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PROJECT ENGINEER Mahmoud Etemadi Phone: (815) 284–5393

LEADER EL-AHMAD (815) 284–5994

SQUAD Ahmad Phone:

COVER SHEET
SUMMARY OF QUANTITIES
GENERAL NOTES
TYPICAL SECTIONS
SCHEDULE OF QUANTITIES
BRIDGE PLAN DETAILS FOR STRUCTURE 098-0015
BRIDGE PLAN DETAILS FOR STRUCTURE 037-0106
STAGING DETAILS
DETOUR ROUTE DETAIL
TRAFFIC CONTROL FOR ROAD CLOSURE (STD 40.1)
TRAFFIC CONTROL FOR ROAD CLOSURE (STD 40.1A)
TYPICAL PAVEMENT MARKINGS (STD 41.1)

STATE STANDARDS

000001-04	STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS
001001	AREAS OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH AND A FOOT
701311-02	LANE CLOSURE, 2L, 2W, MOVING OPERATIONS - DAY ONLY
701423-01	LANE CLOSURE, MULTILANE, WITH BARRIER, FOR > 45 MPH TO 55 MPH
702001-06	TRAFFIC CONTROL DEVICES
704001-02	TEMPORARY CONCRETE BARRIER
780001-01	TYPICAL PAVEMENT MARKINGS

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS

PROPOSED HIGHWAY PLANS

N

FAP ROUTE 646 (IL 40) & FAP 638 (IL 82) SECTION 101BY-D & 137-1B-D WHITESIDE & HENRY COUNTY C-92-151-06





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

WHITESIDE COUNTY STERLING & COLOMA, SECTION 30 & 31, T. 21-N. & R-6-7-E. HENRY COUNTY CAMBRIDGE, SECTION 16, T. 15–N. & R–3–E.

CONTRACT NO. 64C67

GROSS LENGTH OF SECTION = 63 FEET = 0.0119 MILES (WHITESIDE) **GROSS LENGTH OF SECTION** = 43 FEET = 0.008 MILES (HENRY) NET LENGTH OF SECTION = 63 FEET = 0.0119 MILES (WHITESIDE) NET LENGTH OF SECTION = 43 FEET = 0.008 MILES (HENRY)

SUMMARY OF QUANTITIES

				SFT	Y-2A
				IL 40 WHITESIDE	US 3 HENRY
CODE NUMBER	PAY ITEM	UNIT	TOTAL QUANTITY	SN: 098-0015 100 % STATE	SN: 037- 010
44001000	BITUMINOUS CONCRETE SURFACE REMOVAL	SQ YD	23.5	18.5	5
50400505	PRECAST PRESTRESSED CONCRETE DECK BEAMS (27" DEPTH)	SQ. FT.	650	650	· · · · ·
50400405	PRECAST PRESTRESSED CONCRETE DECK BEAMS (21" DEPTH)	SQ. FT.	252		252
50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	210	210	,
58100200	WATERPROOFING MEMBRANE SYSTEM	SQ YD	125.7	91.7	34
58300100	PORTLAND CEMENT MORTAR FAIRING COURSE	FOOT	459	330	129
67100100	MOBILIZATION	L SUM	1	0.5	0.5
70100325	TRAFFIC CONTROL AND PROTECTION STD 701423	EACH	1	1	
70103815	TRAFFIC CONTROL SURVEILANCE	CAL DA	3	2	1
70300200	TEMPORARY PAVEMENT MARKING	FOOT	2760	2760	
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	919	919	
70400100	TEMPORARY CONCRETE BARRIER	FOOT	120	120	-
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	120	120	
78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	4880	4600	280
78300105	PAVEMENT MARKING REMOVAL	FOOT	920	920	
X0320047	REMOVAL OF EXISTING PRECAST PRESTRESSED CONCRETE DECK BEAMS	SQ FT	915	659	256
X0322932	SILICONE JOINT SEALER, 1 1/2"	FOOT	25	25	
X4066424	BITUMINOUS CONCRETE SURFACE COARSE, SUPERPAVE, MIX "D", N50	TON	18.8	10.3	8.5
X0712400	TEMPORARY PAVEMENT	SO YD	100	72	28
X0919000	TÉMPORARY PAVEMENT REMOVAL	SQ YD	100	72	28
X7013015	TRAFFIC CONTROL FOR ROAD CLOSURE	L SUM	1		1
Z0001900	ASBESTOS BEARING PAD REMOVAL	EACH	4	4	
Z0030250	IMPACT ATTENUATOR, TEMPRARY(NON-REDIRECTIVE), TEST LEVEL 3	EACH	2	2	
Z0030350	IMPACT ATTENUATOR, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2	2	

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GENERAL NOTES

Any disturbed area caused by construction shall be seeded using Class 2A by the Contractor at his expense with no cost to the Department.

