

MONTGOMERY COUNTY HISTORIC PRESERVATION COMMISSION
STAFF REPORT

Address:	15021 Dufief Mill Rd.	Meeting Date:	08/16/17
Resource:	Maple Spring Barns Master Plan Site	Report Date:	08/09/17
Applicant:	Jeff Fuller (agent for owner)	Public Notice:	08/02/17
Review:	HAWP	Tax Credit:	partial
Case Number:	02/02-17A	Staff:	Dan Bruechert
Proposal:	Barn conversion to pre-K – primary school, and other modifications		

STAFF RECOMMENDATION

Staff recommends that the Historic Preservation Commission **approve with one (1)** condition the HAWP application.

- Details for the louvered penthouse must be submitted with final authority for approval delegated to staff.

ARCHITECTURAL DESCRIPTION

SIGNIFICANCE: Master Plan for Historic Preservation Individual Site
STYLE: Agricultural
DATE: c.1918-1842

From *Places in the Past*:

“A prime example of an early 20th century, state of the art agricultural facility, Maple Spring Farm was once one of the leading dairy operations in the State of Maryland. The primary structure is the 19-bay long dairy barn (1942), with gambrel roof punctuated by four metal ventilators. The bar is highly visible on this section of well-traveled Darnestown Road in the densely populated Gaithersburg-Rockville area. The collection of outbuildings, built between c1918 and 1942, date from the heyday of specialized large-scale dairy farming

Maple Spring Farm was recognized in the metropolitan region as a model dairy operation with its mechanized making parlor, sanitary concrete interiors, and above average milk production. The 355-acre, 110-cow farm was owned and operated by Thomas Moore Garrett, a statewide agricultural leader who served as a director of the Farm Bureau, the Soil Conservation board, and the Southern States Cooperative, and was a charter member of the Maryland-Virginia Milk Producers Association, established in 1920.

Other important agricultural structures include two terra cotta silos, a concrete block milk house, a two-story horse barn, one story wagon house/granary, and an equipment building. Still

standing on an adjacent lot is the associated residence, located at the heart of a medical facility at 10810 Darnestown Road.”

BACKGROUND

The applicant came in for a preliminary review on at the June 16, 2017 HPC meeting. The Commission was generally supportive of the proposal. The Commissioners express three general areas of concern with the information presented. First, there was some concern about the specific material proposed as a roof coating. Second, the Commissioners expressed some concern about the appropriateness of the fencing on the site. Lastly, the Commissioners expressed a desire to have a more details presented. The revised proposal follows.

PROPOSAL

The applicant is proposing to convert the barn to a pre- and primary school to operate out of the first floor of the old barn. A new front entrance will be created and several non-historic windows will be altered. The metal roof will be coated and the hardscape surrounding the barn will be altered to accommodate its new use as a school. Finally, several air handling units will be relocated away from the barn building.

APPLICABLE GUIDELINES

When reviewing alterations and additions to a *Master Plan* site several documents are to be utilized and guidelines to assist the Commission in developing their decision. These documents include Montgomery County Code chapter 24A (Chapter 24A) and the *Secretary of the Interior's Standards for Rehabilitation (Standards)* and can be guided by the details in the Design Guidelines for Historic Sites and Districts in Montgomery County, Maryland (*Design Guidelines*). The pertinent information in these documents is outlined below.

Secretary of the Interior's Standards for Rehabilitation

1. A Property will be used as it was historically or be given a new use that requires minimal change to its distinctive materials, features, spaces and spatial relationships.
2. The historic character of a property will be retained and preserved. The removal of distinctive materials or alteration of features, space and spatial relationships that characterize a property will be avoided.
3. Changes to a property that has acquired historic significance in their own right will be retained and preserved.
4. Distinctive materials, features, finishes and construction techniques or examples of craftsmanship that characterize a property will be preserved.
5. Deteriorated historic features will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture, and, where possible, materials. Replacement of missing features will be substantiated by documentary and physical evidence.
6. Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.
9. New additions, exterior alterations, or related new construction will not destroy historic materials, features, and spatial relationships that characterize the property.

The new work shall be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportions, and massing to protect the integrity of the property and its environment.

Montgomery County Code; Chapter 24A-8(b)

A HAWP permit should be issued if the Commission finds that:

1. The proposal will not substantially alter the exterior features of a historic site or historic resource within a historic district.
2. The proposal is compatible in character and nature with the historical archaeological, architectural or cultural features of the historic site or the historic district in which a historic resource is located and would not be detrimental thereto of to the achievement of the purposes of this chapter.
3. The proposal would enhance or aid in the protection, preservation and public or private utilization of the historic site or historic resource located within an historic district in a manner compatible with the historical, archeological, architectural or cultural value of the historic site or historic district in which an historic resource is located; or
4. The proposal is necessary in order that unsafe conditions or health hazards be remedied; or
5. The proposal is necessary in order that the owner of the subject property not be deprived of reasonable use of the property or suffer undue hardship; or
6. In balancing the interests of the public in preserving the historic site or historic resource located within an historic district, with the interests of the public from the use and benefit of the alternative proposal, the general public welfare is better served by granting the permit.

STAFF DISCUSSION

The applicant is proposing to convert the barn to a pre-K school. Overall the applicant is using a light hand and is not proposing any radical work that will significantly alter the remaining historic character of the barn building. For individually listed master plan sites, the HPC is charged with using the Secretary of the Interior's Standards for Rehabilitation. These ten Standards are a series of concepts about maintaining, repairing, and replacing historic materials, as well as designing new additions or making alterations. These Standards recognize that buildings need not be preserved in amber to continue to contribute their historic character to the built environment. The Maple Springs Bar has already undergone extensive expansion and alteration, but in its existing configuration, the proposed use as a school seems to comport well with Standard 1. The work proposed on the site falls into four general categories of work: alteration to the front entrance, roof work, windows, and hardscape/landscape alterations.

Front Entrance

In order to use the ground floor as classroom space, the applicant is proposing to excavate the ground floor several inches. To best accommodate this change the applicant is proposing to lower the front entrance, stairs, and ramp accordingly. The current front entrance is a modern design with residential-style doors with sidelights accessed by a concrete block front porch and ADA compliant ramp. The new proposal will lower the entrance by approximately 8" (eight inches) and install a contemporary glass entrance. The lowered entrance requires a new stair and ramp. The new porch and single-run ADA ramp will be constructed out of pour-in-place

concrete and a metal railing. These materials are consistent with the existing ramp and are generally in keeping with the character of the building in its modified form. Additionally, the single-run ramp will have less visual impact on the building than the existing double-run ramp and Staff supports this change.

Roof Alterations

The applicant is proposing to install two louvered penthouses on the roof for air intake and is proposing to cover the metal roof in Alumination 301 roof coating.

The proposed louvered penthouses will be installed on the roof valley between the roofs of the historic barn and the non-historic block addition. They will be minimally visible from the surrounding site as shown on the attached plans. This is a necessary mechanical system for the barn's continued use and will not detract from the historic character of the barn. The applicant did not provide exterior materials specifications and Staff recommends this element be approved with the condition that material specifications must be submitted and approved with final approval authority delegated to staff.

The applicant is also proposing to coat the historic metal roof using Alumanation 301. The coating is an asphalt based coating, containing 15% metal that is sprayed directly onto the roof. The resulting finish is said to be highly reflective which is consistent with the current appearance of the historic barn. The applicant has provided technical specifications for HPC review with the application materials. Staff does not have any experience with this specific product, however, it appears that the coating is thin enough that the roof will still read as a 5-V metal roof after the product application. It does not appear that this treatment will potentially damage the historic fabric and complies with Standard 6 and should be approved.

Windows

The applicant is proposing to install or reintroduce windows on all four elevations of the barn. The windows will achieve a consistent appearance and materials.

Northeast Elevation

Along the northeast elevation the applicant is proposing to introduce one window at the third bay from the left of the building and uncover and reinstall three windows to the right of the ramp to the loft. These windows will match the appearance and dimensions of the existing windows. This proposal will establish uniform spacing between the windows and uncover three historic windows.

Southwest Elevation

The applicants are proposing several window introductions to the southwest elevation (non-historic block addition) of the barn. The third bay from the left will introduce a new window that matches the dimensions and configurations, the door in the middle of will be converted to a window, a window will be introduced at the 15th bay from the right, and three new windows will be installed in the 16th through 18th bays. All of the proposed windows will match the dimensions and configuration of the existing windows and will create a uniform appearance for the façade. As this work is on a non-historic addition to the barn building, the alterations will have little impact on the historic character of the barn building and should be approved.

Northwest Elevation

The northwest elevation will have two windows altered. The paired windows to the left of the front door will be replaced in a design that matches the paired windows to the right of the door. Additionally, the right-most window on the northwest elevation will be replaced in a design that matches the other windows on the concrete block elevation. The windows identified for replacement are not historic and have degraded to the point where they need to be replaced. Their replacement will not have a visual impact on historic materials or the historic character of the building.

Southeast Elevation

On the southeast (rear) elevation, the applicant is proposing to introduce two new windows in the non-historic block addition. These windows will match the dimensions and configuration as the other windows on the block building. Additionally, the applicant is proposing to replace the window on the right of the barn with one matching the dimensions and appearance of the historic. These changes are occurring at the rear of the building and will have a minimal impact on the historic character of the building.

Staff recommends approval for the proposed window work.

Hardscape/Landscape Work

There are several changes to the landscape and hardscape that are necessary to convert this barn building to a school. On the southeast side of the barn, the applicant is proposing to construct an 'island' of grass in the middle of the parking lot to establish a circulation pattern. There will be additional grassy areas at the corners and edges of the parking lot. The barn's context was altered considerably previously and these changes will not have a significant impact on the building or site, but help to define traffic patterns and make the it safer to drop children off at school.

At the rear of the building the applicant is proposing to install a fenced-in playground. This area will be minimally visible from the public-right-of way and will be surrounded in a vinyl coated chain link fence. This material was identified as an appropriate fencing in this setting during the preliminary review. Putting the playground in this location will minimize its visual impact on the historic barn and staff supports its approval.

The southwestern portion of the site includes a paved area and a wooded section which drops off steeply to a stream. The applicant proposes to remove some of the paved area and install grass and to construct a 42" (forty-two inch) tall split rail fence with vinyl mesh. While the vinyl mesh is not generally an approved material when used in conjunction with a wood fence, because of the site's use a school, Staff recognizes the unique safety challenges and supports this fencing proposal.

Finally, there are three areas around the building that will be used for HVAC air handlers. The applicant is proposing to screen them with a vertical cedar fence. The wooden fence is an acceptable design and will visually and acoustically shield the air handlers. Additionally, the air handlers will be placed in locations where they are not visible from the public right-of-way and

are only being screened for those on the site.

Other Work

To the southwest of the barn, on the south side of the stream is a small two-story barn with a loft. The applicant is proposing to demolish this structure. It is located entirely within the floodplain and the applicant is concerned about the building degrading and creating a danger on the site. At the preliminary review, none of the commissioners expressed concern about the proposed demolition. Staff reluctantly supports this building's demolition. The building has been abandoned for several years without any work and it has fallen into disrepair. It sits within the floodplain, so it may not be put to any use in its current location and the remainder of the project site is too constrained for the building to be relocated on the site. Staff believes that the larger project would not be feasible with the added liability of the degrading building on site and believes the public is better served by the completion of this project as identified in 24A-8(b)(6). Additionally, should the building continue to degrade its demolition may be justified under 24A-8(b)(4).

The applicant is also proposing additional work that does not require a HAWP, because it is a repair, but bears mentioning. The applicant is proposing to repair the exterior of the silos and to repair the large barn doors on the northeast elevation in a fixed position. The applicant will additionally repair the loft doors on the northeast elevation and fix them in place. The repair and retention of these elements will serve to preserve the character and materials of the barn and is good preservation work that, at minimum merits acknowledgement.

STAFF RECOMMENDATION

Staff recommends that the Commission **approve with one (1) condition** the HAWP application;

- Details for the louvered must be submitted with final authority for approval delegated to staff.

and with the general condition applicable to all Historic Area Work Permits that **the applicant will present 3 permit sets of drawings to HPC staff for review and stamping prior to submission for permits (if applicable)**. After issuance of the Montgomery County Department of Permitting Services (DPS) permit, the applicant will arrange for a field inspection by calling the DPS Field Services Office at 240-777-6370 prior to commencement of work and not more than two weeks following completion of work.



HISTORIC PRESERVATION COMMISSION
301/563-3400

DPS - #8

APPLICATION FOR HISTORIC AREA WORK PERMIT

Contact Email: jfuller@dncarch.com Contact Person: Jef Fuller, AIA
Tax Account No.: 52-207-2782 Daytime Phone No.: 301-840-1100
Name of Property Owner: Chabad Lubavitch of Upper Montgomery County Daytime Phone No.: 301-537-0067
Address: 11520 Darnestown Road, Gaithersburg, MD 20878
Contractor: To Be Determined Phone No.: _____
Contractor Registration No.: _____
Agent for Owner: Terry J. Korth - tkorth@korthcos.com Daytime Phone No.: 301-343-0602

LOCATION OF BUILDING/PREMISE

House Number: 15021 Street: Duffel Mill Road
Town/City: Gaithersburg Nearest Cross Street: Darnestown Road
Lot: P2,V Block: Westleigh 6726/559 Subdivision: _____
Liber: _____ Folio: _____ Parcel: _____

PART ONE: TYPE OF CONSTRUCTION/ADDITION

1A. CHECK ALL APPLICABLE:

- ☐ Construct ☐ Extend ☒ Alter/Renovate
☐ Move ☐ Install ☐ Wreck/Raze
☐ Revision ☐ Repair ☐ Revocable

CHECK ALL APPLICABLE:

- ☐ A/C ☐ Slab ☐ Room Addition ☐ Porch ☐ Deck ☐ Shed
☐ Solar ☐ Fireplace ☐ Woodburning Stove ☐ Single Family
☐ Fence/Wall (complete Section 4) ☐ Other: _____

1B. Construction cost estimate: \$ 900,000

1C. If this is a revision of a previously approved active permit, see Permit # N/A

PART TWO: COMPLETE FOR NEW CONSTRUCTION AND EXTEND/ADDITIONS

2A. Type of sewage disposal: 01 ☒ WSSC 02 ☐ Septic 03 ☐ Other: _____
2B. Type of water supply: 01 ☒ WSSC 02 ☐ Well 03 ☐ Other: _____

PART THREE: COMPLETE ONLY FOR FENCE/RETAINING WALL

3A. Height: _____ feet _____ inches

3B. Indicate whether the fence or retaining wall is to be constructed on one of the following locations:

- ☐ On party line/property line ☐ Entirely on land of owner ☐ On public right of way/easement

I hereby certify that I have the authority to make the foregoing application, that the application is correct, and that the construction will comply with plans approved by all agencies listed and I hereby acknowledge and accept this to be a condition for the issuance of this permit.

Terry J. Korth Agent for the Owner 7/19/17
Signature of owner or authorized agent Date

Approved: _____ For Chairperson, Historic Preservation Commission

Disapproved: _____ Signature: _____ Date: _____

Application/Permit No.: _____ Date Filed: _____ Date Issued: _____

HAWP APPLICATION: MAILING ADDRESSES FOR NOTIFYING
[Owner, Owner's Agent, Adjacent and Confronting Property Owners]

Owner's mailing address Rabbi Sholom Raichik Chabad Lubavitch of Upper Montgomery County 11520 Darnestown Rd Gaithersburg MD 20878	Owner's Agent's mailing address Terry J. Korth The Korth Companies, Inc. 9101 Gaither Road Gaithersburg, MD 20877
Adjacent and confronting Property Owners mailing addresses	
WASHINGTONIAN WOODS HOA C/O PROPERTY MNGMNT PEOPLE 955 RUSSELL AVE STE A GAITHERSBURG MD 20879-6218	CYNASA HOLDINGS LLC 15020 SHADY GROVE RD SUITE 302 ROCKVILLE MD 20850
MARYLAND NATIONAL CAPITOL PARK & PLANNING COMM 8787 GEORGIA AVE SILVER SPRING MD 20910	MA DONGHUI 10901 CITREON CT NORTH POTOMAC MD 20878-2527
CAROL A BLEAKLEY 10900 CITREON CT GAITHERSBURG MD 20878	MAPLE SPRINGS VETERINARY HOSPITAL 14925 DUFIEF MILL ROAD NORTH POTOMAC, MD 20878

Written Description of Project

a. Historical Setting

The MC Historic summary for Maple Springs Farm provides a good overview of the property and the significant features.

The historic dairy barn and two outbuildings are located on an approximately 2-acre parcel, and were sub-divided away from the associated farm house and a third outbuilding that are located on the adjoining lot. The historic setting is the entire parcel, but the primary emphasis is the view from the North on Darnestown Road. Under earlier HAWP's a vet clinic (now closed) operated out of the first floor of the barn, and cell towers were added to one of the silos.

The barn is in reasonable condition and the primary skin is relatively intact. The interior of the barn on the first floor has little to no remaining fabric of the original barn. The second floor/hay loft of the barn is relatively intact, but there is a mechanical room separated out to the South and ductwork runs along the floor. The outbuilding to the Southeast has been substantially modified. The outbuilding to the Southwest is located across the stream and within the flood plain. It appears to have been a machine shed and is not in good condition.

The building has sat vacant and is somewhat of a nuisance for close to 10 years.

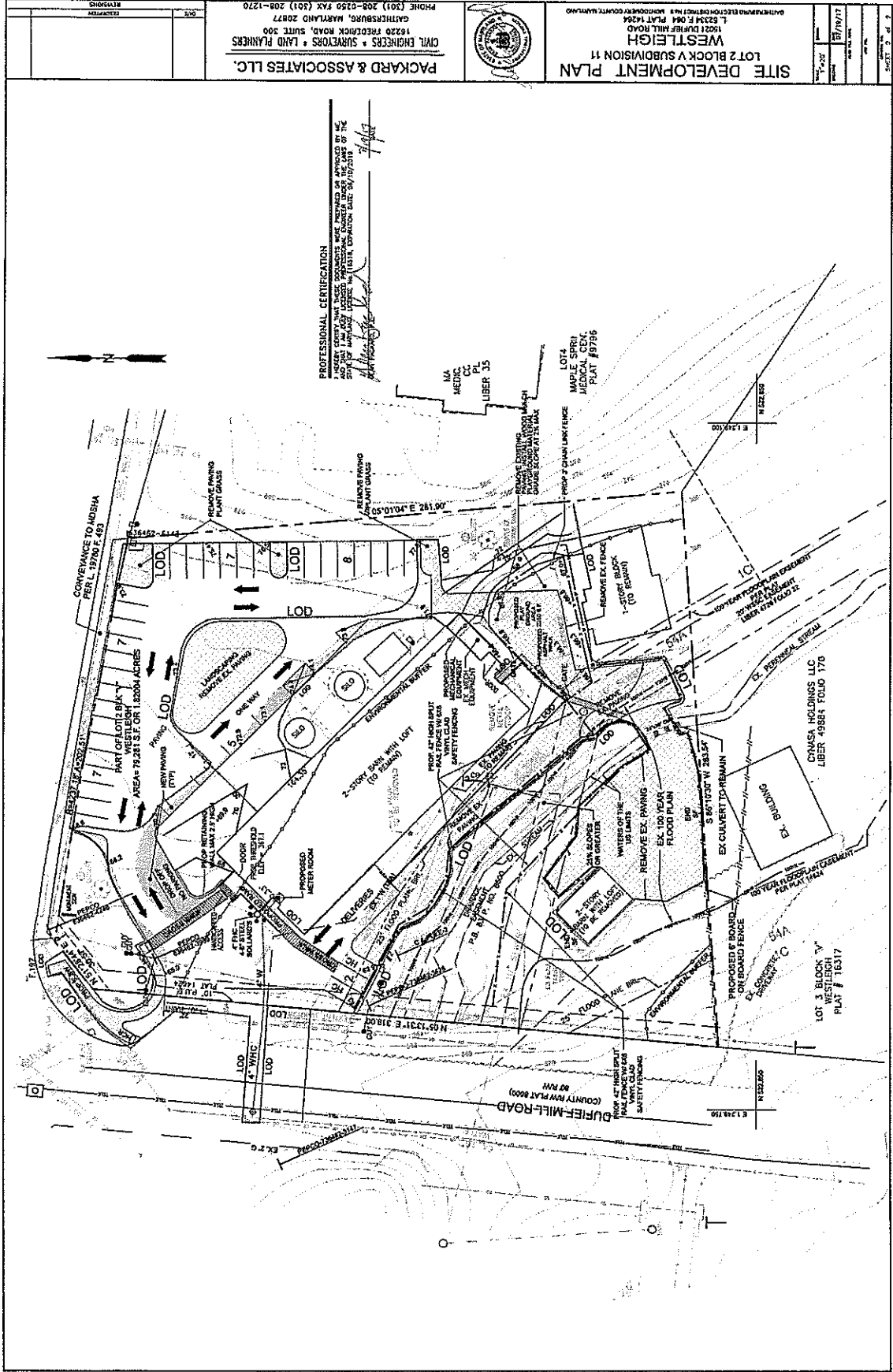
b. Project Description

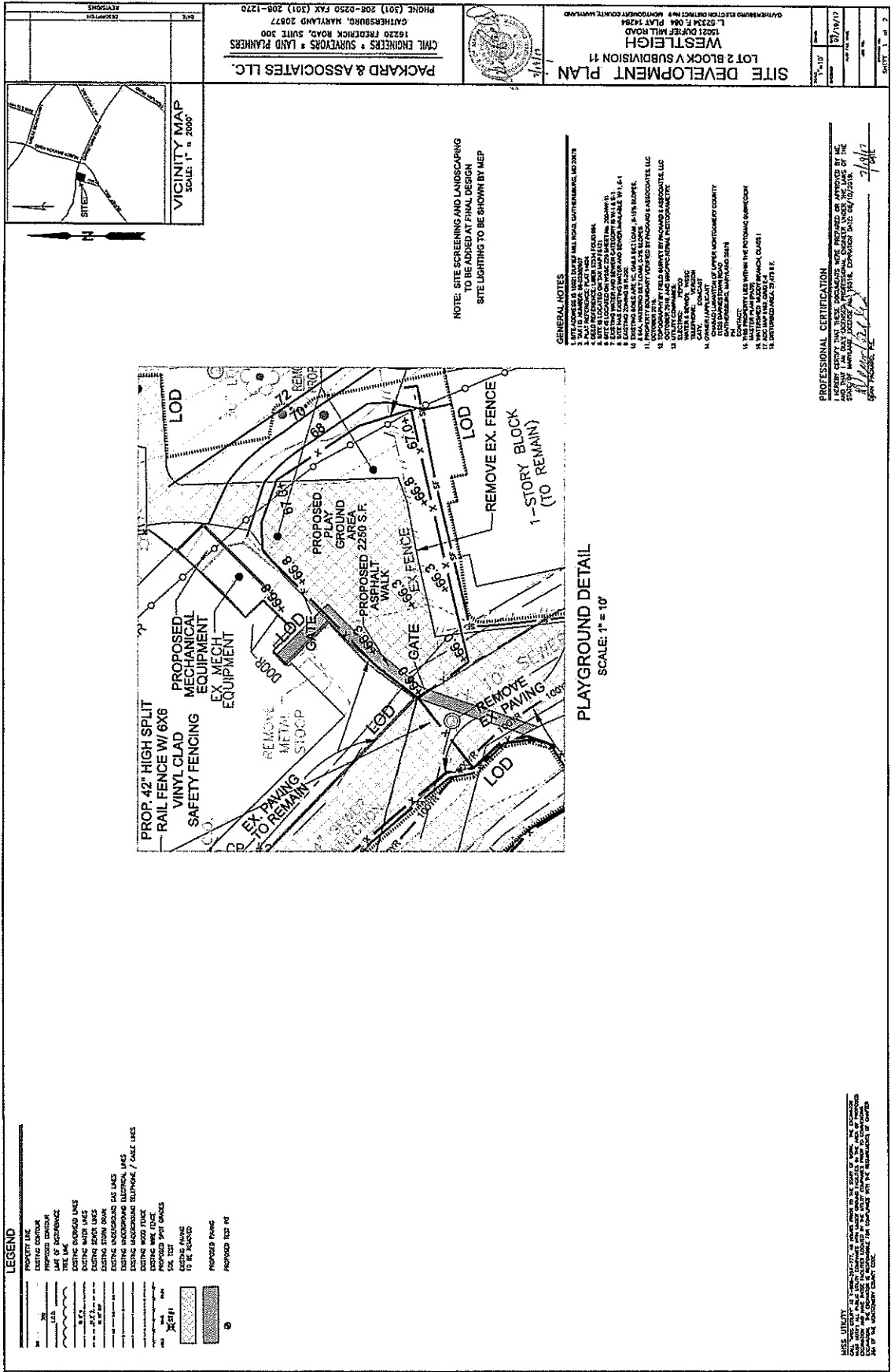
The proposal is to return the barn to a productive use, as a pre- & primary school, that will operate out of the first floor of the old barn and the newer addition to the Southwest.

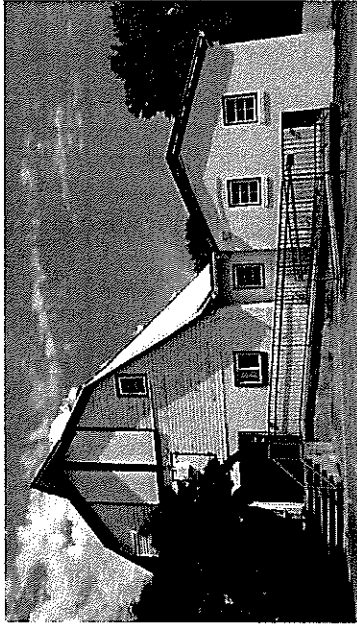
The exterior skin is proposed to be repaired in kind, and except for new doors and windows (to replace the non-original windows) left largely intact. The former vet clinic had a number of condensing units scattered around the perimeter of the barn, and we are proposing to create three groupings of units on the ground to the Southeast and Southwest of the building, behind screen fencing. Fresh air will be supplied through new louvered dormers located in the roof valley between the old barn and the support structure (expanded milking shed) and will not be visible from the ground or the road.

The parking lot will be reconfigured to the North & East, but similar in size to the current lot. We will be removing pavement to the West of the barn that falls in the stream buffers. A fenced play area for the pre-school will be located to the Southeast. To the Southwest, we propose to demolish the dilapidated machine shed, and create a grassy play area for the primary school. The edge of the stream will be protected from the children, by a split rail fence, with plastic covered mesh.

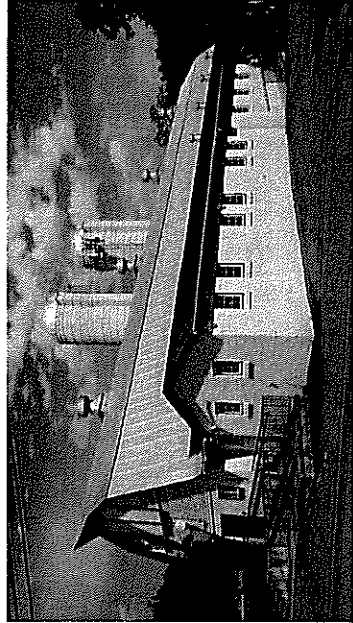
The first floor of the barn will be dropped by approximately 8" to provide additional headroom, and some of the steel columns will be relocated to allow for a longer span in some of the classrooms and the Multipurpose Room. The entire first floor will be fit-up as a school. The second floor will not be fit-up at this time, but there are plans to utilize that space in the future.



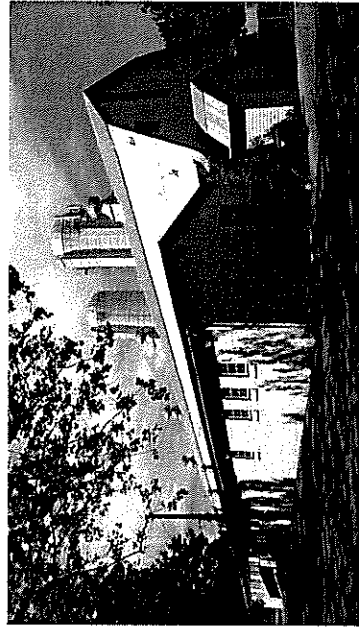




Northwest Facade



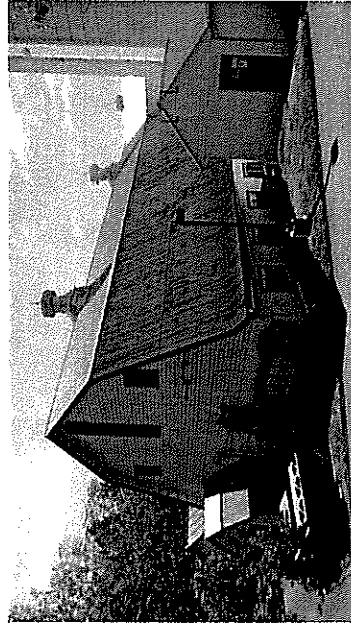
West Corner



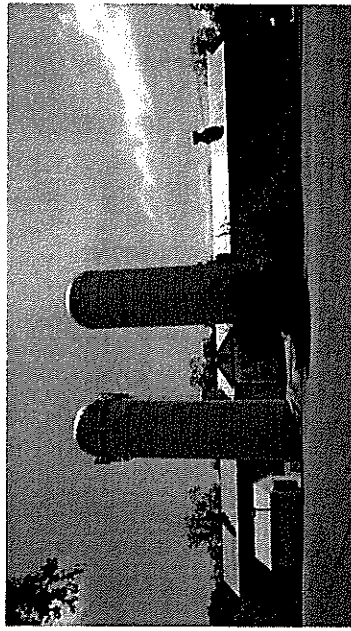
South Corner



Southeast Facade



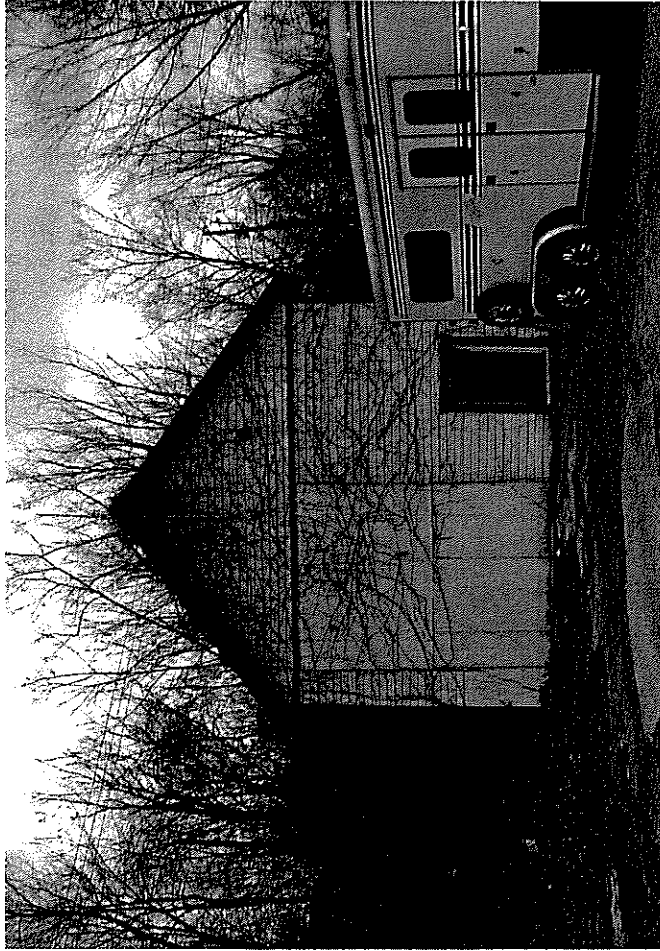
East Corner



Northeast Facade

EXISTING BUILDING PHOTOS

Simcha Educational Center
15021 Duffel Mill Rd., Gaithersburg, MD 20878
HAWP Submission



