTRACT NO. 70A13	



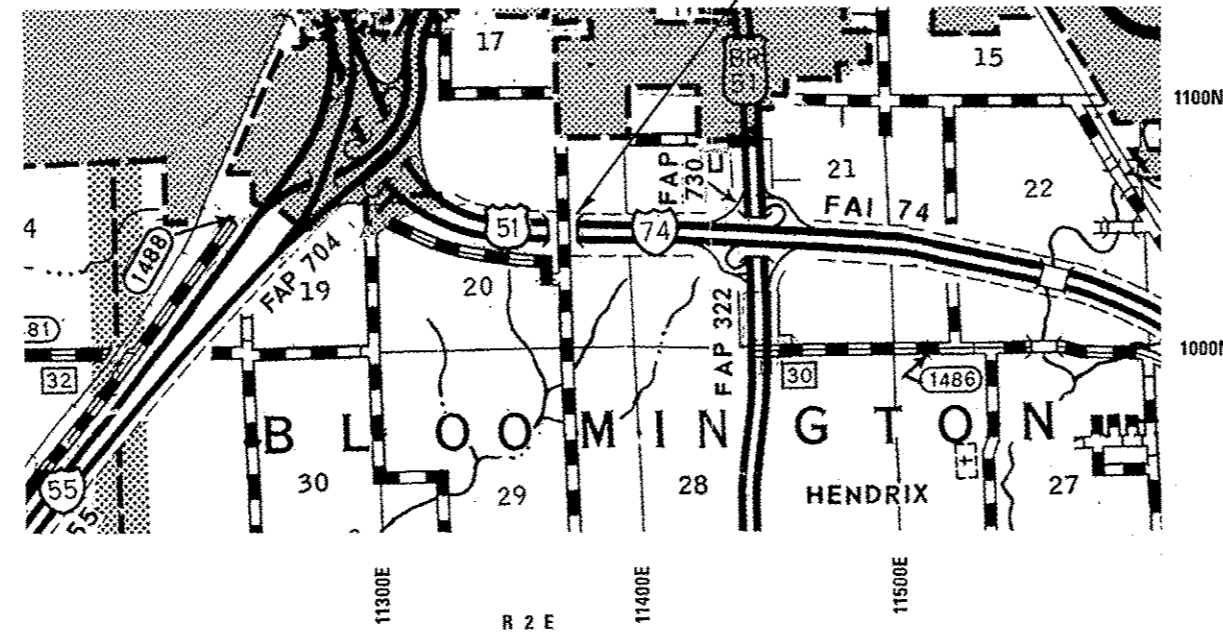
PROJECT LOCATION, STA. 679 + 59.01
S.N. 057-0116

CURRENT ADT:
10,300 (WB) (2011)
10,400 9EB) (2011)



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
BLOOMINGTON TOWNSHIP



PROJECT ENGINEER JASON STULTS 217-466-7364
PROJECT MANAGER MICHAEL LEROY 217-466-7228

GROSS LENGTH = 496.53 FT. = 0.094 MILE
NET LENGTH = 496.53 FT. = 0.094 MILE



CONTRACT NO. 70A13

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED 10-15 20 12
Joseph E. Crowe
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

Dec 7 20 12
John D. Baranzelli, P.E.
ACTING ENGINEER OF DESIGN AND ENVIRONMENT

Dec 7 20 12
William R. Fry
ACTING DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

INDEX OF SHEETS

SHEET NO	DESCRIPTION
1	COVER SHEET
2	INDEX OF SHEETS / HIGHWAY STANDARDS
2	GENERAL NOTES
3	SUMMARY OF QUANTITIES
4	EXISTING AND PROPOSED TYPICAL CROSS SECTIONS
5	SCHEDULE OF QUANTITIES
6	PLAN SHEET
7	DETAIL - CRASHWALL EXTENSION SN 057-0116
8	DETAIL - INLET TO BE RECONSTRUCTED
9	DETAIL - INFO ONLY, AS BUILT BRIDGE PEIR SN 057-0116
10	DISTRICT 5 DETAIL Z0030150D - IMPACT ATTENUATOR, NON-REDIRECTIVE, TEST LEVEL 3 64' MEDIAN
11-13	CROSS SECTIONS

GENERAL NOTES

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

G.N.-100A
 ELECTRONIC FILES AND/OR ELECTRONIC SURVEY INFORMATION INCLUDING CADD FILES WILL NOT BE AVAILABLE TO THE CONTRACTOR.

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

G.N.-280
 TEMPORARY EROSION CONTROL SEEDING IS INCLUDED IN THIS CONTRACT TO SEED DISTURBED EARTH DURING TIME PERIODS WHEN PERMANENT SEEDING IS NOT ALLOWED. SOME OR ALL OF THE TEMPORARY EROSION CONTROL SEEDING WILL BE DELETED IF IT IS POSSIBLE TO PLACE PERMANENT SEEDING ON EARTH AT THE TIME OF THEIR COMPLETION.

NO COMMITMENTS

HIGHWAY STANDARDS

STANDARD NO.	DESCRIPTION
000001-06	STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS
001001-02	AREAS OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH AND OF A FOOT
280001-07	TEMPORARY EROSION CONTROL SYSTEMS
701101-03	OFF-ROAD OPERATIONS, MULTILANE, 15' TO 24 INCHES FROM PAVEMENT EDGE
701400-06	APPROACH TO LANE CLOSURE, FREEWAY/EXPRESSWAY
701406-06	LANE CLOSURE, FREEWAY/EXPRESSWAY, DAY OPERATIONS ONLY
701901-03	TRAFFIC CONTROL DEVICES

FILE NAME * c:\pwork\pwork\lroyne\0316210\DS710	USER NAME * lroyne 6-tht-gennote.dgn	DESIGNED - DRAWN -	REVISED - REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	INDEX OF SHEETS/HIGHWAY STANDARDS GENERAL NOTES	F.A.I. RTE. 74	SECTION (57-201)	COUNTY MCLEAN	TOTAL SHEETS 13	SHEET NO. 2
PLOT SCALE * 40.0000 / / in.	CHECKED -	REVISED -	REVISED -	SCALE: SHEET NO. OF SHEETS STA. TO STA.		CONTRACT NO. 70A13 ILLINOIS FED. AID PROJECT				
PLOT DATE * 10/15/2012	DATE -	REVISED -	REVISED -							

