



Electric Utility

SPECIFICATIONS

FOR

CONSTRUCTION

JULY 1, 2026

ROSEVILLE ELECTRIC UTILITY SPECIFICATIONS FOR CONSTRUCTION

TABLE OF CONTENTS

<u>POLICIES</u>	PAGE
Policy for Electric Utility Installation.....	1
Policy Notes	2-3
Procedures	4
Inspection	5
Trench Backfill and Compaction	6
 <u>CONDUIT</u>	
Conduit Requirements and Specification	7
General Conduit Details	8
 <u>TRENCHING</u>	
General Mainline Trench Details.....	9
Residential Trenching Specification Attached Sidewalk.....	10
Residential Trenching Specification Detached Sidewalk.....	11
Service Notch Excavation Attached Sidewalk	12
Transformer Excavation Attached/Detached Sidewalk.....	13
Concrete Pad Vault Placement	14
Residential Streetlight Trenching Detail.....	15
Residential Streetlight Detail for Hard Soil Conditions Detached Walk.....	16
Residential Service Entrance Conduit Installation.....	17
 <u>VAULTS</u>	
Vault Construction Notes.....	18
Concrete Switch Pad Vault	19
Concrete Switch Pad Vault Detail	20
Switch Pad Vault Grounding Detail	21

ROSEVILLE ELECTRIC UTILITY SPECIFICATIONS FOR CONSTRUCTION

TABLE OF CONTENTS

	PAGE
<u>12KV J-BOXES AND PULL BOXES</u>	
12kv Local Distribution Splice Pull Box (3'W x 6'L x 5'D)	22
12kv Mainline Splice Pull Box (4'W x 6'-6"L x 5'D)	23
12kv Primary Junction Box (4'W x 4'L x 4'-4"D)	24
Grounding Detail for Primary Box.....	25
Installation and Grounding Detail for Above Ground 3 Phase Junction Box.....	26
12kV Interceptor Box.....	27
12kv Single Circuit Vault (Manhole 6'W x 8'L x 7'D)	28
12kv Multiple Circuit Vault (Manhole 6'W x 12'L x 7'D)	29
12kv Multiple Circuit Expansion Vault (Manhole 6'W x 15'L x 9'D)	30
 <u>TRANSFORMERS PADS</u>	
Precast Concrete Transformer Pad Construction Notes and Location Requirements ...	31
Precast Concrete Transformer Pad application Notes	32
Precast Concrete Pad for Three Phase 12kv Transformer - 1000kVA & Below.....	33
Concrete Pad for Three Phase 12kv Transformer - 1500kVA & Above	34
Concrete Pad for Single Phase 12kv Transformer - 167kVA & Below.....	35
Precast Concrete Pad 12kv Capacitor Bank.....	36
Pad for Single Phase Residential Transformer	37
Residential Transformer Pad Installation Details	38
 <u>SECONDARY SERVICE BOXES:</u>	
Secondary Box Specifications	39
Street Light Box Specifications	40

ROSEVILLE ELECTRIC UTILITY SPECIFICATIONS FOR CONSTRUCTION

TABLE OF CONTENTS

	PAGE
<u>STREET LIGHTING</u>	
Street Lighting Control Panel.....	41
One Line Diagrams, Street Light Control Panel (120, 240, or 208 V) Lighting	42
Cobra Head Street Light 100-250 Watt HPS LED Standard	43
Decorative Street Light 100-250 Watt HPS LED Standard	44
<u>LANDSCAPING AND WORKING CLEARANCES:</u>	
Electric Department Landscape Design Requirements.....	45
Electric Department Landscape Design Requirements.....	46
12KV Padmount Switchgear and Capacitor Bank Clearance Detail	47
12KV Above Ground J-Box Clearance Detail	48
12KV Padmount Transformer Clearance Detail.....	49
Street Light Clearance Detail	50
Recommended Trees and shrubs for Under Powerlines.....	51
Clearance Requirements for Overhead Conductors in Proximity to Buildings	52

POLICY FOR NEW ELECTRIC UTILITY INSTALLATIONS

DEVELOPER RESPONSIBILITY

1. LAND RIGHTS.
2. TRENCHING, EXCAVATION, BACKFILL AND GRADING, COMPACTION, ALL SURVEYING AND STAKING OF GRADES, PROPERTY LINES, RIGHTS-OF-WAY, SIDEWALKS, ETC.
3. FURNISH AND INSTALL ALL MATERIALS NOT INSTALLED BY ROSEVILLE ELECTRIC CREWS, WHICH SHALL INCLUDE, BUT NOT BE LIMITED TO: PRIMARY JUNCTION BOXES, PADS, CONDUITS (PRIMARY, SECONDARY AND STREETLIGHT), SECONDARY SERVICE BOXES, STREETLIGHT PULL BOXES, AND ALL APPLICABLE FITTINGS. THESE ITEMS ARE TO BE INSTALLED PER ROSEVILLE ELECTRIC CONSTRUCTION SPECIFICATIONS.
4. FURNISH AND INSTALL SECONDARY SERVICE ENTRANCE CONDUIT AND CONDUCTORS FROM THE SECONDARY SERVICE BOX TO THE HOUSE PER THE NATIONAL ELECTRIC CODE FOR RESIDENTIAL CONSTRUCTION. FURNISH AND INSTALL SECONDARY SERVICE CONDUITS AND CONDUCTORS TO TRANSFORMER FOR COMMERCIAL CONSTRUCTION. NO MORE THAN 8 SERVICE CONDUCTORS PER PHASE ARE ALLOWED WITH A MAXIMUM WIRE SIZE OF 1000 MCM (COPPER OR ALUMINUM).
5. PAY FOR ALL MATERIALS ATTRIBUTED TO THE DEVELOPMENT AS DETERMINED BY THE ELECTRIC UTILITY DIRECTOR AND INSTALLED BY ROSEVILLE ELECTRIC WHICH SHALL INCLUDE, BUT NOT BE LIMITED TO: TRANSFORMERS, CONDUCTORS, SWITCHGEAR, STREET LIGHTING, METERS AND ALL APPLICABLE ELECTRIC FITTINGS.
6. COORDINATION WITH OTHER UTILITIES (SUREWEST, PACIFIC GAS & ELECTRIC, COMCAST CABLE COMMUNICATIONS, INC., AND CITY WATER, SEWER, REFUSE, ETC.). ANY AND ALL COSTS ASSESSED BY THESE UTILITIES.
7. THE ELECTRIC UTILITY DIRECTOR WILL REQUIRE ITEMS 5 AND 6 ABOVE TO BE PAID BEFORE ROSEVILLE ELECTRIC WILL PURCHASE NON-STOCK ITEMS OR INSPECT ANY PREMISES FOR ACCEPTANCE AND INSTALLATION OF ELECTRICAL FACILITIES.

ROSEVILLE ELECTRIC RESPONSIBILITY

1. DESIGN OF ELECTRICAL SYSTEM FOR PROVIDING SERVICE TO THE DEVELOPMENT.
2. INSTALLATION OF ALL MATERIALS IN ITEM 5 UNDER DEVELOPER RESPONSIBILITY.
3. INSTALLATION OF STREET LIGHTING SYSTEM IN PUBLIC ROADWAYS AND TESTING OF ELECTRICAL CIRCUITS.
4. INSTALLATION OF METERS AND CURRENT TRANSFORMERS AS REQUIRED.
5. ROSEVILLE ELECTRIC SHALL CONSTRUCT THE NECESSARY FACILITIES TO DELIVER POWER TO THE DEVELOPER'S AREA OF RESPONSIBILITY AS DETERMINED BY THE ELECTRIC UTILITY DIRECTOR AND OUTLINED IN CITY ORDINANCE 2407 DATED MARCH 20, 1991.

NOTE: (1) THIS POLICY SHALL BE SUBJECT TO CHANGE BY THE CITY COUNCIL AT ANY TIME IN ACCORDANCE WITH PROCEDURES ESTABLISHED BY THE LAWS OF THE STATE OF CALIFORNIA AND THE PROVISIONS OF THE CITY OF ROSEVILLE MUNICIPAL CODE.

- (2) ALL WORK TO BE PERFORMED BY THE DEVELOPER SHALL BE SUBJECT TO THE APPROVAL OF THE ROSEVILLE ELECTRIC UTILITY DIRECTOR.



SPEC. GROUP: SPECIFICATIONS FOR CONSTRUCTION

POLICY FOR NEW ELECTRIC UTILITY INSTALLATIONS

REV. DATE: REV. NO:

07/01/26

DRAWING NO.

01

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7. THE ELECTRIC UTILITY DIRECTOR WILL REQUIRE ITEMS 5 AND 6 ABOVE TO BE PAID BEFORE ROSEVILLE ELECTRIC WILL PURCHASE NON-STOCK ITEMS OR INSPECT ANY PREMISES FOR ACCEPTANCE AND INSTALLATION OF ELECTRICAL FACILITIES.

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SPEC. GROUP: SPECIFICATIONS FOR CONSTRUCTION

POLICY FOR NEW ELECTRIC UTILITY INSTALLATIONS

REV. DATE: REV. NO:

07/01/26

DRAWING NO.

01

POLICY NOTES

1. THE ENGINEER SHALL MEAN THE DIRECTOR OF THE CITY OF ROSEVILLE ELECTRIC DEPARTMENT OR ANY OF HIS APPOINTED REPRESENTATIVES.
2. THE ENGINEER RESERVES THE RIGHT TO MAKE MINOR CHANGES AT ANY PHASE OF THE PROJECT TO INSURE THE PROPER INSTALLATION OF ITS FACILITIES.
3. THE ENGINEER HAS SOLE AUTHORITY ON THE APPROVAL OF ANY DESIGN OR MATERIAL CHANGES REQUESTED BY THE OWNER OR CONTRACTOR.
4. THE ENGINEER HAS SOLE AUTHORITY AND RESERVES THE RIGHT TO MAKE ON-SITE INSPECTIONS AND OBSERVE THE CONSTRUCTION OF ITS FACILITIES AT ANY TIME.
5. ANY MATERIAL OR DESIGN CHANGE MADE WITHOUT PRIOR APPROVAL BY THE ENGINEER IS DONE SO AT THE OWNERS OR CONTRACTORS OWN RISK.
6. ANY UNAPPROVED MATERIAL OR DESIGN CHANGE OR IMPROPERLY INSTALLED SYSTEM NOT MEETING SET CITY OF ROSEVILLE ELECTRIC SPECIFICATIONS SHALL BE REPLACED AND PROPERLY INSTALLED BY THE CONTRACTOR OR OWNER AT THE CONTRACTOR'S OR OWNER'S OWN EXPENSE.
7. IT IS THE RESPONSIBILITY OF THE DEVELOPER'S CONTRACTOR TO PROVIDE ALL THE NECESSARY FIELD SURVEYING AND STAKING TO INSURE ADEQUATE CONTROL POINTS FOR ALL UTILITY INSPECTORS TO VERIFY PROPER LOCATION AND GRADE OF ALL UTILITIES. THE ELECTRIC DEPARTMENT ASSUMES NO RESPONSIBILITY FOR PLACEMENT OF ITS FACILITIES IN OR ON IMPROPERLY MARKED LOCATIONS.
8. INSTALLATION OF ELECTRIC DEPARTMENT FACILITIES TO BE DONE ACCORDING TO ELECTRIC DEPARTMENT DESIGNED JOB PRINT AND CITY OF ROSEVILLE ELECTRIC DEPARTMENT CONSTRUCTION SPECIFICATIONS.
9. ALL CONSTRUCTION OF ELECTRICAL FACILITIES SHALL CONFORM TO STATE OF CALIFORNIA GENERAL ORDER NO. 128, "CONSTRUCTION OF UNDERGROUND ELECTRIC SUPPLY AND COMMUNICATION SYSTEMS" AS WELL AS APPLICABLE OSHA REGULATIONS.
10. A 12.5' PUBLIC UTILITY EASEMENT IS REQUIRED ALONG ALL STREET FRONTAGES UNLESS OTHERWISE SPECIFIED BY THE ELECTRIC DEPARTMENT.
11. TRENCH DETAILS IN THESE SPECIFICATIONS AND ON ELECTRIC DEPARTMENT JOB PRINTS ARE TYPICAL FOR ELECTRIC ONLY. IF OTHER UTILITIES REQUEST JOINT OCCUPATION, IT IS THE RESPONSIBILITY OF THE DEVELOPER TO CO-ORDINATE WITH THE OTHER UTILITIES FOR THEIR REQUIREMENTS.
12. VERTICAL CONDUIT RISERS, AT TRANSFORMER, SWITCH AND SECONDARY SERVICE BOX LOCATIONS ARE TO BE ADEQUATELY SUPPORTED TO PREVENT LEANING DURING THE BACKFILL OPERATION.
13. BOTTOM OF ALL UTILITY TRENCHES TO BE SQUARE AND CLEAN.
14. BACKFILL FOR JOINT UTILITY TRENCH SHALL BE SAND COMPACTED 85% TO 6" ABOVE THE 4 UTILITIES OCCUPYING THE JOINT TRENCH. THEN BACKFILL WITH NATIVE MATERIAL FREE OF ALL DELETERIOUS MATERIALS, ROCKS OR BOULDERS COMPACTED TO 90% WITHIN ONE (1) FOOT OF FINAL GRADE AND 95% THE LAST FOOT. SAND SHADING MATERIAL TO BE, SCREENED FREE, NO. 4 SIEVE, 4MM MAXIMUM PARTICLE SIZE, FREE OF SHARP EDGES, AND APPROVED BY EACH UTILITY TRENCH INSPECTOR. (DG WILL NOT BE APPROVED.)



SPEC. GROUP: SPECIFICATIONS FOR CONSTRUCTION

POLICY NOTES

REV. DATE: REV. NO:

07/01/26

DRAWING NO.

02

POLICY NOTES

15. STREET CROSSING SHALL BE 24" WIDE AND 57" DEEP FROM TOP BACK GRADE OF SIDEWALK. IF, DURING EXCAVATION, A SHALLOW OBJECT IS ENCOUNTERED, (WATER, SEWER MAIN, ETC.), AN EXCAVATION UNDERNEATH THE OBJECT SHALL BE DONE WITH A MINIMUM 20' GRADUAL TRANSITION EACH SIDE OF THE OBJECT TO MEET CLEARANCES AS SPECIFIED IN STATE OF CALIFORNIA GENERAL ORDER #128, CONSTRUCTION OF UNDERGROUND ELECTRIC SUPPLY AND COMMUNICATIONS SYSTEMS.
16. SEWER LATERAL CLEANOUTS SHALL NOT BE PLACED MORE THAN 3'-6" FROM BACK OF SIDEWALK.
17. WORK SHALL NOT PROCEED UNLESS UTILITY TRENCHES ARE IN ACCORDANCE WITH ALL CAL OSHA REQUIREMENTS.
18. DEVELOPER'S CONTRACTOR SHALL ASSUME ALL LIABILITY FOR OPEN TRENCHES AND SHALL PROVIDE AND MAINTAIN ALL BARRICADES AS REQUIRED FOR SAFETY.
19. ALL TRANSFORMER PADS, SWITCH PADS, JUNCTION BOXES AND SECONDARY SERVICE BOXES SHALL BE SET AT FINAL GRADE (INCLUDING LANDSCAPING). ANY FACILITIES, WHICH IN ROSEVILLE ELECTRIC'S JUDGEMENT, REQUIRE RAISING, LOWERING, LEVELING, OR RELOCATION TO MEET FINAL GRADE REQUIREMENTS WILL BE DONE BY THE DEVELOPER AT THEIR EXPENSE.
20. WHERE MOUNDED LANDSCAPING OR SEVERE SLOPES ARE PLANNED OR ADDED AT A LATER DATE THE DEVELOPER IS RESPONSIBLE FOR PROVIDING RETAINING WALLS OR APPROPRIATE GRADE CHANGES TO INSURE ADEQUATE CLEAR, LEVEL WORKSPACE.



SPEC. GROUP: SPECIFICATIONS FOR CONSTRUCTION

POLICY NOTES

REV. DATE: REV. NO:

07/01/26

DRAWING NO.

03

PROCEDURES

1. JOINT UTILITY AND STREET CROSSINGS MAY BE PLACED BEFORE CURB AND SIDEWALK ARE FORMED, AND IN ALL CASES AFTER INSTALLATION OF WATER, SEWER, STORM DRAINS, AND ROUGH STREET SUBGRADE HAS BEEN ACCOMPLISHED.
2. CONDUIT PROVING, INSTALLATION OF SECONDARY SERVICE BOXES AND TRANSFORMER AND SWITCH PADS TO BE DONE AFTER STREETS, CURB, GUTTER AND SIDEWALK ARE INSTALLED. ALSO, PERMANENT FRONT PROPERTY MARKERS (NAIL, PIN OR INDENTATION) MUST BE INSTALLED, AND LOT NUMBERS SHALL BE PAINTED ON BACK OF SIDEWALK.
3. ROSEVILLE ELECTRIC DEPARTMENT CREWS WILL NOT BEGIN FINAL INSTALLATION OF EQUIPMENT UNTIL ALL ITEMS IN NOTE 2 ABOVE HAVE BEEN COMPLETED AND THE ELECTRIC DEPARTMENT INSPECTOR HAS RELEASED THE PROJECT TO THE ELECTRIC DEPARTMENT CONSTRUCTION DIVISION.
4. PROJECTS MAY BE PHASED INTO AREAS WITH SUFFICIENT WORKLOAD FOR EACH UTILITY TO INSTALL THEIR FACILITIES IN A COST-EFFECTIVE MANNER, WHEN APPROVED BY ALL JOINT TRENCH UTILITIES.
5. DEVELOPER SHALL CONTACT THE ASSISTANT CONSTRUCTION SUPERINTENDENT TO GAIN APPROVAL OF, PROPOSED PHASING, WHEN DELIVERY OF POWER TO SPECIFIC AREAS IS REQUESTED.



SPEC. GROUP: SPECIFICATIONS FOR CONSTRUCTION

PROCEDURES

REV. DATE: REV. NO:

07/01/26

DRAWING NO.

04

INSPECTION

1. ROSEVILLE ELECTRIC PROVIDES INSPECTION FOR ALL FACILITIES INSTALLED FOR ITS USE. A MINIMUM 24-HOUR ADVANCE NOTICE IS REQUIRED FOR ALL WORK REQUIRING INSPECTION. TO SCHEDULE AN INSPECTION, CONTACT THE ENGINEER IN CHARGE OF THE PROJECT OR CALL ROSEVILLE ELECTRIC AT (916) 774-5600 BETWEEN THE HOURS OF 8 AM AND 4 PM MONDAY THROUGH FRIDAY.
2. ALL MATERIAL AND WORK SHALL BE SUBJECT TO INSPECTION, EXAMINATION, AND TESTING BY ROSEVILLE ELECTRIC AT ANY TIME DURING INSTALLATION OR CONSTRUCTION. THE DEVELOPER SHALL PROVIDE AND MAINTAIN PROPER FACILITIES AND SAFE ACCESS FOR ALL SUCH INSPECTIONS OR TESTING.
3. THE DEVELOPER SHALL GIVE 24 HOURS ADVANCE NOTICE TO ROSEVILLE ELECTRIC FOR INSPECTION OF THE FOLLOWING: BACKFILLING TRENCH, PLACEMENT OF VAULTS, CONDUITS OR BOXES, MANDRELLING OF CONDUIT, AND SETTING OF PADS FOR SWITCHES OR TRANSFORMERS.
4. FAILURE OF THE DEVELOPER TO ADHERE TO THE ABOVE PROVISIONS MAY RESULT IN THE DEVELOPER BEING REQUIRED, AT HIS OWN EXPENSE, TO REMOVE, UNCOVER, OR OTHERWISE ENABLE INSPECTION OF SUCH WORK BY THE INSPECTOR.
5. ANY UNAPPROVED MATERIAL, DESIGN CHANGE, OR IMPROPERLY INSTALLED SYSTEM NOT MEETING ROSEVILLE ELECTRIC SPECIFICATIONS SHALL BE REPLACED AND PROPERLY INSTALLED BY THE DEVELOPER OR HIS CONTRACTOR AT THE DEVELOPER'S EXPENSE.
6. REJECTED WORK WILL RESULT IN DELAYING ELECTRIC SERVICE TO THE PROJECT UNTIL THE INADEQUACIES ARE CORRECTED. DELAYS BEYOND THE SCHEDULED DATE FOR ELECTRIC FINAL CONSTRUCTION MAY RESULT IN THE PROJECT BEING RESCHEDULED TO THE NEXT AVAILABLE CONSTRUCTION DATE FOR ELECTRIC CREWS.



SPEC. GROUP: SPECIFICATIONS FOR CONSTRUCTION

INSPECTION

REV. DATE: REV. NO:

07/01/26

DRAWING NO.

05

TRENCH BACKFILL & COMPACTION

BACKFILL FOR JOINT UTILITY TRENCH SHALL BE SAND COMPACTED 85% TO 6" ABOVE THE 4 UTILITIES OCCUPYING THE JOINT TRENCH. THEN BACKFILL WITH NATIVE MATERIAL FREE OF ALL DELETERIOUS MATERIALS, ROCKS OR BOULDERS COMPACTED TO 90% WITHIN ONE (1) FOOT OF FINAL GRADE AND 95% THE LAST FOOT.

SAND SHADING MATERIAL TO BE, SCREENED FREE, NO. 4 SIEVE, 4MM MAXIMUM PARTICLE SIZE, FREE OF SHARP EDGES, AND APPROVED BY EACH UTILITY TRENCH INSPECTOR. (DG WILL NOT BE APPROVED.)



SPEC. GROUP: SPECIFICATIONS FOR CONSTRUCTION

TRENCH BACKFILL
AND COMPACTION

REV. DATE: REV. NO:

07/01/26

DRAWING NO.

06

POWER CONDUIT RUNS:

THE NUMBER AND SIZE OF ALL CONDUITS TO BE INSTALLED ON ANY PROJECT IS DETERMINED SOLELY BY THE ROSEVILLE ELECTRIC JOB PRINT.

CONDUIT TYPES:

ALL 3", 4" AND 6" CONDUITS SHALL PVC - POWER AND COMMUNICATIONS, TYPE D.B., RATED FOR 90°C., TC-8, DB-120 ASTM F512, HEAVY WALL, . CONDUITS UP TO 2" SHALL BE MINIMUM SCHEDULE 40 PVC

COUPLINGS:

SHALL BE MINIMUM SCHEDULE 40 LONG TYPE PVC (EXCEPT FOR END BELL COUPLINGS PROVIDED ON A P&C CONDUIT)

SOLVENT AND GLUING OF CONDUIT:

SHALL BE IN ACCORDANCE WITH ASTM - 2564 FOR PVC.

CONDUIT TERMINATORS:

CONDUITS SHALL BE TERMINATED IN ALL CONCRETE MANHOLES, PAD VAULTS, PULL BOXES AND J-BOXES WITH PRECAST TERMADUCT TERMINATORS (SEE DETAIL C, PAGE 2.2). FOR EXISTING STRUCTURES WITHOUT PRECAST TERMADUCTS, CONDUITS SHALL BE INSTALLED WITH END BELLS GROUTED IN PLACE FLUSH WITH INTERIOR WALLS. (SEE DETAIL B, PAGE 08)

CONDUIT SWEEPS AND BENDS:

ALL SWEEPS WITH A RADIUS OF LESS THAN 15' SHALL BE OF PREFAB CONSTRUCTION AND BE A MINIMUM SCHEDULE 40. NO FIELD BENT SWEEPS WITH A RADIUS OF LESS THAN 15' ARE ALLOWED. THE MINIMUM SWEEP RADIUS SHALL BE PER THE ROSEVILLE ELECTRIC JOB PRINT OR THE CHART BELOW, WHICHEVER IS GREATER:

- 6" CONDUIT = 60" RADIUS (VERTICAL), 120" (HORIZONTAL)
- 4" CONDUIT = 48" RADIUS
- 3" CONDUIT = 36" RADIUS
- 1-1/2" CONDUIT = 18" RADIUS

NO CONDUIT RUN SHALL HAVE MORE THAN A TOTAL OF 360 DEGREES OF BEND UNLESS SPECIFIED BY THE ROSEVILLE ELECTRIC JOB PRINT.

CONCRETE ENCASEMENT:

CONDUITS REQUIRING CONCRETE ENCASEMENT SHALL BE A MINIMUM OF TWO-SACK SAND SLURRY PER CALTRANS STANDARD SPEC 19-3.062. THE CONDUIT SHALL HAVE A MINIMUM OF 3" SURROUNDING ALL SIDES OF THE CONDUIT. CONCRETE ENCASEMENT MAY BE APPROVED BY INSPECTOR FOR SHALLOW TRENCH SECTIONS.

CONDUIT PROVING:

ALL CONDUITS SHALL BE BLOWN FREE OF WATER AND DEBRIS. ALL 3", 4" AND 6" CONDUITS SHALL BE PROVIDED WITH AN APPROVED PULL TAPE. ALL CONDUITS SHALL BE PROVEN WITH A ROSEVILLE ELECTRIC DEPARTMENT PERSONNEL OBSERVING. USE A PROVING MANDREL EQUAL TO 80% OF THE CONDUITS DIAMETER (MANDREL SUPPLIED BY ROSEVILLE ELECTRIC).

CONDUIT MEASURING PULL TAPE:

PULL TAPE SHALL:

BE MADE FROM OR 1/2" POLYESTER.
HAVE A MINIMUM STRENGTH OF 1800 LBS.
BE ONE CONTINUOUS LENGTH (NO SPLICES)

BE PRE-LUBRICATED.
BE PRINTED WITH FOOTAGE MARKINGS.
HAVE A MINIMUM OF 22 GAUGE DETECTABLE COPPER CONDUCTOR

THE PULL TAP SHALL EXTEND 25' PAST END OF CONDUIT.

CONDUIT BANKS:

CONDUIT BANKS LARGER THAN 2 DUCTS SHALL BE CONSTRUCTED WITH THE USE OF PRE FABRICATED SPACERS, (SEE DETAIL A, PAGE 08), PLACED AT A MINIMUM OF 10'-0" O.C. TO MAINTAIN SPACING SHOWN BY DETAILS ON JOB MAP.



SPEC. GROUP: SPECIFICATIONS FOR CONSTRUCTION

CONDUIT REQUIREMENTS AND SPECIFICATIONS

REV. DATE: REV. NO:

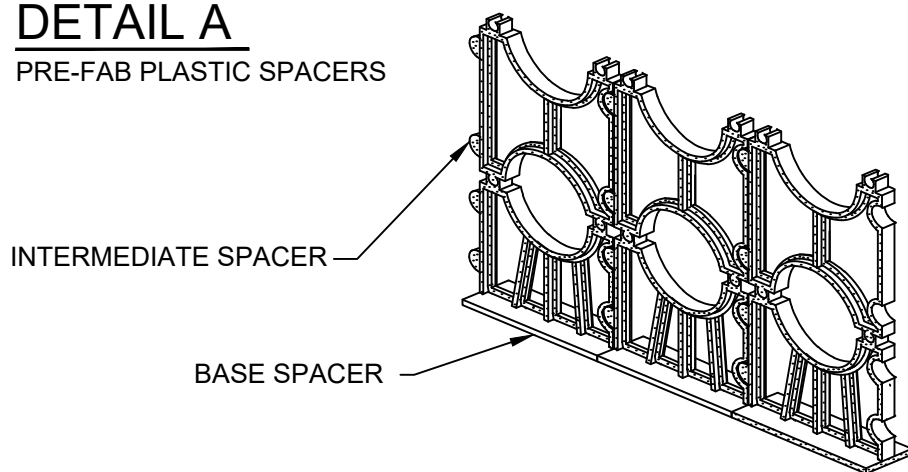
07/01/26

DRAWING NO.

