

PROJECT ENGINEER: SAL MADONIA (217) 782-4761
 SQUAD LEADER: MARCUS BRUCE (217) 524-0946

STATE OF ILLINOIS

DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS

PLANS FOR PROPOSED
 FEDERAL AID HIGHWAY

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(84-2B-1) I-1	SANGAMON	31	1
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
CONTRACT NO. 72349				

INDEX OF SHEETS

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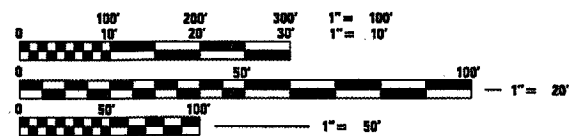
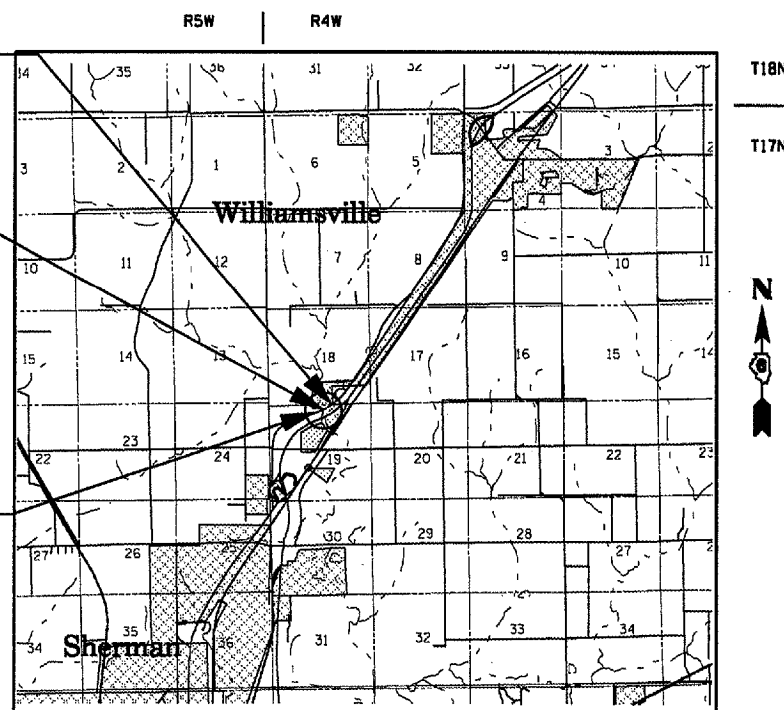
FOR SUMMARY OF QUANTITIES SEE SHEET 3

ADT 509 (2003)
 MU 1% - SU 5%

SECTION (84-2B-1) I-1
 ENDS STA. 38 + 59.00

S.N. 084-0025
 STA. 36 + 16.64
 150'-1 1/2" BK. TO BK. ABUT.
 31'-9" STRUCTURE WIDTH
 SKEW 7 34' 46" LT. FWD.

SECTION (84-2B-1) I-1
 BEGINS STA. 32 + 40.00



SCALES
 PLAN 1" = 50'
 PROFILE HORIZ. 1" = 50'
 PROFILE VERT. 1" = 5'
 CROSS SECTIONS 1" = 10'
 1" = 5'

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

FOR UNDERGROUND UTILITY LOCATIONS CALL
 J.U.L.I.E. TOLL FREE
 1-800-892-0123
 WILLIAMSVILLE TOWNSHIP

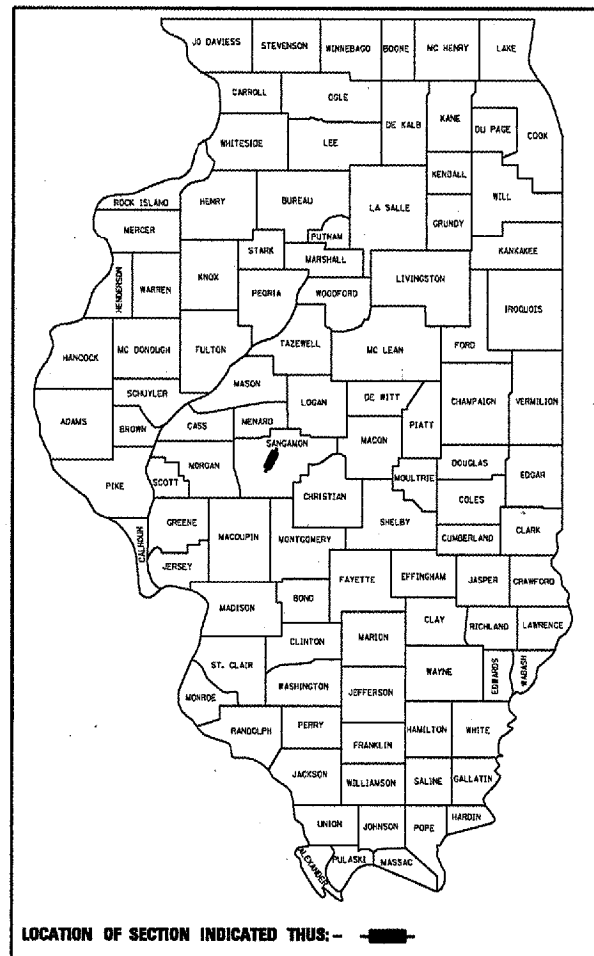
CONTRACT NO. 72349

LOCATION MAP

GROSS AND NET LENGTH OF PROJECT = 0.117 MILES

SEAL

D-96-521-01



STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS

SUBMITTED *Feb. 21, 2008*
Christina M. Reed
 DEPUTY DIRECTOR OF HIGHWAYS

March 21, 2008
Eric E. Horn
 ENGINEER OF DESIGN AND ENVIRONMENT

March 21, 2008
Christina M. Reed
 DIRECTOR, DIVISION OF HIGHWAYS

GENERAL NOTES

- WHERE SECTION OR SUB-SECTION MARKERS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE REMOVED. THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL PROPERTY MARKERS AND MONUMENTS UNTIL THE OWNER, AN AUTHORIZED AGENT OR LAND SURVEYOR HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING UTILITY PROPERTY FROM CONSTRUCTION OPERATIONS AS OUTLINED IN ARTICLE 107.26 OF THE STANDARD SPECIFICATIONS. THE J.U.L.I.E. NUMBER IS 800-892-0123.
THE LOCATIONS OF EXISTING WATER MAINS, GAS MAINS, SEWERS, ELECTRIC POWER LINES, TELEPHONE LINES, AND OTHER UTILITIES AS SHOWN ON THE PLANS ARE BASED ON THE BEST INFORMATION AVAILABLE, BUT ARE NOT GUARANTEED. ALL UTILITY LOCATIONS SHOWN ARE SUPPLIED BY THE UTILITY COMPANIES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ASCERTAIN THEIR EXACT LOCATION FROM THE UTILITY COMPANIES AND BY FIELD INSPECTION.
- ADJUSTMENT OF WATER METERS, TELEPHONE, GAS, ELECTRICAL AND CABLE T.V. FACILITIES SHALL BE DONE BY THE RESPECTIVE OWNERS. RELOCATION OF ALL UTILITIES SHALL ALSO BE DONE BY THE RESPECTIVE OWNERS.
- WHERE PROPOSED CONSTRUCTION ABUTS EXISTING APPURTENANCES, A SAW CUT SHALL BE MADE TO ACHIEVE A NEAT BUTT JOINT. SAW CUTS WILL NOT BE PAID FOR SEPARATELY. COST OF SAW CUTS SHALL BE INCLUDED IN THE TYPE OF WORK ENCOUNTERED.
- PLAN DIMENSIONS AND DETAILS RELATIVE TO EXISTING PAVEMENTS HAVE BEEN TAKEN FROM EXISTING PLANS AND ARE SUBJECT TO CONSTRUCTION VARIATIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY SUCH DIMENSIONS AND DETAILS IN THE FIELD. SUCH VARIATIONS SHALL NOT BE CAUSE FOR ADDITIONAL COMPENSATION DUE TO A CHANGE IN THE SCOPE OF THE WORK. HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE UNIT PRICE BID FOR THE WORK.
- ALL STATION REFERENCES ARE TO THE ROADWAY CENTERLINE. THE COORDINATE SYSTEM USED FOR THE HORIZONTAL CONTROL IS THE STATE PLANE COORDINATE SYSTEM FOR THIS PROJECT.
- ALL ELEVATIONS SHOWN ON THE PLANS ARE BASED ON U.S.G.S. MEAN SEA LEVEL DATUM.
- THE FOLLOWING RATES OF APPLICATION HAVE BEEN USED IN CALCULATING THE PLAN QUANTITIES:
 - PRIMING OF CONCRETE AND BITUMINOUS BASES
BITUMINOUS MATERIAL (PRIME COAT) 0.08 gal/yd²
AGGREGATE (PRIME COAT)-(REQUIRED IF OPEN TO TRAFFIC) 4 lb/yd²
 - FERTILIZER (SEED) 270 lb/acre (1-1-1)
NITROGEN 90 lb/acre
PHOSPHORUS 90 lb/acre
POTASSIUM 90 lb/acre
 - MULCH METHOD 2 2 tons/acre
- THE FOLLOWING DENSITIES HAVE BEEN USED IN CALCULATING THE PLAN QUANTITIES:

HOT-MIX ASPHALT	112 lb/(yd ² x in)
GRANULAR MATERIALS	2.05 tons/yd ³
- MIXTURE REQUIREMENTS
THE FOLLOWING MIXTURE REQUIREMENTS ARE APPLICABLE FOR THIS PROJECT:

MIXTURE USE(S):	BINDER COURSE	SURFACE COURSE
AC/PG:	64-22	64-22
RAP % (MAX.):	15%	15%
DESIGN AIR VOIDS:	4% @ NDESIGN=50	4% @ NDESIGN=50
MIXTURE COMPOSITION: (GRADATION MIXTURE)	IL 19.0	IL 9.5 OR 12.5
VOLUMETRIC REQUIREMENTS:		
FRICITION AGGREGATE:	N/A	MIX "C"
FIELD DENSITY:		

- ANY REFERENCE TO A STANDARD IN THESE PLANS SHALL BE INTERPRETED TO MEAN THE EDITION, AS INDICATED BY THE SUB-NUMBER LISTED IN THE INDEX OF SHEETS, OR THE COPY OF THE STANDARD INCLUDED IN THESE PLANS.
- ONLY THOSE TREES DESIGNATED BY THE ENGINEER OR LISTED IN THE TREE REMOVAL SCHEDULE SHALL BE REMOVED. THE CONTRACTOR WILL PROTECT ALL REMAINING TREES FROM DAMAGE DUE TO HIS OPERATIONS. PROPERTY OWNERS SHALL BE NOTIFIED BY THE CONTRACTOR PRIOR TO REMOVING TREES AND SHRUBS ON PROPERTY THAT HAS BEEN ACQUIRED BY THE STATE. THE PROPERTY OWNERS SHALL BE ALLOWED TIME TO TRANSPLANT TREES AND SHRUBS TO THEIR PROPERTY. OTHERWISE ALL TREES AND SHRUBS INDICATED ON THE PLANS FOR REMOVAL SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR.
- THE FOLLOWING PROJECT COMMITMENTS HAVE BEEN MADE DURING THE PLANNING PHASE:
•NO COMMITMENTS HAVE BEEN MADE.

HIGHWAY STANDARDS

280001-04	TEMPORARY EROSION CONTROL SYSTEMS
420001-07	PAVEMENT JOINTS
420601-05	7.2 m (24') PCC PAVEMENT
420701-02	PAVEMENT FABRIC
515001-02	NAME PLATE FOR BRIDGES
630001-07	STEEL PLATE BEAM GUARDRAIL
630301-04	SHOULDER WIDENING FOR TYPE 1 GUARDRAIL TERMINALS
631032-03	TRAFFIC BARRIER TERMINAL, TYPE 6A
635006-02	REFLECTOR AND TERMINAL MARKER PLACEMENT
635011-01	REFLECTOR MARKER AND MOUNTING DETAILS
701006-02	OFF-ROAD OPERATION 2L, 2W, 15' TO PAVEMENT EDGE FOR SPEEDS ≥ 45 MPH
701011-01	OFF-ROAD MOVING OPERATIONS 2L, 2W DAY ONLY FOR SPEEDS ≥ 45 MPH
701901	TRAFFIC CONTROL DEVICES
780001-01	TYPICAL PAVEMENT MARKINGS
000001-05	STANDARD SYMBOLS, ABBREVIATIONS & PATTERNS
BLR 21-7	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS
BLR 22-5	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS (2-LANE 2 WAY RURAL TRAFFIC) (ROAD CLOSED TO THRU TRAFFIC)

DISTRICT SIX	
EXAMINED	February 21, 20 08
	<i>Louis J. Haasig</i>
	OPERATIONS ENGINEER
EXAMINED	February 21, 20 08
	<i>William R. Frey</i>
	PROGRAM IMPLEMENTATION ENGINEER
EXAMINED	February 21, 20 08
	<i>William R. Frey</i>
	PROGRAM DEVELOPMENT ENGINEER

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

GENERAL NOTES & HIGHWAY STANDARDS

DATE 2/03

DRAWN BY MLO
CHECKED BY CWG

CONTRACT NO. 72349

PAY CODE NUMBER	ITEM DESCRIPTION	UNIT	TOTAL QUANTITY	80% FEDERAL 20% STATE X071-2A
20200100	EARTH EXCAVATION	CU YD	75.7	75.7
20700400	POROUS GRANULAR EMBANKMENT, SPECIAL	CU YD	206	206
25000210	SEEDING, CLASS 2A	ACRE	0.2	0.2
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	12	12
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	12	12
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	12	12
25100115	MULCH, METHOD 2	ACRE	0.2	0.2
25100630	EROSION CONTROL BLANKET	SO YD	850	850
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	20	20
28000400	PERIMETER EROSION BARRIER	FOOT	1167	1167
40600200	BITUMINOUS MATERIALS (PRIME COAT)	TON	0.9	0.9
40600982	HOT-MIX ASPHALT SURFACE REMOVAL-BUTT JOINT	SO YD	147	147
40603080	HOT-MIX ASPHALT BINDER COURSE SUPERPAVE, IL 19.0, N50	TON	80	80
40603310	HOT-MIX ASPHALT SURFACE COURSE, SUPERPAVE, MIX C, N50	TON	97	97
42000300	PORTLAND CEMENT CONCRETE PAVEMENT 8"	SO YD	74	74
42001200	PAVEMENT FABRIC	SO YD	66	66
44000100	PAVEMENT REMOVAL	SO YD	74	74
44000198	HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH	SO YD	927	927
48101500	AGGREGATE SHOULDERS, TYPE B 6"	SO YD	261	261
48203021	HOT-MIX ASPHALT SHOULDERS, 6"	SO YD	313	313
50102400	CONCRETE REMOVAL	CU YD	22.3	22.3
50104720	REMOVAL OF EXISTING CONCRETE DECK	EACH	1	1
50200100	STRUCTURE EXCAVATION	CU YD	247.6	247.6
50300100	FLOOR DRAINS	EACH	7	7
50300225	CONCRETE STRUCTURES	CU YD	16.3	16.3
50300255	CONCRETE SUPERSTRUCTURE	CU YD	152.5	152.5
50300260	BRIDGE DECK GROOVING	SO YD	451	145
50300300	PROTECTIVE COAT	SO YD	555	555
50500505	STUD SHEAR CONNECTORS	EACH	1965	1965
50500715	JACK AND REMOVE EXISTING BEARINGS	EACH	10	10
50600300	CLEANING AND PAINTING STEEL BRIDGE	L SUM	1	1

PAY CODE NUMBER	ITEM DESCRIPTION	UNIT	TOTAL QUANTITY	80% FEDERAL 20% STATE X071-2A
50606400	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES	L SUM	1	1
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	37560	37560
50900200	STEEL RAILING, TYPE 2399	FOOT	301	301
5100300	SLOPE WALL 6 INCH	SO YD	12.0	12.0
51500100	NAME PLATES	EACH	1	1
52100010	ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	5	5
52100020	ELASTOMERIC BEARING ASSEMBLY, TYPE II	EACH	5	5
52100520	ANCHOR BOLTS, 1"	EACH	20	20
59100100	GEOCOMPOSITE WALL DRAIN	SO YD	82.4	82.4
60109580	PIPE UNDERDRAIN FOR STRUCTURE 5 4"	FOOT	154	154
* 63000000	STEEL PLATE BEAM GUARD RAIL, TYPE A	FOOT	575	575
* 63100087	TRAFFIC BARRIER TERMINAL, TYPE 6A	EACH	4	4
* 63100167	TRAFFIC BARRIER TERMINAL, TYPE I (SPECIAL) TANGENT	EACH	4	4
63200310	GUARDRAIL REMOVAL	FOOT	534	534
* 66500105	WOVEN WIRE FENCE, 4'	FOOT	140	140
66502300	WOVEN WIRE FENCE REMOVAL	FOOT	95	95
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	6	6
67100100	MOBILIZATION	L SUM	1	1
70101800	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	L SUM	1	1
70300100	SHORT-TERM PAVEMENT MARKING	FOOT	62	62
70300230	TEMPORARY PAVEMENT MARKING - LINE 5'	FOOT	1393.0	1393.0
70301000	WORK ZONE PAVMENT MARKING REMOVAL	SO FT	21	21
* 7800120	PAINT PAVEMENT MARKING - LINE 5'	FOOT	1393.0	1393.0
* 78200405	GUARDRAIL MARKERS	EACH	10	10
* 78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	4	4
X0323830	DRAINAGE SCUPPERS, 0.5'-1'	EACH	3	3

*DENOTES SPECIALTY ITEM

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

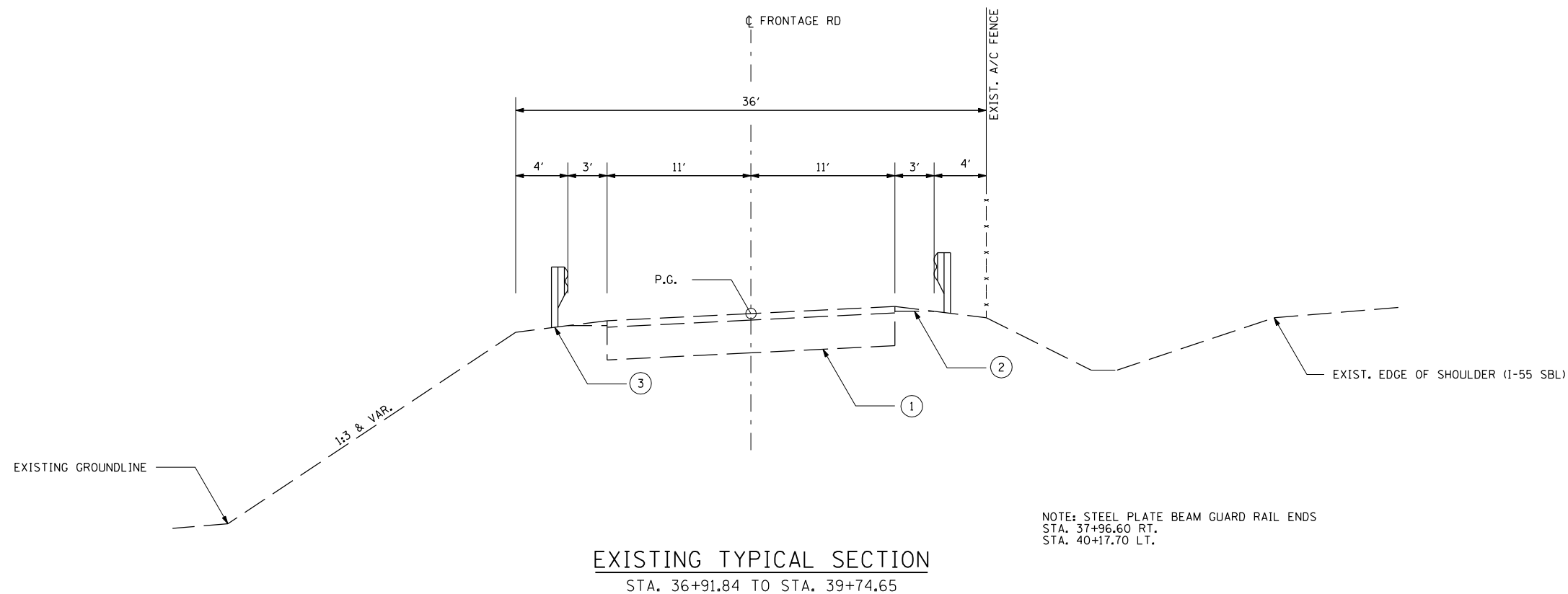
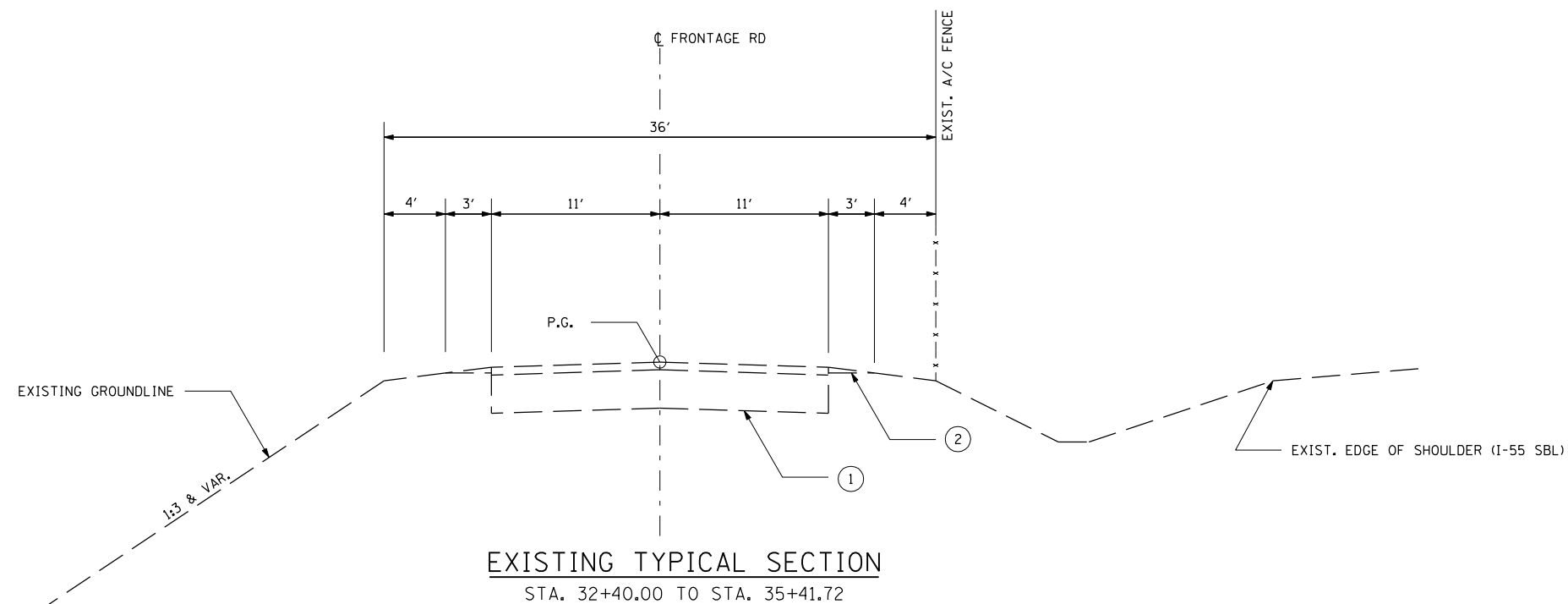
SUMMARY OF QUANTITIES

DRAWN BY MLO
CHECKED BY CWG

DATE 2/03

Rev.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(84-2B-1) I-1	SANGAMON	31	4
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 72349				



NOTE: STEEL PLATE BEAM GUARD RAIL ENDS
 STA. 37+96.60 RT.
 STA. 40+17.70 LT.

