ELECTRICAL SECTION

GENERAL

All electrical equipment, materials, and workmanship shall be in accordance with the Standard Specifications, State of California, Department of Transportation, Caltrans (CSS), the National Electrical Manufacturers Association (NEMA), the Underwriters’ Laboratories Inc. (UL), the Electrical Testing Laboratories (ETL), the National Electrical Testing Association (NETA), the Electronic Industries Association (EIA), the National Electric Code (NEC), the American Society for Testing and Materials (ASTM), where applicable and except as modified herein.

ELECTROLIERS

(a) **Electroliers.** Electroliers shall consist of a 30’ single arm galvanized steel pole (standard) equivalent to a CALTRANS type 15, and an LED Streetlight Series E, Type II Medium or approved equal, furnished and installed in accordance with City of Morgan Hill Standard Details for Construction. For electroliter spacing and luminaire wattage requirement, see Detail E-17.

(b) **Conduit.** All conduit shall be 1 1/2” Schedule 40 Polyvinyl Chloride (PVC), and conform to ASTM D 2241. Rigid conduit may be required by the City Engineer.

(c) **Trenching for Conduits.** Conduit trenches shall be dug to 24” min. depth. Conduit shall be placed directly behind the back of curb (6” Max., from back of curb to center of conduit). In cases where there will be an attached sidewalk, the backfill material shall be sand with the concrete sidewalk poured over the trench location. In cases where there will be a detached sidewalk, the conduit shall be covered by 3 inches of concrete. For electroliter conduit designed to occupy PG&E’s joint trench, see paragraph h.

(d) **Conductors.** All conductors shall be #8 AWG typeTHW (#10 AWG allowed in pole only) unless otherwise specified, and be UL listed for 600V operation. All wire shall be stranded copper in accordance with ASTM B 3 and B 8. All conductor insulation shall be standard type THW in accordance with ASTM D 2219 and ASTM D 2220.

(e) **Fuses.** Fuses shall be standard midget ferrule type, with “Non–Time Delay” feature, and shall be 13/22” x 1 1/2”. All lighting service conductors shall be fused at the service connection point (30 AMP Max) and at all electroliers with a 10 Amp fuse accessible from the hand hole opening on the standard.

(f) **Service Connection Point.** Pull boxes for streetlight service connection points shall be installed adjacent to P.G.&E. secondary box designated for service connection.

(g) **Pull Boxes.** Pull boxes shall be precast of reinforced portland cement concrete in accordance with CSS Section 86-2.06A. Any pull box made of non portland cement concrete material shall conform to ASTM D 635. All individual pull boxes for electroliers shall be placed directly in front of the standard and parallel to the face of curb.
DEVELOPER INSTALL OPTION

(h) Electroliter Conduit Location. If developer elects to install the substructure for PG&E, Cable, and Telephone ("Private Utilities"), electroliter conduit may occupy the joint trench only upon approval the City Engineer. Otherwise, electroliter conduit shall be located and installed per the Electrical Section General Notes and standard details E-1 and E-2.

(i) Plan Submital. Developer shall submit to the Public Works Department two (2) sets of a substructure plan for review after PG&E review and approval. The Public Works Department shall only review the plan for possible conflicts with existing "Public Utilities" and approved subdivision improvements. Changes to the plans shall be directed as they relate to utility conflicts and all matters related to electrolitters. It is developer’s responsibility to ensure that the substructure plans meet PG&E's, GTE’s and Charter Communication’s standards. The plans shall contain, as a minimum, the following information:

1. STREET LIGHTING PLAN— shows all proposed electrolitters, boxes and conduit related to the subdivision’s street lighting system as well as their location in respects to sidewalks, driveway approaches and handicap ramps.

2. JOINT TRENCH PLAN— using the "Overall Utility Plan" as the background, shows joint trench locations, electrolitters, existing and proposed "Public" and "Private" utilities.

3. DETAILS SHEET— shows all applicable City of Morgan Hill Standard Details, to include trench restoration and backfill details.