SUMMARY OF QUANTITIES

LOCATION:

FAI 74
MCLEAN COUNTY
677+15.47
TO
682+12.00
URBAN
INTERSTATE
100% FEDERAL

CONSTRUCTION CODE:

0021

PAY ITEM CODE	PAY ITEM	UNIT	QTY
20200100	EARTH EXCAVATION	CU YD	5.00
20400800	FURNISHED EXCAVATION	CU YD	445.0
* 25000210	SEEDING, CLASS 2A	ACRE	0.75
* 25000400	NITROGEN FERTILIZER NUTRIENT	POUND	60.0
* 25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	60.0
* 25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	60.0
* 25100115	MULCH, METHOD 2	ACRE	0.75
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	65.0
28000305	TEMPORARY DITCH CHECKS	FOOT	92.0
28000500	INLET AND PIPE PROTECTION	EACH	1.0
50300225	CONCRETE STRUCTURES	CU YD	3.6
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	310.0
63400105	GUARD POSTS	EACH	36.0
64300450	IMPACT ATTENUATORS (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2.0

SUMMARY OF QUANTITIES

LOCATION:

FAI 74
MCLEAN COUNTY
677+15.47
TO
682+12.00
URBAN
INTERSTATE
100% FEDERAL

CONSTRUCTION CODE:

0021

PAY ITEM CODE	PAY ITEM	UNIT	QTY
64301090	ATTENUATOR BASE	SQ YD	101.6
67100100	MOBILIZATION	LSUM	1.0
70100700	TRAFFIC CONTROL AND PROTECTION, STANDARD 701406	LSUM	1.0
X2810102	STONE RIPRAP, CLASS A1 (SPECIAL)	SQ YD	17.0
X6015015	REMOVE AND REPLACE CONCRETE HEADWALLS FOR PIPE UNDERDRAIN	EACH	3.0
X6026800	INLETS TO BE RECONSTRUCTED (SPECIAL)	EACH	1.0
X7015005	CHANGEABLE MESSAGE SIGN	CAL DA	14.0

*SPECIALTY ITEMS

SEEDING SCHEDULE

STATION	LENGTH (FEET)	WIDTH (FEET)	AREA (SQ FT)	AREA (ACRE)	SEEDING CLASS 2A (ACRE)	NITROGEN FERTILIZER NUTRIENT (POUND)	PHOSPHOROUS FERTILIZER NUTRIENT (POUND)	POTASSIUM FERTILIZER NUTRIENT (POUND)	MULCH METHOD 2 (ACRE)	TEMPORARY EROSION CONTROL SEEDING (POUND)
					25000210	25000400	25000500	25000600	25100115	28000250
677+15.00	10.0	20	395.00	0.01	0.01	0.82	0.82	0.82	0.01	0.91
677+25.00	25.0	59	1,475.00	0.03	0.03	3.05	3.05	3.05	0.03	3.39
677+50.00	25.0	59	1,475.00	0.03	0.03	3.05	3.05	3.05	0.03	3.39
677+75.00	25.0	59	1,475.00	0.03	0.03	3.05	3.05	3.05	0.03	3.39
678+00.00	25.0	59	1,475.00	0.03	0.03	3.05	3.05	3.05	0.03	3.39
678+25.00	25.0	59	1,475.00	0.03	0.03	3.05	3.05	3.05	0.03	3.39
678+50.00	25.0	59	1,475.00	0.03	0.03	3.05	3.05	3.05	0.03	3.39
678+75.00	25.0	59	1,475.00	0.03	0.03	3.05	3.05	3.05	0.03	3.39
679+00.00	25.0	59	1,475.00	0.03	0.03	3.05	3.05	3.05	0.03	3.39
679+25.00	25.0	59	1,475.00	0.03	0.03	3.05	3.05	3.05	0.03	3.39
679+50.00	9.0	59	531.00	0.01	0.01	1.10	1.10	1.10	0.01	1.22
679+59.00	16.0	59	944.00	0.02	0.02	1.95	1.95	1.95	0.02	2.17
679+75.00	25.0	59	1,475.00	0.03	0.03	3.05	3.05	3.05	0.03	3.39
680+00.00	25.0	59	1,475.00	0.03	0.03	3.05	3.05	3.05	0.03	3.39
680+25.00	25.0	59	1,475.00	0.03	0.03	3.05	3.05	3.05	0.03	3.39
680+50.00	25.0	59	1,475.00	0.03	0.03	3.05	3.05	3.05	0.03	3.39
680+75.00	25.0	59	1,475.00	0.03	0.03	3.05	3.05	3.05	0.03	3.39
681+00.00	25.0	59	1,475.00	0.03	0.03	3.05	3.05	3.05	0.03	3.39
681+25.00	25.0	59	1,475.00	0.03	0.03	3.05	3.05	3.05	0.03	3.39
681+50.00	25.0	59	1,475.00	0.03	0.03	3.05	3.05	3.05	0.03	3.39
681+75.00	25.0	59	1,475.00	0.03	0.03	3.05	3.05	3.05	0.03	3.39
682+00.00	25.0	59	987.50	0.02	0.02	2.04	2.04	2.04	0.02	2.27
682+25.00	20									
TOTAL			29407.50	0.68	0.68	60.76	60.76	60.76	0.68	67.51
USE				0.75	0.75	60	60	60	0.75	65

EARTHWORK SCHEDULE

STATION	TO	STATION	EARTH EXCAVATION CU YD	SUITABLE FOR EMBANKMENT CU YD	EMBANKMENT CU YD	FURNISHED EXCAVATION CU YD
			20200100			20400800
677+15.00		679+59.0	1.62	0	211.44	211.44
679+59.00		682+25.0	0.67	0	232.85	232.85
TOTAL			2.29	0	444.29	444.29
USE			5.00	0.00		445.00

**IMPACT ATTENUATORS (NON-REDIRECTIVE),
TEST LEVEL 3**

STATION	TO	STATION	ATTENUATOR	ATTENUATOR
			Z0030150	BASE 64301090
679+04.00		679+49.0	1	50.8
679+69.00		680+14.0	1	50.8
TOTAL			2	101.6

