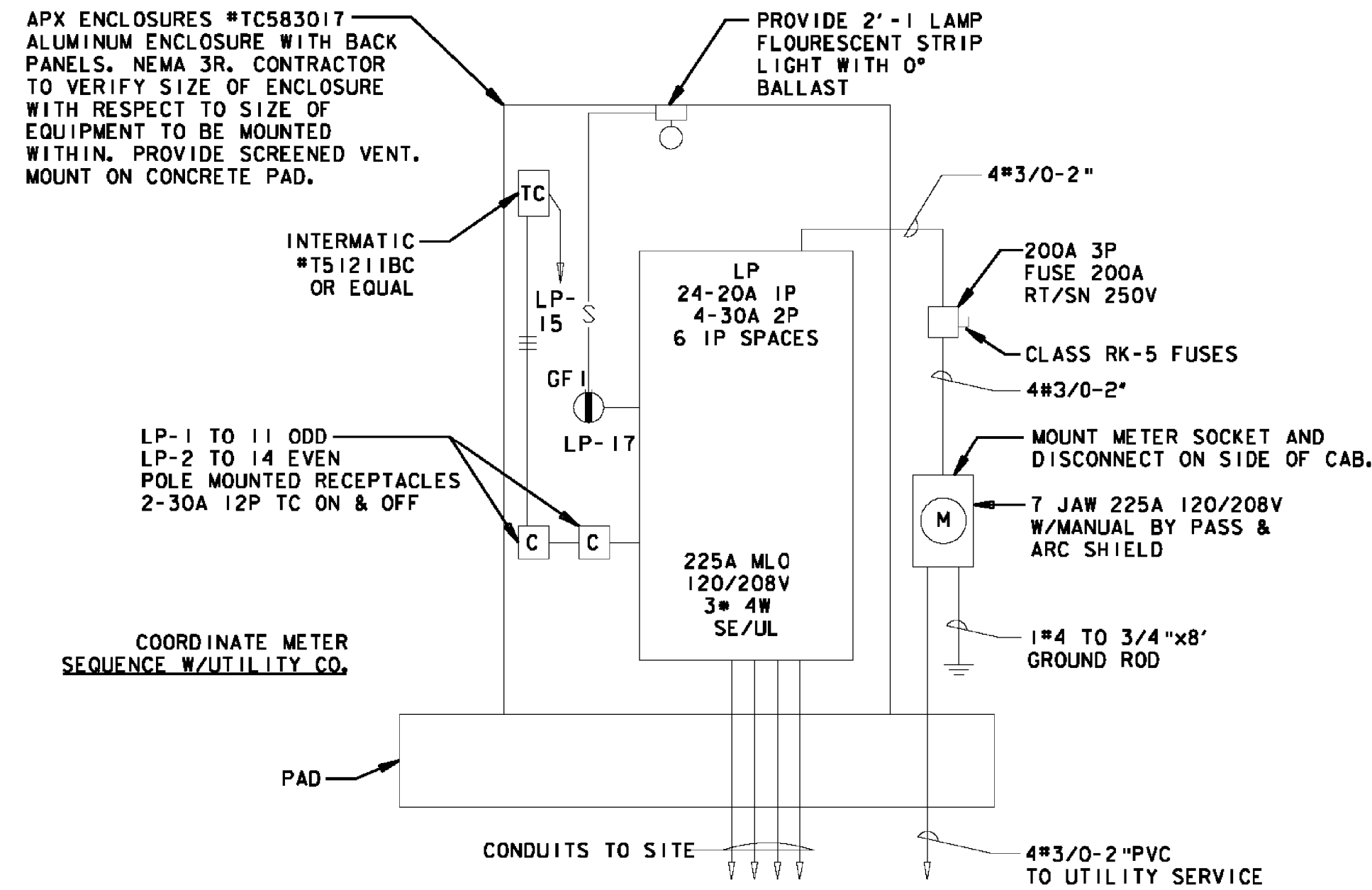


DELTA LIGHTING SYSTEMS TYPE 'A' FIXTURES, OR APPROVED EQUAL



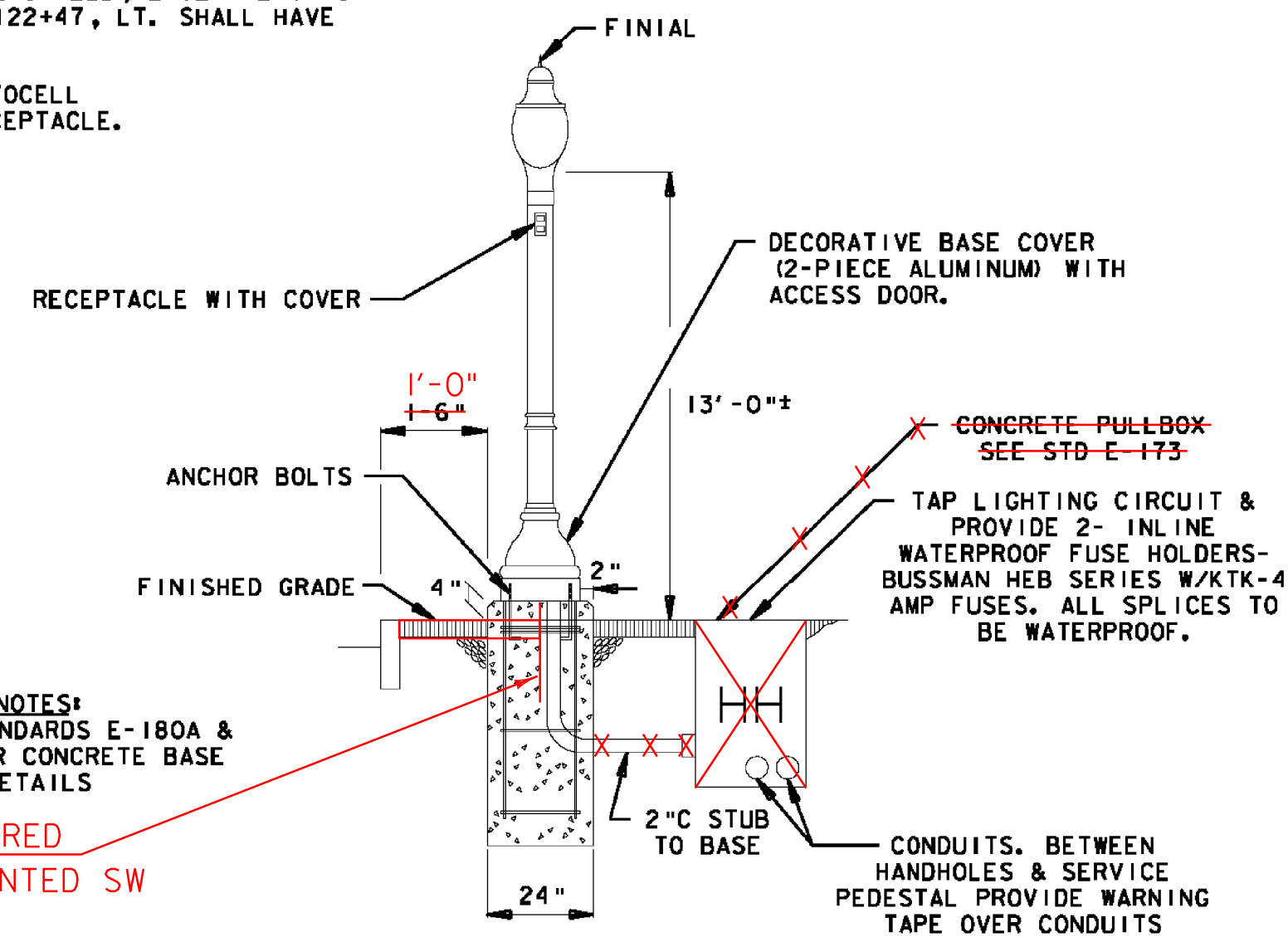
SPECIAL PROVISION (LIGHTING CONTROL PANEL) "LP"

SCALE: N.T.S.

POLE: 13'-0" 12 FLUTED MANDREL FORMED, ALUMINUM SHAFT 6" & 7" ROUND POLE WELDED TO A 6-5/8" ROUND EXTRUDED ALUMINUM POLE BASE WHICH IS WELDED TOP AND BOTTOM TO A CAST-ALUMINUM ANCHOR PLATE.

LIGHT FIXTURE: GLASS GLOBE LUMINAIRE WITH CUT-OFF OPTICAL SYSTEM 90W LED LAMP WITH 4,000K COLOR TEMP. AND 120 DEGREE HOUSE SIDE SHIELD, EXCEPT LIGHTS FROM STA 116+83, LT. TO 122+47, LT. SHALL HAVE NO SHIELD.

UNIT TO BE SUPPLIED WITH 208V PHOTOCELL AND FACTORY MOUNTED DUPLEX GF1 RECEPTACLE.



NOTES:
SEE VT STANDARDS E-180A & E-180B FOR CONCRETE BASE DETAILS

CENTERED ON IMPRINTED SW

SPECIAL PROVISION (ORNAMENTAL STREET LIGHT)

SCALE: N.T.S.

