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Maritime Electric Company, Limited
Underground Standard Document

THE LATEST VERSION OF THIS DOCUMENT CAN BE FOUND AT MARITIME ELECTRIC WEBSITE UNDER ACCOUNTS AND BILLING THEN UNDERGROUND STANDARDS.

DATE	REV	DESCRIPTION
Oct-2018	1.2	Published new and updated underground construction standards with revised drawings and including changes to specs of the primary underground, mechanical protection, and pad details.
Feb-2019	1.3	Updated trench details drawing # E-88-296. Transformer pad requirement for 750MCM or above under section 6.1.3.

Table of Contents

1. General 1

1.1 Scope 1

1.2 Division of Ownership of Facilities 1

1.3 Expectation of Customer/Contractor 1

1.4 Route and Grade Design 1

1.5 Design and Construction Details 2

1.6 Warranty Period..... 2

2. Duct Banks, Fittings, and Installation 2

2.1 Conduit Types..... 2

2.2 Conduit Joints, Bends, and Terminations..... 3

2.3 Number of Conduits 4

2.4 Inspection 4

2.5 Installation 4

2.5.1. Cold Temperature 4

3. Riser Pole 5

3.1 Primary Riser 5

3.2 Secondary Riser 5

3.2.1 Conduit to Outdoor Meter 6

3.2.2 Conduit into Building..... 6

4. Trenching..... 6

4.1 Backfilling 6

4.2 Compaction 6

4.3 Maintenance..... 6

4.4 Conduit Bank Layout 7

4.5 Trench Bottom 7

5. Easements 7

5.1 Underground Conduit and Cables 7

5.2 High Voltage Pad-mounted Equipment 7

5.3 Low Voltage Secondary Equipment 7

6. Transformer Foundation..... 8

6.1 Concrete 8

6.1.1. Poured in Place	8
6.1.2. Prefabricated Concrete	8
6.1.3. Fiberglass	8
6.2 Location	8
6.2.1 Blast Wall.....	8
6.2.2 Bollards	9
6.3 Installation	9
6.4 Retirement.....	10
7 Horizontal Separations from Other Facilities	10
7.1 Swimming Pools.....	10
7.2 Propane Tanks	10
8 Underground Distribution Documents & Drawing Requirement	11
9. Primary Underground Distribution Document Checklist.....	12
10. Underground Standard Drawings	13

1. General

1.1 Scope

This document contains information pertaining to Maritime Electric Company, Limited (MECL) standard construction practices for underground supply facilities. This document assists the personnel involved in the construction of such facilities to connect to MECL's system. This document will help bring uniformity with respect to construction practices. It is designed to be used in conjunction with MECL underground standard drawings.

1.2 Division of Ownership of Facilities

All facilities constructed for MECL use shall be built to the standards contained in this document and the associated drawings. Facilities constructed for use in conjunction with MECL's facilities, such as customer owned service ducts, shall meet the appropriate provincial and national standards. The customer is responsible for installing ducts and service conductors ensuring to leave adequate length of conductor at the end to which MECL will connect to MECL facilities. This includes, but not limited to sealing of the ducts to prevent any potential water problem, which is to be completed at the time the service conductor is installed to a temporary seal in the event construction is delayed.

1.3 Expectation of Customer/Contractor

MECL's most significant expectation of the contractor is to maintain a safe and secure workplace for their employees, MECL employees, and the public. MECL expects all facilities installed for MECL use will be constructed to MECL standards and/or the project plan. All facilities shall be constructed with the correct type and number of ducts, and with a focus on a water tight and obstruction free finished product, minimizing sharp bends. No trenching or backfilling shall be completed during the period of December 15 – April 15 of each year without explicit approval from MECL. This is to avoid any complications due to frost and winter conditions. If installation is permitted during this time, it is crucial to follow cold temperature instructions for duct installation, as well as good working practices.

It is expected that the customer/contractor contact MECL at a **minimum of 48 hours** prior to the commencement of construction to provide a construction timeline. This is to coordinate an appropriate time to complete an inspection.

1.4 Route and Grade Design

No excavation or installation shall commence until the route and final grade has been established and proper approval obtained from appropriate governing body, other utilities, owners, and MECL. An agreement **must** be in place between all necessary parties, typically consisting of approved drawings and/or plan. Any work carried out without this approval may result in removal and replacement at the customer's expense. A general construction timeline should be provided during the approval process.

The customer/contractor shall ensure that the site is at final grade at locations where MECL facilities are to be installed. These facilities shall be installed at a minimum of 150mm above the center of the roadway in all subdivision applications. An indication of the final grade shall be provided by the customer/contractor by means of a grade stake or other applicable method. MECL will not be obligated to approve a proposed underground supply route that in MECL's judgment it would be inadvisable. Examples of this include, but not limited to:

- Wet areas where excessive frost heaving may be expected.
- Areas with limited access for installation, maintenance, or future replacement.

- Areas without proper drainage where subsurface facilities may be continuously subject to water.
- Duct banks without proper clearance to existing water and sewer facilities.

1.5 Design and Construction Details

MECL will work in conjunction with the customer or anyone hired to work on the customer’s behalf to develop a design for underground supply facilities. The customer is responsible to provide MECL with as-built drawings at the completion of the project, which is to be professionally completed. These drawings should be supplied electronically to MECL as a pdf or dwg file. This drawing shall contain information such project specifics as transformer size and location, number and size of conduit, size and length of conductor, length/distances of the property lines, trench detail and location of other equipment such as riser poles, switchgears, high-voltage sectionalizing cabinets, secondary pedestals, pull-pits, and street lightings.

Facilities owned by other utilities may cause re-routing of the underground system to maintain any and all clearances. This may cause depths of duct banks to change to accommodate other systems, or the requirement of encasement in concrete for the duct banks. MECL shall be informed if other utilities are present, or have any future plans to install underground facilities.

1.6 Warranty Period

The contractor shall warrant all material and work supplied in the approved plan and drawings for a period of 18 months following MECL final approval and acceptance. All work shall be completed in accordance to MECL standard underground practices. The contractor shall correct any defects which may arise during construction, installation and under normal used at their own expense. This includes, but is not limited to, maintaining proper backfill material, asphalt reinstatement, and equipment heaving or movement.

2. Duct Banks, Fittings, and Installation

2.1 Conduit Types

Only rigid PVC to be used for primary side (high voltage). Refer to Table 1 for the average dimensions of rigid PVC conduit. Please note that rigid conduit is approximately twice as thick as DB2 duct.

Average Dimensions				
Nominal Size & Type	OD(mm)	ID(mm)	Wall(mm)	Weight(kg/100m)
100mm Rigid	114.3	102.3	6	352.4
125mm Rigid	141.3	128.2	6.6	478.5

Table 1 - Average Dimensions of Typical Conduit

Rigid PVC shall conform to CSA C22.2 No.211.0 & C22.2 No.211.2.

For horizontal to vertical transition to a riser pole, a rigid PVC 1525mm utility bend shall be installed. This applies to conduit transitions that will contain both primary and secondary cables. Only rigid PVC conduit is to be installed above and below ground. For horizontal to vertical transition to pad mounted equipment, such as transformers and sectionalizing cabinets, a smaller 915mm bend can be used.

For horizontal transitions, rigid PVC 1525mm radius bends are to be used for all bends (i.e. 22.5°, 45°, 90°). All bends are to be of rigid PVC.

2.2 Conduit Joints, Bends, and Terminations

A run of conduit between outlets or termination points shall not have more than the equivalent of four 90-degree bends, including the bends located at the outlet or termination point. All rigid PVC fittings, bends, couplers, joints, and elbows shall be joined with solvent cement designed for that purpose. It is important to follow the manufacturer's instructions when applying this solvent. "Push-fit only" fittings are not approved for use.

Bends in duct runs may be accomplished by the use of 30°, 45° or 90° bends and may be supplemented by the use of a 5° coupling. All bends shall be cleaned appropriately and joined using solvent designed for that purpose.

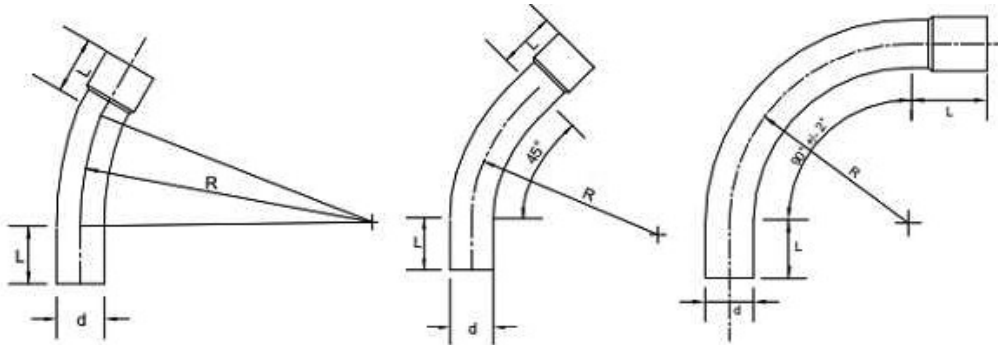


Figure 1: 24°, 45° and 90° Conduit Bends

Please note that axial deflection should not be attempted at joints. Also, as the temperature approaches the freezing point, less offset distances are recommended. It is important to follow the duct manufacturer's instructions for the allowable offset.

All spare conduits shall be sealed or capped with an approved cap or plug designed for that purpose. The conduit must be sealed properly against water and debris ingress. Conduits that are required to be capped underground, shall have permanently cemented caps installed. Prior to sealing – a hole of sufficient size shall be drilled below the capping area to allow for pulling rope to be terminated. A pulling rope of 6mm poly or nylon rope shall be used as a pulling rope with 3m of excess rope on either end of the conduit.

All conduits that terminate in a high voltage device (transformer, sectionalizing cabinet, riser pole, etc.) must be fitted with bell ends at the point of termination. The purpose of the bell end is to protect the cable jacket from abrasion during pulling. The bell end is to be a separate fitting – the flared section at the end of a length of conduit or duct is not considered to be a bell end for this purpose. These are to be permanently installed at the entry of equipment, with the exception of a riser pole where the bell end should be fitted only to allow for conduit height adjustment. This emphasizes the importance of appropriate lengths of conduit remaining in pad mounted equipment-please see the appropriate drawing. If the conduit enters through a concrete wall, the curved section of the bell end shall be flush with the concrete.



Figure 2: Bell End

2.3 Number of Conduits

The requirement of the number and size of conduits depends on the specific system design including the size and number of cables, spare duct requirements, contingency planning, and pulling distances. MECL shall be consulted to determine the exact number and size of conduits. General or typical requirements are listed below.

Three phase primary application - will require two conduits if triplex cable will be installed or four conduits if single conductor cable will be installed. This will accommodate a spare conduit. The size of the conduit is dependent on the percent fill and the length of the run. Typically, 127mm conduit is required for three phase applications.

- Three phase primary application – will require two 127mm conduits. This will accommodate for a spare.
- *Single phase primary application* – will require two 100mm conduits. This will accommodate for a spare.
- *Secondary application* – will require two 100mm conduits.

2.4 Inspection

MECL may request that a test mandrel be pulled through the conduit in the presence of MECL upon completion of the work, or at another reasonable time. The presence of water and/or debris shall render suspect the construction process and may result in additional work required prior to approval. This additional work will be completed at the customer/contractors expense. MECL will supply the test mandrel, if necessary.

2.5 Installation

All duct and fittings to be joined should be exposed to the same temperature prior to assembly. It is recommended to use a primer prior to solvent cementing.

2.5.1. Cold Temperature

Conduit installation at a temperature below freezing shall be approved by MECL. This restriction is due to the risk of damage to conduit and fittings. If installation is permitted at temperature lower than 5°C, a PVC primer *must* be applied prior to solvent cementing.

2.5.2. Solvent Cementing

The proper procedure must be used when cementing conduit to ensure a permanent watertight fit and an obstruction free interior. This is a general guideline and it is not meant to replace manufacture's installation instructions.

- Conduit to be cut shall be cut square with its longitudinal axis and all ridges, burrs, and uneven surfaces removed.

- Dry fit test to ensure proper fit.
- Thoroughly clean the end of the conduit and inside of the fitting.
- For cold temperature installation-apply primer to the inside socket surface of the fitting. Use a scrubbing motion to ensure penetration. Apply primer to conduit to depth of fitting socket. Again apply primer to the inside socket surface.
- Apply cement lightly, but uniformly to the side socket surface. Keep excess cement out of the socket transition area. Apply cement to the outer surface of the conduit.
- Immediately forcefully bottom the conduit end in the socket and give a quarter turn to ensure the solvent is spread evenly on the material.
- Hold together until the joint is made.
- Wipe excess cement from conduit at the end of the fitting. A properly made joint will normally show a bead around the entire circumference.

PVC solvent cement is fast drying and must be applied as quickly as possible, usually within 20 seconds after application. The joint must be held in place for approximately one minute to prevent the duct from backing out of the fitting. Force should not be exerted to joints following cementing. Set times are dependent on temperature. Below are recommended set times:

Temperature range	Time (minutes)
0-10	120
10-15	60
15+	30

Table 3

3. Riser Pole

A riser pole is the location of transition from aerial supply conductor to underground supply cable. All conduits are to be attached to the pole using metal pole straps in a quadrant of the pole as to prevent obstruction for guying requirements, damage due to vehicles and snow removal equipment and any other project specific considerations. It is important to contact MECL to determine the proper quadrant of the pole to install the ducts.

3.1 Primary Riser

Riser poles containing high voltage cable shall contain a bell end fitting to be temporarily placed until the final duct height is determined. Refer to DWG#UG-08-01 for the minimum height of the primary conduit. It is important to contact MECL to determine the proper duct height. Typically, primary riser poles have metal guards to act as mechanical protection at the base of the pole. However, this will be determined by MECL, as particular circumstances may require the use of concrete. All primary riser poles are to have utility 90° bends installed on the horizontal to vertical transition. Please see Section 2.1. It shall be noted that all conduits on pole must be of Rigid PVC.

3.2 Secondary Riser

Riser pole containing low voltage cable, such as a customer's service, shall contain an expansion joint at the base of the vertical section of conduit. There is a maximum of two secondary risers to be installed on a pole. In all cases, MECL should be contacted for permission to install the conduit on pole. If a primary conduit is already installed on a pole, then MECL will decide the number of conduits for secondary service.

3.2.1 Conduit to Outdoor Meter

Where an underground service lateral terminates in a meter socket installed on the outside of the building, the cable shall be protected by a rigid PVC conduit up the wall and to the meter socket. All conduits shall be installed to prevent damage due to frost. If using approved Teck cable, then PVC conduit may be run for a 1500mm from the pole.

3.2.2 Conduit into Building

When an underground service lateral terminates within a building, the cable shall be protected by a rigid PVC conduit through the wall and for at least 1500mm. The service conduit shall terminate in service entrance disconnect provided by the customer inside the building wall.

All conduits entering a building underground shall be sealed at their indoor ends with suitable compounds. It shall be the responsibility of the customer to install and maintain these seals to prevent entrance of moisture.

4. Trenching

General considerations for trenching for any part of an underground system is the safety during excavation, selection of backfill material, the method of compaction, and any future maintenance.

4.1 Backfilling

Backfilling procedures shall not cause distortion or damage to conduits. Suitable backfill material shall be used, considering: preventing mechanical damage to the ducts, compaction ability, drainage ability, and adequate heat dissipation. Sand is required to be the backfill material for under, between and above all conduits installed in the trench.

Frozen backfill material is not to be used. All frozen excavated material is to be removed and disposed of by the customer or contractor. If backfilling during temperatures near or below freezing point, all backfill material shall be as dry as possible. If conditions warrant, MECL may deem it necessary for all conduits to be encased in concrete. Please consult MECL if concrete is required. This will normally be determined in the design or approval stage of the project.

4.2 Compaction

Compaction of sand is required under and around the conduits laid in the trenches. This is to be completed in layers as the conduits are installed. That is, if the trench requires conduits to be vertically stacked, a compacted layer of sand is required for each level of conduits. To minimize the possibility of duct damage, the trench shall be hand tamped from the bottom of the trench to 150mm above the top level of conduits. An additional 450mm of backfill material shall be used, to total 600mm cover, prior to power tapping equipment being used.

4.3 Maintenance

The customer/contractor shall be responsible to maintain the backfilled trench area for the warranty period of 18 months as outlined in Section 1.5 This includes, but not limited to, maintenance due to settlement of the trench, concrete or asphalt repairs or drainage issues that arise.

4.4 Conduit Bank Layout

The location of the conduits in the bank shall be as shown in drawing E-88-296 of MECL Underground Standard Drawings. If design complexities require more conduits in a bank, MECL shall be consulted. In all cases, warning tape is to be installed 300mm below finished grade. If design does not allow minimum spacing determined by MECL standard, a non-standard approval must be obtained from MECL prior to starting any work.

4.5 Trench Bottom

The trench bottom shall be firm, uniform, and free of debris with no large rock protruding into the trench. Prior to laying out conduits, 150mm of well taped sand is to be installed at the trench bottom. In order to provide continuous support for the conduits, the grade of the sand shall be uniform. This is shown in drawing E-88-296 in MECL Underground Standard Drawings. No blocking or supports are to be used underneath the conduit that would create a stress point. Base spacers shall not be used for direct buried installation.

In unstable soil areas, MECL may require existing base material to be excavated and replaced with crushed stone or gravel with a particle size of 15mm to create a stable base prior to installing sand. As mentioned in Section 2.1 please consult MECL if conduits are required to be installed in concrete.

5. Easements

MECL requires a legal easement for all underground infrastructures located on privately owned property prior to the commencement of construction. This includes, but not limited to, private right of ways and areas owned by others. These documents shall be obtained and registered at the owner's expense. Prior to registering with the appropriate government body, MECL will proof read the easement documents to confirm accuracy.

5.1 Underground Conduit and Cables

Easement requirements for underground conduits and occasionally direct buried conductor will normally be 4m wide with an additional 4m at the start and end of the trench. MECL must be contacted to obtain the area where conduit and/or cables are installed.

5.2 High Voltage Pad-mounted Equipment

Easement requirements of pad-mounted equipment, such as transformers and sectionalizing cabinets will normally be a 4m² areas. MECL must be contacted in all instances to confirm the proper area required for high voltage pad-mounted equipment. This equipment must be located so it does not hinder in any way in its operations. Please refer to E-90-03 or consult MECL. For pad-mounted primary metering cabinet, pad-mounted switch-gear, contact MECL for easement based on the electrical design.

5.3 Low Voltage Secondary Equipment

Easement requirements of secondary junction boxes or URD's will normally be a 3m² areas. MECL should be contacted in all instances to confirm the proper area required for all secondary subsurface equipment. These pedestals must be selected based on the cable range provided to ensure compliance of the standard. Please refer to the underground standards drawings.

6. Transformer Foundation

The customer/contractor is responsible for installing an appropriate foundation on which a pad-mount transformer will be installed. Both concrete and fiberglass are acceptable by MECL provided the following requirements are adhered to.

6.1 Concrete

There are three standard sizes of concrete transformer foundations; all three have construction details and dimensions included on the corresponding drawings. The concrete used shall be 25MPa.

6.1.1. Poured in Place

Once the appropriate grade is established, the form can be constructed and the concrete pad can be poured in place provided environmental conditions allow or provisions to cover the pad for a period of time following the pour are in place.

6.1.2. Prefabricated Concrete

A prefabricated concrete foundation manufactured by a credible provider. It is important that all required site work is completed prior to transporting the concrete pad to the work site.

6.1.3. Fiberglass

A fiberglass pad manufactured to MECL standard and design for this purpose may be used. Drawings E-12-01 and E-12-02 show the dimensions required for the fiberglass pad. If dimensions differ from this drawing, MECL shall be consulted prior to installing or ordering equipment.

For Single-phase transformer up to 167KVA: A fiberglass pad must be used when using 750MCM secondary conductors.

For Three phase transformers up to 500KVA: A fiberglass pad must be used when using 750MCM secondary conductors.

6.2 Location

The location of a transformer foundation shall be approved by MECL prior to construction. The major consideration should be given to accessibility with respect to transformer installation, maintenance and replacement. Other important considerations are listed below:

- There should be no obstructions within 3.0 meters directly in front and 1.0 meter on the other three sides of the transformer. This includes property lines.
- A minimum 1200mm flat area directly in front of the transformer shall be maintained in locations where slope exists.
- Refer to Dwg. UG-90-01.

6.2.1 Blast Wall

A blast wall is a wall or barrier with non-combustible surfaces or material (concrete blocks) constructed on edges of the transformer foundations. A blast wall is required if the transformer will be within 3m or less of a building or combustible device and 6m from any window, door or ventilation inlet or outlet on a building³. Typical construction of a blast wall will consist of 200x200x300mm concrete blocks and extended 150mm above the height of the transformer. 10M

vertical reinforcing bar shall be installed with no more than 600mm spacing. If a blast wall is to be used please consult MECL for transformer foundation size requirements and transformer height. However, extending each side and back of the foundation by 300mm is generally sufficient. Maintenance of the blast wall is at the owner's expense. Please note that a fiberglass transformer pad shall not be used if a blast wall is necessary.

