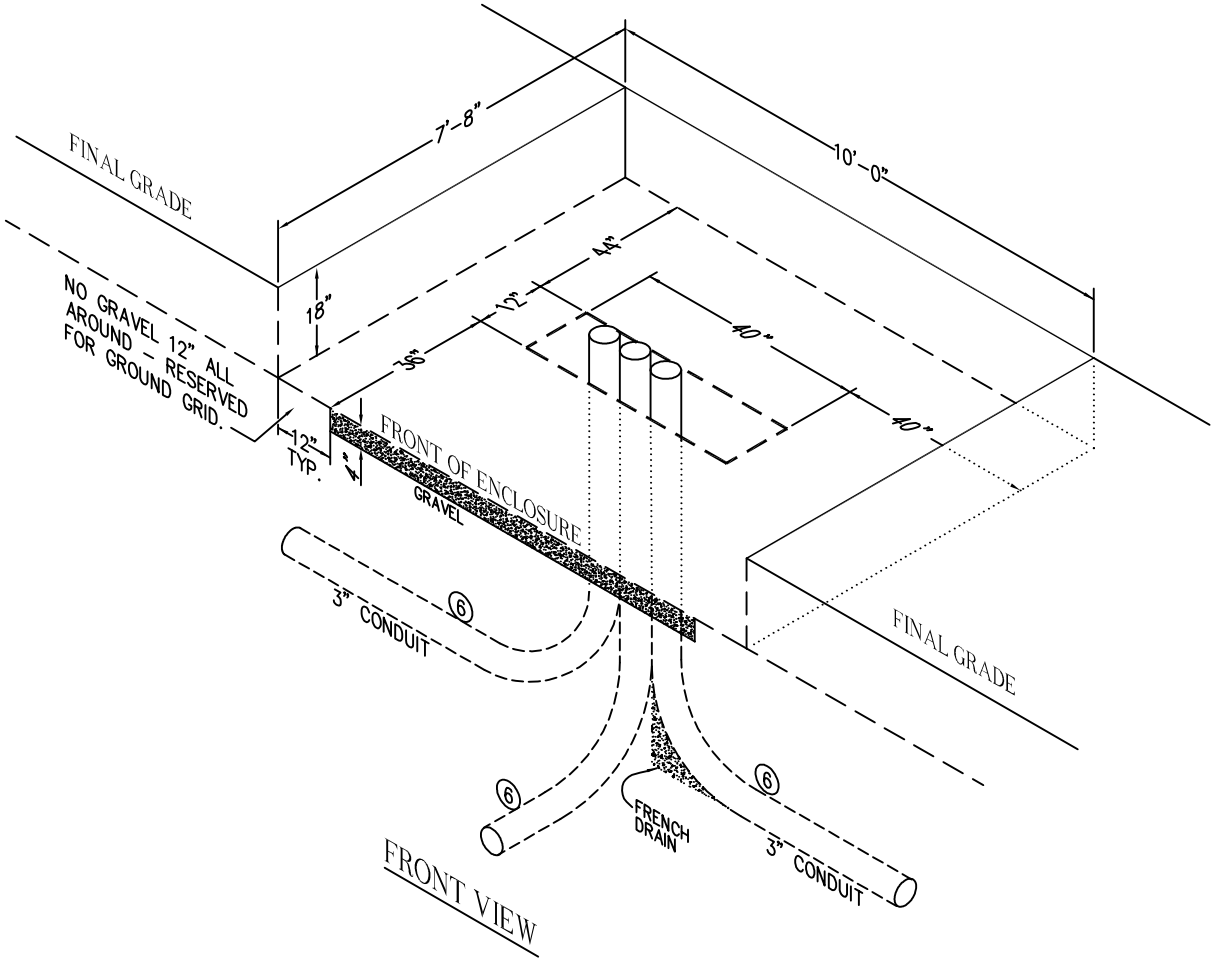
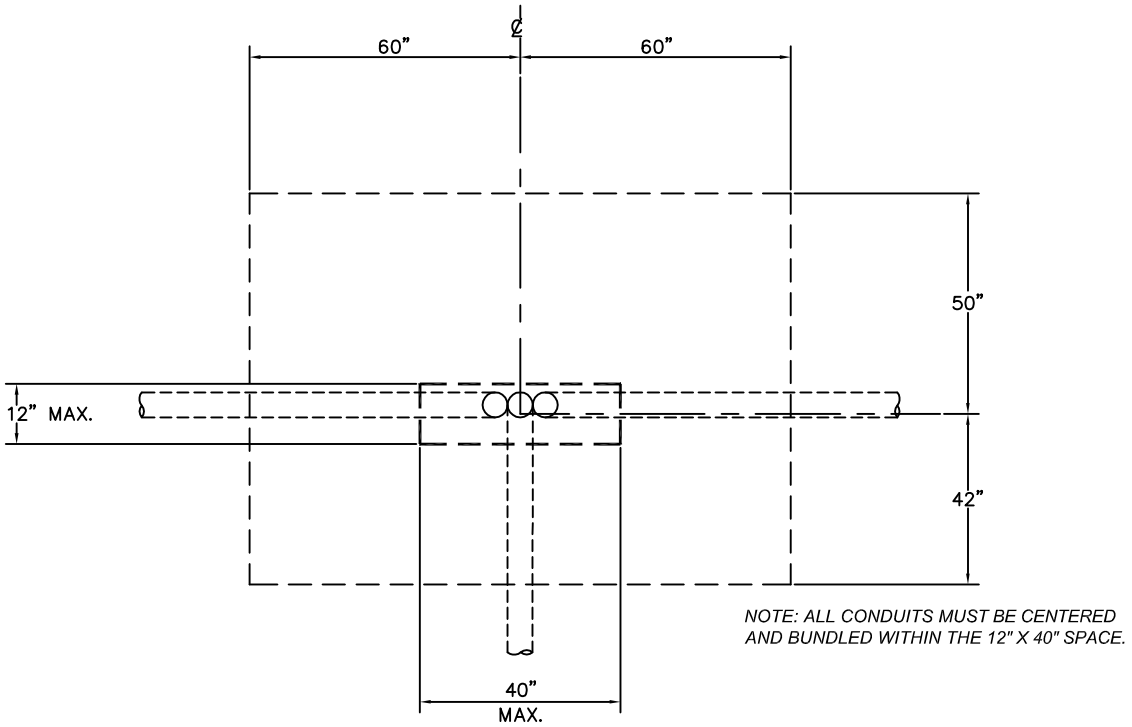
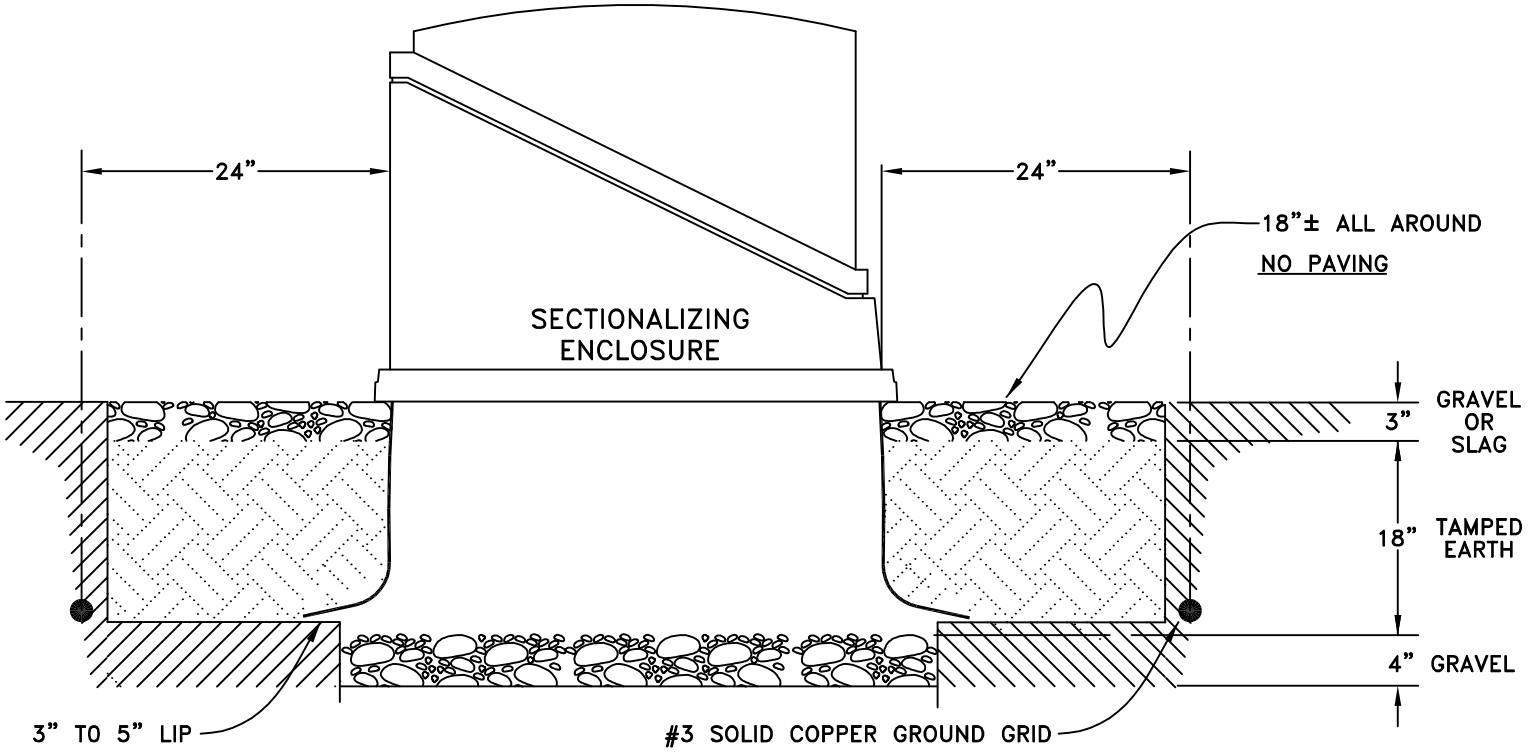


