



Heber Light & Power

Developer & Commercial Electrical Service Requirements Manual 2020

E.1.1 - GENERAL REQUIREMENTS

PURPOSE

This section was prepared to aid developers, contractors, engineers and customers in establishing electric service for new and remodeled structures. We recognize that you may require personal assistance from our staff, and we encourage you to contact us by calling Heber Light & Power at 435-657-1581 or 435-657-2913 to discuss electric service requirements with us. It is the desire of Heber Light & Power, and the local electrical code enforcing authority to provide you, the Customer (developers, contractors, owners, etc.) with high quality, safe electric service.

In order to avoid unnecessary repetition, the "Power Company" as used in the following pages shall mean Heber Light & Power.

The requirements are intended to apply to new developments.

As a general rule, if the matter in question is not presented herein, then it is not allowed unless approved by the Power Company.

Any power required for private use (i.e. light, sprinkler, etc.) shall be metered.

CODES AND ORDINANCES

It is necessary that the construction of new or remodeled installations conform to applicable provisions of the National Electrical Code (NEC), National Electrical Safety Code (NESC), and State of Utah Electrical Service Regulations, as well as City and County ordinances and codes. This includes OSHA rules both during construction and maintenance.

CHANGES OR CONFLICTS IN REQUIREMENTS AND GUIDELINES

Some of the information in this section is based on the aforementioned governmental codes and ordinances as well as Heber Light & Power specific requirements as stated herein. These requirements and guidelines are issued with the intent of complying with all applicable codes, ordinances, regulations, and tariffs; however, in the case of conflict, the appropriate regulation, tariff, code, or ordinance will supersede the interpretation offered in this manual. In addition, these requirements are subject to change in the event that the governing codes, ordinances, regulations, or tariffs are changed. The Power Company should be consulted in case of doubt on the applicability of any item.

The phrase "consult Power Company" as used in this manual shall mean a consultation with Heber Light & Power Superintendent is to be made for each and every installation or project.

APPLICATION FOR SERVICE

For more information and applications please visit - <https://www.heberpower.com/construction-process>

It is important that the Power Company office be provided as early as possible with accurate load information and the date when the Customer will require service, so all necessary arrangements for the service may be completed. Request for service to large residential developments normally require 60 days advance planning by the Power Company in order to serve the load. Installations requiring transformers or other equipment not in stock may require six months lead time or more.

The Power Company is available to provide advice on service requirements and related problems relative to electric energy utilization for new, existing, and reconstructed installations. The Developer will be held liable for any damage to Power Company equipment.

When conditions are encountered during construction that require changes in the initial, agreed upon service arrangements, the Power Company must be consulted so mutually satisfactory alternative arrangements can be made. Adequate notice must be given to the Power Company and approval granted regarding changes or additions.

TYPES OF SERVICE FURNISHED

The electric service available is 60 hertz (cycles), alternating current, single or three-phase. The secondary voltages and connections available are given below:

- Single-phase, 120/240 volt, three-wire, grounded
- Three-phase, 208Y/120 volt, four-wire, grounded, wye
- Three-phase, 480Y/277 volt, four-wire, grounded, wye

The nominal primary voltage of Heber Light & Power's power distribution system may differ from one service area to another. Under certain conditions, primary delivery will be supplied at the distribution voltage standard for the location at which it is requested.



HEBER LIGHT & POWER ELECTRICAL REQUIREMENTS & STANDARDS MANUAL GENERAL REQUIREMENTS

ELECTRIC 1.1
GENERAL REQUIREMENTS
SCALE: NONE
DATE: 10/11/2011
REV: B
REV DATE: 02/26/2020

E.1.2 - GENERAL REQUIREMENTS

APPROVAL FOR SERVICE

It is required that an electrical installation be approved by the electrical inspection authority having jurisdiction and by the Power Company, as stated herein, before it can be energized by the Power Company. The service will be energized by the Power Company only after all service requirements and inspections have been met.

PERMANENT SERVICE CONNECTION

Only authorized Power Company employees shall make the permanent (or temporary) connection or disconnection of the Power Company's electric service to a building, structure or subdivision interconnections.

SEALS

The purpose of seals by the Power Company on meters and associated service equipment is to prevent injury and/or tampering.

Under normal circumstances, seals are not to be removed except by the Power Company. If an emergency should require seal removal (only by authorized electrical contractors) without prior notification, the Power Company must be notified as soon as possible, so the installation can be inspected and the seal replaced. When this occurs, the party removing the seal shall accept all liability for damage or alteration to equipment, injury to persons or property, and loss of revenue to the Power Company from the time the seal is removed until 72 hours after the Power Company has been notified that the equipment is ready to be re-sealed.

WORK ACTIVITY NEAR HIGH VOLTAGE OVERHEAD POWER LINES

As set forth in Section 54-8c-1 through 54-8c-7 of the Utah Code, no person or thing may be brought within 10 feet of any high voltage overhead line unless:

- The responsible party has notified the Power Company or Utility operating the high voltage line of the intended activity; and
- The responsible party and the Power Company have completed mutually satisfactory safety precautions for the activity; and
- The responsible party has made prior arrangements to pay the Power Company for the mutually satisfactory safety precautions (if applicable).
- The Power Company recommends a minimum of 3 business day's notice be given before any work near its lines is scheduled to begin.

NOTE: The National Electrical Safety Code requires that homes, buildings, bridges, signs, antennas, etc. have sufficient horizontal and vertical clearance to overhead power lines. Consult the Power Company for applicable distances.

UNDERGROUND PRIMARY/SECONDARY SYSTEM REQUIREMENTS OF SUBDIVISION and COMMERCIAL AREAS

The intent of this policy is to set forth the Developer's installation requirements and to outline specific installation standards. Along with requirements indicated in this section applicable requirements as indicated in other sections of this document apply to commercial and residential developments.

Where a development within the service area of the Power Company is to be subdivided into residential or commercial lots and has been approved by the appropriate Planning and Zoning Boards, the electrical distribution system will be installed underground in accordance with the Power Company's connection fee and line extension policy. The subdivision Developer shall provide the Power Company with the easements necessary for the most efficient installation of the required distribution system. All electrical systems installed by the Developer shall be front lot construction unless otherwise approved by the Heber Light & Power.

The following subsections serve as a guide for specific requirements of commercial and residential developments; however, the developer is responsible for coordinating with the Power Company to insure that the intents of this policy are met.



HEBER LIGHT & POWER ELECTRICAL REQUIREMENTS & STANDARDS MANUAL GENERAL REQUIREMENTS

ELECTRIC 1.2
GENERAL REQUIREMENTS
SCALE: NONE
DATE: 10/11/2011
REV: B
REV DATE: 02/26/2020

E.2.1 - TRENCHING & CONDUITS

TRENCHING

The developer is to provide the trench for all required conduit systems and, following installation of the conduit by the Developer (see 5.4 CONDUITS), backfill to meet Power Company requirements. The Power Company, under the terms of Heber Light & Power's Line Extension policy, will install both primary (medium voltage 12.47 kV or 4.16 kV) and secondary cables (below 480 volts).

To assure the final grade has been established, the trenching will be started after the curbs and gutters have been installed unless approved by Heber Light & Power.

Call Before You Dig

Utah Law Section 54-8A-1 through 54-8A-11 requires the Blue Stakes One Call Location Center be notified at least two working days prior to excavation. The excavation must not be started until locations have been made.

Depth

SEE CHART ON E.2.2 FOR TRENCHING DEPTHS. The property owner is responsible at their own cost to insure that proper burial depth clearance listed below is maintained even after excavation of the property. Any questions on impaired burial depths should be immediately brought to the attention of the Power Company. Under certain conditions, with prior Power Company approval, cable/conduit systems may be buried with less cover provided that mechanical protection is installed by the Developer to the Power Company's specifications.

Width

All trenches shall meet OSHA requirements. Primary/secondary combined trenches shall be a minimum of 18 inches wide at the bottom. Trenches 12 inches wide will be approved for a single service only.

Backfill

The Developer will be responsible for backfilling trenches he provides. The Developer must provide 12" of sand to be placed on top of conduits and shall have red warning tape on top of sand. Where trenches cross structural fill, typical of road crossings, the trench backfill shall consist of like kind structural fill. All primary and secondary conduit systems shall have placement of red warning tape 6" below final grade. The tape shall be of the type specific for the application.

Joint Use

Typically, joint use between other utilities of Power Company trenches is not allowed unless approved by the Power Company. Any joint use between telephone, TV, and other electrical communication cables must be pre-approved by the Power Company and installed in accordance with the Power Company specifications. The Power Company normally will not install electrical cables in a common trench with non-electric utilities such as water, gas, and sewer, unless unusual conditions such as adverse soil or route restrictions exist. All such installations require the prior approval of the Power Company.

Heber City Communication Conduit

In Heber City all trenches shall have a 2" conduit for communication lines. This does not apply to other cities or construction in the county areas.

Transformers and Secondary Boxes

To schedule a Heber Light & Power employee to open a transformer or secondary box please call 435-654-2913 Do Not open transformers or secondary boxes under any circumstance. Anyone opening an HL&P transformer, switch, junction box, secondary box or any other Heber Light & Power equipment will be subject to a trespassing fine.



HEBER LIGHT & POWER ELECTRICAL REQUIREMENTS & STANDARDS MANUAL TRENCHING & CONDUITS

ELECTRIC 2.1

TRENCHING & CONDUITS

SCALE: NONE

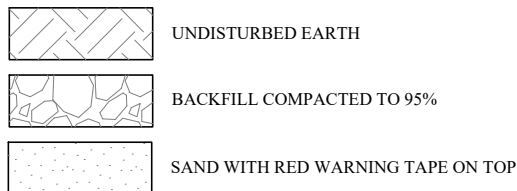
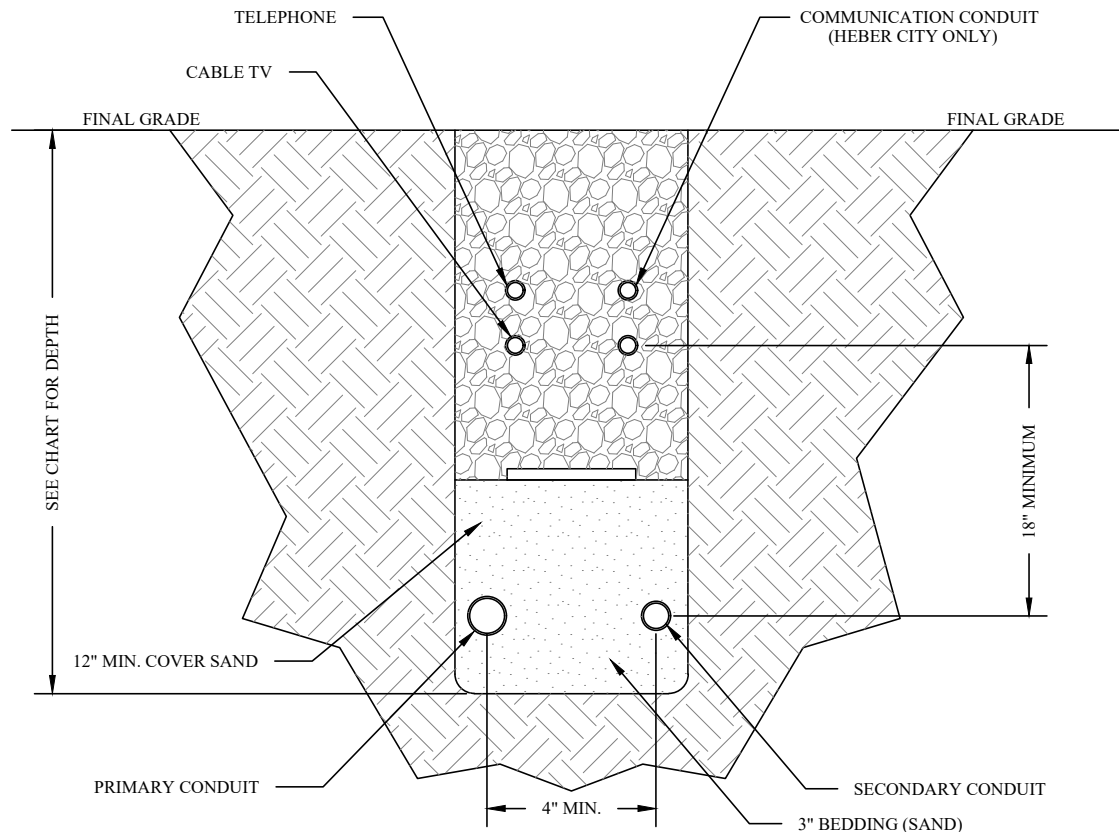
DATE: 10/11/2011