LEGEND

- ① EXIST. PAVEMENT - 3" HMA SURFACE COURSE ON 7" STABILIZED BASE COURSE
- ② EXIST. AGG. SHOULDER
- ③ EXIST. STEEL PLATE BEAM GUARD RAIL

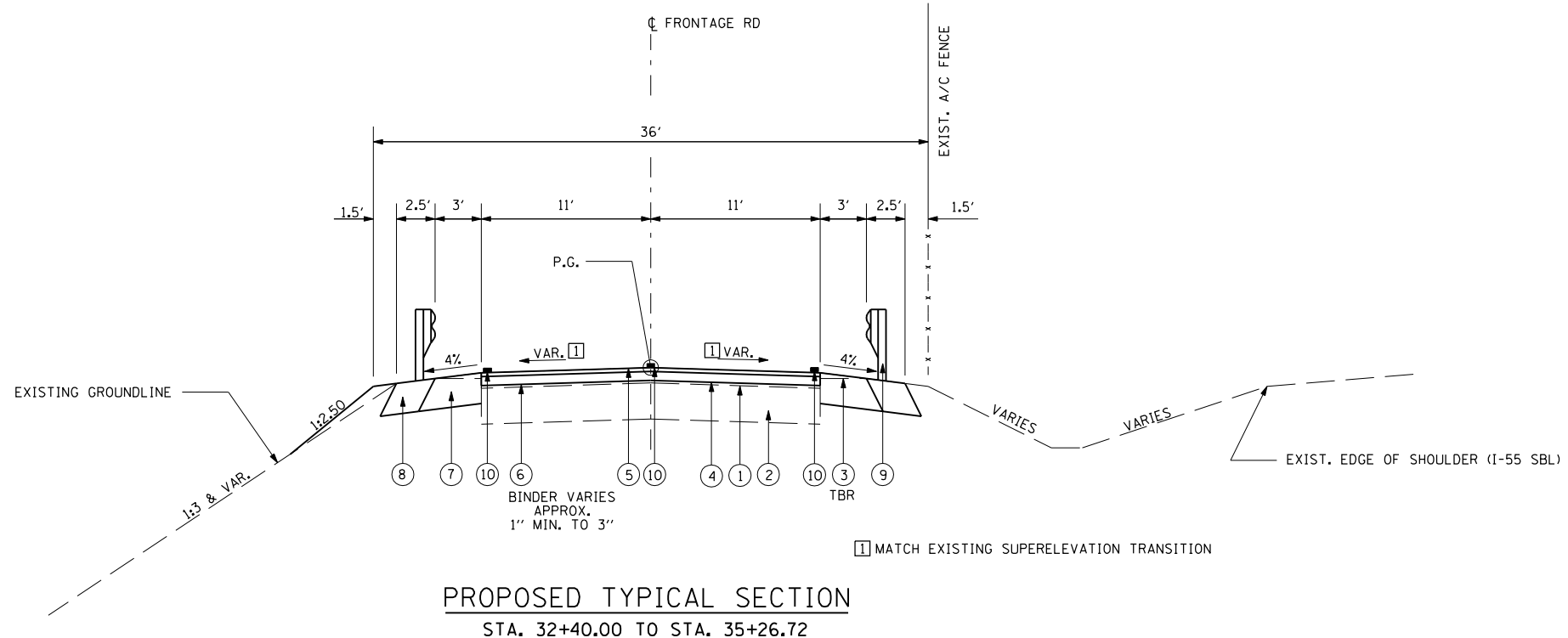
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

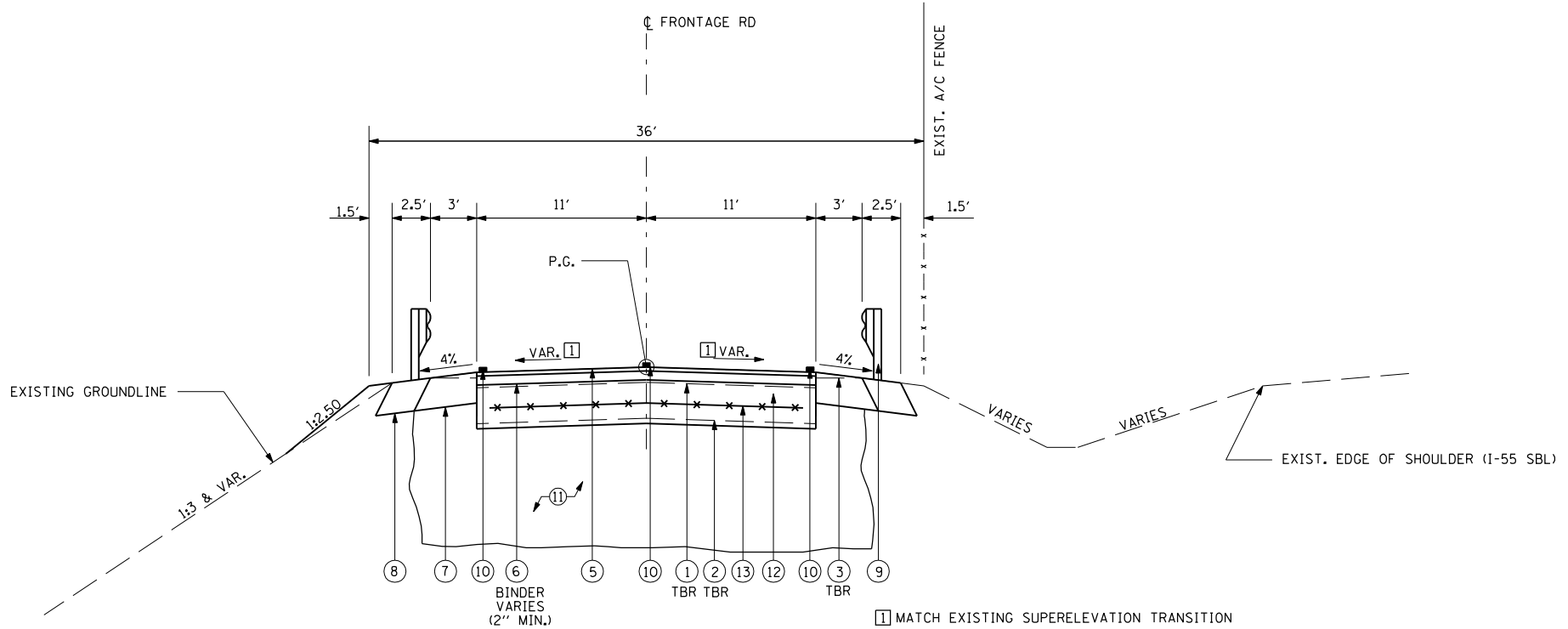
EXISTING TYPICAL SECTIONS

DATE 3/03
 DRAWN BY NJV
 CHECKED BY BKB

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(84-2B-1) I-1	SANGAMON	31	5
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 72349				



PROPOSED TYPICAL SECTION
STA. 32+40.00 TO STA. 35+26.72



PROPOSED TYPICAL SECTION
STA. 35+26.72 TO STA. 35+41.72

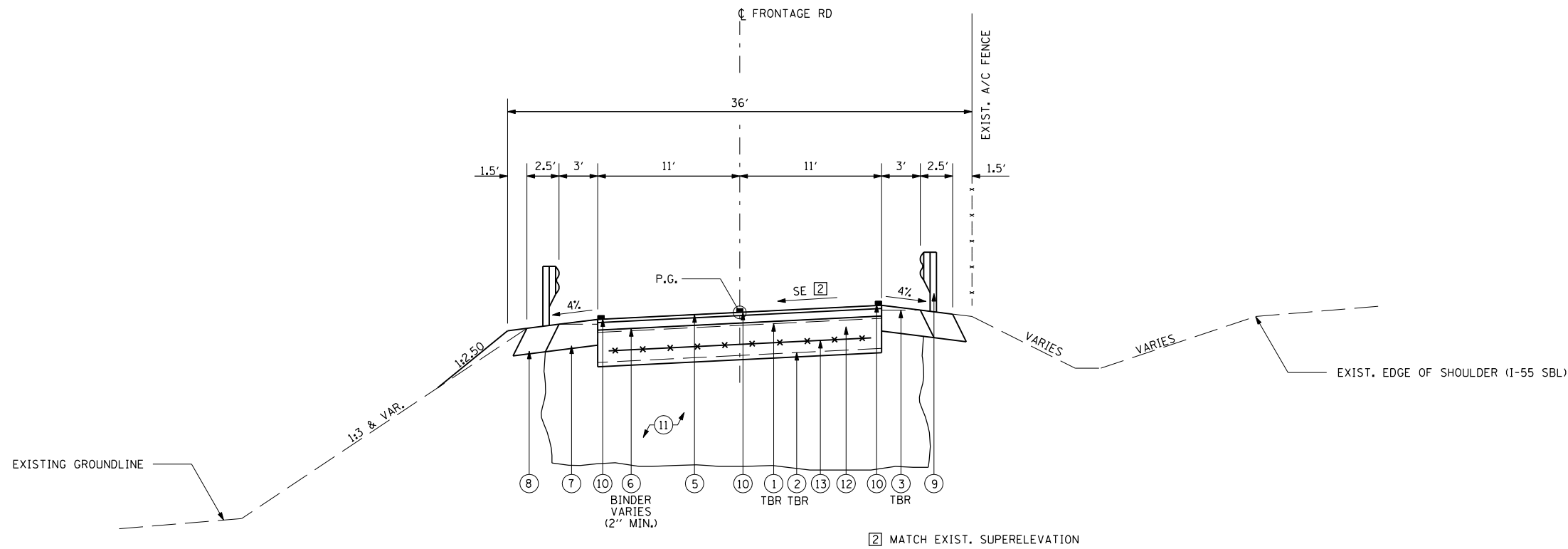
LEGEND

- ① EXIST. HMA PAVEMENT 3"
- ② EXIST. STABILIZED BASE COURSE 7"
- ③ EXIST. AGGREGATE SHOULDER
- ④ PROP. HMA SURFACE REMOVAL (VARIABLE DEPTH)
- ⑤ PROP. HMA CONCRETE SURFACE COURSE, SUPERPAVE, MIXTURE C, N50 (1 1/2")
- ⑥ PROP. HMA CONCRETE BINDER COURSE, SUPERPAVE, N50 (VARIABLE DEPTH)
- ⑦ PROP. HMA SHOULDER 6"
- ⑧ PROP. AGGREGATE SHOULDER, TYPE B 6"
- ⑨ PROP. STEEL PLATE BEAM GUARDRAIL, TYPE A
- ⑩ PROP. PAINT PAVEMENT MARKING - LINE 5"
- ⑪ PROP. BACKFILL PER SPECIAL PROVISIONS
- ⑫ PROP. PCC PAVEMENT, 8" (STD. 420601)
- ⑬ PROP. PAVEMENT FABRIC 6x6-W1.4xW1.4 (STD. 420701)

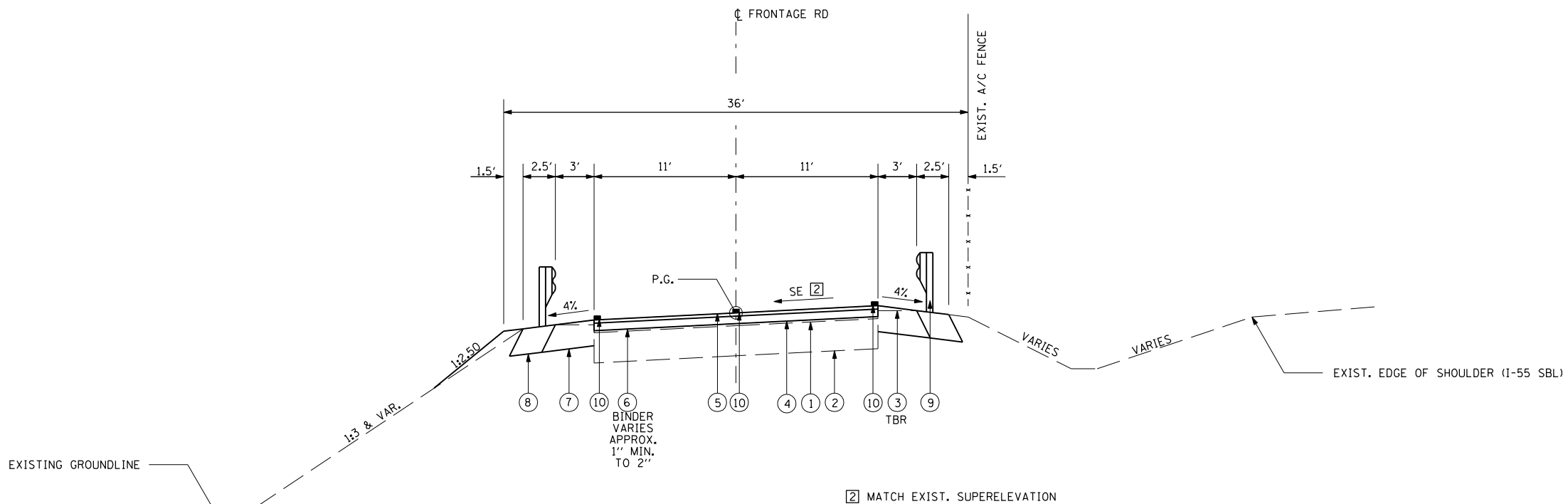
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
PROPOSED TYPICAL SECTIONS
SHEET 1 OF 2
DRAWN BY NJV/MLO
CHECKED BY BKB/SJK
DATE 3/03

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(84-2B-1) I-1	SANGAMON	31	6
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 72349				



PROPOSED TYPICAL SECTION
STA. 36+91.84 TO STA. 37+06.84



PROPOSED TYPICAL SECTION
STA. 37+06.84 TO STA. 38+59.00

LEGEND

- ① EXIST. HMA PAVEMENT 3"
- ② EXIST. STABILIZED BASE COURSE 7"
- ③ EXIST. AGGREGATE SHOULDER
- ④ PROP. HMA SURFACE REMOVAL (VARIABLE DEPTH)
- ⑤ PROP. HMA SURFACE COURSE, SUPERPAVE, MIXTURE C, N50 (1 1/2")
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- ⑦ PROP. HMA SHOULDER 6"
- ⑧ PROP. AGGREGATE SHOULDER, TYPE B 6"
- ⑨ PROP. STEEL PLATE BEAM GUARDRAIL, TYPE A
- ⑩ PROP. PAINT PAVEMENT MARKING - LINE 5"
- ⑪ PROP. BACKFILL PER SPECIAL PROVISIONS
- ⑫ PROP. PCC PAVEMENT, 8" (STD. 420601)
- ⑬ PROP. PAVEMENT FABRIC 6x6-W1.4xW1.4 (STD. 420701)

REVISIONS	
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ILLINOIS DEPARTMENT OF TRANSPORTATION
PROPOSED TYPICAL SECTIONS
SHEET 2 OF 2
DRAWN BY NJV/MLO
CHECKED BY BKB/SJK
DATE 3/03

EARTH EXCAVATION

LOCATION	EARTH EXCAVATION (CUT) (CU YD)	STRUCTURE EXCAVATION (CUT) (CU YD)	EXCAVATION ADJUSTED FOR SHRINKAGE * (CU YD)	EMBANKMENT (FILL) (CU YD)	EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-) (CU YD)
I-55 FRONTAGE BEHIND ABUTMENTS	96	247.6	72	82	-110
TOTAL	96	247.6	257.7	82	75.7

*AN EARTH SHRINKAGE FACTOR OF 0.25 IS APPLIED

SEEDING, FERTILIZERS AND MULCH

STATION	STATION	OFFSET	SEEDING, CLASS 2A (ACRE)	NITROGEN FERTILIZER NUTRIENT (POUNDS)	PHOSPHOROUS FERTILIZER NUTRIENT (POUNDS)	POTASSIUM FERTILIZER NUTRIENT (POUNDS)	MULCH, METHOD 2 (ACRE)	EROSION CONTROL BLANKET (SQ YD)	TEMPORARY EROSION CONTROL SEEDING (POUNDS)
32+40.00	34+50.00	LT	0.038					185	
34+50.00	35+41.72	LT	0.038					185	
36+91.84	37+50.00	LT	0.021					103	
37+50.00	40+00.00	LT	0.057					277	
32+40.00	35+41.72	RT	0.012					50	
36+91.84	38+59.00	RT	0.008					40	
TOTAL			0.174						
ROUNDED TOTAL			0.20	12	12	12	0.20	850	20

WOVEN WIRE FENCE, 4'

STATION TO	STATION	OFFSET	EACH
35+06.72	35+41.72	RT	35
36+91.84	37+26.84	RT	35
TOTAL			70

WOVEN WIRE FENCE REMOVAL

STATION TO	STATION	OFFSET	EACH
35+06.72	35+30.42	RT	24
36+91.14	37+26.84	RT	24
TOTAL			48

BITUMINOUS MATERIALS (PRIME COAT)

STATION TO	STATION	OFFSET	GALLON
32+40.00	35+41.72	LT&RT	0.56
36+91.84	38+59.00	LT&RT	0.34
TOTAL			0.9

PORTLAND CEMENT CONCRETE PAVEMENT, 8"

STATION TO	STATION	OFFSET	SO YD
35+26.72	35+41.72	LT&RT	37
36+91.84	37+06.84	LT&RT	37
TOTAL			74

BITUMINOUS SURFACE REMOVAL - BUTT JOINT

STATION TO	STATION	SO YD
32+40.00	32+70.00	73.5
38+29.00	38+59.00	73.5
TOTAL		147

PAVEMENT FABRIC

STATION TO	STATION	OFFSET	SO YD
35+27.22	35+41.22	LT&RT	33
36+92.34	37+06.34	LT&RT	33
TOTAL			66

HMA SURFACE REMOVAL (VARIABLE DEPTH)

STATION TO	STATION	OFFSET	SO YD
32+70.00	35+26.72	LT&RT	628
37+06.84	38+29.00	LT&RT	299
TOTAL			927

PAVEMENT REMOVAL

STATION TO	STATION	OFFSET	SO YD
35+26.72	35+41.72	LT&RT	37
36+91.84	37+06.84	LT&RT	37
TOTAL			74

AGGREGATE SHOULDERS, TYPE B, 6"

STATION TO	STATION	OFFSET	SO YD
32+40.00	35+41.72	LT	84.0
36+91.84	38+59.00	LT	46.5
32+40.00	35+41.72	RT	84.0
36+91.84	38+59.00	RT	46.5
TOTAL			261

HMA SHOULDERS, 6"

STATION TO	STATION	OFFSET	SO YD
32+40.00	35+41.72	LT	100.5
36+91.84	38+59.00	LT	56
32+40.00	35+41.72	RT	100.5
36+91.84	38+59.00	RT	56
TOTAL			313

STEEL PLATE BEAM GUARDRAIL, TYPE A

STATION TO	STATION	OFFSET	FOOT
34+25.20	35+12.70	LT	87.5
33+09.06	35+09.06	RT	200.0
37+24.65	39+24.65	LT	200.0
37+20.18	38+07.68	RT	87.5
TOTAL			575.0

TRAFFIC BARRIER TERMINAL, TYPE 6 A

STATION TO	STATION	OFFSET	EACH
35+12.70	35+43.35	LT	1
35+09.06	35+39.71	RT	1
36+94.00	37+24.65	LT	1
36+89.53	37+20.18	RT	1
TOTAL			4

TRAFFIC BARRIER TERMINAL, TYPE 1, SPECIAL (TANGENT)

STATION TO	STATION	OFFSET	EACH
33+75.20	34+25.20	LT	1
32+59.06	33+09.06	RT	1
39+24.65	39+74.65	LT	1
38+07.68	38+57.68	RT	1
TOTAL			4

GUARDRAIL REMOVAL

STATION TO	STATION	OFFSET	FOOT
34+91.00	35+43.00	LT	52
34+88.00	35+40.00	RT	52
36+94.00	40+16.00	LT	322
36+89.00	37+97.00	RT	108
TOTAL			534

SHORT TERM PAVEMENT MARKING

STATION TO	STATION	OFFSET	FOOT
32+40.00	38+59.00	CENTERLINE	62

TEMPORARY PAVEMENT MARKING - LINE 5"

STATION TO	STATION	OFFSET	FOOT
32+40.00	38+59.00	LT	619
32+40.00	38+59.00	RT	619
32+40.00	38+59.00	CENTERLINE	150
TOTAL			1388

WORK ZONE PAVEMENT MARKING REMOVAL

STATION TO	STATION	OFFSET	SO FT
32+40.00	38+59.00	CENTERLINE	21

PAINT PAVEMENT MARKING - LINE 5"

STATION TO	STATION	OFFSET	FOOT
32+40.00	38+59.00	LT	619
32+40.00	38+59.00	RT	619
32+40.00	38+59.00	CENTERLINE	155
TOTAL			1393

GUARDRAIL MARKER

STATION TO	STATION	OFFSET	EACH
34+25.20	35+43.35	LT	2
36+94.00	39+24.65	LT	3
33+09.06	35+39.71	RT	3
36+89.53	38+07.68	RT	2
TOTAL			10

TERMINAL MARKER - DIRECT APPLIED

STATION	OFFSET	EACH
33+75.20	LT	1
32+59.06	RT	1
39+74.65	LT	1
38+57.68	RT	1
TOTAL		4

HMA SURFACE COURSE, SUPERPAVE, MIX C, N50

STATION TO	STATION	OFFSET	TON
32+40.00	35+41.72	LT&RT	62
36+91.84	38+59.00	LT&RT	35
TOTAL			97

HMA BINDER COURSE, SUPERPAVE, IL-19.0, N50

STATION TO	STATION	OFFSET	TON
32+40.00	35+41.72	LT&RT	58.5
36+91.84	38+59.00	LT&RT	21.5
TOTAL			80

REVISIONS	
NAME	DATE

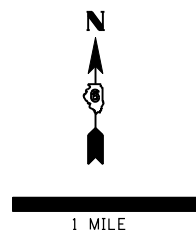
ILLINOIS DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES

DRAWN BY MLO

CHECKED BY CWG

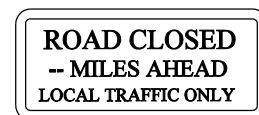
DATE 2/03



ROAD CLOSURE PLAN

MAINTENANCE OF TRAFFIC GENERAL NOTES

- 1.) ALL SIGNING SHALL BE IN ACCORDANCE WITH THE APPLICABLE PROVISIONS OF THE STATE OF ILLINOIS "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" ADOPTED JANUARY 1, 2007, THE DETAILS IN THESE PLANS AND THE LATEST EDITION OF THE STATE OF ILLINOIS "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES".
- 2.) ALL MAINTENANCE OF TRAFFIC SIGNS SHALL BE PROVIDED, PLACED AND MAINTAINED BY THE CONTRACTOR.
- 3.) THE CONTRACTOR SHALL PROCEED WITH THE WORK IN AN EXPEDIENT MANNER TO REDUCE THE TIME THAT THE CLOSURE IS IN EFFECT.
- 4.) THE ENGINEER SHALL BE NOTIFIED IN WRITING AT LEAST TWO WEEKS PRIOR TO THE DAY THAT THE ROAD IS TO BE CLOSED. THE ENGINEER WILL CONTACT THE BUREAU OF OPERATIONS.
- 5.) THE CONTRACTOR SHALL SUPPLY TO THE ENGINEER THE NAMES AND PHONE NUMBERS OF HIS REPRESENTATIVES ON THE CONSTRUCTION SITE AND HIS REPRESENTATIVE RESPONSIBLE FOR SIGNING AND MAINTENANCE PRIOR TO THE START OF WORK.
- 6.) LONGITUDINAL DIMENSIONS SHOWN ON THESE PLANS MAY BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.
- 7.) THE ROAD SHALL NOT BE CLOSED UNTIL ALL SIGNING IS ERECTED IN ACCORDANCE WITH TRAFFIC STANDARD BLR-21/BLR-22, THE ROAD CLOSURE PLAN, AND AS APPROVED BY THE ENGINEER.
- 8.) ALL EXISTING SIGNING THAT IS NOT APPLICABLE WHILE THE ROAD CLOSURE IS IN EFFECT SHALL BE COMPLETELY COVERED BY THE CONTRACTOR. COSTS FOR COVERING EXISTING SIGNS SHALL BE CONSIDERED INCLUDED IN THE COST OF THE TRAFFIC CONTROL.
- 9.) ALL ROAD CLOSURE SIGNS SHALL BE POST MOUNTED (4" X 4" WOODEN POSTS), AS SPECIFIED IN THE SPECIAL PROVISIONS.
- 10.) ALL ROAD CLOSURE SIGNING EXCEPT REGULATORY SIGNS SHALL HAVE BLACK LEGENDS ON FLUORESCENT ORANGE BACKGROUNDS AND STANDARD BLACK BORDERS. ALL ROAD CLOSURE SIGNS SHALL BE NEW OR LIKE NEW CONDITION. ALL FLUORESCENT ORANGE SIGNS SHALL BE 48" X 48" IN SIZE.
- 11.) THE SIZE OF ALL SIGNS NOT SPECIFIED IN THESE PLANS SHALL BE AS REQUIRED BY THE "ILLINOIS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", AND APPLICABLE TRAFFIC STANDARDS.
- 12.) AS A MINIMUM, ALL AMBER FLASHING LIGHTS THAT ARE REQUIRED FOR THE CLOSURE SIGNING SHALL MEET THE REQUIREMENTS FOR TYPE A- LOW INTENSITY FLASHING LIGHTS PER ARTICLE 1084.01 OF THE STANDARD SPECIFICATIONS. ALL LIGHTS SHALL OPERATE DURING HOURS OF DARKNESS. ONLY LIGHTS THAT HAVE BEEN APPROVED BY THE ILLINOIS DEPARTMENT OF TRANSPORTATION SHALL BE USED.
- 13.) THE TYPE III BARRICADES USED AT POINTS OF CLOSURE TO THRU TRAFFIC ONLY SHALL NOT EXCEED 8 FEET IN WIDTH FOR A SINGLE APPROACH LANE. ALL BARRICADES AT THESE LOCATIONS SHALL HAVE REFLECTORIZED STRIPING ON BOTH SIDES OF THE BARRICADE.
- 14.) THE "ROAD CLOSED" SIGN ON A TYPE III BARRICADE SHALL BE MOUNTED ACCORDING TO STANDARD 702001. ALL TYPE III BARRICADES SHALL HAVE TWO AMBER TYPE A - LOW INTENSITY FLASHING LIGHTS.
- 15.) CONSTRUCTION EQUIPMENT SHALL NOT BE PARKED IMMEDIATELY BEHIND THE TYPE III BARRICADES DURING NON-WORKING HOURS. IN ANY EVENT, ARTICLES, 701 THRU 703 OF THE STANDARD SPECIFICATIONS SHALL APPLY.
- 16.) THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL PRIVATE DRIVEWAYS AND FIELD ENTRANCES DURING PERIODS OF CONSTRUCTION.
- 17.) FOR STABILIZATION, ALL TYPE III BARRICADES SHALL REQUIRE A MINIMUM OF FOUR SAND BAGS PER BARRICADE.
- 18.) THIS WORK WILL BE PAID FOR AT THE CONTRACT LUMP SUM PRICE FOR "TRAFFIC CONTROL AND PROTECTION (SPECIAL)" WHICH PRICE SHALL INCLUDE PLACEMENT AND MAINTENANCE OF ALL TRAFFIC CONTROL ITEMS AS SHOWN IN THESE PLANS AND NO ADDITIONAL COMPENSATION SHALL BE ALLOWED.