Winter 2016

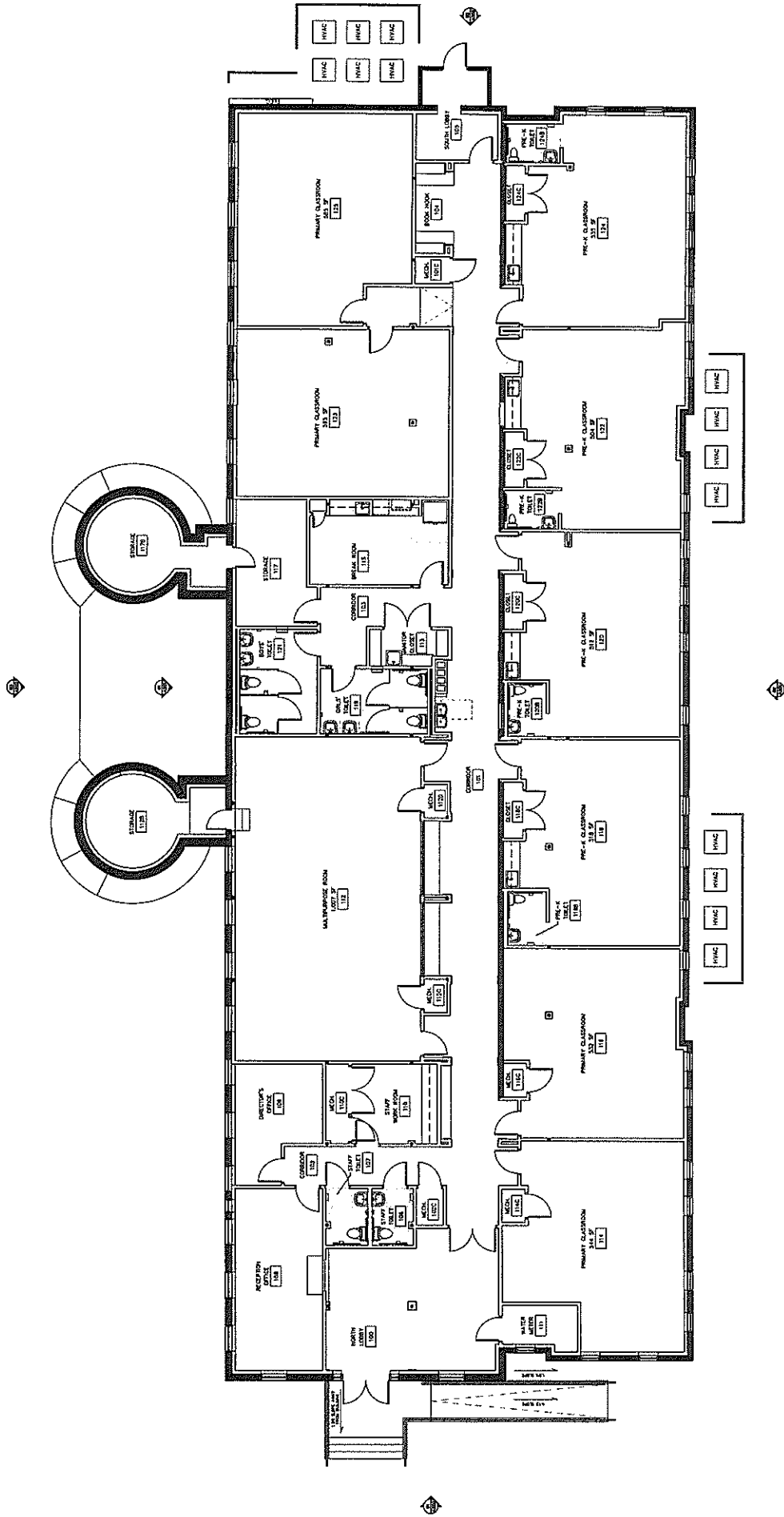


Summer 2017

BUILDING TO BE DEMOLISHED

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FLOOR PLAN

DRAWINGS ARE NOT TO SCALE

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 HAWP Submission



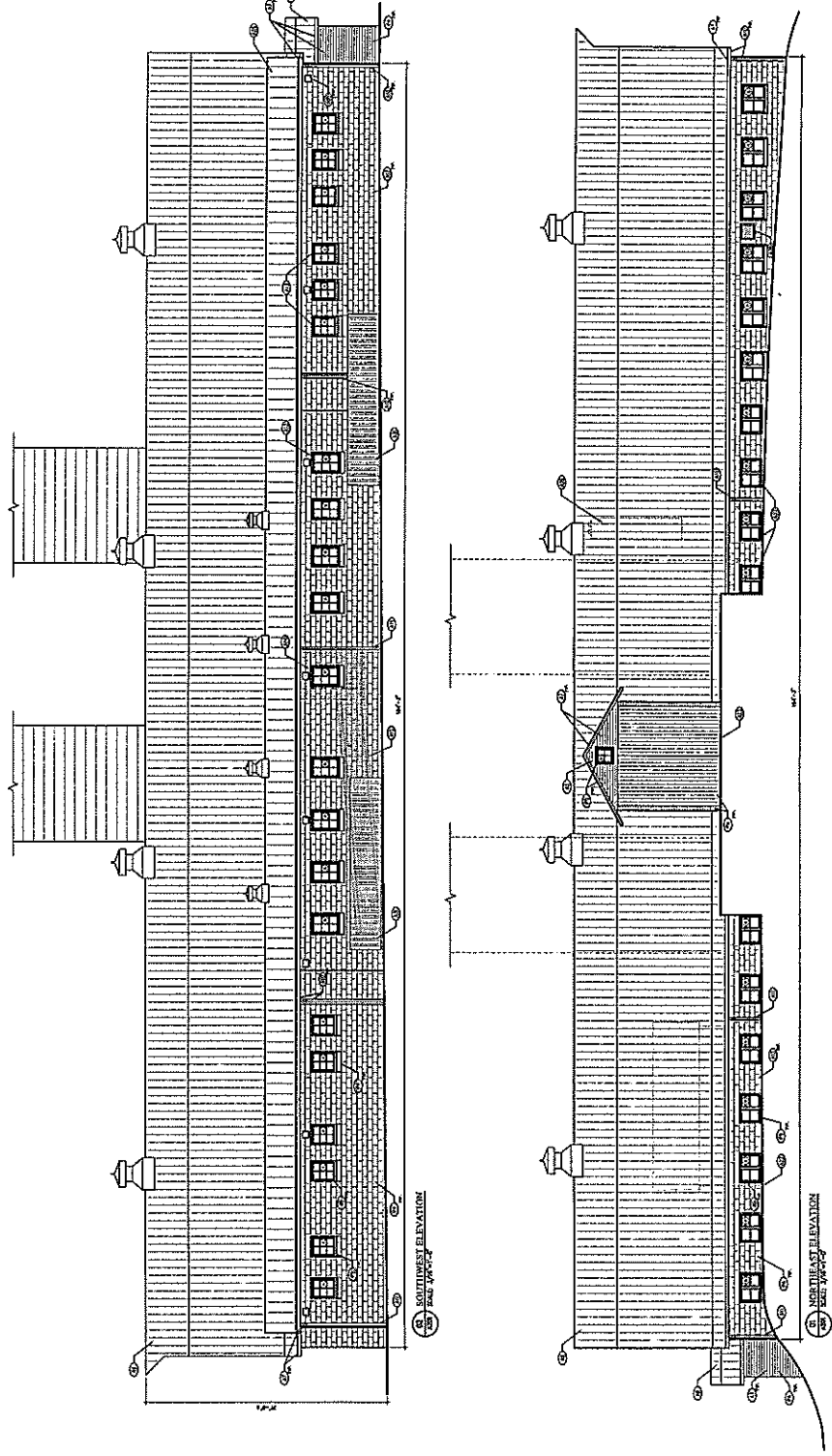
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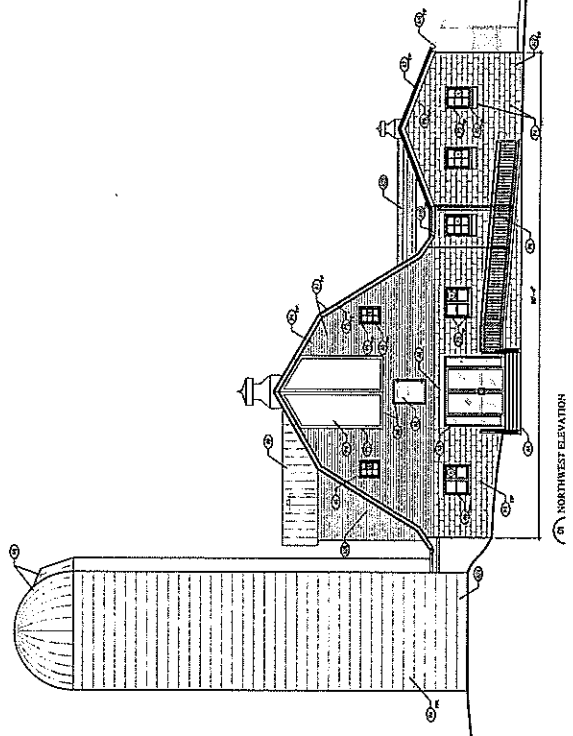
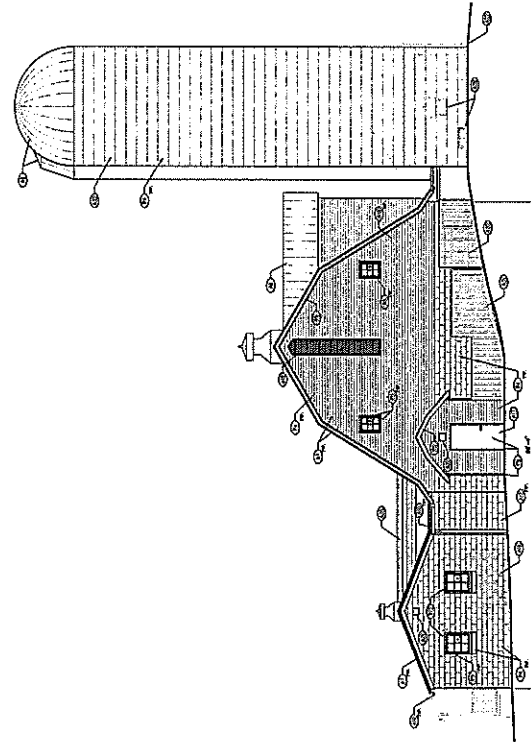
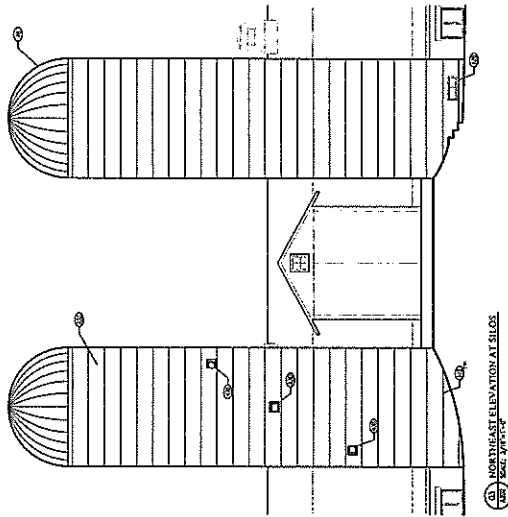
BUILDING ELEVATIONS

[illegible]

EXTERIOR FINISH MATERIAL NOTES

BRICKS, 1/2" - 1 1/2"
1. All bricks to be laid in running bond pattern. Mortar joints to be uniform and full.
2. Bricks to be laid in running bond pattern. Mortar joints to be uniform and full.
3. Bricks to be laid in running bond pattern. Mortar joints to be uniform and full.
4. Bricks to be laid in running bond pattern. Mortar joints to be uniform and full.
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10. Bricks to be laid in running bond pattern. Mortar joints to be uniform and full.

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BUILDING ELEVATIONS

DRAWINGS ARE NOT TO SCALE

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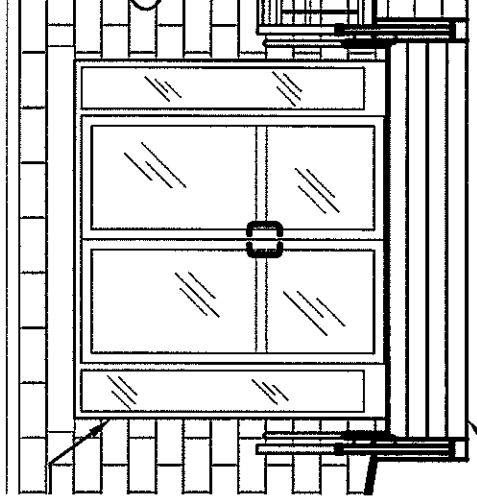
Similar barn with glass doors: King Dairy Barn MOOSEBARN, Boyds, MD.



Main entry door style precedent



Existing entry doors



Proposed entry door elevation - Door frames to be black aluminum

MAIN ENTRY DOORS

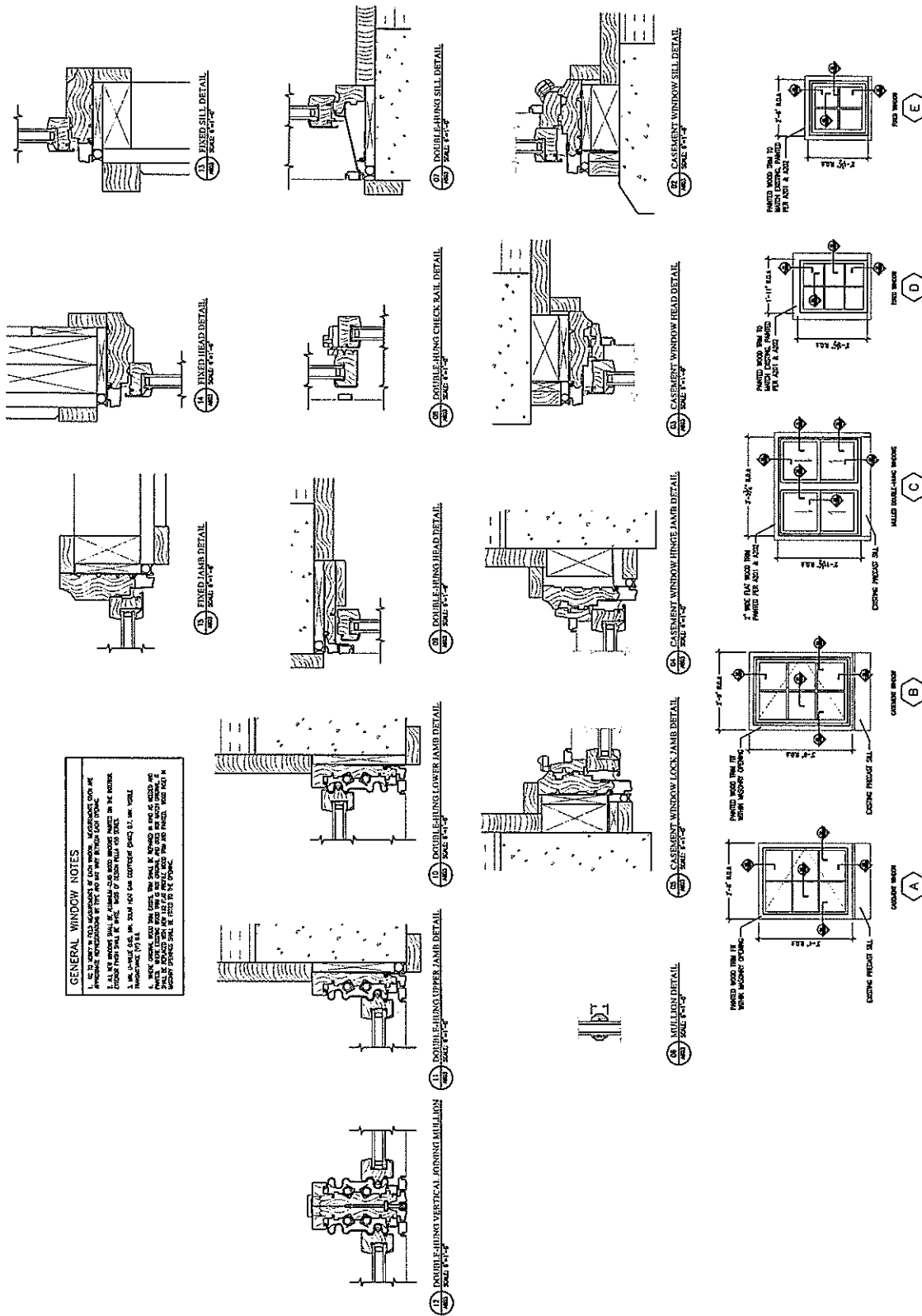
17

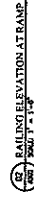
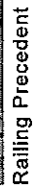
DRAWINGS ARE NOT TO SCALE

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WINDOW TYPES & DETAILS

11 WINDOW TYPES
SCALE 1/4"=1'-0"

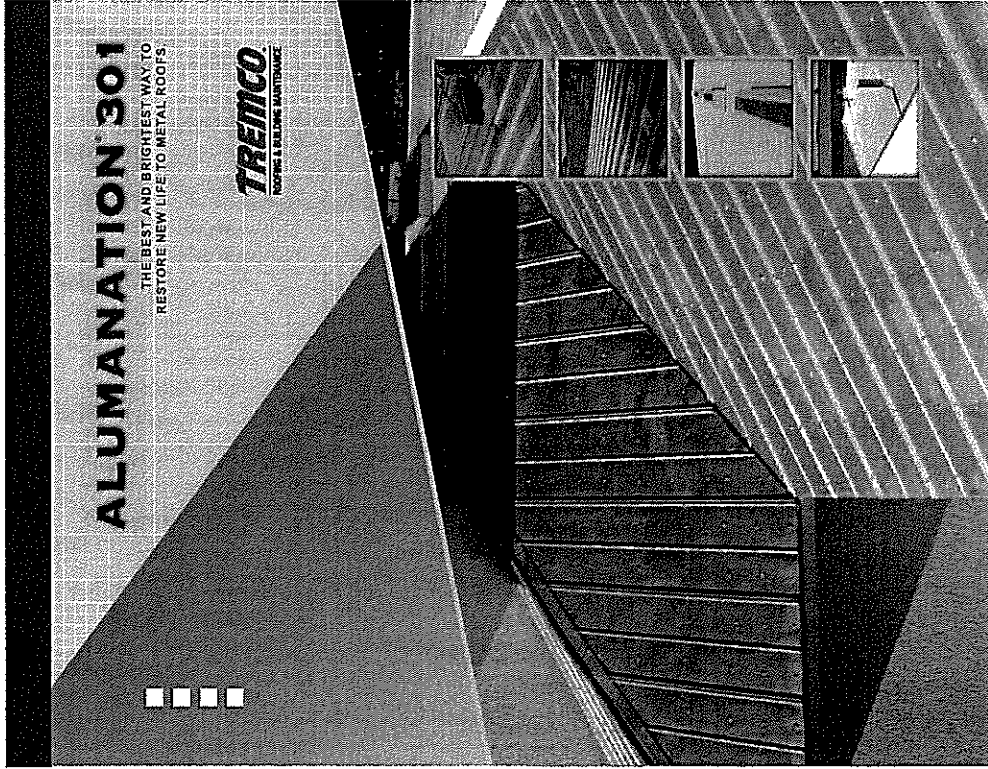




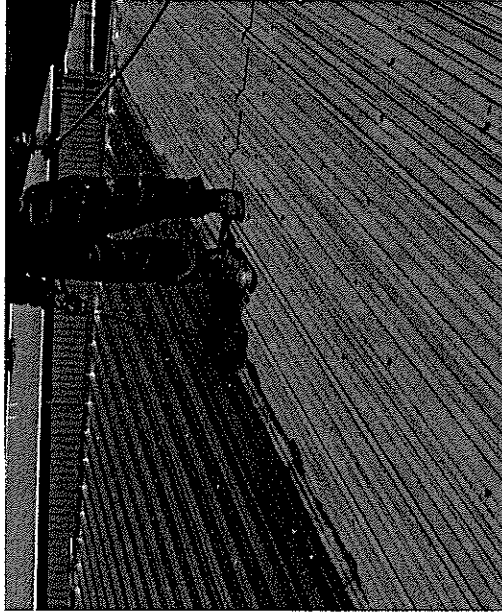
DRAWINGS ARE NOT TO SCALE



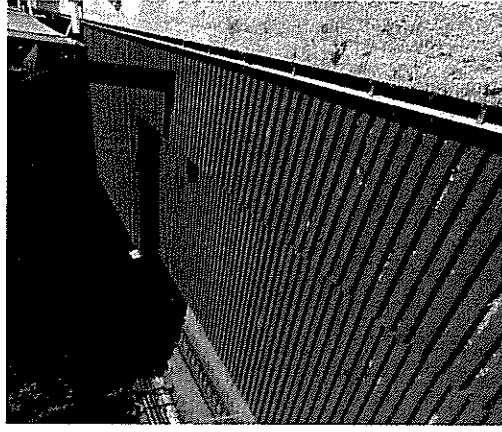
D&D
ARCHITECTS
Date: 07-19-2017



Roof coating product - Color as shown



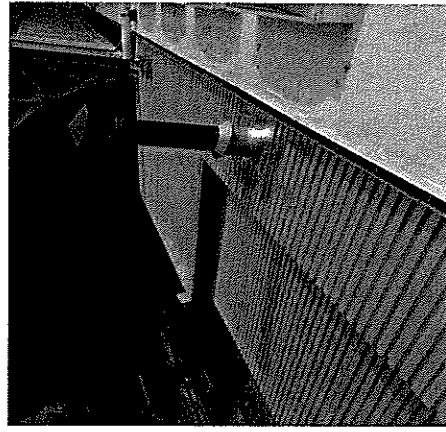
Product application



Before



PA Turnpike Commission



After

ALUMINATION 301 ROOF COATING APPLICATION EXAMPLES

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HAWP Submission



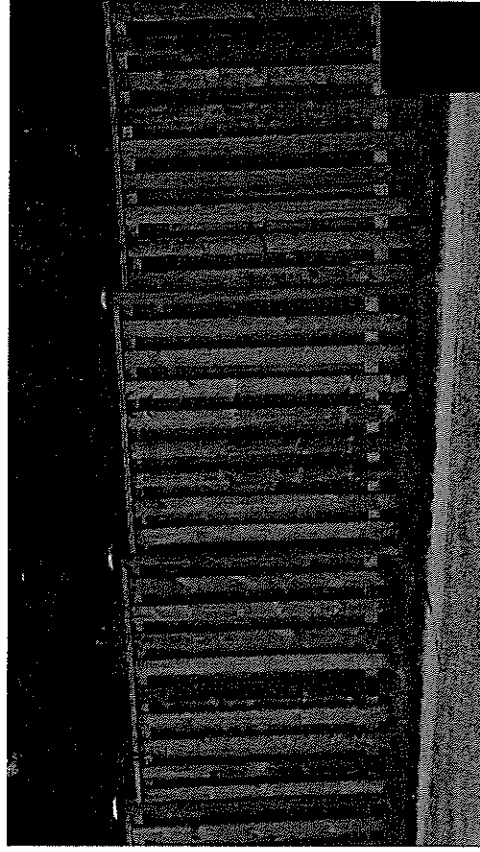
Playground equipment type to be used to Southeast/rear of building.



Black vinyl-coated chain link proposed surrounding play area.



Split-rail style fence with 6"x6" vinyl mesh to be used in flood plain at south end of property.

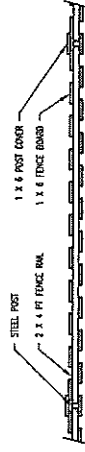


Mechanical equipment screening fence to be used adjacent to building.

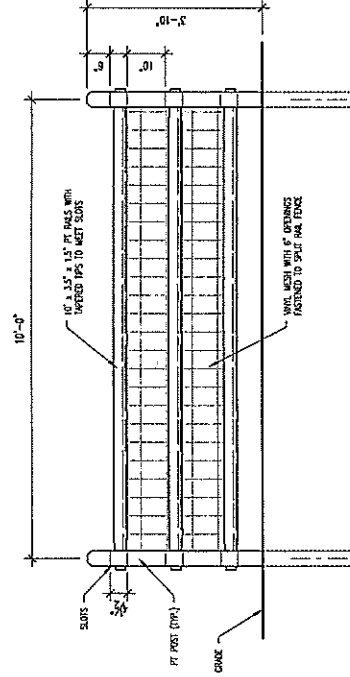
FENCING AND PLAY EQUIPMENT PRECEDENTS

2

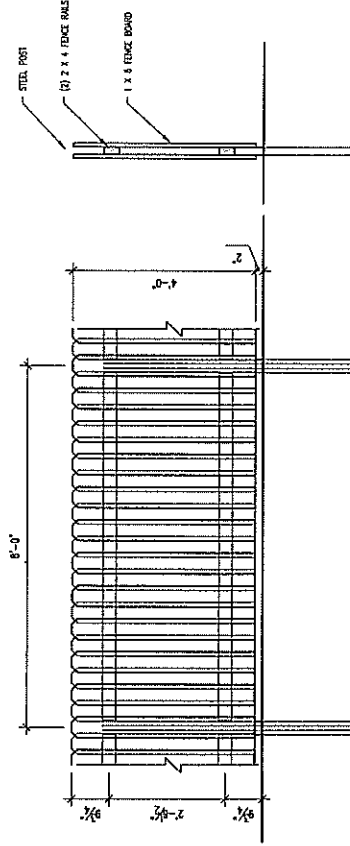
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HAWP Submission



10
100
BOARD ON BOARD FENCE PLAN VIEW
SCALE 1" = 1'-0"

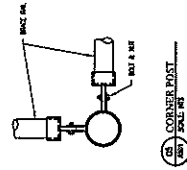


10
100
SPLIT RAIL FENCE ELEVATION
SCALE 1" = 1'-0"

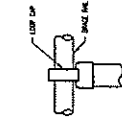


17
100
BOARD ON BOARD FENCE ELEVATION
SCALE 1" = 1'-0"

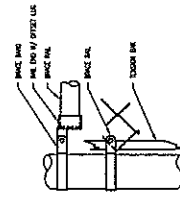
18
100
BOARD ON BOARD FENCE SECTION
SCALE 1" = 1'-0"



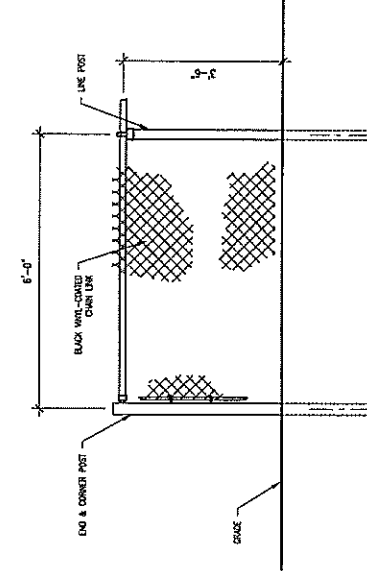
24
100
CORNER POST
SCALE 1" = 1'-0"



24
100
LINE POST
SCALE 1" = 1'-0"



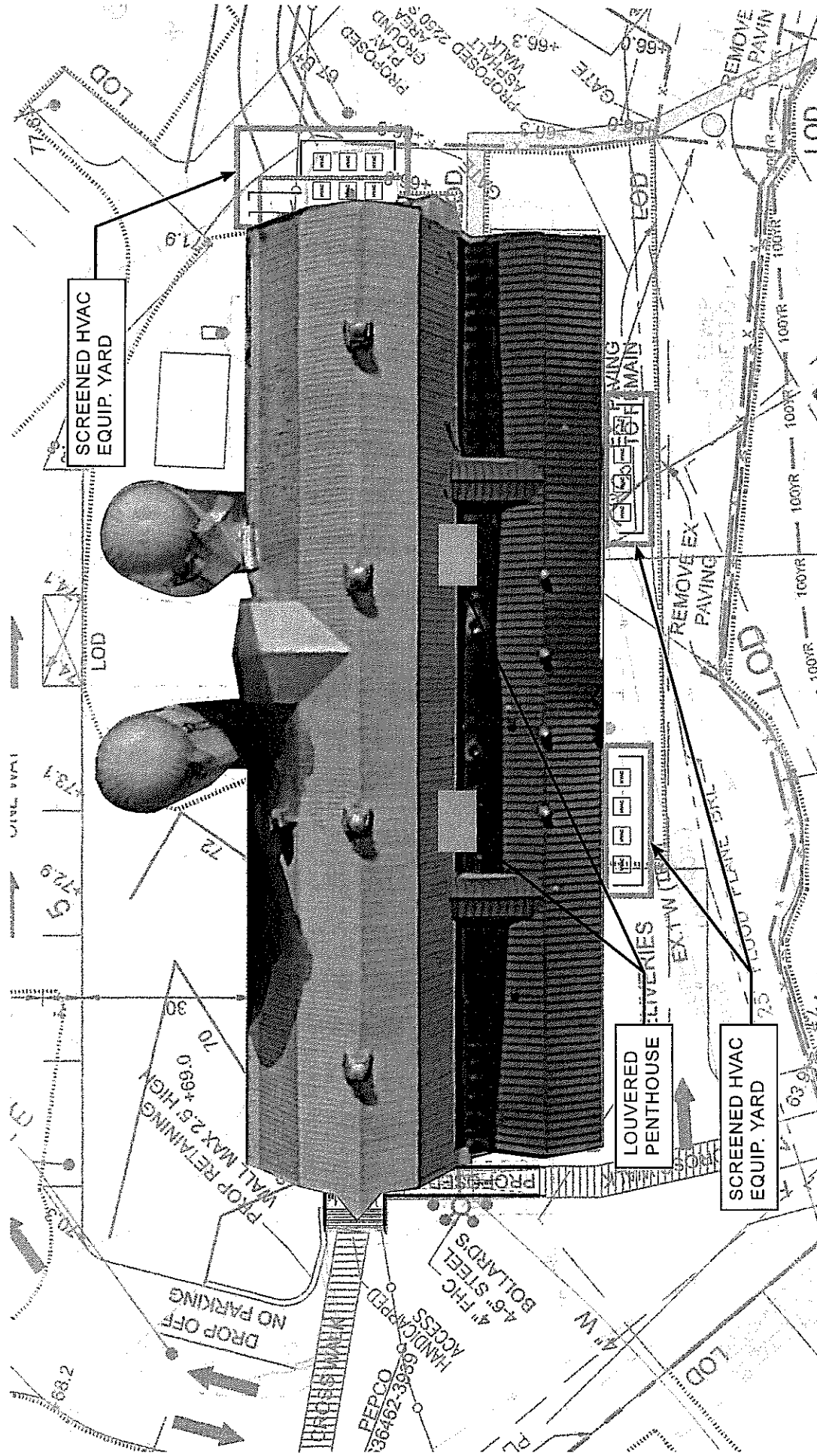
25
100
TERMINAL POST
SCALE 1" = 1'-0"



21
100
CHAINLINK FENCE ELEVATION
SCALE 1" = 1'-0"

FENCING DETAILS

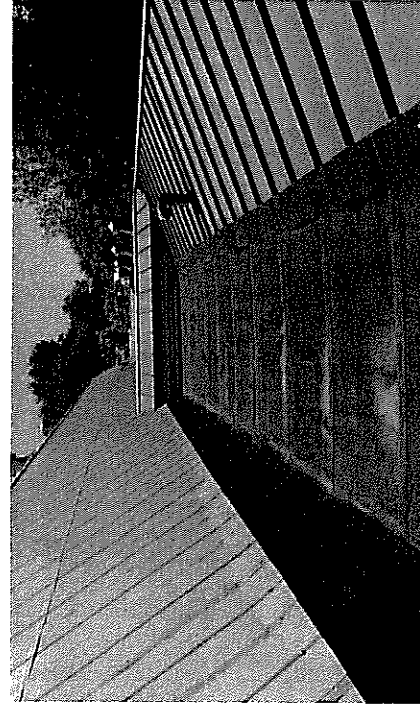
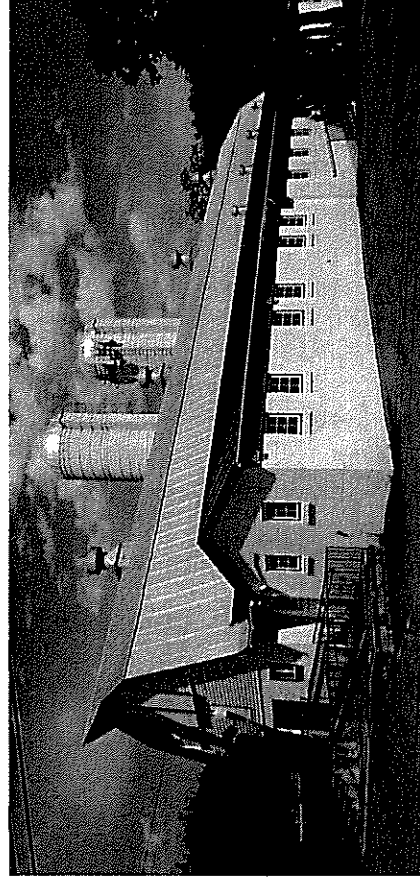
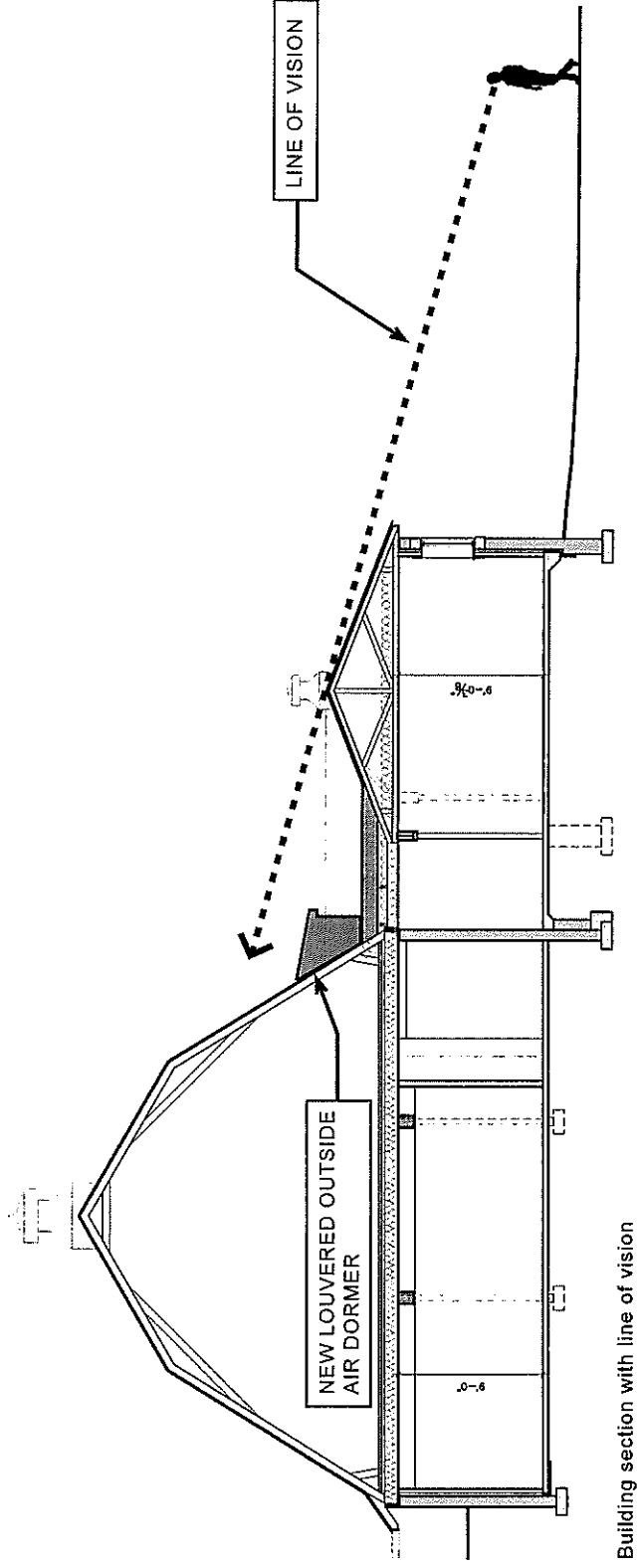
DRAWINGS ARE NOT TO SCALE



MEP EQUIPMENT PLAN

DRAWINGS ARE NOT TO SCALE

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 HAWP Submission



Roof valley view from on roof

Perspective view from ground

OUTSIDE AIR INTAKE

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 HAWP Submission

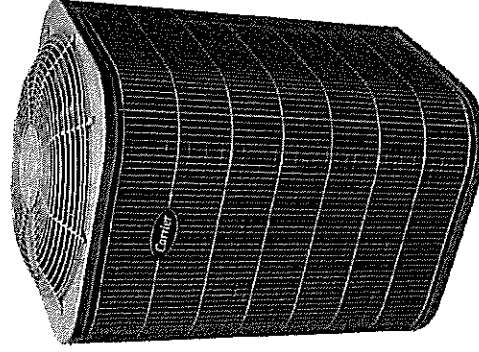
CA13NA 018-060
Base Series Air Conditioner
with Puron® Refrigerant



turn to the experts

Product Data

35" x 35" x 40" (L x W x H)



Carrier's CA13 has been designed utilizing Carrier's Puron refrigerant. The environmentally sound refrigerant allows you to make a responsible decision in the protection of the earth's ozone layer.

This product has been designed and manufactured to meet Energy Star® criteria for energy efficiency when matched with appropriate coil components. Refer to the combination ratings in the Product Data for system combinations that meet Energy Star® guidelines.

INDUSTRY LEADING FEATURES / BENEFITS

Efficiency

- 13.0 SEER / 10.9 - 11 EER (based on tested combination)
- Microtube Technology™ refrigeration system
- Energy Star® combinations

Reliability

- Puron® refrigerant -- environmentally sound, won't deplete the ozone layer and low lifetime service cost.
- Scroll compressor
- Internal pressure relief valve
- Internal thermal overload
- Filter drier

Durability

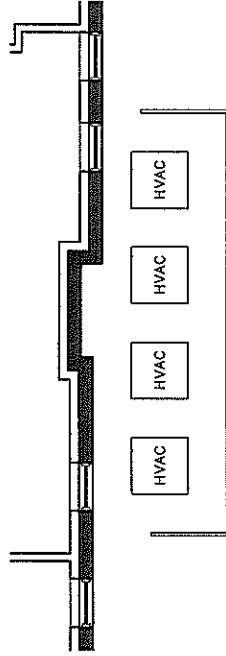
WeatherArmor™ protection package:

- Solid, durable sheet metal construction
- Dense wire coil guard

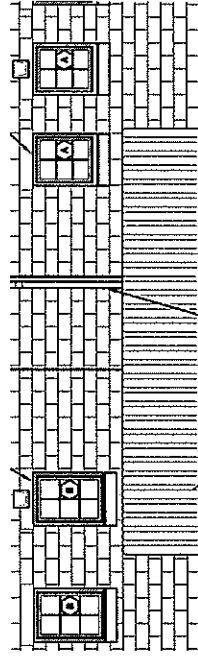
Applications

- Long-line -- up to 250 feet (76.20 m) total equivalent length, up to 200 feet (60.96 m) condenser above evaporator, or up to 80 ft. (24.38 m) evaporator above condenser (See Longline Guide for more information.)
- Low ambient (down to -20°F/-28.9°C) with accessory kit

NOTE: Ratings contained in this document are subject to change at any time. Always refer to the AHRI directory (www.ahridirectory.org) for the most up-to-date ratings information.



