



Location
5402 Voges Road

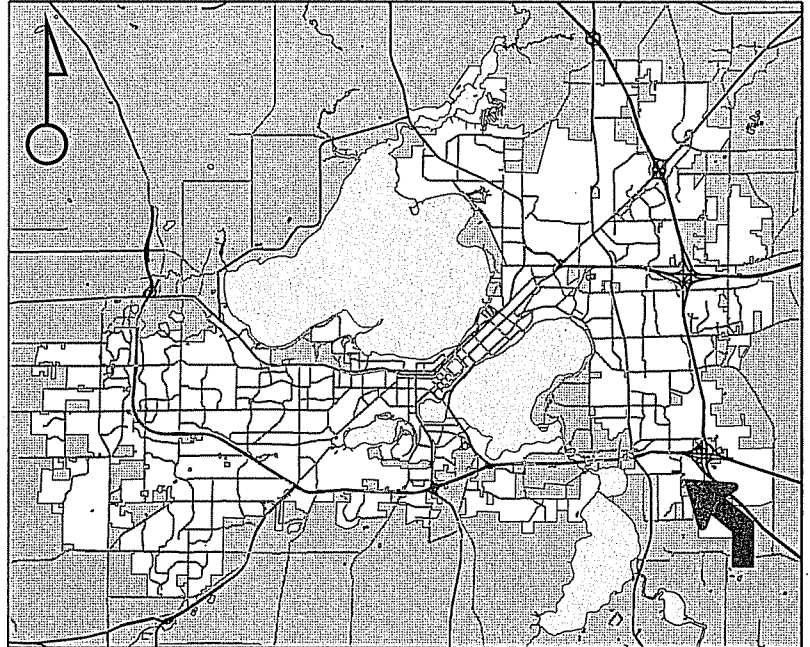
Project Name
Trane House Relocation

Applicant
MMI Properties, LLC/
John Bieno – TJK Design Build

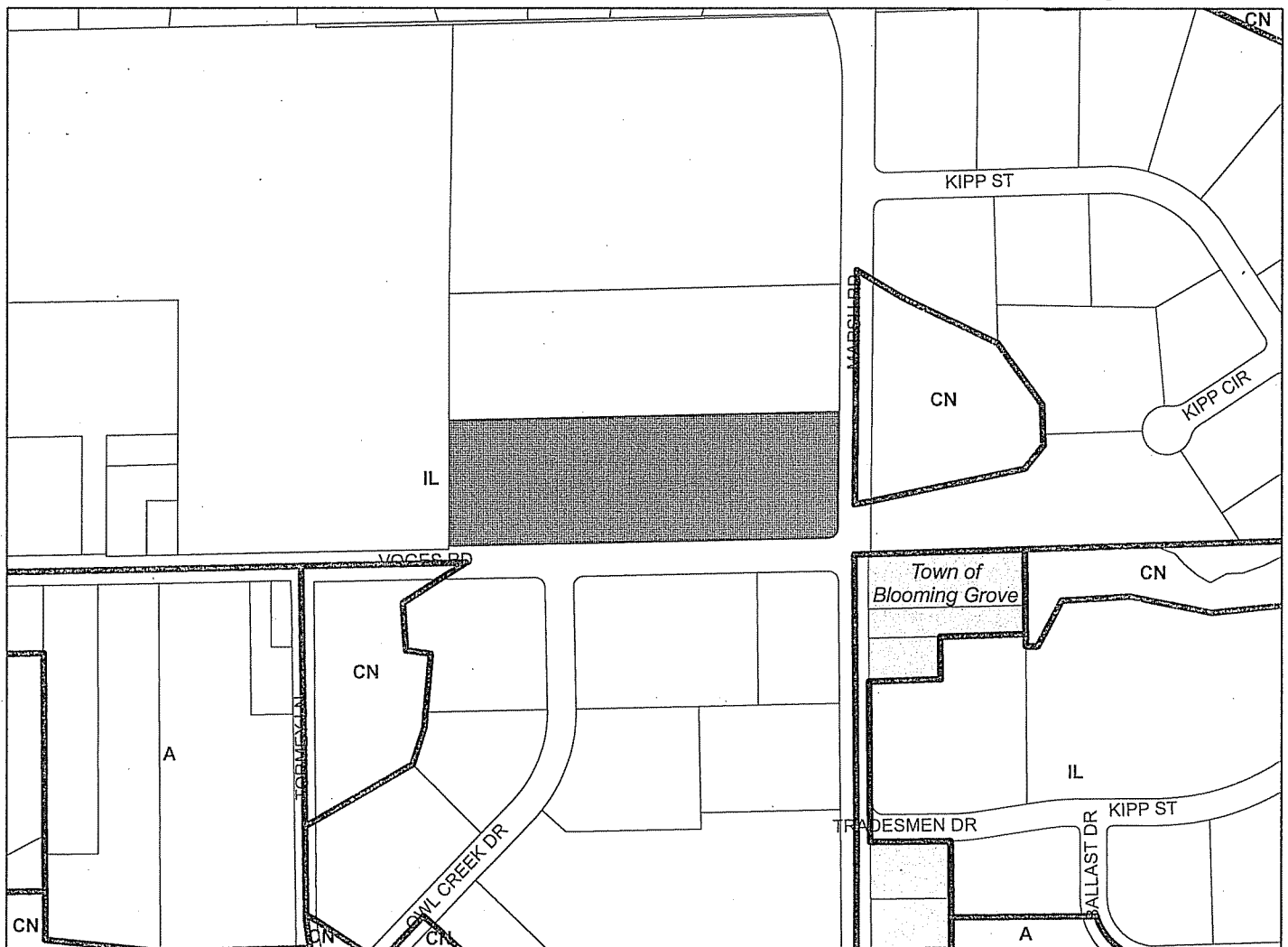
Existing Use
Single-family residence

Proposed Use
Relocate single-family residence to
allow construction of an office building

Public Hearing Date
Plan Commission
14 October 2013

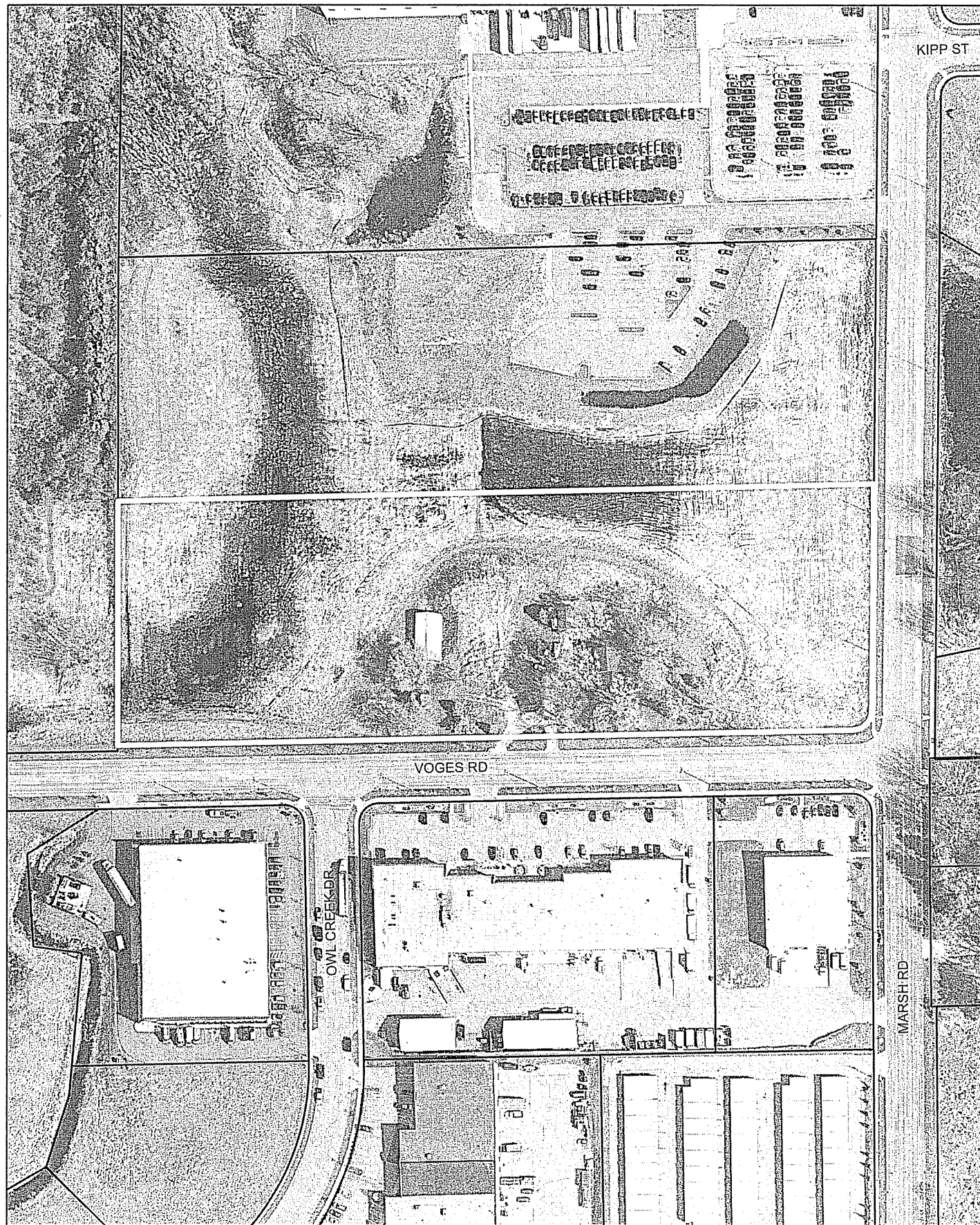


For Questions Contact: Kevin Firchow at: 267-1150 or kfirchow@cityofmadison.com or City Planning at 266-4635



Scale : 1" = 400'

City of Madison, Planning Division : RPJ : Date : 08 October 2013





LAND USE APPLICATION

CITY OF MADISON

215 Martin Luther King Jr. Blvd; Room LL-100
PO Box 2985; Madison, Wisconsin 53701-2985
Phone: 608.266.4635 | Facsimile: 608.267.8739

- All Land Use Applications should be filed with the Zoning Administrator at the above address.
- The following information is required for all applications for Plan Commission review except subdivisions or land divisions, which should be filed using the Subdivision Application.
- This form may also be completed online at:
www.cityofmadison.com/developmentcenter/landdevelopment

FOR OFFICE USE ONLY:

Amt. Paid _____ Receipt No. _____
Date Received _____
Received By _____
Parcel No. _____
Aldermanic District _____
Zoning District _____
Special Requirements _____
Review Required By:
☐ Urban Design Commission ☐ Plan Commission
☐ Common Council ☐ Other: _____

