

INDEX OF SHEETS

SHEET NO.	
1	TITLE PAGE & SUMMARY OF QUANTITIES
2 - 5	ROADWAY LIGHTING PLANS

STANDARD PLANS

914-R6	PULL BOX DETAIL
920-R5	(2 SHEETS) TRAFFIC CONTROL, CONSTRUCTION AND MAINTENANCE
921-R5	(2 SHEETS) TRAFFIC CONTROL, CONSTRUCTION AND MAINTENANCE

**STATE OF NEBRASKA
DEPARTMENT OF ROADS**

**PLANS FOR CONSTRUCTION
CAMBRIDGE WEST
LIGHTING
RED WILLOW COUNTY**



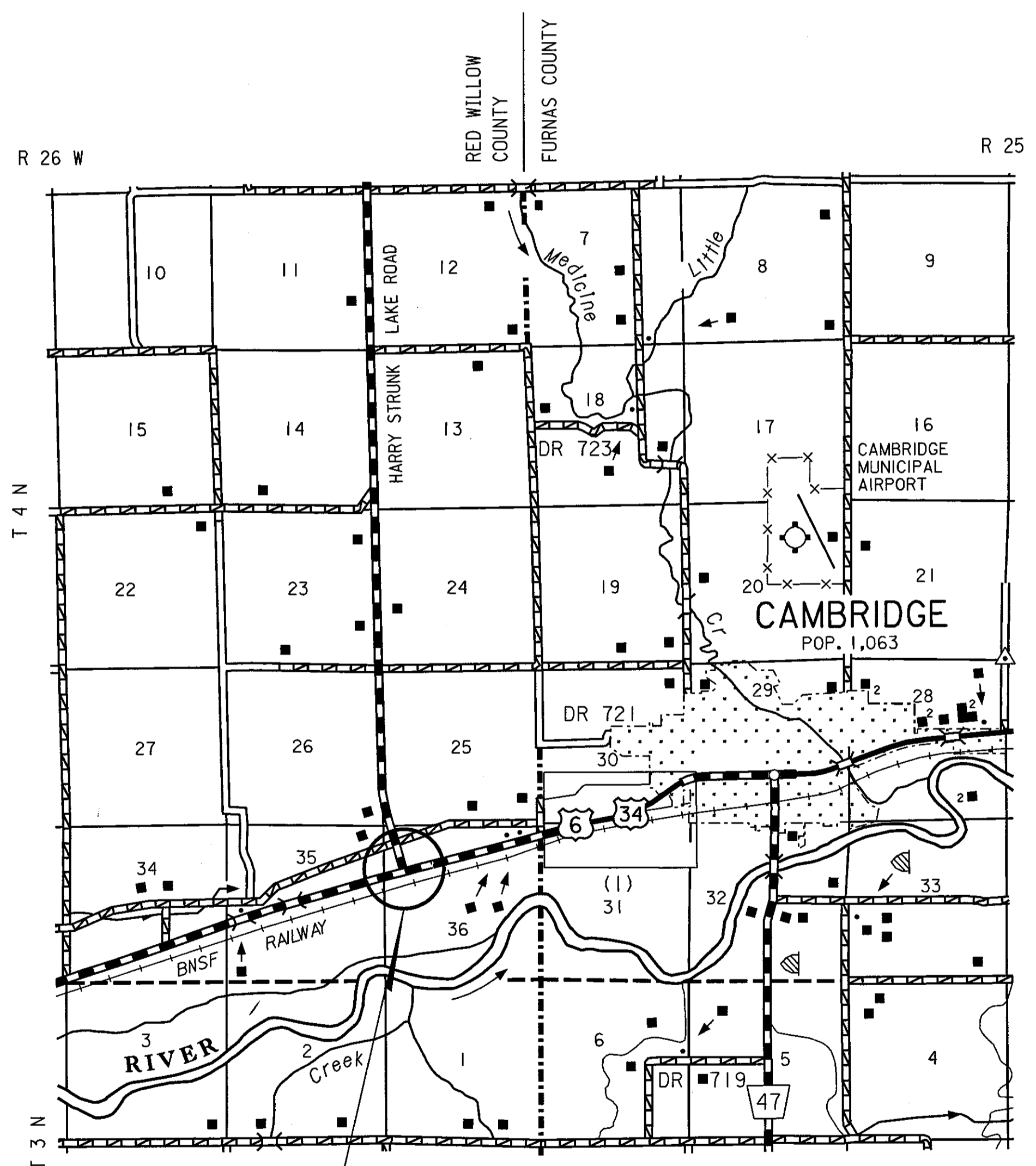
PROJECT NO.	SHEET NO.
ELEC-6-2(1040)	1
▲ CONTROL NO.	71174
▲ CONTROL NO.	
■ CONTROL NO.	

THE 2007 EDITION OF THE NEBRASKA STANDARD SPECIFICATIONS AND THE SPECIAL PROVISIONS APPLY TO THIS PROJECT.

SUMMARY OF QUANTITIES

**ELECTRICAL ITEMS
GROUP 8B**

ITEM	QUANTITY	UNITS
BARRICADE, TYPE II	125.000	BDAY
BARRICADE, TYPE III	26.000	BDAY
TEMPORARY SIGN DAY	10.000	EACH
SIGN DAY	221.000	EACH
CONTRACTOR FURNISHED SIGN DAY	10.000	EACH
FLAGGING	10.000	DAY
MOBILIZATION	1.000	LS
PULL BOX, TYPE PB-5	1.000	EACH
STREET LIGHTING UNIT, TYPE SL-BT-40-12-0.25	3.000	EACH
LIGHTING CONTROL CENTER, TYPE D	1.000	EACH
1 1/2-INCH CONDUIT IN TRENCH	364.000	LF
1 1/2-INCH CONDUIT, JACKED	72.000	LF
STREET LIGHTING CABLE, NO. 6 BARE	436.000	LF
STREET LIGHTING CABLE, NO. 6 USE	872.000	LF

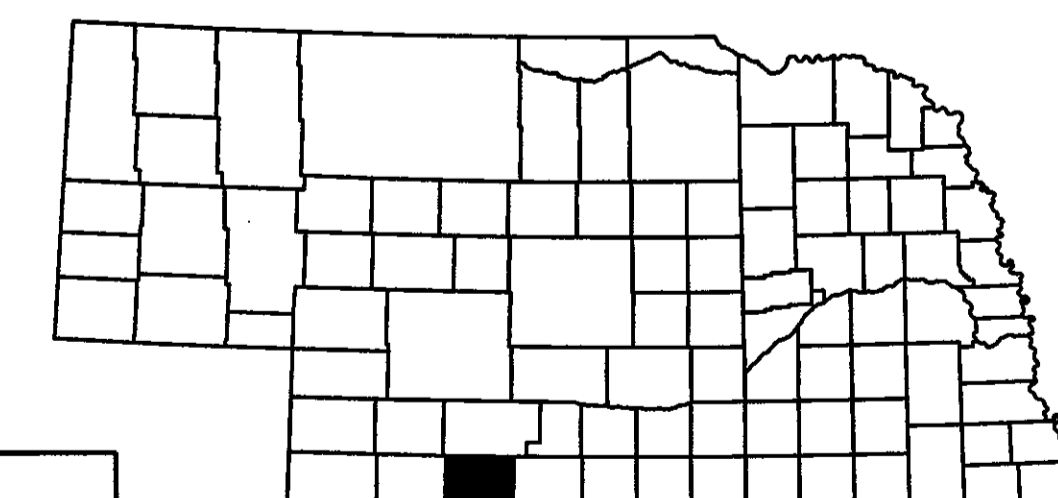


THE WORK ON THIS PROJECT CONSISTS OF GROUPS

8B-ELECTRICAL

▲ GROUPS 8B ARE INCLUDED
IN THE LETTING OF JUNE 27, 2013
▲ GROUPS _____ ARE INCLUDED
IN THE LETTING OF _____
■ GROUPS _____ ARE INCLUDED
IN THE LETTING OF _____

DESIGN DESIGNATION
MAINTENANCE
TRAFFIC
YEAR: 2013
ADT: 2,885



CONVENTIONAL SIGNS

FENCE R.O.W. OR WIRE	
GUARDRAIL	
TRAVELED WAY	
DIKE	
CULVERT	
POWER POLE	
TELEPHONE POLE	
MAILBOX	
RAILROAD TRACKS	
MARSH	
TREE - CONIFEROUS	
TREE - DECIDUOUS	

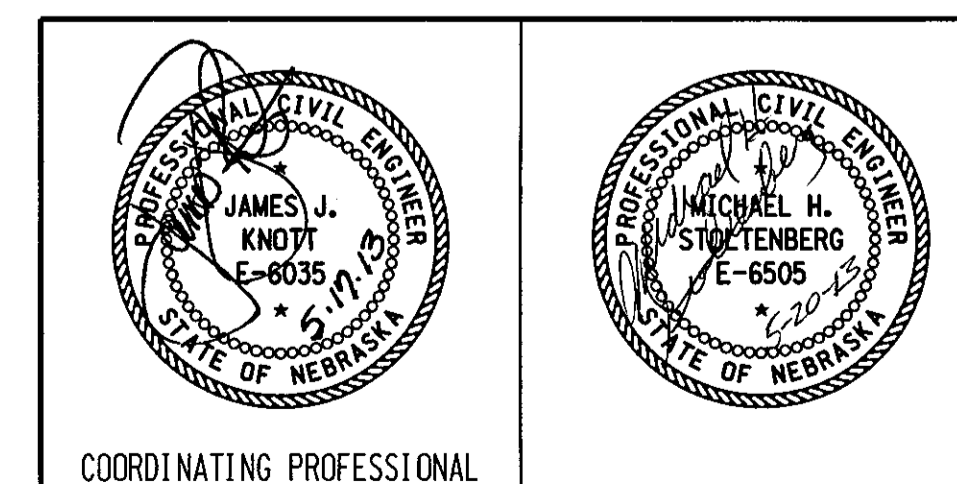
R.O.W. LEGEND

NEW CONTROLLED ACCESS	
PREVIOUS CONTROLLED ACCESS	
LIMITS OF CONSTRUCTION	
PREVIOUS R.O.W.	
NEW R.O.W.	
EXISTING PERMANENT EASEMENT	
TEMPORARY EASEMENT	
EXCESS TAKING	
PERMANENT EASEMENT	
EXISTING RAILROAD EASEMENT	
NEW RAILROAD PERMANENT EASEMENT	
NEW RAILROAD TEMPORARY EASEMENT	

REFERENCE POST NO. 109+42 (US-6)

EXCEPTIONS: FROM STA. TO STA.

