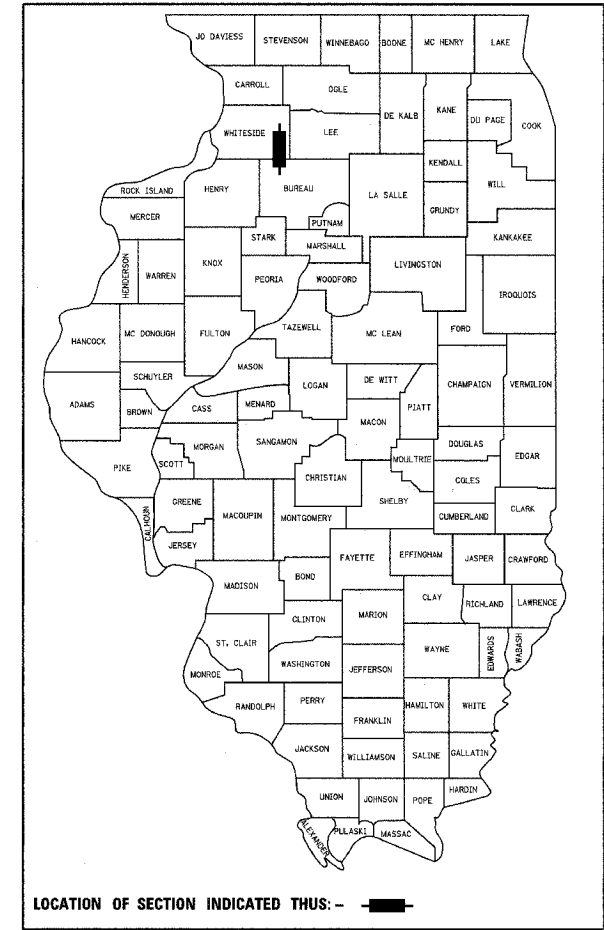


PROJECT ENGINEER: BOB WAGNER  
 SQUAD LEADER: BECKY MARRUFFO (815) 284-5902  
 FRED LIN  
 CONSULTANT: RANDOLPH & ASSOCIATES, INC. (309) 693-8844, LIN ENGINEERING, LTD. (217) 483-4168  
 DON BELL

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
646	(102)BR-3	WHITESIDE	59	1

CONTRACT NUMBER: 64426  
D-92-059-99



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

SUBMITTED August 30, 2005  
Jimmy Mounts  
REGION 2 DISTRICT ENGINEER

October 14, 2005  
Mike Sear  
ENGINEER OF DESIGN AND ENVIRONMENT

October 14, 2005  
Eric E. Hawn  
DEPUTY DIRECTOR, DIVISION OF HIGHWAYS

PREPARED BY:  
LIN ENGINEERING, LTD.  
CHATHAM, ILLINOIS 62629  
(217) 483-4168

Fred M. Lin  
FRED M. LIN, P.E.  
ILLINOIS REGISTERED ENGINEER NO. 062-056704  
REGISTRATION EXPIRES NOV. 30, 2005

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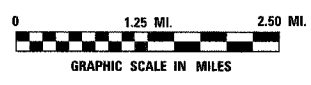
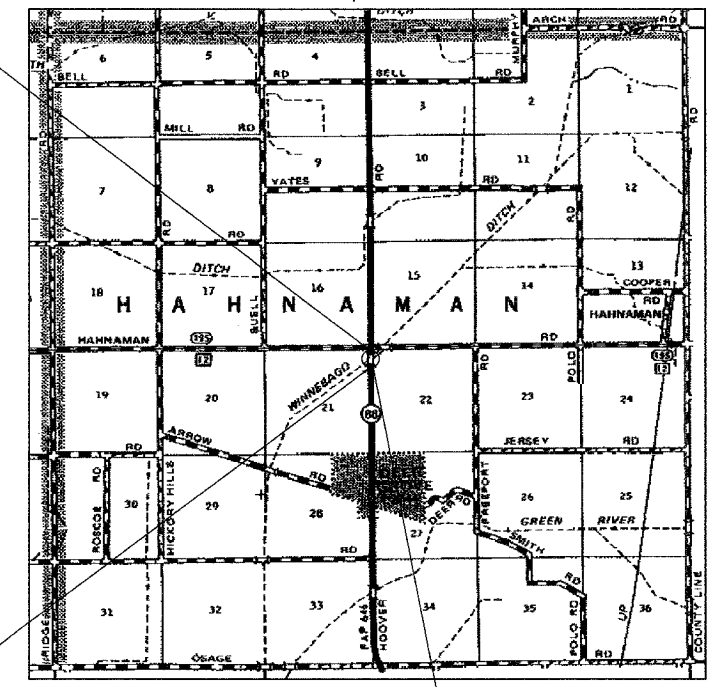
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

**PROPOSED  
HIGHWAY PLANS**

F.A.P.ROUTE 646 (IL RTE 40)  
SECTION 102 BR-3  
C-92-112-03  
WHITESIDE COUNTY  
PROJECT ACF-0646(060)  
R 7E, 4th P.M.

BEGIN PROJECT LIMIT  
STA 554+55.00

END PROJECT LIMIT  
STA 562+70.00



DESCRIPTION OF WORK:  
THIS PROJECT INCLUDES THE COMPLETE REMOVAL OF THE THREE-SPAN PRECAST, PRESTRESSED CONCRETE DECK BEAM STRUCTURE (S.N. 098-0017) CARRYING F.A. RTE 646 (IL RTE 40) OVER WINNEBAGO DITCH AND REPLACEMENT WITH A THREE SPAN, REINFORCED CONCRETE DECK AND WIDE FLANGE BEAM STRUCTURE (S.N. 098-0109), RAISING THE PROFILE OF THE EXISTING PAVEMENT, SHOULDER IMPROVEMENTS, RELOCATING AN EXISTING FIELD ENTRANCE, AND RELATED EARTHWORK AND DRAINAGE.

GROSS LENGTH OF IMPROVEMENT = 815.0 FEET = 0.15 MILE  
NET LENGTH OF IMPROVEMENT = 815.0 FEET = 0.15 MILE



**INDEX OF SHEETS**

- 1 COVER SHEET, INDEX OF SHEETS, & STANDARDS
- 2 - 3 SUMMARY OF QUANTITIES
- 4 TYPICAL SECTIONS
- 5 HORIZONTAL & VERTICAL CONTROL
- 6 GENERAL NOTES & COMMITMENTS
- 7 - 9 SCHEDULE OF QUANTITIES
- 10 - 11 PLAN & PROFILE
- 12 MAINTENANCE OF TRAFFIC PLAN
- 13 - 33 PROPOSED BRIDGE PLAN
- 34 - 36 BORING LOGS
- 37 - 42 EXISTING BRIDGE PLAN
- 43 BUTT JOINT AND FIELD ENTRANCE DETAILS
- 44 - 51 DISTRICT STANDARDS
- 52 - 57 CROSS SECTIONS
- \* 43A Stream Water Pollution Prevention Plan

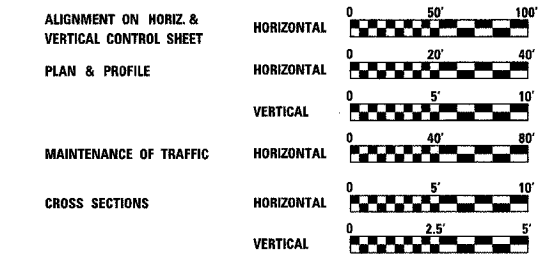
**STATE STANDARDS**

- 000001-04 STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS
- 001001 AREAS OF REINFORCEMENT REBARS
- 001006 DECIMAL OF AN INCH AND A FOOT
- 280001-02 TEMPORARY EROSION CONTROL SYSTEMS
- 420401-05 BRIDGE APPROACH PAVEMENT
- 503001-02 CONCRETE PARAPET SLIP-FORMING OPTION
- 515001-02 NAME PLATE FOR BRIDGES
- 542401 METAL END SECTION FOR PIPE CULVERTS
- 609006-02 BRIDGE APPROACH PAVEMENT (DRAIN DETAIL)
- 630001-05 STEEL PLATE BEAM GUARDRAIL
- 630301-03 SHOULDER WIDENING FOR TYPE 1, (SPECIAL) GUARDRAIL TERMINALS
- 631031-05 TRAFFIC BARRIER TERMINAL TYPE 6
- 635001 DELINEATORS
- 635006-02 REFLECTOR AND TERMINAL MARKER PLACEMENT
- 635011-01 REFLECTOR MARKER AND MOUNTING DETAILS
- 666001 RIGHT OF WAY MARKERS
- 667101 PERMANENT SURVEY MARKERS
- 701011-01 TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES
- 701201-02 TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES
- 701306-01 TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES
- 701311-02 TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES
- 701321-08 TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES
- 701326-02 TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES
- 702001-05 TRAFFIC CONTROL DEVICES
- 704001-02 TEMPORARY CONCRETE BARRIER
- 720011 METAL POSTS FOR SIGNS, MARKERS AND DELINEATORS
- 780001-01 TYPICAL PAVEMENT MARKINGS
- 781001-02 TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS

**DISTRICT STANDARDS**

- 2.1 SWPPP/EROSION CONTROL PLAN
- 22.1 ENTRANCE AND SIDERADS WITH 2.4m (8') BITUMINOUS SHOULDERS
- 23.4 DETAIL OF BITUMINOUS SHOULDER AT GUARD RAIL
- 23.4a BITUMINOUS SHOULDER
- 30.2 FIELD TILE JUNCTION VAULTS 600(24) AND 900(36) DIA.
- 31.2 TREATMENT OF FIELD TILE SYSTEMS UNDER DITCHES
- 34.4 THRUST BLOCK DETAILS
- 37.4 DELINEATOR AND POST ORIENTATION
- 38.4 WITNESS MARKER FOR PERMANENT SURVEY MARKERS TYPE II
- 39.4 INFORMATIONAL WARNING SIGN (FOR NARROW TRAVEL LANES)\*
- 41.1 TYPICAL PAVEMENT MARKINGS
- 63.4 REFERENCE MARKERS
- 73.2 AUTOMATIC FLAP GATES
- 90.4 TREE REPLACEMENT SCHEDULE
- 91.4 RUMBLE RESURFACING
- 92.4 BARRIER REFLECTORS
- 99.4 STOP LINE FOR TEMPORARY SIGNALS

\* SIGNS TO BE INCLUDED IN COST OF TRAFFIC CONTROL AND SHALL NOT BE PAID SEPARATELY



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

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

HAHNAMAN TOWNSHIP, SECTION 21 & 22  
CONTRACT NO. 64426

**SUMMARY OF QUANTITIES**

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
646	(102)BR-3	WHITESIDE	57	2
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
CONTRACT NUMBER: 64426				

CODE NUMBER	ITEM	UNIT	80% FEDERAL / 20% STATE			
			TOTAL QUANTITY	X071-2A STRUCTURE	I000 ROADWAY	SFTY-3N
20100110	TREE REMOVAL (6 TO 15 UNITS DIAMETER)	UNITS	20		20	-
20200100	EARTH EXCAVATION	CU. YD.	485		485	-
20300100	CHANNEL EXCAVATION	CU. YD.	312		312	-
20400800	FURNISHED EXCAVATION	CU. YD.	520		520	-
20700400	POROUS GRANULAR EMBANKMENT, SPECIAL	CU. YD.	134	134		-
21301052	EXPLORATION TRENCH 52" DEPTH	FOOT	200		200	-
25000310	SEEDING, CLASS 4	ACRE	0.25		0.25	-
25001830	SEEDING, CLASS 6 (MODIFIED)	ACRE	1.00		1.00	-
25100115	MULCH METHOD 2	ACRE	1.25		1.25	-
25100630	EROSION CONTROL BLANKET	SO. YD.	1,943		1,943	-
28000300	TEMPORARY DITCH CHECKS	EACH	14		14	-
28000500	INLET AND PIPE PROTECTION	EACH	5		5	-
28100107	STONE RIPRAP, CLASS A4	SO. YD.	1,044	1,044		-
28200200	FILTER FABRIC	SO. YD.	1,044	1,044		-
35101400	AGGREGATE BASE COURSE, TYPE B	TON	158		158	-
40600980	BITUMINOUS SURFACE REMOVAL - BUTT JOINT	SO. YD.	369		369	-
42001165	BRIDGE APPROACH PAVEMENT	SO. YD.	250		250	-
42001300	PROTECTIVE COAT	SO. YD.	1,042	1,042		-
42001430	BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)	SO. YD.	69		69	-
44000100	PAVEMENT REMOVAL	SO. YD.	161		161	-
44000700	APPROACH SLAB REMOVAL	SO. YD.	160		160	-
44004250	PAVED SHOULDER REMOVAL	SO. YD.	130		130	-
44300200	STRIP REFLECTIVE CRACK CONTROL TREATMENT	FOOT	1,145		1,145	-
48202315	BITUMINOUS SHOULDERS SUPERPAVE 5 3/4"	SO. YD.	844		844	-
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1	1		-
50104650	SLOPE WALL REMOVAL	SO. YD.	1,040	1,040		-
50105220	PIPE CULVERT REMOVAL	FOOT	30		30	-
50200100	STRUCTURE EXCAVATION	CU. YD.	418	418		-
50300100	FLOOR DRAINS	EACH	18	18		-
50300150	NEOPRENE EXPANSION JOINT 2"	FOOT	97	97		-
50300225	CONCRETE STRUCTURES	CU. YD.	199.3	199.3		-
50300255	CONCRETE SUPERSTRUCTURE	CU. YD.	203.8	203.8		-
50300260	BRIDGE DECK GROOVING	SO. YD.	649	649		-
50300320	ELASTOMERIC BEARING ASSEMBLY, TYPE II	EACH	12	12		-

CODE NUMBER	ITEM	UNIT	80% FEDERAL / 20% STATE			
			TOTAL QUANTITY	X071-2A STRUCTURE	I000 ROADWAY	SFTY-3N
50500105	FURNISHING AND ERECTING STRUCTURAL STEEL	L. SUM	1	1		-
50500505	STUD SHEAR CONNECTORS	EACH	3,276	3,276		-
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	64,540	64,540		-
51201000	FURNISHING METAL PILE SHELLS 12"	FOOT	3,725	3,725		-
51202600	DRIVING AND FILLING SHELLS	FOOT	3,725	3,725		-
51203200	TEST PILE METAL SHELLS	EACH	3	3		-
51205200	TEMPORARY SHEET PILING	SO. FT.	1,560	1,560		-
51500100	NAME PLATES	EACH	1	1		-
54200223	PIPE CULVERTS, CLASS D, TYPE 1 18"	FOOT	36		36	-
54215547	METAL END SECTIONS 12"	EACH	4		4	-
54215553	METAL END SECTIONS 18"	EACH	2		2	-
54390170	INSERTION CULVERT LINER 22"	FOOT	90		90	-
54390200	INSERTION CULVERT LINER 28"	FOOT	35		35	-
58700200	BRIDGE SEAT SEALER	SO. FT.	256	256		-
60100945	PIPE DRAINS 12"	FOOT	117		117	-
60801024	FLAP GATE 24"	EACH	1		1	-
60801030	FLAP GATE 30"	EACH	1		1	-
60900240	TYPE C INLET BOX, STANDARD 609006	EACH	4		4	-
60900515	CONCRETE THRUST BLOCKS	EACH	4		4	-
61133100	FIELD TILE JUNCTION VAULTS, 2' DIA.	EACH	2		2	-
61140000	STORM SEWER, SPECIAL 8"	FOOT	200		200	-
61140100	STORM SEWER, SPECIAL 10"	FOOT	200		200	-
61140200	STORM SEWER, SPECIAL 12"	FOOT	200		200	-
* 63000000	STEEL PLATE BEAM GUARDRAIL TYPE A	FOOT	525.0		525.0	-
* 63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	4		4	-
* 63100169	TRAFFIC BARRIER TERMINAL TYPE 1, SPECIAL (FLARED)	EACH	4		4	-
63200310	GUARDRAIL REMOVAL	FOOT	667		667	-
63500105	DELINEATORS	EACH	2		2	-
66600105	FURNISHING AND ERECTING RIGHT-OF-WAY MARKERS	EACH	8		8	-

\* SPECIALTY ITEMS

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

**SUMMARY OF QUANTITIES**

SCALE: NONE  
DATE: AUGUST 2005

DRAWN BY: JH  
CHECKED BY: FML

**SUMMARY OF QUANTITIES**

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
646	(102)BR-3	WHITESIDE	57	3
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
CONTRACT NUMBER: 64426				

CODE NUMBER	ITEM	UNIT	80% FEDERAL / 20% STATE			
			TOTAL QUANTITY	X071-2A STRUCTURE	1000 ROADWAY	SFTY3N
66700305	PERMANENT SURVEY MARKERS, TYPE II	EACH	1		1	-
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL. MO.	6		6	-
67100100	MOBILIZATION	L. SUM	1		1	-
70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	1		1	-
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L. SUM	1		1	-
70100460	TRAFFIC CONTROL AND PROTECTION, STANDARD 701306	L. SUM	1		1	-
70100500	TRAFFIC CONTROL AND PROTECTION, STANDARD 701326	L. SUM	1		1	-
70103815	TRAFFIC CONTROL SURVEILLANCE	CAL. DA.	6		6	-
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1		1	-
70106700	TEMPORARY RUMBLE STRIP	EACH	12		12	-
70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	3,657		3,657	-
70300280	TEMPORARY PAVEMENT MARKING - LINE 24"	FOOT	24		24	-
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ. FT.	1,268		1,268	-
70400100	TEMPORARY CONCRETE BARRIER	FOOT	980		980	-
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	955		955	-
78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	3,667		3,667	-
78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	9		9	-
78100105	RAISED REFLECTIVE PAVEMENT MARKER (BRIDGE)	EACH	3		3	-
78200200	BIDIRECTIONAL PRISMATIC BARRIER REFLECTOR	EACH	4		4	-
78200420	GUARDRAIL MARKERS, TYPE B	EACH	11		11	-
78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	4		4	-
78300100	PAVEMENT MARKING REMOVAL	SQ. FT.	306		306	-
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	13		13	-
Z0002600	BAR SPLICERS	EACH	593	593		-
Z0013798	CONSTRUCTION LAYOUT	L. SUM	1	1		-
Z0030250	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2			2
Z0030350	IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2			2
A2007814	TREE, TILIA AMER. (AMER. LINDEN/BASSWOOD), 1-3/4" CALIPER, BALLED & BURLAPPED	EACH	3		3	-
X4066414	BIT. CONC. SURF. CSE., SUPERPAVE, MIX "C", N50	TON	560		560	-
X4066765	LEVELING BINDER (MACHINE METHOD), SUPERPAVE, N50	TON	269		269	-
X5020501	UNDERWATER STRUCTURE EXCAVATION PROTECTION - LOCATION 1	EACH	1	1		-
X5020502	UNDERWATER STRUCTURE EXCAVATION PROTECTION - LOCATION 2	EACH	1	1		-

• SPECIALTY ITEMS

REVISIONS	
NAME	DATE

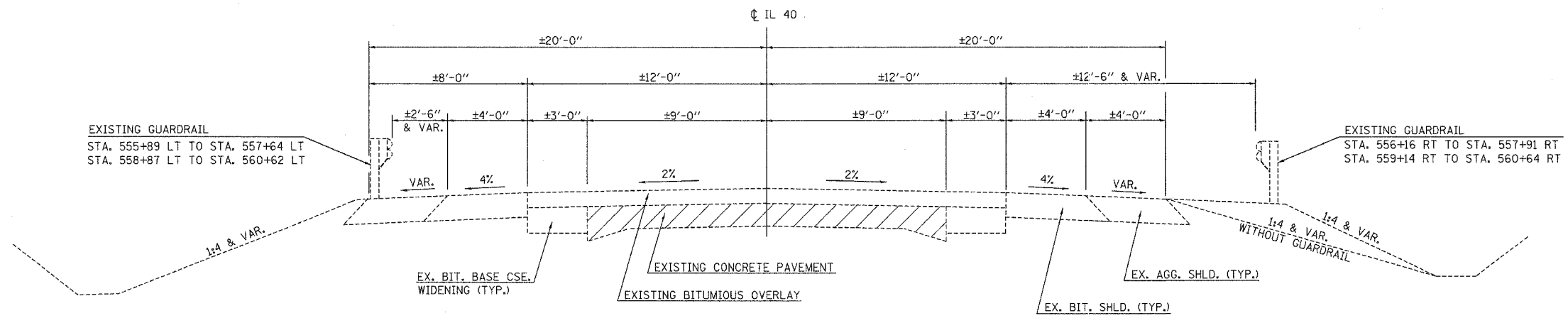
ILLINOIS DEPARTMENT OF TRANSPORTATION

**SUMMARY OF QUANTITIES**

SCALE: NONE  
DATE: AUGUST 2005

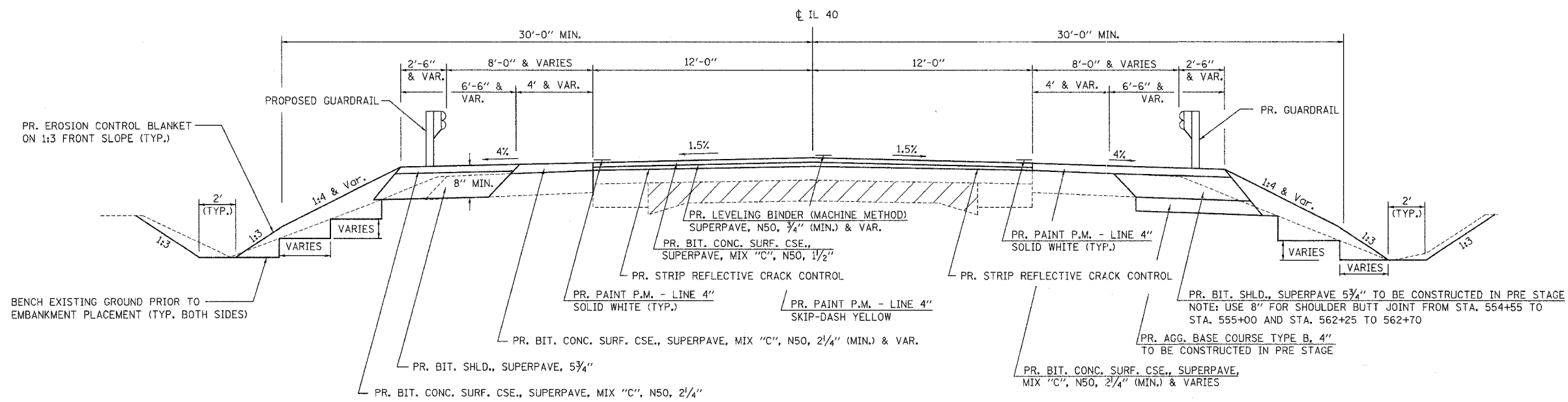
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CHECKED BY: FML

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
646	(102)BR-3	WHITESIDE	57	4
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
CONTRACT NUMBER: 64426				



**EXISTING TYPICAL SECTION**  
STA. 554+55.00 to STA. 562+70.00

NOTE: EXISTING STRUCTURE LOCATION,  
STA. 557+75.80 TO STA. 558+98.48



**PROPOSED TYPICAL SECTION**  
STA. 555+00.00 to STA. 562+25.00

BRIDGE OMISSION: STA. 557+54.00 TO STA. 559+22.00  
BRIDGE APPROACH PAVEMENT OMISSION:  
STA. 557+24.65 TO STA. 557+54.65 AND STA. 559+21.35 TO STA. 559+51.35  
BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE) OMISSION:  
STA. 557+16.50 TO STA. 557+24.65 AND STA. 559+51.35 TO STA. 559+59.50

- NOTE: 1. REMOVE EXISTING PAVEMENT, SHOULDERS AND BRIDGE APPROACH PAVEMENT FROM STA. 557+16.50 TO STA. 559+59.50  
2. EXISTING STRUCTURE LOCATION, STA. 557+75.80 TO STA. 558+98.48  
3. BUTT JOINT LOCATION: STA. 554+55.00 TO STA. 555+00.00 & STA. 562+25.00 TO STA. 562+70.00

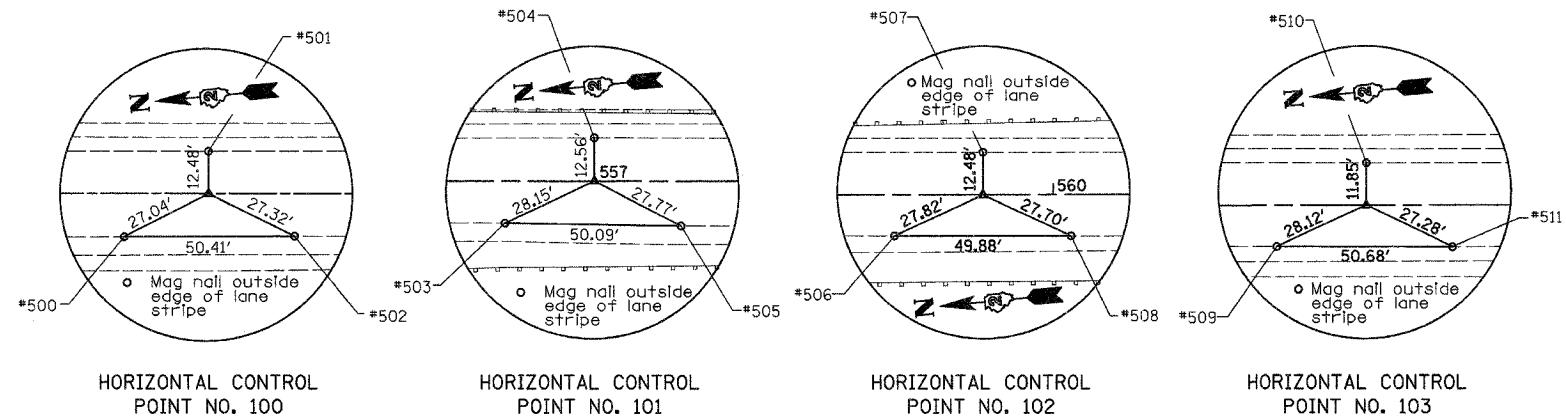
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**TYPICAL SECTIONS**  
SCALE: NONE  
DATE: AUGUST, 2005  
DRAWN BY: JH  
CHECKED BY: FML



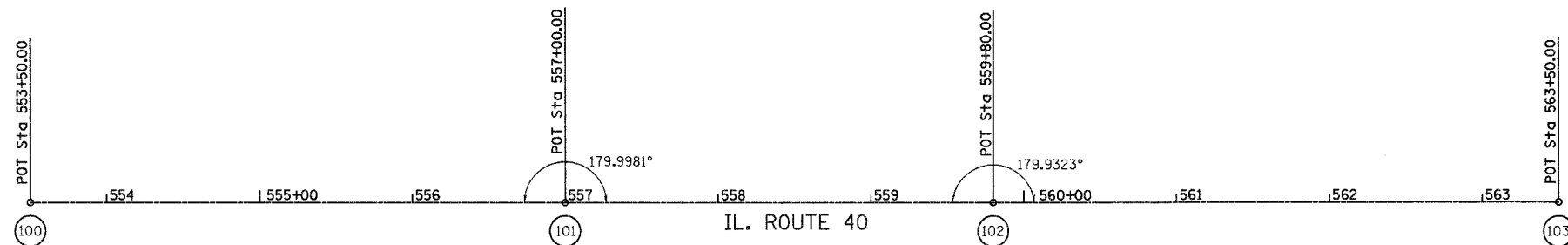
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
646	(102)BR-3	WHITESIDE	57	5
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 64426				

## HORIZONTAL & VERTICAL CONTROL

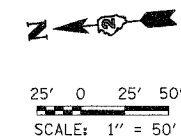


HORIZONTAL CONTROL POINTS					
POINT	NORTHING	EASTING	STATION	OFFSET	DESCRIPTION
100	1807379.70	2424796.05	553+50.00	0.00	MAG NAIL
101	1807031.31	2424762.58	557+00.00	0.00	MAG NAIL
102	1806752.59	2424735.81	559+80.00	0.00	MAG NAIL
103	1806384.24	2424700.88	563+50.00	0.00	MAG NAIL

BENCH MARKS			
ELEVATION	STATION	OFFSET	DESCRIPTION
648.31	559+21.50	25.50' RT	CHISELED SQUARE ON THE SW WINGWALL OF S.N. 098-0017



REFERENCE TIES			
POINT	STATION	OFFSET	DESCRIPTION
500	553+25.94	12.33' RT.	MAG NAIL
501	553+50.00	12.48' LT.	MAG NAIL
502	553+74.47	12.16' RT.	MAG NAIL
503	556+74.54	12.00' RT.	MAG NAIL
504	557+00.00	12.56' LT.	MAG NAIL
505	557+24.66	12.77' RT.	MAG NAIL
506	559+54.78	11.75' RT.	MAG NAIL
507	559+80.00	12.48' LT.	MAG NAIL
508	560.05.06	11.80' RT.	MAG NAIL
509	563+24.48	11.80' RT.	MAG NAIL
510	563+50.00	11.85' LT.	MAG NAIL
511	563+74.53	11.94' RT.	MAG NAIL



REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

HORIZONTAL & VERTICAL CONTROL

SCALE: 1"=50'  
DATE: AUGUST, 2005

DRAWN BY: JH  
CHECKED BY: FML

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
646	(102)BR-3	WHITESIDE	57	6
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
CONTRACT NUMBER: 64426				

## GENERAL NOTES

See cross sections for special ditches and backslopes.

The removal of Bituminous Surfacing not on a rigid type base removed in conjunction with the base shall be removed as EARTH EXCAVATION. The removal of Bituminous Surfacing on a rigid type base removed in conjunction with the base shall be included in the contract unit price for PAVEMENT REMOVAL of the type specified.

The final top four inches of soil in any right-of-way area disturbed by the Contractor must be capable of supporting vegetation. The soil must be from the A horizon (zero to 2' deep) of soil profiles of local soils.

It is estimated that 520 cubic yards of earth will be hauled to the job from outside the project limits. A shrinkage factor of 25% has been used.

The Contractor shall seed all disturbed areas within the project limits. Seeding Class 4 or 6 (modified) shall be used. Class 6 (modified) shall be used on front slopes and ditch bottoms. Class 4 shall be used on all back slopes and areas behind the back slope, and beyond the toe of front slope on fill sections without ditches.

Fertilizer Nutrients shall be applied at the rate specified in Sections 250 and 252 of the Standard Specifications. This shall be included in the cost of the SEEDING or SODDING.

Mulch Method II shall be applied over all seeded areas.

When mulch with emulsified asphalt is applied, it will be the contractor's responsibility to cover or protect all traffic signs, guardrail and curbs. Any signs, guardrail or curbs which become covered with asphaltic material shall be cleaned by the Contractor at his own expense.

The following Mixture Requirements are applicable for this project:

Mixture Use(s):	<u>SURFACE COURSE:</u> BIT. CONC. SURF. CSE. SUPERPAVE, MIX "C", N50	<u>LEVELING BINDER:</u> LEVELING BINDER, SUPERPAVE, N50	<u>SHOULDER SURFACE:</u> BIT. CONC. SURF. CSE. SUPERPAVE, MIX "C", N50	<u>SHOULDER LOWER LIFT:</u> BIT. SHLD. SUPERPAVE
PG:	PG 64-22	PG 64-22	PG 58-22	PG 58-22
RAP% (Max)	15%	25%	30%	50%
Design Air Voids	4.2% @ N50	4.2% @ N50	3.0% @ N50	2.0% @ N50
Mixture Composition (Gradation Mixture)	IL 9.5 OR 12.5	IL 9.5	IL 9.5 OR 12.5	BAM
Friction Aggregate	C	N/A	C	N/A
20 Year ESAL	2.3	2.3	N/A	N/A

The Contractor will be required to furnish 5/2" high brass stencils as approved by the Engineer and install stationing at 250' intervals. Stationing shall be placed on both lanes of 2-lane highways. The stations shall be placed 6" inside the pavement marking edge so they can be read from shoulder. This work will be included in the cost of the final pavement surface.

Guardrail posts may be driven through bituminous shoulders if the shoulder is not damaged as determined by the Engineer. If the shoulder is being damaged, the Contractor shall core holes in the shoulder according to Article 630.06 of the Standard Specifications.

Install a "TO ACTUATE SIGNAL" sign for the traffic signal detector loops. The detail of this sign is included in the plans. This work will be included in the cost of TRAFFIC CONTROL AND PROTECTION STANDARD 701321.

Bituminous and Aggregate prime coat shall be placed in accordance with Section 406 of the Standard Specifications. The cost of the prime coats shall be included in the contract unit price per ton for LEVELING BINDER (MACHINE METHOD) of the type specified.

A Nationwide 404 Permit has been issued for this project and the conditions of that permit must be adhered to.

The new number for this structure will be S.N. 098-0109.

Three (3) trees are proposed to be replaced within the project limits. The layout shall be performed by the District Landscape Architect. Mulch shall consist of hardwood chips, spread at a width of five (5) feet, four (4) inches thick, with weed barrier, to be included in the cost per EACH tree. An alternate planting site shall be at the I-88/IL Route 40 Interchange location.

### COMMITMENTS

No commitments have been made for this project.

The thickness for the Bridge Approach Pavement Connector (Flexible) shall be a minimum of 12". The material shall be 1/2" Bit. Conc. Surf. Cse., Superpave, Mixture "C", N50, and the remaining thickness shall be Leveling Binder, Superpave, N50. The work will be paid for at the contract unit price per Sq. Yd. for BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE).

Strip Reflective Crack Control shall be placed at all locations where the original pavement was widened as shown in the plans.

During construction operations the existing field entrance at Station 554+93.00 RT shall be closed. The Property Owner shall access the parcel from the existing field entrance along Hahnaman Road just west of the project limits.

The proposed pipe for the field entrance shall be placed in line with the proposed ditch line.

Where field tile is encountered, storm sewer or pipe drain will be used in accordance with Section 611. The minimum size for replacement will be 6" for Pipe Drains and 8" for Storm Sewer, but the size must be at least 2" larger than the adjoining tile. A Field Tile Junction Vault will be constructed at the right of way to connect the tile and storm sewer. The following quantities have been included in case field tile is encountered:

- Exploration Trench 52" Depth - 200 FOOT
- Field Tile Junction Vaults - 2 EACH
- Storm Sewer Special, 8" - 200 FOOT
- Storm Sewer Special, 10" - 200 FOOT
- Storm Sewer Special, 12" - 200 FOOT

A quantity of 10 (NW), 10 (NE), 10 (SW) and 10 (SE) Cubic Yards of Furnished Excavation has been included to provide shoulder widening for the TRAFFIC BARRIER TERMINAL, TYPE 1, SPECIAL (FLARED), if the Engineer determines that the excavated materials from the job are insufficient to bring the shoulders to the proper slope and width.

The Contractor shall be responsible for ensuring that the flapgates are in working order at all times. A quantity of one (1) EACH for Flap Gate 24", and Flap Gate 30", has been provided in the event replacement is required. Checking the flapgates shall be included in the cost for replacement of flapgates.

The Contractor shall supply the Resident Engineer with the manufacturer's installation requirements for the type of Steel Plate Beam Guardrail Terminal Type 1 Special (Flared).

One 8d galvanized nail shall be used to toe nail the wood block out to the wood post on all traffic Barrier Terminal Type I Specials.

Delineators shall be installed as shown in Standard 635001, except that the post shall be rotated 180° and only metal-backed delineators shall be permitted.

Temporary Seeding for Erosion Control shall be provided for the project and as directed by the Engineer. This work shall be included in the cost for EARTH EXCAVATION.

Saw cutting shall be included in the cost per Square Yard for PAVEMENT REMOVAL.

Aggregate Base Course, Type B, is provided in the plan quantities and shall be used only as needed when directed by the Engineer.

Right-of-way markers will be erected with the back face of the marker on the right-of-way line unless the new right-of-way line has been surveyed and pinned, in which instance the right-of-way markers will be erected 12 inches inside the new right-of-way line.

The Contractor shall be responsible for protecting utility property during construction operations as outlined in Article 107.31 of the Standard Specifications. A minimum of 48 hours advance notice is required for non-emergency work. The JULIE number is 800-892-0123. The following listed utilities located within the project limits or immediately adjacent to the project construction limits are members of JULIE:

SBC, AT&T, COM ED, FRONTIER COMMUNICATIONS, LIGHTCORE, MID-AMERICAN PIPELINE, NICOR GAS

CADD data will be available to Contractors and Consultants working on this project. This information will be provided upon request as MicroStation CADD files and Geopak coordinate geometry files ONLY. If data is required in other formats it will be your responsibility to make these conversions. If any discrepancy or inconsistency arises between the electronic data and the information on the hard copy, the information on the hard copy should be used. Contact the District's Project Engineer to request these files.

#### SURVEY MARKERS

PERMANENT SURVEY MARKERS, TYPE II, shall be set at intervals of 1.6 km (1 mile) or as directed by the Engineer. Bridge or culvert projects shall have one survey marker placed near the structure. Estimated: 1 EACH.

Permanent Survey Markers, Type II shall be cast-in-place as shown on Highway Standard 667101.

The Contractor shall submit to the Engineer a description of location, elevation, and coordinates for each permanent survey marker. The Engineer shall submit this information to the Survey Crew.

### REVIEWED

ENGINEER OF PROJECT DEVELOPMENT	DATE
ENGINEER OF PROJECT IMPLEMENTATION	DATE
ENGINEER OF OPERATIONS	DATE
ENGINEER OF LOCAL ROADS	DATE

NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

### GENERAL NOTES & COMMITMENTS

SCALE: NONE  
DATE: AUGUST, 2005

DRAWN BY: JH  
CHECKED BY: FML

**20100110 TREE REMOVAL (6 TO 15 UNITS DIAMETER)**

LOCATION	QUANTITY (UNITS)
STATION	
STA. 556+59.6 TO 52.5' LT.	7
STA. 556+91.1 TO 50.3' LT.	7
STA. 556+63.3 TO 52.7' LT.	6
TOTAL =	20

**28000300 TEMPORARY DITCH CHECKS**

LOCATION	QUANTITY (EACH)
STATION	
555+60, RT	1
556+75, LT	1
558+50, RT	1
558+75, LT	1
557+20, LT	1
557+50, RT	1
558+00, RT	1
559+00, LT	1
559+50, LT	1
559+75, RT	1
560+25, RT	1
560+50, LT	1
561+25, RT	1
561+50, LT	1
TOTAL =	14

**44000100 PAVEMENT REMOVAL**

LOCATION	QUANTITY (SQ. YD.)
STATION	
557+16.5 TO 557+45.8	78.2
559+28.5 TO 559+59.5	82.7
TOTAL =	160.9

**20200100 EARTH EXCAVATION  
20400800 FURNISHED EXCAVATION**

LOCATION	EARTH EXCAVATION CU. YD.	EARTH EXCAVATION ADJUSTED FOR SHRINKAGE CU. YD.	EMBANKMENT CU. YD.	FURNISHED EXCAVATION CU. YD.
STATION				
554+55 TO 557+54.65	194.1	138.1	406.3	268.2
559+21.35 TO 562+70	298.4	223.8	475.4	251.6
TOTAL =	482.5	361.9	881.7	519.8
USE	485			520

**44000700 APPROACH SLAB REMOVAL**

LOCATION	QUANTITY (SQ. YD.)
STATION	
STA. 557+45.8 TO STA. 557+75.8	80.0
STA. 558+98.5 TO STA. 559+28.5	80.0
TOTAL =	160.0

**44004250 PAVED SHOULDER REMOVAL**

LOCATION	QUANTITY (SQ. YD.)
STATION	
STA. 557+02.6 TO STA. 557+63.4 LT.	29.9
STA. 557+26.6 TO STA. 557+92.0 RT.	40.0
STA. 558+85.3 TO STA. 559+49.5 LT.	29.4
STA. 559+13.0 TO STA. 559+73.2 RT.	30.1
TOTAL =	129.4

**20300100 CHANNEL EXCAVATION**

LOCATION	QUANTITY (CU. YD.)
STATION	
STA. 557+54.0 TO STA. 557+88.5	156.0
STA. 558+89.5 TO STA. 559+22.0	156.0
TOTAL =	312.0

**28000500 INLET AND PIPE PROTECTION**

LOCATION	QUANTITY (EACH)
STATION	
554+76.20, RT	1
557+35.08, LT	1
558+08.52, RT	1
558+72.25, LT	1
559+54.51, RT	1
TOTAL =	5

**44300200 STRIP REFLECTIVE CRACK CONTROL TREATMENT**

LOCATION	QUANTITY (FOOT)
STATION	
RT. STA. 554+55.0 TO STA. 557+24.1	269.1
RT. STA. 559+67.0 TO STA. 562+70.0	303.0
LT. STA. 554+55.0 TO STA. 557+09.0	254.0
LT. STA. 559+52.0 TO STA. 562+70.0	318.0
TOTAL =	1,144.1

**21301052 EXPLORATION TRENCH 52" DEPTH**

LOCATION	QUANTITY (FOOT)
STATION	
JOBSITE, RT	100.0
JOBSITE, LT	100.0
TOTAL =	200.0

**35101400 AGGREGATE BASE COURSE, TYPE B**

LOCATION	QUANTITY (TON)
STATION	
STA. 554+93.0 RT	50.0
STA. 554+55.0 TO STA. 557+96.5 RT	51.3
STA. 559+08.6 TO STA. 562+70.0 RT	56.3
TOTAL =	157.6

**25000310 SEEDING, CLASS 4**

LOCATION	QUANTITY (ACRE)
JOBSITE	0.14
TOTAL =	0.14

**48202315 BITUMINOUS SHOULDERS, SUPERPAVE 5 1/2"**

LOCATION	QUANTITY (SQ. YD.)
STATION	
STA. 554+55 TO STA. 557+40.5 RT.	198.0
STA. 554+55 TO STA. 557+09.5 LT.	188.7
STA. 559+66.5 TO STA. 562+70 RT.	213.5
STA. 559+35.5 TO STA. 562+70 LT.	243.3
TOTAL =	843.5

**25001830 SEEDING, CLASS 6 (MODIFIED)**

LOCATION	QUANTITY (ACRE)
JOBSITE	0.79
TOTAL =	0.79

**40600980 BITUMINOUS SURFACE REMOVAL - BUTT JOINT**

LOCATION	QUANTITY (SQ. YD.)
STATION	
554+55.00 TO 555+00.00	187.3
562+25.00 TO 562+70.00	181.6
TOTAL =	368.9

**25100115 MULCH METHOD 2**

LOCATION	QUANTITY (ACRE)
JOBSITE	1.25
TOTAL =	1.25

**42001165 BRIDGE APPROACH PAVEMENT**

LOCATION	QUANTITY (SQ. YD.)
STATION	
557+24.65 TO 557+54.65	124.7
559+21.35 TO 559+51.35	124.7
TOTAL =	249.4

**50105220 PIPE CULVERT REMOVAL**

LOCATION	QUANTITY (FOOT)
STATION	
555+33, RT.	29.7
TOTAL =	29.7

**25100630 EROSION CONTROL BLANKET**

LOCATION	QUANTITY (SQ. YD.)
STATION	
554+55 TO 557+61.7, RT	409.3
554+55 TO 557+31.5, LT	280.7
559+44.5 TO 562+70, RT	554.9
559+14.3 TO 562+70, LT	698.1
TOTAL =	1943.0

**42001430 BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)**

LOCATION	QUANTITY (SQ. YD.)
STATION	
557+16.50 TO 557+24.65	34.2
559+51.35 TO 559+59.50	34.2
TOTAL =	68.4

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES

SCALE: NONE  
DATE: AUGUST 2005

DRAWN BY: JH  
CHECKED BY: FML

**5420223 PIPE CULVERTS, CLASS D 18"**

LOCATION	QUANTITY (FOOT)
STATION	
554+93.6 RT	36
TOTAL =	36

**54215547 METAL END SECTIONS 12"**

LOCATION	QUANTITY (EACH)
STATION	
557+25.10, LT	1
557+56.85, RT	1
559+19.15, LT	1
559+57.50, RT	1
TOTAL =	4

**54215553 METAL END SECTIONS 18"**

LOCATION	QUANTITY (EACH)
STA 554+74.7 , 34.5' RT	1
STA 555+12.5 , 39.4' RT	1
TOTAL =	2

**54390170 INSERTION CULVERT LINER 22"**

LOCATION	QUANTITY (FOOT)
STATION	
557+50 , LT	30.0
558+23 , RT	30.0
559+40 , RT	30.0
TOTAL =	90.0

**54390200 INSERTION CULVERT LINER 28"**

LOCATION	QUANTITY (FOOT)
558+55 , LT	34.5
TOTAL =	34.5

**60100945 PIPE DRAINS 12"**

LOCATION	QUANTITY (FOOT)
STATION	
557+25.10, LT	22.0
557+56.85, RT	29.3
559+19.15, LT	28.5
559+50.90, RT	36.9
TOTAL =	116.7

**60801024 FLAP GATE 24"**

LOCATION	QUANTITY (EACH)
JOBSITE	1
TOTAL =	1

**60801030 FLAP GATE 30"**

LOCATION	QUANTITY (EACH)
JOBSITE	1
TOTAL =	1

**60900240 TYPE C INLET BOX, STANDARD 609006**

LOCATION	QUANTITY (EACH)
STATION	
557+25.10, LT	1
557+56.85, RT	1
559+19.15, LT	1
559+50.90, RT	1
TOTAL =	4

**60900515 CONCRETE THRUST BLOCKS**

LOCATION	QUANTITY (EACH)
STATION	
557+25.10, LT	1
557+56.85, RT	1
559+19.15, LT	1
559+56.50, RT	1
TOTAL =	4

**61133100 FIELD TILE JUNCTION VAULTS, 2' DIA**

LOCATION	QUANTITY (EACH)
JOBSITE, RT	1
JOBSITE, LT	1
TOTAL =	2

**61140000 STORM SEWER, SPECIAL 8"  
61140100 STORM SEWER, SPECIAL 10"  
61140200 STORM SEWER, SPECIAL 12"**

LOCATION	QUANTITY (FOOT)
JOBSITE, RT	100.0
JOBSITE, LT	100.0
TOTAL =	200.0

**63000000 STEEL PLATE BEAM GUARDRAIL TYPE A**

LOCATION	QUANTITY (FOOT)
STATION	
STA. 555+88.61 TO 557+31.07 RT	162.5
STA. 556+00.90 TO 557+00.86 LT	100.0
STA. 559+75.14 TO 560+75.10 RT	100.0
STA. 559+44.93 TO 561+07.39 LT	162.5
TOTAL =	525.0

**63100085 TRAFFIC BARRIER TERMINAL, TYPE 6**

LOCATION	QUANTITY (EACH)
STATION	
STA. 557+31.07 TO 557+64.22 RT	1
STA. 557+00.86 TO 557+34.01 LT	1
STA. 559+41.99 TO 559+75.14 RT	1
STA. 559+11.78 TO 559+44.93 LT	1
TOTAL =	4

**63100169 TRAFFIC BARRIER TERMINAL TYPE 1, SPECIAL (FLARED)**

LOCATION	QUANTITY (EACH)
STATION	
STA. 555+18.61 TO 555+88.61 RT	1
STA. 555+50.90 TO 556+00.90 LT	1
STA. 560+75.10 TO 561+25.10 RT	1
STA. 561+07.39 TO 561+57.39 LT	1
TOTAL =	4

**63200310 GUARDRAIL REMOVAL**

LOCATION	QUANTITY (FOOT)
STATION	
STA 556+25.65 TO 557+97.92 RT	172.6
STA 555+84.85 TO 557+57.27 LT	172.4
STA 559+21.88 TO 560+70.34 RT	149.1
STA 558+83.25 TO 560+56.15 LT	172.9
TOTAL =	667.0

**63500105 DELINEATORS**

LOCATION	QUANTITY (EACH)
STATION	
STA. 555+18.61 RT.	1
STA. 561+57.39 LT.	1
TOTAL =	2

**66600105 FURNISHING AND ERECTING RIGHT-OF-WAY MARKERS**

LOCATION	QUANTITY (EACH)
STATION	
STA. 556+50; 60.0' LT	1
STA. 557+00; 70.0' LT	1
STA. 555+00; 60.0' RT	1
STA. 555+50; 70.0' RT.	1
STA. 561+50; 70.0' LT	1
STA. 562+00; 60.0' LT	1
STA. 561+60; 70.0' RT.	1
STA. 562+00; 60.0' RT.	1
TOTAL =	8

**66700305 PERMANENT SURVEY MARKERS, TYPE II**

LOCATION	QUANTITY (EACH)
JOBSITE	1
TOTAL =	1

**67000400 ENGINEER'S FIELD OFFICE, TYPE A**

LOCATION	QUANTITY (CAL. MONTH)
JOBSITE	6
TOTAL =	6

**67100100 MOBILIZATION**

LOCATION	QUANTITY (L. SUM)
JOBSITE	1
TOTAL =	1

**70100405 TRAFFIC CONTROL AND PROTECTION, STANDARD 701321**

LOCATION	QUANTITY (EACH)
JOBSITE	1
TOTAL =	1

**70100450 TRAFFIC CONTROL AND PROTECTION, STANDARD 701201**

LOCATION	QUANTITY (L. SUM)
JOBSITE	1
TOTAL =	1

**70100460 TRAFFIC CONTROL AND PROTECTION, STANDARD 701306**

LOCATION	QUANTITY (L. SUM)
JOBSITE	1
TOTAL =	1

**70100500 TRAFFIC CONTROL AND PROTECTION, STANDARD 701326**

LOCATION	QUANTITY (L. SUM)
JOBSITE	1
TOTAL =	1

**70103815 TRAFFIC CONTROL SURVEILLANCE**

LOCATION	QUANTITY (CAL. DA.)
JOBSITE	6
TOTAL =	6

**70106500 TEMPORARY BRIDGE TRAFFIC SIGNALS**

LOCATION	QUANTITY (EACH)
IL ROUTE 40	
NORTH END	2
SOUTH END	2
HAHNAMAN ROAD	
WEST SIDE	2
EAST SIDE	2
TOTAL =	8

**70106700 TEMPORARY RUMBLE STRIP**

LOCATION	QUANTITY (EACH)
IL ROUTE 40	
NORTH END	3
SOUTH END	3
HAHNAMAN ROAD	
WEST SIDE	3
EAST SIDE	3
TOTAL =	12

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

**SCHEDULE OF QUANTITIES**

SCALE: NONE  
DATE: AUGUST 2005

DRAWN BY: JH  
CHECKED BY: FML

**70300220 TEMPORARY PAVEMENT MARKING - LINE 4"**

LOCATION	QUANTITY (FOOT)
STAGE I	
STA. 554+25.0 TO STA. 563+00.0 (WHITE)	875
STA. 553+72.5 TO STA. 563+47.5 (YELLOW)	975
STAGE II	
STA. 553+82.5 TO STA. 563+37.5 (YELLOW)	955
STA. 554+36.0 TO STA. 562+88.0 (WHITE)	852
TOTAL =	3,657

**70300280 TEMPORARY PAVEMENT MARKING - LINE 24"**

LOCATION	QUANTITY (FOOT)
HAHNAMAN ROAD	
EAST SIDE	12.0
WEST SIDE	12.0
TOTAL =	24.0

**70301000 WORK ZONE PAVEMENT MARKING REMOVAL**

LOCATION	QUANTITY (SQ. FT.)
TEMPORARY PAVEMENT MARKING	
STAGE I	618.7
STAGE II	602.4
TEMPORARY STOP BARS	
HAHNAMAN ROAD	48.0
TOTAL =	1,267.1

**70400100 TEMPORARY CONCRETE BARRIER**

LOCATION	QUANTITY (FOOT)
STATION	
STA 553+72.5 TO 563+47.5 (STAGE I)	975
TOTAL =	975

**70400200 RELOCATE TEMPORARY CONCRETE BARRIER**

LOCATION	QUANTITY (FOOT)
STATION	
STA 553+82.5 TO 563+37.5 (STAGE II)	955
TOTAL =	955

**78001100 PAINT PAVEMENT MARKING - LINE 4"**

LOCATION	QUANTITY (FOOT)
STATION	
STA. 554+55.0 TO STA. 562+70.00 RT. (WHITE)	815
STA. 554+55.0 TO STA. 562+70.00 LT. (WHITE)	815
STA. 554+55.0 TO STA. 562+70.00 (YELLOW)	203.8
x 2 APPLICATIONS	
TOTAL =	3,667.6

**78100100 RAISED REFLECTIVE PAVEMENT MARKER**

LOCATION	QUANTITY (EACH)
STATION	
554+22.50	1
555+02.50	1
555+82.50	1
556+82.50	1
559+82.50	1
560+82.50	1
561+42.50	1
562+22.50	1
563+02.50	1
TOTAL =	9

**78100105 RAISED REFLECTIVE PAVEMENT MARKER (BRIDGE)**

LOCATION	QUANTITY (EACH)
STATION	
557+42.50	1
558+22.50	1
559+02.50	1
TOTAL =	3

**78200200 BIDIRECTIONAL PRISMATIC BARRIER REFLECTOR**

LOCATION	QUANTITY (EACH)
STA. 547+70 LT.	1
STA. 558+20 RT.	1
STA. 558+50 LT.	1
STA. 559+00 RT.	1
TOTAL =	4

**78200420 GUARDRAIL MARKERS, TYPE B**

LOCATION	QUANTITY (EACH)
STA. 555+80 RT.	1
STA. 556+10 LT.	1
STA. 556+60 RT.	1
STA. 556+90 LT.	1
STA. 557+40 RT.	1
STA. 559+30 LT.	1
STA. 559+80 RT.	1
STA. 560+10 LT.	1
STA. 560+80 RT.	1
STA. 556+90 LT.	1
STA. 561+40 RT.	1
TOTAL =	11

**78201000 TERMINAL MARKER - DIRECT APPLIED**

LOCATION	QUANTITY (EACH)
STATION	
555+18.61 RT	1
555+50.90 LT.	1
561+25.10 RT.	1
561+57.39 LT.	1
TOTAL =	4

**78300100 PAVEMENT MARKING REMOVAL**

LOCATION	QUANTITY (SQ. FT.)
STATION	
CENTER: STA. 553+72.5 TO STA. 554+55.0	6.9
CENTER: STA. 562+70.0 TO STA. 563+47.5	6.5
RT: STA. 554+25.0 TO STA. 563+00.0	291.7
TOTAL =	305.1

**78300200 RAISED REFLECTIVE PAVEMENT MARKER REMOVAL**

LOCATION	QUANTITY (EACH)
STATION	
STA. 553+72.5 TO STA. 563+47.5	13
TOTAL =	13

**Z0030250 IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3**

LOCATION	QUANTITY (EACH)
U.S. 40	
NORTH END	1
SOUTH END	1
TOTAL =	2

**Z0030350 IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3**

LOCATION	QUANTITY (EACH)
U.S. 40	
NORTH END	1
SOUTH END	1
TOTAL =	2

**A2007814 TREE, TILIA AMERICANA (AMERICAN LINDEN/BASSWOOD), 1-3/4" CALIPER, BALLED AND BURLAPPED**

LOCATION	QUANTITY (EACH)
JOB SITE	3
TOTAL =	3

**X4066414 BIT, CONC. SURF. CSE., SUPERPAVE. MIX "C", N50**

LOCATION	QUANTITY (TON)
STATION	
LT SHOULDER: 554+55 TO 562+70	148.7
RT SHOULDER: 554+55 TO 562+70	272.9
PAVEMENT: 554+55 TO 562+70	139.9
TOTAL =	559.5

**X4066765 LEVELING BINDER (MACHINE METHOD), SUPERPAVE, N50**

LOCATION	QUANTITY (TON)
STATION	
554+90.00 TO 557+16.50	94.3
559+59.50 TO 562+35.00	174.3
TOTAL =	268.6

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

**SCHEDULE OF QUANTITIES**

SCALE: NONE  
DATE: AUGUST 2005

DRAWN BY: JH  
CHECKED BY: FML

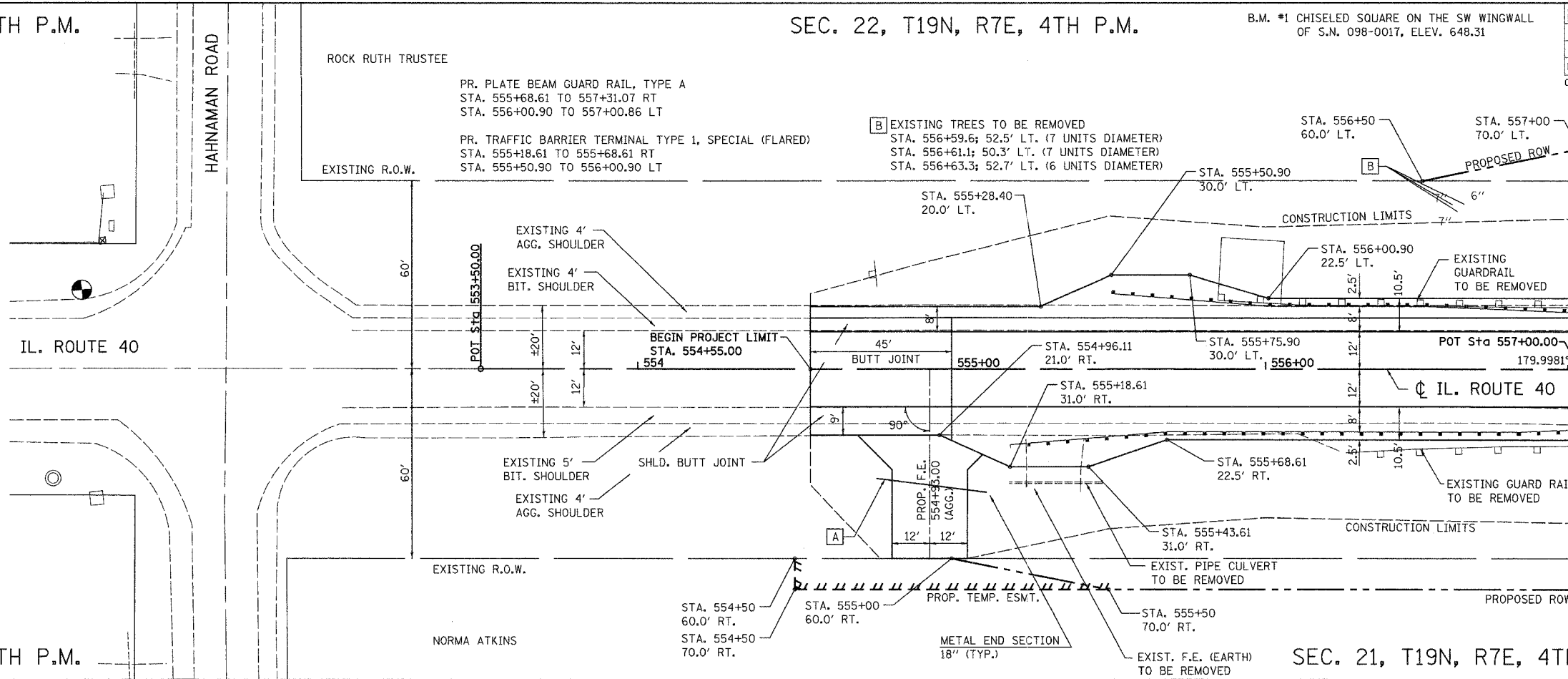
SEC. 15, T19N, R7E, 4TH P.M.

