CITY OF PETALUMA

STREET LIGHT DESIGN AND CONSTRUCTION STANDARDS

600 SERIES

JUNE 1999

GENERAL NOTES

- All wiring methods and equipment construction shall conform to the 1. current edition of the National Electrical Code, California Standard Specifications and the Standard Plans.
- All conduit to be used shall be a minimum of 2" diameter, except from 2. each street light to the adjacent pull box which may be 1" diameter PVC or metal, and shall have the following cover from top of conduit.
 - Within sidewalk of parkway areas: 2" 0" min. Schedule 40
 - Within roadway areas: 3" 0" min. Schedule 80 PVC. B.
- All metal conduit and other metal parts shall be continuously bonded 3. and grounded.
- All bends and/or offsets shall be made with factory sections. 4.
- Unless otherwise approved by the City Engineer, a No. 5 pull box 5. (State Standard ES-8) shall be used at all street light standards.
- All pull boxes shall be installed per State Standard ES-8 and Standard 6. Specification Section 86. The bottoms of pull boxes installed in the ground or in sidewalk areas, shall be bedded in 12" of clean drain rock.
- Junction boxes to be not more than 200'-0" apart on long runs. 7.
- When pull boxes are subject to vehicular traffic, they shall be set on 8. concrete footings and cast iron traffic covers shall be installed.
- All splices to be aproved solderless waterproof connectors of proper 9. size. (Example: split bolt plus tape plus coating).
- All empty conduts shall have a 1/4" nylon pull rope provided inside. 10.
- All conduits shall be sealed with an approved duct seal. Conduits 11. stubbed for future extensions shall be capped.
- All street lighting projects are subject to approval by the City Traffic 12. Engineer.
- All pull box covers shall be secured with brass hold down bolts and 13. inscribed, "Street Lighting".

CITY OF PETALUMA Department of Engineering 22 Bassett Street - Petaluma California 949 2 707 778 4304 - Fax 707 778 4437

Thomas S. Hargis - R.C.E 2366

Street Light Standards General Notes (1)

March 31st 1995

N. T. S.

Butch Smith

Lirawn By

Scale

SLS0000.600 Std.Det.



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CITY OF PETALUMA
Department of Engineering
22 Bassett Street - Petaluma Cabfornia 94952
707 778 4304 - Fax 707 778 4437

Approved By

Approved By

Thomas S. Hargis - R.C.E. 2560

Standard STREET LIGHTS Table of Contents Butch Smith
Scale

N. T. S.

June 16th 1999 (Rev.)



Füe Number Std. Det. SLS0000.600A

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GENERAL NOTES (Continued)

- 14. Street light spacing shall be maintained perdesign criteria. Street light spacing shall be located at property lines when possible.
- 15. The minimum-average maintained foot-candles and uniformity ratio of all street lighting shall comply with design criteria.
- 16. All street lights equipped with a photocell control shall have the photocell oriented to the north.
- 17. All wire shall be THHN A.W.G. with the minimum size to be No.8 except within Street Lighting Standards, shall be No.10.
- 18. The developer/engineer shall make arrangements for service points with P.G.&E. The developer shall be responsible for all costs associ ated therewith which shall be paid directly to P.G.&E. The contractor shall verify the street light service point location(s) with P.G.&E. prior to installation.
- 19. New developments within an existing developed area shall install the entire lighting system, including luminaires.
- 20. All street light systems shall be designed for 120 volt service.
- 21. The current to be used to determine conductor sizes shall be determined as follows:
 Total Wattage of Fixtures Served x 3.5 ÷ Service Voltage.
- 22. Pole identification numbers shall be located on the street side of each luinaire. Minimum finished height 10'-0" from top of curb. Numbers for medal poles shall be a minimum of 4" x 2" reflective white on black with adhesive backs. Numbers for wood poles shall be a minimum of 3" x 2" stamped aluminum.
- 23. Project applicant shall provide as builts to the City prior to the request for Street Light turn on. Street Light as builts shall provide the following: Service connection points, conduit locations including distance from face of curb and depth.