Example equipment yard plan



Example equipment yard elevation

EXTERIOR HVAC EQUIPMENT

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 HAWP Submission

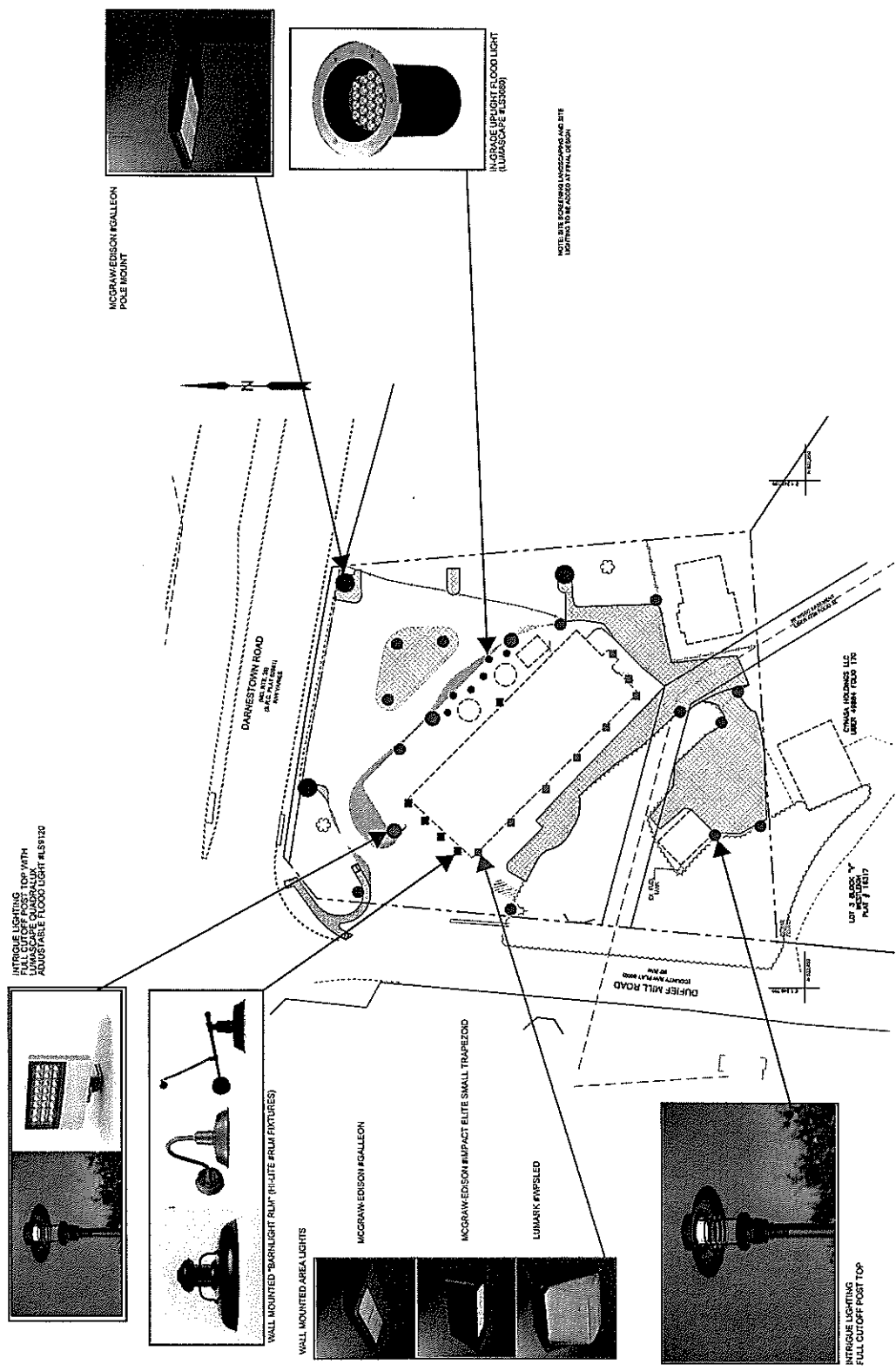


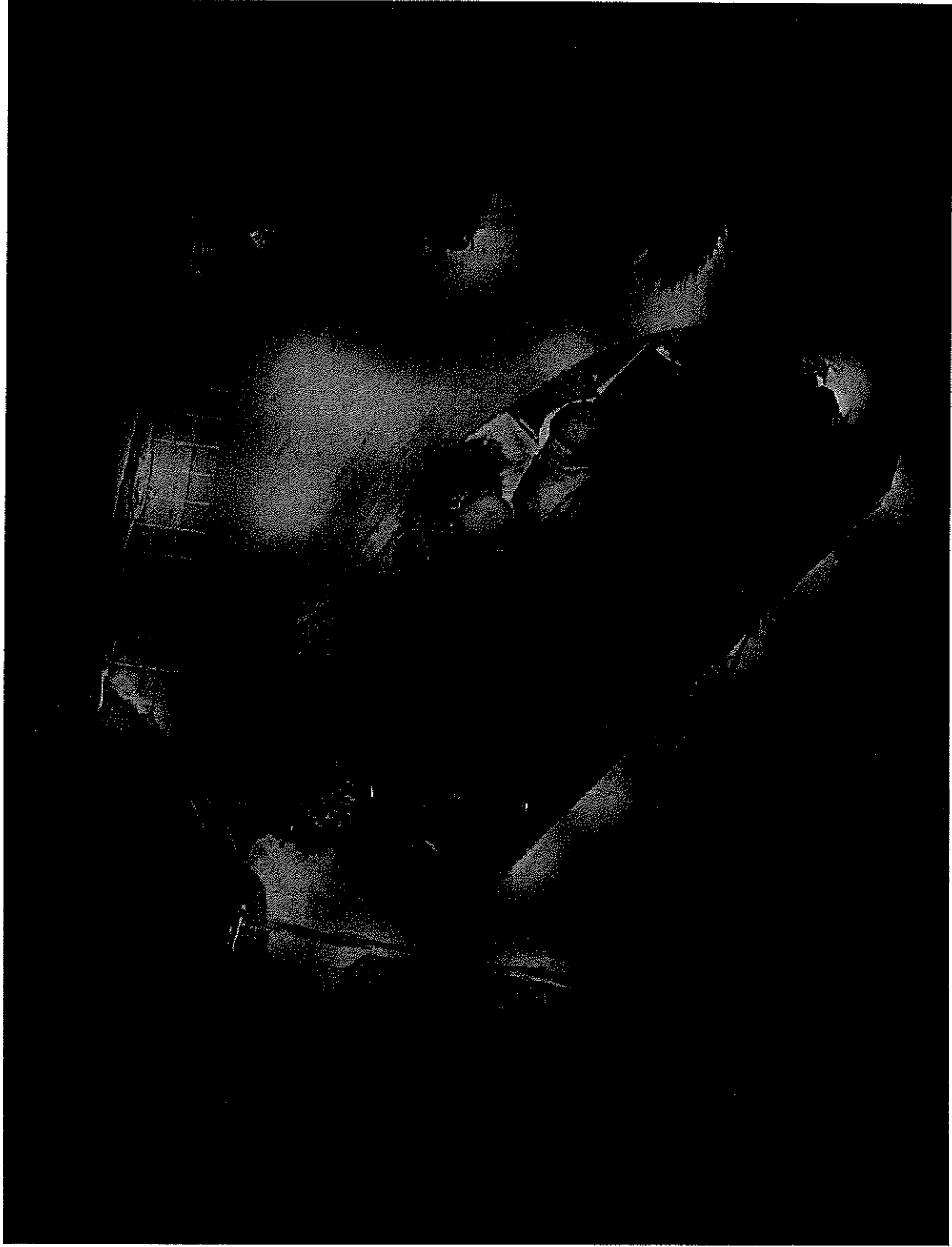
DRAWINGS ARE NOT TO SCALE

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DRAWINGS ARE NOT TO SCALE

SITE LIGHTING PLAN

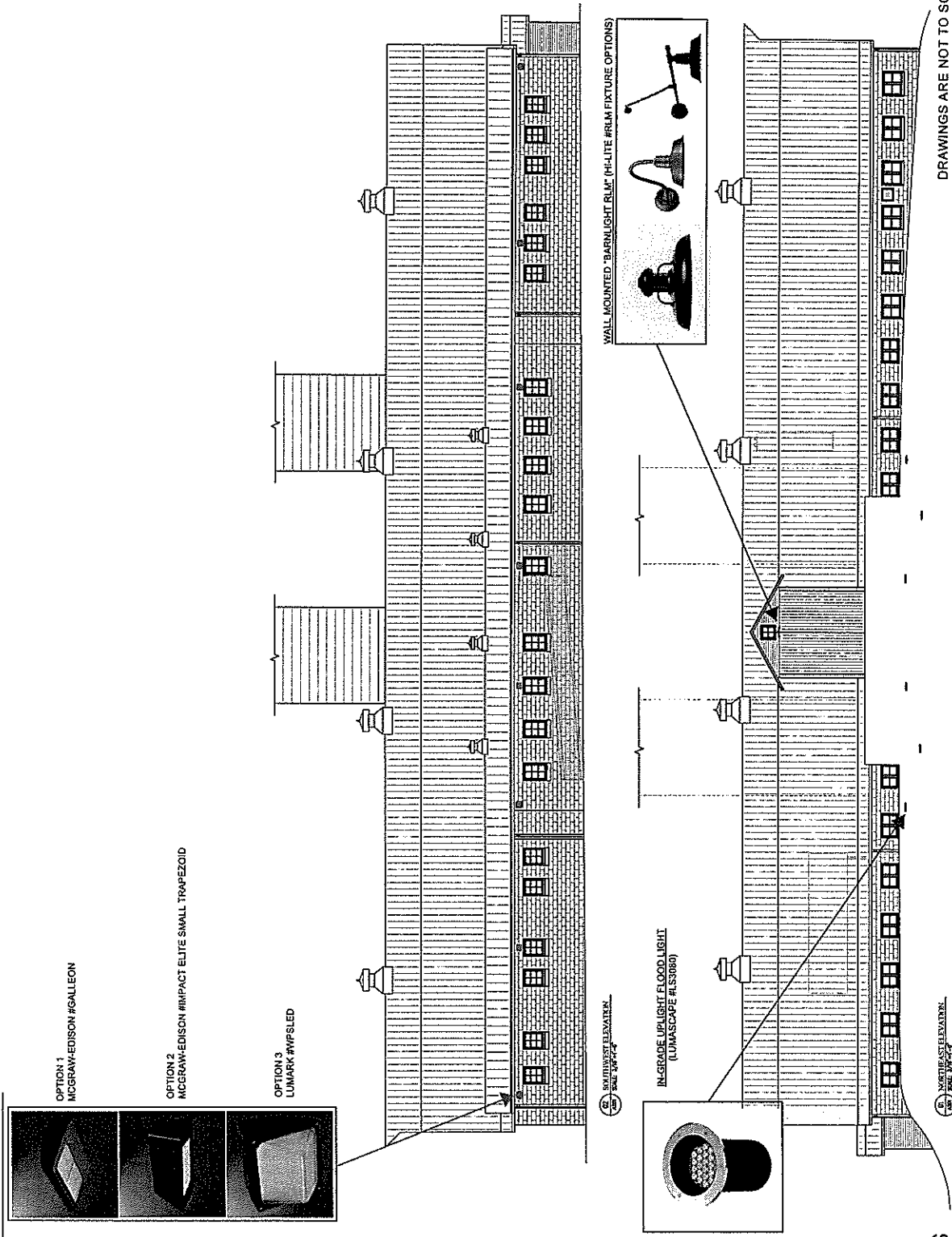




SITE LIGHTING RENDER

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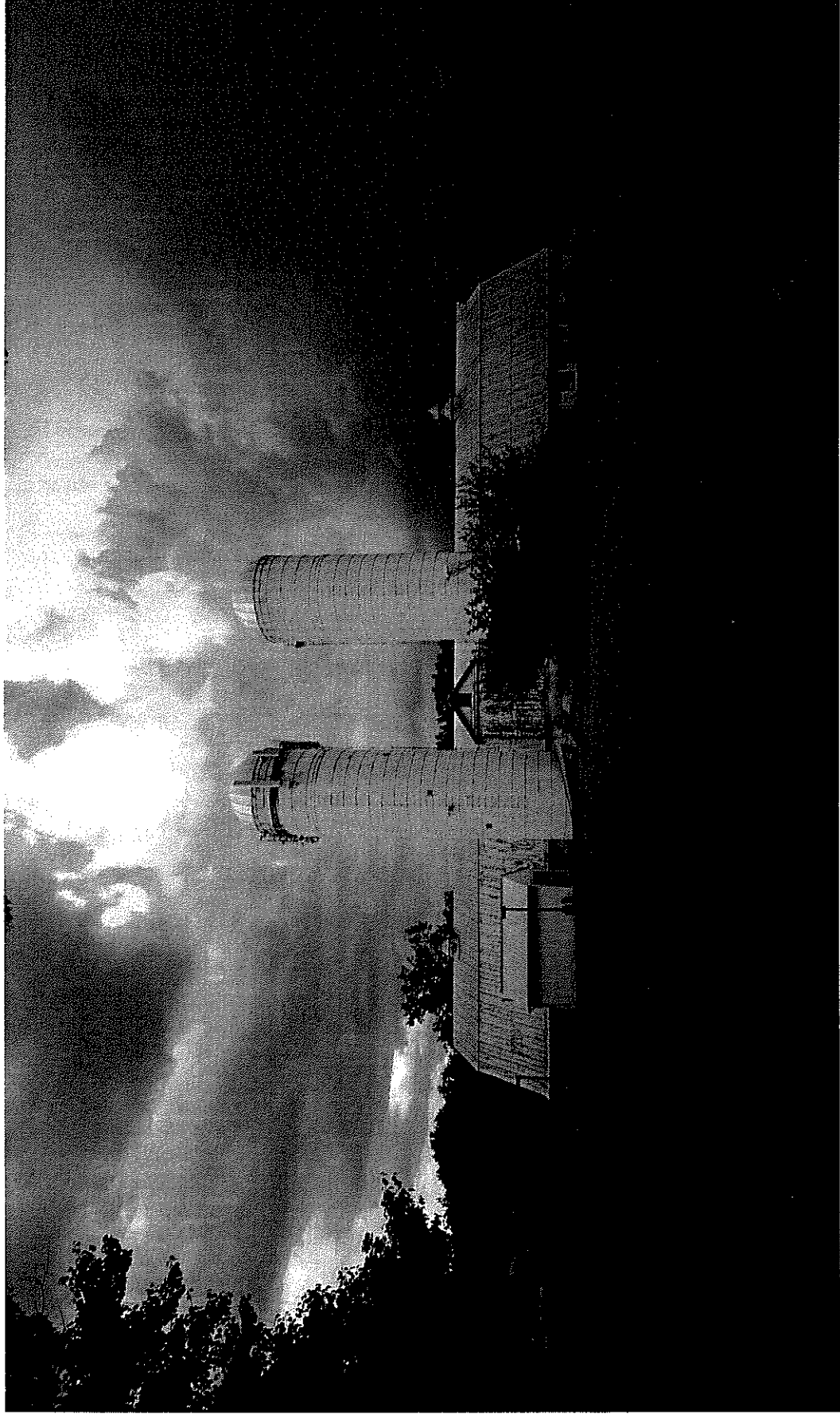


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SITE LIGHTING ELEVATIONS

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HAWP Submission

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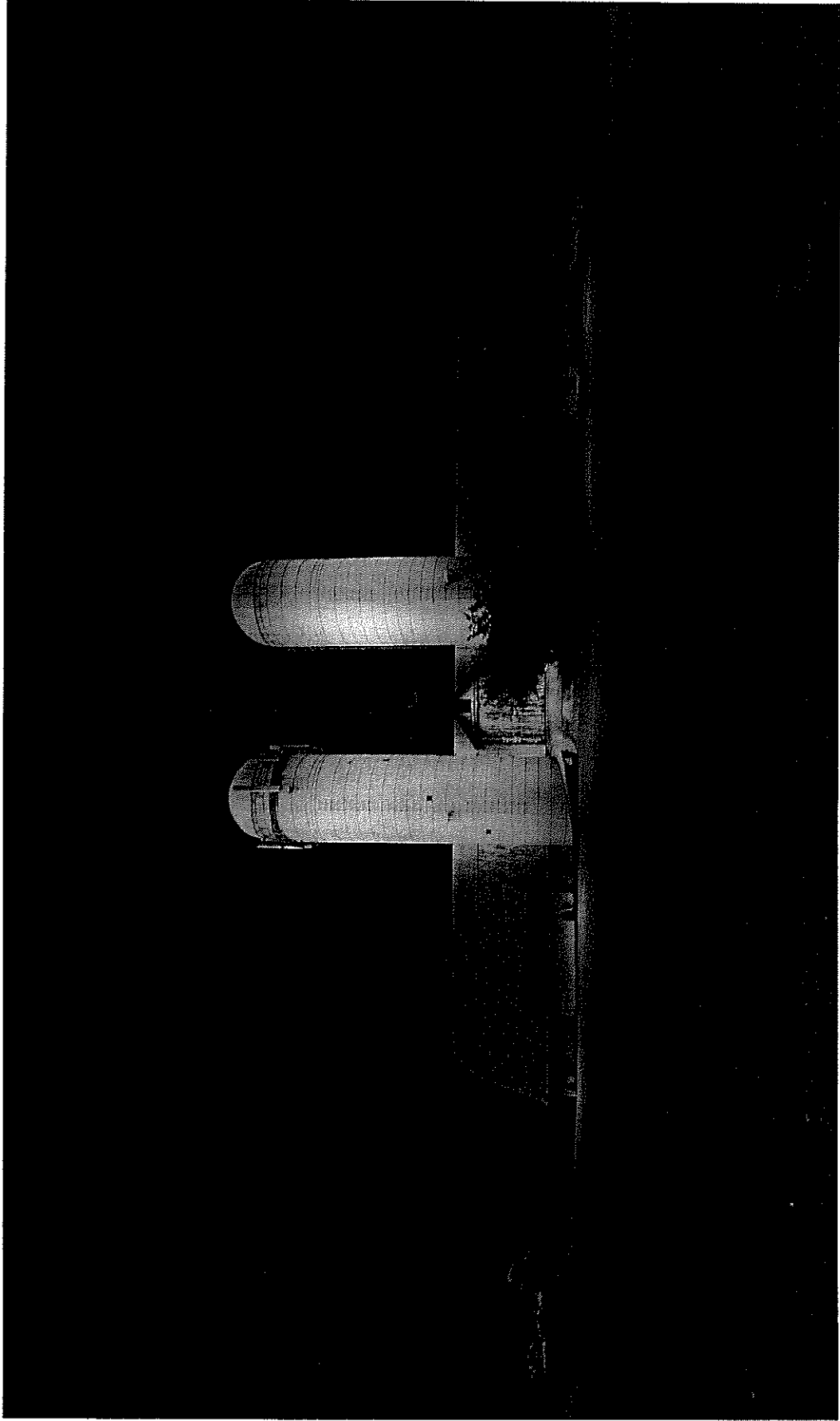


DAYTIME VIEW

29

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HAWP Submission



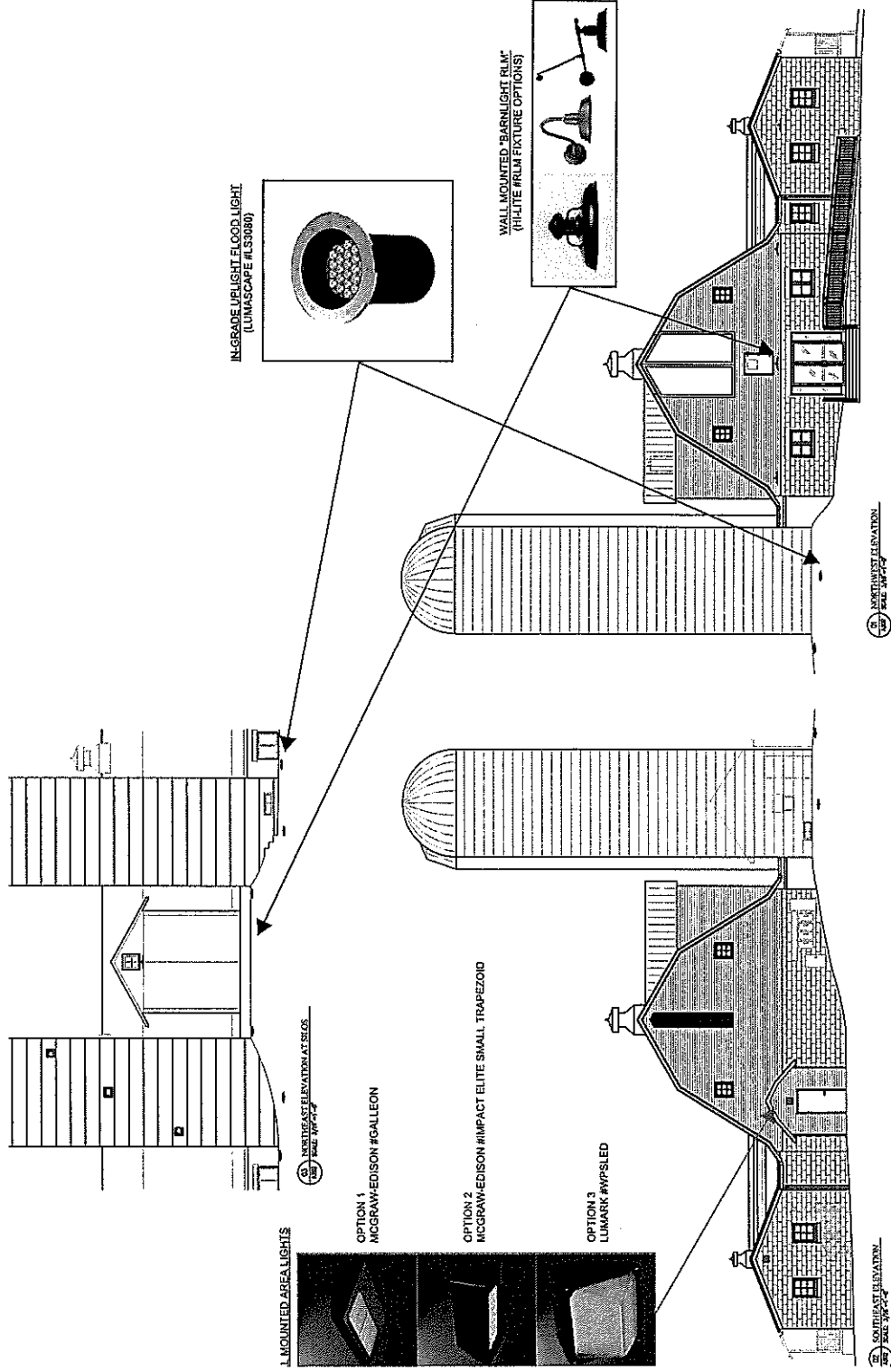


SITE LIGHTING RENDER

30

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SITE LIGHTING ELEVATIONS

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HAWP Submission



3

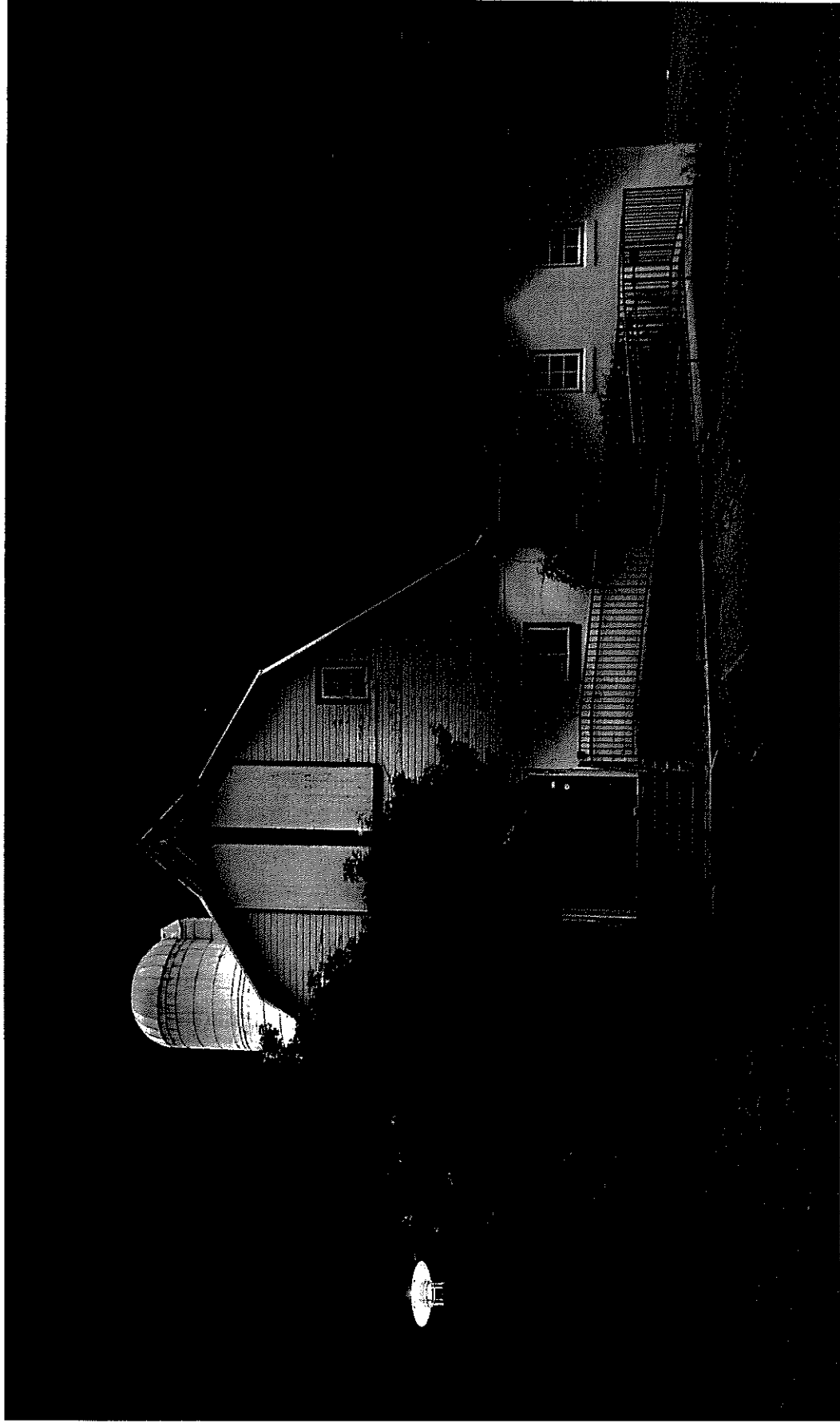


DAYTIME VIEW

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HAWP Submission



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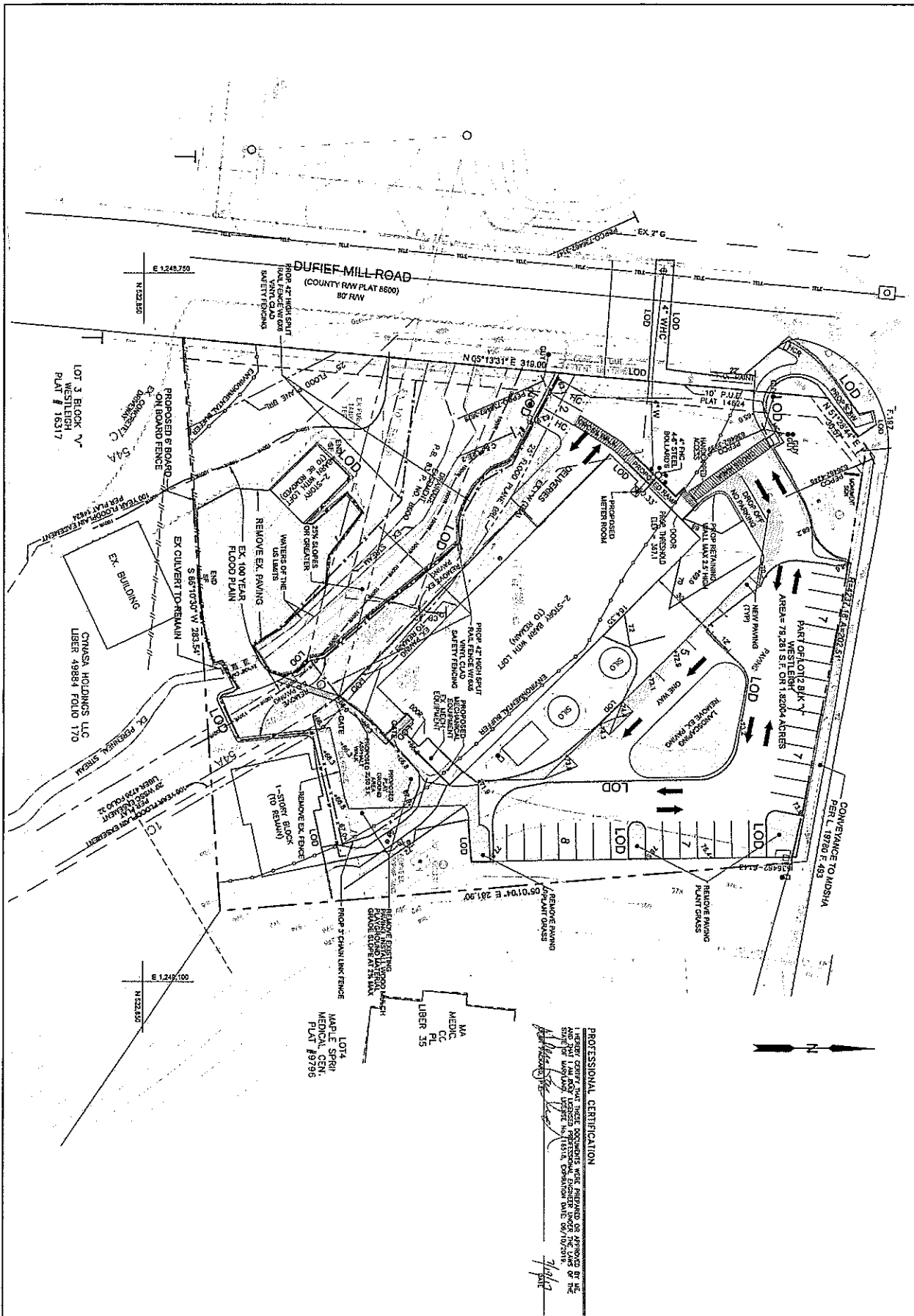


SITE LIGHTING RENDER

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HAWP Submission



33

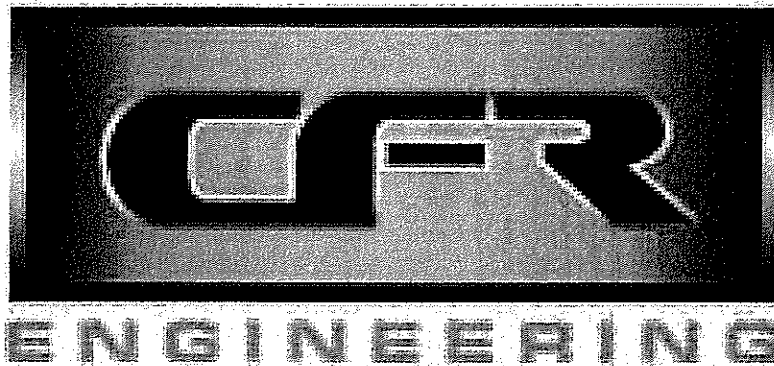


SITE DEVELOPMENT PLAN LOT 2 BLOCK V SUBDIVISION 11 WESTLEIGH 15021 DUFFIE MILL ROAD L 25334 F. 084 PLAT 14264 <small>GAITHERSBURG ELECTION DISTRICT NO. 8 MONTGOMERY COUNTY, MARYLAND</small>			PACKARD & ASSOCIATES LLC. CIVIL ENGINEERS * SURVEYORS * LAND PLANNERS 16220 FREDERICK ROAD, SUITE 300 GAITHERSBURG, MARYLAND 20877 PHONE (301) 208-0250 FAX (301) 208-1270	DATE: _____ DESCRIPTION: _____ REVISIONS: _____
SHEET 2 OF 2	01/19/17		15021 DUFFIE MILL ROAD L 25334 F. 084 PLAT 14264	

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SIMCHA EDUCATIONAL CENTER

15021 Dufief Mill Rd, Gaithersburg, MD 20878



Historic Board
Site Lighting
Schematic -
Proposed Fixture
Cutsheets

CFR Project Number: 17056
July 17 2017

Prepared By:

CFR Engineering Consultants, Inc.

20251 Century Blvd, Suite 120

Germantown, MD 20874

(877) 871-4229

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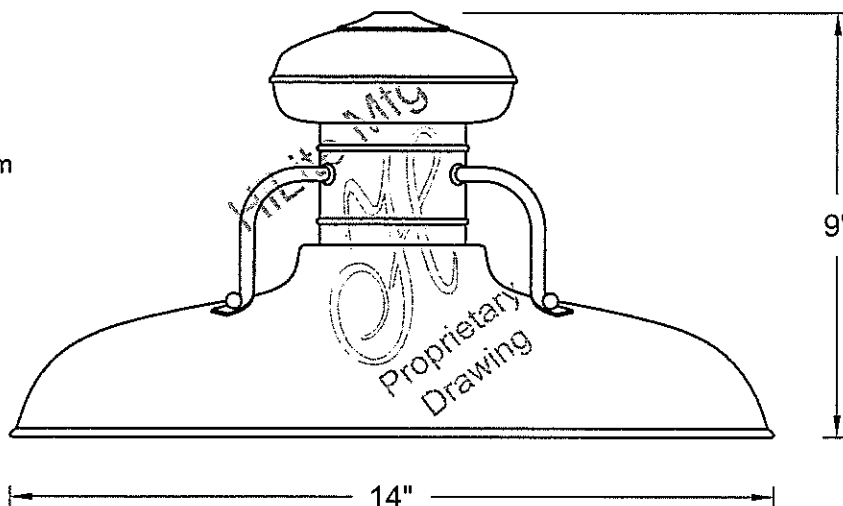


HI-LITE MFG. CO., INC

13450 Monte Vista Avenue
Chino, California 91710
Telephone: (909) 465-1999
Toll Free: (800) 465-0211
Fax: (909) 465-0907
web: www.hilitemfg.com
e-mail: sales@hilitemfg.com

H-7514 Milkman Collection

Job Name:
Type:
Quantity:



FINISH -Offered in exceptional finishes, comprised of: polyester/polished powder coat, baking enamel liquid, raw metal, or galvanized finishes.

Standard Finishes are: 91(Black), 93(White), 95(Dark Green), 96(Galvanized), BR47(Powder Coat Rust), BK01(Black Texture), GN20(Powder Coat Patina).

Upgraded Finishes are: 29, 66, 82, 90, 92, 94, 97, 99, 100, 103, 104, 105, 110, 112, 113, 114, 115, 117, 118, 119, 120, 127, 128, 129, 133, 134, 135, 136, 98, 101, 102, 137, 138, 139, 140, 121, 122, 123, 124, 125, 126, 11, 01, 22, 25, 33, 77, 89, 24, 44, 48, 49, 15, 16.

For interior finish of fixture refer to color chart on pages 344-348.

MOUNTING - Cord, Stem, Arm, and Flush mounting available.

ACCESSORIES - CGU(Cast Guard and Glass), LCGU(Large Cast Guard and Glass), WGU(Wire Guard and Glass), LWGU(Large Wire Guard and Glass), ARN(Acorn Globe), LARN(Large Acorn Globe), WGR(Wire Guard), SK(Swivel Knuckle) and FX(Flexible tubing for cord mounted fixture only) available.

REFLECTOR - Heavy duty, spun shade, aluminum 6061-0 and/or 1100-0, galvanized 22 gauge, steel 20/22 gauge, copper 032/040 and brass 032/040 construction. Dependant on finish.

SOCKETS/LAMPS - Available in:

Incandescent

- rated 200 watt max/120 volt, medium base.

Compact Fluorescent(CFL)

- rated 13/18/26/32/42/57 watt max/120/277 volt, GX24Q base.

Metal Halide(MH)

- rated 35/50/70/100/150/175 watt max/120/208/240/277 volt, medium base, 4KV socket.

High Pressure Sodium(HPS)

- rated 50/70/100/150 watt max/120/277 volt, medium base.

Light-Emitted Diode(LED)

-See LED specification sheet.

MADE IN THE U.S.A.

Suitable for wet location.
(Except when cord mounted)





Hi-Lite Mfg. Co.

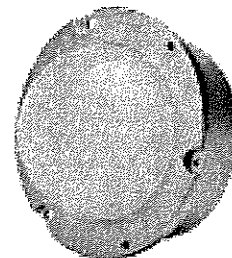
**LED 2
Series
Specifications**

Description

The Hi-Lite LED 2 series is a drop-in LED light engine with integrated thermal management and optics. The LED 2 series is available for Open-rated fixtures. The LED 2 series is offered in five lumen outputs: 850, 1250, 2000, 3000, and 4000.

Specifications

- Open-rated fixture only (not rated for use within a sealed fixture or glass enclosure)
- 96° Beam Angle Domed Lens
- 9W, 850lm, 440mA (tested at 4000 K)
- 13W, 1250lm, 440mA (tested at 4000 K)
- 21W, 2000lm, 900mA (tested at 4000 K)
- 31W, 3000lm, 900mA (tested at 4000 K)
- 38W, 4000lm, 900mA (tested at 4000 K)
- ≥ 90 CRI for all CCTs (2700 K, 3000 K, 3500 K, 4000 K)
- 5-year Limited Warranty
- Designed to last 50,000 hours at L_{70}



(USE THIS FORMAT TO PLACE ORDER)

Wattage /	Light Source	Color Temperature	Dimming Option	Driver Location	Voltage
9 (850 lumens)	LED2	27 (2700 K) 30 (3000 K) 35 (3500 K) 40 (4000 K)	Leave blank if dimming is not required.	BCM (Ballast Canopy Mount)	9W & 13W 1 (120V) 2 (277)
13 (1250 lumens)			For 9W and 13W only I (Incandescent) (Not available in 277V) E (0-10V Dimming 10%)		
21 (2000 lumens)			For 21W, 31W, & 38W only E (0-10V Dimming 10%)		
31 (3000 lumens)					
38 (4000 lumens)					
31 /	LED2 /	30 /		BCM /	M
31/LED2/30/BCM-M					

Ordering Examples:

31/LED2/30/BCM-M - 31W, LED2, 3000 K, Non-Dimming, Ballast Canopy Mount, 120/277 V

21/LED2/27/E/BCM-M - 21W, LED2, 2700 K, Electronic Dimming, Ballast Canopy Mount, 120/277 V

38/LED2/40/BCM-M - 38W, LED2, 4000 K, Non-Dimming, Ballast Canopy Mount, 120/277 V

Key Features

- Rated for 50,000 hours
- Min 0 °C start up temp

Hi-Lite Manufacturing Co., Inc.

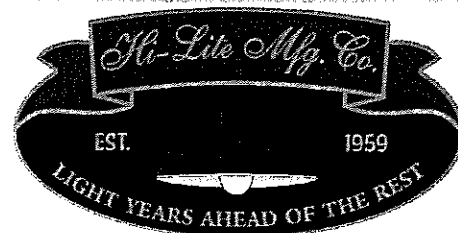
13450 Monte Vista Avenue

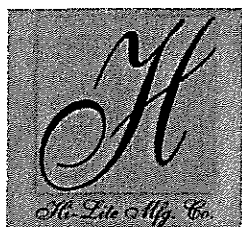
Chino, CA 91710

P: (909) 465-1999 | Fax: (909) 465-0907 | Toll Free: (800) 465-0211

www.hilitemfg.com | email: sales@hilitemfg.com

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Hi-Lite Mfg. Co.

**LED 3
Series
Specifications**

Description

The Hi-Lite LED 3 series is a Chip -On-Board (COB) drop -in LED light board. The LED 3 series is specifically used for enclosed light fixtures with jelly jar style fixtures. The LED 3 series is offered in two lumen outputs: 1200 and 1600.

Specifications

- For use with enclosed -rated Jelly Jar style fixtures and accessories only.
- Standard 120° Beam Angle
- 12W, 1200lm, 350mA (tested at 4000 K)
- 18W, 1600lm, 500mA (tested at 4000 K)
- 90 CRI for all CCTs (2700K, 3000K, 4000K, 5000K)
- Lumen maintenance, L70 lifetime= 50k hours based on 105° operating temp.

