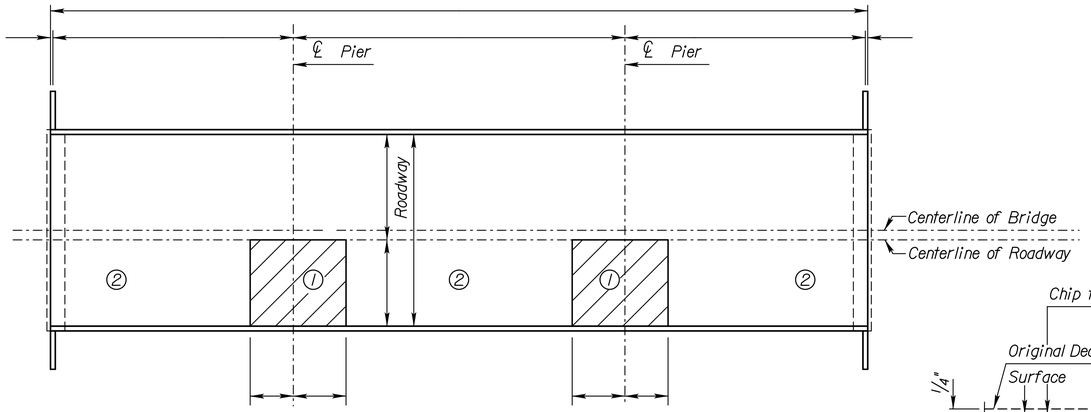
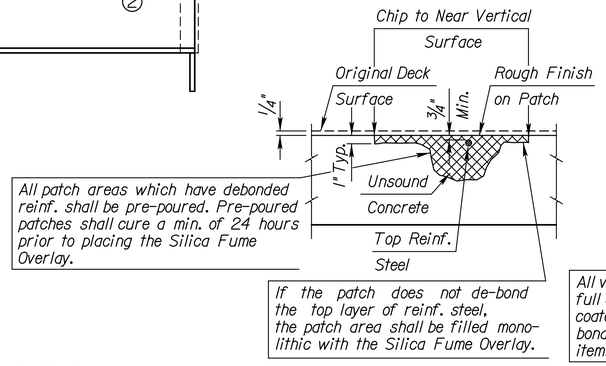
STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	Proj. No.	YEAR	0	0

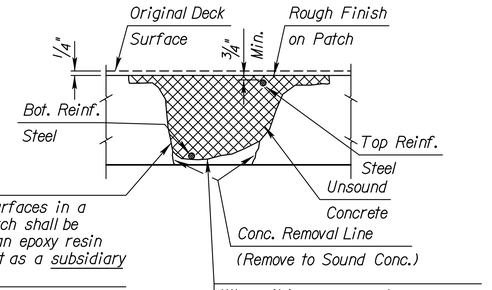


BRIDGE DECK PATCHING SEQUENCE

(Showing sequence for one lane only – other lane similar)

** *Note: Cutting the overlay back to ℄ Bridge, concrete removal, all material, equipment, and labor necessary for this item shall be subsidiary to other items.*

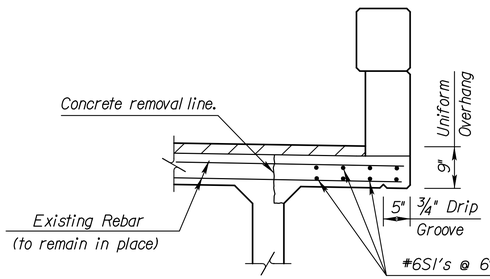




DECK PATCHING DETAILS

TYPICAL SECTION SHOWING FIRST STAGE OF REPAIR

TYPICAL SECTION SHOWING SECOND STAGE OF REPAIR



RAIL AND OVERHANG REPLACEMENT DETAILS

GENERAL NOTES

PATCHING SEQUENCE: The concrete removal shall be completed in stages, beginning with removal of deteriorated concrete in Area ①. If more than 15 longitudinal bars in Area ① are debonded for a distance of greater than 4 feet along the bars, the concrete removal shall stop and the patch area filled with Gr. 4.0 Concrete (AE). The patch shall cure a minimum of 3 days before concrete removal resumes in that area. Following the completion of work in Area ①, concrete removal may begin in Area ②. Concrete removal shall not begin in an Area ② until the patching concrete in adjacent Area ① has cured a minimum of 3 days. The maximum size of any full depth patch shall be limited to 4'x8' in any direction. Fully debonded bars in Area ① shall be limited to the same 4'x8' maximum patch size. All patching and SFO concrete shall cure according to the Specifications prior to allowing traffic on that lane.