**GUARD POSTS
63400105**

STATION	TO	STATION	EACH
678+05.00		679+39.0	18
680+19.00		681+13.0	18
TOTAL			36

**TEMPORARY DITCH CHECKS
28000305**

STATION	FOOT
677+50.00	23
678+25.00	23
679+50.00	23
680+75.00	23
TOTAL	92

**STONE RIPRAP, CLASS A1 (SPL)
X2810102**

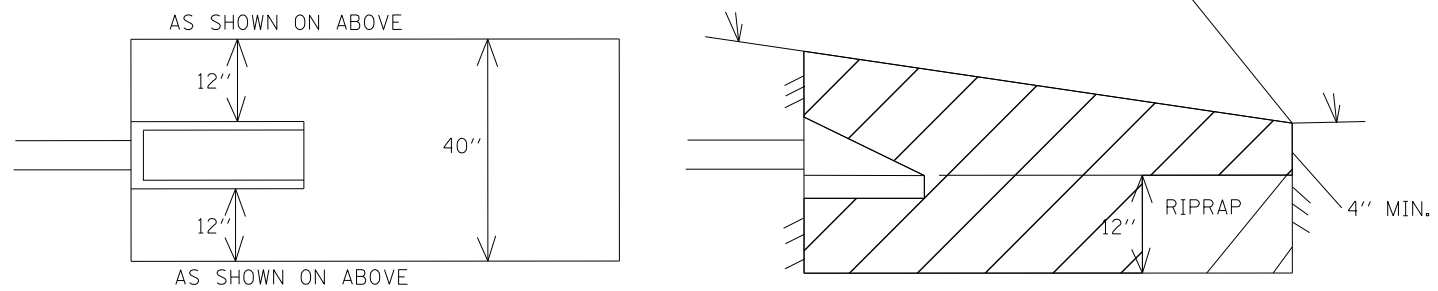
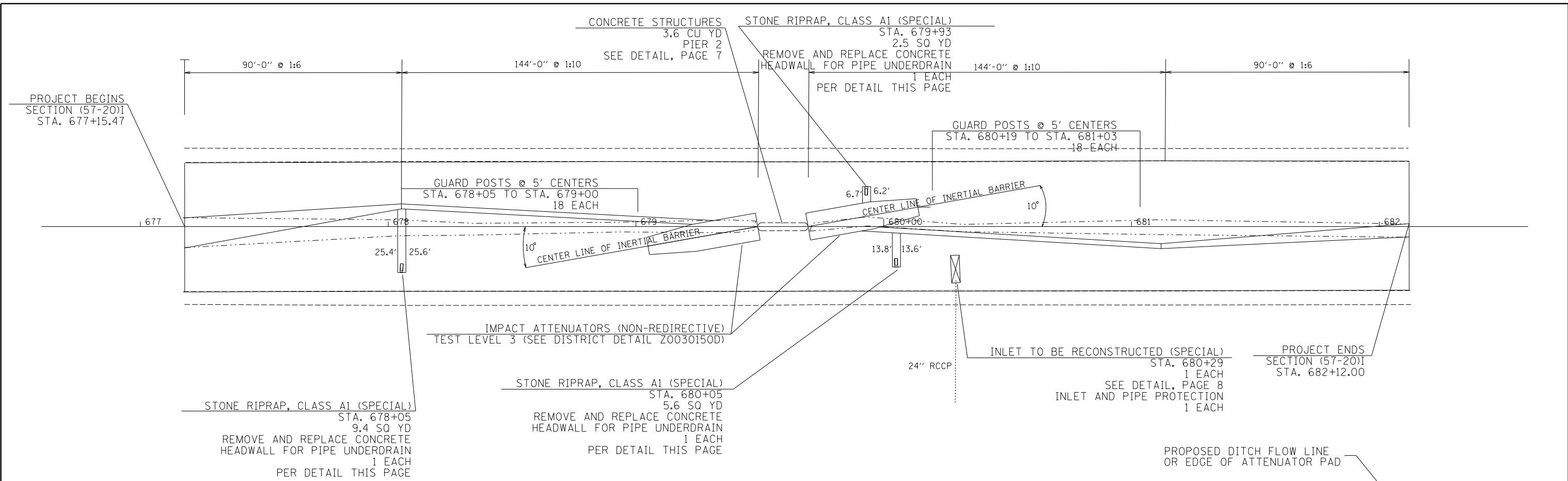
	WIDTH	LENGTH	SQ YD
678+05.0	3.3	25.5	9.35
679+93.0	3.3	6.5	2.38
680+05.0	3.3	13.8	5.06
TOTAL			16.79
			17.00

**INLET AND PIPE PROTECTION
28000500**

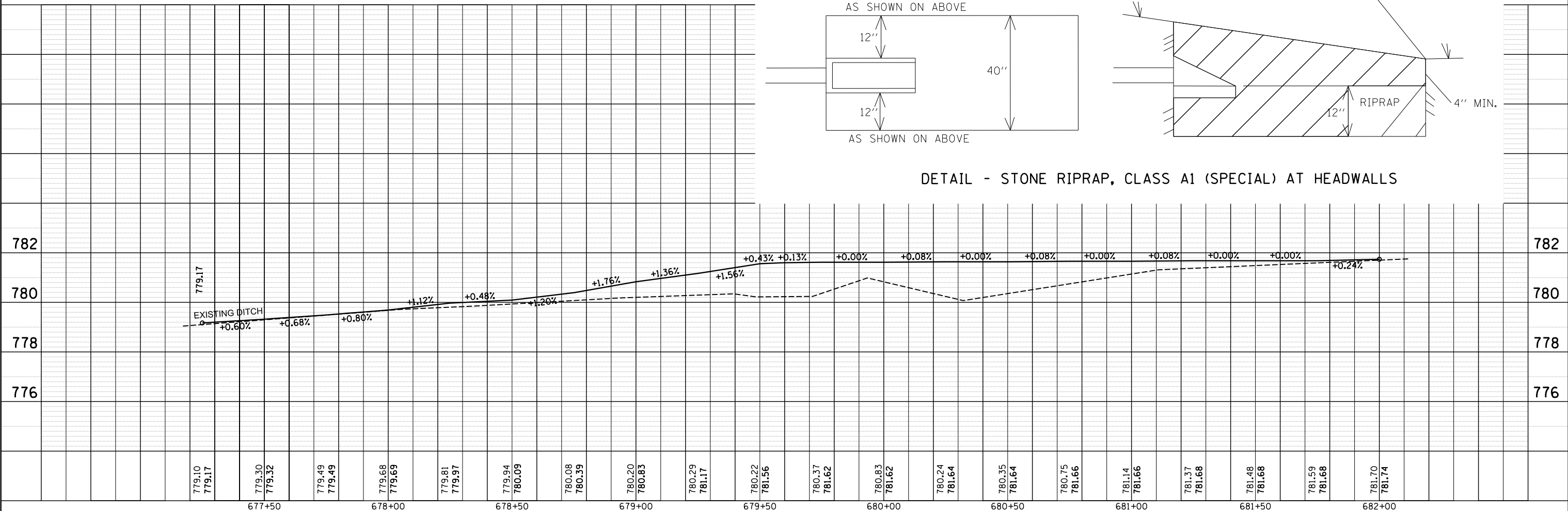
STATION	680+29.0	1 EACH
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PLAN	SURVEYED	DATE
	PLOTTED	
	CHECKED	
	BY	
	NO.	