TOTAL NET LENGTH OF PROJECT: FEET MILES



COORDINATING PROFESSIONAL

CONSTRUCTION DIVISION

Computer: DRCONSTRUCT24

User: dor17005

Date: 17-MAY-2013 13:25

File: 711740pset1file.dgn
Scale: 1:100

• The locations of all aerial and underground utility facilities may not be indicated in these plans. Underground utilities, whether indicated or not will be located and flagged by the Utilities at the request of the Contractor.

No excavation will be permitted in the area of underground utility facilities until all such facilities have been located and identified to the satisfaction of all parties. The excavation must be accomplished with extreme care in order to avoid any possibility of damage to the utility facility.

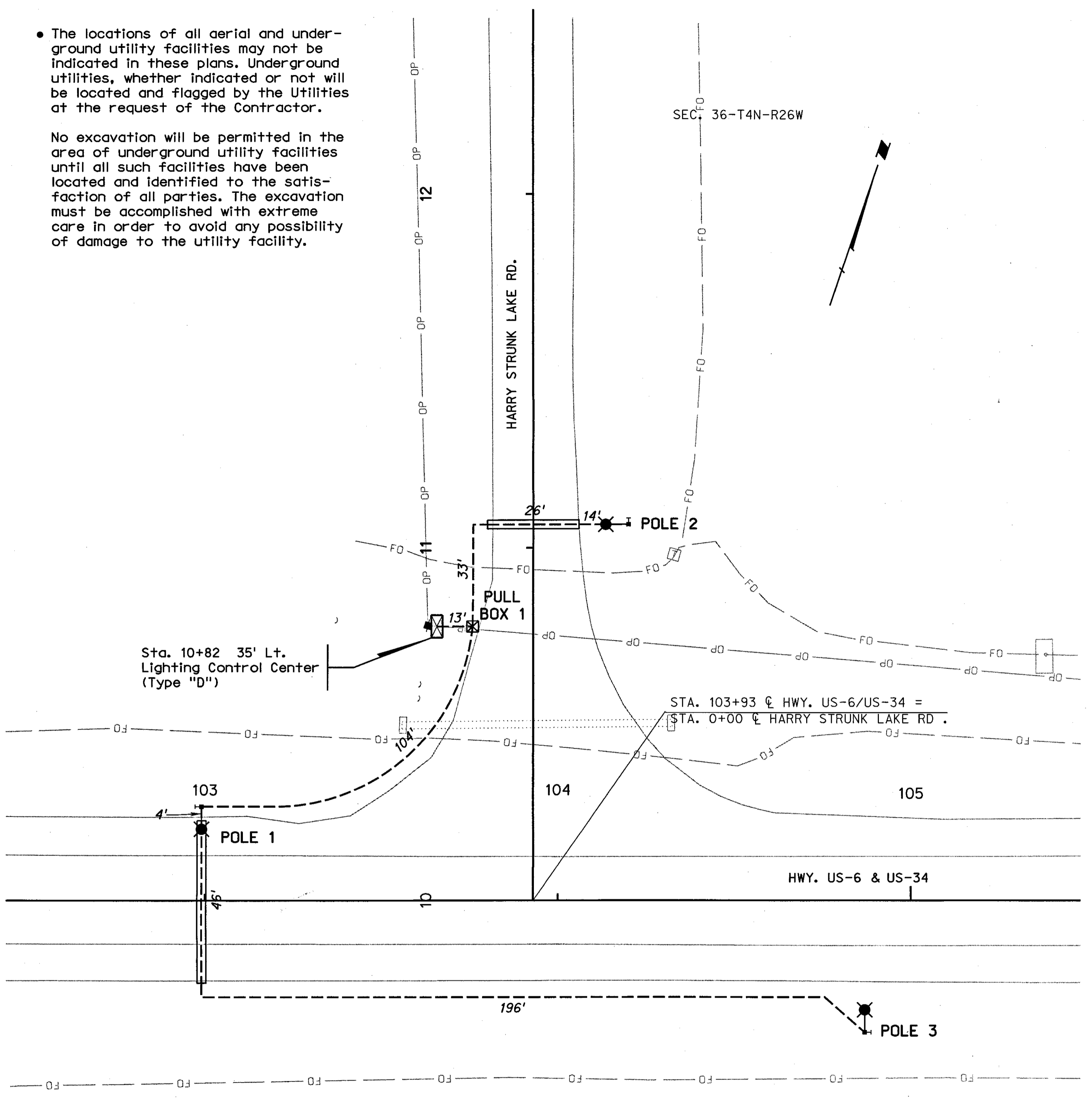
ROADWAY DESIGN DIVISION

Computer: DRDESIGN2

User: dcr13089

Date: 13-MAR-2013 13:26

File: 71174(10)1.dgn
Scale: 1:20



- LEGEND**
- LIGHTING CONTROL CENTER
 - SINGLE LIGHTING UNIT
 - PULL BOX
 - EXISTING POWER POLE
 - CONDUIT IN TRENCH
 - CONDUIT JACKED
 - EXISTING OVERHEAD POWER LINE
 - FIBER OPTIC LINE

SEC. 36-T4N-R26W

JCT. HWY. US-34/US-6 & HARRY STRUNK LAKE RD.

LIGHTING UNIT SCHEDULE

UNIT NO.	STATION	TYPE	"W"	REMARKS
1	102+99 - 27' LT.	SL-BT-40-12-0.25	15	☉ HWY. US-6/US-34
2	11+07 - 27' RT.	SL-BT-40-12-0.25	15	☉ HARRY STRUNK LAKE RD.
3	104+87 - 27' RT.	SL-BT-40-12-0.25	15	☉ HWY. US-6/US-34

PULL BOX SCHEDULE

UNIT NO.	STATION	TYPE	REMARKS
1	10+78 - 17' Lt.	PB-5	☉ HARRY STRUNK LAKE RD.

LAMP SCHEDULE

UNIT NO.	WATTS	TYPE	INITIAL LUMENS	RATED LIFE HRS.	REMARKS
ALL	250	HPS	27,500	24,000±	--

LUMINAIRE DATA

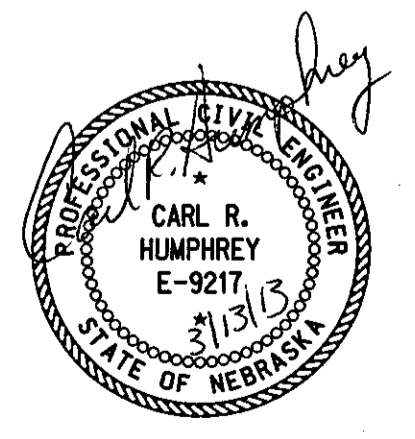
UNIT NO.	IES DESIGNATION	REMARKS
ALL	TYPE III, MED, CUTOFF	WITH PHOTO CONTROL

BALLAST RATINGS

UNIT NO.	TYPE	LINE VOLTS	ALLOWABLE LINE-VOLTS VARIATION	LINE-OPER. AMPS	LINE WATTS	ALLOWABLE LINE-VOLTS DIP	P.F. %
ALL	CWA	240	±10%	1.3	305	50-10%	65-90

SCHEDULE OF WIRING MATERIALS

- WIRE & CABLE**
- THE ELECTRICAL, MECHANICAL AND PHYSICAL PROPERTIES OF THE CONDUCTORS LISTED IN THE FOLLOWING SCHEDULE ESTABLISH THE MINIMUM ACCEPTABLE REQUIREMENTS FOR EACH OF THE LISTED APPLICATIONS. CONDUCTORS WHICH HAVE PROPERTIES THAT EXCEED THESE MINIMUM REQUIREMENTS MAY BE FURNISHED, AT THE CONTRACTOR'S OPTION, WITH THE ENGINEER'S APPROVAL. NO ADJUSTMENT IN THE CONTRACT PRICE WILL BE ALLOWED.
- UNLESS INDICATED OTHERWISE ALL CONDUCTORS SHALL BE SINGLE CONDUCTOR, STRANDED COPPER U.L. LISTED, 600V. WITH SIZE OF CONDUCTOR AND TYPE AND COLOR OF INSULATION AS LISTED BELOW.
- ONE PHASE CONDUCTOR MUST, AT THE TIME OF INSTALLATION, BE PERMANENTLY IDENTIFIED AS THE LINE 2 (RED) CONDUCTOR AT EACH END AND AT EVERY POINT WHERE THE CONDUCTOR IS ACCESSIBLE. IDENTIFICATION WILL BE ACCOMPLISHED BY (A) COLORING THE EXPOSED INSULATION RED (B) MARKING THE EXPOSED INSULATION WITH RED TAPE.
- SERVICE ENTRANCE:** TYPE USE OR XHHW, NO. 6 AWG
- EQUIPMENT GROUND:** BARE OR INSULATED, NO. 6 AWG
- POLE:** NO. 12 AWG, THW OR THWN.
- BRANCH CIRCUIT FEEDERS, INCLUDING NEUTRALS:** USE OR XHHW (IF PLACED IN CONDUIT) USE OR UF (IF DIRECT BURIED), NO. 6 AWG
- COLOR CODES:** "NEUTRAL" - WHITE OR GREY; "INSULATED EQUIPMENT GROUND" - GREEN; "LINE 1" - BLACK; "LINE 2" - RED



