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Duct System Installation Specifications

SCOPE
The project consists of the installation of the complete underground duct system for both primary and secondary voltages, including conduit, pull boxes, sectors ground sleeves, equipment pads, riser poles, hand holes, etc., necessary for the installation of MTEMC's underground primary cables, secondary cables, communication (comm) cables, and other associated MTEMC equipment and apparatus.

1. The developer shall be responsible for furnishing all labor, materials, and equipment necessary for:
   A. Excavation, backfill, concrete and/or gravel encasement required for all ditches.
   B. Duct banks and conduit installation including PVC spacers systems (conduit chairs) and pull strings.
   C. Pad mounted equipment concrete pads.
   D. Secondary junction boxes
   E. Manholes
   F. Transformer Box Pads
   G. Sector Ground Sleeves
   H. Primary pull boxes
   I. Comm hand holes including “flower pots” and comm conduit

2. In addition to the above, the developer shall be responsible for all surveying for the placement of MTEMC's lines and equipment, and for all electrical easements required at no cost to MTEMC.

3. MTEMC shall furnish drawings showing specific locations, quantities, sizes, encasement, and/or other requirements. Said drawings are a part of these specifications and are equally important to the success of the project.

4. Specific Material/Equipment Specifications:
   A. Manholes:
      a. Manhole excavation and backfill requirements are shown on drawings “MH-3 sh 2” and “OMH-3 sh2” "". Strict adherence to these requirements is critical.
      b. The developer should give MTEMC a minimum of 24-hours notice prior to setting manholes in order for MTEMC to schedule a crew to install manhole grounding and sump wells prior to backfill and to schedule an inspector to be present during the setting of the manholes.
      c. Elevations for manholes are critical. The maximum throat allowed is 24”. The minimum is 6". See throat detail on drawing PM-2L.
d. The developer shall follow manufacturer's recommendations when setting manholes. Proper slings and attachments are vital to the integrity of the manhole. Damaged manholes will not be accepted.
e. See drawing "MH-3" or "OMH-3" for manufacturing details on manholes.
f. Care shall be taken when placing manholes to align parallel to the street, thereby facilitating conduit installation.

B. Duct Banks:

a. Primary duct bank details are included in the drawings. See Primary Ditch Details "2C", "3C", "4C", "6C-2", "9C", "12C", "4G", or "2G" for ditch details. MTEMC Engineering will specify the duct bank to be used. All No. 1 aluminum primary cable in conduit shall be encased in gravels per Ditch Detail drawing "2G". All primary cable installations and feeders larger than No. 1 aluminum shall be encased in concrete per the Ditch Details Drawing that is specified by MTEMC. Any exceptions to this policy must be approved by the Vice President of Engineering. Ditch Detail “2G” shows the installation of a communications conduit is in the same ditch with MTEMC's primary cable.

b. The secondary conduit ditch details are shown on Secondary Ditch Details "1S" and "2S". Cover required is shown on details.

c. The duct bank must be inspected by MTEMC prior to concrete or gravel encasement and also prior to backfill. Call 1-800-886-8362 at least 24 hours prior to needing inspection.

d. All completely underground primary conduit to be schedule 40 if encased in gravel or if encased in concrete. See MTEMC Engineering for size conduit and encasement requirements. See Secondary Ditch Details for secondary conduit requirements.

e. The primary duct bank should be straight and as level as practical. No sharp bends or dips will be allowed. Conduit banks shall be supported a minimum of every seven (7) feet by PVC spacer system (conduit chairs). See the Approved Material List for MTEMC approved PVC spacer systems. Ducts should drain into manholes.

f. Caps of the proper size and type shall be installed on all conduits not terminating in manholes, switches, or other such equipment. Conduit shall be clean, dirt and rock free.

g. In some instances, excavation at specific apparatus must be deeper than the typical ditch detail drawings show. In such cases, the developer should begin sloping the ditch deeper a minimum distance of 20' away from the apparatus in question. No sharp bends will be accepted. Primary duct banks shall not be heated.

h. Conduit bank should enter rectangular manholes as shown on “MH-3 sh 3”.

i. Conduit must be installed to enter manhole perpendicular to manhole. (Note that manhole may not be parallel with the street in all cases; therefore, care must be taken to align conduit for perpendicular entrance to manholes.) Misaligned conduit banks will not be accepted.
j. Secondary or service lateral conduit ditch details are shown on Secondary Ditch Detail "1S" or "2S". No sharp bends will be allowed. Horizontal bending radius must be no less than 6' and limited to one (1) per run. Conduit road crossings must be planned to avoid sharp bends for conduit serving building sites. MTEMC inspectors will disapprove road crossings not taking this into account.
k. Pull strings shall be installed in all conduits.
l. Communications (Comm) conduit shall be installed in the same manner as the primary and secondary conduit. Elbows are not required for the HDPE conduit. The comm conduit may be installed in the same ditches as the primary and secondary conduit. Comm conduit shall be as specified HDPE SDR 13.5 orange with red stripes when placed in an open primary ditch. If the conduit is being installed by boring, then SDR 11 shall be used. Comm conduit in secondary ditches can be schedule 40 PVC.

C. Concrete Equipment Pads:
a. Concrete equipment pads (such as switch, transformer, etc.) must be inspected by MTEMC prior to concrete pouring. Call MTEMC at 1-877-886-8362 to request pad inspection.
b. Concrete pads shall rest on gravels installed according to the details found elsewhere in the drawings.
c. Detailed drawings of required concrete pads will be furnished by MTEMC to the developer as a part of the plans and specifications. (See "PAD NO. 8-440B" and "PAD NO. 10" for switch pad details, and "PAD NO. 1" or "PAD NO. 5" for transformer pad details.)

D. Riser Poles
a. At riser poles (see drawing RP-1), the developer shall furnish and install all conduit and conduit ells required from the ditch up to and including the first stick of conduit. MTEMC will install additional conduit sections and brackets for each riser required. Prior to any digging within three (3) feet of MTEMC's poles, MTEMC shall be contacted 24 hours in advance to arrange for an MTEMC inspector to be present during excavation and backfill closer than three (3) feet from poles.

E. Secondary Box Pedestals:
a. Overhead primary/underground secondary developments:
   (i) When required by MTEMC engineers, a secondary box pedestal shall be installed near the base of each transformer pole and additional secondary box, pedestals shall be installed on property lines on both sides of the street as specified by MTEMC Engineering. (See drawing SBP-1,-2). These pedestals shall have schedule 40 PVC conduits (number and size as required by MTEMC) running under the street between them, with 90 degree, 24" radius PVC elbows turning up into the pedestals. The developer shall install one (1) 90 degree, 24" radius PVC elbow for each lot to be served from the appropriate pedestal. The elbows shall be
connected to a 10' section of schedule 40 PVC and turned in the direction of their respective building sites. Secondary box size will be designated by the MTEMC engineer. A list of approved boxes is found in Appendix "B".

(ii) Refer to section 5D for riser installations.
b. Completely underground developments:
In developments with pad mounted transformers (PMT), secondary pull boxes shall be installed across the street from the PMT as specified by MTEMC Engineering, and secondary pull boxes will be required on the same side of the road as required by MTEMC Engineering (See drawings SBP-2,-3).
Schedule 40 PVC conduits (number and size as required by MTEMC engineers) shall extend from the PMT secondary compartment area to the pull box. In addition, the developer shall install one (1) 90 degree, 24" radius schedule 40 PVC elbow for each lot to be served from the PMT secondary compartment or the pull box. These elbows shall be turned in the direction of their respective building sites. Secondary box size will be designated by the MTEMC engineer. A list of approved boxes is found in Appendix "B".

F. Communications Hand Holes
Communication hand holes shall be installed as specified by MTEMC Engineering. See SBP-1 and SBP-2 for examples of layouts. Use sheet 2 of these drawings as examples for installing comm pull boxes. All comm pull boxes shall be installed a minimum of five feet from any above ground piece of MTEMC equipment for example: transformer, switch, sector, pole, etc.

5. Miscellaneous Requirements:
A. Any changes to these plans and specifications must have the approval of MTEMC's Engineering Services Manager.
B. Inspections by MTEMC are vital to the acceptability of the duct system by MTEMC prior to MTEMC's installation of cable and other electrical apparatus. MTEMC operations' inspectors must be assured that the duct system is installed to MTEMC's Duct specifications before such apparatus can be installed. It is therefore, extremely important for all installations to be inspected in a timely manner, as outlined elsewhere in these specifications.
C. Particular attention should be given (for safety reasons) to the sloping of banks in ditches or other excavation deeper than five feet. Detailed drawings may not show OSHA and/or other local, state, and/or federal regulations due to variations in soil types, etc.; however, the developer is responsible for compliance with such requirements. The fact that MTEMC inspectors may fail to point out code or regulation violations does not relieve the developer or owner from compliance with applicable codes and regulations, and in no way places blame on MTEMC for failing to point out such violations.
Request for Location of Underground Facilities

1. Before beginning any excavation operation, each person responsible for such excavation shall serve written or telephonic notice of intent to excavate to Tennessee One Call (811) at least three (3) working days prior to the actual date of excavation, but not more than fifteen (15) full working days prior to such time.

2. Should a period of time of fifteen (15) working days from the actual date specified to start excavation expire without the excavation begin completed, the person responsible for such excavation shall notify Tennessee One Call of intent for additional excavation. Such notification must take place a minimum of three (3) working days prior to the expiration of original fifteen- (15) working-day period.

3. The written or telephone notice required shall contain the name, address, and telephone number of the person responsible for excavation; and the starting date, type of excavation to be done, specific location of excavation, and whether or not explosives are to be used.