Approved By:

Thomas & Hargin

Street Light
Standards
General Notes
(2)

Butch Smith
Scale:

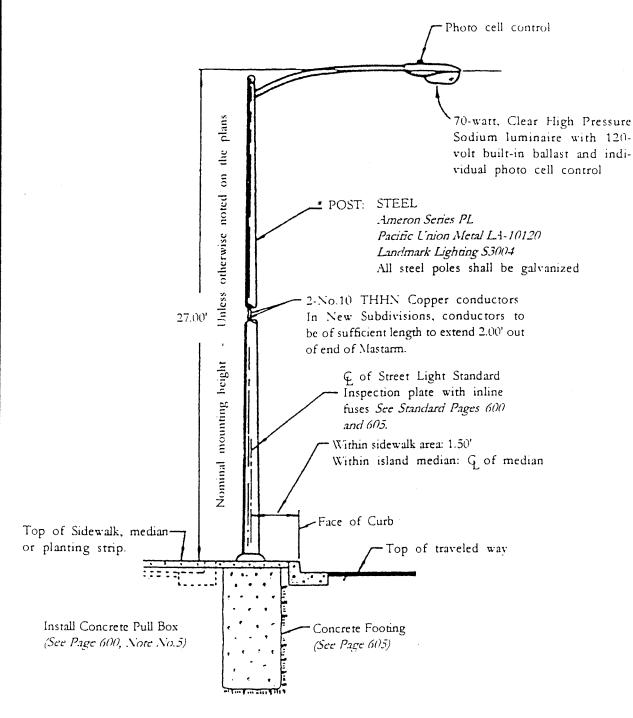
N. T. S.

March 26th 1996
File Number:
Std. Det. SLS0000.601



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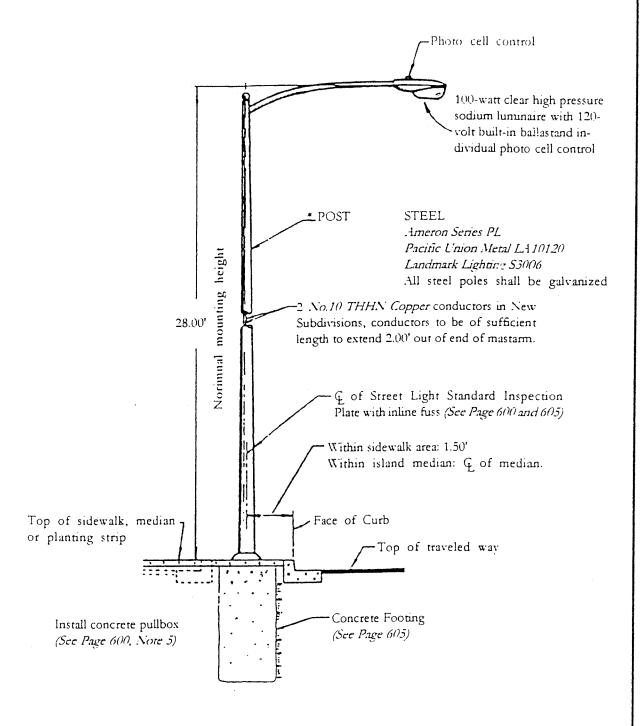
Mastarm to extend 2.00' Minimum beyond curb face.



* Alternates to be specifically approved by the City Engineer

CITY OF PETALUMA Department of Engineering 22 Bassen Street - Petaliuma California 94952 05 - 8 4304 - Fax 05 - 8 4437 Approvised By	Standards Street Light Local Street	Exam By Butch Smith Scale N. T. S. Date June 16th 1999 (Rev.)	
Thomas S. Hargis - R.C.E. 2366		Füe Number Std. Det. SLS0000.602	Page 602

Mastarm to extred 4.50' Minimum beyond curb face.



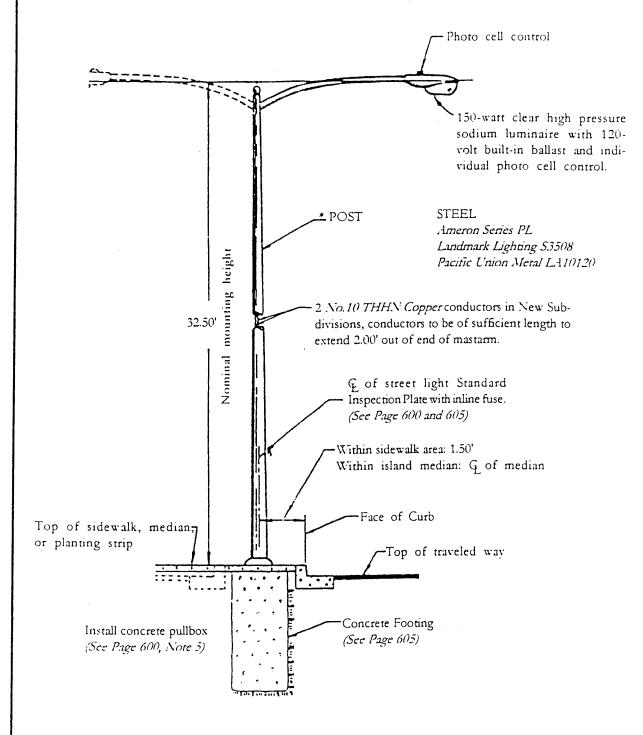
* Alternates to be specifically approved by the City Engineer