07

DETAIL A

PRE-FAB PLASTIC SPACERS



DUCT SIZE

3"
4"
6"

CONDUIT SEPARATION

3"
3"
3"

NOTE:

MAXIMUM DISTANCE BETWEEN SPACERS
= 10'-0"

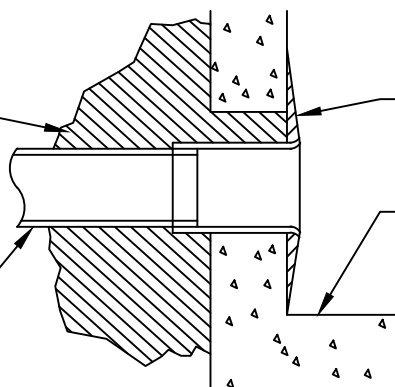
DETAIL B

GROUT AROUND COUPLING
AND FILL ANY VOIDS

GROUT END BELL FLUSH
WITH INTERIOR WALL

CONCRETE BOX WALL

3", 4" OR 6" CONDUIT



DETAIL C

TERMAUCT TERMINATORS

TERMAUCT TERMINATORS TO FIT
O.D. OF FOLLOWING PIPES:

CONDUIT SIZE	O.D. OF CONDUIT
3"	3.500"
4"	4.500"
6"	6.625"

NOTE:

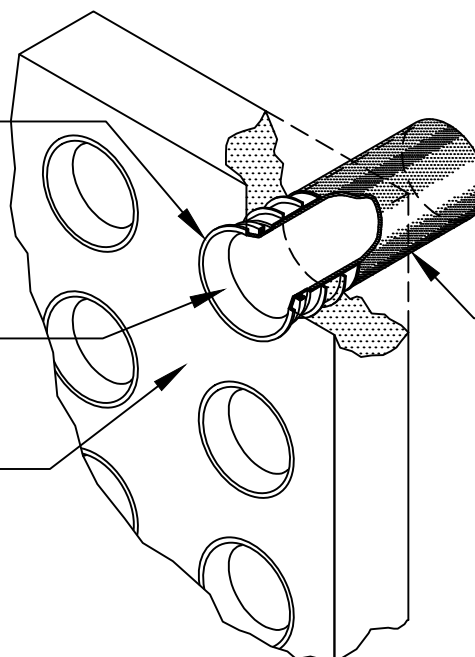
1. TERMAUCT TERMINATORS ARE PRECAST
INTO VAULTS AND MANHOLES.
2. KNOCK OUT ONLY THOSE MEMBRANES
NEEDED FOR DUCT TERMINATION.

STOP HEIGHT

KNOCK OUT
MEMBRANE

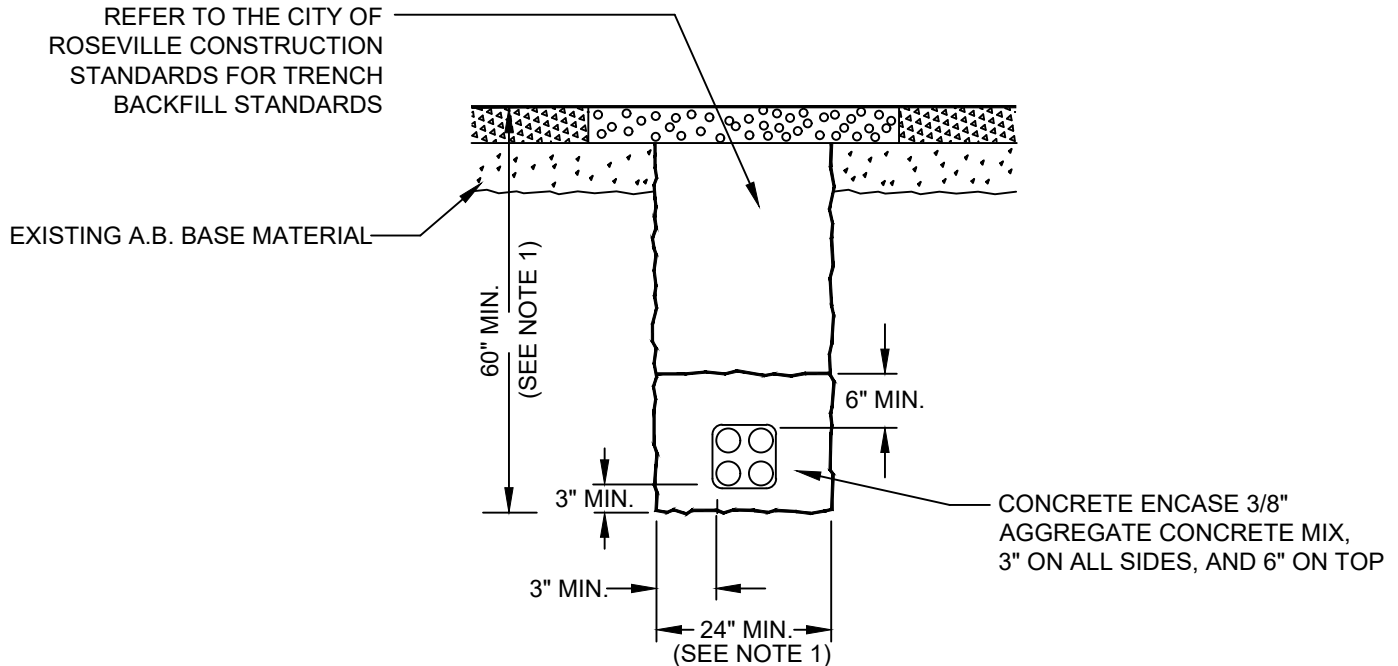
INSIDE WALL

CONDUIT



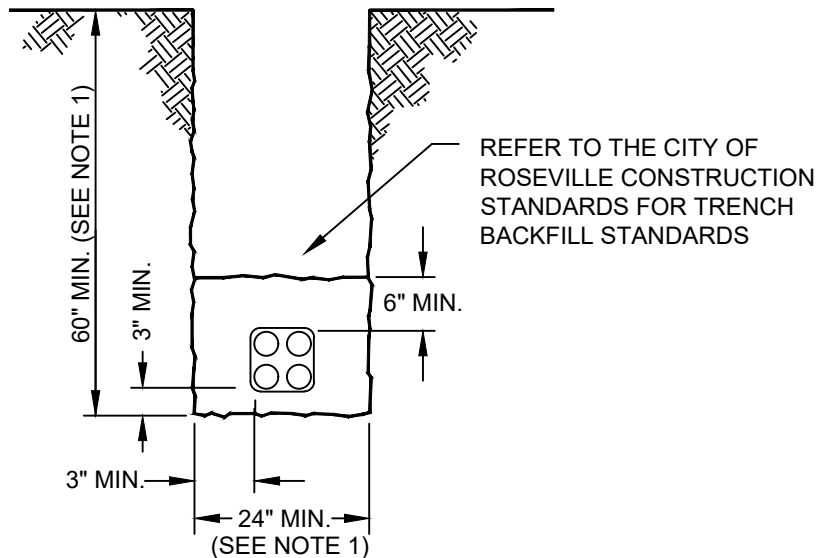
DETAIL E

DUCT SYSTEM IN EXISTING STREET - MAINLINE



DETAIL F

GENERAL TRENCH DETAIL - MAINLINE OUTSIDE OF ROADWAY

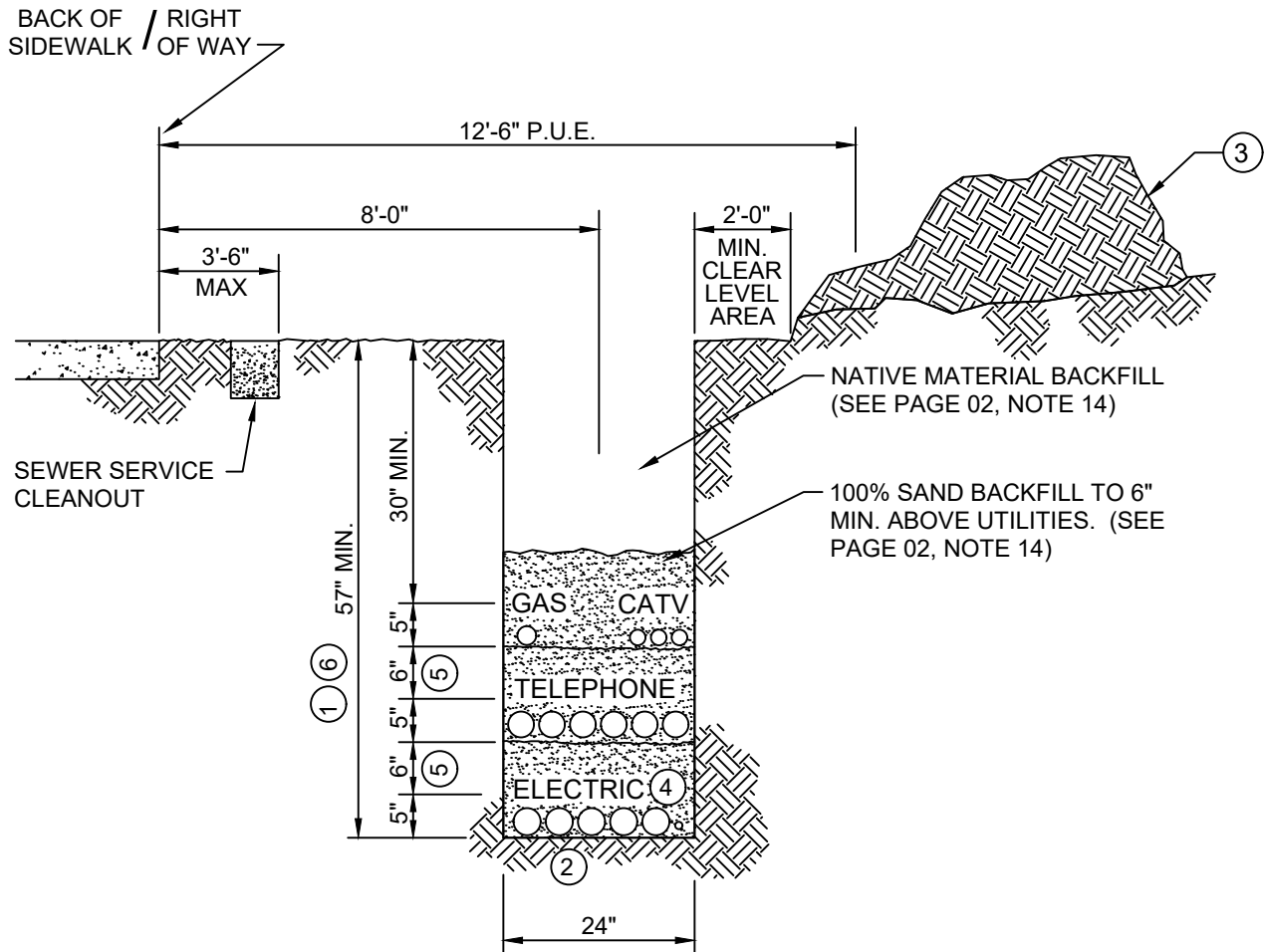


NOTES:

1. SPECIFIC DIMENSIONS AND DUCT ARRANGEMENT PER TRENCH DETAILS ON JOB MAP. TRENCH SHOWN FOR ELECTRIC ONLY. JOINT OCCUPATION BY OTHER UTILITIES TO BE CO-ORDINATED BY DEVELOPER SUBJECT TO APPROVAL BY ROSEVILLE ELECTRIC.
2. MAY BE REDUCED TO 48" FOR #1/0 URD DISTRIBUTION CIRCUITS. (1 OR 2-4" CONDUITS).
3. ALL TRENCHES MUST BE IN ACCORDANCE WITH Cal OSHA REQUIREMENTS.

JOINT UTILITY TRENCH DETAIL ATTACHED SIDEWALK

N.T.S.

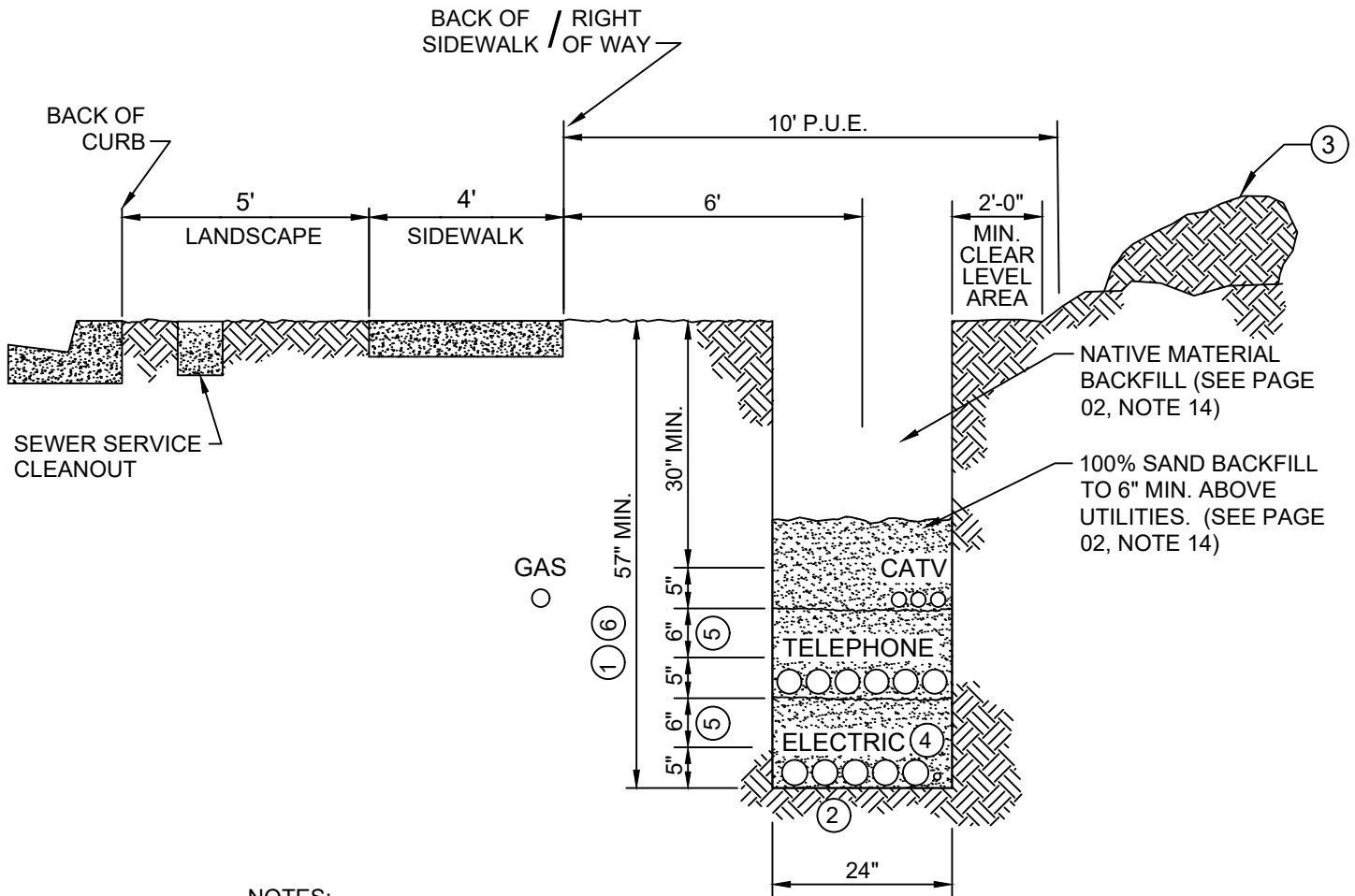


NOTES:

- ① TRENCH DEPTH TO BE MEASURED FROM TOP BACK OF CURB OR SIDEWALK IN AREAS WHERE GRADE IS LEVEL OR INCLINING. TRENCH DEPTH TO BE MEASURED FROM THE LOW POINT OF FINISHED GRADE AT TRENCH LOCATION IN AREAS WHERE GRADE IS DECLINING. TRENCHES MUST BE IN ACCORDANCE WITH ALL CAL OSHA REQUIREMENTS.
- ② BOTTOM OF TRENCH TO BE SQUARE AND CLEAN.
- ③ SPOILS TO BE PLACED ON FIELD SIDE & OBSERVE CAL OSHA REQUIREMENT ON PLACEMENT OF SPOILS IN RELATIONSHIP TO OPEN TRENCH.
- ④ ELECTRICAL CONDUITS ARE TO BE LAID FLAT IN THE BOTTOM OF THE TRENCH.
- ⑤ UTILITY SEPARATION SHOWN TO BE MAINTAINED EXCEPT BY MUTUAL AGREEMENT BETWEEN ALL UTILITIES INVOLVED.
- ⑥ TRENCH DEPTH SHALL NOT EXCEED 59".

JOINT UTILITY TRENCH DETAIL DETACHED SIDEWALK

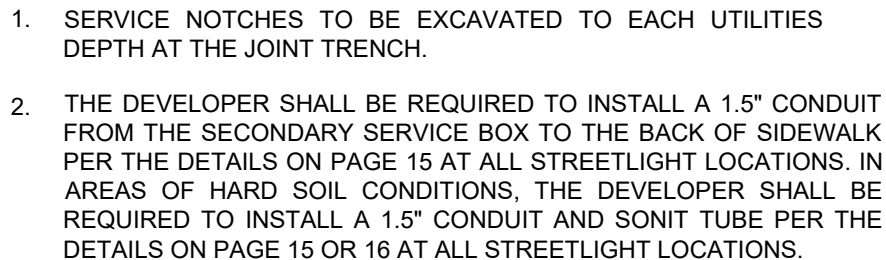
N.T.S.

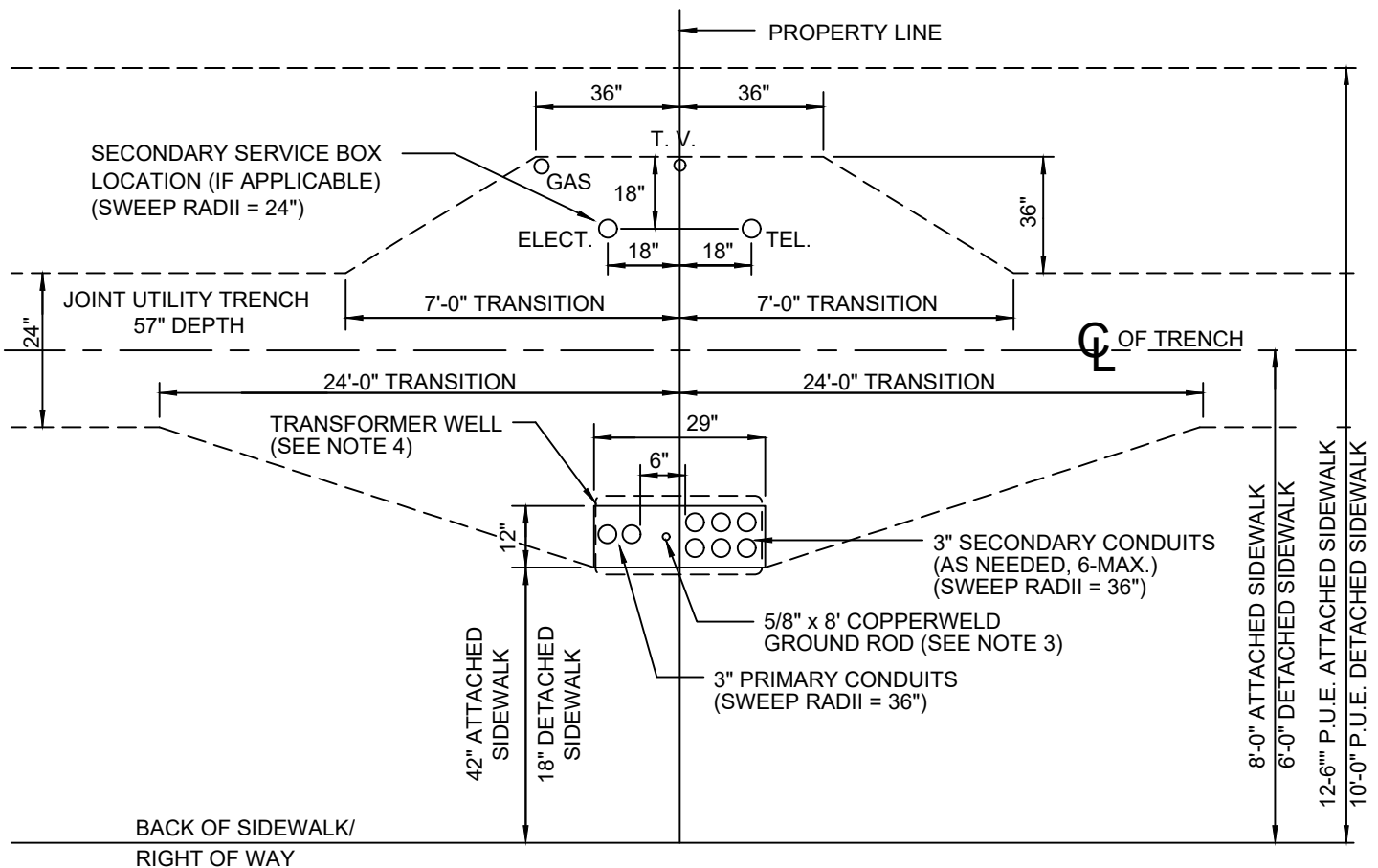


NOTES:

- ① TRENCH DEPTH TO BE MEASURED FROM TOP BACK OF CURB OR SIDEWALK IN AREAS WHERE GRADE IS LEVEL OR INCLINING. TRENCH DEPTH TO BE MEASURED FROM THE LOW POINT OF FINISHED GRADE AT TRENCH LOCATION IN AREAS WHERE GRADE IS DECLINING. TRENCHES MUST BE IN ACCORDANCE WITH ALL CAL OSHA REQUIREMENTS.
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- ⑤ UTILITY SEPARATION SHOWN TO BE MAINTAINED EXCEPT BY MUTUAL AGREEMENT BETWEEN ALL UTILITIES INVOLVED.
- ⑥ TRENCH DEPTH SHALL NOT EXCEED 59".

N.T.S.





NOTES:

1. DEVELOPER TO PROVIDE A CLEAR LEVEL PAD AND RETAINING WALL IF NECESSARY TO MEET THE APPROVAL OF THE ROSEVILLE ELECTRIC INSPECTOR.
2. BACKFILL AND COMPACTION SHALL BE IN ACCORDANCE WITH PAGE 02, NOTE #14 OF ROSEVILLE ELECTRIC'S SPECIFICATIONS FOR RESIDENTIAL CONSTRUCTION. DISTURBED EARTH UNDER TRANSFORMER PADS SHALL BE REPLACED WITH 12" OF 3/4" A.B. MATERIAL COMPACTED IN 6" LIFTS TO PREVENT SETTLEMENT. THE DEVELOPER MAY BE REQUIRED TO PROVIDE COMPACTION REPORTS FROM A CERTIFIED SOILS TESTING FIRM IF DEEMED NECESSARY BY A ROSEVILLE ELECTRIC INSPECTOR.
3. IN HARD SOIL CONDITIONS WHERE THE GROUND ROD CANNOT BE DRIVEN, THE DEVELOPER HAS THE OPTION OF PLACING 35' OF #4 BARE COPPER STRAND WIRE. THE #4 WIRE SHALL EXTEND 5' ABOVE THE FINISH ELEVATION OF THE TRANSFORMER PAD AND LAY IN THE BOTTOM OF THE TRENCH FOR A MINIMUM DISTANCE OF 25'.
4. SEE PAGE 38 FOR TRANSFORMER WELL REQUIREMENTS.
5. DEVELOPER TO REFER TO CIVIL IMPROVEMENT PLANS TO DETERMINE IF SIDEWALK IS ATTACHED OR DETACHED TO CURB AND GUTTER.



SPEC. GROUP: SPECIFICATIONS FOR CONSTRUCTION

TRANSFORMER EXCAVATION ATTACHED/DETACHED SIDEWALK

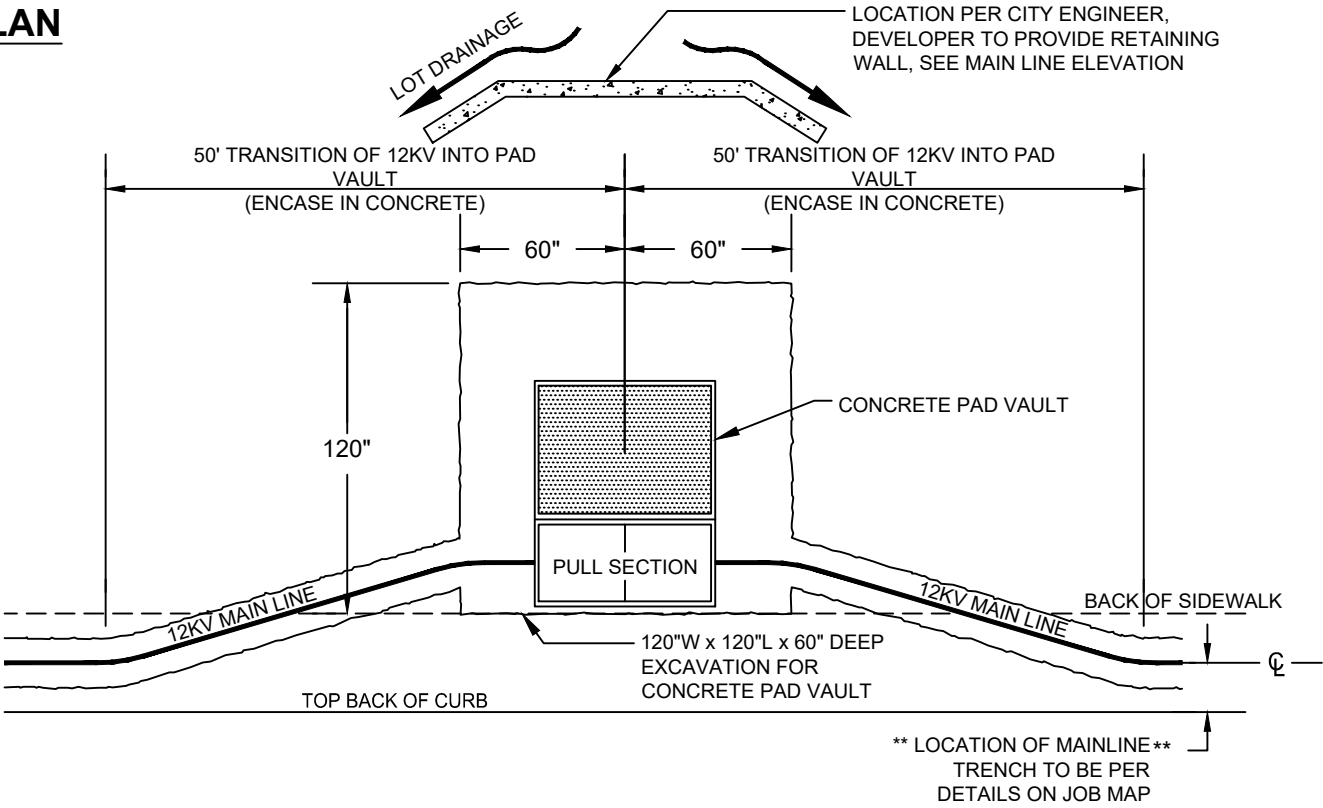
REV. DATE: REV. NO:

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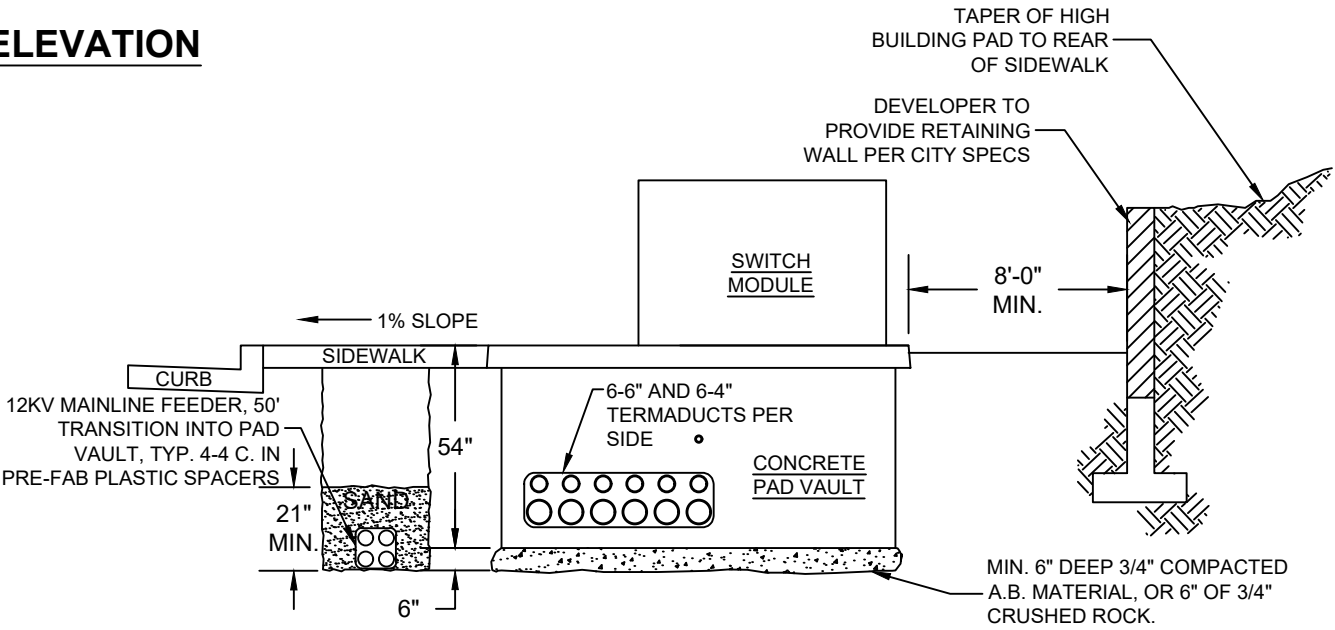
DRAWING NO.