4. The location of proposed area of excavation should be designated by marking such area with “Safety Orange” color-coded stakes and “Safety White” identifications on the roadway, or other marking devices.

5. The appropriate location of MTEMC underground facilities does not include a designation of location as to depth below the surface of the ground. Excavators must use reasonable care to ascertain for themselves the exact depth of the underground facilities. If after so ascertaining, the excavator learns that the excavation is likely to interfere with the operation of MTEMC facilities, he/she must contact MTEMC to make other arrangements.

6. In the event of an emergency, MTEMC may be contacted at any time. “Emergency” means an imminent danger to life, health, or property.

7. MTEMC will use “Safety Red” to mark its facilities.
NOTE:
LANDSCAPING AROUND THE PAD IS PERMITTED. HOWEVER, NO TREES, BUSHES, OR SHRUBBERY SHOULD BE PLANTED WITHIN TWELVE (12) FEET OF THE SIDES OF PAD-MOUNTED EQUIPMENT THAT HAVE DOORS OR ACCESS COVERS THAT MUST BE OPENED. ON THE SIDES OF THE EQUIPMENT THAT DO NOT HAVE DOORS OR ACCESS COVERS, TREES, BUSHES, AND SHRUBBERY SHOULD BE PLANTED AT LEAST THREE (3) FEET AWAY. SMALL PLANTS AND FLOWERS THAT DO NOT REQUIRE USE OF CHAINSAWS SAWS OR OTHER SIMILAR EQUIPMENT TO REMOVE ARE PERMITTED CLOSER TO THE PAD BUT MAY BE DAMAGED OR DESTROYED IF MAINTENANCE IS REQUIRED TO BE PERFORMED ON THE PAD-MOUNTED EQUIPMENT.
Notes:

1. Conduits run horizontal to water or gas lines must have a minimum 36" horizontal separation.
2. Telephone or cable utility minimum separation from MTEMC ducts shall be either:
   a.) 36" parallel
   b.) 12" vertical
3. All foreign utility perpendicular crossings must have 12" minimum separation from MTEMC ducts.
4. Conduit shall be PVC schedule 40, size and number as specified on plans, with long coupling integral bells.
5. No sharp bends will be allowed. Horizontal bends must be greater than 6’ radius. Contractor should plan runs to building sites such that no sharp bends will be necessary to serve the building.
6. Install Jetline pull string with minimum 200 lb tensile strength in each conduit.
7. If above not practical, then options shown on secondary ditch detail 25 may be used.
FOLLOWING OPTIONS ALLOWED AT DISCRETION OF MTEMC ENGINEERING WHERE ROCK WILL NOT ALLOW DWG 1S TO WORK.

SELECTED EARTH BACKFILL, NO LARGE ROCKS (2" MAXIMUM DIAMETER), AND/OR OTHER SHARP, HEAVY OBJECTS ALLOWED.

VARIES 
(NOT CRITICAL)

FINISHED GRADE

SCH 80 ELECTRICAL GRADE PVC CONDUIT WITH LONG COUPLING, INTEGRAL BELLS.

COMM. CONDUIT, TYPICALLY 1" PVC SCH 40

MIN. 18" COVER

WATER OR GAS

SECONDARY DITCH DETAIL OPTION NO. 1

SCH 80 ELECTRICAL GRADE PVC CONDUIT WITH LONG COUPLING, INTEGRAL BELLS.

COMM. CONDUIT, TYPICALLY 1" PVC SCH 40

MIN. 12" TOTAL COVER

MIN. 36" MINIMUM

CONCRETE

WATER OR GAS

SECONDARY DITCH DETAIL OPTION NO. 2

NOTES:

1. Conduits run horizontal to water or gas lines must have a minimum 36" horizontal separation.

2. Telephone or cable utility minimum separation from MTEMC ducts shall be either:
   a.) 36" parallel
   b.) 12" vertical

3. All foreign utility perpendicular crossings must have 12" minimum separation from MTEMC ducts.

4. Use secondary ditch detail 1S where practical; use one of the above options only if detail 1S is not practical.

5. No sharp bends will be allowed. Horizontal bends must be greater than 6' radius. Contractor should plan runs to building sites such that no sharp bends will be necessary to serve the building.

6. Install Jetline pull string with minimum 200 lb tensile strength in each conduit.
Notes:

1. Conduits run horizontal to water or gas lines must have a minimum 36" horizontal separation.
2. Telephone or cable utility minimum separation from MTEMC ducts shall be either:
   a.) 36" parallel
   b.) 12" vertical
3. All foreign utility perpendicular crossings must have 12" minimum separation from MTEMC ducts.
4. Electrical conduit shall be PVC sch. 40, size and number as specified on plans. Comm conduit shall be 2" HDPE SDR 13.5, orange with red strip, for main comm line and multi-drop conduits. Comm conduit is 1" PVC sch. 40 for single drops.
5. Conduit shall be supported by approved conduit chairs at regular intervals not exceeding 7'-0". See Appendix B for approved spacers.
6. Install Jetline pull string with minimum 200 lb tensile strength in each conduit.
7. Omit telephone or catv utility duct requirement if not being installed.
8. If conductor is not to be initially installed in the duct bank, a #14 thhn cu tracer wire shall be installed inside one of the interior conduits or center conduit if an odd number of conduits are installed. If one end of the conduit is just a stub out 10 feet or longer, the tracer wire shall be bent back to the outside of the conduit and securely taped such that the wire can't be pulled out easily. There shall be 10' tails left in all enclosures for MTEMC to connect to the ground. See MTEMC local engineering for questions.
NOTES:

1. CONDUITS RUN HORIZONTAL TO WATER OR GAS LINES MUST HAVE A MINIMUM 36" HORIZONTAL SEPARATION.

2. TELEPHONE OR CABLE UTILITY MINIMUM SEPARATION FROM MTEMC DUCTS SHALL BE EITHER:
   a) 36" PARALLEL
   b) 12" VERTICAL

3. ALL FOREIGN UTILITY PERPENDICULAR CROSSINGS MUST HAVE 12" MINIMUM SEPARATION FROM MTEMC DUCTS.

4. CONDUIT SHALL BE PVC, SCHEDULE 40.

5. CONDUIT SHALL BE SUPPORTED WITH APPROVED DUCT SPACERS AT REGULAR INTERVALS NOT EXCEEDING 7'-0". SEE APPENDIX B FOR APPROVED SPACERS.

6. A MINIMUM OF 3" OF CONCRETE IS REQUIRED AROUND DUCT BANK WITH 3" SEPARATION BETWEEN CONDUITS.

7. INSTALL JETLINE PULL STRING WITH MINIMUM 200 LB TENSILE STRENGTH IN EACH CONDUIT.

8. OMIT TELEPHONE OR CABLE UTILITY DUCT REQUIREMENTS IF NOT BEING INSTALLED.

9. IF CONDUCTOR IS NOT TO BE INITIALLY INSTALLED IN THE DUCT BANK, A #14 THHN CU TRACER WIRE SHALL BE INSTALLED INSIDE ONE OF THE INTERIOR CONDUITS OR CENTER CONDUIT IF AN ODD NUMBER OF CONDUITS ARE INSTALLED. IF ONE END OF THE CONDUIT IS JUST A STUB OUT 10 FEET OR LONGER, THE TRACER WIRE SHALL BE BENT BACK TO THE OUTSIDE OF THE CONDUIT AND SECURELY TAPED SUCH THAT THE WIRE CAN'T BE PULLED OUT EASILY. THERE SHALL BE 10' TAILS LEFT IN ALL ENCLOSURES FOR MTEMC TO CONNECT TO GROUND. SEE MTEMC LOCAL ENGINEERING FOR QUESTIONS.
NOTES:

1. CONDUITS RUN PARALLEL TO WATER OR GAS LINES MUST HAVE A MINIMUM 36” SEPARATION.

2. TELEPHONE OR CABLE UTILITY SEPARATION FROM METEC DUCTS SHALL BE EITHER:
   a.) 36” PARALLEL
   b.) 12” VERTICAL

3. ALL FOREIGN UTILITY PERPENDICULAR CROSSINGS MUST HAVE 12” MINIMUM SEPARATION FROM METEC DUCTS.

4. CONDUIT SHALL BE PVC SCHEDULE 40.

5. CONDUIT SHALL BE SUPPORTED WITH APPROVED DUCT SPACERS AT REGULAR INTERVALS NOT EXCEEDING 7’-0”. SEE APPENDIX B FOR APPROVED SPACERS.

6. A MINIMUM OF 3” OF CONCRETE IS REQUIRED AROUND DUCT BANK.

7. INSTALL JETLINE PULL STRING WITH MINIMUM 200 LB TENSILE STRENGTH IN EACH CONDUIT.

8. CONCRETE SHALL BE MIXED WITH RED DYE.

9. IF CONDUCTOR IS NOT TO BE INITIALLY INSTALLED IN THE DUCT BANK, A #14 THHN CU TRACER WIRE SHALL BE INSTALLED INSIDE ONE OF THE INTERIOR CONDUITS OR CENTER CONDUIT IF AN ODD NUMBER OF CONDUITS ARE INSTALLED. IF ONE END OF THE CONDUIT IS JUST A STUB OUT 10 FEET OR LONGER, THE TRACER WIRE SHALL BE BENT BACK TO THE OUTSIDE OF THE CONDUIT AND SECURELY TAPED SUCH THAT THE WIRE CAN’T BE PULLED OUT EASILY. THERE SHALL BE 10’ TAILS LEFT IN ALL ENCLOSURES FOR METEC TO CONNECT TO GROUND. SEE METEC LOCAL ENGINEERING FOR QUESTIONS.