MACHINE PREPARATION (1/4"): This item shall consist of preparing the deck for a SFO. by removing concrete from the roadway surface of the bridge deck to a depth of 1/4". See KDOT Specifications.

AREA PREPARED FOR PATCHING: This item shall consist of removing unsound concrete and bituminous patches from the bridge deck, cleaning reinforcing bars, filling the removed patched areas with concrete, and preparing the entire area of deck for SFO. Quantity shown is an estimate of the areas involved. The exact areas shall be determined by tapping, before, during and after chipping operation to assure that all unsound concrete has been removed. See KDOT Specifications.

FULL DEPTH PATCHING: Forms shall be provided to enable placement of concrete in areas of full depth removal of bridge slab. The forms may be suspended from existing reinforcing bars by wire ties or a method approved by the Engineer may be used. See KDOT Specifications for method of measurement and basis of payment.

REINFORCING IN BRIDGE DECK: Care should be exercised to prevent cutting, stretching or damaging exposed reinforcing steel. Extreme care should be exercised to avoid breaking the bond between the reinforcing steel and concrete where bars are partially exposed yet remain anchored in sound concrete. Reinforcing steel damaged, cut or deteriorated shall be replaced as directed by the Engineer. See table on this sheet for minimum splice length required. Replacement of bars damaged by the Contractor shall be subsidiary to "Area Prepared for Patching".

SILICA FUME OVERLAY (SFO): This item shall consist of preparing the concrete surface, placing, finishing and curing the 1 1/2" SFO. See KDOT Specifications.

SILICA FUME OVERLAY CONSTRUCTION JOINTS: All vertical construction joints in the overlay and the vertical joint between the overlay and the curbs shall be sealed by sandblasting and then painting the joints with an approved Concrete Masonry Coating. 72 hours after placement of the Silica Fume Overlay.

BOX GIRDER DRAIN HOLES: All drain holes on bottom of box girders shall be cleaned by drilling out. This is subsidiary to "Removal of Existing Structure".

SUMMARY OF QUANTITIES		
ITEM	UNITS	TOTAL
Machine Preparation (1/4")	S.Y.	
Area Prepared for Patching	S.Y.	
Area Prep. for Patching (Full Depth)	S.Y.	
Silica Fume Overlay (1 1/2")	S.Y.	
Material for SFO (Set)	C.Y.	1.0
Reinforcing Steel (Gr. 60) (Repair-Set)	Lbs.	1.0
Grade 4.0 (AE) Conc.	C.Y.	
Removal of Existing Structure	L.S.	

MINIMUM REBAR SPLICE LENGTHS*		
Bar Size	Gr. 40	Gr. 60
#4	12"	16"
#5	13"	20"
#6	16"	24"
#7	20"	29"
#8	26"	38"
#9	33"	48"
#10	42"	61"
#11	52"	75"

* *Lap lengths are based on a Class B Splice. Use the min. splice length corresponding to the grade of existing reinforcing in the deck.*

NO.	DATE	REVISIONS	BY	APP'D
3				
2				
1	10-19-04	Current Release		

KANSAS DEPARTMENT OF TRANSPORTATION

Br. No. Sta.
Br. No. Sta.

BRIDGE DECK PATCHING AND OVERLAY DETAILS

Proj. No. Co.

SHEET NO. OF	DATE	APP'D	
DESIGNED	DETAILED	REL QUANTITIES	CADD
DESIGN CK.	DETAIL CK.	QUAN.CK.	CADD CK.

Std. Base File: br194.dgn
Plotted By: smarquis
File: br194.dgn (br194)
Plot Date: 18-SEP-2009 14:20
Plot Location: Bridge Design