6.2.2 Bollards

All transformers and high voltage equipment will require mechanical protection. This will not be debated, as this is important to ensure public safety as well as unnecessary service interruptions.

Concrete bollards shall have a 200mm diameter and a height of at least 2440mm, with 1220mm above-grade. Sono-tube is to be used for forms. Rebar shall be set at least 135mm in the ground. Construction of a concrete bollard shall be in conjunction with drawing E-85-144 in MECL Underground Standard Drawings. All bollards should be connected with the ground grid.

Bollards must have plastic cover with reflective tape on it. Refer to DWG # E-18-100.

The installation of bollards is to conform to the Canadian Electrical Code and CSA C22.3 No.7-15. Failure to install bollards where deemed necessary by MECL will result in non-approval, thus delaying the service connection.

³ Canadian Electrical Code Rules 26-242

6.3 Installation

The customer/contractor shall supply all labor and material associated with the installation of the transformer foundation, including primary and secondary conduit, grounding provisions and base materials. The minimum number and layout of secondary conduits shall be adequate to meet MECL and the customer's requirements. This is generally determined in the design or approval stage of the project. The following are minimal requirements for the customer/contractor. Communication with MECL is important to ensure a timely and efficient project.

- Contact MECL at a minimum 48 hours prior to the commencement of work to establish an inspection schedule.
- Excavate an area to the transformer pad plus 1m on all sides to a depth of 1300mm or 1600mm, depending on the installation specifics. Refer to drawing E-88-296.
- Install all ducts to standards in this document and associated drawings. Ensure proper configuration – high voltage on the left hand side and low voltage on the right. No cable shall pass under the transformer portion of the pad.
- Install the grounding system as per drawing E-85-143.
- Install sand surrounding the conduits. This is required as there will be gravel installed at the base of the pad.
- Install concrete bollards – as per drawing E-85-144.
- Backfill with well compacted, coarse gravel. Backfill material shall be no larger than 25mm and no smaller than 12.5mm.
- Install transformer pad. Ensure the pad is level and square in relation to the surroundings.
- Backfill to final grade with crushed stone.

- Cut conduits such that they are flush with the surface of a concrete pad. If fiberglass pad is used the conduits shall be half the distance between the gravel base and the top surface of the pad.
- Tag all conduits with weatherproof tag indicating civic number, in pad-mount equipment, and secondary pedestals in which it terminates. Contractors/Developers are required to install the weatherproof tags.
- Warranty all work for a period of 18 months immediately following the final inspection by MECL. This includes, but not limited to, workmanship, equipment, and ground settling issues.

6.4 Retirement

The customer/contractor will be responsible for the removal of any transformer foundation that is no longer in use. This includes, but not limited to, foundation removal and site restoration. The retirement of a transformer pad is typically initiated by a service no longer in use or upgrade of existing customer equipment.

7 Horizontal Separations from Other Facilities

Customers/ Contractors must ensure that minimum separations for the underground lines must be in compliance with the MECL standards and C22.3 No. 7-15 Underground Systems. For trenching, please refer to the drawing E-88-296.

7.1 Swimming Pools

MECL must be consulted if any underground wires are present if the customer plans to have a swimming pool or open water body.

As per Table 4: CSA 22.3 7-15 Underground Systems.

Swimming pools clearance must be met with the following criteria for the underground electrical infrastructure.

Underground Lines Voltage (V)	Minimum distance between the inside walls of a pool and underground cables
	Installed in PVC Conduit
0V - 750V	1000 mm
751V - 15000V	1500 mm
15001V - 25000V	2000 mm

A minimum of 4000mm distance from Pad mount transformer to swimming pool must be maintained.

7.2 Propane Tanks

MECL must be consulted when installing or upgrading a propane tank. A minimum horizontal separation of 1500mm between underground cables and propane tanks must be maintained all the time. If the separation is not possible, contact MECL.

8 **Underground Distribution Documents & Drawing Requirement**

All constructions that have a pad-mount transformer or primary underground line must have the following details.

- Service Order Number
- A plan of the subdivision, showing the building(s) offset in relation to existing and proposed property lines, other buildings, and streets.
- Future Development Plan.
- Load Summary and Service requirement.
- Capital Job Info Sheet.
- Number and type of units (single dwelling, duplexes, multi dwelling apartments).
- Electric Heat or Non-Electric Heat.
- Electrical plan and Single Line Diagram.
 - Following Items must be mentioned on the drawings:
 - Riser Pole.
 - Pad-Mount Equipment (Transformer, Sectionalizing Cabinet/ MPJ Box, Switchgears, etc.).
 - Secondary Pedestals.
 - Primary and Secondary Services and Conduits Sizes.
 - Spare Equipment.
 - Street Lights & Location of Meter Posts.
 - Length/Distances for property lines.
- Communication and other third party trenching (if any).

**PRIMARY UNDERGROUND DISTRIBUTION DOCUMENT CHECKLIST
(To be used by Customer/Electrician/Electrical Consultants)**

WORK REQUIRED	
PRE-CONSTRUCTION	<input type="checkbox"/> CALL THE CUSTOMER SERVICE CENTRE TO SET UP A SERVICE ORDER NUMBER (1-800-670-1012).
	<input type="checkbox"/> A MECL REPRESENTATIVE WILL GET IN TOUCH WITH YOU.
	<input type="checkbox"/> A SITE VISIT WITH A MECL REPRESENTATIVE TO DISCUSS ELECTRICITY SUPPLY OPTIONS.
	<input type="checkbox"/> SUBMIT A SUBDIVISION PLAN, ELECTRICAL DRAWINGS, AND OTHER ASSOCIATED DOCUMENTS TO MECL.
	<input type="checkbox"/> MECL WILL COORDINATE WITH YOUR ELECTRICIAN AND CONSULTANT REGARDING THE ELECTRICAL DESIGN.
	<input type="checkbox"/> THE ELECTRICAL CONSULTANT MUST PROVIDE THE VOLTAGE DROP CALCULATIONS AND LOAD DETAILS.
	<input type="checkbox"/> SUBMIT A CAPITAL JOB INFO SHEET TO THE METERING DEPARTMENT AT <i>metertechns@maritimeelectric.com</i> .
	<input type="checkbox"/> AFTER APPROVAL OF THE ELECTRICAL SITE PLAN, A MECL REPRESENTATIVE WILL ISSUE AN ESTIMATE.
CONSTRUCTION	<input type="checkbox"/> THE CONTRACTOR/CUSTOMER MUST CONFIRM WITH MECL IF A BLAST WALL IS REQUIRED.
	<input type="checkbox"/> PAYMENT IS REQUIRED TO PROCEED FURTHER WITH THE WORK.
	<input type="checkbox"/> CONTACT MECL FOR DIGGING CHECKS BEFORE COMMENCEMENT OF WORK.
	<input type="checkbox"/> CONTACT OTHER UTILITIES FOR OTHER DIGGING CHECKS AND APPROVALS BEFORE COMMENCEMENT OF WORK.
	<input type="checkbox"/> CONTACT MECL WHEN ROADWAYS AND PROPERTY LINES ARE COMPLETED.
AFTER CONSTRUCTION	<input type="checkbox"/> CONTACT MECL FOR INSPECTION.
	<input type="checkbox"/> TAKE SPECIAL CONSIDERATION TO ENSURE ALL EQUIPMENT IS INSTALLED AT THE PROPER GRADE.
	<input type="checkbox"/> ENSURE ALL CONDUITS ARE SEALED TO PREVENT DEBRIS/WATER INGRESS.
	<input type="checkbox"/> ALL CONDUITS MUST BE LABELLED WITH CIVIC ADDRESS #, SECONDARY BOXES, AND TRANSFORMER.
	<input type="checkbox"/> ENSURE PLASTIC COVERS WITH REFLECTIVE TAPE IS INSTALLED ON BOLLARDS AS PER DWG E-85-144 AND E-18-100.
	<input type="checkbox"/> MECL MUST BE CONTACTED FOR FINAL INSPECTION.
AFTER CONSTRUCTION	<input type="checkbox"/> SUBMIT AS-BUILT DRAWINGS TO MECL IN .DWG (CAD) AND PDF FORMAT.
	<input type="checkbox"/> MECL WILL PERFORM THE NECESSARY WORK AND ENERGIZE THE EQUIPMENT.

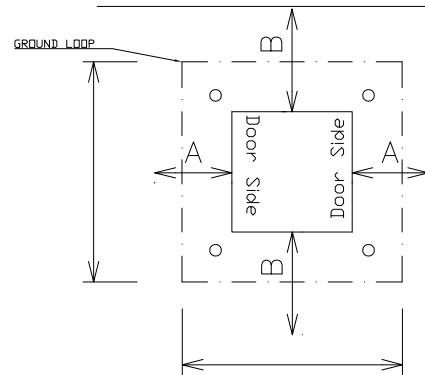
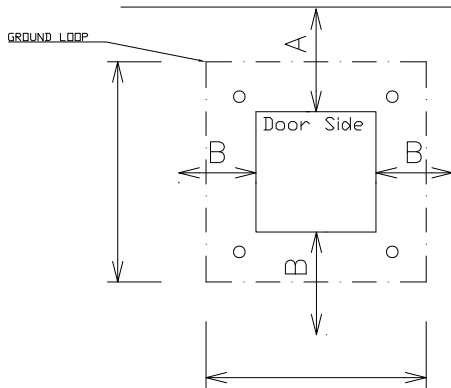
*The checklist is merely a guideline and shall be used by customer/contractor to ensure process has been completed.

*Refer to Underground Standard Drawings and Underground Standard Document for details.

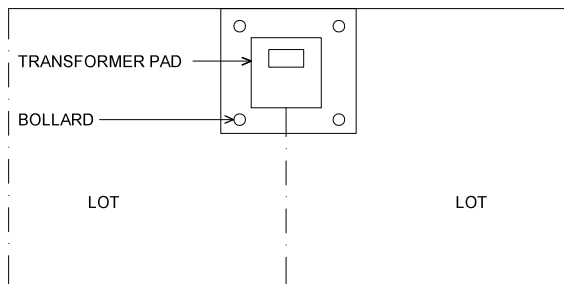
Sno.	DRAWING NO.	DRAWING TITLE
01	E-90-03	PADMOUNT EQUIPMENT LOCATION DETAIL
02	E-87-236	CONCRETE PAD REINFORCING DETAILS 1 PHASE PADMOUNTED UP TO 167 KVA
03	E-87-237	CONCRETE PAD 1 PHASE PADMOUNTED UP TO 167 KVA
04	E-85-141	CONCRETE PAD REINFORCING DETAILS 3 PHASE PADMOUNTED 112-750KVA
05	E-85-142	CONCRETE PAD 3 PHASE PADMOUNTED 112KVA- 750KVA
06	E-85-139	CONCRETE PAD REINFORCING DETAILS 3 PHASE PADMOUNTED 1000-2500KVA
07	E-85-140	CONCRETE PAD 3 PHASE PADMOUNTED 1000KVA- 2500KVA
08	E-12-01	FIBERGLASS PAD 3 PHASE PADMOUNTED UP TO 750KVA
09	E-12-02	FIBERGLASS PAD 1 PHASE PADMOUNTED UP TO 167KVA
10	UG-12-02	FIBERGLASS PAD FOR TRANSFORMER INSTALLATION DETAIL
11	UG-18-04	SINGLE PHASE HIGH VOLTAGE SECTIONALIZING CABINET (PRIMARY)
12	UG-05-06	THREE PHASE HIGH VOLTAGE SECTIONALIZING CABINET (PRIMARY)
13	E-85-143	GROUNDING DETAILS FOR PAD MOUNTED TRANSFORMER
14	UG-18-01	GROUNDING DETAILS FOR SECTIONALIZING CABINET
15	E-85-144	PADMOUNT XFMR & SECTIONALIZING CABINET CONCRETE PROTECTIVE BOLLARDS
16	E-18-100	SPECIFICATIONS FOR PLASTIC BOLLARD COVERS
17	E-88-296	STANDARD TRENCHING DETAIL
18	UG-92-01	UNDERGROUND CLEARANCES AT DITCHES IN R.O.W.
19	UG-05-03	SECONDARY ABOVE GRADE ENCLOSURES/ SECONDARY PEDESTALS
20	E-99-01	GRADE LEVEL ENCLOSURES INSTALLATION DETAILS
21	E-99-02	GRADE LEVEL ENCLOSURES INSTALLATION IN CONCRETE AND PAVEMENT
22	UG-08-01	STEEL GUARD 1 PHASE AND 3 PHASE RISER POLE PROTECTION
23	UG-05-05	SECONDARY RISER ON PRIMARY VOLTAGE POLE
24	UG-05-04	SECONDARY RISER ON SECONDARY VOLTAGE POLE
25	UG-18-05	SECONDARY RISER ON PRIMARY POLE TO METER POST
26	UG-18-06	SECONDARY RISER ON PRIMARY POLE TO OUTDOOR METER
27	UG-18-07	SECONDARY RISER ON SERVICE POLE TO METER POST
28	UG-18-08	SECONDARY RISER ON SERVICE POLE TO OUTDOOR METER

R.O.W. BOUNDARY OF HIGHWAY OR STREET

R.O.W. BOUNDARY OF HIGHWAY OR STREET



R.O.W. BOUNDARY OF HIGHWAY OR STREET



MINIMUM WORKING SPACE

PHASE	DIMENSION A	DIMENSION B
SINGLE	3000mm	600mm
THREE	3000mm	1000mm

NOTES:

1. ALL FACILITIES MUST BE LOCATED OFF ROAD R.O.W. INCLUDING CONCRETE PAD, PROTECTIVE BOLLARDS & GROUND GRID.
2. SOME EQUIPMENT HAVE MORE THAN ONE ACCESS SIDES, LIKE SWITCHGEARS AND METERING CABINET. PLEASE CONSULT MECL.
3. AN EASEMENT IS REQUIRED WHEN M.E.C.L. FACILITIES ARE LOCATED ON PRIVATE PROPERTY.
MECL SHOULD BE CONTACT TO CONFIRM PROPER AREA REQUIRED FOR HIGH VOLTAGE PAD-MOUNTED EQUIPMENT.
4. THE WORKING SPACE SHALL BE OBSTRUCTION FREE INCLUDING LANDSCAPING.
5. A MINIMUM SEPARATION IS REQUIRED FOR THE FOLLOWING SCENARIOS:
 - A) 3000mm BETWEEN BUILDING AND PAD-MOUNTED EQUIPMENT
 - B) 3000mm FROM ANY COMBUSTIBLE DEVICE
 - C) 6000mm FROM ANY DOOR OR WINDOW
 - D) 6000mm FROM ANY VENTILATION INLET/OUTLET.

MARITIME
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SCALE : N.T.S. _____

DRAWN : F.F. _____

CHECKED : Z.S. _____

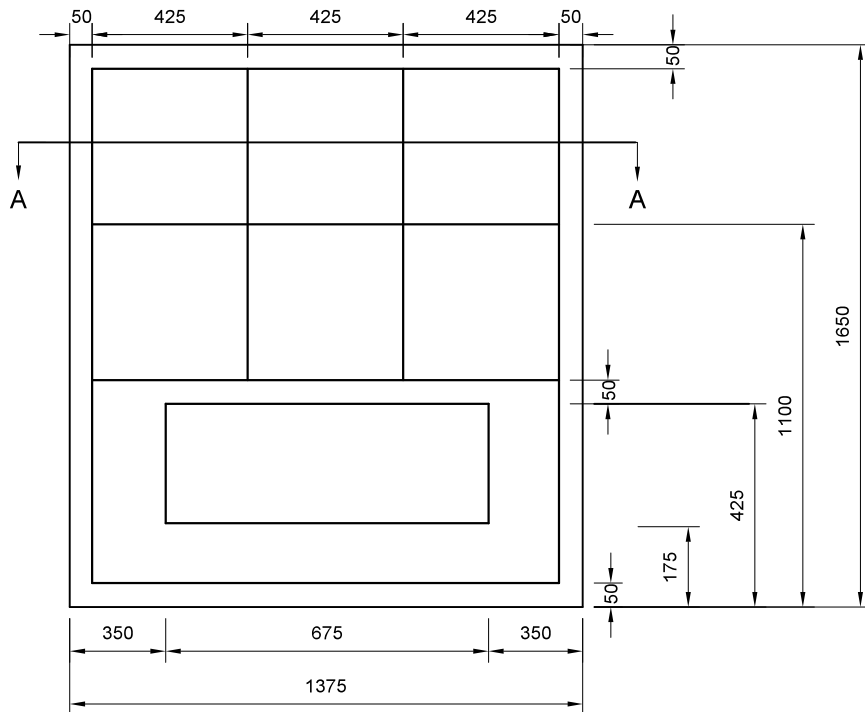
APPROVED: F.F. _____

PAD-MOUNT EQUIPMENT
LOCATION DETAILS

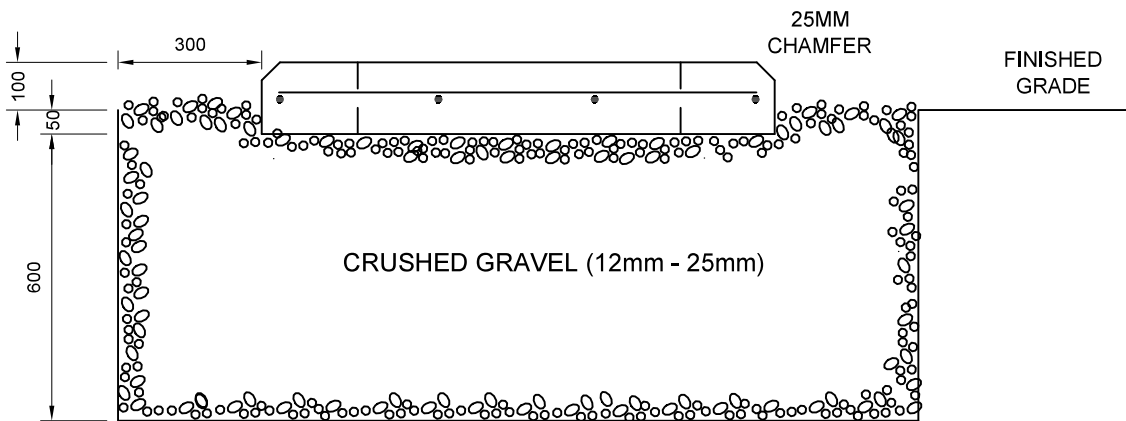
DATE : MAY_15_'90

REVISED : JUN_27_'18

DWG. No. : E-90-03



PLAN VIEW



SECTION A - A

NOTES:

1. ALL BARS 15M
STEEL $f_y = 350$ MPa
CONCRETE $f_c = 25$ MPa @ 28 DAYS
CONCRETE 0.16 CU. METERS
2. MAXIMUM AGGREGATE - 25mm
3. ALL DIMENSIONS IN MILLIMETERS.
4. MINIMUM COVER = 50mm TYPICAL
5. IF THE PADMOUNT TRANSFORMER REQUIRES A BLAST WALL,
PLEASE CONTACT UTILITY FOR INCREASED SIZE OF TRANSFORMER PAD.