EXCAVATION WORK FOR 3-PHASE
FIBERGLASS SECTIONALIZING ENCLOSURE



NOTE: ALL CONDUITS MUST BE CENTERED AND BUNDLED WITHIN THE 12" X 40" SPACE.

FRONT OF ENCLOSURE
TYPICAL CONDUIT AND SWEEP PLACEMENT
AREA FOR SECTIONALIZING ENCLOSURE.
(8 BENDS MAX.)



(SIDE VIEW)

SECTIONALIZING ENCLOSURE PROFILE

GENERAL NOTES:

- ALL EQUIPMENT AND WORK SHALL CONFORM WITH THE NATIONAL ELECTRICAL SAFETY CODE AND APPLICABLE UNDERWRITERS' AND GOVERNMENTAL BUILDING CODES. CERTAIN ITEMS ARE SUBJECT TO INSPECTION AND APPROVAL BY THE DUQUESNE LIGHT COMPANY.

- PRIOR TO REQUESTING SECTIONALIZING ENCLOSURE INSTALLATION, AN UNOBSTRUCTED ACCESS WAY CAPABLE OF HS20–44 (32,000 POUNDS PER AXLE) TRUCK LOADING SHALL BE PROVIDED AND PERMANENTLY MAINTAINED BY THE CUSTOMER.

- DUQUESNE LIGHT COMPANY IS TO HAVE THE RIGHT OF INGRESS AND EGRESS AT ALL TIMES. DLCO SHALL BE ABSOLVED FROM ALL PROPERTY DAMAGES DUE TO NON–NEGLIGENT INGRESS OR EGRESS OF DLCO PERSONNEL OR EQUIPMENT.

CUSTOMER WORK:

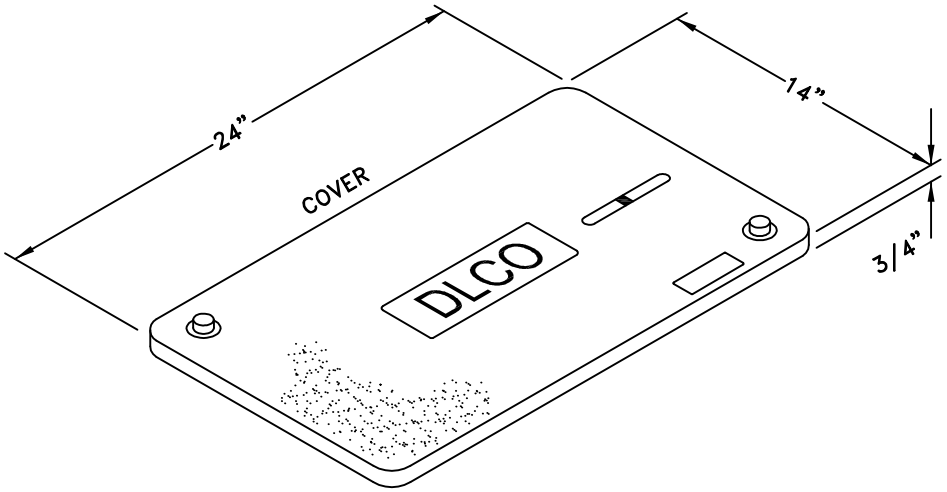
(1) INSTALL AT THE PAD, SECTIONALIZING PIT AND/OR POLE, 90° ELBOWS. THE ELBOWS SHOULD BE PVC SCHEDULE 80, TYPE DB, IN ACCORDANCE WITH NEMA SPECIFICATION TC2. THE USE OF PVC ELBOWS WILL NOT REQUIRE THE USE OF GROUNDING BUSHINGS.