GENERAL STREET LIGHT NOTES

CONCRETE BASES

CONCRETE BASE SIZES SHALL BE TWO FEET IN DIAMETER AND FOUR FEET IN DEPTH FOR ORNAMENTAL POLES. THE TOP OF THE BASE SHALL BE RAISED 4" ABOVE THE SIDEWALK AND SHALL HAVE A 45° 1"x1" CHAMFERED EDGE. SEE STANDARD DRAWINGS E-180A AND E-180B FOR ADDITIONAL NOTES AND CONCRETE BASE DETAILS. CARE SHOULD BE TAKEN WHERE CONCRETE BASES, DRAINAGE STRUCTURES OR UTILITIES ARE CLOSE TOGETHER.

CONDUIT

A 2" (I.D.) MIN. AND SIZED AS INDICATED CONDUIT SHALL BE USED AT ALL LOCATIONS. ALL CONDUIT SHALL BE AT LEAST SCHEDULE 80 P.V.C. OR RIGID GALVANIZED STEEL ELECTRICAL CONDUIT AND CONFORM TO THE REQUIREMENTS OF UL-8.

THE FINAL CONDUIT DEPTH SHALL BE A MIN. OF 2' AND BE 2' TO 3' BELOW GRADE FOR CONDUIT RUNS PARALLEL WITH CURB OR EDGE OF SHOULDER, AND 3' TO 5' DEPTH UNDER ROADWAYS OR AS DIRECTED BY THE ENGINEER.

A 6" WIDE YELLOW MARKING TAPE (PLASTIC) SHALL BE INSTALLED 6" TO 12" BELOW FINISH GRADE OVER THE CONDUIT RUNS. MARKING TAPE IS INCIDENTAL TO THE CONDUIT ITEMS.

A MAXIMUM OF 270° IN TOTAL BENDS WILL BE PERMITTED IN A SINGLE RUN OF CONDUIT, AND 180° IN RUNS LONGER THAN 250' AND NONE IN RUNS LONGER THAN 500'.

CONDUIT SLEEVE

MINIMUM WALL THICKNESS FOR RIGID PLASTIC PIPE SLEEVES SHALL BE 1/36th THE DIAMETER. ALL CONDUIT RUNS UNDER ROADWAY SHALL BE INSTALLED IN RIGID PLASTIC PIPE SLEEVES. THE SLEEVE SHALL EXTEND TO WITHIN 2' OF THE SIDE OF A CONCRETE BASE OR PULLBOX. WHERE NO CONCRETE BASE OR PULLBOX IS PRESENT, THE SLEEVE SHALL EXTEND 2' BEYOND THE OUTSIDE EDGE OF SHOULDER OR FACE OF CURB. BACKFILLING AROUND A SLEEVE SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

GROUNDING

IN ADDITION TO A GROUND ROD AT EACH CONCRETE POLE BASE, A CONTINUOUS GROUNDING CIRCUIT SIZED AS INDICATED A.W.G. COPPER CONDUCTOR SHALL RUN BACK TO A CIRCUIT PROTECTIVE DEVICE AT THE POWER SOURCE OR TRANSFORMER. ALUMINUM WIRE SHALL NOT BE USED FOR GROUND WIRE.

ALL CONDUIT MUST INCLUDE A GROUNDING CONDUCTOR, AND 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 GROUND CONDUCTOR.

POLES, ANCHOR BASES AND ARMS

ALL ORNAMENTAL STREET LIGHT POLES SHALL BE FLUTED ALUMINUM, FINISHED BLACK AND SHALL NOT INCLUDE A BREAKAWAY DESIGN FEATURE.

WIRE

ALL WIRING BETWEEN THE METER AND/OR POWER SOURCE AND THE FIRST POLE AND/OR PULLBOX AND BETWEEN POLES AND/OR PULLBOXES SHALL BE AS SPECIFIED ON THE PLANS (ALUMINUM OR COPPER) AND SIZED AS SPECIFIED ON THE PLANS. ALL WIRE TO HAVE TYPE XHHW-2 INSULATION OR EQUIVALENT.

USE #10 A.W.G. STRANDED COPPER WIRES IN EACH POLE BETWEEN THE POLE BASE AND THE LUMINAIRE AND #6 BETWEEN RECEPTACLES. USE COPPER SIZED AS INDICATED (MIN.) FOR THE CONTINUOUS GROUND CIRCUIT.

ALL WIRE CONNECTIONS IN THE LIGHT POLE BASES SHALL BE MADE WITH THE PROPER, IN LINE OR WYE TYPE WATERPROOF DISCONNECT KIT. THE LOAD SIDE TO THE LUMINAIRE SHALL BE FUSED AT 3 TIMES THE LOAD.

