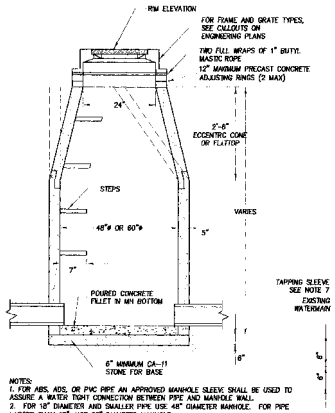
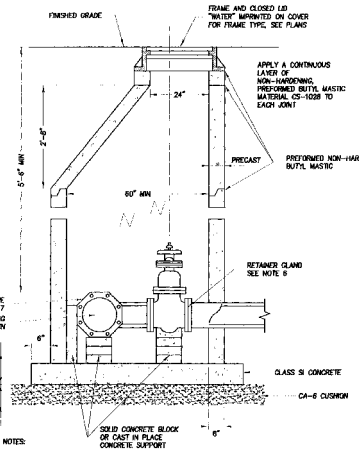


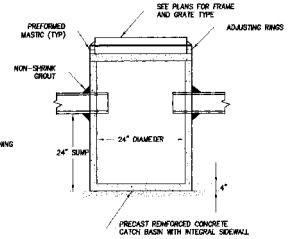
NOTES:
1. FOR ABS, ADS, OR PVC PIPE AN APPROVED MANHOLE SLEEVE SHALL BE USED TO ASSURE A WATER TIGHT CONNECTION BETWEEN PIPE AND MANHOLE WALL.
2. FOR 18" DIAMETER AND SMALLER PIPE USE 48" DIAMETER MANHOLE. FOR PIPE LARGER THAN 18", USE 60" DIAMETER MANHOLE.
3. PRECAST CONCRETE SHALL CONFORM TO ASTM C-478 FOR ALL MANHOLES.
4. FOR FRAME AND GRATE TYPES, SEE CALLOUTS ON ENGINEERING PLANS.

STORM MANHOLE (TYPE A) N.T.S.



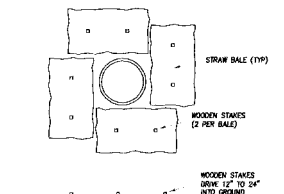
NOTES:
1. WHEN THE FRAME DOES NOT MEET PROPOSED ELEVATION, A MAXIMUM OF TWO PRECAST CONCRETE RINGS MAY BE USED TO A MAXIMUM OF 12 INCHES. THE RING(S) SHALL BE SET IN A BED OF NON-HARDENING MASTIC (BUB-R MEK OR EQUAL).
2. THE VALVE MUST ALIGN WITH THE CENTER OF VAULT OPENING.
3. CONES MUST BE ECCENTRIC.
4. BUTTERFLY VALVES REQUIRE ECCENTRIC CONES.
5. WHEN ADJUSTMENTS ARE NECESSARY, THEY WILL BE PREFORMED WITH A MAXIMUM OF TWO (2) PRECAST CONCRETE RINGS SET IN A BED OF PREFORMED NON-HARDENING MASTIC (CS-1028 OR APPROVED EQUAL) TO A MAXIMUM HEIGHT OF 12".
6. USE MEGALUG SERIES 1100 OR FORD UNIFLANGE SERIES 1400 RETAINER GLANDS.
7. TAPPING SLEEVES SHALL BE CAST IRON MECHANICAL JOINT (CLOW F-5205 OR EQUAL)

CAST IRON SLEEVE PRESSURE TAP VALVE VAULT DETAIL N.T.S.



