



UTILITIES DEPARTMENT

Current Revision: December 14, 2021

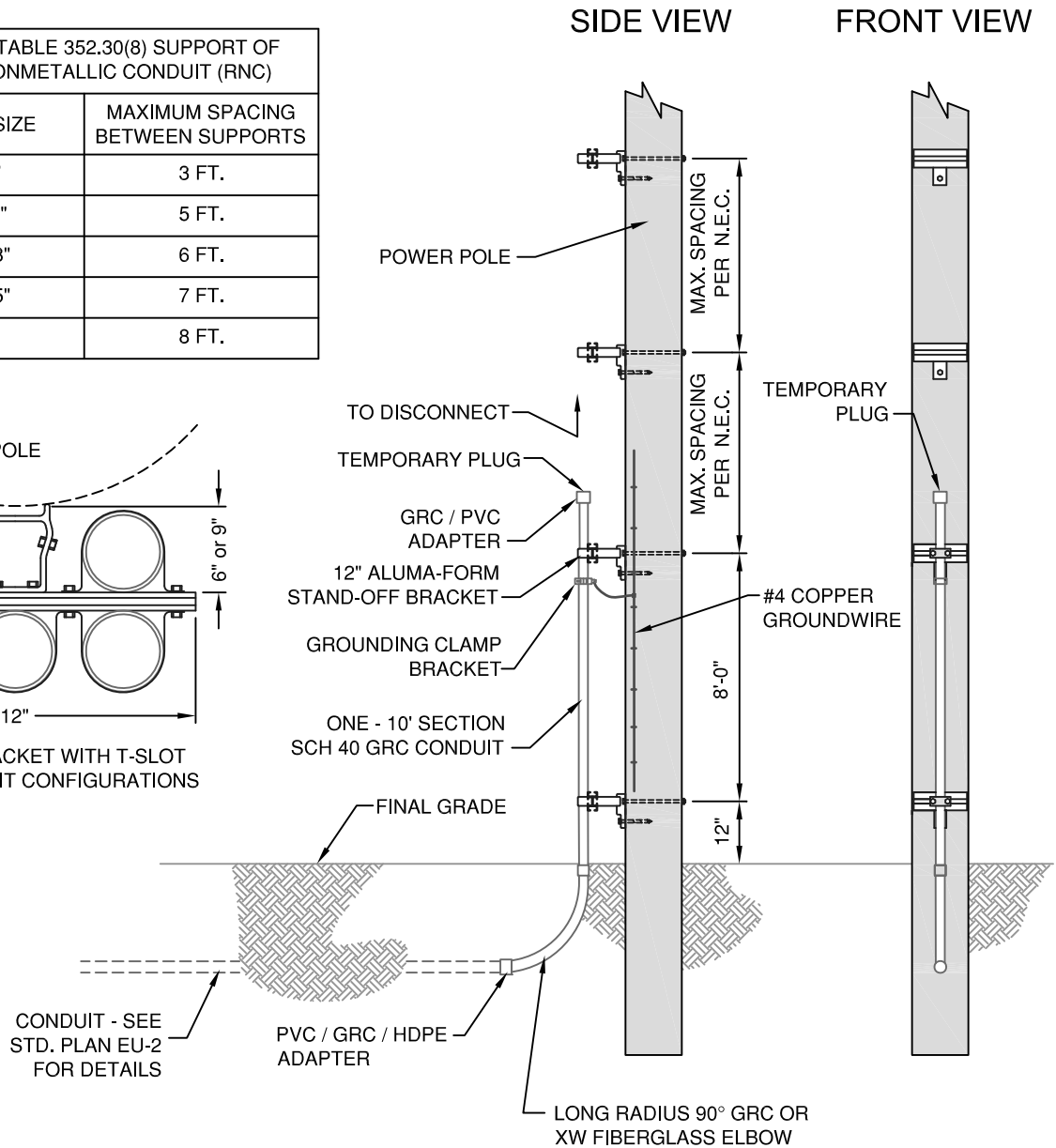
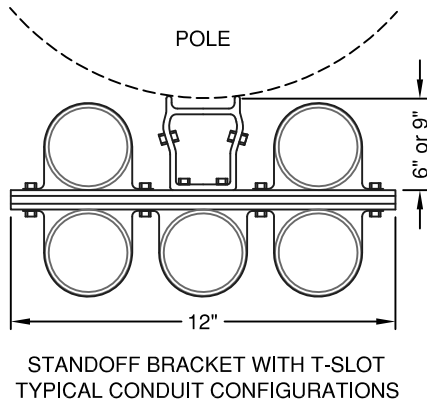
Underground Electrical Standards

Underground

UNDERGROUND

EU-1	RISER CONDUIT INSTALLATION (2 SHEETS)
EU-2	CONDUIT INSTALLATION
EU-3	TRENCH DETAIL
EU-4	TRANSFORMER PAD, 3 PHASE, 75 KVA - 1,000 KVA, (2 SHEETS)
EU-5	TRANSFORMER PAD, 3 PHASE, 1,500 KVA, (2 SHEETS)
EU-6	TRANSFORMER PAD, 1 PHASE (4 SHEETS)
EU-7	TRANSFORMER PAD, 3 PHASE, TYPE 1 PRE-FORMED CONCRETE - 9'X9'
EU-8	TRANSFORMER PAD, 3 PHASE, TYPE 2 PRE-FORMED CONCRETE - 9'X11'
EU-9	PROTECTIVE POSTS
EU-10	3 PHASE SECTIONALIZER CABINET- CONDUIT INSTALLATION
EU-11	SECTIONALIZER CABINET- DIMENSIONS
EU-12	PULL BOX- SPECIFICATIONS (12x12, 11x18, 24x36) (3 SHEETS)
EU-13	PULL BOX- SPECIFICATIONS FOR TYPE 5
EU-14	PULL BOX CONDUIT INSTALLATION
EU-15	SECONDARY PEDESTAL
EU-16	ELECTRICAL VAULT (2 SHEETS)
EU-17	UTILITY ENCLOSURE; 7' X 4' X 3' DEEP (2 SHEETS)
EU-18	UTILITY ENCLOSURE; 7' X 4' X 6' DEEP (2 SHEETS)
EU-19	UTILITY ENCLOSURE LID; 1 PHASE TRANSFORMER0 TYPE 1
EU-20	UTILITY ENCLOSURE LID; SOLID- TYPE 2
EU-21	FIBERGLASS BOX PAD FOR 3 PHASE SWITCH GEAR (3 SHEETS)
EU-22	VOID
DU-23	DEFERRAL CABINET; 1 PHASE

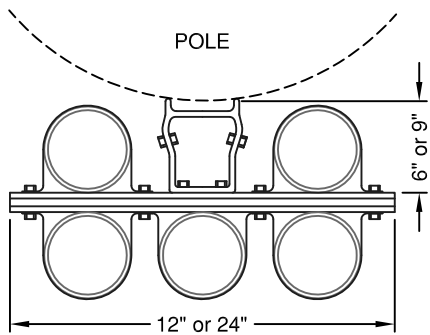
PER N.E.C. TABLE 352.30(8) SUPPORT OF RIDGED NONMETALLIC CONDUIT (RNC)	
CONDUIT SIZE	MAXIMUM SPACING BETWEEN SUPPORTS
1/2" - 1"	3 FT.
1-1/4" - 2"	5 FT.
2-1/2" - 3"	6 FT.
3-1/2" - 5"	7 FT.
6"	8 FT.



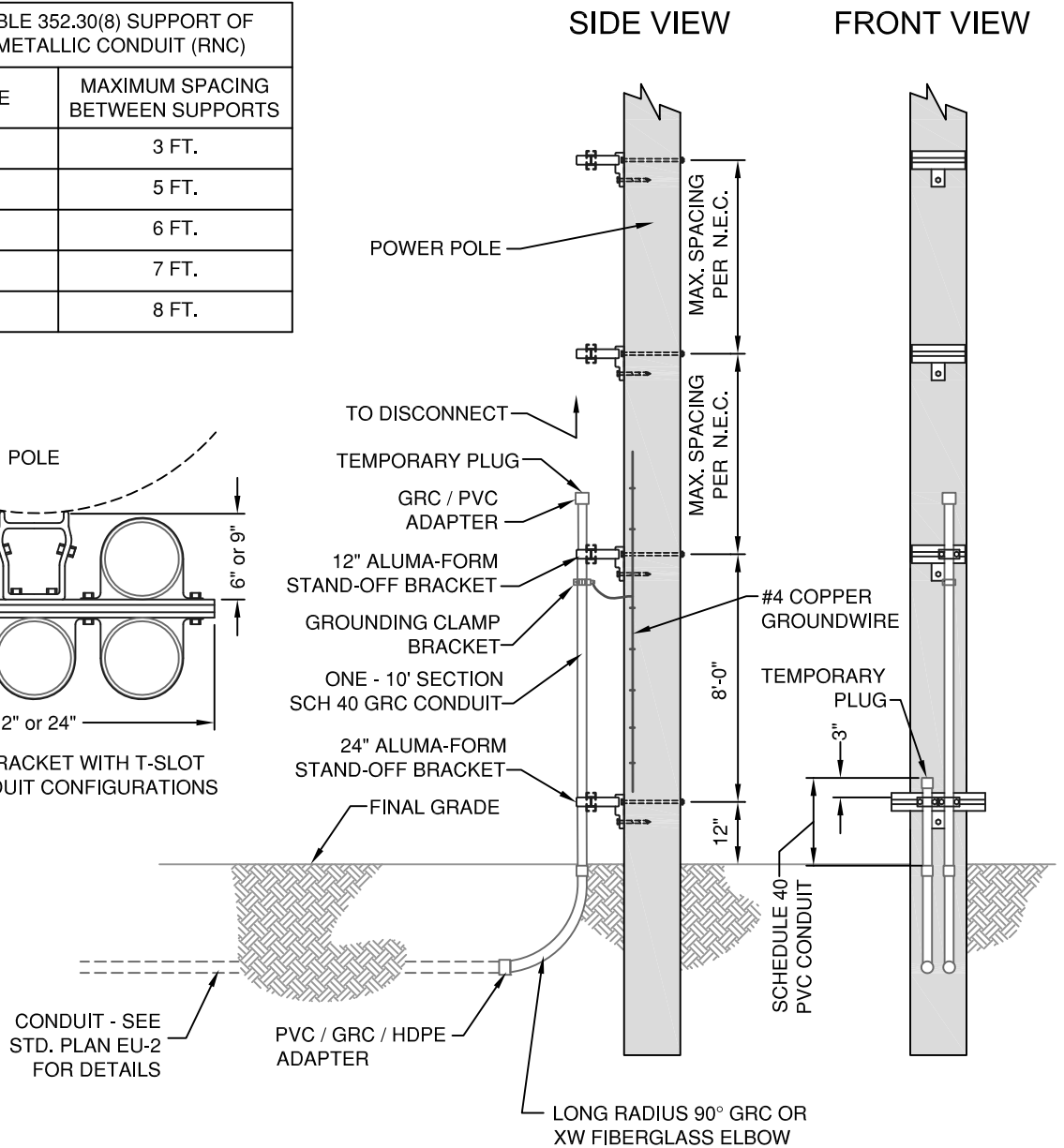
1. THE CONDUIT SHALL EXTEND UP THE RISER POLE ON THE SAME SIDE AS THE UTILITY DEPARTMENT INSTALLED DISCONNECT SWITCH.
2. CONDUIT SHALL BE SUPPORTED TO POLE USING CITY SUPPLIED ALUMA-FORM CONDUIT STANDOFF BRACKETS AND STRAPS.
3. ALL MATERIALS SHALL BE AS LISTED, OR AN APPROVED EQUAL. THE USE OF A BRAND NAME IS FOR THE PURPOSE OF DESCRIBING A STANDARD QUALITY, PERFORMANCE, AND CHARACTERISTIC DESIRED, AND IS NOT INTENDED TO LIMIT OR RESTRICT COMPETITION.

REV: 4/4/16

PER N.E.C. TABLE 352.30(8) SUPPORT OF RIDGED NONMETALLIC CONDUIT (RNC)	
CONDUIT SIZE	MAXIMUM SPACING BETWEEN SUPPORTS
1/2" - 1"	3 FT.
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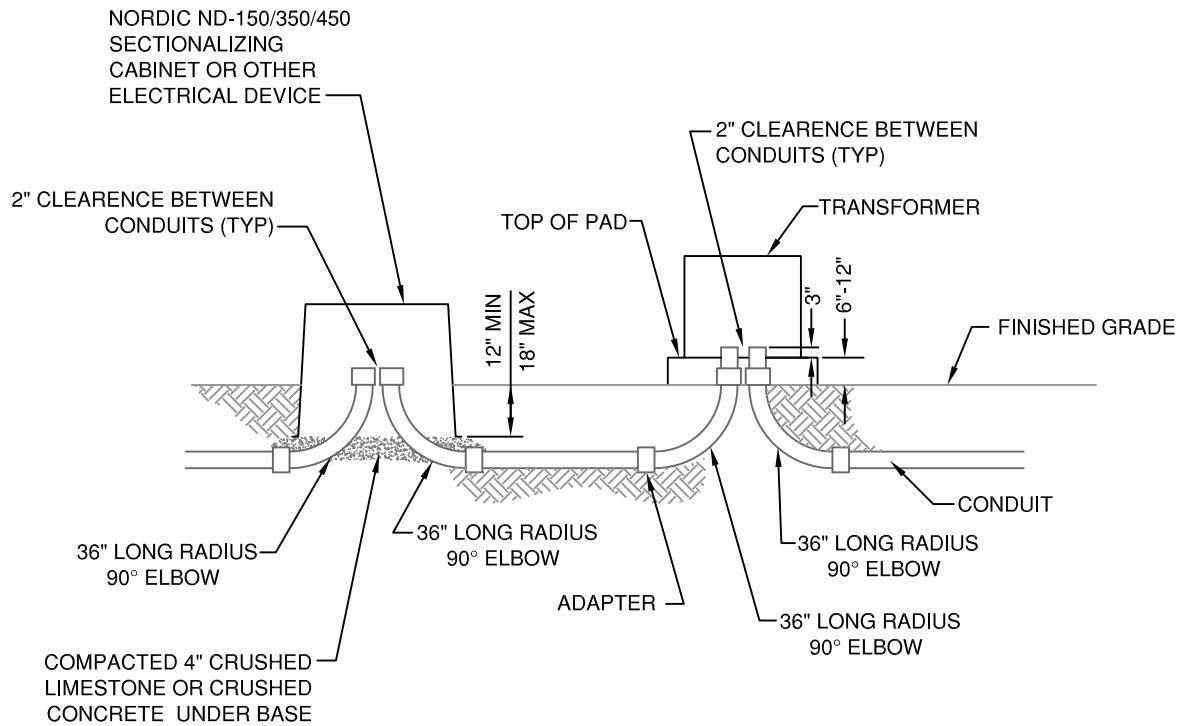


STANDOFF BRACKET WITH T-SLOT
TYPICAL CONDUIT CONFIGURATIONS



1. THE CONDUIT SHALL EXTEND UP THE RISER POLE ON THE SAME SIDE AS THE UTILITY DEPARTMENT INSTALLED DISCONNECT SWITCH.
2. CONDUIT SHALL BE SUPPORTED TO POLE USING CITY SUPPLIED ALUMA-FORM CONDUIT STANDOFF BRACKETS AND STRAPS.
3. ALL MATERIALS SHALL BE AS LISTED, OR AN APPROVED EQUAL. THE USE OF A BRAND NAME IS FOR THE PURPOSE OF DESCRIBING A STANDARD QUALITY, PERFORMANCE, AND CHARACTERISTIC DESIRED, AND IS NOT INTENDED TO LIMIT OR RESTRICT COMPETITION.

REV: 4/4/16



1. LONG RADIUS ELBOW AND ADAPTER MATERIAL TYPE TO BE DETERMINED BY CITY PRIOR TO CONDUIT INSTALLATION. (GRC, SCH. 40 PVC, EXTRA HEAVY-WALLED FIBERGLASS, ETC.)
2. FINISHED GRADE LOCATION TO BE DETERMINED BY CITY PRIOR TO INSTALLATION OF TRANSFORMER, SECTIONALIZING CABINET, OR OTHER ELECTRICAL DEVISE. (TOP OF CURB, FINISHED FLOOR ELEVATION, EXISTING GRADE, ETC.)
3. CONDUIT SHALL BE BEDDED IN SAND, UNLESS OTHERWISE APPROVED BY THE UTILITY DEPARTMENT INSPECTOR.
4. THE UTILITY DEPARTMENT SHALL FURNISH AND THE CONTRACTOR SHALL INSTALL A MARKER TAPE, ALONG AND ABOVE, ALL CONDUIT RUNS.
5. SCHEDULE 40 P.V.C. CONDUIT(S) SHALL BE USED THROUGHOUT ENTIRE PROJECT. USE ONLY CARLON QUICK SET P.V.C. GLUE-#VC9982.
6. H.D.P.E. PIPE MAY BE USED WITH APPROVAL OF THE G.I.U.D. INSTALLATION METHODS SHALL BE APPROVED BY THE G.I.U.D. PRIOR TO BEGINNING PROJECT.
7. ALL MATERIALS SHALL BE AS LISTED, OR AN APPROVED EQUAL. THE USE OF A BRAND NAME IS FOR THE PURPOSE OF DESCRIBING A STANDARD QUALITY, PERFORMANCE, AND CHARACTERISTIC DESIRED, AND IS NOT INTENDED TO LIMIT OR RESTRICT COMPETITION.

REV: 2/29/2012

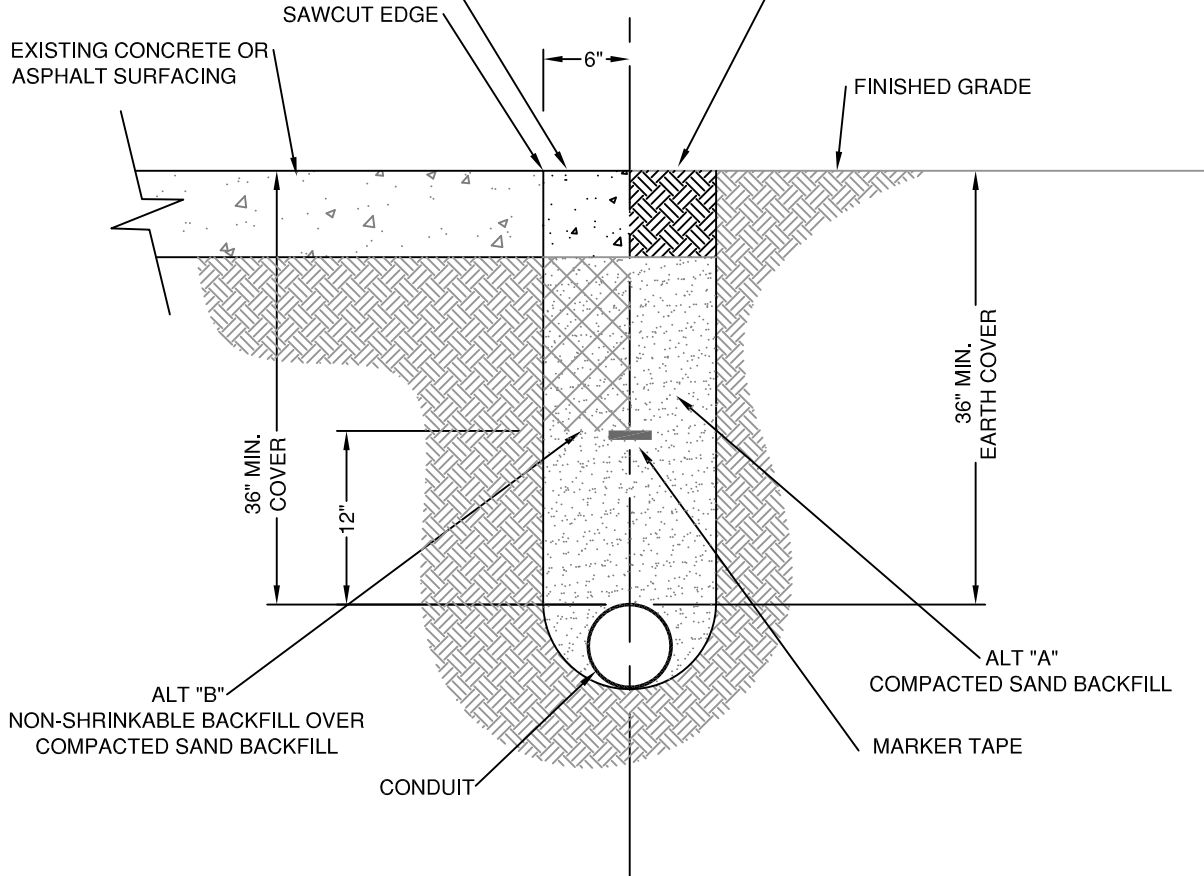
REMOVE AND REPLACE CONCRETE OR ASPHALT AS REQUIRED TO MATCH EXISTING SURFACING WITH 8" 47-B CONCRETE OR 6" 47-B CONCRETE BASE w/ 2" BITUMINOUS ASPHALT SURFACING.

