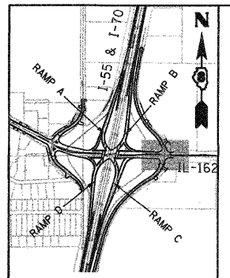
FAP ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
70	60-10 (K-1,HB)	MADISON	420	201
STA.	TO STA.			
CONTRACT NO.: 76709				



KEY PLAN

PROPOSED SEQUENCE OF OPERATION								
PHASE	1	2	3	4	5	6	7	8
MOVMENT								
CONCURRENT MOVEMENT PERMITTED	5 OR 6	5 OR 6	7 OR 8	7 OR 8	1 OR 2	1 OR 2	3 OR 4	3 OR 4

PLAN
SURVEYED
DRAWN
ALIGNMENT CHECKED
PLAN CHECKED
NOTE BOOK
NO. -
PLAN FILE NAME
BY
DATE

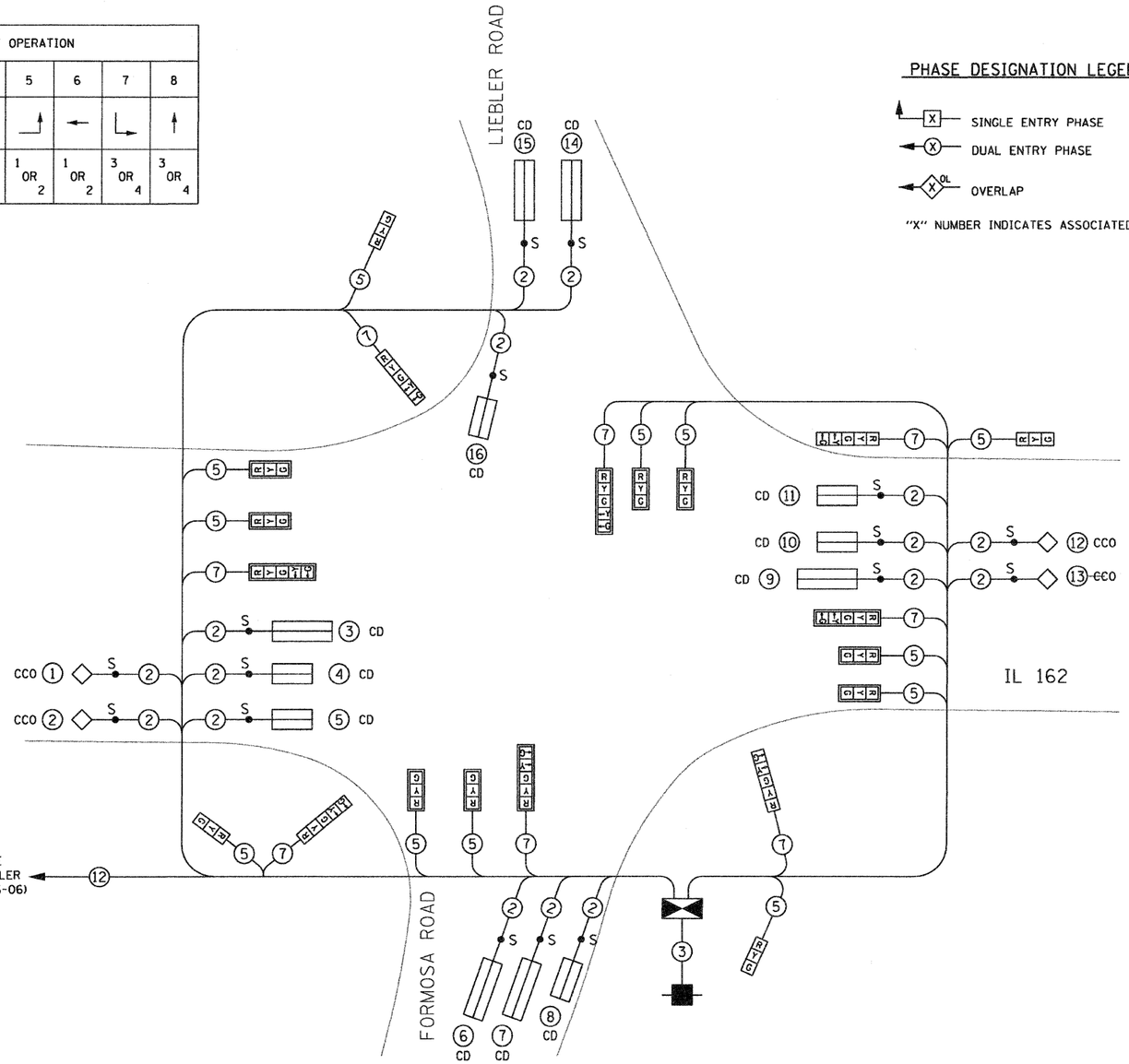
PHASE DESIGNATION LEGEND

- SINGLE ENTRY PHASE
- DUAL ENTRY PHASE
- OVERLAP

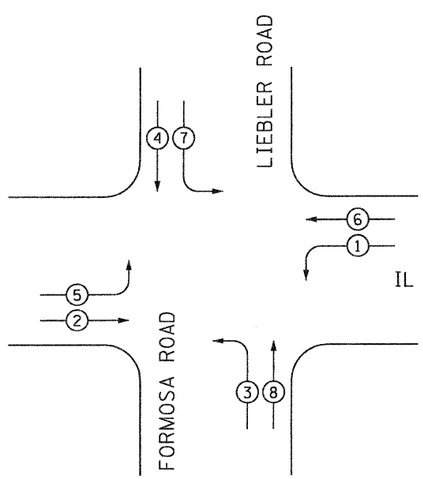
"X" NUMBER INDICATES ASSOCIATED PHASE

CABLE PLAN LEGEND

- CONTROLLER
- SERVICE INSTALLATION
- DETECTOR LOOPS
- DETECTOR LOOP LEAD-IN SPLICE
- NUMBER OF CONDUCTORS OR FIBER OPTIC STRANDS
- LEFT TURN - YELLOW
- LEFT TURN - GREEN
- TRAFFIC SIGNAL SECTION 12" - GREEN
- GEOMETRICALLY PROGRAMMED LOUVER (G.P.L.)
- SIGNAL FACE WITH BACKPLATE
  - RED
  - YELLOW
  - GREEN
  - YELLOW LEFT
  - GREEN LEFT
- CALL DELAY — CD
- CALL CARRY OVER — CCO



1 PROPOSED TRAFFIC SIGNALS CABLE PLAN
N.T.S.



2 PHASE DESIGNATION DIAGRAM
N.T.S.

DETECTOR LOOP REQUIREMENTS AND CALCULATIONS IL-162 @ LIEBLER/FORMOSA ROAD					
LOOP No.(*)	PHASE	LOOP SIZE	No. OF TURNS	INDUCTANCE (MICROHENRIES)	RESISTANCE (OHMS)
1	2	6'x6'	5	269	3.0
2	2	6'x6'	5	266	3.0
3	5	6'x50' Q	3-6-3	379	3.5
4	2	6'x20' Q	4-8-4	301	2.6
5	2	6'x20' Q	4-8-4	298	2.5
6	3	6'x50' Q	3-6-3	357	3.2
7	8	6'x50' Q	3-6-3	348	2.7
8	8	6'x20' Q	4-8-4	268	1.6
9	1	6'x50' Q	3-6-3	383	3.7
10	6	6'x20' Q	4-8-4	304	2.8
11	6	6'x20' Q	4-8-4	301	2.8
12	6	6'x6'	5	280	3.4
13	6	6'x6'	5	283	3.4
14	7	6'x50' Q	3-6-3	411	4.6
15	4	6'x50' Q	3-6-3	406	4.3
16	4	6'x20' Q	4-8-4	326	3.4

THE ABOVE VALUES ARE CALCULATED OF COMBINED LOOP AND LEAD-IN INDUCTANCE AND RESISTANCE. ACTUAL MEASURED VALUES SHOULD BE WITHIN +/- 20% OF THESE VALUES

TS-08

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
PROPOSED TRAFFIC SIGNALS CABLE PLAN
IL 162 @ LIEBLER RD./FORMOSA RD.
FAI ROUTE 70
SECTION 60-10K-1, 60-10HB
MADISON COUNTY

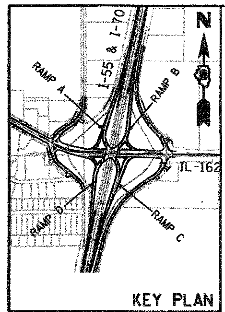
DRAWN BY: RPJ CHECKED BY: A. OSHANA, P.E.

XXXXX.XXX - IDOT IL 162 over I-55,70 revisions
236-TS-08-east_Cable.dgn
1/28/2009
4:59:00 PM
Robert Swanson

FAP ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	60-10 (K-1,HB)	MADISON	420	202

STA. TO STA.

CONTRACT NO.: 76709

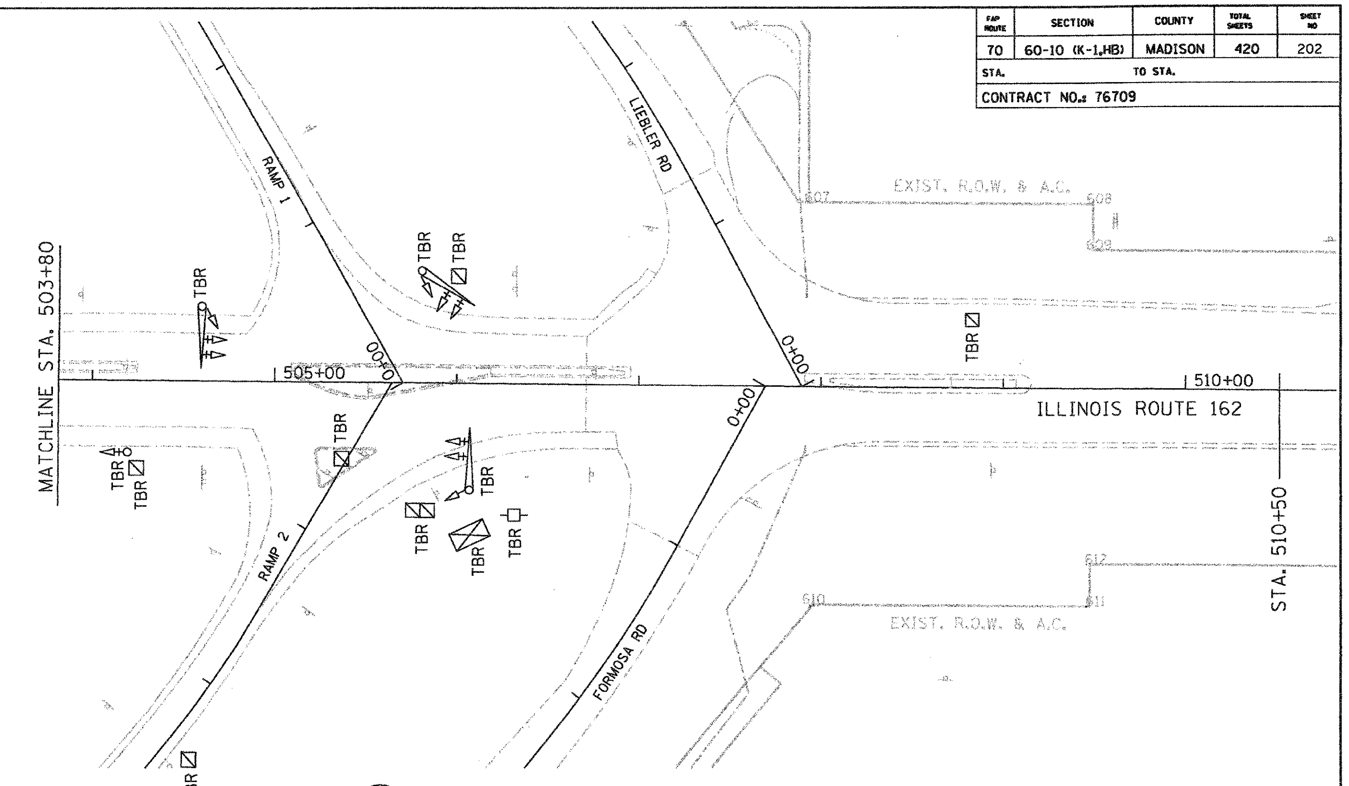


NOTES

1. TEMPORARY TRAFFIC SIGNAL INSTALLATION SHALL REMAIN IN USE DURING CONSTRUCTION UNTIL NEW SIGNALS ARE READY FOR OPERATION.
2. REFER TO LIGHTING PLANS FOR THE REMOVAL OF LIGHT UNITS AND FOUNDATIONS.
3. "TBR" INDICATES EQUIPMENT TO BE REMOVED

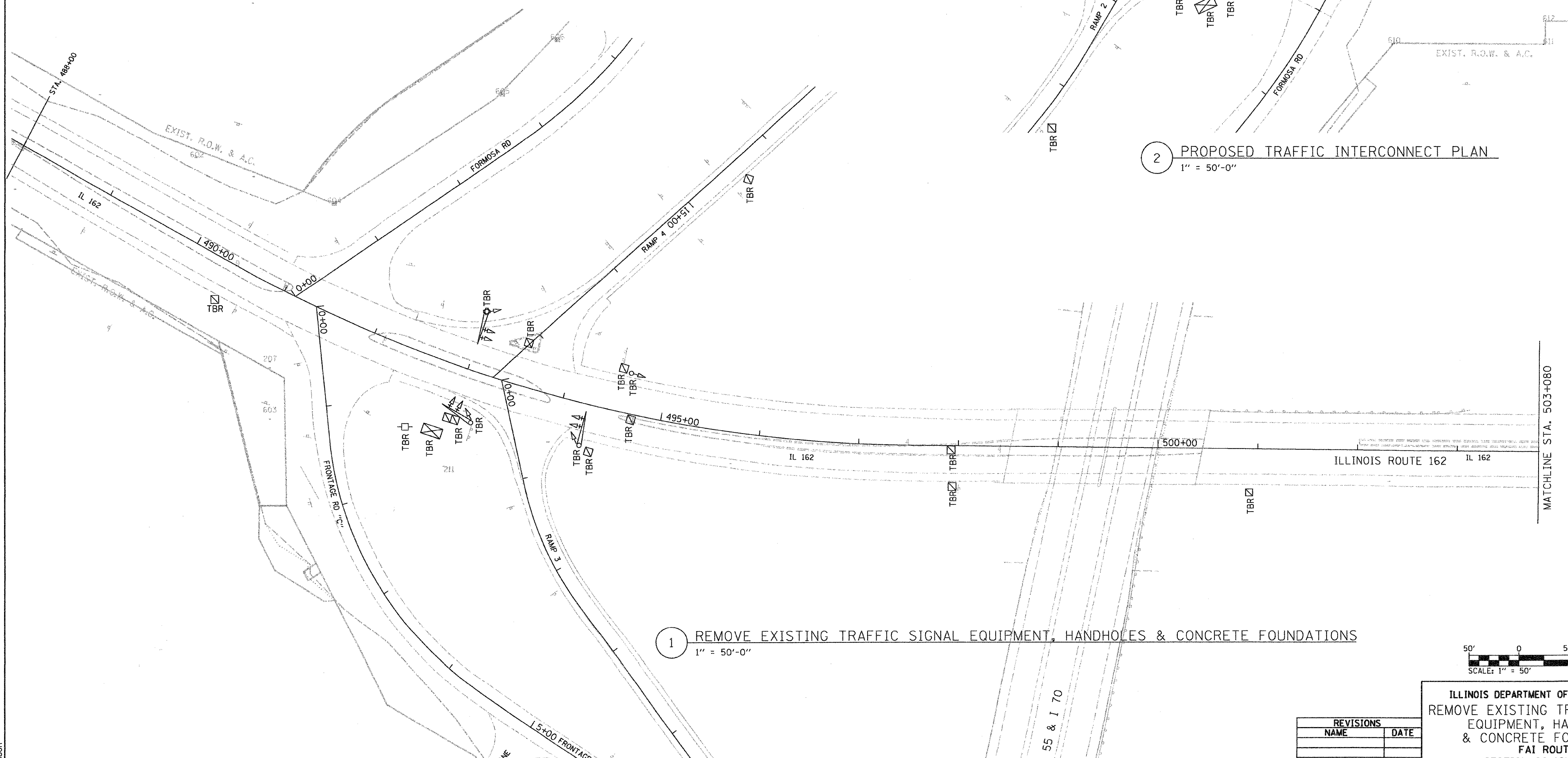
EXISTING TRAFFIC SIGNALS LEGEND

CONTROLLER	⊠
SERVICE INSTALLATION	-□-
SIGNAL HEAD	-▷
SIGNAL HEAD WITH BACKPLATE	+▷
SIGNAL POST	o
MAST ARM ASSEMBLY AND POLE, ALUMINUM	o—
HANDHOLE	⧄
DOUBLE HANDHOLE	⧄⧄



2 PROPOSED TRAFFIC INTERCONNECT PLAN

1" = 50'-0"



1 REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT, HANDHOLES & CONCRETE FOUNDATIONS

1" = 50'-0"

SCALE: 1" = 50'

TS-09

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT, HANDHOLES & CONCRETE FOUNDATIONS

FAI ROUTE 70

SECTION 60-10K-1, 60-10HB

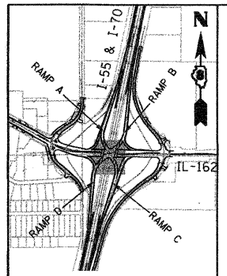
MADISON COUNTY

DRAWN BY: RPJ CHECKED BY: A. OSHANA, P.E.

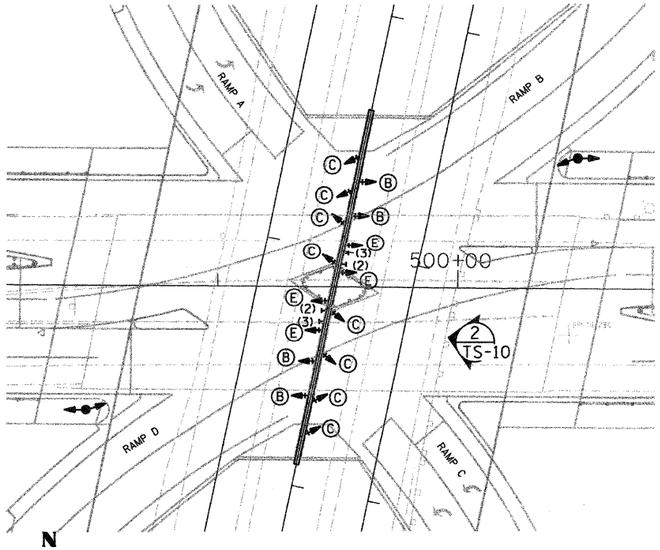
PLAN | NOTE BOOK NO. | SURVEYED | PLOTTED | ALIGNMENT CHECKED | R.O.W. WAY CHECKED | CADD FILE NAME | BY | DATE

XXXX.XXX - IDOT IL 162 over I-55_70 revisions
236-TS-09-Removal_Plan.dgn
1/28/2009
5:01:23 PM
Robert Swanson

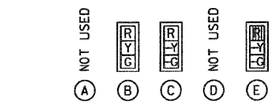
FAP ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
70	60-10 (K-1,HB)	MADISON	420	203
STA.	TO STA.			
CONTRACT NO.: 76709				



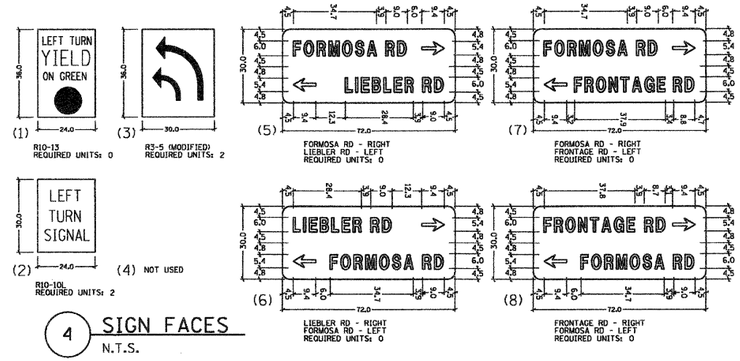
KEY PLAN



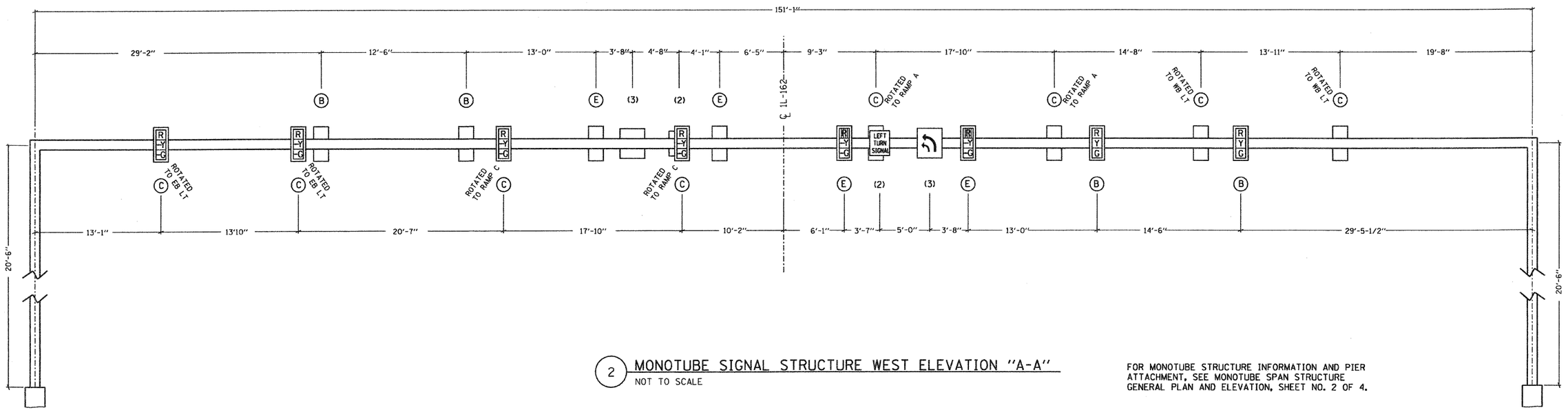
1 MONOTUBE SIGNAL STRUCTURE PLAN
1" = 30'-0"



3 TRAFFIC SIGNALS FACES
N.T.S.



4 SIGN FACES
N.T.S.



2 MONOTUBE SIGNAL STRUCTURE WEST ELEVATION "A-A"
NOT TO SCALE

FOR MONOTUBE STRUCTURE INFORMATION AND PIER ATTACHMENT, SEE MONOTUBE SPAN STRUCTURE GENERAL PLAN AND ELEVATION, SHEET NO. 2 OF 4.

PLAN
SURVEYED
DRAWN
ALIGNMENT CHECKED
QUANTITIES CHECKED
ADD'T FILE NAME
NOTE BOOK
NO. -

BY	DATE
-	-
-	-
-	-
-	-

TS-10

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

MONOTUBE SIGNAL STRUCTURE

FAI ROUTE 70
SECTION 60-10K-1, 60-10HB
MADISON COUNTY

DRAWN BY: RPJ CHECKED BY: A. OSHANA, P.E.

XXXXX.XXX - IDOT IL 162 over I-55_70 revisions
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1/28/2009
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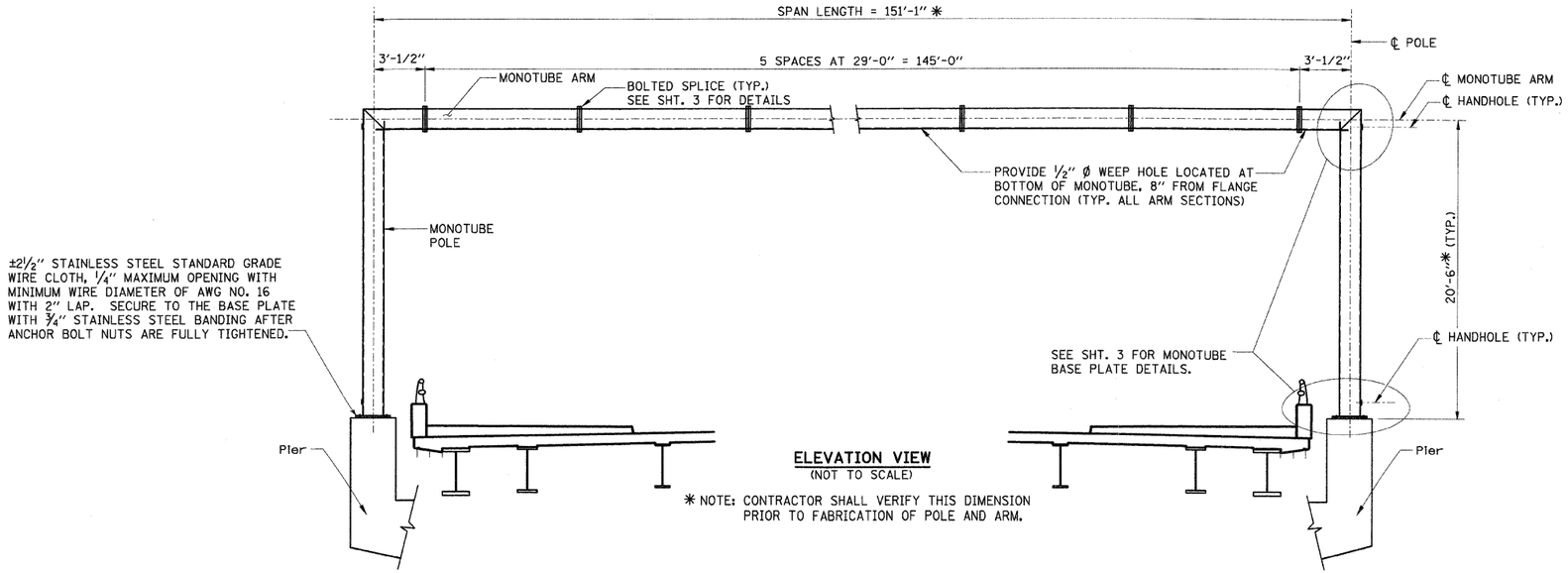
Robert Swanson

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	*	MADISON	420	204
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

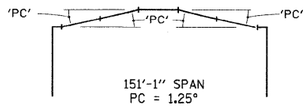
* 60-10K-1, 60-10HB *CONTRACT NO. 76709*



ELEVATION VIEW
(NOT TO SCALE)

* NOTE: CONTRACTOR SHALL VERIFY THIS DIMENSION PRIOR TO FABRICATION OF POLE AND ARM.

* FIELD VERIFY POLE HEIGHTS PRIOR TO FABRICATION.



CAMBER DETAILS

NOTE: FABRICATE WITH ROLLING CAMBER UP.

MONOTUBE SIGNAL STRUCTURE NOTES

1. SIGNAL STRUCTURE MATERIALS SHALL BE AS FOLLOWS:

POLES & MONOTUBE ARM	->	ASTM A618 GRADE II OR A500 GRADE C
HANDHOLE FRAME	->	ASTM A709 GRADE 36
HANDHOLE COVER	->	ASTM A607, GRADE 50, 55 OR 60 KSI
STEEL PLATES	->	ASTM A709 GRADE 50
WELD METAL	->	E70XX
ANCHOR BOLTS	->	SEE ANCHOR ROD ASSEMBLY NOTES
NUTS FOR ANCHOR BOLTS	->	SEE ANCHOR ROD ASSEMBLY NOTES
WASHERS FOR ANCHOR BOLTS	->	SEE ANCHOR ROD ASSEMBLY NOTES
STAINLESS STEEL SCREWS	->	AISI TYPE 316
ALUMINUM NUT COVER	->	ASTM B26 (356-T6)

2. DESIGN SPECIFICATIONS: CURRENT (AT TIME OF LETTING) AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS.
3. PROPOSED LOADING AND CONFIGURATION: AS SHOWN ON SHEET TS-11. TOTAL SIGNAL/SIGN APPLIED WIND AREA NOT TO EXCEED 220 SQ. FT.
4. CONSTRUCTION: CURRENT (AT TIME OF LETTING) ILLINOIS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS. ("STANDARD SPECIFICATIONS") ALL REFERENCES TO "MAST ARM ASSEMBLY AND POLE" ARE APPLICABLE, UNLESS OTHERWISE NOTED.
5. WELDING: ALL WELDS TO BE CONTINUOUS UNLESS OTHERWISE SHOWN. ALL WELDING TO BE DONE IN ACCORDANCE WITH CURRENT AWS D1.1 STRUCTURAL WELDING CODE AND THE STANDARD SPECIFICATIONS.
6. FASTENERS: ALL CONNECTION BOLTS SHALL BE HIGH STRENGTH BOLTS M164, GALVANIZED ACCORDING TO M232 (A153). ALL NUTS SHALL BE "LOCKNUTS" WITH NYLON OR STEEL INSERTS AND SEMIFINISHED HEXAGONAL HEADS EQUIVALENT TO THE FINISHED HEAVY HEX SERIES OF THE AMERICAN NATIONAL STANDARD.
7. THE DESIGN WIND SPEED IS 90 MPH.
8. ALTERNATE DESIGNS FOR THIS STRUCTURE ARE NOT ALLOWED.
9. EXCEPT FOR ANCHOR BOLTS, ALL BOLT HOLE DIAMETERS SHALL BE EQUAL TO THE BOLT DIAMETER PLUS 1/16", PRIOR TO GALVANIZING. HOLE DIAMETERS FOR ANCHOR BOLTS SHALL NOT EXCEED THE BOLT DIAMETER PLUS 3/8".
10. SIGN PANELS AND SIGNALS ATTACHED TO THE MONOTUBE SHALL BE LOCATED AS SHOWN ON THE TRAFFIC SIGNAL PLANS. WIRE ACCESS HOLES SHALL NOT EXCEED 3/4" IN DIAMETER.
11. THE POLE SHALL BE INSTALLED VERTICALLY. ARM CAMBER SHALL BE ACCOUNTED FOR IN THE FLANGE CONNECTIONS.
12. ALL SIGNALS SHALL BE INSTALLED VERTICALLY.
13. MONOTUBE ARM & POLES SHALL BE FABRICATED FROM ROUND PIPE.
14. GALVANIZING: ALL PLATES, SHAPES, AND PIPE SHALL BE HOT DIP GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH AASHTO M111.

ANCHOR ROD ASSEMBLY NOTES:

1. ALL DIMENSIONS ARE IN FEET AND INCHES EXCEPT AS NOTED.
2. ALL ANCHOR RODS SHALL BE ASTM F1554 GRADE 105 AND GALVANIZED ACCORDING TO STANDARD SPECIFICATION SECTION 1006.09.
3. ANCHOR RODS SHALL MEET CHARPY V-NOTCH (CVN) ENERGY OF 15 FT-LB AT 40° F. NO WELDING SHALL BE PERMITTED ON RODS.
4. ALL NUTS AND WASHERS SHALL BE GALVANIZED. GRADE, FINISH AND STYLE OF NUTS AND WASHERS SHALL CONFORM TO THE RECOMMENDATIONS OF ASTM F1554.
5. FOR ASSEMBLIES THAT EMPLOY COUPLING NUTS, EACH ROD SHALL BE TURNED HALFWAY INTO COUPLER AND SNUG TIGHTENED.
6. FOR ANCHOR ROD INSTALLATION DETAILS, REFER TO SHEET S-61 OF S-68.

SIGN STRUCTURE NUMBER
8M060I055R018.0

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STATION 499+48.35
STRUCTURE NO. 060-0338

MONOTUBE SPAN STRUCTURE ELEVATION, NOTES & CAMBER DETAILS

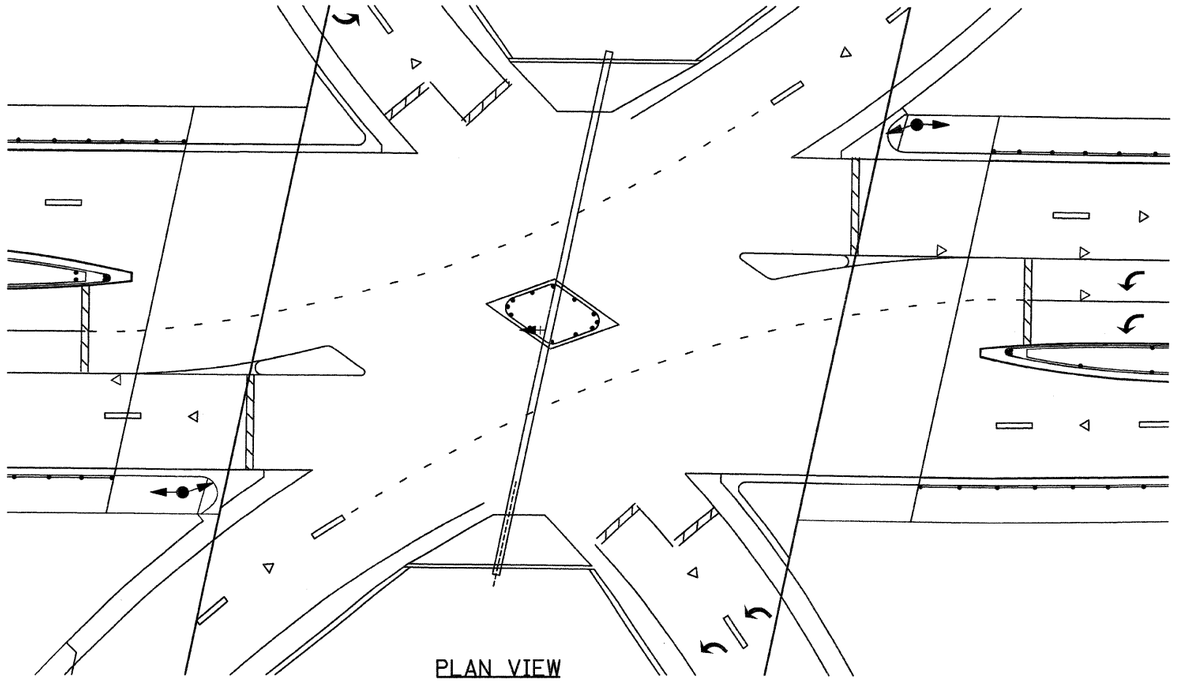
DESIGNED: JAN DRAWN: HJB
DATE: 4/06 CHECKED: TO CHECKED: JAN

SHT. 1 OF 4

STV Incorporated
Engineers/Architects/Planners/Construction Managers
200 W. Monroe Street, Suite 1650
Chicago, IL 60606-5015
312/553-0655, FAX 312/553-0661

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	*	MADISON	420	205
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* 60-10K-1, 60-10HB *CONTRACT NO. 76709*

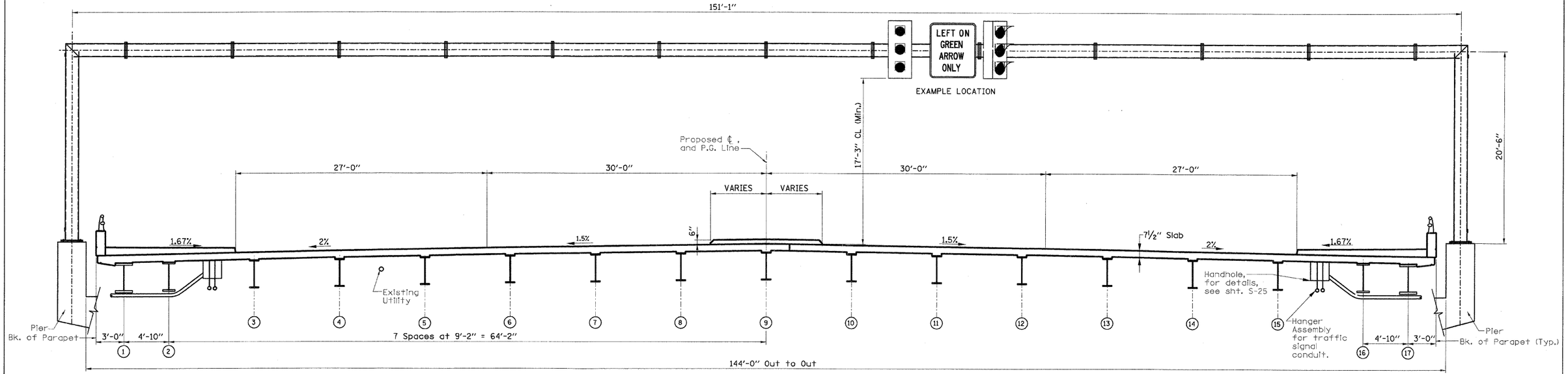


PLAN VIEW

N

NOTE:

THE PLAN AND ELEVATION VIEWS ON THIS SHEET SHOW TYPICAL SIGNAL HEADS AND SIGN PANELS CONSIDERED IN DESIGN OF THE MONOTUBE SPAN, AND DO NOT SHOW OTHER APPURTENANT ITEMS THAT ARE SHOWN IN THE TRAFFIC SIGNAL INSTALLATION PLANS. FOR SIGNAL HEAD PLACEMENT, SEE MONOTUBE SIGNAL STRUCTURE SHEET NO. TS-10.



MONOTUBE STRUCTURE ELEVATION
(LOOKING EAST)

SIGN STRUCTURE NUMBER
8M060I055R018.0

SHT. 2 OF 4

STV Incorporated
Engineers/Architects/Planners/Construction Managers
200 W. Monroe Street, Suite 1650
Chicago, IL. 60606-5015
312/553-0655, FAX 312/553-0661

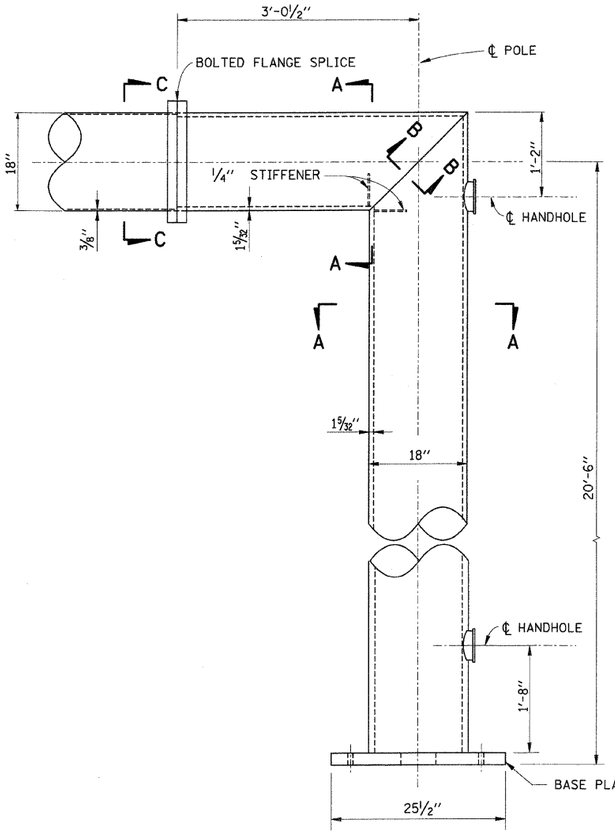
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STATION 499+48.35
STRUCTURE NO. 060-0338
MONOTUBE SPAN STRUCTURE
GENERAL PLAN AND ELEVATION

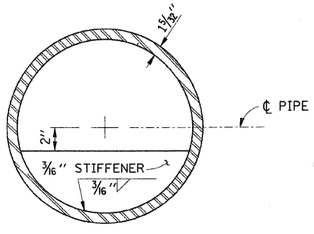
DESIGNED: JAN DRAWN: HJB
DATE: 4/06 CHECKED: TO CHECKED: JAN

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	*	MADISON	420	206
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

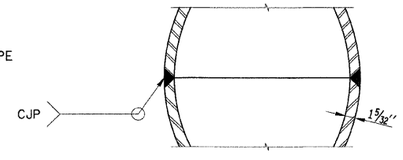
* 60-10K-1, 60-10HB CONTRACT NO. 76709



ELEVATION

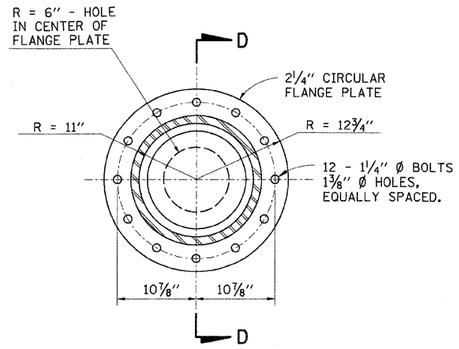


SECTION A-A

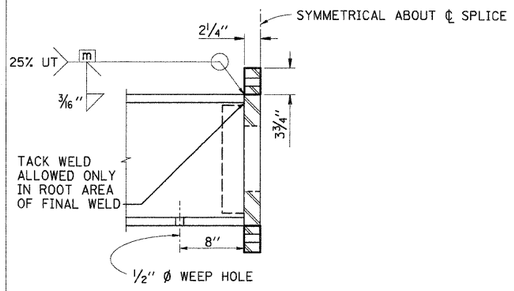


SECTION B-B

MONOTUBE POLE & ARM DETAILS

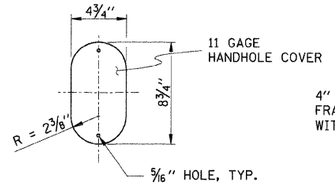


SECTION C-C

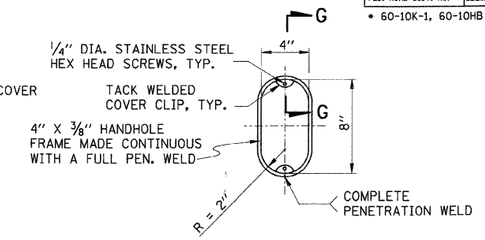


SECTION D-D

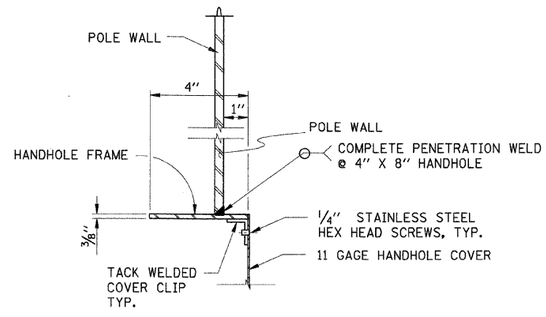
MONOTUBE FLANGE SPLICE DETAILS



HANDHOLE COVER



HANDHOLE FRAME



SECTION G-G

MONOTUBE HANDHOLE DETAILS

SIGN STRUCTURE NUMBER
8M060I055R018.0

SHT. 3 OF 4

STV Incorporated
Engineers/Architects/Planners/Construction Managers
200 W. Monroe Street, Suite 1650
Chicago, IL 60606-5015
312/553-0655, FAX 312/553-0661

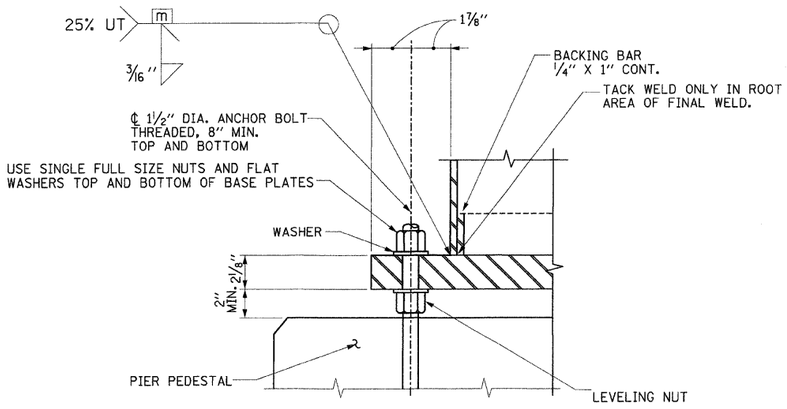
REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STATION 499+48.35
STRUCTURE NO. 060-0338
MONOTUBE SPAN STRUCTURE
BASE PLATE & ARM
CONNECTION DETAILS

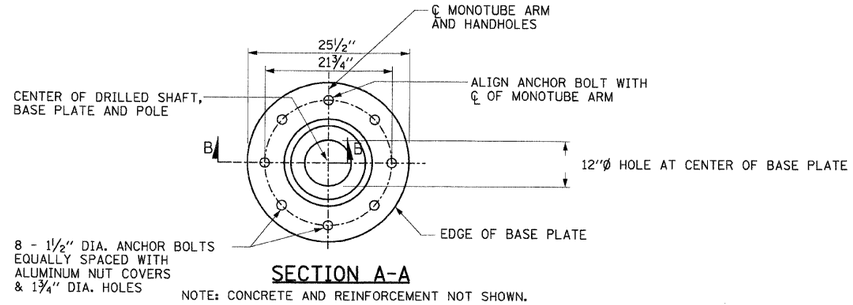
DESIGNED: JAN DRAWN: HJB
DATE: 4/06 CHECKED: TO CHECKED: JAN

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	•	MADISON	420	207
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

• 60-10K-1, 60-10HB *CONTRACT NO. 76709*



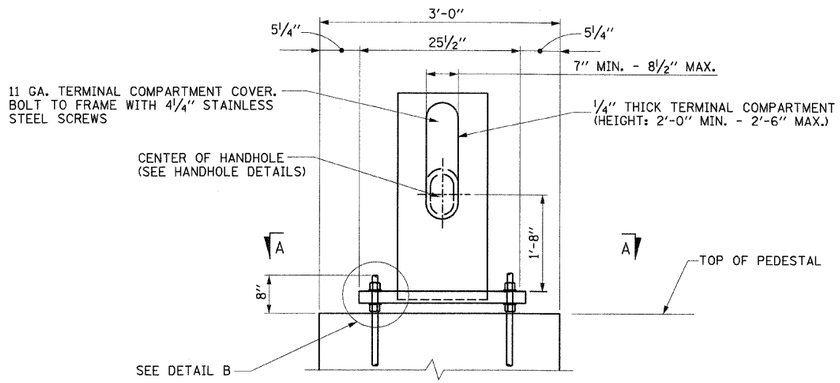
DETAIL B



SECTION A-A

NOTE: CONCRETE AND REINFORCEMENT NOT SHOWN.

* ANCHOR BOLT GROUP LOCATIONS MAY BE ±1/2" IN THE DIRECTION OF THE SPAN.



MONOTUBE BASE PLATE AND ANCHORAGE ELEVATION

SIGN STRUCTURE NUMBER
8M060I055R018.0

SHT. 4 OF 4

STV Incorporated
Engineers/Architects/Planners/Construction Managers
200 W. Monroe Street, Suite 1650
Chicago, IL. 60606-5015
312/553-0655, FAX 312/553-0661

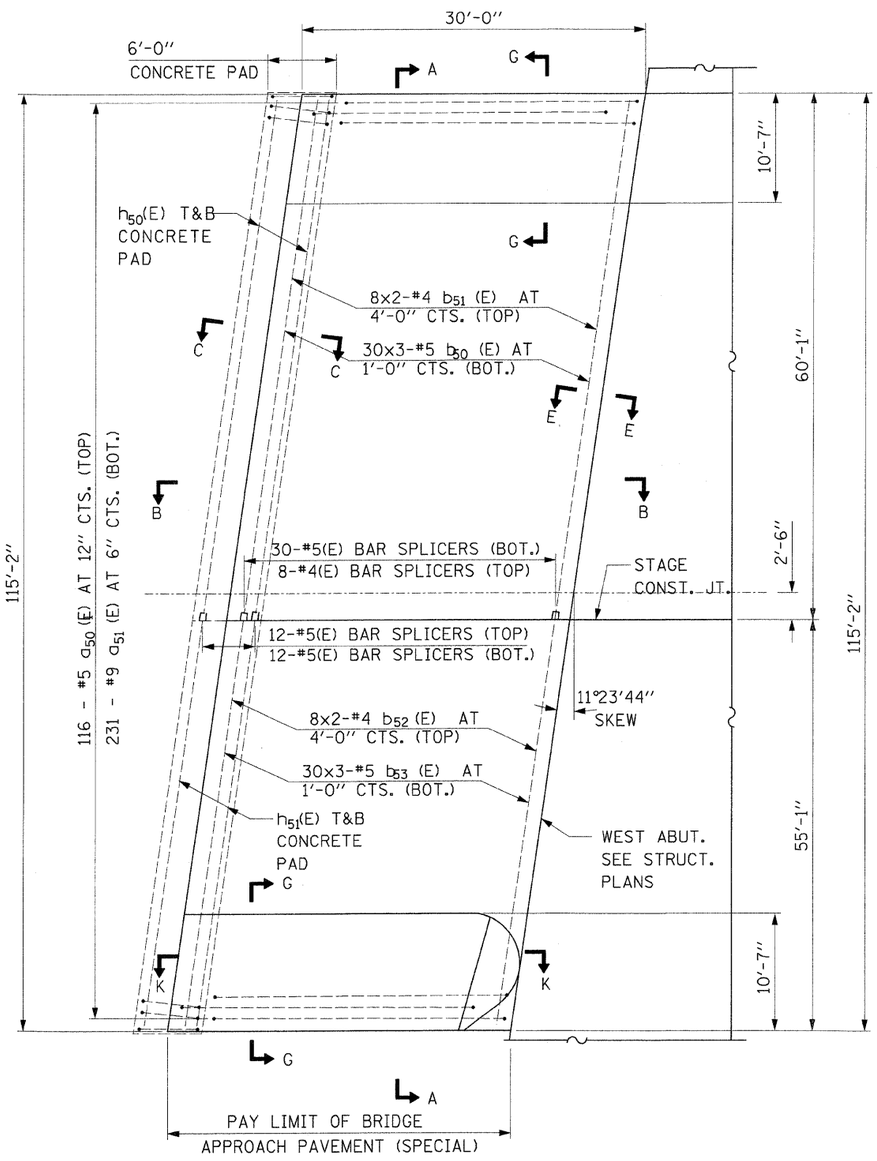
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STATION 499+48.35
STRUCTURE NO. 060-0338
MONOTUBE SPAN STRUCTURE
BASE PLATE & ARM
CONNECTION DETAILS

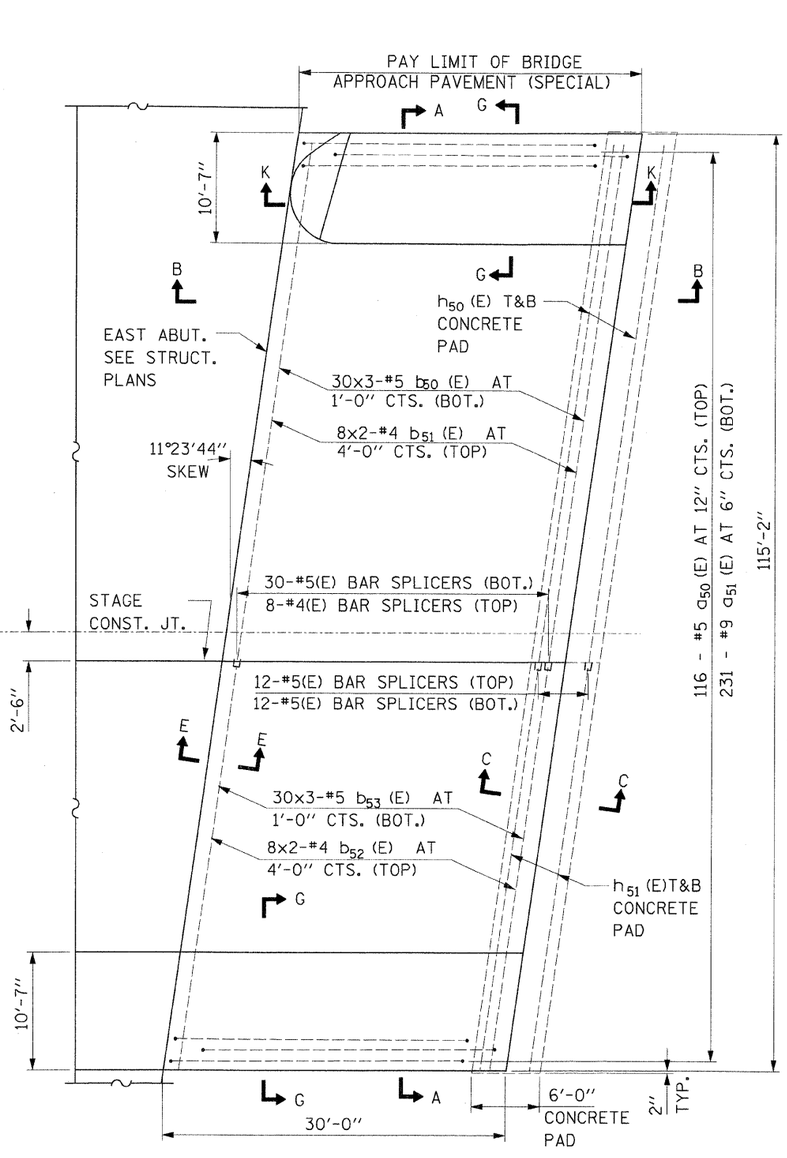
DESIGNED: JAN DRAWN: HJB
DATE: 4/06 CHECKED: TO CHECKED: JAN

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	•	MADISON	420	208
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

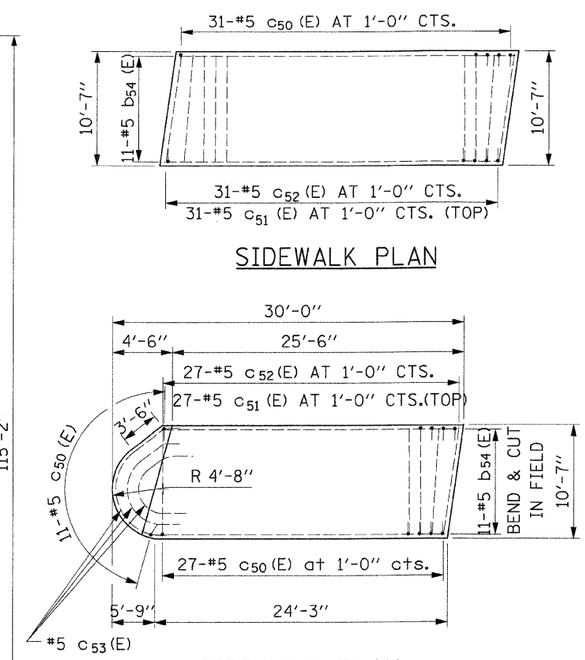
• 60-10K-1, 60-10HB



BRIDGE APPROACH PAVEMENT PLAN - WEST



BRIDGE APPROACH PAVEMENT PLAN - EAST



SIDEWALK PLAN

SIDEWALK PLAN

GENERAL NOTES

1. SEE STANDARD 421001 FOR REINFORCEMENT DETAILS NOT SHOWN.
2. SEE STANDARD 420001 FOR DETAILS OF JOINTS NOT SHOWN.
3. REFER TO STRUCTURAL BRIDGE PLANS FOR ABUTMENT.
4. BLOCK OUT CONCRETE SLEEPER SLAB FOR STEEL PLATE BEAM GUARD RAIL POSTS. COORDINATE WITH STANDARD 631031.

MIN. LAP
#4 = 1'-8"
#5 = 2'-2"

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

BRIDGE APPROACH PAVEMENT

FAI ROUTE 70

SECTION 60-10K, 60-10-4HB

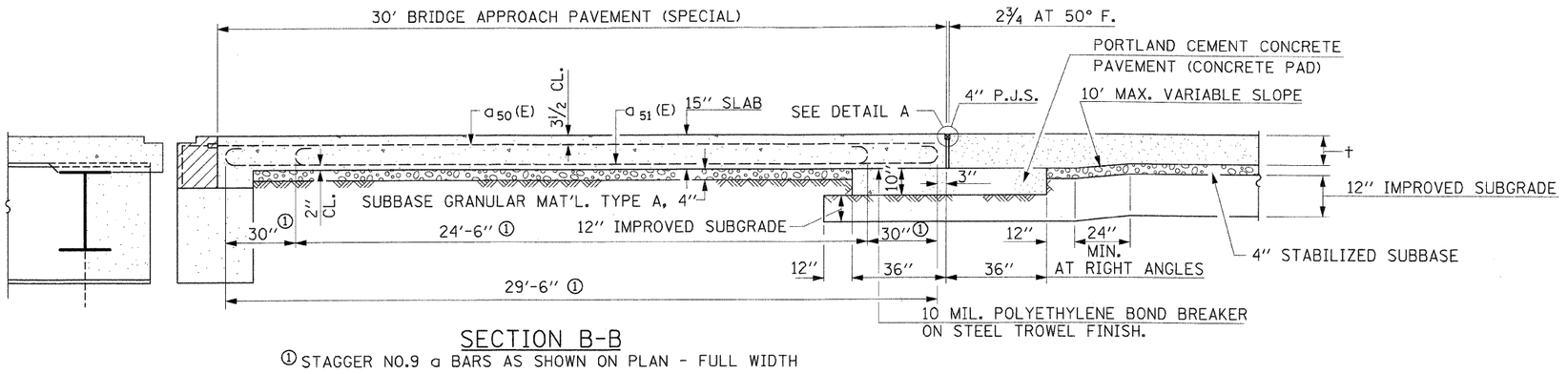
MADISON COUNTY

SCALE: NOT TO SCALE DRAWN BY: HJB

DATE: 4/06 CHECKED BY: JAW

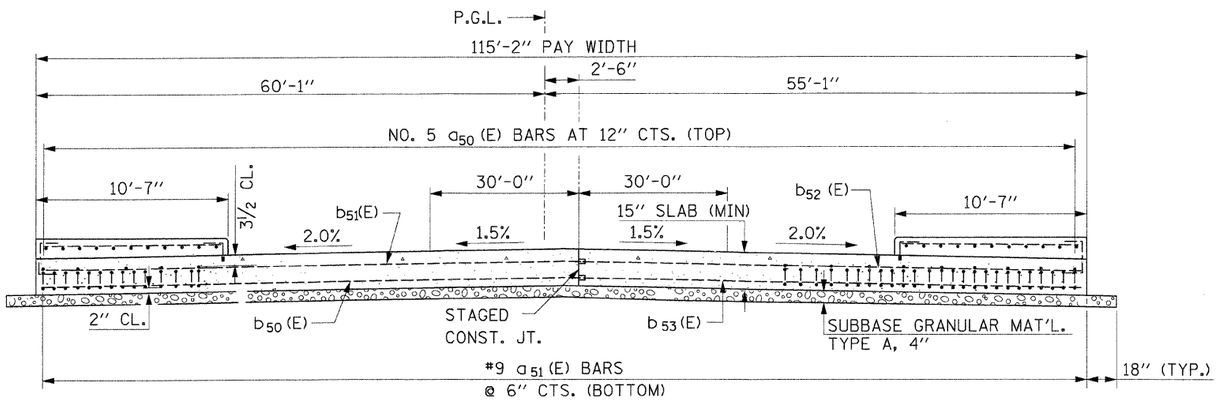
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	•	MADISON	420	209
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

• 60-10K-1, 60-10HB



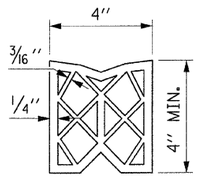
SECTION B-B

① STAGGER NO.9 a BARS AS SHOWN ON PLAN - FULL WIDTH

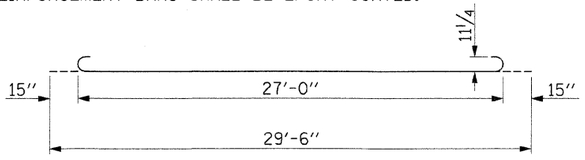


SECTION A-A

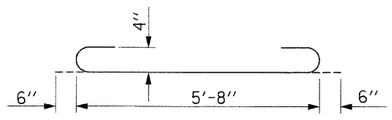
(SEE PLAN FOR DIMENSIONS NOT SHOWN, ALSO SEE STRUCTURAL PLANS)
ALL REINFORCEMENT BARS SHALL BE EPOXY COATED.



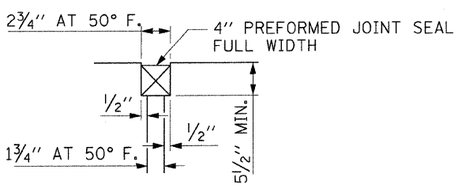
PREFORMED JOINT SEAL



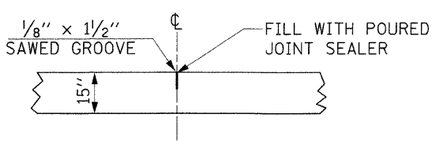
BAR a 50 (E)



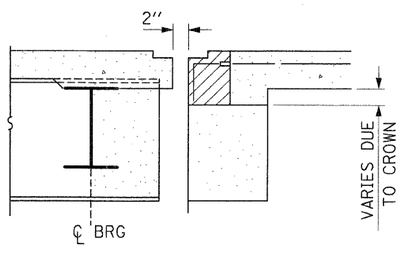
BAR a 52 (E)



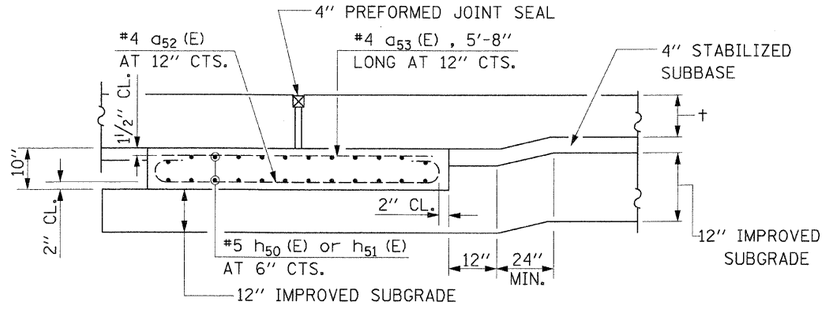
DETAIL A



DETAIL B



SECTION E-E



SECTION C-C - RIGID PAVEMENT

(SHOWING REINFORCEMENT)

DESIGN STRESSES

FY = 60,000 P.S.I.
F'C = 3,500 P.S.I.
N = 8.5

GENERAL NOTES

1. THICKNESS - "+" = THICKNESS OF PAVEMENT
2. ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SHOWN.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

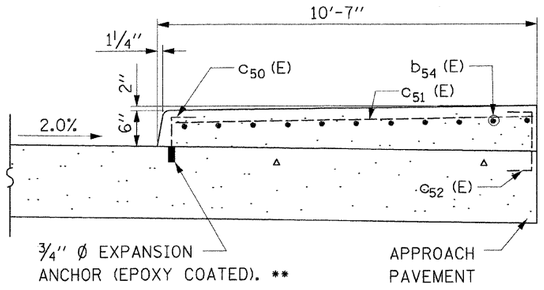
BRIDGE APPROACH PAVEMENT DETAILS

FAI ROUTE 70
SECTION 60-10K, 60-10-4HB
MADISON COUNTY

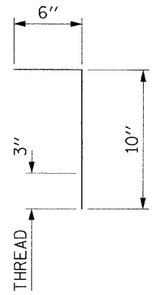
SCALE: NOT TO SCALE — DRAWN BY: HJB
DATE: 4/06 — CHECKED BY: JAW

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	*	MADISON	420	210
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

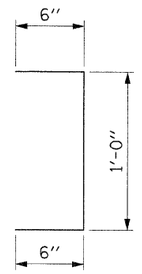
* 60-10K-1, 60-10HB



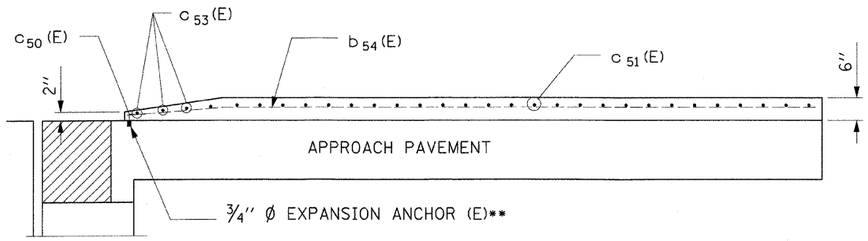
SECTION G-G



BAR c_{50}(E)



BAR c_{52}(E)



SECTION K-K

BILL OF MATERIAL

	BAR	NO.	SIZE	LENGTH	SHAPE
	a_{50} (E)	232	#5	29'-6"	
	a_{51} (E)	462	#9	29'-6"	
	a_{52} (E)	232	#4	6'-8"	
	a_{53} (E)	232	#4	5'-8"	
	b_{50} (E)	180	#5	21'-10"	
	b_{51} (E)	32	#4	31'-5"	
	b_{52} (E)	32	#4	28'-10"	
	b_{53} (E)	180	#5	20'-2"	
*	b_{54} (E)	44	#5	29'-8"	
*	c_{50} (E)	138	#5	1'-4"	
*	c_{51} (E)	116	#5	10'-2"	
*	c_{52} (E)	116	#5	2'-0"	
*	c_{53} (E)	6	#5	13'-0"	
	h_{50} (E)	96	#5	31'-8"	
	h_{51} (E)	96	#5	29'-2"	

*	BAR SPLICERS	EACH	124
*	REINFORCEMENT BARS, EPOXY COATED	LB	3110
*	CONCRETE SUPERSTUCTURES	C.Y.	27.4
*	PREFORMED JOINT SEAL	FOOT	235
*	CONCRETE PAD	S.Y.	154
*	POLYETHYLENE BOND BREAKER	S.Y.	154
	BRIDGE APPROACH PAVEMENT (SPECIAL)	S.Y.	768

REINFORCEMENT BARS DESIGNATED (E) SHALL BE EPOXY COATED.

* ITEMS INCLUDED IN THE COST FOR BRIDGE APPROACH PAVEMENT (SPECIAL).

** COST OF MACHINING BAR c_{50} (E) INCLUDED WITH BRIDGE APPROACH PAVEMENT (SPECIAL).

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

BRIDGE APPROACH PAVEMENT DETAILS

FAI ROUTE 70

SECTION 60-10K, 60-10-4HB

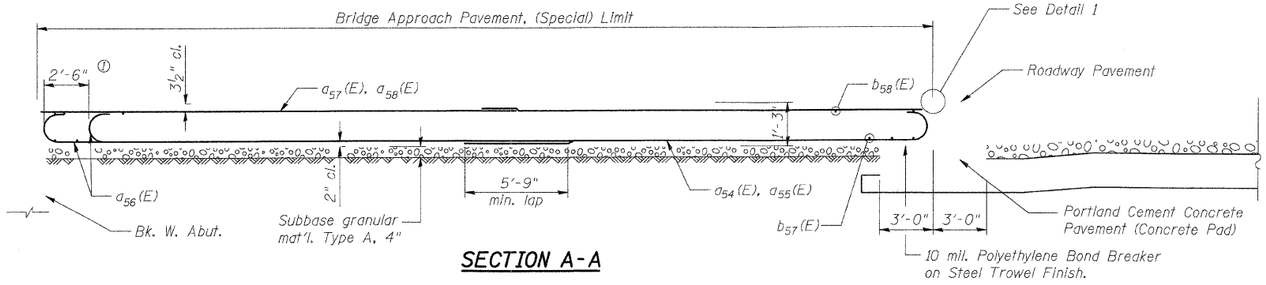
MADISON COUNTY

SCALE: NOT TO SCALE — DRAWN BY: HJB

DATE: 4/06 — CHECKED BY: JAW

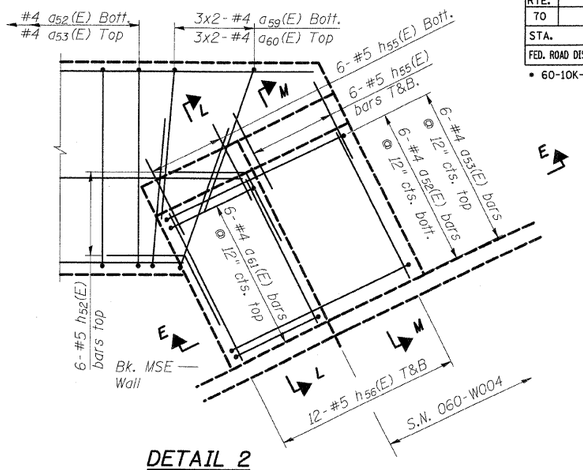
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	•	MADISON	420	211
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

• 60-10K-1, 60-10HB **CONTRACT NO. 76709**

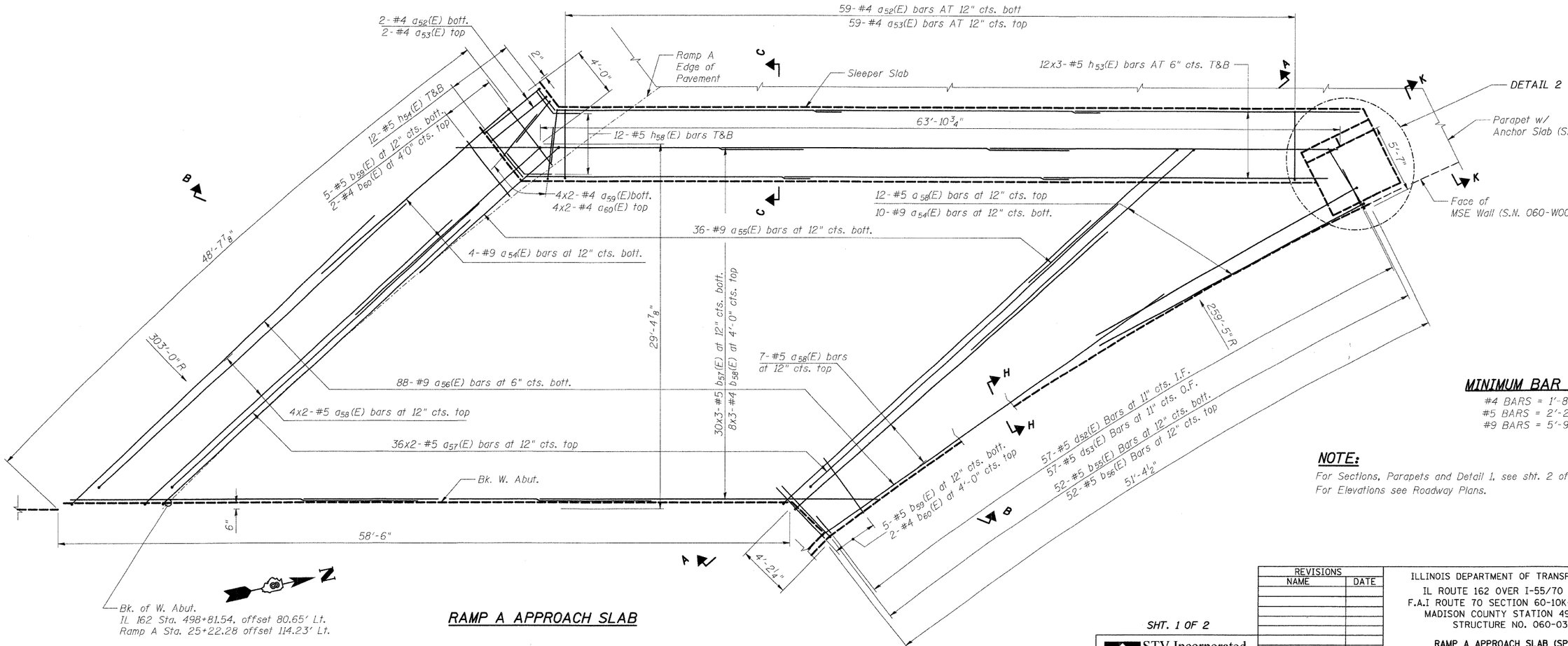


SECTION A-A

① Stagger #9 a_{56}(E) bars as shown on plan - full width



DETAIL 2



RAMP A APPROACH SLAB

MINIMUM BAR LAP

#4 BARS = 1'-8"
#5 BARS = 2'-2"
#9 BARS = 5'-9"

NOTE:

For Sections, Parapets and Detail 1, see sht. 2 of 2.
For Elevations see Roadway Plans.

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STATION 499+48.35
STRUCTURE NO. 060-0338

RAMP A APPROACH SLAB (SPECIAL)

DESIGNED: JAW DRAWN: BTO
DATE: 4/06 CHECKED: BTO CHECKED: JAN

SHT. 1 OF 2

STV Incorporated
Engineers/Architects/Planners/Construction Managers
200 W. Monroe Street, Suite 1650
Chicago, IL 60606-5015
312/553-0055, FAX 312/553-0661

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	•	MADISON	420	212
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

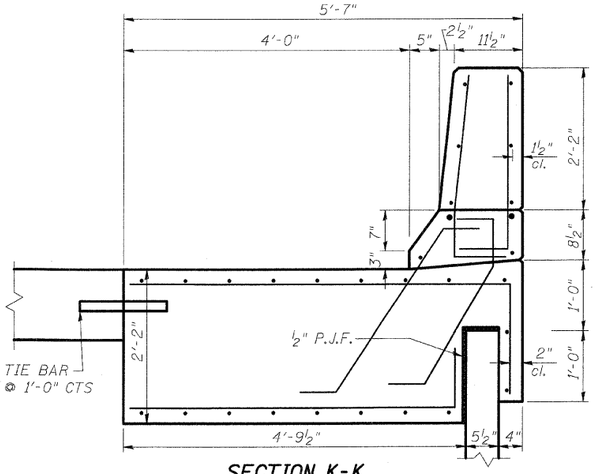
• 60-10K-1, 60-10HB CONTRACT NO. 76709

BILL OF MATERIAL RAMP "A"

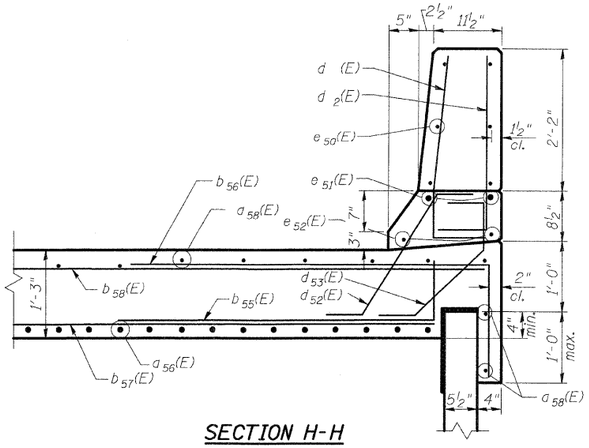
	Bar	No.	Size	Length	Shape
	$a_{52}(E)$	67	#4	6'-8"	
	$a_{53}(E)$	67	#4	5'-8"	
	$a_{54}(E)$	14	#9	25'-3"	
	$a_{55}(E)$	36	#9	16'-3"	
	$a_{56}(E)$	88	#9	34'-9"	
	$a_{57}(E)$	72	#5	22'-7"	
	$a_{58}(E)$	27	#5	27'-0"	
	$a_{59}(E)$	14	#4	4'-8"	
	$a_{60}(E)$	14	#4	4'-2"	
	$a_{61}(E)$	6	#4	5'-4"	
	$b_{55}(E)$	52	#5	5'-3"	
	$b_{56}(E)$	52	#5	6'-8"	
	$b_{57}(E)$	90	#5	27'-11"	
	$b_{58}(E)$	24	#4	27'-7"	
	$b_{59}(E)$	10	#5	6'-4"	
	$b_{60}(E)$	4	#4	5'-10"	
	$d(E)$	59	#5	3'-2"	
	$d_2(E)$	59	#4	3'-2"	
	$d_{52}(E)$	57	#5	3'-0"	
	$d_{53}(E)$	57	#4	3'-0"	
	$e_{50}(E)$	12	#4	16'-10"	
	$e_{51}(E)$	4	#8	28'-7"	
	$e_{52}(E)$	4	#5	27'-5"	
	$e_{59}(E)$	6	#4	18'-4"	
	$h_{52}(E)$	6	#5	4'-4"	
	$h_{53}(E)$	72	#5	22'-8"	
	$h_{54}(E)$	12	#5	8'-11"	
	$h_{55}(E)$	18	#5	2'-4"	
	$h_{56}(E)$	24	#5	4'-6"	
	$h_{58}(E)$	48	#5	4'-4"	
*	Reinforcement Bars, Epoxy Coated		Pound	23,950	
*	Concrete		Cu. Yd.	120	
*	Preformed Joint Seal		Foot	74	
*	Concrete Pad		Sq. Yd.	49	
*	Polyethylene Bond Breaker		Sq. Yd.	49	
	Bridge Approach Pavement (Special)		Sq. Yd.	238	

* Items included in the cost for Bridge Approach Pavement, (Special)

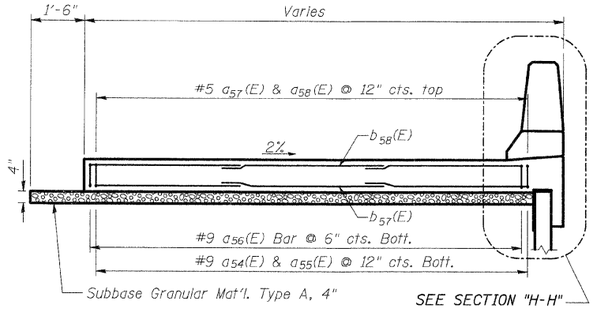
SECTION K-K
(S.N. 060-W004)



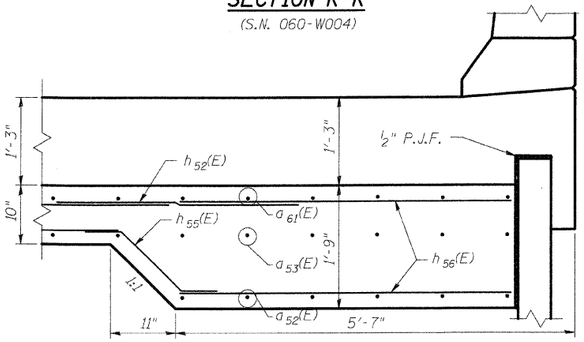
SECTION H-H



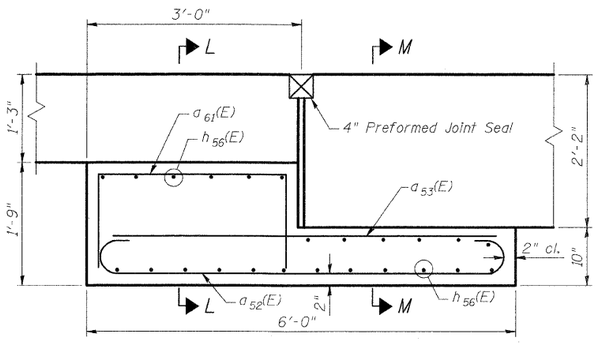
SECTION B-B



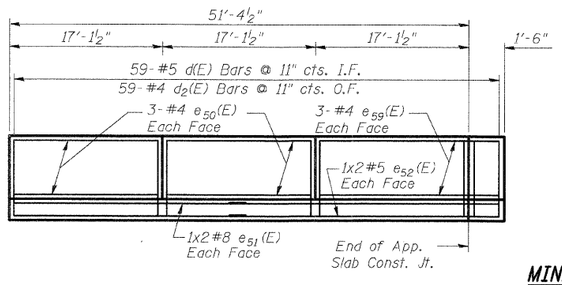
SECTION L-L



SECTION E-E



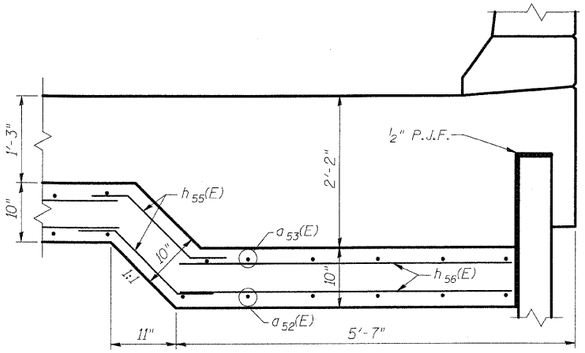
INSIDE PARAPET ELEVATION AT RAMP "A" APPROACH SLAB (SPECIAL)



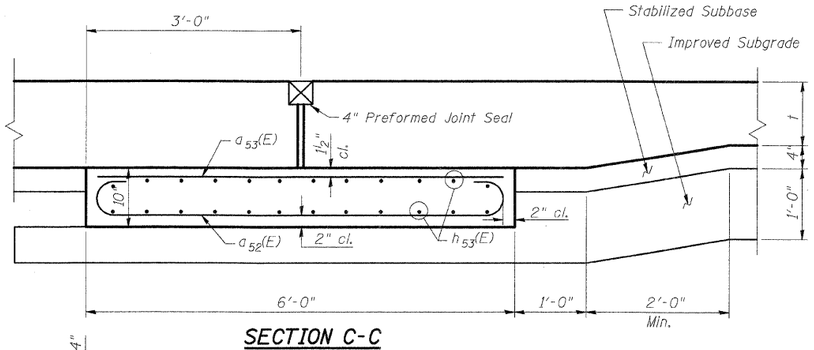
MINIMUM BAR LAP

#4 bars = 1'-8"
#5 bars = 2'-2"
#9 bars = 5'-9"

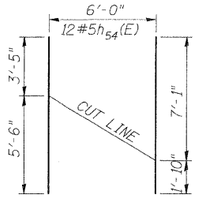
SECTION M-M



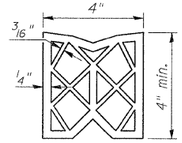
SECTION C-C



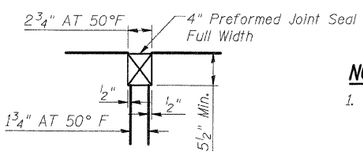
Bar h54(E) CUTTING DIAGRAM



PREFORMED JOINT SEAL



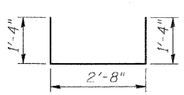
DETAIL 1



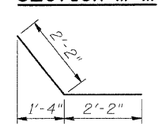
NOTES:

1. Thickness - "t" = thickness of pvmt.

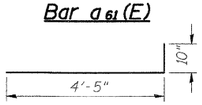
Bar $a_{61}(E)$



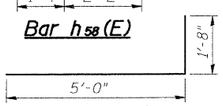
Bar $h_{58}(E)$



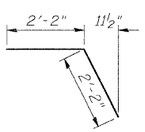
Bar $b_{55}(E)$



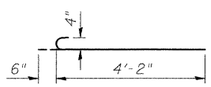
Bar $b_{56}(E)$



Bar $h_{52}(E)$

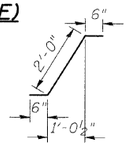


Bar $a_{59}(E)$

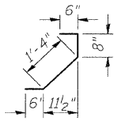


Bar $d(E)$ & $d_2(E)$

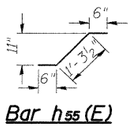
Bar $d_{52}(E)$



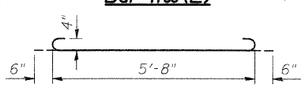
Bar $d_{53}(E)$

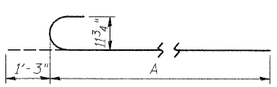


Bar $h_{55}(E)$



Bar $a_{52}(E)$





Bar	A
$a_{54}(E)$	24'-0"
$a_{55}(E)$	15'-0"
$a_{56}(E)$	33'-6"

SHT. 2 OF 2

STV Incorporated
Engineers/Architects/Planners/Construction Managers
200 W. Monroe Street, Suite 1650
Chicago, IL. 60606-5015
312/553-0655, FAX 312/553-0661

REVISIONS NAME	DATE

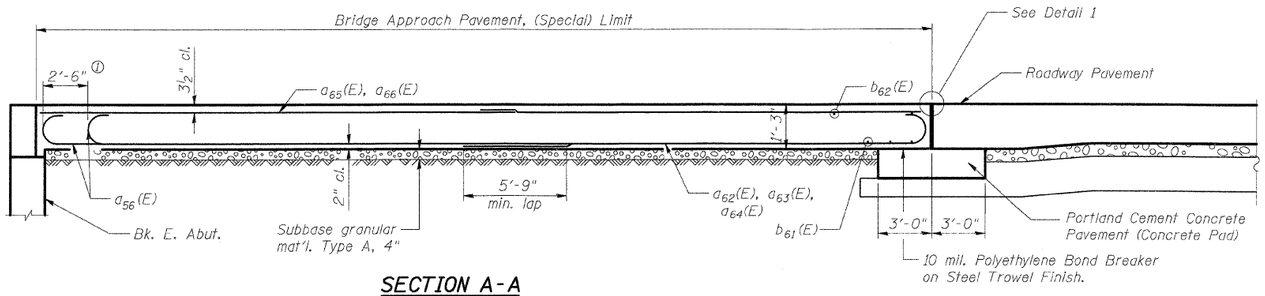
ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STATION 499+48.35
STRUCTURE NO. 060-0338

RAMP A APPROACH SLAB DETAILS (SPECIAL)

DESIGNED: JAW DRAWN: BTO
DATE: 4/06 CHECKED: BTO CHECKED: JAN

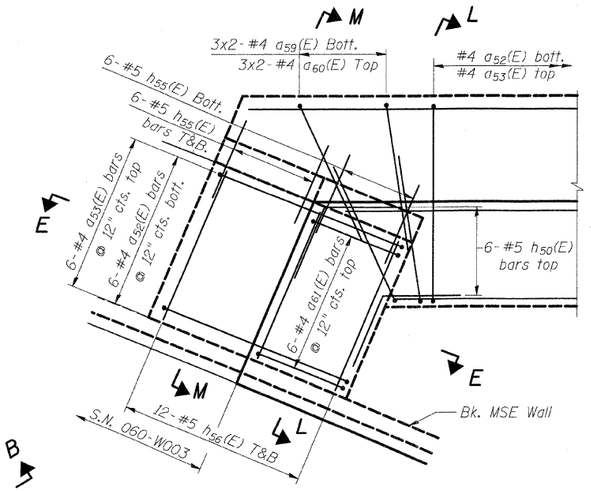
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	*	MADISON	420	213
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

• 60-10K-1, 60-10HB **CONTRACT NO. 76709**

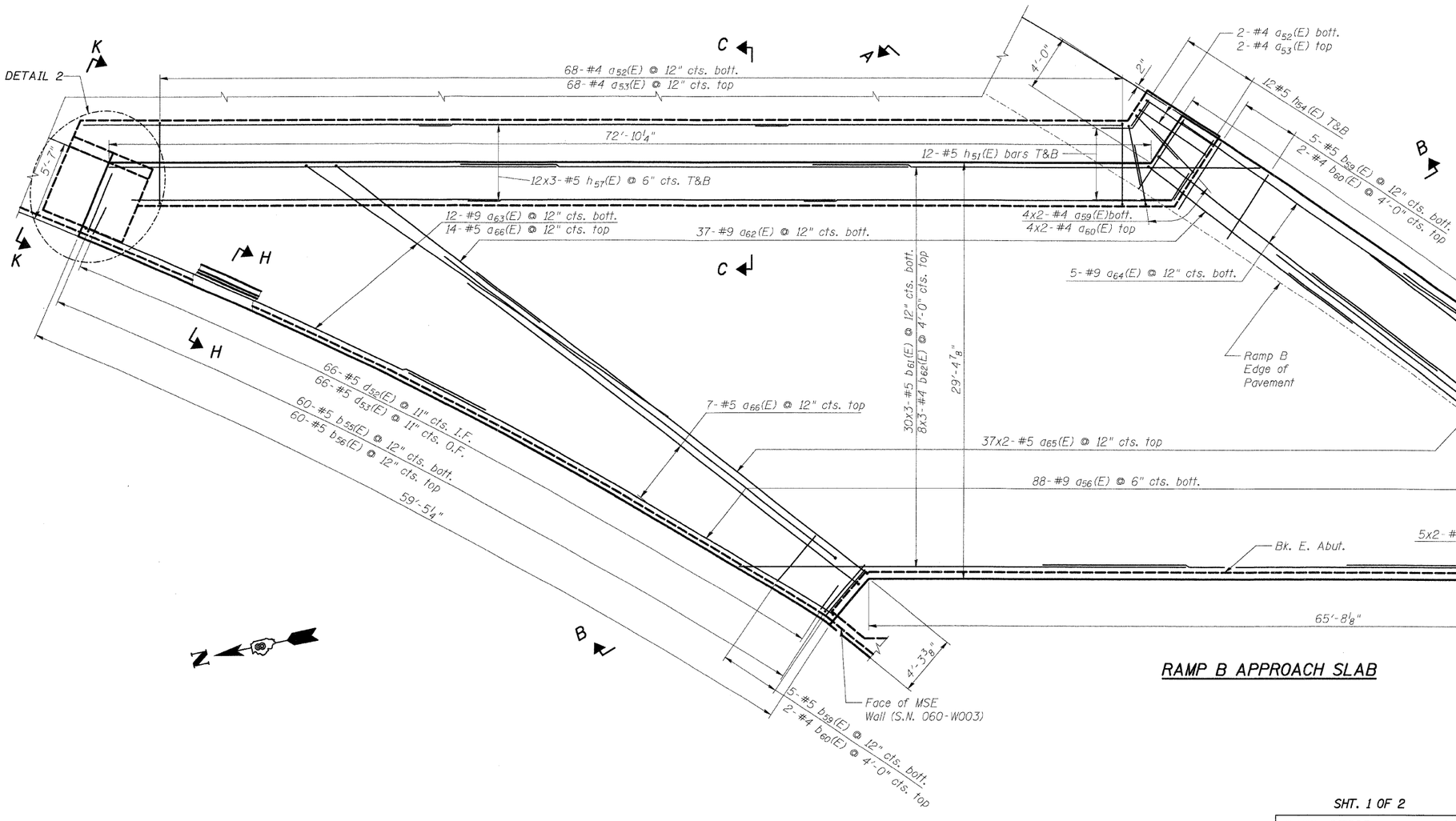


SECTION A-A

① Stagger #9 a_{56}(E) bars as shown on plan - full width



DETAIL 2



RAMP B APPROACH SLAB

NOTES:

For Sections, Parapets and Detail 1, see sht. 2 of 2.