SEC. 22, T19N, R7E, 4TH P.M.

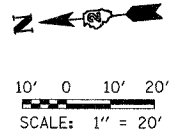
B.M. #1 CHISELED SQUARE ON THE SW WINGWALL OF S.N. 098-0017, ELEV. 648.31

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
646	(102)BR-3	WHITESIDE	57	10
STA. 554+55.00		TO STA. 557+00.00		
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				
CONTRACT NUMBER: 64426				

PLAN	DATE	BY
REVIEWED		
PLOTTED		
CHECKED		
NO. OF WAY CHECKED		
CADD FILE NAME		



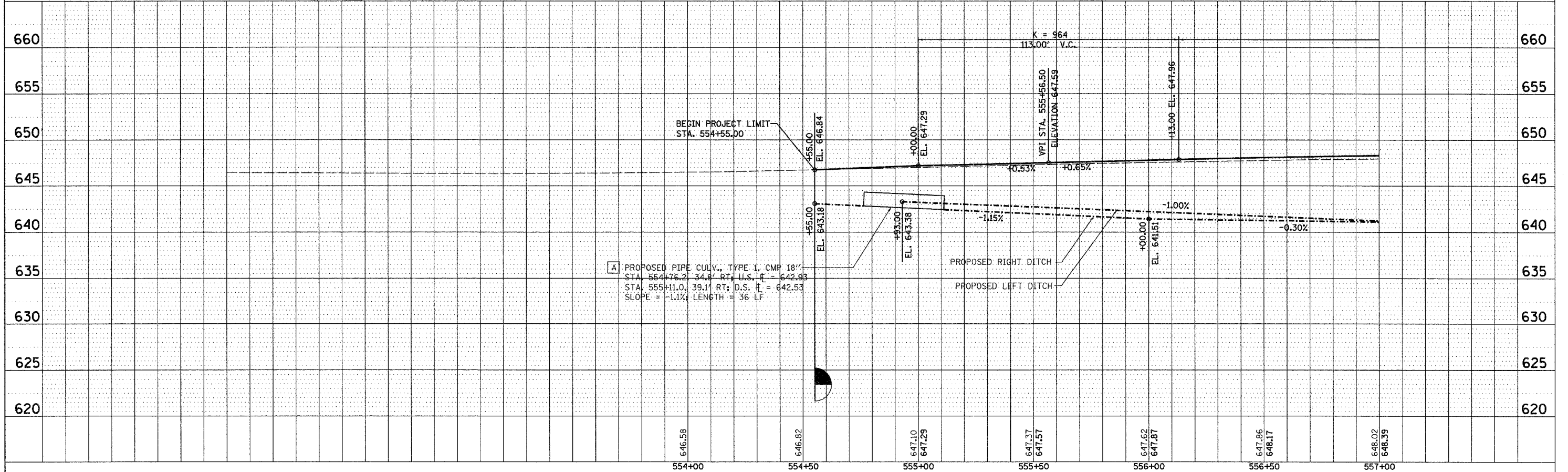
MATCH LINE STATION 557+00.00



SEC. 16, T19N, R7E, 4TH P.M.

SEC. 21, T19N, R7E, 4TH P.M.

PROFILE	DATE	BY
REVIEWED		
PLOTTED		
CHECKED		
NO. OF WAY CHECKED		
STRUCTURE NOTATIONS CHKD		



PLAN & PROFILE SHEET - STA. 554+55 TO 557+00

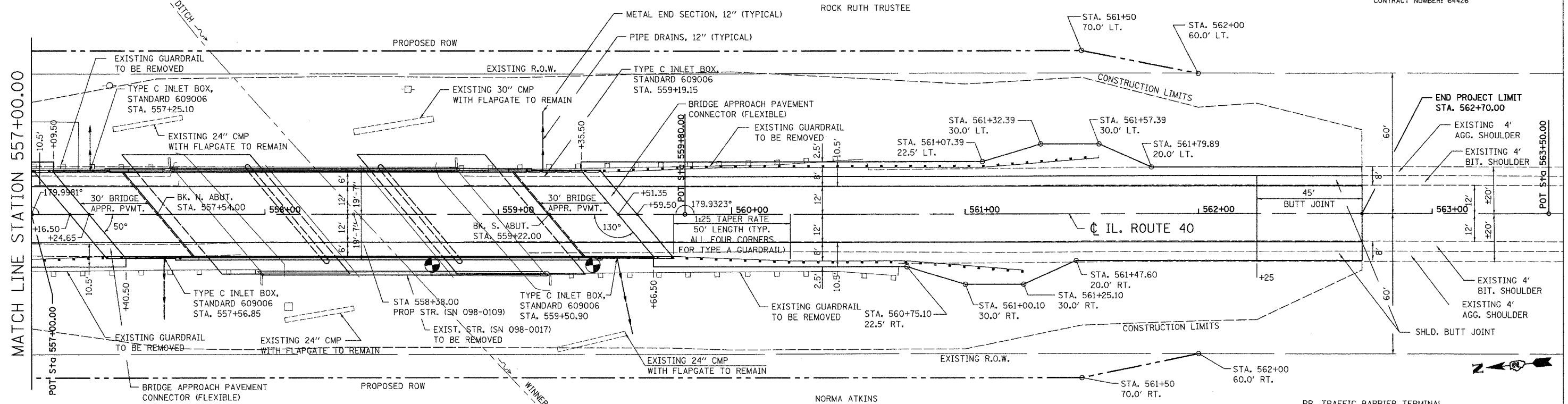


B.M. #1 CHISELED SQUARE ON THE SW WINGWALL  
OF S.N. 098-0017, ELEV. 648.31

SEC. 22, T19N, R7E, 4TH P.M.

NOTE: SEE STRUCTURE GENERAL PLAN AND ELEVATION SHEET FOR RIPRAP INFORMATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
646	(102)BR-3	WHITESIDE	57	11
STA. 557+00.00 TO STA. 562+70.00				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				
CONTRACT NUMBER: 64426				



PR. PLATE BEAM GUARD RAIL, TYPE A  
STA. 555+68.61 TO 557+31.07 RT  
STA. 556+00.90 TO 557+00.86 LT

PR. TRAFFIC BARRIER TERMINAL, TYPE 6  
STA. 557+31.07 TO 557+64.22 RT  
STA. 557+00.86 TO 557+34.01 LT

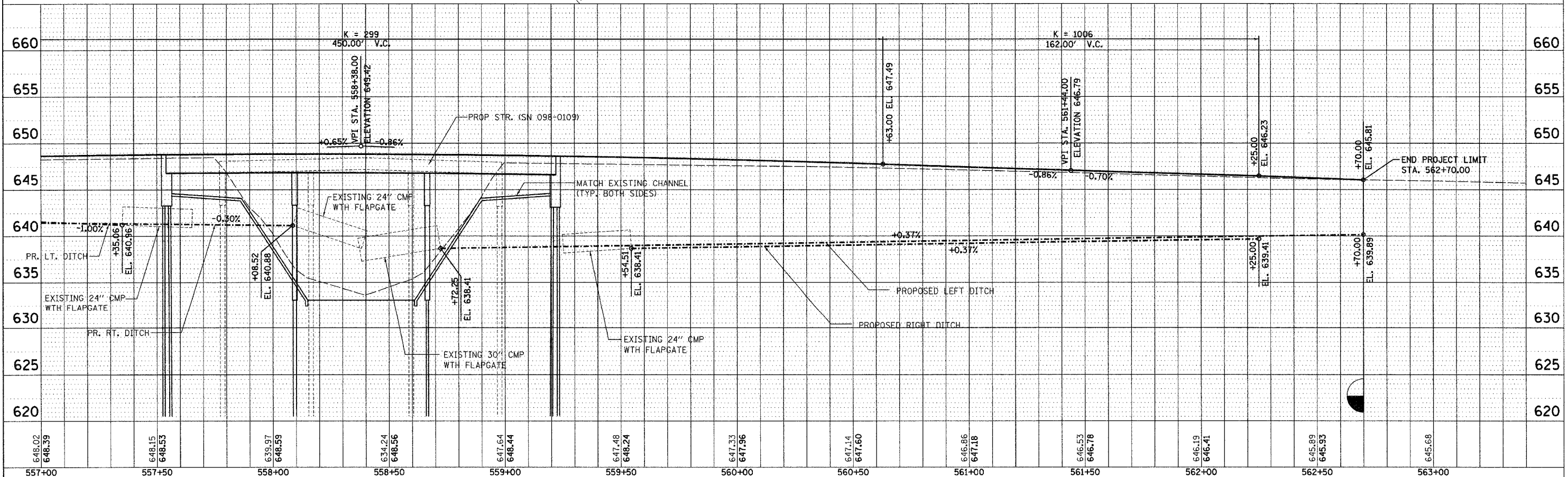
SEC. 21, T19N, R7E, 4TH P.M.

PR. TRAFFIC BARRIER TERMINAL, TYPE 6  
STA. 559+41.99 TO 559+75.14 RT  
STA. 559+11.78 TO 559+44.93 LT

PR. PLATE BEAM GUARD RAIL, TYPE A  
STA. 559+75.14 TO 560+75.10 RT  
STA. 559+44.93 TO 561+07.39 LT

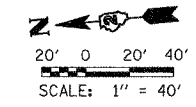
PR. TRAFFIC BARRIER TERMINAL  
TYPE 1, SPECIAL (FLARED)  
STA. 560+75.10 TO 561+25.10 RT  
STA. 561+07.39 TO 561+57.39 LT

10' 0" 10' 20"  
SCALE: 1" = 20'



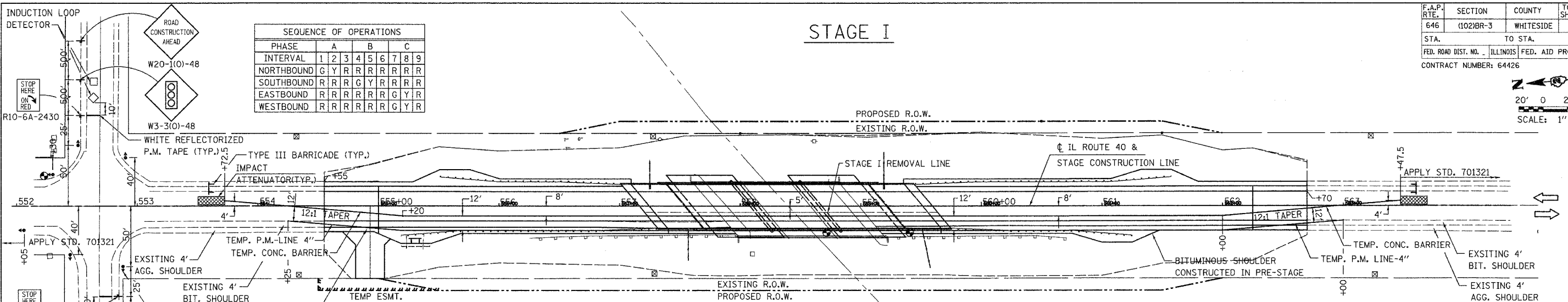
PLAN & PROFILE SHEET - STA. 557+00 TO 562+70

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
646	(102)BR-3	WHITESIDE	57	12
STA. TO STA.		ILLINOIS FED. AID PROJECT		
FED. ROAD DIST. NO.		CONTRACT NUMBER: 64426		



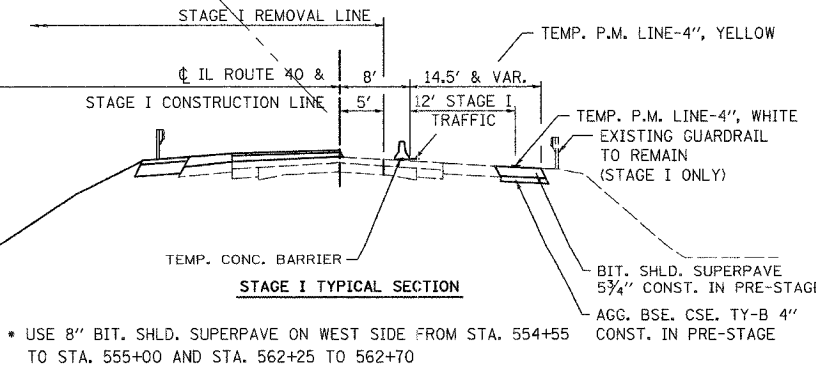
SEQUENCE OF OPERATIONS									
PHASE	A	B	C	D	E	F	G	H	I
INTERVAL	1	2	3	4	5	6	7	8	9
NORTHBOUND	G	Y	R	R	R	R	R	R	R
SOUTHBOUND	R	R	R	G	Y	R	R	R	R
EASTBOUND	R	R	R	R	R	R	G	Y	R
WESTBOUND	R	R	R	R	R	R	G	Y	R

### STAGE I



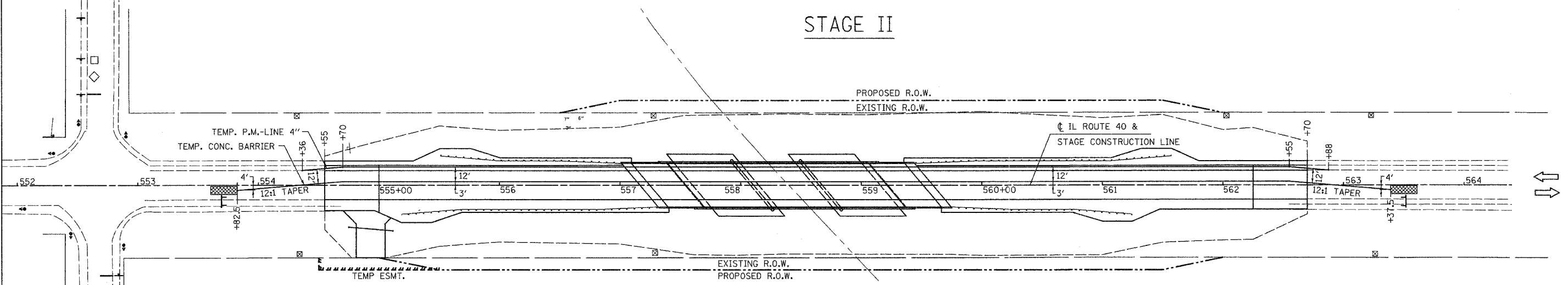
- PRE-STAGE CONSTRUCTION:**
1. CLOSE SOUTHBOUND LANE IN ACCORDANCE WITH STANDARD 701306.
  2. WIDEN WEST SIDE SHLD. WITH AGG. BASE CSE. TYPE B. AND BIT. SHLD., SUPERPAVE. SEE TYPICAL SECTION ON THIS SHEET AND SHEET NO. 5 FOR DETAILS.

- STAGE I CONSTRUCTION:**
1. REMOVE WEST SIDE EXISTING PAVEMENT MARKING EDGE LINE AND CENTER LINE IMMEDIATELY PRIOR TO BARRIER WALL PLACEMENT IN ACCORDANCE WITH STANDARD 701306.
  2. CLOSE EAST HALF OF IL RTE 40 AS SHOWN IN ACCORDANCE WITH STANDARD 701321
  3. REMOVE EAST HALF OF EXISTING BRIDGE, BRIDGE APPROACH PAVEMENT, SHOULDER, AND PORTIONS OF PAVEMENT AS SHOWN.
  4. CONSTRUCT EAST HALF GRADING AND DITCHES.
  5. CONSTRUCT EAST HALF OF PROPOSED BRIDGE, APPROACH PAVEMENT, APPROACH PAVEMENT CONNECTORS, PAVEMENT AND SHOULDER.
  6. INSTALL EAST SIDE GUARDRAILS.
  7. APPLY TEMPORARY PAVEMENT MARKINGS.



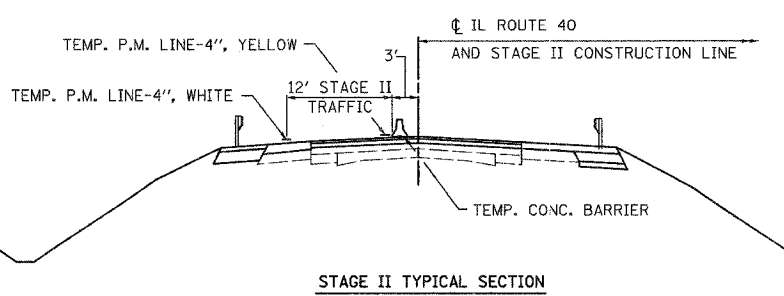
- GENERAL NOTES:**
1. MAINTENANCE OF TRAFFIC SHALL BE IN ACCORDANCE WITH HIGHWAY STANDARD 701321, AS SHOWN AND AS DIRECTED BY THE ENGINEER.
  2. THE SIGN "TO ACTUATE SIGNAL" SHOWN IN DISTRICT STANDARD 99.4 SHALL BE INSTALLED AT THE STOP LINE AS DIRECTED BY ENGINEER.
  3. SIGNAL, STOP BAR, RUMBLE STRIP, LOOP DETECTOR AND ADVANCE SIGN LOCATIONS TO REMAIN IN PLACE THROUGHOUT DURATION OF STAGES I & II.
  4. COST OF SIDE STREET TRAFFIC CONTROL WILL BE INCLUDED IN TRAFFIC CONTROL STANDARD 701321. NO ADDITIONAL COMPENSATION WILL BE MADE.
  5. DURING CONSTRUCTION OPERATIONS THE EXISTING FIELD ENTRANCE AT STATION 554+93.00 RT SHALL BE CLOSED. THE PROPERTY OWNER SHALL ACCESS THE PARCEL FROM THE EXISTING FIELD ENTRANCE ALONG HAHNAMAN ROAD JUST WEST OF THE PROJECT LIMITS.

### STAGE II



- STAGE II CONSTRUCTION:**
1. CLOSE WEST HALF OF IL RTE 40 AS SHOWN IN ACCORDANCE WITH STANDARD 701321
  2. REMOVE WEST HALF OF EXISTING BRIDGE, APPROACH PAVEMENT, SHOULDER, AND PORTIONS OF PAVEMENT.
  3. CONSTRUCT WEST HALF GRADING AND DITCHES.
  4. CONSTRUCT WEST HALF OF PROPOSED BRIDGE, APPROACH PAVEMENT, APPROACH PAVEMENT CONNECTORS, PROPOSED PAVEMENT AND SHOULDER.
  5. CONSTRUCT FIELD ENTRANCE AND CULVERT.
  6. INSTALL WEST SIDE GUARDRAILS.

- STAGE III CONSTRUCTION:**
1. APPLY PERMANENT PAVEMENT MARKINGS UNDER STD. 701311.



REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**MAINTENANCE OF TRAFFIC PLAN**  
 SCALE: 1"=40'  
 DATE: AUGUST, 2005  
 DRAWN BY: JH  
 CHECKED BY: FML



Benchmark: Chisled "a" on SW corner of bridge 098-0017 on top of the wingwall. Elev.: 648.31

Existing Structure: S.N. 098-0017. Three span Precast-Prestressed Concrete deck beams on pile bent piers and abutments. The overall length is 124'-0" and the overall width is 46'-6". The contractor shall remove the existing structure in stages and replace it with a three span wide flange beam with reinforced concrete slab superstructure.

No Salvage.

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

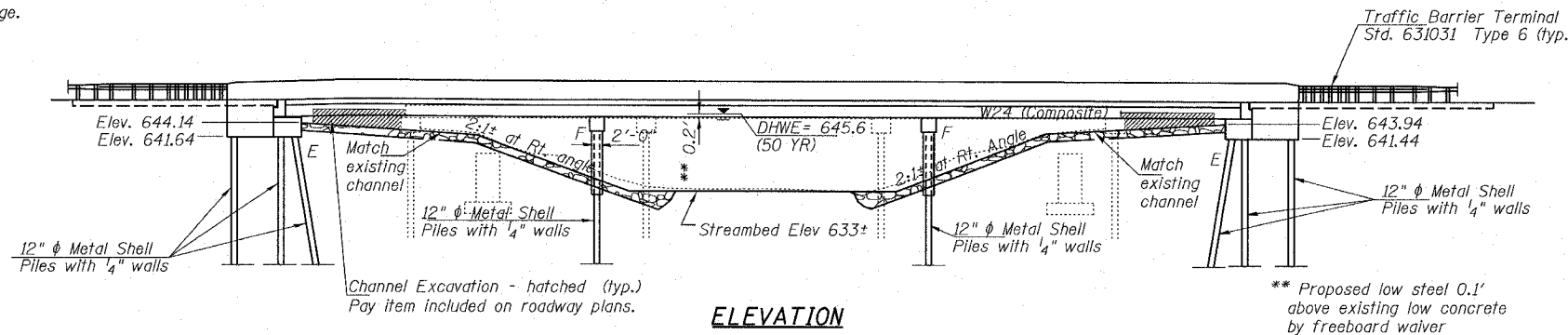
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.L. 646	(102) BR-3	Whiteside	57	13
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT				

SHEET NO. 1  
24 SHEETS

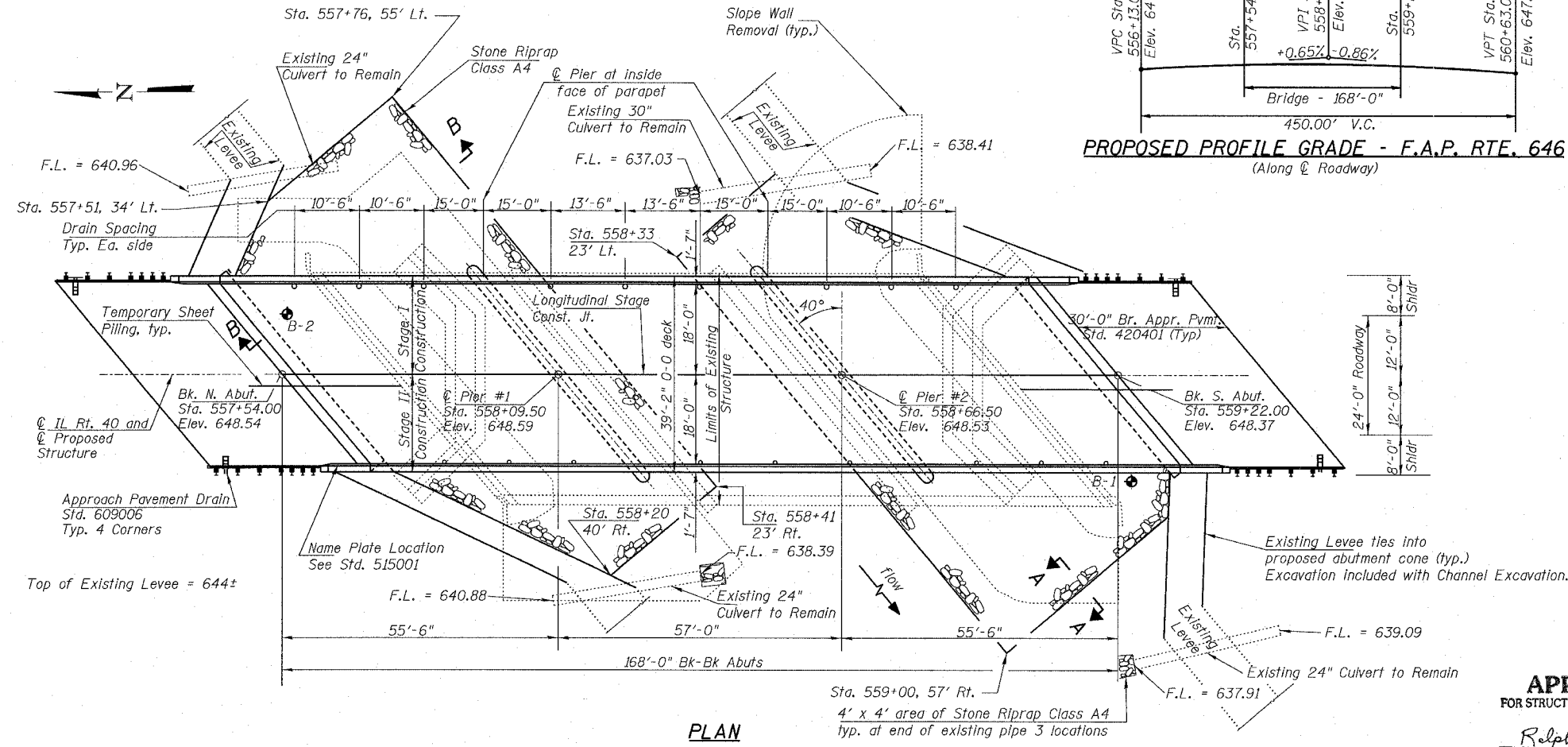
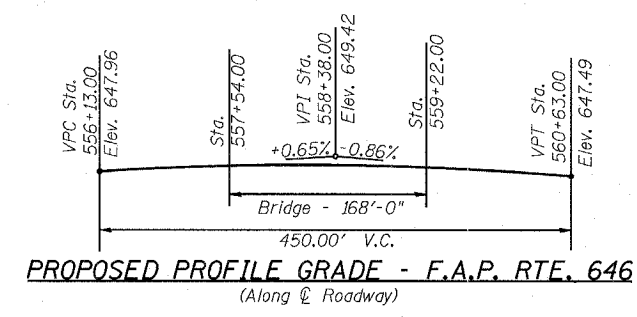
CONTRACT NO. 64426

GENERAL NOTES

- Fasteners shall be high strength bolts AASHTO M 164, Type 3 in unpainted areas and mechanically galvanized AASHTO M 164, Type 1 or 2 in painted areas. Bolts  $\frac{7}{8}$ "  $\phi$ , open holes  $\frac{5}{16}$ "  $\phi$ , unless otherwise noted.
- Calculated weight of Structural Steel = 123,930 pounds.
- All structural steel shall be AASHTO M 270 Grade 50W.
- Field welding of construction accessories will not be permitted to beams or girders.
- Anchor bolts shall be set before bolting diaphragms over supports.
- The structural steel bearing plates of the Elastomeric Bearing Assembly shall conform to the requirements of AASHTO M 270 Grade 50W.
- 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 and all splice plate material except fill plates.
- Reinforcement bars shall conform to the requirements of AASHTO M 31 or M322 Grade 60.
- Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.
- Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of  $\frac{1}{8}$  inch. Adjustment shall be made either by grinding the surface or by shimming the bearing. Two  $\frac{3}{8}$ " adjusting shims, of the dimensions of the bottom bearing plate, shall be provided for each bearing in addition to all other plates or shims.
- The contractor shall drive one test pile at the north abutment, one test pile at Pier #1 and one test pile at Pier #2 in permanent locations as directed by the Engineer before ordering the remainder of piles.
- Bridge Seat Sealer shall be applied to the seat area of the north and south abutments.
- AASHTO M 270 Grade 50W structural steel shall only be painted, for a distance of three times the depth of the beams or girders (but not exceeding 10 feet) each way from the deck joints. All structural steel shall be cleaned as specified in the special provision for "Surface Preparation and Painting Requirements for Weathering Steel".
- All Construction joints shall be bonded.



\*\* Proposed low steel 0.1' above existing low concrete by freeboard waiver



TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Removal of Existing Structures	Each			1
Concrete Structures	Cu. Yd.		199.3	199.3
Concrete Superstructure	Cu. Yd.	203.8		203.8
Reinforcement Bars, Epoxy Coated	Pound	47,060	17,480	64,540
Furnishing Metal Pile Shells 12"	Lin. Ft.		3725	3725
Driving and Filling Shells	Lin. Ft.		3725	3725
Test Pile Metal Shells	Each		3	3
Furnishing and Erecting Structural Steel	L. Sum	1		1
Stud Shear Connectors	Each	3276		3276
Name Plates	Each	1		1
Stone Riprap, Class A4	Sq. Yd.		1044	1044
Protective Coat	Sq. Yd.	1042		1042
Structure Excavation	Cu. Yd.		418	418
Neoprene Expansion Joint 2"	Lin. Ft.	97		97
Filter Fabric for use with Riprap	Sq. Yd.		1044	1044
Temporary Sheet Piling	Sq. Ft.		1560	1560
Bridge Deck Grooving	Sq. Yd.	649		649
Floor Drains	Each	18		18
Bar Splicers	Each	501	92	593
Porous Granular Embankment (Special)	Cu. Yd.		134	134
Elastomeric Bearing Assembly Type II	Each	12		12
Bridge Seat Sealer	Sq. Ft.		256	256
Underwater Structure Excavation Protection, No. 1	Each		1	1
Underwater Structure Excavation Protection, No. 2	Each		1	1
Slope Wall Removal	Sq. Yd.		1040	1040

**APPROVED**  
FOR STRUCTURAL ADEQUACY ONLY  
Ralph E. Anderson (TOD)  
ENGINEER OF BRIDGES AND STRUCTURES

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Revised 7-30-01  
8/8/2005

WATERWAY INFORMATION

Drainage Area = 54.3 sq. mi. Low Grade Elev. 645.2 ft. @ Sta. 565+00

Flood	Freq. Yr.	Q C.F.S.	Opening Prop.	Sq. Ft. Prop.	Natural H.W.E.	Head - Ft. Prop.	Headwater El. Prop.	Headwater El. Prop.
Overtop	5	2488	620	631	644.6	0.6	0.6	645.2
Design	50	4657	679	690	645.6	1.1	1.1	646.7
Base	100	5267	679	690	646.3	0.8	0.8	647.1

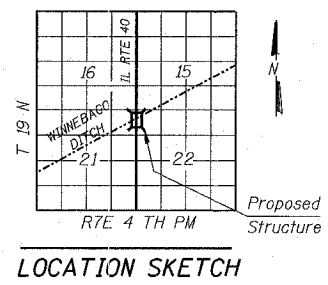
STATION 558+38  
BUILT 20\_\_ BY  
STATE OF ILLINOIS  
F.A.P. RT. 646  
SEC. (102)BR-3  
LOADING HS20  
STR. NO. 098-0109

**NAME PLATE**  
See Std. 515001

**DESIGN SPECIFICATIONS**  
AASHTO Standard Specs. - 2002 17th Edition

**SEISMIC DATA**  
Seismic Performance Category (SPC) = A  
Bedrock Acceleration Coefficient (A) = 0.035g  
Site Coefficient (S) = 1.0  
**LOADING HS 20-44**  
Allow 50#/sq. ft. for future wearing surface.

**DESIGN STRESSES**  
FIELD UNITS  
f<sub>c</sub> = 3500 psi  
f<sub>y</sub> = 60,000 psi (Reinf.)  
f<sub>y</sub> = 50,000 psi (Structural Steel, AASHTO M270 Grade 50W)



GENERAL PLAN AND ELEVATION  
IL RTE 40 OVER WINNEBAGO DITCH  
F.A.P. 646 SECTION (102)BR-3  
WHITESIDE COUNTY  
STATION 558+38  
S.N. 098-0109

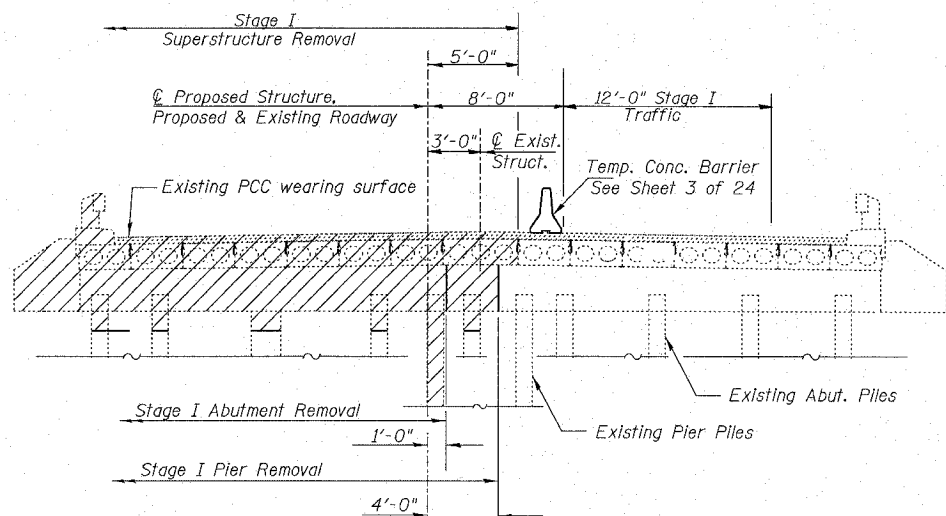
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CHECKED	AMP		DATE	Aug. 2005
DRAWN	JDB			
CHECKED	DDB			

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. F.A. 646	(102) BR-3	Whiteside	57	14
ILLINOIS FED. AID PROJECT-				

SHEET NO. 2  
24 SHEETS

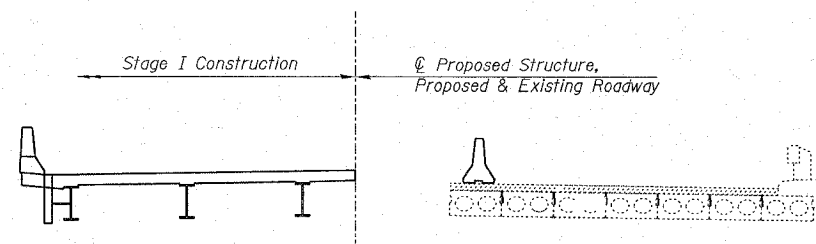
CONTRACT NO. 64426



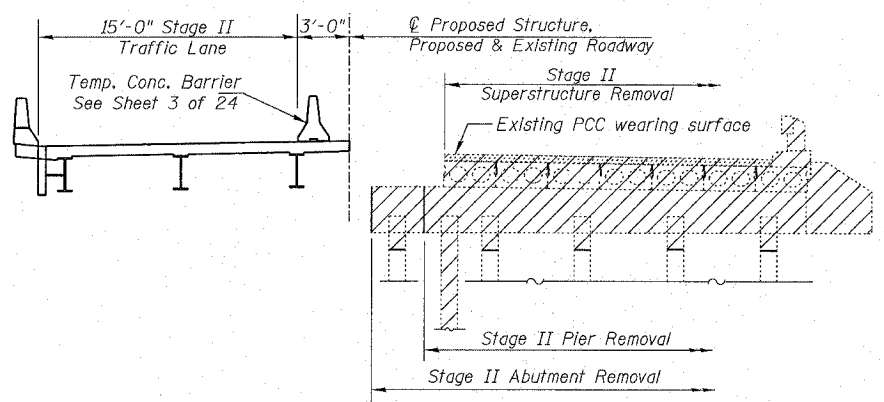
**STAGE I REMOVAL**

Stage Construction Notes:

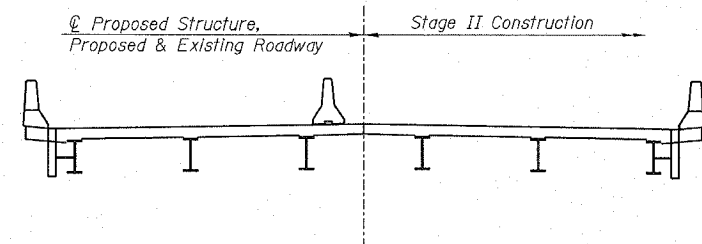
1. All sections are looking south.
2. For quantity of of Temporary Concrete Barrier see Roadway Plans.



**STAGE I CONSTRUCTION**



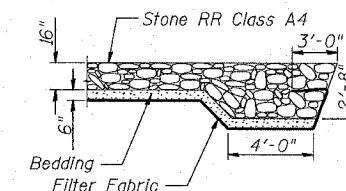
**STAGE II REMOVAL**



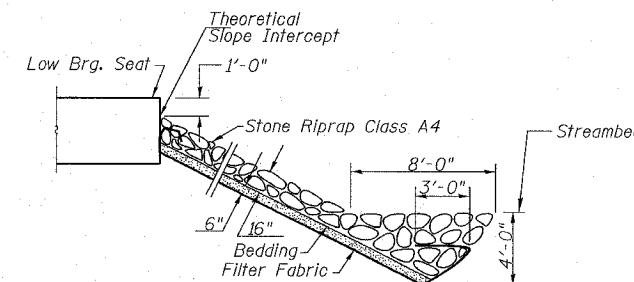
**STAGE II CONSTRUCTION**

**INDEX OF DRAWINGS**

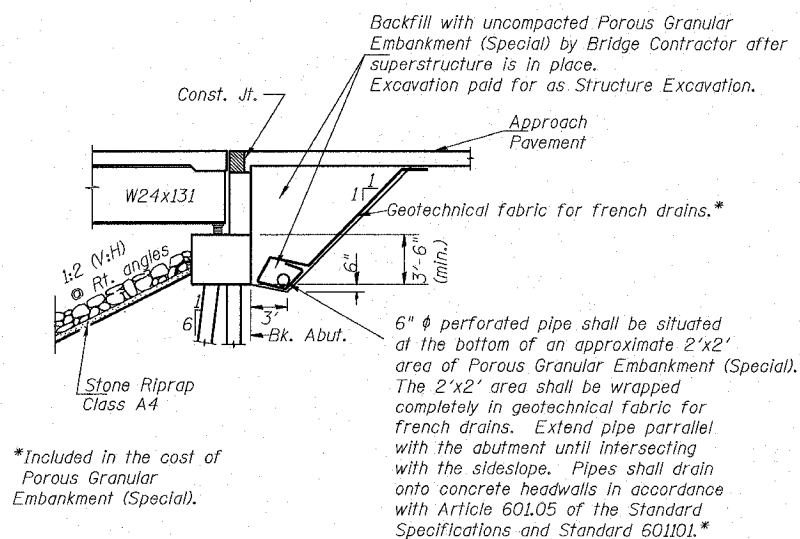
Sht. No.	Sht. Title
1	General Plan and Elevation
2	Stage Construction
3	Temporary Concrete Barrier
4 & 5	Deck Elevations
6	Deck Plan and Section
7	Superstructure Details
8	Neoprene Expansion Joints
9	Structural Steel Framing Plan
10	Diaphragm & Splice Details
11	Bearing Details
12	Anchor Bolt Details for Bearings
13	North Abutment
14	North Abutment Details
15	South Abutment
16	South Abutment Details
17	Pier #1
18	Pier #2
19	Pile Details
20	Bar Splicer Details
21	Cantilever Forming Brackets
22, 23 & 24	Soil Boring Log



**SECTION A-A**  
Typical Flank Stone Riprap Treatment

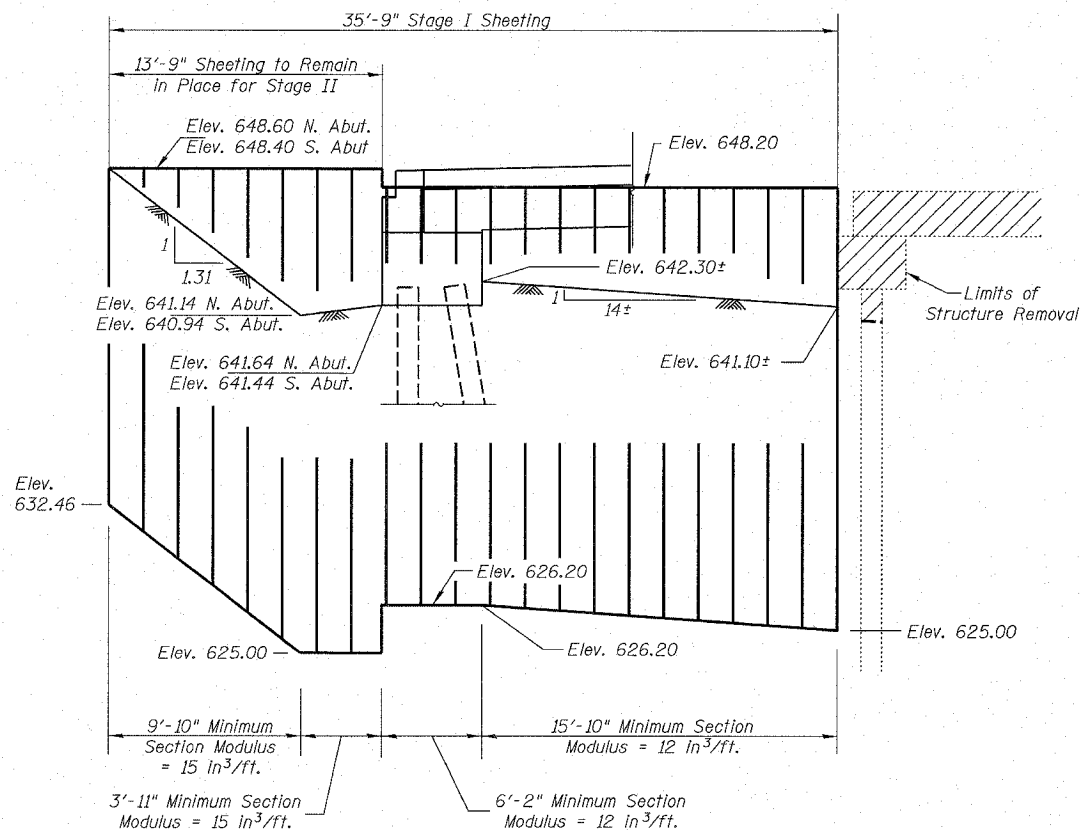


**SECTION B-B**  
Typical Toe Stone Riprap Treatment



**SECTION THRU ABUTMENT**

at right angle to abut.



**TEMPORARY SHEET PILING**

Slopes and distances are along sheeting (parallel to  $\bar{C}$  Roadway)  
North Abutment shown. South Abutment the same.

**STAGE CONSTRUCTION**  
IL RTE 40 OVER WINNEBAGO DITCH  
F.A.P. 646 SECTION (102)BR-3  
WHITESIDE COUNTY  
STATION 558+38  
S.N.098-0109

DESIGNED	DDB		FILE NUMBER	136.110
CHECKED	AMPH		DATE	Aug. 2005
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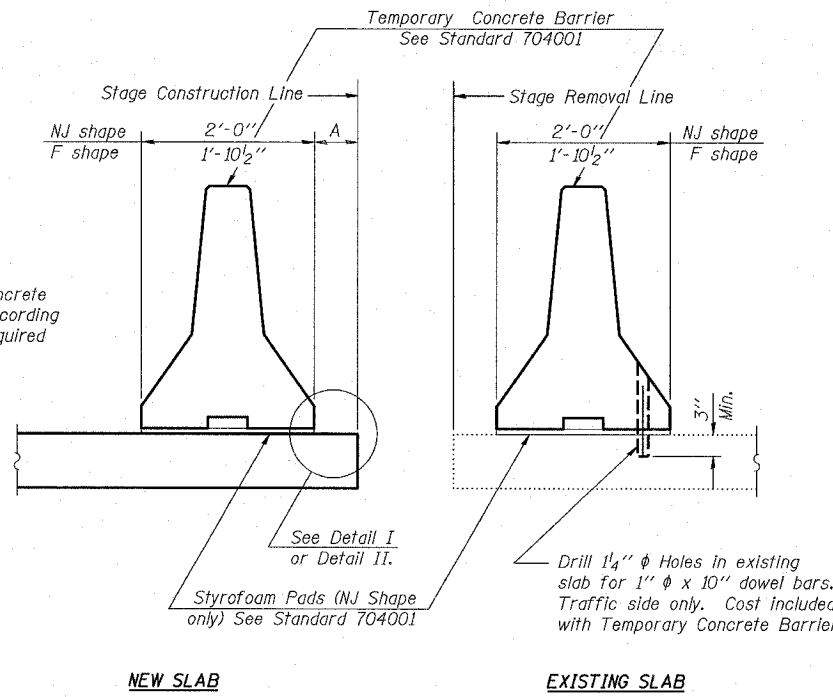
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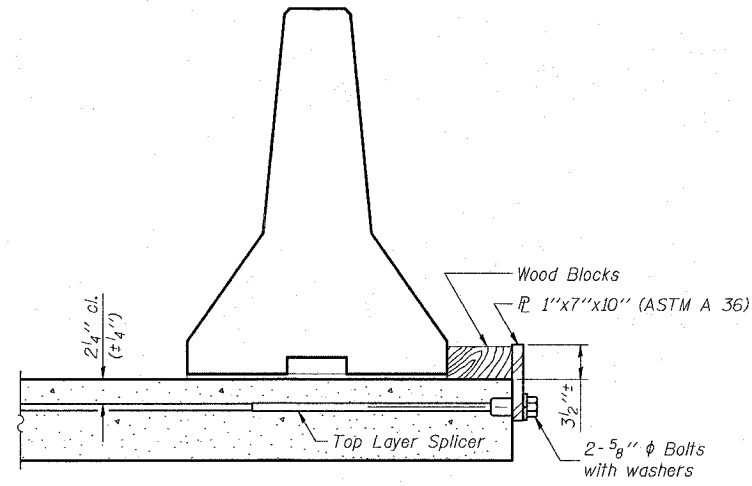
9/19/2005

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 3 24 SHEETS
S.B.L.	(102)	Whiteside	57	15	
F.A. 646	BR-3				
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT-			CONTRACT NO. 64426		

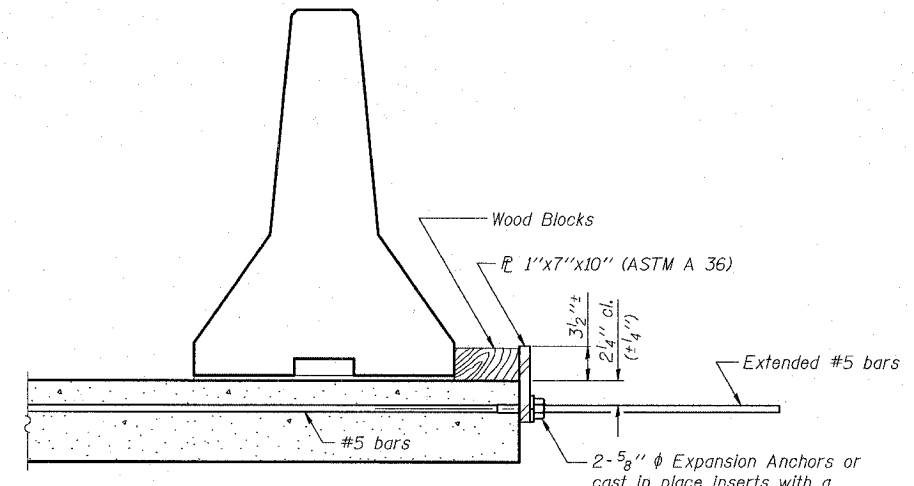


SECTIONS THRU SLAB



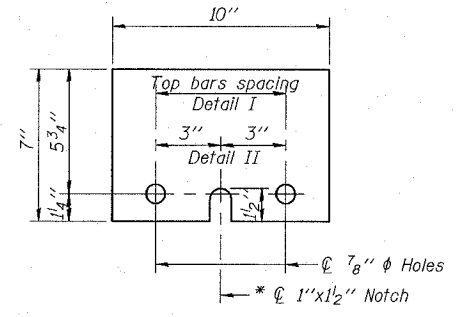
DETAIL I

The 1" x 7" x 10" Plate shall not be removed until Stage II Construction forms and reinforcement bars are in place.



DETAIL II

The 1" x 7" x 10" 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" x 7" x 10"

\* Required only with Detail II

TEMPORARY CONCRETE BARRIER  
IL RTE 40 OVER WINNEBAGO DITCH  
F.A.P. 646 SECTION (102)BR-3  
WHITESIDE COUNTY  
STATION 558+38  
S.N. 098-0109

DESIGNED	DDB		FILE NUMBER	136.110
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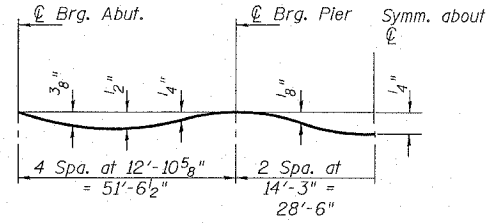
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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

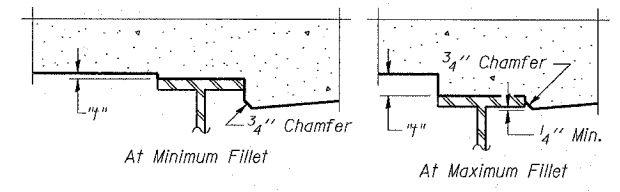
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.L. F.A. 646	(102) BR-3	Whiteside	57	16
ILLINOIS FED. AID PROJECT-		CONTRACT NO. 64426		

24 SHEETS



**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 below and on sheet 5.



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. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown below, minus slab thickness, equals the fillet heights "t" above top flange of beams.