PROFILE	SURVEYED	DATE
	PLOTTED	
	CHECKED	
	BY	
	NO.	



DETAIL - STONE RIPRAP, CLASS A1 (SPECIAL) AT HEADWALLS



FILE NAME =	USER NAME = leroyma	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PLAN AND PROFILE SHEET	F.A.I. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
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	PLOT DATE = 10/15/2012	DATE -	REVISED -			ILLINOIS FED. AID PROJECT					

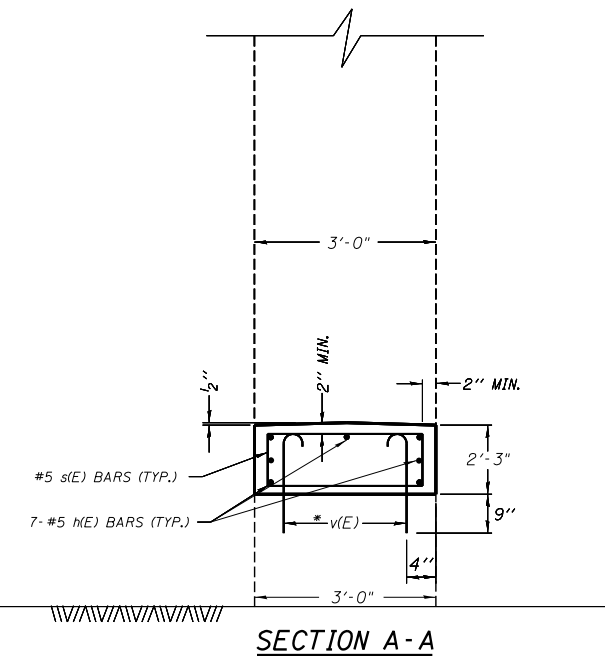
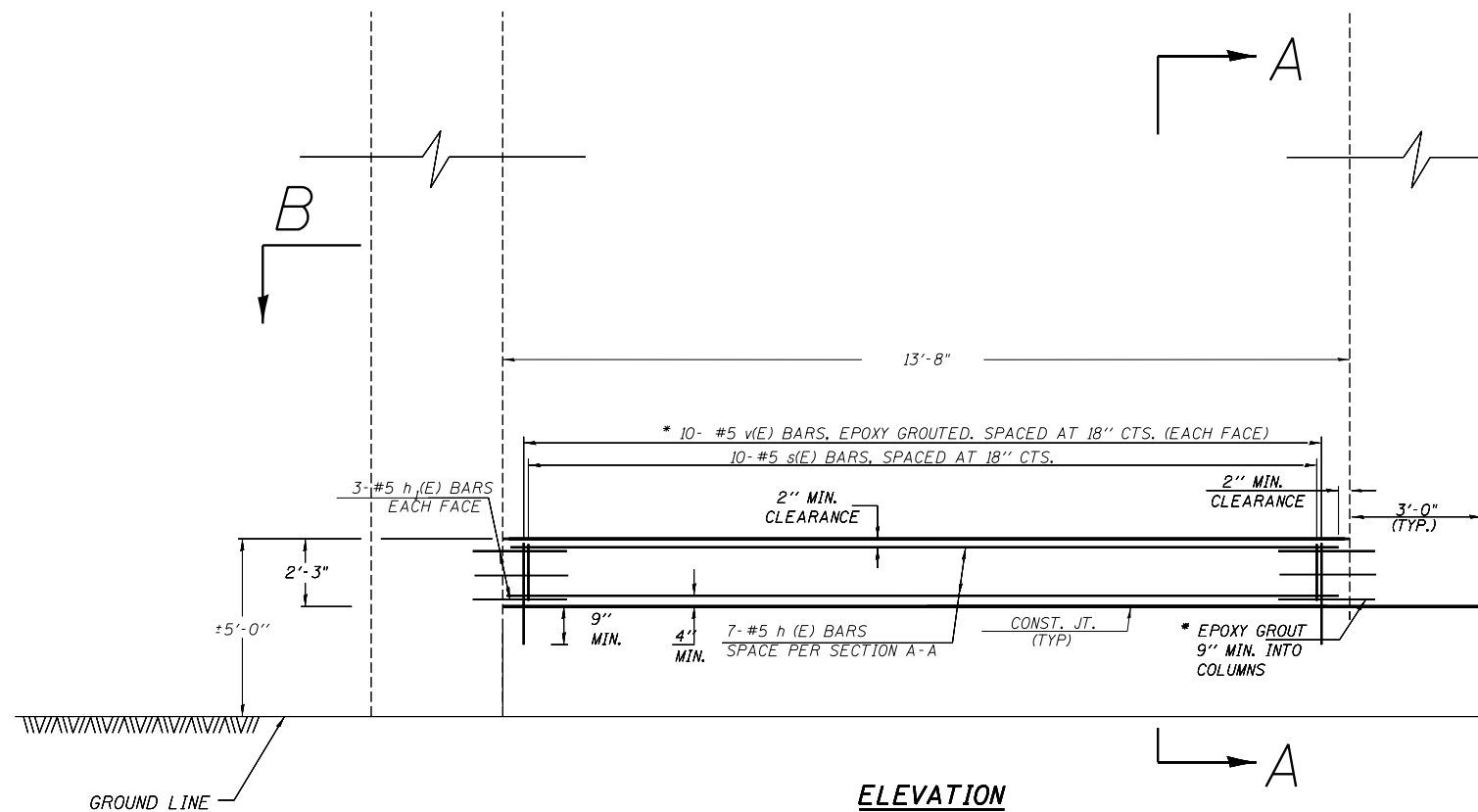
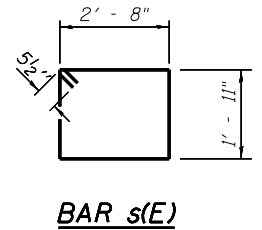
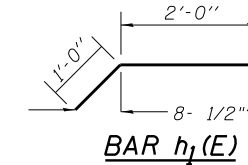
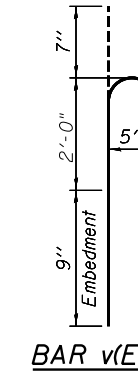
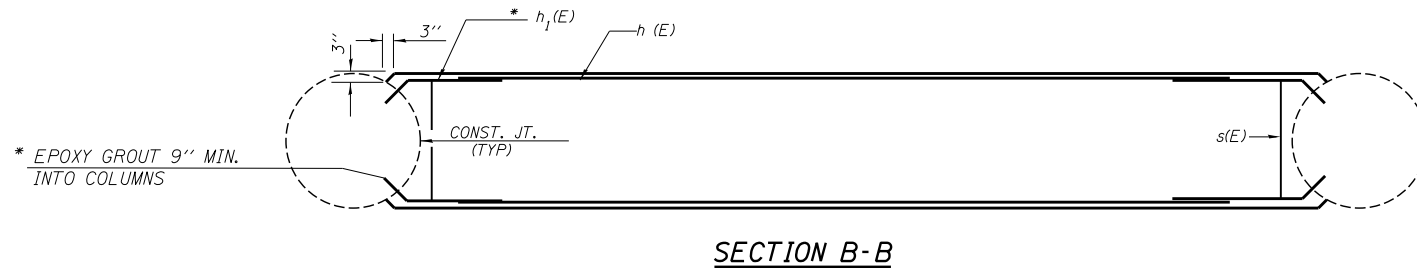
S.N. 057-0116