For Elevations see Roadway Plans.

REVISIONS	
NAME	DATE

SHT. 1 OF 2

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ILLINOIS DEPARTMENT OF TRANSPORTATION

IL ROUTE 162 OVER I-55/70 IN TROY

F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB

MADISON COUNTY STATION 499+48.35

STRUCTURE NO. 060-0338

RAMP B APPROACH SLAB (SPECIAL)

DESIGNED: JAW DRAWN: BTO

DATE: 4/06 CHECKED: BTO CHECKED: JAN

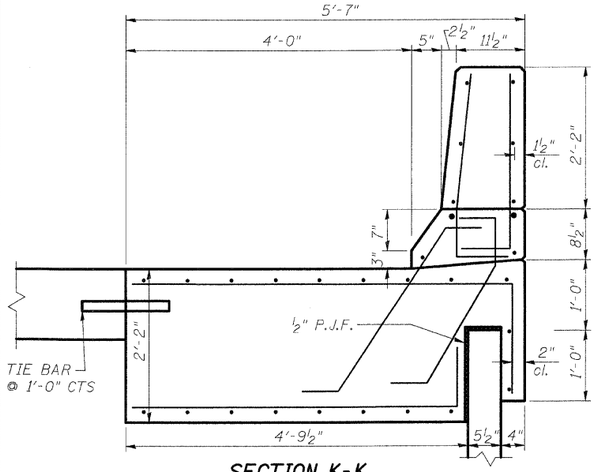
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TO	•	MADISON	420	214
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

• 60-10K-1, 60-10HB CONTRACT NO. 76709

BILL OF MATERIAL RAMP "B"

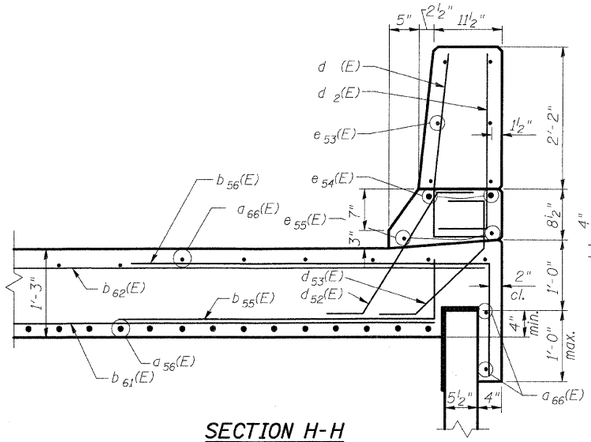
Bar	No.	Size	Length	Shape
$a_{52}(E)$	76	#4	6'-8"	
$a_{53}(E)$	76	#4	5'-8"	
$a_{56}(E)$	88	#9	34'-9"	
$a_{59}(E)$	14	#4	4'-8"	
$a_{60}(E)$	14	#4	4'-2"	
$a_{61}(E)$	6	#4	4'-8"	
$a_{62}(E)$	37	#9	19'-3"	
$a_{63}(E)$	12	#9	32'-3"	
$a_{64}(E)$	5	#9	25'-11"	
$a_{65}(E)$	74	#5	23'-3"	
$a_{66}(E)$	31	#5	31'-3"	
$b_{55}(E)$	60	#5	5'-3"	
$b_{56}(E)$	60	#5	6'-8"	
$b_{59}(E)$	10	#5	6'-4"	
$b_{60}(E)$	4	#4	5'-10"	
$b_{61}(E)$	90	#5	31'-3"	
$b_{62}(E)$	24	#4	31'-0"	
d(E)	68	#5	3'-2"	
$d_2(E)$	68	#4	3'-2"	
$d_{52}(E)$	66	#5	3'-0"	
$d_{53}(E)$	66	#4	3'-0"	
$e_{53}(E)$	12	#4	19'-7"	
$e_{54}(E)$	4	#8	32'-8"	
$e_{55}(E)$	4	#5	31'-6"	
$e_{60}(E)$	6	#4	21'-1"	
$h_{50}(E)$	6	#5	4'-4"	
$h_{51}(E)$	24	#5	4'-4"	
$h_{54}(E)$	12	#5	8'-11"	
$h_{55}(E)$	18	#5	2'-1"	
$h_{56}(E)$	24	#5	4'-6"	
$h_{57}(E)$	72	#5	25'-8"	
* Reinforcement Bars, Epoxy Coated		Pound	26,130	
* Concrete		Cu. Yd.	135.4	
* Preformed Joint Seal		Foot	83	
* Concrete Pad		Sq. Yd.	55	
* Polyethylene Bond Breaker		Sq. Yd.	55	
Bridge Approach Pavement (Special)		Sq. Yd.	270	

* Items included in the cost for Bridge Approach Pavement, (Special)

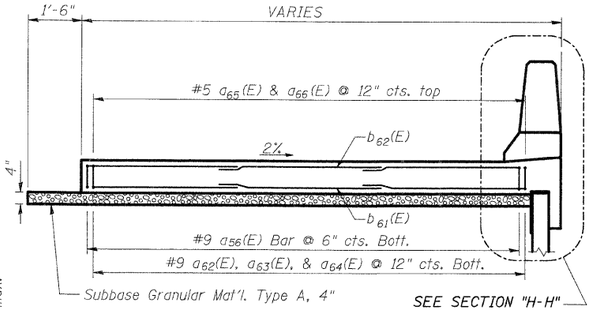


SECTION K-K

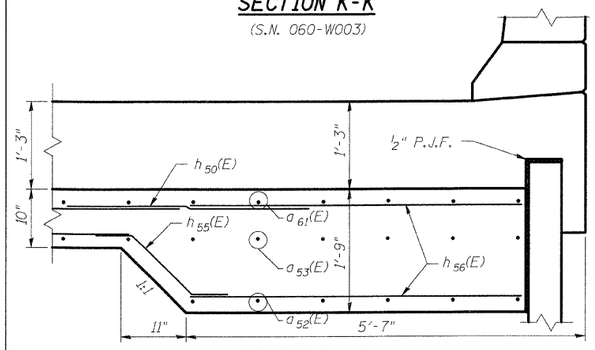
(S.N. 060-W003)



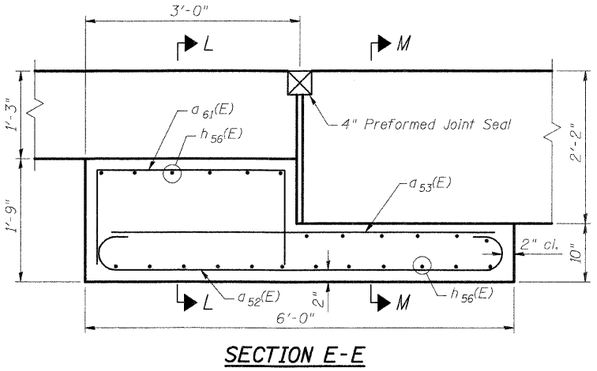
SECTION H-H



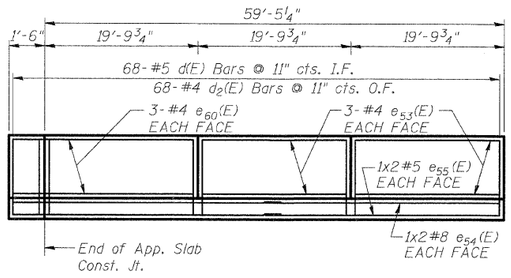
SECTION B-B



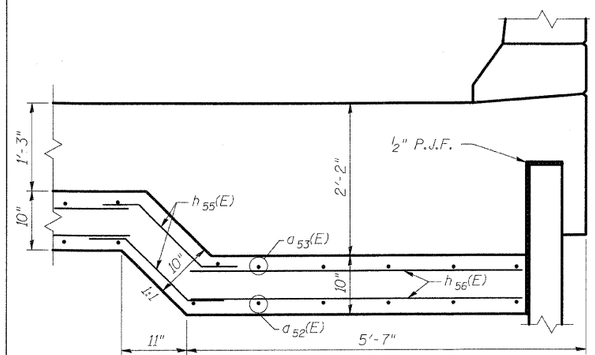
SECTION L-L



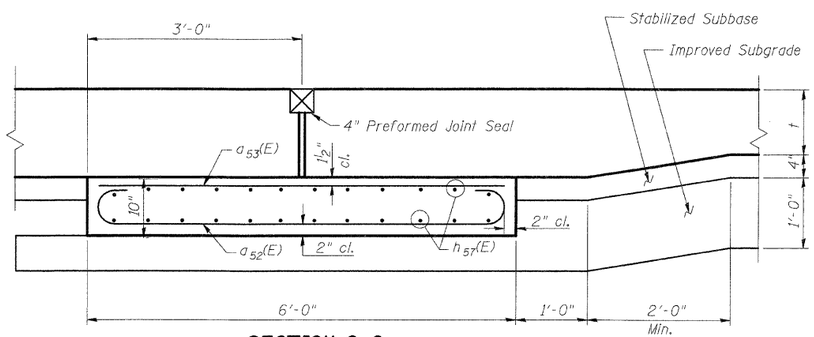
SECTION E-E



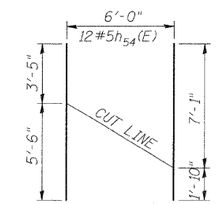
INSIDE PARAPET ELEVATION AT RAMP "B" APPROACH SLAB (SPECIAL)



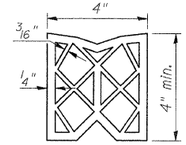
SECTION M-M



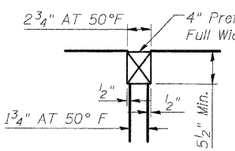
SECTION C-C



Bar $h_{54}(E)$ CUTTING DIAGRAM



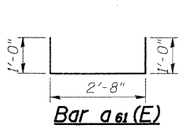
PREFORMED JOINT SEAL



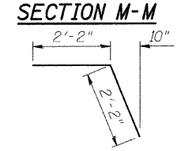
DETAIL 1

MINIMUM BAR LAP

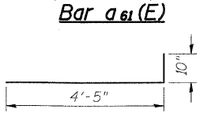
#4 bars = 1'-8"
#5 bars = 2'-2"
#9 bars = 5'-9"



Bar $a_{61}(E)$



Bar $h_{50}(E)$



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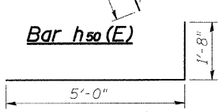
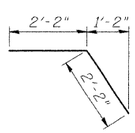
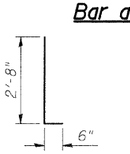


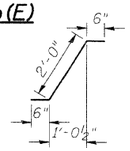
Bar $b_{56}(E)$



Bar $h_{51}(E)$



Bar d(E) & $d_2(E)$



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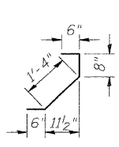
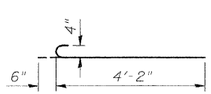
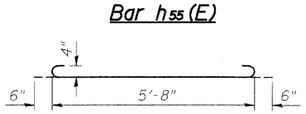


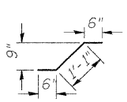
Bar $d_{53}(E)$



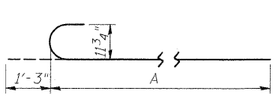
Bar $a_{59}(E)$



Bar $a_{52}(E)$



Bar $h_{55}(E)$



Bar	A
$a_{56}(E)$	33'-6"
$a_{62}(E)$	18'-0"
$a_{63}(E)$	31'-0"
$a_{64}(E)$	24'-8"

SHT. 2 of 2

STV Incorporated
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REVISIONS NAME	DATE

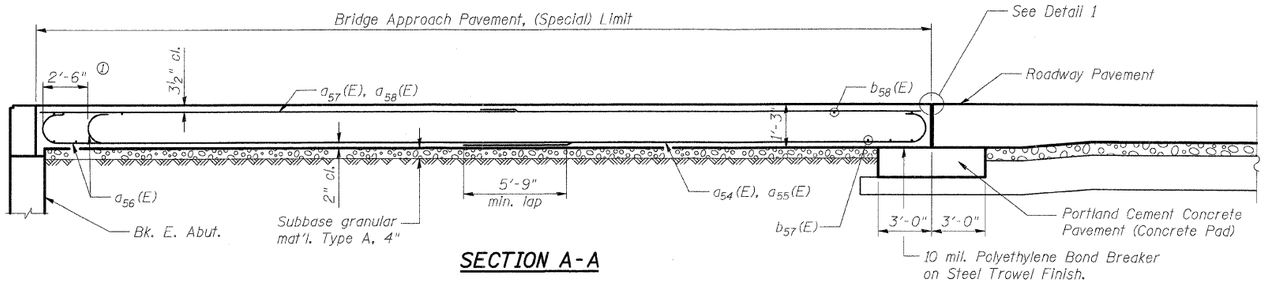
ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STATION 499+48.35
STRUCTURE NO. 060-0338

RAMP B APPROACH SLAB DETAILS (SPECIAL)

DATE: 4/06 DESIGNED: JAW DRAWN: BTO CHECKED: BTO CHECKED: JAN

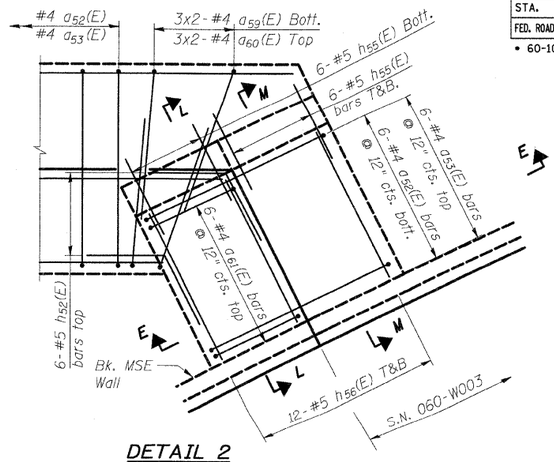
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	•	MADISON	420	215
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

• 60-10K-1, 60-10HB **CONTRACT NO. 76709**

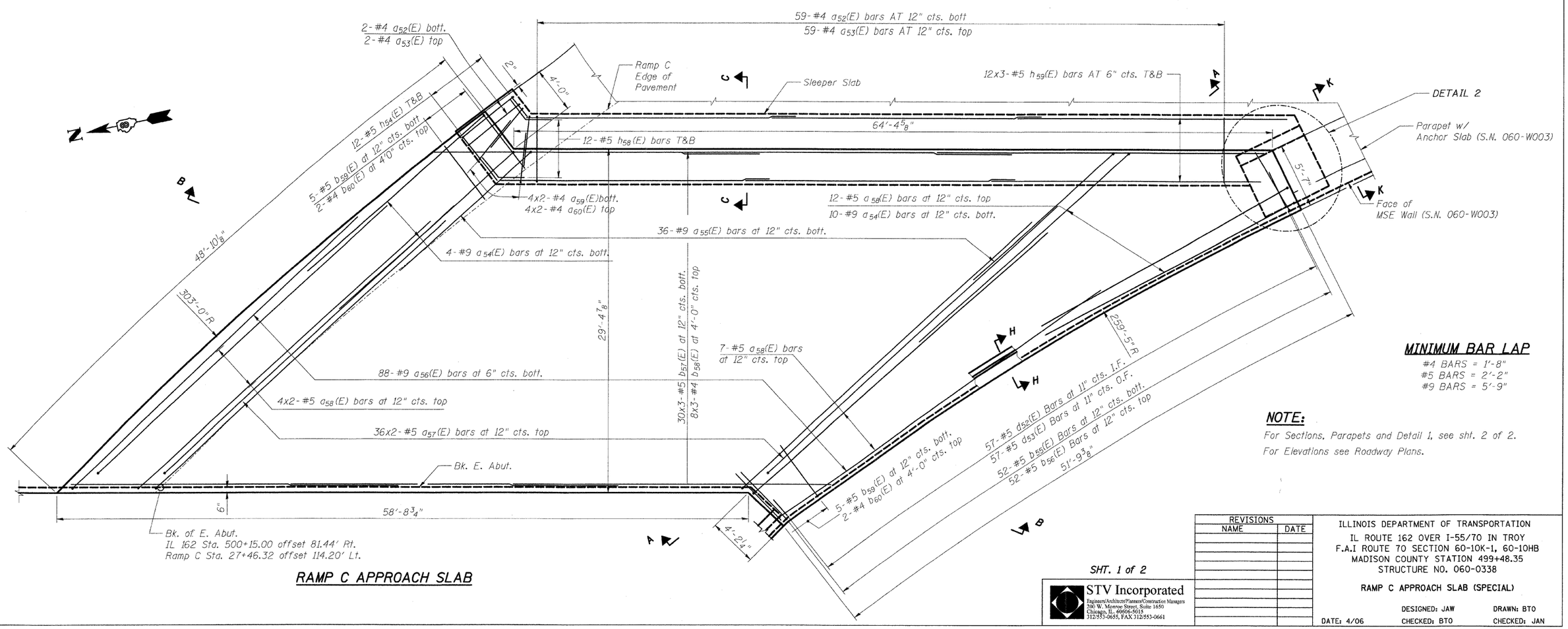


SECTION A-A

① Stagger #9 a_{56}(E) bars as shown on plan - full width



DETAIL 2



RAMP C APPROACH SLAB

MINIMUM BAR LAP

#4 BARS = 1'-8"
#5 BARS = 2'-2"
#9 BARS = 5'-9"

NOTE:

For Sections, Parapets and Detail 1, see sht. 2 of 2.
For Elevations see Roadway Plans.

SHT. 1 of 2

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Chicago, IL. 60606-5015
312/553-0655, FAX 312/553-0661

REVISIONS NAME	DATE

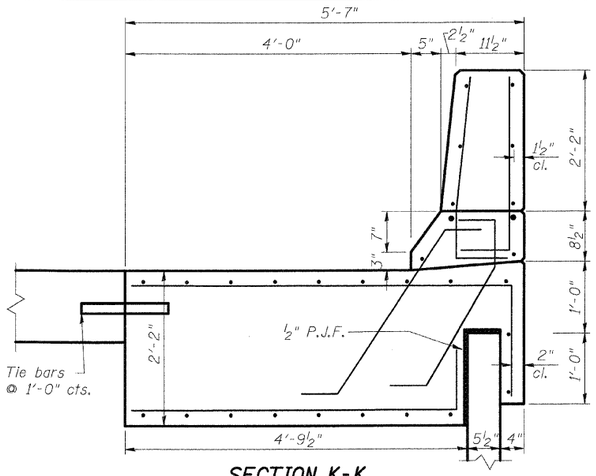
ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STATION 499+48.35
STRUCTURE NO. 060-0338

RAMP C APPROACH SLAB (SPECIAL)

DESIGNED: JAW DRAWN: BTO
DATE: 4/06 CHECKED: BTO CHECKED: JAN

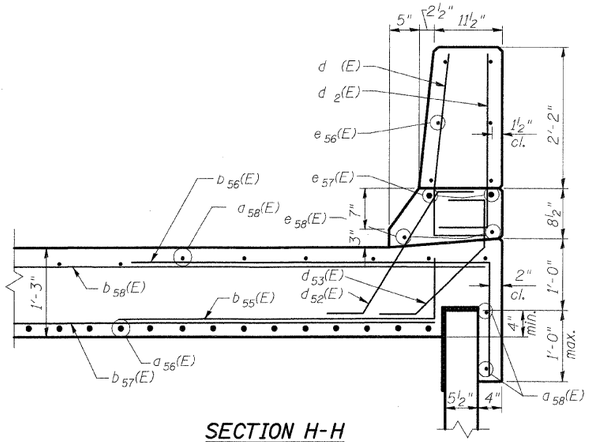
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	•	MADISON	420	216
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

• 60-10K-1, 60-10HB CONTRACT NO. 76709

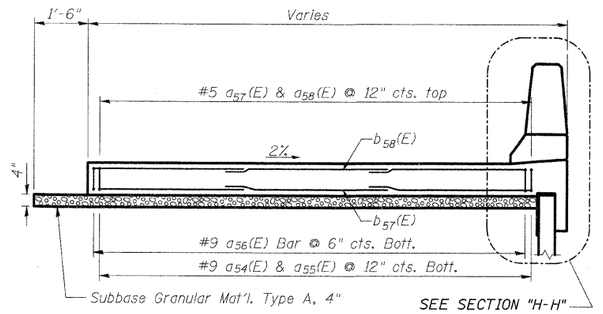


SECTION K-K

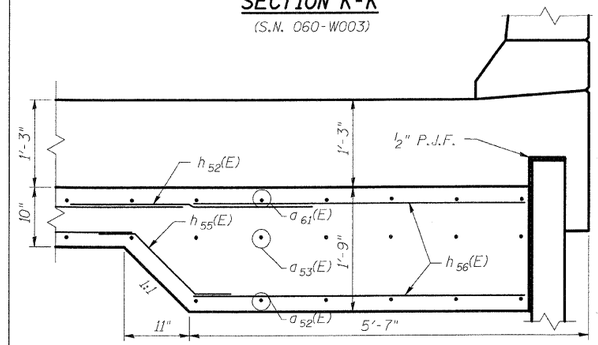
(S.N. 060-W003)



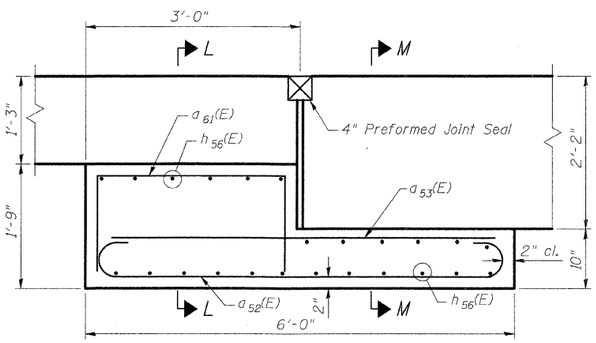
SECTION H-H



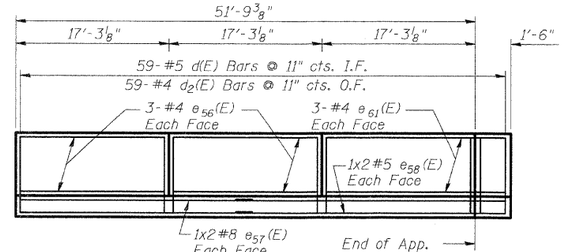
SECTION B-B



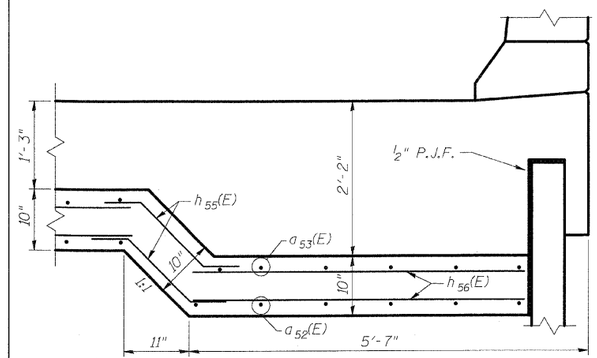
SECTION L-L



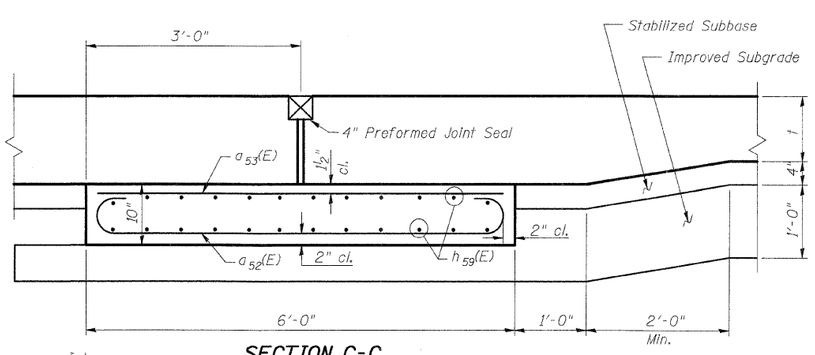
SECTION E-E



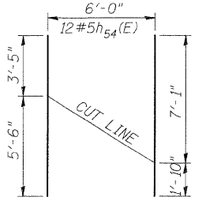
INSIDE PARAPET ELEVATION AT RAMP "C" APPROACH SLAB (SPECIAL)



SECTION M-M



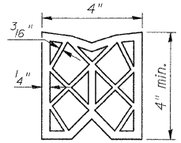
SECTION C-C



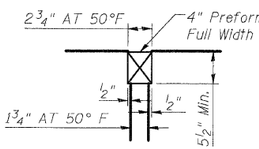
Bar h 54(E) CUTTING DIAGRAM

MINIMUM BAR LAP

#4 bars = 1'-8"
#5 bars = 2'-2"
#9 bars = 5'-9"



PREFORMED JOINT SEAL



DETAIL 1

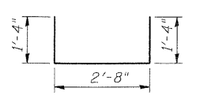
BILL OF MATERIAL RAMP "C"

	Bar	No.	Size	Length	Shape
	a 52(E)	67	#4	6'-8"	
	a 53(E)	67	#4	5'-8"	
	a 54(E)	14	#9	25'-3"	
	a 55(E)	36	#9	16'-3"	
	a 56(E)	88	#9	34'-9"	
	a 57(E)	72	#5	22'-7"	
	a 58(E)	27	#5	27'-0"	
	a 59(E)	14	#4	4'-8"	
	a 60(E)	14	#4	4'-2"	
	a 61(E)	6	#4	5'-4"	
	b 55(E)	52	#5	5'-3"	
	b 56(E)	52	#5	6'-8"	
	b 57(E)	90	#5	27'-11"	
	b 58(E)	24	#4	27'-7"	
	b 59(E)	10	#5	6'-4"	
	b 60(E)	4	#4	5'-10"	
	d(E)	59	#5	3'-2"	
	d 2(E)	59	#4	3'-2"	
	d 52(E)	57	#5	3'-0"	
	d 53(E)	57	#4	3'-0"	
	e 56(E)	12	#4	17'-0"	
	e 57(E)	4	#8	28'-9"	
	e 58(E)	4	#5	27'-7"	
	e 61(E)	6	#4	18'-6"	
	h 52(E)	6	#5	4'-4"	
	h 54(E)	12	#5	8'-11"	
	h 55(E)	18	#5	2'-4"	
	h 56(E)	24	#5	4'-6"	
	h 58(E)	48	#5	4'-4"	
	h 59(E)	72	#5	22'-10"	
*	Reinforcement Bars, Epoxy Coated		Pound	23,950	
*	Concrete		Cu. Yd.	120	
*	Preformed Joint Seal		Foot	74	
*	Concrete Pad		Sq. Yd.	49	
*	Polyethylene Bond Breaker		Sq. Yd.	49	
	Bridge Approach Pavement (Special)		Sq. Yd.	238	

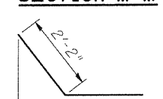
* Items included in the cost for Bridge Approach Pavement, (Special)

NOTES:

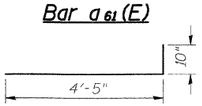
1. Thickness - "t" = thickness of pvmt.



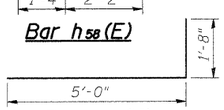
Bar a 61(E)



Bar h 58(E)



Bar b 55(E)



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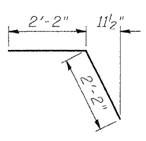
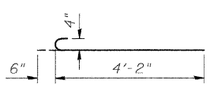
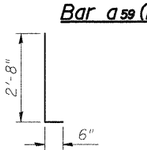


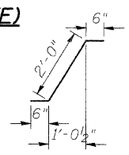
Bar h 52(E)



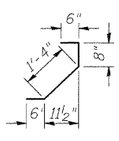
Bar a 59(E)



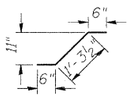
Bar d(E) & d2(E)



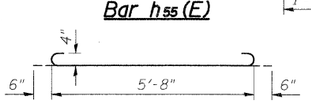
Bar d 52(E)



Bar d 53(E)



Bar h 55(E)



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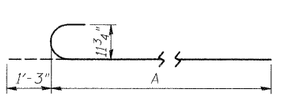


Bar	A
a 54(E)	24'-0"
a 55(E)	15'-0"
a 56(E)	33'-6"

SHT. 2 OF 2

STV Incorporated
Engineers/Architects/Planners/Construction Managers
200 W. Monroe Street, Suite 1650
Chicago, IL. 60606-5015
312/553-0655, FAX 312/553-0661

REVISIONS NAME	DATE

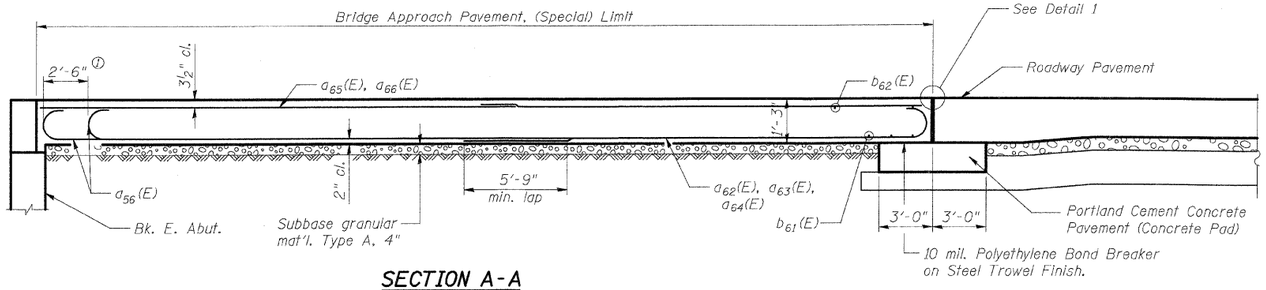
ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STATION 499+48.35
STRUCTURE NO. 060-0338

RAMP C APPROACH SLAB DETAILS (SPECIAL)

DESIGNED: JAW DRAWN: BTO
DATE: 4/06 CHECKED: BTO CHECKED: JAN

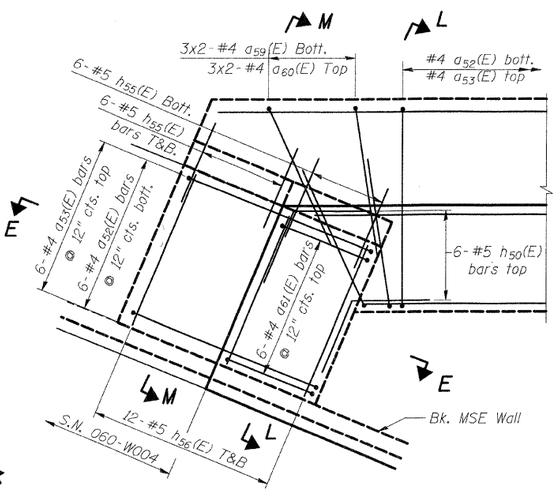
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	•	MADISON	420	217
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

• 60-10K-1, 60-10HB CONTRACT NO. 76709

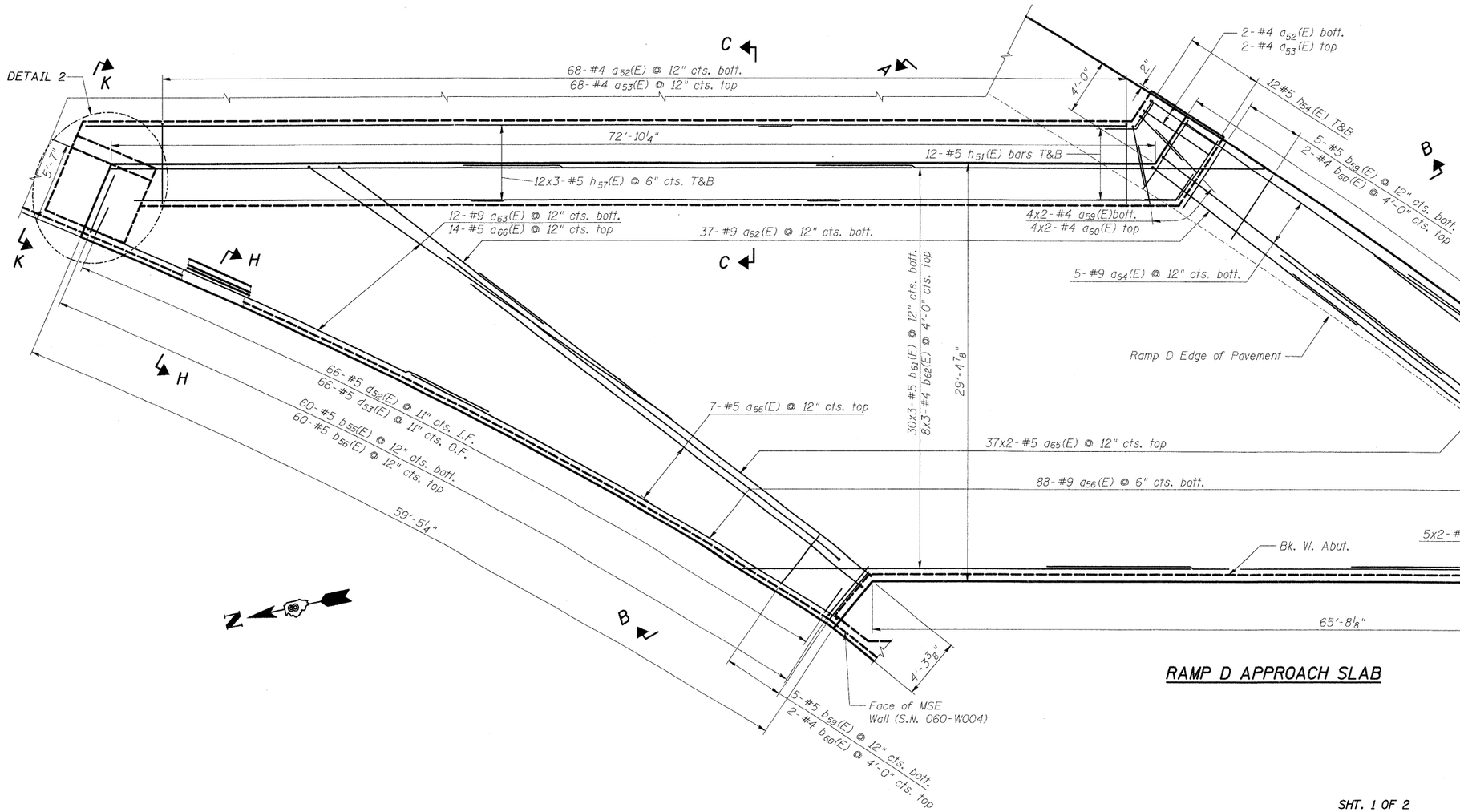


SECTION A-A

① Stagger #9 a_{56}(E) bars as shown on plan - full width



DETAIL 2



RAMP D APPROACH SLAB

NOTES:

For Sections, Parapets and Detail 1, see sht. 2 of 2.

For Elevations see Roadway Plans.

Bk. of W. Abut.
IL 162 Sta. 498+51.81 offset 66.69' Rt.
Ramp D Sta. 10+58.85 offset 122.64' Rt.

SHT. 1 OF 2

STV Incorporated
Engineers/Architects/Planners/Construction Managers
200 W. Monroe Street, Suite 1650
Chicago, IL 60606-5015
312/553-0655, FAX 312/553-0661

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STATION 499+48.35
STRUCTURE NO. 060-0338

RAMP D APPROACH SLAB (SPECIAL)

DESIGNED: JAW DRAWN: BTO
DATE: 4/06 CHECKED: BTO CHECKED: JAN

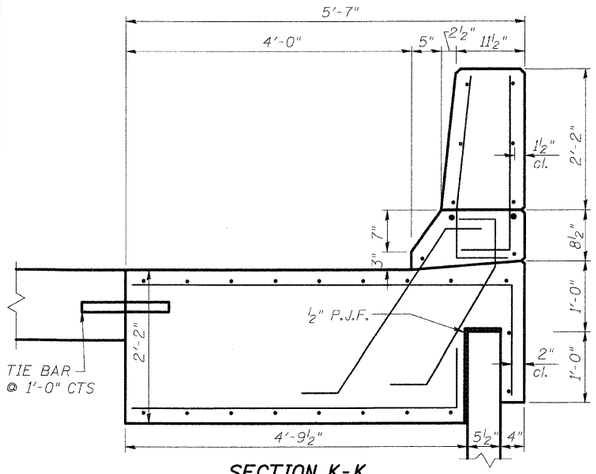
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	•	MADISON	420	218
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

• 60-10K-1, 60-10HB CONTRACT NO. 76709

BILL OF MATERIAL RAMP "D"

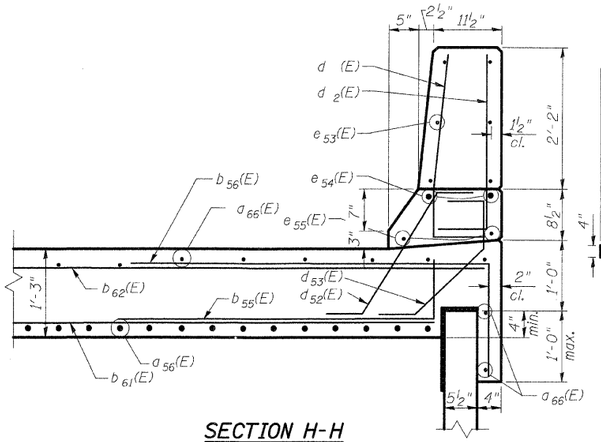
Bar	No.	Size	Length	Shape
$a_{52}(E)$	76	#4	6'-8"	
$a_{53}(E)$	76	#4	5'-8"	
$a_{56}(E)$	88	#9	34'-9"	
$a_{59}(E)$	14	#4	4'-8"	
$a_{60}(E)$	14	#4	4'-2"	
$a_{61}(E)$	6	#4	4'-8"	
$a_{62}(E)$	37	#9	19'-3"	
$a_{63}(E)$	12	#9	32'-3"	
$a_{64}(E)$	5	#9	25'-11"	
$a_{65}(E)$	74	#5	23'-3"	
$a_{66}(E)$	31	#5	31'-3"	
$b_{55}(E)$	60	#5	5'-3"	
$b_{56}(E)$	60	#5	6'-8"	
$b_{59}(E)$	10	#5	6'-4"	
$b_{60}(E)$	4	#4	5'-10"	
$b_{61}(E)$	90	#5	31'-3"	
$b_{62}(E)$	24	#4	31'-0"	
$d(E)$	68	#5	3'-2"	
$d_2(E)$	68	#4	3'-2"	
$d_{52}(E)$	66	#5	3'-0"	
$d_{53}(E)$	66	#4	3'-0"	
$e_{53}(E)$	12	#4	19'-7"	
$e_{54}(E)$	4	#8	32'-8"	
$e_{55}(E)$	4	#5	31'-6"	
$e_{60}(E)$	6	#4	21'-1"	
$h_{50}(E)$	6	#5	4'-4"	
$h_{51}(E)$	24	#5	4'-4"	
$h_{54}(E)$	12	#5	8'-11"	
$h_{55}(E)$	18	#5	2'-1"	
$h_{56}(E)$	24	#5	4'-6"	
$h_{57}(E)$	72	#5	25'-8"	
* Reinforcement Bars, Epoxy Coated		Pound	26,130	
* Concrete		Cu. Yd.	135.4	
* Preformed Joint Seal		Foot	83	
* Concrete Pad		Sq. Yd.	55	
* Polyethylene Bond Breaker		Sq. Yd.	55	
Bridge Approach Pavement (Special)		Sq. Yd.	270	

* Items included in the cost for Bridge Approach Pavement, (Special)

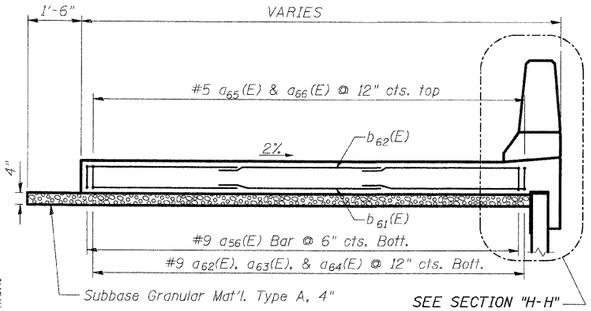


SECTION K-K

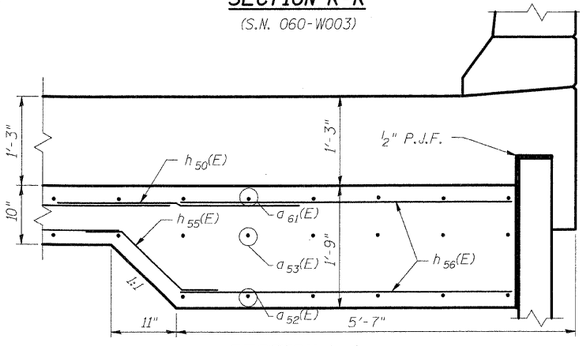
(S.N. 060-W003)



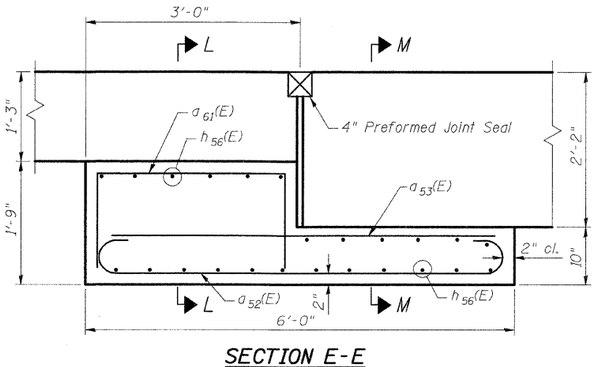
SECTION H-H



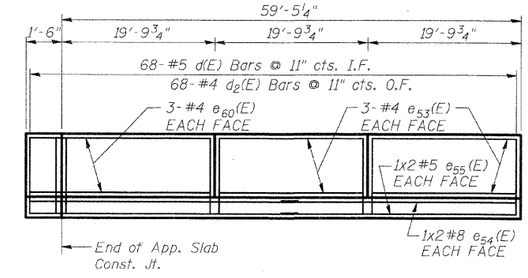
SECTION B-B



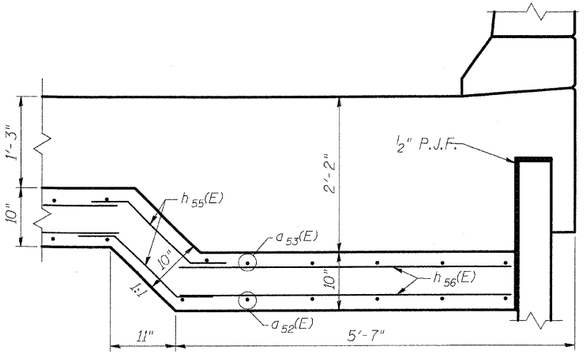
SECTION L-L



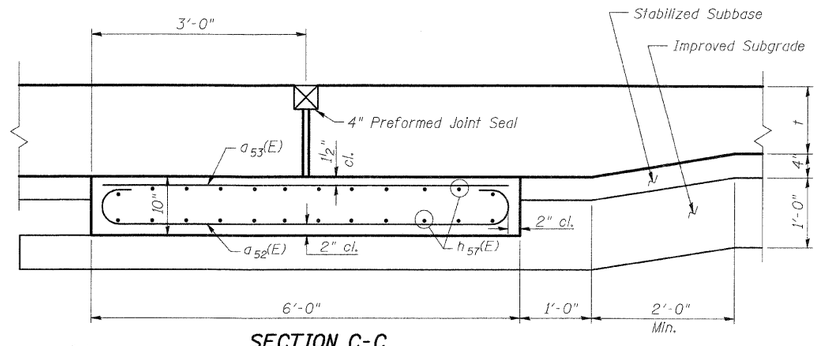
SECTION E-E



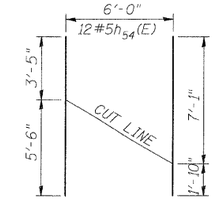
INSIDE PARAPET ELEVATION AT RAMP "B" APPROACH SLAB (SPECIAL)



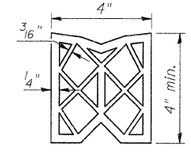
SECTION M-M



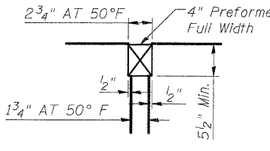
SECTION C-C



Bar $h_{54}(E)$
CUTTING DIAGRAM



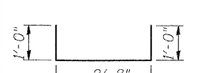
PREFORMED JOINT SEAL



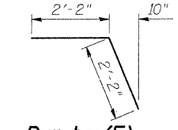
DETAIL 1

MINIMUM BAR LAP

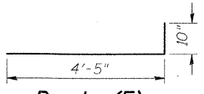
#4 bars = 1'-8"
#5 bars = 2'-2"
#9 bars = 5'-9"



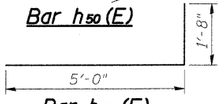
Bar $a_{61}(E)$



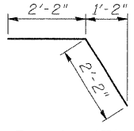
Bar $h_{50}(E)$



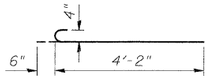
Bar $b_{55}(E)$



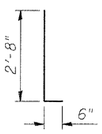
Bar $b_{56}(E)$



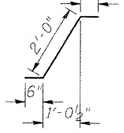
Bar $h_{51}(E)$



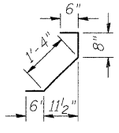
Bar $a_{59}(E)$



Bar $d(E)$ & $d_2(E)$



Bar $d_{52}(E)$



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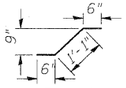
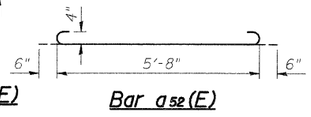
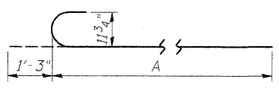


Bar $h_{55}(E)$



Bar $a_{52}(E)$



Bar	A
$a_{56}(E)$	33'-6"
$a_{62}(E)$	18'-0"
$a_{63}(E)$	31'-0"
$a_{64}(E)$	24'-8"

SHT. 2 of 2

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REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STATION 499+48.35
STRUCTURE NO. 060-0338

RAMP D APPROACH SLAB DETAILS (SPECIAL)

DESIGNED: JAW DRAWN: BTO
DATE: 4/06 CHECKED: BTO CHECKED: JAN

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	60-10K-1,60-10HB	MADISON	420	219
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 76709

BENCH MARK

CP#35, Iron Pin w/Cap, Sta. 502+30.81, 37.37' Rt, El. 582.812

EXISTING STRUCTURE

Structure S.N. 060-0139 was built in 1956 as U. S. Route 40 Bypass over F. A. Route 190 (U. S. Route 66). It was widened and the deck reconstructed in 1978. The four span structure was built on concrete piles at the abutments and timber piles at the piers. The composite reinforced concrete deck is supported by continuous steel beams that are 27" deep at the fascia and 30" deep elsewhere. The back to back abutment length is 194'-0" and the deck is 75'-2" out to out.

During construction of the new structure, staged construction will be utilized to maintain one lane of traffic in each direction.

No salvage.

STATION 499+48.35
BUILT 200_ BY
STATE OF ILLINOIS
F.A.I. RT. 70 SEC. 60-10HB
LOADING HS20
STR. NO. 060-0338

NAME PLATE

See Std. 515001

NOTE: For Name Plate location, see sht. S-59.

LOADING HS20

Allow 50 lbs/ft^2 future wearing surface

DESIGN SPECIFICATION

2002 AASHTO Std. Spec, 17th edition

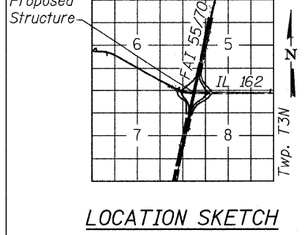
DESIGN STRESSES

NEW CONSTRUCTION

f'c = 3,500 psi (concrete)
fy = 60,000 psi (reinforcement)
fy = 36,000 psi
(AASHTO M-270, Gr.36 struc. steel)
fy = 50,000 psi
(AASHTO M-270, Gr.50 struc. steel)

SEISMIC DATA

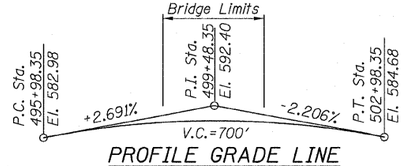
Seismic Performance Category (SPC)= B
Bedrock Acceleration Coefficient (A)= .12
Site Coefficient (S) = 1.5



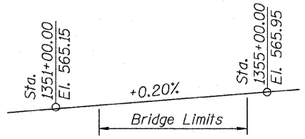
LOCATION SKETCH

NOTES:

1. See General Notes on Sht. S-03.
2. All existing utilities attached to bridge shall be maintained during and after construction.
3. For ramp and abutment walls, see Dwgs. for S.N. 060-W006 (east) and 060-W004 (west).
4. Offsets are measured from ℄ IL Rt. 162 to back of parapet.



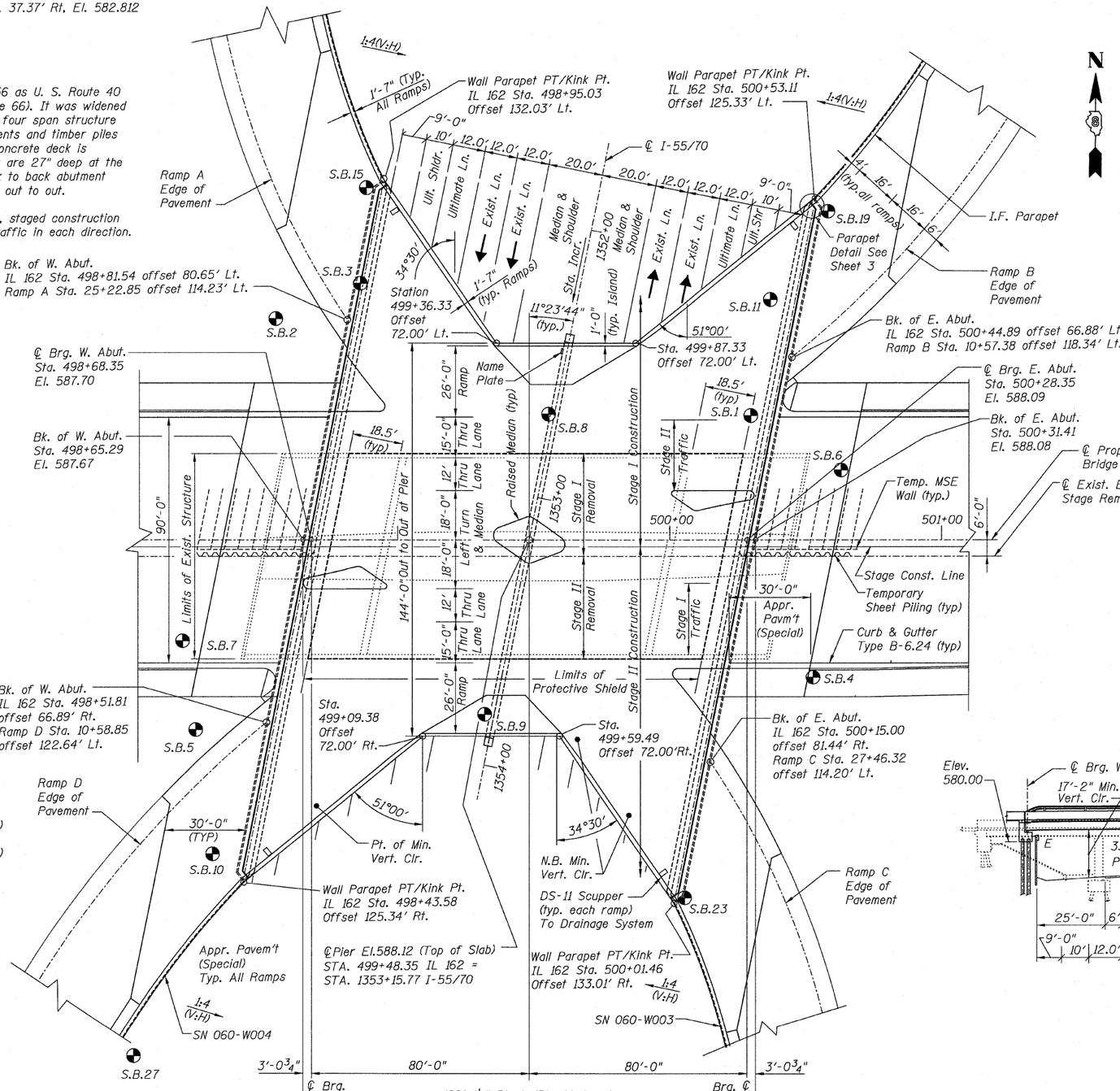
PROFILE GRADE LINE
IL Route 162



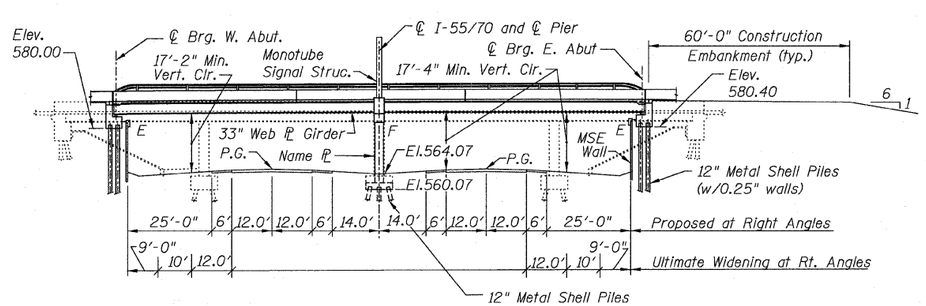
PROFILE GRADE LINE
NB & SB I-55/70

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
Ralph E Anderson
ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS
JOHN A. HEU
81-004960
OAK PARK
REGISTERED STRUCTURAL ENGINEER
LICENSE EXPIRES
11/30/2010



PLAN



ELEVATION

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STATION 499+48.35
STRUCTURE NO. 060-0338

GENERAL PLAN

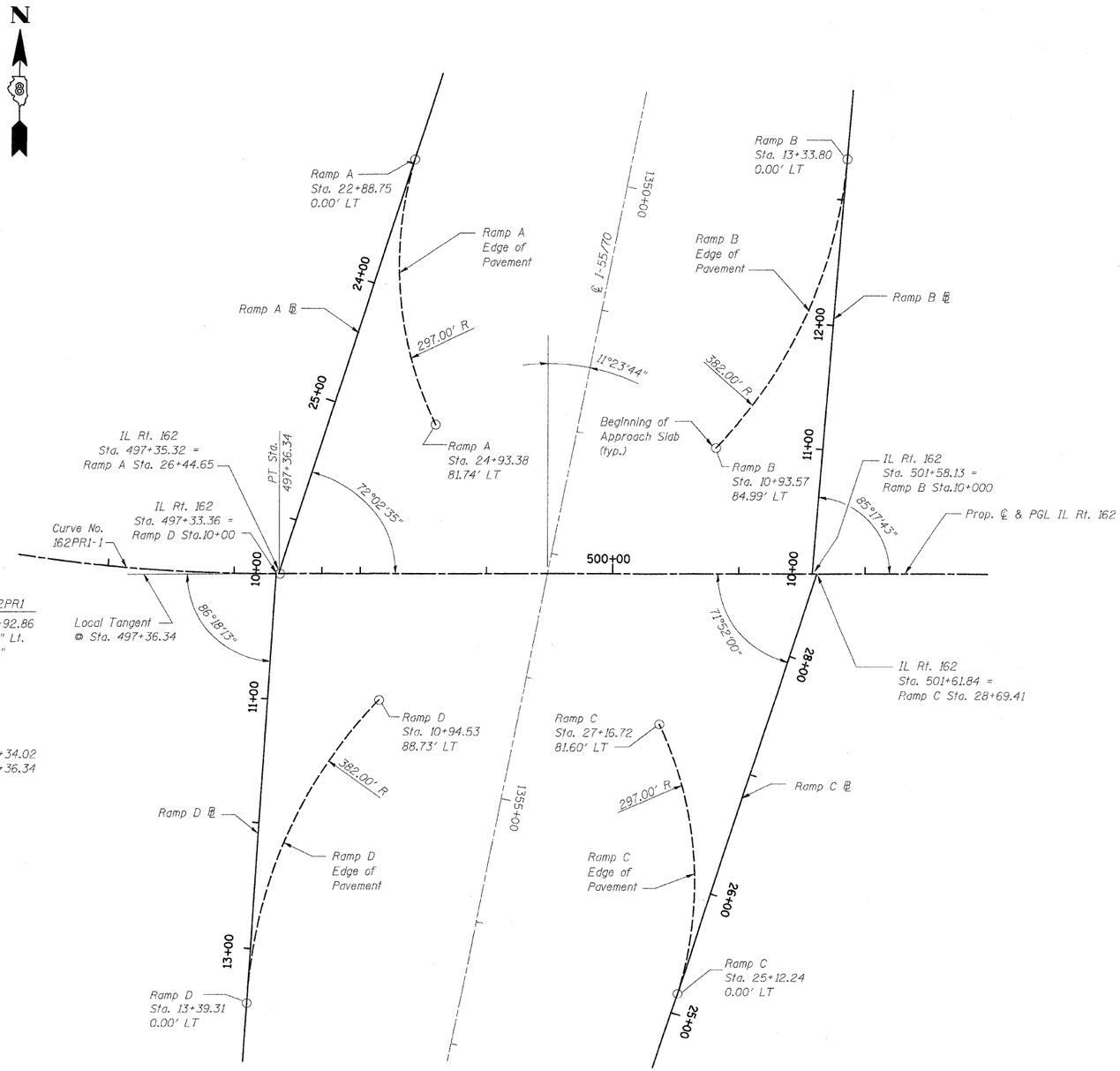
DESIGNED: AWH DRAWN: BTO
DATE: 03/06 CHECKED: JAN CHECKED: AWH

SHT. S-01 OF S-68

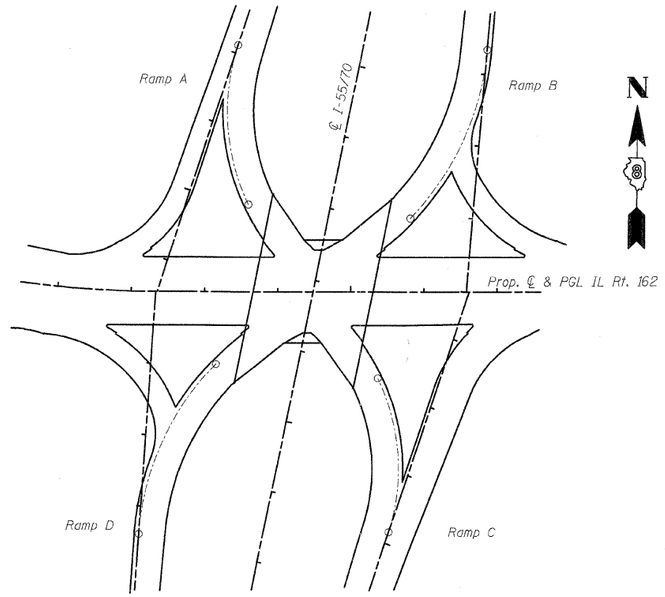
STV Incorporated
Engineers/Architects/Planners/Construction Managers
200 W. Monroe Street, Suite 1650
Chicago, IL 60606-5015
312/553-0655, FAX 312/553-0661

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	60-10K-1,60-10HB	MADISON	420	220
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 76709



PLAN-SURVEY ℄



PLAN-RAMPS & ℄

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STATION 499+48.35
STRUCTURE NO. 060-0338

BRIDGE GEOMETRY

DESIGNED: BTO DRAWN: BTO
DATE: 03/06 CHECKED: AWH CHECKED: AWH

SHT. S-02 OF S-68

STV Incorporated
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	60-10K-1,60-10HB	MADISON	420	221
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 76709

GENERAL NOTES

1. Fasteners shall be AASHTO M164 Type 1, mechanically galvanized bolts. Bolts 7/8" diameter, open holes 15/16" diameter, unless otherwise noted.

2. Calculated weight of Structural Steel:
   AASHTO (M270 GR 50) = 748,170 pounds
   AASHTO (M270 GR 36) = 68,490 pounds

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

4. The main load carrying member components subject to tensile stress shall conform to the Supplemental Requirements for Notch Toughness Zone 2. These components are the wide flange beams, the tension flanges and webs of the plate girders, and all splice plate material except fill plates.

5. Materials, fabrication welding, and non-destructive testing for the members identified as Fracture Critical Member and member components (F.C.M.) in the contract plans shall conform to the requirements of Section 12 of the current ANSI / AASHTO / AWS / D 1.5 Bridge Welding Code.

6. Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60.

7. Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of 1/8". Adjustments shall be made either by grinding the surface or by shimming the bearing. Two 1/8" adjusting shims, of the dimensions of the bottom bearing plate, shall be provided for each bearing in addition to all other plates or shims.

8. The Contractor shall drive test piles to 110% of the nominal required bearing specified in production locations at substructures specified or approved by the Engineer before ordering the remainder of piles.

9. Concrete Sealer shall be applied to the seat area of the East and West Abutments.

10. When the deck pour is stopped for the day at one or more of the Transverse Bonded Construction joints in the deck Pouring Sequence as shown, the next pour shall not be made until both of the following requirements are met:
    1. At least 72 hours shall have elapsed from the end of the previous pour.
    2. The concrete strength shall have attained a minimum flexural strength of 650 psi or a minimum compressive strength of 3500 psi.

11. In addition to all other requirements of section 512 of the Standard Specifications, splices for the 12" metal shell piles shall develop the full capacity of the steel's cross sectional area of the pile for tension, shear and bending forces. One approved method of achieving this requirement is full penetration butt welding of the entire cross section. Other types of splices meeting the full capacity requirement may be allowed subject to the approval of the Engineer. Any proposal by the Contractor to use an alternate splice method must include adequate documentation demonstrating that the full tension, shear and bending capacities will be met. Appropriate welder qualifications will be required for the positions and processes used in splicing all piles. Nondestructive testing of completed welds will be limited to visual inspection.

12. The existing structural steel coating contains lead. The contractor shall take appropriate precautions to deal with the presence of lead on this project.

13. All construction joints shall be bonded.

14. 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 503.06b 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.

15. The organic zinc rich primer/epoxy/urethane paint system shall be used for painting of new structural steel except where otherwise noted. The entire system shall be shop applied, with the exception that masked off connection surfaces, field installed fasteners and damaged areas shall be touched up in the field. The color of the final finish coat for all interior steel surfaces shall be gray, Munsell No. 5B 7/1. The color of the final finish coat for the exterior and bottom flange of the fascia beams shall be gray, Munsell No. 5B 7/1. See Special Provision for "Cleaning and Painting New Metal Structures."

16. Slipforming of the parapets is not allowed.

17. The embankment configuration shown shall be the minimum that must be placed and compacted prior to construction of the abutments.

18. Wherever reference is made to Neoprene Expansion Joint in these plans it shall be interpreted to mean Preformed Joint Strip Seal.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUB-STRUCT.	SUPER-STRUCT.	TOTAL
Removal of Existing Structures	EACH			1
Structure Excavation	CU YD	401		401
Preformed Joint Strip Seal	FOOT		524	524
Concrete Structures	CU YD	770		770
Concrete Superstructure	CU YD		858	858
Bridge Deck Grooving	SQ YD		2935	2935
Protective Coat	SQ YD		3456	3456
Furnishing and Erecting Structural Steel	L.S.		1	1
Stud Shear Connectors	EACH		16981	16981
Reinforcement Bars, Epoxy Coated	POUND	89390	233410	322800
Aluminum Railing, Type L	FOOT		408	408
Furnishing Metal Shell Piles 12" x 0.250"	FOOT	15910		15910
Driving Piles	FOOT	15910		15910
Test Pile Metal Shells	EACH	3		3
Temporary Sheet Piling	SQ FT	3000		3000
Name Plates	EACH	1		1
Concrete Sealer	SQ FT	1415		1415
Temporary Mechanically Stabilized Earth Wall	SQ FT	1600		1600
Drainage Scuppers, DS-11	EACH		4	4
Drainage System	L.S.		1	1
High Load Multi-Rotation Bearings, Fixed-250 K	EACH		13	13
High Load Multi-Rotation Bearings, Guided Expansion, 100 K	EACH		26	26
High Load Multi-Rotation Bearings, Guided Expansion, 350 K	EACH		2	2
High Load Multi-Rotation Bearings, Guided Expansion, 650 K	EACH		2	2
High Load Multi-Rotation Bearings, Non-Guided Expansion, 50 K	EACH		8	8
High Load Multi-Rotation Bearings, Non-Guided Expansion, 75 K	EACH		6	6
High Load Multi-Rotation Bearings, Non-Guided Expansion, 100 K	EACH		6	6
High Load Multi-Rotation Bearings, Non-Guided Expansion, 150 K	EACH		6	6
High Load Multi-Rotation Bearings, Non-Guided Expansion, 200 K	EACH		4	4
Bar Splicers	EACH	567	672	1239
Protective Shield	SQ YD		1146	1146
Anchor Bolts, 1"	EACH	224		224
Anchor Bolts, 1 1/4"	EACH	52		52
Anchor Bolts, 1 1/2"	EACH	20		20

INDEX OF SHEETS

REVISIONS NAME	DATE

STV Incorporated
Engineers/Architects/Planners/Construction Managers
200 W. Monroe Street, Suite 1650
Chicago, IL 60606-5015
312/553-0655, FAX 312/553-0661

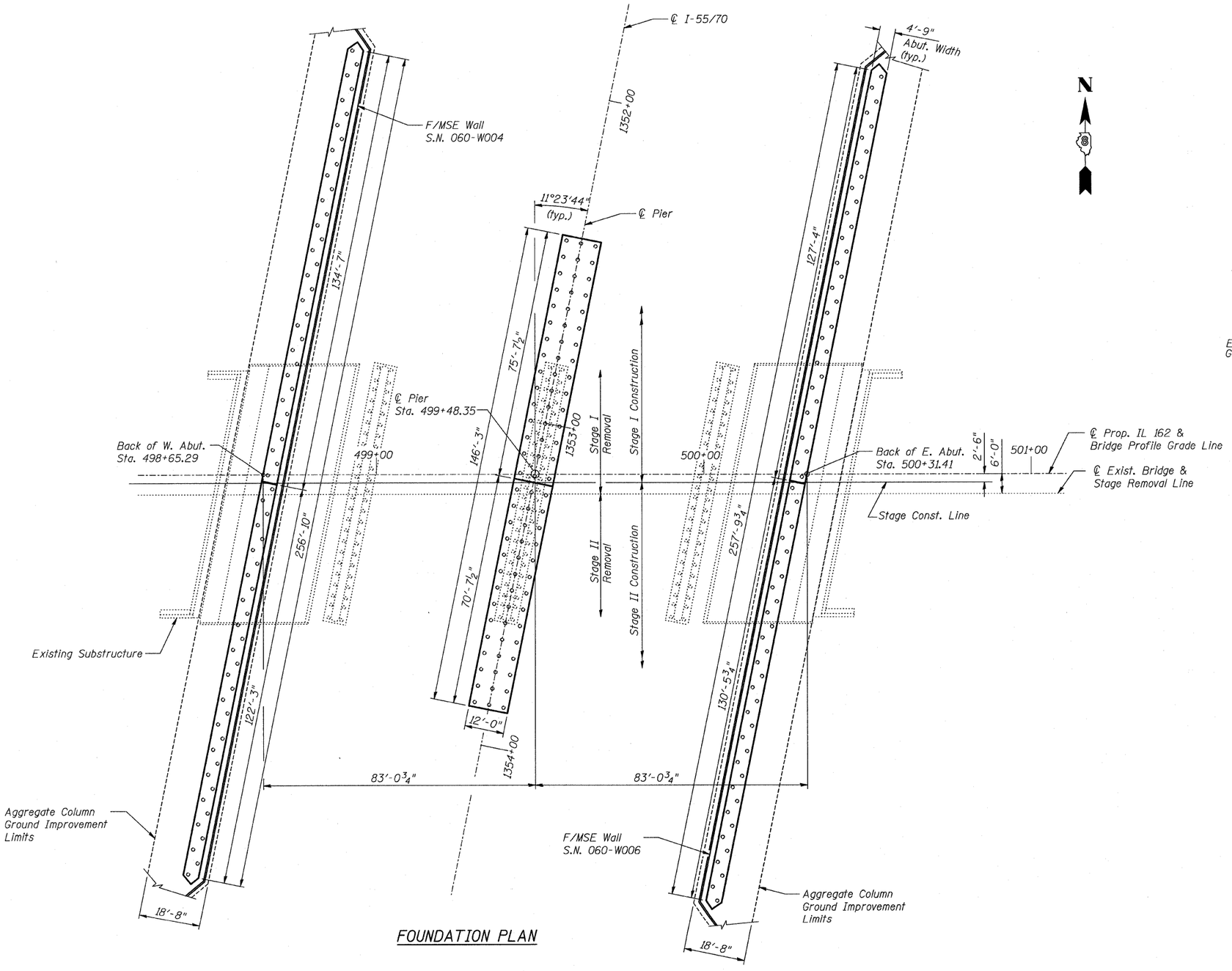
ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STATION 499+48.35
STRUCTURE NO. 060-0338

GENERAL NOTES, B.O.M., & INDEX OF SHEETS

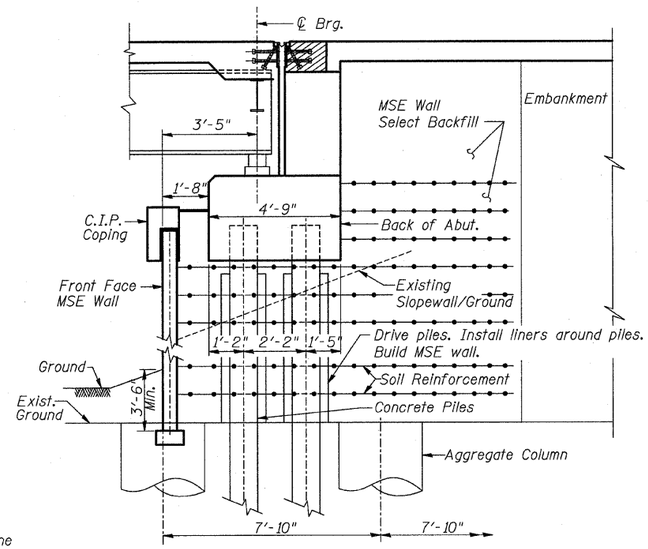
DESIGNED: BTO DRAWN: BTO
DATE: 03/06 CHECKED: AWH CHECKED: AWH

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	60-10K-1,60-10HB	MADISON	420	222
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 76709

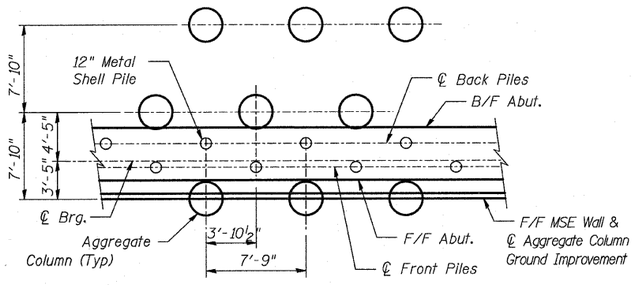


FOUNDATION PLAN



SECTION AT ABUTMENT

(Dimensions @ Rt. L's)



TYPICAL AGGREGATE COLUMN GROUND IMPROVEMENT/PILE LAYOUT

Contractor shall alternate aggregate column and pile spacing as shown.

NOTES:

1. For Abutment pile layout, see Shts. S-53, S-54, S-56, & S-57.
2. For Pier Pile layout, see Shts. S-59 & S-60.
3. Details for Aggregate Column Ground Improvement and Mechanically Stabilized Earth (MSE) walls are shown on drawings for Structure No. 060-W004 and 060-W006.
4. Drill Aggregate Columns before driving piles.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

IL ROUTE 162 OVER I-55/70 IN TROY

F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB

MADISON COUNTY STATION 499+48.35

STRUCTURE NO. 060-0338

FOUNDATION PLAN

DESIGNED: BTO DRAWN: BTO

DATE: 03/06 CHECKED: AWH CHECKED: AWH

SHT. S-04 OF S-68

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Chicago, IL 60606-5015
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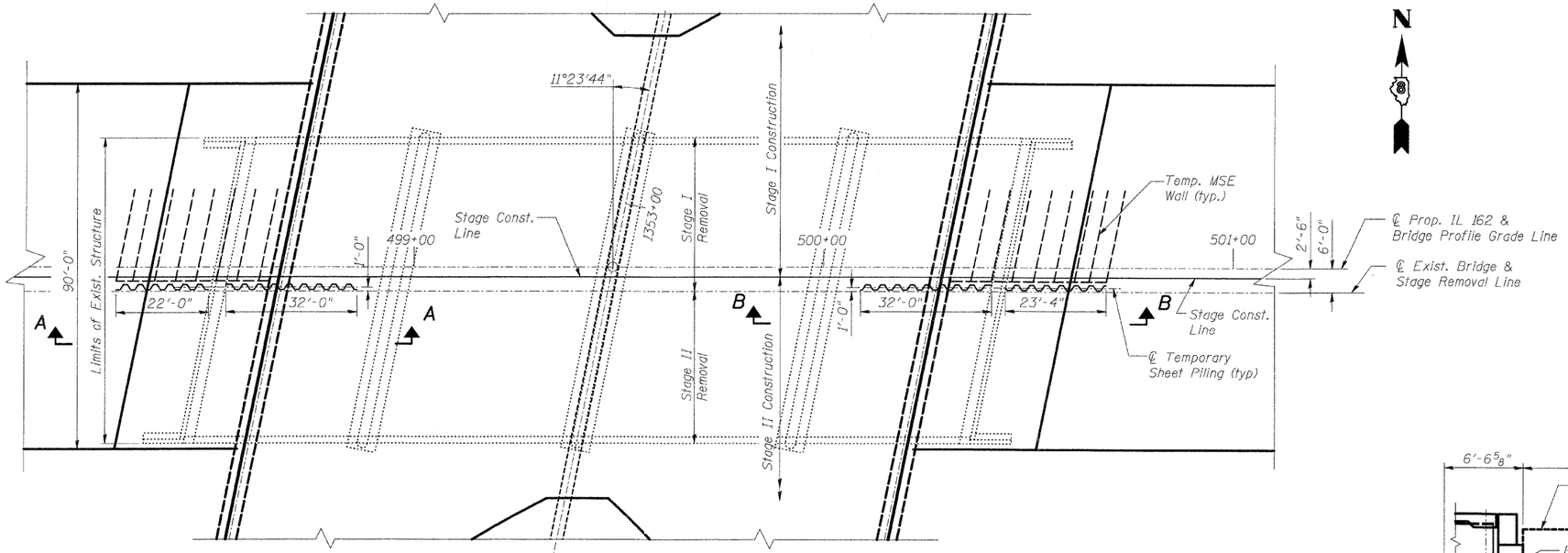
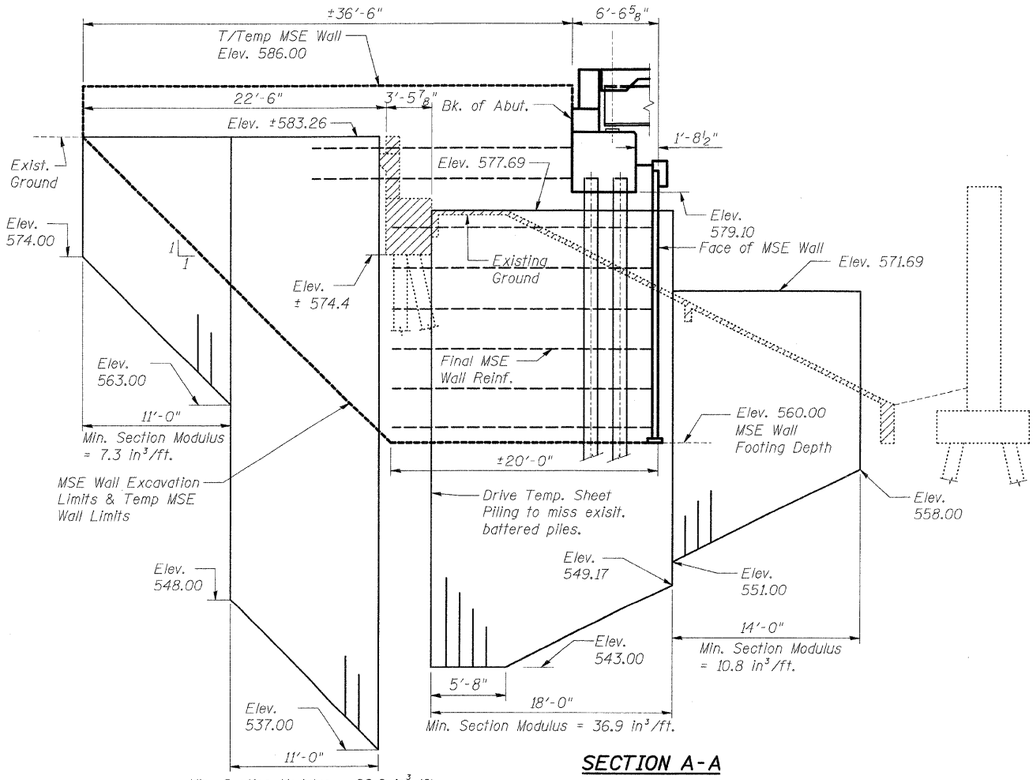
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	60-10K-1,60-10HB	MADISON	420	223
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 76709



PLAN - TEMP. SHEET PILING & TEMP. MSE WALL



SECTION A-A

Distances shown along alignment of sheeting

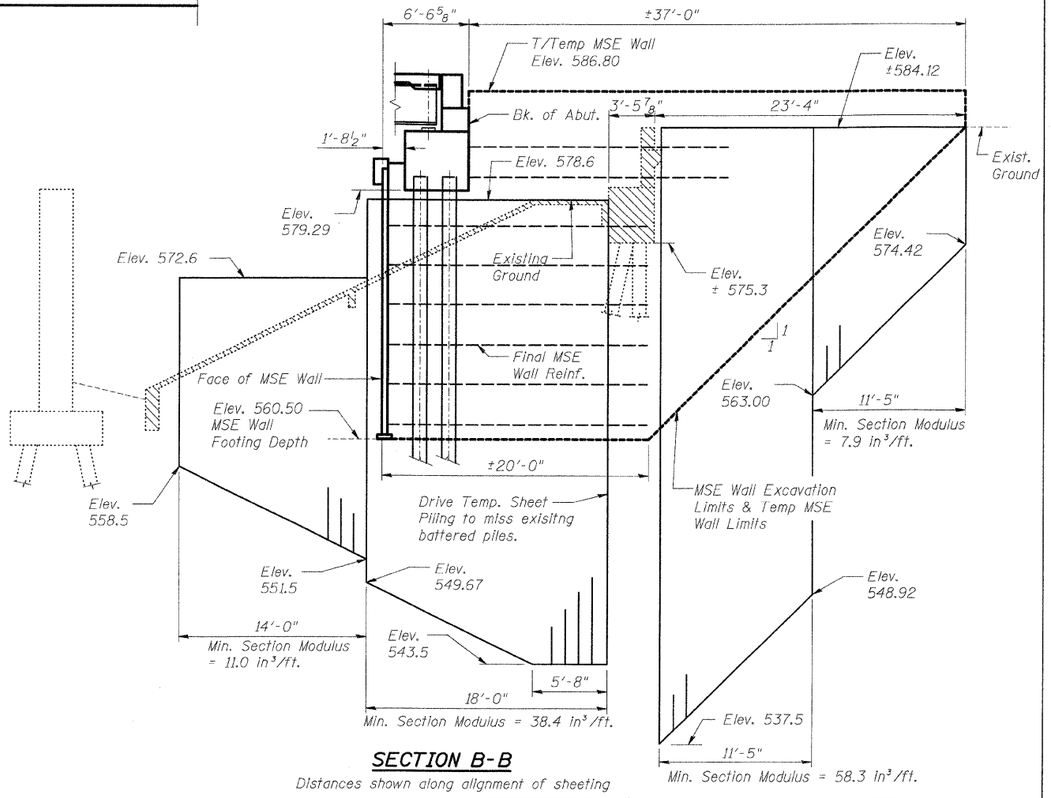
BILL OF MATERIAL

Item	Unit	Total
Temporary Sheet Piling	SQ FT	3000
Temporary Mechanically Stabilized Earth Wall	SQ FT	1600

NOTE:

1. If the Contractor chooses to alter the temporary cantilevered 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.

2. See civil drawings for roadway soil retainage requirements.



SECTION B-B

Distances shown along alignment of sheeting

REVISIONS NAME	DATE

SHT. S-05 OF S-68

STV Incorporated
Engineers/Architects/Planners/Construction Managers
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Chicago, IL. 60606-5015
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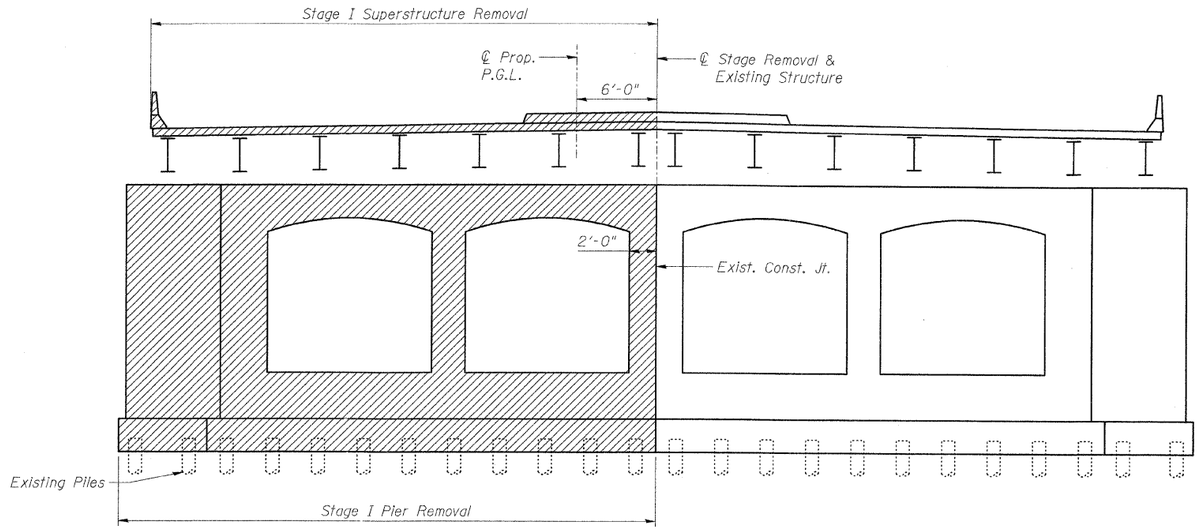
ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STATION 499+48.35
STRUCTURE NO. 060-0338
TEMPORARY SHEET PILING & TEMPORARY MSE WALL

DESIGNED: BTO DRAWN: BTO
DATE: 03/06 CHECKED: AWH CHECKED: AWH

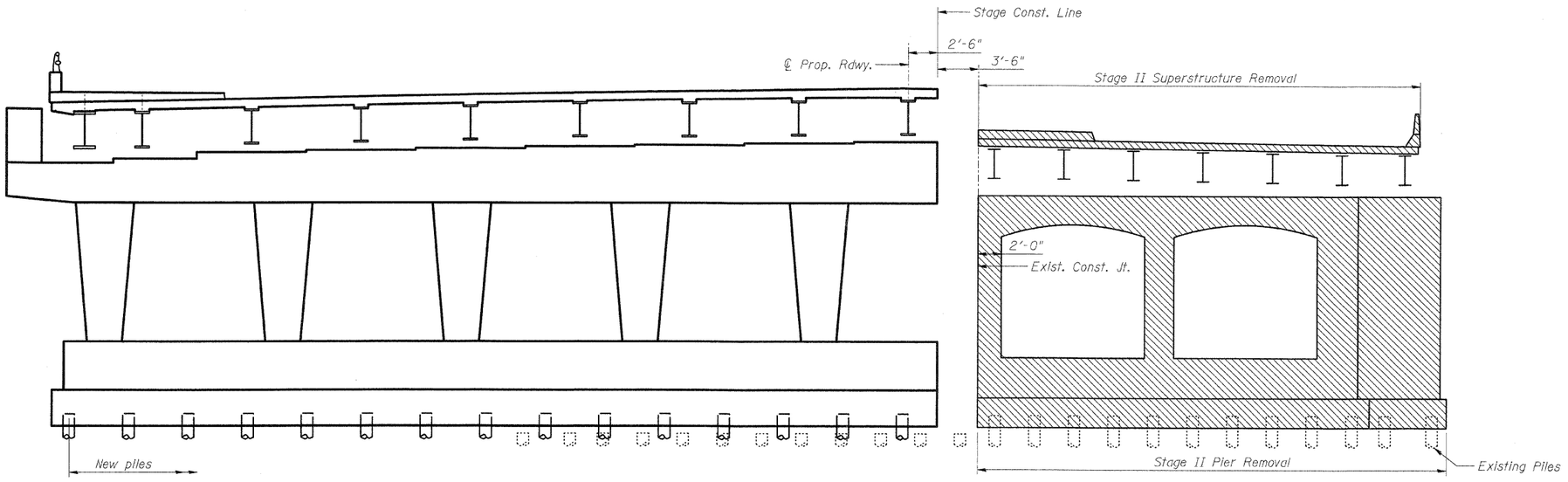
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	60-10K-1,60-10HB	MADISON	420	224
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 76709



EXISTING CENTER PIER REMOVAL-STAGE I

(Looking East)



EXISTING CENTER PIER REMOVAL-STAGE II

(Looking East)

NOTE:

Removal of existing abutments similar. Existing timber piles at pier to be cut below proposed footing. Existing concrete piles at abutments to be removed to top of MSE wall footing.

