SUMMARY OF QUANTITIES

ROUTE: FAI 64 (I-64)
COUNTY: JEFFERSON
FUNDING: 90% FED/10% STATE
LOCATION: RURAL

	LOCATION:	RURAL
ITEM DESCRIPTION	UNIT	0013
PAVEMENT CONNECTOR (PCC) FOR BRIDGE APPROACH SLAB	SQ YD	107
PROTECTIVE COAT	SQ YD	1,082
PAVEMENT REMOVAL	SQ YD	191
PAVED SHOULDER REMOVAL	SQ YD	32
PORTLAND CEMENT CONCRETE SHOULDERS 10"	SQ YD	32
CONCRETE REMOVAL	CU YD	35.4
PROTECTIVE SHIELD	SQ YD	180
STRUCTURE EXCAVATION	CU YD	53
CONCRETE STRUCTURES	CU YD	33.8
CONCRETE SUPERSTRUCTURE	CU YD	17.9
BRIDGE DECK GROOVING	SQ YD	972
CONCRETE SUPERSTRUCTURE (APPROACH SLAB)	CU YD	49.5
FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	1,590
	PAVEMENT CONNECTOR (PCC) FOR BRIDGE APPROACH SLAB PROTECTIVE COAT PAVEMENT REMOVAL PAVED SHOULDER REMOVAL PORTLAND CEMENT CONCRETE SHOULDERS 10* CONCRETE REMOVAL PROTECTIVE SHIELD STRUCTURE EXCAVATION CONCRETE STRUCTURES CONCRETE SUPERSTRUCTURE BRIDGE DECK GROOVING CONCRETE SUPERSTRUCTURE (APPROACH SLAB)	ITEM DESCRIPTION UNIT PAVEMENT CONNECTOR (PCC) FOR BRIDGE APPROACH SLAB SQ YD PROTECTIVE COAT SQ YD PAVEMENT REMOVAL SQ YD PAVED SHOULDER REMOVAL PORTLAND CEMENT CONCRETE SHOULDERS 10" SQ YD CONCRETE REMOVAL SQ YD STRUCTURE EXCAVATION CU YD CONCRETE STRUCTURES CU YD BRIDGE DECK GROOVING CU YD CONCRETE SUPERSTRUCTURE (APPROACH SLAB) CU YD CONCRETE SUPERSTRUCTURE (APPROACH SLAB)

<u>1</u> REV. 5-29-2020

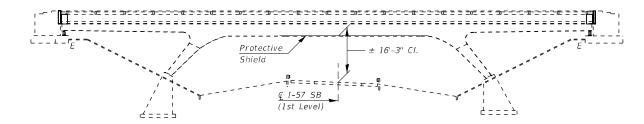
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USER NAME = adamsam	DESIGNED -	REVISED -
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PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 3/13/2020	DATE -	REVISED -

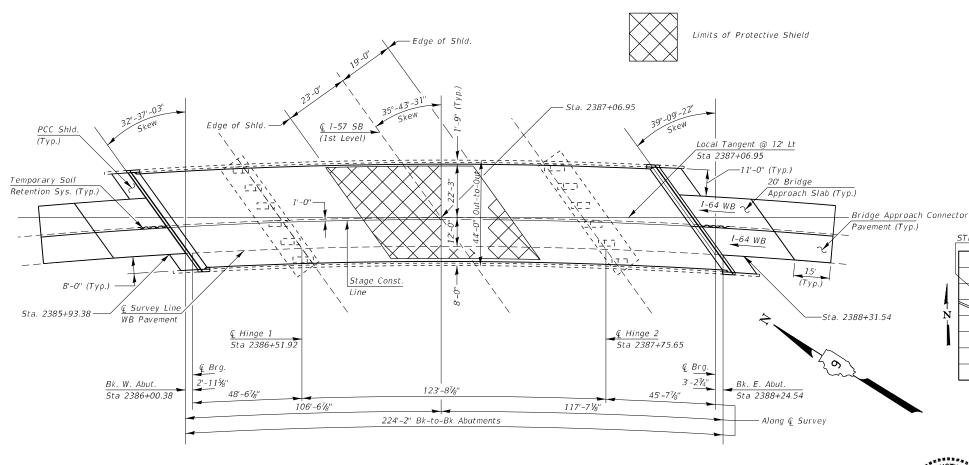
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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		SUMMARY	OF Q	UANTITIES

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS		
64	D9 BRIDGE REPAIR 2020-5	JEFFERSON	21		
ļ		CONTRACT	NO. 78	375	
	LILLINOIS LEED A	ID PROJECT		_	



