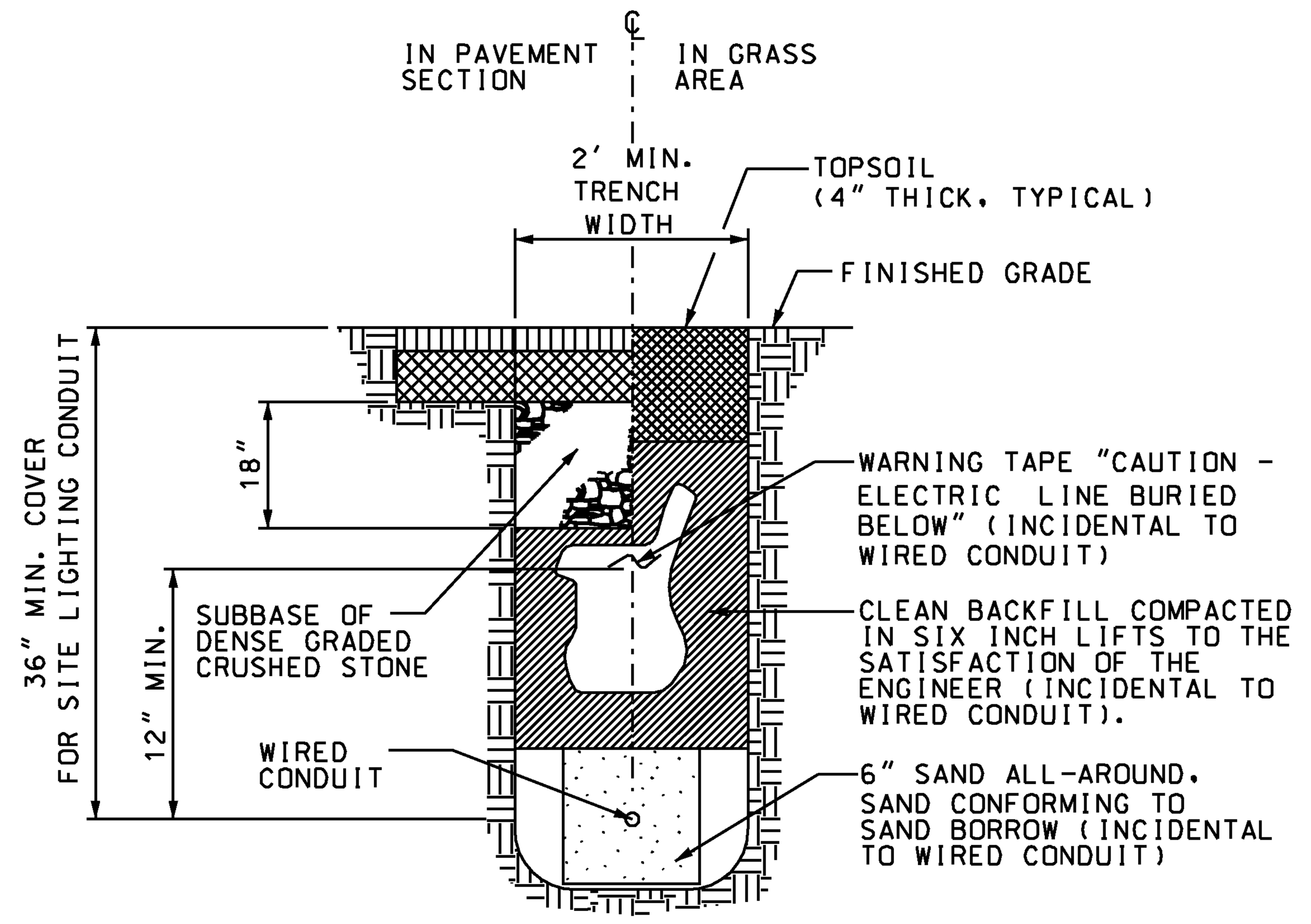
STREET LIGHTING GENERAL NOTES

TYPICAL TRENCH SECTION NOTES:

1. BOTTOM OF TRENCH SHALL BE UNDISTURBED ORIGINAL GROUND OR FIRMLY COMPACTED EARTH FREE FROM VOIDS, ROCK, OR RUBBLE AND/OR RELATIVELY SMOOTH ARCH, AND LINED WITH A MINIMUM OF TWO INCHES OF CLEAN SAND.
2. CONDUIT UNDER AREAS SUBJECT TO VEHICULAR TRAFFIC SHALL BE ENCASED IN SIX INCH RIGID PLASTIC OR STEEL PIPE SLEEVES TO FIVE FEET (5') BEYOND EDGE OF PAVEMENT, TYPICAL. PAID AS ELECTRICAL CONDUIT SLEEVE.
3. SEE TYPICAL TRENCH DETAIL FOR SPACING TO BE MAINTAINED BETWEEN ADJACENT CONDUITS.
4. PVC CONDUIT SHALL BE PRIMED AND GLUED TO FORM A WATERTIGHT SEAL.



TYPICAL TRENCH SECTION

NOT TO SCALE

CONCRETE BASES

1. WHEN CONCRETE BASES ARE INSTALLED IN SLOPING GROUND, THE GREATEST EXPOSED HEIGHT TO KEEP ALL OF THE TOP ABOVE GROUND MUST BE DOUBLED AND THEN ADDED TO THE MINIMUM DEPTH FOR THE TOTAL BASE DEPTH.
2. CARE SHOULD BE TAKEN WHERE CONCRETE BASES, DRAINAGE STRUCTURES OR UTILITIES ARE CLOSE TOGETHER.
3. THE OFFSET FOR CONCRETE BASES (FACE OF CURB OR EDGE OF PAVEMENT TO CENTER OF CONCRETE BASE) SHALL BE A MINIMUM OF 2'-6" OR AS OTHERWISE NOTED ON THE PLANS.

POLES, ANCHOR BASES AND ARMS

1. ALL NEW STREET LIGHT POLES, POLE BASES AND LUMINAIRE ARMS SHALL BE ALUMINUM, PAINTED FLAT BLACK.
2. UTILIZE APPROVED DUAL-RATED PARALLEL TAP CONNECTOR WITH INSULATING COVER TO TAPS AT POLE BASES.

LUMINAIRES

1. LUMINAIRES SHALL BE L.E.D. TYPE ONLY.
2. ALL LUMINAIRES SHALL BE THE SAME; A MIX OF FIXTURES WILL NOT BE ALLOWED. NO LUMINAIRE SUBSTITUTIONS OTHER THAN THOSE LISTED IN THE LED SPECIAL PROVISIONS SHALL BE ALLOWED.
3. ALL LUMINAIRES SHALL BE EQUIPPED WITH BIRD SPIKES ON TOP.
4. ALL LUMINAIRE HOUSINGS SHALL BE PAINTED FLAT BLACK.

CONDUIT SLEEVES

1. THE SLEEVE SHALL EXTEND TO WITHIN TWO FEET OF THE SIDE OF A CONCRETE BASE OR PULLBOX. WHERE NO CONCRETE BASE OR PULLBOX IS PRESENT, THE SLEEVE SHALL EXTEND FOUR FEET BEYOND THE OUTSIDE EDGE OF SHOULDER OR FACE OF CURB. BACKFILLING AROUND A SLEEVE SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS. THE SLEEVE SHALL BE SCHEDULE 80.

WIRE

1. ALL WIRING BETWEEN THE METER AND/OR THE POWER SOURCE AND THE FIRST POLE AND/OR PULLBOX AND BETWEEN POLES AND/OR PULLBOXES SHALL BE COPPER AND SIZED AS SPECIFIED ON THE PLANS. ALL WIRE SHALL HAVE TYPE XHHW INSULATION OR EQUIVALENT.
2. CIRCUIT CONDUCTORS SHALL BE CLEARLY IDENTIFIED BY CORROSION RESISTANT TAGS INDICATING CIRCUIT NUMBER AND PANEL SOURCES AT EVERY POLE BASE AND HANDHOLE.