SHT. S-06 OF S-68

STV Incorporated
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REVISIONS NAME	DATE

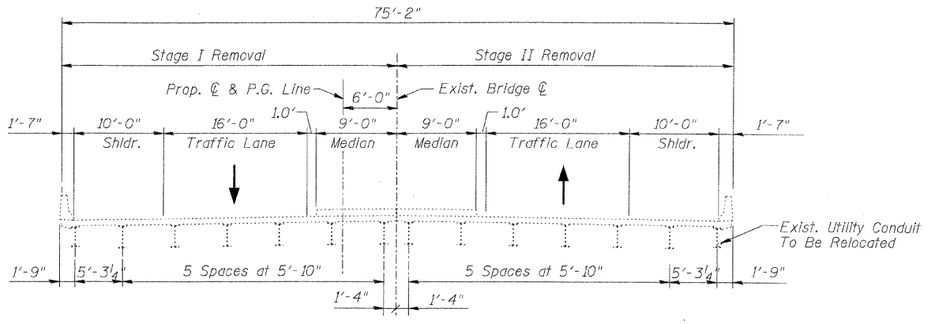
ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STATION 499+48.35
STRUCTURE NO. 060-0338

EXISTING STRUCTURE REMOVAL

DESIGNED: BTO DRAWN: BTO
DATE: 03/06 CHECKED: AWH CHECKED: AWH

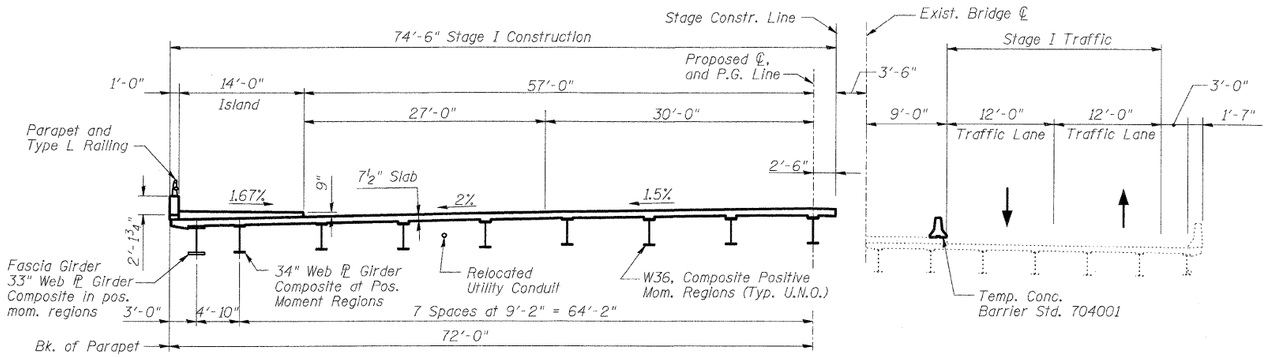
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	60-10K-1,60-10HB	MADISON	420	225
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 76709



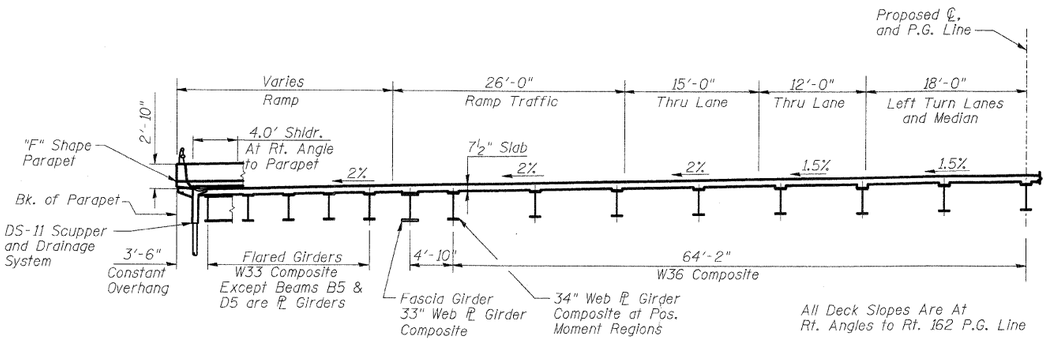
EXISTING BRIDGE

(At Pier-Looking East)



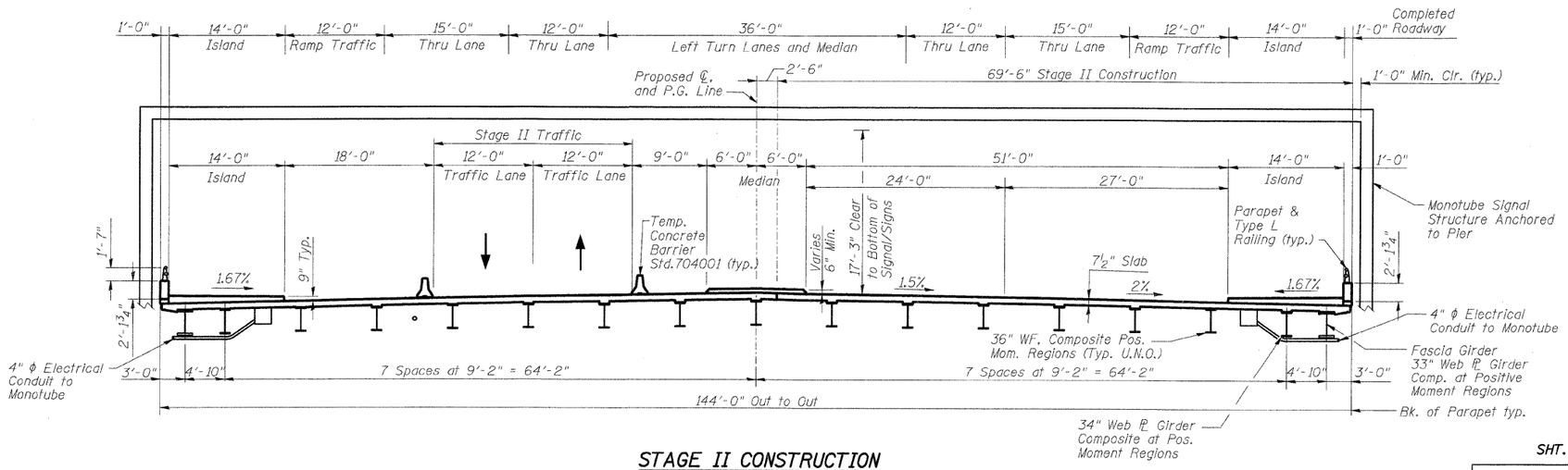
STAGE I CONSTRUCTION

(At Pier-Looking East)



HALF SECTION THRU BRIDGE DECK

(At Ramps Looking East)



STAGE II CONSTRUCTION

(At Pier-Looking East)

NOTES:

1. See Sheet S-08 for Temporary Concrete Barrier.
2. See Roadway Plans for quantity of Temporary Concrete Barrier.

SHT. S-07 OF S-68

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REVISIONS NAME	DATE

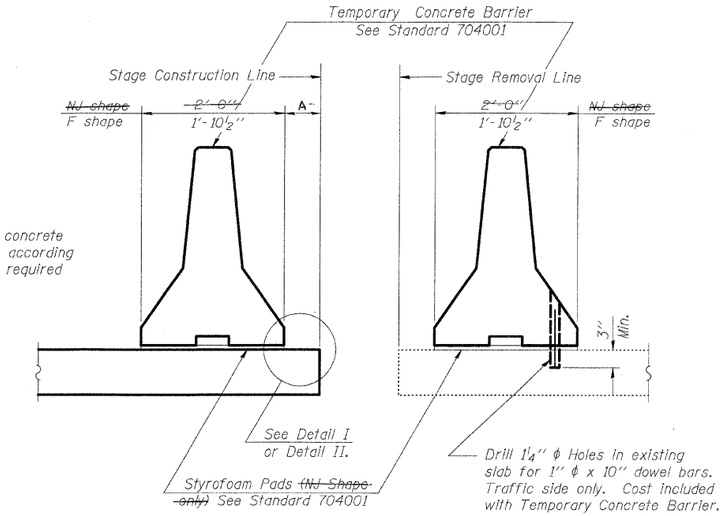
ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STATION 499+48.35
STRUCTURE NO. 060-0338

STAGE CONSTRUCTION DECK SECTIONS

DESIGNED: BTO DRAWN: BTO
DATE: 03/06 CHECKED: AWH CHECKED: AWH

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	60-10K-1,60-10HB	MADISON	420	226
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 76709



NEW SLAB EXISTING SLAB

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".

SECTIONS THRU SLAB

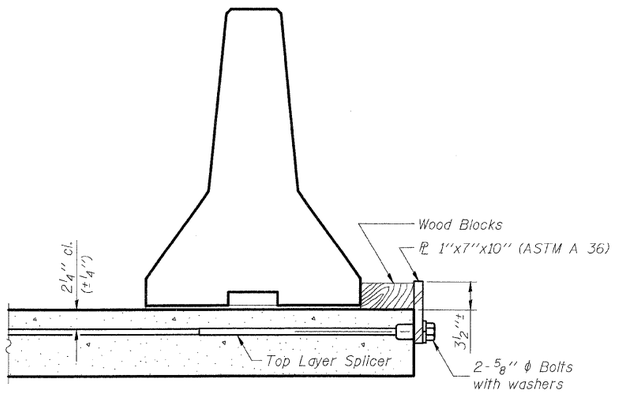
NOTES:

Detail I - With Bar Splicer or Couplers:
Connect one (1) 1"x7"x10" steel ℄ 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"x7"x10" steel ℄ to the concrete slab with 2-⅝" ϕ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate ℄ of each barrier panel.

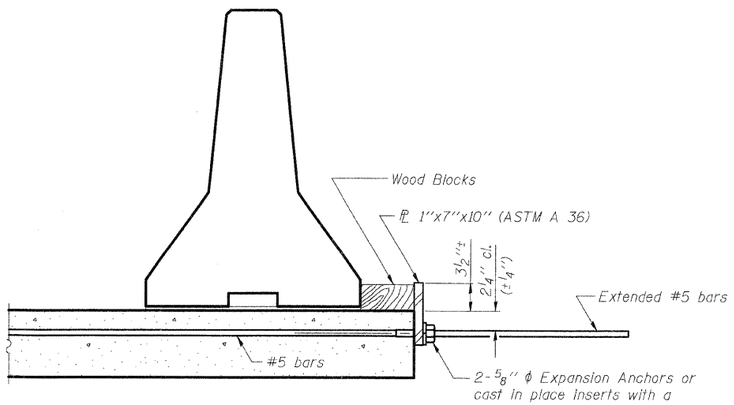
Cost of anchorage is included with Temporary Concrete Barrier.

See civil drawings for Quantity of Temporary Concrete Barrier.



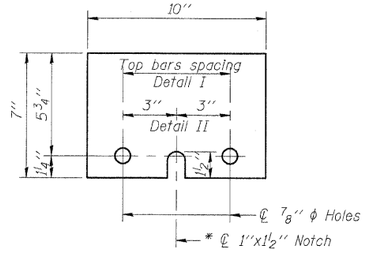
DETAIL I

The 1"x7"x10" Plate shall not be removed until Stage II Construction forms and reinforcement bars are in place.



DETAIL II

The 1"x7"x10" 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.



℄ 1"x7"x10"

* Required only with Detail II

R-27 9-01-03 (Notes Modified)

SHT. S-08 OF S-68

REVISIONS NAME	DATE

STV Incorporated
Engineers/Architects/Planners/Construction Managers
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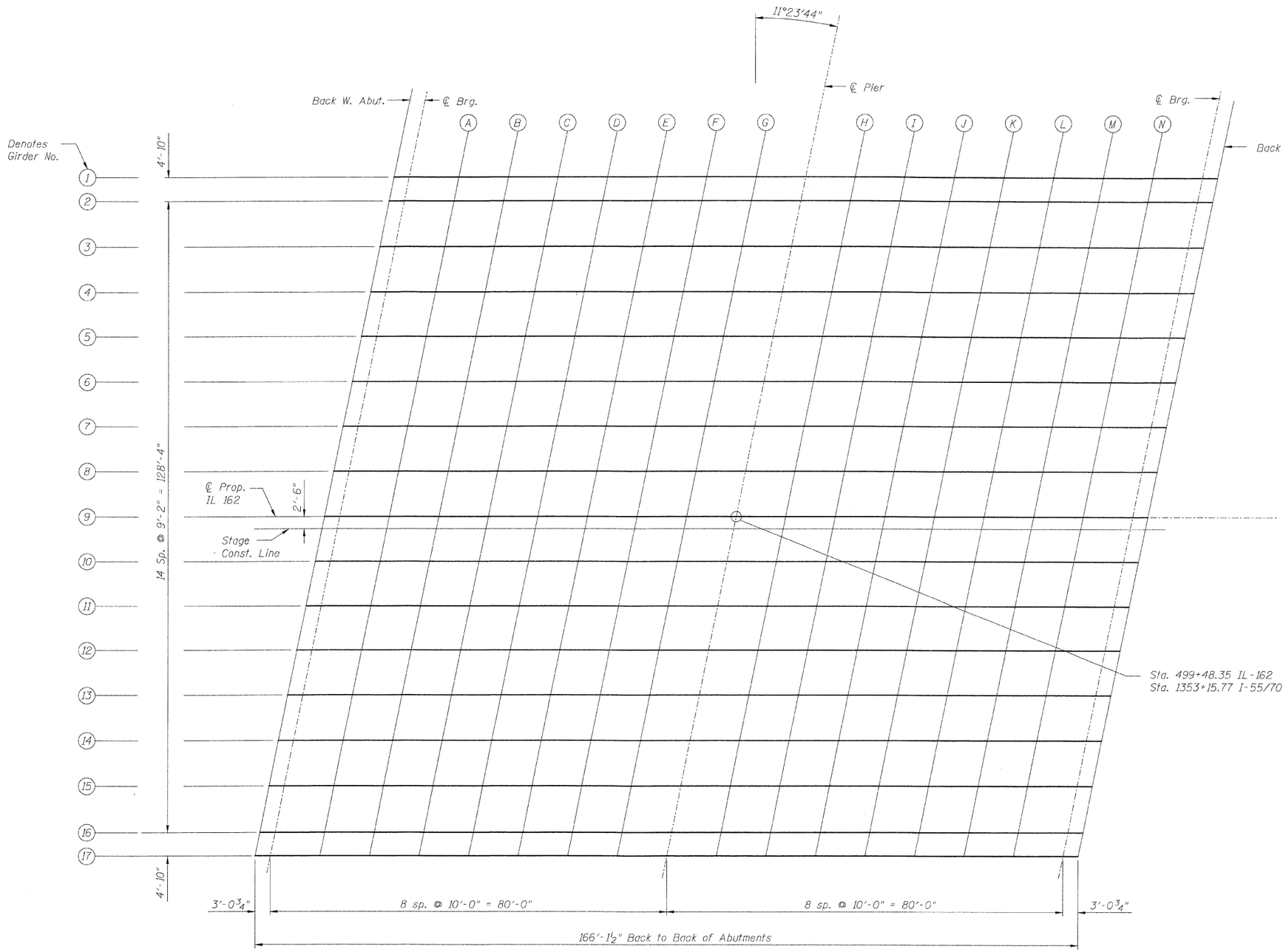
ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STATION 499+48.35
STRUCTURE NO. 060-0338

TEMPORARY CONCRETE BARRIER

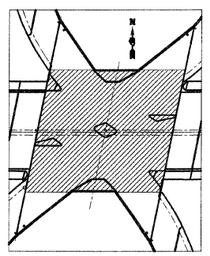
DESIGNED: BTO DRAWN: BTO
DATE: 03/06 CHECKED: JAN CHECKED: JAN

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	60-10K-1,60-10HB	MADISON	420	227
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 76709



SCREED PLAN



KEY PLAN

NOTE:

For additional information on top of deck elevations, see Shts. S-10 & S-11.

SHT. S-09 OF S-68

STV Incorporated
Engineers/Architects/Planners/Construction Managers
200 W. Monroe Street, Suite 1650
Chicago, IL 60606-5015
312/553-0655, FAX 312/553-0661

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STATION 499+48.35
STRUCTURE NO. 060-0338

SCREED PLAN - IL 162

DESIGNED: BTO DRAWN: BTO
DATE: 03/06 CHECKED: JAN CHECKED: JAN

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	60-10K-1,60-10HB	MADISON	420	228
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 76709

Girder 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back W. Abut.	49879.195	-69.000	586.550	586.550
℄ W.Abut.Brg.	49882.257	-69.000	586.572	586.572
A	49892.257	-69.000	586.639	586.661
B	49902.257	-69.000	586.699	586.740
C	49912.257	-69.000	586.752	586.804
D	49922.257	-69.000	586.798	586.850
E	49932.257	-69.000	586.837	586.879
F	49942.257	-69.000	586.869	586.895
G	49952.257	-69.000	586.894	586.903
℄ Pier	49962.257	-69.000	586.912	586.912
H	49972.257	-69.000	586.923	586.932
I	49982.257	-69.000	586.927	586.953
J	49992.257	-69.000	586.924	586.966
K	50002.257	-69.000	586.914	586.966
L	50012.257	-69.000	586.897	586.949
M	50022.257	-69.000	586.873	586.915
N	50032.257	-69.000	586.842	586.865
℄ E.Abut.Brg.	50042.257	-69.000	586.804	586.804
Back E.Abut.	50045.320	-69.000	586.791	586.791

Girder 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back W. Abut.	49878.221	-64.167	586.639	586.639
℄ W.Abut.Brg.	49881.283	-64.167	586.661	586.661
A	49891.283	-64.167	586.729	586.760
B	49901.283	-64.167	586.790	586.842
C	49911.283	-64.167	586.844	586.904
D	49921.283	-64.167	586.890	586.947
E	49931.283	-64.167	586.930	586.974
F	49941.283	-64.167	586.963	586.989
G	49951.283	-64.167	586.988	586.997
℄ Pier	49961.283	-64.167	587.007	587.007
H	49971.283	-64.167	587.019	587.027
I	49981.283	-64.167	587.023	587.049
J	49991.283	-64.167	587.021	587.065
K	50001.283	-64.167	587.012	587.069
L	50011.283	-64.167	586.996	587.056
M	50021.283	-64.167	586.972	587.024
N	50031.283	-64.167	586.942	586.973
℄ E.Abut.Brg.	50041.283	-64.167	586.905	586.905
Back E.Abut.	50044.346	-64.167	586.892	586.892

Girder 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back W. Abut.	49876.374	-55.000	586.809	586.809
℄ W.Abut.Brg.	49879.436	-55.000	586.832	586.832
A	49889.436	-55.000	586.901	586.941
B	49899.436	-55.000	586.963	587.035
C	49909.436	-55.000	587.018	587.108
D	49919.436	-55.000	587.066	587.154
E	49929.436	-55.000	587.107	587.177
F	49939.436	-55.000	587.140	587.182
G	49949.436	-55.000	587.167	587.181
℄ Pier	49959.436	-55.000	587.187	587.187
H	49969.436	-55.000	587.200	587.214
I	49979.436	-55.000	587.206	587.248
J	49989.436	-55.000	587.205	587.276
K	49999.436	-55.000	587.197	587.286
L	50009.436	-55.000	587.182	587.272
M	50019.436	-55.000	587.161	587.233
N	50029.436	-55.000	587.132	587.172
℄ E.Abut.Brg.	50039.436	-55.000	587.096	587.096
Back E.Abut.	50042.499	-55.000	587.083	587.083

Girder 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back W. Abut.	49874.526	-45.833	586.979	586.979
℄ W.Abut.Brg.	49877.588	-45.833	587.002	587.002
A	49887.588	-45.833	587.072	587.112
B	49897.588	-45.833	587.135	587.208
C	49907.588	-45.833	587.191	587.281
D	49917.588	-45.833	587.241	587.329
E	49927.588	-45.833	587.283	587.353
F	49937.588	-45.833	587.318	587.360
G	49947.588	-45.833	587.346	587.360
℄ Pier	49957.588	-45.833	587.368	587.368
H	49967.588	-45.833	587.382	587.395
I	49977.588	-45.833	587.389	587.431
J	49987.588	-45.833	587.390	587.460
K	49997.588	-45.833	587.383	587.471
L	50007.588	-45.833	587.369	587.459
M	50017.588	-45.833	587.349	587.421
N	50027.588	-45.833	587.321	587.361
℄ E.Abut.Brg.	50037.588	-45.833	587.286	587.286
Back E.Abut.	50040.651	-45.833	587.274	587.274

Girder 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back W. Abut.	49872.678	-36.667	587.148	587.148
℄ W.Abut.Brg.	49875.740	-36.667	587.171	587.171
A	49885.740	-36.667	587.243	587.283
B	49895.740	-36.667	587.307	587.380
C	49905.740	-36.667	587.365	587.455
D	49915.740	-36.667	587.415	587.504
E	49925.740	-36.667	587.459	587.529
F	49935.740	-36.667	587.496	587.537
G	49945.740	-36.667	587.525	587.538
℄ Pier	49955.740	-36.667	587.548	587.548
H	49965.740	-36.667	587.563	587.576
I	49975.740	-36.667	587.572	587.614
J	49985.740	-36.667	587.573	587.644
K	49995.740	-36.667	587.568	587.657
L	50005.740	-36.667	587.556	587.646
M	50015.740	-36.667	587.536	587.609
N	50025.740	-36.667	587.510	587.550
℄ E.Abut.Brg.	50035.740	-36.667	587.477	587.477
Back E.Abut.	50038.803	-36.667	587.465	587.465

Girder 6

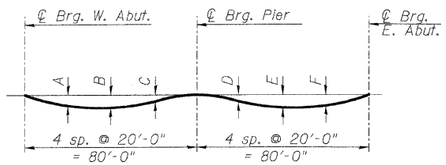
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back W. Abut.	49870.831	-27.500	587.304	587.304
℄ W.Abut.Brg.	49873.893	-27.500	587.328	587.328
A	49883.893	-27.500	587.401	587.441
B	49893.893	-27.500	587.467	587.540
C	49903.893	-27.500	587.526	587.616
D	49913.893	-27.500	587.578	587.666
E	49923.893	-27.500	587.622	587.693
F	49933.893	-27.500	587.660	587.702
G	49943.893	-27.500	587.691	587.704
℄ Pier	49953.893	-27.500	587.715	587.715
H	49963.893	-27.500	587.732	587.745
I	49973.893	-27.500	587.742	587.783
J	49983.893	-27.500	587.745	587.815
K	49993.893	-27.500	587.741	587.829
L	50003.893	-27.500	587.729	587.819
M	50013.893	-27.500	587.711	587.784
N	50023.893	-27.500	587.686	587.727
℄ E.Abut.Brg.	50033.893	-27.500	587.654	587.654
Back E.Abut.	50036.956	-27.500	587.643	587.643

Girder 7

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back W. Abut.	49868.983	-18.333	587.427	587.427
℄ W.Abut.Brg.	49872.045	-18.333	587.451	587.451
A	49882.045	-18.333	587.526	587.566
B	49892.045	-18.333	587.593	587.666
C	49902.045	-18.333	587.653	587.743
D	49912.045	-18.333	587.706	587.795
E	49922.045	-18.333	587.752	587.823
F	49932.045	-18.333	587.791	587.833
G	49942.045	-18.333	587.823	587.837
℄ Pier	49952.045	-18.333	587.849	587.849
H	49962.045	-18.333	587.867	587.880
I	49972.045	-18.333	587.878	587.920
J	49982.045	-18.333	587.882	587.953
K	49992.045	-18.333	587.879	587.968
L	50002.045	-18.333	587.869	587.959
M	50012.045	-18.333	587.853	587.926
N	50022.045	-18.333	587.829	587.869
℄ E.Abut.Brg.	50032.045	-18.333	587.798	587.798
Back E.Abut.	50035.108	-18.333	587.787	587.787

Girder 8

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back W. Abut.	49867.136	-9.167	587.550	587.550
℄ W.Abut.Brg.	49870.198	-9.167	587.574	587.574
A	49880.198	-9.167	587.650	587.690
B	49890.198	-9.167	587.718	587.791
C	49900.198	-9.167	587.780	587.870
D	49910.198	-9.167	587.834	587.923
E	49920.198	-9.167	587.882	587.952
F	49930.198	-9.167	587.922	587.964
G	49940.198	-9.167	587.956	587.969
℄ Pier	49950.198	-9.167	587.982	587.982
H	49960.198	-9.167	588.001	588.015
I	49970.198	-9.167	588.014	588.056
J	49980.198	-9.167	588.019	588.090
K	49990.198	-9.167	588.018	588.106
L	50000.198	-9.167	588.009	588.099
M	50010.198	-9.167	587.994	588.067
N	50020.198	-9.167	587.971	588.012
℄ E.Abut.Brg.	50030.198	-9.167	587.942	587.942
Back E.Abut.	50033.261	-9.167	587.931	587.931

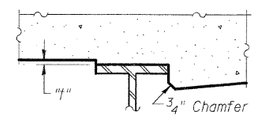


DEAD LOAD DEFLECTION DIAGRAM

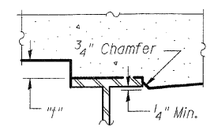
(Includes weight of concrete only)

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 above.

GIRDER	A	B	C	D	E	F
1/17	1/2"	5/8"	5/16"	5/16"	5/8"	1/2"
2/16	5/8"	11/16"	5/16"	5/16"	11/16"	5/8"
3-15	7/8"	1 1/16"	1/2"	1/2"	1 1/16"	7/8"



At Minimum Fillet



At Maximum Fillet

To determine fillet height "f", measure elevations at intervals as shown after all steel has been erected. Add this number to the slab thickness and subtract the sum from the "Theoritical Grade Elev. Adjusted for Dead Load Deflection." This equals the fillet height above the girders.

FILLET HEIGHTS

NOTE:

See Sheet S-09 for Screed Plan.

SHT. S-10 OF S-68

STV Incorporated
Engineers/Architects/Planners/Construction Managers
200 W. Monroe Street, Suite 1650
Chicago, IL 60606-5015
312/553-0655, FAX 312/553-0661

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STATION 499+48.35
STRUCTURE NO. 060-0338

DECK ELEVATIONS - IL 162

DESIGNED: BTO DRAWN: BTO
DATE: 03/06 CHECKED: JAN CHECKED: JAN

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	60-10K-1,60-10HB	MADISON	420	229
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 76709

Girder 9 & ℄ Prop. Rdwy.

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back W. Abut.	49865.288	0.000	587.672	587.672
℄ W.Abut.Brg.	49868.350	0.000	587.697	587.697
A	49878.350	0.000	587.774	587.814
B	49888.350	0.000	587.844	587.917
C	49898.350	0.000	587.906	587.996
D	49908.350	0.000	587.962	588.051
E	49918.350	0.000	588.011	588.081
F	49928.350	0.000	588.053	588.094
G	49938.350	0.000	588.087	588.100
℄ Pier	49948.350	0.000	588.115	588.115
H	49958.350	0.000	588.136	588.149
I	49968.350	0.000	588.150	588.191
J	49978.350	0.000	588.156	588.227
K	49988.350	0.000	588.156	588.245
L	49998.350	0.000	588.149	588.239
M	50008.350	0.000	588.135	588.208
N	50018.350	0.000	588.113	588.154
℄ E.Abut.Brg.	50028.350	0.000	588.085	588.085
Back E.Abut.	50031.413	0.000	588.075	588.075

Stage Const. Line

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back W. Abut.	49864.784	2.500	587.631	587.631
℄ W.Abut.Brg.	49867.846	2.500	587.656	587.656
A	49877.846	2.500	587.733	587.773
B	49887.846	2.500	587.803	587.876
C	49897.846	2.500	587.866	587.956
D	49907.846	2.500	587.922	588.011
E	49917.846	2.500	587.971	588.042
F	49927.846	2.500	588.013	588.055
G	49937.846	2.500	588.048	588.061
℄ Pier	49947.846	2.500	588.076	588.076
H	49957.846	2.500	588.097	588.111
I	49967.846	2.500	588.112	588.153
J	49977.846	2.500	588.119	588.189
K	49987.846	2.500	588.119	588.207
L	49997.846	2.500	588.112	588.202
M	50007.846	2.500	588.098	588.171
N	50017.846	2.500	588.077	588.118
℄ E.Abut.Brg.	50027.846	2.500	588.049	588.049
Back E.Abut.	50030.909	2.500	588.039	588.039

Girder 10

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back W. Abut.	49863.440	9.167	587.520	587.520
℄ W.Abut.Brg.	49866.502	9.167	587.545	587.545
A	49876.502	9.167	587.623	587.663
B	49886.502	9.167	587.694	587.767
C	49896.502	9.167	587.758	587.848
D	49906.502	9.167	587.815	587.903
E	49916.502	9.167	587.865	587.935
F	49926.502	9.167	587.908	587.950
G	49936.502	9.167	587.944	587.957
℄ Pier	49946.502	9.167	587.973	587.973
H	49956.502	9.167	587.995	588.008
I	49966.502	9.167	588.010	588.052
J	49976.502	9.167	588.018	588.089
K	49986.502	9.167	588.019	588.108
L	49996.502	9.167	588.013	588.103
M	50006.502	9.167	588.000	588.073
N	50016.502	9.167	587.980	588.021
℄ E.Abut.Brg.	50026.502	9.167	587.954	587.954
Back E.Abut.	50029.565	9.167	587.944	587.944

Girder 11

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back W. Abut.	49861.593	18.333	587.366	587.366
℄ W.Abut.Brg.	49864.655	18.333	587.392	587.392
A	49874.655	18.333	587.471	587.512
B	49884.655	18.333	587.544	587.617
C	49894.655	18.333	587.609	587.699
D	49904.655	18.333	587.667	587.756
E	49914.655	18.333	587.719	587.789
F	49924.655	18.333	587.763	587.805
G	49934.655	18.333	587.800	587.813
℄ Pier	49944.655	18.333	587.831	587.831
H	49954.655	18.333	587.854	587.867
I	49964.655	18.333	587.870	587.912
J	49974.655	18.333	587.880	587.950
K	49984.655	18.333	587.882	587.971
L	49994.655	18.333	587.877	587.967
M	50004.655	18.333	587.866	587.939
N	50014.655	18.333	587.847	587.888
℄ E.Abut.Brg.	50024.655	18.333	587.822	587.822
Back E.Abut.	50027.718	18.333	587.812	587.812

Girder 12

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back W. Abut.	49859.745	27.500	587.213	587.213
℄ W.Abut.Brg.	49862.807	27.500	587.239	587.239
A	49872.807	27.500	587.320	587.360
B	49882.807	27.500	587.393	587.466
C	49892.807	27.500	587.460	587.550
D	49902.807	27.500	587.520	587.608
E	49912.807	27.500	587.572	587.643
F	49922.807	27.500	587.618	587.660
G	49932.807	27.500	587.656	587.670
℄ Pier	49942.807	27.500	587.688	587.688
H	49952.807	27.500	587.713	587.726
I	49962.807	27.500	587.730	587.772
J	49972.807	27.500	587.741	587.811
K	49982.807	27.500	587.745	587.833
L	49992.807	27.500	587.741	587.831
M	50002.807	27.500	587.731	587.804
N	50012.807	27.500	587.714	587.754
℄ E.Abut.Brg.	50022.807	27.500	587.689	587.689
Back E.Abut.	50025.870	27.500	587.680	587.680

Girder 13

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back W. Abut.	49857.898	36.667	587.026	587.026
℄ W.Abut.Brg.	49860.960	36.667	587.053	587.053
A	49870.960	36.667	587.135	587.175
B	49880.960	36.667	587.209	587.282
C	49890.960	36.667	587.277	587.367
D	49900.960	36.667	587.338	587.427
E	49910.960	36.667	587.392	587.463
F	49920.960	36.667	587.439	587.481
G	49930.960	36.667	587.479	587.492
℄ Pier	49940.960	36.667	587.512	587.512
H	49950.960	36.667	587.538	587.551
I	49960.960	36.667	587.557	587.598
J	49970.960	36.667	587.569	587.639
K	49980.960	36.667	587.574	587.662
L	49990.960	36.667	587.572	587.662
M	50000.960	36.667	587.562	587.635
N	50010.960	36.667	587.546	587.587
℄ E.Abut.Brg.	50020.960	36.667	587.523	587.523
Back E.Abut.	50024.023	36.667	587.515	587.515

Girder 14

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back W. Abut.	49856.050	45.833	586.826	586.826
℄ W.Abut.Brg.	49859.112	45.833	586.853	586.853
A	49869.112	45.833	586.937	586.977
B	49879.112	45.833	587.013	587.086
C	49889.112	45.833	587.082	587.172
D	49899.112	45.833	587.144	587.233
E	49909.112	45.833	587.199	587.270
F	49919.112	45.833	587.248	587.289
G	49929.112	45.833	587.289	587.302
℄ Pier	49939.112	45.833	587.323	587.323
H	49949.112	45.833	587.350	587.363
I	49959.112	45.833	587.370	587.412
J	49969.112	45.833	587.384	587.454
K	49979.112	45.833	587.390	587.478
L	49989.112	45.833	587.389	587.479
M	49999.112	45.833	587.381	587.454
N	50009.112	45.833	587.367	587.407
℄ E.Abut.Brg.	50019.112	45.833	587.345	587.345
Back E.Abut.	50022.175	45.833	587.337	587.337

Girder 15

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back W. Abut.	49854.202	55.000	586.627	586.627
℄ W.Abut.Brg.	49857.264	55.000	586.654	586.654
A	49867.264	55.000	586.738	586.779
B	49877.264	55.000	586.816	586.889
C	49887.264	55.000	586.886	586.976
D	49897.264	55.000	586.950	587.038
E	49907.264	55.000	587.006	587.077
F	49917.264	55.000	587.056	587.097
G	49927.264	55.000	587.098	587.111
℄ Pier	49937.264	55.000	587.134	587.134
H	49947.264	55.000	587.162	587.175
I	49957.264	55.000	587.184	587.225
J	49967.264	55.000	587.198	587.269
K	49977.264	55.000	587.206	587.294
L	49987.264	55.000	587.206	587.296
M	49997.264	55.000	587.200	587.273
N	50007.264	55.000	587.186	587.227
℄ E.Abut.Brg.	50017.264	55.000	587.166	587.166
Back E.Abut.	50020.327	55.000	587.158	587.158

Girder 16

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back W. Abut.	49852.355	64.167	586.426	586.426
℄ W.Abut.Brg.	49855.417	64.167	586.454	586.454
A	49865.417	64.167	586.540	586.571
B	49875.417	64.167	586.619	586.671
C	49885.417	64.167	586.690	586.751
D	49895.417	64.167	586.755	586.812
E	49905.417	64.167	586.813	586.857
F	49915.417	64.167	586.864	586.890
G	49925.417	64.167	586.907	586.916
℄ Pier	49935.417	64.167	586.944	586.944
H	49945.417	64.167	586.974	586.983
I	49955.417	64.167	586.997	587.023
J	49965.417	64.167	587.013	587.057
K	49975.417	64.167	587.021	587.079
L	49985.417	64.167	587.023	587.084
M	49995.417	64.167	587.018	587.070
N	50005.417	64.167	587.006	587.037
℄ E.Abut.Brg.	50015.417	64.167	586.987	586.987
Back E.Abut.	50018.480	64.167	586.979	586.979

Girder 17

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back W. Abut.	49851.381	69.000	586.321	586.321
℄ W.Abut.Brg.	49854.443	69.000	586.349	586.349
A	49864.443	69.000	586.435	586.458
B	49874.443	69.000	586.514	586.556
C	49884.443	69.000	586.587	586.639
D	49894.443	69.000	586.652	586.704
E	49904.443	69.000	586.711	586.753
F	49914.443	69.000	586.762	586.788
G	49924.443	69.000	586.807	586.816
℄ Pier	49934.443	69.000	586.844	586.844
H	49944.443	69.000	586.875	586.884
I	49954.443	69.000	586.898	586.924
J	49964.443	69.000	586.915	586.957
K	49974.443	69.000	586.924	586.976
L	49984.443	69.000	586.927	586.979
M	49994.443	69.000	586.922	586.964
N	50004.443	69.000	586.911	586.934
℄ E.Abut.Brg.	50014.443	69.000	586.892	586.892
Back E.Abut.	50017.506	69.000	586.885	586.885

NOTE:
See Sheet S-09 for Screed Plan.

SHT. S-11 OF S-68

STV Incorporated
Engineers/Architects/Planners/Construction Managers
200 W. Monroe Street, Suite 1650
Chicago, IL 60606-5015
312/553-0655, FAX 312/553-0661

REVISIONS	
NAME	DATE

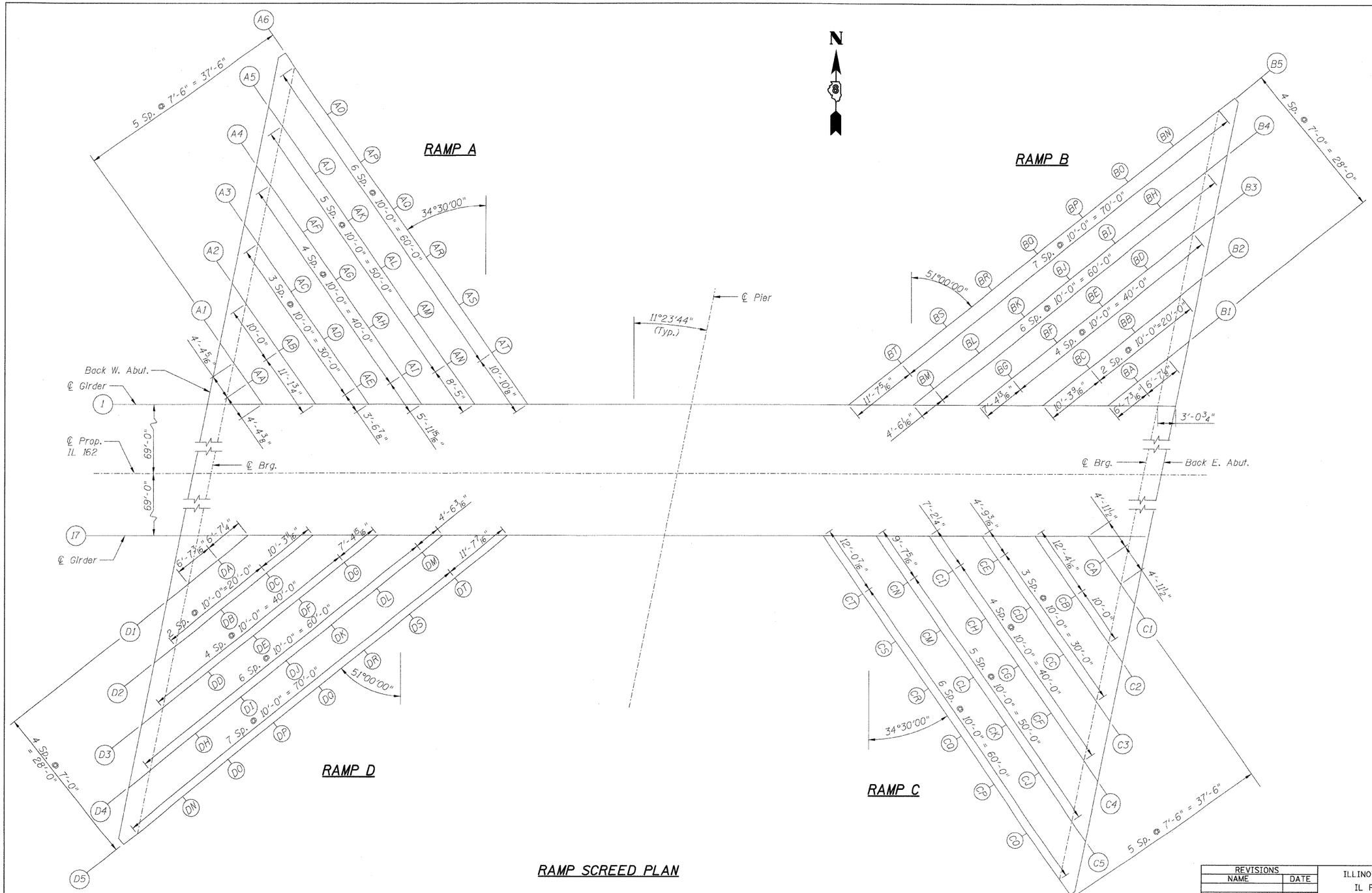
ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STATION 499+48.35
STRUCTURE NO. 060-0338

DECK ELEVATIONS - IL 162

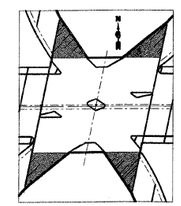
DESIGNED: BTO DRAWN: BTO
DATE: 03/06 CHECKED: JAN CHECKED: JAN

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	60-10K-1,60-10HB	MADISON	420	230
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 76709



RAMP SCREED PLAN



KEY PLAN

SHT. S-12 OF S-68

REVISIONS	
NAME	DATE

STV Incorporated
Engineers/Architects/Planners/Construction Managers
200 W. Monroe Street, Suite 1650
Chicago, IL 60606-5015
312/553-0655, FAX 312/553-0661

ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STATION 499+48.35
STRUCTURE NO. 060-0338

SCREED PLAN-RAMPS A THRU D

DESIGNED: BTO DRAWN: BTO
DATE: 03/06 CHECKED: JAN CHECKED: JAN

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	60-10K-1,60-10HB	MADISON	420	231
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 76709

GIRDER A6

LOCATION	STA.	OFFSET	THEORETICAL GRADE ELEVATION	THEOR. GRADE ELEV. ADJ. FOR DEAD LOAD DEFL.
Back W. Abut.	49892.18	0	585.417	585.417
℄ W. Brg.	49894.02	0	585.482	585.482
AO	49899.69	0	585.681	586.412
AP	49905.35	0	585.878	587.240
AQ	49911.02	0	586.072	587.729
AR	49916.68	0	586.265	587.946
AS	49922.34	0	586.455	587.841
AT	49928.01	0	586.642	587.435
℄ Girder 1	49934.15	0	586.843	586.843

GIRDER A5

LOCATION	STA.	OFFSET	THEORETICAL GRADE ELEVATION	THEOR. GRADE ELEV. ADJ. FOR DEAD LOAD DEFL.
Back W. Abut.	49887.63	0	585.577	585.577
℄ W. Brg.	49891.96	0	585.674	585.674
AJ	49897.62	0	585.874	586.448
AK	49903.29	0	586.071	587.036
AL	49908.95	0	586.267	587.426
AM	49914.62	0	586.460	587.387
AN	49920.28	0	586.651	587.134
℄ Girder 1	49925.05	0	586.809	586.809

GIRDER A4

LOCATION	STA.	OFFSET	THEORETICAL GRADE ELEVATION	THEOR. GRADE ELEV. ADJ. FOR DEAD LOAD DEFL.
Back W. Abut.	49885.57	0	585.768	585.768
℄ W. Brg.	49889.90	0	585.865	585.865
AF	49895.56	0	586.066	586.353
AG	49901.23	0	586.264	586.693
AH	49906.89	0	586.461	586.843
AI	49912.55	0	586.654	586.826
℄ Girder 1	49915.95	0	586.770	586.770

GIRDER A3

LOCATION	STA.	OFFSET	THEORETICAL GRADE ELEVATION	THEOR. GRADE ELEV. ADJ. FOR DEAD LOAD DEFL.
Back W. Abut.	49883.50	0	585.958	585.958
℄ W. Brg.	49887.83	0	586.057	586.057
AC	49893.50	0	586.258	586.363
AD	49899.16	0	586.457	586.578
AE	49904.83	0	586.654	586.695
℄ Girder 1	49906.85	0	586.724	586.724

GIRDER A2

LOCATION	STA.	OFFSET	THEORETICAL GRADE ELEVATION	THEOR. GRADE ELEV. ADJ. FOR DEAD LOAD DEFL.
Back W. Abut.	49881.44	0	586.148	586.148
℄ W. Brg.	49885.77	0	586.247	586.247
AB	49891.43	0	586.450	586.472
℄ Girder 1	49897.75	0	586.673	586.673

GIRDER A1

LOCATION	STA.	OFFSET	THEORETICAL GRADE ELEVATION	THEOR. GRADE ELEV. ADJ. FOR DEAD LOAD DEFL.
Back W. Abut.	49879.38	0	586.338	586.338
℄ W. Brg.	49883.71	0	586.438	586.438
AA	49886.18	0	586.527	586.528
℄ Girder 1	49888.65	0	586.615	586.615

GIRDER B5

LOCATION	STA.	OFFSET	THEORETICAL GRADE ELEVATION	THEOR. GRADE ELEV. ADJ. FOR DEAD LOAD DEFL.
Back E. Abut.	50055.34	0	585.673	585.673
℄ E. Brg.	50052.61	0	585.731	585.731
BN	50044.84	0	585.892	586.497
BO	50037.07	0	586.050	587.258
BP	50029.29	0	586.203	587.670
BQ	50021.52	0	586.352	588.062
BR	50013.75	0	586.496	588.002
BS	50005.98	0	586.637	587.899
BT	49998.21	0	586.773	587.475
℄ Girder 1	49989.19	0	586.926	586.926

GIRDER B4

LOCATION	STA.	OFFSET	THEORETICAL GRADE ELEVATION	THEOR. GRADE ELEV. ADJ. FOR DEAD LOAD DEFL.
Back E. Abut.	50054.10	0	585.880	585.880
℄ E. Brg.	50050.44	0	585.956	585.956
BH	50042.67	0	586.117	586.599
BI	50034.90	0	586.273	587.125
BJ	50027.12	0	586.425	587.472
BK	50019.35	0	586.573	587.513
BL	50011.58	0	586.716	587.415
BM	50003.81	0	586.855	587.072
℄ Girder 1	50000.31	0	586.917	586.917

GIRDER B3

LOCATION	STA.	OFFSET	THEORETICAL GRADE ELEVATION	THEOR. GRADE ELEV. ADJ. FOR DEAD LOAD DEFL.
Back E. Abut.	50051.93	0	586.105	586.105
℄ E. Brg.	50048.27	0	586.182	586.182
BD	50040.50	0	586.341	586.606
BE	50032.73	0	586.496	586.897
BF	50024.96	0	586.647	587.020
BG	50017.18	0	586.793	586.989
℄ Girder 1	50011.43	0	586.899	586.899

GIRDER B2

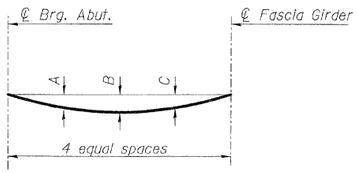
LOCATION	STA.	OFFSET	THEORETICAL GRADE ELEVATION	THEOR. GRADE ELEV. ADJ. FOR DEAD LOAD DEFL.
Back E. Abut.	50049.76	0	586.331	586.331
℄ E. Brg.	50046.10	0	586.407	586.407
BB	50038.33	0	586.565	586.624
BC	50030.56	0	586.719	586.778
℄ Girder 1	50022.56	0	586.873	586.873

GIRDER B1

LOCATION	STA.	OFFSET	THEORETICAL GRADE ELEVATION	THEOR. GRADE ELEV. ADJ. FOR DEAD LOAD DEFL.
Back E. Abut.	50047.59	0	586.556	586.556
℄ E. Brg.	50043.93	0	586.632	586.632
BA	50038.80	0	586.735	586.738
℄ Girder 1	50033.68	0	586.838	586.838

GIRDER	LOCATION		
	A	B	C
A1	0.001	0.001	0.001
A2	0.017	0.023	0.017
A3	0.097	0.136	0.097
A4	0.330	0.463	0.330
A5	0.839	1.178	0.839
A6	1.294	1.817	1.294
B1	0.002	0.003	0.002
B2	0.052	0.073	0.052
B3	0.314	0.440	0.314
B4	0.777	1.091	0.777
B5	1.233	1.73	1.233

(Deflections are in inches)



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 above.

NOTE:

See Sht. S-12 for ramp screed plan.

For ramp beams, screed points are not offset, but are along beam ℄.

SHT. S-13 OF S-68

STV Incorporated
Engineers/Architects/Planners/Construction Managers
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Chicago, IL 60606-5015
312/553-0655, FAX 312/553-0661

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STATION 499+48.35
STRUCTURE NO. 060-0338

RAMPS A&B DECK ELEVATIONS

DESIGNED: BTO DRAWN: BTO
DATE: 03/06 CHECKED: JAN CHECKED: JAN

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	60-10K-1,60-10HB	MADISON	420	232
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 76709

GIRDER C6

LOCATION	STA.	OFFSET	THEORETICAL GRADE ELEVATION	THEOR. GRADE ELEV. ADJ. FOR DEAD LOAD DEFL.
Back E. Abut.	50004.31	0	585.670	585.670
℄ E. Brg.	50002.48	0	585.727	585.727
CO	49996.81	0	585.898	586.617
CP	49991.15	0	586.067	587.419
CQ	49985.48	0	586.234	587.876
CR	49979.82	0	586.399	588.100
CS	49974.16	0	586.561	587.972
CT	49968.49	0	586.721	587.586
℄ Girder 17	49961.68	0	586.911	586.911

GIRDER C5

LOCATION	STA.	OFFSET	THEORETICAL GRADE ELEVATION	THEOR. GRADE ELEV. ADJ. FOR DEAD LOAD DEFL.
Back E. Abut.	50006.91	0	585.856	585.856
℄ E. Brg.	50004.54	0	585.928	585.928
CJ	49998.88	0	586.101	586.664
CK	49993.21	0	586.271	587.226
CL	49987.55	0	586.438	587.612
CM	49981.88	0	586.604	587.550
CN	49976.22	0	586.767	587.308
℄ Girder 17	49970.78	0	586.922	586.922

GIRDER C4

LOCATION	STA.	OFFSET	THEORETICAL GRADE ELEVATION	THEOR. GRADE ELEV. ADJ. FOR DEAD LOAD DEFL.
Back E. Abut.	50008.97	0	586.057	586.057
℄ E. Brg.	50006.60	0	586.130	586.130
CF	50000.94	0	586.303	586.583
CG	49995.28	0	586.474	586.896
CH	49989.61	0	586.642	587.033
CI	49983.95	0	586.809	587.010
℄ Girder 17	49979.88	0	586.927	586.927

GIRDER C3

LOCATION	STA.	OFFSET	THEORETICAL GRADE ELEVATION	THEOR. GRADE ELEV. ADJ. FOR DEAD LOAD DEFL.
Back E. Abut.	50011.03	0	586.258	586.258
℄ E. Brg.	50008.67	0	586.331	586.331
CC	50003.00	0	586.505	586.608
CD	49997.34	0	586.677	586.801
CE	49991.68	0	586.846	586.899
℄ Girder 17	49988.98	0	586.926	586.926

GIRDER C2

LOCATION	STA.	OFFSET	THEORETICAL GRADE ELEVATION	THEOR. GRADE ELEV. ADJ. FOR DEAD LOAD DEFL.
Back E. Abut.	50013.10	0	586.459	586.459
℄ E. Brg.	50010.73	0	586.532	586.532
CB	50005.07	0	586.707	586.729
℄ Girder 17	49998.08	0	586.919	586.919

GIRDER C1

LOCATION	STA.	OFFSET	THEORETICAL GRADE ELEVATION	THEOR. GRADE ELEV. ADJ. FOR DEAD LOAD DEFL.
Back E. Abut.	50015.16	0	586.659	586.659
℄ E. Brg.	50012.80	0	586.733	586.733
CA	50009.99	0	586.820	586.821
℄ Girder 17	50007.18	0	586.907	586.907

GIRDER D5

LOCATION	STA.	OFFSET	THEORETICAL GRADE ELEVATION	THEOR. GRADE ELEV. ADJ. FOR DEAD LOAD DEFL.
Back W. Abut.	49841.35	0	585.153	585.153
℄ W. Brg.	49844.09	0	585.224	585.224
DN	49851.86	0	585.424	586.028
DO	49859.63	0	585.619	586.827
DP	49867.40	0	585.810	587.276
DQ	49875.18	0	585.996	587.706
DR	49882.95	0	586.179	587.685
DS	49890.72	0	586.357	587.619
DT	49898.49	0	586.531	587.233
℄ Girder 17	49907.52	0	586.728	586.728

GIRDER D4

LOCATION	STA.	OFFSET	THEORETICAL GRADE ELEVATION	THEOR. GRADE ELEV. ADJ. FOR DEAD LOAD DEFL.
Back W. Abut.	49842.60	0	585.366	585.366
℄ W. Brg.	49846.26	0	585.461	585.461
DH	49854.03	0	585.659	586.140
DI	49861.80	0	585.853	586.705
DJ	49869.57	0	586.042	587.089
DK	49877.35	0	586.228	587.168
DL	49885.12	0	586.409	587.108
DM	49892.89	0	586.586	586.803
℄ Girder 17	49896.40	0	586.664	586.664

GIRDER D3

LOCATION	STA.	OFFSET	THEORETICAL GRADE ELEVATION	THEOR. GRADE ELEV. ADJ. FOR DEAD LOAD DEFL.
Back W. Abut.	49844.77	0	585.602	585.602
℄ W. Brg.	49848.43	0	585.696	585.696
DD	49856.20	0	585.893	586.158
DE	49863.97	0	586.086	586.487
DF	49871.74	0	586.275	586.648
DG	49879.52	0	586.459	586.655
℄ Girder 17	49885.27	0	586.593	586.593

GIRDER D2

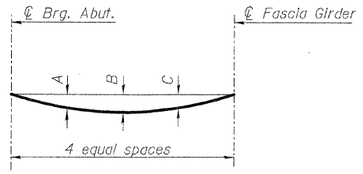
LOCATION	STA.	OFFSET	THEORETICAL GRADE ELEVATION	THEOR. GRADE ELEV. ADJ. FOR DEAD LOAD DEFL.
Back W. Abut.	49854.26	0	585.906	585.906
℄ W. Brg.	49850.60	0	585.932	585.932
DB	49858.37	0	586.128	586.186
DC	49866.14	0	586.319	586.379
℄ Girder 17	49874.15	0	586.512	586.512

GIRDER D1

LOCATION	STA.	OFFSET	THEORETICAL GRADE ELEVATION	THEOR. GRADE ELEV. ADJ. FOR DEAD LOAD DEFL.
Back W. Abut.	49856.43	0	586.141	586.141
℄ W. Brg.	49852.77	0	586.167	586.167
DA	49857.90	0	586.296	586.299
℄ Girder 17	49863.03	0	586.423	586.423

GIRDER	LOCATION		
	A	B	C
C1	0.001	0.001	0.001
C2	0.017	0.023	0.017
C3	0.097	0.136	0.097
C4	0.330	0.463	0.330
C5	0.839	1.178	0.839
C6	1.294	1.817	1.294
D1	0.002	0.003	0.002
D2	0.052	0.073	0.052
D3	0.314	0.440	0.314
D4	0.777	1.091	0.777
D5	1.233	1.73	1.233

(Deflections are in inches)



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 above.

NOTE:

See Sht. S-12 for ramp screed plan.

For ramp beams screed points are not offset, but are along beam ℄.

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STATION 499+48.35
STRUCTURE NO. 060-0338

RAMPS C&D DECK ELEVATIONS

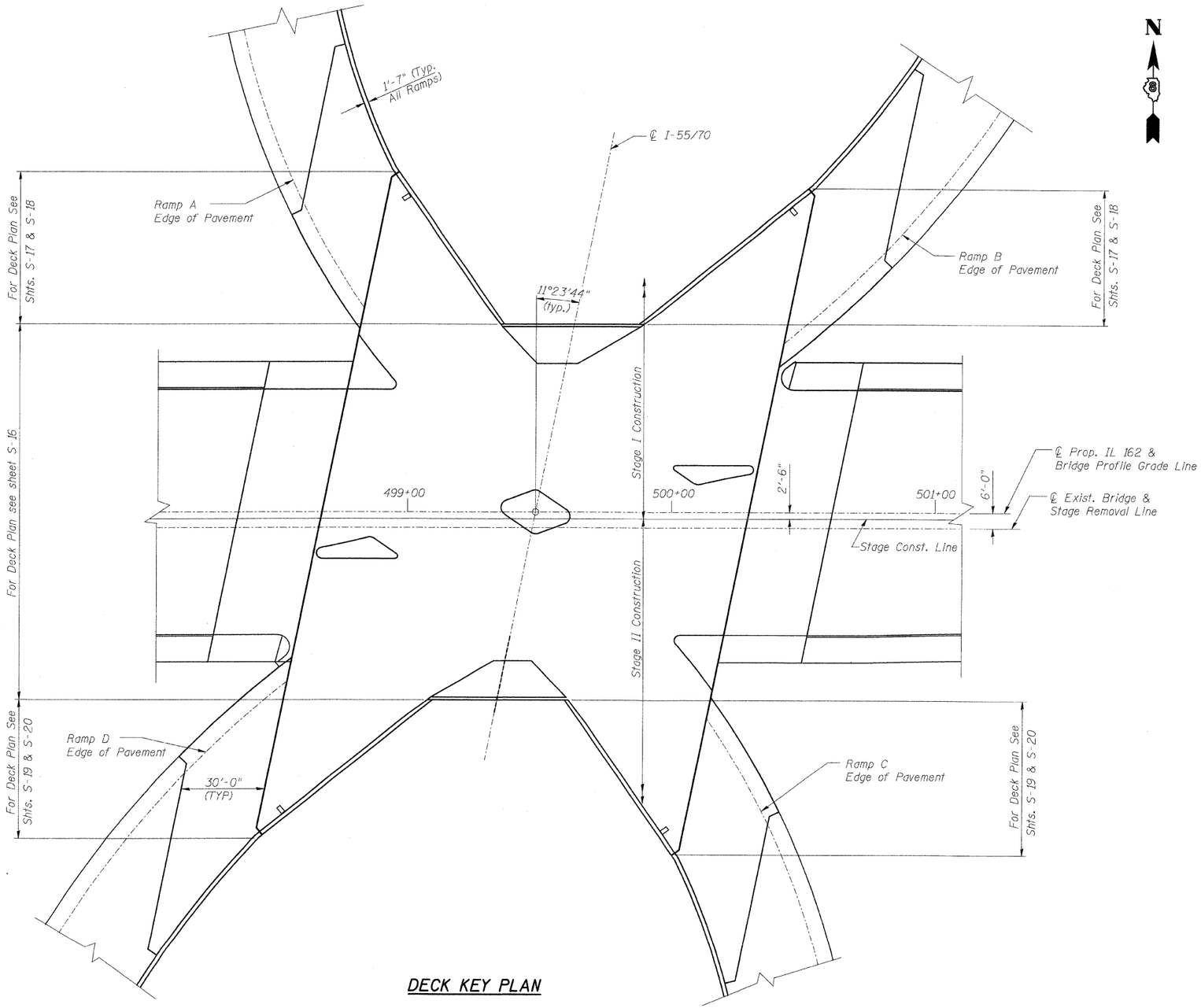
DESIGNED: BTO DRAWN: BTO
DATE: 03/06 CHECKED: JAN CHECKED: JAN

SHT. S-14 OF S-68

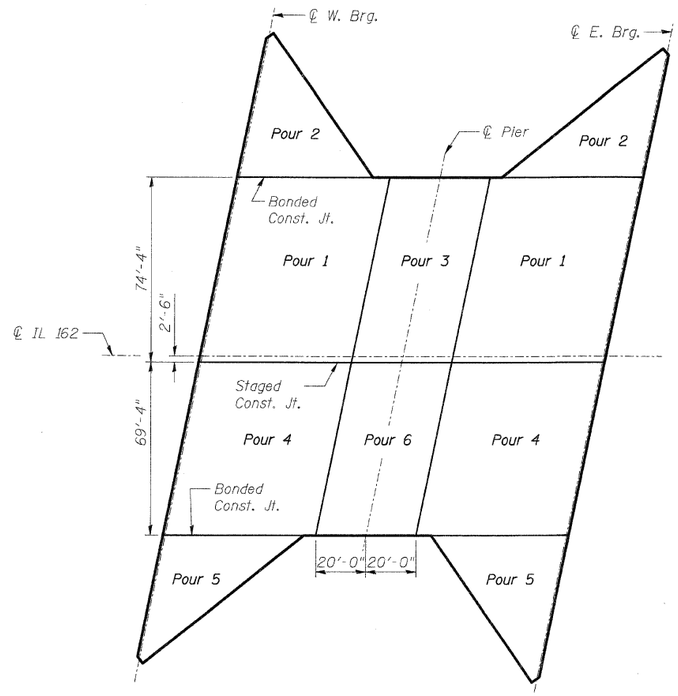
STV Incorporated
Engineers/Architects/Planners/Construction Managers
200 W. Monroe Street, Suite 1650
Chicago, IL. 60606-5015
312/553-0655, FAX 312/553-0661

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	60-10K-1,60-10HB	MADISON	420	233
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 76709



DECK KEY PLAN



DECK POUR SEQUENCE

NOTES:

1. For parapet and railing details see sheets S-27 thru S-29.
2. For superimposed median details see Sht. S-30. For island details, see Sht. S-26.
3. Work this sheet with S-16 thru S-24.
4. The pour sequence shall not be changed without the approval of the engineer.
5. Superimposed medians 1, 2, & 3 shall be poured after stage II deck is in place.

REVISIONS	
NAME	DATE

SHT. S-15 OF S-68

STV Incorporated
Engineers/Architects/Planners/Construction Managers
200 W. Monroe Street, Suite 1650
Chicago, IL. 60606-5015
312/553-0655, FAX 312/553-0661

ILLINOIS DEPARTMENT OF TRANSPORTATION

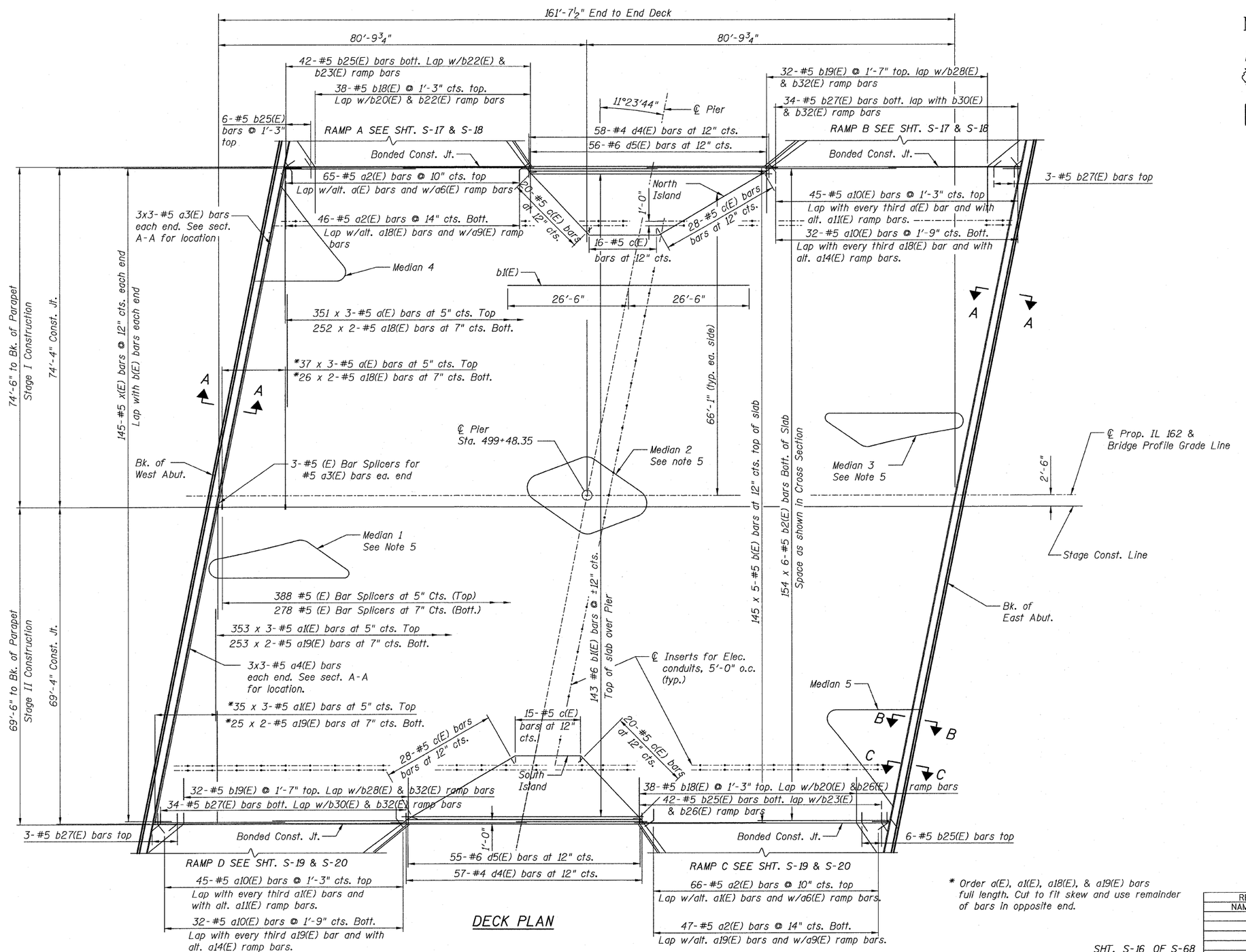
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STATION 499+48.35
STRUCTURE NO. 060-0338

DECK KEY PLAN & POUR SEQUENCE

DESIGNED: AWH DRAWN: BTO
DATE: 03/06 CHECKED: BTO CHECKED: JAN

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	60-10K-1,60-10HB	MADISON	420	234
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 76709

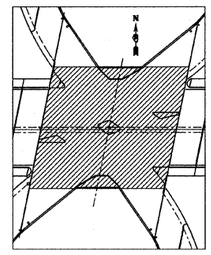


DECK PLAN

NOTES:

1. Bars Indicated thus 145x5-#5 etc.indicates 145 lines of bars with 5 lengths per line.
2. Reinforcing Bar designated (E) Shall be Epoxy Coated.
3. Expansion Anchors Required at Medians See Sht. S-30 for Superimposed Median Details.
4. See Sht. S-26 for Island details.
5. Superimposed medians 1, 2, & 3 shall be poured after Stage II deck is in place.
6. For Sections A-A, B-B, & C-C, see Sht. S-24.

Minimum Lap
#5 Bars - 2'-2"
#6 Bars - 2'-7"



KEY PLAN

* Order a(E), a1(E), a18(E), & a19(E) bars full length. Cut to fit skew and use remainder of bars in opposite end.

SHT. S-16 OF S-68

REVISIONS NAME	DATE

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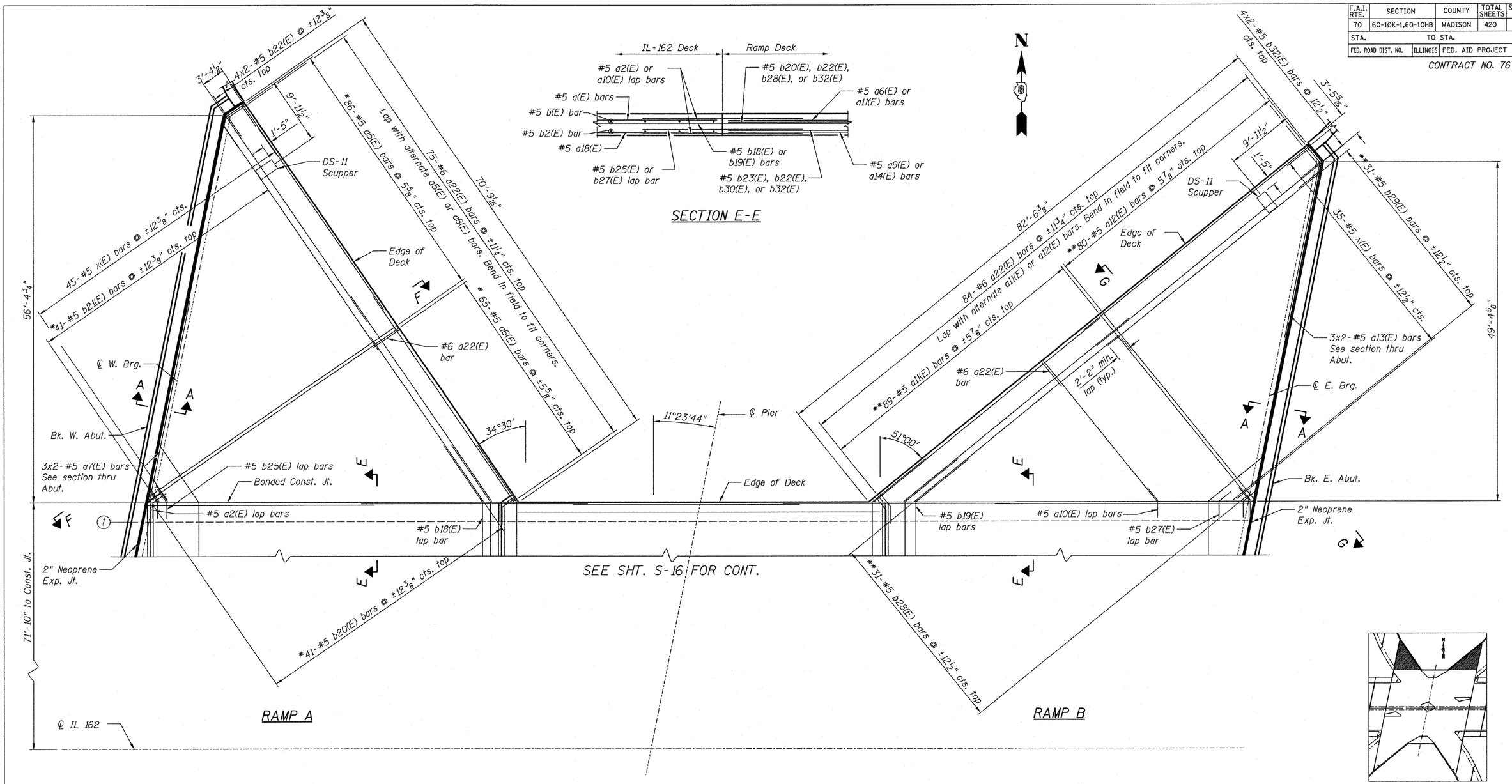
ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STATION 499+48.35
STRUCTURE NO. 060-0338

DECK PLAN - IL 162

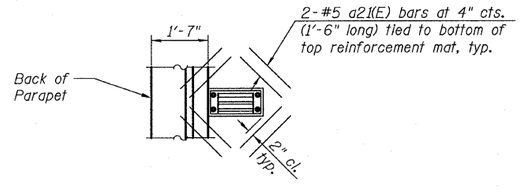
DESIGNED: BTO DRAWN: BTO
DATE: 03/06 CHECKED: JAW CHECKED: JAW

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	60-10K-1,60-10HB	MADISON	420	235
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 76709



SECTION E-E



PLAN AT SCUPPER (TYP.)

DECK PLAN - RAMPS A & B TOP BARS

KEY PLAN

*Order a5(E), a6(E), b20(E), & b21(E) bars full length. Cut to fit skew and use remainder of bars in Ramp C.

**Order a11(E), a12(E), b28(E), & b29(E) bars full length. Cut to fit skew and use remainder of bars in Ramp D.

NOTES:

1. Bars designated (E) shall be Epoxy Coated
2. See Sht. S-22 for sections F-F & G-G.
3. For section thru ramp parapet see Sht. S-24.
4. For Parapet Elevation see Sht. S-28.
5. For Reinforcement Bar List and BOM, see Sht. S-31.
6. For Scupper Details, see Sht. S-35.
7. For Section thru Abut., see Sht. S-24.

SHT. S-17 OF S-68

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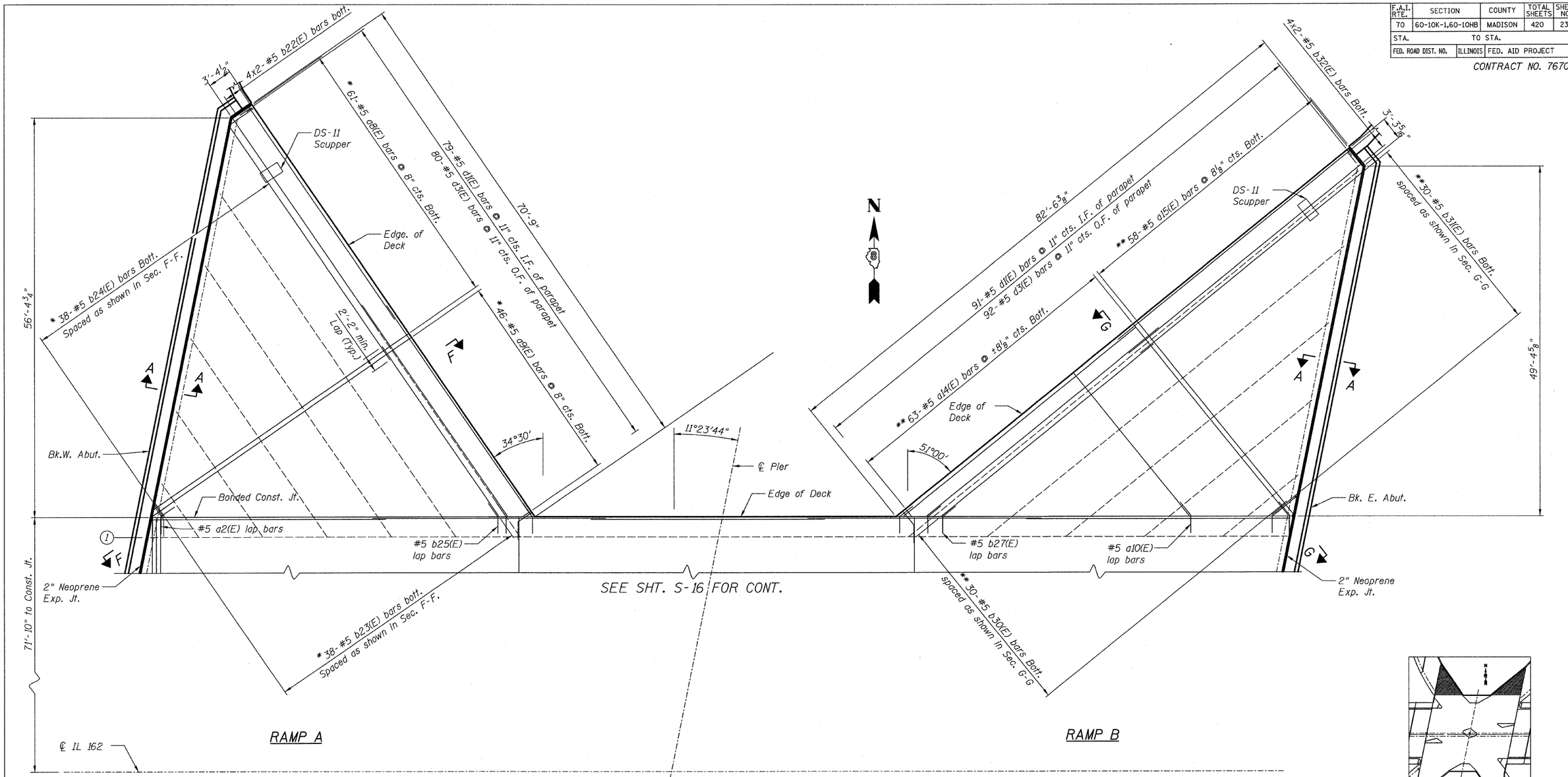
REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STATION 499+48.35
STRUCTURE NO. 060-0338
DECK PLAN
RAMPS A & B - TOP BARS

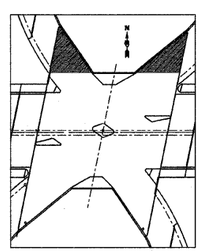
DESIGNED: BTO DRAWN: BTO
DATE: 03/06 CHECKED: JAW CHECKED: JAW

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	60-10K-1,60-10HB	MADISON	420	236
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 76709



DECK PLAN - RAMPS A & B BOTTOM BARS



KEY PLAN

*Order a8(E), a9(E), b23(E), & b24(E) bars full length. Cut to fit skew and use remainder of bars in Ramp C.

**Order a14(E), a15(E), b30(E), & b31(E) bars full length. Cut to fit skew and use remainder of bars in Ramp D.

NOTES:

1. Bars designated (E) shall be Epoxy Coated
2. See Sht. S-22 for sections F-F & G-G.
3. For section thru ramp parapet, see Sht. S-24.
4. For Parapet Elevation see Sht. S-28.
5. For Reinforcement Bar List and BOM, see Sht. S-31.
6. For Scupper Details, see Sht. S-35.

SHT. S-18 OF S-68

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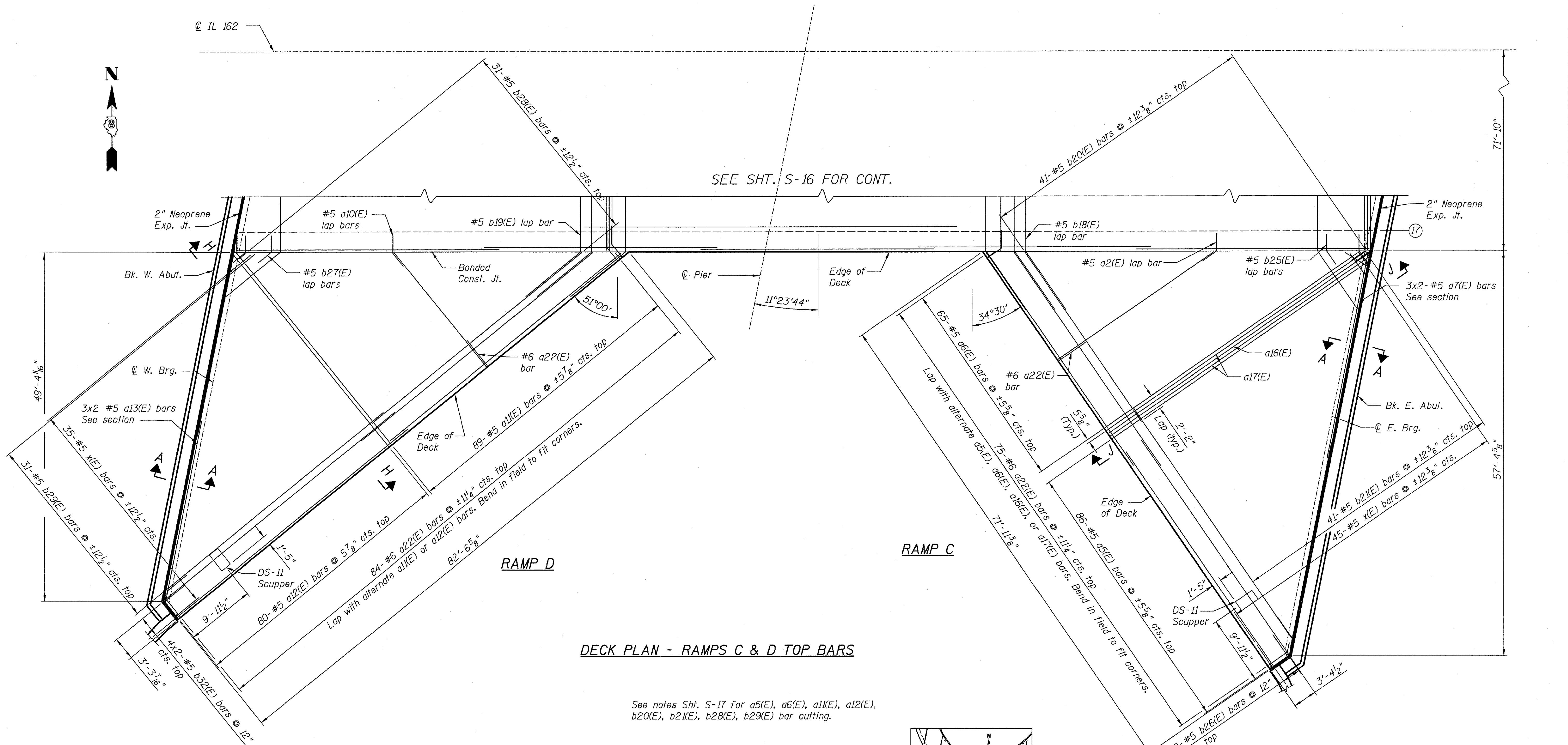
200 W. Monroe Street, Suite 1650
Chicago, IL. 60606-5015
312/553-0655, FAX 312/553-0661

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STATION 499+48.35
STRUCTURE NO. 060-0338
DECK PLAN
RAMPS A & B - BOTTOM BARS

DESIGNED: BTO DRAWN: BTO
DATE: 03/06 CHECKED: JAW CHECKED: JAW

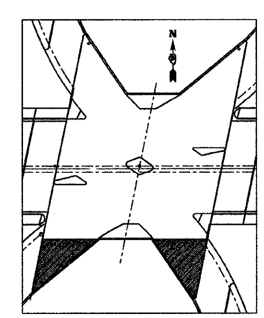


DECK PLAN - RAMPS C & D TOP BARS

See notes Sht. S-17 for a5(E), a6(E), a11(E), a12(E), b20(E), b21(E), b28(E), b29(E) bar cutting.

NOTES:

1. Bars designated (E) shall be Epoxy Coated
2. See Sht. S-23 for sections H-H & J-J.
3. For section thru ramp parapet, see sht. S-24.
4. For Parapet Elevation see Sht. S-29.
5. For Reinforcement Bar List and BOM, see Sht. S-31.
6. For Scupper Details, see Sht. S-35.



KEY PLAN

SHT. S-19 OF S-68

STV Incorporated
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200 W. Monroe Street, Suite 1650
Chicago, IL 60606-5015
312/553-0655, FAX 312/553-0661

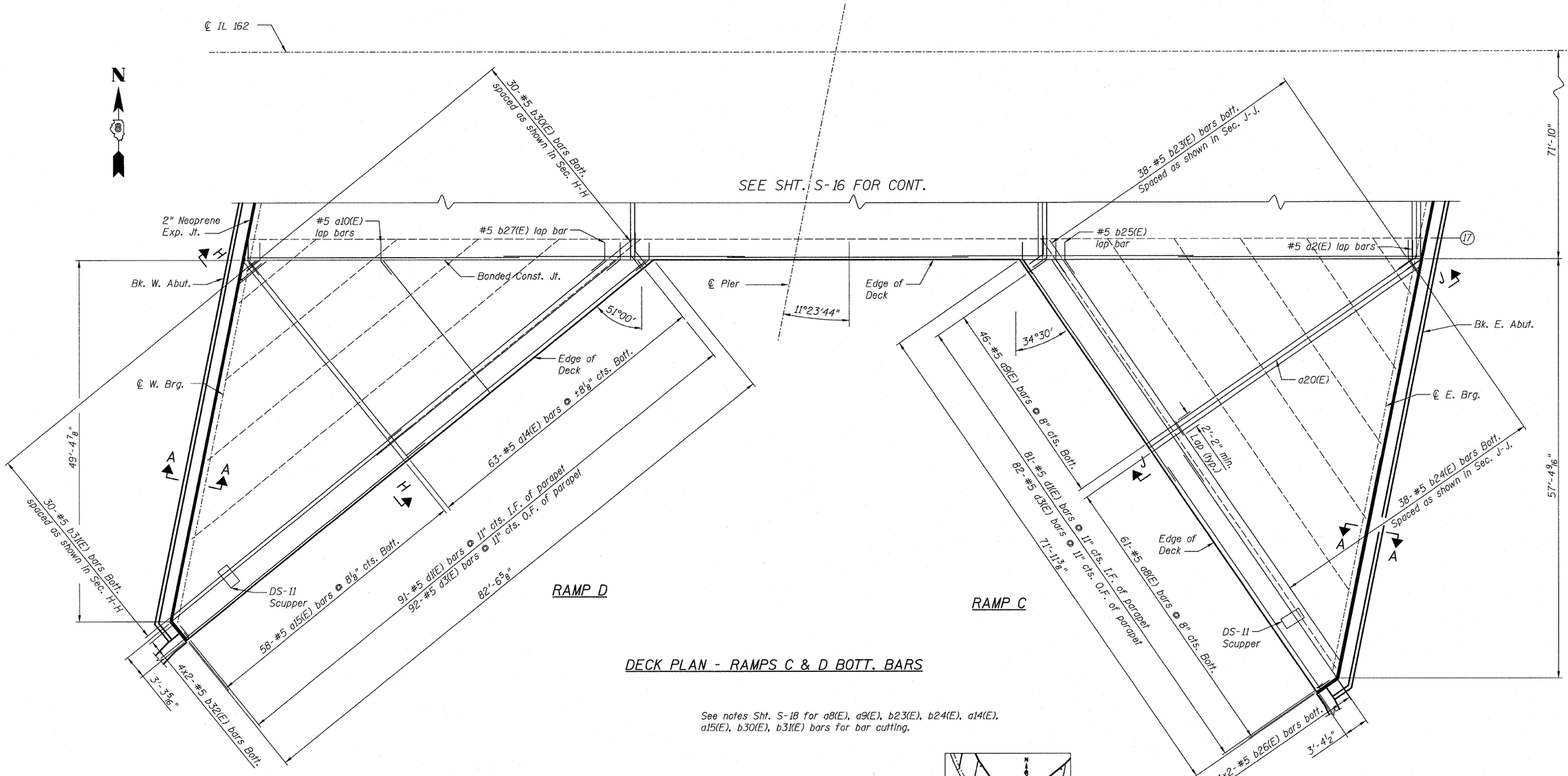
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STATION 499+48.35
STRUCTURE NO. 060-0338
DECK PLAN
RAMPS C & D - TOP BARS

DESIGNED: BTO DRAWN: BTO
DATE: 03/06 CHECKED: JAW CHECKED: JAW

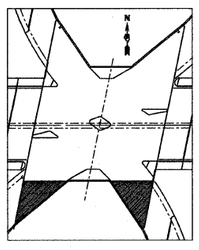
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	60-10K-1,60-10HB	MADISON	420	238
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 76709



DECK PLAN - RAMPS C & D BOTT. BARS

See notes Sht. S-18 for a8(E), a9(E), b23(E), b24(E), a14(E), a15(E), b30(E), b31(E) bars for bar cutting.



KEY PLAN

NOTES:

1. Bars designated (E) shall be Epoxy Coated
2. See Sht. S-23 for sections H-H & J-J.
3. For Parapet Elevation see Sht. S-29.
4. For Reinforcement Bar List and BOM, see Sht. S-31.
5. For Scupper Details, see Sht. S-35.

SHT. S-20 OF S-68

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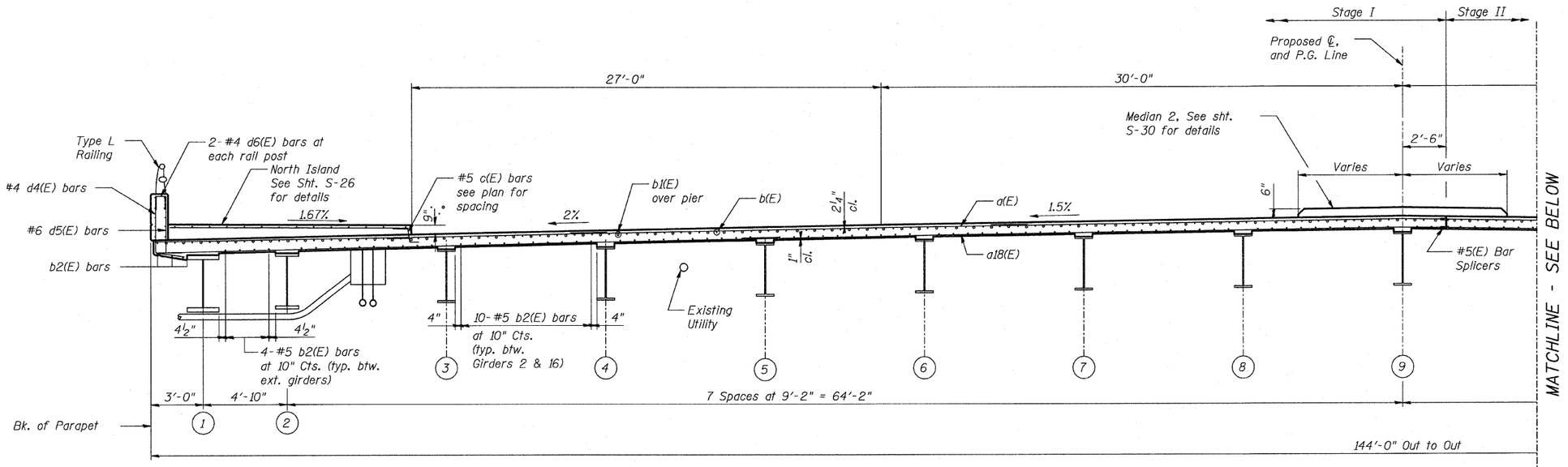
REVISIONS NAME	DATE

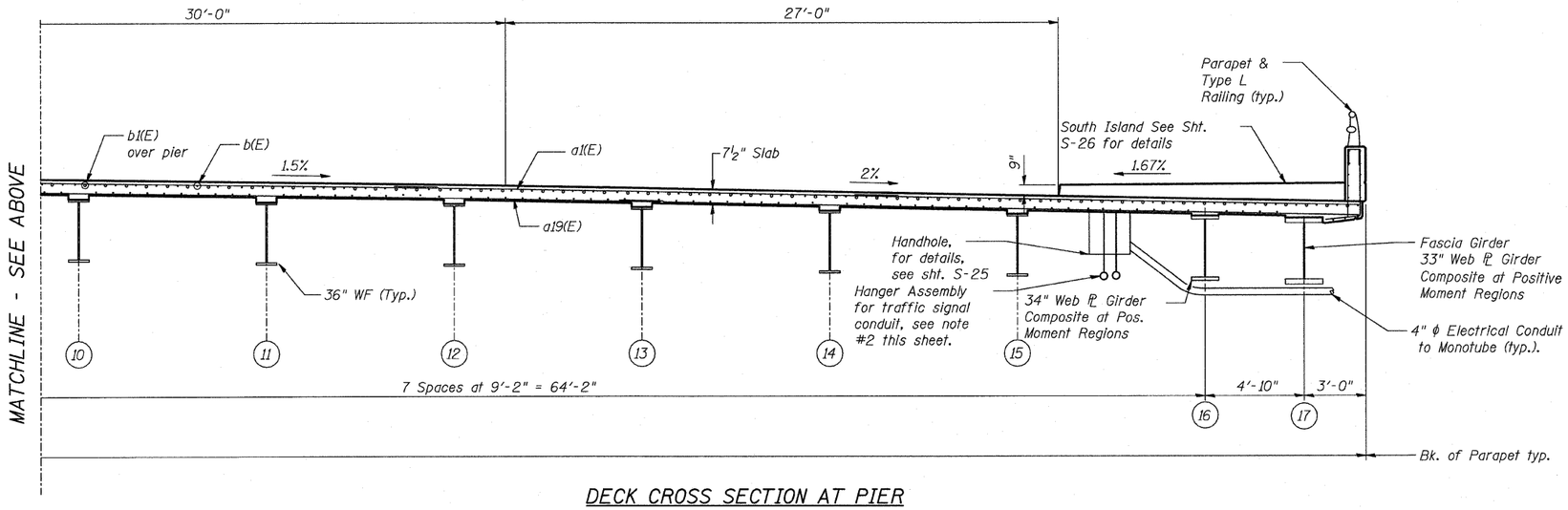
ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STATION 499+48.35
STRUCTURE NO. 060-0338
DECK PLAN
RAMPS C & D - BOTTOM BARS

DESIGNED: BTO DRAWN: BTO
DATE: 03/06 CHECKED: JAW CHECKED: JAW

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	60-10K-1,60-10HB	MADISON	420	239
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 76709





DECK CROSS SECTION AT PIER

NOTES:

1. Reinforcement bars designated (E) shall be epoxy coated.
2. Concrete inserts for traffic signal conduits. Refer to Traffic Signal plans for details. The cost of of installation included with the pay item, "Concrete Superstructure".

