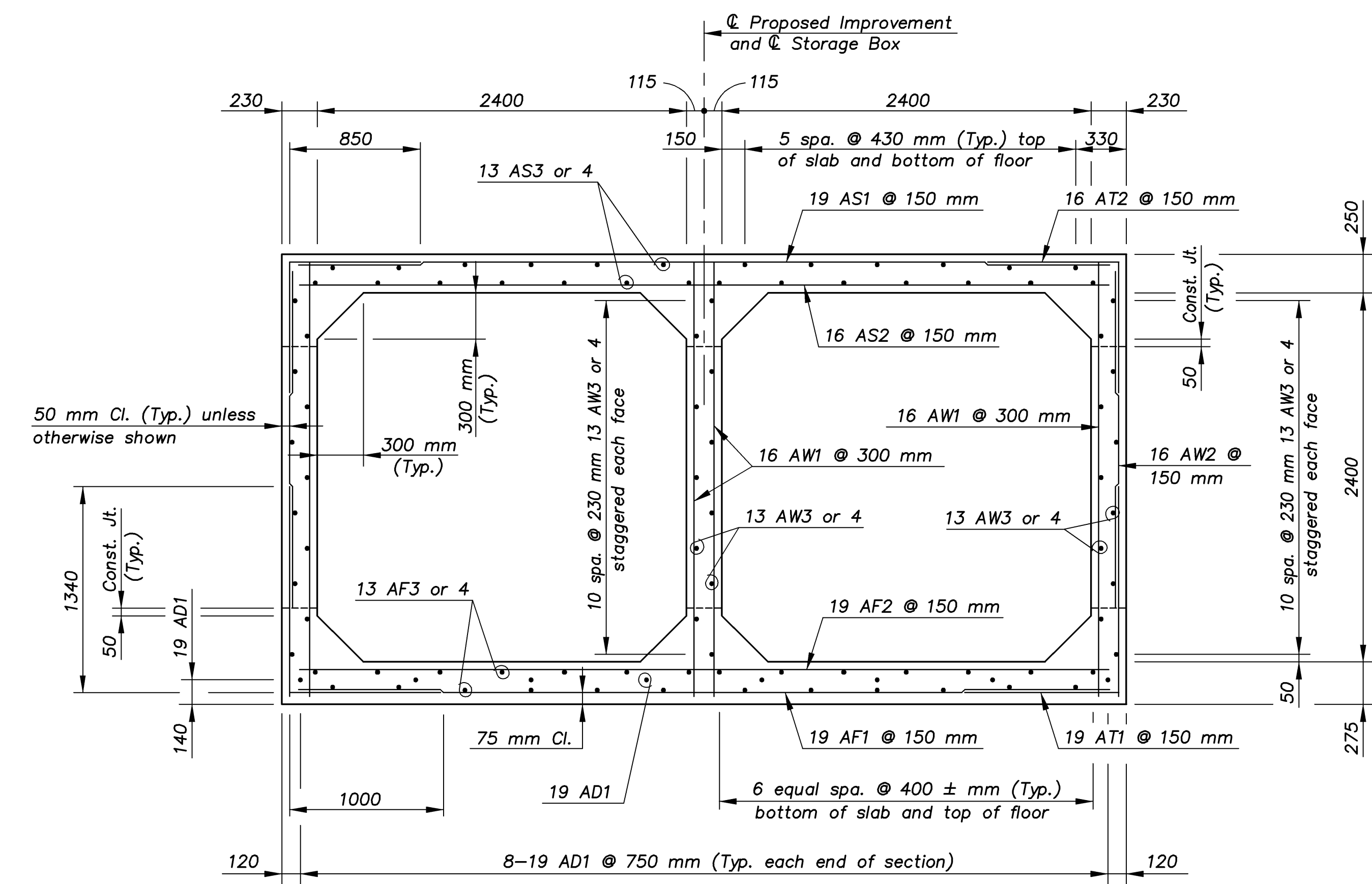


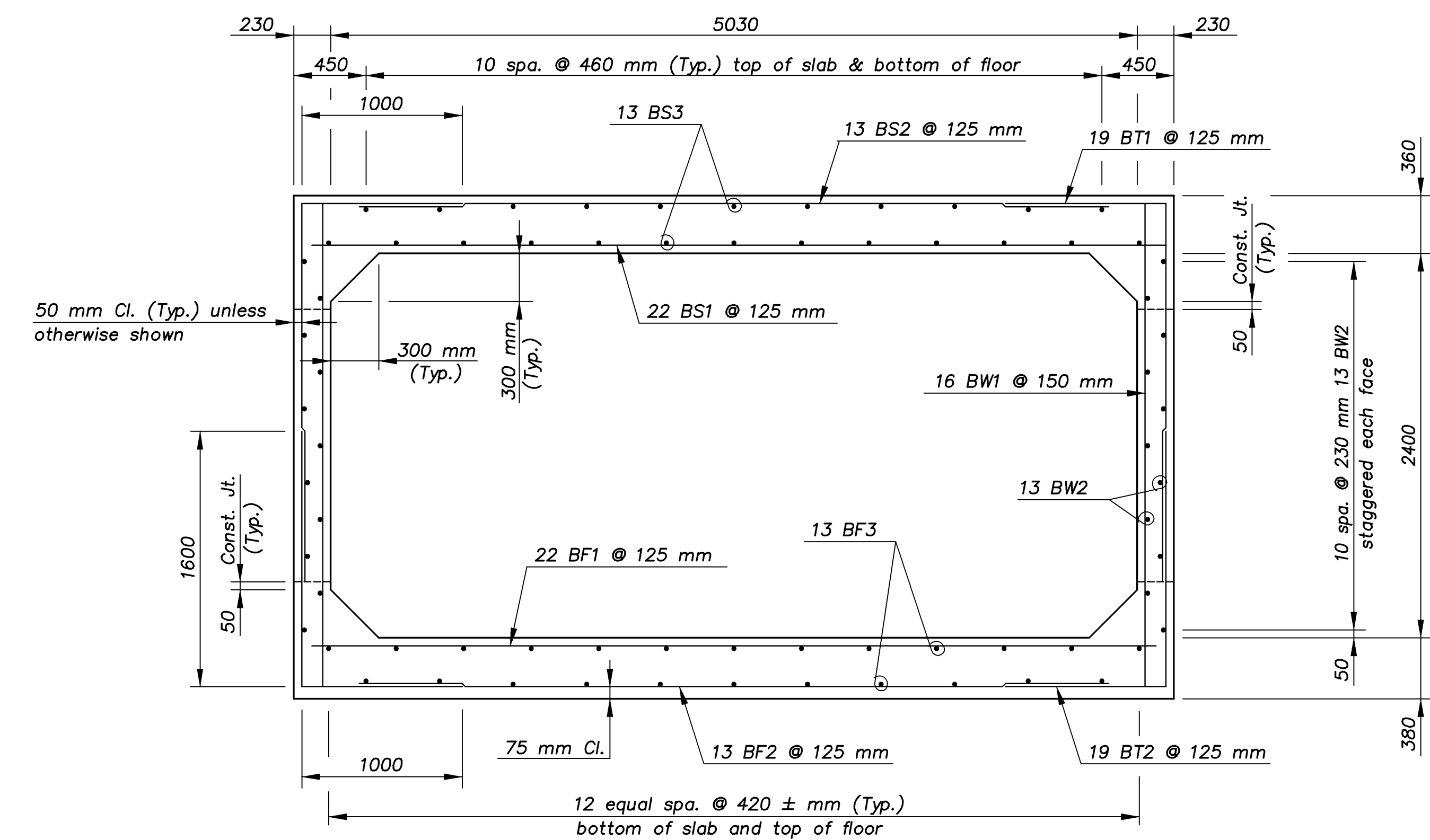
E.F. INDICATES EACH FACE.  
 N.F. INDICATES NEAR FACE.  
 F.F. INDICATES FAR FACE.