EXISTING CONCRETE OR ASPHALT SURFACING

SAWCUT EDGE

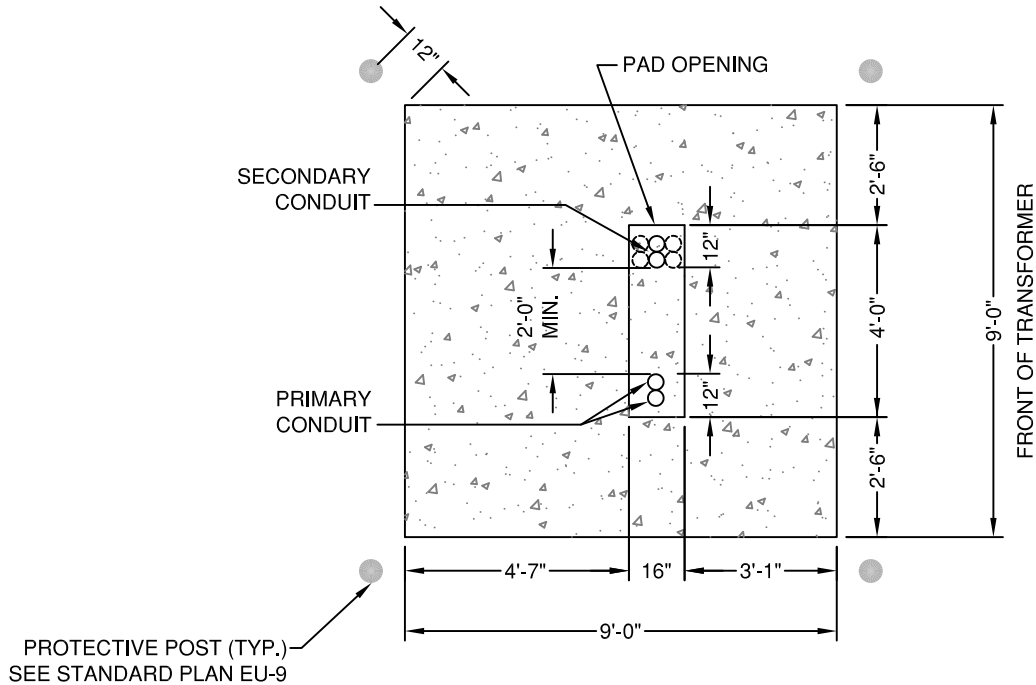
COMPACTED EARTH BACKFILL

FINISHED GRADE



1. CONDUIT TO BE BEDDED IN SAND, UNLESS OTHERWISE APPROVED BY THE UTILITY DEPARTMENT INSPECTOR.
2. THE UTILITY DEPARTMENT SHALL FURNISH AND THE CONTRACTOR SHALL INSTALL A MARKER TAPE, ALONG AND ABOVE, ALL CONDUIT RUNS.
3. ALL BACKFILL METHODS SHALL BE AS APPROVED BY THE UTILITY DEPARTMENT INSPECTOR.
4. THE UTILITY DEPARTMENT INSPECTOR SHALL HAVE OPPORTUNITY TO INSPECT CONDUIT INSTALLATION PRIOR TO BACKFILLING.

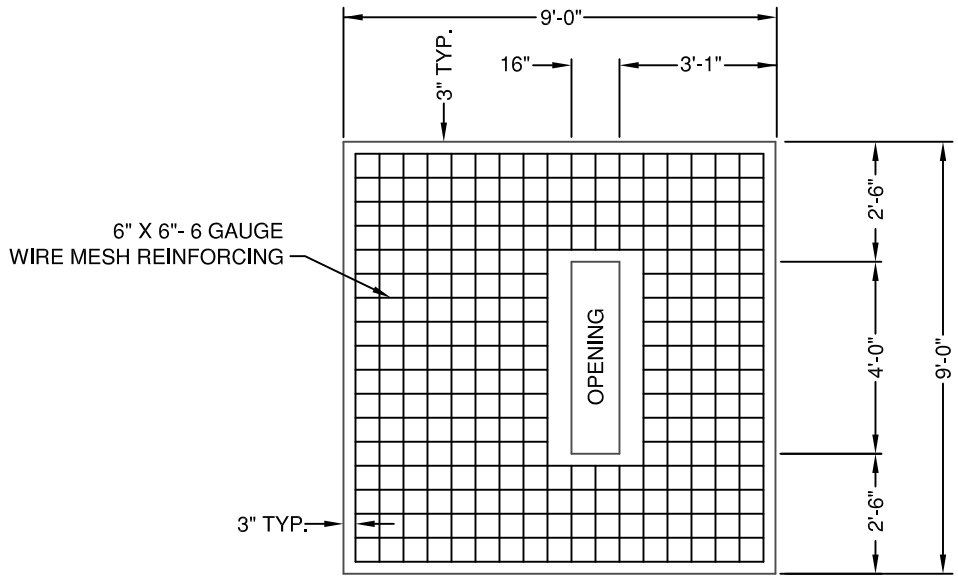
REV: 2/29/2012



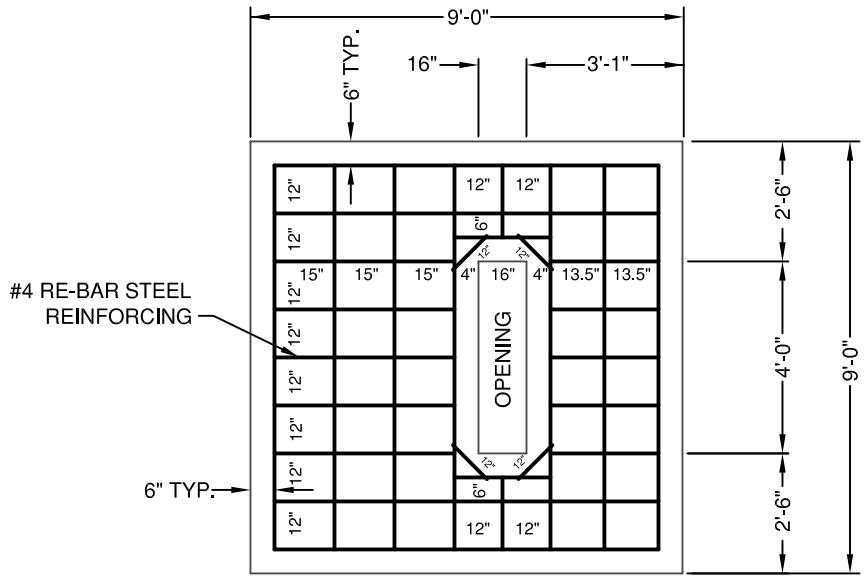
TRANSFORMER PAD

1. TRANSFORMER PADS TO BE TYPE 47-B MODIFIED CONCRETE AS PER CITY SPECIFICATIONS SECTION 2, DIVISION 2. PAD TO BE 12" THICK, REINFORCED WITH 6"x6"-6 GAUGE WIRE MESH OR #4 RE-BAR AS PER STANDARD PLAN EU-4, SHEET 2 OF 2.
2. TOP OF PAD TO BE SAME ELEVATION OF FINISHED FLOOR OR AS SPECIFIED BY UTILITY DEPARTMENT. ALL FORMS AND REINFORCING SHALL BE INSPECTED BY CITY ELECTRIC DEPARTMENT PRIOR TO PLACEMENT OF CONCRETE.
3. ELECTRICAL CONTRACTOR SHALL INSTALL CONCRETE FILLED PROTECTIVE POSTS AT EACH CORNER OF TRANSFORMER PAD. PROTECTIVE POSTS SHALL BE 3'-8" ABOVE AND 3 FEET BELOW FINISHED GRADE AS PER STANDARD PLAN EU-9. PROTECTIVE POSTS ARE TO PROTECT TRANSFORMER FROM TRAFFIC AND SHALL BE INSTALLED PRIOR TO THE SETTING OF TRANSFORMER BY UTILITY DEPARTMENT.
4. A MINIMUM OF 10 FEET SHALL BE MAINTAINED BETWEEN THE TRANSFORMER AND ANY STRUCTURE.
5. FRONT OF TRANSFORMER TO FACE _____ .

REVISED: 8/30/2021



DETAIL "A"
6" x 6"- 6 GAUGE WIRE MESH



DETAIL "B"
#4 RE-BAR

1. TRANSFORMER PADS TO BE TYPE 47-B MODIFIED CONCRETE AS PER CITY SPECIFICATIONS SECTION 2, DIVISION 2. PAD TO BE 12" THICK, REINFORCED WITH 6"x6"-6 GAUGE WIRE MESH (DETAIL "A") OR #4 RE-BAR (DETAIL "B").
2. TOP OF PAD TO BE 6" ABOVE FINISHED GRADE. ALL FORMS AND REINFORCING SHALL BE INSPECTED BY CITY ELECTRIC DEPARTMENT PRIOR TO PLACEMENT OF CONCRETE.
4. STEEL REINFORCING TO BE SUSPENDED 6" FROM SUB GRADE OF TRANSFORMER PAD.
5. ALL RE-BAR INTERSECTION CROSSINGS TO BE WIRE TIED TOGETHER.

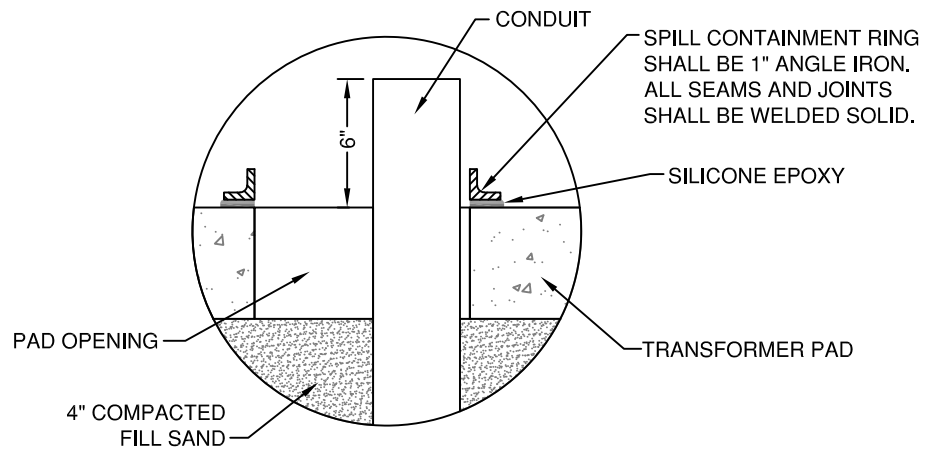
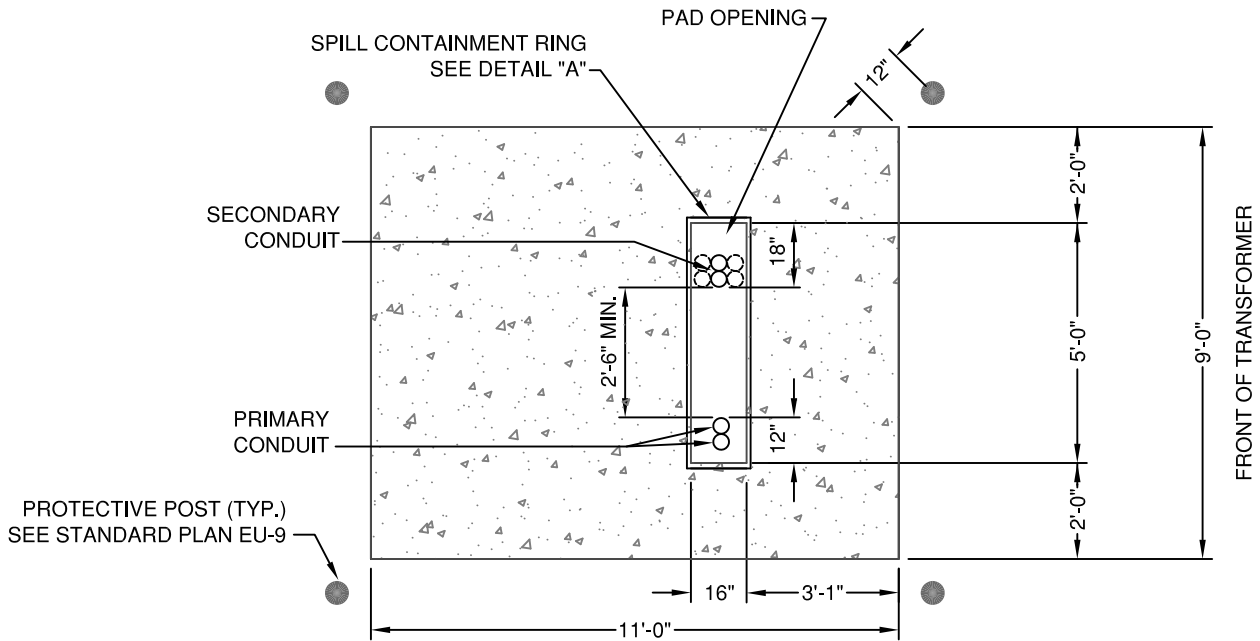
REVISED: 8/30/2021



DATE: 3/5/2012
DRAWN BY: K.J.M.
CHECKED BY: T.W.B.

75-1000 KVA 3Ø
TRANSFORMER PAD
REINFORCING

PLAN
EU - 4
2 OF 2



DETAIL "A"

1. SERVICE TO BE _____ V.A.C.
2. TRANSFORMER PADS TO BE TYPE 47-B MODIFIED CONCRETE AS PER CITY SPECIFICATIONS SECTION 2, DIVISION 2. PAD TO BE 12" THICK, REINFORCED WITH 6"x6"-6 GAUGE WIRE MESH OR #4 RE-BAR AS PER STANDARD PLAN EU-5, SHEET 2 OF 2.
3. TOP OF PAD TO BE SAME ELEVATION OF FINISHED FLOOR OR AS SPECIFIED BY UTILITY DEPARTMENT. ALL FORMS AND REINFORCING SHALL BE INSPECTED BY CITY ELECTRIC DEPARTMENT PRIOR TO PLACEMENT OF CONCRETE.
4. ELECTRICAL CONTRACTOR SHALL INSTALL CONCRETE FILLED PROTECTIVE POSTS AT EACH CORNER OF TRANSFORMER PAD. PROTECTIVE POSTS SHALL BE 3'-8" ABOVE AND 3 FEET BELOW FINISHED GRADE AS PER STANDARD PLAN EU-9. PROTECTIVE POSTS ARE TO PROTECT TRANSFORMER FROM TRAFFIC AND SHALL BE INSTALLED PRIOR TO THE SETTING OF TRANSFORMER BY UTILITY DEPARTMENT.
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6. FRONT OF TRANSFORMER TO FACE _____ .

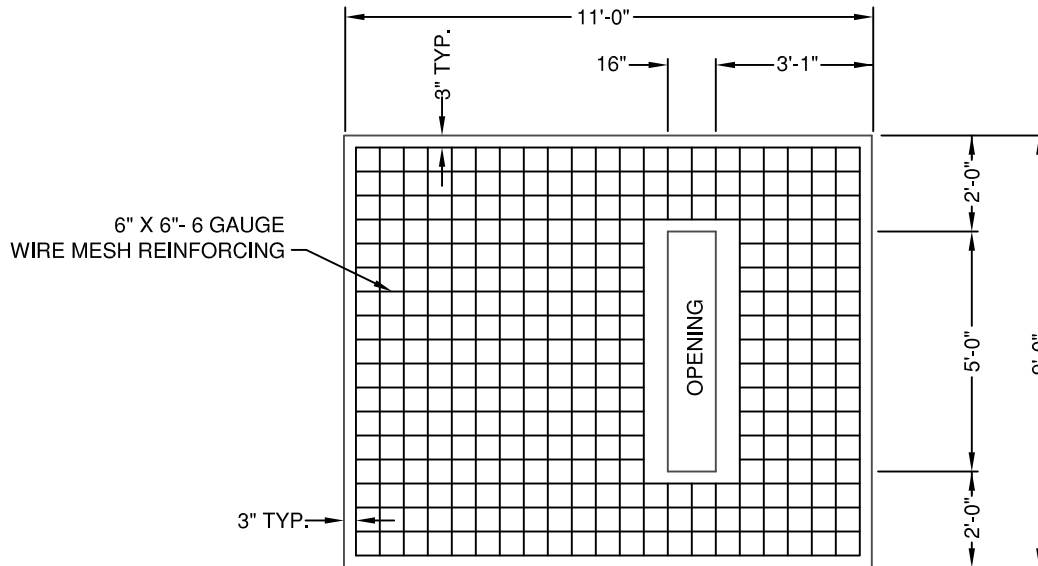
REVISED: 8/30/2021



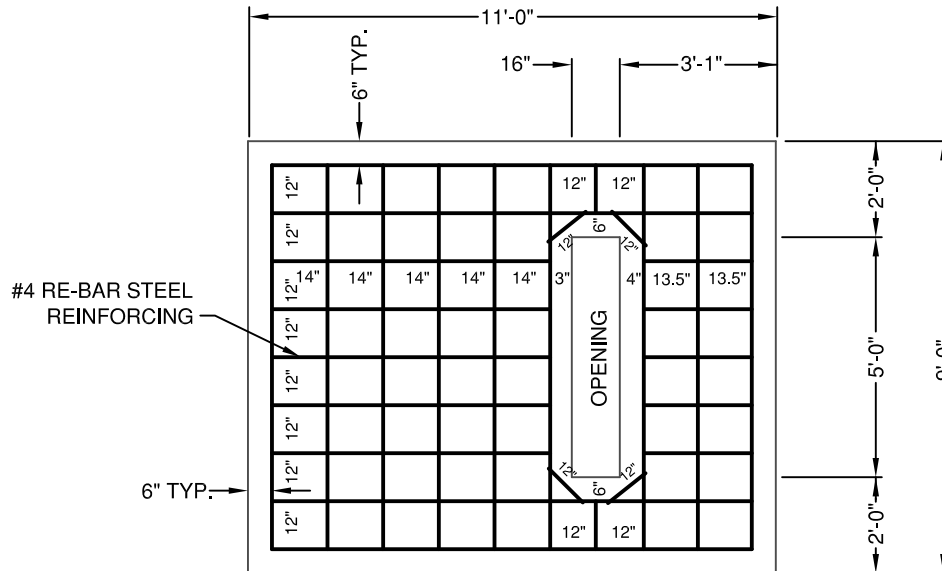
DATE: 4/12/1996
 DRAWN BY: P.S.L.
 CHECKED BY: T.W.B.