BAR LIST	SIZE	LENGTH	PCS.
	15	1550	2
	15	1275	4
	15	1125	2
LIFT HOOK			1

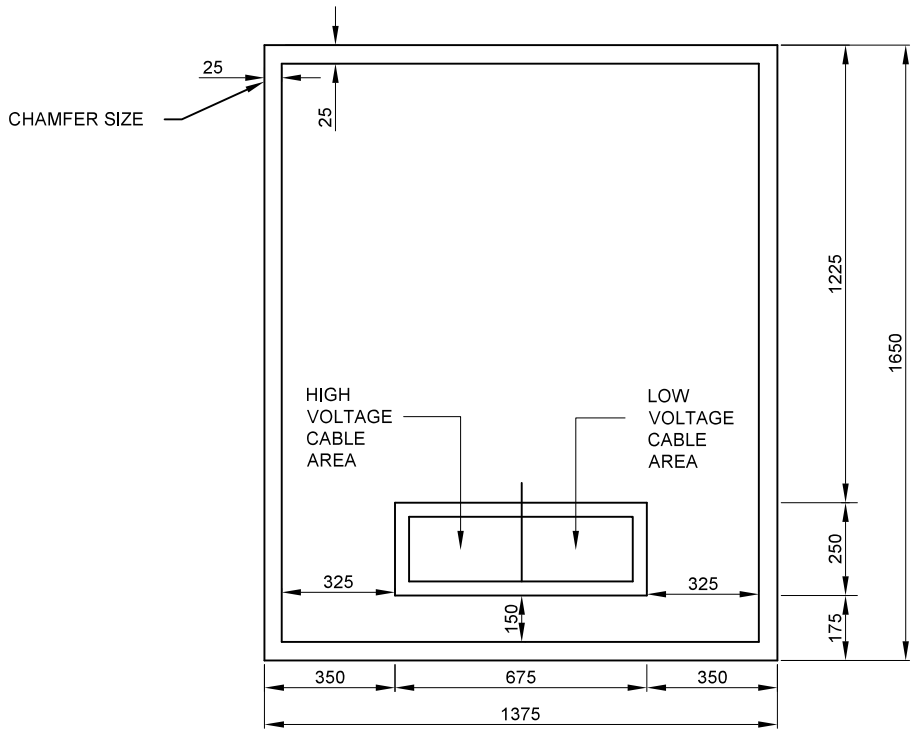


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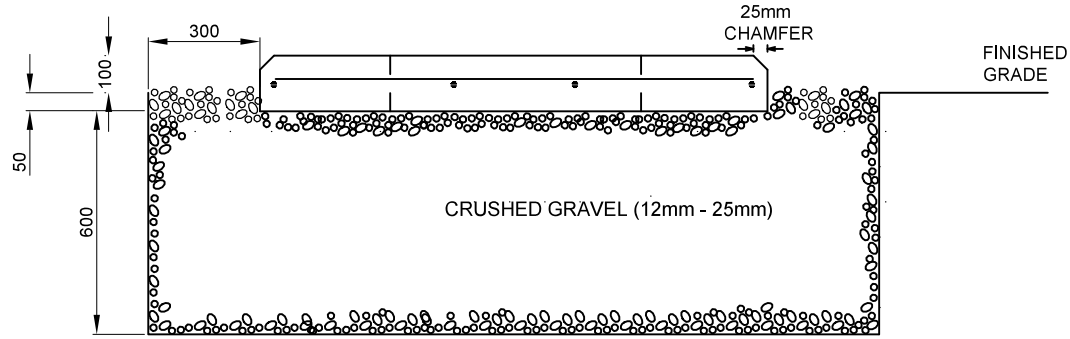
SCALE : N.T.S. _____
 DRAWN : J.E.B. _____
 CHECKED : N.K. _____
 APPROVED : N.K. _____

CONCRETE PAD
 REINFORCEMENT DETAILS
 SINGLE PHASE UP TO 167 KVA

DATE : JUNE_22_'87
 REVISED : AUG_'16_'17
 DWG. No. : E-87-236 _____



PLAN VIEW

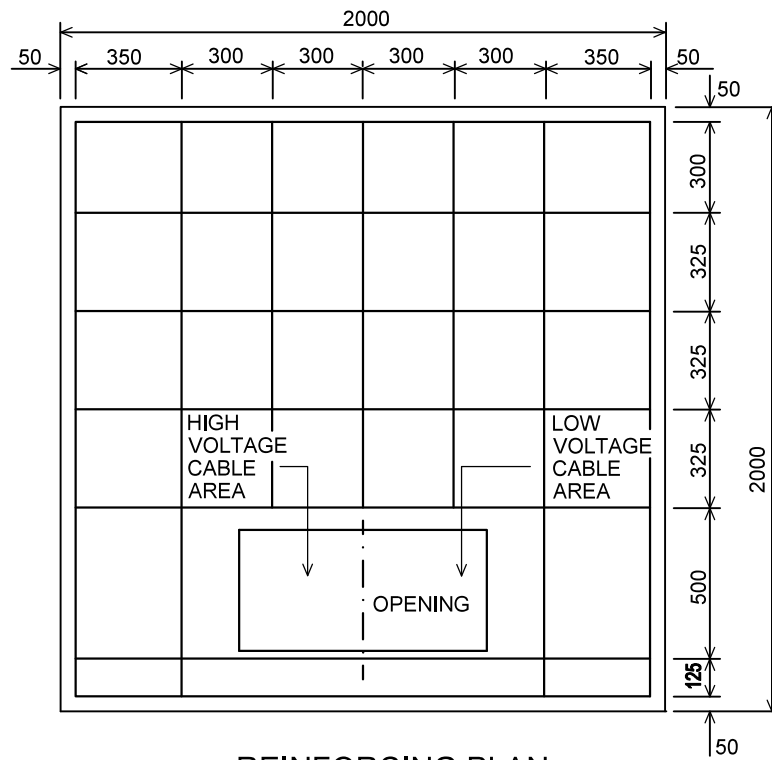


ELEVATION

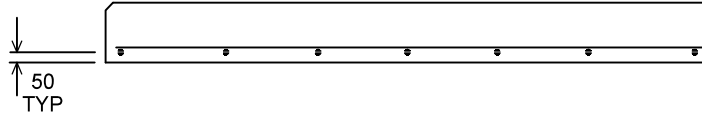
NOTES:

1. CONCRETE = 25 MPa @ 28 DAYS
2. CONCRETE 1.6 CU. METERS
3. REFER TO DWG. E-87-236 FOR REINFORCING DETAILS.
4. REFER TO DWG. E-85-143 FOR GROUNDING DETAILS.
5. REFER TO DWG. E-85-144 FOR BOLLARDS DETAILS.
6. REFER TO DWG. E-90-03 FOR PAD-MOUNT EQUIPMENT LOCATION DETAIL.
7. IF THE PAD-MOUNT TRANSFORMER REQUIRES A BLAST WALL,
PLEASE CONTACT UTILITY FOR INCREASED SIZE OF TRANSFORMER PAD.
8. A 3000mm FLAT AREA MUST BE PROVIDED IN FRONT AND 600mm ON EACH SIDE OF TRANSFORMER PAD.
9. ALL SECONDARY DUCTS TO BE LABELED WITH WEATHER PROOF TAG INDICATING THE CIVIC #S OR TAP BOX THEY FEED.
10. GRAVEL TO BE NO GREATER THAN 35mm OR NO LESS THAN 15mm.
11. CONDUITS TO BE FLUSH WITH THE SURFACE OF THE CONCRETE TRANSFORMER PAD.
12. ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE STATED.

	<h2>MARITIME ELECTRIC COMPANY, LIMITED</h2>	
<p>SCALE : N.T.S. _____</p> <p>DRAWN : J.E.B. _____</p> <p>CHECKED : F.F. _____</p> <p>APPROVED : F.F. _____</p>	<h3>CONCRETE PAD DETAIL SINGLE PHASE UP TO 167 KVA</h3>	<p>DATE : JUN._22,_'87</p> <p>REVISED : JUN._27,_'18</p> <p>DWG. No. : E-87-237 _____</p>



REINFORCING PLAN



SECTION

NOTES:

1. REINFORCING 50 KSI YIELD.
2. ALL MEASUREMENTS ARE IN MILLIMETERS
3. IF THE PADMOUNT TRANSFORMER REQUIRES A BLAST WALL, PLEASE CONTACT UTILITY FOR INCREASED SIZE OF TRANSFORMER PAD.

BAR LIST

SIZE	LENGTH	PCS.
15	1900	11
15	1275	3

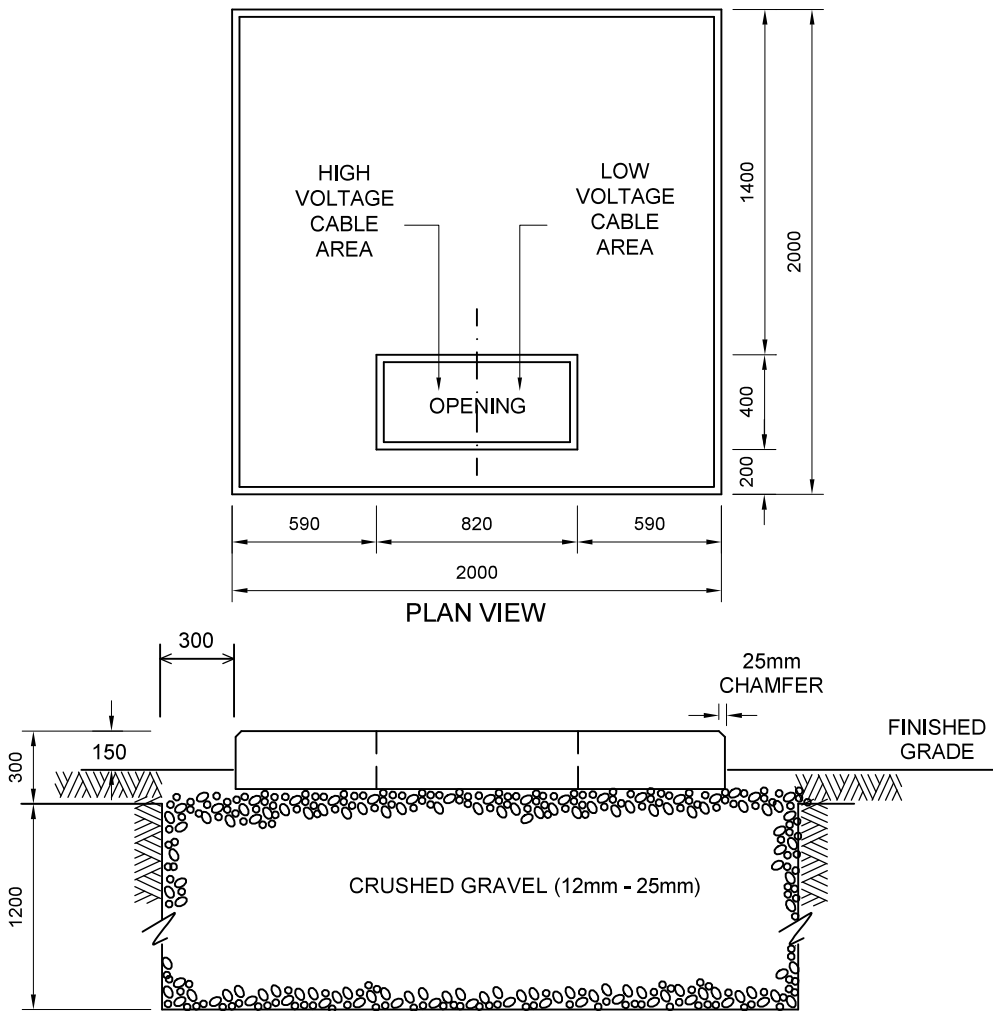


MARITIME ELECTRIC COMPANY, LIMITED

SCALE : N.T.S. _____
 DRAWN : J.E.B. _____
 CHECKED : N.K. _____
 APPROVED: N.K. _____

CONCRETE PAD REINFORCEMENT
 DETAILS 3 PHASE
 PADMOUNTED 112-750KVA

DATE : OCT._22,_'96
 REVISED : JULY_11,_'00
 DWG. No. : E-85-141 _____



NOTES:

ELEVATION

1. CONCRETE = 25 MPa @ 28 DAYS
2. CONCRETE 1.10 CU. METERS
3. REBAR - 52kg
4. REFER TO DWG. E-85-141 FOR REINFORCING DETAILS.
5. REFER TO DWG. E-85-143 FOR GROUNDING DETAILS.
6. REFER TO DWG. E-85-144 FOR BOLLARDS DETAILS.
7. REFER TO DWG. E-90-03 FOR PAD-MOUNT EQUIPMENT LOCATION DETAIL.
8. IF THE PADMOUNT TRANSFORMER REQUIRES A BLAST WALL, PLEASE CONTACT UTILITY FOR INCREASED SIZE OF TRANSFORMER PAD.
9. A 3000mm FLAT AREA MUST BE PROVIDED IN FRONT AND 1000mm ON EACH SIDE OF TRANSFORMER PAD.
10. ALL SECONDARY DUCTS TO BE LABELED WITH WEATHER PROOF TAG INDICATING THE CIVIC #S OR TAP BOX THEY FEED.
11. GRAVEL TO BE NO GREATER THAN 35mm OR NO LESS THAN 15mm.
12. CONDUITS TO BE FLUSH WITH THE SURFACE OF THE TRANSFORMER PAD.
13. ALL DIMENSIONS IN MILLIMETERS.

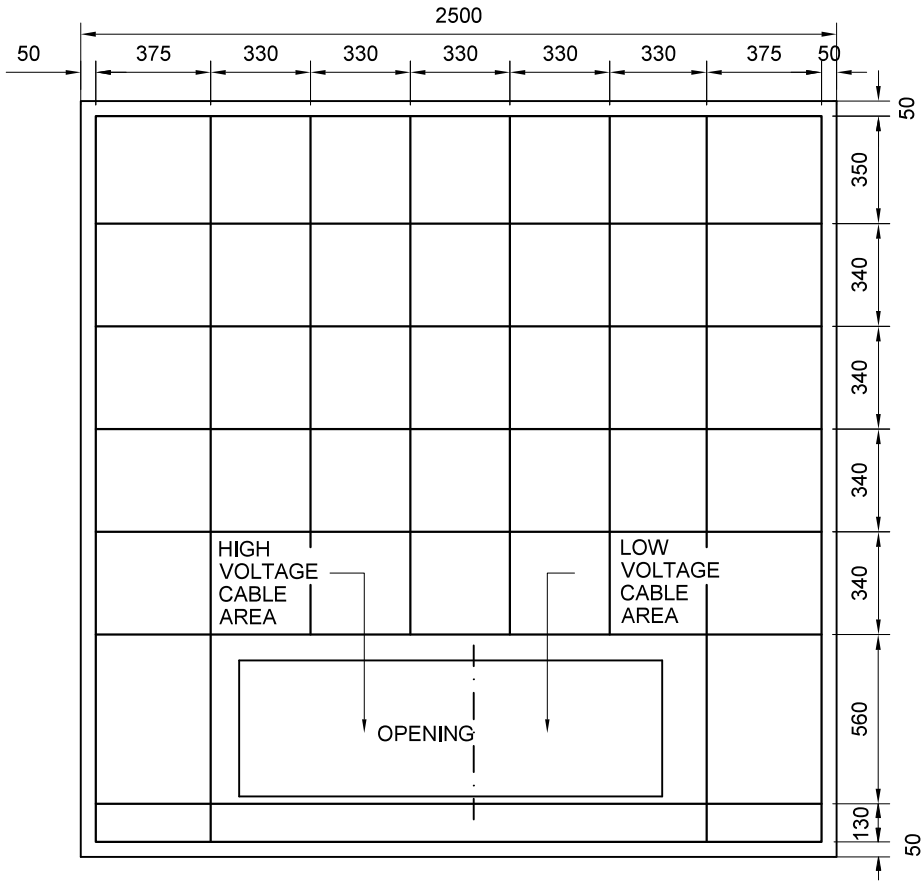


MARITIME ELECTRIC COMPANY, LIMITED

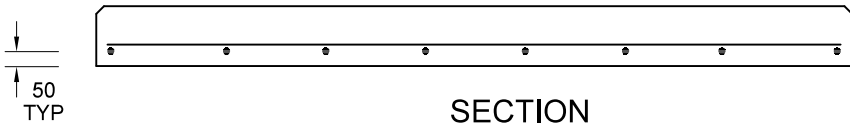
SCALE : N.T.S. _____
 DRAWN : J.E.B. _____
 CHECKED : F.F. _____
 APPROVED: F.F. _____

**CONCRETE PAD
 30 PADMOUNTED TRANSFORMER
 112KVA - 750KVA**

DATE : OCT._21_'96
 REVISED : JUN._20_'18
 DWG. No. : E-85-142 _____



REINFORCING PLAN



SECTION

NOTES:

1. REINFORCING 50 KSI YIELD.
2. ALL MEASUREMENTS ARE IN MILLIMETERS
3. IF THE PADMOUNT TRANSFORMER REQUIRES A BLAST WALL, PLEASE CONTACT UTILITY FOR INCREASED SIZE OF TRANSFORMER PAD.

BAR LIST

SIZE	LENGTH	PCS.
15	2400	8
15	1710	4
15	2400	4
	LIFT HOOK	1

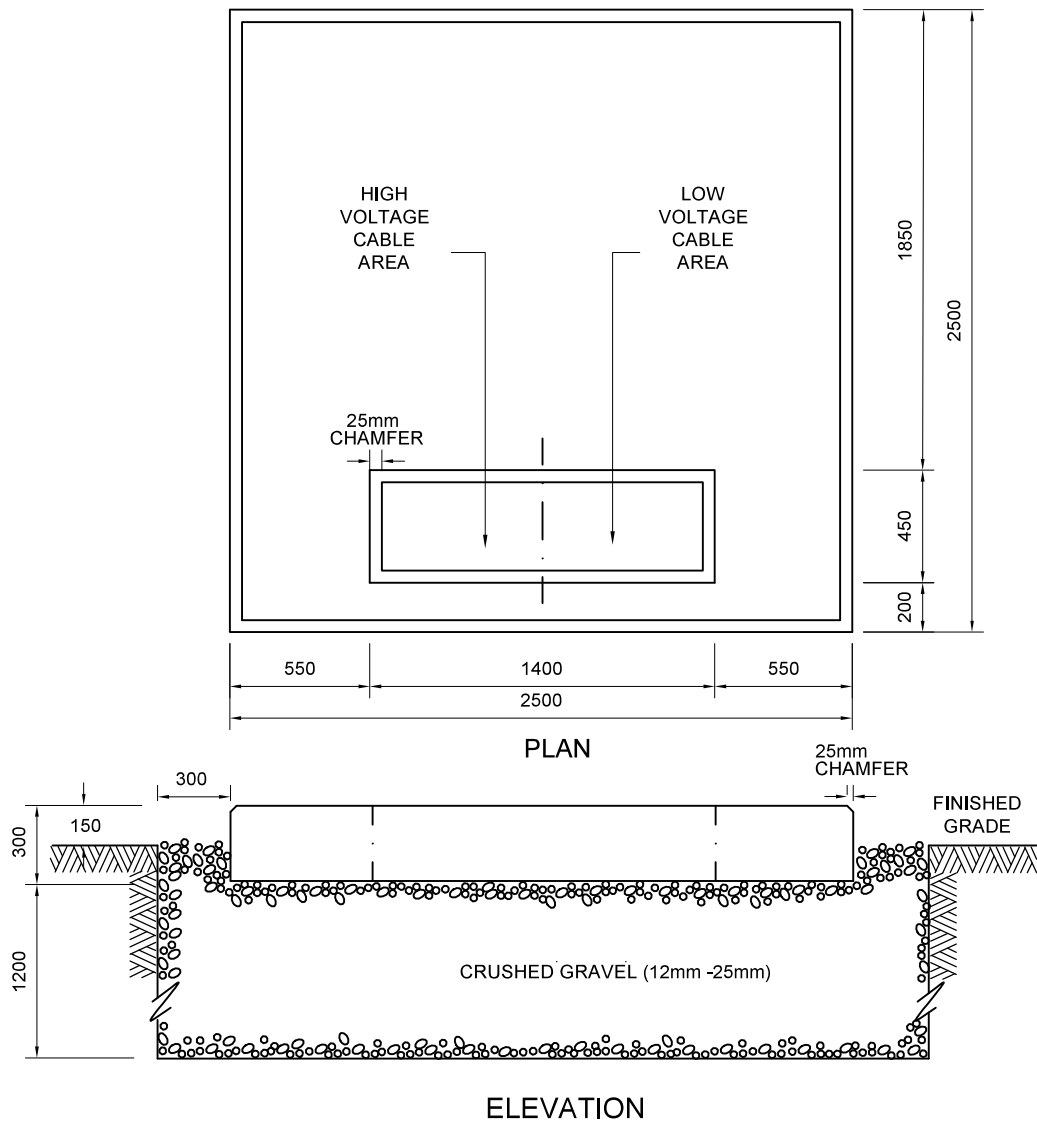


MARITIME ELECTRIC COMPANY, LIMITED

SCALE : N.T.S. _____
 DRAWN : J.E.B. _____
 CHECKED : N.K. _____
 APPROVED: N.K. _____

**CONCRETE PAD
 REINFORCING DETAILS
 3Ø PADMOUNTED 1000KVA - 2500KVA**

DATE : OCT._22,_'96
 REVISED : JULY_11,_'00
 DWG. No. : E-85-139 _____



NOTES:

ELEVATION

1. CONCRETE = 25 MPa @ 28 DAYS
2. CONCRETE 1.70 CU. METERS
3. REBAR - 72.68kg
4. REFER TO DWG. E-85-139 FOR REINFORCING DETAILS.
5. REFER TO DWG. E-85-143 FOR GROUNDING DETAILS.
6. REFER TO DWG. E-85-144 FOR BOLLARDS DETAILS.
7. REFER TO DWG. E-90-03 FOR PAD-MOUNT EQUIPMENT LOCATION DETAIL.
8. IF THE PADMOUNT TRANSFORMER REQUIRES A BLAST WALL,
PLEASE CONTACT UTILITY FOR INCREASED SIZE OF TRANSFORMER PAD.
9. A 3000mm FLAT AREA MUST BE PROVIDED IN FRONT AND 1000mm ON EACH SIDE OF TRANSFORMER PAD.
10. ALL SECONDARY DUCTS TO BE LABELED WITH WEATHER PROOF TAG INDICATING THE CIVIC #'S AND TAP BOX THEY FEED.
11. GRAVEL TO BE NO GREATER THAN 35mm OR NO LESS THAN 15mm.
12. CONDUITS TO BE FLUSH WITH THE CONCRETE TRANSFORMER PAD.
13. ALL DIMENSIONS IN MILLIMETERS.