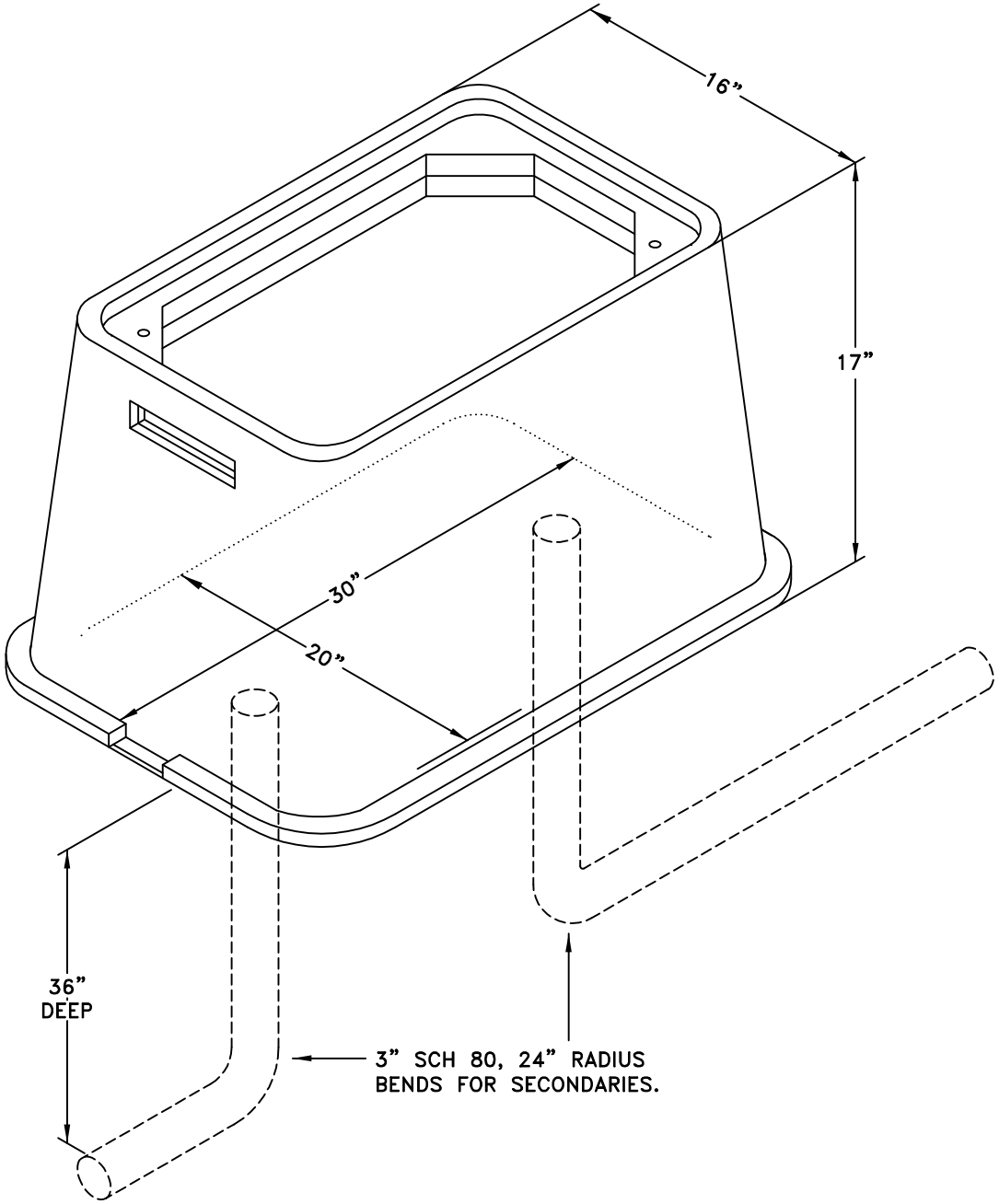
EXTEND BENDS " INTO PAD OR SECTIONALIZING PIT OPENING OR 6" UP POLE. DRILL (4) 1/2" DIA. HOLES ON 2" CENTERS AT THE LOW POINT OF EACH BEND AND REMOVE ALL INTERNAL BURRS. INSTALL AN 18"x18"x24"D FRENCH DRAIN. INSTALL A 18" GAUGE PULL CORD WITH A MINIMUM BREAKING STRENGTH OF 1800 POUND IN EACH CONDUIT. TO PROVIDE ALL TRENCHING, BACKFILLING, AND SURFACE RESTORATION. NO BACKFILLING SHALL BEGIN UNTIL THE PRIMARY ELECTRICAL CONDUIT HAS BEEN INSPECTED AND APPROVED BY DUQUESNE LIGHT COMPANY.

(2) CUSTOMER TO EXCAVATE PIT FOR SECTIONALIZING ENCLOSURE AS SHOWN. ENCLOSURE TO BE A MINIMUM OF 5' FROM VEHICULAR TRAFFIC AND HAVE 9'x9' CLEAR, LEVEL, UNOBSTRUCTED WORK AREA AT FRONT OF ENCLOSURE.

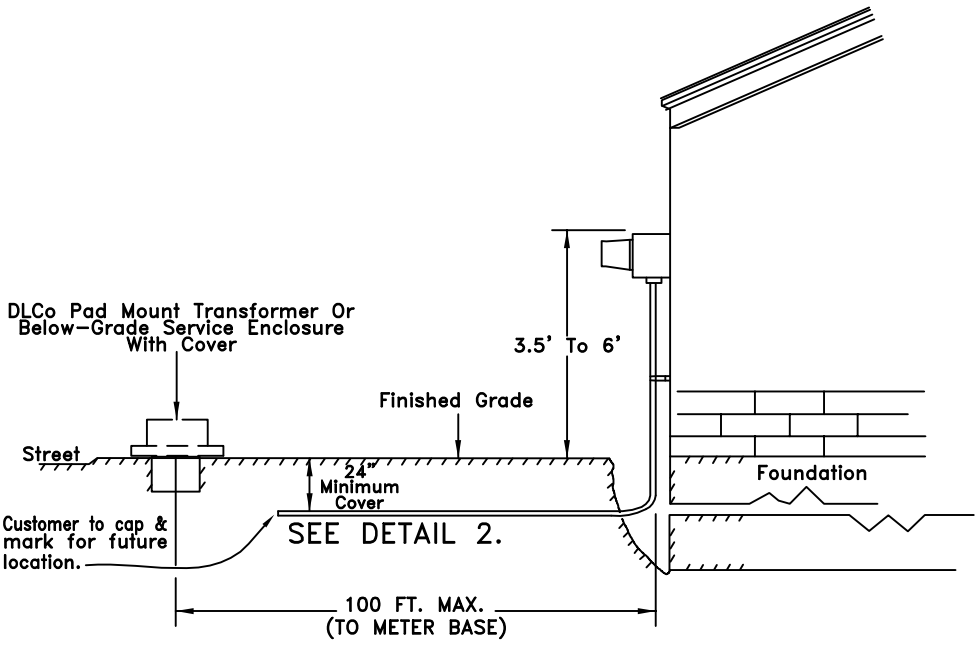
(3) THE EXCAVATION SHALL HAVE A FINAL INSPECTION BY DUQUESNE LIGHT CO. PRIOR TO THE INSTALLATION OF THE SECTIONALIZING ENCLOSURE. (412–393–4343).