(USE THIS FORMAT TO PLACE ORDER)

Wattage /	Light Source	Color Temperature	Dimming Option	Optics	Driver Location	- Voltage
12 (1200 lumens)	LED3	27 (2700 K)	Leave blank if dimming is not required. E (0-10V Dimming10%)	Standard Beam is 120°(no optics) Leave blank if other optics are not required.	BCM (Ballast Canopy Mount)	M (Multi 120/277)
18 (1600 lumens)		30 (3000 K)				
		40 (4000 K)				
		50 (5000 K)		O (71° Beam angle flat frost lens will drop lumens by 18%)		
18 /	LED3 /	27 /	/	/	/	BCM - M
18/LED3/27/BCM-M						

Ordering Examples:

18/LED3/27/BCM-M	- 18W, LED3, 2700 K, Non-Dimming, Ballast Canopy Mount, 120/277 V
12/LED3/30/E/BCM-M	- 12W, LED3 3000 K, Electronic Dimming, Ballast Canopy Mount, 120/277 V
18/LED3/40/E/BCM-M	- 18W, LED3 4000 K, Electronic Dimming, Ballast Canopy Mount, 120/277 V

Hi-Lite Manufacturing Co., Inc.

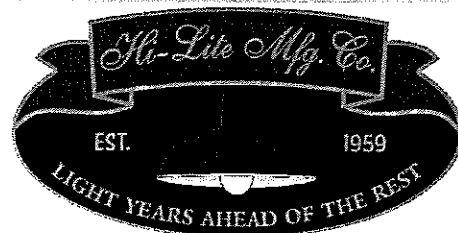
13450 Monte Vista Avenue

Chino, CA 91710

P: (909) 465-1999 | Fax: (909) 465-0907 | Toll Free: (800) 465-0211

www.hilitemfg.com | email: sales@hilitemfg.com

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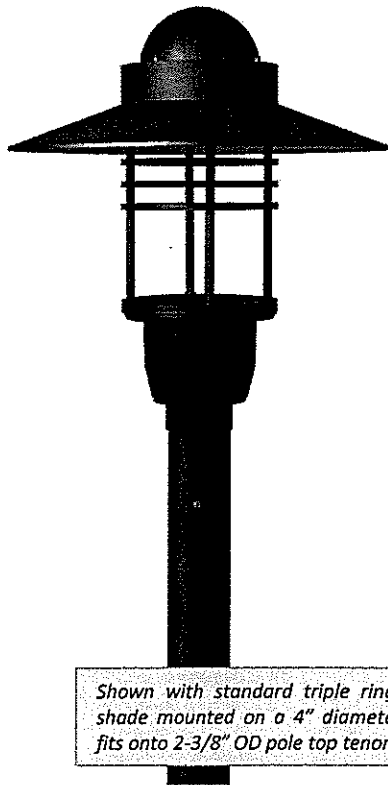
Type: _____ Model: _____

Project: _____



LARGE EUROTECH

LED Full Cutoff Post Top



Shown with standard triple rings and standard spun shade mounted on a 4" diameter pole. Mounting hub fits onto 2-3/8" OD pole top tenon.



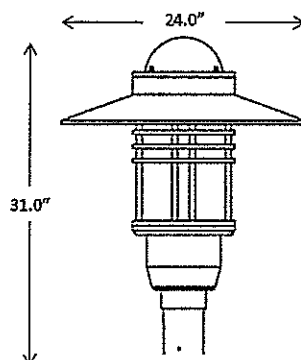
Dome Top



Cone Top



Flat Top



General Description: Large Eurotech Full-Cutoff is a fully shielded full-cutoff fixture. The LED module is positioned in the upper housing above the shade providing full cutoff per IESNA standards.

Construction: Top, housing, mounting gear constructed of cast low-copper content aluminum. Stainless steel external hardware to protect against corrosion. Triple Rings are standard; No Ring (-NR) option available.

Shade: Shall be spun aluminum with a white painted underside and specified topside finish. Shade shall have beaded edge for added strength. Optional materials available – consult factory.

Lens: Heat resistant, tempered (0.188" thick) soda-lime, clear glass lens provides a Type V distribution.

LED Light Engine: Horizontal LED module located in upper housing. Color temperatures include: 2700K, 3000K, 3500K, and 4000K with minimum CRI of 80. For other color temperature options, consult factory.

Driver: Mounted in fixture base at pole-top, constant current LED driver; drive currents of 1000mA, 1500mA, and 2000mA available.

Heat Sink: Finned heat sink shall be extruded aluminum and located in upper housing above LED module.

Decorative Top: Three (3) top styles available: Cone, Dome and Flat Top.

Mounting: Pole mounted. Mounting hub fits onto standard 2-3/8" tenon and secured in place with four 1/4"-20 set screws to prevent rotation. Quick disconnect assembly inside pole provides easy wiring of fixture to driver bracket frame.

Poles: See Intrigue "Pole Specification Guide".

Finish: Textured polyester powder coat finish. Black, bronze, grey, white, silver, and verde green available. For custom colors, please consult factory.

Gaskets: EPDM gaskets are standard.

EPA and Weight: EPA = 0.94ft²
Weight = 41lbs



Listings: ETL listed to UL 1598 for Wet Locations. Indoor/Outdoor listed for use in Canada.



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P: (877) 965 0005 F: (262) 436 1745

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Type: _____ Model: _____

Project: _____



SERIES MOUNTING WATTAGE CCT (kelvin) TOP STYLE OPTICS OPTIONS FINISH

FIXTURE DETAIL

SERIES ☐ LEF Large Eurotech Full-Cutoff Pole Mount Fixture

MOUNTING ☐ PT Post Top Mount (2-3/8" tenon)

WATTAGE ☐ 37LED 37 nominal watts; 1000mA
☐ 55LED 55 nominal watts; 1500mA
☐ 70LED 70 nominal watts; 2000mA

Nominal Watts	Nominal Lumens	Lumens/Watt (LPW)	CCT (Kelvin)	CRI	Rated Life (L85)	Drive Current (mA)	Input Current	Output Voltage
37	3,840	104	4000	> 80	50,000 hrs	1,000mA	0.41A @ 120V 0.18A @ 277V	36-42V
55	5,760	105	4000	> 80	50,000 hrs	1,500mA	0.61A @ 120V 0.26A @ 277V	36-42V
70	7,685	110	4000	> 80	50,000 hrs	2,000mA	0.79A @ 120V 0.34A @ 277V	36-42V

KELVIN ☐ 27K 2700K
☐ 30K 3000K
☐ 35K 3500K
☐ 40K 4000K

TOPSTYLE ☐ C Cone
☐ D Dome
☐ F Flat Top

OPTICS ☐ TYS Type V Distribution – heat resistant glass lens

OPTIONS ☐ NR No Rings
☐ TRH Tamper Resistant Hardware
☐ HSS House Side Shield
☐ SHDCO Spun Aluminum Shade; Copper
☐ SHDSS Spun Aluminum Shade; Stainless Steel

FINISH ☐ BLK Black ☐ VGN Verde Green
☐ BRZ Bronze ☐ WHT White
☐ GRY Grey ☐ WGF Woodgrain Finish – consult factory
☐ SIL Silver ☐ CC Custom Color – consult factory

IES files can be found on website.

Content of specification sheets is subject to change. Please consult website for current product detail.



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Project: _____

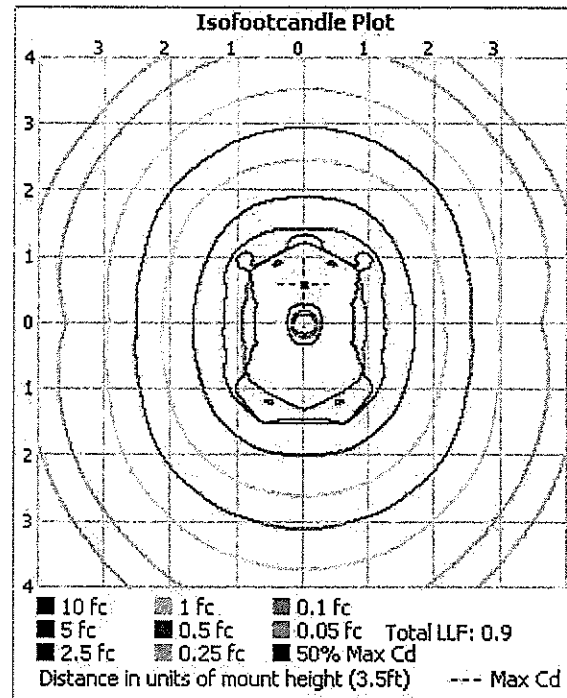
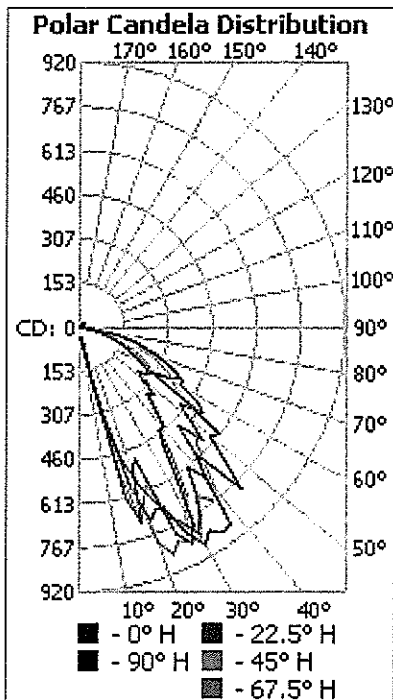


PHOTOMETRICS

Criteria	Result
Total Lumen Output (Lumens)	2037
Total Power (W)	76.53
Luminaire Efficacy (LPW)	26.62
Power Factor	0.997
BUG Rating	B1-U2-G1
IES Classification	Type II
Longitudinal Classification	Very Short

	Center Beam fc	Beam Width	
1.0R	38.8 fc	0.7 ft	1.4 ft
2.0R	9.7 fc	1.4 ft	2.8 ft
3.0R	4.3 fc	2.0 ft	4.2 ft
4.0R	2.4 fc	2.7 ft	5.5 ft

■ Vert. Spread: 37.6°
 ■ Horiz. Spread: 69.4°



Luminaire Classification System (LCS)

LCS	Zone	Lumens	% Luminaire
FL	(0-30)	235.9	11.6
FM	(30-60)	582.7	28.6
FH	(60-80)	207.9	10.2
FVH	(80-90)	6.7	0.3
BL	(0-30)	221.3	10.9
BM	(30-60)	539	26.5
BH	(60-80)	185.5	9.1
BVH	(80-90)	6.2	0.2
UL	(90-100)	8.8	0.4
UH	(100-180)	42.7	2.1
Total		2036.7	100

BUG Rating: B1-U2-G1

Zone	Lumens	% Luminaire
0-30	458.2	22.5
0-40	870.8	42.8
0-60	1580	77.6
60-90	406.2	19.9
0-90	1986	97.5
90-180	51.0	2.5
0-180	2037	100.0

ES files can be found on website

Content of specification sheets is subject to change. Please consult website for current product details.



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N60 W14592 Kaul Avenue Menomonee Falls, WI 53051
P: (877) 965 0005 F: (262) 436 1745

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DESCRIPTION

The Galleon™ LED luminaire delivers exceptional performance in a highly scalable, low-profile design. Patented, high-efficiency AccuLED Optics™ system provides uniform and energy conscious illumination to walkways, parking lots, roadways, building areas and security lighting applications. IP66 rated and UL/cUL Listed for wet locations.

Catalog #	Type
Project	
Comments	Date
Prepared by	

SPECIFICATION FEATURES

Construction

Extruded aluminum driver enclosure thermally isolated from Light Squares for optimal thermal performance. Heavy-wall, die-cast aluminum end caps enclose housing and die-cast aluminum heat sinks. A unique, patent pending interlocking housing and heat sink provides scalability with superior structural rigidity. 3G vibration tested and rated. Optional tool-less hardware available for ease of entry into electrical chamber. Housing is IP66 rated.

Optics

Patented, high-efficiency injection-molded AccuLED Optics technology. Optics are precisely designed to shape the distribution maximizing efficiency and application spacing. AccuLED Optics create consistent distributions with the scalability to meet customized application requirements. Offered standard in 4000K (+/- 275K) CCT 70 CRI. Optional 3000K, 5000K and 6000K CCT.

Electrical

LED drivers are mounted to removable tray assembly for ease of maintenance. 120-277V 50/60Hz, 347V 60Hz or 480V 60Hz operation. 480V is compatible for use with 480V Wye systems only. Standard with 0-10V dimming. Shipped standard with Eaton proprietary circuit module designed to withstand 10kV of transient line surge. The Galleon LED luminaire is suitable for operation in -40°C to 40°C ambient environments. For applications with ambient temperatures exceeding 40°C, specify the HA (High Ambient) option. Light Squares are IP66 rated. Greater than 90% lumen maintenance expected at 60,000 hours. Available in standard 1A drive current and optional 600mA, 800mA and 1200mA drive currents (nominal).

Mounting

STANDARD ARM MOUNT: Extruded aluminum arm includes internal bolt guides allowing for easy positioning of fixture during mounting. When mounting two or more luminaires at 90° and 120° apart, the EA extended arm may be required. Refer to the

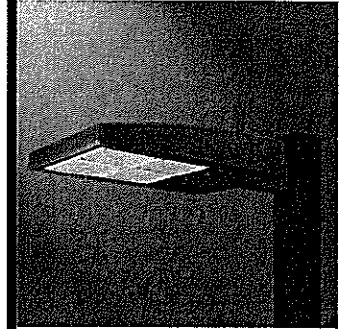
arm mounting requirement table. Round pole adapter included. For wall mounting, specify wall mount bracket option. **QUICK MOUNT ARM:** Adapter is bolted directly to the pole. Quick mount arm slide into place on the adapter and is secured via two screws, facilitating quick and easy installation. The versatile, patent pending, quick mount arm accommodates multiple drill patterns ranging from 1-1/2" to 4-7/8". Removal of the door on the quick mount arm enables wiring of the fixture without having to access the driver compartment. A knock-out enables round pole mounting.

Finish

Housing finished in super durable TGIC polyester powder coat paint, 2.5 mil nominal thickness for superior protection against fade and wear. Heat sink is powder coated black. Standard housing colors include black, bronze, grey, white, dark platinum and graphite metallic. RAL and custom color matches available.

Warranty

Five-year warranty.

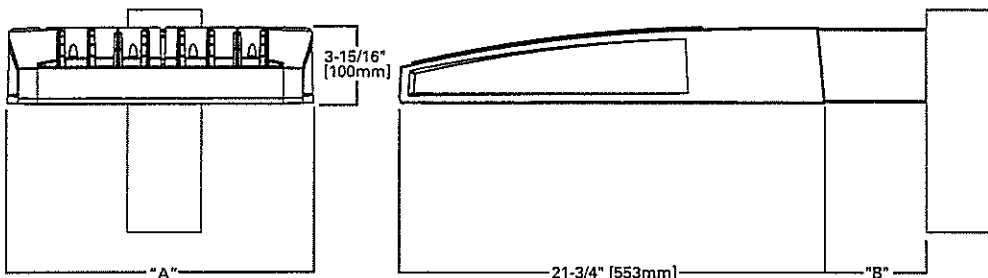


GLEON GALLEON LED

1-10 Light Squares
Solid State LED

AREA/SITE LUMINAIRE

DIMENSIONS

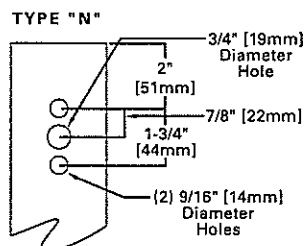


DIMENSION DATA

Number of Light Squares	"A" Width	"B" Standard Arm Length	"B" Optional Arm Length ¹	Weight with Arm (lbs.)	EPA with Arm ² (Sq. Ft.)
1-4	15-1/2" (394mm)	7" (178mm)	10" (254mm)	33 (15.0 kgs.)	0.96
5-6	21-5/8" (549mm)	7" (178mm)	10" (254mm)	44 (20.0 kgs.)	1.00
7-8	27-5/8" (702mm)	7" (178mm)	13" (330mm)	54 (24.5 kgs.)	1.07
9-10	33-3/4" (857mm)	7" (178mm)	16" (406mm)	63 (28.6 kgs.)	1.12

NOTES: 1. Optional arm length to be used when mounting two fixtures at 90° on a single pole. 2. EPA calculated with optional arm length.

DRILLING PATTERN



CERTIFICATION DATA

UL/cUL Wet Location Listed
ISO 9001
LM79 / LM80 Compliant
3G Vibration Rated
IP66 Rated
DesignLights Consortium™ Qualified*

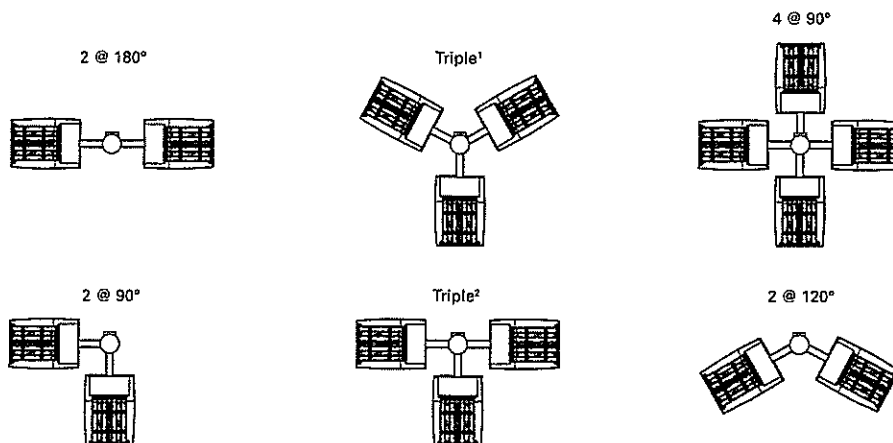
ENERGY DATA

Electronic LED Driver
>0.9 Power Factor
<20% Total Harmonic Distortion
120V-277V 50/60Hz
347V & 480V 60Hz
-40°C Min. Temperature
40°C Max. Temperature
50°C Max. Temperature (HA Option)

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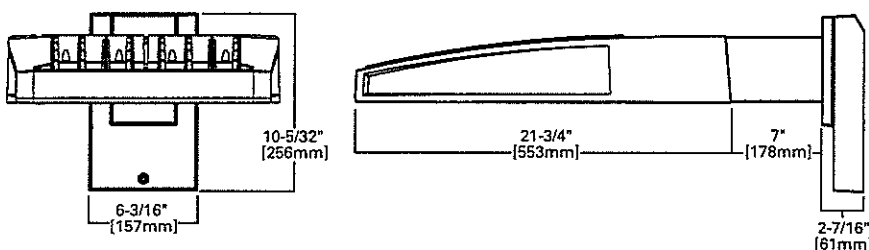
ARM MOUNTING REQUIREMENTS

Configuration	90° Apart	120° Apart
GLEON-AF-01	7" Arm (Standard)	7" Arm (Standard)
GLEON-AF-02	7" Arm (Standard)	7" Arm (Standard)
GLEON-AF-03	7" Arm (Standard)	7" Arm (Standard)
GLEON-AF-04	7" Arm (Standard)	7" Arm (Standard)
GLEON-AF-05	10" Extended Arm (Required)	7" Arm (Standard)
GLEON-AF-06	10" Extended Arm (Required)	7" Arm (Standard)
GLEON-AF-07	13" Extended Arm (Required)	13" Extended Arm (Required)
GLEON-AF-08	13" Extended Arm (Required)	13" Extended Arm (Required)
GLEON-AF-09	16" Extended Arm (Required)	16" Extended Arm (Required)
GLEON-AF-10	16" Extended Arm (Required)	16" Extended Arm (Required)

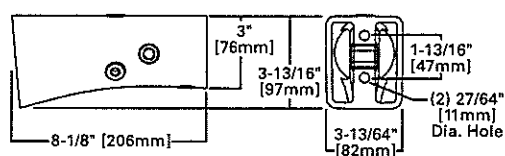


NOTES: 1 Round poles are 3 @ 120°. Square poles are 3 @ 90°. 2 Round poles are 3 @ 90°.

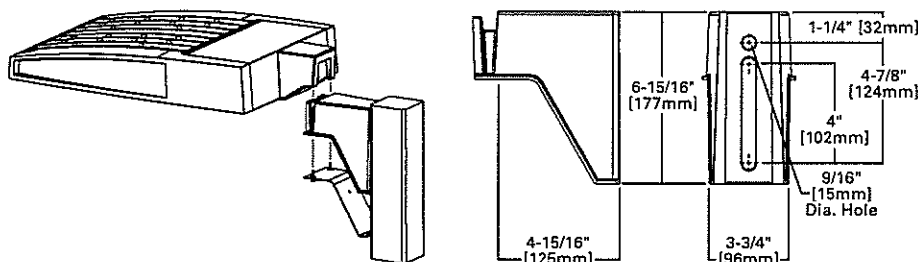
STANDARD WALL MOUNT



MAST ARM MOUNT

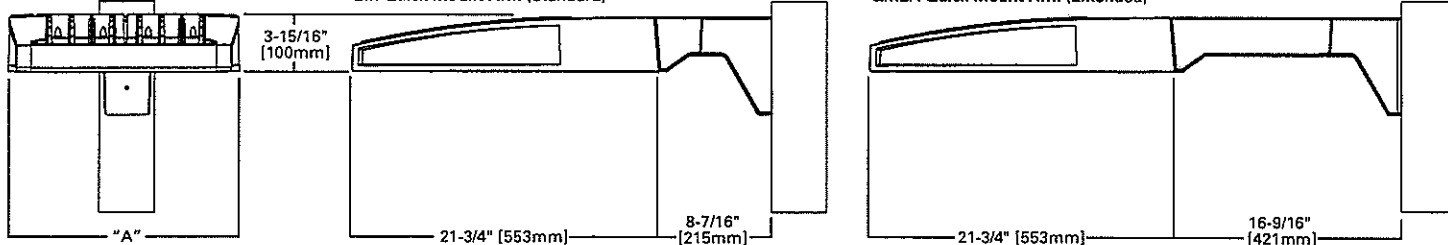


QUICK MOUNT ARM (INCLUDES FIXTURE ADAPTER)



QM Quick Mount Arm (Standard)

QMEA Quick Mount Arm (Extended)



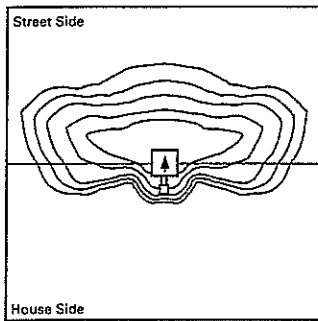
QUICK MOUNT ARM DATA

Number of Light Squares 1,2	"A" Width	Weight with QM Arm (lbs.)	Weight with QMEA Arm (lbs.)	EPA (Sq. Ft.)
1-4	15-1/2" (394mm)	35 (15.91 kgs.)	38 (17.27 kgs.)	1.11
5-6 3	21-5/8" (549mm)	46 (20.91 kgs.)	49 (22.27 kgs.)	
7-8	27-5/8" (702mm)	56 (25.45 kgs.)	59 (26.82 kgs.)	

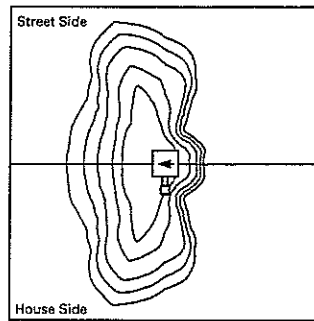
NOTES: 1 QM option available with 1-8 light square configurations. 2 QMEA option available with 1-6 light square configurations. 3 QMEA arm to be used when mounting two fixtures at 90° on a single pole.

45

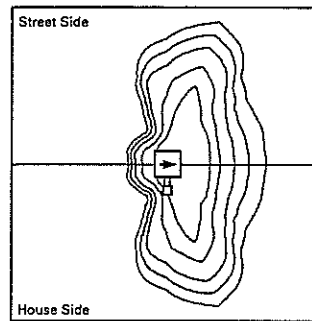
OPTIC ORIENTATION



Standard



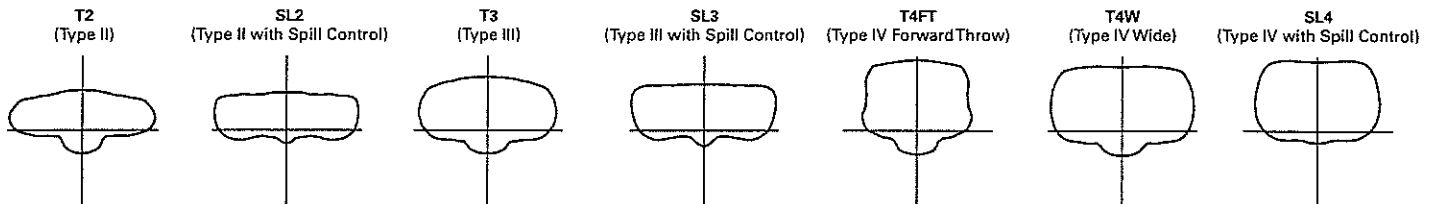
Optics Rotated Left @ 90° [L90]



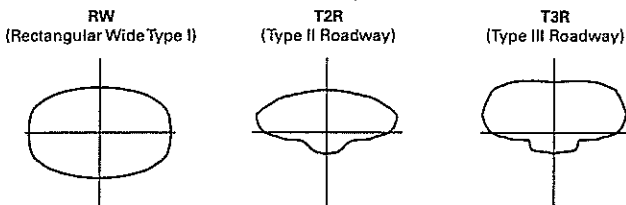
Optics Rotated Right @ 90° [R90]

OPTICAL DISTRIBUTIONS

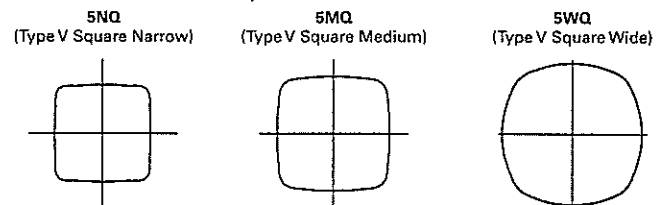
Asymmetric Area Distributions



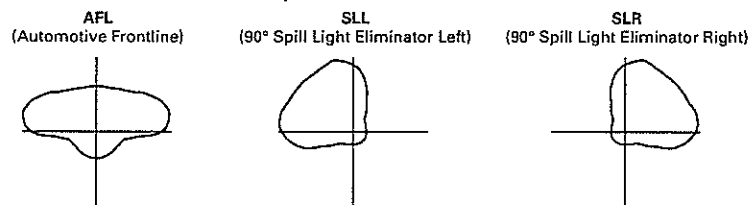
Asymmetric Roadway Distributions



Symmetric Distributions



Specialized Distributions

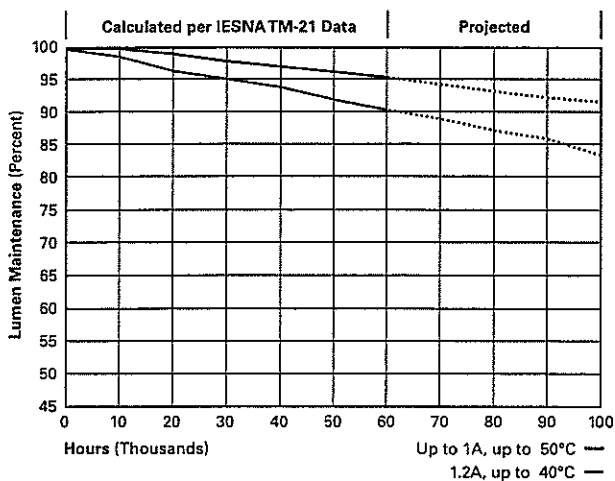


LUMEN MAINTENANCE

Drive Current	Ambient Temperature	TM-21 Lumen Maintenance (60,000 Hours)	Projected L70 (Hours)
Up to 1A	Up to 50°C	> 95%	416,000
1.2A	Up to 40°C	> 90%	205,000

LUMEN MULTIPLIER

Ambient Temperature	Lumen Multiplier
0°C	1.02
10°C	1.01
25°C	1.00
40°C	0.99
50°C	0.97



ORDERING INFORMATION

Sample Number: GLEON-AF-04-LED-E1-T3-GM-QM

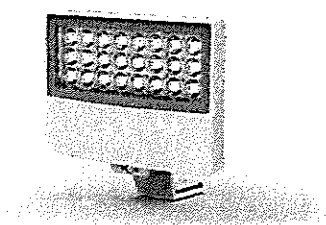
Product Family ^{1,2}	Light Engine	Number of Light Squares ³	Lamp Type	Voltage	Distribution	Color	Mounting
GLEON=Galleon	AF=1A Drive Current	01=1 02=2 03=3 04=4 05=5 06=6 07=7 ⁴ 08=8 ⁴ 09=9 ⁵ 10=10 ⁵	LED=Solid State Light Emitting Diodes	E1=120-277V 347=347V ⁶ 480=480V ^{6,7}	T2=Type II T2R=Type II Roadway T3=Type III T3R=Type III Roadway T4FT=Type IV Forward Throw T4W=Type IV Wide 5NQ=Type V Narrow 5MQ=Type V Square Medium 5WQ=Type V Square Wide SL2=Type II w/Spill Control SL3=Type III w/Spill Control SL4=Type IV w/Spill Control SLL=90° Spill Light Eliminator Left SLR=90° Spill Light Eliminator Right RW=Rectangular Wide Type I AFL=Automotive Frontline	AP=Grey BZ=Bronze BK=Black DP=Dark Platinum GM=Graphite Metallic WH=White	[Blank]=Arm for Round or Square Pole EA=Extended Arm ⁸ MA=Mast Arm Adapter ⁹ WM=Wall Mount QM=Quick Mount Arm (Standard Length) ¹⁰ QMEA=Quick Mount Arm (Extended Length) ¹¹

Options (Add as Suffix)	Accessories (Order Separately)
<p>7030=70 CRI 3000K ¹² 8030=80 CRI 3000K ¹³ 7050=70 CRI 5000K ¹² 7060=70 CRI 6000K ¹² 600=Drive Current Factory Set to Nominal 600mA ¹⁴ 800=Drive Current Factory Set to Nominal 800mA ¹⁴ 1200=Drive Current Factory Set to Nominal 1200mA ^{14,15} F=Single Fuse (120, 277 or 347V. Must Specify Voltage) FF=Double Fuse (208, 240 or 480V. Must Specify Voltage) 2L=Two Circuits ^{16,17} DIM=External 0-10V Dimming Leads P=Button Type Photocontrol (120, 208, 240 or 277V. Must Specify Voltage) PER7=NEMA 7-PIN Twistlock Photocontrol Receptacle R=NEMA Twistlock Photocontrol Receptacle AHD145=After Hours Dim, 5 Hours ¹⁸ AHD245=After Hours Dim, 6 Hours ¹⁸ AHD255=After Hours Dim, 7 Hours ¹⁸ AHD355=After Hours Dim, 8 Hours ¹⁸ HA=50°C High Ambient ¹⁹ MS/DIM-L08=Motion Sensor for Dimming Operation, Maximum 8' Mounting Height ^{20,21} MS/DIM-L20=Motion Sensor for Dimming Operation, 9' - 20' Mounting Height ^{20,22} MS/DIM-L40=Motion Sensor for Dimming Operation, 21' - 40' Mounting Height ^{20,23} MS/DIM-L40W=Motion Sensor for Dimming Operation, 21' - 40' Mounting Height (Wide Range) ^{20,24} MS/X-L08=Bi-Level Motion Sensor, Maximum 8' Mounting Height ^{20,21,25} MS/X-L20=Bi-Level Motion Sensor, 9' - 20' Mounting Height ^{20,22,25} MS/X-L40=Bi-Level Motion Sensor, 21' - 40' Mounting Height ^{20,23,25} MS/X-L40W=Bi-Level Motion Sensor, 21' - 40' Mounting Height (Wide Range) ^{20,24,25} MS-L08=Motion Sensor for ON/OFF Operation, Maximum 8' Mounting Height ^{20,21} MS-L20=Motion Sensor for ON/OFF Operation, 9' - 20' Mounting Height ^{20,22} MS-L40=Motion Sensor for ON/OFF Operation, 21' - 40' Mounting Height ^{20,23} MS-L40W=Motion Sensor for ON/OFF Operation, 21' - 40' Mounting Height (Wide Range) ^{20,24} LWR-LW=LumaWatt Wireless Sensor, Wide Lens for 8' - 16' Mounting Height ²⁶ LWR-LN=LumaWatt Wireless Sensor, Narrow Lens for 16' - 40' Mounting Height ²⁶ L90=Optics Rotated 90° Left R90=Optics Rotated 90° Right MT=Factory Installed Mesh Top TH=Tool-less Door Hardware LCF=Light Square Trim Plate Painted to Match Housing ²⁷ HSS=Factory Installed House Side Shield ²⁸ CE=CE Marking ²⁹</p>	<p>OA/RA1016=NEMA Photocontrol Multi-Tap - 105-285V OA/RA1027=NEMA Photocontrol - 480V OA/RA1021=NEMA Photocontrol - 347V OA/RA1013=Photocontrol Shorting Cap OA/RA1014=120V Photocontrol MA1252=10kV Surge Module Replacement MA1036-XX=Single Tenon Adapter for 2-3/8" O.D. Tenon MA1037-XX=2@180° Tenon Adapter for 2-3/8" O.D. Tenon MA1197-XX=3@120° Tenon Adapter for 2-3/8" O.D. Tenon MA1188-XX=4@90° Tenon Adapter for 2-3/8" O.D. Tenon MA1189-XX=2@90° Tenon Adapter for 2-3/8" O.D. Tenon MA1190-XX=3@90° Tenon Adapter for 2-3/8" O.D. Tenon MA1191-XX=2@120° Tenon Adapter for 2-3/8" O.D. Tenon MA1038-XX=Single Tenon Adapter for 3-1/2" O.D. Tenon MA1039-XX=2@180° Tenon Adapter for 3-1/2" O.D. Tenon MA1192-XX=3@120° Tenon Adapter for 3-1/2" O.D. Tenon MA1193-XX=4@90° Tenon Adapter for 3-1/2" O.D. Tenon MA1194-XX=2@90° Tenon Adapter for 3-1/2" O.D. Tenon MA1195-XX=3@90° Tenon Adapter for 3-1/2" O.D. Tenon FSIR-100=Wireless Configuration Tool for Occupancy Sensor ²⁰ GLEON-MT1=Field Installed Mesh Top for 1-4 Light Squares GLEON-MT2=Field Installed Mesh Top for 5-6 Light Squares GLEON-MT3=Field Installed Mesh Top for 7-8 Light Squares GLEON-MT4=Field Installed Mesh Top for 9-10 Light Squares GLEON-QM=Quick Mount Arm Kit GLEON-QMEA=Quick Mount Extended Arm Kit LS/HSS=Field Installed House Side Shield ^{28,29}</p>

NOTES:

- Customer is responsible for engineering analysis to confirm pole and fixture compatibility for all applications. Refer to our white paper WP513001EN for additional support information.
- DesignLights Consortium™ Qualified. Refer to www.designlights.org Qualified Products List under Family Models for details.
- Standard 4000K CCT and minimum 70 CRI.
- Not compatible with extended quick mount arm (QMEA).
- Not compatible with standard quick mount arm (QM) or extended quick mount arm (QMEA).
- Requires the use of an internal step down transformer when combined with sensor options. Not available with sensor at 1200mA. Not available in combination with the HA high ambient and sensor options at 1A.
- Only for use with 480V Wye systems. Per NEC, not for use with ungrounded systems, impedance grounded systems or corner grounded systems (commonly known as Three Phase Three Wire Delta, Three Phase High Leg Delta and Three Phase Corner Grounded Delta systems).
- May be required when two or more luminaires are oriented on a 90° or 120° drilling pattern. Refer to arm mounting requirement table.
- Factory installed.
- Maximum 8 light squares.
- Maximum 6 light squares.
- Extended lead times apply. Use dedicated IES files for 3000K, 5000K and 6000K when performing layouts. These files are published on the Galleon luminaire product page on the website.
- Extended lead times apply. Use dedicated IES files for 3000K, 5000K and 6000K when performing layouts. These files are published on the Galleon luminaire product page on the website.
- 1 Amp standard. Use dedicated IES files for 600mA, 800mA and 1200mA when performing layouts. These files are published on the Galleon luminaire product page on the website.
- Not available with HA option.
- 2L is not available with MS, MS/X or MS/DIM at 347V or 480V. 2L in AF-02 through AF-04 requires a larger housing, normally used for AF-05 or AF-06. Extended arm option may be required when mounting two or more fixtures per pole at 90° or 120°. Refer to arm mounting requirement table.
- Not available with LumaWatt wireless sensors.
- Requires the use of P photocontrol or the PER7 or R photocontrol receptacle with photocontrol accessory. See After Hours Dim supplemental guide for additional information.
- 50°C lumen maintenance data applies to 600mA, 800mA and 1A drive currents.
- The FSIR-100 configuration tool is required to adjust parameters including high and low modes, sensitivity, time delay, cutoff and more. Consult your lighting representative at Eaton for more information.
- Approximately 22' detection diameter at 8' mounting height.
- Approximately 40' detection diameter at 20' mounting height.
- Approximately 60' detection diameter at 40' mounting height.
- Approximately 100' detection diameter at 40' mounting height.
- Replace X with number of Light Squares operating in low output mode.
- LumaWatt wireless sensors are factory installed only requiring network components RF-EM-1, RF-GW-1 and RF-ROUT-1 in appropriate quantities. See www.eaton.com/lighting for LumaWatt application information.
- Not available with house side shield (HSS).
- Only for use with SL2, SL3, SL4 and AFL distributions. The Light Square trim plate is painted black when the HSS option is selected.
- CE is not available with the LWR, MS, MS/X, MS/DIM, P, R or PER7 options. Available in 120-277V only.
- One required for each Light Square.