The following Mixture Requirements are applicable for this project:

	IL 40	IL 82
Mixture Uses(s):	Mainline Surface	Mainline Surface
	Course	Course
PG:	PG 64-22	PG 64-22
RAP%: (Max)	15%	15%
Design Air Voids	4.2 @ N50	4.2 @ N50
Mixture Composition	IL 9.5 or 12.5	IL 9.5 or 12.5
(Gradation Mixture)		
Friction Aggregate	D	С
20 Year ESAL	2.3	0.7

Bituminous 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 BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE Mix "D", N50.

These structures will retain the same numbers SN 098-0015 & 037-0106.

Pavement Marking shall be done according to Standard 780001, except as follows:

1. All words, such as ONLY, shall be 2.4 m (8 feet) high.

2. All non-freeway arrows shall be the large size.

3. The distance between yellow no-passing lines shall be 200 mm (8"), not 180 mm (7") as

shown in the detail of Typical Lane and Edge Lines.

All work on the structures over the Hennepin Feeder Canal & the north branch of Spring Creek, shall be performed from the existing deck and that no work shall take place below the existing structure on the ground.

No vehicles or materials shall be parked or stored outside the state right-of-way

No vehicles or materials shall be parked or stored on the Hennepin Feeder Canal property, which is owned by the Illinois Department of Natural Resources

The bike path located on the west towpath of the Hennepin Feeder Canal shall not be closed for any duration to exceed one hour.

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:

Commonwealth Edison Co.
AT&T
NICOR Gas Co.
Insight Communications of Rockford
Lightcore

Program #5 (Arch. Size Enlarge 200% Enlarge 107

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 646 (IL 40) & FAP 638 (IL 82)	101BY-D & 137-1B-D	Whiteside & Henry	17	3
FED ROAD DIST. NO.	ILLINOIS	PROJECT		

Cambridge Telephone Corn Belt Energy Corp. City of Rock Falls Norlight Telecommunications Aldridge Electric

GENERAL NOTES SHEET 1





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SCHEDULE OF QUANTITIES

	BITUMINOUS CONCRET	E SURFACE REMOVA	16	
IL 40 IL 82	SQ YD 18.5 5 23.5	LOCATION SN: 098-0015 SN: 037-0106 TOTAL		WHITESIDE COUNTY HENRY COUNTY
IL 40	TEMPORARY PAVEMENT. EOOT WHITE YELLOW	LOCATION		
STAGE I STAGE II	920 920 920 1840 2760	624+ 22.5 624+ 22.5 TOTAL		WHITESIDE COUNTY WHITESIDE COUNTY
IL 40 STAGE I STAGE II	WORK_ZONE_PAVEMENT_N SO_FT 306 <u>613</u> 919	MARKING REMOVAL LOCATION 624+ 22.5 624+ 22.5 TOTAL		WHITESIDE COUNTY WHITESIDE COUNTY
IL 40 STAGE I	IEMPORARY CONCRETE J EQOI 120 120	BARRIEB LOCATION 632+ 22.5 TOTAL	- 633+ 42.5	WHITESIDE COUNTY
IL 40 STAGE II	RELOCATE_TEMPORARY 1 E001 120 120	CONCRETE BARRIER LOCATION 632+ 22.5 TOTAL	- 633+ 42.5	WHITESIDE COUNTY
IL 40	PAINT PAVEMENT MARKI EQOI WHITE YELLOW	LOCATION		
IL 82	3680 920 108 <u>172</u> 4772 108 4880	624+ 22.5 624+ 22.5 636+ 2.5 636+ 2.5 TOTÄL	- 633+ 42.5 - 636+ 45.5	WHITE EDGELNES - 2 COATS SKIP DASH WHITE - 2 COATS SOLID RT/SKP DASH LEFT WHITE EDGELNES - 2 COATS
IL 40	PAINT_PAVEMENT_MARKI E001 920 920	N <u>C REMOVAL</u> LOCATION 624+ 22.5	- 633+ 42.5	
IL 40 IL82	IEMPORARY_PAVEMENT EQQI 72 28 100	L <u>OCATION</u> SN: 098-0015 SN: 037-0106		WHITESIDE COUNTY HENRY COUNTY
IL 40 IL82	IEMPORARY PAVEMENT EOOT 72 	REMOVAL LOCATION SN: 098-0015 SN: 037-0106		WHITESIDE COUNTY HENRY COUNTY
IL 40 STAGE I STAGE II	IMPACT ATTENUATORS. EACH 1 1 2	<u>TEMPORARY (NON-DIREC LOCATION</u> 632+ 22.5 632+ 22.5 TOTAL	TIVE), TEST LEVEL 3 OUTSIDE LANE INSIDE LANE	WHITESIDE COUNTY WHITESIDE COUNTY
IL 40 STAGE I STAGE II	IMPACT ATTENUATORS. EACH 1 2	RELOCATE (NON-DIRECT) LOCATION 632+ 22.5 632+ 22.5 TOTAL	VE), TEST LEVEL 3 OUTSIDE LANE INSIDE LANE	WHITESIDE COUNTY WHITESIDE COUNTY

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SCHEDULE OF QUANTITIES



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GENERAL NOTES

Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

The cut strands at each beam end shall be given two coats of zinc dust spray or paint meeting the requirements of ASTM A780. The zinc dust spray or paint shall be applied before corrosion appears and allowed to dry according to manufacturer's specifications prior to another coat of zinc. This work shall be performed by the producer and included with the cost of the beam.