REVISIONS NAME	DATE

SHT. S-21 OF S-68

STV Incorporated
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Chicago, IL. 60606-5015
312/553-0655, FAX 312/553-0661

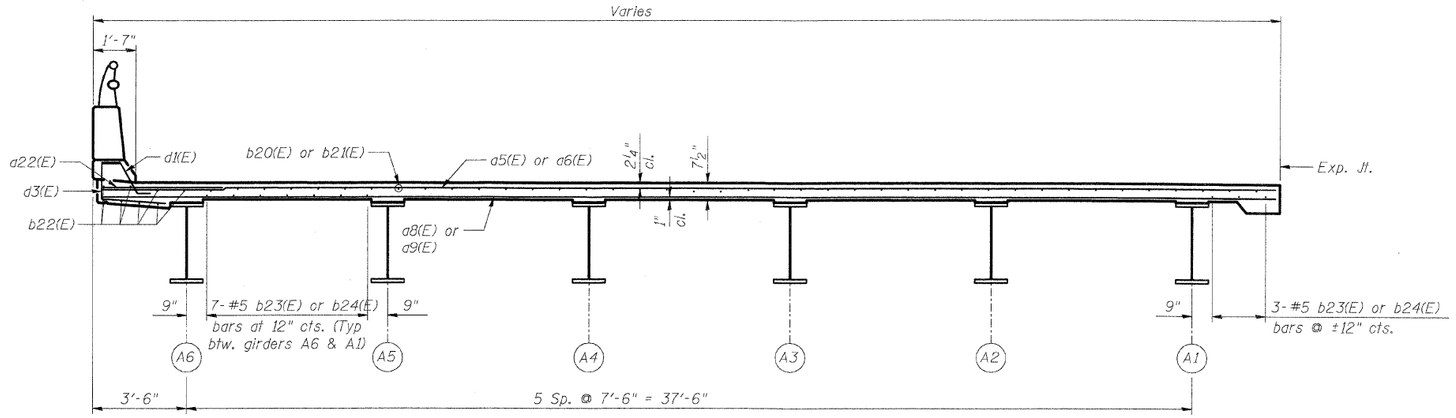
ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STATION 499+48.35
STRUCTURE NO. 060-0338

DECK CROSS SECTION - IL 162

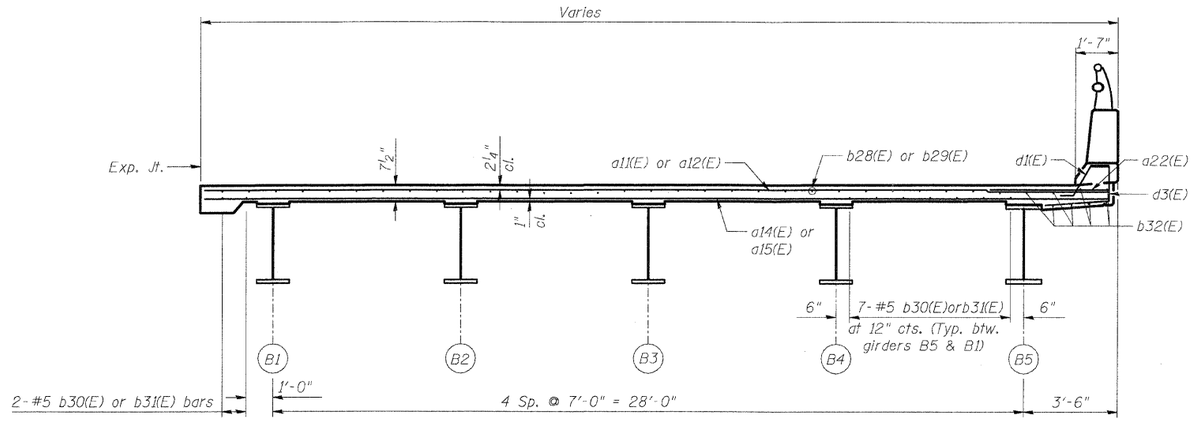
DESIGNED: BTO DRAWN: BTO
DATE: 03/06 CHECKED: JAW CHECKED: JAW

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	60-10K-1,60-10HB	MADISON	420	240
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 76709



DECK CROSS SECTION F-F



DECK CROSS SECTION G-G

NOTES:

1. Reinforcement Bars designated (E) shall be epoxy coated.
2. For locations of sections F-F & G-G see Shts. S-17 & S-18.

SHT. S-22 OF S-68

STV Incorporated
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200 W. Monroe Street, Suite 1650
Chicago, IL. 60606-5015
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REVISIONS	
NAME	DATE

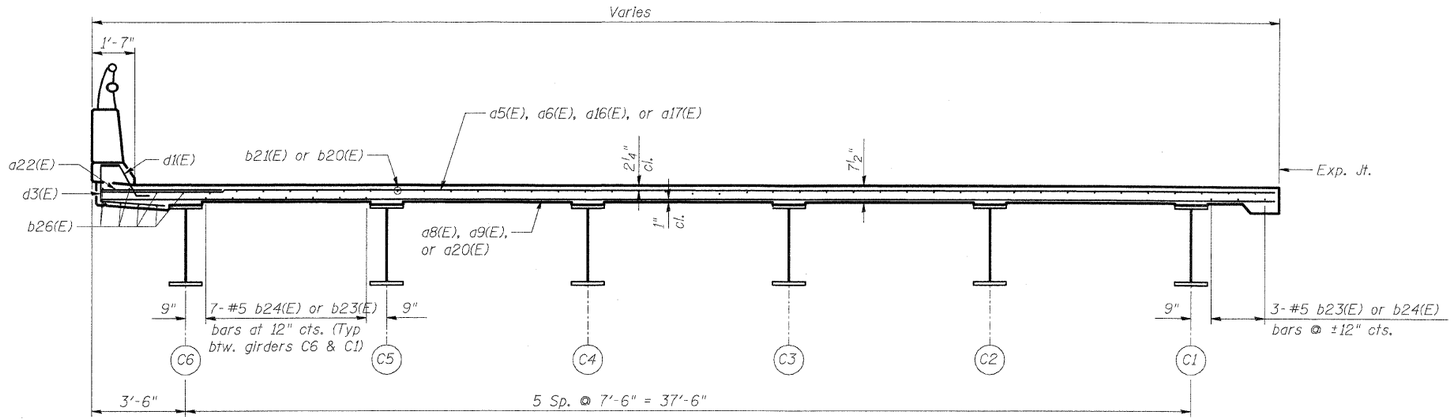
ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STATION 499+48.35
STRUCTURE NO. 060-0338

DECK CROSS SECTIONS - RAMPS A & B

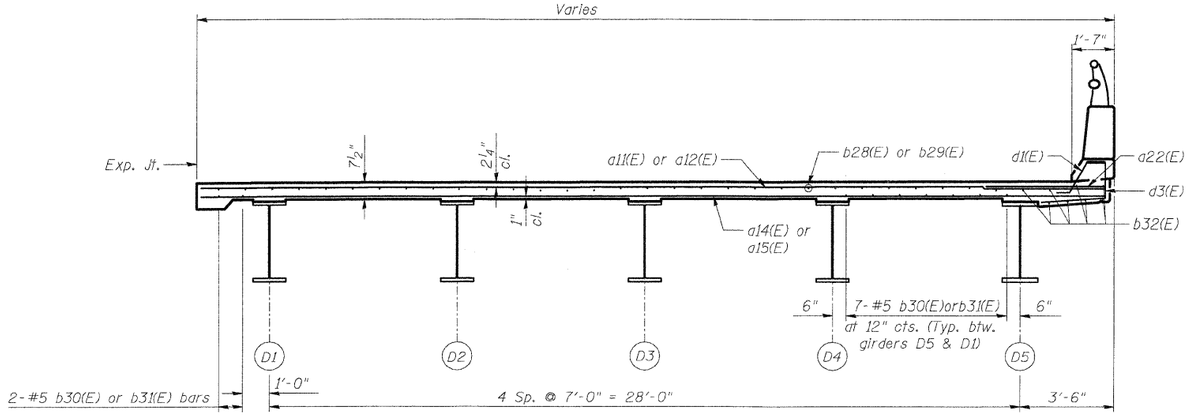
DESIGNED: BTO DRAWN: BTO
DATE: 03/06 CHECKED: JAW CHECKED: JAW

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	60-10K-1,60-10HB	MADISON	420	241
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 76709



DECK CROSS SECTION J-J



DECK CROSS SECTION H-H

NOTES:

1. Reinforcement Bars designated (E) shall be epoxy coated.
2. For locations of sections H-H & J-J see Shts. S-19 & S-20.

SHT. S-23 OF S-68

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REVISIONS	
NAME	DATE

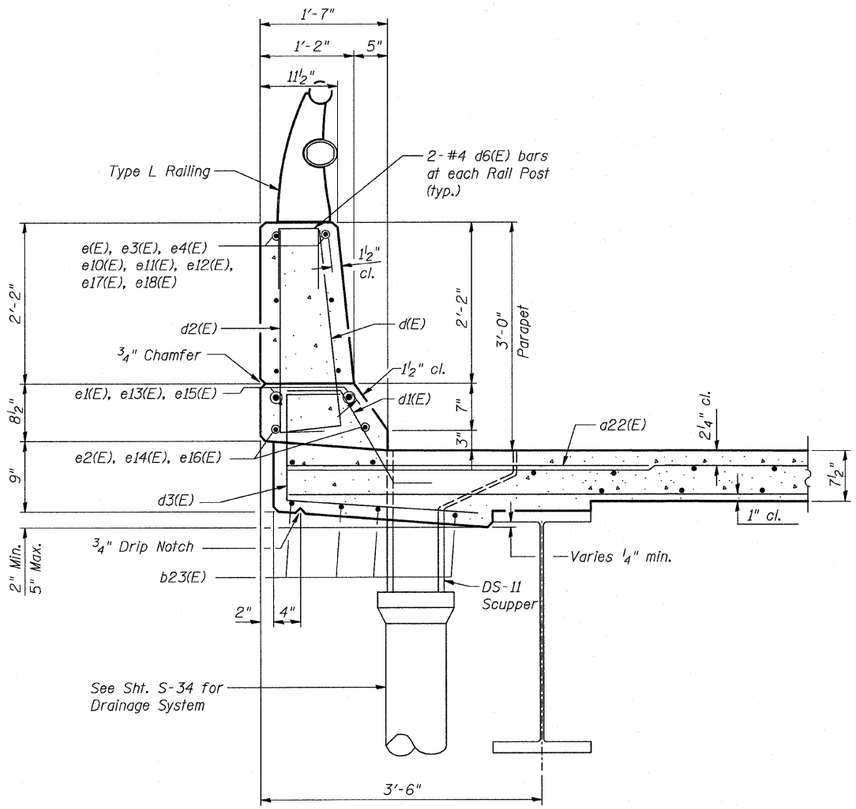
ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STATION 499+48.35
STRUCTURE NO. 060-0338

DECK CROSS SECTIONS - RAMPS C & D

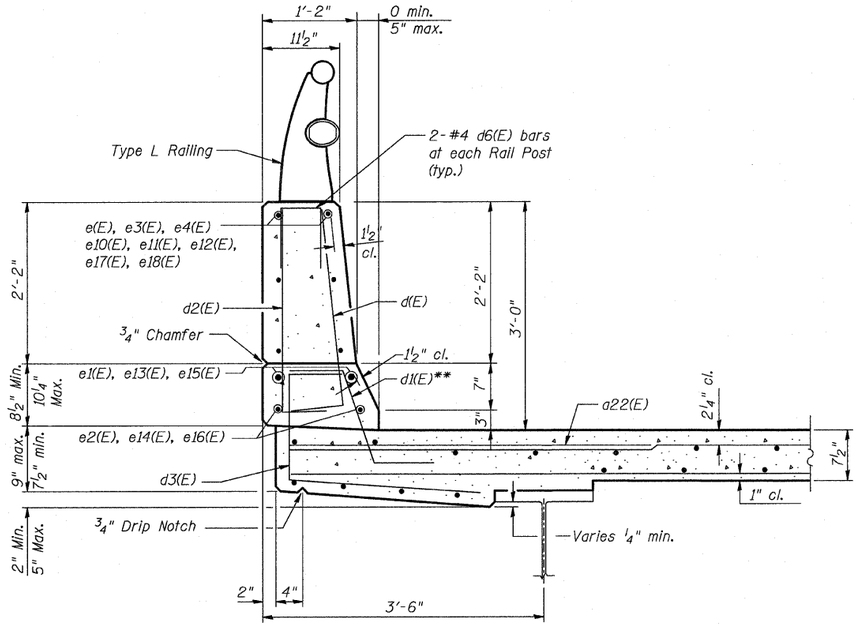
DESIGNED: BTO DRAWN: BTO
DATE: 03/06 CHECKED: JAW CHECKED: JAW

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	60-10K-1,60-10HB	MADISON	420	242
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 76709



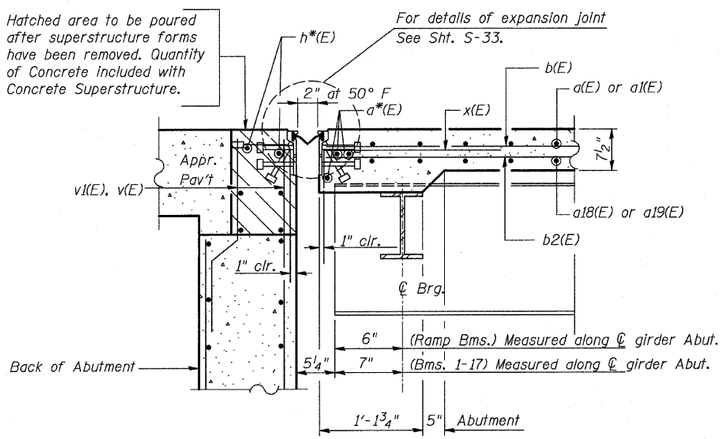
SECTION THROUGH RAMP PARAPET (TYP.)



SECTION D-D

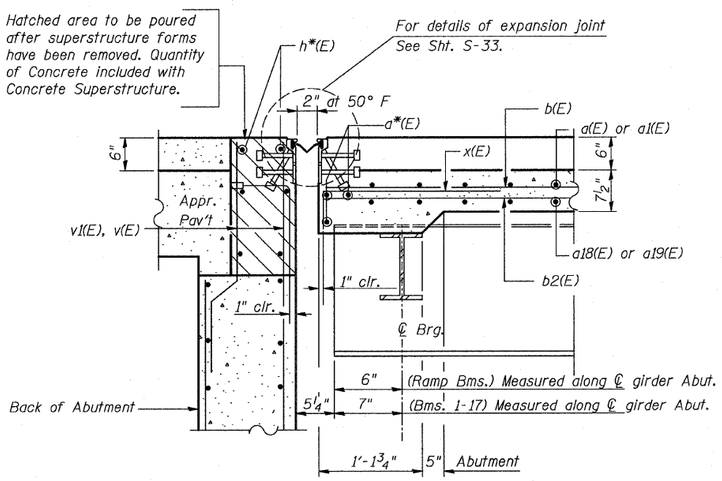
NOTES:

1. For location of section D-D, see sht. S-27.
2. For location of sections A-A, B-B, C-C, see sht S-32.
3. * - Indicates for bar designation, see Deck or Abutment plans.
4. For section through Island Parapet See Sht. S-26.
5. ** - Adjust in field as required.



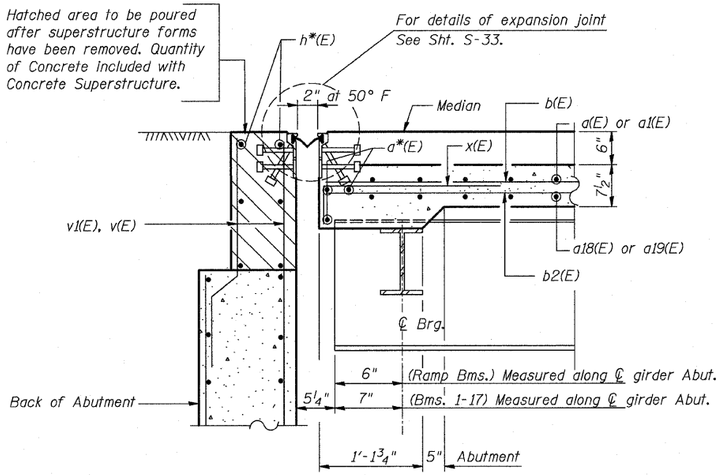
SECTION A-A

(@ Abutments w/ approach slab)



SECTION B-B

(@ Abutments w/ approach slab & median)



SECTION C-C

(@ Abutments w/o approach slab)

SHT. S-24 OF S-68

REVISIONS NAME	DATE

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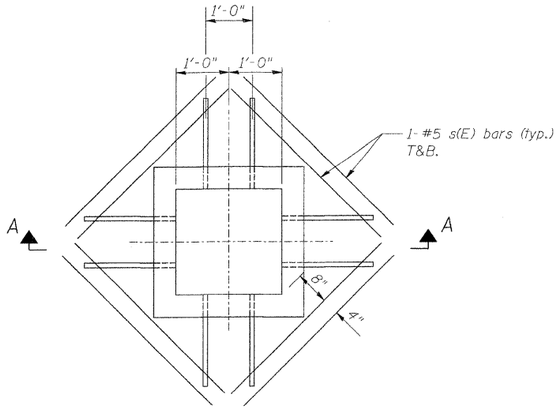
ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STATION 499+48.35
STRUCTURE NO. 060-0338

DECK DETAILS

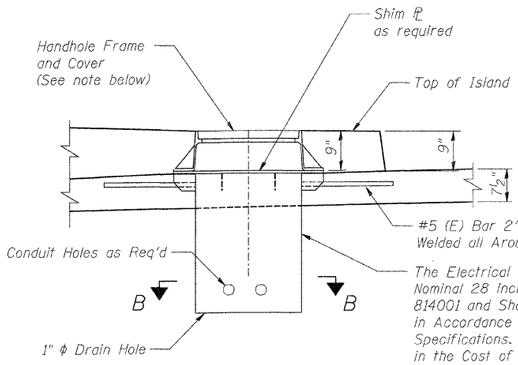
DESIGNED: BTO DRAWN: BTO
DATE: 03/06 CHECKED: BG CHECKED: BG

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	60-10K-1,60-10HB	MADISON	420	243
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 76709



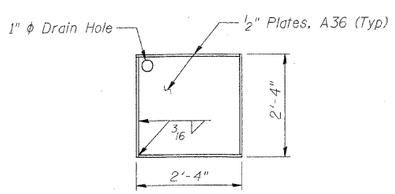
PLAN



SECTION A-A

HANDHOLE INSTALLATION

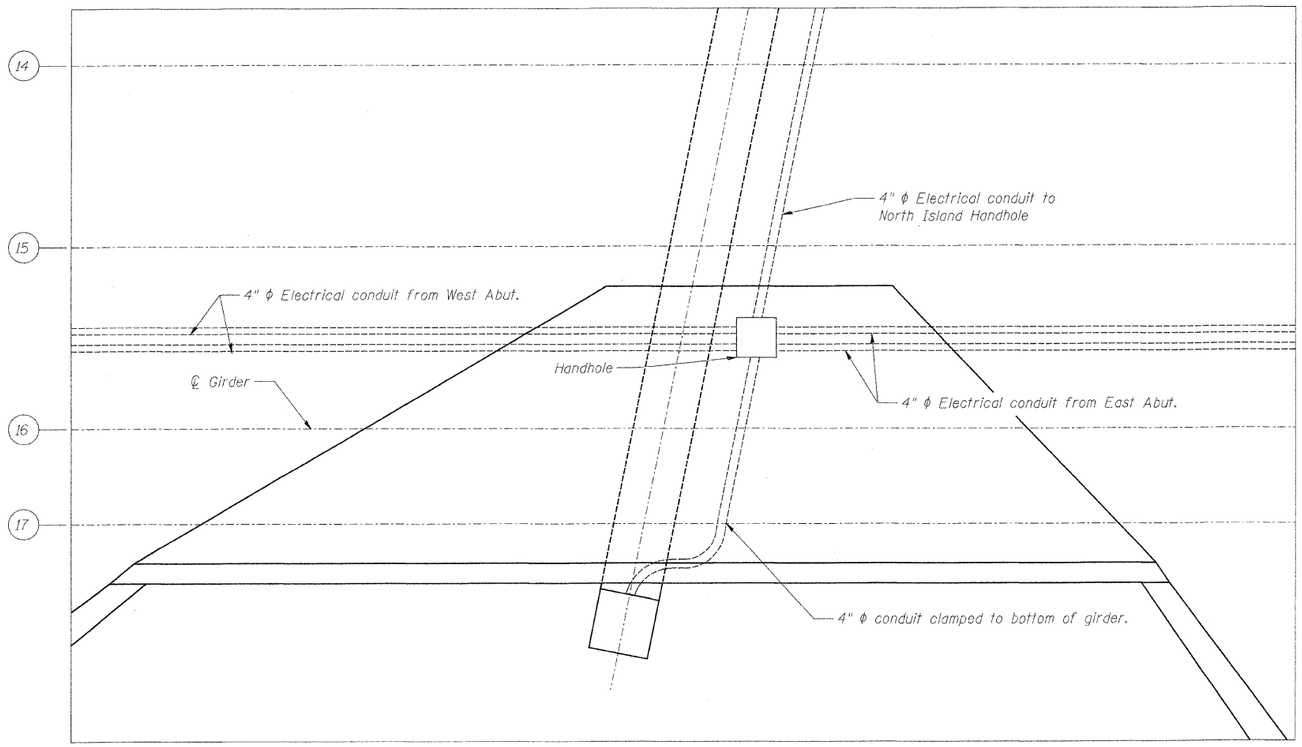
The Electrical Handhole Frame and Cover Shall be a Nominal 28 inch Square in Accordance with Standard 814001 and Shall be a Heavy Duty Type, Manufactured in Accordance with Section 1088.06 of the Standard Specifications. Cost of the Handhole Shall be Included in the Cost of Furnishing and Erecting Structural Steel. The Frame and Grate Shall be paid for as Handhole Frame and Cover (Special).



SECTION B-B

NOTE:

The Handhole and Handhole Frame and Cover shall be installed level. The deck and sidewalk concrete shall be placed to match the flange plate of the handhole and the rim of the frame and cover.



PLAN - CONDUIT LOCATION

South end shown, North end similar

REVISIONS	
NAME	DATE

SHT. S-25 OF S-68

STV Incorporated
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Chicago, IL 60606-5015
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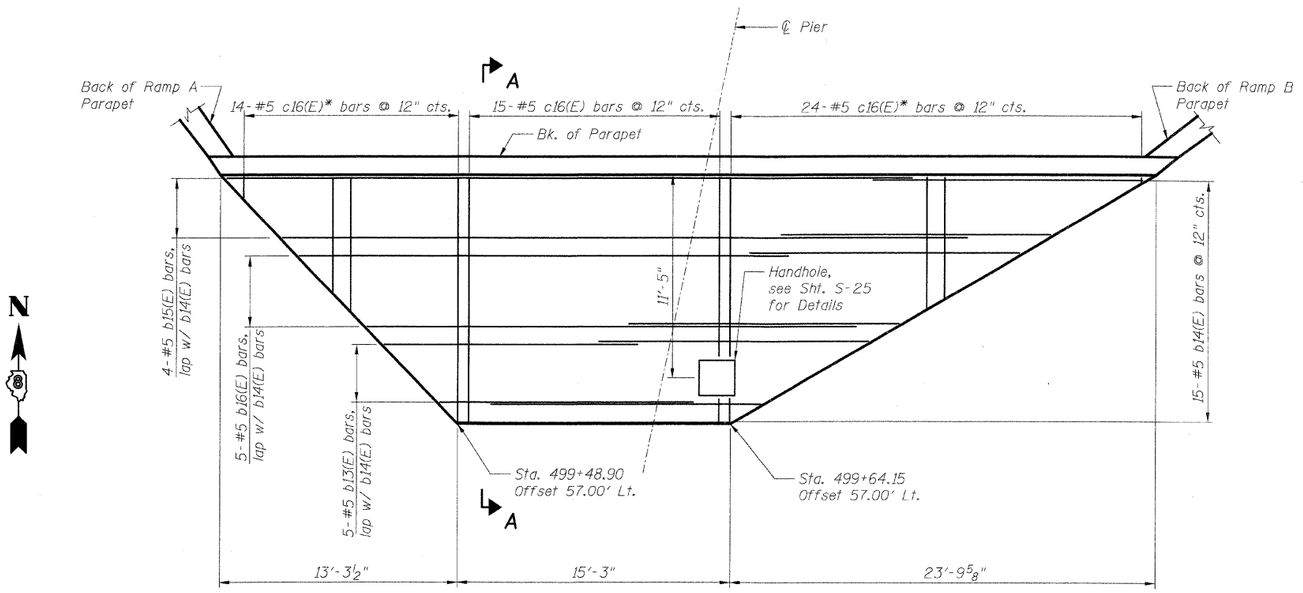
ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STATION 499+48.35
STRUCTURE NO. 060-0338

ELECTRICAL DETAILS

DESIGNED: BTO DRAWN: BTO
DATE: 03/06 CHECKED: BG CHECKED: BG

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	60-10K-1,60-10HB	MADISON	420	244
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

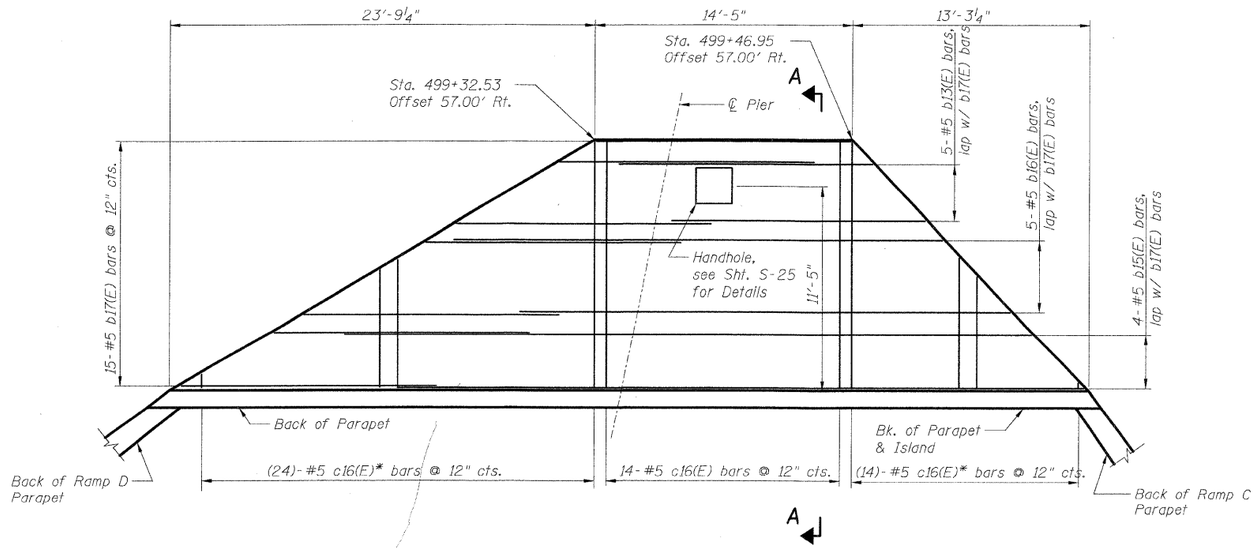
CONTRACT NO. 76709



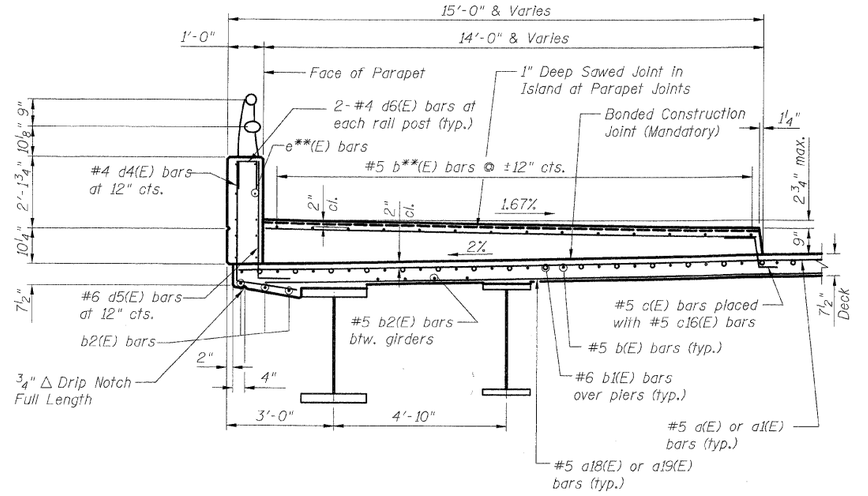
N

PLAN NORTH ISLAND

℄ IL 162



PLAN SOUTH ISLAND



SECTION A-A

NOTE:

** - Indicates for bar designation see deck plans, parapet elevations and diaphram elevation.

*Order c16(E) bars full length. Cut to fit skew and use remainder of bars in opposite Island.

SHT. S-26 OF S-68

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Chicago, IL 60606-5015
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REVISIONS NAME	DATE

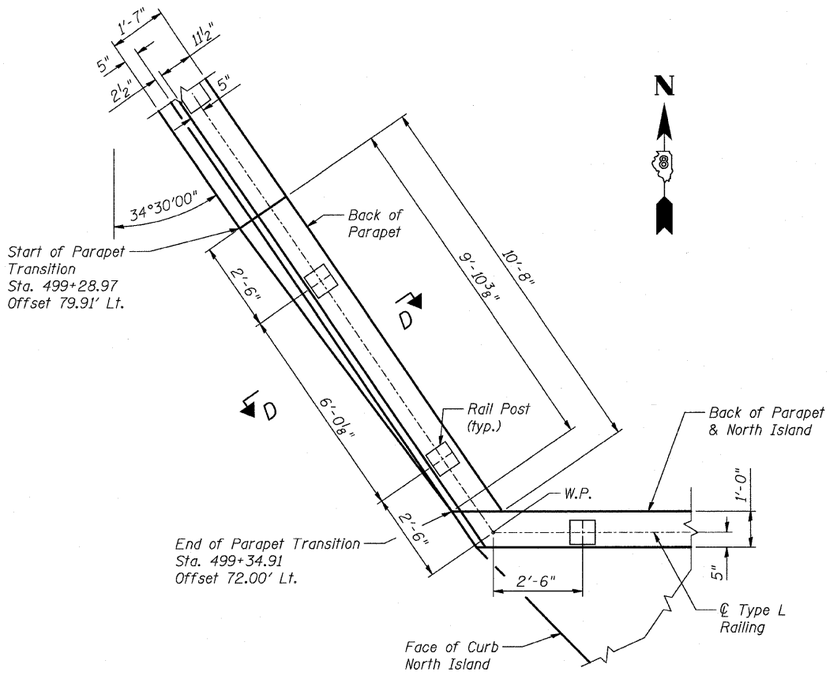
ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STATION 499+48.35
STRUCTURE NO. 060-0338

NORTH & SOUTH ISLAND DETAILS

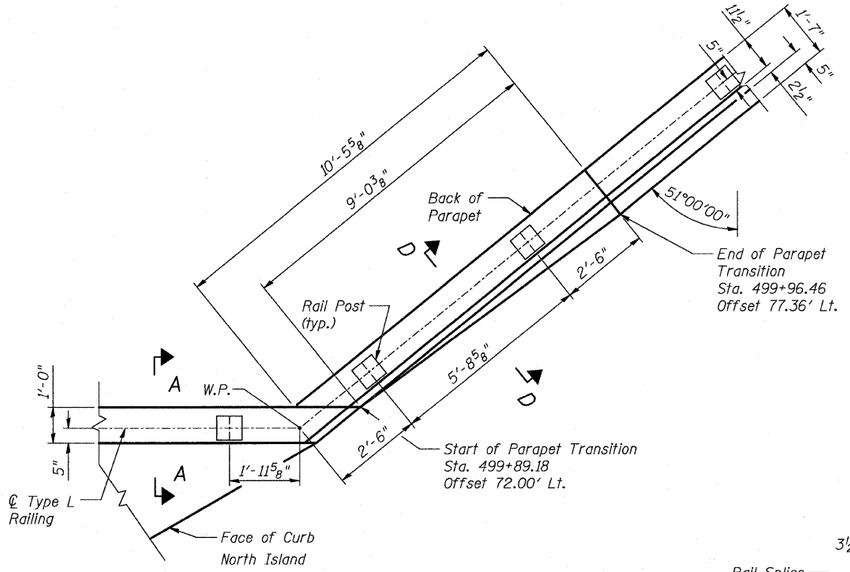
DESIGNED: BTO DRAWN: BTO
DATE: 03/06 CHECKED: JAW CHECKED: JAW

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	60-10K-1,60-10HB	MADISON	420	245
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

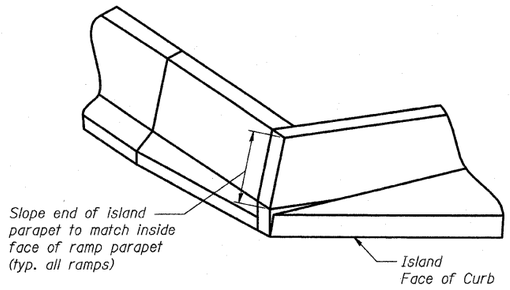
CONTRACT NO. 76709



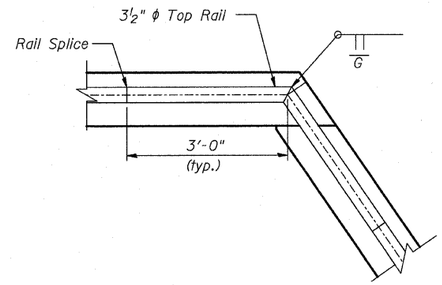
RAMP A PARAPET TRANSITION PLAN

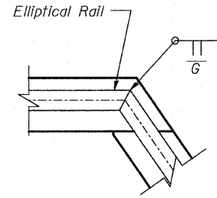


RAMP B PARAPET TRANSITION PLAN



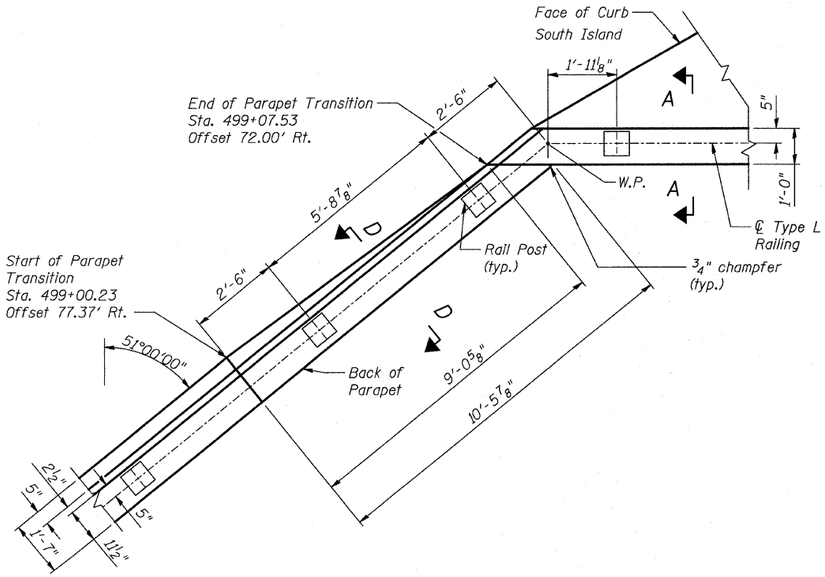
RAMP A INSIDE PARAPET ISOMETRIC VIEW



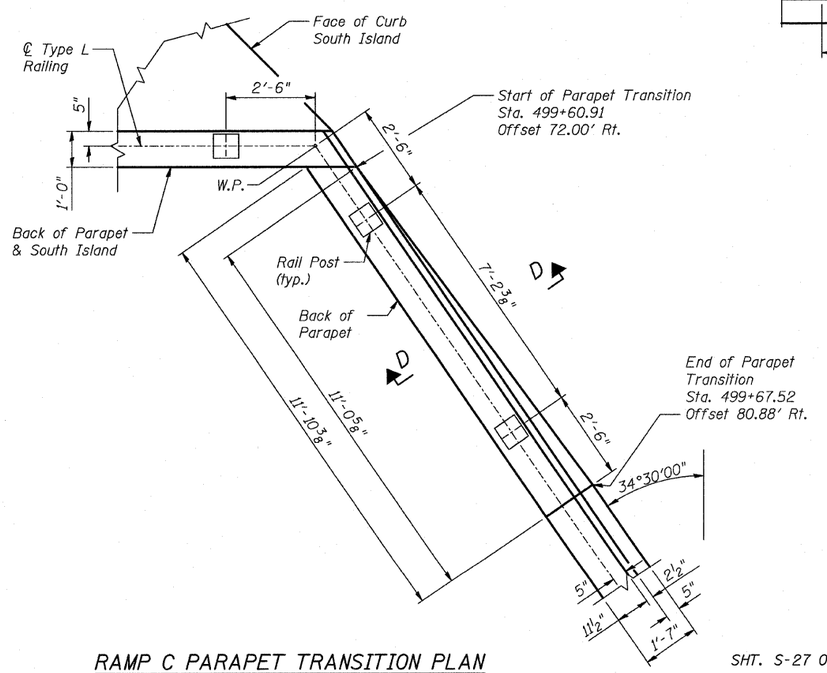


RAILING TRANSITION CONN. DETAIL (TYP.)

See Sht. S-36 for Railing Details



RAMP D PARAPET TRANSITION PLAN



RAMP C PARAPET TRANSITION PLAN

NOTES:

1. For section A-A, see Sht. S-26.
2. For section D-D, see Sht. S-24.
3. For typical section thru ramp parapet, see Sht. S-24.

SHT. S-27 OF S-68

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REVISIONS	
NAME	DATE

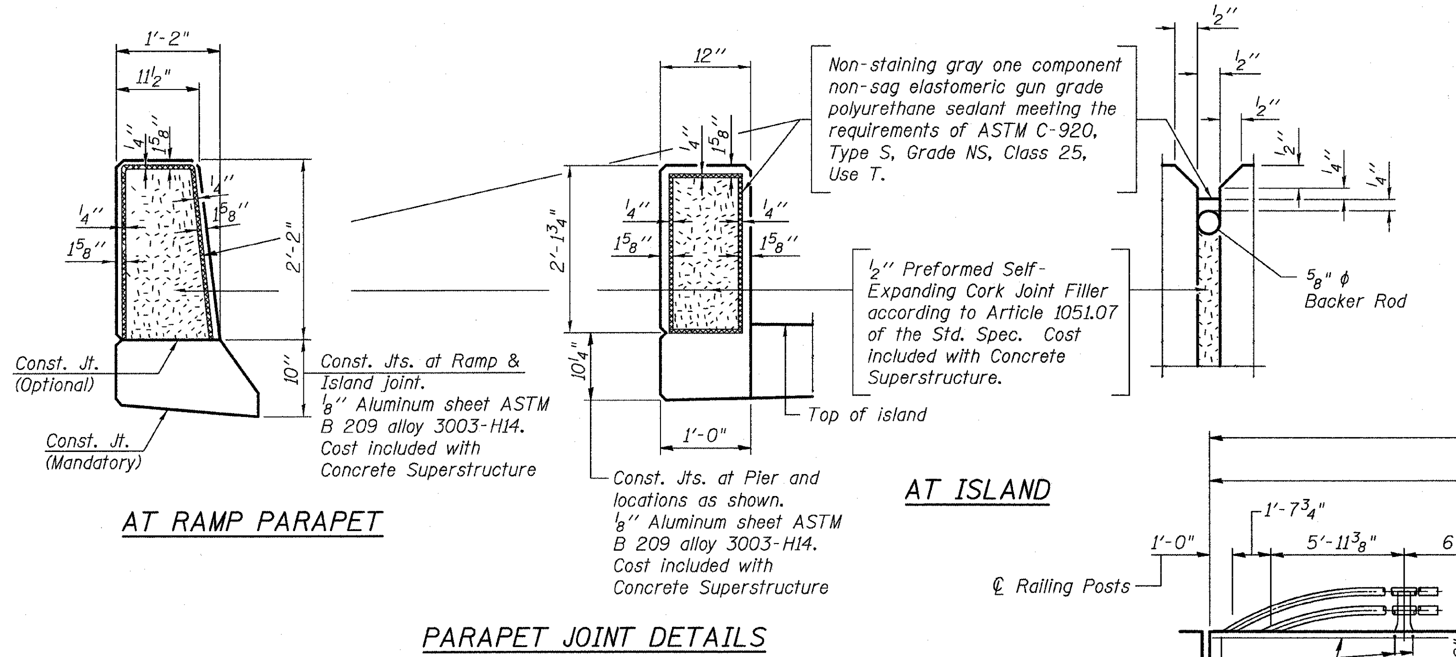
ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STATION 499+48.35
STRUCTURE NO. 060-0338

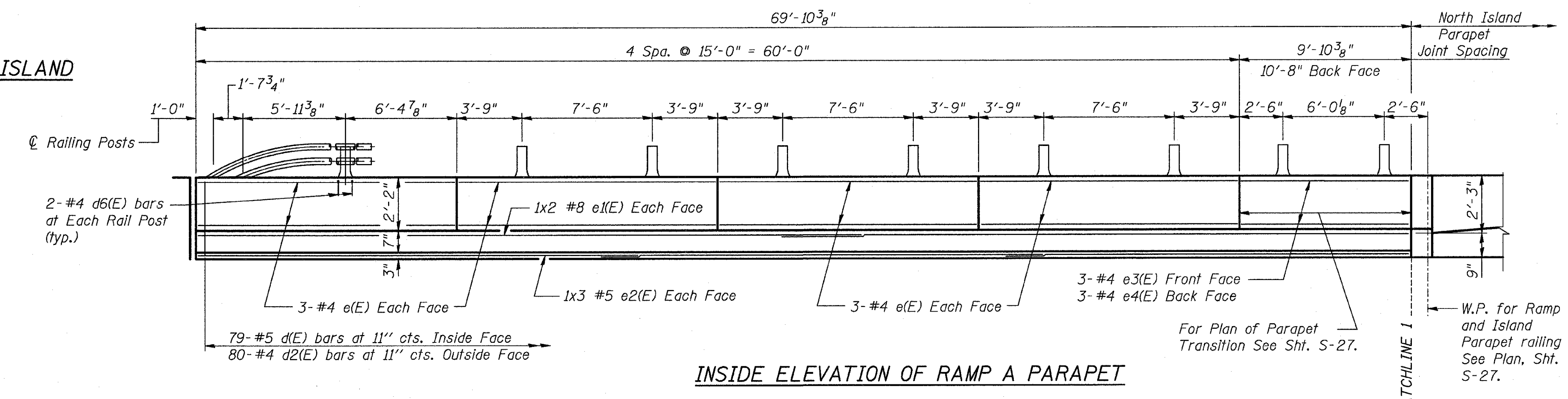
PARAPET DETAIL AT RAMP CORNERS

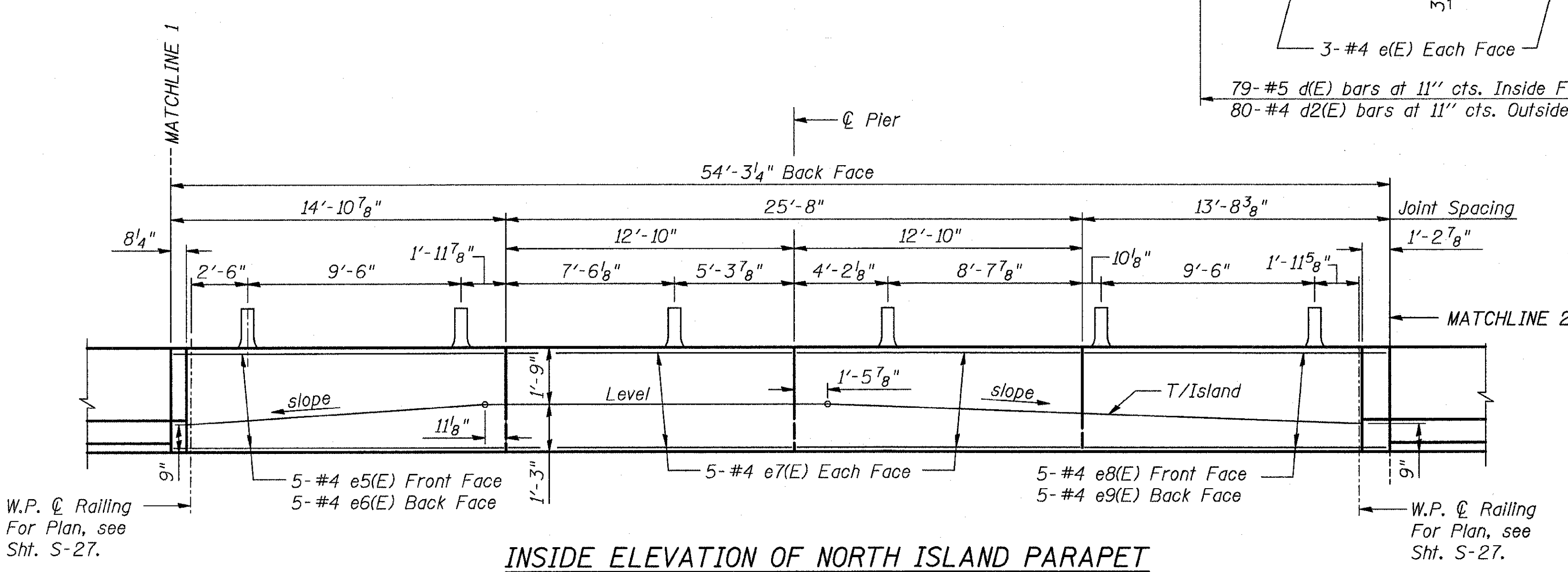
DESIGNED: BTO DRAWN: BTO
DATE: 03/06 CHECKED: JAW CHECKED: JAW

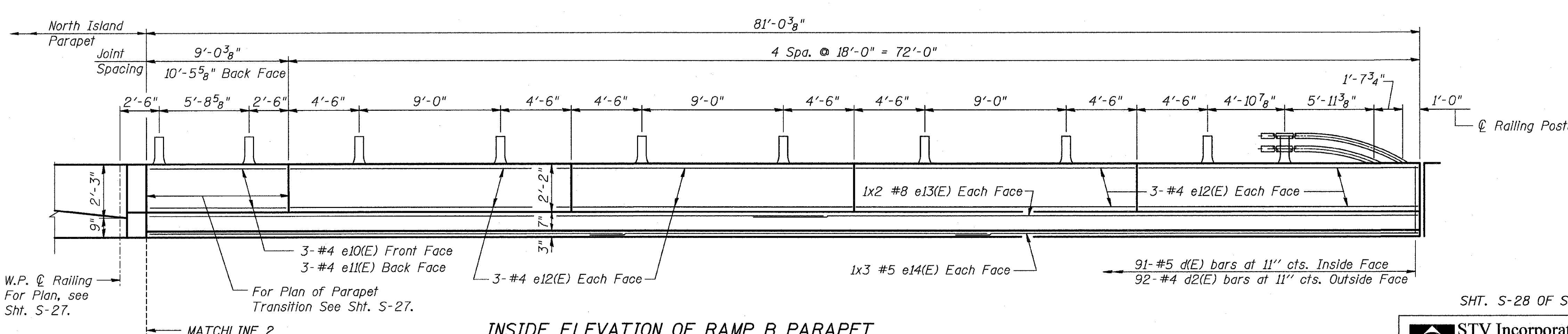
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	60-10K-1,60-10HB	MADISON	420	246
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 76709









MIN. BAR LAP

#5 - 2'-2"
#8 - 4'-6"

SHT. S-28 OF S-68

REVISIONS	
NAME	DATE

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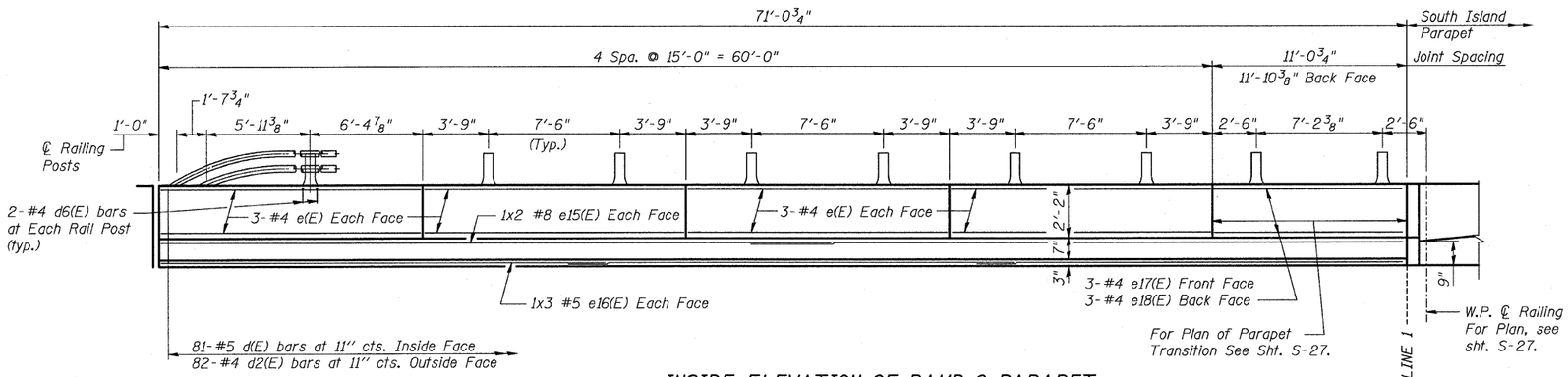
ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STATION 499+48.35
STRUCTURE NO. 060-0338

PARAPET ELEVATIONS & DETAILS
RAMPS A, B, & NORTH ISLAND

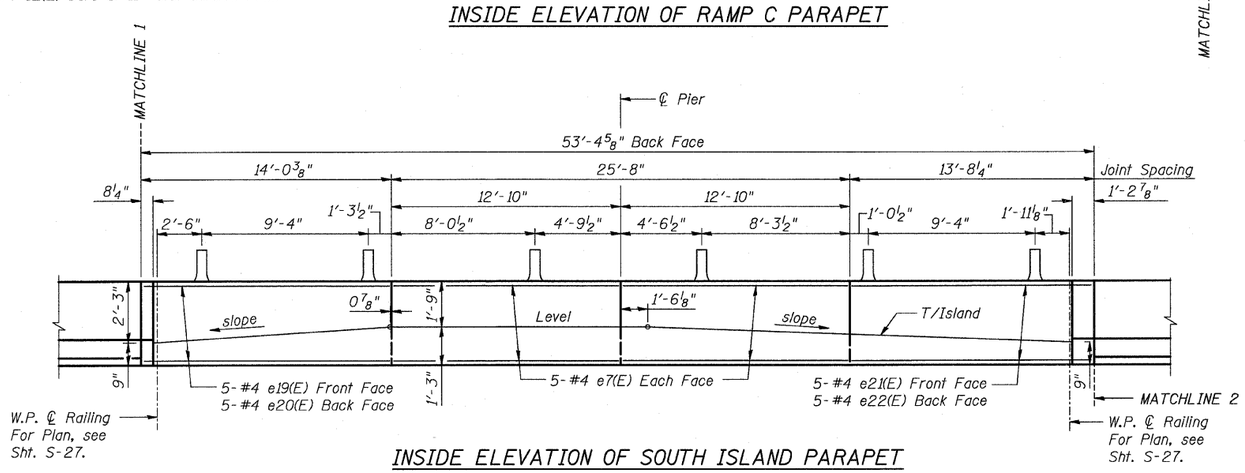
DESIGNED: BTO DRAWN: BTO
DATE: 03/06 CHECKED: JAW CHECKED: JAW

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	60-10K-1,60-10HB	MADISON	420	247
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

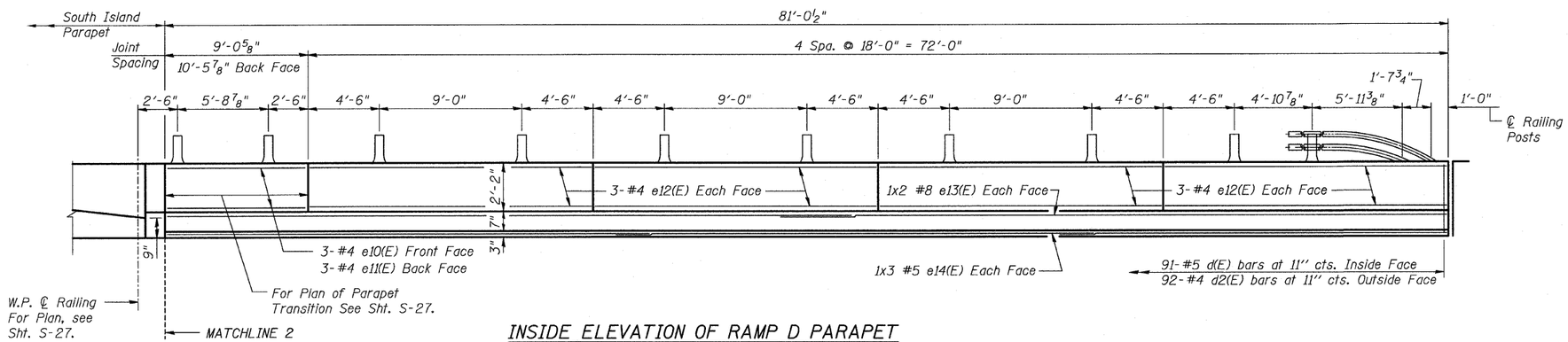
CONTRACT NO. 76709



INSIDE ELEVATION OF RAMP C PARAPET



INSIDE ELEVATION OF SOUTH ISLAND PARAPET



INSIDE ELEVATION OF RAMP D PARAPET

MIN. BAR LAP

#5 - 2'-2"
#8 - 4'-6"

REVISIONS NAME	DATE

SHT. S-29 OF S-68

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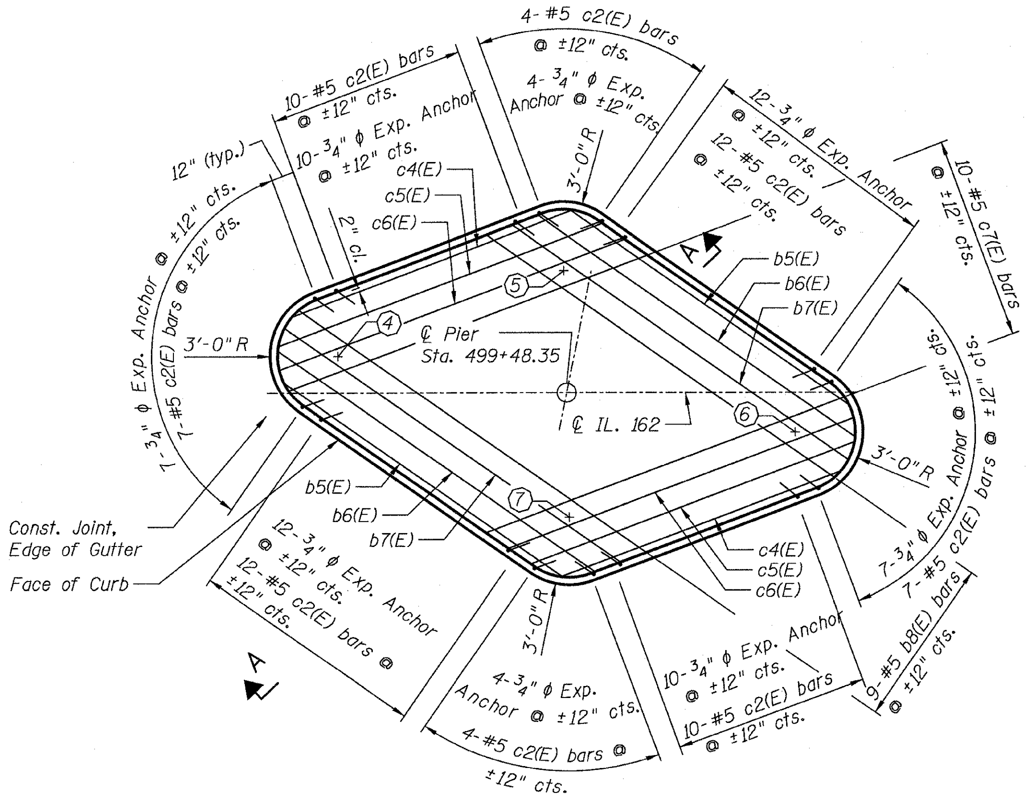
ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STATION 499+48.35
STRUCTURE NO. 060-0338
PARAPET ELEVATIONS
RAMPS B, C, & SOUTH ISLAND

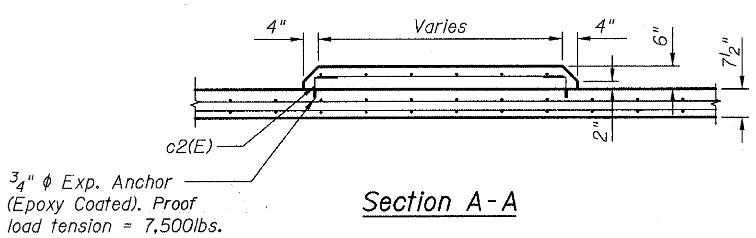
DESIGNED: BTO DRAWN: BTO
DATE: 03/06 CHECKED: JAW CHECKED: JAW

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	60-10K-1,60-10HB	MADISON	420	248
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

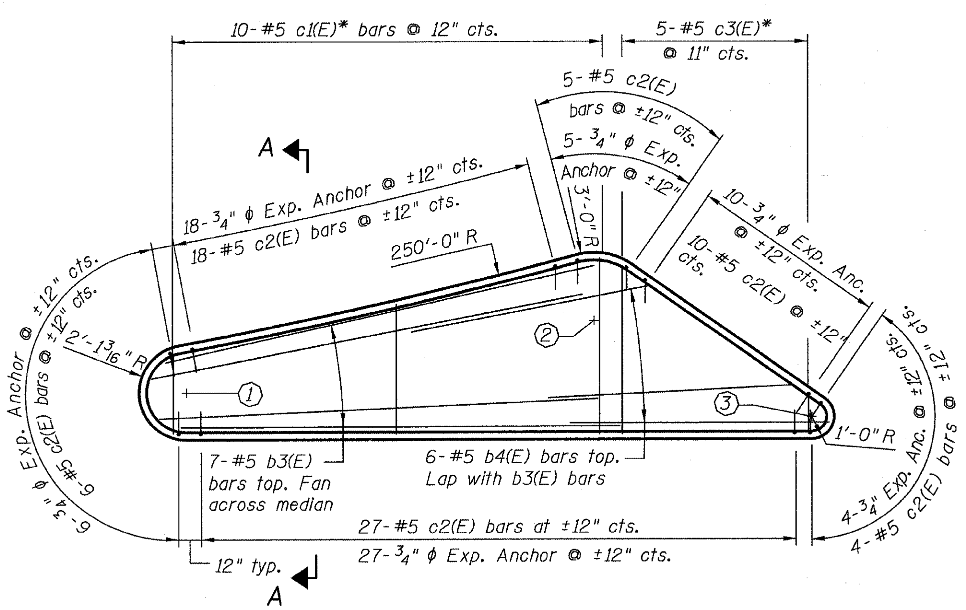
CONTRACT NO. 76709



MEDIAN 2 PLAN



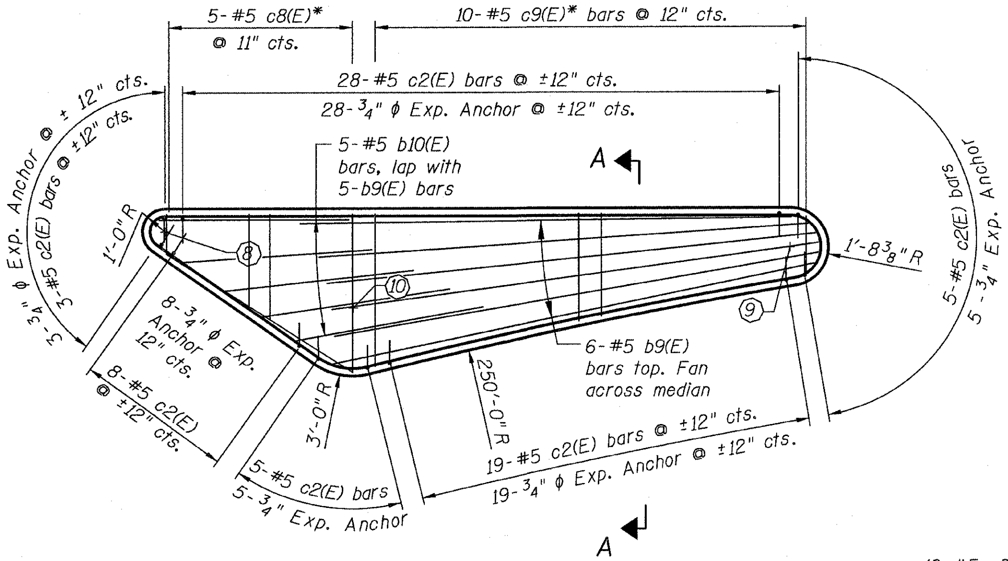
Section A-A



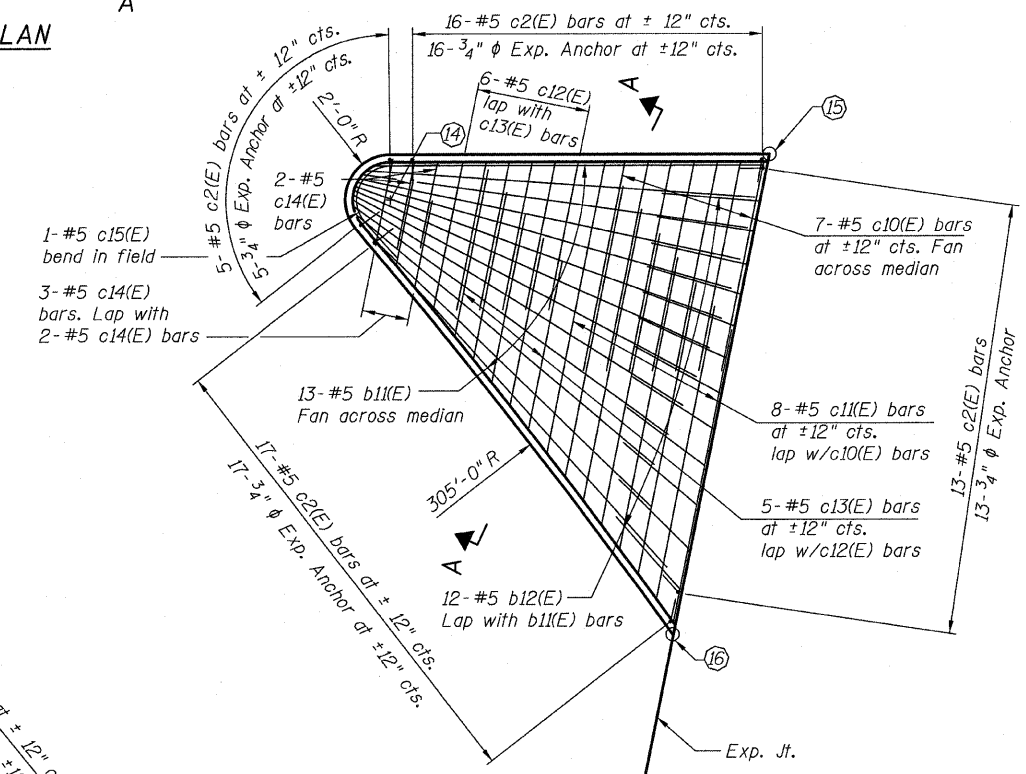
MEDIAN 1 PLAN

TABLE A
CENTER OF RADIUS & EDGE OF MEDIAN FACE

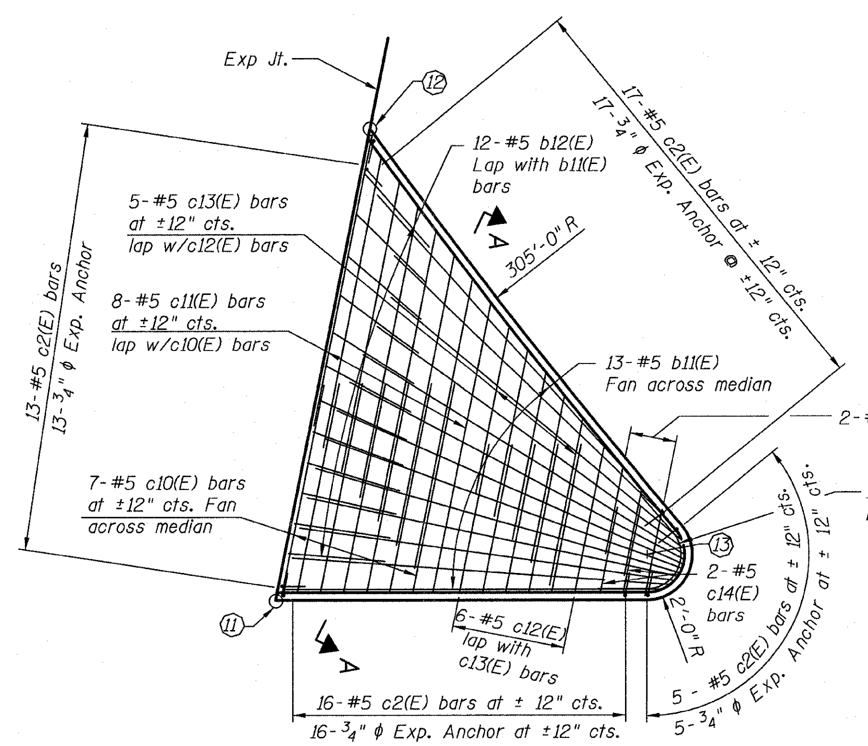
Point	℄ IL 162 STA.	℄ IL 162 OFFSET
1	498+67.42	15.90 ft Rt.
2	498+85.45	12.73 ft Rt.
3	498+95.08	17.00 ft Rt.
4	499+38.24	1.68 ft Lt.
5	499+48.24	5.44 ft Lt.
6	499+58.47	1.68 ft Rt.
7	499+48.47	5.44 ft Rt.
8	500+01.64	17.00 ft Lt.
9	500+29.28	16.30 ft Lt.
10	500+09.95	13.65 ft Lt.
11	498+77.01	47.00 ft Lt.
12	498+81.19	67.76 ft Lt.
13	498+93.40	49.00 ft Lt.
14	500+03.04	49.00 ft Lt.
15	500+19.69	47.00 ft Rt.
16	500+15.43	68.08 ft Rt.



MEDIAN 3 PLAN



MEDIAN 5 PLAN



MEDIAN 4 PLAN

NOTES:

1. ① Indicates center of median face radius or edge of median face. See Table A this sheet.
2. Reinforcement bars designated (E) shall be epoxy coated.
3. For Bill of Material, see Sht. S-31.
4. * - Order bars full length. Cut to fit skew and use remainder of bars in opposite end.

SHT. S-30 OF S-68

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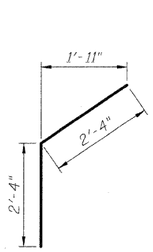
REVISIONS	
NAME	DATE

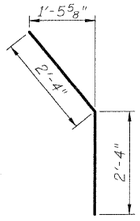
ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STATION 499+48.35
STRUCTURE NO. 060-0338

SUPERIMPOSED MEDIAN DETAILS

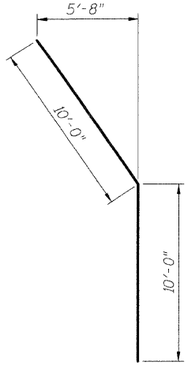
DESIGNED: BTO DRAWN: BTO
DATE: 03/06 CHECKED: JAW CHECKED: JAW



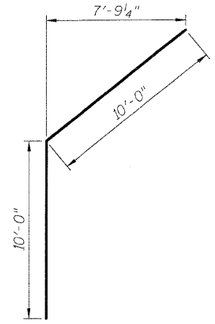
BAR a2(E)



BAR a10(E)



BAR b18(E)



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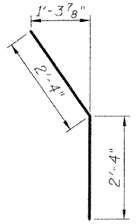

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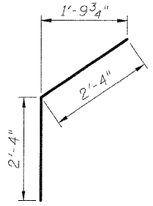

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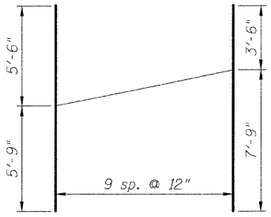

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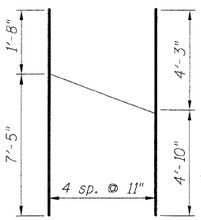
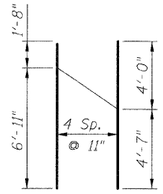
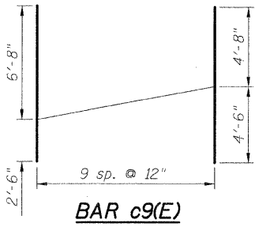


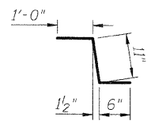
BAR c3(E)



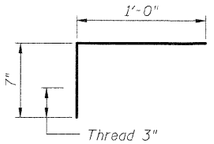
BAR c8(E)



BAR c9(E)



BAR c(E)



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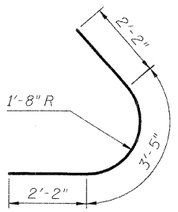

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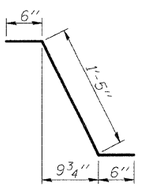
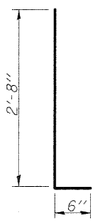
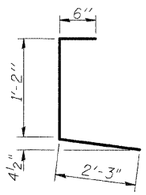


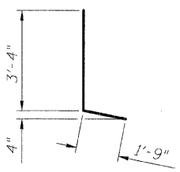
BAR d1(E)



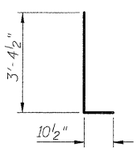
BARS d(E) & d2(E)



BAR d3(E)

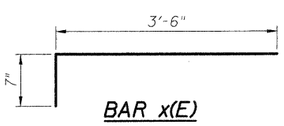


BAR d4(E)



BAR d5(E)

BAR d6(E)



BAR x(E)

SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	1,164	5	26'-2"	
a1(E)	1,164	5	24'-6"	
a2(E)	224	5	4'-8"	
a3(E)	18	5	26'-7"	
a4(E)	18	5	24'-8"	
a5(E)	86	5	47'-2"	
a6(E)	65	5	44'-6"	
a7(E)	12	5	30'-3"	
a8(E)	61	5	47'-2"	
a9(E)	46	5	44'-6"	
a10(E)	154	5	4'-8"	
a11(E)	89	5	35'-7"	
a12(E)	80	5	38'-1"	
a13(E)	12	5	26'-1"	
a14(E)	63	5	35'-9"	
a15(E)	58	5	38'-1"	
a16(E)	1	5	45'-0"	
a17(E)	2	5	44'-6"	
a18(E)	556	5	38'-2"	
a19(E)	556	5	35'-8"	
a20(E)	1	5	45'-0"	
a21(E)	32	5	1'-6"	
a22(E)	318	6	4'-6"	
b(E)	725	5	34'-0"	
b1(E)	143	6	53'-0"	
b2(E)	924	5	28'-9"	
b3(E)	7	5	20'-5"	
b4(E)	6	5	11'-10"	
b5(E)	2	5	15'-0"	
b6(E)	2	5	17'-1"	
b7(E)	2	5	18'-1"	
b8(E)	9	5	18'-9"	
b9(E)	6	5	21'-9"	
b10(E)	5	5	9'-9"	
b11(E)	26	5	16'-10"	
b12(E)	24	5	4'-5"	
b13(E)	10	5	14'-2"	
b14(E)	15	5	15'-1"	
b15(E)	8	5	38'-5"	
b16(E)	10	5	27'-5"	
b17(E)	15	5	14'-3"	
b18(E)	76	5	20'-0"	
b19(E)	64	5	20'-0"	
b20(E)	41	5	31'-5"	
b21(E)	41	5	42'-0"	
b22(E)	16	5	36'-4"	
b23(E)	38	5	31'-8"	
b24(E)	38	5	42'-3"	
b25(E)	96	5	4'-8"	
b26(E)	16	5	36'-11"	
b27(E)	74	5	4'-8"	
b28(E)	31	5	41'-8"	
b29(E)	31	5	41'-2"	
b30(E)	30	5	41'-6"	
b31(E)	30	5	42'-4"	
b32(E)	32	5	42'-3"	

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	60-10K-1,60-10HB	MADISON	420	249
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 76709

Bar	No.	Size	Length	Shape
c(E)	127	5	2'-5"	
c1(E)	10	5	11'-3"	
c2(E)	306	5	1'-7"	
c3(E)	5	5	9'-1"	
c4(E)	2	5	13'-3"	
c5(E)	2	5	15'-3"	
c6(E)	2	5	16'-4"	
c7(E)	10	5	16'-11"	
c8(E)	5	5	8'-7"	
c9(E)	10	5	9'-2"	
c10(E)	14	5	9'-9"	
c11(E)	16	5	13'-1"	
c12(E)	12	5	6'-9"	
c13(E)	10	5	7'-7"	
c14(E)	10	5	3'-10"	
c15(E)	2	5	7'-9"	
c16(E)	67	5	14'-8"	
d(E)	342	5	3'-2"	
d1(E)	342	5	2'-5"	
d2(E)	346	4	3'-2"	
d3(E)	346	4	3'-11"	
d4(E)	115	4	5'-1"	
d5(E)	111	6	4'-3"	
d6(E)	124	4	2'-0"	
e(E)	48	4	14'-9"	
e1(E)	4	8	37'-6"	
e2(E)	6	5	24'-11"	
e3(E)	3	4	9'-8"	
e4(E)	3	4	10'-5"	
e5(E)	5	4	14'-0"	
e6(E)	5	4	14'-8"	
e7(E)	40	4	12'-7"	
e8(E)	5	4	12'-3"	
e9(E)	5	4	13'-5"	
e10(E)	6	4	8'-10"	
e11(E)	6	4	10'-3"	
e12(E)	48	4	17'-9"	
e13(E)	8	8	43'-5"	
e14(E)	12	5	28'-11"	
e15(E)	4	8	38'-1"	
e16(E)	6	5	25'-4"	
e17(E)	3	4	10'-10"	
e18(E)	3	4	11'-8"	
e19(E)	5	4	13'-1"	
e20(E)	5	4	13'-9"	
e21(E)	5	4	12'-2"	
e22(E)	5	4	13'-5"	
s(E)	32	5	4'-0"	
x(E)	450	5	4'-1"	
Reinforcement Bars, Epoxy Coated			Pound	233,410
Concrete Superstructure			Cu. Yds.	858

NOTES:

1. Reinforcement bars designated (E) shall be Epoxy Coated.
2. All Expansion Anchors shall be Epoxy Coated and included in the cost of "Reinforcement Bars, Epoxy Coated".

SHT. S-31 OF S-68

STV Incorporated
Engineers/Architects/Planners/Construction Managers
200 W. Monroe Street, Suite 1650
Chicago, IL 60606-5015
312/553-0055, FAX 312/553-0661

REVISIONS NAME	DATE

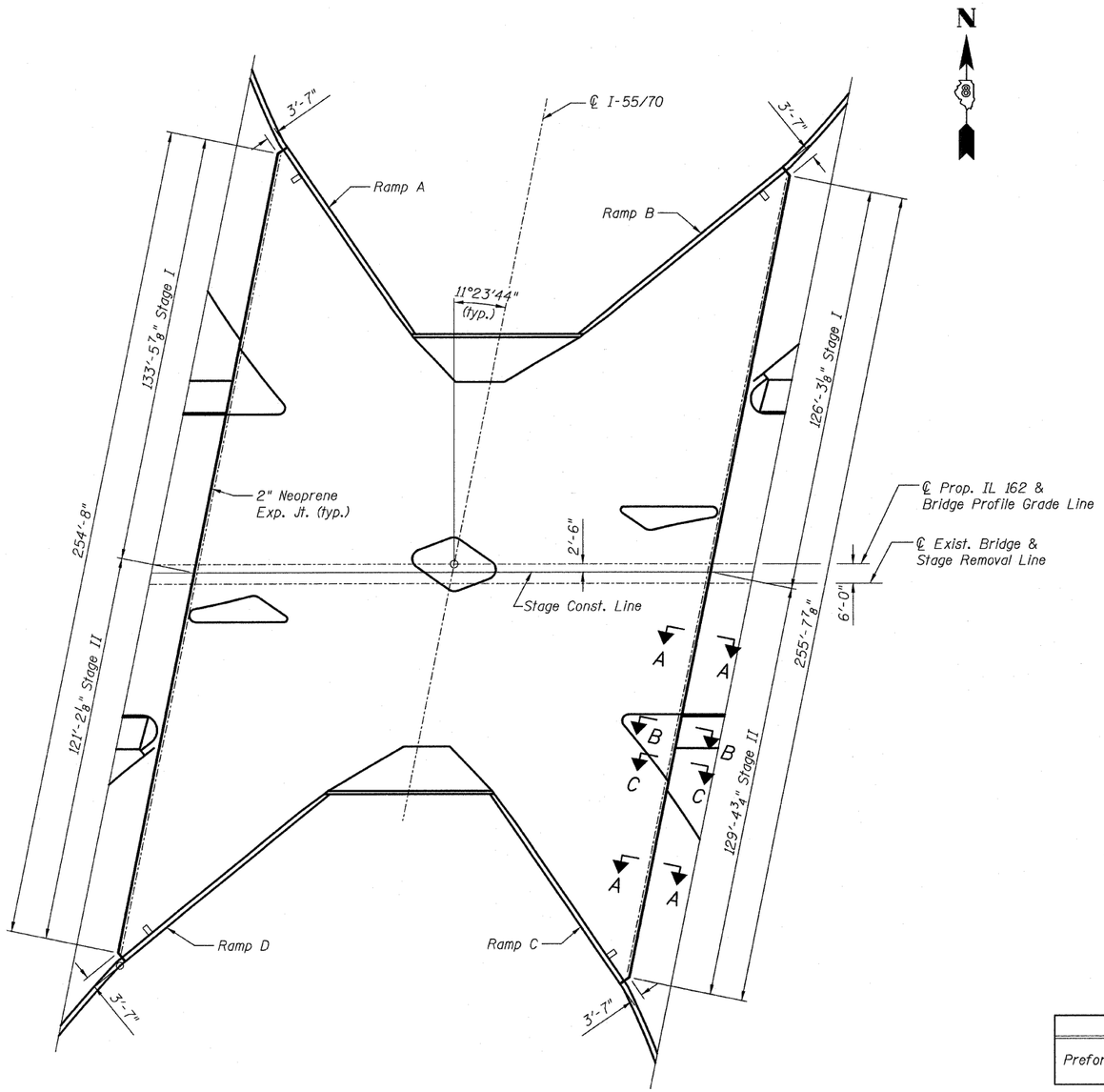
ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STATION 499+48.35
STRUCTURE NO. 060-0338

SUPERSTRUCTURE B.O.M.

DESIGNED: BTO DRAWN: BTO
DATE: 03/06 CHECKED: JAW CHECKED: JAW

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	60-10K-1,60-10HB	MADISON	420	250
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

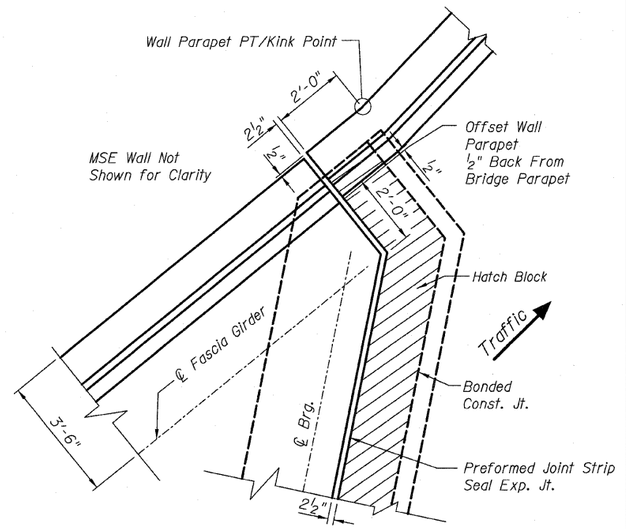
CONTRACT NO. 76709



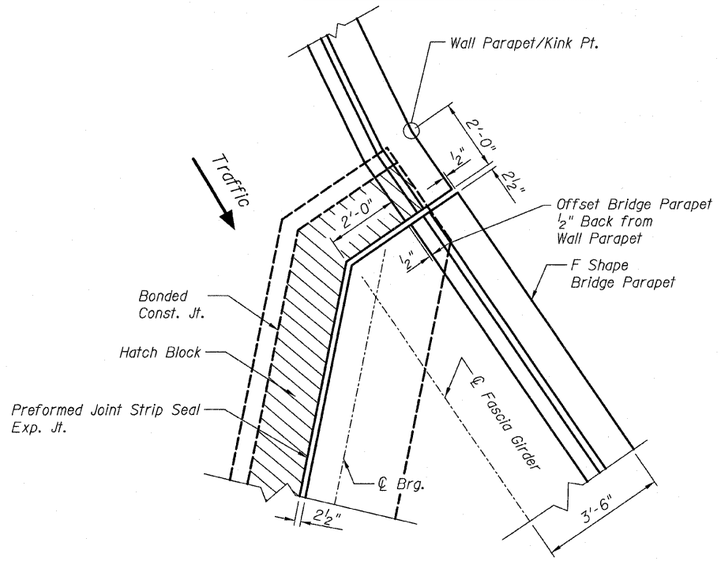
PLAN

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	524



PARAPET DETAIL (RAMPS B&D)



PARAPET DETAIL (RAMPS A&C)

NOTES:

1. For Expansion Joint Installation details, see sht S-33.
2. See Sht. S-24 for sections A-A, B-B, & C-C.
3. See Shts. S-54 & S-56 for Medians 4 & 5 Abut. backwall details.

SHT. S-32 OF S-68

STV Incorporated
Engineers/Architects/Planners/Construction Managers
200 W. Monroe Street, Suite 1650
Chicago, IL. 60606-5015
312/553-0655, FAX 312/553-0661

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STATION 499+48.35
STRUCTURE NO. 060-0338

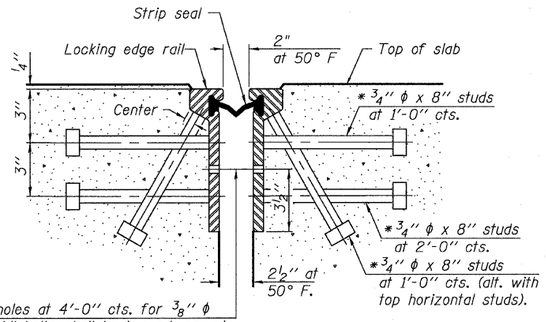
EXPANSION JOINT DETAILS

DESIGNED: BTO DRAWN: BTO
DATE: 03/06 CHECKED: JAN CHECKED: JAN

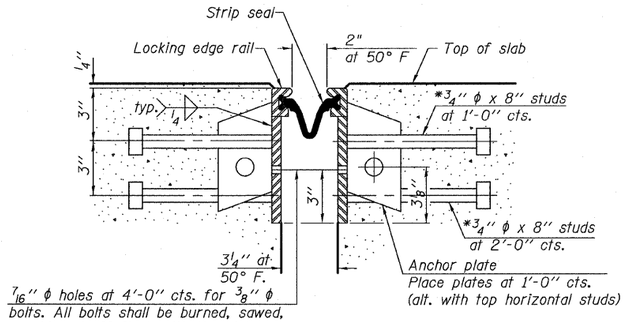
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	60-10K-1,60-10HB	MADISON	420	251
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 76709

* Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.



SECTION THRU ROLLED RAIL JOINT



SECTION THRU WELDED RAIL JOINT

Notes:

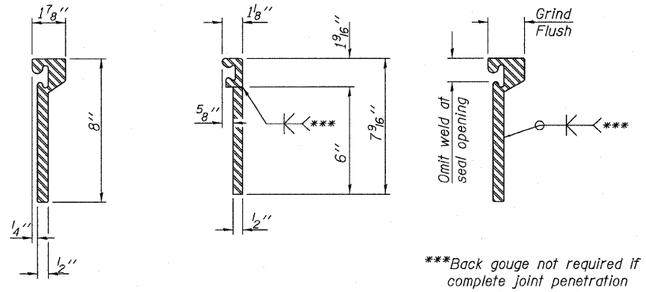
The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of 4 inches.

The height and thickness of the Locking Edge Rails shown are minimum dimensions. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed. Locking Edge Rails may be spliced at slope discontinuities and stage construction joints.

The manufacturer's recommended installation methods shall be followed.

The joint opening and deck dimensions detailed on the superstructure are based on a rolled rail expansion joint. If the Contractor elects to use the welded rail expansion joint, the opening and deck dimensions shall be modified according to the dimensions detailed on this sheet. Required modifications shall be made at no additional cost to the State.

All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.



***Back gouge not required if complete joint penetration is verified by mock-up.

ROLLED EXTRUDED RAIL

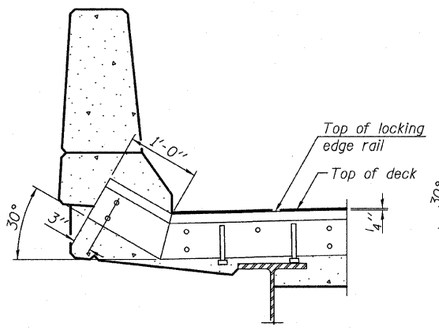
WELDED RAIL

ANCHOR PL (for welded rail)

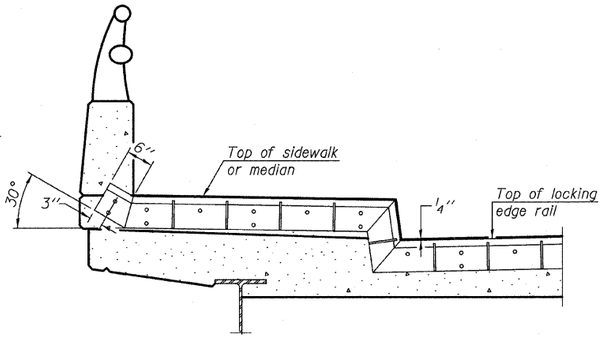
LOCKING EDGE RAIL SPLICE

The inside of the locking edge rail groove shall be free of weld residue.