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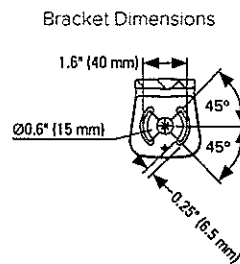
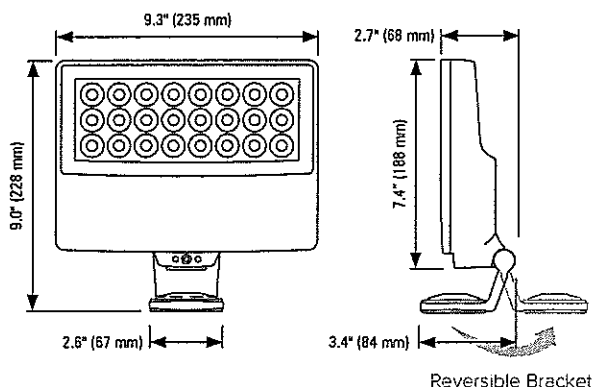


FEATURES

The Quadralux Q2 is the smallest in a series of intelligent, high performance floodlights, combining the best of Lumascape technology in a modern form factor. Available with white, color changing and tunable white light engines, this luminaire is controlled via PowerSync™ and built to our renowned quality standards. With a range of accessories and an innovative mounting bracket, this luminaire can be installed in multiple orientations. The Quadralux range features CoolDrive™ thermal management and EasyGlow™ visual comfort technologies for superior performance.

PERFORMANCE

Output	30 W Light Engine	CCT, CRI	Lumen Output	Efficacy	Peak Intensity
 Single Color		2 700 K, 80 CRI	3 016 lm (10°)	89.2 lm/W	59 251 cd
		3 000 K, 80 CRI	3 069 lm (10°)	91.1 lm/W	60 498 cd
		3 500 K, 80 CRI	3 342 lm (10°)	98.9 lm/W	65 876 cd
		4 000 K, 80 CRI	3 406 lm (10°)	100.2 lm/W	69 930 cd
		5 000 K, 70 CRI	3 617 lm (10°)	107.0 lm/W	72 174 cd
		Red / Green / Blue			
Available Beam Angles		6°, 10°, 15°, 30°, 45°, 9° x 40°, 20° x 60°			
 Color Changing		RGB	1352 lm (8°)	43.4 lm/W	43 860 cd
		RGBA	1625 lm (8°)	51.7 lm/W	52 189 cd
		RGBW	1846 lm (8°)	59.0 lm/W	52 119 cd
	Available Beam Angles		8°, 10°, 15°, 30°, 40°, 9° x 40°, 20° x 60°		
 Tunable White		Full Range	--	--	--
		Warm White Only	--	--	--
Available Beam Angles		6°, 10°, 15°, 30°, 45°, 9° x 40°, 20° x 60°			
Shielding and Glare Control		EasyGlow™ visual comfort technology 1/2" Cross hatch louver 45° Visor (Custom visor / Snoot arrangements on request)			
TM-21 Lumen Maintenance (L70)		> 60 000 hrs			

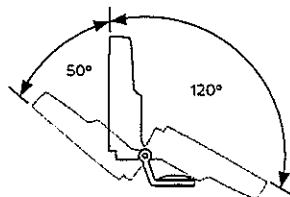
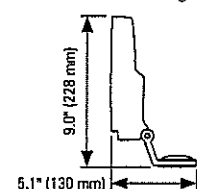


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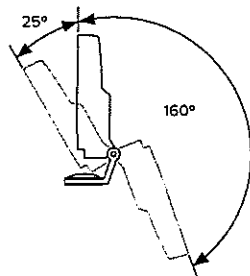
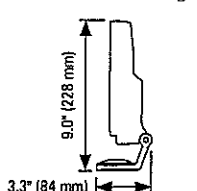
OVERVIEW / SPECIFICATIONS

Electrical	Power Consumption	≤ 35 W	
	Input Voltage	110-240 V, 50/60 Hz (International market) 120-277 V, 50/60 Hz (North American market)	
Control	Dimming Options via PowerSync™	Wireless DMX DMX / RDM <i>For other protocols contact factory</i>	0-10V (sink or source) ⁽¹⁾ Phase dimming ⁽¹⁾⁽²⁾ <i>(1) Not available for RGB (2) Not available for Tunable White</i>
	Resolution	2000 Hz flicker free dimming to 0.1%	
	Thermal Management	CoolDrive™ onboard thermal monitoring and control	
Construction	IP Rating	IP66 / IP67	
	IK Rating	IK6	
	Construction Details	Die cast marine grade aluminum, tempered glass lens, isolated stainless steel fasteners, constant torque adjustable mounting bracket (lockable and reversible), with mounting surface galvanic isolator	
	Finish	9-step powder-coat process, including marine epoxy undercoat and polyester top coat.	
	Dimensions	9.3" x 9" x 2.7" (235 mm x 228 mm x 68 mm)	
	Installation Options	Surface-mounted	
	Ambient Operating Temperatures	-40 °F to 122 °F (-40 °C to 50 °C)	
	Surface Temperature	≤138°F (59°C)	
Mounting & Adjustability	Adjustability	Standard Mounting Orientation - Horizontal	-50°, +120°
		Standard Mounting Orientation - Vertical	-140°, +30°
		Reverse Mounting Orientation - Horizontal	-25°, +160°
		Reverse Mounting Orientation - Vertical	-115°, +70°
	Standard Mounting	Constant torque adjustable mounting bracket, lockable and reversible 1 x 0.6" (1 x 15 mm) center mount 2 x 1/4" (6 mm) mount on 1.6" (40 mm) spacing with 90° rotation	
	Vibration Resistance	3G Rating (ANSI C136.31). Contact factory for mounting detail	
	Mounting Accessories	Surface mounting kit (International market) Pole Clamp (3", 4", 4.5", 5") (76 mm, 102 mm, 114 mm, 127 mm) Tenon Adapter (2 3/8" x 4, 3.5" x 6") (60 mm x 102 mm, 89 mm x 152 mm) Post Mounting Kit (Ø5.5" x 8.3") (Ø140 mm x 211 mm) Safety Cable	
	Weight	4.5 lbs (2 kg)	
	EPA	0.6 ft² (557 cm²)	
Ratings & Approvals	Approved Use	Dry, Damp, Wet locations	
	Certifications (Pending)	ETL, CE, RCM, CCC	

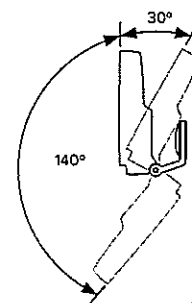
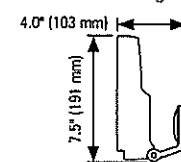
Standard Horizontal Mounting



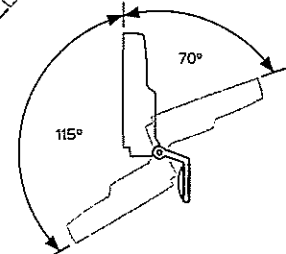
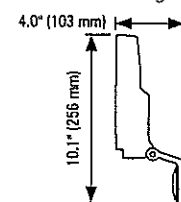
Reverse Horizontal Mounting



Standard Vertical Mounting



Reverse Vertical Mounting



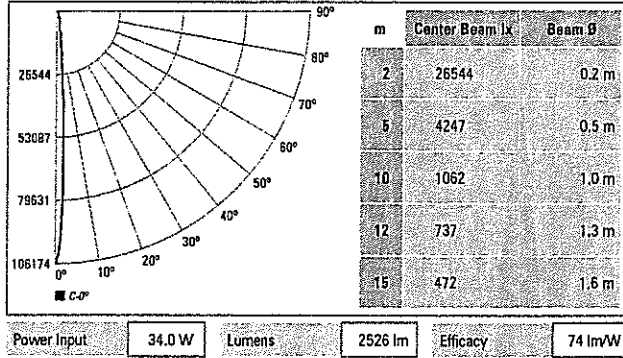
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Photometrics

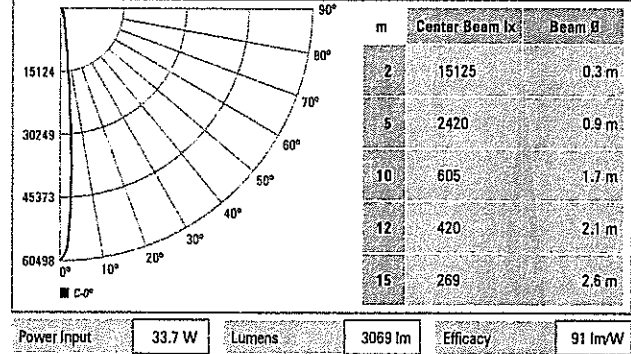
Photometric data is based on test results from a NIST traceable testing lab. IES data is available at www.lumescape.com.

Note: No depreciation factor is applied to the data shown.

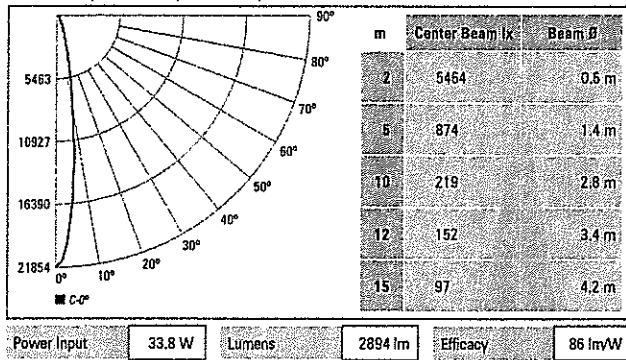
LS9120 | 3000 K | 80 CRI | 6°



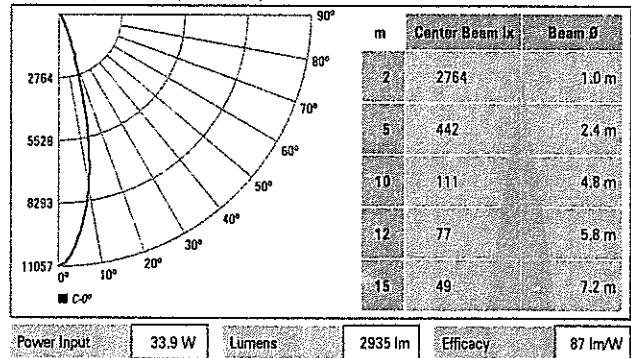
LS9120 | 3000 K | 80 CRI | 10°



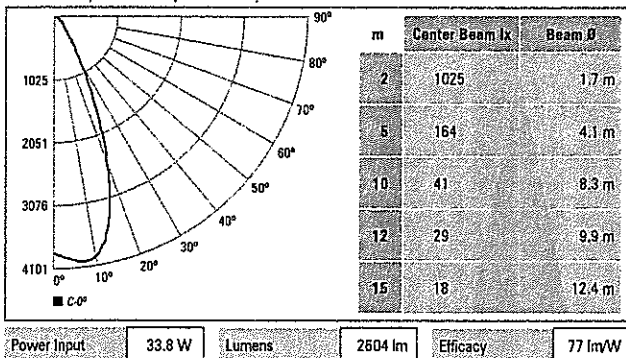
LS9120 | 3000 K | 80 CRI | 15°



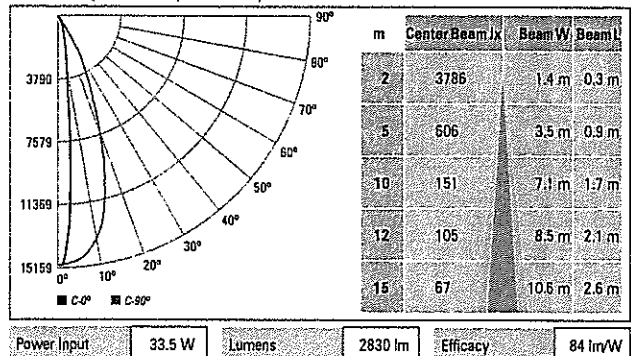
LS9120 | 3000 K | 80 CRI | 30°



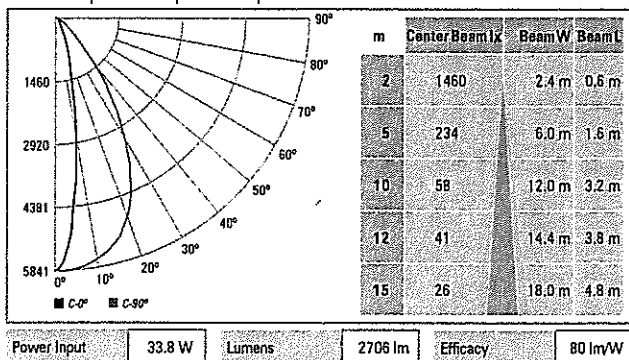
LS9120 | 3000 K | 80 CRI | 45°



LS9120 | 3000 K | 80 CRI | 9° x 40°



LS9120 | 3000 K | 80 CRI | 20° x 60°

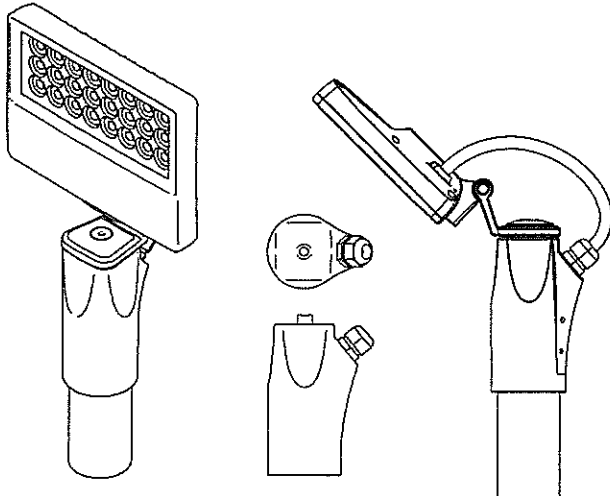


50

MOUNTING ACCESSORIES

Tenon Adaptor

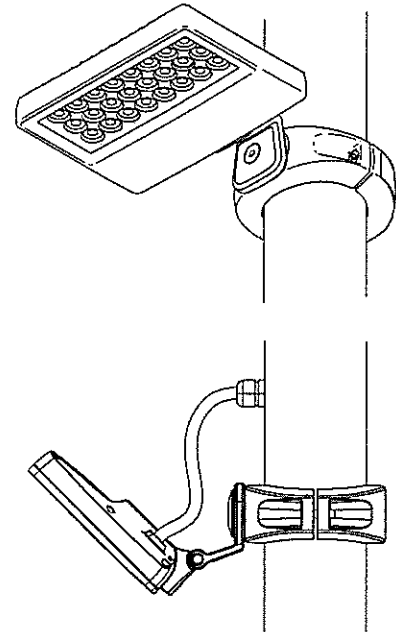
(2 3/8" x 4" and 3 1/2" x 6" options)



2 3/8" x 4" Option Shown

Pole Mount

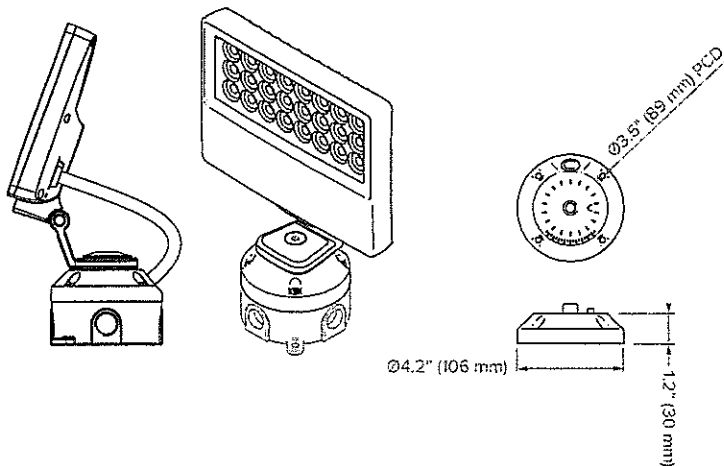
(3", 4", 4.5", 5" options)



4.5" Option Shown

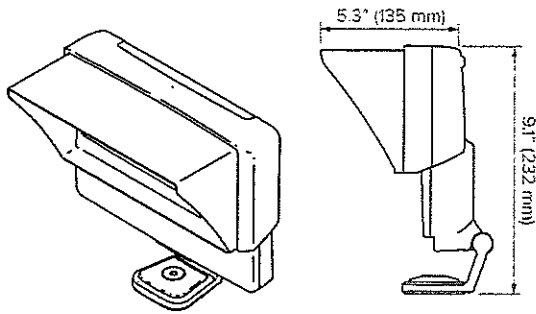
4" Junction Box Adapter (North American Market)

Surface Mounting Kit (International Market)



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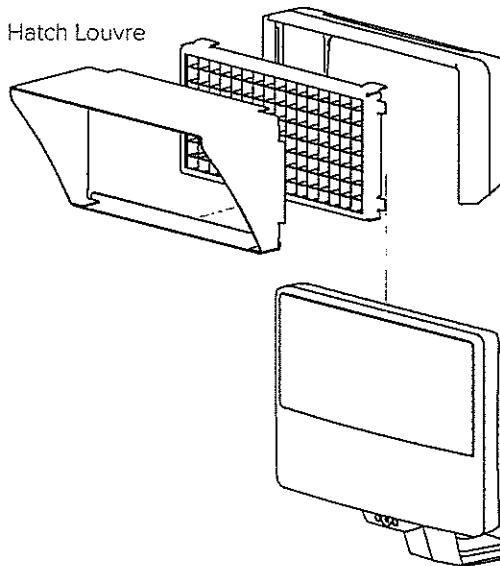
SHIELDING & GLARE CONTROL



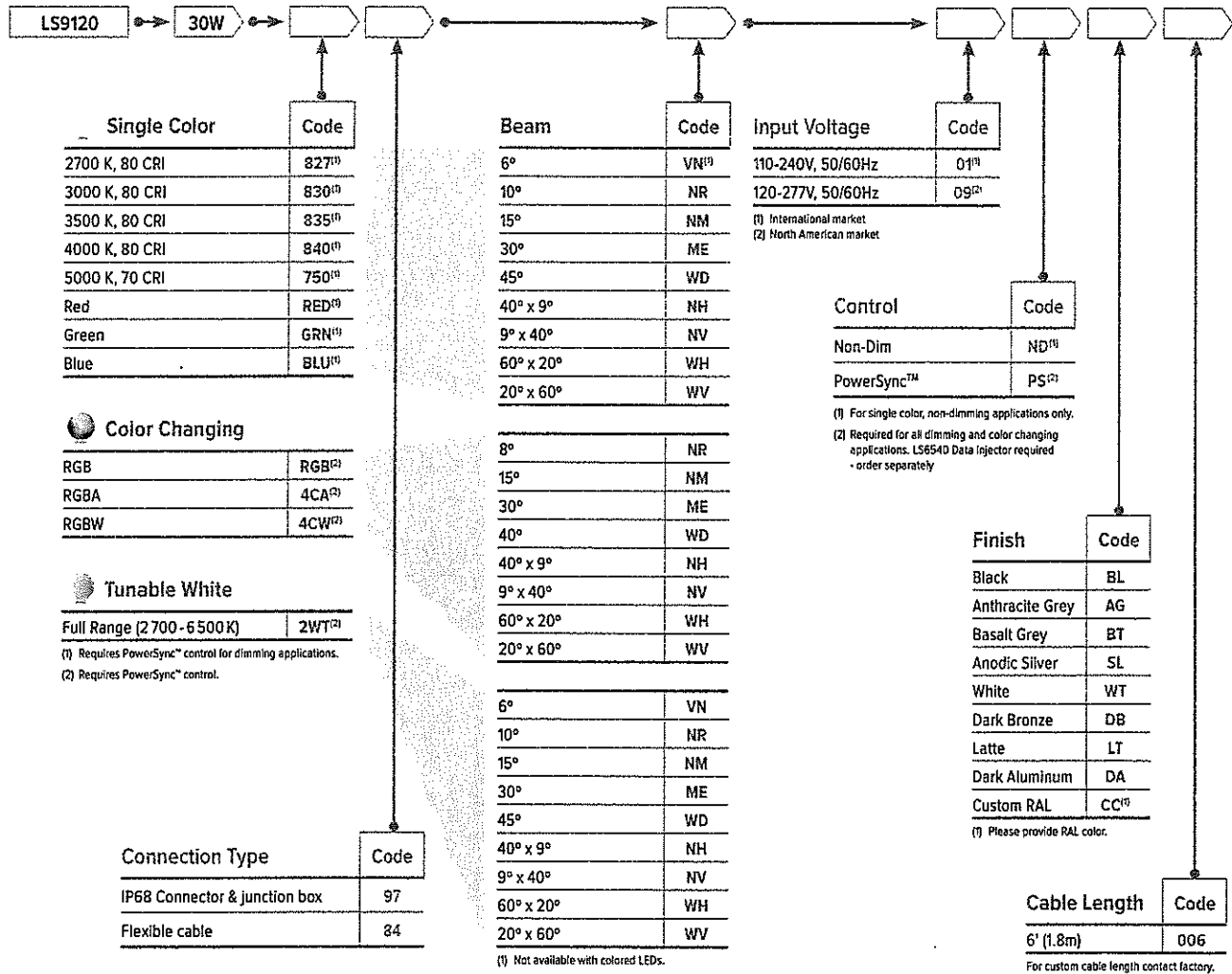
LS6201 Accessory Holder
Required for the attachment of any accessory

LS6202 Cross Hatch Louvre

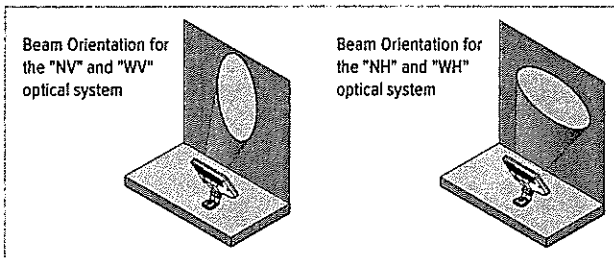
LS6203 45° Visor



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Beam Orientations



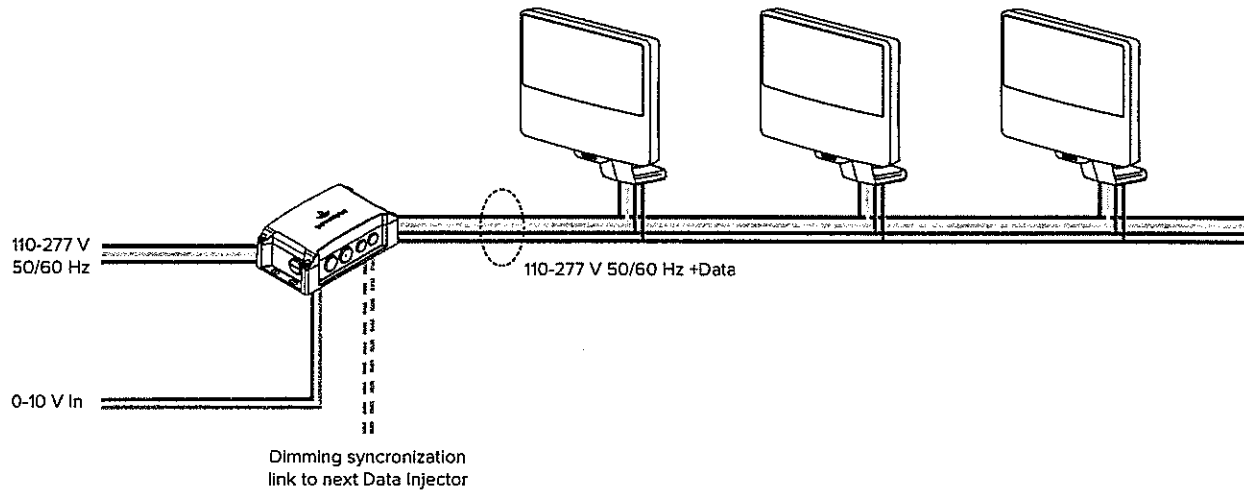
Mounting Accessories	Code
4" Junction Box Adapter / Surface Mounting Kit	LS6301
3" Pole Clamp	LS6302
4" Pole Clamp	LS6303
4.5" Pole Clamp	LS6304
5" Pole Clamp	LS6305
2 3/8" x 4" Tenon Adapter	LS6306
3.5" x 6" Tenon Adapter	LS6307
Safety Cable	LS6308

Shielding & Glare Control	Code
Accessory Holder (Required with accessory)	LS6201
Cross Hatch Louvre	LS6202
45° Visor	LS6203
Custom Visor (Contact factory)	LS6204

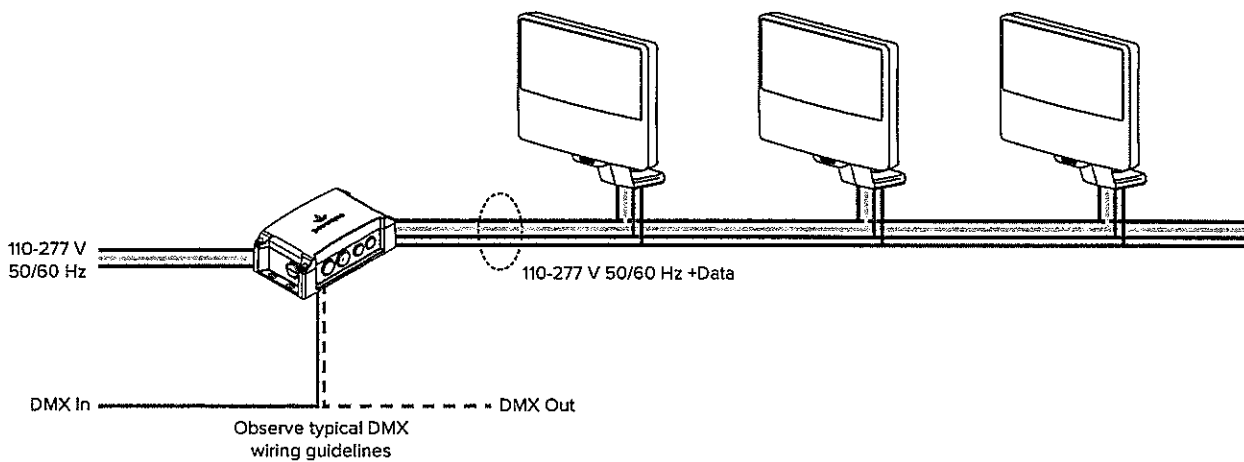
53

WIRING DIAGRAMS

0-10 V Dimming - Line Voltage Circuit (110-277 V, 50/60 Hz)



DMX/RDM - Line Voltage Circuit (110-277 V, 50/60 Hz)



NOTE: The above diagrams are intended to show electrical pathways between luminaires and ancillary devices. These diagrams are not intended to show type or color of cord/wire, luminaire input voltage rating, wire gauge or approved use of the cord/wire supplied with luminaires.

Consult the luminaire-specific cutsheet or the factory for detailed specifications.

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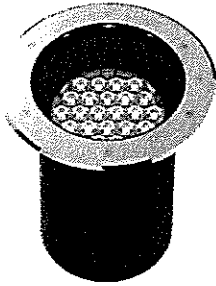
MAX CIRCUIT LOAD

Fixture Quantity per PowerSync™ Data Injector

Voltage	12A	16A
120V	41	45
240V	45	45
277V	45	45

Refer to PowerSync™ installation manual for maximum distance information and typology options

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FEATURES




This luminaire takes performance and control technology to a new level, whilst leveraging the industry leading reliability of the Lumascape inground platform.

The dimmable, single colour luminaire can be controlled via Lumascape's innovative PowerSync™ technology which allows for highly granular DMX / RDM control via a growing list of standard industry protocols and allows 2000 Hz flicker free dimming to 0.1%. Using PowerSync™, power and data run in the same, single luminaire cable making installation clean and simple.

In addition this luminaire incorporates industry leading EasyGlow™ visual comfort technology, which dramatically reduces the perception of glare. Furthermore, CoolDrive™ active thermal management engages as internal temperatures increase to keep light output consistent, and only under extreme conditions will the luminaire take control and dim the output gradually and smoothly.

These technological advancements ensure the best in class performance of the LS3080 continues throughout its working life.

OVERVIEW / SPECIFICATIONS

Output	30 W Light Engine	CCT, CRI	Lumen Output	Efficacy	Peak Intensity
 Single Color		2700 K, 80 CRI	2896 lm (10°)	81.9 lm/W	56633 cd
		3000 K, 80 CRI	3003 lm (10°)	82.4 lm/W	58288 cd
		3500 K, 80 CRI	3270 lm (10°)	89.8 lm/W	63469 cd
		4000 K, 80 CRI	3338 lm (10°)	92.4 lm/W	69598 cd
		5000 K, 70 CRI	3545 lm (10°)	98.7 lm/W	71832 cd
		Red / Green / Blue			
Available Beam Angles		6°, 10°, 15°, 30°, 45°, 40° x 9°, 60° x 20°			
 Color Changing		RGB	--	--	--
		RGBA	--	--	--
		RGBW	--	--	--
Available Beam Angles		8°, 15°, 30°, 40°, 40° x 9°, 60° x 20°			
 Tunable White		Full Range	--	--	--
		Warm White Only	--	--	--
Available Beam Angles		6°, 10°, 15°, 30°, 45°, 40° x 9°, 60° x 20°			
Shielding and Glare Control		EasyGlow™ visual comfort technology Cross hatch louver Custom diffusion media			
TM-21 Lumen Maintenance (L70)		> 60000 hrs			

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OVERVIEW / SPECIFICATIONS

Electrical	Power Consumption	35 W	
	Input Voltage	110-240 V, 50/60 Hz (International market) 120-277 V, 50/60 Hz (North American market)	
Control	Dimming Options via PowerSync™	0-10V (sink or source) DMX / RDM <i>For other protocols contact factory</i>	Wireless DMX Phase dimming
	Resolution	2000 Hz flicker free dimming to 0.1%	
	Thermal Management	CoolDrive™ onboard thermal monitoring and control	
Construction	IP Rating	IP68	
	IK Rating	IK10	
	Construction Details	316 Marine Grade Stainless Steel housing, high strength glass with 9259 lb (4200 kg) static load rating (when used in conjunction with LS640-K), teflon coated cover screws.	
	Finish	316 Marine Grade Stainless Steel cover (polished or brushed finish). Other finish options by request.	
	Dimensions	Ø10.3" (262 mm) x 17.7" (450 mm) for Pre-Installation Blockout Ø9.4" (240 mm) x 13.8" (350 mm) for Direct Burial	
	Installation Options	Pre-Installation Blockout, for concrete pour, drive over and general use applications Mounting collar for decks and grates Direct Burial, for landscapes, planters and special applications (consult factory)	
	Ambient Operating Temperatures	-4 °F to 122 °F (-20 °C to 50 °C)	
	Surface Temperature	≤149 °F (≤65 °C)	
Mounting & Adjustability	Adjustability	±20° tilt, 360° rotation	
	Mounting Accessories	LS640-K (for use with Pre-Installation Blockout luminaires)	
	Weight	15 lb (6.8 kg)	
Ratings & Approvals	Approved Use	Dry, Damp, Wet locations Inherently Protected Suitable for use in poured concrete	
	Certifications (Pending)	ETL, CE, RCM, CCC	

Why Use LS640-K-87/97 Pre-Installation Blockout?

The LS640-K-97 acts as the 'rough in section' or 'pre-installation blockout' and can be ordered ahead to suit the site construction schedule. LS640-K-97 is supplied complete with a blockout cover, junction box (3-way, 20mm PVC) and IP68 connector assembly, allowing the installer to complete all hardwiring before the luminaire arrives on site, and ensures the luminaire is not damaged during site works. The IP68 connector enables tool-free connection of the luminaire. The junction box remains accessible after installation.

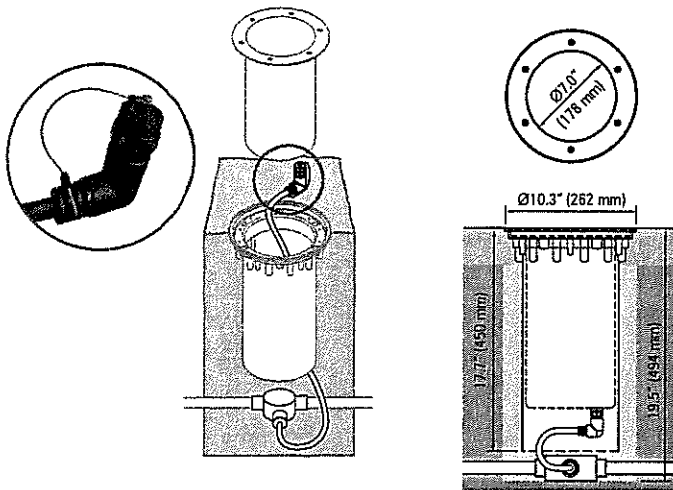
Note: The '97' version is for dimming options, and the '87' version is for non-dimming options.

Why Use LS640-K-84 Pre-Installation Blockout?

The LS640-K-84 is an alternate installation type for configurations not supported by the IP68 connector or for wiring conditions not compatible with the junction box. LS640-K-84 requires the luminaire to be fitted with 'type 84' connection type. This option is 100% hardwired, and may require the placement of a junction box or other approved wiring method (by others) within reach of the factory-sealed wire entry. All aspects of the luminaire itself are still field serviceable.

Note: This option does not support dimming.

IP68 Connector for LS640-K-87/97 Pre-Installation Blockout



IP68 Connector & Junction Box

The luminaire is fitted with an IP68 connector, which attaches directly to the cable supplied with LS640-K-97, without the use of any tools. The cable is 1m in length, and is factory assembled with a 3-way junction box – Remains field serviceable after installation.

Lens Options



OptiClear™ Glass

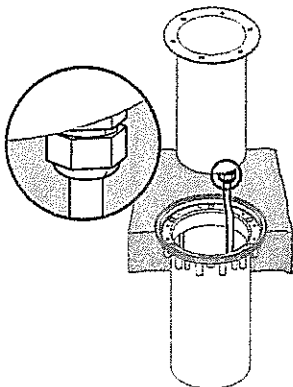
Glass of very high optical purity and load strength. Suitable for walk-over and drive-over applications.



GripGlass™

OptiClear™ glass with slip reduction glazing process. Suitable for walk-over and drive-over applications.

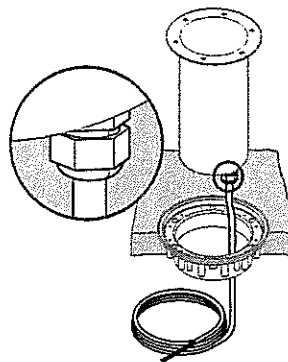
Connection Type '84' for LS640-K-84 Pre-Installation Blockout



Flexible Cable

For connection to the branch circuit via junction box (by others) or other approved method. 3m length. For other length options, consult factory.

Connection Type '84' for LS640-2 Pre-Installation Collar

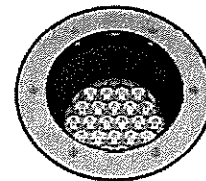


Flexible Cable

For connection to the branch circuit via junction box (by others) or other approved method. 3m length. For other length options, consult factory.

Flush Cover Options

Flush covers for pre-installation use special seals and support bushes to ensure static loads up to 9 259 lb (4 200 kg) are properly supported. In order to achieve this drive-over rating, OptiClear™ or Grip-Glass™ must be used.



Pre-Installation Blockout Round Flush Cover

- SS316: Polished
- SS316: Brushed

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Single Color	Code
2700 K, 80 CRI	827 ⁽¹⁾
3000 K, 80 CRI	830 ⁽¹⁾
3500 K, 80 CRI	835 ⁽¹⁾
4000 K, 80 CRI	840 ⁽¹⁾
5000 K, 70 CRI	750 ⁽¹⁾
Red	RED ⁽¹⁾
Green	GRN ⁽¹⁾
Blue	BLU ⁽¹⁾

Color Changing	Code
RGB	RGB ⁽²⁾
RGBA	4CA ⁽²⁾
RGBW	4CW ⁽²⁾

Tunable White	Code
Full Range (2700-6500 K)	2WT ⁽²⁾

(1) Requires PowerSync™ control for dimming applications.

(2) Requires PowerSync™ control.

Lens	Code
OptiClear™	A ⁽¹⁾
GripGlass™	G ⁽¹⁾

(1) Suitable for drive-over

Cover	Code
Stainless steel, polished	M
Stainless steel, brushed	N

Connection Type	Code
IP68 Connector & junction box	97 ⁽¹⁾
IP68 Connector & junction box	87 ⁽²⁾
Flexible cable	84 ⁽²⁾

(1) Required for all dimming and color changing applications. LS640-K-97-01 required - order separately.