1500-2500 KVA
 3Ø TRANSFORMER
 PAD

PLAN
 EU - 5
 1 OF 2



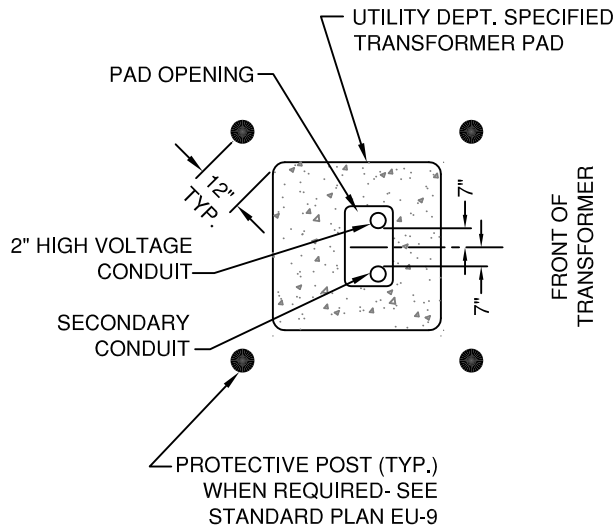
DETAIL "A"
6" x 6"- 6 GAUGE WIRE MESH



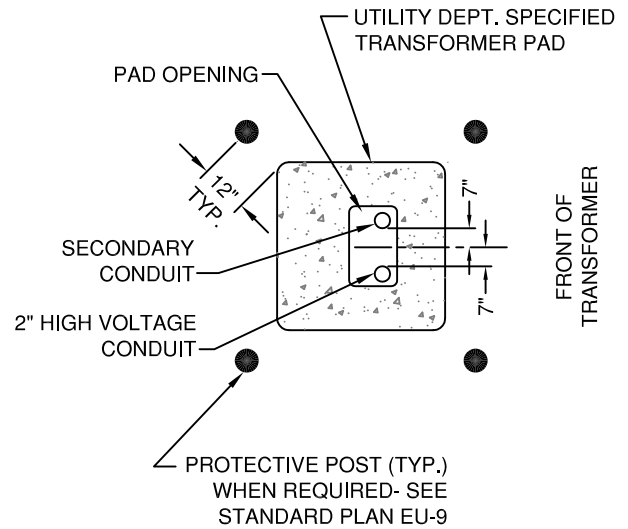
DETAIL "B"
#4 RE-BAR

1. TRANSFORMER PADS TO BE TYPE 47-B MODIFIED CONCRETE AS PER CITY SPECIFICATIONS SECTION 2, DIVISION 2. PAD TO BE 12" THICK, REINFORCED WITH 6"x6"-6 GAUGE WIRE MESH (DETAIL "A") OR #4 RE-BAR (DETAIL "B").
2. TOP OF PAD TO BE 6" ABOVE FINISHED GRADE. ALL FORMS AND REINFORCING SHALL BE INSPECTED BY CITY ELECTRIC DEPARTMENT PRIOR TO PLACEMENT OF CONCRETE.
4. STEEL REINFORCING TO BE SUSPENDED 6" FROM SUB GRADE OF TRANSFORMER PAD.
5. ALL RE-BAR INTERSECTION CROSSINGS TO BE WIRE TIED TOGETHER.

REVISED: 8/30/2021



120/240 V.A.C.
1 PHASE LOW PROFILE
 DEAD FRONT
 TRANSFORMER PAD



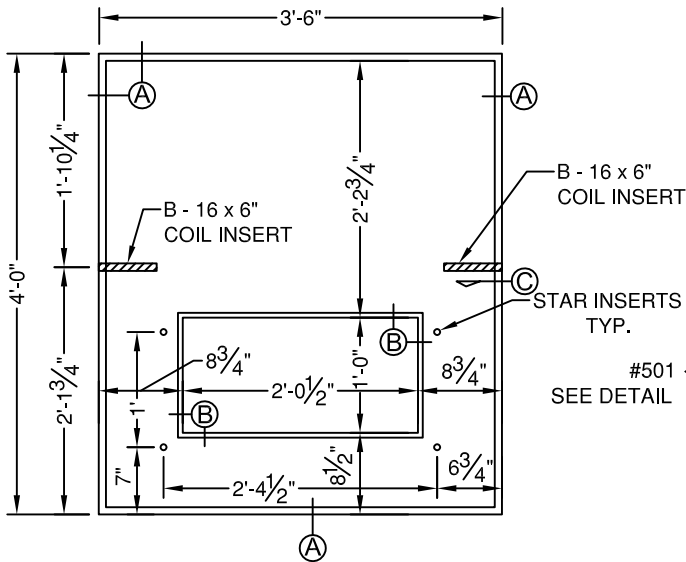
120/240 V.A.C.
1 PHASE STANDARD
 DEAD FRONT
 TRANSFORMER PAD

1. ELECTRICAL CONTRACTOR SHALL INSTALL CONCRETE FILLED PROTECTIVE POSTS AT EACH CORNER OF TRANSFORMER PAD. PROTECTIVE POSTS SHALL BE 3'-8" ABOVE AND 3 FEET BELOW FINISHED GRADE AS PER STANDARD PLAN EU-9. PROTECTIVE POSTS ARE TO PROTECT TRANSFORMER FROM TRAFFIC AND SHALL BE INSTALLED PRIOR TO THE SETTING OF TRANSFORMER BY UTILITY DEPARTMENT.
2. A MINIMUM OF 10 FEET SHALL BE MAINTAINED BETWEEN THE TRANSFORMER AND ANY STRUCTURE.
3. FRONT OF TRANSFORMER TO FACE _____.
4. ALL MATERIALS SHALL BE AS LISTED, OR AN APPROVED EQUAL. THE USE OF A BRAND NAME IS FOR THE PURPOSE OF DESCRIBING A STANDARD QUALITY, PERFORMANCE, AND CHARACTERISTIC DESIRED, AND IS NOT INTENDED TO LIMIT OR RESTRICT COMPETITION.

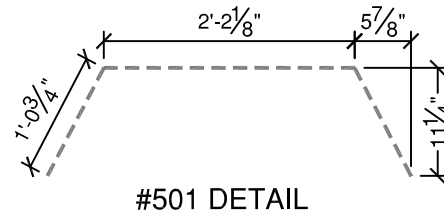
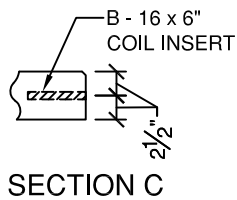
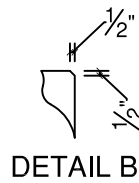
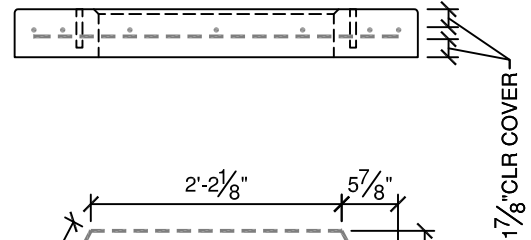
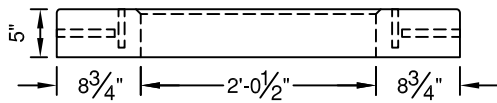
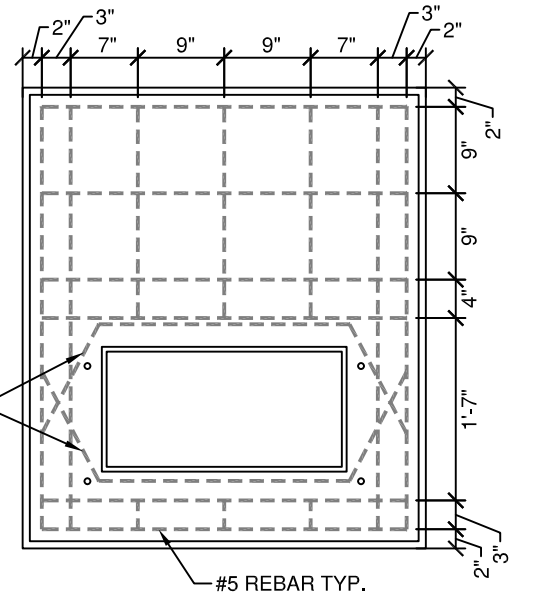
REVISED: 8/20/2013

<p>CITY OF GRAND ISLAND UTILITIES DEPARTMENT</p>	<p>DATE: 8/20/2013 DRAWN BY: P.F.G. CHECKED BY: T.W.B.</p>	<p>1Ø TRANSFORMER PAD CONDUIT LOCATIONS</p>	<p>PLAN EU - 6 1 of 4</p>
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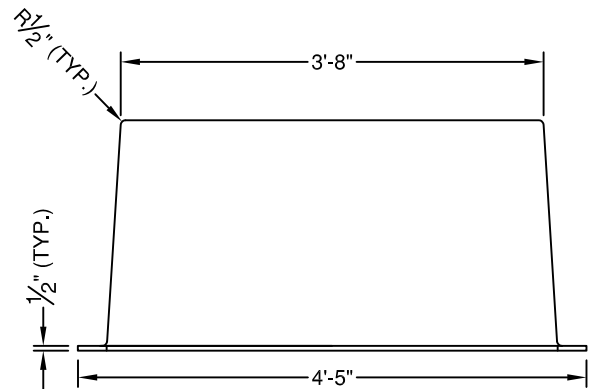
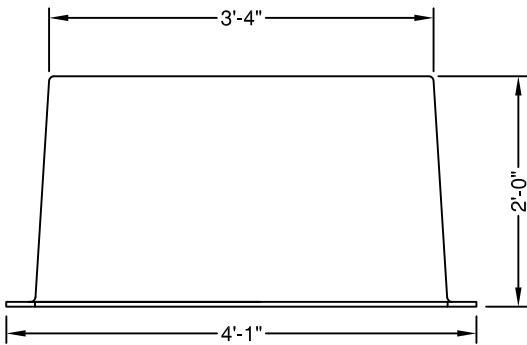
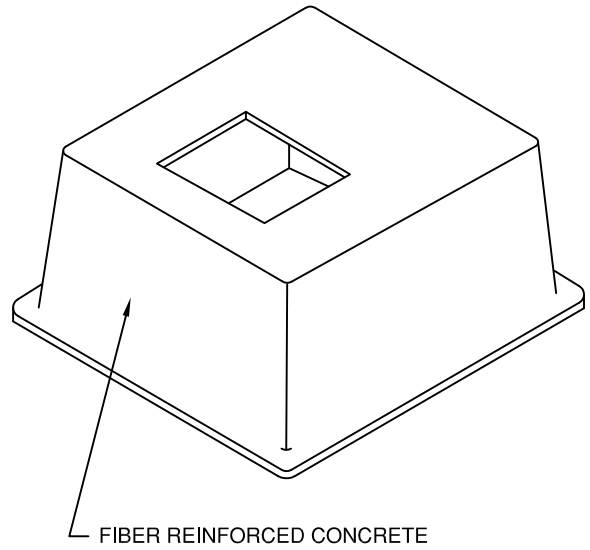
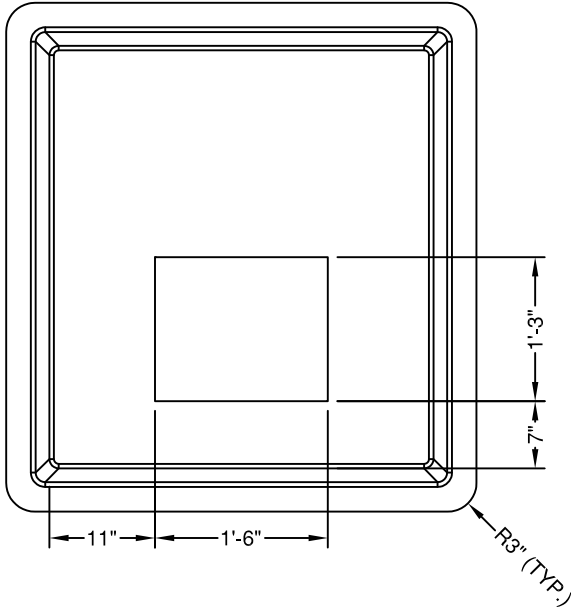
DIMENSIONS

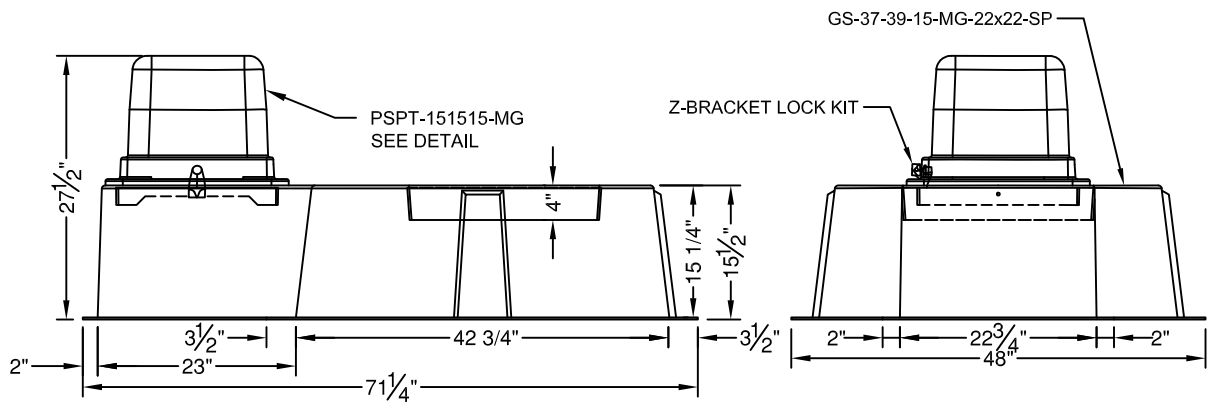
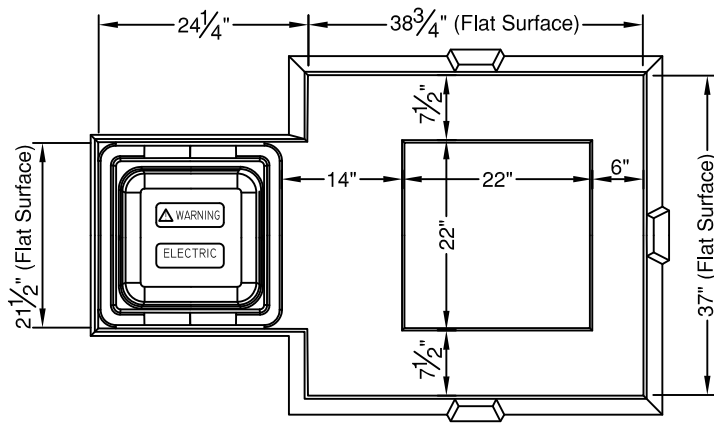


REBAR LAYOUT



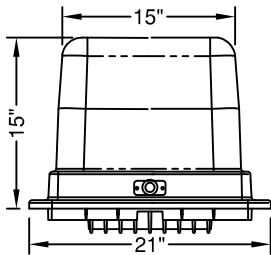
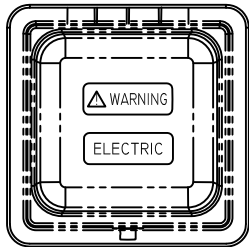
MATERIALS		
DESCRIPTION	UNIT	QUANTITIES
5/8" dia. X 2" Star Insert	EA.	4
B - 16 x 6" Coil Insert	EA.	2
#5 x 1' - 0" Rebar	EA.	4
#5 x 3' - 2" Rebar	EA.	7
#5 x 3' - 8" Rebar	EA.	8
#501 Rebar (SEE DETAIL)	EA.	2



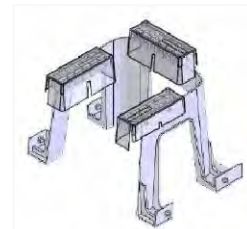
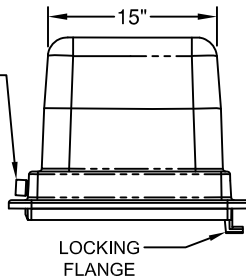


PSPT-151515-MG DETAIL

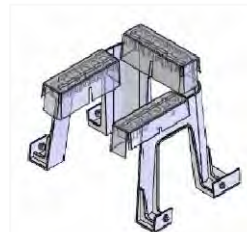
OPTIONAL PLASTIC BRACKETS W/CONNECTORS



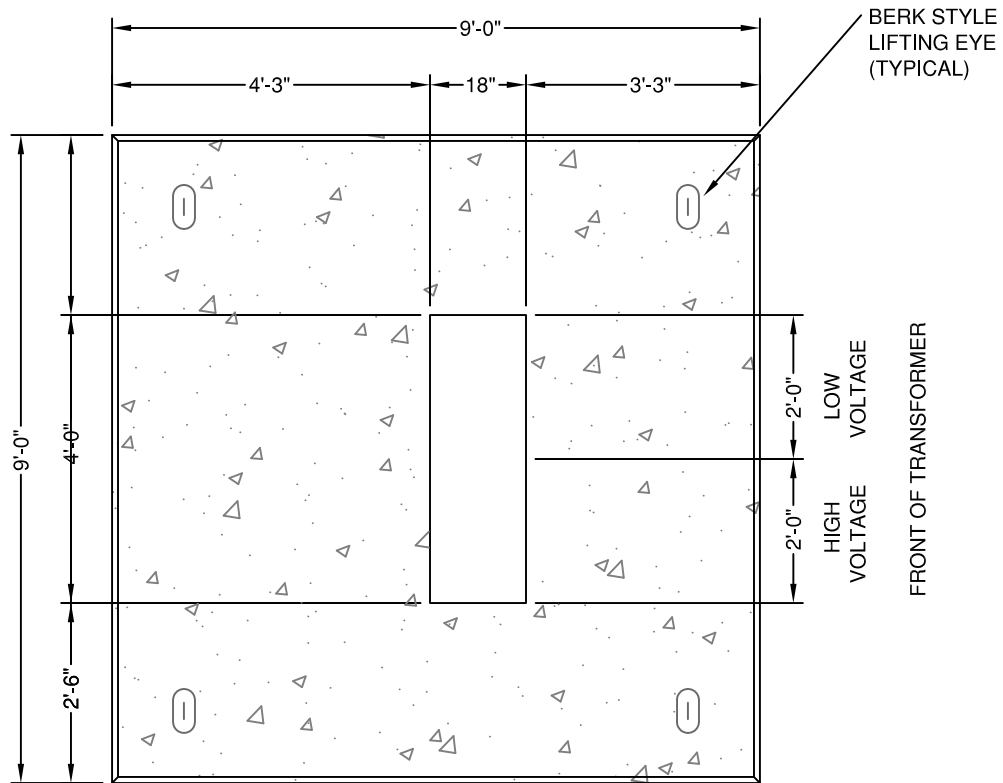
SST LOCK WITH PENTAHEAD BOLT



99-PSP-CB-15-L6350



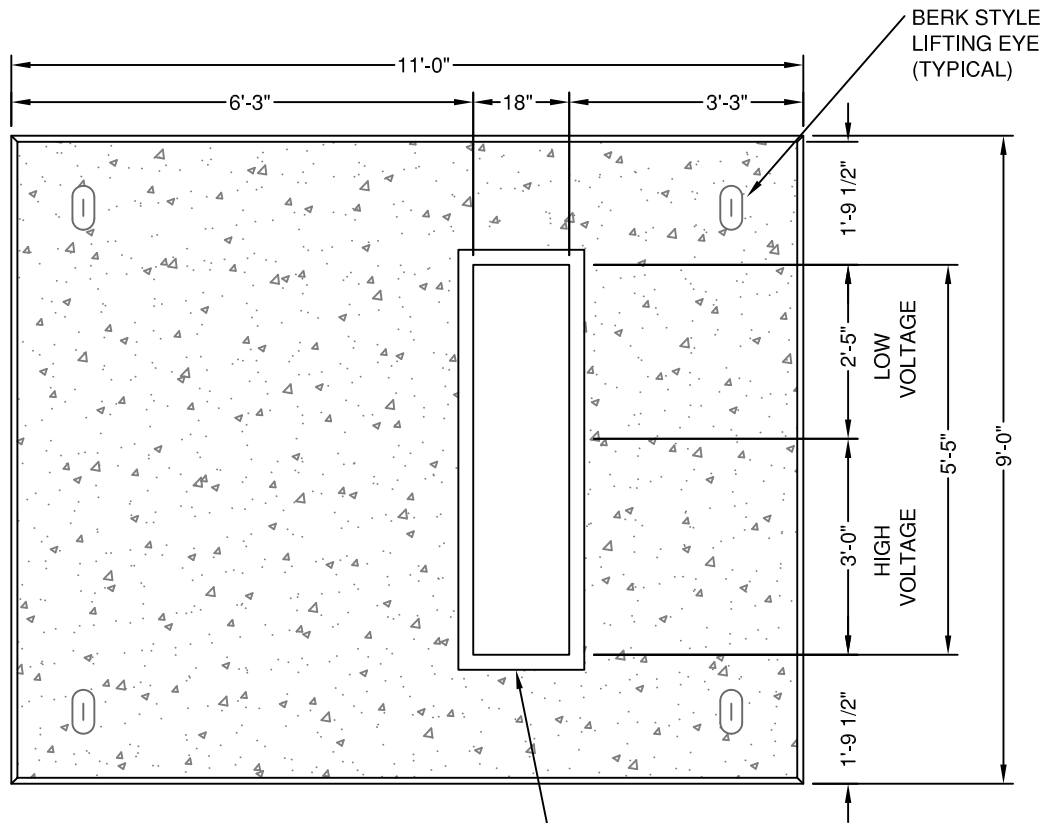
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NOTES:

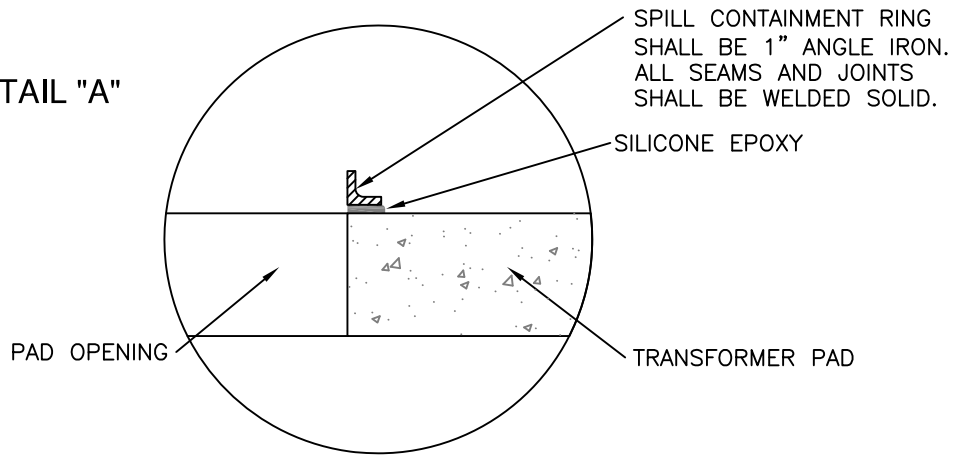
1. ALL TRANSFORMER PADS SHALL BE TYPE 47-B MODIFIED REINFORCED CONCRETE - 12" THICK.
2. ALL MATERIALS SHALL BE AS LISTED, OR AN APPROVED EQUAL. THE USE OF A BRAND NAME IS FOR THE PURPOSE OF DESCRIBING A STANDARD QUALITY, PERFORMANCE, AND CHARACTERISTIC DESIRED, AND IS NOT INTENDED TO LIMIT OR RESTRICT COMPETITION.

