APPLICANT-INSTALLED FACILITIES AGREEMENT FOR UNDERGROUND CONVERSIONS (WR # 6574572)

This Agreement, made and entered into this_____day of_____, 20_____, by and between the CITY OF FORT LAUDERDALE (the "Applicant"), a Florida municipal corporation with an address of 100 N Andrews Ave, Ft. Lauderdale, FL 33301 and FLORIDA POWER & LIGHT COMPANY ("FPL"), a Florida corporation organized under the laws of the State of Florida, with an address of P.O. Box 14000, 700 Universe Boulevard, Juno Beach, FL 33408-0429.

WITNESSETH:

WHEREAS, the Applicant has executed the appropriate underground facilities conversion agreement ("Conversion Agreement") with FPL to convert certain overhead electric distribution facilities (collectively the "Existing Overhead Facilities") to underground distribution facilities (collectively the "Underground Facilities"), as described in the aforementioned Conversion Agreement (hereinafter the "Conversion");

WHEREAS, the Applicant desires to perform itself, or through its Contractors, certain Work as such term is described in **Exhibit A** associated with the Conversion;

WHEREAS, FPL is willing, subject to all the terms and conditions set forth below in this Agreement, to allow the Applicant to perform the Work based on Applicant's assurance that such Work will be in accordance with FPL's designs, instructions, standards and specifications (hereinafter, "Standards and Specifications" attached hereto as **Exhibit B**), and such Work will not adversely impact FPL or its electric customers;

NOW, THEREFORE, in recognition of the foregoing premises, and in consideration of the covenants and promises set forth herein below, FPL and Applicant do hereby agree as follows:

1. **Compliance with Tariff**. Applicant shall comply with and abide by the requirements, terms, and conditions of this Agreement, the Conversion Agreement, and FPL's electric tariff (the "Tariff").

2. **Conditions for Work to be Performed.** Applicant shall, at its own cost and expense, perform or cause to be performed, all Work, as described in **Exhibit A**, in accordance with the terms and conditions of this Agreement and the Standards and Specifications shown in **Exhibit B**. The Applicant shall provide all survey and staking to ensure that all Underground Facilities are installed as shown in the Conversion Agreement and provide As-Built prints to FPL within two (2) weeks of installation, signed and certified by a Florida registered surveyor along with an FPL "Redline" document.

3. **Commencement of Work**. Applicant shall perform the Work, or any portion of the Work, only upon receipt of a notice to proceed containing the approved drawings, specifications and instructions from FPL ("Notice to Proceed"). After receipt of the Notice to Proceed,

Applicant shall provide written notice of intent to commence work to FPL at least five (5) days prior to commencement of such Work. Applicant shall not perform any excavation work without first notifying Sunshine State One Call for identification and marking of existing underground utilities and complying with the excavation requirements set forth in Florida Statute Chapter 556.

4. **Materials**. All Materials are to be supplied by FPL and shall be picked up by Applicant at a mutually agreed upon time and location, typically with 5 business days minimum notice, but no more than 15 business days notice, unless mutually agreed upon. Alternatively, FPL will, at Applicant's expense, have the material delivered to a mutually agreed upon location. Applicant assumes liability for any materials lost, stolen or damaged once these materials are picked up by, or delivered to, the Applicant.

5. **Contractors**. Applicant may enter into a contract with a contractor for the performance of theWork, or any portion thereof, provided that the contractor has been approved by FPL in writing prior to execution of such contract. Applicant shall not make any substitution of any contractor for the performance of Work unless the substitution is approved by FPL in writing. The Applicant's contractor(s) shall perform ALL work as outlined within **Exhibit A** & **Exhibit B**. No contract or purchase order between Applicant and its contractor(s) shall bind or purport to bind FPL, but each contractor entering into a contract with Applicant with respect to the Work shall name FPL as an intended third-party beneficiary and include a provision permitting its assignment to FPL upon FPL's written request, following default by Applicant or termination or expiration of this Agreement. Applicant shall provide FPL with written certification from each of its contractors performing Work that all warranties, guarantees and obligations of such contractors are equivalent or better than those granted by such contractor to FPL for similar work and shall require that each such contractor name FPL as an intended third party beneficiary of such warranties, guarantees and obligations with the same rights of enforcement as Applicant. Applicant shall assign all representations, warranties, guaranties, and obligations of all contractors at the request and direction of FPL, and without recourse to Applicant, to FPL upon default by Applicant or termination or expiration of this Agreement; provided, however, that, notwithstanding such assignment, Applicant shall be entitled to enforce each such representation, warranty, guaranty, and obligation so long as Applicant has any liability under this Agreement. Applicant hereby assigns to FPL, effective as of the termination or expiration of this Agreement, all representations, warranties, guaranties and obligations of all Contractors.

6. **Right of Entry**. FPL reserves the right, together with its agents or designees to enter the Jobsite as it may elect for the purpose of inspecting the Work, or constructing or installing such collateral work as it may desire, or testing, boring or surveying, or any other purpose.

7. **Inspection and Correction of Deficiencies**.

7.1. All Work shall be properly inspected and tested, if appropriate, by Applicant and shall at all times be subject to additional inspection by FPL and its designee(s).

7.2. Neither the failure to make such inspection, nor the failure to discover defective workmanship, materials, or equipment, nor approval of or payment to Applicant for such Work shall prejudice the rights of FPL thereafter to correct or reject the same.

7.3. Applicant shall correct any deficiencies found with the Work, including but not limited to discrepancies that are inconsistent with FPL's design, instructions, Standards or Specifications in **Exhibit B** within two (2) business days. If Applicant does not adequately rectify the identified deficiencies in the required timeframe, FPL may, at its sole discretion, perform, or have performed by its contractor the required repairsand Applicant shall pay FPL for any costs incurred. These requirements apply whether the discovery of deficiencies occurs while Applicant is performing its Work or while FPL, or its contractor, is performing its portion of the work. Any deficiencies noted by FPL prior to connection of any customers shall be rectified by Applicant at its sole cost and expense.

7.4. If any Work or part thereof is covered over contrary to the requirements of this Agreement or the written request of FPL, it must, if required by FPL, be uncovered for observation and inspection and covered again at Applicant's sole expense.

7.5. If any Work that FPL has not specifically requested to observe and inspect prior to being covered has been covered, FPL may request to see such Work or part thereof and it shall be uncovered by Applicant. If such Work or part thereof is found to be in accordance with this Agreement, the cost of uncovering and covering again shall be paid by FPL. If such Work or part thereof fails to meet the requirements of this Agreement, Applicant shall pay all costs of uncovering, correcting, and covering again.

7.6. Applicant shall pay FPL for all time spent reviewing and inspecting Applicant's Work.

7.7. No electric customers shall be connected to the Underground Facilities prior to all deficiencies being rectified.

8. <u>Indemnity / Liability of Applicant</u>.

8.1. Subject to the conditions and limitations set forth in § 768.28 F.S. (2020), applicant shall protect, defend, indemnify and hold FPL free and unharmed from and against any liabilities whatsoever resulting from or in connection with this Agreement, the Conversion or in connection with the performance of the Work by the Applicant, its employees, agents, Contractors or Contractors' employees. The Applicant's indemnity obligations to FPL shall not apply to any claims or liabilities that are caused by the sole negligence of FPL.

8.2. Subject to the conditions and limitations set forth in § 768.28 (2020), Applicant shall assume full responsibility for all damages and all restoration arising in connection with the Work.

9. **Design Work**. FPL shall provide all design, instruction, standards and specifications necessary to perform the Conversion.

10. **Completion of Work and Ownership**. Applicant shall complete the Work by _____, 20____and notify FPL when said Work is complete. Upon FPL's final written approval of the completion of the Work ("Acceptance"), Applicantacknowledges that all rights, title and interest, free and clear of all liens, in and to the Workshall vest in FPL. If requested by FPL, Applicant shall provide FPL, in a form acceptable toFPL, an affidavit of Applicant certifying payment of all indebtedness to all Contractors and awritten release of liens from Applicant and each Contractor.

11. **No Liability by FPL**. FPL assumes no liability due to any damage, misunderstanding of installation drawings or specifications, or any actions due to Applicant or its Contractor.

12. **Suspension for Cause:**

12.1. FPL may at its sole discretion, by Notice, temporarily suspend the Work, or any portion thereof, under this Agreement when the performance by Applicant or its contractor deviates from the Standards and Specifications set forth in Exhibit B.

12.2. The methods by which Applicant performs its Work are entirely the responsibility of Applicant. FPL's right to suspend Work is intended solely to verify that the Work being performed by Applicant and its Contractor conforms to the Standards and Specifications set forth in Exhibit B and shall not obligate FPL to review the efficiency, adequacy or safety of Applicant's or its Contractors methods or means of operation or construction.

12.3. Any additional costs incurred by Applicant resulting from such suspension shall be borne solely by Applicant.

12.4. If Applicant immediately corrects the unsatisfactory condition FPL shall authorize resumption of the Work. Applicant's failure to immediately effect correction of the unsatisfactory conditions shall be cause for termination of this Agreement.

13. **Termination for Cause:**

13.1. FPL may, upon Notice to Applicant, and without prejudice to any remedy available to FPL under law, in equity or under this Agreement, terminate the wholeor any part

of this Agreement for cause and take possession of the Work without termination charge, penalty or obligation in the event Applicant fails to perform a material obligation under this Agreement and fails to cure such material obligationdefault within a reasonable period of time, but in no event more than ten (10) business days, after Notice from FPL specifying the nature of such default (any such termination referred to as a "Termination for Cause").

13.2. In the event of Termination for Cause by FPL, Applicant shall:

a. Unless instructed otherwise in the Notice, immediately stop all Work hereunder;

b. Issue no further contracts except with the prior written consent of FPL;

c. Assign to FPL, to the extent requested by FPL, all rights of Applicant under contracts outstanding;

d. Terminate, to the extent requested by FPL, outstanding contracts;

e. Fully cooperate and refrain from hindering or interfering in any manner with any other persons or parties currently or prospectively performing the Work; and

f. Take any other action toward termination, or toward preservation of the Work, that FPL may direct.

13.3. Upon a Termination for Cause, all obligations of FPL hereunder shall terminate effective immediately. Upon such Termination for Cause, FPL may either rework or take over the terminated Work and proceed to provide such materials, supplies, equipment and labor of both FPL and FPL contractors, as may be reasonably necessary to complete said Work. FPL may have any partially fabricated portion of the Work removed from Applicant's or contractor's facilities upon Notice to Applicant. Applicant shall be liable for any increase of FPL's costs, including rework costs, incurred by FPL as a result of FPL's termination of the contract for cause.

13.4. In the event of Termination for Cause, FPL shall have no liability to Applicant for costs incurred by Applicant as a result of such termination.

14. **Termination Prior to Construction**. Applicant may terminate this Agreement at any time prior to the start of construction. If Applicant elects to still complete the Conversion, then the Contribution-In-Aid-of-Construction (CIAC) amount provided in the Conversion Agreement shall be revised accordingly. The revised Conversion Agreement must be executed and any additional CIAC due received by FPL prior to the start of construction.

15. **Assignment**. This Agreement is not assignable.

16. **Applicant's Payments to FPL.** Any monies that are owed by Applicant to FPL under this Agreement shall be paid to FPL within thirty (30) days of FPL producing an invoice.

17. **Notice**. As used herein, the term "Notice" shall mean any formal written correspondence providing notice of action, purpose, intent or the like given under the provisions of this Agreement. Unless otherwise provided in this Agreement, Notice shall be delivered in person, by courier or by certified mail and shall be effective when received. General correspondence is not categorized as Notice.

IN WITNESS WHEREOF, FPL and Applicant have executed this Agreement for the provision of Applicant-Installed facilities to be effective as of the date first above written.

CITY OF FORT LAUDERDALE, A MUNICIPAL CORPORATION OF THE STATE OF FLORIDA

WITNESSES:

_____

_____ By: _____
[Witness type or print name] Dean J. Trantalis, Mayor

_____

_____ By: _____
[Witness type or print name] Christopher J. Lagerbloom, ICMA-CM
City Manager

ATTEST:

_____
Jeffery A. Modarelli,
City Clerk

Approved as to form:
Alain E. Boileau, City Attorney

By: _____

STATE OF FLORIDA
COUNTY OF BROWARD

The foregoing instrument was acknowledged before me by means of □ physical presence or □ online, this ____ day of _____, 2021, by DEAN J. TRANTALIS, Mayor of the City of Fort Lauderdale, a municipal corporation of Florida on behalf of the City of Fort Lauderdale.

_____
Notary Public, State of Florida

_____
Name of Notary Typed, Printed or Stamped

Personally Known_____ OR Produced Identification_____
Type of Identification Produced _____

STATE OF FLORIDA
COUNTY OF BROWARD

The foregoing instrument was acknowledged before me this by means of □ physical presence or □ online, this ____ day of _____, 2021, by CHRISTOPHER J. LAGERBLOOM, ICMA-CM, City Manager of the City of Fort Lauderdale, a municipal corporation of Florida on behalf of the City of Fort Lauderdale.

_____
Notary Public, State of Florida

_____
Name of Notary Typed, Printed or Stamped

Personally Known_____ OR Produced Identification_____
Type of Identification Produced _____

FLORIDA POWER & LIGHT COMPANY, a Florida for profit corporation

By: _____
(Signature)

Name: _____
(Print or type)

Title: _____
(Print or type)

STATE OF _____
COUNTY OF _____

The foregoing instrument was acknowledged before me this by means of □ physical presence or □ online, this ____ day of _____, 2021, by _____, as _____ of for FLORIDA POWER & LIGHT COMPANY, a Florida for profit corporation on behalf of FLORIDA POWER & LIGHT COMPANY.

_____
Notary Public, State of Florida

_____
Name of Notary Typed, Printed or Stamped

Personally Known_____ OR Produced Identification_____
Type of Identification Produced _____

Exhibit A

WR # 6574572

Work to be Performed:

Applicant shall:

- Install all conduit and concrete products based on the attached specifications and in the locations as indicated on the attached drawings.

- Install cable, transformers and switch pads including the primary and secondary cable terminations and connections. FPL will be responsible for energizing the new underground circuit(s) to the existing FPL electrical system.

FPL

Applicant Installed Facilities

Exhibit B

WR # 6574572

Standards and Specification

rev: March 2020

3.3.1 Survey As-Builts

3.3.1.1 The Surveyor shall obtain As-built Survey before back filling occurs. This field information is necessary for updating and correcting FPL work order drawings (usually Plan & Profile). The Surveyor is to record all as-built information in a field book. (See 4.0 Data Recording). All manholes, vaults, trench routes and duct bank locations are to be stationed to a baseline or reference line. The as-built information is to be referenced to this line. Elevations will be to NGVD 1929, NAVD 1988, or other established local datum. They are to be taken along the top of the duct bank or cable and at existing grade at 50-foot maximum intervals. Existing grade elevation shots (Top of Ground) are to be taken as close as practical to the elevation shots of the duct bank or cable being recorded. Additional elevations and grade shots are required when there is a change of elevation and/or direction of the cable or duct bank. Elevations are required on the roof of the manhole, rim if installed ,at existing grade and where the duct enters the manhole or feeder splice box. When other utilities are uncovered, (water, gas, sewer, telephone, etc.) their size, material and type are to determined, their location referenced to the base line, and their elevation noted. An elevation will be taken on the duct bank or cable directly above or below the other utility and at existing grade. As-built shall show the relation of installed facility to any easement provided by the permitting agency or others.

SPECIFICATIONS FOR UNDERGROUND CONDUIT INSTALLATION

1. Conduit, handhole, and transformer pad placement shall be in the easement provided and in accordance with the design drawings and field staking.
2. Use only FPL supplied conduit with FPL supplied bends. (Figure 1)
3. Glue all joints securely with FPL supplied glue. (Appendix A)
4. FPL conduit markers must be placed at all conduit ends. (Figure 1)
5. Primary conduit is to have a minimum of 36 inches of cover. Secondary conduit is to have a minimum of 24 inches of cover. (Figure 1). Secondary conduit may be placed at 36" depth when in the same trench as primary conduit.
6. All service and street light conduit is to have 24 – 30 inches of cover at property line. All future service stub-outs at transformer locations to be installed with 90's. Where primary, secondary, or street light conduit runs turn horizontally, 36 inch radius 90 degree bends are to be used.
7. Cap all ends of the conduit with FPL supplied end caps. Denote termination point of each conduit run on the capped end, (Appendix B). All conduit ends are to be terminated 1 – 2 feet above final grade except at transformer locations where conduit ends are to be terminated 3 inches above final grade. (Figure 3)
8. Install 1 #12 copper locate wire supplied by FPL in each trench per attached specs (Figure 4). All ends of the #12 copper locate wire must be exposed above grade, and secured with a tie wrap to a piece of stubbed up conduit for future locates. (Figure 4)
9. Conduits terminated at transformer locations to be installed with templates supplied by FPL per Figure 3A, 3B, or 3C according to the type of transformer being installed. (Consult your Service Planner).

10. Concrete transformer slabs provided by FPL are to be installed level on compacted fill at final grade and oriented as shown on the FPL design drawing(s) (Figure 3)

11. Conduits terminated at future secondary handhole locations to be installed per Figure 2. If secondary handholes are being installed at the time of conduit installation, install 45 degree bends as shown in Figure 1.

12. Primary splice handhole to be installed with electronic cable marker. (Figure 2A)

13. Install a continuous length of pull string in all conduit runs.

14. Backfill operations are to be done carefully with special attention given to utilizing clean fill, thereby assuring the elimination of rock and other scrap material to insure that the conduit will not be damaged or marking devices moved and proper compaction is achieved.

TESTING AND ACCEPTANCE GUIDELINES

Following notification of completed installation of underground conduits by a developer/contractor FPL will:

1. Randomly spot check the installation depth of conduits below grade at a minimum of 2 points between each primary termination point, (transformers, splice boxes & risers) noting the measured depth on the record drawing.

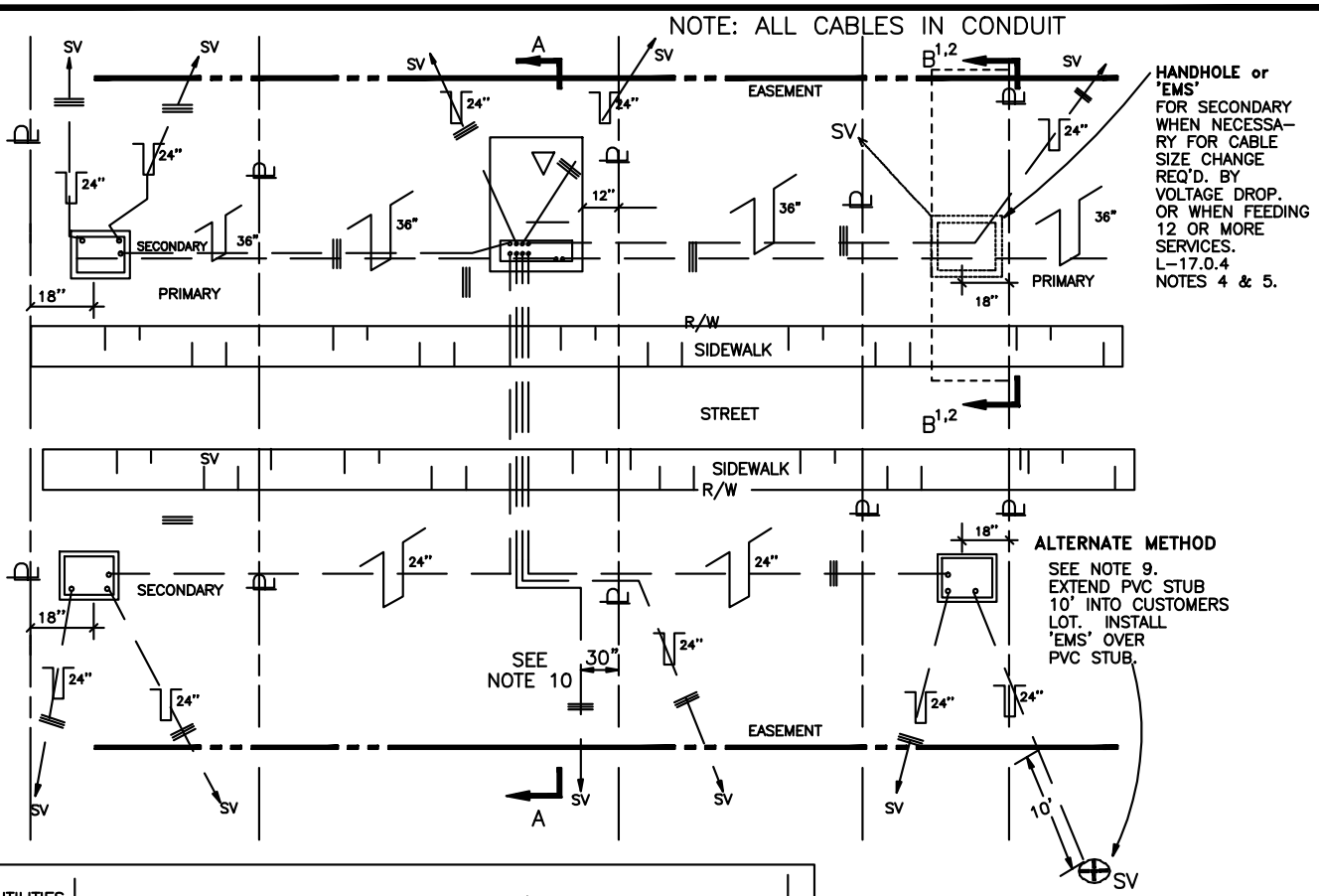
2. After confirming the correct routing and integrity of a conduit run, verify that the cable markers were installed and exposed conduit ends are plugged.

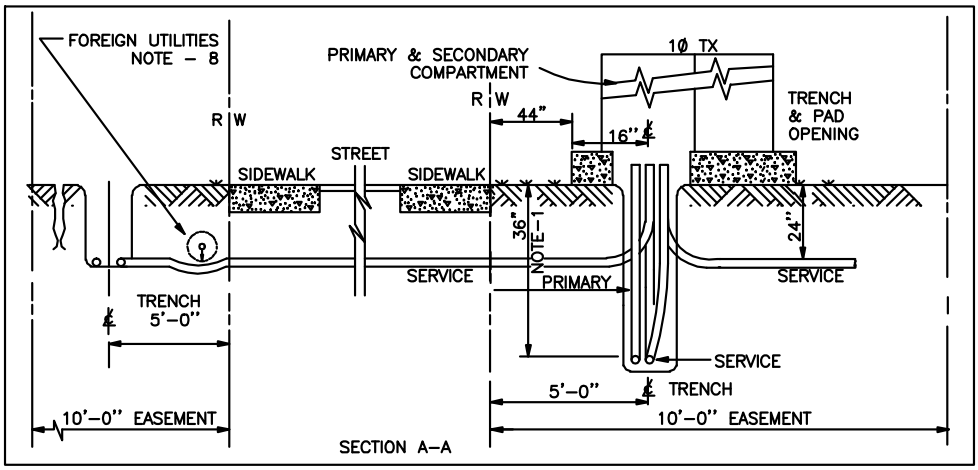
3. Confirm that a continuous length of pull string has been installed in all conduit runs and verify that all conduits runs terminate in the correct locations.

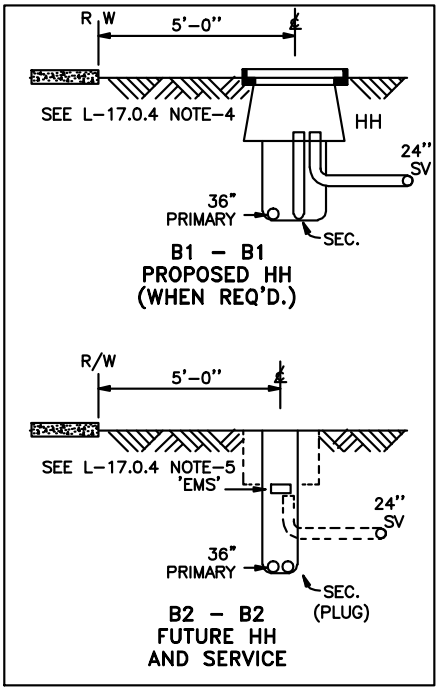
4. The final acceptance of the conduit installation will occur when FPL pulls the conductor and occupies the conduit.

LOCATING SINGLE PHASE TRANSFORMER PAD IN FRONT EASEMENT PREFERRED METHOD

L-17.0.5







NOTES:

8. MINIMUM SEPARATION FROM FOREIGN PIPES, CONDUITS OR CABLES MUST BE AS FOLLOWS: FROM COMMUNICATION SYSTEMS (CATV, OR TELEPHONES), 3" OF CONCRETE OR 12" OF WELL TAMPED EARTH: FROM WATER, GAS, OR SEWER LINES, 12" OF WELL TAMPED EARTH, OR OTHER SEPARATION AGREED TO BY ALL PARTIES INVOLVED.
9. AS AN ALTERNATE METHOD EXTEND THE PVC 10' INTO THE CUSTOMERS PROPERTY & INSTALL AN 'EMS' OVER THE PVC STUB. USE THIS METHOD OF CONSTRUCTION ONLY WHEN YOU ARE UNABLE TO USE THE PREFERRED METHOD OF STUBBING THE PVC INSIDE THE HANDHOLE OR TO AVOID FUTURE CONFLICTS WITH FOREIGN UTILITIES INSTALLATIONS. THIS METHOD OF CONSTRUCTION CAN BE USED IN EITHER FRONT OR REAR EASTMENT.
10. PRIMARY, SECONDARY AND/OR SERVICE RUNS ADJACENT TO SIDE PROPERTY LINES SHOULD BE INSTALLED AT 30" FROM THE PROPERTY LINES WHENEVER POSSIBLE.

SUPERSEDES L-17 SH. 5 LAST REVISED ON 1-29-92

F P L

OH & UG DISTRIBUTION SYSTEM STANDARDS

NO.	DATE	REVISION	ORIG.	DRAWN	APPR.
3	8/15/05	UPDATE DRAWING	SMS	ELS	JJM
2	6/29/05	UPDATE DRAWING	SMS	ELS	JJM
1	8/18/99	CHANGE (L-17, SH 4) TO SEE L-17.0.4 & TITLE	SMS	PRH	JJM
0	8/9/96	CHANGE MINIMUM DEPTH	SMS	RAS	JJM

ORIGINATOR: SMS

DRAWN BY: RAS

DATE: 8/9/96

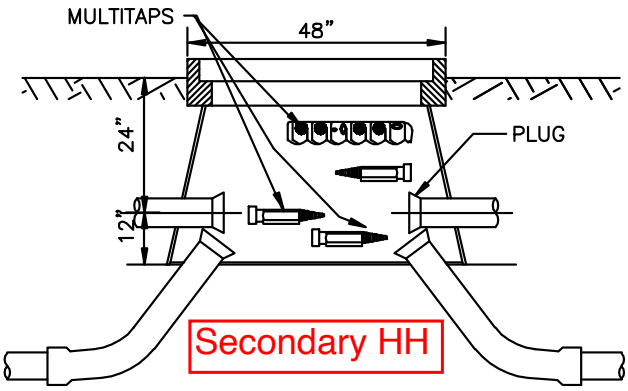
APPROVED: J.J. MCEVOY
SUPERVISOR, OH/UG PRODUCT SUPPORT SERVICES

CAM #21-0191
Exhbit 1
Page 14 of 56

NO SCALE

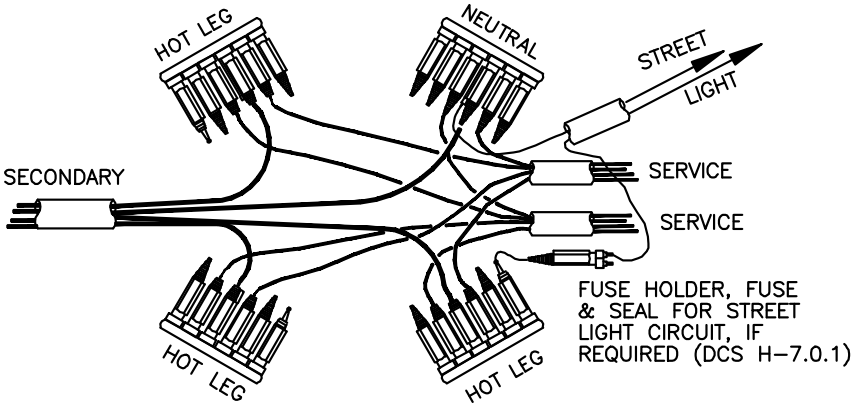
MULTITAP CONNECTORS IN HANDHOLE (30"X48"X36") FOR CONNECTING 2 TO 5 SERVICES AND 1/0 PRIMARY SPLICE BOX

UN-19.0.0



NOTE: KNOCKOUTS WILL ACCOMMODATE 5" PVC 2 KNOCKOUTS EACH SIDE

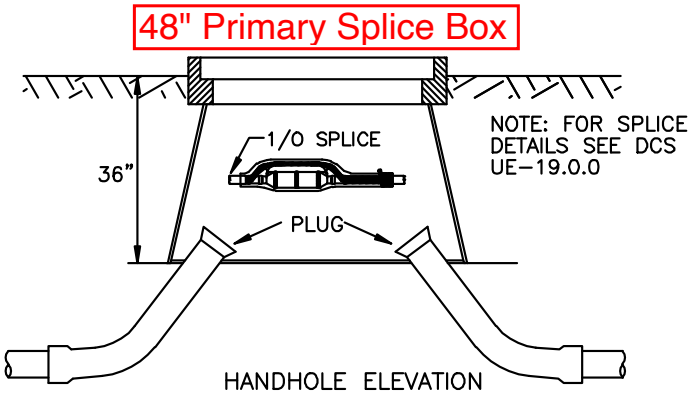
HANDHOLE ELEVATION



FOR EASE OF INSTALLATIONS TRAIN THE CABLES ABOVE GRADE, INSTALL THE MULTITAP CONNECTORS, THEN INSTALL INSIDE HANDHOLE

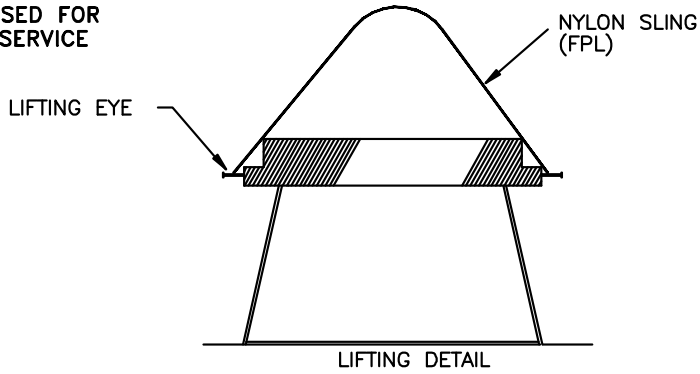
CONNECTION DIAGRAM (EXPANDED)

HANDHOLE USED FOR SECONDARY SERVICE

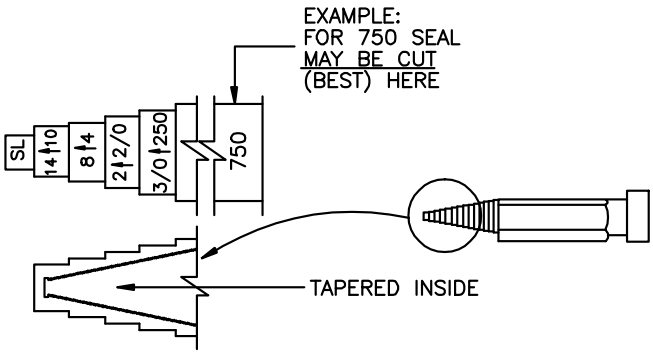


HANDHOLE ELEVATION

HANDHOLE USED AS A 1/0 PRIMARY SPLICE BOX



HANDHOLE MAY BE LIFTED WITH OR WITHOUT COVER IN PLACE



MULTITAP CONNECTOR M&S 163-017-502
FLOOD SEAL

NOTES:

1. MAXIMUM 1 SECONDARY CONDUIT WITH 2 TO 5 SERVICES.
2. MAXIMUM 3 SPLICES.
3. PROVIDE GROUNDING FOR ANY RUN GREATER THAN 650FT, INSTALL GROUND RODS AT THE 48" HANDHOLES TO GROUND THE CABLE. IF A HANDHOLE IS BEING INSTALLED IN A RUN FOR "CONVENIENCE" (TOO MANY BENDS IN THE RUN, CUTTING INTO A LOOP TO EXTEND INTO A CUL-DE-SAC, REPAIRING A DIG IN, ECT.) THERE IS NO NEED FOR THE GROUND RODS.
4. 6-PORT MULTITAP CONNECTOR M&S #163-017-502 WILL ACCOMMODATE #1/0 CABLE AND #400-#750 MCM COPPER OR ALUMINUM CABLES
5. WEIGHT:
   2 PIECE LID = 82 LBS. EACH
   BODY = 190 LBS.
6. LIFTING:
   COVER MAY BE LIFTED WITH THE HANDHOLE LID LIFTER (HOOK) TOOL M&S #593-930-021.
7. COMPLETE HANDHOLE, INCLUDES COVER M&S #162-121-004.
8. REPLACEMENT COVER M&S #162-121-012.
9. HANDHOLE SHOULD NOT BE EXPOSED TO VEHICULAR TRAFFIC, SUCH AS STREETS, PARKING LOTS, OR DRIVEWAYS.
10. FOR DRIVEWAY LOADING HANDHOLE 32"X50"X36" DEEP, USE M&S #162-122-892. (UX-202.0.0) APPROXIMATE WEIGHT 2,663 LBS.