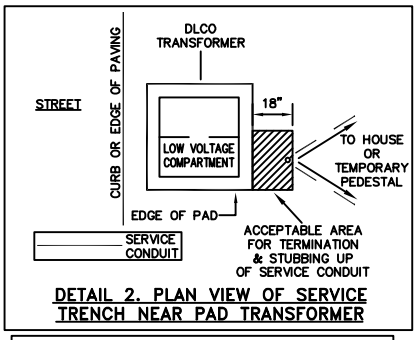
GENERAL NOTES/CUSTOMER WORK



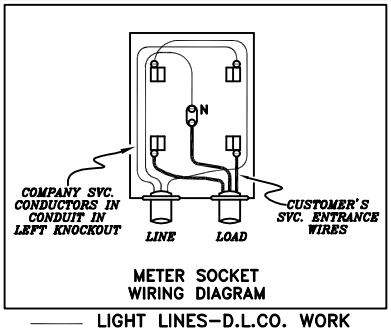


SERVICE ENCLOSURE





DETAIL 2. PLAN VIEW OF SERVICE TRENCH NEAR PAD TRANSFORMER



METER SOCKET WIRING DIAGRAM

LIGHT LINES–D.L.CO. WORK

HEAVY LINES–CUSTOMER'S WORK

(FOR MULTI OR PRE-WIRED METERS (MORE THAN 6) LINE FEED IS TO BE ATTACHED BEFORE MAIN SWITCH & SEALABLE WIRING TROUGH.)

CUSTOMER'S WORK

1. CONTACT THE COMPANY FOR METER LOCATION.
2. CONTACT THE PENNSYLVANIA ONE-CALL SYSTEM AT 1-800-242-1776.
3. FURNISH, INSTALL, AND MAINTAIN A DLCO APPROVED METER BASE. SEE DLCO SERVICE INSTALLATION RULES, SECTION 8.2 & www.duquesnelight.com
4. FURNISH, INSTALL AND MAINTAIN CONDUIT FROM THE METER BASE TO THE COMPANY'S SERVICE ENCLOSURE OR TRANSFORMER AT THE STREET.

- AT THE METER BASE, INSTALL A RISER CONDUIT AND SECURE TO THE STRUCTURE. INSTALL A 3"-DIAMETER, 24" RADIUS BEND. DRILL FOUR 1/2" DIAMETER HOLES AT LOW POINT OF BEND AND INSTALL AN 18" X 18" X 18" FRENCH DRAIN. RISER CONDUIT AND 24" RADIUS BEND SHALL BE 3" NOMINAL PVC, SCHEDULE 80 PER NEMA TC2 (EPC-80-PVC FOR TYPE IV APPLICATIONS), GRAY IN COLOR ONLY. (ALL CONDUIT WITH LESS THAN 18" OF COVER MUST BE SCHEDULE 80.) EXTEND 3" DIAMETER CONDUIT FROM THE METER BASE TO THE COMPANY'S SERVICE ENCLOSURE OR TRANSFORMER AT THE STREET. SERVICE LATERAL CONDUIT AND BEND MUST BE 3" NOMINAL PVC, SCH. 40 PER NEMA TC2 (EPC-40-PVC FOR TYPE II APPLICATIONS), GRAY IN COLOR ONLY. TAKE PROPER CARE TO PREVENT DEBRIS FROM ENTERING CONDUIT. INSTALL A 24" RADIUS BEND WITHIN 18" OF DUQUESNE LIGHT COMPANY'S TRANSFORMER OR SECONDARY ENCLOSURE EXTENDING A MIN. OF 3" TO A MAX. OF 6" ABOVE FINISHED GRADE AND CAP. SEE DETAIL(2) ABOVE. INSTALL A 1/4" NYLON OR POLYPROPYLENE PULLING LINE WITHIN THE CONDUIT. BE SURE LINE MOVES FREELY AFTER SOLVENT CEMENT HAS CURED. TRENCH MUST BE DEEP ENOUGH TO PROVIDE 4" OF TAMPED SELECT BACKFILL BELOW THE CONDUIT AND 3" OF TAMPED SELECT BACKFILL OVER THE CONDUIT. THE MINIMUM TOTAL COVER OVER THE CONDUIT IS TO BE 24". SEE DETAIL "C" SELECT BACKFILL SHALL CONSIST OF SAND, CRUSHED STONE (SUCH AS LIMESTONE FRAGMENTS/DUST) OR OTHER MATERIAL APPROVED BY THE COMPANY. REMAINING BACKFILL SHALL BE FREE OF MATERIALS THAT MAY DAMAGE THE CONDUIT, AND MUST NOT CONTAIN SOLID MATERIAL (ROCKS, STONES, ETC.) LARGER THAN 2" OR WITH SHARP EDGES.
- SERVICE LATERAL CONDUIT TO EXTEND DIRECTLY IN A STRAIGHT LINE FROM THE METER BASE TO THE COMPANY'S SVC. ENC. OR TRANSFORMER AT THE STREET WITHOUT ANY BENDS OR SWEEPS. IF ADDITIONAL BENDS OR SWEEPS ARE ANTICIPATED, OR IF THE LENGHTH OF THE SVC. EXCEEDS 100', THE CUSTOMER MUST SUBMIT A DWG. OF THE PROPOSED CONDUIT PATH TO THE COMPANY FOR APPROVAL BEFORE INSTALLING THE CONDUIT.
- A 2-1/2 NOMINAL RISER CONDUIT MAY BE USED IF THE METER BASE HAS NO 3" KNOCKOUT. THE RISER MUST BE PVC SCH. 80 PER NEMA TC2 (EPC-80-PVC FOR TYPE IV APPLICATIONS) AND INSTALLED AND SECURED AS ABOVE. CONNECT THE RISER TO THE SCH. 80 BEND WITH A REDUCER FITTING MEETING NEMA TC3.

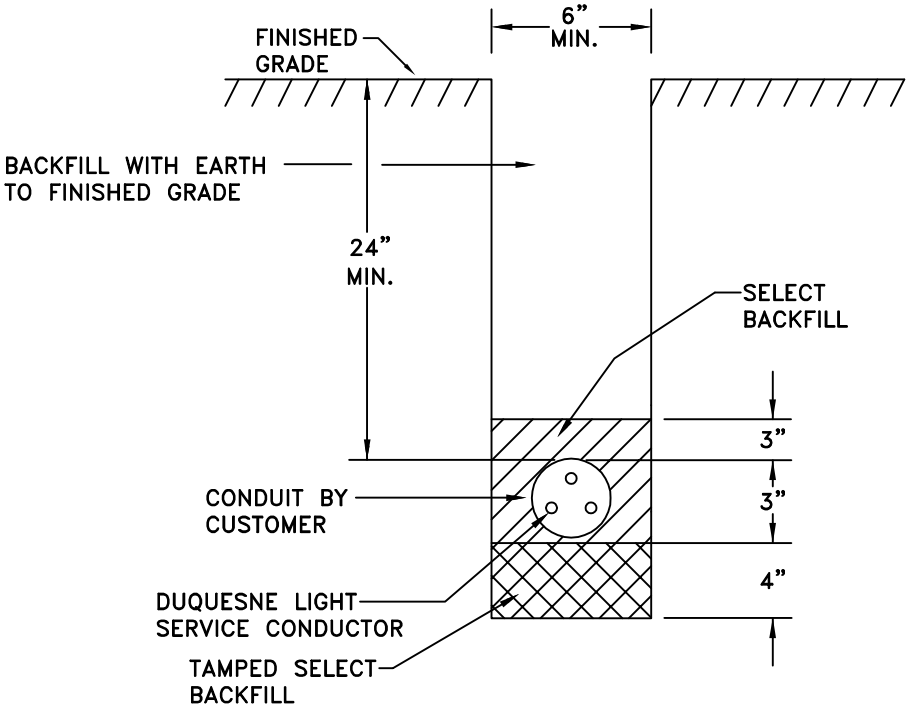
5. FOR SERVICE LATERALS EXCEEDING 100' THE CUSTOMER SHOULD CONTACT BOB MILLS OF WESCO. @ 412-393-8241 TO PURCHASE AUX. SERVICE ENCLOSURE, MEETING DLCO STK. #240339 SPECS. THIS PURCHASE SHOULD BE MADE BY CREDIT CARD ONLY.