Form Effective: February 21, 2013

1. Project Address: 5402 VOGES ROAD
Project Title (if any): TRANE

2. This is an application for (Check all that apply to your Land Use Application):

- ☐ Zoning Map Amendment from _____ to _____
- ☐ Major Amendment to Approved PD-GDP Zoning ☐ Major Amendment to Approved PD-SIP Zoning
- ☐ Review of Alteration to Planned Development (By Plan Commission)
- ☒ Conditional Use, or Major Alteration to an Approved Conditional Use
- ☒ Demolition Permit
- ☐ Other Requests: _____

3. Applicant, Agent & Property Owner Information:

Applicant Name: JOHN BIENO Company: TJK DESIGN BUILD
Street Address: 1034 WEST MAIN STREET City/State: MADISON WI Zip: 53703
Telephone: (608) 257 1090 Fax: (608) 257 1092 Email: J.BIENO@TJK-DESIGN-BUILD.COM

Project Contact Person: SAME AS ABOVE Company: _____
Street Address: _____ City/State: _____ Zip: _____
Telephone: () _____ Fax: () _____ Email: _____

Property Owner (if not applicant): MMI PROPERTIES LLC
Street Address: 5301 VOGES ROAD City/State: MADISON, WI Zip: 53718

4. Project Information:

Provide a brief description of the project and all proposed uses of the site: OFFICE BUILDING W/ PARKING
DEMOL OF EXISTING GARAGE AND RELOCATION OF HOUSE (LOCATION OUTSIDE OF THE CITY)
Development Schedule: Commencement SEPT 2013 Completion JUNE 2014

5. Required Submittal Information

All Land Use applications are required to include the following:

☒ **Project Plans** including:*

- Site Plans (fully dimensioned plans depicting project details including all lot lines and property setbacks to buildings; demolished/proposed/alterd buildings; parking stalls, driveways, sidewalks, location of existing/proposed signage; HVAC/Utility location and screening details; useable open space; and other physical improvements on a property)
- Grading and Utility Plans (existing and proposed)
- Landscape Plan (including planting schedule depicting species name and planting size)
- Building Elevation Drawings (fully dimensioned drawings for all building sides, labeling primary exterior materials)
- Floor Plans (fully dimensioned plans including interior wall and room location)

Provide collated project plan sets as follows:

- **Seven (7) copies** of a full-sized plan set drawn to a scale of 1 inch = 20 feet (folded or rolled and stapled)
- **Twenty Five (25) copies** of the plan set reduced to fit onto 11 X 17-inch paper (folded and stapled)
- **One (1) copy** of the plan set reduced to fit onto 8 ½ X 11-inch paper

* For projects requiring review by the **Urban Design Commission**, provide **Fourteen (14) additional 11x17 copies** of the plan set. In addition to the above information, all plan sets should also include: 1) Colored elevation drawings with shadow lines and a list of exterior building materials/colors; 2) Existing/proposed lighting with photometric plan & fixture cutsheet; and 3) Contextual site plan information including photographs and layout of adjacent buildings and structures. The applicant shall bring samples of exterior building materials and color scheme to the Urban Design Commission meeting.

☒ **Letter of Intent: Provide one (1) Copy per Plan Set** describing this application in detail including, but not limited to:

- | | | |
|---|---|--|
| • Project Team | • Building Square Footage | • Value of Land |
| • Existing Conditions | • Number of Dwelling Units | • Estimated Project Cost |
| • Project Schedule | • Auto and Bike Parking Stalls | • Number of Construction & Full-Time Equivalent Jobs Created |
| • Proposed Uses (and ft ² of each) | • Lot Coverage & Usable Open Space Calculations | • Public Subsidy Requested |
| • Hours of Operation | | |

☒ **Filing Fee:** Refer to the Land Use Application Instructions & Fee Schedule. Make checks payable to: *City Treasurer*.

☒ **Electronic Submittal:** All applicants are required to submit copies of all items submitted in hard copy with their application as Adobe Acrobat PDF files on a non-returnable CD to be included with their application materials, or by e-mail to pcapplications@cityofmadison.com.

☐ **Additional Information** may be required, depending on application. Refer to the Supplemental Submittal Requirements.

6. Applicant Declarations

☒ **Pre-application Notification:** The Zoning Code requires that the applicant notify the district alder and any nearby neighborhood and business associations in writing no later than **30 days prior to FILING this request**. List the alderperson, neighborhood association(s), and business association(s) AND the dates you sent the notices:

→ If a waiver has been granted to this requirement, please attach any correspondence to this effect to this form.

☒ **Pre-application Meeting with Staff:** Prior to preparation of this application, the applicant is required to discuss the proposed development and review process with Zoning and Planning Division staff; note staff persons and date.

Planning Staff: KEVIN FURLOW Date: 8.22.13 Zoning Staff: PAT ANDERSON Date: 8.22.13

The applicant attests that this form is accurately completed and all required materials are submitted:

Name of Applicant JOHN BIEND Relationship to Property: ARCHITECT
Authorizing Signature of Property Owner [Signature] Date 9.3.13



DESIGN BUILD

634 W. Main Street
Madison, WI 53703
Office 608-257-1090
Fax 608-257-1092
www.tjkdesignbuild.com

September 4, 2013

Department of Planning & Development
City of Madison
215 Martin Luther King Jr. Blvd
PO Box 2985
Madison WI 53701

RE: **Letter of Intent**
5402 Voges Road
Madison WI

To Whom It May Concern:

The following is submitted together with the plans, application and zoning text for staff, Plan Commission and Common Council consideration of approval.

Organizational structure:

Owner: MMI Properties, LLC
5301 Voges Road
Madison WI 53718
608-257-2600
608-838-6821 fax
Contact: John Brigham

Architect: TJK Design Build Inc
634 West Main Street
Madison WI 53703
608-257-1090
608-257-1092 fax
Contact: John J Bieno
jjbieno@tjkdesignbuild.com

Engineer: Snyder and Associates
5010 Voges Road
Madison WI 53718
608-838-0444
608-838-0445 fax
Contact: Mike Calkins

Landscape
Design: Richard Slayton, ASLA

Introduction:

The site is located on the North side of Voges Road. The site is approximately 297,080 SF in size. Of this area, approximately 89,250 SF are buildable. It is under the control of a single developer. The developments that surround this lot have slowly been developed over the last 15 years.

Deconstruction:

This proposed development envisions the deconstruction of an accessory garage building and the relocation of a single family residence to central Wisconsin. The demolition would also include the deck and hard paved areas around the house. Inspection of these properties has been made by the development team. It's been concluded that the garage is beyond the capacity of any reasonable rehabilitation. The house was of reasonable value and a relocation site has been found. The relocation will take place as quickly as approvals can be met for this development. Additional reports on the structures existing condition will be prepared for distribution to the staff and Plan Commission. The developer will contract to prepare a recycling and reuse plan for the building and the components and materials will be handled appropriately. Although the zoning code clearly encourages the preservation of existing structures, the zoning codes purpose also includes promoting the general welfare of the City, encouraging the most appropriate land uses and conserving and enhancing the taxable value of lands and buildings. We believe that the Plan Commission can determine that the demolition standards are met.

Project Description:

The site under consideration is located along a busy road on the south east side of Madison. The project is surrounded by light to medium commercial/industrial development. The lot is also predominantly engulfed by a wetland. We are proposing to remove the existing garage on this property and relocate the existing single family residence. These structures will be replaced with a new slab on grade, pre-engineered building that will be utilized as a regional office for a mechanical corporation. The building and parking have been positioned to maximize the buildable area as well as meet the zoning code. We have also incorporated a patio area that takes advantage of the natural wetlands. Entry and exit into the property will be off of two curb cuts. A second future development, and associated parking, is also to take advantage of these curb cuts. Bike and pedestrian access is compliant with the zoning requirements and has been integrated into the design of the facility. Landscaping has been introduced to enhance the architecture of the building as well as offer some shading and screening. Accent lights have been incorporated into the façade of the building. The parking lot itself will be lit by multiple pole fixtures. The building façade will be a combination of masonry elements, metal panels, windows, translucent panels and strong architectural forms. Large openings can be found on all four facades of the building. Window frame colors have been chosen to accent the architecture. Mechanicals will be on the roof and screened with the incorporation of a corrugated metal mechanical roof screen.

Project Schedule:

It is anticipated that construction will start in the fall of 2013 and will be completed in the summer of 2014.

Social and Economic Impact:

This development will have a positive social and economic impact. The development will potentially increase the city's tax base with minimal if any increased cost to the city. The redevelopment will provide new work opportunities while promoting pedestrian, bicycle and mass transit circulation.

Thank you for your time in reviewing our proposal.

Sincerely,

John J Bieno, AIA
TJK Design Build Inc



Re: Trane Office Building

Demarb, Denise <district16@cityofmadison.com>
To: John Bieno <jjbieno@tjkdesignbuild.com>
Cc: "Firchow, Kevin" <KFirchow@cityofmadison.com>

Mon, Aug 19, 2013 at 10:56 AM

John,

I drove by the site and I would like to welcome Trane to Madison! I agree to waive the 30 day notification period. Good luck and let me know if I can help you as you move forward with this project. I look forward to hearing about your plans.

Denise

On Aug 16, 2013, at 11:22 AM, "John Bieno" <jjbieno@tjkdesignbuild.com> wrote:

> Alder Demarb:

>

> Good morning. We are working with a developer for a new building at 5402 Voges Road. The project will be the local office for Trane, a company that manufactures mechanical units. No manufacturing will take place at this location. It will be their corporate offices for this region. I have been working with Kevin Firchow with the City on creating a plan that is agreeable to both the City and my client. I believe we have reached that balance. I've attached a copy of the plans and elevations for your review.

>

> I hope we can gain your support on this project as it moves through the process. I hope to also gain your waiver for the 30 day notification.

>

> I look forward to working with you on this project. Please let me know if you have any questions.

>

> Thank you.

>

>

>

> --

> John J Bieno, AIA, NCARB

> Architect, Vice-President

>

> TJK Design Build

> 634 West Main Street

> Madison, Wisconsin 53703

>

> Phone - 608.257.1090

> Cell - 608.772.6996

> Fax - 608.257.1092

> Website - tjkdesignbuild.com<<http://tjkdesignbuild.com>>

> <C11.pdf>

> <A11 (1).pdf>

> <A21.pdf>



DESIGNBUILD

634 W. Main Street
Madison, WI 53703
Office 608-257-1090
Fax 608-257-1092
www.tjkdesignbuild.com

DATE: August 27, 2013

FROM: John J. Bieno, AIA
TJK Design Build, Inc.
634 W. Main Street
Madison, WI 53703

RE: **Schedule - Trane**

Submit to Plan Commission	09/04/13
Hire Structural Engineer	09/06/13
Plan Commission Meeting	10/14/13
Submit Building Plans for State Approval	10/14/13
Zoning Site Plan Review	10/16/13
Approved State Drawings	10/28/13
Site Plan Approval	11/01/13
Building Permit	11/02/13
Start Construction	11/18/13
Footings & Foundation	December
Steel Erection	Jan – Feb 2014
Interior Buildout	Feb – March 2014
Sitework	April – May 2014
Substantial Completion	05/16/14
Occupancy	06/01/14

(Note: Exterior items will still need to be completed in the Spring)

DESCRIPTION

The Lumark Tribute is the most versatile, functionally designed, universally adaptable outdoor luminaire available. The Tribute brings outstanding performance to walkways, parking lots, roadways, loading docks, building areas, and any security lighting application. U.L. listed and CSA certified for wet locations.