NO.	DATE	REVISION	ORIG.	DRAWN	APPR.
8	7/29/11	UPDATE NOTE 3	ARR	ELS	BXN
7	2/4/10	UPDATE NOTE 4	ARR	ELS	JRD
6	6/16/08	UPDATE NOTES	GAP	ELS	JJM
5	8/16/05	UPDATE NOTES	RJO	ELS	JJM
4	11/18/03	UPDATE NOTES	RJO	ELS	JJM
3	7/16/01	UPDATE DRAWING (NOTES)	RAP	JES	JJM
2	9/27/99	UPDATE DRAWING (NOTES)	RAP	JES	JJM
1	8/09/96	ADDED EMS & NOTES 9., 10, & 11	SMS	RAS	JJM

FPL

OH & UG DISTRIBUTION SYSTEM STANDARDS

SUPERSEDES UN-19.0.0 LAST REVISED ON 9-30-94

ORIGINATOR: SMS

DRAWN BY: SMS

DATE: 9/30/94

APPROVED: J.J. MCEVOY
SUPERVISOR, OH/UG PRODUCT SUPPORT SERVICES

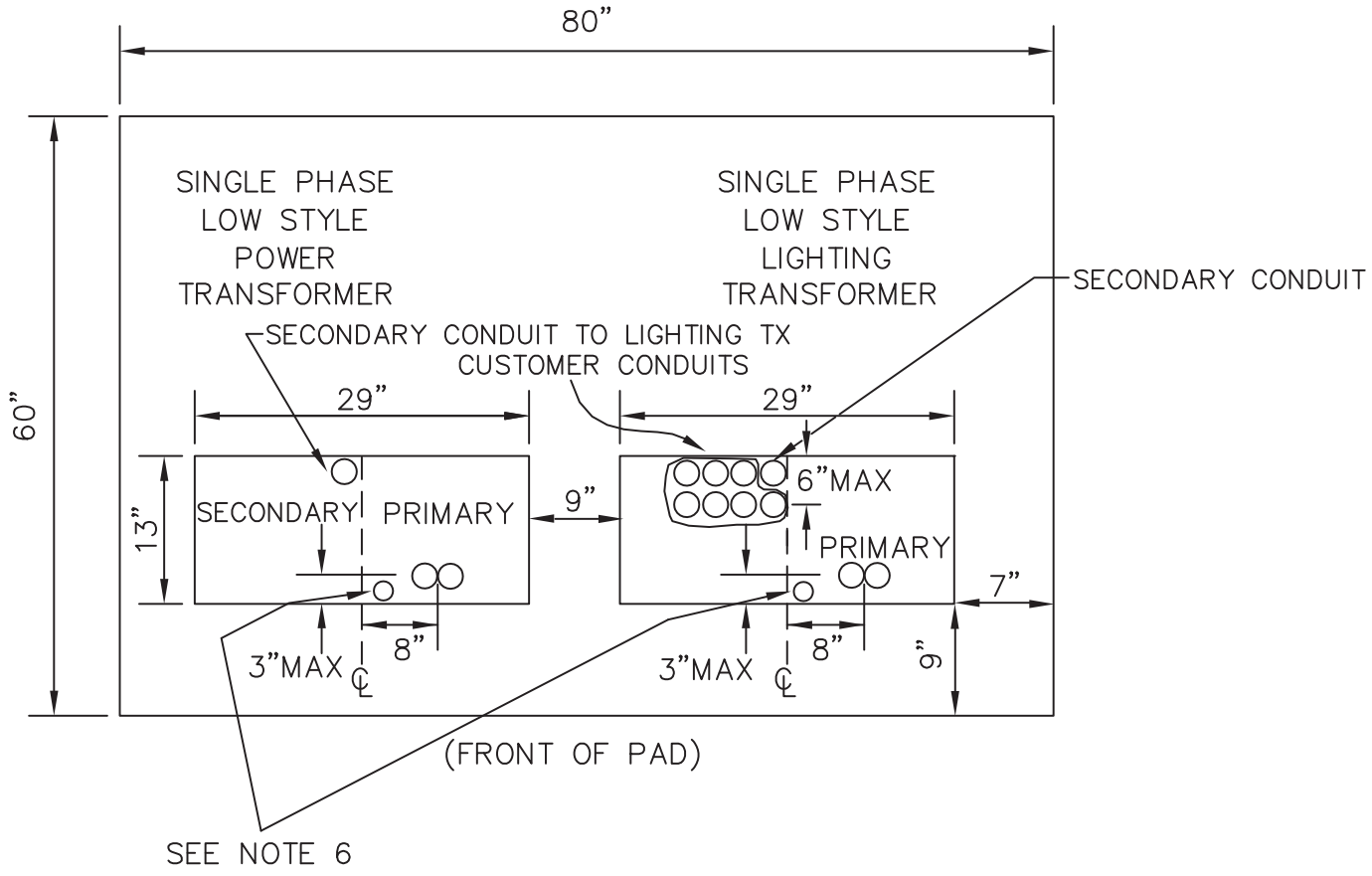
CAM #21-0191

NO SCALE

UN

CONDUIT LOCATIONS FOR OPEN WYE-OPEN DELTA USING TWO SINGLE PHASE LOW STYLE PAD MOUNTED TRANSFORMERS

UX-115.0.2



NOTES:

1. PAD M&S #162-246-001.
2. ALL CONDUITS TO EXTEND 3" MAX ABOVE GROUND LEVEL.
3. ALL CONDUIT RELATED DIMENSIONS ARE TO THE CENTER OF THE DUCT UNLESS OTHERWISE INDICATED.
4. MAINTAIN 8' CLEARANCE FROM FRONT AND 3' CLEARANCE FROM SIDES AND BACK OF TRANSFORMER PAD.
5. FOR ADDITIONAL DETAILS OF THE SECONDARY CONDUIT ROUTING UNDER THE PAD, REFER TO DCS PAGES I-68.0.2 AND I-68.0.3.
6. INSTALL 2" SLEEVE FOR GROUND ROD, 48" LONG.
7. CABLES REQUIRING CT METERING INSIDE THE TRANSFORMER MUST BE PLACED TOWARDS THE FRONT OPENING OF THE TX PAD AND IN FRONT OF ANY OTHER CABLES WHICH ARE NOT CT METERED INSIDE THE TRANSFORMER. THIS IS TO AVOID CABLE TRAINING ISSUES.

F P L

OH & UG DISTRIBUTION SYSTEM STANDARDS

NO.	DATE	REVISION	ORIG.	DRAWN	APPR.
4	1/28/16	UPDATE NOTES	ARR	ELS	RDH
3	5/7/15	UPDATE DRAWING AND NOTES	ARR	ELS	RDH
2	10/31/14	UPDATE DRAWING AND NOTES	ARR	ELS	RDH
1	3/25/8	UPDATE DIMENSIONS	GAP	ELS	JJM

ORIGINATOR: SMS

DRAWN BY: BILL

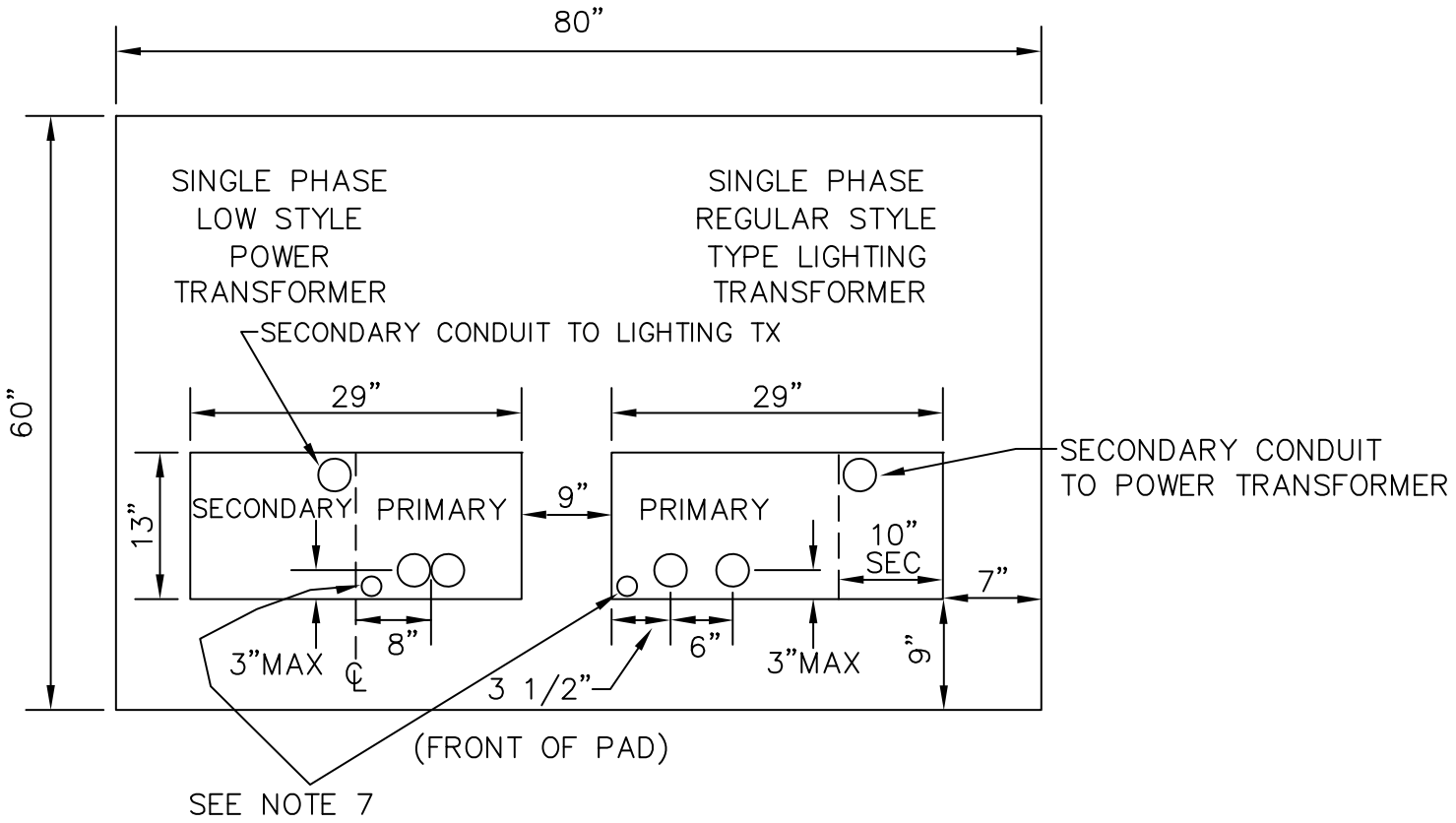
DATE:

APPROVED: J.J McEVOY
SUPERVISOR, OH/UG PRODUCT SUPPORT SERVICES

NO SCALE

UX-115.0.1 CONDUIT LOCATIONS FOR OPEN WYE-OPEN DELTA USING A SINGLE PHASE LOW STYLE PAD MOUNTED TRANSFORMER AND A 1ø REGULAR STYLE PAD MOUNTED TRANSFORMER

UX-115.0.1



NOTES:

1. REFERENCE I-68.0.2 OF THE DCS.
2. PAD M&S #162-246-001 (6" PAD THICKNESS) AND #162-246-002 (24" PAD THICKNESS).
3. ALL CONDUITS TO EXTEND 3" MAX ABOVE GROUND LEVEL.
4. ALL SECONDARY / CUSTOMER CONDUITS MUST FIT WITHIN THE 10"X13" AREA INDICATED.
5. ALL CONDUIT RELATED DIMENSIONS ARE TO THE CENTER OF THE DUCT UNLESS OTHERWISE INDICATED.
6. MAINTAIN 8' CLEARANCE FROM FRONT AND 3' CLEARANCE FROM SIDES AND BACK OF TRANSFORMER PAD.
7. INSTALL 2" SLEEVE FOR GROUND ROD, 48" LONG.
8. CABLES REQUIRING CT METERING INSIDE THE TRANSFORMER MUST BE PLACED TOWARDS THE FRONT OPENING OF THE TX PAD AND IN FRONT OF ANY OTHER CABLES WHICH ARE NOT CT METERED INSIDE THE TRANSFORMER. THIS IS TO AVOID CABLE TRAINING ISSUES.

F P L

OH & UG DISTRIBUTION SYSTEM STANDARDS

NO.	DATE	REVISION	ORIG.	DRAWN	APPR.
4	9/13/16	UPDATE NOTE	ARR	ELS	RDH
3	1/28/16	UPDATE NOTE	ARR	ELS	RDH
2	5/7/15	UPDATE DRAWING	ARR	ELS	RDH
1	3/25/8	UPDATE DIMENSIONS	GAP	ELS	JJM

ORIGINATOR: SMS

DRAWN BY: BILL

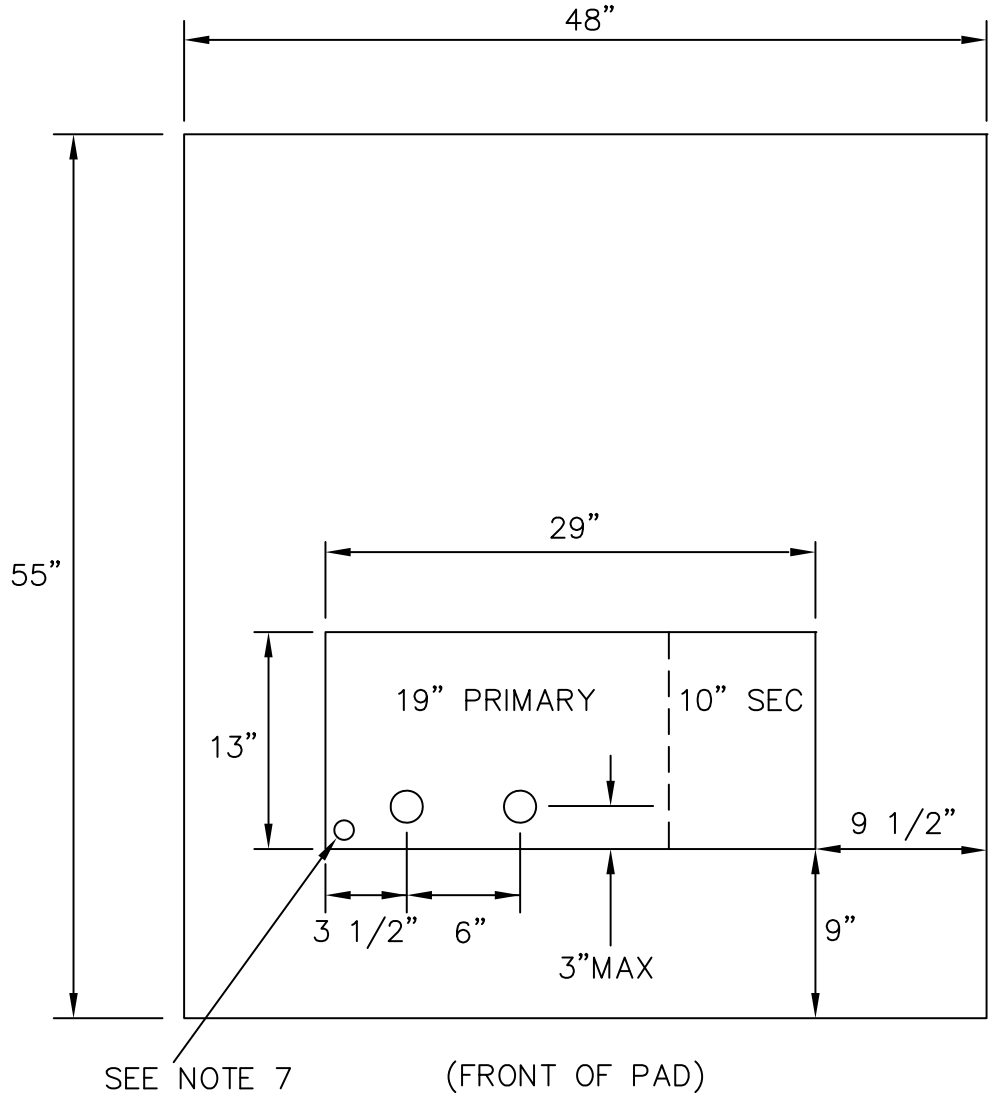
DATE: 7/21/14

APPROVED: J.J McEVOY
SUPERVISOR, OH/UG PRODUCT SUPPORT SERVICES

NO SCALE

CONDUIT LOCATIONS FOR SINGLE PHASE REGULAR STYLE PAD MOUNTED TRANSFORMERS

UX-117.0.2



NOTES:

1. REFERENCE I-62.0.0 OF THE DCS.
2. PAD M&S #162-248-004.
3. ALL CONDUITS TO EXTEND 3" MAX ABOVE GROUND LEVEL.
4. ALL SECONDARY/CUSTOMER CONDUITS MUST FIT WITHIN THE 10"X13" AREA INDICATED.
5. ALL CONDUIT RELATED DIMENSIONS ARE TO THE CENTER OF THE DUCT.
6. MAINTAIN 8' CLEARANCE FROM FRONT AND 3' CLEARANCE FROM SIDES AND BACK OF TRANSFORMER PAD.
7. INSTALL 2" SLEEVE FOR GROUND ROD, 48" LONG.
8. CABLES REQUIRING CT METERING INSIDE THE TRANSFORMER MUST BE PLACED TOWARDS THE FRONT OPENING OF THE TX PAD AND IN FRONT OF ANY OTHER CABLES WHICH ARE NOT CT METERED INSIDE THE TRANSFORMER. THIS IS TO AVOID CABLE TRAINING ISSUES.

F P L

OH & UG DISTRIBUTION SYSTEM STANDARDS

NO.	DATE	REVISION	ORIG.	DRAWN	APPR.
2	1/28/16	UPDATE NOTES	ARR	ELS	RDH
1	5/7/15	UPDATE DRAWING	ARR	ELS	RDH

ORIGINATOR: SMS

DRAWN BY: BILL

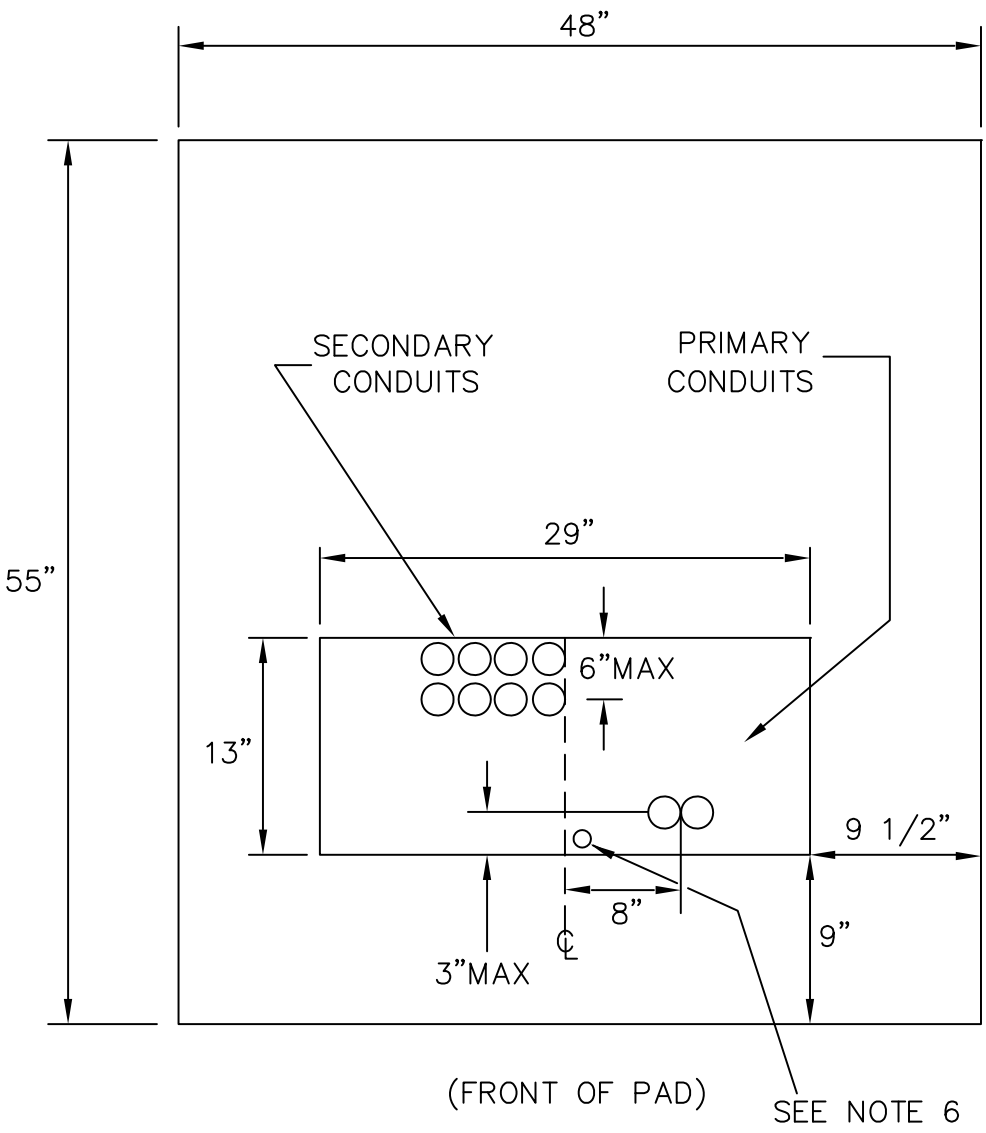
DATE:

APPROVED: J.J McEVOY

SUPERVISOR, OH/UG PRODUCT SUPPORT SERVICES

NO SCALE

UX-117.0.1	CONDUIT LOCATIONS FOR SINGLE PHASE LOW STYLE PAD MOUNTED TRANSFORMERS	UX-117.0.1



NOTES:

1. REFERENCE I-65.0.1 OF THE DCS.
2. PAD M&S #162-248-004.
3. ALL CONDUITS TO EXTEND 3" MAX ABOVE GROUND LEVEL.
4. ALL CONDUIT RELATED DIMENSIONS ARE TO THE CENTER OF THE DUCT UNLESS OTHERWISE INDICATED.
5. MAINTAIN 8' CLEARANCE FROM FRONT AND 3' CLEARANCE FROM SIDES AND BACK OF TRANSFORMER PAD.
6. INSTALL 2" SLEEVE FOR GROUND ROD, 48" LONG.
7. CABLES REQUIRING CT METERING INSIDE THE TRANSFORMER MUST BE PLACED TOWARDS THE FRONT OPENING OF THE TX PAD AND IN FRONT OF ANY OTHER CABLES WHICH ARE NOT CT METERED INSIDE THE TRANSFORMER. THIS IS TO AVOID CABLE TRAINING ISSUES.

F P L

OH & UG DISTRIBUTION SYSTEM STANDARDS

NO.	DATE	REVISION	ORIG.	DRAWN	APPR.
2	1/28/16	UPDATE NOTES	ARR	ELS	RDH
1	5/7/15	UPDATE DRAWING	ARR	ELS	RDH

ORIGINATOR: SMS

DRAWN BY: BILL

DATE:

APPROVED: J.J McEVOY

SUPERVISOR, OH/UG PRODUCT SUPPORT SERVICES

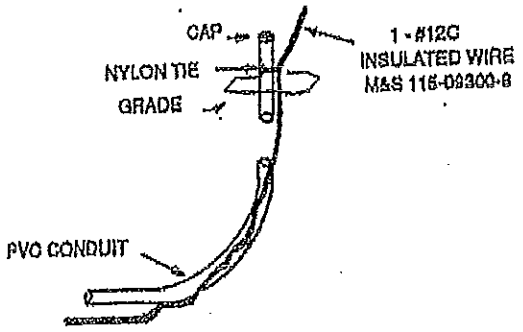
NO SCALE

FIGURE 4

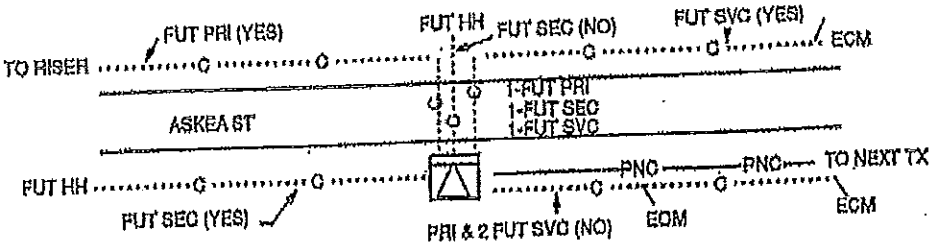
1 - #12C INSTALLATION

When installing conduit only (cable to be pulled later), a single #12 copper insulated wire is to be direct buried in every trench at the same depth as the conduits. The ends of the wire are to be terminated above ground at the conduit ends as shown. This wire will allow empty plastic conduits to be located with electronic equipment.

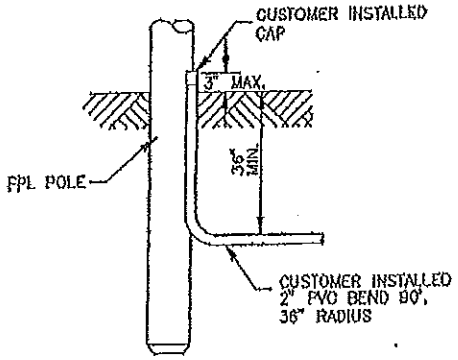
This method is not intended for cases where conduit is installed strictly for road crossings only. In these cases EOM markers should be used to mark the conduit ends.



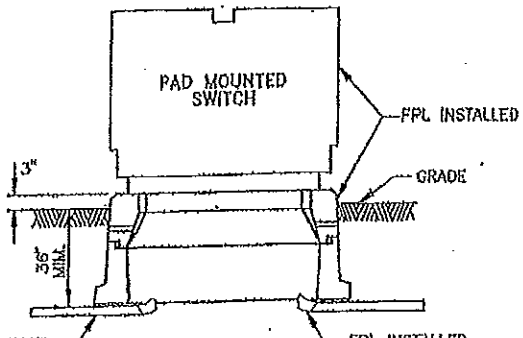
WHERE TO INSTALL #12C WIRE



DRAWING SYMBOLS



TYPICAL PVC CONDUIT BEND AT RISER POLE INSTALLATION



TYPICAL CONDUIT ENTRANCES TO PAD MOUNTED SWITCH

SYMBOLS

	EXISTING	PROPOSED
CONDUCTORS – PRIMARY FPL OWNED, IN CONDUIT, WITH CONDUCTOR SIZE, METAL, RATED VOLTAGE INSULATION AND NEUTRAL INDICATED.	—PNC—	—PNC—
CONDUCTORS – SECONDARY – STREET LIGHT FPL OWNED, IN CONDUIT, WITH CONDUCTOR SIZE, METAL AND INSULATION INDICATED (HM/HD TPX SHOWN).	1/0A	4/0A
SERVICE LATERALS THREE-WIRE SECONDARY SERVICE, FPL OWNED IN CONDUIT WITH CONDUCTOR SIZE, METAL, INSULATION AND JACKET INDICATED.	3-2C RN	1/0A TPX
EMPTY CONDUIT	—C—	—C— —C—
PADMOUNTED TRANSFORMERS PADMOUNTED TRANSFORMER, 1ø, WITH kVA RATING (FRONT, OR TERMINAL CHAMBER, IS SMALL RECTANGLE AT RIGHT END OF SYMBOL.. PRIMARY PHASE (INDICATED) TRANSFORMER STYLE SHOWN AS FOLLOWS: (RS) – REGULAR SIZE – 42" + HIGH, (DF) – DEAD FRONT – 32 " + HIGH, (LS) – LOW STYLE – 24" + HIGH.	B 15	B 15
STRUCTURES ELECTRONIC CABLE MARKER AND OR SPLICE PIT (BURIED)		
SERVICE HANDHOLE		

FPL

RECOMMENDED PRACTICES FOR FIELD JOINING OF PVC CONDUIT (USING CLEAR SOLVENT CEMENT) AND PVC CONDUIT INSTALLATION

UN-27.0.0

FIELD JOINING

1. EXAMINE EACH LENGTH OF CONDUIT AND ENSURE THERE ARE NO INTERIOR OR EXTERIOR IMPERFECTIONS, CRACKS, ETC. REMOVE ALL FOREIGN MATERIAL FROM INSIDE CONDUIT.

2. USING A HACKSAW, (594-40600-7) FINE TOOTH WOOD SAW, OR NYLON STRING, CUT PIPE SQUARE (IF REQUIRED). REMOVE ANY BURRS AND BEVEL ANY SHARP EDGES. WIPE DRY WITH A CLEAN, DRY CLOTH.

3. APPLY CEMENT (M & S #522-14100-7) UNIFORMLY ON INSIDE OF BELL OR FITTING. APPLY UNIFORM COAT OF CEMENT ONTO CONDUIT END. DO NOT POUR, SPLASH, OR GLOB CEMENT ON!

4. IMMEDIATELY INSERT THE CONDUIT INTO THE BELL END OF FITTING ALL THE WAY TO THE INSIDE SHOULDER. ENSURE SNUG FIT AND TURN CONDUIT 1/4 TURN TO DISTRIBUTE CEMENT EVENLY.

5. HOLD JOINT FOR APPROXIMATELY ONE MINUTE TO ALLOW CEMENT TO BEGIN SETTING. WIPE OFF EXCESS CEMENT.
   (NOTE: MANUFACTURER RECOMMENDATIONS ARE TO ALLOW FOR A MINIMUM OF 10 MINUTES OF DRYING TIME PRIOR TO ANY BACKFILLING. WEATHER CONDITIONS MAY VARY THIS SETTING TIME.)

FIELD INSTALLATION

1. LAY CONDUIT RUN INTO TRENCH. DO NOT KICK, THROW OR SLAM IT IN!

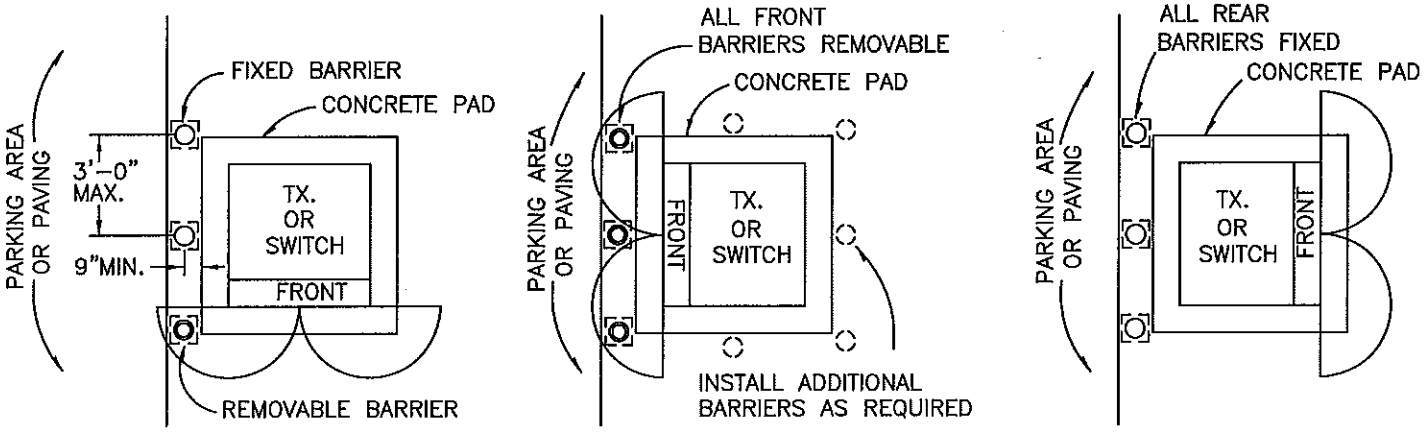
2. SURROUNDING TRENCH BACKFILL MUST BE FREE OF LARGE OR SHARP ROCKS, CINDERS OR OTHER DEBRIS WHICH WILL DAMAGE CONDUITS DURING BACKFILL OPERATION OR SUBSEQUENT COMPACTION.

3. IN CORAL ROCK AREAS, IT IS RECOMMENDED THAT HAND BACKFILLING FOR THE FIRST 3 TO 6 INCHES BE PERFORMED.

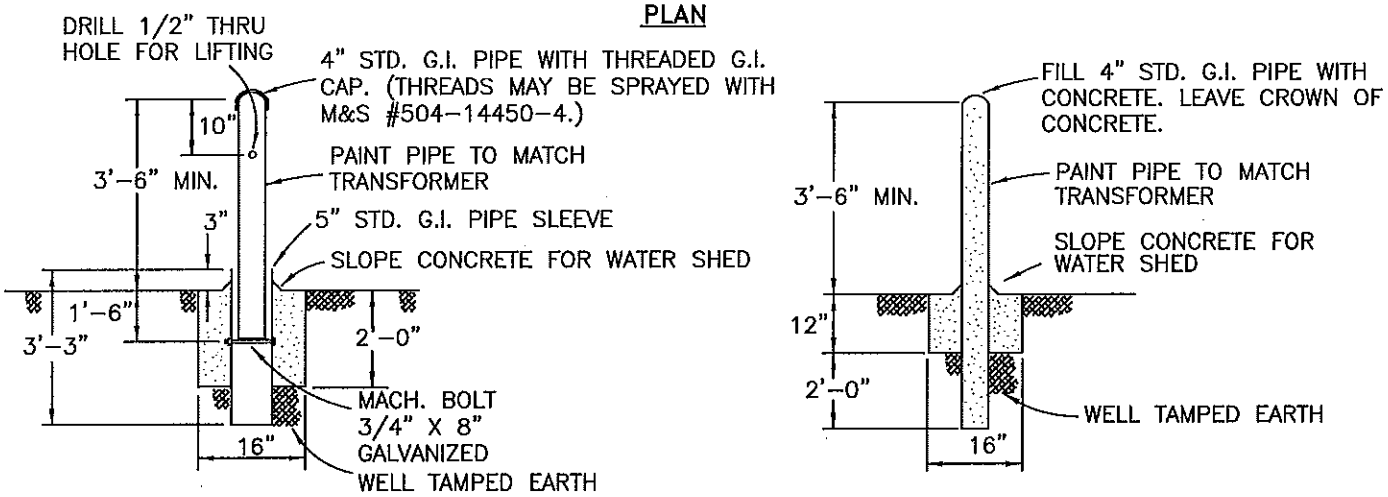
4. INSTALL PLUGS OR END BELLS ON ALL VACANT DUCTS, AS REQUIRED.

5. THE FINISHED CONDUIT RUN SHALL BE RODDED IN AN APPROVED MANNER (I.E. WINCH LINE, MANDREL, ETC.) TO VERIFY CONTINUITY AND CLEANLINESS. (NOTE: NO CONDUIT RUN SHALL BE ACCEPTED AS PROPERLY INSTALLED UNLESS FREE PASSAGE IS OBTAINED AND VERIFIED BY FPL SUPERVISION.)