ELEVATION



<u>PLAN</u>

CURVE DATA

(From Existing Plans)

P.I. STA. 2392+44.25

 $\Delta = 66^{\circ} - 20' - 10'$

 $D = 3^{\circ}-00'-00''$

R = 1909.86'

L = 2211.21'T = 1248.26'

E = 371.74'

S.E. = 0.08 FT/FTAttained in 240'

DESIGN STRESSES

(From Existing Plans)

fc = 1,400 psi (Super and Sub)

vc = 75 psi (Footings)

fs = 20,000 psi (Structural A-36)

DESIGNED

HECKED

DRAWN

fs = 20,000 psi (Existing Reinforcement)

n = 10

6. Install microsilica concrete overlay

7. Replace bearings and install drain extensions 8. Switch stages and repeat

SCOPE OF WORK

1. Set up traffic control with temporary concrete barrier

2. Install protective shield

3. Replace abutment backwalls, bridge approach slabs, and bride approach connectors

4. Perform work at joints

5. Remove existing overlay by mechanical scarification and hydro-scarification

9. Repair slope walls

REVISED

REVISED

REVISED

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

SN 041-0060

⚠ REV. 5-29-2020

STRUCTURE LOCATION

RANGE 2E - 3RD. PM

081-005470

SPRINGFIELD ILLINOIS

Expires 11-30-2020

D. Cal Kungung

5/11/2020

GENERAL PLAN & ELEVATION 64 D9 BRIDGE REPAIR 2020-5 JEFFERSON CONTRACT NO. 78753 OF 13 SHEETS STA

<u>GENERAL NOTES</u>

Reinforcement bars designated (E) shall be epoxy coated.

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.

In addition to the requirements of article 107.16 the contractor shall protect the surface of all bridge decks and bridge approach pavements in a manner satisfactory to the engineer before any equipment is allowed to cross the structure. Protection shall be provided for all equipment as defined in article 101.16 regardless if track mounted or wheeled.

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

The cost of any saw cuts made to complete the work as described in plan details shall not be paid for separately but shall be included in the various pay items involved.

Protective coat shall be applied to all new concrete surfaces on bridge parapet areas, concrete overlay, and bridge approach slabs. Seasonal limits for application shall not apply

All structural steel shall conform to AASHTO Classification M-270 Gr. 36, unless otherwise noted. Existing structural steel that will be in contact with new structural steel shall be cleaned and painted prior to erection as required by the Special Provision "Cleaning and Painting Contact Surface Areas of

Synthetic fibers shall be added to the Bridge Deck Microsilica Concrete Overlay, see Special Provisions.

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

The reference line for stationing on this project follows the original construction survey line of the bridge and coincides with the outer edge of the traffic lane.

Joint openings shall be adjusted according to Article 520.04 of the Standard Specifications when the deck is poured at an ambient temperature other than $50^{\circ}F$

Existing reinforcement bars extending into the removal area shall be cleaned, straightened, and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with Concrete Removal.

All new structural steel and bearing assembly shall be hot-dip galvanized. See Special Provisions for "Hot Dip Galvanizing For Structural Steel."

TOTAL BILL OF MATERIAL

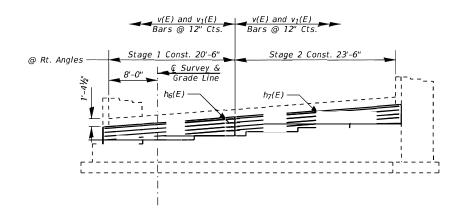
	UNIT	QUANTITY
Paved Shoulder Removal	Sq. Yd.	32
PCC Shoulders, 10"	Sq. Yd.	32
Pavement Removal	Sq. Yd.	191
Concrete Removal	Cu. Yd.	35.4
Protective Shield	Sq. Yd.	180
Concrete Structures	Cu. Yd.	33.8
Concrete Superstructure	Cu. Yd.	17.9
Concrete Superstructure (Approach Slab)	Cu. Yd.	49.5
Bridge Deck Grooving	Sq. Yd.	972
Reinforcement Bars, Epoxy Coated	Pound	23,750
Bar Splicers	Each	262
Preformed Joint Strip Seal	Foot	117
Elastomeric Bearing Assembly, Type I	Each	12
Jack and Remove Existing Bearings	Each	12
Furnishing and Erecting Structural Steel	Pound	1,590
Anchor Bolts, 1"	Each	24
Floor Drain Extensions	Each	13
Bridge Deck Microsilica Concrete Overlay, 2¾"	Sq. Yd.	972
Bridge Deck Scarification, 2¾"	Sq. Yd.	972
Slope Wall Repair	Sq. Yd.	8
Slope Wall Slurry Pumping	Cu. Yd.	6
Geocomposite Wall Drain	Sq. Yd.	24
Pipe Underdrains for Structures, 4"	Foot	111
Granular Backfill for Structures	Cu. Yd.	43
Temporary Soil Retention System	Sq. Ft.	42
Structure Excavation	Cu. Yd.	53
Deck Slab Repair (Full Depth, Type I)	Sq. Yd.	3
Protective Coat	Sg. Yd.	1,082