Catalog #	MPTR-SL-250-208V	Type
Project	Trane	A
Comments		Date
Prepared by		08/21/2013

SPECIFICATION FEATURES

Construction

Rugged one-piece die-cast aluminum housing and door frame. One-piece silicone gasket protects the optical chamber from performance degrading contaminants. One (1) stainless spring latch and two (2) stainless hinges allow toolless opening and removal of door frame.

Reflector

Choice of nine (9) high efficiency optical distributions, including five (5) segmented optical systems constructed of premium 95% reflective oxidized aluminum sheet. Optical segments are rigidly mounted inside a thick gauge aluminum housing for superior protection. All segment faces are clean of rivet heads, tabs or other means of attachment which may cause streaking in the light distribution. Optical modules are

field rotatable in 90° increments and offered standard with mogul base lampholders for High Pressure Sodium and 200-400W Metal Halide assemblies or medium-base lampholders for Metal Halide 150W and below.

Electrical

Ballast and related electrical componentry are hard mounted to die-cast housing for optimal heat transfer and operating efficiency. Optional swing-down galvanized steel power tray with integral handle and quick disconnects allows tray to be completely removed from housing providing ample room for fixture installation and maintenance.

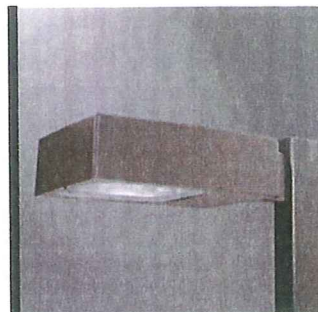
Mounting

Extruded 8" aluminum arm features internal bolt guides for easy positioning of fixture during installation to pole or wall surface.

Standard single carton packaging of housing, square pole arm and round pole adapter allow for consolidated product arrival to site. Optional internal mast arm mount accepts a 1 1/4" to 2 3/8" O.D. horizontal tenon, while a 4-bolt clamping mechanism secures fixture. Cast-in leveling guides provide +/-5° vertical leveling adjustment.

Finish

Housing and arm finished in a 5 stage premium TGIC bronze polyester powder coat paint. Optional colors include black, grey, white, dark platinum and graphite metallic. RAL and custom color matches available.



TR TRIBUTE

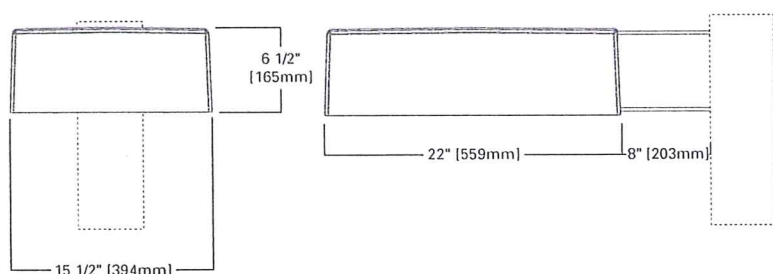
70 - 400W

High Pressure Sodium
Pulse Start Metal Halide
Metal Halide

AREA LUMINAIRE

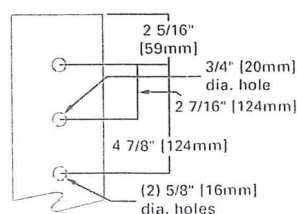


DIMENSIONS

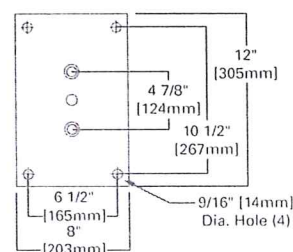


DRILLING PATTERNS

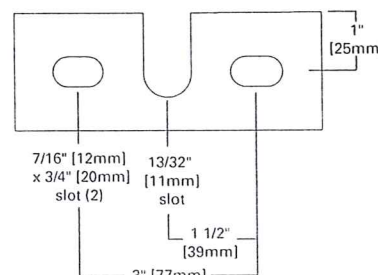
TYPE "M"



WALL MOUNT (MA1219-XX)



TRUNNION MOUNT



TECHNICAL DATA

UL Wet Locations Listed
CSA Certified
EISA Compliant

ENERGY DATA

Hi-Reactance Ballast Input Watts

70W HPS HPF (95 Watts)
100W HPS HPF (130 Watts)
150W HPS HPF (190 Watts)
150W MP HPF (185 Watts)

CWI Ballast Input Watts

250W HPS HPF (300 Watts)

CWA Ballast Input Watts

175W MH HPF (210 Watts)
200W MP HPF (227 Watts)
200W HPS HPF (250 Watts)
250W MH HPF (295 Watts)
250W MP HPF (283 Watts)
320W MP HPF (365 Watts)
350W MP HPF (397 Watts)
400W MP HPF (452 Watts)
400W MH HPF (455 Watts)
400W HPS HPF (465 Watts)

EPA

Effective Projected Area: (Sq. Ft.)
Without Arm: 1.19

SHIPPING DATA

Approximate Net Weight:
39 lbs. (17.73 kgs.)



ORDERING INFORMATION

MPTR-SL-250-208V

MP	TR	SL	250	208V			
-----------	-----------	-----------	------------	-------------	--	--	--

Lamp Type
MP=Pulse Start Metal Halide
MH=Metal Halide
HP=High Pressure Sodium

Series ¹
TR: Tribute (Arm Included)

Distribution
2F=Type II Formed
2S=Type II Segmented
3F=Type III Formed
3S=Type III Segmented
4F=Type IV Formed
4S=Type IV Segmented
5F=Type V Formed
5S=Type V Segmented
SL: Spill Light Eliminator

Lamp Wattage ²
MP
70=70W
100=100W
150=150W
200=200W
250=250W
320=320W
350=350W
400=400W³
MH
175=175W⁴
250=250W⁴
400=400W^{3, 4}
HPS
70=70W
100=100W
150=150W
250=250W
400=400W³

Voltage ⁵
120V=120V
208V=208V
240V=240V
277V=277V
347V=347V⁶
480V=480V
DT=Dual-Tap
MT=Multi-Tap, wired 277V
TT=Triple-Tap, ⁶ wired 347V
5T=5 Tap Wired⁵ 480V

Options
F1=Single Fuse (120, 277 or 347V⁷ only)
F2=Double Fuse (208, 240 or 480V⁷ only)
Q=Quartz Restrike (Hot Strike Only)⁸
EM=Quartz Restrike with "Delay" ⁸ Relay (Quartz lamp strikes at both hot and cold starts)
EM/SC: Emergency Separate⁸ Circuit
LL: Lamp Included
S: 1 1/4" - 2 3/8" Internal Mast Arm Mount
TM: Trunnion Mount
CEC: California Title 20 Compliant Ballast (Applies to 200-320W and 400W MP only)
PT: Electrical Power Tray
PER: NEMA Twistlock Photocontrol Receptacle
PC: Button Type Photocontrol⁹
HS=House Side Cutoff¹⁰
LA=Less Arm (Order Mounting Separately)

Standard Color
—=Bronze (Standard)
WH=White
BK=Black
AP=Grey
DP=Dark Platinum
GM=Graphite Metallic

Accessories ¹¹
MA1201-BZ=Direct Wall Mount Kit1
MA1218-BZ=Direct Mount for Pole1
MA1219-BZ=Wall Mounting Plate
OA1090-BZ=Adjustable slipfitter Arm for Tenon Mount 2 3/8" O.D.1
MA1221-BZ: External House Side Shield Kit (EPA= 0.38)
MA1222: Internal House Side Shield Kit for 2S/3S
MA1223: Internal House Side Shield Kit 4S
MA1224: Internal House Side Shield Kit for 2F/3F
MA1225: Internal House Side Shield Kit for 4F
MA1010-BZ: Single Tenon Adapter for 3 1/2" O.D. Tenon
MA1011-BZ: 2 @ 180 degrees Tenon Adapter for 3 1/2" O.D. Tenon
MA1012-BZ: 3 @ 120 degrees Tenon Adapter for 3 1/2" O.D. Tenon
MA1013-BZ: 4 @ 90 degrees Tenon Adapter for 3 1/2" O.D. Tenon
MA1014-BZ: 2 @ 90 degrees Tenon Adapter for 3 1/2" O.D. Tenon
MA1015-BZ: 2 @ 120 degrees Tenon Adapter for 3 1/2" O.D. Tenon
MA1016-BZ: 3 @ 90 degrees Tenon Adapter for 3 1/2" O.D. Tenon
MA1017-BZ: Single Tenon Adapter for 2 3/8" O.D. Tenon
MA1018-BZ: 2 @ 180 degrees Tenon Adapter for 2 3/8" O.D. Tenon
MA1019-BZ: 3 @ 120 degrees Tenon Adapter for 2 3/8" O.D. Tenon
MA1045-BZ: 4 @ 90 degrees Tenon Adapter for 2 3/8" O.D. Tenon
MA1048-BZ=2 @ 90 degrees Tenon Adapter for 2 3/8" O.D. Tenon
MA1049-BZ=3 @ 90 degrees Tenon Adapter for 2 3/8" O.D. Tenon
TR/VS=Field Installed Vandal Shield12
OA/RA1013=Photocontrol Shorting Cap
OA/RA1016=NEMA Photocontrol - Multi-Tap
OA/RA1027=NEMA Photocontrol 480V
OA/RA1201=NEMA Photocontrol 347V

Notes: 1 8 Inch Arm and pole adapter included with fixture. Specify Less Arm "LA" option when mounting accessory is ordered separately. 2 150W and below in Pulse Start Metal Halide are medium base sockets. All other wattages are mogul base. 3 Requires reduced envelope lamp. 4 175W, 250W, and 400W MH available in non-U.S. markets only. 5 Products also available in non-US voltages and 50Hz for international markets. Consult your Cooper Representative for availability and ordering information. 5T only available in 400W MH. 6 88% efficient EISA Compliant MP fixtures not available in 347V or TT Voltages. 7 Must specify voltage. 8 Quartz options not available with SL optics. 9 Specify 120V, 208V, 240V, or 277V only. 10 House side shield not available on 5S, 5F, or SL optics. 11 Order separately/replace XX with color specification. 12 Not available with SLE or House Side Shield.