REV: C

REV DATE: 02/26/2020

E.2.2 - TRENCHING & CONDUITS

**POWER WILL NOT BE CONNECTED UNLESS A TRENCH INSPECTION WAS PERFORMED BY AN HL&P EMPLOYEE.
CALL 435-654-2913 TO SCHEDULE A TRENCH INSPECTION**



VOLTAGE AND DEPTHS:		
VOLTAGE	TRENCH DEPTH	COVER
SECONDARY	42"	36"
PRIMARY	54"	48"
6" CONDUIT	78"	72"

NOTES:

1. SECONDARY CONDUITS SHALL BE BURIED AT THE SAME DEPTH AS PRIMARY, IF NO PRIMARY IS TO BE INSTALLED USE THE ABOVE CHART FOR SECONDARY DEPTHS.
2. THERE SHALL BE A 4" MINIMUM SEPARATION BETWEEN CONDUITS.
3. A MINIMUM OF 12" SEPARATION BETWEEN ELECTRICAL AND OTHER UTILITIES IS REQUIRED.
4. ALL CONDUITS SHALL BE BURIED A MINIMUM OF 48" UNDER PAVED SURFACES AND RAILROADS.
5. TRENCHES WITHIN HEBER CITY SHALL HAVE A 2" CONDUIT FOR FIBER OPTIC LINES.



HEBER LIGHT & POWER ELECTRICAL REQUIREMENTS & STANDARDS MANUAL TRENCHING & CONDUITS

ELECTRIC 2.2
TRENCHING & CONDUITS
SCALE: NONE
DATE: 10/11/2011
REV: D
REV DATE: 02/26/2020

E.2.3 - TRENCHING & CONDUITS

CONDUITS

The Power Company requires the use of conduit for all underground primary and secondary cable installations, including lighting circuits. Rigid galvanized steel or gray electrical grade PVC schedule 40 (underground only) conduit are acceptable materials for conduits installed by the Customer.

All 90-degree bends are to be a minimum of 36" radius for 3" pipe, 36" radius for 4" pipe, and 36" radius for 6" pipe. All primary elbows are to be PVC for 3", 4" and 6" conduits

Rigid elbows to be used when going up a pole or building.

All conduits shall be terminated at the open end with plastic bushings.

All underground metallic conduit must be tape wrapped with suitable tape for the application.

Residential primary conduit sizes must be three (3) inch. Secondary conduit size shall be three (3) inches from transformers to junction domes and (3) inches from transformer or dome to resident. Streetlight conduits shall be (3) inches.

Trenches within Heber City limits shall have a 2" communication conduit.

All conduits end points shall be sealed or taped to prevent debris from plugging the conduit. The Developer shall be responsible for cleaning conduits if the Power Company is unable to install or pull the service cable.

All conduits running from transformers or secondary boxes to the location of the meter shall have rope or equivalent with at minimum of 1000 lbs. pulling capacity.

Along with conduits extending to secondary junction boxes, each transformer pad and secondary box shall have ten (10) foot conduit stub-outs for interconnection to adjacent homes.

Prior to backfilling, the Developer must notify the Power Company (435-654-2913) for trench inspection and GPS of conduits, following the inspection the Power Company shall allow backfilling.

Power will NOT be connected unless a trench inspection has been performed and approved.

There will be a \$50.00 return trip fee for all failed trench inspections.



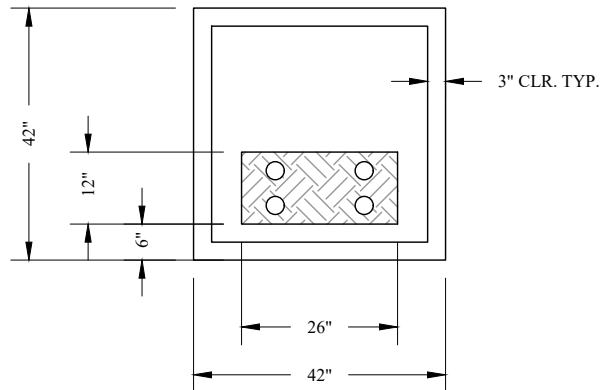
HEBER LIGHT & POWER ELECTRICAL REQUIREMENTS & STANDARDS MANUAL TRENCHING & CONDUITS

ELECTRIC 2.3
TRENCHING & CONDUITS
SCALE: NONE
10/12/2011
REV: C
REV DATE: 02/26/2020

E.5.1 - SINGLE PHASE PAD MOUNTED TRANSFORMER

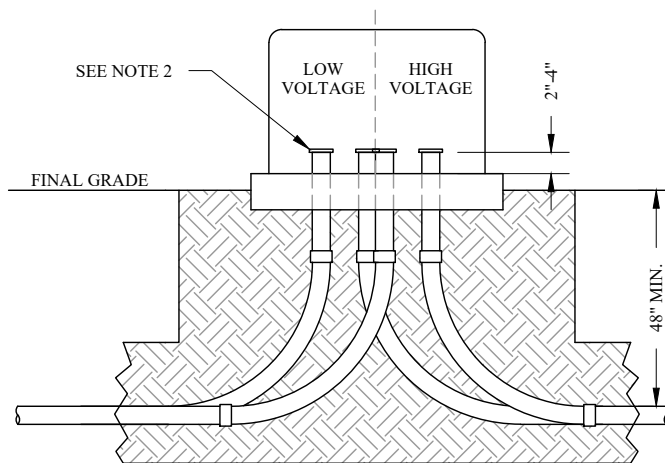
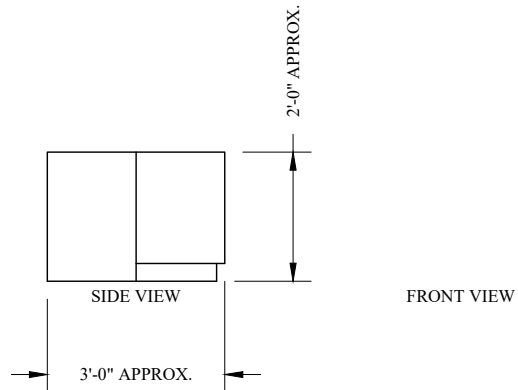
NOTE:

1. DEVELOPER TO SUPPLY TRENCHING, CONDUITS, STUB OUTS AND ADDITIONAL SAND / ROADBASE.



NOTE:

1. POWER COMPANY TO SUPPLY BASES AND TRANSFORMERS..



NOTES:

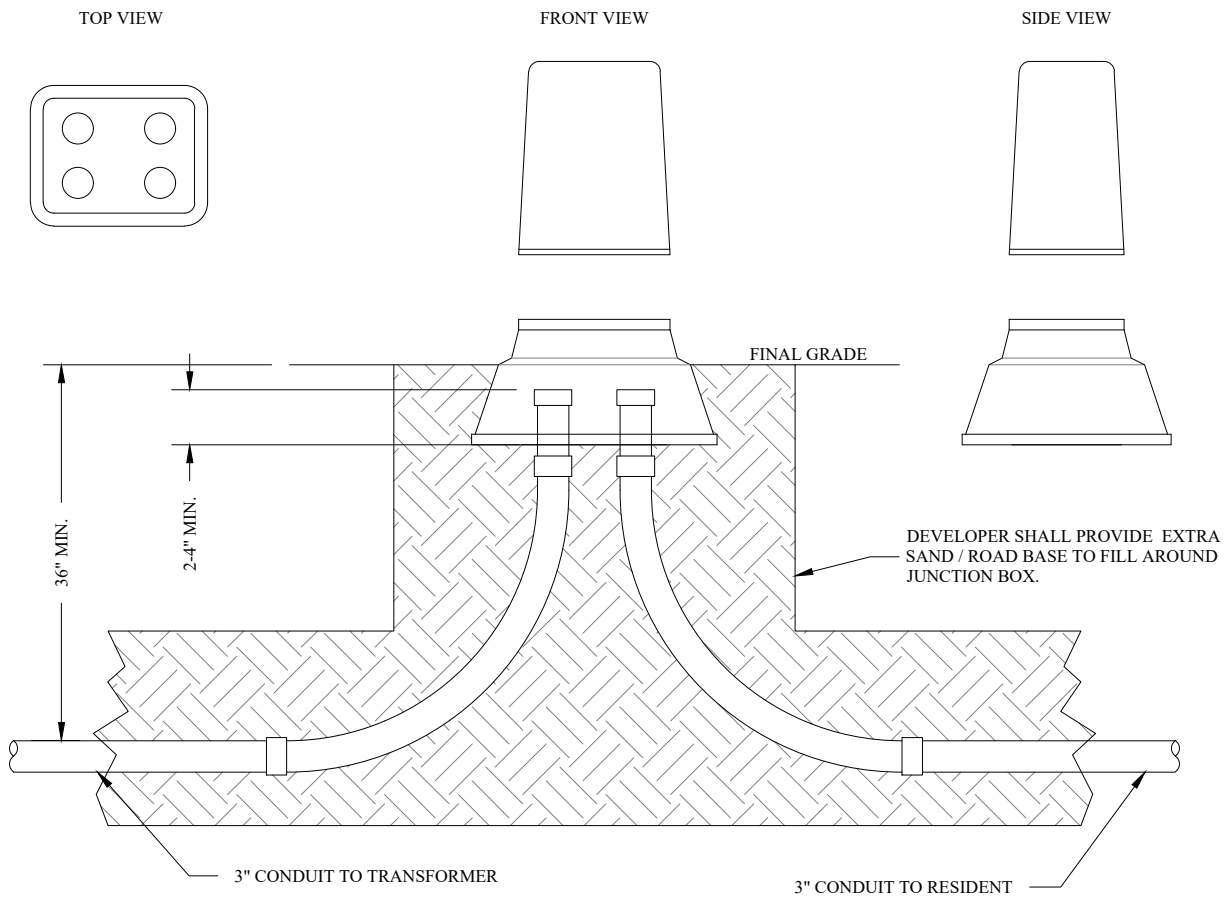
1. FILL MATERIAL UNDER THE CONCRETE PAD OR BASE SHALL BE SAND / ROAD BASE.
2. DEVELOPER SHALL PROVIDE ENOUGH SAND / ROAD BASE TO FILL AROUND CONDUITS.



HEBER LIGHT & POWER ELECTRICAL REQUIREMENTS & STANDARDS MANUAL 1 PHASE PAD TRANSFORMER

ELECTRIC 5.1
1 PHASE PAD TRANSFORMER
SCALE: NONE
DATE: 10/12/2011
REV: A
REV DATE: 02/26/2020

E.4.1 - SECONDARY JUNCTION BOXES



NOTES:

1. DEVELOPER SHALL PROVIDE MINIMUM SPACING BETWEEN CONDUITS.
2. DEVELOPER TO SEAL ALL CONDUIT ENDS WITH TAPE TO PREVENT PLUGGING
3. DEVELOPER IS RESPONSIBLE FOR TRENCHING AND BACK FILLING.
4. DEVELOPER SHALL USE ONE OF THE TWO ACCEPTABLE JUNCTION BOXES LISTED ABOVE.
5. ALL CONDUITS RUNNING FROM TRANSFORMERS OR SECONDARY BOXES TO THE LOCATION OF THE METER SHALL HAVE ROPE OR EQUIVALENT WITH A MINIMUM OF 1000 LBS. PULLING CAPACITY.