GROUNDING

1. ALL CONDUIT MUST INCLUDE A GROUNDING CONDUCTOR. RIGID STEEL CONDUIT SHALL BE PROPERLY CONNECTED AT THE JOINTS SO AS TO BE WATERTIGHT AND MAINTAIN ELECTRICAL CONTINUITY AND HAVE GROUNDING BUSHINGS SO AS TO ACT AS A GROUNDING CONDUCTOR.
2. THE GROUNDING CONDUCTOR SHALL BE CONTINUOUS.
3. ALUMINUM WIRE SHALL NOT BE USED FOR GROUND WIRE.

PULL BOXES, MANHOLES AND JUNCTION BOXES

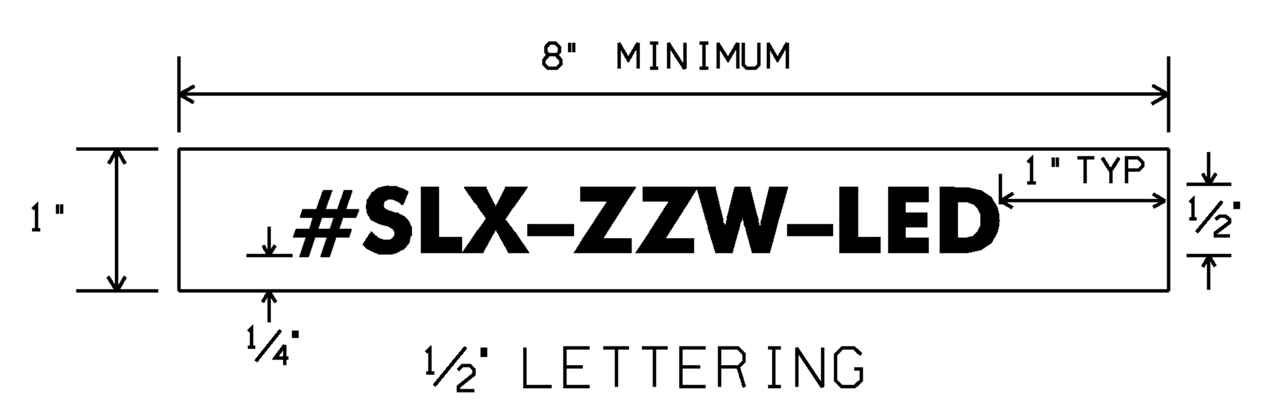
1. POLYMER CONCRETE AND REINFORCED FIBERGLASS U.L. LISTED PULLBOXES AND HANDHOLES SHALL BE INSTALLED WITH HEAVY DUTY COVERS.
2. ALL CONNECTIONS IN HANDHOLES SHALL BE MADE WITH INSULATED WATERPROOF MECHANICAL SCREW-TYPE CONNECTOR SUITABLE FOR DIRECT BURIAL. NO BARE OR COMPRESSION TYPE CONNECTORS MAY BE USED.

GENERAL

1. THE LOAD ON EACH BRANCH OF A THREE WIRE CIRCUIT SHALL BE AS BALANCED AS POSSIBLE. LOAD TO NEUTRAL.
2. THE CONTRACTOR SHALL ACQUIRE ALL NECESSARY PERMITS AND MAKE ALL NECESSARY ARRANGEMENTS WITH THE UTILITY COMPANY TO PROVIDE A PERMANENT POWER SUPPLY TO THE STREET LIGHTING SYSTEM. IF APPLICABLE, THE ROUTING OF POWER TO THE SYSTEM SHALL BE SUCH THAT THE AGENCY OF TRANSPORTATION HAS FULL RESPONSIBILITY FROM THE TRANSFORMER THROUGH THE LIGHTING SYSTEM. NO INTERVENING OWNERSHIP OR RESPONSIBILITY SHALL BE ALLOWED.
3. ALL CONNECTING HARDWARE (NUTS, BOLTS, ETC.) SHALL BE STAINLESS STEEL.
4. MATERIALS AND EQUIPMENT SHALL BE LISTED BY UNDERWRITERS' LABORATORIES AND SHALL BE INSTALLED IN ACCORDANCE WITH SUCH LISTINGS.
5. ALL MATERIALS AND INSTALLATION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE, AND ALL CODES, REGULATIONS AND REQUIREMENTS OF ALL MUNICIPAL, STATE, FEDERAL AND OTHER PUBLIC OR PRIVATE AUTHORITIES WHICH HAVE JURISDICTION. IN EACH CASE, CODES ARE MINIMUM REQUIREMENTS.