STOCK SAMPLE NUMBER (Lamp Included)

SAMPLE NUMBER: MPTR2340

MP	TR	23	
-----------	-----------	-----------	--

Lamp Type
MP=Pulse Start Metal Halide
HP=High Pressure Sodium ²

Series ¹
TR=Tribute

Distribution
23=Type II/III Formed

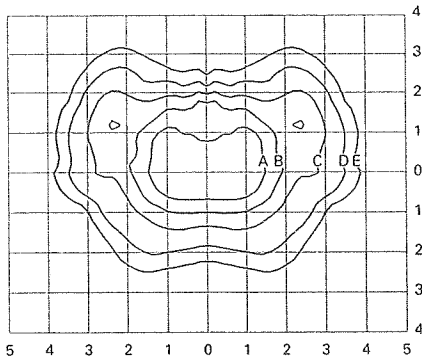
Lamp Wattage
15=150W
25=250W
32=320W
40=400W

NOTES:

¹ Short logic fixtures are finished bronze include multi-tap ballast, lamp, arm and round pole adapter. Other options not available. Refer to standard ordering logic. ² Available in 150, 250 and 400 Watt. Refer to In Stock Guide for availability.

VOLTAGE CHART	
DT=Dual-Tap	120/277 (wired 277V)
MT=Multi-Tap	120/208/240/277 (wired 277V)
TT=Triple-Tap	120/277/347 (wired 347V)
5T=5-Tap	120/208/240/277/480 (wired 480V)

LAMP TYPE	WATTAGE
Pulse Start Metal Halide	70, 100, 150, 250, 320, 350, 400W
Metal Halide	175, 250, 400W
High Pressure Sodium	70, 100, 150, 250, 400W

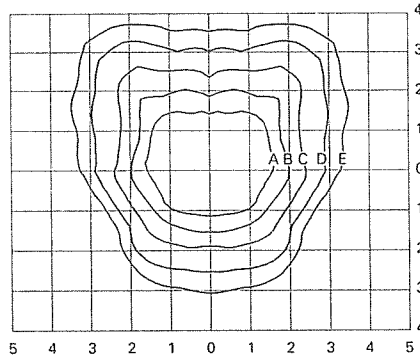


MPTR-3S-320
320—Watt MP
30,000—Lumen Clear Lamp
Type III Segmented

Footcandle Table

Select mounting height and read across for footcandle values of each isofootcandle line. Distance in units of mounting height.

Mounting Height	Footcandle Values for Isofootcandle Lines				
	A	B	C	D	E
20'	3.00	1.50	0.75	0.30	0.15
25'	2.00	1.00	0.50	0.20	0.10
30'	1.38	0.69	0.34	0.13	0.06

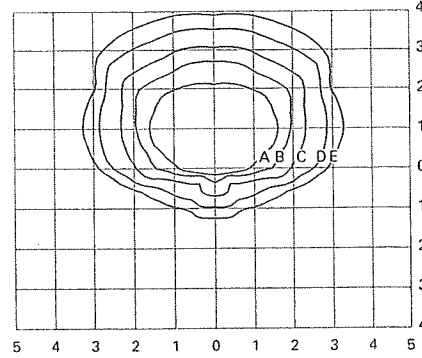


MPTR-4S-400
400—Watt MP
40,000—Lumen Clear Lamp
Type IV Segmented

Footcandle Table

Select mounting height and read across for footcandle values of each isofootcandle line. Distance in units of mounting height.

Mounting Height	Footcandle Values for Isofootcandle Lines				
	A	B	C	D	E
20'	3.00	1.50	0.75	0.30	0.15
25'	2.00	1.00	0.50	0.20	0.10
30'	1.38	0.69	0.34	0.13	0.06



MPTR-SL-400
400—Watt MP
40,000—Lumen Clear Lamp
Spill Light Eliminator

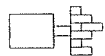
Footcandle Table

Select mounting height and read across for footcandle values of each isofootcandle line. Distance in units of mounting height.

Mounting Height	Footcandle Values for Isofootcandle Lines				
	A	B	C	D	E
20'	3.00	1.50	0.75	0.30	0.15
25'	2.00	1.00	0.50	0.20	0.10
30'	1.38	0.69	0.34	0.13	0.06

MOUNTING CONFIGURATIONS

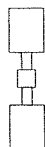
Wall Mount



Arm Mount Single
EPA: 1.62



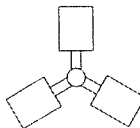
Arm Mount 2 @ 180
EPA: 3.24



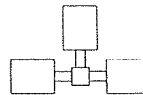
Arm Mount 2 @ 90
EPA: 3.24



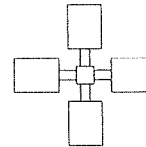
Arm Mount 3 @ 120
(Round Pole Only)
EPA: 4.43



Arm Mount 3 @ 90
EPA: 4.43



Arm Mount 4 @ 90
EPA: 5.03



DESCRIPTION

The Lumark Tribute is the most versatile, functionally designed, universally adaptable outdoor luminaire available. The Tribute brings outstanding performance to walkways, parking lots, roadways, loading docks, building areas, and any security lighting application. U.L. listed and CSA certified for wet locations.

Catalog #	MPTR-4F-250-208V	Type	B
Project	Trane	Date	08/21/2013
Comments			
Prepared by			

SPECIFICATION FEATURES

Construction

Rugged one-piece die-cast aluminum housing and door frame. One-piece silicone gasket protects the optical chamber from performance degrading contaminants. One (1) stainless spring latch and two (2) stainless hinges allow toolless opening and removal of door frame.

Reflector

Choice of nine (9) high efficiency optical distributions, including five (5) segmented optical systems constructed of premium 95% reflective oxidized aluminum sheet. Optical segments are rigidly mounted inside a thick gauge aluminum housing for superior protection. All segment faces are clean of rivet heads, tabs or other means of attachment which may cause streaking in the light distribution. Optical modules are

field rotatable in 90° increments and offered standard with mogul base lampholders for High Pressure Sodium and 200-400W Metal Halide assemblies or medium-base lampholders for Metal Halide 150W and below.

Electrical

Ballast and related electrical componentry are hard mounted to die-cast housing for optimal heat transfer and operating efficiency. Optional swing-down galvanized steel power tray with integral handle and quick disconnects allows tray to be completely removed from housing providing ample room for fixture installation and maintenance.

Mounting

Extruded 8" aluminum arm features internal bolt guides for easy positioning of fixture during installation to pole or wall surface.

Standard single carton packaging of housing, square pole arm and round pole adapter allow for consolidated product arrival to site. Optional internal mast arm mount accepts a 1 1/4" to 2 3/8" O.D. horizontal tenon, while a 4-bolt clamping mechanism secures fixture. Cast-in leveling guides provide +/-5° vertical leveling adjustment.

Finish

Housing and arm finished in a 5 stage premium TGIC bronze polyester powder coat paint. Optional colors include black, grey, white, dark platinum and graphite metallic. RAL and custom color matches available.



TR TRIBUTE

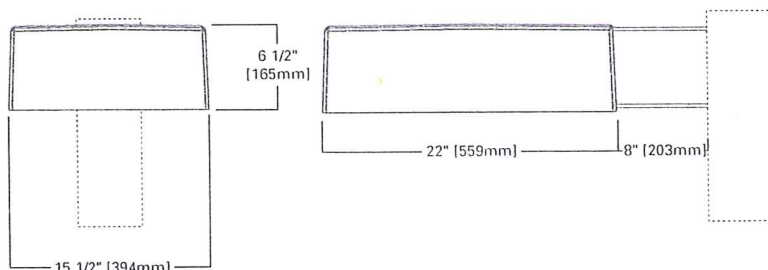
70 - 400W

High Pressure Sodium
Pulse Start Metal Halide
Metal Halide

AREA LUMINAIRE

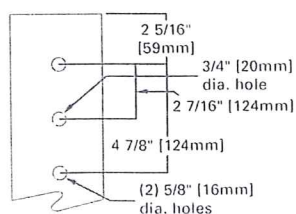


DIMENSIONS

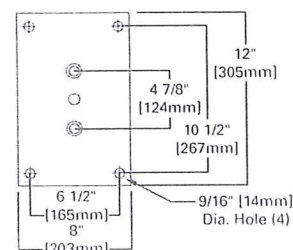


DRILLING PATTERNS

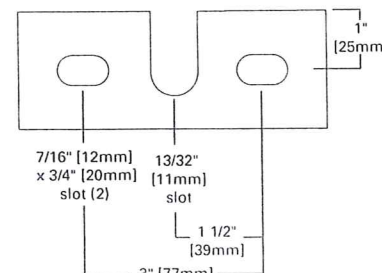
TYPE "M"



WALL MOUNT (MA1219-XX)



TRUNNION MOUNT



TECHNICAL DATA

UL Wet Locations Listed
CSA Certified
EISA Compliant

ENERGY DATA

Hi-Reactance Ballast Input Watts

70W HPS HPF (95 Watts)
100W HPS HPF (130 Watts)
150W HPS HPF (190 Watts)
150W MP HPF (185 Watts)

CWI Ballast Input Watts

250W HPS HPF (300 Watts)

CWA Ballast Input Watts

175W MH HPF (210 Watts)
200W MP HPF (227 Watts)
200W HPS HPF (250 Watts)
250W MH HPF (295 Watts)
250W MP HPF (283 Watts)
320W MP HPF (365 Watts)
350W MP HPF (397 Watts)
400W MP HPF (452 Watts)
400W MH HPF (455 Watts)
400W HPS HPF (465 Watts)

EPA

Effective Projected Area: (Sq. Ft.)
Without Arm: 1.19

SHIPPING DATA

Approximate Net Weight:
39 lbs. (17.73 kgs.)