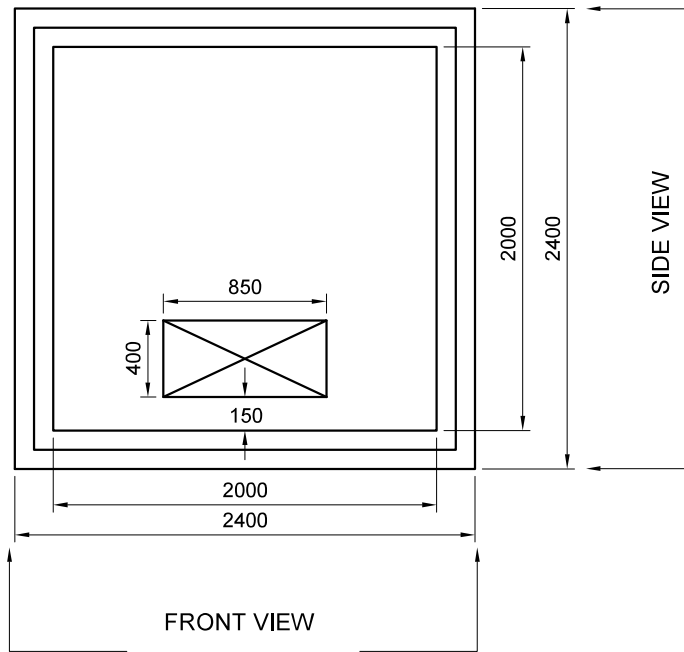


MARITIME ELECTRIC COMPANY, LIMITED

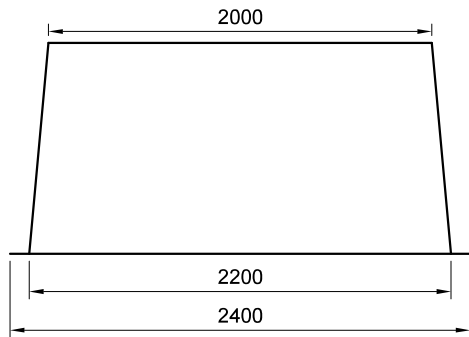
SCALE : N.T.S. _____
 DRAWN : J.E.B. _____
 CHECKED : F.F. _____
 APPROVED : F.F. _____

**CONCRETE PAD
 30 PADMOUNTED TRANSFORMER
 1000KVA - 2500KVA**

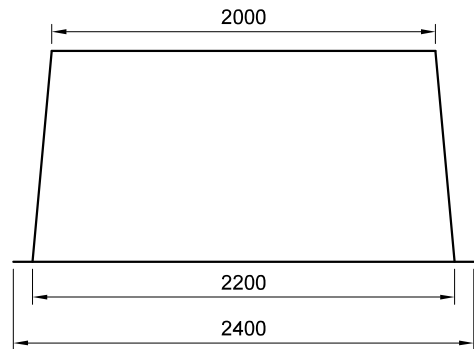
DATE : OCT._22_,'96
 REVISED : JUN._27_,'18
 DWG. No. : E-85-140 _____



PLAN VIEW



FRONT VIEW



SIDE VIEW

NOTES:

1. REFER TO DWG. E-85-143 FOR GROUNDING DETAILS.
2. ALL MEASUREMENTS IN MILLIMETERS UNLESS INDICATED.
3. CONDUITS TO EXTEND HALF THE DISTANCE FROM GRAVEL TO TOP SURFACE OF PAD.
4. SHALL BE CONSTRUCTED WITH SUFFICIENT REINFORCING IN THE WALL AND TOP IN ORDER TO ACCOMMODATE A MINIMUM 4500kg DIRECT VERTICAL LOAD.
5. IF ANY DIMENSIONS OF THE PAD DIFFER FROM THIS DRAWING, PLEASE CONSULT MECL PRIOR TO ORDERING.
6. FIBERGLASS PAD CANNOT BE USED IF FIRE WALL IS REQUIRED.

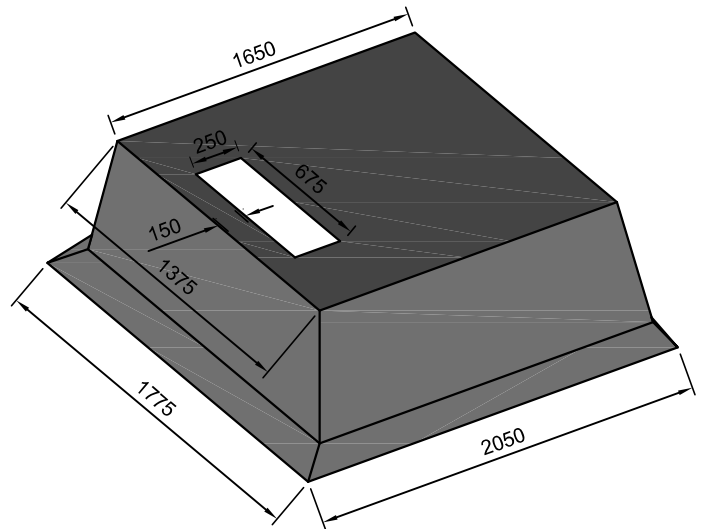
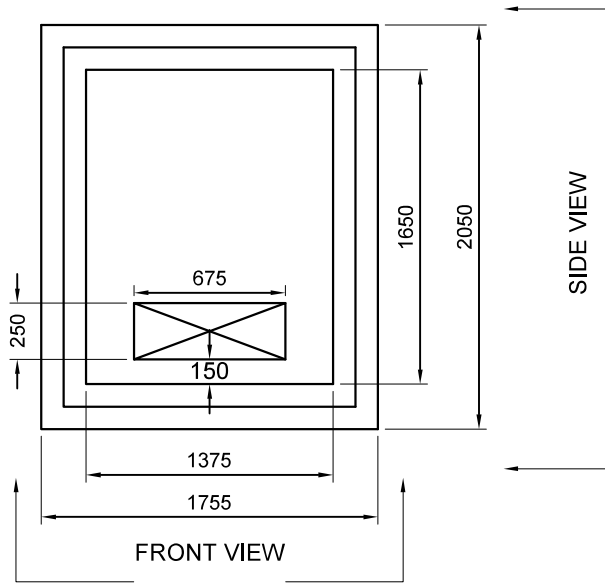


MARITIME ELECTRIC COMPANY, LIMITED

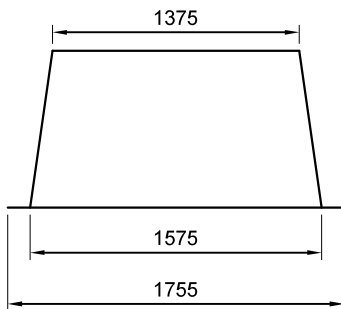
SCALE : N.T.S.____
 DRAWN : J.E.B.____
 CHECKED : Z.S.____
 APPROVED: F.F.____

**FIBERGLASS TRANSFORMER PAD
 THREE PHASE - UP TO 750KVA**

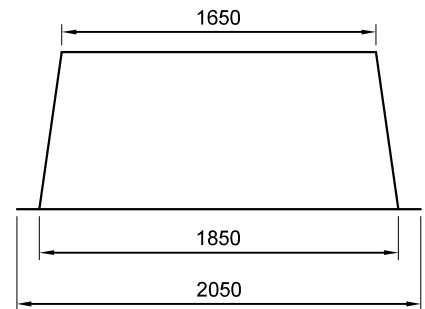
DATE : JUN._01_-'12_
 REVISED : JUN._28_-'18_
 DWG. No. : E-12-001



PLAN VIEW



FRONT VIEW



SIDE VIEW

NOTES:

1. REFER TO DWG. E-85-143 FOR GROUNDING DETAILS.
2. ALL MEASUREMENTS IN MILLIMETERS UNLESS INDICATED.
3. CONDUITS TO EXTEND HALF THE DISTANCE FROM GRAVEL TO TOP SURFACE OF PAD.
4. SHALL BE CONSTRUCTED WITH SUFFICIENT REINFORCING IN THE WALL AND TOP IN ORDER TO ACCOMMODATE A MINIMUM 4500kg DIRECT VERTICAL LOAD.
5. IF ANY DIMENSIONS OF THE PAD DIFFER FROM THIS DRAWING, PLEASE CONSULT MECL PRIOR TO ORDERING.
6. FIBERGLASS PAD CANNOT BE USED IF FIRE WALL IS REQUIRED.

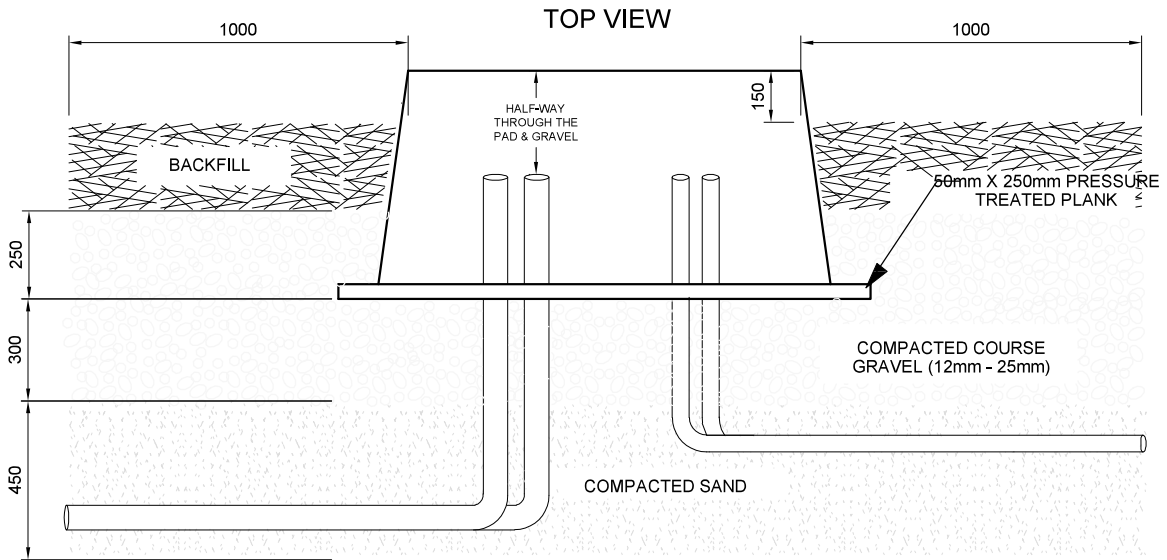
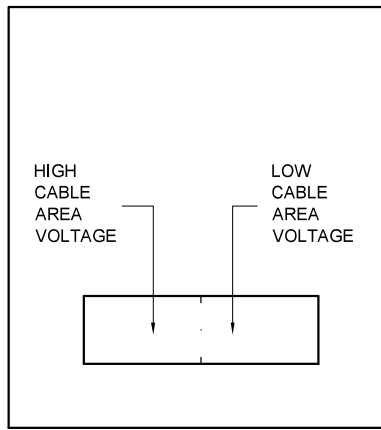


MARITIME ELECTRIC COMPANY, LIMITED

SCALE : N.T.S.____
 DRAWN : J.E.B.____
 CHECKED : Z.S.____
 APPROVED: F.F.____

**FIBERGLASS TRANSFORMER PAD
 SINGLE PHASE - UP TO 167 KVA**

DATE : JUN._01,_'12_
 REVISED : JUN._28,_'18_
 DWG. No. : E-12-02__



ELEVATION

NOTES:

1. GRAVEL = 12mm - 25mm.
2. INSTALL 50mm X 250mm PRESSURE TREATED PLANK UNDER ALL FOUR EDGES OF THE FIBERGLASS PAD.
3. ENSURE ALL CONDUITS LINE UP WITH THE TRANSFORMER PAD OPENING.
4. CUT CONDUITS OFF HALF WAY BETWEEN GRAVEL AND TOP OF PAD.
5. ALL CONDUITS TO BE LABELLED WITH WATERPROOF TAGS INDICATING THE CMIC #'S, OR TAP BOX THEY FEED.
6. FIBERGLASS PAD ARE NOT TO BE USED IF BLAST WALL IS REQUIRED.
7. REFER TO DWG. E-90-03 FOR PAD-MOUNT EQUIPMENT LOCATION DETAIL.
8. REFER TO DWG. E-85-143 FOR GROUNDING DETAILS.
9. REFER TO DWG. E-85-144 FOR BOLLARDS DETAILS.
10. A 3000mm FLAT AREA MUST BE PROVIDED IN FRONT AND 1000mm ON EACH SIDE OF TRANSFORMER PAD.

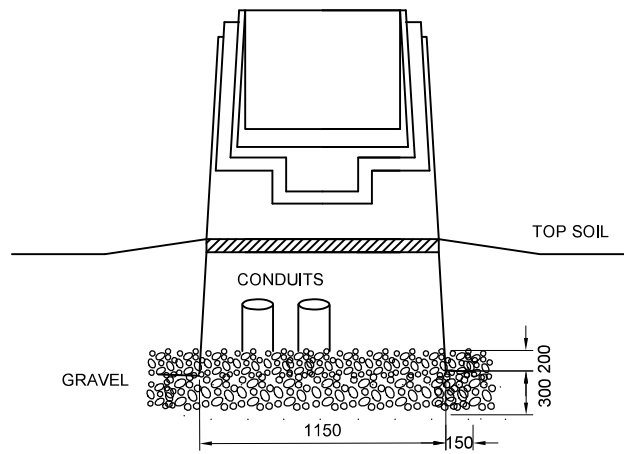


MARITIME ELECTRIC COMPANY, LIMITED

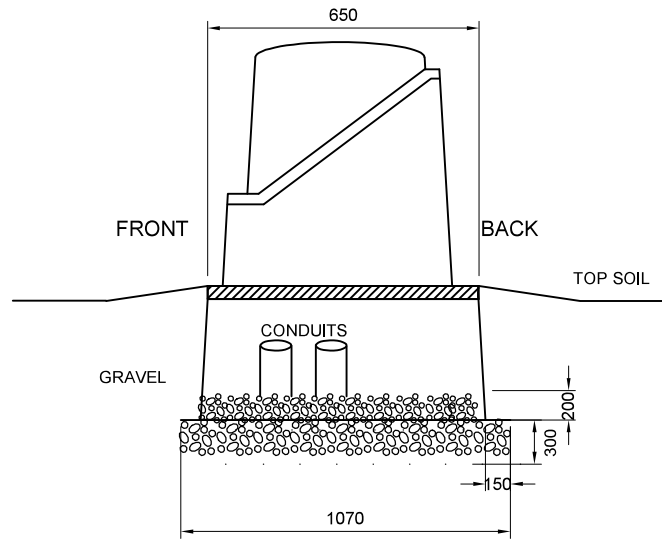
SCALE : N.T.S. _____
 DRAWN : J.E.B. _____
 CHECKED : N.K. _____
 APPROVED: N.K. _____

FIBERGLASS
 TRANSFORMER PAD
 INSTALLATION

DATE : MAY_31_'12
 REVISED : JUN_27_'18
 DWG. No. : UG-12-02_____



FRONT VIEW



SIDE VIEW

NOTES:

1. ALL APPROPRIATE PRIMARY CONDUITS TO BE INSTALLED IN EXCAVATED AREA.
2. BACKFILL MATERIAL TO BE MECHANICALLY TAMPED FROM THE BOTTOM OF THE EXCAVATION TO THE GRAVEL LEVEL.
3. NO LESS THAN 300mm OF DRAINAGE GRAVEL EXTENDING 150mm BEYOND THE OUTSIDE EDGE OF THE CABINET TO BE INSTALLED AND COMPACTED.
4. 200mm OF DRAINAGE GRAVEL TO BE INSTALLED INSIDE CABINET AFTER IT HAS BEEN PLACED.
5. CABINET IS TO BE SQUARELY POSITIONED AND LEVELED. THE CABINET IS TO BE GRADED AWAY WITH TOPSOIL.
6. ALL CONDUITS ARE TO BE LABELED WITH WATERPROOF TAGS INDICATING CONDUIT DIRECTION.
7. CONDUITS ARE TO BE CUT HALFWAY BETWEEN GRAVEL AND TOP OF BASE.
8. REFER TO THE GROUNDING DETAIL DRAWING UG-18-01.
9. REFER TO THE VEHICLE PROTECTION DETAIL DRAWING E-85-144.

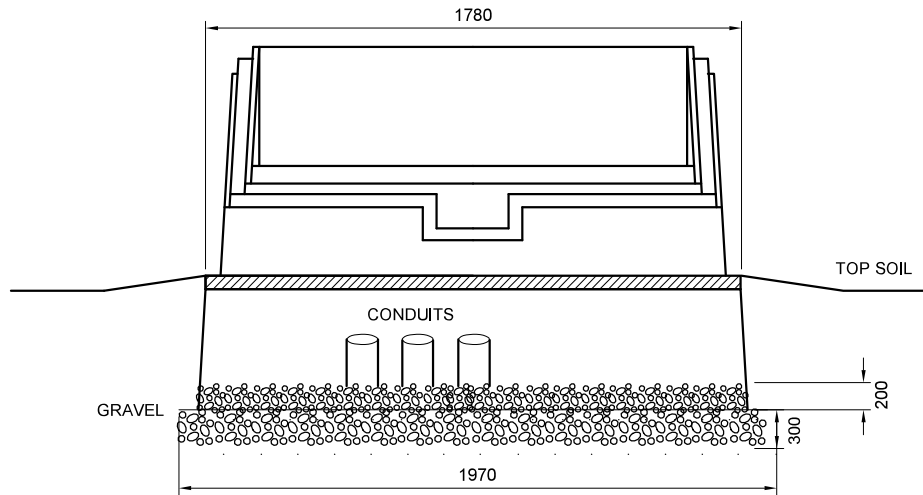


MARITIME ELECTRIC COMPANY, LIMITED

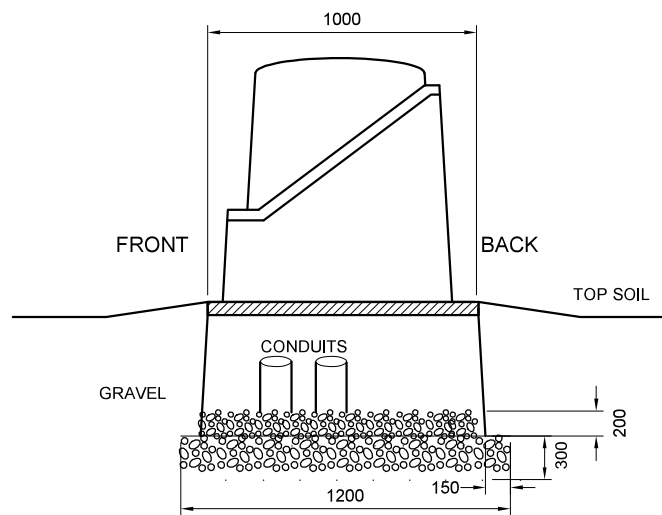
SCALE : N.T.S. _____
 DRAWN : F.F. _____
 CHECKED : Z.S. _____
 APPROVED: F.F. _____

SINGLE PHASE PRIMARY
 SECTIONALIZING CABINET

DATE : JUN_27,_2018
 REVISED :
 DWG. No. : UG-18-04



FRONT VIEW



SIDE VIEW

NOTES:

1. ALL APPROPRIATE PRIMARY CONDUITS TO BE INSTALLED IN EXCAVATED AREA.
2. BACKFILL MATERIAL TO BE MECHANICALLY TAMPED FROM THE BOTTOM OF THE EXCAVATION TO THE GRAVEL LEVEL.
3. NO LESS THAN 300mm OF DRAINAGE GRAVEL EXTENDING 150mm BEYOND THE OUTSIDE EDGE OF THE CABINET TO BE INSTALLED AND COMPACTED.
4. 200mm OF DRAINAGE GRAVEL TO BE INSTALLED INSIDE CABINET AFTER IT HAS BEEN PLACED.
5. CABINET IS TO BE SQUARELY POSITIONED AND LEVELED. THE CABINET IS TO BE GRADED AWAY WITH TOPSOIL.
6. ALL CONDUITS ARE TO BE LABELED WITH WATERPROOF TAGS INDICATING CONDUIT DIRECTION.
7. CONDUITS ARE TO BE CUT HALFWAY BETWEEN GRAVEL AND TOP OF BASE.
8. REFER TO THE GROUNDING DETAIL DRAWING UG-18-01.
9. REFER TO THE VEHICLE PROTECTION DETAIL DRAWING E-85-144.