LOCKING EDGE RAILS

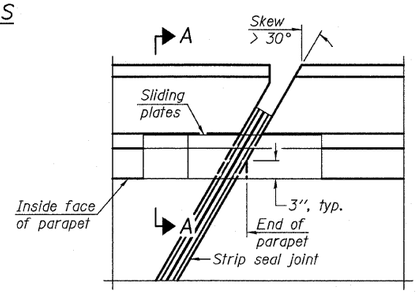


AT PARAPET

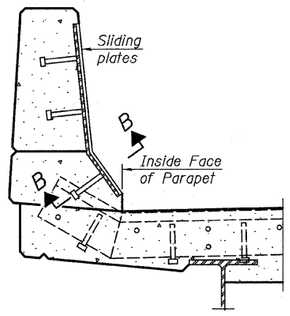


AT SIDEWALK OR MEDIAN

Shorter plates with a single row of studs at 12" cts. may be necessary on medians which are shallower than 9". See manufacturer's recommendation.



PLAN

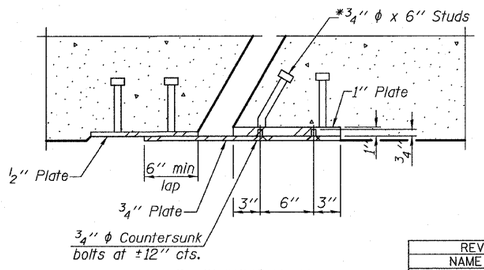


SECTION A-A

POINT BLOCK DETAILS

(for skews > 30°)

TYPICAL END TREATMENTS



SECTION B-B

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	524

SHT. S-33 OF S-68

REVISIONS NAME	DATE

STV Incorporated
Engineers/Architects/Planners/Construction Managers
200 W. Monroe Street, Suite 1650
Chicago, IL. 60606-5017
312/553-0655, FAX 312/553-0661

ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STATION 499+48.35
STRUCTURE NO. 060-0338

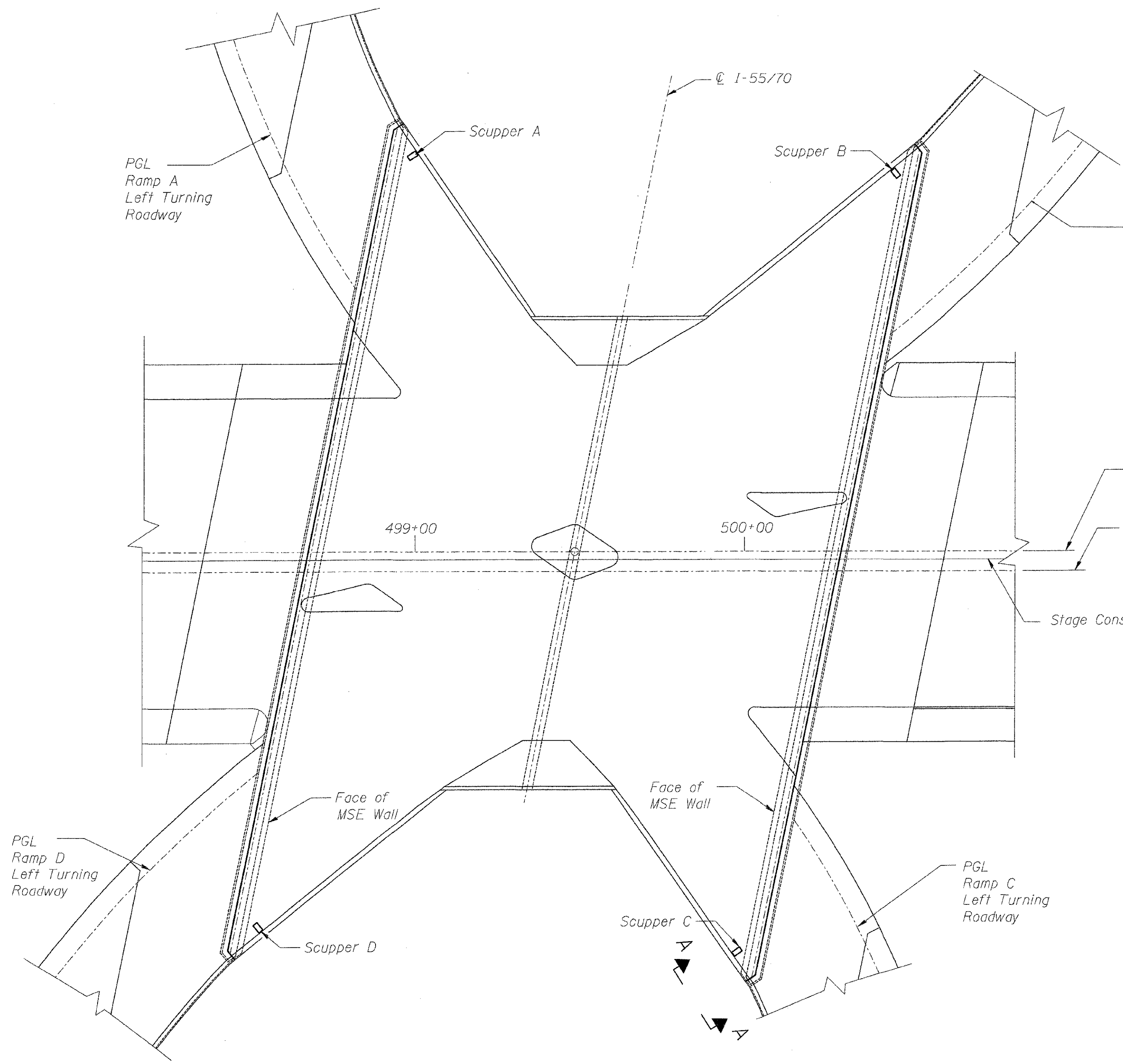
PREFORMED JOINT STRIP SEAL

DESIGNED: BTO DRAWN: BTO
DATE: 03/06 CHECKED: BG CHECKED: BG

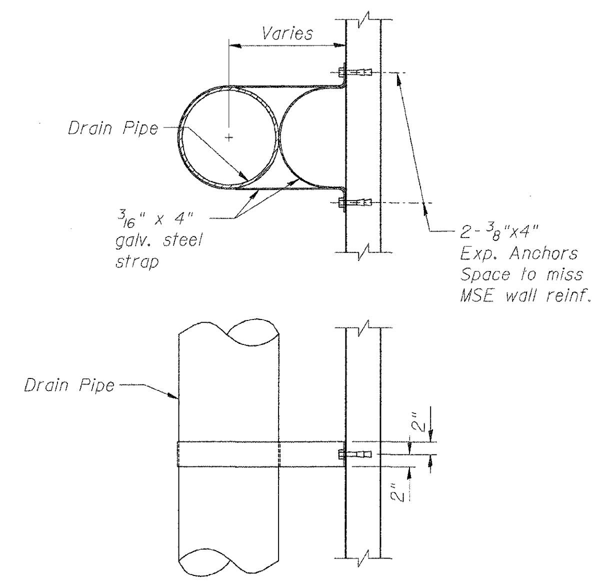
EJ-SSJ 10-1-08

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	60-10K-1,60-10HB	MADISON	420	252
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

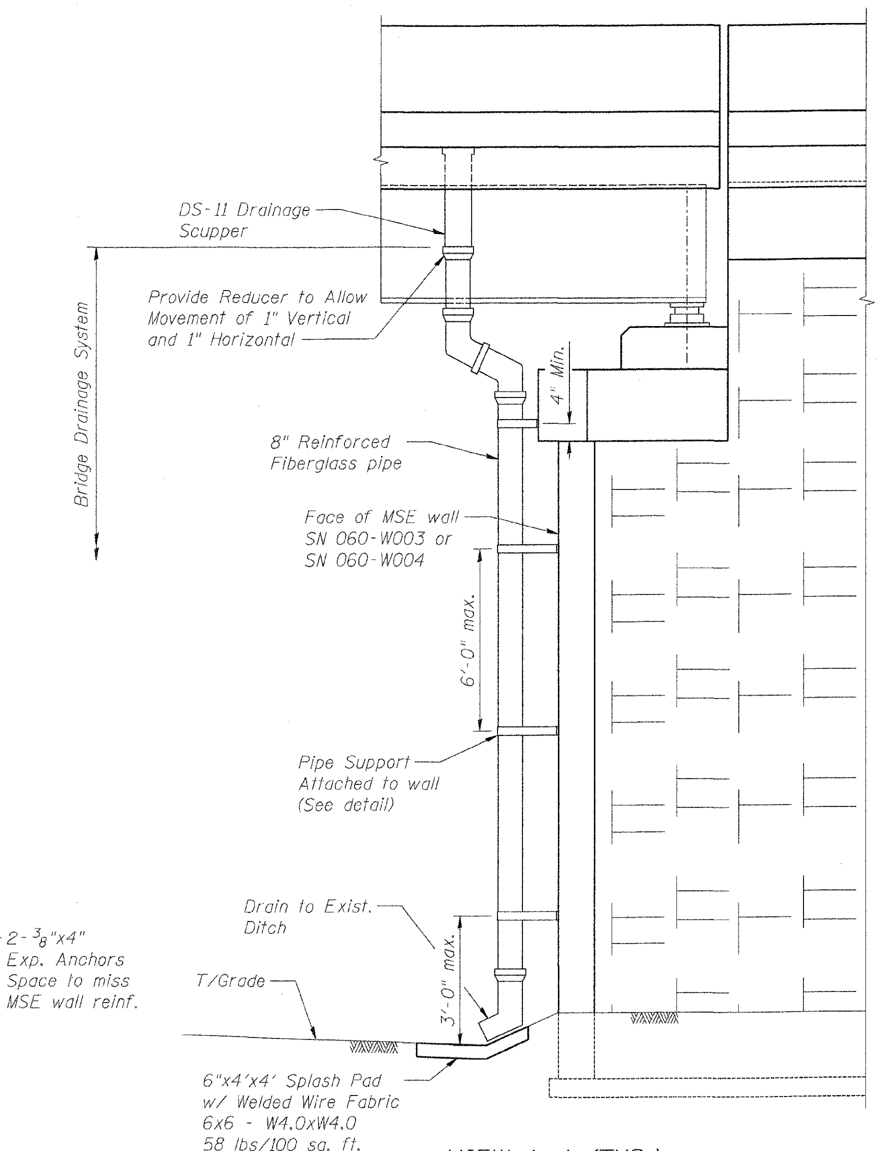
CONTRACT NO. 76709



PLAN



PIPE BRACKET DETAIL AT MSE WALL



VIEW A-A (TYP.)

BILL OF MATERIAL

Item	Unit	Total
Drainage System	L.S.	1

Scupper	Station	Offset
A	49900.65	121.13 (L)
B	50044.68	116.41 (L)
C	49995.84	122.11 (R)
D	49852.01	116.42 (R)

SCUPPER LOCATION TABLE

NOTES:

1. See S-24 for section thru ramp parapet.
2. For Scupper locations, see deck plans S-17 thru S-20.

SHT. S-34 OF S-68

STV Incorporated
Engineers/Architects/Planners/Construction Managers
200 W. Monroe Street, Suite 1650
Chicago, IL 60606-5015
312/553-0655, FAX 312/553-0661

REVISIONS	
NAME	DATE

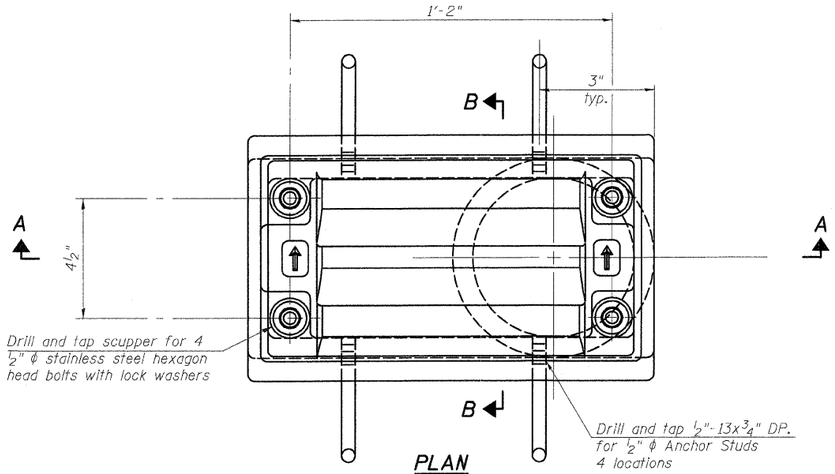
ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STATION 499+48.35
STRUCTURE NO. 060-0338

BRIDGE DRAINAGE SYSTEM

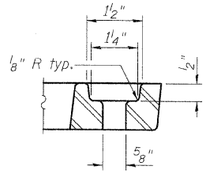
DESIGNED: JAN   DRAWN: BTO
DATE: 03/06   CHECKED: AWH   CHECKED: JAN

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	60-10K-1,60-10HB	MADISON	420	253
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

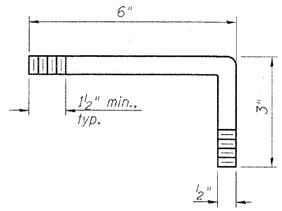
CONTRACT NO. 76709



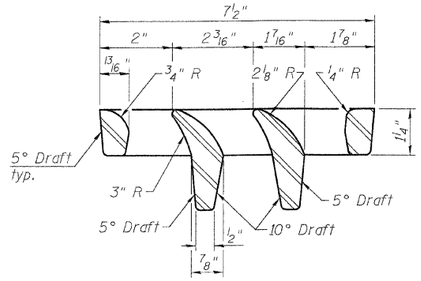
PLAN



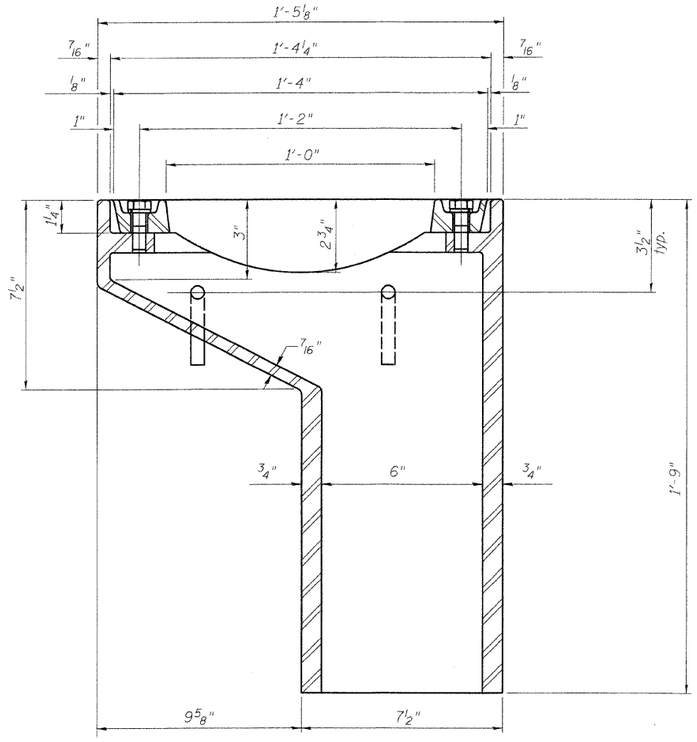
BOLT HOLE DETAIL



ANCHOR STUD DETAIL

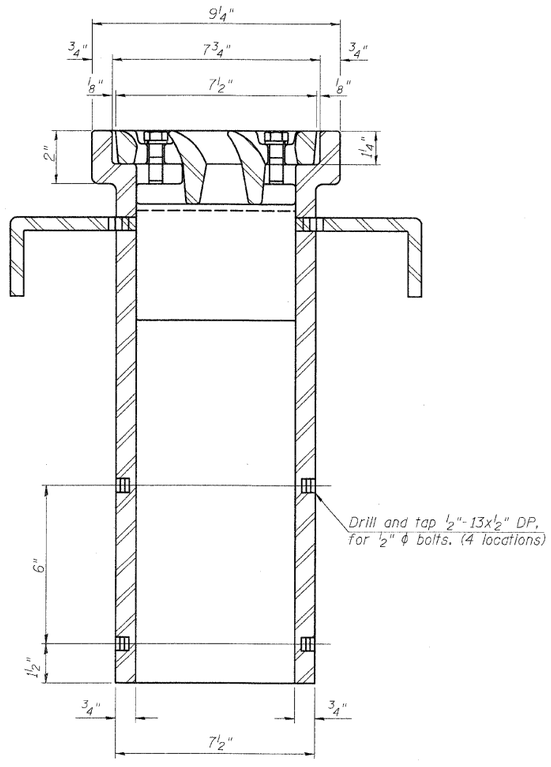


VANE GRATE DETAIL



SECTION A-A

See Sht. S-24 for scupper location relative to parapet.



SECTION B-B

NOTES:

All cast iron parts shall be gray iron conforming to the requirements of AASHTO M 105, Class 35B.

Bolts, anchor studs, washers and nuts shall conform to the requirements of ASTM A 307 and shall be galvanized according to AASHTO M 232.

The grate, frame and downspout shall be galvanized according to AASHTO M 111 and ASTM A 385. Downspouts located on the exterior side of a painted steel fascia beam shall be painted with the finish coat specified for the exterior side of the fascia beam.

As an alternate, bolts, anchor studs, washers and nuts may be stainless steel according to Article 1006.29(d) of the Standard Specifications.

Structural steel weldments of equal sections and of the same configuration may be substituted for cast iron. Fillet or full penetration welds shall be used for the weldments. Details shall be submitted to the Engineer for approval.

The Contractor shall take appropriate measures to assure that Protective Coat is not applied to the scupper.

Cost of the Grate, Frame, Downspout, Anchor Studs, Bolts, Washers and Nuts including complete installation of the scupper shall be paid for at the contract unit price each for Drainage Scupper, DS-11.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scupper, DS-11	Each	4

8-11-02

SHT. S-35 OF S-68

REVISIONS NAME	DATE

STV Incorporated
Engineers/Architects/Planners/Construction Managers
200 W. Monroe Street, Suite 1650
Chicago, IL. 60606-5015
312/553-0655, FAX 312/553-0661

ILLINOIS DEPARTMENT OF TRANSPORTATION

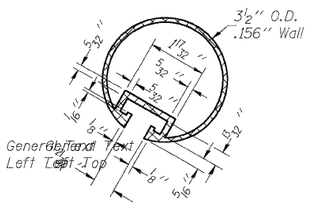
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STATION 499+48.35
STRUCTURE NO. 060-0338

DRAINAGE SCUPPER, DS 11

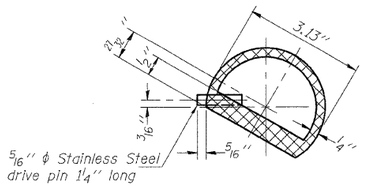
DESIGNED: BTO DRAWN: BTO
DATE: 03/06 CHECKED: JAN CHECKED: JAN

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	60-10K-1,60-10HB	MADISON	420	254
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 76709

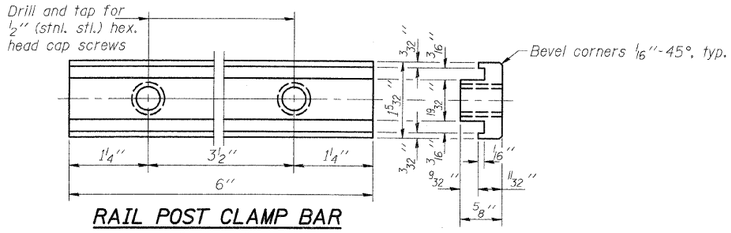


SECTION THRU TOP RAIL



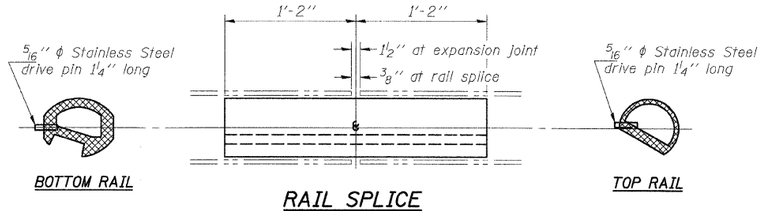
SECTION THRU SPLICE

For Top Rail



RAIL POST CLAMP BAR

For Top Rail



RAIL SPLICE

Notes: All Posts shall be normal to parapet.

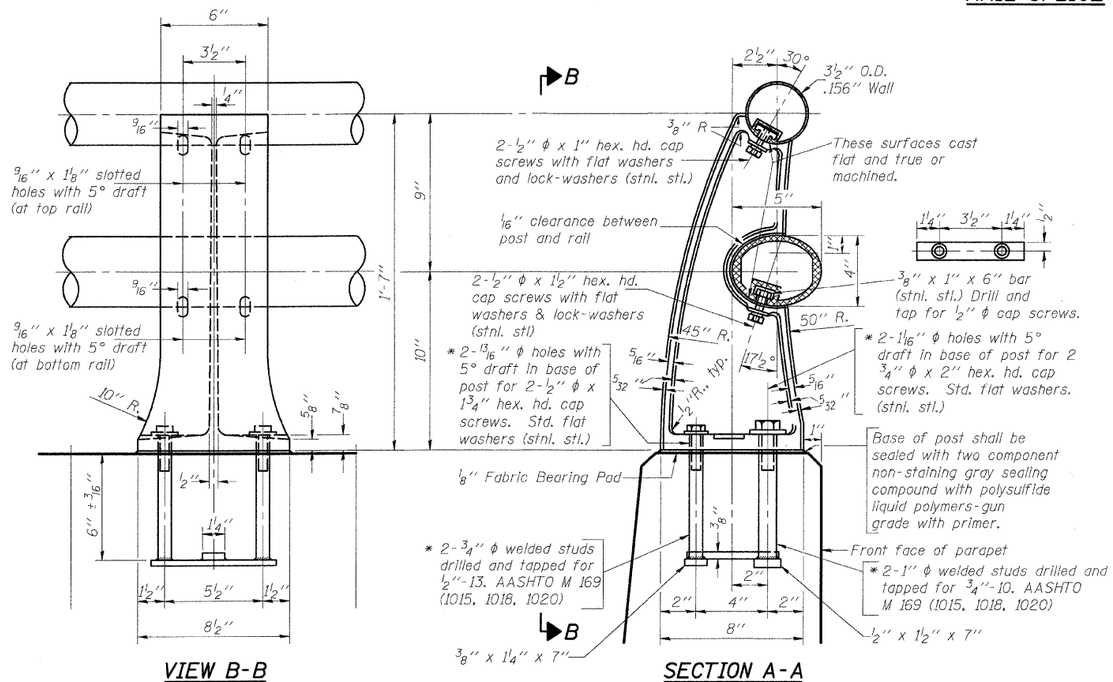
All Aluminum Alloy Extruded Rail shall be supplied in modular lengths of 30 feet, except at the end of bridge or over open joints in bridge deck where the rail shall be attached to a minimum of 2 posts. If the rail is on a horizontal curve of 2300 foot radius or less, the modular lengths may be reduced but shall be attached to a minimum of 2 posts.

All joints in rail shall be spliced per detail.

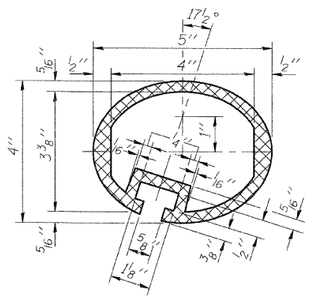
Provide 1-⅛" and 2-1/16" Aluminum Shims for 25% of the Posts. Rail elements shall be parallel to Grade-high spots will be ground and low spots shimmed.

Railing shall be according to Section 509 of the Standard Specifications, except as noted, and will be paid for at the contract unit price per foot for ALUMINUM RAILING, TYPE L.

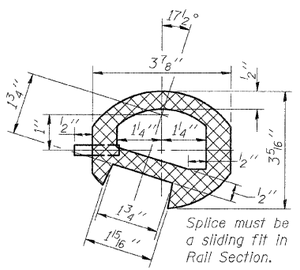
Aluminum alloy rail shall conform to ASTM B 221 alloy 6061-T6 or 6351-T5 with min. yield 35 ksi, min. tensile 38 ksi, and elongation of 10% in 2 inches.



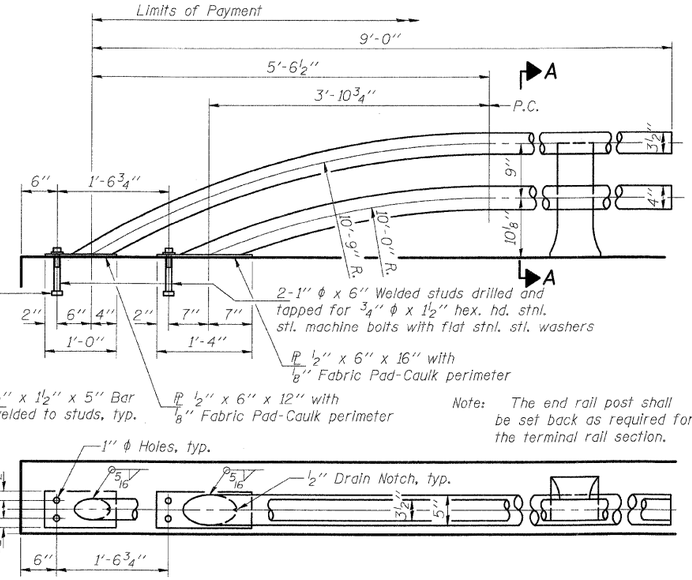
RAIL POST DETAILS



SEC. THRU ELLIPTICAL RAIL SECTION



SEC. THRU SPLICE



RAIL TERMINAL SECTION

BILL OF MATERIAL

Item	Unit	Quantity
Aluminum Railing, Type L	Foot	408

TYPE L ALUMINUM RAILING

* In lieu of the cast-in-place anchor device shown, the Contractor has the option of drilling and epoxy grouting stainless steelanchor rods of the same diameter and grade as the specified cap screws. Embedment shall be according to the manufacturer's specifications.

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STATION 499+48.35
STRUCTURE NO. 060-0338

TYPE L RAILING

DESIGNED: BTO DRAWN: BTO
DATE: 03/06 CHECKED: JAN CHECKED: JAN

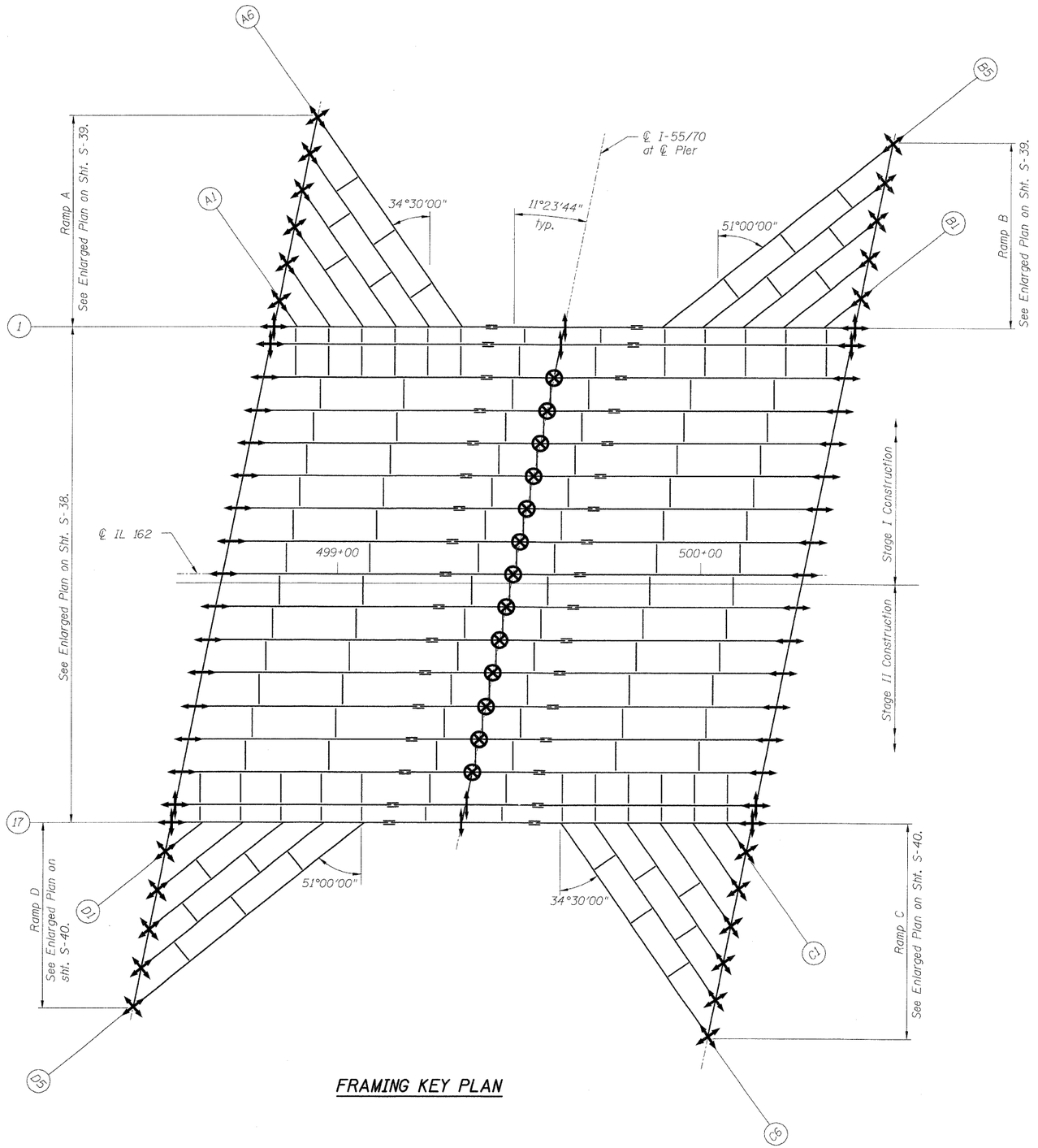
SHT. S-36 OF S-68

STV Incorporated
Engineers/Architects/Planners/Construction Managers
200 W. Monroe Street, Suite 1650
Chicago, IL 60606-5015
312/553-0655, FAX 312/553-0661

R-20 9-01-03

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	60-10K-1,60-10HB	MADISON	420	255
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 76709



FRAMING KEY PLAN

N

8

LEGEND:

- Guided Bearing
- Direction of Movement
- Non-Guided Bearing
- Direction of Movement
- Fixed Bearing

SHT. S-37 OF S-68

REVISIONS NAME	DATE

STV Incorporated
Engineers/Architects/Planners/Construction Managers
200 W. Monroe Street, Suite 1650
Chicago, IL. 60606-5015
312/553-0655, FAX 312/553-0661

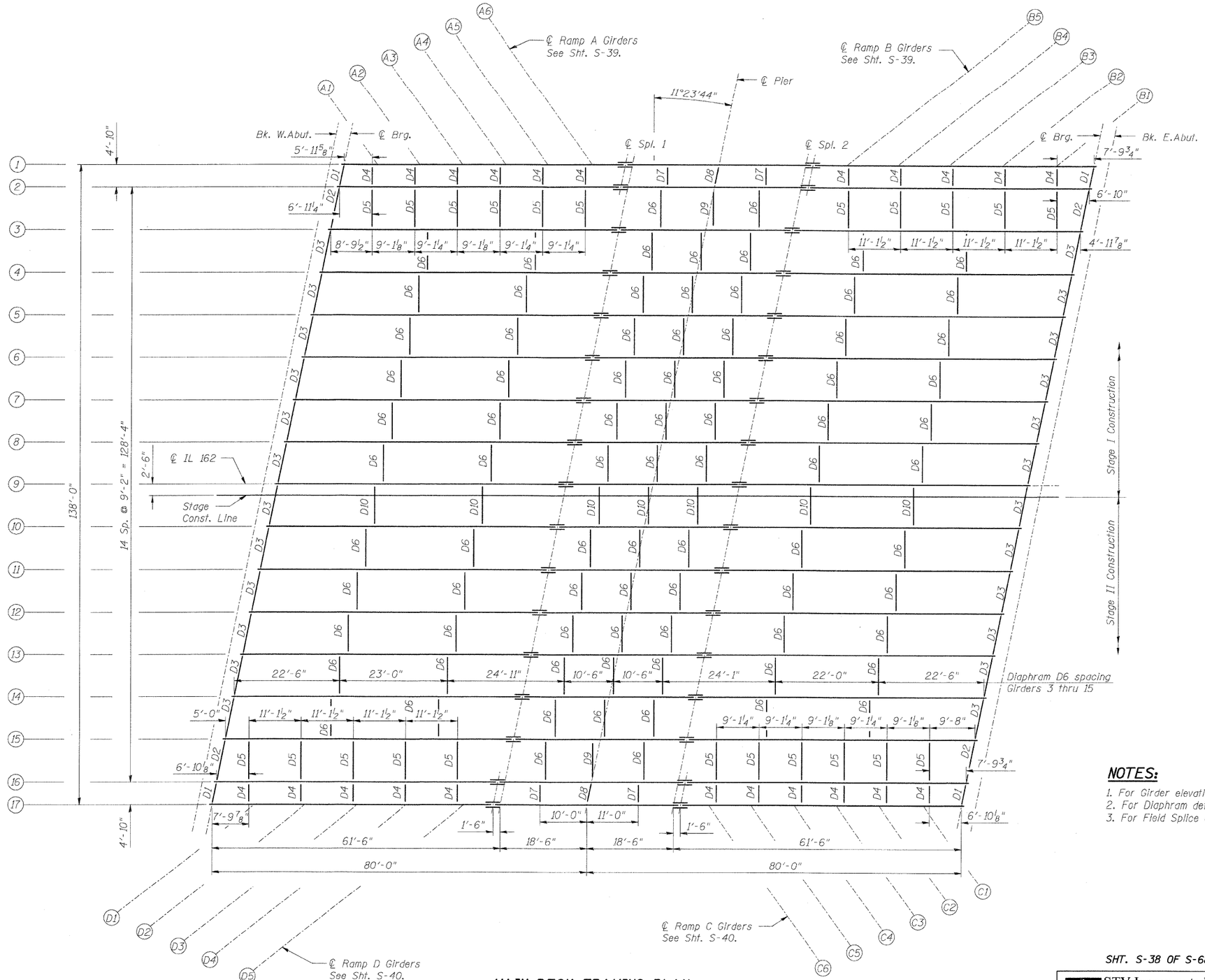
ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STATION 499+48.35
STRUCTURE NO. 060-0338

FRAMING KEY PLAN

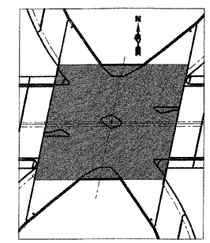
DESIGNED: BTO DRAWN: BTO
DATE: 03/06 CHECKED: AWH CHECKED: JAN

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	60-10K-1,60-10HB	MADISON	420	256
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 76709



MAIN DECK FRAMING PLAN



KEY PLAN

NOTES:

1. For Girder elevations see Shts. S-41 thru S-43.
2. For Diaphram details see Shts S-48 & S-49.
3. For Field Splice details see Sht. S-47.

SHT. S-38 OF S-68

STV Incorporated
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REVISIONS NAME	DATE

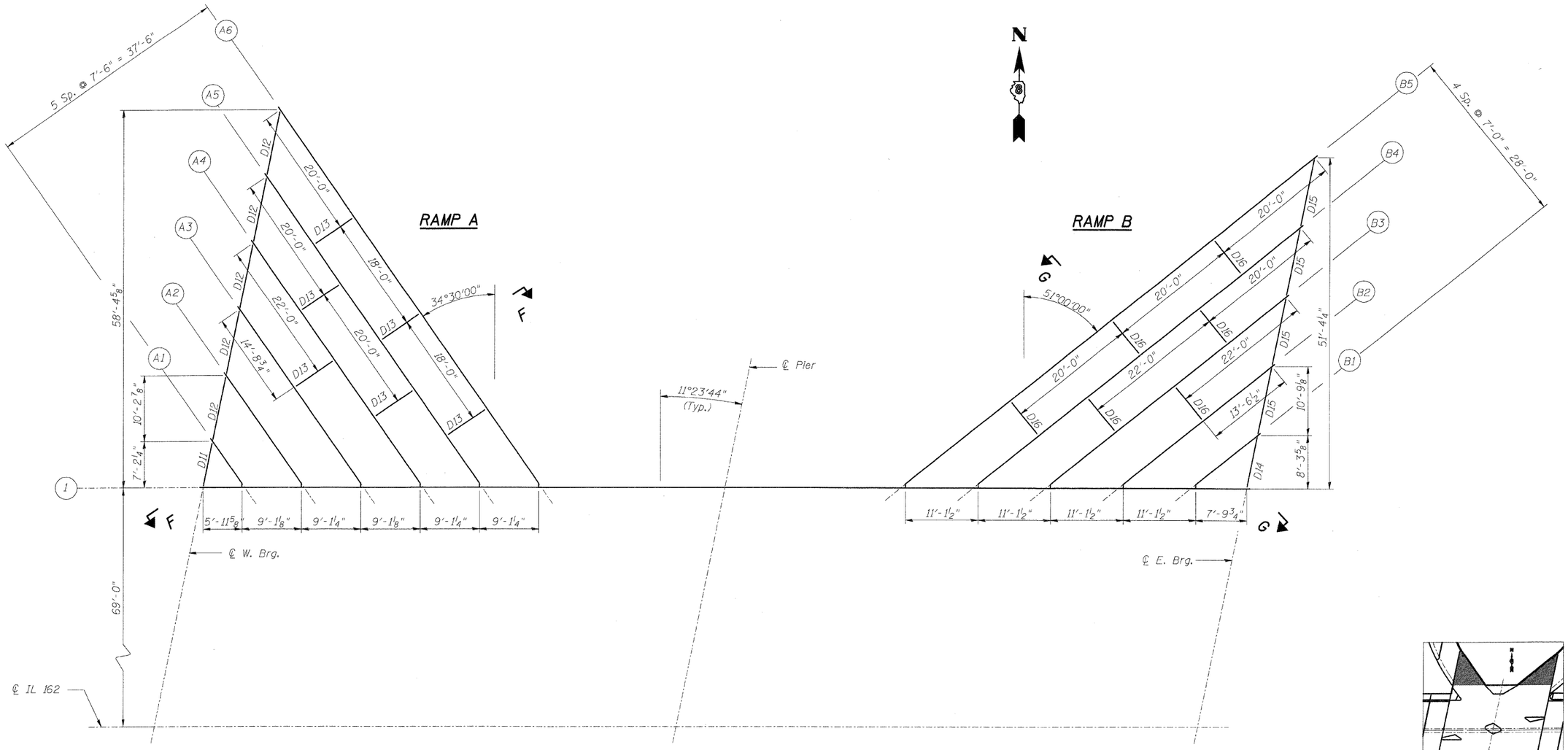
ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STATION 499+48.35
STRUCTURE NO. 060-0338

FRAMING PLAN - IL 162

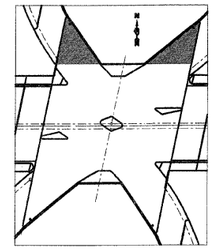
DESIGNED: BTO DRAWN: BTO
DATE: 03/06 CHECKED: JAN CHECKED: JAN

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	60-10K-1,60-10HB	MADISON	420	257
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 76709



RAMP A&B FRAMING PLAN



KEY PLAN

NOTES:

1. For Girder elevations see Sht. S-44.
2. For Diaphram details see Shts. S-48 & S-49.
3. For Sections F-F & G-G, see Sht. S-22.

SHT. S-39 OF S-68

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REVISIONS NAME	DATE

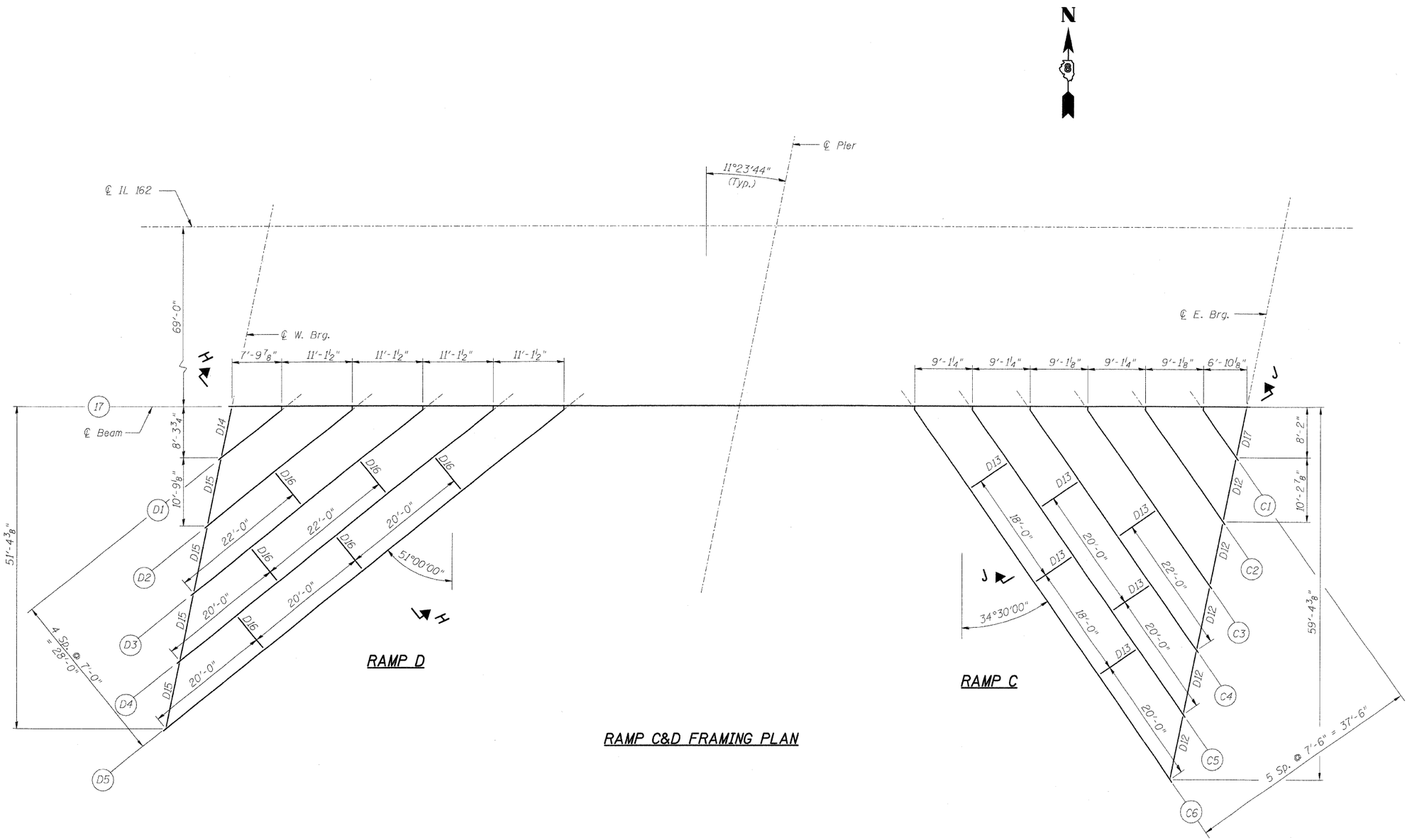
ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STATION 499+48.35
STRUCTURE NO. 060-0338

FRAMING PLAN - RAMPS A & B

DESIGNED: AWH DRAWN: BTO
DATE: 03/06 CHECKED: JAN CHECKED: JAN

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	60-10K-1,60-10HB	MADISON	420	258
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

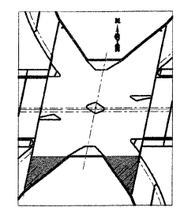
CONTRACT NO. 76709



RAMP D

RAMP C

RAMP C&D FRAMING PLAN



KEY PLAN

NOTES:

1. For Girder elevations see Sht. S-44.
2. For Diaphram details see Shts. S-48 & S-49.
3. For Sections H-H & J-J, see Sht. S-23.

SHT. S-40 OF S-68

STV Incorporated
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200 W. Monroe Street, Suite 1650
Chicago, IL 60606-5015
312/553-0655, FAX 312/553-0661

REVISIONS NAME	DATE

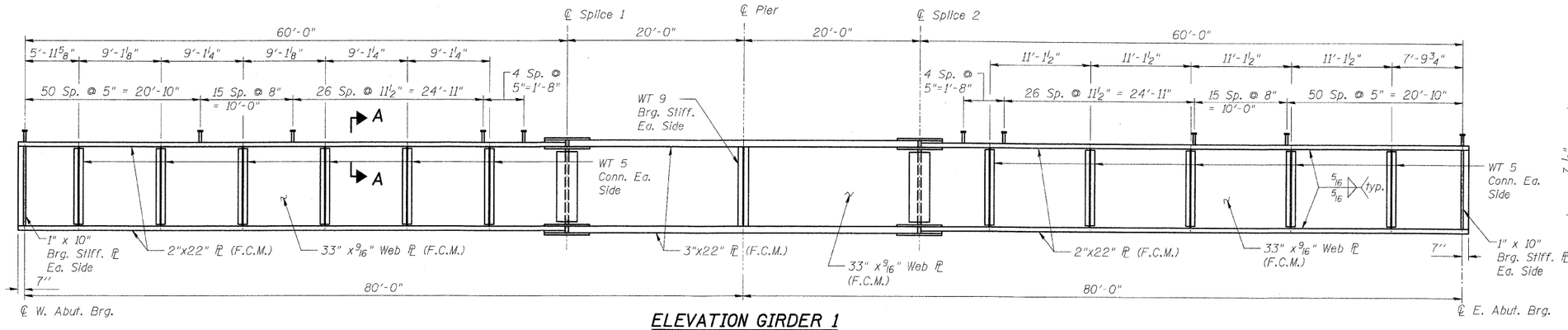
ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STATION 499+48.35
STRUCTURE NO. 060-0338

FRAMING PLAN - RAMPS C & D

DESIGNED: AWH DRAWN: BTO
DATE: 03/06 CHECKED: JAN CHECKED: JAN

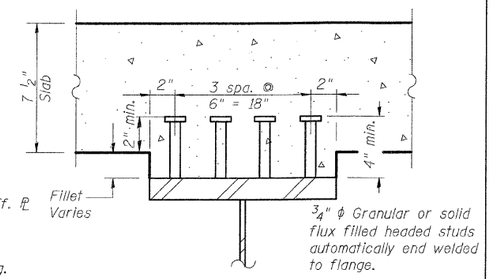
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	60-10K-1,60-10HB	MADISON	420	259
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 76709

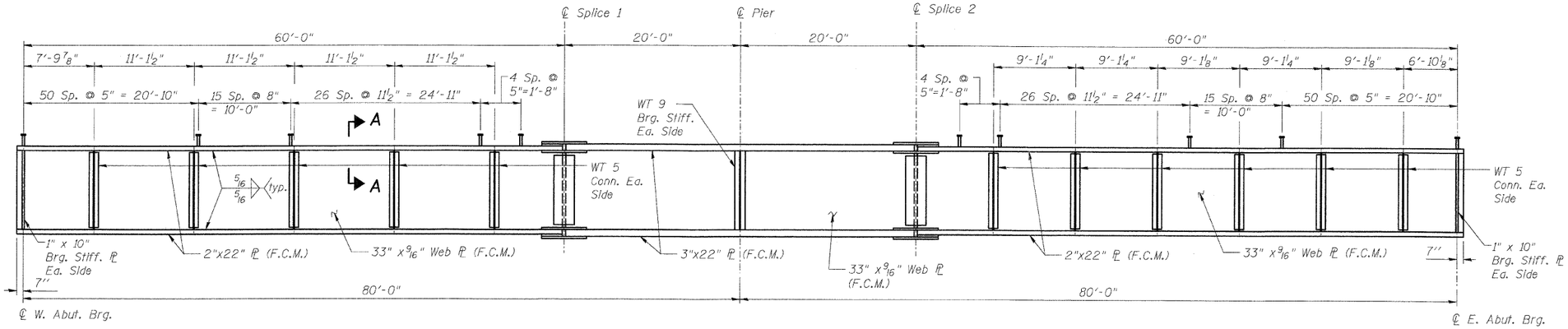


ELEVATION GIRDER 1

(Looking North)



SECTION A-A



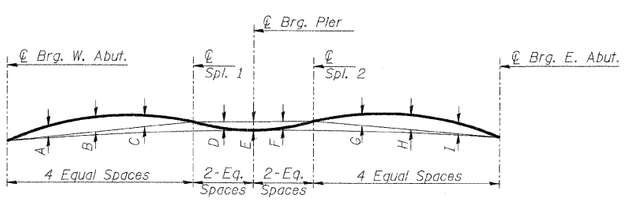
ELEVATION GIRDER 17

(Looking North)

TOP OF WEB ELEVATIONS

(For Fabrication Only)

GIRDER	WEST ABUT. BRG.	℄ SPLICE 1	℄ PIER	℄ SPLICE 2	EAST ABUT. BRG.
1	585.718	585.890	585.877	585.948	585.950
2	585.870	586.088	586.077	586.149	586.114
16	585.662	585.989	586.014	586.122	586.196
17	585.494	585.783	585.810	585.919	586.039



CAMBER DIAGRAM

GIRDER	A	B	C	D	E	F	G	H	I
1	½	5/8	½	⅛	½	⅛	½	5/8	½
2	½	¾	½	⅛	½	⅛	½	¾	½
16	½	¾	½	⅛	½	⅛	½	¾	½
17	½	5/8	½	⅛	½	⅛	½	5/8	½

CAMBER VALUES

(Dimensions in inches)

BILL OF MATERIAL

Item	Unit	Total
Stud Shear Connectors	Each	1536

NOTES:

1. F.C.M. denotes fracture critical member or Member Component.
2. For splice details, see Sht. S-47.
3. For Bearing Stiffener details, see Sht. S-48.
4. For Ramp Beam connection details, see Sht. S-49.
5. All steel shown on this sheet shall be AASHTO M270 Grade 50.

SHT. S-41 OF S-68

STV Incorporated
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Chicago, IL. 60606-5015
312/553-0655, FAX 312/553-0661

REVISIONS NAME	DATE

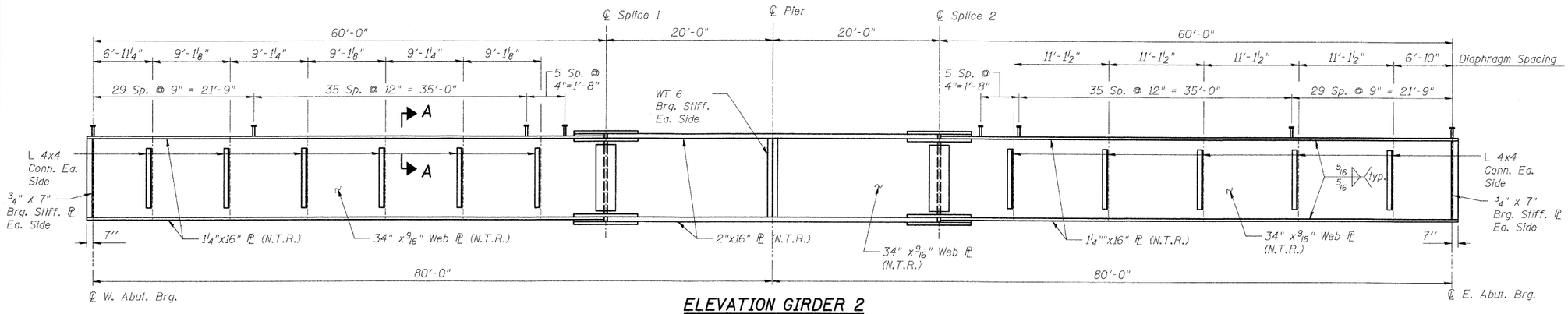
ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STATION 499+48.35
STRUCTURE NO. 060-0338

ELEVATION - GIRDERS 1 & 17

DESIGNED: AWH DRAWN: BTO
DATE: 03/06 CHECKED: JAN CHECKED: JAN

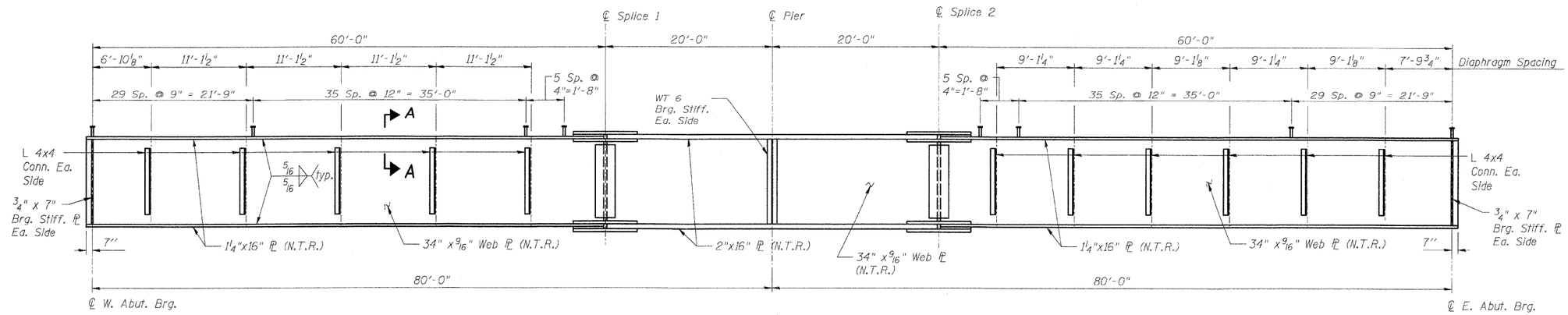
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	60-10K-1,60-10HB	MADISON	420	260
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 76709



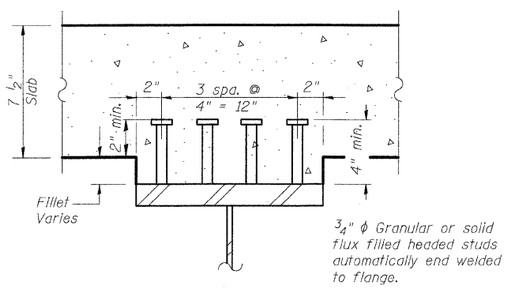
ELEVATION GIRDER 2

(Looking North)



ELEVATION GIRDER 16

(Looking North)



SECTION A-A

BILL OF MATERIAL

Item	Unit	Total
Stud Shear Connectors	Each	1120

NOTES:

1. N.T.R. denotes members to which notch toughness requirements are applicable.
2. For splice details, see Sht. S-47.
3. For Bearing Stiffener details, see Sht. S-48.
4. For Diaphragm details, see Sht. S-48 & S-49.
5. All steel shown on this sheet shall be AASHTO M270 Grade 50.

SHT. S-42 OF S-68

STV Incorporated
Engineers/Architects/Planners/Construction Managers
200 W. Monroe Street, Suite 1550
Chicago, IL. 60606-5015
312/553-0655, FAX 312/553-0661

REVISIONS NAME	DATE

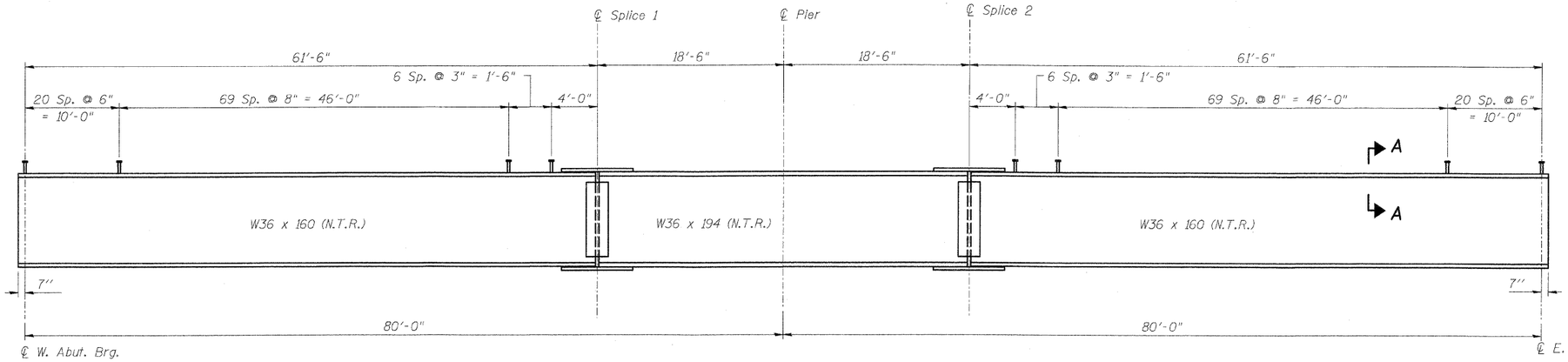
ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STATION 499+48.35
STRUCTURE NO. 060-0338

ELEVATION - GIRDERS 2 & 16

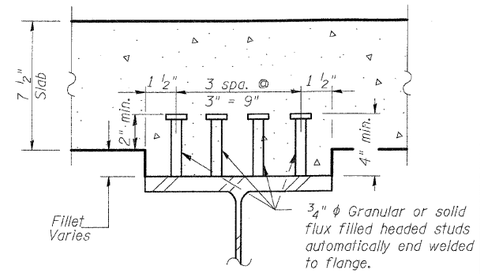
DESIGNED: AWH DRAWN: BTO
DATE: 03/06 CHECKED: JAN CHECKED: JAN

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	60-10K-1,60-10HB	MADISON	420	261
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 76709



ELEVATION GIRDERS 3-15



SECTION A-A

TOP OF GIRDER ELEVATION (GIRDERS 3-15)

(For Fabrication Only)

GIRDER	WEST ABUT. BRG.	℄ SPLICE 1	℄ PIER	℄ SPLICE 2	EAST ABUT. BRG.
3	586.165	586.385	586.415	586.446	586.429
4	586.335	586.562	586.595	586.628	586.620
5	586.504	586.740	586.775	586.811	586.810
6	586.661	586.905	586.942	586.980	586.988
7	586.784	587.036	587.076	587.116	587.132
8	586.907	587.167	587.209	587.252	587.275
9	587.030	587.298	587.343	587.388	587.419
10	586.878	587.153	587.201	587.248	587.287
11	586.725	587.008	587.058	587.108	587.155
12	586.572	586.863	586.916	586.968	587.023
13	586.386	586.685	586.739	586.794	586.857
14	586.186	586.494	586.551	586.607	586.678
15	585.987	586.302	586.361	586.421	586.500

BILL OF MATERIAL

Item	Unit	Total
Stud Shear Connectors	Each	9984

NOTES:

1. N.T.R. denotes members to which notch toughness requirements are applicable.
2. For splice details, see Sht. S-47.
3. For Diaphragm details, see Shts. S-48 & S-49.
4. All steel shown on this sheet shall be AASHTO M270 Grade 50.

SHT. S-43 OF S-68

STV Incorporated
Engineers/Architects/Planners/Construction Managers
200 W. Monroe Street, Suite 1650
Chicago, IL 60606-5015
312/553-0655, FAX 312/553-0661

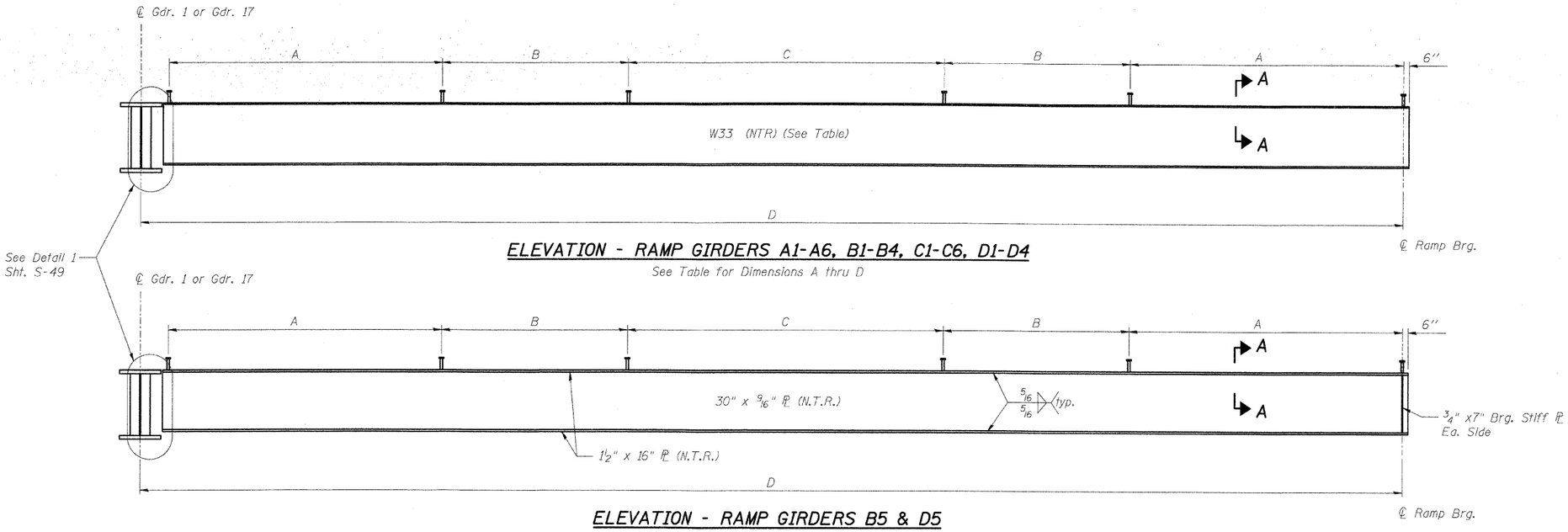
REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STATION 499+48.35
STRUCTURE NO. 060-0338
ELEVATION - GIRDERS 3 THRU 15
TOP OF GIRDER ELEVATIONS

DESIGNED: BTO DRAWN: BTO
DATE: 03/06 CHECKED: RPM CHECKED: BJG

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	60-10K-1,60-10HB	MADISON	420	262
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 76709

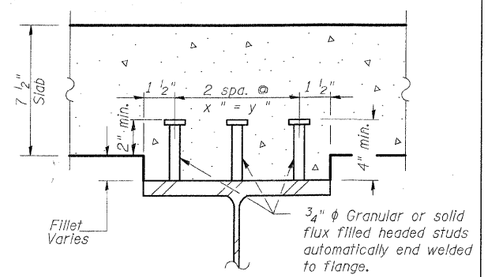


ELEVATION - RAMP GIRDERS A1-A6, B1-B4, C1-C6, D1-D4

See Table for Dimensions A thru D

ELEVATION - RAMP GIRDERS B5 & D5

See Table for Dimensions A thru D



SECTION A-A

SIZE	x	y
W33x118	4 1/4"	8 1/2"
W33x152	4 1/4"	8 1/2"
33" P.G.	6 1/2"	13"

RAMP GIRDERS

GIRDER	SIZE	A	B	C	D
A1	W33x118	3 sp. @ 14" = 3'-6"	-	-	8'-8 5/8"
A2	W33x118	12 sp. @ 4" = 4'-0"	10 sp. @ 4" = 3'-4"	10 sp. @ 5" = 4'-2"	21'- 1 3/4"
A3	W33x118	10 sp. @ 6" = 5'-0"	11 sp. @ 7" = 6'-5"	14 sp. @ 7" = 8'-2"	33'-6 7/8"
A4	W33x118	20 sp. @ 6" = 10'-0"	6 sp. @ 10" = 5'-0"	10 sp. @ 10" = 8'-4"	45'-11 7/8"
A5	W33x118	25 sp. @ 6" = 12'-6"	14 sp. @ 8" = 9'-4"	13 sp. @ 11" = 11'-11"	58'- 5"
A6	W33x152	30 sp. @ 6" = 15'-0"	18 sp. @ 8" = 12'-0"	14 sp. @ 12" = 14'-0"	70'-10 1/8"

GIRDER	SIZE	A	B	C	D
B1	W33x118	5 sp. @ 12" = 5'-0"	-	-	13'-2 1/4"
B2	W33x118	11 sp. @ 6" = 5'-6"	11 sp. @ 6" = 5'-6"	11 sp. @ 6" = 5'-6"	30'-3 1/2"
B3	W33x118	22 sp. @ 7" = 12'-10"	8 sp. @ 10" =6'-8"	6 sp. @ 10" = 5'-0"	47'-4 3/4"
B4	W33x152	25 sp. @ 7" = 14'-7"	12 sp. @ 9" = 9'-0"	14 sp. @ 12" = 14'-0"	64'-6"
B5	P.G.	30 sp. @ 7" = 17'-6"	15 sp. @ 10" = 12'-6"	15 sp. @ 14" = 17'-6"	81'-7 1/4"

GIRDER	SIZE	A	B	C	D
C1	W33x118	4 sp. @ 12" = 4'-0"	-	-	9'-11"
C2	W33x118	12 sp. @ 4" = 4'-0"	10 sp. @ 5" = 4'-2"	9 sp. @ 5" = 3'-9"	22'- 4 1/8"
C3	W33x118	10 sp. @ 6" = 5'-0"	11 sp. @ 7" = 6'-5"	16 sp. @ 7" = 9'-4"	34'-9 1/8"
C4	W33x118	20 sp. @ 6" = 10'-0"	12 sp. @ 8" = 8'-0"	10 sp. @ 10" = 8'-4"	47'-2 1/4"
C5	W33x118	25 sp. @ 6" = 12'-6"	14 sp. @ 8" = 9'-4"	14 sp. @ 11" = 12'-10"	59'-7 3/8"
C6	W33x152	30 sp. @ 6" = 15'-0"	18 sp. @ 8" = 12'-0"	15 sp. @ 12" = 15'-0"	72'-0 3/8"

GIRDER	SIZE	A	B	C	D
D1	W33x118	5 sp. @ 12" = 5'-0"	-	-	13'-2 3/8"
D2	W33x118	11 sp. @ 6" = 5'-6"	11 sp. @ 6" = 5'-6"	11 sp. @ 6" = 5'-6"	30'-3 5/8"
D3	W33x118	22 sp. @ 7" = 12'-10"	8 sp. @ 10" =6'-8"	6 sp. @ 10" = 5'-0"	47'-4 7/8"
D4	W33x152	25 sp. @ 7" = 14'-7"	12 sp. @ 9" = 9'-0"	14 sp. @ 12" = 14'-0"	64'-6 1/8"
D5	P.G.	30 sp. @ 7" = 17'-6"	15 sp. @ 10" = 12'-6"	15 sp. @ 14" = 17'-6"	81'-7 3/8"

TOP OF GIRDER ELEVATIONS

(For Fabrication Only)

GIRDER	W. ABUT. BRG.	℄ GIRDER 1
A1	585.771	585.928
A2	585.581	585.985
A3	585.390	586.036
A4	585.199	586.082
A5	585.007	586.122
A6	584.816	586.156

GIRDER	E. ABUT. BRG.	℄ GIRDER 17
C1	586.066	586.219
C2	585.865	586.232
C3	585.665	586.238
C4	585.463	586.239
C5	585.262	586.234
C6	585.060	586.224

GIRDER	E. ABUT. BRG.	℄ GIRDER 1
B1	585.965	586.150
B2	585.740	586.185
B3	585.515	586.212
B4	585.290	586.229

GIRDER	W. ABUT. BRG.	℄ GIRDER 17
D1	585.500	585.736
D2	585.265	585.825
D3	585.030	585.905
D4	584.794	585.977

TOP OF WEB ELEVATIONS

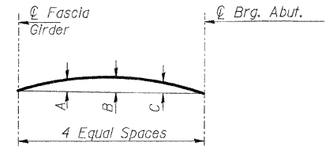
(For Fabrication Only)

GIRDER	E. ABUT. BRG.	℄ GIRDER 1
B5	584.918	586.113

GIRDER	W. ABUT. BRG.	℄ GIRDER 17
D5	584.412	585.915

BILL OF MATERIAL

Item	Unit	Total
Stud Shear Connectors	Each	4341



CAMBER DIAGRAM

GIRDER	A	B	C
B5 & D5	1 3/8	2 3/8	1 3/8

CAMBER VALUES

(Dimensions in inches)

NOTES:

1. All structural steel shall meet notch toughness reqirements (N.T.R.).
2. All steel shown on this sheet shall be AASHTO M270 Grade 50.
3. See Sht. S-49 for ramp connection detail.
4. See Shts. S-50 for floating bearing details.
5. See Shts. S-48 & S-49 for diaphragm locations.

SHT. S-44 OF S-68

STV Incorporated
Engineers/Architects/Planners/Construction Managers
200 W. Monroe Street, Suite 1650
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REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STATION 499+48.35
STRUCTURE NO. 060-0338
ELEVATION - RAMP GIRDERS
TOP OF GIRDER ELEVATIONS

DESIGNED: JAN DRAWN: BTO
DATE: 03/06 CHECKED: BTO CHECKED: JAN

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	60-10K-1,60-10HB	MADISON	420	263
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 76709

MOMENT AND REACTION TABLES - RAMP GIRDERS

		Girder A1 & C1	Girder A2 & C2	Girder A3 & C3	Girder A4 & C4	Girder A5 & C5	Girder A6 & C6	Girder B1 & D1	Girder B2 & D2	Girder B3 & D3	Girder B4 & D4	Girder B5 & D5
		0.5 Span	0.5 Span	0.5 Span	0.5 Span	0.5 Span	0.5 Span	0.5 Span	0.5 Span	0.5 Span	0.5 Span	0.5 Span
Is	(in^4)	5900	5900	5900	5900	5900	8160	5900	5900	5900	8160	13182
Ic (n)	(in^4)	-	16429	16564	16960	17852	23069	-	16242	16682	22198	28227
Ic (3n)	(in^4)	-	12263	12349	12600	13168	16459	-	12045	12321	16032	20781
Ss	(in^3)	359	359	359	359	359	487	359	359	359	487	799
Sc (n)	(in^3)	-	537	540	547	565	746	-	535	544	728	1033
Sc (3n)	(in^3)	-	488	490	496	510	664	-	485	492	653	944
Z	(in^3)	-	-	-	-	-	-	-	-	-	-	-
DL	(k/')	0.86	0.86	0.86	0.86	0.86	0.83	0.81	0.81	0.81	0.84	0.90
Md	(' k)	10.5	53	129	238	380	537	17.6	93	227	439	749
s DL	(k/')	0.46	0.46	0.46	0.46	0.53	0.72	0.46	0.46	0.46	0.53	0.72
$M_{S\,DL}$	(' k)	5.7	29	70	129	237	470	10.1	53	130	276	603
M_{LL}	(' k)	54.1	122	243	394	545	652	67.2	182	370	565	727
M (Imp)	(' k)	16.2	37	73	114	148	166	20.2	55	107	149	176
$5/3[M_{LL} + M(Imp)]$	(' k)	117	264	527	847	1155	1363	146	395	796	1189	1504
Ma	(' k)	173	450	945	1578	2303	3081	225	704	1499	2476	3714
Mu	(' k)	1729	2611	2915	2915	2915	3484	1729	2816	2816	3463	4568
fs DL non-comp	(ksi)	0.35	1.8	4.3	8.0	12.7	13.2	0.59	3.1	7.6	10.8	11.3
fs DL (comp)	(ksi)	-	0.7	1.7	3.1	5.6	8.5	0.34	1.3	3.2	5.1	7.7
fs $5/3[M_{LL} + M(Imp)]$	(ksi)	-	5.9	11.7	18.6	24.5	21.9	-	8.9	17.5	19.6	17.5
fs (Overload)	(ksi)	-	8.4	17.8	29.6	42.8	43.6	-	13.3	28.3	35.5	36.4
fs (total)	(ksi)	0.24	-	-	-	-	-	0.32	-	-	-	-
VR	(k)	28.4	38.9	46.7	50.8	52.6	50.2	26.6	41.2	47.4	49.5	48.2
Girder Reaction Table												
		Abut. or Fascia	Abut. or Fascia	Abut. or Fascia	Abut. or Fascia	Abut. or Fascia	Abut. or Fascia	Abut. or Fascia	Abut. or Fascia	Abut. or Fascia	Abut. or Fascia	Abut. or Fascia
R_{DL}	(k)	6.5	14.7	22.9	31.1	41.4	55.9	8.4	19.3	30.1	44.4	66.3
R_{LL}	(k)	21.8	29.9	35.9	39.4	41.4	40.0	20.4	31.7	36.8	39.2	38.8
Imp.	(k)	6.5	9.0	10.8	11.4	11.2	10.2	6.1	9.5	10.7	10.3	9.4
R (Total)	(k)	34.9	53.6	69.6	81.9	94.0	106.1	34.9	60.5	77.6	93.9	114.5

Is and Ss are the moment of inertia and section modulus of the steel section used in computing fs (Total & Overload).

Ic(n) and Sc(n) are the moment of inertia and section modulus of the composite section used in computing stresses due to Live Load.

Ic(3n) and Sc(3n) are the moment of inertia and section modulus of the composite section used in computing stresses due to superimposed dead loads. (see AASHTO 10.38)

VR is the maximum Live Load + Impact shear range in span.

Z is the plastic section modulus used to determine the fully plastic moments in the non-composite areas.

Ma (Applied Moment)=$1.3[M_{\ell} + Ms_{\ell} + \frac{5}{3}(M_{L} + M(Imp))]$.

The Plastic Moment capacity (M_U) is computed according to AASHTO 10.48.1 and 10.50.1.1.

fs (Overload) is the sum of the stresses due to $M_{\ell} + Ms_{\ell} + \frac{5}{3}(M_{L} + M(Imp))$.

fs (Total) (Non-compact section) is the sum of the stresses due to $1.3[M_{\ell} + Ms_{\ell} + \frac{5}{3}(M_{L} + M(Imp))]$.

SHT. S-45 OF S-68

REVISIONS NAME	DATE

STV Incorporated
Engineers/Architects/Planners/Construction Managers
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Chicago, IL. 60606-5015
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ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STATION 499+48.35
STRUCTURE NO. 060-0338
MOMENT AND REACTION TABLES
RAMP GIRDERS

DESIGNED: JAN DRAWN: BTO
DATE: 03/06 CHECKED: BTO CHECKED: JAN

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	60-10K-1,60-10HB	MADISON	420	264
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 76709

MOMENT AND REACTION TABLES - GIRDERS 1 THRU 17

		Girder 1			Girder 2			Girders 3 thru 15		Girder 16			Girder 17		
		0.4 Sp. 1	Pier	0.6 Sp. 2	0.4 Sp. 1	Pier	0.6 Sp. 2	0.4 Sp.1 / 0.6 Sp.2	Pier	0.4 Sp. 1	Pier	0.6 Sp. 2	0.4 Sp. 1	Pier	0.6 Sp. 2
Is	(in^4)	28664	44550	28664	14268	22578	14268	9750	12100	14268	22578	14268	28664	44550	28664
Ic (n)	(in^4)	50600		50600	31550		31550	25062		31550		31550	50600		50600
Ic (3n)	(in^4)	38257		38257	23230		23230	18317		23230		23230	38257		38257
Ss	(in^3)	1549	2285	1549	782	1188	782	542	664	782	1188	782	1549	2285	1549
Sc (n)	(in^3)	1870		1870	1027		1027	783		1027		1027	1870		1870
Sc (3n)	(in^3)	1719		1719	938		938	707		938		938	1719		1719
Z	(in^3)		2529			1315			767		1315			2529	
DL	(k/')	2.32	1.74	2.29	1.11	1.82	1.14	1.05	1.53	1.14	1.82	1.11	2.29	1.74	2.32
Mdl	(' k)	1031	3477	985	560	1707	556	496	1100	556	1707	560	985	3477	1031
s DL	(k/')	0.48		0.48	0.61		0.59	0.48		0.61		0.59	1.24		1.28
Ms_{DL}	(' k)	612		584	301		286	252		286		301	584		612
M_{LL}	(' k)	2086	1943	1697	1173	1043	1080	805	572	1080	1043	1173	1697	1943	2086
M (Imp)	(' k)	562	525	458	317	281	292	196	140	292	281	317	458	525	562
$5/3[M_{LL}+ M(Imp)]$	(' k)	4414	4114	3592	2483	2207	2287	1728	1068	2287	2207	2483	3592	4114	4414
Ma	(' k)	7874	9868	6709	4348	5087	4069	3218	2818	4069	5087	4348	6709	9868	7874
Mu	(' k)	7896	10538	7896	4736	5479	4736	3921	3196	4736	5479	4736	7896	10538	7896
fs DL non-comp	(ksi)	8.0	18.3	7.6	8.6	17.2	8.5	11.0	19.9	8.5	17.2	8.6	7.6	18.3	8.0
fs DL (comp)	(ksi)	4.3		4.1	3.9		3.7	4.3		3.7		3.9	4.1		4.3
$fs\ 5/3[M_{LL}+ M(Imp)]$	(ksi)	28.3	21.6	23.1	29.0	22.3	26.7	26.5	19.3	26.7	22.3	29.0	23.1	21.6	28.3
fs (Overload)	(ksi)	40.6	39.9	34.8	41.5	39.5	38.9	41.7	39.2	38.9	39.5	41.5	34.8	39.9	40.6
VR	(k)	120.0		113.5	63.5		73.8	69.9		73.8		63.53	113.5		120.0

		Girder 1			Girder 2			Girders 3 thru 15		Girder 16			Girder 17		
		W. Abutment	Pier	E. Abutment	W. Abutment	Pier	E. Abutment	Abutments	Pier	W. Abutment	Pier	E. Abutment	W. Abutment	Pier	E. Abutment
R_{DL}	(k)	79.1	373.6	74.3	60.0	193.4	53.7	45.4	153.0	53.7	193.4	60.0	74.3	373.6	79.1
R_{LL}	(k)	83.3	189.8	75.9	43.7	106.3	50.9	51.6	73.6	50.9	106.3	43.7	75.9	189.8	83.3
Imp.	(k)	22.5	57.2	20.5	11.8	28.7	13.7	12.6	18.0	13.7	28.7	11.8	20.5	57.2	22.5
R (Total)	(k)	184.9	620.6	170.7	115.6	328.4	118.3	109.6	244.6	118.3	328.4	115.6	170.7	620.6	184.9

Is and Ss are the moment of inertia and section modulus of the steel section used in computing fs (Total & Overload).

$Ic_{(n)}$ and $Sc_{(n)}$ are the moment of inertia and section modulus of the composite section used in computing stresses due to Live Load.

$Ic_{(3n)}$ and $Sc_{(3n)}$ are the moment of inertia and section modulus of the composite section used in computing stresses due to superimposed dead loads. (see AASHTO 10.38)

VR is the maximum Live Load + Impact shear range in span.

Z is the plastic section modulus used to determine the fully plastic moments in the non-composite areas.

Ma (Applied Moment)=$1.3[M_{\ell} + Ms_{\ell} + 5/3(M_{L} + M(Imp))]$.

The Plastic Moment capacity (Mu) is computed according to AASHTO 10.48.1 and 10.50.1.1.

fs (Overload) is the sum of the stresses due to $M_{\ell} + Ms_{\ell} + 5/3(M_{L} + M(Imp))$.

fs (Total) (Non-compact section) is the sum of the stresses due to $1.3[M_{\ell} + Ms_{\ell} + 5/3(M_{L} + M(Imp))]$.

SHT. S-46 OF S-68

STV Incorporated
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Chicago, IL 60606-5015
312/553-0655, FAX 312/553-0661

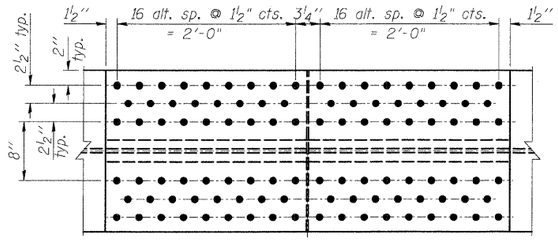
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STATION 499+48.35
STRUCTURE NO. 060-0338
MOMENT AND REACTION TABLES
GIRDERS 1 THRU 17

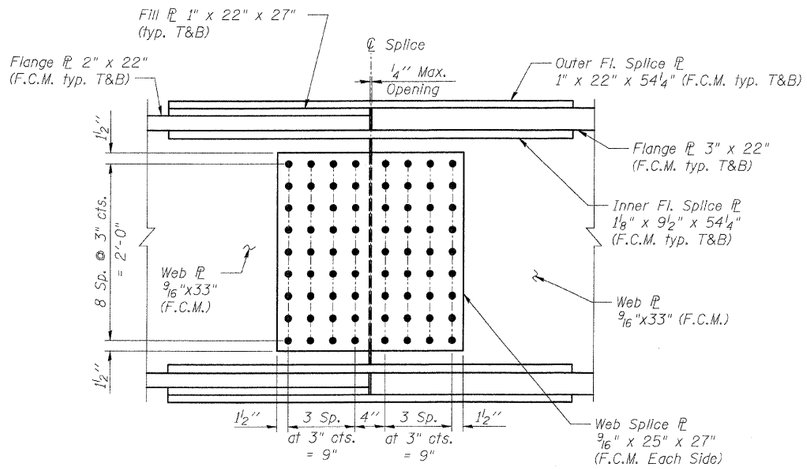
DESIGNED: BTO DRAWN: JAN
DATE: 03/06 CHECKED: JAN CHECKED: BTO

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	60-10K-1,60-10HB	MADISON	420	265
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 76709

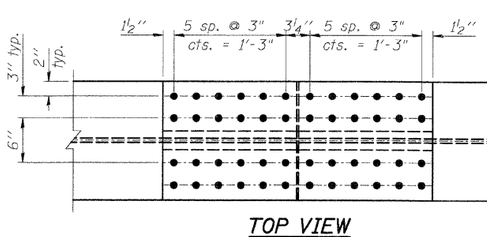


TOP VIEW

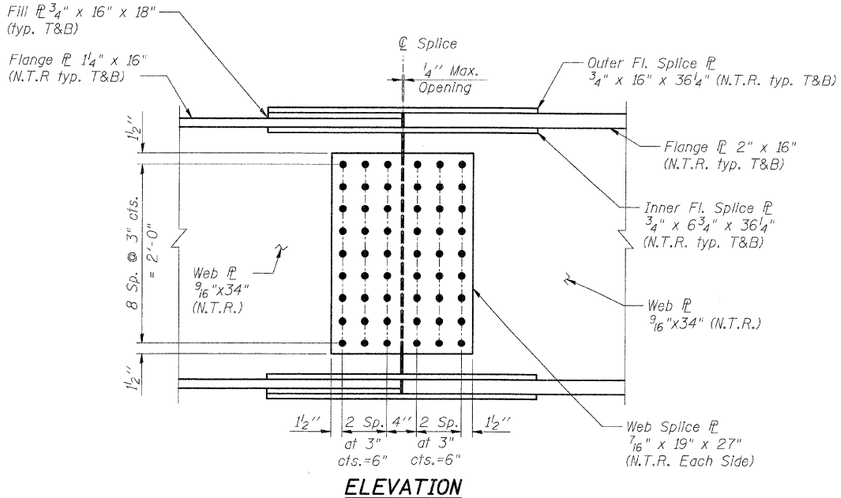


ELEVATION

SPLICE (GIRDERS 1 & 17)

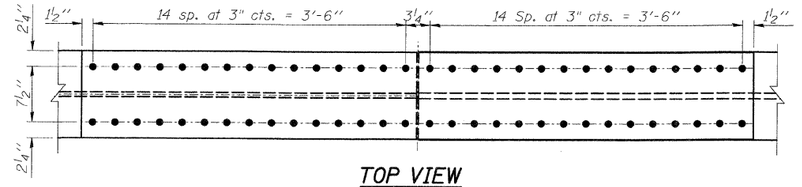


TOP VIEW

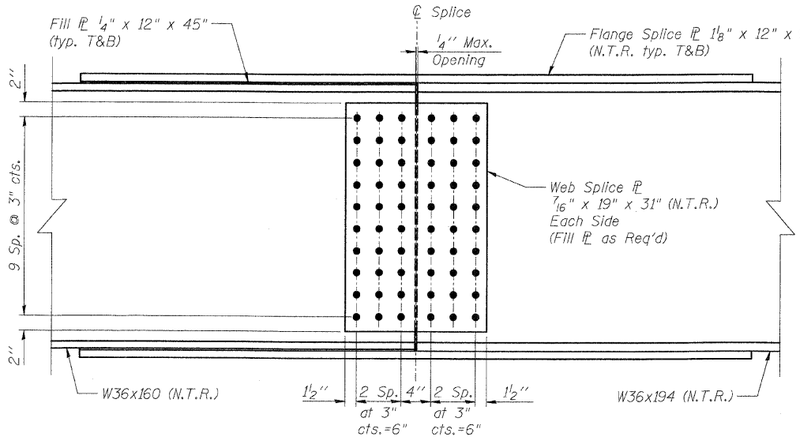


ELEVATION

SPLICE (GIRDERS 2 & 16)



TOP VIEW



ELEVATION

SPLICE (GIRDERS 3-15)

NOTES:

1. F.C.M. denotes Fracture Critical Member.
2. N.T.R. deontes members to which notch toughness requirements are applicable.
3. Structural steel for splice plates shall be AASHTO M270 Grade 50.
4. High Strength bolts shall conform to AASHTO M-164 specification. Bolts shall be 7/8" ϕ, open holes 15/16" ϕ.

