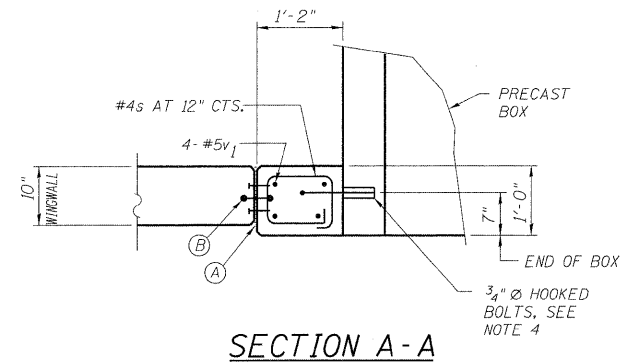
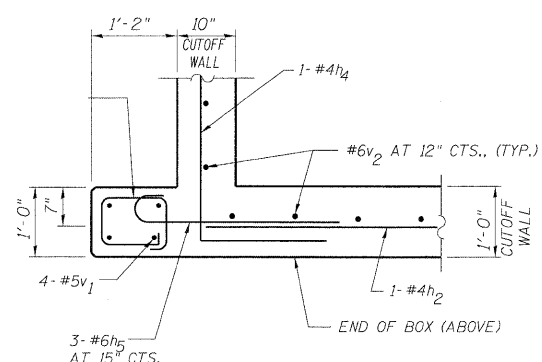


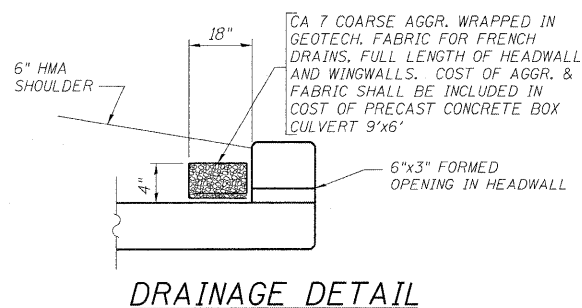
- (A) 1/2" PREMOULDED JOINT FILLER, INSTALL w/ 2 COLUMNS OF CONC. NAILS (FLAT HD. C.S.), 1" LONG, AT 12" CTS., VERTICAL.
- (B) 6" HOLLOW BULB TYPE NONMETALLIC WATER SEAL (6" FROM TOP OF WALL TO TOP OF FOOTING).