LIGHTING

ROADWAY DESIGN DIVISION

Computer: DRDESIGN2

User: ddr13089

Date: 13-MAR-2013 10:47

File: 711740102.dgn
Scale: 1:100

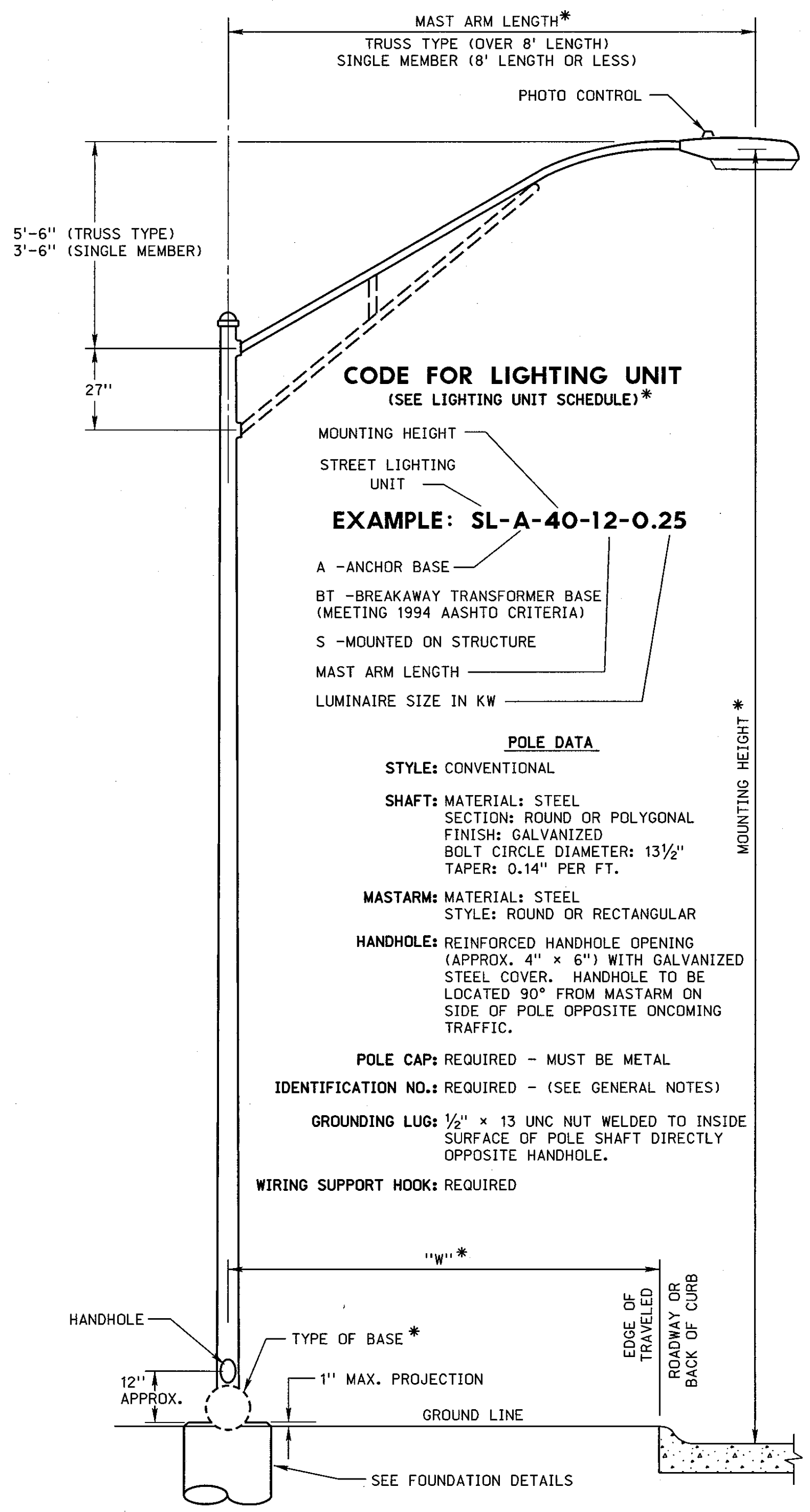
GENERAL NOTES:

- A 72 HOUR BURN IS NOT REQUIRED ON INSTALLATIONS USING HPS LUMINAIRES.
- FOR PULL BOX DETAILS, SEE STANDARD PLAN 914-R6. ALL PULL BOXES WITH METAL FRAME AND LID SHALL BE GROUNDED, UNLESS INDICATED OTHERWISE.
- ALL CONNECTIONS IN PULL BOXES WILL BE MADE USING SUBMERSIBLE SECONDARY CONNECTORS MEETING ANSI C119.1 REQUIREMENTS.
- ELECTRICAL CONNECTIONS IN POLE OR TRANSFORMER BASE SHALL BE MADE USING U.L. APPROVED, MULTI-CABLE, DUAL RATED, MECHANICAL CONNECTOR BLOCKS WITH ALLEN HEAD SET SCREWS. THE CONNECTOR BLOCK SHALL BE COMPLETELY ENCASED IN A SILICONE GEL OR FULLY SURROUNDED BY A MOLDED INSULATING COVER. CONNECTORS SHALL BE RATED 600 VOLTS. COMPRESSION TAPS AND TAPING WILL NOT BE ALLOWED.

THE CONNECTOR BLOCK MUST CONTAIN THE CORRECT NUMBER OF CABLE ENTRANCES TO ALLOW ONE CONDUCTOR PER WIRE HOLE AND MUST BE RATED FOR THE SIZE(S) AND TYPE(S) OF CABLE BEING USED. ANTI-OXIDANT COMPOUND SHALL BE USED AND PROPER PROCEDURES FOLLOWED.

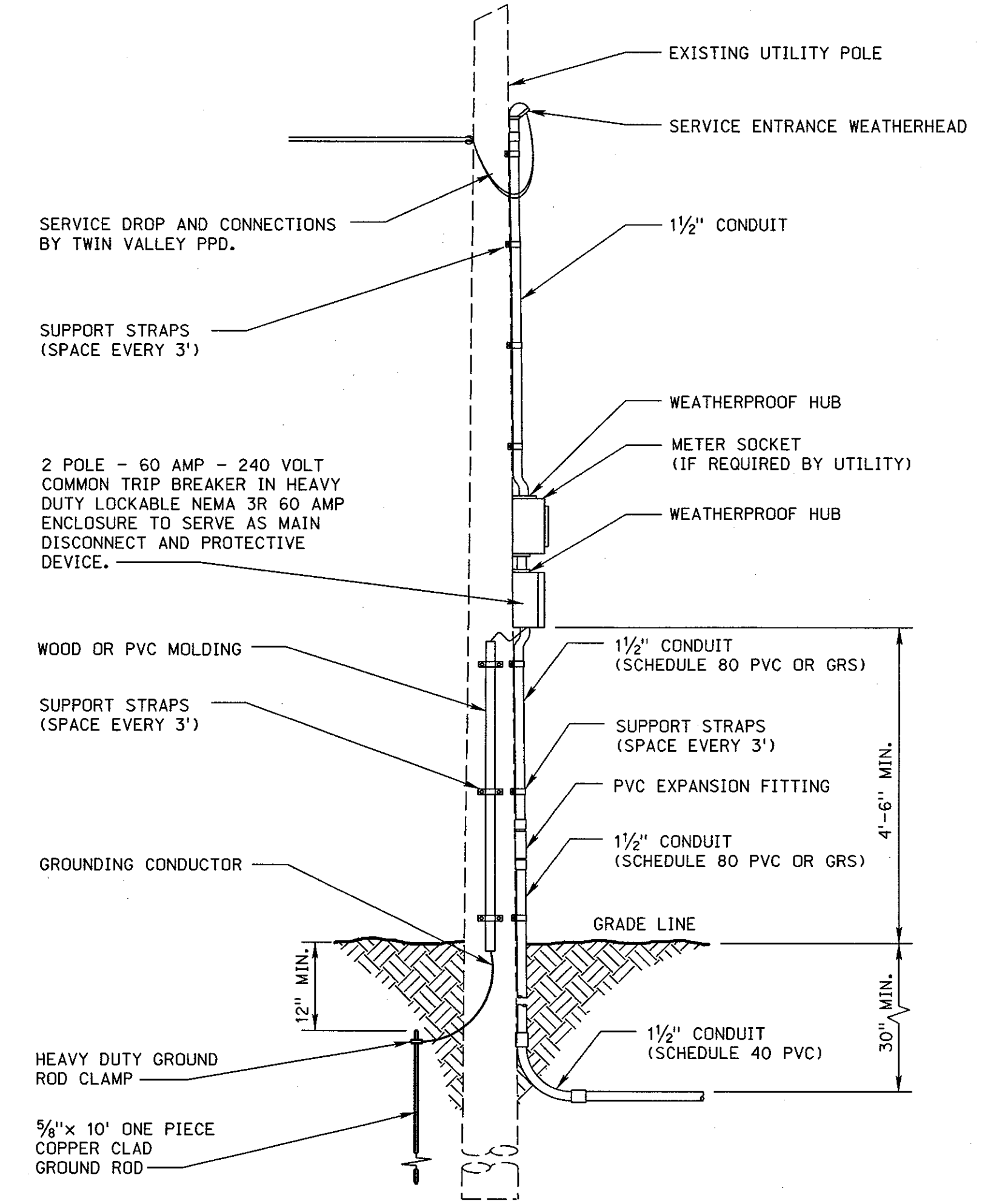
THE ELECTRICAL CONNECTION, WHEN COMPLETE, SHALL BE FULLY INSULATED TO PREVENT ACCIDENTAL CONTACT WITH LIVE COMPONENTS.
- AN EQUIPMENT GROUNDING CONDUCTOR SHALL BE BONDED:
 - TO ALL POLES OR TRANSFORMER BREAKAWAY BASES.
 - AT ALL CONTROL CENTER SERVICE LOCATIONS.
 - TO ALL METALLIC NONCURRENT CARRYING COMPONENTS.
 - TO ALL GROUND RODS.
- IN PULL BOXES, POLE BASES, JUNCTION BOXES AND CONTROL CABINETS, THE DIRECTION OF EACH CABLE RUN SHALL BE INDICATED BY ATTACHING A PERMANENT TAG OF RIGID PLASTIC OR NON-FERROUS METAL TO THE CONDUIT. TAGS SHALL BE EMBOSSED, STAMPED OR ENGRAVED WITH LETTERS 3/16" OR GREATER IN HEIGHT AND SECURED TO THE CONDUIT WITH NYLON OR PLASTIC TIES.