PRIMARY DITCH DETAIL 3C
(3 CONDUITS 6” TYPICAL)
NOTES:

1. CONDUITS RUN HORIZONTAL TO WATER OR GAS LINES MUST HAVE A MINIMUM 36" HORIZONTAL SEPARATION.

2. TELEPHONE OR CABLE UTILITY MINIMUM SEPARATION FROM MTEMC DUCTS SHALL BE EITHER:
   a) 36" PARALLEL
   b) 12" VERTICAL

3. ALL FOREIGN UTILITY PERPENDICULAR CROSSINGS MUST HAVE 12" MINIMUM SEPARATION FROM MTEMC DUCTS.

4. CONDUIT SHALL BE PVC, SCHEDULE 40.

5. CONDUIT SHALL BE SUPPORTED BY APPROVED DUCT SPACERS AT REGULAR INTERVALS NOT EXCEEDING 7'-0". SEE APPENDIX B FOR APPROVED SPACERS.

6. A MINIMUM OF 3" OF CONCRETE IS REQUIRED AROUND DUCT BANK.

7. INSTALL JETLINE PULL STRING WITH MINIMUM 200 LB TENSILE STRENGTH IN EACH CONDUIT.

8. CONCRETE SHALL BE MIXED WITH RED DYE.

9. IF CONDUCTOR IS NOT TO BE INITIALLY INSTALLED IN THE DUCT BANK, A #14 THHN CU TRACER WIRE SHALL BE INSTALLED INSIDE ONE OF THE INTERIOR CONDUITS OR CENTER CONDUIT IF AN ODD NUMBER OF CONDUITS ARE INSTALLED. IF ONE END OF THE CONDUIT IS JUST A STUB OUT 10 FEET OR LONGER, THE TRACER WIRE SHALL BE BENT BACK TO THE OUTSIDE OF THE CONDUIT AND SECURELY TAPE SUCH THAT THE WIRE CAN'T BE PULLED OUT EASILY. THERE SHALL BE 10' TAILS LEFT IN ALL ENCLOSURES FOR MTEMC TO CONNECT TO GROUND. SEE MTEMC LOCAL ENGINEERING FOR QUESTIONS.

PRIMARY DITCH DETAIL 4C
(4 CONDUITS 6" TYPICAL)

REVISED: 5-24-19
NOTES:

1. CONDUITS RUN HORIZONTAL TO WATER OR GAS LINES MUST HAVE A MINIMUM 36" HORIZONTAL SEPARATION.

2. TELEPHONE OR CABLE UTILITY MINIMUM SEPARATION FROM MTEMC DUCTS SHALL BE EITHER:
   a) 36" PARALLEL
   b) 12" VERTICAL

3. ALL FOREIGN UTILITY PERPENDICULAR CROSSINGS MUST HAVE 12" MINIMUM SEPARATION FROM MTEMC DUCTS.

4. CONDUIT SHALL BE PVC, SCHEDULE 40.

5. CONDUITS SHALL BE SUPPORTED WITH APPROVED DUCT SPACERS AT REGULAR INTERVALS NOT EXCEEDING 7'-0". SEE APPENDIX B FOR APPROVED SPACERS.

6. A MINIMUM OF 3" OF CONCRETE IS REQUIRED AROUND DUCT BANK.

7. INSTALL JETLINE PULL STRING WITH MINIMUM 200 LB TENSILE STRENGTH IN EACH CONDUIT.

8. CONCRETE SHALL BE MIXED WITH RED DYE.

9. IF CONDUCTOR IS NOT TO BE INITIALLY INSTALLED IN THE DUCT BANK, A #14 THHN CU TRACER WIRE SHALL BE INSTALLED INSIDE ONE OF THE INTERIOR CONDUITS OR CENTER CONDUIT IF AN ODD NUMBER OF CONDUITS ARE INSTALLED. IF ONE END OF THE CONDUIT IS JUST A STUB OUT 10 FEET OR LONGER, THE TRACER WIRE SHALL BE BENT BACK TO THE OUTSIDE OF THE CONDUIT AND SECURELY TAPED SUCH THAT THE WIRE CAN'T BE PULLED OUT EASILY. THERE SHALL BE 10' TAILS LEFT IN ALL ENCLOSURES FOR MTEMC TO CONNECT TO GROUND. SEE MTEMC LOCAL ENGINEERING FOR QUESTIONS.

PRIMARY DITCH DETAIL 6C-2 (6 CONDUITS) REVISED: 5-24-19
NOTES:

1. CONDUITS RUN HORIZONTAL TO WATER OR GAS LINES MUST HAVE A MINIMUM 36" HORIZONTAL SEPARATION.

2. TELEPHONE OR CABLE UTILITY MINIMUM SEPARATION FROM MTEMC DUCTS SHALL BE EITHER:
   a) 36" PARALLEL
   b) 12" VERTICAL

3. ALL FOREIGN UTILITY PERPENDICULAR CROSSINGS MUST HAVE 12" MINIMUM SEPARATION FROM MTEMC DUCTS.

4. CONDUIT SHALL BE PVC, SCHEDULE 40.

5. CONDUITS SHALL BE SUPPORTED WITH APPROVED DUCT SPACERS AT REGULAR INTERVALS NOT EXCEEDING 7'-0". SEE APPENDIX B FOR APPROVED SPACERS.

6. A MINIMUM OF 3" OF CONCRETE IS REQUIRED AROUND DUCT BANK.

7. INSTALL JETLINE PULL STRING WITH MINIMUM 200 LB TENSILE STRENGTH IN EACH CONDUIT.

8. CONCRETE SHALL BE MIXED WITH RED DYE.

9. IF CONDUCTOR IS NOT TO BE INITIALLY INSTALLED IN THE DUCT BANK, A #14 THIN CU TRACER WIRE SHALL BE INSTALLED INSIDE ONE OF THE INTERIOR CONDUITS OR CENTER CONDUIT IF AN ODD NUMBER OF CONDUITS ARE INSTALLED. IF ONE END OF THE CONDUIT IS JUST A STUB OUT 10 FEET OR LONGER, THE TRACER WIRE SHALL BE BENT BACK TO THE OUTSIDE OF THE CONDUIT AND SECURELY TAPED SUCH THAT THE WIRE CAN'T BE PULLED OUT EASILY. THERE SHALL BE 10' TAILS LEFT IN ALL ENCLOSURES FOR MTEMC TO CONNECT TO GROUND. SEE MTEMC LOCAL ENGINEERING FOR QUESTIONS.
NOTES:

1. CONDUITS RUN HORIZONTAL TO WATER OR GAS LINES MUST HAVE A MINIMUM 36" HORIZONTAL SEPARATION.

2. TELEPHONE OR CABLE UTILITY MINIMUM SEPARATION FROM MTEMC DUCTS SHALL BE EITHER:
   a) 36" PARALLEL
   b) 12" VERTICAL

3. ALL FOREIGN UTILITY PERPENDICULAR CROSSINGS MUST HAVE 12" MINIMUM SEPARATION FROM MTEMC DUCTS.

4. CONDUIT SHALL BE PVC, SCHEDULE 40.

5. CONDUITS SHALL BE SUPPORTED WITH APPROVED DUCT SPACERS AT REGULAR INTERVALS NOT EXCEEDING 7'-0". SEE APPENDIX B FOR APPROVED SPACERS.

6. A MINIMUM OF 3" OF CONCRETE IS REQUIRED AROUND DUCT BANK.

7. INSTALL JETLINE PULL STRING WITH MINIMUM 200 LB TENSILE STRENGTH IN EACH CONDUIT.

8. CONCRETE SHALL BE MIXED WITH RED DYE.

9. IF CONDUCTOR IS NOT TO BE INITIALLY INSTALLED IN THE DUCT BANK, A #14 THHN CU TRACER WIRE SHALL BE INSTALLED INSIDE ONE OF THE INTERIOR CONDUITS OR CENTER CONDUIT IF AN ODD NUMBER OF CONDUITS ARE INSTALLED. IF ONE END OF THE CONDUIT IS JUST A STUB OUT 10 FEET OR LONGER, THE TRACER WIRE SHALL BE BENT BACK TO THE OUTSIDE OF THE CONDUIT AND SECURELY TAPED SUCH THAT THE WIRE CAN'T BE PULLED OUT EASILY. THERE SHALL BE 10' TAILS LEFT IN ALL ENCLOSURES FOR MTEMC TO CONNECT TO GROUND. SEE MTEMC LOCAL ENGINEERING FOR QUESTIONS.

PRIMARY DITCH DETAIL 12C
(12 CONDUITS)  
REVISED: 5-24-19
Notes:

1. Developer to install secondary pullboxes and comm hand holes. (Location, size, manufacturer and catalog number as specified by MTEMC Engineering. See appendix "B")

2. Developer to install PVC (sch 40) conduits from pull box Number 1 to pullbox Number 2 when required by MTEMC Engineering. (Number and size as required by MTEMC.) Developer to install 2" HDPE (SIR 13.5 orange with red stripes) between comm hand holes as required by MTEMC Engineering. (Number and size as required by MTEMC.)

3. Developer to furnish and install first section of electrical riser conduit and elbow (from pole to secondary pull box.) Developer to furnish and install comm conduit from comm hand hole up the pole through the lowest conduit standoff bracket. Pull strings to be included in all conduits.

4. Developer to install one (1) 3" elbow (24" radius, sch 80) and 10" stub out of sch. 40 conduit out of the appropriate pullbox for each lot to be served, aim the conduit toward the building site. A 2" sch. 40 PVC comm conduit shall be run from the comm hand hole and be stubbed out to the same location as the service conduit. A pull string is to be installed in each conduit with the end of each conduit taped to keep out dirt. Mark the end of the conduit above grade to locate in the future.