R11-3
60"X30"

SIGN PANEL No. ①



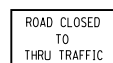
W20-3(0)-48
POST MOUNTED
W/LIGHT

SIGN PANEL No. ②



W20-3(0)-48
POST MOUNTED
W/LIGHT

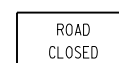
SIGN PANEL No. ③



R11-4

SIGN PANEL No. ④

WITH TYPE III STAGGERED
BARRICADES (PER STANDARD
702001 FOR "ROAD CLOSED
TO THRU TRAFFIC")



R11-2

SIGN PANEL No. ⑤

WITH TYPE III STAGGERED
BARRICADES (PER STANDARD
702001 FOR "ROAD CLOSED
TO ALL TRAFFIC")

LEGEND

- TYPE III BARRICADE W/FLASHING LIGHTS
- POST MOUNTED SIGNS WITH PANEL DESIGNATION

REVISIONS	
NAME	DATE

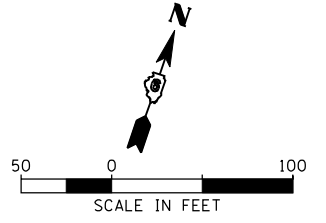
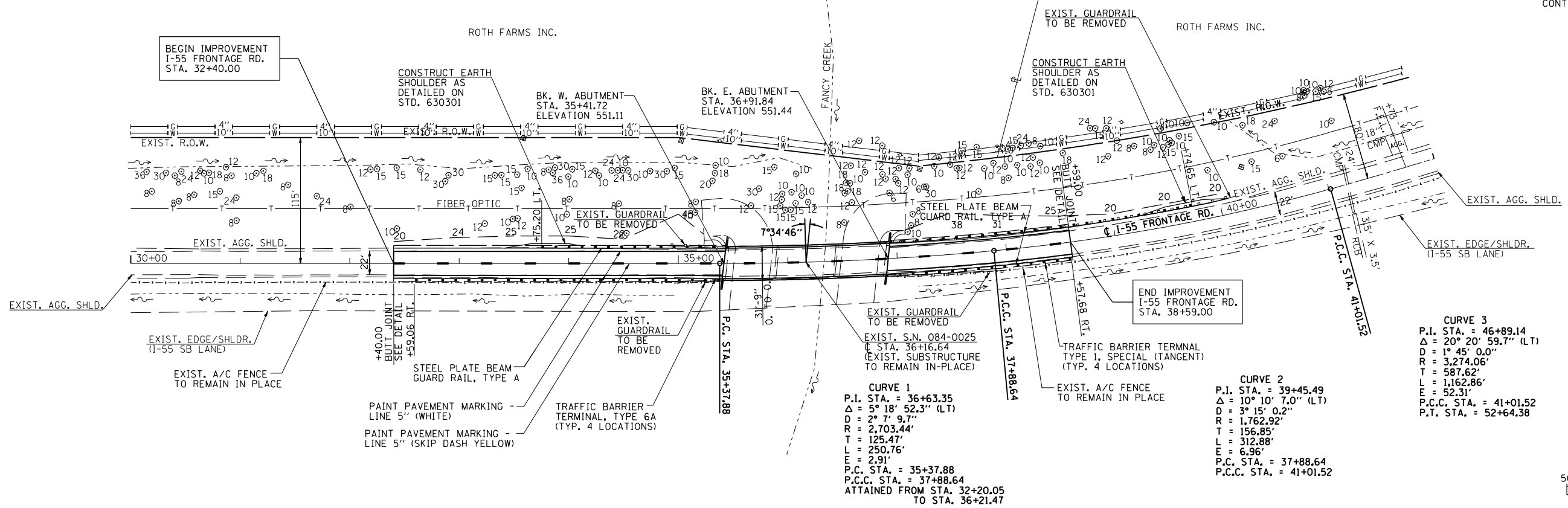
ILLINOIS DEPARTMENT OF TRANSPORTATION
**MAINTENANCE OF TRAFFIC
ROAD CLOSURE PLAN**

DATE 3/03
DRAWN BY BKB
CHECKED BY RMD

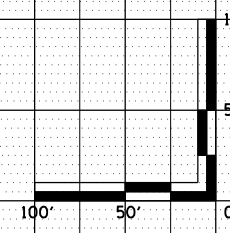
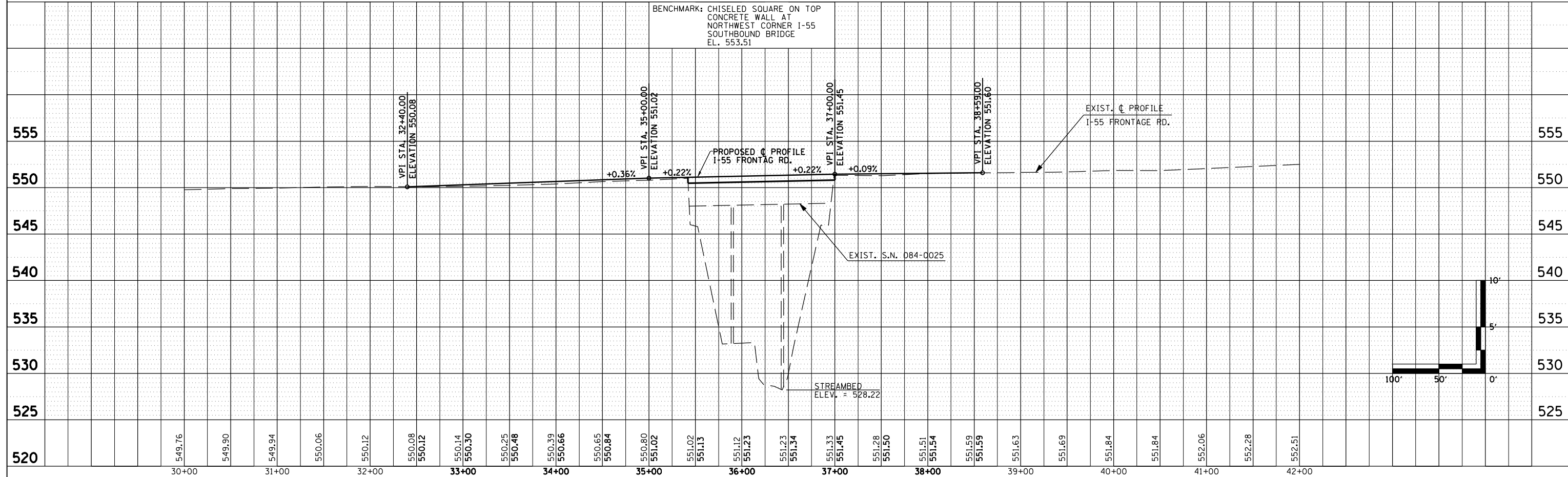
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(84-2B-1)-1	SANGAMON	31	9
STA. 30+00		TO STA. 42+00		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
CONTRACT NO. 72349				

PLAN	DATE
SURVEYED	
PLOTTED	
CHECKED	
BY	
NO. _____	

PROFILE	DATE
SURVEYED	
PLOTTED	
CHECKED	
BY	
NO. _____	



BENCHMARK: CHISELED SQUARE ON TOP
CONCRETE WALL AT
NORTHWEST CORNER I-55
SOUTHBOUND BRIDGE
EL. 553.51



Bench Mark: Top of ROW marker SW corner of intersection with Knollwood Road. Elev. 573.01.

Existing Structure: S.N. 084-0025 built 1959 as F.A.I. Route 55 (Service Road), Section 84-2B-1 at Station 291+20.00. Structure consists of 3 span continuous steel WF beams with reinforced concrete deck supported by spill thru abutments and hammerhead piers. 150'-0 1/4" back-to-back abutments. 30'-8" out-to-out deck. Concrete deck to be removed and replaced. Road to be closed and traffic detoured during construction.

No salvage

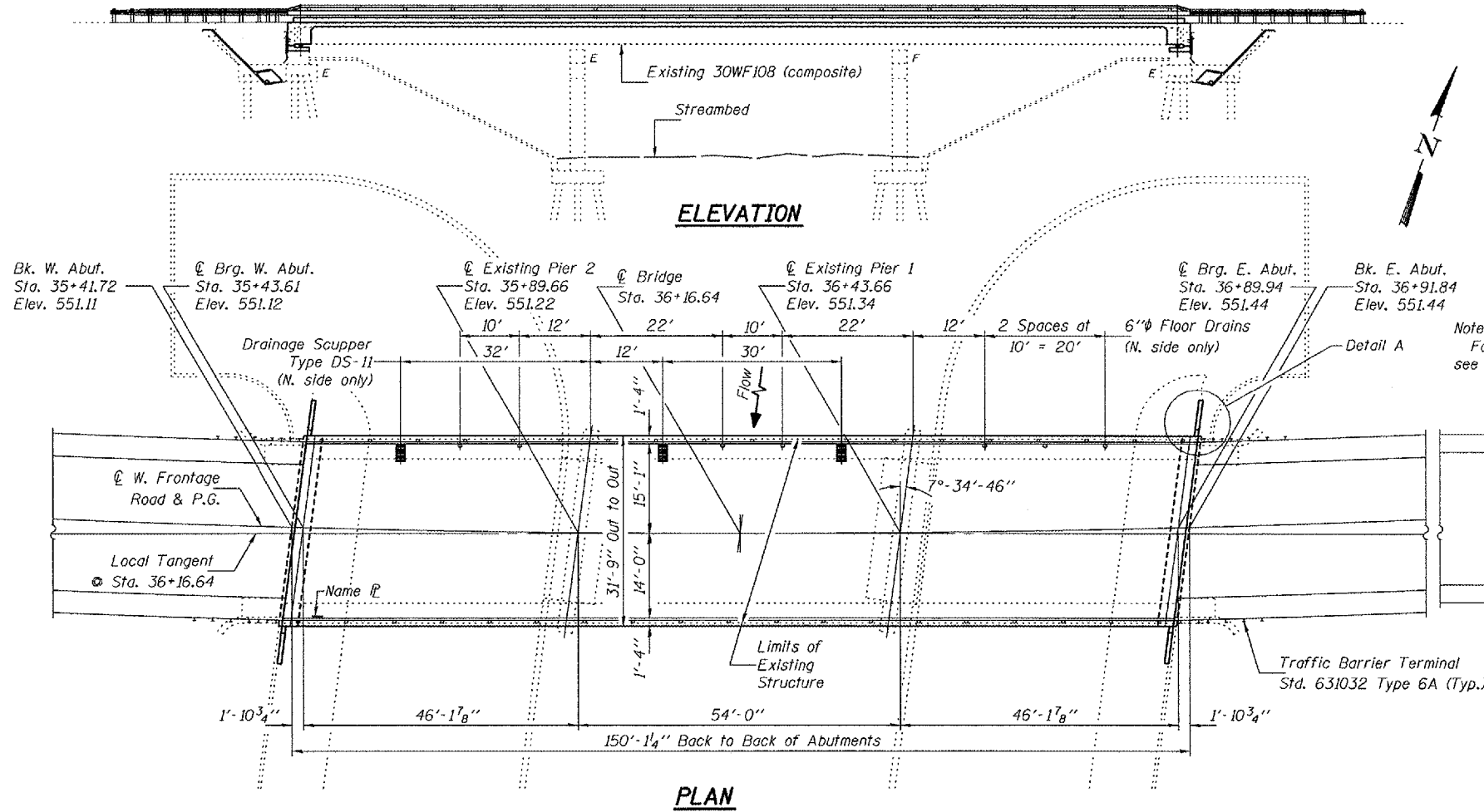
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEETS	SHEET	SHEET NO.
F.A.I. 55	84-2B-1	SANGAMON	31	10	14 SHEETS
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT		

Contract #72349

INDEX OF SHEETS

1. General Plan
2. General Data
- 3.-4. Top of Slab Elevations
5. Superstructure
6. Superstructure Details
7. Diaphragm Details
8. Drainage Scupper, DS-II
9. Steel Railing, Type 2399
10. Structural Steel
11. Elastomeric Bearing Details
12. Concrete Removal
13. West Abutment
14. East Abutment

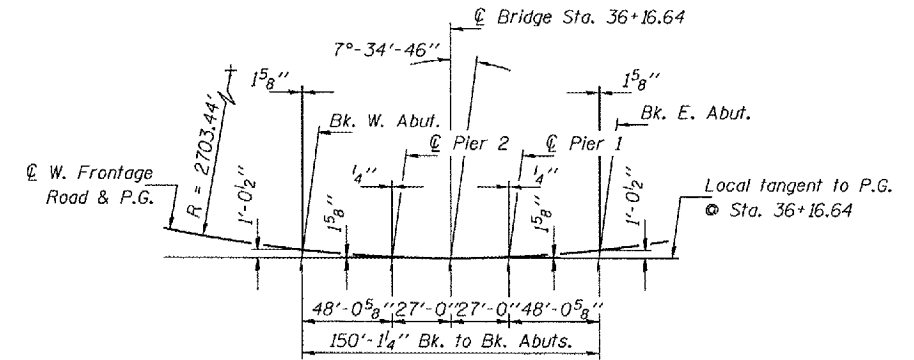


Note:
For Detail A and Section Thru Abutment
see sheet 4 of 14.

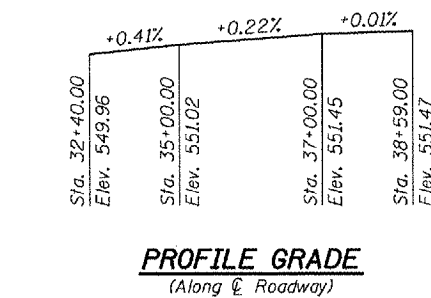
STATION 36+16.64
REBUILT 20 BY
STATE OF ILLINOIS
F.A.I. ROUTE 55 - SECTION (84-2B-1) I-1
LOADING HS20
STRUCTURE NO. 084-0025

NAME PLATE

See Std. 515001
Existing Name Plate shall be cleaned and
relocated next to new Name Plate. Cost
included with Name Plates.



OFFSET SKETCH



PROFILE GRADE
(Along Center Roadway)

DESIGNED: Tom K...
CHECKED: W.D. Collins
DRAWN: John F. Schneller Jr.
EXAMINED: [Signature]
PASSED: [Signature]
March 5, 2008



CURVE DATA

(Center of West Frontage Road)
P.I. Sta. = 36+63.35
Δ = 5°-18'-52.3"
D = 2°-7'-9.7"
R = 2,703.44'
T = 125.47'
L = 250.76'
E = 2.91'
P.C. Sta. = 35+37.88
P.C.C. Sta. = 37+88.64
S.E. = 2.5%
Attained from Sta. 32+20.25
to Sta. 36+21.47

LOADING HS20-44

Allow 25 psf for future wearing surface.

DESIGN SPECIFICATIONS

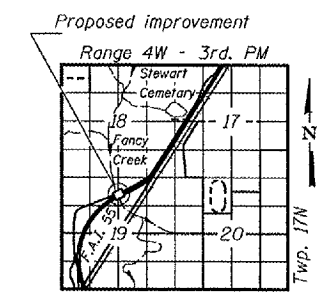
2002 AASHTO

DESIGN STRESSES

FIELD UNITS (New Const.)
f'c = 3,500 psi
fy = 60,000 psi (reinforcement)
FIELD UNITS (Existing Const.)
fs = 18,000 psi (steel)
fs = 20,000 psi (rebar)
fc = 1,400 psi (concrete)

SEISMIC DATA

Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 4.8%g
Site Coefficient (S) = 1.2



LOCATION SKETCH

GENERAL PLAN
WEST FRONTAGE ROAD OVER
FANCY CREEK
F.A.I. ROUTE 55 - SEC. (84-2B-1) I-1
SANGAMON COUNTY
STATION 36+16.64
STRUCTURE NO. 084-0025

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 2
F.A.I. 55	(84-2B-1)I-1	SANGAMON	31	11	14 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

Contract #72349

GENERAL NOTES

No field welding is permitted except as specified in the contract documents. Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60 (IL Modified). See Special Provisions

Plan dimensions and details relative to existing plans are subject to routine variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished based upon the unit price bid for the work.

Bearing seat surfaces shall be constructed or adjusted to their designated elevations within a tolerance of $\frac{1}{8}$ inch (0.01 ft.). Adjustment shall be made either by grinding the surface or by shimming the bearings.

Prior to pouring the new concrete deck, all heavy or loose rust, loose mill scale, and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel and the cost will be included in the pay item covering removal of the existing concrete.

As directed by the Engineer, existing construction accessories welded to the top flange of beams and girders shall be removed. The weld areas shall be ground flush and inspected for cracks using magnetic particle testing (MT) or dye penetrant testing (PT) by an individual acceptable to the Engineer. Any cracks that cannot be removed by grinding $\frac{1}{4}$ inch deep shall be identified and reported to the Bureau of Bridges and Structures for further disposition. The cost of removing welded accessories, grinding and inspecting weld areas and grinding cracks will be paid for according to Article 109.04 of the Standard Specifications.

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

Cleaning and painting of the existing structural steel shall be as specified in the special provision for "Cleaning and Painting Existing Steel Structures". All beams, bearings and other structural steel within 5 ft. (measured along the beam) from face of each abutment and the entire surface of the fascia beams shall be cleaned per Near White Blast Cleaning - SSPC-SP10.

The designated areas cleaned per Near White Blast Cleaning - SSPC-SP10 shall be painted according to the requirements of Paint System 1 - OZ/E/U. The color of the final finish coat for all cleaned steel surfaces shall be Gray, Munsell No. 5B 7/1.

All new structural steel shall be shop painted with an inorganic zinc primer per AASHTO M300, Type I.

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

Reinforcement bars designated (E) shall be epoxy coated.

The SSPC QP1 and QP2 Painting Contractor Certification will not be required for this bridge.

A minimum of 2 air monitors will be required to monitor abrasive blasting operations at this site, see special provision for Containment and Disposal of Lead Paint Cleaning Residues.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Porous Granular Embankment (Special)	Cu. Yd.		206	206
Concrete Removal	Cu. Yd.		22.3	22.3
Removal of Existing Concrete Deck	Each	1		1
Structure Excavation	Cu. Yd.		247.6	247.6
Floor Drains	Each	7		7
Drainage Scuppers, DS-II	Each	3		3
Concrete Structures	Cu. Yd.		16.3	16.3
Concrete Superstructure	Cu. Yd.	152.5		152.5
Bridge Deck Grooving	Sq. Yd.	451		451
Protective Coat	Sq. Yd.	555		555
Elastomeric Bearing Assembly Type I	Each	5		5
Elastomeric Bearing Assembly Type II	Each	5		5
Stud Shear Connectors	Each	1965		1965
Reinforcement Bars, Epoxy Coated	Pound	34830	2730	37560
Steel Railing, Type 2399	Foot	301		301
Name Plates	Each	1		1
Jack and Remove Existing Bearings	Each	10		10
Slopedwall 6 Inch	Sq. Yd.		12.0	12.0
Geocomposite Wall Drain	Sq. Yd.		82.4	82.4
Pipe Underdrain for Structure, 4" ϕ	Foot		154	154
Cleaning and Painting Steel Bridge	L. Sum			1
Containment and Disposal of Lead Paint Cleaning Residues	L. Sum			1
Anchor Bolts, 1"	Each		20	20

DESIGNED Tom L. Kurtenbach
CHECKED Philip E. Coppennoll
DRAWN John F. Schneller Jr.
CHECKED T.L.K. / P.E.C.

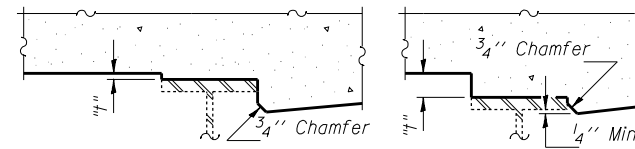
March 5, 2008

EXAMINED *Thomas J. Samagala*
PRINCIPAL ENGINEER OF BRIDGE DESIGN

PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

GENERAL DATA
F.A.I. ROUTE 55 - SEC. (84-2B-1)I-1
SANGAMON COUNTY
STATION 36+16.64
STRUCTURE NO. 084-0025

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



At Minimum Fillet

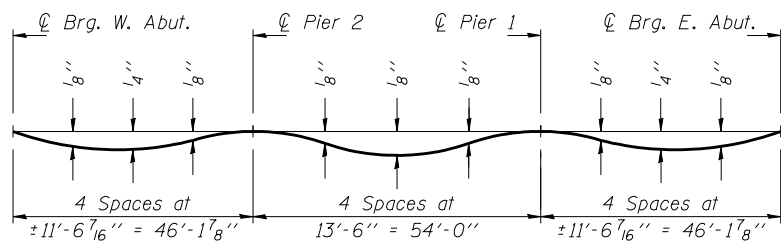
At Maximum Fillet

To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown below and on sheet 4 of 14. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown below and on sheet 4 of 14, minus slab thickness, equals the fillet heights "t" above top flange of beams.

FILLET HEIGHTS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 3 14 SHEETS
F.A.I. 55	(84-2B-1)1-1	SANGAMON	31	12	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

Contract #72349



DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only.)
Notes:
The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown below and on sheet 4 of 14.

BEAM 1

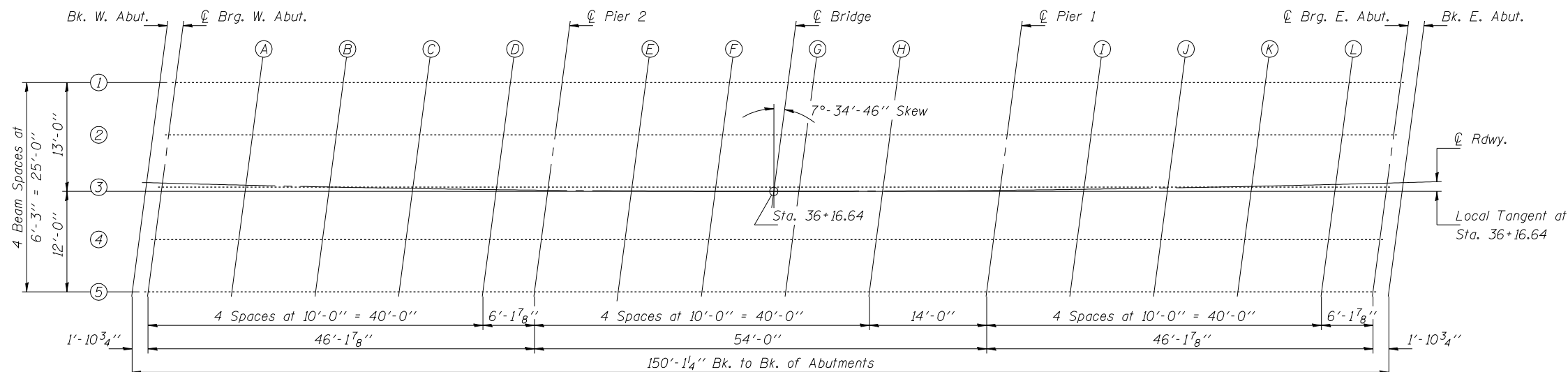
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of West Abut.	35+42.98	-12.00	550.91	550.91
CL Brg West Abut.	35+44.89	-12.05	550.91	550.91
A	35+54.93	-12.30	550.92	550.93
B	35+64.97	-12.51	550.92	550.94
C	35+75.02	-12.68	550.93	550.94
D	35+85.06	-12.82	550.93	550.94
CL Existing Pier 2	35+91.25	-12.88	550.94	550.94
E	36+01.30	-12.96	550.95	550.95
F	36+11.34	-13.00	550.95	550.97
G	36+21.39	-13.00	550.96	550.98
H	36+31.44	-12.96	550.99	550.99
CL Existing Pier 1	36+45.51	-12.85	551.02	551.02
I	36+55.55	-12.72	551.04	551.05
J	36+65.60	-12.56	551.07	551.09
K	36+75.64	-12.36	551.10	551.12
L	36+85.69	-12.12	551.13	551.14
CL Brg East Abut.	36+91.87	-11.96	551.14	551.14
Back of East Abut.	36+93.77	-11.91	551.15	551.15

BEAM 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of West Abut.	35+42.32	-5.73	551.02	551.02
CL Brg West Abut.	35+44.22	-5.78	551.02	551.02
A	35+54.24	-6.03	551.03	551.04
B	35+64.26	-6.24	551.04	551.06
C	35+74.28	-6.42	551.05	551.07
D	35+84.30	-6.56	551.07	551.07
CL Existing Pier 2	35+90.47	-6.62	551.07	551.07
E	36+00.50	-6.70	551.09	551.09
F	36+10.52	-6.74	551.10	551.11
G	36+20.55	-6.75	551.12	551.13
H	36+30.57	-6.71	551.14	551.15
CL Existing Pier 1	36+44.61	-6.61	551.17	551.17
I	36+54.63	-6.48	551.20	551.21
J	36+64.65	-6.33	551.22	551.24
K	36+74.67	-6.13	551.25	551.27
L	36+84.69	-5.90	551.28	551.29
CL Brg East Abut.	36+90.86	-5.73	551.30	551.30
Back of East Abut.	36+92.76	-5.68	551.30	551.30

ROADWAY & P.G.