13

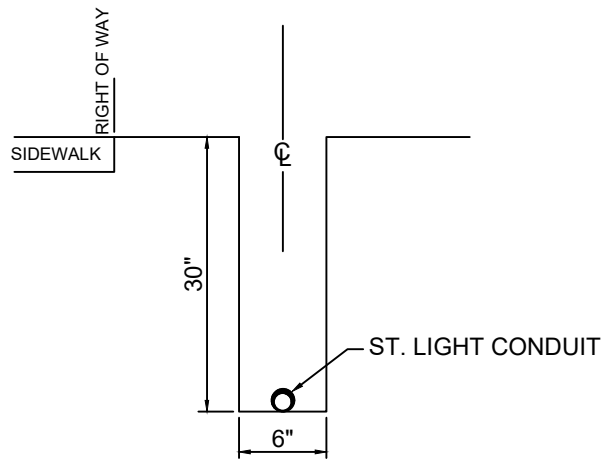
PLAN



ELEVATION



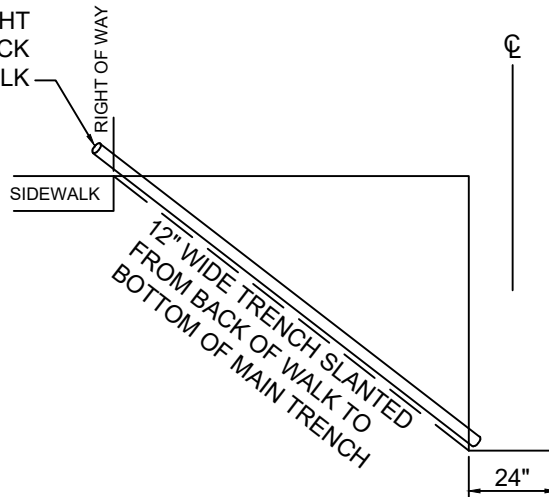
* 8' MIN. CLEARANCE AT SWITCH MODULE DOORS, 4' MIN. CLEARANCE AT SIDES OF SWITCH MODULE FROM WALLS, BUILDINGS, PLANTERS, OR DIRT EMBANKMENTS. SLOPES TO BE 2% MAX. WITHIN THESE AREAS



TRENCH CUT-OUT (DETAIL FOR CONUIT ONLY)

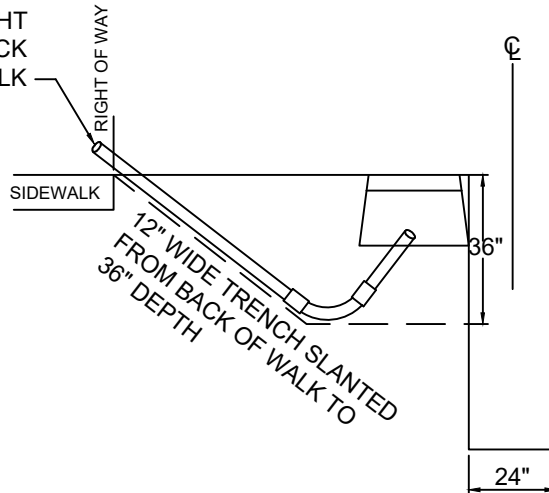
* UNLESS OTHERWISE NOTED ON
CITY OF ROSEVILLE ELECTRIC
DEPT JOB MAP

STUB AND CAP ST. LIGHT
CONDUIT 3" TO 4" ABOVE BACK
OF SIDEWALK



TRENCH CUT-OUT (DETAIL FOR LOCATIONS WITH STREET LIGHT ONLY)

STUB AND CAP ST. LIGHT
CONDUIT 3" TO 4" ABOVE BACK
OF SIDEWALK



TRENCH CUT-OUT (DETAIL FOR LOCATIONS WITH STREET LIGHT AT A SERVICE BOX)



SPEC. GROUP: SPECIFICATIONS FOR CONSTRUCTION

RESIDENTIAL STREETLIGHT TRENCHING DETAIL

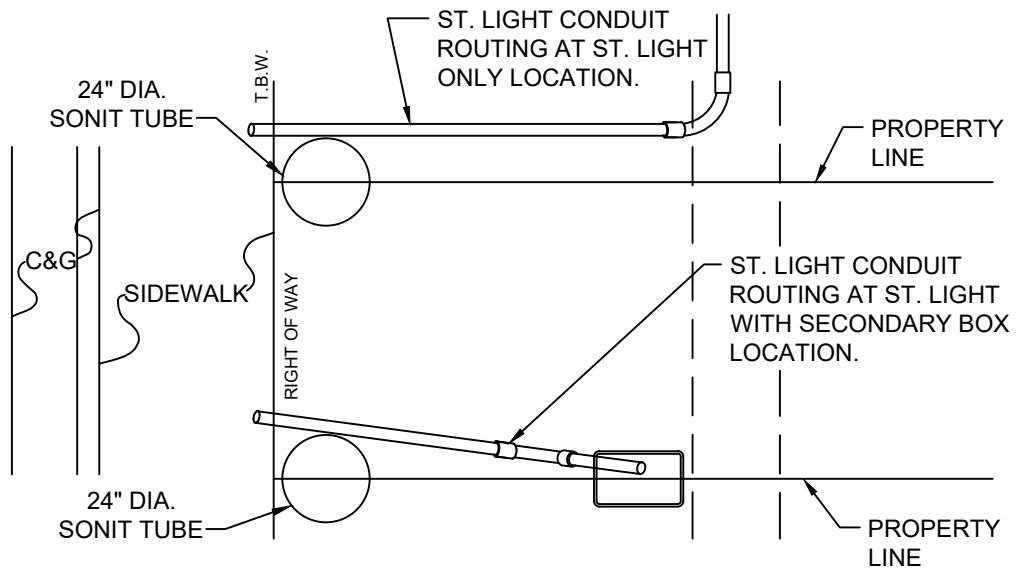
REV. DATE: REV. NO:

07/01/26

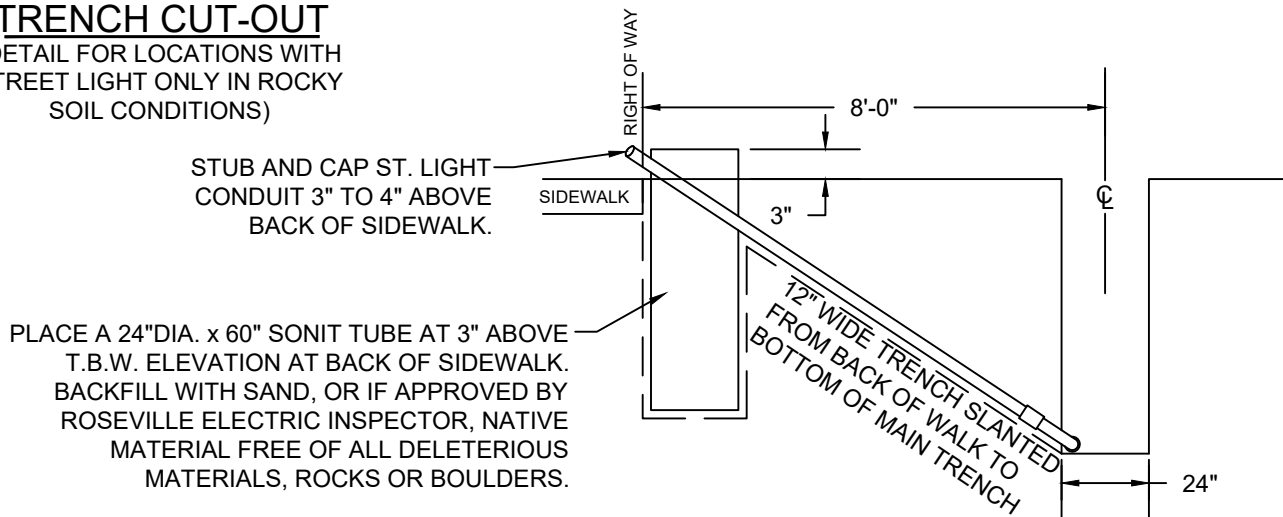
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15

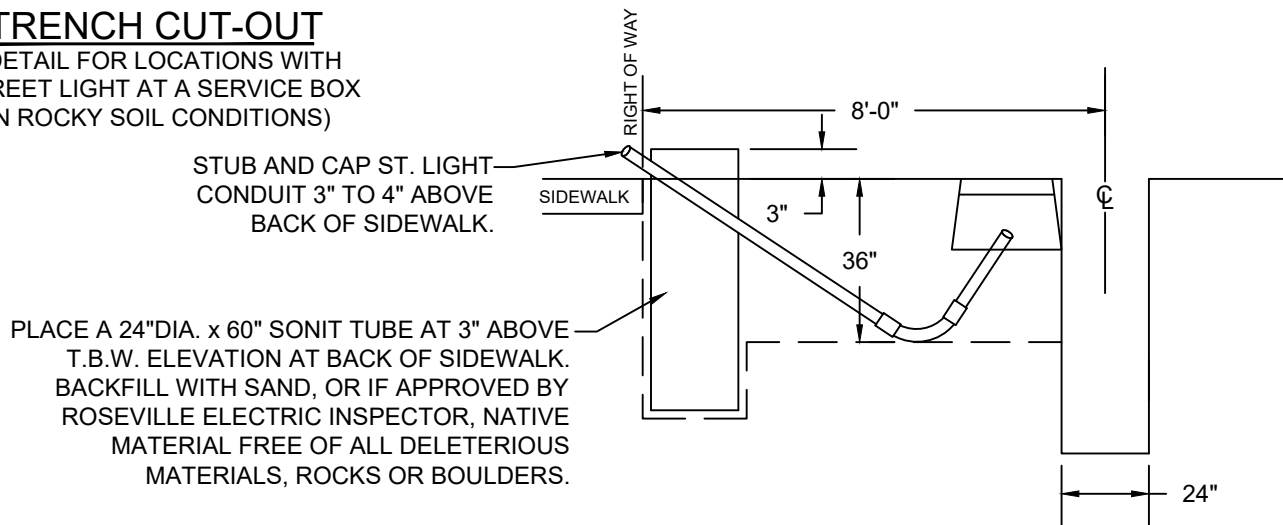
ST. LIGHT SYSTEM
PLAN VIEW

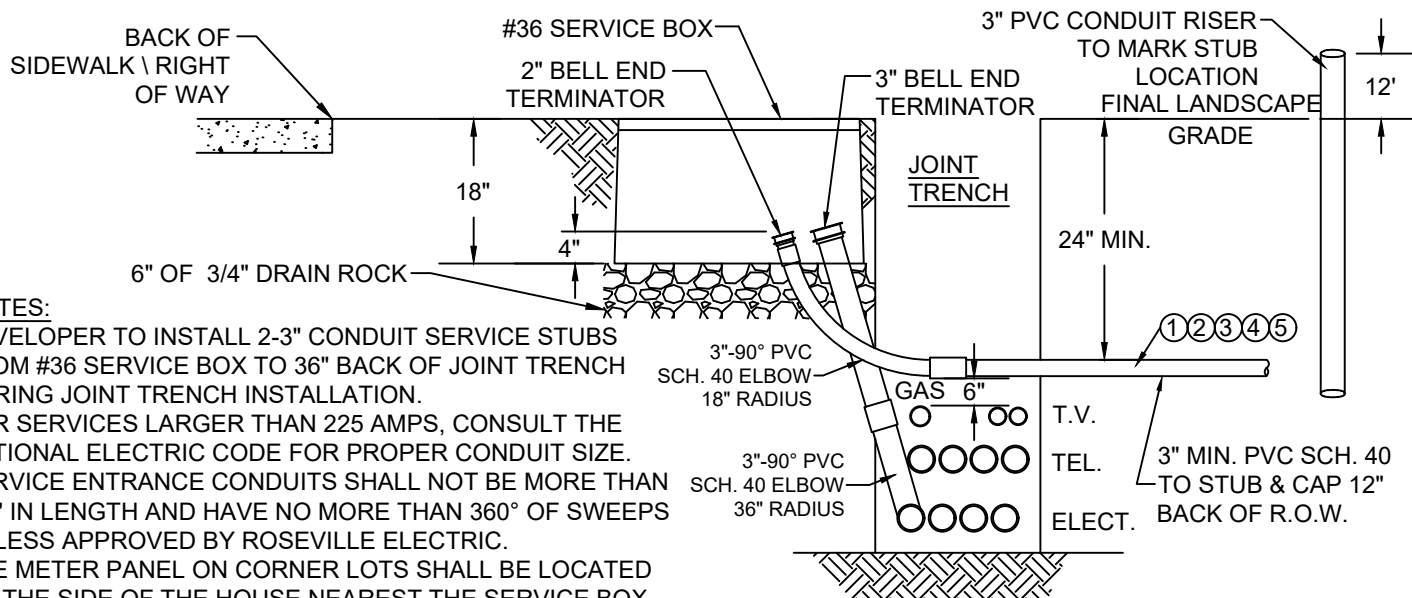


TRENCH CUT-OUT
(DETAIL FOR LOCATIONS WITH
STREET LIGHT ONLY IN ROCKY
SOIL CONDITIONS)



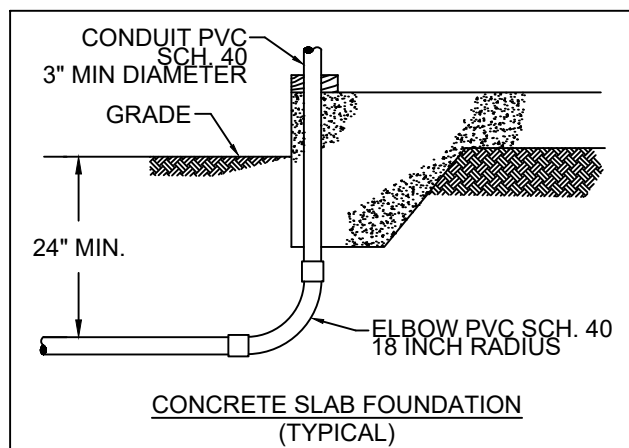
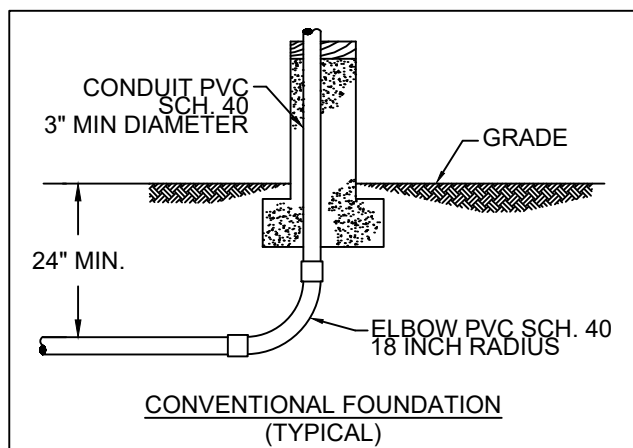
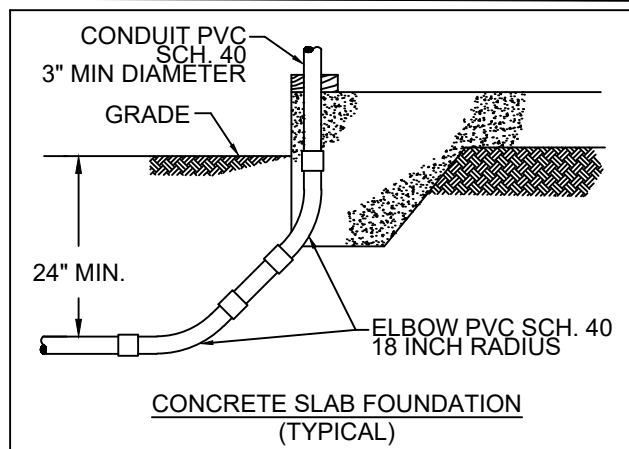
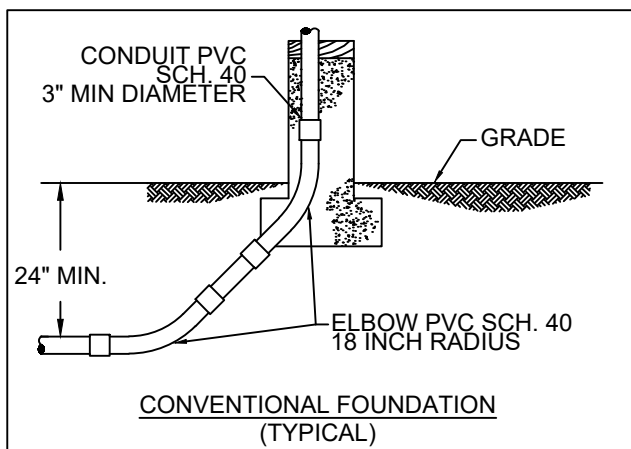
TRENCH CUT-OUT
(DETAIL FOR LOCATIONS WITH
STREET LIGHT AT A SERVICE BOX
IN ROCKY SOIL CONDITIONS)





- NOTES:**
- ① DEVELOPER TO INSTALL 2-3" CONDUIT SERVICE STUBS FROM #36 SERVICE BOX TO 36" BACK OF JOINT TRENCH DURING JOINT TRENCH INSTALLATION.
 - ② FOR SERVICES LARGER THAN 225 AMPS, CONSULT THE NATIONAL ELECTRIC CODE FOR PROPER CONDUIT SIZE.
 - ③ SERVICE ENTRANCE CONDUITS SHALL NOT BE MORE THAN 100' IN LENGTH AND HAVE NO MORE THAN 360° OF SWEEPS UNLESS APPROVED BY ROSEVILLE ELECTRIC.
 - ④ THE METER PANEL ON CORNER LOTS SHALL BE LOCATED ON THE SIDE OF THE HOUSE NEAREST THE SERVICE BOX.
 - ⑤ THE TOTAL LENGTH OF THE SECONDARY RUN FROM THE TRANSFORMER TO THE METER PANEL SHALL NOT EXCEED 400' IN LENGTH UNLESS APPROVED BY ROSEVILLE ELECTRIC.

SERVICE ENTRANCE CONDUIT AT SERVICE BOX



SERVICE ENTRANCE CONDUIT AT HOUSE FOUNDATION

VAULTS

GENERAL

1. FOR SIZE AND TYPE OF VAULT TO BE USED, SEE ELECTRIC DEPARTMENT JOB MAP.
2. ALL JOINTS BETWEEN SECTIONS OF VAULTS SHALL BE PROVIDED WITH PLIABLE GASKET SEALS AND INTERIOR SEAMS ARE TO BE FILLED WITH AN EXTERIOR GRADE NON-SHRINK LATEX CAULK.
3. ALL AREAS AROUND VAULTS SHALL BE BACKFILLED WITH EITHER SAND OR A.B. BASE MATERIAL COMPACTED TO INSURE ALL VOIDS AROUND VAULTS ARE FILLED.
4. THERE SHALL BE A MINIMUM 50'-0" TRANSITION AREA BETWEEN VAULT ENTRANCE KNOCK-OUT CONFIGURATIONS AND MAIN LINE TRENCH CONFIGURATIONS (SEE JOB MAPS). THE MAINLINE TRENCH SHALL BE MADE WIDER AND, WHEN NECESSARY, DEEPER IN THE TRANSITION AREA TO INSURE THAT CONDUITS ARE BROUGHT INTO THE VAULT AT 90 DEGREES WITH VAULT WALL WITHOUT THE USE OF PREFAB ELBOWS. CONDUIT SWEEPS AND BENDS MAY BE CONCRETE ENCASED PER ROSEVILLE ELECTRIC REQUIREMENTS AND JOB PRINT.
5. ALL VAULTS SHALL HAVE GALVANIZED PULLING IRONS. FOR NUMBER AND LOCATION SEE SPECIFIC VAULT DETAIL.
6. FOR SPECIAL APPLICATION VAULTS ORDERED WITHOUT PRECAST DUCT TERMINATORS , ALL DUCTS SHALL BE TERMINATED INTO VAULTS WITH DUCT END BELL TERMINATORS GROUTED FLUSH WITH INSIDE FACE OF VAULT.
7. EACH VAULT SECTION AND EXTENSION SHALL BE CLEARLY MARKED WITH ITS GROSS WEIGHT (LBS.) IN A HIGHLY VISIBLE PLACE.

CONCRETE PAD VAULTS

8. VAULTS SHALL BE SET ON UNDISTURBED SOIL ON A MINIMUM BASE OF 6" COMPACTED A.B. 1. MATERIAL, OR 6" OF 3/4" CRUSHED ROCK.
9. VAULTS TO BE SET FLUSH WITH FINISH GRADE UNLESS OTHERWISE APPROVED BY THE ELECTRIC DEPT. VAULTS PLACED IN AREAS WITH SLOPES OF 2% OR LESS SHOULD BE SET FLUSH WITH HIGHEST FINISH GRADE ON VAULT PERIMETER. NO SLOPES GREATER THAN 2% WILL BE ALLOWED WITHIN REQUIRED CLEARANCE AREA AROUND PAD VAULTS. (SEE PAGE 14)

12KV CIRCUITS VAULTS (MANHOLES)

10. VAULTS SHALL BE SET ON UNDISTURBED SOIL ON A MINIMUM BASE OF 18" A.B. MATERIAL COMPACTED IN 6" LIFTS TO 95%.
11. VAULTS, UNLESS OTHERWISE SPECIFIED ON JOB MAPS, SHALL BE PROVIDED WITH UNISTRUT CHANNEL INSERTS ON ALL 4 SIDES.
12. VAULTS SHALL BE PROVIDED WITH ONE 36" I.D. X 12" CONCRETE RISER AND ONE 36" I.D. X 6" CONCRETE RISER. A 36" I.D. X 6" STEEL CASTING WITH STEEL TRAFFIC LID MARKED "ROSEVILLE ELECTRIC" AND NUMBERED PER ROSEVILLE ELECTRIC JOB PRINT AND THE MANHOLE NUMBERING SPECIFICATION, 830-205, WILL BE SUPPLIED BY THE CITY OF ROSEVILLE FOR INSTALLATION BY THE DEVELOPER.
13. CONCRETE RISERS AND STEEL CASTING SHALL BE GROUTED IN PLACE WITH TWO GALVANIZED LADDER RUNGS INSERTED IN PLACE.
14. VAULT RISER SECTION SHALL BE ENCASED IN A MINIMUM 9" WIDE CONCRETE RING FROM THE TOP OF THE VAULT TO 2" BELOW THE TOP OF THE LID.
15. STEEL LID OF THE VAULT RISER SECTION TO BE SET FLUSH WITH FINAL GRADE. NO SLOPES GREATER THAN 2% WILL BE ALLOWED WITHIN 4 FEET OF ANY PORTION OF THE STEEL LID.



SPEC. GROUP: SPECIFICATIONS FOR CONSTRUCTION

VAULT CONSTRUCTION NOTES

REV. DATE: REV. NO:

07/01/26

DRAWING NO.

18

1. VAULT MANUFACTURER TO MARK EACH SECTION WITH GROSS WEIGHT.
2. AN OPTIONAL TOP CAN BE ORDERED WITH A 59"x 65" ACCESS OPENING FOR LARGER SWITCHGEAR. THE TYPICAL TOP SHALL BE USED UNLESS SPECIFIED ON THE JOB PRINT.

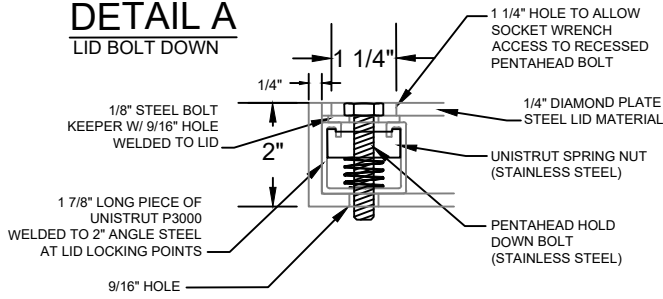
NOTE:
CONTRACTOR MUST PLACE AN
ADJUSTABLE COVER PLATE UNDER
THE 1"Ø LEVELING COIL-BOLT INSERT
BETWEEN THE ROOF SLAB AND VAULT
FOR LEVELING.



CONCRETE SWITCH PAD VAULT FOR CITY OF ROSEVILLE

19

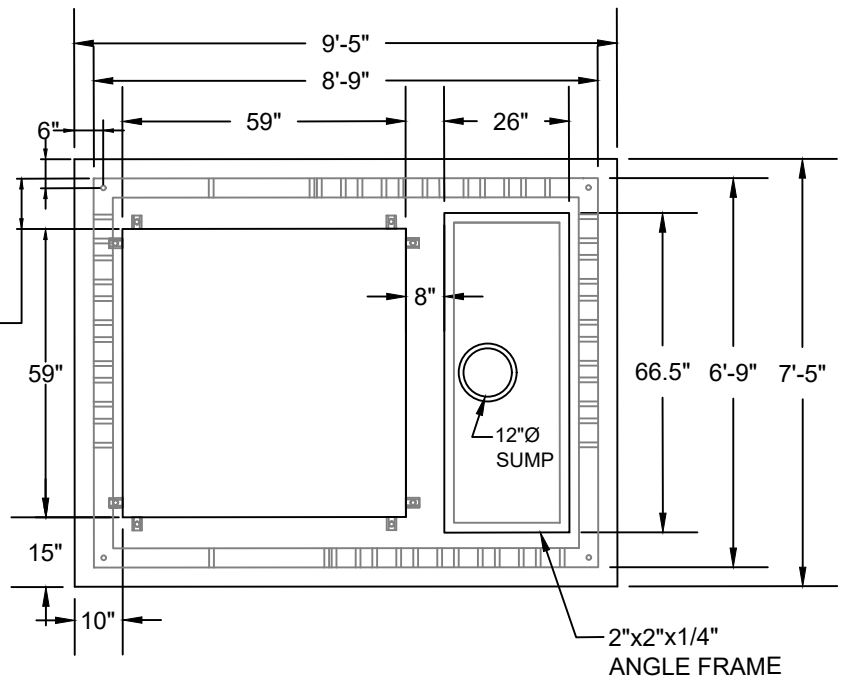
DETAIL A LID BOLT DOWN



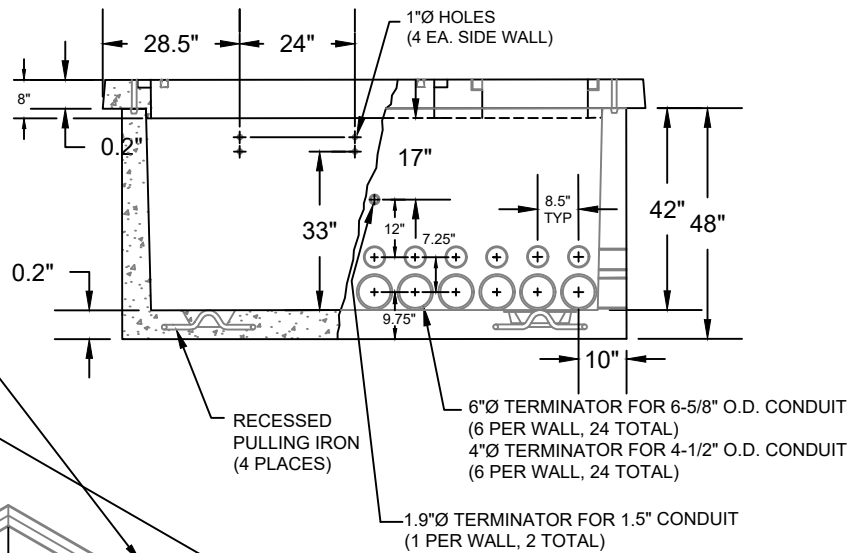
NOTE:

1. VAULT MANUFACTURER TO MARK EACH SECTION WITH GROSS WEIGHT.
2. AN OPTIONAL TOP CAN BE ORDERED WITH A 59" x 65" ACCESS OPENING FOR LARGER SWITCHGEAR. THE TYPICAL TOP SHALL BE USED UNLESS SPECIFIED ON THE JOB PRINT.