COMPANY WORK

FURNISH, INSTALL, CONNECT AND MAINTAIN THE SERVICE LATERAL CABLE UP TO A MAX. OF 100'.

DETAIL "D"

URD RESIDENTIAL SERVICE



TRENCH DETAIL

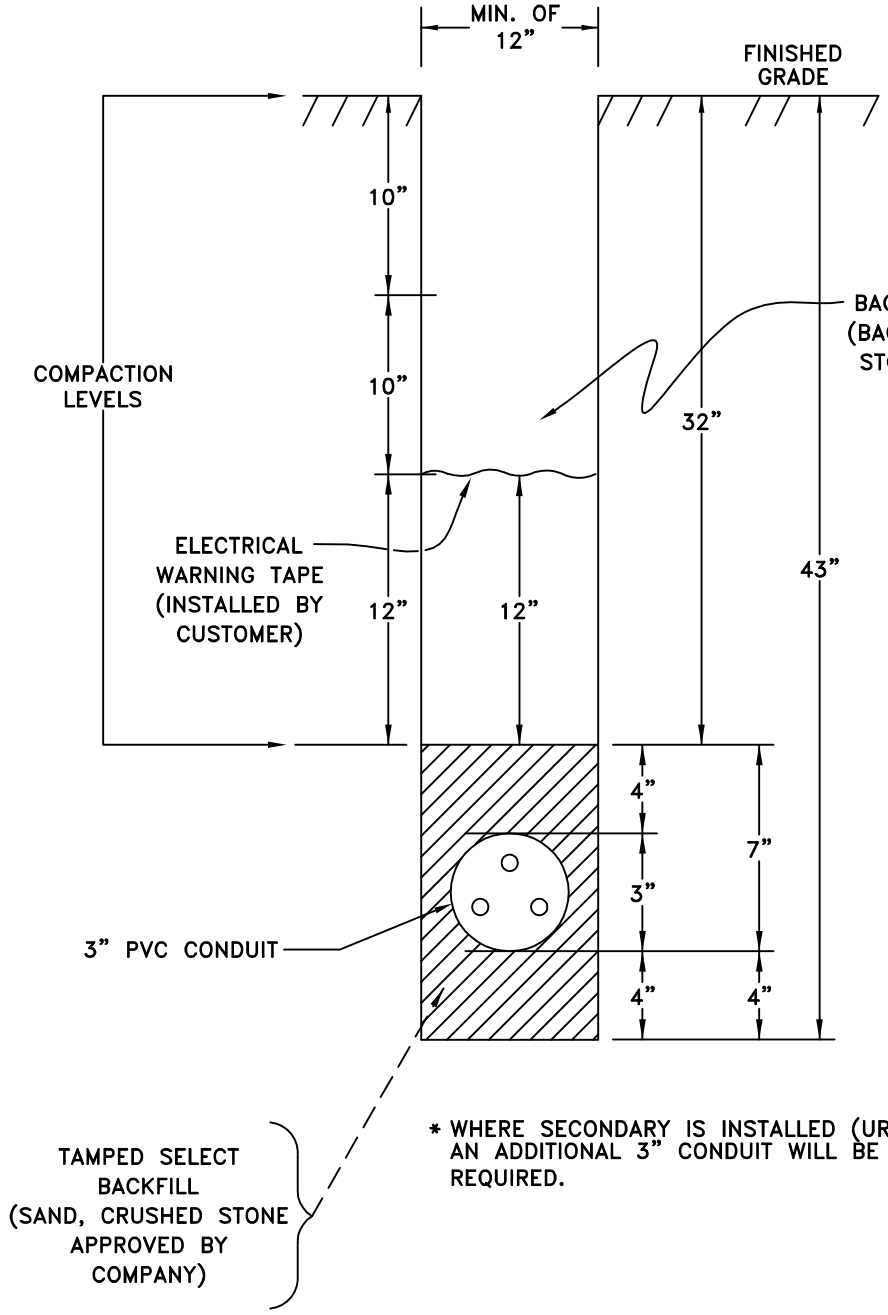
DETAIL "C"

NOTE:

1.) IF TRENCHING WITHIN STATE RIGHT-OF-WAY, CONDUITS ARE TO BE A MINIMUM OF 36" TOTAL COVERAGE.

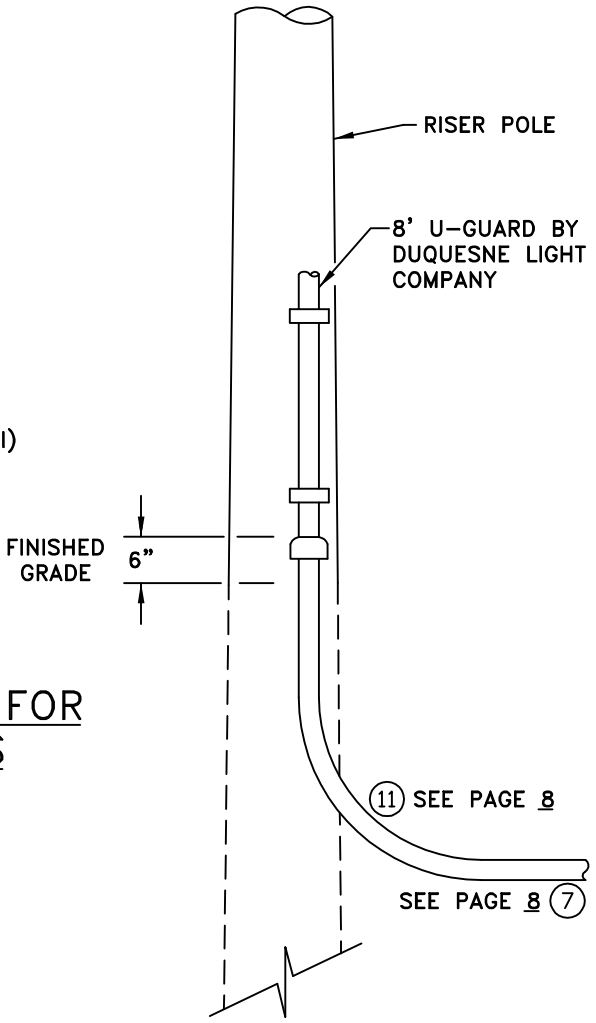
2.) IF TRENCHING WITHIN CITY OF PITTSBURGH AND A PERMIT IS REQUIRED, MINIMUM COVERAGE IS 30".