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of West Abut.	35+41.72	0.00	551.11	551.11
CL Brg West Abut.	35+43.61	0.00	551.12	551.12
A	35+53.61	0.00	551.14	551.15
B	35+63.61	0.00	551.16	551.18
C	35+73.61	0.00	551.18	551.20
D	35+83.61	0.00	551.20	551.21
CL Existing Pier 2	35+89.66	0.00	551.22	551.22
E	35+99.66	0.00	551.24	551.25
F	36+09.66	0.00	551.26	551.27
G	36+19.66	0.00	551.28	551.29
H	36+29.66	0.00	551.31	551.32
CL Existing Pier 1	36+43.66	0.00	551.34	551.34
I	36+53.66	0.00	551.36	551.37
J	36+63.66	0.00	551.38	551.40
K	36+73.66	0.00	551.40	551.42
L	36+83.66	0.00	551.42	551.43
CL Brg East Abut.	36+89.94	0.00	551.44	551.44
Back of East Abut.	36+91.84	0.00	551.44	551.44



PLAN

DESIGNED Tom L. Kurtenbach
CHECKED Philip E. Coppernoll
DRAWN John F. Schneller Jr.
CHECKED T.L.K. / P.E.C.

March 5, 2008
EXAMINED Thomas J. Samagalski
PASSED Ralph E. Anderson

TOP OF SLAB ELEVATIONS
F.A.I. ROUTE 55 - SEC. (84-2B-1)1-1
SANGAMON COUNTY
STATION 36+16.64
STRUCTURE NO. 084-0025

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 4 14 SHEETS
F.A.I. 55	(84-2B-1)1-1	SANGAMON	31	13	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

Contract #72349

BEAM 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of West Abut.	35+41.66	0.54	551.12	551.12
CL Brg West Abut.	35+43.55	0.49	551.12	551.12
A	35+53.55	0.24	551.14	551.16
B	35+63.55	0.02	551.16	551.18
C	35+73.55	-0.16	551.18	551.19
D	35+83.55	-0.30	551.20	551.20
CL Existing Pier 2	35+89.70	-0.37	551.21	551.21
E	35+99.70	-0.45	551.23	551.23
F	36+09.71	-0.49	551.25	551.26
G	36+19.71	-0.50	551.27	551.29
H	36+29.71	-0.47	551.29	551.30
CL Existing Pier 1	36+43.71	-0.36	551.33	551.33
I	36+53.71	-0.25	551.35	551.36
J	36+63.71	-0.09	551.38	551.40
K	36+73.71	0.10	551.41	551.42
L	36+83.71	0.33	551.43	551.44
CL Brg East Abut.	36+89.86	0.49	551.45	551.45
Back of East Abut.	36+91.75	0.54	551.46	551.46

BEAM 4

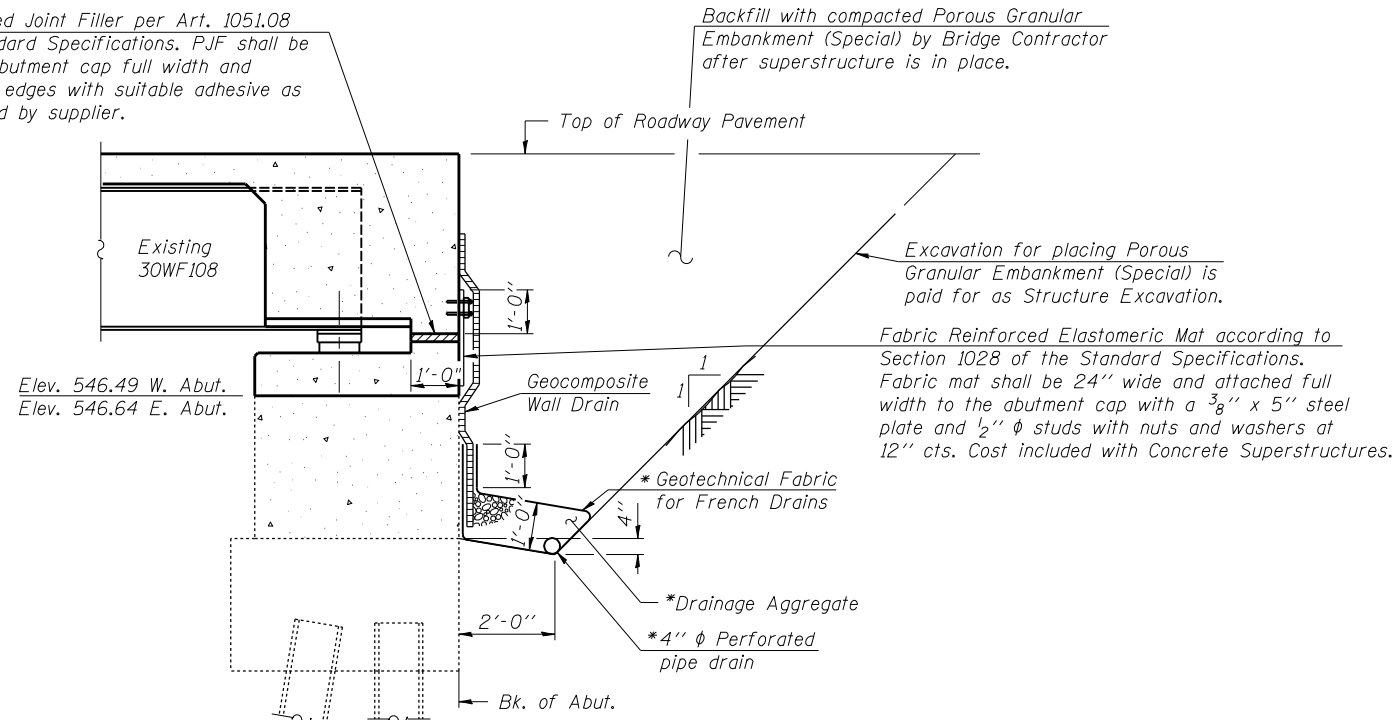
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of West Abut.	35+41.00	6.81	551.23	551.23
CL Brg West Abut.	35+42.89	6.76	551.23	551.23
A	35+52.87	6.50	551.25	551.27
B	35+62.84	6.29	551.28	551.30
C	35+72.82	6.11	551.30	551.32
D	35+82.79	5.96	551.33	551.33
CL Existing Pier 2	35+88.93	5.89	551.34	551.34
E	35+98.91	5.81	551.37	551.37
F	36+08.89	5.76	551.40	551.41
G	36+18.87	5.75	551.42	551.44
H	36+28.85	5.78	551.45	551.46
CL Existing Pier 1	36+42.82	5.88	551.48	551.48
I	36+52.80	5.99	551.51	551.51
J	36+62.77	6.14	551.53	551.55
K	36+72.75	6.33	551.56	551.58
L	36+82.72	6.56	551.59	551.60
CL Brg East Abut.	36+88.86	6.72	551.60	551.60
Back of East Abut.	36+90.75	6.77	551.61	551.61

BEAM 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of West Abut.	35+40.35	13.08	551.33	551.33
CL Brg West Abut.	35+42.24	13.03	551.34	551.34
A	35+52.19	12.77	551.37	551.38
B	35+62.14	12.55	551.40	551.42
C	35+72.09	12.37	551.43	551.44
D	35+82.04	12.22	551.46	551.46
CL Existing Pier 2	35+88.17	12.15	551.48	551.48
E	35+98.13	12.06	551.51	551.51
F	36+08.08	12.01	551.54	551.55
G	36+18.04	12.00	551.58	551.59
H	36+27.99	12.02	551.60	551.61
CL Existing Pier 1	36+41.93	12.12	551.64	551.64
I	36+51.88	12.23	551.66	551.67
J	36+61.84	12.38	551.69	551.70
K	36+71.79	12.57	551.71	551.73
L	36+81.74	12.79	551.74	551.75
CL Brg East Abut.	36+87.87	12.94	551.76	551.76
Back of East Abut.	36+89.75	12.99	551.76	551.76

2" Preformed Joint Filler per Art. 1051.08 of the Standard Specifications. PJF shall be bonded to abutment cap full width and vertically at edges with suitable adhesive as recommended by supplier.

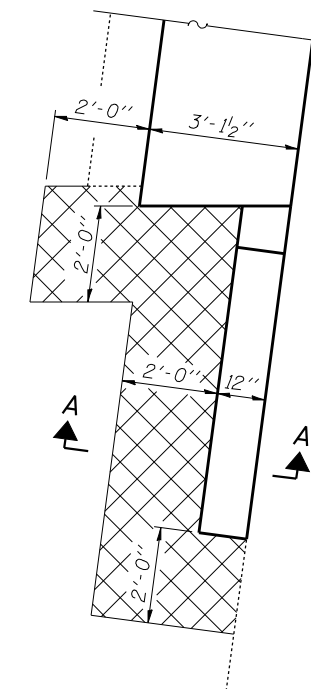
Backfill with compacted Porous Granular Embankment (Special) by Bridge Contractor after superstructure is in place.



SECTION THRU SEMI-INTEGRAL ABUTMENT
(Horiz. dim. @ Rt. L's)

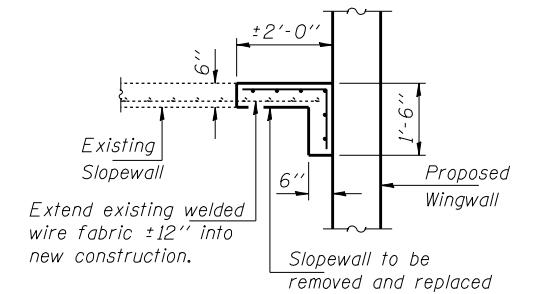
* Included in the cost of Pipe Underdrains for Structures.

Note:
All drainage system components shall extend to 2'-0" from the end of each wingwall except an outlet pipe shall extend until intersecting with the side slopes. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101).



DETAIL A

Indicates removal and replacement of slopewall.



SECTION A-A

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

The removal and replacement of existing slopewall in conjunction with concrete removal and abutment reconstruction shall be paid for as Slopewall 6" (Typical each corner of bridge).

Any additional fill required at the corners of the abutments shall be included with Structure Excavation.

DESIGNED	Tom L. Kurtenbach
CHECKED	Philip E. Coppernoll
DRAWN	John F. Schneller Jr.
CHECKED	T.L.K. / P.E.C.

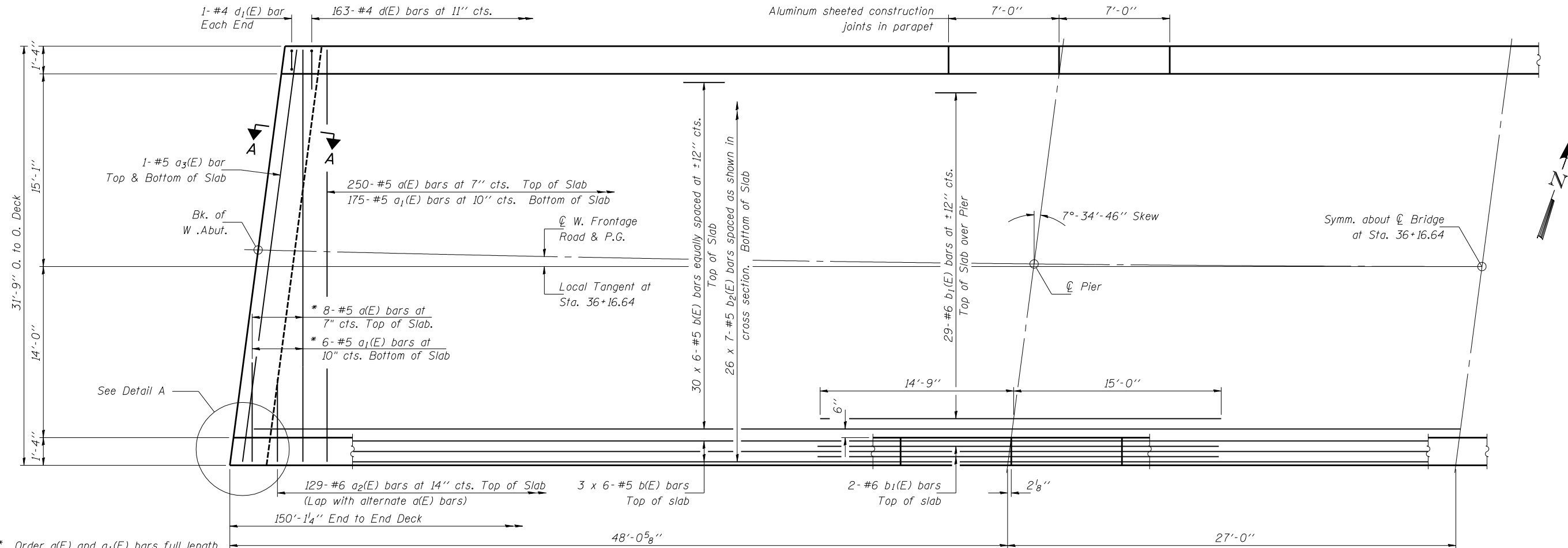
EXAMINED	Thomas J. Samagala	March 5, 2008
PASSED	Ralph E. Anderson	

TOP OF SLAB ELEVATIONS
F.A.I. ROUTE 55 - SEC. (84-2B-1)1-1
SANGAMON COUNTY
STATION 36+16.64
STRUCTURE NO. 084-0025

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

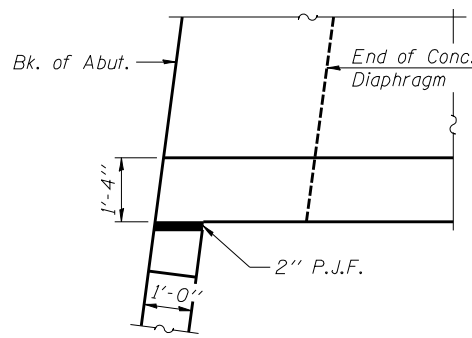
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 5
F.A.I. 55	(84-2B-1)1-1	SANGAMON	31	14	14 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

Contract #72349

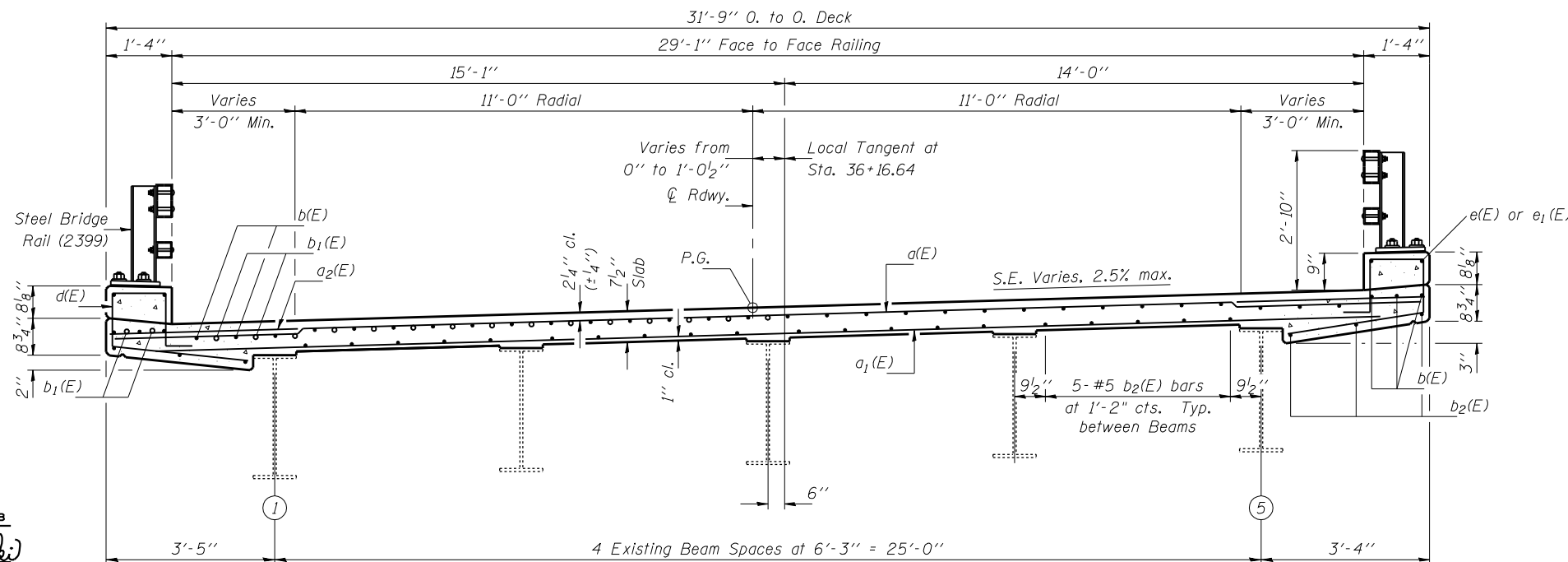


* Order a(E) and a₁(E) bars full length. Cut to fit skew and use remainder of bars in opposite end.

HALF PLAN



DETAIL A



CROSS SECTION
(Looking East)

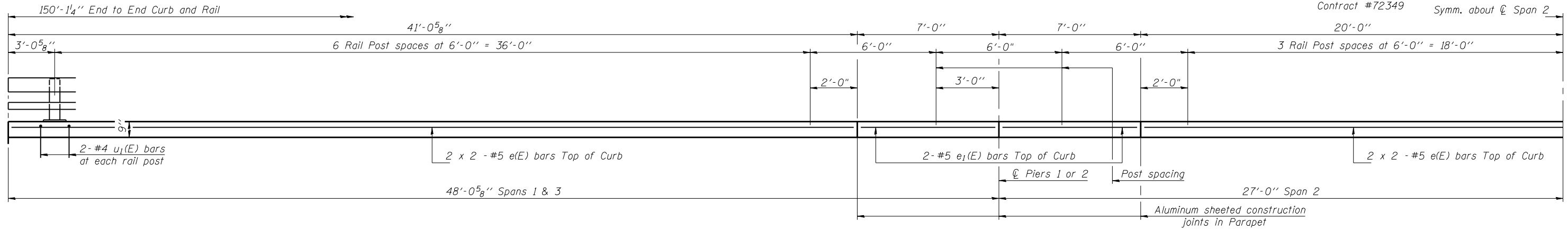
MIN. BAR LAPS
#5 bars = 2'-2"

Notes:
Bars indicated thus 30 x 6- #5 etc. indicates 30 lines of bars with 6 lengths per line.
See Sheet 6 of 14 for parapet reinforcement, Rail Post spacing, superstructure details and Bill of Material.
See Sheet 7 of 14 for Diaphragm Details and Section A-A.
See Sheet 1 of 14 for Floor Drain and Drainage Scupper spacing.

DESIGNED Tom L. Kurtenbach
CHECKED Philip E. Coppernoll
DRAWN John F. Schneller Jr.
CHECKED T.L.K. / P.E.C.

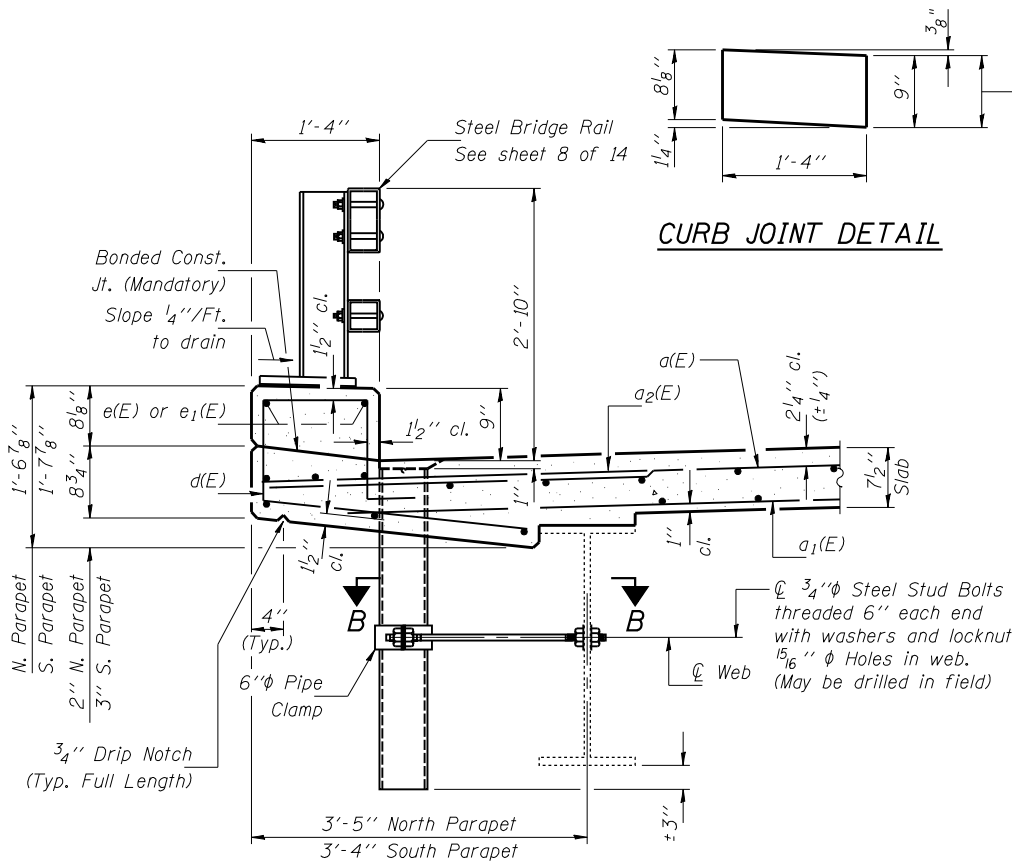
March 5, 2008
EXAMINED Thomas J. Samagalski
PASSED Ralph E. Anderson
ENGINEER OF BRIDGE DESIGN
ENGINEER OF BRIDGES AND STRUCTURES

SUPERSTRUCTURE
F.A.I. ROUTE 55 - SEC. (84-2B-1)1-1
SANGAMON COUNTY
STATION 36+16.64
STRUCTURE NO. 084-0025



MIN. BAR LAP
#5 bars = 1'-8"

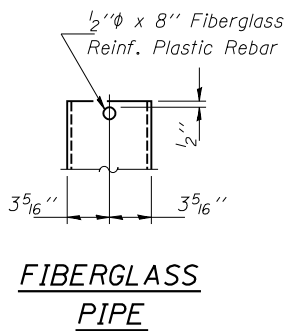
INSIDE ELEVATION OF PARAPET
(Looking North)



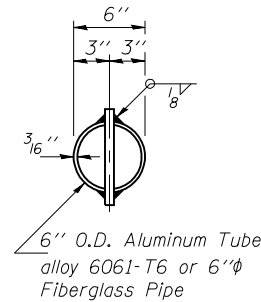
SECTION AT CURB

CURB JOINT DETAIL

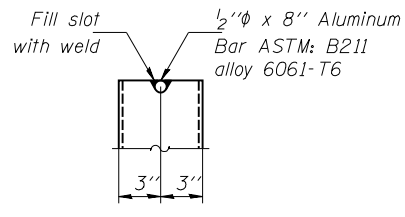
Construction Joints at Piers and locations as shown. 1/8" Aluminum sheet ASTM B 209 alloy 3003-H14. Cost included with Concrete Superstructure



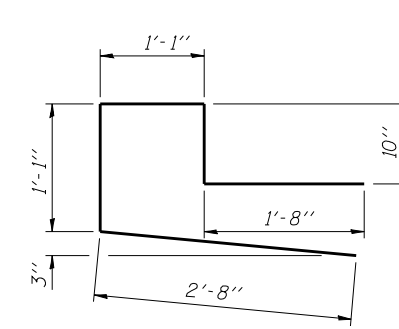
FIBERGLASS PIPE



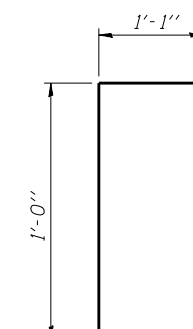
TOP PLAN
(Showing Aluminum Tube)



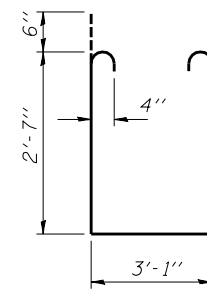
ALUMINUM TUBE



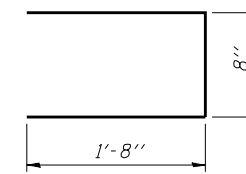
BAR d(E)



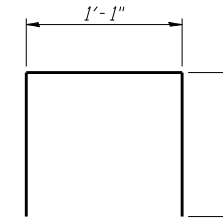
BAR d1(E)



BAR s1(E)



BAR u(E)



BAR u1(E)

SUPERSTRUCTURE
BILL OF MATERIAL

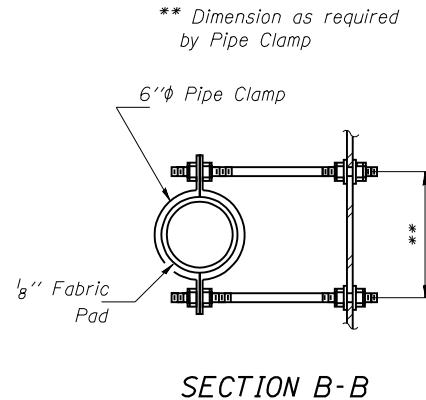
Bar	No.	Size	Length	Shape
a(E)	258	#5	31'-5"	—
a1(E)	181	#5	29'-9"	—
a2(E)	258	#6	6'-0"	—
a3(E)	4	#5	31'-8"	—
a4(E)	24	#5	1'-6"	—
b(E)	216	#5	26'-10"	—
b1(E)	66	#6	29'-9"	—
b2(E)	182	#5	23'-4"	—
d(E)	326	#5	7'-4"	□
d1(E)	4	#5	3'-1"	□
e(E)	24	#5	21'-6"	—
e1(E)	16	#5	6'-9"	—
m(E)	20	#6	8'-6"	—
m1(E)	10	#6	31'-9"	—
m2(E)	4	#6	3'-1"	—
m3(E)	8	#6	6'-0"	—
s1(E)	64	#4	9'-3"	□
u(E)	64	#5	4'-0"	□
u1(E)	100	#4	3'-1"	□
Reinforcement Bars, Epoxy Coated			Lbs.	34830
Concrete Superstructure			Cu. Yd.	152.5

Bars indicated thus 3 x 2-#5 etc. indicates 3 lines of bars with 2 lengths per line.