MEDIAN PIER CRASHWALL EXTENSION

GENERAL NOTES

REINFORCEMENT BARS DESIGNATED (E) SHALL BE EPOXY COATED.
 PLAN DIMENSIONS AND DETAILS RELATIVE TO EXISTING PLANS ARE SUBJECT TO NOMINAL CONSTRUCTION VARIATIONS. THE CONTRACTOR SHALL FIELD VERIFY EXISTING DIMENSIONS AND DETAILS AFFECTING NEW CONSTRUCTION AND MAKE NECESSARY APPROVED ADJUSTMENTS PRIOR TO CONSTRUCTION OR ORDERING OF MATERIALS. SUCH VARIATIONS SHALL NOT BE CAUSE FOR ADDITIONAL COMPENSATION FOR A CHANGE IN SCOPE OF THE WORK, HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE UNIT PRICE BID FOR THE WORK.

THE COST OF EPOXY GROUTING BARS SHALL BE INCLUDED WITH REINFORCEMENT BARS (EPOXY COATED).



BILL OF MATERIALS

Bar	No.	Size	Length	Shape	
h(E)	7	#5	13' - 4"	—	
h ₁ (E)	12	#5	3' - 0"	┌	
s(E)	10	#5	10'-1"	□	
v(E)	20	#5	3' - 4"	┌	
CONCRETE STRUCTURES				CU. YD.	3.6
REINFORCEMENT BARS, EPOXY COATED				LB.	310

* EPOXY GROUT h₁(E) AND v(E) BARS IN 9" MIN. HOLES ACCORDING TO ARTICLE 584 OF THE STANDARD SPECIFICATIONS.

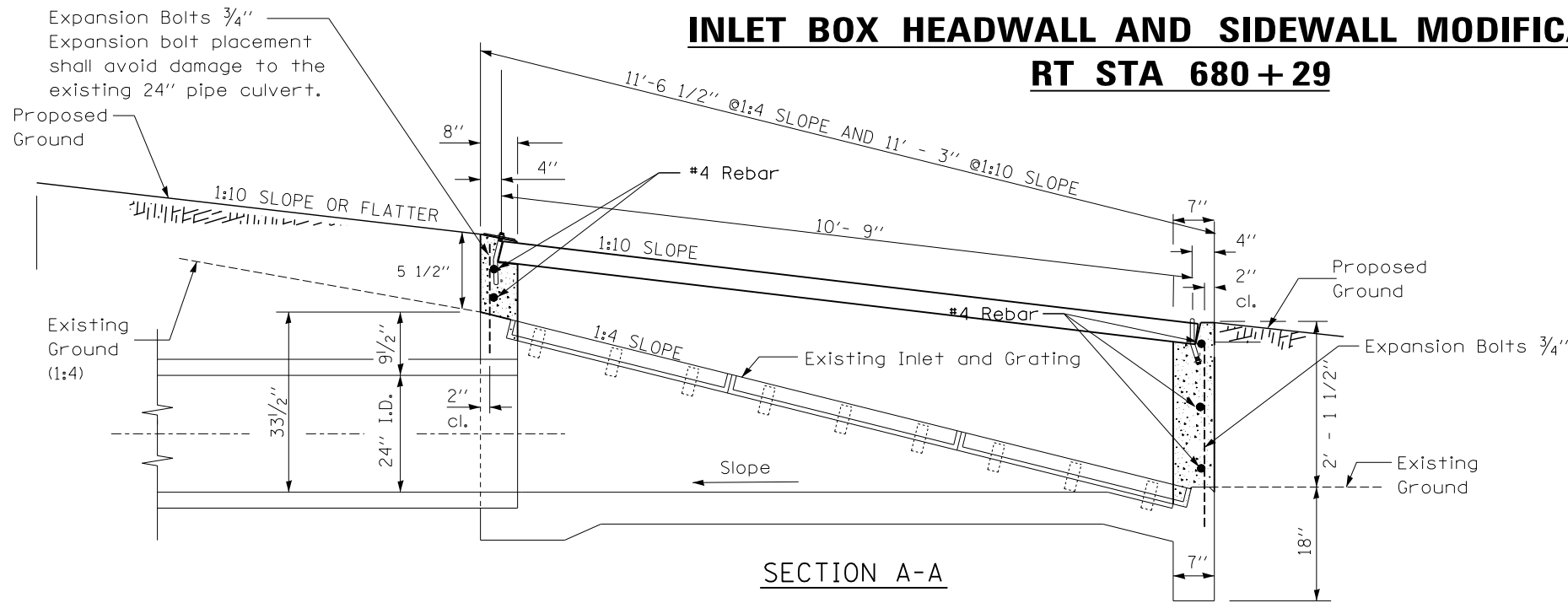
CRASHWALL EXTENSION
 PIER 2
 SN 057-0116