(2) For single color, non-dimming applications only. LS640-K-87-01 required - order separately.

(3) LS640-K-84 or LS640-2 collar required - order separately. For applications requiring LS640-2 collar, consult factory.

Beam	Code
6°	VN ⁽¹⁾
10°	NR
15°	NM
30°	ME
45°	WD
40° x 9°	NH
9° x 40°	NV
60° x 20°	WH
20° x 60°	WV

8°	NR
15°	NM
30°	ME
40°	WD
40° x 9°	NH
9° x 40°	NV
60° x 20°	WH
20° x 60°	WV

6°	VN
10°	NR
15°	NM
30°	ME
45°	WD
40° x 9°	NH
9° x 40°	NV
60° x 20°	WH
20° x 60°	WV

(1) Not available with colored LEDs.

Housing Depth	Code
17.7" (450 mm) Pre-Install Blockout	24
13.8" (350 mm) Mounting Collar	24

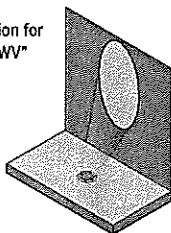
Wire Entry Location	Code
Bottom	Q

Input Voltage	Code
110-240V, 50/60Hz	01 ⁽¹⁾
120-277V, 50/60Hz	09 ⁽²⁾

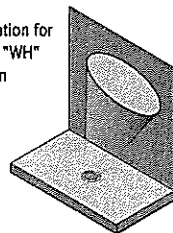
(1) International market
(2) North American market

Beam Orientations

Beam Orientation for the "NV" and "WV" optical system



Beam Orientation for the "NH" and "WH" optical system



Control	Code
Non-Dim	ND ⁽¹⁾
PowerSync™	PS ⁽²⁾

(1) For single color, non-dimming applications only.

(2) Required for all dimming and color changing applications. LS640 Data Injector required - order separately

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Why Use Direct Burial?

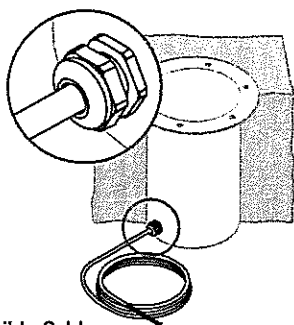
Direct burial installation is ideal for landscaping areas or for special applications where depth is restricted. This type of installation also allows for maximum heat dissipation. The 316 Marine Grade Stainless Steel construction of the luminaire performs flawlessly in alkaline and acidic soil types, and is also rated for use in concrete pour applications. **Note: This installation type has no option for a pre-installation blackout.**

Lumascap ships the luminaire complete with:

- 10' (3 m) flexible cable or;
- 2' (0.6 m) armored cable and 3-way, 20 mm PVC junction box or;
- 6.5' (2 m) hookup wire.

All options include the MicroAntiLeach™ wire entry seal. These options provide the installer with greater flexibility to determine the nature of the electrical connections. These options are 100% hardwired. Internal luminaire components remain field serviceable. **Note: PowerSync™ dimming and control options are not supported for direct burial installations – refer Pre-Installation Blockout configurations only.**

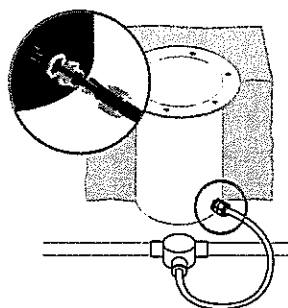
Connection type '84' for 'Direct Burial' housing



Flexible Cable

For connections to the branch circuit via junction box (by others) or other approved method. 3 m length. For other length options, consult factory.

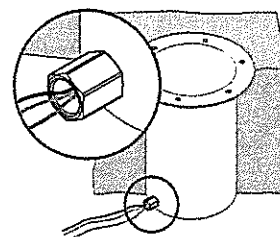
Connection type '81' for 'Direct Burial' housing



Armored Cable & Junction Box

The luminaire is factory-fitted with a 0.6 m armored cable. Ensure terminations can be made within this length. For other length options, consult factory.

Connection type '82' for 'Direct Burial' housing

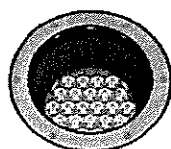
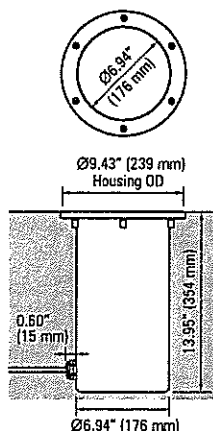


1/2" NPT Adapter

The luminaire is factory-fitted with 6.5' (2.0 m) hookup wire. Ensure terminations can be made within this length. For other length options, consult factory.

Recessed Cover Options

Use recessed cover for installation in soil, grass, pavers and other uneven surfaces where no cover overhang is desired.

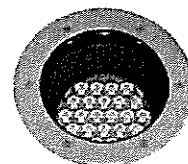
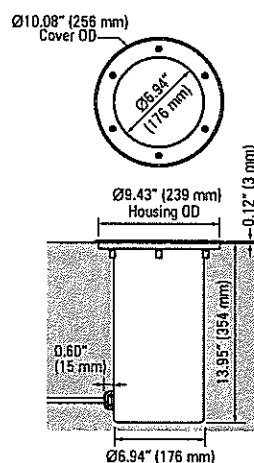


Recessed Cover

- SS316: Polished
- SS316: Brushed

Flush Cover Options

Use flush covers for installation in fine finished surfaces such as granite and marble. They can also be used in some suspended applications. The flush cover will conceal gaps between the luminaire and the surrounding surface.



Round Flush Cover

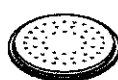
- SS316: Polished
- SS316: Brushed

Lens Options



OptiClear™ Glass

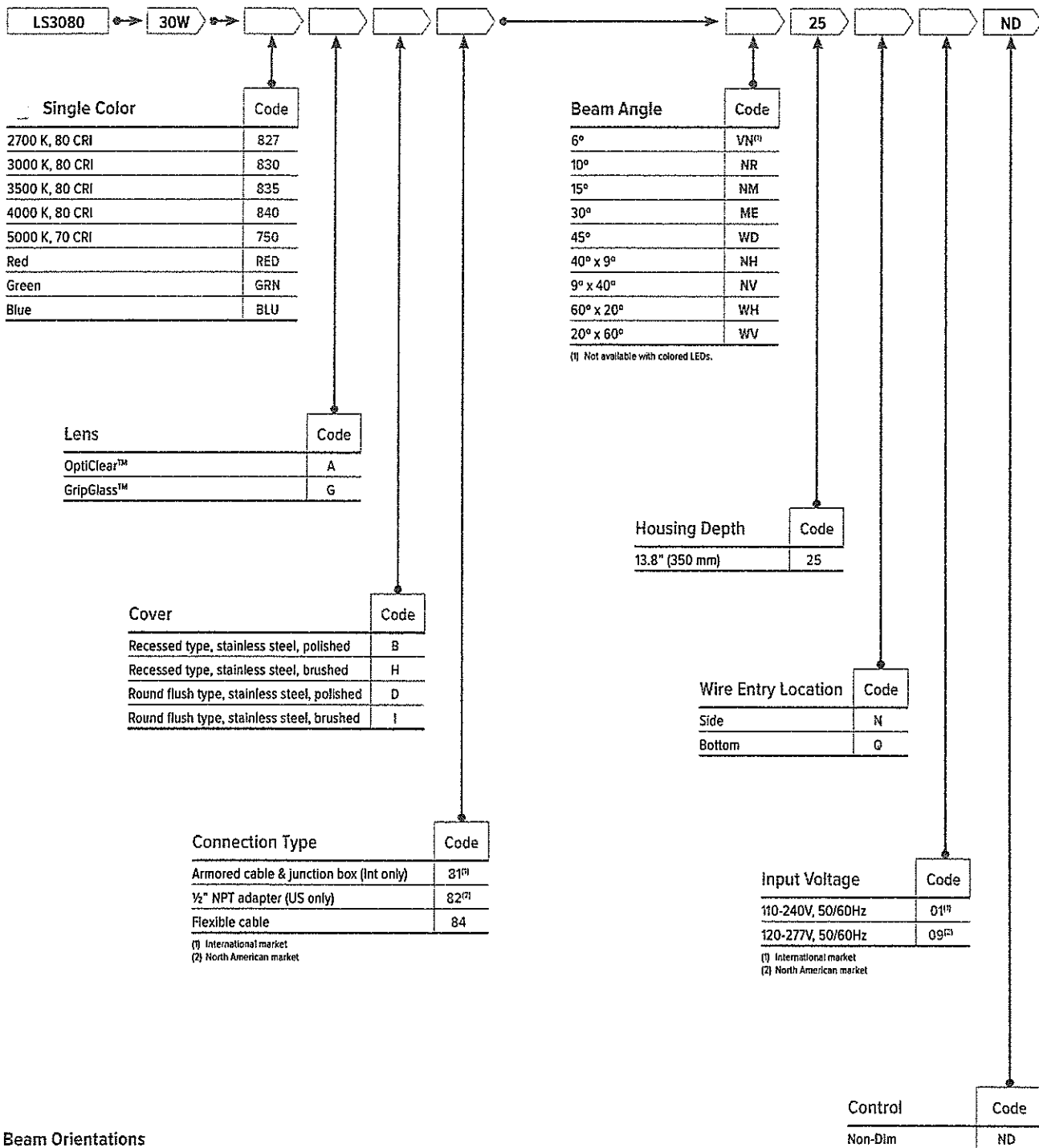
Glass of very high optical purity and load strength. Suitable for walk-over and drive-over applications.



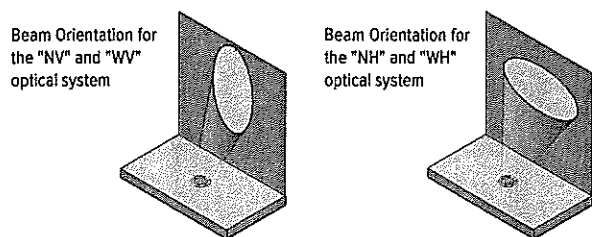
GripGlass™

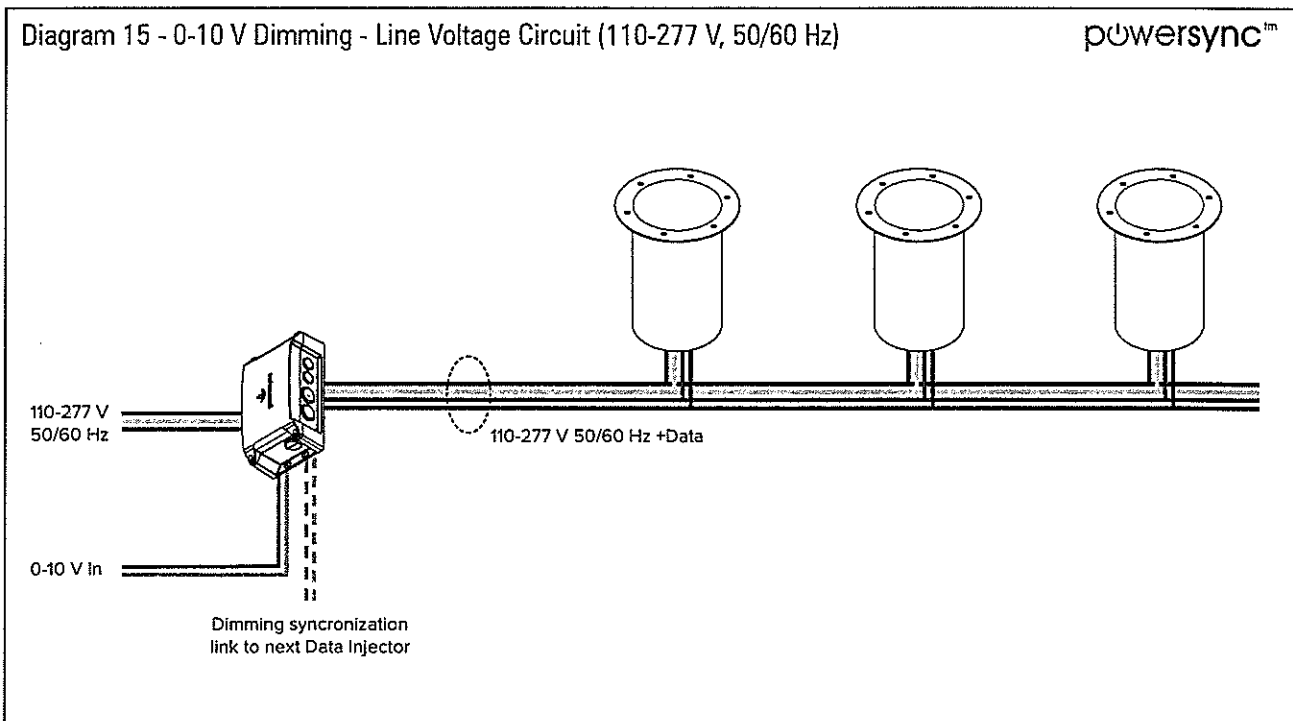
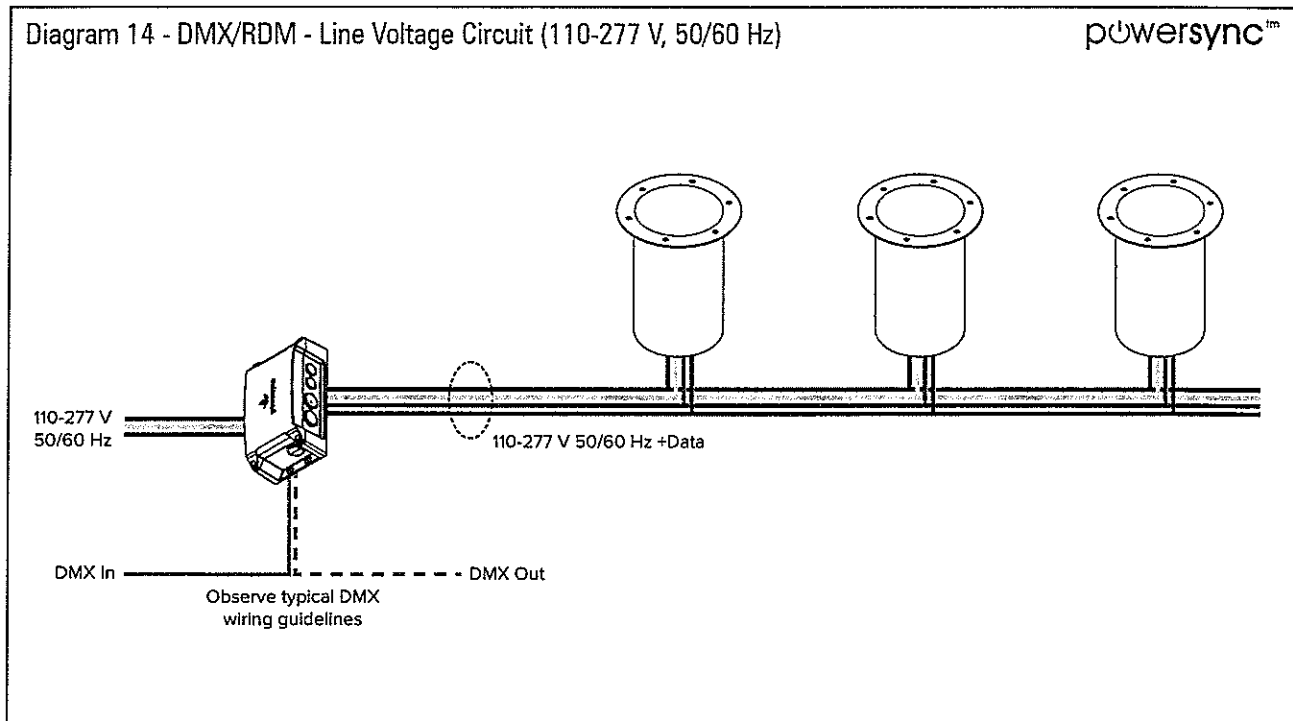
OptiClear™ glass with slip reduction glazing process. Suitable for walk-over and drive-over applications.

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Beam Orientations





NOTE: The above diagrams are intended to show electrical pathways between luminaires and ancillary devices. These diagrams are not intended to show type or color of cord/wire, luminaire input voltage rating, wire gauge or approved use of the cord/wire supplied with luminaires.

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MAX CIRCUIT LOAD

Fixture Quantity per PowerSync™ Data Injector

Voltage	12A	16A
120V	30	45
240V	45	45
277V	45	45

Refer to PowerSync™ installation manual for maximum distance information and typology options

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DESCRIPTION

The Galleon™ wall LED luminaire's appearance is complementary with the Galleon area and site luminaire bringing a modern architectural style to lighting applications. Flexible mounting options accommodate wall surfaces in both an upward and downward configuration. The Galleon family of LED products deliver exceptional performance with patented, high-efficiency AccuLED Optics™, providing uniform and energy conscious lighting for parking lots, building and security lighting applications.

Catalog #		Type	
Project			
Comments		Date	
Prepared by			

SPECIFICATION FEATURES

Construction

Driver enclosure thermally isolated from optics for optimal thermal performance. Heavy wall aluminum housing die-cast with integral external heat sinks to provide superior structural rigidity and an IP66 rated housing. Overall construction passes a 1.5G vibration test to ensure mechanical integrity. UPLIGHTING: Specify with the UPL option for inverted mount upright housing with additional protections to maintain IP rating.

Optics

Choice of thirteen patented, high-efficiency AccuLED Optics. The optics are precisely designed to shape the distribution maximizing efficiency and application spacing. AccuLED Optics create consistent distributions with the scalability to meet customized application requirements. Offered standard in 4000K (+/- 275K) CCT and minimum 70 CRI. Optional 3000K, 5000K and 6000K CCT. Greater than 90%

lumen maintenance expected at 60,000 hours. Available in standard 1A drive current and optional 1200mA, 800mA, and 600mA drive currents.

Electrical

LED drivers are mounted for ease of maintenance. 120-277V 50/60Hz, 347V or 480V 60Hz operation. 480V is compatible for use with 480V Wye systems only. Drivers are provided standard with 0-10V dimming. An optional Eaton proprietary surge protection module is available and designed to withstand 10kV of transient line surge. The Galleon Wall LED luminaire is suitable for operation in -30°C to 40°C ambient environments. For applications with ambient temperatures exceeding 40°C, specify the HA (High Ambient) option. Emergency egress options for -20°C ambient environments and occupancy sensor available.

Mounting

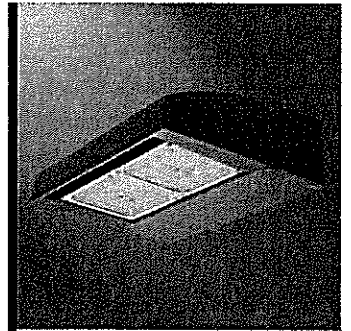
Gasketed and zinc plated rigid steel mounting attachment fits directly to 4" j-box or wall with the Galleon Wall "Hook-N-Lock" mechanism for quick installation. Secured with two captive corrosion resistant black oxide coated allen head set screws which are concealed but accessible from bottom of fixture.

Finish

Housing finished in super durable TGIC polyester powder coat paint, 2.5 mil nominal thickness for superior protection against fade and wear. Standard colors include black, bronze, grey, white, dark platinum and graphite metallic. RAL and custom color matches available. Consult the McGraw-Edison Architectural Colors brochure for the complete selection.

Warranty

Five-year warranty.

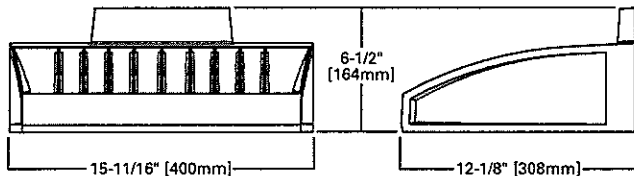


GWC GALLEON WALL LUMINAIRE

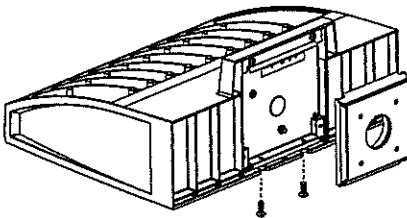
1-2 Light Squares
Solid State LED

WALL MOUNT LUMINAIRE

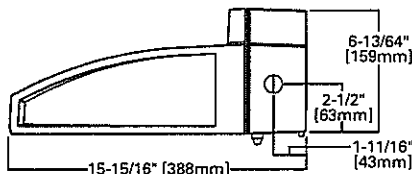
DIMENSIONS



HOOK-N-LOCK MOUNTING



BATTERY BACKUP AND THRU-BRANCH BACK BOX



CERTIFICATION DATA

UL/cUL Listed
LM79 / LM80 Compliant
IP66 Housing
ISO 9001
DesignLights Consortium™ Qualified*

ENERGY DATA

Electronic LED Driver
>0.9 Power Factor
<20% Total Harmonic Distortion
120-277V/50 & 60Hz, 347V/60Hz, 480V/60Hz
-30°C Minimum Temperature
40°C Ambient Temperature Rating

SHIPPING DATA

Approximate Net Weight:
27 lbs. (12.2 kgs.)



POWER AND LUMENS

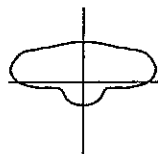
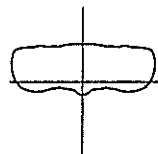
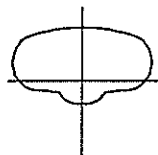
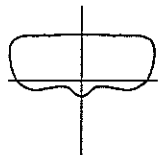
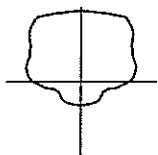
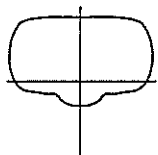
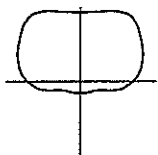
Number of Light Squares		1				2			
Drive Current		600mA	800mA	1.0A	1.2A	600mA	800mA	1.0A	1.2A
Nominal Power (Watts)		34	44	59	67	66	85	113	129
Input Current @ 120V (A)		0.30	0.39	0.51	0.58	0.58	0.77	1.02	1.16
Input Current @ 208V (A)		0.17	0.22	0.29	0.33	0.34	0.44	0.56	0.63
Input Current @ 240V (A)		0.15	0.19	0.26	0.29	0.30	0.38	0.48	0.55
Input Current @ 277V (A)		0.14	0.17	0.23	0.25	0.28	0.36	0.42	0.48
Input Current @ 347V (mA)		0.11	0.15	0.17	0.20	0.19	0.24	0.32	0.39
Input Current @ 480V (mA)		0.08	0.11	0.14	0.15	0.15	0.18	0.24	0.30
Optics									
T2	4000K/5000K Lumens	4,110	5,040	6,238	6,843	8,031	9,849	12,190	13,373
	3000K Lumens	3,638	4,461	5,522	6,057	7,109	8,718	10,791	11,838
	BUG Rating	B1-U0-G1	B1-U0-G1	B1-U0-G2	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2
T3	4000K/5000K Lumens	4,189	5,138	6,359	6,975	8,187	10,039	12,425	13,630
	3000K Lumens	3,708	4,548	5,629	6,174	7,247	8,887	10,999	12,065
	BUG Rating	B1-U0-G1	B1-U0-G1	B1-U0-G2	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2
T4FT	4000K/5000K Lumens	4,214	5,167	6,395	7,016	8,233	10,097	12,497	13,709
	3000K Lumens	3,730	4,574	5,661	6,211	7,288	8,938	11,062	12,135
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G2	B2-U0-G3	B2-U0-G3
T4W	4000K/5000K Lumens	4,159	5,100	6,313	6,925	8,127	9,966	12,336	13,532
	3000K Lumens	3,682	4,515	5,588	6,130	7,194	8,822	10,920	11,979
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B2-U0-G3
SL2	4000K/5000K Lumens	4,102	5,032	6,227	6,831	8,018	9,832	12,170	13,350
	3000K Lumens	3,631	4,454	5,512	6,047	7,098	8,703	10,773	11,817
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G3	B2-U0-G3
SL3	4000K/5000K Lumens	4,188	5,137	6,358	6,974	8,186	10,038	12,424	13,628
	3000K Lumens	3,707	4,547	5,628	6,173	7,246	8,886	10,998	12,064
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G3
SL4	4000K/5000K Lumens	3,980	4,880	6,040	6,626	7,776	9,537	11,803	12,949
	3000K Lumens	3,523	4,320	5,347	5,865	6,883	8,442	10,448	11,462
	BUG Rating	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G3	B1-U0-G3	B2-U0-G3
5NQ	4000K/5000K Lumens	4,321	5,298	6,558	7,193	8,443	10,353	12,814	14,057
	3000K Lumens	3,825	4,690	5,805	6,367	7,474	9,164	11,343	12,443
	BUG Rating	B2-U0-G1	B2-U0-G1	B2-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G2	B3-U0-G2
5MQ	4000K/5000K Lumens	4,400	5,396	6,678	7,326	8,598	10,544	13,050	14,315
	3000K Lumens	3,895	4,777	5,911	6,485	7,611	9,334	11,552	12,672
	BUG Rating	B3-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2
5WQ	4000K/5000K Lumens	4,412	5,410	6,695	7,345	8,621	10,572	13,085	14,354
	3000K Lumens	3,906	4,789	5,926	6,502	7,631	9,358	11,583	12,706
	BUG Rating	B3-U0-G1	B3-U0-G1	B3-U0-G2	B3-U0-G2	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2
SL/SLR	4000K/5000K Lumens	3,681	4,515	5,588	6,129	7,193	8,821	10,917	11,976
	3000K Lumens	3,258	3,997	4,946	5,425	6,367	7,808	9,664	10,601
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G3	B1-U0-G3	B2-U0-G3
RW	4000K/5000K Lumens	4,281	5,250	6,498	7,129	8,366	10,259	12,698	13,930
	3000K Lumens	3,790	4,647	5,752	6,311	7,406	9,081	11,240	12,331
	BUG Rating	B2-U0-G1	B2-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G2	B3-U0-G2

* Nominal lumen data for 70 CRI. BUG rating for 4000K/5000K. Refer to IES files for 3000K BUG ratings.

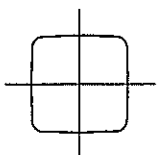
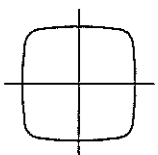
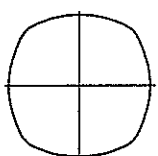
65

OPTICAL DISTRIBUTIONS

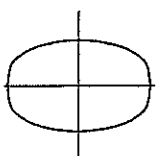
Asymmetric Area Distributions

T2
(Type II)SL2
(Type II with Spill Control)T3
(Type III)SL3
(Type III with Spill Control)T4FT
(Type IV Forward Throw)T4W
(Type IV Wide)SL4
(Type IV with Spill Control)

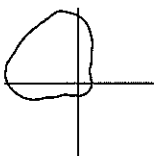
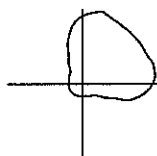
Symmetric Distributions

5NQ
(Type V Square Narrow)5MQ
(Type V Square Medium)5WQ
(Type V Square Wide)

Specialized Distributions

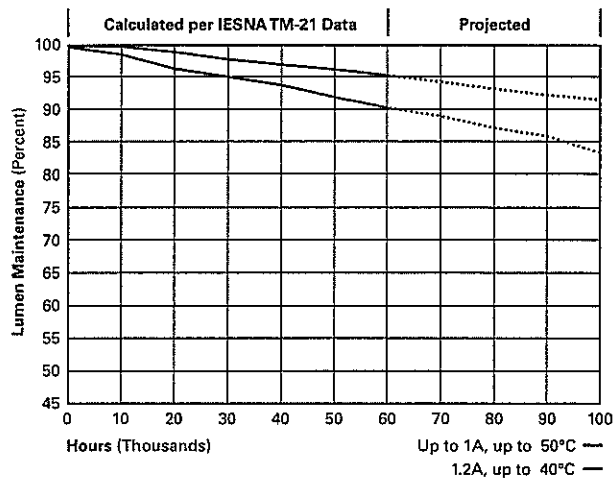
RW
(Rectangular Wide Type I) (90° Spill Light Eliminator Left)

SLL

SLR
(90° Spill Light Eliminator Right)

LUMEN MAINTENANCE

Drive Current	Ambient Temperature	TM-21 Lumen Maintenance (60,000 Hours)	Projected L70 (Hours)
Up to 1A	Up to 50°C	> 95%	> 416,000
1.2A	Up to 40°C	> 90%	> 205,000



LUMEN MULTIPLIER

Ambient Temperature	Lumen Multiplier
0°C	1.02
10°C	1.01
25°C	1.00
40°C	0.99
50°C	0.97

CONTROL OPTIONS

0-10V

This fixture is offered standard with 0-10V dimming driver(s). The DIM option provides 0-10V dimming wire leads for use with a lighting control panel or other control method.

Photocontrol (P, R and PER7)

Optional button-type photocontrol (P) and photocontrol receptacles (R and PER7) provide a flexible solution to enable "dusk-to-dawn" lighting by sensing light levels. Advanced control systems compatible with NEMA 7-pin standards can be utilized with the PER7 receptacle.

After Hours Dim (AHD)

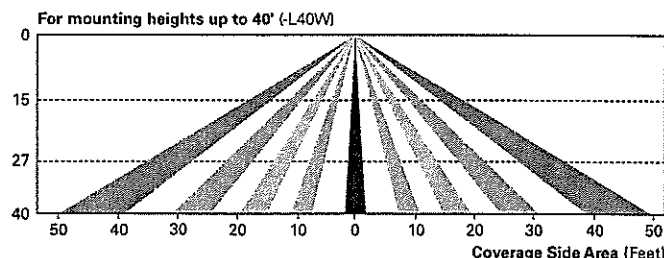
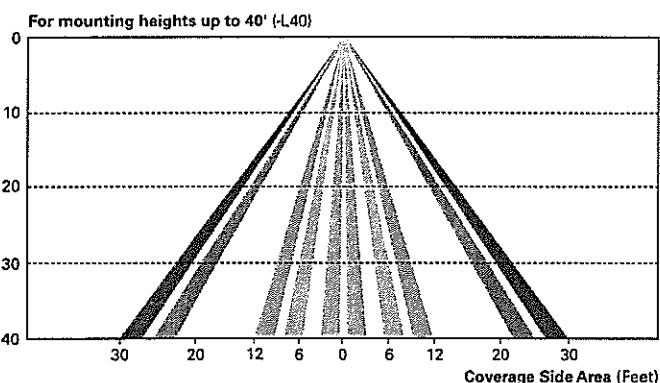
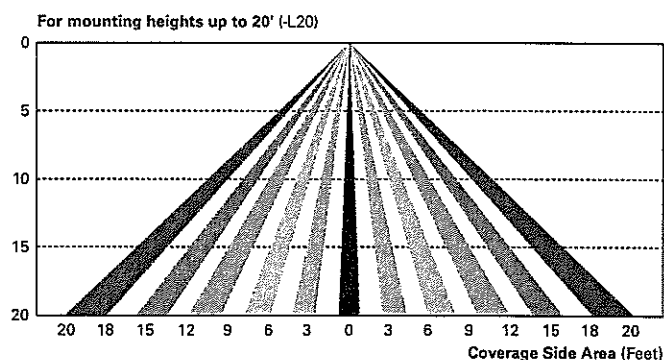
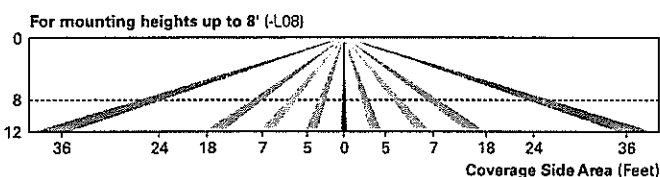
This feature allows photocontrol-enabled luminaires to achieve additional energy savings by dimming during scheduled portions of the night. The dimming profile will automatically take effect after a "dusk-to-dawn" period has been calculated from the photocontrol input. Specify the desired dimming profile for a simple, factory-shipped dimming solution requiring no external control wiring. Reference the After Hours Dim supplemental guide for additional information.

Dimming Occupancy Sensor (MS/DIM-LXX and MS-LXX)

These sensors are factory installed in the luminaire housing. When the MS/DIM-LXX sensor option is selected, the occupancy sensor is connected to a dimming driver and the entire luminaire dims when there is no activity detected. When activity is detected, the luminaire returns to full light output. The MS/DIM sensor is factory preset to dim down to approximately 50 percent power with a time delay of five minutes. The MS-LXX sensor is factory preset to turn the luminaire off after five minutes of no activity. The MS/X-LXX is also preset for five minutes and only controls the specified number of light engines to maintain steady output from the remaining light engines.

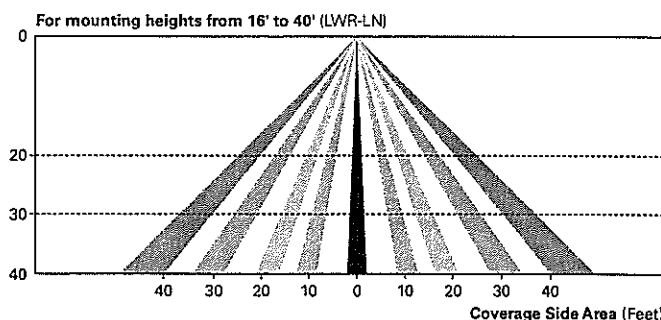
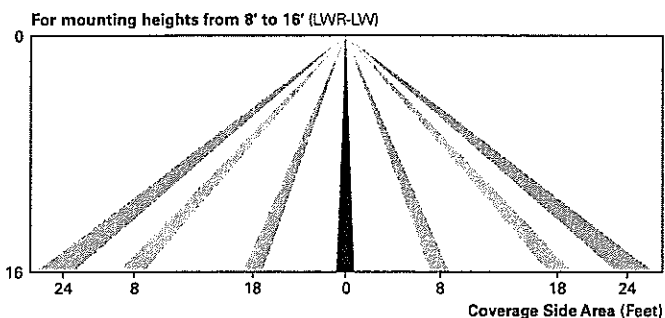
These occupancy sensors includes an integral photocell that can be activated with the FSIR-100 accessory for "dusk-to-dawn" control or daylight harvesting - the factory preset is OFF. The FSIR-100 is a wireless tool utilized for changing the dimming level, time delay, sensitivity and other parameters.

A variety of sensor lens are available to optimize the coverage pattern for mounting heights from 8'-40'.

**LumaWatt Wireless Control and Monitoring System (LWR-LW and LWR-LN)**

The LumaWatt system is a peer-to-peer wireless network of luminaire-integral sensors for any sized project. Each sensor is capable of motion and photo sensing, metering power consumption and wireless communication. The end-user can securely create and manage sensor profiles with browser-based management software. The software will automatically broadcast to the sensors via wireless gateways for zone-based and individual luminaire control. The LumaWatt software provides smart building solutions by utilizing the sensor to provide easy-to-use dashboard and analytic capabilities such as improved energy savings, traffic flow analysis, building management software integration and more.

For additional details, refer to the LumaWatt product guides.