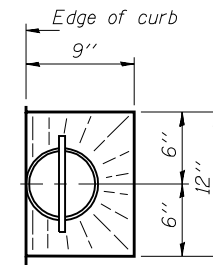
Notes:
Fiberglass pipe shall conform to ASTM D 2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum.
The exterior surfaces of the floor drains shall be painted with the finish coat as specified in the Special Provision for Cleaning and Painting Existing Steel Structures. The exterior surfaces shall be cleaned according to Society of Protective Coatings Spec. SSPC-1 prior to painting.

DESIGNED Tom L. Kurtenbach
CHECKED Philip E. Coppennoll
DRAWN John F. Schneller Jr.
CHECKED T.L.K. / P.E.C.

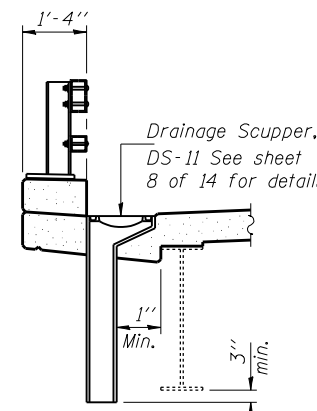
EXAMINED Thomas J. Samagala
PASSED Ralph E. Anderson
March 5, 2008
ENGINEER OF BRIDGE DESIGN
ENGINEER OF BRIDGES AND STRUCTURES



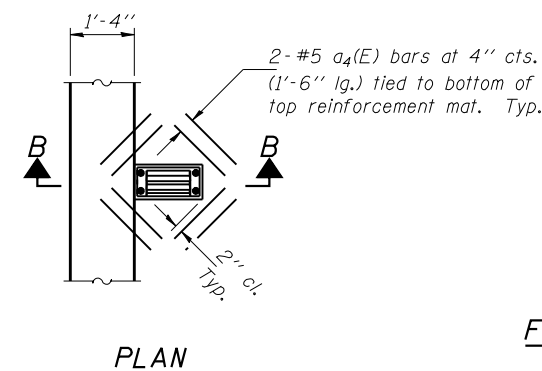
SECTION B-B



TOP PLAN



SECTION B-B



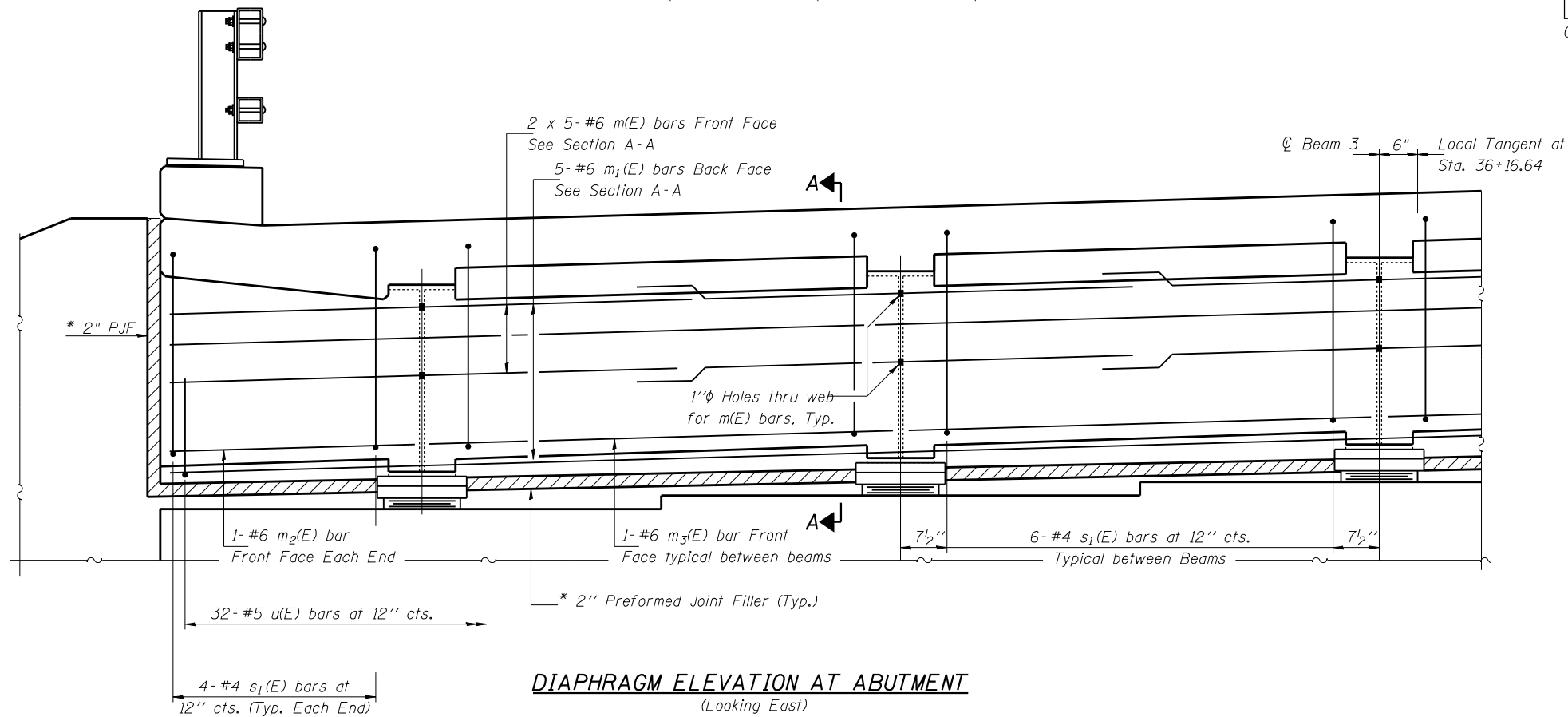
PLAN

SUPERSTRUCTURE DETAILS
F.A.I. ROUTE 55 - SEC. (84-2B-1)I-1
SANGAMON COUNTY
STATION 36+16.64
STRUCTURE NO. 084-0025

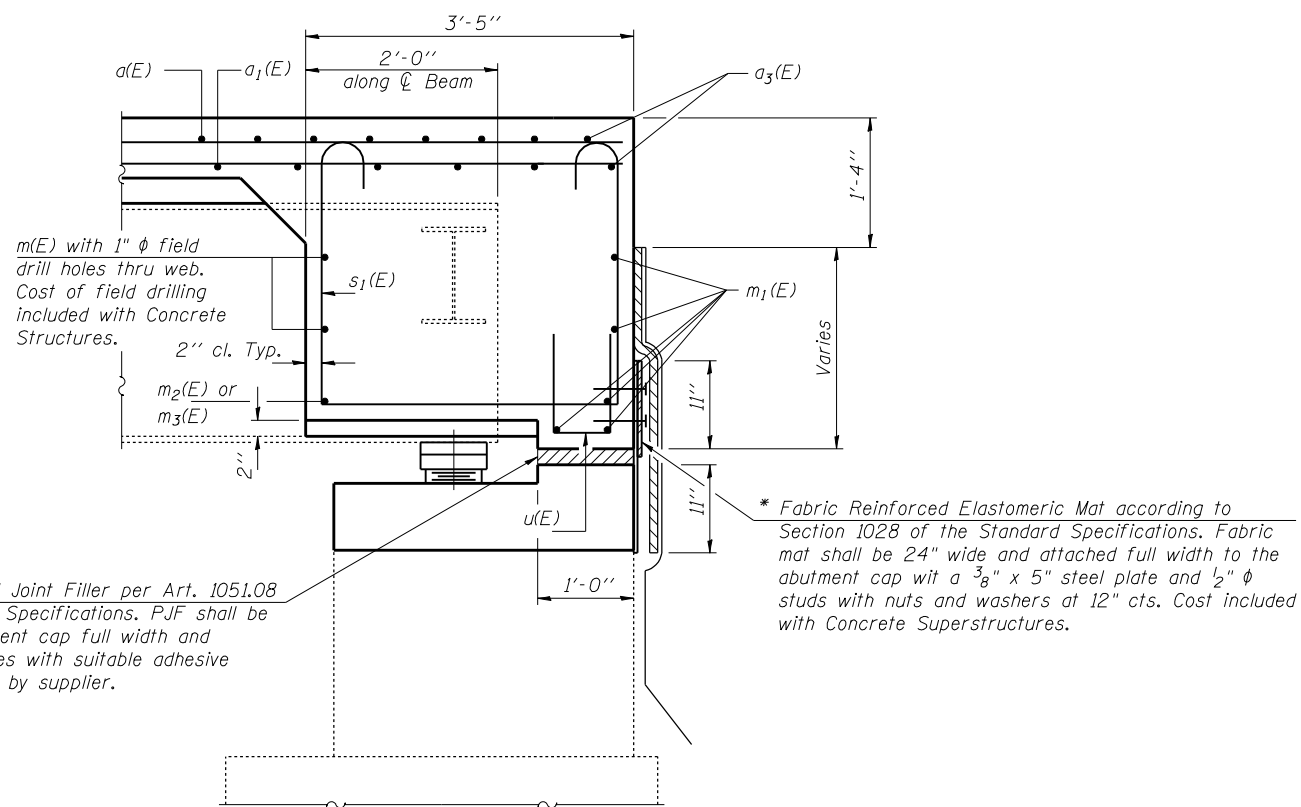
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO.
F.A.I. 55	(84-2B-1)I-1	SANGAMON	31	16	14 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

Contract #72349



DIAPHRAGM ELEVATION AT ABUTMENT
(Looking East)



SECTION A-A

* Cost included with Concrete Superstructure.
(Dimensions are at Rt. L's except as noted)

MIN. BAR LAPS
#6 bars = 2'-9"

Notes:
Reinforcement bars in diaphragm are billed with superstructure on sheet 6 of 14.
For details of bars s1(E) and u(E) see sheet 6 of 14.
The s1(E) bars shall be placed parallel to the beams.
Spacing for these bars shall be at right angles to the beam.
Concrete in diaphragm is included with Concrete Superstructure on sheet 6 of 14.
Bars indicated thus 2 x 5-#6 etc. indicates 2 lines of bars 5 lengths per line.

* 2" Preformed Joint Filler per Art. 1051.08 of the Standard Specifications. P.J.F. shall be bonded to abutment cap full width and vertically at edges with suitable adhesive as recommended by supplier.

* Fabric Reinforced Elastomeric Mat according to Section 1028 of the Standard Specifications. Fabric mat shall be 24" wide and attached full width to the abutment cap with a 3/8" x 5" steel plate and 1/2" φ studs with nuts and washers at 12" cts. Cost included with Concrete Superstructures.

DESIGNED Tom L. Kurtenbach
CHECKED Philip E. Coppernoll
DRAWN John F. Schneller Jr.
CHECKED T.L.K. / P.E.C.

March 5, 2008
EXAMINED Thomas J. Domagalaki
PASSED Ralph E. Anderson
ENGINEER OF BRIDGE DESIGN
ENGINEER OF BRIDGES AND STRUCTURES

DIAPHRAGM DETAILS
F.A.I. ROUTE 55 - SEC. (84-2B-1)I-1
SANGAMON COUNTY
STATION 36+16.64
STRUCTURE NO. 084-0025

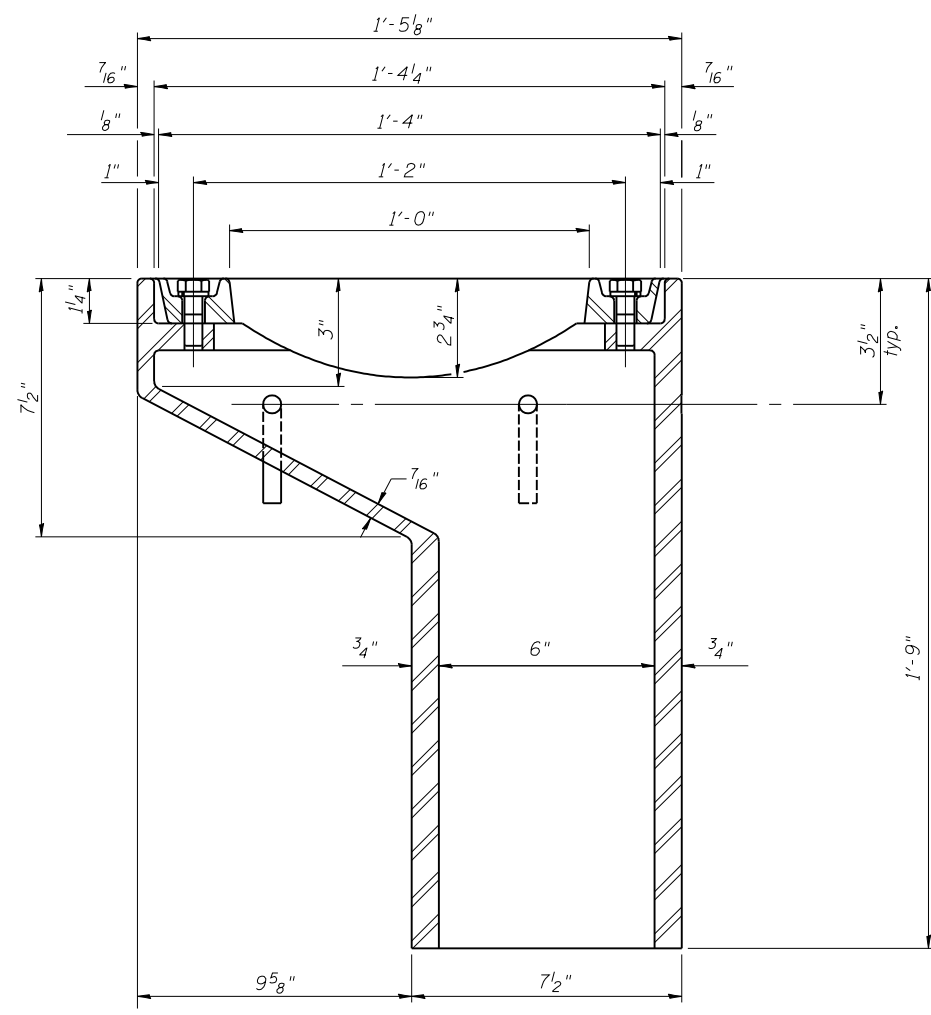
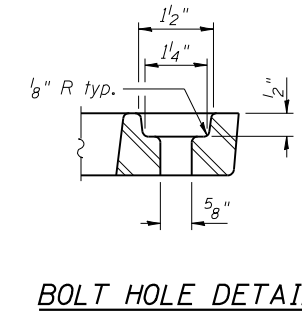
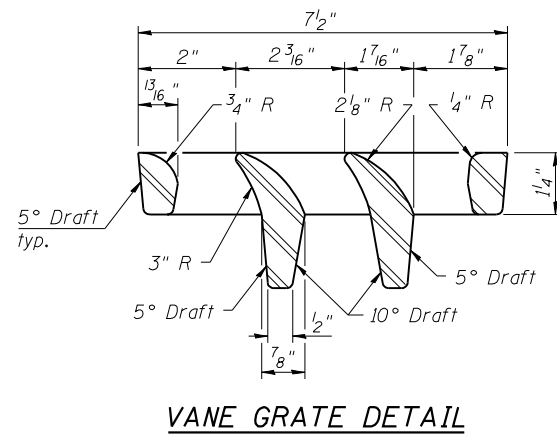
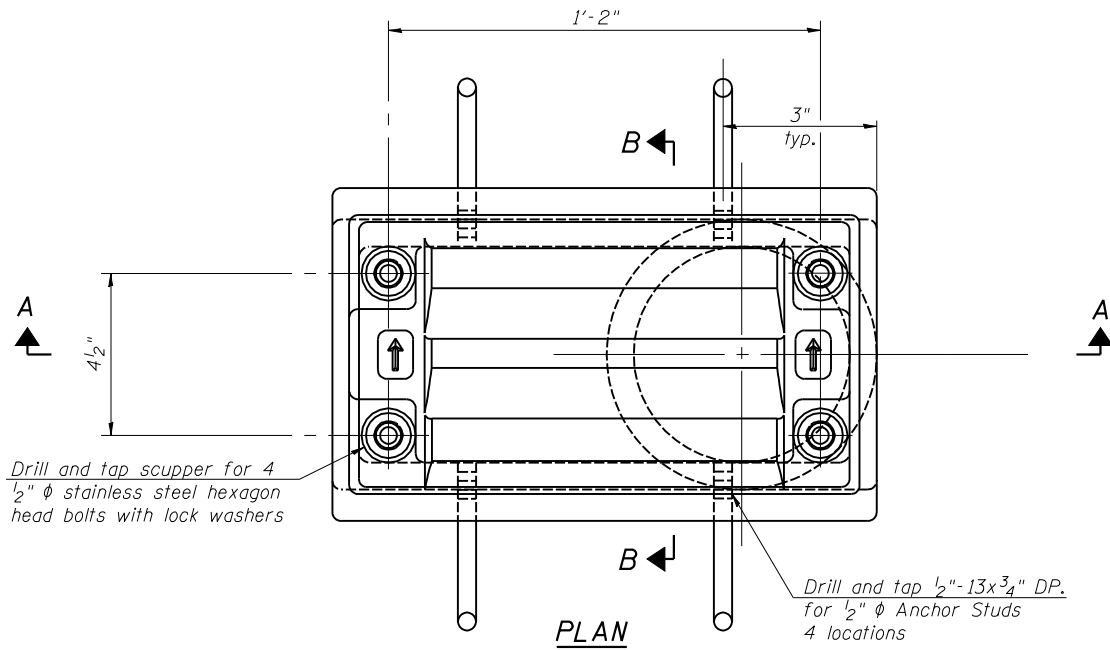
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 8 14 SHEETS
F.A.I. 55	(84-2B-1)1-1	SANGAMON	31	17	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

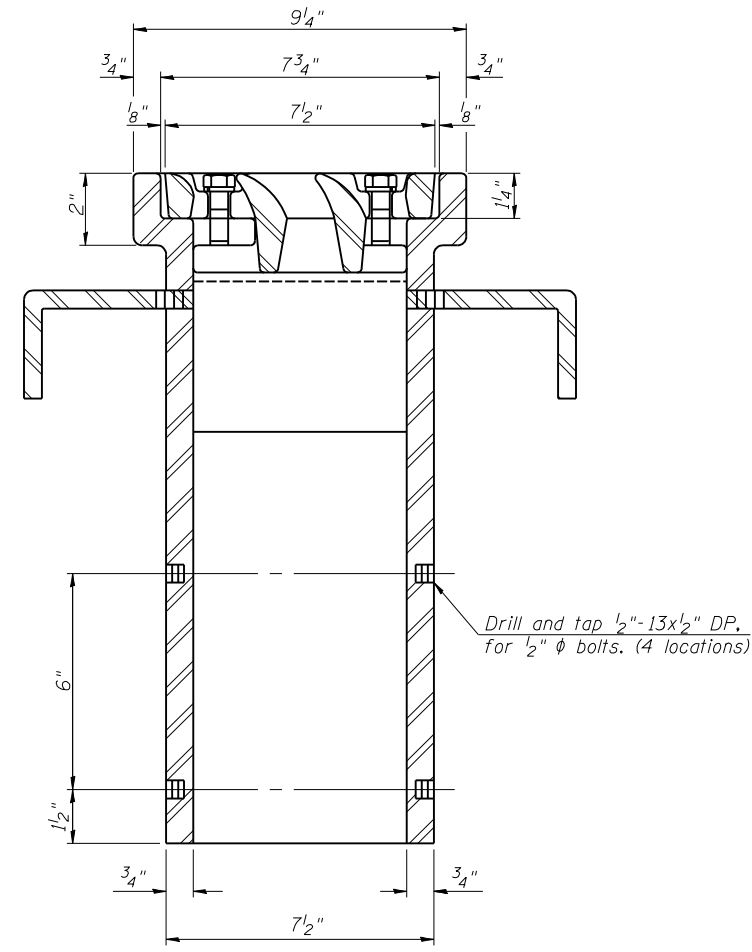
Contract #72349

Notes:

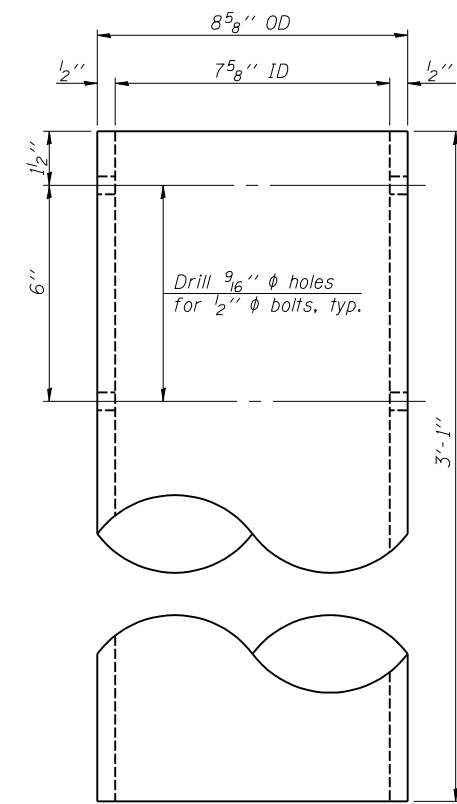
- All cast iron parts shall be gray iron conforming to the requirements of AASHTO M 105, Class 35B.
- Bolts, anchor studs, washers and nuts shall conform to the requirements of ASTM A 307 and shall be galvanized according to AASHTO M 232.
- Downspouts located on the exterior side of a painted steel fascia 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 the cast iron scupper frame. Fillet or full penetration welds shall be used for the weldments. Details shall be submitted to the Engineer for approval. Structural steel weldments shall not be substituted for the cast iron scupper grate. Structural steel frames and downspouts shall be galvanized according to AASHTO M111.
- 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.
- Alternate fiberglass downspout conforming to ASTM D 2996 with a short-time rupture strength hoop tensile stress of 30,000 psi min. may be used in lieu of the cast iron or steel equivalent.



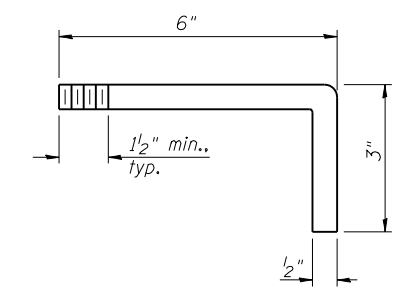
SECTION A-A
See sheet 1 of 14 for scupper location relative to parapet.



SECTION B-B



DOWNSPOUT



ANCHOR STUD DETAIL

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scupper, DS-11	Each	3

DRAINAGE SCUPPER, DS-11
F.A.I. ROUTE 55 - SEC. (84-2B-1)1-1
SANGAMON COUNTY
STATION 36+16.64
STRUCTURE NO. 084-0025

DESIGNED Tom L. Kurtenbach
CHECKED Philip E. Coppennoll
DRAWN John F. Schneller Jr.
CHECKED T.L.K. / P.E.C.