**FILLET HEIGHTS**

**BEAM 1**

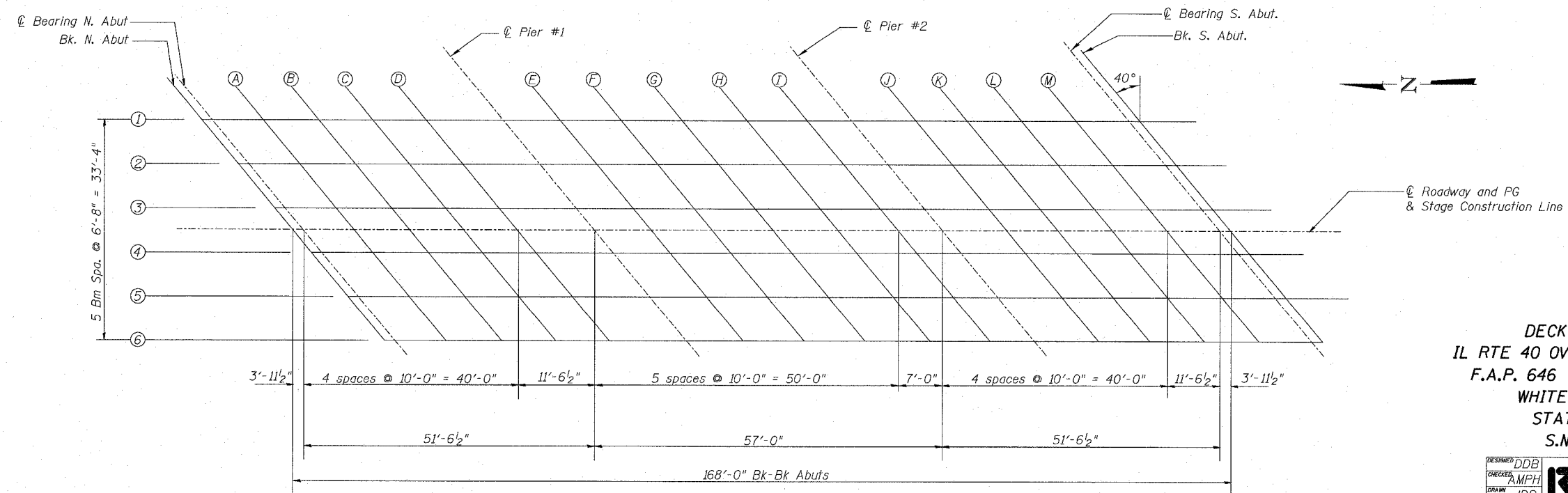
Location	Station	Offset		Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
BK. N. ABUT	557+40.02	16.667	Lt	648.229	648.229
CL. BRG. N. ABUT.	557+43.97	16.667	Lt	648.238	648.238
A	557+53.97	16.667	Lt	648.257	648.292
B	557+63.97	16.667	Lt	648.273	648.327
C	557+73.97	16.667	Lt	648.286	648.334
D	557+83.97	16.667	Lt	648.295	648.320
CL. PIER #1	557+95.52	16.667	Lt	648.302	648.302
E	558+05.52	16.667	Lt	648.304	648.308
F	558+15.52	16.667	Lt	648.303	648.320
G	558+25.52	16.667	Lt	648.298	648.319
H	558+35.52	16.667	Lt	648.290	648.304
I	558+45.52	16.667	Lt	648.279	648.281
CL. PIER #2	558+52.52	16.667	Lt	648.269	648.269
J	558+62.52	16.667	Lt	648.252	648.272
K	558+72.52	16.667	Lt	648.232	648.277
L	558+82.52	16.667	Lt	648.208	648.262
M	558+92.52	16.667	Lt	648.181	648.221
CL BRG. S. ABUT.	559+04.06	16.667	Lt	648.146	648.146
BK. S. ABUT.	559+08.02	16.667	Lt	648.133	648.133

**BEAM 2**

Location	Station	Offset		Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
BK. N. ABUT	557+45.61	10.000	Lt	648.370	648.370
CL. BRG. N. ABUT.	557+49.57	10.000	Lt	648.378	648.378
A	557+59.57	10.000	Lt	648.395	648.429
B	557+69.57	10.000	Lt	648.409	648.463
C	557+79.57	10.000	Lt	648.420	648.469
D	557+89.57	10.000	Lt	648.428	648.453
CL. PIER #1	558+01.11	10.000	Lt	648.432	648.432
E	558+11.11	10.000	Lt	648.432	648.436
F	558+21.11	10.000	Lt	648.429	648.447
G	558+31.11	10.000	Lt	648.423	648.444
H	558+41.11	10.000	Lt	648.413	648.426
I	558+51.11	10.000	Lt	648.400	648.401
CL. PIER #2	558+58.11	10.000	Lt	648.389	648.389
J	558+68.11	10.000	Lt	648.370	648.390
K	558+78.11	10.000	Lt	648.347	648.392
L	558+88.11	10.000	Lt	648.322	648.376
M	558+98.11	10.000	Lt	648.293	648.333
CL BRG. S. ABUT.	559+09.65	10.000	Lt	648.256	648.256
BK. S. ABUT.	559+13.61	10.000	Lt	648.242	648.242

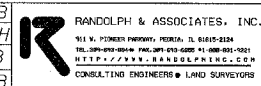
**BEAM 3**

Location	Station	Offset		Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
BK. N. ABUT	557+51.20	3.333	Lt	648.485	648.485
CL. BRG. N. ABUT.	557+55.16	3.333	Lt	648.492	648.492
A	557+65.16	3.333	Lt	648.508	648.542
B	557+75.16	3.333	Lt	648.520	648.573
C	557+85.16	3.333	Lt	648.529	648.577
D	557+95.16	3.333	Lt	648.534	648.559
CL. PIER #1	558+06.70	3.333	Lt	648.537	648.537
E	558+16.70	3.333	Lt	648.535	648.539
F	558+26.70	3.333	Lt	648.530	648.548
G	558+36.70	3.333	Lt	648.522	648.543
H	558+46.70	3.333	Lt	648.510	648.523
I	558+56.70	3.333	Lt	648.495	648.497
CL. PIER #2	558+63.70	3.333	Lt	648.482	648.482
J	558+73.70	3.333	Lt	648.462	648.482
K	558+83.70	3.333	Lt	648.438	648.483
L	558+93.70	3.333	Lt	648.410	648.464
M	559+03.70	3.333	Lt	648.380	648.420
CL BRG. S. ABUT.	559+15.25	3.333	Lt	648.340	648.340
BK. S. ABUT.	559+19.20	3.333	Lt	648.325	648.325



**DECK ELEVATIONS**  
IL RTE 40 OVER WINNEBAGO DITCH  
F.A.P. 646 SECTION (102)BR-3  
WHITESIDE COUNTY  
STATION 558+38  
S.N. 098-0109

DESIGNED	DDB	FILE NUMBER	136.110
CHECKED	AMPH	DATE	Aug. 2005
DRAWN	JDB		
CHECKED	DDB		



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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S. B. I. F. A. 646	(102) BR-3	Whiteside	57	17
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 5  
24 SHEETS

CONTRACT NO. 64426

PG & SCL

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
BK. N. ABUT	557+54.00	0.000	648.542	648.542
CL. BRG. N. ABUT.	557+57.96	0.000	648.549	648.549
A	557+67.96	0.000	648.564	648.598
B	557+77.96	0.000	648.575	648.628
C	557+87.96	0.000	648.583	648.631
D	557+97.96	0.000	648.587	648.612
CL. PIER #1	558+09.50	0.000	648.589	648.589
E	558+19.50	0.000	648.586	648.590
F	558+29.50	0.000	648.580	648.598
G	558+39.50	0.000	648.571	648.592
H	558+49.50	0.000	648.558	648.572
I	558+59.50	0.000	648.542	648.544
CL. PIER #2	558+66.50	0.000	648.529	648.529
J	558+76.50	0.000	648.507	648.527
K	558+86.50	0.000	648.482	648.527
L	558+96.50	0.000	648.454	648.508
M	559+06.50	0.000	648.422	648.462
CL BRG. S. ABUT.	559+18.04	0.000	648.382	648.382
BK. S. ABUT.	559+22.00	0.000	648.367	648.367

BEAM 4

Location	Station	Offset		Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
BK. N. ABUT	557+56.80	3.333	Rt	648.495	648.495
CL. BRG. N. ABUT.	557+60.76	3.333	Rt	648.501	648.501
A	557+70.76	3.333	Rt	648.515	648.549
B	557+80.76	3.333	Rt	648.525	648.579
C	557+90.76	3.333	Rt	648.532	648.581
D	558+00.76	3.333	Rt	648.536	648.561
CL. PIER #1	558+12.30	3.333	Rt	648.536	648.536
E	558+22.30	3.333	Rt	648.533	648.537
F	558+32.30	3.333	Rt	648.526	648.543
G	558+42.30	3.333	Rt	648.516	648.536
H	558+52.30	3.333	Rt	648.502	648.515
I	558+62.30	3.333	Rt	648.485	648.487
CL. PIER #2	558+69.30	3.333	Rt	648.471	648.471
J	558+79.30	3.333	Rt	648.449	648.469
K	558+89.30	3.333	Rt	648.423	648.468
L	558+99.30	3.333	Rt	648.393	648.448
M	559+09.30	3.333	Rt	648.361	648.401
CL BRG. S. ABUT.	559+20.84	3.333	Rt	648.319	648.319
BK. S. ABUT.	559+24.80	3.333	Rt	648.304	648.304


BEAM 5

Location	Station	Offset		Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
BK. N. ABUT	557+62.39	10.000	Rt	648.400	648.400
CL. BRG. N. ABUT.	557+66.35	10.000	Rt	648.405	648.405
A	557+76.35	10.000	Rt	648.417	648.451
B	557+86.35	10.000	Rt	648.426	648.479
C	557+96.35	10.000	Rt	648.431	648.479
D	558+06.35	10.000	Rt	648.433	648.458
CL. PIER #1	558+17.89	10.000	Rt	648.431	648.431
E	558+27.89	10.000	Rt	648.425	648.429
F	558+37.89	10.000	Rt	648.416	648.434
G	558+47.89	10.000	Rt	648.404	648.425
H	558+57.89	10.000	Rt	648.389	648.402
I	558+67.89	10.000	Rt	648.370	648.372
CL. PIER #2	558+74.89	10.000	Rt	648.355	648.355
J	558+84.89	10.000	Rt	648.331	648.351
K	558+94.89	10.000	Rt	648.303	648.348
L	559+04.89	10.000	Rt	648.272	648.326
M	559+14.89	10.000	Rt	648.237	648.277
CL BRG. S. ABUT.	559+26.43	10.000	Rt	648.193	648.193
BK. S. ABUT.	559+30.39	10.000	Rt	648.177	648.177

BEAM 6

Location	Station	Offset		Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
BK. N. ABUT	557+67.99	16.667	Rt	648.279	648.279
CL. BRG. N. ABUT.	557+71.94	16.667	Rt	648.284	648.284
A	557+81.94	16.667	Rt	648.294	648.328
B	557+91.94	16.667	Rt	648.300	648.354
C	558+01.94	16.667	Rt	648.304	648.352
D	558+11.94	16.667	Rt	648.304	648.329
CL. PIER #1	558+23.48	16.667	Rt	648.299	648.299
E	558+33.48	16.667	Rt	648.292	648.296
F	558+43.48	16.667	Rt	648.282	648.299
G	558+53.48	16.667	Rt	648.268	648.288
H	558+63.48	16.667	Rt	648.250	648.264
I	558+73.48	16.667	Rt	648.230	648.231
CL. PIER #2	558+80.48	16.667	Rt	648.213	648.213
J	558+90.48	16.667	Rt	648.187	648.207
K	559+00.48	16.667	Rt	648.157	648.202
L	559+10.48	16.667	Rt	648.124	648.178
M	559+20.48	16.667	Rt	648.088	648.128
CL BRG. S. ABUT.	559+32.03	16.667	Rt	648.042	648.042
BK. S. ABUT.	559+35.98	16.667	Rt	648.025	648.025

DECK ELEVATIONS  
IL RTE 40 OVER WINNEBAGO DITCH  
F.A.P. 646 SECTION (102)BR-3  
WHITESIDE COUNTY  
STATION 558+38  
S.N. 098-0109

DESIGNED	DDB	 RANDOLPH & ASSOCIATES, INC. 111 N. FLOWER PARKWAY, ROCKFORD, IL 61103-2124 TEL: (815) 998-0800 FAX: (815) 998-0100 *TOLL FREE: (815) 998-0100 HTTP://WWW.RANDOLPHINC.COM	FILE NUMBER	136.110
CHECKED	AMPH		DATE	Aug.
DATE	JDB			2005
CHECKED	DDB			

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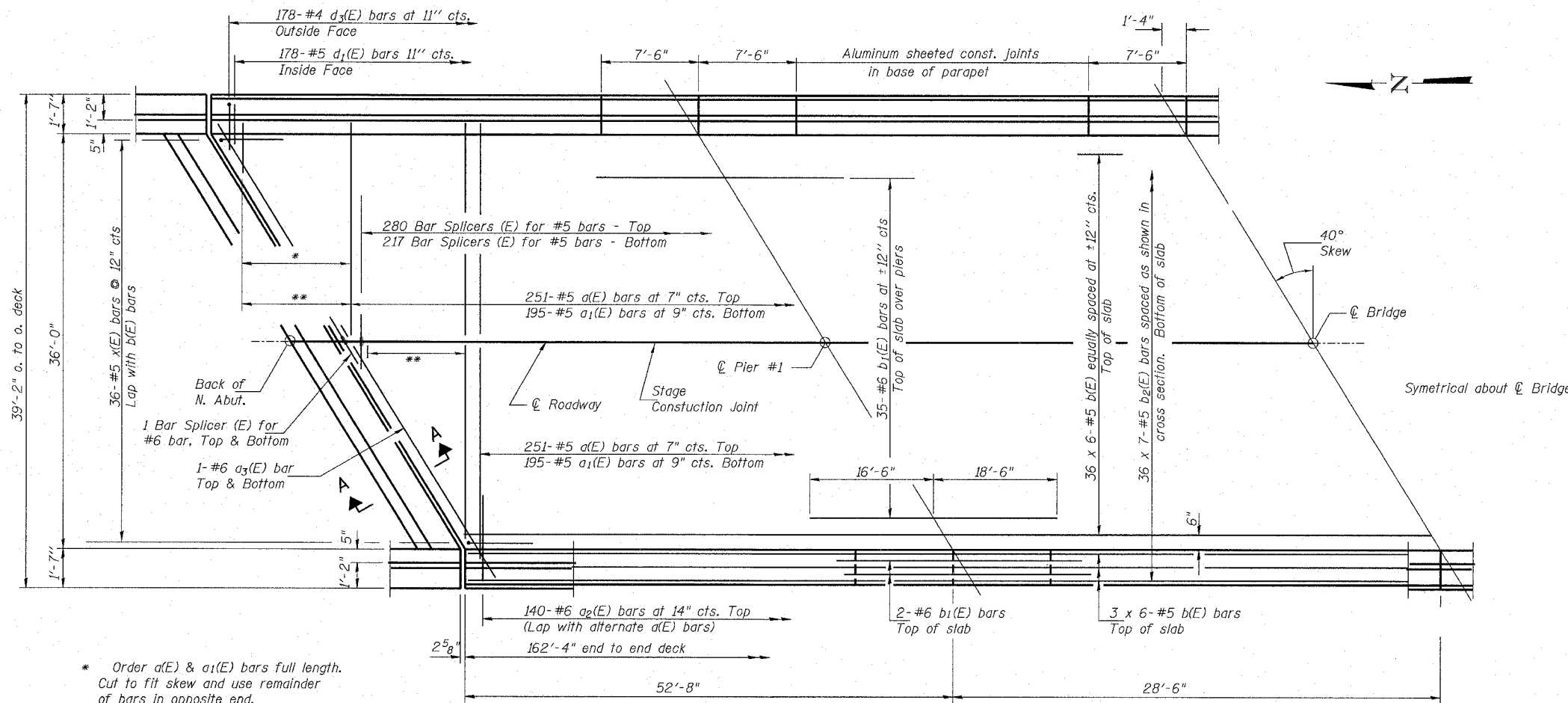
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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.L. F.A. 646	(102) BR-3	Whiteside	57	18
ILLINOIS		FED. AID PROJECT-		

SHEET NO. 6  
24 SHEETS

CONTRACT NO. 64426

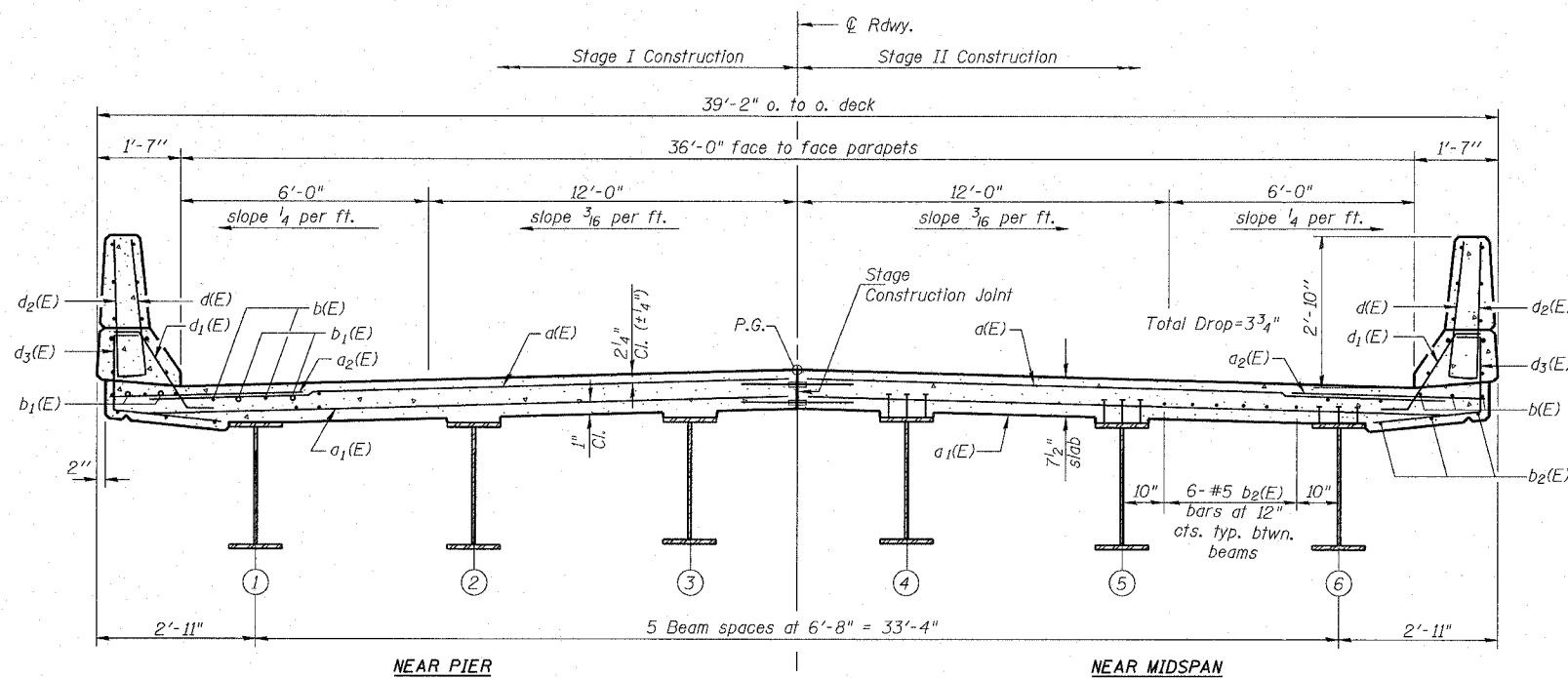


\* Order a(E) & a1(E) bars full length. Cut to fit skew and use remainder of bars in opposite end.

\*\* 29-#5 a(E) bars at 7" cts. Top  
22-#5 a1(E) bars at 9" cts. Bottom

HALF PLAN

Laps: #5 bars 1'-8"



CROSS SECTION  
(Looking South)

Notes:  
See Sheet 7 of 24 for superstructure details and Bill of Material.  
Reinforcement bars designated (E) shall be epoxy coated.  
Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.  
See Sheet 7 of 24 for parapet reinforcement.

DECK PLAN AND SECTION  
IL RTE 40 OVER WINNEBAGO DITCH  
F.A.P. 646 SECTION (102)BR-3  
WHITESIDE COUNTY  
STATION 558+38  
S.N. 098-0109

DESIGNED	DDB	RANDOLPH & ASSOCIATES, INC. 111 S. FORTUNE PARKWAY, P.O. BOX 1111, DEERFIELD, ILL. 60015 TEL: 847-938-8888 FAX: 847-938-8889 WWW.RANDOLPH-ASSOCIATES.COM	FILE NUMBER	136.110
CHECKED	AMPH		DATE	Aug. 2005
DRAWN	JDB			
ENGINEER	DDB			

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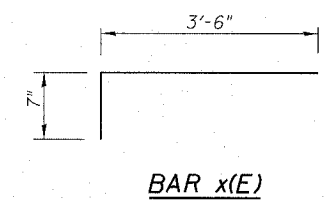
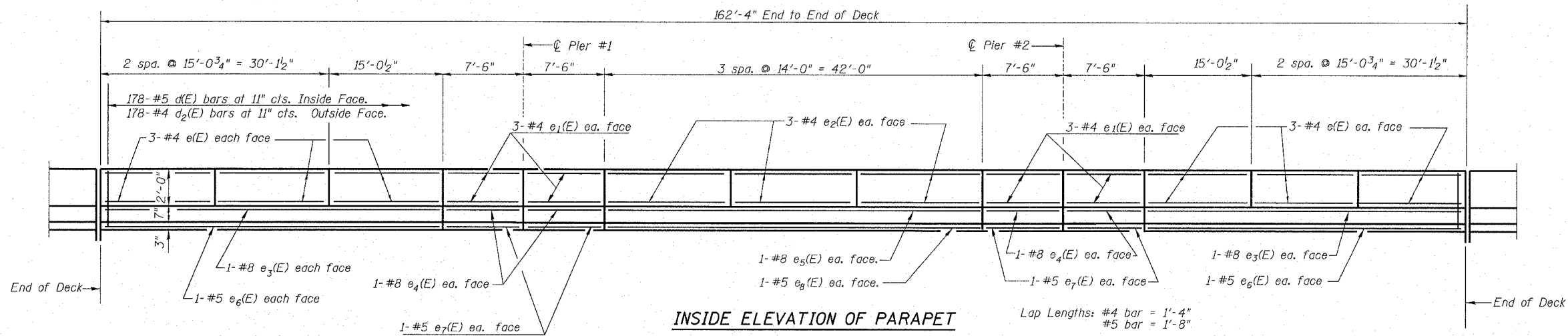
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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S. B. I. F. A. 646	(102) BR-3	Whiteside	57	19
FED. ROAD DIST. NO. 7		ILLINOIS FED. AID PROJECT-		

SHEET NO. 7  
24 SHEETS

CONTRACT NO. 64426

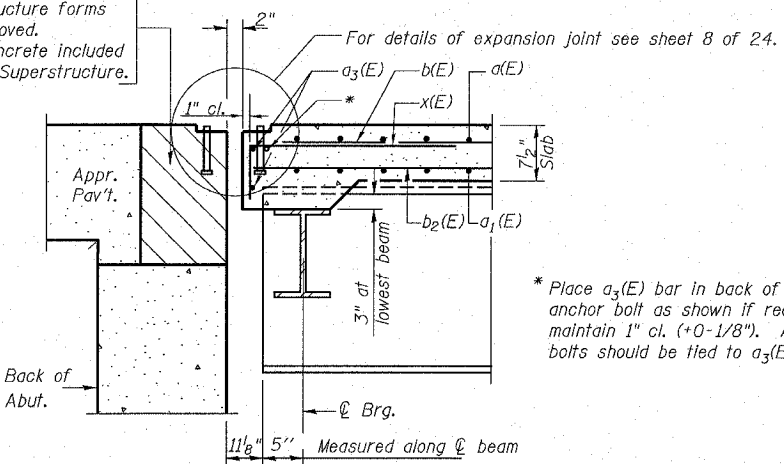


BAR x(E)

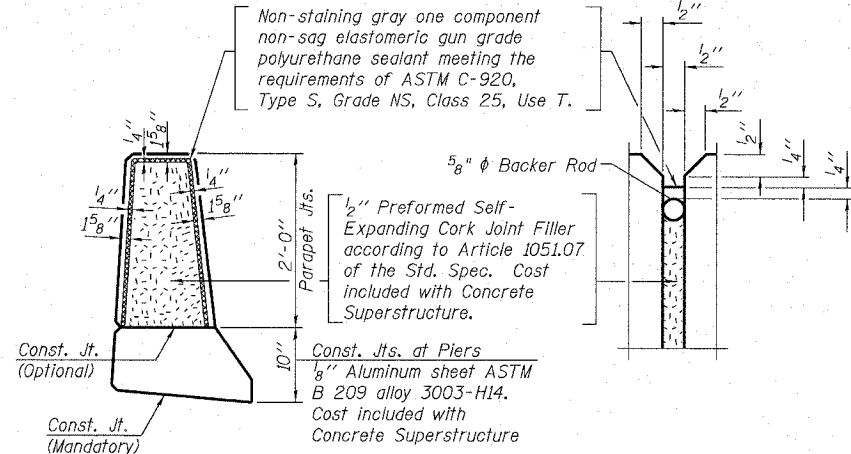
SUPERSTRUCTURE  
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d(E)	560	#5	18'-10"	—
d1(E)	434	#5	18'-10"	—
d2(E)	280	#6	4'-0"	—
d3(E)	8	#6	24'-10"	—
d(E)	252	#5	28'-5"	—
b1(E)	78	#6	35'-0"	—
b2(E)	252	#5	24'-7"	—
d(E)	356	#5	3'-0"	—
d1(E)	356	#5	2'-5"	—
d2(E)	356	#4	3'-0"	—
d3(E)	356	#4	3'-7"	—
e(E)	72	#4	14'-9"	—
e1(E)	48	#4	7'-2"	—
e2(E)	36	#4	13'-8"	—
e3(E)	8	#8	44'-10"	—
e4(E)	16	#8	7'-2"	—
e5(E)	4	#8	41'-8"	—
e6(E)	8	#5	44'-10"	—
e7(E)	16	#5	7'-2"	—
e8(E)	4	#5	41'-8"	—
x(E)	72	#5	4'-1"	—
Reinforcement Bars, Epoxy Coated		Pound	47,060	
Concrete Superstructure		Cu. Yds.	203.8	

Hatched area to be poured after superstructure forms have been removed. Quantity of concrete included with Concrete Superstructure.

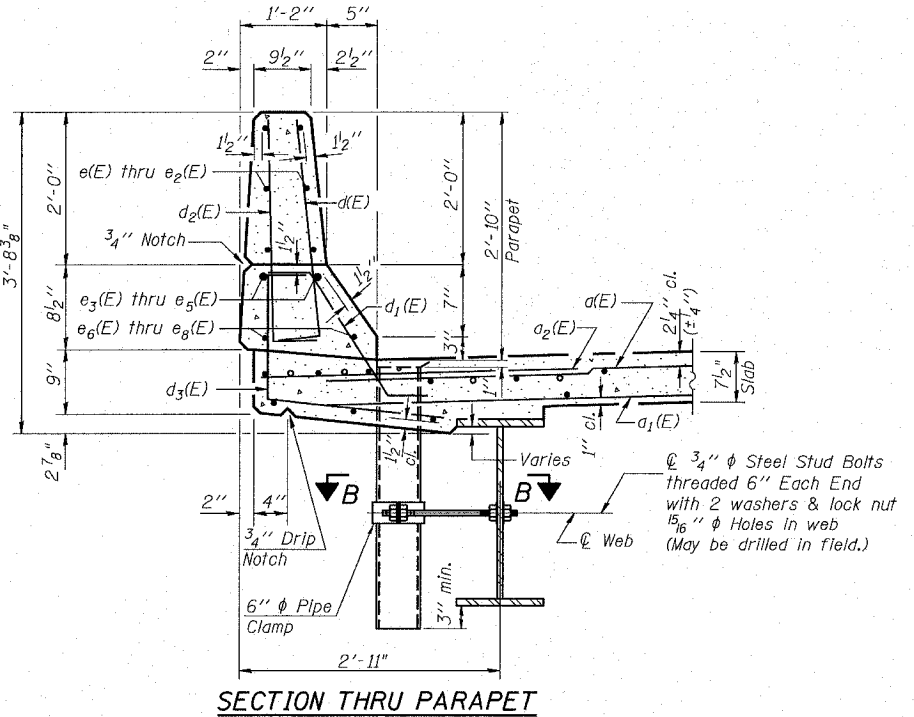


SECTION A-A

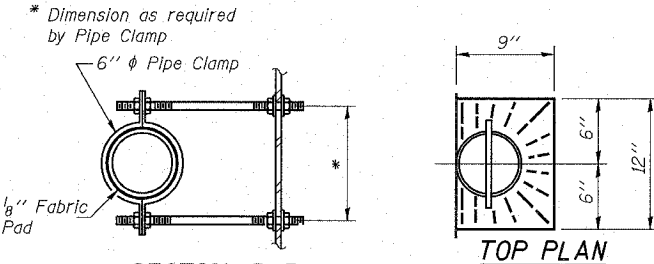


PARAPET JOINT DETAILS

Notes:  
The exterior surfaces of the floor drains shall be painted with the finish coat as specified in the special provisions for Cleaning and Painting New Metal Structures. The exterior surfaces of the drains shall be cleaned according to Steel Structures Painting Council's Spec. SSPC-SP1 prior to painting. Fiberglass pipe shall conform to ASTM D 2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum.

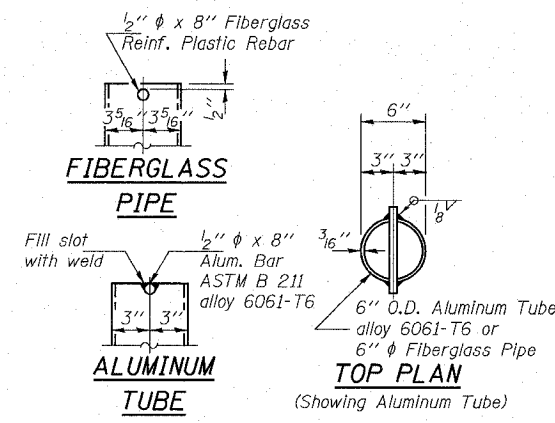


SECTION THRU PARAPET



SECTION B-B

TOP PLAN



FIBERGLASS PIPE

ALUMINUM TUBE

TOP PLAN (Showing Aluminum Tube)

Reinforcement bars designated (E) shall be epoxy coated.  
Bars indicated thus 1 x 2-#5 etc. indicates 1 line of bars with 2 lengths per line.

SUPERSTRUCTURE DETAILS  
IL RTE 40 OVER WINNEBAGO DITCH  
F.A.P. 646 SECTION (102)BR-3  
WHITESIDE COUNTY  
STATION 558+38  
S.N. 0098-0109

DESIGNED	DDB	RANDOLPH & ASSOCIATES, INC. 111 N. FLOWER PARKWAY, P.O. BOX 1111 MILWAUKEE, WISCONSIN 53201 TEL. 414-224-2000 FAX. 414-224-2001	FILE NUMBER	136.110
CHECKED	AMPH		DATE	Aug. 2005
DRAWN	JDB			
CHECKED	DDB			

BARS d(E) & d2(E) BAR d1(E) BAR d3(E)

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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.L. 646	(102) BR-3	Whiteside	57	20
F.A. 646	BR-3	ILLINOIS FED. AID PROJECT-		

CONTRACT NO. 64426

Joint Size	"C" at 50°F	"D" at 50°F
2"	2"	1 1/2" Min.

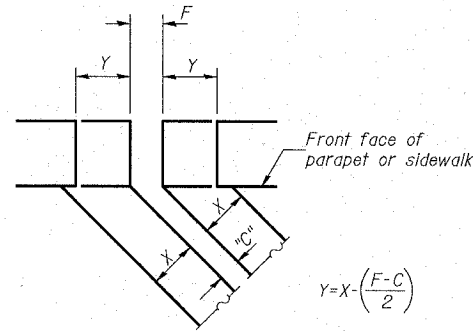
**INSTALLATION NOTES**

- Install continuous seal in roadway, parapet, curb, and sidewalk.
- Install anchor blocks as indicated.

NOTE A: Maximum spacing of anchor bolts shall be 12" centers.

**SKREW LIMITATIONS**

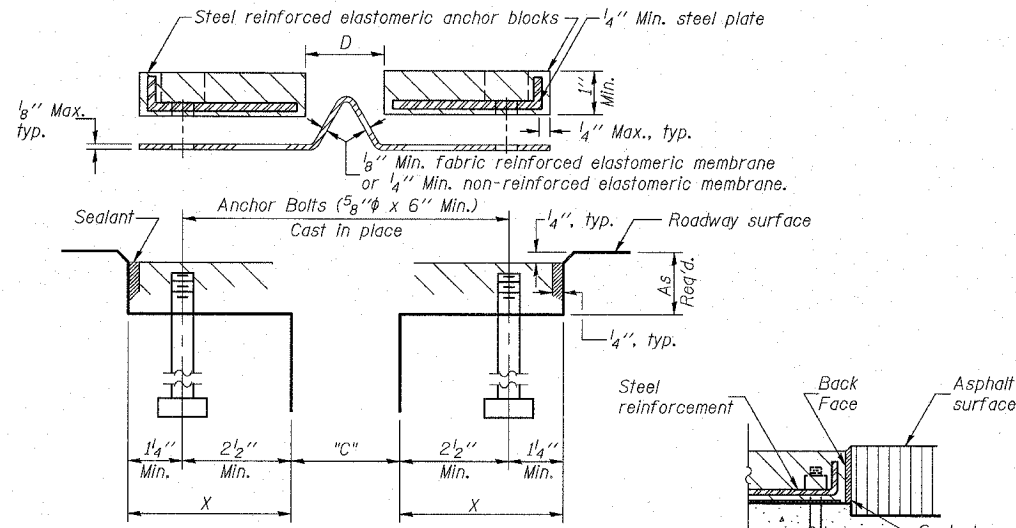
The details of the anchor blocks and the elastomeric membrane in the parapet, as shown, are for up to 50° skews. For skews greater than 50°, the anchor blocks and the elastomeric membrane, installed according to dimension "D", might require modifications to insure a minimum clearance of 1/2" from centerline of anchor studs to edge of parapet opening. The anchor blocks and the elastomeric membrane shall also be installed to the top of the parapet with the anchor studs spaced at ±12" cts.



**FORMING BLOCKOUT SKETCH**

$$Y = X \cdot \left( \frac{F-C}{2} \right)$$

For dimension "F" see sheet #

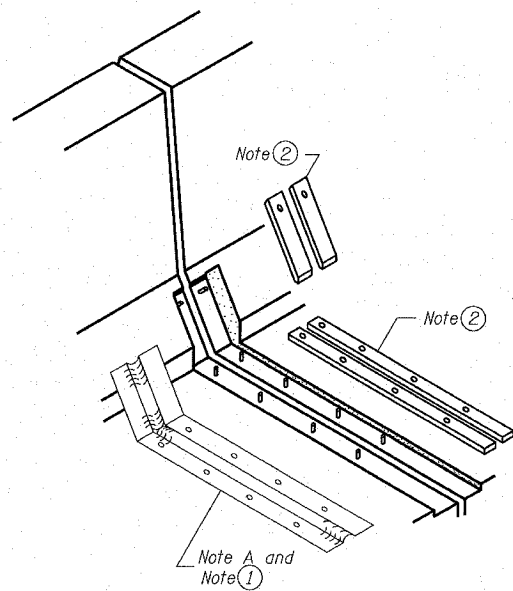


**CROSS SECTION**

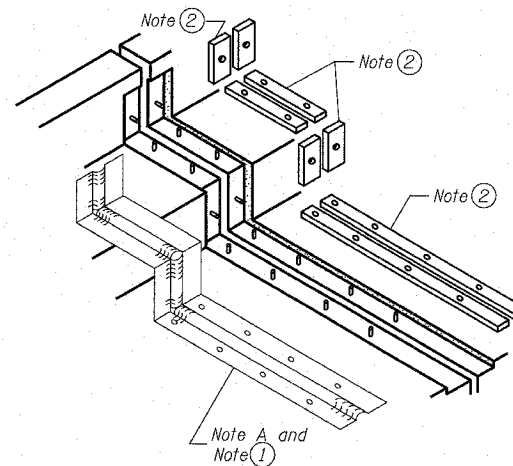
**ANCHOR BLOCK WITH ASPHALT SURFACE**

**GENERAL NOTES**

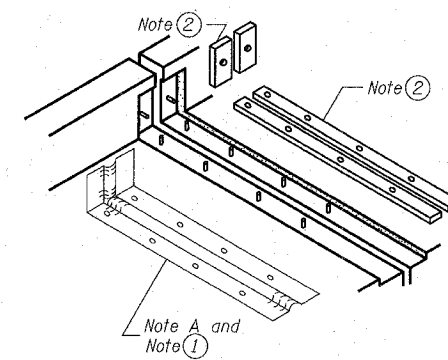
Continuous Seal Neoprene Expansion Joint shall consist of molded anchor blocks of elastomer and steel, field assembled over continuous lengths of elastomeric membrane.  
The elastomeric membrane shall be premolded with a single or a double upward convolution that will have a "memory" to return to its molded position upon joint closure.  
The convolution length shall be such that the extended length will not be greater than the manufactured length when the joint is fully expanded in its design range and will not protrude above the anchor blocks when the joint is fully compressed.  
Joint openings shall be adjusted according to Article 503.10(c) of the Standard Specifications when the deck is poured at an ambient temperature other than 50° F.  
The parapet and roadway membrane shall be made continuous by an approved vulcanizing process. Lapping will not be permitted.



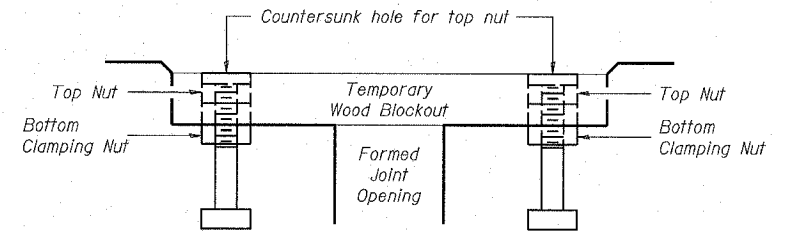
**AT PARAPET**



**AT SIDEWALK OR MEDIAN**



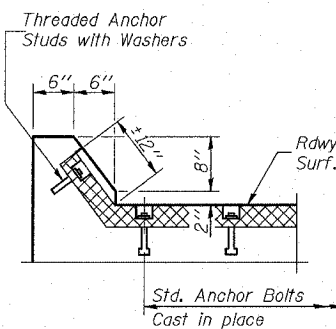
**AT WALL**



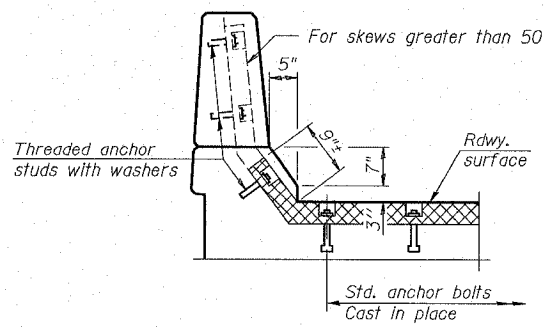
**RECOMMENDED BLOCKOUT DETAIL**

Note: Stud needs to be threaded lower to allow for use of clamping nut.

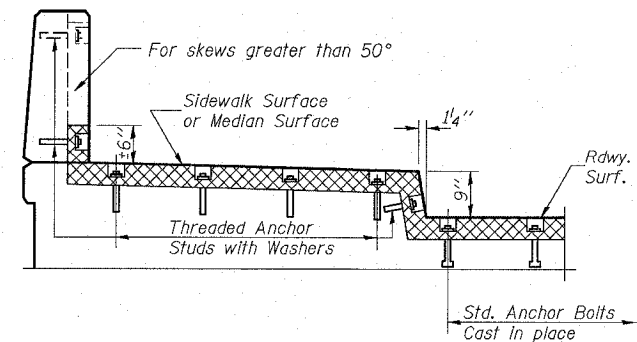
Anchor studs should be stainless



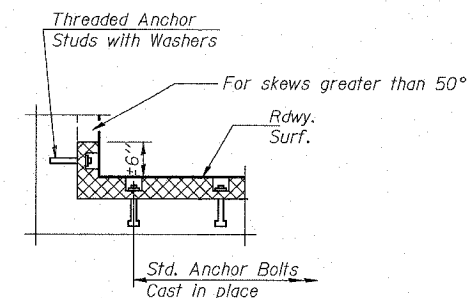
**AT CURB**



**AT PARAPET**



**AT SIDEWALK OR MEDIAN TYPICAL END TREATMENTS**



**AT WALL**

NEOPRENE EXPANSION JOINTS  
IL RTE 40 OVER WINNEBAGO DITCH  
F.A.P. 646 SECTION (102)BR-3  
WHITESIDE COUNTY  
STATION 558+38  
S.N. 098-0109

DESIGNED	DDB		FILE NUMBER	136.110
CHECKED	AMPH		DATE	Aug. 2005
DRAWN	JDB			
CHECKED	DDB			

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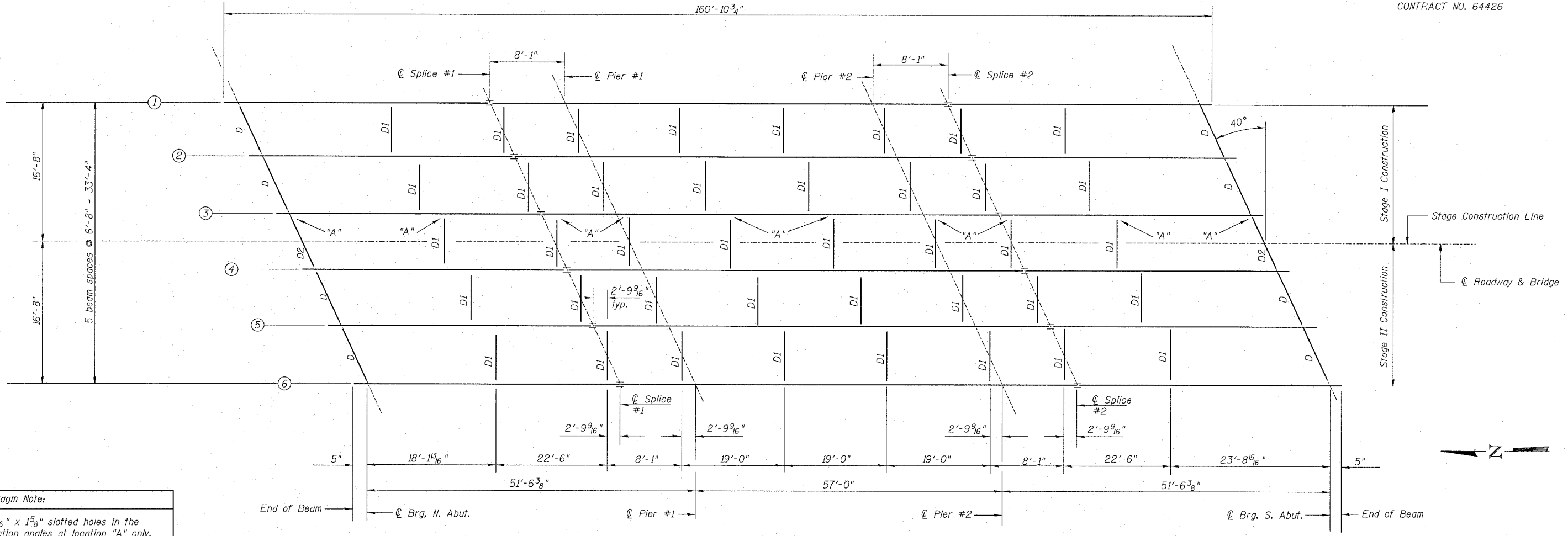


STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S. B. I.	(102)	Whiteside	57	21
F. A.	646 BR-3	ILLINOIS FED. AID PROJECT-		

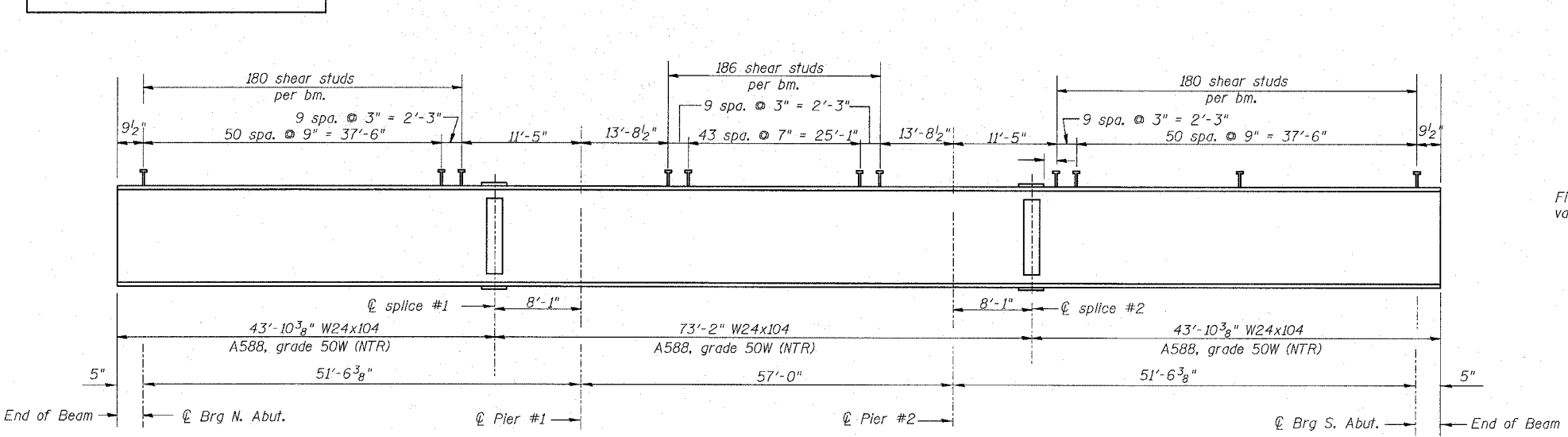
CONTRACT NO. 64426

SHEET NO. 9  
24 SHEETS



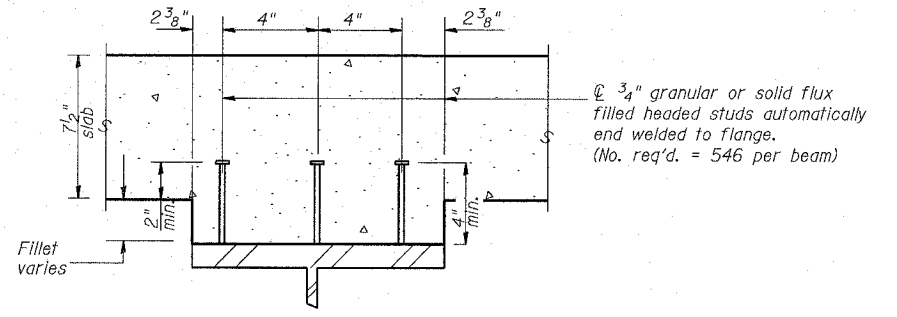
**Diaphragm Note:**  
Use  $1\frac{5}{16}$ " x  $1\frac{5}{8}$ " slotted holes in the connection angles at location "A" only. Provide  $\frac{1}{4}$ " plate washers for slotted holes. Bolts shall be finger tightened prior to the deck pour for stage II construction and then fully tightened after completion of the deck pour for stage II construction.

**FRAMING PLAN**



Note: NTR denotes Notch Toughness Requirements

**BEAM ELEVATION**



**STRUCTURAL STEEL  
FRAMING PLAN  
IL RTE 40 OVER WINNEBAGO DITCH  
F.A.P. 646 SECTION (102)BR-3  
WHITESIDE COUNTY  
STATION 558+38  
S.N. 098-0109**

DESIGNED	DDB		FILE NUMBER	136.110
CHECKED	AMPH		DATE	Aug. 2005
DRAWN	JDB			
ENGINEER	DDB			

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		0.4 Sp. #1	Pier	0.5 Sp. #2
$I_s$	(in <sup>4</sup> )	3100	3100	3100
$I_{c(n)}$	(in <sup>4</sup> )	8635		8635
$I_{c(3n)}$	(in <sup>4</sup> )	6410		6410
$S_s$	(in <sup>3</sup> )	258	258	258
$S_{c(n)}$	(in <sup>3</sup> )	378		378
$S_{c(3n)}$	(in <sup>3</sup> )	343		343
$Z$	(in <sup>3</sup> )		289	
$DL$	(k/')	0.776	1.218	0.776
$M_{DL}$	(k)	160	339	85
$s_{DL}$	(k/')	0.442		0.442
$M_{sDL}$	(k)	100		71
$M_{LL}$	(k)	345	175	321
$M_{(Imp)}$	(k)	98	49	88
$5/3(M_{LL} + M_{(Imp)})$	(k)	738	374	682
$M_a$	(k)	1298	927	1090
$M_u$	(k)	1787	1204	1787
$f_s DL$ (non-comp)	(ksi)	7.4	15.8	4.0
$f_s DL$ (comp)	(ksi)	3.5		2.5
$f_s 5/3(M_{LL} + M_{(Imp)})$	(ksi)	23.4	17.4	21.7
$f_s$ (Overload)	(ksi)	34.4	33.2	28.1
$f_s$ (Total)	(ksi)			
$VR$	(k)	48.2		35.5

\* Compact, Braced section.  
\*\* Non-Compact Section

		Abut.	Pier
$R_{DL}$	(k)	25.2	72.9
$R_{LL}$	(k)	34.7	41.0
$Imp.$	(k)	9.8	11.6
$R$ (Total)	(k)	69.7	125.4

$I_s$  and  $S_s$  are the moment of inertia and section modulus of the steel section used in computing  $f_s$  (Total & Overload).

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

$I_{c(3n)}$  and  $S_{c(3n)}$  are the moment of inertia and section modulus of the composite section used in computing stresses due to superimposed dead loads.

$VR$  is the maximum LL + impact shear range within the composite portion of the span.

$Z$  is the plastic section modulus used to determine the Fully Plastic Moments in the non-composite areas.

The Plastic Moment Capacity ( $M_p$ ) is computed according to AASHTO 10.48.1 and 10.50.1.1.

$M_{DL}$  - moment due to dead loads on non-composite section

$M_{sDL}$  - moment due to dead loads on composite section

$M_{LL}$  - moment due to live loads on non-composite or composite section

$M_{(Imp)}$  - moment due to live load impact on non-composite or composite section

$M_a$  (Applied Moment) =  $1.3[M_{DL} + M_{sDL} + \frac{5}{3}(M_{LL} + M_{(Imp)})]$ .

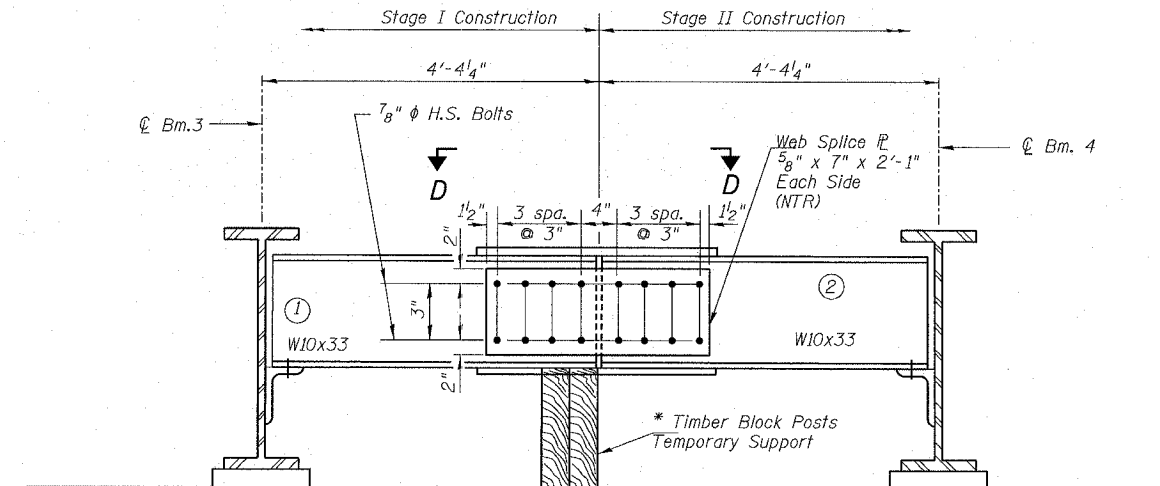
$f_s$  (Overload) is the sum of the stresses due to  $M_{DL} + M_{sDL} + \frac{5}{3}(M_{LL} + M_{(Imp)})$ .

$f_s$  (Total) is the sum of the stresses due to  $1.3[M_{DL} + M_{sDL} + \frac{5}{3}(M_{LL} + M_{(Imp)})]$ .

TOP OF BEAM ELEVATIONS BEFORE DEFLECTIONS \*\*\*

	Beam 1	Beam 2	Beam 3	Beam 4	Beam 5	Beam 6
CL. Brg. N. Abut	647.570	647.710	647.820	647.830	647.730	647.610
CL Splice 1	647.580	647.720	647.820	647.820	647.720	647.590
CL Brg. Pier 1	647.575	647.713	647.812	647.811	647.708	647.577
CL Brg. Pier 2	647.545	647.667	647.758	647.749	647.632	647.493
CL Splice 2	647.540	647.660	647.750	647.740	647.620	647.480
CL. Brg. S. Abut	647.480	647.590	647.670	647.650	647.520	647.370

\*\*\* For Fabrication Only



**DIAPHRAGM D2**

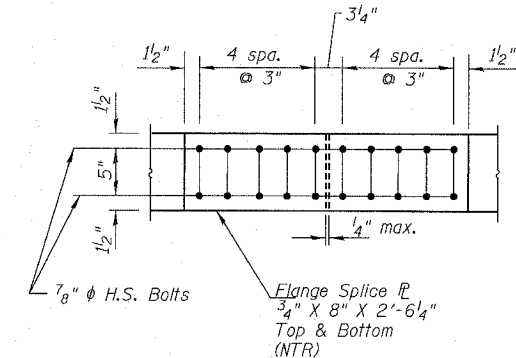
2 Required  
(looking South)

For details of connections to beams see diaphragm D

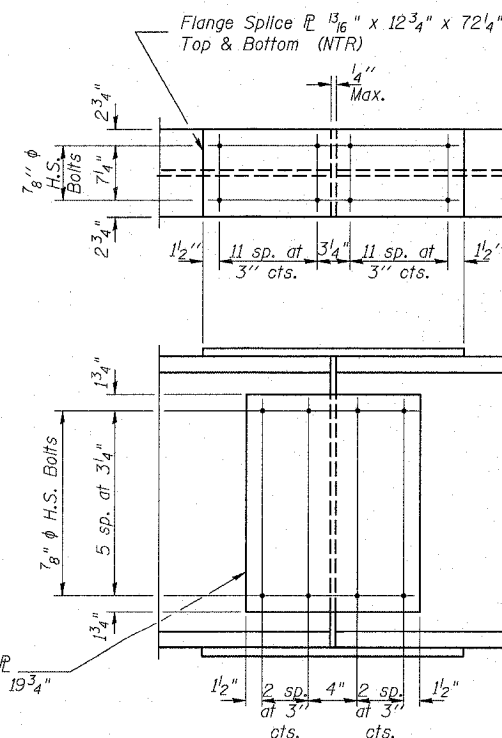
\* Cost of Timber Block Posts included with "Furnishing and Erecting Structural Steel".

**DIAPHRAGM D2 CONSTRUCTION SEQUENCE**

- 1.) Order Diaphragm D2 in two sections with lengths of 4'-3 3/4" and 4'-3 3/4".
- 2.) Attach section ① of Diaphragm to Beam 3 and top flange splice during Stage I Construction.
- 3.) Place Timber Block Posts between section ① of diaphragm and abutment bearing seat.
- 4.) Attach section ② of diaphragm to both Beam 4 and section ① of diaphragm during Stage II Construction.
- 5.) Attach web splice plates to sections ① and ② of diaphragms.
- 6.) Remove Timber Block Posts.
- 7.) Attach bottom flange splice plate to sections ① and ② of diaphragms.