5. The builder’s electrician shall install the 3" PVC electrical conduit and 1" PVC comm conduit from the stub outs to the meter bases including pull strings. (See Note 4 above and drawings E5G-2 and E5G-3 in MTEMC’s Electrical Service Guidelines for more information.)

6. MTEMC to install schedule 80 conduits above first 10’ section on riser pole. (Number and size as required by MTEMC)

7. Refer to Drawing SBP-1, Sh. 2, for more details.

8. All PVC 3" conduit shall be long coupling type.

9. This drawing shows a typical installation for large subdivision lots. Actual installation will vary.

10. All elbows shall be schedule 80 PVC.

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MTEMC

SECONDARY PULLBOX INSTALLATION DETAILS
(OVERHEAD PRIMARY – UNDERGROUND SERVICE)

DRAWING NUMBER: SBP-1
REVISED DATE: AUG. 28, 2019
SCALE: NONE

8-1-2020
NOTES:
1. CONDUIT ELBOWS # 2 AND # 3 ARE 3" PVC 10' SECTION INSTALLED BY DEVELOPER AND TURNED OUT TOWARD BUILDING SITES WITH MAX SEPARATION OF 48".
2. DEVELOPER TO INSTALL PVC (SCHEDULE 40) CONDUITS FROM SECONDARY BOX PEDASTAL AT BASE OF POLE TO SECONDARY BOX PEDASTAL ACROSS STREET, NUMBER AND SIZE AS REQUIRED BY M.T.E.M.C. ALL ELBOWS TO BE SCHEDULE 80 PVC.
3. PEDESTAL TO BE INSTALLED ON BED OF 1/2" CLEAN GRAVELS PLACED ON UNDISTURBED EARTH WITH MINIMUM 24" FROM POLE.
4. REFER TO DRAWING SBP-1, SHEET 1 OR SHEET 3, FOR OVERALL PLAN.
1. Developer to install secondary pullboxes and comm hand holes.
   (Location, size, manufacturer and catalog number as specified by MTEMC Engineering - See appendix "B")

2. Developer to install PVC (Sch 40) conduits from pull box number 1 to pull box number 2 when required by MTEMC Engineering. (Number and size as required by MTEMC.) Developer to install conduit between comm hand holes as required by MTEMC Engineering. (Number, type, and size as required by MTEMC.)

3. Developer to furnish and install first section of electrical riser conduit and elbow [From pole to secondary pull box.] Developer to furnish and install comm conduit from comm hand hole up the pole through the lowest conduit standoff bracket. Pull strings to be included in all conduits.

4. Developer to install one (1) elbow (24" radius, sch. 80) and 10" stub out of sch. 40 conduit out of the appropriate pullbox for each lot to be served, aim the conduit toward the building site. A 1" PVC sch 40 comm conduit shall be run from the comm hand hole and be stubbed out to the same location as the service conduit. A pull string is to be installed in each conduit with the end of each conduit taped to keep out dirt. Mark the end of the conduit above grade to facilitate in the future.

5. The builder's electrician shall install the 3" PVC electrical conduit and 1" PVC sch 40 comm conduit from the stub outs to the meter bases including pull strings. (See Note 4 above and drawings E3G-2 and E3G-3 in MTEMC's Electrical Service Guidelines for more information.)

6. MTEMC to install schedule 80 conduits above first section of conduit on riser pole. (Number and size as required my MTEMC)

7. Refer to Drawing SBP-1, Sheet 2, for more details.

8. All PVC 3" conduit shall be long coupling type.

9. This drawing shows a 'typical' installation for large subdivision lots. Actual installation will vary.

10. All elbows shall be schedule 80 PVC.
EXAMPLE OF GENERIC LAYOUT: CONSULT WITH M.T.E.M.C. ENGINEERING FOR SPECIFIC DEVELOPMENT LAYOUT.

Notes:

1. Developer to furnish and install secondary pullboxes as well as comm hand holes. (Location, Manufacturer, and Catalog Number as specified by MTEMC Engineering - see Appendix "B")

2. Developer to furnish and install transformer box pad and PVC (sch 40) electrical conduit from boxpad to pullbox (number and size as required by MTEMC). Developer to furnish and install comm hand holes and necessary comm conduit between comm hand holes (number, type, and size as required by MTEMC). Transformer boxpads and comm hand holes shall be as specified by MTEMC - see Appendix B.

3. Developer to install one (1) 3" elbow (24" radius, sch. 80) and 10' sub out of sch. 40 conduit out of the appropriate boxpad and pullbox for each lot to be served, aim the conduit toward the building site. A 1" comm conduit shall be run from the comm pullbox and be stubbed out to the same location as the service conduit. A pull string is to be installed in each conduit with the end of each conduit taped to keep out dirt. Mark the end of the conduit above grade to locate in the future.

4. The builder’s electrician shall install the 3" PVC electrical conduit and 1" HDPE comm conduit from the stub outs to the meter bases. (See Note 3 above and drawings ES-G-2 and ES-G-3 in MTEMC’s Electrical Service Guidelines for more information.)

5. Refer to drawing SBP-2, Sheet 2, for more details.

6. All elbows to be schedule 80 PVC.
NOTES:
1. CONDUIT ELBOWS #2 AND #3 ARE 3" PVC INSTALLED BY DEVELOPER AND TURNED OUT TOWARD BUILDING SITES.
2. DEVELOPER TO INSTALL PVC (SCHEDULE 40) CONDUITS FROM PAD MOUNTED TRANSFORMER TO SECONDARY PULLBOX ACROSS STREET OR BEHIND TRANSFORMER, NUMBER AND SIZE AS REQUIRED BY M.T.E.M.C. ALL ELBOWS TO BE SCHEDULE 80 PVC.
3. PULLBOX TO BE INSTALLED ON BED OF 1/2" CLEAN GRAVELS PLACED ON UNDISTURBED EARTH.
4. REFER TO DRAWING SBP-2, SHEETS 1 OR 3, FOR OVERALL PLAN.
EXAMPLE OF GENERIC LAYOUT. CONSULT WITH M.T.E.M.C. ENGINEERING FOR SPECIFIC DEVELOPMENT LAYOUT.

Notes:

1. Developer to furnish and install secondary pullboxes as well as comm hand holes. (Location, Manufacturer, and Catalog Number as specified by MTEMCE Engineering - see Appendix 8)

2. Developer to furnish and install transformer box pad and PVC (sch 40) electrical conduit from boxpad to pullbox (number and size as required by MTEMC). Developer to furnish and install comm hand holes and necessary HDPE SDR 13.5 comm conduit between comm hand holes (number and size as required by MTEMC). Transformer boxpads and comm hand holes shall be as specified by MTEMC - see Appendix 8.

3. Developer to install one (1) 3" elbow (24" radius, sch. 80) and 10' sub out of sch. 40 conduit out of the appropriate boxpad and pullbox for each lot to be served, aim the conduit toward the building site. A 1" PVC sch 40 comm conduit shall be run from the comm hand hole and be stubbed out to the same location as the service conduit. A pull string is to be installed in each conduit with the end of each conduit taped to keep out dirt. Mark the end of the conduit above grade to locate in the future.

4. The builder's electrician shall install the 3" PVC electrical conduit and 1" PVC comm conduit from the stub outs to the meter bases. (See Note 3 above and drawings ESG-2 and ESG-3 in MTEMC's Electrical Service Guidelines for more information.)

5. Refer to drawing SBP-2, Sheet 2, for more details.

6. Conduit from transformer box pad to pullbox will be specified by MTEMC for each project.

7. All elbows to be schedule 80 PVC.
NOTES:
1. CONDUIT ELBOWS # 2 AND # 3 ARE 3" PVC INSTALLED BY DEVELOPER AND TURNED OUT TOWARD BUILDING SITES.
2. DEVELOPER TO INSTALL PVC (SCHEDULE 40) CONDUITS FROM PAD MOUNTED TRANSFORMER TO SECONDARY PULLBOX ACROSS STREET OR BEHIND TRANSFORMER, NUMBER AND SIZE AS REQUIRED BY M.T.E.M.C. ALL ELBOWS TO BE SCHEDULE 80 PVC.
3. PULLBOX TO BE INSTALLED ON BED OF 1/2" CLEAN GRAVELS PLACED ON UNDISTURBED EARTH.
4. REFER TO SHEETS 1 & 3 OF DRAWING SBP-1 OR SBP-2 FOR OVERALL PLAN.
PLAN VIEW

TOP OF BOX COVER TO BE FLUSH W/ FINISHED GRADE

SELECTED EARTH BACKFILL

FILL WITH 1/2" CLEAN GRAVEL

SCHEDULE 80 PVC

SIDE VIEW

TOP OF COVER TO BE FLUSH W/ FINISHED GRADE

NUMBER OF CONDUITS SHOWN ON PLANS

END VIEW

NOTES:
1. DEVELOPER SHALL FURNISH AND INSTALL PULLBOX PER MTEMC SPECIFICATIONS. CATALOG NUMBERS ARE LISTED IN APPENDIX B.
2. SIZE AND NO. CONDUITS SHOWN ON PLANS.
3. ALL CONDUIT ELBOWS SHALL BE CAPPED UPON INSTALLATION.
4. ALL ELBOWS TO BE SCHEDULE 80 PVC.