4. PRIMARY ELECTRICAL, GAS, CABLE & TELEPHONE PLANS— information shown per respective utility’s standards.

(j) Commencement of Work. Developer’s substructure contractor shall not commence work until the above plans have been reviewed by the Public Works Department and an encroachment permit issued specifically for such work.
NOTES:
1. ALL CONDUIT SHALL BE LOCATED 6" BEHIND BACK OF CURB, AND INSTALLED AT A MINIMUM OF 24" DEPTH. SEE "ELECTRICAL SECTION—GENERAL NOTES", SHEET E-1, PARAGRAPH C.
2. ALL CONDUIT SHALL BE 1 1/2" SCHEDULE 40 P.V.C., THE MAXIMUM DISTANCE BETWEEN PULL BOXES SHALL NOT EXCEED 200', AND SHALL NOT CONTAIN MORE THAN 3 (45' MAX.) BENDS.
3. STREET LIGHT SERVICE CONNECTIONS TO P.G.&E. SECONDARY SERVICE BOXES SHALL ONLY BE MADE TO P.G.&E. DESIGNATED STREET LIGHT CONNECTION POINTS. SERVICE CONDUIT FROM PULL BOX TO P.G.&E. SECONDARY BOX SHALL CONTAIN THE NECESSARY CONDUCTORS, AND AN ADDITIONAL 24" (MIN.) SLACK FOR P.G.&E.
4. THIS DETAIL IS DIAGRAMMATIC, ACTUAL CONDITIONS MAY VARY.
ATTACHED SIDEWALK
(with sidewalk meander)

NOTES:
1. JOINT TRENCHES LOCATED BEHIND SIDEWALK SHALL FOLLOW PATH OF MEANDER AROUND ELECTROLIER (ATTACHED SIDEWALK).
2. SEE DETAIL E-11 "ELECTROLIER & BASE", DETAIL E-13 "ELECTROLIER SERVICE CONNECTION", DETAIL E-4 "CONCRETE PULLBOX NON–TRAFFIC" AND DETAIL E-7 "CONCRETE PULLBOX NOTES".
3. SEE DETAIL E-3 FOR ELECTROLIER LOCATION WITHOUT SIDEWALK MEANDER.

DETACHED OR COMMERCIAL SIDEWALK
ATTACHED SIDEWALK
WITHOUT SIDEWALK MEANDER

NOTES:

1. SEE DETAIL E-11 "ELECTROLIER & BASE", DETAIL E-13 "ELECTROLIER SERVICE CONNECTION", DETAIL E-4 "CONCRETE PULLBOX NON-TRAFFIC" AND DETAIL E-7 "CONCRETE PULLBOX NOTES".

2. POLE SHALL BE CALTRANS TYPE 15, OR APPROVED EQUAL, WITH 10’ MAST ARM (SEE DETAIL E11).

3. IF JOINT TRENCH FACILITIES DO NOT EXIST, STREET LIGHTING SECONDARY SHALL BE LOCATED DIRECTLY BEHIND CURB (AS SHOWN THROUGHOUT THIS SECTION).

4. PULL BOX SHALL BE LOCATED TO THE LEFT OF THE ELECTROLIER (OR DIRECTLY IN FRONT OF HAND HOLE).
CONCRETE PULLBOX
NON-TRAFFIC

NO. 3 1/2 PRECAST CONCRETE BOX MIN. WITH LID MARKED "STREET LIGHTING", OR Sized AS SPECIFIED ON DRAWINGS

FIN. GRADE (SEE NOTES 6, & 14- DETAIL E-7)

1 1/2" PVC SCH.40 CONDUIT

DRAIN HOLE 1" MIN.- 2" MAX.

1 1/2" (MIN.) PVC SCH. 40 SERVICE CONDUIT

ROCK SUMP 3/4" DRAIN ROCK

SECTION A-A

DIMENSION

A: 1" MIN. 2" MAX. (TYP.- ALL CONDUITS)
B: 1" MIN. 2" MAX. (TYP.- ALL CONDUITS)

NOTE
APPLICATION: PLACED IN CONDUIT RUNS IN AREAS WHERE BOX IS NOT SUBJECT TO VEHICULAR TRAFFIC LOAD: SEE DETAILS E-6 AND E-7 FOR PULL BOX DETAILS AND NOTES.
BOLT HOLE SHALL MATCH
STANDARD BOLTS; RECESS
IN COVER FOR NUT (SEE
DETAIL E-6)

PLATE SHALL COVER
ENTIRE TOP OF BOX

1/2" DIA. LIFT HOLE

TOP VIEW

FIN. GRADE
SAW CUT EDGE

2" AC (MIN.)