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MARITIME ELECTRIC COMPANY, LIMITED

SCALE : N.T.S. _____

DRAWN : J.E.D. _____

CHECKED : N.K. _____

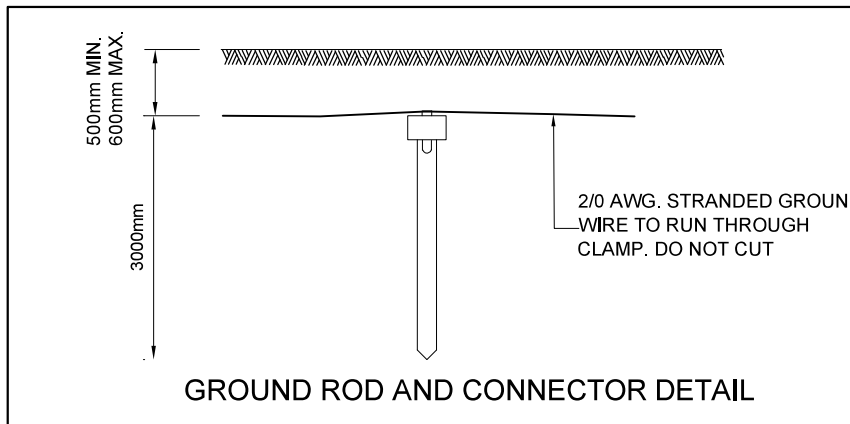
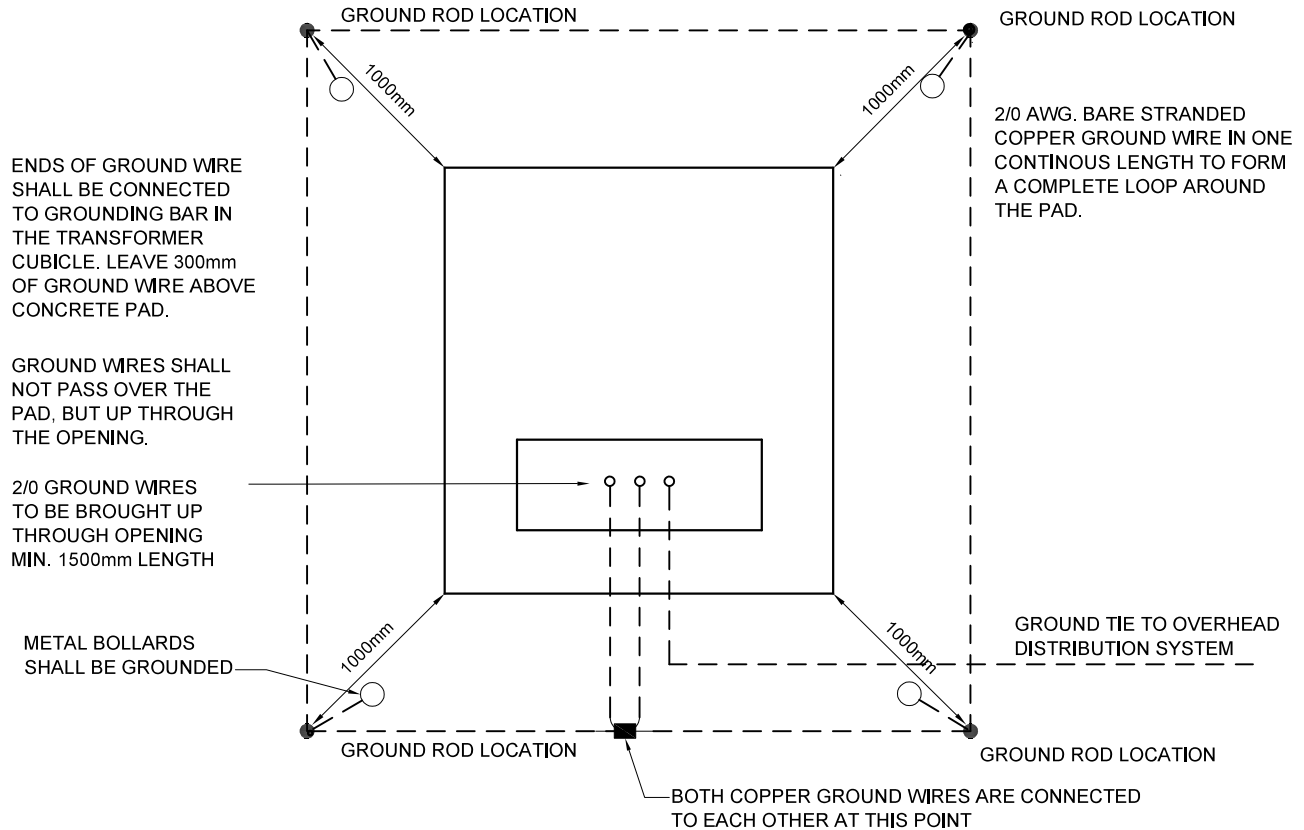
APPROVED: N.K. _____

THREE PHASE PRIMARY
 SECTIONALIZING CABINET

DATE : MAY_05_'05

REVISED : JUN_27_'18

DWG. No. : UG-05-06



NOTES:

1. GROUNDING SHALL BE IN ACCORDANCE WITH SECTION 10 OF THE LATEST CANADIAN ELECTRICAL CODE PART 1.
2. ALL DIMENSIONS IN MILLIMETERS UNLESS STATED OTHERWISE.
3. A ROD ELECTRODE OR PLATE ELECTRODE MAYBE USED FOR GROUNDING.
4. PLATE ELECTRODE SHALL BE IN DIRECT CONTACT WITH EXTERIOR SOIL AT NOT LESS THAN 600mm BELOW GRADE.
5. DEPTH OF GROUNDING SYSTEM TO BE BETWEEN 300mm AND 600mm.

MARITIME
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MARITIME ELECTRIC COMPANY, LIMITED

SCALE : N.T.S. _____

DRAWN : J.E.B. _____

CHECKED : Z.S. _____

APPROVED: F.F. _____

**GROUNDING DETAILS FOR
PADMOUNTED TRANSFORMER**

DATE : JUNE_22_'87

REVISED : JUNE_25_'18

DWG. No. : E-85-143

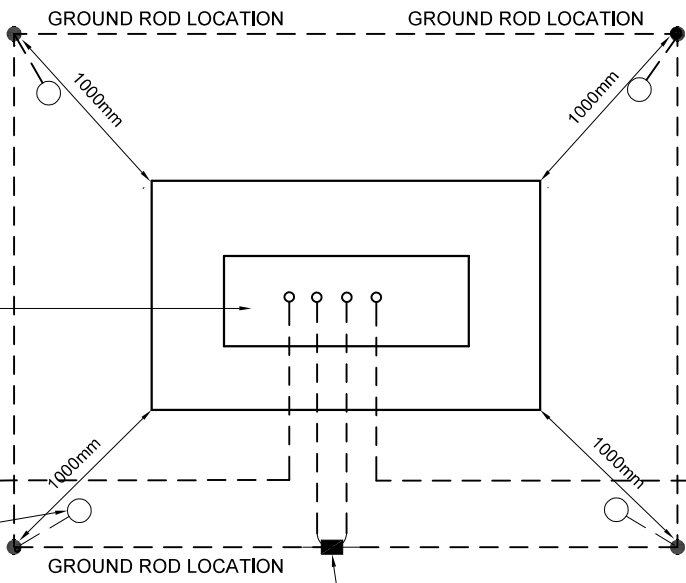
ENDS OF GROUND WIRE SHALL BE CONNECTED TO GROUNDING BAR IN THE CABINET. LEAVE 300mm (1') OF GROUND WIRE INSIDE THE CABINET..

2/0 AWG. BARE STRANDED COPPER GROUND WIRE IN ONE CONTINUOUS LENGTH TO FORM A COMPLETE LOOP AROUND THE EQUIPMENT.

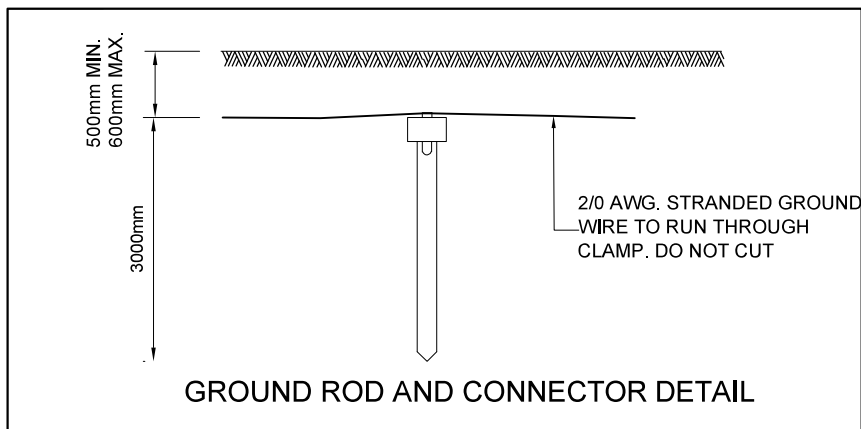
2/0 GROUND WIRES TO BE BROUGHT UP THROUGH OPENING MIN. 1.5M (5') LENGTH

TO THE OTHER CABINET, PAD-MOUNTED EQUIPMENT

METAL BOLLARDS SHALL BE GROUNDED



COPPER GROUND WIRES CROSSING OVER EACH OTHER AT THIS POINT AND CONNECTED TOGETHER USING A SUITABLE CONNECTOR FOR COPPER CONDUCTOR AND DIRECT BURIAL APPLICATIONS



NOTES:

1. GROUNDING SHALL BE IN ACCORDANCE WITH SECTION 10 OF THE LATEST CANADIAN ELECTRICAL CODE PART 1.
2. ALL DIMENSIONS IN MILLIMETERS UNLESS STATED OTHERWISE.
3. A ROD ELECTRODE OR PLATE ELECTRODE MAYBE USED FOR GROUNDING.
4. PLATE ELECTRODE SHALL BE IN DIRECT CONTACT WITH EXTERIOR SOIL, INSTALLED NOT LESS THAN 600mm BELOW GRADE.
5. DEPTH OF GROUNDING SYSTEM TO BE BETWEEN 500mm AND 600mm.
6. TIE SHALL CONNECT TO THE SECTIONALIZING CABINET GROUND & TO THE RISER POLE GROUND & OTHER HV CABINET OR PAD-MOUNT.

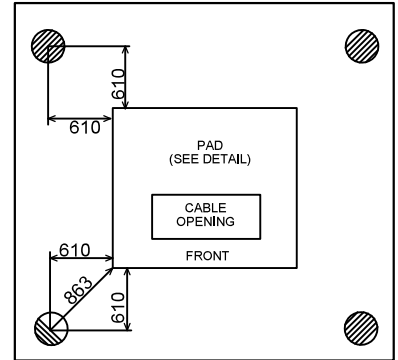
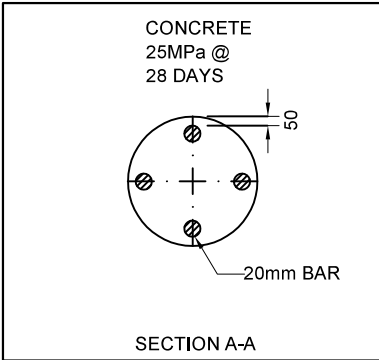
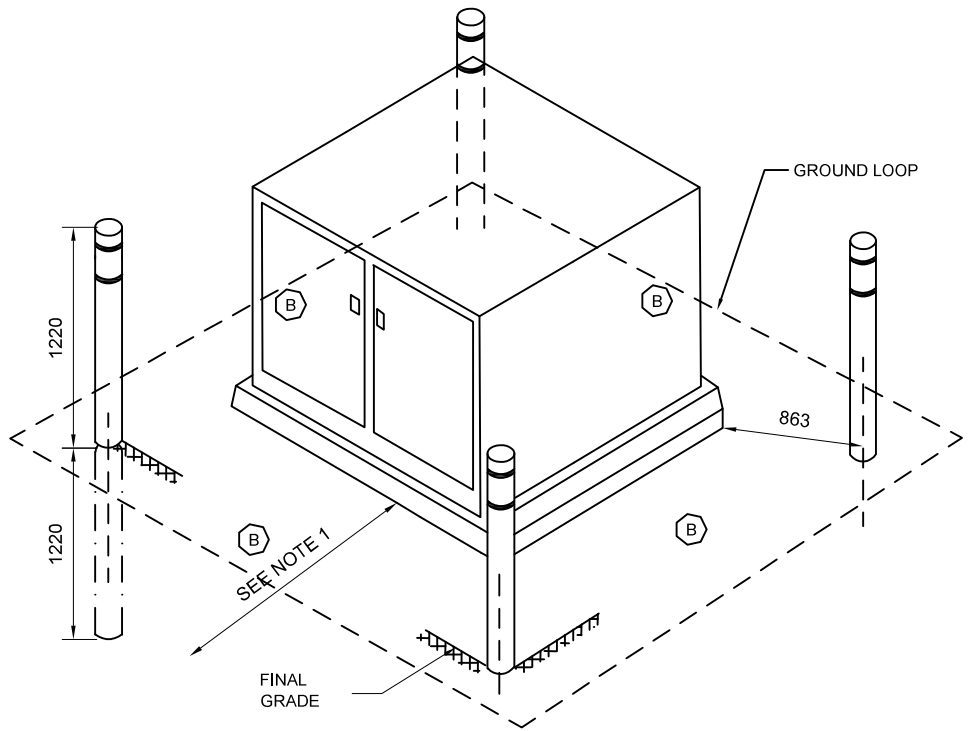
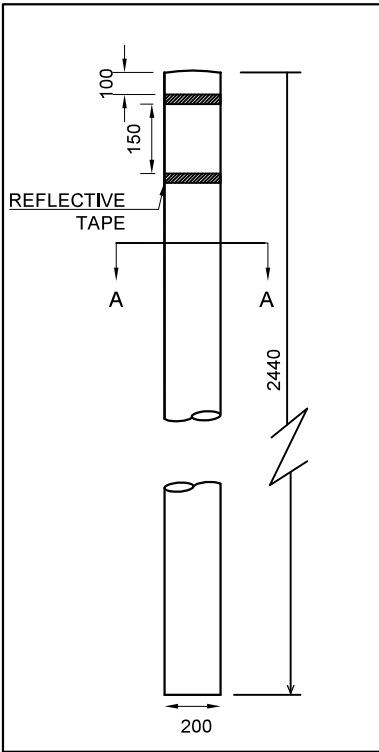


MARITIME ELECTRIC COMPANY, LIMITED

SCALE : N.T.S._____
 DRAWN : F.F._____
 CHECKED : Z.S._____
 APPROVED: F.F._____

GROUNDING DETAILS FOR SECTIONALIZING CABINETS

DATE : JUN._25_,'18
 REVISED : JUN._25_,'18
 DWG. No. : UG-18-01



NOTES:

1. ORIENTATION OF PAD OR SECTIONALIZING CABINET MUST ALLOW 3000mm OF WORKING SPACE IN FRONT OF PAD FOR OPERATION.
2. THE TRANSFORMER OR SECTIONALIZING CABINET SHALL BE INSTALLED AT LEAST 3000mm FROM ANY COMBUSTIBLE SURFACE OR MATERIAL ON A BUILDING AND SHALL BE INSTALLED AT LEAST 6000mm FROM ANY WINDOW, DOOR OR VENTILATION OPENING ON A BUILDING. IF THESE CLEARANCES CANNOT BE MET AN APPROVED CONCRETE RETAINING WALL MUST BE PROVIDED.
3. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.
4. IF THE PAD-MOUNT TRANSFORMER REQUIRES A BLAST WALL, PLEASE CONTACT MECL FOR INCREASED SIZE OF TRANSFORMER PAD.
5. BOLLARDS MUST HAVE PLASTIC COVER WITH REFLECTIVE TAPE. YELLOW COVERS ARE REQUIRED FOR AREAS INTENDED FOR VEHICLE TRAFFIC/PARKING.
6. BOLLARDS MUST BE GREEN PLASTIC COVER FOR ALL MECL PAD-MOUNT EQUIPMENT INSTALLED BETWEEN HILLSBOROUGH ST. AND FANNING BANK AND ON OR SOUTH OF EUSTON ST.
7. REFER TO THE GROUNDING DETAIL DRAWING E-85-143 AND UG-18-01.
8. (B) MECL REPRESENTATIVE WILL INFORM YOU IF MORE THAN FOUR BOLLARDS ARE REQUIRED.
9. REINFORCING STEEL SET 1220mm IN GROUND. USE SONO TUBE FOR FORM. NO METAL ON BOLLARD EXTERIOR UNLESS GROUNDING.
10. FOR MECL APPROVED BOLLARD COVERS DETAILS, REFER TO DWG # E-18-100

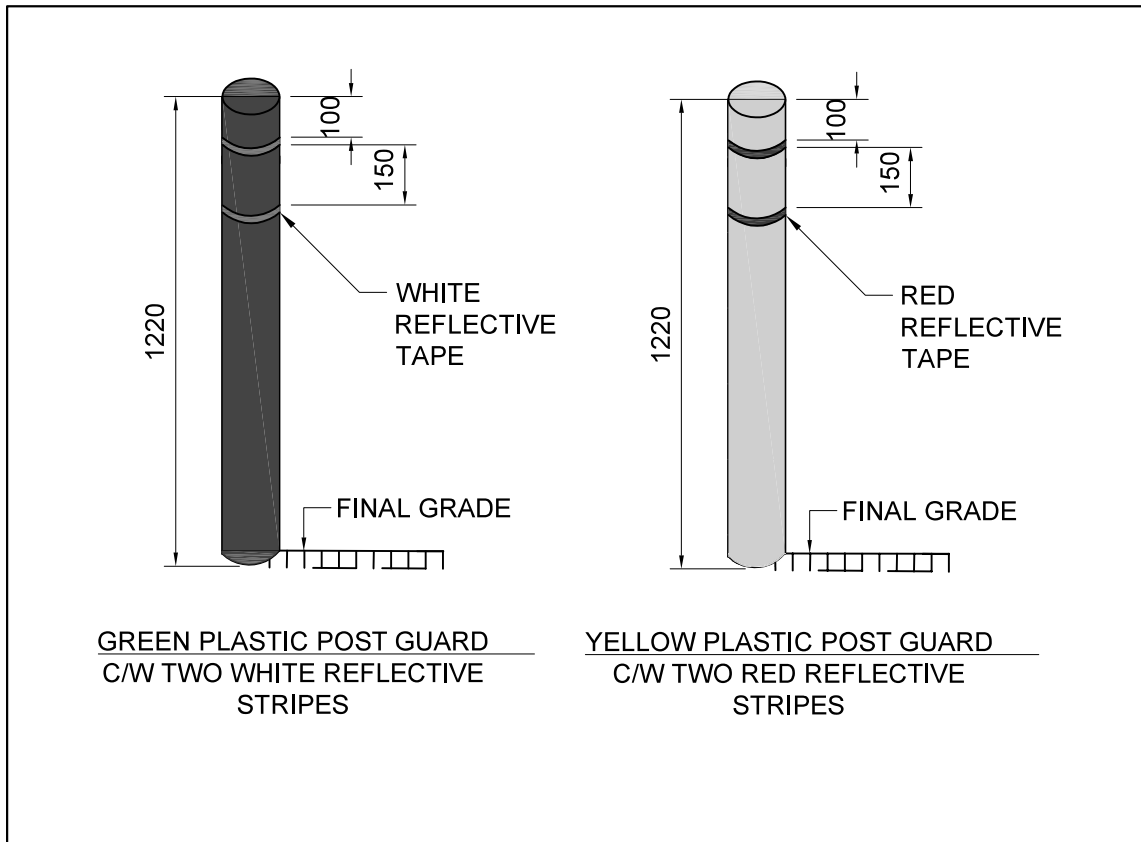


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 CHECKED : Z.S. _____
 APPROVED: F.F. _____

**PAD MOUNT TRANSFORMER
 & SECTIONALIZING CABINET
 CONCRETE PROTECTIVE BOLLARDS**

DATE : JUN._22,_'87
 REVISED : JUN._20,_'18_
 DWG. No. : E-85-144_____



NOTES:

1. ONLY MECL APPROVED PLASTIC BOLLARD COVERS TO BE INSTALLED.
2. HDPE POST GUARD / SURE GUARD YELLOW C/W TWO REFLECTIVE RED STRIPES OR HDPE POST GUARD / SURE GUARD GREEN C/W TWO REFLECTIVE WHITE STRIPES CAN BE USED FOR BOLLARD COVERS ONLY.
3. THE WIDTH OF THE PLASTIC BOLLARD COVER IS 8 - 7/8 " AND HEIGHT IS 52 INCH.
4. BOLLARDS SHALL BE PLACED SO AS NOT TO OBSTRUCT ANY DOORS NOR RESTRICT THE OPERATION OF THE EQUIPMENT.
5. REFER TO DRAWINGS E-85-144, E-85-143 AND UG-18-01 FOR MORE DETAIL.