REVISIONS: 1/10/06, 2/22/12, 5/8/16, 6/8/16, 5/24/19

MTEMC CONSTRUCTION DETAIL
48L X 30W X 36D PULL BOX

SCHEDULE 80 PVC
NOTES:
1. ALL SECONDARY ELBOWS SHALL BE SCH. 80 PVC, 2¼" I.D. ALL PRIMARY ELBOWS SHALL BE SCH 80, 6¾" I.D. SHOWN ON PLANS.
2. MAINTAIN 2" MINIMUM SPACING BETWEEN CONDUIT UNLESS SHOWN GREATER.
3. ALL CONDUIT ELBOWS MUST BE CAPPED UPON INSTALLATION.
4. ALL ELBOWS TO BE SCHEDULE 80 PVC.

NOTES:
5. SERVICE EQUIPMENT AND METER BASE SECURED FASTENED TO A 4X4 POST SET IN THE GROUND AT A MINIMUM DEPTH OF 2 FEET.
6. LOCATE POST BEYOND RIGHT REAR CORNER OF PAD-MOUNTED TRANSFORMER OR UNDERGROUND SECONDARY BOX. ALLOW 2 FT. CLEARANCE BETWEEN POST AND TRANSFORMER OR SECONDARY BOX. WTMC ENGINEER MAY SPOT LOCATION FOR NEW TEMPORARY SERVICE AS WELL AS ADDITIONAL TEMPORARY SERVICES.
7. SERVICE ENTRANCE RACEWAY OF 1 1/4" W/P FLEXIBLE CONDUIT WILL EXTEND FROM THE TOP OF THE METER BASE TO NOT LESS THAN 1 FT. BELOW GRADE AND INTO THE TRANSFORMER BOX PAD.
8. SERVICE ENTRANCE CONDUCTORS, NO. 8 (L/F OR USE) UNDERGROUND CABLE WILL EXTEND 7 FT. OUT OF SERVICE ENTRANCE RACEWAY. CONNECTIONS IN TRANSFORMER CABINET OR UNDERGROUND SECONDARY BOX WILL BE MADE BY WTMC.
9. METER BASE WILL BE LOCATED BETWEEN 4" AND 6" ABOVE GRADE.
10. A WEATHERPROOF, U.L. LISTED, TEMPORARY SERVICE PANEL WILL BE LOCATED AT THE METER BASE. IN NO CASE WILL THE PANEL BE LESS THAN 3 FT. ABOVE GROUND.
11. 15 AND 20 AMPERE RECEPTACLES WILL HAVE GROUND FAULT PROTECTION FOR PERSONNEL.
12. A GROUND WIRE OF NO. 4 COPPER OR LARGER SHALL BE RUN UNPLIQUED FROM METER BASE OR PANEL TO GROUND ROD. AN 8 FT. DRIVEN GROUND ROD BONDED TO GROUND WIRE WITH CLAMP SUITABLE FOR DIRECT SOIL BURIAL WILL BE INSTALLED BELOW GRADE, 8 IN. FROM POST.
13. ALL ELBOWS TO BE SCHEDULE 80 PVC.
BOX PAD FRONT ELEVATION

BOX PAD SIDE ELEVATION

NOTES:

1. DEVELOPER SHALL FURNISH AND INSTALL TRANSFORMER BOX PAD PER MTEMC SPECIFICATIONS. SEE APPENDIX B FOR APPROVED CATALOG NUMBERS.

2. BASE VIEW SHOWS HIGH-VOLTAGE CONDUITS TURNING UP IN ORDER OF PRIORITY--I, 2, 3, 4, ETC. : TI, T2 REPRESENT HIGH-VOLTAGE TAP CONDUITS POSITIONS. 15, 25, ETC. SHOW RELATIVE POSITIONS OF SECONDARY (LOW-VOLTAGE) CONDUITS. SEE PLANS FOR EXACT NUMBER AND SIZE OF CONDUITS.

3. ALL CONDUIT ELBOWS SHALL BE CAPPED UPON INSTALLATION.

4. BEGINNING AT 5' FROM LIP OF BOX PAD, DITCH SHALL COMPLY WITH DETAIL DWG, 2G, 2C, OR 4C. SEE "DUCT BANK SPECS", SECTION (5)(3)(a) FOR DITCH REQUIREMENTS.

5. TOP OF BOX PAD TO BE 4'-6" ABOVE GRADE.

6. ALL HI-VOLTAGE CONDUITS SHALL TERMINATE A MINIMUM OF 4' ABOVE GRAVEL FILL INSIDE BOX.

7. ALL LO-VOLTAGE CONDUITS SHALL TERMINATE 12" FROM TOP OF BOX PAD.

8. REFER TO DRAWING SBP-2 AND SBP-3 FOR SECONDARY FULL BOX LOCATIONS AND SPECIFICATIONS.

9. ALL ELBOWS TO BE SCHEDULE 80 PVC.

SCHEDULE

CONSTRUCTION DETAIL
TRANSFORMER BOX PAD

MTEMC

DRAWING NO.
BP-1

REVISED: 5-24-19
REVISED: 10-26-18
REVISED: 3-4-16
REVISED: 1-10-06

8-1-2020
SECTOR PAD BASE AND EXCAVATION PLAN
(Scale 1/2"=1'-0")

SECTOR SIDE ELEVATION
(Scale 1/2"=1'-0")

NOTES:
1. DEVELOPER SHALL FURNISH AND INSTALL SECTOR PADS PER MTEMC SPECIFICATIONS. THE PADS SHALL BE PRECAST CONCRETE. PART NUMBERS ARE LISTED IN APPENDIX B.
2. ALL ELBOWS SHALL BE SCH. 80 PVC. 36" R, SIZE SHOWN ON PLANS.
3. SEE PLANS FOR EXACT NO. AND SIZE OF CONDUITS.
4. MAINTAIN 2" MINIMUM SPACING BETWEEN CONDUIT UNLESS SHOWN GREATER.
5. ALL CONDUIT ELBOWS MUST BE CARED UPON INSTALLATION.
6. SEE APPENDIX B FOR MANUFACTURER & CATALOG INFORMATION.

SECTOR FRONT ELEVATION
(Scale 1/2"=1'-0")

MTEMC
CONSTRUCTION DETAIL
SECTOR AND PAD
SINGLE PHASE

8-1-2020
### TABLE 1

<table>
<thead>
<tr>
<th>CONDUIT SIZE</th>
<th>CONDUIT CONTAINING CUSTOMER OWNED WIRING SUPPORT SPACING</th>
<th>CONDUIT CONTAINING MTEMC OWNED WIRING SUPPORT SPACING</th>
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<tr>
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<td>2 1/2&quot; - 3&quot;</td>
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<tr>
<td>3 1/2&quot; - 5&quot;</td>
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**Spacing shall be within ± 3"**

### TABLE 2

<table>
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<tr>
<th>CONDUIT SIZE</th>
<th>CONDUIT RADIUS</th>
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<tr>
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<td>4&quot; &amp; up</td>
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<td>Primary</td>
</tr>
<tr>
<td>2&quot;</td>
<td>36&quot;</td>
<td>Primary</td>
</tr>
</tbody>
</table>

### Notes:

1. See ditch details elsewhere in these specifications for ditch dimensions and requirements.

2. Prior to any excavation closer than 3' to the pole, the developer shall provide 24 hours notice to MTEMC to arrange for MTEMC inspector to be present during excavation. Work shall be arranged such that the required excavation and backfill will take place the same day as excavation.

3. A minimum of 4" with a maximum of 10" of electrical riser conduit, and all riser elbows shall be sched 80 PVC furnished and installed by developer. All electrical conduit shall meet NEMA TC-2, WC 1094A, and UL651 specs. Comm conduit shall be furnished and installed by the developer. All 2" comm conduit shall be HDPE SDR11.5 orange with a red stripe. The conduit will be installed on the back of the lowest stand off bracket.

4. MTEMC shall install all additional 10" sections of PVC schedule 80 conduit above the first 10" section.

5. Developer shall glue cap on any spare elbows and all comm conduit. It must be a cap; tape will not be approved.

6. Conduit-to-pole brackets shall standoff conduit 4" from pole and shall be furnished and installed for the first 10" of electric riser conduit by the developer. Comm conduit shall be run through the back of the lowest conduit standoff bracket and capped. See listed approved materials for the accepted brackets in Appendix B.

7. Conduit in the last 20' of ditch prior to meeting riser pole elbow shall be level in order for riser pole conduit to be plumb.

8. Developer must coordinate specific conduit risers location with MTEMC before installation is begun.

9. Schedule 80 PVC conduit shall be long coupling type.

10. See Table 1 for conduit support spacing.

11. NESC requires 8" between bottom support two brackets.
NOTES:

1. MAINTAIN A 4" SEPARATION BETWEEN CONDUITS AND A 4" CONCRETE COVER OVER CONDUITS.

2. EACH CONDUIT IS TO BE 2" OFF THE POLE'S CENTER LINE AND IS TO PASS BETWEEN CONDUITS AT TOP OF POLE, SO THIS DIMENSION RELATIVE TO THE POLE'S CENTER LINE IS CRITICAL.

3. TO BE USED ON ALL RISERS THAT MEET ONE OR MORE OF THE FOLLOWING CRITERIA:
   A. PRIMARY SERVICES LARGER THAN #1 ALUMINUM.
   B. PRIMARY SERVICES THAT ARE WITHIN STATE RIGHT OF WAY.
   C. PRIMARY SERVICES THAT EXIST IN AREAS WHERE DAMAGE TO THE CONDUIT IS LIKELY. SEE METMC ENGINEER FOR APPPLICABILITY.