NOTES:
1. PROVIDE FA-1,2, OR 6 AGGREGATE AROUND CB TO SUBGRADE ELEVATION.
2. ALTERNATE CB BOTTOM — PRECAST REINFORCED CONCRETE BASIN.
3. NO MORE THAN TWO ADJUSTING RINGS SHALL BE PERMITTED. TWO INCH ADJUSTINGS RINGS SHALL ONLY BE USED ON ADJUSTMENTS LESS THAN THREE INCHES.
4. CONCRETE FILLETS SHALL BE MADE WITH ADDITIONAL MORTAR TO PROVIDE A SMOOTH TRANSITION BETWEEN THE CASTING AND THE ADJUSTING RINGS.
5. DRESS UP INTERIOR JOINTS WITH HYDRAULIC CEMENT. APPLY A CONTINUOUS LAYER OF NONHARDENING PREFORMED MASTIC MATERIAL (BUB R MEK OR EZ STICK) TO PREVENT INFLOW.

CATCH BASIN (TYPE C) N.T.S.



MAINTANANCE
1. FILTER BARRIER SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.
2. SHOULD THE FABRIC DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE EXPECTED USABLE LIFE AND THE BARRIER IS STILL NECESSARY, THE FABRIC SHALL BE REPLACED PROMPTLY.
3. SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH STORM EVENT. THEY MUST BE REMOVED WHEN THE DEPOSITS REACH APPROXIMATELY ONE HALF THE HEIGHT OF THE BARRIER.
4. ANY SEDIMENT DEPOSITS REMAINING IN-PLACE AFTER THE SILT FENCE OR FILTER BARRIER IS NO LONGER REQUIRED, SHALL BE DRESSED TO CONFORM TO THE EXISTING GRADE, PREPARED, SEEDED, AND MULCHED.
5. MAINTAIN BALES UNTIL LANDSCAPING HAS BEEN ESTABLISHED.

STRAW BALES N.T.S.

Downers Grove Tree Protection Requirements

Ordinances regarding trees, including tree protection requirements for public trees, are located in Chapter 34 of the Downers Grove Municipal Code. The Forestry Division of the Public Works Department implements and enforces these codes. The following identifies tree protection requirements for projects near public parkway trees.

Tree protection shall include avoiding damage to the above ground tree branches and trunk, and the below ground root system and surrounding soil. Roots are one of the most vital parts of a tree and must be protected from severing or damage in their soil environment caused by compaction and grading. The majority of a tree's nutrient and water absorbing roots are in the upper 18 to 24 inches of soil. Damage to the roots can lead to irreversible tree decline or death in the coming years, unless the area around the root zone is protected during construction activities. The Critical Root Zone, or CRZ, is the area immediately surrounding a tree that needs to be protected from damage. The size of this area, measured from the center of the tree, is generally a circle with a radius of one foot for each inch of trunk diameter. The depth of the CRZ extends to 4 feet below the natural ground surface level.

In a municipal parkway setting with utilities and paved or non-permeable surfaces, the size of the CRZ has been adjusted to form a rectangle around the parkway tree trunk with the minimum dimensions listed in the following table. At a minimum, the listed CRZ shall be fenced. Whenever possible, the entire parkway shall be fenced except where access has been permitted.

Parkway Tree diameter at 4.5'	Width from street to parkway (measured each to sidewalk)	Length along street (measured)	Depth
6 - 12.0 inches	10.0 feet	10 feet	4 feet
12.1 - 24.0 inches	15.0 feet	20 feet	4 feet
24.1 or more inches	20.0 feet	30 feet	4 feet

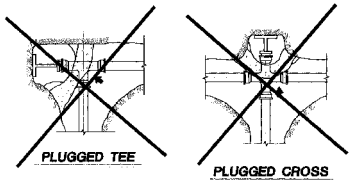
For public parkway trees, roots located within the determined CRZ shall be protected from compaction, severing, and the storage of materials or equipment. If utilities pass through a CRZ, they must be augered underneath the tree. In cases where severing of roots within a portion of the CRZ may be unavoidable (ex. sidewalk installation, curb replacement), subject to the approval of the Village Forester, sharp clean cuts shall be made on root ends to promote wound closure and root regeneration. All fencing around each tree's CRZ is to be 4 feet high, secured to steel posts spaced no further than 10 feet apart, and maintained daily in good condition.