ILLUMINATION REQUIREMENTS

1. LIGHTING LEVELS AS MEASURED AT THE PAVED SURFACE SHALL HAVE AN AVERAGE MAINTAINED ILLUMINANCE OF 1.0 FOOT-CANDLE.

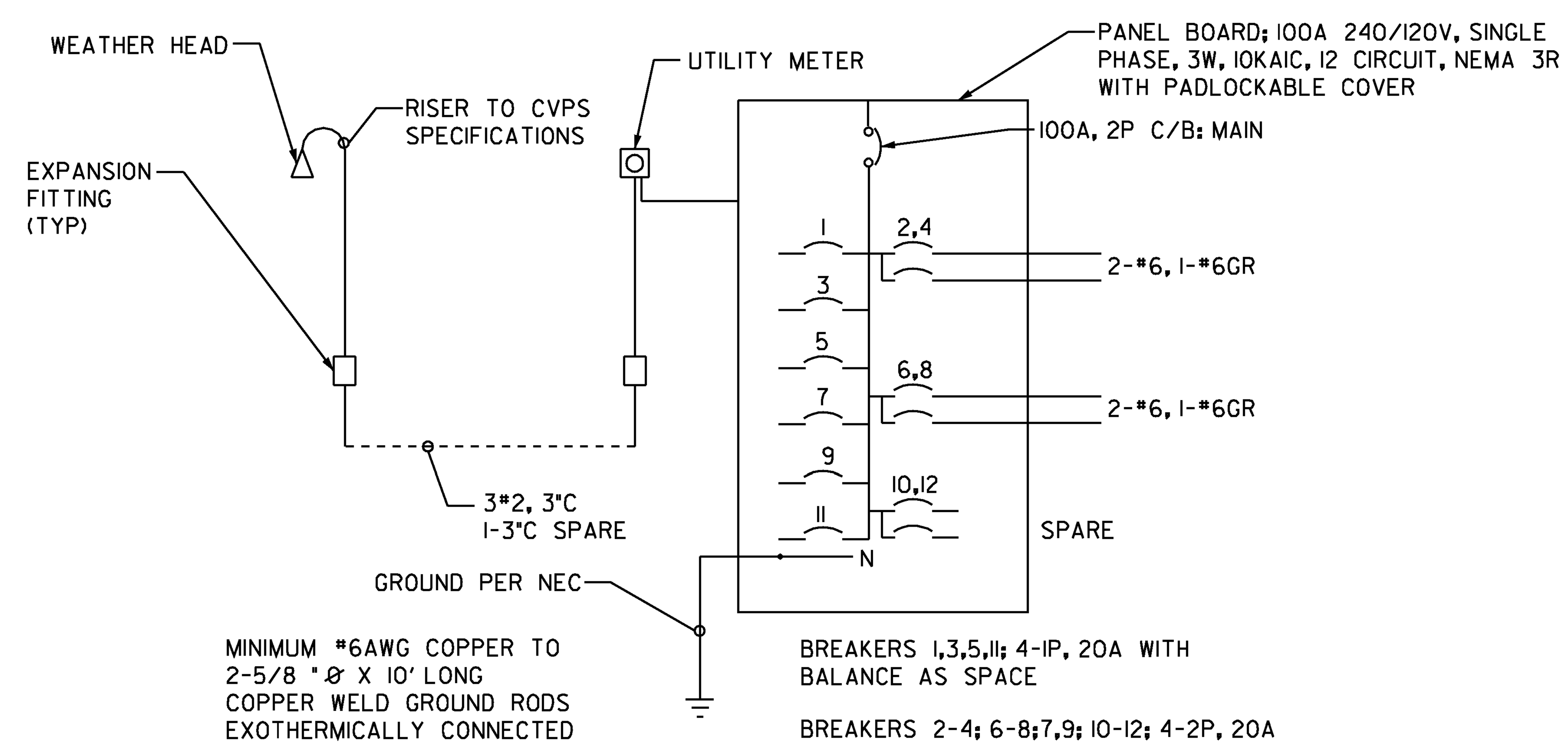


LEGEND: BLACK OR WHITE (NON-REFLECTIVE) - STAMPED PRIOR TO PRINTING/PAINTING.
BACKGROUND: NATURAL ALUMINUM OR FLAT BLACK SURFACE, THE SAME AS POLE FINISH.

DETAIL FOR TAGS ATTACHED TO STREET LIGHT POLES

NOTES:

1. THE TAG SHALL BE MOUNTED ON ALL STREET LIGHT POLES IN SUCH A MANNER AS NOT TO BE EASILY REMOVED, SUCH AS WELDED, RIVETED, OR BOLTED WITH VANDAL PROOF BOLTS.
2. THE LETTERS SHALL BE PUNCHED, STAMPED, ENGRAVED, OR PHOTO-ETCHED. PUNCHING, STAMPING OR ENGRAVING SHALL PENETRATE AT LEAST 1/2 THE BASE MATERIAL THICKNESS.
3. THE BASE MATERIAL FOR THE TAG SHALL BE ALUMINUM WITH A MINIMUM THICKNESS OF 0.10 INCHES.
4. THE TAG SHALL BE ATTACHED TO THE POLE ABOVE THE HANDHOLE, 6 INCHES MAXIMUM, IF THE POLE HAS A TRANSFORMER BASE, ATTACH TAG TO COVER.
5. FIXTURE TAG CHARACTER 'X' SHALL BE THE DESIGNATED SL NUMBER AS SHOWN ON THE LIGHTING PLANS.
6. FIXTURE TAG CHARACTER 'ZZ' SHALL BE THE WATTAGE OF THE LUMINAIRE.



ONE-LINE DIAGRAM SITE LIGHTING SERVICE PEDESTAL