**SECTION A-A**

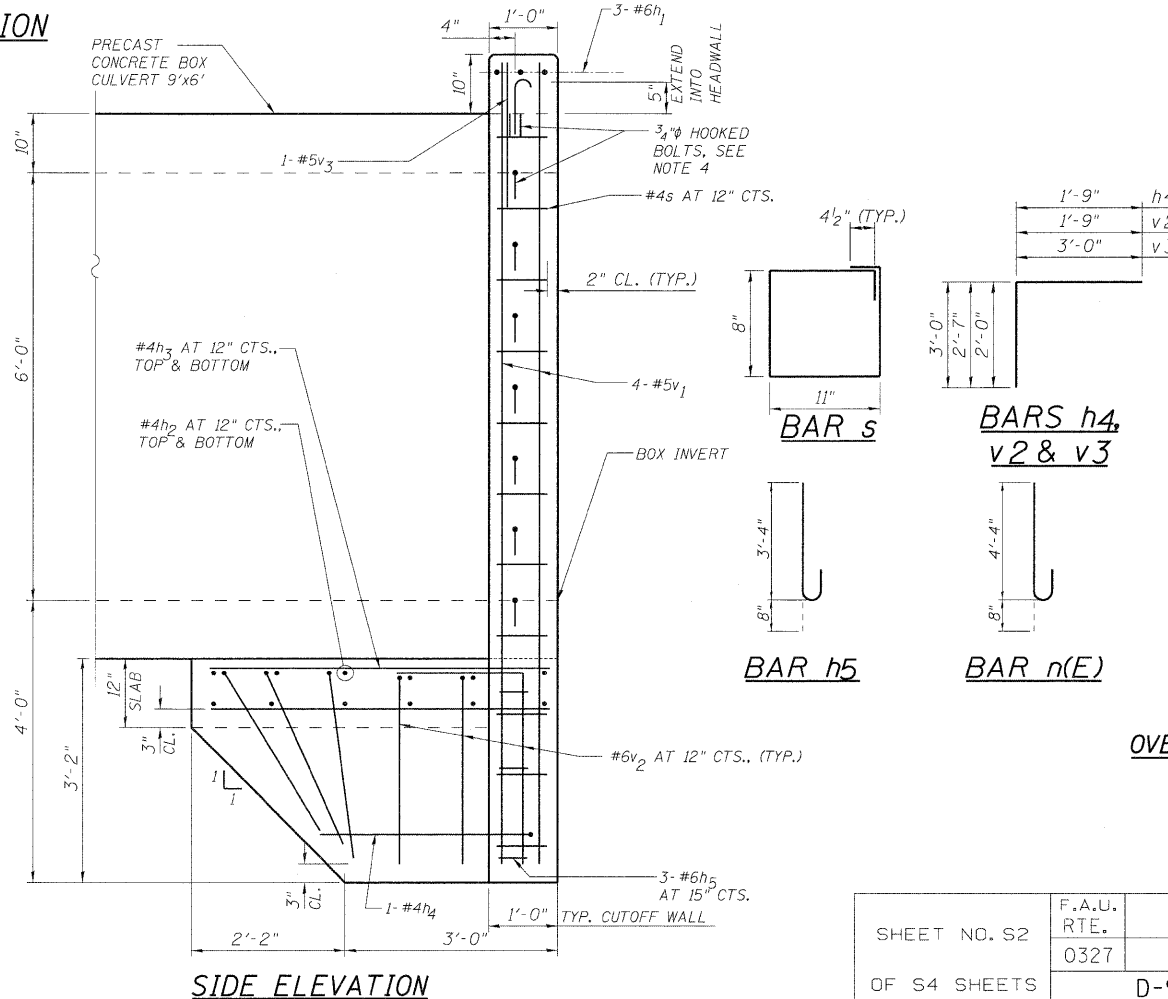


**SECTION B-B**



**DRAINAGE DETAIL**

**HEADWALL ELEVATION**



**SIDE ELEVATION**

**NOTES**

1. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS AND DIMENSIONS BEFORE ORDERING MATERIALS.
2. ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFERS, EXCEPT AS NOTED.
3. REINFORCEMENT BARS DESIGNATED (E) SHALL BE EPOXY COATED.
4. TO CONNECT CAST-IN-PLACE COLLAR TO PRECAST BOX, PROVIDE 3/4" HOOKED BOLTS WITH EMBEDDED INSERTS AT 12" MAXIMUM CENTERS. HOOKED BOLTS SHALL EXTEND 6" INTO HEADWALL AND 9" INTO SIDES OF COLLAR. COST SHALL BE INCLUDED IN THE PRECAST CONCRETE BOX CULVERT 9'x6' ITEM.
5. PROVIDE PROTECTIVE COAT ON TOP HORIZONTAL SURFACES AND TOP 6" ON INSIDE FACES OF HEADWALLS.

**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h	68	#4	11'-0"	—
h1	6	#6	23'-7"	—
h2	24	#4	21'-3"	—
h3	88	#4	4'-10"	—
h4	4	#4	4'-9"	—
h5	12	#6	4'-0"	—
n(E)	56	#4	5'-0"	—
s	44	#4	3'-11"	—
t	112	#4	6'-1"	—
v	68	#4	9'-10"	—
v1	16	#5	11'-3"	—
v2	64	#6	4'-4"	—
v3	4	#5	5'-0"	—
w	40	#5	11'-0"	—

Item	Unit	Quantity
REMOVAL OF EXISTING STRUCTURES	EACH	1
NAME PLATES	EACH	1
CONCRETE BOX CULVERTS	CU YD	47
REINFORCEMENT BARS	POUND	3523
REINFORCEMENT BARS, EPOXY COATED	POUND	421
STRUCTURE EXCAVATION	CU YD	240
EARTH EXCAVATION	CU YD	284
REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL	CU YD	147
COARSE AGGREGATE BACKFILL (SPECIAL)	CU YD	952
FILTER FABRIC	SQ YD	112
STONE RIPRAP, CLASS A4	SQ YD	55
PRECAST CONCRETE BOX CULVERT 9'x6'	FOOT	103
BACKSLOPE DRAINS, TYPE 3 6"	FOOT	60
PROTECTIVE COAT	SQ YD	15

**HEADWALL DETAILS**  
**FAU 0327 / WEST RIVER ROAD**  
**OVER CREEK (2.6 MI. SOUTH OF IL ROUTE 53**  
**SECTION 112 T-1, WILL COUNTY**  
**STA. 100+00.00**  
**STRUCTURE NO. 099-0521**

SHEET NO. S2	F.A.U. RTE. 0327	SECTION 112 T-1	COUNTY WILL	TOTAL SHEETS 17	SHEET NO. 12
OF S4 SHEETS	D-91-496-09		CONTRACT NO. 60G54		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT		

DESIGNED - ST
CHECKED - MJM
DRAWN - ST
CHECKED - MJM

**LONCO, INC.**  
 CONSULTING ENGINEERS  
 1560 WALL ST, SUITE 222  
 NAPERVILLE, ILLINOIS 60563 PH: (630) 577-9100