UN-21.0.0 PROTECTIVE BARRIER AND PLANTING CLEARANCES FOR PAD MOUNT TRANSFORMERS AND SWITCHES UN-21.0.0



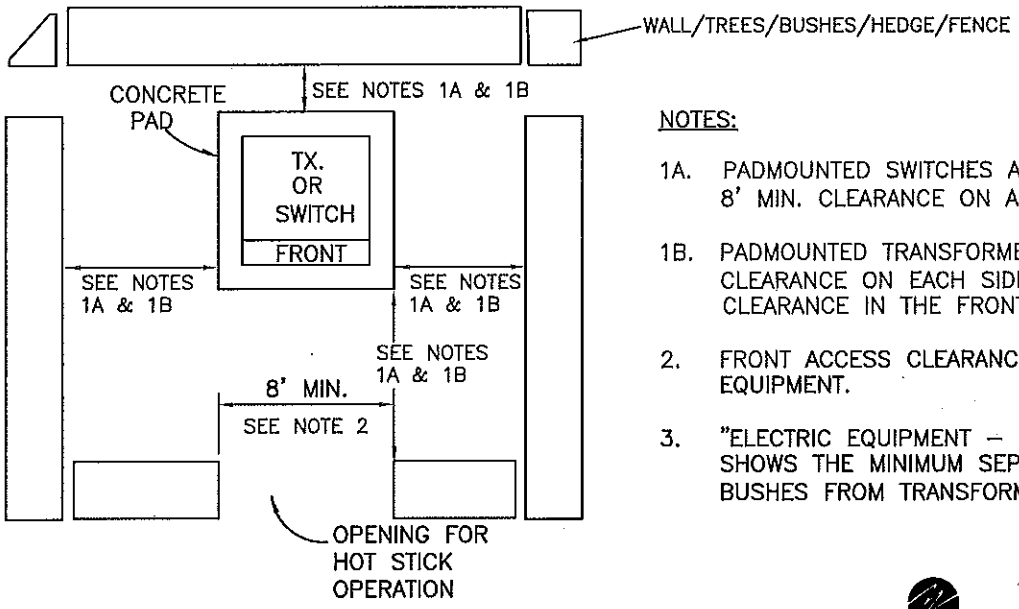
PLAN



REMOVABLE BARRIER

SECTION

FIXED BARRIER



PLAN

NOTES:

1A. PADMOUNTED SWITCHES AND CAPACITOR BANKS REQUIRE 8' MIN. CLEARANCE ON ALL SIDES.

1B. PADMOUNTED TRANSFORMERS REQUIRE 3' MIN. CLEARANCE ON EACH SIDE AND BACK AND 8' CLEARANCE IN THE FRONT.

2. FRONT ACCESS CLEARANCE SHOULD BE 8' FOR ALL EQUIPMENT.

3. "ELECTRIC EQUIPMENT – KEEP OUT" DECAL THAT SHOWS THE MINIMUM SEPARATION DISTANCES FOR BUSHES FROM TRANSFORMERS IS M&S #548-560-101.

FPL

OH & UG DISTRIBUTION SYSTEM STANDARDS

NO.	DATE	REVISION	ORIG.	DRAWN	APPR.
5	3/3/17	UPDATE DRAWING (NOTES)	ARR	ELS	RDH
4	9/13/16	UPDATE DRAWING (NOTES)	ARR	ELS	RDH
3	9/17/13	UPDATE DRAWING (NOTES)	JJR	ELS	WM
2	7/16/01	UPDATE DRAWING (NOTES)	RAP	JES	JJM
1	8/27/99	UPDATE DRAWING (NOTES)	RAP	JES	JJM
0	9/30/94	ORIGINAL DRAWING	CJM	PMG	RJS

ORIGINATOR: CJM DRAWN BY: PTH

DATE: 9/30/94 APPROVED: R.J. SALESKY NO SCALE

DIRECTOR, DISTRIBUTION ENGINEERING AND OPERATIONS SERVICES

UN

IDENTIFICATION OF UNDERGROUND CABLES AND VACANT CONDUITS

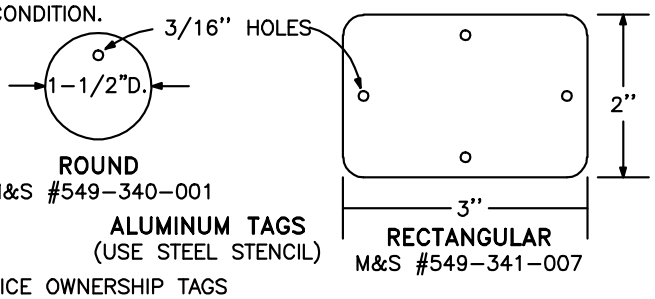
UV-12.0.0

GENERAL ALL UNDERGROUND CIRCUITS SHOULD BE IDENTIFIED WHERE APPLICABLE AS FOLLOWS:

- FEEDER NUMBER
- SWITCH NUMBER
- PHASE
- CONDUCTOR SIZE, METAL, TYPE INSULATION AND VOLTAGE RATE (IF NOT SAME AS OPERATING VOLTAGE)
- SOURCE OR DIRECTION OF FEED
- OWNERSHIP
- ADDRESS OF BUILDING SERVED
- TLM NUMBER
- DATE OF FAILURE ON SECTION OF CABLE (DIRECT BURIED ONLY)
- ANY UNUSUAL CONDITIONS, I.E. CABLE IN CONDUIT, PARTIALLY IN CONDUIT, DIRECT BURIED, ETC.

ALL CIRCUITS AND VACANT CONDUITS SHOULD BE APPROPRIATELY IDENTIFIED AT EACH TERMINAL OR SWITCHING POINT AND ALL INTERMEDIATE LOCATIONS SUCH AS VAULTS, MANHOLES, PAD MOUNTED TRANSFORMERS, OR HANDHOLES. WHEN THE CIRCUIT OR VACANT CONDUIT IS OWNED BY OTHER THAN FLORIDA POWER & LIGHT COMPANY, SHOW "CUST" ON APPROPRIATE TAG. IF NECESSARY INFORMATION CANNOT BE SHOWN ON ONE TAG, USE ADDITIONAL TAGS.

INFORMATION WILL BE PLACED ON APPROVED TAGS SHOWN BELOW IN THE MANNER DESCRIBED FOR THE PARTICULAR CONDITION.



ROUND
M&S #549-340-001

ALUMINUM TAGS
(USE STEEL STENCIL)

RECTANGULAR
M&S #549-341-007

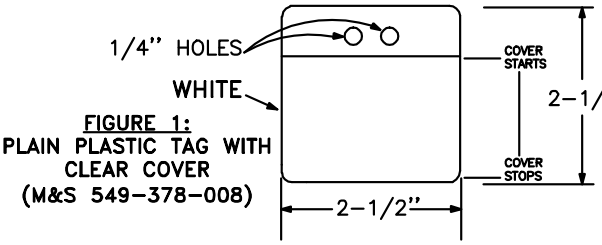
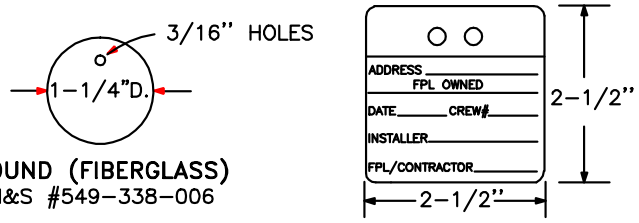


FIGURE 1:
PLAIN PLASTIC TAG WITH CLEAR COVER (M&S 549-378-008)

IMPORTANT
USE INDELIBLE MARKING PEN ONLY (M&S #549-501-004)

SERVICE OWNERSHIP TAGS
PLACE INSIDE METER CAN. USE TIE WRAP TO ATTACH TAG TO CONDUCTORS. PRINT ADDRESS USING MARKING PEN (M&S #549-50100-4)



ROUND (FIBERGLASS)
M&S #549-338-006

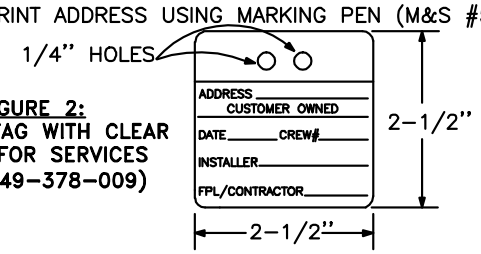


FIGURE 2:
PLASTIC TAG WITH CLEAR COVER FOR SERVICES (M&S 549-378-009)

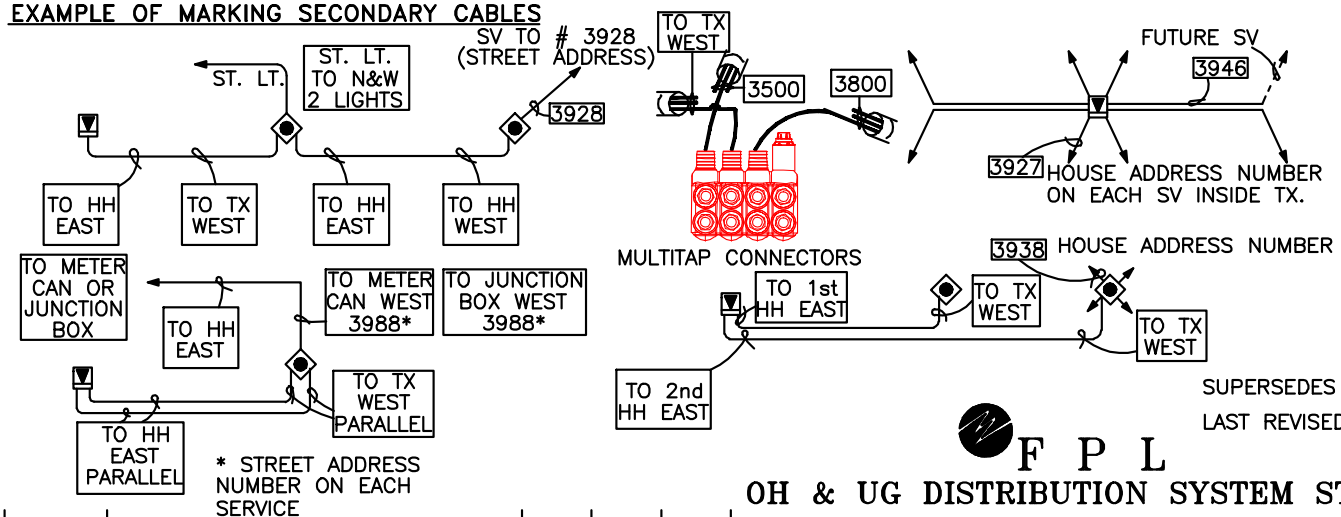
UNGERGROUND DUCT & MANHOLE SYSTEMS

USE ALUMINUM TAGS, AFFIXED TO CABLES WITH #12C-TW ON ALL CIRCUITS IN UNDERGROUND SYSTEMS, SUCH AS SUBWAY VAULTS, MANHOLES, RISER POLES, ECT. ROUND ALUMINUM TAGS ARE FOR FEEDER NUMBER AND PHASE IDENTIFICATION. RECTANGULAR ALUMINUM TAGS ARE USED FOR ALL OTHER IDENTIFICATION PURPOSES FOR EXAMPLE, ON ISOLATED NEUTRAL CONDUCTORS OF PILC CABLES, ETC.

DIRECT BURIED AND CABLE IN CONDUIT SYSTEMS

USE PLASTIC TAGS AS SHOWN IN FIGURE 2 (M&S 549-378-009) FOR CUSTOMER IDENTIFICATION AT LOCATIONS THAT WILL BE SUBJECTED TO SUNLIGHT, SUCH AS RISERS, AND ALSO IN URD APPLICATIONS FOR IDENTIFYING SERVICES, SUCH AS PADMOUNTED TRANSFORMERS AND HANDHOLES. USE PLAIN PLASTIC TAGS AS SHOWN IN FIGURE 1 (M&S 549-378-008) IN PRIMARY TERMINATION TAGGING APPLICATIONS. PLASTIC TAGS HAVE A CLEAR, UV RESISTANT FLAP TO REDUCE FADING AND WEATHERING. ALLOW 10 SECONDS MINIMUM DRYING TIME TO PREVENT SMEARING BEFORE ADHERING THE CLEAR FLAP. FASTEN PLASTIC TAG TO CABLE WITH 5-3/4" BLACK TIE-WRAPS (M&S 534-250-001) OR 12" BLACK PLASTIC TIE-WRAPS (M&S 534-253-000).

EXAMPLE OF MARKING SECONDARY CABLES



* STREET ADDRESS NUMBER ON EACH SERVICE

SUPERSEDES UV-12.0.0
LAST REVISED ON 3/15/91

F P L

OH & UG DISTRIBUTION SYSTEM STANDARDS

NO.	DATE	REVISION	ORIG.	DRAWN	APPR.
3	6/15/09	UPDATE DRAWING	AR	ELS	JRD
2	9/29/08	UPDATE DWG AND NOTES	GAP	ELS	JJM
1	7/16/01	REVISED TEXT AND ADDED A DETAIL DWG.	RAP	JES	JJM
0	9/30/94	CHANGED PAGE FORMAT AND REVISED NOTES AND DIMENSIONS	RJO	MLG	RJS

ORIGINATOR: RJO

DRAWN BY: MLG

DATE: 9-30-94

APPROVED: R.J. SALESKY
DIRECTOR, DISTRIBUTION ENGINEERING AND OPERATIONS SERVICES

CAM #21-0191 Exhibit 1

NO SCALE

PRIMARY and SECONDARY PHASE MARKING TAPE

SIZE	COLOR	M&S NUMBER
1" WIDE X 36 YARDS LONG	YELLOW	549-441-001
1-1/2" WIDE X 36 YARDS LONG	BLACK	549-441-002
2" WIDE X 36 YARDS LONG	YELLOW	549-442-008
3/4" WIDE X 66 FEET LONG	BLACK	532-269-006
3/4" WIDE X 66 FEET LONG	WHITE	532-218-002
1/2" WIDE X 20 FEET LONG	(8)COLOR PACK (RED, WHITE, BLUE, GREEN, YELLOW, BROWN, VIOLET, ORANGE)	549-443-100

TY-RAPS IDENTIFICATION TABLE

COLOR	M&S NUMBER	LENGTH	WIDTH
BROWN	534-254-014	7.4"	.19"
RED	534-254-022	7.4"	.19"
ORANGE	534-254-031	7.4"	.19"
YELLOW	534-254-049	7.4"	.19"
GREEN	534-254-057	7.4"	.19"
BLUE	534-254-065	7.4"	.19"
PURPLE	534-254-073	7.4"	.19"
GREY	534-254-081	7.4"	.19"
WHITE	534-255-002	14.5"	.30"

NO.	DATE	REVISION	ORIG.	DRAWN	APPR.
5	6/6/16	UPDATED CHART	AR	ELS	RDH
4	2/27/13	UPDATED CHART	AR	ELS	WM
3	2/12/13	ADDED M&S 594-441-002	AR	ELS	WM
2	9/29/09	UPDATED TITLE BLOCK & ADDED M&S #594-443-000	AR	ELS	JRD
1	6/15/09	UPDATE TITLE FOR BOTH CHARTS	AR	ELS	JRD

F P L

OH & UG DISTRIBUTION SYSTEM STANDARDS

ORIGINATOR: RAP DRAWN BY: J.SHOUP

DATE: 7/16/01 APPROVED: J.J McEVOY CAM #21-0191 NO SCALE

SUPERVISOR, OH/UG PRODUCT SUPPORT SERVICES

UV

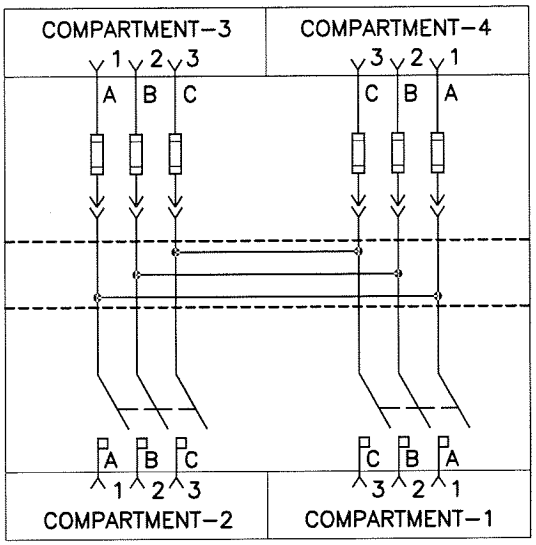
TYPICAL INSTALLATION OF 15 OR 25 KV S & C TYPE PME DEAD FRONT THREE PHASE PAD MOUNTED SWITCHGEAR

C-32.0.1

C

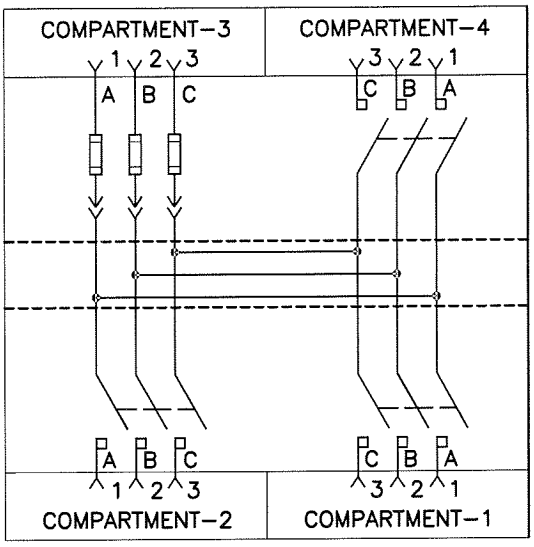
STYLE IDENTIFICATION AND 3 PHASE CONNECTION DIAGRAMS

S&C TYPE PME-9



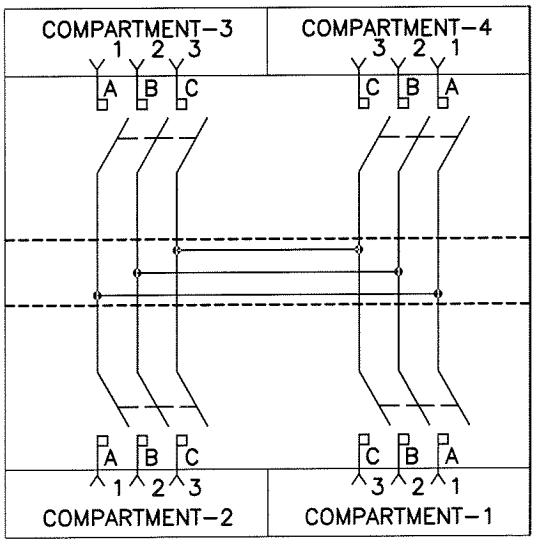
SWITCHGEAR		REQUIRES FUSEHOLDER	
M&S NO.	RATED VOLTAGE	M&S NO.	QTY
270-67400-7	15KV	531-56150-1	6
270-67401-5	15KV SS*	531-56150-1	6
270-67200-4	25KV	531-56310-5	6
270-67201-2	25KV SS*	531-56310-5	6

S&C TYPE PME-11



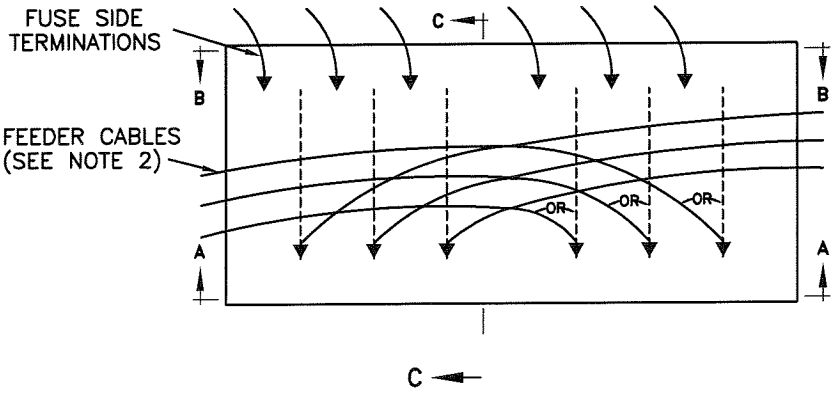
SWITCHGEAR		REQUIRES FUSEHOLDER	
M&S NO.	RATED VOLTAGE	M&S NO.	QTY
270-67900-9	15KV	531-56150-1	3
270-67901-7	15KV SS*	531-56150-1	3
270-68100-3	25KV	531-56310-5	3
270-68101-1	25KV SS*	531-56310-5	3

S&C TYPE PME-10



SWITCHGEAR	
M&S NO.	RATED VOLTAGE
270-683-000	15KV
270-683-050	15KV SS*
270-684-000	25KV
270-684-050	25KV SS*

* (SS) INDICATES ENCLOSURES OF #304 STAINLESS STEEL FOR USE IN HIGHLY CORROSIVE AREAS



TOP VIEW
DIAGRAM FEEDER CABLE LAYOUT
(PME-9 SHOWN)

F P L

OH & UG DISTRIBUTION SYSTEM STANDARDS

NO.	DATE	REVISION	ORIG.	DRAWN	APPR.
2	06/06/01	ADDED PME-10	CEA	JES	JJM
1	9/30/94	REMOVED DEADFRONT SW NOTE AND ADDED NEW BORDER	RWS	RAS	RJS

ORIGINATOR: RWS DRAWN BY: JRG

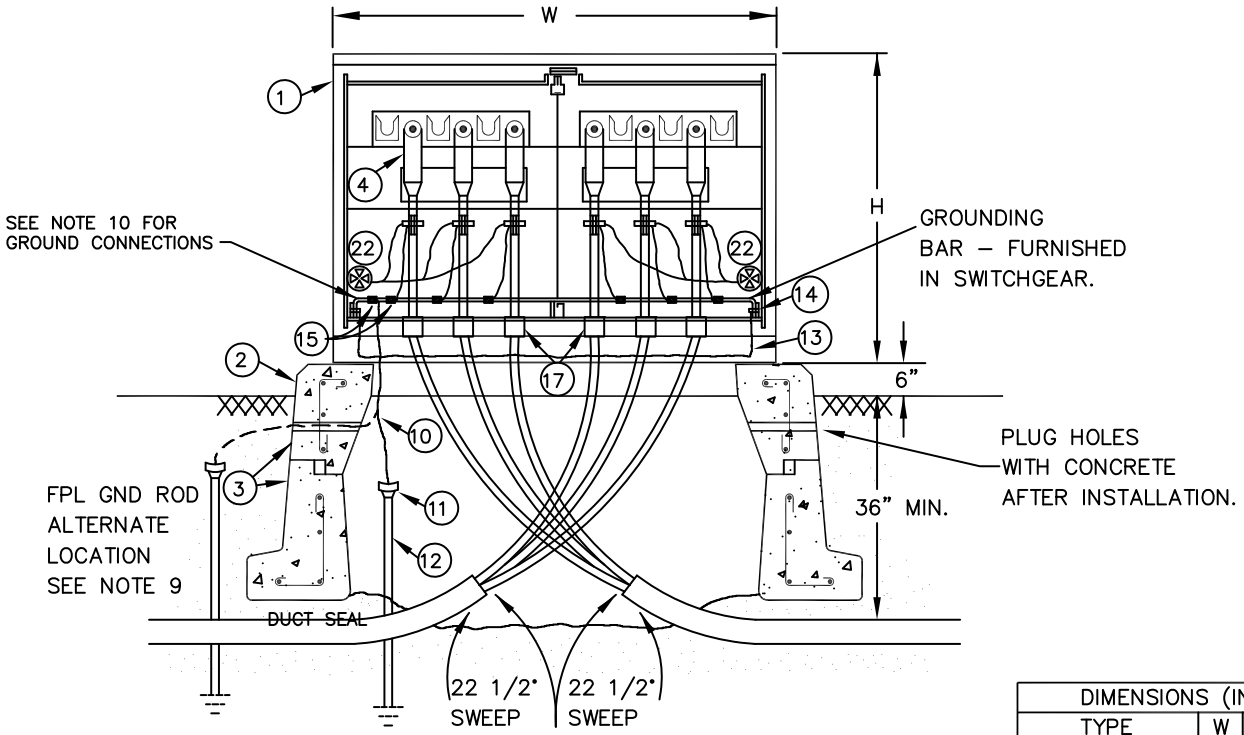
DATE: 6/30/93 APPROVED: R.J. SALESKY NO SCALE

DIRECTOR, DISTRIBUTION ENGINEERING AND OPERATIONS SERVICES

CAM #21-0191

TYPICAL INSTALLATION OF 15 OR 25KV S&C TYPE PME DEAD FRONT THREE PHASE PAD MOUNTED SWITCHGEAR

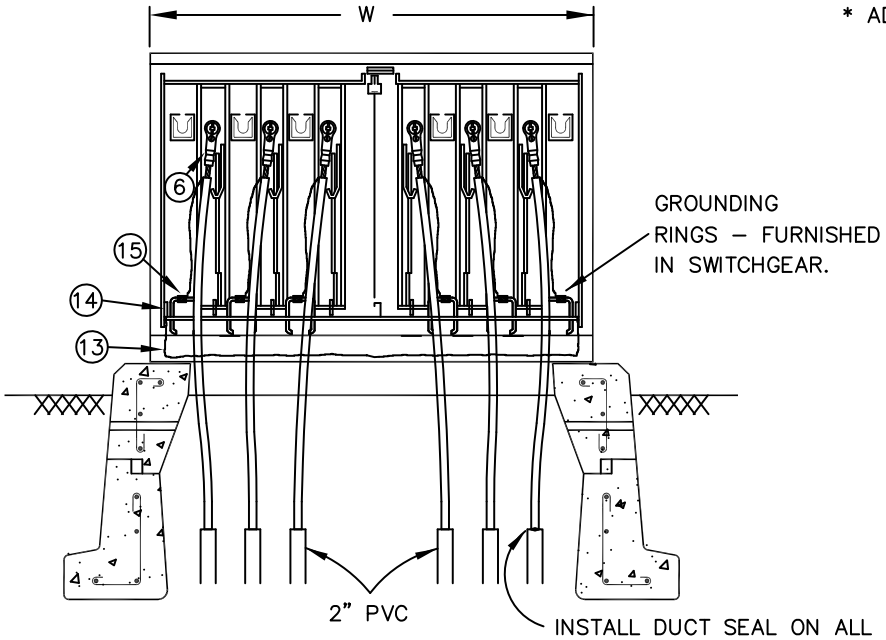
C-32.0.2



600 AMP FEEDER SIDE
SECTION A-A

DIMENSIONS (INCHES)					WEIGHT IN LBS.*
TYPE		W	D	H	
15 KV	PME-9	75	67	50	2092
	PME-11	75	73	50	2230
	PME-10	75	73	50	2292
25 KV	PME-9	84	82	56	2592
	PME-11	84	88 1/2	56	2875
	PME-10	84	88 1/2	56	2950

* ADD 150 LBS. FOR STAINLESS STEEL.



FUSE SIDE (PME-9 SHOWN)
SECTION B-B

NO.	DATE	REVISION	ORIG.	DRAWN	APPR.
4	8/1/16	UPDATE TABLE	AGR	ELS	RDH
3	10/22/09	ADD NOTE	CEA	ELS	AEL
2	7/21/01	UPDATE DRAWING ADDED PME-10 AND CHANGED SOME TEXT	RAP	JES	JJM
1	9/30/94	ADDED ARROW TO INCLUDE TOP CHAMBER SECTION (3)	RJO	BAQ	RJS

F P L

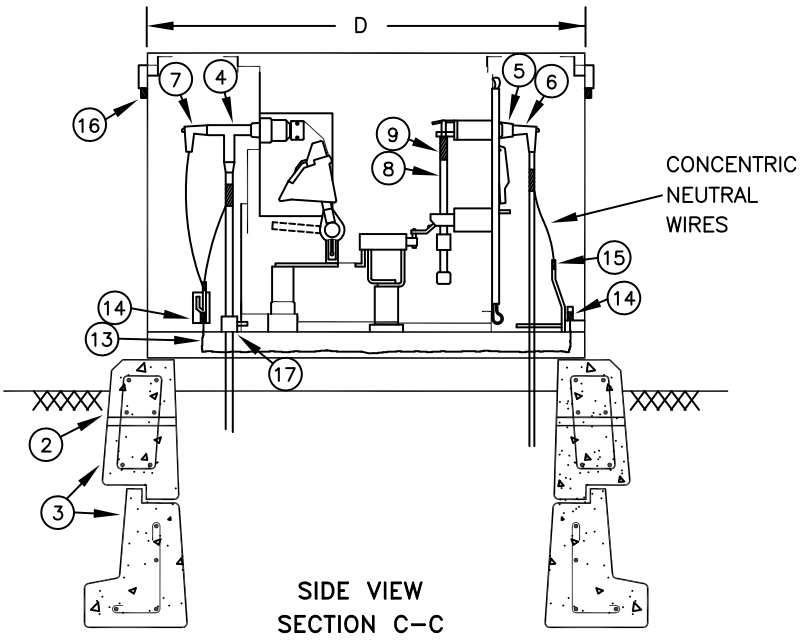
OH & UG DISTRIBUTION SYSTEM STANDARDS

ORIGINATOR: RWS DRAWN BY: JRG

DATE: 6/30/93 APPROVED: R.J. SALESKY CAM #21-0191 NO SCALE

DIRECTOR, DISTRIBUTION ENGINEERING AND OPERATIONS SERVICES

C-32.03	TYPICAL INSTALLATION OF 15 OR 25KV S&C TYPE PME DEAD FRONT THREE PHASE PAD MOUNTED SWITCHGEAR	C-32.0.3



SIDE VIEW
SECTION C-C

NOTES:

1. WHEN CHANGING OUT A LIVE FRONT PAD MOUNTED SWITCH TO A DEAD FRONT PAD MOUNTED SWITCH, IT IS IMPORTANT TO ENSURE THAT THE REPLACEMENT DEAD FRONT SWITCH HAS THE SIX INCH ADAPTER BASE SPACER. THE NEW SWITCH MUST BE INSTALLED WITH THE SAME ORIENTATION AS THE OLD SWITCH IN ORDER TO ENSURE THAT THE ADAPTER BASE SPACER MATCHES THE NEW SWITCH CORRECTLY TO THE ORDER, SMALLER SIZED PAD.
   NOTE: IT IS NO LONGER REQUIRED TO CHANGE OUT THE TOP PAD PORTION OF THE CHAMBER. USE 600 AMP REPLACEMENT ELBOWS (M&S #163-502-567), AS SHOWN IN DCS UH-40.0.0 FOR THE FEEDER CABLES AND 200 AMP REPAIR ELBOWS (VARIOUS M&S NUMBERS), AS SHOWN IN UH-78.0.0 FOR THE LOOP SIDE PRIMARY CABLES.
2. CABLES MUST NOT BE IN CONTACT WITH THE EDGE OF CHAMBER FOOTING. TOP VIEW SHOWS CORRECT ROUTING FRO FEEDER CABLES THAT IS NECESSARY TO PROVIDE FOR CABLE MOVEMENT.
3. PRIMARY CABLES MUST BE ABLE TO REACH PARKING LOCATIONS.
4. ALLOW SUFFICIENT LENGTH OF CONCENTRIC NEUTRAL TO REACH GROUNDING BARS AND PERMIT FREE MOVEMENT OF ELBOWS.
5. BRASS STUDS FURNISHED WITH THE 600 AMP ELBOW KITS MUST BE INSTALLED AND TIGHTENED SECURELY (55 FT. LBS) IN THE 600 AMP BUSHINGS. THE SHORT THREADED END OF THE STUD GOES INTO THE BUSHING. SEE UH-41.0.1 AND UH-41.0.2 FOR 600 AMP ELBOW DETAILS.
6. INSTALL 800 AMP 3ø FAULT INDICATORS ON EACH SET OF FEEDERS CABLES. SEE UV-14.0.0, UV-14.0.1, UV-14.0.2.
7. LOOP SIDE PRIMARY CABLES (#1/0A) MUST GO THRU CABLE GUIDES TO AVOID CONFLICT WITH FUSE DOOR WHEN IT IS ROTATED TO OPEN.
8. CABLE MOUNTING BRACKET SHOULD BE USED ON THE FEEDER CABLE TO CORRECTLY POSITION THE CABLES FOR EASIER INSTALLATION OF THE BOLT-ON ELBOW TERMINATORS ON TO THE 600 AMP BUSHINGS. THE 600 AMP ELBOWS MUST BE INSTALLED PERFECTLY STRAIGHT (VERTICALLY AND HORIZONTALLY) ONTO THE 600 AMP BUSHINGS TO PROPERLY ENGAGE THE THREADS. THE MOUNTING BRACKETS ARE TO BE BOLTED TO THE BOTTOM FLANGE OF THE SWITCH COMPARTMENT WALL WITH 3/8" X 1/2" BOLTS THRU EXISTING HOLES PROVIDED BY THE SWITCH MANUFACTURER.
9. INSTALL GROUND RODS PER DCS G-2.0.2. MAKE CERTAIN OF CABLE LOCATIONS BEFORE DRIVING GROUND RODS. WHEN INSTALLING GROUND RODS IN ALTERNATE LOCATION, INSURE THAT BOTH THE TOP OF THE ROD AND THE #4C WIRE ARE AT LEAST 3" BELOW GRADE AND ARE COVERED. EXISTING 3/4" HOLES SHOULD BE USED IF AT LEAST 3" BELOW GRADE.
10. CONNECT BOND FROM GROUND ROD TO THE GROUNDING BAR ON THE FEEDER SIDE OF THE SWITCH CABINET OR, WHEN PROVIDED, TO THE GROUNDING PAD OF THE CABINET ON THE FEEDER SIDE.
11. APPLY CAULKING COMPOUND TO SEAM BETWEEN PAD MOUNTED SWITCH AND PAD CHAMBER.
12. UNUSED FUSE POSITIONS MUST HAVE BUSHINGS & PROTECTIVE CAPS INSTALLED. UNUSED FEEDER POSITIONS MUST HAVE 600 AMP PROTECTIVE CAPS (M&S #163-645-007). SEE MATERIAL DETAILS ON C-32.0.4
13. AFTER THE PAD MOUNTED SWITCH IS INSTALLED, THE LIFTING BRACKETS MUST BE REMOVED AND STORED INSIDE THE CABINET BY SECURING THEM TO THE GROUNDING ROD FOUND ON THE FEEDER COMPARTMENT.
14. ENSURE THAT THE "CAUTION" LABEL (M&S #548-560-104) IS INSTALLED ON EACH SIDE OF THE SWITCH HAVING ACCESS TO THE HIGH VOLTAGE SWITCH AND/OR THE HIGH VOLTAGE FUSE COMPARTMENTS PER DCS Z-35.0.0.
15. SEAL DUCTS PER UN-29.0.0.
16. DO NOT SET THE SWITCH IN LOW-LYING AREAS SUBJECT TO FLOODING. EXTRA PAD TOPS SHOULD BE ADDED, IF NEEDED, TO RAISE THE SWITCH.

