

Item Location	SUMMARY OF QUANTITIES													
	Excavation		Concrete		Reinforcing Steel		Piles *		Contractor Furnished PDA Each	Multi-Layer Polymer Concrete Overlay Sq. Yds.	Handrail, Pedestrian Lin. Ft.	Handrail, Bicycle Lin. Ft.	Reinforced Concrete Riprap Sq. Yds.	Construction Staking, Bridge Lump Sum
	Class I Cu. Yds.	Class II Cu. Yds.	(Grade 4.0) (AE) (SA) Cu. Yds.	(Grade 4.0) (AE) Cu. Yds.	(Epoxy Coated) (Grade 60) Lbs.	(Steel) (HP12x53) Lin. Ft.	(Steel) (HP12x74) Lin. Ft.							
Abutment No. 1	78.8	-	**	-	**	92.4	-	1	-	-	-	-	-	-
Pier No. 1	-	42.1	-	23.3	2,695	-	102.8	-	-	-	-	-	-	-
Pier No. 2	-	39.5	-	23.3	2,695	-	104.4	1	-	-	-	-	-	-
Abutment No. 2	87.5	-	**	-	**	96.0	-	-	-	-	-	-	-	-
Substr. Total	166.3	81.6	-	46.6	5,390	188.4	207.2	2	-	-	-	207.2	-	-
Superstr. Total	-	-	214.6	-	71,150	-	-	-	645.0	100.0	199.8	-	-	-
Total	166.3	81.6	214.6	46.6	76,540	188.4 †	207.2 †	2	645.0	100.0	199.8	207.2	1	-

**Quantities are included in the Superstr. Total Quantity.

† Summary of Piling

Abutment No. 1 4 @ 23.1'
Pier No. 1 4 @ 25.7'
Pier No. 2 4 @ 26.1'
Abutment No. 2 4 @ 24.0'

* NOTE: Use only HP12x53 piling in the Abutments and HP12x74 piling in the Piers.

GENERAL NOTES

EXISTING STRUCTURE: Plans of the existing structure are on file and available for inspection by qualified bidders at the Bureau of Local Projects, KDOT, Eisenhower State Office Building, 700 SW Harrison, Topeka, KS.

EMBANKMENT: Complete the embankment at the abutments as shown on the Bridge Excavation sheet prior to driving the abutment piling or commencing with the abutment footing excavation.

BRIDGE EXCAVATION: Elevation 1336.0 shall designate the Excavation Boundary Plane of Class I and Class II Excavation; Class I above the plane, Class II below the plane. See the Bridge Excavation sheet for the limits of pay excavation.

BACKFILL COMPACTION: Compact backfill at the abutments and piers.

PILING: Drive all piling to penetrate the Shale. Driving shall stop when in the opinion of the Engineer additional driving may damage the piling. As a minimum drive each pile to the load and penetration, but in no case shall the pile be driven to more than 110% of Design Pile Load.

CONTRACTOR FURNISHED PDA: Use the Pile Driving Analyzer equipment at the locations shown in the Construction Layout. Use Pile Driving Analyzer equipment and methods compliant with KDOT Special Provisions. The piling shall remain in place as permanent piling. Drive the piling to the resistance value of (Strength I divided by Phi). At any location where problems are experienced, pile damage suspected, or the Pile Driving Formula Load occurs significantly above the design tip elevation, the Engineer may request that the Pile Driving Analyzer (PDA) equipment be used.

CORRAL RAIL: Build the corral rail and curb after the falsework is struck. The falsework is required to be struck to ensure the concrete slab is self-supported.

HANDRAIL: Construction joints in the rail are not permitted except as shown. Build the handrails after the falsework is struck.

BROKEN CONCRETE: Waste the broken concrete from the existing bridge on sites provided by the Contractor and approved by the Engineer.

REMOVAL OF EXISTING STRUCTURE: Removal of existing structure is included in the bid item, "Removal of Existing Structures", Lump Sum. All materials removed from the existing structure shall become the property of the Contractor. Remove this material from the site.

CONCRETE: Superstructure concrete is bid as Concrete (Grade 4.0)(AE)(SA). Substructure concrete is bid as Concrete (Grade 4.0)(AE). The Contractor may use Concrete (Grade 4.0) in the footings. Bevel all exposed edges of all concrete with a 3/4" inch triangular molding, except as otherwise noted on the plans. Construction joints are optional with the Contractor, but if used, place only at locations shown, or at locations approved by the Engineer.

REINFORCING STEEL: All reinforcing steel dimensions are to the centerline of bars unless otherwise noted. All reinforcing steel, except the spiral bars, shall conform to the requirements of ASTM A615, Grade 60. Spiral bars may meet the requirements of either ASTM A615 (Gr. 40 or 60) or AASHTO M 32, and are included in the bid item "Reinforcing Steel (Gr. 60)".