IN INSTANCES WHERE THE CONDUIT OR CONDUIT ENTRANCES ARE NOT VISIBLE OR ACCESSIBLE, AS IN ANCHOR BASE INSTALLATIONS, A DIRECTION TAG SHALL BE ATTACHED TO EACH CABLE.
- CONDUIT SHALL BE INSTALLED IN ACCORDANCE WITH SECTION 405 OF THE "STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION".
- ALL METALLIC AND NONMETALLIC CONDUIT SHALL BEAR THE U.L. LABEL.
- UNLESS INDICATED OTHERWISE IN THE PLANS:
 - ALL CONDUIT SHALL BE 1/2".
 - CONDUIT PLACED IN TRENCH OR UNDER THE ROADWAY SHALL BE NONMETALLIC AND OF THE FOLLOWING TYPES AS DEFINED IN THE SPECIFICATIONS: PVC, FRE, CID OR HDPE.
 - NONMETALLIC CONDUIT SURFACE MOUNTED ON STRUCTURES OR USED AS RISERS SHALL BE SCHEDULE 80 PVC.
 - METALLIC CONDUIT WHEN USED SHALL BE TYPE GRS OR IMC.
 - GALVANIZED INTERMEDIATE METAL CONDUIT (IMC) MAY BE USED IN LIEU OF GALVANIZED RIGID STEEL CONDUIT (GRS).
 - CONDUIT PLACED IN GROUND SHALL HAVE A MINIMUM EARTH COVER OF 30" UNLESS INDICATED OTHERWISE.
 - ALL UNDERGROUND CONDUIT RACEWAYS TERMINATING IN PULL BOXES, LIGHT POLE BASES, BREAKAWAY TRANSFORMER BASES, PEDESTAL BASES, LIGHTING CONTROL CENTER CABINETS OR OTHER IN GROUND OR GROUND MOUNTED ENCLOSURES, SHALL ENTER THE ENCLOSURE VERTICAL TO THE EARTH'S SURFACE. ALL CONDUIT ENDS SHALL BE EQUIPPED WITH BELLS OR BUSHINGS TO PROTECT THE CABLE THEY CARRY FROM CHAFING OR ABRASION.
- CONDUIT UNDER ROADWAY SHALL BE MEASURED FOR PAYMENT AS EXTENDING 1 FT. BEYOND THE EDGE OF THE ROADWAY SURFACE (INCLUDING SURFACED SHOULDERS).
- JACKED CONDUIT MAY BE EITHER METALLIC OR NONMETALLIC.
- TRENCHING SHALL BE KEPT A MINIMUM OF 5 FT. FROM THE TRUNK OF EXISTING TREES. JACKING MAY BE REQUIRED UNDER THE CENTER OF LARGE TREES IN LIMITED SPACE.
- ROUTING OF CONDUIT AND CABLE MAY BE ALTERED BY THE PROJECT ENGINEER, IF NECESSARY, TO SUIT FIELD CONDITIONS.
- INSTALL SPARE BENDS AS SHOWN ON PLANS. SPARE BENDS MUST BE SECURELY CAPPED OR PLUGGED AT BOTH ENDS WITH FITTINGS OF THE CORRECT SIZE AND TYPE FOR THE CONDUIT BEING USED.
- CONDUIT DRAINS ARE NOT REQUIRED.
- LIGHTING CONDUIT AND TRAFFIC SIGNAL CONDUIT MAY BE LAID IN THE SAME TRENCH.
- LUMINAIRES SHALL BE LEVELED AFTER POLE HAS BEEN INSTALLED ON FOUNDATION. LUMINAIRE MOUNTING BOLTS SHALL BE TORQUED TO MANUFACTURERS SPECIFICATIONS.
- ROADWAY LIGHTING SYSTEM MUST MEET PROJECT ENGINEERS FINAL INSPECTION. ROADWAY LIGHTING SYSTEMS ARE NOT SUBJECT TO STATE OR LOCAL ELECTRICAL INSPECTION. ELECTRICAL WORK PERFORMED ON REST AREAS OR WEIGH STATIONS WILL REQUIRE AN ELECTRICAL PERMIT AND WILL BE SUBJECT TO A FINAL INSPECTION BY THE STATE ELECTRICAL INSPECTOR.
- CONTACT UTILITY THREE WORKING DAYS PRIOR TO REQUIRING SERVICE CONNECTION OR DISCONNECT.
- GROUNDING CONNECTIONS IN PULL BOXES AND JUNCTION BOXES SHALL BE MADE USING MECHANICAL CONNECTORS SPECIFICALLY DESIGNED FOR THE PURPOSE.
- UNLESS INDICATED OTHERWISE IN THE PLANS:
 - CONVENTIONAL LIGHTING UNITS MAY BE INSTALLED USING EITHER CONCRETE OR POWER DRIVEN FOUNDATIONS.
 - ALL FOUNDATIONS USED ON A PROJECT SHALL BE OF ONE TYPE.
- A LEGIBLE POLE IDENTIFICATION NUMBER CONSISTING OF THE POLE TYPE (EXAMPLE: SL-BT-40-12) TOGETHER WITH THE POLE MANUFACTURER'S NAME AND THE DATE OF MANUFACTURE (MONTH AND YEAR) WILL BE REQUIRED ON ALL NEW LIGHT POLES. THE POLE IDENTIFICATION NUMBER SHALL BE APPLIED TO THE POLE BY EITHER OF THE FOLLOWING TWO METHODS.
 - THE TOP OF THE POLE BASE SHALL BE STAMPED OR ENGRAVED WITH THE REQUIRED INFORMATION. (PRIOR TO GALVANIZING IN THE CASE OF STEEL POLES)
 - A DURABLE METAL TAG, STAMPED WITH THE REQUIRED INFORMATION, SHALL BE SECURELY ATTACHED TO THE POLE BASE OR POLE SHAFT. THE TAG AND ITS METHOD OF ATTACHMENT MUST BE APPROVED BY THE LIGHTING ENGINEER.



T-BASE BOLT CIRCLE DESCRIPTION

MOUNTING HEIGHT	25' & 30'	35' THRU 45'	50'
TOP BOLT CIRCLE	10.0" TO 12.0"	10.5" TO 13.5"	13" TO 15 1/8"
BOTTOM BOLT CIRCLE	10.0" TO 12.0"	13" TO 15"	15" TO 17 1/4"



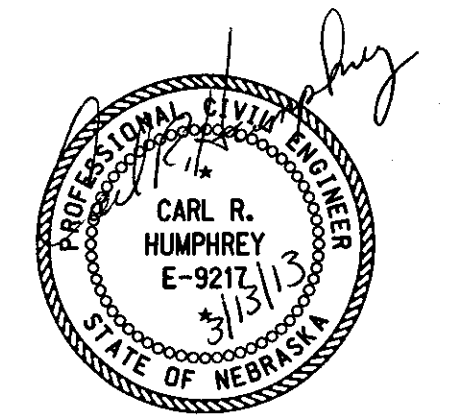
LIGHTING CONTROL CENTER, TYPE "D"

UNLESS INDICATED OTHERWISE, ALL COMPONENTS OF THE LIGHTING CONTROL CENTER INSTALLATION ARE TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR.

LIGHTING CONTROL CENTER LOCATION IS APPROXIMATE. ACTUAL LOCATION WILL BE AS DIRECTED BY THE ELECTRIC UTILITY AND PROJECT ENGINEER.

CONTACT UTILITY THREE WORKING DAYS PRIOR TO PERFORMING WORK ON THEIR POLES. RISERS AND GROUND CONDUCTORS ARE TO BE POSITIONED (HEIGHT AND QUADRANT) AS DIRECTED BY UTILITY.