INLET BOX HEADWALL AND SIDEWALL MODIFICATION

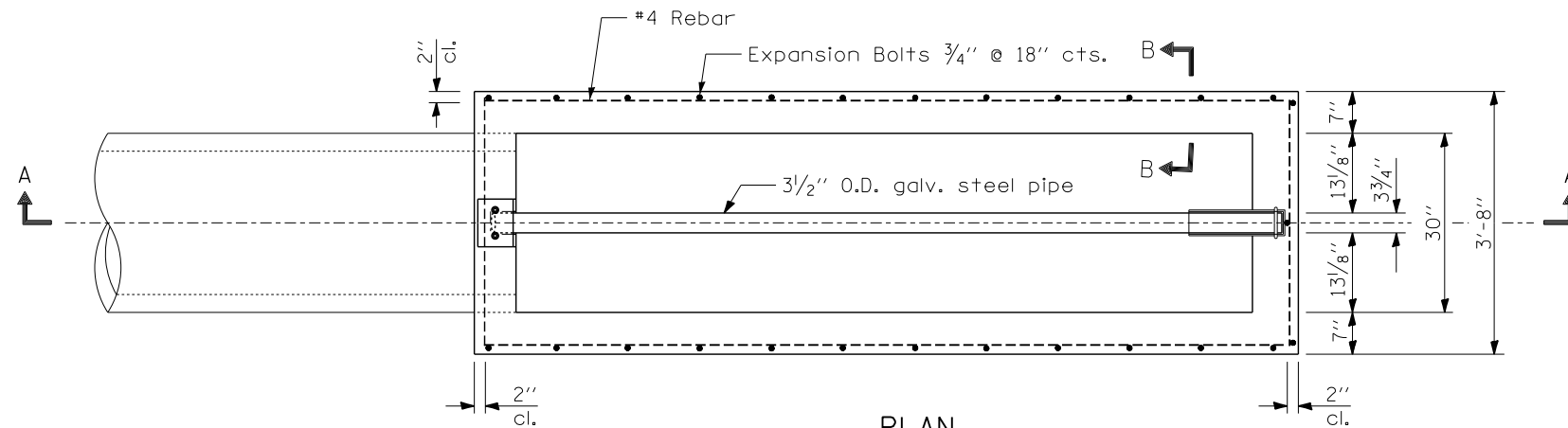
RT STA 680+29

NOTES

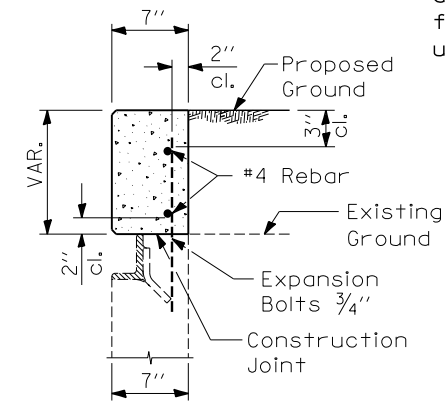
- All edges shall have standard 3/4" chamfers.
- CLASS SI CONCRETE shall be used throughout.
- Expansion bolts shall extend a minimum 4" into new concrete.
- The contractor will be responsible for checking steel pipe length and field dimensions prior to ordering to insure proper installation of grating.
- Existing angle frame and main bearing bars shall remain in place. Existing steel grating shall be removed and delivered to Bloomington maintenance storage yard at no additional cost to the state.
- The inlet shall be backfilled in accordance with the Standard Specifications.
- All work and materials shall be in accordance with applicable portions of Section 542. The galvanized steel pipe, steel top anchor plate, U bolts, nylon insert hex lock nuts and washers and all work associated with these items will not be measured for payment and shall be included in the contract unit price (each) for INLET TO BE RECONSTRUCTED (SPL)



SECTION A-A

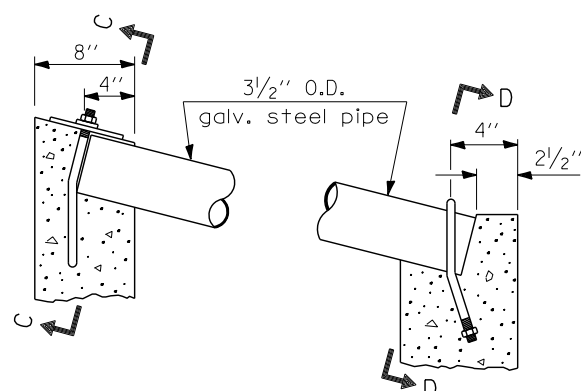


PLAN

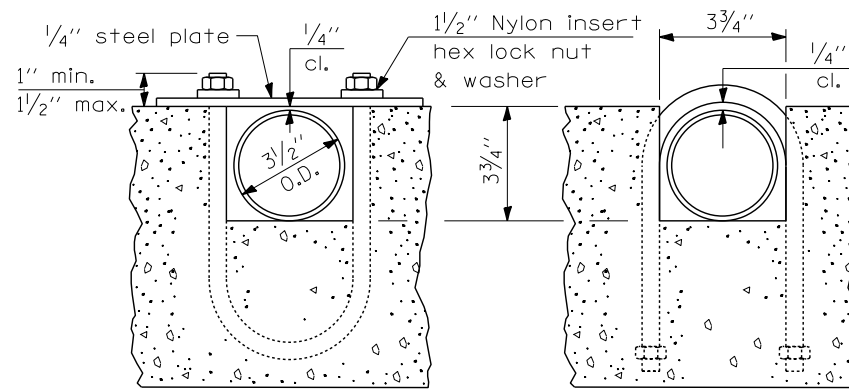


SECTION B-B

Bill of Materials		
LOCATION RT. 680+30		
54002020	each	16
3/4" Bolts		
54248500	cu. yd.	0.6
Concrete Headwalls		
50800105	pound	16.5
Rebar size #4		
Galv. Steel Pipe	3 1/2" O.D.	10'-6"