SERVICE TRENCH DETAIL



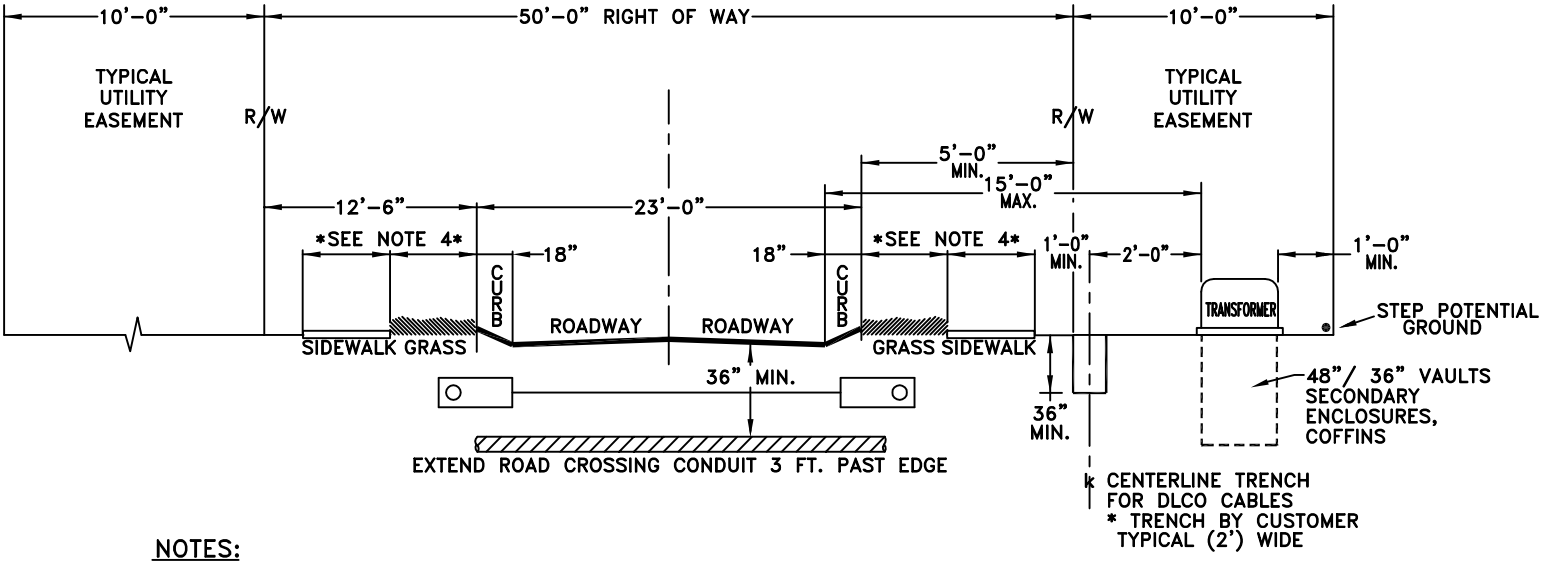
STANDARD TRENCH SECTION FOR DLCO DISTRIBUTION LINES

DETAIL "B"
NTS



TERMINAL POLE

TYPICAL TRENCH/STREET CROSSING & TERMINAL POLE DETAILS

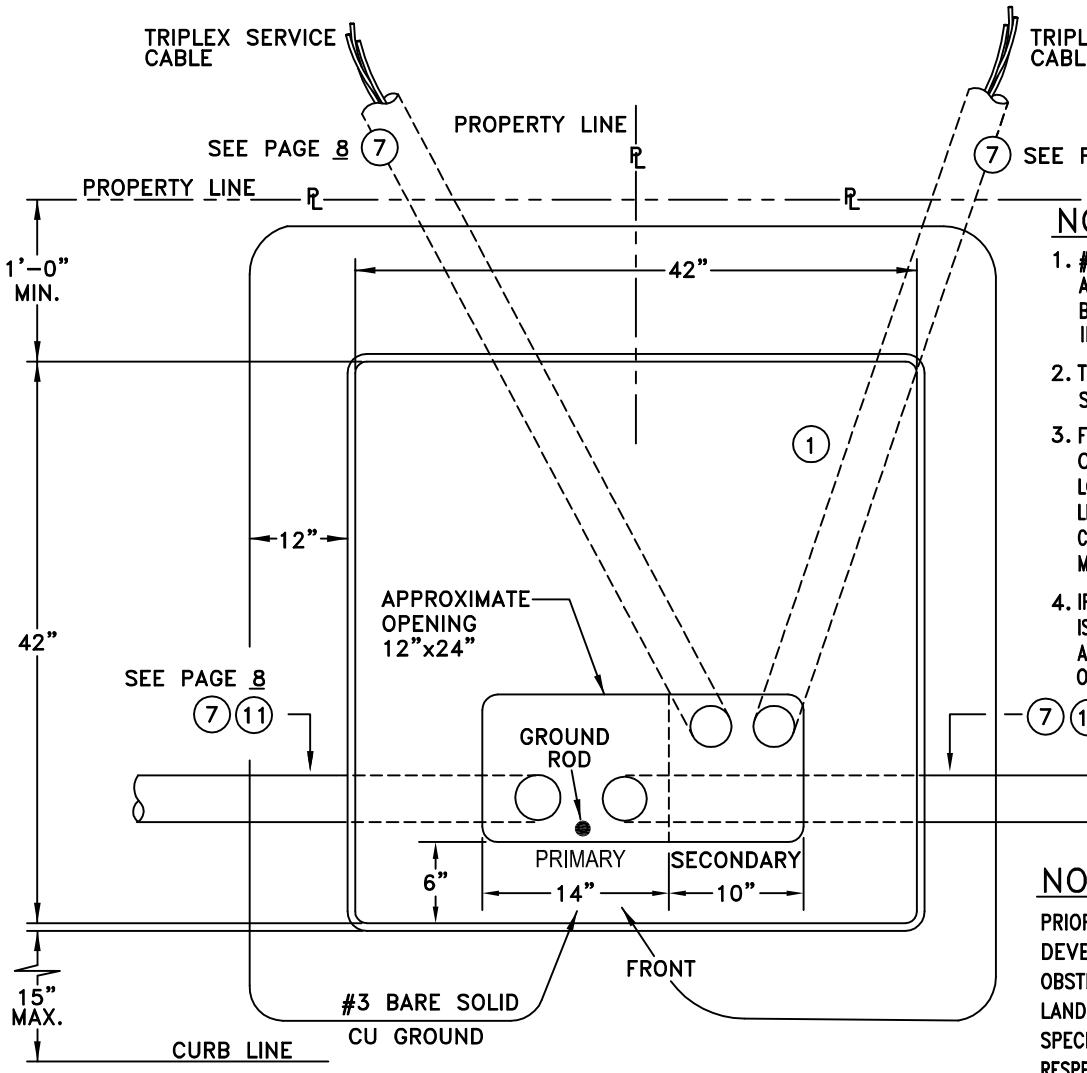


NOTES:

1. WHEN NO SIDEWALKS ARE PLANNED, DLCO EQUIPMENT SHALL BE LOCATED NO CLOSER THAN 5' FROM BACK OF CURB AND WITHIN ROAD RIGHT OF WAY.
2. IF SIDEWALKS ARE PLANNED, DLCO EQUIPMENT IS TO BE LOCATED NO FURTHER THAN 15' FROM THE FACE OF THE CURB TO FACE OF EQUIPMENT, WHICH MAY REQUIRE DLCO FACILITIES WITHIN THE 10' UTILITY EASEMENT.
3. ALL TRENCHES ARE TO MAINTAIN THE SAME DISTANCE FROM THE FACE OF DLCO EQUIPMENT THROUGHOUT THE DEVELOPMENT, AND TO BE AS STRAIGHT AS POSSIBLE. THE CENTERLINE OF TRENCHES FOR DLCO CABLES SHALL BE NO FURTHER THAN 2" FROM THE FACE OF EQUIPMENT.
4. DISTANCES VARY ACCORDING TO MUNICIPALITY REQUIREMENTS.
5. MAINTAIN A MINIMUM OF 3' HORIZONTAL SEPARATION FROM OTHER UTILITIES NOT IN SAME TRENCH, SUCH AS GAS & SEWAGE UNLESS MUNICIPAL ORDINANCE STIPULATES OTHERWISE.
6. DLCO FACILITIES SHALL NOT BE LOCATED UNDER SIDEWALKS.
7. NO TREES, SHRUBS, ETC., SHALL BE PLANTED WITHIN 6' OF EDGES OF TRENCHES FOR DLCO CABLES.

TYPICAL DLCO EQUIPMENT ROAD PROFILE

NTS



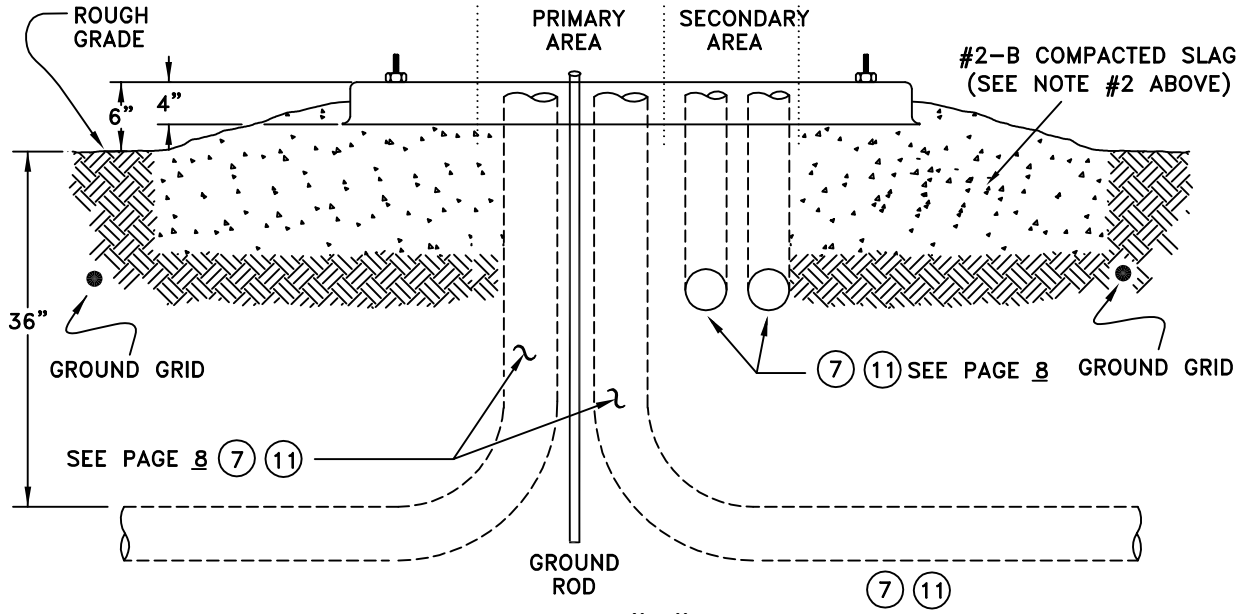
PLAN VIEW

NOTES:

1. #3 GRID WIRE (ITEM #6) MUST BE COVERED BY A MINIMUM OF 4" OF EARTH FILL. CONNECT BOTH ENDS OF GRID WIRE TO GROUND ROD IN PRIMARY AREA OF PAD.
2. TAMP EARTH FILL AND SLAG TO PREVENT SETTLING.
3. FOR EXACT LOCATION OF XFMR. PAD SEE CONSTRUCTION DRAWINGS. IN GENERAL LOCATE PAD 1'-0" MIN. FROM FRONT PROPERTY LINE. PAD SHOULD BE LOCATED 5'-0" MIN. FROM CURB LINE. A MIN. 9'X6' CLEAR WORKING SPACE MUST BE MAINTAINED IN FRONT OF THE XFMR.
4. IF STREET LIGHTS ARE REQUIRED, DEVELOPER IS TO INSTALL A 2' - 36" RADIUS SCH. 80 ELBOW AND STUB OUT (1) SECTION IN THE DIRECTION OF STREET LIGHT LOCATION.

NOTES:

PRIOR TO THE START OF D. L. CO. WORK THE DEVELOPER SHALL CLEAR THE GROUND OF OBSTRUCTIONS AND GRADE WITHIN 6" OF FINAL LANDSCAPE GRADE. THE DEVELOPER WILL ALSO SPECIFY WHERE THE FINAL GRADE WILL LIE WITH RESPECT TO ROUGH GRADE SO THAT THE COMPANY'S EQUIPMENT CAN BE SET AT PROPER ELEVATION.

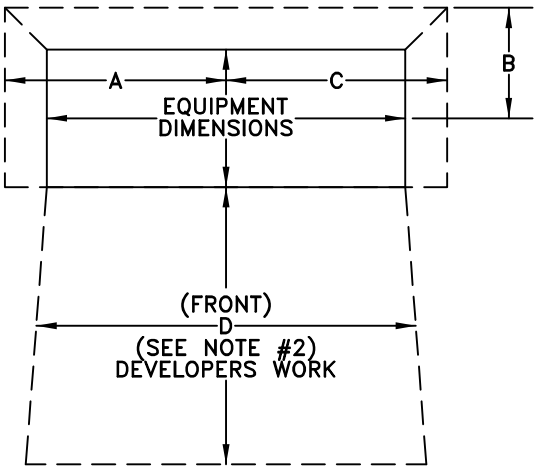


DETAIL "D"

TRANSFORMER PAD DETAILS

UNDERGROUND RESIDENTIAL DISTRIBUTION

INSTALLATION DETAILS FOR TRANSFORMER PAD FOR PAD-MOUNTED 1ø TRANSFORMER.



DIAGRAM

NOTE TO CUSTOMER:
IN ACCORDANCE WITH PA ACT 287 OF 1974 AS AMENDED, COMMONWEALTH OF PENNSYLVANIA. THE CUSTOMER'S CONSULTING ENGINEERS/ARCHITECTS SHALL FURNISH TO THE INSTALLER THE LOCATION OF ANY UNDERGROUND UTILITIES IN THE VICINITY OF THE PROPOSED ELECTRICAL FACILITIES.