NOT TO SCALE

NOTES:

1. STREET LIGHT POLES IN PARKING LOT SHALL HAVE A NON-BREAKAWAY BASE (ANCHOR BASE ASSEMBLY, SEE VTRANS STANDARD E-180B).
2. THE MAXIMUM NUMBER OF DEGREES OF SWEEPS BETWEEN EQUIPMENT AND JUNCTION BOXES AND/OR BETWEEN JUNCTION BOXES SHALL BE 270 DEGREES.

GENERAL ELECTRICAL NOTES:

1. CONTRACT TO SECURE AND PAY COSTS OF PERMIT, CERTIFICATES, LICENSES, INSPECTIONS AND APPROVALS.
2. DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENT OF WORK. BASIC DESIGN CONCEPTS INDICATED ARE TO BE EITHER FOLLOWED OR BETTERED. WORK IS INTENDED TO INCLUDE ITEMS NECESSARY FOR PROPER OPERATION AND COMPLETION. FIELD VERIFY ALL LOCATIONS, ELEVATIONS, AND DIMENSIONS.
3. INSTALLATION SHALL BE MADE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
4. CONTRACTOR TO CONTACT DIGSAFE IN VERMONT PRIOR TO COMMENCING WORK (CALL 811).

Hoyle, Tanner & Associates, Inc.

HTA PROJECT	MODEL
904221	Light Detail Sheet 1

PROJECT NAME: HARTLAND
PROJECT NUMBER: CMG PARK(25)
FILE NAME: Z20K154sht_ldtl.dgn
PROJECT LEADER: WAYNE L. DAVIS
DESIGNED BY: JCC
PLOT DATE: 9/16/2013
DRAWN BY: JCC
CHECKED BY: CRM

LIGHTING DETAILS