ALL BOXES AND CABINETS WITH ACCESS TO ELECTRICAL COMPONENTS MUST BE PADLOCKED IMMEDIATELY AFTER INSTALLATION. CONTRACTOR SHALL PROVIDE PADLOCK DURING CONSTRUCTION PERIOD. AFTER FINAL ACCEPTANCE OF PROJECT, MAINTAINING UTILITY OR AGENCY WILL PROVIDE PADLOCK.



LIGHTING

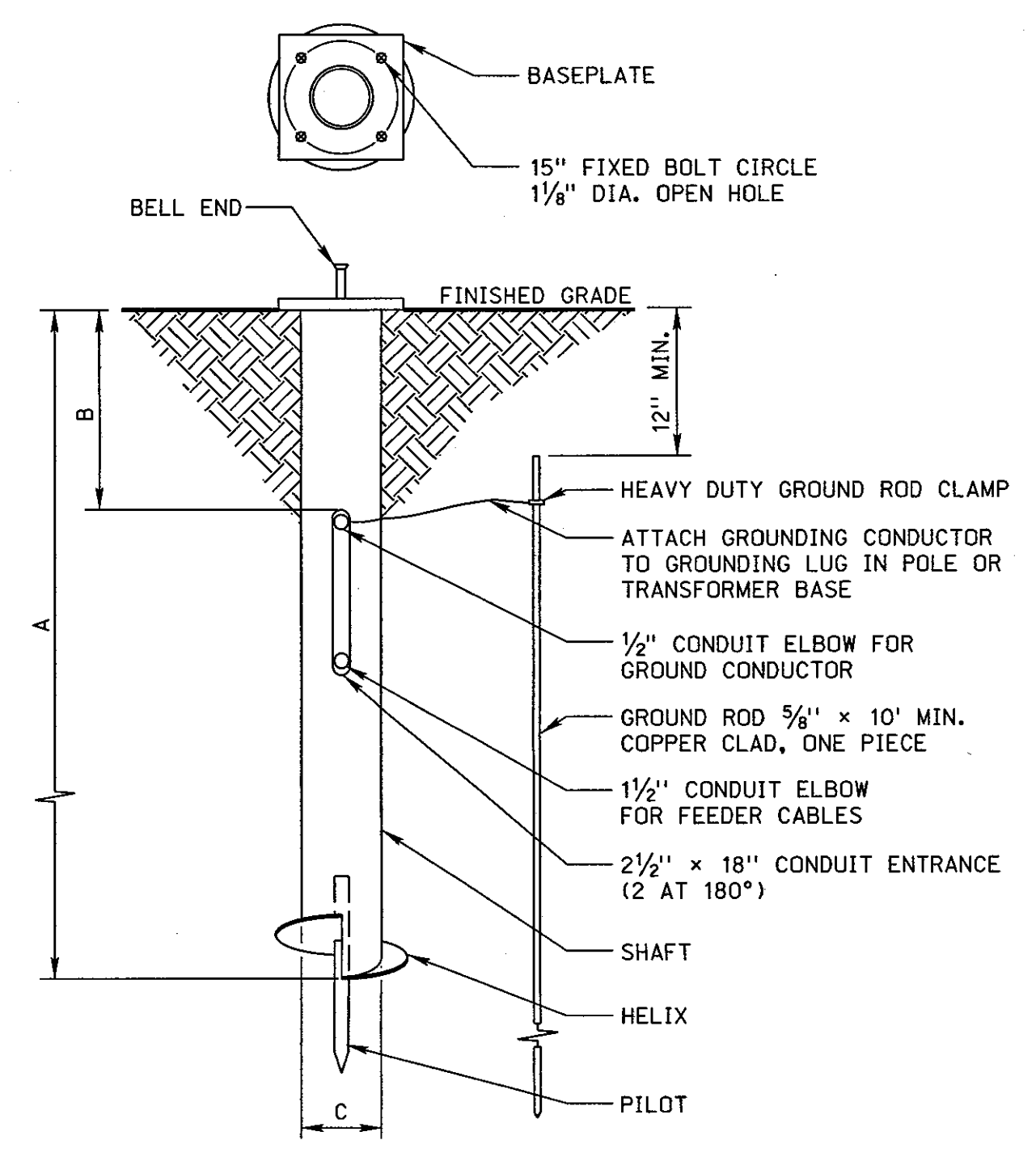
ROADWAY DESIGN DIVISION

Computer: DRDESIGN2

User: dor13089

Date: 13-MAR-2013 10:47

File: 711740103.dgn
Scale: 1:100



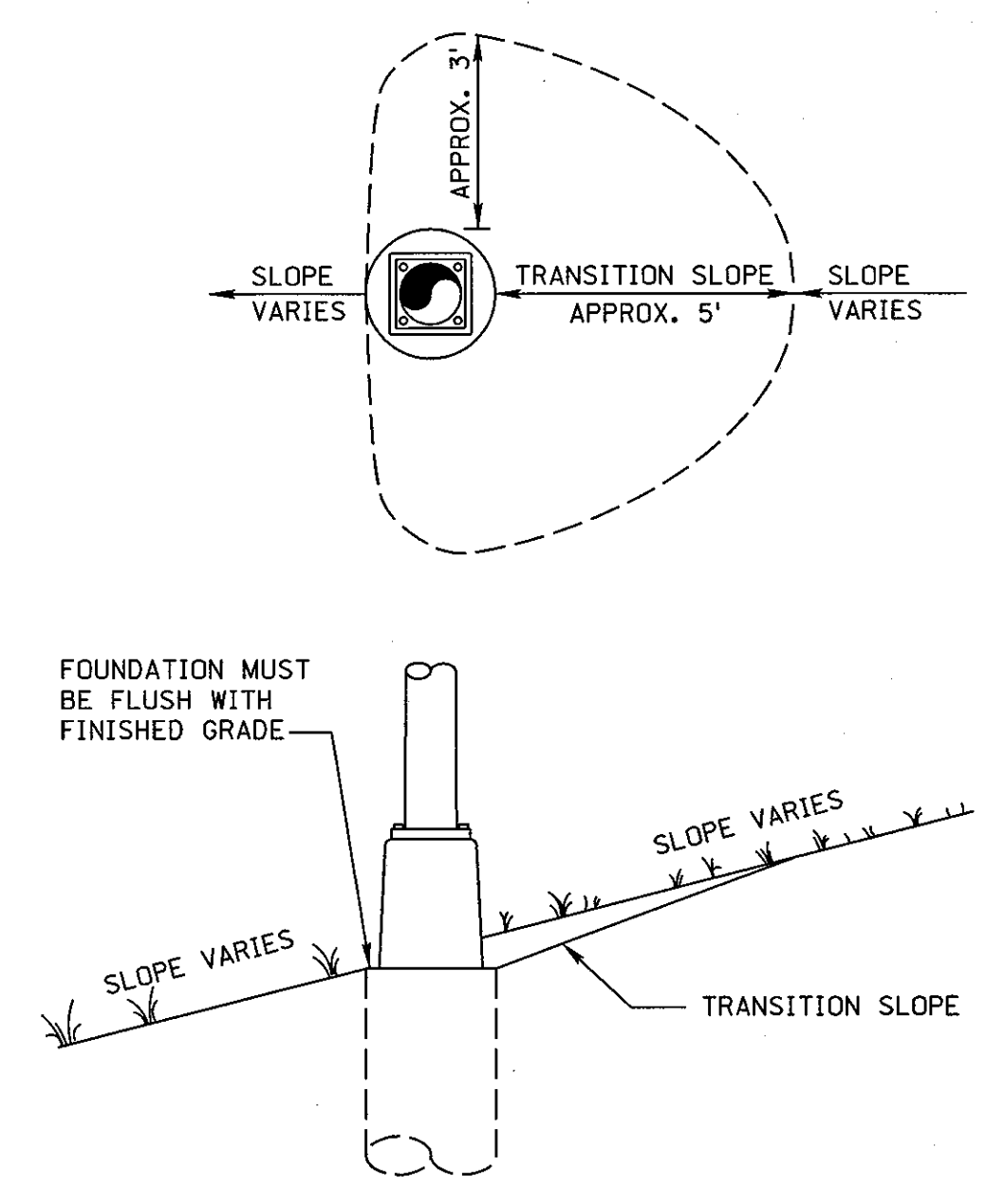
POWER INSTALLED FOUNDATION

NOTES:
FOUNDATION SHOWN IS OF A "HELIX/PILOT" DESIGN. FOUNDATIONS OF A "KEY-HOLE" DESIGN AND MEETING OR EXCEEDING ALL OTHER REQUIREMENTS ARE EQUALLY ACCEPTABLE.
FOUNDATION MUST BE INSTALLED PRIOR TO TRENCHING AND WITHOUT PILOT HOLE.
FOUNDATION MUST BE INSTALLED WITH BASEPLATE LEVEL AND FLUSH WITH FINISHED GRADE.
ANY DEVIATION FROM THE ABOVE INSTALLATION PROCEDURES MUST BE APPROVED BY THE ENGINEER.
INSTALL IN ACCORDANCE WITH THE MANUFACTURES RECOMMENDATIONS.