NOTE:
DUQUESNE LIGHT CO. TO HAVE RIGHT OF INGRESS AND EGRESS AT ALL TIMES. DUQUESNE LIGHT CO. TO BE ABSOLVED FROM ALL LIABILITY FOR PROPERTY DAMAGE DUE TO NON-NEGLIGENT INGRESS AND EGRESS OF DUQUESNE LIGHT CO. PERSONNEL OR EQUIPMENT.

NOTE:
TO REQUESTING INSTALLATION OF D.L.CO. EQUIPMENT, AN UNOBSTRUCTED ACCESS WAY CAPABLE OF WITHSTANDING 72,000# TRUCK LOADING MUST BE PROVIDED AND MAINTAINED BY THE CUSTOMER.

NOTE TO TELEPHONE CO.:
BASED ON PRESENT DISTRIBUTION CIRCUIT ARRANGEMENTS, THE PROTECTION SCHEME DOES MEET SPECIFICATIONS SET FORTH IN EEI PUBLICATIONS 68-62.

EQUIPMENT	EQUIPMENT DIMENSIONS	EQUIPMENT CLEARANCE FROM DLCO EQUIPMENT CENTERLINE (FT)			FRONT
		A	B	C	D
TRANSFORMER	6'x6'	4'	4'	4'	9'x6'
FIBERGLASS LOADBREAK BUSHING JUNCTION	10'Lx7'-6"W	6'	6'	6'	9'x6'
FIBERGLASS VAULT	3'x3'	2'-6"	2'-6"	2'-6"	9'x6'
SECONDARY ENCLOSURE	2'Lx1'W	2'	1'-6"	2'	3'x6'

UTILITY EQUIPMENT WORKSPACE CLEARANCE TABLE
(SEE DIAGRAM ABOVE)
*DIMENSIONS INCLUDE GROUND GRID AROUND EQUIPMENT

LEGEND

DUQUESNE LIGHT COMPANY WORK

INSTALL U.G. VAULT

INSTALL TRANSFORMER PAD

INSTALL U.G. SERVICE ENCLOSURE RECTANGULAR

INSTALL U.G. SERVICE ENCLOSURE ROUND. (REQ'D.)

FUTURE STREET LIGHT LOCATION.

INSTALL 70W HPS COLONIAL LUMINAIRE ON 18' FIBERGLASS POST.

---URD23D( )---

INSTALL 2/C #2, 23KV AL. CABLE.
NUMBER PHASES TO BE INDICATED ON CONSTRUCTION DWG.

--URD23D(1)/URD23D(1)--

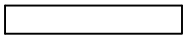
REPLACE 2/C#2, 23KV, AL CABLE IN 1-1/2" PLASTIC CONDUIT.

-----URDIII-----

INSTALL 3/C 600V CABLE

-- ## --

INSTALL UNDERGROUND RESIDENTIAL SERVICE CABLES.



EXISTING ROAD CROSSING

ABOVE GROUND LOADBREAK BUSHING JUNCTION

TEMPORARILY UTILIZE 6' U.G. CABLE WARNING POST AT SERVICE ENCLOSURE LOCATIONS AS NEEDED DURING CONSTRUCTION PHASE OF PROJECT.

DEVELOPER'S WORK

PRIOR TO THE START OF DUQUESNE LIGHT COMPANY WORK:

1.) ALL GRADING TO BE WITHIN 6" OF FINAL LANDSCAPE GRADE PRIOR TO REQUESTING THE START OF D.L.CO. WORK AND FINAL GRADE TO BE SPECIFIED.

2.) PROVIDE A 9'-0" x 6'-0" CLEAR LEVEL WORKING AREA AT EACH TRANSFORMER PAD, VAULT LOCATION, AND ABOVE GROUND LOADBREAK BUSHING JUNCTION.

3.) PAINT ALL LOT LINES AND LOT NUMBERS ON CURB OR IDENTIFY LOT LINES AND NUMBERS IN SOME MANNER. LOT LINES TO BE IDENTIFIED BY STAKES, ETC. PRIOR TO THE INSTALLATION OF D.L.CO. STREET CROSSING CONDUIT.

4.) CONTACT - D.L.CO. (412-393-2788) THREE WEEKS PRIOR TO START OF STREET PAVING.

5.) NO TRENCHING SHALL BEGIN WITHOUT THE APPROVAL OF THE DESIGNATED COORDINATOR. THE DEVELOPER SHALL NOTIFY THE D.L.CO. & THE TELEPHONE COMPANY A MINIMUM OF THREE WEEKS PRIOR TO THE TIME HE DESIRES TO BEGIN TRENCHING. THE D.L.CO. COORDINATOR WILL DETERMINE THE ACTUAL REQUIRED DATE.

6.) AT THE TIME OF INSTALLATION OF D.L.CO. EQUIPMENT, THE DEVELOPER SHALL ADEQUATELY MARK LOCATIONS OF OTHER UTILITIES IN THE AREA OF D.L.CO. CONSTRUCTION AND HAVE THE ROADWAYS ADEQUATELY PAVED OR CONSTRUCTED TO SUPPORT 32,000 LBS.

--URD23D(1)--
---URDIII---

7.) DEVELOPER TO PROVIDE AND INSTALL 3" SCHEDULE 40 PVC CONDUIT. FOR ALL PRIMARY & SECONDARY CABLES (SEE DETAIL 'B') WITH 1,800 LBS. 5/8" WOVEN POLYESTER TAPE FOR PULLING CABLE & ELBOW. NUMBER AS INDICATED.

8.) DEVELOPER TO PROVIDE COMPLETE TRENCHING AND BACKFILLING AS SHOWN IN DETAIL "B". NO BENDS PERMITTED, ONLY GRADUAL FIELD SWEEPS WITH A RADIUS GREATER THAN 25'.

9.) DEVELOPER SHALL SUPPLY EITHER SAND, GRAVEL, OR SLAG FOR THE INSTALLATION OF DLCO'S FACILITIES. THE AMOUNT AND TYPE WILL BE DETERMINED BY DLCO'S CONSTRUCTION SUPERVISOR AND COORDINATED WITH THE DEVELOPER AS TO LOCATION AND DATE FOR REQUIRED DELIVERY.

--#--

10.) PROVIDE AND INSTALL 3" PVC SCH. 40 CONDUITS FROM NEW HOMES TO SERVICE ENCLOSURES/TRANSFORMERS. SEE DETAIL "C".

11.) PROVIDE AND INSTALL 3" PVC SCH 40 CONDUITS

12.) PROVIDE AND INSTALL 90°, PVC SCH 80 ELBOWS WITH 36" RADIUS AT TRANSFORMER/SWITCH ENCLOSURE/TERMINAL POLE LOCATIONS. (SEE PAGE 5 FOR PRIMARY & SECONDARY.

13.) PROVIDE AND INSTALL 3", 90°, PVC, SCH. 80 ELBOWS WITH 24" RADIUS AT SERVICE ENCLOSURE & TRANSFORMER (SEE DETAIL "D") FOR SERVICES.

14.) ALL HORIZONTAL 90° BENDS AT ROAD CROSSINGS TO BE SCHEDULE 80 WITH A MINIMUM 60" RADIUS.

DEVELOPER'S WORK NOTES