NO.	DATE	REVISION	ORIG.	DRAWN	APPR.
8	1/23/19	UPDATED NOTE 12	ARR	ELS	BXN
7	2/24/11	UPDATED NOTE 9 AND ADDED NOTE 10	ARR	ELS	BXN
6	10/22/09	UPDATED NOTE 9 AND ADDED NOTE 10	CEA	ELS	AEL
5	7/31/08	UPDATED NOTE 12	CEA	ELS	JJM
4	6/27/08	ADDED NOTE 15	CEA	ELS	JJM

F P L
OH & UG DISTRIBUTION SYSTEM STANDARDS

ORIGINATOR: PMG
DRAWN BY: RAS
DATE: 9/30/94
APPROVED: J.J McEVOY
SUPERVISOR, OH/UG PRODUCT SUPPORT SERVICES
CAM #21-0191
NO SCALE

TYPICAL INSTALLATION OF 15 OR 25KV S&C TYPE PME DEAD FRONT THREE PHASE PAD MOUNTED SWITCHGEAR

C-32.0.4

MATERIAL LIST

ITEM	DESCRIPTION	QUANTITY	M&S NO.
1	15KV SWITCHGEAR PME-9 (2-THREE PHASE FEEDER POSITIONS AND 6 FUSE POSITIONS	1	STANDARD 270-674-007 STAINLESS STEEL 270-674-015
	15KV SWITCHGEAR PME-11 (3-THREE PHASE FEEDER POSITIONS AND 3 FUSE POSITIONS	1	STANDARD 270-679-009 STAINLESS STEEL 270-679-017
	15KV SWITCHGEAR PME-10 (4-THREE PHASE FEEDER POSITIONS AND NO FUSE POSITIONS	1	STANDARD 270-683-000 STAINLESS STEEL 270-683-050
	25KV SWITCHGEAR PME-9 (2-THREE PHASE FEEDER POSITIONS AND 6 FUSE POSITIONS	1	STANDARD 270-672-004 STAINLESS STEEL 270-672-012
	25KV SWITCHGEAR PME-11 (3-THREE PHASE FEEDER POSITIONS AND 3 FUSE POSITIONS	1	STANDARD 270-681-003 STAINLESS STEEL 270-681-011
	25KV SWITCHGEAR PME-10 (4-THREE PHASE FEEDER POSITIONS AND NO FUSE POSITIONS	1	STANDARD 270-684-000 STAINLESS STEEL 270-684-050
2	PAD (TOP SECTION ONLY) FOR REPLACING LF WITH DF FOR 15KV / FOR 25KV	1	162-122-035 162-122-051
3	PAD & CABLE CHAMBER (TOP & BOTTOM SECT.) FOR 15KV / FOR 25KV	1	162-122-019 162-122-027
4	DEAD FRONT TERMINATOR, 1000 KCMIL AL 15KV/25KV	VARIES	T-BODY 600 AMP ELBOW 163-639-101 CABLE ADAPTER 163-639-161 SHEAR BOLT CONNECTOR 163-639-104
5	LOADBREAK BUSHING, 200 AMP 15KV / 25KV	VARIES	163-861-001 163-864-001
6	ELBOW TERMINATOR, 1/0 AL 15KV / 25KV	VARIES	163-587-007 163-502-001
7	PROTECTIVE CAP 200 AMP (25KV SWITCHES ONLY)	VARIES	163-022-000
	PROTECTIVE CAP 200 AMP (15KV SWITCHES ONLY)	VARIES	163-018-002
	ELBOW SURGE ARRESTER (25KV SWITCHES ONLY)	VARIES	334-015-005
8	SME-4Z FUSE HOLDERS 15KV / 25KV	VARIES	531-561-501 531-563-105
9	FUSES: REFILL UNITS FOR SME-4Z, SM-4Z&SML-4Z FUSE HOLDERS 15KV: 20 AMP 531-387-005; 30 AMP 531-388-001; 50 AMP 531-389-008; 65 AMP 531-395-008; 80 AMP 531-395-016; 100 AMP 531-396-004; 125 AMP 531-398-007; 150 AMP 531-402-004; 175 AMP 531-403-001; 200 AMP 531-390-006 25KV: 10 AMP 531-327-002; 15 AMP 531-328-009; 20 AMP 531-329-005; 30 AMP 531-330-003; 40 AMP 531-331-000; 50 AMP 531-332-006; 65 AMP 531-333-002; 80 AMP 531-334-009; 100 AMP 531-335-005; 125 AMP 531-337-008; 150 AMP 531-338-004; 175 AMP 531-339-001; 200 AMP 531-340-009		NOTE: THE FUSE REFILLS ARE THE SAME AS THOSE USED IN LIVEFRONT SWITCHES
10	WIRE #4C SDB	6	112-309-000
11	CONNECTOR, GROUND ROD, CLAMP TYPE	1	120-036-106
12	COPPERWELD GROUND RODS AS REQUIRED GROUND ROD COUPLINGS	VARIES	130-614-005 130-405-104
13	#4/0C CABLE, 600V	27	110-101-061
14	CONNECTOR #4/0 COPPER CABLE TO FLAT	6	120-871-005
15	CONNECTOR, COPPER TO COPPER, BOLTED PME-9 / PME-11 / PME-10	19 / 22 / 25	102-800-002
16	LOCK STANDARD PADLOCK, SMALL PME-9 / PME-11 / PME-10	4 / 5 / 6	546-246-011
17	CABLE MOUNTING BRACKET PME-9 / PME-11 / PME-10	6 / 9 / 12	160-311-000 STANDARD (S) 160-310-000 STAINLESS STEEL (SS)
18	BOLT, 3/8" X 1 1/2" WITH NUT (FOR MOUNTING BRACKETS)	SAME AS BRACKETS	140-525-001 (SS)
19	NUT, 3/8" (FOR MOUNTING BRACKETS)	SAME AS BRACKETS	161-450-004 (S)
20	LOCKWASHER, 3/8" (FOR MOUNTING BRACKETS)	SAME AS BRACKETS	161-524-008 (S) 145-294-001 (SS)
21	BOLT, CAP SCREW, HEX HEAD 3/8"-16X1-1/2"	SAME AS BRACKETS	161-479-002 (S)
22	FAULT INDICATOR, 800 AMP, 3 PHASE PME-9 / PME-11 / PME-10	2 / 3 / 4	163-297-009

REPLACEMENT PARTS FOR SWITCHES

600 AMP BUSHINGS 15KV 274-002-003; 25KV 274-003-000

200 AMP BUSHING WELLS 15KV 274-002-208; 25KV 274-003-204

NO.	DATE	REVISION	ORIG.	DRAWN	APPR.
6	1/23/19	UPDATE TABLE	ARR	ELS	RDH
5	3/31/11	UPDATE NOTES	ARR	ELS	BXN
4	3/1/2011	UPDATE NOTES	ARR	ELS	BXN
3	9/2/2010	UPDATE NOTE 17	GAP	ELS	BXN

FPL

OH & UG DISTRIBUTION SYSTEM STANDARDS

ORIGINATOR: PMG DRAWN BY: RAS

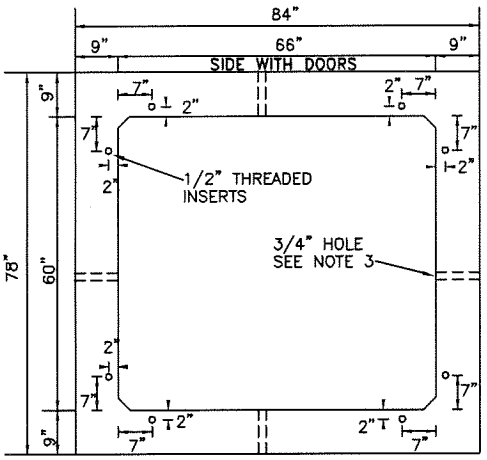
DATE: 9/30/94 APPROVED: J.J McEVOY SUPERVISOR, OH/UG PRODUCT SUPPORT SERVICES

CAM #21-0191 NO SCALE

UX-122.0.0

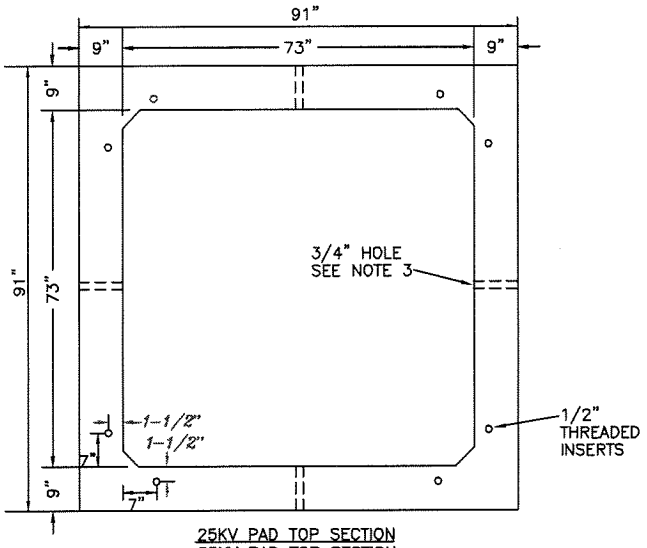
CONCRETE FOUNDATION FOR DEADFRONT THREE PHASE PAD MOUNTED SWITCHES 15 AND 25KV

UX-122.0.0



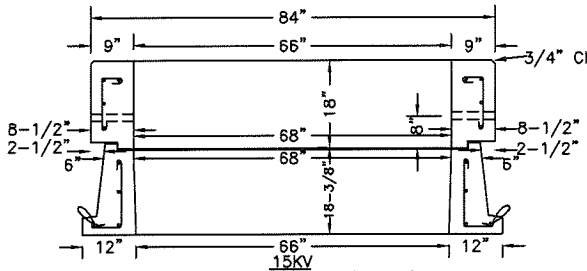
SIDE WITH DOORS

15KV PAD TOP SECTION



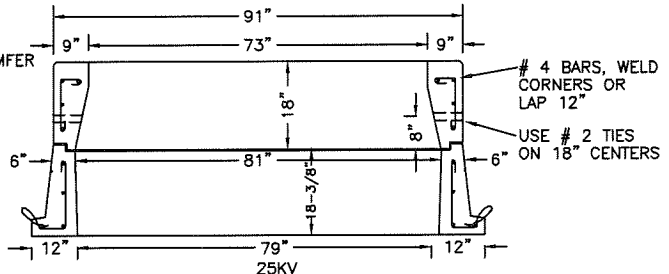
25KV PAD TOP SECTION

25KV PAD TOP SECTION



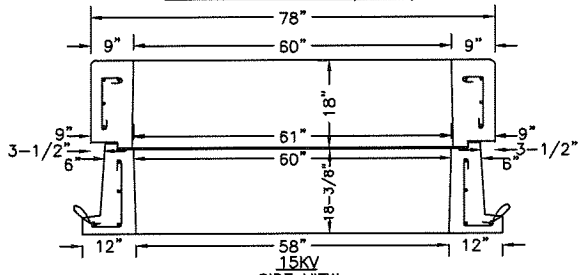
15KV

FRONT & BACK VIEW (DOORS)



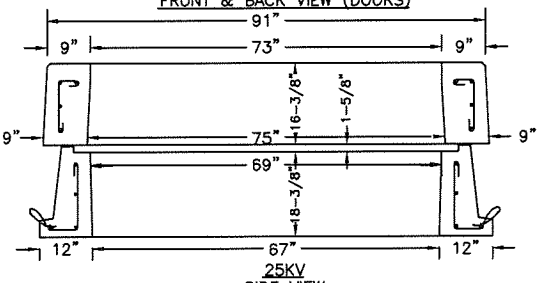
25KV

FRONT & BACK VIEW (DOORS)



15KV

SIDE VIEW



25KV

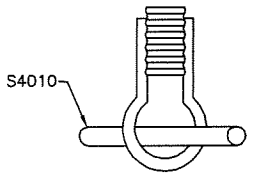
SIDE VIEW

NOTES

1. INSIDE EDGE OF INSERT TO BE MINIMUM OF 2" FROM EDGE OF CONCRETE.
2. LIFTING RINGS TO BE GALV. WIRE ATTACHED TO #4 REINFORCING ROD AND HAVE ADEQUATE LIFTING STRENGTH. (TOTAL 4)
3. 3/4" ø HOLE FOR LIFTING BOLT TO EXTEND THROUGH THE WALL. SUPPLIED WITH SEALING CAP PLUG. (TOTAL 4)
4. TOP SURFACE SHALL BE SMOOTH PLANE. THE MAXIMUM ALLOWABLE VARIATION IN HEIGHT BETWEEN ANY TWO POINTS ON THIS SURFACE IS 0.125 INCHES.
5. SUPERIOR THREADED INSERTS, 1/2" WITH PLUG, ELECTRO-GALV., 8 REQUIRED. (SEE DETAIL A).
6. #2 AND #4 REINFORCING RODS.
7. 4000 LBS. TEST CONCRETE.
8. MANUFACTURERS IDENTIFICATION, YEAR OF MANUFACTURE, AND FPL CO. M&S NUMBER TO BE CAST IN TOP SURFACE OF PAD NEAR CENTER OF PAD AND IN FOOTING OF CHAMBER NEAR CENTER OF FOOTING. (THIS REQUIRED WHEN PRECAST).

APPROXIMATE WEIGHT (POUNDS)	
15KV PAD	3500
15KV CHAMBER	3250
25KV PAD	3900
25KV CHAMBER	4140

DEADFRONT PAD AND CABLE CHAMBER	
DESCRIPTION	M&S NUMBER
15KV TOP PAD ONLY	162-12203-5
15KV TOP PAD AND BOTTOM CHAMBER	162-12201-9
25KV TOP PAD ONLY	162-12205-1
25KV TOP PAD AND BOTTOM CHAMBER	162-12202-7



DETAIL "A"

FPL

OH & UG DISTRIBUTION SYSTEM STANDARDS

NO.	DATE	REVISION	ORIG.	DRAWN	APPR.
3	10/19/00	*UPDATE DIMENSIONS*	RAP	JES	JJM
2	10/10/96	UPDATE FOUNDATION	BS	BILL	BS

ORIGINATOR: SMS

DRAWN BY: BILL

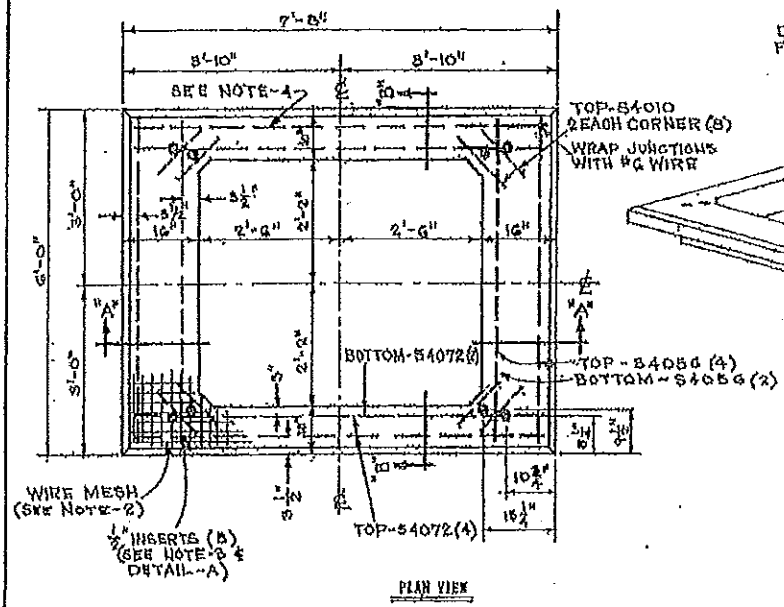
DATE:

APPROVED: J.J. MCEVOY
SUPERVISOR, OH/UG PRODUCT SUPPORT SERVICES

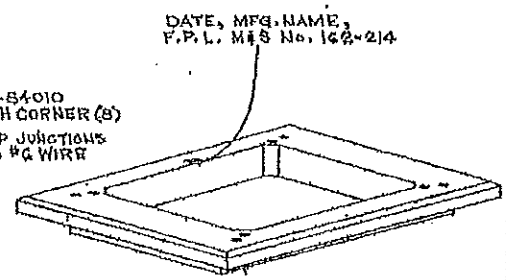
NO SCALE

UX-113

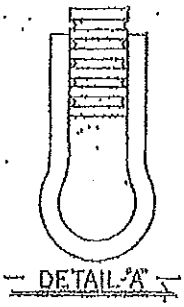
CONCRETE FOUNDATION FOR S&C 30 PADMOUNTED SWITCH

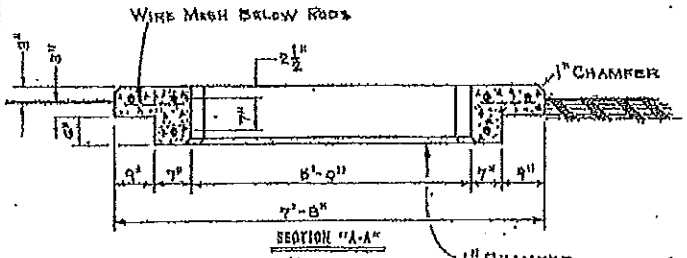


PLAN VIEW

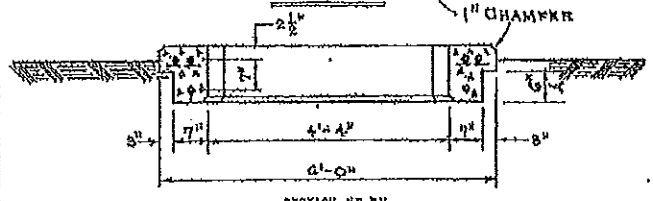


WEIGHT - 2745 LB.	
CU. FT. - 18.8	
CU. YD. - 0.68	
1245 - KILOGRAMS	
519 - LITERS	
0.519 - CU. METERS	





SECTION "A-A"



SECTION "B-B"

1. Top surface to be smooth and level. Surface irregularities are not acceptable.
2. 4 x 4 No.4 Welded Wire Mesh Reinforcing to stop 2" from Sides and Opening of Foundation.
3. Superior Threaded Inserts, 1/2" with Plug, Electro-Galv., 4 Required. (See Detail A)
4. #4 Reinforcing Rod as shown.
5. 4000 Lb. Test Concrete.
6. For use with S & C Switches, M & S Nos. 270-863, 270-864, 270-865 & 270-880.
7. Manufacturers Identification, Year of Manufacture, and FPL Co. M & S Number to be cast in top surface of pad near center of pad. (This required when precast.)

NO.	DATE	REVISION	BY	CK	ENG	APP
1	2-8-78	CORRECTED DIMENSION				

DRAWN K.Smith
CHECKED
ENGINEER

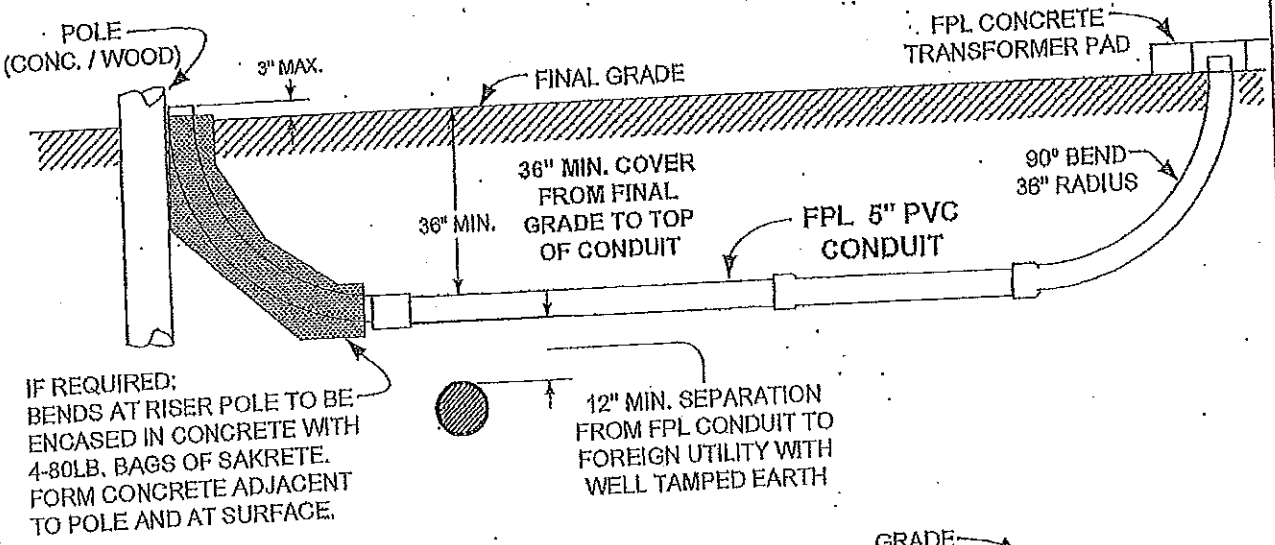
APPROVED: CHIEF ENGINEER

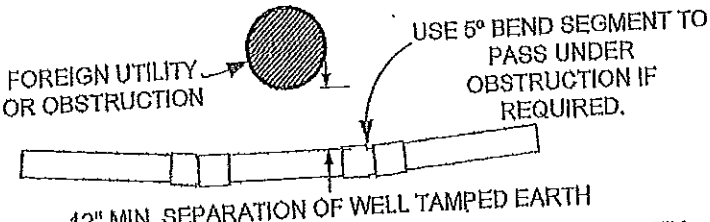
STANDARDS
UNDERGROUND DISTRIBUTION SYSTEM
FLORIDA POWER & LIGHT COMPANY
DATE 12-28-71 NO SCALE

FORM 393 (3) REV. 2/73

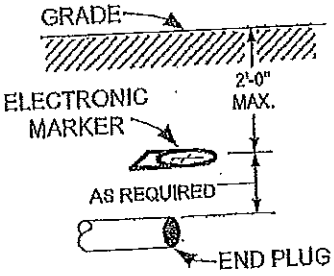
****** NOTICE******

- CALL SUNSHINE 1-800-432-4770 48HOURS BEFORE YOU DIG FOR UNDERGROUND LOCATIONS.
- NOTIFY FPL REP. FOR INSPECTION OF TRENCH DEPTH & PVC INSTALLATION PRIOR TO BACKFILLING TRENCH.





FPL CONDUIT CROSSING UNDER A FOREIGN UTILITY

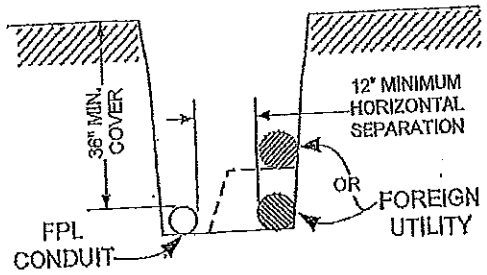


DUCT END MARKING
(IF REQUIRED)

NOTES:

- BACK-FILL WITHIN 4" OF THE CONDUIT TO BE FREE OF MATERIAL THAT MAY DAMAGE CONDUIT SYSTEM (BOARDS, ROCKS LARGER THAN 1" IN DIAMETER, DEBRIS, ETC.)
- IF COMPACTION OF TRENCH ROUTE IS REQUIRED FOR PAVING, ETC. BEGIN MACHINE COMPACTION 6" MINIMUM ABOVE CONDUIT.
- WHERE 36" OF COVER CANNOT BE MAINTAINED, 30" OF COVER WILL BE ALLOWED WITH 3" OF CONCRETE ENCASEMENT AROUND THE CONDUIT. (N.E.S.C. RULE FOR PRIMARY VOLTAGES)
- INSTALL A CONTINUOUS LENGTH OF PULL STRING IN ALL CONDUIT RUNS.

MATERIAL LIST 5" PVC SCH 40 CONDUIT	
20' LENGTH (BELLED END)	164-33800-1
90° BEND 36" RADIUS	164-25250-5
90° BEND 48" RADIUS	164-25200-9
45° BEND 48" RADIUS	164-61400-8
5° BEND SEGMENT	164-56100-1
22.5° SWEEP 12'-6" RADIUS	164-13000-1
STRAIGHT COUPLING	164-44900-7
REPAIR SLEEVE 6' LONG	164-47630-0
END PLUG	164-53500-1
ELECTRONIC MARKER	590-61601-5

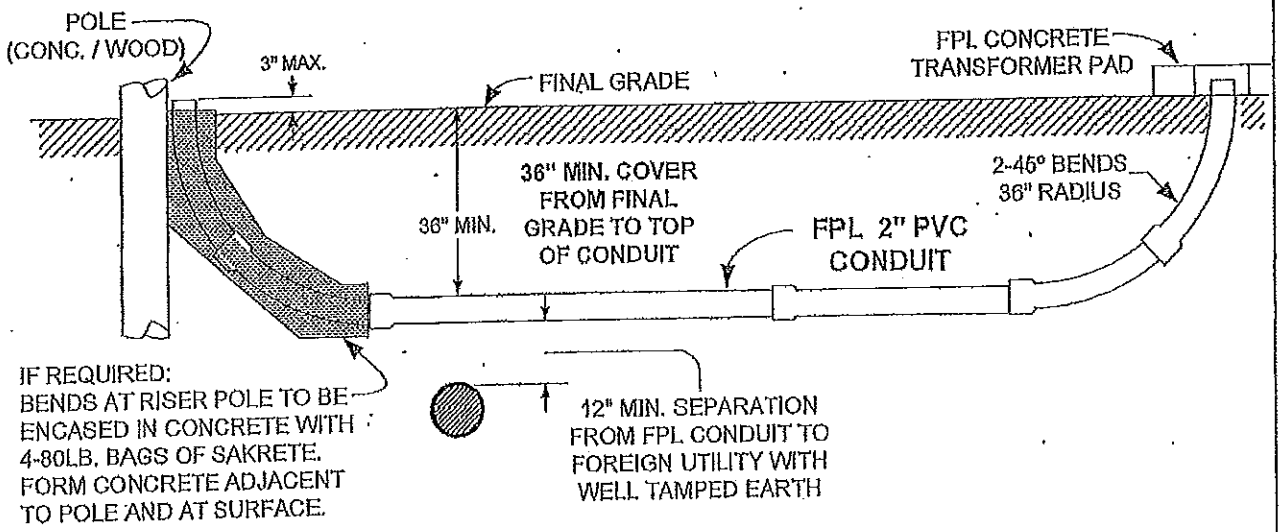


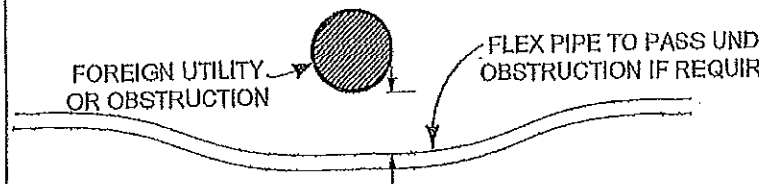
INSTALLATION OF FPL CONDUIT
PARALLEL WITH - OR - IN A SHARED TRENCH
WITH A FOREIGN UTILITY.

FPL SUPPLIED 5" PVC CONDUIT
TYPICAL CUSTOMER INSTALLATION DETAILS
(PORTIONS OF UN-6, UN-15,CONC. & PAD DETAILS)

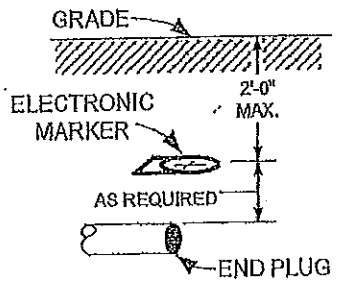
****** NOTICE******

- CALL SUNSHINE 1-800-432-4770 48HOURS BEFORE YOU DIG FOR UNDERGROUND LOCATIONS.
- NOTIFY FPL REP. FOR INSPECTION OF TRENCH DEPTH & PVC INSTALLATION PRIOR TO BACKFILLING TRENCH.





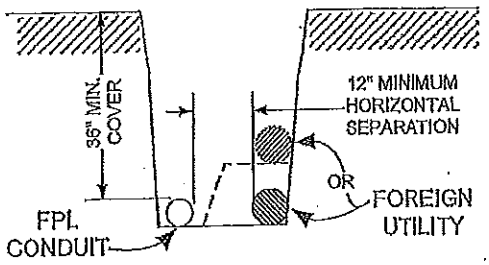
FPL CONDUIT CROSSING UNDER A FOREIGN UTILITY



DUCT END MARKING
(IF REQUIRED)

NOTES:

- BACK-FILL WITHIN 4" OF THE CONDUIT TO BE FREE OF MATERIAL THAT MAY DAMAGE CONDUIT SYSTEM (BOARDS, ROCKS LARGER THAN 1" IN DIAMETER, DEBRIS, ETC.)
- IF COMPACTION OF TRENCH ROUTE IS REQUIRED FOR PAVING, ETC. BEGIN MACHINE COMPACTION 6" MINIMUM ABOVE CONDUIT.
- WHERE 36" OF COVER CANNOT BE MAINTAINED, 30" OF COVER WILL BE ALLOWED WITH 3" OF CONCRETE ENCASEMENT AROUND THE CONDUIT. (N.E.S.C. RULE FOR PRIMARY VOLTAGES)
- INSTALL A CONTINUOUS LENGTH OF PULL STRING IN ALL CONDUIT RUNS.



INSTALLATION OF FPL CONDUIT
PARALLEL WITH - OR - IN A SHARED TRENCH
WITH A FOREIGN UTILITY.

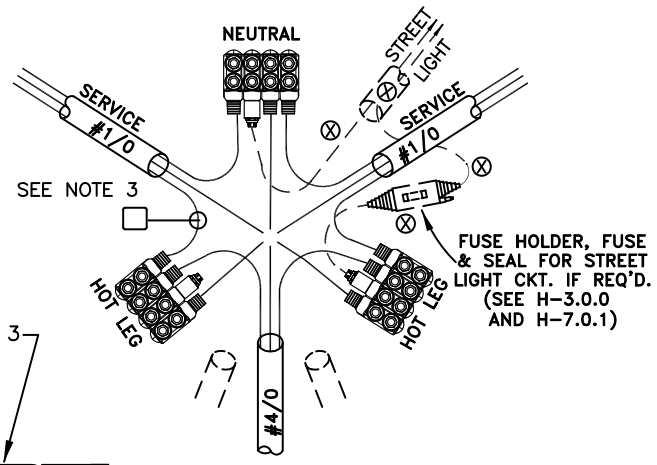
MATERIAL LIST 2" PVC SCH 40 CONDUIT	
20' LENGTH (BELLED END)	164-33100-6
90° BEND 24" RADIUS	164-23800-6
45° BEND 36" RADIUS	164-23945-2
45° BEND 24" RADIUS	164-23900-2
STRAIGHT COUPLING	164-47000-6
REPAIR SLEEVE 4" LONG	164-47520-2
END PLUG	164-54800-5
ELECTRONIC MARKER	590-61601-5

FPL SUPPLIED 2" PVC CONDUIT

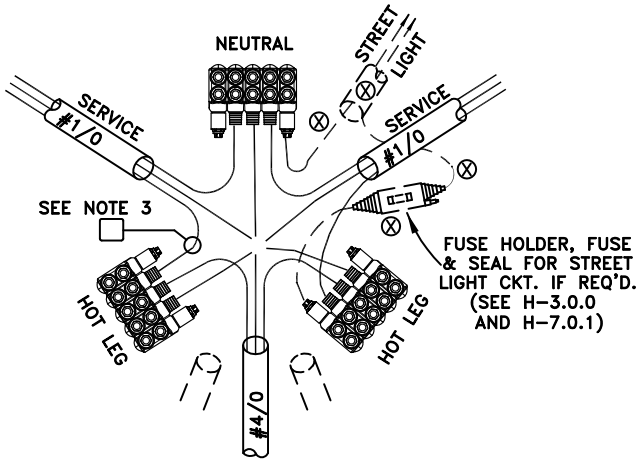
TYPICAL CUSTOMER INSTALLATION DETAILS
(PORTIONS OF UN-6, UN-15, CONC.& PAD DETAILS)

SHEAR BOLT SECONDARY CONNECTORS IN HANDHOLE FOR CONNECTING 2 TO 4 SERVICES

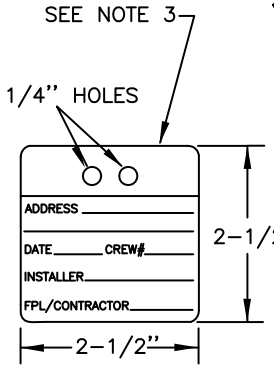
L-17.0.7



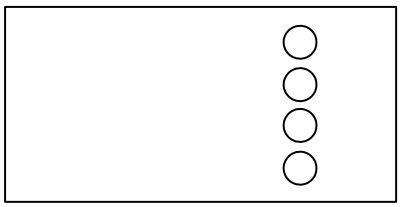
4 PORT SHEAR BOLT CONNECTOR (PIRANHA) CONNECTION DIAGRAM FOR 1 – 2 SERVICE M&S #163-066-008



5 PORT SHEAR BOLT CONNECTOR (PIRANHA) CONNECTION DIAGRAM FOR 3 – 4 SERVICE M&S #163-066-009



M&S # 549-378-009



TOP VIEW OF CONDUIT LAYOUT IN HANDHOLE (SEE NOTE 5)

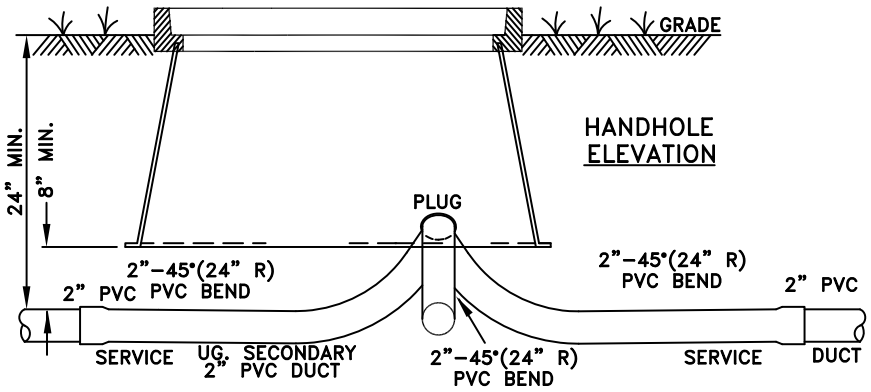


TABLE 1

NOTES:

1. FOR ONE SERVICE, SEE UC-5.0.0, UC-6.0.0 AND UC-6.0.2.
2. ONLY INSULATED CONDUCTORS MAY BE CONNECTED TO SHEAR BOLT CONNECTORS.
3. INSTALL TAG M&S #549-378-009 EVERYTIME A CONNECTOR IS INSTALLED OR REPLACED.
4. FOR ADDITIONAL INFORMATION REFER TO L-17.0.9, L-17.0.10 AND L-17.0.11.
5. FOR 24" AND 30" HANDHOLES INSTALL ALL CONDUITS AT ONE END OF THE HANDHOLE. BOTH THE 24" AND 30" HANDHOLES COME WITH A SPECIAL STENCIL "TO PLACE ALL CONDUITS AT THE END OF THE HANDHOLES". THIS ALLOWS THE CONDUCTOR TO BE LIFTED OUT OF THE HANDHOLE AND WORK THE CONNECTORS ABOVE GROUND.
6. WHEN FIELD CONDITIONS DICTATE THE USE OF FIVE OR MORE CABLES, IT MAY BE BEST TO CONSIDER THE USE OF THE 30" HANDHOLE, AS THIS WILL ALLOW ADDITIONAL ROOM TO WORK THE CONNECTIONS.
7. A 24" HEAVY DUTY HANDHOLE (M&S #162-120-500) IS ALSO AVAILABLE FOR USE IN SIDEWALKS, DRIVEWAYS AND PARKING LOTS. NOT FOR USE IN ROADWAYS OR AREAS OF DELIBERATE TRAFFIC.