1/3 L

11/2" X 11/2" X 3 16" MIN. L
BEVEL ENDS TO FIT LIP OF
BOX.

PRECAST REINFORCED
CONCRETE BOX

CONDUIT (TYP.)
(PVC SHOWN)

SECTION A - A

DIMENSION
A: 1" MIN. 2" MAX. (TYP. - ALL CONDUITS)
B: 1" MIN. 2" MAX. ABOVE GROUT (TYP. - ALL CONDUITS)

NOTED:
1. APPLICATION: PLACED IN CONDUIT RUNS IN AREAS WHERE BOX IS SUBJECT TO VEHICULAR TRAFFIC LOAD.
2. SEE DETAILS E-6, AND E-7 FOR PULL BOX DETAILS AND NOTES.

City of Morgan Hill
Public Works Department

CITY ENGINEER       DATE       REVISED
4/1/96       5/14/15       E-5
HOLD DOWN BOLT DETAIL

NON-TRAFFIC COVER

PCC COVER

SCREWDRIVER SLOT

3/8" BRASS HOLD DOWN BOLT AND NUT

WASHERS

TRAFFIC COVER

SCREWDRIVER SLOT

TUBE, 7 / 16" I.D.
  x 3 / 16" WALL

3/8" BRASS HOLD DOWN BOLT AND NUT

WASHERS

1 1/8"

1 1/2" x 3/4" x 1/8"

CHANNEL, 1 1/2" LG.

DIMENSION TABLE

<table>
<thead>
<tr>
<th>CONCRETE BOX</th>
<th>CONCRETE COVER</th>
<th>TRAFFIC COVER</th>
<th>△ ROCK SUMP</th>
</tr>
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<tr>
<td>PULL BOX</td>
<td>MIN. THICKNESS</td>
<td>MIN. DEPTH</td>
<td>L</td>
</tr>
<tr>
<td>NO. 3 1/2</td>
<td>1&quot;</td>
<td>12&quot;</td>
<td>15</td>
</tr>
<tr>
<td>NO. 5</td>
<td>1&quot;</td>
<td>12&quot;</td>
<td>23</td>
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<tr>
<td>NO. 6</td>
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<td>35</td>
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<tr>
<td>NO. 8</td>
<td>1 1/2&quot;</td>
<td>14&quot;</td>
<td>47</td>
</tr>
</tbody>
</table>

△ = MINIMUM CUBIC FEET OF DRAIN ROCK FOR ROCK SUMP. DOES NOT APPLY TO TRAFFIC BOX. PROVIDE DRAIN ROCK FOR TRAFFIC BOX IN ACCORDANCE WITH STD. E-5
PULL BOX NOTES

1. Use steel cover and special concrete footing, as shown in Detail E–5, when box is approved by the City Engineer to be installed where subject to vehicular traffic loads. Steel cover shall have embossed non–skid pattern. (See detail E–5)

2. Steel reinforcing shall be as regularly used in the standard products of the respective manufacturer.

3. Pull boxes shall be marked as follows:
   "TRAFFIC SIGNAL": For traffic signal systems with or without street lighting systems.
   "STREETLIGHTING": For street lighting systems only.
   "SPRINKLER CONTROL": For sprinkler control systems only.
   "ELECTRICAL": For miscellaneous electrical systems only.

4. All metal covers, metal Z–bar frame, metal rings, or any metallic component of a pull box shall be bonded to a #10 AWG or larger copper grounding conductor. Bonding jumpers shall be solid or braided copper equivalent to #10 AWG and shall be attached to a 1/4–20 stainless steel screw (drill and tap as required) and approved grounding lug.

5. The pullbox cover opening shall be 1/8" greater in length and width.

6. The City Engineer shall approve installation of pullboxes in a sidewalk area except as shown in Dtl. E–2, Commercial Sidewalk. The depth of the pullbox shall be adjusted so that the top of the box is flush with the surrounding sidewalk.