SHT. S-47 OF S-68

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REVISIONS NAME	DATE

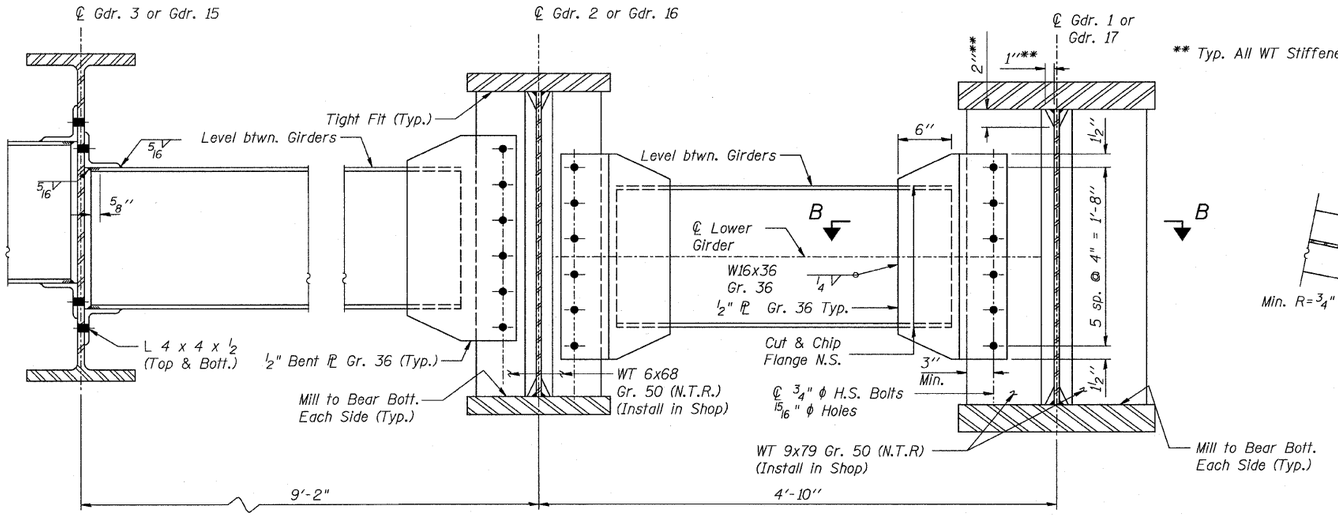
ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STATION 499+48.35
STRUCTURE NO. 060-0338

STEEL DETAILS - SPLICES

DESIGNED: BTO DRAWN: BTO
DATE: 03/06 CHECKED: JAN CHECKED: JAN

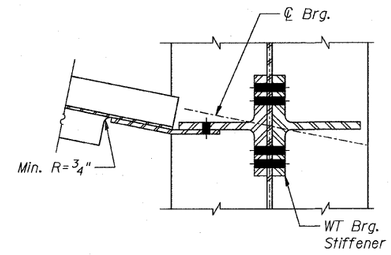
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	60-10K-1,60-10HB	MADISON	420	266
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 76709

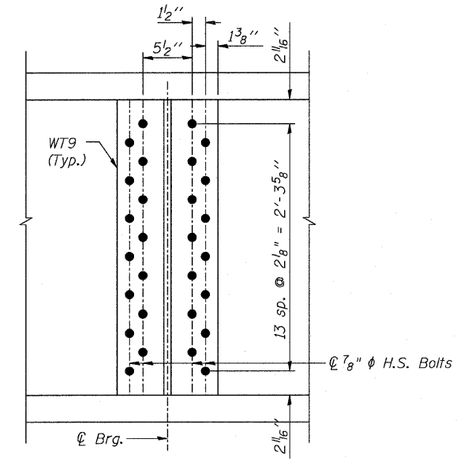


DIAPHRAGM D9
(2-Required)

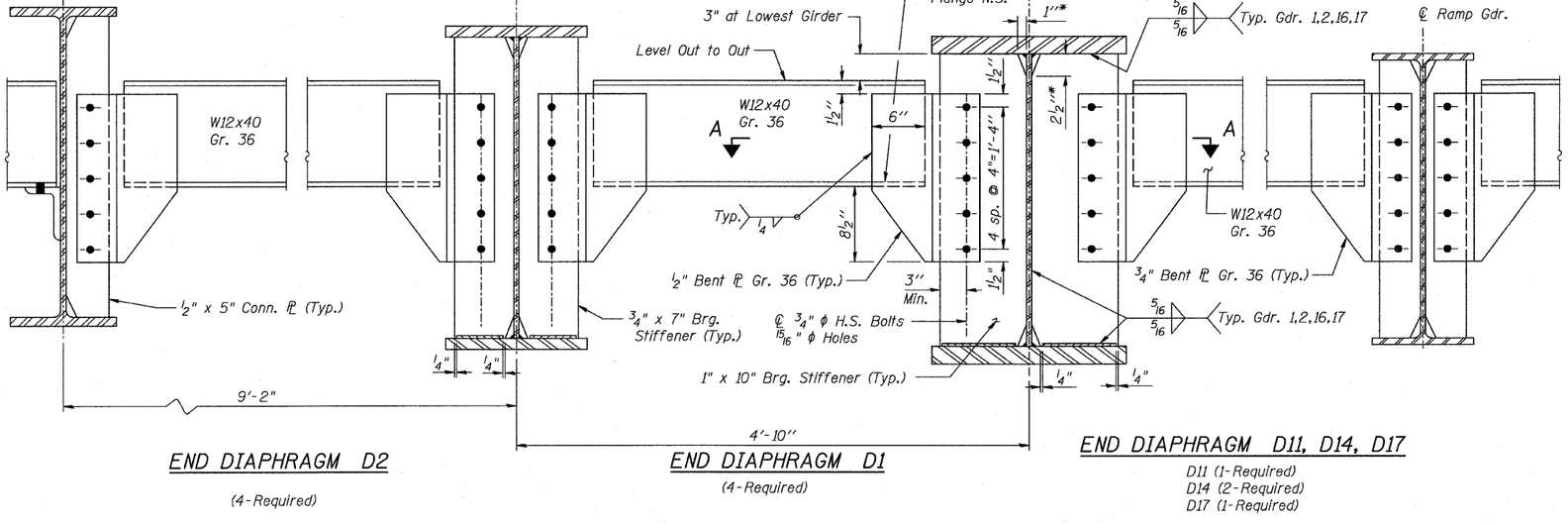
DIAPHRAGM D8
(2-Required)



SECTION B-B



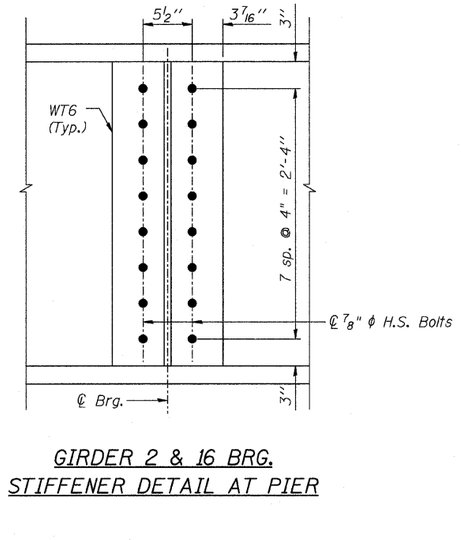
GIRDER 1 & 17 BRG. STIFFENER DETAIL AT PIER



END DIAPHRAGM D2
(4-Required)

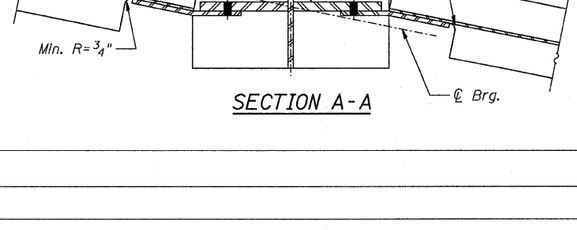
END DIAPHRAGM D1
(4-Required)

END DIAPHRAGM D11, D14, D17
D11 (1-Required)
D14 (2-Required)
D17 (1-Required)



GIRDER 2 & 16 BRG. STIFFENER DETAIL AT PIER

Notes:
1. Two hardened washers shall be required over all oversize holes for diaphragms.
2. All cross frames or diaphragms between beams or girders shall be installed with erection pins and bolts in accordance with the erection plan approved by the Engineer. Individual cross frames or diaphragms at supports may be temporarily disconnected to install bearing anchor rods.



SECTION A-A

SHT. S-48 OF S-68

REVISIONS NAME	DATE

STV Incorporated
Engineers/Architects/Planners/Construction Managers
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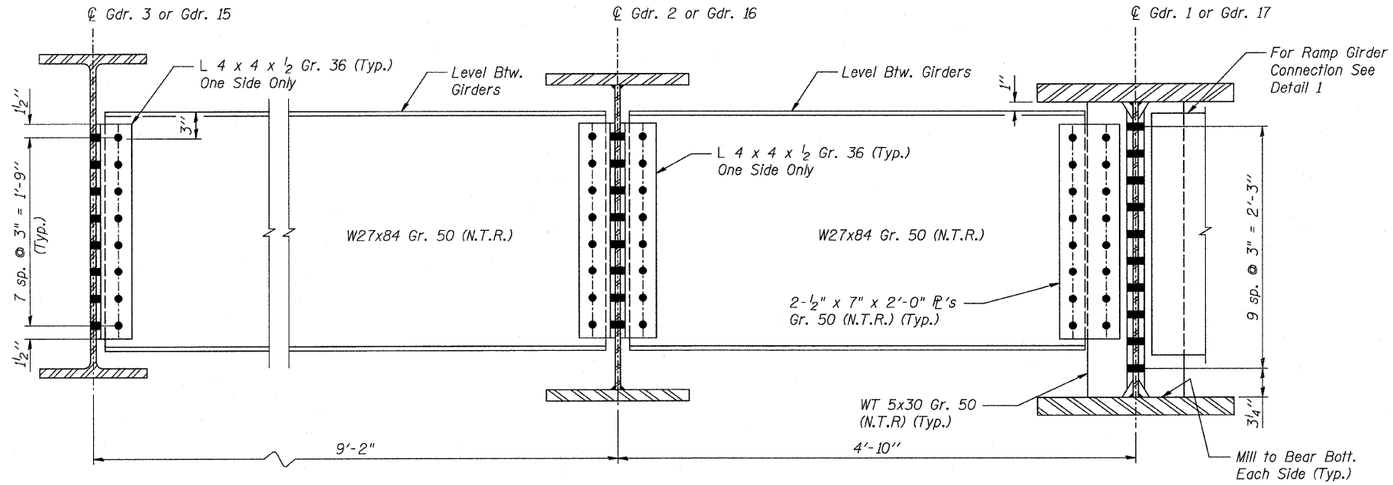
ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STATION 499+48.35
STRUCTURE NO. 060-0338
STEEL DETAILS
DIAPHRAGMS & BEARING STIFFENERS

DESIGNED: BTO DRAWN: BTO
DATE: 03/06 CHECKED: JAN CHECKED: JAN

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	60-10K-1,60-10HB	MADISON	420	267
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 76709



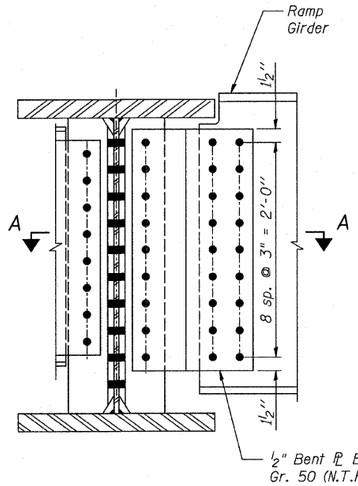
DIAPHRAGM D5

(22-Required)

DIAPHRAGM D4

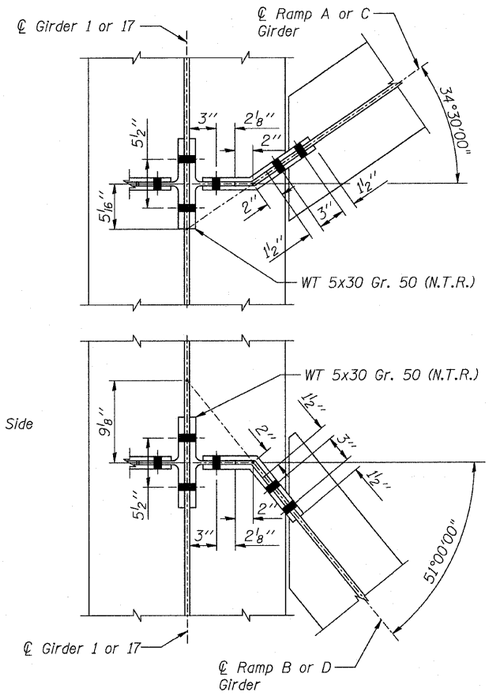
(22-Required)

⅞" ϕ H.S. Bolts with 1 1/16" ϕ holes unless noted otherwise



DETAIL 1

For location of Detail 1, see Sht. S-44.

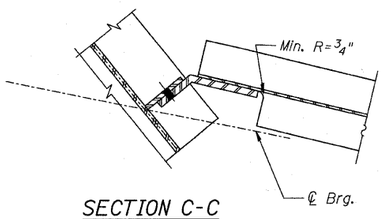


SECTION A-A

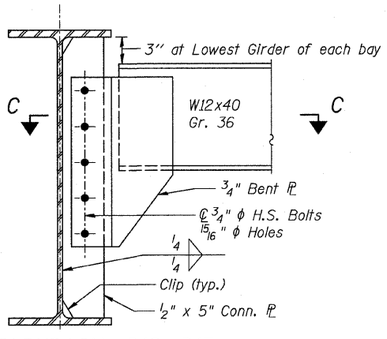
⅞" ϕ H.S. Bolts with 1 1/16" ϕ holes unless noted otherwise

Notes:

1. Two hardened washers shall be required over all oversize holes for diaphragms. Position slots so bolts start at one end with no concrete load and finish near the opposite end of the slots under deck load.
2. All cross frames or diaphragms between beams or girders shall be installed with erection pins and bolts in accordance with the erection plan approved by the Engineer. Individual cross frames or diaphragms at supports may be temporarily disconnected to install bearing anchor rods.

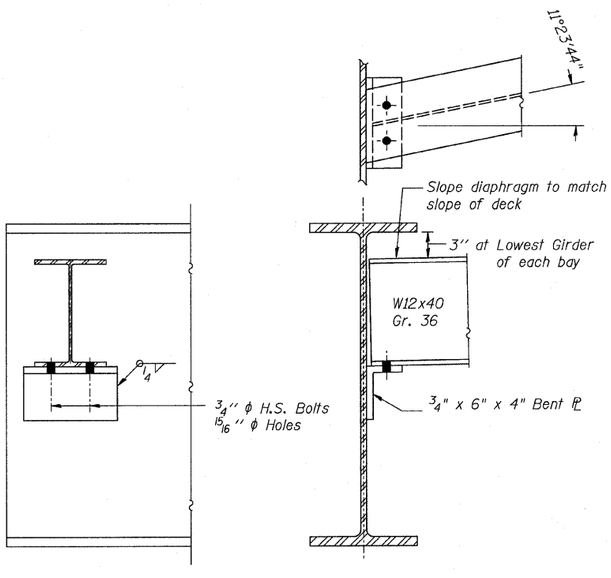


SECTION C-C



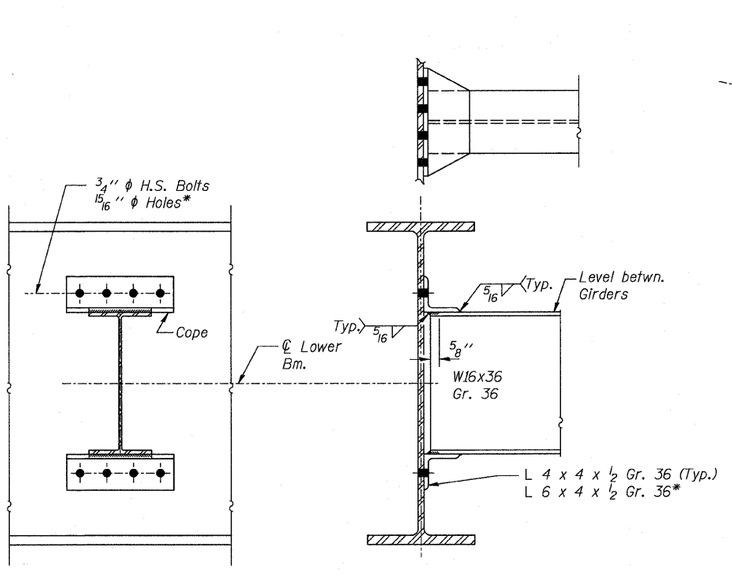
END DIAPHRAGM D12, D15

D12 (10-Required)
D15 (8-Required)



END DIAPHRAGMS D3

D3 (24-Required)



DIAPHRAGM D6, D7, D10, D13, D16

D6 (81-Required)
D7 (4-Required)
D10 (7-Required)
D13 (12-Required)
D16 (12-Required)

* Provide 15/16" x 2" vertical slotted holes in 6 x 4 x ½ (LLV) angles for diaphragms D10 in stage construction bay, Stage II side. 5/16" structural plate washers shall be placed over slotted holes. Slotted hole bolts shall be finger-tightened prior to the deck pour and fully-tightened after completion of the deck pour.

SHT. S-49 OF S-68

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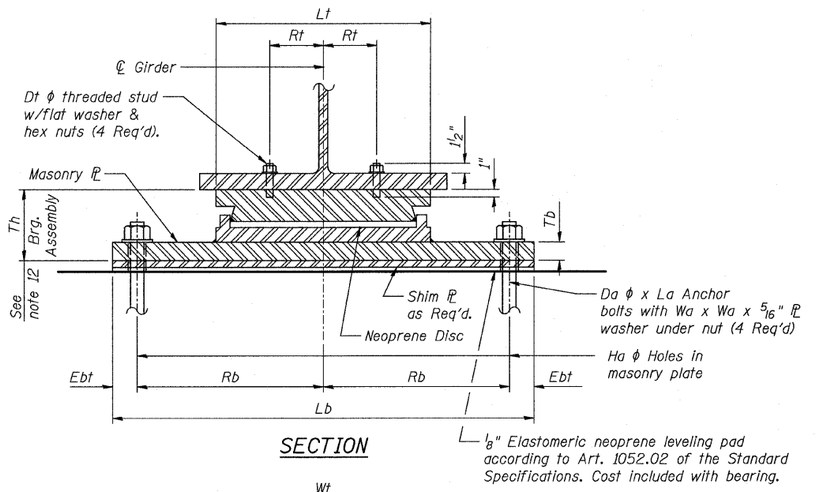
REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STATION 499+48.35
STRUCTURE NO. 060-0338
STEEL DETAILS
DIAPHRAGMS & RAMP CONNECTIONS

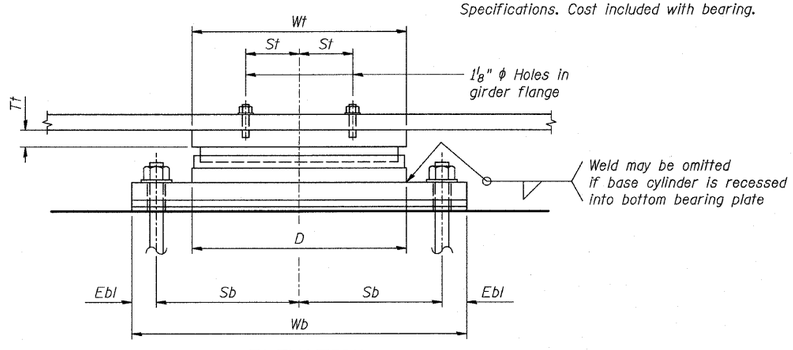
DESIGNED: JAN DRAWN: BTO
DATE: 03/06 CHECKED: BTO CHECKED: JAN

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	60-10K-1,60-10HB	MADISON	420	268
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 76709

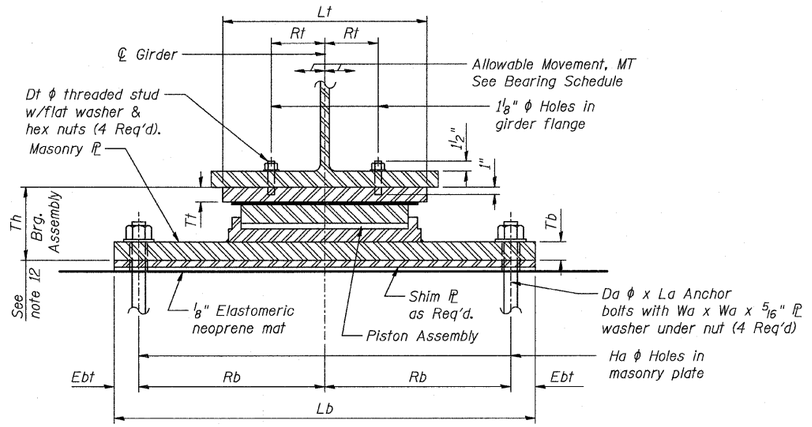


SECTION

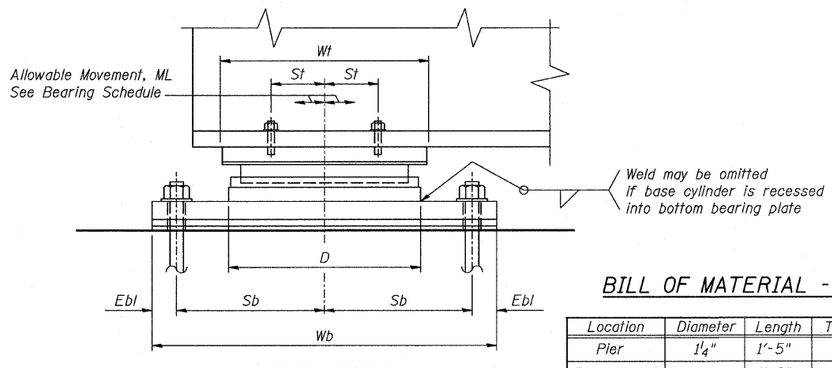


ELEVATION

FIXED BEARING



SECTION



ELEVATION

NON-GUIDED EXPANSION BEARING

NOTES:

1. All steel for floating bearings shall conform to the requirements of AASHTO M270 Grade 50, unless otherwise specified.
2. Anchor bolts shall be ASTM F1554 allthread (or an Engineer-approved alternate material) Grade 55 of the diameters specified. The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.
   Anchors bolts at fixed bearings may be either cast-in-place or installed in holes drilled after the supporting member is in place. Anchor bolts for expansion bearings shall be placed in holes drilled in the concrete through holes in the bottom bearing plate after the members are in place.
   Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.
3. Adjusting shim plates shall be placed under masonry plates as required during erection. See general notes on Sht. S-03.
4. The Dimensions shown are for a specific Manufacturer's product. See Special Provision regarding changes to dimensions and details.
5. Information not shown regarding the size of the bearing top plate, piston and base assemblies shall be determined by the manufacturer and shall meet the following requirements:

   Vertical Load Capacity: See Schedule
   Lateral Load Capacity: See Schedule
   Rotation from horizontal: 0.02 radians
   Movement Capacities: See Schedule

6. The sliding coefficient of friction shall not exceed 3 percent.
7. Certification of compliance to proof load and sliding coefficient of friction requirements in accordance with AASHTO 18.3.5.3 shall be provided with shop drawing submittal.
8. The bearings shall be blocked during the erection of structural steel. The Contractor shall submit the Erection Procedure for approval by the Engineer.
9. For Design Dead Load and Live Loads, see girder moment tables.
10. Work this sheet with sht. S-51.
11. For location of bearing type, see Sht. S-37.
12. Contractor shall adjust bridge seat elevations and/or shim bearings as required for actual bearing height Th.

BILL OF MATERIAL - ANCHORS

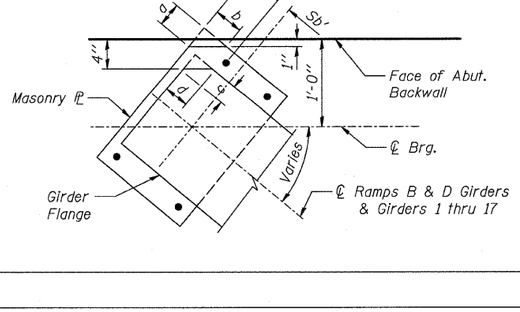
Location	Diameter	Length	Total	Type
Pier	1¼"	1'-5"	52	ASTM F1554
E. Abutment	1"	1'-2"	56	ASTM F1554
W. Abutment	1"	1'-2"	64	ASTM F1554

BILL OF MATERIAL - BEARINGS

Item	Unit	Total
High Load Multi-Rotation Bearings, Fixed, 250K	Each	13
Floating Bearing, Non-Guided Expansion, 50K	Each	8
Floating Bearing, Non-Guided Expansion, 75K	Each	6
Floating Bearing, Non-Guided Expansion, 100K	Each	6
Floating Bearing, Non-Guided Expansion, 150K	Each	6
Floating Bearing, Non-Guided Expansion, 200K	Each	4

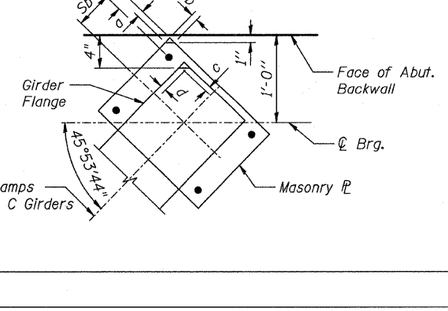
BEARING SCHEDULE

Type	Vertical Capacity K	Lateral Capacity K	Quantity Each	Location	Girders	Guided Expansion	ML in	MT in	Th in	D in	Top Plate/Bearing Assembly Lt in	Wt in	Dt in	Tt in	St in	Rt in	Masonry Plate Lb in	Wb in	Tb in	Sb* in	Rb in	Ebl* in	Ebt in	Da in	La in	Ha in	Wa in
High Load Multi-Rotation Bearings, Fixed, 250K	250	110	13	Pier	3-15	-	-	-	5.75	13.13	13.125	13.125	1	2.375	4.5	4.5	21.50	16.63	1	5.625	8.063	2.688	2.188	1.25	17	1.75	2.75
High Load Multi-Rotation Bearings, Non-Guided Expansion, 50K	50	-	8	Abutment	A1,A2,B1,B2,C1,C2,D1,D2	-	2	0.5	4.75	6.5	6.50	8.75	1	1.5	2.5	2	19	12.25	1	4.375	7.75	1.75	1.75	1	14	1.5	2.25
High Load Multi-Rotation Bearings, Non-Guided Expansion, 75K	75	-	6	Abutment	A3,A4,B3,C3,C4,D3	-	2	0.5	5	7.5	7.50	9.625	1	1.5	3	2	19	13.13	1.25	4.8125	7.75	1.75	1.75	1	14	1.5	2.25
High Load Multi-Rotation Bearings, Non-Guided Expansion, 100K	100	-	6	Abutment	A5,A6,B4,C5,C6,D4	-	2	0.5	5	8.5	8.50	10.5	1	1.5	3	2.25	19	14.0	1.25	5.25	7.75	1.75	1.75	1	14	1.5	2.25
High Load Multi-Rotation Bearings, Non-Guided Expansion, 150K	150	-	6	Abutment	2,16,B5,D5	-	2	0.5	5.25	9.5	9.50	11.125	1	1.5	3.5	2.75	23.5	14.75	1.5	5.625	10	1.75	1.75	1	14	1.5	2.25
High Load Multi-Rotation Bearings, Non-Guided Expansion, 200K	200	-	4	Abutment	1,17	-	2	1	6.1875	12	12	13	1	1.750	4.5	4.00	29.5	16.5	2	6.5	13	1.75	1.75	1	14	1.5	2.25



GIRDER	a	b	c	d
B5,D5	3¼"	4"	2 9/16"	3⅜"
B4,D4	¾"	⅞"	⅜"	½"
B3,D3	⅜"	⅜"	⅜"	⅜"
A5,A6,C5,C6	⅞"	⅞"	½"	½"
A3,A4,C3,C4	½"	½"	⅜"	⅜"
B1,B2,D1,D2	-	-	-	-
A1,A2,C1,C2	-	-	⅜"	⅜"
1,17	-	-	5¼"	1⅛"
2,16	-	-	2¼"	½"
3-15	-	-	-	-

MASONRY ℙ & GIRDER FLANGE CORNER CLIP



GIRDER	Sb'	Ebl'
B4,D4	4.813"	2.188"
B5,D5	2.063"	5.313"
A5,A6,C5,C6	5.063"	1.938"

* Dimensions Sb' and Ebl' required due to backwall interference at Abutments. See Masonry ℙ & Girder Flange Corner Clip sketches for location of Sb' and Ebl'.

REVISIONS NAME	DATE

SHT. S-50 OF S-68

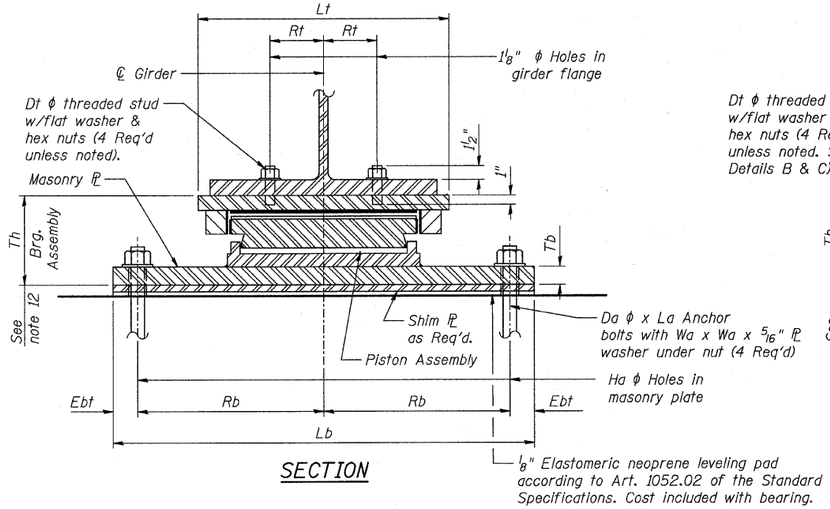
STV Incorporated
Engineers/Architects/Planners/Construction Managers
200 W. Monroe Street, Suite 1650
Chicago, IL. 60606-5015
312/553-0655, FAX 312/553-0661

ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STATION 499+48.35
STRUCTURE NO. 060-0338
HIGH LOAD MULTI-ROTATION BEARINGS
- FIXED AND NON-GUIDED

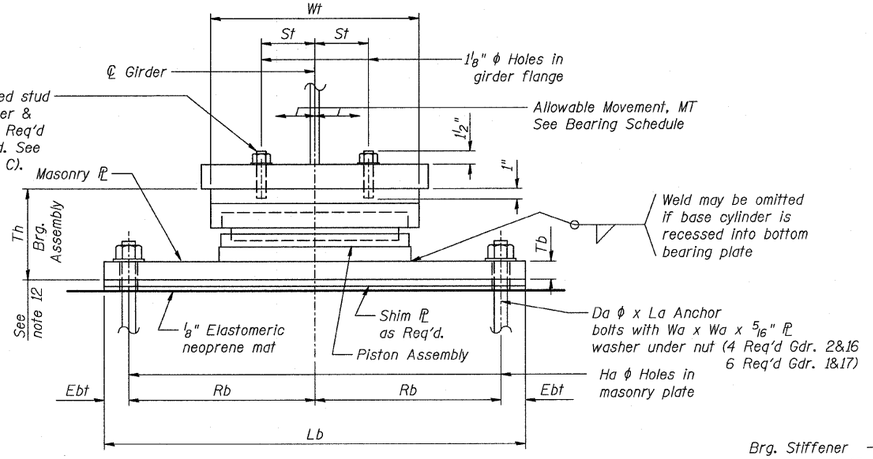
DESIGNED: BTO DRAWN: BTO
DATE: 03/06 CHECKED: JAN CHECKED: JAN

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	60-10K-1,60-10HB	MADISON	420	269
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

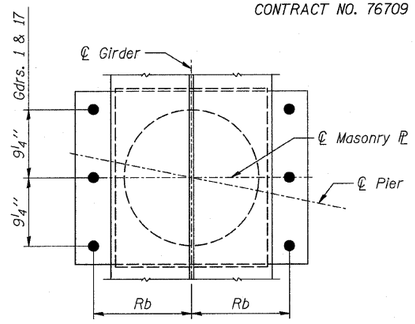
CONTRACT NO. 76709



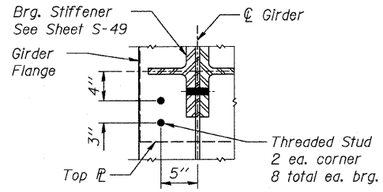
SECTION



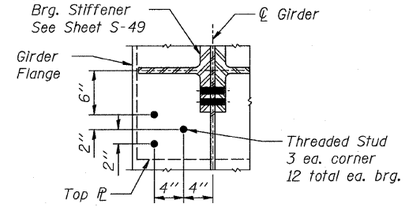
ELEVATION



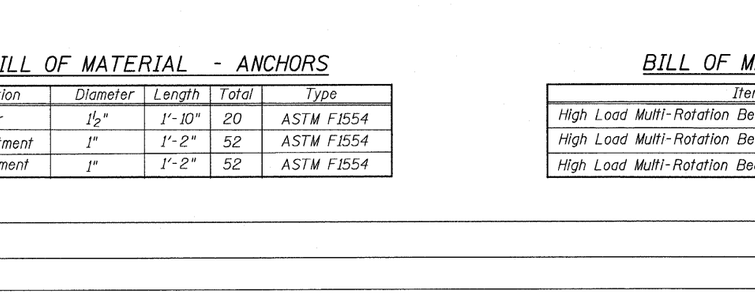
DETAIL "A"



DETAIL "B"

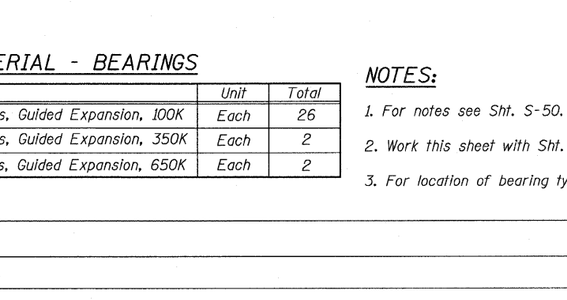


DETAIL "C"



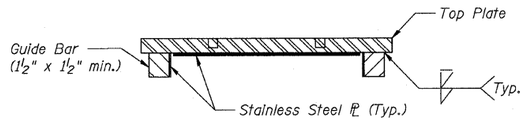
ELEVATION

GUIDED EXPANSION BEARING - LONGITUDINAL TO GIRDER

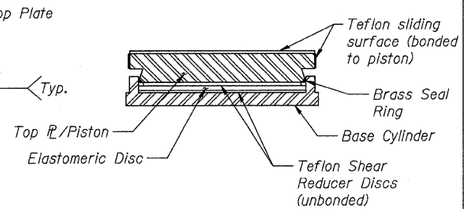


SECTION

GUIDED EXPANSION BEARING - TRANSVERSE TO GIRDER



TOP PLATE ASSEMBLY



PISTON ASSEMBLY

BEARING SCHEDULE

Type	Vertical Capacity K	Lateral Capacity K	Quantity Each	Location	Girders	Guided Expansion	ML in	MT in	Th in	D in	Top Plate/Bearing Assembly Lt in	Wt in	Dt in	Tt in	St in	Rt in	Masonry Plate Lb in	Wb in	Tb in	Sb in	Rb in	Ebl in	Ebt in	Da in	La in	Ha in	Wa in
High Load Multi-Rotation Bearings, Guided Expansion, 100K	100	50	26	Abutment	3-15	Long.	2	-	6.601	7.5	12.50	10	1	1.5	3	4.25	20	11.0	1.5	3.75	8.25	1.75	1.75	1	14	1.5	2.25
High Load Multi-Rotation Bearings, Guided Expansion, 350K	350	135	2	Pier	2,16	Transv.	-	2	8.625	13.5	19.25	15.75	1	2.25	Detail B	Detail B	28.75	17.00	1.75	5	10.875	3.5	2.625	1.5	20	2	3
High Load Multi-Rotation Bearings, Guided Expansion, 650K	650	250	2	Pier	1,17	Transv.	-	2	10.875	18.375	24.25	20.75	1	3	Detail C	Detail C	32	23.75	2	Detail A	13.375	2.625	2.625	1.5	20	2	3

BILL OF MATERIAL - ANCHORS

Location	Diameter	Length	Total	Type
Pier	1½"	1'-10"	20	ASTM F1554
E. Abutment	1"	1'-2"	52	ASTM F1554
W. Abutment	1"	1'-2"	52	ASTM F1554

BILL OF MATERIAL - BEARINGS

Item	Unit	Total
High Load Multi-Rotation Bearings, Guided Expansion, 100K	Each	26
High Load Multi-Rotation Bearings, Guided Expansion, 350K	Each	2
High Load Multi-Rotation Bearings, Guided Expansion, 650K	Each	2

NOTES:

1. For notes see Sht. S-50.
2. Work this sheet with Sht. S-50.
3. For location of bearing type, see Sht. S-37.

SHT. S-51 OF S-68

STV Incorporated
Engineers/Architects/Planners/Construction Managers
200 W. Monroe Street, Suite 1650
Chicago, IL. 60606-5015
312/553-0655, FAX 312/553-0661

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STATION 499+48.35
STRUCTURE NO. 060-0338
HIGH LOAD MULTI_ROTATION BEARINGS - GUIDED EXPANSION

DESIGNED: BTO DRAWN: BTO
DATE: 03/06 CHECKED: JAN CHECKED: JAN

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	60-10K-1,60-10HB	MADISON	420	270
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 76709

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SHT. S-52 OF S-68

STV Incorporated
Engineers/Architects/Planners/Construction Managers
200 W. Monroe Street, Suite 1650
Chicago, IL 60606-5015
312/553-0655, FAX 312/553-0661

REVISIONS	
NAME	DATE

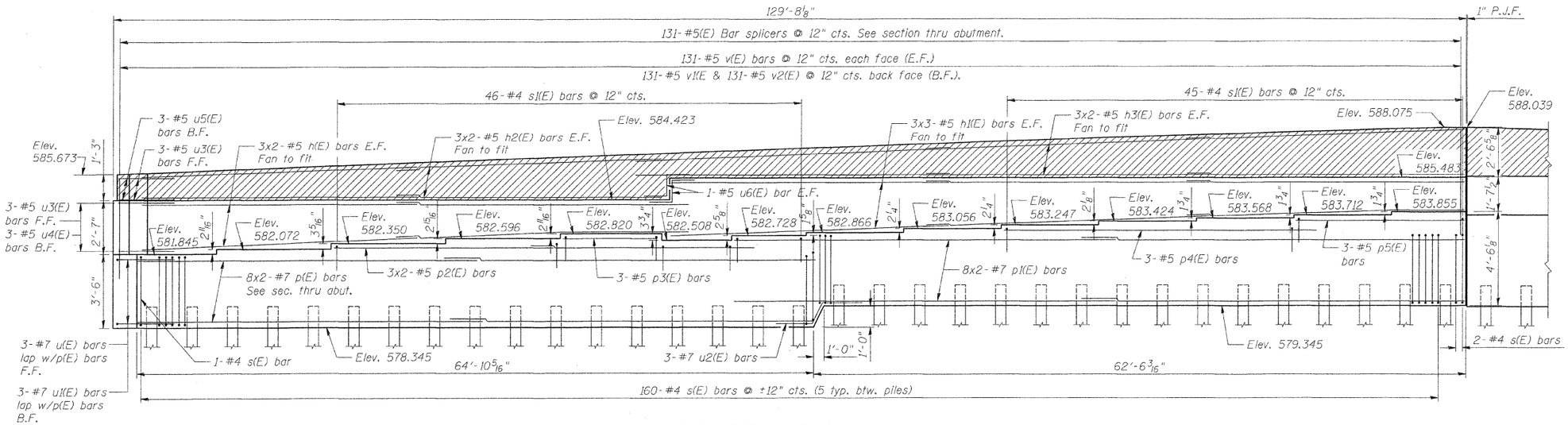
ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STATION 499+48.35
STRUCTURE NO. 060-0338

NOT USED

DESIGNED: BTO DRAWN: BTO
DATE: 03/06 CHECKED: JAN CHECKED: JAN

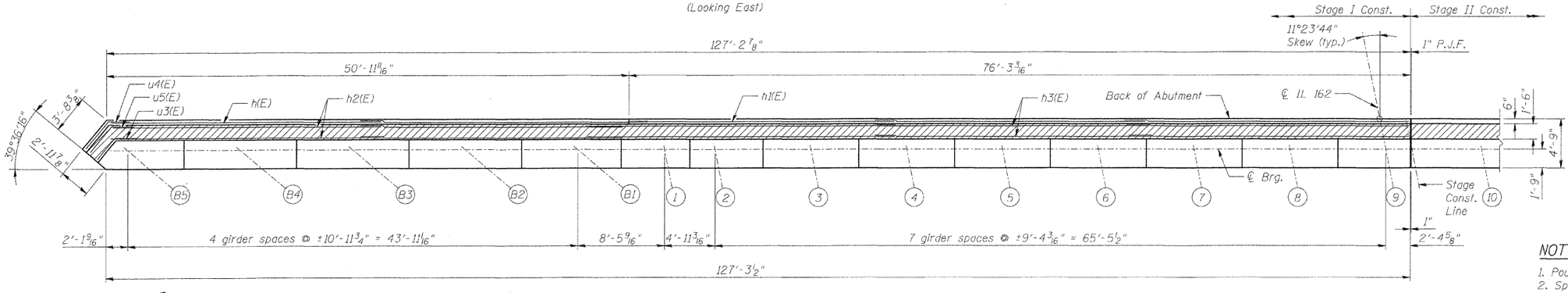
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	60-10K-1,60-10HB	MADISON	420	271
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 76709

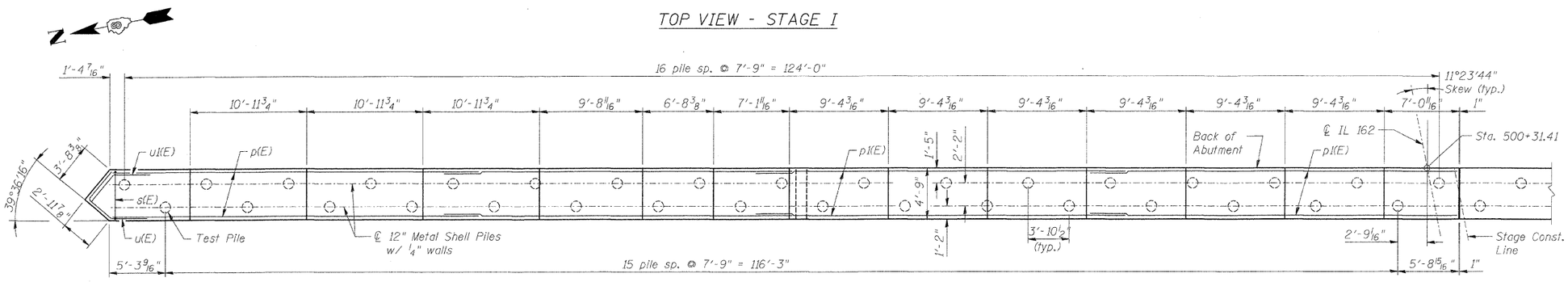


ELEVATION - STAGE I

(Looking East)



TOP VIEW - STAGE I



PILE CAP PLAN - STAGE I

Min. Lap
#5 bars = 2'-2"
#7 bars = 3'-5"

PILE DATA

Type: 12" ϕ Metal Shell, w/ 1/4" wall
Nominal Required Bearing: 355 kips
Allowable Resistence Available: 80 kips
Est. Length: 86 ft
No. Required: 32 plus 1 Test Pile

The metal Shell piles shall be according to ASTM A252 Grade 3.

NOTES:

1. Pour steps monolithically with abutment.
2. Space reinforcement in cap to miss anchor bolts.
3. Bars designated (E) shall be expoxy coated.
4. F.F. indicates Front Face
   E.F. indicates Each Face
   B.F. indicates Back Face
5. For Bill of Material, sections and details, see Sht. S-55.

SHT. S-53 OF S-68

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REVISIONS NAME	DATE

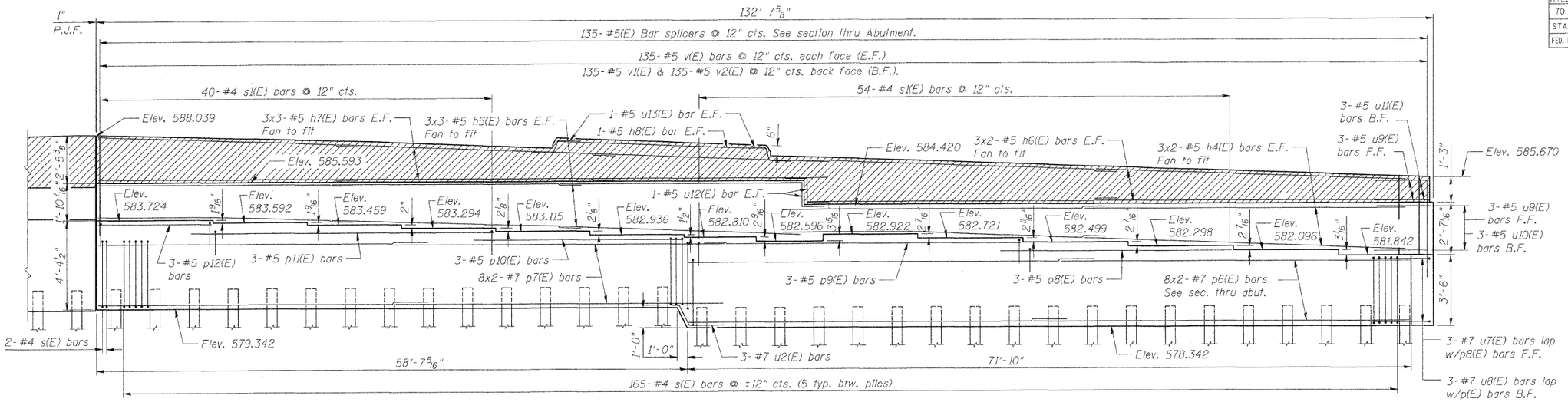
ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STATION 499+48.35
STRUCTURE NO. 060-0338

EAST ABUTMENT PLAN & ELEVATION - STAGE I

DESIGNED: BTO DRAWN: BTO
DATE: 03/06 CHECKED: JAN CHECKED: JAW

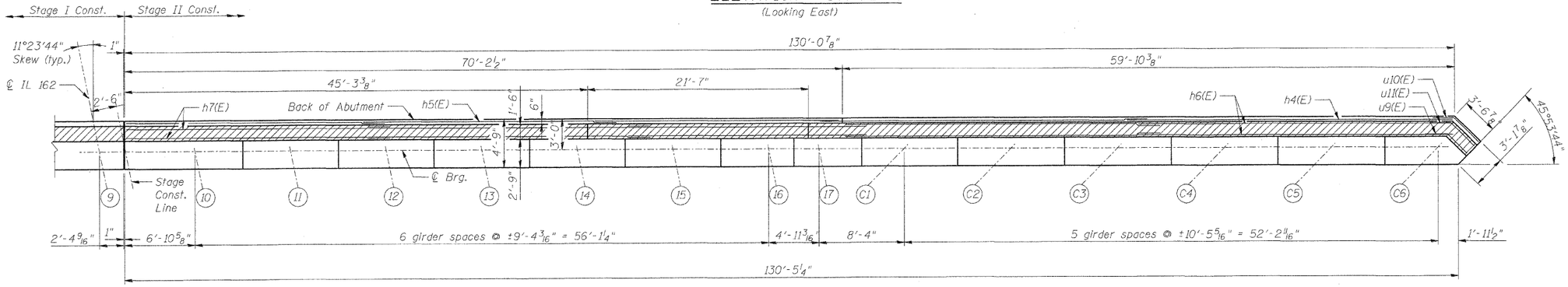
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	60-10K-1,60-10HB	MADISON	420	272
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 76709

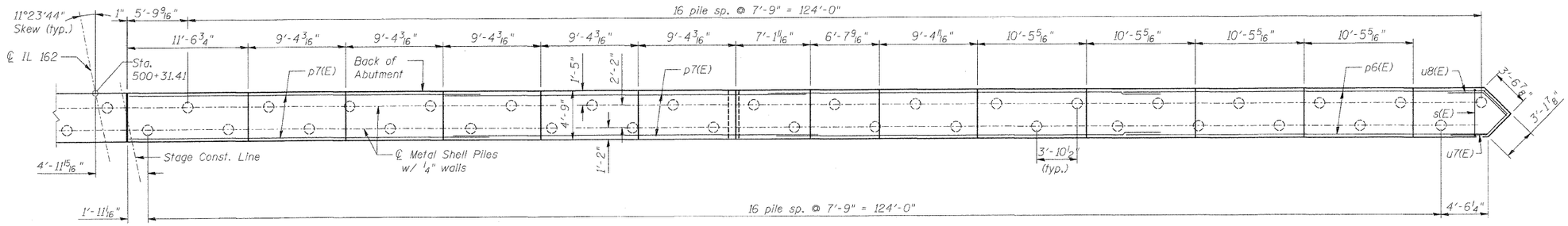


ELEVATION - STAGE II

(Looking East)



TOP VIEW - STAGE II



PILE CAP PLAN - STAGE II

PILE DATA

Type: 12" ϕ Metal Shell, w/ 1/4" wall
Nominal Required Bearing: 355 kips
Allowable Resistence Available: 80 kips
Est. Length: 86 ft
No. Required: 34

The Metal Shell piles shall be according to ASTM A252 Grade 3.

NOTE:

For notes, see Sht. S-53.

REVISIONS NAME	DATE

SHT. S-54 OF S-68

STV Incorporated
Engineers/Architects/Planners/Construction Managers
200 W. Monroe Street, Suite 1650
Chicago, IL 60606-5015
312/553-0655, FAX 312/553-0661

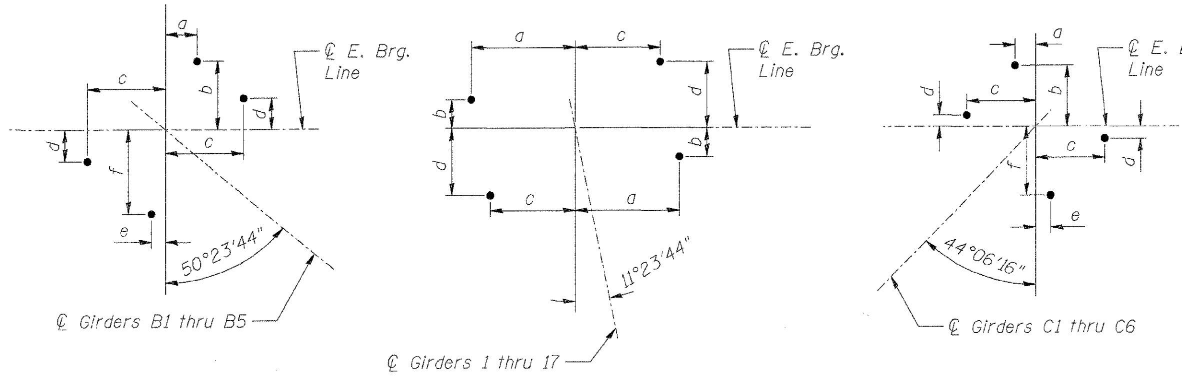
ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STATION 499+48.35
STRUCTURE NO. 060-0338

EAST ABUTMENT PLAN & ELEVATION - STAGE II

DESIGNED: BTO DRAWN: BTO
DATE: 03/06 CHECKED: JAN CHECKED: JAW

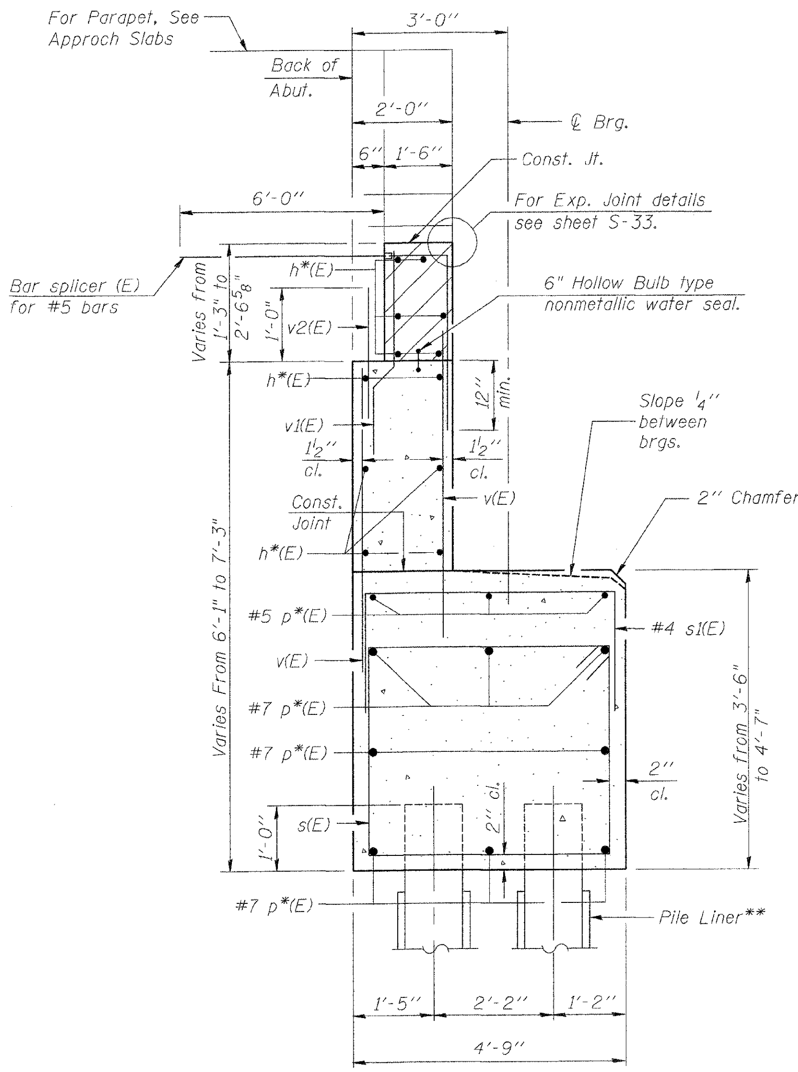
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	60-10K-1,60-10HB	MADISON	420	273
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 76709

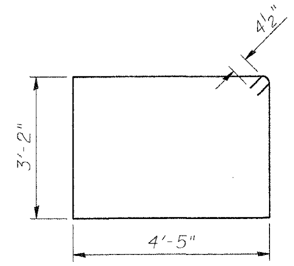


GIRDER	a	b	c	d	e	f
B1,B2	1 9/16"	8 3/4"	8 5/16"	3 5/16"	1 9/16"	8 3/4"
B3	1 1/4"	9"	8 5/8"	2 7/8"	1 1/4"	9 1/16"
B4	1 1/4"	9"	9"	2 5/8"	7/8"	9 5/16"
B5	4 3/4"	9"	10 11/16"	4 1/8"	2 1/16"	11 5/16"
1,17	14"	3 13/16"	11 7/16"	8 15/16"	-	-
2,16	10 15/16"	3 9/16"	8 11/16"	7 1/2"	-	-
3-15	7 3/8"	2 1/16"	7 3/8"	5 5/16"	-	-
C1,C2	2 1/2"	8 9/16"	8 5/8"	2 1/4"	2 1/2"	8 9/16"
C3,C4	2 1/4"	8 7/8"	8 15/16"	1 15/16"	2 1/4"	8 7/8"
C5,C6	2 1/16"	9	9 1/4"	1 5/8"	1 15/16"	9 3/16"

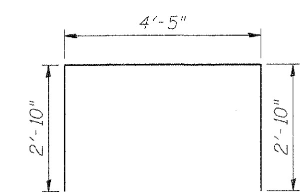
ANCHOR BOLT LAYOUT EAST ABUTMENT



SEC. THRU ABUT.



BARS s(E)



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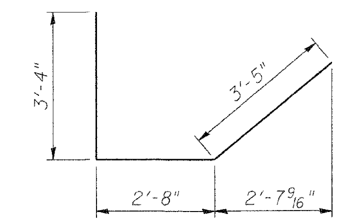
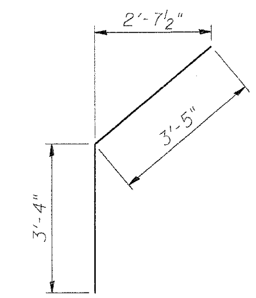
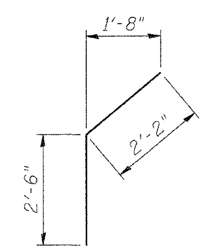


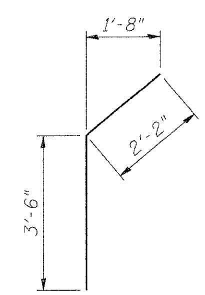
BAR u(E)



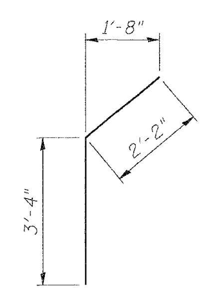
BAR u1(E)



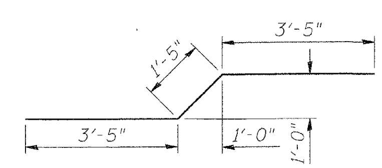
BAR u3(E)



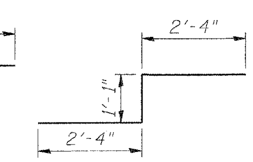
BAR u4(E)



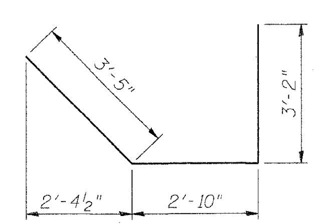
BAR u5(E)



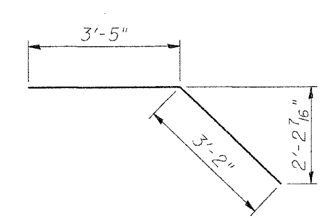
BAR u2(E)



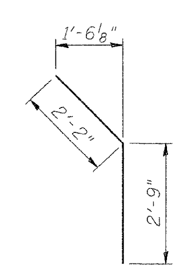
BAR u6(E)



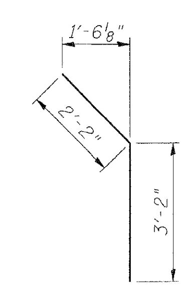
BAR u7(E)



BAR u8(E)



BAR u9(E)



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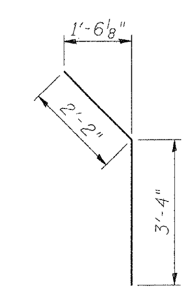

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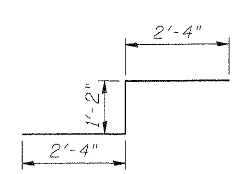
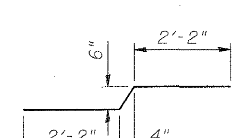
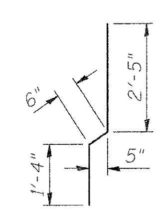


BAR u12(E)



BAR u13(E)



BAR v1(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	12	#5	27'-8"	
h1(E)	18	#5	26'-8"	
h2(E)	12	#5	26'-6"	
h3(E)	18	#5	27'-7"	
h4(E)	12	#5	32'-1"	
h5(E)	18	#5	24'-10"	
h6(E)	12	#5	30'-11"	
h7(E)	18	#5	25'-6"	
h8(E)	2	#5	21'-4"	
p(E)	16	#7	34'-0"	
p1(E)	16	#7	36'-8"	
p2(E)	6	#5	21'-3"	
p3(E)	3	#5	10'-9"	
p4(E)	3	#5	30'-0"	
p5(E)	3	#5	16'-2"	
p6(E)	16	#7	37'-6"	
p7(E)	16	#7	32'-8"	
p8(E)	3	#5	23'-0"	
p9(E)	3	#5	31'-5"	
p10(E)	3	#5	20'-9"	
p11(E)	3	#5	30'-0"	
p12(E)	3	#5	11'-3"	
s(E)	330	#4	15'-11"	
s1(E)	185	#4	10'-1"	
u(E)	3	#7	9'-5"	
u1(E)	3	#7	6'-9"	
u2(E)	6	#7	8'-3"	
u3(E)	6	#5	4'-8"	
u4(E)	3	#5	5'-8"	
u5(E)	3	#5	5'-6"	
u6(E)	4	#5	5'-9"	
u7(E)	3	#7	9'-5"	
u8(E)	3	#7	6'-7"	
u9(E)	6	#5	4'-11"	
u10(E)	3	#5	5'-4"	
u11(E)	3	#5	5'-6"	
u12(E)	4	#5	5'-10"	
u13(E)	4	#5	4'-11"	
v(E)	532	#5	4'-10"	
v1(E)	266	#4	4'-3"	
v2(E)	266	#5	2'-6"	
Concrete Structures			Cu. Yd.	221
Reinforcement Bars, Epoxy Coated			Pound	17,310
Test Pile Metal Shell			Each	1
Furnishing Metal Pile Shells 12" x 0.250"			Foot	5,676
Driving Piles			Foot	5,676

NOTES:

1. Hatched area to be poured after superstructure faslsework has been removed. Quantity of concrete included with Concrete Superstructure.
2. * - Indicates for bar designation see abutment plan and elevation.
3. ** - Pile Liner shall be included in the cost of "Furnishing Metal Pile Shells 12". Do not fill annulus between pile and pile liner. Provide filter fabric around top of pile liner
4. Reinforcement bars designated (E) shall be epoxy coated.
5. For details of Bar splicers, see Sht. S-63.

REVISIONS	
NAME	DATE

STV Incorporated
Engineers/Architects/Planners/Construction Managers
200 W. Monroe Street, Suite 1650
Chicago, IL 60606-5015
312/553-0655, FAX 312/553-0661

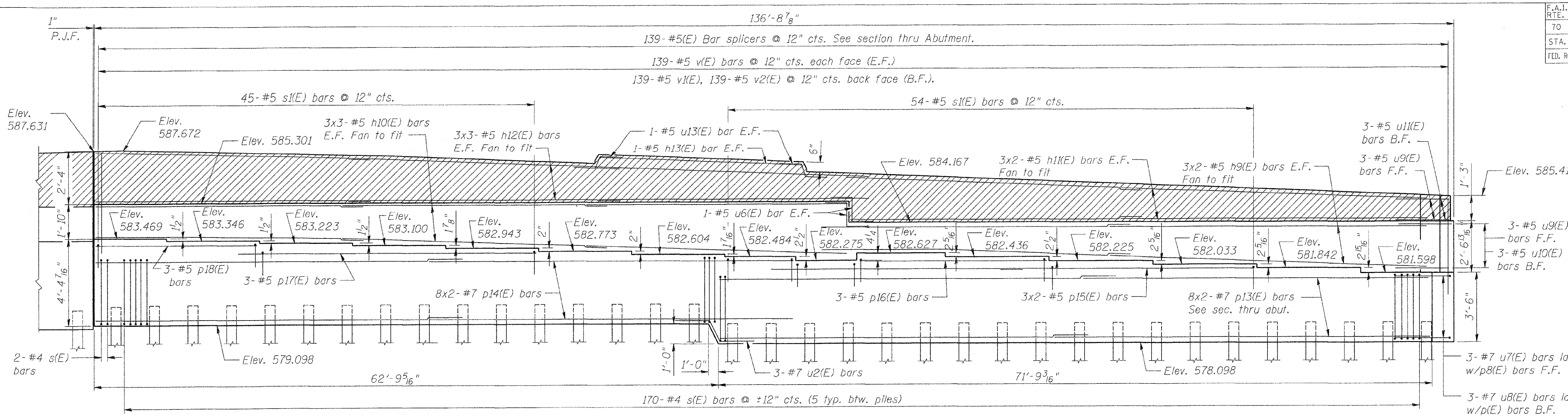
ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STATION 499+48.35
STRUCTURE NO. 060-0338

EAST ABUTMENT DETAILS

DESIGNED: JAW DRAWN: BTO
DATE: 03/06 CHECKED: BTO CHECKED: JAW

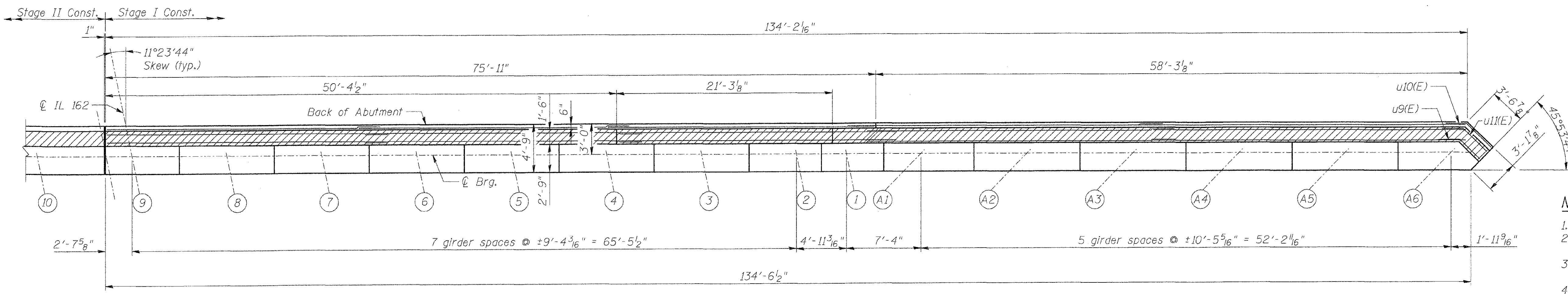
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	60-10K-1,60-10HB	MADISON	420	274
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 76709

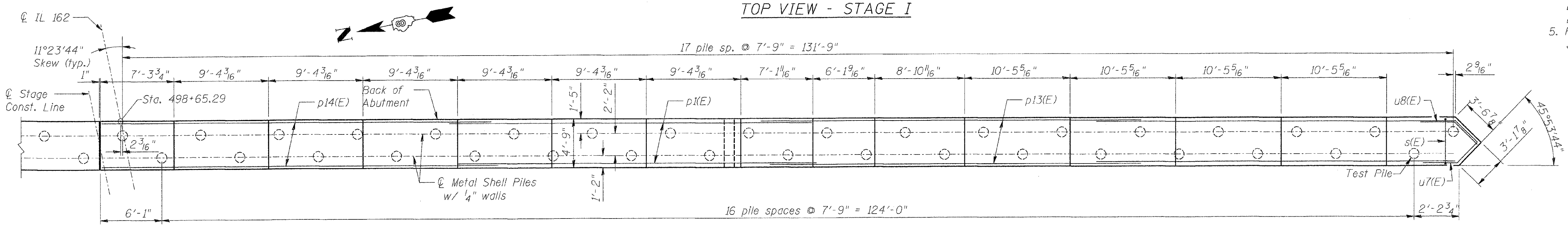


ELEVATION - STAGE I

(Looking West)



TOP VIEW - STAGE I



PILE CAP PLAN - STAGE I

PILE DATA

Type: 12" ϕ Metal Shell, w/ ¼" wall
Nominal Required Bearing: 355 kips
Allowable Required Available: 80 kips
Est. Length: 86 ft
No. Required: 34 plus 1 Test Pile

The Metal Shell piles shall be according to ASTM A252 Grade 3.

NOTES:

1. Pour steps monolithically with abutment.
2. Space reinforcement in cap to miss anchor bolts.
3. Bars designated (E) shall be expoxy coated.
4. F.F. indicates Front Face
   E.F. indicates Each Face
   B.F. indicates Back Face
5. For Bill of Material, sections and details, see Sht. S-58.

Min. Lap
#5 bars = 2'-2"
#7 bars = 3'-5"

SHT. S-56 OF S-68

REVISIONS	
NAME	DATE

STV Incorporated
Engineers/Architects/Planners/Construction Managers
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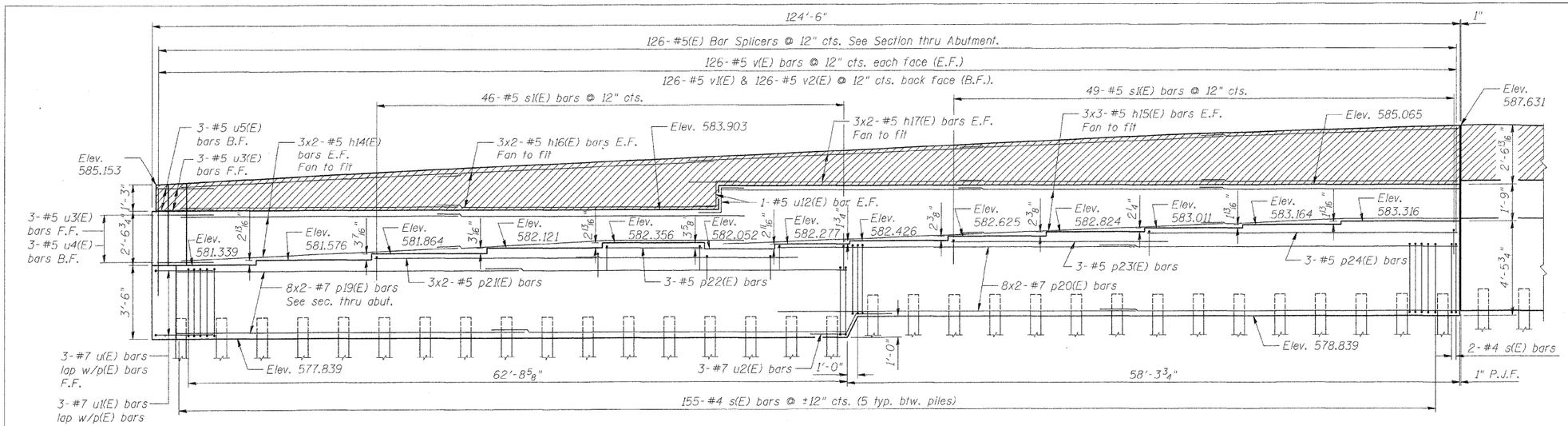
ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STATION 499+48.35
STRUCTURE NO. 060-0338

WEST ABUTMENT PLAN & ELEVATION - STAGE I

DESIGNED: JAW DRAWN: BTO
DATE: 03/06 CHECKED: BTO CHECKED: JAW

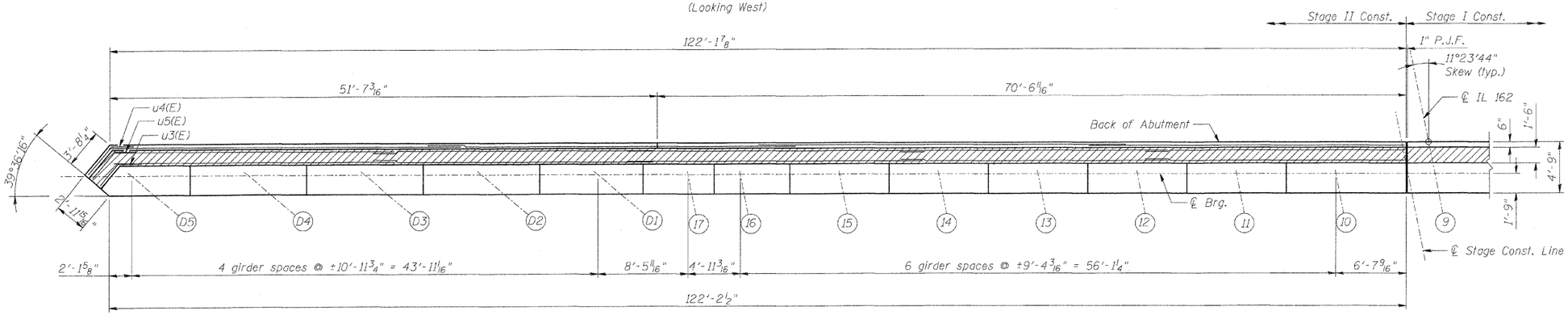
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	60-10K-1,60-10HB	MADISON	420	275
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 76709

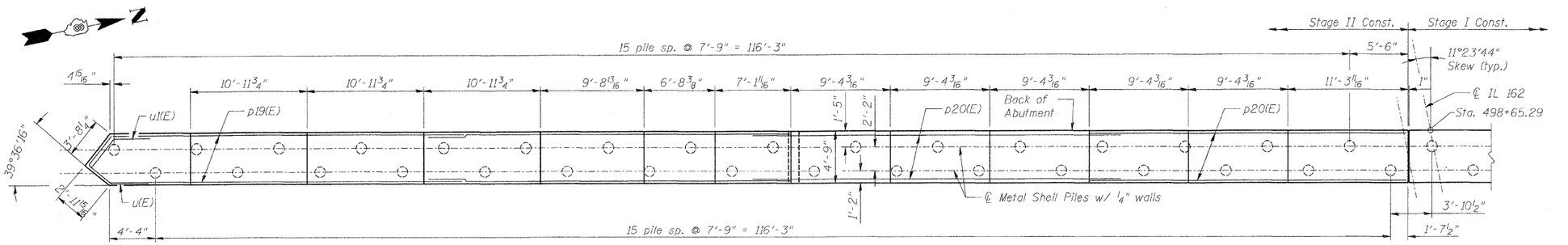


ELEVATION - STAGE II

(Looking West)



TOP VIEW - STAGE II



PILE CAP PLAN - STAGE II

PILE DATA

Type: 12" ϕ Metal Shell, w/ 1/4" wall
Nominal Required Bearing: 355 kips
Allowable Resistence Available: 80 kips
Est. Length: 86 ft
No. Required: 32

The Metal Shell piles shall be according to ASTM A252 Grade 3.

NOTE:

1. For notes, see Sht. S-56.

REVISIONS NAME	DATE

SHT. S-57 OF S-68

STV Incorporated
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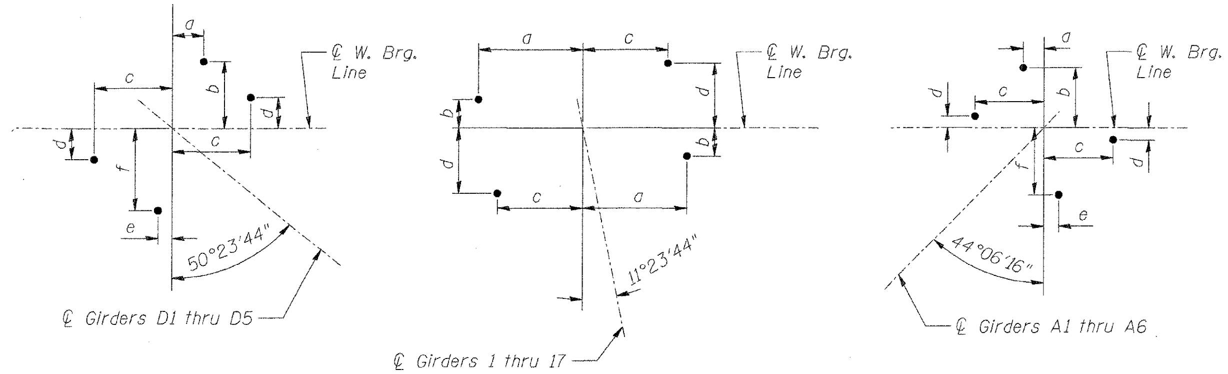
ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STATION 499+48.35
STRUCTURE NO. 060-0338

WEST ABUTMENT PLAN & ELEVATION - STAGE II

DESIGNED: JAW DRAWN: BTO
DATE: 03/06 CHECKED: BTO CHECKED: JAW

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	60-10K-1,60-10HB	MADISON	420	276
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 76709



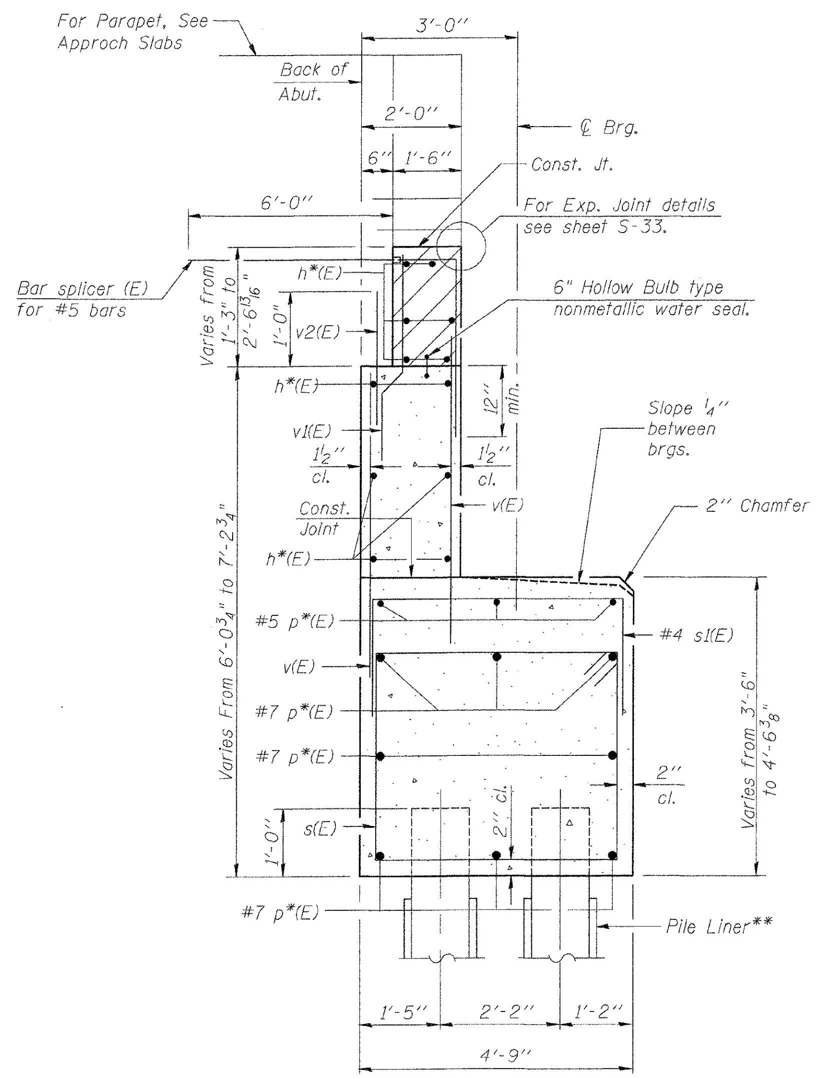
GIRDER	a	b	c	d	e	f
D1,D2	$1\frac{9}{16}$"	$8\frac{3}{4}$"	$8\frac{5}{16}$"	$3\frac{5}{16}$"	$1\frac{9}{16}$"	$8\frac{3}{4}$"
D3	$1\frac{1}{4}$"	9"	$8\frac{5}{8}$"	$2\frac{7}{8}$"	$1\frac{1}{4}$"	$9\frac{1}{16}$"
D4	$1\frac{1}{4}$"	9"	9"	$2\frac{5}{8}$"	$\frac{7}{8}$"	$9\frac{5}{16}$"
D5	$4\frac{3}{4}$"	9"	$10\frac{11}{16}$"	$4\frac{1}{8}$"	$2\frac{1}{16}$"	$11\frac{5}{16}$"
1,17	14"	$3\frac{13}{16}$"	$11\frac{7}{16}$"	$8\frac{15}{16}$"	-	-
2,16	$10\frac{15}{16}$"	$3\frac{9}{16}$"	$8\frac{11}{16}$"	$7\frac{1}{2}$"	-	-
3-15	$7\frac{3}{8}$"	$2\frac{1}{16}$"	$7\frac{3}{8}$"	$5\frac{5}{16}$"	-	-
A1,A2	$2\frac{1}{2}$"	$8\frac{9}{16}$"	$8\frac{5}{8}$"	$2\frac{1}{4}$"	$2\frac{1}{2}$"	$8\frac{9}{16}$"
A3,A4	$2\frac{1}{4}$"	$8\frac{7}{8}$"	$8\frac{15}{16}$"	$1\frac{15}{16}$"	$2\frac{1}{4}$"	$8\frac{7}{8}$"
A5,A6	$2\frac{1}{16}$"	9"	$9\frac{1}{4}$"	$1\frac{5}{8}$"	$1\frac{15}{16}$"	$9\frac{3}{16}$"

ANCHOR BOLT LAYOUT WEST ABUTMENT

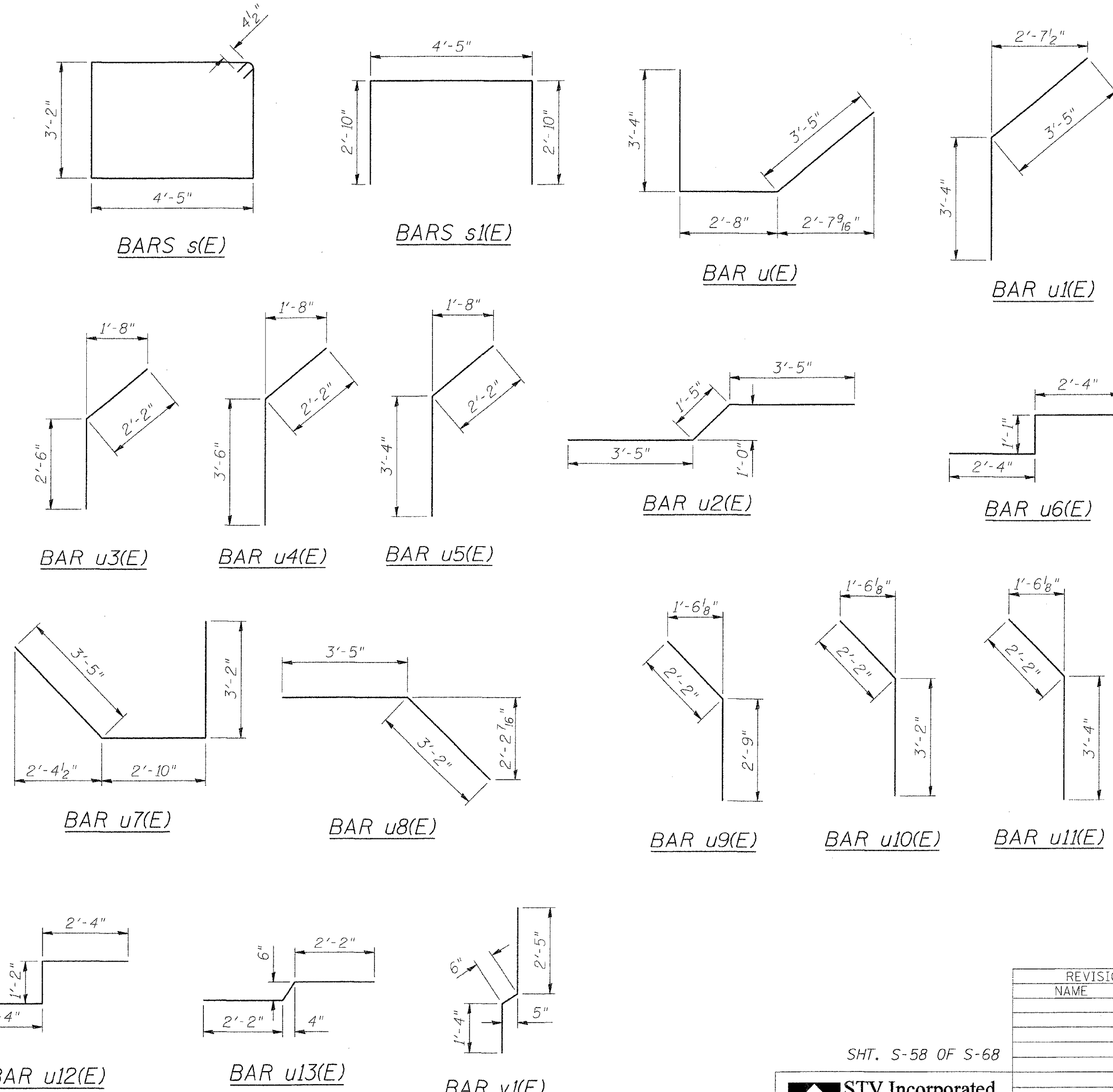
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h9(E)	12	#5	30'-1"	
h10(E)	18	#5	26'-8"	
h11(E)	12	#5	30'-3"	
h12(E)	18	#5	27'-6"	
h13(E)	2	#5	21'-0"	
h14(E)	12	#5	27'-11"	
h15(E)	18	#5	24'-11"	
h16(E)	12	#5	26'-8"	
h17(E)	18	#5	25'-7"	
p13(E)	16	#7	37'-6"	
p14(E)	16	#7	36'-7"	
p15(E)	6	#5	28'-0"	
p16(E)	3	#5	19'-0"	
p17(E)	3	#5	20'-0"	
p18(E)	3	#5	16'-3"	
p19(E)	16	#7	33'-1"	
p20(E)	16	#7	34'-1"	
p21(E)	6	#5	21'-3"	
p22(E)	3	#5	9'-6"	
p23(E)	3	#5	20'-8"	
p24(E)	3	#5	29'-8"	
s(E)	329	#4	15'-11"	
s1(E)	194	#4	10'-1"	
u(E)	3	#7	9'-5"	
u1(E)	3	#7	6'-9"	
u2(E)	6	#7	8'-3"	
u3(E)	6	#5	4'-8"	
u4(E)	3	#5	5'-8"	
u5(E)	3	#5	5'-6"	
u6(E)	4	#5	5'-9"	
u7(E)	3	#7	9'-5"	
u8(E)	3	#7	6'-7"	
u9(E)	6	#5	4'-11"	
u10(E)	3	#5	5'-4"	
u11(E)	3	#5	5'-6"	
u12(E)	4	#5	5'-10"	
u13(E)	4	#5	4'-11"	
v(E)	530	#5	4'-10"	
v1(E)	265	#4	4'-3"	
v2(E)	265	#5	2'-6"	

Concrete Structures	Cu. Yd.	218
Reinforcement Bars, Epoxy Coated	Pound	18,160
Test Pile Metal Shell	Each	1
Furnishing Metal Pile Shells 12" x 0.250"	Foot	5,676
Driving Piles	Foot	5,676



SEC. THRU ABUT.



BARS s(E) BARS s1(E) BAR u(E) BAR u1(E)

BAR u3(E) BAR u4(E) BAR u5(E) BAR u2(E) BAR u6(E)

BAR u7(E) BAR u8(E) BAR u9(E) BAR u10(E) BAR u11(E)

BAR u12(E) BAR u13(E) BAR v1(E)

NOTES:

1. Hatched area to be poured after superstructure faslsework has been removed. Quantity of concrete included with Concrete Superstructure.
2. * - Indicates for bar designation see abutment plan and elevation.
3. ** - Pile Liner shall be included in the cost of "Furnishing Metal Pile Shells 12". Do not fill annulus between pile and pile liner. Provide filter fabric around top of liner.
4. Reinforcement bars designated (E) shall be epoxy coated.
5. For details of Bar splicers, see Sht. S-63.