Any damage done to the bridge during beam removal shall be repaird by the Contractor. Cost to be included in the cost of Removal of Existing PPC Deck Beams.

The top surface of the beams shall be finished in accordance with Article 504.06 of the Standard Specifications except that the surface shall not be roughened by brooming. The finished surface shall be free of depressions or high spots with sharp corners, and the top edge of keys shall be rounded or chamfered a minimum of 14".

If required to be anchored, temporary concrete barrier shall only be anchored into the overlay and not the PPC Deck Beams.

All construction joints shall be bonded.

See Roadway Plans for Stage Construction Details.

The minimum thickness of the Bituminous concrete overlay shall be $1_2^{\prime\prime}$

and varies as required to adjust for the existing profile grade and beam camber. All structural steel shall be shop painted with the inorganic zinc rich primer per AASHTO M300, Type 1. Cost included with Furnishing and Erecting Structural Steel.

TOTAL BILL OF MATERIAL

ІТЕМ	UNIT	QUANTITY
Removal of Existing PPC Deck Beams	Sq. Ft.	659
PPC Deck Beams (27" Depth)	Sq. Ft.	650
PC Mortar Fairing Course	Foot	330
Waterproofing Membrane System	Sq. Yd.	91.7
Asbestos Bearing Pad Removal	Each	4
Bituminous Concrete Surface Course, Superpave Mix "D" N5O	Ton	10.3
Furnishing and Erecting Structural Steel	Pound	210
Bituminous Concrete Surface Removal	Sq. Yd.	18.5
Silicone Joint Sealer, 1 ¹ 2"	Foot	25

DESIGN STRESSES

PRECAST UNITS f'c = 5,000 psi f'ci = 4,000 psi $f's = 270,000 \text{ psi} (l_2" \phi \text{ low lax strands})$ $f'si = 201,960 \text{ psi} (l_2" \phi \text{ low lax strands})$

PLAN AND ELEVATION IL 40 / HENNEPIN CANAL FEEDER WHITESIDE COUNTY SN 098-0015



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GENERAL NOTES

Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

Any damage done to the bridge during beam removal shall be repaired by the Contractor. Cost to be included in the cost of "Removal of Existing PPC Deck Beams".

The top surface of the beams shall be finished in accordance with Article 504.06 of the Standard Specifications except that the surface shall not be roughened by brooming. The finished surface shall be free of depressions or high spots with sharp corners, and the top edge of keys shall be rounded or chamfered a minimum of 1/4".

The cut strands at each beam end shall be given two coats of zinc dust spray or paint meeting the requirements of ASTM A780. The zinc dust spray or paint shall be applied before corrosion appears and allowed to dry according to manufacturer's specifications prior to another coat of zinc. This work shall be performed by the producer and included with the cost of the beam.

Precast prestressed concrete deck beams shall be erected according to the requirements of Article 504.06(e) of the Standard Specifications except that shear key clamping between new and existing construction will be required as shown on the plans and as herein specified. After the new deck beams are erected, the clamping devices shall be installed and pulled up tight so that a full, firm bearing is obtained between the clamping plates and the deck beam concrete. The Contractor shall furnish all material for the clamping devices, including sufficient 16" and 18" steel shims to adjust for differential elevations between the two deck beams. The l_4^{\prime} ' holes for the clamping devices shall be drilled at the locations shown on the plans. Care shall be taken to drill the holes perpendicula to the beams. After the shear key clamping devices are fully secured, the keyways shall be grouted. The clamping devices shall not be loosened or removed. Complete the wearing surface installation. This work, including the furnishing of clamping devices and shims, shall be included in the cost for Precast Prestressed Concrete Deck Beams (21" Depth).

TOTAL BILL OF MATERIAL

UNIT	QUANTITY
Tons	8.5
Sq. Yd.	5
Sq. Ft.	256
Sq. Ft.	252
Sq. Yd.	34
Foot	129
	Tons Sq. Yd. Sq. Ft. Sq. Ft. Sq. Yd.

PLAN AND ELEVATION SBI RT. 82 HENRY COUNTY STA. 636+24 SN 037-0106





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