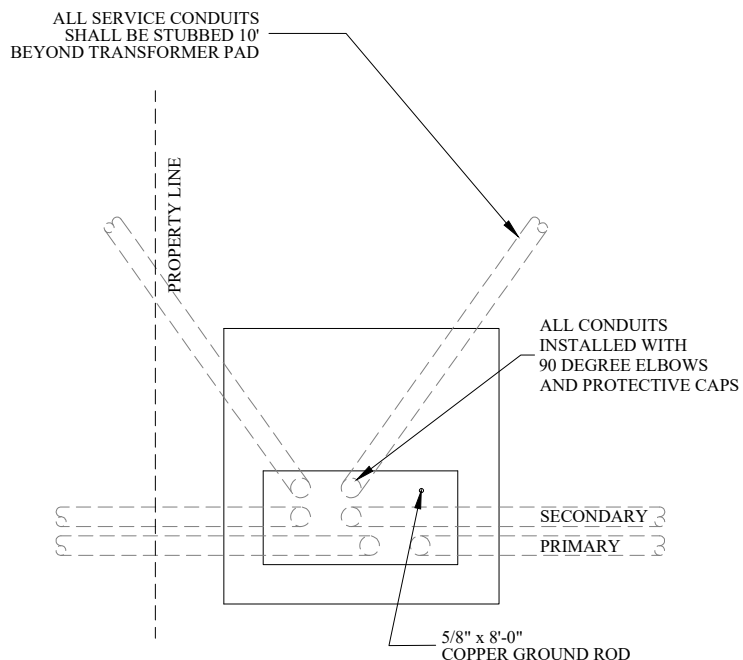
HEBER LIGHT & POWER ELECTRICAL REQUIREMENTS & STANDARDS MANUAL SECONDARY JUNCTION BOXES

ELECTRIC 4.1
SECONDARY JUNCTION BOXES
SCALE: NONE
DATE: 10/12/2011
REV: A
REV DATE: 02/26/2020

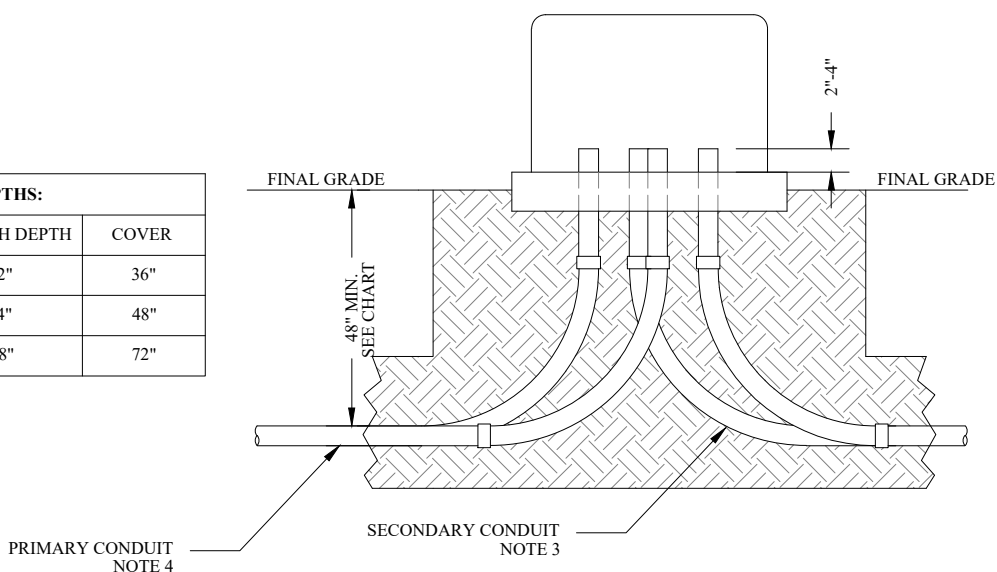
E.5.2 - SINGLE PHASE TYPICAL CONDUIT INSTALLATION FOR RESIDENTIAL SUBDIVISION

NOTES:

1. THE DEVELOPER IS RESPONSIBLE FOR THE INSTALLATION OF RIGID GALVANIZED STEEL, OR GRAY ELECTRICAL GRADE PVC SCHEDULE 40 (UNDERGROUND ONLY) CONDUIT.
2. ALL STUB OUTS MUST POINT IN THE GENERAL DIRECTION OF THE FRONT CORNER OF BUILDING AND MUST EXTEND BEYOND PROPERTY LINE OF THE LOT BEING SERVED.
3. FOR RESIDENTIAL SERVICES USE 3" CONDUIT TO RESIDENT AND 3" CONDUIT TO SECONDARY JUNCTION DOME.
4. PRIMARY CABLE CONDUIT SHALL BE A MINIMUM OF 3". THE DEVELOPER IS REQUIRED TO COORDINATE WITH THE POWER COMPANY FOR SPECIFIC CONDUIT SIZES REQUIRED.
5. CONDUITS MUST BE BURIED A MINIMUM OF 36" DEEP. (SEE CHART BELOW).
6. ALL CONDUITS SMALLER THAN 6" SHALL USE PVC 90'S AND FITTINGS. RIGID SHALL BE USED ON RISER POLES OR WHERE OTHERWISE SPECIFIED BY THE POWER COMPANY.
7. ALL SERVICE CONDUITS SHALL BE STUBBED 10' BEYOND TRANSFORMER PAD OR SECONDARY JUNCTION BOX.



VOLTAGE AND DEPTHS:			
VOLTAGE	CONDUIT DIA.	TRENCH DEPTH	COVER
SECONDARY	3"	42"	36"
PRIMARY	3"	54"	48"
PRIMARY	6"	78"	72"



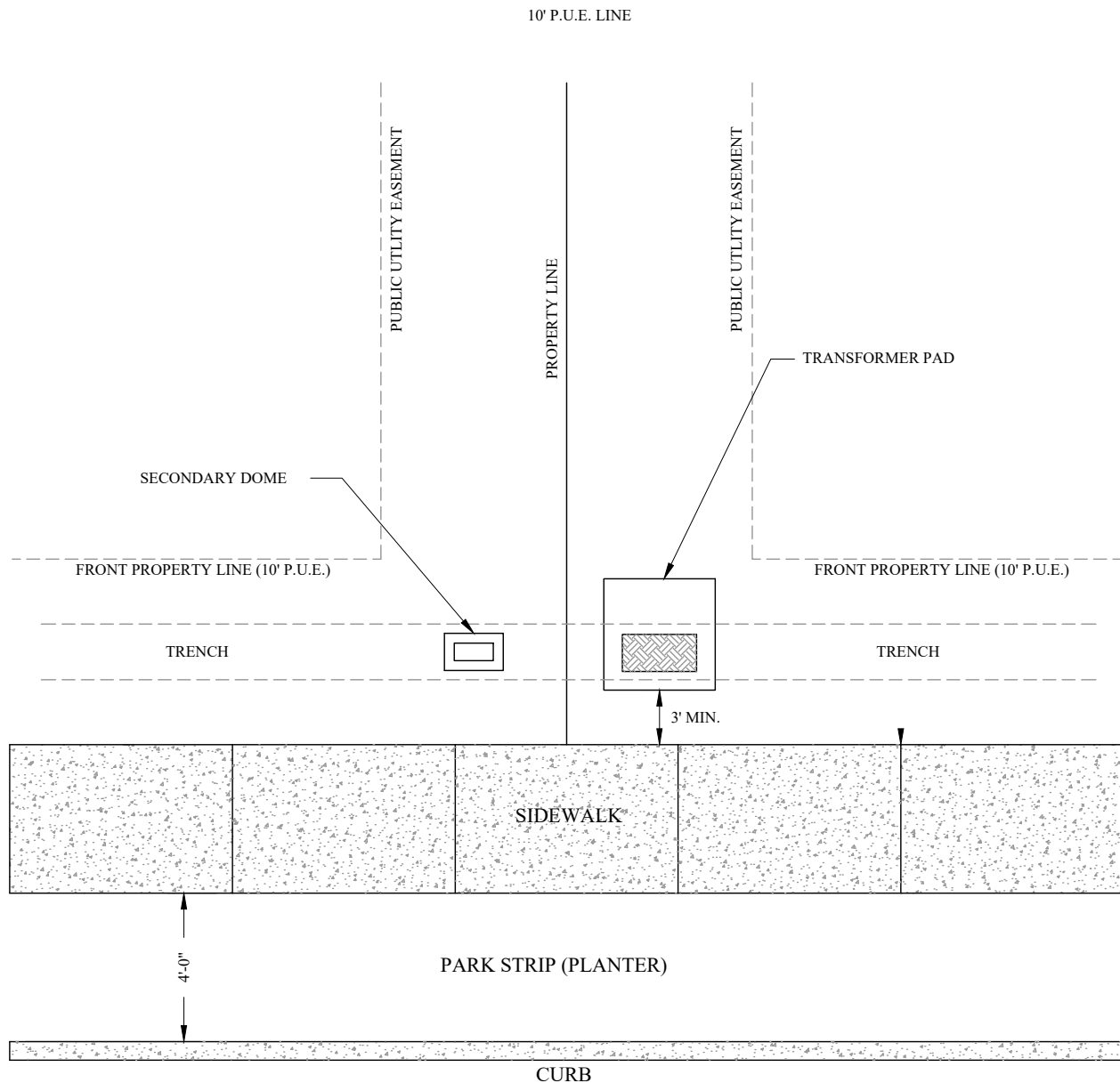
ATTENTION: ALL CONDUITS RUNNING FROM TRANSFORMERS OR SECONDARY BOXES TO THE LOCATION OF THE METER SHALL HAVE ROPE OR EQUIVALENT WITH A MINIMUM OF 1000 LBS. PULLING CAPACITY.



HEBER LIGHT & POWER ELECTRICAL REQUIREMENTS & STANDARDS MANUAL 1 PHASE CONDUIT INSTALLATION

ELECTRIC 5.2
1 PHASE CONDUIT INSTALLATION
SCALE: NONE
DATE: 10/12/2011
REV: A
REV DATE: 02/26/2020

E.5.3 - SINGLE PHASE TRANSFORMER PAD OR SECONDARY DOME LOCATION WITH PLANTER AND SIDEWALK



NOTES:

1. ALL TRENCHING, TRANSFORMERS AND SECONDARY DOMES SHALL BE LOCATED WITHIN THE PUBLIC UTILITY EASEMENT (P.U.E).
2. TRANSFORMERS AND SECONDARY JUNCTION BOXES TO BE LOCATED AS PER THE ELECTRICAL DESIGN PROVIDED BY HEBER LIGHT & POWER.
3. TRANSFORMER AND OTHER EQUIPMENT FRONTS TO BE INSTALLED SO THAT THE FRONTS ARE FACING THE SIDEWALK..
4. CONDUITS SHALL BE CAPPED 2" ABOVE FINAL GRADE.
5. NO OBSTRUCTIONS SHALL BE PERMITTED WITHIN 10' OF THE FRONT AND 3' ON THE SIDES AND BACK OF ANY ELECTRICAL EQUIPMENT.



HEBER LIGHT & POWER ELECTRICAL REQUIREMENTS & STANDARDS MANUAL EQUIPMENT LOCATION SPEC.