TABLE 1

CABLES	CONNECTORS	HANDHOLE
1/0 SECONDARY, #6 DUPLEX AND 12CU FOR STREET LIGHT	163-066-008 (4 PORT)	162-304-001 (15.5"X10.5"X18" DEEP)
1/0 SECONDARY, AND 1/0 SERVICES, UP TO 4 SERVICES	163-066-009 (5 PORT)	162-120-008 (24"X13"X18" DEEP)
4/0 SECONDARY, AND 1 OR 2 SERVICES	163-066-008 (4 PORT)	162-120-008 (24"X13"X18" DEEP)
4/0 SECONDARY, AND 3 OR 4 SERVICES	163-066-009 (5 PORT)	162-120-008 (24"X13"X18" DEEP)
250 MCM TO 350 MCM	163-066-010 (5 PORT)	162-100-007 (30"X17"X18" DEEP)
350 MCM TO 500 MCM (NO MORE THAN 4 SETS)	163-066-011 (5 PORT)	162-100-007 (30"X17"X18" DEEP)
400 MCM TO 500 MCM (NO MORE THAN 4 SETS)	163-017-502 (6 PORT)	162-100-007 (30"X17"X18" DEEP)
400 MCM TO 500 MCM (NO MORE THAN 5 SETS)	163-017-502 (6 PORT)	162-121-004 (48"X30"X36" DEEP)
600 MCM TO 750 MCM	163-017-502 (6 PORT)	162-121-004 (48"X30"X36" DEEP)

FOR TRAFFIC LOADING USE HANDHOLE	162-122-892 (32"X50"X36" DEEP)
	162-122-893 (17"X30"X18" DEEP)

NO.	DATE	REVISION	ORIG.	DRAWN	APPR.
22	12/7/17	UPDATE TABLE	ARR	ELS	RDH
21	11/3/17	UPDATE TABLE	ARR	ELS	RDH
20	10/24/16	ADD NOTE 7	ARR	ELS	RDH
19	9/27/16	UPDATE TABLE AND DRAWING	ARR	ELS	RDH
18	5/12/16	UPDATE DRAWING AND NOTES	ARR	ELS	RDH
17	11/11/14	UPDATE TABLE	ARR	ELS	RDH

FPL

OH & UG DISTRIBUTION SYSTEM STANDARDS

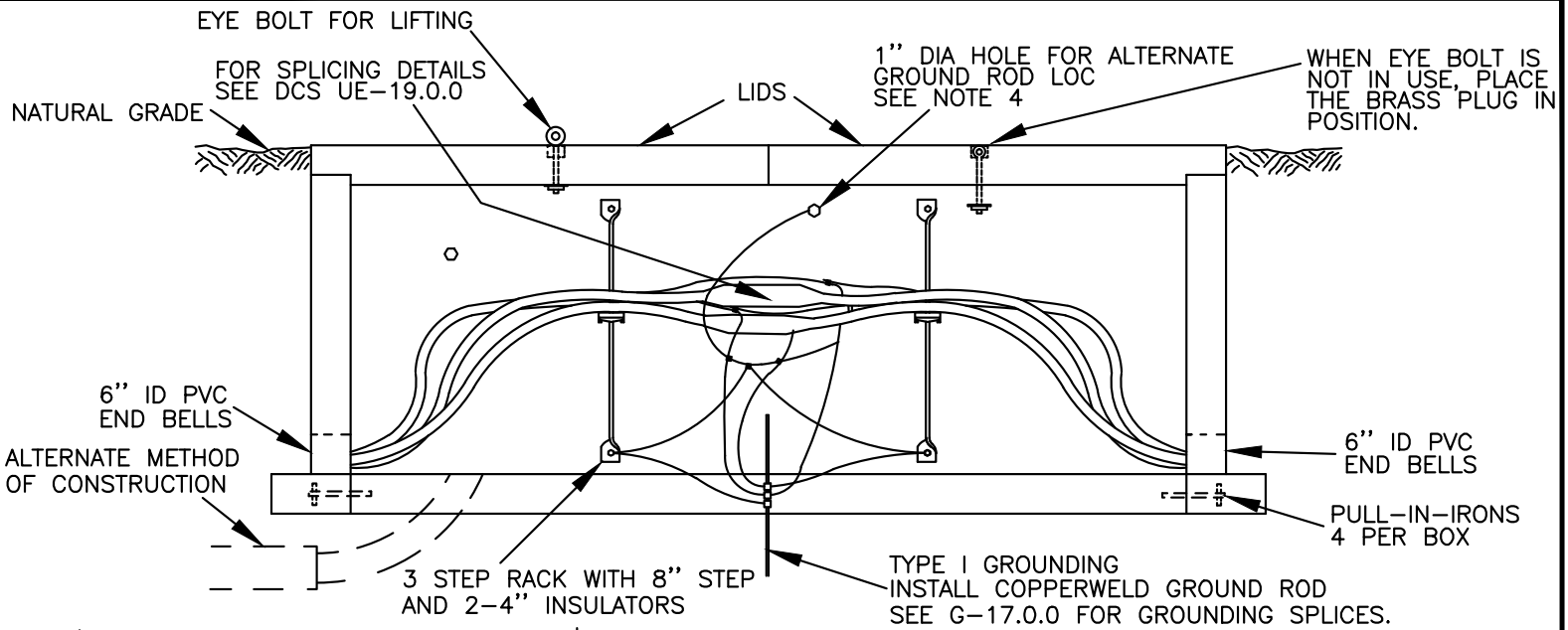
ORIGINATOR: SMS DRAWN BY: RAS

DATE: 8/09/96 APPROVED: J.R. "PEPE" DIAZ RELIABILITY ENGINEERING MANAGER

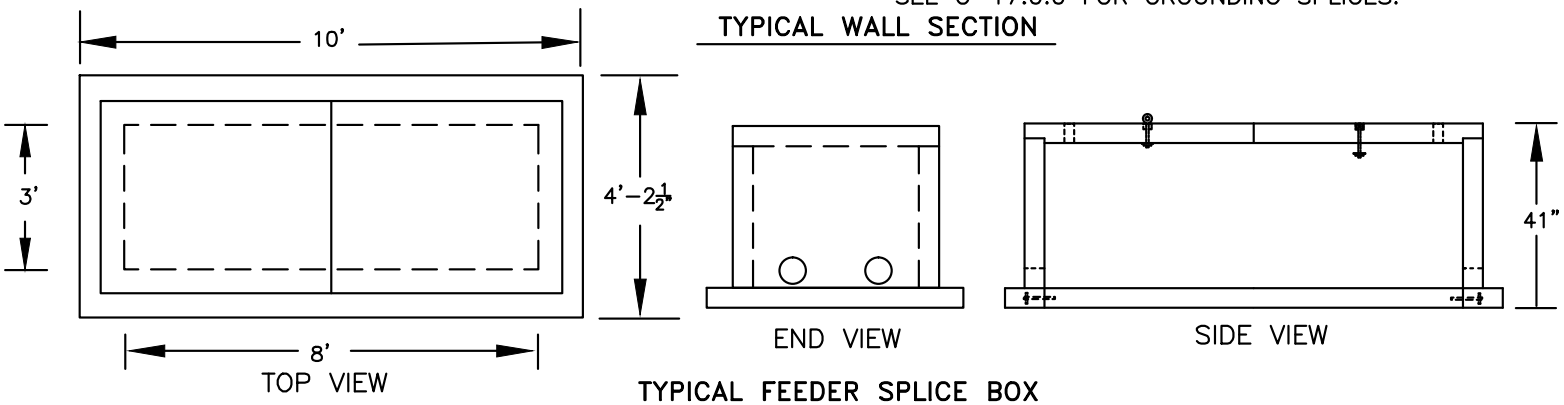
NO SCALE

FEEDER SPLICE BOX

UN-18.0.0



TYPICAL WALL SECTION



TYPICAL FEEDER SPLICE BOX

M&S NUMBER	DESCRIPTION
162-240-003	CONCRETE FEEDER SPLICE BOX & LIDS. (SEE NOTE 5)
162-241-000	CONCRETE FEEDER SPLICE BOX & LIDS COMES WITH SPECIAL BRUSHED SIDEWALK FINISH LIDS AND FLUSH INSERTS SUITABLE FOR PEDESTRIAN TRAFFIC. (SEE NOTE 5)
162-242-203	POLYMER CONCRETE FEEDER SPLICE BOX. TO BE INSTALLED IN AREAS NOT SUBJECT TO ANY VEHICULAR TRAFFIC SUCH AS STREETS, PARKING LOTS, OR DRIVEWAYS.

NOTES:

1. LEAVE SUFFICIENT EXPOSED GROUND ROD TO INSTALL 6 EACH #4/0-#2 CONNECTIONS M&S #120-118-005.
2. GROUND ALL SPICES PER DISTRIBUTION STANDARD G-17.0.0.
3. GROUND CABLE RACKS.
4. EACH SPLICE BOX IS SUPPLIED WITH 2-1" DIA HOLE FOR ALTERNATE GROUND ROD LOCATION. MAKE ALL GROUNDING CONNECTIONS INSIDE THE BOX. RUN SUFFICIENT AMOUNT OF 4/0 TO MAKE CONNECTION TO ALT. GROUND ROD LOCATION. RESEAL 1" DIA HOLE WITH AQUASEAL.
5. REFER TO UX-233.0.1 FOR DRIVEWAY LOADING SPLICE BOXES (H20 RATED), M&S #162-240-003 AND 162-241-000. (H20 RATED = 32,000LBS).
6. WEIGHT OF SPLICE BOX (W/O LIDS) = 6700 LBS. DIMENSIONS ARE 10' X 4'-2.5" X 41" DEEP.
7. WEIGHT OF EACH LID = 1400 LBS. TWO LIDS REQUIRED. M&S # FOR LID ONLY 162-240-011.
8. URD FEEDER CABLE SPLICES MUST BE BONDED TO DRIVEN GROUNDS.
9. REFER TO UE-19.0.0 FOR SPLICE ASSEMBLY. A WATER TIGHT SEAL MUST BE MADE WHERE INSULATED.
10. CONDUCTORS CONNECT TO SYSTEM NEUTRAL. SEE G-17.0.0.
11. THE MAXIMUM PERMISSIBLE IMPENDENCE TO SYSTEM NEUTRAL FOR A DRIVEN GROUND IS 25 OHMS.
12. AS SHOWN ABOVE, THE PVC MAY ENTER UNDERNEATH THE SPLICE BOX BY USING A 45 DEGREE SWEEP. SEAL CONDUIT WITH DUCT SEAL.
13. IN AREAS SUBJECT TO WATER INTRUSION, INSTALL A SUFFICIENT AMOUNT OF PEAROCK 1/4"-3/4" SIZE ROCK TO ALLOW FOR THE PERCOLATION OF THE WATER.
14. IF FEEDER SPLICE BOX IS TO BE INSTALLED IN A SIDEWALK, A SEPARATION WILL BE NEEDED BETWEEN THE CONCRETE AND THE LIDS. THE D.O.T. INDEX 310 SPECIFIES THE USE OF A 1/2" EXPANSION JOINT (PREFORMED JOINT FILLER) FOR THIS SEPARATION. ALSO CONSULT YOUR LOCAL MUNICIPALITY FOR ANY ADDITIONAL REQUIREMENTS.
15. THE MAXIMUM SEPARATION BETWEEN FEEDER SPLICE BOXES IS 950', THIS IS TO ALLOW FOR PROPER CABLE PULLING TENSIONS.
16. UX-233.0.1 AND UX-233.0.3 FOR MORE DETAIL.
17. WHEN SETTING A PAD/MANHOLE OR FEEDER SPLICE BOX, THE AREA MUST BE LEVELED WITHIN 1 INCH IN 8 FEET IN ALL DIRECTIONS, AND THOROUGHLY COMPACTED WITH A VIBRATORY PLATE COMPACTOR. THIS STEP WOULD PROVIDE A SMOOTH AND LEVEL SURFACE.
18. FEEDER CABLES ARE NOT TO BE LOOPED AROUND THE ENDS OF THE BOX, THIS WILL EXCEED THE BEND RADIUS OF THE CABLES CREATING A POTENTIAL FAILURE

NO.	DATE	REVISION	ORIG.	DRAWN	APPR.
8	8/26/19	ADD NOTE 18	ARR	ELS	RDH
7	8/6/18	ADD NOTE 17	ARR	ELS	RDH
6	6/12/17	UPDATE DRAWING AND NOTES	ARR	ELS	RDH
5	5/19/17	ADD NOTE 15	ARR	ELS	RDH

F P L

OH & UG DISTRIBUTION SYSTEM STANDARDS

ORIGINATOR: RAP

DRAWN BY: J.SHOUP

DATE: 8/27/99

APPROVED: J.J McEVOY
SUPERVISOR, OH/UG PRODUCT SUPPORT SERVICES

CAM #21-0191

NO SCALE

PAD-MOUNTED CAPACITOR BANK INSTALLATIONS

J-4.0.0

WE HAVE TWO STANDARD 1200 KVAR PAD-MOUNTED, CAPACITOR BANKS. THEY ARE PRESENTLY OPERATED AS FIXED BANKS, BUT MAY BE REMOTELY SWITCHED IN THE FUTURE.

223-388-508 13KV, PAD-MOUNTED, DEADFRONT, STAINLESS STEEL ENCLOSURE, 3 PHASE, 1200 KVAR CAPACITOR BANK TO INCLUDE: A POTENTIAL TRANSFORMER, VACCUMM SWITCHES, DOUBLE BUSHING CAPACITOR CANS, (7.62KV, 400 KVAR), X-LIMITER FUSES (80A), BUSHING WELLS (200A), PARKING STANDS, METER SOCKET AND CONTROL WIRING FOR RADIO RECEIVER.

223-388-001 23KV, PAD-MOUNTED, DEADFRONT, STAINLESS STEEL ENCLOSURE, 3 PHASE, 1200 KVAR CAPACITOR BANK TO INCLUDE: A POTENTIAL TRANSFORMER, VACUUM SWITCHES, DOUBLE BUSHING CAPACITOR CANS, (13.2 KVAR), 400 KVAR), X-LIMITER FUSES (50A), BUSHING WELLS (200A), PARKING STANDS, METER SOCKET AND CONTROL WIRING FOR RADIO RECEIVER.

EITHER UNIT CAN MOUNT ON FOUNDATION UX-108 (M&S 162-251-005). THE FOUNDATION, ARRESTERS, AND ROTATABLE BUSHINGS ARE INCLUDED IN THE FOLLOWING MECA UNIT.

EITHER UNIT CAN BE USED IN SALT-SPRAY AREAS.

A	B	C	D	E	F	G	H
C			1200	T	E		

J

DETAILS OF INSTALLATION:

1. THE UNITS ARE TO BE INSTALLED NO MORE THAN 100FT FROM A DEAD-FRONT, PADMOUNTED SWITCH CABINET, ONLY. LIVE FRONT CABINETS SHOULD BE CHANGED OUT FOR THIS APPLICATION.
2. THE UNIT WILL BE SERVED WITH 1/0, 25KV CABLE FROM THE BACK (200-AMP INTERFACE) OF THE ARRESTERS PRESENTLY FOUND IN THE CABINET, BUT THESE ARRESTERS MAY BE RE-USED IN THE CAP BANK UNIT.
3. INSTALL ROTATABLE, FEED-THRU BUSHINGS ON THE 23KV URD CAPACITOR BANK (ONE SIDE FOR THE ARRESTER ELBOW AND ONE SIDE FOR THE PRIMARY ELBOW COMING FROM THE PADMOUNTED SWITCH CABINET). NOTE: THIS ONLY APPLIES TO 23KV UNITS, SINCE IT IS TYPICALLY, NOT NECESSARY, TO PROTECT 15KV URD SYSTEMS, WITH ELBOW ARRESTERS.
4. THE PAD-MOUNTED BANK SITS ON A PRE-CAST CONCRETE PAD. REFER TO UX-108.
5. THE BANK IS PROTECTED, BY CURRENT-LIMITING FUSES, AND HAS A POTENTIAL TRANSFORMER (INTERNALLY PROTECTED AND HOOKED UP TO THE LINE SIDE OF FUSES), WHICH POWERS THE VACUUM SWITCHES.
6. FAULT INDICATORS SHOULD BE INSTALLED AT BOTH THE PADMOUNTED SWITCH CABINET AND THE CAPACITOR CABINET TO DISTINGUISH BETWEEN CAN OR CABLE FAILURE.
7. INSTALL SIGNS SHOWING "INSTRUCTIONS FOR SWITCHING" (M&S 548-223-000) AND "REPLACEMENT COMPONENTS" (M&S 548-223-100) ON INSIDE OF CABINET DOOR.

NOTES:
1. PADMOUNTED CAPACITOR BANKS REQUIRE 8' MINIMUM CLEARANCE IN FRONT AND REAR DOORS.

4	9/17/13	UPDATE DRAWING (TEXT)	JJR	ELS	WM
3	4/5/13	UPDATE DRAWING (TEXT)	JJR	ELS	WM
2	5/21/12	UPDATE DRAWING (TEXT)	LFV	ELS	WM
1	3/24/04	UPDATE DRAWING (TEXT)	LFV	ELS	JJM

ORIGINATOR: LFV
DRAWN BY: J. SHOUP
DATE: 07/25/01
APPROVED: J.J. MCEVOY SUPERVISOR, OH/UG PRODUCT
NO SCALE

CAPACITOR BANK SWITCHING INSTRUCTIONS

J-4.0.1

THE FOLLOWING INSTRUCTIONS ARE TO BE PLACED INSIDE ALL PAD-MOUNTED CAPACITOR BANKS:

INSTRUCTIONS FRO SWITCHING PADMOUNTED CAPACITOR BANKS:

TO ENERGIZE THE BANK, FOLLOW THESE STEPS:

1. TURN RC OFF AT FEEDER BREAKER.
2. VERIFY THAT ELBOWS ARE PARKED AT BOTH FEEDER PAD-MOUNTED SWITCH CABINET AND CAPACITOR BANK CABINET.
3. VERIFY ALL GROUNDS/SHORTING STRAPS HAVE BEEN REMOVED FROM THE CAPACITOR CANS.
4. VERIFY THAT SEMAPHORES IN VACUUM SWITCHES ARE IN THE "OPEN" POSITION.
5. VERIFY THAT CURRENT LIMITING FUSES ARE INSTALLED, WITH THE BLOWN INDICATOR FACING DOWN.
6. PLACE REMS CONTROLLER SWITCH IN THE LOCAL POSITION.
7. CLOSE IN ELBOWS AT CAPACITOR CABINET.
8. CLOSE IN ELBOWS AT SWITCH CABINET.
9. PRESS THE RED (CLOSE) BUTTON ON THE REMS OR USE THE REMOTE HAND OPERATOR TO CLOSE VACUUM SWITCHES.
10. TURN RC ON AT FEEDER BREAKER.

TO SWITCH OUT AND ISOLATE THE BANK, FOLLOW THESE STEPS:

1. VERIFY THAT REMS CONTROLLER'S TOGGLE SWITCH IS PLACED IN THE POSITION.
2. PRESS GREEN TRIP BUTTON ON REMS RECEIVER BOX.
3. VERIFY THAT SEMAPHORES IN VACUUM SWITCHES SHOW OPEN.
4. VERIFY THAT SEMAPHORES IN VACUUM SWITCHES SHOW OPEN.
5. ALLOW AT LEAST FIVE MINUTES THEN TEST FOR VOLTAGE OR CURRENT AT THE CAPACITOR CELLS.
6. OPEN, PARK, AND CAP ELBOWS AT FEEDER PAD-MOUNTED SWITCH CABINET.
7. OPEN, PARK, AND CAP ELBOWS AT CAPACITOR CABINET.
8. ATTACH ALL NECESSARY GROUNDS.

NOTE:
THE CAPACITOR CANS ARE TO BE ENERGIZED OR DE-ENERGIZED WITH THE VACUUM SWITCHES, ONLY.
DO NOT USE THE LOAD-BREAK ELBOWS OR THE CURRENT-LIMITING FUSES FOR THE ACTIVITY.

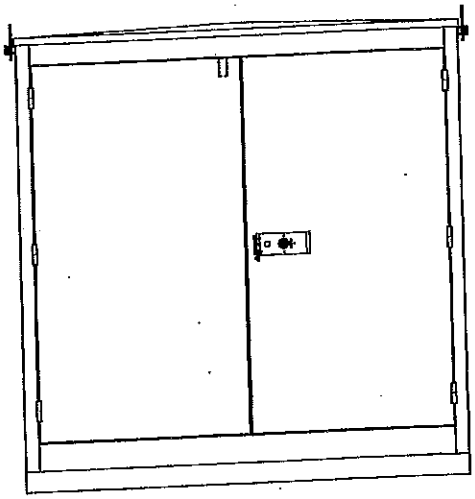
J

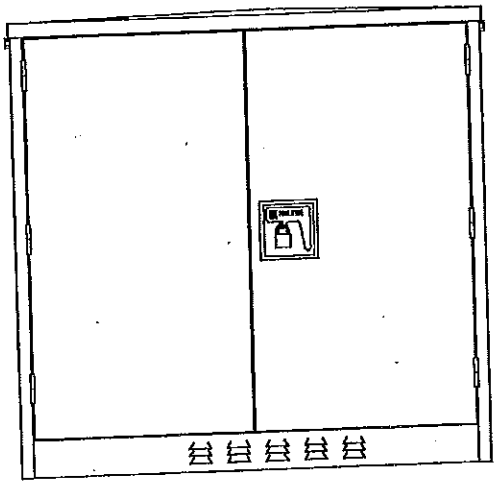
PAD-MOUNTED CAPACITOR BANK-REPLACEMENT COMPONENTS:

CURRENT LIMITING FUSES:	
13KV, 80A, X-LIMITER	M&S 531-454-802
23KV, 50A, X-LIMITER	M&S 531-455-001
POTENTIAL TRANSFORMERS:	
13KV, INTERNALLY FUSED	M&S 461-088-059
23KV, INTERNALLY FUSED	M&S 461-088-105
CAPACITOR CANS:	
7620V, 400KVAR, TWO-BUSHING	M&S 225-402-130
13,200V, 400KVAR, TWO-BUSHING	M&S 225-402-230
VACUUM SWITCHES:	
13KV, 200A	M&S 275-108-120
23KV, 200A	M&S 275-108-130

J–4.0.2	TYPICAL INSTALLATION OF 25 KV S & C DEAD FRONT SWITCHGEAR AND THREE PHASE PAD–MOUNTED CAPACITOR BANK	J–4.0.2

NOTES:
1. INSTALL 92" X 92" PRECAST PAD (M&S 162–251–005)
2. DRIVE GROUND RODS & ATTACH #2 CU GROUND TO GROUNDING LUGS.
3. INSTALL URD CAPACITOR BANK (M&S 223–388–001) ON PAD.
4. INSTALL ROTATABLE FEED–THRU BUSHING 25KV (M&S 163–250–002) ON EACH BUSHING.
5. INSTALL 200 AMP ELBOWS ON ROTATABLE FEED–THRU BUSHINGS.
6. INSTALL 18KV ELBOW ARRESTERS (M&S 334–015–005) ON ROTATABLE FEED–THRU BUSHINGS.

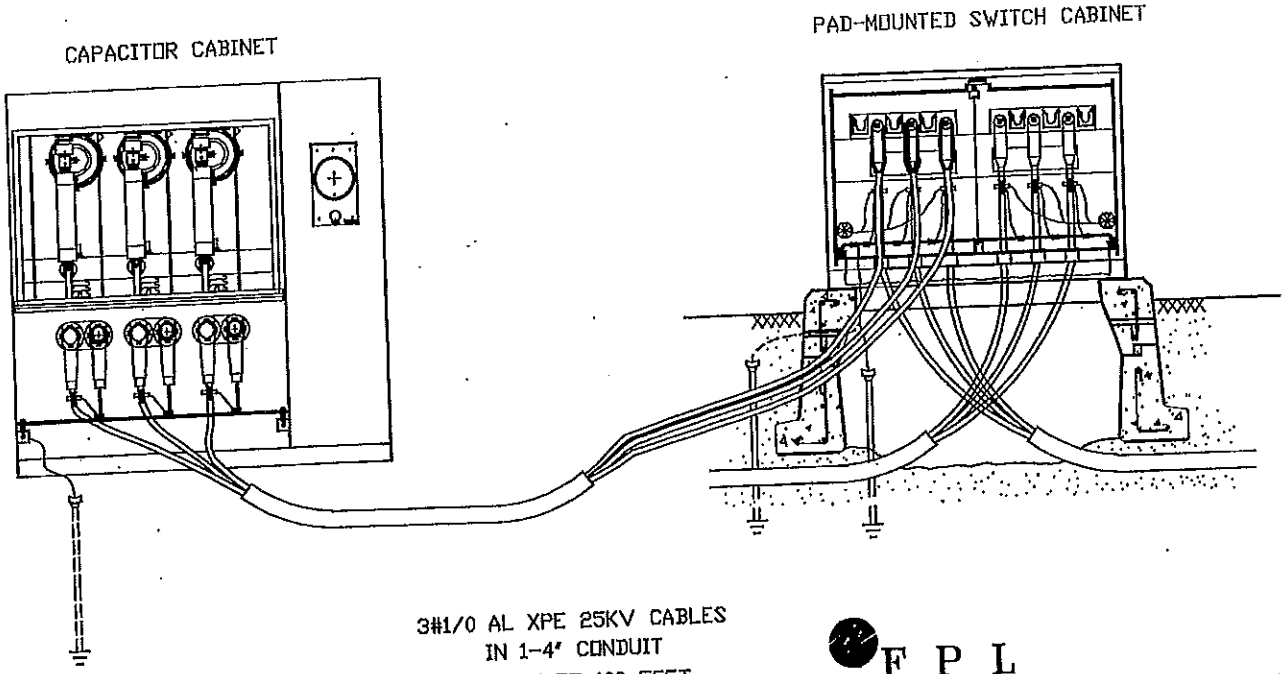




J

CAPACITOR CABINET

PAD–MOUNTED SWITCH CABINET



3#1/0 AL XPE 25KV CABLES
IN 1–4" CONDUIT
MAXIMUM OF 100 FEET

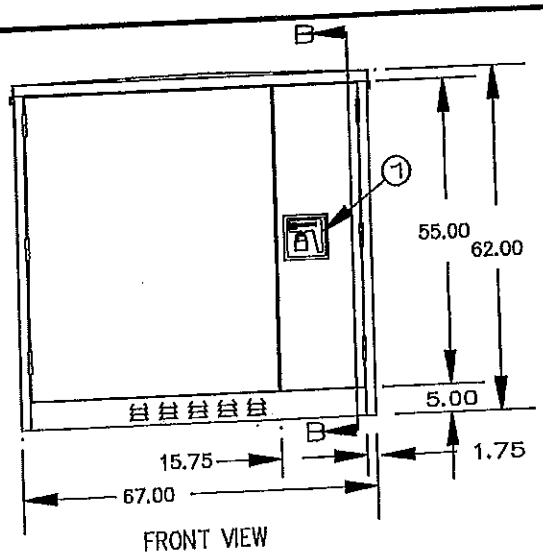
F P L
OH & UG DISTRIBUTION SYSTEM STANDARDS

		JGV	ELS	WM	DATE: 07/26/01	ORIGINATOR: LFV APPROVED: J.J. MCEVOY SUPERVISOR, OH/UG PRODUCT

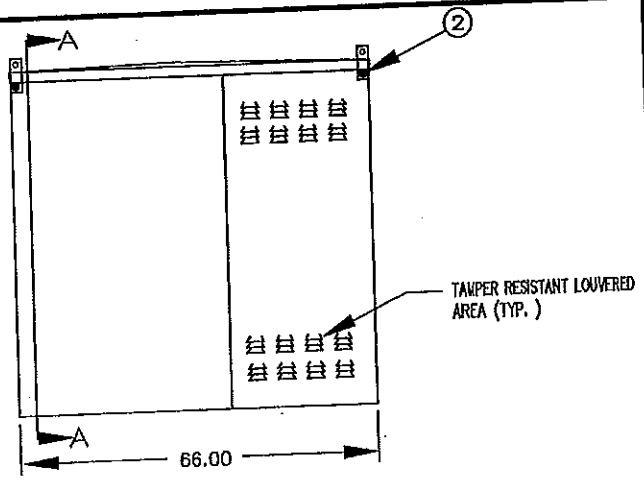
DRAWN BY: J. SHOUP
CAM #21-0191
NOT SCALE

MALTON 25KV, 200A, 125KV BIL, 1200KVAR PAD-MOUNTED CAPACITOR BANK

J-4.0.3

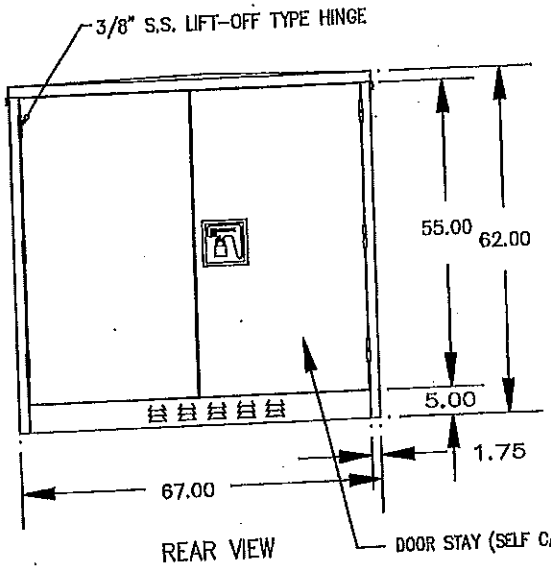


FRONT VIEW



RIGHT SIDE VIEW

ITEM	QTY	DESCRIPTION
16	1	4-POINT TERMINAL BLOCK
15	3	CAPACITORS, 400 KVAR, 13200V, 150KV BIL, 1-BUSHING COOPER #CEPI33M22 OR EQUAL 23
14	3	FUSE MOUNTING COOPER TYPE NX - CODE 6 W/50A X-LIMITER FUSE 23KV
13	1	INNER DOOR BARRIER - CLEAR LEXAN
12	LOT	#2 FLEXIBLE COPPER WIRE
11	11	INSULATOR 25KV, 125KV BIL
10	1	MANUFACTURERS NAMEPLATE
9	2	GROUNDING STRAPS
8	1	METER SOCKET 100 AMP, 4-TERMINAL, RNG TYPE
7	3	PARKING STAND
6	3	BUSHING WELL 200AMP, 25KV, 125KV BIL
5	1	1/4" CLEAR LEXAN WINDOW (REMOVABLE TO ACCESS FUSES)
4	1	POTENTIAL TRANSFORMER, SINGLE BUSHING, 120:1 1KVA - INTERNALLY FUSED 23
3	3	VACCUUM SWITCH, 200A, 25KV, 5-PIN CONTROL, MANUAL TRIP JOSLYN VERSAVAC 23
2	4	5/8-11 UNC THREADED INSERTS WITH REMOVABLE LIFTING TABS
1	2	HANDLE ASSY. W/ S.S. HEX BOLT, 3-PT. LATCHING



REAR VIEW

NOTES:

1. MATERIAL IS 12 GA. OR 11 GA. (.105) STEEL - AS SPECIFIED
2. STEEL IS PHOSPATE TREATED FOR PAINT ADHESION
3. ENCLOSURE IS PAINTED WITH MALTON "POLYMAX PLUS" FINISHING PROCESS TO MEET ANSI/EEI PERFORMANCE GUIDLINES PAINT COLOR: MUNSELL 7GY3.29/1.5 GREEN.
4. ENCLOSURE CONSTRUCTION TO MEET THE LATEST ANSI STANDARD C57.12.28

REV	DATE	BY	DESCRIPTION
D	4/7/00	TG	ADDED LUG #
C	3/11/99	TG	CHANGE FUSE SPACING DIM FROM 12 TO 13
B	12/03/97	RR	ADDED 4.1" X 2" SLOT TO HOLD DOWN CLIP, REMOVED CLEAR LEXAN WINDOW FROM SECTION VIEW A-A FOR CLARITY
A	11/21/97	RR	ADDED HOLD DOWN BRACKETS, RELOCATED LOWER BUSHINGS TO TOP FEED FUSE, ADDED DETAIL 'A'

TOLERERANCE UNLESS NOTED: .XX ±.02; .XXX ±.010

F P L

OH & UG DISTRIBUTION SYSTEM STANDARDS

ORIGINATOR: LFV

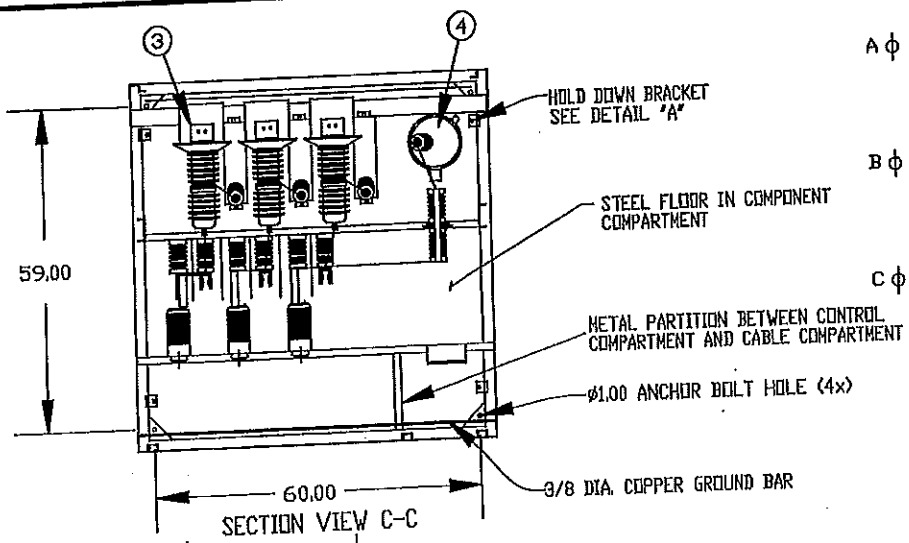
DRAWN BY: J. SHOUP

DATE: 07/26/01

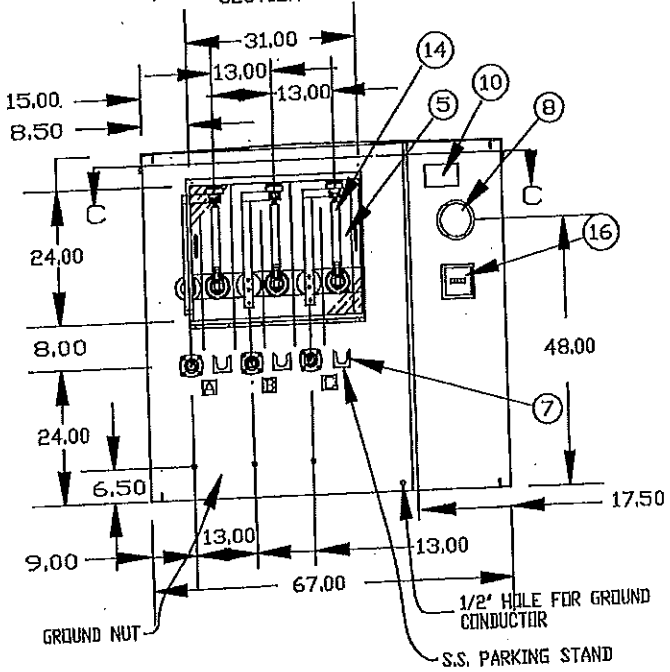
APPROVED: J.J. MCEVOY
SUPERVISOR, OH/UG PRODUCT