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ORDERING INFORMATION

Sample Number: GWC-AF-02-LED-E1-T3-GM

Product Family ¹	Light Engine	Number of Light Squares ²	Lamp Type	Voltage	Distribution	Color	Mounting Options
GWC=Galleon Wall	AF=1A Drive Current	01=1 02=2 ³	LED=Solid State Light Emitting Diodes	E1=120-277V 347=347V ⁴ 480=480V ^{4,5}	T2=Type II T3=Type III T4FT=Type IV Forward Throw T4W=Type IV Wide SL2=Type II w/Spill Control SL3=Type III w/Spill Control SL4=Type IV w/Spill Control SLR=90° Spill Light Eliminator Left SLR=90° Spill Light Eliminator Right RW=Rectangular Wide Type I 5NQ=Type V Square Narrow 5MQ=Type V Square Medium 5WQ=Type V Square Wide	AP=Grey BZ=Bronze BK=Black DP=Dark Platinum GM=Graphite Metallic WH=White CC=Custom Color ⁶	[BLANK]=Surface Mount
Options (Add as Suffix)					Accessories (Order Separately)		
7030=70 CRI / 3000K ⁷ 8030=80 CRI / 3000K ⁷ 7050=70 CRI / 5000K ⁷ 7060=70 CRI / 6000K ⁷ 600=Drive Current Factory Set to 600mA 800=Drive Current Factory Set to 800mA 1200=Drive Current Factory Set to 1200mA ⁸ F=Single Fused (120, 277 or 347V. Must Specify Voltage) FF=Double Fused (208, 240 or 480V. Must Specify Voltage) 10K=10kV Surge Module DIM=0-10V Dimming Leads ^{9,10} DALI=DALI Driver ¹¹ HA=50°C High Ambient ¹² UPL=Uplight Housing ¹³ BBB=Battery Pack with Back Box ^{3,8,9,14} CWB=Cold Weather Battery Pack with Back Box ^{3,8,9,14} P=Button Type Photocontrol (120, 208, 240 or 277V. Must Specify Voltage) R=NEMA Twistlock Photocontrol Receptacle PER7=NEMA 7-PIN Twistlock Photocontrol Receptacle ¹⁵ AHD145=After Hours Dim, 5 Hours ¹⁶ AHD245=After Hours Dim, 6 Hours ¹⁶ AHD255=After Hours Dim, 7 Hours ¹⁶ AHD355=After Hours Dim, 8 Hours ¹⁶ MS-LXX=Motion Sensor for On/Off Operation ^{17,18,19} MS/DIM-LXX=Motion Sensor for Dimming Operation ^{17,18,19} LWR-LW=LumaWatt Wireless Sensor, Wide Lens for 8' - 16' Mounting Height ^{18,20,21} LWR-LN=LumaWatt Wireless Sensor, Narrow Lens for 16' - 20' Mounting Height ^{18,20,21} L90=Optics Rotated 90° Left R90=Optics Rotated 90° Right MT=Factory Installed Mesh Top LCF=Light Square Trim Plate Painted to Match Housing ²² HSS=Factory Installed House Side Shield ²³ CE=CE Marking and Small Terminal Block ²⁴					OA/RA1013=Photocontrol Shorting Cap OA/RA1016=NEMA Photocontrol - Multi-Tap 105-285V OA/RA1201=NEMA Photocontrol - 347V OA/RA1027=NEMA Photocontrol - 480V MA1252=10kV Circuit Module Replacement MA1059XX=Thru-branch Back Box (Must Specify Color) FSIR-100=Wireless Configuration Tool for Occupancy Sensor ¹⁷ LS/HSS=Field Installed House Side Shield ^{23,25}		

NOTES:

- DesignLight Consortium™ Qualified. Refer to www.designlights.org Qualified Products List under Family Models for details.
- Standard 4000K CCT and minimum 70 CRI.
- Two light squares with BBB or CWB options limited to 25°C, 120-277V only.
- Requires the use of a step down transformer. Not available in combination with sensor options at 1200mA.
- Only for use with 480V Wye systems. Per NEC, not for use with ungrounded systems, impedance grounded systems or corner grounded systems (commonly known as Three Phase Three Wire Delta, Three Phase High Leg Delta and Three Phase Corner Grounded Delta systems).
- Custom colors are available. Setup charges apply. Paint chip samples required. Extended Lead times apply.
- Extended lead times apply. Use dedicated IES files when performing layouts.
- Not available with HA option.
- Cannot be used with other control options.
- Low voltage control lead brought out 18" outside fixture.
- Only available with BBB or CWB in single light square. HA option available for single light square only. Limited to 1A and below.
- Not available with 1200, UPL, BBB and CWB options. Available for single light square only.
- Not available with SL2, SL3, SL4, HA, BBB, CWB, R, or PER7 options.
- Operates a single light square only. Cold weather option operates -20°C to +40°C, standard 0°C to +40°C. Backbox is non-IP rated.
- Compatible with standard 3-PIN photocontrols, 5-PIN or 7-PIN ANSI controls.
- Requires the use of P photocontrol or the PER7 or R photocontrol receptacle with photocontrol accessory. See After Hours Dim supplemental guide for additional information.
- The FSIR-100 configuration tool is required to adjust parameters including high and low modes, sensitivity, time delay, cutoff and more. Consult your lighting representative at Eaton for more information.
- Replace LXX with mounting height in feet for proper lens selection (e.g., L8=8' mounting height). L8, L20, L40, and L40W are available options.
- Includes integral photosensor.
- LumaWatt wireless sensors are factory installed requiring network components in appropriate quantities. See www.eaton.com/lighting for LumaWatt application information.
- Bronze sensor is shipped with Bronze fixtures. White sensor shipped on all other housing color options.
- Not available with HSS option.
- Only for use with SL2, SL3 and SL4 distributions. The light square trim plate is painted black when the HSS option is selected.
- CE is not available with the 1200, DALI, LWR, MS, MS/DIM, P, R or PER7 options. Available in 120-277V only.
- One required for each light square.



DESCRIPTION

The Impact Elite family of wall luminaires is the ideal complement to site design. Incorporating modular LightBAR™ technology, the Impact Elite luminaire provides outstanding uniformity and energy-conscious illumination. Combined with a rugged construction, the Impact Elite luminaire is the ideal facade and security luminaire for zones surrounding schools, office complexes, apartments and recreational facilities. UL/cUL listed for wet locations.

Catalog #	Type
Project	
Comments	
Prepared by	

SPECIFICATION FEATURES

Construction

Heavy-wall, die-cast aluminum housing and removable hinged door frame for precise tolerance control and repeatability. Hinged door inset for clean mating with housing surface and secured via two captive fasteners. Optional tamper-resistant Torx™ head fasteners offer vandal resistant access to the electrical chamber.

Optics

Choice of six patented, high-efficiency AccuLED Optics™ distributions. Optics are precisely designed to shape the light output, maximizing efficiency and application spacing. AccuLED Optics technology creates consistent distributions with the scalability to meet customized application requirements. Offered Standard in 4000K (+/- 275K) CCT and minimum 70 CRI. Optional 3000K CCT, 5000K CCT and 5700K CCT.

Electrical

LED drivers mount to die-cast aluminum back housing for optimal heat sinking, operation efficacy, and prolonged life. Standard drivers feature electronic universal voltage (120-277V 50/60Hz), 347V 60Hz or 480V 60Hz operation, greater than 0.9 power factor, less than 20% harmonic distortion, and are suitable for operation in -40°C to 40°C ambient environments. All fixtures are shipped standard with 10kV/10kA common – and differential – mode surge protection. LightBARs feature an IP66 enclosure rating and maintain greater than 95% lumen maintenance at 60,000 hours per IESNA TM-21. Emergency egress options for -20°C ambient environments and occupancy sensor available.

Mounting

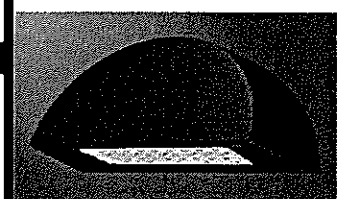
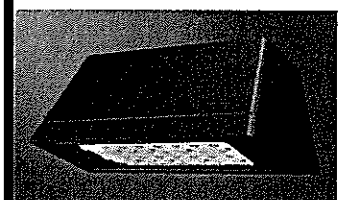
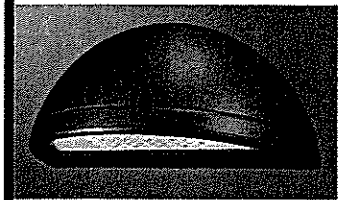
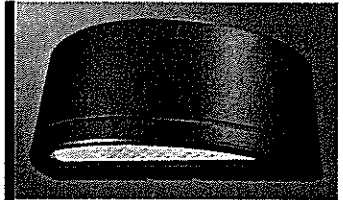
Gasketed and zinc plated rigid steel mounting attachment fits directly to 4" j-box or wall with the Impact Elite "Hook-N-Lock" mechanism for quick installation. Secured with two captive corrosion resistant black oxide coated allen head set screws concealed but accessible from bottom of fixture.

Finish

Cast components finished in a five-stage super TGIC polyester powder coat paint, 2.5 mil nominal thickness for superior protection against fade and wear. Standard colors include black, bronze, grey, white, dark platinum and graphite metallic. RAL and custom color matches available. Consult the McGraw-Edison Architectural Colors brochure for the complete selection.

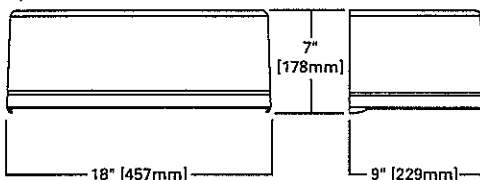
Warranty

Five-year warranty.

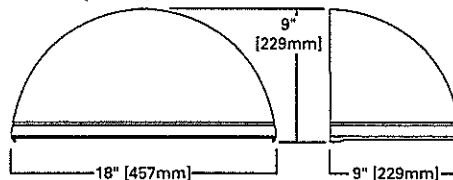


DIMENSIONS

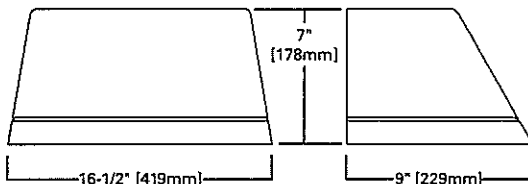
Cylinder



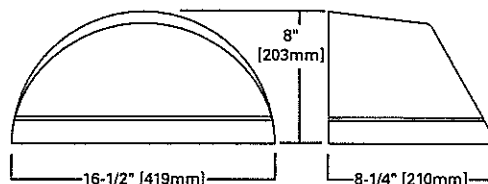
Quarter Sphere



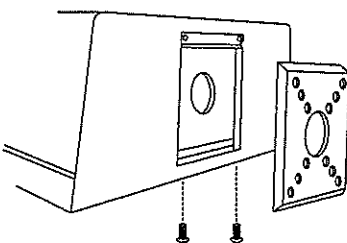
Trapezoid



Wedge



HOO-K-N-LOCK MOUNTING



ISC/ISS/IST/ISW IMPACT ELITE LED

1 - 2 LightBARs

Solid State LED

WALL MOUNT LUMINAIRE

CERTIFICATION DATA

UL/cUL Listed
LM79 / LM80 Compliant
IP66 LightBARs
ISO 9001

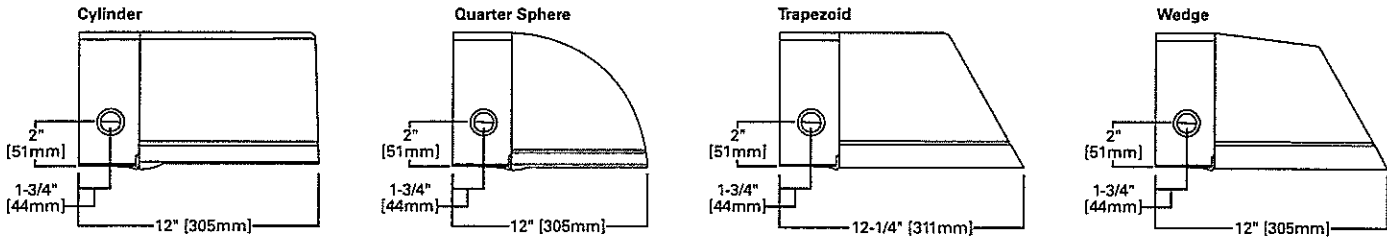
ENERGY DATA

Electronic LED Driver
>0.9 Power Factor
<20% Total Harmonic Distortion
120-277V/50 & 60Hz, 347V/60Hz,
480V/60Hz
-40°C Minimum Temperature
40°C Ambient Temperature Rating

SHIPPING DATA

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

THRUWAY BACK BOX



POWER AND LUMENS BY BAR COUNT

Number of LightBARs		E01	E02	F01	F02
		21 LED LightBAR		7 LED LightBAR	
Drive Current		350mA		1A	
Power (Watts)	120-277V	25W	47W	26W	50W
Current (A)	120V	0.22	0.40	0.22	0.42
	277V	0.10	0.18	0.10	0.19
Power (Watts)	347V or 480V	31W	52W	32W	55W
Current (A)	347V	0.11	0.16	0.11	0.17
	480V	0.16	0.18	0.16	0.18
Optics					
BL2	Lumens	2,738	5,476	2,260	4,521
	Bug Rating	B1-U0-G1	B1-U0-G1	B1-U0-G1	B1-U0-G1
BL3	Lumens	2,702	5,405	2,231	4,462
	Bug Rating	B1-U0-G1	B1-U0-G2	B1-U0-G1	B1-U0-G1
BL4	Lumens	2,613	5,225	2,157	4,313
	Bug Rating	B1-U0-G1	B1-U0-G2	B1-U0-G1	B1-U0-G1
GZW	Lumens	2,785	5,570	2,299	4,598
	Bug Rating	B2-U0-G2	B3-U0-G3	B1-U0-G1	B2-U0-G2
SLR/SL	Lumens	2,435	4,869	2,010	4,020
	Bug Rating	B1-U0-G1	B1-U0-G2	B1-U0-G1	B1-U0-G2

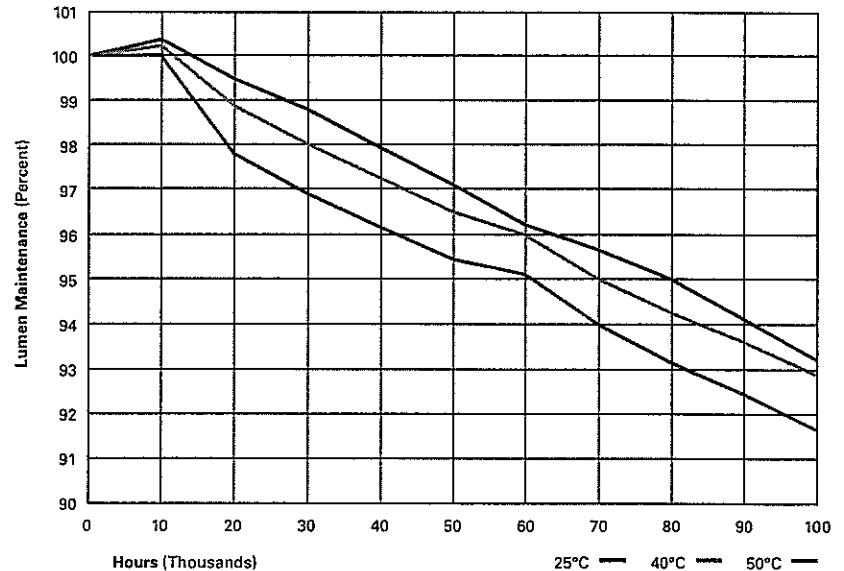
LUMEN MAINTENANCE

Ambient Temperature	25,000 Hours*	50,000 Hours*	60,000 Hours*	100,000 Hours	Theoretical L70 (Hours)
25°C	> 99%	> 97%	> 96%	> 93%	> 450,000
40°C	> 98%	> 97%	> 96%	> 92%	> 425,000
50°C	> 97%	> 96%	> 95%	> 91%	> 400,000

* Per IESNA TM-21 data.

LUMEN MULTIPLIER

Ambient Temperature	Lumen Multiplier
10°C	1.02
15°C	1.01
25°C	1.00
40°C	0.99



ORDERING INFORMATION

Sample Number: ISC-E02-LED-E1-BL3-GM

Product Family	Number of LightBARs ^{1,2}	Lamp Type	Voltage	Distribution	Color ⁴
ISC=Impact Elite LED Small Cylinder ISS=Impact Elite LED Small Quarter Sphere IST=Impact Elite LED Small Trapezoid ISW=Impact Elite LED Small Wedge	E01=(1) 21 LED LightBAR E02=(2) 21 LED LightBARs F01=(1) 7 LED LightBAR F02=(2) 7 LED LightBARs	LED=Solid State Light Emitting Diodes	E1=Electronic (120-277V) 347=347V 480=480V ³	BL2=Type II w/Back Light Control BL3=Type III w/Back Light Control BL4=Type IV w/Back Light Control GZW=Wall Grazer Wide SLR=90° Spill Light Eliminator Left SLR=90° Spill Light Eliminator Right	AP=Grey BZ=Bronze BK=Black DP=Dark Platinum GM=Graphite Metallic WH=White
Options (Add as Suffix)				Accessories (Order Separately) ¹⁰	
2L=Two Circuits ⁶ 7030=70 CRI / 3000K CCT ⁴ 7050=70 CRI / 5000K CCT ⁴ 7060=70 CRI / 5700K CCT ⁴ 8030=80 CRI / 3000K CCT ⁴ P=Button Type Photocontrol (Available in 120, 208, 240 or 277V. Must Specify Voltage) OSB=Occupancy Sensor with Back Box (Specify 120V or 277V) ⁷ BBB-XX=Battery Pack with Back Box (Specify 120V or 277V) ⁸ CWB-XX=Cold Weather Battery Pack with Back Box (Specify 120V or 277V) ⁸ DIM=0-10V Dimming Drivers LCF=LightBAR Cover Plate Matches Housing Finish ULG=Uplight Glow TR=Tamper Resistant Hardware				MA1253=10kV Circuit Module Replacement MA1254-XX=Thruway Back Box - Impact Elite Trapezoid MA1255-XX=Thruway Back Box - Impact Elite Cylinder MA1256-XX=Thruway Back Box - Impact Elite Quarter Sphere MA1257-XX=Thruway Back Box - Impact Elite Wedge	

NOTES:

- Standard 4000K CCT and greater than 70 CRI. LightBARs for downlight use only.
- 21 LED LightBAR powered by 350mA and 7 LED LightBAR powered by 1A.
- Only for use with 480V Wye systems. Per NEC, not for use with ungrounded systems, impedance grounded systems or corner grounded systems (commonly known as Three Phase Three Wire Delta, Three Phase High Leg Delta and Three Phase Corner Grounded Delta systems).
- Custom and RAL color matching available upon request. Consult your lighting representative at Eaton for more information.
- Low-level output varies by bar count. Consult factory. Not available with 347V or 480V. Available with two bars (E02 or F02) only.
- Extended lead times apply.
- Available with E02 or F02, only one bar on street side will be wired to sensor. Time delay factory setting 15-minutes. When ordered with PC option, both bars are connected to photocontrol as primary switching means. Standard sensor lens covers 8' mounting height, 360° coverage, maximum 48" diameter. Not available in all configurations or with BBB or CWB options.
- Specify 120V or 277V. LED standard integral battery pack is rated for minimum operating temperature 32°F (0°C). Operates one bar for 90-minutes. Not available in all configurations or with OSB option. Consult factory.
- Specify 120V or 277V. LED cold weather integral battery pack is rated for minimum operating temperature -4°F (-20°C). Operates one bar for 90-minutes. Not available in all configurations or with OSB option. Consult factory.
- Replace XX with color suffix.

DESCRIPTION

The Lumark Wal-Pak wall luminaire provides traditional architectural style with high performance energy efficient illumination. Rugged die-cast aluminum construction, stainless steel hardware along with a sealed and gasketed optical compartment make the Wal-Pak virtually impenetrable to contaminants. IP66 Rated. Three available lamp sources including patented energy efficient LED, pulse start metal halide and high pressure sodium. UL/cUL wet location listed. The Wal-Pak wall luminaire is ideal for pathway illumination, building entrances, vehicle ramps, schools, tunnels, stairways and loading docks.

Catalog #		Type
Project		
Comments		Date
Prepared by		

SPECIFICATION FEATURES

Housing

Rugged one-piece die-cast aluminum housing and hinged, removable die-cast aluminum door. One-piece silicone gasket seals the optical chamber. UL 1598 wet location listed and IP66 ingress protection rated.

Electrical

Ballasts, LED driver and related electrical components are hard mounted to the die-cast housing for optimal heat sinking and operating efficiency. Wiring is extended through a silicone gasket at the back of the housing. Three 1/2" threaded conduit entry points allow for thru-branch wiring. LED thermal management system incorporates both conduction and natural convection to transfer heat rapidly away from LED source. Integral LED electronic driver incorporates internal fusing designed to withstand a 6kV surge test and is Class 2 rated for 120-277V with an operating temperature of -40° to 55°C. Wal-

Pak LED systems maintain greater than 93% of the initial light output after 72,000 hours of operation. UL listed HID high power factor ballasts are Class H insulation rated (high pressure sodium: 250, 400W [-40°C / -40°F]). High efficiency HID ballasts are available in 120, 208, 240, 277, 347 and 480V.

Optical

Highly reflective anodized aluminum reflectors provide high efficiency illumination. Optical assemblies include impact resistant borosilicate refractive glass, and full cutoff IESNA compliant configurations. Patented, solid state LED luminaires are thermally optimized with three lumen packages. HID models are offered in horizontal medium or mogul-based metal halide [MP] or high pressure sodium [HP] lamps.

Door Assembly

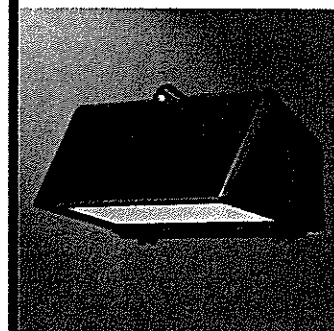
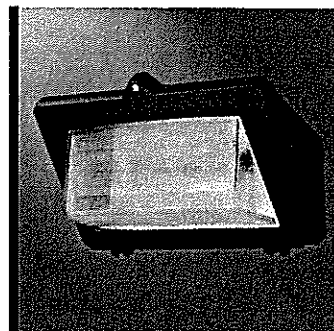
Single point, captive stainless steel hardware secures the removable hinged door allowing for ease of

installation and maintenance. Door assembly is hinged at the bottom for easy removal, installation and re-lamping.

Finish

Finished in five-stage super TGIC polyester powder coat paint, 2.5 mil nominal thickness for superior protection against fade and wear. Standard color is bronze. Additional colors available in white, grey, bronze, black, dark platinum and graphite metallic. Consult your lighting representative at Eaton for a complete selection of standard colors.

Efficiency Standards Notice
Select luminaires are manufactured to USA and California efficiency regulations.



WP WAL-PAK

27, 32 and 46W

LED

250 - 400W

Pulse Start Metal Halide

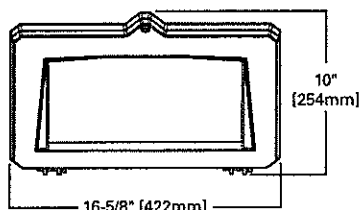
250 - 400W

High Pressure Sodium

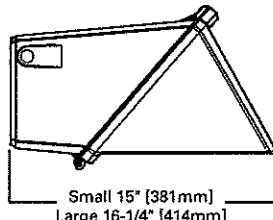
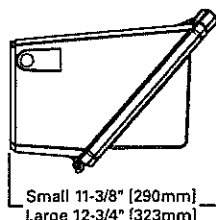
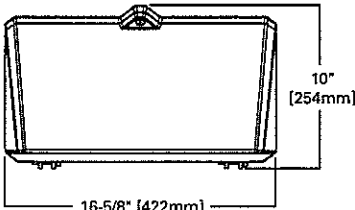
WALL MOUNT LUMINAIRE

DIMENSIONS

BOROSILICATE GLASS DOOR (GL)



FULL CUTOFF DOOR (FC)



TECHNICAL DATA

UL/cUL Wet Location Listed
IP66 Rated
40°C Maximum Ambient Temperature
External Supply Wiring 90°C Minimum
EISA @, ARRA, Title 20 Compliant
LM79 / LM80 Compliant

ENERGY DATA

CWA Ballast Input Watts
200W HPS HPF (250 Watts)
250W MP HPF (283 Watts) @
400W HPS HPF (465 Watts)
400W MP HPF (452 Watts) @

SHIPPING DATA

Approximate Net Weight:
32-42 lbs. (15-19 kgs.)



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2017-06-05 17:00:21

POWER AND LUMENS

Catalog Number	Lumens	Power Consumption (Watts)	B.U.G. Rating	Correlated Color Temperature CCT (Kelvin)	Color Rendering Index (CRI)
Borosilicate Glass Door (GL)					
LDWP-GL-3B-ED-7040	3,270	27W	B1-U3-G1	4000K	73
LDWP-GL-4B-ED-7040	4,160	32W	B1-U3-G2	4000K	73
LDWP-GL-6B-ED-7040	5,828	46W	B1-U4-G4	4000K	73
LDWP-GL-3B-ED	3,333	27W	B1-U3-G1	5000K	72
LDWP-GL-4B-ED	4,199	32W	B1-U3-G3	5000K	73
LDWP-GL-6B-ED	5,883	46W	B1-U4-G4	5000K	73
Full Cutoff Door (FC)					
LDWP-FC-3B-ED-7040	1,884	27W	B1-U0-G1	4000K	72
LDWP-FC-4B-ED-7040	2,239	32W	B1-U0-G1	4000K	73
LDWP-FC-6B-ED-7040	3,137	47W	B1-U0-G1	4000K	73
LDWP-FC-3B-ED	1,912	27W	B1-U0-G1	5000K	72
LDWP-FC-4B-ED	2,279	32W	B1-U0-G1	5000K	73
LDWP-FC-6B-ED	3,192	46W	B1-U0-G1	5000K	73

CURRENT DRAW

Light Engine	3B	4B	6B
Nominal Power (Watts)	27W	32W	46W
Input Current @ 120V (A)	0.24	0.28	0.40
Input Current @ 208V (A)	0.14	0.16	0.23
Input Current @ 240V (A)	0.13	0.15	0.20
Input Current @ 277V (A)	0.11	0.13	0.18
Input Current @ 347V (A)	0.09	0.11	0.15
Input Current @ 480V (A)	0.10	0.12	0.14

LUMEN MAINTENANCE

Ambient Temperature	TM-21 Lumen Maintenance (72,000 Hours)*	Theoretical L70 (Hours)
25°C	> 93%	> 340,000
40°C	> 92%	> 316,000

* Per TM-21 data.

LUMEN MULTIPLIER

Ambient Temperature	Lumen Multiplier
10°C	1.07
15°C	1.04
25°C	1.00
40°C	0.94

72

ORDERING INFORMATION

Sample Number: LDWP-FC-4B-120V

Lamp Type	Product Family ²	Door Type ³	Lamp Wattage ⁴	Voltage ⁵
LD=Solid State Light-Emitting Diodes (LED) ¹ HP=High Pressure Sodium MP=Pulse Start Metal Halide	WP=Wal-Pak	GL=Borosilicate Glass Door FC=Full Cutoff Door	LED 3B=(3 Package), 27W 4B=(4 Package), 32W 6B=(6 Package), 46W HP 250=250W 400=400W MP 250=250W 400=400W	120V=120V 208V=208V 240V=240V 277V=277V 347V=347V ⁶ 480V=480V ⁶ DT=Dual-Tap MT=Multi-Tap TT=Tri-Tap ED=Electronic LED Driver
Options (Add as Suffix) ⁷			Accessories (Order Separately)	
F1=Single Fuse (Must Specify Voltage, 120, 277 or 347V) PE=Button Type Photocontrol (Must Specify Voltage, 120, 208, 240 or 277V) LL=Lamp Included Q=Quartz Restrike T4 Lamp ⁸ EM=Emergency Quartz Restrike T4 Lamp with Time Delay Relay ⁸ EMLED-CD=LED Battery Backup Cold Temperature ⁹ 7040=72 CRI / 4000K CCT AP=Grey BK=Black DP=Dark Platinum GM=Graphite Metallic WH=White			WG/WPGL=Wire Guard Borosilicate Glass Lens Door WG/WPFC=Wire Guard Full Cutoff Door TR/WP=Tamper-resistant Screw and Bit VS/WPGL=Polycarbonate Vandal Shield for Borosilicate Glass Lens Door	

NOTES:

- Five-year warranty.
- Fixture color is standard bronze unless optional color is specified.
- Small housing offered for LED models. Large housing for 250W-400W. Clear glass is standard for full cutoff door types except for LD. LD full cutoff door is standard with Solite® glass.
- LED packages based on 70 CRI / 5000K package at 25°C ambient.
- See voltage chart for descriptions. 105°C Rated wire required for thru-branch wiring for units above 250W. Thru-branch wiring is rated for 40°C for LD. Higher wattage thru-branch wiring is rated for use in 25°C ambient operating environments.
- Not available with thru-branch wiring. LED will be supplied with integral step down transformer.
- Not all options can be combined. Only one emergency or battery back-up option available within the fixture. LD models utilize EMLED-CD options only for battery back-up.
- Q or EM not available with LD or E electronic ballast.
- EMLED-CD available with B models only. For use in 25°C ambient operating temperature environments. Specify 120V or 277V. EMLED-CD minimum -20°C/-4°F. Battery pack is a UL recognized component.

STOCK ORDERING INFORMATION - LAMP INCLUDED

Sample Number: WPL48C

Product Family	Lamp Type	Lamp Wattage	Door/Glass Type
WP=Wal-Pak	L=LED ¹ P=Pulse Start Metal Halide S=High Pressure Sodium	LED 3B=27W 4B=32W 6B=46W Pulse Start Metal Halide 25=250W 40=400W High Pressure Sodium 25=250W 40=400W	[Blank]=Standard C=Full Cutoff Door

NOTE: 1 Five-year warranty.

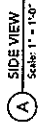
VOLTAGE CHART

MT=Multi-Tap	120, 208, 240, 277V (Wired 277V)
TT=Triple-Tap	120, 277, 347V (Wired 347V)
ED=Electronic LED Driver	120-277V (Universal - 50-60Hz)

73

9'-2"

FRONT VIEW
Scale: 1" = 1'-0"



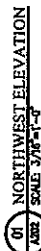
SPECIFICATIONS

1. 3/8" THICK ALUMINUM LETTERS

- Painted Black
- Font: AvenirNext LT Pro MediumCn

INSTALLATION

- Stud mounted



COLORS & FINISHES

C1. BLACK

401 Hampton Park Boulevard
Capitol Heights, MD, 20743
phone 240.765.1400
fax 240.765.1401
www.artdisplayco.com

Duffel Mill

North

ON THE

1033

RESULTS

0016-02KC Konh- Duffel Mill

REQUIRE Kareesa Clark

REF ID: A66727

CREATIVITY TEST CONCEPT

27000000

1 07/21/17 KC

www.elsevier.com/locate/jmb

[illegible]

APPROVED BY: _____
CLIENT _____

NOTES

NOTES:

Dimensions and drawings are sole property of An Display Company and may not be used or reproduced without permission. Material colors are limited by printing technology and may not reflect the exact colors of the finished product. Colors shown in printed may not represent actual size and proportions to build.

(N) All Electrical components are to be U.S. approved

All electrical components are intended to be installed in accordance with the requirements of article 605 of the national electrical code and/or other applicable local codes. Installation must comply with all applicable building codes and regulations. The manufacturer shall not be responsible for improper grounding and bonding of the entire system. AIA: ESD/S9811-01; ESD/S9811-02; ESD/S9811-03; ESD/S9811-04; ESD/S9811-05; ESD/S9811-06; ESD/S9811-07; ESD/S9811-08; ESD/S9811-09; ESD/S9811-10; ESD/S9811-11; ESD/S9811-12; ESD/S9811-13; ESD/S9811-14; ESD/S9811-15; ESD/S9811-16; ESD/S9811-17; ESD/S9811-18; ESD/S9811-19; ESD/S9811-20; ESD/S9811-21; ESD/S9811-22; ESD/S9811-23; ESD/S9811-24; ESD/S9811-25; ESD/S9811-26; ESD/S9811-27; ESD/S9811-28; ESD/S9811-29; ESD/S9811-30; ESD/S9811-31; ESD/S9811-32; ESD/S9811-33; ESD/S9811-34; ESD/S9811-35; ESD/S9811-36; ESD/S9811-37; ESD/S9811-38; ESD/S9811-39; ESD/S9811-40; ESD/S9811-41; ESD/S9811-42; ESD/S9811-43; ESD/S9811-44; ESD/S9811-45; ESD/S9811-46; ESD/S9811-47; ESD/S9811-48; ESD/S9811-49; ESD/S9811-50; ESD/S9811-51; ESD/S9811-52; ESD/S9811-53; ESD/S9811-54; ESD/S9811-55; ESD/S9811-56; ESD/S9811-57; ESD/S9811-58; ESD/S9811-59; ESD/S9811-60; ESD/S9811-61; ESD/S9811-62; ESD/S9811-63; ESD/S9811-64; ESD/S9811-65; ESD/S9811-66; ESD/S9811-67; ESD/S9811-68; ESD/S9811-69; ESD/S9811-70; ESD/S9811-71; ESD/S9811-72; ESD/S9811-73; ESD/S9811-74; ESD/S9811-75; ESD/S9811-76; ESD/S9811-77; ESD/S9811-78; ESD/S9811-79; ESD/S9811-80; ESD/S9811-81; ESD/S9811-82; ESD/S9811-83; ESD/S9811-84; ESD/S9811-85; ESD/S9811-86; ESD/S9811-87; ESD/S9811-88; ESD/S9811-89; ESD/S9811-90; ESD/S9811-91; ESD/S9811-92; ESD/S9811-93; ESD/S9811-94; ESD/S9811-95; ESD/S9811-96; ESD/S9811-97; ESD/S9811-98; ESD/S9811-99; ESD/S9811-100; ESD/S9811-101; ESD/S9811-102; ESD/S9811-103; ESD/S9811-104; ESD/S9811-105; ESD/S9811-106; ESD/S9811-107; ESD/S9811-108; ESD/S9811-109; ESD/S9811-110; ESD/S9811-111; ESD/S9811-112; ESD/S9811-113; ESD/S9811-114; ESD/S9811-115; ESD/S9811-116; ESD/S9811-117; ESD/S9811-118; ESD/S9811-119; ESD/S9811-120; ESD/S9811-121; ESD/S9811-122; ESD/S9811-123; ESD/S9811-124; ESD/S9811-125; ESD/S9811-126; ESD/S9811-127; ESD/S9811-128; ESD/S9811-129; ESD/S9811-130; ESD/S9811-131; ESD/S9811-132; ESD/S9811-133; ESD/S9811-134; ESD/S9811-135; ESD/S9811-136; ESD/S9811-137; ESD/S9811-138; ESD/S9811-139; ESD/S9811-140; ESD/S9811-141; ESD/S9811-142; ESD/S9811-143; ESD/S9811-144; ESD/S9811-145; ESD/S9811-146; ESD/S9811-147; ESD/S9811-148; ESD/S9811-149; ESD/S9811-150; ESD/S9811-151; ESD/S9811-152; ESD/S9811-153; ESD/S9811-154; ESD/S9811-155; ESD/S9811-156; ESD/S9811-157; ESD/S9811-158; ESD/S9811-159; ESD/S9811-160; ESD/S9811-161; ESD/S9811-162; ESD/S9811-163; ESD/S9811-164; ESD/S9811-165; ESD/S9811-166; ESD/S9811-167; ESD/S9811-168; ESD/S9811-169; ESD/S9811-170; ESD/S9811-171; ESD/S9811-172; ESD/S9811-173; ESD/S9811-174; ESD/S9811-175; ESD/S9811-176; ESD/S9811-177; ESD/S9811-178; ESD/S9811-179; ESD/S9811-180; ESD/S9811-181; ESD/S9811-182; ESD/S9811-183; ESD/S9811-184; ESD/S9811-185; ESD/S9811-186; ESD/S9811-187; ESD/S9811-188; ESD/S9811-189; ESD/S9811-190; ESD/S9811-191; ESD/S9811-192; ESD/S9811-193; ESD/S9811-194; ESD/S9811-195; ESD/S9811-196; ESD/S9811-197; ESD/S9811-198; ESD/S9811-199; ESD/S9811-200; ESD/S9811-201; ESD/S9811-202; ESD/S9811-203; ESD/S9811-204; ESD/S9811-205; ESD/S9811-206; ESD/S9811-207; ESD/S9811-208; ESD/S9811-209; ESD/S9811-210; ESD/S9811-211; ESD/S9811-212; ESD/S9811-213; ESD/S9811-214; ESD/S9811-215; ESD/S9811-216; ESD/S9811-217; ESD/S9811-218; ESD/S9811-219; ESD/S9811-220; ESD/S9811-221; ESD/S9811-222; ESD/S9811-223; ESD/S9811-224; ESD/S9811-225; ESD/S9811-226; ESD/S9811-227; ESD/S9811-228; ESD/S9811-229; ESD/S9811-230; ESD/S9811-231; ESD/S9811-232; ESD/S9811-233; ESD/S9811-234; ESD/S9811-235; ESD/S9811-236; ESD/S9811-237; ESD/S9811-238; ESD/S9811-239; ESD/S9811-240; ESD/S9811-241; ESD/S9811-242; ESD/S9811-243; ESD/S9811-244; ESD/S9811-245; ESD/S9811-246; ESD/S9811-247; ESD/S9811-248; ESD/S9811-249; ESD/S9811-250; ESD/S9811-251; ESD/S9811-252; ESD/S9811-253; ESD/S9811-254; ESD/S9811-255; ESD/S9811-256; ESD/S9811-257; ESD/S9811-258; ESD/S9811-259; ESD/S9811-260; ESD/S9811-261; ESD/S9811-262; ESD/S9811-263; ESD/S9811-264; ESD/S9811-265; ESD/S9811-266; ESD/S9811-267; ESD/S9811-268; ESD/S9811-269; ESD/S9811-270; ESD/S9811-271; ESD/S9811-272; ESD/S9811-273; ESD/S9811-274; ESD/S9811-275; ESD/S9811-276; ESD/S9811-277; ESD/S9811-278; ESD/S9811-279; ESD/S9811-280; ESD/S9811-281; ESD/S9811-282; ESD/S9811-283; ESD/S9811-284; ESD/S9811-285; ESD/S9811-286; ESD/S9811-287; ESD/S9811-288; ESD/S9811-289; ESD/S9811-290; ESD/S9811-291; ESD/S9811-292; ESD/S9811-293; ESD/S9811-294; ESD/S9811-295; ESD/S9811-296; ESD/S9811-297; ESD/S9811-298; ESD/S9811-299; ESD/S9811-300; ESD/S9811-301; ESD/S9811-302; ESD/S9811-303; ESD/S9811-304; ESD/S9811-305; ESD/S9811-306; ESD/S9811-307; ESD/S9811-308; ESD/S9811-309; ESD/S9811-310; ESD/S9811-311; ESD/S9811-312; ESD/S9811-313; ESD/S9811-314; ESD/S9811-315; ESD/S9811-316; ESD/S9811-317; ESD/S9811-318; ESD/S9811-319; ESD/S9811-320; ESD/S9811-321; ESD/S9811-322; ESD/S9811-323; ESD/S9811-324; ESD/S9811-325; ESD/S9811-326; ESD/S9811-327; ESD/S9811-328; ESD/S9811-329; ESD/S9811-330; ESD/S9811-331; ESD/S9811-332; ESD/S9811-333; ESD/S9811-334; ESD/S9811-335; ESD/S9811-336; ESD/S9811-337; ESD/S9

POST AND PANEL SIGN
QTY: (1) SINGLE FACED

A

SPECIFICATIONS

1. **4'X4' ALUMINUM SIGN**
 - 1"x1" square aluminum frame
 - White aluminum panel
 - Applied black vinyl text
 - Font: AvenirNext LT Pro MediumCn

2. POSTS

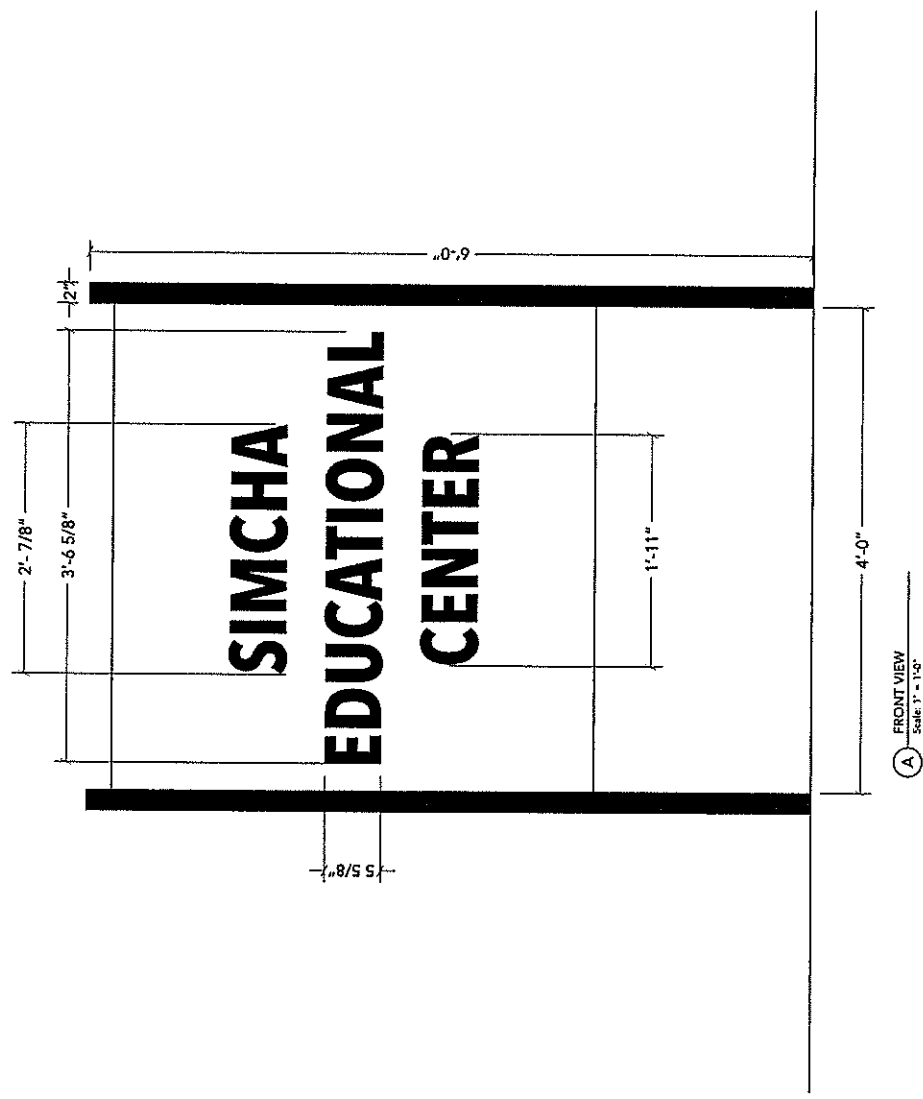
- 2" square posts painted black

INSTALLATION

- Installed into soil conditions

COLORS & FINISHES

C1. BLACK



(A) FRONT VIEW
Scale: 1" = 1'-0"

NOTES
1. All dimensions are in feet and inches unless otherwise noted.
2. All dimensions are to the center of the sign unless otherwise noted.
3. All dimensions are to the center of the sign unless otherwise noted.
4. All dimensions are to the center of the sign unless otherwise noted.
5. All dimensions are to the center of the sign unless otherwise noted.