7. Pull boxes shall not be installed within the boundary of new or existing wheelchair ramps or driveways.

8. All pull boxes shall be located within the City Right–Of–Way, or in an officially dedicated Public Utility Easement (upon the approval of the City Engineer).

9. Drain rock cushion shall extend a minimum of 6" beyond inside walls of non–traffic boxes.

10. Conduits shall terminate not more than 2" and not less than 1" inside the box, and shall be not less than 1" nor more than 2" clear from the bottom of the box.

11. Conduits shall enter the box with manufactured long radii type or standard 45° elbow.

12. Pull box shall be size No. 3 1/2 minimum unless approved otherwise.

13. Pull boxes shall be placed at intervals not exceeding 200’ in conduit runs.

14. Install pull box extension(s) as required to set top of pull box flush with surrounding grade.
WATERPROOFED 1 POLE FUSED SPLICE CONNECTOR RATED 30A, 600V WITH ONE 30A FUSE

SIDEWALK OR TOP OF CURB GRADE

#3 1/2 STD. NON-TRAFFIC PULLBOX (SEE DETAIL E-4)

1 1/2" PVC SCH.40 CONDUIT

2 #10 AND #10 TYPE THW GROUND TO 120V LOAD (ALL #10 AWG MIN. CONDUCTOR SIZE)

5 /8" DIA. COPPER-CLAD X 10' LONG GROUND ROD GROUNDING ELECTRODE

6" MIN. (TYP.)

PVC SCH. 40 SERVICE CONDUIT TO PG & E. (SEE DETAIL E-1)

120 VOLT 2 WIRE SERVICE CONDUCTORS TO PG & E. APPROVED CONNECTION POINT (#10 AWG MIN. CONDUCTOR SIZE)

3/4" (MIN.) DRAIN ROCK

UL LISTED GROUND CLAMP SUITABLE FOR DIRECT BURIAL/CONCRETE ENCASEMENT BELOW GRADE APPLICATION (TYP.)

DIMENSION
A: 1" MIN. 2" MAX. (TYP.— ALL CONDUITS)
B: 1" MIN. 2" MAX. (TYP.— ALL CONDUITS)

NOTES:
1. SEE DETAILS E-6, AND E-7 NOTES.
2. PROVIDE 3' OF SLACK IN ALL CONDUCTORS IN ACCORDANCE WITH SPECIFICATIONS. (SLACK NOT SHOWN.)
#3 1/2 STD. NON-TRAFFIC PULLBOX (SEE DETAIL E-4)

WATERPROOFED 2 POLE FUSED SPICE CONNECTOR RATED 30A, 600V WITH TWO 30A FUSES (SEE DETAILS E-15 AND E-16)

SIDEWALK OR TOP OF CURB GRADE

WATERPROOF SPICE (TYP.) (SEE NOTE 3)

CONDUIT BELL END (TYP.)

1-1/2" PVC SCH.40 CONDUIT

2  #8 AND #8 TYPE THW GROUND TO 240V LOAD (#10 AWG MIN. CONDUCTOR SIZE)

5/8" DIA. COPPER-CLAD X 8' LONG GROUND ROD GROUNDING ELECTRODE

6" MIN (TYP.)

6" MIN (TYP.)

A: 1" MIN. 2" MAX. (TYP.- ALL CONDUITS)

B: 1" MIN. 2" MAX. ABOVE GROUT (TYP.- ALL CONDUITS)

120/240 VOLT 2 WIRE SERVICE CONDUCTORS TO PG & E. (#8 AWG MIN. CONDUCTOR SIZE)

3/4" (MIN.) DRAIN ROCK

UL LISTED GROUND CLAMP SUITABLE FOR DIRECT BURIAL/CONCRETE ENCASEMENT BELOW GRADE APPLICATION (TYP.)

NOTES:
1. SEE DETAILS E-6, AND E-07 NOTES.
2. PROVIDE 3' OF SLACK IN ALL CONDUCTORS IN ACCORDANCE WITH SPECIFICATIONS (SLACK NOT SHOWN).
SIDEWALK OR TOP OF CURB GRADE

#3 1/2 STD. NON-TRAFFIC PULLBOX (SEE DETAIL E-4)

PVC FEEDER CONDUIT WITH STREETLIGHTING CONDUCTORS TO POLE (SEE DTL. E-13)

CONDUIT BELL END (TYP.)