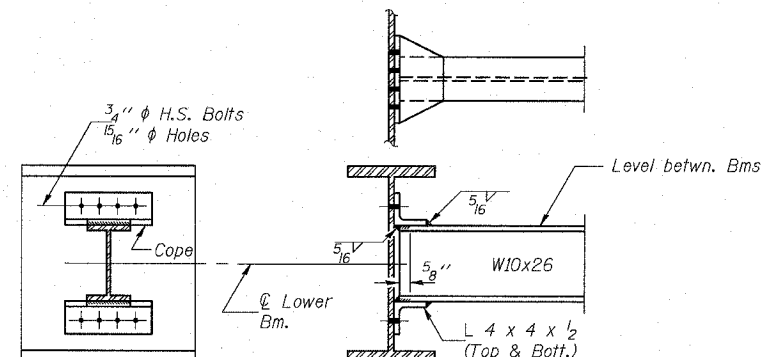


VIEW D-D



**SPLICE**

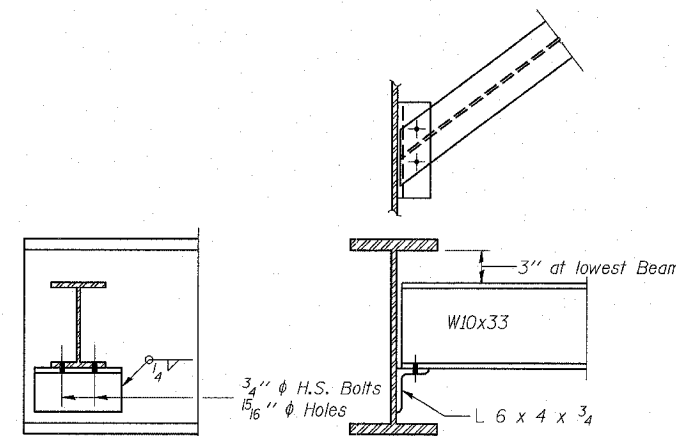
12 Required



**DIAPHRAGM D1**

40 Required

Note:  
Two hardened washers shall be required over all oversize holes for diaphragms.



**DIAPHRAGM D**

8 Required

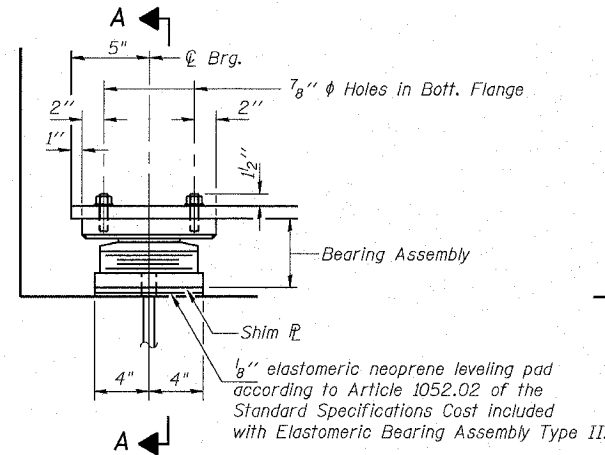
Note: NTR denotes Notch Toughness Requirements

**DIAPHRAGM & SPLICE DETAILS**  
IL RTE 40 OVER WINNEBAGO DITCH  
F.A.P. 646 SECTION (102)BR-3  
WHITESIDE COUNTY  
STATION 558+38  
S.N. 098-0109

DESIGNED	DDB		FILE NUMBER	136.110
CHECKED	AMPH		DATE	Aug. 2005
DRAWN	JDB			
ENGINEER	DDB			

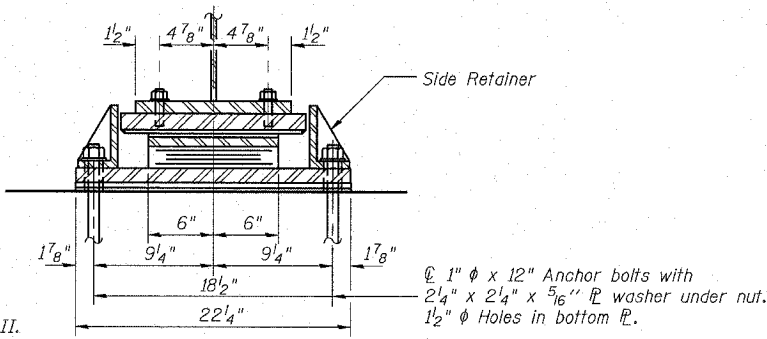
R:\Projects\0136\0136-110 Winn ph 11 bridge planset\10 SS detail.s.dgn

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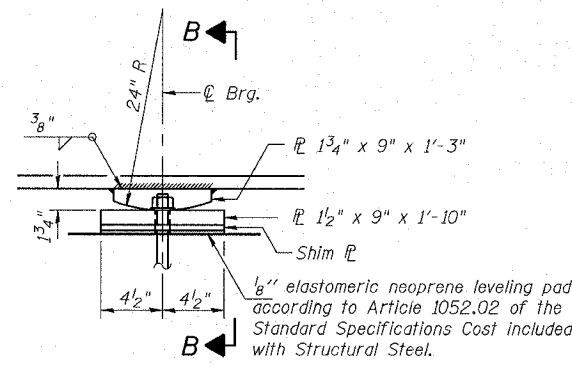


ELEVATION AT BOTH ABUTMENTS

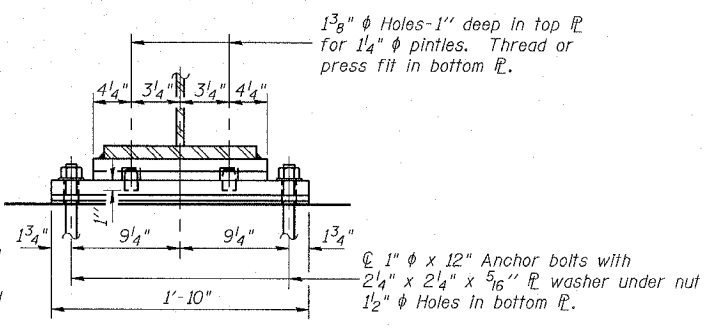
TYPE II ELASTOMERIC EXP. BRG.



SECTION A-A



ELEVATION AT BOTH PIERS

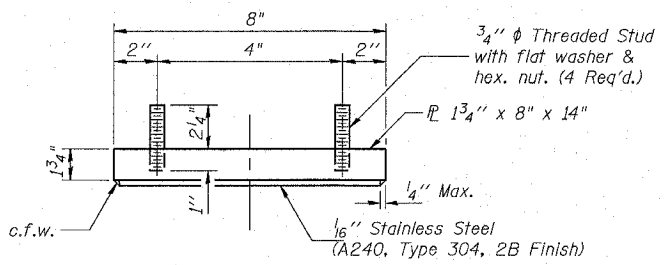


SECTION B-B

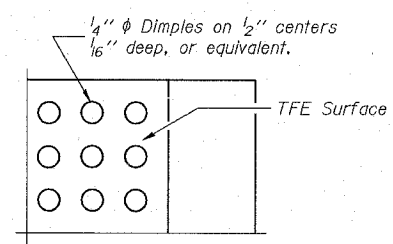
Notes: Anchor bolts at fixed bearings may be built into the masonry.  
See sheet 12 of 24 for Anchor Bolt installation.  
Provide 1/2" x 8" x 22 1/4" shim for beam #4 at north abutment. Provide 1/4" x 8" x 22 1/4" shim for beam #3 at south abutment. Provide 1/8" x 8" x 22 1/4" shim for beam #3 at Pier #2.

FIXED BEARING

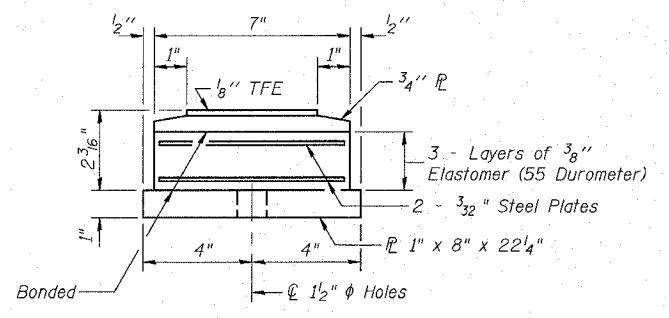
6 required at Pier #1 and 6 required at Pier #2



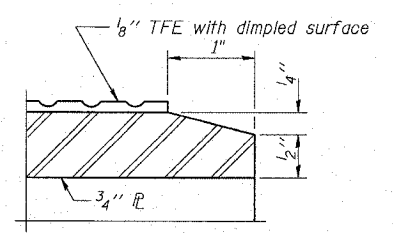
TOP BEARING ASSEMBLY



PLAN-TFE SURFACE



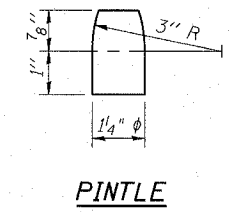
BOTTOM BEARING ASSEMBLY



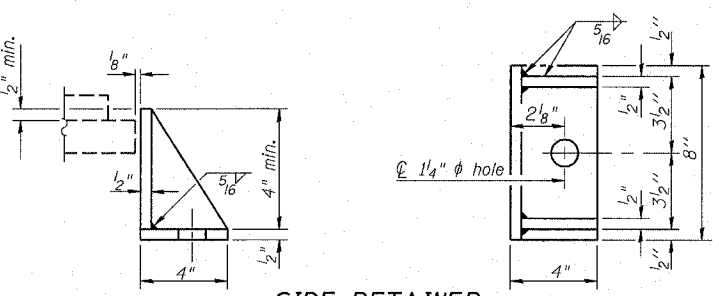
SECTION THRU TFE

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.

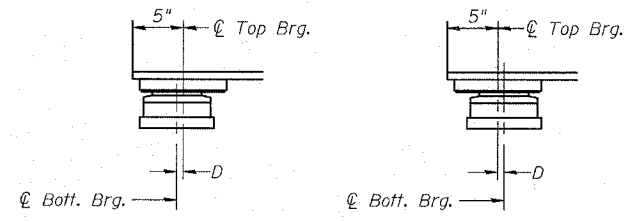


PINTLE



SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. Weight included with Structural Steel.



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.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type II	Each	12

BEARING DETAILS  
IL RTE 40 OVER WINNEBAGO DITCH  
F.A.P. 646 SECTION (102)BR-3  
WHITESIDE COUNTY  
STATION 558+38  
S.N. 098-0109

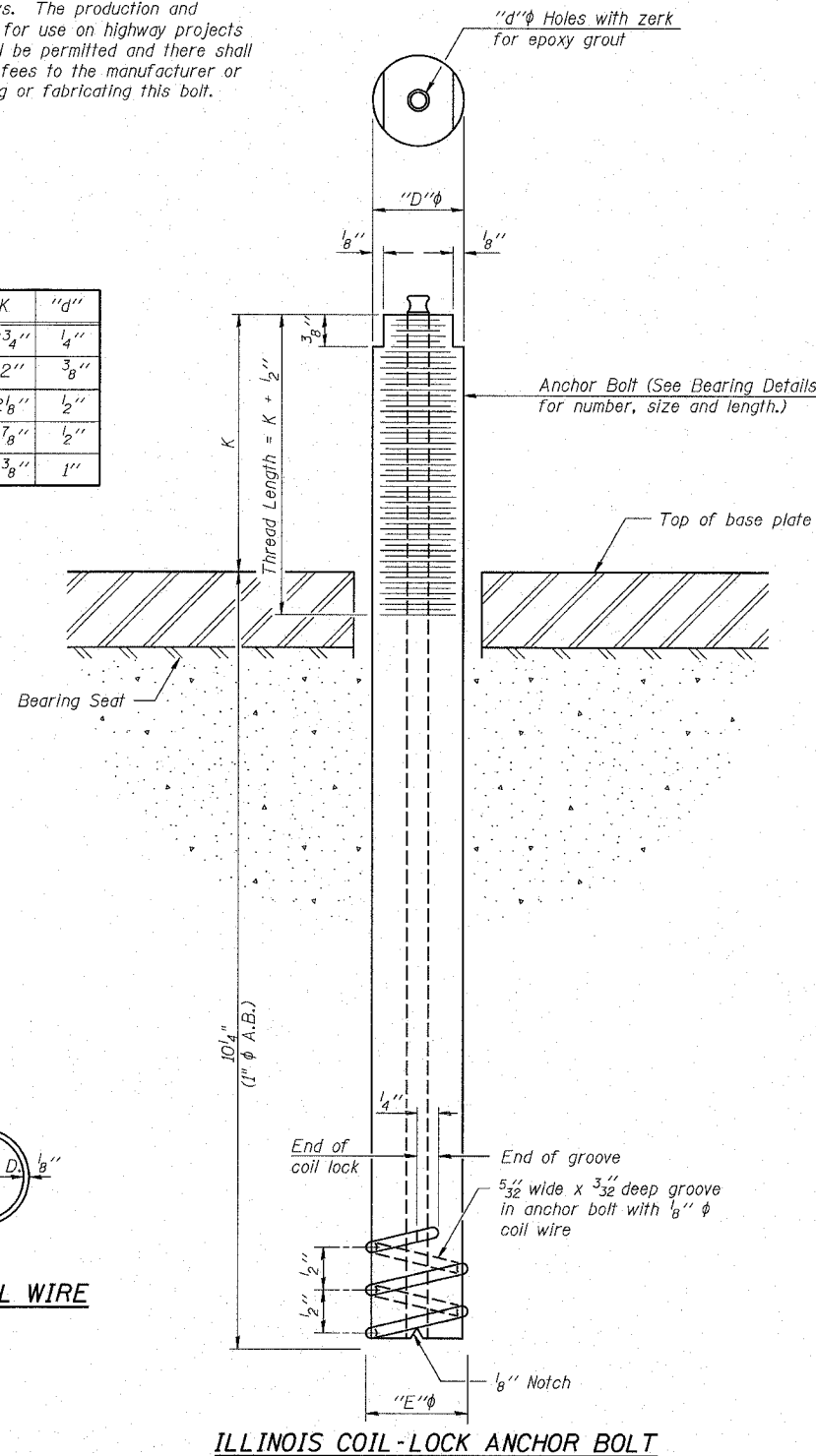
DRAWN	DDB	<p>RANDOLPH &amp; ASSOCIATES, INC. 111 N. PEPPER PARKWAY, PEORIA, IL 61614-2124 TEL: 309-693-0888 FAX: 309-693-0888 WWW.RANDOLPH-ASSOCIATES.COM CONSULTING ENGINEERS &amp; LAND SURVEYORS</p>	FILE NUMBER
CHECKED	AMPH		136.110
DATE	JDB		Aug.
CHECKED	DDB		2005

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The Illinois Coil-Lock Anchor Bolt is a proprietary item which is the property of the Illinois Department of Transportation. Use, reproduction or disclosure without express written permission is prohibited and protected under Federal copyright laws. The production and the fabrication of this bolt for use on highway projects in the State of Illinois shall be permitted and there shall be no incurred charges or fees to the manufacturer or the fabricator for producing or fabricating this bolt.

D	E	H	K	"d"
1"	1 1/8"	1 3/16"	1 3/4"	1/4"
1 1/4"	1 3/8"	1 1/16"	2"	3/8"
1 1/2"	1 5/8"	1 5/16"	2 1/8"	1/2"
2"	2 1/8"	1 13/16"	2 7/8"	1/2"
2 1/2"	2 5/8"	2 5/16"	3 3/8"	1"



**MATERIALS FOR ILLINOIS COIL-LOCK ANCHOR BOLT**

The anchor bolt shall be fabricated from cold drawn or hot finished seamless carbon steel mechanical tubing conforming to ASTM A 519, Grade 1026, CW and supplied with hexagonal nuts and cut washers.  
The coil wire shall be made of any suitable soft steel wire.  
The finished anchor bolt shall be cleaned of rust and other foreign materials and wrapped or packaged to prevent contamination until they are installed.  
The epoxy grout shall be a two-component, epoxy resin bonding system conforming to ASTM C 881, Type I, Grade 1 and of a Class suitable for the temperature at installation.

**GENERAL NOTES**

Holes in the masonry for anchor bolts shall be drilled through the base plates to the diameter and depth shown or according to the manufacturer's recommendation after beams or girders have been erected and adjusted.  
Prior to setting the bolts, the holes shall be dry and all dust and loose particles shall be removed by the use of compressed air or vacuuming.  
The anchor bolts, furnished and installed including the epoxy grout or capsules shall not be paid for separately but shall be included in the unit bid price for Furnishing and Erecting Structural Steel.

**INSTALLATION PROCEDURE for the ILLINOIS COIL-LOCK ANCHOR BOLT**

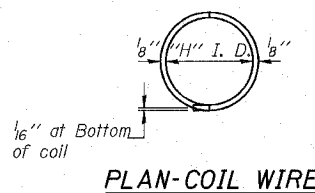
1. With the coil wire in place, the bolt shall be inserted into the hole and turned clockwise to a snug fit in the hole. Nut and washer shall be placed on the bolt. The nut shall be tensioned until the steel base plates are held securely to the concrete bearing seat.
2. Epoxy grout shall be pumped through the zerk fitting with a pressure gun. Pumping shall continue until the epoxy overflows the hole around the bolt shank. After pumping is discontinued, excess epoxy shall be immediately wiped off.

**ALTERNATE ANCHOR BOLTS**

The Contractor may use, at his option, the capsule or the adhesive cartridge type anchor rods that have been previously tested and given a prior approval by the Department. The Contractor shall install these anchor rods in pre-drilled holes according to the manufacturer's recommendations and procedures.  
The capsule or the adhesive cartridge type anchor rods shall be a two part system composed of:  
1. A threaded rod stud with nut and washer of the type specified.  
2. A sealed glass capsule or a sealed glass adhesive cartridge containing premeasured amounts of the adhesive chemical.

Location	Type
All	A307

ASTM F 1554 Grade 105, ASTM A 449 and AASHTO M 314 Grade 105 anchor bolts may be substituted for the anchor bolts shown above.



PLAN-COIL WIRE

ILLINOIS COIL-LOCK ANCHOR BOLT

ANCHOR BOLT DETAILS FOR BEARINGS  
IL RTE 40 OVER WINNEBAGO DITCH  
F.A.P. 646 SECTION (102)BR-3  
WHITESIDE COUNTY  
STATION 558+38  
S.N. 098-0109

DESIGNED	DDB	RANDOLPH & ASSOCIATES, INC. 111 N. PIERCE PARKWAY, PEORIA, IL 61615-0124 TEL: 309-243-0848 FAX: 309-243-0898 11-800-881-1021 WWW.RANDOLPH-ASSOCIATES.COM CONSULTING ENGINEERS & LAND SURVEYORS	FILE NUMBER	136.110
CHECKED	AMPH		DATE	Aug.
DRAWN	JDB			2005
CHECKED	DDB			

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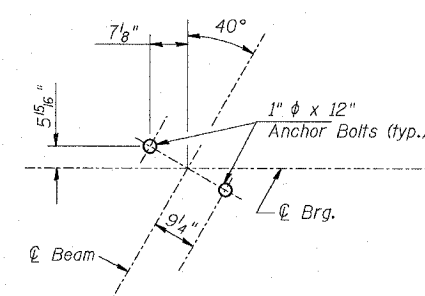
8/8/2005

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.A. 646	(102)BR-3	Whiteside	57	25
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT-				

SHEET NO. 13  
24 SHEETS

CONTRACT NO. 64426



ANCHOR BOLT LAYOUT DETAIL

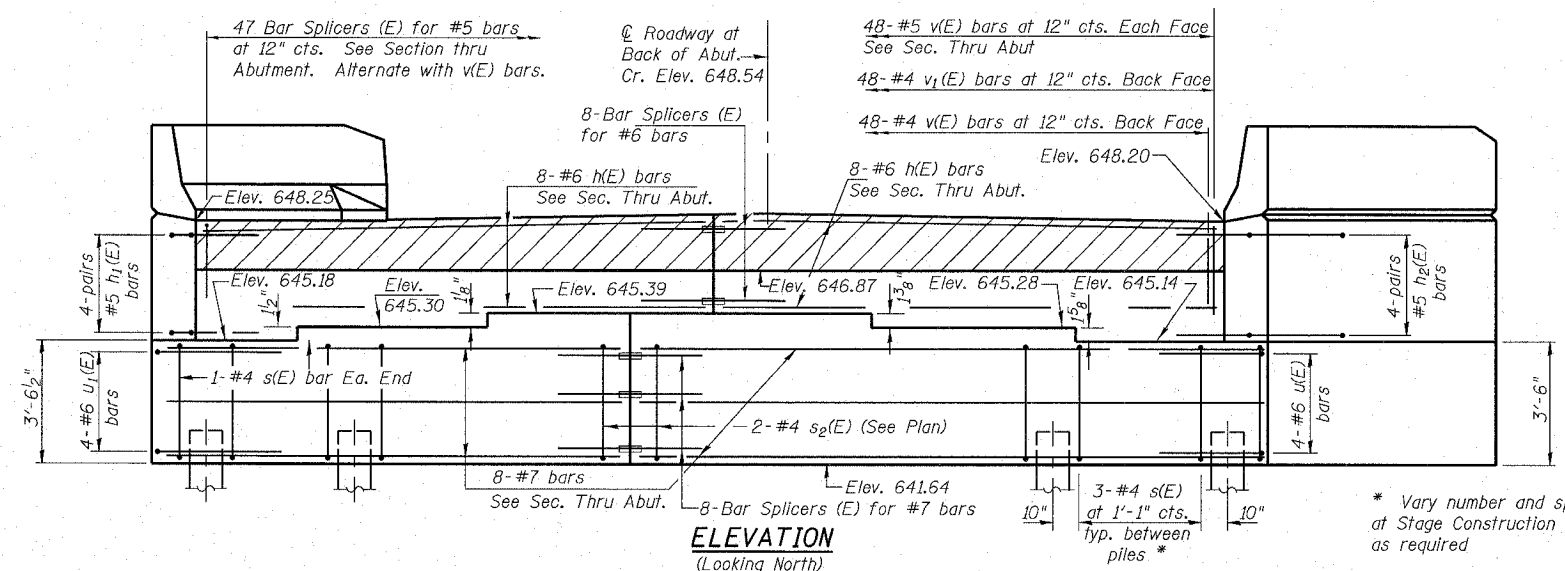
ABUTMENT  
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	16	#6	23'-2"	
h <sub>1</sub> (E)	8	#5	5'-9"	
h <sub>2</sub> (E)	8	#5	5'-9"	
h <sub>3</sub> (E)	20	#4	9'-8"	
h <sub>4</sub> (E)	12	#4	9'-8"	
n(E)	16	#6	11'-10"	
n <sub>1</sub> (E)	12	#6	5'-11"	
p(E)	3	#7	26'-0"	
p <sub>1</sub> (E)	2	#7	24'-2"	
p <sub>2</sub> (E)	3	#7	22'-4"	
p <sub>3</sub> (E)	3	#7	22'-10"	
p <sub>4</sub> (E)	2	#7	24'-8"	
p <sub>5</sub> (E)	3	#7	26'-6"	
p <sub>6</sub> (E)	12	#7	9'-9"	
s(E)	38	#4	15'-7"	
s <sub>1</sub> (E)	20	#4	9'-5"	
s <sub>2</sub> (E)	2	#4	18'-3"	
u(E)	4	#6	10'-3"	
u <sub>1</sub> (E)	4	#6	9'-3"	
v(E)	96	#5	4'-10"	
v <sub>1</sub> (E)	48	#4	3'-4"	
v <sub>2</sub> (E)	22	#6	5'-6"	
v <sub>3</sub> (E)	6	#6	5'-9"	
v <sub>4</sub> (E)	16	#6	5'-8"	
v <sub>5</sub> (E)	48	#5	3'-8"	
Structure Excavation	Cu. Yd.		162	
Concrete Structures	Cu. Yd.		44.5	
Reinforcement Bars, Epoxy Coated	Pound		4090	
Test Piles Metal Shells	Each		1	
Furnishing Metal Pile Shells 12"	Ft.		840	
Driving and Filling Shells	Ft.		840	
Bridge Seat Sealer	Sq. Ft.		128	

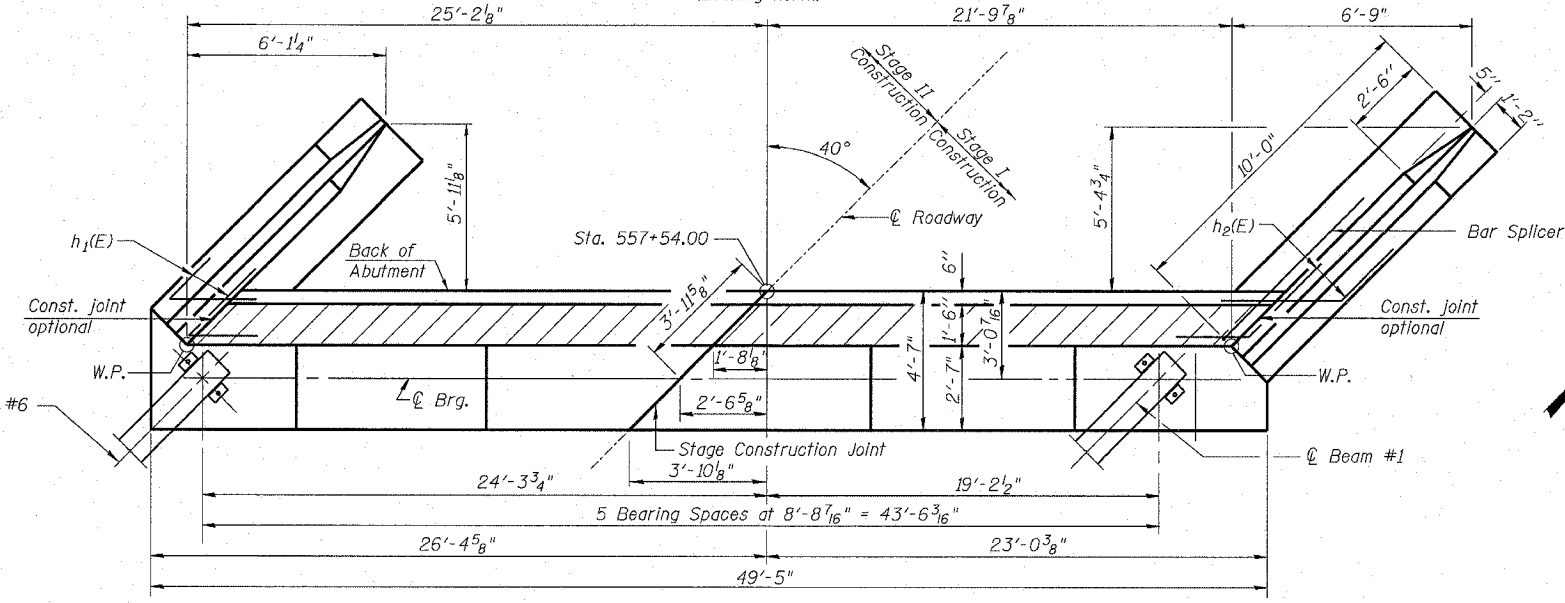
Notes:  
1. Reinforcement bars designated (E) shall be epoxy coated.  
2. For details of Bar Splicers, see sheet 20 of 24.

NORTH ABUTMENT  
IL RTE 40 OVER WINNEBAGO DITCH  
F.A.P. 646 SECTION (102)BR-3  
WHITESIDE COUNTY  
STATION 558+38  
S.N. 098-0109

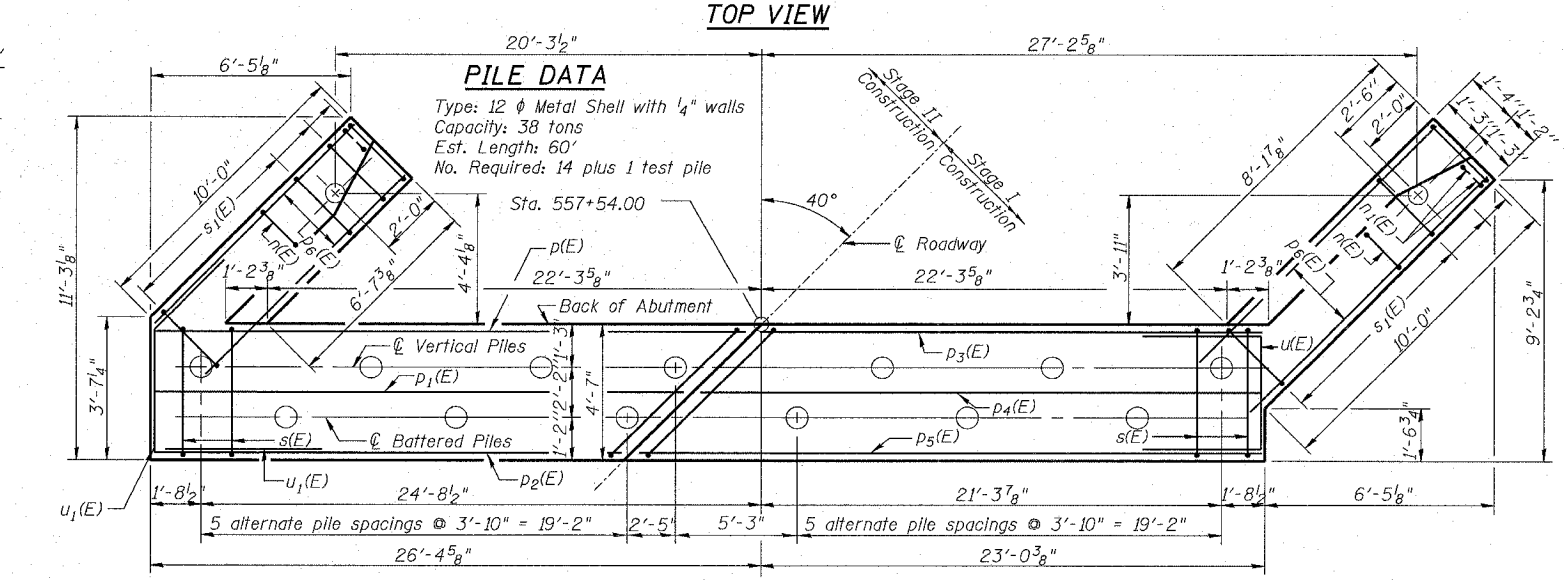
DESIGNED	DDB		FILE NUMBER
CHECKED	AMPH		136.110
DRAWN	JDB		DATE
CHECKED	DDB		Aug.
			2005



ELEVATION  
(Looking North)

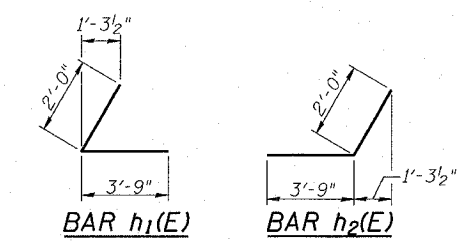


TOP VIEW

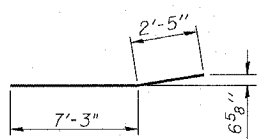


PLAN-PILE CAP

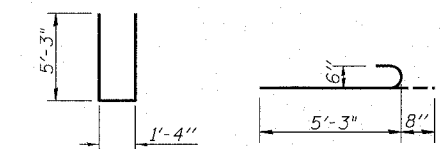
**PILE DATA**  
Type: 12 φ Metal Shell with 1/4" walls  
Capacity: 38 tons  
Est. Length: 60'  
No. Required: 14 plus 1 test pile



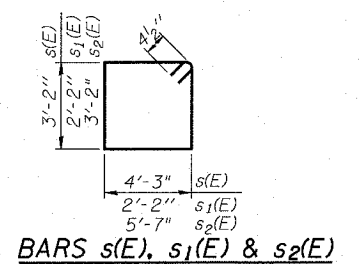
BAR h<sub>1</sub>(E)      BAR h<sub>2</sub>(E)



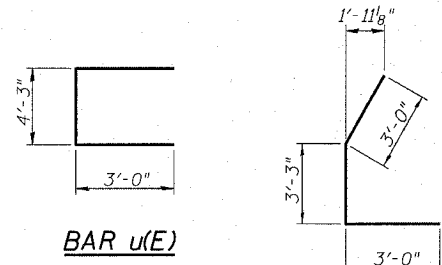
BAR h<sub>4</sub>(E)



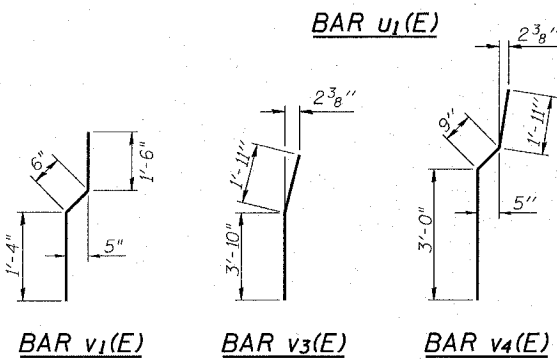
BAR n(E)      BAR n<sub>1</sub>(E)



BARS s(E), s<sub>1</sub>(E) & s<sub>2</sub>(E)



BAR u(E)      BAR u<sub>1</sub>(E)



BAR v<sub>1</sub>(E)      BAR v<sub>3</sub>(E)      BAR v<sub>4</sub>(E)

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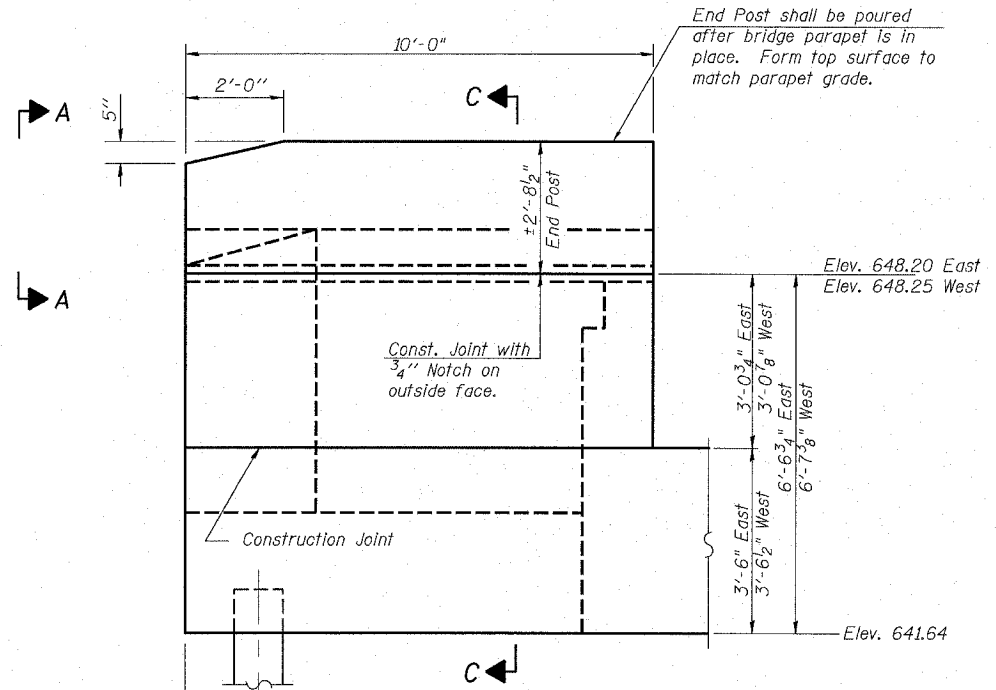
10/20/27 AM 8/8/2005

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

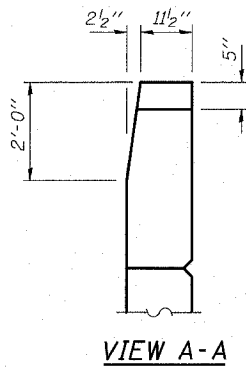
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S. B. I. F. A. 646	(102) BR-3	Whiteside	57	26
FED. ROAD DIST. NO. 7		ILLINOIS FED. AID PROJECT		

SHEET NO. 14  
24 SHEETS

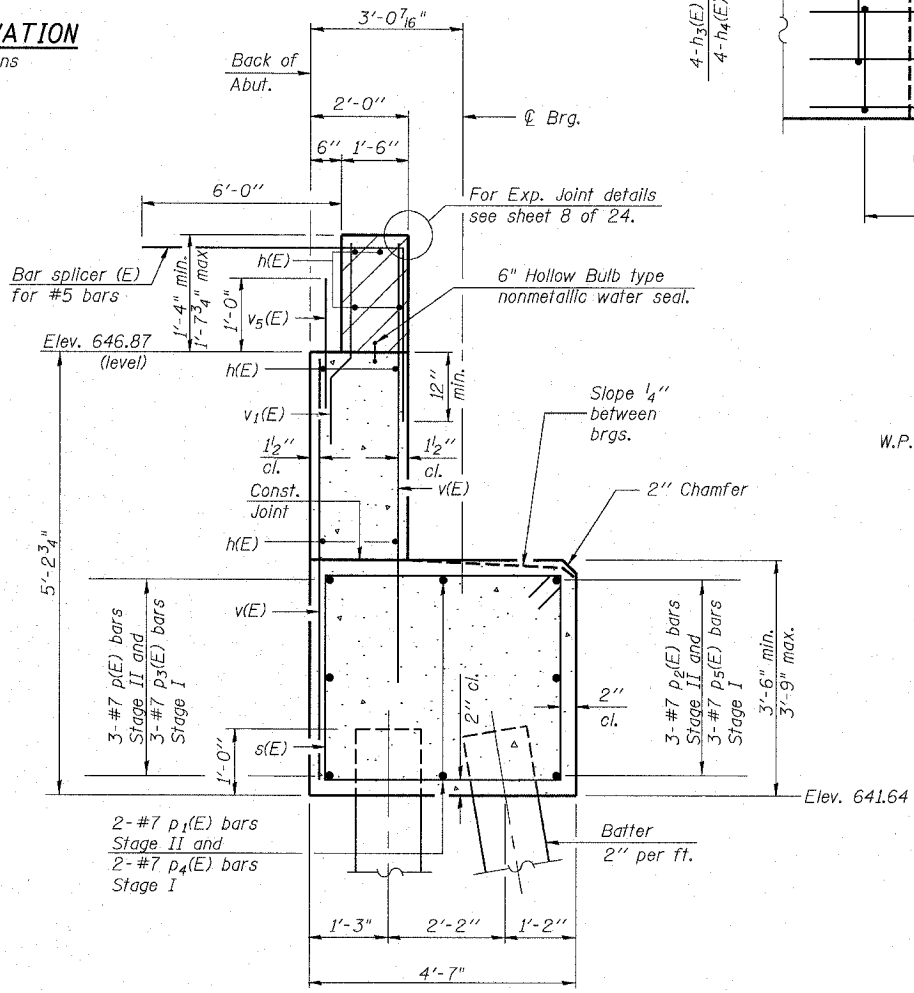
CONTRACT NO. 64426



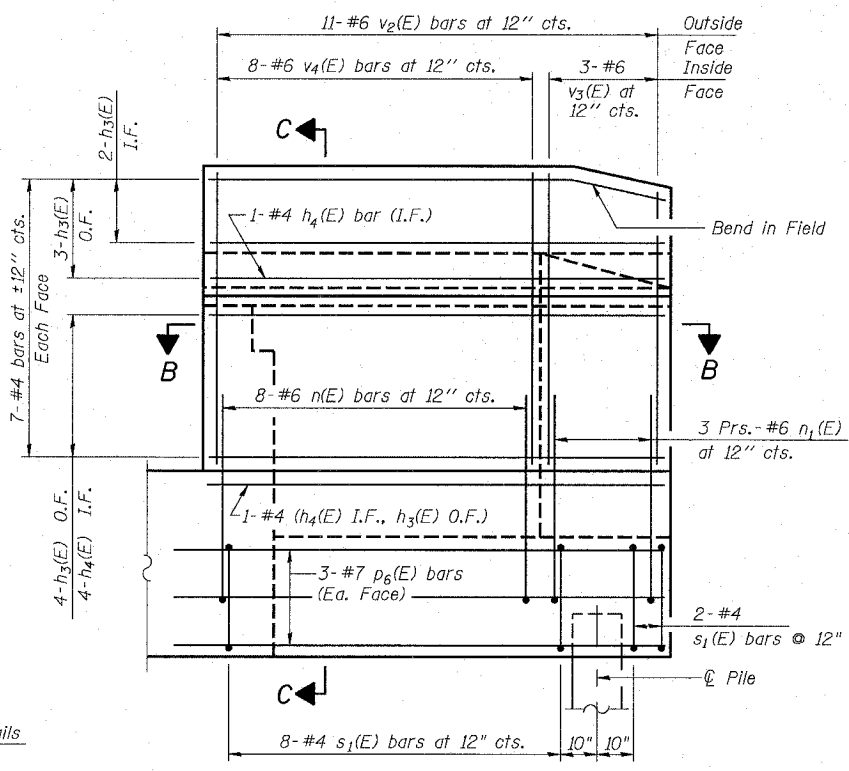
**WING WALL ELEVATION**  
Showing Dimensions



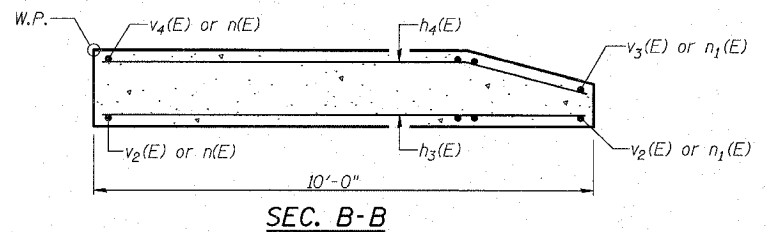
**VIEW A-A**



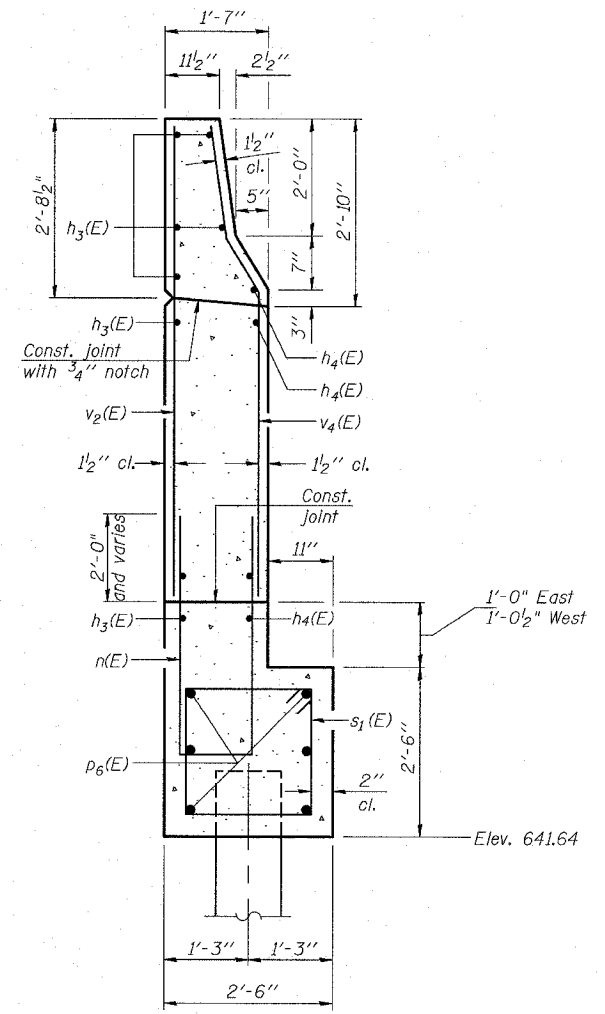
**SEC. THRU ABUT.**  
(at right angles to abut.)



**WING WALL ELEVATION**  
Showing Reinforcement



**SEC. B-B**



**SEC. C-C**

- Notes:
1. Hatched area to be poured after superstructure forms have been removed. Quantity of concrete included with Concrete Superstructure.
  2. Space reinforcement in cap to miss anchor bolts.
  3. Pour steps monolithically with cap.
  4. Reinforcement bars designated (E) shall be epoxy coated.
  5. Quantity of concrete in end post included with Concrete Superstructure on sheet 7 of 24.

**NORTH ABUTMENT**  
IL RTE 40 OVER WINNEBAGO DITCH  
F.A.P. 646 SECTION (102)BR-3  
WHITESIDE COUNTY  
STATION 558+38  
S.N. 098-0109

DESIGNED	DDB		FILE NUMBER
CHECKED	AMPH		136.110
DRAWN	JDB		DATE
CHECKED	DDB		Aug.
			2005

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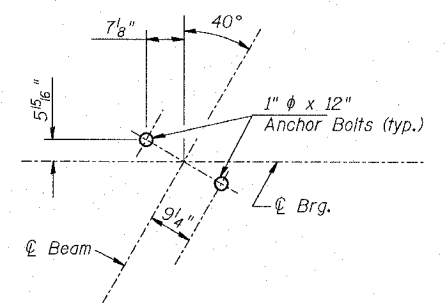
10/21/20 AM 8/8/2005

A-1-D 9-01-03

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S. B. I. F. A. 646	(102)BR-3	Whiteside	57	27
FED. ROAD DIST. NO. 7		ILLINOIS FED. AID PROJECT-		24 SHEETS

CONTRACT NO. 64426



ANCHOR BOLT LAYOUT DETAIL

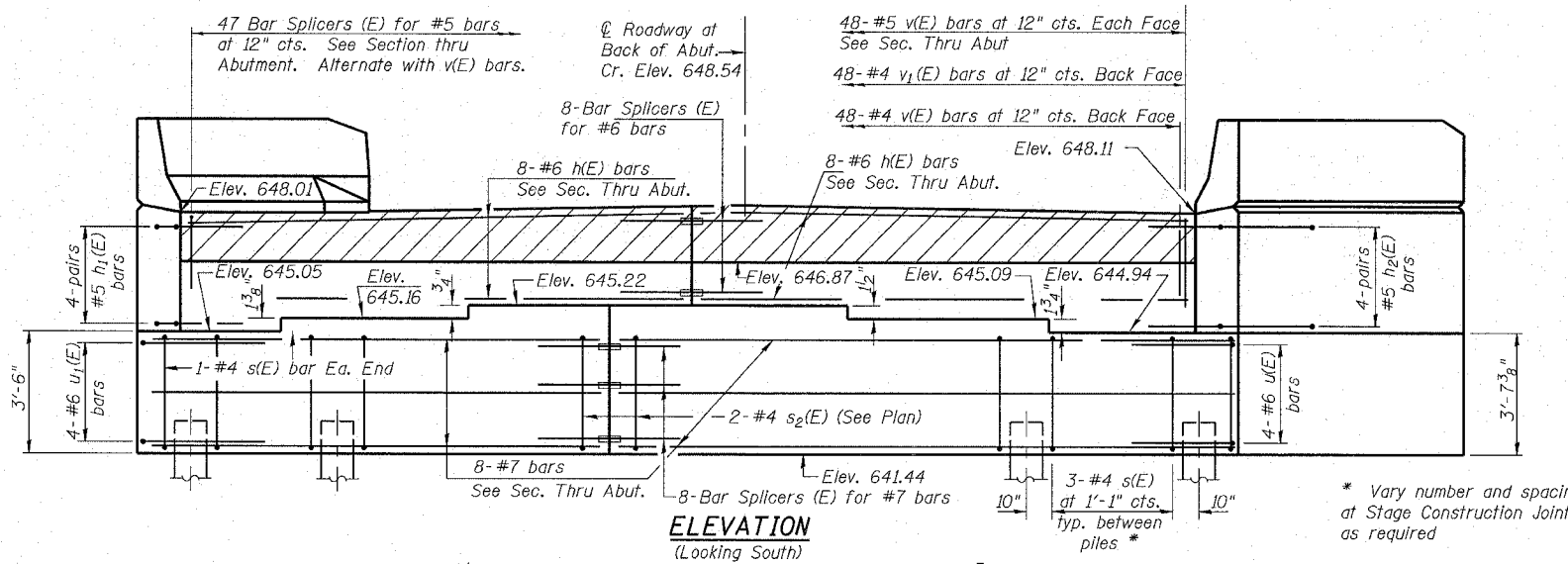
ABUTMENT  
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	16	#6	23'-2"	
h <sub>1</sub> (E)	8	#5	5'-9"	
h <sub>2</sub> (E)	8	#5	5'-9"	
h <sub>3</sub> (E)	20	#4	9'-8"	
h <sub>4</sub> (E)	12	#4	9'-8"	
n(E)	16	#6	11'-10"	
n <sub>1</sub> (E)	12	#6	5'-11"	
p(E)	3	#7	26'-0"	
p <sub>1</sub> (E)	2	#7	24'-2"	
p <sub>2</sub> (E)	3	#7	22'-4"	
p <sub>3</sub> (E)	3	#7	22'-10"	
p <sub>4</sub> (E)	2	#7	24'-8"	
p <sub>5</sub> (E)	3	#7	26'-6"	
p <sub>6</sub> (E)	12	#7	9'-9"	
s(E)	38	#4	15'-7"	
s <sub>1</sub> (E)	20	#4	9'-5"	
s <sub>2</sub> (E)	2	#4	18'-3"	
u(E)	4	#6	10'-3"	
u <sub>1</sub> (E)	4	#6	9'-3"	
v(E)	96	#5	4'-10"	
v <sub>1</sub> (E)	48	#4	3'-4"	
v <sub>2</sub> (E)	22	#6	5'-6"	
v <sub>3</sub> (E)	6	#6	5'-9"	
v <sub>4</sub> (E)	16	#6	5'-8"	
v <sub>5</sub> (E)	48	#5	3'-8"	
Structure Excavation		Cu. Yd.	150	
Concrete Structures		Cu. Yd.	45.0	
Reinforcement Bars, Epoxy Coated		Pound	4090	
Furnishing Metal Pile Shells 12"		Lin. Ft.	1125	
Driving and Filling Shells		Lin. Ft.	1125	
Bridge Seat Sealer		Sq. Ft.	128	

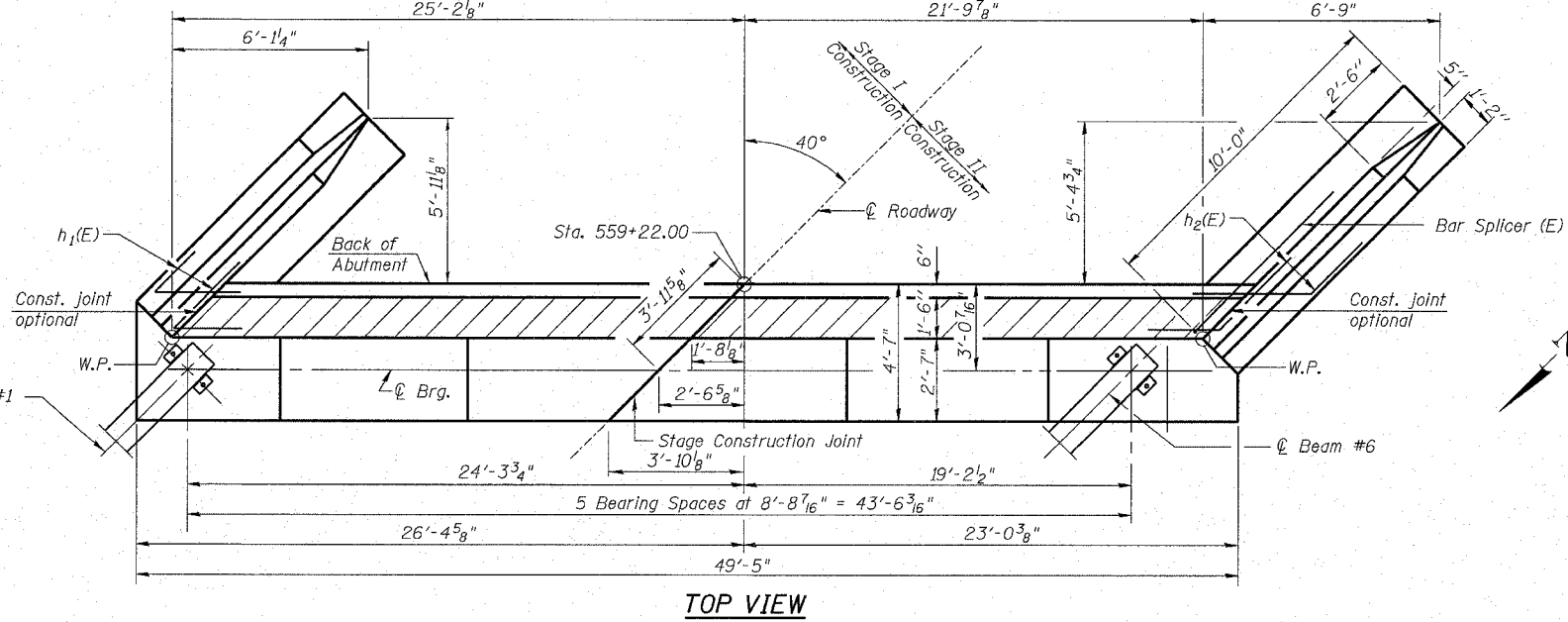
- Notes:  
1. Reinforcement bars designated (E) shall be epoxy coated.  
2. For details of Bar Splicers, see sheet 20 of 24.