CITY OF PETALUMA
Department of Engineering
22 Bassert Street - Petaiuma California 44952
00 - 8 4304 - Fax 00 - 8 443

Street Light
Approved By
Collector Street
Thomas S Hargis - R.C. E. 23366

Standard
Standard
Scale
N. T. S.
Date
June 16th 1999 (Rev.)
Füe Number
Std. Det. SLS0000.603

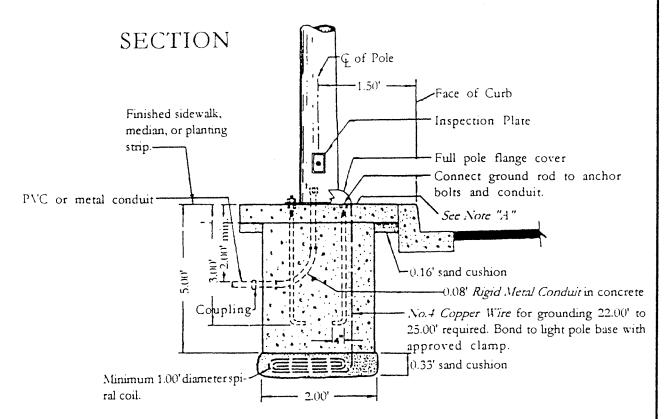
Mastarm to extred 6.50' minimum beyond curb face.



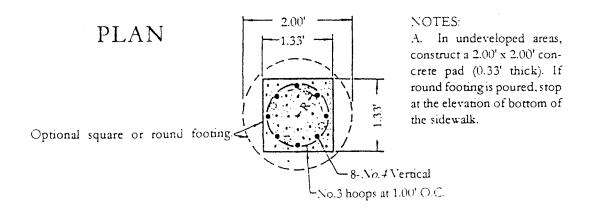
* Alternates to be specifically approved by the Circ Engineer.

CITY OF PETALUMA Department of Engineering 22 Bassen Street - Petaluma California 94952 20 - 78 4304 - Fax 707 - 78 4437 Approved By	Standard Street Light Anterial Street	Erawn dy Butch Smith Scale N. T. S. Date June 16th 1999 (Rev.)	
Thomas S. Hargis - R.C.E. 22366		File Number Std. Det. SLS0000.604	Page 604

ALTERNATES: Quickset Model No. L.F.-54 Brooks Products Inc. Model No. 85C-109

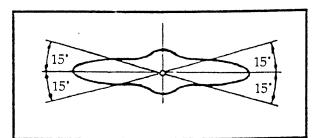


Concrete shall be Class "A" P.C.C. poured against undisturbed soil.

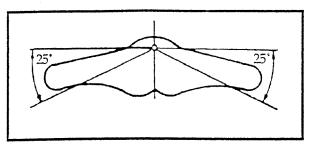


R = Anchor bolt diameter dimension radius and bolt pattern to suit pole base furnished.

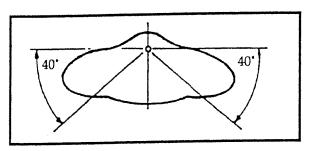
CITY OF PETALUMA Department of Engineering 22 Bassen Street Petaluma California 04052 07 8 4304 Fax 07 8 4437 Approved By	Standard Concrete Footing Detail	Butch Smith Scale N. T. S. Date June 16th 1999 (Rev.)	
Thomas S. Hargis - R.C.E. 22666		File Number. Std. Det. SLS0000.605	Page: 605



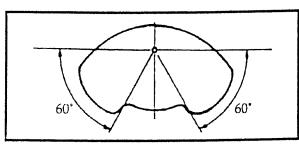
TYPE 1 CENTER OF STREET



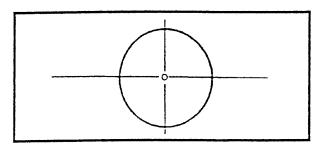
TYPE 2 SIDE MOUNTING Standard for Local Street unless noted otherwise



TYPE 3 SIDE MOUNTING Standard for Collecdtor and Arterial Streets unless noted otherwise