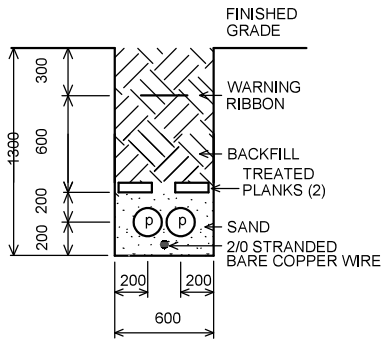


MARITIME ELECTRIC COMPANY, LIMITED

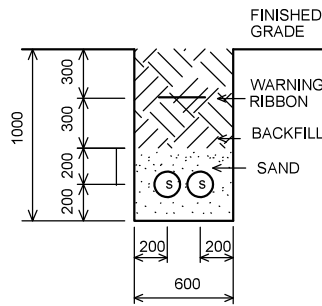
SCALE : N.T.S. _____
 DRAWN : F.F. _____
 CHECKED : F.F. _____
 APPROVED: F.F. _____

**SPECIFICATION FOR
 PLASTIC BOLLARD COVERS**

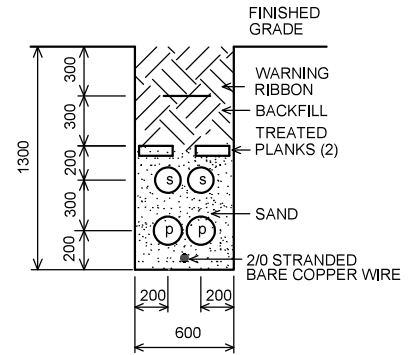
DATE : SEP._10_'18_
 REVISED :
 DWG. No. : E-18-100



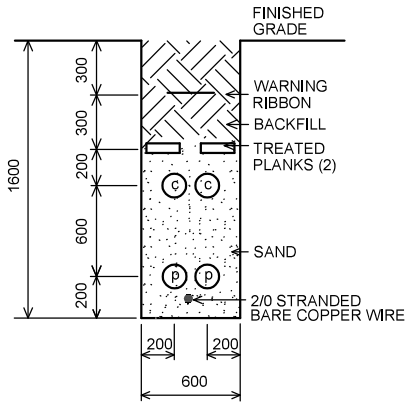
PRIMARY DUCTS



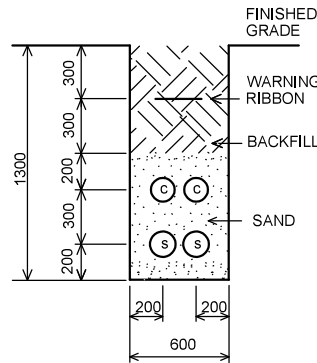
SECONDARY DUCTS



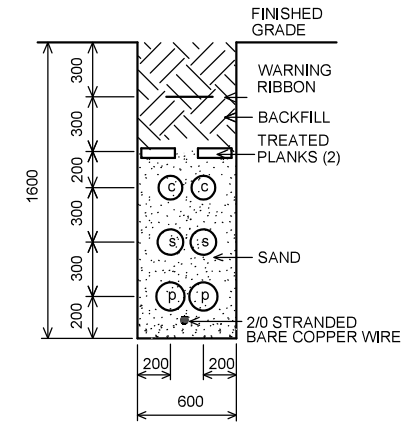
PRIMARY & SECONDARY DUCTS



PRIMARY VOLTAGE AND COMMUNICATION DUCTS



SECONDARY VOLTAGE AND COMMUNICATION DUCTS



PRIMARY, SECONDARY VOLTAGE AND COMMUNICATION DUCTS

NOTES:

1. (P) = PRIMARY VOLTAGE DUCT
125mm (5") RIGID PVC (1 & 3 PHASE)
QUANTITY TO BE DETERMINED BY MARITIME ELECTRIC.
A MINIMUM OF TWO DUCTS TO BE INSTALLED ALWAYS.
2. (S) 100mm (4") SECONDARY VOLTAGE DUCTS RIGID PVC OR DB2 DUCT FOR SECONDARY BUS BETWEEN TRANSFORMERS AND SECONDARY PEDESTALS AND FROM SECONDARY PEDESTAL TO SECONDARY PEDESTAL.
A MINIMUM OF TWO DUCTS TO BE INSTALLED ALWAYS.
3. (C) = COMMUNICATION DUCTS
QUANTITY AND SIZE TO BE DETERMINED BY APPROPRIATE PARTY.
4. 6mm DIA. NYLON ROPE INSTALLED IN ALL DUCTS.
5. BACKFILLING OF TRENCH IN LAYERS (MECHANICALLY TAMPED).
6. EXCAVATED SOIL MAY BE USED FOR BACKFILL, ABOVE SAND LEVEL IF FREE FROM LARGE ROCKS OR DEBRIS.
7. HIGH VOLTAGE WARNING RIBBON TO BE BURIED AT 300mm.
8. PRESSURE TREATED PLANKS - 2 (50mm x150mm) TO BE BURIED 200mm ABOVE TOP CONDUITS IN PRIMARY VOLTAGE TRENCHES.
9. FOR ANY TRENCHING REQUIRED TO CROSS THE ROAD R.O.W. REFER TO DWG.#UG-92-01.
10. IF SITE CONDITIONS PROHIBIT TRENCH DEPTH AS PER THIS DRAWING CONSULT MECL.
11. ALL DUCTS TO BE LABELED WITH WEATHER PROOF TAGS INDICATING THE DESTINATION OF THE CONDUITS. IN THE CASE OF RESIDENCES, CIVIC NUMBERS ARE TO BE INSTALLED.
12. **CONTRACTOR TO PROVIDE A MINIMUM OF 48 HRS. NOTICE TO MECL PRIOR TO SCHEDULED BACKFILLING OF WORKS. BACKFILLING NOT PERMITTED UNTIL APPROVED BY MECL.**

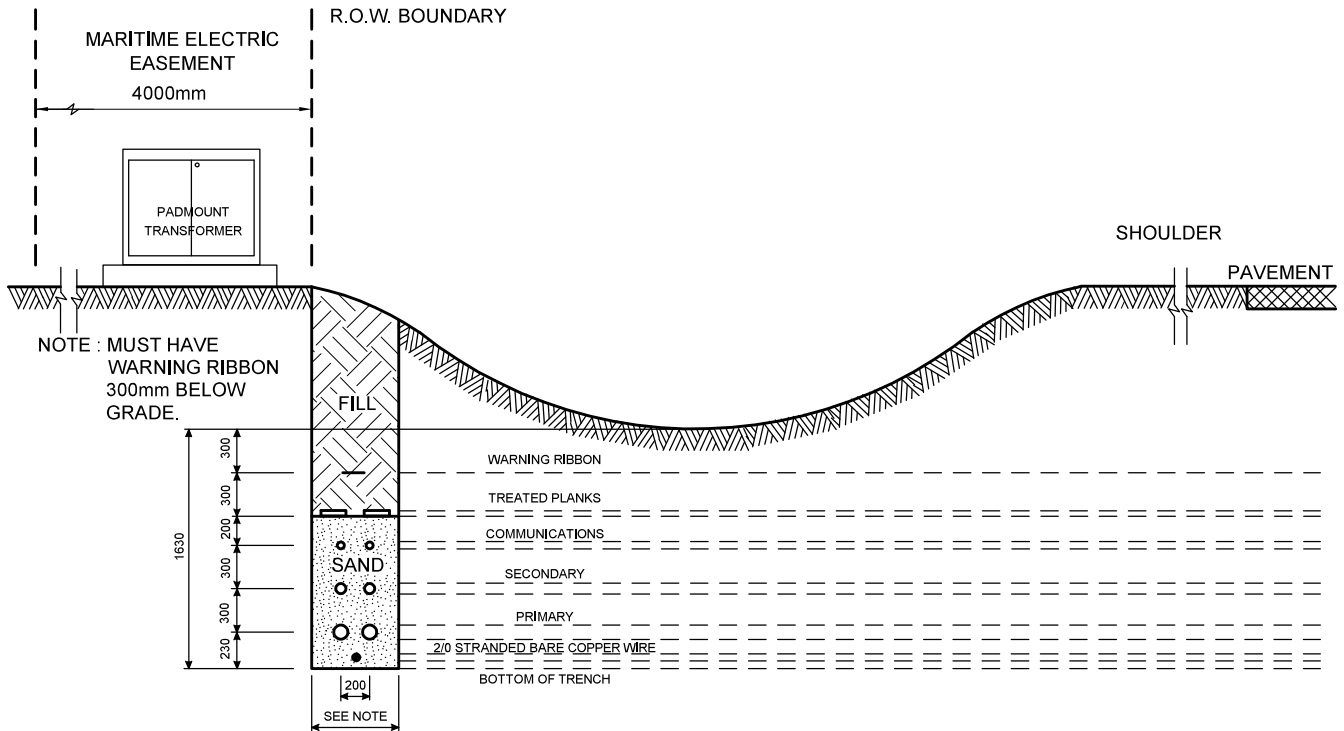
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ELECTRIC
A FORTIS COMPANY

MARITIME ELECTRIC COMPANY, LIMITED

SCALE : N.T.S. _____
DRAWN : J.E.B. _____
CHECKED : N.K. _____
APPROVED: N.K. _____

TRENCHING DETAILS

DATE : JUL_29_'87
REVISED : FEB_22,'19
DWG. No. : E-88-296__



NOTE : MUST HAVE WARNING RIBBON 300mm BELOW GRADE.

NOTE : TRENCH WIDTH TO BE IN ACCORDANCE WITH OCCUPATIONAL HEALTH AND SAFETY REQUIREMENTS.
REF. DWG. E-88-296

A 3000mm WORKING SPACE MUST BE PROVIDED IN FRONT OF TRANSFORMER PAD.

A 1200mm OF FLAT SPACE MUST BE PROVIDED IN FRONT OF TRANSFORMER PAD IN LOCATIONS WHERE SLOPE EXISTS.

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS INDICATED.

EASEMENT APPLIES TO PAD-MOUNT EQUIPMENT AND SECONDARY PEDESTALS.

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CHECKED : F.F. _____

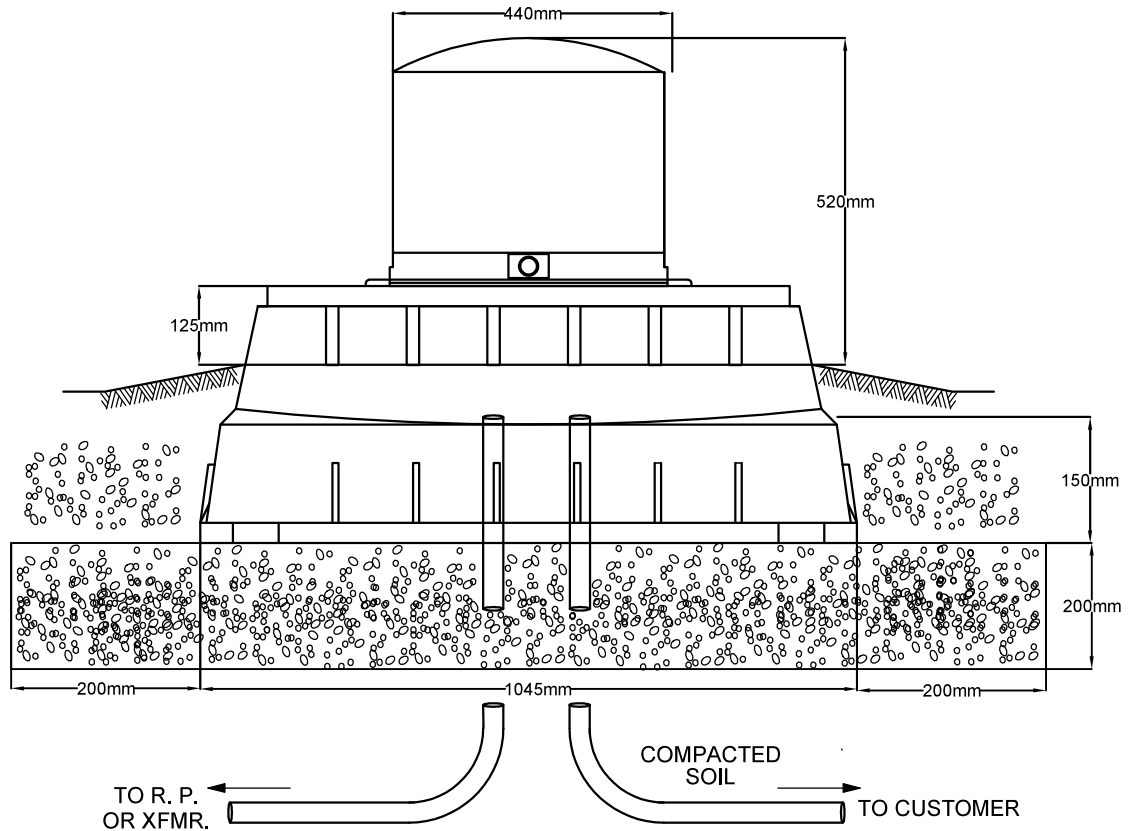
APPROVED: F.F. _____

UNDERGROUND CLEARANCES
AT DITCHES IN R.O.W.

DATE : JUL_07_'92

REVISED : JUN_27_'18

DWG. No. : UG-92-01 _____



NOTES

1. FINAL GRADE TO BE SLOPED AWAY FROM PEDESTAL FOR PROPER DRAINAGE.
2. PEDESTAL INSTALLED AT BASE OF POLE OR:
 - A) PAD-MOUNT EQUIPMENT MUST MAINTAIN MINIMUM 1000mm FROM POLE AND MUST BE ON PRIVATE PROPERTY.
 - B) PEDESTAL INSTALLED ON EASEMENT WITHOUT POLE MUST MAINTAIN A MINIMUM 1000mm FROM LOT LINE FACING ROAD OR RIGHT OF WAY.
3. PEDESTAL TO SIT ON 200mm LAYER OF COMPACTED GRAVEL BASE. 150mm OF GRAVEL TO PROTRUDE AROUND ENTIRE PERIMETER OF PEDESTAL.
4. BACKFILL MUST BE COMPACTED FROM BOTTOM OF TRENCH HOUSING CONDUIT TO GRAVEL BASE.
5. MATERIAL USED TO HOLD PEDESTAL IN PLACE AND GRADE AWAY IS TO BE TOPSOIL.
6. ALL CONDUIT SUBJECT TO CRUSHING DUE TO COMPACTION ARE TO BE P.V.C.
7. ALL 90°'s IN SECONDARY BUS SYSTEM ARE TO BE P.V.C. (POLE - PEDESTAL AND/OR TRANSFORMER.)
8. ALL CONDUIT TO BE PROPERLY IDENTIFIED WITH WATERPROOF TAGS INDICATING INCOMING AND OUTGOING LINES. PLEASE IDENTIFY WITH CIVIC. #.
9. ORDER # FOR COMPLETE UNITS - PEDESTAL WITH H.D. POLYETHYLENE BASE: AG-30HDX.
10. MINIMUM CONDUCTOR SIZE FEEDING A SECONDARY TAP BOX IS 3/0 COPPER, WHEN MORE THAN TWO ARE TO BE FED OFF THE BOX, LARGER CONDUCTOR MAY BE REQUIRED. MECL IS TO BE CONTACTED FOR CONDUCTOR.

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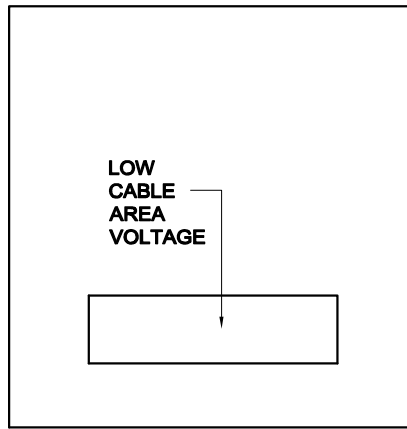
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**SECONDARY ABOVE GRADE
PEDESTAL**

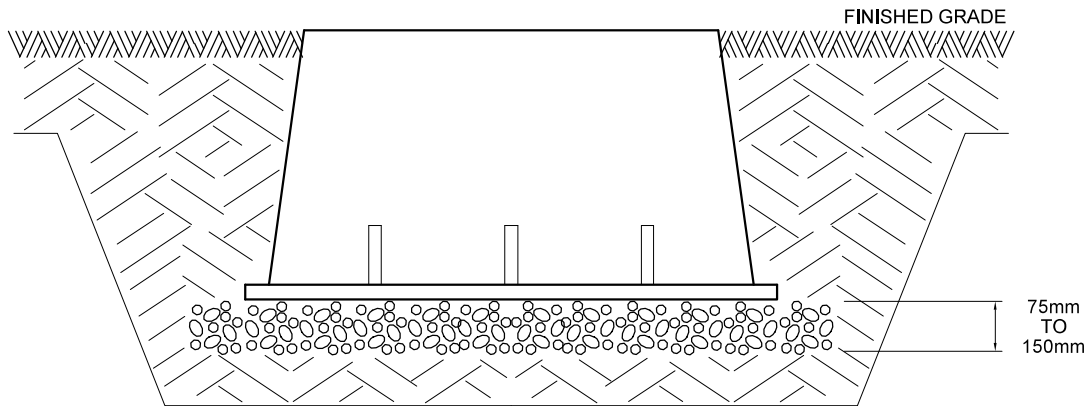
DATE : MAR._04_,'05

REVISED : JUN._25_,'18

DWG. No. : UG-05-03 _____



TOP VIEW



ELEVATION

1. PREPARE THE EXCAVATION APPROXIMATELY 150mm DEEPER THAN THE OVERALL HEIGHT OF THE ENCLOSURE. THE LENGTH AND WIDTH OF THE EXCAVATION SHOULD BE DETERMINED BY ADDING 100mm TO 150mm TO THE OVERALL LENGTH AND WIDTH OF THE HAND-HOLES OR PULL BOX.
2. PLACE 150mm OF COMPACTED GRAVEL. THE COMPACTED GRAVEL SHOULD BE LEVELED SO THE TOP OF THE HAND-HOLES OR PULL BOX IS FLUSH TO GRADE.
3. PLACE SELECTED BACKFILL INTO THE EXCAVATION AT 300mm LIFTS AND COMPACT EITHER BY MECHANICAL COMPACTING OR FLOODING THE EXCAVATION TO ACHIEVE THE DESIRED RELATIVE COMPACTION.
4. ALL SECONDARY CONDUITS TO BE LABELED WITH WEATHER PROOF TAG INDICATING THE CIVIC #S OR TAP BOX THEY SERVICE.
5. MINIMUM CONDUCTOR SIZE FEEDING A SECONDARY TAP BOX IS 3/0 COPPER, WHEN MORE THAN TWO ARE TO BE FED OFF THE TAP BOX, LARGER CONDUCTOR MAY BE REQUIRED. MECL IS TO BE CONTACTED FOR CONDUCTOR.

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SCALE : N.T.S. _____

DRAWN : J.E.B. _____

CHECKED : N.K. _____

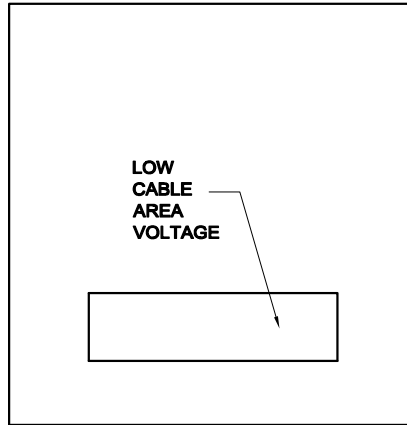
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GRADE LEVEL ENCLOSURES
 INSTALLATION DETAILS

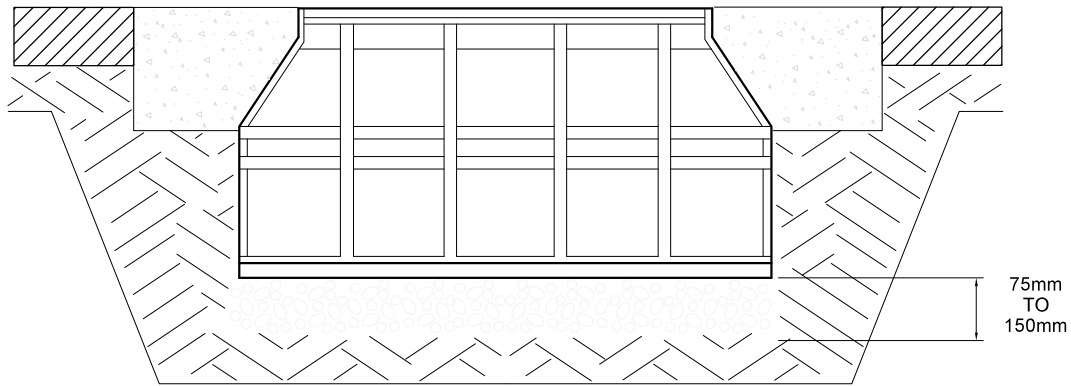
DATE : FEB_22_'99

REVISED : APR_25_'03

DWG. No. : E-99-01 _____



TOP VIEW



ELEVATION

1. PREPARE THE EXCAVATION APPROXIMATELY 150mm DEEPER THAN THE OVERALL HEIGHT OF THE ENCLOSURE. THE LENGTH AND WIDTH OF THE EXCAVATION SHOULD BE DETERMINED BY ADDING 100mm TO 150mm TO THE OVERALL LENGTH AND WIDTH OF THE HAND-HOLES OR PULL BOX.
2. PLACE APPROXIMATELY 75mm - 150mm OF COMPACTED MATERIAL SUCH AS SAND OR GRAVEL. GRAVEL IS THE RECOMMENDED MATERIAL BECAUSE OF ITS DRAINAGE CHARACTERISTICS. THE COMPACTED MATERIAL SHOULD BE LEVELED SO THE TOP OF THE HAND-HOLES OR PULL BOX IS FLUSH TO GRADE. INSTALL WITH COVER IN PLACE WITH SHIMS ON ALL SIDES AND ENDS TO PREVENT DEFLECTION.
3. PLACE SELECTED BACKFILL INTO THE EXCAVATION AT 300mm LIFTS AND COMPACT EITHER BY MECHANICAL COMPACTING OR FLOODING THE EXCAVATION. THE BACKFILL SHOULD BE DISCONTINUED APPROXIMATELY 200mm BELOW THE FINISHED GRADE. THE FINAL 200mm OF THE EXCAVATION SHOULD BE FINISHED WITH CONCRETE. THIS SHOULD BE ACCOMPLISHED BY PROVIDING A FORM AROUND THE ENCLOSURE THAT WOULD PRODUCE A 150mm WIDE COLLAR. SMALL SHIMS SHOULD BE PLACED BETWEEN COVER AND WALL UNTIL CONCRETE IS SET.
4. ALL SECONDARY CONDUITS TO BE LABELED WITH WEATHER PROOF TAG INDICATING THE CIVIC #'S OR TAP BOX THEY SERVICE.
5. MINIMUM CONDUCTOR SIZE FEEDING A SECONDARY TAP BOX IS 3/0 COPPER, WHEN MORE THAN TWO ARE TO BE FED OFF THE TAP BOX, LARGER CONDUCTOR MAY BE REQUIRED. MECL IS TO BE CONTACTED FOR CONDUCTOR.