SOUTH ABUTMENT  
IL RTE 40 OVER WINNEBAGO DITCH  
F.A.P. 646 SECTION (102)BR-3  
WHITESIDE COUNTY  
STATION 558+38  
S.N. 098-0109

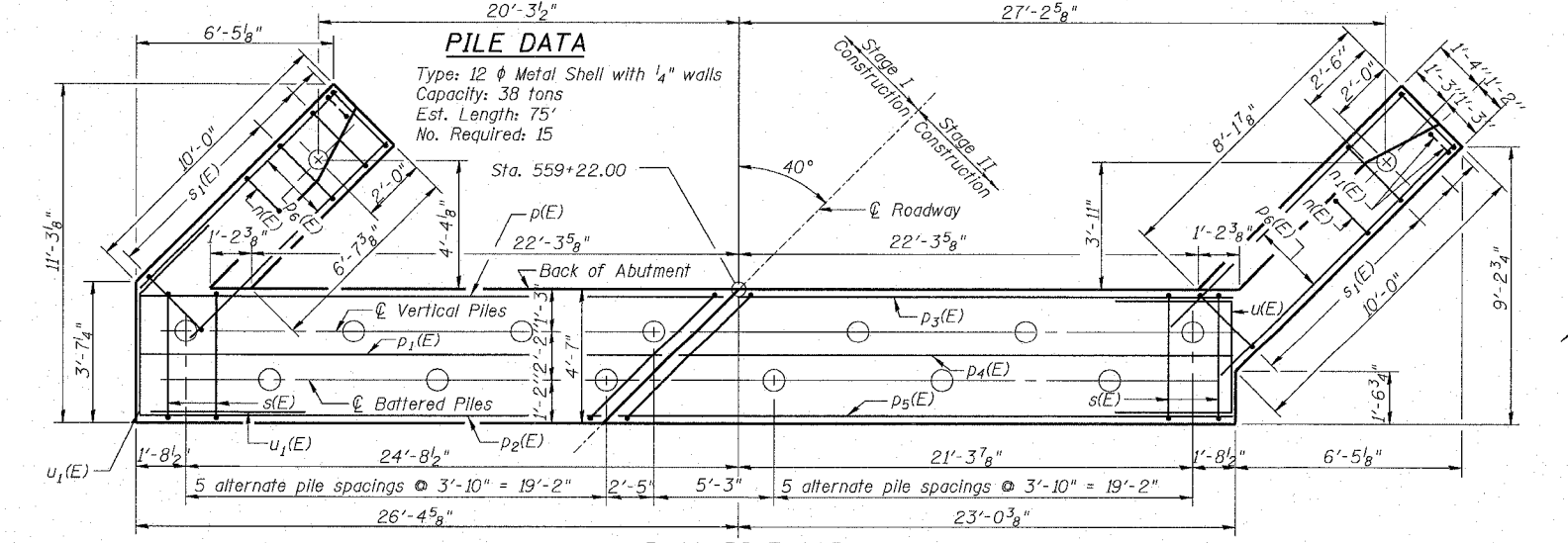
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CHECKED	AMPH		136.110
DRAWN	JDB		DATE
CHECKED	DDP		Aug.
			2005



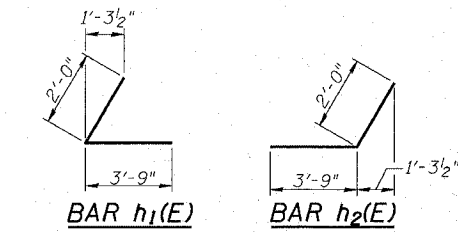
ELEVATION  
(Looking South)



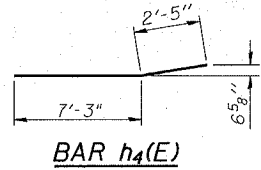
TOP VIEW



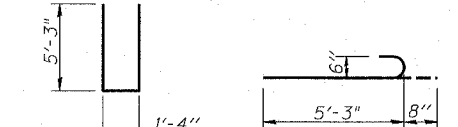
PLAN-PILE CAP



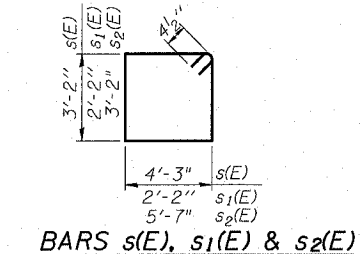
BAR h<sub>1</sub>(E)      BAR h<sub>2</sub>(E)



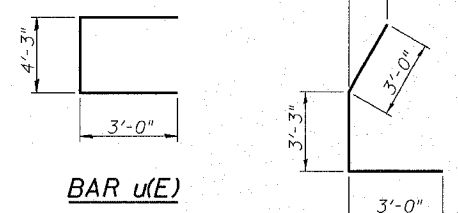
BAR h<sub>4</sub>(E)



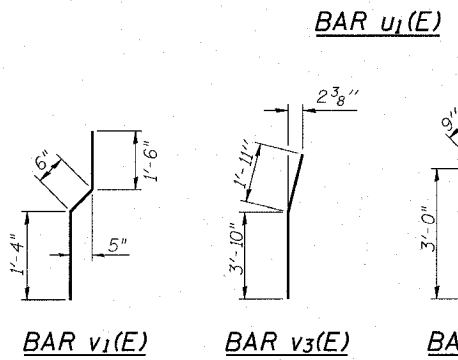
BAR n(E)      BAR n<sub>1</sub>(E)



BARS s(E), s<sub>1</sub>(E) & s<sub>2</sub>(E)



BAR u(E)      BAR u<sub>1</sub>(E)



BAR v<sub>1</sub>(E)      BAR v<sub>3</sub>(E)      BAR v<sub>4</sub>(E)

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10/22/03 AM

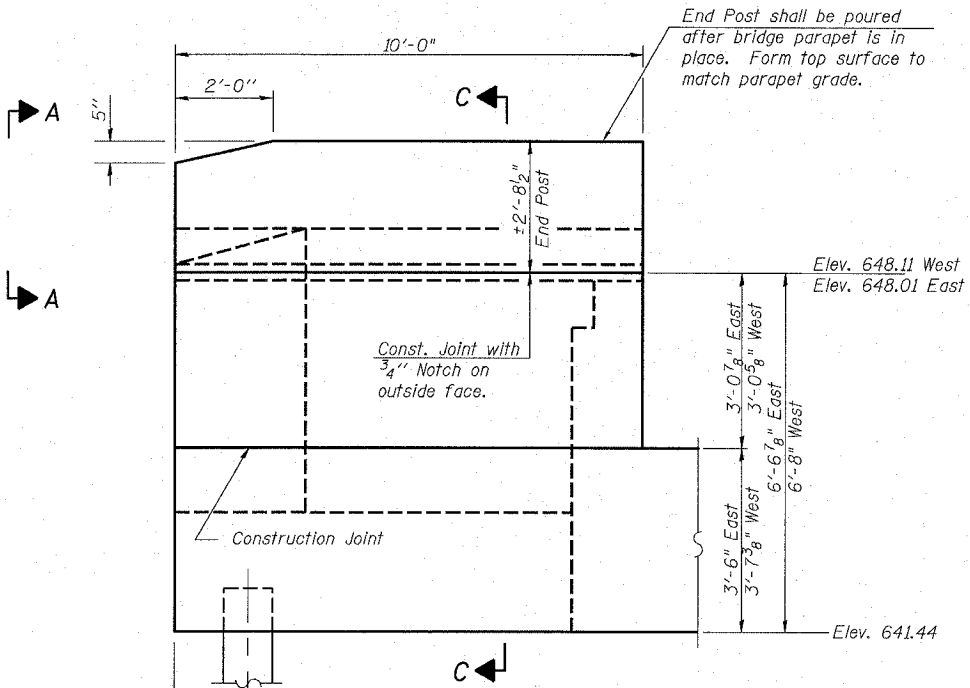
8/8/2005

A-1-R (35°-60°) 9-01-03

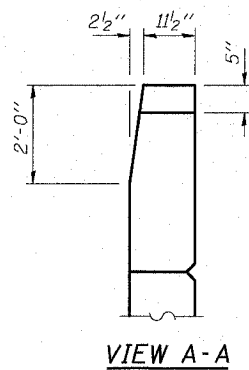
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S. B. I.	(102)	Whiteside	57	28
F. A.	646 BR-3			
FED. ROAD DIST. NO. 7	ILLINOIS FED. AID PROJECT-			

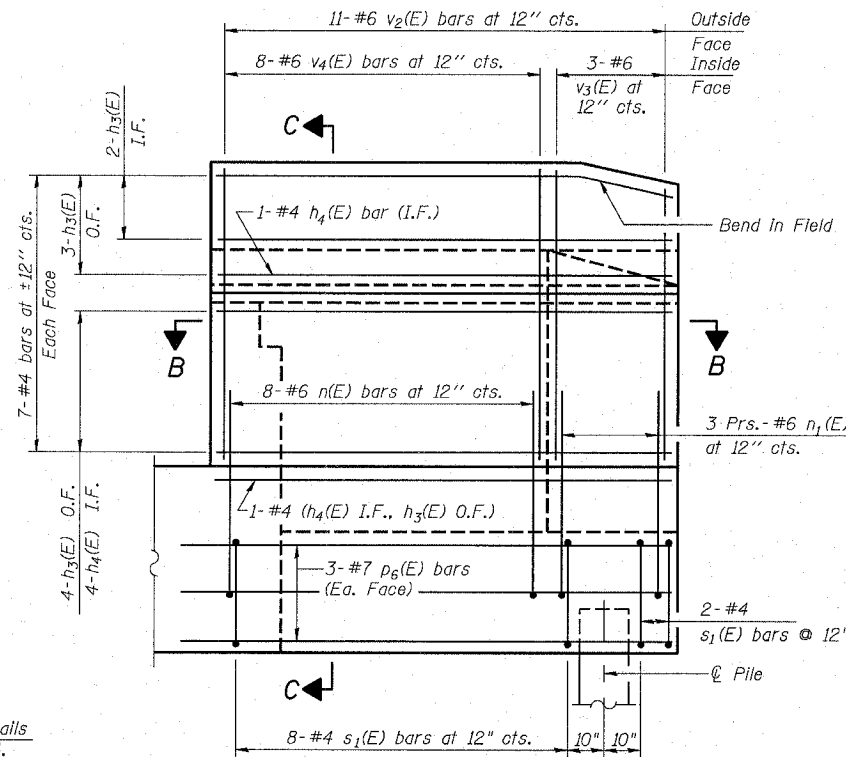
CONTRACT NO. 64426



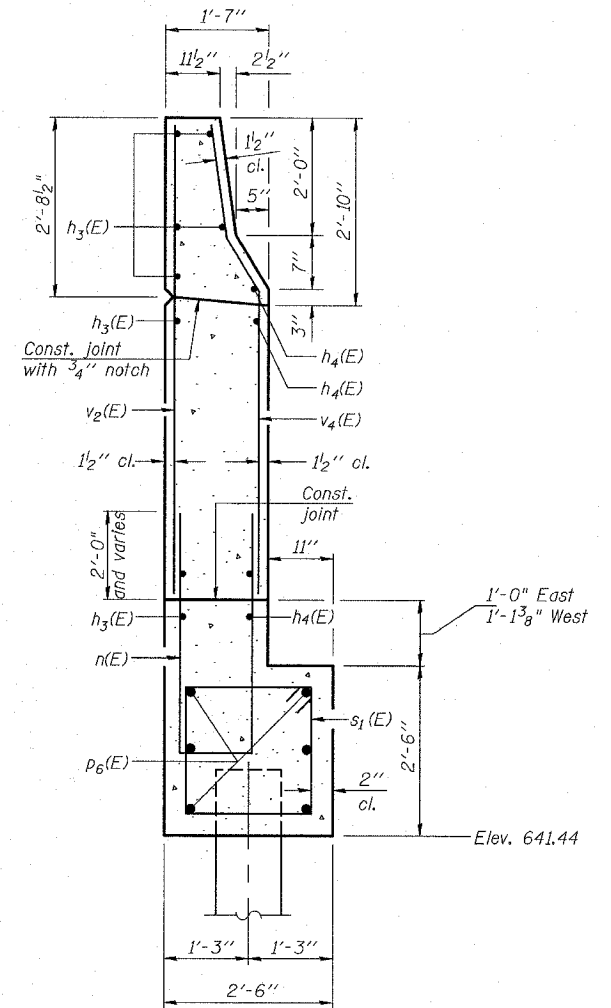
**WING WALL ELEVATION**  
Showing Dimensions



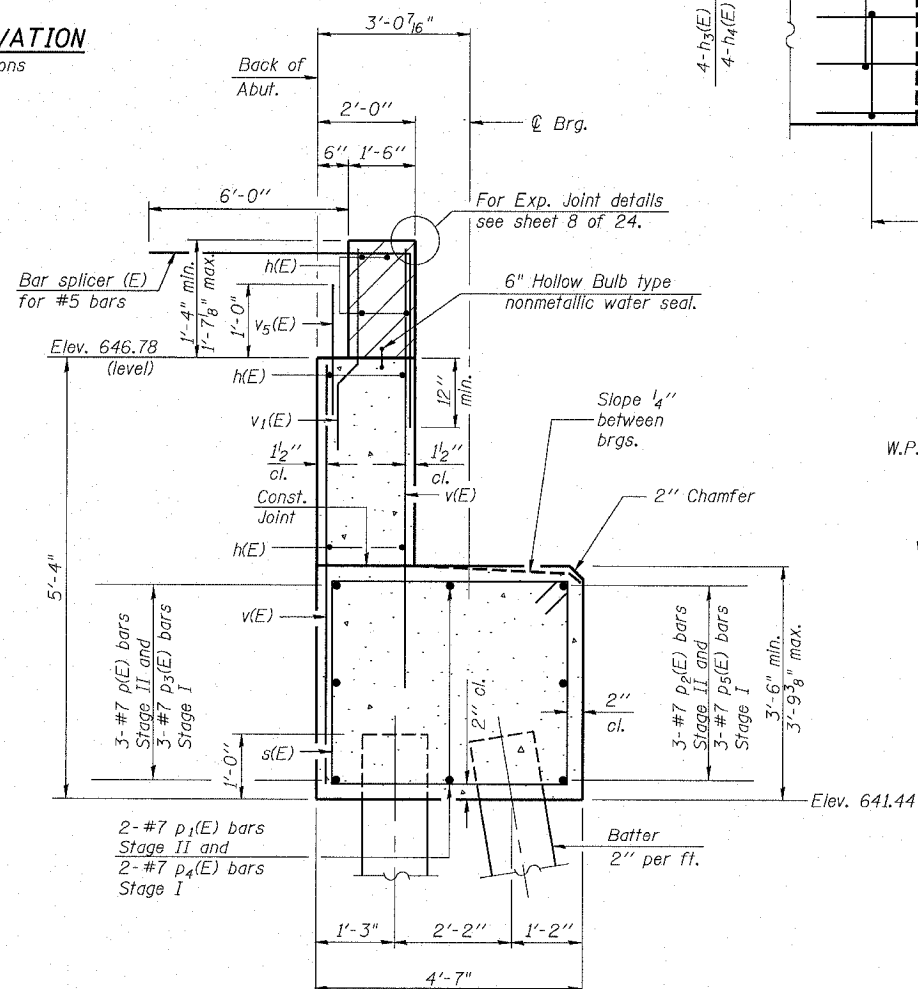
**VIEW A-A**



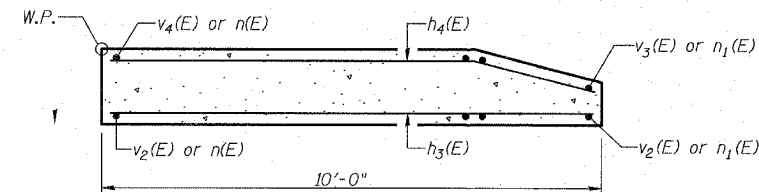
**WING WALL ELEVATION**  
Showing Reinforcement



**SEC. C-C**



**SEC. THRU ABUT.**  
(at right angles to abut.)



**SEC. B-B**

- Notes:
1. Hatched area to be poured after superstructure forms have been removed. Quantity of concrete included with Concrete Superstructure.
  2. Space reinforcement in cap to miss anchor bolts.
  3. Pour steps monolithically with cap.
  4. Reinforcement bars designated (E) shall be epoxy coated.
  5. Quantity of concrete in end post included with Concrete Superstructure on sheet 7 of 24.

**SOUTH ABUTMENT**  
IL RTE 40 OVER WINNEBAGO DITCH  
F.A.P. 646 SECTION (102)BR-3  
WHITESIDE COUNTY  
STATION 558+38  
S.N. 098-0109

DESIGNED	DDB		FILE NUMBER
CHECKED	AMPH		136.110
DRAWN	JDB		DATE
CHECKED	DDB		Aug.
			2005

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10/23/05 AM

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A-1-D 9-01-03



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

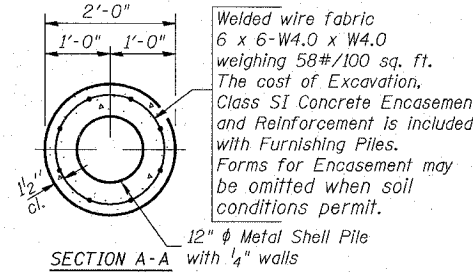
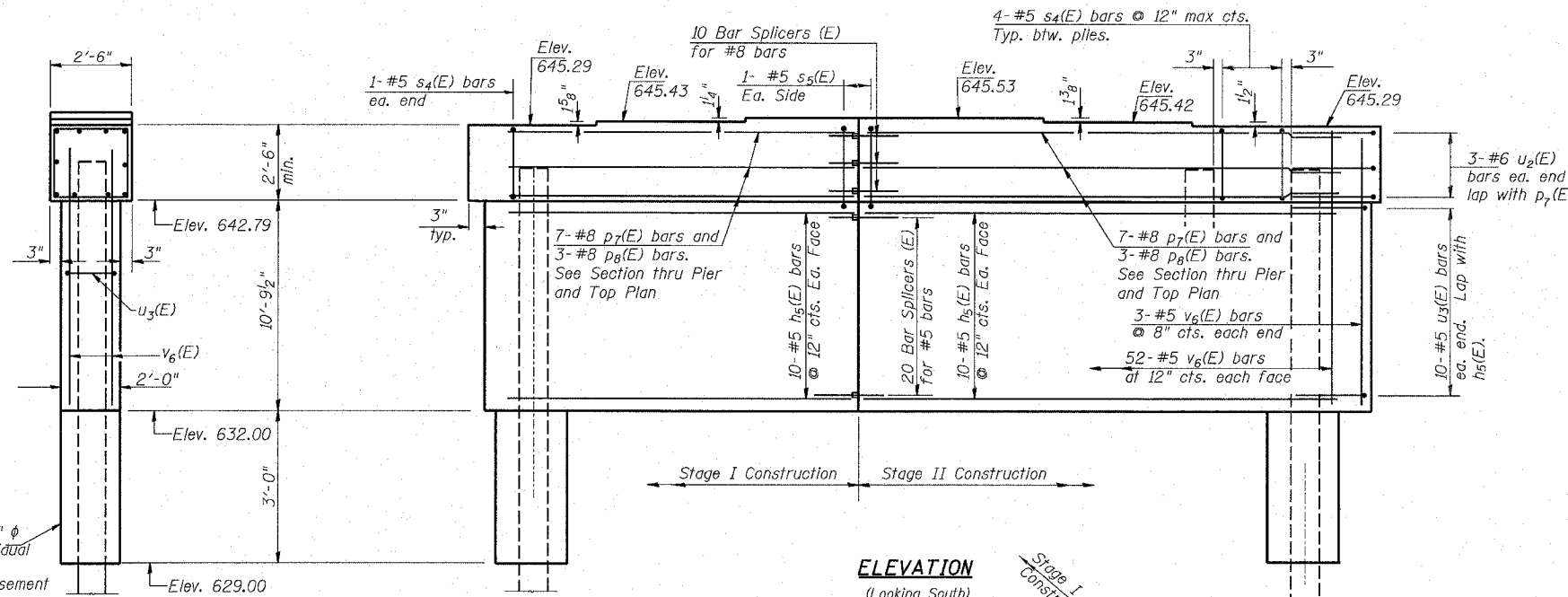
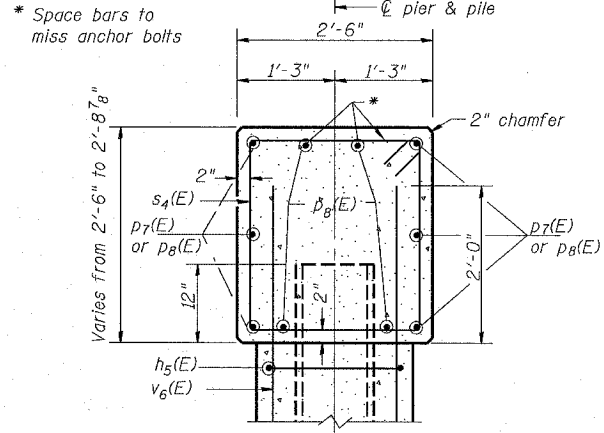
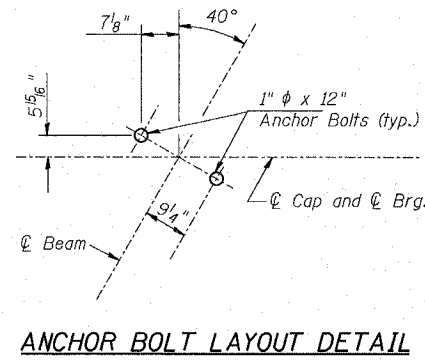
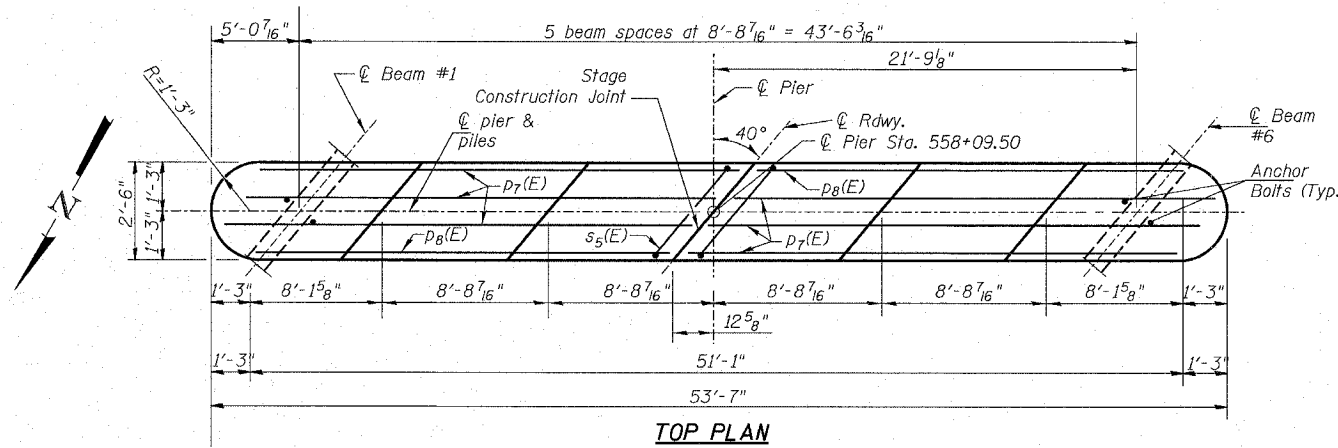
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.R.L.	(102)	Whiteside	57	29
F.A. 646	BR-3			
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT-				

CONTRACT NO. 64426

- Notes: 1. Space reinforcement in cap to miss anchor bolts.  
2. Pour steps monolithically with cap.  
3. All edges shall have standard 2" chamfers except as noted.

**PILE DATA**

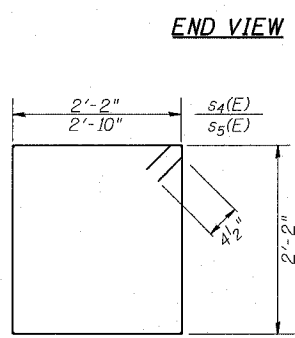
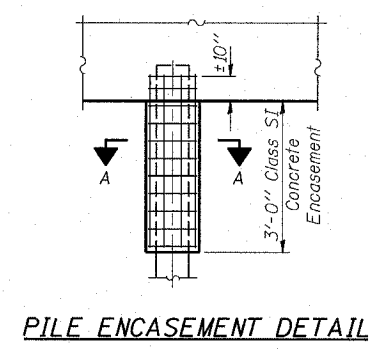
Type: 12"  $\phi$  Metal Shell with  $\frac{1}{4}$ " walls  
Capacity: 42 ton; over drive to 65 tons  
Est. Length: 65 LF  
No. Req'd: 11 plus 1 test pile



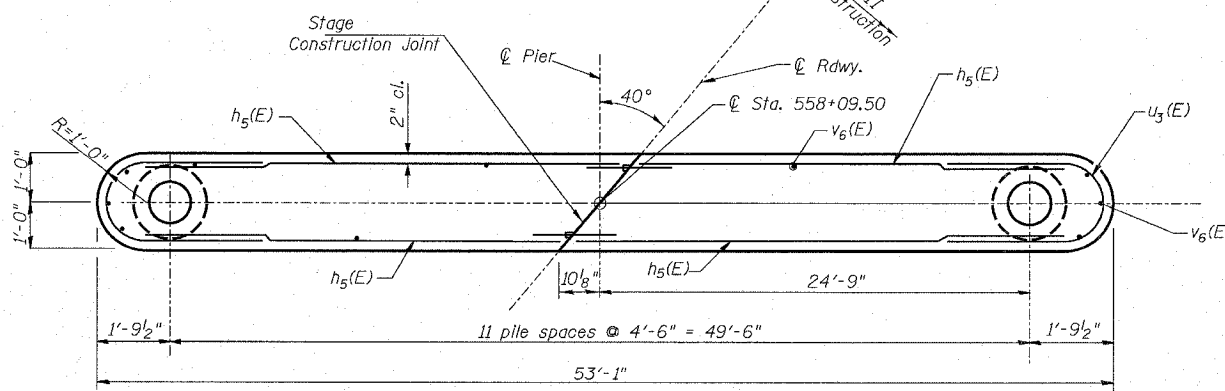
**BILL OF MATERIAL**

Bar	No.	Size	Length (ft)	Shape
$h_5(E)$	40	#5	24'-9"	—
$p_7(E)$	14	#8	26'-0"	—
$p_8(E)$	6	#8	24'-5"	—
$s_4(E)$	46	#5	9'-5"	□
$s_5(E)$	2	#5	10'-9"	□
$u_2(E)$	6	#6	11'-3"	U
$u_3(E)$	20	#5	10'-7"	U
$v_6(E)$	110	#5	12'-9"	—
Concrete structures		Cu. Yd.	55.0	
Reinforcement bars, epoxy coated		Lb.	4650	
Furnishing Metal Pile Shells 12"		L.F.	715	
Driving and Filling Shells		L.F.	715	
Structure Excavation		Cu. Yd.	53	
Underwater Structure Excavation Protection, Location 1		Each	1	
Test Piles Metal Shell		Each	1	

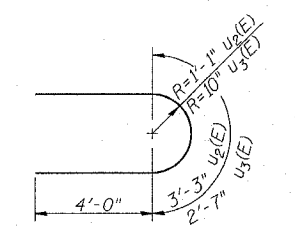
Reinforcement bars designated (E) shall be epoxy coated.



BAR  $s_4(E)$  &  $s_5(E)$



STEM SECTION



BAR  $u_2(E)$  &  $u_3(E)$

PIER #1  
IL RTE 40 OVER WINNEBAGO DITCH  
F.A.P. 646 SECTION (102)BR-3  
WHITESIDE COUNTY  
STATION 558+38  
S.N. 098-0109

DESIGNED	DDB		FILE NUMBER
CHECKED	AMPH		136.110
DRAWN	JDB		DATE
CHECKED	DDB		Aug.
			2005

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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

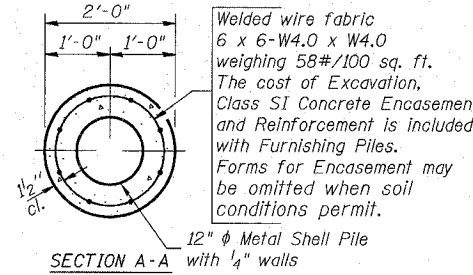
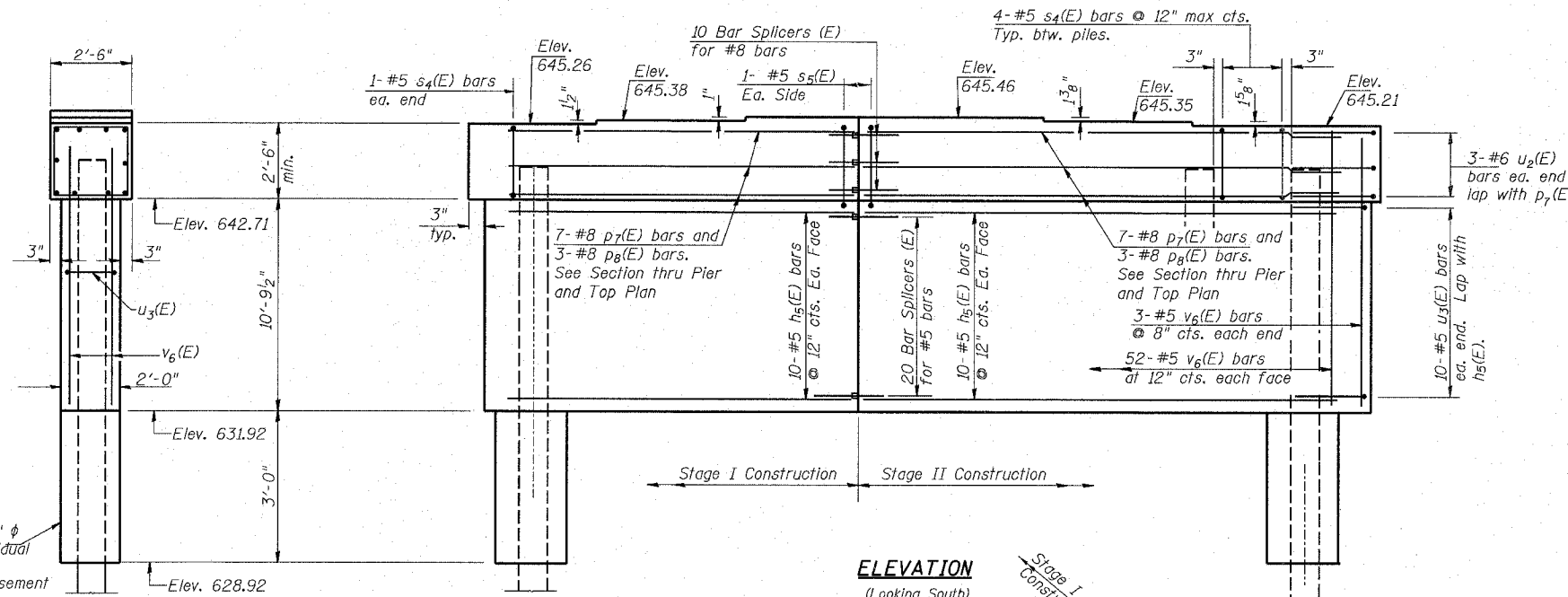
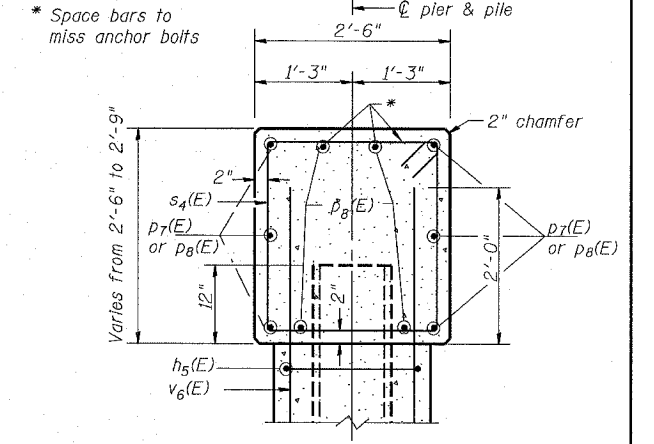
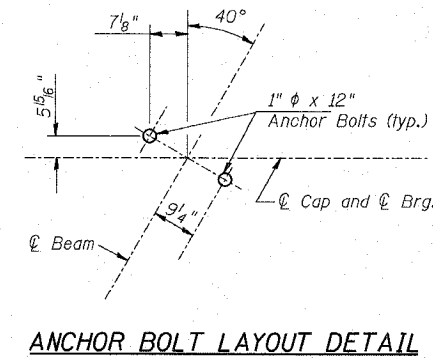
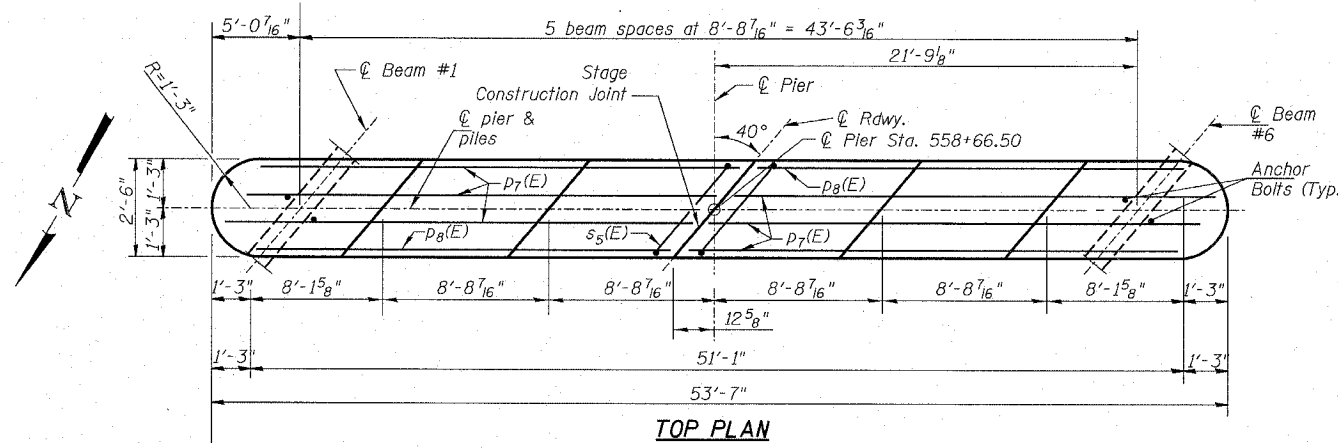
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.L.	(102)	Whiteside	57	30
F.A. 646	BR-3			
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT-				

CONTRACT NO. 64426

- Notes: 1. Space reinforcement in cap to miss anchor bolts.  
2. Pour steps monolithically with cap.  
3. All edges shall have standard 2" chamfers except as noted.

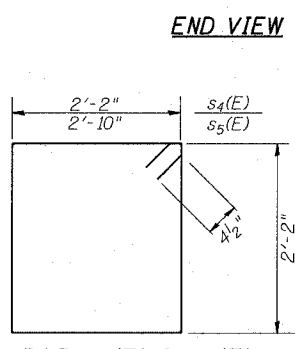
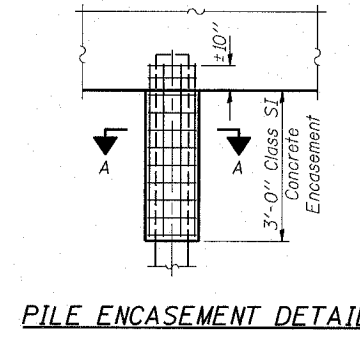
**PILE DATA**

Type: 12"  $\phi$  Metal Shell with 1/4" walls  
Capacity: 42 tons; over drive to 65 tons  
Est. Length: 95 LF  
No. Req'd: 11 plus 1 test pile

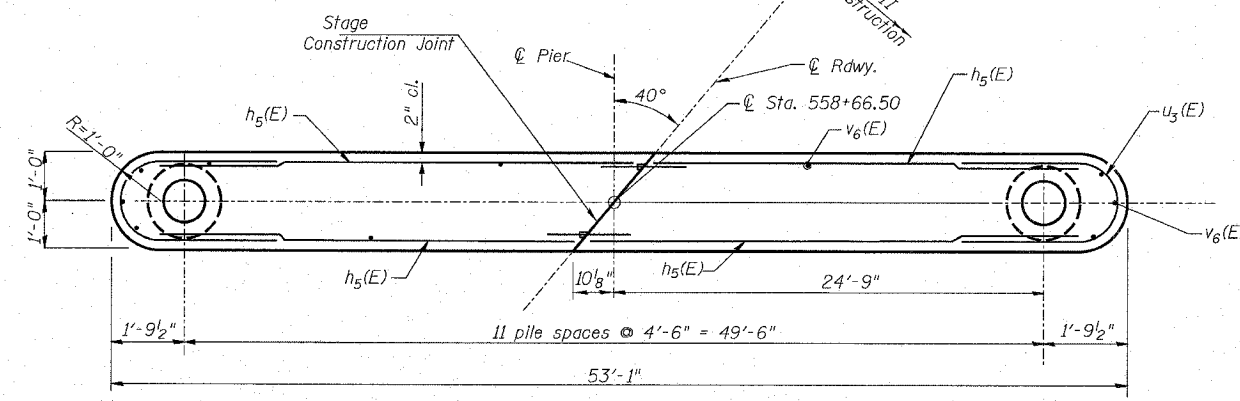


**BILL OF MATERIAL**

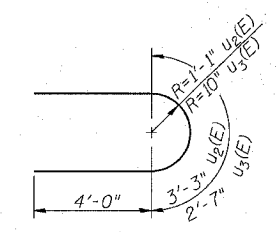
Bar	No.	Size	Length (ft)	Shape
h5(E)	40	#5	24'-9"	—
p7(E)	14	#8	26'-0"	—
p8(E)	6	#8	24'-5"	—
s4(E)	46	#5	9'-5"	□
s5(E)	2	#5	10'-9"	□
u2(E)	6	#6	11'-3"	U
u3(E)	20	#5	10'-7"	—
v6(E)	110	#5	12'-9"	—
Concrete structures		Cu. Yd.	54.9	
Reinforcement bars, epoxy coated		Lb.	4650	
Furnishing Metal Pile Shells 12"		L.F.	1045	
Driving and Filling Shells		L.F.	1045	
Structure Excavation		Cu. Yd.	53	
Underwater Structure Excavation Protection, Location 2		Each	1	
Test Piles Metal Shell		Each	1	



BAR s4(E) & s5(E)



STEM SECTION



BAR u2(E) & u3(E)

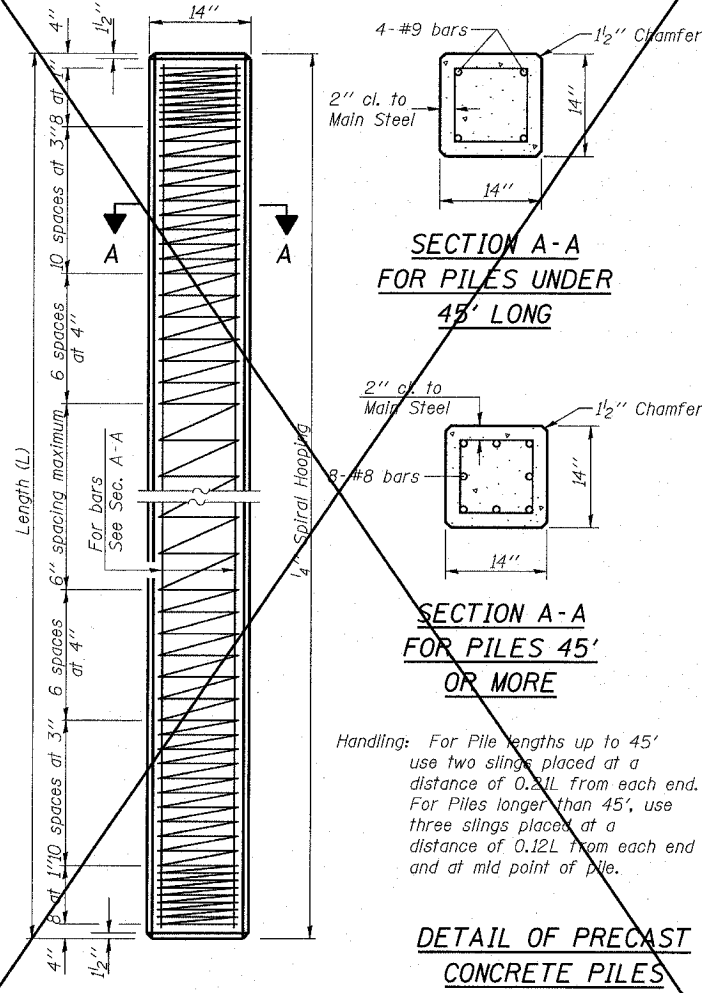
PIER #2  
IL RTE 40 OVER WINNEBAGO DITCH  
F.A.P. 646 SECTION (102)BR-3  
WHITESIDE COUNTY  
STATION 558+38  
S.N. 098-0109

DESIGNED	DDB	FILE NUMBER	136.110
CHECKED	AMPH	DATE	Aug. 2005
DRAWN	JDB		
CHECKED	DDB		

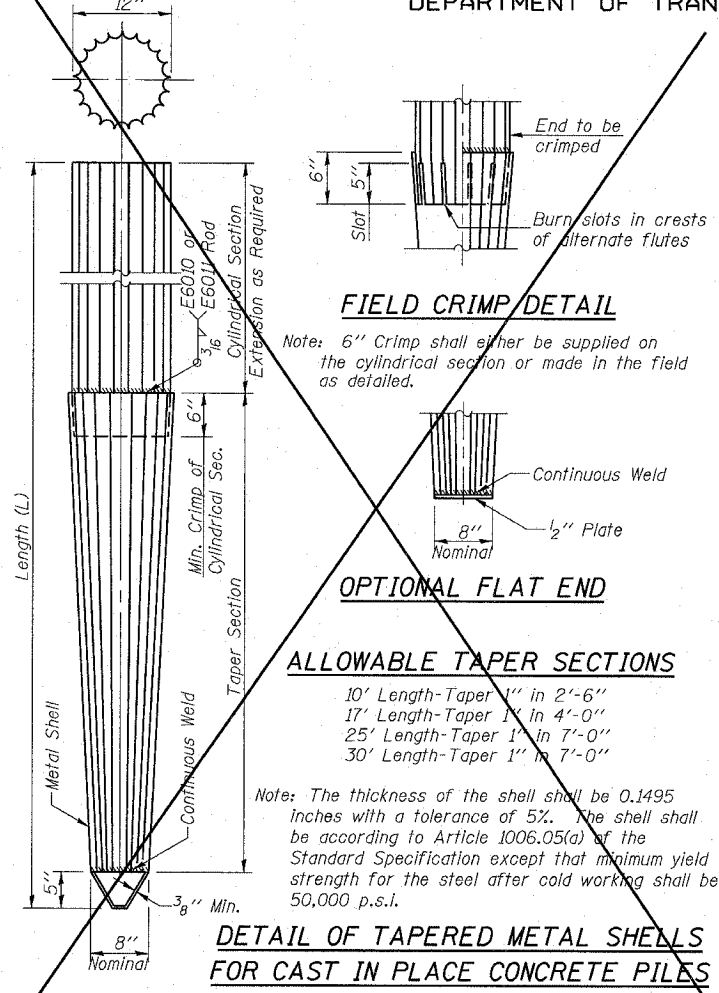
RANDOLPH & ASSOCIATES, INC.  
111 N. FLOWER PARKWAY, P.O. BOX 2124  
TEL: 815-291-8818 FAX: 815-291-8888  
CONSULTING ENGINEERS & LAND SURVEYORS

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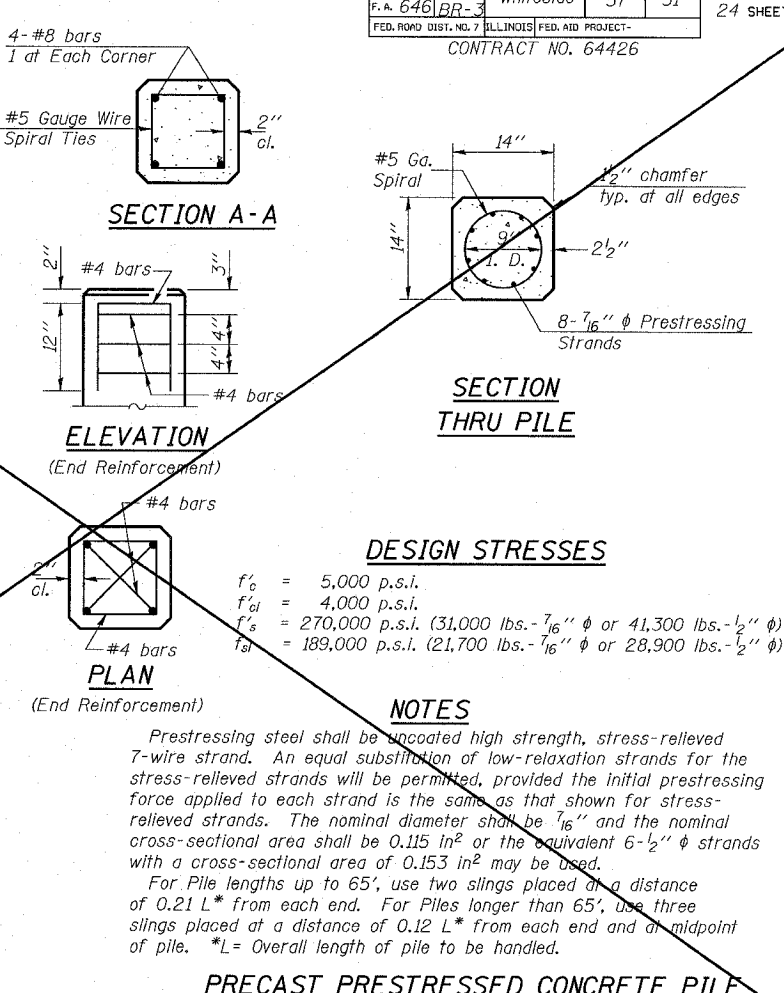
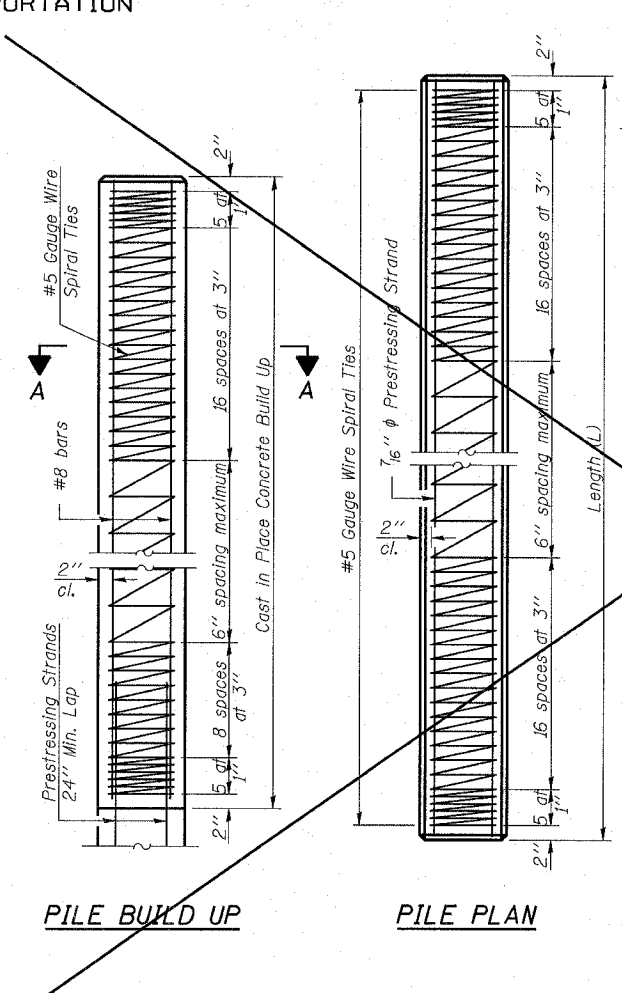
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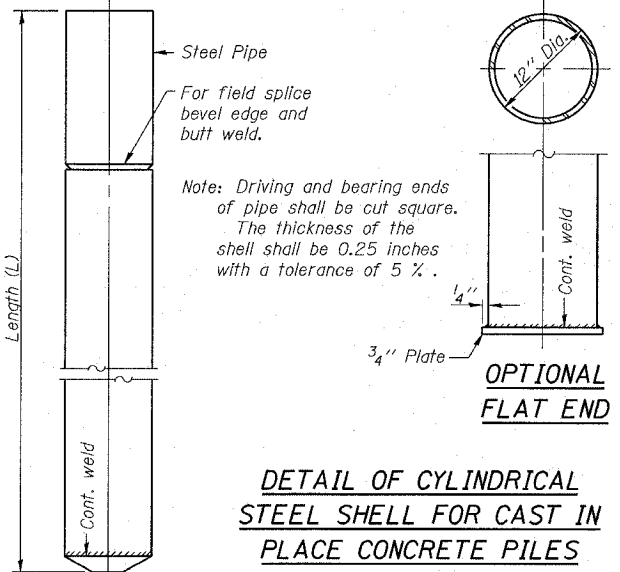
**DETAIL OF PRECAST CONCRETE PILES**



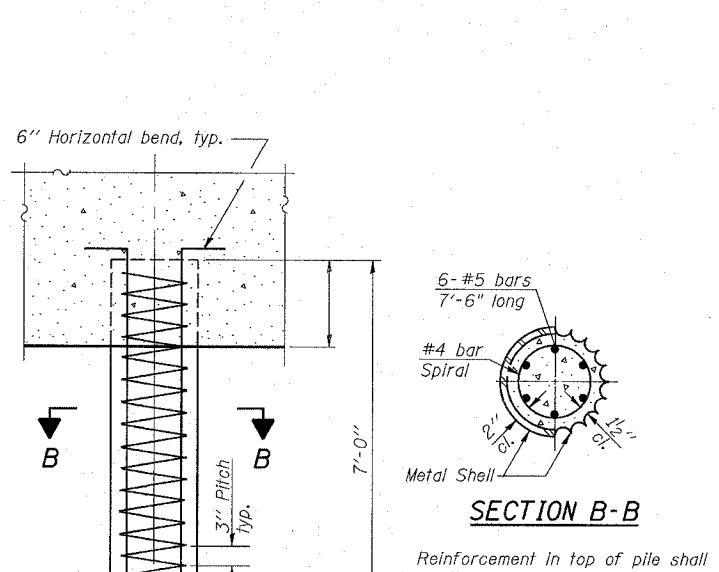
**DETAIL OF TAPERED METAL SHELLS FOR CAST IN PLACE CONCRETE PILES**



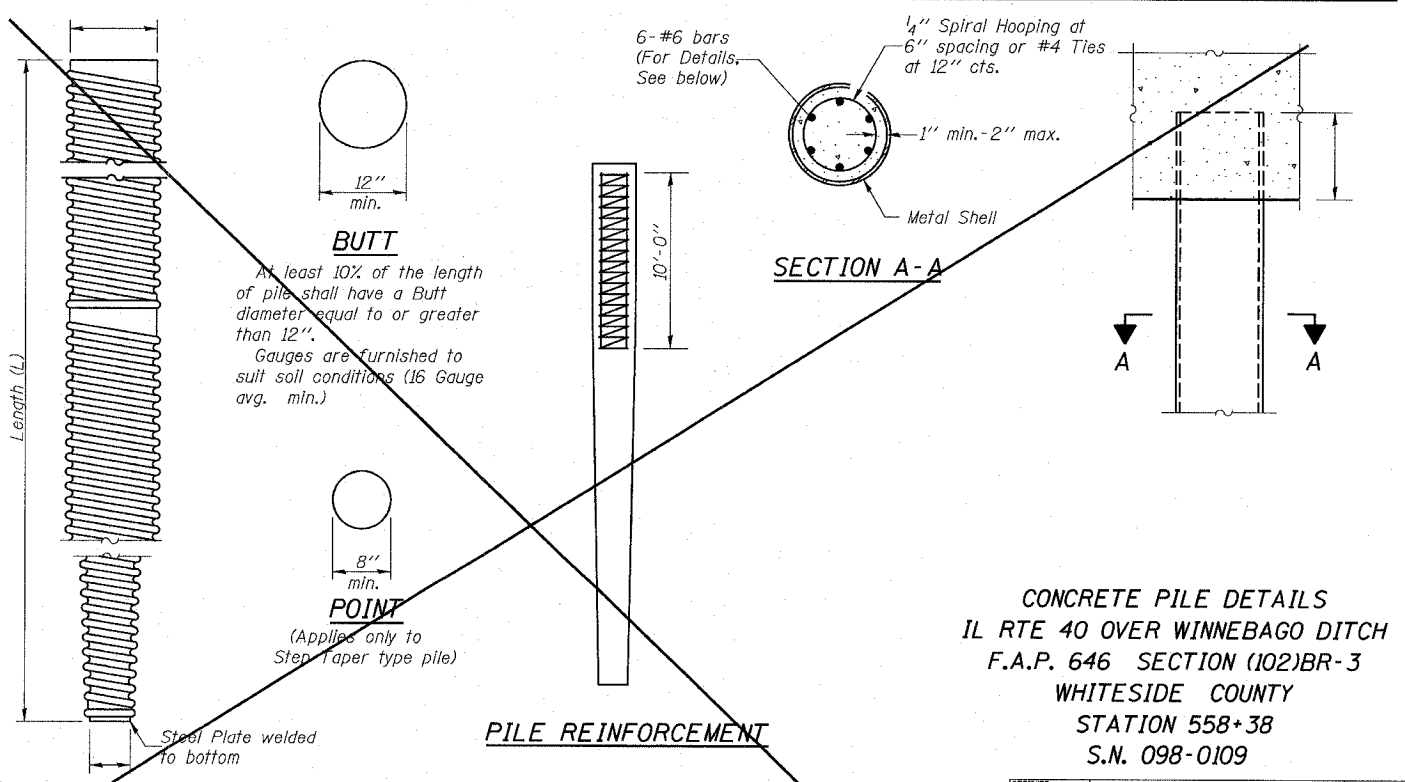
**PRECAST PRESTRESSED CONCRETE PILE**



**DETAIL OF CYLINDRICAL STEEL SHELL FOR CAST IN PLACE CONCRETE PILES**



**DETAIL OF REINFORCEMENT FOR METAL SHELLS**



**PILE REINFORCEMENT**

**CONCRETE PILE DETAILS**  
IL RTE 40 OVER WINNEBAGO DITCH  
F.A.P. 646 SECTION (102)BR-3  
WHITESIDE COUNTY  
STATION 558+38  
S.N. 098-0109

DESIGNED	DDB		FILE NUMBER
CHECKED	AMPH		136.110
DRAWN	JDB		DATE
APPROVED	DDB		Aug.
			2005

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**NOTES**

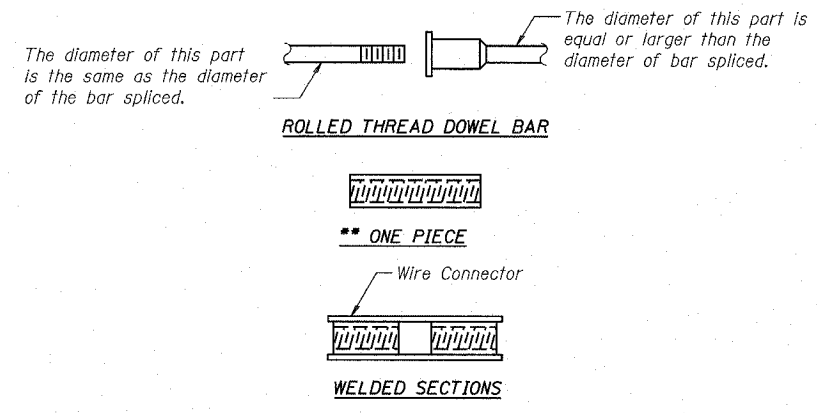
Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.  
Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.  
All reinforcement bars shall be lapped and tied to 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:

- Minimum Capacity (Tension in kips) =  $1.25 \times f_y \times A_t$
- Minimum \*Pull-out Strength (Tension in kips) =  $1.25 \times f_{sallow} \times A_t$

Where  $f_y$  = Yield strength of lapped reinforcement bars in ksi.  
 $f_{sallow}$  = Allowable tensile stress in lapped reinforcement bars in ksi (Service Load)  
 $A_t$  = Tensile stress area of lapped reinforcement bars.  
\* = 28 day concrete

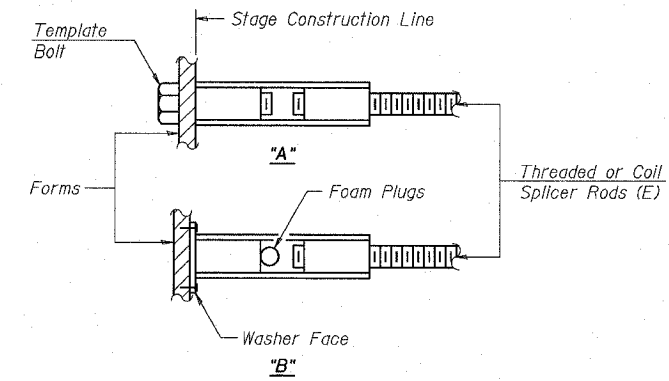
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#4	1'-8"	14.7	5.9
#5	2'-0"	23.0	9.2
#6	2'-7"	33.1	13.3
#7	3'-5"	45.1	18.0
#8	4'-6"	58.9	23.6
#9	5'-9"	75.0	30.0
#10	7'-3"	95.0	38.0
#11	9'-0"	117.4	46.8

Bar splicer assemblies shall be according to Section 508 of the Standard Specifications, except as noted. The furnishing and installation of bar splicer assemblies will be measured and paid for at the contract unit price each for "BAR SPLICERS."