APPROVED BY:
CLIENT: _____
SALES & PM: _____
PRODUCTION: _____
MEASUREMENTS: _____
FIELD CHECK: _____

REVISIONS:
1. 07/21/17 JC
2. 07/21/17 JC

DESIGNER: Karesa Clarke
REPRESENTATIVE: Joe
DRAWN BY: CONCEPT

PROJECT: Duffel Mill
CLIENT: Korth
ADDRESS: 0016-02KC Korth- Duffel Mill
EQUITY: C.F.B.

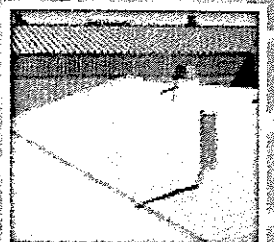
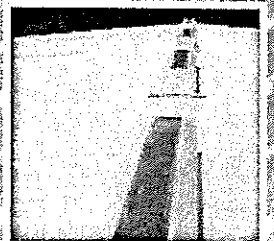
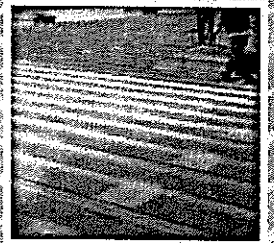
401 Hampton Park Boulevard
Capital Heights, MD, 20743
phone: 240.765.1400
fax: 240.765.1401
www.warddisplayco.com



ALUMANATION® 301

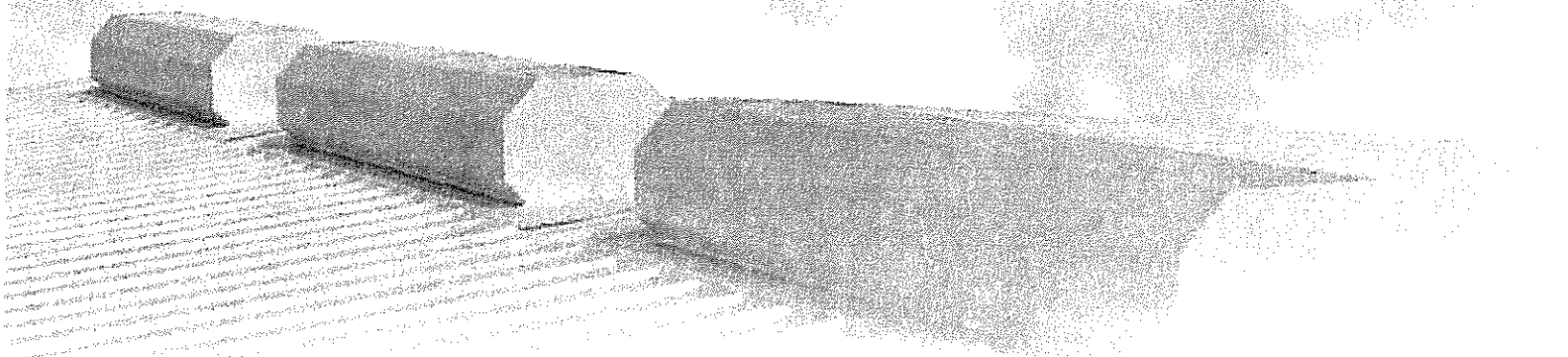
THE BEST AND BRIGHTEST WAY TO
RESTORE NEW LIFE TO METAL ROOFS.

TREMCO.
ROOFING & BUILDING MAINTENANCE



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ALUMANATION® 301



NOT JUST A BETTER ALTERNATIVE, IT'S THE SMART CHOICE FOR CONTRACTORS.

It's only a matter of time for every metal roof—eventually water intrusion and rust will take their toll. How much of a toll is largely a matter of how well the roof is constructed and maintained in the first place.

If you want to give owners the best protection at the best value, while saving time and money, you need to make one choice: the Alumanation 301 system. The system is composed of Alumanation 301, a self-priming, reflective aluminum coating, and Geogard Seam Sealer for sealing seams, fasteners and penetrations.

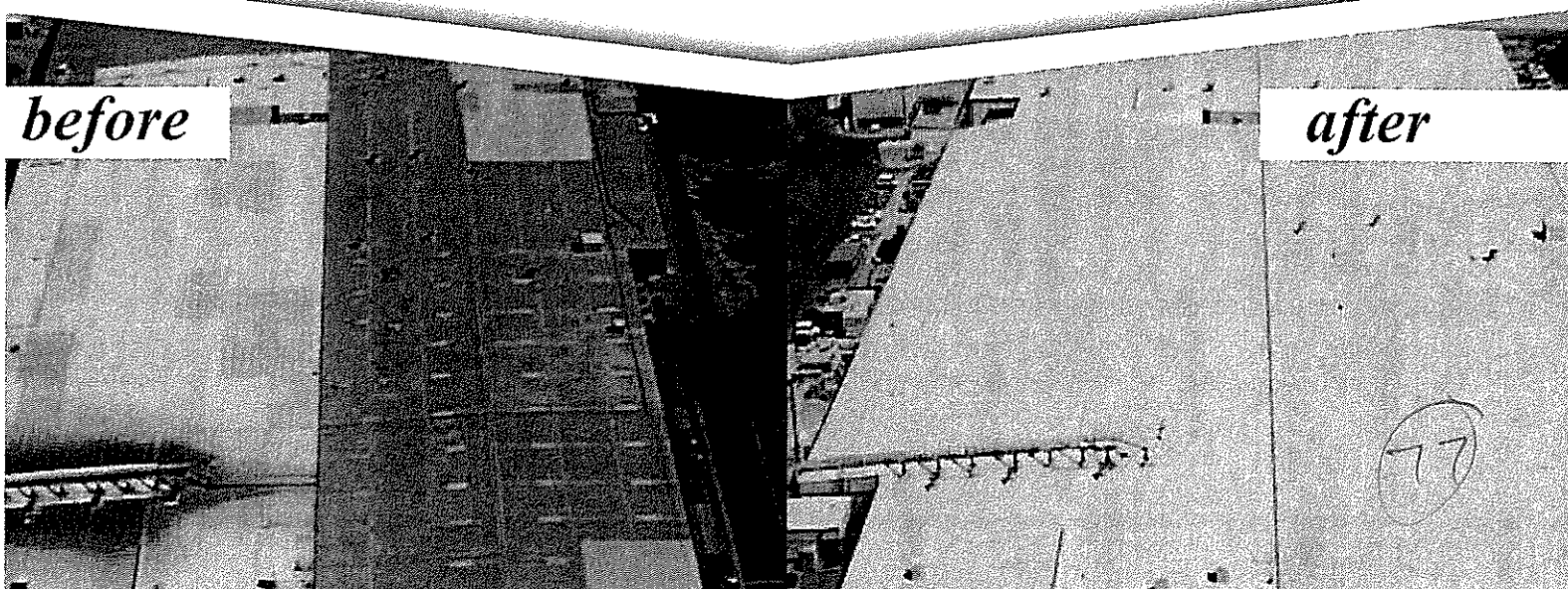
By selecting the Alumanation 301 system, you can offer the building owners a significantly less costly means of restoring their roof compared to the enormous expense of roof replacement. You and your crews can accomplish the restoration quickly, efficiently, using less labor, in less time and with less disruption for the building owners and occupants.

BETTER PRODUCT MEANS BETTER PERFORMANCE.

Alumanation 301 uses a proprietary formula that has been setting the sustainable standard in metal roof protection for more than 60 years.

A high solids, asphalt-based, asbestos-free coating that uses unique fiber reinforcement technology, Alumanation 301 contains 15% metal—double the ASTM standard for premium aluminum roof coatings. The high metal content provides greater reflectivity, more durability, proven performance and longer life.

The high aluminum content and short non-asbestos fibers translate into greater uniformity, less spray clogging and a more consistent coating application.



before

after

**MORE BANG FOR THE BUCK.
TODAY AND IN THE LONG RUN.**

In selecting a roof coating, longevity and reliability can make all the difference in the world. Under normal conditions, the Alumanation 301 system typically provides 12 to 15 years of superior protection before the need to recoat.

A GOOD REFLECTION ON YOU.

The Alumanation 301 system provides brighter and higher reflectivity than standard aluminum coatings, making it your best choice for metal, built-up or modified bitumen roof applications that need high reflectivity at an economical cost. Alumanation 301 can reflect as much as 65% of the sun's rays. Below-roof temperatures and energy use can both drop dramatically. And since there's no tear-off, there is nothing to haul to the landfill.

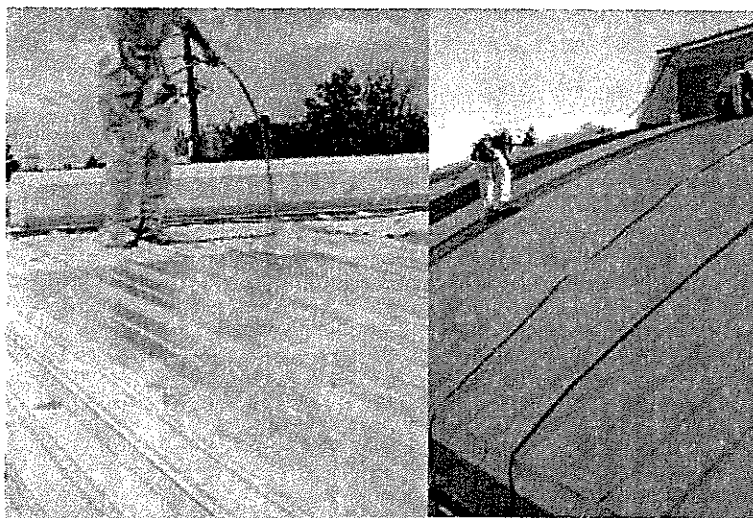
**APPLICATION IS FAST, SIMPLE & LESS
AGITATING. LITERALLY.**

After power washing, minimal surface prep and applying Geogard Seam Sealer where necessary, self-priming Alumanation 301 can be applied by spray, roller or brush in a single coat. The Alumanation 301 mixture remains suspended, so workers spend less time agitating, more time applying. Your crews get in and out quickly; your labor costs can go down dramatically.

**IMPRESSIVE PROTECTION,
IMPRESSIVE GUARANTEE.**

For metal roofs, waterproofing and rust protection is the name of the game. Even in the worst environments, the Alumanation 301 system diligently guards against rust and water intrusion. An incredible 12-year warranty reflects the Alumanation 301 system's outstanding performance and reliability.

RESTORATION — OR — REPLACEMENT?



ROOF RESTORATION: A HOST OF IMPRESSIVE BENEFITS

- Significantly lower overall cost
- Increased service life
- Less work, smaller crews, lower labor costs
- Quick and easy application
- Cold-application = safer, more productive workers
- No tear off; no landfill fees
- Cost effective over second roofing layer
- Restoration can usually be repeated
- Can help dramatically lower energy use
- Minimize business disruption
- Environmentally friendly
- Outstanding warranty protection

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THE RIGHT RESTORATION PRODUCT TO GET THE JOB DONE RIGHT.

		Built Up Roofs/ Modified Bitumen	Weathered Single Ply	Metal	Concrete	Foam	Walls
ALPHAGUARD®							
ALUMANATION® 301							
ECOLASTIC®							
GEOGARD®							
ICE							
ROCK-IT® ADHESIVE							
SOLARGARD® 6083							
SOLARGARD® ACRYTHANE							
SOLARGARD® HY-BUILD							
TREMLASTIC®							

ALUMANATION 301

ALUMANATION® 301 SYSTEM SOLUTION

Step 1: Power wash

Step 2: Apply Geogard
Seam Sealer

Step 3: Apply one-coat
Alumanation 301

ALUMANATION 301 WARRANTY

But of course, the best product comes with the best warranty.

Tremco Roofing has a long-standing commitment to making top-of-the-line products that consistently perform beyond expectations. We back that commitment up with comprehensive warranty protection. For Alumanation 301 customers, warranties are available for up to 12 years on material and labor.



TREMCO.
ROOFING & BUILDING MAINTENANCE

3735 Green Road, Beachwood, OH 44122
U.S.: 800-852-6013
50 Beth Nealson Drive, Toronto, Ontario M4H 1M6
CA: 800-668-9879
www.tremcoroofing.com

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ALUMANATION® 301

#301550 – 55 gallon drum

#301050 – 5 gallon pail

Premium reflective fibered aluminum coating

Description

This premium grade metallic pigmented, industrial maintenance coating is formulated from specially processed asphaltic liquids, non-drying oils, a proprietary blend of natural and synthetic fibers, and aluminum pigment. ALUMANATION 301 reflects heat, prevents corrosion, and protects against mild acid and alkali fumes on a variety of substrates, including metal, transite, built-up roofing and modified bitumen.

Uses

ALUMANATION 301 is a metallic pigmented coating used for the rustproofing and weatherproofing of metal roofs and sidewalls, and as a reflective coating for BUR and modified bitumen roof systems.

Advantages

The one-coat application without a primer makes it a very inexpensive and user-friendly product. ALUMANATION 301's aluminum finish is highly reflective; protecting the roof from harmful UV as well as keeping building cooling costs to a minimum.

ALUMANATION 301 is a solvent-based product that can be applied in colder temperatures than its water-based counterparts.

Limitations

Do not apply when air surface temperature is below 40°F or when rain is imminent. Not recommended for use over tar surfaces, slate, tile, wood, shingles, or where water ponds. Do not apply over newly installed asphalt built-up roofs without allowing the roof to weather a minimum 60-90 days.

Preparation

General: Remove all debris, dust, and dirt with a stiff broom or power cleaning equipment or by using high-pressure power wash (min. 2000 psi). All surfaces must be clean and dry.

If surface was previously coated, please contact the Republic Technical Department for surface preparation recommendations.

Metal: Rust and flaking or peeling paint shall be wire brushed, scraped, or pressure washed to ensure a sound surface. No priming is necessary because of the rust inhibiting oils in ALUMANATION 301. Seams, fasteners, and protrusions shall be repaired as needed. Refer to appropriate metal application specifications for additional information.

BUR / Modified Bitumen: Torn flashings, faulty copings, parapet walls, large blisters, and surface breaks shall be repaired using GEOGARD SEAM SEALER and PERMAFAB roofing fabric. Refer to appropriate BUR / Modified Bitumen application specifications for additional information.

Application

ALUMANATION 301 can be applied by brush, roller, or spray gun to specified coverage rates.

Spray Equipment Recommendation

Pumps: Graco King 45:1, Graco Bulldog 30:1 or gas powered equivalents. Graco GH733, HydraMax 350 or GMax 7900 or other manufacturers equivalents.

Hose/Pressure: 50 – 300 length (depending on spray rig pressure). When using hoses longer than 100 use the next larger hose ID every 50 . Every 50 of hose will reduce the spray pressure of the rig by 10% at the gun tip.

i.e. 300 hose – 3/4" (50/100) to 1/2" (50/100) to 1/4" (50/100) to 3/8" (50)

Good results are generally obtained @ 2000–3000 psi at spray tip.

Gun: Graco Contractor Gun, Graco Contractor FTx gun, Graco Silver Plus or equivalent. (Tip extrusions or pole guns can be used)

TECHNICAL DATA

Weight per Gallon (ASTM D 1475)	8.8 ± 0.2 lbs.
Specific Gravity (ASTM D 562)	1.00 ± 0.2
Solids (% by Weight)	61% ± 1%
Solids (% by Volume)	47% ± 1%
Viscosity	126 ± 2 K.U.
Metallic Content (ASTM D 2824)	Min. 15%
Flexibility @ 32°F (ASTM D 1737)	Passes 1/4" diameter mandrel bend
Dry Time (ASTM D 1640)	24 hours
Flashpoint (ASTM D 3278)	105°F
Reflectance (ASTM C 1549-02)	>60
Clean Up	Mineral spirits

COVERAGE

Metal	2 gal./100 sq. ft.
Smooth Built-Up/Modified Bitumen Roofing	2 1/2 gal./100 sq. ft.

The surface dictates the actual coverage. The amounts shown are intended as minimum application information. Over corrugated and irregular metal surfaces, allow for additional surface area by multiplying square feet by 1.15 minimum.



REPUBLIC
RESTORATION SYSTEMS

TREMCO

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ALUMANATION® 301

Tip Sizes:

Fan Width (in)	.039	.041	.043	.045	.047	.049
10"-12"	539	541	543	545	547	549
12"-14"	639	641	643	645	647	649
14"-16"	739	741	743		747	749
16"-18"	839	841	843		847	
Flow Rate	1.60 gpm	1.80 gpm	1.98 gpm	2.17 gpm	2.37 gpm	2.58 gpm

- Graco Heavy - Duty RAC Switch tips (GHDXXX)

Maintenance

It is recommended that the coating application be checked on a regular schedule with additional inspections after the system has been exposed to severe conditions. Recoating or small area touch up can be made at any time by following recommended application procedures.

Technical Services

Technical advice or service on suitability of material for specific application and end-use requirements is available from the manufacturer. Refer to label and Material Safety Data Sheet (MSDS) for precautionary information.



Tremco Incorporated

3735 Green Road, Beachwood, OH 44122

U.S.: 800-551-7081

50 Beth Neilson Drive, Toronto, Ontario M4H 1M6

CA: 800-668-9879

www.tremcoroofing.com

ALUMANATION 301 is a U.S. registered trademark of Republic Powdered Metals, Inc.

The information provided on this data sheet is effective as of January 2014 and supersedes all previous data concerning this product and its application.

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SECTION 011000 - SUMMARY OF WORK

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. This section summarizes the scope of work to be performed at the Dufief Building located in Gaithersburg, MD.
- B. Information in this section is provided as a general overview of the project scope, and as such, does not grant authority for deviation from the specifications for product, execution, or quality assurance. The Contractor shall remain solely responsible for comprehensive review of all project documents.

1.2 GENERAL PROJECT REQUIREMENTS

- A. The following paragraphs are generally applicable requirements for performance of work on this project.
 - 1. The building must operate continuously without Interruption. The Contractor shall perform work according to the following conditions and as necessary to prevent interruption of the buildings operations:
 - a. All security requirements shall be followed.
 - b. Materials, equipment and set-up areas shall be where designated by the Owner.
 - b. Roadways shall remain accessible during the project.
 - c. The existing roof system is in a watertight condition and must be maintained in a constant watertight condition during the roofing project.
 - d. The new roof system shall be maintained in a constant watertight condition.
 - 2. Construction details for the work of these specifications are as noted on the contract drawings. The project details shall govern product installation unless the product manufacturer requires a more stringent detail for purposes of proper product performance or system warranty, in which case, the manufacturer's detail will govern. In instances where specific conditions exist that vary from the project specification construction details or the manufacturer's standard details, the Contractor shall submit a manufacturer approved shop drawing for consideration by the owner. Installation shall not begin until approval by the Owner has been given.
 - 3. As stated elsewhere in the contract documents, all safety, health, and environmental regulations of either local or national legislative bodies, as well as those of the product manufacturers, shall be complied with by the successful bidder for the project work. The cost of compliance with such regulations shall be included in the bidders base bid without expectation for compliance waiver or change order.

June, 2017

4. The Contractor shall exercise all due precaution to prevent disruption to the occupancy of the facility interior or grounds. Every effort must be employed to prevent causing additional damage to the existing roof system while working in an adjacent area, point overloading of the roof deck, damage to roof areas not in this contract. In the event that new leaks or other such disruptive or damaging conditions are brought on as a result of the Contractor's negligence, poor judgment, or failure to comply with the project specification requirements, the Contractor shall repair such damage to the satisfaction of the Owner at no additional charge to the Owner.
5. The Contractor shall maintain a complete set of project specifications and contract drawings on the roof top during the course of work on this facility. Failure of proper installation by the Contractor, due to unavailability of project specifications or drawings on the roof, constitutes negligence.

1.3 GENERAL DESCRIPTION OF WORK

A. Area of Work:

1. **Base Bid Work:** Roof Areas shown on the Roof Plan, of the contract drawings and identified as The Areas Of Contract shall be cleaned using a pressure washer and wax free detergent at a minimum 3,000 PSI. After pressure washing, any additional loose rust or paint must be wire brushed away. Any tight rust or existing coating may remain. All horizontal seams will be reinforced with a three course application GeoGard Seamsealer and permafab. All fasteners will receive a covering of GeoGard SeamSealer (Dallop). A one coat application of Alumination 301 will be applied at 1 Gal/ 100 sq. ft. Provide a 12 year manufactures warranty.

1.09 JOBSITE AND ROOF TOP CLEANING

- A. The following paragraphs refer to the proper project cleaning procedure to be employed on this project.

1. General Debris

- a. The Contractor shall keep all staging and work areas free of debris by policing these areas daily. This includes perimeter of dumpsters or trash containers.
- b. Dumpsters used for work generated debris collection shall be covered nightly to prevent wind blown trash from leaving the container. Dumpsters shall not be filled to overflowing nor shall they be allowed to remain on site, in a filled condition, more than 24 hours before dumping.

Dufief Building
Gaithersburg, MD

June, 2017

- c. Upon completion of work in an area, or change in the project staging area, all trash and debris shall be removed prior to departure.

2. Restoration of Project Grounds

- a. Repairs or restoration to the project grounds, sidewalks, driveways, parking lots, trees, shrubs and lawn, where damaged due to construction activity, shall be performed to the complete satisfaction of the Owner.

- END OF SECTION -

1 THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION

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5 HISTORIC AREA WORK PERMIT - :

7207 Spruce Avenue :

6 - - - - - X

7 PRELIMINARY CONSULTATION - :

9 West Irving Street :

8 - - - - - :

9 PRELIMINARY CONSULTATION - :

5710 Surrey Street :

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11 PRELIMINARY CONSULTATION - :

15021 Dufief Mill Road :

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A meeting in the above-entitled matter was held on

June 14, 2017, commencing at 7:30 p.m., in the MRO

Auditorium at 8787 Georgia Avenue, Silver Spring, Maryland

20910, before:

COMMITTEE MEMBERS

Bill Kirwan, Chair

Brian Carroll

Marsha Barnes

Kenneth Firestone

Kathleen Legg

Deposition Services, Inc.

12321 Middlebrook Road, Suite 210

Germantown, MD 20874

Tel: (301) 881-3344 Fax: (301) 881-3338

info@DepositionServices.com www.DepositionServices.com

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ALSO PRESENT:

Scott Whipple

Michael Kyne

Dan Bruechert

APPEARANCES

STATEMENT OF:

PAGE

William Henning

8

Luke Olson

22, 48

John Fitzgerald

23

David Bralove

27

Brian Reilly

50

Jef Fuller

58

Kim Centrone

62

Terry Korth

74

Rabbi Sholom Raichik

74

1 MR. CARROLL: Michael, can we just see a picture
2 of the front of the garage? Okay, I just think that, you
3 know, the garage would work, possibly could contribute a
4 little bit more. But it's not a game changer for me.

5 MR. WHIPPLE: One of the Commissioners that is not
6 here raised that issue, and so, the extent to which you can
7 do a little bit more research and we'll lay that issue to
8 rest.

9 MR. OLSON: Sure. Happy to work with Staff to do
10 that.

11 MR. FIRESTONE: Looking at the size of this
12 garage, I would suspect, because it looks like it's what, at
13 least a two car garage, it's pretty wide. Historic garages
14 tended to be smaller because the cars were smaller and
15 fewer. So, I have a feeling this is not historic. But
16 that's just a gut feeling.

17 MR. KIRWAN: All right. Thank you very much. We
18 look forward to seeing you come back with a HAWP
19 application. All right, the next item on our agenda this
20 evening is a preliminary for Case II.D at 15021 Dufief Mill
21 Road. Do we have a Staff Report?

22 MR. BRUECHERT: Good evening. Yes, we do. And
23 this is 15021 Dufief Mill. It's a Master Plan Site known as
24 the Maple Spring Barns. It was developed in 1918 and
25 operated until about 1942. The farm itself was 355 acres

1 and was considered a model 20th century dairy operation.
2 The site now consists of 1.8 acres. So, as far as the
3 context goes, that is pretty much been eradicated by
4 development in the surrounding area. As a Master Plan Site,
5 it's supposed to be reviewed under Chapter 24A, Section 8,
6 and the Secretary of the Interior Standards for
7 Rehabilitation.

8 So, what the applicant is proposing to do is
9 convert the pre-1942 barn and a later addition into a pre-K
10 through primary school. Doing this, what they propose is a
11 pretty delicate hand. But the site offers a certain amount
12 of challenges to go along with that. So, just bullet
13 pointed, they are going to need to replace the main entrance
14 doors which are non-historic, the entrance steps and the
15 accommodating ADA ramp. They're proposing to replace
16 deteriorated windows with matching replacements. They are
17 proposing to strip the metal roof and cover it with a liquid
18 membrane. They are removing the south ramp and its
19 entrance. They are proposing to relocate the HVAC condenser
20 units.

21 There is one set of barn style doors that are not
22 weather tight and are currently inoperable. They are
23 proposing to make them both weather tight and operable.
24 There is a two-story barn building that in a site visit I
25 was not able to see. A large portion of the site is

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1 withered over. They're proposing to remove that in order to
2 operate as a school, some signage will need to be involved.
3 There was no indication of what the signage was proposed or
4 located. And hardscape alterations. Again, this is a
5 preliminary review and what we're dealing with largely is
6 conceptual in nature rather than getting into specifics
7 about alterations. But again, the plan does have a very
8 delicate hand.

9 So, again, it's a 1.8 acre lot. What you're
10 looking at is the south elevation of the main barn buildings
11 with the two silos. These are all historic features. In
12 the rear corner of the lot is a one-story block building,
13 and that is visible and accessible. They're proposing no
14 changes for that. And there is a smaller two-story barn
15 identified with a loft which is not accessible, and is
16 proposed for demolition.

17 So just walking around the site, you can see that
18 the barn is at an angle to both streets. What you're
19 looking at would be the principal entrance, sort of obscured
20 by the trees in the shadow, but you can see, clearly see the
21 ADA ramp. You can see the later non-historic addition which
22 is blocked to your right. It has non-historic windows
23 throughout. Just walking around the building. Again, what
24 you see between the silos is the barn loft doors which
25 they're proposing to make weather tight, and rehab as

1 necessary. Some repointing work will need to be done in the
2 silos. There are some non-historic window openings which
3 will be replaced in kind. As you go, just a better detail
4 of the loft access. This is the rear. You currently have
5 some ground condenser units. Those will be relocated. I
6 think the applicant has identified where they will be
7 relocated. There are some additional vents that are going
8 to be closed and windows replaced in the rear.

9 This is the rear of the non-historic addition. On
10 the right you see a close up of a non-historic window. The
11 ramp providing access is proposed to be removed as part of
12 the plan. They will block in that door and replace it with
13 a window. That's happening a number of other locations.
14 And then, now we're back to the front. Again, you see the
15 sort of crumbling concrete and pipe rail, ramp and steps
16 with a non-historic entrance addition which because it was
17 too bright, I was unable to capture the details in a
18 photograph.

19 The applicant is proposing to lower the first
20 floor level of the interior of the barn so it will require
21 reconfiguration of the door, the steps, and the ramp along
22 the way. So perhaps some guidance from the Commissioners in
23 attendance as to what would be preferable, I think would be
24 helpful. So again, it's a tight site. Access will be a
25 challenge. But again, the applicant is proposing a pretty

1 light hand with everything. And so, in addition to the
2 Staff Report, just some additional questions or concerns
3 that Staff had for the applicant and the Commissioners may
4 have as far as the condition of the two-story barn building,
5 the entrance door, and access design. How signage will be
6 integrated into the site, perhaps in a way to maintain
7 what's left of the historic character of the building. And
8 then, is the liquid membrane roof an appropriate treatment
9 for the metal gambrel roof?

10 And then, based on the Commission's
11 recommendations, either return for a preliminary, a second
12 preliminary, or come in for a full HAWP. Are there any
13 questions for Staff?

14 MR. KIRWAN: Any questions for Staff? No, I hear
15 none so let the applicant provide us their testimony.

16 MR. FULLER: Good evening, my name is Jef Fuller
17 with DNT Architects. I'd like to introduce also Rabbi
18 Raichik, who is the property owner, Terry Korth, from Korth
19 Construction, who's acting as project manager, and Kim
20 Centrone, from our office. I wanted to start by thanking
21 Staff because this project is an incredibly compromised
22 project with a lot of overlapping jurisdiction. We set up a
23 meeting with the rest of the M-NCPPC staff because we have
24 floodplains that come up to the face of the building. We
25 have all kinds of non-conforming development that comes

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1 within property lines and just doesn't have adequate
2 setbacks. So we had all kinds of issues we have to deal
3 with. So Staff was very beneficial in setting up a meeting
4 with all of the staff so we could try to get input and not
5 have to try to solve our problems one at a time. We did a
6 similar thing with DPS because there's just an awful lot of
7 issues here.

8 Also, obviously, I want to thank Dan for putting
9 together a Staff Report. I obviously don't really need to
10 go into too much of the background on the historic barn.
11 It's a great barn, but unfortunately, it's been
12 significantly compromised. Obviously the cows and the
13 fields are gone. The barn itself, in that picture there you
14 can see what was a molting shed. There were two additions
15 on that originally. It was only the center section of the
16 barn that got expanded out and continued all the way
17 through. The barn used to be associated with the house on
18 the adjoining lot. It was completely separated off, so the
19 barn is sitting sort of out by itself. There's pavement
20 throughout the property.

21 The facility was renovated to turn and put a vet
22 clinic on the first floor of the facility. They occupied
23 that. They expanded it a couple times over time. But the
24 building sat empty for 10 years. Basically, nobody wanted
25 to take on the challenges of dealing with this property,

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1 dealing with HPC staff, dealing with all the issues with
2 Park and Planning, and all the other contradictions to go in
3 with an old barn. So I really have to commend the Rabbi for
4 deciding, hey listen, I'm going to make this thing happen.
5 Let's get it away from being an eyesore and let's turn it
6 into something that the community can be proud of again.
7 And basically his congregation is up the street, and they're
8 looking to set this up as a primary and a pre-school.

9 Some of the other things that have happened to the
10 building in terms of changes that are there. There's been
11 deterioration by neglect. Years ago when they added the
12 cell towers, we actually asked to have a number of things
13 taken care of that were never done. So it's 15 years later
14 that continue deteriorate on the facilities. To clarify, on
15 the building that we're looking to demolish, that is
16 completely located in the floodplain. It's across the creek
17 from the main building itself. I would actually say it's a
18 machine shed rather than a barn, it has a loft over it, and
19 it's in really bad shape. And we really cannot touch it
20 because it's in the floodplain. So we prefer to tear it
21 down and turn it into some play area.

22 I know nobody likes to tear down part of a
23 historic fabric, but it's either going to be demolition by
24 neglect or letting the stream take it out for us, or we take
25 it out at this point in time and take advantage of it. All

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1 throughout the perimeter of this building there's been all
2 kinds of things added to it. There's condensing units all
3 around the perimeter of the building. There's the large fan
4 coil units on the back side of the building where we do plan
5 to put more improvements. There are the front door, as
6 pointed out, the handicap ramp getting into the building.
7 There's a number of different things that are out there. So
8 it is a significantly compromised resource in its own right.
9 It is not a pure and clean facility.

10 We're trying to clean up a few of those. We're
11 trying to then be able to turn into something that is
12 productive. The issue of raising or dropping the floor to
13 raise the ceiling height, cow barns, they're not known to
14 have high ceilings on the first floor. So, what we're
15 trying to do is lower the first floor by about a foot.
16 That's only about eight inches just to have a little bit
17 more clearance because it's incredibly tight inside the
18 space, and it just doesn't kind of create the feeling we'd
19 like to see in the overall facility.

20 We've done some investigation in terms of, you
21 know, we really believe we can make that happen. So we're
22 going to try to turn it into a better facility from that
23 standpoint. We are looking to upgrade the skin of the
24 building to make it comply with energy codes so that we can
25 turn it into something that's going to be more favorable on

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1 that side of the world as well. So we are really trying to
2 bring it into the 20th century. We're not at the present
3 time planning to touch what was the hay loft. At some point
4 in the future we may be coming back for something where we,
5 because we have issues with egress to deal with that right
6 now. But it's a great assembly space because it's column
7 free space, and so we're trying to preserve it as much as
8 possible for something we can work with in the future. We
9 know we have a number of challenges to deal with on that.
10 We've got an awful lot on our plate right now for what we
11 want to try to do just to bring in and make the school work.
12 Kim, why don't you walk through what we're trying to do.

13 MS. CENTRONE: So, I think you touched on most of
14 the things.

15 MR. KIRWAN: If you could just state your name for
16 the record?

17 MS. CENTRONE: Oh, I'm sorry. Kim Centrone. What
18 did you miss?

19 MR. FULLER: Just walk through a little bit about
20 the operation of how it's set up in terms of the school.

21 MS. CENTRONE: Sure. