STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	87 N–0362–01	2007	6	48

SUMMARY OF QUANTITIES

Item / Location	Concrete Grade 4.0 (AE) Cu. Yds.	Reinforcing Steel for Patching Lbs.	Reinforcing Steel △ Grade 60 Epoxy Coated Lbs.	Hydro–Demolition Sq. Yds.	Patching (Full Depth) Sq. Yds.	Patching (Part. Depth) Sq. Yds.	Silica Fume Overlay (1–1/2") Sq. Yds.	Expansion Joint L.F.	Bridge Deck Drain Each	Drilling and Grouting Each	Pier End Repair S.Y.	Pier End Patching S.Y.	Bearing Repair Each	Pedestrian Rail Repair S.Y.	Pedestrian Rail Patching S.Y.
Abutment No. 1	––	––	––	––	––	––	––	102.50	––	––	––	––	10	––	––
Pier No. 1	––	––	––	––	––	––	––	––	––	––	51.34	**	10	––	––
Pier No. 2	––	––	––	––	––	––	––	––	––	––	51.34	**	10	––	––
Pier No. 3	––	––	––	––	––	––	––	––	––	––	51.34	**	10	––	––
Pier No. 4	––	––	––	––	––	––	––	––	––	––	51.34	**	10	––	––
Pier No. 5	––	––	––	––	––	––	––	––	––	––	51.34	**	10	––	––
Abutment No. 2	––	––	––	––	––	––	––	102.50	––	––	––	––	10	––	––
Substr. Total	––	––	––	––	––	––	––	––	––	––	––	––	––	––	––
Superstr. Total	261.2	––	181,250	2503	––	––	3076	––	––	––	––	––	––	––	––
Total	261.2	△ 64,793	181,250	2503	75	1752	3076	205	61	7316	256.7	131	70	1027	5

△ Includes reinforcing steel for full deck patching and partial deck patching. No quantity is allowed for end pier patching and pedestrian rail patching.

** Quantities are included in the Total Quantity.

INDEX TO BRIDGE DRAWINGS

Sheet No.	Drawing
6	General Notes and Quantities
7	Construction Layout
8	Hydrodemolition and Removal Details
9	Delamination Diagram
10	Bearing Device and Pier Improvements
11–13	Superstructure Improvements
14	Bridge Deck Patching & Overlay Details
15	Bill of Reinforcing Steel and Bending Diagrams
	Standards
16	Supports and Spacers for Reinforcing Steel

GENERAL NOTES

EXISTING STRUCTURE: Plans of the existing structure are included in this set of plans.

EXISTING DIMENSION VERIFICATION: Dimensions of the existing structure are based on old plans. Verify, by field measurement, the as built dimensions of the existing structure and submit such verification in writing to the Engineer. The verification will include sketches, drawings, photographs and descriptions as needed to clearly define the as built dimensions that will be incorporated in the new construction.

ENVIRONMENTAL PROTECTION: Use protection as shown in the KDOT Specifications. The Environmental Protection Structure Classification is Class A or B.

These plans provide for the construction of all proposed bridge improvements without the necessity of entering or disturbing the Arkansas River. If the Contractor determines that entering the river will be desired or necessary, he will be responsible for obtaining all permits and adhering to all regulatory requirements. The Contractor shall prevent all construction materials and debris from coming in contact with the river.

EXISTING REINFORCING STEEL: Existing reinforcing steel to remain in place shall be thoroughly cleaned. Bars severely damaged or broken shall be straightened or replaced as directed by the Engineer. After removal of concrete, any bars which have lost more than one–half the original cross–sectional area due to corrosion, shall be replaced and paid for at the unit price bid for "Reinforcing Steel for Patching".

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.

CONCRETE: Superstructure concrete is bid as Concrete (Grade 4.0)(AE). Bevel all exposed edges of all concrete with a 3/4" triangular molding, except as otherwise noted on the plans.

EXISTING CONCRETE: Casting to existing concrete, the term "existing" means "any".

SILICA FUME OVERLAY: Place a 1 ½ inch Silica Fume Overlay over the entire deck surface as shown on the plans. Silica fume material is subsidiary to this item. No additional payment will be made for additional material used to patch prepared area.

TRAFFIC RAIL: Build the traffic rail after the falsework is struck.

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.

ELASTOMERIC CONCRETE: Use one of the following products or an approved equal:

DELCRETE manufactured by The D.S. Brown Company
WABOCRETE manufactured by Watson Bowman Associates Inc.
SILSPEC 900 PNS manufactured by SSI Inc.

Place the elastomeric concrete at locations shown on the plans and in the manner prescribed in the application procedures published by the manufacturer of the binder. Arrange for a technical service representative of the binder manufacturer to be present on the project during the first placement of the elastomeric concrete. The elastomeric concrete shall be subsidiary to the bid item "Expansion Joint" and will not be measured.

EXPANSION JOINT: All material and labor required to install the expansion joint shall be paid for by the bid item "Expansion Joint". All steel plates, angles and bars shall be ASTM A36 or A709 Gr. 36 steel.

FULL DEPTH PATCHING: Remove loose and unsound deck concrete and bituminous material as designated by the Engineer to whatever depth is necessary to reach sound concrete. See KDOT Specifications. Prepared areas are to be patched in accordance with these plans. Patching may be completed during silica fume overlay operations or prior to overlay.

PARTIAL DEPTH PATCHING: Remove loose and unsound deck concrete and bituminous material as designated by the Engineer to whatever depth is necessary to reach sound concrete. See KDOT Specifications. Prepared areas are to be patched in accordance with these plans. Patching may be completed during silica fume overlay operations or prior to overlay.

PEDESTRIAN RAIL REPAIR AND PATCH: Brush blast and power wash surface per plans. Remove loose concrete to provide an adequate surface for epoxy patching. Hammers and other more aggressive means of concrete removal shall not be used without written consent from the Engineer. Patch prepared surface of pedestrian rail using approved epoxy repair materials. Finish on all faces shall be smooth and even. Seal surfaces using approved concrete sealer per plans. All work needed for surface preparation and sealing shall be included in the price for "Pedestrian Rail Repair". Patching shall be paid for as "Pedestrian Rail Patching" and will be a measured quantity pay item.

PIER END REPAIR AND PATCH: Brush blast and power wash surface per plans. Remove loose concrete to provide an adequate surface for epoxy patching. Hammers and other more aggressive means of concrete removal shall not be used without written consent from the Engineer. Patch prepared surface of pier end using approved epoxy repair materials. Finish on all faces shall be smooth and even. Seal surfaces using approved concrete sealer per plans. All work needed for surface preparation and sealing shall be included in the price for "Pier End Repair". Patching shall be paid for as "Pier End Patching" and will be a measured quantity pay item.

CONCRETE SEALERS: Contractor to provide material documents for approval prior to application.

DRILLING AND GROUTING: This item shall consist of grouting reinforcing steel, anchor bolts, tie bars, or dowel bars into the existing concrete, where required by the Engineer, with an epoxy grout. △ Reinforcing steel shall be Grade 60. Follow KDOT Specifications 842 and any associated Special Provisions. Drill the holes to the specifications required by the grout manufacturer and in such a manner as not to damage adjacent concrete or bars. After the hole is drilled, remove all loose material by using a wire brush to free the dust from the side of the hole and then vacuuming to remove material and dust. Fill the hole 30% to 50% full of epoxy grout and insert the bar. Then fill the hole to ¼ inch from the top of the hole. Follow the manufacturer's directions for mixing, application and curing. The tools, materials, including reinforcing steel, labor and incidentals necessary to complete the work shall be paid for per each by the bid item "Drilling and Grouting". The reinforcing steel used for "drilling and grouting" is not included in the bid item "Reinforcing Steel" or "Reinforcing Steel for Patching." Drilling and grouting of reinforcement bars in the approach slab is not included in this pay item.

BEARING REPAIR: Prepare surfaces and paint in accordance with Section 714 of the 2007 KDOT Standard Specifications. Paint shall be inorganic zinc/polyurethane paint.

EXISTING LIFT GATE: Contractor to remove lift gate floor box and operating stem to top of pier at Pier No. 3 and 4. These items shall become the property of the Contractor and removed from the site. Remaining gate appurtenances to remain in place. This item shall be subsidiary to "Removal of Existing Structures."

FALSEWORK PLANS: A licensed Professional Engineer shall design the falsework details. Details shall bear the seal of a licensed Professional Engineer. Submit 7 sets of details in compliance with KDOT Specifications to the Field Engineer for review.

CONSTRUCTION LOADS: Only foot traffic is permitted on the new deck during the seven day curing period. Work to place reinforcing steel or forms for the bridge rail or barrier is allowed 3 days after the concrete is placed provided the curing is maintained on any exposed deck by keeping it wet during the 7–day curing period. Light truck traffic (gross vehicle weight less than 5 Mg) is allowed on the deck 15 days after the pour is completed. Legal loads are permitted 21 days after the concrete is placed. With Engineer approval, heavy stationary loads may be allowed on the bridge deck 28 days after the deck pour is completed. See KDOT Specifications.

EXISTING UTILITY CONDUIT: The existing utility conduit supported below the center bridge deck shall be removed by the contractor and disposed of in accordance with these plans. The pipe material is unknown. The Contractor shall cut and remove the pipe flush with the abutment wall. The pipe shall be plugged with a 12–inch thickness of non–shrink grout and troweled flush with the abutment wall. This item shall be subsidiary to "Removal of Existing Structures."

DESIGN DATA

EXISTING DESIGN SPECIFICATIONS:

AASHO Specifications, 1969 Edition.

EXISTING DESIGN LOADING:

HS 20–44

NEW UNIT STRESSES:

Concrete (Grade 4.0)(AE): f'c = 4,000 psi
Reinforcing Steel (Grade 60): fy = 60,000 psi

△ 10/23/07 Added "Epoxy Coated"
10/23/07 Added sentence

KANSAS DEPARTMENT OF TRANSPORTATION

GENERAL NOTES AND QUANTITIES

PROJ. NO. 87 N–0362–01 SEDGWICK CO.

MKEC ENGINEERING CONSULTANTS, INC.
WICHITA, KANSAS

DESIGNED BY:	JAG	CHECKED BY:	KJS
DRAWN BY:	DPG	DATE: 4/23/07	SHEET 6 OF 48

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