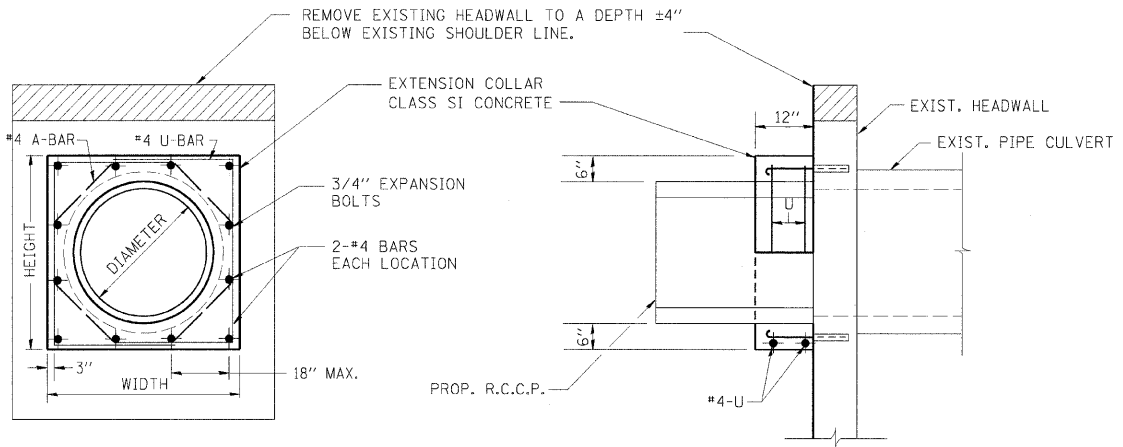


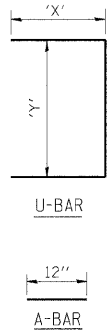
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	150-31HBK	LASALLE	492	315
STA. TO STA.			ILLINOIS FED. AID PROJECT	
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT	



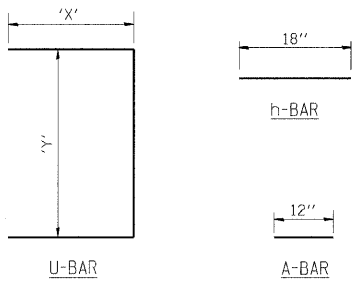
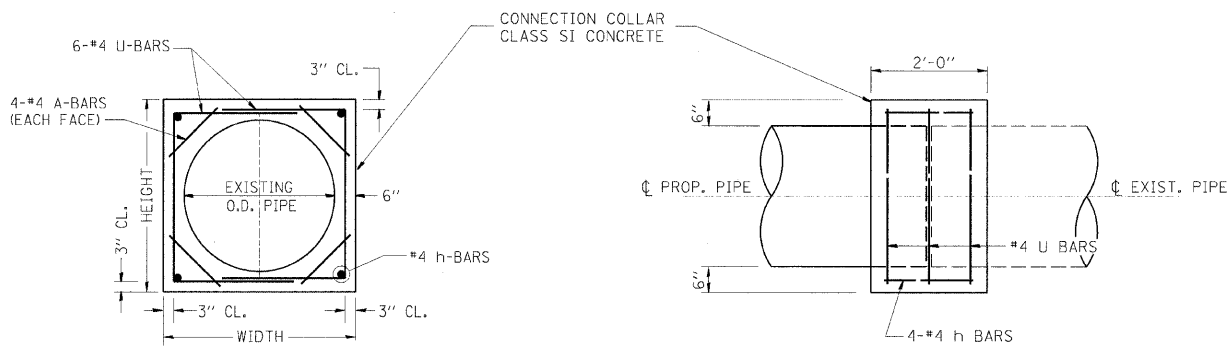
EXPANSION BOLTS SHALL CONSIST OF SELF DRILLING EXPANSION SHIELDS AND 3/4" DIA. HOOKED BOLTS. HOOKED BOLTS SHALL EXTEND A MINIMUM OF 9" INTO NEW CONCRETE.

MINIMUM CERTIFIED PROOF LOAD = 4,080 LBS.

LOCATION	EXISTING CULVERT SIZE	PIPE DIMENSION		PIPE AREA SQ. FT.	EXTENSION COLLAR		A-BAR 12	U-BAR		CLASS SI CONC. COLLAR CU. YD.	REINFORCEMENT BARS POUND	3/4" DIA. EXPANSION BOLTS EACH
		DIA. IN.	DIA. IN.		WIDTH	HEIGHT		IN.	IN.			
368	24	24	24	3.14	3.50	3.50	8	2.17	3.00	0.27	24.96	8
369	24	24	24	3.14	3.50	3.50	8	2.17	3.00	0.27	24.96	8
372	24	24	24	3.14	3.50	3.50	8	2.17	3.00	0.27	24.96	8
373	24	24	24	3.14	3.50	3.50	8	2.17	3.00	0.27	24.96	8