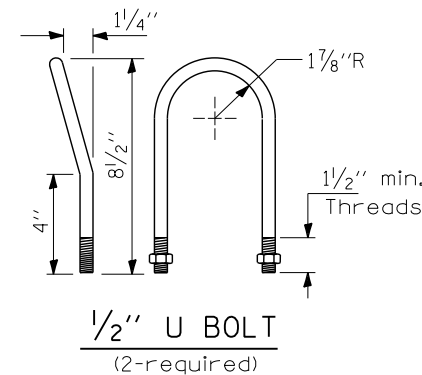


DETAIL AT BLOCKOUTS

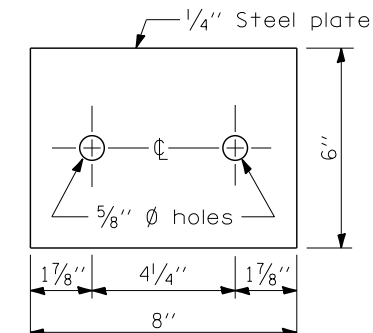


SECTION C-C

SECTION D-D

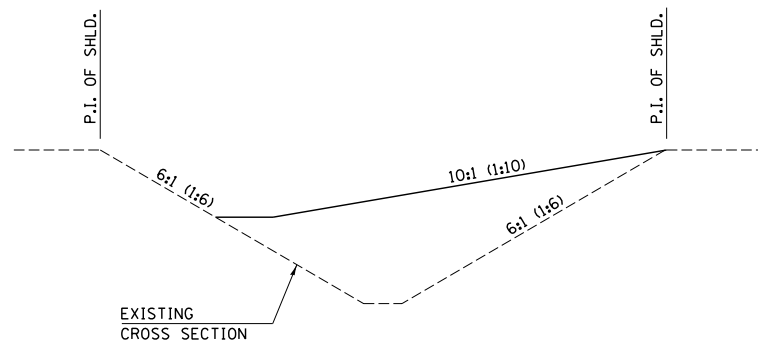
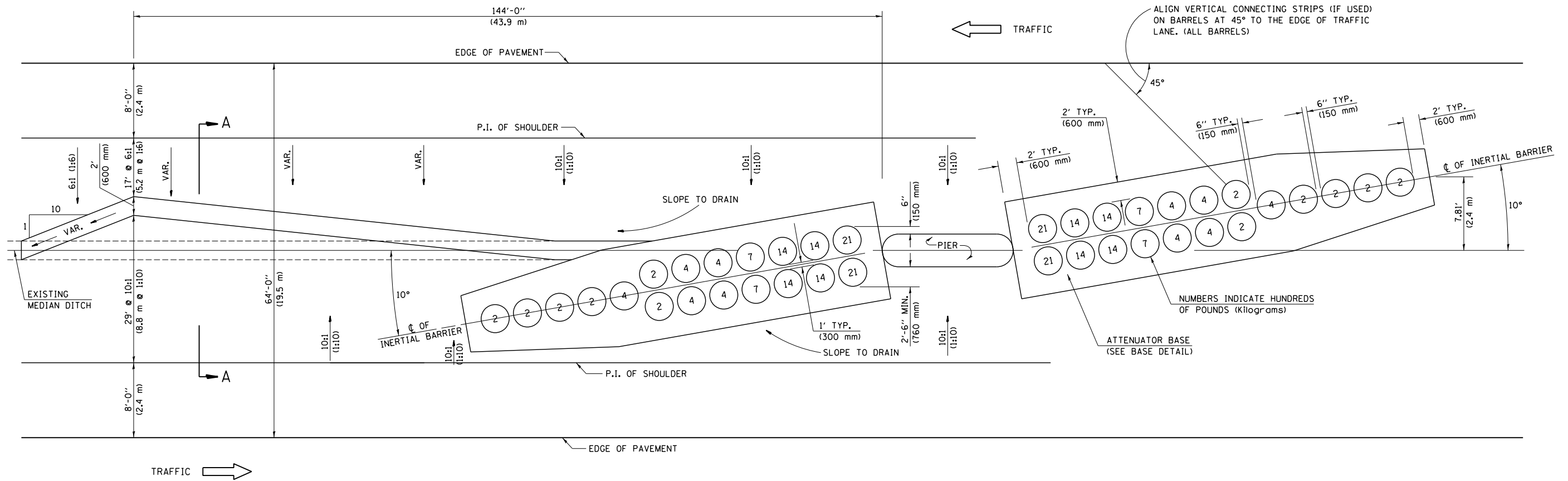


1/2" U BOLT
(2-required)

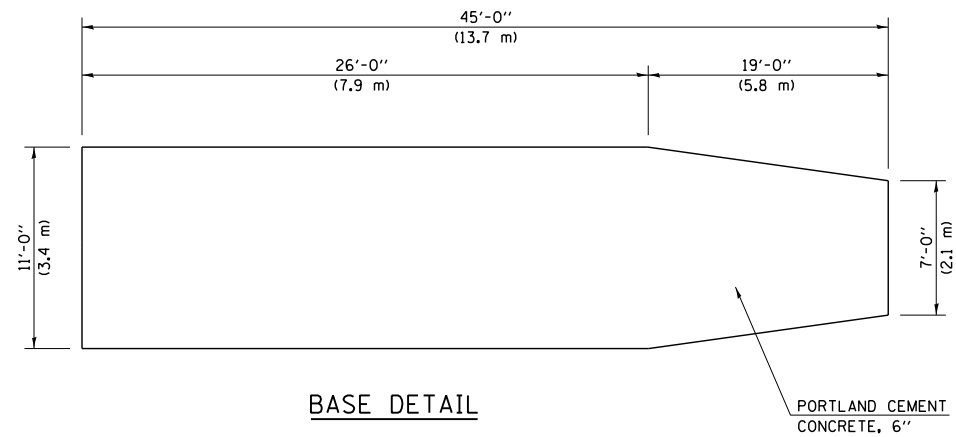


TOP ANCHOR PLATE
(1-required)

70 MPH (110 km/h) DESIGN - 64' (19.5 m) MEDIAN



SECTION A-A
GRADING AND SHAPING DETAIL



GENERAL NOTES

- ALL 10:1 (1:10) SLOPES SHOWN ON THIS DETAIL SHALL BE CONSTRUCTED 10:1 (1:10) OR FLATTER.
- THE SLOPES AS SHOWN ON THIS DETAIL SHALL APPLY TO BOTH ENDS OF THE BRIDGE PIERS.
- THE LENGTH X WIDTH OF MODULE LAYOUT IS 41.0' x 7.0' : 19 MODULES - 14,400 LBS. (12.5 m x 2.1 m : 19 MODULES - 6532 kg).
- IN AREAS OF 10:1 (1:10) SLOPES PRECEDING THE ATTENUATOR IN THE MEDIAN INSTALLATION, FOUR OR MORE WOOD POSTS SHALL BE PLACED AT 5' (1.5 m) INTERVALS IN THE MEDIAN \bar{C} . SEE SPECIAL PROVISIONS AND SCHEDULES.