4. TOTAL ENCASMENT WIDTH IS DEPENDENT ON THE CONDUIT'S OUTSIDE DIAMETER.

5. CONCRETE ENCASMENT SHALL BE RUBBED AND FINISHED TO FILL ALL Voids.

6. THE QUADRANTS FOR CONDUIT LOCATION SHALL BE DETERMINED BY METMC PERSONNEL.

7. IF THE NUMBER OF CONDUITS IS GREATER THAN 2, SEE METMC PERSONNEL.

8. THIS IS TO BE USED FOR ALL FEEDER CIRCUITS AND WHENEVER METMC PERSONNEL DETERMINE CONDUIT IS AT RISK FOR DAMAGE.

9. ALL ELUBING SHALL BE SCH 80 PVC.

PLAN VIEWS
SCALE: 3/32" = 1'

SIDE VIEW
SCALE: 3/4" = 1'

Concrete Envelope (Where Required, See Approp. Ditch Detail)
1) Consult with District Engineer for specific placement to verify that location will conform to MTEMC Maintenance Requirements.

2) Depending on the bollard placement, MTEMC may require the bollard to be removable. This may be accomplished by placing a sleeve in the concrete encasement.

NOTES:
NOTES:

A. Where applicable, all electrical installations shall meet the current National Electric Code requirements.

B. Conduit risers shall be placed on pole such that no conflict exists between riser and foreign utilities.

C. Contact MTEM C personnel for location of meter base. Where applicable, place meter on building.

D. If Required a material charge as stated in MTEM C OB-102-N shall be paid before final approval.

INSTALLATION NOTES:

1. Developer shall purchase and install an MTEM C approved 24"x36"x18" deep secondary pull box as shown.

2. Customer shall extend conductor tails 18" minimum above the top of the pull box.

3. Developer shall purchase and install two 90° elbows with 24" radius between pull box and pole as shown.

4. Conduit size shall be one (1) 4" permanent and one (1) spare 4" schedule 80 PVC unless otherwise approved by MTEM C Engineering.

5. Developer shall provide a 4" spacer located between pole and riser conduit such as a 4x4 or a piece of 4" conduit so that MTEM C can install proper straps and position the riser conduit on the pole appropriately.

6. Contact MTEM C for ditch inspection at 1-877-886-8362 Service for approval of pull box and conduit installation. 24-hour notification is required.

7. MTEM C shall install the remaining sections of conduit riser, straps, conductor, and connectors inside the box after ditch inspection approval.

8. All elbows to be Schedule 80 PVC.
Primary Pullbox (if necessary)

Primary (from source)

12" 12"

Transformer Pad to be easily visible and accessible from road or drive,

Service (to meterbase)

12"

Front

ELEVATION VIEW

Scale: None

PLAN VIEW

Scale: None

Notes:
1. See MTEMC approved UG boxes & pads list for correct types.
2. Call 1-877-886-8362 Before backfilling ditch for MTEMC ditch inspection.
3. Conduit size from pole to transformer to be 2". From transformer to meterbase 3" unless otherwise noted by MTEMC service engineer.
4. See drawing BP-1 for more detail on box pads.

Schedule 80 conduit up pole to be furnished and installed by MTEMC.

FIRST 10' OF RISER CONDUIT SHALL BE PROVIDED & INSTALLED BY CUSTOMER. SEE RP-1 FOR MORE DETAIL.

MTEMC communication conduit. Extend approximately 3' above final grade, strap to pole at 1'. (See ESQ-2 for more details)

Stand conduit 4" off pole.

Primary Pullbox (if necessary)

– Top of box to be flush with final grade.
– Top of conduit 4"–6" from gravel

Turn up conduit and cap 6" below grade.

Primary: 2" Sch. 40

36" radius Sch. 80 elbow.

300lb. test pull string in conduit installed by customer.

Bed of gravel, Gravel size 1/2".

2" PVC Sch. 40

1/2" Schedule 40

1" Schedule 40

12" Min.

24" radius Sch. 80 elbow.

6" Bed of gravel Gravel size 1/2".

3" Schedule 40 service conduit

Transformer installed by MTEMC

Pad installed by customer top to be 4"–6" above grade.

Cut conduit off 4" from gravel.

Turn up conduit and cap 6" below grade.

1" PVC Sch. 40 to home/meter See ESQ-2 Drawing

8-1-2020
NOTES:

1. CONDUIT SHALL BE INSTALLED TO THE BOTTOM OF THE PAD. MTEMC WILL ASSIST WITH THE INSTALLATION INSIDE AND UNDERNEATH THE TRANSFORMER PAD. CALL 1–877–866–8362 TO SET UP APPOINTMENT.

2. A GROUND WIRE OF NO. 4 COPPER OR LARGER SHALL BE RUN UNSPLICED FROM A LUG IN THE METER BASE TO A DRIVEN GROUND ROD. AN 8' DRIVEN GROUND ROD BONDED TO GROUND WIRE WITH CLAMP SUITABLE FOR DIRECT SOIL BURIAL WILL BE INSTALLED BELOW FINAL GRADE.

3. CUSTOMER SHALL FURNISH AND INSTALL THE NECESSARY CONDUIT, FITTINGS AND WIRE TO COMPLETE THE INSTALLATION, INCLUDING PULLING SERVICE WIRE.

4. ALL ELBOWS TO BE SCHEDULE 80 PVC.
NOTES:
1) NEMA TRIMMED 2 HOLE SPADE CONNECTOR.
2) Must be tinned, long barrel, compression terminal lugs.
3) Must be compatible with the inserted conductor.
4) BOLTS AND WASHERS MUST BE 1/2" STAINLESS STEEL WITH 1/2" BRONZE NUTS.
5) Stainless steel bolts must be All-Thread.
6) Work back to front.
7) Use offset lugs or approved spacer for stacking lugs in cases of insufficient transformer spade capacity.
8) See Appendix B for approved material list.
1/2 reinforcing rods in 6" x 6" mesh as shown

DO NOT POUR CONCRETE AROUND CONDUIT. OPENINGS AS SHOWN ARE REQUIRED.

PRIMARY CABLE OPENING
SECONDARY CABLE OPENING

A-A VIEW

1/2 reinforcing rods spaced 6" apart

MINIMUM DESIGN STRENGTH OF 3000 PSI

CLEARANCES

7" (SEE NOTE 3)

MINIMUM CLEARANCE AROUND TRANSFORMER

REVISED: 5-28-02
REVISED: 5-16-14
REVISED: 12-4-13
REVISED: 3-7-16
REVISED: 5-16-17
REVISED: 3-16-17
REVISED: 5-26-17

NOTES:
1. MAXIMUM NUMBER OF CONDUCTORS PER PHASE SHALL BE 16.
2. OWNER’S CONTRACTOR TO BE RESPONSIBLE FOR ALL UNDERGROUND PRIMARY AND SECONDARY CONDUCTS. REFER TO DUCT SPECIFICATIONS FOR MORE DETAILS.
3. PAD SHALL NOT BE LOCATED CLOSER THAN 7'-0" TO A BUILDING OR OTHER OBSTRUCTION, EXCEPT FRONT OF PAD SHALL BE NO CLOSER THAN 12'-0" UNLESS OTHERWISE APPROVED BY MT EMC ENGINEERING. THE FRONT OF THE PAD SHALL FACE AWAY FROM THE BUILDING OR TOWARD THE ACCESS ROAD. FINAL ORIENTATION TO BE DETERMINED BY MT EMC ENGINEERING.
4. CUSTOMER TO BE RESPONSIBLE FOR FURNISHING AND INSTALLING CONDUIT FROM THE FIRST 10' VERTICAL SECTION ON THE POLE TO THE TRANSFORMER PAD. CUSTOMER SHALL FURNISH AND MT EMC WILL INSTALL CONDUIT ABOVE THE FIRST 10' SECTION ON THE POLE. SEE MT EMC DRAWING RP-2.
5. CUSTOMER TO BE RESPONSIBLE FOR PROVISION AND INSTALLATION OF:
   A. SECONDARY RUNS THROUGH BUILDING WALL INTO THE TRANSFORMER CABINET.
   B. CONDUCTOR RUNS UP TO LOW VOLTAGE BUSHINGS.
   C. CONNECTIONS INSIDE LOW VOLTAGE COMPARTMENTS. REFER TO DRAWING LUG NO.1 FOR FURTHER DETAILS.
6. ALL FIRE AND SAFETY CODES SHALL BE MET CONCERNING THE PLACEMENT OF TRANSFORMERS ADJACENT TO BUILDINGS.
7. AN MT EMC ENGINEER MUST APPROVE THE ORIENTATION OF THE PAD PRIOR TO CONSTRUCTION.
8. ALL ELKOWS TO BE SCHEDULE 80 PVC.
9. OLDCASTLE PAD/MT EMC 75-2000 KVA APPROVED FOR USE

GROUNDED CONDUCTORS

GROUND LINE

4' SCH 80 PVC CONDUIT WITH 45° BENDING RADIUS TO BE INSTALLED

PRIMARY
SECONDARY

4' SCH 80 PVC CONDUIT
WITH 45° BENDING RADIUS
TO BE INSTALLED

NUMBER AND SIZE AS REQUIRED

SCH 80 PVC CONDUIT
WITH 45° BENDING RADIUS
TO BE INSTALLED

NUMBER AND SIZE AS REQUIRED

GENERAL INSPECTION NOTES:
1. GET DITCH AND PVC READY, CALL MT EMC @ 1-877-886-8362 AND REQUEST INSPECTION
2. FORM 3D PAD AND CALL FOR INSPECTION
3. CALL AND REQUEST INSPECTION AFTER Poured.
4. YOU WILL NEED A FINAL PAD INSPECTION, THIS WILL INCLUDE:
   FORMS WRECKED, ACCESS TO SITE, PROPER GRADE, STRINGS IN DUCT SYSTEM, AND METER BASE

MT EMC
TRANSFORMER PAD SPECIFICATIONS
PAD MOUNT TRANSFORMER

SCALE 1/2"=1'

REVISED: 5-16-14
REVISED: 12-4-13
REVISED: 3-7-16
REVISED: 5-16-17
REVISED: 3-16-17
REVISED: 5-26-17

APPROVED
5-11-09

DRAWING NO.
PAD NO.1

SHEET 1 OF 1

8-1-2020
NOTES:

1. MAXIMUM CONDUCTORS PER PHASE SHALL BE 16.

2. TURN UP PRIMARY COMPARTMENT CONDUIT 12" BELOW SLAB.

3. TURN UP SECONDARY COMPARTMENT CONDUIT 6" ABOVE GRAVEL, UNLESS USING SIDE ENTRY CONDUIT. STOP SECONDARY CONDUITS 2" INSIDE SECONDARY COMPARTMENT IF USING SIDE ENTRY CONDUIT.