ORDERING INFORMATION

MPTR-4F-250-208V

MP	TR	4F	250	208V			
-----------	-----------	-----------	------------	-------------	--	--	--

Lamp Type MP =Pulse Start Metal Halide MH =Metal Halide HP =High Pressure Sodium Series ¹ TR =Tribute (Arm Included)	Distribution 2F =Type II Formed 2S =Type II Segmented 3F =Type III Formed 3S =Type III Segmented 4F =Type IV Formed 4S =Type IV Segmented 5F =Type V Formed 5S =Type V Segmented SL =Spill Light Eliminator	Lamp Wattage ² MP 70 =70W 100 =100W 150 =150W 200 =200W 250 =250W 320 =320W 350 =350W 400 =400W ³ MH 175 =175W ⁴ 250 =250W ⁴ 400 =400W ^{3,4} HPS 70 =70W 100 =100W 150 =150W 250 =250W 400 =400W ³ Voltage ⁵ 120V =120V 208V =208V 240V =240V 277V =277V 347V =347V ⁶ 480V =480V DT =Dual-Tap MT =Multi-Tap, wired 277V TT =Triple-Tap, ⁶ wired 347V 5T =5 Tap Wired ⁵ 480V	Options F1 =Single Fuse (120, 277 or 347V ⁷ only) F2 =Double Fuse (208, 240 or 480V ⁷ only) Q =Quartz Restrike (Hot Strike Only) ⁸ EM =Quartz Restrike with "Delay" Relay" (Quartz lamp strikes at both hot and cold starts) EM/SC =Emergency Separate ⁸ Circuit LL =Lamp Included S =1 1/4" - 2 3/8" Internal Mast Arm Mount TM =Trunnion Mount CEC =California Title 20 Compliant Ballast (Applies to 200-320W and 400W MP only) PT =Electrical Power Tray PER =NEMA Twistlock Photocontrol Receptacle PC =Button Type Photocontrol ⁹ HS =House Side Cutoff ¹⁰ LA =Less Arm (Order Mounting Separately) Standard Color B =Bronze (Standard) WH =White BK =Black AP =Grey DP =Dark Platinum GM =Graphite Metallic	Accessories ¹¹ MA1201-BZ =Direct Wall Mount Kit ¹ MA1218-BZ =Direct Mount for Pole ¹ MA1219-BZ =Wall Mounting Plate OA1090-BZ =Adjustable slipfitter Arm for Tenon Mount 2 3/8" O.D. ¹ MA1221-BZ =External House Side Shield Kit (EPA= 0.38) MA1222 =Internal House Side Shield Kit for 2S/3S MA1223 =Internal House Side Shield Kit 4S MA1224 =Internal House Side Shield Kit for 2F/3F MA1225 =Internal House Side Shield Kit for 4F MA1010-BZ =Single Tenon Adapter for 3 1/2" O.D. Tenon MA1011-BZ =2 @ 180 degrees Tenon Adapter for 3 1/2" O.D. Tenon MA1012-BZ =3 @ 120 degrees Tenon Adapter for 3 1/2" O.D. Tenon MA1013-BZ =4 @ 90 degrees Tenon Adapter for 3 1/2" O.D. Tenon MA1014-BZ =2 @ 90 degrees Tenon Adapter for 3 1/2" O.D. Tenon MA1015-BZ =2 @ 120 degrees Tenon Adapter for 3 1/2" O.D. Tenon MA1016-BZ =3 @ 90 degrees Tenon Adapter for 3 1/2" O.D. Tenon MA1017-BZ =Single Tenon Adapter for 2 3/8" O.D. Tenon MA1018-BZ =2 @ 180 degrees Tenon Adapter for 2 3/8" O.D. Tenon MA1019-BZ =3 @ 120 degrees Tenon Adapter for 2 3/8" O.D. Tenon MA1045-BZ =4 @ 90 degrees Tenon Adapter for 2 3/8" O.D. Tenon MA1048-BZ =2 @ 90 degrees Tenon Adapter for 2 3/8" O.D. Tenon MA1049-BZ =3 @ 90 degrees Tenon Adapter for 2 3/8" O.D. Tenon TR/VS =Field Installed Vandal Shield ¹² OA/RA1013 =Photocontrol Shorting Cap OA/RA1016 =NEMA Photocontrol - Multi-Tap OA/RA1027 =NEMA Photocontrol 480V OA/RA1201 =NEMA Photocontrol 347V
--	--	--	---	---

Notes: 1 8 Inch Arm and pole adapter included with fixture. Specify Less Arm "LA" option when mounting accessory is ordered separately. 2 150W and below in Pulse Start Metal Halide are medium base sockets. All other wattages are mogul base. 3 Requires reduced envelope lamp. 4 175W, 250W, and 400W MH available in non-U.S. markets only. 5 Products also available in non-US voltages and 50Hz for international markets. Consult your Cooper Representative for availability and ordering information. 5T only available in 400W MH. 6 88% efficient EISA Compliant MP fixtures not available in 347V or TT Voltages. 7 Must specify voltage. 8 Quartz options not available with SL optics. 9 Specify 120V, 208V, 240V, or 277V only. 10 House side shield not available on 5S, 5F, or SL optics. 11 Order separately/replace XX with color specification. 12 Not available with SLE or House Side Shield.

STOCK SAMPLE NUMBER (Lamp Included)

SAMPLE NUMBER: MPTR2340

MP	TR	23	
-----------	-----------	-----------	--

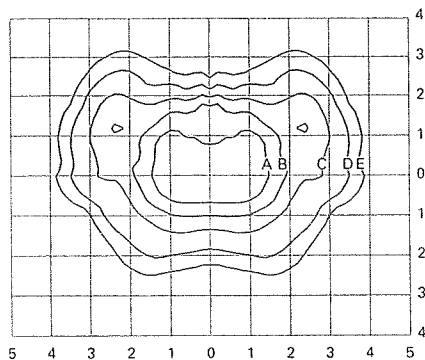
Lamp Type MP =Pulse Start Metal Halide HP =High Pressure Sodium ²	Series ¹ TR =Tribute	Distribution 23 =Type II/III Formed	Lamp Wattage 15 =150W 25 =250W 32 =320W 40 =400W
---	--	--	---

NOTES:

¹ Short logic fixtures are finished bronze include multi-tap ballast, lamp, arm and round pole adapter. Other options not available. Refer to standard ordering logic. ² Available in 150, 250 and 400 Watt. Refer to In Stock Guide for availability.

VOLTAGE CHART	
DT=Dual-Tap	120/277 (wired 277V)
MT=Multi-Tap	120/208/240/277 (wired 277V)
TT=Triple-Tap	120/277/347 (wired 347V)
5T=5-Tap	120/208/240/277/480 (wired 480V)

LAMP TYPE	WATTAGE
Pulse Start Metal Halide	70, 100, 150, 250, 320, 350, 400W
Metal Halide	175, 250, 400W
High Pressure Sodium	70, 100, 150, 250, 400W

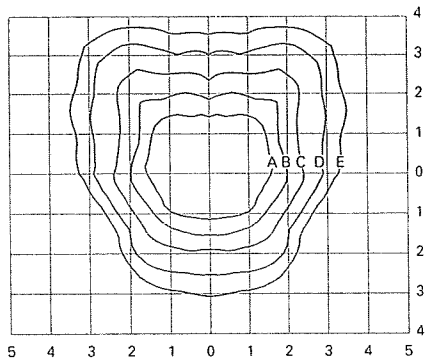


MPTR-3S-320
320—Watt MP
30,000—Lumen Clear Lamp
Type III Segmented

Footcandle Table

Select mounting height and read across for footcandle values of each isofootcandle line. Distance in units of mounting height.

Mounting Height	Footcandle Values for Isofootcandle Lines				
	A	B	C	D	E
20'	3.00	1.50	0.75	0.30	0.15
25'	2.00	1.00	0.50	0.20	0.10
30'	1.38	0.69	0.34	0.13	0.06

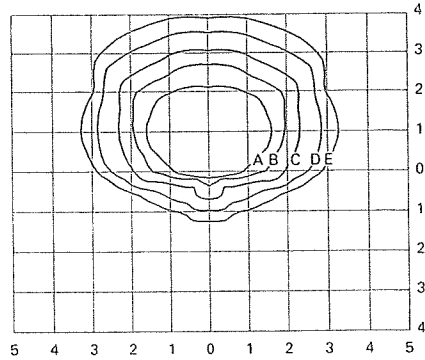


MPTR-4S-400
400—Watt MP
40,000—Lumen Clear Lamp
Type IV Segmented

Footcandle Table

Select mounting height and read across for footcandle values of each isofootcandle line. Distance in units of mounting height.

Mounting Height	Footcandle Values for Isofootcandle Lines				
	A	B	C	D	E
20'	3.00	1.50	0.75	0.30	0.15
25'	2.00	1.00	0.50	0.20	0.10
30'	1.38	0.69	0.34	0.13	0.06



MPTR-SL-400
400—Watt MP
40,000—Lumen Clear Lamp
Spill Light Eliminator

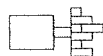
Footcandle Table

Select mounting height and read across for footcandle values of each isofootcandle line. Distance in units of mounting height.

Mounting Height	Footcandle Values for Isofootcandle Lines				
	A	B	C	D	E
20'	3.00	1.50	0.75	0.30	0.15
25'	2.00	1.00	0.50	0.20	0.10
30'	1.38	0.69	0.34	0.13	0.06

MOUNTING CONFIGURATIONS

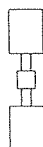
Wall Mount



Arm Mount Single
EPA: 1.62



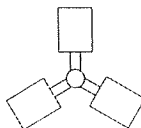
Arm Mount 2 @ 180
EPA: 3.24



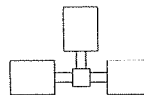
Arm Mount 2 @ 90
EPA: 3.24



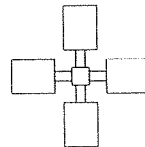
Arm Mount 3 @ 120
(Round Pole Only)
EPA: 4.43



Arm Mount 3 @ 90
EPA: 4.43



Arm Mount 4 @ 90
EPA: 5.03



DESCRIPTION

The McGraw-Edison BSL / BRL Bollard Series, available in heights from 24" to 42", has crisp, clean lines which blend with any architectural setting. Constructed of seamless, heavy-duty aluminum and finished with a tough polyester powder coat finish, the McGraw-Edison Louvered Bollard Series is gasketed to seal out external contaminants. U.L. 1598 listed and CSA certified for wet locations.

Bollards are designed for walkways, entranceways, drives and other small-area lighting applications where low mounting heights are desirable.

SPECIFICATION FEATURES

Construction

TOP: Rugged, minimum 5/32" thick cast aluminum top cap secured via a concealed stainless steel allen screw with twist removal mechanism for lamp access. Flow through ventilation assure cool to the touch top. **LOUVERS:** Cast Aluminum Louver blades provide sharp cutoff delivering no direct light above 90°. Louvers are secured to the shaft via tamper stainless steel rods and fasteners. **LOWER HOUSING:** Nominal 1/8" thick aluminum extruded housing. Bollard housing is secured to the base with flathead, counter-sunk screws for smooth, uncluttered appearance. **BASE:** Rugged cast aluminum. Completely concealed.

Electrical

HID High Power Factor ballast for -20°F starting. CFL Electronic ballast for 0°F starting. Product is factory mounted to the base. Quick disconnects provided between lamp and electrical assembly. Metal Halide and High Pressure Sodium lamp sources up to 100W and up to 42W Compact Fluorescent sources.

Optical

LAMP ENCLOSURE: One piece tempered glass with internal flutes for even disbursement of illumination. Decorative colored glass optional. Globe is fully gasketed via EPDM material. Socket is porcelain, medium-base for HID lamp sources and

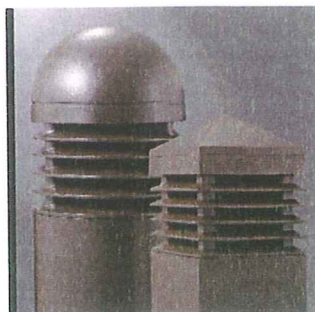
polycarbonate/PBT GX24q-3/q-4 base for compact fluorescent lamps.