REV: 2/28/2005 PFG



SPILL CONTAINMENT RING
SEE DETAIL "A"

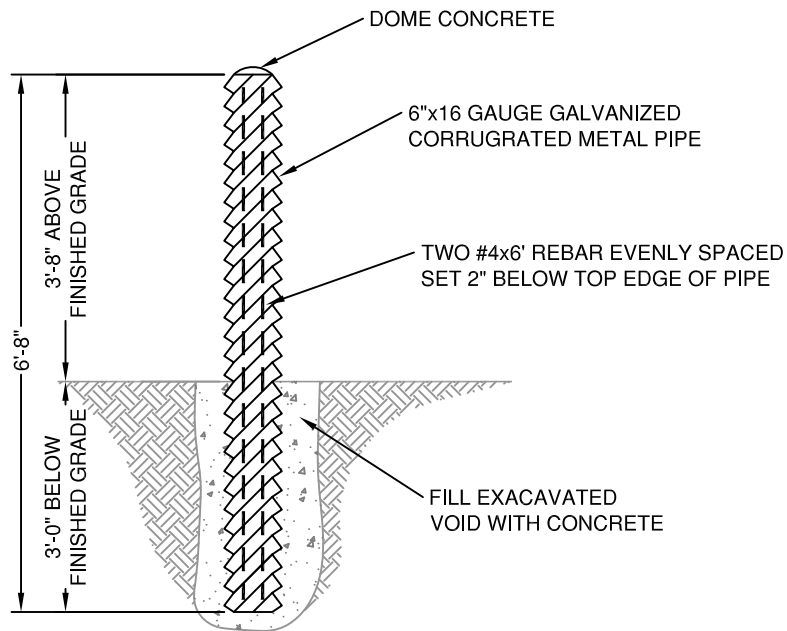
DETAIL "A"



NOTES:

1. ALL TRANSFORMER PADS SHALL BE TYPE 47-B MODIFIED REINFORCED CONCRETE - 12" THICK.
2. ALL MATERIALS SHALL BE AS LISTED, OR AN APPROVED EQUAL. THE USE OF A BRAND NAME IS FOR THE PURPOSE OF DESCRIBING A STANDARD QUALITY, PERFORMANCE, AND CHARACTERISTIC DESIRED, AND IS NOT INTENDED TO LIMIT OR RESTRICT COMPETITION.

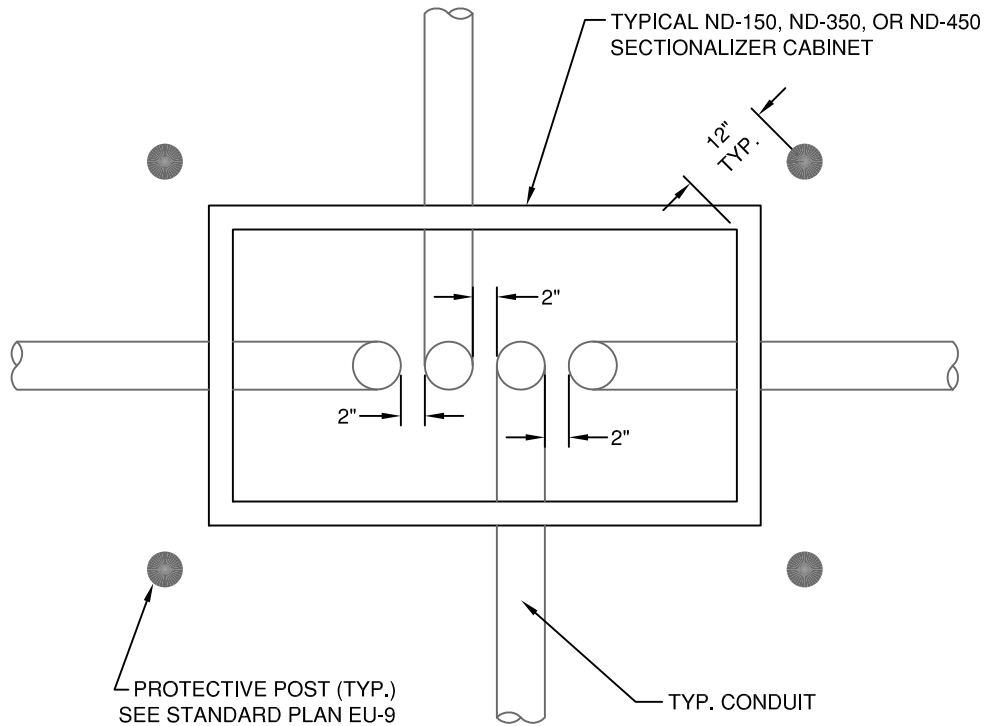
REV: 2/28/2005 PFG
REV: 6/5/2003



TYPE 47-B CONCRETE REQUIRED
 VOLUME-1.4 CU. FT.
 FILLED WT.-APPROX. 235 LBS. EA.

ELECTRICAL CONTRACTOR SHALL INSTALL CONCRETE FILLED PROTECTIVE POSTS AT EACH CORNER OF TRANSFORMER PAD, SECTIONALIZER, AND VAULT, OR AS OTHERWISE DIRECTED BY THE UTILITY DEPARTMENT. PROTECTIVE POSTS SHALL BE 3'-8" ABOVE AND 3 FEET BELOW FINISHED GRADE. POSTS ARE TO PROTECT ELECTRICAL INFRASTRUCTURE FROM TRAFFIC AND SHALL NOT INTERFERE WITH DOOR OPENINGS. POSTS SHALL BE INSTALLED PRIOR TO THE TRANSFORMER BEING SET.

REV. 6/5/2003
 REV. 4/25/2001
 REV. 2/2000

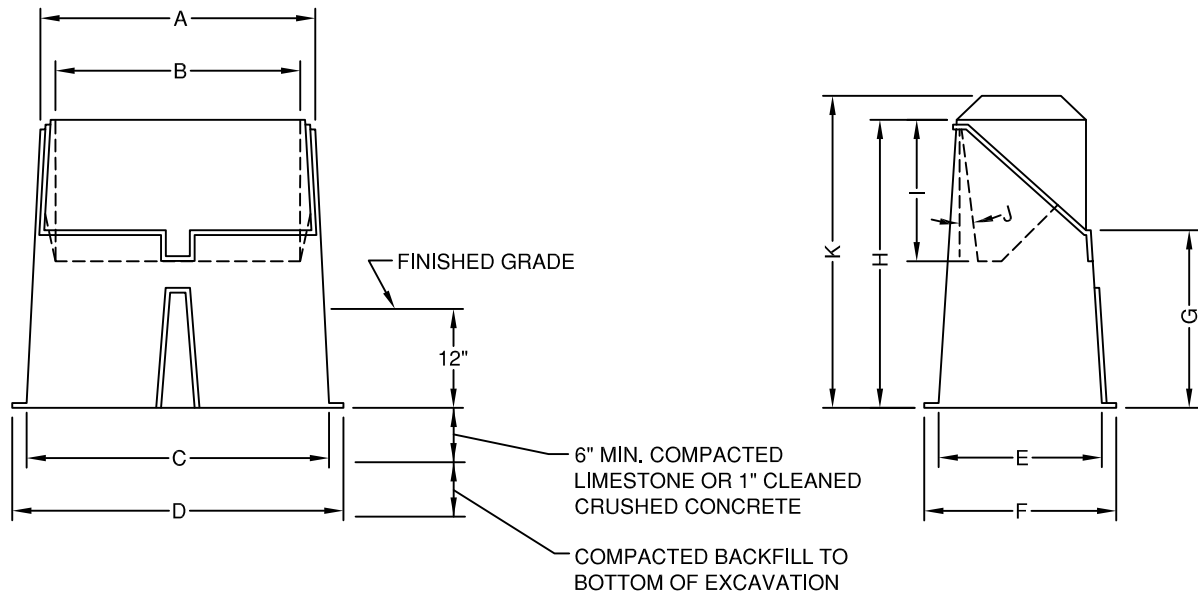


NOTES:

1. ELECTRICAL CONTRACTOR SHALL INSTALL CONCRETE FILLED PROTECTIVE POSTS AT EACH CORNER OF SECTIONALIZER **AFTER** UTILITY DEPARTMENT HAS INSTALLED CABINET. PROTECTIVE POSTS SHALL BE 3'-8" ABOVE AND 3 FEET BELOW FINISHED GRADE. POSTS ARE TO PROTECT ELECTRICAL INFRASTRUCTURE FROM TRAFFIC AND SHALL NOT INTERFERE WITH DOOR OPENINGS.
2. HIGH VOLTAGE CONDUITS SHALL BE CENTERED AND IN A STRAIGHT LINE, WITH 2" CLEARANCE BETWEEN CONDUITS.

REV: 12/9/2011

SPECIFICATIONS FOR SECTIONALIZING CABINET



DIEMENSIONS:		A	B	C	D	E	F	G	H	I	J	K
NORDIC ND-450	3 PHASE:	74.5"	66"	82"	89.5"	43.5"	50.5"	35"	61"	15"	5°	64"
NORDIC ND-350	3 PHASE:	57"	51"	63"	74.5"	34"	45"	37"	48"	15"	5°	53"
NORDIC ND-150	1 PHASE:	26"	21"	32"	39"	36"	43"	28"	48"	15"	5°	52"

CABINETS SHALL BE FIBERGLASS - SUNLIGHT RESISTEANT.

CABINETS SHALL INCORPORATE GROUND SLEEVE PRINCIPAL INTO MOUNTING BASE WITH MINIMUM 3-1/2" LIP AROUND BASE FOR STABILITY.

3Ø MOUNTING BOARD SHALL BE A MINIMUM OF 51" WIDE BY 15" HIGH TO ALLOW SPACE FOR THREE 4 POINT 15KV LOAD BREAK JUNCTIONS WITH 2 STAINLESS STEEL PARKING STANDS.

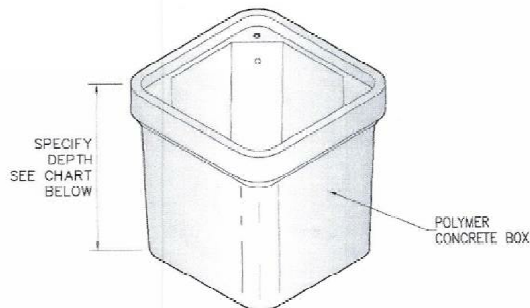
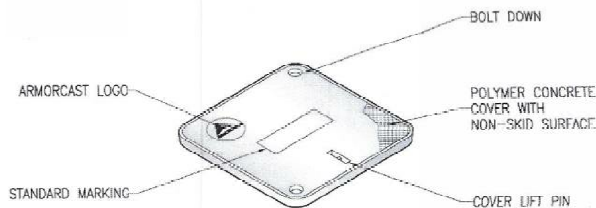
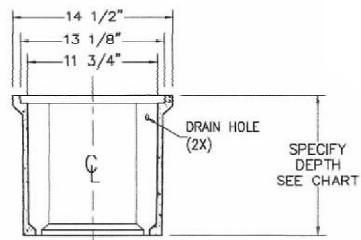
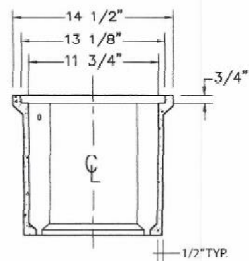
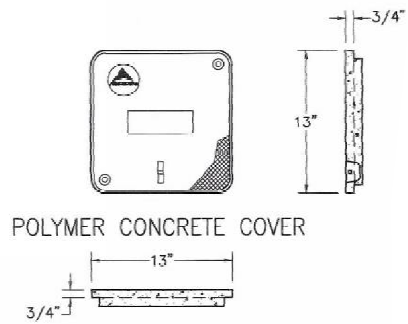
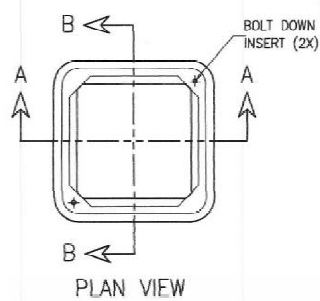
1Ø MOUNTING BOARD SHALL BE A MINIMUM OF 21" WIDE BY 15" HIGH TO ALLOW SPACE FOR ONE 4 POINT 15KV LOAD BREAK JUNCTIONS WITH 2 STAINLESS STEEL PARKING STANDS.

MOUNTING BOARD SHALL BE AT 5 DEGREES FROM VERTICAL FOR COMFORTABLE OPERATION OF LOAD BREAK ELBOWS.

STAINLESS STEEL DOOR PROPS SHALL BE PROVIDED.

ALL MATERIALS SHALL BE AS LISTED, OR AN APPROVED EQUAL. THE USE OF A BRAND NAME IS FOR THE PURPOSE OF DESCRIBING A STANDARD QUALITY, PERFORMANCE, AND CHARACTERISTIC DESIRED, AND IS NOT INTENDED TO LIMIT OR RESTRICT COMPETITION.

REV: 12/9/2011



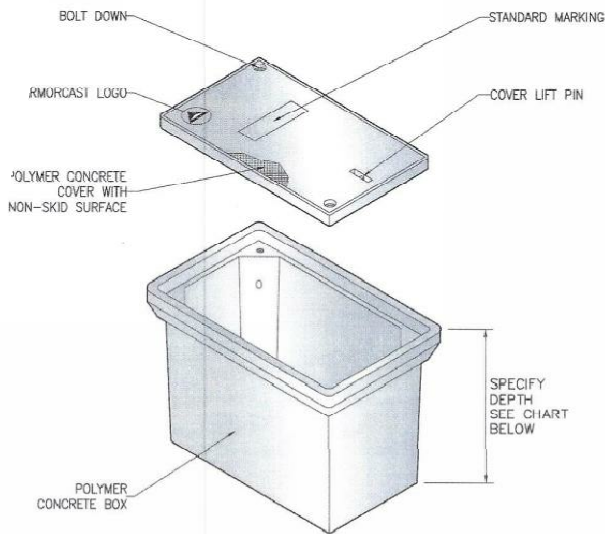
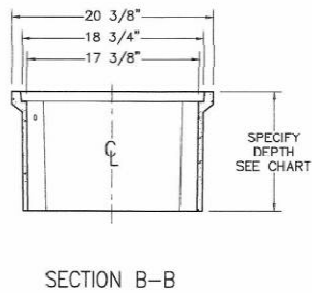
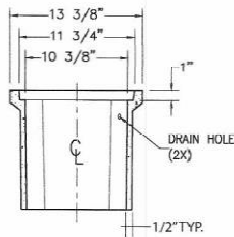
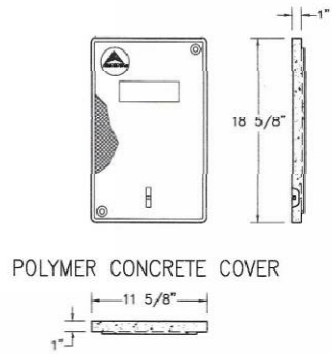
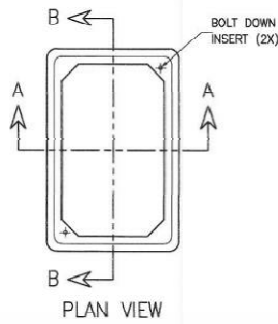
12"W x 12"L BOX ASSEMBLIES Specify Depth Below

DESCRIPTION	NOMINAL SIZE W x L x D	LOAD RATING	ANSI TIER	PART NUMBER	APPROX. WEIGHT	PALLET QTY.
Box & Cover Assembly	12" x 12" x 12"	10K	8	A6001423A	42 lbs.	27
	12" x 12" x 12"	20K	15 / 22	A6001423TA / A6001423HD	46 lbs.	27
Box & Cover Assembly	12" x 12" x 24"	10K	8	A6001423AX24	72 lbs.	9
	12" x 12" x 24"	20K	15 / 22	A6001423TAX24 / A6001423HDAX24	76 lbs.	9

COMPONENTS

MORE COVER VARIATIONS ARE AVAILABLE IN OUR "COVER SECTION"

DESCRIPTION	NOMINAL SIZE W x L x D	LOAD RATING	ANSI TIER	PART NUMBER	APPROX. WEIGHT	PALLET QTY.
Replacement Covers	12" x 12"	10K	8	A6001422	15 lbs.	50
	12" x 12"	20K	15	A6001422T	19 lbs.	50
Replacement Boxes	12" x 12" x 12"	10K / 20K	22	A6001423	27 lbs.	18
	12" x 12" x 24"	10K / 20K	22	A6001423X24	57 lbs.	9



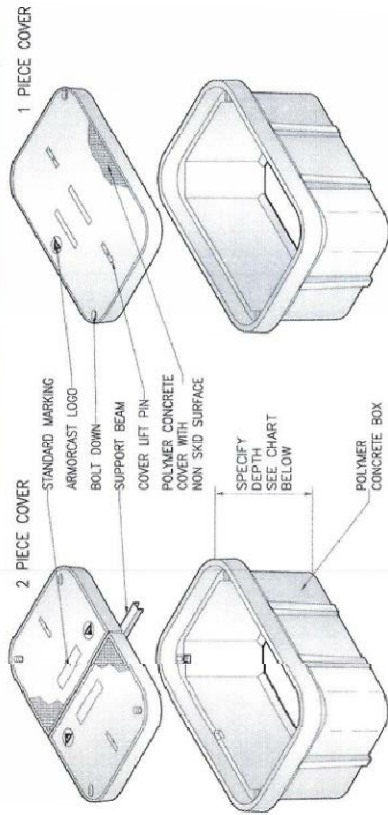
11"W x 18"L BOX ASSEMBLIES Specify Depth Below