4. ALL CONCRETE (BOTH SLAB AND WALL SECTIONS) TO HAVE 1/2" RE-BAR REINFORCEMENT. THE SLAB PORTION SHALL HAVE RE-BAR SPACED IN A 6" MESH, 4" FROM BOTTOM OF SLAB. THE WALL SECTIONS SHALL HAVE VERTICAL RE-BAR LOCATED BETWEEN 1" AND 2" FROM BOTH CONCRETE SURFACES AND HORIZONTAL 1/2" RE-BAR TIES AT NO GREATER THAN 12" APART.

5. CONCRETE SHALL BE 3000 PSI.

6. OWNER'S CONTRACTOR TO BE RESPONSIBLE FOR ALL UNDERGROUND PRIMARY AND SECONDARY CONDUITS. REFER TO DUCT SPECIFICATIONS FOR MORE DETAILS.

7. PAD SHALL NOT BE LOCATED CLOSER THAN 7'-0" TO A BUILDING OR OTHER OBSTRUCTION. EXCEPT FRONT OF PAD SHALL BE NO CLOSER THAN 12'-0", UNLESS OTHERWISE APPROVED BY MTEMCO ENGINEERING, THE FRONT OF THE PAD SHALL FACE AWAY FROM THE BUILDING OR TOWARD THE ACCESS ROAD. FINAL ORIENTATION TO BE DETERMINED BY MTEMCO ENGINEERING.

8. ALL ELBOWS TO BE SCHEDULE 80 PVC.

9. OLDCASTLE PRECAST PAD DWG# 384-MTEMCO PAD#5 IS APPROVED FOR USE.
DEAD FRONT FOUNDATION

SIDE "A"

1" BEVEL

#4 AT 12" EA. WAY

SEE ANCHOR BOLT DETAIL (TYP)

(4) 5/8"DIA. ANCHOR BOLT

ENCLOSURE

ANCHOR BRACKET BY S&C

1 1/2" MIN.

ANCHOR BOLT DETAIL
(1/2"=1"

NOTES:
1. OLDCASTLE PRECAST
   #384-88x94 MTEMC PAD#10
   MAY BE USED INSTEAD OF A Poured
   IN PLACE FOUNDATION.

2. SIDE "A" TO BE PARALLEL TO STREET.

3. REINFORCEMENT TO HAVE 2" CLEARANCE
   FROM FACE OF CONCRETE.

4. ELBOWS MUST ENTER PAD IN A VERTICAL
   ORIENTATION. A DIAGONAL ORIENTATION
   IS NOT ACCEPTABLE.

5. 6" ELBOWS TO BE 48R, SCH 80 PVC.

6. CALL 1-877-886-8362 FOR INSPECTION.

DATE | REVISION | BY
--- | --- | ---
1-9-12 | COMBINED SHEETS 1 & 2 | CHW
3-27-13 | CHANGED EMBRIONS AND REVOLVED | KGO
3-7-16 | GENERAL REVISIONS | KGO
7-3-18 | REVISED SHEET 5 | A.Lowe

MTEMC
SWITCH PAD DETAIL
S&C PME 125 BIL
600 AMP
STANDARD DRAWING

SCALE 1/2"=1'

STANDERDS DRAWING

R.R. PAD NO.10

APPROVED 11/27/13

DRAWN BY

CHECKED BY

8-1-2020
NOTES:

1. SIDE "A" TO BE PARALLEL TO STREET.
2. REINFORCEMENT TO HAVE 2" CLEARANCE FROM FACE OF CONCRETE.
3. ELBOWS MUST ENTER PAD IN A VERTICAL ORIENTATION. A DIAGONAL ORIENTATION IS NOT ACCEPTABLE.
4. 6" ELBOWS TO BE 48R, SCH 80 PVC.
PAD NO 11. CONDUIT ROLL

SECTION X–X

MANHOLE MH–3
NOTES:

1. MANHOLE TO BE DESIGNED TO MEET H-20 LOADING REQ'TS.

2. CONCRETE STRENGTH fc=4,500 PSI MIN AT 28 DAYS.

3. REINFORCING STEEL SHALL BE ASTM A-615 GRADE 60.

4. ALL MANHOLE JOINTS INCLUDING GRADE RINGS, SHALL BE SEALED USING RUBBER NECK OR RUB-R-NECK BY K.T. SNYDER INC. (OR APPROVED EQUAL) MEETING FED SPEC SS-S-210A.

5. LIFTING DEVICES WILL BE "SWIFT LIFT" BY DAYTON SUPERIOR, OR EQUAL.

APPROVED DESIGN:
OLDCASTLE PRECAST INC. DRAWING # 612-84-MTEMC

CONSTRUCTION DETAIL
12' x 6' x 7' UTILITY MANHOLE (TYPICAL)
NOTES FOR SETTING MANHOLE:
1. EXCAVATE THE HOLE ACCORDING TO DETAILS SHOWN. NOTE THE 1:1 SLOPE TO COMPLY WITH OSHA REQUIREMENTS FOR "NORMAL" SOIL.
2. PLACE MINIMUM OF 12" OF #17 OR #67 GRAVEL IN THE HOLE AND LEVEL.
3. SET THE MANHOLE (NOTE THAT 3'-0" MINIMUM WORKING CLEARANCE REQUIRED AT BASE OF MANHOLE).
4. MTMC TO GROUND MANHOLE.
5. DEVELOPER TO INSTALL REQUIRED DUCTS.
6. BACKFILL UP TO THE JOINT OF THE TWO HALVES.
7. SET THE MANHOLE THROAT AND COVER (SEE DETAIL).
8. BACKFILL TO FINAL GRADE. NOTE GRAVEL AROUND SIDES AND ENDS OF MANHOLE.

MANHOLE THROAT/Cover notes:
1. MANHOLE THROAT/Cover TO BE BOURCHARD #1133.
2. DO NOT SUPPORT METAL THROAT WITH CONDUIT; USE PVC CONDUIT CUT TO CORRECT LENGTH (MIN. OF 4, EQUALLY SPACED).
3. CONCRETE FORMS SHOWN ARE 2X LUMBER FOR OUTSIDE FORM, AND 3" SONOTUBE FOR INSIDE FORM. BOTH CUT TO LENGTH REQUIRED FOR FINAL GRADE.
4. PREMANUFACTURED GRADE RING MAY BE SUBSTITUTED FOR SONOTUBE & CONDUIT SUFTS FOR MANHOLE COVER.
1. **MANHOLE TO BE DESIGNED TO MEET H-20 LOADING REQTS.**

2. **CONCRETE STRENGTH fc=4,500 PSI MIN AT 28 DAYS.**

3. **REINFORCING STEEL SHALL BE ASTM A-615 GRADE 60.**

4. **ALL MANHOLE JOINTS, INCLUDING GRADE RINGS, SHALL BE SEALED USING RAM NEK OR RUB′R-NEK BY K.T. SNYDER CO INC. (OR APPROVED EQUAL) MEETING FED SPEC SS-S-210A.**

5. **LIFTING DEVICES WILL BE "79U80 UA" BY MEADOW BURKE, OR EQUAL.**

6. **DO NOT USE PULLING IRONS TO LIFT MANHOLES. USE LIFTING ANCHORS. MANHOLES WITH DAMAGED PULLING IRONS WILL NOT BE ACCEPTED.**

**APPROVED DESIGN:**
OLDCASTLE PRECAST INC. DRAWING #MTEMC 715MH3

---

**MTEMC CONSTRUCTION DETAIL**
7′ x 15′ x 7′ UTILITY MANHOLE (TYPICAL)

**DATE:** 4-2-09

**DRAWING NO:** MH-3

**STATED BY:**

**DRAWN BY:**

**CHECKED BY:**
NOTES:

1) THE DUCT BANKS SHALL BE INSTALLED IN THE ARRANGEMENT AS SHOWN SO THAT ONE QUADRANT IN THE MANHOLE IS LEFT TOTALLY EMPTY TO PROVIDE WORKSPACE.

2) THE SWITCH DUCT BANK SHALL BE ON THE OPPOSITE SIDE OF THE MANHOLE FROM THE MAIN DUCT. THIS PROVIDES SPACE FOR THE CABLE TO BE BENT AS NECESSARY.

3) THE SWITCH DUCT BANK AND THE TAP DUCT BANK SHALL ALWAYS BE ON THE SAME END OF MANHOLE.

4) ALL DUCT BANKS SHALL ENTER AND EXIT THE BOTTOM HALF OF THE MANHOLE UNLESS APPROVED BY MTEMC.
1. Manhole to be designed to meet H-20 loading forces.