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SCALE : N.T.S. _____

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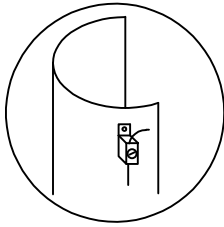
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**GRADE LEVEL ENCLOSURES
INSTALLATION IN
CONCRETE AND PAVEMENT**

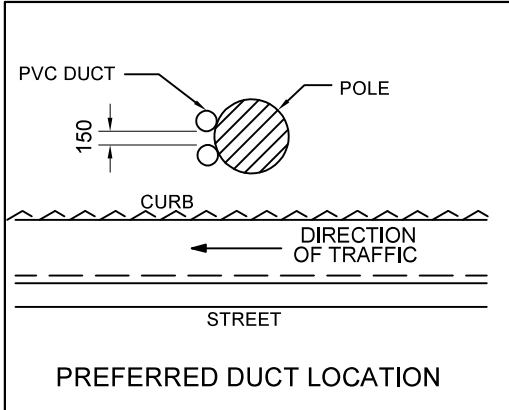
DATE : FEB._22_-'99

REVISED : JUL._04_-'18

DWG. No. : E-99-02 _____



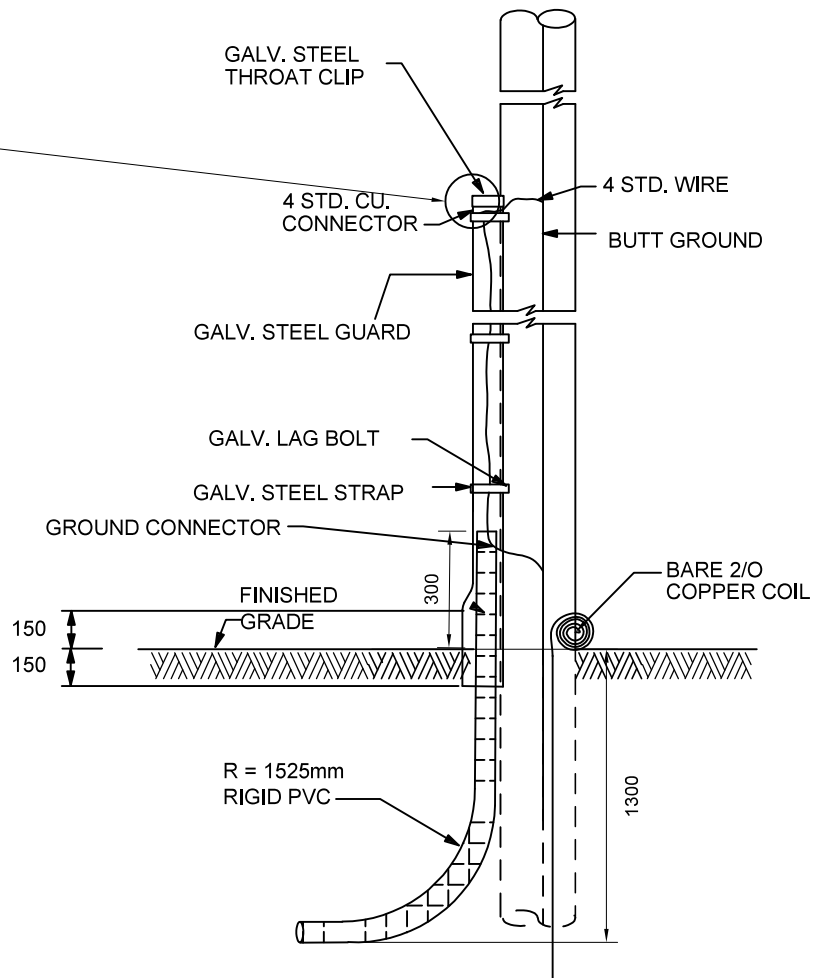
4 STD. CU TO GO THROUGH EACH CONNECTOR ON EACH SECTION FOR GROUNDING PURPOSES. CONNECT TO BUTT GROUND AT BOTH TOP AND BOTTOM.



SERVICE TYPE	# OF CONDUITS
PRIMARY 3 PHASE	2 - 127mm
PRIMARY 1 PHASE	2 - 100mm
SECONDARY 1 PHASE	2 - 100mm

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS STATED OTHERWISE.
2. THE GROUNDING AND NEUTRAL MUST BE THE SAME.
3. LOCATION OF DUCTS AT BASE OF POLE TO BE SPECIFIED BY MARITIME ELECTRIC.
4. ALL CONDUITS TO HAVE 6mm NYLON PULL ROPES AND PVC CAPS MUST BE PLACED ON BOTH ENDS TO PREVENT THE ENTRANCE OF WATER.
5. CONDUIT SWEEPS OF RIGID PVC ARE TO BE USED FOR ALL PRIMARY AND SECONDARY APPLICATIONS. RIGID PVC SWEEPS ARE TO HAVE A RADIUS OF 1525mm.
6. OVERLAP CABLE GUARD 50mm.
7. KEEP CONDUITS 150mm APART ON POLE.
8. THE 2/0 BARE COPPER CONDUCTOR TO BE RUN IN THE TRENCH SHALL HAVE 6000mm COILED AT THE BASE OF THE POLE.

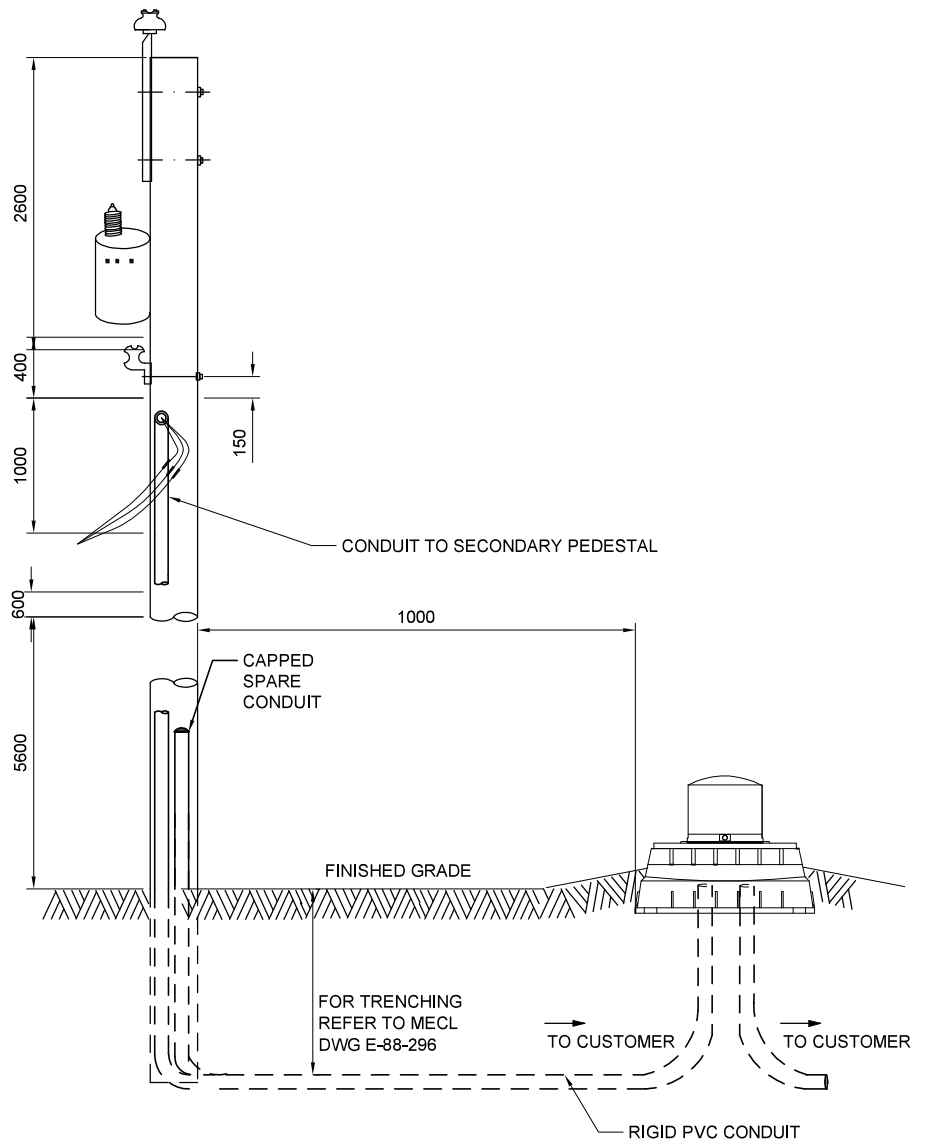
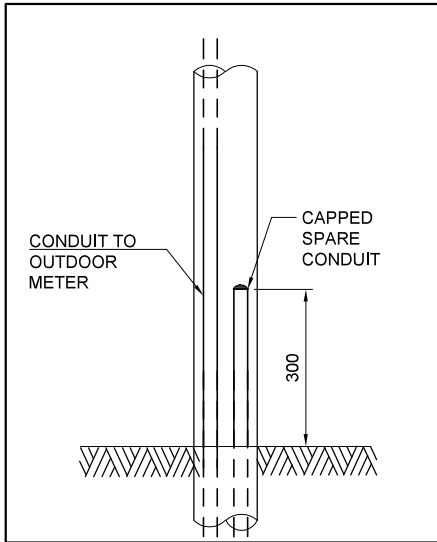
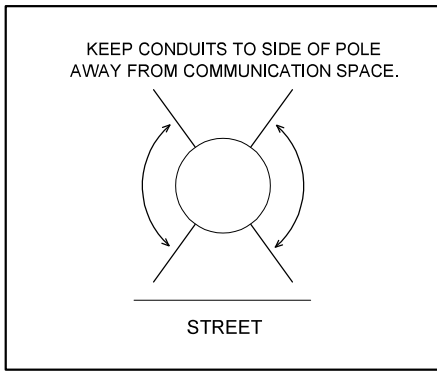


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 DRAWN : F.F. _____
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 APPROVED: F.F. _____

**STEEL GUARD
 SINGLE PHASE & THREE PHASE
 RISER POLE PROTECTION**

DATE : JUN_05_'08
 REVISED : JUN_27_'18
 DWG. No. : UG-08-01__



NOTES:

1. WHERE CONTACT HAZARD EXISTS THE LAST SECTION OF CONDUIT SHALL BE LEFT ON SITE TO BE INSTALLED BY MECL.
2. ALL CONDUIT INSTALLED ON POLE TO BE PVC WITH PROPER FROST JOINT.
3. SPARE CONDUIT IS TO BE CAPPED 1M UP ON RISER POLE.
4. CAP SPARE CONDUIT WITH PROPER CONDUIT CAP.
5. CONDUIT IS TO BE ATTACHED USING METAL STRAPS AND LAG BOLTS.
5. TRENCHING MUST BE CARRIED OUT AS PER MECL DWG-E-88-296.
7. ALL WORK MUST BE CARRIED OUT AS PER CANADIAN ELECTRICAL CODE.
8. ARMORED TECK-CABLE MAY BE USED FROM SECONDARY PEDESTALS TO CUSTOMER METER.
9. ALL DIMENSIONS IN MILLIMETER UNLESS OTHERWISE STATED.

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CHECKED : K.S. _____

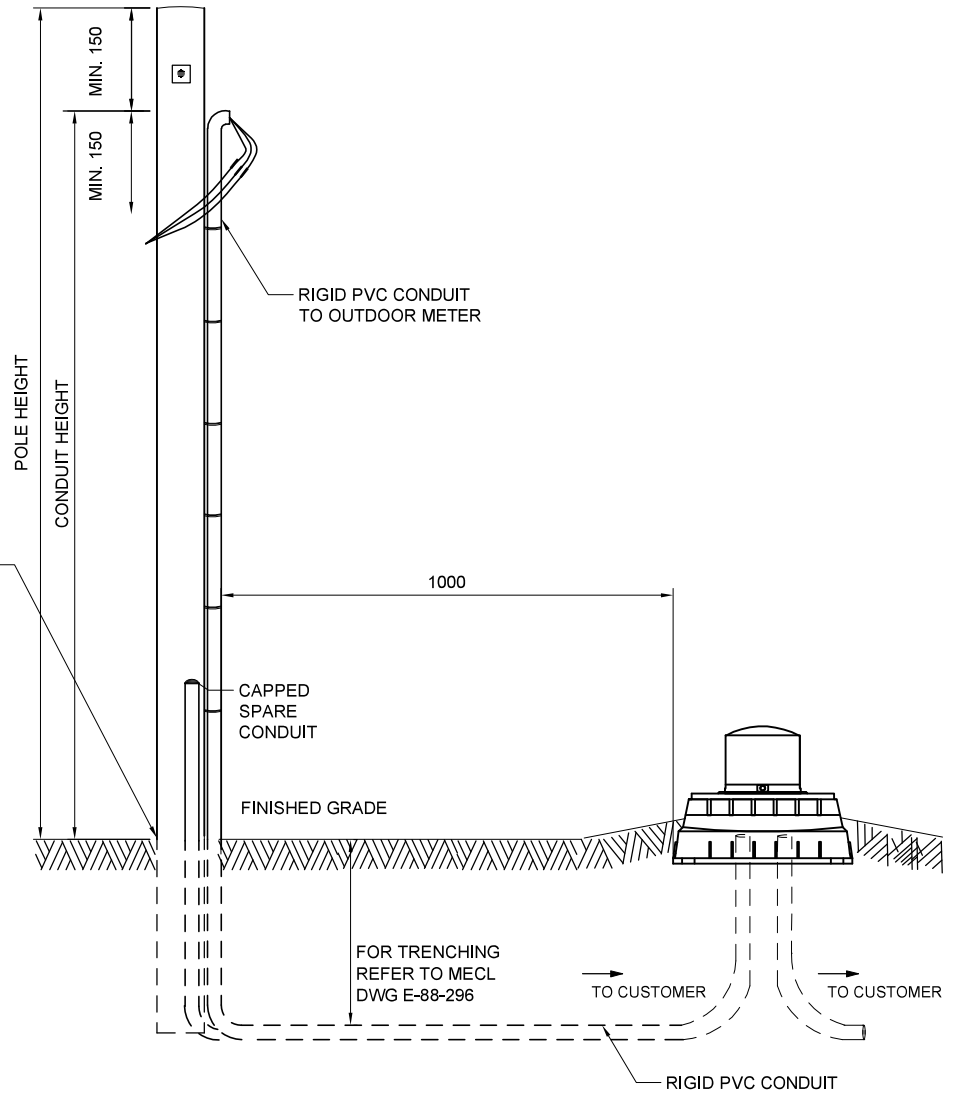
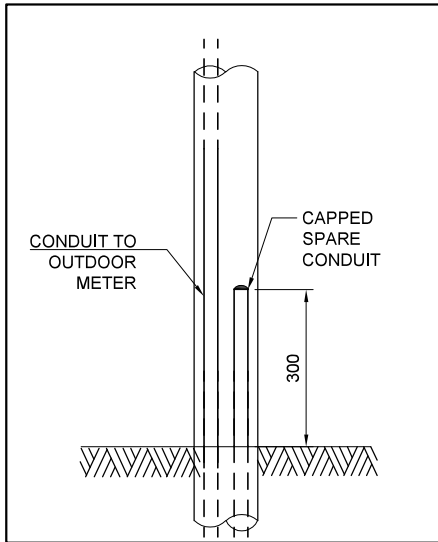
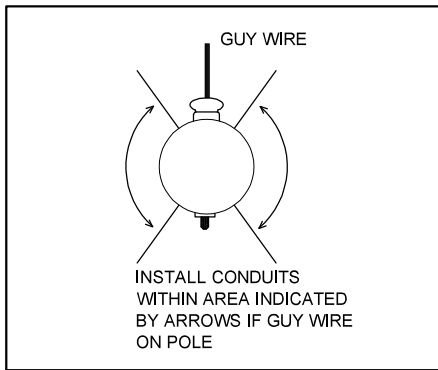
APPROVED: K.S. _____

**SECONDARY RISER ON
PRIMARY VOLTAGE POLE**

DATE : MAR_14_'05

REVISED : AUG_07_'18

DWG. No. : UG-05-05__



NOTES:

1. ALL CONDUIT INSTALLED ON POLE TO BE PVC WITH PROPER FROST JOINT.
2. SPARE CONDUIT IS TO BE CAPPED 1M UP ON RISER POLE.
3. CAP SPARE CONDUIT WITH PROPER CONDUIT CAP.
4. CONDUIT IS TO BE ATTACHED USING METAL STRAPS AND LAG BOLTS.
5. TRENCHING MUST BE CARRIED OUT AS PER MECL DWG-E-88-296.
6. ALL WORK MUST BE CARRIED OUT AS PER CANADIAN ELECTRICAL CODE.
7. ARMORED TECK-CABLE MAY BE USED FROM SECONDARY PEDESTALS TO CUSTOMER METER.
8. ALL DIMENSIONS IN MILLIMETER UNLESS OTHERWISE STATED.