In addition to fines and citations that may be assessed for violations of any Chapter 24 municipal code (such as not maintaining fencing around the CRZ or unauthorized removal of protected trees), violations may be subject to the following provisions:

- issuance of an invoice for the value or partial value of the tree lost due to damage to either the above ground or below ground portions of the parkway tree, or unauthorized tree removal.
- forfeiture of bonds issued for the work should there be insufficient to cover tree values and fines.
- costs of repairs, such as pruning or cabling, or costs for removal of the damaged parkway tree along with the stump if the tree cannot remain in the right-of-way.
- fines of $500.00 for the 1st offense, $1,000 for the 2nd offense, $2,500 for 3rd and subsequent offenses.
- each day during which a violation continues shall be construed as a separate and distinct offense.

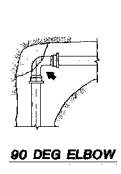
For more information, contact the Forestry Division at 434-5475 or 434-5476

May 2006 Page 1 of 3

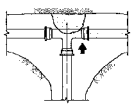


PLUGGED TEE

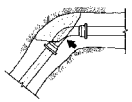
PLUGGED CROSS



90 DEG ELBOW



TEE



VERTICAL BEND

NOTES:
1. THRUST BLOCKING TO PREVENT MOVEMENT OF LINES UNDER PRESSURE AT BENDS, TEES, CAPS, VALVES, HYDRANTS, AND AT POINTS SPECIFIED BY THE ENGINEER AND SHALL BE CLASS SI CONCRETE A MINIMUM OF 12" THICK, PLACED BETWEEN SOLID GROUND AND FITTING. IT SHALL BE ANCHORED IN SUCH A MANNER THAT PIPE AND FITTING WILL ACCESSIBLE FOR REPAIRS. THRUST BLOCK SHALL BE PLACED AT BENDS 11 1/4 DEGREES OR MORE.
2. ALL THRUST BLOCKS ARE TO BE INSTALLED AGAINST UNDISTURBED EARTH.
3. ARROWS INDICATE DIRECTION OF THRUST.
4. ALL THRUST BLOCKS TO BE CONSTRUCTED WITH 3500 P.S.I. CLASS SI CONCRETE.
5. POURED CONCRETE SHALL EXTEND TO 6" ON EITHER SIDE OF THE WATERMAIN WALL.

4 THRUST BLOCK INSTALLATION N.T.S.

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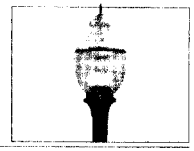
Design AC

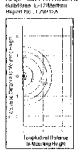
Attractive Acorn Post-Top Fixtures

- Efficient post top fixtures add a touch of nostalgia to parks, walkways, docks and other pedestrian thoroughfares, help provide increased pedestrian safety.
- Vandal and weather-resistant design and construction provides long life with minimum outages.
- Easy access for relamping, cleaning and maintenance helps keep maintenance costs low.



Photometric Data:

Luminaire: Type V
SP-70 Reflector Optic
Lamp: 150 Watt HPS (Sodium)
Input Watts: 170 Watts
Report No.: LP8703A



COMPENSATION CHART - Footcandles are initial

Mounting Ht.	A	B	C	D	L
8'	0.68	0.32	0.58	0.31	0.49
10'	0.43	0.20	0.50	0.30	0.28
12'	0.27	0.14	0.44	0.26	0.17
15'	0.24	0.08	0.34	0.20	0.11
20'	0.13	0.03	0.22	0.13	0.06

Note: Multiply candlepower values by .8071 for 120V lamp

Specifications:

Overall: Acorn Post-top fixtures are designed with an internal beam filled lamp and reflector system. The overall diameter of the fixture is 18", with a height to width ratio of approximately 3 to 1. Its pleasing proportions and smooth contours provide maximum lighting efficiency, as well as stable and aesthetically pleasing.

Housing and Ventilation: The housing is a heavier, thicker walled molded cast aluminum, to prevent vibration and distortion. The ballast housing is cast aluminum. A thermal cutoff is provided to prevent lamp extinguishing. The ballast is fully encapsulated and is protected against moisture, corrosion and vibration. The ballast housing is cast aluminum. All hardware is stainless steel or equivalent.