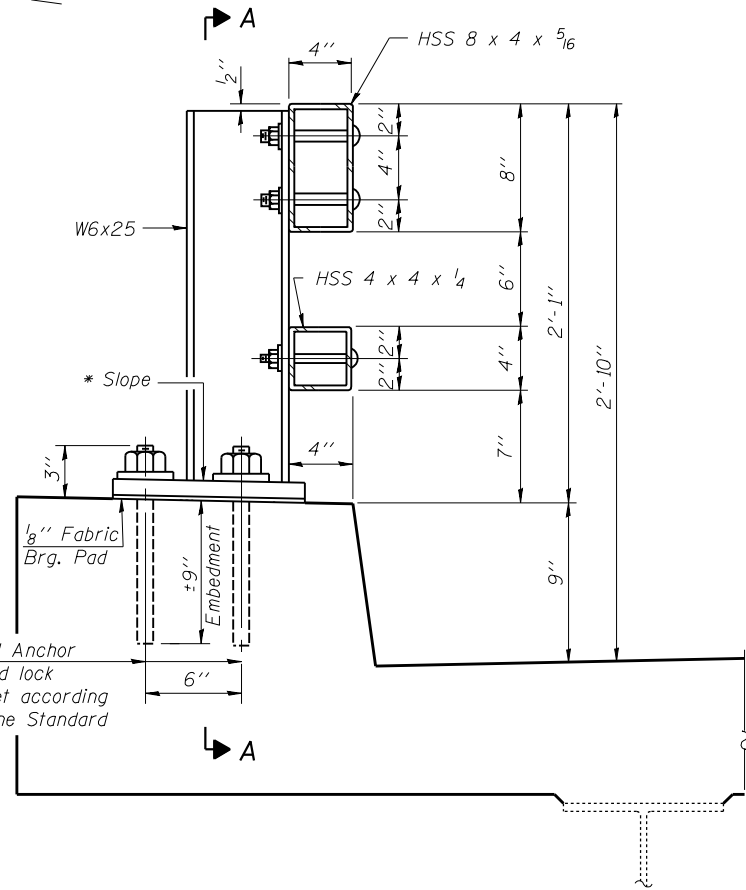
March 5, 2008
EXAMINED Thomas J. Samagalski
PASSED Ralph E. Anderson

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

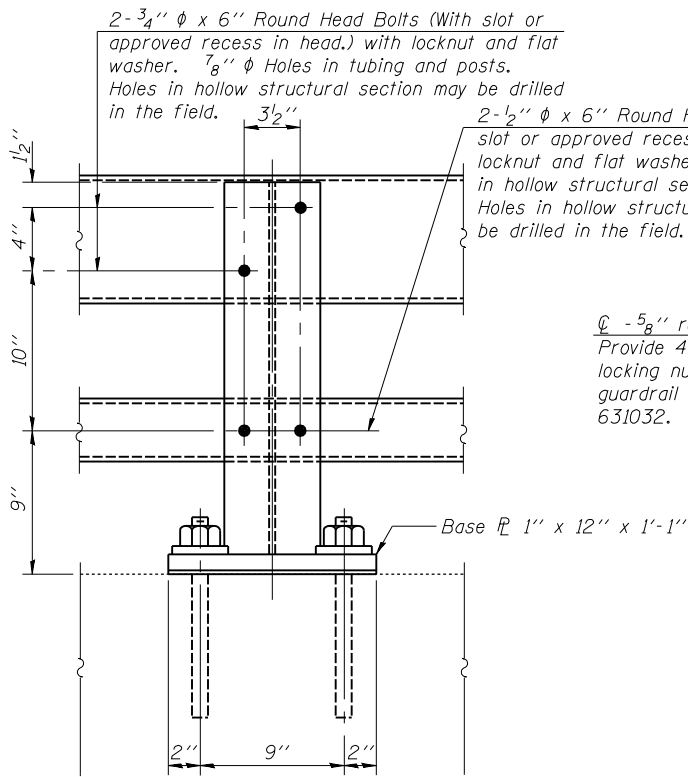
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 9
F.A.I. 55	(84-2B-1)1-1	SANGAMON	31	18	14 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

Contract #72349

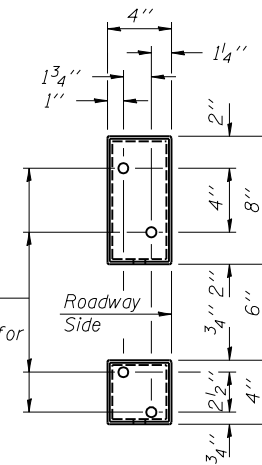
* Cut bottom end of post to curb slope.



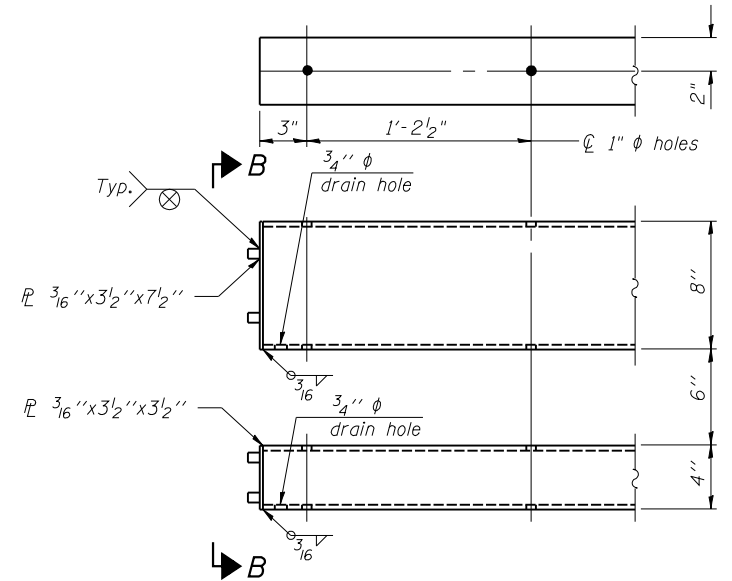
SECTION AT RAIL POST



SECTION A-A



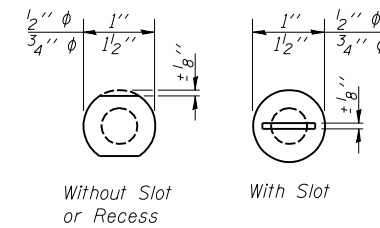
VIEW B-B



END OF RAIL DETAILS

Notes:

- All field drilled holes shall be coated with an approved zinc rich paint before erection.
- Posts shall not be located closer than 1'-3" to an existing bridge expansion joint or end of bridge.
- Steel Bridge Rail expansion joint shall be provided between any two (2) posts which span a bridge expansion joint. Bolts located at expansion joint shall be provided with locknuts and shall be tightened only to a point that will allow railing movement.
- Provide one 1/8" and two 1/16" steel shims for 25% of the posts. Shims shall be similar to base plates in size and holes.
- All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.



VIEW C-C

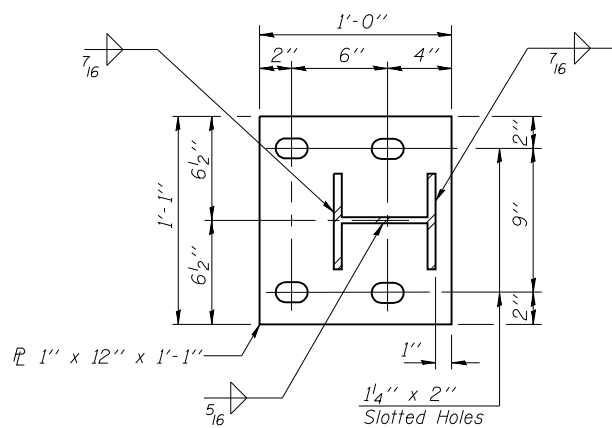
BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type 2399	Foot	301

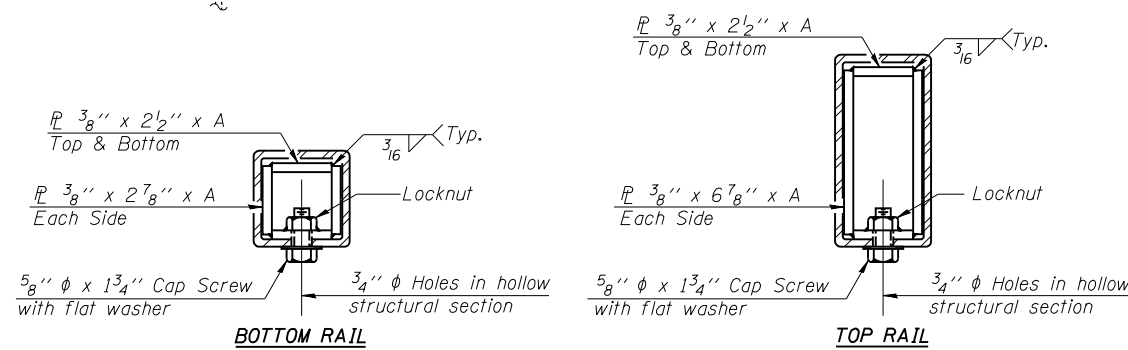
SPLICE DIMENSIONS

T	D	A	B	C	E
≤ 4"	2 1/2"	1'-8"	2"	4"	2 1/2"
> 4" ≤ 6 1/2"	3 3/4"	2'-0"	2 1/2"	5 1/2"	3 1/2"
> 6 1/2" ≤ 9"	5"	2'-4"	3 1/2"	6 1/2"	9"
> 9" ≤ 13"	7"	2'-10"	4 1/2"	8 1/2"	11"
Rail Splice	1/4"	1'-8"	2"	4"	—

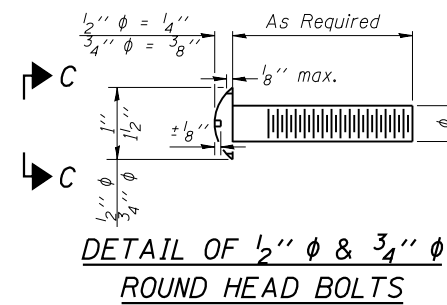
T = Total movement at expansion joint as shown on the design plans.



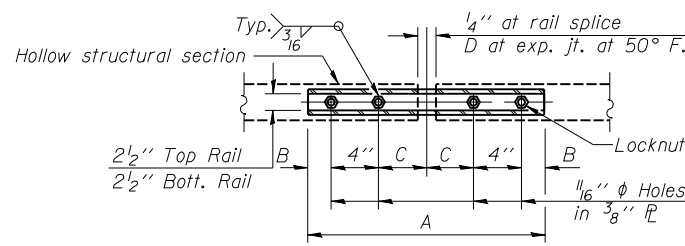
BASE PLATE DETAIL



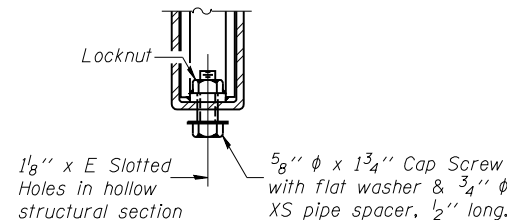
SECTIONS AT RAIL SPLICE



DETAIL OF 1/2" & 3/4" ROUND HEAD BOLTS



PLAN-BOTT. SPLICE TYPICAL



RAIL SPLICE CONNECTION AT EXPANSION JT.

DESIGNED Tom L. Kurtenbach
CHECKED Philip E. Coppernoll
DRAWN John F. Schneller Jr.
CHECKED T.L.K. / P.E.C.

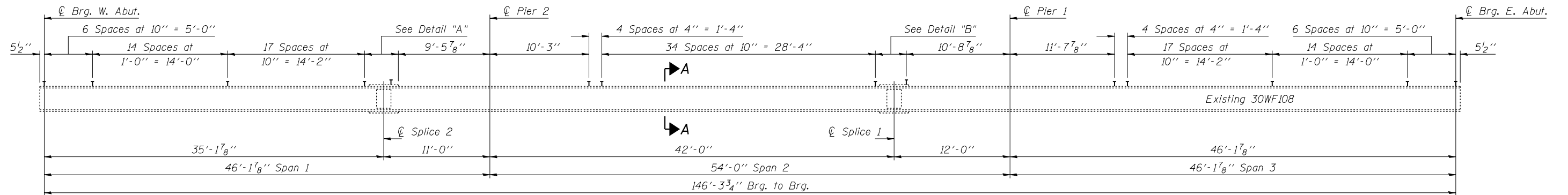
March 5, 2008
EXAMINED Thomas J. Samagala
PASSED Ralph E. Anderson

STEEL RAILING, TYPE 2399
F.A.I. ROUTE 55 - SEC. (84-2B-1)1-1
SANGAMON COUNTY
STATION 36+16.64
STRUCTURE NO. 084-0025

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

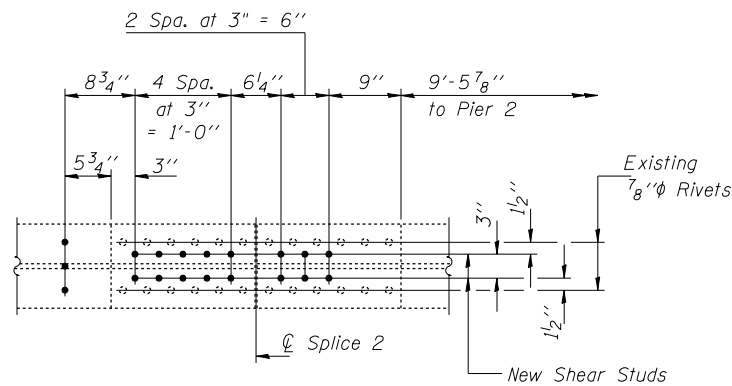
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F.A.I. 55	(84-2B-1)1-1	SANGAMON	31	19	14 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

Contract #72349

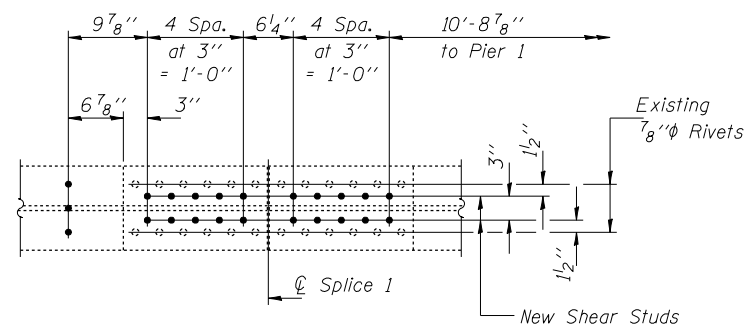


EXISTING BEAM ELEVATION

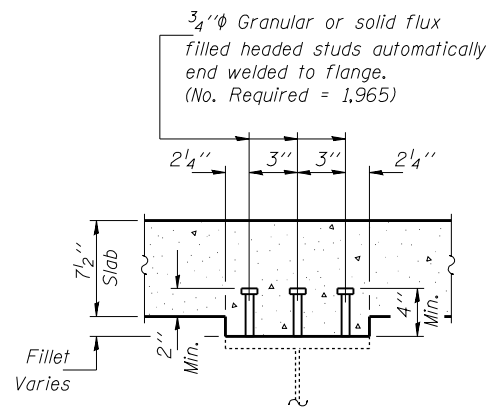
Showing Stud Shear Connector spacing.



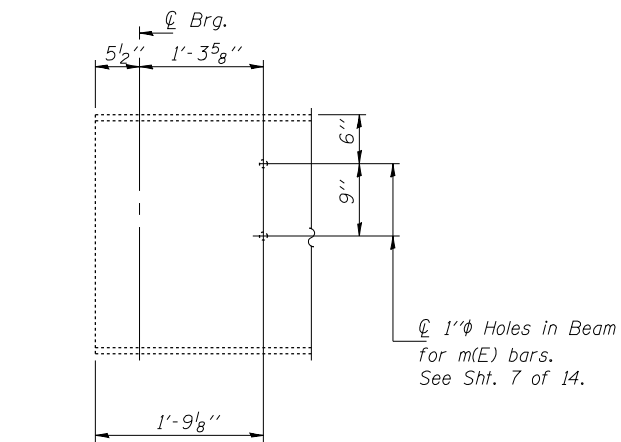
DETAIL "A"



DETAIL "B"



SECTION A-A



END OF BEAM ELEVATION

	0.4 Sp. 1 or 0.6 Sp. 3	Pier	0.5 Sp. 2
I_s (in ⁴)	4,470	4,470	4,470
I_c (n) (in ⁴)	12,476	—	12,476
I_c (3n) (in ⁴)	9,178	—	9,178
S_s (in ³)	299	299	299
S_c (n) (in ³)	452	—	452
S_c (3n) (in ³)	408	—	408
D (K/ft.)	.727	.988	.727
$M\emptyset$ (K)	112.8	233.4	82.2
$s\emptyset$ (K/ft.)	.261	—	.261
$Ms\emptyset$ (K)	46.5	—	44.5
$M\emptyset$ (K)	328.6	157.5	339.7
M (Imp) (K)	87.3	45.0	86.2
$5_3[M\emptyset + M(\text{Imp})]$ (K)	693.2	337.5	709.8
M_a (K)	1,108.3	742.2	1,087.5
M_u (K)	1,189.0	—	1,250.9
$fs\emptyset$ non-comp (k.s.i.)	4.5	9.4	3.3
$fs\emptyset$ (comp) (k.s.i.)	1.4	—	1.3
$fs^{5_3}(L + \text{Imp})$ (k.s.i.)	18.4	13.5	18.8
fs (Overload) (k.s.i.)	24.3	22.9	23.4
fs (Total) (k.s.i.)	—	29.8	—
VR (K)	52.3	—	43.9

* Includes effects of centrifugal force and superelevation.

	Abutments	Piers
$R\emptyset$ (K)	17.7	54.6
$R\emptyset$ (K)	38.2	46.0
Imp. (K)	10.1	12.2
R (Total) (K)	66.0	112.8

I_s and S_s are the moment of inertia and section modulus of the steel section used in computing fs (Total & Overload).
 I_c and S_c are the moment of inertia and section modulus of the composite section used in computing fs (Total & Overload).
 VR is the maximum live Load + Impact shear range in span.
 M_a (Applied Moment) = $1.3[M\emptyset + Ms\emptyset + 5_3(M\emptyset + I)]$.
 M_u is the Full Plastic Moment Capacity for Compact, Braced section.
 fs (Overload) is the sum of the stresses due to $M\emptyset + Ms\emptyset + 5_3(M\emptyset + I)$.
 fs (Total) is the sum of the stresses due to $1.3[M\emptyset + Ms\emptyset + 5_3(M\emptyset + I)]$.
 $M\emptyset$ - Moment due to dead loads on non-composite section.
 $Ms\emptyset$ - Moment due to dead loads on composite section.
 $M\emptyset$ - Moment due to live loads on composite section.
 I - Live load impact.

**** TOP OF BEAM ELEVATIONS**

Loc.	Bm.	Bm. 1	Bm. 2	Bm. 3	Bm. 4	Bm. 5
⊖ Brg. W. Abut.	550.52	550.60	550.68	550.76	550.84	550.84
⊖ Splice 2	550.46	550.58	550.70	550.82	550.95	550.95
⊖ Pier 2	550.46	550.59	550.72	550.85	550.98	550.98
⊖ Splice 1	550.50	550.65	550.80	550.96	551.11	551.11
⊖ Pier 1	550.53	550.69	550.84	551.00	551.15	551.15
⊖ Brg. E. Abut.	550.67	550.83	550.98	551.14	551.29	551.29

** For Information Only.

Note: Top of the beam elevations are given from the existing plans. In order to convert these to the current survey, subtract 0.25 ft. from each elevation.

DESIGNED Tom L. Kurtenbach
 CHECKED Philip E. Coppernoll
 DRAWN John F. Schneller Jr.
 CHECKED T.L.K. / P.E.C.

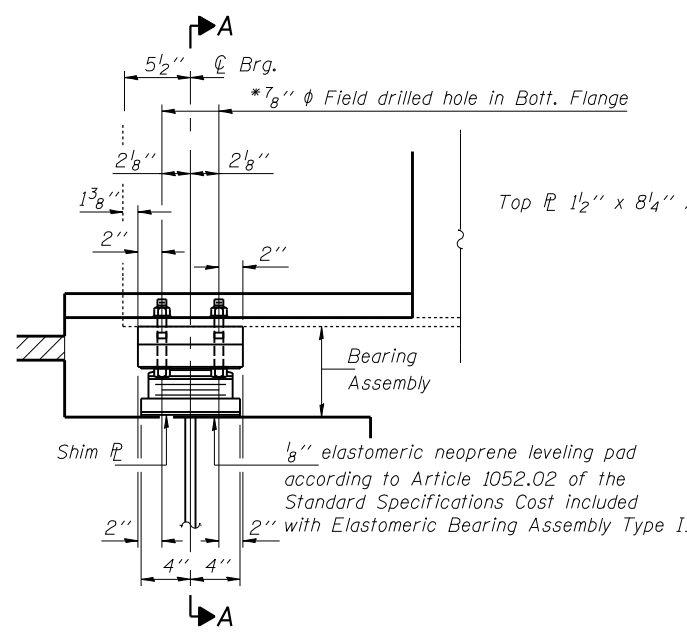
March 5, 2008
 EXAMINED Thomas J. Samagalski
 PASSED Ralph E. Anderson
 ENGINEER OF BRIDGES AND STRUCTURES

STRUCTURAL STEEL
F.A.I. ROUTE 55 - SEC. (84-2B-1)1-1
SANGAMON COUNTY
STATION 36+16.64
STRUCTURE NO. 084-0025

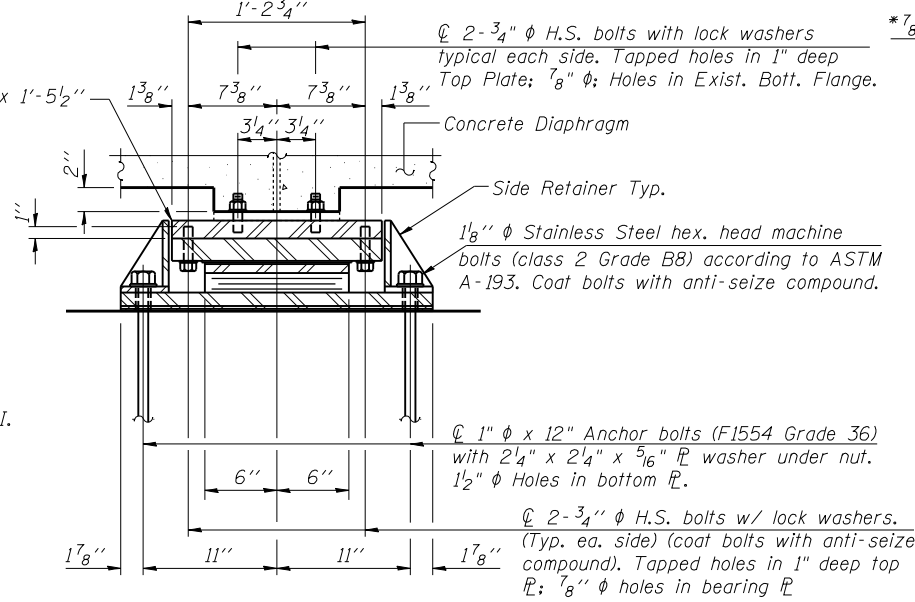
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 11
F.A.I. 55	(84-2B-1)I-1	SANGAMON	31	20	14 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

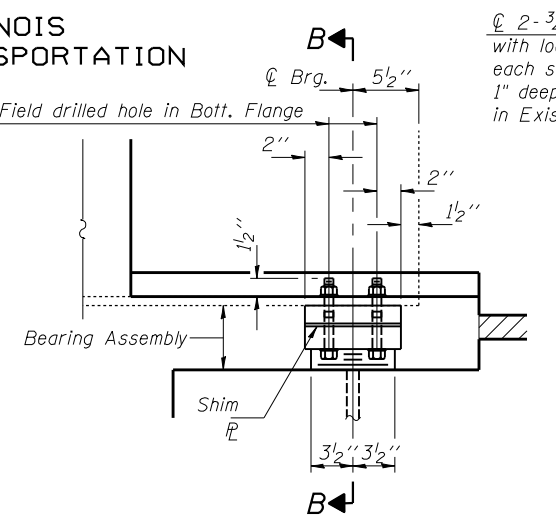
* The cost of field drilling shall be included in concrete structures.



