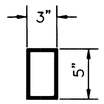
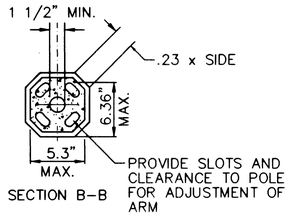
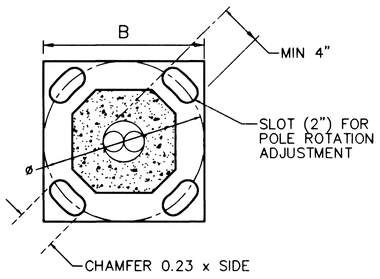
NOTE: POLE TO STEEL BASE PLATE AND MAST ARM TO FIXTURE CONNECTION DETAILS SHALL BE PROVIDED BY THE MANUFACTURER AND DETERMINED THROUGH THE SHOP DRAWING REVIEW PROCESS.



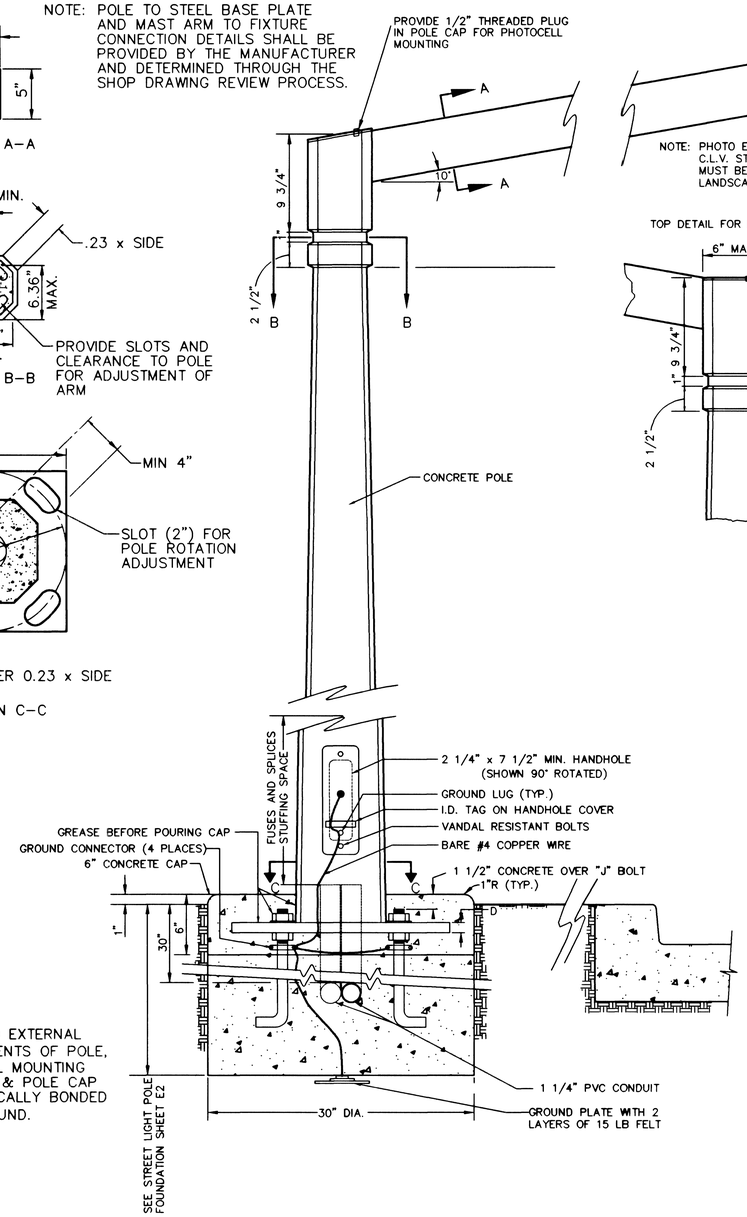
SECTION A–A



SECTION B–B

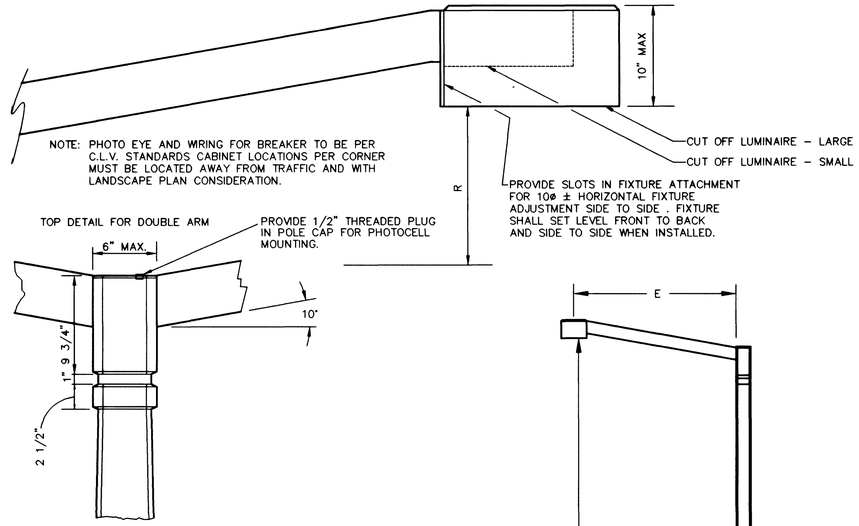


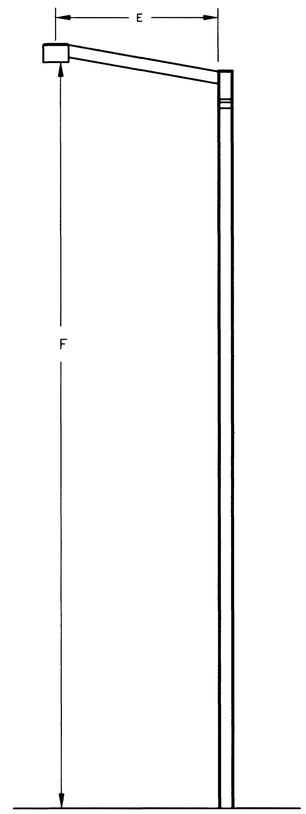
SECTION C–C



NOTE:

ALL INTERNAL AND EXTERNAL METALLIC COMPONENTS OF POLE, REINFORCING STEEL MOUNTING PLATE, HANDHOLE & POLE CAP SHALL BE ELECTRICALLY BONDED TOGETHER TO GROUND.





TYPE 2
DOUBLE OR SINGLE ARM

	"B"	"ø"	"D"	"E"	"F"	"R"	SHAFT BASE	FOOTING	CUTOFF LUMINAIRE
TYPE 2A	14"	14"	3/4"	8'	31' 2"	2.16'	9–3/16"	30"ø X 5' 6"	LARGE

STREET LIGHT POLE, ARM AND FIXTURE DETAIL-TYPE 2A (2 / E-3)

SCALE: NONE

STREET LIGHT POLE
MAST ARM AND LUMINAIRE

Pole

a. This specification covers general requirements for tapered, prestressed, square concrete poles with chamfered corners for use in structural supports for street lights.

b. Poles shall be designed for dead loads and wind loads induced by fixtures and attachments which produce bending and torsion in the shaft. Design stresses due to loading and prestressing shall conform to ACI 318.71.