2. Concrete strength f'c = 4,500 PSI MIN at 28 days.

3. Reinforcing steel shall be ASTM A-615 Grade 60.

4. All manhole joints, including grade rings, shall be sealed using K-latex or equivalent.

5. Lifting devices will be "70160 VA" by Meadow Burke, or equal.

6. Do not use pulling公元 to lift manholes. Use lifting anchors. Paint anchors with damaged pulling公元s will not be accepted.

Approved Design:
Gloucester Projects Inc. Drawing #MH-M3181831
NOTES FOR SETTING MANHOLE:
1. EXCAVATE THE HOLE ACCORDING TO DETAILS SHOWN. NOTE THE 1:1 SLOPE TO COMPLY WITH OSHA REQUIREMENTS FOR "NORMAL" SOIL.
2. PLACE MINIMUM OF 12" OF #17 OR #67 GRAVEL IN THE HOLE AND LEVEL.
3. SET THE MANHOLE (NOTE THAT 3'-0" MINIMUM WORKING CLEARANCE REQUIRED AT BASE OF MANHOLE).
4. MTEMC TO GROUND MANHOLE.
5. DEVELOPER TO INSTALL REQUIRED DUCTS.
6. BACKFILL UP TO THE JOINT OF THE TWO HALVES.
7. SET THE MANHOLE THROAT AND COVER (SEE DETAIL).
8. BACKFILL TO FINAL GRADE. NOTE GRAVEL AROUND SIDES AND ENDS OF MANHOLE.

MANHOLE THROAT/Cover NOTES:
1. MANHOLE THROAT/Cover TO BE Bouchard #1133.
2. DO NOT SUPPORT METAL THROAT WITH SONOTUBE; USE PVC CONDUIT CUT TO CORRECT LENGTH (MIN. OF 4, EQUALLY SPACED).
3. CONCRETE FORMS SHOWN ARE 2X LUMBER FOR OUTSIDE FORM, AND 3/4" SONOTUBE FOR INSIDE FORM, BOTH CUT TO LENGTH REQUIRED FOR FINAL GRADE.
4. PREMANUFACTURED GRADE RING MAY BE SUBSTITUTED FOR SONOTUBE & CONDUIT SUPPORTS FOR MANHOLE COVER.

REVISED: 5-25-00

8-1-2020
Appendix A

Single Family Lot Underground Residential Service in Developed Subdivisions

The following specifications pertain to underground services to single-family homes built in developed subdivisions.

1) The electrical service ditch must run from the MTEMC designated meter location to the MTEMC designated power source. The ditch shall be as described in Ditch Detail “1S” or “2S”. The bottom of the ditch shall be level or sloping at a consistent angle such that the conduit will be supported well with little or no vertical bending in the ditch. The contractor or owner will be responsible for backfilling the ditch with rock-free dirt or sand.

2) The contractor shall provide and install a continuous (unbroken) 3” PVC (electrical grade, schedule 40) conduit in the ditch from the MTEMC source to the MTEMC meter base location, with no horizontal elbows in the run (not counting riser and meter base location vertical elbows). The conduit must be permanently connected and have a minimum 200 lb. tensile pull string installed from the MTEMC source to the meter location. A minimum of one-foot separation from other utilities shall be maintained. No portion of elbow or conduit above finished grade will be permitted to be Schedule 40 PVC; however, Schedule 80 electrical grade PVC will be permitted.

3) Before the ditch is backfilled and before wire is installed, the meter base must be installed complete with owner’s service entrance conductors. The ditch and conduit must be inspected by the MTEMC inspector at this time (prior to MTEMC pulling the service lateral conductors). Call 1-877-886-8362 to set up an appointment.

4) Where services cross streets, the ditch must be backfilled with crusher-run gravel. Where streets are paved, contractors should take out proper permits and repave according to local authority instructions.

5) The contractor or owner will be responsible for any damage to the conduit or cable occurring during backfilling, and any additional cost to MTEMC will be billed to the contractor.

6) In cases that require one or more horizontal bends, or are more than 250 feet from meter base location to MTEMC source, or service entrance is larger than 200 amps, contact the MTEMC District Engineering office for further requirements.
## Appendix B - Approved Materials

<table>
<thead>
<tr>
<th>ITEM</th>
<th>MTEMC DRAWING NUMBER</th>
<th>MANUFACTURER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manhole Covers</td>
<td>PM-2L</td>
<td>John Bouchard No. 1133 (ELECTRIC) Neenah No. R-1640-C1 (ELECTRIC)</td>
</tr>
</tbody>
</table>
| Manholes | MH-1, MH-3, OMH-3 | Old Castle Precast, Inc. 5900 East Division  
Lebanon, TN 37090  
Phone No.: (615) 453-6111  
Fax: (615) 453-6080  
Cloud Concrete Company, P. O. Box 1189  
LaVergne, TN 37086  
Phone No.: 793-1920  
Sherman Dixie Concrete Co. P. O. Box 140199  
Nashville, TN 37214  
DeKalb Concrete Products P. O. Box 1185 Toccoa, GA 30577  
Attention: Tommy Whitfield  
Phone No.: (706) 779-3366  
Fax No.: (706) 779-3515 |
| Schedule 40 Conduit with **long couplings** | multiple drawings | Prime Conduit, Cantex or equivalent. Must meet the following specifications: UL 651, NEMA TC2-1978, Fed Spec No. WC1094A. **Standard couplings will not be accepted.**  
**Long Couplings**  
Prime Conduit CPLLCS300X6125  
Cantex 6202005  
**Sch 40 Conduit**  
Prime Conduit 49013-10  
Cantex A52DA12 |
| Schedule 80 Conduit with **long couplings** | RP-1, RP-3 | Prime Conduit, Cantex or equivalent. Must meet the following specifications: UL 651, NEMA TC2-1978, Fed Spec No. WC1094A. **Standard couplings will not be accepted.**  
**Long Couplings**  
Prime Conduit CPLLCS300X6125  
Cantex 6202005  
**Sch 80 Conduit**  
Prime Conduit 49413-010  
Cantex A53DA12 |
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<tr>
<th>ITEM</th>
<th>DESCRIPTION</th>
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<tbody>
<tr>
<td>Comm 2” HDPE Conduit</td>
<td>2” HPDE SDR 13.5 Orange with Red Stripe</td>
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<th>ITEM</th>
<th>MTEMC DRAWING NUMBER</th>
<th>MANUFACTURER</th>
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<td>Two Hole Compression Lug</td>
<td>LUG NO. 1</td>
<td>Approved Manufacturers: Burndy, Anderson,</td>
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<tr>
<td>Spacers</td>
<td>LUG NO. 1</td>
<td>Burndy &quot;ASA250U&quot;, &quot;ASA800U&quot;, or &quot;ASA1000U&quot; depending on wire size.</td>
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<th>ITEM</th>
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<tr>
<td>Conduit Spacers (conduit chairs)</td>
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<td>2” Conduit</td>
<td>2” HDPE SDR 13.5 Orange with Red Stripe</td>
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<td>5336032</td>
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<td>Carlon</td>
<td>S288JLN</td>
<td>S289JLN</td>
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<td>4” Conduit</td>
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<td>S288NLN</td>
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<td>6” Conduit</td>
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# MIDDLE TENNESSEE ELECTRIC MEMBERSHIP CORPORATION

## APPROVED UNDERGROUND BOXES AND PADS

(last revised 8-1-2020)

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>MTEMC ITEM NUMBER</th>
<th>Hubbell/Quazite/Pencell</th>
<th>Highline</th>
<th>Oldcastle (Duralite)/Carson</th>
<th>Channell</th>
<th>Concast</th>
<th>Charles Industries</th>
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<td>Primary Pullbox</td>
<td>7013</td>
<td>PG3048Z270MT</td>
<td>PHA304836H03270100</td>
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<td>Secondary Junction Box (Small)</td>
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<td>PG13242975MT</td>
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<td>Streetlight Installations Only</td>
<td>7021</td>
<td>PG2436Z2242MT</td>
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<td>BULKU2436180062106</td>
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<td>Box Pad (Large)</td>
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<td>Ground Sleeve for 1-Phase 25 kV Sectionalizing Pedestal (Sector)</td>
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<td>Comm Hand Hole (17X30X18 Rect.)</td>
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<td>1730-18P2PO1-MTCOM</td>
<td>Carson 17306004</td>
<td>P173018ABGTHXMM</td>
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<td>Comm Hand Hole (10&quot; Flower Pot)</td>
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<td>Pencell-PE9AHDX006A5</td>
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<td>Carson 09106007</td>
<td>P100010ABGTHXMM</td>
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</tr>
</tbody>
</table>

**Specifications and Notes:**

1) Non-approved boxes/pads will not allowed by MTEMC.

2) Covers (for pullbox and secondary junction boxes) shall have 1/2” minimum captive, stainless steel penta-head bolts with nuts that are chamfered to help facilitate the installation of auger style bolts.

3) Covers (for pullbox and secondary junction boxes) shall be gray in color and have “MTEMC” and “ELECTRIC” cast into the top of the cover.


5) The part numbers for both the box and lid shall be painted on the inside wall of the pullbox so that it is visible when the box is installed.

6) Shipment for box pads and pullboxes shall include cardboard separators between stacked boxes to prevent jamming.

7) Box pads shall be designed and tested according to the Northeast Underground Guideline (NEUC) Number 9001-87R1.

8) Box pads shall have "Front/Street" stenciled on the top lip of the box pad. The MTEMC specific part number shall be stenciled on the top lip of the box pad.

9) Electrical pullboxes and secondary junction boxes and lids shall have a minimum Tier 15 rating for incidental traffic in accordance with ANSI/SCTE 77 2017 guidelines.

10) Comm hand holes shall have “MTEMC Comm” on its top.