MALTON 25KV 200A, 125KV BIL, 1200KVAR PAD-MOUNTED CAPACITOR BANK

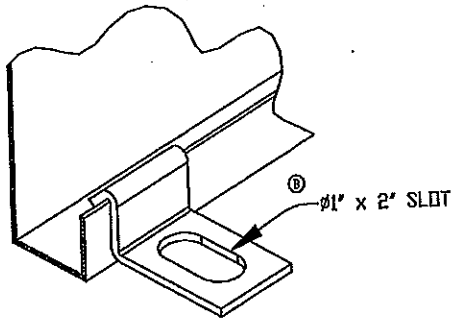
J-4.0.4



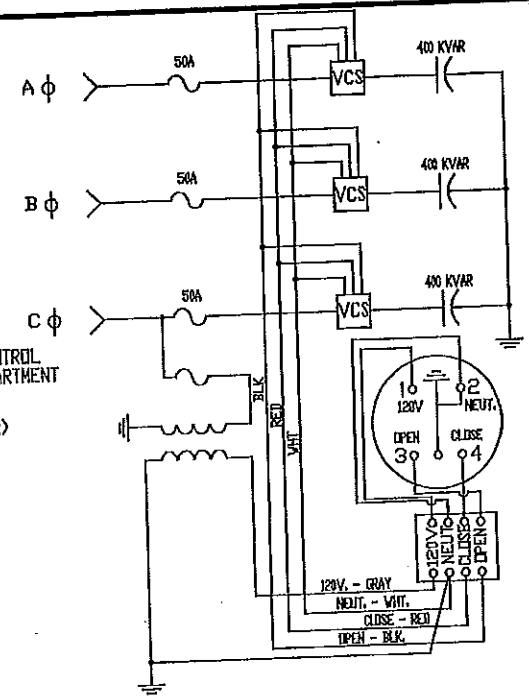
SECTION VIEW C-C



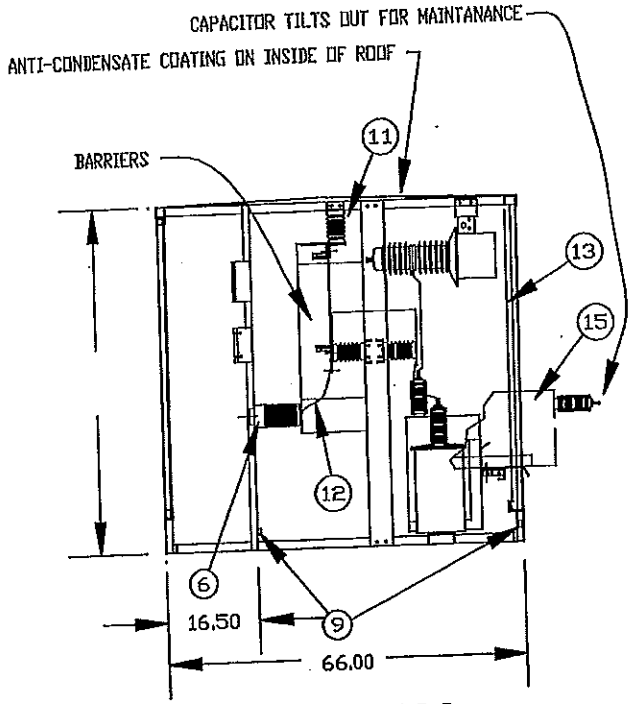
SECTION VIEW A-A



DETAIL "A"



LINE DIAGRAM



SECTION VIEW B-B

F P L

OH & UG DISTRIBUTION SYSTEM STANDARDS

ORIGINATOR: LFV

DRAWN BY: J. SHOUP

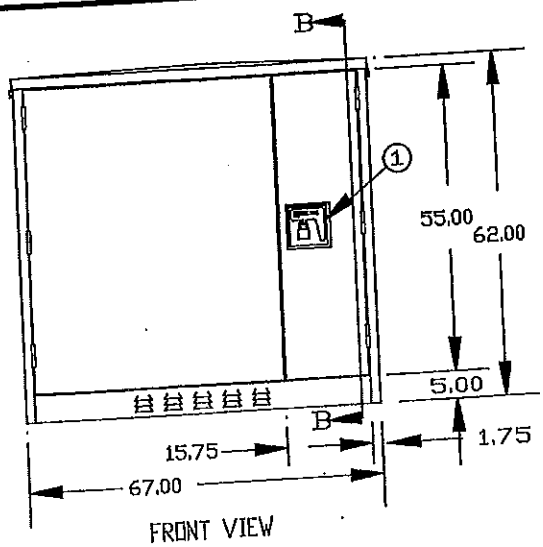
DATE: 07/26/01

APPROVED: J.J. MCEVOY
SUPERVISOR, OH/UG PRODUCT

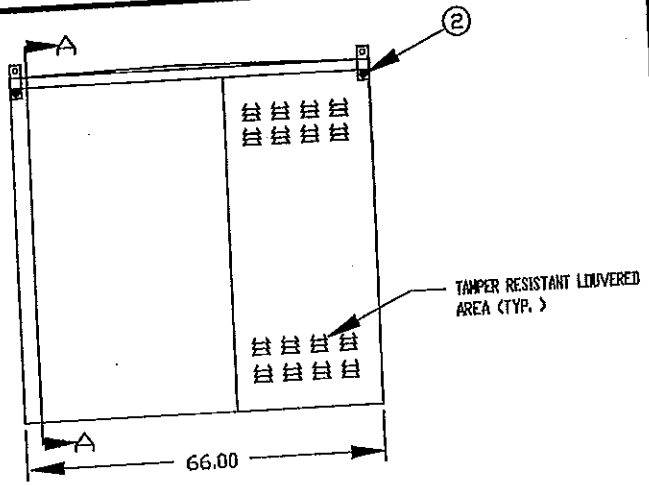
NOT SCALE

MALTON 15KV, 200A, 95KV BIL, 1200KVAR PAD-MOUNTED CAPACITOR BANK

J-4.0.5

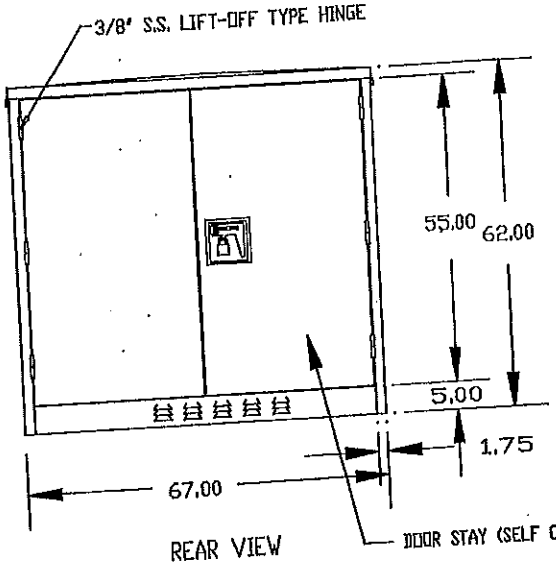


FRONT VIEW



RIGHT SIDE VIEW

ITEM	QTY	DESCRIPTION
16	1	4-POINT TERMINAL BLOCK
15	3	CAPACITORS, 400 KVAR, 7620V, 95KV BIL, 1-BUSHING COOPER #CEP170B7FA OR EQUAL 15
14	3	FUSE MOUNTING COOPER TYPE NX - CODE 6 W/80A X-LIMITER FUSE 15KV
13	1	INNER DOOR BARRIER - CLEAR LEXAN
12	LOT	#2 FLEXIBLE COPPER WIRE
11	11	INSULATOR 25KV, 125KV BIL
10	1	MANUFACTURERS NAMEPLATE
9	2	GROUNDING STRAPS
8	1	METER SOCKET 100 AMP, 4-TERMINAL, RING TYPE
7	3	PARKING STAND
6	3	BUSHING WELL 200AMP, 25KV, 125KV BIL
5	1	1/4" CLEAR LEXAN WINDOW (REMOVABLE TO ACCESS FUSES)
4	1	POTENTIAL TRANSFORMER, SINGLE BUSHING, 63.5:1 1KVA - INTERNALLY FUSED 15
3	3	VACCUUM SWITCH, 200A, 15KV, 5-PIN CONTROL, MANUAL TRIP JOSLYN VERSAVAC 15
2	4	5/8-11 UNC THREADED INSERTS WITH REMOVABLE LIFTING TABS
1	2	HANDLE ASSY. W/ S.S. HEX BOLT, 3-PT. LATCHING



REAR VIEW

NOTES:

1. MATERIAL IS 12 GA. OR 11 GA. (.105) STEEL - AS SPECIFIED
2. STEEL IS PHOSPATE TREATED FOR PAINT ADHESION
3. ENCLOSURE IS PAINTED WITH HALTON "POLYMAX PLUS" FINISHING PROCESS TO MEET ANSI/EEI PERFORMANCE GUIDLINES PAINT COLOR: MUNSELL 7GY3.29/1.5 GREEN.
4. ENCLOSURE CONSTRUCTION TO MEET THE LATEST ANSI STANDARD C57.12.28

REV	DATE	BY	DESCRIPTION
A	04/05/00	TG	ADDED N & S H

TOLERERANCE UNLESS NOTED	
.XX	±.02
.XXX	±.010

FPL

OH & UG DISTRIBUTION SYSTEM STANDARDS

ORIGINATOR: LFV

DRAWN BY: J. SHOUP

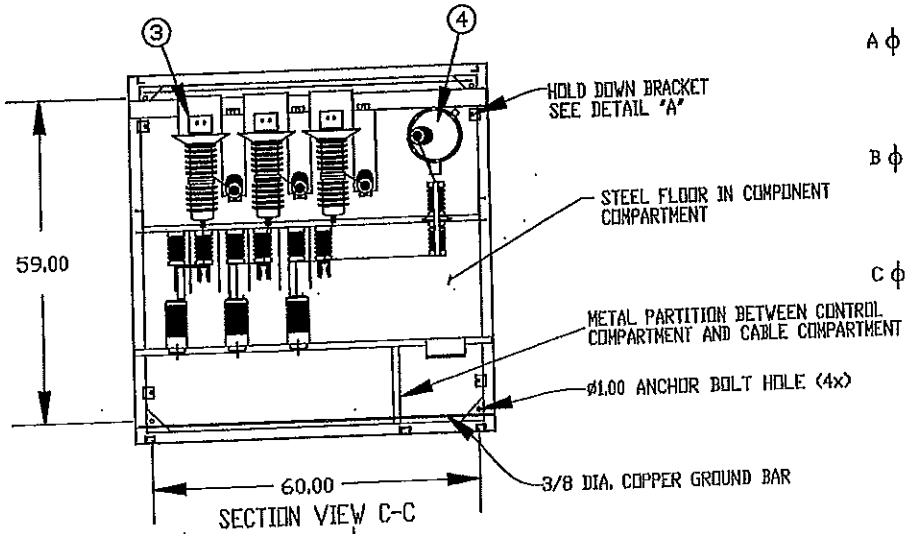
DATE: 07/26/01

APPROVED: J.J. MCEVOY
SUPERVISOR, OH/UG PRODUCT SUPPORT SERVICES

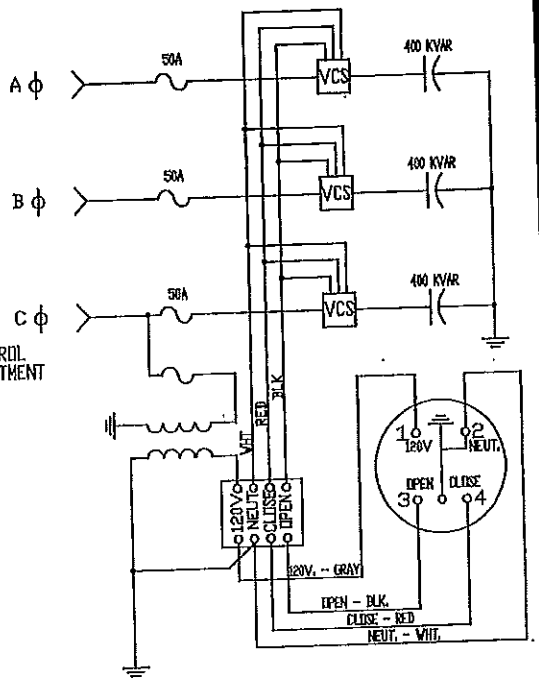
NO SCALE

MALTON 15KV, 200A, 95KV BIL, 1200KVAR PAD-MOUNTED CAPACITOR BANK

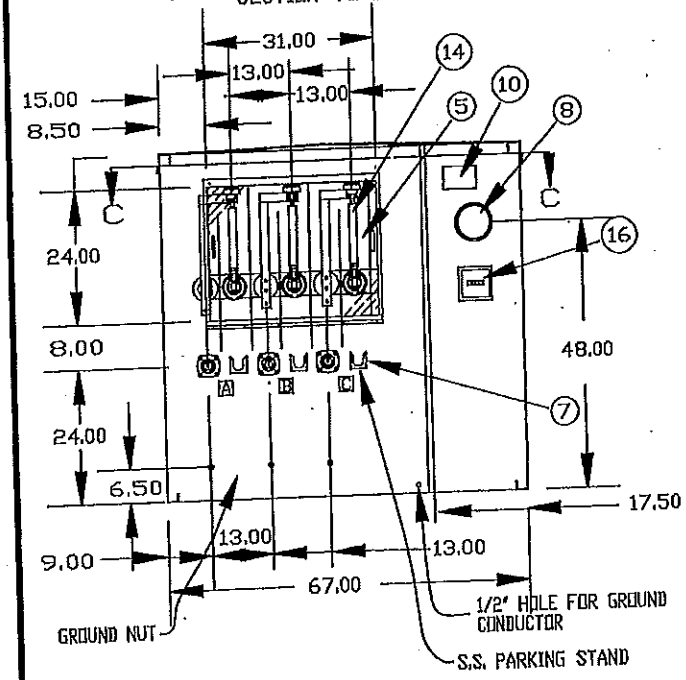
J-4.0.6



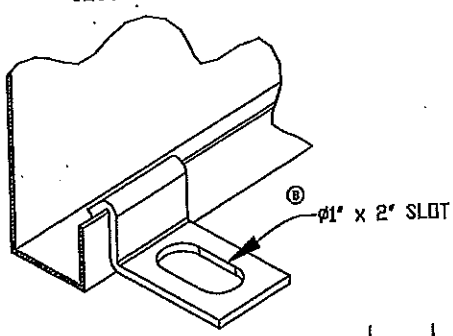
SECTION VIEW C-C



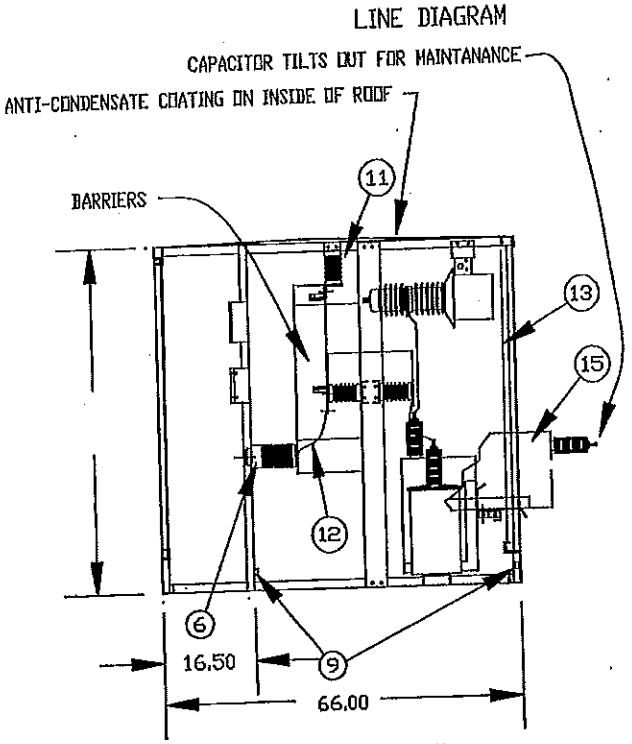
LINE DIAGRAM



SECTION VIEW A-A



DETAIL "A"



SECTION VIEW B-B

F P L

OH & UG DISTRIBUTION SYSTEM STANDARDS

ORIGINATOR: LFV

DRAWN BY: J. SHOUP

DATE: 07/26/01

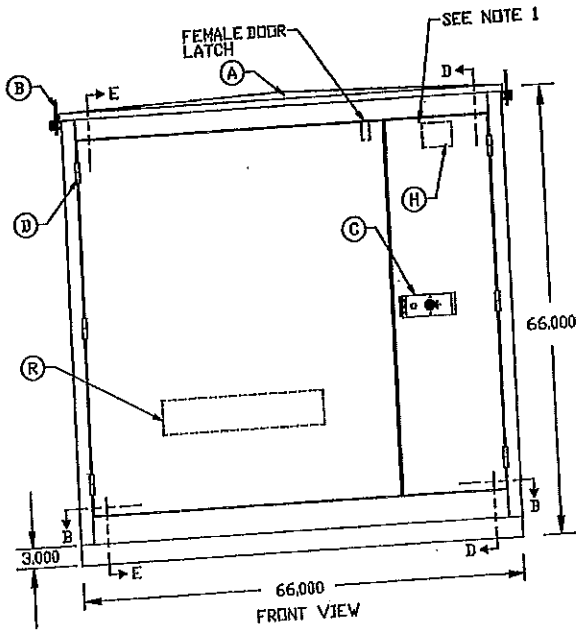
APPROVED: J.J. MCEVOY
SUPERVISOR, OH/UG PRODUCT

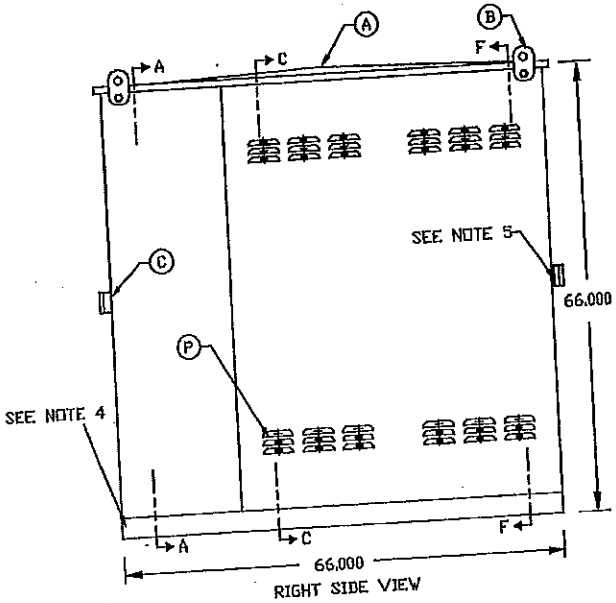
NO SCALE

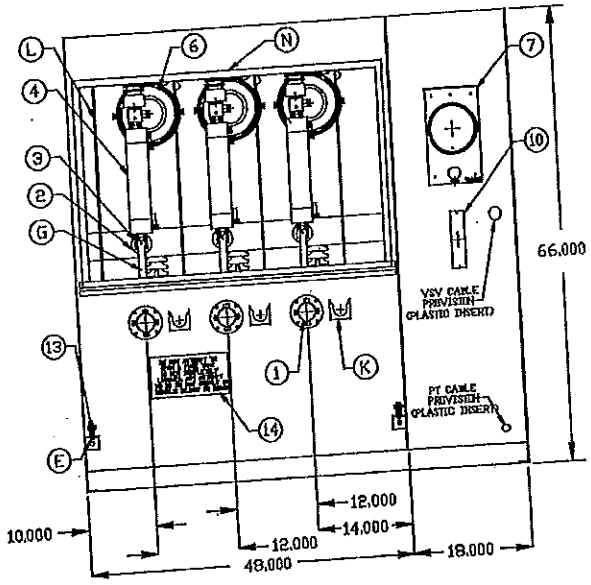
J-4.0.7

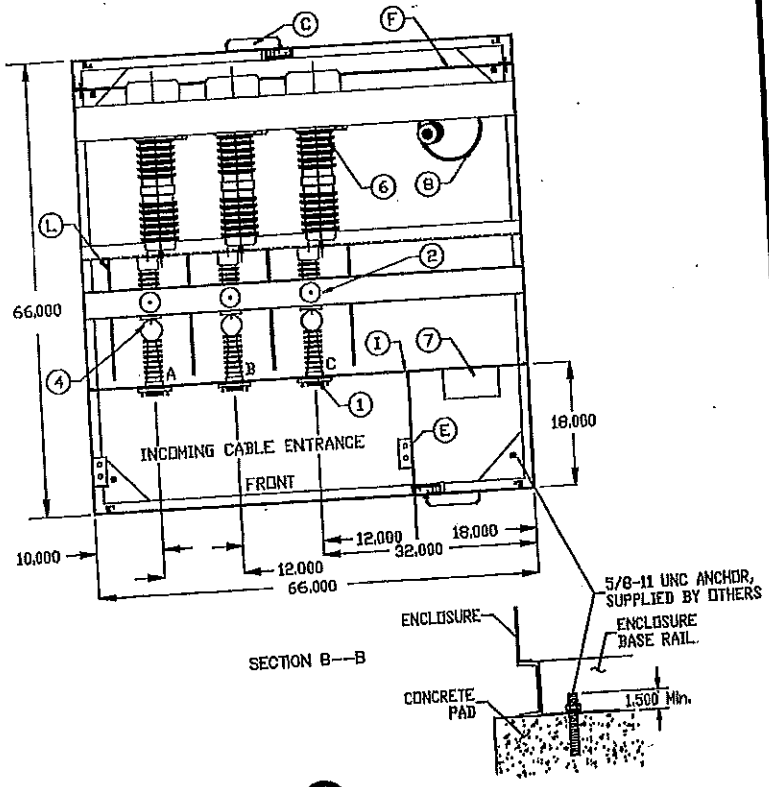
SHALLBETTER 25KV, 125KV BIL, 1200KVAR, DEAD-FRONT, PAD-MOUNTED, CAPACITOR BANK

J-4.0.7









J

F P L

OH & UG DISTRIBUTION SYSTEM STANDARDS

ORIGINATOR: LFV

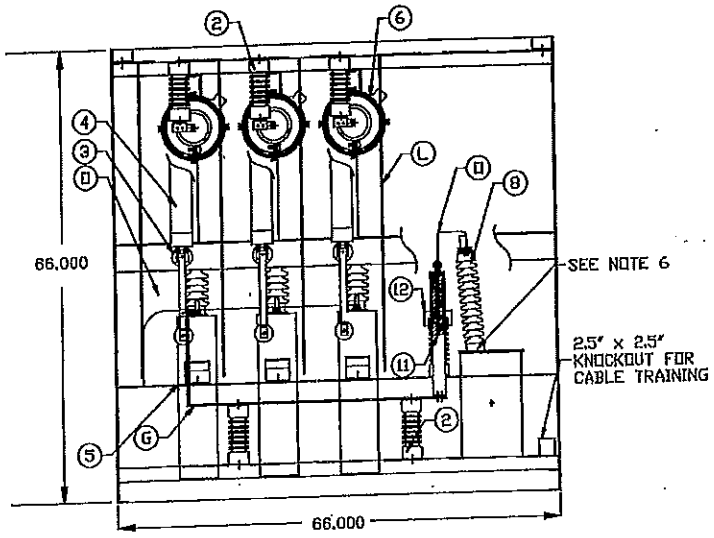
DRAWN BY: J. SHOUP

DATE: 07/26/01

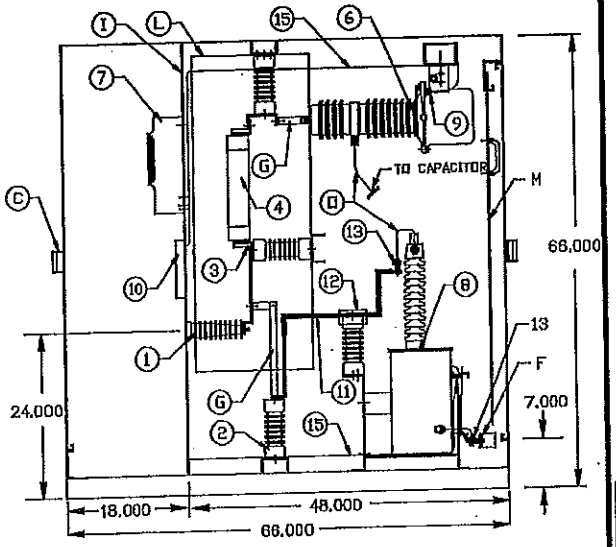
APPROVED: J.J. MCEVOY
SUPERVISOR, OH/UG PRODUCT SUPPORT SERVICES

NO SCALE

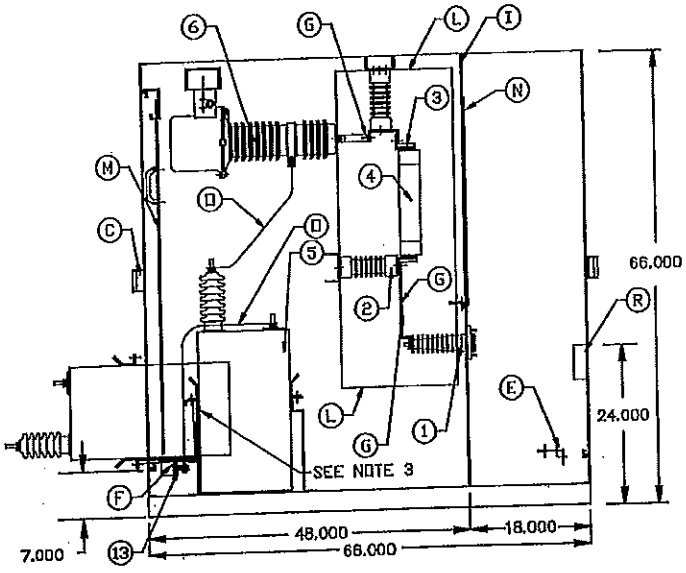
J–4.0.8	SHALLBETTER, 25KV, 125KV BIL, 1200KVAR DEAD–FRONT, PAD–MOUNT, CAPACITOR BANK	J–4.0.8



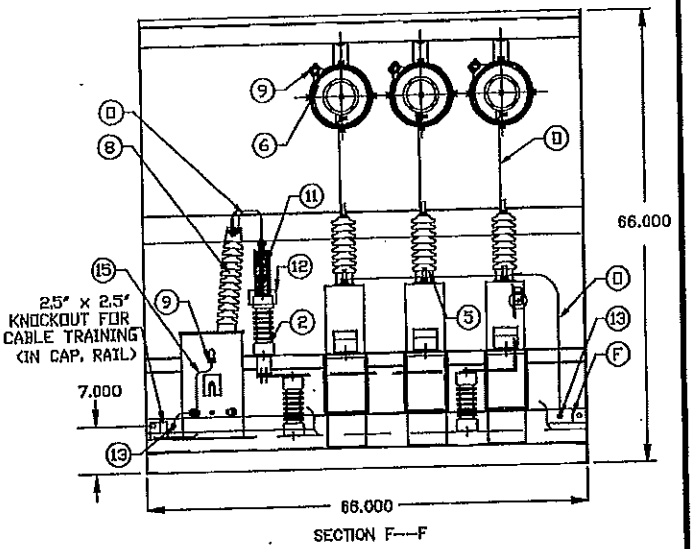
SECTION C—C



SECTION D—D



SECTION E—E



SECTION F—F

J

FPL

OH & UG DISTRIBUTION SYSTEM STANDARDS

ORIGINATOR: LFV

DRAWN BY: J. SHOUP

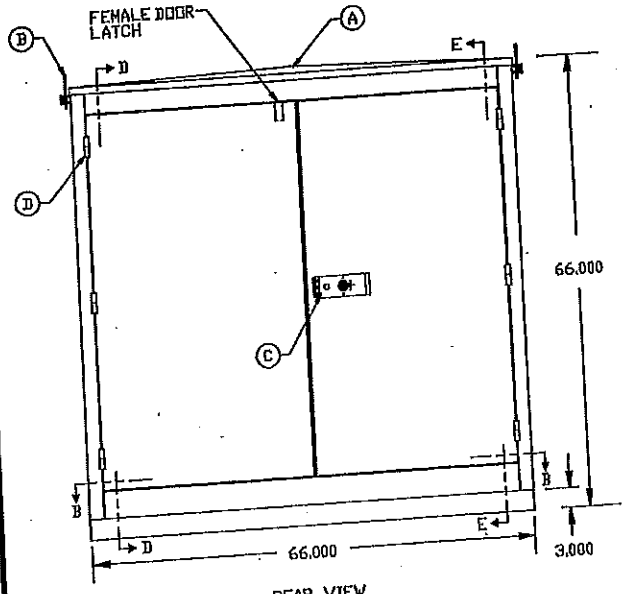
DATE: 07/26/01 APPROVED: J.J. MCEVOY SUPERVISOR, OH/UG PRODUCT

NO SCALE

J-4.0.9

SHALLBETTER, 25KV, 125KV BIL, 1200KVAR, DEAD-FRONT, PAD-MOUNT, CAPACITOR BANK

J-4.0.9



REAR VIEW

SYSTEM RATING

NOMINAL SYSTEM VOLTAGE	23/13.28 kV GROUNDED WYE
MAXIMUM DESIGN VOLTAGE	25 kV
BASIC INSULATION LEVEL (BIL)	125 kV
CONTINUOUS CURRENT	200 AMP
FUSE TYPE	NX CURRENT-LIMITING
FUSE RATING, MAXIMUM	200E AMP
FUSE INTERRUPTING, SYMMETRICAL	9,400 AMP
KVAR	1200
PHASE	THREE
HERTZ	60 HZ.
WEIGHT	2,150 Lbs.
CATALOG NUMBER	SCBD-P332612000SW-GA-FPL

CONSTRUCTION NOTES

•NEMA TYPE 3R, 11 GAUGE GALVANNEAL, WELDED CONSTRUCTION, WELDS AND SEAMS GROUND SMOOTH.

•FINISH COAT IS MUNSELL No. 7GY 3.29/1.5, GREEN. PAINT FINISH MEETS OR EXCEEDS A.N.S.I. C57.12.28-1988 PAINT SPECIFICATIONS FOR PAD-MOUNT EQUIPMENT ENCLOSURE INTEGRITY.

•ENCLOSURE TO HAVE A 3", 304L STAINLESS STEEL FORMED CHANNEL BASE.

FEATURES

AACROSS KINKED ROOF FOR ADDED STRENGTH AND PREVENTING STANDING MOISTURE.

BREMOVABLE LIFTING PLATES WITH BLIND MOUNTING HOLES.

CSBI'S "SENTRY LATCH" 3-POINT POSITIVE LATCH MECHANISM, SECURED AND OPERATED BY 1/2-TURN, CAPTIVE, RECESSED HEX-HEAD BOLT AND SHIELDED PADLOCK SHACKLE.

DHINGE. LOOSE JOINT PIN, 304L STAINLESS STEEL, SOLID WELDED TO DOOR AND CABINET, ALLOWS DOORS TO BE REMOVED IN THE OPEN POSITION ONLY.

EFRONT GROUND PADS. 304L STAINLESS STEEL, WITH 1/2"-13 UNC THREADED HOLE FOR CUSTOMER SUPPLIED GROUND CONNECTORS. PADS ARE UNPAINTED AND WELDED TO ENCLOSURE.

FREAR GROUND BUS. FULL LENGTH, CONTINUOUS, SILVER PLATED COPPER. SUPPORTED WITH UNPAINTED, STAINLESS STEEL GROUND PADS WELDED TO ENCLOSURE.

GBUS BAR. SILVER PLATED COPPER, FREE OF SHARP EDGES OR BURRS.

HMANUFACTURE'S DATA PLATE. CONTAINS INFORMATION LISTED UNDER SYSTEM RATING, NON-CORROSIVE, PERMANENTLY STAMPED AND ATTACHED TO ENCLOSURE.

IEQUIPMENT WALL. FULL HEIGHT.

JDOOR STAYS (RETAINED) HOLD DOORS IN 90°, 110°, OR 140° OPEN POSITION.

KPARKING STANDS. 14 GAUGE 304L STAINLESS STEEL, WELDED TO EQUIPMENT WALL.

LBARRIERS. 3/16" GPO-3, GLASS REINFORCED POLYESTER.

MCOMPARTMENT BARRIER. 1/4" LEXAN, CLEAR POLYCARBONATE, REMOVABLE, WITH NON-CONDUCTIVE HANDLES.

NFUSE ACCESS BARRIER. 1/4" CLEAR POLYCARBONATE (LEXAN), SECURED WITH 3/4 TURN FASTENERS.

OCOPPER ROD, HARDDRAWN 3/8" DIA.

PSCREENED, TAMPER PROOF LOUVERS.

RSPARE FUSE POCKET

SPECIAL NOTES FOR MANUFACTURER ONLY:

1NO SIGNS OR LABELS TO BE ON ANY EXTERIOR PART OR INTERIOR DOORS OF ENCLOSURE, PER FP&L SPEC. (SBI DATA PLATE WILL BE ON INTERIOR OF FRONT MALE DOOR).