DESCRIPTION	NOMINAL SIZE W x L x D	LOAD RATING	ANSI TIER	PART NUMBER	APPROX. WEIGHT	PALLET QTY.
Box & Cover Assembly	11" x 18" x 12"	10K	8	A6001429A	47 lbs.	18
	11" x 18" x 12"	20K	15 / 22	A6001429TA / A6001429HDA	47 lbs.	18
Box & Cover Assembly	11" x 18" x 18"	10K	8	A6001429AX18	71 lbs.	12
	11" x 18" x 18"	20K	15 / 22	A6001429TAX18 / A6001429HDAX18	71 lbs.	12

COMPONENTS

MORE COVER VARIATIONS ARE AVAILABLE IN OUR "COVER SECTION"

DESCRIPTION	NOMINAL SIZE W x L x D	LOAD RATING	ANSI TIER	PART NUMBER	APPROX. WEIGHT	PALLET QTY.
Replacement Covers	11" x 18"	10K	8	A6001428	15 lbs.	50
	11" x 18"	20K	15	A6001428T	15 lbs.	50
Replacement Boxes	11" x 18" x 12"	10K / 20K	22	A6001429	32 lbs.	18
	11" x 18" x 18"	10K / 20K	22	A6001429X18	56 lbs.	12

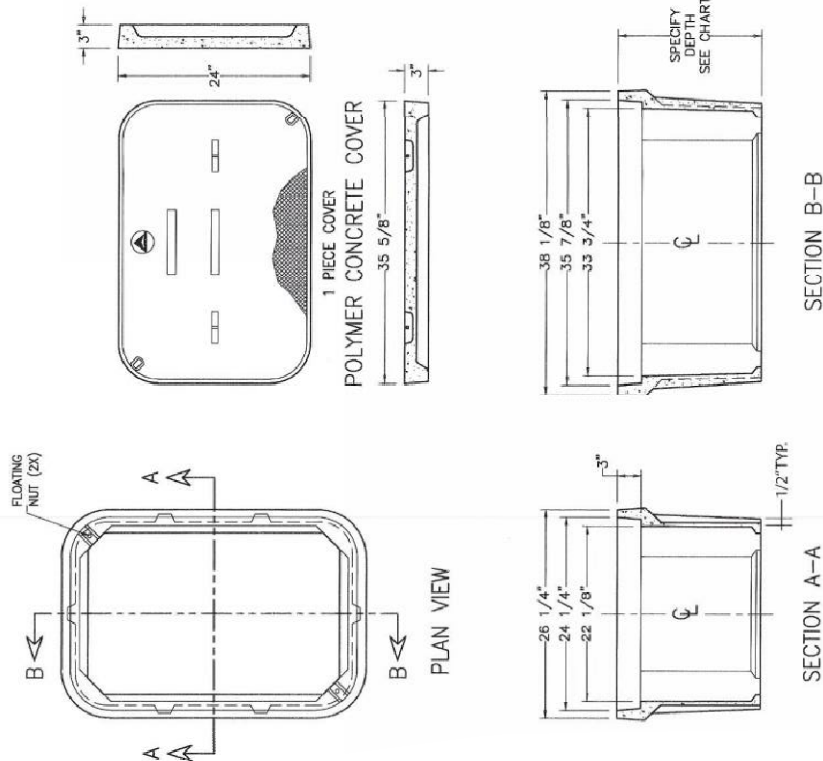


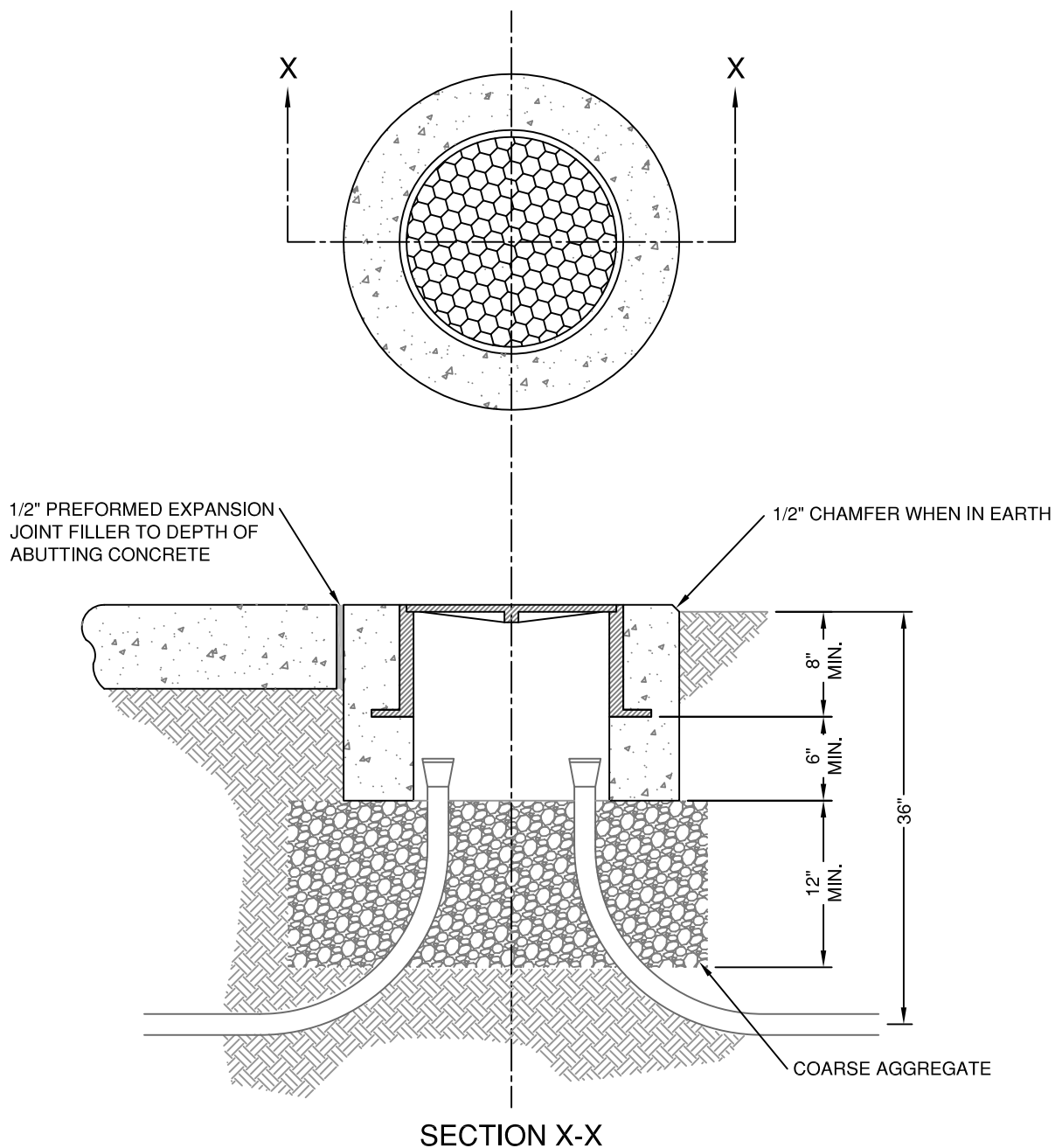
24"W x 36"L BOX ASSEMBLIES Specify Depth Below

DESCRIPTION	NOMINAL SIZE W x L x D	LOAD RATING	AMSI TIER	PART NUMBER	APPROX. WEIGHT	PALLET QTY.
Box & Cover Assembly	24" x 36" x 12"	10K	8	A6001974APCX12	106 lbs.	8
Box & Cover Assembly	24" x 36" x 12"	20K	15 / 22	A6001974TAPCX12 / A6001974HDAPCX12	257 lbs.	8
Box & Cover Assembly	24" x 36" x 18"	10K	8	A6001974APCX18	231 lbs.	4
Box & Cover Assembly	24" x 36" x 18"	20K	15 / 22	A6001974TAPCX18 / A6001974HDAPCX18	288 lbs.	4
Box & Cover Assembly	24" x 36" x 24"	10K	8	A6001974APCX24	277 lbs.	2
Box & Cover Assembly	24" x 36" x 24"	20K	15 / 22	A6001974TAPCX24 / A6001974HDAPCX24	359 lbs.	2
Box & Cover Assembly	24" x 36" x 30"	10K	8	A6001974APCX30	302 lbs.	2
Box & Cover Assembly	24" x 36" x 30"	20K	15 / 22	A6001974TAPCX30 / A6001974HDAPCX30	364 lbs.	2
Box & Cover Assembly	24" x 36" x 36"	10K	8	A6001974APCX36	325 lbs.	2
Box & Cover Assembly	24" x 36" x 36"	20K	15 / 22	A6001974TAPCX36 / A6001974HDAPCX36	387 lbs.	2
Box & Cover Assembly	24" x 36" x 42"	10K	8	A6001974APCX42	369 lbs.	2
Box & Cover Assembly	24" x 36" x 42"	20K	15 / 22	A6001974TAPCX42 / A6001974HDAPCX42	431 lbs.	2

COMPONENTS

DESCRIPTION	NOMINAL SIZE W x L x D	LOAD RATING	AMSI TIER	PART NUMBER	APPROX. WEIGHT	PALLET QTY.
Replacement Covers	24" x 36" - 1 pc.	10K	8	A6001975	95 lbs.	20
Replacement Covers	24" x 36" - 1 pc.	20K	15 / 22	A6001975T / A6001975HD	57 lbs.	20
Replacement Covers	24" x 36" - 2 pc.	10K	8	A6001976	54 lbs.	20
Replacement Covers	24" x 36" - 2 pc.	20K	15 / 22	A6001976T / A6001976HD (2 pc. Req.)	54 lbs.	20
Replacement Boxes	24" x 36" x 12"	10K / 20K	22	A6001974PCX12	100 lbs.	8
Replacement Boxes	24" x 36" x 18"	10K / 20K	22	A6001974PCX18	136 lbs.	4
Replacement Boxes	24" x 36" x 24"	10K / 20K	22	A6001974PCX24	182 lbs.	2
Replacement Boxes	24" x 36" x 30"	10K / 20K	22	A6001974PCX30	207 lbs.	2
Replacement Boxes	24" x 36" x 36"	10K / 20K	22	A6001974PCX36	230 lbs.	2
Replacement Boxes	24" x 36" x 42"	10K / 20K	22	A6001974PCX42	274 lbs.	2





NOTES:

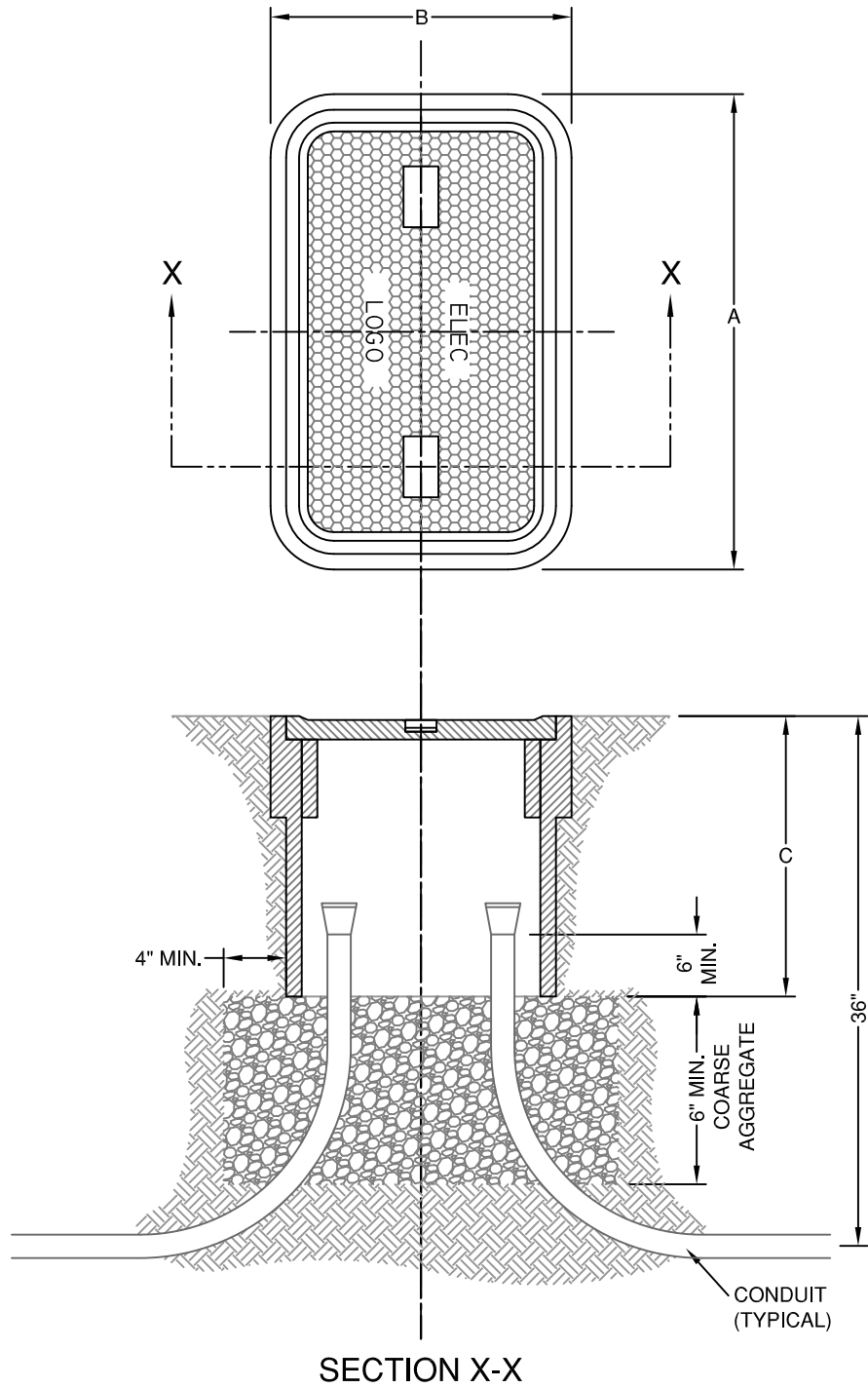
CONCRETE SHALL BE CLASS 47-B MODIFIED, AS PER CITY SPECIFICATIONS SECTION 2, DIVISION 2.

PULL BOXES SHALL HAVE A LIP OR FLANGED EDGE FRAMING THE COVER OPENING TO PROVIDE A FLUSH, FRAMED SEPARATION BETWEEN THE SURFACING MATERIAL AND THE EDGES OF THE COVER.

PULL BOX COVERS SHALL BE EMBOSSED WITH AN ANTI-SLIP SURFACE PATTERN, AND SHALL FIT SUFFICIENTLY TIGHT TO PREVENT ENTRANCE OF RUN-OFF WATER.

SEATING SURFACES OF FRAME AND COVER SHALL BE MACHINED TO FIT. FRAME AND COVER TO BE CAST IRON. TYPE 5 PULL BOX SHALL BE CAPABLE OF SUPPORTING VEHICULAR TRAFFIC IN ACCORDANCE WITH AASHTO SPECIFICATIONS H-20 LOADING.

REVISED: 6/5/2003



SEE TABLE ON STANDARD PLAN EU-12 FOR PULL BOX DIMENSIONS.

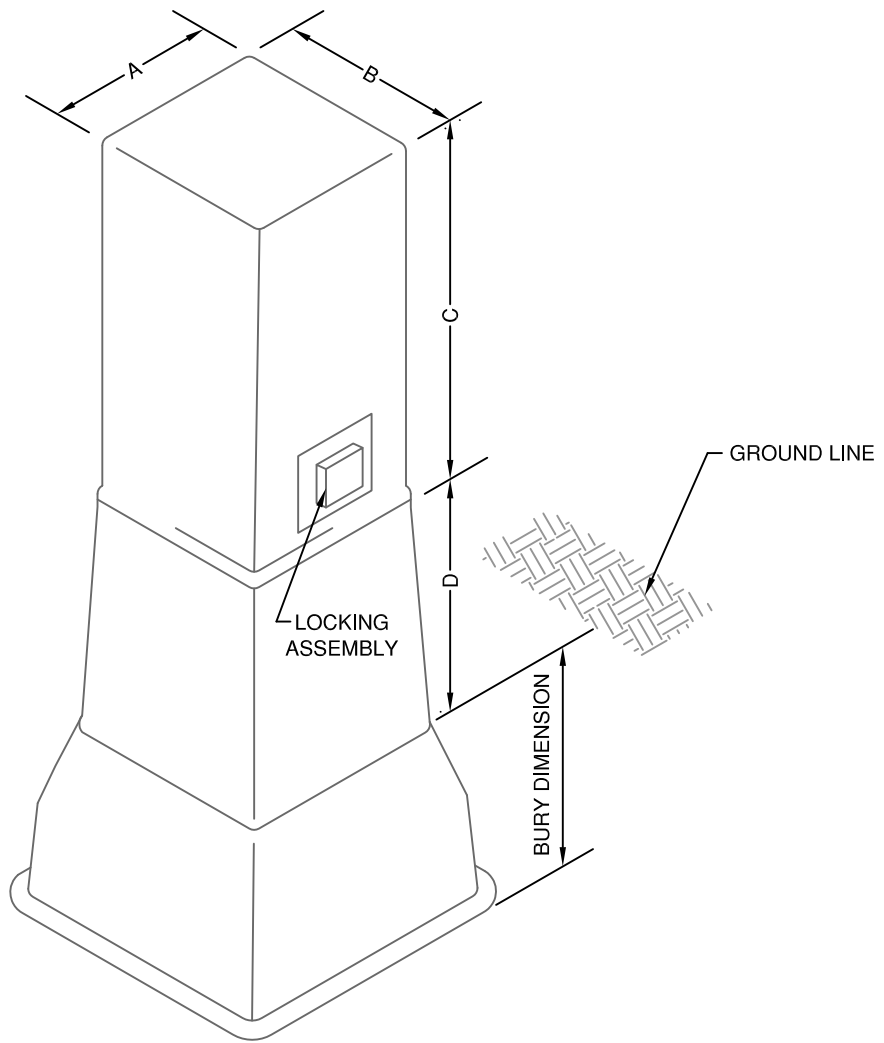
REVISED: 6/5/2003

CITY OF
GRAND ISLAND
 UTILITIES DEPARTMENT

DATE: 10/1/1998
 DRAWN BY: T.D.Z.
 CHECKED BY: T.W.B.