Gasketing: Gasketing is only used where it is considered necessary. Silicone is used in preference to other materials.

Optical System: The optical SP-70 High Efficiency Refractor System consists of four specially designed multi-lens refractors, each constructed of high purity cast aluminum with specular Alzak finish. The refractor system is designed to have a cut off at maximum beam distribution to provide a cut off angle of 70° above the vertical, with cutoff at 76°. The system is guaranteed to not exceed the top of the globe.

Globe: The Design AC fixture's globe is a molded heavy wall acrylic UV stabilized polycarbonate material. The patented bottom is designed to provide even diffusion of light. When the globe is subject to the accumulation of the optional SP-70 High Efficiency Refractor System, the globe's bottom is designed to have a specular finish to maximize the amount of light point upon reflectors and minimize the amount of light reflected into the globe. All globe joints and parts are precision machined to provide a good fit.

Gasketing: Gasketing is only used where it is considered necessary. Silicone is used in preference to other materials.

Installation: The fixture is easily installed as the pole is being erected. Lamp replacement requires only the top fixture to be lowered.

Optional Systems: The optional SP-70 High Efficiency Refractor System consists of four specially designed multi-lens refractors, each constructed of high purity cast aluminum with specular Alzak finish. The refractor system is designed to have a cut off at maximum beam distribution to provide a cut off angle of 70° above the vertical, with cutoff at 76°. The system is guaranteed to not exceed the top of the globe.

Installation: The fixture is easily installed as the pole is being erected. Lamp replacement requires only the top fixture to be lowered.

Optional Systems: The optional SP-70 High Efficiency Refractor System consists of four specially designed multi-lens refractors, each constructed of high purity cast aluminum with specular Alzak finish. The refractor system is designed to have a cut off at maximum beam distribution to provide a cut off angle of 70° above the vertical, with cutoff at 76°. The system provides shielding of the lamp to prevent glare and lighting fixtures be delivering through the reflector elements.

Ballast: Design AC fixtures operating on more than 120 Volt Nigh Power Factor Ballasts. Ballasts must be fixtures operating on 120 V are Normal Power Factor. All ballasts are located within the fixture below the lamp, to avoid damage from lamp heat.

Finish: High solids acrylic or polyester baked enamel, electrostatically applied over pretreated and phosphate treated metal. The finish shall meet or exceed the requirements of ANSI standard for 1 2000 hour salt spray exposure.

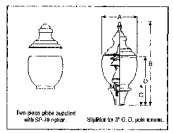
Quality Lighting
A DIVISION OF JJI LIGHTING GROUP, INC.
11930 MELROSE AVENUE · SUNLAND PARK, NM 88063 · PHONE (505) 452-4000 · FAX (505) 452-4700
email: sales@qualitylighting.com · www.qualitylighting.com
Representatives in: Alaska, Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Texas, Utah, Washington, Wyoming, Western Canada, U.S.V.I., Guam, Saipan

Dimensional and Physical Data:

OPERATION:		MAXIMUM LAMP WATTAGE:		
A	5.00 (diameter)	Lamp	Wattage	Base
B	30.00	HPS	150W	Medium
C	13.00	MH	175W	Medium
D	27.00"	LPS	55W	D. C. Bayonet

WEIGHT: 27.0 lbs.

PROJECTED AREA (TOTAL): 1.7 sq. ft.



Ordering Information:

ORDERING EXAMPLE:
AC-16-BL-HPS-150-120-CC-FD

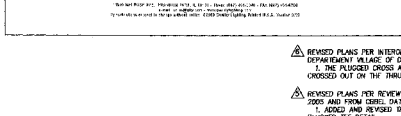
AC 16 BL HPS 150 120 CC FD
DESIGN
SIZE
OPTICAL SYSTEM
LAMP TYPE
LAMP WATTAGE
PRIMARY BALLAST VOLTAGE
FINISH
OPTIONS

(Diagram as eight smaller squares in the example.)

