

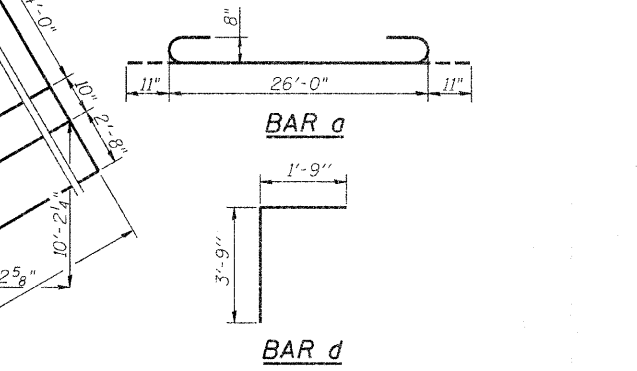
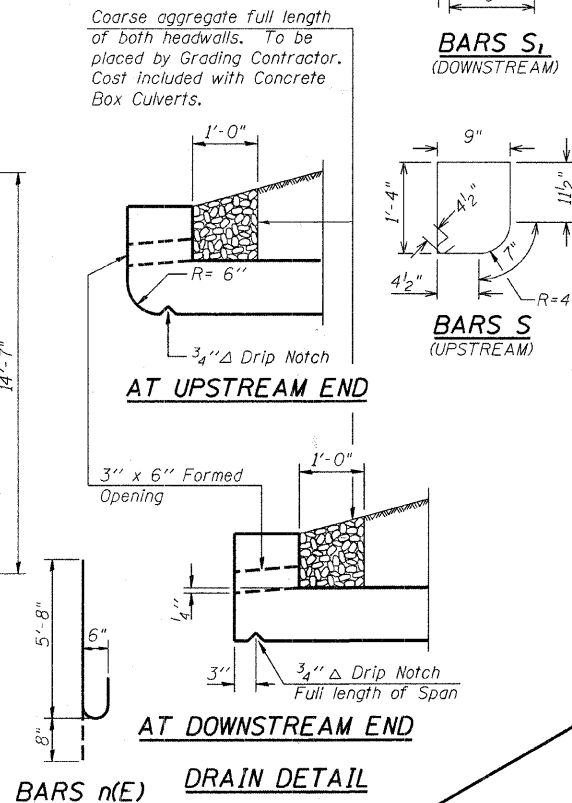
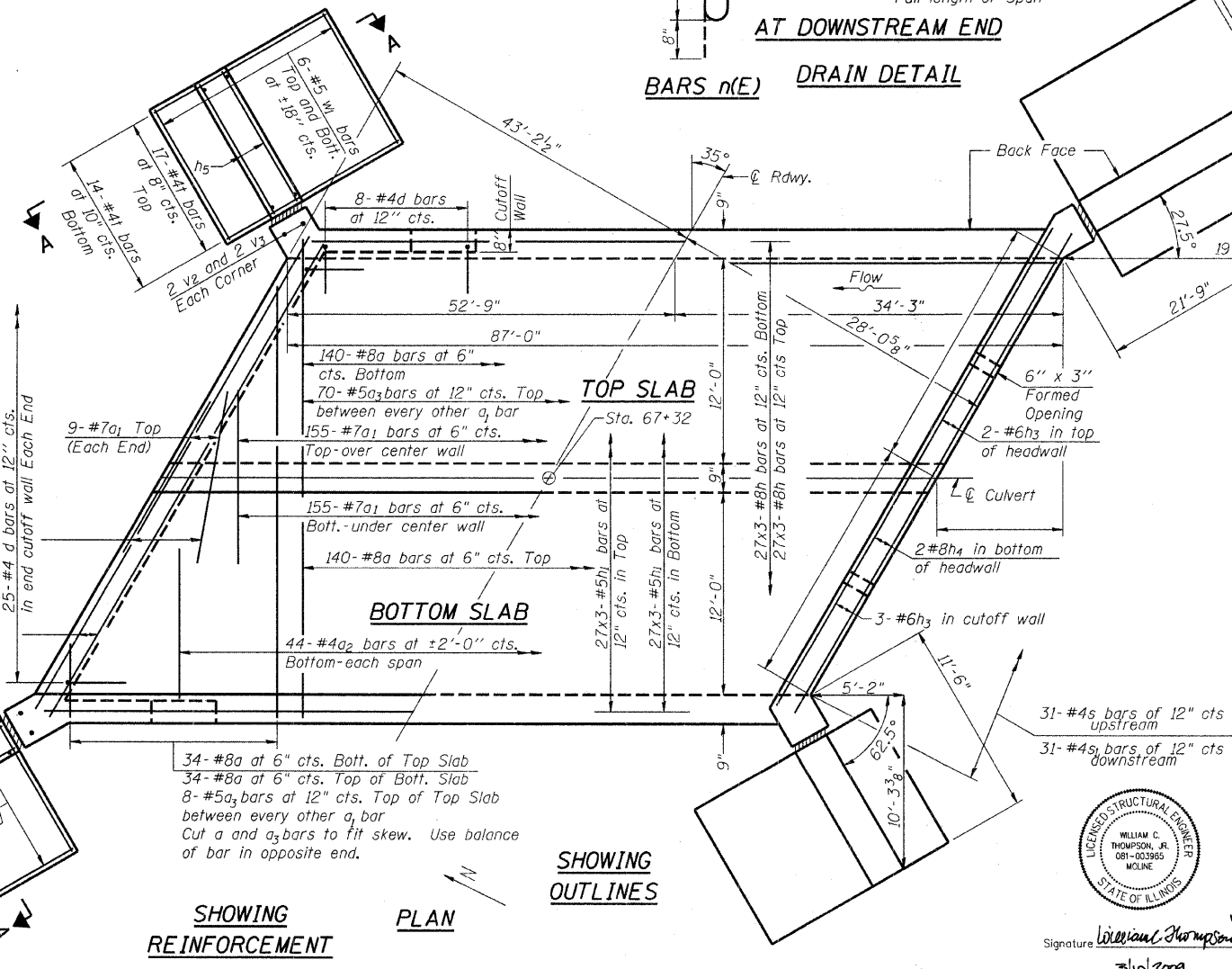
**DESIGN STRESSES**  
 $f_y = 60,000$  psi  
 $f'_c = 3,500$  psi  
 max soil pressure = 1900 psf