c. Poles shall be designed for ultimate strengths in accordance with the basic assumptions and requirements of AASHTO "Standard Specifications For Structural Supports for Highway Signs, Luminaries and Traffic Signals", latest edition.

d. AASHTO wind loading criteria shall apply and shall be specified to the City of Las Vegas area of 80 m.p.h.

e. The manufacturer shall furnish the Purchaser fabrication and detail drawings.

Color

f. Summerlin beige Ameron #2123 dated 6–3–88, Sample No. 361. All pole aggregate color to be matched by pre–approved samples. Purchaser will provide color sample and final color approval. Exterior surface sealer shall be a clean urethane "lithonthane" as manufactured by L. M. Scofield Company or approved equal.

Cement

g. Portland Cement shall conform to the requirements of ASTM C150, Type III. Aggregates shall conform to ASTM C33 and C330 except that the requirements for gradation shall not apply. Water used for curing, washing aggregates and mixing concrete shall be free of oils, organic matter, and other substances in amounts that may be deleterious to concrete and it shall not contain concentrations of chloride ions in excess of 500 parts per million of sulfate ions in excess of 1,000 parts per million.

h. Admixtures shall be used for color conditioning only and shall comply with UBC Standard No. 26–12. The pigment component must consist of pure mineral oxides only.