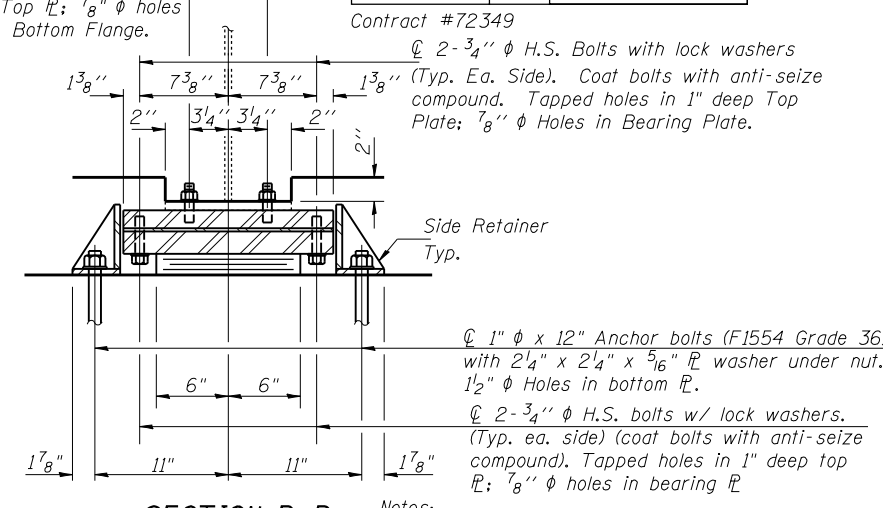
ELEVATION AT W. ABUTMENT



SECTION A-A



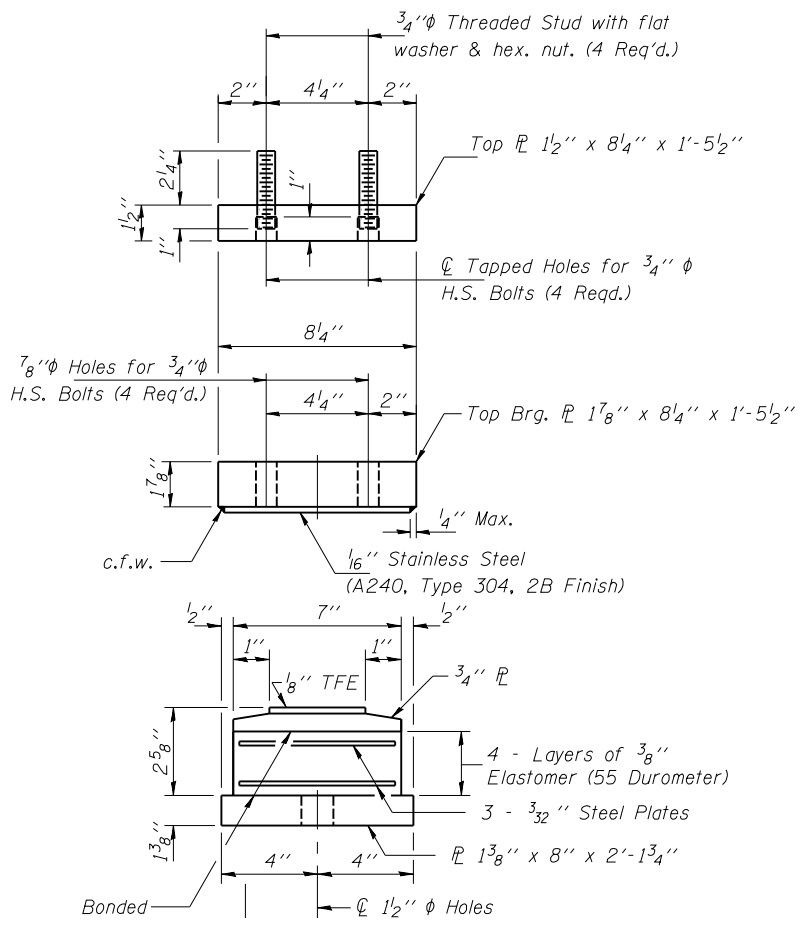
ELEVATION AT E. ABUTMENT



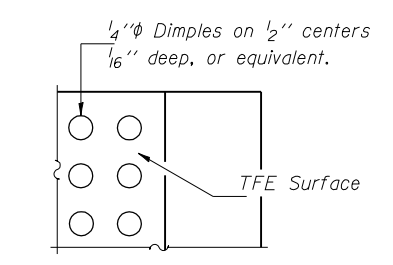
SECTION B-B

Notes:
Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.
Anchor bolts for Type II bearings shall be placed in holes drilled through the bottom bearing plate after members are in place. Side retainers shall be placed after bolts are installed.
Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.
Side retainers, shims, and other steel members required for the bearing assembly shall be included in the cost of Elastomeric Bearing Assembly.
Two 8" in. adjusting shims shall be provided for each bearing in addition to all other plates and shims and placed as shown on bearing details. Cost included with Elastomeric Bearing Assembly.

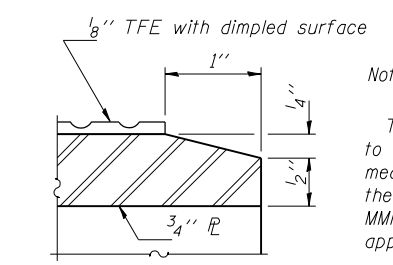
TYPE II ELASTOMERIC EXP. BRG.



BEARING ASSEMBLY

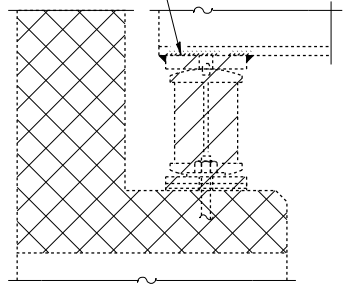


PLAN-TFE SURFACE



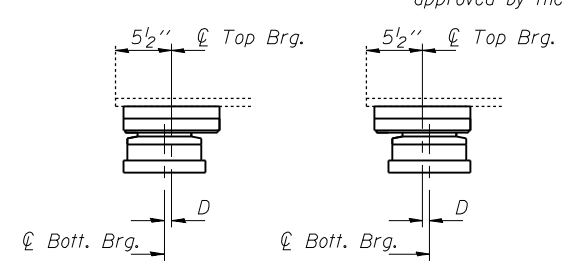
SECTION THRU TFE

Existing Top Plates to be removed using air-arc method and grind smooth all weld material remaining on the bottom flange.



EXISTING BEARING REMOVAL

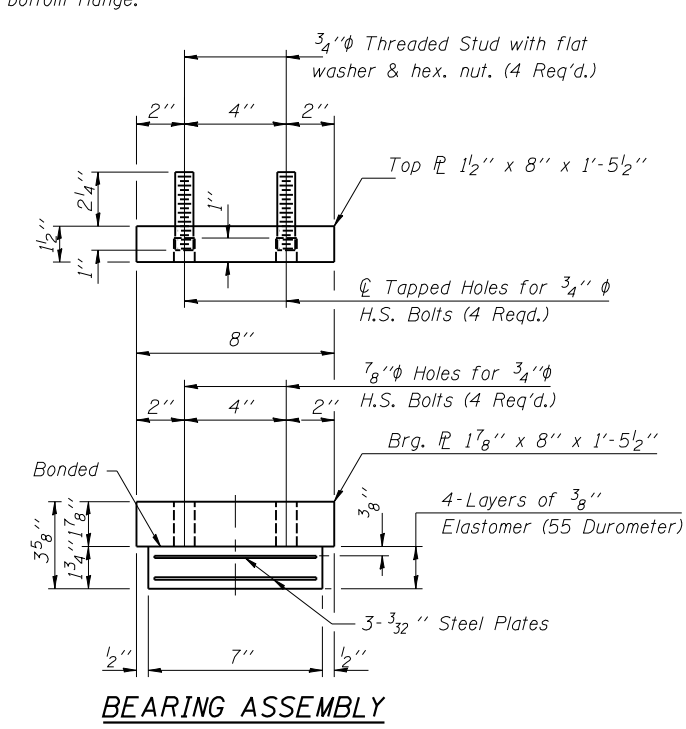
Note:
The 1/8" TFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.
Bonding of 1/8" TFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.



SETTING ANCHOR BOLTS AT EXP. BRG.

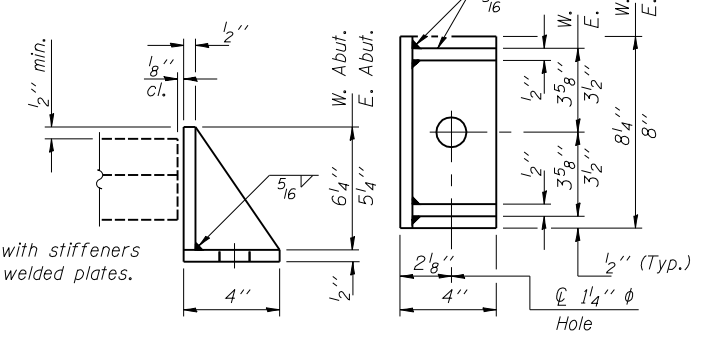
D = 1/8" per each 100' of expansion for every 15° temp. change from the normal temp. of 50°F.

TYPE I ELASTOMERIC EXP. BRG.



BEARING ASSEMBLY

Note:
Shim plates shall not be placed under Bearing Assembly.



SIDE RETAINER

JACKING AND REMOVE BEARINGS AT ABUTMENTS (BEAMS 1 THRU 5)

- The Contractor shall submit for approval by the Engineer plans for jacking & cribbing prior to commencing any work at the bearings.
- Jacking and removing existing bearings shall be done after the deck removal is completed and before the new deck is poured.
- Jacking shall be limited to a maximum of 1/4" lift to remove the existing bearing assembly, utilizing a jack or series of jacks. The max. dead load reaction at each beam with the deck removed is 3.2k at abutments. The minimum jack capacity for each beam is 6.4k at Abutment.
- Reconstruct abutments as detailed on sheets 12-14.
- The new bearings, fill plates and shim plates shall be in place and the beams shall be lowered before the new concrete deck is placed.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	5
Elastomeric Bearing Assembly Type II	Each	5
Anchor Bolts, 1" φ	Each	20

ELASTOMERIC BEARING DETAILS
F.A.I. ROUTE 55 - SEC. (84-2B-1)I-1
SANGAMON COUNTY
STATION 36+16.64
STRUCTURE NO. 084-0025

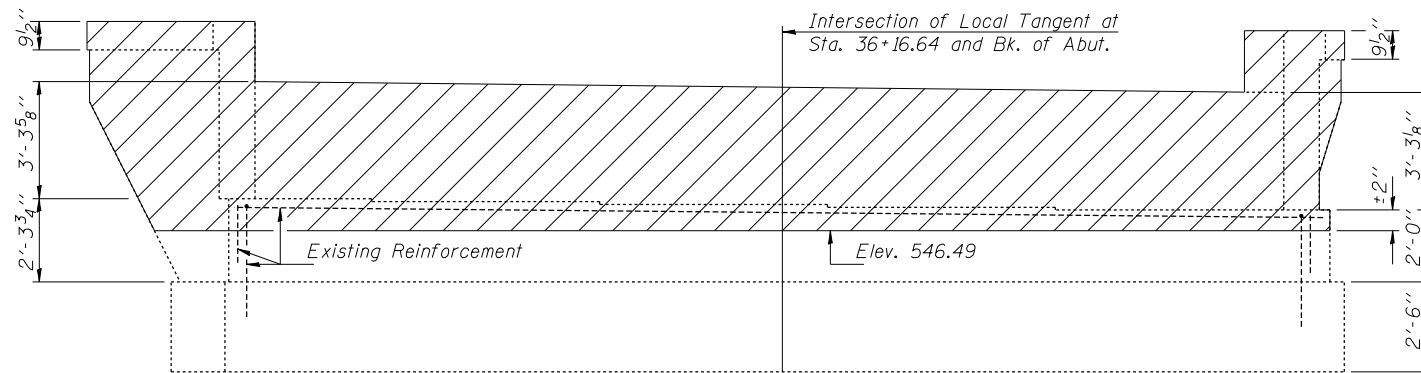
DESIGNED Tom L. Kurtenbach
CHECKED Philip E. Copperroll
DRAWN John F. Schneller Jr.
CHECKED T.L.K. / P.E.C.

March 5, 2008
EXAMINED Thomas J. Samagala
ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

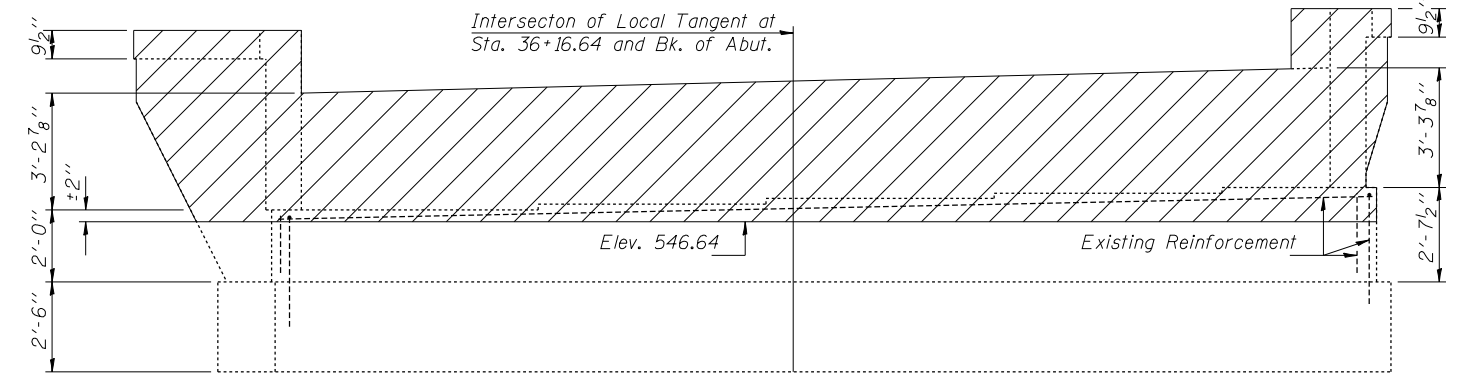
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 12
F.A.I. 55	(84-2B-1)1-1	SANGAMON	31	21	14 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

Contract #72349



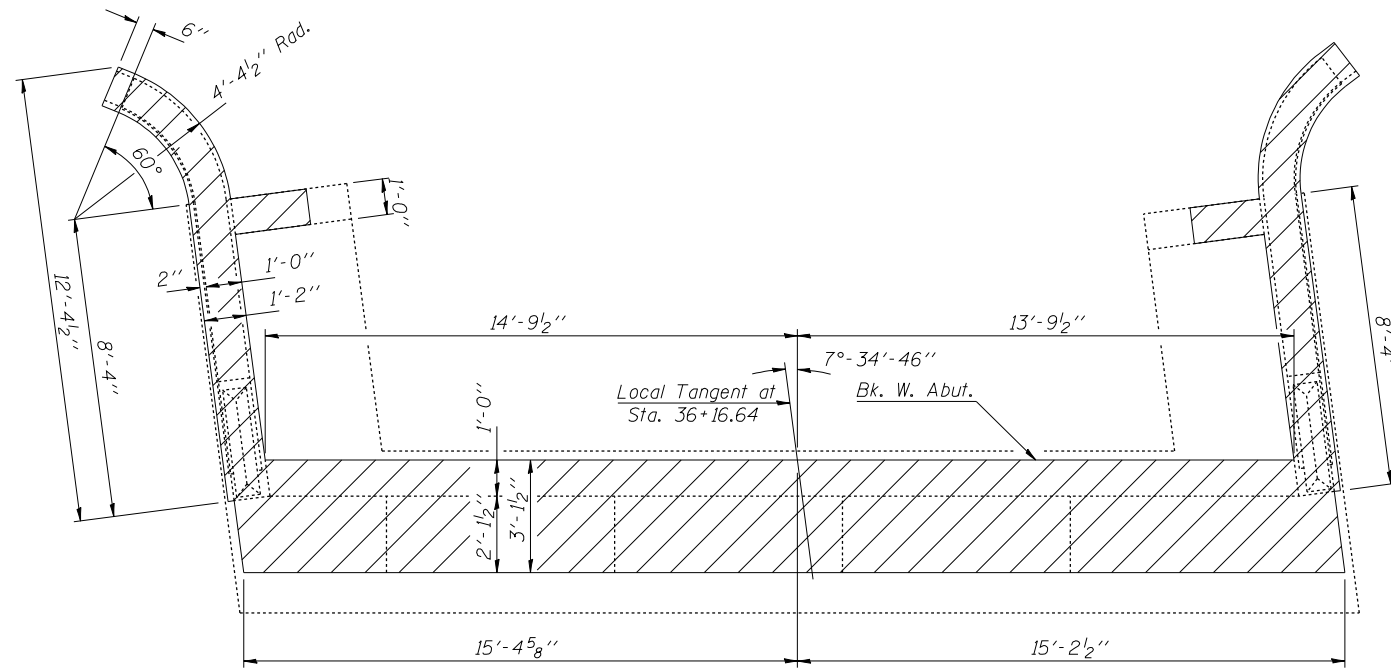
ELEVATION-WEST ABUTMENT

(Looking West)

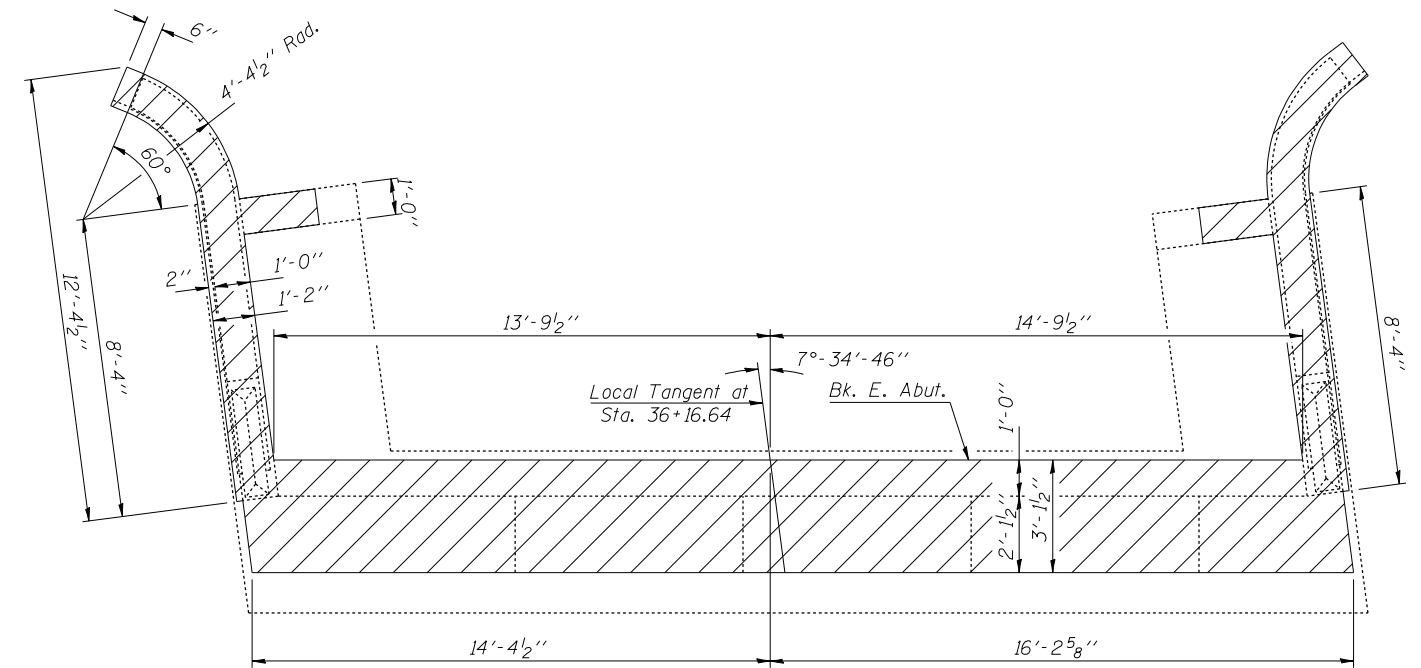


ELEVATION-EAST ABUTMENT

(Looking East)



PLAN-WEST ABUTMENT

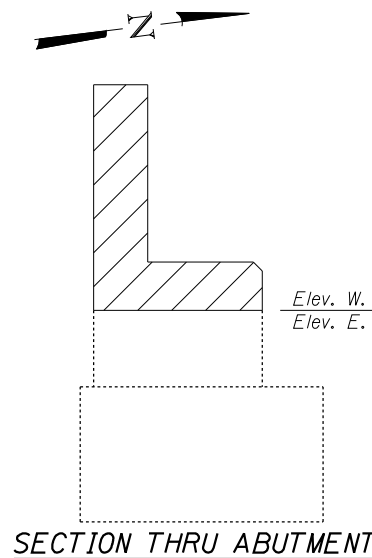


PLAN-EAST ABUTMENT

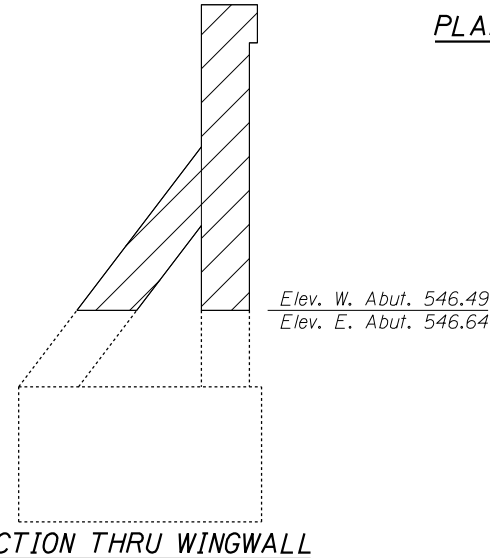
Notes:
Hatched area indicates Concrete Removal.
Existing reinforcement bars extending into the new construction shall be cleaned, straightened and incorporated into the new construction.
Cost included with Concrete Removal.
Existing reinforcement bars not extending into the new construction shall be cut off and covered with a 2" layer of cement grout cost included with Concrete Removal.

DESIGNED Tom L. Kurtenbach
CHECKED Philip E. Coppernoll
DRAWN John F. Schneller Jr.
CHECKED T.L.K. / P.E.C.

EXAMINED Thomas J. Domagalaki
PASSED Ralph E. Anderson
March 5, 2008
ENGINEER OF BRIDGE DESIGN
ENGINEER OF BRIDGES AND STRUCTURES



SECTION THRU ABUTMENT



SECTION THRU WINGWALL

**TWO ABUTMENTS
BILL OF MATERIAL**

Item	Unit	Quantity
Concrete Removal	Cu. Yd.	22.3

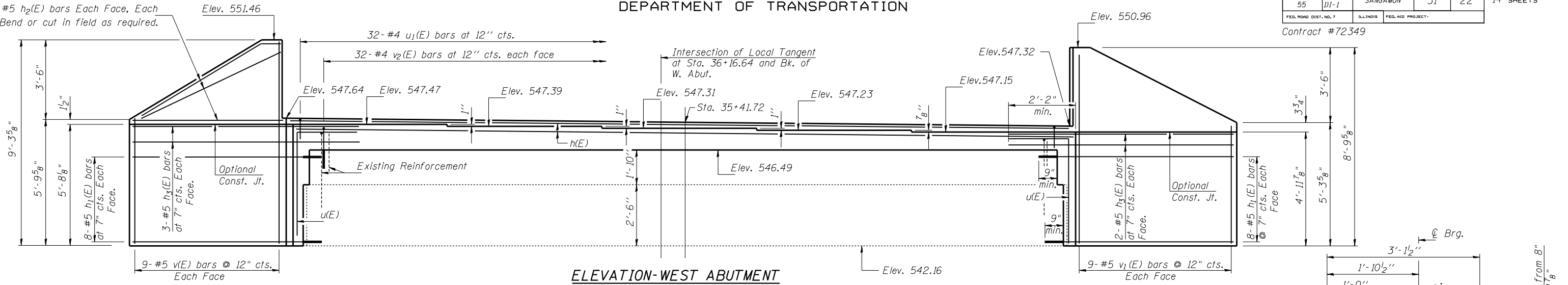
CONCRETE REMOVAL
F.A.I. ROUTE 55 - SEC. (84-2B-1)1-1
SANGAMON COUNTY
STATION 36+16.64
STRUCTURE NO. 084-0025

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

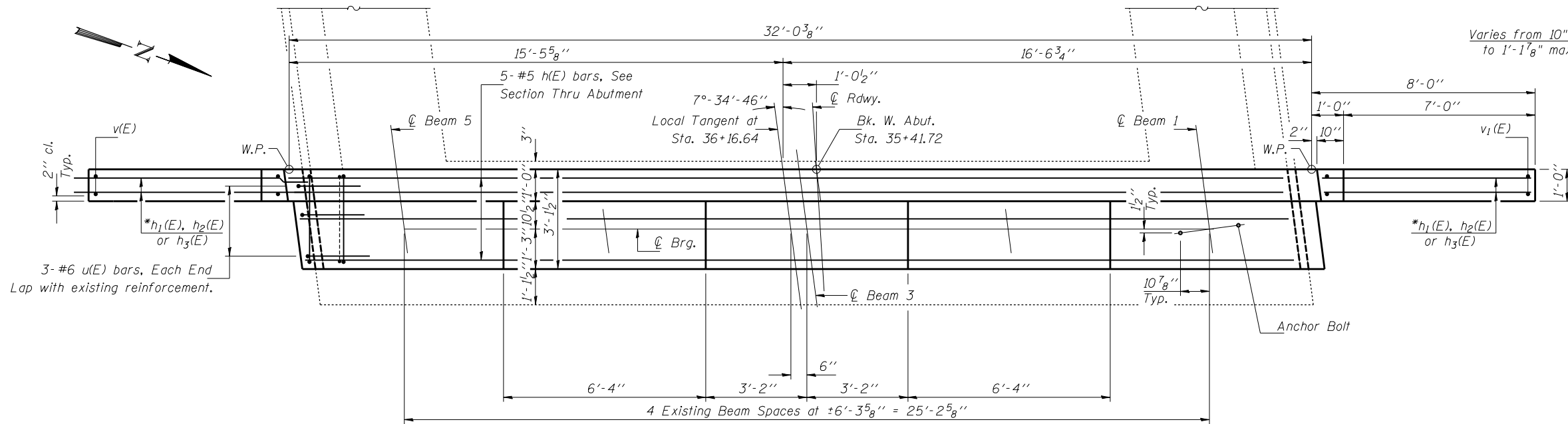
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 13 14 SHEETS
F.A.I. 55	(84-2B-1)1-1	SANGAMON	31	22	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

Contract #72349

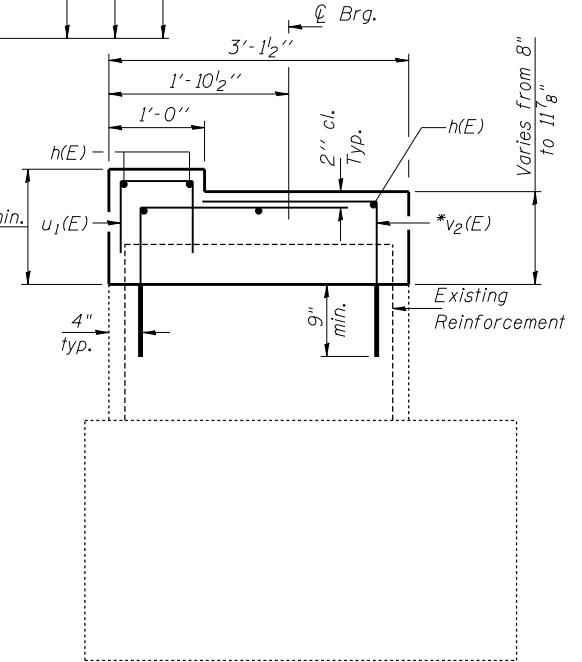
Fan 6-#5 $h_2(E)$ bars Each Face, Each Wing. Bend or cut in field as required.