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	54-87 K-8258-01	2007	126	556

**CONSTRUCTION METHOD:**  
 Construction for the Storage Box shall be Cast-in-Place as detailed on the Plans. Precast Box Culverts shall not be used in lieu of the Cast-in-Place Box Culverts.



TYPICAL SECTION-(TYPE A) STORAGE BOX



TYPICAL SECTION-(TYPE B) STORAGE BOX

**GENERAL NOTES**

- DESIGN LOADING:**  
 MS-18 AASHTO Specifications, 1996 Edition & Interims.
- UNIT STRESSES:**  
 Concrete (Grade 31) (AE)  $f'_c = 31 \text{ MPa}$   
 Reinforcing Steel (Grade 420)  $f_y = 420 \text{ MPa}$   
 Structural Steel (Grade 250)  $f_y = 250 \text{ MPa}$
- CONCRETE:**  
 Concrete (Grade 31) (AE) shall be used throughout. Bevel all exposed edges with a 20 mm triangular molding, unless otherwise noted.
- REINFORCING:**  
 All reinforcing shall conform to ASTM A615M, Grade 420 and shall be epoxy coated. All dimensions relative to the placement of reinforcing steel shall be to the centerline of bar unless otherwise noted. The clear distance from the face of concrete to the end of reinforcing bar shall be 50 mm.
- FLOOR CONSTRUCTION:**  
 Dewatering of the structural excavation may be necessary along the entire length of the storage box. The underlying shale will deteriorate upon exposure with time and also will soften if left covered with water. The Contractor shall exercise care to protect the founding level as he prepares for placement of concrete for the floor slab.
- SEAL COURSE:**  
 A Seal Course may be required by the Engineer. The Seal Course shall be unreinforced Concrete (Commercial Grade) to a minimum depth of 75 mm or as determined by the Engineer. Concrete for the Seal Course shall be paid for at the unit price set for Concrete for Seal Course.
- CONSTRUCTION JOINTS:**  
 Construction Joints shown are optional, but if used shall be made at locations shown or approved by the Engineer.
- GEOLOGY:**  
 For subsurface information in the vicinity of the storage box, see Roadway Cross Sections and Soils Report.
- P.V.C. PLASTIC WATERSTOP:**  
 A 230 mm P.V.C. Plastic Waterstop shall be placed in the top slab and bottom floor where section changes occur. Plastic Waterstop shall not be paid for directly, but shall be subsidiary to Concrete (Grade 31) (AE).
- GRATES AND FRAMES:**  
 All structural steel required for the grates and frames shall conform to the requirements of ASTM A709M Grade 250. All parts shall be galvanized after fabrication in accordance with KDOT Standard Specifications.
- EXCAVATION AND BACKFILL:**  
 The excavation outside the limits of the storage box shall be backfilled with cohesive soil and compacted to Type C compaction requirements in accordance with the Standard Specifications. Excavation and Backfill is not paid for directly but is considered Subsidiary to the bid item "Concrete Grade 31 (AE)". See Rock Road Pump Station "General Notes" for more information about Excavation and Backfill.

SUMMARY OF QUANTITIES								
Item	Unit	Section 1	Section 2	Section 3	Section 4	Section 5	Section 6	Total
Concrete Grade 31 (AE)	cu m	81.5	200.5	85.5	200.8	80.4	50.2	698.9
Reinforcing Steel Grade 420 (Epoxy Coated)	kg	10 720	23 880	10 850	23 900	10 520	5390	85 260
Foundation Stabilization	cu m							63.6
Concrete for Seal Course	cu m							254.2

Storage-RCB/Kellogg 1:250

KANSAS DEPARTMENT OF TRANSPORTATION

**R.C.B. STORAGE BOX  
 GENERAL NOTES, QUANTITIES  
 AND TYPICAL SECTIONS**

Cook, Flatt & Strobel  
 ENGINEERS, P. A.

DESIGNED	R.S.C.	SCALE	Varies
DETAILED	T.R.G.	DATE	
QUANTITIES	T.R.G.	SHEET	3 OF 9

Proj. No. 54-87 K-8258-01 SEDGWICK COUNTY