PLAN VIEW

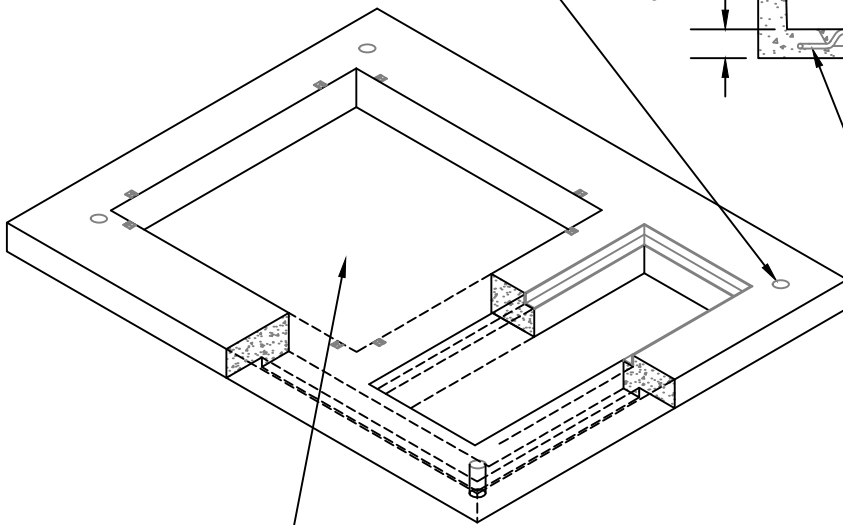


ELEVATION (CUTAWAY)



ISOMETRIC VIEW

1"Ø LEVELING COIL-BOLT INSERT (4 TOTAL) FOR LEVELING TOP. CONTRACTOR MUST PLACE AN ADJUSTABLE COVER PLATE UNDER THE 1"Ø LEVELING COIL-BOLT INSERT BETWEEN THE ROOF SLAB AND VAULT FOR LEVELING



59"x 59" ACCESS OPENING TYPICAL (OR OPTIONAL 59"x65" ACCESS OPENING FOR LARGE SWITCHGEAR) SEE NOTE 2



SPEC. GROUP: SPECIFICATIONS FOR CCONSTRUCTION

CONCRETE SWITCH PAD VAULT DETAILS FOR CITY OF ROSEVILLE

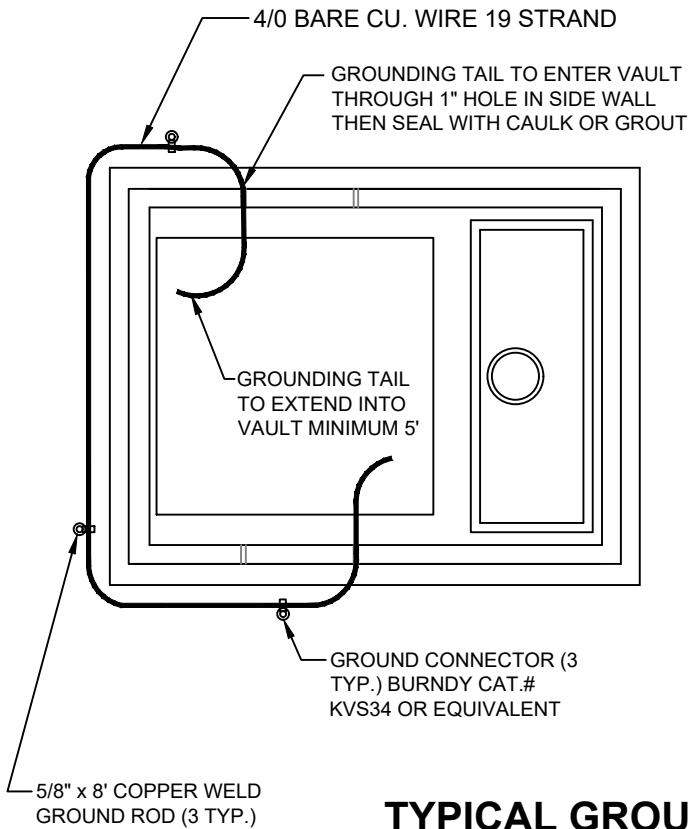
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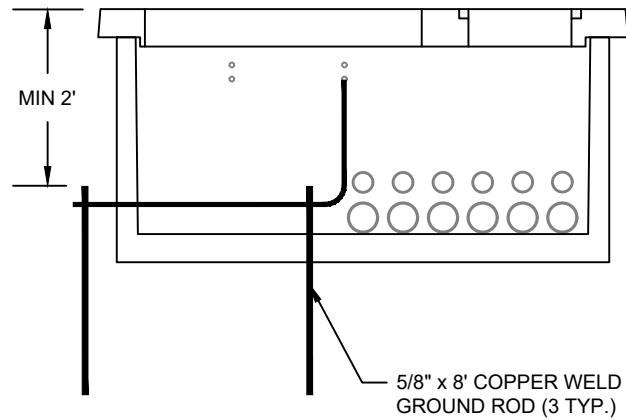
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NOTE:

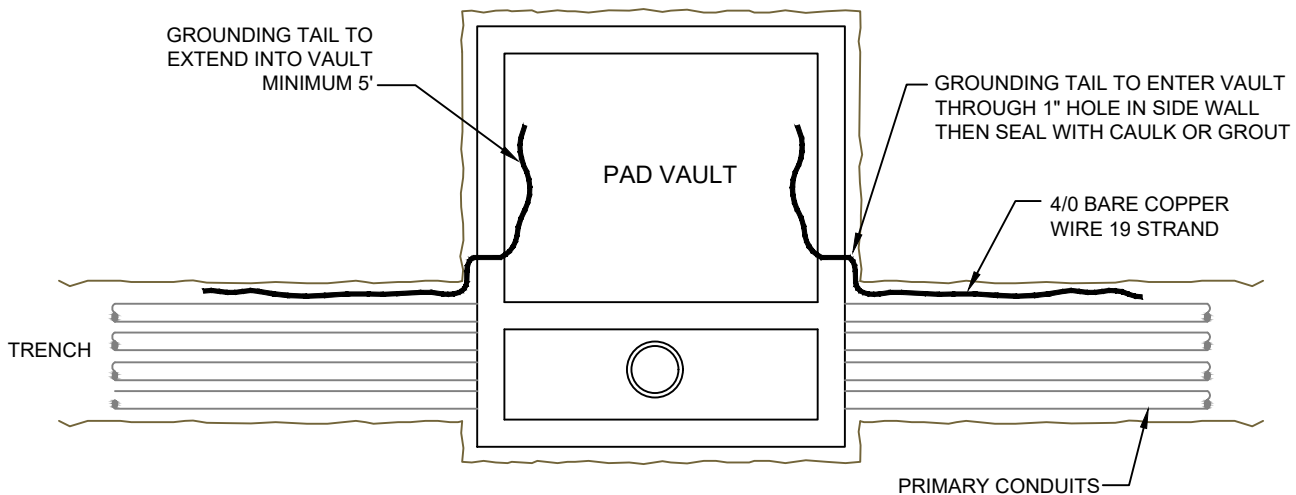
1. 4/0 COPPER WIRE AND GROUND RODS TO BE INSTALLED BY CONTRACTOR AND INSPECTED BY ROSEVILLE ELECTRIC INSPECTORS.



TYPICAL GROUND INSTALLATION

NOTE:

IN HARD SOIL CONDITIONS WHERE THE GROUND RODS CANNOT BE DRIVEN, THE DEVELOPER HAS THE OPTION OF PLACING TWO 35' LENGTHS OF 4/0, 19 STRAND, BARE COPPER WIRE. THE WIRE SHALL EXTEND INTO THE PAD VAULT 5' AND LAY IN THE BOTTOM OF THE TRENCH (MIN. 60" DEPTH) FOR A DISTANCE OF 25' IN DIFFERENT DIRECTIONS. THE WIRE SHALL BE ENCASED IN 3" OF CONCRETE.

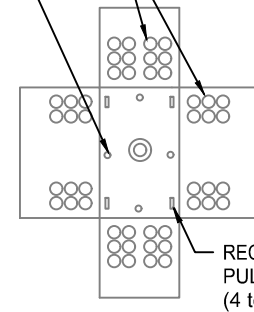


ALTERNATIVE GROUND INSTALLATION IN HARD SOIL CONDITIONS

3'X6' (NOMINAL) 2 PIECE HINGED, SPRING OR TORSION ASSISTED, ALUMINUM LID, PENTAHEAD LOCKDOWN** AS PER (W.U.C.) WESTERN UNDERGROUND SPECIFICATIONS, ADJUSTABLE FRAME AND COVER WITH 2 EA. SAFETY BARS AND 1 EA. HINGE LOCK. MARKED "ROSEVILLE ELECTRIC". (PEDESTRIAN TRAFFIC LOADING) COVER PIECE MUST HAVE THE CAPABILITY OF BEING OPENED TO 180°.

1" DIA. GROUND ROD KNOCKOUTS (4 TYP.) 1-EA. SIDE MID. WALL 6" OFF INSIDE FACE

4" TERMINATORS FOR 4.5" O.D. PIPE (12 EA. SIDE)



RECESSED PULLING IRON (4 total)

TERMA-DUCT ARRANGEMENT

NOTE:

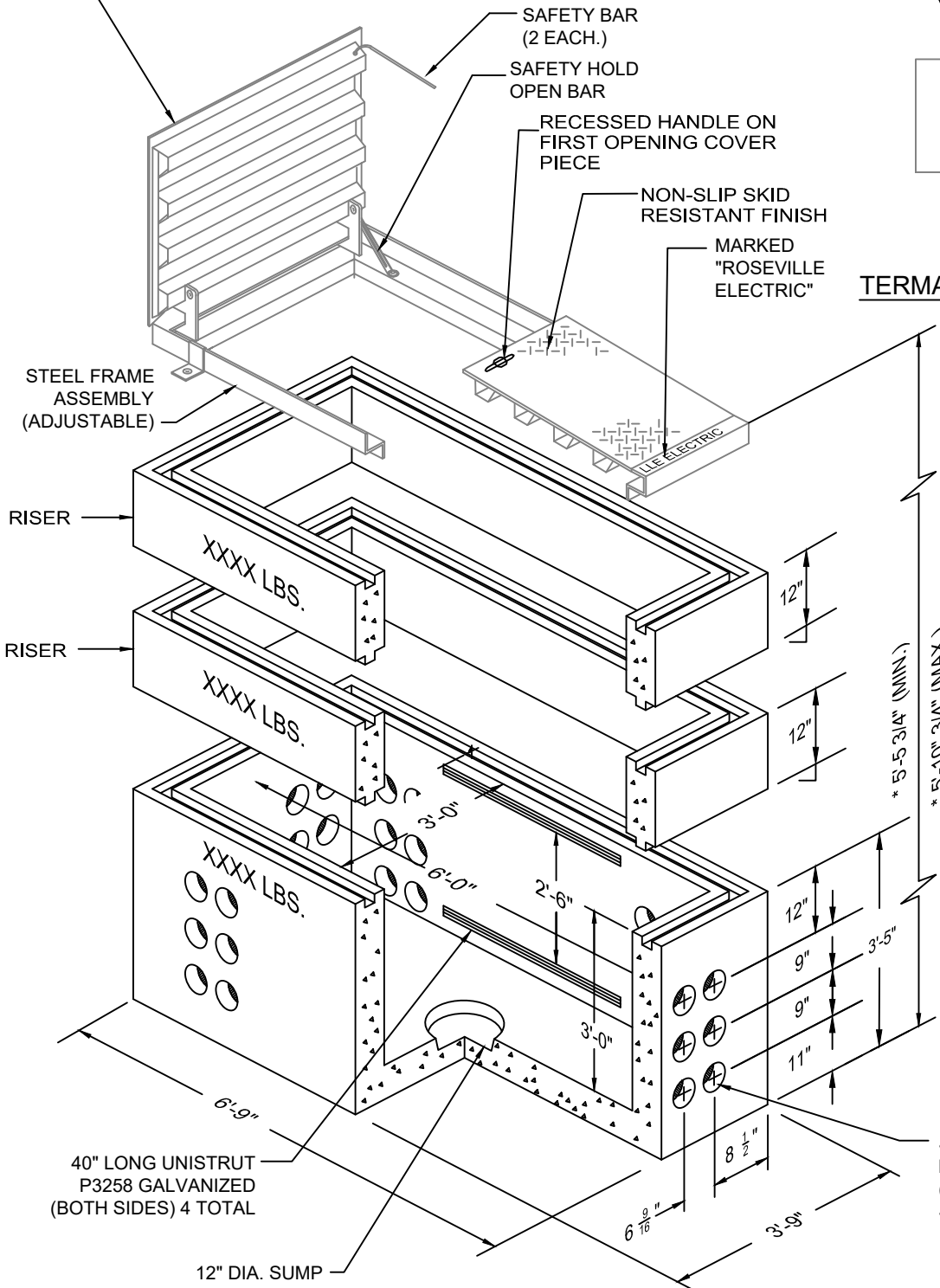
* EXACT HEIGHT DIMENSION MAY VARY BETWEEN MANUFACTURERS. VERIFY PRIOR TO INSTALLATIONS.
** PENTAHEAD BOLT AND SPRINGNUT TO BE STAINLESS STEEL MATERIAL.

DESIGN NOTES:

1. PROVIDE GASKET SEAL AT EACH JOINT.
2. GROUT ALL INTERIOR SEAMS AND LID SECTION AFTER FINAL ADJUSTMENT.
3. PROVIDE LIFTING INSERTS AS REQ'D FOR BOX & RISERS.
4. VAULT MANUFACTURER TO MARK EACH SECTION WITH GROSS WEIGHT.

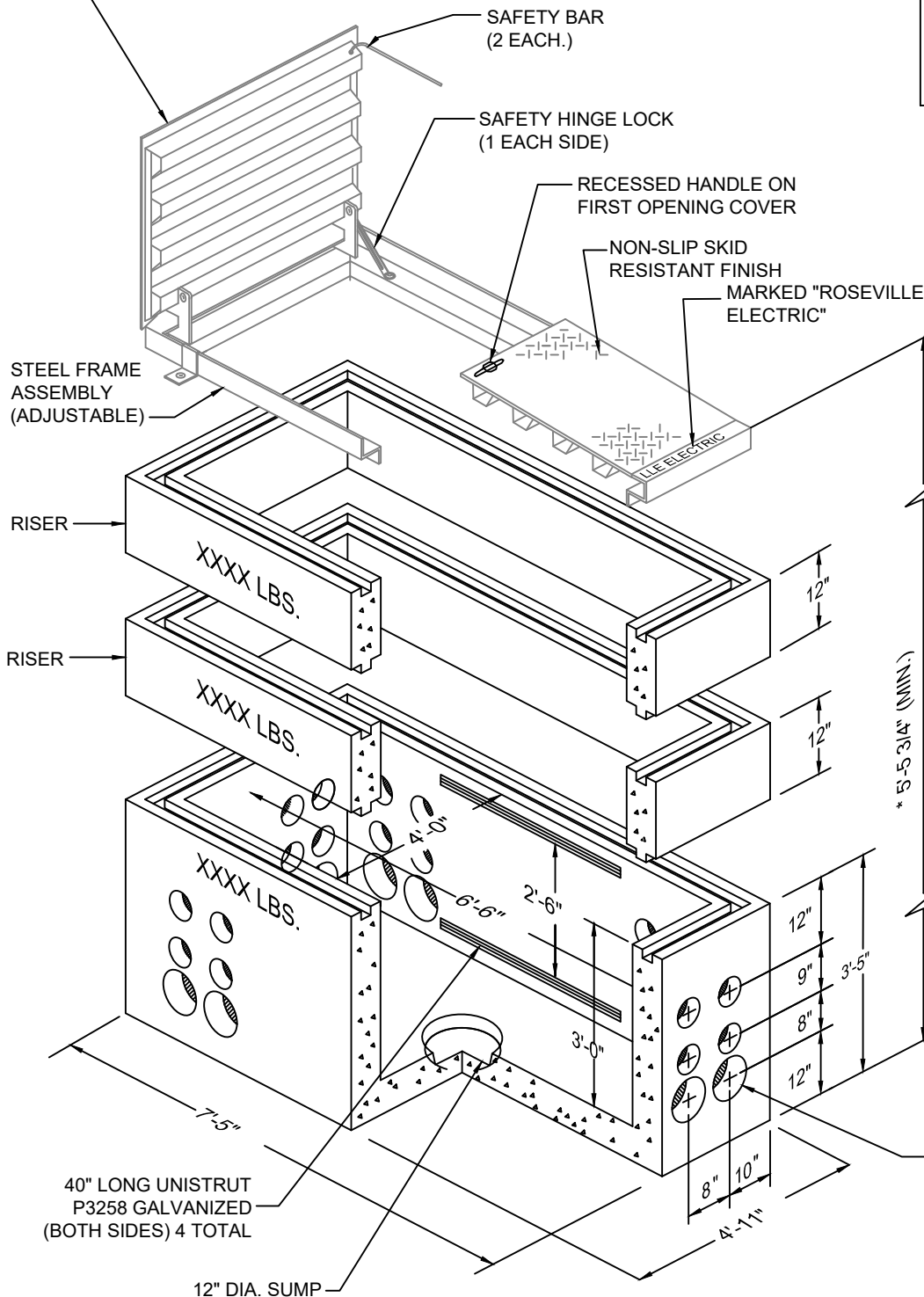
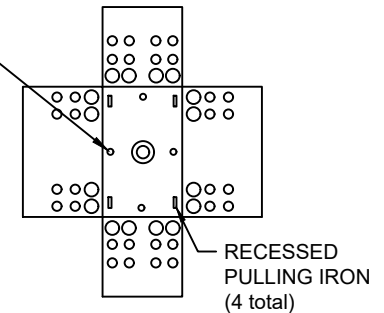
USE NOTES:

5. VAULT TO BE USED WITH LOCAL DISTRIBUTION CIRCUITS ONLY.



4'X4'-6" (NOMINAL) 2 PIECE HINGED, SPRING OR TORSION ASSISTED, ALUMINUM LID, PENTAHEAD LOCKDOWN** AS PER (W.U.C.) WESTERN UNDERGROUND SPECIFICATIONS, ADJUSTABLE FRAME AND COVER WITH 2 SAFETY BARS AND 1 EA. HINGE LOCK. MARKED "ROSEVILLE ELECTRIC". (PEDESTRIAN TRAFFIC LOADING) COVER PIECE MUST HAVE THE CAPABILITY OF BEING OPENED TO 180°.

1" DIA. GROUND ROD KNOCKOUTS (4 TYP.) 1-EA. SIDE MID. WALL 6" OFF INSIDE FACE



NOTE:

* EXACT HEIGHT DIMENSION MAY VARY BETWEEN MANUFACTURERS. VERIFY PRIOR TO INSTALLATIONS.
** PENTAHEAD BOLT AND SPRINGNUT TO BE STAINLESS STEEL MATERIAL.

DESIGN NOTES:

1. PROVIDE GASKET SEAL AT EACH JOINT.
2. GROUT ALL INTERIOR SEAMS AND LID SECTION AFTER FINAL ADJUSTMENT.
3. PROVIDE LIFTING INSERTS AS REQ'D FOR BOX & RISERS.
4. VAULT MANUFACTURER TO MARK EACH SECTION WITH GROSS WEIGHT.

USE NOTES:

1. VAULT TO BE USED WITH EITHER LOCAL DISTRIBUTION OR MAINLINE CIRCUITS.
2. NO MORE THAN TWO MAINLINE CIRCUITS ARE ALLOWED PER VAULT.

8 EACH 4" TERMADUCT AND 4 EACH 6" TERMADUCT TERMINATORS ON EACH WALL. SEE DETAIL C PAGE 2.2



SPEC. GROUP: SPECIFICATIONS FOR CONSTRUCTION

12kV MAINLINE SPLICE PULL BOX
(4W' x 6'-6"L x 5'D)

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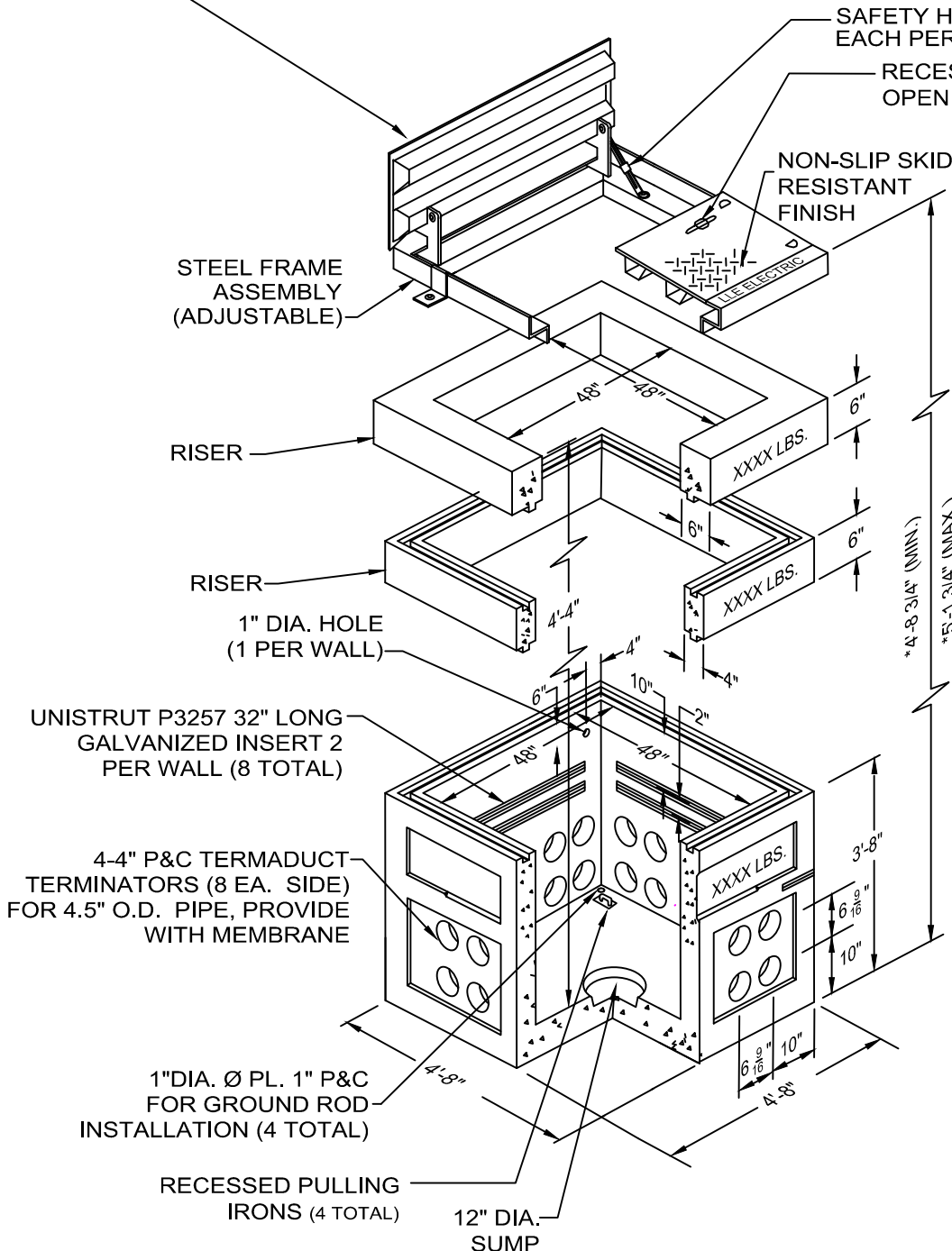
07/01/26

DRAWING NO.

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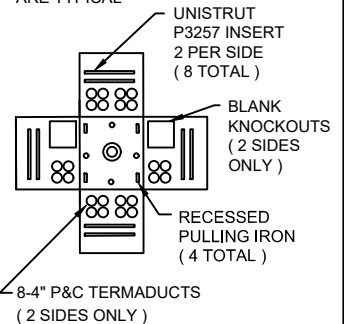
4'X4' (NOMINAL) 2 PIECE HINGED, SPRING OR TORSION ASSISTED, ALUMINUM LID, PENTAHEAD LOCKDOWN** AS PER (W.U.C.) WESTERN UNDERGROUND SPECIFICATIONS, ADJUSTABLE FRAME AND COVER AND 1 EA. HINGE LOCK. MARKED "ROSEVILLE ELECTRIC". (PEDESTRIAN TRAFFIC LOADING) COVER PIECE MUST HAVE THE CAPABILITY OF BEING OPENED TO 180°.

**FOR SPECIAL
CONDITIONS
USE ONLY:
IN AREAS WHERE THERE IS
NOT ENOUGH ROOM FOR AN
ABOVE GROUND J-BOX**



TYPICAL INTERCEPTER BOX

MODIFIED 12KV PRI. JUNCTION BOX (4'W x 4'L x 4'-2\"D) AS NOTED BELOW, ALL OTHER DIMENSIONS & SPECIFICATIONS ARE TYPICAL



NOTE:

* EXACT HEIGHT DIMENSION MAY VARY BETWEEN MANU-FACTURERS. VERIFY PRIOR TO INSTALLATIONS.

** PENTAHEAD BOLT AND SPRINGNUT TO BE STAINLESS STEEL MATERIAL.

DESIGN NOTES:

1. PROVIDE LIFTING INSERTS AS REQUIRED FOR BOX, LID & RISER.
2. GROUT ALL INTERIOR SEAMS & LID SECTION AFTER FINAL ADJUSTMENT.
3. PROVIDE GASKET SEAL AT EACH JOINT.
4. VAULT MANUFACTURER TO MARK EACH SECTION WITH GROSS WEIGHT.



SPEC. GROUP: SPECIFICATIONS FOR CONSTRUCTION

12kV PRIMARY JUNCTION BOX
(4'Wx4'Lx4'-4\"D)

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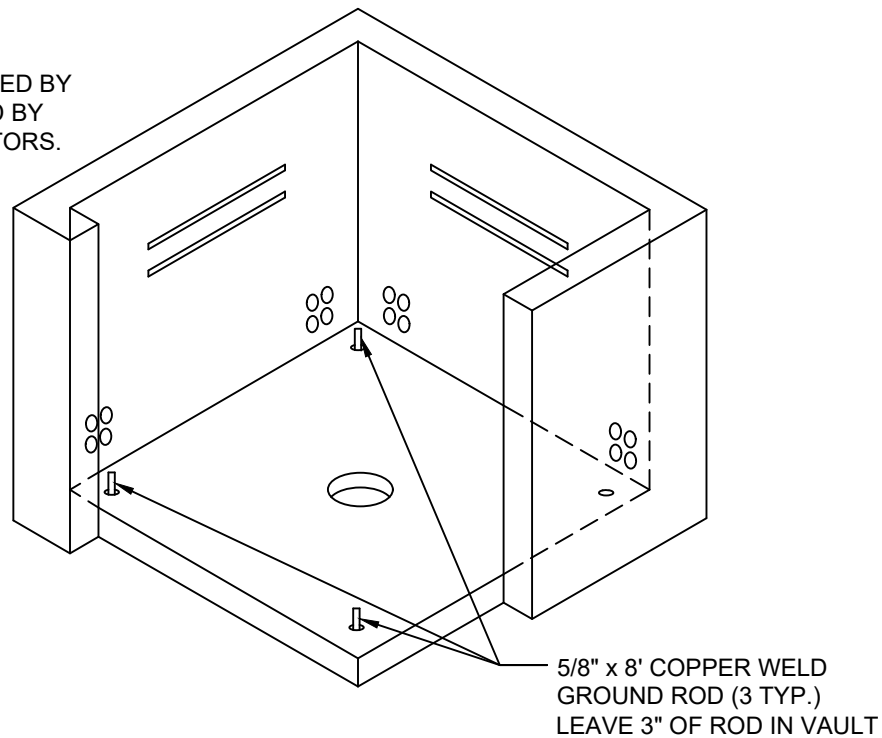
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NOTES:

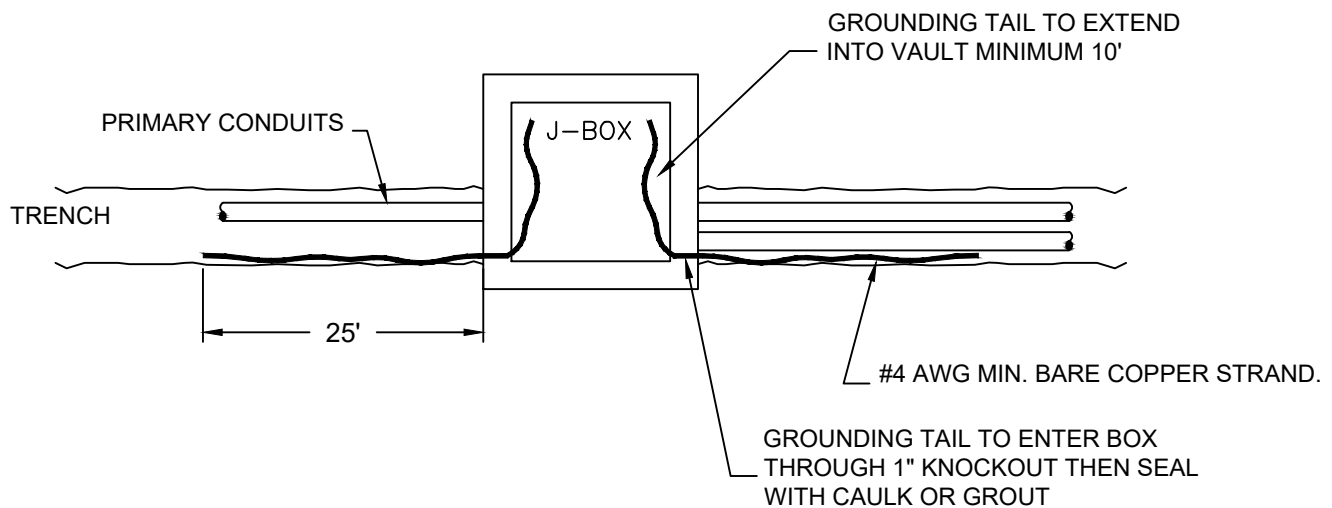
GROUND RODS TO BE INSTALLED BY CONTRACTOR AND INSPECTED BY ROSEVILLE ELECTRIC INSPECTORS.