UNGROUNDED CONDUCTORS

3/4" (MIN.) DRAIN ROCK

1 1/2" SCH. 40 PVC SERVICE CONDUIT TO P.G.&E. APPROVED CONNECTION POINT (#10 AWG MIN. CONDUCTOR SIZE)

6" MIN (TYP.)

1 1/2" SCHEDULE 40 PVC THROUGH CONDUIT WITH TWO UNGROUNDED CONDUCTORS (#10 AWG MIN. CONDUCTOR SIZE) TO ADDITIONAL LIGHTING

5/8" DIA. COPPER-CLAD X 10’ LONG GROUND ROD GROUNDING ELECTRODE, WITH UL LISTED GROUND CLAMP SUITABLE FOR DIRECT BURIAL/CONCRETE ENCASEMENT APPLICATION (TYP)

#10 AWG STRANDED EQUIPMENT GROUNDING CONDUCTOR FROM GROUND CLAMP TO GROUNDING LUG INSIDE OF POLE

DIMENSION
A: 1" MIN. 2" MAX. (TYP.—ALL CONDUITS)
B: 1" MIN. 2" MAX. (TYP.—ALL CONDUITS)

NOTES:
1. SEE DETAILS E-6 AND E-7 NOTES.
2. PROVIDE 3’ OF SLACK IN ALL CONDUCTORS IN ACCORDANCE WITH SPECIFICATIONS. (SLACK NOT SHOWN.)
3. 240V STREETLIGHTING CIRCUIT SHOWN. 120V STREETLIGHTING SIMILAR EXCEPT NEUTRAL CONDUCTOR IS PRESENT.
Galvanized steel pole equal to Valmont DS30 & GA300-65-GV.

Note: For mast arms longer than 8', pole must be equal to Caltrans Type 15.

Photoelectric control (see detail E-14)

LED street light series E Type II medium (see detail E-11R)

Weather proof mast arm fitting

(12' for behind S/W see detail E-3)

#4 rebar cage

Alternate concrete collar and junction box location

2' x 3.5' x 4' concrete collar around base & junction box

Foundations cap 4' min. depth

1" x 36" x 4" anchor bolts with double nuts and washers - 4 req'd.

Vertical reinforcement, 4 ea - #6 rebars

Horizontal reinforcement 3 ea - #6 rebar @ 24" O.C.

3" x 5" hand hole with cover plate and tamper proof bolts; hand-hole to face junction box.

Base/bolt rounded cover (typ.)

Diameter or square

5' min

3'-0"

11"

11"

2'

2'

5/8" x 10' copper clad ground rod

NOTE: The application shown references electroliers installed with a meandering sidewalk. For electroliers located behind the sidewalk use detail E-3 for location dimensions.

City of Morgan Hill
Public Works Department

ELECTROLIER & BASE

DRAWING NO.
E-11

CITY ENGINEER
4/1/96 4/25/17
4/1/96 4/25/17
DATE REVISED
STERNBERG 8750 15 1/4" X 23 1/4" VINTAGE POLYCARBONATE ACORN GLOBE, TYPE III GLASS REFRACTOR, WITH 100W/120V HPS BULB AND ALZAC DISK REFRACTOR.

BALLAST COMPARTMENT .250 WALL THICKNESS.

SINGLE CONVENIENCE OUTLET

FLAGHOLDER

2-7/8" DIA. BANNER ARMS 37" APART FROM THE TOP OF THE UPPER ARM TO THE BOTTOM OF THE LOWER ARM.

STERNBERG ORNAMENTAL POLE #3912-T WITH ARCHITECTURAL MEDIUM BRONZE FINISH. 4" TO 3" DIA. TAPERED POLE, .125 WALL THICKNESS OF 6063-T6 STRUCTURAL GRADE ALUMINUM. POLE WELDED FOR SINGLE UNIT CONSTRUCTION.

.250 TO .188 WAL THICKNESS

4"X6 1/2" HAND HOLE WITH COVER PLATE AND STAINLESS STEEL ALLEN HEAD SCREWS. HAND HOLE TO FACE PULLBOX.