STREET LIGHT FOUNDATION DATA			
MOUNTING HEIGHT	A	B	C
UP TO 30'	5'-0"	1'-6"	8"
31' TO 40'	6'-0"	1'-6"	8"
41' TO 50'	7'-0"	1'-6"	8"

FOUNDATION
SHAFT: ASTM A53 SCHEDULE 20, GRADE B, OR ASTM A252, GRADE 2, 0.25 WALL THICKNESS.
BASE PLATE: ASTM A36
HELIX: ASTM A29
PILOT: ASTM 575

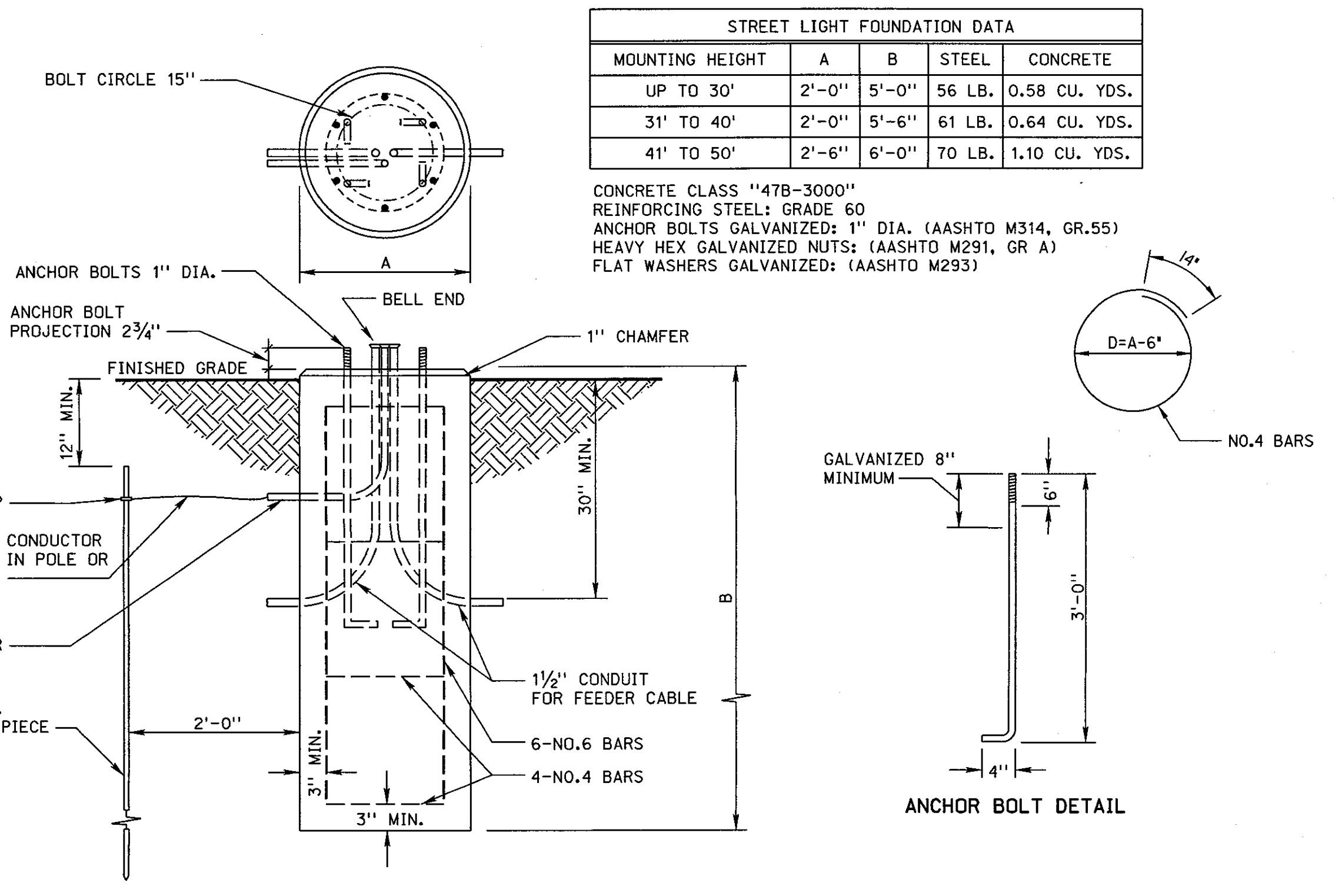
GALVANIZE FOUNDATION PER ASTM A123 AFTER FABRICATION.
HARDWARE
HEX HEAD BOLTS: ASTM A325; GALVANIZED ASTM A153
HEAVY HEX NUTS: ASTM A563 GRADE D OR DH; GALVANIZED ASTM A153
WASHERS: ASTM F436; GALVANIZED ASTM A153



LIGHT POLES LOCATED ON SLOPE

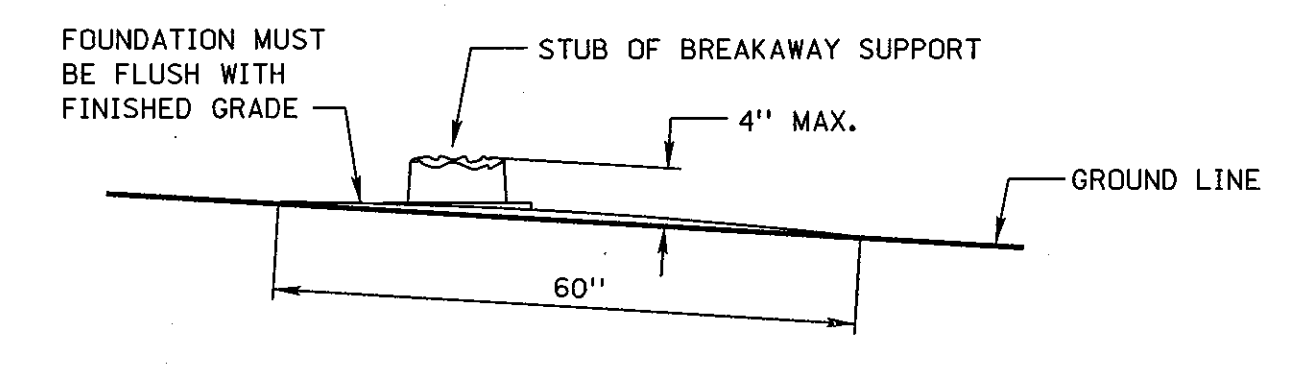
BREAK-A-WAY SUPPORTS ARE DESIGNED TO YIELD OR SEPARATE WHEN STRUCK BY AN ERRANT VEHICLE, THEREBY MINIMIZING INJURY TO THE OCCUPANTS OF THE VEHICLE AND DAMAGE TO THE VEHICLE ITSELF. IN ORDER FOR THE BREAK-A-WAY SUPPORT TO WORK AS DESIGNED, THE SUPPORT MUST BE KEPT FREE OF ALL ENCUMBRANCES AND ITS BASE MUST BE FLUSH WITH FINAL GRADE.

WHEN PERFORMING EARTHWORK IN THE VICINITY OF BREAK-A-WAY SUPPORTS, NO EMBANKMENT (BACKFILL) SHALL BE ALLOWED TO COVER ANY PORTION OF THE SUPPORT NOR SHALL THE POLE FOUNDATION (CONCRETE OR POWER) BE ALLOWED TO PROJECT ABOVE FINAL GRADE. SHOULD THE TOE OF THE BACKFILL EXTEND BEYOND THE BREAK-A-WAY SUPPORT, A TRANSITION SLOPE, CONSTRUCTED AS SHOWN IN THE PLAN DETAIL TITLED "LIGHT POLES LOCATED ON SLOPE" MUST BE PROVIDED TO PROTECT THE INTEGRITY OF THE SUPPORT.



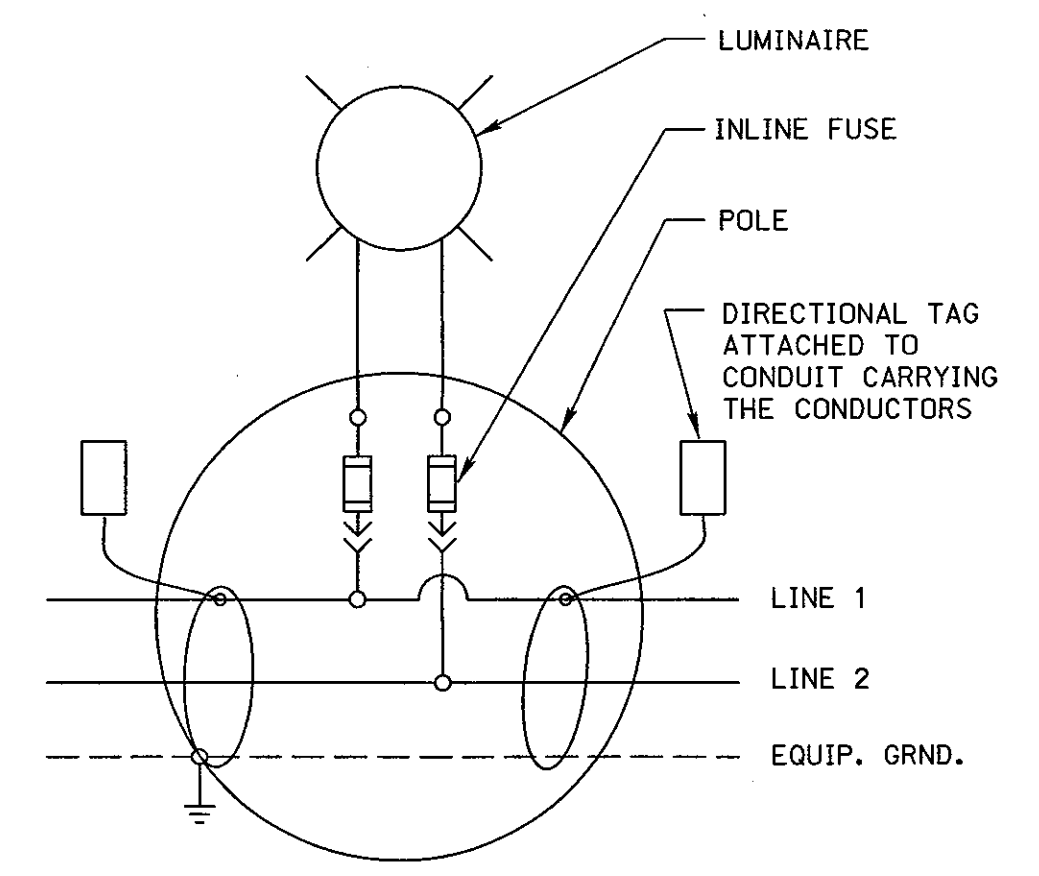
CONCRETE FOUNDATION

STREET LIGHT FOUNDATION DATA				
MOUNTING HEIGHT	A	B	STEEL	CONCRETE
UP TO 30'	2'-0"	5'-0"	56 LB.	0.58 CU. YDS.
31' TO 40'	2'-0"	5'-6"	61 LB.	0.64 CU. YDS.
41' TO 50'	2'-6"	6'-0"	70 LB.	1.10 CU. YDS.