This example illustrates the standard ordering sequence. Each part of the ordering number is chosen from the appropriate column in the ordering chart below. The number in the example designates a Design AC fixture, 16" outside lamp. The fixture is to be equipped with a 150 Watt HPS lamp, with primary voltage of 120 V. The finish is to be a Dunkel Gray, and the fixture is to be equipped with Surge Protection (for pole mounting only applies, see catalog).

DESIGN	SIZE	OPTICAL SYSTEM	LAMP TYPE	LAMP Watts	LAMP LPS	VOLTS
AC	16	BL - Base Lamp	HPS	35W	40W	120V 277V
		R - Refractor		50W	50W	208
		SP 70		70W	100W	240
				100W	140W ‡	277
				150W	17MW	480 (Not Available)

‡ 140W lamp will operate with 250W HM Ballast



OPTIONS

ELECTRICAL
PD Single Fusing 120V/277V
PDFD Double Fusing 208V/240V

OPTICAL
R Refractor
SP-70 High performance reflector
CDS 1/2" Removable cut-off shield (photocell to be wired with SP-70)
PT Painted top

FINISH
BK Black paint (standard)
CC Custom color (typically extra)

Quality Lighting
A DIVISION OF JJI LIGHTING GROUP, INC.
11930 Melrose Avenue
Sunland Park, NM 88063
Phone: 877-511-0300
Fax: 877-511-0700
Email: sales@qualitylighting.com

PROJECT NAME: NELSON MEADOW			
QTY.	LABEL	LUMINAIRE DESCRIPTION / MOUNTING HEIGHT	LUMENS
12	B	AC-16-SP-70-HPS-100-VND-BK/LS-40-17-14-BK	9500

PREPARED BY:	FILE NAME	DATE	L.L.F.	SCALE	DWN BY
Quality Lighting	F:\ACI-FILES\050989B.AGI	04-03-2006	.81	1"=30'	D. H.

PREPARED FOR C. M. LAVOIE & ASSOCIATES

FIXTURES AND POLES MANUFACTURED BY QUALITY LIGHTING

FOR INFORMATION CONTACT DAVE HOLLADAY AT (800) 545-1326

STATISTICAL AREA : ROAD 1: BROOKBANK, JEFFERSON, NELSON

AVERAGE Fc = .43
MAXIMUM Fc = .93
MINIMUM Fc = .10
AVERAGE/MINIMUM = 4.3
MAXIMUM/MINIMUM = 9.3
TOTAL NUMBER OF POINTS = 270

STATISTICAL AREA : ROAD 2: CARPENTER

AVERAGE Fc = .48
MAXIMUM Fc = .89
MINIMUM Fc = .16
AVERAGE/MINIMUM = 3
MAXIMUM/MINIMUM = 5.56
TOTAL NUMBER OF POINTS = 46

PLANE : @GRADE

POINT SPACING LEFT-TO-RIGHT = 10 Ft
POINT SPACING TOP-TO-BOTTOM = 10 Ft
LOWER LEFTHAND CORNER OF PLANE:
X = 4061.98 Y = 4726.08 Z = 0
UPPER RIGHTHAND CORNER OF PLANE:
X = 5270.03 Y = 5697.63 Z = 0
LIGHT METER IS NORMAL TO PLANE
TOTAL NUMBER OF POINTS = 334

MODEL
MOUNTING TYPE
CATALOG#

Specifications

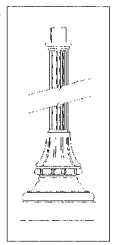
Description The lighting post shall be all aluminum, one piece construction, with a fluted shaft and a classic, double tapered and fluted base.

Materials The base material shall be heavy wall cast aluminum, formed true to the pattern with symmetric detail. The shaft material shall be fluted, extruded aluminum. All hardware shall be bronze resistant stainless steel. Anchor bolts to be hot dipped galvanized.