**LOADING HS 20-44**

Notes: Reinforcement bars designated (E) shall be epoxy coated.  
 Bars indicated thus 12x4-#5 etc. indicates 12 lines of bars with 4 lengths per line.  
 Reinforcement Bars shall conform to the requirements of AASHTO M-31, M-42 or M-53, Grade 60.  
 All construction joints shall be bonded.  
 Precast Alternate is not allowed.

DESIGNED JDA	200
CHECKED	EXAMINED
DRAWN MAC	PASSED
CHECKED JDA	ENGINEER OF BRIDGES AND STRUCTURES

DB-T-R 03-11-09



**BILL OF MATERIAL**

Bar No.	Size	Length	Shape	Bar No.	Size	Length	Shape
a	348	#8	27'-10"	s	31	#4	4'-11"
a <sub>1</sub>	346	#7	13'-2"	s <sub>1</sub>	31	#4	4'-9"
a <sub>2</sub>	88	#4	8'-1"				
a <sub>3</sub>	78	#5	26'-0"	t	178	#4	7'-3"
d	82	#4	5'-6"	v	450	#4	9'-2"
				v <sub>1</sub>	450	#4	3'-0"
h	162	#8	31'-5"	v <sub>2</sub>	8	#4	9'-11"
h <sub>1</sub>	162	#5	30'-5"	v <sub>3</sub>	8	#4	6'-1"
h <sub>2</sub>	81	#6	30'-8"	v <sub>4</sub>	88	#4	2'-1"
h <sub>3</sub>	10	#6	30'-11"	v <sub>5</sub>	88	#4	6'-4"
h <sub>4</sub>	8	#8	31'-8"	v <sub>6</sub>	18	#4	12'-10"
h <sub>5</sub>	38	#4	10'-5"	w	24	#5	20'-8"
h <sub>6</sub>	38	#4	20'-8"	w <sub>1</sub>	24	#5	10'-5"
n(E)	88	#6	6'-4"				

Concrete Box Culverts Cu. Yd. 270  
 Reinforcement Bars, Epoxy Coated Pound 840  
 Reinforcement Bars Pound 69,040



Signature: *William C. Thompson, Jr.*  
 Date: 3/10/2009  
 Exp. Date: 11/30/2010

S.N. 037-6200  
 CULVERT DETAILS  
 LATHROP STREET  
 OVER GRADETT DITCH  
 STA. 67+32.00