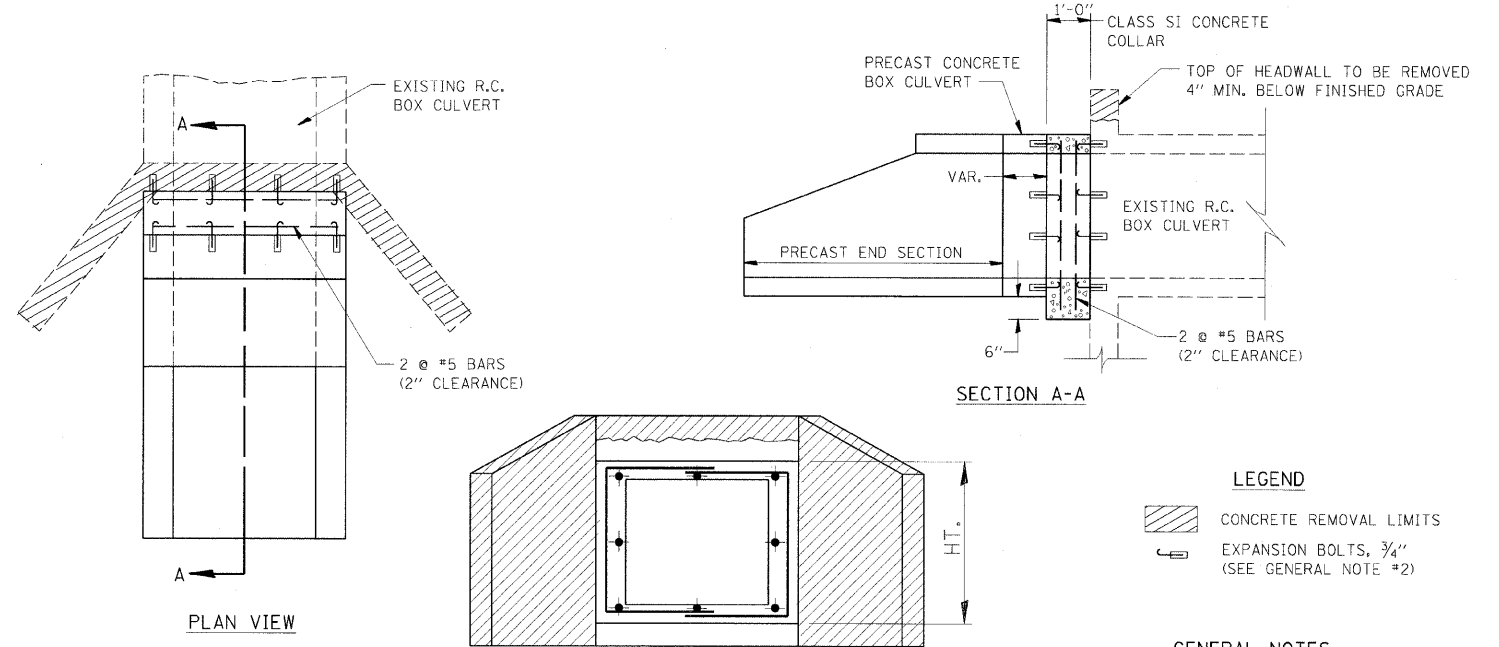


COLLAR DETAIL (R.C.C.P. EXTENSION OF PIPE CULVERT)



LOCATION	EXISTING CULVERT SIZE	EXTENSION COLLAR		A-BAR 12	U-BAR		h-BAR 18	CONC. COLLAR CU. YD.	REINFORCEMENT BARS POUND
		WIDTH	HEIGHT		IN.	IN.			
316	18	2.92	2.92	8	1.87	2.42	8	0.21	22.07
318	18	2.92	2.92	8	1.87	2.42	8	0.21	22.07
319	18	2.92	2.92	8	1.87	2.42	8	0.21	22.07
325	24	3.50	3.50	8	2.17	3.00	8	0.27	24.96
340	24	3.50	3.50	8	2.17	3.00	8	0.27	24.96

COLLAR DETAIL (DIRECT PIPE CULVERT EXTENSION)



LEGEND

- Concrete Removal Limits
- Expansion Bolts, 3/4" (SEE GENERAL NOTE #2)

GENERAL NOTES

- CLASS SI CONCRETE SHALL BE USED THROUGHOUT. THE INSIDE DIMENSIONS OF THE CLASS SI CONCRETE COLLAR SHALL BE THE SAME AS THE NEW PRECAST CONCRETE BOX CULVERT.
- EXPANSION BOLTS SHALL CONSIST OF SELF DRILLING EXPANSION SHIELDS AND 3/4" HOOKED BOLTS. HOOKED BOLTS SHALL EXTEND A MINIMUM OF 9" INTO NEW CONCRETE. BOLTS SHALL BE PLACED IN EACH CORNER AND AT 18" MAXIMUM CENTERS. MINIMUM CERTIFIED PROOF LOADING = 4,080 LBS.

LOCATION	EXISTING CULVERT SIZE	PRECAST CULV. EXTENSION	U-BAR		S.I. CONC. COLLAR CU. YD.	REINFORCEMENT BARS POUND	3/4" DIA. EXPANSION BOLTS EACH
			x'	y'			
346	4 X 3		3.08	4.30	0.38	43.76	12
347	4 X 3		3.08	4.30	0.38	43.76	12

COLLAR DETAIL (PRECAST BOX CULVERT EXTENSION OF BOX CULVERT)

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION
NAME	DATE	
		BOX & PIPE CULVERT EXTENSION DETAIL

SCALE: VERT. N/A
HORIZ. N/A
DATE

DRAWN BY TDT
CHECKED BY MTM

HANSON
Hanson Professional Services Inc.
1525 South Sixth Street
Springfield, Illinois 62703-2886
Offices Nationwide

MODEL NAME = SHEET 08
PLOT DATE = 10/23/2009
DRAWN BY = JMT
REVIEWED BY = JMT
PLOT SCALE = 1/8"=1'-0"
USER NAME = jmt

LAYOUT: JMT
DRAWN: JMT
REVIEWED: JMT