ELECTRIC 5.3

1 PHASE TRANSFORMER PAD

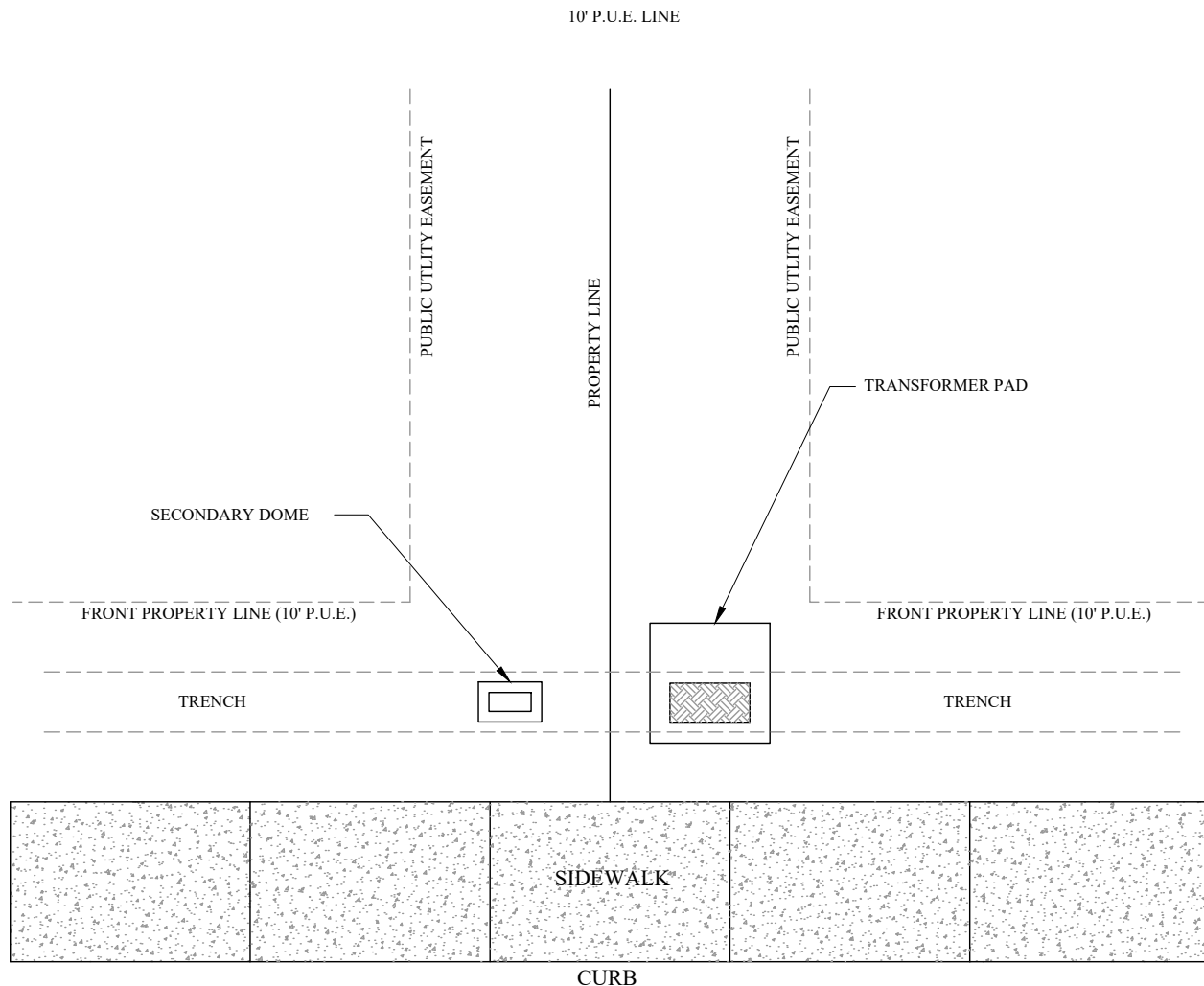
SCALE: NONE

DATE: 10/12/2011

REV: A

REV DATE: 02/26/2020

E.5.4 - SINGLE PHASE TRANSFORMER PAD OR SECONDARY DOME LOCATION WITH SIDEWALK AND NO PLANTER



NOTES:

1. ALL TRENCHING, TRANSFORMERS AND SECONDARY DOMES SHALL BE LOCATED WITHIN THE PUBLIC UTILITY EASEMENT (P.U.E).
2. TRANSFORMERS AND SECONDARY JUNCTION BOXES TO BE LOCATED AS PER THE ELECTRICAL DESIGN PROVIDED BY HEBER LIGHT & POWER.
3. TRANSFORMER AND OTHER EQUIPMENT FRONTS TO BE INSTALLED SO THAT THE FRONTS ARE FACING THE SIDEWALK..
4. CONDUITS SHALL BE CAPPED 2" ABOVE FINAL GRADE.
5. NO OBSTRUCTIONS SHALL BE PERMITTED WITHIN 10' OF THE FRONT AND 3' ON THE SIDES AND BACK OF ANY ELECTRICAL EQUIPMENT.



HEBER LIGHT & POWER ELECTRICAL REQUIREMENTS & STANDARDS MANUAL EQUIPMENT LOCATION SPEC.

ELECTRIC 5.4

1 PHASE TRANSFORMER PAD

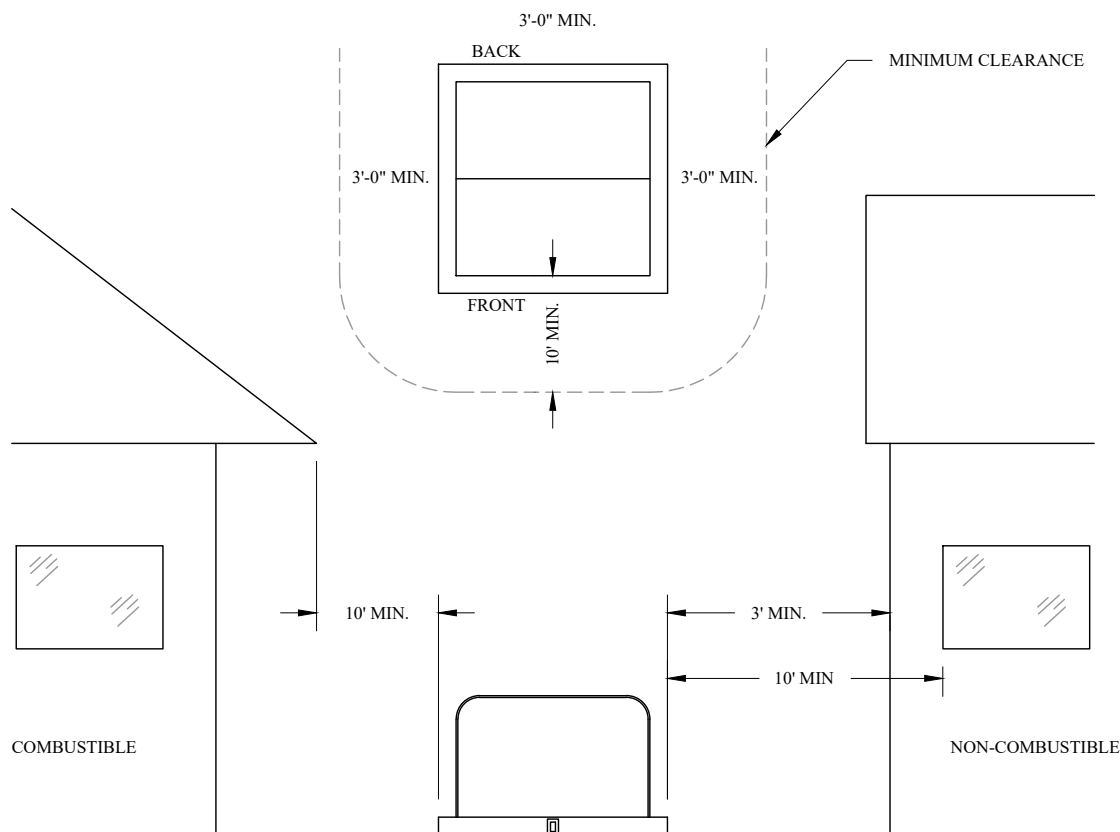
SCALE: NONE

DATE: 10/12/2011

REV: A

REV DATE: 02/26/2020

E.5.6 - SINGLE PHASE AND THREE PHASE PAD MOUNTED TRANSFORMER CLEARANCES



10' CLEAR AREA IN FRONT OF EQUIPMENT TO ALLOW FOR THE USE OF HOT STICKS (NOTE 2)

10' CLEARANCE FROM ANY TRANSFORMER SURFACE IF STRUCTURE IS OF COMBUSTIBLE MATERIAL

3' CLEARANCE TO ANY NON-COMBUSTIBLE BUILDING SURFACES THAT DO NOT HAVE ANY OPENINGS CLOSER THAN 10'

NOTES:

1. CONSULT NATIONAL ELECTRIC SAFETY CODE, NEC, STATE AND LOCAL BUILDING AND FIRE CODES FOR ADDITIONAL REQUIREMENTS.
2. FRONT OF PAD MOUNTED TRANSFORMER TO BE LOCATED AWAY FROM BUILDING WALLS OR OTHER BARRIERS TO ALLOW FOR SAFE WORKING PRACTICES.
3. CONSULT THE POWER COMPANY FOR ADDITIONAL CLEARANCES THAT MAY BE REQUIRED FOR DOORS, WINDOWS, FIRE ESCAPES, AIR VENTS, ETC.
4. WHEN PAD MOUNTED TRANSFORMERS OR OTHER EQUIPMENT ARE INSTALLED WHERE IT MAY BE STRUCK BY A MOTORIZED VEHICLE THE CUSTOMER WILL INSTALL AND MAINTAIN POWER COMPANY APPROVED BARRIER POST TO PROTECT THE EQUIPMENT.



HEBER LIGHT & POWER ELECTRICAL REQUIREMENTS & STANDARDS MANUAL TRANSFORMER CLEARANCES

ELECTRIC 5.6

TRANSFORMER CLEARANCES

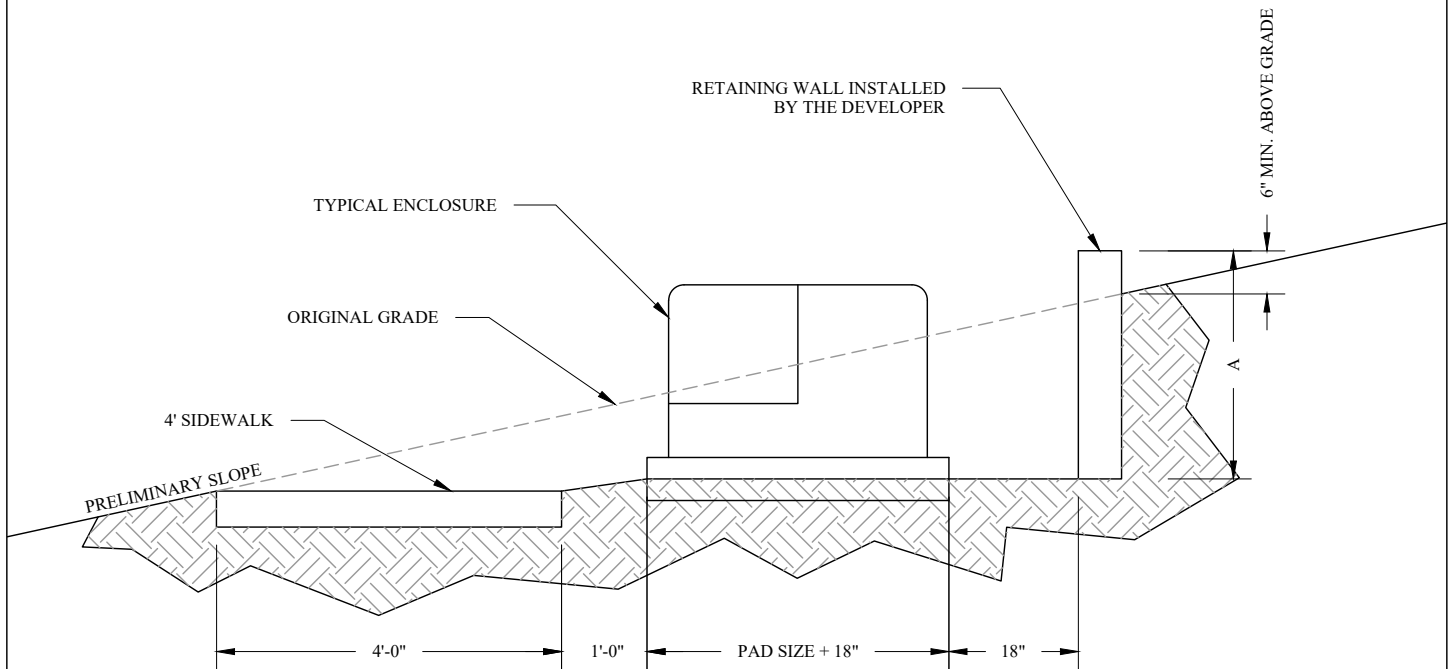
SCALE: NONE

DATE: 10/12/2011

REV: A

REV DATE: 02/26/2020

E.5.7 - EQUIPMENT EROSION PREVENTION



NOTES:

1. WHEN IT BECOMES NECESSARY TO NOTCH-OUT OR FILL A SLOPE TO INSTALL AN ENCLOSURE OR TRANSFORMER, THE CLEARED AREA SHOULD BE SUFFICIENT SIZE TO ACCOMMODATE THE ENCLOSURE AND SHORINGS. THE FRONT OF THE PAD SHALL BE PLACED 2" (MAX.) ABOVE THE SIDEWALK.
2. AREA UNDER AND BEHIND PAD MUST BE LEVEL AND COMPACTED.
3. A RETAINING WALL IS REQUIRED IF DIMENSION "A" IS GREATER THAN 12".
4. SIDE RETAINING WALLS ARE ALSO REQUIRED IF DIMENSION "A" IS GREATER THAN 18". RETAINING WALL SHALL BE 6" ABOVE EXISTING GRADE AND 18" FROM EACH SIDE AND BEHIND ENCLOSURE.
5. ALL GRADING SHALL BE PERFORMED BY DEVELOPER.
6. CONTACT THE POWER COMPANY IF ASSISTANCE IS REQUIRED.



HEBER LIGHT & POWER ELECTRICAL REQUIREMENTS & STANDARDS MANUAL EQUIP. EROSION PREVENTION

ELECTRIC 5.7

EQUIP. EROSION PREVENTION

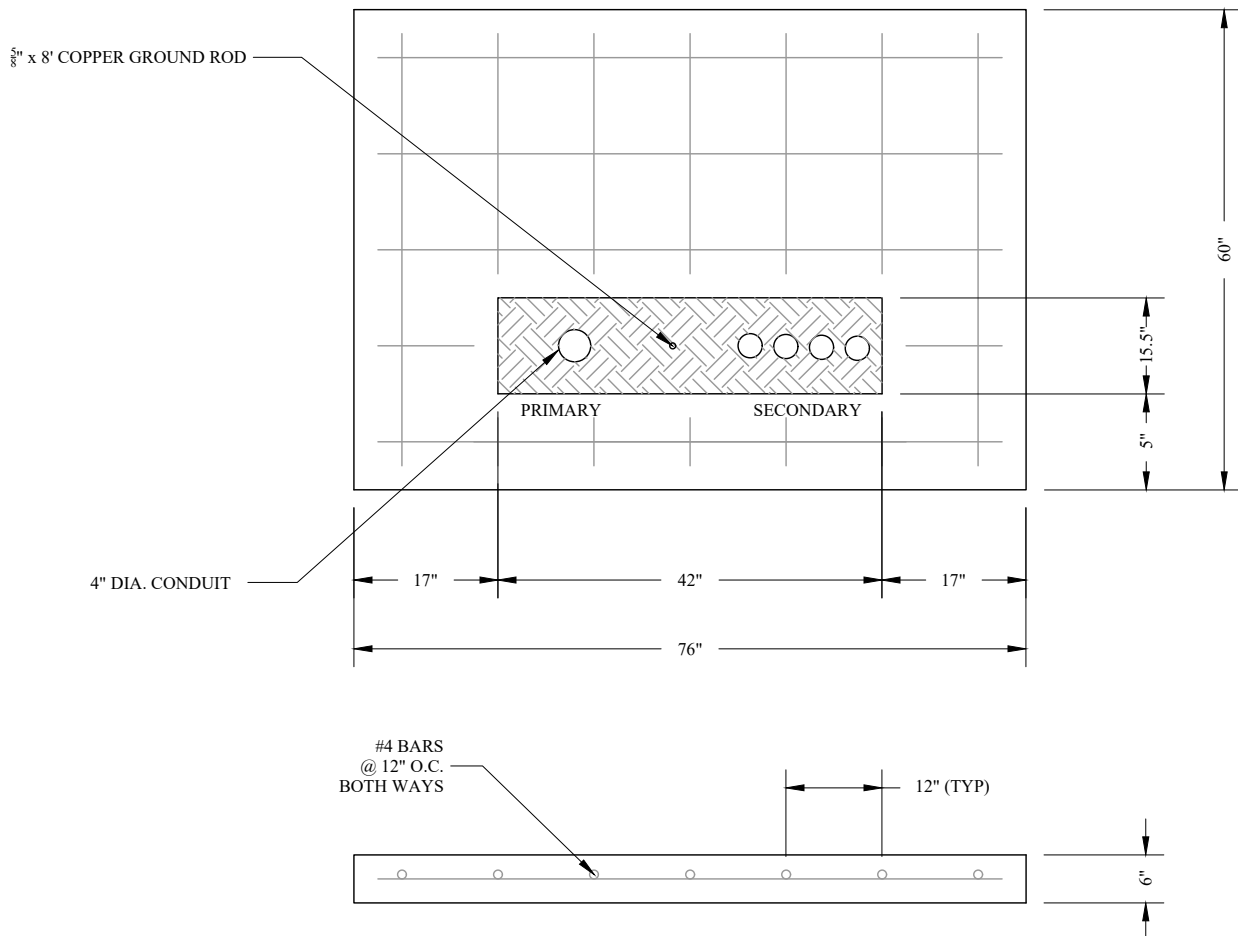
SCALE: NONE

DATE: 10/12/2011

REV: A

REV DATE: 02/26/2020

E.5.8.3 - THREE PHASE TRANSFORMER CONCRETE PAD WITHOUT CT RACK



NOTES:

1. CONCRETE SPECIFICATION - CLASS "B" CONCRETE MINIMUM.



HEBER LIGHT & POWER ELECTRICAL REQUIREMENTS & STANDARDS MANUAL THREE PHASE TRANSFORMER PAD

ELECTRIC 5.8.3

THREE PHASE CONCRETE PAD

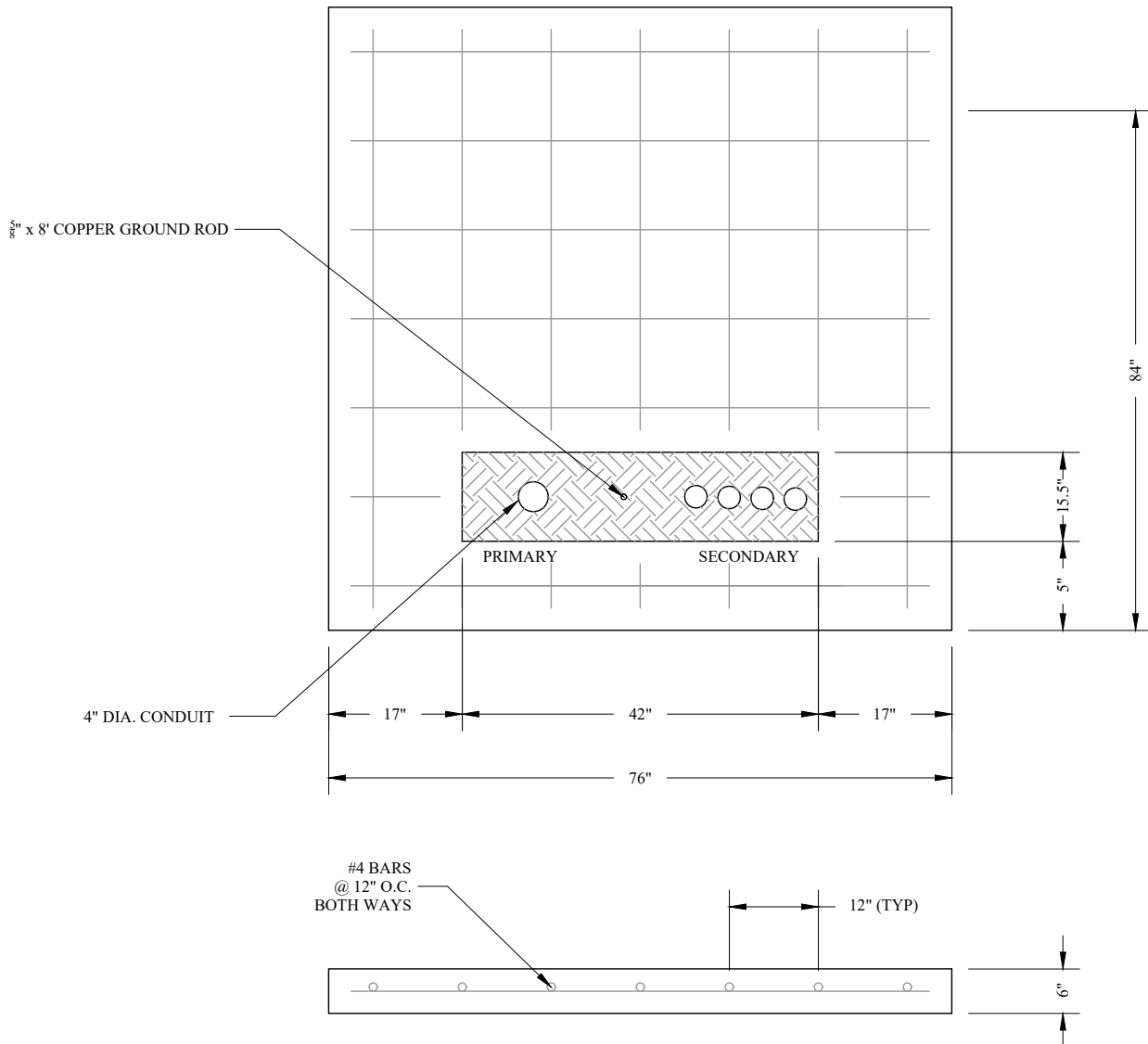
SCALE: 1/2"=1'-0"

DATE: 12/01/2010

REV: A

REV DATE: 02/26/2020

E.5.8.2 - THREE PHASE TRANSFORMER CONCRETE PAD WITHOUT CT RACK



NOTES:

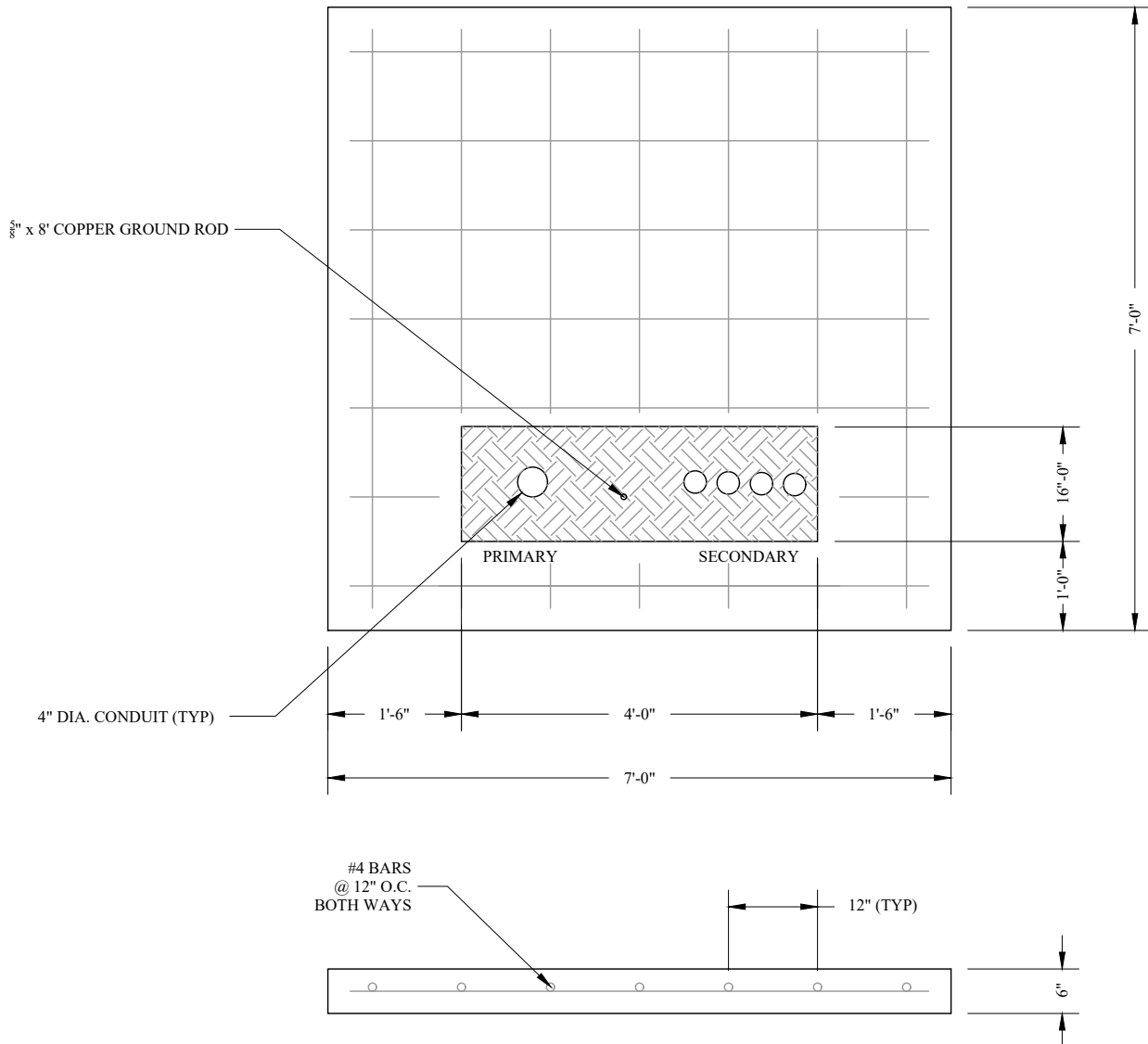
1. CONCRETE SPECIFICATION - CLASS "B" CONCRETE MINIMUM.



HEBER LIGHT & POWER ELECTRICAL REQUIREMENTS & STANDARDS MANUAL THREE PHASE TRANSFORMER PAD

ELECTRIC 5.8.2
THREE PHASE CONCRETE PAD
SCALE: 1/2"=1'-0"
DATE: 12/01/2010
REV: A
REV DATE: 02/26/2020

E.5.8.1 - THREE PHASE TRANSFORMER CONCRETE PAD WITHOUT CT RACK



NOTES:

1. CONCRETE SPECIFICATION - CLASS "B" CONCRETE MINIMUM.



HEBER LIGHT & POWER ELECTRICAL REQUIREMENTS & STANDARDS MANUAL THREE PHASE TRANSFORMER PAD

ELECTRIC 5.8.1

THREE PHASE CONCRETE PAD

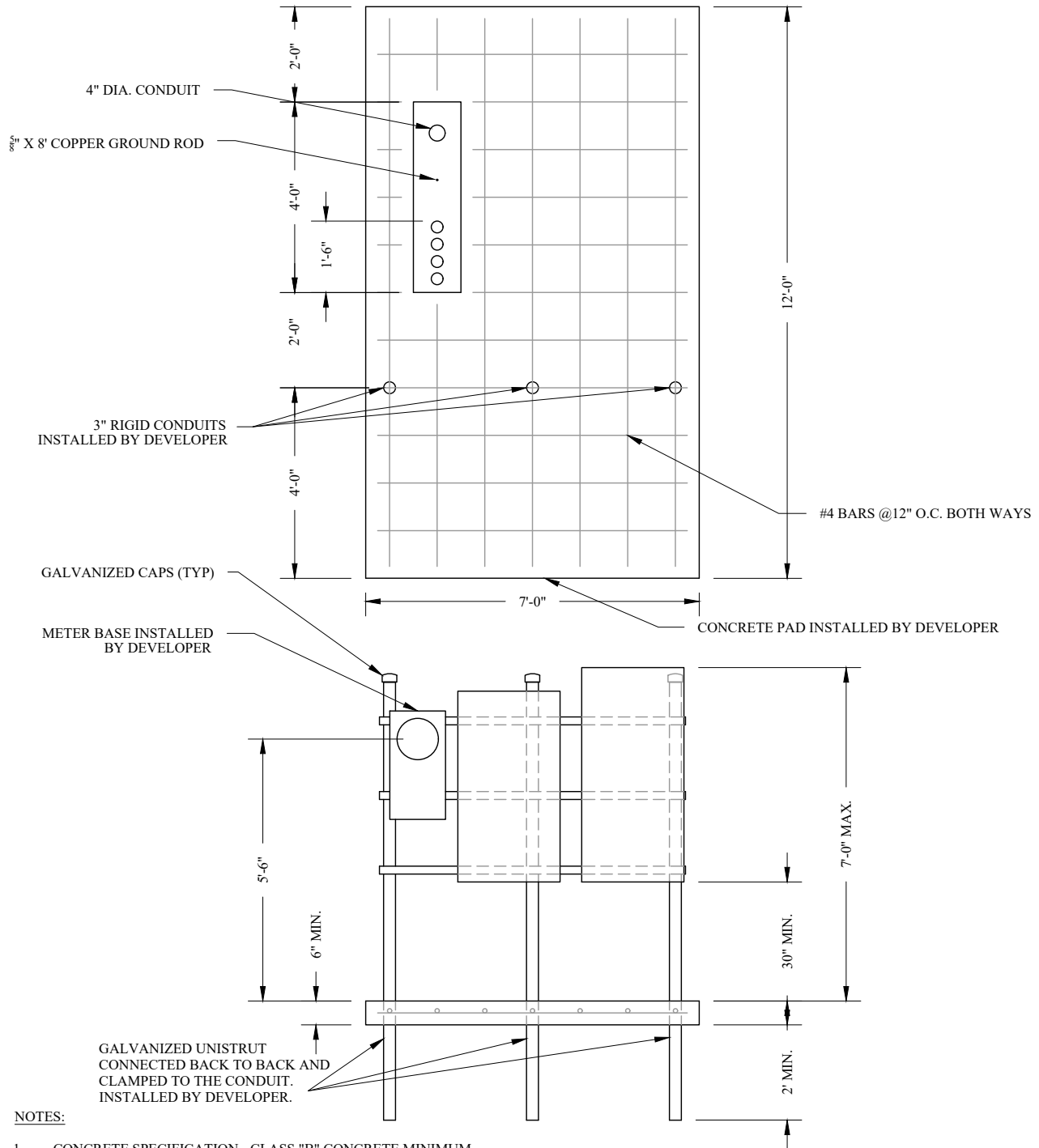
SCALE: 1/2"=1'-0"

DATE: 12/01/2010

REV: B

REV DATE: 02/26/2020

E.5.9 - THREE PHASE TRANSFORMER PAD WITH METERING STATION



NOTES:

1. CONCRETE SPECIFICATION - CLASS "B" CONCRETE MINIMUM
2. HEBER LIGHT & POWER WILL NOT PULL OR TERMINATE COMMERCIAL SERVICES FROM SECONDARY SIDE OF TRANSFORMER.
3. DEVELOPER SHALL TERMINATE ALL CABLES FROM THE CT CANS IN.
4. CONTRACTOR SHALL TERMINATE ALL CABLES THEY RUN.



HEBER LIGHT & POWER ELECTRICAL REQUIREMENTS & STANDARDS MANUAL 3 PHASE TRANSFORMER PAD

ELECTRIC 5.9

3 PHASE TRANSFORMER PAD

SCALE: NONE

DATE: 10/12/2011

REV: A

REV DATE: 02/26/2020

E.6.1 - STREET LIGHTING

STREET LIGHTING

General

The following general requirements shall apply to street lights installed in new underground residential subdivisions/developments (subdivisions) located within the service area of City - USA Power (within City - USA):

City - USA Power will provide electric power for street lights at no cost, except as otherwise provided below in the Street Light Layouts section.

City - USA Power standard (Town and Country) street lights (poles, fixtures and wiring) shall be used except as provided in item 5, and 6 below. The standard street light pole (direct embedded) is a W.J. Whatley, Inc. Catalog No. E3020-20-60-N1,3 and the standard fixture (pole top mounted) is a Cooper Lighting Catalog No. LXF10SR2334 (100 watt high pressure sodium lamp) or approved General Electric equal.

City - USA Power standard street lights will be installed in accordance with City - USA Power's Line Extension Policy.

City - USA Power standard street lighting will be installed, owned and maintained by the City - USA Power. Conduit systems for street lighting wiring shall be installed by contractors/developers in accordance with Drawing E.6.4.

Development specific decorative (non City - USA Power standard) street lighting (poles, fixtures and wiring) may be installed in subdivisions with homeowners associations.

Decorative lighting (service disconnect, poles, luminaries, lamps, conduit and wiring) installed in underground subdivisions with homeowners associations shall be installed by contractors/developers, and owned by the homeowners associations. Power for the street lights will be provided by City - USA Power in accordance with item 1 above.

Street Light Layouts

The following layout requirements shall apply to City - USA Power standard and decorative street lighting installations:

Layouts for City - USA Power standard street light installations will be prepared by City - USA Power.

Layouts for decorative street light installations shall be prepared by contractors/developers, utilizing the general requirements included subsequently in this section. Contractors/developers shall provide drawings of proposed layouts for decorative street lighting to City - USA Power for review and approval. Catalog information on the poles, luminaries and lamps proposed for use shall be provided by contractors/developers with the light layouts.

In general, street lights shall be placed at three and four way intersections, and at 90 degree turns (elbows). See Drawing E.6.3 for typical street lighting layout.

Street lights shall also be installed between intersections at staggered spacings of approximately 400 feet. Decorative street lights may be installed at lesser spacings, but homeowners associations will be billed for the electric power usage of the additional lights. See Drawing E.6.3 for typical street lighting layout.

Decorative street lights may be installed (400 foot non-staggered spacing) on medians (islands) in streets with islands at least 10 feet in width. Decorative street lights may be installed at lesser spacings, but homeowners associations will be billed for the electric power usage of the additional lights.

Luminaries for decorative street lights shall be Type III, include a photo cell receptacle and shall be suitable for use with a 100 watt high pressure sodium lamp. Use of luminaries with higher wattage lamps or other light sources (metal halide or mercury vapor) must be approved by City - USA Power. Additional charges for excess electric power usage may be assessed to homeowners associations. House side shields shall be provided if required. Street light poles shall provide a minimum mounting height for luminaries of 16 feet.

Point(s) of Delivery for Decorative Lighting

The point(s) of delivery for decorative street lights shall be at a location(s) approved by City - USA Power. Contractors/developers shall provide drawings of proposed locations for points of delivery for decorative street lighting to the City - USA Power for review and approval. These points of delivery shall typically be proximate to City - USA Power owned pad mounted transformers or secondary junction boxes.