TYPICAL GROUND INSTALLATION

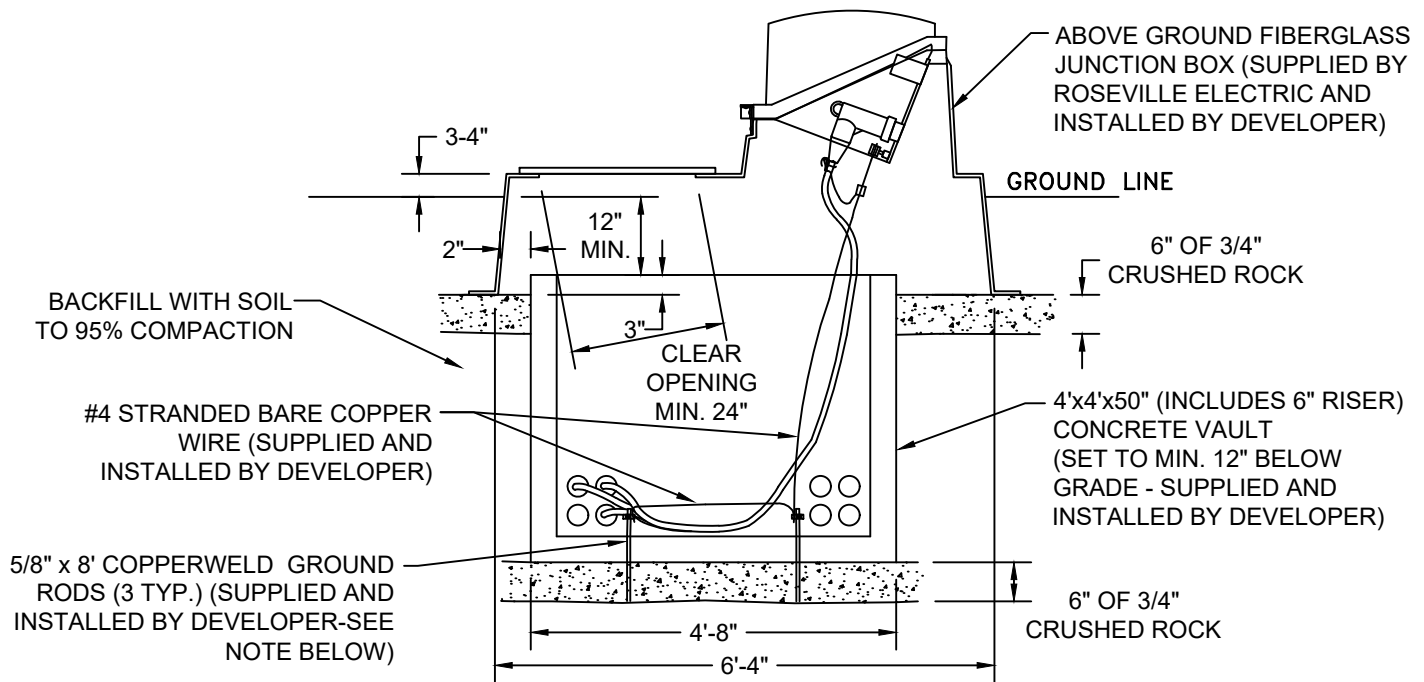
NOTES:

IN HARD SOIL CONDITIONS WHERE THE GROUND RODS CANNOT BE DRIVEN, THE DEVELOPER HAS THE OPTION OF 1. PLACING TWO 35' LENGTHS OF #4 BARE COPPER STRAND WIRE. THE WIRE SHALL EXTEND INTO THE VAULT 10' AND LAY IN THE BOTTOM OF THE TRENCH (MIN. 48" DEPTH) FOR A DISTANCE OF 25' IN DIFFERENT DIRECTIONS. THE WIRE SHALL BE ENCASED IN 3" OF CONCRETE.



ALTERNATIVE GROUND INSTALLATION IN HARD SOIL CONDITIONS

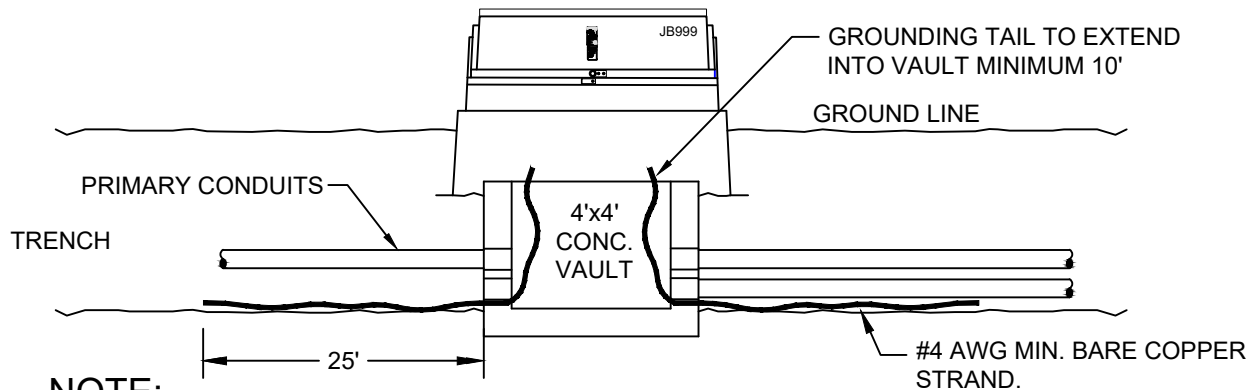
TYPICAL INSTALLATION



NOTE:

IN HARD SOIL CONDITIONS WHERE THE GROUND RODS CANNOT BE DRIVEN, THE DEVELOPER HAS THE OPTION TO USE THE ALTERNATIVE GROUNDING METHOD AS SHOWN BELOW.

ALTERNATIVE GROUND INSTALLATION IN HARD SOIL CONDITIONS



NOTE:

IN HARD SOIL CONDITIONS WHERE THE GROUND RODS CANNOT BE DRIVEN, THE DEVELOPER HAS THE OPTION OF PLACING TWO 35' LENGTHS OF #4 BARE COPPER STRAND WIRE. THE WIRE SHALL EXTEND INTO THE VAULT 10' AND LAY IN THE BOTTOM OF THE TRENCH (MIN. 48" DEPTH) FOR A DISTANCE OF 25' IN DIFFERENT DIRECTIONS. THE WIRE SHALL BE ENCASED IN 3" OF CONCRETE.

NOTES:

1. DEVELOPER TO PROVIDE CLEAR LEVEL PAD AND RETAINING WALL IF NECESSARY AROUND JUNCTION BOX.
2. ABOVE GROUND FIBERGLASS PORTION OF JUNCTION BOX WILL BE SUPPLIED BY ROSEVILLE ELECTRIC AND INSTALLED BY THE DEVELOPER'S CONTRACTOR.

MODIFIED 12KV PRI. JUNCTION
BOX (4'W x 4'L x 4'-2"D)
AS NOTED BELOW, ALL OTHER
DIMENSIONS & SPECIFICATIONS
ARE TYPICAL

UNISTRUT
P3257 INSERT
2 PER SIDE
(8 TOTAL)

- BLANK
KNOCKOUTS
(2 SIDES
ONLY)

RECESSED
PULLING IRON
(4 TOTAL)

8-4" P&C TERMADUCTS
(2 SIDES ONLY)

4'x 4' (NOMINAL) 2 PIECE HINGED, SPRING OR TORSION ASSISTED, EPOXY COATED, PENTAHEAD LOCKDOWN** AS PER (W.U.C.) WESTERN UNDERGROUND SPECIFICATIONS, ADJUSTABLE FRAME AND COVER -WITH 1 EACH SAFETY HINGE LOCK PER COVER PIECE. MARKED "ROSEVILLE ELECTRIC" H-10 TRAFFIC LOADING EACH COVER PIECE MUST HAVE THE CAPABILITY OF BEING OPENED TO 180° BY MEANS OF A PIN THAT CAN BE REMOVED WITHOUT THE USE OF TOOLS.

SAFETY HINGE LOCK 1
- EACH PER COVER PIECE

RECESSED HANDLE ON FIRST
- OPENING COVER PIECE

STEEL FRAME ASSEMBLY
(ADJUSTABLE)

RISER

RISER

1" DIA. HOLE
(1 PER WALL)

UNISTRUT P3257 32"
LONG GALVANIZED
INSERT 2 PER WALL
(8 TOTAL)

4-4" P&C TERMADUCT.
TERMINATORS
(8 EA. SIDE) FOR 4.5"
O.D. PIPE, PROVIDE
WITH MEMBRANE

1"DIA. Ø PL. 1" P&C FOR
GROUND ROD INSTALLATION
(4 TOTAL)

RECESSED PULLING
IRONS (4 TOTAL)

6"

*4'-8 3/4" (MIN.)

*5'-1 3/4" (MAX.)

* EXACT HEIGHT DIMENSION MAY VARY BETWEEN MANUFACTURERS. VERIFY PRIOR TO INSTALLATIONS.

** PENTAHEAD BOLT AND SPRINGNUT TO BE STAINLESS STEEL MATERIAL.

1. PROVIDE LIFTING INSERTS AS REQUIRED FOR BOX, LID & RISER.
2. GROUT ALL INTERIOR SEAMS & LID SECTION AFTER FINAL ADJUSTMENT.
3. PROVIDE GASKET SEAL AT EACH JOINT.
4. VAULT MANUFACTURER TO MARK EACH SECTION WITH GROSS WEIGHT.



SPEC. GROUP: SPECIFICATIONS FOR CONSTRUCTION

12kV INTERCEPTOR BOX

REV. DATE:	REV. NO:
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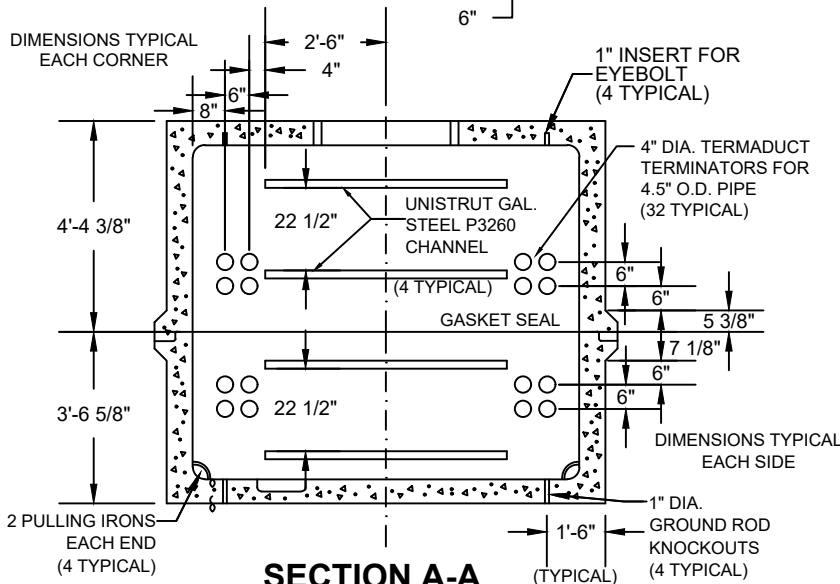
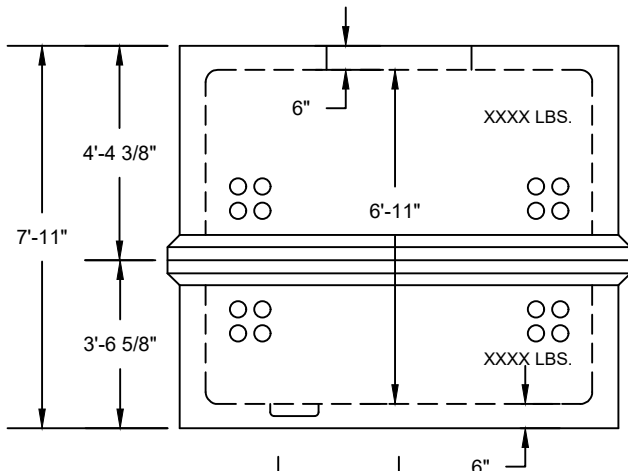
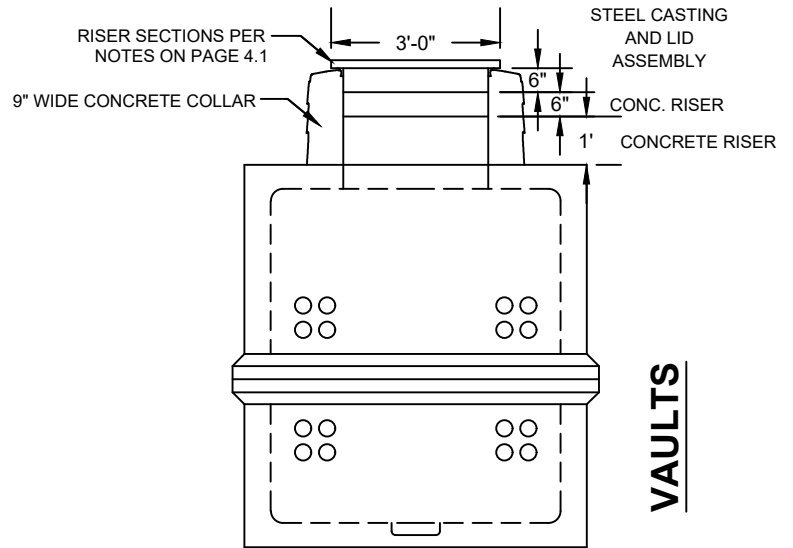
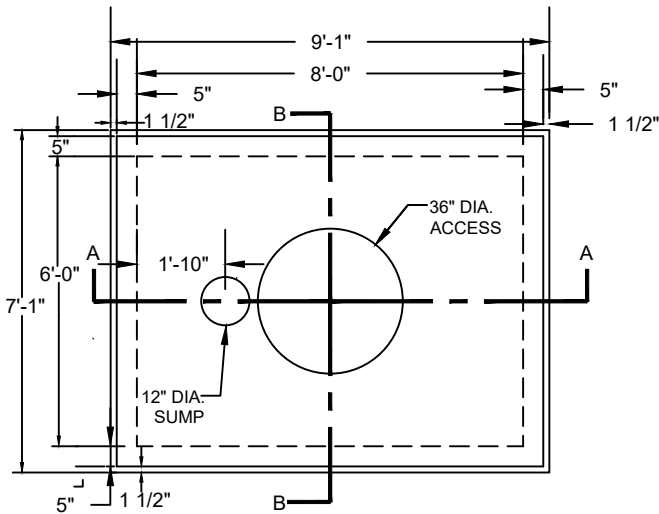
07/01/26

DRAWING NO.

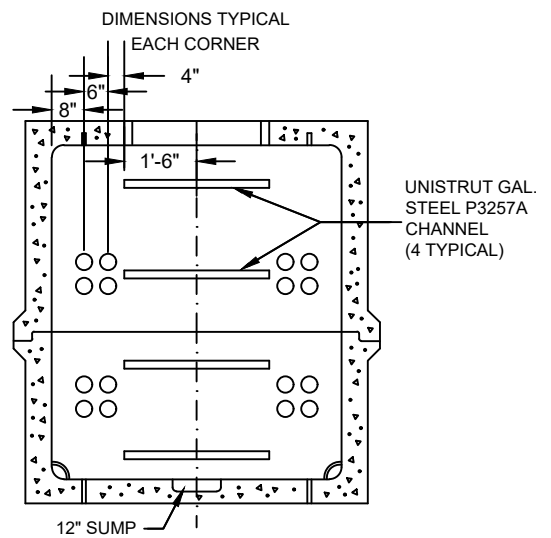
27

DESIGN NOTES:

1. THE VAULT SHALL BE DESIGNED USING THE FOLLOWING:
 - A. OVERBURDEN: 2'-6" (SOIL WEIGHT 120 LBS. FT.³)
 - B. H-20-44 BRIDGE LOADING
 - C. 1 PIECE MONOLITHIC OR 2 PIECE W/ MID-SIDEWALL JOINT
 - D. WATERPROOF JOINTS
 - E. PULLING ANCHORS LOADING MAX. 20,000 LBS.
(ONLY 2 ANCHORS IN A VERTICAL LINE BEING USED AT ANY TIME)
 - F. HEAVY ENOUGH NOT TO FLOAT
2. ADMIXTURES- CALCIUM CHLORIDE OR ANY OTHER CHLORIDE ADMIXTURE SHALL NOT BE PERMITTED. A POTENTIALLY GOOD ADMIXTURE IS CALCIUM NITRITE WHICH NEUTRALIZES CL-IN A RATIO OF 2 TO 1
3. SURFACE SEALER- 2 COATS OF A PENETRATING EPOXY SEALER SHALL BE APPLIED TO THE EXTERIOR SEALER EXAMPLE: PEN SEAL 50 FROM AMERICAN METOSEAL CO., SUPER SEAL #35 FROM L & M CONST. CHEMICAL, OR EQUIVILANT
4. INTERIOR SHALL BE PAINTED WITH 2 COATS OF APPROVED WHITE MASONARY PAINT
5. PROVIDE LIFTING INSERTS AS REQUIRED
6. VAULT MANUFACTURER TO MARK EACH SECTION WITH GROSS WEIGHT



SECTION A-A

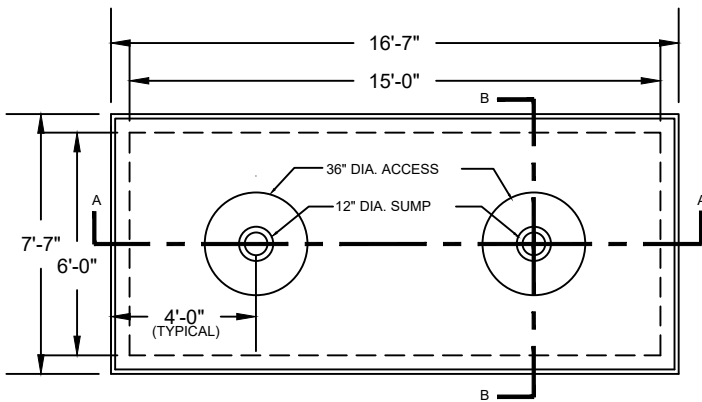


SECTION B-B

VAULTS

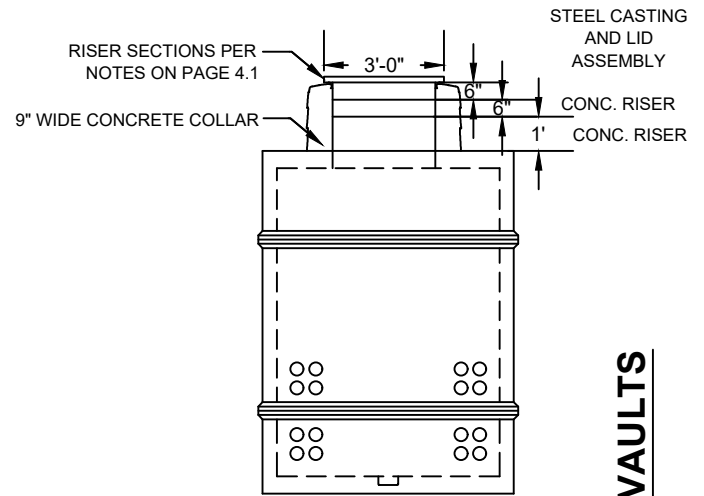
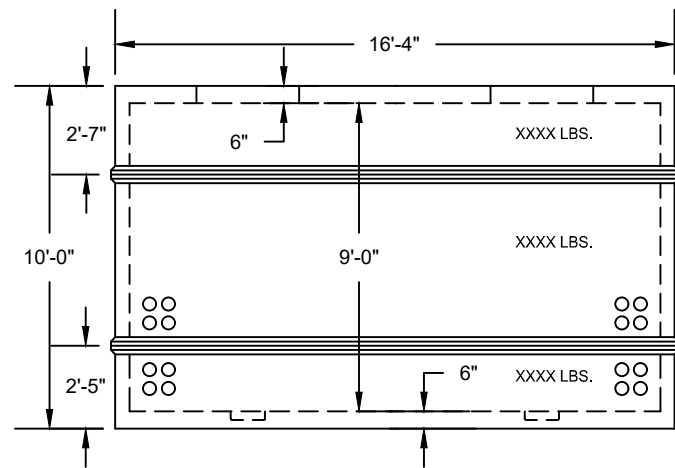
6. VAULT MANUFACTURER TO MARK EACH SECTION WITH GROSS WEIGHT



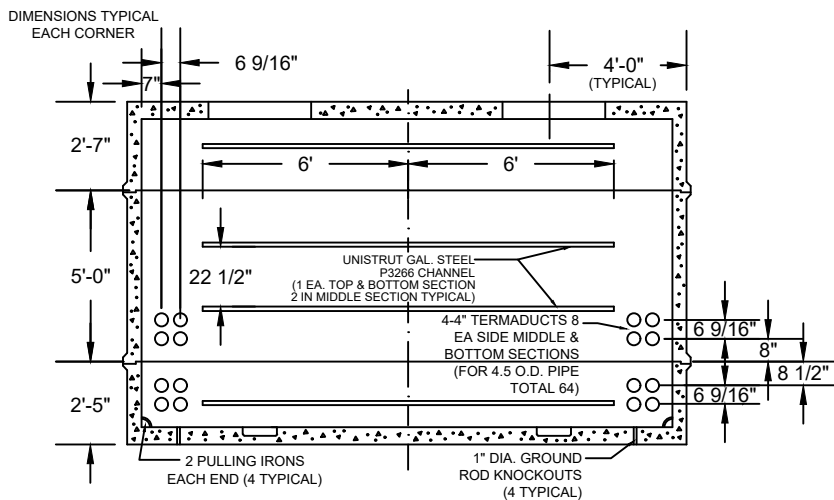


DESIGN NOTES:

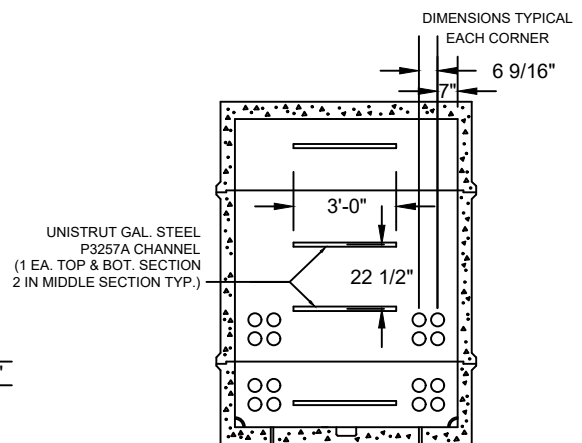
- THE VAULT SHALL BE DESIGNED USING THE FOLLOWING:
 - OVERBURDEN: 2'-6" (SOIL WEIGHT 120 LBS. FT³)
 - H-20-44 BRIDGE LOADING
 - 1 PIECE MONOLITHIC OR 2 PIECE W/ MID-SIDEWALL JOINT
 - WATERPROOF JOINTS
 - PULLING ANCHORS LOADING MAX. 20,000 LBS. (ONLY 2 ANCHORS IN A VERTICAL LINE BEING USED AT ANY TIME)
 - HEAVY ENOUGH NOT TO FLOAT
- ADMIXTURES- CALCIUM CHLORIDE OR ANY OTHER CHLORIDE ADMIXTURE SHALL NOT BE PERMITTED. A POTENTIALLY GOOD ADMIXTURE IS CALCIUM NITRITE WHICH NEUTRALIZES CL-IN A RATIO OF 2 TO 1
- SURFACE SEALER- 2 COATS OF A PENETRATING EPOXY SEALER SHALL BE APPLIED TO THE EXTERIOR SEALER EXAMPLE: PEN SEAL 50 FROM AMERICAN METOSEAL CO., SUPER SEAL #35 FROM L & M CONST. CHEMICAL, OR EQUIVILANT
- INTERIOR SHALL BE PAINTED WITH 2 COATS OF APPROVED WHITE MASONRY PAINT
- PROVIDE LIFTING INSERTS AS REQUIRED
- VAULT MANUFACTURER TO MARK EACH SECTION WITH GROSS WEIGHT



VAULTS



SECTION A-A



SECTION B-B



SPEC. GROUP: SPECIFICATIONS FOR CONSTRUCTION

12kV MULTIPLE CIRCUIT EXPANSION
(6'W x 15'L x 9'D) SPLICE VAULT (MANHOLE)

REV. DATE: REV. NO:

07/01/26

DRAWING NO.

30

1. GENERAL NOTES

- (A) THESE STANDARDS INCLUDE CONCRETE TRANSFORMER PAD CONSTRUCTION NOTES AND LOCATION REQUIREMENTS FOR 1Ø AND 3Ø, 12KV, PAD-MOUNTED TRANSFORMERS.
- (B) LOCATION AND SIZE OF PAD SHALL BE PER THE ROSEVILLE ELECTRIC DESIGN FOR THE PROJECT.
- (C) SECONDARY TERMINAL LUGS FOR CONNECTION OF SERVICE CONDUCTORS AT THE TRANSFORMER ARE PROVIDED BY ROSEVILLE ELECTRIC.
- (D) NO MORE THAN 8 SERVICE CONDUCTORS (MAXIMUM WIRE SIZE OF 1000 MCM CU. OR AL.) PER PHASE WILL BE ALLOWED TO THE TRANSFORMER. SECONDARY SERVICE CONDUCTORS SHALL NOT BE INSTALLED UNTIL ROSEVILLE ELECTRIC HAS SET THE HIGH VOLTAGE TRANSFORMER ON THE PAD. IF THE SECONDARY WIRE IS INSTALLED PRIOR TO ROSEVILLE ELECTRIC SETTING THE TRANSFORMER, IT WILL BE REQUIRED TO BE PULLED OUT. PULL ROPE MUST BE INSTALLED PRIOR TO TRANSFORMER PLACEMENT.
- (E) POURED IN-PLACE CONCRETE PADS CAN BE USED ONLY WITH PRIOR ROSEVILLE ELECTRIC APPROVAL, USING PRE-CAST PAD SPECIFICATIONS.

2. CONSTRUCTION NOTES

- (A) DISTURBED EARTH UNDER TRANSFORMER PADS SHALL BE REPLACED WITH 12" OF 3/4" A.B. MATERIAL COMPACTED IN 6" LIFTS TO PREVENT SETTLEMENT. THE CONTRACTOR MAY BE REQUIRED TO PROVIDE COMPACTION REPORTS FROM A CERTIFIED SOILS TESTING FIRM, IF DEEMED NECESSARY BY A ROSEVILLE ELECTRIC INSPECTOR.
- (B) CONDUITS SHALL BE CUT OFF AND BELL END TERMINATORS INSTALLED 8" BELOW TRANSFORMER PAD SURFACE.
- (C) PAD MANUFACTURER TO MARK PAD WITH GROSS WEIGHT AND PROVIDE LIFTING INSERTS AS REQUIRED.
- (D) SMOOTH FINISH SURFACE AND SIDES. CONCRETE SHALL BE DESIGNED TO ATTAIN A STRENGTH OF 3000 POUNDS PER SQUARE INCH IN 28 DAYS.
- (E) THE SURFACE OF THE TRANSFORMER PAD MUST BE LEVEL TO $\pm 1/16$ INCH IN 4 FEET WHEN MEASURED WITH A STRAIGHT EDGE. SURFACES NOT MEETING THIS REQUIREMENT WILL BE REJECTED.
- (F) TEMPORARILY PLUG CONDUITS.
- (G) A MINIMUM DISTANCE OF 6 FEET SHALL BE MAINTAINED BETWEEN GROUND RODS.
- (H) IN HARD SOIL CONDITIONS WHERE THE GROUND ROD CANNOT BE DRIVEN, THE DEVELOPER HAS THE OPTION OF PLACING 35' OF #4 BARE COPPER STRAND WIRE. THE #4 WIRE SHALL EXTEND 5' ABOVE THE FINISH ELEVATION OF THE TRANSFORMER PAD AND LAY IN THE BOTTOM OF THE TRENCH FOR A MINIMUM DISTANCE OF 25' WITH 3" OF CONCRETE ENCASEMENT. FOR TRANSFORMER SIZES OF 1500 KVA AND ABOVE, #250 MCM BARE COPPER STRAND WIRE SHALL BE USED.
- (I) DEVELOPER SHALL HAVE ALL PULL ROPES INSTALLED PRIOR TO ROSEVILLE ELECTRIC SETTING HIGH VOLTAGE TRANSFORMER.