2NO HIGH VOLTAGE CABLE TO BE USED ON ANY PART OF THIS GEAR. ALL HV ELECTRICAL CONNECTIONS TO BE MADE WITH HARDDRAWN BUS OR ROD.

3THIS ENCLOSURE UTILIZES A TILT-OUT CAPACITOR RACK. CAPACITORS TO BE ABLE TO INDIVIDUALLY TILTED OUT AT 90°.

4ENCLOSURE BOTTOM CHANNEL TO BE A 3" FORMED 304L STAINLESS STEEL CHANNEL.

5DOOR LATCH HAS A HEX HEAD BOLT.

6POTENTIAL TRANSFORMER IS INTERNALLY FUSED.

7THESE NOTES ARE FOR MANUFACTURER ONLY.

J

F P L

OH & UG DISTRIBUTION SYSTEM STANDARDS

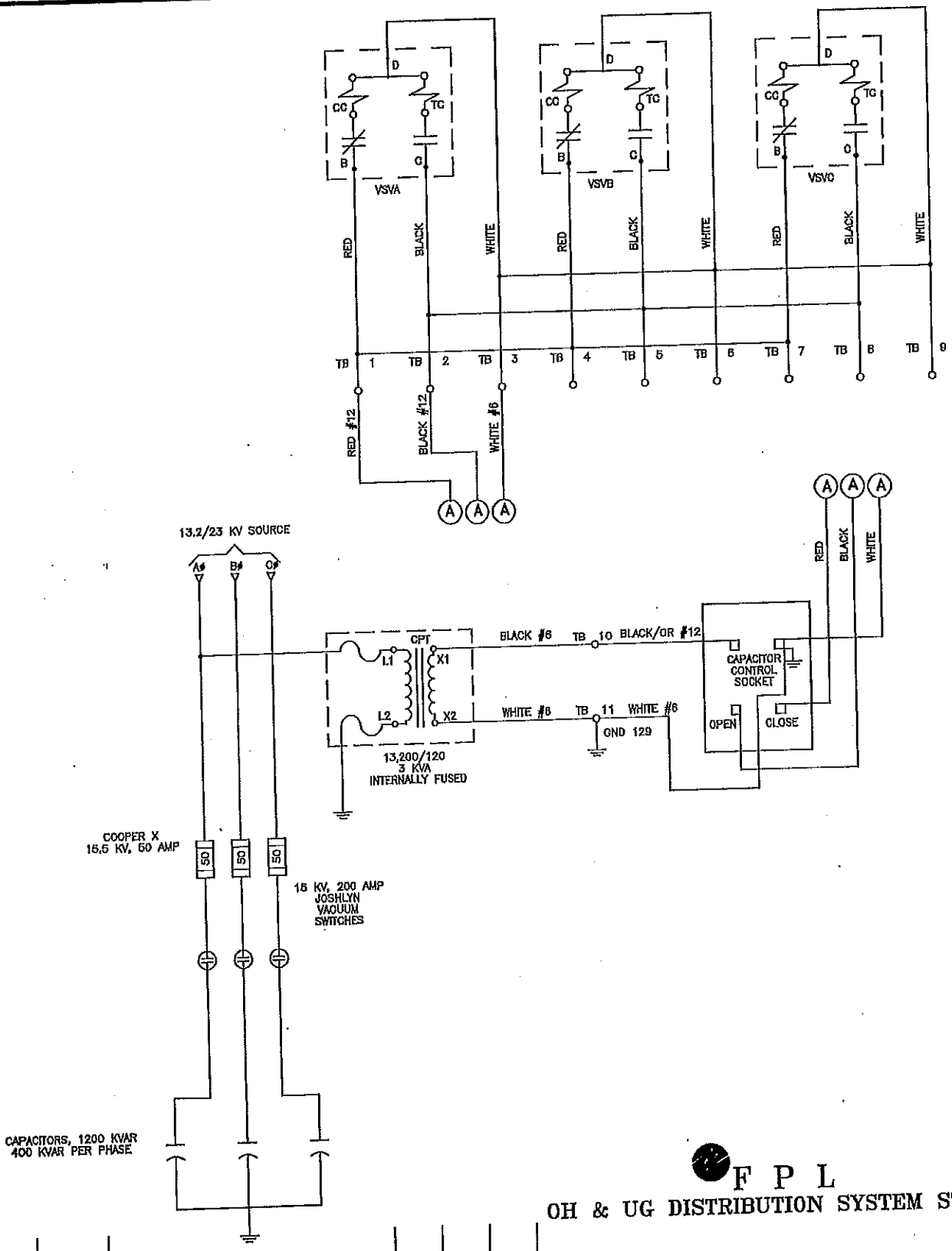
ORIGINATOR: LFV

DRAWN BY: J. SHOUP

DATE: 07/26/01 APPROVED: J.J. MCEVOY SUPERVISOR, OH/UG PRODUCT

NO SCALE

J-4.0.10	SHALLBETTER 25 KV, 1200 KVAR PAD-MOUNTED CAPACITOR BANK	J-4.0.10



J

F P L

OH & UG DISTRIBUTION SYSTEM STANDARDS

ORIGINATOR: LFV

DRAWN BY: J. SHOUP

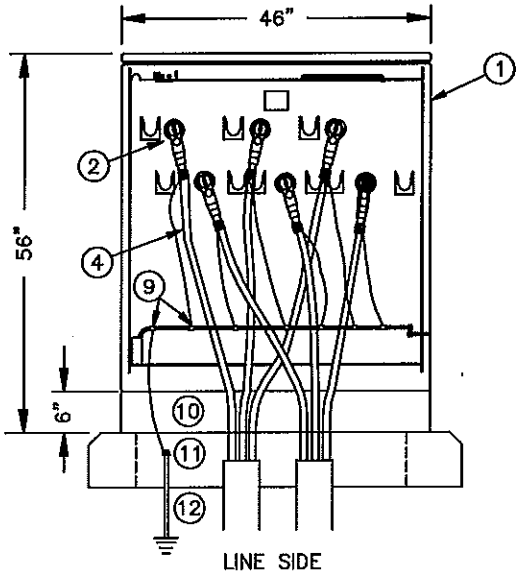
DATE: 07/26/01 APPROVED: J.J. MCEVOY

SUPERVISOR, OH/UG PRODUCT

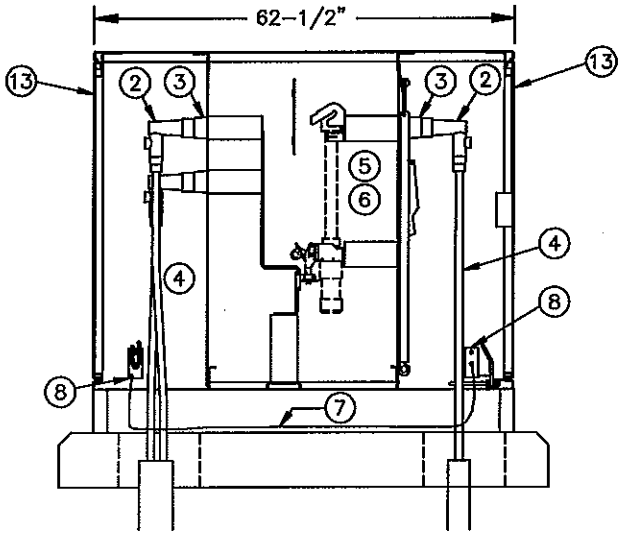
NO SCALE

INSTALLATION OF S&C TYPE PME-4 DEAD FRONT THREE PHASE PAD MOUNTED FUSE CABINET FOR 13 AND 23 KV MAXIMUM FUSE 200 AMP (NEW DESIGN-SIX BUSHINGS ON LINE SIDE)

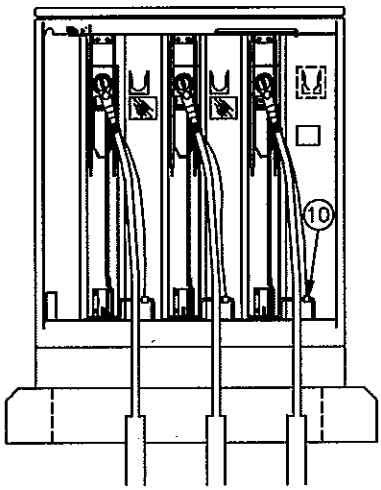
C-39.0.1



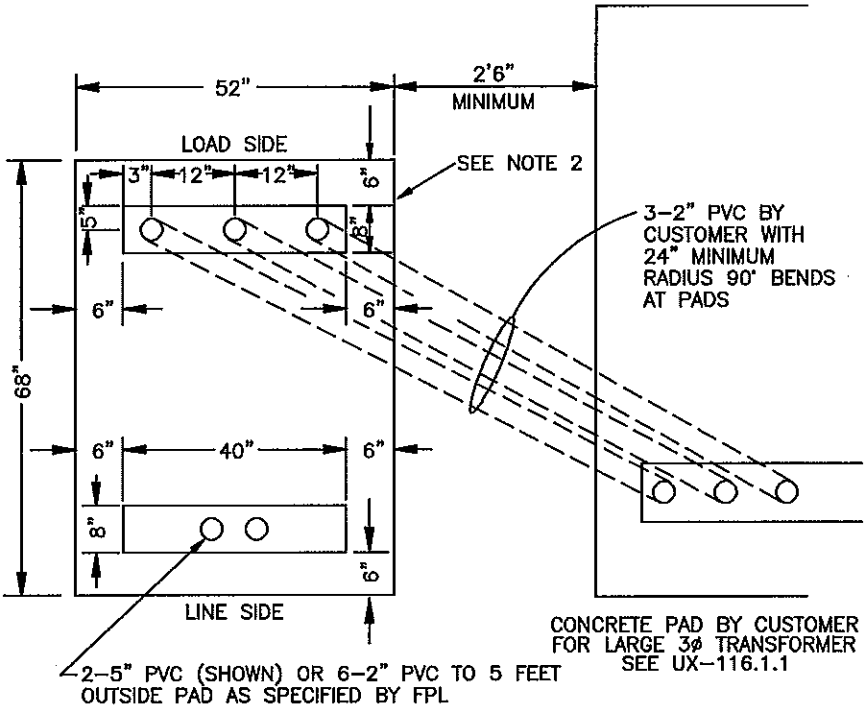
LINE SIDE

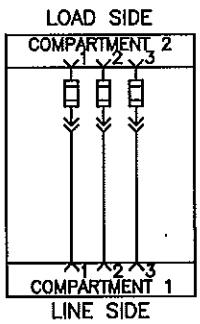


SIDE VIEW



LOAD SIDE





WEIGHT:1200 LBS.

SEE C-39.0.2 FOR MATERIAL LIST AND NOTES

FPL

OH & UG DISTRIBUTION SYSTEM STANDARDS

NO.	DATE	REVISION	ORIG.	DRAWN	APPR.
2	9/8/03	UPDATE NOTES	CEA	ELS	JJM
1	1/31/03	UPDATE DRAWING TO NEW SIX BUSHING ON LINE SIDE DESIGN	CEA	JES	JJM

ORIGINATOR: PMG DRAWN BY: RAS

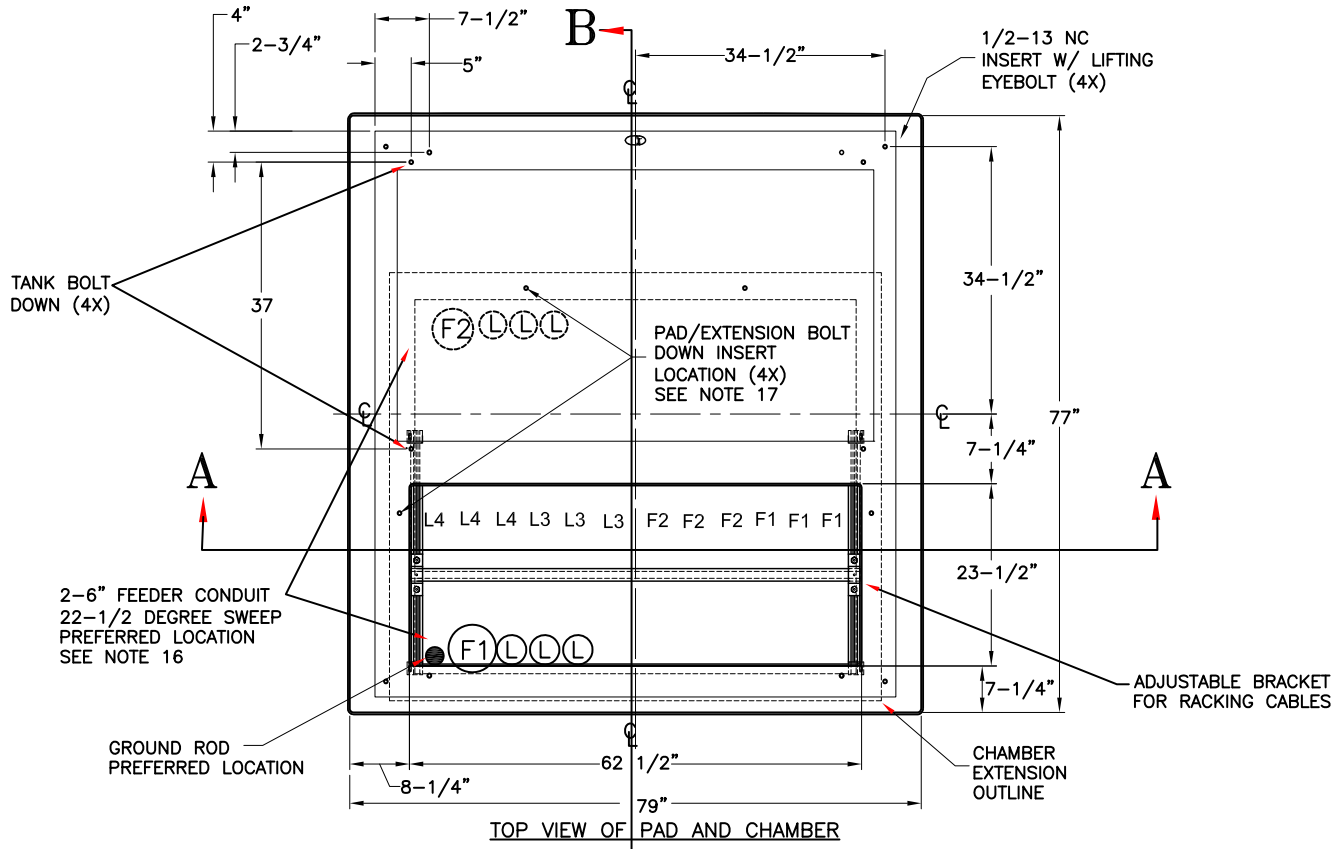
DATE: 8/09/96 APPROVED: J.J. MCEVOY NO SCALE

SUPERVISOR, OH/UG PRODUCT SUPPORT SERVICES

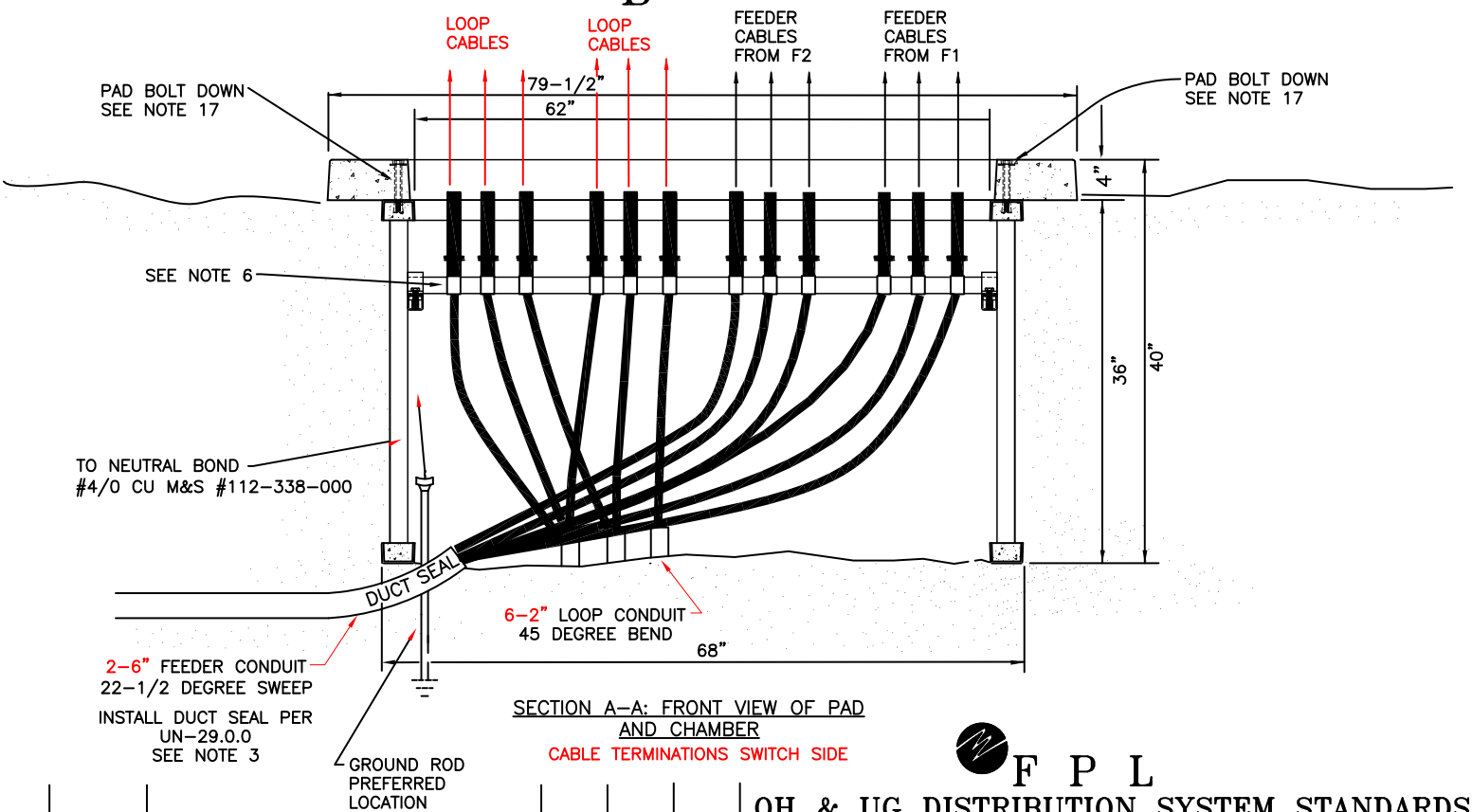
TYPICAL INSTALLATION OF 25KV S&C VISTA THREE PHASE SWITCH FOR USE IN 13KV OR 23KV BELOW GRADE AND PAD MOUNTED APPLICATIONS

C-46.0.0

TYPICAL BUSHING POSITION ON VISTA SWITCH MODEL 422 SHOWN
F=FEEDER L=LATERAL



TOP VIEW OF PAD AND CHAMBER



SECTION A-A: FRONT VIEW OF PAD AND CHAMBER
CABLE TERMINATIONS SWITCH SIDE

FPL

OH & UG DISTRIBUTION SYSTEM STANDARDS

ORIGINATOR: A. PANTOURIS
DRAWN BY: F. SCHILLING
DATE: 5/29/09
APPROVED: ARI LIMA
LEAD SUPERVISOR, UG SERVICES

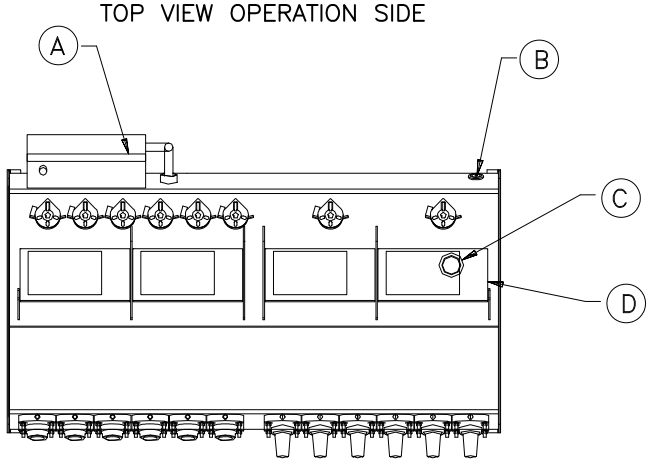
NO.	DATE	REVISION	ORIG.	DRAWN	APPR.
1	11/14/12	LOOP CABLE IDENTIFICATION	JGV	ELS	WM

TYPICAL INSTALLATION OF 25KV S&C VISTA THREE PHASE SWITCH FOR USE IN 13KV OR 23KV BELOW GRADE AND PAD MOUNTED APPLICATIONS

C-46.0.1

TYPICAL VISTA SWITCH MODEL 422 SHOWN

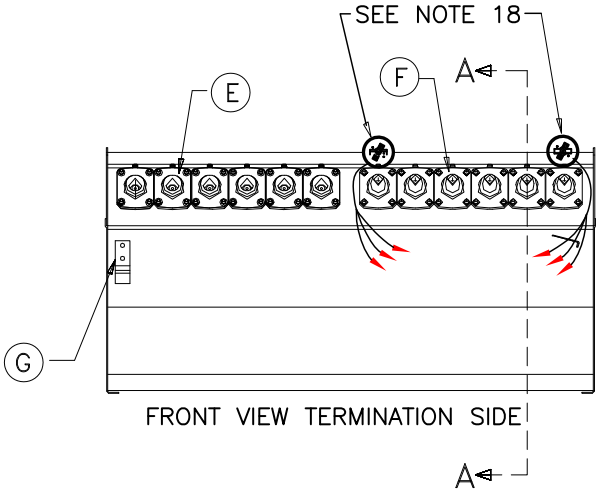
TOP VIEW OPERATION SIDE



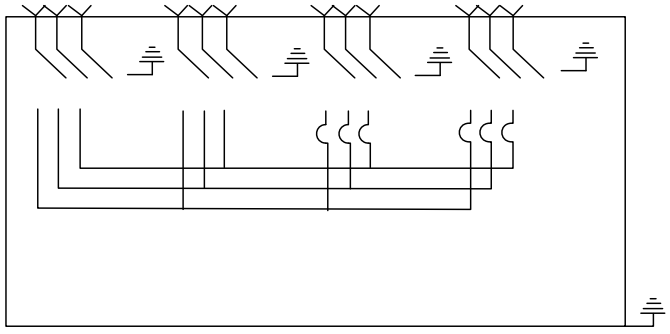
TOP VIEW TERMINATION SIDE

FEATURES IN THIS ASSEMBLY

A. OVERCURRENT CONTROL
B. GAS FILL PORT
C. PRESSURE GAUGE
D. WINDOW FOR VIEWING OPEN GAP AND GROUNDED POSITION OF LOAD-INTERRUPTER SWITCH OR FAULT INTERRUPTER
E. 200-AMPERE BUSHING-WELLS FOR FAULT-INTERRUPTER
F. 600-AMPERE BUSHINGS FOR LOAD-INTERRUPTER SWITCH
G. TWO-HOLE GROUND PAD
H. 600-AMPERE THREE-POLE LOAD-INTERRUPTER SWITCH WITH GROUND POSITION
I. OPERATING MECHANISM
J. MANUAL OPERATING HANDLE
K. NAMEPLATE
L. SUBMERSIBLE SF6-INSULATED TANK
M. 600-AMPERE ALUMINUM BUS
N. BASE BRACKET



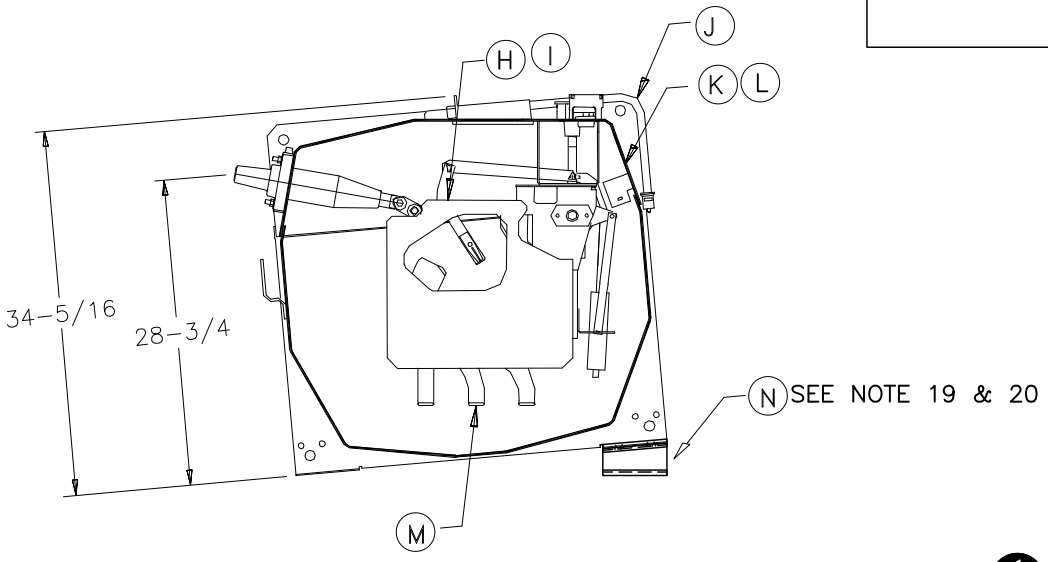
FRONT VIEW TERMINATION SIDE



TERMINATION SIDE

OPERATION SIDE

CONNECTION DIAGRAM



SECTION A-A: FEEDER SWITCH

F P L

OH & UG DISTRIBUTION SYSTEM STANDARDS

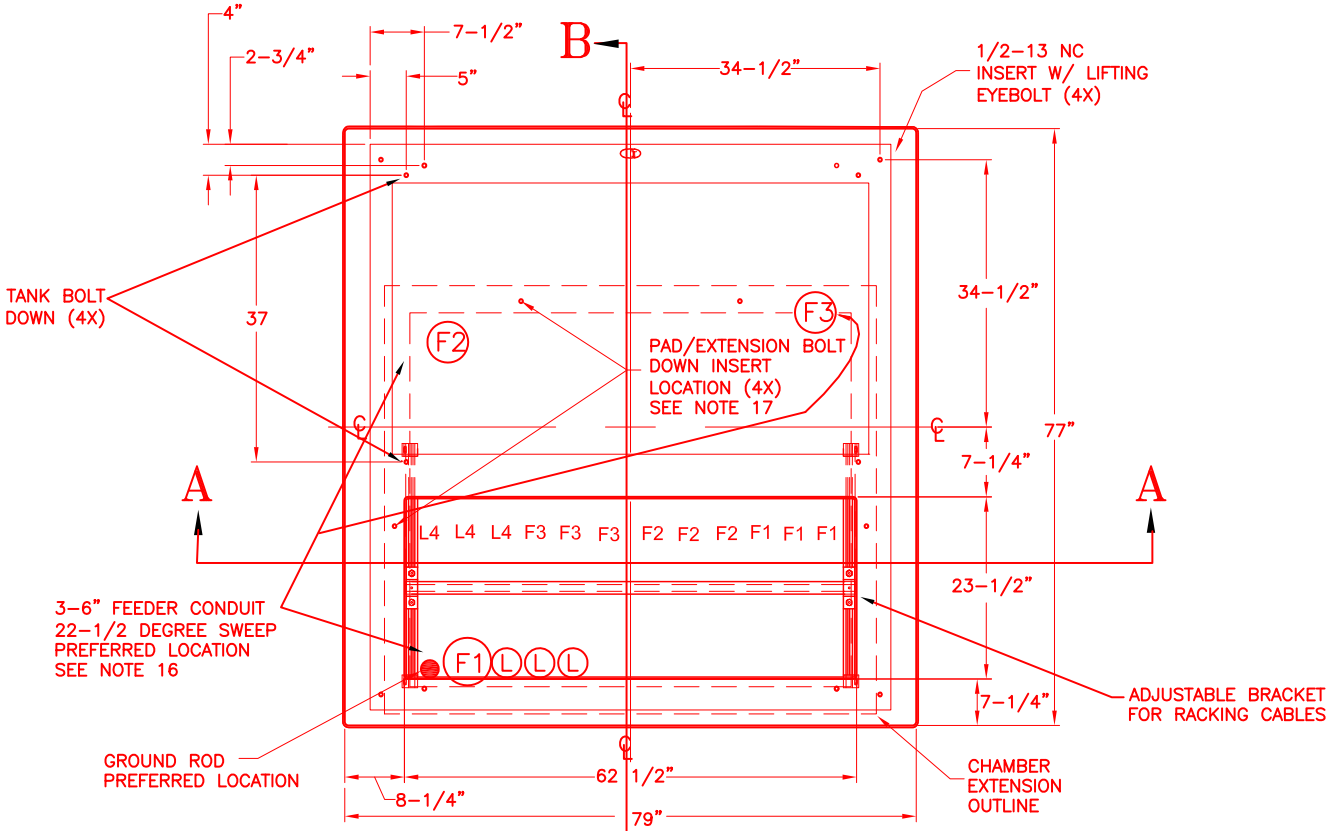
ORIGINATOR: A. PANTOURIS
DRAWN BY: F. SCHILLING
DATE: 7/27/09
APPROVED: ARI LIMA
LEAD SUPERVISOR, UG SERVICES

NO.	DATE	REVISION	ORIG.	DRAWN	APPR.
1	11/14/12	CHANGE C-46.0.2 TO C-46.0.1	JGV	ELS	WM

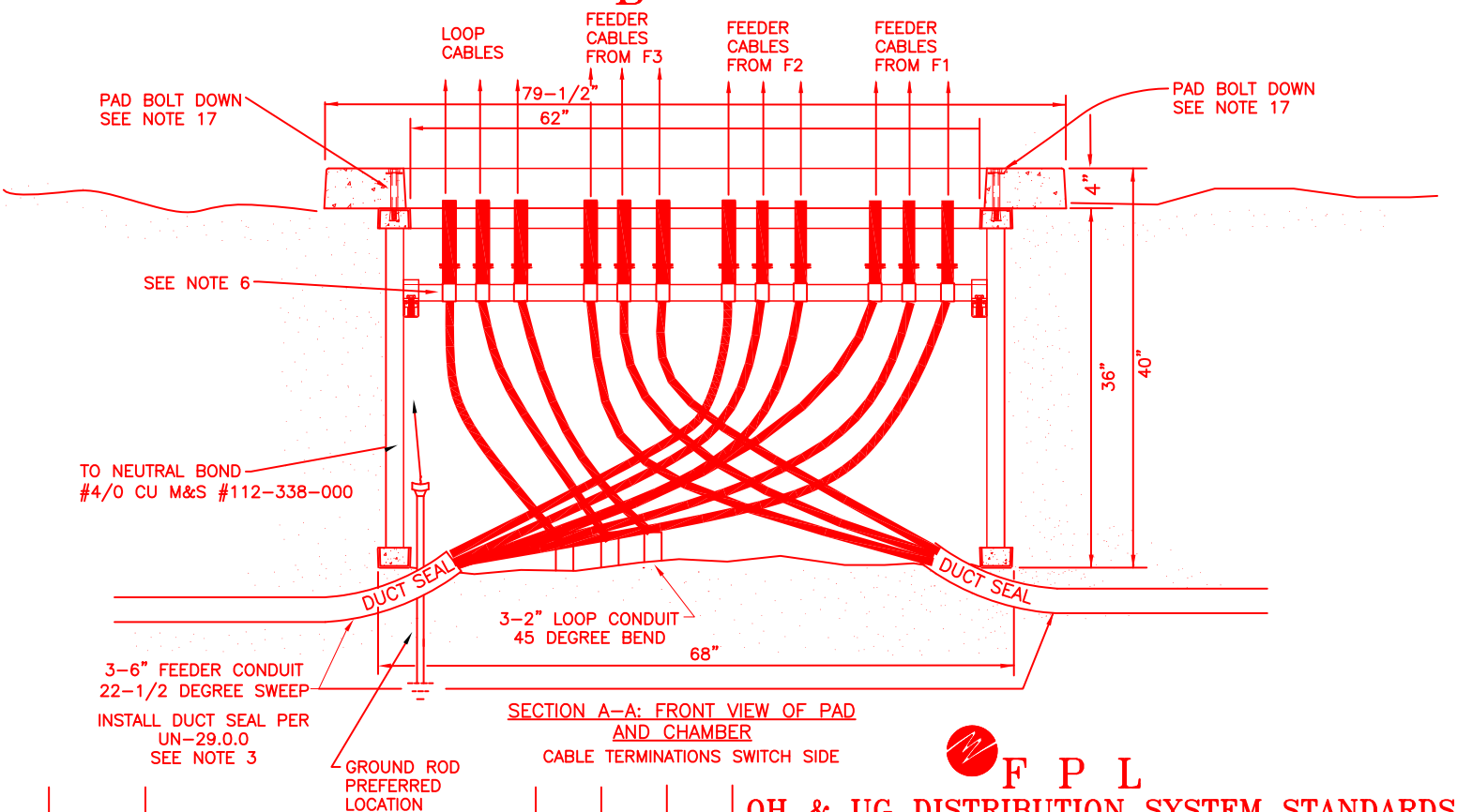
TYPICAL INSTALLATION OF 25KV S&C VISTA THREE PHASE SWITCH FOR USE IN 13KV OR 23KV BELOW GRADE AND PAD MOUNTED APPLICATIONS