VOLTAGE LOSSES GREATER THAN 3% IN THE SECONDARY CIRCUIT REQUIRE LARGER WIRE.

ALL WIRE SHALL BE TYPE RHH-RHW EPR.

PULLBOXES

FOR DETAILS SEE STANDARD SHEET E-173.

GENERAL

ALL ELECTRICAL MATERIAL AND INSTALLATION SHALL MEET THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE, STATE AND LOCAL CODES AND REQUIREMENTS OF GREEN MOUNTAIN POWER AT THE SOURCE. THE LOAD ON EACH BRANCH OF A THREE WIRE CIRCUIT SHALL BE AS BALANCED AS POSSIBLE, LOAD TO NEUTRAL.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING AND FOR SCHEDULING WORK WITH GREEN MOUNTAIN POWER FACILITIES IN THE PROJECT AREA.

ALL LUMINAIRES TO BE INSTALLED ON CANTILEVER POLES SHALL HAVE THE SAME COLOR FINISH (BLACK) AS THE POLE IT IS BEING INSTALLED ON. PAYMENT FOR THE LUMINAIRE ARM, CONDUIT SWEEPS AND WIRING FOR THE LUMINAIRE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CONTRACT ITEM 678.15.

THE CONTRACTOR SHALL PERFORM THE FOLLOWING WORK ON THIS PROJECT

- PERFORM AN INSULATION TEST ON ALL CONDUCTORS EXCEPT THE GROUND CONDUCTOR (INCLUDING NEUTRAL, DISCONNECT FROM GROUND BEFORE TESTING). PERFORM A RESISTANCE TO GROUND TEST AT SPECIFIED GROUNDS. SEE VERMONT STANDARD SPECIFICATIONS SUBSECTION 679.08. FURNISH THE TRAFFIC AND SAFETY SECTION VIA THE RESIDENT ENGINEER THE READINGS OBTAINED FROM THE ABOVE TESTS.
- COORDINATE WITH GMP TO CONNECT THE NEW ORNAMENTAL STREET LIGHT SYSTEM TO THE EXISTING SERVICE. INSTALL A NEW METERING POWER AND CONTROL PEDESTAL WITH METER SOCKET AND SERVICE PANELBOARD AND CONTROL EQUIPMENT (SPECIAL PROVISION (LIGHTING CONTROL PANEL)) FOR THE SINGLE RECEPTACLE OUTLETS ON STREET LIGHT POLES. THE STREET LIGHTS WHICH WILL RECEIVE THEIR POWER FROM THE SAME CIRCUIT AS THE TRAFFIC SIGNALS SHALL UTILIZE A SEPARATE CIRCUIT BREAKER AT THE CONTROLLER CABINET. THE NEW LIGHTING CONTROL PANEL SHALL BE INSTALLED OFF OF WEST STREET AS SHOWN IN THE DETAILS (SHEET 84). INSTALL ALL NECESSARY WIRING AND CONDUIT FROM THE TRANSFORMER POLE.
- AT EACH STREET LIGHT POLE LOCATION, INSTALL A CONCRETE POLE BASE, STAINLESS STEEL ANCHOR BOLTS, NUTS AND WASHERS (FLAT AND LOCK) CAST IRON POLE, LUMINAIRE GLOBE, LED LAMPS, WIRING, WATERPROOF DISCONNECT KITS AND CONDUIT SWEEPS.
- INSTALL CONDUIT, SIZE, TYPE AND LOCATION AS NOTED ON THE PLANS.
- INSTALL PULLBOXES WITH CONDUIT SWEEPS AS PER PLAN.
- INSTALL ALL WIRING, SIZE AND TYPE AS PER PLAN AND/OR SPECIFICATION.
- INSTALL RIGID PLASTIC SLEEVES AS PER PLAN, LOCATION & SIZE.
- INSTALL LUMINAIRE AND NECESSARY WIRING ON ALL CANTILEVER POLES AS SHOWN ON THE PLANS.
- STREET LIGHTING IN THIS DOWNTOWN AREA MUST BE MAINTAINED DURING CONSTRUCTION.

PROJECT NAME: BARRE CITY
PROJECT NUMBER: FEGC F 026-(134) C/2

FILE NAME: 85b010.LTDETI.C2 PLOT DATE: 3/21/2011
PROJECT LEADER: G.BAKOS DRAWN BY: DMP / JAR
DESIGNED BY: DMP / MDS CHECKED BY:
STREET LIGHTING DETAILS AND NOTES SHEET 84 OF 339