SPEC. GROUP: SPECIFICATIONS FOR CONSTRUCTION

PRECAST CONCRETE TRANSFORMER PAD
CONSTRUCTION NOTES AND LOCATION REQUIREMENTS

REV. DATE: REV. NO:

07/01/26

DRAWING NO.

31

3. APPLICATION NOTES

- (A) THE PAD SIZES WERE BASED ON THE MAXIMUM DIMENSIONS, INCLUDING COOLING RADIATORS OF THE VARIOUS MANUFACTURERS' TRANSFORMERS. A ONE FOOT APRON (18" FOR TRANS. ABOVE 1000 KVA) IS REQUIRED IN FRONT OF THE COMPARTMENT DOORS. IF AN OVERSIZE PAD IS USED TO ALLOW FOR TRANSFORMER SIZE INCREASE AT A LATER TIME, IT MAY BE NECESSARY TO REDUCE LV DIMENSION SLIGHTLY IN ORDER TO FIT INITIAL TRANSFORMER.
- (B) THE CONCRETE PAD SHOULD BE LOCATED SO THAT ITS ASSOCIATED TRANSFORMER WILL BE THREE FEET MINIMUM FROM THE SIDE OF ANY BUILDING WALL. IF THE WALL IS FIREPROOF, THE MINIMUM CLEARANCE CAN BE REDUCED TO TWO FEET. AT LEAST EIGHT FEET OF CLEAR SPACE SHALL BE PROVIDED IN FRONT OF PAD TO ALLOW COMPLETE OPENING OF TRANSFORMER CABINET DOORS AND ALLOW CITY PERSONEL SUFFICIENT WORKING ROOM FOR HOT STICK WORK. FIGURE NO. 1, SHOWS THE PREFERRED LOCATION OF A TRANS. PAD WITH REFERENCE TO OTHER CONSTRUCTION.
- (C) IF A PAD-MOUNTED TRANSFORMER CAN NOT BE LOCATED AWAY FROM VEHICULAR TRAFFIC, THE CUSTOMER SHALL PROVIDE SUITABLE BARRIERS FOR THE PROTECTION OF THE TRANSFORMER. ROSEVILLE ELECTRIC SHALL DETERMINE THE TYPE, SIZE AND NUMBER OF ANY SUCH BARRIERS REQUIRED. A REMOVABLE TYPE POST IS SHOWN IN FIGURE NO. 2.
- (D) IF A PAD-MOUNTED TRANSFORMER IS TO BE INSTALLED UNDER A ROOF, AT LEAST 5 FEET OF HEAD ROOM SHALL BE PROVIDED FOR LIFTING OF THE TRANSFORMER. CONTACT ROSEVILLE ELECTRIC FOR EACH PARTICULAR CASE.
- (E) IF A WALL OR ENCLOSURE IS INSTALLED AROUND THE TRANSFORMER, THE WALL SHALL MEET THE REQUIREMENTS OF NOTE 3(B). WALLS ARE ONLY ALLOWED ON 3 SIDES OF THE TRANSFORMER. NO GATES ARE ALLOWED. OPENING MUST MEET THE REQUIREMENTS FOR CLEAR ACCESS AS SHOWN IN FIGURE NO. 1.



SPEC. GROUP: SPECIFICATIONS FOR CONSTRUCTION

PRECAST CONCRETE TRANSFORMER PAD
CONSTRUCTION NOTES AND LOCATION REQUIREMENTS

REV. DATE: REV. NO:

07/01/26

DRAWING NO.

32

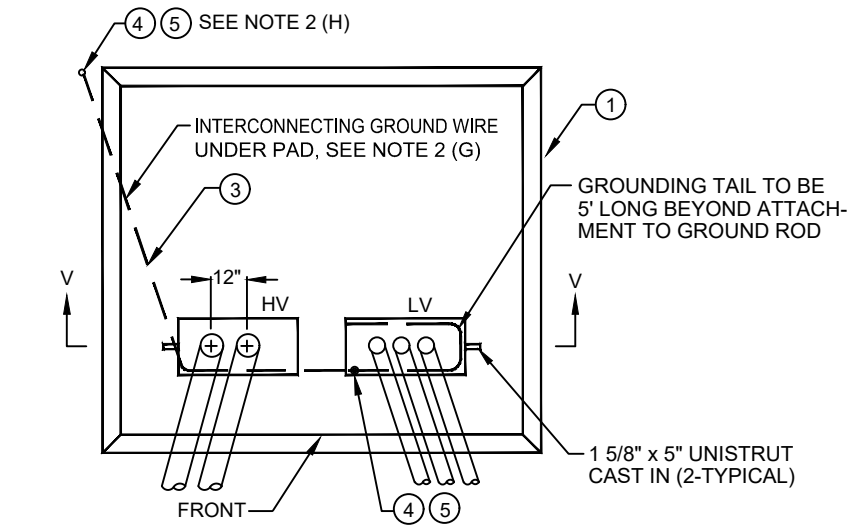


FIGURE NO. 3 - SECTION V - V

LOCATION FOR PRIMARY & SECONDARY CONDUITS

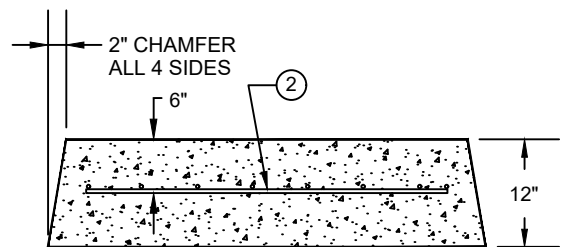
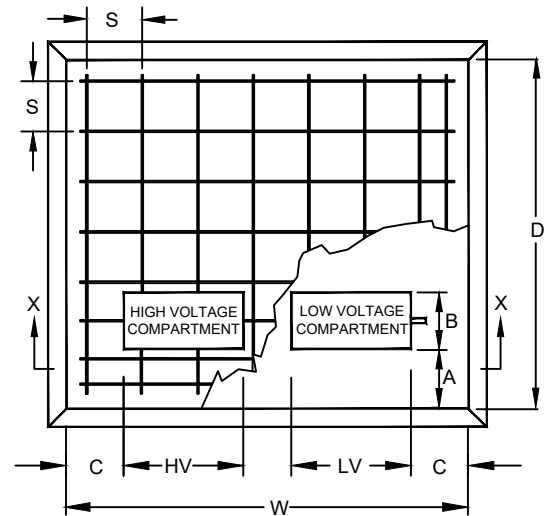
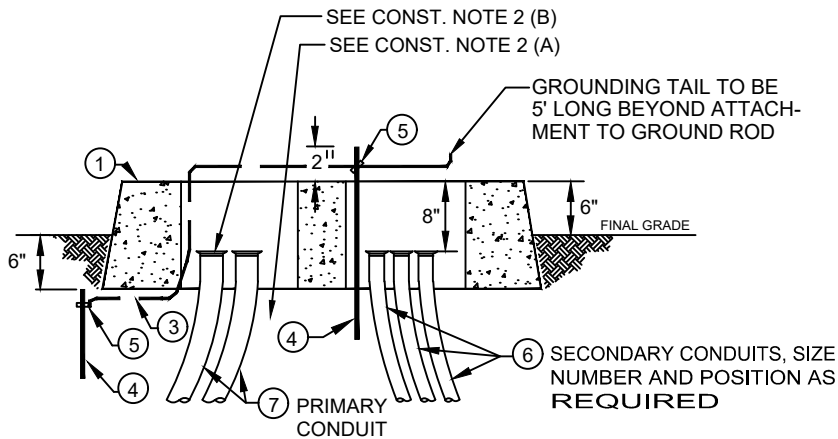


FIGURE NO. 4 - SECTION X - X
CONCRETE PAD DETAILS

ITEM	QUANTITY	DESCRIPTION
1	1	CONCRETE PAD
2	AS REQ.	REINFORCING STEEL, NO.4
3	13' MIN.	WIRE, NO.4 AWG MIN. BARE COPPER STRAND
4	2	GROUND ROD, 5/8" x 8'-0"
5	2	CLAMP, GROUND ROD, FOR ITEM 4
6	AS REQ.	CONDUIT, TYPE & SIZE AS REQUIRED FOR SECONDARY
7	AS REQ.	CONDUIT, PLASTIC 4" DIA. FOR PRIMARY

TABLE NO. 1 - TRANSFORMER PAD COMPONENTS

* FOR HARD SOIL CONDITIONS SEE CONSTRUCTION NOTE 2 (H), PAGE 30

TRANSFORMER (KVA)	MAX. TRANS WEIGHT (LBS)	PAD DIMENSIONS (INCHES)							
		A	B	C	D	HV	LV	W	S
45-500	8,000	15	20	13	78	20	20	78	12
750-1000	14,000	21	20	21	96	20	20	96	9

TABLE NO. 2 - CONCRETE PAD DIMENSIONS

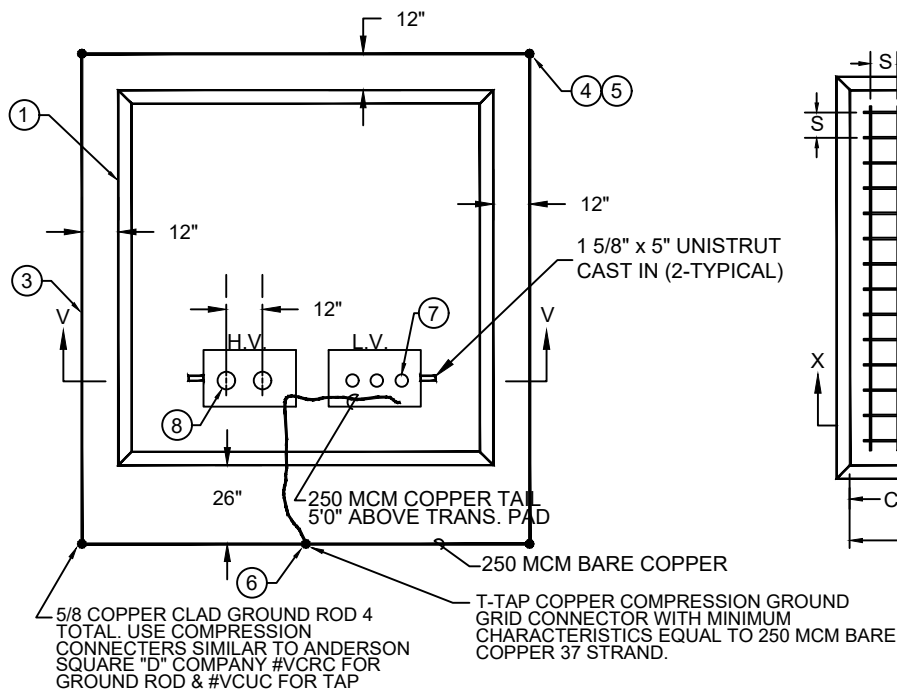


FIGURE NO. 5 - GROUNDING DETAIL

1500 kVA AND ABOVE

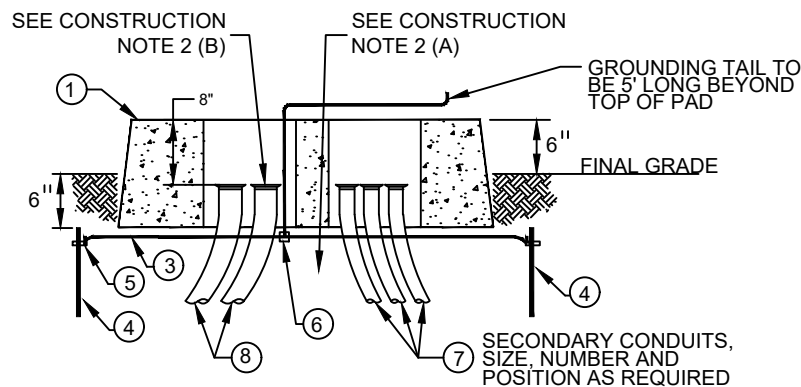


FIGURE NO. 7 - SECTION V - V

LOCATION FOR PRIMARY & SECONDARY CONDUITS

ITEM	QUANTITY	DESCRIPTION
1	1	CONCRETE PAD
2	AS REQ.	REINFORCING STEEL, NO.4
3	57' MIN.	250 MCM BARE COPPER STRAND
4	4	GROUND ROD, 5/8" x 8'-0"
5	4	COMPRESSION CONNECTORS
6	1	T-TAP COPPER COMPRESSION CONNECTOR
7	AS REQ.	CONDUIT, SIZE & TYPE FOR SECONDARY
8	AS REQ.	CONDUIT, PLASTIC 4" DIA. FOR PRIMARY

TABLE NO. 3 - TRANSFORMER PAD COMPONENTS

1500 kVA AND ABOVE

* FOR HARD SOIL CONDITIONS SEE CONST. NOTE 2 (H), PAGE 30

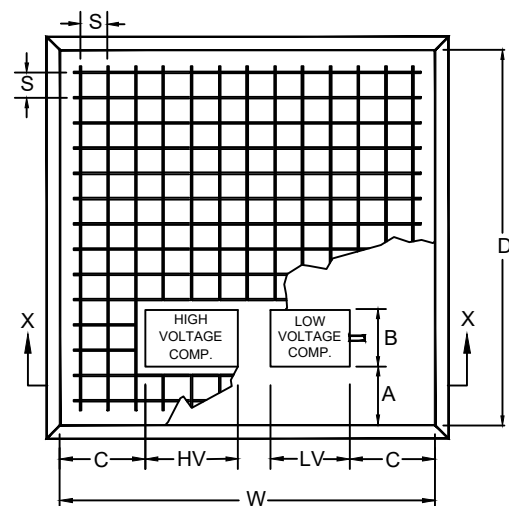


FIGURE NO. 6 - SECTION X - X

CONCRETE PAD DETAIL

TRANSFORMER (KVA)	MAX. TRANS WEIGHT (LBS)	PAD DIMENSIONS (INCHES)							
		A	B	C	D	HV	LV	W	S
1500-2500	18,000	24	20	31.5	115	20	20	115	9

TABLE NO. 4 - CONCRETE PAD DIMENSIONS

FOR 3Ø PADMOUNT TRANS 1500 kVA AND ABOVE

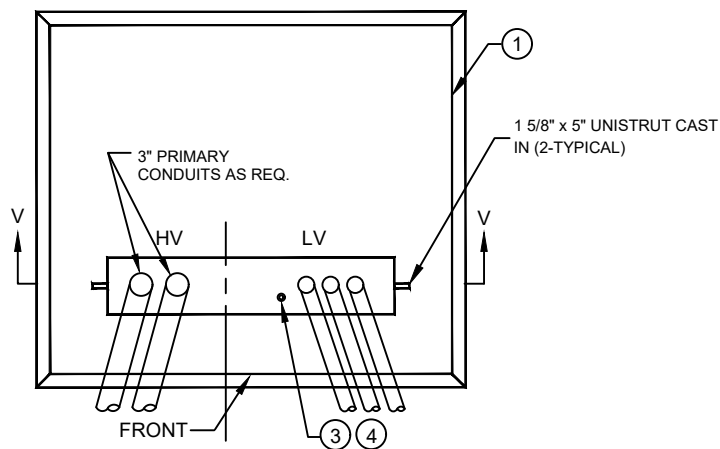


FIGURE NO. 8 - SECTION V - V
LOCATION FOR PRIMARY & SECONDARY CONDUITS

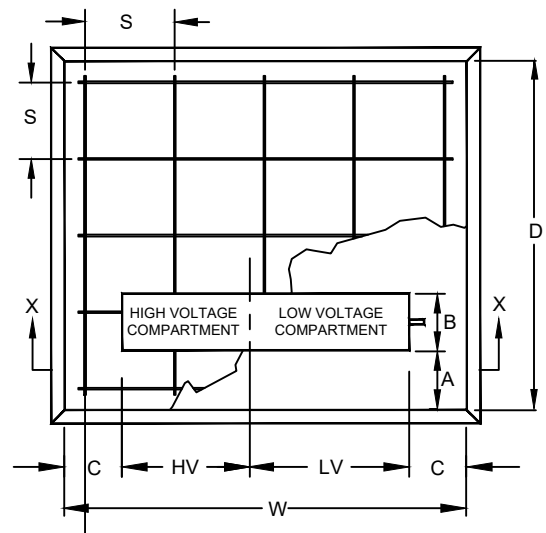


FIGURE NO. 9 - SECTION X - X
CONCRETE PAD DETAILS

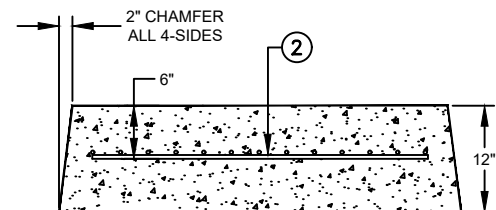


FIGURE NO. 9 - SECTION X - X
CONCRETE PAD DETAILS

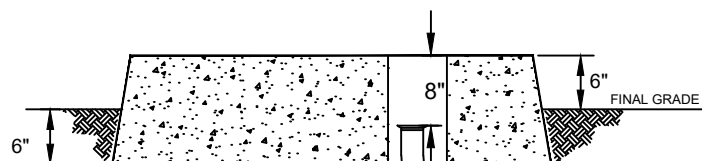
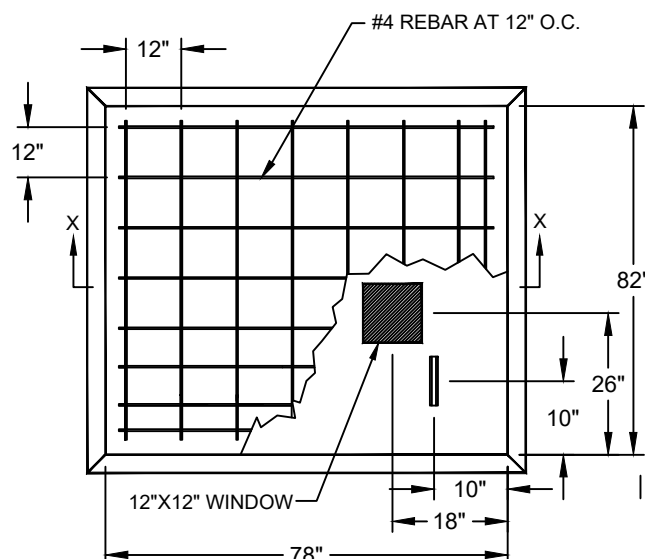
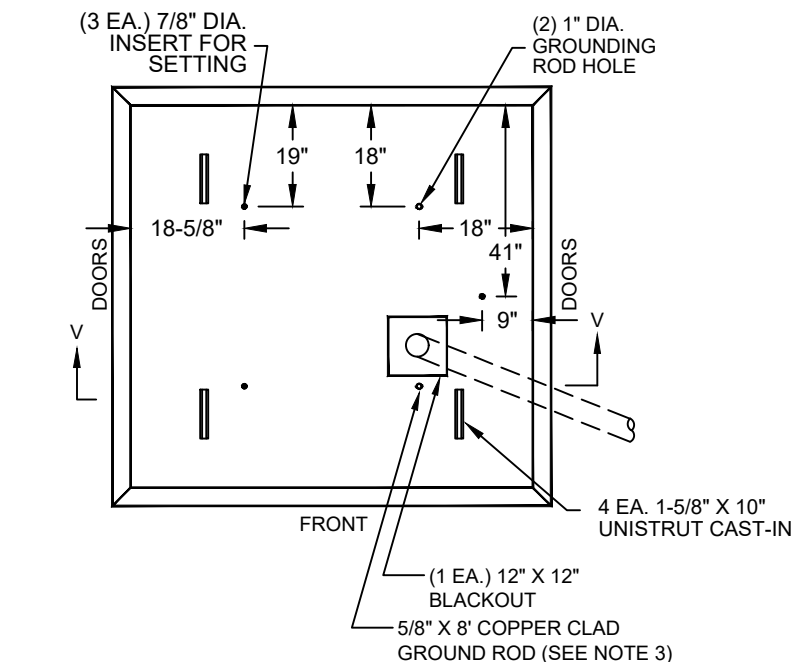
ITEM	QUANTITY	DESCRIPTION
1	1	CONCRETE PAD
2	AS REQ.	REINFORCING STEEL, NO.4
3	1	GROUND ROD, 5/8" x 8'-0"
4	1	CLAMP, GROUND ROD, FOR ITEM 4
5	AS REQ.	CONDUIT, TYPE & SIZE AS REQUIRED FOR SECONDARY
6	AS REQ.	CONDUIT, PLASTIC 3" DIA. FOR PRIMARY

TABLE NO. 5 - TRANSFORMER PAD COMPONENTS

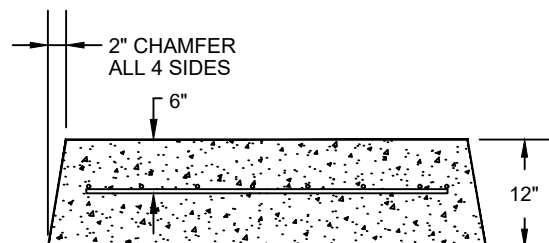
* FOR HARD SOIL CONDITIONS SEE CONST. NOTE 2 (H), PAGE 30

TRANSFORMER (KVA)	MAX. TRANS WEIGHT (LBS)	PAD DIMENSIONS (INCHES)							
		A	B	C	D	HV	LV	W	S
25 - 167	2,500	8	14	9	54	12	17	48	12

TABLE NO. 6 - CONCRETE PAD DIMENSIONS



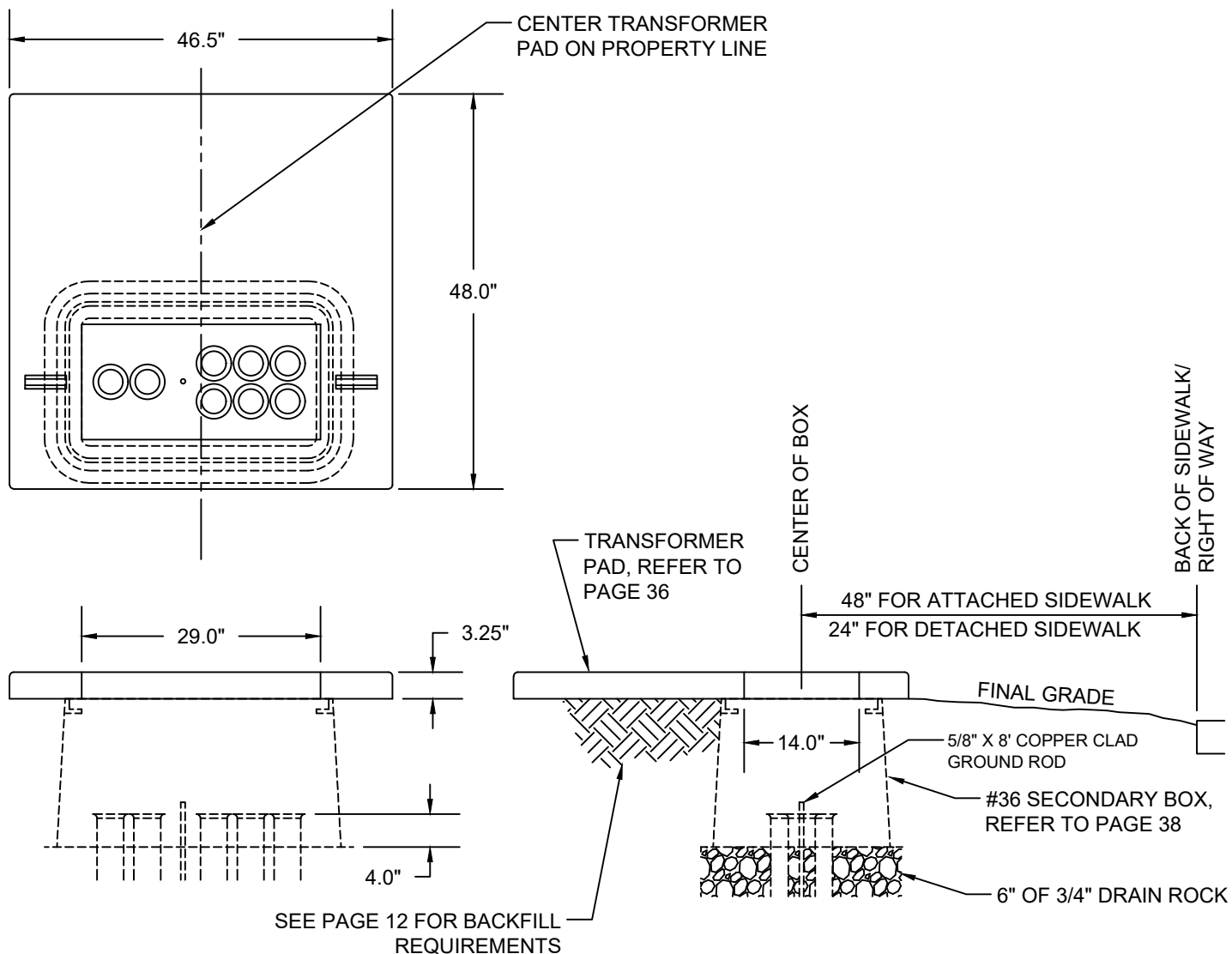
SECTION V - V



SECTION X - X

CONSTRUCTION NOTES:

1. A MINIMUM OF 8' CLEARANCE SHALL BE MAINTAINED AT THE CAPACITOR BANK DOORS. 4' MIN CLEARANCE AT SIDES OF CAPACITOR BANK FROM WALLS, BUILDINGS, PLANTERS, OR DIRT EMBANKMENTS.
2. IF A PAD-MOUNTED CAPACITOR BANK CANNOT BE LOCATED AWAY FROM VEHICULAR TRAFFIC, A SUITABLE BARRIER SHALL BE PROVIDED FOR THE PROTECTION OF THE CAPACITOR BANK.
3. IN HARD SOIL CONDITIONS WHERE THE GROUND RODS CANNOT BE DRIVEN, THE DEVELOPER HAS THE OPTION OF PLACING TWO 35' LENGTHS OF #4 BARE CU. STRAND WIRE. THE WIRE SHALL EXTEND ABOVE THE PAD 5' AND LAY IN THE BOTTOM OF THE TRENCH (MIN. 48" DEPTH) FOR A MINIMUM DISTANCE OF 25', IN DIFFERENT DIRECTIONS. WIRE SHALL BE ENCASED WITH A MIN. 3" OF CONCRETE.
4. DISTURBED EARTH UNDER PADS SHALL BE WELL TAMPED OR SHALL BE REPLACED BY SAND, OR OTHER SUITABLE MATERIAL TO PREVENT SETTLEMENT.



NOTES:

1. CONDUITS SHALL BE TERMINATED 4" ABOVE BOX FLOOR WITH CONDUIT END BELLS, TEMPORARILY CAPPED.

SECONDARY BOX SPECIFICATIONS

1. LID TO HAVE TWO (2) PENTAHEAD LOCK DOWN BOLTS. BOLTS ARE TO BE #16-3/8" x 2 1/4" x .834 HEAD INCHES OR CORROSION RESISTANT 1/2"-6 x 2 1/2" PENTA HEAD COIL BOLTS.
2. LID TO BE MARKED "ROSEVILLE ELECTRIC".
3. TRAFFIC LID RATED H-20 TO BE USED IN ALL TRAFFIC AREAS.
4. BOX AND LID TO BE FLUSH WITH FINAL GRADE.
5. ONLY THOSE BOXES LISTED IN THIS SPEC ARE APPROVED FOR INSTALLATION BY OR FOR THE CITY OF ROSEVILLE ELECTRIC DEPARTMENT.