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

DISTRICT 5 DETAIL NO. Z0030150D

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	PLOT SCALE = 40.0000' / in.	CHECKED -	REVISED -
	PLOT DATE = 10/15/2012	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

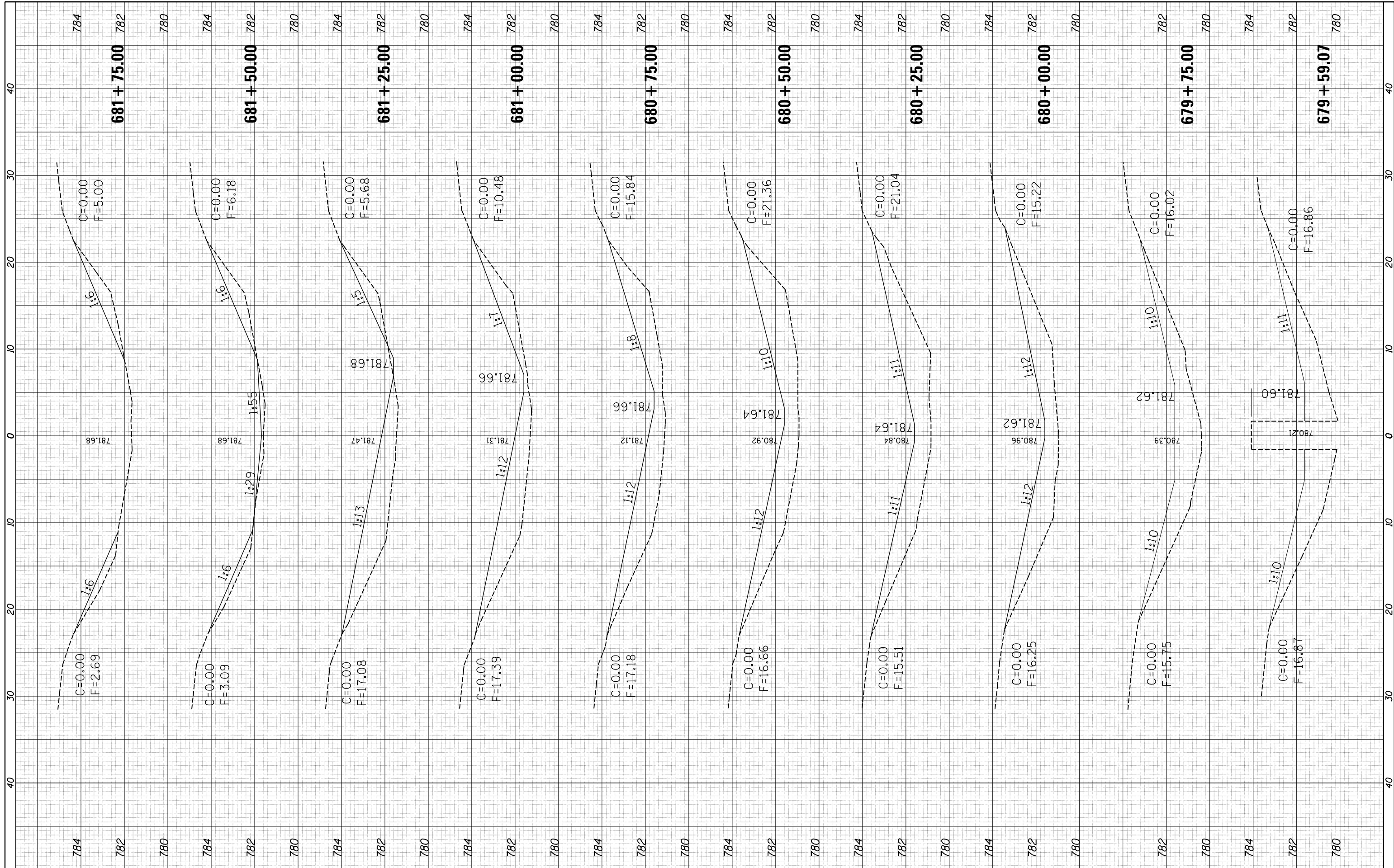
DETAILS

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

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(57-20I)	MCLEAN	13	10
CONTRACT NO. 71006				
ILLINOIS FED. AID PROJECT				

FINAL SURVEY NO.	SURVEYED PLOTTED TEMPLATE AREAS CHECKED	BY	DATE

ORIGINAL SURVEY NO.	SURVEYED PLOTTED TEMPLATE AREAS CHECKED	BY	DATE



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 PLOT SCALE = 10.0000' / in.
 PLOT DATE = 10/15/2012

DESIGNED -
 DRAWN -
 CHECKED -
 DATE -

REVISED -
 REVISED -
 REVISED -
 REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

SCALE: SHEET OF SHEETS STA. 679+59.07 TO STA. 681+75.00

F.A.I. RTE. 74	SECTION (57-20I)	COUNTY McLean	TOTAL SHEETS 13	SHEET NO. 12
			CONTRACT NO. 71006	
ILLINOIS FED. AID PROJECT				

FINAL SURVEY NO.	SURVEYED PLOTTED AREAS CHECKED	BY	DATE

ORIGINAL SURVEY NO.	SURVEYED PLOTTED AREAS CHECKED	BY	DATE



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\$MODELNAME\$	PLOT SCALE = 10.0000 / in.	CHECKED -	REVISED -
	PLOT DATE = 10/15/2012	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SCALE: SHEET OF SHEETS STA. 682+00.00 TO STA. 682+00.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(57-20)I	McLean	13	13
CONTRACT NO. 71006			ILLINOIS FED. AID PROJECT	