11 1/2" DIA. BASE, .750 FLOOR THICKNESS, W/ 4 ANCHOR BOLTS AND 1 GROUNDING LUG

CONSTRUCTION JOINT TO ALLOW ADJUSTMENT OF LEVELING NUTS

FOR PULLBOX ONLY, SEE DETAIL E-4 FOR BRANCH CIRCUIT SEE DETAIL E-10.

SEE DTL E-13 "ELECTROLER SERVICE CONNECTION"

UNDISTURBED EARTH OR SUITABLE COMPACTED FILL (95% RELATIVE COMPACTION)

4 MIN: 1"X18"X4" ANCHOR BOLTS WITH DOUBLE NUTS AND WASHERS (FURNISHED BY POLE MANUFACTURER ALL HOT-DIP GALVANIZED)

VERTICAL REINFORCEMENT, 4ea - #6 REBARS

HORIZONTAL REINFORCEMENT 3ea- #6 REBAR @ 12" O.C.

CLASS "B" CONCRETE

18" DIAMETER OR SQUARE

5/8" X 10' COPPER CLAD GROUND ROD
NOTES:

1. LIGHT ENGINE PORTION OF EXTRUSION TO REMAIN NATURAL ALUMINUM, NO PAINTING

2. NEMA PHOTOCELL (NOT INCLUDED) AND RECEPTICAL

3. FIXTURE HOUSING IS ALL ALUMINUM AND DESIGNED TO MOUNT ON 1.25" OR 2" O.D. HORIZONTAL TENON, 3 BOLT PATTERN, POLE TYPE 15

4. MAST/ARM LENGTH 10' FOR POLE AT BACK OF WALK, OR 8' LENGTH FOR USE IN PARK STRIP

5. COVER

6. LATCH

7. UTILIZE CREE BRAND FIXTURE OR CITY APPROVED EQUIVALENT.
   Wattage shall be based on equivalent wattage. Residential streets will be 53 watts, collector will be 89 watts and arterial streets will be 139 watts.

8. ALL RESIDENTIAL FIXTURES SHALL HAVE BACKLIGHTING SHIELDS.
NOTES:
1. PAINT ALL TAPERED SPLICES WITH ELECTRICAL WATERPROOF COATING.
2. DO NOT EXCEED SPRING CONNECTOR MANUFACTURER'S RECOMMENDATIONS FOR AWG COPPER WIRE SPLICING COMBINATIONS.
2 POLE, 600V

CRIMPING SLEEVE - CRIMP AS CLOSE TO HOLDER BODY AS POSSIBLE TO AVOID CRIMP IN EXPOSED CONDUCTOR (TYP.)

TWO PART MOLDED PLASTIC FUSEHOLDER BODY

O-RING FOR SEALING (2)

LOAD

RETAINING SCREW

FUSES (RETAINED IN LOAD SIDE)

HALF LAP SELF-VULCANIZING TYPE RUBBER TAPE TO THICKNESS OF INSULATION (TWO LAYERS MIN.-TYP.)

APPLY HALF LAP PVC INSULATING TAPE OVER ENTIRE SPlice (TWO LAYERS MINIMUM) OR APPLY TO A THICKNESS EQUAL TO ORIGINAL INSULATION. APPLY SCOTCH COAT OVER TAPE TO PROVIDE WATERTIGHT JIJNT (TYP.)

1 POLE, 600V

CRIMPING SLEEVE - CRIMP AS CLOSE TO HOLDER BODY AS POSSIBLE TO AVOID CRIMP IN EXPOSED CONDUCTOR (TYP.)

MOLDED PLASTIC FUSEHOLDER BODY AND NUT WITH O-RING FOR SEALING

LOAD

HALF LAP PVC INSULATING TAPE OVER ENTIRE SPlice (TWO LAYERS MINIMUM) OR APPLY TO A THICKNESS EQUAL TO ORIGINAL INSULATION. APPLY SCOTCH COAT OVER TAPE TO PROVIDE WATERTIGHT JIJNT (TYP.)

CONDUCTOR (TYP.)

