



DRAINAGE DATA

Drainage Area	1.36 Sq. Mi.
Design Frequency	100 Yr.
Design Discharge	1817 CFS
Design High Water Elevation	176.44 Ft.

LOADING: HS20-44 A.A.S.H.T.O. Specification, 1983 Edition.

UNIT STRESSES:
 Class AAA Concrete (AE) $F'_c = 4000$ p.s.i.
 $F_c = 1600$ p.s.i.
 Reinforcing Steel (Grade 60) $F_y = 60,000$ p.s.i.
 $F_s = 24,000$ p.s.i.

CONSTRUCTION: The Contractor shall construct the Cast-In-Place and Precast as shown.

JOINTS: Construction Joints shall only be formed at locations shown or as approved by the Engineer

EXCAVATION: All excavation and backfill shall extend two (2) feet beyond the sides of the box and wingwall.

CONFLICT: If R.C.B. plan notes conflict with the General Notes from this sheet, then these General Notes will govern.

PRECAST CONCRETE: Precast Box Sections shall meet the appropriate design and inspection requirements of A.S.T.M. Designation C-850, Table 2 or C789, Table 2 whichever is critical and the Loading Specifications. The intermediate joints shall be sealed with a mastic compound which shall be provided for approval with the shop detail submittal. The Contractor shall furnish, to the Engineer, detail plans and shop drawings showing the proposed precast layout and all other details for manufacture and delivery of any precast items to be incorporated into the work.

SEAL COURSE: A Seal Course shall be constructed below the R.C.B. as shown in the Plans. The Seal Course shall consist of a 6" Granular Base (Type UD-1).

REINFORCING STEEL: All dimensions relative to reinforcing are to centerline of bars unless otherwise noted. Bar bending and dimensions shall be as shown and noted on the Bar Bending Diagrams. Reinforcing used in the Precast Sections is not required to be epoxy coated. The concrete cover for all reinforcing shall be 1 1/2" minimum unless otherwise noted. A revised bar schedule will be required at shop detail submittal due to any modified box length in excess of the minimum headwalls.

Doweling details between pre-cast and cast-in-place ends must be submitted for approval by the Engineer.

FLOWABLE FILL: Flowable fill will be placed from bottom floor of new 9'x5' RCB to top of top slab. The void area to be filled will be between existing and extended RCB and new 9'x5' RCB and between the single cells. Also flowable fill will be required in the southern excavated area of Stage I and the eastern excavated area 34' Lt. and Rt. of & 21st Street. This will be subsidiary to the bid item "Precast Box (9'x5') or "Cast-in-place Box(9'x5') as applicable.

FILL & COMPACTION: Fill over the RCB and compaction as depicted on Sht. No. 3 will be considered subsidiary to other items in the contract.

GENERAL NOTES

EXISTING DIMENSION VERIFICATION: Dimensions of the existing structure are based on old plans. The Contractor shall verify by field measurements the as-built dimensions of the existing structure and submit such verification in writing to the Engineer.

DRILL & GROUT: This item shall consist of grouting reinforcing steel into concrete members, where required by the Engineer, with an epoxy grout. Locate each hole with the aid of a pachometer to miss the existing reinforcing steel. Drill the holes in such a manner 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. Follow the manufacturers directions for mixing, to the specifications required by the grout manufacturer and in application and curing.

CONCRETE BONDING AGENT: Initiate all Concrete removals with a 1/2" saw cut at the removal line. All existing Concrete Surfaces upon which new concrete is to be placed shall be coated with a KDOT approved Epoxy Resin Concrete Bonding Agent. See product information for Concrete Placement prior to complete "set" of bonding agent.

PAYMENT: "Precast Box (9'x5') shall be paid for per L.F. which shall include all labor, material, excavation, concrete, reinforcing steel, drilling and grouting, seal course, backfill, flowable fill and all other incidentals necessary to complete the work. Quantities are for information only.

Sta. 122+40.37 Extend Existing Structure No. 614-33-4506
 3-8'x4'-6" R.C.B. with
 3-8'x5'-0"x11'-11" R.C.B. Rt.
 See Sh. No. 22

REMOVAL ITEMS

Wingwall Sta. 122+54.00	57.00' Lt.
Wingwall Sta. 122+54.00	18.00' Lt.
Wingwall Sta. 122+54.00	18.00' Rt.
Wingwall Sta. 122+54.00	49.00' Rt.
8'x4' RCB Sta. 122+53.48 to 122+74.31	
5' Concrete Sidewalk Sta. 122+50.00 to 122+95.00	
Handrail Sta. 122+41 Lt. and Rt.	

BILL OF MATERIALS

Class AAA Concrete (AE)	67.3 C.Y.
Reinforcing Steel (Grade 60)	10,180 Lbs.
Seal Course (Granular Base)	152 C.Y.
Class III Excavation	40. C.Y.

NOTE: Precast box quantities are based on distance along & 2-9'x5' RCB. Shop drawing modification for P.I. construction will not alter the payment length of Precast Box.

LOCATION	DESCRIPTION	21st STREET STATION	21st STREET OFFSET	NORTH COORDINATE	EAST COORDINATE	FLOWLINE ELEVATION
1	Upstream face of hubguard	124+79.43	164.37' Lt.	2373557.5700	387451.8890	170.60
2	Cast-in-place/Precast C.J.	124+76.64	163.36' Lt.	2373554.7950	387450.8250	170.60
3	Intermediate stage limit	123+79.84	128.17' Lt.	2373458.6070	387413.9840	169.73
4	P.I.	122+76.14	90.48' Lt.	2373355.5640	387374.5180	169.83
5	P.I.	122+64.31	55.03' Lt.	2373344.3350	387338.8720	168.52
6	Cast-in-place/Precast C.J.	122+64.15	57.73' Rt.	2373346.0900	387226.1290	168.35
7	Downstr. face of hubguard	122+64.07	60.80' Rt.	2373346.0630	387223.0610	168.35
8	Downstr. face of exist. hubguard	122+40.37	48.86' Rt.	2373322.1660	387234.5940	168.87
9	Downstream face of new hubguard	122+40.35	60.77' Rt.	2373322.3520	387222.6800	168.35
10	East edge of 9'x5' RCB/& 8'x4' RCB	122+74.31	29.22' Rt.	2373355.7670	387254.8060	168.39
11	Cast-in-place/Precast C.J.	122+64.20	21.50' Rt.	2373345.5250	387262.3500	168.41
12	Cast-in-place/Precast C.J.	122+64.17	39.51' Rt.	2373345.8060	387244.3490	168.38

- LEGEND**
- * Remove wingwall and toewall to clear new 2-9'x5' RCB exterior wall.
 - ** 2-9'x5' RCB (Precast)
 - ** * Cast-in-place 9'x5' & 1-9'x5' RCB (Precast)

Drawn by: ras
 Plotted by: ras 3-11-2004
 I: 2004/04/06/newplans/gennote

CITY OF WICHITA, KANSAS
 JAMES L. ARMOUR, P.E.-ACTING CITY ENGINEER
 Str. No. 614-33-4506 Sta. 122+40.37
RCB LAYOUT SWD #225
TRIBUTARY TO FOUR MILE CREEK
 Proj. No. 468-83775 SEDGWICK CO.

Professional Engineering Consultants, P.A.
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Designed by	R.A.S.	Checked by	M.S.N.
Drawn by	R.A.S.	Date	Mar. 2004
		Job No.	04106