C-46.0.2

TYPICAL BUSHING POSITION ON VISTA SWITCH MODEL 431 SHOWN
F=FEEDER L=LATERAL



TOP VIEW OF PAD AND CHAMBER



SECTION A-A: FRONT VIEW OF PAD AND CHAMBER
CABLE TERMINATIONS SWITCH SIDE

FPL

OH & UG DISTRIBUTION SYSTEM STANDARDS

ORIGINATOR: J. VALDES DRAWN BY: E. SCHILLING

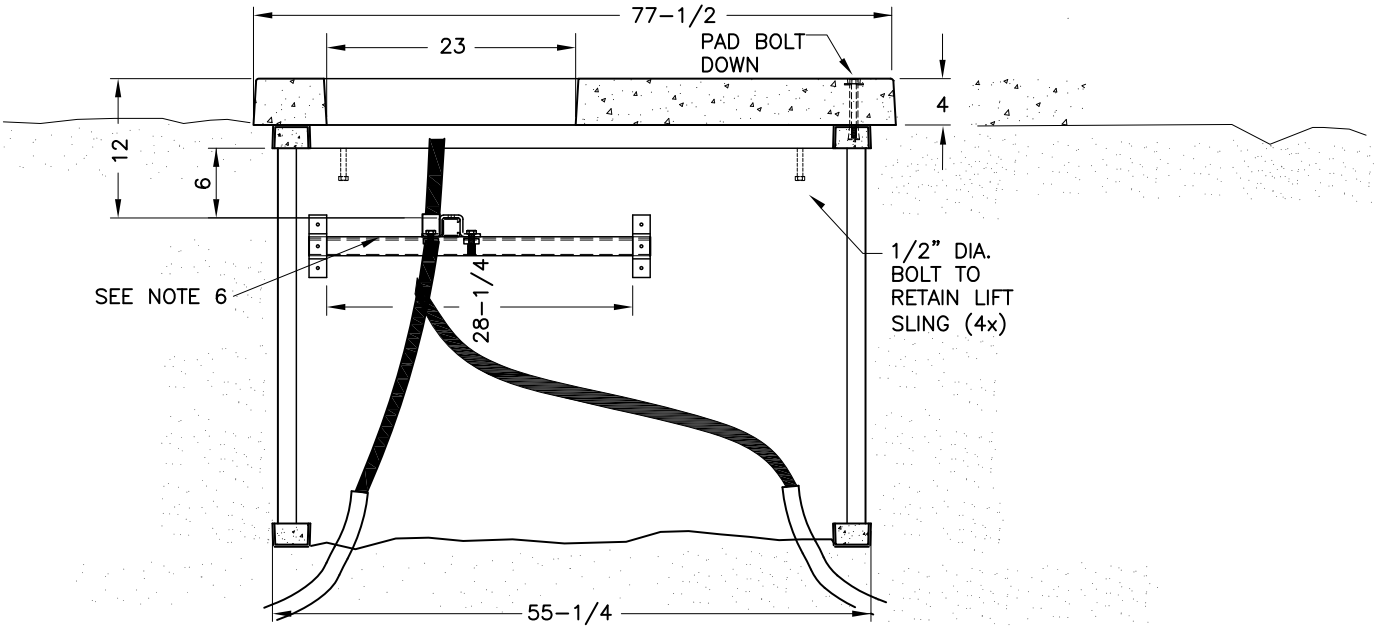
DATE: 3/16/2012 APPROVED: WILLIAM MONZON NO SCALE

LEAD SUPERVISOR, UG SERVICES

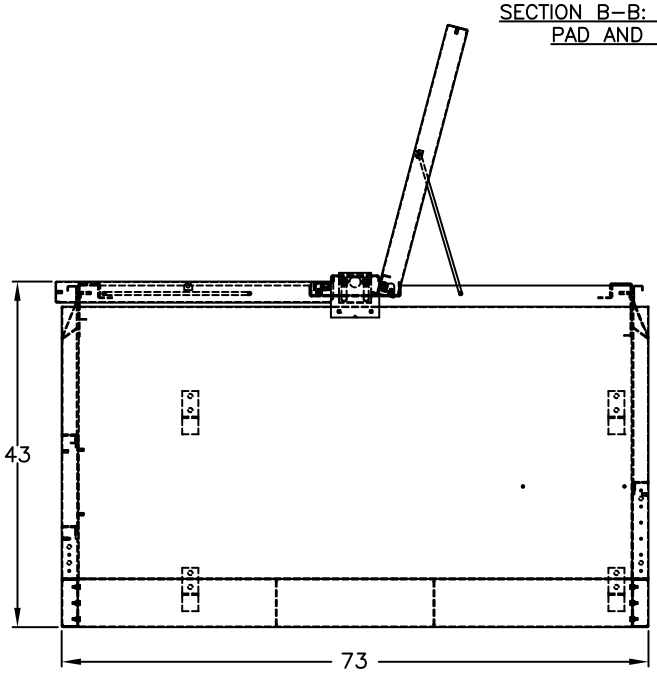
NO.	DATE	REVISION	ORIG.	DRAWN	APPR.
1	11/14/12	NEW PAGE OF C-46	JGV	ELS	WM

TYPICAL INSTALLATION OF 25KV S&C VISTA THREE PHASE SWITCH FOR USE IN 13KV OR 23KV BELOW GRADE AND PAD MOUNTED APPLICATIONS

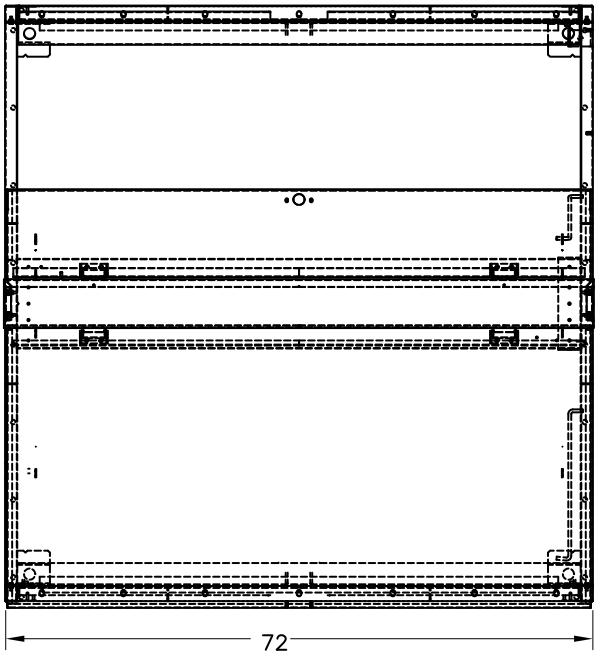
C-46.0.3



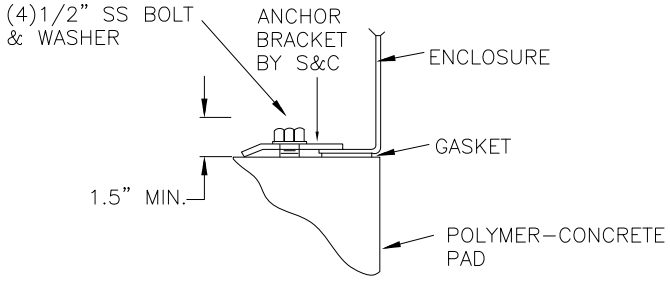
SECTION B-B: SIDE VIEW OF PAD AND CHAMBER



SWITCH ENCLOSURE SIDE VIEW



SWITCH ENCLOSURE TOP VIEW



ENCLOSURE ANCHOR DETAIL

F P L

OH & UG DISTRIBUTION SYSTEM STANDARDS

ORIGINATOR: A. PANTOURIS

DRAWN BY: F. SCHILLING

DATE: 7/27/09

APPROVED: ARI LIMA
LEAD SUPERVISOR, UG SERVICES

NO.	DATE	REVISION	ORIG.	DRAWN	APPR.
1	11/14/12	CHANGE C-46.0.1 TO C-46.0.3	JGV	ELS	WM

TYPICAL INSTALLATION OF 25KV S&C VISTA THREE PHASE SWITCH FOR USE IN 13KV OR 23KV BELOW GRADE AND PAD MOUNTED APPLICATIONS

C-46.0.4

MATERIAL LIST

ITEM	DESCRIPTION	QUANTITY	M&S NUMBER	WMS CU
1	VISTA 422 (4 "WAYS', 2-THREE PHASE FEEDER GANG SWITCHES AND TWO-THREE PHASE, INDIVIDUALLY PROTECTED LOAD TAPS, WITH A STAINLESS STEEL ENCLOSURE	1	279-209-050	SW-VISTA-422-PAD
	VISTA 431 (4 "WAYS', 3-THREE PHASE FEEDER GANG SWITCHES AND ONE-THREE PHASE, INDIVIDUALLY PROTECTED LOAD TAPS, WITH A STAINLESS STEEL ENCLOSURE		279-211-050	SW-VISTA-431-PAD
	VISTA 440 (4 "WAYS", 4-THREE PHASE FEEDER GANG SWITCHES AND NO PROTECTED TAPS, WITH A STAINLESS STEEL ENCLOSURE		279-210-050	SW-VISTA-440-PAD
2	PAD AND CHAMBER FOR PM DF VISTA SWITCH (77"X 79"X 40" DEEP)	1	162-690-790	PD-SW-W/CC-VISTA
3	600 AMP T-BODY ELBOWS	VARIES	163-639-101	TM-PDF-600-1K
4	200 AMP BUSHINGS (25KV)	VARIES	163-864-001	SW-PD-BSH
5	200 AMP LOADBREAK ELBOWS (25KV)	VARIES	163-502-001	TM-PDF-1/0
6	PROTECTIVE CAP (15KV ONLY)	VARIES	163-022-000	TM-PDF-GC
7	ELBOW SURGE ARRESTERS (25KV ONLY)	VARIES	334-015-005	TM-PDF-LA
8	GROUND ROD CONNECTOR, CLAMP TYPE	1	120-036-106	DG-CLP-5/8
9	GROUND RODS, AS NEEDED	VARIES	130-614-005	DG-PKG-5/8
10	GROUND ROD COUPLINGS	VARIES	130-405-104	DG-C-5/8
11	#4 COPPER WIRE, SDB	6	112-309-000	SW-PMD-GC (Qty - 1)
12	#4/0 CU CABLE, 600V	27	110-101-169	
13	#4/0 CABLE CONNECTORS	6	120-871-005	
14	COPPER TO COPPER BOLTED CONNECTORS	22	102-800-002	
15	STANDARD LOCKS	2	546-246-011	SW-PMD-LOCK
16	CABLE MOUNTING BRACKET, STAINLESS	12	160-310-000	SW-VISTA-MT-HDW
17	BOLTS, SS, 1/2"X 1-1/2" FOR CABLE BRACKET		140-515-557	
18	SPRING, NUTS, SS, FOR 1/2" BOLT FOR CABLE BRACKET		161-463-000	
19	LOCK WASHER, 1/2", FOR CABLE BRACKET		145-294-010	
20	800 AMP FAULT INDICATOR	VARIES	163-297-009	P-CL-FCI-800
21	ROTATABLE FEEDTHRU DEVICE, 200AMP, 25KV	6	163-250-002	SW-VISTA-422-PAD
		3	163-250-002	SW-VISTA-431-PAD

NOTES:

1. THE INTERRUPTERS MUST BE PRE-SET BY THE ERC PRIOR TO BEING ISSUED TO THE JOB. CALL 863-4921 OR 863-4900 TO MAKE ARRANGEMENTS.
2. THE PAD MOUNTED VISTA SWITCH MAY BE INSTALLED IN AREAS SUBJECT TO FLOODING.
3. SEAL THE INCOMING DUCTS PER UN-29.0.0.
4. THE SWITCH AND ITS ENCLOSURE MUST BE BOLTED TO THE PAD.
5. REFER TO DCS UH-41.0.1 FOR PROPER INSTALLATION OF 600 AMP T-BODY ELBOWS.
6. BOTH THE FEEDER CABLES AND LOOP SIDE CABLES ARE TO BE RACKED THROUGH THE CABLE SUPPORT BRACKETS INSTALLED ON THE UNISTRUT IN THE CABLE CHAMBER.
7. CABLES MUST NOT BE IN CONTACT WITH THE CABLE CHAMBER OR PAD TOP.
8. ALLOW SUFFICIENT LENGTH OF CONCENTRIC NEUTRAL TO REACH GROUNDING BARS AND PERMIT THE FREE MOVEMENT OF THE ELBOWS.
9. MAKE CERTAIN OF CABLES LOCATIONS BEFORE DRIVING GROUND RODS.
10. APPLY CAULKING COMPOUND TO THE SEAM BETWEEN THE ENCLOSURE AND THE PAD TOP.
11. DUST CAPS USED FOR COVERING BUSHINGS AND BUSHING WELLS DURING SHIPMENT MUST BE REMOVED PRIOR TO ENERGIZING THE SWITCH.
12. UNUSED LOAD TAPS MUST HAVE BUSHINGS AND PROTECTIVE CAPS INSTALLED.
13. UNUSED FEEDER POSITIONS MUST HAVE 600 AMP PROTECTIVE CAPS INSTALLED (M&S #163-645-007).
14. AFTER THE SWITCH ENCLOSURE HAS BEEN INSTALLED, THE LIFTING BRACKETS MUST BE REMOVED AND STORED INSIDE THE ENCLOSURE FOR FUTURE USE.
15. ENSURE THAT THE WARNING LABEL (M&S #548-560-104) IS INSTALLED ON BOTH THE CABLE COMPARTMENT AND THE OPERATOR SIDES OF THE ENCLOSURE.
16. INSTALL FEEDER CONDUITS AS SHOWN IN C-46.0.0 AND C-46.0.2 ON LEFT AND/OR REAR SIDE OF CABLE CHAMBER TO ALLOW FOR BENDING RADIUS OF CABLE.
17. BOLTS FOR SECURING PAD TO CHAMBER ARE INCLUDED FROM VENDOR. THERE ARE 4 BOLTING LOCATIONS AS SHOWN ON DRAWINGS.
18. INSTALL 800 AMP 3ø FAULT INDICATORS ON EACH SET OF FEEDER CABLES. SEE UV-14.0.0, UV-14.0.1, & UV-14.0.2.
19. FOR PAD MOUNTED APPLICATIONS, THE BASE BRACKETS ("FEET"). "N" AS SHOWN IN C-46.0.1 ARE REQUIRED.
20. THE BASE BRACKETS ARE NOT REQUIRED FOR BELOW GRADE ("UNDER-COVER") APPLICATIONS, BUT SHOULD BE KEPT WITH THE SWITCH IN THE POSSIBLE EVENT OF FUTURE RE-USE IN A PAD MOUNTED APPLICATION.
21. INSTALL ROTATABLE FEED-THRU DEVICE ON THE LOAD SIDE OF THE VISTA SWITCH (M&S #163-250-002)

NO.	DATE	REVISION	ORIG.	DRAWN	APPR.
4	4/4/19	UPDATE LINE 3	AXR	ELS	RDH
3	2/18/19	UPDATE TABLE	AXR	ELS	RDH
2	11/14/12	UPDATE NOTES 16 AND 19 ADD NOTE 21 AND ITEM 21	JGV	ELS	WM
1	9/2/10	UPDATE ITEM 16	GAP	ELS	BXN

F P L

OH & UG DISTRIBUTION SYSTEM STANDARDS

ORIGINATOR: A. PANTOURIS

DRAWN BY: E. SCHILLING

DATE: 9/1/03

APPROVED: ARI LIMA
LEAD SUPERVISOR, UG SERVICES

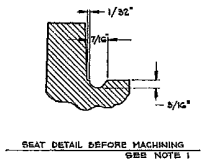
CAM #21-0191
Exhibit 1
Page 52 of 56

NO SCALE

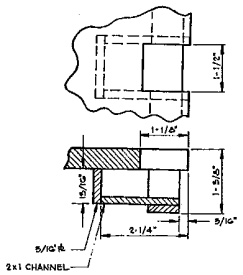
UX-232.0.0

AIRCRAFT MANHOLE FRAME AND COVER
M&S #161-041-007

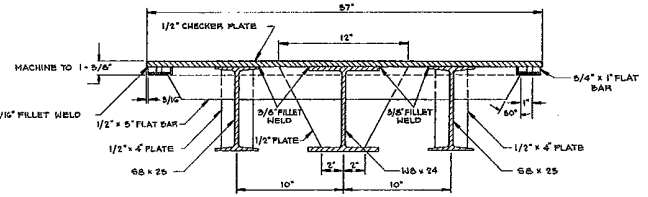
UX-232.0.0



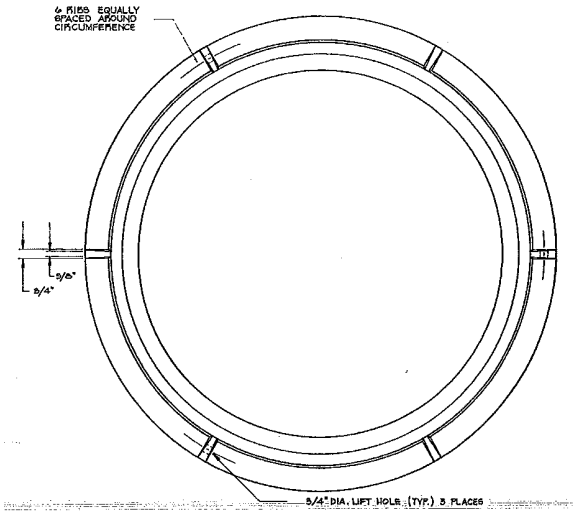
SEAT DETAIL BEFORE MACHINING
SEE NOTE 1

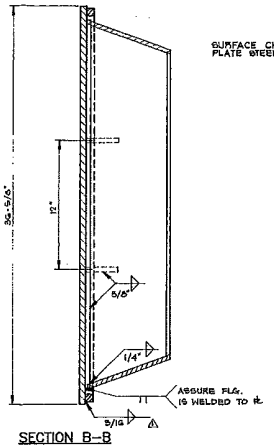


PICKHOLE DETAIL

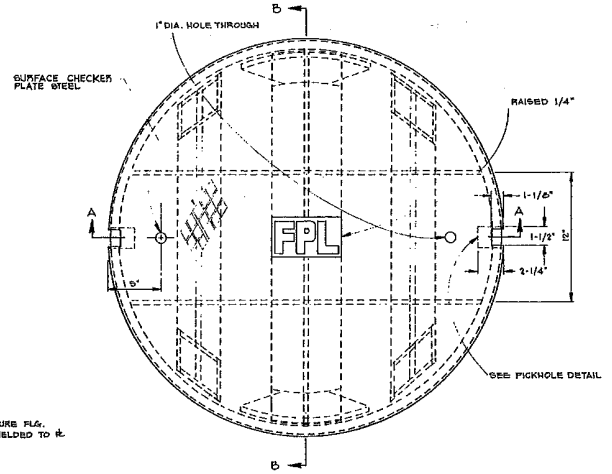


SECTION A-A

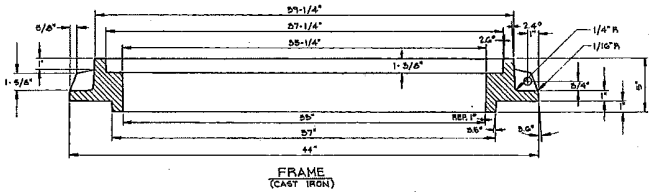




SECTION B-B



COVER
(HOT DIP GALVANIZED STEEL)



FRAME
(CAST IRON)

NOTES:

1. BEARING SURFACES OF COVER AND OF FRAME WHERE IT CONTACTS MUST BE GROUND TRUE TO PREVENT RATTLING OF COVER.
2. 3" HIGH FPL LETTERS IN CENTER TO BE BEAD WELDED ON GROUND FLUSH CHECKER PLATE.
3. PICKHOLE SHALL BE 1-8/16" DEEP.
4. WELDS SHALL BE CONTINUOUS ALL AROUND EXCEPT AS NOTED.
5. SPECIFICATIONS FOR FRAME CASTING:
   CASTINGS SHALL BE OF UNIFORM QUALITY, FREE FROM BLOWHOLES, HARD SPOTS, SHRINKAGE DISTORTION, CRACKS, OR OTHER DEFECTS. THEY SHALL BE SMOOTH, WELL CLEANED BY SHOT BLASTING AND COATED WITH A COAL TAR PITCH VARNISH WHICH WILL RESULT IN A SMOOTH COATING, TOUGH AND TENACIOUS WHEN COLD, NOT TACKY WHEN HOT.
   THE MATERIAL USED IN THE MANUFACTURE OF THESE CASTINGS SHALL BE ASTM CLASS 30 GRAY IRON, MINIMUM TENSILE STRENGTH 30,000 LBS. PER SQUARE INCH, AND SHALL CONFORM WITH ASTM SPECIFICATION A-48-64.
   ALL CASTINGS SHALL BE MANUFACTURED TRUE TO PATTERN: COVERS & FRAMES SHALL FIT TOGETHER IN A SATISFACTORY MANNER. ALL BEARING SURFACES SHALL BE MACHINED TO PREVENT ROCKING & RATTLING UNDER TRAFFIC.
6. APPROX. TOTAL WEIGHT 750 LBS.
7. REFER TO UX DRAWING UX-225.0.0, FOR SPECIAL (AIRCRAFT) 2-WAY 7'-8" MANHOLE, M&S #162-237-002.
8. MANHOLE AND COVER RATED AT 280,000 LBS.

NO.	DATE	REVISION	ORIG.	DR.	APP.
2	1/12/16	UPDATED NOTES	ARR	ELS	RDH
1	8/13/14	ADDED NOTES	ARR	ELS	RDH

FLORIDA POWER & LIGHT COMPANY

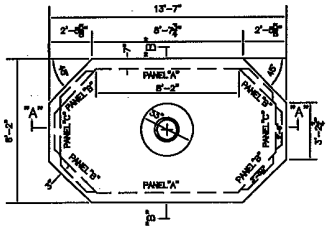
DRAWN: EJ | DATE: 7/15/86 | APPROVED: J.J McEVOY

NO SCALE | SUPERVISOR, OH/UG PRODUCT SUPPORT SERVICES

UX-223.0.0

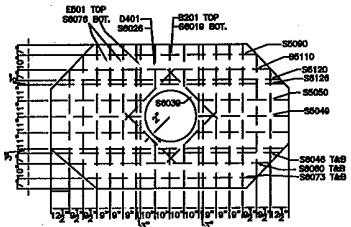
MANHOLE, 2 WAY, 8'2" PANEL
M&S #162-236-006

UX-223.0.0

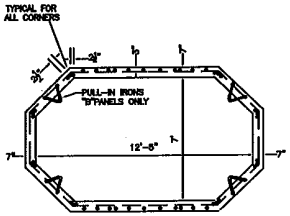


PLAN

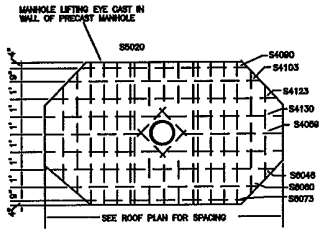
T&B= TOP & BOTTOM



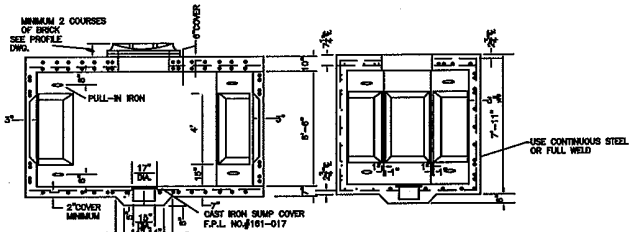
ROOF PLAN



WALL PLAN

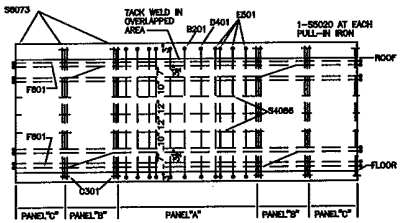


FLOOR PLAN



SECTION "A-A"

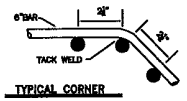
SECTION "B-B"



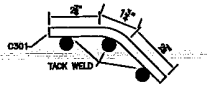
PANEL REINFORCING

MATERIAL REQUIRED

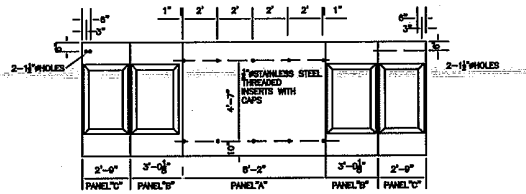
CONCRETE – 9 CU. YD'S
1 – CAST IRON SUMP COVER – F.P.&L. CO #161-017
1 – MANHOLE FRAME AND COVER – F.P.&L. CO. #161-040
8 – PULLIN-IRONS – F.P.&L. CO # 161-309



TYPICAL CORNER



C301-48-REQ'D7⅛"LONG



LOCATION OF INSERTS AND DUCT ENTRANCES

REFERENCE DRAWINGS

UX-520 CAST IRON SUMP COVER
E-15855 STREET MANHOLE FRAME AND COVER.

UX-224 REINFORCING SCHEDULE

NOTES:

1. 12–6" DUCTS FOR ALL WINDOWS.
2. 2"X4" CONSTRUCTION JOINTS REQUIRED WHEN POUR IS NOT CONTINUOUS. BOTTOM CONSTRUCTION JOINT WILL NOT BE PERMITTED IN PRECAST MANHOLE.
3. FOR CONSTRUCTION SPECIFICATIONS SEE FORM–903
4. FULL BAR WELD MAY BE SUBSTITUTED INSTEAD OF 24DIA. LAPP BARS.
5. PULL–IN–IRONS–F.P.&L. CO. #161–309.
6. 5000LB. TEST CONCRETE
7. PRECAST MANHOLE SHALL BE DELIVERED IN ONE PIECE.
8. WEIGHT = 35,000LBS.
9. RATING = H20 LOADING

NO.	DATE	REVISION	ORIG.	DR.	APP.
6	8/4/16	ADD NOTE 9	ARR	ELS	RDH
5	8/21/15	ADD NOTE 8	ARR	ELS	RDH
4	3/4/15	UPDATE TITLE	ARR	ELS	RDH
3	6/23/14	UPDATE DRAWING	ARR	ELS	RDH
2	3/25/08	UPDATE DRAWING AND ADD NOTES	GAP	ELS	JJM
1	2/26/08	VECTERIZE DRAWING	GAP	ELS	JJM

TWO WAY MANHOLE
M&S 162–236–006
APPROX. WEIGHT: 35,000 LBS.

FLORIDA POWER & LIGHT COMPANY

ORIG.
DRAWN: J.R. GARCIA

NO SCALE

DATE:

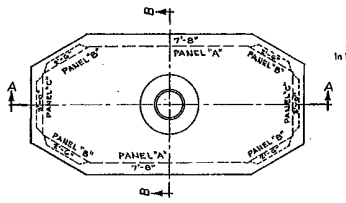
APPROVED

DIRECTOR, DISTRIBUTION ENGINEERING
AND OPERATIONS SERVICES

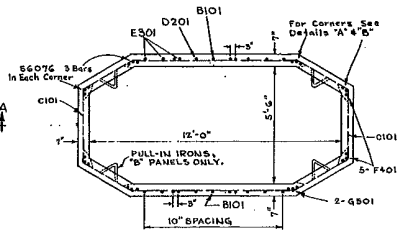
UX-219.0.0

MANHOLE, 2 WAY 7'-8" PANEL
M&S #162-235-000

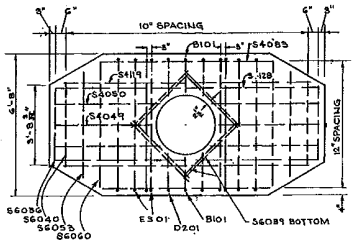
UX-219.0.0



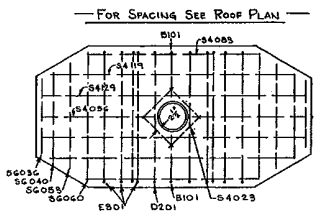
—PLAN—



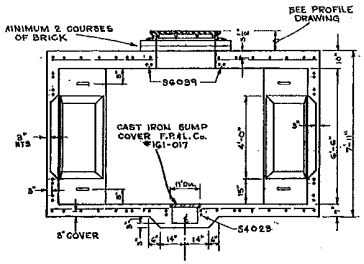
—WALL PLAN—



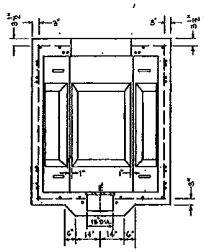
—ROOF PLAN—



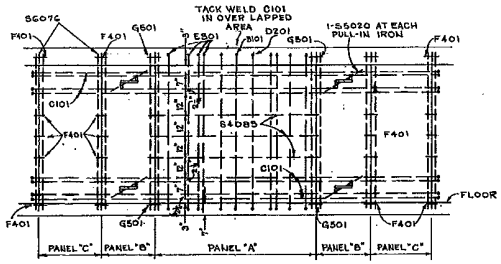
—FLOOR PLAN—



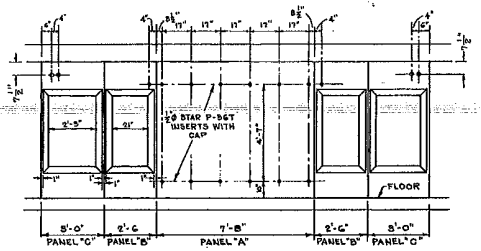
— SECTION A-A —



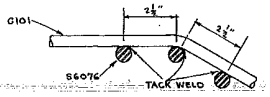
— SECTION B-B —



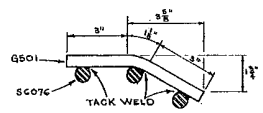
— PANEL REINFORCING —



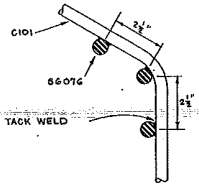
—LOCATION OF INSERTS AND DUCT ENTRANCES—



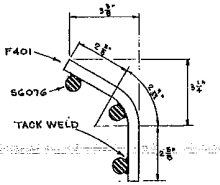
—DETAIL A—



—G501 DETAIL—



—DETAIL B—



—F401 DETAIL—

REFERENCE DRAWINGS

UX-520 CAST IRON SUMP COVER
E-15555 STREET MANHOLE FRAME & COVER
UX-220 REINFORCING SCHEDULE

NOTES:
1. APPROXIMATE TOTAL WEIGHT – 32,200LBS.
2. RATING = H20 LOADING

NO.	DATE	REVISION	ORIG.	DR.	APP.
4	8/4/16	ADD NOTE	ARR	ELS	RDH
3	8/21/15	ADD NOTE	ARR	ELS	RDH
2	3/4/15	UPDATE TITLE	ARR	ELS	RDH
1	7/1/83	ADD M&S NO. & WEIGHT			

FLORIDA POWER & LIGHT COMPANY

NO SCALE

DRAWN: KB

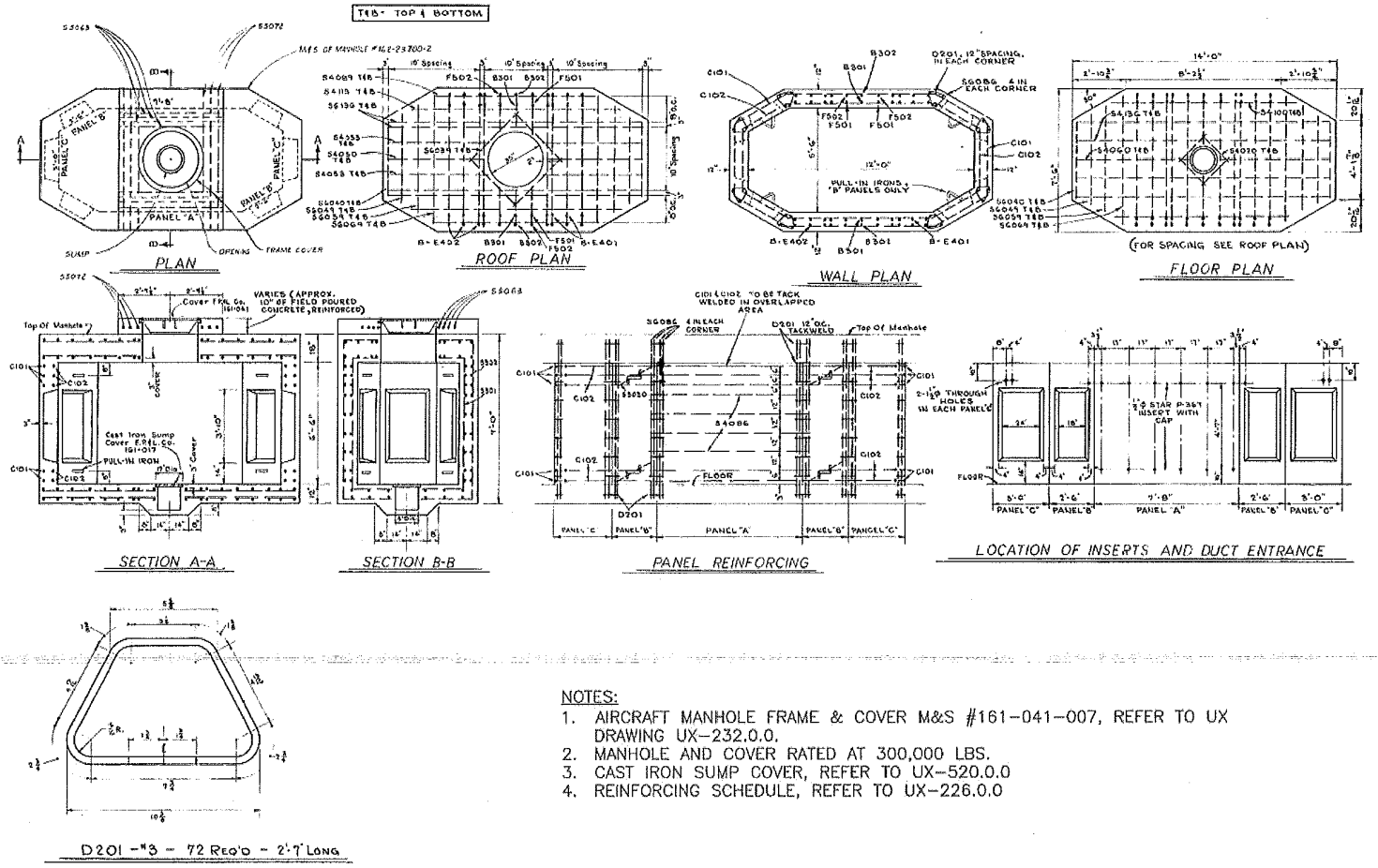
DATE: 3/25/70

APPROVED: J.J McEVOY
SUPERVISOR, OH/UG PRODUCT SUPPORT SERVICES

UX-225.0.0

SPECIAL PRECAST - TWO WAY 7'-8" MANHOLE
M&S #162-237-002
APPROXIMATE TOTAL WEIGHT - 66,200 LBS.

UX-225.0.0



D201 - #3 - 72 Req'd - 2'-7" Long

NOTES:

1. AIRCRAFT MANHOLE FRAME & COVER M&S #161-041-007, REFER TO UX DRAWING UX-232.0.0.
2. MANHOLE AND COVER RATED AT 300,000 LBS.
3. CAST IRON SUMP COVER, REFER TO UX-520.0.0
4. REINFORCING SCHEDULE, REFER TO UX-226.0.0

NO.	DATE	REVISION	ORIG.	DR.	APP.
3	8/13/14	ADDED M&S NUMBER & WEIGHT	ARR	ELS	RDH
2	7/1/83	ADDED M&S NUMBER & WEIGHT			
1	6/2/82	ADD REBAR SS072 & COVER MODIFICATION			

NO SCALE

DRAWN: KRB

DATE: 1-29-70

APPROVED: JJ McEVOY
SUPERVISOR, OH/UG PRODUCT SUPPORT SERVICES