

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**PROPOSED
HIGHWAY PLANS**

F.A.P. 345 US 20 (LAKE STREET)
SECTION 8R-1-RS-4
EAST OF WELD RD. TO WEST OF SHALES PARKWAY
BRIDGE REPAIRS AND RESURFACING

COOK AND KANE COUNTIES
C-91-113-11

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
345	8R-1-RS-4	KANE/COOK	124	1
FED. ROAD DIST. NO.	ILLINOIS	CONTRACT NO.	60M46	

D-91-113-11 *124-2 = 122

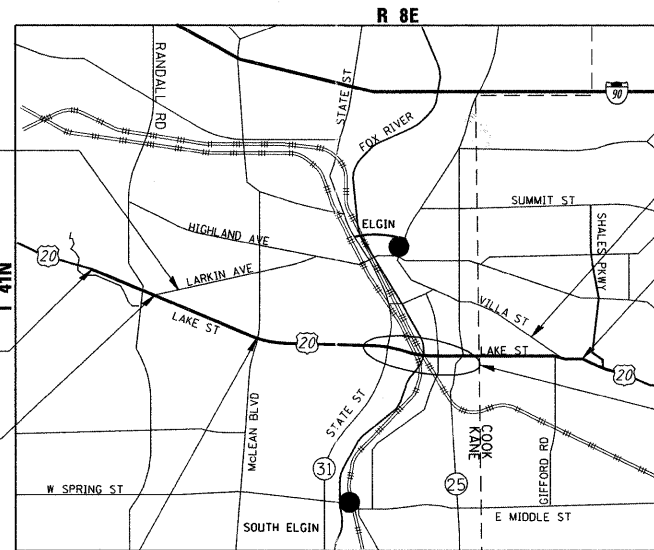
*122 + 6 = 128

FOR INDEX OF SHEETS, SEE SHEET NO. 2

THIS IMPROVEMENT IS LOCATED
WITHIN THE CITY OF ELGIN

TRAFFIC DATA

2007 ADT: 30,000-58,200
POSTED SPEED LIMIT - 55 MPH



PROJECT LIMITS
LARKIN AVE.
STA. 71 + 45

PROJECT LIMITS
VILLA ST.
STA. 201 + 97

PROJECT ENDS
STA. 415 + 53

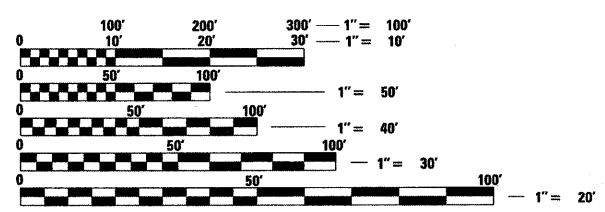
PROJECT BEGINS
STA. 99 + 60

FA 426 OVER WB US RTE 20
SN 045-0008

BRIDGE OMISSION
STA. 211 + 38 TO 212 + 87

- US RTE 20 OVER FOX RIVER
SN 045-0004
- US RTE 20 OVER RAYMOND ST
SN 045-0005
- US RTE 20 OVER ST CHARLES ST
SN 045-0006
- US RTE 20 OVER IL RTE 25
SN 045-0007
- US RTE 20 OVER POPLAR CREEK
SN 045-0217
- US RTE 20 OVER BUS US RTE 20
SN 045-0218
- IL RTE 31 OVER US RTE 20
SN 045-0017

ELGIN TOWNSHIP
LOCATION MAP
1" = 5000'
GROSS OF PROJECT = 31593 = 5.96 MI.
NET LENGTH OF PROJECT = 31443 = 5.95 MI.



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

J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123
OR 811

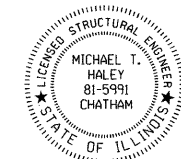
ABNA ENGINEERING, INC.
ROBERT J. LOEHR, S.E.
3992
Robert J. Loehr
DATE: 03/31/2011
SIGNATURE AND SEAL APPLIES
TO DRWG NO 101 TO 108



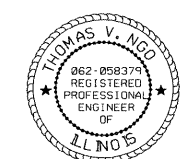
ABNA ENGINEERING, INC.
THOMAS P. PAGLICCHI, P.E.
062-056747
Thomas P. Paglicchi
DATE: 03/31/2011
SIGNATURE AND SEAL APPLIES
TO DRWG NO 109 TO 111



LIN ENGINEERING, LTD.
MICHAEL T. HALEY, S.E.
81-5991
Michael T. Haley
DATE: 03/31/2011
SIGNATURE AND SEAL APPLIES
TO DRWG NO 69 TO 100



MILLENNIA PROFESSIONAL SERVICES
THOMAS V. NGO, P.E.
062-058379
Thomas V. Ngo
DATE: 03/31/2011
SIGNATURE AND SEAL APPLIES
TO DRWG NO 1 TO 68