BRIDGE REPAIRS 2ND LEVEL STRUCTURE <u>I-64 WB OVER I-57 SB</u>

F.A.I. RTE 64 - D9 BRIDGE REPAIR 2020-5

JEFFERSON COUNTY <u>STATION 2387+06.95</u>

STRUCTURE NO. 041-0060



Stage 2 Const. 25'-0" Stage 1 Const. 19'-0" @ Rt. Angles -Grade Line $h_5(E) -$

EAST ABUTMENT

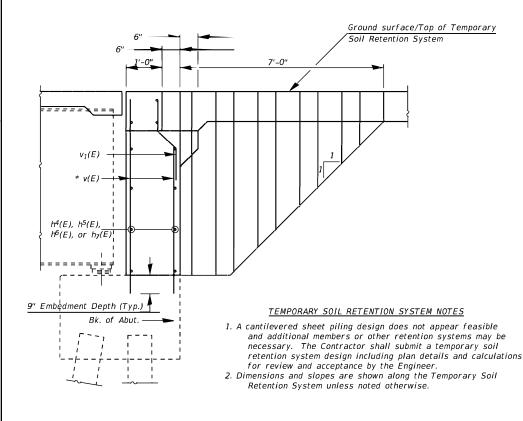
Looking East

WEST ABUTMENT

Looking West

ABUTMENT BACKWALL REPLACEMENT

* Drill and epoxy grout v(E) bars 9" into existing abutment according to Article 584 of the Standard Specifications.



Granular Backfill (See Special Provisions) .Approach slab Excavation is paid for as Structure Geocomposite Excavation Wall Drain Geotechnical Fabric for French Drains * Drainage Aggregate * 4" Ø Perforated pipe underdrain * Included in the cost of Pipe Underdrains for Structures. (See Special Provisions)

ABUTMENT DRAIN DETAIL

(Horizontal dimensions at right angles) Temporary Sheet Piling not shown for clarity. See Detail this sheet.

BILL OF MATERIAL (TWO BACKWALLS)

Bar	No.	Size	Length	Shape	
h ₄ (E)	8	#5	25'-1"		
h ₅ (E)	8	#5	32'-11"		ĺ
$h_6(E)$	8	#5	21'-4"		
$h_7(E)$	8	#5	28'-1"]
v(E)	208	#4	5'-1"		ļ
v ₁ (E)	104	#4	3'-3"		
Conc	rete Str	uctures	Cu. Yd.	18.9	[/1 \
Co.	ncrete R	emoval	Cu. Yd.	17.5	
E	Bar Splic	ers	Each	16	ļ
Reinforcement Bars, Epoxy Coated			Pound	1,830	
Struc	ture Exc	cavation	Cu. Yd.	53	ĺ
Geocomposite Wall Drain			Sq. Yd.	24	
Pipe Underdrains for Structures, 4"			Foot	111	
Temporary Soil Retention System			Sq. Ft.	42	
Granular Backfill for Structures			Cu. Yd.	43	

BACKWALL REPLACEMENT AND SHEET PILING DETAILS

2ND LEVEL STRUCTURE I-64 WB OVER I-57 SB

F.A.I. RTE 64 - D9 BRIDGE REPAIR 2020-5

JEFFERSON COUNTY STATION 2387+06.95

STRUCTURE NO. 041-0060

⚠ REV. 5-29-2020

USER NAME = adamsam	DESIGNED -	REVISED -
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STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

						F.A.IL RTE.	SE		
	SN 041-0060						64	D9 BRIDGE	
	314 041-0000								
		SHEET 8	OF	13	SHEETS	STA.	TO STA.		

Bar $v_1(E)$

SCALE:

ECTION E REPAIR 2020-5 JEFFERSON 21 16 CONTRACT NO. 78753

TEMPORARY SOIL RETENTION SYSTEM