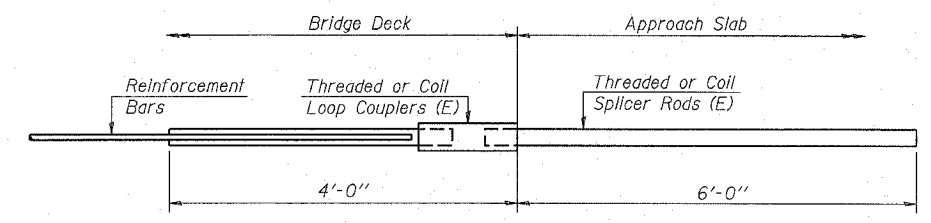
**BAR SPLICER ASSEMBLY ALTERNATIVES**

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



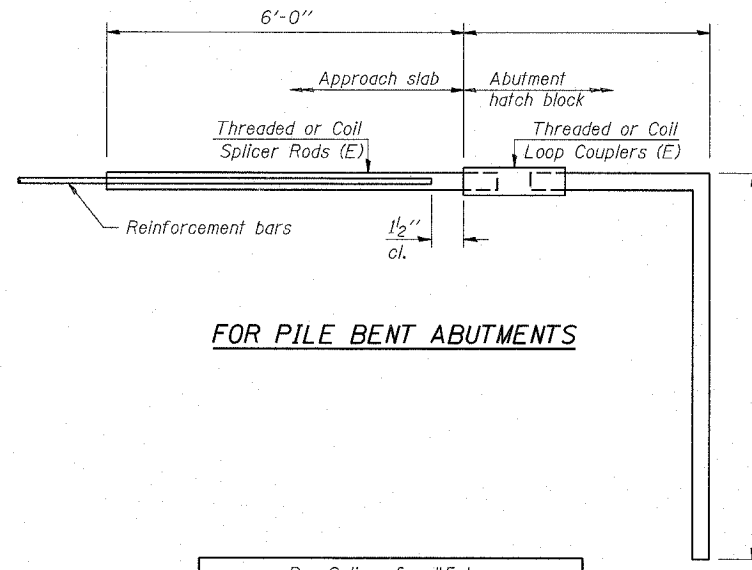
**INSTALLATION AND SETTING METHODS**

"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.



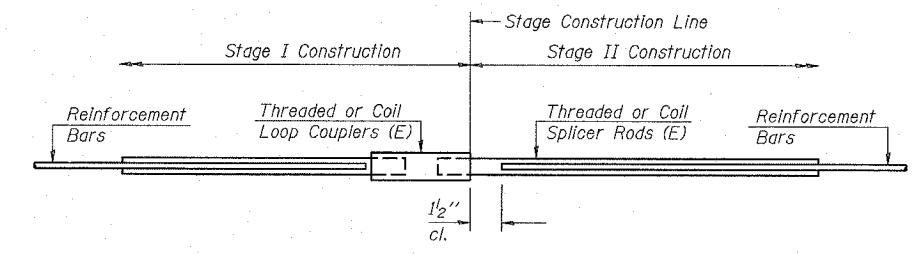
**FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS**

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 9.2 kips - tension
No. Required = 0



**FOR PILE BENT ABUTMENTS**

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 9.2 kips - tension
No. Required = 94



**STANDARD**

Bar Size	No. Assemblies Required	Location
#5	497	Deck
#6	4	Deck
#6	16	Abutments
#7	16	Abutments
#5	40	Piers
#8	20	Piers

**BAR SPLICER DETAILS**  
IL RTE 40 OVER WINNEBAGO DITCH  
F.A.P. 646 SECTION (102)BR-3  
WHITESIDE COUNTY  
STATION 558+38  
S.N. 098-0109

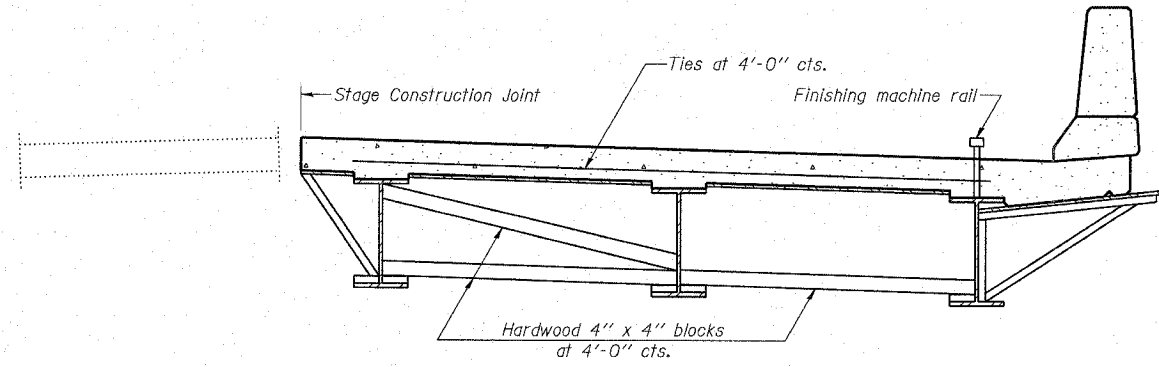
DESIGNED	DDB	<p>RANDOLPH &amp; ASSOCIATES, INC. 111 S. FORTNER PARKWAY, PEORIA, IL 61610-3134 TEL: 309-253-2616 FAX: 309-253-2888 111-682-601-7021 WWW.RANDOLPHR&amp;A.COM</p>	FILE NUMBER
CHECKED	AMPH		136.110
DRAWN	JDB		DATE
ENGINEER	DDB		Aug.
			2005

R:\Projects\0136\0136-110 Winn ph 11\bridge plans\20-bar splicer.dgn 11:02:50 AM 8/8/2005

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

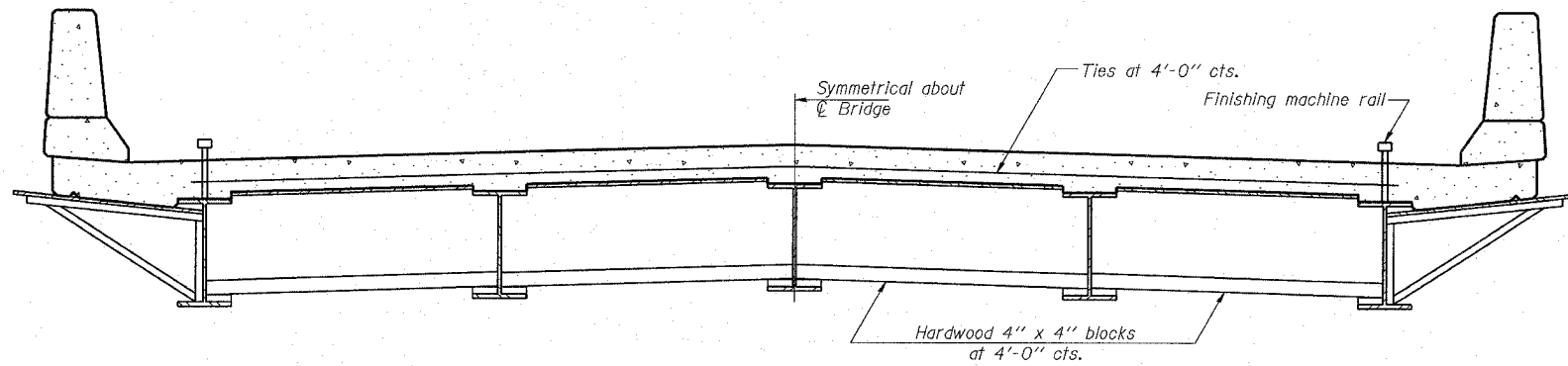
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 21 24 SHEETS
S. B. I.	(102)	Whiteside	57	33	
F. A. 646	BR-3				
FED. ROAD DIST. NO. 7	ILLINOIS FED. AID PROJECT-				

CONTRACT NO. 64426



**FORM BRACES FOR  
STAGE CONSTRUCTION**

When cantilever forming brackets are used, the work shall be done according to Article 503.06, except as modified below and in the details shown on this sheet.  
The finishing machine rails shall be placed on the top flange of the exterior beams.  
The beams or girders, supporting cantilever forming brackets, shall be tied together at 4 foot intervals.  
For Standard construction, or Stage Construction the Hardwood bracing materials shall be placed as shown between webs of beams in each bay.



**FORM BRACES FOR  
STANDARD CONSTRUCTION**

R:\Projects\0136\0136-110 Winn ph 11\bridge plansef\21 cant form bracket.dgn

8/8/2005 11:03:39 AM

**CANTILEVER FORMING BRACKETS  
IL RTE 40 OVER WINNEBAGO DITCH  
F.A.P. 646 SECTION (102)BR-3  
WHITESIDE COUNTY  
STATION 558+38  
S.N. 098-0109**

SB-1 9-01-03

DESIGNED	DDB	<b>RANDOLPH &amp; ASSOCIATES, INC.</b> <small>111 N. PIERCE PARKWAY, PEORIA, IL 61650-2124          TEL: 309-690-9999 FAX: 309-690-0888 E-MAIL: RAS@RASC.COM          WWW: WWW.RANDOLPH-ASSOCIATES.COM</small>	FILE NUMBER	136.110
CHECKED	AMPH		DATE	Aug. 2005
DRAWN	JDB			
CHECKED	DDB			



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
646	(102) BR-3	Whiteside	57	35

FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT-

SHEET NO. 23  
24 SHEETS

CONTRACT NO. 64426

Units English  
Project P-92-059-99  
Route FA 646  
Sec. 102 BR-1  
County Whiteside


Sh. 3 of 3

Boring No.	Sta	O/S	El.	N	Qu t/sf	W %	El.	N	Qu t/sf	W %
B-1	559 + 25	19' Rt CL								
		wash	-95				***			
		MEDIUM gray fine SAND		4						
				7						
				12						
		VERY DENSE gray fine SAND		16						
				30						
				28						
		END OF BORING	***				***			
			***				***			
			***				***			
			***				***			
			***				***			
			***				***			
			***				***			
			***				***			
			***				***			
			***				***			
			***				***			
			***				***			
			***				***			
			***				***			

Sheet 3 of 3

**SOIL BORING B-1**

**SOIL BORING LOG**  
**IL RTE 40 OVER WINNEBAGO DITCH**  
**F.A.P. 646 SECTION (102)BR-3**  
**WHITESIDE COUNTY**  
**STATION 558+38**  
**S.N. 098-0109**

DESIGNED DDB		FILE NUMBER
CHECKED AMP		136.110
DRAWN JDB		DATE Aug. 2005
CHECKED DDB		

RANDOLPH & ASSOCIATES, INC.  
111 W. PIONEER PARKWAY, PEORIA, IL 61614-2104  
TEL. 309-699-8844 FAX 309-699-8855  
WWW.RANDOLPHASSOCIATES.COM  
CONSULTING ENGINEERS & LAND SURVEYORS

R:\Projects\0136\0136-110 Winn ph 11\br l dge pl ansef\23-soilbor lng B1-1.dgn 8/8/2005 2:04:05 PM





B.M. 10' N.W. corner Bridge Abutment  
 Pt. Sta. 557+87 Elev. 648.77  
 Existing Structure: 1-100' span steel thru Truss, 22' width  
 on closed Abutments. Truss has been removed.

Abutments to be removed as required.  
 No Temporary Bridge required.

STATE OF ILLINOIS  
 DEPARTMENT OF PUBLIC WORKS & BUILDINGS  
 DIVISION OF HIGHWAYS

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. / SHEETS
F.A. 646	(102)BR-3	WHITESIDE	57	37	
CONTRACT #64426					

GENERAL NOTES

Class X Concrete used in curb and wingwalls shall be free of chert, flint, limonite, lignite and soft sandstone. All reinforcement bars shall be lapped 20 diameters unless otherwise shown.

For item precast prestressed concrete Bridge Deck, see supplemental specifications effective Jan. 3, 1966.

Exposed surfaces of the expansion devices, inaccessible after erection, shall receive two shop coats of red lead paint. All other surfaces shall be given one shop coat of red lead paint. Anchor studs shall not be painted.

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

The handrail concrete in the rail post and railing shall be poured in separate operations.

The contractor shall drive 2 Met. Shell test piles both in permanent locations. One at pier #1 and one at the So. Abutment as directed by the Engineer before ordering the remainder of piles.

Existing Abutments shall be removed as required to clear the slope walls.

Excavation for Slope Wall shall not be classified. Any excavation at the abutment ends of the structure or shaping of existing ground other than stated in Section 13 of the Standard Specification, shall be incidental to contract.

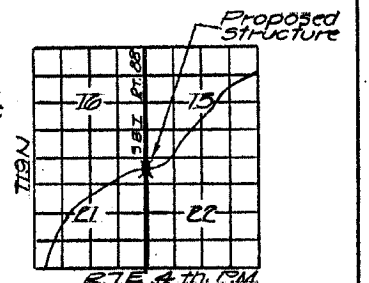
TOTAL BILL OF MATERIAL

Item	Unit	Super	Sub.	Total
Bridge Deck Sealant	Sq. Yds.	575		575
Bituminous Conc. Surface Course Subclass 1-11 (2" Min.)	Tons	64.6		64.6
* Bridge Seat Sealant	L.S.		1	1
Prec. Prest. Conc. Bm Slab (17')	Sq. Ft.	5580		5580
Handrail Concrete	Cu. Yds.	9.0		9.0
Class X Concrete	Cu. Yds.	18.4	73.1	91.5
Reinforcement Bars	Lbs.	8460	5260	13720
Class X Concrete Encasement	Cu. Yds.		19.8	19.8
Metal Piles Shell (12')	Lin. Ft.		1530	1530
Test Piles (Metal Shells)	ea.		2	2
Name Plates	ea.		1	1
* Protective Coat	Sq. Yds.	175		175

\* Includes application on curb, rail & wingwall only.  
 \*\* At abutments only.

WATERWAY INFORMATION

Drainage Area --- 55 Sq. Miles  
 Character --- Level, Cultivated  
 Required Opening --- (50 Yr. Flood) --- 400 Sq. Ft.  
 Present Opening --- 400 Sq. Ft.  
 Proposed Opening --- 400 Sq. Ft.



DESIGN STRESSES

FIELD UNITS  
 $f_c = 1400$  psi (Super.)  
 $f_s = 20,000$  psi (Reinf.)  
 $v_c = 75$  psi (FTGs.)  
 $n = 10$

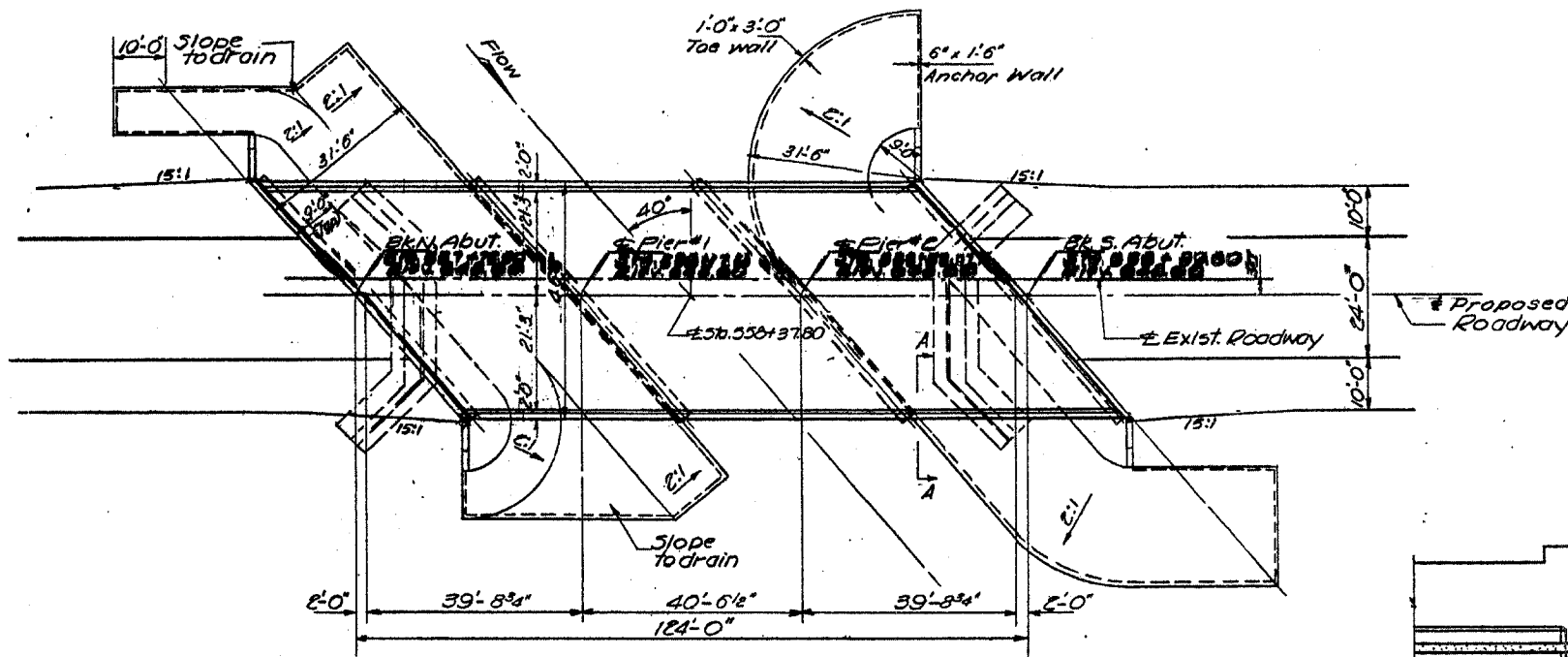
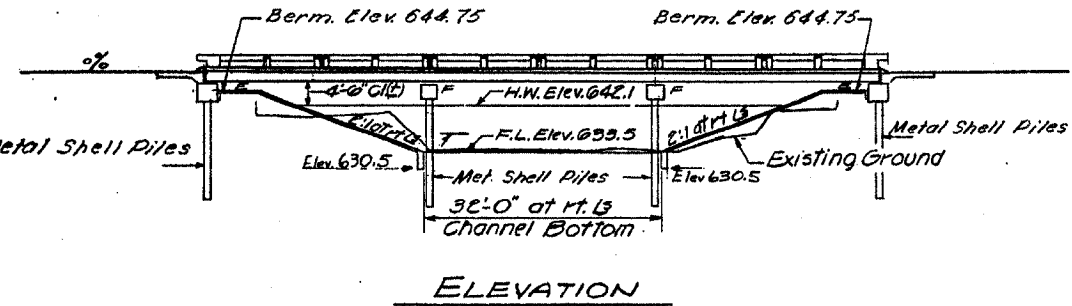
PRECAST PRESTRESSED UNITS

$f_c = 5000$  psi  
 $f_{c1} = 4000$  psi  
 $f_s = 248,000$  psi (5 strands)  
 $f_{s1} = 173,600$  psi (5 strands)

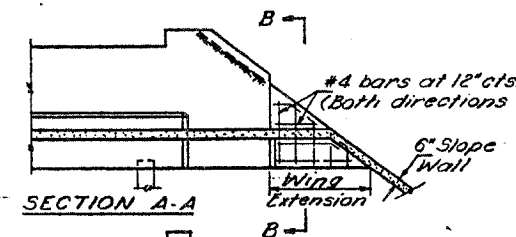
LOADING H520-44

GENERAL PLAN & ELEVATION  
 S.B.I. RT. 88 OVER WINNEBAGO DITCH  
 S.B.I. RT. 88 SEC. 102B-1  
 WHITESIDE COUNTY  
 STATION 558+37.80

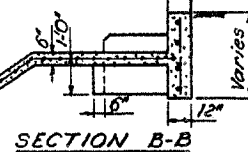
Rev. 12/1/66 2-3



PLAN



SECTION A-A



SECTION B-B

STATION 558+37.80  
 BUILT 196 BY  
 STATE OF ILLINOIS  
 S.B.I. RT. 88 SEC. 102B-1  
 LOADING H520

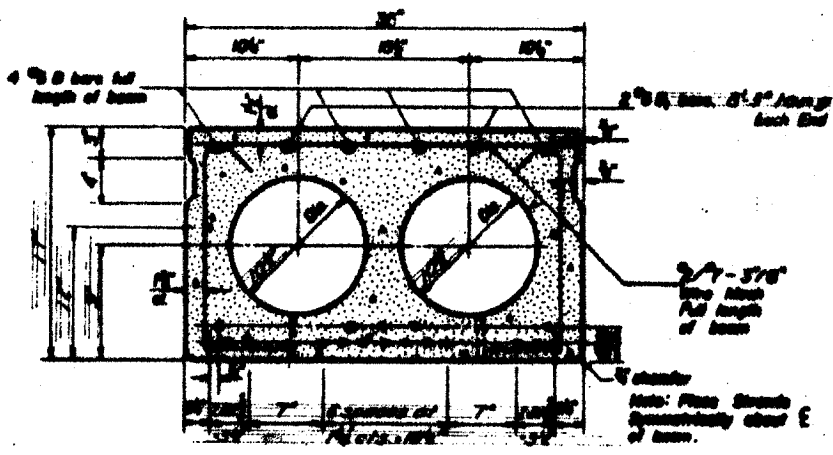
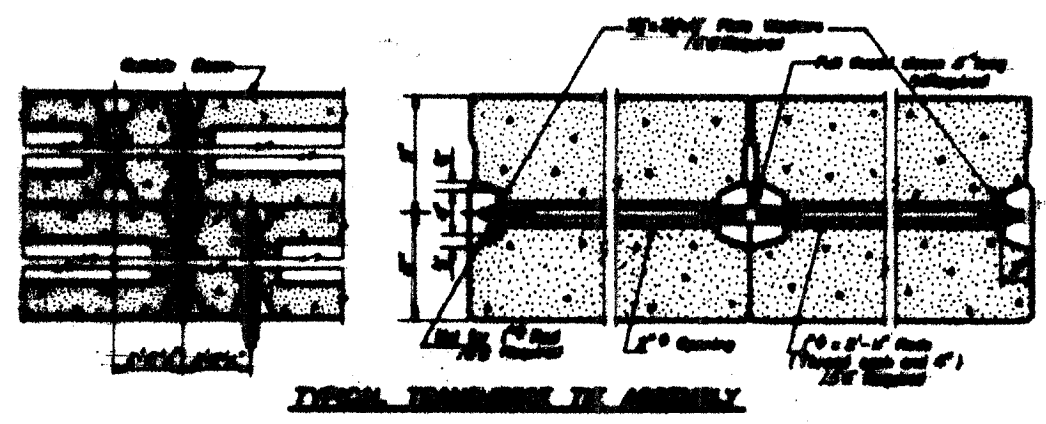
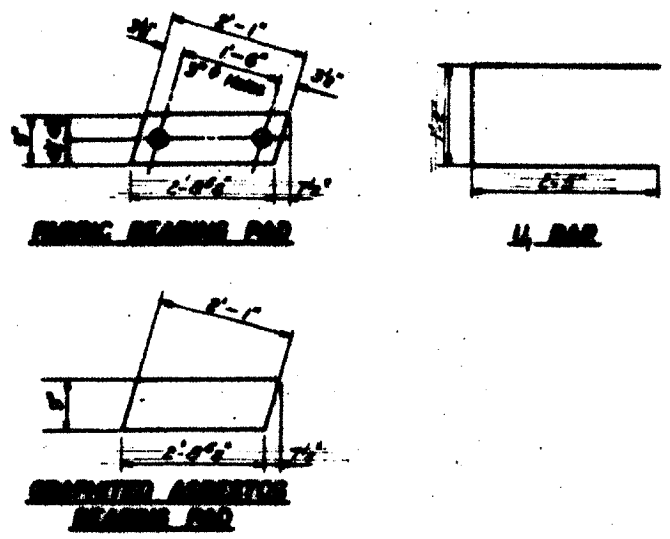
NAME PLATE  
 (See Std. 2113-1)

Welded Wire Fabric 6"x6"  
 mesh, No. 4 Wires, W.F.  
 58 # per 100 sq. ft.

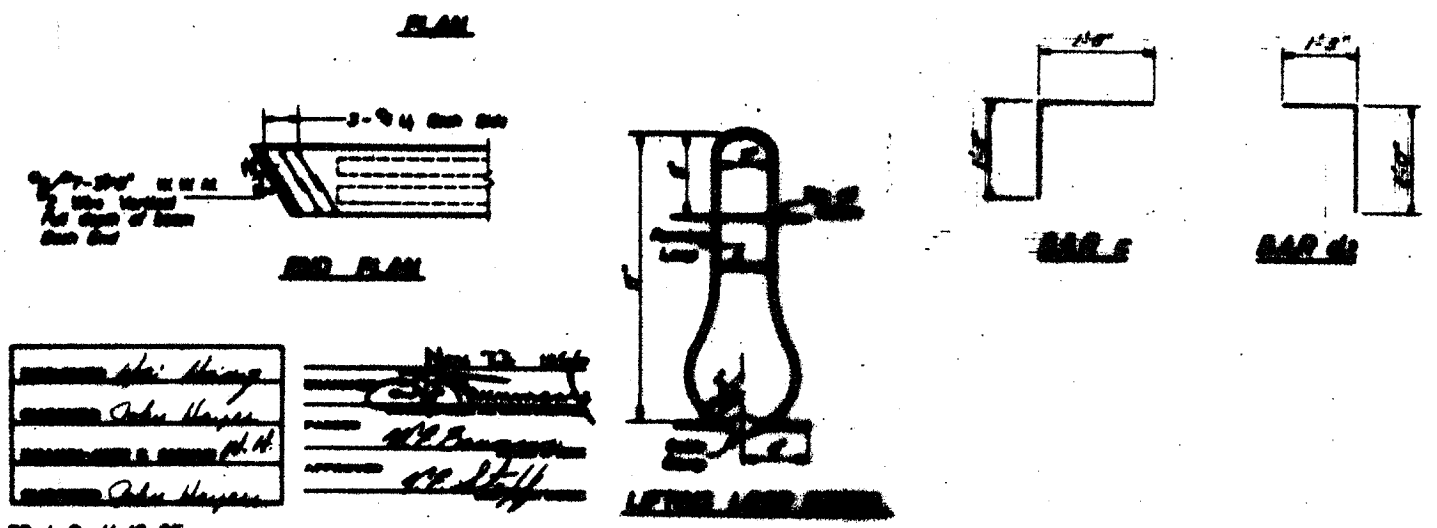
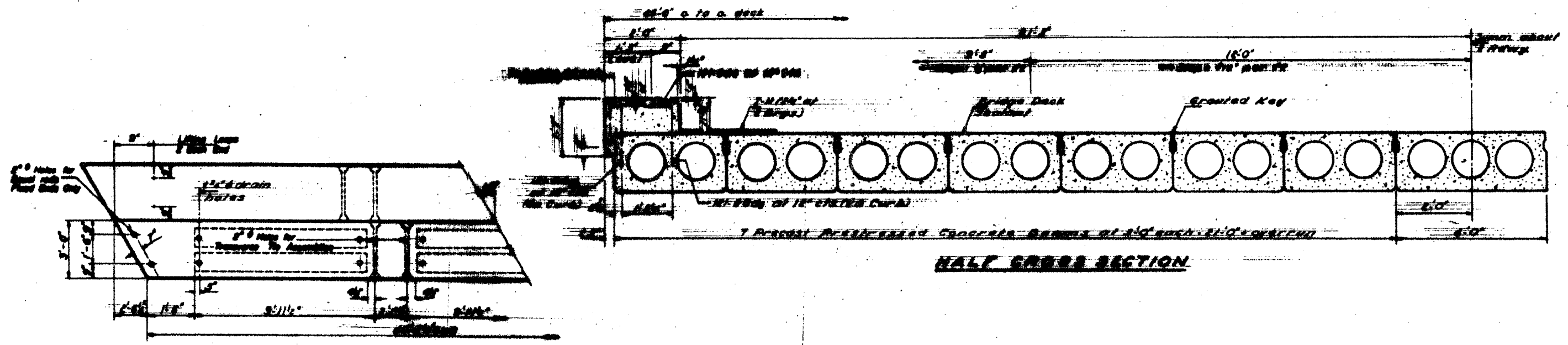
DESIGNED	Wei Huang	EXAMINED	November 23, 1966
CHECKED	John Hayes	PASSED	M.C. Bannerman
DRAWN	J. Kessler	APPROVED	[Signature]
CHECKED	John Hayes		

STATE OF ILLINOIS  
DEPARTMENT OF PUBLIC WORKS & BUILDINGS  
OFFICE OF HIGHWAYS

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.	DATE
F.A. 646	(102)BR-3	WHITESIDE	57	36	
CONTRACT #64426					



**TYPICAL SECTION**  
 1/2" Grade Reinforcing Steel  
 1/2" Grade Reinforcing Steel  
 5 Strands 3/8" 2 Strands 1/2" up



**GENERAL NOTES**

Reinforcing steel shall be uncoated high strength stress-relieved 7-wire strand. The nominal diameter shall be 7/8" and the nominal cross-sectional area shall be 6.125 sq in. Lapping bars shall be 12" minimum, but shall also lap with their own and shall have a minimum ultimate tensile strength of 216,000 lb.

The 7-wire is the minimum to quantity shall be tapered to a size 10 and the strands per strand may remain constant for bar on outside beam shall be fixed with steel wire ties to quantity in a place.

Lengthened steel bars shall be placed with a one day mix of 2-1 sand and P.C. mortar. After setting bars from concrete, holes for the steel anchors shall be drilled into the sub-structure and the anchor details shall be placed in place.

Steel for steel reinforcement to walls and other angles shall be S.A.E. 1080, standard steel ASTM Designation A36, or intermediate grade A.S.T.M. Designation AIS.

Any reinforcement to quantity (1/2" dia, 3/4" dia, 1" dia, and above) shall be the same as provided in connection with A.S.T.M. Designation A36.

One of reinforcement and connections bar into the base, of bearing walls, of other walls, and quantity lengthened steel bars is included in unit price bid for "Precast Prestressed Concrete Bridge Deck".

Bars d, e de are cast into curb units only, and extend 10" long into field concrete.

For Reinforcement see sheet 34.

**BILL OF MATERIAL**

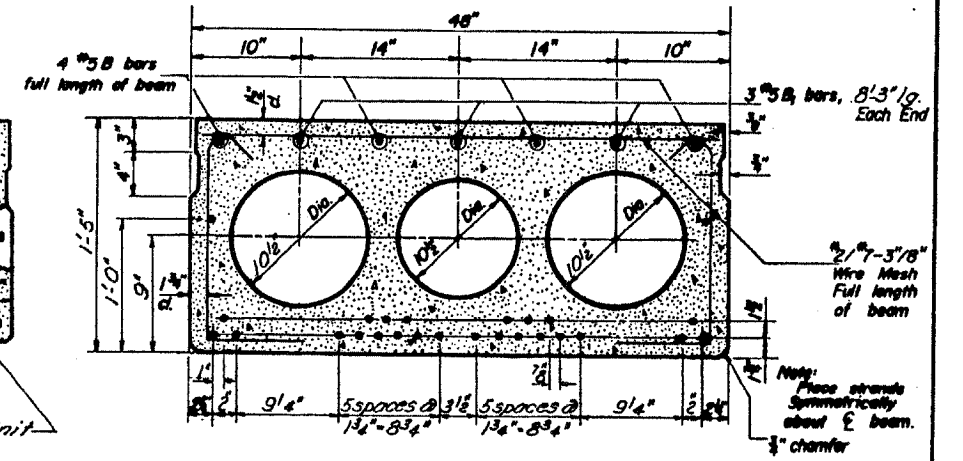
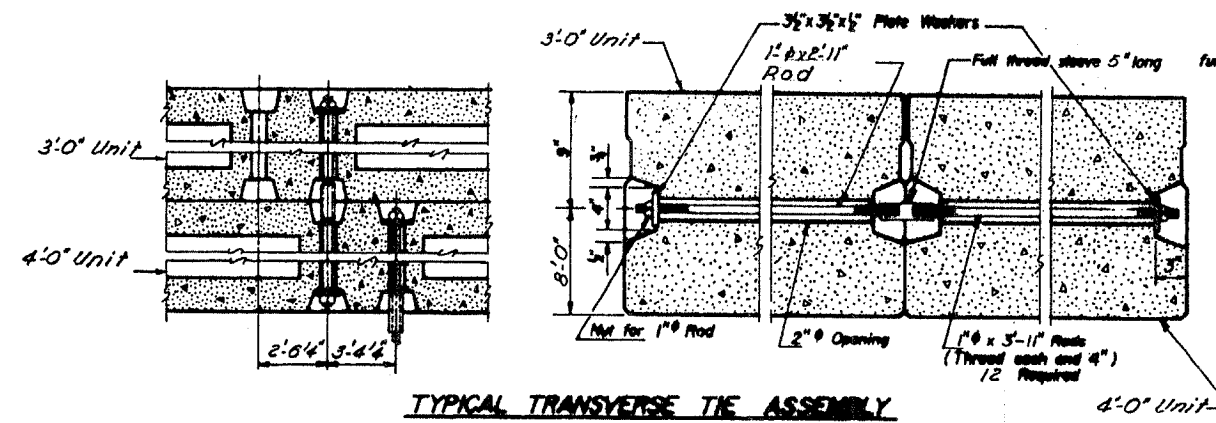
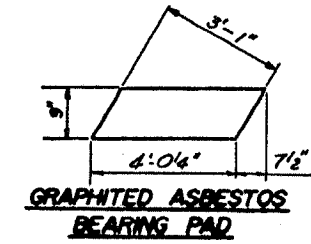
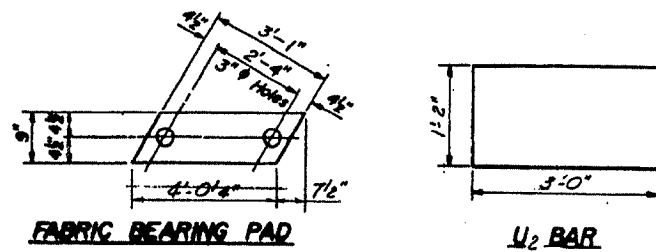
NO.	DESCRIPTION	QTY	UNIT	AMOUNT
C	PRECAST CONCRETE BRIDGE DECK (17')	1	CU YD	17.0
	REINFORCEMENT BARS	165	LB	165.0
	CLASS X CONCRETE	18.8	CU YD	18.8
	REINFORCEMENT BARS	165	LB	165.0

**SUPERSTRUCTURE (60' UNIT)**  
 S.B. RT 66 SEC 102B-1  
 WHITESIDE COUNTY  
 STATION 550+37.00

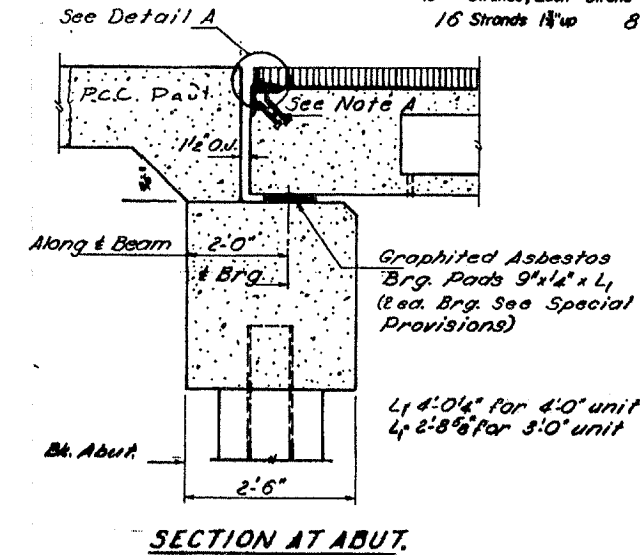
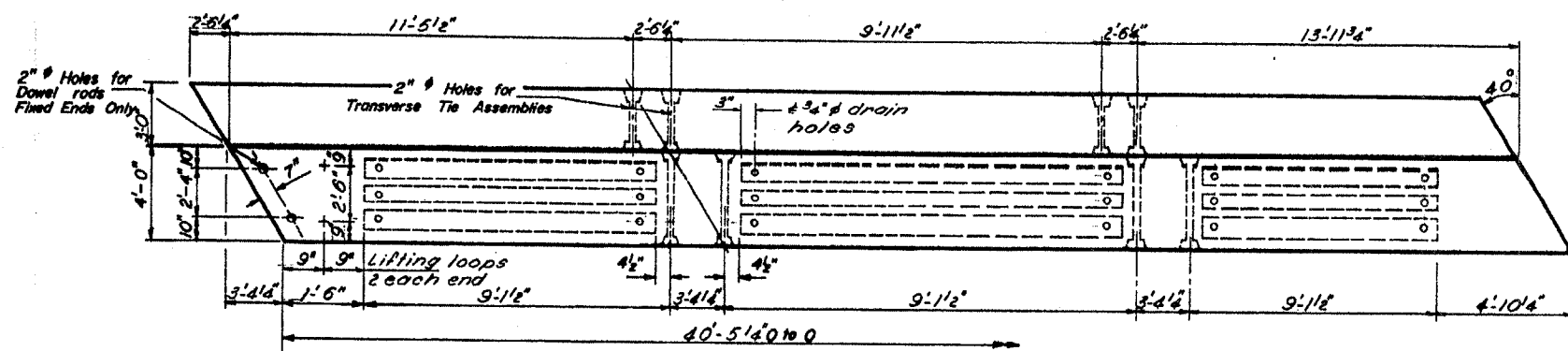
APPROVED: *John Mayne*  
 SUPERVISOR  
 DATE: *Nov 12 1966*  
 DESIGNED BY: *John Mayne*  
 CHECKED BY: *John Mayne*

STATE OF ILLINOIS  
DEPARTMENT OF PUBLIC WORKS & BUILDINGS  
DIVISION OF HIGHWAYS

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 3
F.A. 646	(102)BR-3	WHITESIDE	57	39	
CONTRACT #64426					



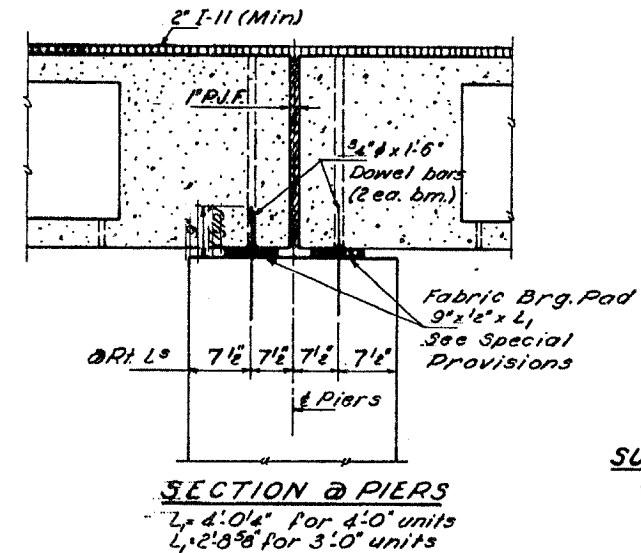
**TYPICAL SECTION**  
1/8" Strands, Each Strand Stressed to 18,900 lbs.  
16 Strands 1 1/2" up 8 Strands 3/4" up 2 Strands 1 1/2" up



**Note A**  
3/4" #8 CR1020 STL granular or solid flux filled headed studs automatically end welded at all 1'-0" cts. 3 studs for 3'-0" unit 4 studs for 4'-0" unit 2 studs for curb unit

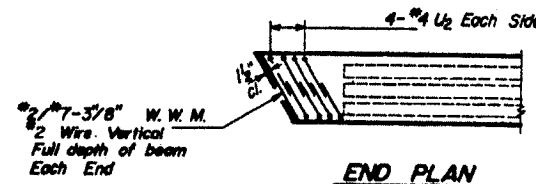
**SECTION AT ABUT.**

**Note B:**  
Angles are to be ordered and fabricated to fit the pavement crown, after the beams are in place and the engineer has taken profile elevations along the entire structure. Cost of angles shall be incidental.

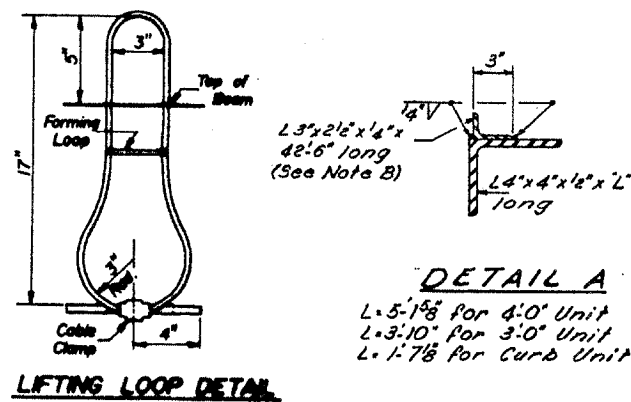


**Notes**  
All materials billed on sheet 3.

**SUPERSTRUCTURE (4'-0" UNIT)**  
S.B.I. RT 88 SEC. 102B-1  
WHITESIDE COUNTY  
STATION 558+37.80



**END PLAN**



**DETAIL A**

L: 5'-1 1/2" for 4'-0" Unit  
L: 3'-10" for 3'-0" Unit  
L: 1'-7 1/8" for Curb Unit

**LIFTING LOOP DETAIL**

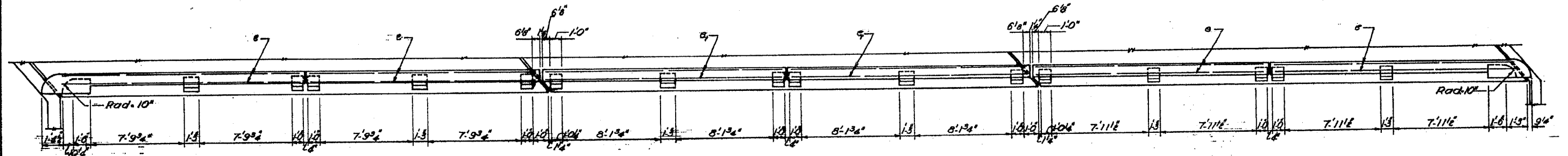
DESIGNED	Wei Hsing
CHECKED	John Hayes
DRAWN	JAMES R. CARMAN W.H.
CHECKED	John Hayes

EXAMINED	Nov 23 1966
PASSED	[Signature]
APPROVED	[Signature]

PD-2-R 11-19-65

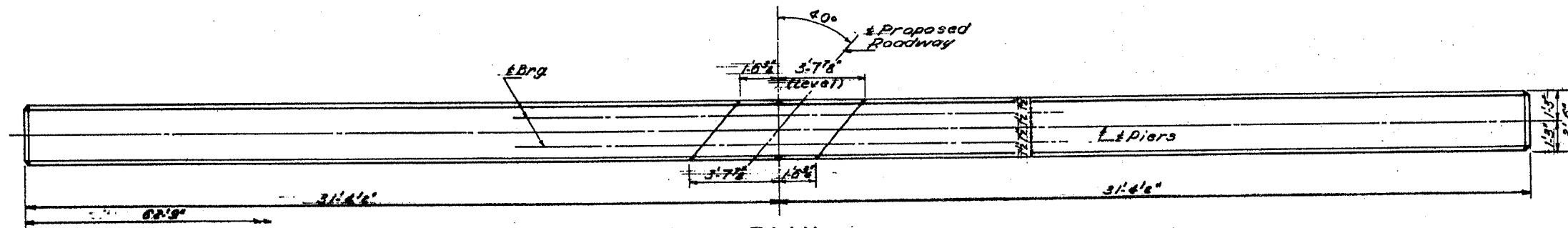
STATE OF ILLINOIS  
DEPARTMENT OF PUBLIC WORKS & BUILDINGS  
DIVISION OF HIGHWAYS

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 4
F.A. 646	102)BR-3	WHITESIDE	57	40	
CONTRACT #64426					

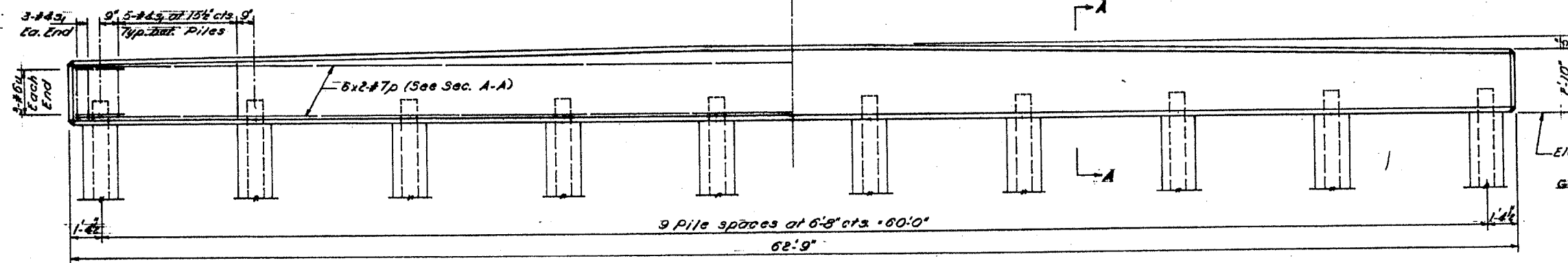


**PLAN**  
(Showing West rail, East rail by rotation)

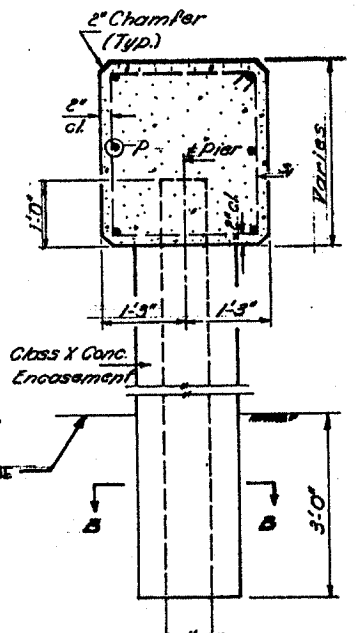
Note: For Rail Detail & its reinforcement see Std. 2070RA-2



**PLAN**  
(Piers)

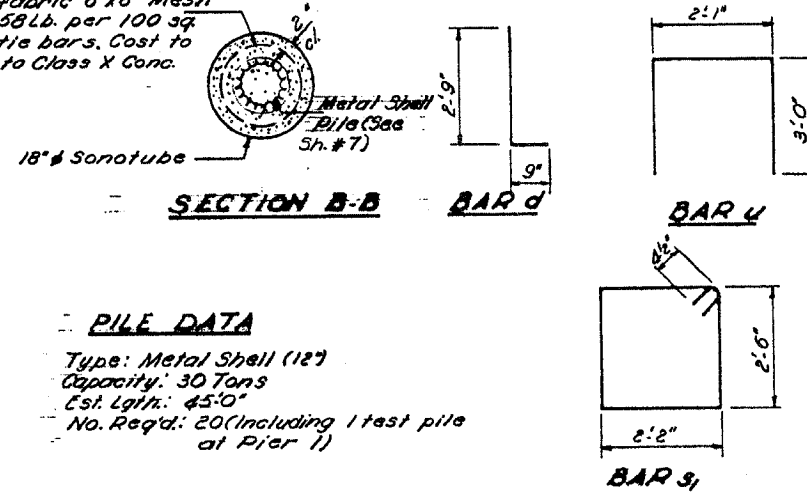


**ELEVATION**



**SECTION A-A**

Welded wire fabric 6"x6" Mesh  
#4 Wires - Wt. 58 Lb. per 100 sq  
ft. plus 4-#4 tie bars. Cost to  
be incidental to Class X Conc.  
encasement.



**SECTION B-B**

**BAR d**

**BAR u**

**BAR s<sub>1</sub>**

**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape	Bar	No.	Size	Length	Shape
d	78	#8	3'-6"	U	u	12	#6	8'-1"	U
e	48	#8	19'-3"	—	p	24	#7	32'-6"	—
e <sub>1</sub>	24	#8	20'-0"	—	r	72	#4	3'-0"	U
s	432	#3	3'-5"	□	n	12	#4	4'-0"	U
s <sub>1</sub>	102	#4	10'-1"	□					
Handrail Concrete		Cu. Yds.	9.0	Metal Piles Shell (12")		Lin. Ft.	856		
Class X Concrete		Cu. Yds.	35.3	Test Piles (Metal Shells)		Each	1		
Reinf. Bars (Superstr.)		Lbs.	6200						
Reinf. Bars (Substr.)		Lbs.	2430						
Cl. X Conc. Encasement		Cu. Yds.	17.0						

\*78 s bars between posts

DESIGNED *Wei Hsiang*  
CHECKED *John Hays*  
DRAWN *J. Messler*  
CHECKED *John Hays*

EXAMINED *Nov 23 1966*  
PASSED *M. E. Bauman*  
APPROVED *R. E. Hoff*

**PILE DATA**

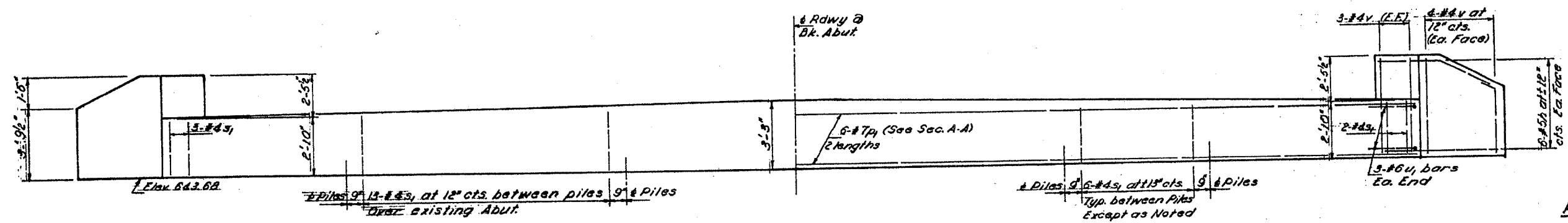
Type: Metal Shell (12")  
Capacity: 30 Tons  
Est. Lgth: 45'-0"  
No. Req'd: 20 (Including 1 test pile  
at Pier 1)

**PIERS**  
S.B.I. RT 88 SEC. 102B-1  
WHITESIDE COUNTY  
STATION 558+57.80

STATE OF ILLINOIS  
DEPARTMENT OF PUBLIC WORKS & BUILDINGS  
DIVISION OF HIGHWAYS

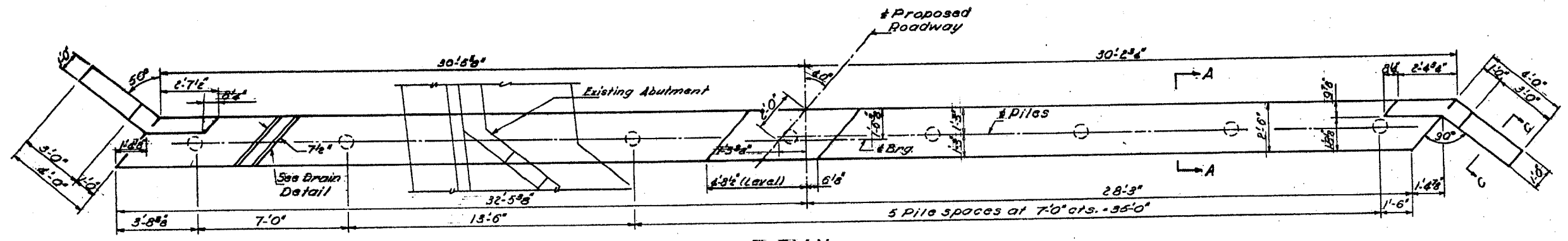
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 646	(102)BR-3	WHITESIDE	57	41
CONTRACT #64426				

SHEET NO. 5  
SHEETS

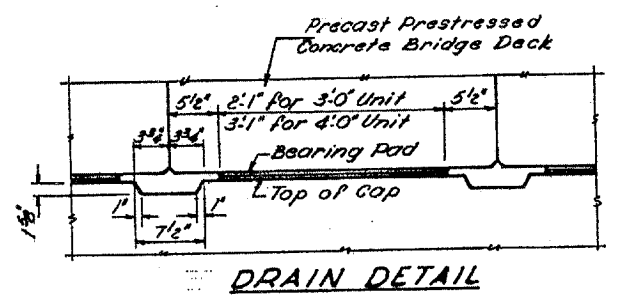
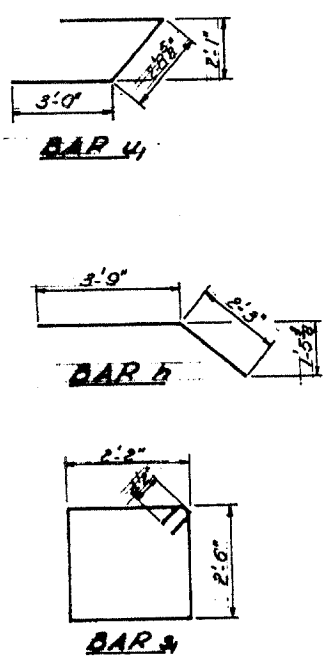
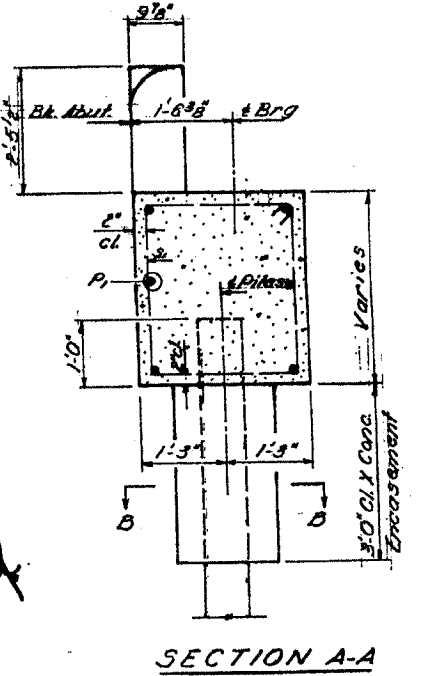
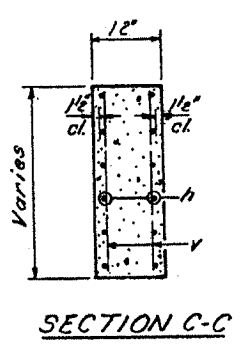


**ELEVATION**  
(Look at Rt. L to & Roadway)

**PILE DATA**  
Type: Metal Shell (12")  
Capacity: 30 Tons  
Est. Length: 45'-0"  
No. Req'd: 8



**PLAN**



(All Dimensions are given at Rt. L's to & of proposed roadway)  
**Note:**  
Existing Abut. shall be removed to Elev. 643.68 as req'd. for new cap & existing reinf. bars shall be cut-off. The new Abut. cap shall be rested on existing Abut. wall.  
For Sec. B-B see sheet 4.