Dimensions The post shall be X' X" in height with a 13-5/8" or 17" diameter base. The post shall shall have a 4" outside diameter with a 3" tenon at the top for luminaire mounting. The base shall have a height of 17" or 18".

Installation The post shall be provided with four 5/8" diameter by 18" long J-type anchor bolts to be installed on a 9-1/2" or 12" bolt circle. An access door shall be provided in the base for wiring and for bolts and wiring access. A grounding screw shall be provided inside the base opposite the door for wire access.

Finish The post shall be shipped pre-finished with a premium polyester powder coat. Colors available are black (BK) (standard), dark bronze (DB), dark green (DG), or custom (CC). Prime painted (PP) posts are also available.



Product Order Guide

Series	Base Size	Mounting Height	Finish	Option
LS-40	13-5/8	14	BK Black	P Powder Coat
	17	12	DB Dark Bronze	WDRB Weatherproof duplex receptacle in base
		10	DG Dark Green	WDRP Weatherproof duplex receptacle in post
		8	CC Custom	
			PP Prime	

Example: LS-40-13-5/8-12-DG-PC

Dimensions

Model	Base Dia.	Base Height	Weight
LS-40	13-5/8"	17"	75#
	17"	18"	92#

Quality Lighting
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11930 Melrose Avenue
Sunland Park, NM 88063
Phone: 877-511-0300
Fax: 877-511-0700
Email: sales@qualitylighting.com

#	DATE	DESCRIPTION
1	2-16-05	PER VILLAGE & CLIENT REVIEW
2	4-17-05	PER VILLAGE & SANITARY DISTRICT
3	6-02-05	PER VILLAGE REVIEW
4	7-01-05	PER VILLAGE REVIEW
5	8-08-05	PER VILLAGE REVIEW
6	9-15-05	PER VILLAGE REVIEW
7	9-26-05	PER VILLAGE REVIEW
8	12-05-05	PER VILLAGE REVIEW

4 REVISED PLANS PER INTERDEPTCE CORRESPONDENCE BY PUBLIC WORKS DEPARTEMENT VILLAGE OF D.G. DATED SEPTEMBER 2, 2005
1. THIS PLUGGED CROSS AND PLUGGED TEE DETAIL HAVE BEEN ADDED TO THE THRUST BLOCK DETAIL.

5 REVISED PLANS PER REVIEW LETTERS FROM VILLAGE OF D.G. JULY 5, 2005 AND FROM DEBEL DATED JULY 29, 2005.
1. ADDED AND REVISED THRUST BLOCK INSTALLATION DETAIL AND PLUGGED TEE DETAIL.
2. REVISED LIGHT POLE DETAIL.

6 REVISED PLANS PER REVIEW LETTERS FROM VILLAGE OF D.G. MAY 6, 2005
1. ADDED PRESSURE CONNECTION VAULT DETAIL
2. REMOVED CASING DETAIL
3. ADDED LIGHT POLE DETAILS

7 REVISED PLANS PER REVIEW LETTERS FROM VILLAGE OF D.G. MARCH 16, 2005 & D.G. SANITARY DISTRICT APRIL 4, 2005
1. CREATED SHEET
2. ADDED CASING DETAIL.
2. ADDED STORM MANHOLE (TYP A) DETAIL.
3. ADDED CATCH BASIN (TYP C) DETAIL.

NELSON MEADOW

WEST SIDE OF CARPENTER STREET
DOWNERS GROVE, ILLINOIS

11	7-21-06	PER VILLAGE REVIEW
10	5-23-06	PER VILLAGE REVIEW
9	4-05-06	PER VILLAGE REVIEW

DETAILS

DRAWN BY: JMB CHECKED BY: BLH
SCALE: N.T.S. DATE: 1-24-06
JOB NUMBER: 04-239 SHEET: 5 OF 17

C.M. Lavoie & Associates, Inc.
Consulting Civil Engineering
Land Planning & Surveying
1650 W. Route 126
Plainfield, Illinois 60544
voice 815-254-0505
fax 815-436-5158

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