TYPE 4 SIDE MOUNTING



TYPE 5

CITY OF PETALUMA
Department of Engineering

Thomas S. Hargis - R.C.E. 22366

Standard I. E. S. Light Patterns Butch Smith

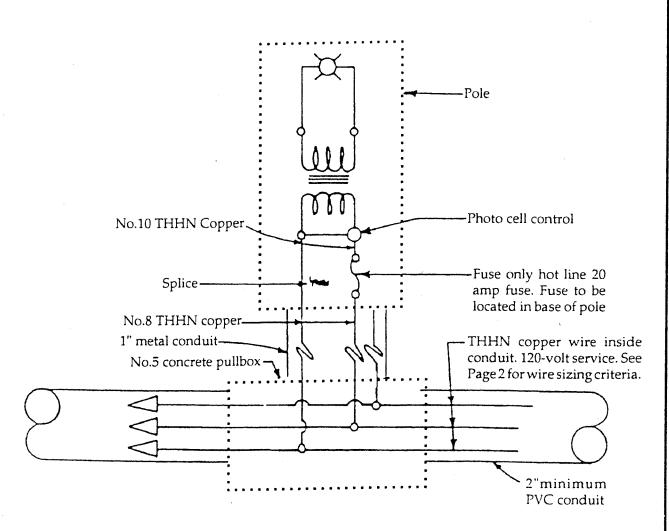
N. T. S.

Date

March 31st 1995 File Number: Std.Dct. SLS0000.606



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SCHEMATIC STREET LIGHT WIRING DIAGRAM

CITY OF PETALUMA
Department of Engineering

22 Bassett Street - Petaluma California 94952 707,778 4304 - Fax 707,778 4437

Thomas S. Hargis - R.C.E. 22366

Standard STREET LIGHT WIRING

Light Patterns

Butch Smith

N. T. S.

Date: March 31st 1995

File Number Std. Det. SLS0000.607



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AREA CLASS	ROADWAY CLASS	MIN. AVG. MAINTAINED F.C.	UNIFORMITY RATIO AVG.F.C. MIN.F.C.
1	LOCAL	0.2	4:1
RESIDENTIAL	COLLECTOR	0.3	5 : 1
RESIL	ARTERIAL	0.75	3:1
	LOCAL	0.2	4:1
URBAN	COLLECTOR	0.3	5 : 1
U	ARTERIAL	0.75	3:1
COMMERCIAL	COLLECTOR	0.3	5 : 1
СОММ	ARTERIAL	0.75	3:1

AVERAGE MAINTAINED F.C. IS: F.C. = $\frac{\text{(LL) (MF) (CU)}}{\text{(W) (S)}}$

FC = Illumination in footcandles
LL = Rated initial lamp lumens
MF = Maintenance factor
CU = Coefficient of utilization
W = Street width (curb to curb)
S = Spacing of luminares

MINIMUM F.C. IS: FC = (fc)(LF)(MF)(CF)

FC = Minimum point footcandles

fc = Raw total footcandles (at darkest point)

LF = Lamp factor

MF = Maintenance factor

CF = Mounting height correction factor

UNIFORMITY RATIO = $\frac{\text{AVERAGE FOOTCANDLES}}{\text{MINIMUM FOOTCANDLES}}$

CITY OF PETALUMA Department of Engineering

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Thomas S. Hargis - R.C.E. 2206

Standard Roadway Illumination

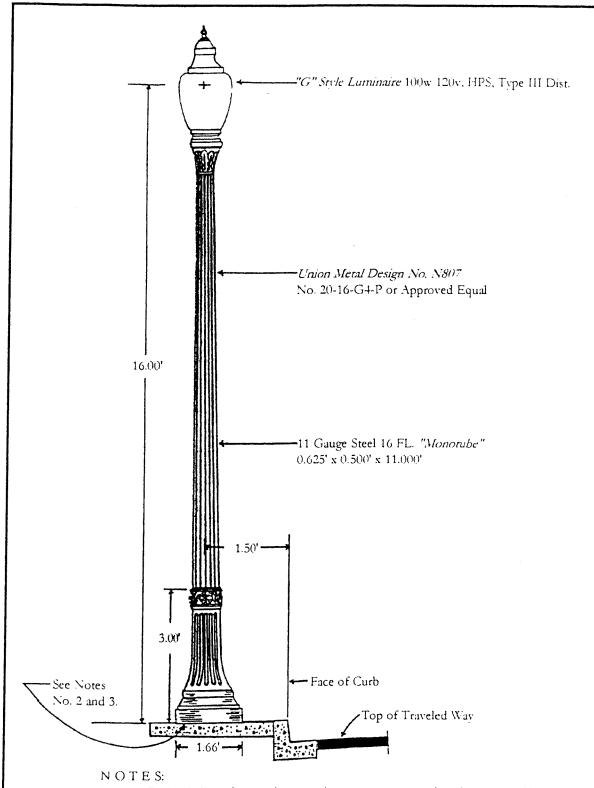
•	Drawn By
	Butch Smith
	Scale:
	N. T. S.
	Date:

Date: March 31st 1995

File Number Std. Det. SLS0000.608



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- 1. Design shall conform to these requirements except as otherwise approved by the City Engineer by variance.
- 2. Ground surface at base must be level
- 3. (4) 0.08' x 2.50' Anchor Bolts shall be used on the 1.00' base coupling.

CITY OF PETALUMA Department of Engineering 22 Hassert Street - Petaluma California 94952 70 78 4304 - Fax 70 78 4437 Approved By	Historic Style Street Light With Acorn	Butch Smith Scale N. T. S. Date June 28th 1999 (Rev.)	
Thomas S Hargis - R.C.E. 22366	Fixture	File Number: Std. Det. SLS0000.609	Page 609

-6.00'Photocell 1).16' Schedule 40 Steel Pipe Armwith Union Metal No. 49-F2 Final, 0.10' Thread, or Approved Equal. Prodel Series G3191, 150 w, 120v HPS, Type III Dist. or Approved Equal. Union Metal Design No. 3714 - No. 75-30-J4-Por Approved Equal. 11 Gauge Steel 0.70' x 0.32' x 32.29' "Octo-Fluted Pole Pattern" 32.29 Face of Curb Union Metal No.15 Series Cast Iron Pedestal and Base or Approved Equal. Top of Traveled Way See Notes 2 and 3

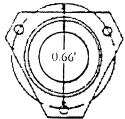
NOTES:

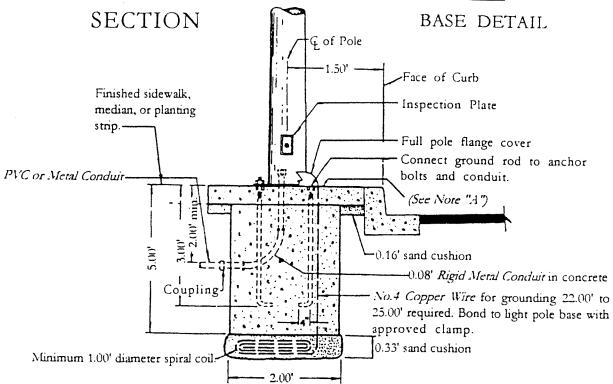
- 1. Design shall conform to these requirements except as otherwise approved by the City Engineer by variance.
- 2. Ground surface at base must be level.
- 3. (4) 0.06' x 2.50' Large Anchor Bolts (0.33' Proj.) with (2) Hex Nuts shall be used on the 0.83' Base Coupling.

CITY OF PETALUMA Department of Engineering 22 Bassen Street - Peraluma California 94952 - 8 4304 - Fax 0 - 8 443 Approved By	Historic Style Mastarm Street Light	Butch Smith Scale N. T. S. Date June 28th 1999 (Rev.)	
Thomas S. Hargis - R.C.E. 2366		File Number Std. Det. SLS0000.610	Page: 610

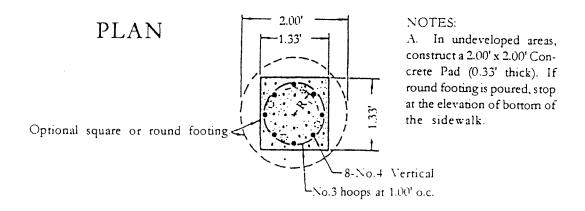
ALTERNATES:

Quickset Model No. L.F.-54
Brooks Products Inc. Model No. 85C-109





Concrete shall be Class "A" P.C.C. poured against undisturbed soil.



R = Anchor bolt diameter dimension radius and bolt pattern to suit pole base furnished.

CITY OF PETALUMA Department of Engineering 22 Bassett Street - Petaluma California 94952 20	Historic Style Concrete Footing and Base Detail	Butch Smith Scale N. T. S. Date. June 16th 1999 (Rev.)	
Thomas S. Hargis - R.C.E. 22366		File Number Std.Det. SLS0000.611	Page 611