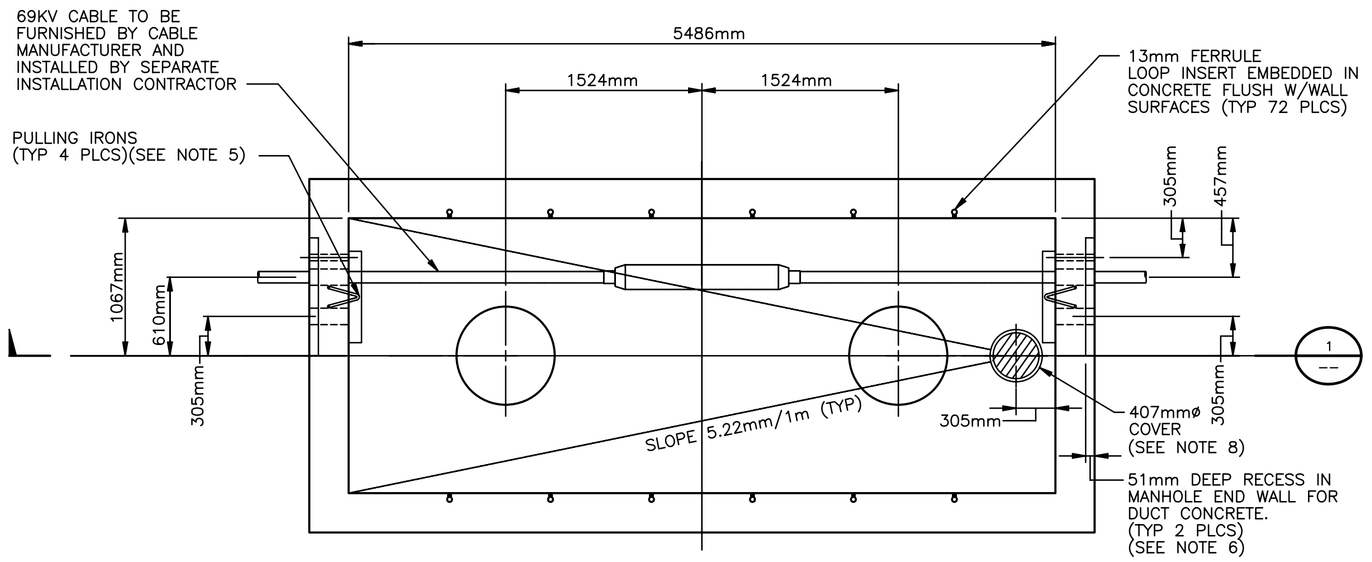
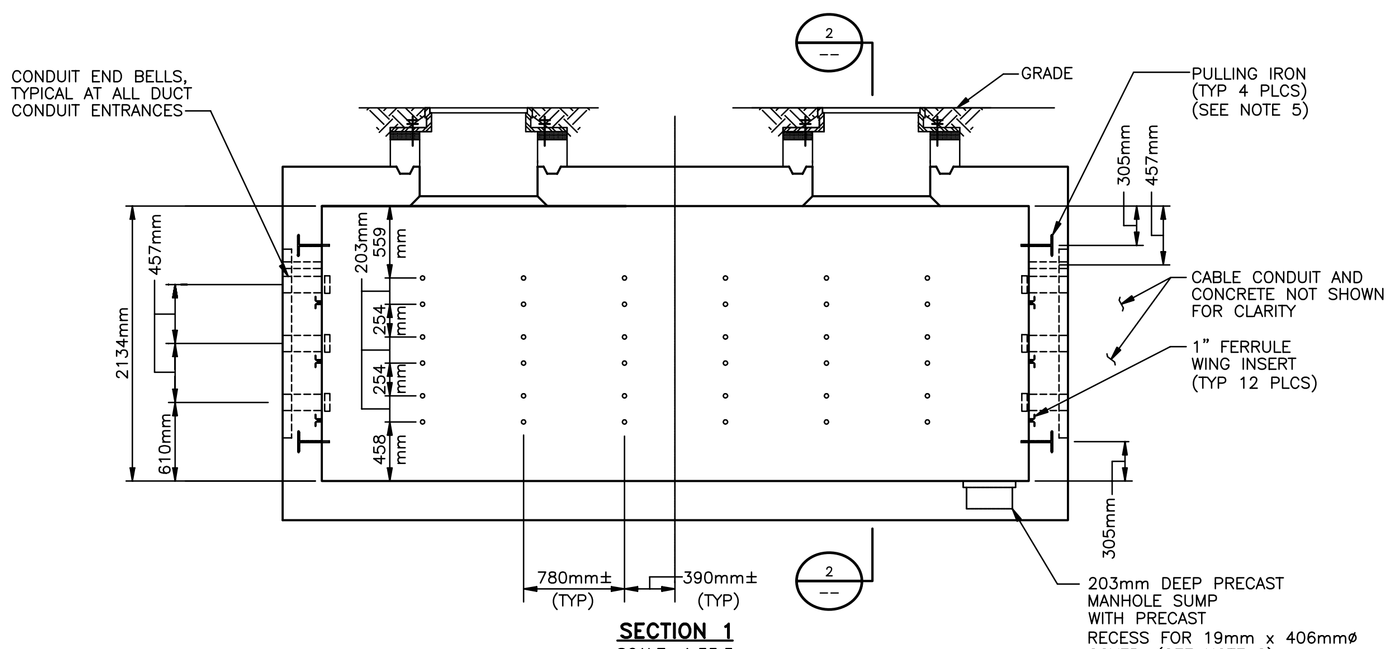