CAMBER: Provide camber as shown on the Camber Diagram unless the Contractor uses either long span steel beam falsework (concrete dead load deflection greater than 1/4 inch) or timber falsework with greater than 12'-0" clear span. If either case exists, submit falsework plans that show the additional required camber.

FALSEWORK PLANS: A licensed Professional Engineer shall design the falsework details. Details shall bear the seal of a licensed Professional Engineer. See the Bridge Design Manual, Section 16.1 "Review and Approval of Falsework Plans", for a listing of items to be included on the falsework plan. Submit electronic plans conforming to Section 105 of the Standard Specification with details in compliance with KDOT Specifications to the Field Engineer for review.

FALSEWORK: Leave the falsework in place in the last span cast and in the next adjacent span until 15 days have elapsed or longer as directed by the Engineer.

CONCRETE PLACING SEQUENCE: The sequence of placing concrete in the slab and curbs shall be as shown, or the Contractor may submit an alternate placing sequence for review. Submit the alternate placing sequence to the Engineer at the Preconstruction Conference. Include the proposed rate of concrete placement in C.Y./h, the plant capacity, placement direction, construction joint location, a description of the equipment used in placing the concrete, proposed admixtures, and the quantity of concrete in each placing segment. Any additional cost for the Contractor's alternate plan of placing concrete, including admixtures, shall be at the Contractor's expense and shall be considered subsidiary to the bid item, "Concrete (Grade 4.0) (AE) (SA)". Approval of the Contractor's alternate sequence is required prior to placement of concrete in the deck.

CONSTRUCTION LOADS: Limited traffic is permitted on the new sub-deck, one-course deck or any concrete overlay during the curing period, keep any exposed deck wet during the curing period. See KDOT Specifications Section 710 Tables 710-1 & 710-2 for additional information.

SLAB ELEVATIONS: The Contractor shall record elevation readings on the "Slab Elevations" sheet in the table at locations designated by a "(2)". The Engineer shall submit the table on a half-sized sheet to the State Bridge Office, KDOT, Eisenhower State Office Building, 700 SW Harrison, Topeka, KS.

DECK FINISHING: Set the finishing machine parallel to the skew for striking off and screeding the concrete. Screeding normal to the centerline of the bridge will not be allowed.

MULTI-LAYER POLYMER CONCRETE OVERLAY: The Contractor shall apply a Multi-Layer Polymer Concrete Overlay over the entire bridge deck, after expansion of the Superstructure, in accordance with Section 729 of the KDOT Standard Specifications.

TEMPERATURE: The design temperature for all dimensions is 60° F.

QUANTITIES: Items not listed separately in the Summary of Quantities are subsidiary to other items in the proposal.

DIMENSIONS: All dimensions shown on the design plans are horizontal dimensions unless otherwise noted. Make necessary allowances for roadway grade and cross slope.

CONSTRUCTION JOINTS: The construction joints shown are optional with the Contractor. If used, place the construction joints only at locations shown or at locations approved by the Engineer.

PREPARATION OF CONCRETE SURFACES: All concrete surfaces abutting proposed or existing concrete shall be prepared prior to casting the new concrete. This shall consist of brush blasting, power washing and water-soaking immediately prior to casting new concrete. This work shall be considered subsidiary to the bid item "Concrete, Grade 4.0 (AE)(SA)".

PLAN NOTE: The dimensions used in the development of these plans were derived from several sources that were somewhat inconsistent. There may arise, during construction, small dimensional discrepancies. These dimensional discrepancies shall be resolved by the Engineer.

CONSTRUCTION STAKING: Contractor is responsible to provide construction staking for the bridge. The extent of bridge construction staking shall be determined by the contractor. KDOT specifications do not necessarily apply. Staking for the bridge shall be subsidiary to the bid item "Construction Staking, Bridge".

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DESIGN DATA

DESIGN SPECIFICATIONS: AASHTO Specifications (1983 Edition) and Interims to year 1988.

DESIGN LOADING:
HS20-44

Design Dead Load includes an allowance of 25 psf for a future wearing surface.

UNIT STRESSES:
Concrete (Grade 4.0) f'c = 4 ksi
Concrete (Grade 4.0)(AE) f'c = 4 ksi
Concrete (Grade 4.0)(AE)(SA) f'c = 4 ksi
Reinforcing Steel (Grade 60) fy = 60 ksi

DESIGN PILE LOAD (Tons/Pile)		
Location	Strength I	Service I
Abutment	66	40
Pier	150	92
Phi φ = 0.65		

LRFR RATING FACTORS		
Rating Level	Inventory	Operating
Truck		
HS20-44 Loading	0.9	1.2
Manual for Bridge Evaluation, Second Ed.		



STREET IMPROVEMENTS FOR
127TH STREET EAST
FROM 13TH STREET NORTH TO 21ST STREET NORTH

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GENERAL NOTES & QUANTITIES

PROJECT NO.	472-85158	
DATE	11/29/17	
SCALE	NTS	
DESIGNED	DRAWN	CHECKED
DMU	RAM	KJS
NO.	REVISION	DATE
SHEET NO.		