PULL BOX
 CONDUIT
 INSTALLATION

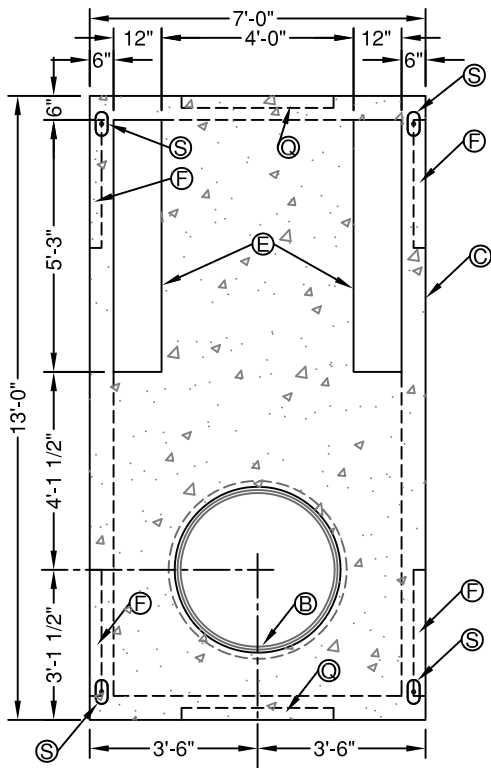
PLAN
 EU - 14



DESCRIPTION	PART NO.	A	B	C	D	LOCKABLE	BURY DIMENSION
TYPE 1 SECONDARY PEDESTAL	PEN-CELL AG-15HD	14"	11"	18"	18"	X	12"
TYPE 2 SECONDARY PEDESTAL	PEN-CELL AG-14HP	11"	14"	18"	12"	X	6"
TYPE 3 SECONDARY PEDESTAL	WESTERN POWER SPM-190	12"	18.5"	24"	30"	X	12"

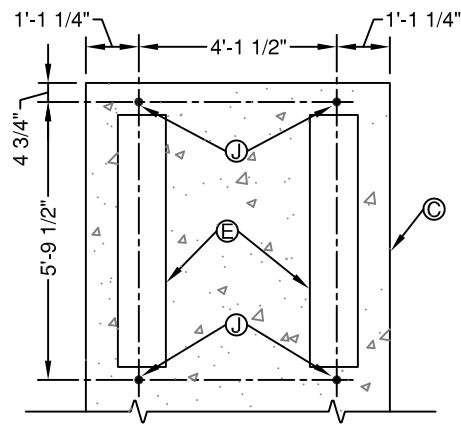
NOTE:
 ALL MATERIALS SHALL BE AS LISTED, OR AN APPROVED EQUAL. THE USE OF A BRAND NAME IS FOR THE PURPOSE OF DESCRIBING A STANDARD QUALITY, PERFORMANCE, AND CHARACTERISTIC DESIRED, AND IS NOT INTENDED TO LIMIT OR RESTRICT COMPETITION.

REV: 3/6/2012

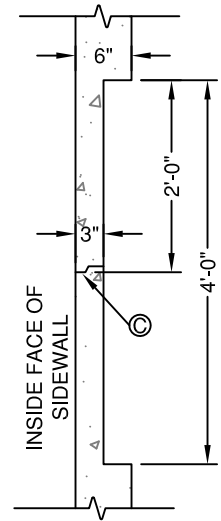


NOTE:
REINFORCING FOR THE LID SECTION
IS TO BE DETERMINED BY THE
PRECAST CONCRETE CONTRACTOR.

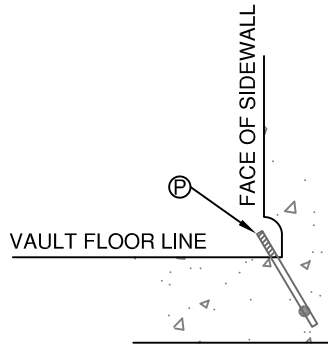
VAULT PLAN



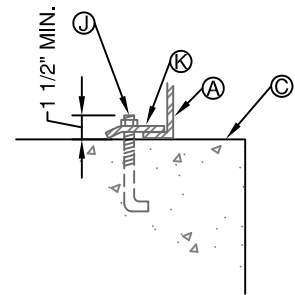
ANCHOR BOLT PLAN



KNOCK-OUT



LIFTING POINT DETAIL



ANCHOR BOLT DETAIL

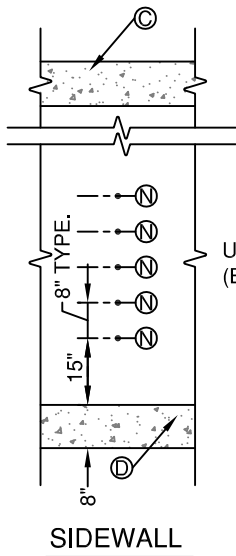
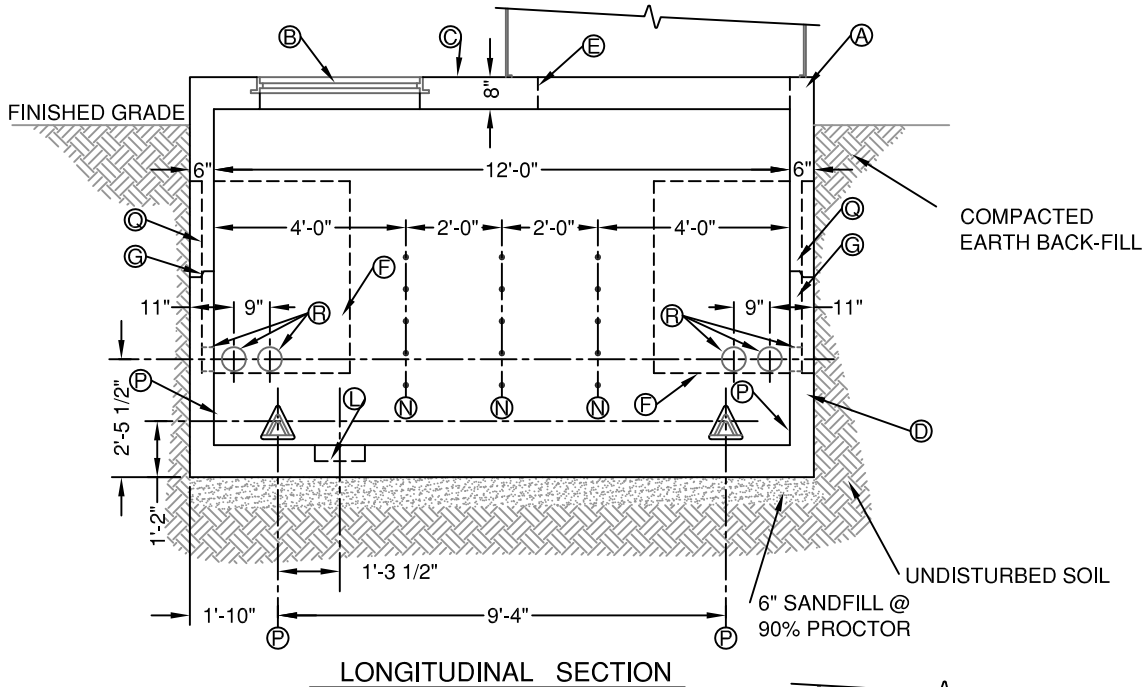
ITEM INDEX

- A. - S & C MODEL PME-9 PAD-MOUNTED GEAR (BY UTILITY)
- B. - NEENAH MODEL R-1792-JL HEAVY DUTY SOLID GRATE MANHOLE
- C. - PRECAST CONCRETE VAULT TOP SECTION
- D. - PRECAST CONCRETE VAULT BOTTOM SECTION
- E. - 12" x 63" PRECAST CONCRETE KNOCK-OUTS
- F. - 32" x 48" PRECAST CONCRETE KNOCK-OUTS
- G. - TYPICAL PRECAST CONCRETE TONGUE AND GROOVE JOINT
- H. - TYPICAL BOX SECTION CORNER CHAMFER
- J. - 5/8" x 6" ANCHOR BOLT
- K. - ANCHOR BRACKET (BY UTILITY)
- L. - MODEL #SU-125 12.5" PLASTIC SUMP W/LID
- M. - 1-1/2" x 1-1/2" x 12 GAUGE STEEL UNI-STRUT (BY UTILITY)
- N. - 3/8" DIA. STAR INSERTS
- P. - 1/2" CARBON STEEL PRESTRESS CABLE, TYPE PI-1 (HYTRELL ®) PULLING EYE W/ POCKET AND LID BY PA INSERT CORP. OR APPROVED EQUAL.
- Q. - 38" x 48" PRECAST CONCRETE KNOCK-OUTS
- R. - 6" Ø TERMINATORS
- S. - BERK LIFTING INSERT

REV: 6/5/2003
REV: 8/2/2001
REV: 4/25/2001

GENERAL NOTES

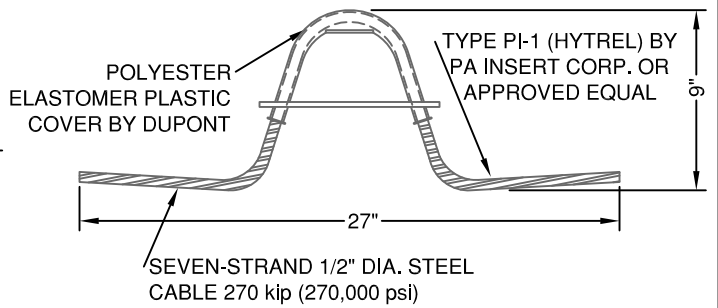
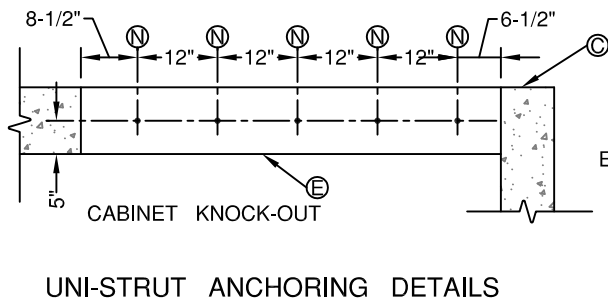
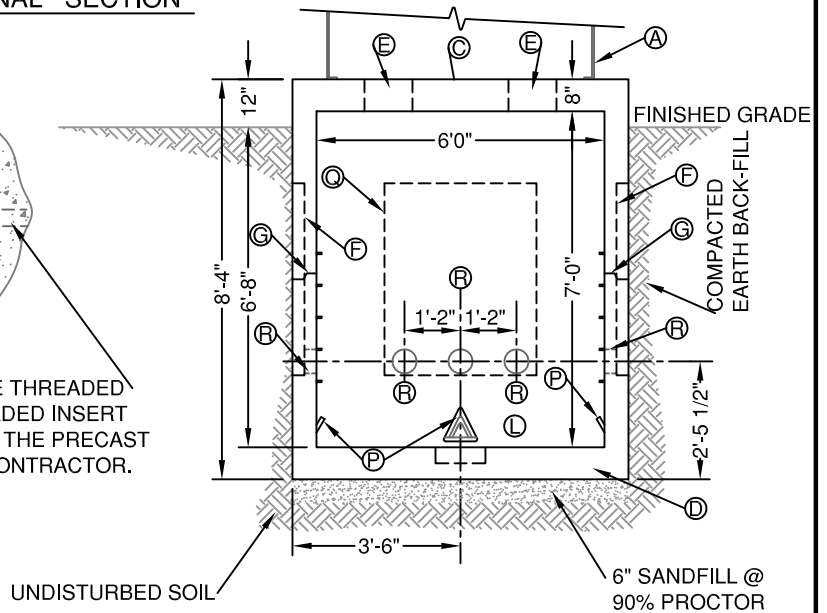
1. - ALL CONCRETE TO BE USED IN CONSTRUCTION OF VAULT IS TO BE TYPE 47-B, AS PER CITY OF GRAND ISLAND SPECIFICATIONS DIVISION 2 "CONCRETE PAVING SPECIFICATIONS".
2. - ALL CONCRETE JOINTS ARE TO BE SEALED AND SET IN MASTIC.
3. - LIFTING HOOKS SHALL BE CAST IN EACH VAULT SECTION, AND POSITIONED SO THAT FUTURE USE IS POSSIBLE.
4. - VAULTS SHALL BE CONSTRUCTED TO HAVE A LOAD RATING OF H-20 OR HIGHER.
5. - ALL SECTIONS OF UNI-STRUT SHALL BE MOUNTED BY THE UTILITY DEPARTMENT. THE ANCHORS FOR THE MOUNTING UNI-STRUT SHALL BE CAST INTO THE VAULT SECTIONS, AS SPECIFIED, BY THE PRECAST CONCRETE CONTRACTOR.
6. - ALL ANCHOR POINTS ARE TO BE CONSTRUCTED TO WITHSTAND A PULLING FORCE OF 30,000 LBS.
7. - ALL MATERIALS SHALL BE AS LISTED, OR AN APPROVED EQUAL. THE USE OF A BRAND NAME IS FOR THE PURPOSE OF DESCRIBING A STANDARD QUALITY, PERFORMANCE, AND CHARACTERISTIC DESIRED, AND IS NOT INTENDED TO LIMIT OR RESTRICT COMPETITION.



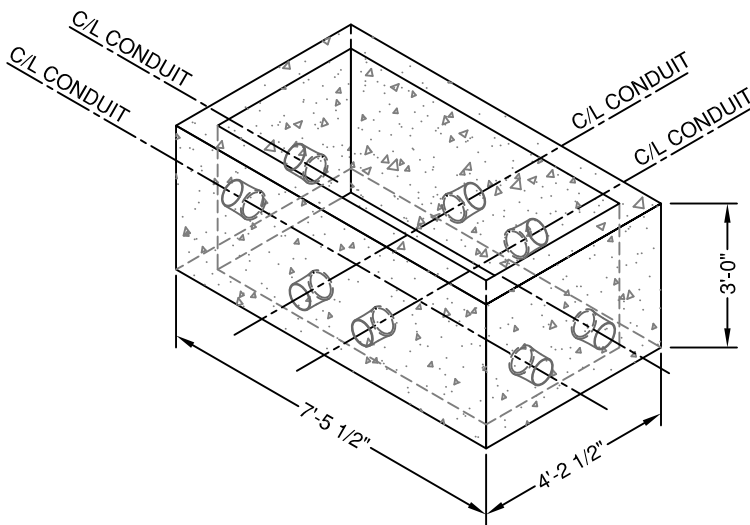
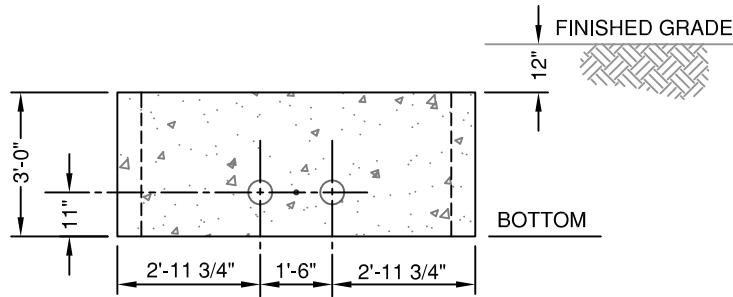
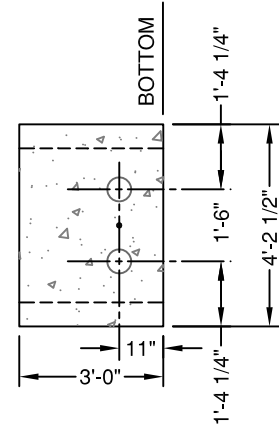
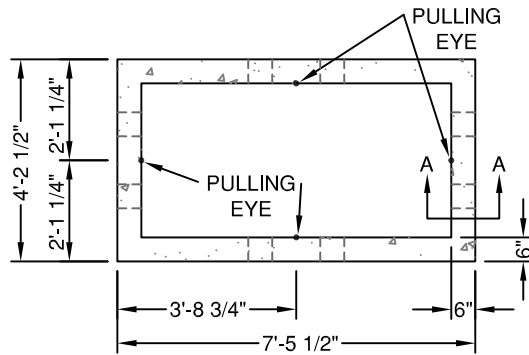
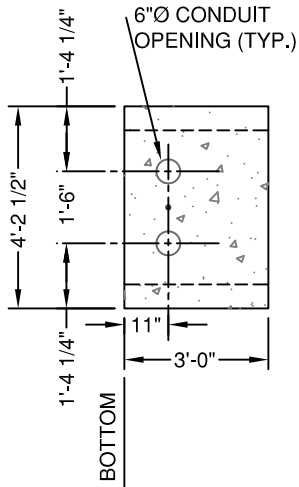
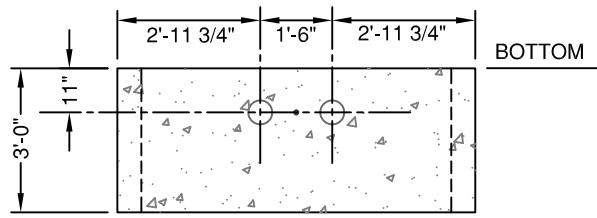
UNI-STRUT SECTION (BY GIUD)

FACE OF CONC.

BOLT IS TO BE THREADED INTO A THREADED INSERT PROVIDED BY THE PRECAST CONCRETE CONTRACTOR.



REV: 8/2/2001
 REV: 4/25/2001
 REV: 6/5/2003



ISOMETRIC VIEW

BILL OF MAT'L.		
ITEM	DESCRIPTION	No.
R 402	#4x2'-9"	20
R 401	#4x3'-9 1/2" 1'-6" 1'-6"	8
R 400	#4x12'-6"	8

WEIGHT = 5,075 lbs.

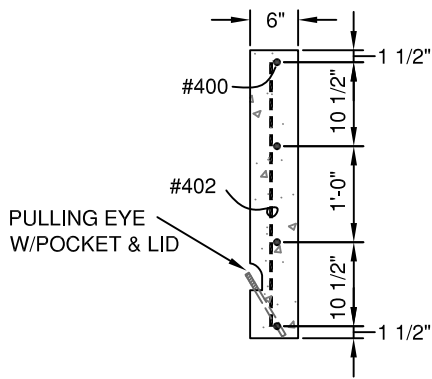
REV.: 6/6/2003
REV.: 8/2/2001



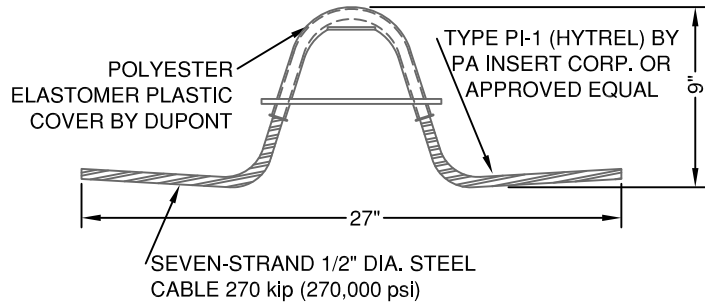
DATE: 4/12/1996
DRAWN BY: ZEC
CHECKED BY: T.W.B.