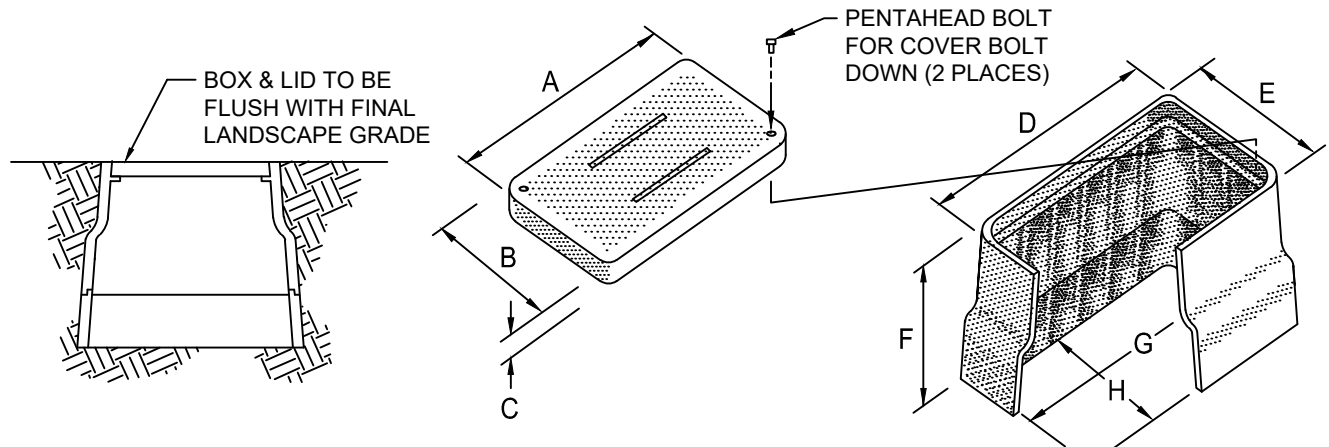
13"Wx24"Lx18"D STANDARD **#30** BOX AND LID DIMENSIONS

MANUFACTURER	CATALOG NO.	LID DIMENSIONS			BOX DIMENSIONS				
		A	B	C	D	E	F	G	H
CDR SYSTEMS	PB10-1324-18 BOX				25.25	15.75	18.00	29.50	20.00
	PC10-1324-02 ITC LID								
	PC12-1324-02 FTC LID	23.25	13.75	2.00					
REPLACON PRODUCTS	RP1324-18IT BOX				24.50	15.25	18.00	27.75	18.50
	RP1324 ITC LID								
	RP1324 FTC LID	23.12	13.75	2.00					
QUAZITE PRODUCTS	PE 1324 Z 505 BOX & LID ASSEMBLY				24.625	15.125	18.00	29.00	19.50
	INCIDENTIAL H-10	23.375	13.875	2.00					
ARMORCAST PRODUCTS	A6001946X18 BOX				25.375	15.875	18.00	27.50	18.125
	A6001866 ITC LID								
	A6001969 FTC LID	23.25	13.75	2.00					

17"Wx30"Lx18"D LARGE **#36** BOX AND LID DIMENSIONS

CDR SYSTEMS	PB10-1730-18 BOX				32.50	19.50	18.00	36.75	23.75
	PC10-1730-02 ITC LID								
	PC12-1730-02 FTC LID	30.50	17.50	2.00					
REPLACON PRODUCTS	RP1730-18IT BOX				32.50	19.50	18.00	36.50	23.50
	RP1730 ITC LID								
	RP1730 FTC LID	30.37	17.50	2.00					
QUAZITE PRODUCTS	PE 1730 Z 504 BOX & LID ASSEMBLY				32.125	19.00	18.00	37.00	24.00
	INCIDENTAL H-10	30.625	17.625	2.00					
ARMORCAST PRODUCTS	A6001640X18 BOX				32.75	19.625	18.00	37.00	24.00
	A6001643 ITC LID								
	A6001947T FTC LID	30.50	17.50	2.00					

* FOR TRAFFIC RADTED CONDITIONS SEE NOTE 2 ABOVE



SPEC. GROUP: SPECIFICATIONS FOR CONSTRUCTION

SECONDARY SERVICE BOX SPECIFICATIONS STANDARD (No.30) AND LARGE BOX (No.36)

REV. DATE: REV. NO:

07/01/26

DRAWING NO.

39

STREET LIGHTING BOX SPECIFICATIONS

1. LID TO HAVE TWO (2) PENTAHEAD LOCK DOWN BOLTS. BOLTS ARE TO BE #16-3/8" x 2 1/4" x .834 HEAD INCHES OR CORROSION RESISTANT 1/2"-6 x 2 1/2" PENTA HEAD COIL BOLTS.
2. LID TO BE MARKED "STREET LIGHTING".
3. TRAFFIC LID RATED H-20 TO BE USED IN ALL TRAFFIC AREAS.
4. BOX AND LID TO BE FLUSH WITH FINAL GRADE.
5. ONLY THOSE BOXES LISTED IN THIS SPEC ARE APPROVED FOR INSTALLATION BY OR FOR THE CITY OF ROSEVILLE ELECTRIC DEPARTMENT.

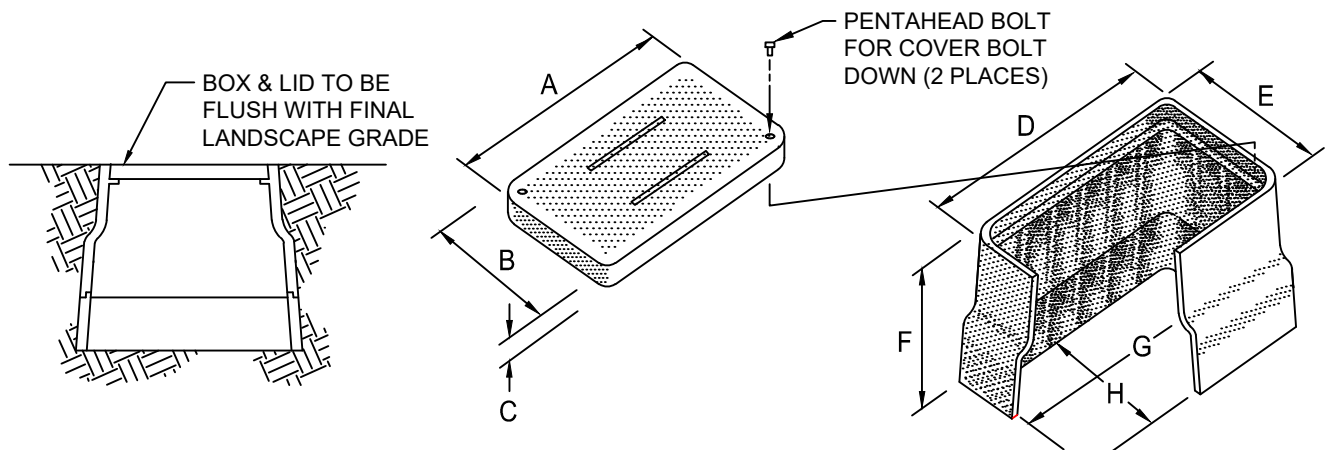
10"Wx17"Lx12"D SMALL #9 BOX AND LID DIMENSIONS

MANUFACTURER	CATALOG NO.	LID DIMENSIONS			BOX DIMENSIONS				
		A	B	C	D	E	F	G	H
CDR SYSTEMS	PB10-1015-12 BOX PC10-1015-02 ITC LID PC12-1015-02 FTC LID	15.36	10.12	1.75	17.06	11.81	12.00	21.25	16.00
REPLACON PRODUCTS	RP1017-12IT BOX RP1017 ITC LID RP1017 FTC LID	15.25	10.00	1.75	16.00	10.75	12.00	18.00	12.50
QUAZITE PRODUCTS	PC 1118 Z 506 BOX & LID ASSEMBLY INCIDENTIAL H-10	18.50	11.50	0.75	20.50	13.50	12.00	17.00	10.00
ARMORCAST PRODUCTS	A6001921X12 BOX A6001922 ITC LID A6001922T FTC LID	15.375	10.125	1.75	17.50	12.25	12.00	18.00	12.625

13"Wx24"Lx18"D STANDARD #30 BOX AND LID DIMENSIONS

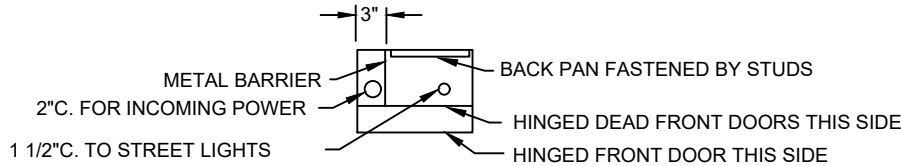
CDR SYSTEMS	PB10-1324-18 BOX PC10-1324-02 ITC LID PC12-1324-02 FTC LID	23.25	13.75	2.00	25.25	15.75	18.00	29.50	20.00
REPLACON PRODUCTS	RP1324-18IT BOX RP1324 ITC LID RP1324 FTC LID	23.12	13.75	2.00	24.50	15.25	18.00	27.75	18.50
QUAZITE PRODUCTS	PE 1324 Z 505 BOX & LID ASSEMBLY INCIDENTIAL H-10	23.375	13.875	2.00	24.625	15.125	18.00	29.00	19.50
ARMORCAST PRODUCTS	A6001946X18 BOX A6001866 ITC LID A6001969 FTC LID	23.25	13.75	2.00	25.375	15.875	18.00	27.50	18.125

* FOR TRAFFIC RADTED CONDITIONS SEE NOTE 2 ABOVE

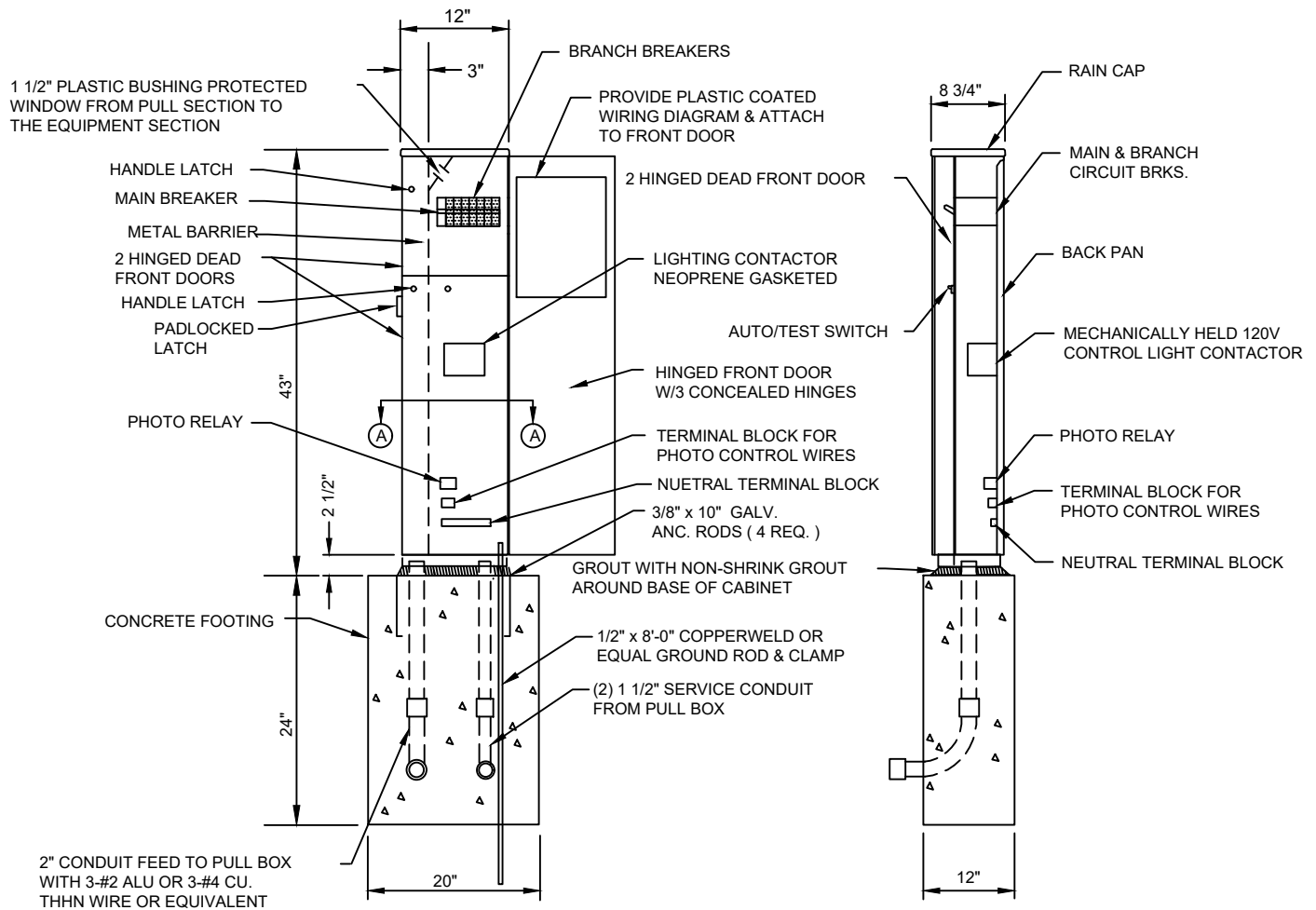


STREET LIGHTING CONTROL PANEL NOTES :

1. EQUIPMENT CABINET SHALL BE PRE-WIRED AND SHALL CONFORM TO NEMA STANDARDS.
2. ALL CONTROL WIRING SHALL BE AWG-14-THW STRAND CU. WIRE.
3. EQUIPMENT SHALL BE PAINTED FOREST GREEN, BE OF NEMA 3R CONSTRUCTION AND PROVIDED WITH DEAD FRONT PANELS.
4. ALL EQUIPMENT SHALL BE CURRENTLY MANUFACTURED ITEMS.
5. ALL STREET LIGHTS FED FROM A CONTROLLER SHALL BE PLACED IN THE TEST POSITION FOR A SEVEN DAY BURN IN PERIOD TO TEST THE LIGHTS, BALLASTS, CIRCUITS, ETC. BEFORE BEING PLACED IN NORMAL OPERATION.

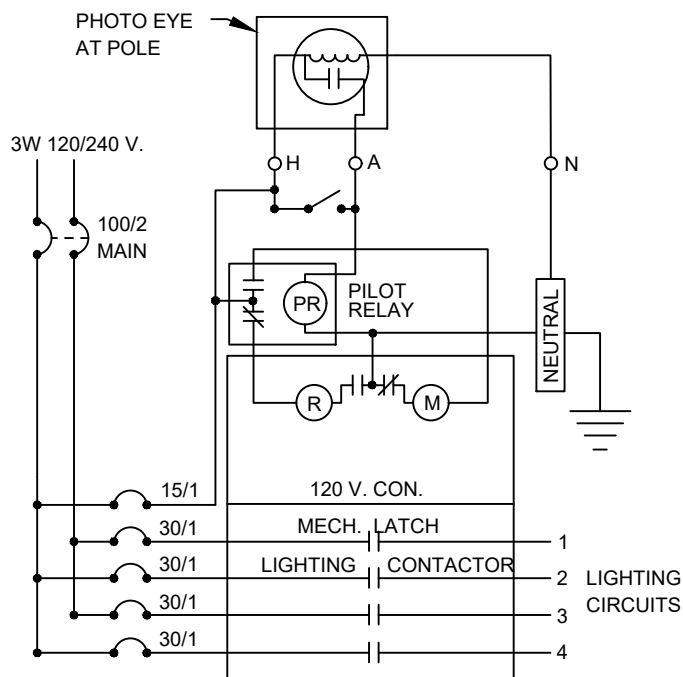


SECTION A-A

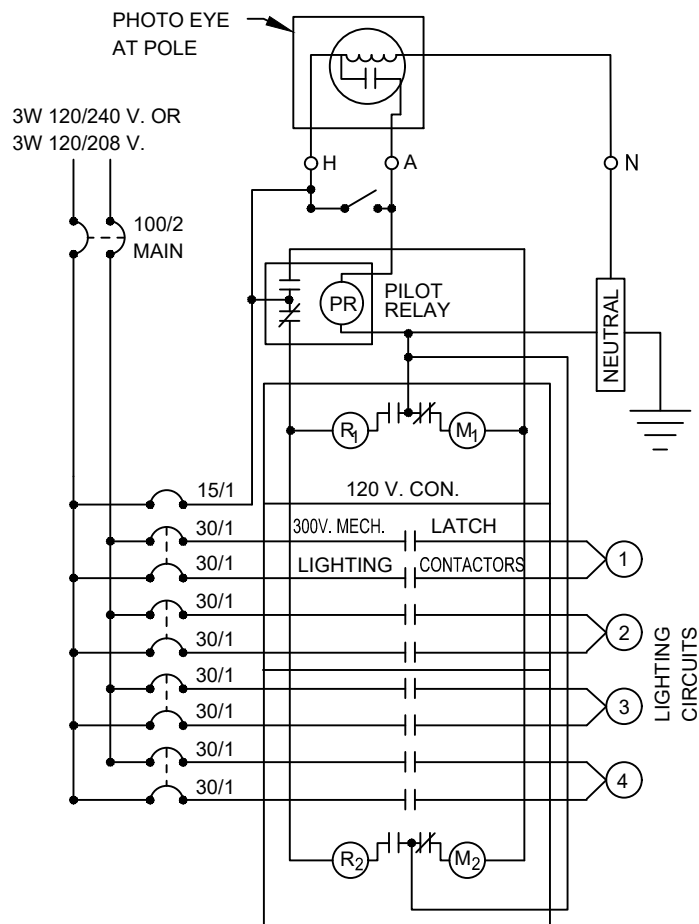


FRONT VIEW

SIDE VIEW



FOR 120 VOLT ST. LIGHT
LUMINAIRE SYSTEM



FOR 240 VOLT OR 208 VOLT
LUMINAIRE SYSTEM

NOTE: ALL STREET LIGHT CIRCUITS SHALL BE 2-#8 AND 1-#8 BARE
SOLID CU WIRES.
1-RED, 1-BLACK, 1-BARE FOR 240 OR 208 VOLT SYSTEMS.
1-BLACK, 1-WHITE, 1-BARE FOR 120 VOLT SYSTEMS.

THE GROUND WIRE SHALL BE CONNECTED BETWEEN ALL POLES AND BACK TO
THE CONTROLLER OR POINT OF CONNECTION.



SPEC. GROUP: SPECIFICATIONS FOR CONSTRUCTION

ONE LINE DIAGRAMS, STREET LIGHT CONTROL
PANEL FOR 120, 240, OR 208 V. LIGHTING

REV. DATE: REV. NO:

07/01/26

DRAWING NO.

42

LEVELING PAD FOR LUMINAIRE. LEVEL
LUMINAIRE IN AIR W/BUCKET TRUCK

2-3/8" END O.D. X 3-5/16" BASE O.D.
X .120" THICKNESS WITH A 2' RISE

COBRAHEAD SPECIFICATIONS

WATTAGE	LUMINAIRE PART #	SHAFT HEIGHT	LUMINAIRE MOUNTING HEIGHT	PIER SIZE SOIL (W X D)	PIER SIZE ROCK (W X D)
100	LUMEC RFS-35W16LED3K-G2-R3M -UNV-DMG-API1011-FAWS -RCD7-GY3	25'-0"	28'-6"	24" X 60"	30" X 42"
150	LUMEC RFS-54W16LED4K-G2-R3M -UNV-DMG-API2011-FAWS -RCD7-GY3	28'-6"	30'-0"	24" X 60"	30" X 42"
250	LUMEC RFM-108W48LED4K-G2-R3 S-UNV-DMG-API2011-FAW S-RCD7-GY3	33'-0"	35'-9"	30" X 72"	36" X 48"

WEATHER RESISTANT 3
BOLT ARM ATTACHMENT
SEE TABLE FOR **COBRAHEAD**
LED LUMINAIRE PART #

INSTALL 12-2 W/GROUND UF CABLE FROM BASE OF POLE TO LUMINAIRE. FOR CONTROLLER TYPE CIRCUIT
ADD AN ADDITIONAL 12-3 W/GROUND UF CABLE AT PHOTO-EYE POLE LOCATION ONLY.

TAPERED GALVANIZED STEEL POLE TO HAVE MINIMUM YIELD STRENGTH OF 40,000 PSI AFTER
FABRICATION. POLE TO BE DESIGNED TO A MINIMUM OF A.A.S.H.T.O. 80 USING AN E.P.A. OF 3.3 SQ.
FT. & 60 LBS.. LUMINAIRE WELDING AND INSPECTION TO CONFORM TO A.W.S. SPECIFICATIONS.

4" X 6 1/2" HANDHOLE W/REMOVABLE COVER. PLACE 30A, 600V
FUSE HOLDER W/20 AMP FUSE. USE 1 FUSE PER HOT LEG.

REMOVABLE 2-PIECE BASE-COVER.

GROUT W/NON-SHRINK GROUT BETWEEN BASE OF POLE & CONCRETE AFTER ERECTION AND LEVELING.

1" DIA. X 36" X 4" GALVANIZED ANCHOR BOLTS W/2 GALVANIZED HEX NUTS & 2 FLAT WASHERS REQUIRED
PER BOLT.

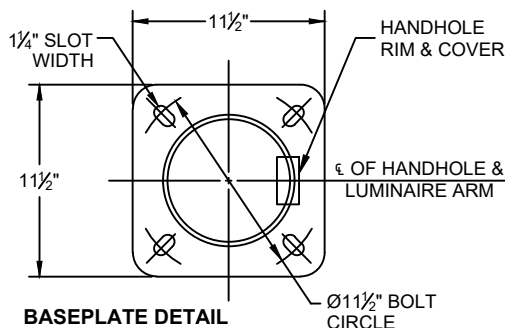
CONCRETE SHALL OBTAIN 5000 P.S.I. IN 28 DAYS.

(2) 1-1/2" SCH. 40 CONDUIT(S) PER JOB PRINT. SEE PAGE 9.5 FOR WIRE SIZE AND QTY.

5/8" X 8' COPPER GROUND ROD BONDED TO POLE W/#6 SOLID BARE COPPER WIRE. WHERE THE GROUND
ROD CANNOT BE DRIVEN, THE DEVELOPER MAY PLACE 8' OF #6 SOLID COPPER WIRE IN THE BOTTOM OF
THE TRENCH (MINIMUM 30" DEEP). THE WIRE WILL BE ENCASED IN A MINIMUM OF 3" OF CONCRETE AND BE
OF LENGTH TO BOND TO THE STREET LIGHT POLE.

DEVELOPER RESPONSIBILITY:

1. DEVELOPER TO PROVIDE LAMP TO MEET SECTION "LUMINAIRE PART #" IN COBRAHEAD SPECIFICATIONSTABLE FOR EACH FIXTURE INSTALLED. LUMINAIRE IS TO BE MOUNTED ON A GALVANIZED STEEL POLE SIMILAR TO AMERON N-286-ROSVIL801, AMERON N-336-ROSEVIL801, OR VALMONT DS32 POLE 800A.
2. DEVELOPER TO PROVIDE 2 SETS OF SUBMITTALS SHOWING TYPE OF LUMINAIRE, POLE, LAMP, PHOTO EYE, OR SHORTING CAP TO BE USED FOR APPROVAL BY ROSEVILLE ELECTRIC.
3. ANY DEVELOPER OR CONTRACTOR INSTALLING NON-APPROVED EQUIPMENT DOES SO AT HIS OWN RISK AND MAY FACE FUTURE EXPENSES IN CORRECTING ANY NON-APPROVED MATERIALS TO MEET ROSEVILLE ELECTRIC STANDARDS.



SPEC. GROUP: SPECIFICATIONS FOR CONSTRUCTION

REV. DATE: REV. NO:

07/01/26

COBRA HEAD STREET LIGHT
100-250 WATT HPS LED STANDARD

DRAWING NO.

43

DECORATIVE LED SPECIFICATIONS

WATTAGE	LUMINAIRE PART #	SHAFT HEIGHT	PIER SIZE SOIL (W X D)	PIER SIZE ROCK (W X D)
100	HADCO C2430J-A3SR7N73064A5SNNNA	17'-6"	18" X 60"	24" X 48"
150	HADCO C2430K-A3SR7N74064A5SNNNA	17'-6"	18" X 60"	24" X 48"
250	HADCO C2430K-A3SR7N74064A5SNNNA	17'-6"	18" X 60"	24" X 48"

SEE TABLE FOR
DECORATIVE LED
SPECIFICATIONS

INSTALL 12-2 W/GROUND UF CABLE FROM BASE OF POLE TO LUMINAIRE. FOR CONTROLLER TYPE CIRCUIT ADD AN ADDITIONAL 12-3 W/GROUND UF CABLE AT PHOTO-EYE POLE LOCATION ONLY.

DECORATIVE STREET LIGHT POLE STANDARD:

1. ANTIQUE STREET LAMP, INC. MODEL: PZNY1718ANBK, NEW YORK SERIES, 17'6" STANDARD HEIGHT WITH A 17" DIAMETER BASE, CAST IRON/STEEL, AND BLACK IN COLOR.
2. SPRING CITY ELECTRICAL MFG. CO. MODEL: IWBNT-16.6-TBD, NORTH HAMPTON IRON/STEEL POST SERIES, 17'6" STANDARD HEIGHT WITH A 16.5" DIAMETER BASE, CAST IRON/STEEL, AND BLACK IN COLOR.
3. UNION METAL CORPORATION MODEL: P1571-70-B123-Y1, ORNAMENTAL LIGHTING STANDARD, STEEL POLE WITH CAST IRON BASE, 17'6" STANDARD HEIGHT WITH A 16.5" DIAMETER BASE, CAST IRON/STEEL, AND BLACK IN COLOR.

DEVELOPER RESPONSIBILITY:

1. DEVELOPER TO PROVIDE THE APPROVED 250W HPS EQUIVALENT LED FIXTURE PER SECTION 9.8 OF THESE SPECIFICATIONS.
2. DEVELOPER TO PROVIDE THE APPROVED STEEL POLE.
3. LIGHTING SYSTEM SHALL BE COMPLETELY FUNCTIONAL AND TESTED BY ROSEVILLE ELECTRIC.
4. DEVELOPER TO PROVIDE 2 SETS OF SUBMITTALS SHOWING TYPE OF LUMINAIRE, POLE, LAMP, PHOTO EYE, OR SHORTING CAP TO BE USED FOR APPROVAL BY ROSEVILLE ELECTRIC. ANY DEVELOPER OR CONTRACTOR INSTALLING NON-APPROVED EQUIPMENT DOES SO AT HIS OWN RISK AND MAY FACE FUTURE EXPENSES IN CORRECTING ANY NON-APPROVED MATERIALS TO MEET CITY STANDARDS.
5. DEVELOPER SHALL INSTALL LIGHTING SYSTEM PER THE ROSEVILLE ELECTRIC JOB PRINT.

HANDHOLE W/REMOVABLE COVER. PL. 1-30A 600V FUSE HOLDER W/20 AMP FUSE. USE 1 FUSE PER HOT LEG.

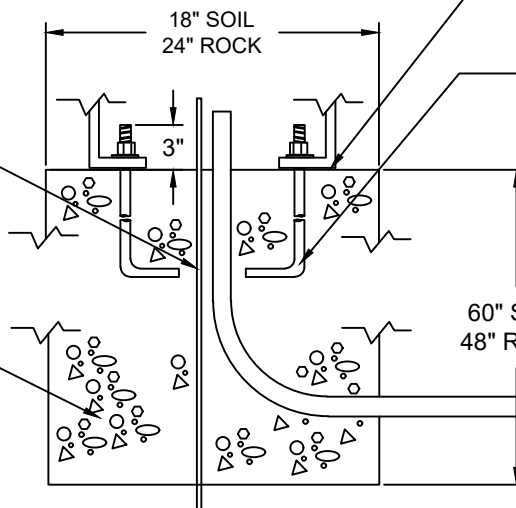
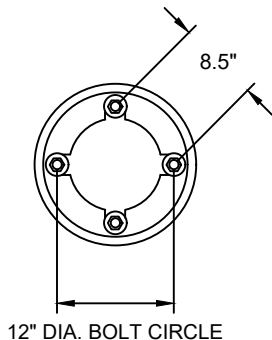
1/2"X 6' CU. GROUND ROD. BOND TO POLE W/#6 SOLID BARE COPPER.

GROUT W/NON-SHRINK GROUT BETWEEN BASE OF POLE & CONCRETE AFTER ERECTION AND LEVELING.

3/4"ØX 24" HOT DIP GALVANIZED L-TYPE ANCHOR BOLTS (4 PER POST)

(2) 1-1/2" SCH. 40 CONDUIT. (QTY. PER JOB PRINT) SEE PAGE 9.5 FOR WIRE SIZE AND QTY.

CONCRETE SHALL OBTAIN 5000 P.S.I. IN 28 DAYS.



SPEC. GROUP: SPECIFICATIONS FOR CONSTRUCTION

REV. DATE: REV. NO:

07/01/26

DECORATIVE STREET LIGHT
100-250 WATT HPS LED STANDARD

DRAWING NO.