SHT. S-58 OF S-68

REVISIONS NAME	DATE

STV Incorporated
Engineers/Architects/Planners/Construction Managers
200 W. Monroe Street, Suite 1650
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312/553-0655, FAX 312/553-0661

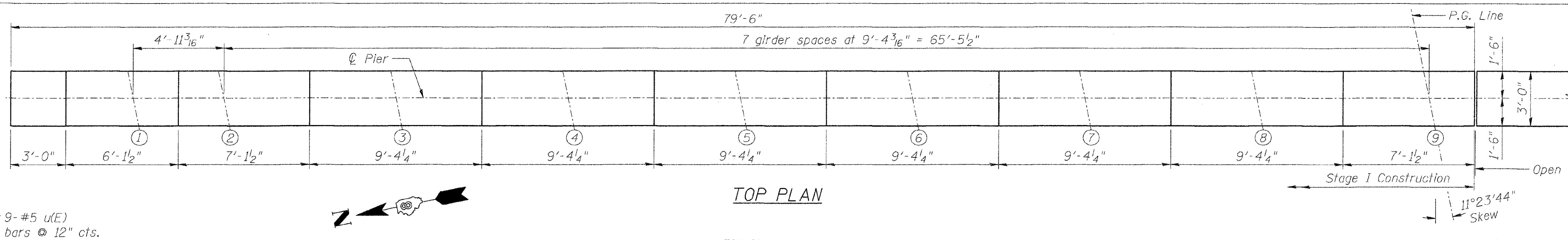
ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STATION 499+48.35
STRUCTURE NO. 060-0338

WEST ABUTMENT DETAILS

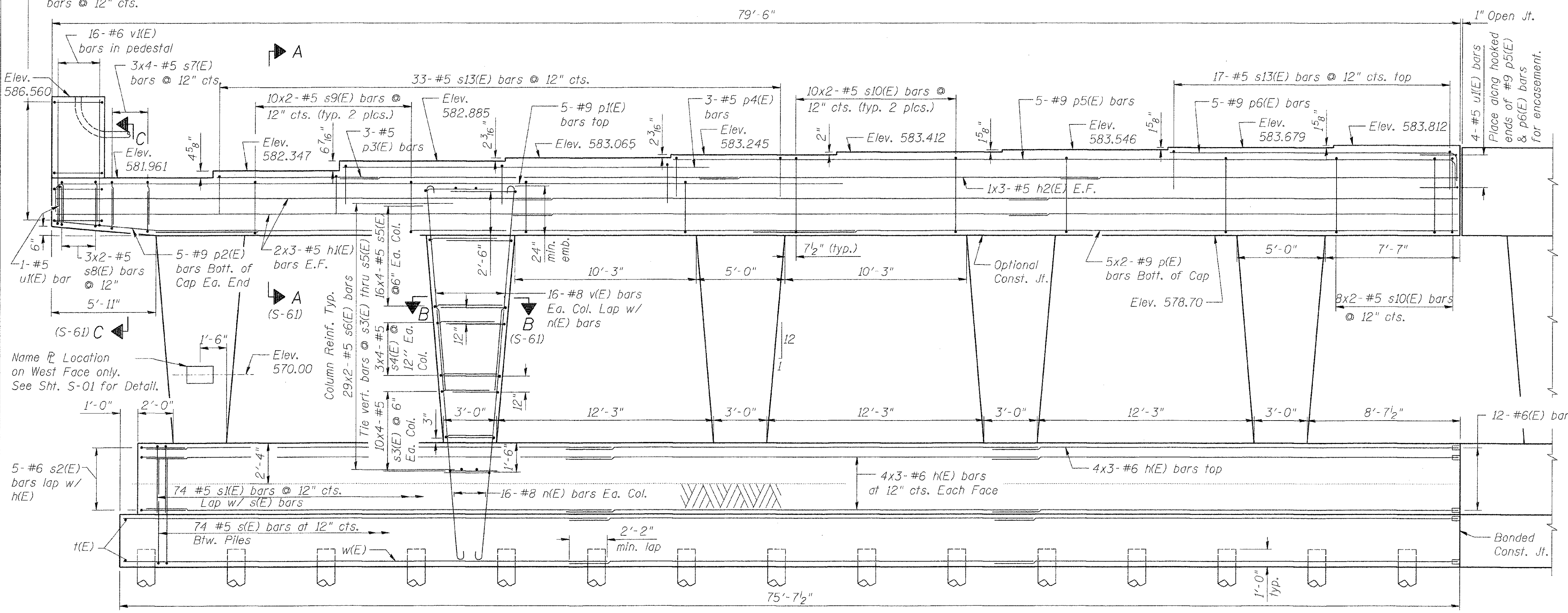
DESIGNED: JAW DRAWN: BTO
DATE: 03/06 CHECKED: BTO CHECKED: JAW

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	60-10K-1,60-10HB	MADISON	420	277
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

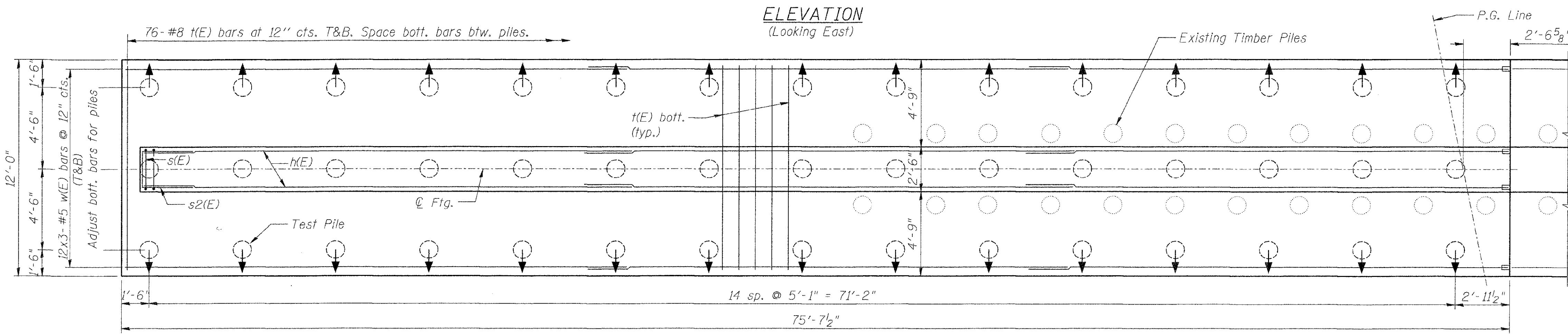
CONTRACT NO. 76709



TOP PLAN



ELEVATION
(Looking East)



SHT. S-59 OF S-68

FOOTING PLAN

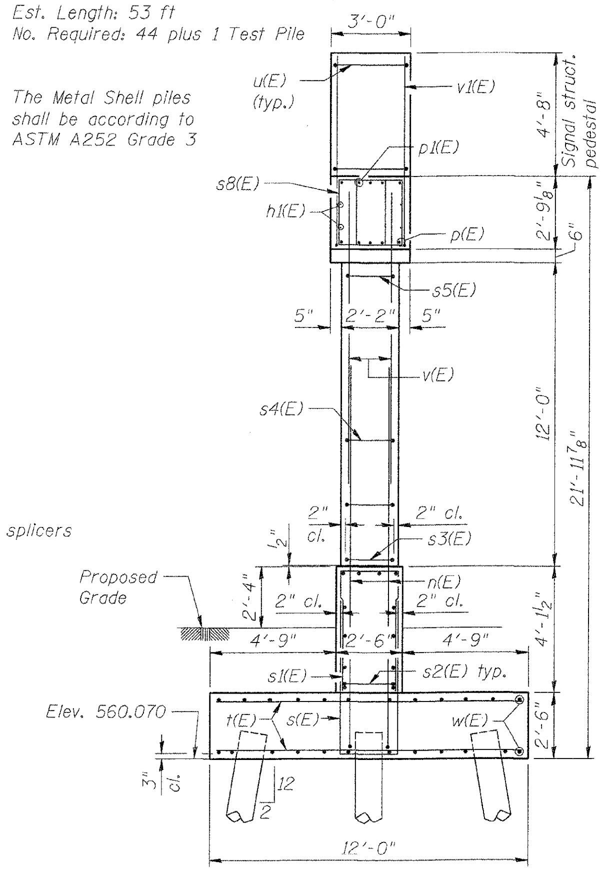
Size	Lap
#5	3'-0"
#6	3'-7"
#7	3'-5"
#8	4'-6"
#9	5'-9"

MIN. BAR LAP
Unless noted otherwise

PILE DATA

Type: 12" φ Metal Shell w/ 1/4" wall
Nominal Required Bearing: 355 kips
Allowable Resistence Available: 80 kips
Est. Length: 53 ft
No. Required: 44 plus 1 Test Pile

The Metal Shell piles shall be according to ASTM A252 Grade 3



END VIEW

NOTES:

1. Space reinforcement in cap to miss anchor bolts.
2. Pour steps monolithically with cap.
3. Work this sht. with Sht. S-60 thru S-62.
4. All edges shall have standard 3/4" chamfer except as noted.
5. Cut existing timber piles below proposed bottom of footing.

Denotes Battered Pile (2:12)

REVISIONS NAME	DATE

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Engineers/Architects/Planners/Construction Managers
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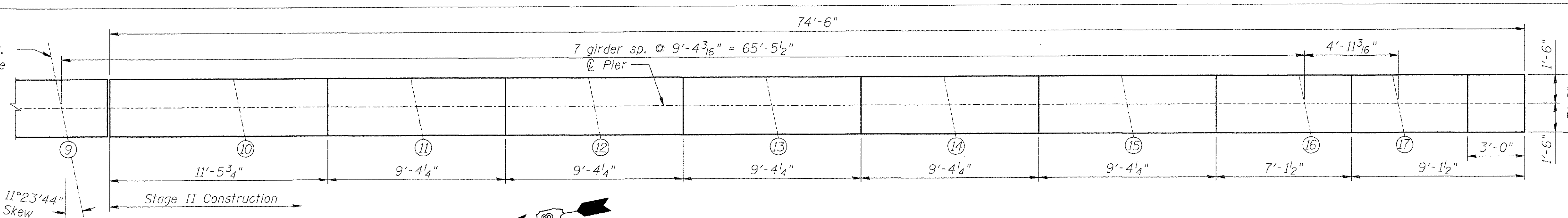
ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STATION 499+48.35
STRUCTURE NO. 060-0338

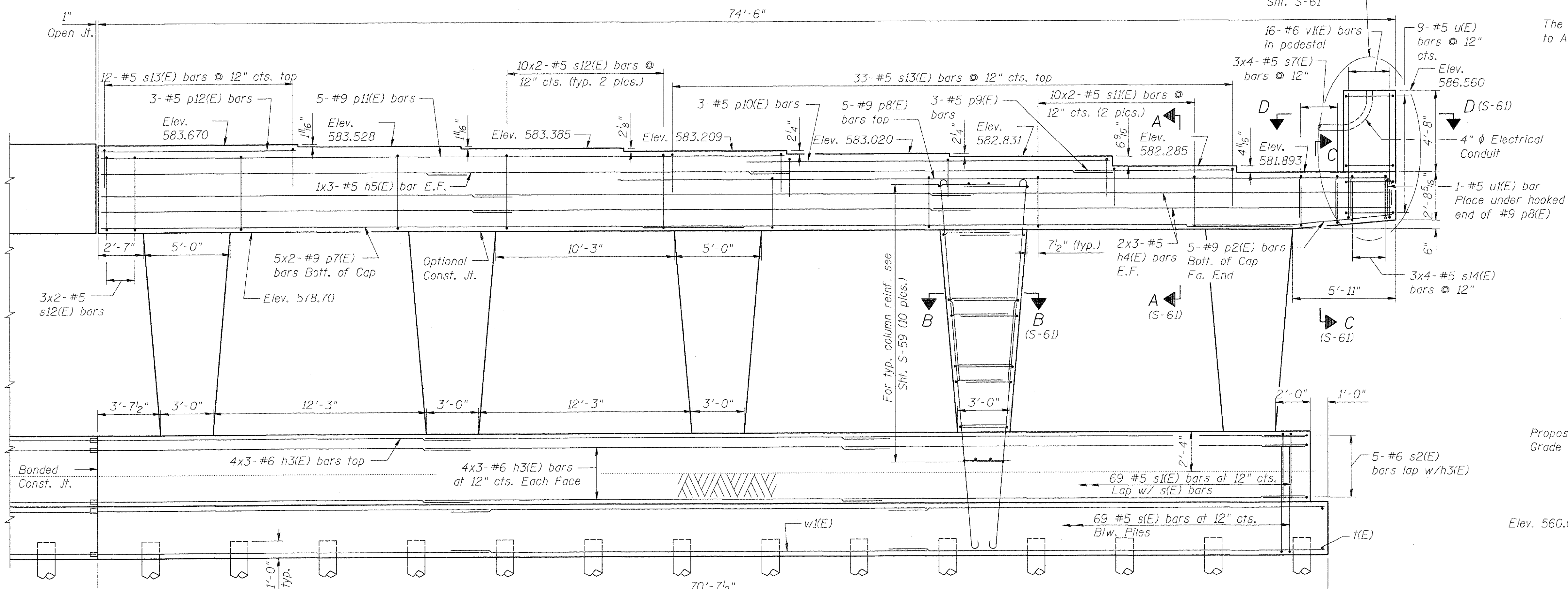
PIER PLAN & ELEVATION - STAGE I

DESIGNED: BTO DRAWN: BTO
DATE: 03/06 CHECKED: AWH CHECKED: AWH

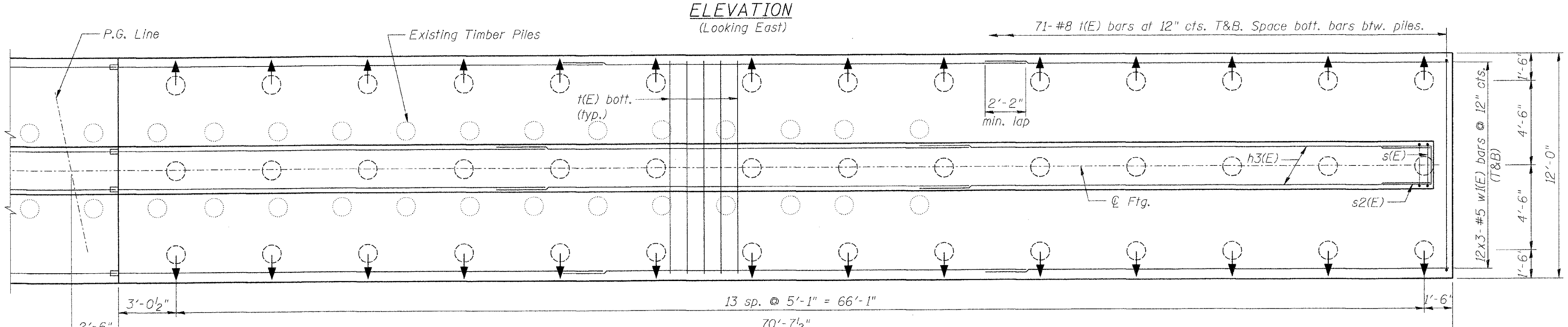
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	60-10K-1,60-10HB	MADISON	420	278
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 76709





ELEVATION
(Looking East)



FOOTING PLAN

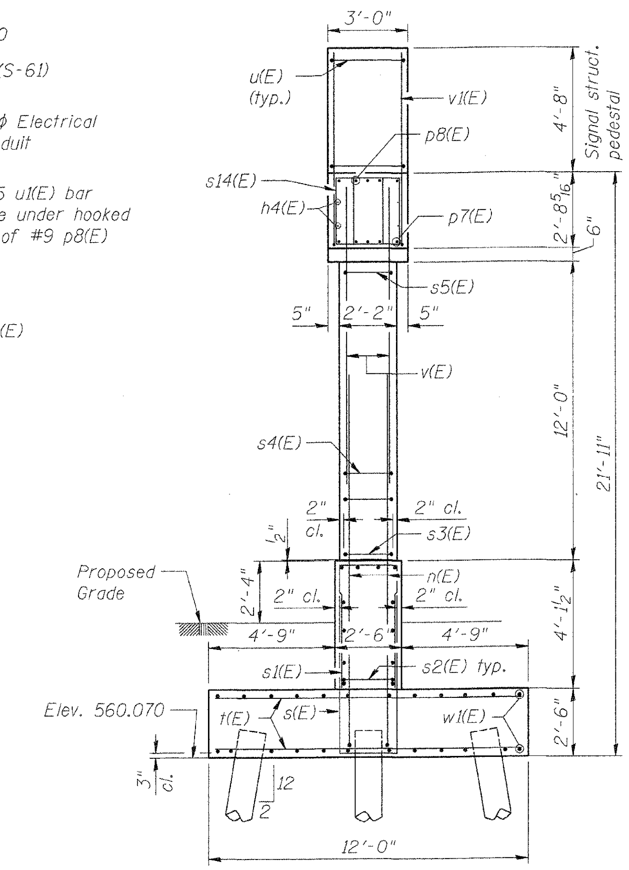
PILE DATA

Type: 12" ϕ Metal Shell w/ 1/4" wall
Nominal Required Bearing: 355 kips
Allowable Resistence Available: 80 kips
Est. Length: 53 ft
No. Required: 42

The Metal Shell piles shall be according to ASTM A252 Grade 3

Size	Lap
#5	3'-0"
#6	3'-7"
#7	3'-5"
#8	4'-6"
#9	5'-9"

MIN. BAR LAP
Unless noted otherwise



END VIEW

NOTE:
For notes, see sht. S-59.

Denotes Battered Pile (2:12)

SHT. S-60 OF S-68

REVISIONS	
NAME	DATE

STV Incorporated
Engineers/Architects/Planners/Construction Managers
200 W. Monroe Street, Suite 1650
Chicago, IL 60606-5015
312/553-0655, FAX 312/553-0661

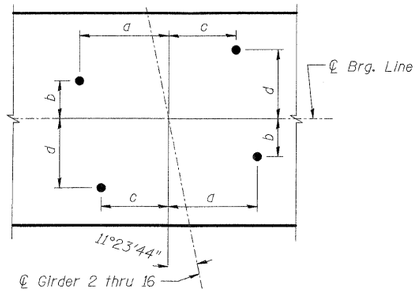
ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STATION 499+48.35
STRUCTURE NO. 060-0338

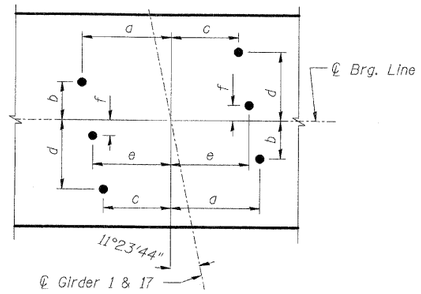
PIER PLAN & ELEVATION - STAGE II

DESIGNED: BTO | DRAWN: BTO
DATE: 03/06 | CHECKED: AWH | CHECKED: AWH

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	60-10K-1,60-10HB	MADISON	420	279
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

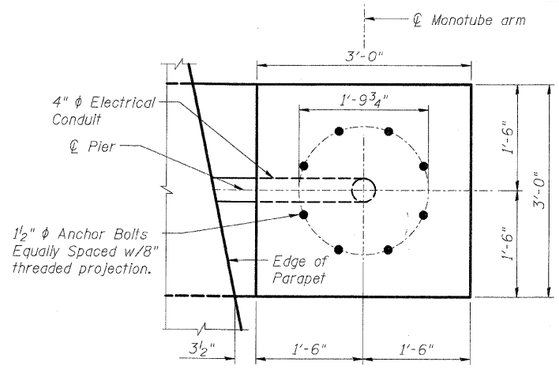
CONTRACT NO. 76709





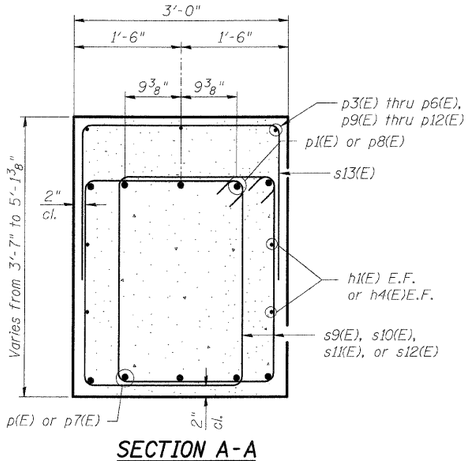
	a	b	c	d	e	f
1,17	$14\frac{15}{16}$"	$6\frac{7}{16}$"	$11\frac{5}{16}$"	$11\frac{11}{16}$"	$13\frac{1}{8}$"	$2\frac{5}{8}$"
2,16	$11\frac{5}{8}$"	$2\frac{3}{4}$"	$9\frac{11}{16}$"	$7\frac{7}{16}$"	-	-
3-15	9"	$3\frac{15}{16}$"	$6\frac{13}{16}$"	$7\frac{1}{8}$"	-	-

ANCHOR BOLT LAYOUT

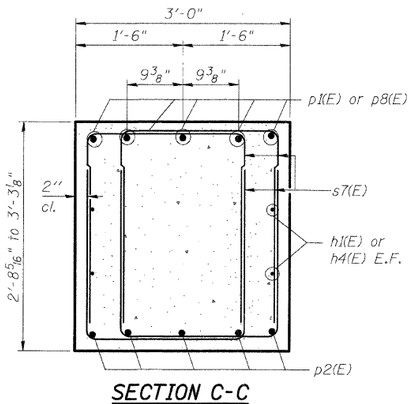


MONOTUBE ANCHOR BOLT LAYOUT

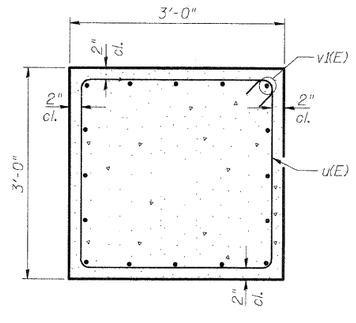
Note: Monotube Anchor bolts shall be ASTM F1554 Grade 55ksi.



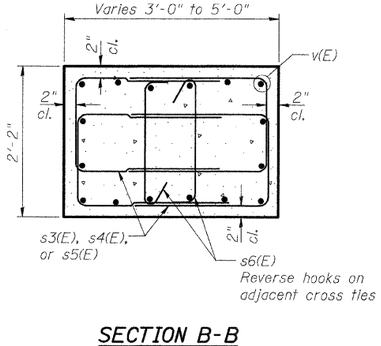
SECTION A-A



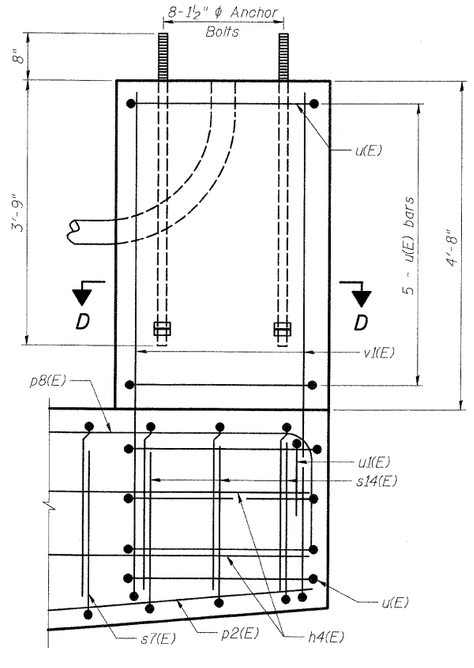
SECTION C-C



SECTION D-D



SECTION B-B



DETAIL 1

South end shown, north end similar

REVISIONS NAME	DATE

SHT. S-61 OF S-68

STV Incorporated
Engineers/Architects/Planners/Construction Managers
200 W. Monroe Street, Suite 1650
Chicago, IL. 60606-5015
312/553-0655, FAX 312/553-0661

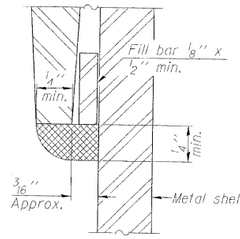
ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STATION 499+48.35
STRUCTURE NO. 060-0338

PIER DETAILS

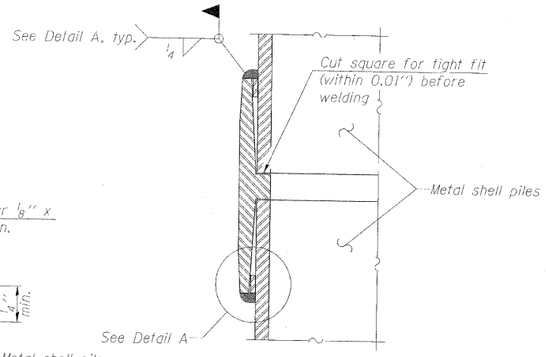
DESIGNED: BTO DRAWN: BTO
DATE: 03/06 CHECKED: AWH CHECKED: AWH

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	60-10K-1,60-10HB	MADISON	420	280
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 76709

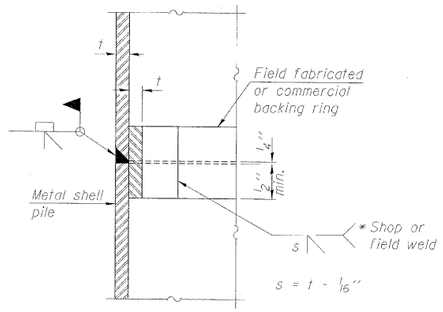


DETAIL A



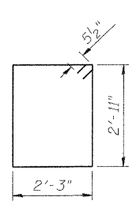
Notes:
The 1/8" x 1/2" min. fill bar may be constructed of 2 bars with a 1/8" max. gap between them.
Pile segments shall be driven to solid contact with splicer before welding.

WELDED COMMERCIAL SPLICE

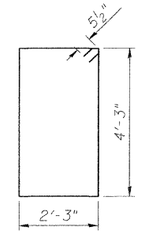


COMPLETE PENETRATION WELD SPLICE

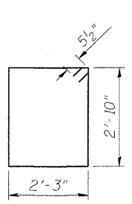
* Field fabricated backing ring may be made from pile shell by removing segment to allow reducing circumference and vertically rejoin with partial joint penetration weld.



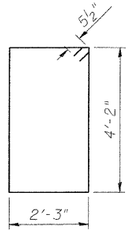
BAR s9(E)



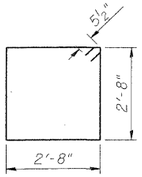
BAR s10(E)



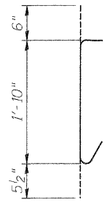
BAR s11(E)



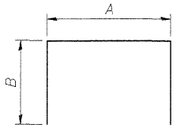
BAR s12(E)



BAR u(E)



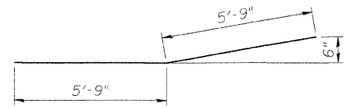
BAR s6(E)



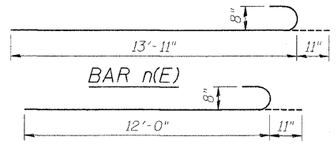
s & u BARS

A & B DIMENSIONS

Bar	A	B
s(E)	2'-2"	4'-6"
s1(E)	2'-2"	3'-11"
s2(E)	2'-2"	3'-9"
s3(E)	1'-4"	2'-8"
s4(E)	1'-4"	3'-4"
s5(E)	1'-4"	3'-10"
s7(E)	2'-3"	2'-7"
s8(E)	2'-3"	2'-5"
s13(E)	2'-8"	2'-2"
s14(E)	2'-3"	2'-4"
u1(E)	2'-8"	2'-0"

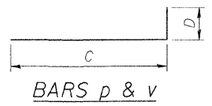


BAR p2(E)



BAR n(E)

BAR v(E)



BARS p & v

C & D DIMENSIONS

Bar	C	D
p1(E)	44'-6"	1'-7"
p5(E)	44'-3"	1'-7"
p6(E)	16'-3"	1'-7"
p8(E)	44'-6"	1'-7"
v1(E)	7'-0"	1'-0"

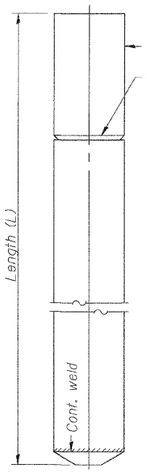
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	36	#6	27'-3	
h1(E)	12	#5	28'-4"	
h2(E)	6	#5	23'-0"	
h3(E)	36	#6	25'-6"	
h4(E)	12	#5	26'-9"	
h5(E)	6	#5	21'-4"	
n(E)	160	#8	14'-10"	
p(E)	10	#9	39'-9"	
p1(E)	5	#9	46'-1"	
p2(E)	10	#9	11'-6"	
p3(E)	3	#5	9'-1"	
p4(E)	3	#5	20'-8"	
p5(E)	5	#9	45'-10"	
p6(E)	5	#9	17'-10"	
p7(E)	10	#9	37'-3"	
p8(E)	5	#9	46'-1"	
p9(E)	3	#5	9'-2"	
p10(E)	3	#5	20'-6"	
p11(E)	5	#9	39'-3"	
p12(E)	3	#5	11'-2"	
s(E)	143	#5	11'-2"	
s1(E)	143	#5	10'-0"	
s2(E)	10	#6	9'-8"	
s3(E)	400	#5	6'-8"	
s4(E)	120	#5	8'-0"	
s5(E)	640	#5	9'-0"	
s6(E)	580	#5	2'-9 1/2"	
s7(E)	24	#5	7'-5"	
s8(E)	6	#5	7'-1"	
s9(E)	40	#5	11'-3"	
s10(E)	56	#5	13'-11"	
s11(E)	40	#5	11'-1"	
s12(E)	46	#5	13'-9"	
s13(E)	95	#5	7'-0"	
s14(E)	6	#5	6'-11"	
t(E)	294	#8	11'-6"	
u(E)	18	#5	11'-7"	
u1(E)	6	#5	6'-8"	
v(E)	160	#8	12'-11"	
v1(E)	32	#6	8'-0"	
w(E)	72	#5	26'-7"	
w1(E)	72	#5	24'-11"	
Structure Excavation		Cu. Yd.	401	
Concrete Structures		Cu. Yd.	331	
Reinforcement Bars, Epoxy Coated		Pound	53,920	
Test Pile Metal Shell		Each	1	
Furnishing Metal Pile Shells 12" x 0.250"		Foot	4558	
Driving Piles		Foot	4558	

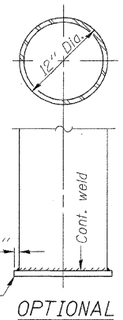
Reinforcement Bars designated (E) shall be epoxy coated

NOTE:

Work this sheet with Shts. S-59 thru S-61.

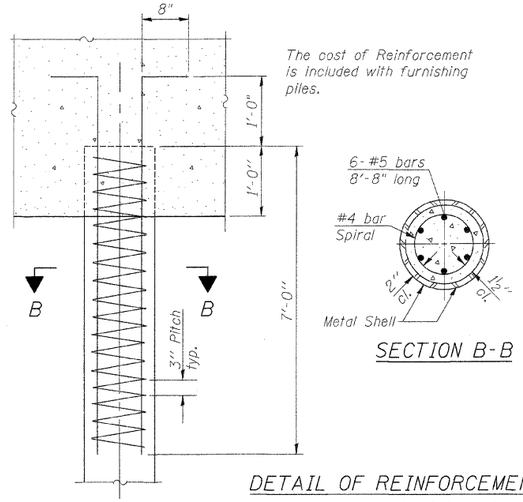


Note: Driving and bearing ends of pipe shall be cut square. The thickness of the shell shall be 0.25 inches with a tolerance of 5 % .



OPTIONAL FLAT END

DETAIL OF CYLINDRICAL STEEL SHELL FOR CAST IN PLACE CONCRETE PILES



The cost of Reinforcement is included with furnishing piles.

SECTION B-B

DETAIL OF REINFORCEMENT FOR METAL SHELLS

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

REVISIONS	
NAME	DATE

SHT. S-62 OF S-68

STV Incorporated
Engineers/Architects/Planners/Construction Managers
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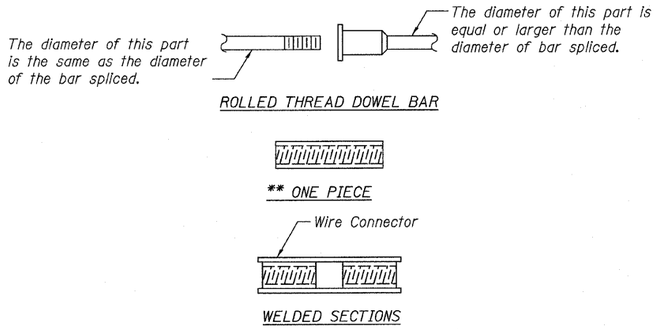
ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STATION 499+48.35
STRUCTURE NO. 060-0338

PIER & PILE DETAILS

DESIGNED: BTO DRAWN: BTO
DATE: 03/06 CHECKED: AWH CHECKED: AWH

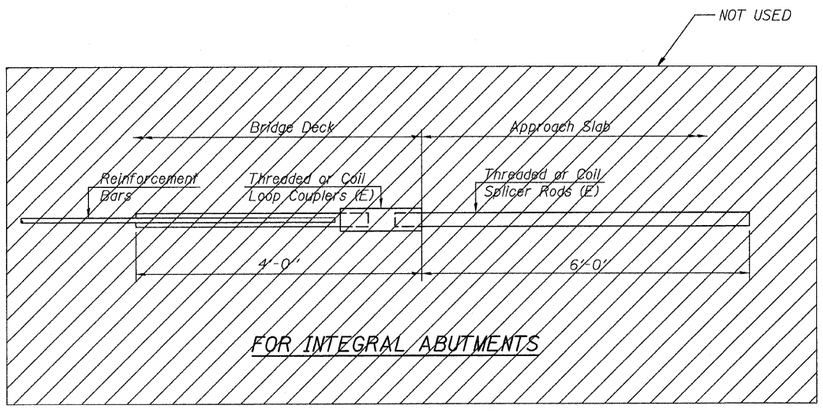
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	60-10K-1,60-10HB	MADISON	420	281
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 76709

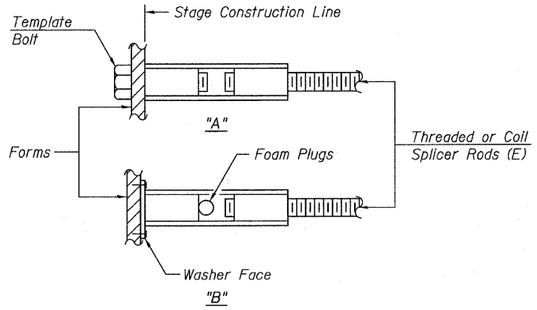


BAR SPLICER ASSEMBLY ALTERNATIVES

** Heavy Hex Nuts conforming to ASTM A 563, Grade C, D or DH may be used.

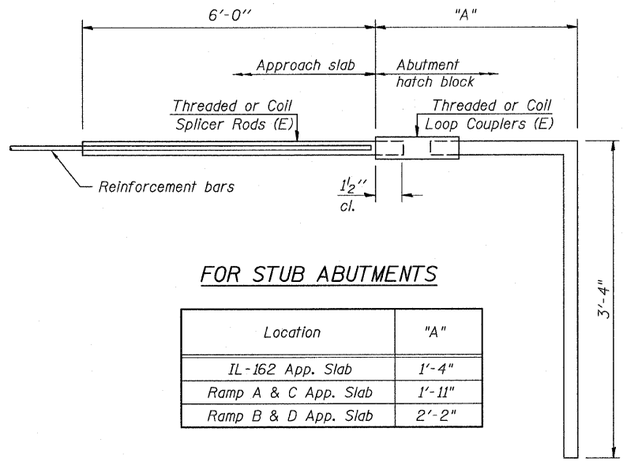


FOR INTEGRAL ABUTMENTS



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.



FOR STUB ABUTMENTS

Location	"A"
IL-162 App. Slab	1'-4"
Ramp A & C App. Slab	1'-11"
Ramp B & D App. Slab	2'-2"

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 12.3 kips - tension
No. Required = 531

NOTES

Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.

Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.

All reinforcement bars shall be lapped and tied to the splicer rods or dowel bars.

Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars.

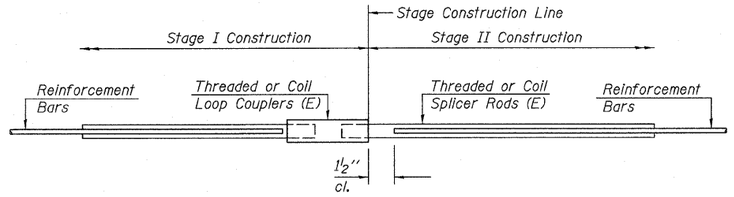
Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

① Minimum Capacity (Tension in kips) = $1.25 \times f_y \times A_t$

② Minimum *Pull-out Strength (Tension in kips) = $0.66 \times f_y \times A_t$

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

BAR SPLICER ASSEMBLIES			
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#4	1'-8"	14.7	7.9
#5	2'-2"	23.0	12.3
#6	2'-7"	33.1	17.4
#7	3'-5"	45.1	23.8
#8	4'-6"	58.9	31.3
#9	5'-9"	75.0	39.6
#10	7'-3"	95.0	50.3
#11	9'-0"	117.4	61.8



STANDARD

Bar Size	No. Assemblies Required	Location
#5	24	Pier
#6	12	Pier
#5	672	Deck

BAR SPLICER ASSEMBLY DETAILS

BSD-1 10-1-08

SHT. S-63 OF S-68

REVISIONS	
NAME	DATE

STV Incorporated
Engineers/Architects/Planners/Construction Managers
200 W. Monroe Street, Suite 1650
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F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STATION 499+48.35
STRUCTURE NO. 060-0338

BAR SPLICER ASSEMBLY

DESIGNED: BTO DRAWN: BTO
DATE: 03/06 CHECKED: JAN CHECKED: JAN

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	60-10K-1,60-10HB	MADISON	420	282
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 76709

Illinois Department of Transportation — SOIL BORING LOG

Page 1 of 2 — Date 4/10/03

ROUTE FAP 586 DESCRIPTION IL 162 and I-55/70 Interchange Ramp Retaining Walls in Troy LOGGED BY Mark Schreader

SECTION 60R-2, 37R-1 LOCATION SW 1/4, SEC. 5, TWP. 3N, RNG. 7W, 3 PM

COUNTY Madison DRILLING METHOD Hollow Stem Auger HAMMER TYPE 140# Automatic

STRUCT. NO. — Station —

BORING NO. SB #1 NE Ramp — Station 1352+55 (I-55/70) — Offset 27.00ft LT Ed. Pav. (I-55/70) — Ground Surface Elev. 561.0 ft

Surface Water Elev. — ft — Stream Bed Elev. — ft

Groundwater Elev.: First Encounter 540.0 ft — Upon Completion — ft — After — Hrs. — ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Brown Silty LOAM			
	2		
	3		
557.0	3	NC	14
Gray Silty LOAM			
-5	4		
	4	1.5	
	4	S/15	26
	2		
	1	0.6	
-10	2	S/20	32
	0		
	2	0.6	
549.0	1	S/20	31
Brown Silty Clay LOAM	2		
	2	1.1	
	2	S/20	34
-15	2		
	3	1.3	
	3	S/20	30
	2		
	1	0.8	
-20	23	S/20	30
	0		
-30			

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Brown Silty Clay LOAM (continued)	3	1.4	
	3	S/20	21
535.5			
	0		
Gray Loamy SAND	0		
See Gradation @ 25.5 ft	3	NC	23
-25	0		
	2		
534.0	1	NC	24
Gray Silty Clay LOAM	5		
	7	2.3	
	11	S/20	17
-30	6		
	11	4.1	
	15	S/15	13
	6		
	16	2.6	
	33	S/10	17
-40	5		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation — SOIL BORING LOG

Page 2 of 2 — Date 4/10/03

ROUTE FAP 586 DESCRIPTION IL 162 and I-55/70 Interchange Ramp Retaining Walls in Troy LOGGED BY Mark Schreader

SECTION 60R-2, 37R-1 LOCATION SW 1/4, SEC. 5, TWP. 3N, RNG. 7W, 3 PM

COUNTY Madison DRILLING METHOD Hollow Stem Auger HAMMER TYPE 140# Automatic

STRUCT. NO. — Station —

BORING NO. SB #1 NE Ramp — Station 1352+55 (I-55/70) — Offset 27.00ft LT Ed. Pav. (I-55/70) — Ground Surface Elev. 561.0 ft

Surface Water Elev. — ft — Stream Bed Elev. — ft

Groundwater Elev.: First Encounter 540.0 ft — Upon Completion — ft — After — Hrs. — ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Gray Silty Clay LOAM (continued)	8	2.2	
	10	S/20	22
-45	5		
	10	2.9	
	14	S/15	20
-50	6		
	14	3.1	
	19	S/15	16
-55	7		
	13	3.1	
	18	S/15	16
-60	4		

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Gray Silty Clay LOAM (continued)	8	3.4	
	11	S/15	19
500.0			
End of Boring			
-65			
-70			
-75			
-80			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation — SOIL BORING LOG

Page 1 of 2 — Date 4/15/03

ROUTE FAP 586 DESCRIPTION IL 162 and I-55/70 Interchange Ramp Retaining Walls in Troy LOGGED BY Mark Schreader

SECTION 60R-2, 37R-1 LOCATION SW 1/4, SEC. 5, TWP. 3N, RNG. 7W, 3 PM

COUNTY Madison DRILLING METHOD Hollow Stem Auger HAMMER TYPE 140# Automatic

STRUCT. NO. — Station —

BORING NO. SB #2 NW Ramp — Station 1352+55 (I-55/70) — Offset 63.00ft RT Ed. Pav. (I-55/70) — Ground Surface Elev. 560.5 ft

Surface Water Elev. — ft — Stream Bed Elev. — ft

Groundwater Elev.: First Encounter 534.5 ft — Upon Completion — ft — After — Hrs. — ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Gray Silty Clay LOAM			
	2		
	2	0.8	
	3	S/20	26
-5	2		
	3	1.8	
	3	S/20	27
	0		
	2	1.2	
	3	S/20	33
551.0			
-10	0		
Brown Silty LOAM	2	0.8	
	2	S/20	34
	0		
	2	1.2	
	3	S/10	58
-15	0		
	2	0.9	
	2	S/20	31
543.5			
Brown Silty CLAY	0		
	3	1.6	
	4	S/20	29
-20	2		

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Brown Silty CLAY (continued)	2	0.8	
	3	S/20	31
	2		
	3	1.5	
	3	S/20	30
-25	0		
	3	1.1	
	3	S/20	26
	3		
	6	2.8	
	7	S/20	14
-30	5		
	7	2.8	
	9	S/20	14
-35	12		
	24	4.0	
	20	S/5	18
-40	4		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation — SOIL BORING LOG

Page 2 of 2 — Date 4/15/03

ROUTE FAP 586 DESCRIPTION IL 162 and I-55/70 Interchange Ramp Retaining Walls in Troy LOGGED BY Mark Schreader

SECTION 60R-2, 37R-1 LOCATION SW 1/4, SEC. 5, TWP. 3N, RNG. 7W, 3 PM

COUNTY Madison DRILLING METHOD Hollow Stem Auger HAMMER TYPE 140# Automatic

STRUCT. NO. — Station —

BORING NO. SB #2 NW Ramp — Station 1352+55 (I-55/70) — Offset 63.00ft RT Ed. Pav. (I-55/70) — Ground Surface Elev. 560.5 ft

Surface Water Elev. — ft — Stream Bed Elev. — ft

Groundwater Elev.: First Encounter 534.5 ft — Upon Completion — ft — After — Hrs. — ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Brown Silty CLAY (continued)	8	3.6	
	11	S/10	20
-45	5		
	9	3.6	
	14	S/15	19
509.5			
End of Boring			
-50	6		
	12	3.5	
	16	S/20	19
-55			
-60			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation — SOIL BORING LOG

Page 1 of 2 — Date 4/23/03

ROUTE FAP 586 DESCRIPTION IL 162 and I-55/70 Interchange Ramp Retaining Walls in Troy LOGGED BY Mark Schreader

SECTION 60R-2, 37R-1 LOCATION SW 1/4, SEC. 5, TWP. 3N, RNG. 7W, 3 PM

COUNTY Madison DRILLING METHOD Hollow Stem Auger HAMMER TYPE 140# Automatic

STRUCT. NO. — Station —

BORING NO. SB #3 NW Ramp — Station 1352+36 (I-55/70) — Offset 35.00ft RT Ed. Pav. (I-55/70) — Ground Surface Elev. 561.5 ft

Surface Water Elev. — ft — Stream Bed Elev. — ft

Groundwater Elev.: First Encounter 553.0 ft — Upon Completion — ft — After — Hrs. — ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Brown Silty LOAM			
	3		
	3	2.2	
	5	S/20	26
-5	2		
	2	0.8	
	2	S/20	33
	2		
	3	2.4	
	4	S/20	28
-10	2		
	2	1.5	
	3	S/20	30
549.5			
Brown Silty Clay LOAM	2		
	3	1.0	
	3	B/20	32
-15	3		
	3	1.4	
	5	S/10	46
	0		
	3	1.3	
	3	S/20	29
-20	0		

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Brown Silty Clay LOAM (continued)	2	1.3	
	3	S/20	27
	3		
	3	1.1	
	4	B/20	28
-25	3		
	5	2.0	
	6	S/20	24
	3		
	3	1.0	
	4	B/20	22
-30	4		
	4	2.0	
	6	S/20	15
	7		
	14	4.4	
	28	S/10	15
-40	4		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation — SOIL BORING LOG

Page 2 of 2 — Date 4/23/03

ROUTE FAP 586 DESCRIPTION IL 162 and I-55/70 Interchange Ramp Retaining Walls in Troy LOGGED BY Mark Schreader

SECTION 60R-2, 37R-1 LOCATION SW 1/4, SEC. 5, TWP. 3N, RNG. 7W, 3 PM

COUNTY Madison DRILLING METHOD Hollow Stem Auger HAMMER TYPE 140# Automatic

STRUCT. NO. — Station —

BORING NO. SB #3 NW Ramp — Station 1352+36 (I-55/70) — Offset 35.00ft RT Ed. Pav. (I-55/70) — Ground Surface Elev. 561.5 ft

Surface Water Elev. — ft — Stream Bed Elev. — ft

Groundwater Elev.: First Encounter 553.0 ft — Upon Completion — ft — After — Hrs. — ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Brown Silty Clay LOAM (continued)	8	3.4	
	10	S/20	21
-45	5		
	8	3.1	
	11	S/20	21
-50	7		
	14	3.4	
	20	S/20	19
510.5			
End of Boring			
-55			
-60			
-65			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation — SOIL BORING LOG

Page 1 of 2 — Date 8/9/03

ROUTE FAP 586 DESCRIPTION IL 162 and I-55/70 Interchange Ramp Retaining Walls in Troy LOGGED BY Mark Schreader

SECTION 60R-2, 37R-1 LOCATION SW 1/4, SEC. 5, TWP. 3N, RNG. 7W, 3 PM

COUNTY Madison DRILLING METHOD Hollow Stem Auger HAMMER TYPE 140# Automatic

STRUCT. NO. — Station —

BORING NO. SB #4 SE Ramp — Station 1353+45 (I-55/70) — Offset 66.00ft LT Ed. Pav. (I-55/70) — Ground Surface Elev. 560.5 ft

Surface Water Elev. — ft — Stream Bed Elev. — ft

Groundwater Elev.: First Encounter 549.5 ft — Upon Completion — ft — After — Hrs. — ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Gray Silty CLAY			
	3		
	4	1.9	25
	4	S/5	
-5	2		
	3	2.2	26
	5	S/20	
	2		
	2	0.9	27
	3	S/20	
-10	2		
	3	0.9	29
	3	S/20	
	2		
	3	2.0	25
	4	S/20	
-15	0		
	3	1.2	26
	3	S/20	
	3		
	3	1.3	25
	4	S/20	
541.0			
Brown Sandy LOAM	3		
-20			

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Brown Sandy LOAM (continued)	4	2.2	24
	5	S/20	
538.5			
Brown Loamy SAND	3		
	2		23
	3	NC	
-35	0		
	2		26
	2	NC	
533.5			
Brown Silty CLAY	8		
	10	2.6	14
	13	S/20	
-30	5		
	8	4.8	14
	13	S/5	
	3		
	5	2.3	22
	4	S/20	
-40	5		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

SHT. S-64 OF S-68

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STATION 499+48.35
STRUCTURE NO. 060-0338

BORING LOGS

DESIGNED: BTO — DRAWN: BTO
DATE: 03/06 — CHECKED: JAN — CHECKED: JAN

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	60-10K-1,60-10HB	MADISON	420	283
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 76709

Illinois Department of Transportation — SOIL BORING LOG

Page 2 of 2

Date 8/9/03

ROUTE FAP 586 DESCRIPTION IL 162 and I-55/70 Interchange Ramp Retaining Walls in Troy LOGGED BY Mark Schreader

SECTION 60R-2, 37R-1 LOCATION SW 1/4, SEC. 5, TWP. 3N, RNG. 7W, 3 PM

COUNTY Madison DRILLING METHOD Hollow Stem Auger HAMMER TYPE 140# Automatic

STRUCT. NO. — Station —

BORING NO. SB #4 SE Ramp Station 1353+45 (I-55/70) Offset 68.00ft LT Ed. Pav. (I-55/70) Ground Surface Elev. 560.5 ft

Surface Water Elev. — ft Stream Bed Elev. — ft

Groundwater Elev.: First Encounter 549.5 ft Upon Completion — ft After — Hrs. — ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Brown Silty CLAY *(continued)*	7	2.9	20
	9	S/20	
-45	5		
	9	3.4	19
	13	S/20	
509.5	12	4.1	17
	17	S/15	
End of Boring			
-60			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation — SOIL BORING LOG

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Date 6/16/03

ROUTE FAP 586 DESCRIPTION IL 162 and I-55/70 Interchange Ramp Retaining Walls in Troy LOGGED BY Mark Schreader

SECTION 60R-2, 37R-1 LOCATION SW 1/4, SEC. 5, TWP. 3N, RNG. 7W, 3 PM

COUNTY Madison DRILLING METHOD Hollow Stem Auger HAMMER TYPE 140# Automatic

STRUCT. NO. — Station —

BORING NO. SB #5 SW Ramp Station 1354+08 (I-55/70) Offset 61.00ft RT. Ed. Pav. (I-55/70) Ground Surface Elev. 560.0 ft

Surface Water Elev. — ft Stream Bed Elev. — ft

Groundwater Elev.: First Encounter 542.5 ft Upon Completion — ft After — Hrs. — ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Brown Silty LOAM			
	2		
	2	1.4	
	2	S/20	28
-5	2		
	2	1.3	
	2	S/20	32
	2		
	3	1.6	
	3	S/20	30
-10	2		
	2	1.4	
	2	S/20	30
	0		
	0	1.3	
546.0	4	S/20	27
Gray Silty LOAM *Sample ST #1 Recovery = 2.5 ft Qu = 0.5 tsf*			
543.5			
Gray Silty LOAM *Sample ST #2 Recovery = 2.5 ft Qu = 1.0 tsf*			
541.0			
Gray Silty LOAM			
-20			

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Gray Silty LOAM *(continued)* *Sample ST #3 Recovery = 2.5 ft Qu = 1.0 tsf*			
538.5			
Gray Sandy LOAM *Sample ST #4 Recovery = 2.0 ft Qu = 1.5 tsf*			
538.0			
Brown Silty CLAY (Till)	6		
-25	8	2.3	
	12	S/20	14
	7		
	14	5.8	
	20	S/20	13
-30	6		
	12	4.0	
	14	S/20	13
-35	7		
	9	3.5	
	17	S/15	17
-40	7		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation — SOIL BORING LOG

Page 2 of 2

Date 6/16/03

ROUTE FAP 586 DESCRIPTION IL 162 and I-55/70 Interchange Ramp Retaining Walls in Troy LOGGED BY Mark Schreader

SECTION 60R-2, 37R-1 LOCATION SW 1/4, SEC. 5, TWP. 3N, RNG. 7W, 3 PM

COUNTY Madison DRILLING METHOD Hollow Stem Auger HAMMER TYPE 140# Automatic

STRUCT. NO. — Station —

BORING NO. SB #5 SW Ramp Station 1354+08 (I-55/70) Offset 61.00ft RT. Ed. Pav. (I-55/70) Ground Surface Elev. 560.0 ft

Surface Water Elev. — ft Stream Bed Elev. — ft

Groundwater Elev.: First Encounter 542.5 ft Upon Completion — ft After — Hrs. — ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Brown Silty CLAY (Till) *(continued)*	14	4.2	
	18	S/15	17
-45	6		
	13	2.8	
	16	S/15	17
-50	7		
	12	4.2	
509.0	16	S/15	17
End of Boring			
-60			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation — SOIL BORING LOG

Page 1 of 2

Date 4/17/01

ROUTE FAP 586 DESCRIPTION IL 162 over FAI 55/70 @ Troy LOGGED BY Mark Denton

SECTION 60R-2, 37R-1 LOCATION SW 1/4, SEC. 5, TWP. 3N, RNG. 7W, 3 PM

COUNTY Madison DRILLING METHOD Hollow Stem Auger HAMMER TYPE 140#

STRUCT. NO. 060-0139 Station —

BORING NO. 6 E Abutment Station 18+80 Offset 31.50ft RT Ground Surface Elev. 582.06 ft

Surface Water Elev. — ft Stream Bed Elev. — ft

Groundwater Elev.: First Encounter 560.6 ft Upon Completion — ft After — Hrs. — ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Asphalt Shoulder Rock & Sand	4	1.9	
	5	S/15	28
580.6	6		
Brown & Gray Silty CLAY (till)	2		
	1		
	2	0.7	
	4	S/15	28
-5	2		
	3	0.6	
	4	S/10	29
	3		
	5	2.4	
573.1	6	S/15	25
Gray Silty Clay LOAM	4		
-10	6	1.7	
	6	S/15	24
	4		
	5	1.8	
568.1	6	S/10	23
Gray Silty CLAY	4		
-15	5	1.8	
	5	S/10	30
565.6	7		
Dark Gray Silt LOAM with some grass & fine roots	9	2.2	
	8	S/15	21
563.1			
Brown & Gray Silty CLAY			
-20			

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Brown & Gray Silty CLAY *(continued)*	4	1.9	
	5	S/15	28
560.6	6		
Gray Silty LOAM	1		
	2	0.9	
	3	S/15	32
-25	2		
	4	1.5	
	7	S/15	27
	2		
554.1	4	1.5	32
Brown Robine SILT	5	B	
		1.8	40
551.1		B	
Gray Silty Clay LOAM	2		
-30	3	1.1	
	5	B	29
	4		
	2		
546.1	4		
Gray Clay LOAM			
-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation — SOIL BORING LOG

Page 2 of 2

Date 4/17/01

ROUTE FAP 586 DESCRIPTION IL 162 over FAI 55/70 @ Troy LOGGED BY Mark Denton

SECTION 60R-2, 37R-1 LOCATION SW 1/4, SEC. 5, TWP. 3N, RNG. 7W, 3 PM

COUNTY Madison DRILLING METHOD Hollow Stem Auger HAMMER TYPE 140#

STRUCT. NO. 060-0139 Station —

BORING NO. 6 E Abutment Station 18+80 Offset 31.50ft RT Ground Surface Elev. 582.06 ft

Surface Water Elev. — ft Stream Bed Elev. — ft

Groundwater Elev.: First Encounter — ft Upon Completion — ft After — Hrs. — ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Gray Clay LOAM *(continued)*	0	1.5	
	4	S/15	22
	5		
-45	0		
	7	2.0	
	15	S/10	14
-50	7		
	15	4.9	
	23	B	11
530.1			
Gray SILT	30		
-55	50	4.2	
	50/.4	S/10	15
525.1			
Brown & Gray Clay LOAM			
-60			

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Brown & Gray Silty CLAY *(continued)*	6	4.1	
	11	B	20
	12		
-65	7		
	12	3.8	
	17	S/15	18
-70	14		
	17	3.5	
511.1	23	S/15	16
End of Boring @ 71 ft			
-80			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation — SOIL BORING LOG

Page 1 of 2

Date 4/18/01

ROUTE FAP 586 DESCRIPTION IL 162 over FAI 55/70 @ Troy LOGGED BY Mark Denton

SECTION 60R-2, 37R-1 LOCATION SW 1/4, SEC. 5, TWP. 3N, RNG. 7W, 3 PM

COUNTY Madison DRILLING METHOD Hollow Stem Auger HAMMER TYPE 140#

STRUCT. NO. 060-0139 Station —

BORING NO. 7 W Abutment Station 21+22 Offset 31.00ft LT Ground Surface Elev. 581.00 ft

Surface Water Elev. — ft Stream Bed Elev. — ft

Groundwater Elev.: First Encounter 559.5 ft Upon Completion — ft After — Hrs. — ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Asphalt Shoulder Fill Sand & Rock			
579.0			
Gray Silty CLAY (till) Bridge Core	3		
	4	2.8	
	5	S/10	24
-5	4		
	6	3.1	
	7	S/15	23
	4		
	7	2.0	
	9	S/10	28
-10	4		
	8	3.1	
	10	S/15	22
	5		
	6	1.9	
	7	S/15	20
-15	5		
	6	2.1	
	7	S/15	23
	5		
	7	3.5	
562.5	8	S/10	25
Dark Gray Silty Clay LOAM			
561.5			
Gray Silty CLAY			
-20			

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Gray Silty CLAY *(continued)*	4	1.8	
	6	S/10	28
560.5	8		
Gray Silty Clay LOAM	1		
	2	0.8	
	3	S/10	30
557.0			
Gray Silt LOAM	3		
-25	6	1.4	
	7	S/15	27
	2		
	3	1.6	
	5	S/20	29
-30	1		
551.0	2	0.9	
Gray & Brown Silty Clay LOAM	3	S/20	31
	2		
-35	3	1.5	
	8	B	27
544.0			
Dark Gray Silty CLAY			
-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation — SOIL BORING LOG

Page 2 of 2

Date 4/18/01

ROUTE FAP 586 DESCRIPTION IL 162 over FAI 55/70 @ Troy LOGGED BY Mark Denton

SECTION 60R-2, 37R-1 LOCATION SW 1/4, SEC. 5, TWP. 3N, RNG. 7W, 3 PM

COUNTY Madison DRILLING METHOD Hollow Stem Auger HAMMER TYPE 140#

STRUCT. NO. 060-0139 Station —

BORING NO. 7 W Abutment Station 21+22 Offset 31.00ft LT Ground Surface Elev. 581.00 ft

Surface Water Elev. — ft Stream Bed Elev. — ft

Groundwater Elev.: First Encounter 559.5 ft Upon Completion — ft After — Hrs. — ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Dark Gray Silty CLAY *(continued)*	4	1.6	
	5	S/5	23
	6		
-45	3		
	5	1.5	
	5	S/10	22
535.0			
Gray & Brown Clay LOAM	8		
-50	13	4.5	
	17	B	13
-55	4		
	6	2.9	
	9	S/15	22
525.0			
End of Boring @ 76 ft			
-60			

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Gray & Brown Clay LOAM *(continued)*	5	2.4	
	7	S/10	22
	11		
-65	11		
	17	4.7	
	23	B	16
-70	7		
	11	5.7	
	25	B	16
-75	4		
	8	2.4	
	17	S/10	18
505.0			
End of Boring @ 76 ft			
-80			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

SHT. S-65 OF S-68

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STATION 499+48.35
STRUCTURE NO. 060-0338

BORING LOGS

DESIGNED: BTO DRAWN: BTO
DATE: 03/06 CHECKED: JAN CHECKED: JAN

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	60-10K-1,60-10HB	MADISON	420	284
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 76709

Illinois Department of Transportation — SOIL BORING LOG

Page 1 of 2 — Date 4/19/01

ROUTE FAP 586 DESCRIPTION IL 162 over FAI 55/70 @ Troy LOGGED BY Mark Denton
SECTION 60R-2, 37R-1 LOCATION SW 1/4, SEC. 5, TWP. 3N, RNG. 7W, 3 PM
COUNTY Madison DRILLING METHOD Hollow Stem Auger HAMMER TYPE 140#
STRUCT. NO. 060-0139 Station
BORING NO. 8 Center Pier N of Existing Station 19+87.5 Offset 52.00ft RT Ground Surface Elev. 565.20 ft
Surface Water Elev. ft Stream Bed Elev. ft
Groundwater Elev.: First Encounter 558.7 ft Upon Completion ft After Hrs. ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Rock & Sand & Some Concrete Rubble			
563.7			
Brown & Gray Silty Clay LOAM	1		
	2	1.0	
	3	S/20	29
-5	2		
	3	1.1	
	3	B	28
	2		
	4	1.7	
	4	S/15	27
-10	2		
	2	1.5	
	3	S/15	32
553.7			
Gray Silty CLAY	2		
	2	1.0	
	2	S/15	39
-15	2		
	2	0.9	
	3	S/15	44
	2		
	3	1.1	
	5	S/15	29
546.2			
Gray CLAY			
-20			

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Gray CLAY (continued)	0	0.5	
	0	S/15	28
	0		
	2		
	3	1.0	
	4	S/10	26
541.2			
Gray Clay LOAM			
-25	2		
	3	0.9	
	5	S/15	26
	6		
	7	2.8	
	11	S/15	14
-30	5		
	11	4.2	
	20	B	13
	7		
	11	4.6	
	18	B	20
528.2			
Brown & Gray Silty CLAY			
-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation — SOIL BORING LOG

Page 2 of 2 — Date 4/19/01

ROUTE FAP 586 DESCRIPTION IL 162 over FAI 55/70 @ Troy LOGGED BY Mark Denton
SECTION 60R-2, 37R-1 LOCATION SW 1/4, SEC. 5, TWP. 3N, RNG. 7W, 3 PM
COUNTY Madison DRILLING METHOD Hollow Stem Auger HAMMER TYPE 140#
STRUCT. NO. 060-0139 Station
BORING NO. 8 Center Pier N of Existing Station 19+87.5 Offset 52.00ft RT Ground Surface Elev. 565.20 ft
Surface Water Elev. ft Stream Bed Elev. ft
Groundwater Elev.: First Encounter 558.7 ft Upon Completion ft After Hrs. ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Brown & Gray Silty CLAY (continued)	8	1.9	
	7	S/5	23
	10		
523.2			
Brown Clay LOAM			
-45	6		
	8	3.1	
	13	S/10	20
	16		
	27	5.7	
	27	S/15	16
513.2			
Drilled as large Gravel Layer			
512.2			
Gray Clay LOAM	6		
-55	11	3.7	
	17	S/15	17

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Gray Clay LOAM (continued)	4	3.8	
	10	B	21
	12		
503.2			
Gray Silty CLAY with some Wood			
-65	4		
	9	2.0	
	10	S/15	25
-70	7		
	8	2.4	
494.2	12	S/15	23
End of Boring @ 71 ft			
-80			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation — SOIL BORING LOG

Page 1 of 3 — Date 4/20/01

ROUTE FAP 586 DESCRIPTION IL 162 over FAI 55/70 @ Troy LOGGED BY Mark Denton
SECTION 60R-2, 37R-1 LOCATION SW 1/4, SEC. 5, TWP. 3N, RNG. 7W, 3 PM
COUNTY Madison DRILLING METHOD Hollow Stem Auger HAMMER TYPE 140#
STRUCT. NO. 060-0139 Station
BORING NO. 9 Center Pier S End Station 20+11 Offset 58.00ft LT Ground Surface Elev. 565.00 ft
Surface Water Elev. ft Stream Bed Elev. ft
Groundwater Elev.: First Encounter 556.5 ft Upon Completion ft After Hrs. ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Rock Sand Clay Fill			
563.5			
Gray Silty Clay LOAM	1		
	1	0.4	
	2	S/10	36
-5	1		
	2	0.6	
	1	B	31
558.5			
Brown Robine SILT	2		
Burn Results: 11.0% Organics	5	1.5	
	7	S/10	52
Burn Results: 9.5% Organics	3		
-10	6	1.4	
	8	S/15	35
553.5			
Gray Silt LOAM	2		
	4	2.2	
	6	S/10	32
551.0			
Brown Robine SILT	2		
Burn Results: 4.0% Organics	2	0.8	
-15	2	S/15	56
548.5			
Gray CLAY	0		
	1	0.8	
	1	S/15	30
-20			

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Gray CLAY (continued)	0	0.4	
	0	S/10	31
	0		
543.5			
Gray Clay LOAM	0		
	1	1.0	
	2	S/5	24
-35	0		
	2	0.6	
	3	S/10	24
538.5			
Brown Clay LOAM	4		
	10	2.6	
	15	S/10	12
-30	6		
	13	3.7	
	18	S/10	16
533.0			
Brown & Gray Silty CLAY			
-35	5		
	10	2.6	
	12	S/10	20
-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation — SOIL BORING LOG

Page 2 of 3 — Date 4/20/01

ROUTE FAP 586 DESCRIPTION IL 162 over FAI 55/70 @ Troy LOGGED BY Mark Denton
SECTION 60R-2, 37R-1 LOCATION SW 1/4, SEC. 5, TWP. 3N, RNG. 7W, 3 PM
COUNTY Madison DRILLING METHOD Hollow Stem Auger HAMMER TYPE 140#
STRUCT. NO. 060-0139 Station
BORING NO. 9 Center Pier S End Station 20+11 Offset 58.00ft LT Ground Surface Elev. 565.00 ft
Surface Water Elev. ft Stream Bed Elev. ft
Groundwater Elev.: First Encounter 558.5 ft Upon Completion ft After Hrs. ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Brown & Gray Silty CLAY (continued)	4	2.6	
	6	S/10	25
	8		
523.0			
Brown Clay LOAM			
-45	8		
	15	5.1	
	15	B	16
-50			

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Brown Clay LOAM (continued)	8	4.1	
	10	S/20	20
	14		
Gray Clay LOAM			
-65	5		
	7	3.3	
	12	B	21
498.0			
Gray Silty CLAY with some Organics & Robine Silt Lenses			
-70	6		
	8	2.8	
	10	S/15	22
494.0			
Dark Brown Robine SILT			41
493.0			
Gray Silty CLAY			
-75	3		
	6	2.2	
	8	S/10	25
488.0			
Gray SHALE slighty weathered & ground up			
-80			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation — SOIL BORING LOG

Page 3 of 3 — Date 4/20/01

ROUTE FAP 586 DESCRIPTION IL 162 over FAI 55/70 @ Troy LOGGED BY Mark Denton
SECTION 60R-2, 37R-1 LOCATION SW 1/4, SEC. 5, TWP. 3N, RNG. 7W, 3 PM
COUNTY Madison DRILLING METHOD Hollow Stem Auger HAMMER TYPE 140#
STRUCT. NO. 060-0139 Station
BORING NO. 9 Center Pier S End Station 20+11 Offset 58.00ft LT Ground Surface Elev. 565.00 ft
Surface Water Elev. ft Stream Bed Elev. ft
Groundwater Elev.: First Encounter 558.5 ft Upon Completion ft After Hrs. ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Gray SHALE slighty weathered & ground up (continued)	20	NC	
	30		28
	30		
-85	36		
479.5	50/3	3.9	14
End of Boring @ 85.5 ft		S/5	
-90			
-95			
-100			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation — SOIL BORING LOG

Page 1 of 2 — Date 4/23/01

ROUTE FAP 586 DESCRIPTION IL 162 over FAI 55/70 @ Troy LOGGED BY Mark Denton
SECTION 60R-2, 37R-1 LOCATION SW 1/4, SEC. 5, TWP. 3N, RNG. 7W, 3 PM
COUNTY Madison DRILLING METHOD Hollow Stem Auger HAMMER TYPE 140#
STRUCT. NO. Station
BORING NO. 10 SW Corner Cone Station 21+11 Offset 109.00ft LT Ground Surface Elev. 564.40 ft
Surface Water Elev. ft Stream Bed Elev. ft
Groundwater Elev.: First Encounter 557.4 ft Upon Completion ft After Hrs. ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Gray Silty CLAY (till)			
	3		
	4	1.2	
	4	S/10	22
560.4			
Brown & Gray Silty Clay LOAM	3		
-5	4	1.2	
	4	S/20	26
	2		
	2	0.9	
	2	S/10	29
-10	2		
	3	1.8	
	3	B	29
	3		
	2	1.0	
550.9	3	S/10	32
Brown Silty Clay LOAM with Organics 550.4		1.8	
Gray Silty CLAY		S/10	43
-15	0		
	2	0.8	
	2	B	31
547.9			
Gray Clay LOAM	0		
	0	0.4	
	0	S/10	27
-20			

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Gray Clay LOAM (continued)	2	1.0	
	3	S/15	23
	5		
	2		
	2	0.9	
	3	S/10	23
-25	4		
	5	1.1	
	7	B	15
	5		
	6	1.0	
	12	B	16
-30	5		
	8	3.4	
	13	B	13
532.4			
Brown & Gray SILT			
-35	25		
	47	3.5	
	50/4	S/5	15
527.4			
Brown Clay LOAM			
-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation — SOIL BORING LOG

Page 2 of 2 — Date 4/23/01

ROUTE FAP 586 DESCRIPTION IL 162 over FAI 55/70 @ Troy LOGGED BY Mark Denton
SECTION 60R-2, 37R-1 LOCATION SW 1/4, SEC. 5, TWP. 3N, RNG. 7W, 3 PM
COUNTY Madison DRILLING METHOD Hollow Stem Auger HAMMER TYPE 140#
STRUCT. NO. Station
BORING NO. 10 SW Corner Cone Station 21+11 Offset 109.00ft LT Ground Surface Elev. 564.40 ft
Surface Water Elev. ft Stream Bed Elev. ft
Groundwater Elev.: First Encounter 557.4 ft Upon Completion ft After Hrs. ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Brown Clay LOAM (continued)	6	3.1	
	8	S/10	22
	12		
-45	8		
	15	4.7	
	22	B	17
-50	9		
	15	4.4	
	22	B	17
-55	8		
	11	5.0	
	19	S/20	18
-60			

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Brown Clay LOAM (continued)	5	2.3	
	7	S/10	26
	10		
-65	7		
	8	2.2	
	11	S/10	23
-70	7		
	10	2.3	
493.4	12	S/15	22
End of Boring @ 71 ft			
-75			
-80			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
BBS, from 137 (Rev. 8-99)

SHT. S-66 OF S-68

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STATION 499+48.35
STRUCTURE NO. 060-0338

BORING LOGS

DESIGNED: BTO DRAWN: BTO
DATE: 03/06 CHECKED: JAN CHECKED: JAN

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	60-10K-1,60-10HB	MADISON	420	285
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 76709

Illinois Department of Transportation — SOIL BORING LOG

Division of Highways, Illinois Department of Transportation

Page 1 of 2

Date 4/24/01

ROUTE FAP 586 DESCRIPTION IL 162 over FAI 55/70 @ Troy LOGGED BY Mark Denton

SECTION 60R-2, 37R-1 LOCATION SW 1/4, SEC. 5, TWP. 3N, RNG. 7W, 3 PM

COUNTY Madison DRILLING METHOD Drill Rig HAMMER TYPE 140#

STRUCT. NO. ____ Station ____

BORING NO. 11 NE Corner Cone Station 19+09 Offset 94.00ft RT Ground Surface Elev. 565.10 ft

Surface Water Elev. ____ ft Stream Bed Elev. ____ ft

Groundwater Elev.: First Encounter ____ ft Upon Completion ____ ft After ____ Hrs. ____ ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Brown Silty CLAY (fill)			
	2		
562.1	5	2.4	25
Gray Silty Clay LOAM	3	S/10	
		1.5	28
-5	3	S/15	
	2	1.2	
	3	S/15	28
	2		
	4	2.8	
556.6	5	S/15	28
Dark Brown Robine SILT			
Burn Results: 8.0% Organics			45
-15	2		
Burn Results: 6.5% Organics	4	1.5	
	5	S/10	37
553.6			
Gray Silty CLAY with some Organics	0		
	0	0.7	
551.1	0	S/10	33
Dark Brown Robine SILT			29
-25	0		
Burn Results: 7.4% Organics	2	1.1	
549.1	3	S/10	49
Gray Silty CLAY			
	0		
	2	1.0	
-20	3	S/10	36

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Gray Silty CLAY *(continued)*			
543.6	0	0.8	
Gray Clay LOAM	3	S/10	24
	3		
	4	1.2	
541.1	5	S/5	26
Gray Clay LOAM			
-35	0		
	0	0.4	
	0	S/10	28
	8		
	14	4.5	
536.6	25	S/15	12
Brown Loamy SAND with some Gravel			
See Gradation #11, Depth: 30.5'	9		
-40	10	NC	
	14		
533.1			
Brown & Gray Clay LOAM			
	10		
	13	4.2	
-45	25	S/15	11

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation — SOIL BORING LOG

Division of Highways, Illinois Department of Transportation

Page 2 of 2

Date 4/24/01

ROUTE FAP 586 DESCRIPTION IL 162 over FAI 55/70 @ Troy LOGGED BY Mark Denton

SECTION 60R-2, 37R-1 LOCATION SW 1/4, SEC. 5, TWP. 3N, RNG. 7W, 3 PM

COUNTY Madison DRILLING METHOD Drill Rig HAMMER TYPE 140#

STRUCT. NO. ____ Station ____

BORING NO. 11 NE Corner Cone Station 19+06 Offset 94.00ft RT Ground Surface Elev. 565.10 ft

Surface Water Elev. ____ ft Stream Bed Elev. ____ ft

Groundwater Elev.: First Encounter ____ ft Upon Completion ____ ft After ____ Hrs. ____ ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Brown & Gray Clay LOAM *(continued)*			
	3	3.1	
	8	S/15	23
-15	10		
	5		
	8	3.8	
	12	S/15	19
-30			
	9		
	13	3.9	
	17	S/10	16
-45			
	8		
	13	4.2	
	17	S/15	17
-60			
Fine to Coarse Limestone Gravel			

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
(Very Dry)		50/0.3	3.3
Brown & Gray Clay LOAM *(continued)*		S/15	16
-65			
500.1	10	2.0	
Gray SILT	17	S/10	
	22	5.7	23
		S/10	19
-70	7		
Some wood found 494.6	10	2.0	34
Gray Silty CLAY 494.1	15	S/20	
End of Boring @ 71 ft		2.3	25
		S/15	
-80			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation — SOIL BORING LOG

Division of Highways, Shively Geotechnical, Inc.

Page 1 of 2

Date 1/26/05

ROUTE 586 DESCRIPTION West Retaining Wall LOGGED BY MH/PMK

SECTION 60-10-4HB LOCATION SW 1/4, SEC. 5, TWP. 3N, RNG. 7W, 3rd PM

COUNTY Madison DRILLING METHOD Hollow Stem Auger HAMMER TYPE 140-lb Hydraulic

STRUCT. NO. 060-W001 Station ____

BORING NO. SB-15 Station 1352+01 Offset 84.00ft Right Ground Surface Elev. 560.57 ft

Surface Water Elev. NA ft Stream Bed Elev. NA ft

Groundwater Elev.: First Encounter Dry ft Upon Completion 515.9 ft ▽ After 23 Days 560.3 ft ▽

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Gray-Brown Silty Clay LOAM			
	1		
	2	1.0	26.6
	2	S/20	
	1		
	2	1.0	28.1
-5	3	B/20	
Field shear vane test at 7.5 Feet			
			31.7
551.07			
Gray SILT			
-10			
			29.6
549.07			
Dark Gray Brown Silty Clay LOAM			
Field shear vane test at 12.5 Feet			
-15			
-Very Dark Gray, with Organics below 15.5 feet	1		
	1	0.7	37.2
	3	B/20	
542.57			
Dark Gray-Brown Silty CLAY	1		
	2	1.5	24.2
-20	4	S/20	

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Dark Gray-Brown Silty CLAY *(continued)*			
540.07			
Gray CLAY	2		
	2	0.8	23.4
	4	S/15	
537.57			
Gray SILT	0		
	1	0.4	27.6
-25	2	S/15	
535.07			
Gray-Brown Clay LOAM	1		
	2		16.3
	3		
532.57			
Gray Brown Silty LOAM	2		
	5	1.5	13.0
-30	9	S/10	
528.82			
Gray-Brown CLAY			
	2		
	4	1.8	20.3
-38	6	B/15	
	3		
	5	2.4	19.0
-40	8	S/20	

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation — SOIL BORING LOG

Division of Highways, Shively Geotechnical, Inc.

Page 2 of 2

Date 1/26/05

ROUTE 586 DESCRIPTION West Retaining Wall LOGGED BY MH/PMK

SECTION 60-10-4HB LOCATION SW 1/4, SEC. 5, TWP. 3N, RNG. 7W, 3rd PM

COUNTY Madison DRILLING METHOD Hollow Stem Auger HAMMER TYPE 140-lb Hydraulic

STRUCT. NO. 060-W001 Station ____

BORING NO. SB-15 Station 1352+01 Offset 84.00ft Right Ground Surface Elev. 560.57 ft

Surface Water Elev. NA ft Stream Bed Elev. NA ft

Groundwater Elev.: First Encounter Dry ft Upon Completion 515.9 ft ▽ After 23 Days 560.3 ft ▽

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Gray-Brown CLAY *(continued)*			
	3		
▽	5	2.8	18.1
-45	8	S/20	
513.82			
Gray-Brown Clay LOAM	5		
	11	6.6	15.7
510.57	17	S/15	
End of Boring			
-60			
-65			
-70			
-75			
-80			
-85			
-90			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation — SOIL BORING LOG

Division of Highways, Shively Geotechnical, Inc.

Page 1 of 2

Date 1/28/05

ROUTE 586 DESCRIPTION East Retaining Wall LOGGED BY MH/PMK

SECTION 60-10-4HB LOCATION SW 1/4, SEC. 5, TWP. 3N, RNG. 7W, 3rd PM

COUNTY Madison DRILLING METHOD Hollow Stem Auger HAMMER TYPE 140-lb Hydraulic

STRUCT. NO. 060-W002 Station ____

BORING NO. SB-19 Station 1351+76 Offset 84.00ft Left Ground Surface Elev. 562.89 ft

Surface Water Elev. NA ft Stream Bed Elev. NA ft

Groundwater Elev.: First Encounter 549.9 ft ▽ Upon Completion 529.9 ft ▽ After 18 Days 561.9 ft ▽

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Gray-Brown Silty Clay LOAM			
▽	2		
	4	2.5	20.5
559.89	4	S/10	
Gray-Brown SILT	1		
	2	0.7	28.2
-5	3	B/20	
			27.7
-10			
Field shear vane test at 10.0 Feet			
▽			32.5
548.39			
Dark Gray Silty Clay LOAM			
-15			
Field shear vane test at 15.0 Feet	1		
	2	0.5	28.0
	2	S/20	
544.89			
Dark Gray Silty CLAY	1		
	1	0.2	31.1
-20	2	B/10	

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Dark Gray Silty CLAY *(continued)*			
542.39			
Gray Clay LOAM	1		
	2	0.4	26.2
	3	S/15	
	3	0.4	16.8
-35	6	S/10	
	2		
	5	1.2	14.1
534.89	6	S/15	
Brown Silty CLAY			
	2		
	4	4.2	15.2
-40	9	S/20	
-Gray below 32.0 Feet			
▽			
	5		
	10	5.5	17.0
-50	11	S/15	
526.14			
Gray-Brown CLAY			
	3		
	6	1.8	21.7
-60	7	S/15	

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation — SOIL BORING LOG

Division of Highways, Shively Geotechnical, Inc.

Page 2 of 2

Date 1/28/05

ROUTE 586 DESCRIPTION East Retaining Wall LOGGED BY MH/PMK

SECTION 60-10-4HB LOCATION SW 1/4, SEC. 5, TWP. 3N, RNG. 7W, 3rd PM

COUNTY Madison DRILLING METHOD Hollow Stem Auger HAMMER TYPE 140-lb Hydraulic

STRUCT. NO. 060-W002 Station ____

BORING NO. SB-19 Station 1351+76 Offset 84.00ft Left Ground Surface Elev. 562.89 ft

Surface Water Elev. NA ft Stream Bed Elev. NA ft

Groundwater Elev.: First Encounter 549.9 ft ▽ Upon Completion 529.9 ft ▽ After 18 Days 561.9 ft ▽

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Gray-Brown CLAY *(continued)*			
	4		
-45	7	2.9	21.8
	10	S/15	
-Trace Gravel below 47.0 Feet			
	4		
	10	4.3	16.9
512.89	16	S/15	
End of Boring			
-60			
-65			
-70			
-75			
-80			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation — SOIL BORING LOG

Division of Highways, Shively Geotechnical, Inc.

Page 1 of 2

Date 1/28/05

ROUTE 586 DESCRIPTION East Retaining Wall LOGGED BY MH/PMK

SECTION 60-10-4HB LOCATION NW 1/4, SEC. 8, TWP. 3N, RNG. 7W, 3rd PM

COUNTY Madison DRILLING METHOD Hollow Stem Auger HAMMER TYPE 140-lb Hydraulic

STRUCT. NO. 060-W002 Station ____

BORING NO. SB-23 Station 1354+33 Offset 82.00ft Left Ground Surface Elev. 563.08 ft

Surface Water Elev. NA ft Stream Bed Elev. NA ft

Groundwater Elev.: First Encounter 557.1 ft ▽ Upon Completion 524.1 ft ▽ After 21 Days 562.6 ft ▽

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Gray-Brown SILT			
▽			
	5		
	6	3.2	19.1
	6	S/15	
	1		
	2	1.0	25.8
-5	3	B/20	
			29.0
-10			
Field shear vane test at 7.5 Feet			
552.58			
Gray-Brown Silty Clay LOAM			
Field shear vane test at 12.5 Feet			
-15			
			26.3
	1		
	2	0.1	28.5
545.08	3	B/20	
Dark Gray-Brown Silty CLAY			
	2		
	2	1.0	28.2
-20	3	S/10	

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Dark Gray-Brown Silty CLAY *(continued)*			
542.58			
Gray-Brown Silty LOAM	1		
	1		24.6
	1		
540.08			
Brown Clay LOAM	2		
	5	1.4	15.8
-35	8	S/15	
-Gray-Brown below 25.5 Feet	3		
	8	1.4	14.4
	4	S/20	
535.08			
Brown Silty Clay LOAM	9		
No recovery in SPT sampler, obtained grab sample	14		30.2
-50	17		
531.33			
Dark Gray-Brown SILT			
	10		
	14	4.0	17.1
-55	12	S/15	
526.33			
Gray-Brown CLAY			
▽	4		
	5	2.1	25.7
-60	7	S/15	

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

SHT. S-67 OF S-68

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STATION 499+48.35
STRUCTURE NO. 060-0338

BORING LOGS

DESIGNED: BTO DRAWN: BTO
DATE: 03/06 CHECKED: JAN CHECKED: JAN

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	60-10K-1,60-10HB	MADISON	420	286
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 76709

Illinois Department of Transportation
Division of Highways
Shirley Geotechnical, Inc.

SOIL BORING LOG

Page 2 of 2

Date 1/28/05

ROUTE 586 DESCRIPTION East Retaining Wall LOGGED BY MH/PMK

SECTION 60-10-4HB LOCATION NW 1/4, SEC. 8, TWP. 3N, RNG. 7W, 3rd PM

COUNTY Madison DRILLING METHOD Hollow Stem Auger HAMMER TYPE 140-lb Hydraulic

STRUCT. NO. 060-W002
Station

BORING NO. SB-23
Station 1354+33
Offset 82.00ft Left
Ground Surface Elev. 563.08 ft

Surface Water Elev. NA ft
Stream Bed Elev. NA ft

Groundwater Elev.:
First Encounter 557.1 ft
Upon Completion 524.1 ft
After 21 Days 562.6 ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Gray-Brown CLAY *(continued)*			
-Brown below 42.0 Feet			
-45	5 6 9	3.0	21.8 S/20
513.08 -50	4 11 18	4.6	17.8 S/20
End of Boring			
-55			
-60			
-65			
-70			
-75			
-80			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
Shirley Geotechnical, Inc.

SOIL BORING LOG

Page 1 of 2

Date 1/24/05

ROUTE 586 DESCRIPTION West Retaining Wall LOGGED BY MH/PMK

SECTION 60-10-4HB LOCATION NW 1/4, SEC. 8, TWP. 3N, RNG. 7W, 3rd PM

COUNTY Madison DRILLING METHOD Hollow Stem Auger HAMMER TYPE 140-lb Hydraulic

STRUCT. NO. 060-W001
Station

BORING NO. SB-27
Station 1355+30
Offset 105.00ft Right
Ground Surface Elev. 562.27 ft

Surface Water Elev. NA ft
Stream Bed Elev. NA ft

Groundwater Elev.:
First Encounter 546.3 ft
Upon Completion 517.3 ft
After 25 Days 562.3 ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
TOPSOIL			
560.77	1		
Gray-Brown Silty Clay LOAM	3 3	2.1	26.2 B/15
559.27			
Gray-Brown SILT	1		
-5	2 2	0.6	27.7 B/20
555.77			
Gray-Brown Silty Clay LOAM			
555.27			50.6
Dark Gray Silt LOAM, with Organics			
552.77 -10			
Gray Silty Clay LOAM			
Field shear vane test at 10.0 Feet			
-15			27.9
Field shear vane test at 15.0 Feet			
	2		
	2 3	0.9	27.0 B/20
544.27			
Gray Clay LOAM	1		
-20	2 4	0.5	19.3 S/20

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Gray Clay LOAM *(continued)* 541.77			
Dark Gray-Brown Sandy LOAM	1		
	2 2	0.2	28.7 S/20
539.27			
Dark Gray-Brown Silty CLAY	1		
-25	3 4	0.8	16.5 S/20
	2		
	6 9	2.0	14.0 S/20
534.27			
Brown CLAY	3		
-30	7 11	3.4	12.0 S/20
530.52			
Dark Gray SILT			
	6		
-35	12 20	8.5	15.0 S/20
525.52			
Brown CLAY			
	5		
-40	8 11	2.8	17.4 S/15

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
Shirley Geotechnical, Inc.

SOIL BORING LOG

Page 2 of 2

Date 1/24/05

ROUTE 586 DESCRIPTION West Retaining Wall LOGGED BY MH/PMK

SECTION 60-10-4HB LOCATION NW 1/4, SEC. 8, TWP. 3N, RNG. 7W, 3rd PM

COUNTY Madison DRILLING METHOD Hollow Stem Auger HAMMER TYPE 140-lb Hydraulic

STRUCT. NO. 060-W001
Station

BORING NO. SB-27
Station 1355+30
Offset 105.00ft Right
Ground Surface Elev. 562.27 ft

Surface Water Elev. NA ft
Stream Bed Elev. NA ft

Groundwater Elev.:
First Encounter 546.3 ft
Upon Completion 517.3 ft
After 25 Days 562.3 ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Brown CLAY *(continued)*			
-Gray-Brown below 42.0 Feet			
-45	3 6 11	2.9	16.2 S/20
	5		
512.27 -50	10 13	4.0	15.7 S/15
End of Boring			
-55			
-60			
-65			
-70			
-75			
-80			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
BBS, from 137 (Rev. 8-99)

SHT. S-68 OF S-68

STV Incorporated
Engineers/Architects/Planners/Construction Managers
200 W. Monroe Street, Suite 1650
Chicago, IL. 60606-5015
312/553-0655, FAX 312/553-0661

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STATION 499+48.35
STRUCTURE NO. 060-0338

BORING LOGS

DESIGNED: BTO DRAWN: BTO
DATE: 03/06 CHECKED: JAN CHECKED: JAN

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	*	MADISON	420	287
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* 60-10K-1, 60-10HB CONTRACT NO. 76709

BENCH MARK

CP#35, Iron Pin w/Cap, Sta. 502+30.81, 37.37' Rt, El. 582.812

EXISTING STRUCTURE

Bridge S.N. 060-0139 was built in 1956 as U. S. Route 40 Bypass over F. A. Route 190 (U. S. Route 66). It was widened and the deck reconstructed in 1978. The four span structure was built on concrete piles at the abutments and timber piles at the piers. The back to back abutment length is 194'-0" and the deck is 75'-2" out to out.

During construction of the new structure, staged construction will be utilized to maintain one lane of traffic in each direction.

No salvage.

DESIGN STRESSES FIELD UNITS

f'c = 3,500 psi (concrete)
fy = 60,000 psi (reinforcement)

PRECAST UNIT

f'c = 4,500 psi (precast panels)

DESIGN SPECIFICATION

2002 AASHTO Std. Spec, 17th edition

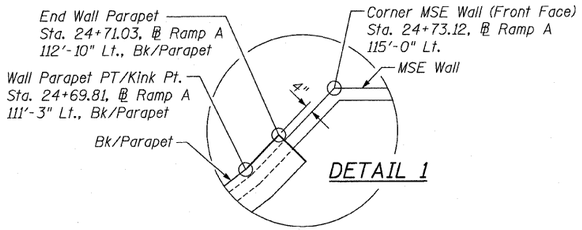
NOTE

Wall is built in Conjunction with New Bridge, S.N. 060-0338.