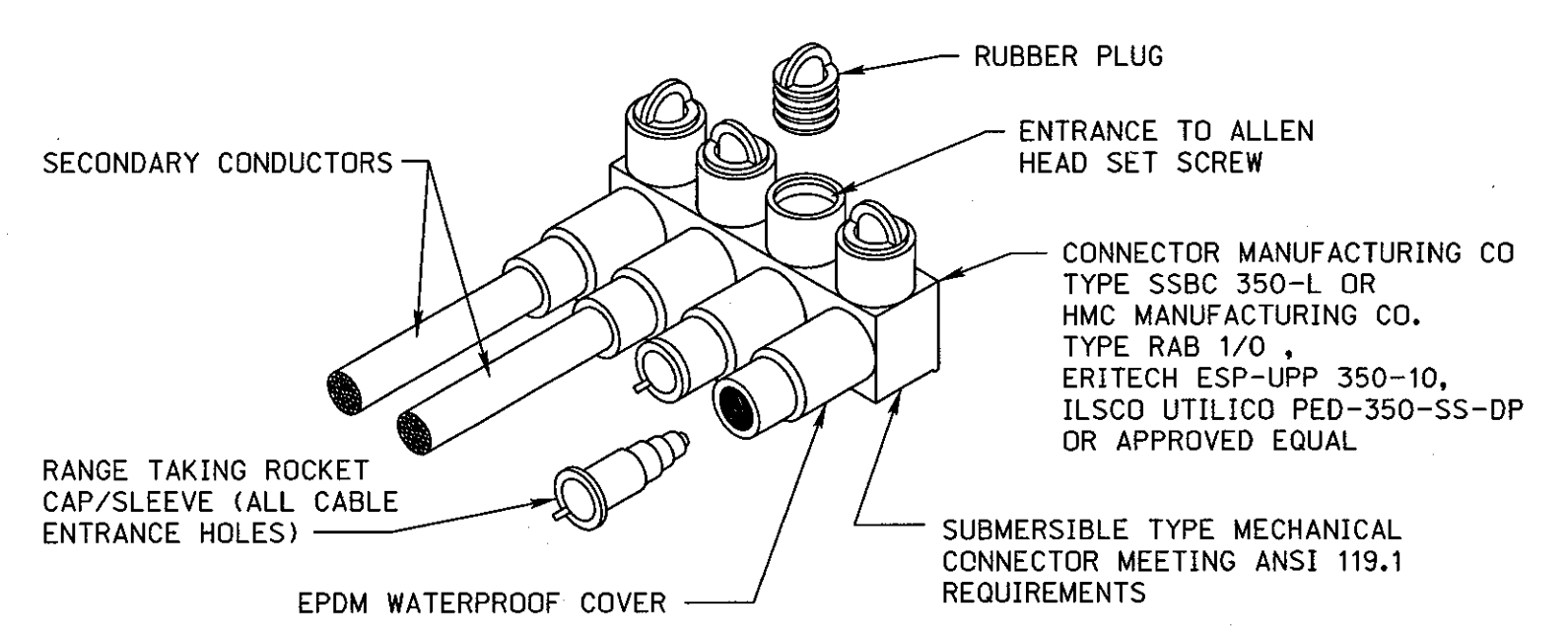


BREAKAWAY SUPPORT STUB CLEARANCE DIAGRAM

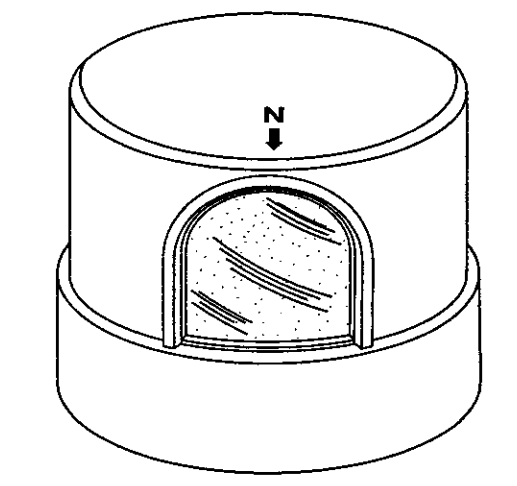
ANY SUBSTANTIAL REMAINS OF A BREAKAWAY DEVICE, AFTER BEING BROKEN AWAY, SHALL NOT PROJECT MORE THAN 4 INCHES ABOVE A 60-INCH CHORD ALIGNED RADIALLY TO THE CENTERLINE OF THE HIGHWAY AND CONNECTING ANY POINT, WITHIN THE LENGTH OF THE CHORD, ON THE GROUND SURFACE ON ONE SIDE OF THE SUPPORT TO A POINT ON THE GROUND SURFACE ON THE OTHER SIDE.



POLE WIRING SCHEMATIC (240 VOLT-2 WIRE)

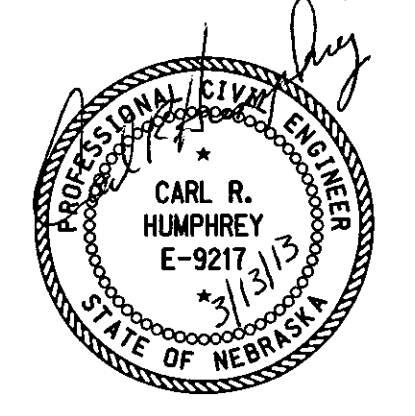


URD CONNECTOR IN PULL BOX



SOLID STATE, FAIL ON, 105-285VAC MEETING ANSI SPECIFICATIONS. FURNISH AREA LIGHTING RESEARCH, INC. MODEL 55T-PV, PRECISION SERIES ECDV-AP-TD OR APPROVED EQUAL