UTILITY ENCLOSURE
7'x4'x3' PRECAST
CONCRETE

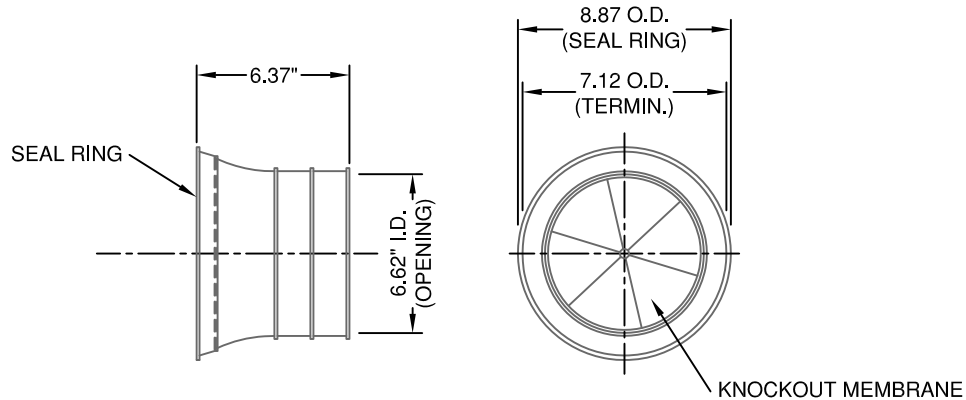
PLAN
EU-17
1 OF 2



SECTION A - A



PULLING EYE DETAIL

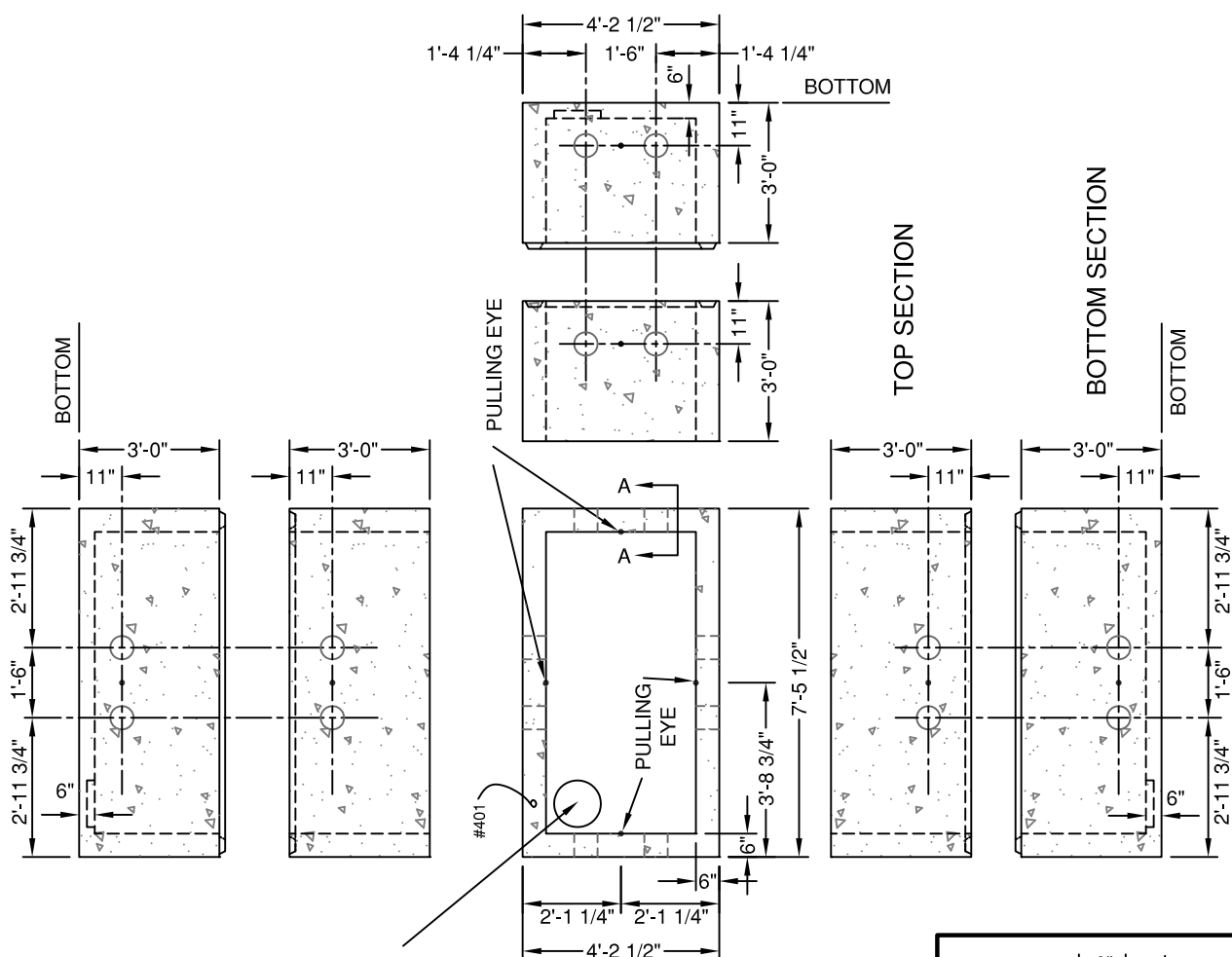


6" TERMINATOR DETAIL

GENERAL NOTES

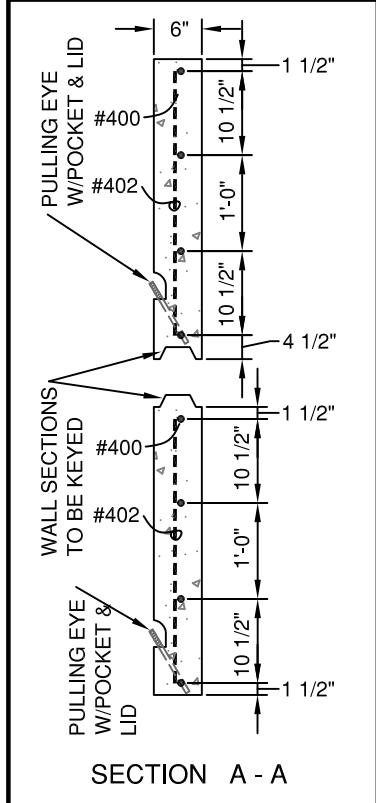
1. DESIGN OF PRECAST UTILITY ENCLOSURE SHALL BE UNDER DIRECT SUPERVISION OF A PROFESSIONAL CIVIL OR STRUCTURAL ENGINEER LICENSED IN THE STATE OF NEBRASKA. IF REQUESTED BY THE G.I.U.D., SUBMIT SEALED SHOP DRAWINGS AND CALCULATIONS. NOTE: FIBERMESH IS NOT A REPLACEMENT OF FLEXERAL REINFORCEMENT.
2. CONCRETE MIX DESIGN PER ACI 301-95. DESIGN OF REINFORCEMENT PER ACI 318-95. ALL CONCRETE TO BE 4000 PSI MIN. AT 28 DAYS WITH FIBERMESH (MIN. 1.5#/CY OF CONCRETE).
3. ALL REINFORCEMENT TO BE GRADE 60, ASTM A615/A615M-96A. WIRE FABRIC TO BE GRADE 75, ASTM A185/A185M-96. PRECASTER TO COORDINATE LOCATION OF CONCRETE WALL JOINT WITH OWNER.
4. LOADING CRITERIA: LOADING: PER ASTM C857 (STANDARD PRACTICE FOR MINIMUM STRUCTURAL LOADING FOR UNDERGROUND PRECAST CONCRETE STRUCTURES). USE 35 PCF (EQUIVALENT FLUID PRESSURE ABOVE WATER TABLE). USE 80 PCF (EQUIVALENT FLUID PRESSURE BELOW WATER TABLE). ASSUME SATURATED SOIL OR WATER TABLE AT 3'-0" BELOW FINISHED GRADE. MAXIMUM 4'-0" OVERBURDEN.
5. ALL CONDUIT OPENINGS SHALL HAVE AN ELECTRICAL/TELEPHONE TERMINATOR FOR 6" SCH 40 PVC MANUFACTURED BY PA INSERT CORP. OR APPROVED EQUAL, INSTALLED WITH FLARED SEAL RING TO INSIDE.

REV.: 6/6/2003
REV.: 8/2/2001



MODEL SU-125 12.5" PLASTIC
SUMP PA INSERT CORP
W/LID OR APP. EQUAL

BILL OF MAT'L.		
ITEM	DESCRIPTION	No.
R 402	#4x2'-9"	40
R 401	#4x3'-9 1/2" 1'-6" 1'-6"	16
R 400	#4x12'-6"	16



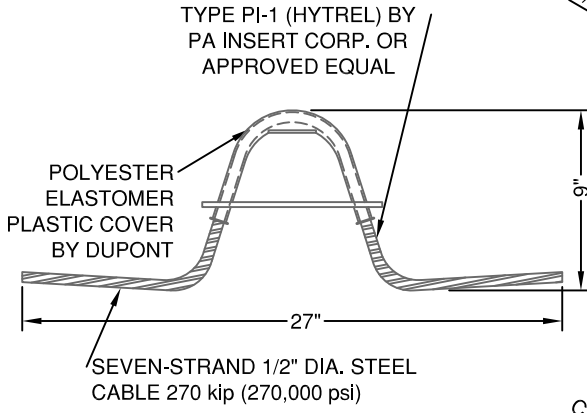
REV.: 8/3/01 by ZEX



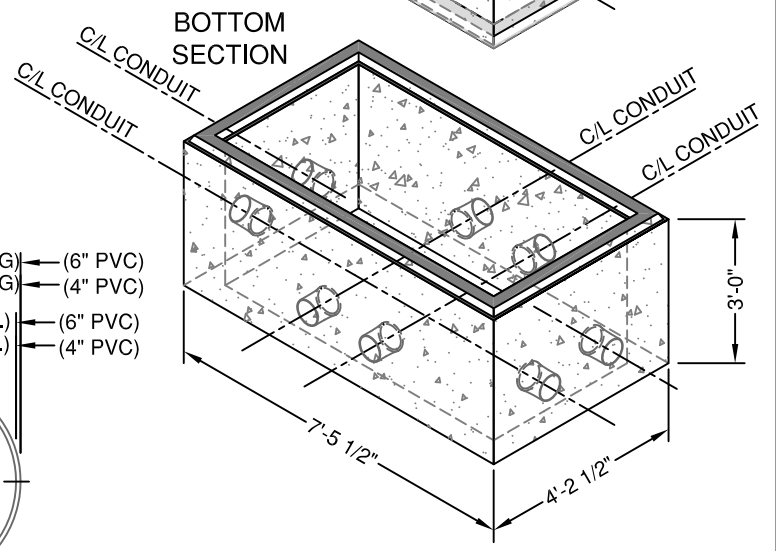
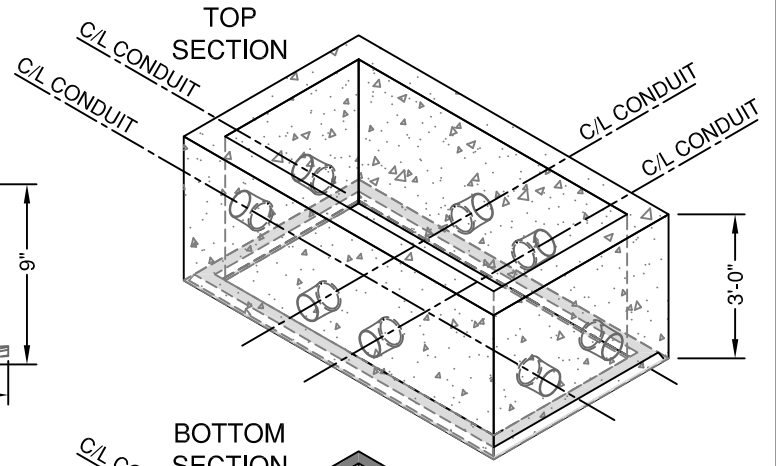
DATE: 4/12/2001
DRAWN BY: ZEC
CHECKED BY: T.W.B.

UTILITY ENCLOSURE
7'x4'x6' PRECAST
CONCRETE

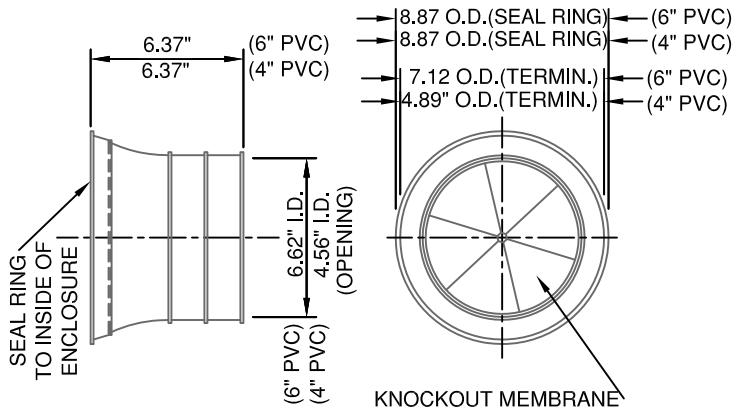
PLAN
EU-18
1 OF 2



PULLING EYE DETAIL



ISOMETRIC VIEW



TERMINATOR DETAIL
(Sch 40 Only)

GENERAL NOTES

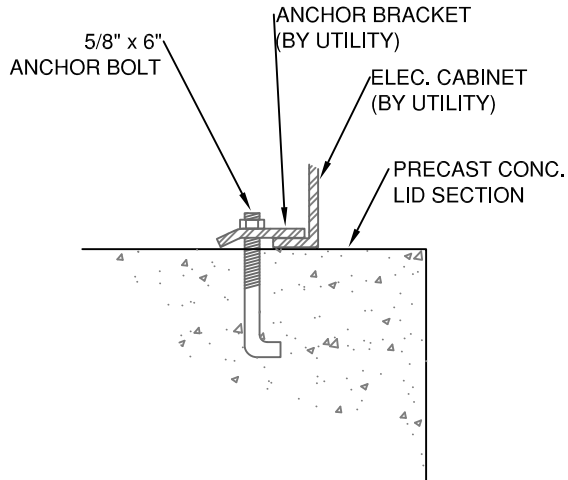
1. DESIGN OF PRECAST UTILITY ENCLOSURE SHALL BE UNDER DIRECT SUPERVISION OF A PROFESSIONAL CIVIL OR STRUCTURAL ENGINEER LICENSED IN THE STATE OF NEBRASKA. IF REQUESTED BY THE G.I.U.D., SUBMIT SEALED SHOP DRAWINGS AND CALCULATIONS. NOTE: FIBERMESH IS NOT A REPLACEMENT OF FLEXERAL REINFORCEMENT.
2. CONCRETE MIX DESIGN PER ACI 301-95. DESIGN OF REINFORCEMENT PER ACI 318-95. ALL CONCRETE TO BE 4000 PSI MIN. AT 28 DAYS WITH FIBERMESH (MIN. 1.5#/C.Y. OF CONCRETE).
3. ALL REINFORCEMENT TO BE GRADE 60, ASTM A615/A615M-96A. WIRE FABRIC TO BE GRADE 75, ASTM A185/A185M-96. PRECASTER TO COORDINATE LOCATION OF CONCRETE WALL JOINT WITH OWNER.
4. LOADING CRITERIA: LOADING: PER ASTM C857 (STANDARD PRACTICE FOR MINIMUM STRUCTURAL LOADING FOR UNDERGROUND PRECAST CONCRETE STRUCTURES). USE 35 PCF (EQUIVALENT FLUID PRESSURE ABOVE WATER TABLE). USE 80 PCF (EQUIVALENT FLUID PRESSURE BELOW WATER TABLE). ASSUME SATURATED SOIL OR WATER TABLE AT 3'-0" BELOW FINISHED GRADE. MAXIMUM 4'-0" OVERBURDEN.
5. ALL CONDUIT OPENINGS SHALL HAVE AN ELECTRICAL/TELEPHONE TERMINATOR FOR SCH 40 MANUFACTURED BY PA INSERT CORP. OR APPROVED EQUAL, INSTALLED WITH FLARED SEAL RING TO INSIDE, SIZE SHALL BE FOR: ____ 4" OR ____ 6" PVC PIPE. (CHECK ONE)



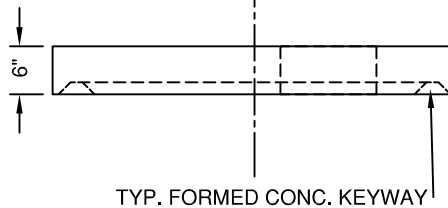
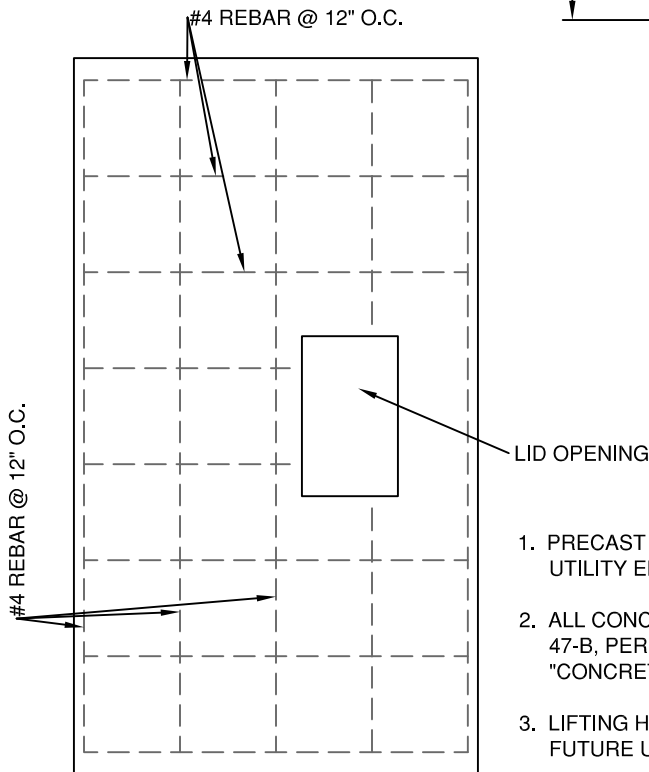
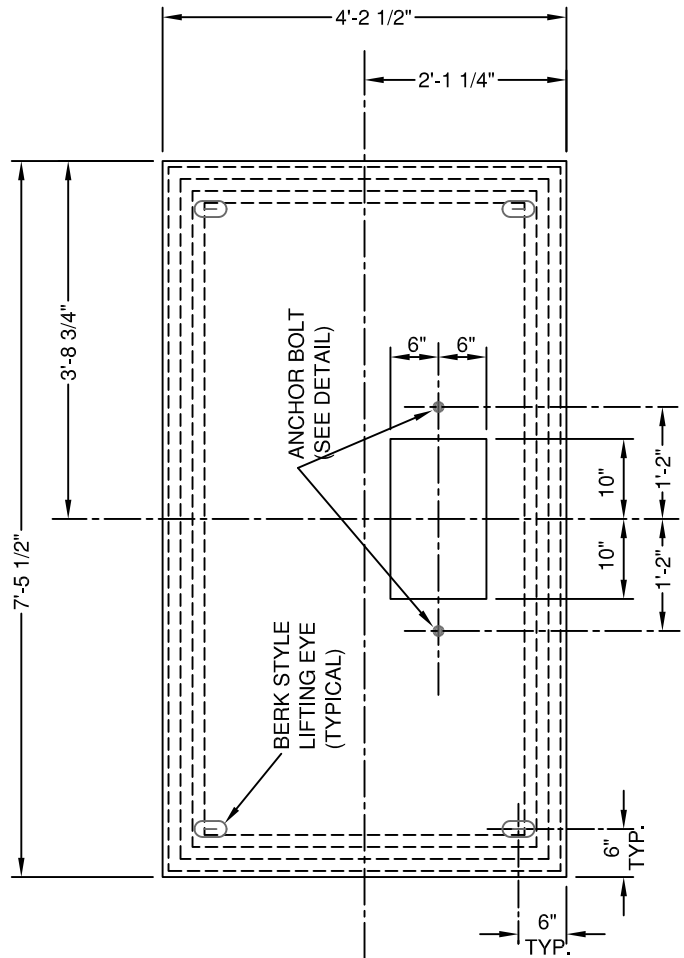
DATE: 4/12/2001
 DRAWN BY: ZEC
 CHECKED BY: T.W.B.