Steel

i. Seven strand minimum, uncoated, stress relieved, prestressing steel shall conform to ASTM A416. Non–tensioned reinforcement shall conform to ASTM A615 and ASTM A82. Base plates, anchor bolts and top mount couplings shall conform to ASTM specifications.

Aluminum

j. Cast aluminum for pole cap shall conform to ASTM SF 70A. Extruded aluminum shapes for luminaire arms shall conform to the Aluminum Association Designation 6063–T6.

Luminaire

k. Luminaire performance shall include testing in accordance with current IES test procedures.

l. The luminaire/lamp combination shall provide a light distribution meeting the requirements for an IES classification: Type I, Type II, and/or Type III, medium, cutoff.

m. Average maintained illuminance and uniformity of illuminance shall conform to IES recommendations.

n. The total downward coefficient of utilization for luminaire shall be no less than 72%.

o. The total contribution of light above 75–degree vertical angle shall not exceed 3% of rated lamp lumens on the streetside and 0.9% on the houseside.

p. The maximum candlepower at a vertical angle of 80 degrees and above in any plane shall not be greater than 59 candela per 1,000 rated lamp lumens. Nadir candlepower shall not exceed 145 candela per 1,000 rated lamp lumens.

q. When the luminaire is equipped with the corresponding lamp rating and mounted at the specified height above the pavement, the luminaire shall provide, within +/–5% the recommended initial minimum horizontal foot–candle values on the pavement.

r. Fixtures shall be constructed with proper gasketing and corrosion resistant materials and/or coatings. Construct metal fixture channels, end caps, interior barriers, reflectors, etc., of adequate gauge and material.

Wiring

s. All fixture wire shall conform to the latest requirements of Underwriters' Laboratories and be concealed within the fixture construction wiring from base of pole to luminary must be 10–2UF with ground.

Ballast

t. High–intensity discharge ballasts shall be constant–wattage magnetic regulating per ANSI C78.1351 trapezoid limitation and power factor 90% minimum.

Lamp

u. Lamps shall bear labels of General Electric, or Sylvania, and be per General Electric lamp designations shown in the fixture schedule. All lamps shall be of the type indicated on the fixture schedule. In case of conflict between submitted shop drawing and fixture schedule on the drawing, the shop drawings shall prevail.

Color and Finish

v. Fixture, mast arm, and pole cap shall all have matching color bronze anodized aluminum finish, aluminum association architectural Class 1.

Independent Testing

w. Tests to verify compliance with the above specs shall be performed by a certified independent laboratory.

STREET LIGHT TECHNICAL DESIGN REQUIREMENTS (1 / E-3)

SCALE: NONE

SOUTHERN NEVADA STATE ONLY

Traffic Management Division
Clark County Public Works
ACCEPTED
By: [signature] 28 Feb 02
Traffic Management Date

ACCEPTANCE OF THESE PLANS SHALL NOT BE CONSTRUED TO BE A PERMIT FOR, OR AN APPROVAL OF, ANY VIOLATION OF STATE OR COUNTY LAW, SPECIFICATIONS, OR THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

RICKEY D. HUNSAKER
ENGINEER – STATE OF NEVADA
No. 12812
PROFESSIONAL ENGINEER
DATE: 2-14-02

REV.	DATE	DESCRIPTION	DATE	AGEN. APP.	DATE	GCW. APP.

DESIGN: JGC
DRAWN: JGC
CHECK: RDH
ISSUE DATE:
ISSUE EDITOR:
PLOT DATE: 02-14-02
PLOT TIME: 15:02:42
Eastmull

G. C. WALLACE, INC.
Engineering/Architecture
1555 SOUTH RAINBOW BLVD./LAS VEGAS, NEVADA 89146
TEL: (702) 804-2000 • FAX: (702) 804-2299
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SUMMERLIN
CHARLESTON BOULEVARD IMPROVEMENTS
STREET LIGHT LUMINAIRE AND POLE NOTES AND DETAILS

SHEET
E-3
30 OF 30 SHTS

JOB NO. 62020.224

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