FUSES (RETAINED IN LOAD SIDE)

HALF LAP SELF-VULCANIZING TYPE RUBBER TAPE TO THICKNESS OF INSULATION (TWO LAYERS MIN.-TYP.)

3/8”

1 1/2”

13/32” O.D.

FUSE DETAIL

NOTES:
1. STRIP ENDS OF CONDUCTOR INSULATION.
2. CRIMP CONNECTOR WITH TOOL DESIGNED FOR THIS PURPOSE.
3. AMPERE RATING OF FUSEHOLDERS SHALL BE RATED 30A MIN.
4. VOLTAGE RATING OF FUSEHOLDERS SHALL BE 600V MIN.
5. PAINT ALL FINISHED TAPED CONNECTIONS WITH ELECTRICAL INSULATING COMPOUND (COATING) TO PROVIDE WATERTIGHT JOINTS.
6. FUSEHOLDERS SHALL BE TRON TYPE "HEX" (240V) OR "HEB" (120V) AS MANUFACTURED BY BUSSMAN DIV. MCGRAW-EDISON CO. OR APPROVED EQUAL. REJECTION TYPE FUSEHOLDERS ARE NOT ACCEPTABLE.
7. USE 10A, 250V A.C. RATED, GENERAL PURPOSE NON-TIME DELAY TYPE "B" OR "B10" FUSES AS MANUFACTURED BY BUSSMAN DIV. OR APPROVED EQUAL FOR INDIVIDUAL STREETLIGHT FUSING APPLICATIONS.
8. FUSE EACH 240V OR 120V STREETLIGHT LUMINAIRE INDIVIDUALLY WITH A 10A FUSE.
9. USE 30A, 250V A.C. RATED, TRON TIME-DELAY TYPE "FNO" FUSES AS MANUFACTURED BY BUSSMAN DIV. OR APPROVED EQUAL FOR SERVICE APPLICATIONS AS REQUIRED.
10. FUSES FOR UNDERGROUND FED ELECTROLYERS SHALL BE INSTALLED IN THE BASE OF THE ELECTROLEY. SEE DTL. E-13
<table>
<thead>
<tr>
<th>ROAD TYPE</th>
<th>WATTAGE OF HIGH PRESSURE SODIUM</th>
<th>SPACING</th>
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<tbody>
<tr>
<td>ARTERIAL</td>
<td>150</td>
<td>160' –180' OPPOSITE</td>
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<tr>
<td>COLLECTOR</td>
<td>150</td>
<td>130' –140' STAGGERED</td>
</tr>
<tr>
<td>LOCAL</td>
<td>100</td>
<td>130' –140' STAGGERED</td>
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<tr>
<td>RURAL</td>
<td>100</td>
<td>380' –420' STAGGERED</td>
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</tbody>
</table>

**4-WAY INTERSECTION SPACING**

**'T' INTERSECTION SPACING**

- "BASIC" ELECTROLIER
- ADDITIONAL (WHEN REQUIRED)
1. Stick-on reflective numbers and letters shall be placed on all electroliers and traffic signal poles. All luminaires shall have wattage codes affixed to the bottom of lamp housing and shall be visible from directly below the lamp. All numbering and/or lettering for poles and lamps shall be placed in accordance with Pacific Gas and Electric (P.G.&E.) Engineering Standard 015137 "Identification of Street Light Numbers".

2. Reflective sheeting, numbers and letters shall comply with the respective specifications in the State Department of Transportation publication "Specifications for Aluminum Reflective Sheet Signs".

3. The numbers and edge sealer shall be placed on the equipment where designated by the plans or the Engineer. The contractor shall obtain the specific designation from the Engineer.

4. Reflective numbers and letters shall have silver reflective adhesive sheeting, 2 1/4" in width, with 3 1/2" in height black series D letters and numbers. The letters and numbers may be screened on to the reflective sheeting or may be die-cut and adhesively attached.

5. The labels for each location may be individual characters applied or a continuous strip applied. The labels shall be vertically arranged with the bottom height placed 9'-0" from the top of curb or finished grade.

6. Reflective numbers shall be applied to a clean surface. The edges of the numbers shall be treated with edge sealer.

7. Where new numbers are to be placed on existing or relocated equipment, the existing numbers shall be removed and the surface shall be cleaned.