**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h	24	#4	6'-0"	—
pi	12	#7	31'-6"	—
s	54	#4	10'-1"	□
u	6	#6	8'-9"	—
v	28	#4	5'-0"	—
Class X Concrete			Cu. Yds.	18.9
Reinforcement Bars			Lbs.	1410
Cl. X Conc. Encasement			Cu. Yds.	1.5
Metal Piles Shell (12")			Lin. Ft.	360

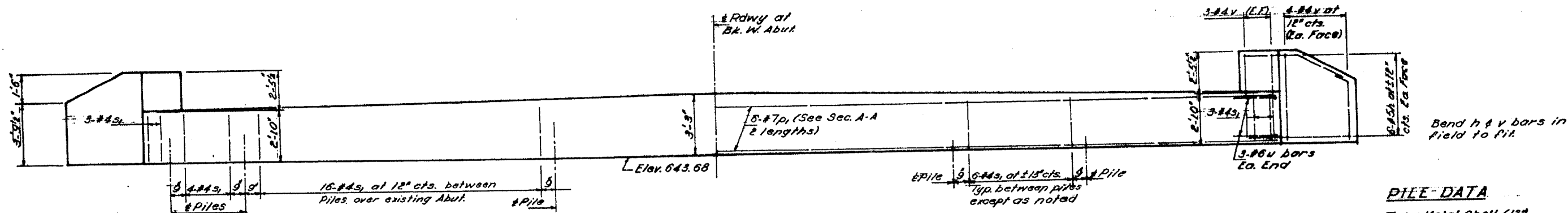
DESIGNED *Wei Huang*  
CHECKED *John Harper*  
DRAWN *J. Hessler*  
CHECKED *John Harper*

EXAMINED *Nov 23 1966*  
PASSED *M.P. B...*  
APPROVED *A.P. Staff*

**NORTH ABUTMENT**  
**S.B.I. RT. 88 SEC. 102B-1**  
**WHITESIDE COUNTY**  
**STATION 558+37.80**

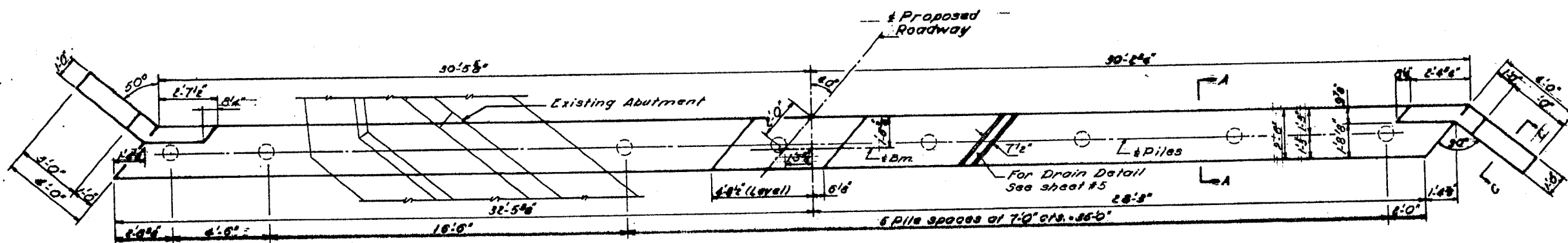
STATE OF ILLINOIS  
DEPARTMENT OF PUBLIC WORKS & BUILDINGS  
DIVISION OF HIGHWAYS

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.	PROJECT NO.
F.A. 646	(102)BR-3	WHITESIDE	57	42	6
CONTRACT #64426					

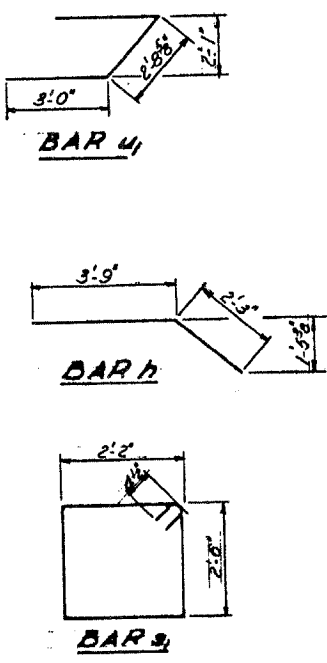
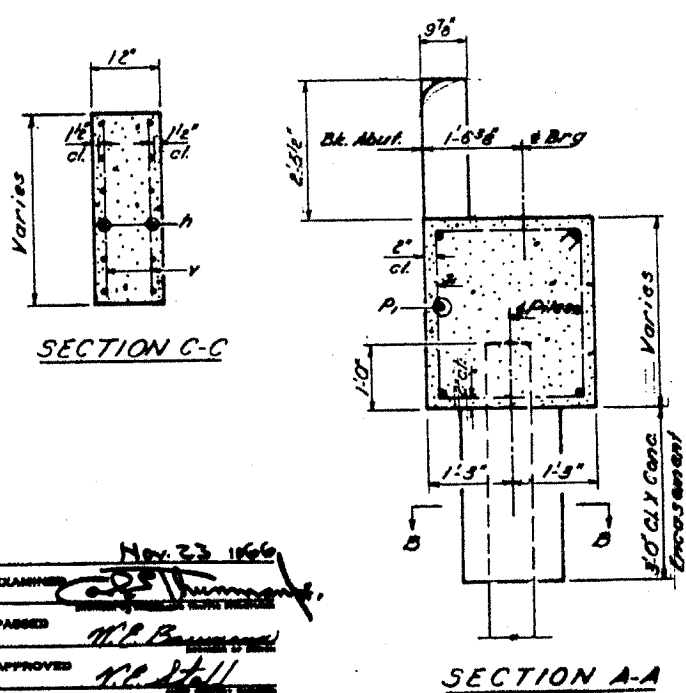


**ELEVATION**  
(Looking at Rt. L to & Roadway)

**PILE DATA**  
Type: Metal Shell (12")  
Capacity: 30 Tons  
Est. Length: 45'-0"  
No. Req'd: 8 (including 1 test pile)



**PLAN**



Note:  
Existing Abut shall be removed to Elev 643.68 as required for new cap & existing reinforcement bars shall be cut-off. The new Abut cap shall be rested on existing abut wall.  
For Sec. B-B see sheet 4.

**BILL OF MATERIAL**

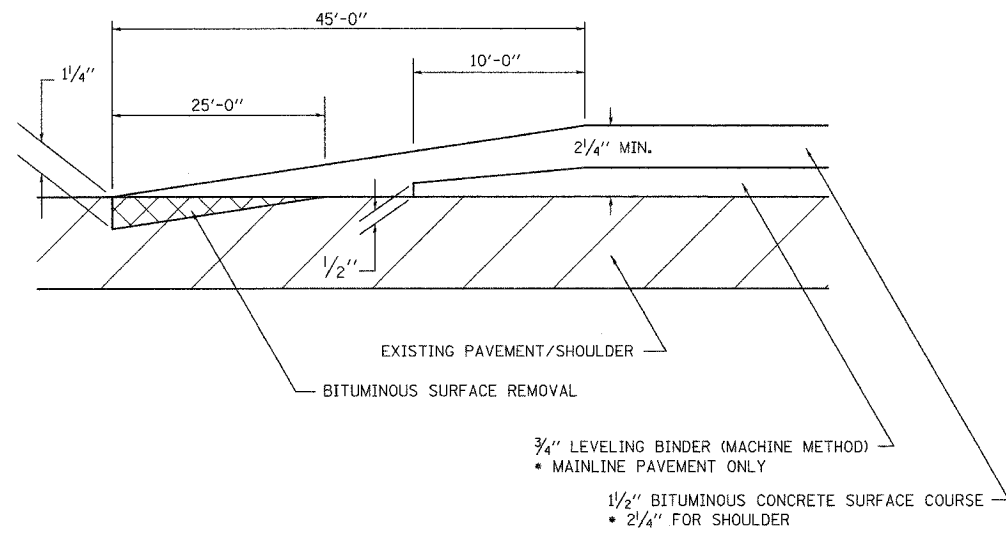
BAR	No.	Size	Length	Shape
h	24	#4	6'-0"	—
P <sub>1</sub>	12	#7	31'-6"	—
s <sub>1</sub>	56	#4	10'-1"	□
u <sub>1</sub>	6	#6	8'-9"	—
v	28	#4	5'-0"	—
Class X Concrete			Cu. Yds.	18.9
Reinforcement Bars			Lbs.	1420
Cl. X Conc. Encasement			Cu. Yds.	1.3
Metal Piles Shell (12")			Lin. Ft.	315
Test Piles (Met. Shells)			Ea.	1

DESIGNED *Wei Hoang*  
CHECKED *John Hayes*  
DRAWN *J. Hoessler*  
CHECKED *John Hayes*

EXAMINED *Nov 23 1966*  
PASSED *H.P. Baumann*  
APPROVED *R.P. Stoff*

**SOUTH ABUTMENT**  
S&L RT RR SEC 102B-1  
WHITESIDE COUNTY  
STATION 558+37.00

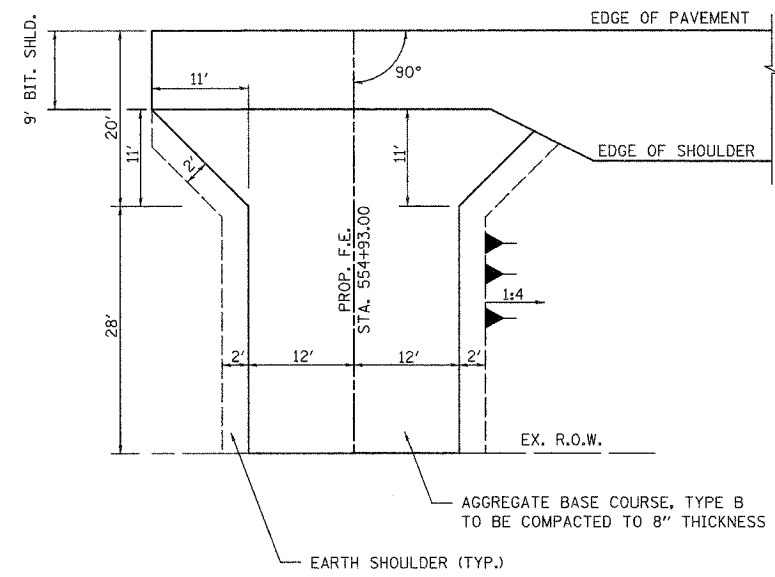
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
646	(102)BR-3	WHITESIDE	57	43
STA.		TO STA.		
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				
CONTRACT NUMBER: 64426				



**BUTT JOINT**

**NOTES:**

1. THE WORK SHALL BE PERFORMED IN ACCORDANCE WITH ARTICLE 406.18, ARTICLE 440.03 AND THE SPECIAL PROVISIONS FOR BUTT JOINTS.
2. THE SAW CUT JOINTS SHALL BE PRIMED JUST PRIOR TO THE PLACING OF BITUMINOUS MATERIAL. THE WORK WILL BE IN ACCORDANCE WITH THE APPLICABLE PORTIONS OF ARTICLE 406.06.
3. THE BIT. SURF. REMOVAL - BUTT JOINT PAY ITEM INCLUDES THE SAW CUT.



**FIELD ENTRANCE**

**NOTES:**

1. F.E. IS TO BE AGGREGATE TO RIGHT OF WAY.
2. EXCAVATION REQUIRED FOR PLACEMENT OF AGGREGATE BASE COURSE SHALL BE CONSIDERED INCIDENTAL TO THE AGGREGATE BASE COURSE.
3. QUANTITY IS CALCULATED WITH 9' BITUMINOUS SHOULDER IN PLACE.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

**BUTT JOINT AND FIELD ENTRANCE DETAILS**

SCALE: NONE  
DATE: AUGUST, 2005

DRAWN BY: JH  
CHECKED BY: FML



# STORM WATER POLLUTION PREVENTION PLAN EROSION CONTROL PLAN

CONTRACT NO.				
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
646	102_BB-3	WHITESIDE	57	43c
STA. _____		TO STA. _____		
FED. ROAD DIST. NO. _____		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 64426				

THE FOLLOWING PLAN WAS ESTABLISHED AND INCLUDED IN THESE PLANS TO DIRECT THE CONTRACTOR IN THE PLACEMENT OF TEMPORARY EROSION CONTROL SYSTEMS AND TO PROVIDE A STORM WATER POLLUTION PREVENTION PLAN FOR COMPLIANCE UNDER NPDES.

THE PURPOSE OF THIS PLAN IS TO MINIMIZE SILTATION WITHIN THE CONSTRUCTION ZONE AND TO ELIMINATE SEDIMENTS FROM ENTERING AND LEAVING THE CONSTRUCTION ZONE BY UTILIZING PROPER TEMPORARY EROSION CONTROL SYSTEMS AND PROVIDING GROUND COVER WITHIN A REASONABLE AMOUNT OF TIME.

CERTAIN ITEMS, AS SHOWN IN THIS PLAN AND REFERENCED BY THE LEGEND, SHALL BE PLACED BY THE CONTRACTOR AT THE BEGINNING OF CONSTRUCTION. OTHER ITEMS SHALL BE PLACED BY THE CONTRACTOR AS DIRECTED BY THE ENGINEER ON A CASE BY CASE SITUATION RESULTING FROM THE CONTRACTOR'S SEQUENCE OF ACTIVITIES, TIME OF YEAR, AND EXPECTED WEATHER CONDITIONS.

THE CONTRACTOR SHALL PLACE PERMANENT EROSION CONTROL SYSTEMS AND SEEDING WITHIN A REASONABLE AMOUNT OF TIME; THEREFORE, REDUCING THE AMOUNT OF AREA BEING OPEN TO THE POSSIBILITY OF EROSION AND REDUCING THE AMOUNT OF TEMPORARY SEEDING. THE RESIDENT ENGINEER WILL DETERMINE IF TEMPORARY EROSION CONTROL SYSTEMS SHOWN IN THE PLAN CAN BE DELETED, THE SIZE OF THE PROPOSED DITCH CHECKS, THE PROPER METHOD OF INSTALLATION, AND IF ANY ADDITIONAL TEMPORARY EROSION CONTROL SYSTEMS SHALL BE ADDED WHICH ARE NOT INCLUDED IN THE PLANS. THE CONTRACTOR SHALL PERFORM ALL WORK AS DIRECTED BY THE ENGINEER AND AS SHOWN IN STANDARD 280001 OF THE PLANS.

#### SITE DESCRIPTION

##### DESCRIPTION OF CONSTRUCTION ACTIVITY:

THIS PROJECT CONSISTS OF REMOVAL AND REPLACEMENT OF THE STRUCTURE CARRYING IL 40 OVER WINNEBAGO DITCH UNDER STAGE CONSTRUCTION.

##### DESCRIPTION OF INTENDED SEQUENCE OF ACTIVITIES:

THE SEQUENCE OF EVENTS ARE AS FOLLOW: CLEARING, EMBANKMENT, EXCAVATION, GRADING AND PAVING. THIS PROJECT WILL BE CONSTRUCTED IN SEGMENTS AS SHOWN IN THE "STAGING PLANS".

TOTAL CONSTRUCTION SITE (CONSTRUCTION LIMIT TO CONSTRUCTION LIMIT) 2.0 ACRES

PROPOSED R.O.W (TOTAL PARCEL AREA) 0.3 ACRES

DISTURBED BY EXCAVATION (E.O.P TO CONSTRUCTION LIMIT) 1.5 ACRES

#### SUPPORTING REPORTS AND PLANS

THE FOLLOWING ASSISTED IN DEVELOPING THE EROSION CONTROL PLAN AS REFERENCED DOCUMENTS:

SOIL PROFILE SHEETS, SOILS REPORTS, BORING LOGS  
USGS DRAINAGE MAPS, PROJECT PLAN DOCUMENTS

DRAINAGE TRIBUTARIES RECEIVING WATER FROM CONSTRUCTION SITE

WINNEBAGO DITCH

#### EROSION CONTROLS AND SEDIMENT CONTROL PROCEDURES

##### STABILIZATION PRACTICES AT THE BEGINNING OF CONSTRUCTION:

PERIMETER EROSION CONTROL SHALL BE PLACED PRIOR TO BEGINNING EARTHWORK.

##### STABILIZATION PRACTICES DURING CONSTRUCTION:

AS EARTH EXCAVATION AND EMBANKMENT ARE BEING COMPLETED THE CONTRACTOR SHALL PLACE DITCH CHECKS, INLET AND PIPE PROTECTION, EROSION CONTROL BLANKET, AND SEEDING AS STAGES OF THE PROJECT ARE COMPLETED. PERIMETER EROSION BARRIER WILL BE INSTALLED AT ADDITIONAL LOCATIONS AS THE PROJECT PROGRESSES. SEEDING SHALL BE COMPLETED AS SPECIFIED IN THE EROSION CONTROL/ SEEDING MOBILIZATION AND TEMPORARY SEEDING SPECIAL PROVISION.

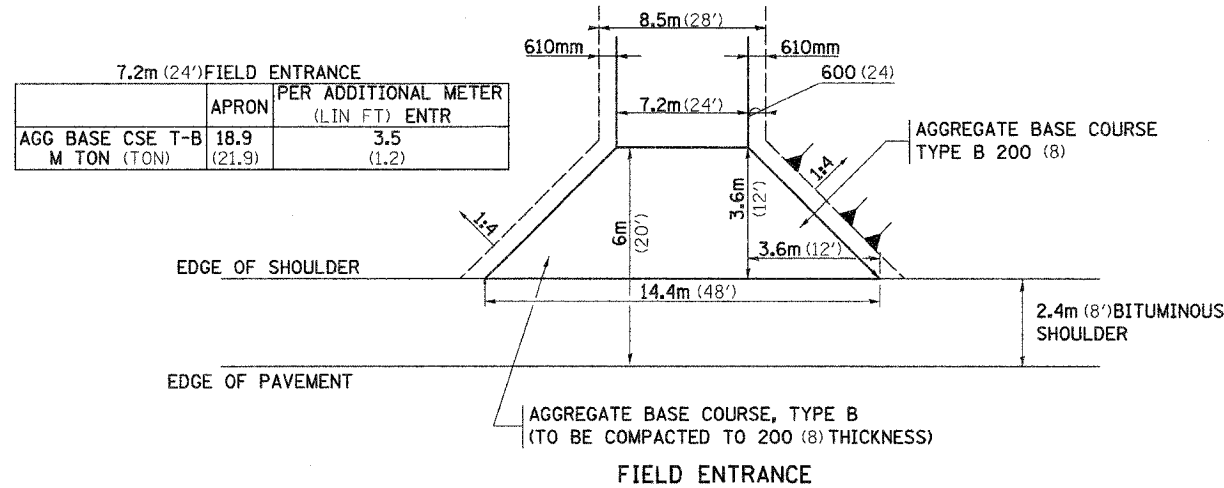
##### MAINTENANCE AFTER FINAL GRADING

TEMPORARY EROSION CONTROL SYSTEMS SHALL BE LEFT IN PLACE WITH PROPER MAINTENANCE UNTIL PERMANENT EROSION CONTROL IS IN PLACE AND WORKING PROPERLY AND ALL PROPOSED TURF AREAS SEEDED AND ESTABLISHED WITH THE PROPER STAND. ONCE PERMANENT EROSION CONTROL SYSTEMS AS PROPOSED IN THE PLANS ARE FUNCTIONAL AND ESTABLISHED, TEMPORARY ITEMS SHALL BE REMOVED, CLEANED UP AND DISTURBED TURF RESEEDED.

PLOT DATE = DATE  
 PLOT NAME = TITLE  
 PLOT SCALE = SCALE  
 REFERENCE = REF

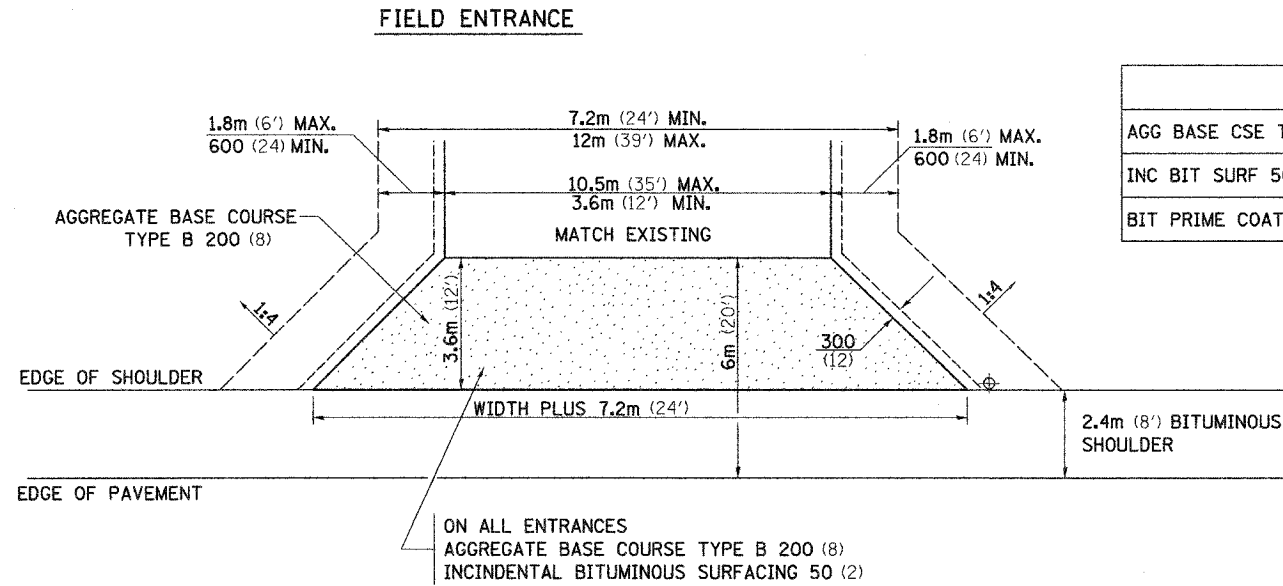
# ENTRANCE AND SIDEROADS WITH 2.4m (8') BITUMINOUS SHOULDERS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
646	(102)BR-3	WHITESIDE	57	44
STA. _____		TO STA. _____		
FED. ROAD DIST. NO. _____		ILLINOIS FED. AID PROJECT		

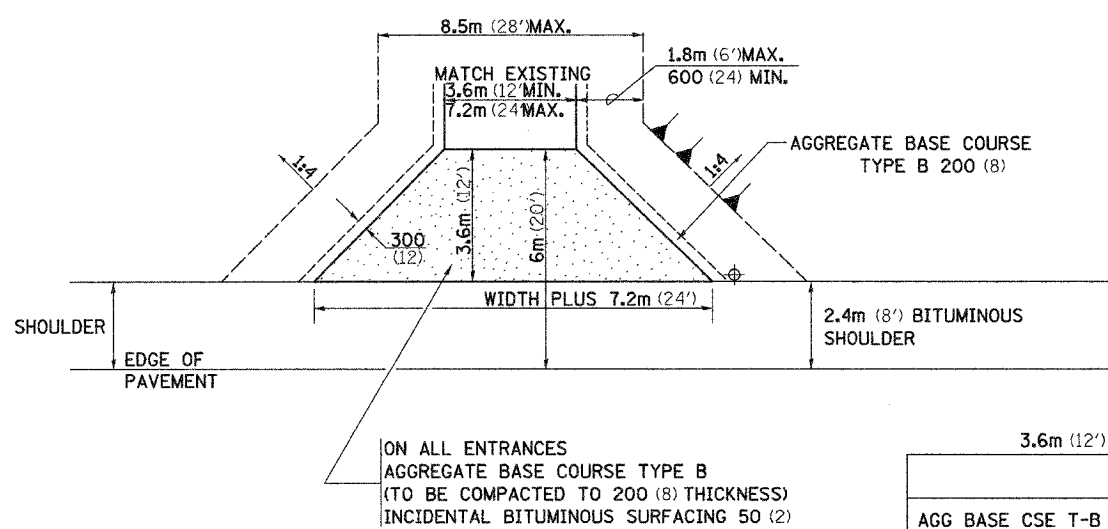
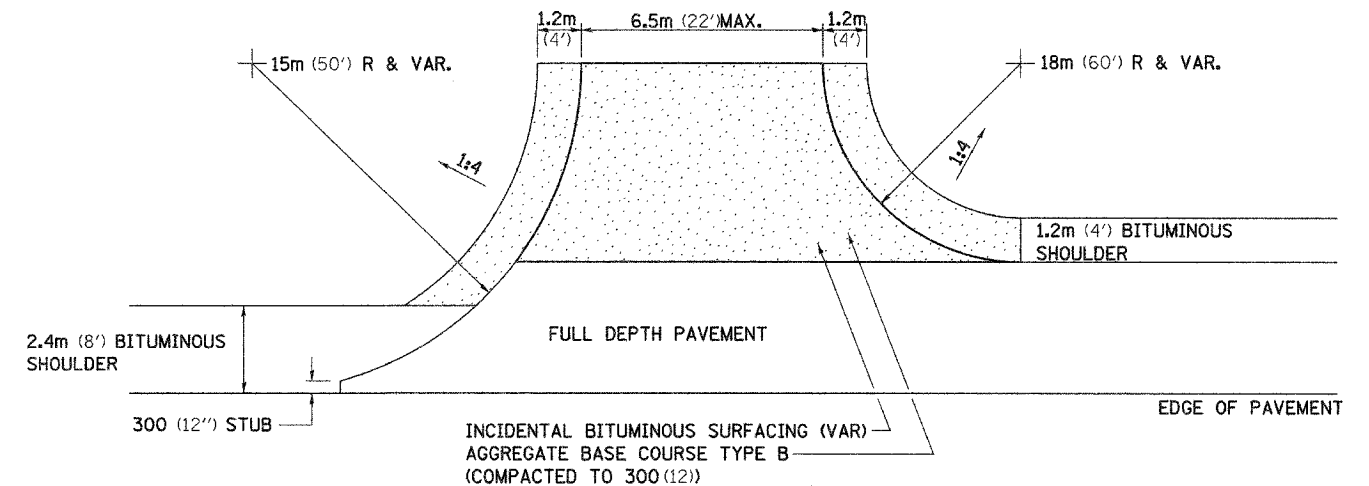


**NOTE**

- ① ALL PE & CE ARE TO BE BITUMINOUS SURFACED TO RIGHT OF WAY LINE. AREA BEHIND RIGHT OF WAY SHALL MATCH EXISTING SURFACE.
- ② FE ARE TO BE AGGREGATE TO RIGHT OF WAY OR TOUCH DOWN, WHICH EVER IS GREATEST.
- ③ QUANTITIES ARE CALCULATED WITH 2.4m BITUMINOUS SHOULDER IN PLACE. AGGREGATE QUANTITIES SHOWN ARE FOR NEW CONSTRUCTION.
- ④ EXCAVATION REQUIRED FOR PLACEMENT OF AGGREGATE BASE COURSE SHALL BE CONSIDERED INCIDENTAL TO THE AGGREGATE BASE COURSE.
- ⑤ ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE NOTED.



	COMMERCIAL ENTRANCE		PER METER ENTR (FOOT)	
	3.6m (12')	10.5m (35')	3.6m (12')	10.5m (35')
AGG BASE CSE T-B (TON)	14.3 (15.8)	27.0 (29.8)	0.64 (0.70)	1.70 (1.87)
INC BIT SURF 50 (2) (TON)	3.3 (3.6)	6.35 (7.0)	0.14 (0.15)	0.40 (0.44)
BIT PRIME COAT (TON)	0.042 (0.046)	0.082 (0.090)	0.002 (0.002)	0.005 (0.006)



ON ALL ENTRANCES  
AGGREGATE BASE COURSE TYPE B  
(TO BE COMPACTED TO 200 (8) THICKNESS)  
INCIDENTAL BITUMINOUS SURFACING 50 (2)

	3.6m (12') PRIVATE ENTRANCE		PER METER ENTR (FOOT)	
	3.6m (12')	7.2m (24')	3.6m (12')	7.2m (24')
AGG BASE CSE T-B (TON)	14.3 (15.8)	21.0 (23.1)	0.64 (0.70)	1.20 (1.32)
INC BIT SURF 50 (2) (TON)	3.3 (3.6)	4.9 (5.4)	0.14 (0.15)	0.27 (0.30)
BIT PRIME COAT (TON)	0.042 (0.046)	0.063 (0.069)	0.002 (0.002)	0.004 (0.004)

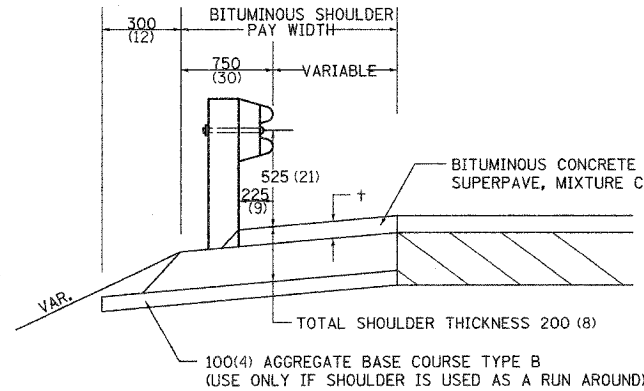
	6m RADIUS (20')	9m RADIUS (30')	12m RADIUS (40')
AGG BASE CSE T-B (TON)			
INC BIT SURF AT 25 (1) (TON)			
BIT PRIME COAT (TON)			

NOTE: USE 50 (2) INC. BIT. SURF. ON EXISTING RETURNS

PLOT DATE = #DATE#  
FILE NAME = #FILE#  
PLOT SCALE = #SCALE#  
REFERENCE = #REF#

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
646	(102)BR-3	WHITESIDE	57	45
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

# DETAIL OF BITUMINOUS SHOULDER AT GUARD RAIL



† = SEE TYPICAL SECTIONS FOR THICKNESS

### GENERAL NOTES

THE TOP LIFT SHALL NOT BE PLACED BEHIND THE GUARDRAIL POSTS. WHEN PLACING THE TOP LIFT THE RAIL MUST BE REMOVED FROM THE POSTS. THE POST SHALL NOT BE REMOVED.

THE HEIGHT OF THE GUARD RAIL SHALL BE 525 (21) FROM THE FINISHED SURFACE.

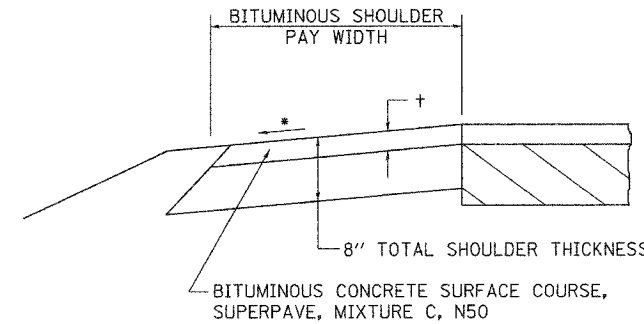
THE BITUMINOUS SHOULDER SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 482 EXCEPT THE TOP LIFT SHALL BE BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIXTURE C, N50. THE WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER TON FOR BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIXTURE C, N50, AND SQUARE METER (SQUARE YARD) FOR BITUMINOUS SHOULDERS SUPERPAVE OF THE THICKNESS SPECIFIED. THE REMOVAL & REINSTALLATION OF THE GUARDRAIL WILL BE INCLUDED IN THE COST OF THE BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIXTURE C, N50.

ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE NOTED.

**DETAIL OF BITUMINOUS SHOULDER AT GUARD RAIL 23.4**

REVISED 1-17-02

# BITUMINOUS SHOULDER



† = SEE TYPICAL SECTIONS FOR THICKNESS

ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE NOTED.

### GENERAL NOTES

THE BITUMINOUS SHOULDER SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 482 EXCEPT THE TOP LIFT SHALL BE BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIXTURE C, N50. THE WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER TON FOR BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIXTURE C, N50, AND SQUARE YARD FOR BITUMINOUS SHOULDERS SUPERPAVE OF THE THICKNESS SPECIFIED.

USE BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIXTURE C, N50, WHEN RESURFACING EXISTING BITUMINOUS SHOULDERS. THE THICKNESS IS SHOWN ON THE TYPICAL SECTIONS. THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER TON FOR BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIXTURE C, N50.

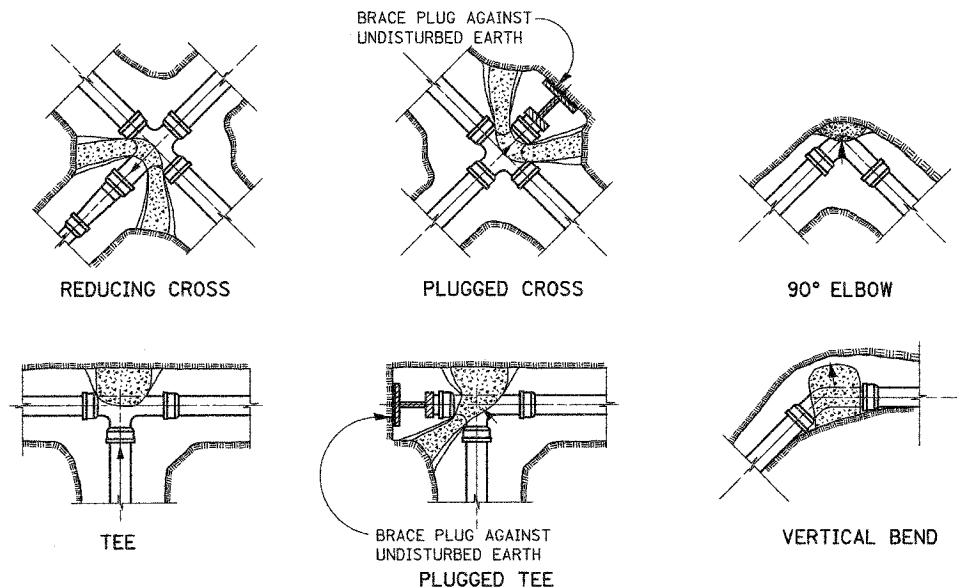
REMOVAL OF MATERIAL FOR PLACEMENT OF THE BITUMINOUS SHOULDER TO BE PAID FOR IN UNITS FOR EXCAVATING AND GRADING EXISTING SHOULDERS OR IN CUBIC YARDS FOR EARTH EXCAVATION OR EARTH EXCAVATION WIDENING.

\* 4% WHEN MAINLINE IS ON TANGENT. FOR CROSS SLOPE ON SUPERELEVATION SECTION, SEE HIGHWAY STANDARD 482001 OR 482006.

**BITUMINOUS SHOULDER 23.4a**

REVISED 5-30-03

# THRUST BLOCK DETAILS



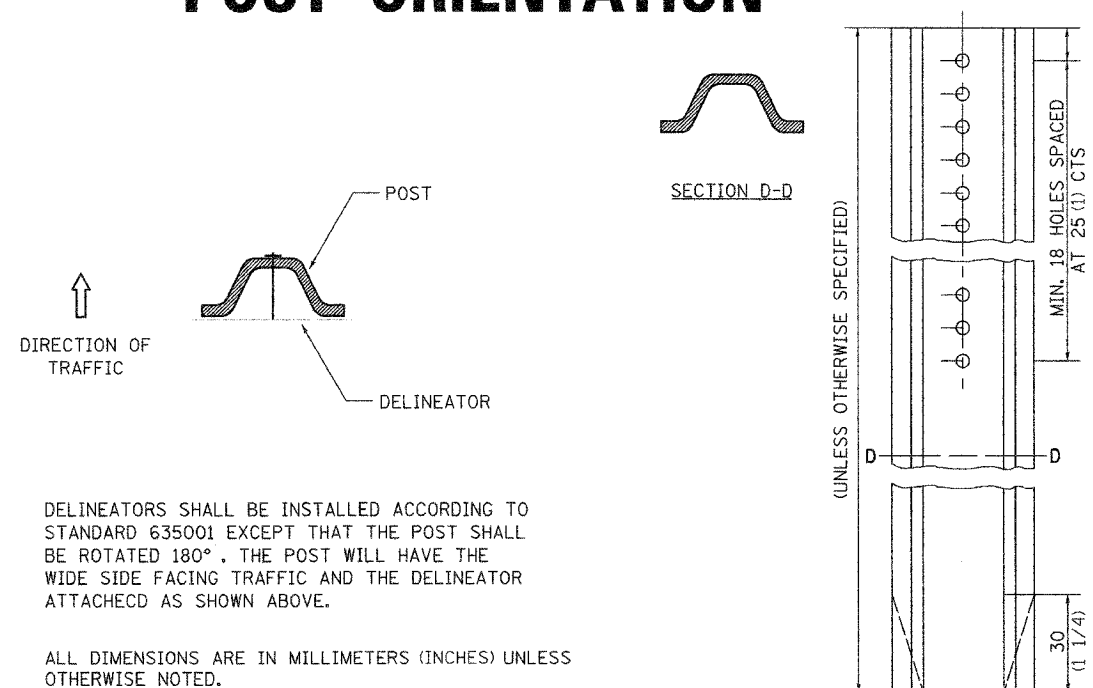
NOTES:  
ALL BLOCKS TO BEAR AGAINST UNDISTURBED EARTH.  
ARROWS INDICATE DIRECTION OF THRUST.  
ALL BLOCKS TO BE CLASS SI CONCRETE.  
ALL FITTINGS SHOWN IN PLAN EXCEPT VERTICAL BEND.

ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE NOTED.

**THRUST BLOCK DETAILS 34.4**

REVISED 10-20-87

# DELINEATOR AND POST ORIENTATION



DELINEATORS SHALL BE INSTALLED ACCORDING TO STANDARD 635001 EXCEPT THAT THE POST SHALL BE ROTATED 180°. THE POST WILL HAVE THE WIDE SIDE FACING TRAFFIC AND THE DELINEATOR ATTACHED AS SHOWN ABOVE.

ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE NOTED.

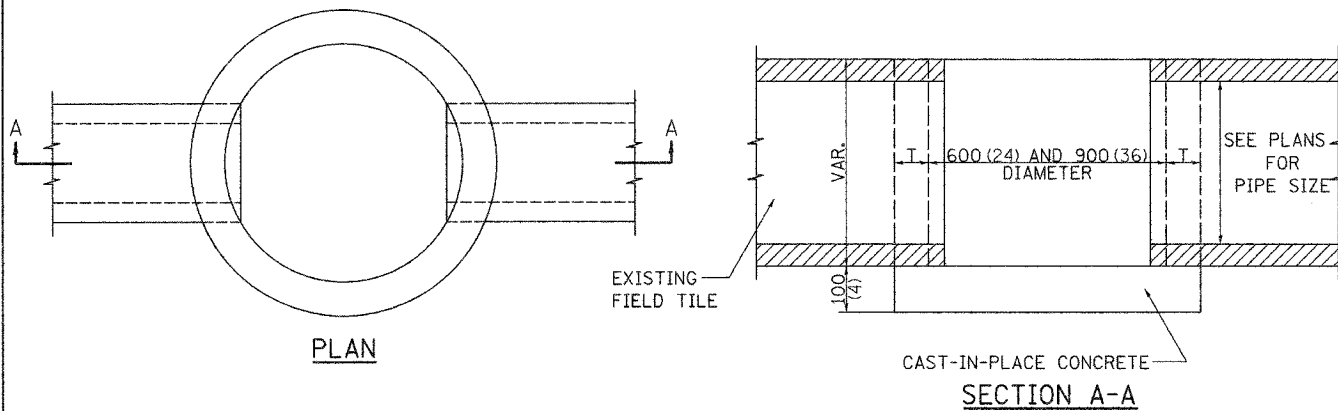
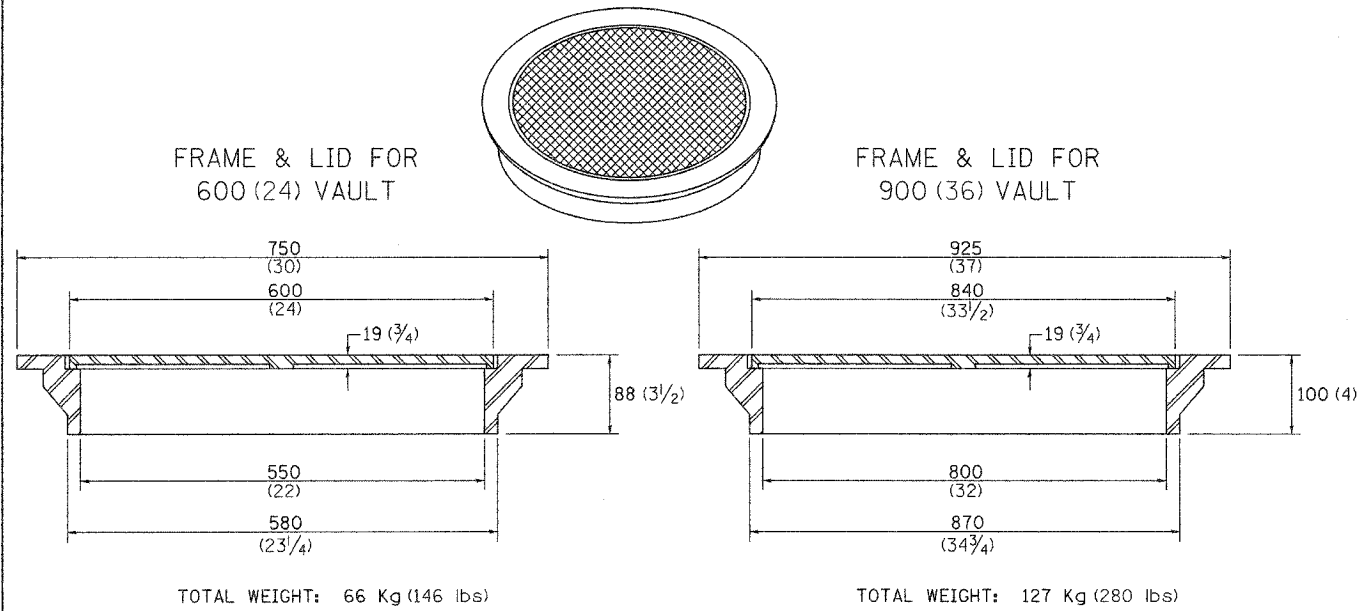
**DELINEATOR AND POST ORIENTATION 37.4**

REVISED 1-31-00

DATE = 04/05/03  
FILE NAME = 04/05/03  
PLOT SCALE = 1/4" = 1'-0"  
REFERENCE = 04/05/03

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
646	(102)BR-3	WHITESIDE	57	46
STA. _____		TO STA. _____		
FED. ROAD DIST. NO. _____		ILLINOIS FED. AID PROJECT		

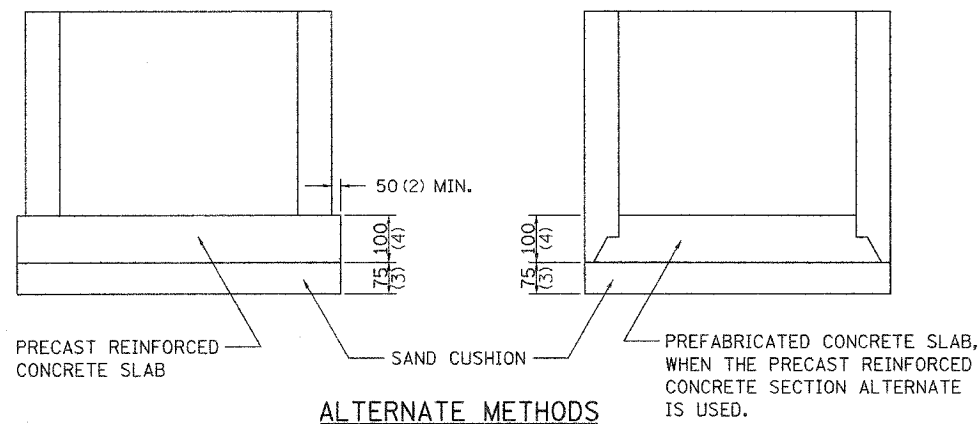
# FIELD TILE JUNCTION VAULTS 600 (24) AND 900 (36) DIA.



ALTERNATE MATERIALS FOR WALLS	T
BRICK MASONRY	200 (8)
CAST-IN-PLACE CONCRETE	150 (6)
CONCRETE MASONRY UNIT	125 (5)
PRECAST REINFORCED CONCRETE SECTION	75 (3)

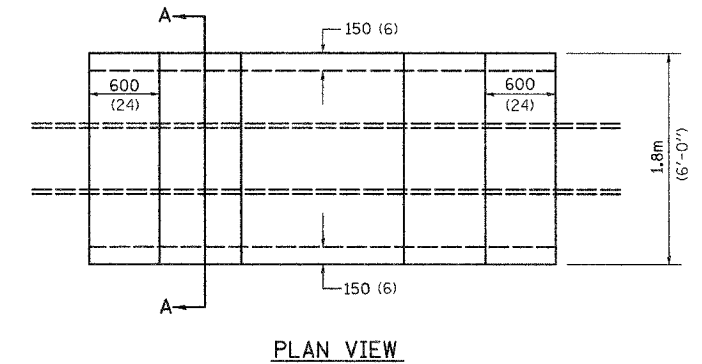
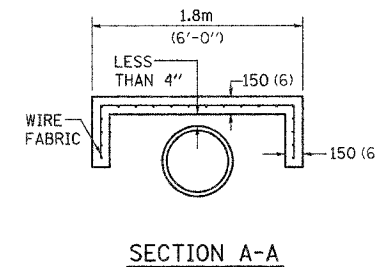
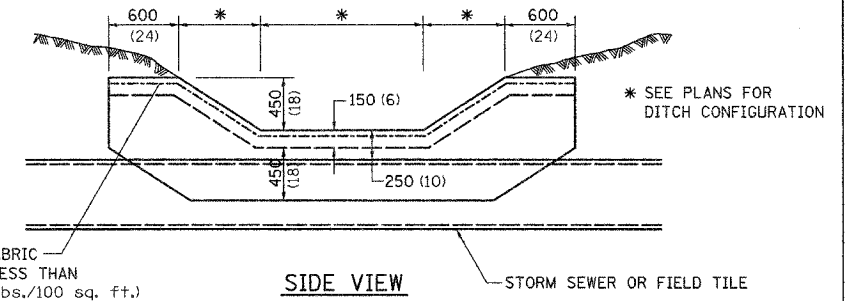
NOTE: THE FRAME AND LID IS REQUIRED ON ALL JUNCTION VAULTS.

ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE NOTED.

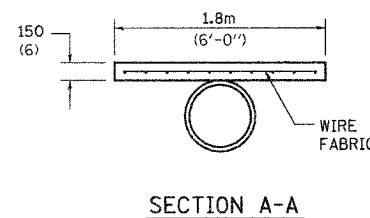
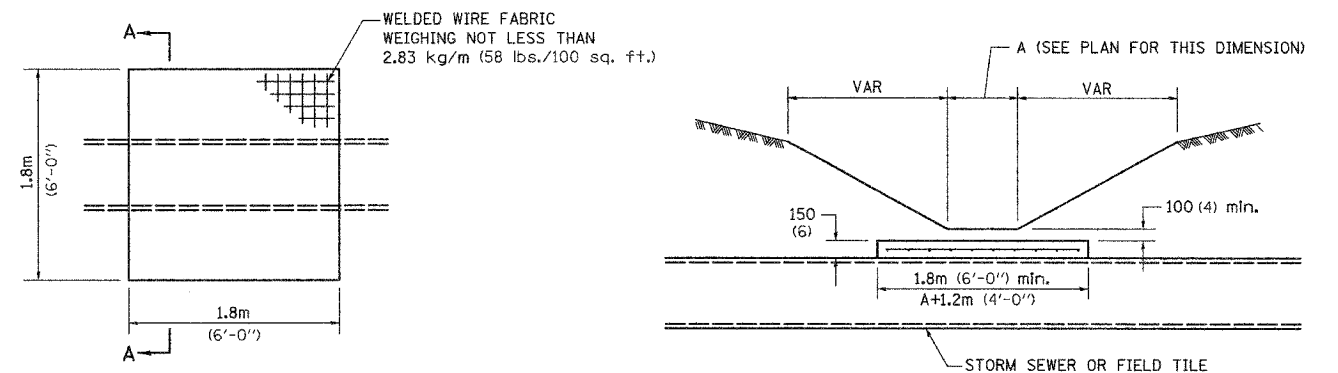


# TREATMENT OF FIELD TILE SYSTEMS UNDER DITCHES

**PAVED DITCH**  
TO BE USED IF COVER OVER THE PIPE AT THE BOTTOM OF THE DITCH IS LESS THAN 250mm (10 INCHES)



TO BE USED IF COVER OVER THE PIPE AT THE BOTTOM OF THE DITCH IS 250mm (10 INCHES) TO 600mm (24 INCHES)



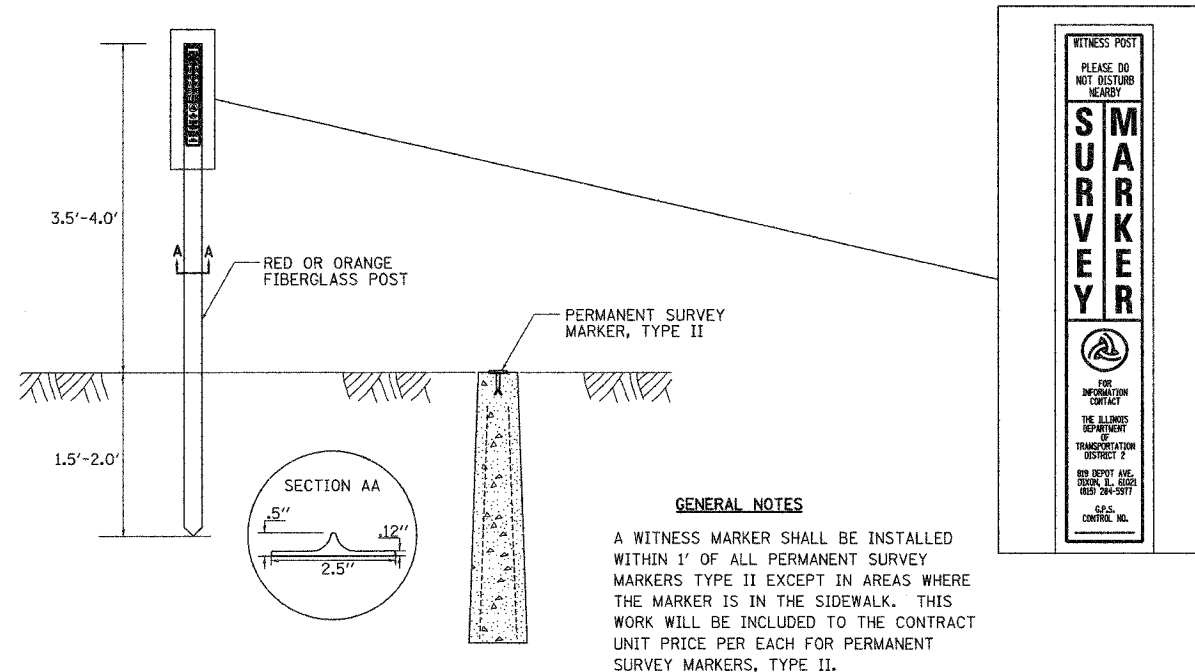
**NOTES**  
THIS WORK SHALL BE DONE IN ACCORDANCE WITH ARTICLE 611.04 OF THE STANDARD SPECIFICATION.

THE CONCRETE SLAB AND PAVED DITCH WILL BE PAID FOR AT THE CONCRETE UNIT PRICE PER CUBIC METER (CUBIC YARD) FOR MISCELLANEOUS CONCRETE.

ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE NOTED.

PLT DATE = 04/15/94  
FILE NAME = 01FILEA  
PLT SCALE = AS SHOWN  
REFERENCE = 01REF

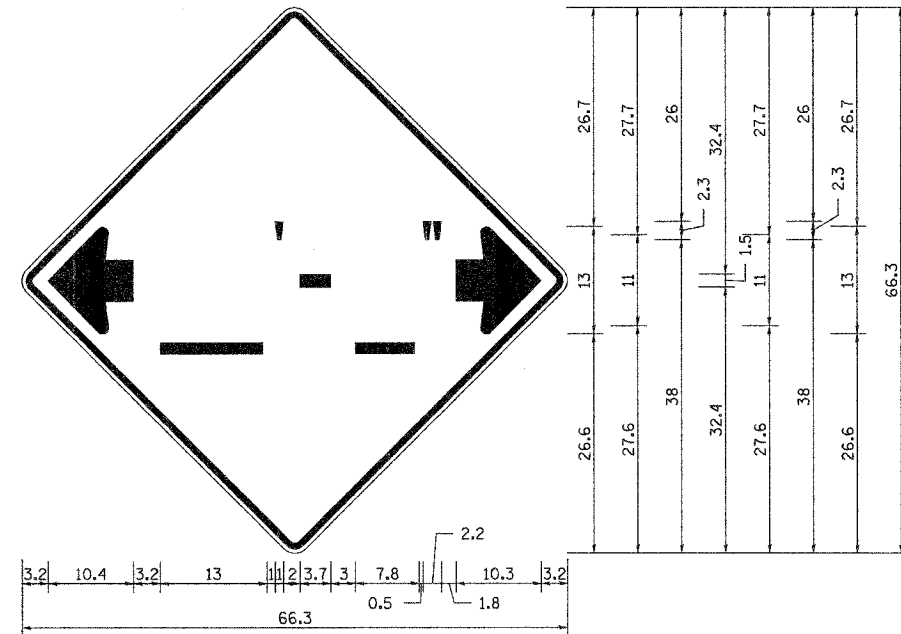
# WITNESS MARKER FOR PERMANENT SURVEY MARKERS TYPE II



WITNESS MARKER FOR PERMANENT SURVEY MARKERS TYPE II 38.4

REVISED 1-31-00

# INFORMATIONAL WARNING SIGN (FOR NARROW TRAVEL LANES)



**NOTES**

W12-2 - Horizontal Clearance Sign  
 48.0" across sides, 1.9" Radius,  
 0.8" Border, 0.5" Indent, Black on  
 Orange; Standard Arrow Custom  
 10.4" X 8.1" 180° Black 11 Inch  
 D Series Lettering; Standard Arrow  
 Custom 10.4" X 8.1" 0°

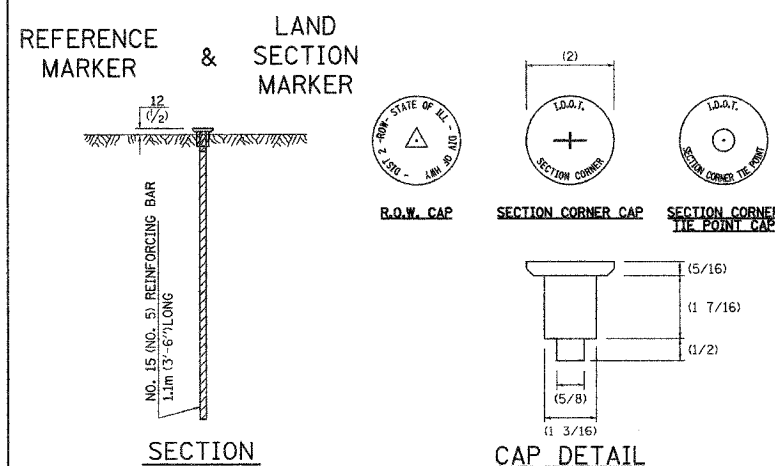
All work to furnish and install these  
 signs shall be included in the cost of  
 the Traffic Control Standards and  
 shall not be paid for separately.