Mounting

Base mounts onto foundation with three (3) 1/2" x 12 1/2" anchor bolts on a 5" Dia. bolt circle (a centrally located 2 7/8" x 3 1/2" wire entrance opening provided).

Finish

Premium fade and abrasion resistant, TGIC Polyester Powder Coat Finish. Standard colors are Black, Grey, Bronze, White, Dark Platinum and Graphite Metallic. Other finish colors available including all RAL matches.



BSL/BRL BOLLARD

26 - 100W

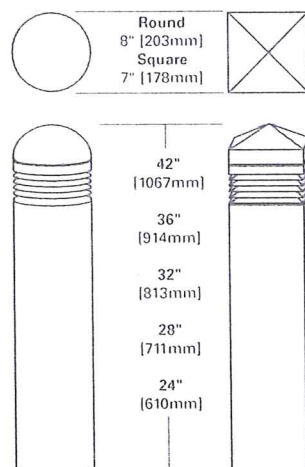
Pulse Start Metal Halide
High Pressure Sodium
Compact Fluorescent
Incandescent

PATHWAY LUMINAIRE



NOTE: In select finishes only.

DIMENSIONS



WATTAGE TABLE

Lamp Type	Wattage
Pulse Start Metal Halide (MP)	50, 70, 100W
High Pressure Sodium (HPS)	35, 50, 70, 100W
Compact Fluorescent (CF)	(1) 26, (1) 32, (1) 42W
Incandescent (IN)	100W

Energy Data

Reactor Ballast Input Watts
35W HPS NPF (46 Watts)

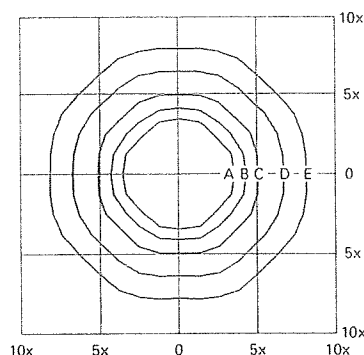
High Reactance Ballast Input Watts

50W HPS HPF (62 Watts)
50W MP HPF (69 Watts)
70W HPS HPF (86 Watts)
70W MP HPF (94 Watts)
100W HPS HPF (115 Watts)
100W MP HPF (129 Watts)
150W HPS HPF (170 Watts)
150W MP HPF (185 Watts)

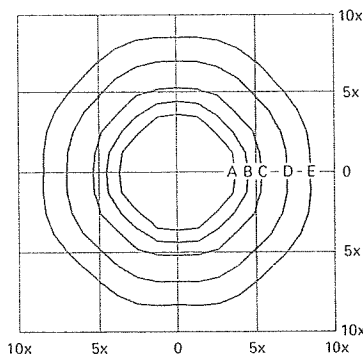
SHIPPING DATA

Approximate Net Weight:
26 lbs. (12 kgs.)

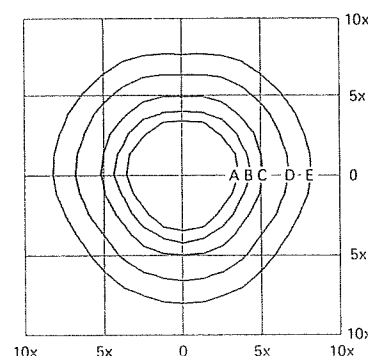
PHOTOMETRICS



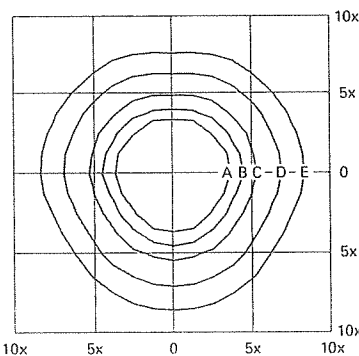
BSL-36-100-MP
100-Watt MP
7,900-Lumen Lamp (Coated ED-17)



BSL-36-100-HPS
100-Watt HPS
8,800-Lumen Lamp (Coated ED-17)



BRL-36-100-MP
100-Watt MP
7,900-Lumen Lamp (Coated ED-17)



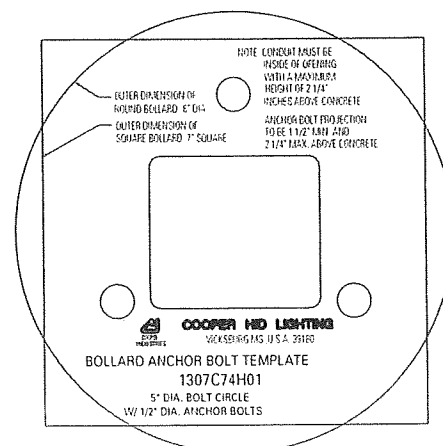
BRL-36-100-HPS
100-Watt HPS
8,800-Lumen Lamp (Coated ED-17)

Footcandle Table

Select mounting height and read across for footcandle values of each isofootcandle line. Distance in units of mounting height.

Mounting Height	Footcandle Values for Isofootcandle Lines				
	A	B	C	D	E
42"	1.20	0.60	0.30	0.12	0.06
36"	2.00	1.00	0.50	0.20	0.10
32"	2.40	1.20	0.60	0.24	0.12
28"	3.20	1.60	0.80	0.32	0.16
24"	4.40	2.20	1.10	0.44	0.22

ANCHOR BOLT TEMPLATE (NOT TO SCALE)



ORDERING INFORMATION

BRL-36-70-MP-208-BZ

BRL	36	70	MP	208	BZ		
Product Family		Fixture Height	Lamp Wattage	Lamp Type	Voltage	Color	Options
BSL=Square Bollard with Stacked Louvers and Pyramidal Top		24=24"	MP	MP=Pulse Start Metal Halide	120=120V	AP=Grey	F=Single Fuse (120, 277 or 347V)
BRL=Round Bollard with Stacked Louvers and Dome Top		28=28"	50=50W	HPS=High Pressure Sodium	208=208V	BZ=Bronze	FF=Double Fuse (208, 240 or 480V)
		32=32"	70=70W	CF=Compact Fluorescent	240=240V	BK=Black	L=Lamp Included ⁸
		36=36"	100=100W	IC=Incandescent	277=277V	WH=White	R1=Provisional cut for GFI Receptacle ⁹
		42=42"	HPS		347=347V	DP=Dark Platinum	R2=Installed GFI Receptacle ⁹
			35=35W ²		MT=Multi-Tap ⁴	GM=Graphite Metallic	CF/EM=Emergency Battery Pack ¹⁰
			50=50W		TT=Triple-Tap ⁴		AB=Aqua Marine Blue Glass Jar
			70=70W		UNV=Universal ⁵		HG=Hunter Green Glass Jar
			100=100W		120-277V		OR=Orange Glass Jar
			CF				RB=Royal Blue Glass Jar
			26= (1) 26W				RE=Red Glass Jar
			32= (1) 32W				
			42= (1) 42W				
			IC				
			100= 100W				

- Notes: 1 HID lamps are medium base. 175W MH is available for non-U.S. markets only.
 2 35W HPS available in 120V only.
 3 Products also available in non-US voltages and 50Hz for international markets. Consult factory for availability and ordering information.
 4 Multi-Tap ballast is 120/208/240/277V wired 277V. Triple-Tap ballast is 120/277/347V wired 347V.
 5 Compact Fluorescent only Electronic ballast universal voltage 120-277V.
 6 Other finish colors available, including a full line of RAL color matches. Consult your Cooper Lighting Representative.
 7 Add as suffix in the order shown.
 8 Coated lamp standard. Must specify clear lamp if desired.
 9 Location of R1 and R2 option on housing subject to height of luminaire.
 10 CF lamps only, rated minimum operating temperature 32° F (0° C).

DESCRIPTION

The IMPACT Elite Cylinder cutoff wall luminaire makes an ideal complement to site design. Rugged construction and full cutoff classified optics provide facade and security lighting for light restricted zones surrounding schools, office complexes, apartments, and recreational facilities. U.L. and cUL Listed for wet locations in down mount applications and damp locations in up mounted applications.

Catalog #		Type	
Project			
Comments		Date	
Prepared by			

SPECIFICATION FEATURES

Construction

Two-piece die-cast aluminum housing and removable hinged door frame nests securely for precise tolerance control and repeatability. Hinged door frame inset for clean mating with housing surface and secured via two [2] captive stainless steel fasteners. Optional tamper resistant torx-head fasteners [TR] offer vandal resistant access to the electrical compartment. 1/8" clear, heat and impact resistant tempered flat glass lens combine with molded silicone gasket to seal the integrated optical assembly while ensuring peak optical performance.

Electrical

Integral hard mount electrical components are secured and grounded within the die-cast aluminum housing for optimal heat sinking and extended component life. Minimum starting temperatures are -40°C (-40°F) for HPS and -30°C (-22°F) for MP. Compact fluorescent luminaires

feature electronic universal 120-277V high efficiency 50/60Hz ballast with -18°C (0°F) minimum starting temperature. Available in 50-175W HID or 26-84W CF. Emergency power pack available for 26-64W CF.

Optical

Premium anodized 95% reflective aluminum optical assemblies provide high efficiency Type II distribution. Optional silk screened house side flat glass shield provides decreased wall brightness. All Impact Elite Wall Series luminaires classify as IESNA full cutoff in downlight applications. Available with 10% or 50% uplight options for architectural highlighting of building details.

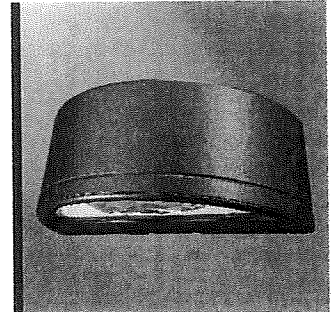
Mounting

Gasketed and zinc plated rigid steel mounting attachment fits directly to 4" j-box or wall with the Impact Elite "Hook-N-Lock" system for fast installation and mounting in both

traditional downlighting [wet location] or inverted uplighting [damp location] mounting positions. Secured via two [2] captive corrosion resistant allen head set screws concealed from view, but accessible from bottom of fixture.

Finish

Housing and door are protected with 5-stage premium TGIC polyester powder coat paint. Premium TGIC powder coat finishes withstand extreme climate changes while providing optimal color and gloss retention over the fixture's installed life. Standard colors include black, bronze, grey, white, dark platinum and graphite metallic. RAL and custom color matches available. Consult McGraw-Edison Architectural Colors Brochure for complete selection.



