

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

ROUTE	STATE	DISTRICT	SHEET NO.
*	MO	BR	*
JOB NO. *			
CONTRACT ID.			
PROJECT NO.			
COUNTY *			DATE
SEC/SUR *	TWP *	RGE *	

"THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT."

GENERAL NOTES:
Design Specifications:
 2002 - AASHTO 17th Edition
 Load Factor Design
Design Unit Stresses:
 Class B-1 concrete $f'c = 4,000$ psi
 Reinforcing steel (Grade 60), $f_y = 60,000$ psi
Design Loading:
 HS20-44 HS20 Modified
 Earth 120 #/ft.³
 Equivalent fluid pressure 30 #/ft.² (Min.) - 60 #/ft.² (Max.)
 All elevations shown are in feet unless otherwise noted.

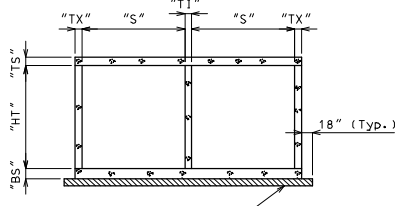
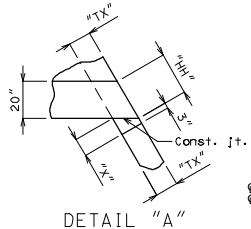
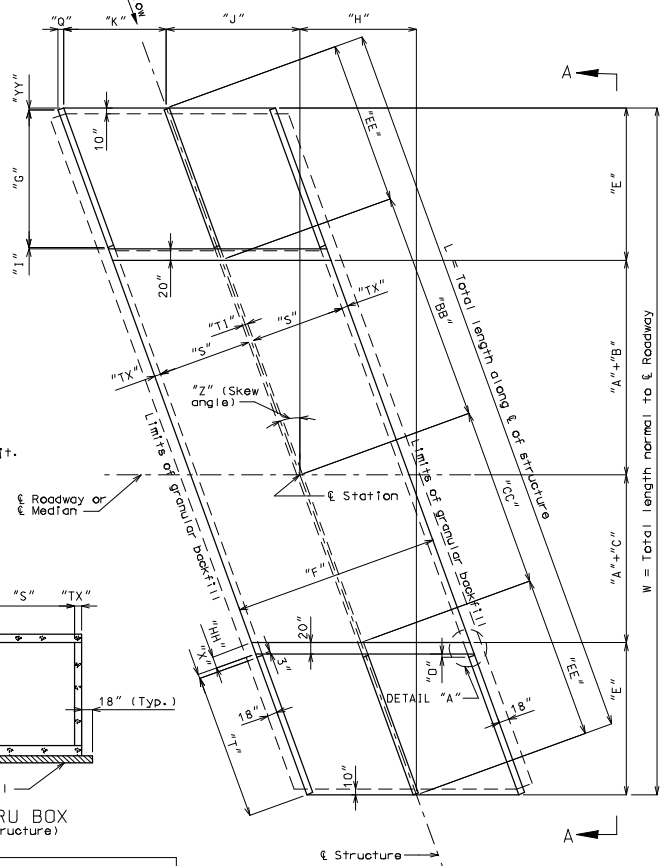
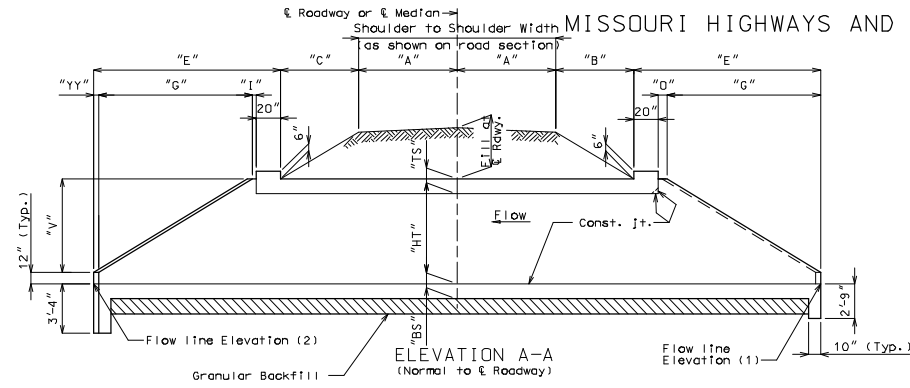
The box shown below indicating whether a precast or c/p box was used should be checked by MODOT Construction personnel:

- Precast Box used
- Cast-in-Place Box used

When alternate precast box sections are used, the minimum barrel length measured along the shortest wall from the first joint to the outside of the headwall, shall be 3'-2". Reinforcement and dimensions for the wings and headwall shall be in accordance with Missouri Standard Plans drawing.

Minimum clearance to reinforcing steel shall be 1 1/2", unless otherwise shown.

"Sec" refers to the sections in the standard and supplemental specifications unless specified otherwise.



Note: Slope of bottom slab shall be placed at natural stream gradient.
 If unsuitable material is encountered, excavation of unsuitable material and furnishing and placing of granular backfill shall be in accordance with Sec 206.

VARIABLE	EQUATION	DIM.	VARIABLE	EQUATION	DIM.
"S"	--		"Q"	TX(cos Z)	
"HT"	--		"T"	G(sec Z)	
"TS"	--		"V"	HT + TS - 12"	
"BS"	--		"W"	2A + B + C + 2E	
"TX"	--		"X"	3" + TX(tan Z)	
"TI"	--		"Z"	Skew Angle	
"A"	--		"BB"	(A + B)(sec Z)	
"B"	--		"CC"	(A + C)(sec Z)	
"C"	--		"EE"	E(sec Z)	
"E"	G + O + 20"		"HH"	20"(sec Z)	
"F"	2S + 2TX + TI		"YY"	TX(sin Z)	
"G"	2V				
"H"	(A + C + E)(tan Z)				
"I"	3"(cos Z)				
"J"	(A + B + E)(tan Z)				
"K"	(S + TI/2)(sec Z)				
"L"	2EE + BB + CC				
"O"	I + YY				

Design Fill (*)
 Elev. (1) feet
 Elev. (2) feet
 * Design fill height is the distance from top of edrn fill or roadway to the top of the top slab.

LOCATION SKETCH

Designed
 Detailed
 Checked

Drainage Area =	(sq. mi.)
Design High Water (DHW) Elev. =	
Design High Water Frequency =	(year)
Design High Water Discharge =	(cfs)
Backwater/Base Flood Data (100 year)	
High Water Elev. =	
Design Discharge =	(cfs)
Estimated Backwater =	(ft)
Outlet Velocity =	(ft/sec)
Roadway Overtopping	
Design Elev. (1' below shoulder) =	
Design Discharge =	(cfs)
Design Frequency =	(year)

& Sta. =
Pr. Gr. Elev. at & Sta. =
Fill at & Rdwy. at & Station =

		FINAL QUANTITIES
Class 4 Excavation	cu. yard	
Removal of Bridges	lump sum	
Class B-1 Concrete (Culverts-Bridge)	cu. yard	
Reinforcing Steel (Culverts-Bridge)	pound	

B. M.
 BRIDGE
 STATE ROAD
 ABUT
 STA.

STD.
STD.
STD.
STD.
BOX 3

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.