CITY - USA ELECTRICAL REQUIREMENTS & STANDARDS MANUAL STREET LIGHTING

ELECTRIC 6.1

STREET LIGHTING

SCALE: NONE

DATE: 10/12/2011

REV: A

REV DATE: 02/26/2020

E.6.2 - STREET LIGHTING

The layout of decorative lights shall be so as to minimize the number of delivery points required.

All points of delivery for decorative street lights shall include a disconnect with over current protective device(s) [fuse(s) or breaker(s)]. The rating of the over current protection shall be compatible with the current rating of the wiring connected to the device. The disconnect shall be service entrance rated, tamper proof, equipped with provisions for locking, installed in a NEMA 3R enclosure and mounted on a building wall, or substantial wood or steel post. The disconnect and appurtenant facilities shall be installed in accordance with the applicable articles of the National Electric Code (NEC).

Facilities installed at decorative street light points of delivery shall be inspected by the City - USA electrical inspector prior to connection to the City - USA Power electrical system.

Wiring between City - USA Power pad mounting transformers or secondary junction boxes and disconnects for decorative lighting will be installed, owned and maintained by City - USA Power and installed in conduits (source side conduit systems) provided (furnished and installed) by contractors/developers (reference paragraph D of this section). City - USA Power will own and maintain the source side conduits after the street light installation is completed.

Conduits for City - USA Power Standard and Decorative Street Lights

City - USA Power wiring for City - USA Power standard and decorative street lights shall be installed in direct buried conduit.

City - USA Power Standard Street Lights:

Contractors/developers shall provide (purchase and install) all street lighting conduit systems (conduit, fitting, elbows, conduit cement, etc.) for City - USA Power standard street lights. City - USA Power will own and maintain the conduit systems after the street light installation is completed. The conduit systems shall extend from City - USA Power pad mounted transformers or secondary junction boxes to street light locations. The contractor/developer shall be responsible for proper routing and placement (burial depth, excavation, bedding, backfill and compaction) of conduits, and for the location of conduit end points (stubs ups) at pad mounted transformers and/or secondary junction boxes, and street light locations.

Decorative Street Lights:

Contractors/developers shall provide (purchase and install) source side conduit systems between decorative street light delivery points and City - USA Power pad mounted transformers and/or secondary junction boxes. City - USA Power will own and maintain the source side conduit systems after the street light installation is completed. The contractor/developer shall be responsible for proper routing and placement of conduits, and for the location of conduit end points (stubs ups) at pad mounted transformer and/or secondary junction box locations. The contractors/developers shall also be responsible for terminating the conduit at the line side of the disconnecting means at delivery points. City - USA Power will install the wiring from transformer or secondary junction box to the delivery point and terminate the wiring at the source of the disconnect.

Conduit types and capping shall be in accordance with the conduits paragraphs of this document.

STREET LIGHTING CONDUIT REQUIREMENTS

The contractor/developer shall be responsible for the installation of street lighting conduit systems (2 inch diameter) extending from transformer or secondary junction boxes to lighting fixture locations. Where possible, lighting fixtures shall be located at street intersections with maximum spacing of approximately 400' (see drawing E.6.3 for typical street lighting layout). The contractor is responsible for proper location and centering of conduit end points for lighting fixture installations. The City, under the terms of its Line Extension Policy, shall furnish and install lighting fixtures and light fixture service cables. Commercial areas shall be required to place conduit to light city streets bordering their development. Lights shall be paid for and installed by the Developer. Light placement shall be at each intersections and one for every 150 feet as approved by the Power Department. Light type and size shall be determined by the Power Department according to road size and area.



CITY - USA ELECTRICAL REQUIREMENTS & STANDARDS MANUAL STREET LIGHTING

ELECTRIC 6.2

STREET LIGHTING

SCALE: NONE

DATE: 10/12/2011

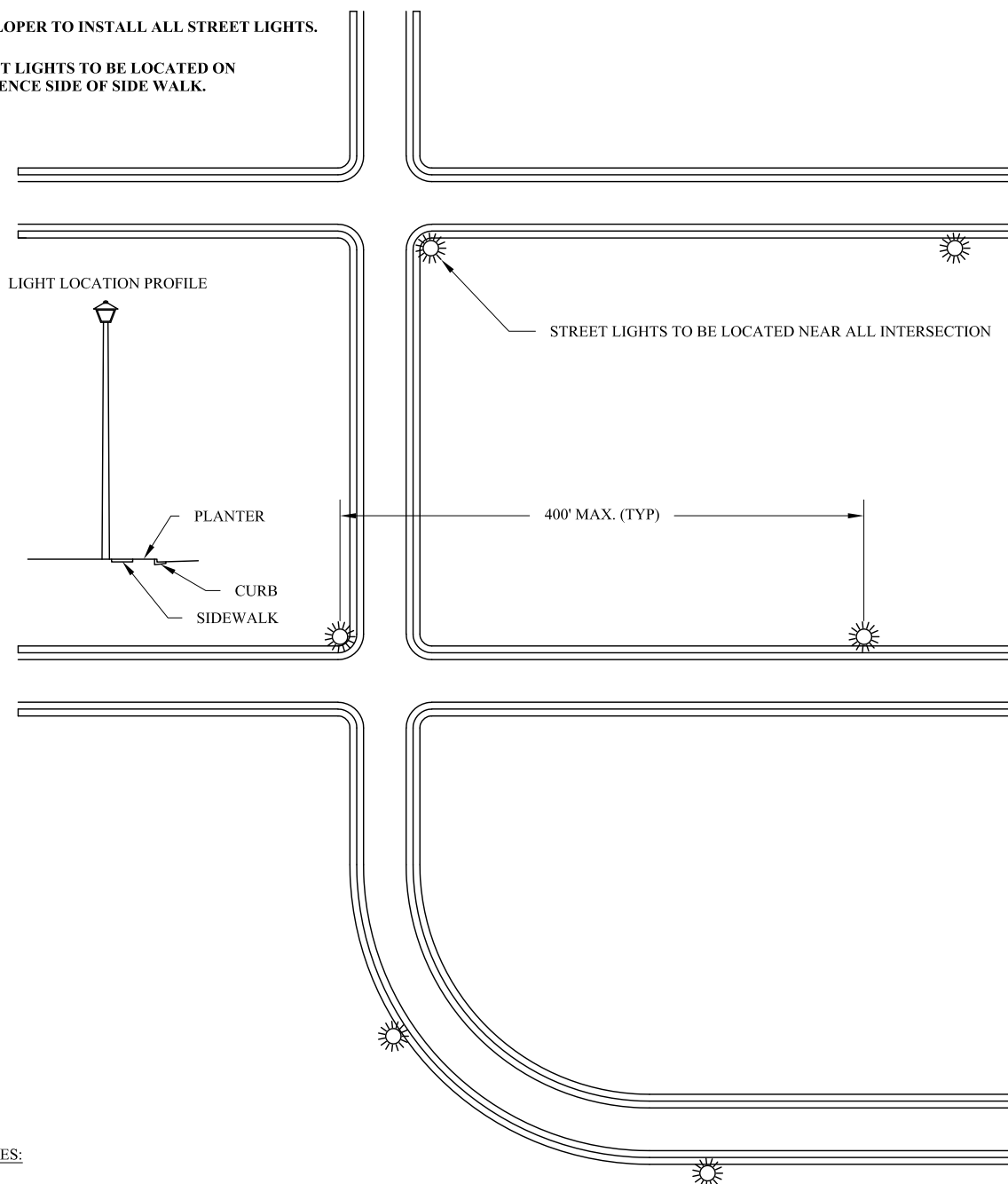
REV: A

REV DATE: 02/26/2020

E.6.3 - STREET LIGHTING

DEVELOPER TO INSTALL ALL STREET LIGHTS.

STREET LIGHTS TO BE LOCATED ON
RESIDENCE SIDE OF SIDE WALK.



NOTES:

1. DEVELOPER SHALL CONTACT LOCAL AUTHORITY FOR STREET LIGHT DESIGN AND SPECIFICATIONS.
2. STREET LIGHT SHALL BE LOCATED WITH 300' MAXIMUM SEPARATION, AND NEAR ALL INTERSECTIONS.
3. DEVELOPER SHALL BE RESPONSIBLE FOR THE INSTALLATION OF THE 2" CONDUITS FROM THE TRANSFORMERS OR SECONDARY JUNCTION BOXES TO LIGHTING FIXTURES.
4. DEVELOPER TO PROVIDE WIRE FROM SECONDARY JUNCTION BOX TO LIGHT POLE.
5. INSPECTION OF STREET LIGHTING SHALL BE SCHEDULED AT THE SAME TIME AS THE CONDUIT AND COMPACTION INSPECTION.



CITY - USA ELECTRICAL REQUIREMENTS & STANDARDS MANUAL STREET LIGHTING

ELECTRIC 6.3

STREET LIGHTING

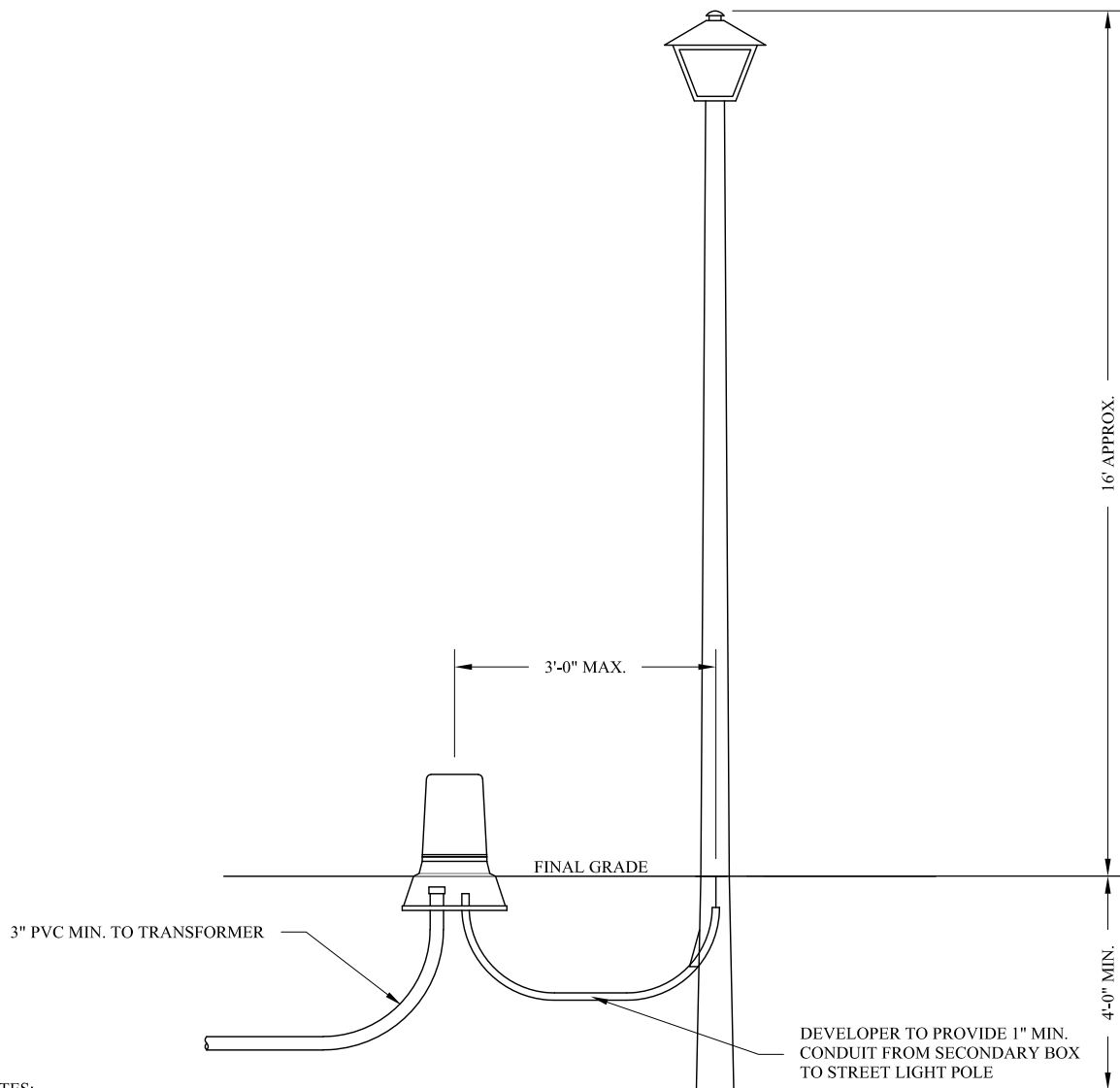
SCALE: NONE

DATE: 10/12/2011

REV: A

REV DATE: 02/26/2020

E.6.4 - STREET LIGHTING



NOTES:

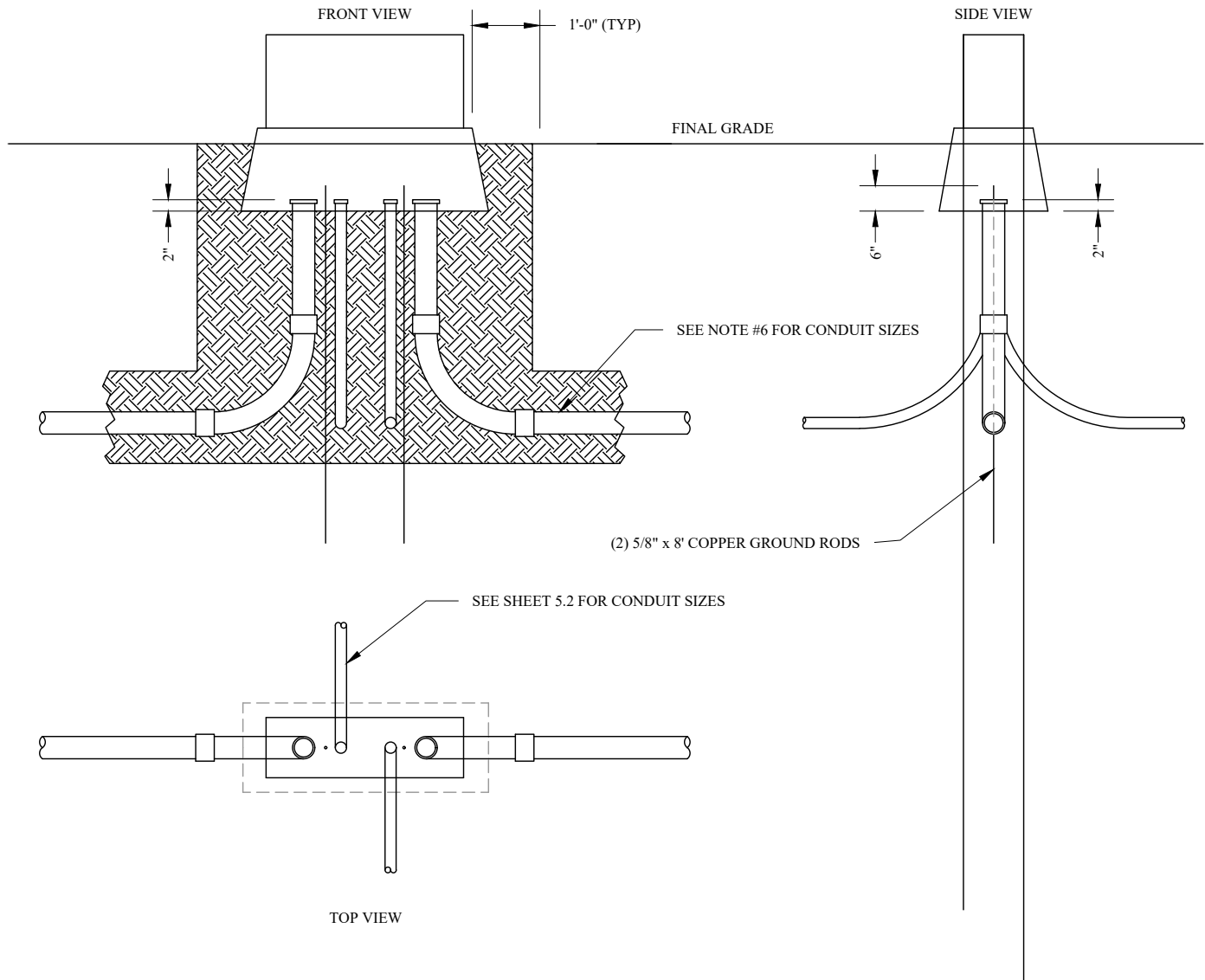
1. DEVELOPER TO PROVIDE 3" CONDUIT FROM TRANSFORMER TO SECONDARY JUNCTION BOX.
2. DEVELOPER SHALL PROVIDE WIRE FROM SECONDARY JUNCTION BOX TO LIGHT POLE.
3. DEVELOPER WILL NEED TO CONTACT A LOCAL AUTHORITY FOR STREET LIGHT SPECIFICATIONS.



CITY - USA ELECTRICAL REQUIREMENTS & STANDARDS MANUAL STREET LIGHTING

ELECTRIC 6.4
STREET LIGHTING
SCALE: NONE
DATE: 10/12/2011
REV: A
REV DATE: 02/26/2020

E.7.1 - SECTIONALIZERS & SWITCHES CONDUIT PLACEMENT FOR SECTIONALIZERS



NOTES:

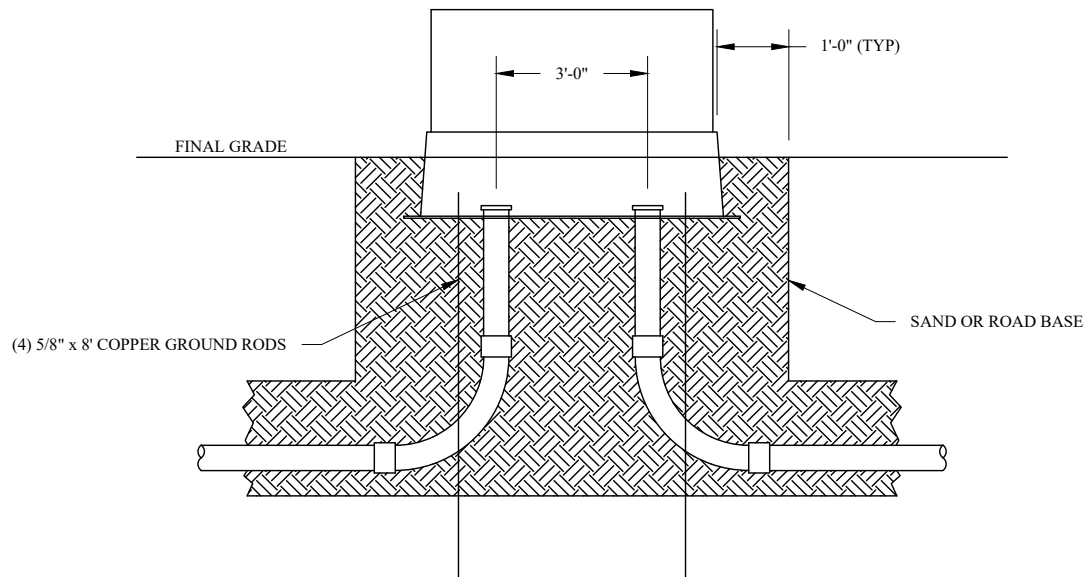
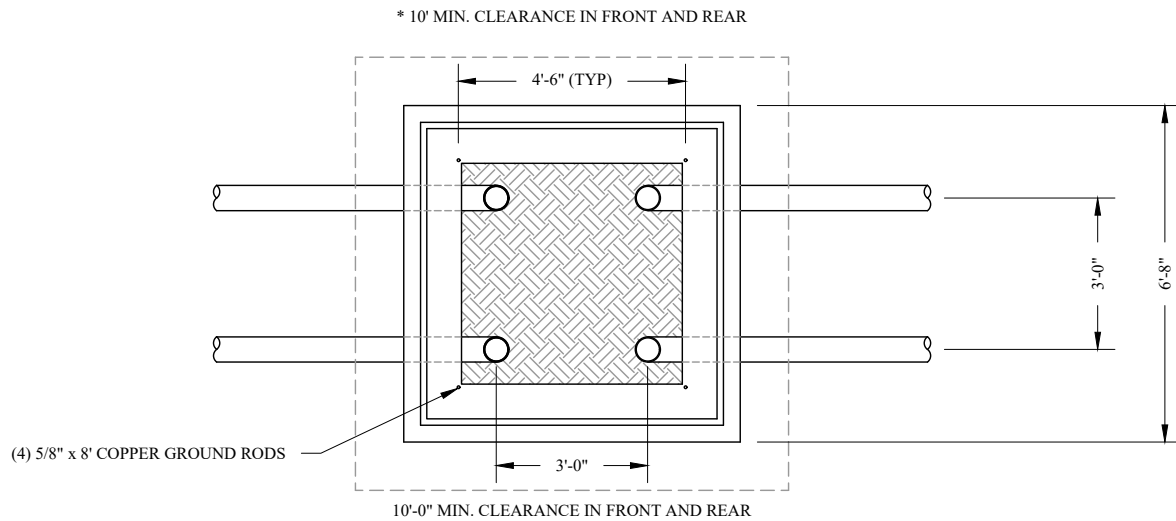
1. ALL 90 DEGREE ELBOWS 6" OR LARGER SHALL BE PVC SCH. 40 UNLESS GOING UP A RISER POLE, THEN USE RIGID STEEL ELBOWS .
2. JUNCTION BOXES AND BASE WILL BE PROVIDED AND INSTALLED BY THE POWER COMPANY.
3. THE POWER COMPANY SHALL PROVIDE ALL GROUND RODS AND SUBSEQUENT MATERIALS TO COMPLETE THE INSTALLATION.
4. SEE SHEET E.2.2 FOR TYPICAL TRENCH CROSS SECTION DRAWING.
5. CONDUIT SIZES AND LOCATIONS WILL BE PROVIDED BY THE POWER COMPANY ON THE SUBDIVISION ELECTRICAL PLANS.



HEBER LIGHT & POWER ELECTRICAL REQUIREMENTS & STANDARDS MANUAL SECTIONALIZERS & SWITCHES

ELECTRIC 7.1
SECTIONALIZERS & SWITCHES
SCALE: NONE
DATE: 10/12/2011
REV: A
REV DATE: 02/26/2020

E.7.3 - SECTIONALIZERS & SWITCHES CONDUIT PLACEMENT FOR SWITCHES



NOTES:

1. ALL 90° SWEEPS SHALL BE 36" RADIUS OR LARGER.
2. SWITCHGEAR AND BASE WILL BE PROVIDED AND INSTALLED BY THE POWER COMPANY .
3. THE POWER COMPANY SHALL PROVIDE ALL GROUND RODS AND SUBSEQUENT MATERIALS TO COMPLETE THE INSTALLATION.
4. SEE SHEET E.2.2 FOR TYPICAL TRENCH CROSS SECTION DRAWING.
5. CONDUIT SIZES AND LOCATIONS WILL BE PROVIDED BY THE POWER COMPANY ON THE SUBDIVISION ELECTRICAL PLANS.



HEBER LIGHT & POWER ELECTRICAL REQUIREMENTS & STANDARDS MANUAL SECTIONALIZERS & SWITCHES

ELECTRIC 7.3
SECTIONALIZERS & SWITCHES
SCALE: NONE
DATE: 10/12/2011
REV: B
REV DATE: 02/26/2020