ISC IMPACT ELITE CYLINDER

50 - 175W

Pulse Start Metal Halide

Metal Halide

High Pressure Sodium

26 - 84W

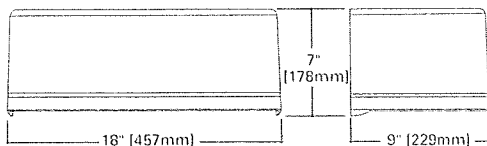
Compact Fluorescent

FULL CUTOFF
WALL MOUNT LUMINAIRE



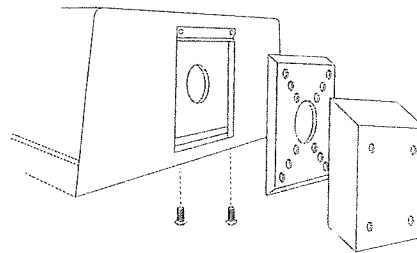
NOTE: in downlight applications only.

STANDARD DIMENSIONS

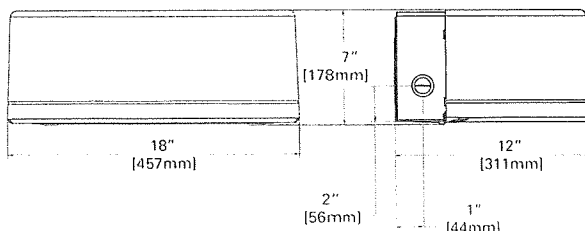


HOOK-N-LOCK MOUNTING

(Mounting attachment included. J-Box not included.)



DIMENSIONS WITH BACK BOX



TECHNICAL DATA

UL1598 Listed, CUL Listed
25°C Maximum Ambient Temperature
External Supply Wiring 90°C Minimum
Down Mounted—Wet Location
Up Mounted—Damp Location

ENERGY DATA

High Reactance Ballast Input Watts

50W HPS HPF (66 Watts)
50W MP HPF (72 Watts)
70W HPS HPF (91 Watts)
70W MP HPF (90 Watts)
100W HPS HPF (130 Watts)
100W MP HPF (129 Watts)
150W HPS HPF (190 Watts)
150W MP HPF (185 Watts)

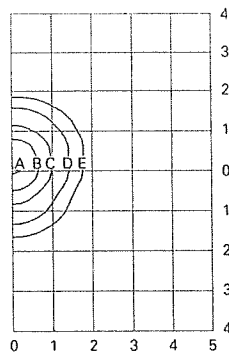
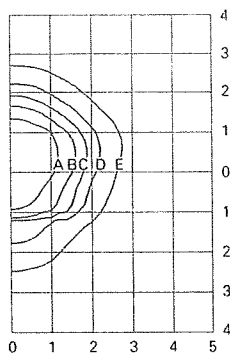
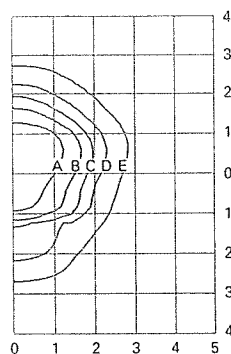
Electronic Ballast Input Watts

26W CF HPF (29 Watts)
32W CF HPF (36 Watts)
42W CF HPF (46 Watts)
52W CF HPF (55 Watts)

SHIPPING DATA

Approximate Net Weight:
18 lbs. (8 kgs.)

IMPACT™

PHOTOMETRICS (Complete IES files available at www.cooperlighting.com)

Footcandle Table

Select mounting height and read across for footcandle values of each isofootcandle line. Distance in units of mounting height.

Mounting Height	Footcandle Values for Isofootcandle Lines				
	A	B	C	D	E
150-MP / 150-HPS					
10'	7.20	2.88	1.44	0.72	0.29
12'	5.00	2.00	1.00	0.50	0.20
14'	3.65	1.46	0.73	0.37	0.07
42-CF					
18'	2.46	1.23	0.62	0.25	0.12
20'	2.00	1.00	0.50	0.20	0.10
25'	1.28	0.64	0.32	0.13	0.06

ORDERING INFORMATION

Sample Number: ISC-150-MP-MT-2S-BZ

Product Family	Lamp Wattage ¹	Lamp Type	Voltage ³	Colors [add as suffix]	Options	Accessories ¹⁹
ISC=Impact Elite Small Cylinder	MP 50=50W ² 70=70W ² 100=100W 150=150W HPS 50=50W ² 70=70W ² 100=100W 150=150W MH 175=175W ¹ CF 26=(1)26W 32=(1) 32W 42=(1) 42W 52=(2) 26W 64=(2) 32W 84=(2) 42W	MP=Pulse Start Metal Halide HPS=High Pressure Sodium MH=Metal Halide ¹ CF=Compact Fluorescent	120=120V 208=208V 240=240V 277=277V 347=347V 480=480V DT=Dual-Tap ⁴ MT=Multi-Tap ⁴ TT=Triple-Tap ⁴ E1=Electronic (120-277V) ⁵ Distribution 2S= Type II Segmented	AP=Grey BZ=Bronze BK=Black DP=Dark Platinum GM=Graphite Metallic WH=White	F=Single Fuse (120, 277, or 347V) ⁶ FF=Double Fuse (208, 240 or 480V) ⁶ P=Button Photocontrol (120, 208, 240 or 277V) ⁶ L=Lamp Included TR=Tamper Resistant Fasteners UPL10=10% Uplight UPL50=50% Uplight ⁷ HS=House Side Shield Glass ⁵ PL=Polycarbonate Lens ^{5, 8} Q=Quartz Restrike (1) T4 Lamp ⁹ EM= Emergency Quartz Restrike (1) T4 Lamp with Time Delay Relay ⁹ EM/SC=Emergency Separate Circuit (1) T4 Lamp ^{9, 10} QMR=Quartz Restrike (1) MR16 Lamp ^{11, 12} EMMR=Emergency Quartz Restrike (1) MR16 Lamp with Time Delay Relay ^{11, 12} EM/SC/MR=Emergency Separate Circuit (1) MR16 Lamp ^{10, 12, 13} EM/SC/12V=Emergency Separate Circuit 12V Low Voltage (1) MR16 Lamp ^{10, 14} 2EM/SC/12V=Emergency Separate Circuit 12V Low Voltage (2) MR16 Lamps ^{10, 14} EMI40-XXX=Emergency Cold Temperature (UL924 Listed) Power Pack -18°C/0°F, (1) CF Lamp ¹⁵ CFEM-XXX=Emergency CF Power Pack (UL924 Listed) (1) CF Lamp. 0°C/32°F ¹⁶ 2EMI40-XXX=Emergency Cold Temperature power pack (UL924 listed), -18°C/0°F, (2) CF Lamps with Back Box matching housing finish ^{15, 17} 2CFEM-XXX=Emergency CF power pack (UL924 listed) 0°C/32°F, (2) CF Lamps, with Back Box matching housing finish ^{16, 18}	MA1255-XX=Thruway Back Box - Impact Elite Cylinder

Notes:

- HID lamps are medium base. 175W MH is available for non-U.S. markets only.
- Not available with 480V.
- Products also available in non-US voltages and 50HZ for international markets. Consult your Cooper Representative for availability and ordering information.
- Dual-tap ballast is 120/277V wired 277V. Multi-tap is 120/208/240/277V wired 277V. Triple-tap ballast is 120/277/347V wired 347V.
- Available with CF Option only. In cold temperatures, compact fluorescent lamps produce lower illumination levels.
- Must specify voltage.
- Not available with dual CF lamps. Not available with EMI40 or CFEM.
- Down lighting position only.
- (1) 120V Lamp, 100W maximum quartz lamp. Utility power may need to cycle to allow HID lamp to cool in warm climates. Not available with CF Option. Lamp supplied by others.
- Leads out of the back of the unit for auxiliary power.
- Not available with CF lamps.
- (1) or (2) 120V Lamps. GU10 base, 50W maximum each. Lamps supplied by others.
- Not Available with 52, 64, 84 CF wattages.
- (1) or (2) 12V bi-pin lamp, socket GU5.3 base, 35W maximum. Power supplied by low voltage DC source (supplied by others). Lamps supplied by others.
- Specify 120 or 277V, (-18°C) minimum temperature. Not available with UPL10 or UPL50.
- Specify 120 or 277V, (0°C) minimum temperature. Not available with UPL10 or UPL50.
- Not available in 84CF configuration.
- Available in 52CF only.
- Order separately. Replace "XX" with color designation.

NOTE: Specifications and dimensions subject to change without notice.
Visit our web site at www.cooperlighting.com

Customer First Center 1121 Highway 74 South Peachtree City, GA 30269 770.486.4800 FAX 770.486.4801

HALO Commercial

DESCRIPTION

Recessed 6 inch aperture lens downlight for vertical ED17P metal halide lamp. Electronic ballast suitable for 120 volt or 277 volt operation. Fixture is suitable for commercial construction and wet location listed. Insulation must be kept 3" from top and sides of housing. Specify housing and trim separately to complete luminaire.

Catalog #		Type	
Project			
Comments		Date	
Prepared by			

SPECIFICATION FEATURES

MECHANICAL

Frame

Boat shaped galvanized steel frame with 1/2" plaster lip accommodates ceilings up to 2" thick. May be used for new construction or remodeling installations. Provided with (2) remodel clips to secure frame when installed from below the ceiling.

Mounting Brackets

Bar hanger receivers adjusts 2" vertically from above the ceiling or thru the aperture. Use with No Fuss™ bar hangers or with 1/2" EMT. Removable to facilitate installation from below the ceiling.

No Fuss™ Bar Hangers

Pre-installed and centered bar hanger locks to tee grid with a screwdriver or pliers. Centering marks on the bar hanger mechanism allows consistent positioning of fixtures.

OPTICAL

Reflector

One piece aluminum reflector secures lens in place with integrated spring clips for a

visually comfortable optic and allows for tool-less lens exchange from below the ceiling. Available with clear, diffuse, prismatic, fresnel or drop opal glass lens. Self flanged standard.

- **Specular Reflectors** - Polished flange standard with white painted flange option.
- **Baffles and White Reflector** - White painted flange standard.

Trim Retention

Reflector is retained with two torsion springs and held tightly to the finished ceiling surface.

ELECTRICAL

Junction Box

(6) 1/2" and (2) 3/4" trade size pry outs positioned to allow straight conduit runs. Listed for (12) #12 AWG (six in, six out) 90°C conductors and feed thru branch wiring.

Lamp Socket

Pulse rated E26 medium base protected porcelain socket with nickel plated brass screw shell accepts open fixture rated (protected) lamp only.

Socket Cap

One piece metal cap attached securely to reflector with turn and lock mechanism.

Control Gear

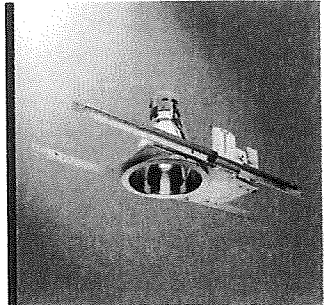
Dual input 120V/277V or 347V electronic ballast.