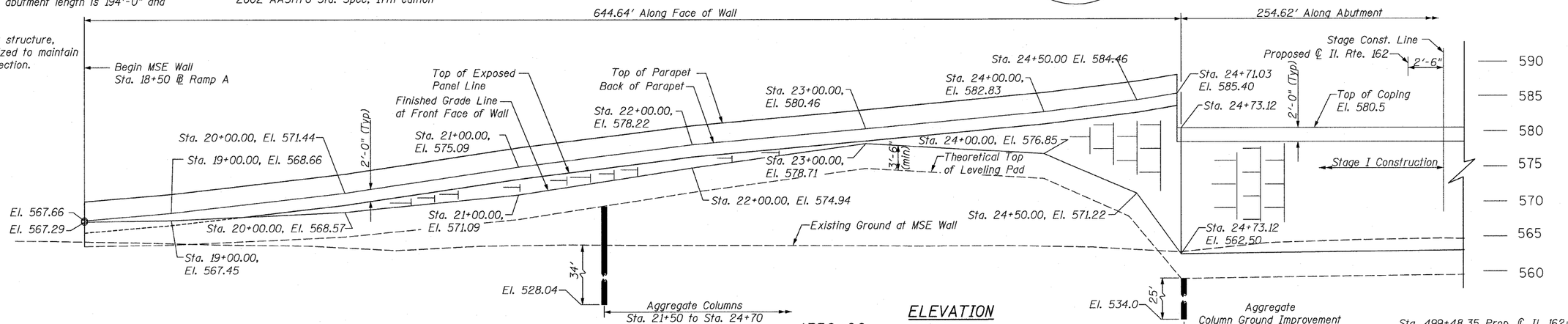
STATION 18+50
BUILT 200_ BY
STATE OF ILLINOIS
F.A.I. RT. 70
SEC. 60-10K-1. 60-10HB
LOADING HS20
STR. NO. 060-W004

NAME PLATE

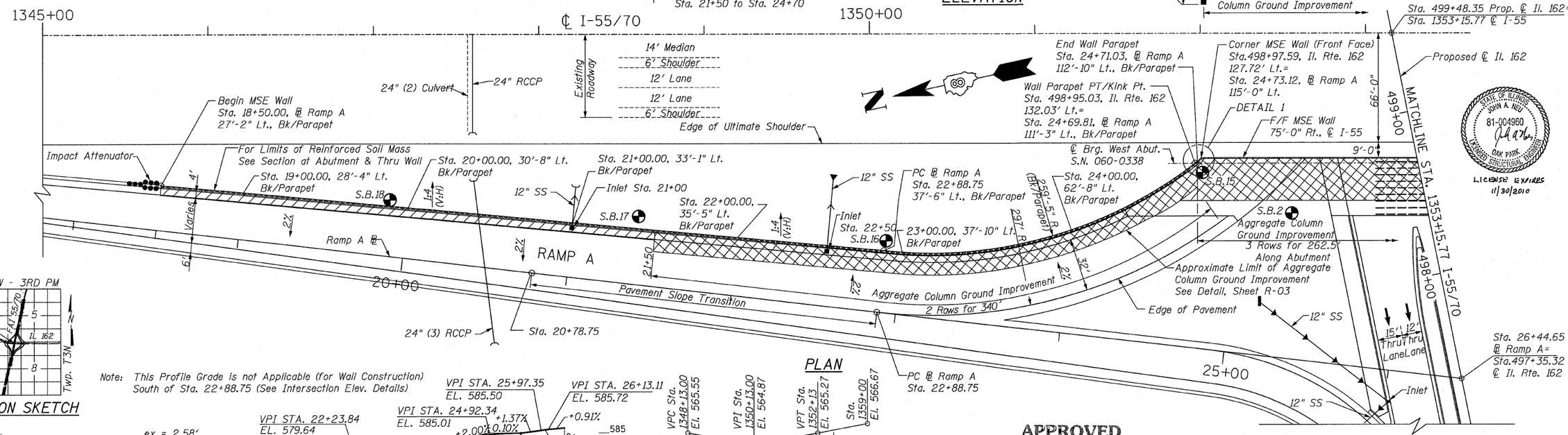
See Std. 515001
NOTE: For Name Plate Location, see Sht. R-04

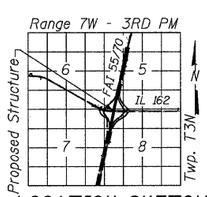


DETAIL 1



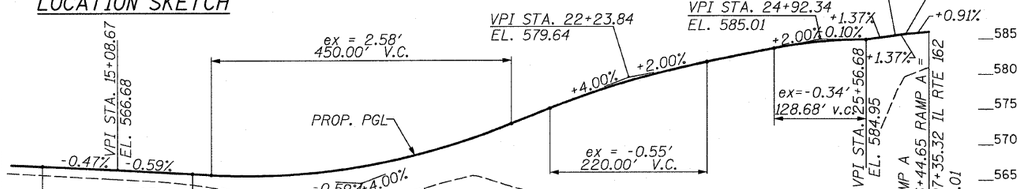
ELEVATION



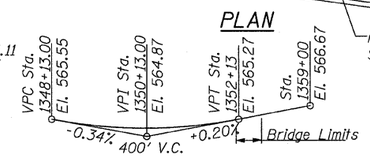


LOCATION SKETCH

Note: This Profile Grade is not Applicable (for Wall Construction) South of Sta. 22+88.75 (See Intersection Elev. Details)



PLAN



PROFILE GRADE LINE
NB & SB I-55/70

= Approximate Limit of Reinforced Soil Mass

= Approximate Limit of Aggregate Column Ground Improvement & Reinforced Soil Mass

APPROVED
FOR STRUCTURAL ADEQUACY ONLY

Ralph E Anderson
ENGINEER OF BRIDGES AND STRUCTURES

Sht. R-01 of R-14

STV Incorporated
Engineers/Architects/Planners/Construction Managers
200 W. Monroe Street, Suite 1650
Chicago, IL. 60606-5012
312/553-0655, FAX 312/553-0661

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STA. 18+50 TO STA. 17+00
STRUCTURE NO. 060-W004

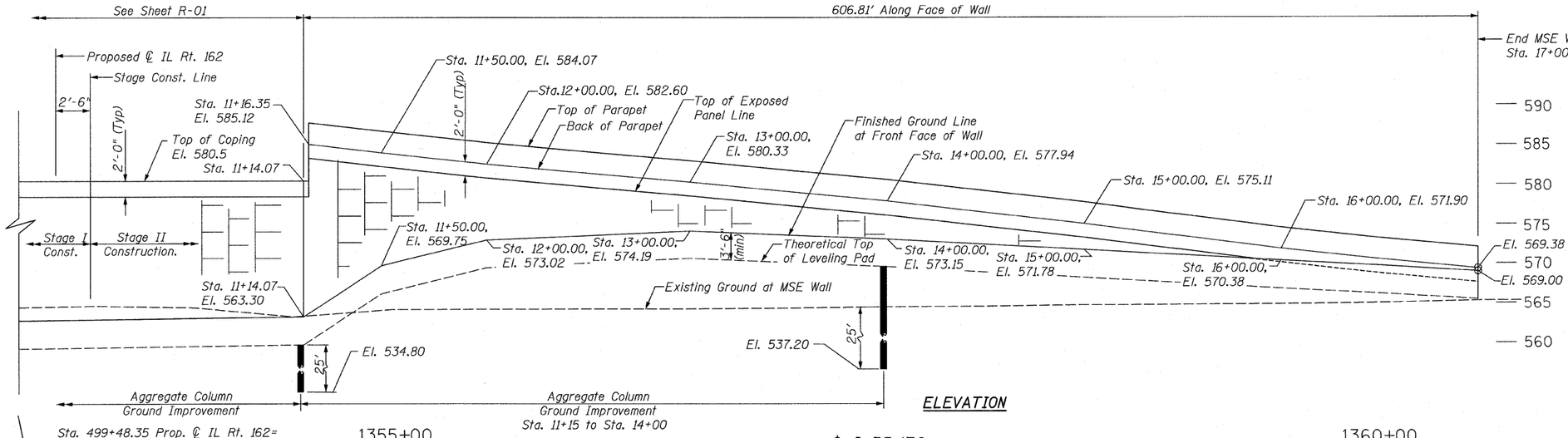
GENERAL PLAN I

DRAWN: AWH
CHECKED: JAN
DATE: 05/2006

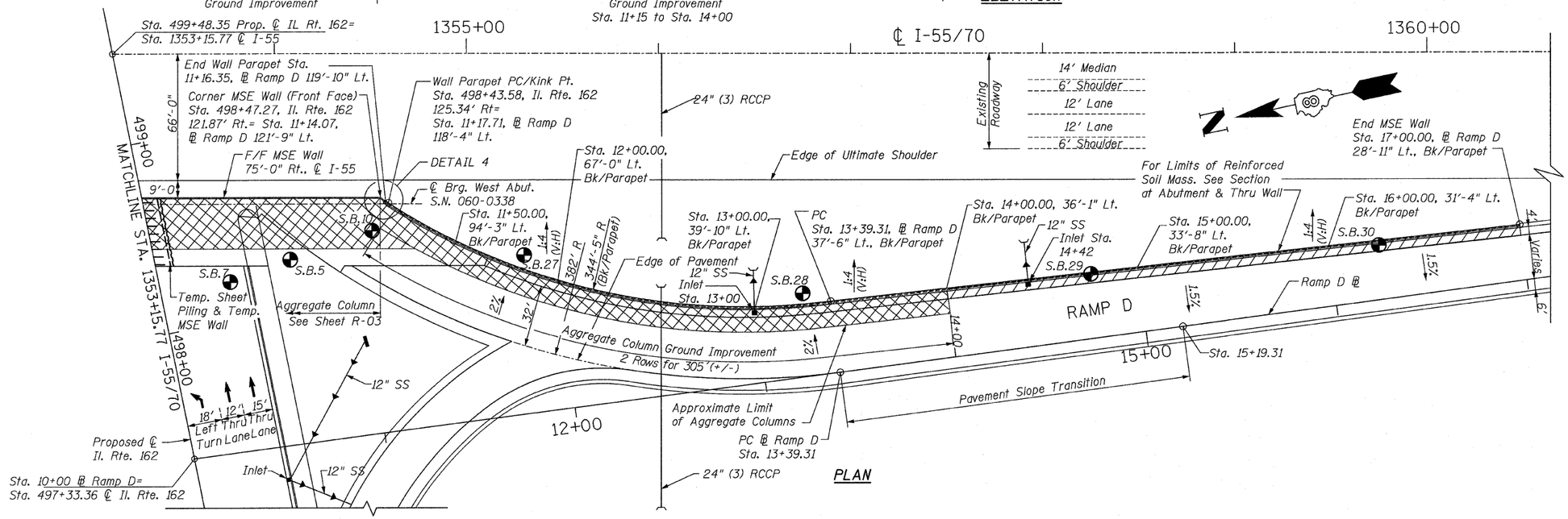
STATE OF ILLINOIS JOHN A. NEU 81-004960 LICENSED STRUCTURAL ENGINEER OAK PARK
LICENSE EXPIRES 11/30/2010

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	•	MADISON	420	288
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

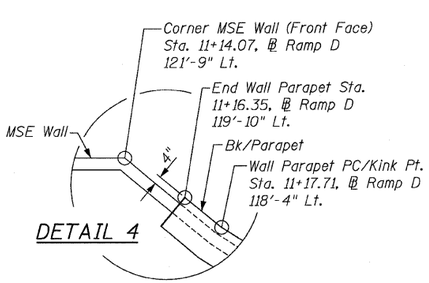
• 60-10K-1, 60-10HB CONTRACT NO. 76709



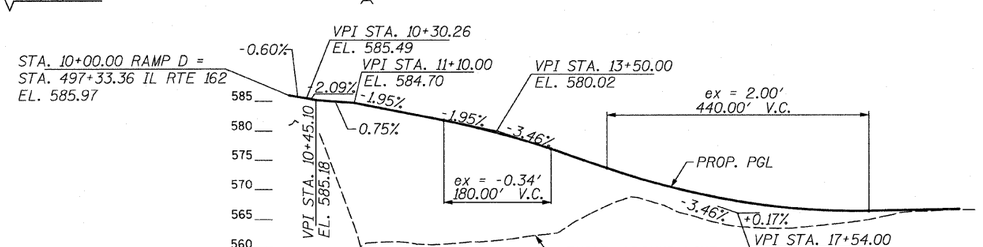
ELEVATION



PLAN



DETAIL 4



Note: This Profile Grade is not Applicable (for Wall Construction) North of Sta. 13+39.31 (See Intersection Elev. Details)

RAMP D ℄

= Approximate Limit of Reinforced Soil Mass

= Approximate Limit of Aggregate Column Ground Improvement & Reinforced Soil Mass

REVISIONS NAME	DATE

Sht. R-02 of R-14

STV Incorporated
Engineers/Architects/Planners/Construction Managers
200 W. Monroe Street, Suite 1650
Chicago, IL. 60606-5015
312/553-0655, FAX 312/553-0661

ILLINOIS DEPARTMENT OF TRANSPORTATION

IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STA. 18+50 TO STA. 17+00
STRUCTURE NO. 060-W004

GENERAL PLAN II

DRAWN: AWH

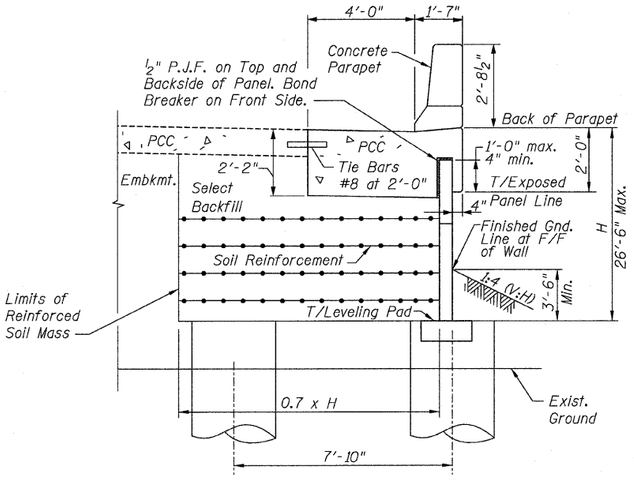
DATE: 05/2006

CHECKED: JAN

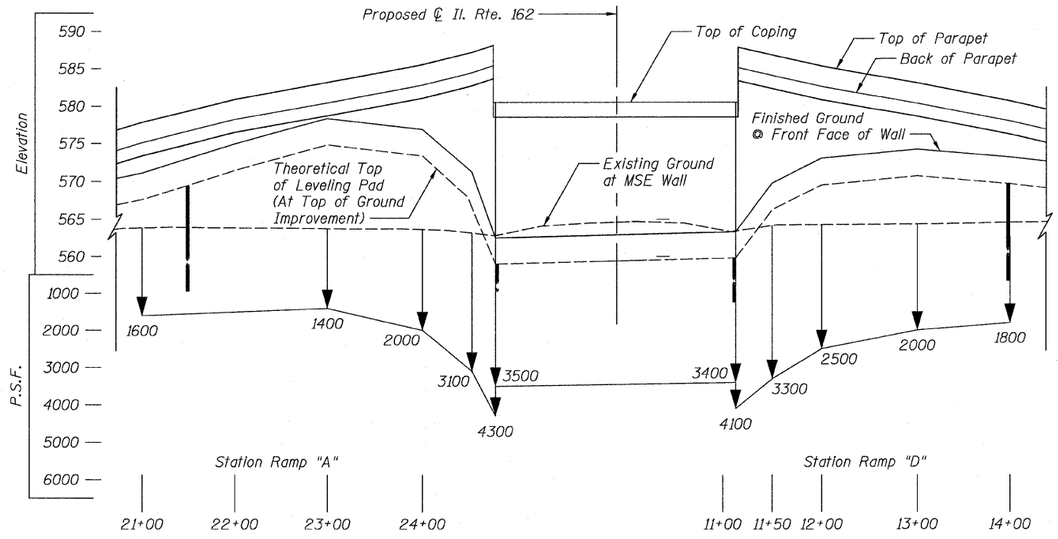
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	*	MADISON	420	289
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* 60-10K-1, 60-10HB CONTRACT NO. 76709

INDEX OF SHEETS



SECTION Thru WALL

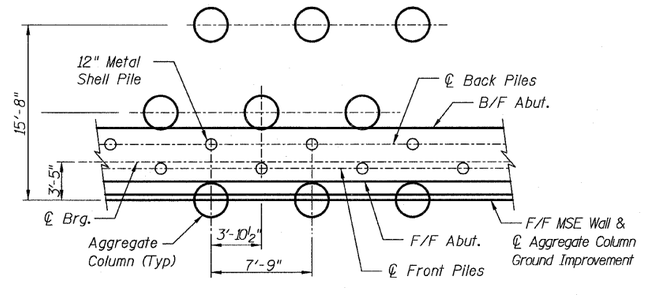


EQUIVALENT UNIFORM SERVICE BEARING PRESSURE

(At Top of Ground Improvement)

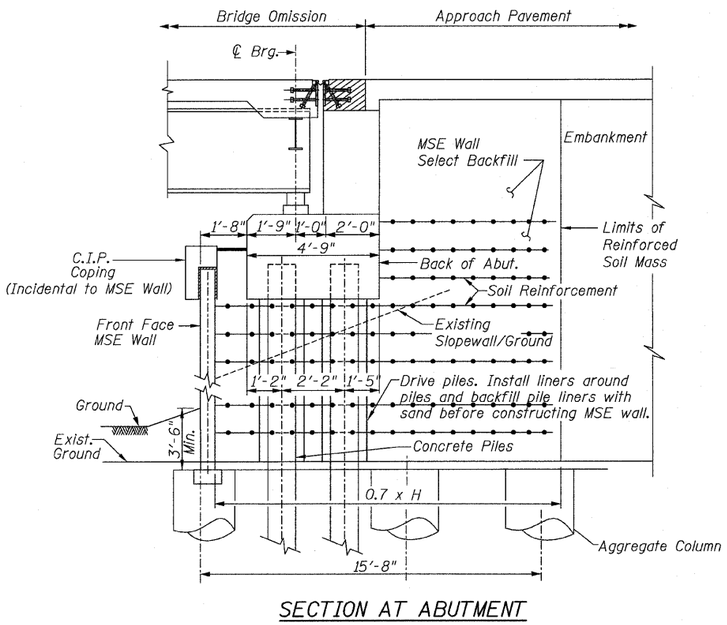
TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Concrete Structures	CU YD	625
Protective Coat	SQ YD	996
Reinforcement Bars, Epoxy Coated	POUND	66,690
Name Plates	EACH	1
Mechanically Stabilized Earth Retaining Wall	SQ FT	16,400
Aggregate Column Ground Improvement	CU YD	4,280



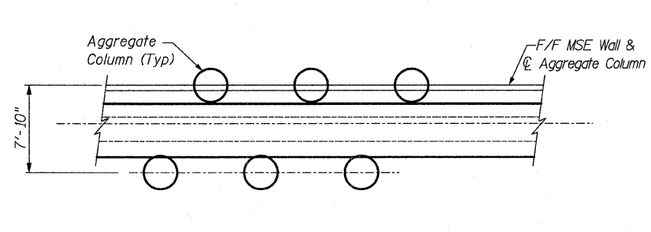
TYPICAL AGGEGATE COLUMN GROUND IMPROVEMENT/PILE LAYOUT (SHOWN AT ABUTMENT)

Contractor shall alternate aggregate column and pile spacing as shown.



SECTION AT ABUTMENT

(Dimensions @ Rt. L's)



TYPICAL AGGREGATE COLUMN GROUND IMPROVEMENT LAYOUT (SHOWN AT RAMP WALL)

GENERAL NOTES:

1. Reinforcement bars designated (E) shall be Epoxy Coated.
2. All edges shall have a ¾" chamfer unless otherwise noted.
3. Sawed construction joints, and construction joints in shoulders, and grooved joints and expansion joints in parapets, shall be colinear with sawed construction joints in PCC pavement (jointed).
4. Reinforcement bars shall conform to the requirements of ASTM A 706 Grade 60
5. All construction joints shall be bonded.

Sht. R-03 of R-14

STV Incorporated
Engineers/Architects/Planners/Construction Managers
200 W. Monroe Street, Suite 1650
Chicago, IL. 60606-5015
312/553-0655, FAX 312/553-0661

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STA. 18+50 TO STA. 17+00
STRUCTURE NO. 060-W004

INDEX OF SHEETS, GENERAL NOTES, BOM
WALL SECTIONS & AGGREGATE COLUMN
GROUND IMPROVEMENT LAYOUT
RAMP A & D

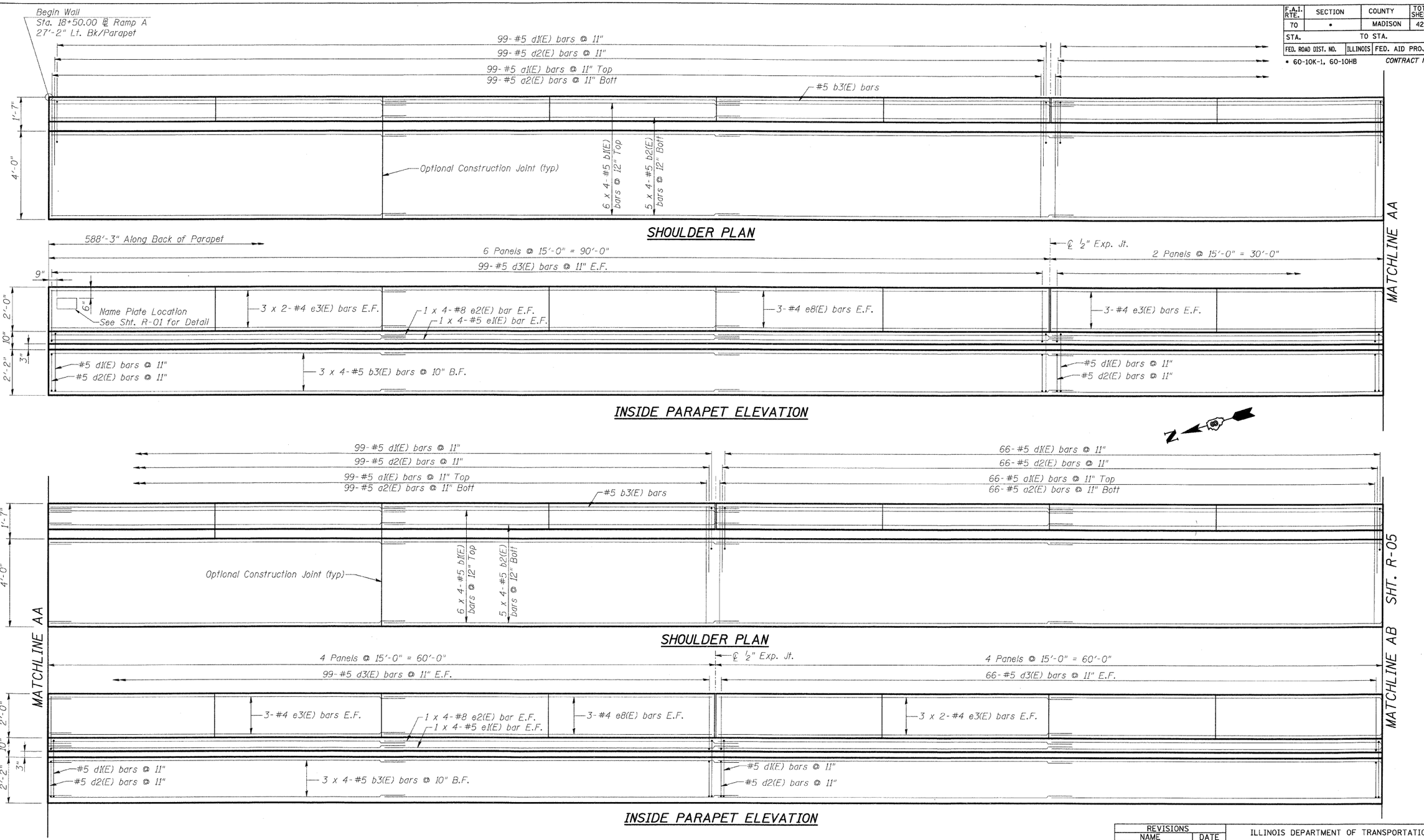
DRAWN BY KM

DATE: 05/2006

CHECKED BY BJG

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	•	MADISON	420	290
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

• 60-10K-1, 60-10HB CONTRACT NO. 76709



B.F. = Back Face
E.F. = Each Face

MIN. BAR LAP

#4 - 1'-4"
#5 - 2'-2"
#8 - 4'-6"

REVISIONS NAME	DATE

Sht. R-04 of R-14

STV Incorporated
Engineers/Architects/Planners/Construction Managers
200 W. Monroe Street, Suite 1650
Chicago, IL 60606-5015
312/553-0655. FAX 312/553-0661

ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STA. 18+50 TO STA. 17+00
STRUCTURE NO. 060-W004

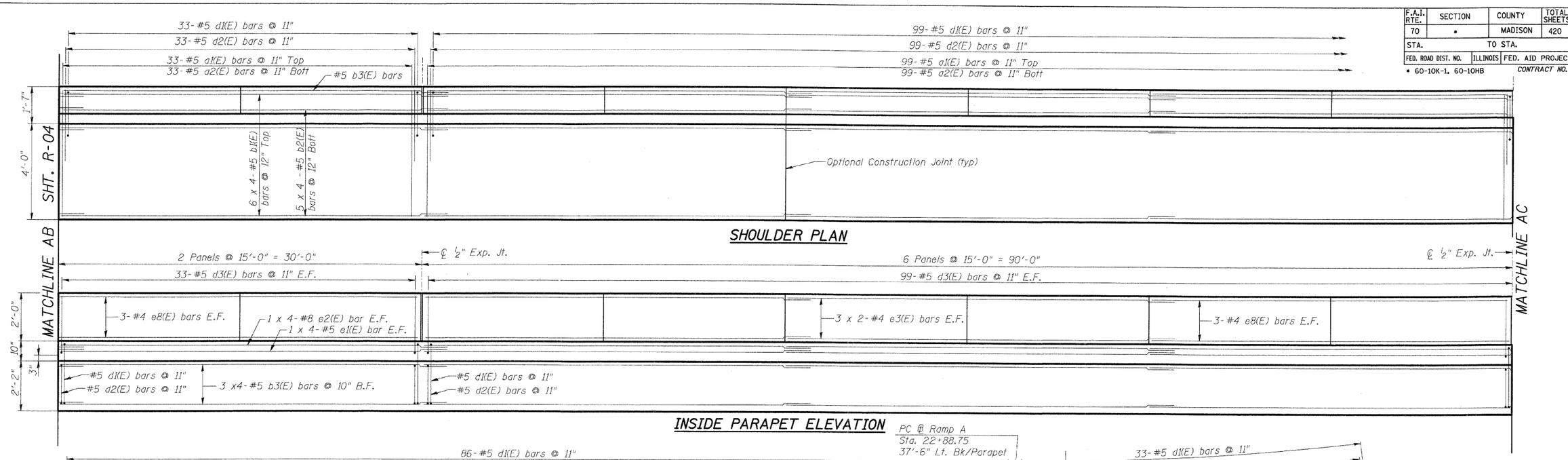
PARAPET ELEVATIONS & SHOULDER PLANS
RAMP A

DRAWN BY KM
CHECKED BY BJG
DATE: 05/2006

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	•	MADISON	420	291
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

• 60-10K-1, 60-10HB

CONTRACT NO. 76709



MIN. BAR LAP

#4 - 1'-4"
#5 - 2'-2"
#8 - 4'-6"

Sht. R-05 of R-14

STV Incorporated
Engineers/Architects/Planners/Construction Managers
209 W. Monroe Street, Suite 1650
Chicago, IL. 60606-5015
312/553-0655, FAX 312/553-0661

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STA. 18+50 TO STA. 17+00
STRUCTURE NO. 060-W004

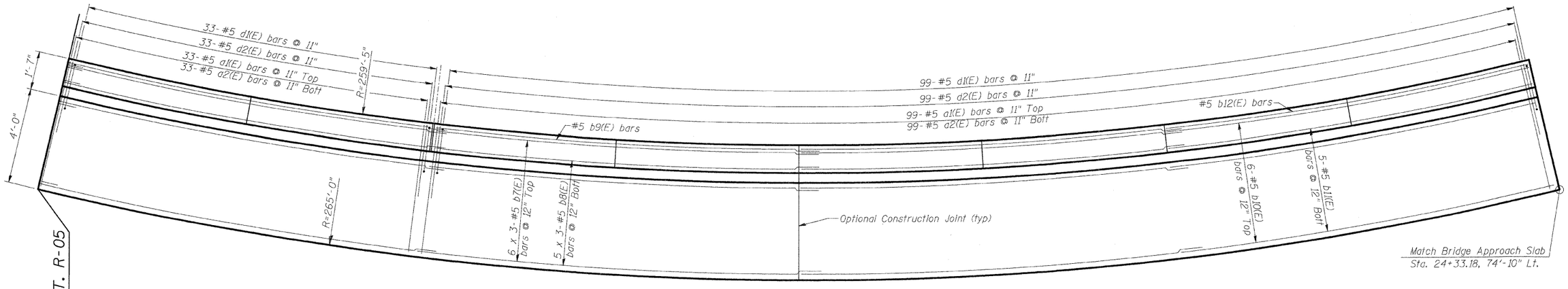
PARAPET ELEVATIONS & SHOULDER PLANS
RAMP A

DRAWN BY KM
CHECKED BY BJG

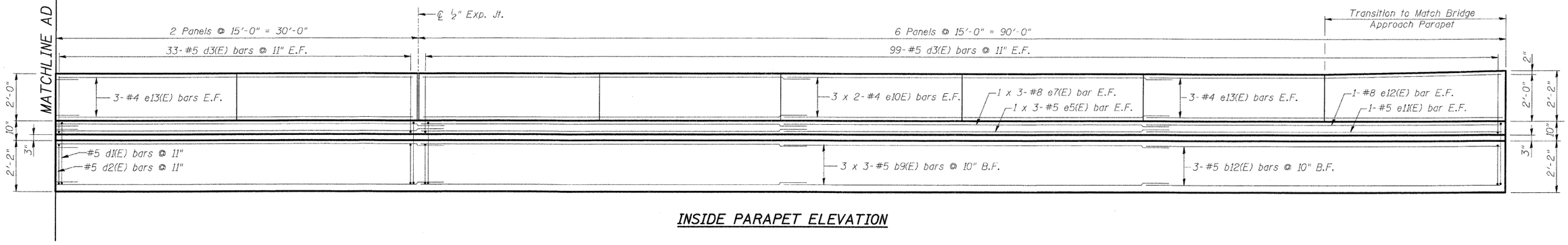
DATE: 05/2006

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	•	MADISON	420	292
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

• 60-10K-1, 60-10HB CONTRACT NO. 76709



SHOULDER PLAN



INSIDE PARAPET ELEVATION

MIN. BAR LAP

#4 - 1'-4"
#5 - 2'-2"
#8 - 4'-6"

Sht. R-06 of R-14

STV Incorporated
Engineers/Architects/Planners/Construction Managers
200 W. Monroe Street, Suite 1650
Chicago, IL. 60606-5015
312/553-0655, FAX 312/553-0661

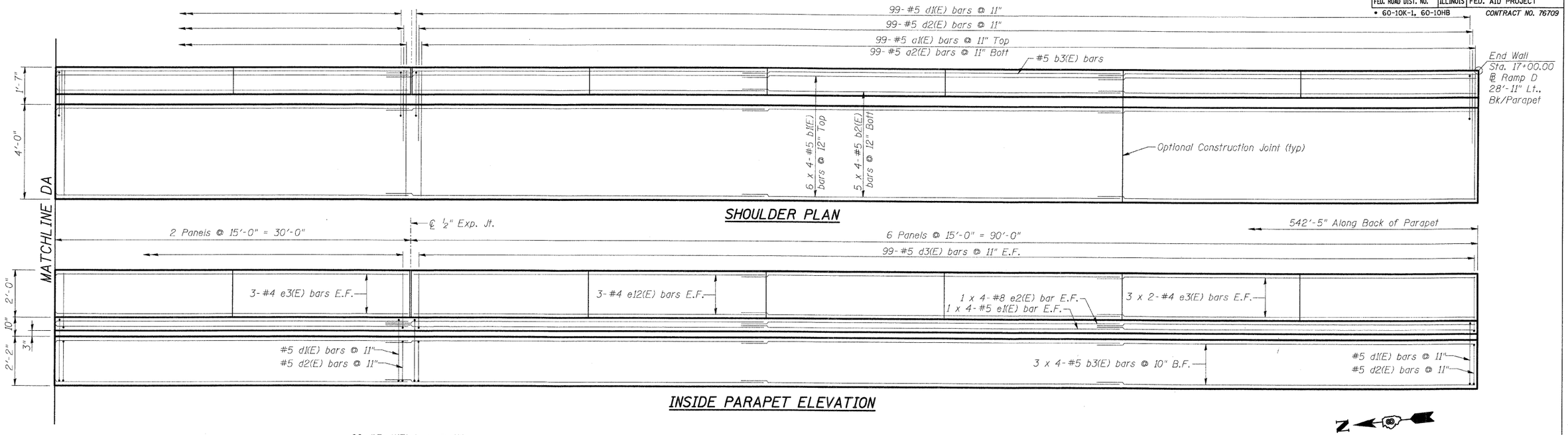
REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STA. 18+50 TO STA. 17+00
STRUCTURE NO. 060-W004

PARAPET ELEVATION & SHOULDER PLAN RAMP A

DRAWN BY KM
CHECKED BY BJG
DATE: 05/2006

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	•	MADISON	420	293
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
• 60-10K-1, 60-10HB		CONTRACT NO. 76709		



MIN. BAR LAP

#4 - 1'-4"
#5 - 2'-2"
#8 - 4'-6"

Sht. R-07 of R-14

STV Incorporated
Engineers/Architects/Planners/Construction Managers
200 W. Monroe Street, Suite 1650
Chicago, IL 60606-5015
312/553-0655, FAX 312/553-0661

REVISIONS	
NAME	DATE

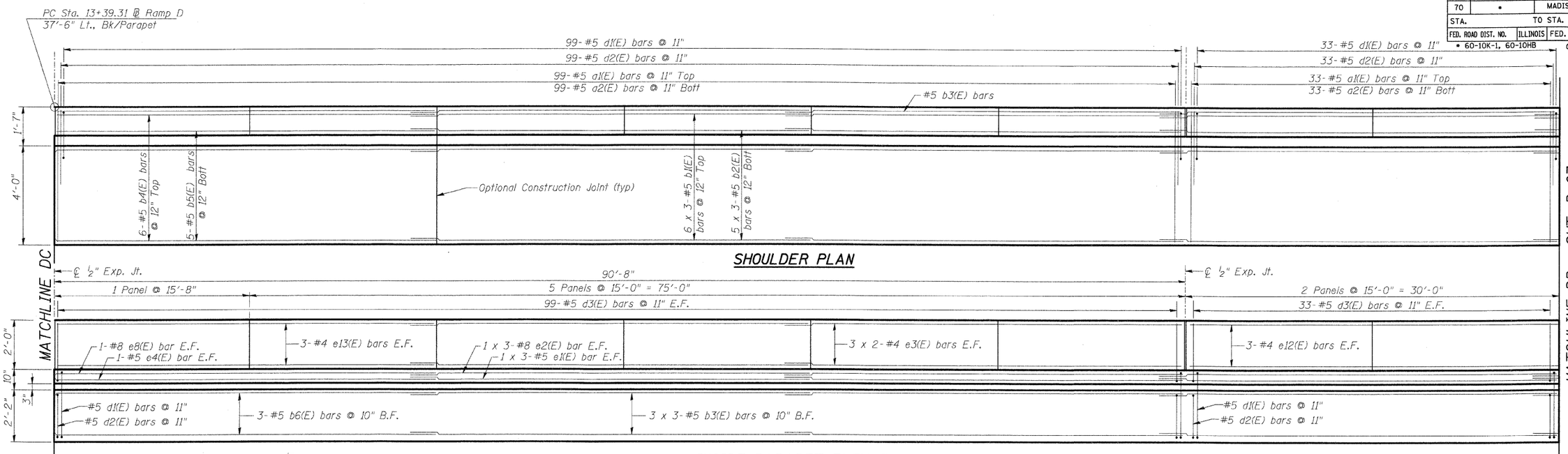
ILLINOIS DEPARTMENT OF TRANSPORTATION

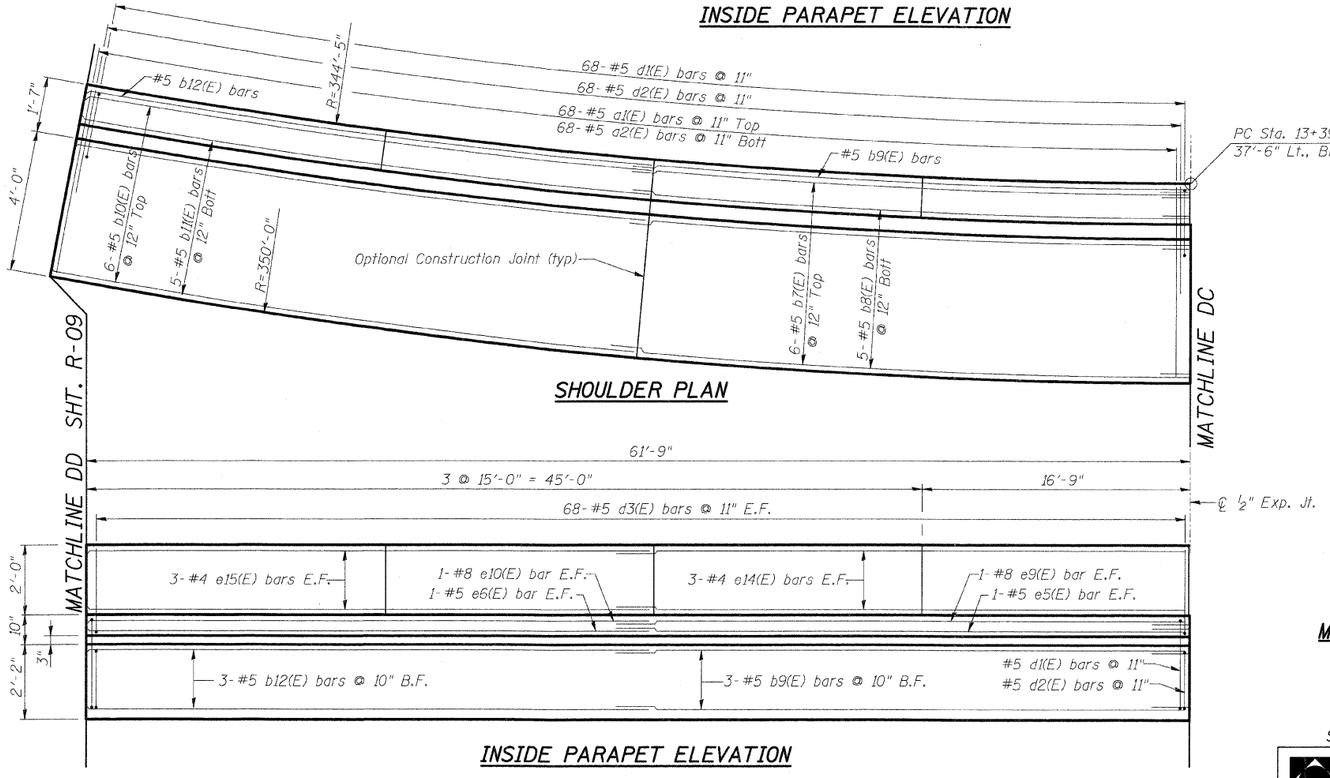
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STA. 18+50 TO STA. 17+00
STRUCTURE NO. 060-W004

PARAPET ELEVATIONS & SHOULDER PLANS
RAMP D

DRAWN BY KM
CHECKED BY BJC
DATE: 05/2006

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	•	MADISON	420	294
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
• 60-10K-1, 60-10HB				CONTRACT NO. 76709





MIN. BAR LAP

#4 - 1'-4"
#5 - 2'-2"
#8 - 4'-6"

Sht. R-08 of R-14

STV Incorporated
Engineers/Architects/Planners/Construction Managers
200 W. Monroe Street, Suite 1650
Chicago, IL. 60606-5014
312/553-0635, FAX 312/553-0661

REVISIONS	
NAME	DATE

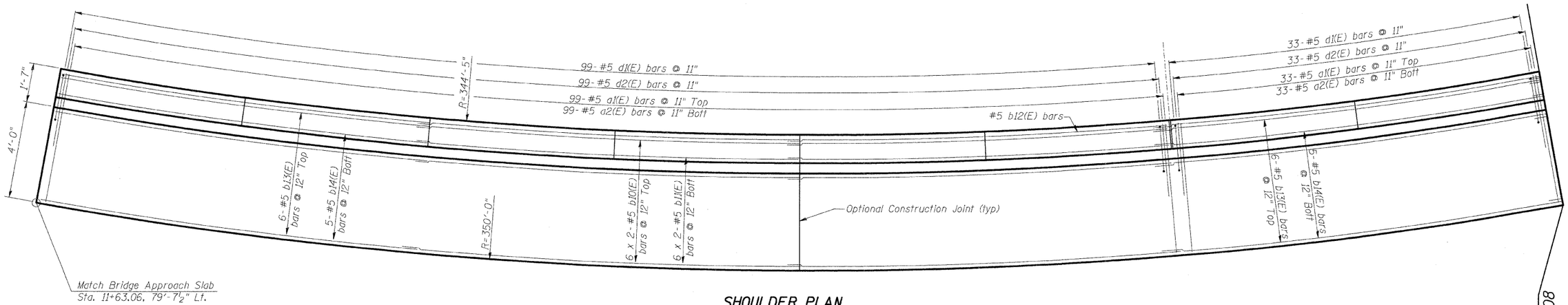
ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STA. 18+50 TO STA. 17+00
STRUCTURE NO. 060-W004

PARAPET ELEVATIONS & SHOULDER PLANS
RAMP D

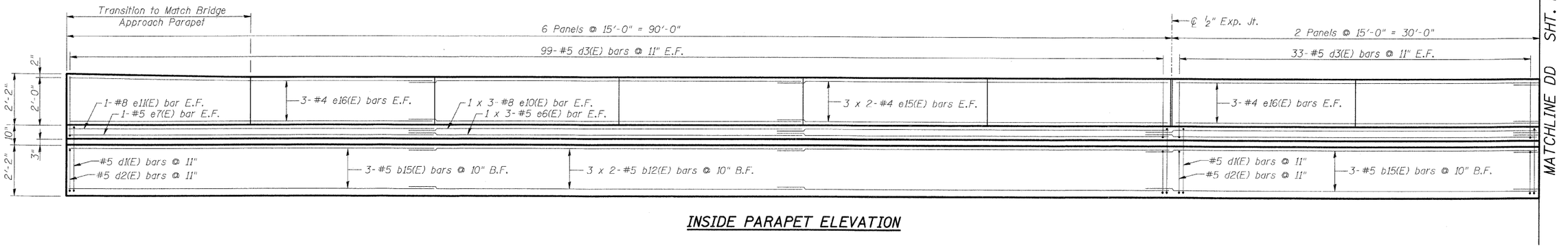
DRAWN BY KM
CHECKED BY BJG
DATE: 05/2006

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	•	MADISON	420	295
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

• 60-10K-1, 60-10HB CONTRACT NO. 76709



SHOULDER PLAN



INSIDE PARAPET ELEVATION

MIN. BAR LAP

#4 - 1'-4"
#5 - 2'-2"
#8 - 4'-6"

Sht. R-09 of R-14

STV Incorporated
Engineers/Architects/Planners/Construction Managers
200 W. Monroe Street, Suite 1650
Chicago, IL 60606-5015
312/553-0655, FAX 312/553-0661

REVISIONS NAME	DATE

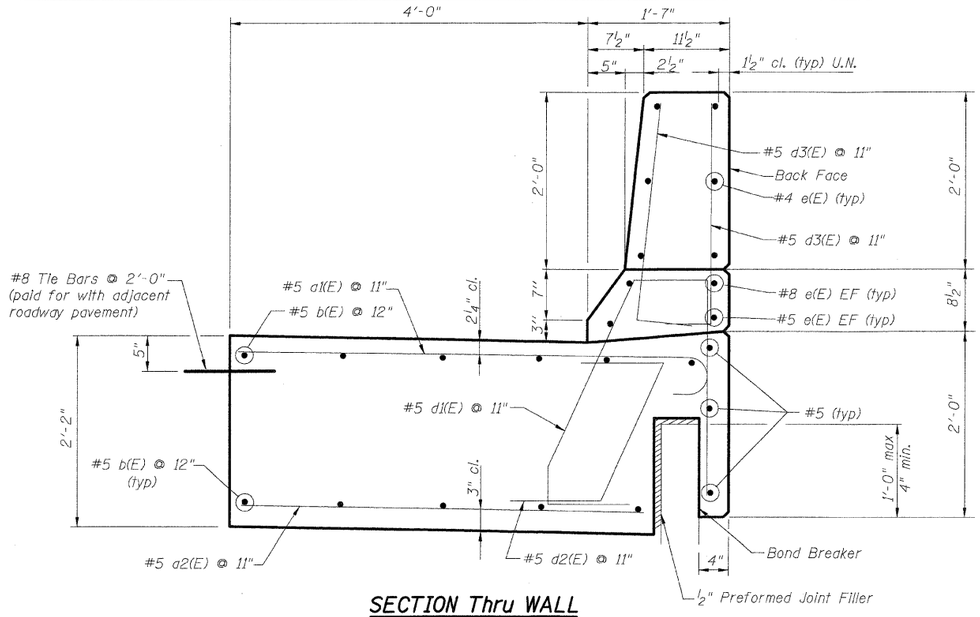
ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STA. 18+50 TO STA. 17+00
STRUCTURE NO. 060-W004

PARAPET ELEVATION & SHOULDER PLAN
RAMP D

DRAWN BY KM
CHECKED BY BJG
DATE: 05/2006

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	•	MADISON	420	296
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

• 60-10K-1, 60-10HB CONTRACT NO. 76709



SECTION Thru WALL

NOTE:
Parapet Stem Height Varies from 2'-0" to 2'-2" at Bridge Approach Parapet.

BILL OF MATERIAL RAMP A

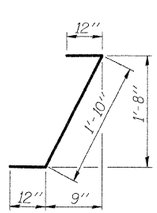
Reinforcing Bar	No.	Size	Bar Length Feet	Inches	Shape
a1(E)	647	5	5	9	
a2(E)	647	5	4	4	
b1(E)	84	5	32	4	
b2(E)	70	5	32	3	
b3(E)	42	5	32	2	
b4(E)	6	5	21	1	
b5(E)	5	5	21	0	
b6(E)	3	5	20	11	
b7(E)	24	5	33	0	
b8(E)	20	5	32	11	
b9(E)	12	5	32	10	
b10(E)	6	5	30	6	
b11(E)	5	5	30	5	
b12(E)	3	5	30	4	
d1(E)	647	5	6	11	
d2(E)	647	5	3	10	
d3(E)	1,294	5	3	0	
e1(E)	28	5	32	2	
e2(E)	28	8	34	6	
e3(E)	60	4	31	4	
e4(E)	2	5	20	11	
e5(E)	8	5	32	10	
e6(E)	2	8	23	3	
e7(E)	8	8	35	2	
e8(E)	24	4	29	8	
e9(E)	6	4	18	5	
e10(E)	18	4	32	0	
e11(E)	2	5	30	4	
e12(E)	2	8	30	4	
e13(E)	12	4	30	4	

Reinforcement Bars, Epoxy Coated	Pound	34,750
Concrete Structures	CU YD	325
Protective Coat	SQ YD	518

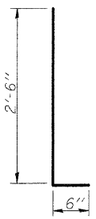
BILL OF MATERIAL RAMP D

Reinforcing Bar	No.	Size	Bar Length Feet	Inches	Shape
a1(E)	596	5	5	9	
a2(E)	596	5	4	4	
b1(E)	66	5	32	4	
b2(E)	55	5	32	3	
b3(E)	33	5	32	2	
b4(E)	6	5	32	7	
b5(E)	5	5	32	6	
b6(E)	3	5	32	5	
b7(E)	6	5	34	7	
b8(E)	5	5	34	6	
b9(E)	3	5	34	5	
b10(E)	18	5	32	10	
b11(E)	15	5	32	9	
b12(E)	9	5	32	8	
b13(E)	12	5	30	4	
b14(E)	10	5	30	3	
b15(E)	6	5	30	2	
d1(E)	596	5	6	11	
d2(E)	596	5	3	10	
d3(E)	1,192	5	3	0	
e1(E)	22	5	32	2	
e2(E)	22	8	34	6	
e3(E)	48	4	31	4	
e4(E)	2	5	32	10	
e5(E)	2	5	34	5	
e6(E)	8	5	32	8	
e7(E)	2	5	30	2	
e8(E)	2	8	35	2	
e9(E)	2	8	36	9	
e10(E)	8	8	35	0	
e11(E)	2	8	30	2	
e12(E)	18	4	29	8	
e13(E)	6	4	30	4	
e14(E)	6	4	33	7	
e15(E)	18	4	31	10	
e16(E)	12	4	30	2	

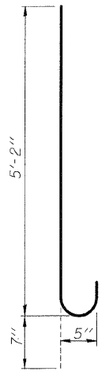
Reinforcement Bars, Epoxy Coated	Pound	31,940
Concrete Structures	CU YD	300
Protective Coat	SQ YD	478



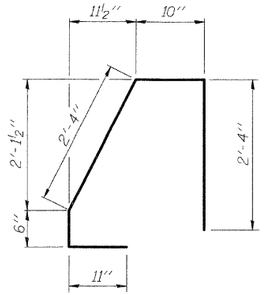
BAR d2(E)



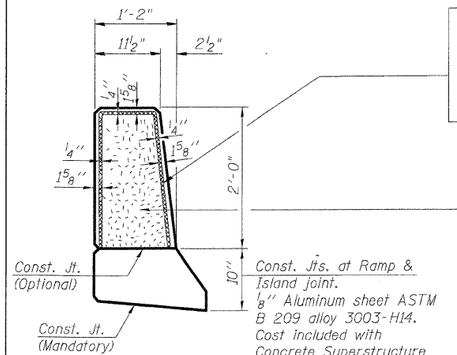
BAR d3(E)



BAR a1(E)

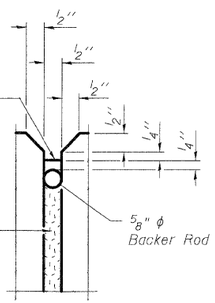


BAR d1(E)

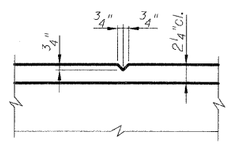


Non-staining gray one component non-sag elastomeric gun grade polyurethane sealant meeting the requirements of ASTM C-920, Type S, Grade NS, Class 25, Use T.

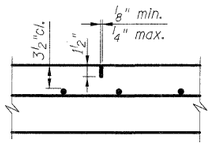
½" Preformed Self-Expanding Cork Joint Filler according to Article 1051.07 of the Std. Spec. Cost included with Concrete Superstructure.



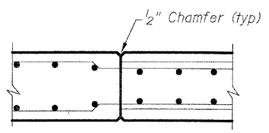
EXPANSION JOINT AT PARAPET DETAIL



GROOVE JOINT DETAIL



SAWED CONTRACTION JOINT DETAIL



PARAPET CONSTRUCTION JOINT DETAIL

NOTES:

1. Reinforcement bars designated (E) shall be Epoxy Coated.
2. Bars indicated thus: 3 x 2-#4 etc. indicates 3 lines of bars with 2 lengths per line.
3. Bundle bars according to Ramp A or Ramp D.

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STA. 18+50 TO STA. 17+00
STRUCTURE NO. 060-W004

PARAPET & ANCHORAGE SLAB DETAILS
RAMP A & D

DRAWN BY KM
CHECKED BY BJG
DATE: 05/2006

Sht. R-10 of R-14

STV Incorporated
Engineers/Architects/Planners/Construction Managers
200 W. Monroe Street, Suite 1650
Chicago, IL. 60606-5012
312/553-0655, FAX 312/553-0661

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	*	MADISON	420	297
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* 60-10K-1, 60-10HB *CONTRACT NO. 76709*

Illinois Department of Transportation — SOIL BORING LOG

Division of Highways, Illinois Department of Transportation

Page 1 of 2

Date 4/15/03

ROUTE FAP 586 DESCRIPTION IL 162 and I-55/70 Interchange Ramp Retaining Walls in Troy LOGGED BY Mark Schreader

SECTION 60R-2, 37R-1 LOCATION SW 1/4, SEC. 5, TWP. 3N, RNG. 7W, 3 PM

COUNTY Madison DRILLING METHOD Hollow Stem Auger HAMMER TYPE 140# Automatic

STRUCT. NO. — Station —

BORING NO. SB #2 NW Ramp Station 1352+55 (I-55/70) Offset 63.00ft RT Ed. Pav. (I-55/70) Ground Surface Elev. 560.5 ft

Surface Water Elev. — ft Stream Bed Elev. — ft

Groundwater Elev.: First Encounter 534.5 ft Upon Completion — ft After — Hrs. — ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Gray Silty Clay LOAM			
	2		
	2	0.8	
	3	S/20	26
-5	2		
	3	1.8	
	3	S/20	27
551.0	0		
-10	2	1.2	
Brown Silty LOAM	3	S/20	33
	0		
	2	0.8	
	2	S/20	34
	0		
	2	1.2	
	3	S/10	58
-15	0		
	2	0.9	
543.5	2	S/20	31
Brown Silty CLAY	0		
	3	1.8	
	4	S/20	29
-20	2		

Brown Silty CLAY *(continued)*

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
	2	0.8	
	3	S/20	31
	2		
	2	1.5	
	3	S/20	30
-25	0		
	3	1.1	
	3	S/20	26
	3		
	6	2.9	
	7	S/20	14
-30	5		
	7	2.6	
	9	S/20	14
	12		
-35	24	4.0	
	20	S/5	16
	4		
-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation — SOIL BORING LOG

Division of Highways, Illinois Department of Transportation

Page 2 of 2

Date 4/15/03

ROUTE FAP 586 DESCRIPTION IL 162 and I-55/70 Interchange Ramp Retaining Walls in Troy LOGGED BY Mark Schreader

SECTION 60R-2, 37R-1 LOCATION SW 1/4, SEC. 5, TWP. 3N, RNG. 7W, 3 PM

COUNTY Madison DRILLING METHOD Hollow Stem Auger HAMMER TYPE 140# Automatic

STRUCT. NO. — Station —

BORING NO. SB #2 NW Ramp Station 1352+55 (I-55/70) Offset 63.00ft RT Ed. Pav. (I-55/70) Ground Surface Elev. 560.5 ft

Surface Water Elev. — ft Stream Bed Elev. — ft

Groundwater Elev.: First Encounter 534.5 ft Upon Completion — ft After — Hrs. — ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Brown Silty CLAY *(continued)*			
	8	3.5	
	11	S/10	20
-45	5		
	9	3.8	
	14	S/15	19
-50	6		
	12	3.5	
509.5	16	S/20	19
End of Boring			
-55			
-60			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation — SOIL BORING LOG

Division of Highways, Illinois Department of Transportation

Page 1 of 2

Date 6/16/03

ROUTE FAP 586 DESCRIPTION IL 162 and I-55/70 Interchange Ramp Retaining Walls in Troy LOGGED BY Mark Schreader

SECTION 60R-2, 37R-1 LOCATION SW 1/4, SEC. 5, TWP. 3N, RNG. 7W, 3 PM

COUNTY Madison DRILLING METHOD Hollow Stem Auger HAMMER TYPE 140# Automatic

STRUCT. NO. — Station —

BORING NO. SB #5 SW Ramp Station 1354+06 (I-55/70) Offset 61.00ft RT. Ed. Pav. (I-55/70) Ground Surface Elev. 560.0 ft

Surface Water Elev. — ft Stream Bed Elev. — ft

Groundwater Elev.: First Encounter 542.5 ft Upon Completion — ft After — Hrs. — ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Brown Silty LOAM			
	2		
	2	1.4	
	2	S/20	28
-5	2		
	2	1.3	
	2	S/20	32
	2		
	3	1.6	
	3	S/20	30
-10	2		
	2	1.4	
	2	S/20	30
	0		
	0	1.3	
546.0	4	S/20	27
Gray Silty LOAM -15 Sample ST #1 Recovery = 2.5 ft Qu = 0.5 tsf			
543.5			
Gray Silty LOAM Sample ST #2 Recovery = 2.5 ft Qu = 1.0 tsf			
541.0			
Gray Silty LOAM -20			

Gray Silty LOAM *(continued)* Sample ST #3 Recovery = 2.5 ft Qu = 1.0 tsf 538.5

Gray Sandy LOAM Sample ST #4 Recovery = 2.0 ft Qu = 1.5 tsf 536.0

Brown Silty CLAY (Till)

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
-25	6		
	8	2.3	
	12	S/20	14
	7		
	14	5.8	
	20	S/20	13
-30	6		
	12	4.0	
	14	S/20	13
	7		
	9	3.5	
	17	S/15	17
-35	7		
	11	4.7	
	23	B	16
-40	7		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation — SOIL BORING LOG

Division of Highways, Illinois Department of Transportation

Page 2 of 2

Date 6/16/03

ROUTE FAP 586 DESCRIPTION IL 162 and I-55/70 Interchange Ramp Retaining Walls in Troy LOGGED BY Mark Schreader

SECTION 60R-2, 37R-1 LOCATION SW 1/4, SEC. 5, TWP. 3N, RNG. 7W, 3 PM

COUNTY Madison DRILLING METHOD Hollow Stem Auger HAMMER TYPE 140# Automatic

STRUCT. NO. — Station —

BORING NO. SB #5 SW Ramp Station 1354+06 (I-55/70) Offset 61.00ft RT. Ed. Pav. (I-55/70) Ground Surface Elev. 560.0 ft

Surface Water Elev. — ft Stream Bed Elev. — ft

Groundwater Elev.: First Encounter 542.5 ft Upon Completion — ft After — Hrs. — ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Brown Silty CLAY (Till) *(continued)*			
	14	4.2	
	18	S/15	17
-45	6		
	13	2.8	
	16	S/15	17
	7		
-50	12	4.2	
509.0	16	S/15	17
End of Boring			
-55			
-60			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation — SOIL BORING LOG

Division of Highways, Illinois Department of Transportation

Page 1 of 2

Date 4/18/01

ROUTE FAP 586 DESCRIPTION IL 162 over FAI 55/70 @ Troy LOGGED BY Mark Denton

SECTION 60R-2, 37R-1 LOCATION SW 1/4, SEC. 5, TWP. 3N, RNG. 7W, 3 PM

COUNTY Madison DRILLING METHOD Hollow Stem Auger HAMMER TYPE 140#

STRUCT. NO. 060-0139 Station —

BORING NO. 7 W Abutment Station 21+22 Offset 31.00ft LT Ground Surface Elev. 581.00 ft

Surface Water Elev. — ft Stream Bed Elev. — ft

Groundwater Elev.: First Encounter 559.5 ft Upon Completion — ft After — Hrs. — ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Asphalt Shoulder Fill Sand & Rock			
579.0			
Gray Silty CLAY (till) Bridge Core			
	3		
	4	2.6	
	5	S/10	24
-5	4		
	6	3.1	
	7	S/15	23
	4		
	7	2.0	
	9	S/10	28
-10	4		
	8	3.1	
	10	S/15	22
	5		
	6	1.9	
	7	S/15	20
-15	5		
	6	2.1	
	7	S/15	23
	5		
	7	3.5	
562.5	8	S/10	25
Dark Gray Silty Clay LOAM			
561.5			
Gray Silty CLAY -20			

Gray Silty CLAY *(continued)*

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
	4	1.8	
	6	S/10	28
	9		
559.5			
Gray Silty Clay LOAM			
	1		
	2	0.8	
	3	S/10	30
557.0			
Gray Silt LOAM -25	3		
	6	1.4	
	7	S/15	27
	2		
	3	1.8	
	5	S/20	29
551.0	1		
Gray & Brown Silty Clay LOAM -30	2	0.9	
	3	S/20	31
	2		
-35	3	1.5	
	8	B	27
544.0			
Dark Gray Silty CLAY -40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation — SOIL BORING LOG

Division of Highways, Illinois Department of Transportation

Page 2 of 2

Date 4/18/01

ROUTE FAP 586 DESCRIPTION IL 162 over FAI 55/70 @ Troy LOGGED BY Mark Denton

SECTION 60R-2, 37R-1 LOCATION SW 1/4, SEC. 5, TWP. 3N, RNG. 7W, 3 PM

COUNTY Madison DRILLING METHOD Hollow Stem Auger HAMMER TYPE 140#

STRUCT. NO. 060-0139 Station —

BORING NO. 7 W Abutment Station 21+22 Offset 31.00ft LT Ground Surface Elev. 581.00 ft

Surface Water Elev. — ft Stream Bed Elev. — ft

Groundwater Elev.: First Encounter 559.5 ft Upon Completion — ft After — Hrs. — ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Dark Gray Silty CLAY *(continued)*			
	4	1.9	
	5	S/5	23
	6		
-45	3		
	5	1.5	
	5	S/10	22
535.0			
Gray & Brown Clay LOAM			
	8		
	13	4.5	
	17	B	13
-55	4		
	8	2.9	
	9	S/15	22
End of Boring @ 76 ft			
505.0			
-60			

Gray & Brown Clay LOAM *(continued)*

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
	5	2.4	
	7	S/10	22
	11		
-65	11		
	17	4.7	
	23	B	16
-70	7		
	11	5.7	
	25	B	16
	4		
-75	8	2.4	
	17	S/10	18
-80			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

NOTE:

1. Structure Number listed on boring logs as 060-W001 is SN 060-W004.

Sht. R-11 of R-14

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STA. 18+50 TO STA. 17+00
STRUCTURE NO. 060-W004

BORING LOGS

DRAWN: BTO
CHECKED: JAN
DATE: 05/2006

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	•	MADISON	420	298
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

• 60-10K-1, 60-10HB *CONTRACT NO. 76709*

Illinois Department of Transportation — SOIL BORING LOG

Division of Highways / Illinois Department of Transportation — Page 1 of 2

Date 4/23/01

ROUTE FAP 586 DESCRIPTION IL 162 over FAI 55/70 @ Troy LOGGED BY Mark Denton

SECTION 60R-2, 37R-1 LOCATION SW 1/4, SEC. 5, TWP. 3N, RNG. 7W, 3 PM

COUNTY Madison DRILLING METHOD Hollow Stem Auger HAMMER TYPE 140#

STRUCT. NO. Station

BORING NO. 10 SW Corner Cone Station 21+11 Offset 109.00ft LT Ground Surface Elev. 564.40 ft

Surface Water Elev. ft Stream Bed Elev. ft

Groundwater Elev.: First Encounter 557.4 ft Upon Completion ft After Hrs. ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Gray Silty CLAY (fill)			
	3		
	4	1.2	
560.4	4	S/10	22
Brown & Gray Silty Clay LOAM			
-5	3		
	4	1.2	
	4	S/20	26
	2		
	2	0.9	
-10	2	S/10	29
	3	1.8	
	3	B	29
	3		
	2	1.0	
550.9	3	S/10	32
Brown Silty Clay LOAM with Organics 550.4		1.6	
Gray Silty CLAY		S/10	43
-15	0		
	2	0.8	
	2	B	31
547.9			
Gray Clay LOAM			
	0		
	0	0.4	
-20	0	S/10	27

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Gray Clay LOAM *(continued)*			
	2		
	3	1.0	
	5	S/15	23
	2		
	2	0.9	
-25	3	S/10	23
	4		
	5	1.1	
	7	B	15
	5		
	6	1.0	
-30	12	B	16
	5		
	8	3.4	
532.4	13	B	13
Brown & Gray SILT			
	25		
-35	47	3.5	
	50/4	S/5	15
527.4			
Brown Clay LOAM			
-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation — SOIL BORING LOG

Division of Highways / Illinois Department of Transportation — Page 2 of 2

Date 4/23/01

ROUTE FAP 586 DESCRIPTION IL 162 over FAI 55/70 @ Troy LOGGED BY Mark Denton

SECTION 60R-2, 37R-1 LOCATION SW 1/4, SEC. 5, TWP. 3N, RNG. 7W, 3 PM

COUNTY Madison DRILLING METHOD Hollow Stem Auger HAMMER TYPE 140#

STRUCT. NO. Station

BORING NO. 10 SW Corner Cone Station 21+11 Offset 109.00ft LT Ground Surface Elev. 564.40 ft

Surface Water Elev. ft Stream Bed Elev. ft

Groundwater Elev.: First Encounter 557.4 ft Upon Completion ft After Hrs. ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Brown Clay LOAM *(continued)*			
	6	3.1	
	8	S/10	22
	12		
-45	8		
	15	4.7	
	22	B	17
-50	9		
	15	4.4	
	22	B	17
-55	8		
	11	5.0	
	19	S/20	18
-60			

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Brown Clay LOAM *(continued)*			
	5	2.2	
	7	S/10	26
	10		
-65	7		
	8	2.2	
	11	S/10	23
-70	7		
	10	2.3	
493.4	12	S/15	22
End of Boring @ 71 ft			
-75			
-80			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation — SOIL BORING LOG

Division of Highways / Illinois Geotechnical, Inc. — Page 1 of 2

Date 1/26/05

ROUTE 586 DESCRIPTION West Retaining Wall LOGGED BY MH/PMK

SECTION 60-10-4HB LOCATION SW 1/4, SEC. 5, TWP. 3N, RNG. 7W, 3rd PM

COUNTY Madison DRILLING METHOD Hollow Stem Auger HAMMER TYPE 140-lb Hydraulic

STRUCT. NO. 060-W001 Station

BORING NO. SB-15 Station 1352+01 Offset 84.00ft Right Ground Surface Elev. 560.57 ft

Surface Water Elev. NA ft Stream Bed Elev. NA ft

Groundwater Elev.: First Encounter Dry ft Upon Completion 515.9 ft ▽ After 23 Daye 560.3 ft ▽

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Gray-Brown Silty Clay LOAM			
	1		
	2	1.0	28.6
	2	S/20	
	1		
	2	1.0	28.1
-5	3	B/20	
Field shear vane test at 7.5 Feet			
			31.7
Gray SILT 551.07			
-10			
Dark Gray Brown Silty Clay LOAM 549.07			
Field shear vane test at 12.5 Feet			
			29.6
-15			
-Very Dark Gray, with Organics below 15.5 feet	1		
	1	0.7	37.2
	3	B/20	
Dark Gray-Brown Silty CLAY 542.57			
	1		
	2	1.5	24.2
-20	4	S/20	

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Dark Gray-Brown Silty CLAY *(continued)* 540.07			
Gray CLAY			
	2		
	2	0.8	23.4
	4	S/15	
Gray SILT 537.57			
	0		
	1	0.4	27.6
-25	2	S/15	
Gray-Brown Clay LOAM 535.07			
	1		
	2		16.3
	3		
Gray Brown Silty LOAM 532.57			
	2		
	5	1.5	13.0
-30	9	S/10	
Gray-Brown CLAY 528.82			
	2		
	4	1.8	20.3
-35	6	B/15	
	3		
	4	2.4	19.0
-40	8	S/20	

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation — SOIL BORING LOG

Division of Highways / Illinois Geotechnical, Inc. — Page 2 of 2

Date 1/26/05

ROUTE 586 DESCRIPTION West Retaining Wall LOGGED BY MH/PMK

SECTION 60-10-4HB LOCATION SW 1/4, SEC. 5, TWP. 3N, RNG. 7W, 3rd PM

COUNTY Madison DRILLING METHOD Hollow Stem Auger HAMMER TYPE 140-lb Hydraulic

STRUCT. NO. 060-W001 Station

BORING NO. SB-15 Station 1352+01 Offset 84.00ft Right Ground Surface Elev. 560.57 ft

Surface Water Elev. NA ft Stream Bed Elev. NA ft

Groundwater Elev.: First Encounter 549.7 ft ▽ Upon Completion 539.7 ft ▽ After Days ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Gray-Brown CLAY *(continued)*			
	3		
	5	2.8	18.1
-45	8	S/20	
Gray-Brown Clay LOAM 513.82			
	5		
	11	6.8	15.7
End of Boring 510.57 -50	17	S/15	
-55			
-60			

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
-65			
-70			
-75			
-80			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation — SOIL BORING LOG

Division of Highways / Illinois Geotechnical, Inc. — Page 1 of 2

Date 1/26/05

ROUTE 586 DESCRIPTION West Retaining Wall LOGGED BY MH/PMK

SECTION 60-10-4HB LOCATION SW 1/4, SEC. 5, TWP. 3N, RNG. 7W, 3rd PM

COUNTY Madison DRILLING METHOD Hollow Stem Auger HAMMER TYPE 140-lb Hydraulic

STRUCT. NO. 060-W001 Station

BORING NO. SB-16 Station 1350+10 Offset 125.00ft Right Ground Surface Elev. 561.70 ft

Surface Water Elev. NA ft Stream Bed Elev. NA ft

Groundwater Elev.: First Encounter 549.7 ft ▽ Upon Completion 539.7 ft ▽ After Days ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Gray-Brown Silty Clay LOAM			
	1		
	3	0.7	28.0
	3	B/20	
	2		
	2	0.1	28.0
-5	2	B/20	
			26.8
			30.6
-Dark Gray-Brown below 8.0 Feet			
-10			
			32.1
Very Dark Gray-Brown Silty Clay LOAM, with Organics 548.70			
			70.7
-15			
	1		
	2	0.6	30.8
	2	B/20	
	1		
	1	0.2	39.7
-20	2	B/20	

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Gray CLAY 541.20			
	1		
	2	1.0	26.0
	3	S/20	
Gray Silty CLAY 538.70			
	1		
	2	0.2	32.5
-25	3	S/10	
	1		
	3	0.7	25.3
	5	S/20	
	2		
	2	0.2	23.3
-30	4	S/20	
Gray CLAY 529.95			
	3		
	5	3.3	12.5
-35	8	S/20	
-Gray-Brown below 37 Feet			
	3		
	6	1.8	23.3
-40	7	S/15	

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation — SOIL BORING LOG

Division of Highways / Illinois Geotechnical, Inc. — Page 2 of 2

Date 1/26/05

ROUTE 586 DESCRIPTION West Retaining Wall LOGGED BY MH/PMK

SECTION 60-10-4HB LOCATION SW 1/4, SEC. 5, TWP. 3N, RNG. 7W, 3rd PM

COUNTY Madison DRILLING METHOD Hollow Stem Auger HAMMER TYPE 140-lb Hydraulic

STRUCT. NO. 060-W001 Station

BORING NO. SB-16 Station 1350+10 Offset 125.00ft Right Ground Surface Elev. 561.70 ft

Surface Water Elev. NA ft Stream Bed Elev. NA ft

Groundwater Elev.: First Encounter 548.7 ft ▽ Upon Completion 539.7 ft ▽ After Days ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Gray CLAY *(continued)*			
	2		
	5	1.9	19.6
-45	7	S/20	
	3		
	6	2.1	20.8
End of Boring 511.70 -50	8	S/20	
-55			
-60			

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
-65			
-70			
-75			
-80			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

NOTE:

1. Structure Number listed on boring logs as 060-W001 is SN 060-W004.

Sht. R-12 of R-14

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STA. 18+50 TO STA. 17+00
STRUCTURE NO. 060-W004

BORING LOGS

DRAWN: BTO
DATE: 05/2006 CHECKED: JAN

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	*	MADISON	420	299
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* 60-10K-1, 60-10HB CONTRACT NO. 76709

Illinois Department of Transportation — SOIL BORING LOG

Division of Highways
Shively Geotechnical, Inc.

Page 1 of 2

Date 1/25/05

ROUTE 586 DESCRIPTION West Retaining Wall LOGGED BY MH/PMK

SECTION 60-10-4HB LOCATION SW 1/4, SEC. 5, TWP. 3N, RNG. 7W, 3rd PM

COUNTY Madison DRILLING METHOD Hollow Stem Auger HAMMER TYPE 140-lb Hydraulic

STRUCT. NO. 060-W001
Station

BORING NO. SB-17
Station 1348+60
Offset 110.00ft Right
Ground Surface Elev. 562.06 ft

Surface Water Elev. NA ft
Stream Bed Elev. NA ft

Groundwater Elev.:
First Encounter 548.1 ft
Upon Completion 559.6 ft
After Days ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Very Dark Brown Silty Clay LOAM			
	2		
	3	1.2	29.4
	3	S/10	
	1		
-5	2	0.7	33.3
	2	S/20	
555.56	1		
Gray-Brown Silty Clay LOAM	2	0.5	30.7
	2	S/20	
-Very Dark Gray below 8.0 Feet	1		
-10	1	0.3	32.4
	3	S/20	
551.56			
Gray-Brown SILT	1		
	2	0.3	34.7
	2	B/20	
	1		
-Dark Gray-Brown below 14.0 With Organics 14.0 to 14.5 Feet -15	1	0.3	66.8
	2	S/20	
	1		
	1	0.7	30.5
	2	B/20	
544.06			
Dark Brown Silty Clay LOAM	1		
542.56 -20	2	0.7	27.4
Dark Gray-Brown CLAY	4	B/15	

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Dark Gray-Brown CLAY *(continued)*			
-Gray below 20.5	2		
	3	1.0	24.2
	3	B/15	
	1		
-35	2	1.1	39.8
	3	B/15	
	2		
	3	1.5	24.4
	3	S/20	
534.06			
Gray Silty CLAY	2		
-39	3	0.8	19.8
	5	S/20	
530.31			
Gray-Brown Fine to Medium SAND			
Sand heaved into augers at 33.5 feet. Redrilled through sand zone to seal-off prior to additional sampling. -35			15.9
525.31			
Gray CLAY	3		
	6	3.3	20.0
-40	8	S/20	

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation — SOIL BORING LOG

Division of Highways
Shively Geotechnical, Inc.

Page 2 of 2

Date 1/25/05

ROUTE 586 DESCRIPTION West Retaining Wall LOGGED BY MH/PMK

SECTION 60-10-4HB LOCATION SW 1/4, SEC. 5, TWP. 3N, RNG. 7W, 3rd PM

COUNTY Madison DRILLING METHOD Hollow Stem Auger HAMMER TYPE 140-lb Hydraulic

STRUCT. NO. 060-W001
Station

BORING NO. SB-17
Station 1348+60
Offset 110.00ft Right
Ground Surface Elev. 562.06 ft

Surface Water Elev. NA ft
Stream Bed Elev. NA ft

Groundwater Elev.:
First Encounter 548.1 ft
Upon Completion 559.6 ft
After Days ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Gray CLAY *(continued)*			
-Gray-Brown below 42.0 Feet			
	3		
-45	6	2.3	20.5
	9	S/20	
512.06 -50			
End of Boring	5		
	9	2.9	18.0
	12	S/20	
-60			

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
-55			
-70			
-80			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation — SOIL BORING LOG

Division of Highways
Shively Geotechnical, Inc.

Page 1 of 2

Date 1/20/05

ROUTE 586 DESCRIPTION West Retaining Wall LOGGED BY MH/PMK

SECTION 60-10-4HB LOCATION SW 1/4, SEC. 5, TWP. 3N, RNG. 7W, 3rd PM

COUNTY Madison DRILLING METHOD Hollow Stem Auger HAMMER TYPE 140-lb Hydraulic

STRUCT. NO. 060-W001
Station

BORING NO. SB-18
Station 1347+10
Offset 100.00ft Right
Ground Surface Elev. 562.41 ft

Surface Water Elev. NA ft
Stream Bed Elev. NA ft

Groundwater Elev.:
First Encounter 552.4 ft
Upon Completion 556.9 ft
After 29 Days 561.9 ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Dark Brown Silty Clay LOAM			
	2		
	2	1.0	30.3
	4	B/20	
-Gray-Brown below 3.0 Feet	1		
-5	2	0.6	29.2
	3	B/20	
556.91			
Gray SILT	1		
	2	1.0	25.8
	4	S/20	
-Gray-Brown below 8.0 Feet	1		
	2	0.4	26.5
-10	2	B/20	
551.91			
Dark Gray-Brown Silty Clay LOAM	1		
	1	0.0	31.2
	2	B/20	
548.41	1		
Very Dark Gray-Brown Silty Clay LOAM, with Organics -15	1	0.4	67.3
	2	B/20	
	1		
	1	0.5	33.3
	2	B/15	
544.41			
Dark Gray-Brown Silty Clay LOAM	1		
	1	0.5	43.6
-20	2	B/20	

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Dark Gray-Brown Silty Clay LOAM *(continued)*			
	2		
	2	0.8	35.4
	3	B/20	
539.41			
Gray CLAY	1		
	3	1.4	25.4
-35	4	S/20	
	2		
	3	1.3	28.7
	5	S/20	
	2		
	3	1.7	20.7
-30	4	S/15	
530.66			
Gray Sandy GRAVEL			
Sand heaved into augers at 33.5 feet. Redrilled through sand zone to seal-off prior to additional sampling.	3		
-35	7		13.9
	4		
	9		
-40	11		9.6
	13		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation — SOIL BORING LOG

Division of Highways
Shively Geotechnical, Inc.

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Date 1/20/05

ROUTE 586 DESCRIPTION West Retaining Wall LOGGED BY MH/PMK

SECTION 60-10-4HB LOCATION SW 1/4, SEC. 5, TWP. 3N, RNG. 7W, 3rd PM

COUNTY Madison DRILLING METHOD Hollow Stem Auger HAMMER TYPE 140-lb Hydraulic

STRUCT. NO. 060-W001
Station

BORING NO. SB-18
Station 1347+10
Offset 100.00ft Right
Ground Surface Elev. 562.41 ft

Surface Water Elev. NA ft
Stream Bed Elev. NA ft

Groundwater Elev.:
First Encounter 552.4 ft
Upon Completion 556.9 ft
After 29 Days 561.9 ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Gray Sandy GRAVEL *(continued)*			
520.66			
Gray CLAY			
	10		
	12	3.8	10.7
-45	15	B/15	
Dark Gray below 47.0 Feet			
	4		
	5	1.9	22.1
512.41 -50	9	B/15	
End of Boring			
-55			
-60			

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
-65			
-70			
-75			
-80			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation — SOIL BORING LOG

Division of Highways
Shively Geotechnical, Inc.

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Date 1/24/05

ROUTE 586 DESCRIPTION West Retaining Wall LOGGED BY MH/PMK

SECTION 60-10-4HB LOCATION NW 1/4, SEC. 8, TWP. 3N, RNG. 7W, 3rd PM

COUNTY Madison DRILLING METHOD Hollow Stem Auger HAMMER TYPE 140-lb Hydraulic

STRUCT. NO. 060-W001
Station

BORING NO. SB-27
Station 1355+30
Offset 105.00ft Right
Ground Surface Elev. 562.27 ft

Surface Water Elev. NA ft
Stream Bed Elev. NA ft

Groundwater Elev.:
First Encounter 546.3 ft
Upon Completion 517.3 ft
After 25 Days 562.3 ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
TOPSOIL			
560.77	1		
Gray-Brown Silty Clay LOAM	3	2.1	26.2
	3	B/15	
559.27			
Gray-Brown SILT	1		
-5	2	0.6	27.7
	2	B/20	
555.77			
Gray-Brown Silty Clay LOAM			
555.27			50.6
Dark Gray Silt LOAM, with Organics			
552.77 -10			
Gray Silty Clay LOAM			
Field shear vane test at 10.0 Feet			
			27.9
Field shear vane test at 15.0 Feet -15			
	2		
	2	0.9	27.0
	3	B/20	
544.27			
Gray Clay LOAM	1		
	2	0.5	19.3
-20	4	S/20	

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Gray Clay LOAM *(continued)* 541.77			
Dark Gray-Brown Sandy LOAM	1		
	2	0.2	28.7
	2	S/20	
539.27			
Dark Gray-Brown Silty CLAY	1		
-25	3	0.8	16.5
	4	S/20	
	2		
	6	2.0	14.0
	9	S/20	
534.27			
Brown CLAY	3		
-30	7	3.4	12.0
	11	S/20	
530.52			
Dark Gray SILT			
	6		
	12	8.5	15.0
-35	20	S/20	
525.52			
Brown CLAY			
	5		
	8	2.8	17.4
-40	11	S/15	

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation — SOIL BORING LOG

Division of Highways
Shively Geotechnical, Inc.

Page 2 of 2

Date 1/24/05

ROUTE 586 DESCRIPTION West Retaining Wall LOGGED BY MH/PMK

SECTION 60-10-4HB LOCATION NW 1/4, SEC. 8, TWP. 3N, RNG. 7W, 3rd PM

COUNTY Madison DRILLING METHOD Hollow Stem Auger HAMMER TYPE 140-lb Hydraulic

STRUCT. NO. 060-W001
Station

BORING NO. SB-27
Station 1355+30
Offset 105.00ft Right
Ground Surface Elev. 562.27 ft

Surface Water Elev. NA ft
Stream Bed Elev. NA ft

Groundwater Elev.:
First Encounter 546.3 ft
Upon Completion 517.3 ft
After 25 Days 562.3 ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Brown CLAY *(continued)*			
-Gray-Brown below 42.0 Feet			
	3		
-45	6	2.9	16.2
	11	S/20	
	5		
	10	4.0	15.7
512.27 -50	13	S/15	
End of Boring			
-55			
-60			

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
-65			
-70			
-75			
-80			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

NOTE:

1. Structure Number listed on boring logs as 060-W001 is SN 060-W004.

Sht. R-13 of R-14

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STA. 18+50 TO STA. 17+00
STRUCTURE NO. 060-W004

BORING LOGS

DRAWN: BTO
CHECKED: JAN

DATE: 05/2006

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	•	MADISON	420	300
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

• 60-10K-1, 60-10HB *CONTRACT NO. 76709*

Illinois Department of Transportation — SOIL BORING LOG

Division of Highways
Shively Geotechnical, Inc.

Page 1 of 2

Date 1/24/05

ROUTE 586 DESCRIPTION West Retaining Wall LOGGED BY MH/PMK

SECTION 60-10-4HB LOCATION NW 1/4, SEC. 8, TWP. 3N, RNG. 7W, 3rd PM

COUNTY Madison DRILLING METHOD Hollow Stem Auger HAMMER TYPE 140-lb Hydraulic

STRUCT. NO. 060-W001
Station

BORING NO. SB-28
Station 1358+75
Offset 125.00ft Right
Ground Surface Elev. 561.61 ft

Surface Water Elev. NA ft
Stream Bed Elev. NA ft

Groundwater Elev.:
First Encounter 553.6 ft ▼
Upon Completion 522.6 ft ▽
After Days ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Gray-Brown Silty Clay LOAM			
	2		
	2 3		54.3
	1		
	1 2		26.2
-5			
			30.3
			27.2
-10			
-Gray below 10.5 Feet			
			25.3
Gray Silty CLAY 548.61			
			23.7
-15			
-Dark Gray-Brown below 15.5 Feet			
	2		
	2 4	1.4 S/15	26.7
Dark Gray-Brown Clay LOAM 543.61			
	1		
-20	2 2	0.5 B/20	21.8

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Dark Gray-Brown Clay LOAM (continued) 541.11			
Gray-Brown Silty Clay LOAM			
	3		
	5 6	1.3 B/20	15.6
	2		
	6 8	1.5 S/20	14.8
	4		
	10 12	1.9 S/15	13.0
Dark Gray-Brown CLAY 533.61			
	5		
	9 21	3.9 B/20	12.9
-30			
-Brown 32.0 to 37.0 Feet			
	2		
	3 5	1.4 S/20	27.8
-35			
-Gray-Brown below 37.0 Feet			
	2		
	4 8	2.2 B/20	20.5
-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation — SOIL BORING LOG

Division of Highways
Shively Geotechnical, Inc.

Page 2 of 2

Date 1/24/05

ROUTE 586 DESCRIPTION West Retaining Wall LOGGED BY MH/PMK

SECTION 60-10-4HB LOCATION NW 1/4, SEC. 8, TWP. 3N, RNG. 7W, 3rd PM

COUNTY Madison DRILLING METHOD Hollow Stem Auger HAMMER TYPE 140-lb Hydraulic

STRUCT. NO. 060-W001
Station

BORING NO. SB-28
Station 1358+75
Offset 125.00ft Right
Ground Surface Elev. 561.61 ft

Surface Water Elev. NA ft
Stream Bed Elev. NA ft

Groundwater Elev.:
First Encounter 553.6 ft ▼
Upon Completion 522.6 ft ▽
After Days ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Dark Gray-Brown CLAY (continued)			
	5		
	8 13	3.0 B/20	17.3
-45			
	3		
	10 14	3.1 S/15	17.8
End of Boring 511.61			
-55			
-70			
-80			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation — SOIL BORING LOG

Division of Highways
Shively Geotechnical, Inc.

Page 1 of 2

Date 1/24/05

ROUTE 586 DESCRIPTION West Retaining Wall LOGGED BY MH/PMK

SECTION 60-10-4HB LOCATION NW 1/4, SEC. 8, TWP. 3N, RNG. 7W, 3rd PM

COUNTY Madison DRILLING METHOD Hollow Stem Auger HAMMER TYPE 140-lb Hydraulic

STRUCT. NO. 060-W001
Station

BORING NO. SB-29
Station 1358+25
Offset 115.00ft Right
Ground Surface Elev. 562.73 ft

Surface Water Elev. NA ft
Stream Bed Elev. NA ft

Groundwater Elev.:
First Encounter 562.7 ft ▼
Upon Completion Not Available ft
After Days ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Gray-Brown SILT			
	4		
	7 7	1.7 B/10	18.5
Dark Gray-Brown Silty Clay LOAM 559.73			
	1		
	2 3	1.0 B/20	24.6
-5			
-Brown 5.5 to 10.5 Feet			
	1		
	2 2	0.8 B/20	27.2
	1		
	2 2	0.4 B/20	26.6
-10			
-Gray below 10.5 Feet			
	1		
	2 3	0.6 B/20	23.8
Dark Gray-Brown Silty CLAY 549.73			
	1		
	2 2	0.8 B/20	22.5
-15			
	2		
Brown Sandy LOAM 546.23			
	3 4	1.0 B/20	28.1
	1		
	3 4	1.0 B/15	27.3
-20			

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Brown Sandy LOAM (continued) 542.23			
Gray-Brown Silty Clay LOAM			
	2		
	6 8	2.0 B/20	10.3
	2		
	6 7	1.6 B/20	15.0
-25			
Gray-Brown Clay LOAM 537.23			
	3		
	6 10	2.1 B/20	14.7
	4		
	7 15	2.8 S/20	13.9
-30			
	7		
Dark Gray SILT 528.23	10 15		18.0
-35			
Gray-Brown CLAY 525.98			
	5		
	6 8		22.6
-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation — SOIL BORING LOG

Division of Highways
Shively Geotechnical, Inc.

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Date 1/24/05

ROUTE 586 DESCRIPTION West Retaining Wall LOGGED BY MH/PMK

SECTION 60-10-4HB LOCATION NW 1/4, SEC. 8, TWP. 3N, RNG. 7W, 3rd PM

COUNTY Madison DRILLING METHOD Hollow Stem Auger HAMMER TYPE 140-lb Hydraulic

STRUCT. NO. 060-W001
Station

BORING NO. SB-29
Station 1358+25
Offset 115.00ft Right
Ground Surface Elev. 562.73 ft

Surface Water Elev. NA ft
Stream Bed Elev. NA ft

Groundwater Elev.:
First Encounter 562.7 ft ▼
Upon Completion Not Available ft
After Days ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Gray-Brown Clay (continued)			
	4		
	7 11	3.1 S/15	19.8
-45			
	5		
	12 20	4.5 B/20	15.8
End of Boring 512.73			
-55			
-70			
-75			
-80			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation — SOIL BORING LOG

Division of Highways
Shively Geotechnical, Inc.

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Date 1/20/05

ROUTE 586 DESCRIPTION West Retaining Wall LOGGED BY MH/PMK

SECTION 60-10-4HB LOCATION NW 1/4, SEC. 8, TWP. 3N, RNG. 7W, 3rd PM

COUNTY Madison DRILLING METHOD Hollow Stem Auger HAMMER TYPE 140-lb Hydraulic

STRUCT. NO. 060-W001
Station

BORING NO. SB-30
Station 1359+75
Offset 100.00ft Right
Ground Surface Elev. 566.76 ft

Surface Water Elev. NA ft
Stream Bed Elev. NA ft

Groundwater Elev.:
First Encounter 548.3 ft ▼
Upon Completion 527.3 ft ▽
After 29 Days 523.8 ft ▽

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Very Dark Gray Silty CLAY, FILL			
	4		
	5 8	2.9 S/15	23.1
	2		
	5 7	2.7 S/15	17.8
-5			
Gray-Brown Silty Clay LOAM 560.26			
	3 4	1.2 S/20	25.9
	1		
	2 3	0.7 S/20	30.6
-10			
-Dark Gray-Brown below 10.5 Feet			
	2		
	2 4	1.3 B/20	32.1
	1		
	2 3	0.7 B/20	27.9
-15			
	1		
	2 2	0.3 B/20	24.3
Gray Silty CLAY 548.76			
	1		
-20	2 2	0.9 S/20	24.9

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Gray Silty CLAY (continued) 546.26			
Gray CLAY			
	1		
	2 2	0.5 B/20	25.2
Gray Sandy LOAM 543.76			
	1		
	2 3	0.2 B/15	18.0
-25			
Gray-Brown Silty Clay LOAM 542.26			
	2		
	2 3	1.1 B/20	20.7
Dark Gray-Brown Silty CLAY 538.76			
	2		
	6 10	2.0 B/10	14.5
-30			
	5		
	11 14	3.2 S/20	11.6
Dark Gray SILT 530.01			
	11		
▽ -40	20 25		15.2

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation — SOIL BORING LOG

Division of Highways
Shively Geotechnical, Inc.

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Date 1/20/05

ROUTE 586 DESCRIPTION West Retaining Wall LOGGED BY MH/PMK

SECTION 60-10-4HB LOCATION NW 1/4, SEC. 8, TWP. 3N, RNG. 7W, 3rd PM

COUNTY Madison DRILLING METHOD Hollow Stem Auger HAMMER TYPE 140-lb Hydraulic

STRUCT. NO. 060-W001
Station

BORING NO. SB-30
Station 1359+75
Offset 100.00ft Right
Ground Surface Elev. 566.76 ft

Surface Water Elev. NA ft
Stream Bed Elev. NA ft

Groundwater Elev.:
First Encounter 548.3 ft ▼
Upon Completion 527.3 ft ▽
After 29 Days 523.8 ft ▽

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Dark Gray SILT (continued)			
Gray-Brown CLAY 525.01			
	4		
	5 9	2.5 B/10	20.1
-45			
	3		
	8 11	2.5 B/20	19.6
End of Boring 516.76			
-55			
-70			
-75			
-80			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

NOTE:

1. Structure Number listed on boring logs as 060-W001 is SN 060-W004.

Sht. R-14 of R-14

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 162 OVER I-55/70 IN TROY
F.A.I ROUTE 70 SECTION 60-10K-1, 60-10HB
MADISON COUNTY STA. 18+50 TO STA. 17+00
STRUCTURE NO. 060-W004

BORING LOGS

DRAWN: BTO
CHECKED: JAN
DATE: 05/2006