ALL DIMENSIONS ARE IN INCHES UNLESS  
 OTHERWISE NOTED.

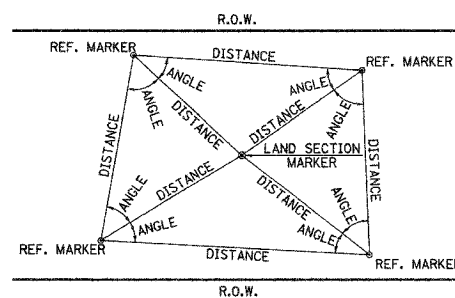
INFORMATIONAL WARNING SIGN (FOR NARROW TRAVEL LANES) 39.4

REVISED 6-29-05

# REFERENCE MARKERS



## METHOD OF REFERENCING MARKERS



- USE INSTRUMENT TIES TO NEARBY LAND-MARKS (STEEPLES, TOWERS, SILOS, ETC...)
- IN CULTIVATED FIELDS, SET 600(2') OR MORE BELOW GROUND SURFACE.
- IN FENCE LINE OR PROTECTED AREA SET TOP AT GROUND LEVEL.

## METHOD OF REFERENCING POINTS

REFERENCE MARKERS SHALL BE USED TO TIE IN PERMANENT LAND SECTION AND 1/4 SECTION CORNERS. WHERE LAND SECTION MARKERS FALL IN THE SHOULDERS OR GRAVEL SURFACES, THE TOP OF THE BAR SHALL BE KEPT 75(3) BELOW THE SURFACE. LAND SECTION MARKERS LOCATED IN TRAFFIC LANES SHALL NOT BE REPLACED.

METAL CAPS SHALL BE PLACED ON TOP OF THE REINFORCEMENT BAR. THERE ARE 3 TYPES OF CAPS, ONE FOR THE RIGHT-OF-WAY CORNERS, ONE FOR THE SECTION CORNERS AND ONE FOR THE SECTION CORNER TIE POINTS. THE CAPS WILL BE SUPPLIED BY IDOT, CALL CHIP CORDELL (815) 284-5370 A MINIMUM OF ONE WEEK BEFORE THE CAPS ARE NEEDED

REFERENCE MARKERS 63.4

REVISED 4-22-05

# TREE REPLACEMENT SCHEDULE

SCIENTIFIC NAME	COMMON NAME	SIZE	UNIT	LOCATION	QUANTITY
TILIA AMERICANA	AMERICAN LINDEN / BASSWOOD	1 3/4" CALIPER, BALLED & BURLAPPED	EACH	TBD	3

ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS  
 OTHERWISE NOTED.

TREE REPLACEMENT SCHEDULE 90.4

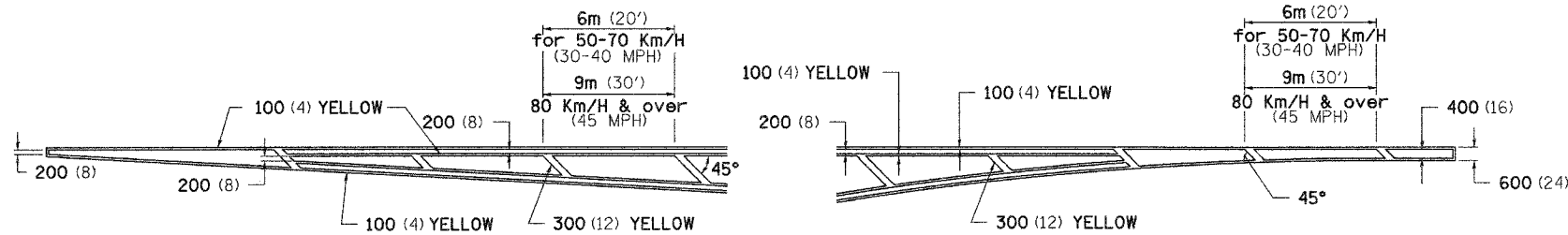
REVISED 5-15-91

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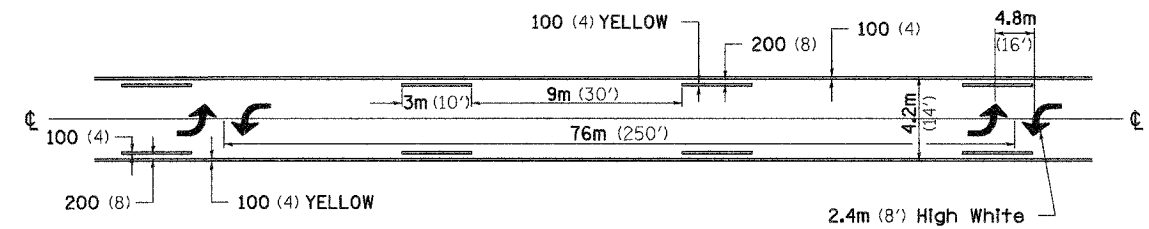
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
646	(102)BR-3	WHITESIDE	57	48
STA. _____		TO STA. _____		
FED. ROAD DIST. NO. _____		ILLINOIS FED. AID PROJECT		

# TYPICAL PAVEMENT MARKINGS

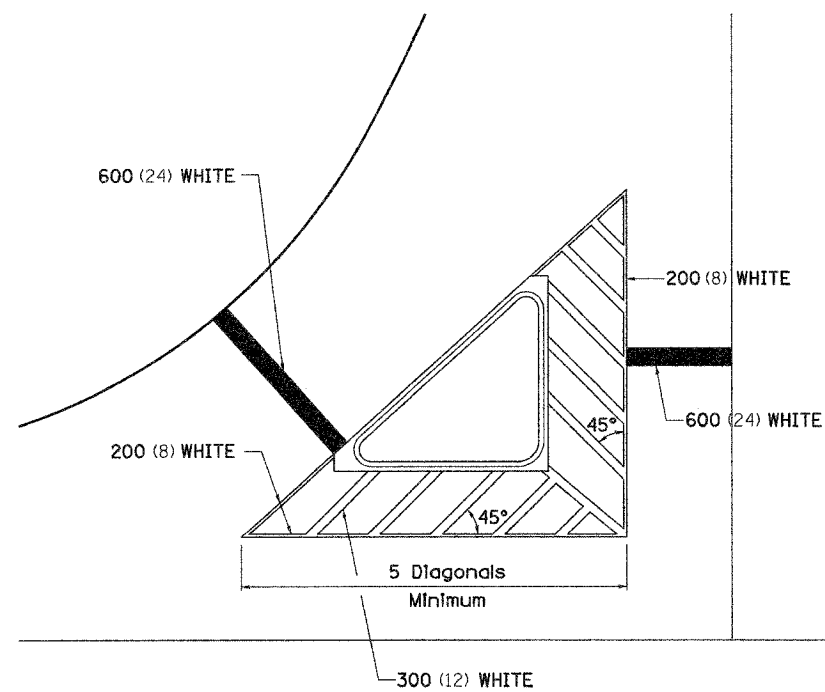
TYPICAL PAVEMENT MARKING FOR FLUSH MEDIAN



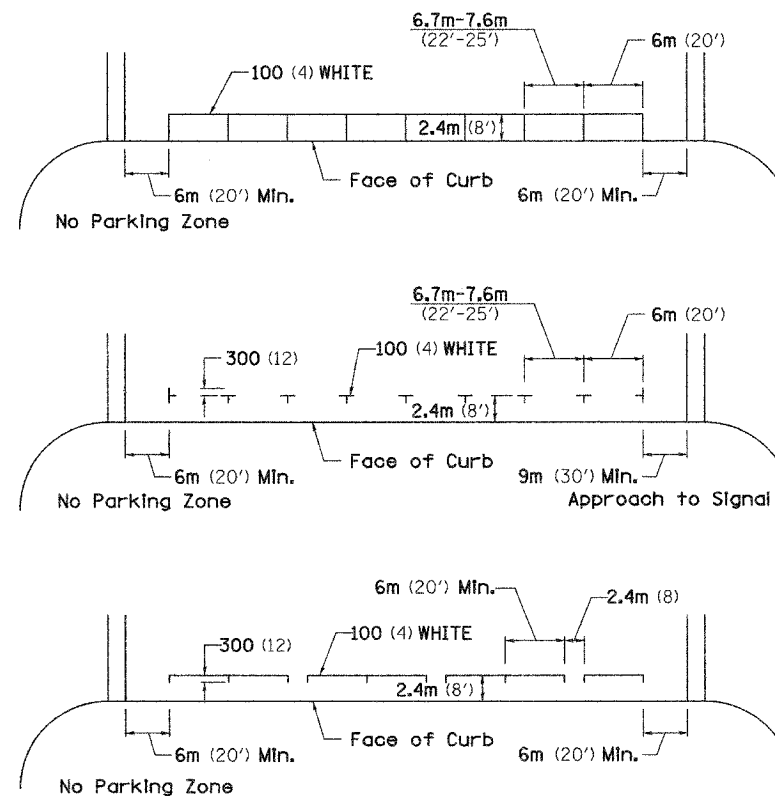
MEDIAN PAVEMENT MARKING



TYPICAL ISLAND OFFSET SHOULDER WIDTH

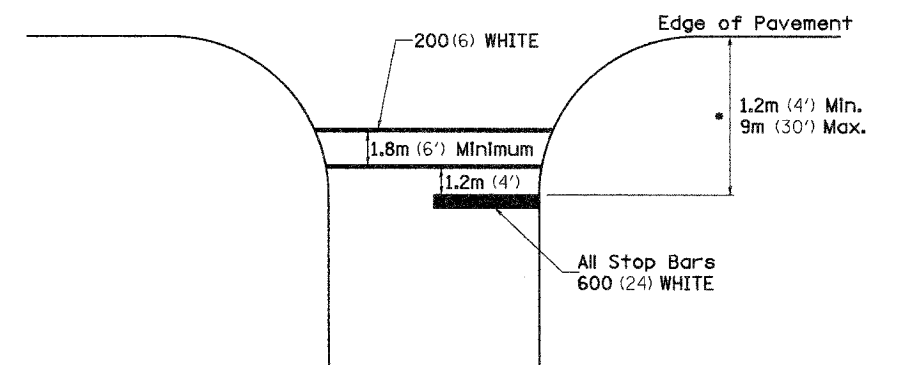


TYPICAL PARKING SPACING



\*\* ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE NOTED.

STANDARD CROSSWALK MARKING  
See Schedules for Locations



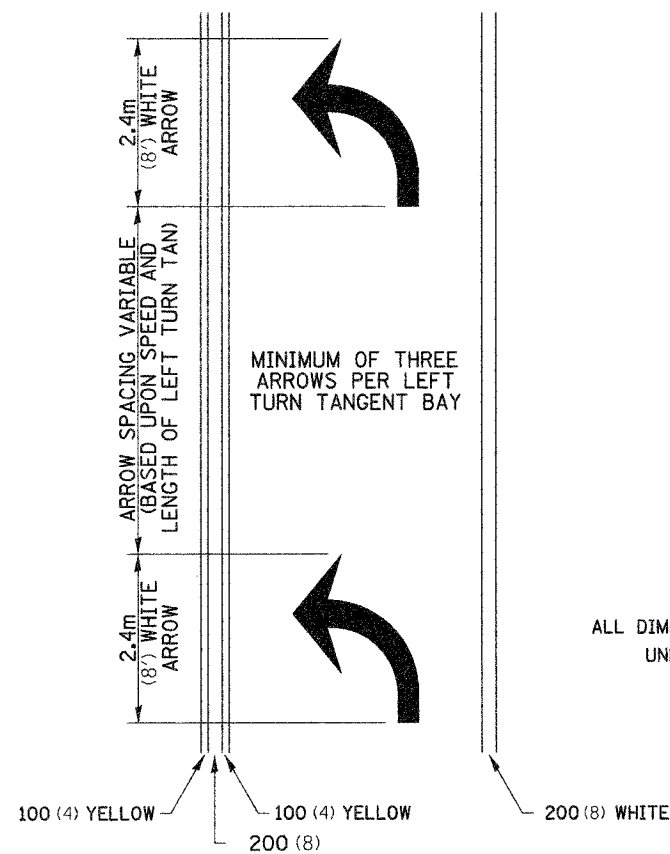
• Distance to the nearest edge of the intersecting roadway in the absence of a marked crosswalk.

PLOT DATE = \*DATE\*  
FILE NAME = \*FILE\*  
PLOT SCALE = \*SCALE\*  
REFERENCE = \*REF\*

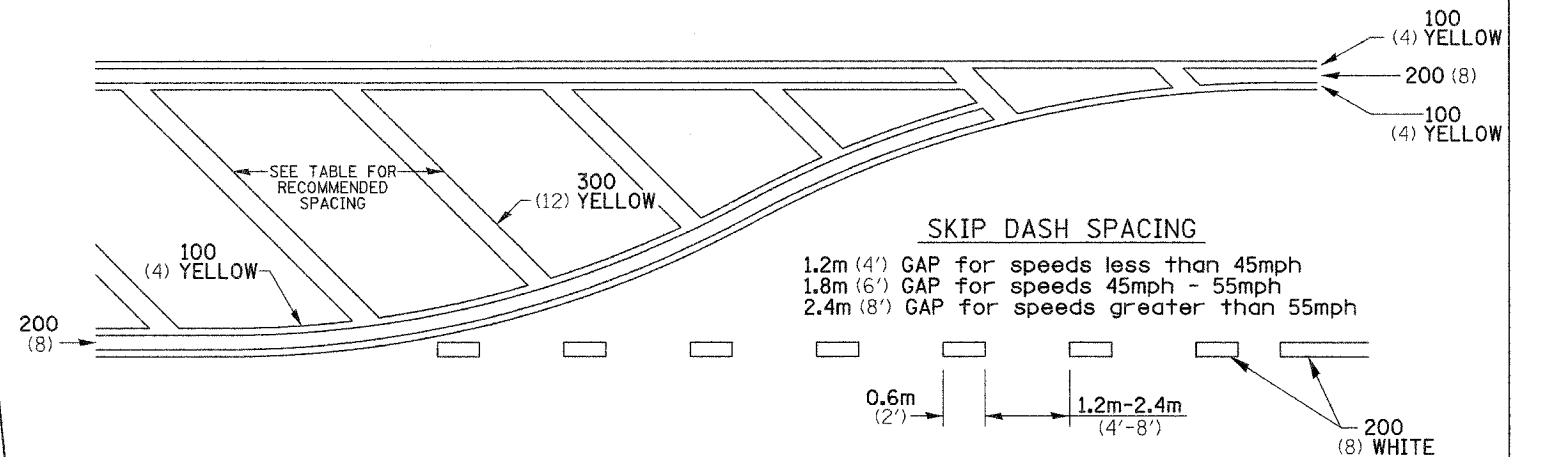
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
646	(102)BR-3	WHITESIDE	57	49
STA. _____		TO STA. _____		
FED. ROAD DIST. NO. _____ ILLINOIS FED. AID PROJECT				

# TYPICAL PAVEMENT MARKINGS

## ARROW LAYOUT



## TYPICAL PAVEMENT MARKING FOR FLUSH MEDIAN



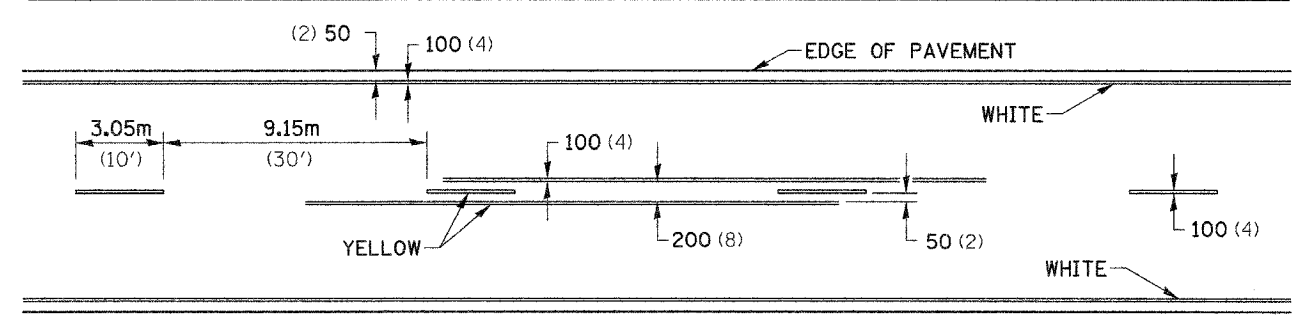
## RECOMMENDED SPACING BETWEEN DIAGONALS (IN FEET)

Speed Limit Range	Continuous Median Area	Intersection Channelization	Objects (Islands)
less than 50Km/H (30MPH)	15.3m (50')	4.53m (15')	3.05m (10')
50-60Km/H (30-40MPH)	22.9m (75')	6.1m (20')	4.53m (15')
70Km/H (45MPH) & over	22.9m (75')	9.05m (30')	6.1m (20')

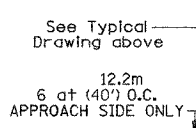
NOTE: If the spacing recommended in the Table does not permit at least five diagonal lines in the area being marked, the spacing from the next lowest speed range should be used. The recommended spacing is measured parallel to the pavement center line.



## TYPICAL PAVEMENT MARKING FOR TWO LANE SECTION - NO PASSING ZONES



## SYMBOLS



- \* REDUCE TO 12.2m (40') O.C. ON CURVES WHERE ADVISORY SPEEDS ARE 15Km/H (10MPH) LOWER THAN POSTED SPEEDS.
- \*\* USE DOUBLE MARKERS WHEN ADT ≥ 25,000

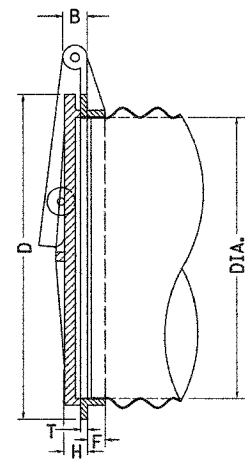
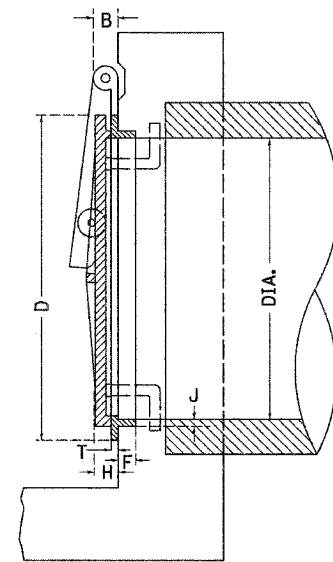
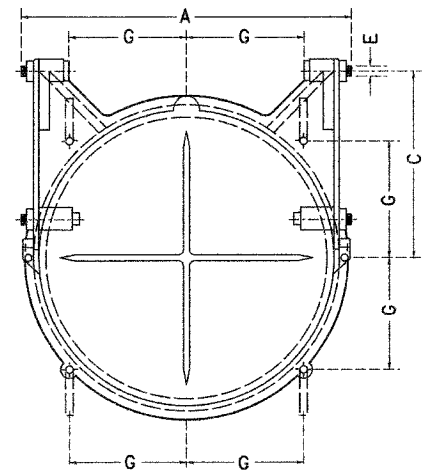
## MULTI-LANE / UNDIVIDED

DATE = 04/15/04  
 FILE NAME = 041504  
 PLOT SCALE = 1/8"=1'-0"  
 REFERENCE = 041504



F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
646	(102)BR-3	WHITESIDE	57	50
STA. _____		TO STA. _____		
FED. ROAD DIST. NO. _____		ILLINOIS FED. AID PROJECT		

# AUTOMATIC FLAP GATES



IT IS INTENDED THAT THE AUTOMATIC FLAP GATES SHALL BE A COMMERCIAL PRODUCT PRODUCED BY A RELIABLE MANUFACTURER. THE GATE MAY BE MADE OF CAST IRON, CAST STEEL OR OTHER SUITABLE MATERIALS. THE DESIGN MAY DIFFER FROM THE DRAWING IF IT WILL WORK IN A SATISFACTORY, TROUBLE FREE MANNER AND WILL WITHSTAND THE WATER PRESSURE AT THE INSTALLATION LOCATION. THE GATE SHALL BE APPROVED BY THE ENGINEER.

THE SIZE OF AUTOMATIC FLAP GATES SHALL REFER TO THE DIAMETER OF THE OUTLET PIPE OR OPENING.

THIS WORK SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR FLAP GATES OF THE SIZE SPECIFIED AND SHALL INCLUDE ALL MATERIALS AND COMPLETE INSTALLATION.

ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE NOTED.

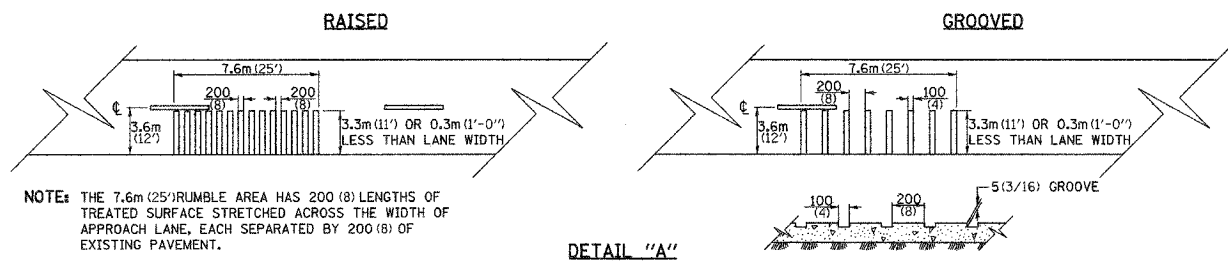
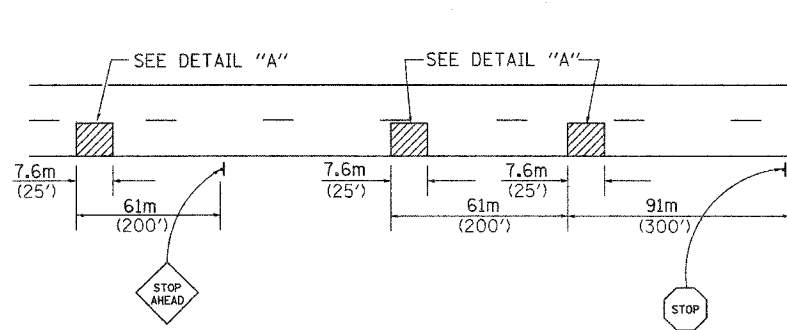
TABLE OF DIMENSIONS

DIAM	A	B	C	D	E	F	G	H	J	T
200 (8)	273 (10 3/4)	35 (1 3/8)	144 (5 11/16)	254 10	13 (1/2)	29 (1 1/8)	90 (3 5/16)	32 (1 1/4)	19 (3/8)	10 (3/8)
250 (10)	324 (12 3/4)	35 (1 3/8)	181 (7 1/8)	311 (12 1/4)	13 (1/2)	29 (1 1/8)	111 (4 3/8)	38 (1 1/2)	13 (1/2)	11 (1 1/16)
300 (12)	375 (14 3/4)	35 (1 3/8)	216 (8 1/2)	368 (14 1/2)	13 (1/2)	29 (1 1/8)	130 (5 1/8)	38 (1 1/2)	13 (1/2)	13 (1/2)
350 (14)	438 (17 1/4)	35 (1 3/8)	251 (9 7/8)	425 (16 3/4)	13 (1/2)	32 (1 1/4)	151 (5 15/16)	38 (1 1/2)	13 (1/2)	14 (9/16)
375 (15)	451 (17 3/4)	35 (1 3/8)	270 (10 5/8)	451 (17 3/4)	13 (1/2)	32 (1 1/4)	159 (6 1/4)	38 (1 1/2)	13 (1/2)	14 (9/16)
400 (16)	489 (19 1/4)	35 (1 3/8)	286 (11 1/4)	476 (18 3/4)	13 (1/2)	32 (1 1/4)	168 (6 5/8)	38 (1 1/2)	13 (1/2)	14 (9/16)
450 (18)	565 (22 1/4)	51 2	321 (12 5/8)	533 21	19 (3/4)	40 (1 5/8)	189 (7 3/8)	44 (1 3/4)	14 (9/16)	14 (9/16)
500 (20)	629 (24 3/4)	51 2	359 (14 1/8)	603 (23 3/4)	19 (3/4)	35 (1 3/8)	210 (8 1/4)	44 (1 3/4)	16 (5/8)	16 (5/8)
525 (21)	641 (25 1/4)	51 2	378 (14 7/8)	616 (24 1/4)	19 (3/4)	35 (1 3/8)	217 (8 5/8)	44 (1 3/4)	16 (5/8)	16 (5/8)
600 (24)	718 (28 1/4)	51 2	432 17	699 (27 1/2)	19 (3/4)	38 (1 1/2)	248 (9 3/4)	44 (1 3/4)	16 (5/8)	16 (5/8)
750 (30)	895 (35 1/4)	64 (2 1/2)	521 (20 1/2)	864 34	25 1	40 (1 5/8)	305 12	51 2	27 (1 1/16)	16 (5/8)
900 (36)	1054 (41 1/2)	64 (2 1/2)	635 25	1038 (40 7/8)	25 1	52 (2 1/16)	367 (14 1/16)	57 (2 1/4)	29 (1 1/8)	17 (1 1/16)
1050 (42)	1207 (47 1/2)	64 (2 1/2)	756 (29 3/4)	1194 47	25 1	59 (2 5/16)	422 (16 5/8)	57 (2 1/4)	29 (1 1/8)	19 (3/4)
1200 (48)	1359 (53 1/2)	64 (2 1/2)	864 34	1372 54	25 1	70 (2 3/4)	484 (19 1/16)	57 (2 1/4)	35 (1 3/8)	19 (3/4)
1350 (54)	1543 (60 3/4)	64 2 1/2	965 38	1581 (62 1/4)	32 (1 1/4)	70 (2 3/4)	559 22	76 3	38 (1 1/2)	22 (1/8)
1500 (60)	1702 (67)	64 (2 1/2)	1067 42	1740 (68 1/2)	32 (1 1/4)	70 (2 3/4)	616 (24 1/4)	76 3	38 (1 1/2)	24 (15/16)
1650 (66)	1855 (73 3/8)	64 (2 1/2)	1194 47	1905 75	32 (1 1/4)	73 (2 7/8)	673 (26 1/2)	76 3	38 (1 1/2)	25 1
1800 (72)	2007 (79)	64 (2 1/2)	1295 51	2083 82	32 (1 1/4)	76 3	737 29	76 3	38 (1 1/2)	25 1
1950 (78)	2184 (86)	64 (2 1/2)	1403 (55 1/4)	2254 (88 3/4)	32 (1 1/4)	89 (3 1/2)	797 (31 3/8)	76 3	41 (1 5/8)	29 (1 1/8)
2100 (84)	2350 (92 1/2)	89 (3 1/2)	1511 (59 1/2)	2426 (95 1/2)	38 (1 1/2)	89 (3 1/2)	857 (33 3/4)	76 3	44 (1 3/4)	32 (1 1/4)

PLOT DATE = #DATE#  
 FILE NAME = #FILE#  
 PLOT SCALE = #SCALE#  
 REFERENCE = #REF#

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
646	(102)BR-3	WHITESIDE	57	51
STA. _____		TO STA. _____		
FED. ROAD DIST. NO. _____ ILLINOIS FED. AID PROJECT				

# RUMBLE RESURFACING



NOTE: THE 7.6m (25') RUMBLE AREA HAS 200 (8) LENGTHS OF TREATED SURFACE STRETCHED ACROSS THE WIDTH OF APPROACH LANE, EACH SEPARATED BY 200 (8) OF EXISTING PAVEMENT.

DETAIL "A"

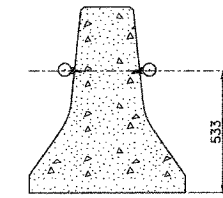
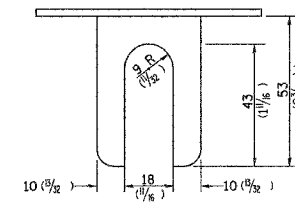
ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE NOTED.

## RUMBLE RESURFACING 91.4

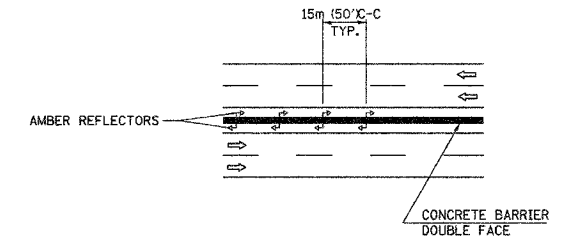
REVISED 2-16-88

# BARRIER REFLECTORS

BARRIER REFLECTOR BRACKET

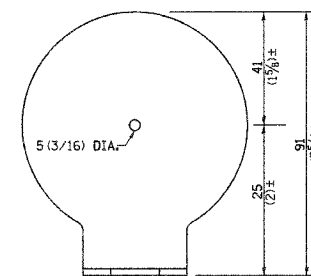


REFLECTOR MOUNTED ON CONCRETE BARRIER

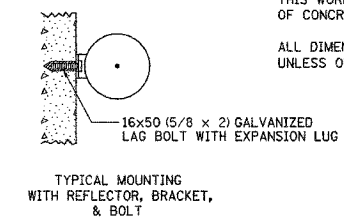


NOTES:

- BRACKET TO BE FABRICATED FROM 12 GAUGE (MIN) STEEL GALVANIZED IN ACCORDANCE WITH ASSHTO M 111.
- INSTALL AMBER REFLECTORS WITH SPACING OF 15m (50') CENTERS.
- BRACKET SHALL BE PLACED BETWEEN THE BOLT HEAD AND THE PLATE WASHER.
- REFLECTORS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 784.07 OF THE STANDARD SPECIFICATIONS.
- THIS WORK SHALL BE CONSIDERED INCIDENTAL TO UNIT COST OF CONCRETE BARRIER.
- ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE NOTED.



CIRCULAR SHAPE 83(3 1/4) DIA.

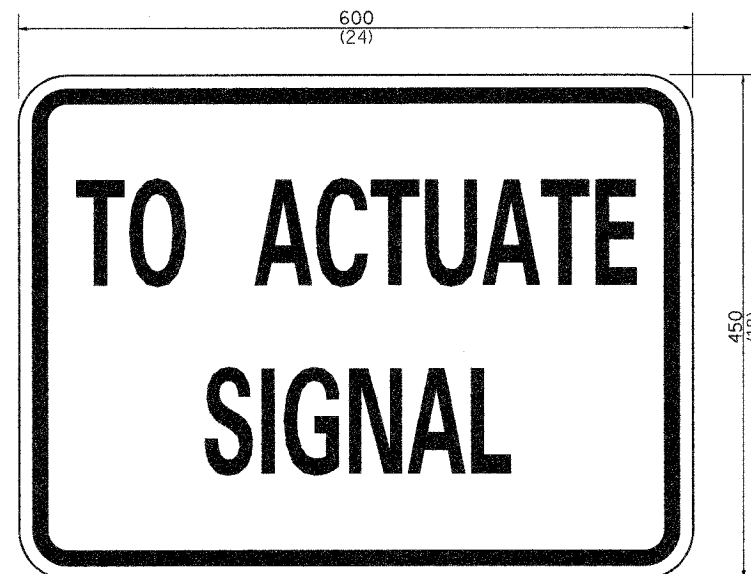


TYPICAL MOUNTING WITH REFLECTOR, BRACKET, & BOLT

## BARRIER REFLECTORS 92.4

REVISED 10-15-04

# STOP LINE SIGN FOR TEMPORARY SIGNALS



SIZE: 600(24) x 450(18)  
 100(4) CAPITAL LETTERS - BLACK  
 13(1/2) BORDER - BLACK  
 WHITE REFLECTIVE - TYPE B  
 ENGINEERING GRADE SHEETING

GENERAL NOTE:

THIS SIGN SHALL BE INSTALLED AT THE STOP LINE AS DIRECTED BY ENGINEER.

ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE NOTED.

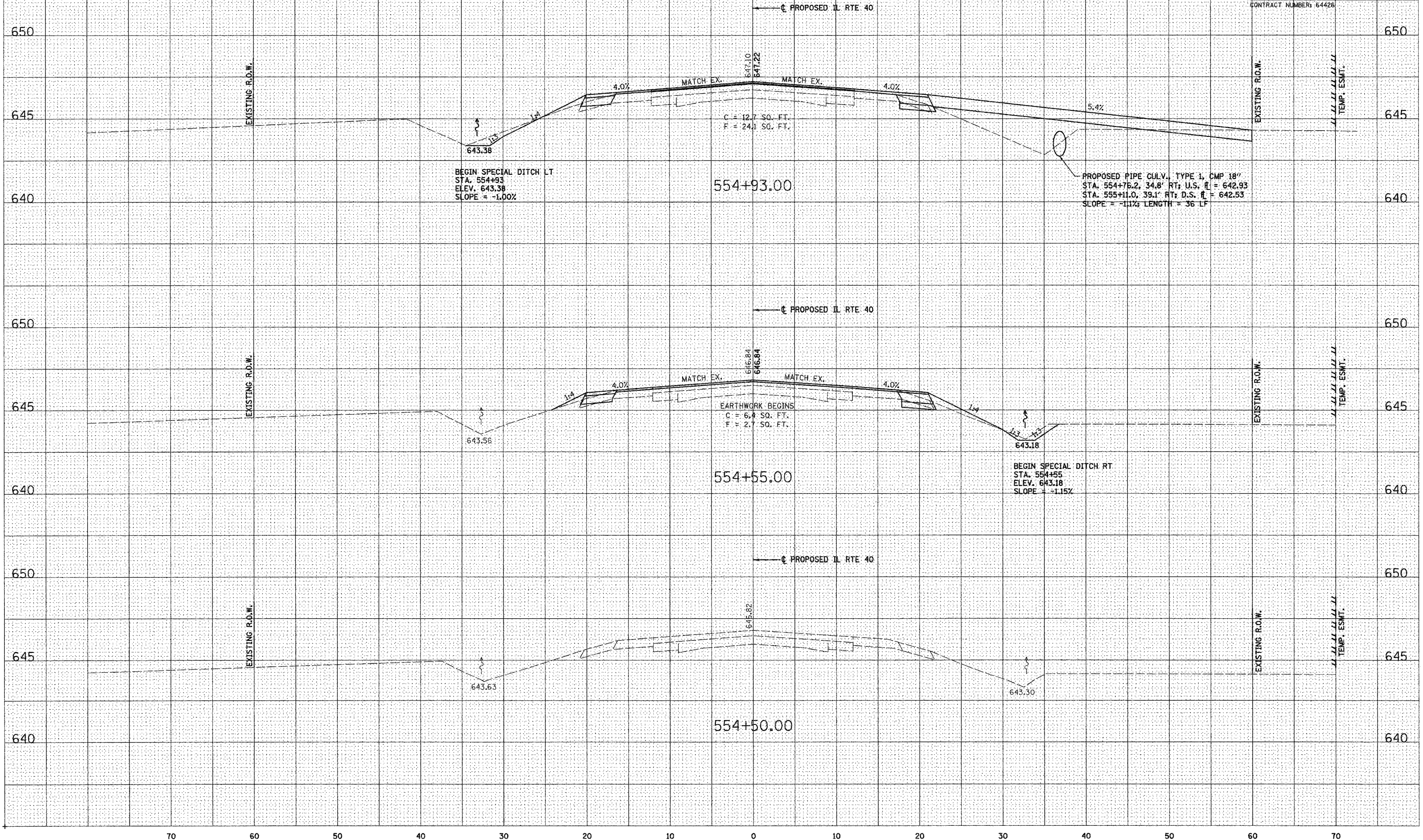
## STOP LINE SIGN FOR TEMPORARY SIGNALS 99.4

REVISED 8-7-90

DATE = #DATE#  
 FILE NAME = #FILE#  
 PLOT SCALE = #SCALE#  
 REFERENCE = #REF#

70 60 50 40 30 20 10 0 10 20 30 40 50 60 70

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
646	(102)BR-3	WHITESIDE	57	52
STA. 554+50.00 TO STA. 554+93.00				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				
CONTRACT NUMBER: 64426				

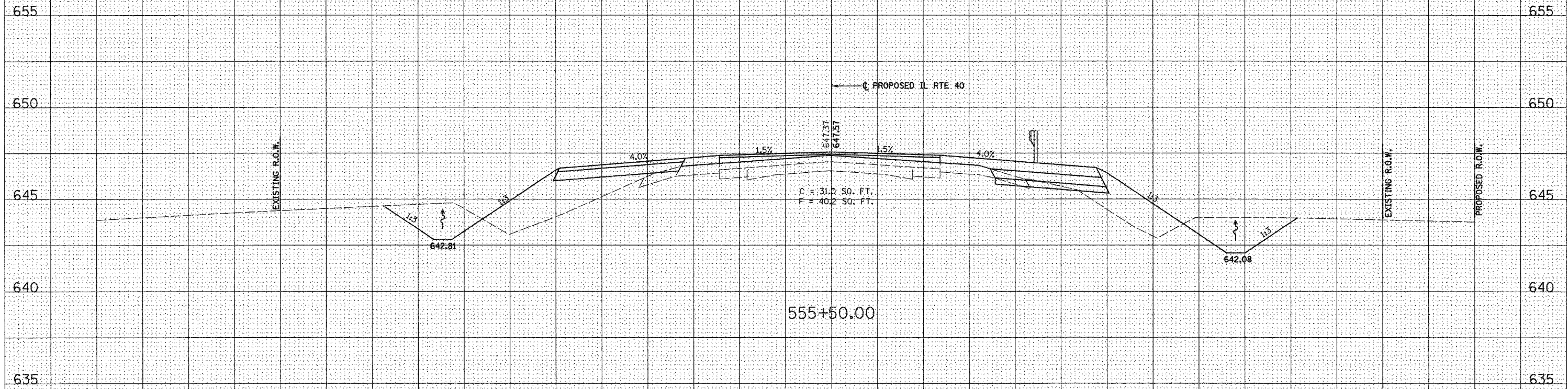


70 60 50 40 30 20 10 0 10 20 30 40 50 60 70



70 60 50 40 30 20 10 0 10 20 30 40 50 60 70

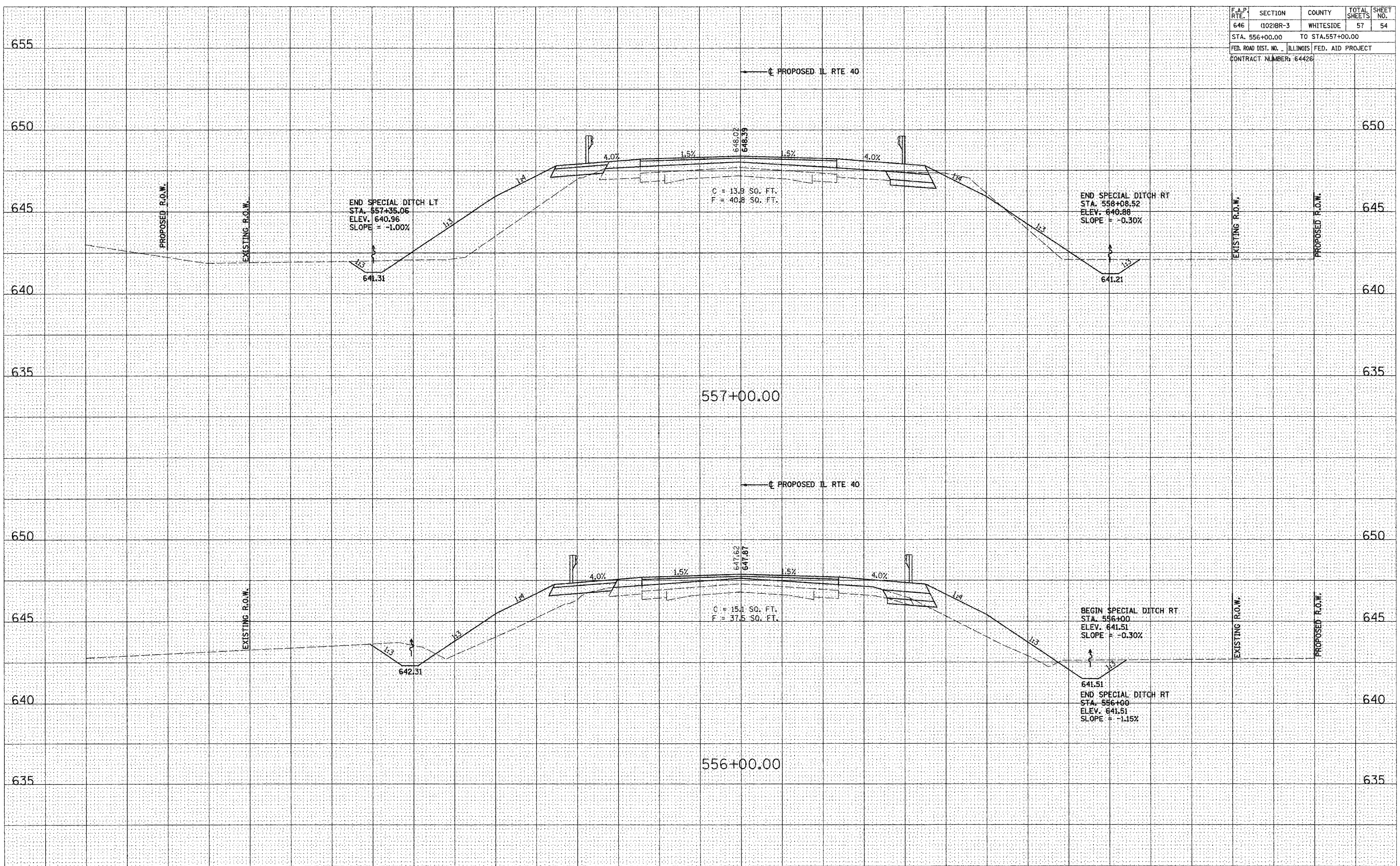
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
646	(102)BR-3	WHITESIDE	57	53
STA. 555+50.00				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				
CONTRACT NUMBER: 64426				



70 60 50 40 30 20 10 0 10 20 30 40 50 60 70

70 60 50 40 30 20 10 0 10 20 30 40 50 60 70

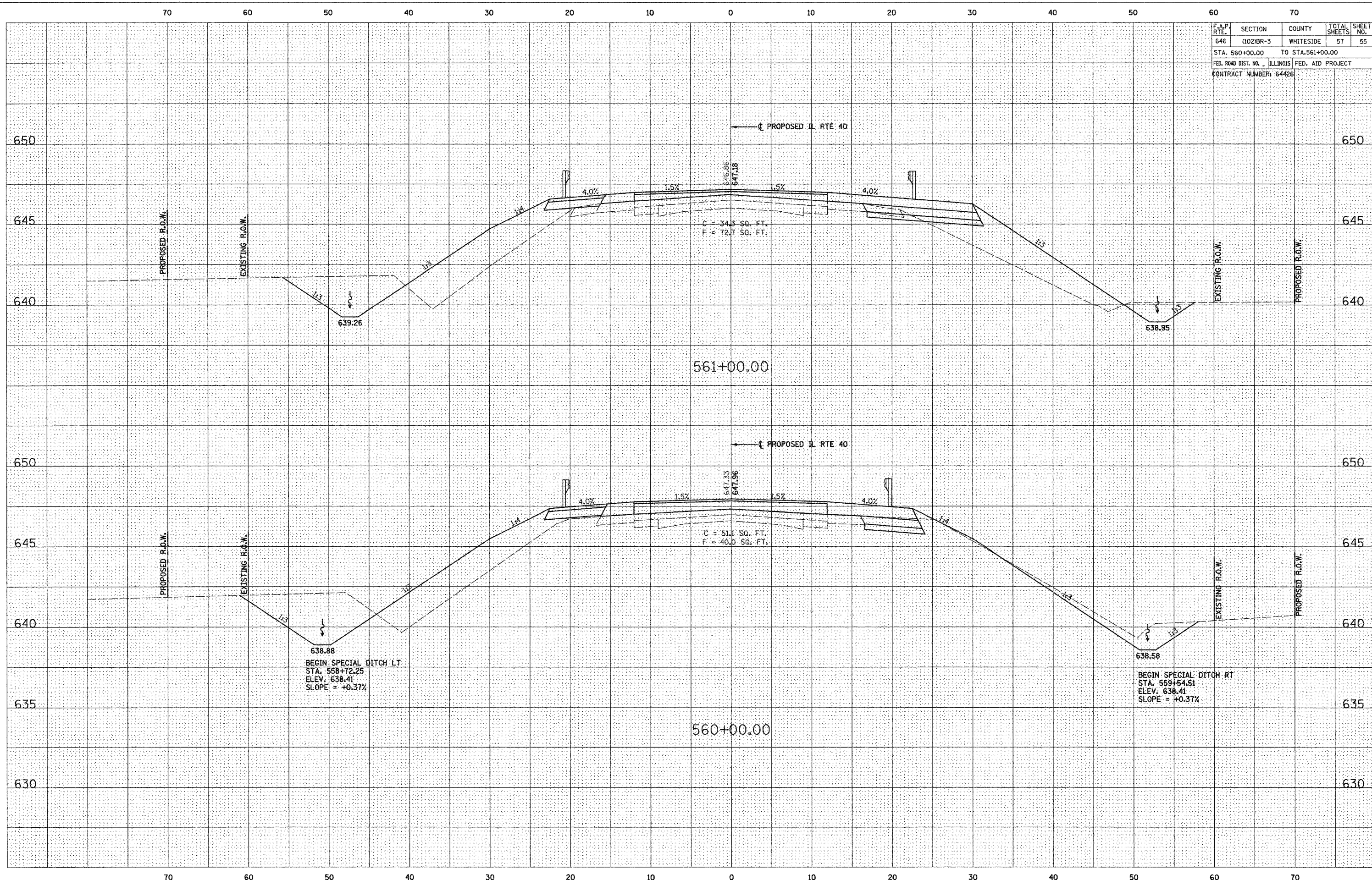
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
646	(102)BR-3	WHITESIDE	57	54
STA. 556+00.00 TO STA. 557+00.00				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				
CONTRACT NUMBER: 64426				



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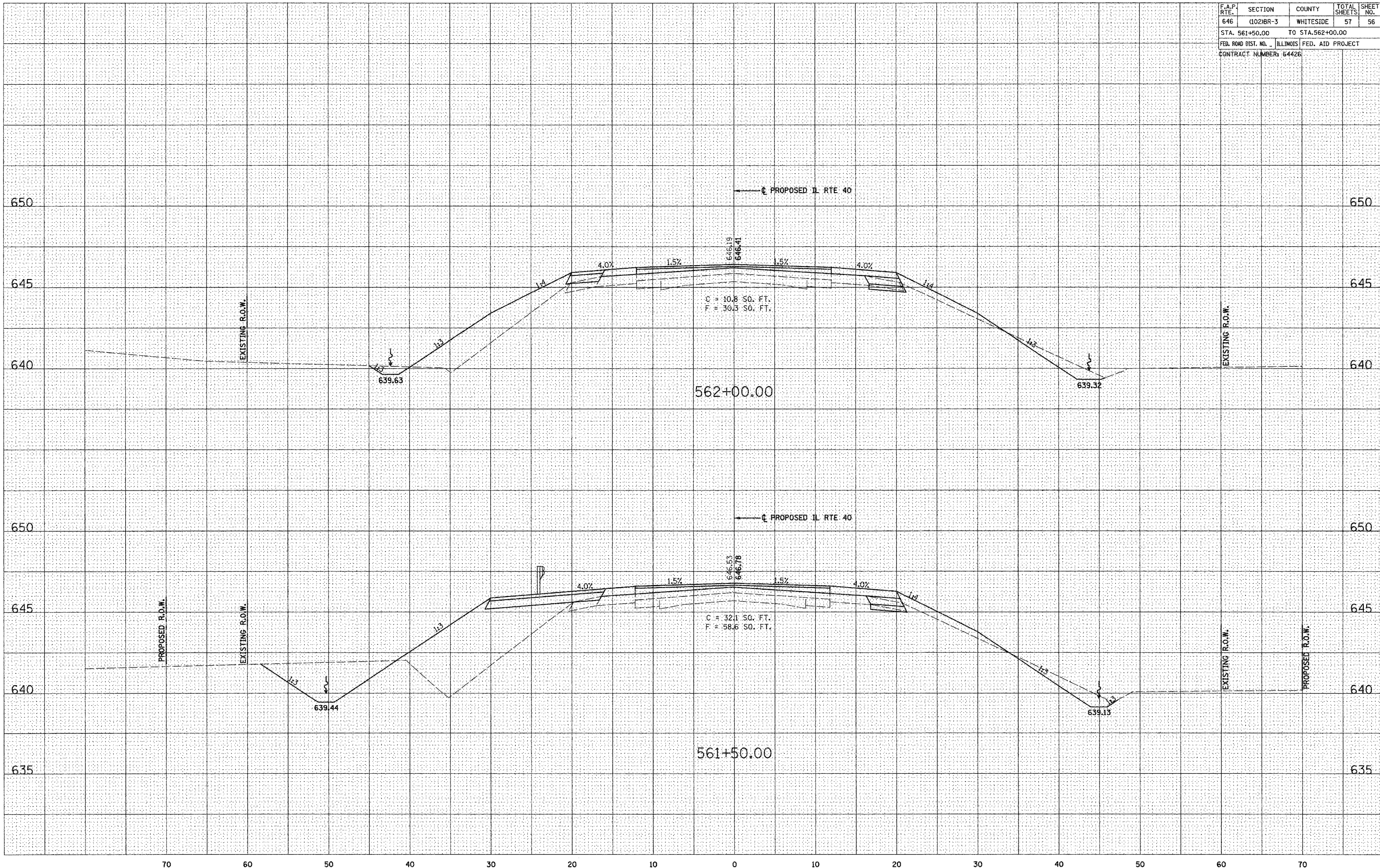


F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
646	(102)BR-3	WHITESIDE	57	55
STA. 560+00.00		TO STA. 561+00.00		
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				
CONTRACT NUMBER: 64426				



70 60 50 40 30 20 10 0 10 20 30 40 50 60 70

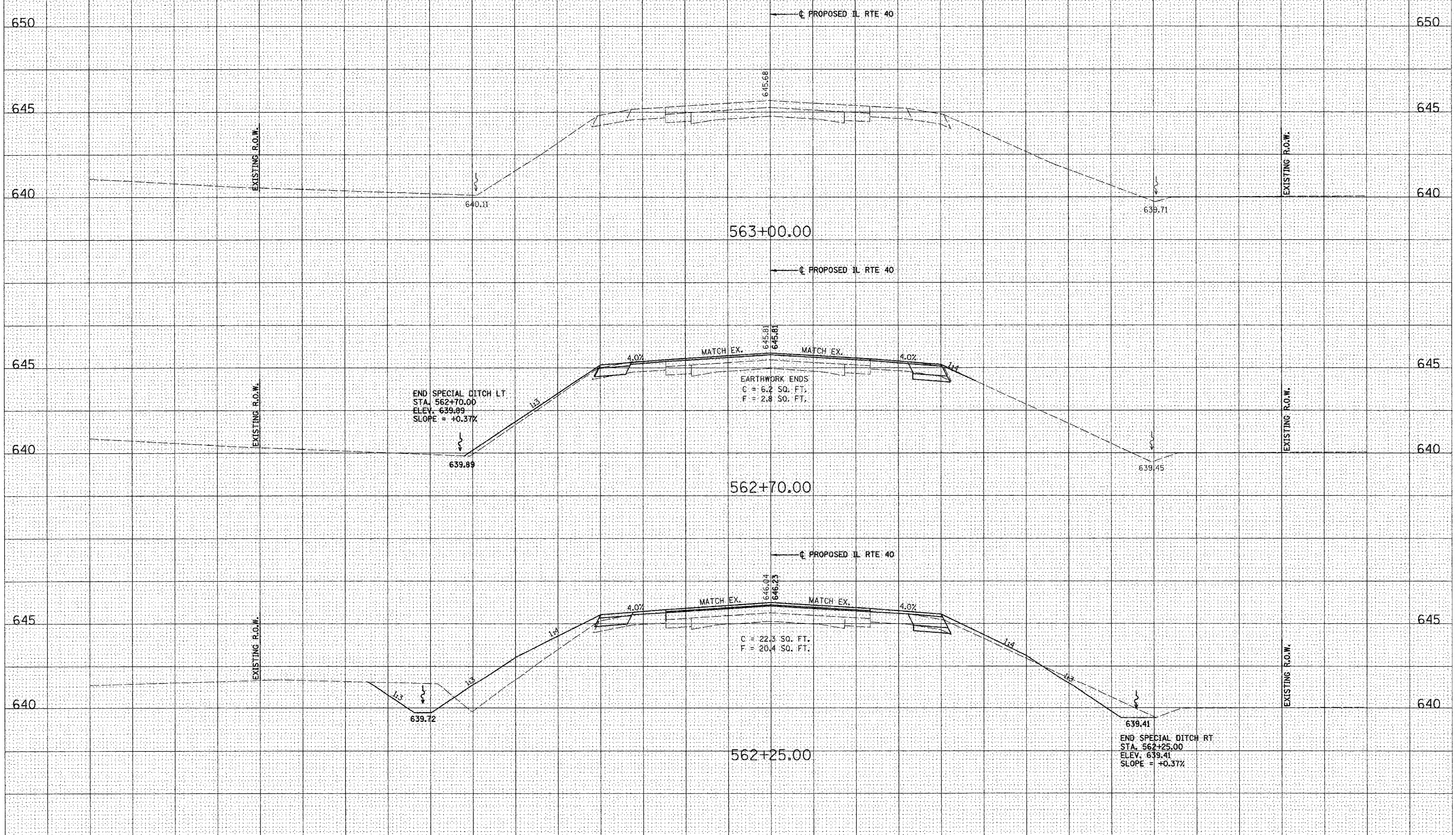
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
646	(102)BR-3	WHITESIDE	57	56
STA. 561+50.00 TO STA. 562+00.00				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				
CONTRACT NUMBER: 64426				





70 60 50 40 30 20 10 0 10 20 30 40 50 60 70

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
646	(102)BR-3	WHITESIDE	57	57
STA. 562+25.00 TO STA. 563+00.00				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				
CONTRACT NUMBER: 64426				



70 60 50 40 30 20 10 0 10 20 30 40 50 60 70