Insulation Detector

Self heating insulation detector opens circuit if insulation is improperly installed.

Code Compliance

- Thermally protected and cULus listed for wet locations.
- IP44 rated for lens trims.
- EMI/RFI per FCC Title 47 CFR, Part 18, non consumer limits.
- High efficacy luminaire may be used to meet IECC, ASHRAE and Title 24 commercial standards.
- Meets California T20 and Federal EISA ballast efficiency standards.



**PD6V50E
PD6V70E
PD6V100E
60V**

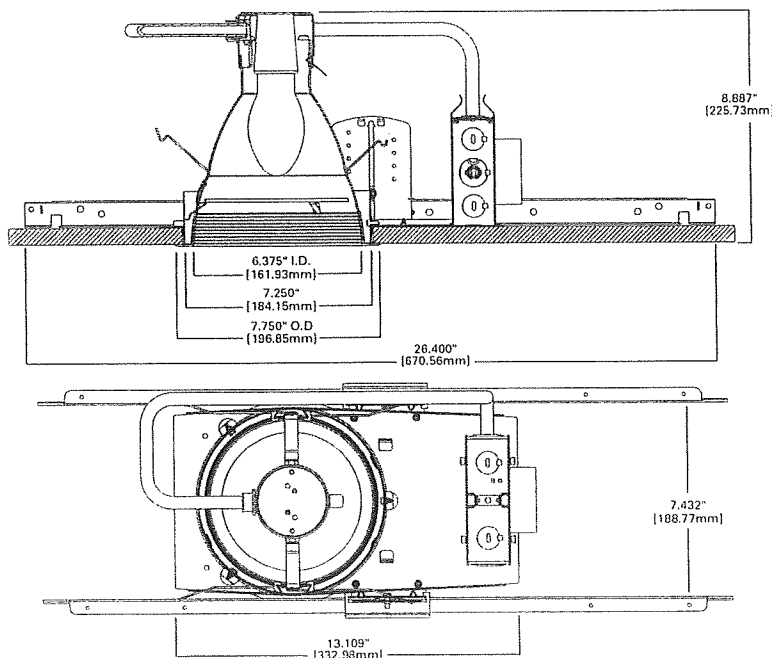
**50, 70, 100W
ED17P**

Metal Halide

**6-Inch Aperture
Lens Downlight**

**New Construction or
Remodel
Non-IC**

DIMENSIONS



HALO Commercial

PD6V50E
PD6V70E
PD6V100E
60V

ENERGY DATA

PD6V50E, PD6CPV50E	
Min. Starting Temp -15°C, +5°F	Sound Rating Class A
EMI/RFI Emissions FCC 47CFR Part 18 Non-Consumer Limits	
Input Frequency 50/60 Hz	Power Factor > 0.95
THD < 10% @ 120V	Input Voltage 120V/277V ±10%
THD < 13% @ 277V	
Crest factor < 1.5	Ballast factor 1.00
Operating Frequency 140 Hz	cULus Listed, Type 1 Outdoor
	Input Power 58W @ 120V
50ED17P, MHC50/U/MPX	Input Power 57W @ 277V
50ED17, MXR50/U/MED/O	Input Current 0.50A @ 120V
50ED17, MP50/U/MED	Input Current 0.23A @ 277V

PD6V70E, PD6CPV70E	
Min. Starting Temp -15°C, +5°F	Sound Rating Class A
EMI/RFI Emissions FCC 47CFR Part 18 Non-Consumer Limits	
Input Frequency 50/60 Hz	Power Factor > 0.95
THD < 6% @ 120V	Input Voltage 120V/277V ±10%
THD < 12% @ 277V	
Crest factor < 1.5	Ballast factor 1.00
Operating Frequency 140 Hz	cULus Listed, Type 1 Outdoor
	Input Power 81W @ 120V
70ED17P, MHC70/U/MP	Input Power 80W @ 277V
70ED17, MXR70/U/MED/O	Input Current 0.69A @ 120V
70ED17, MP70/U/MED	Input Current 0.30A @ 277V

PD6V100E, PD6CPV100E	
Min. Starting Temp -15°C, +5°F	Sound Rating Class A
EMI/RFI Emissions FCC 47CFR Part 18 Non-Consumer Limits	
Input Frequency 50/60 Hz	Power Factor > 0.95
THD < 8% @ 120V	Input Voltage 120V/277V ±10%
THD < 11% @ 277V	
Crest factor < 1.5	Ballast factor 1.00
Operating Frequency 140 Hz	cULus Listed, Type 1 Outdoor
	Input Power 112W @ 120V
100ED17P, MHC100/U/MP	Input Power 109W @ 277V
100ED17, MXR100/U/MED/O	Input Current 0.96A @ 120V
100ED17, MP100/U/MED	Input Current 0.43A @ 277V

PD6V503E	
Min. Starting Temp -30°C, -22°F	SOUND RATING CLASS A
EMI/RFI Emissions FCC 47CFR Part 18 Non-Consumer Limits, Subparts C	
Input Frequency 50/60 Hz	Power Factor > 0.99
THD < 10%	Input Voltage 347V ±10%
Crest factor < 1.6	Ballast factor 1.00
Operating Frequency 170 Hz	UL Listed, cUL Certified, Class P, Type 1 Outdoor, HL
50ED17P, MHC50/U/MPX	Input Power 56W
50ED17, MXR50/U/MED/O	Input Current 0.16A @ 347V
50ED17, MP50/U/MED	

PD6V703E	
Min. Starting Temp -30°C, -22°F	SOUND RATING CLASS A
EMI/RFI Emissions FCC 47CFR Part 18 Non-Consumer Limits, Subparts C	
Input Frequency 50/60 Hz	Power Factor > 0.99
THD < 10%	Input Voltage 347V ±10%
Crest factor < 1.6	Ballast factor 1.00
Operating Frequency 170 Hz	UL Listed, cUL Certified, Class P, Type 1 Outdoor, HL
70ED17P, MHC70/U/MP	Input Power 80W
70ED17, MXR70/U/MED/O	Input Current 0.23A @ 347V
70ED17, MP70/U/MED	

PD6V1003E	
Min. Starting Temp -30°C, -22°F	SOUND RATING CLASS A
EMI/RFI Emissions FCC 47CFR Part 18 Non-Consumer Limits, Subparts C	
Input Frequency 50/60 Hz	Power Factor > 0.99
THD < 10%	Input Voltage 347V ±10%
Crest factor < 1.6	Ballast factor 1.00
Operating Frequency 170 Hz	UL Listed, cUL Certified, Class P, Type 1 Outdoor, HL
100ED17P, MHC100/U/MP	Input Power 108W
100ED17, MXR100/U/MED/O	Input Current 0.31A @ 347V
100ED17, MP100/U/MED	

ORDERING INFORMATION

SAMPLE NUMBER: PD6V70E 60V1GC

Order housing, reflector and lamp separately for a complete luminaire.

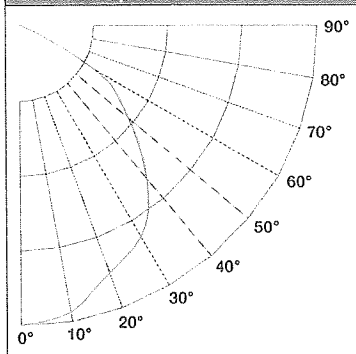
<div>Housing</div> <div>PD6V = 6 Inch vertical E26 (protected) PAR metal halide</div> <div>PD6CPV = 6 Inch vertical E26 (protected) PAR metal halide, CCEA listed (Chicago Plenum)</div>	<div>Reflector</div> <div>60V = 6" vertical</div>	<div>Lens Option</div> <div>1G=Prismatic Glass</div> <div>2G=Diffuse Glass</div> <div>3G=Clear Glass</div> <div>4G=Fresnel Glass</div>	<div>Finish Option</div> <div>C=Specular Clear</div> <div>G=Specular Gold</div> <div>H=Semi Specular Clear</div> <div>W=White (White Flange)</div> <div>BB=Black Baffle (White Flange)</div> <div>WB=White Baffle (White Flange)</div>	<div>Flange Option</div> <div>Blank=Polished Flange (C, G, H)</div> <div>Blank=White flange (W, BB, WB)</div> <div>WF=White Flange (C, G, H)</div>	<div>Accessories</div> <div>HB128APK = L channel hanger bar, 26", 'No-Fuss', pair (replacement)</div> <div>RMB22 = 22" long wood joist mounting bars</div>
<div>Wattage / Ballast Option</div> <div>39E = 39W MH, M130, 120V/277V</div> <div>393E = 39W MH, M130, 347V</div> <div>70E = 70W MH, M98, M139, 120V/277V</div> <div>703E = 70W MH, M98, M139, 347V</div> <div>100E = 100W MH, M90, M140, 120V/277V</div> <div>1003E = 100W MH, M90, M140, 347V</div>		<div>Polymer "Dead Front" Trim¹</div> <div>1GDF=Prismatic Glass with "Dead Front" Trim</div> <div>2GDF=Diffuse Glass with "Dead Front" Trim</div> <div>3GDF=Clear Glass with "Dead Front" Trim</div> <div>4GDF=Fresnel Glass with "Dead Front" Trim</div> <div>5GDF=Drop Opal Glass with "Dead Front" Trim</div>		<div>Note:</div> <div>¹ "DF" trim option includes Specular Clear (C) reflector and white polymer flange only. No other finish or flange options apply.</div>	

PHOTOMETRY

PD6V100E-60V1GC_M100

Spacing Criteria = 1.22
Lumens per Watt = 42 LpW
Test No. P21694
Test Model: PD6V100E-60V1GC_M100

Candlepower Distribution Curve



Candela Distribution	
Degrees Vertical	Candela
0°	1967
5	1945
15	1812
25	1666
35	1486
45	1116
55	786
65	228
75	9
85	3
90	0

*CBCP

Luminance	
(Average Candela/M²)	
Degree	Avg. 0° Luminance
45	64014
55	51269
65	17865
75	918
85	458

Cone of Light Footcandles			
Distance to Illuminated Plane	Initial Nadir Footcandles	Beam (ft.)	
		L Length	W Width
5.5'	65	6.7	6.7
7'	40	8.5	8.5
8'	31	9.7	9.7
9'	24	10.9	10.9
10'	20	12.2	12.2
12'	14	14.6	14.6
14'	10	17	17

Beam diameter is to 50% of maximum footcandles, rounded to the nearest half-foot.
Footcandle values are initial, apply appropriate light loss factors where necessary.

Zonal Lumen Summary			
Zone	Lumens	% Lamp	% Fixture
0-30	1465.65	18.60	34.70
0-40	2387.9	30.20	56.60
0-60	3949.09	50.00	93.50
0-90	4221.72	53.40	100.00

Note: Specifications and Dimensions subject to change without notice.

Visit our web site at www.cooperlighting.com