UTILITY ENCLOSURE
 7'x4'x6' PRECAST
 CONCRETE

PLAN
 EU-18
 2 OF 2



ANCHOR BOLT DETAIL

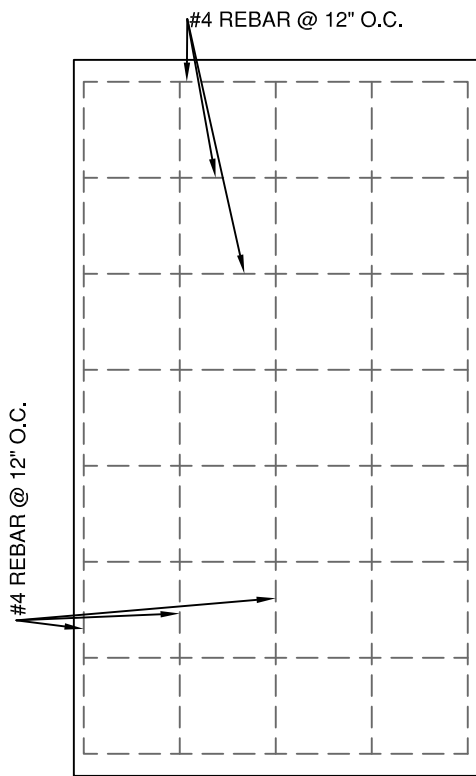


GENERAL NOTES

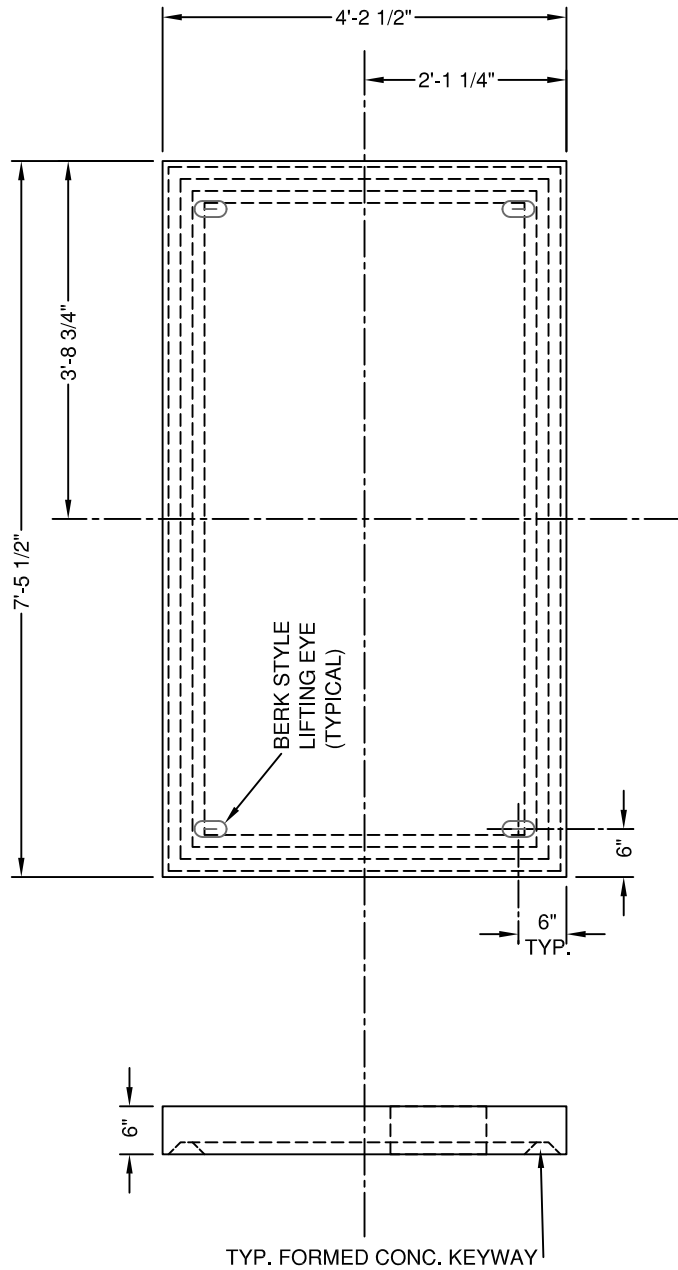
1. PRECAST CONCRETE LID IS TO BE CONSTRUCTED TO MATE WITH UTILITY ENCLOSURE TYPE EU-13 OR EU-14.
2. ALL CONCRETE TO BE USED IN CONSTRUCTION OF LID SHALL BE TYPE 47-B, PER CITY OF GRAND ISLAND SPECIFICATIONS DIVISION 2 "CONCRETE PAVING SPECIFICATIONS".
3. LIFTING HOOKS SHALL BE CAST AND POSITIONED IN THE LID SO THAT FUTURE USE IS POSSIBLE.
4. THE LID IS TO BE CONSTRUCTED TO HAVE A LOAD RATING OF H-20 OR HIGHER.

REV.: 6/6/2003
REV.: 1/3/2002

REBAR PLAN



REBAR PLAN



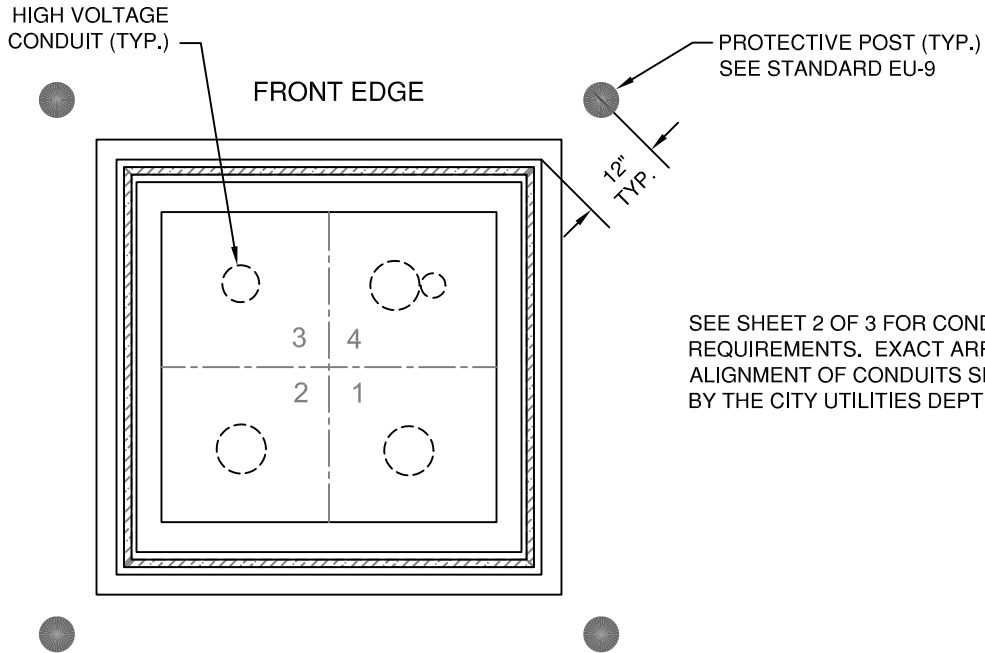
GENERAL NOTES

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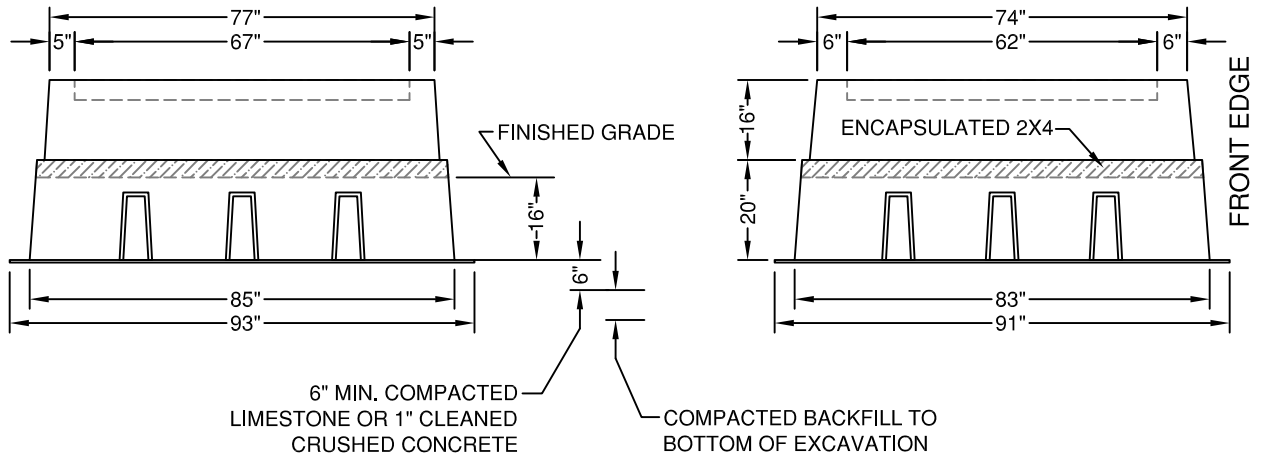
REV.: 6/6/2003

FIBERGLASS BOX PAD FOR PAD-MOUNTED SWITCHGEAR

NORDIC® TYPE GS-75-73-36BMG67X62

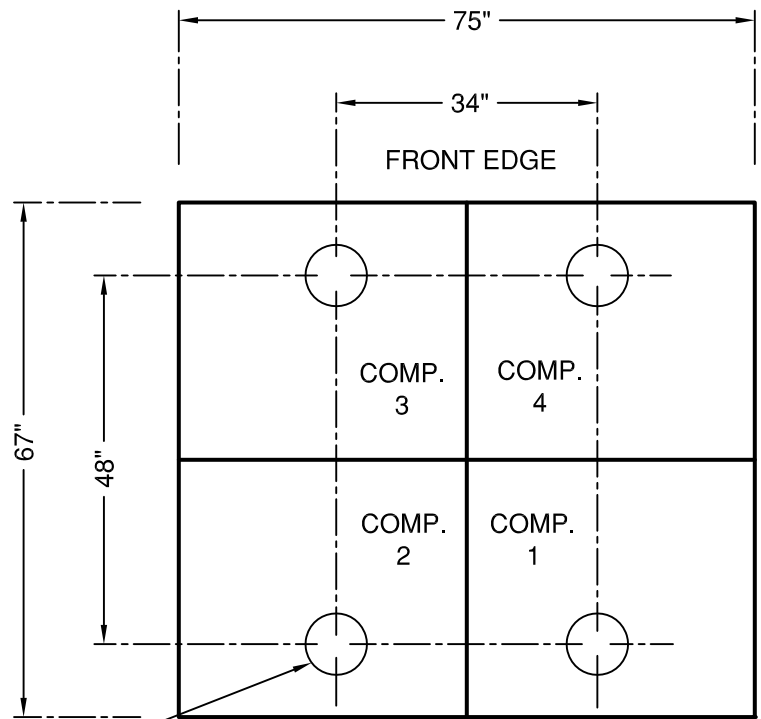


SEE SHEET 2 OF 3 FOR CONDUIT SPACING REQUIREMENTS. EXACT ARRANGEMENT AND ALIGNMENT OF CONDUITS SHALL BE SPECIFIED BY THE CITY UTILITIES DEPT. AT EACH LOCATION.



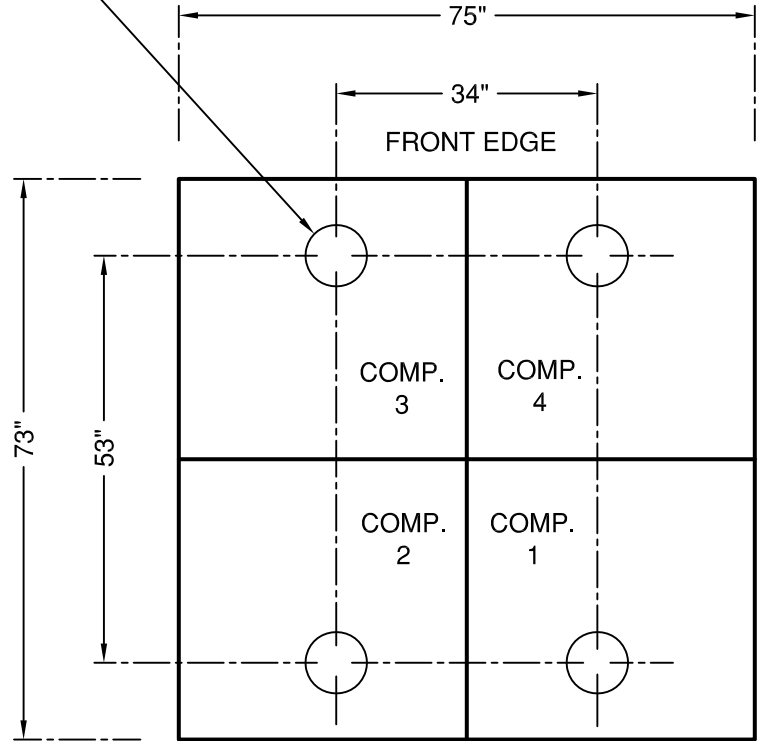
NOTE:
ALL MATERIALS SHALL BE AS LISTED, OR AN APPROVED EQUAL. THE USE OF A BRAND NAME IS FOR THE PURPOSE OF DESCRIBING A STANDARD QUALITY, PERFORMANCE, AND CHARACTERISTIC DESIRED, AND IS NOT INTENDED TO LIMIT OR RESTRICT COMPETITION.

REVISED
12/9/2011

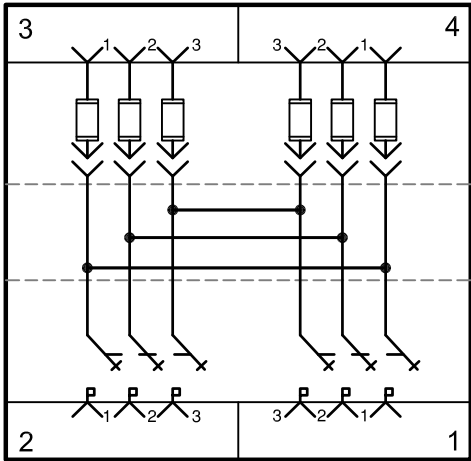


S & C PAD-MOUNTED GEAR, PME-9

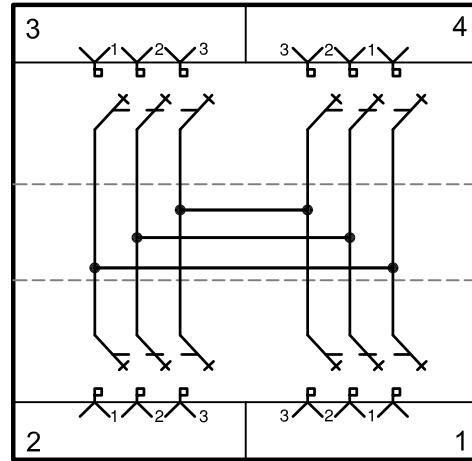
TYP. CONDUIT LOCATION.
EXACT ARRANGEMENT AND
ALIGNMENT OF CONDUITS
SHALL BE SPECIFIED BY THE
CITY UTILITIES DEPT. AT
EACH LOCATION.



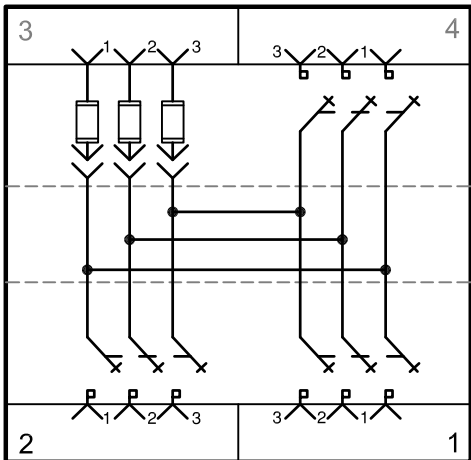
S & C PAD-MOUNTED GEAR, PME-10 & PME-11



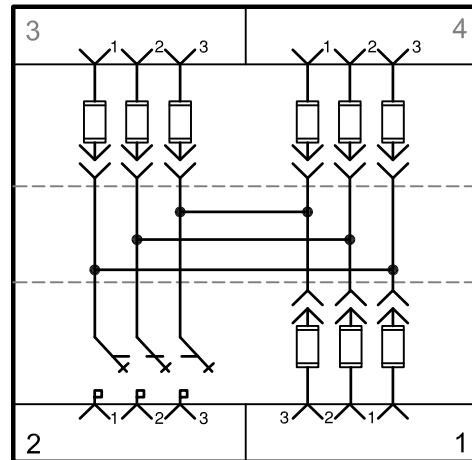
S & C PAD-MOUNTED GEAR- PME-9



S & C PAD-MOUNTED GEAR- PME-10

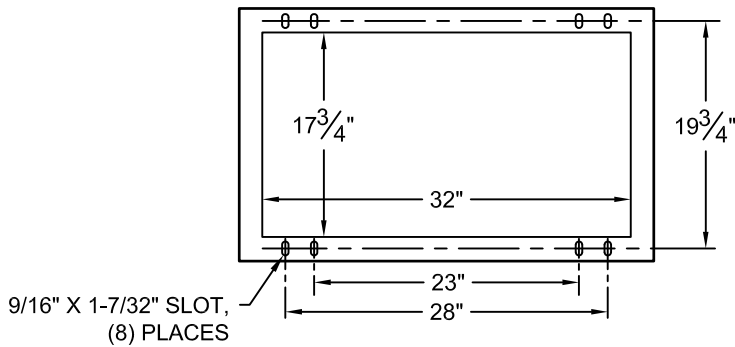
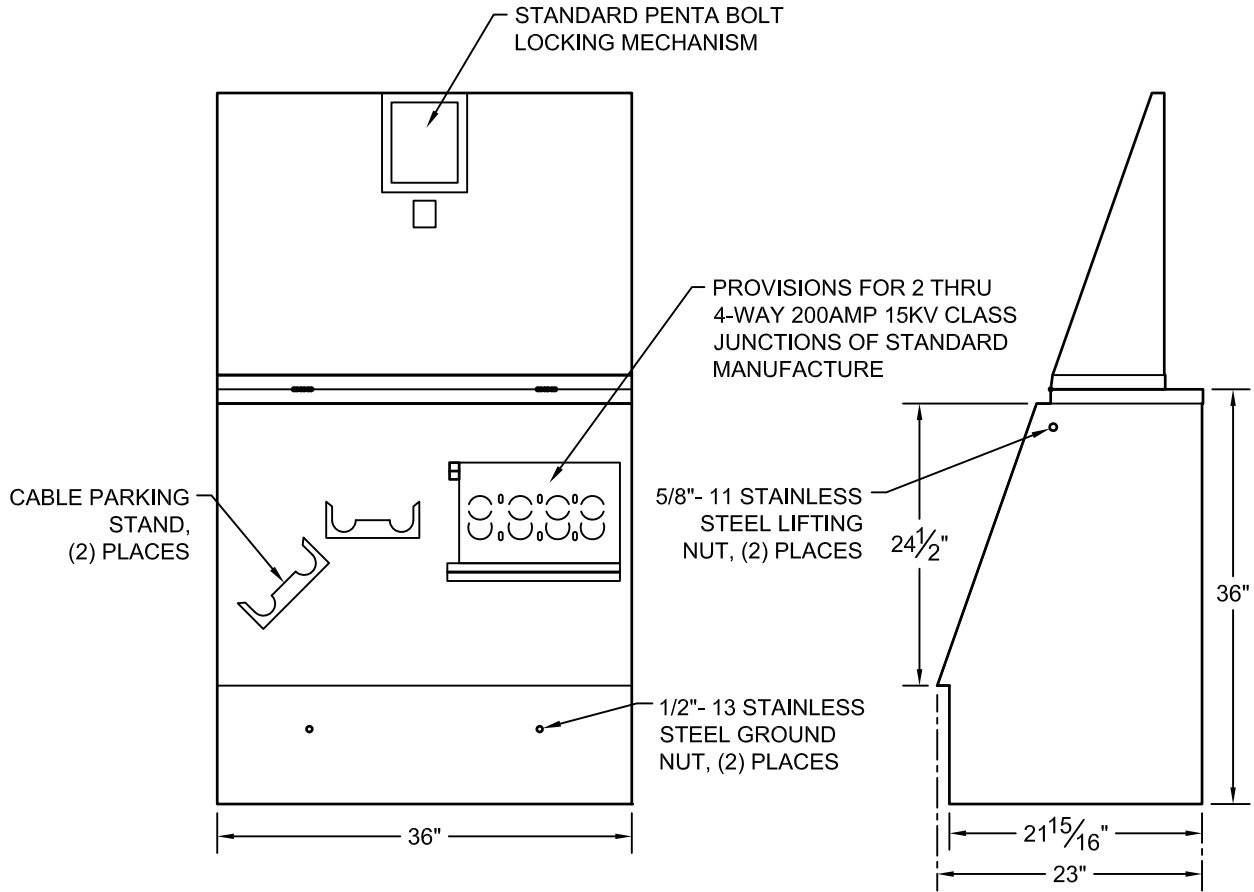


S & C PAD-MOUNTED GEAR- PME-11



S & C PAD-MOUNTED GEAR- PME-12

1Ø DEFERRAL CABINET
 DURHAM Co. - TYPE B062588



NOTES:

1. FABRICATED FROM 14 GA. GALVANIZED STEEL.
2. PAINTED MUNSELL 7GY 3.29/1.5 GREEN.
3. DESIGNED TO CONFORM TO ANSI C57.12.28.
4. ALL MATERIALS SHALL BE AS LISTED, OR AN APPROVED EQUAL. THE USE OF A BRAND NAME IS FOR THE PURPOSE OF DESCRIBING A STANDARD QUALITY, PERFORMANCE, AND CHARACTERISTIC DESIRED, AND IS NOT INTENDED TO LIMIT OR RESTRICT COMPETITION.