44

CITY OF ROSEVILLE ELECTRIC DEPARTMENT **REQUIREMENTS FOR LANDSCAPE DESIGNS**

THE FOLLOWING ITEMS WILL NEED TO BE ADDRESSED WITHIN YOUR LANDSCAPE DESIGN:

1. ALL PLANS SUBMITTED TO THE CITY OF ROSEVILLE ELECTRIC DEPARTMENT SHALL INCLUDE EXISTING AND PROPOSED ELECTRIC FACILITIES, ROADWAY CENTERLINE AND ROADWAY STATIONING. THE LANDSCAPE ARCHITECT SHALL CONTACT THE ELECTRIC DEPARTMENT FOR LOCATIONS OF EXISTING AND PROPOSED FACILITIES.
2. ELECTRIC SERVICE POINT FOR IRRIGATION CONTROLLERS AND LANDSCAPE LIGHTING MUST ORIGINATE FROM A METERED SERVICE POINT AT A LOCATION TO BE DETERMINED BY THE ELECTRIC DEPARTMENT. THE DEVELOPER IS RESPONSIBLE FOR THE INSTALLATION OF ALL SERVICE FACILITIES FROM THE SERVICE POINT TO THE METERED PEDESTAL AND ITS ASSOCIATED CIRCUITS. ALL INSTALLATIONS SHALL CONFORM TO THE NATIONAL ELECTRIC CODE AS ADOPTED BY THE CITY OF ROSEVILLE.
3. SIDEWALKS SHALL BE INSTALLED TO AVOID ALL ELECTRIC FACILITIES WITH THE EXCEPTION OF SECONDARY SERVICE AND STREET LIGHT SPLICE BOXES (#9, #30 AND #36 BOXES). WHEN PLACING SIDEWALK OVER THESE FACILITIES, IT IS THE DEVELOPER'S RESPONSIBILITY TO SET THESE BOXES FLUSH WITH THE SIDEWALK SURFACE.
4. SIDEWALKS, GRASS, GROUND COVERS OR SIMILAR LANDSCAPING MAY BE PLACED ABOVE UTILITY TRENCHES WHERE REQUIRED AS LONG AS THEY DO NOT INTERFERE WITH ACCESS TO ENCLOSURES OR ABOVE GROUND EQUIPMENT.
5. NO TREES SHALL BE PLANTED DIRECTLY OVER AN UNDERGROUND JOINT UTILITY TRENCH. THE TYPICAL TRENCH CENTERLINE IS LOCATED BEHIND BACK OF CURB ALONG ROADWAY FRONTAGES.
6. TREES PLACED WITHIN P.U.E.'S THAT CONTAIN OVERHEAD ELECTRIC LINES WILL BE RESTRICTED TO A MAXIMUM HEIGHT OF 15 FEET AT MATURITY AND MAY BE PROHIBITED IN SOME LOCATIONS DUE TO SAFETY. IN ALL CASES, ADEQUATE ACCESS SHALL BE MAINTAINED FOR PERSONNEL AND EQUIPMENT TO PROVIDE ROUTINE MAINTENANCE TO EXISTING ELECTRIC FACILITIES AS DETERMINED BY THE ELECTRIC DEPARTMENT. SEE PAGE 51 FOR A LIST OF APPROVED TREES. DEVELOPERS WISHING TO INSTALL TREES NOT ON THE APPROVED LIST MUST SUBMIT A REQUEST IN WRITING FOR APPROVAL PRIOR TO INSTALLATION.
7. TREES BEING PLANTED ALONG PUBLIC ROADWAYS WHERE STREET LIGHTS ARE INSTALLED MUST BE LOCATED SO AS TO PROVIDE MINIMUM CLEARANCE FROM LIGHT STANDARDS AND MAXIMUM LIGHTING TO ROADWAYS. SEE ELECTRIC DEPARTMENT "SPECIFICATION FOR COMMERCIAL CONSTRUCTION", PAGE 50, FOR MINIMUM STREET LIGHT CLEAR AREAS.



SPEC. GROUP: SPECIFICATIONS FOR CONSTRUCTION

ELECTRIC DEPARTMENT LANDSCAPE DESIGN REQUIREMENTS

REV. DATE: REV. NO:

07/01/26

DRAWING NO.

45

CITY OF ROSEVILLE ELECTRIC DEPARTMENT REQUIREMENTS FOR LANDSCAPE DESIGNS

8. WHEN PLACING TREES, SHRUBS, WALLS, OR ANY OTHER ABOVE GROUND FACILITIES NEAR EXISTING OR PROPOSED ELECTRIC EQUIPMENT, THE FOLLOWING CLEARANCES MUST BE MAINTAINED:

<u>EQUIPMENT</u>	<u>MINIMUM CLEARANCES REQUIRED (IN FEET)</u>		
	<u>FRONT</u>	<u>SIDES</u>	<u>BACK</u>
12KV PADMOUNT SWITCHGEAR (SEE PAGE 7.2)	8	4	8
12KV PADMOUNT CAPACITOR BANK (SEE PAGE 7.2)	8	4	8
12KV JUNCTION BOX (BELOW GROUND TYPE - SEE PAGE 7.3) (ABOVE GROUND TYPE - SEE PAGE 7.3.1)	4 8	4 3	4 3
PADMOUNT TRANSFORMER (SEE PAGE 7.4)	8	3	3
MANHOLE ENTRY	8	8	8
PULL BOX, SPLICE BOX (4'X4', 3'X6', 4'X6')	4	4	4
METERED PEDESTAL	3	3	3

ALL MINIMUM CLEARANCES SHOWN ABOVE SHALL BE FLAT AND LEVEL SURFACES WITH A SLOPE NO GREATER THAN 2% TO PROVIDE A SAFE WORKING AREA FOR FIELD PERSONNEL. ONLY TURF OR LOW GROWTH GROUND COVERS LESS THAN 4 INCHES IN HEIGHT AND SUITABLE FOR WALKING ON ARE PERMITTED WITHIN THE CLEAR AREA. WHERE RETAINING WALLS ARE REQUIRED TO PROVIDE MINIMUM CLEARANCES IN AREAS WITH SEVERE GRADE CHANGES, CONTACT THE ELECTRIC DEPARTMENT FOR APPROVAL PRIOR TO INSTALLATION.

9. LANDSCAPING BEING INSTALLED AROUND ELECTRICAL EQUIPMENT SHALL BE INSTALLED TO MEET THE EXISTING EQUIPMENT GRADES WITH THE FOLLOWING EXCEPTIONS:
- A. STREET LIGHT BASES MAY BE RAISED A MAXIMUM OF 2 FEET FROM EXISTING GRADE. BEYOND 2 FEET, POLE HEIGHTS MUST BE ADJUSTED.
 - B. MANHOLE RISERS MAY BE RAISED A MAXIMUM OF 12 INCHES. ANY CHANGES TO ELECTRIC EQUIPMENT GRADES ARE THE DEVELOPER'S RESPONSIBILITY AND SHALL BE COMPLETED AT THE DEVELOPER'S EXPENSE TO ELECTRIC DEPARTMENT SPECIFICATIONS.
10. ANY CONFLICTS BETWEEN EXISTING ELECTRIC FACILITIES AND LANDSCAPING INSTALLED WILL BE RESOLVED BY THE DEVELOPER AT HIS EXPENSE TO THE SATISFACTION OF THE ELECTRIC DEPARTMENT.



SPEC. GROUP: SPECIFICATIONS FOR CONSTRUCTION

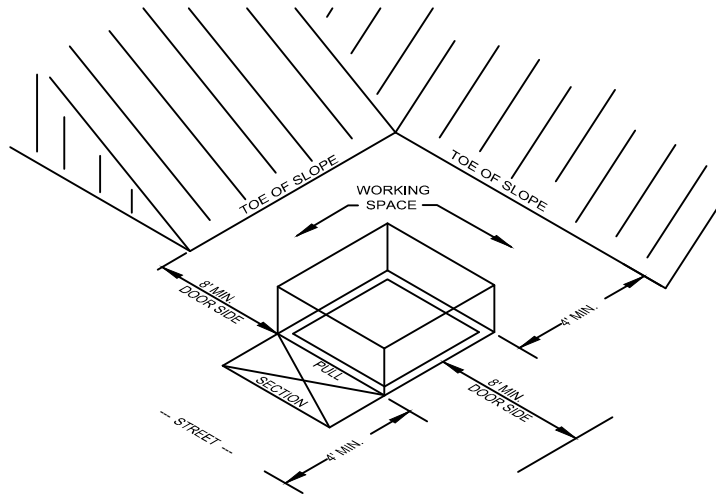
ELECTRIC DEPARTMENT LANDSCAPE DESIGN REQUIREMENTS

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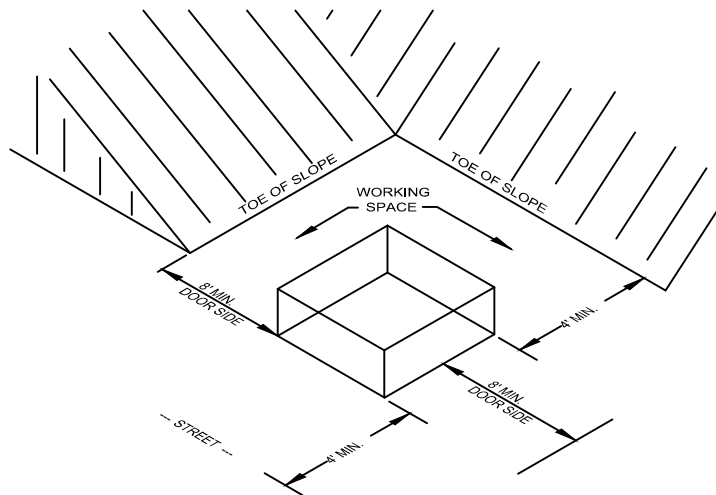
07/01/26

DRAWING NO.

46



SWITCHGEAR MOUNTED ON PAD VAULT



SWITCHGEAR OR CAPACITOR BANK MOUNTED ON CONCRETE PAD

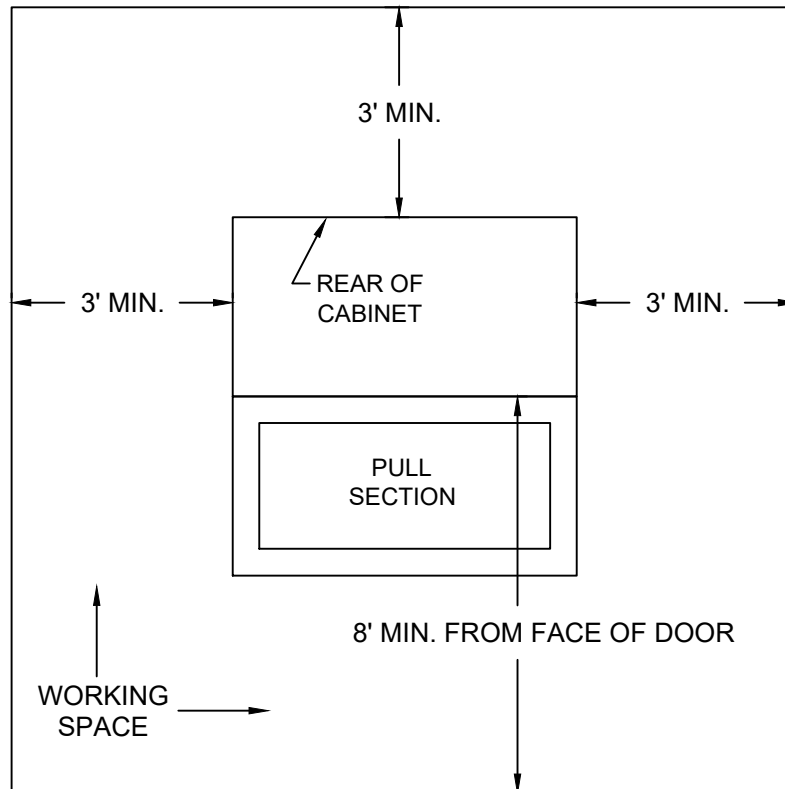
NOTES:

1. MAINTAIN AN 8' CLEAR AND LEVEL WORKING SPACE TO THE DOOR SIDES AND 4' CLEAR LEVEL SPACE TO THE NON-DOOR SIDES OF SWITCHGEAR AND CAPACITOR BANKS. TYPICAL SWITCH AND CAPACITOR BANK ORIENTATION SHOWN. SEE JOB PRINTS FOR SPECIFIC ORIENTATION.
2. NO SLOPES GREATER THAN 2% SLOPING AWAY FROM SWITCHGEAR OR CAPACITOR BANK WILL BE ALLOWED WITHIN THE REQUIRED MINIMUM CLEAR WORKING SPACE SHOWN. A RETAINING WALL MAY BE REQUIRED TO MAINTAIN THE 2% MAXIMUM GRADE.
3. VEHICULAR ACCESS FROM STREET, PARKING LOT OR OTHER HARD DRIVABLE SURFACE SHALL BE MAINTAINED.
4. PARKING BARRIERS SHALL BE INSTALLED WHENEVER SWITCHGEAR OR CAPACITOR BANKS ARE NOT PROTECTED FROM VEHICULAR TRAFFIC.

3-PHASE ABOVE GROUND J-BOX OVER 4'x4' PRECAST

WORKING CLEARANCE DETAIL

N.T.S.



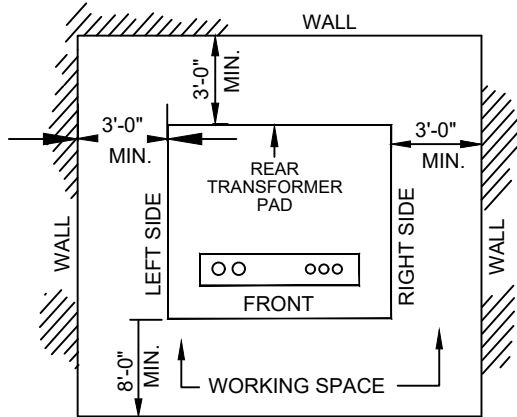
NOTES:

1. MAINTAIN A CLEAR AND LEVEL WORKING SPACE OF 3 FEET ON 3 SIDES AND 8 FEET 1. IN FRONT OF DOOR OF JUNCTION BOX AS SHOWN.
2. NO SLOPES GREATER THAN 2% SLOPING AWAY FROM BOX WILL BE ALLOWED WITHIN THE REQUIRED MINIMUM CLEAR WORKING SPACE SHOWN. A RETAINING WALL MAY BE REQUIRED TO MAINTAIN THE 2% MAXIMUM GRADE.
3. VEHICULAR ACCESS FROM STREET, PARKING LOT OR OTHER HARD DRIVABLE SURFACE SHALL BE MAINTAINED.
4. JUNCTION BOX PULL SECTION LID SHALL BE INSTALLED TO ONE (1) TO TWO (2) INCHES ABOVE FINAL GRADE.

TRANSFORMER WORKING CLEARANCE DETAIL

N.T.S.

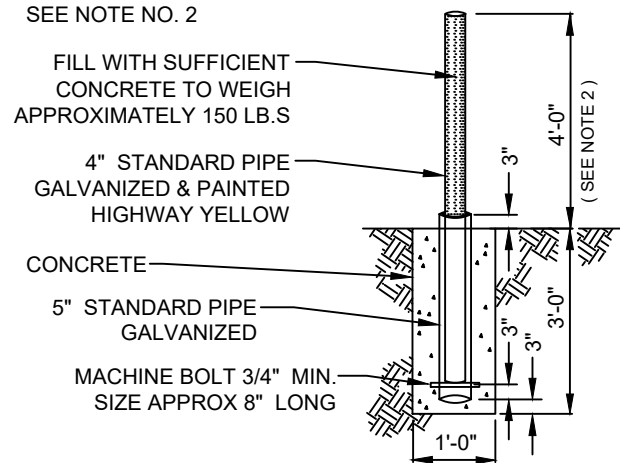
FIGURE NO. 1
MINIMUM TRANSFORMER
CLEARANCE REQUIREMENTS



NOTES:

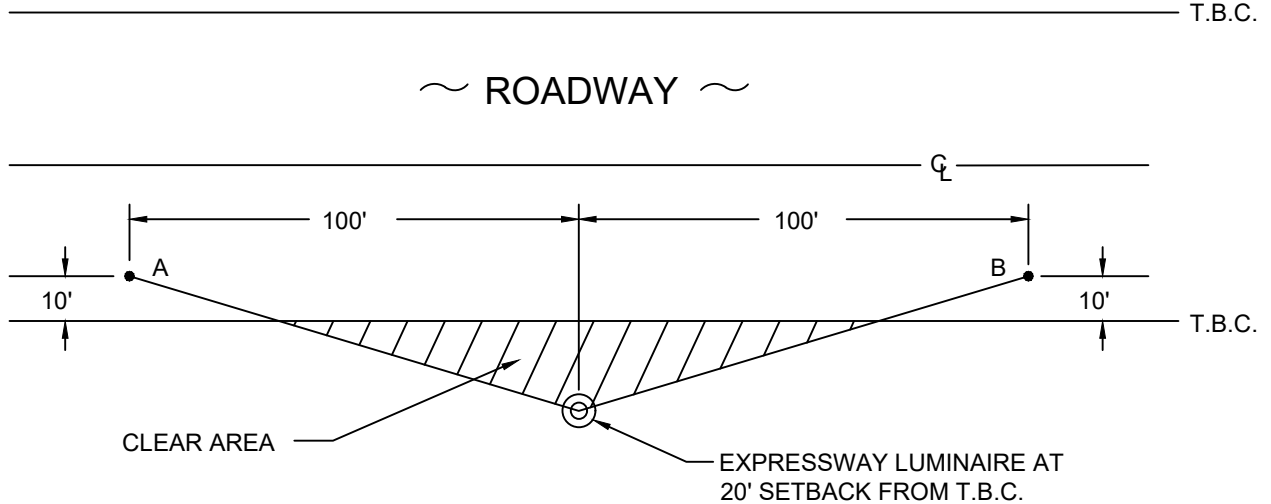
1. THE CONCRETE PAD SHOULD BE LOCATED SO THAT ITS ASSOCIATED TRANSFORMER WILL BE THREE FEET MINIMUM FROM THE SIDE OF ANY BUILDING WALL. IF THE WALL IS FIREPROOF, THE MINIMUM CLEARANCE CAN BE REDUCED TO TWO FEET. AT LEAST EIGHT FEET OF CLEAR SPACE SHALL BE PROVIDED IN FRONT OF PAD TO ALLOW COMPLETE OPENING OF TRANSFORMER CABINET DOORS AND ALLOW CITY PERSONNEL SUFFICIENT WORKING ROOM FOR HOT STICK WORK. FIGURE NO. 1, SHOWS THE PREFERRED LOCATION OF A TRANSFORMER PAD WITH REFERENCE TO OTHER CONSTRUCTION.
2. IF A PAD-MOUNTED TRANSFORMER CAN NOT BE LOCATED AWAY FROM VEHICULAR TRAFFIC, THE CUSTOMER SHALL PROVIDE SUITABLE BARRIERS FOR THE PROTECTION OF THE TRANSFORMER. ROSEVILLE ELECTRIC DEPARTMENT SHALL DETERMINE THE TYPE, SIZE AND NUMBER OF ANY SUCH BARRIER(S) REQUIRED. A REMOVABLE TYPE POST IS SHOWN IN FIGURE NO. 2.
3. IF A PAD-MOUNTED TRANSFORMER IS TO BE INSTALLED UNDER A ROOF, AT LEAST 5 FEET OF HEAD ROOM SHALL BE PROVIDED FOR LIFTING OF THE TRANSFORMER. CONTACT ROSEVILLE ELECTRIC DEPARTMENT FOR EACH PARTICULAR CASE.
4. IF THE CUSTOMER WISHES TO INSTALL A DECORATIVE WALL TO HIDE THE TRANSFORMER FROM PUBLIC VIEW, THE REQUIREMENT SHALL BE IN ACCORDANCE WITH NOTE 1 AND THAT ADDITIONAL AIR SPACE BE REQUIRED FOR SUFFICIENT AIR CIRCULATION AS DETERMINED BY THE ROSEVILLE ELECTRIC DEPARTMENT. WALLS ARE ALLOWED ONLY ON 3 SIDES WITH OPENING AT FRONT OF TRANSFORMER, NO GATES ARE ALLOWED. VEHICULAR ACCESS FROM STREET, PARKING LOT OR HARD DRIVABLE SURFACE SHALL BE MAINTAINED.
5. NO SLOPES GREATER THAN 2% SLOPING AWAY FROM TRANSFORMER PAD WILL BE ALLOWED WITHIN THE REQUIRED MINIMUM CLEAR WORKING SPACE SHOWN. A RETAINING WALL MAY BE REQUIRED TO MAINTAIN THE 2% MAXIMUM GRADE.

FIGURE NO. 2
REMOVABLE POST DETAIL



STREETLIGHT WORKING CLEARANCE DETAIL

N.T.S.



NOTES:

1. NO PLANTS, SHRUBS OR TREES WHICH GROW TO A HEIGHT GREATER THAN 4 FEET AT MATURITY SHALL BE PLANTED IN THE CLEAR AREA SHOWN ABOVE.
2. TO DETERMINE THE CLEAR AREA REQUIRED FOR ANY STREET LIGHT, PROCEED AS FOLLOWS:
 - A. FROM A POINT LOCATED AT TOP BACK OF CURB WHERE STREET LIGHT IS LOCATED, GO 100' ALONG ROADWAY TO THE RIGHT AND LEFT AND LOCATE POINTS A & B AT A DISTANCE OF 10' INTO THE ROADWAY FROM T.B.C.
 - B. DRAW A STRAIGHT LINE FROM THE STREET LIGHT LOCATION TO POINTS A & B.
 - C. THE AREA BETWEEN THE STREET LIGHT AND T.B.C. ON ROAD SIDE OF LINE DESCRIBED ABOVE IS THE CLEAR AREA.
3. TREES PLANTED OUTSIDE THE CLEAR AREA SHOULD HAVE NO MORE THAN 20% OF THEIR CANOPY PROJECTED TO ENCROACH WITHIN THE CLEAR AREA AT MATURITY. THIS 20% ENCROACHMENT IS BASED ON THE DIAMETER OF THE TREES CANOPY AT MATURITY.

RECOMMENDED TREES AND SHRUBS FOR UNDER POWERLINES

COMMON NAME BOTANICAL NAME	TYPE	MAX HEIGHT	MAX SPREAD	FEATURES
Hydrangea <i>Hydrangea paniculata</i>	DECIDUOUS	15'	10'	6"-10" FLOWER CLUSTERS IN SUMMER, RAPID GROWTH.
Indian Hawthorn <i>Raphiolepis indica</i> <i>'Majestic Beauty'</i>	EVERGREEN	15'	8'	MODERATE-SLOW GROWING, FLOWERS IN APRIL.
Western Redbud <i>Cercis occidentalis</i>	DECIDUOUS	15'	15'	CALIFORNIA NATIVE, BUSHY, SHOWY SPRING BLOOMS.
Smoke Tree <i>Cotinus coggygria</i>	DECIDUOUS	12'	12'	UNUSUAL FLOWERS RESEMBLE SMOKE PUFFS, MODERATE GROWTH.
Podocarpus <i>Podocarpaceae macrophyllus maki</i>	EVERGREEN	10'	10'	SLOW GROWING, NARROW LEAVES, GOOD SCREEN TREE.
Xylosma <i>Xylosma congestum</i>	DECIDUOUS/ EVERGREEN	10'	10'	WELL ESTABLISHED PLANTS USUALLY EVERGREEN.



SPEC. GROUP: SPECIFICATIONS FOR CONSTRUCTION

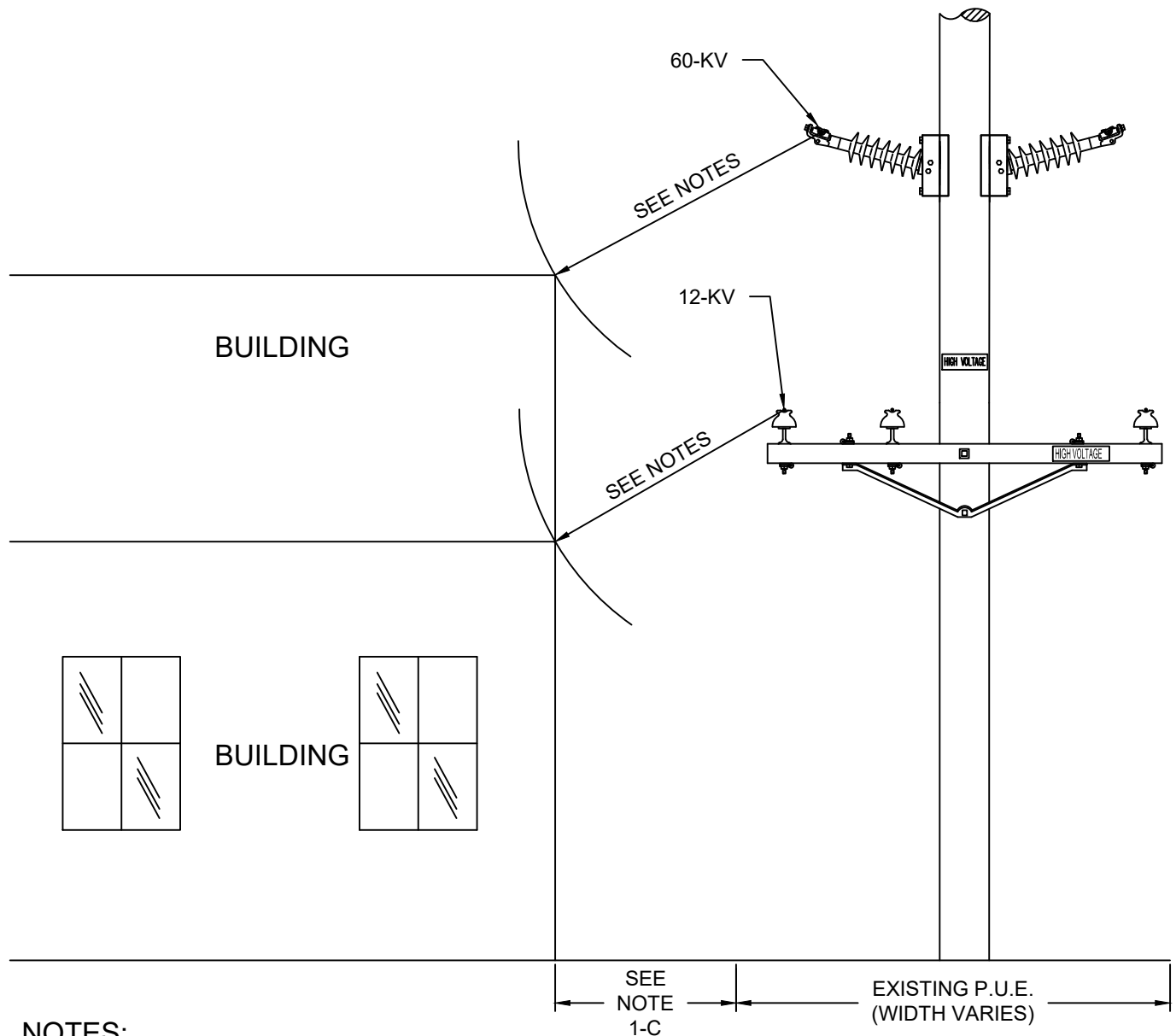
RECOMMENDED TREES AND SHRUBS FOR UNDER POWERLINES

REV. DATE: REV. NO:

07/01/26

DRAWING NO.

51



NOTES:

1. ALL BUILDINGS AND/OR STRUCTURES MUST BE CONSTRUCTED IN SUCH A MANNER TO MAINTAIN A MINIMUM CLEARANCE OF 15' FROM ALL EXISTING OR PROPOSED ROSEVILLE ELECTRIC OVERHEAD POWER LINES. THIS CLEARANCE WILL BE MEASURED TO THE CONDUCTOR AT MAXIMUM SAG AND SWAY. ROSEVILLE ELECTRIC ENGINEERING DEPARTMENT WILL PROVIDE THE CALCULATIONS NECESSARY TO OBTAIN THE MAXIMUM SAG AND SWAY OF THE CONDUCTORS. THIS REQUIRED CLEARANCE CAN BE OBTAINED BY ANY OF THE FOLLOWING AT THE DEVELOPER'S EXPENSE:
 - A. RAISE THE POWER LINES BY SETTING NEW POWER POLE(S).
 - B. PLACE A NEW POLE MID-SPAN TO MINIMIZE THE SWAY OF THE CONDUCTOR.
 - C. LOCATE THE BUILDING TO OBTAIN THE 15' REQUIRED CLEARANCE.
 - D. UNDERGROUND THE 12KV HIGH-VOLTAGE LINES PER ROSEVILLE ELECTRIC DESIGN.



SPEC. GROUP: SPECIFICATIONS FOR CONSTRUCTION

CLEARANCE REQUIREMENTS FOR OVERHEAD
CONDUCTORS IN PROXIMITY TO BUILDINGS

REV. DATE: REV. NO:

07/01/26

DRAWING NO.

52