PHOTO CONTROL



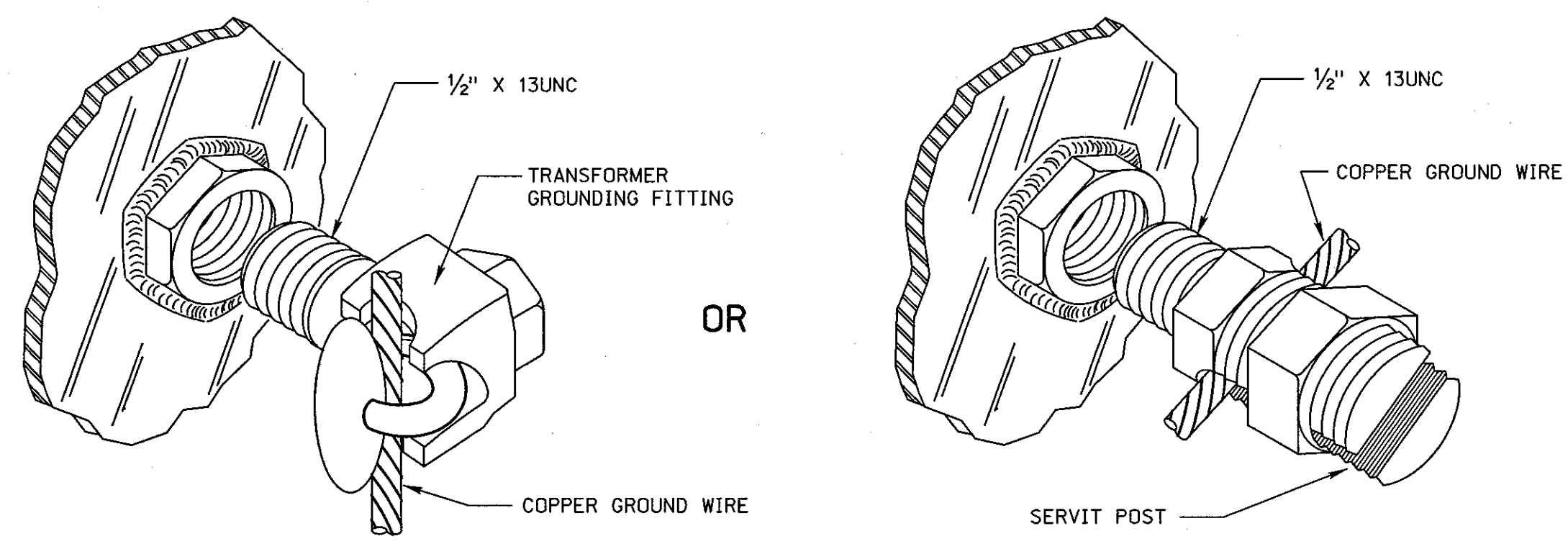
ROADWAY DESIGN DIVISION

Computer: DRDESIGN25

User: dor13089

Date: 13-MAR-2013 10:47

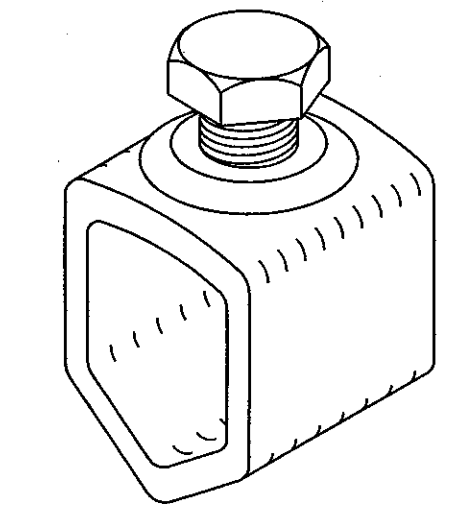
File: 711740104.dgn
Scale: 1:100



CONNECTOR MANUF. CO. TGC2 OR
ERITECH SN250N OR
BLACKBURN TTC3 OR
BURNDY EOC632C OR
APPROVED EQUAL

ERITECH SSP5 OR
BURNDY KC22B2 OR
APPROVED EQUAL

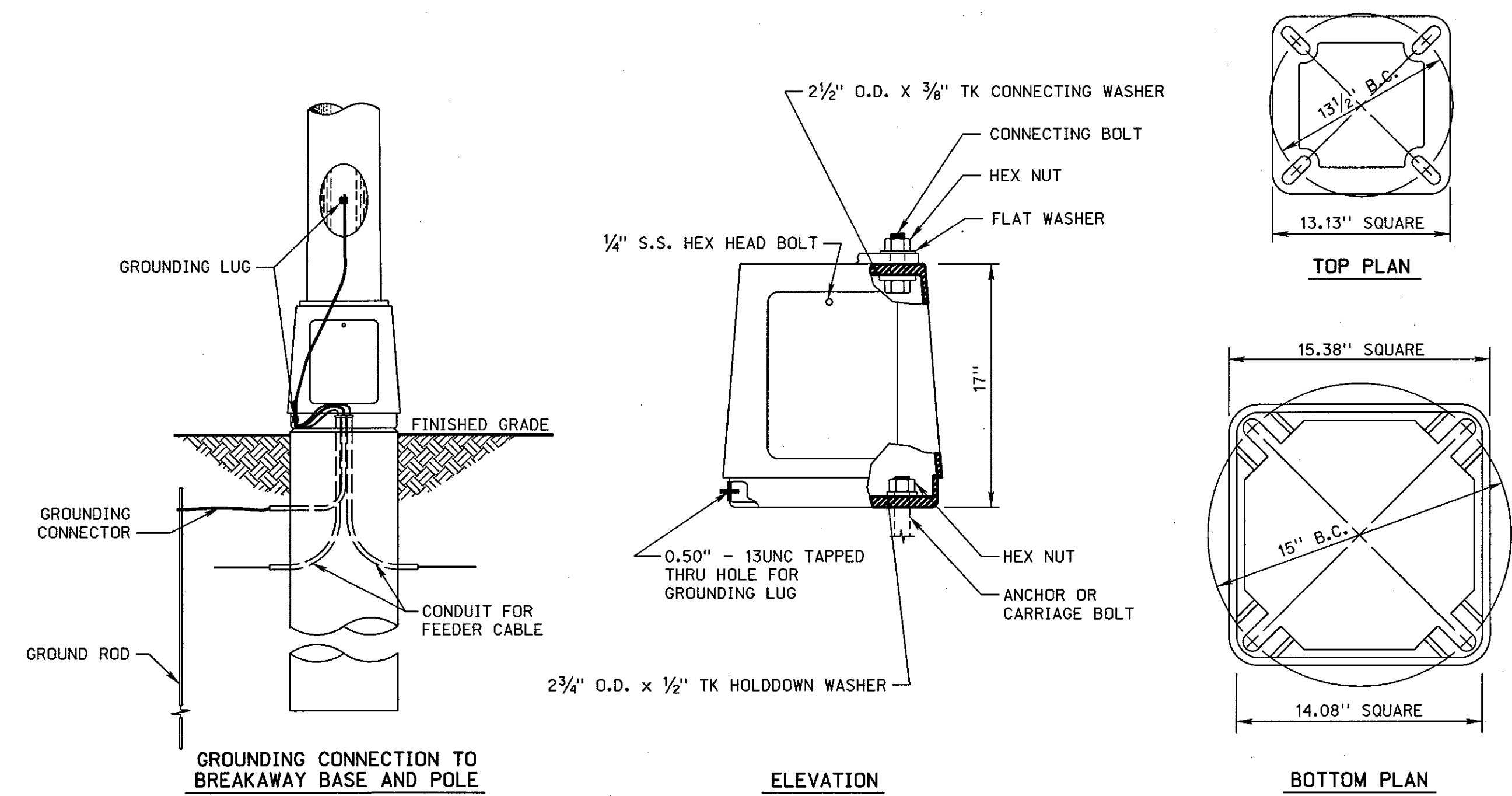
NOTE:
(GROUND ROD)
ERITECH 615800 OR
BLACKBURN 6260 OR
APPROVED EQUAL



CONNECTOR MANUF. CO. WB585-WB58 OR
ERITECH HDC 58-HD58R OR
BLACKBURN JAB58H OR
BURNDY GKP635 OR
APPROVED EQUAL

POLE GROUNDING CONNECTORS

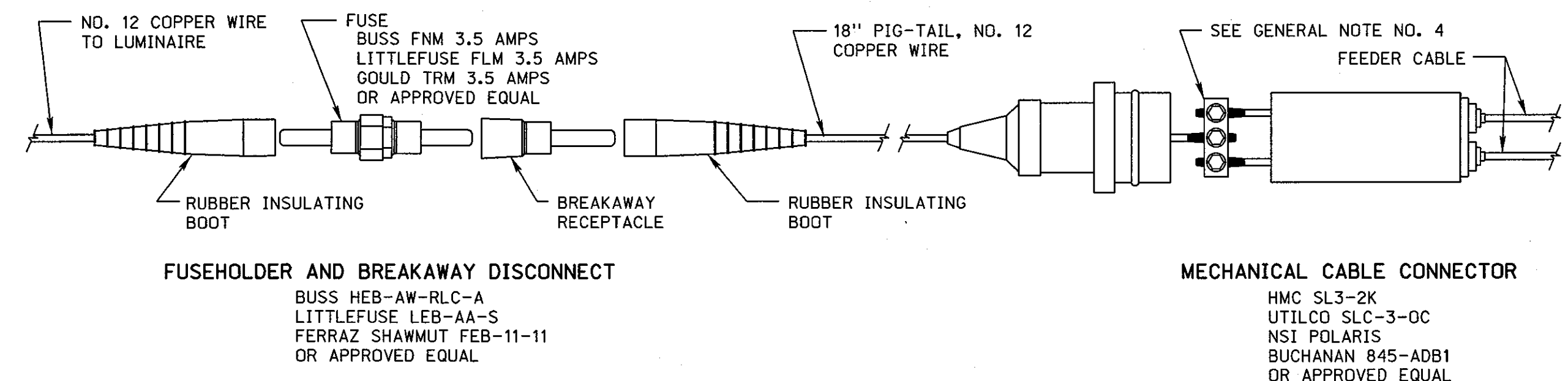
GROUND ROD CLAMP



TRANSFORMER BASE INSTALLATION NOTES:

- POLE FAILURES AND IRREGULAR BREAKAWAY PERFORMANCE CAN RESULT FROM IMPROPER INSTALLATION OF THE TRANSFORMER BASE. TO OBTAIN THE MAXIMUM CAPABILITY OF EACH BASE THE CONTRACTOR MUST COMPLY WITH THE FOLLOWING:
 - USE THE LARGEST POSSIBLE BOLT CIRCLES, BOTH TOP AND BOTTOM.
 - USE GALVANIZED STEEL WASHERS OF THE SIZE AND TYPE ILLUSTRATED. (THE HOLD DOWN AND CONNECTING WASHERS ARE AVAILABLE FROM THE TRANSFORMER BASE MANUFACTURER).
 - INSTALL WASHERS EXACTLY AS SHOWN.
 - SHIM BETWEEN FOUNDATION AND TRANSFORMER BASE IF NEEDED USING ONLY REGULAR "U" SHAPED SHIM STOCK CAPABLE OF PROVIDING SUPPORT ON THREE SIDES OF THE ANCHOR BOLT. INSTALL WITH BACK EDGE OF SHIM FLUSH WITH BOTTOM EDGE OF TRANSFORMER BASE.
 - TORQUE ALL NUTS TO A MINIMUM OF 150 FT. LBS.
- INSTALL BREAKAWAY TRANSFORMER BASE WITH DOOR OPENING ON SAME SIDE OF POLE AS HANDHOLE.
- SECURE EQUIPMENT GROUNDING CONDUCTOR TO TRANSFORMER BASE BY USE OF APPROVED GROUNDING CONNECTOR (LUG) THREADED INTO TAPPED HOLE IN BASE. ROUTE GROUNDING CONDUCTOR FROM GROUNDING LUG IN "T" BASE TO GROUNDING LUG IN POLE AS SHOWN.

TRANSFORMER BASE INSTALLATION



CONNECTIONS FOR BREAKAWAY INSTALLATIONS



LIGHTING