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SCALE : N.T.S. _____

DRAWN : J.E.B. _____

CHECKED : N.K. _____

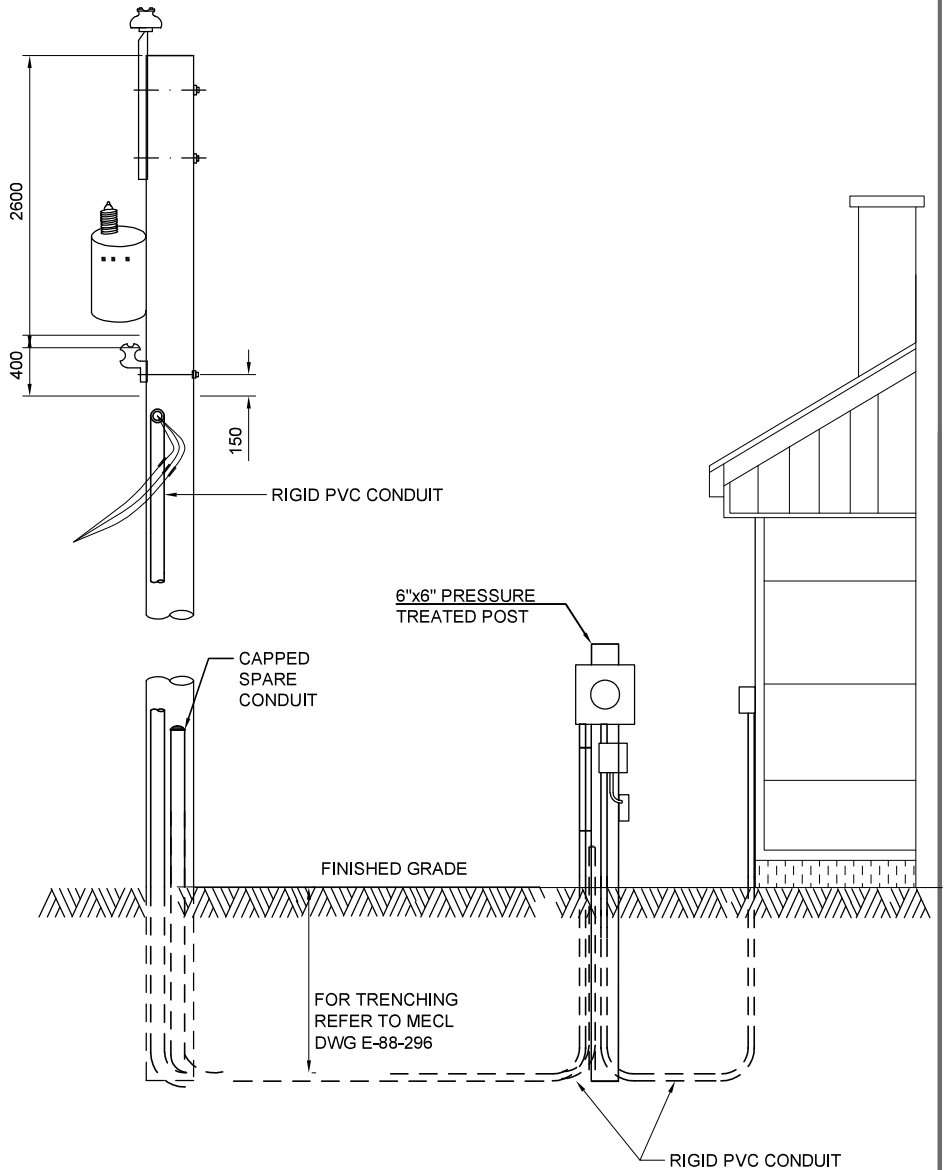
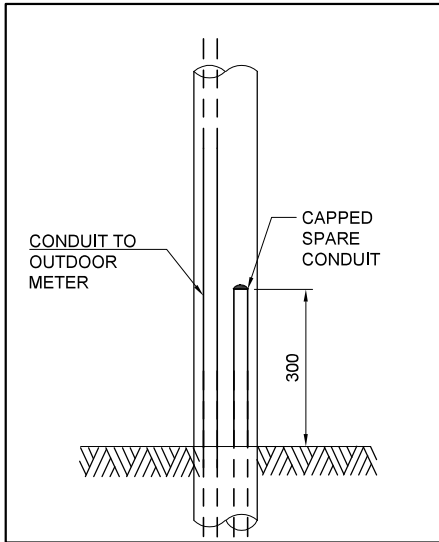
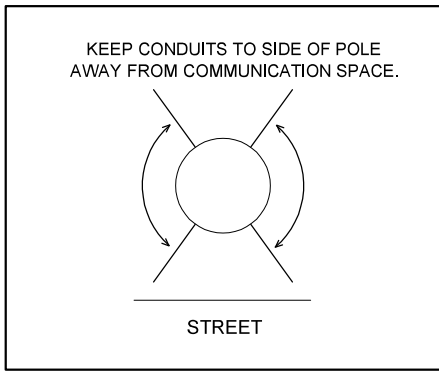
APPROVED: N.K. _____

**SECONDARY RISER
ON SECONDARY VOLTAGE
POLE**

DATE : MAR._11_'05

REVISED : APR._26_'12

DWG. No. : UG-05-04



NOTES:

1. WHERE A CONTACT HAZARD EXISTS THE LAST SECTION OF CONDUIT SHALL BE LEFT ON SITE TO BE INSTALLED BY MECL.
2. ALL CONDUIT INSTALLED ON POLE TO BE PVC WITH PROPER FROST JOINT.
3. SPARE CONDUIT IS TO BE CAPPED 1M UP ON RISER POLE.
4. CAP SPARE CONDUIT WITH PROPER CONDUIT CAP.
5. CONDUIT IS TO BE ATTACHED USING METAL STRAPS AND LAG BOLTS.
5. TRENCHING MUST BE CARRIED OUT AS PER MECL DWG-E-88-296.
7. ALL WORK MUST BE CARRIED OUT AS PER CANADIAN ELECTRICAL CODE.
8. ALL DIMENSIONS IN MILLIMETER UNLESS OTHERWISE STATED.

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DRAWN : F.F. _____

CHECKED : K.S. _____

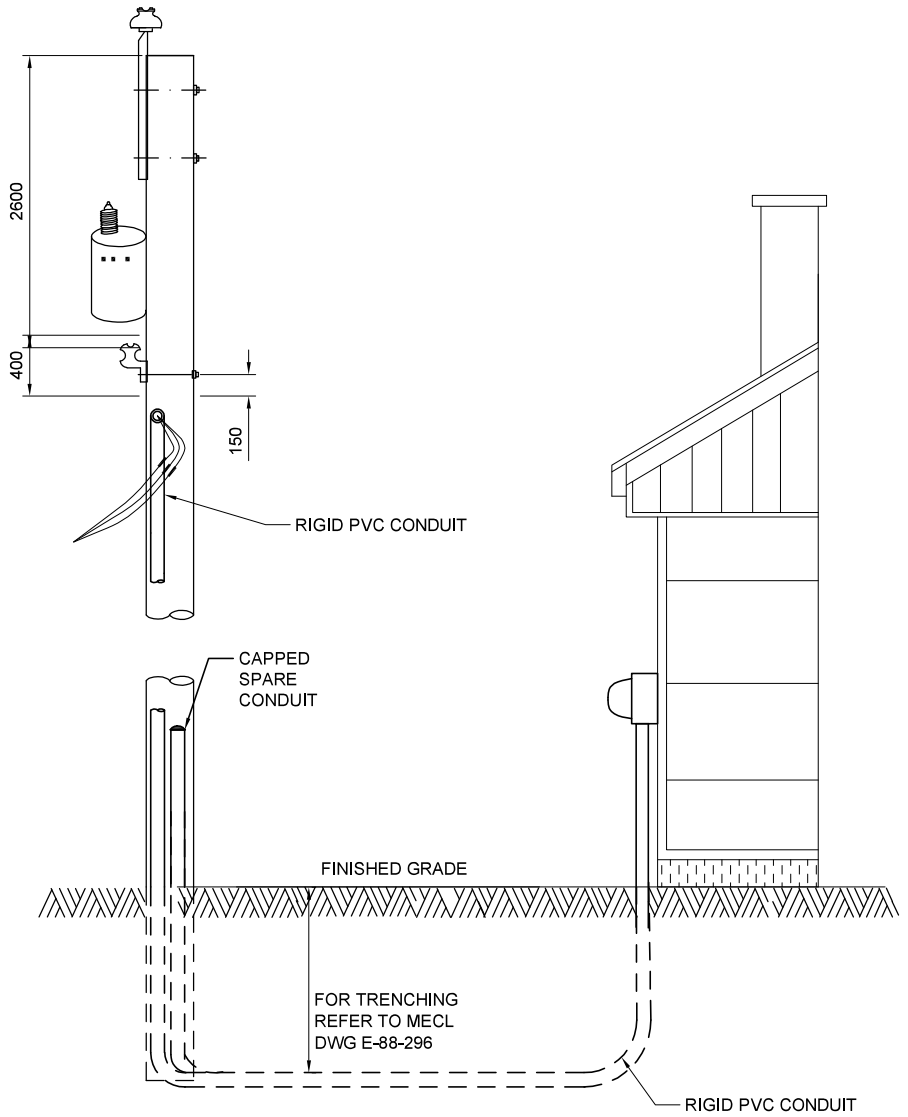
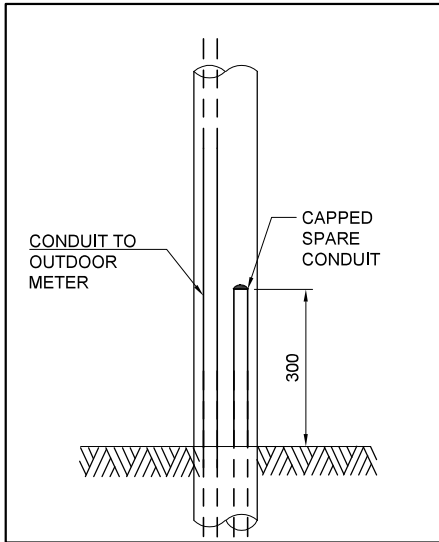
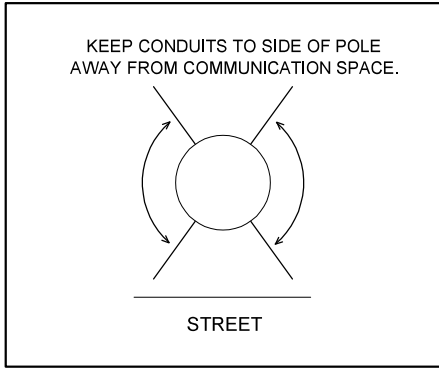
APPROVED: K.S. _____

SECONDARY RISER ON
PRIMARY VOLTAGE POLE
TO METER POST

DATE : AUG_07_'18

REVISED :

DWG. No. : UG-18-05__



NOTES:

1. WHERE CONTACT HAZARD EXISTS THE LAST SECTION OF CONDUIT SHALL BE LEFT ON SITE TO BE INSTALLED BY MECL.
2. ALL CONDUIT INSTALLED ON POLE TO BE PVC WITH PROPER FROST JOINT.
3. SPARE CONDUIT IS TO BE CAPPED 1M UP ON RISER POLE.
4. CAP SPARE CONDUIT WITH PROPER CONDUIT CAP.
5. CONDUIT IS TO BE ATTACHED USING METAL STRAPS AND LAG BOLTS.
5. TRENCHING MUST BE CARRIED OUT AS PER MECL DWG-E-88-296.
7. ALL WORK MUST BE CARRIED OUT AS PER CANADIAN ELECTRICAL CODE.
8. ALL DIMENSIONS IN MILLIMETER UNLESS OTHERWISE STATED.

MARITIME
ELECTRIC
A FORTIS COMPANY

MARITIME ELECTRIC COMPANY, LIMITED

SCALE : N.T.S. _____

DRAWN : F.F. _____

CHECKED : K.S. _____

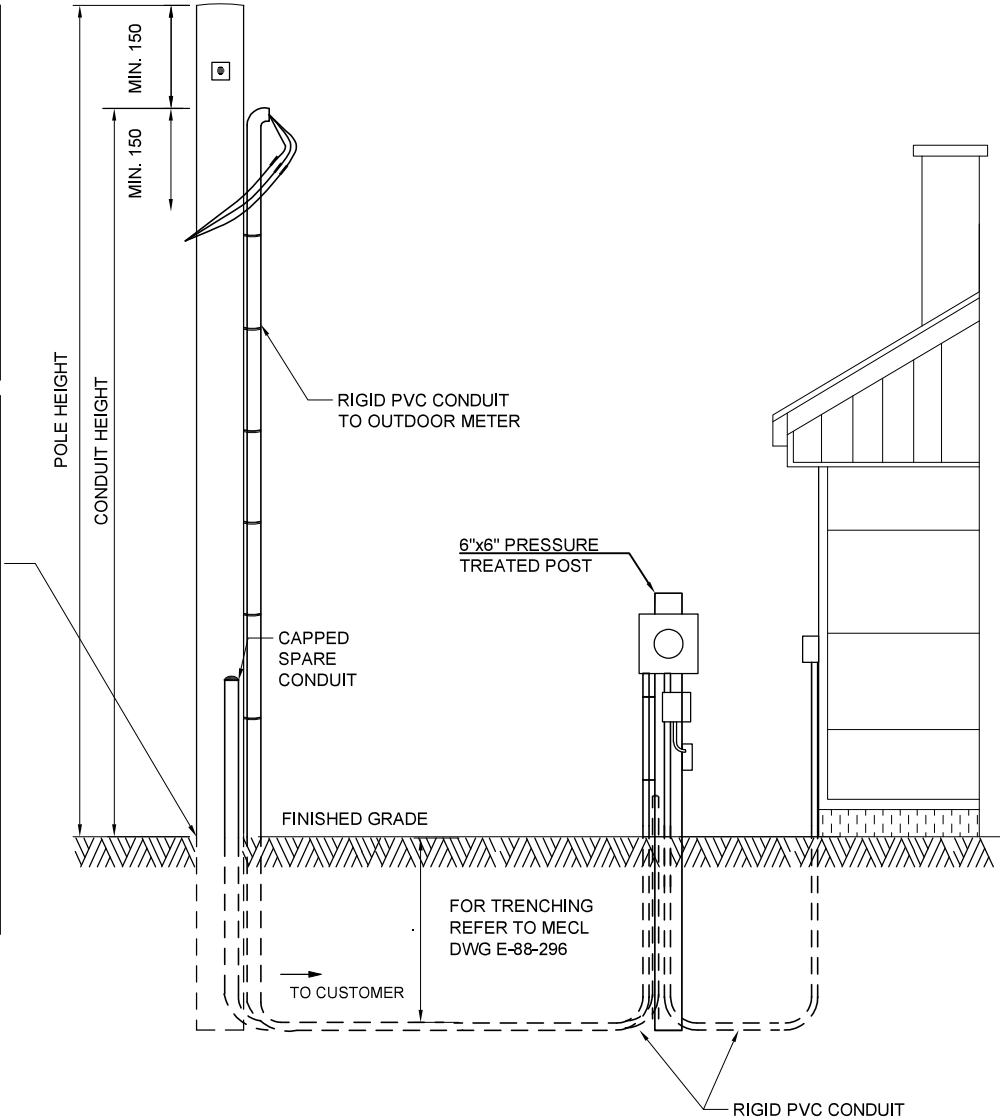
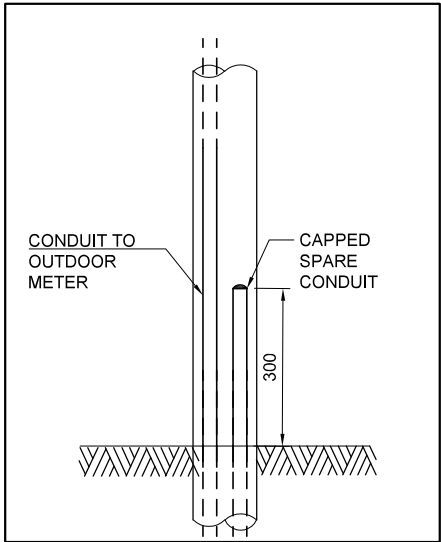
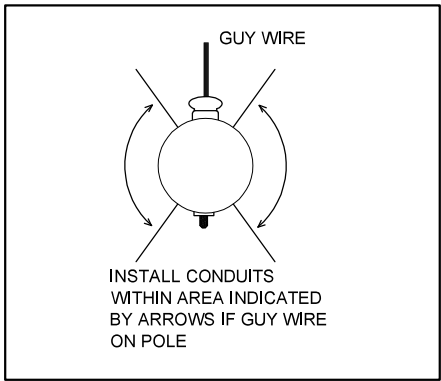
APPROVED: K.S. _____

SECONDARY RISER ON
PRIMARY VOLTAGE POLE
TO OUTDOOR METER

DATE : AUG_07_'18

REVISED :

DWG. No. : UG-18-06



NOTES:

1. ALL CONDUIT INSTALLED ON POLE TO BE PVC WITH PROPER FROST JOINT.
2. SPARE CONDUIT IS TO BE CAPPED 1M UP ON RISER POLE.
3. CAP SPARE CONDUIT WITH PROPER CONDUIT CAP.
4. CONDUIT IS TO BE ATTACHED USING METAL STRAPS AND LAG BOLTS.
5. TRENCHING MUST BE CARRIED OUT AS PER MECL DWG-E-88-296.
6. ALL WORK MUST BE CARRIED OUT AS PER CANADIAN ELECTRICAL CODE.
7. ALL DIMENSIONS IN MILLIMETER UNLESS OTHERWISE STATED.

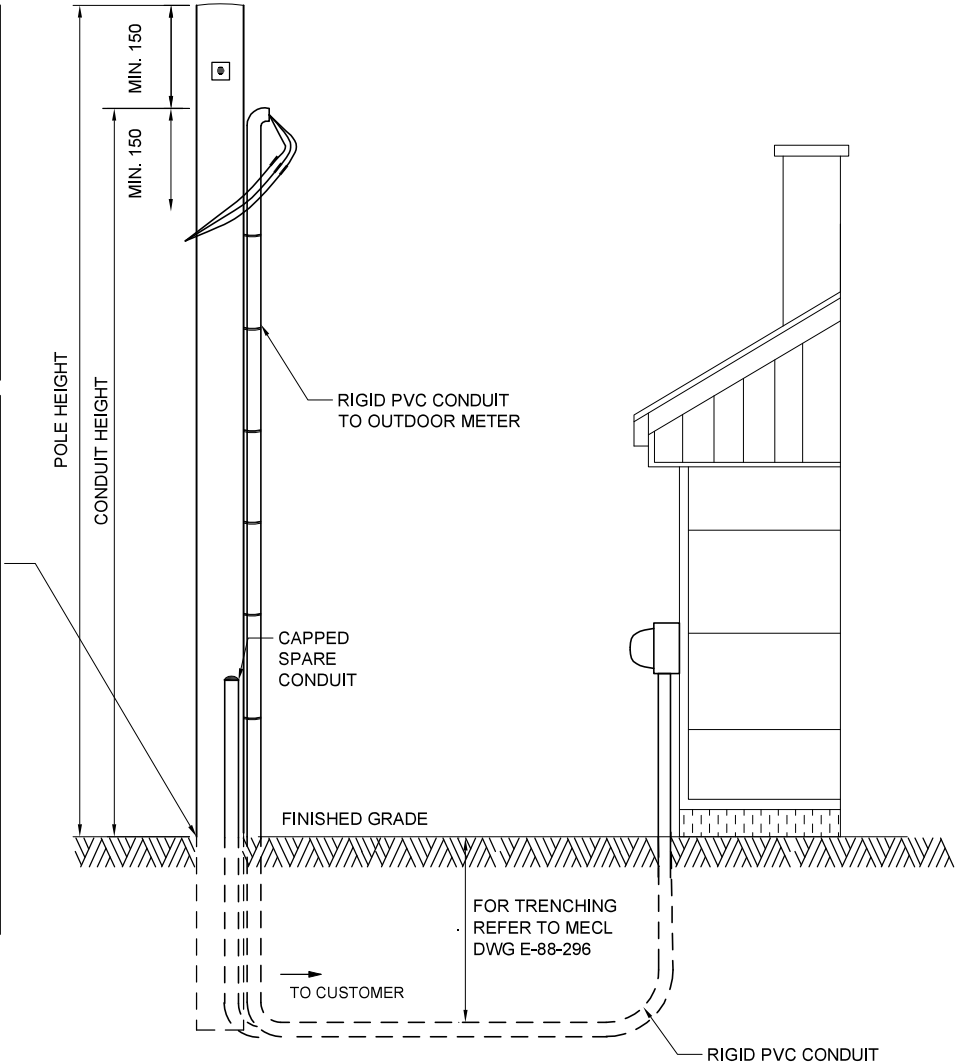
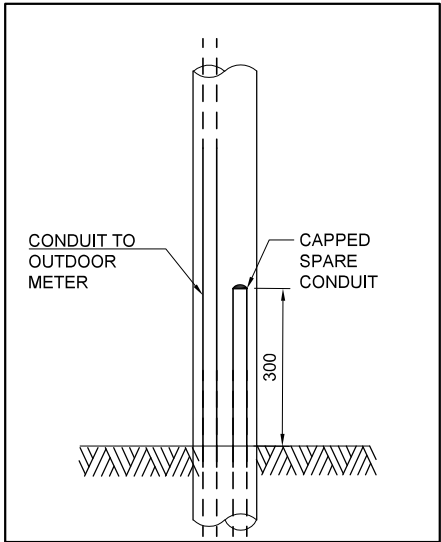
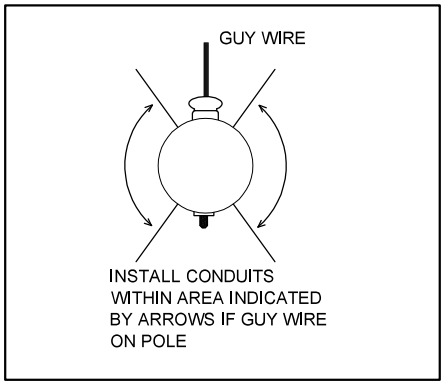
MARITIME
ELECTRIC
A FORTIS COMPANY

MARITIME ELECTRIC COMPANY, LIMITED

SCALE : N.T.S. _____
DRAWN : F.F. _____
CHECKED : K.S. _____
APPROVED: K.S. _____

SECONDARY RISER ON
SERVICE POLE
TO METER POST

DATE : JUL_26_'18
REVISED : .
DWG. No. : UG-18-07



NOTES:

1. ALL CONDUIT INSTALLED ON POLE TO BE PVC WITH PROPER FROST JOINT.
2. SPARE CONDUIT IS TO BE CAPPED 1M UP ON RISER POLE.
3. CAP SPARE CONDUIT WITH PROPER CONDUIT CAP.
4. CONDUIT IS TO BE ATTACHED USING METAL STRAPS AND LAG BOLTS.
5. TRENCHING MUST BE CARRIED OUT AS PER MECL DWG-E-88-296.
6. ALL WORK MUST BE CARRIED OUT AS PER CANADIAN ELECTRICAL CODE.
7. ALL DIMENSIONS IN MILLIMETER UNLESS OTHERWISE STATED.

MARITIME
ELECTRIC
 A FORTIS COMPANY

MARITIME ELECTRIC COMPANY, LIMITED

SCALE : N.T.S. _____
 DRAWN : F.F. _____
 CHECKED : K.S. _____
 APPROVED: K.S. _____

**SECONDARY RISER ON
 SERVICE POLE
 TO OUTDOOR METER**

DATE : JUL_26_'18
 REVISED : .
 DWG. No. : UG-18-08__