ELEVATION-WEST ABUTMENT



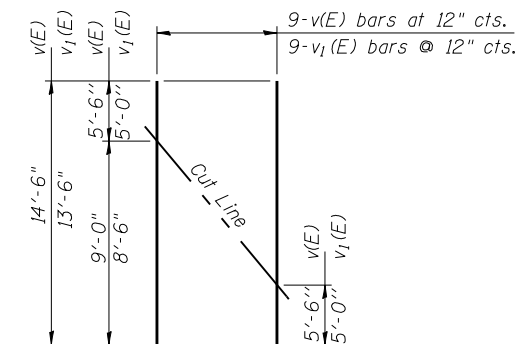
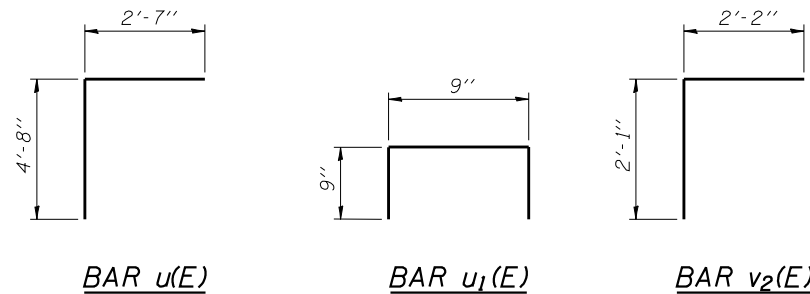
PLAN-WEST ABUTMENT
(Looking West)



SECTION THRU ABUTMENT

* Epoxy grout $h_1(E)$ and $v_2(E)$ bars in 9" min. drilled holes according to Section 584 of the Standard Specifications.

Notes:
Pour steps monolithically with cap.
Space drilled holes in cap and footing to miss existing reinforcement.



FIELD CUTTING DIAGRAM
Order $v(E)$ & $v_1(E)$ bars full length. Cut to fit as shown and use remainder of bars in other face.

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
$h(E)$	5	#5	31'-9"	—
$h_1(E)$	32	#5	9'-6"	—
$h_2(E)$	24	#5	8'-5"	—
$h_3(E)$	10	#5	10'-2"	—
$u(E)$	6	#6	7'-3"	└
$u_1(E)$	32	#4	2'-3"	└
$v(E)$	9	#5	14'-6"	—
$v_1(E)$	9	#5	13'-6"	—
$v_2(E)$	64	#4	4'-3"	└
Concrete Structures			Cu. Yd.	7.6
Reinforcement Bars, Epoxy Coated			Pound	1360
Structure Excavation			Cu. Yd.	123.8

DESIGNED Tom L. Kurtenbach
CHECKED Philip E. Coppernoll
DRAWN John F. Schneller Jr.
CHECKED T.L.K. / P.E.C.

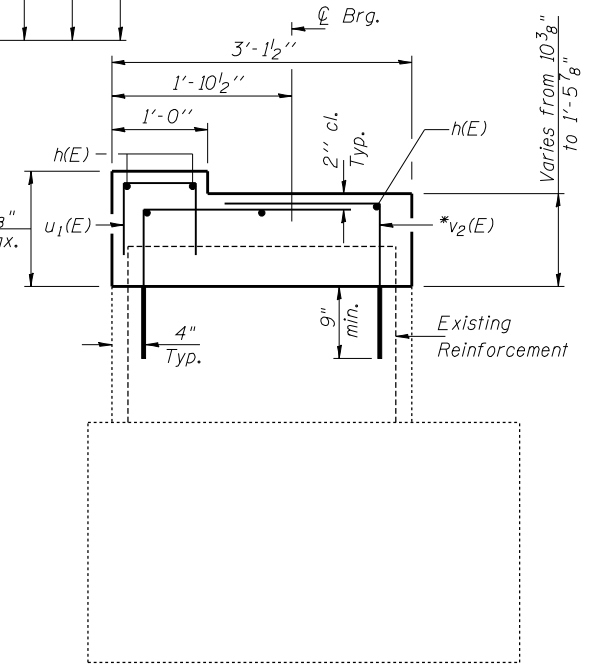
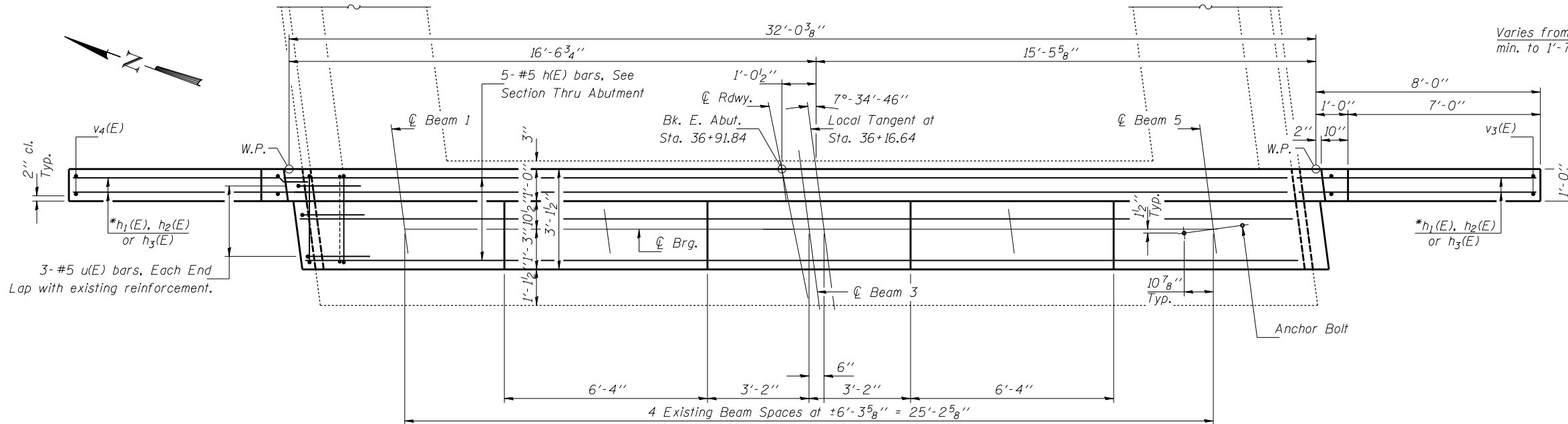
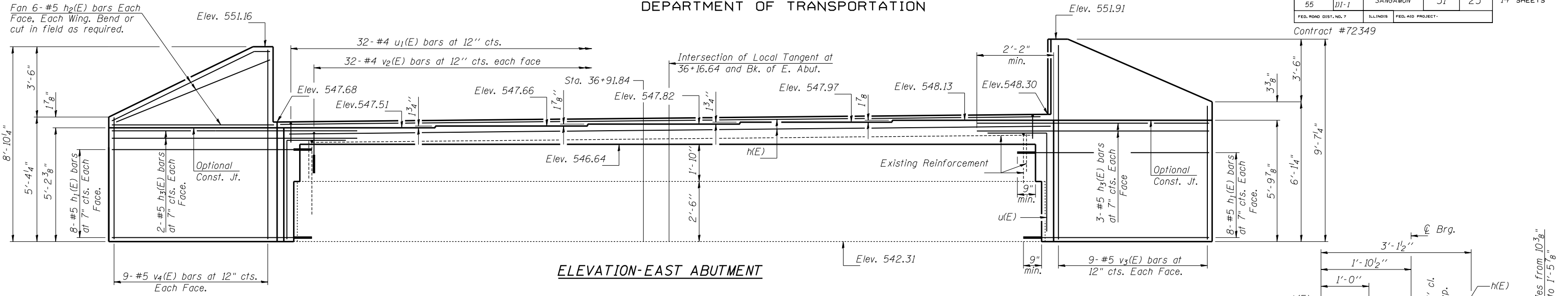
EXAMINED Thomas J. Domagalaki
PASSED Ralph E. Anderson
March 5, 2008
ENGINEER OF BRIDGE DESIGN
ENGINEER OF BRIDGES AND STRUCTURES

WEST ABUTMENT
F.A.I. ROUTE 55 - SEC. (84-2B-1)1-1
SANGAMON COUNTY
STATION 36+16.64
STRUCTURE NO. 084-0025

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

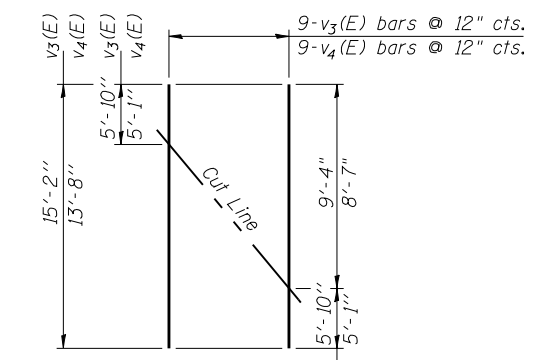
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 14 14 SHEETS
F.A.I. 55	(84-2B-1)I-1	SANGAMON	31	23	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

Contract #72349



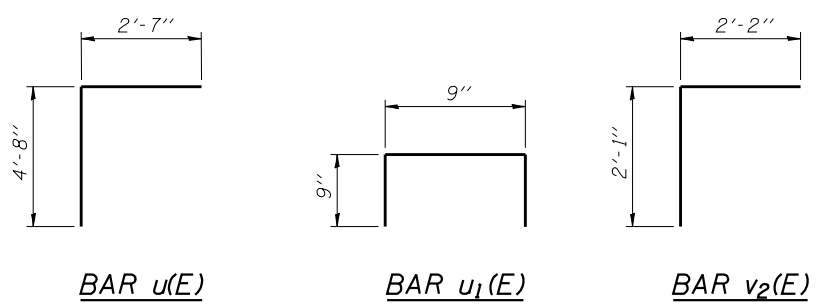
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	5	#5	31'-9"	—
h1(E)	32	#5	9'-6"	—
h2(E)	24	#5	8'-5"	—
h3(E)	10	#5	10'-2"	—
u(E)	6	#6	7'-3"	┘
u1(E)	32	#4	2'-3"	┘
v2(E)	64	#4	4'-3"	┘
v3(E)	9	#5	15'-2"	—
v4(E)	9	#5	13'-8"	—
Concrete Structures		Cu. Yd.	8.7	
Reinforcement Bars, Epoxy Coated		Pound	1370	
Structure Excavation		Cu. Yd.	123.8	



FIELD CUTTING DIAGRAM

Order v3(E) & v4(E) bars full length. Cut to fit as shown and use remainder of bars in other face.



* Epoxy grout h1(E) and v2(E) bars in 9" min. drilled holes according to Section 584 of the Standard Specifications.

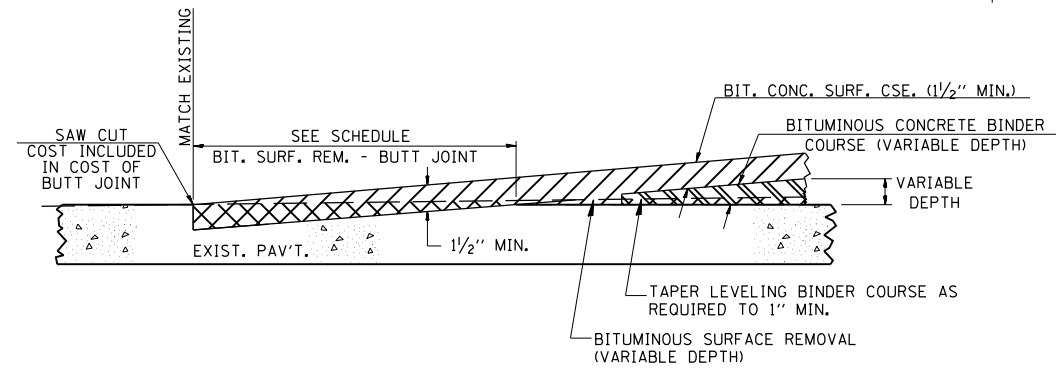
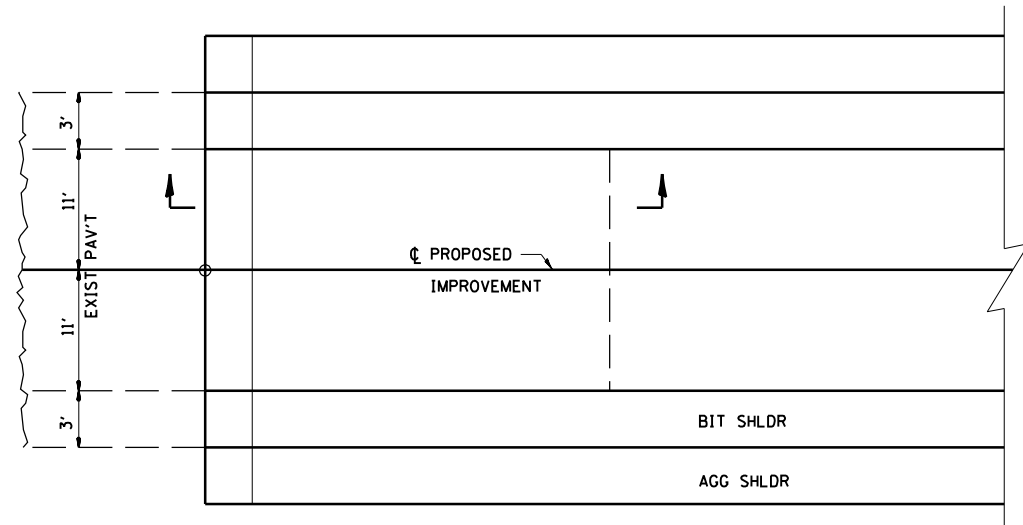
Notes:
Pour steps monolithically with cap.
Reinforcement bars designated (E) shall be epoxy coated.
Space drilled holes in cap and footing to miss existing reinforcement.

DESIGNED Tom L. Kurtenbach
CHECKED Philip E. Coppernoll
DRAWN John F. Schneller Jr.
CHECKED T.L.K. / P.E.C.

EXAMINED Thomas J. Domagalaki
PASSED Ralph E. Anderson
March 5, 2008
ENGINEER OF BRIDGE DESIGN
ENGINEER OF BRIDGES AND STRUCTURES

EAST ABUTMENT
F.A.I. ROUTE 55 - SEC. (84-2B-1)I-1
SANGAMON COUNTY
STATION 36+16.64
STRUCTURE NO. 084-0025

BUTT JOINT DETAIL



F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(84-2B-1) I-1	SANGAMON	31	24
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

CONTRACT NO. 72349

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DATE

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

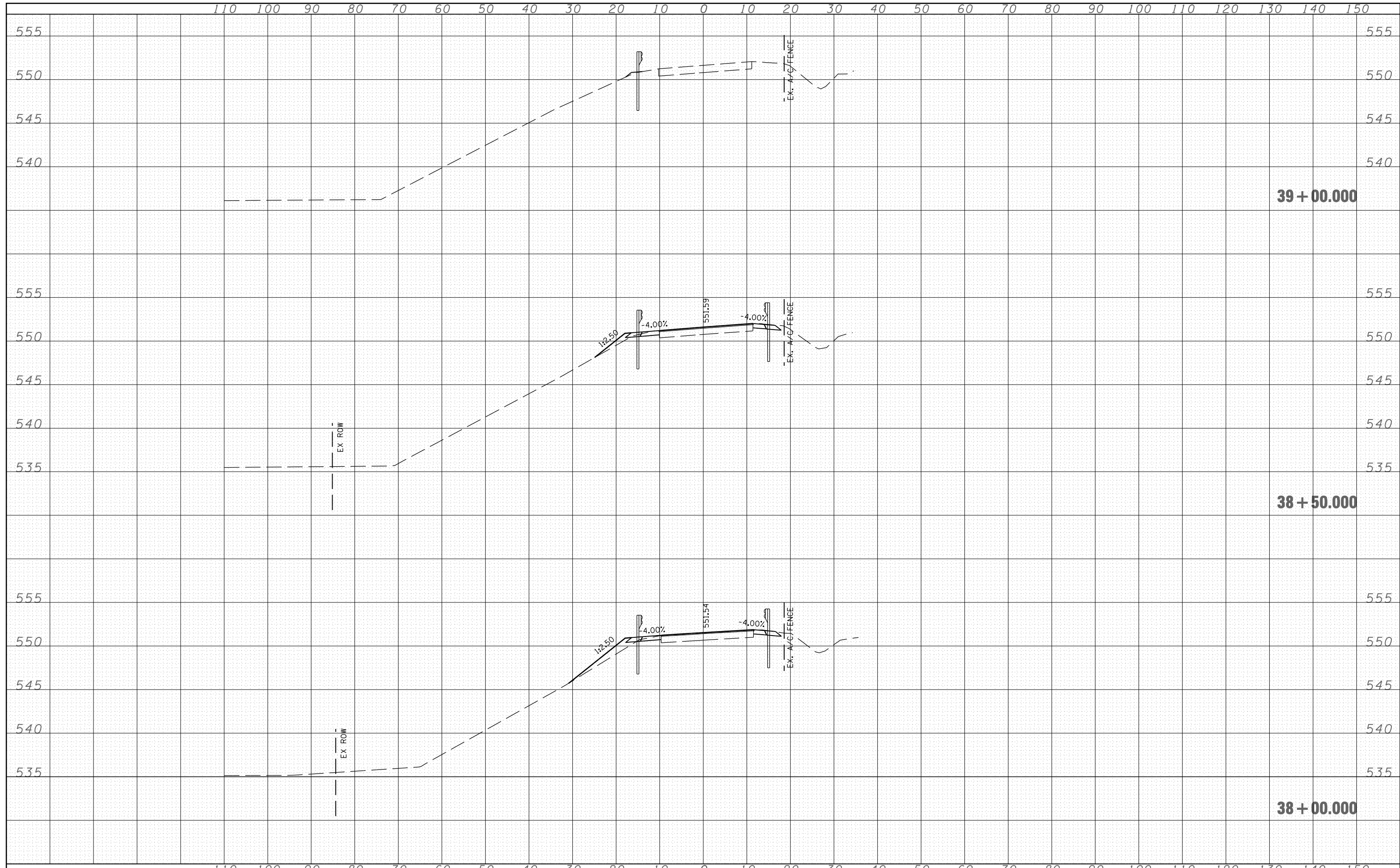
ROADWAY DETAILS

SCALE: NONE
DATE: 2/03

DRAWN BY NJV
CHECKED BY BKB

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

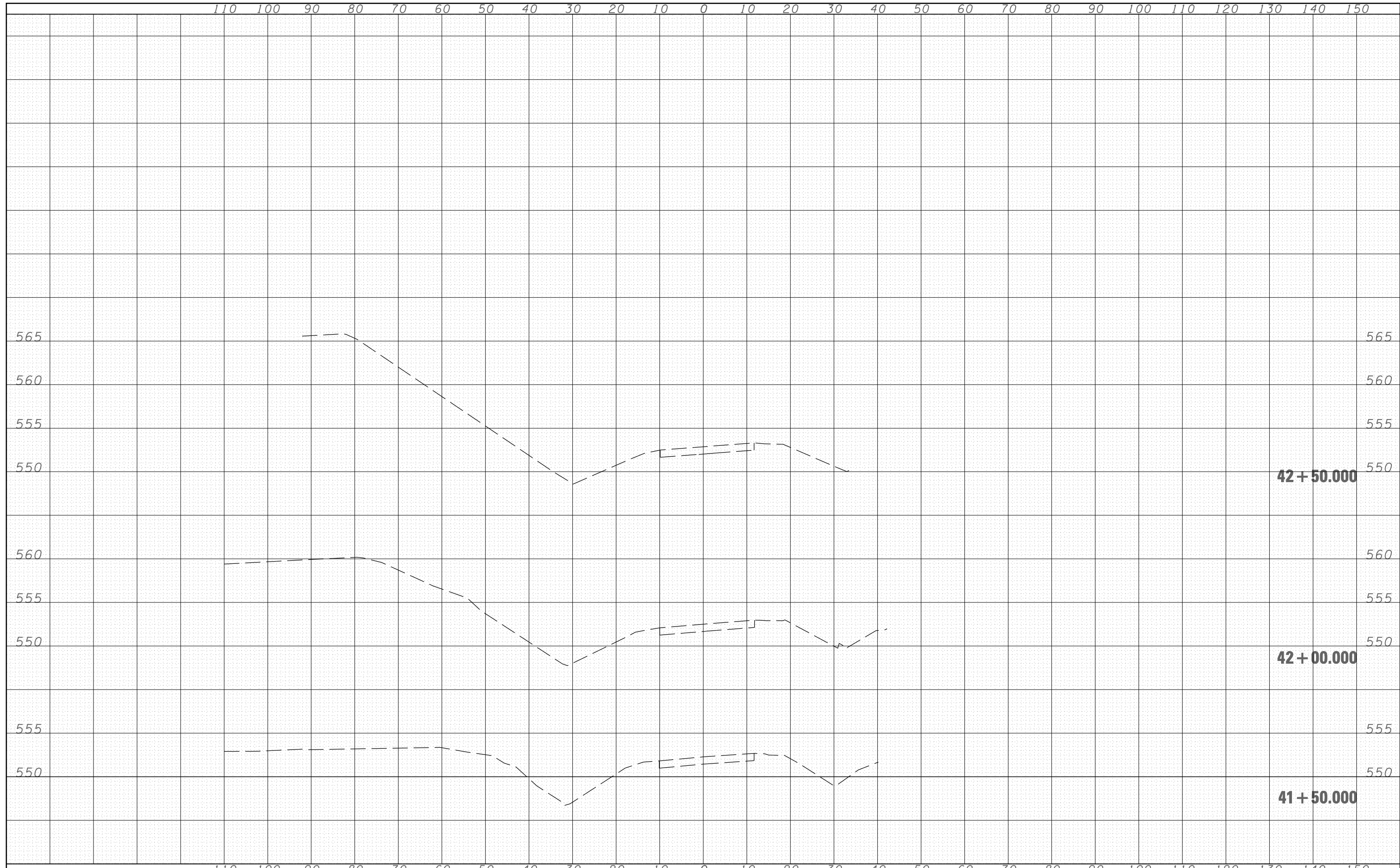
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BY	
SURVEYED	
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ORIGINAL SURVEY	
NOTE BOOK	
NO.	



FILE NAME =	USER NAME = laughtinr1	DESIGNED -	REVISIED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SCALE:	SHEET NO.	OF	SHEETS	STA. 38+00.000	TO STA. 39+00.000
ca:\projects\4652101\bwic final\cross.sections\sh		DRAWN -	REVISIED -		F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
		PLOT SCALE = 20.0000' / IN.	CHECKED -		REVISIED -	55	(84-2B-1) I-1	SANGAMON	31	29
		PLOT DATE = Feb-21-2008 03:00:12PM	DATE -		REVISIED -	CONTRACT NO. 72349				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT										

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

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



FILE NAME =	USER NAME = laughlin1	DESIGNED -	REVISIED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SCALE:	SHEET NO.	OF	SHEETS	STA. 41+50.000	TO STA. 42+50.000	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
ca:\projects\d652101\bw_c_fina\cross.sections\sh	DRAWN -	REVISIED -	55		(84-2B-1) I-1	SANGAMON	31	31			FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
PLOT SCALE = 20.0000' / IN.	CHECKED -	REVISIED -	CONTRACT NO. 72349												
PLOT DATE = Feb-21-2008 03:00:13PM	DATE -	REVISIED -													