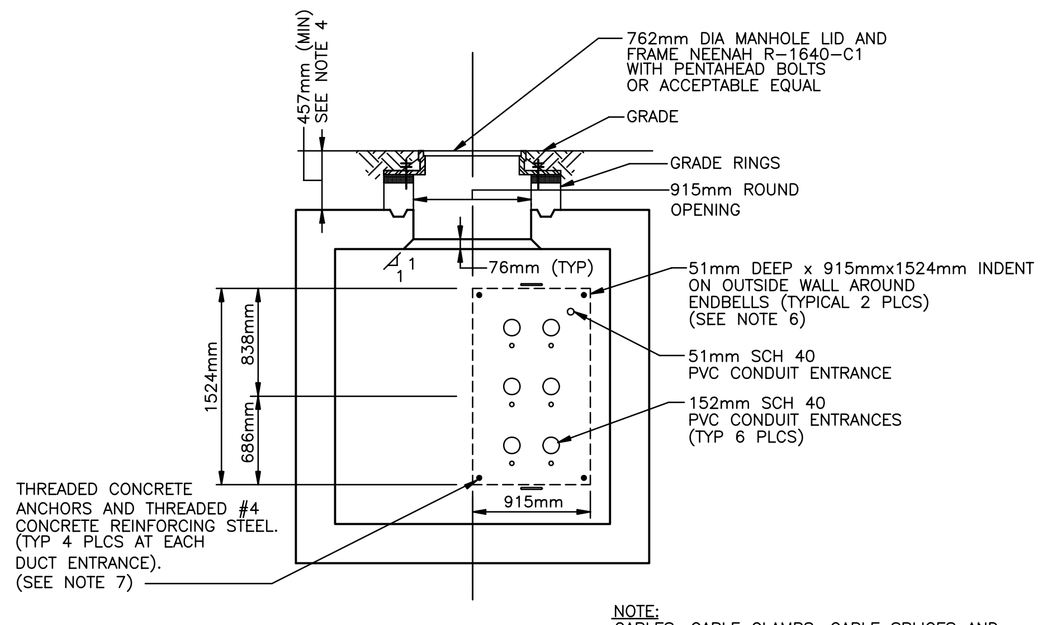
MANHOLE PLAN VIEW
SCALE: 1:33.3

NOTES:

1. FOR GENERAL NOTES, SEE DWG 136462-WSTR-E002.
2. THE MANHOLE FABRICATOR SHALL FURNISH THE MANHOLE AS SPECIFIED AND AS SHOWN ON THE DRAWINGS.
3. THE MANHOLE FABRICATOR SHALL PROVIDE A SUFFICIENT NUMBER OF GRADE RINGS TO FACILITATE INSTALLATION OF THE MANHOLE TO A DEPTH OF 1220mm (TOP OF MANHOLE TO GRADE) IF REQUIRED.
4. THE MANHOLE WILL BE SUPPLIED WITH ADEQUATE QUANTITY OF JOINT SEALER TO COMPLETELY SEAL THE MANHOLE JOINT INTERFACES. JOINT SEALER SHALL BE K.T. SNYDER CO. "RAM-NEK" OR ACCEPTABLE EQUAL. CONTRACTOR TO ENSURE SUFFICIENT JOINT SEALANT IS AVAILABLE AND APPLIED TO JOINT WHEN SETTING MANHOLES.
5. PULLING IRONS SHALL BE RATED FOR MINIMUM 20,000 POUNDS TENSION AT LOADING ANGLE OF 90 DEGREES.
6. MANHOLE FABRICATOR SHALL PRECAST A MINIMUM 51mm DEEP BY 915mm WIDE BY 1524mm HEIGHT RECESS IN THE MANHOLE OUTSIDE END WALL CENTERED AROUND THE DUCT ENTRANCES. RECESS SERVES AS A KEYWAY FOR DUCTBANK.
7. MANHOLE FABRICATOR SHALL FURNISH AND INSTALL 4 THREADED CONCRETE ANCHORS AND THREADED #4 BY 610mm LENGTH CONCRETE REINFORCING STEEL BARS AT EACH DUCT ENTRANCE.
8. MANHOLE SUMP COVER SHALL BE FABRICATED USING MINIMUM 3.2mmX19mm STEEL BAR STOCK AND WELDED IN A CONFIGURATION FOR SUPPORT OF 300 PSF MININUM. COVER SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION. CONTRACTOR SHALL SUBMIT COVER DESIGN FABRICATION DRAWINGS FOR APPROVAL BY ENGINEER BEFORE FABRICATION.
9. ALL REINFORCING BARS SHALL BE PLACED IN ACCORDANCE WITH THE SPECIFICATION.
10. ALL CONCRETE SHALL BE PLACED IN ACCORDANCE WITH THE SPECIFICATION.
11. MANHOLE SHALL BE DAMP PROOFED BY APPLYING TWO COATS OF COAL TAR DAMPPROOFING PAINT-KOPPERS "BITUMASTIC SUPERSERVICE BLACK", POLYGUARD "CA-7" COATING, OR TNEMEC "46-450 HEAVY TNEMECOIL" TO ALL EXTERIOR WALL SURFACES BELOW GRADE. INTERIOR SURFACES SHALL BE TREATED WITH "THOROSEAL" AT THE RATE OF TWO POUNDS PER SQUARE YARD BASE COAT AND ONE POUND PER SQUARE YARD FINISH COAT.
12. REBAR WITHIN MANHOLE WALLS SHALL NOT FORM A LOOP AROUND ANY INDIVIDUAL 6" CONDUIT OPENING. REBAR LOOPS ARE ACCEPTABLE WHEN ENCIRCLING ALL OF THE 6" CONDUIT OPENINGS.
13. PROVIDE ONE STEEL MANHOLE LADDER PER MANHOLE.
14. MANHOLE DESIGN & CALCULATIONS SHALL BE REVIEWED BY OWNER PRIOR TO MANUFACTURING. MANHOLE DESIGN & CALCULATIONS SHALL BE SEALED BY A KANSAS LICENSED ENGINEER.



SECTION 1
SCALE: 1:33.3



SECTION 2
SCALE: 1:33.3

NOTE:
CABLES, CABLE CLAMPS, CABLE SPLICES AND CABLE SUPPORTS ARE NOT SHOWN FOR CLARITY.

KDOT PROJ. NO. 54-87 K-8258-01

Sheet No. 155 of 556

APPROVED FOR CONSTRUCTION

NO	DATE	REVISIONS AND RECORD OF ISSUE	DRN	DES	CHK	PDE	APP
1	03/01/06	ISSUED FOR CONSTRUCTION	MRJ	KDM	FLR	FLR	–
0	01/31/05	95% REVIEW ISSUE	MRJ	KM	FLR	FLR	–

I HEREBY CERTIFY THAT THIS DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF KANSAS.
SIGNED
DATE REG NO.

BLACK & VEATCH

WESTAR ENERGY COMPANY
US HIGHWAY 54/KELLOGG AVENUE PROJECT

ENGINEER FLR | DRAWN KDM | CHECKED FLR | DATE 01/31/05

69kV UNDERGROUND TRANSMISSION LINE MANHOLE SECTIONS AND DETAILS

PROJECT 136462-WSTR-P001 | DRAWING NUMBER | REV 1
CODE
AREA

JON:06867 P1 A=1
ACAD 15.06s (LMS Tech)
AJN:6009 10:23:08
12/03/04