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED MARCH 30, 20 11

Diana M. O'Keefe
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

May 13 20 11
Scott E. Stitt, P.E.
Acting ENGINEER OF DESIGN AND ENVIRONMENT

May 13 20 11
Christine M. Road
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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MILLENNIA PROFESSIONAL SERVICES

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OF THE STATE OF ILLINOIS

Rev. 6-6-11

DISTRICT ONE - PLAN PREP ENGINEER: KEN ENG (847) 705-4247

CONTRACT NO. 60M46

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LIST OF ILLINOIS DOT HIGHWAY STANDARDS

000001-06	STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS
001006	DECIMAL OF AN INCH AND OF A FOOT
280001-05	TEMPORARY EROSION CONTROL SYSTEMS
442201-03	CLASS C AND D PATCHES
482011-03	HMA SHOULDER STRIPS/SHOULDERS WITH RESURFACING OR WIDENING AND RESURFACING PROJECTS
606001-04	CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER
635011-02	REFLECTOR MARKER AND MOUNTING DETAILS
701201-04	LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS >= 45 MPH
701301-04	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701306-03	LANE CLOSURE, 2L, 2W, SLOW MOVING OPERATIONS DAY ONLY, FOR SPEEDS >= 45 MPH
701311-03	LANE CLOSURE, 2L, 2W, MOVING OPERATIONS - DAY ONLY
701336-06	LANE CLOSURE, 2L, 2W, WORK AREAS IN SERIES, FOR SPEEDS > 45 MPH
701400-05	APPROACH TO LANE CLOSURE, FREEWAY/EXPRESSWAY
701401-01	LANE CLOSURE, FREEWAY/EXPRESSWAY
701402-08	LANE CLOSURE, FREEWAY/EXPRESSWAY, WITH BARRIER
701406-06	LANE CLOSURE, FREEWAY/EXPRESSWAY, DAY OPERATIONS ONLY
701411-07	LANE CLOSURE, MULTILANE, AT ENTRANCE OR EXIT RAMP, FOR SPEEDS > 45 MPH
701421-03	LANE CLOSURE, MULTILANE, DAY OPERATIONS ONLY FOR SPEEDS > OR = 45 MPH TO 55 MPH
701426-04	LANE CLOSURE, MULTILANE, INTERMITTENT OR MOVING OPERATIONS FOR SPEEDS > OR = 45 MPH
701446-02	TWO LANE LANE CLOSURE, FREEWAY/EXPRESSWAY
701901-01	TRAFFIC CONTROL DEVICES
704001-06	TEMPORARY CONCRETE BARRIERS
720001-01	SIGN PANEL MOUNTING DETAILS
720011-01	METAL POSTS FOR SIGNS, MARKERS AND DELINEATORS
729001-01	APPLICATIONS OF TYPE A AND B METAL POSTS (FOR SIGNS AND MARKERS)
780001-02	TYPICAL PAVEMENT MARKINGS


COMMITMENTS

THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES AND STAGING/TRAFFIC CONTROL WITH ANY ONGOING PROJECTS IN THE AREA, POSSIBLY INCLUDING CONTRACT 60K90 (MCLEAN BLVD. INTERCHANGE), 62529 (RESURFACING IMMEDIATELY WEST OF THIS CONTRACT), AND LOCAL STREET IMPROVEMENTS AND/OR SEWER WORK UNDERWAY BY PERMIT IN THE CITY OF ELGIN IN THE VICINITY OF IL ROUTE 31 AND/OR IL ROUTE 25 NEAR US 20.

GENERAL NOTES

- BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL "J.U.L.I.E." AT 800-892-0123 FOR FIELD LOCATIONS OF BURIED ELECTRIC, TELEPHONE, AND GAS FACILITIES. 48 HOUR NOTIFICATION IS REQUIRED.
- THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH THE UTILITY COMPANIES, CITY OF ELGIN.
- THE CONTRACTOR WILL NOT BE ALLOWED TO SET UP A YARD OR FIELD OFFICE ON STATE PROPERTY WITHOUT WRITTEN PERMISSION FROM THE DEPARTMENT.
- ANY PAVEMENT MARKINGS AND RAISED REFLECTIVE PAVEMENT MARKERS OBLITERATED BY MILLING AND RESURFACING OPERATIONS ON SIDE STREETS AND ENTRANCES SHALL BE REPLACED AND PAID FOR IN KIND.
- ALL DAMAGE TO EXISTING PAVEMENT MARKING OR RAISED REFLECTIVE PAVEMENT MARKERS OUTSIDE THE REMOVAL LINE SHOWN ON THE PLANS SHALL BE REPLACED AT THE CONTRACTORS EXPENSE. NO ADDITIONAL COST TO THE DEPARTMENT.
- BEFORE BEGINNING ANY WORK, THE CONTRACTOR SHALL RETAIN AND RECORD FOR FUTURE REFERENCES, ALL EXISTING PAVEMENT MARKING LINES AND RAISED REFLECTIVE PAVEMENT MARKERS IN ORDER THAT THESE LOCATIONS CAN BE RE-ESTABLISHED FOR STRIPING. EXACT LOCATIONS OF ALL STRIPING SHALL BE AS DIRECTED BY THE ENGINEER.
- ALL PAVEMENT PATCHING LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL DIMENSIONS AND CONDITIONS EXISTING IN THE FIELD PRIOR TO CONSTRUCTION AND ORDERING MATERIALS.
- THE CONTRACTOR SHALL CONTACT THE DISTRICT ONE TRAFFIC CONTROL SUPERVISOR AT (847) 705-4470 A MINIMUM OF 72 HOURS IN ADVANCE OF BEGINNING WORK.
- THE ENGINEER SHALL CONTACT DON CHIARUGI, THE TRAFFIC FIELD ENGINEER AT (847) 741-9857 A MINIMUM OF TWO (2) WEEKS PRIOR TO THE PLACEMENT OF PERMANENT PAVEMENT MARKINGS.
- THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE ACCESS TO ABUTTING PROPERTY AT ALL TIMES DURING THE CONSTRUCTION OF THIS PROJECT.
- DO NOT SCALE PLANS FOR CONSTRUCTION DIMENSIONS.
- DOUBLE LANE MARKERS ARE TO BE USED AS SHOWN ON THE DISTRICT ONE DETAIL "TYPICAL APPLICATIONS - RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT)" SHOWN ON THE PLANS.
- WHEN MILLED PAVEMENT IS OPEN TO TRAFFIC THE MAXIMUM GRADE DIFFERENTIAL BETWEEN PASSES OF THE MILLING MACHINE SHALL NOT EXCEED 1 1/2 INCHES WHERE THE SPEED LIMIT IS 45 MPH OR LESS AND 1 INCH WHERE THE SPEED LIMIT IS GREATER THAN 45 MPH. WITH WRITTEN APPROVAL FROM THE ENGINEER, A MAXIMUM GRADE DIFFERENTIAL OF 3 INCHES MAY BE ALLOWED IF THE EDGE OF THE MILLING IS SLOPED A MINIMUM 1:3 (V:H).
- BUTT JOINTS WILL BE INSTALLED AT THE ENDS OF ALL RESURFACING (WHERE RESURFACING MEETS EXISTING PAVEMENT), IN ACCORDANCE WITH THE "BUTT JOINT AND HOT-MIX ASPHALT TAPER DETAILS" SHEET INCLUDED IN THE PLANS UNLESS OTHERWISE SPECIFIED.
- PAVEMENT MARKING TAPE, TYPE III SHALL BE USED FOR SHORT TERM PAVEMENT MARKINGS ON ALL FINAL SURFACES. THE COST OF THE PAVEMENT MARKING TAPE, TYPE III AND IT'S REMOVAL SHALL BE INCLUDED IN THE COST OF SHORT TERM PAVEMENT MARKING.
- THE CONTRACTOR SHALL PLACE PROPOSED PAVEMENT MARKINGS IN ACCORDANCE WITH DISTRICT 1 TYPICAL PAVEMENT MARKINGS DETAIL (TC-13).
- THE RESIDENT ENGINEER AND CONTRACTOR SHALL VERIFY ALL EXISTING PAVEMENT MARKING PRIOR TO THE PROJECT STARTING. IF A DISCREPANCIES OCCURS BETWEEN EXISTING PAVEMENT MARKINGS AND THE PROPOSED PAVEMENT MARKINGS, THE RESIDENT ENGINEER SHALL CONTACT THE BUREAU OF TRAFFIC OPERATIONS.
CCCC

FILE NAME = P:\2009\ME\09006.Var\Var-Phil\CADD\W021_US20\Shets\02-Index_Notes.dgn
 USER = JLN
 DATE = 6/1/2011
 MILLENNIA PROFESSIONAL SERVICES



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DESIGNED -	CJD	REVISED -	Rev. 6-6-11
DRAWN -	CJD	REVISED -	
CHECKED -	TVN	REVISED -	
DATE -	6/1/2011	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

US ROUTE 20 (LAKE STREET)
RANDALL RD TO SHALES PARKWAY
 SCALE: N/A

INDEX OF SHEETS, HIGHWAY
STANDARDS, GENERAL NOTES,
AND COMMITMENTS

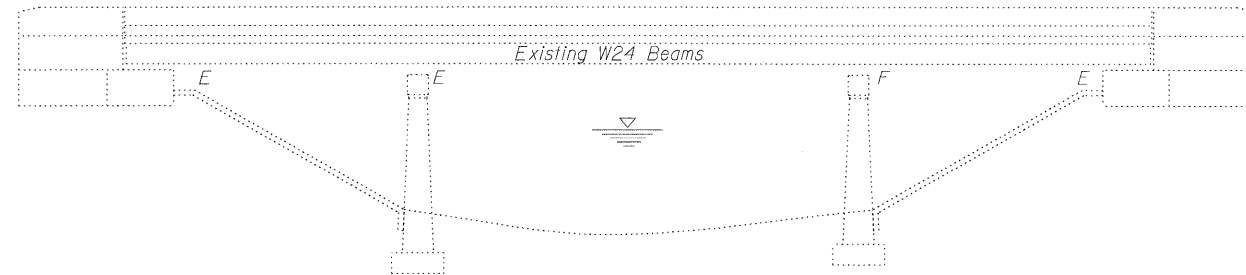
F.A.P. / R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
345	BR-1-RS-4	KANE/COOK	124	2
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			CONTRACT NO. 60M46	

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Existing Structure: S.N. 016-0217 built in 1959 as F.A. Route 6, Section 8-RB-1 at Station 240+83.50. In 1986, the bridge was widened, concrete overlay was placed, expansion joints reconstructed, bearings replaced and substructure was rehabilitated and widened. Structure consists of a three span steel WF beam bridge with 119'-0" back-to-back abutments, out-to-out deck width of 75'-2", solid wall piers on pile footings and pile supported stub abutments. Stage construction shall be utilized to maintain one lane of traffic in each direction at all times.

GENERAL NOTES

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



ELEVATION

INDEX OF SHEETS

- 1. General Plan and Elevation
- 2. Stage Construction Details
- 3. Superstructure Repair
- 4. Substructure Repair

SCOPE OF WORK

- 1. Replace the neoprene abutment joints with polymer concrete and Silicone Joint Sealer.
- 2. Repair deck slab.
- 3. Repair substructure and slope wall.

DESIGN STRESSES

FIELD UNITS (New Const.)

$f'_c = 3,500$ psi
 $f_y = 60,000$ psi (Reinforcement)

FIELD UNITS (Existing)

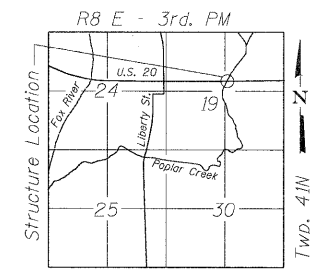
$f_c = 1,400$ psi (Superstructure & Substructure)
 $f_s = 20,000$ psi & 24,000 psi (Reinforcement)
 $f_s = 18,000$ psi & 20,000 psi (Structural Steel)

LOADING HS 20

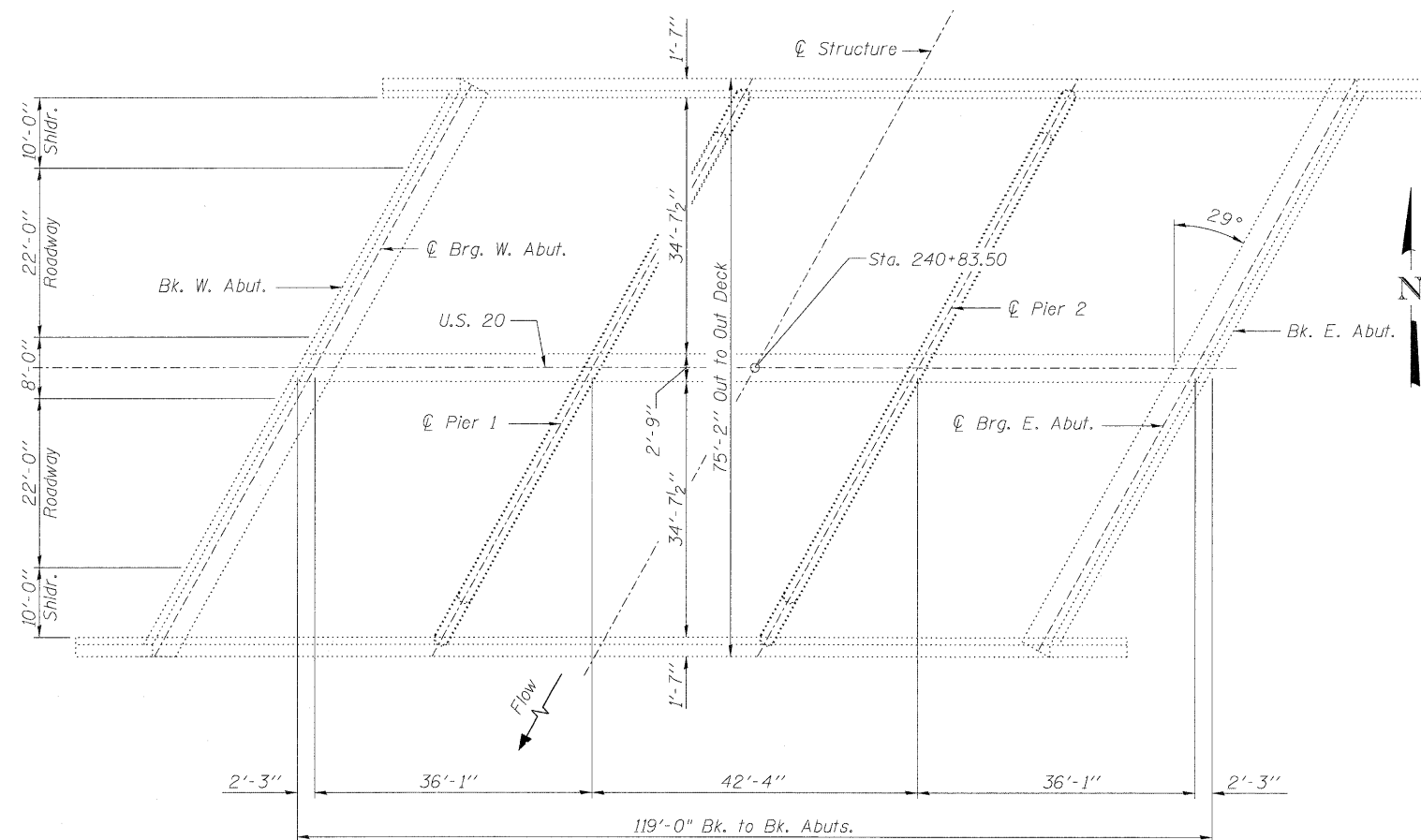
(Original Construction)

DESIGN SPECIFICATIONS

(New Construction)
2002 AASHTO "Standard Specifications for Highway Bridges"



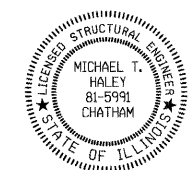
LOCATION SKETCH



PLAN

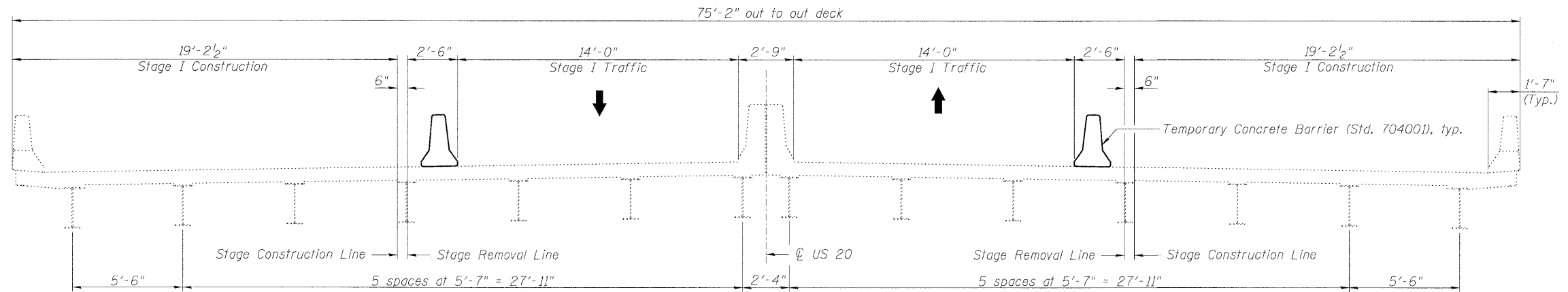
TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Stone Dumped Riprap, Class A3	Ton	-	12	12
Silicone Joint Sealer, 2"	Foot	167	-	167
Polymer Concrete	Cu. Ft.	11.4	-	11.4
Deck Slab Repair (Full Depth, Type II)	Sq. Yd.	13.3	-	13.3
Deck Slab Repair (Partial)	Sq. Yd.	50.8	-	50.8
Structural Repair of Concrete (Depth equal to or less than 5 in.)	Sq. Ft.	6	-	6
Slope Wall 6 inch	Sq. Yd.	-	26.4	26.4



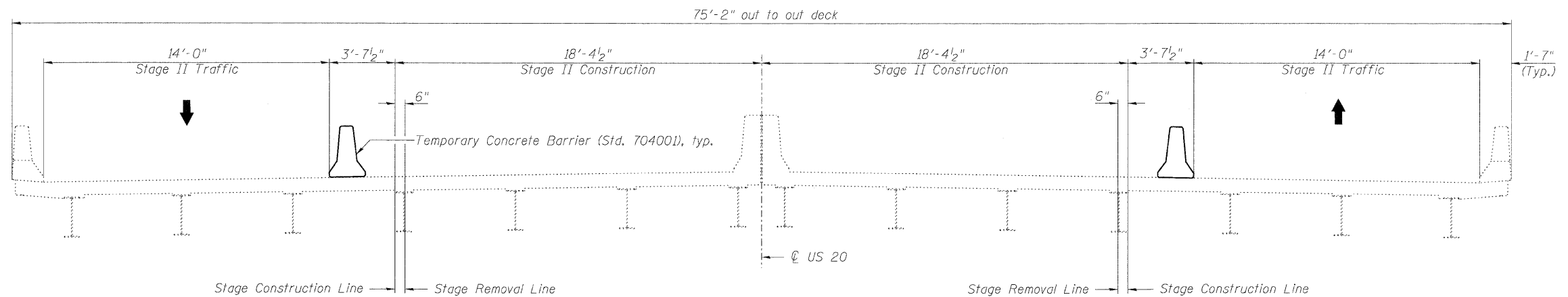
Michael J. Haley 3-24-2011
Michael T. Haley Date
Licensed Structural Engineer
State of Illinois No. 81-5991
Expires 11/30/2012

GENERAL PLAN AND ELEVATION
US 20 OVER POPLAR CREEK
FAP RTE 345- SECTION 8R-1-RS-4
COOK COUNTY
STATION 240+83.50
STRUCTURE NO. 016-0217



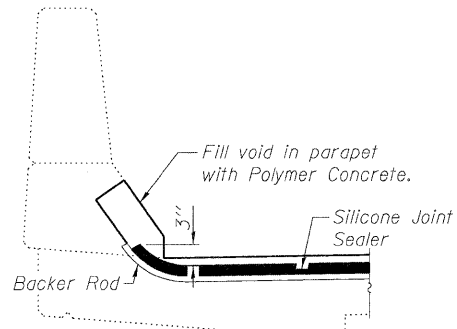
STAGE I REMOVAL & CONSTRUCTION

(Looking East)

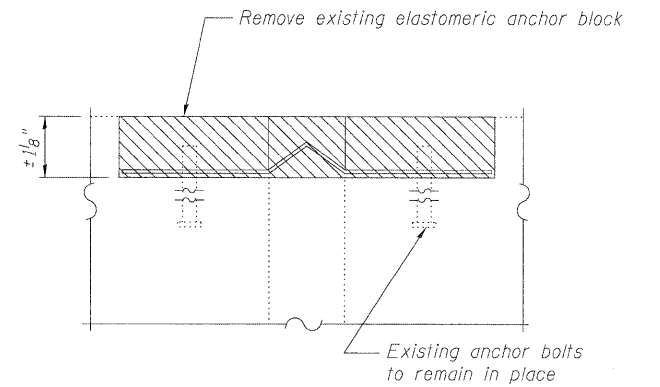


STAGE II REMOVAL & CONSTRUCTION

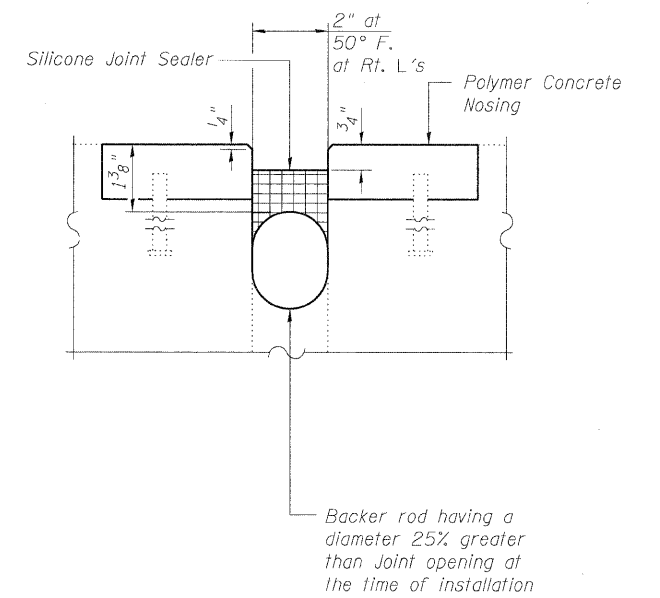
(Looking East)



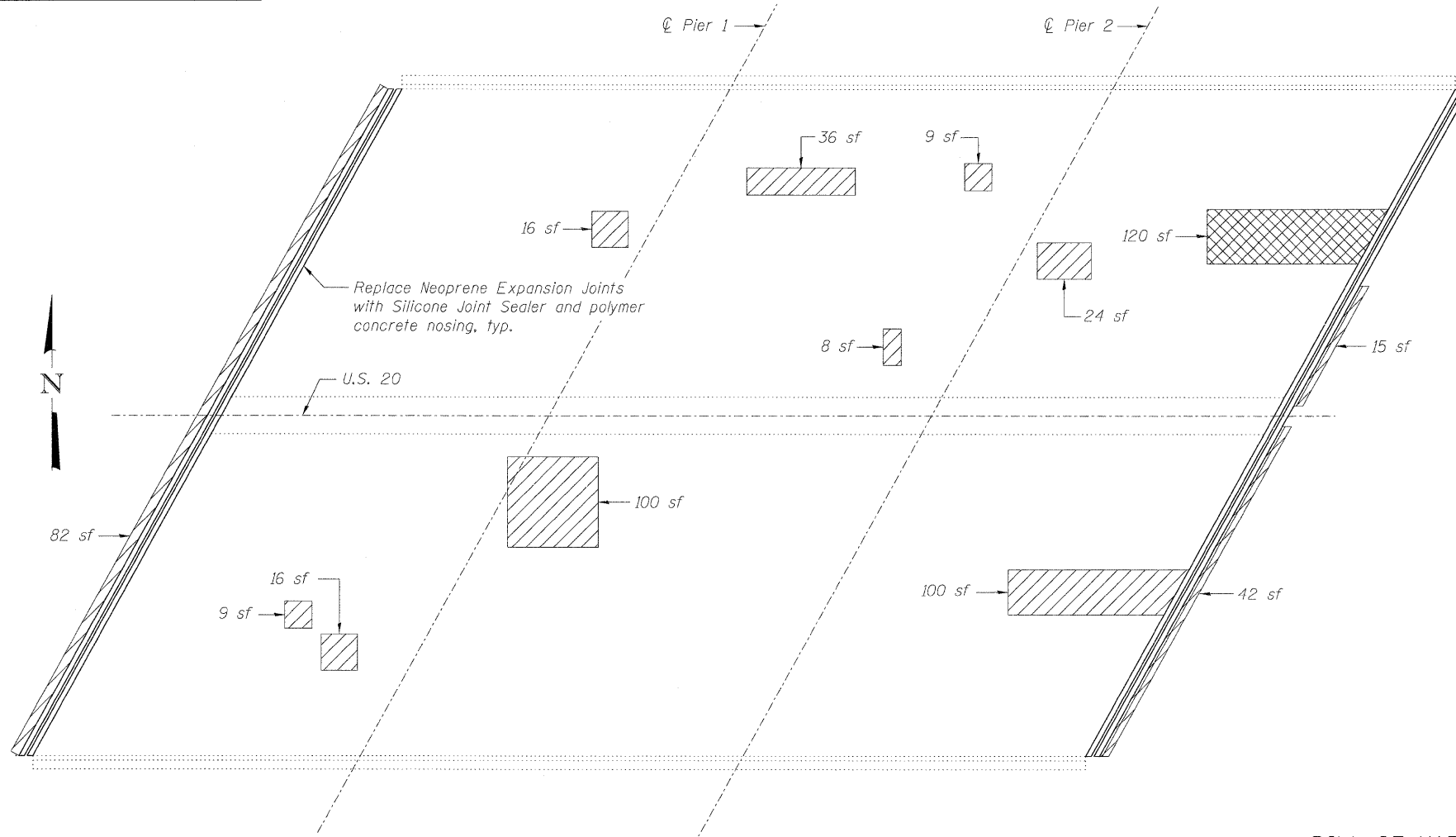
SILICONE JOINT SEALER END TREATMENT



EXISTING JOINT DETAIL @ ABUTMENTS



PROPOSED JOINT DETAIL @ ABUTMENTS



PLAN

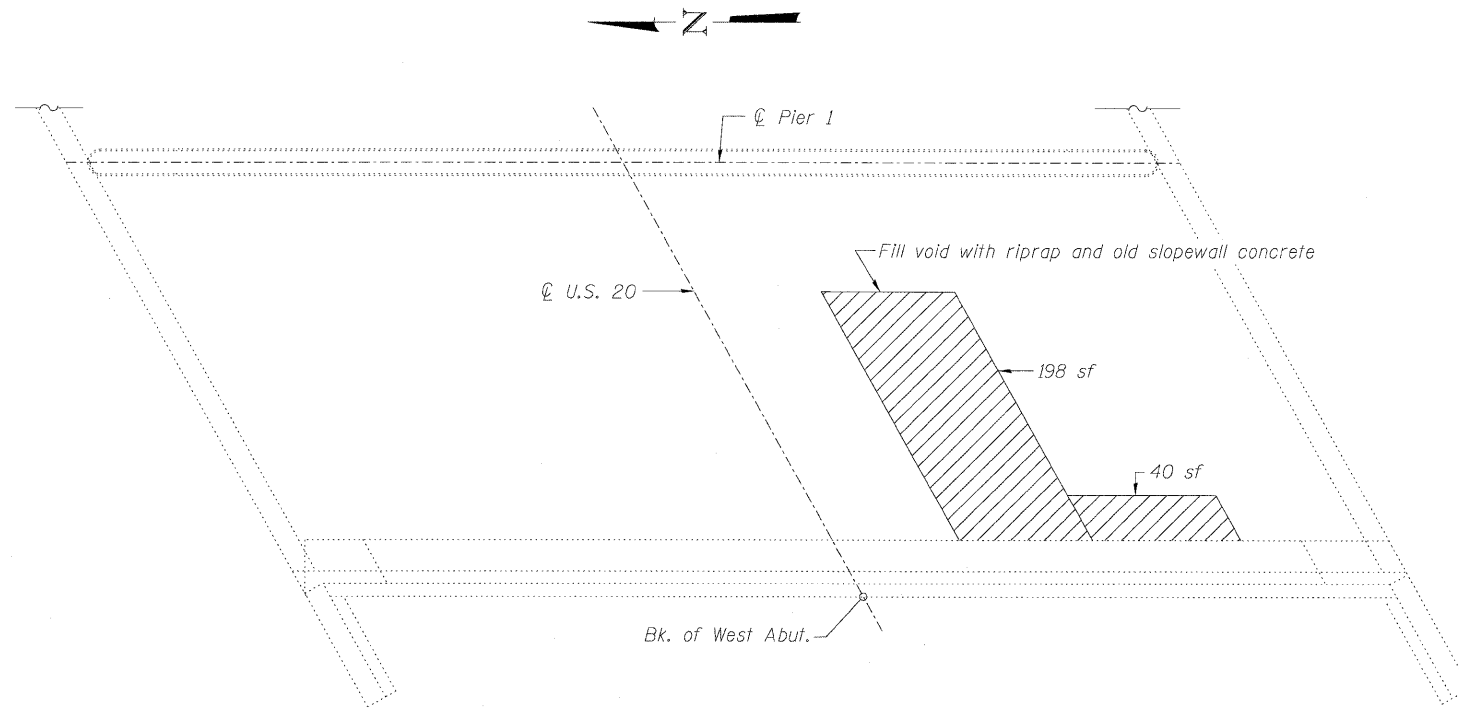
BILL OF MATERIAL

ITEM	UNIT	TOTAL
Silicone Joint Sealer, 2"	Foot	167
Polymer Concrete	Cu. Ft.	11.4
Deck Slab Repair (Partial)	Sq. Yd.	50.8
Deck Slab Repair (Full Depth, Type II)	Sq. Yd.	13.3

LEGEND

- Removal of Existing Joint material
- Deck Slab Repair (Full Depth, Type II)
- Deck Slab Repair (Partial)
- sf Square Feet

Notes:
 Repair of the existing deck slab shall include but may not be limited to the areas shown. The actual area to be repaired will be determined by the Engineer at the time of construction.
 Cost of concrete overlay removal for deck slab repair is included with the cost of Deck Slab Repair.
 Cost of existing joint removal is included in the cost of Silicone Joint Sealer.



PLAN WEST SLOPEWALL

Notes:

Existing failed slope wall concrete shall be broken up into manageable pieces and included with the Riprap fill volume. Cost included with Stone Dumped Riprap, Class A3.

Riprap volume is approximately 300 cu. ft. and shall be placed prior to slope wall repair. Slope wall shall be reinforced with welded wire fabric, 6" x 6" - W4.0 x W4.0, weighing 58 lbs. per 100 sq. ft.

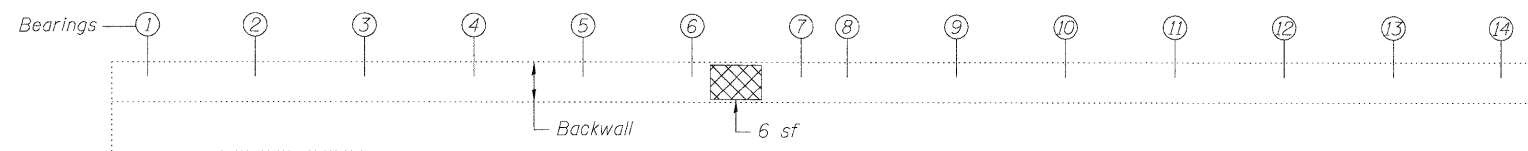
Existing reinforcement shall be cleaned and incorporated into the new construction. Cost included with Slope Wall 6".

Lap existing welded wire fabric with proposed at the joint.

Repair of the existing abutment and slope wall shall include but may not be limited to the areas shown. The actual areas to be repaired will be determined by the Engineer at the time of construction.

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Stone Dumped Riprap, Class A3	Ton	12
Slope Wall 6"	Sq. Yd.	26.4
Structural Repair of Concrete (Depth equal to or less than 5 in.)	Sq. Ft.	6



ELEVATION EAST ABUTMENT
Looking East

LEGEND

Structural Repair of Concrete (Depth equal to or less than 5 in.)

Slope Wall Repair

sf Square Feet