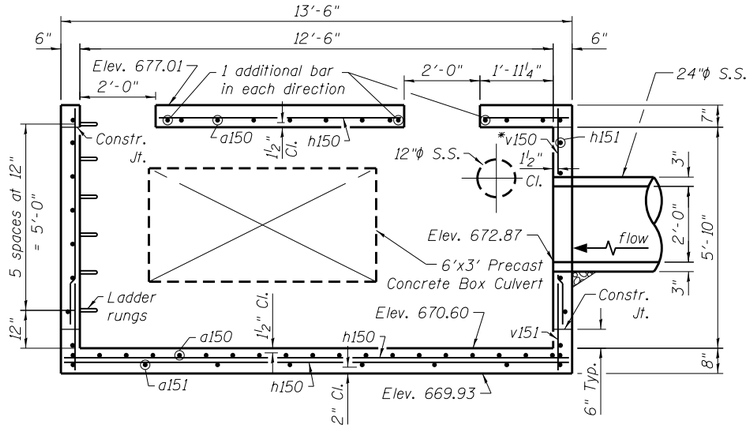
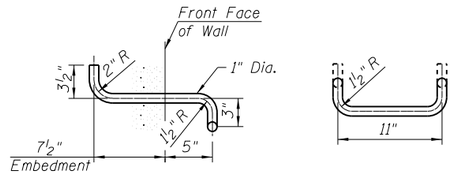


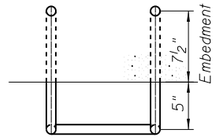
SECTION A-A

* Trim to fit around opening

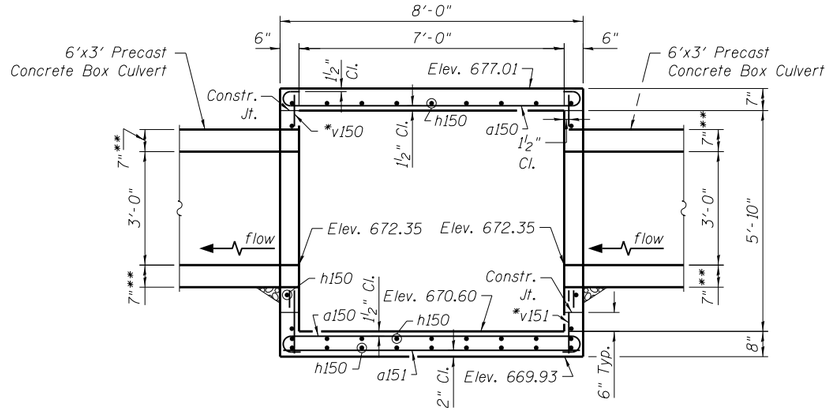


SIDE VIEW FRONT VIEW

TYPE Z LADDER RUNG ELEVATIONS



TYPE Z LADDER RUNG PLAN



SECTION B-B

* Trim to fit around opening
** Dimensions to be verified with precast concrete box culvert manufacturer.

1. The ladder rungs shall be aluminum, conforming to ASTM B361-Alloy 6061-T6 or shall be ductile iron. Aluminum ladder rungs shall receive a heavy coat of bituminous paint or cold applied asphaltic mastic for the portion embedded in concrete. The coating must extend beyond the embedment at least two inches.
2. The contractor may submit an alternative ladder rung detail for Engineer's approval.

Note: All costs for compacted subbase or CLSM, ladder rungs and all other appurtenances required to complete this work shall be included in the item "Concrete Structures."

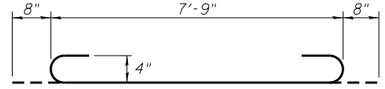
DESIGN STRESSES

fy = 60,000 psi
f'c = 3,500 psi

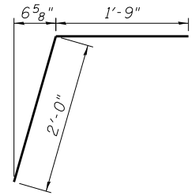
Notes:
Bars indicated thus 12x4-#5 etc. indicates 12 lines of bars with 4 lengths per line.
Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.

BILL OF MATERIAL

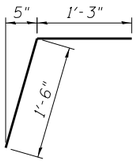
Bar	No.	Size	Length	Shape
a150	41	#6	9'-1"	
a151	8	#5	7'-8"	
h150	49	#5	13'-3"	
h151	16	#5	7'-9"	
h152	8	#5	3'-9"	
h153	16	#5	3'-0"	
h154	16	#5	2'-9"	
v150	56	#5	5'-8"	
v151	56	#5	2'-3"	
Structure Excavation			Cu. Yd.	159
Concrete Structures			Cu. Yd.	7.8
Reinforcement Bars			Pound	2,020



BAR a150



BAR h152



BAR h154

URS
100 S. WACKER DR.
SUITE 500
CHICAGO IL 60606
TEL (312)939-1000
FAX (312)939-4498

FILE NAME = D160M62-SHT-JC5-02.dgn	USER NAME = Anthony.Plutz	DESIGNED - PMH	REVISED -
		CHECKED - MJL	REVISED -
	PLOT SCALE = 40 '-' / in.	DRAWN - PMH	REVISED -
	PLOT DATE = 3/12/2013	CHECKED - MJL	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

JUNCTION CHAMBER NO. 5
DETAILS
SHEET NO. 2 OF 2 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	103R-5	COOK	778	226
		CONTRACT NO. 60M62		
	ILLINOIS FED. AID PROJECT			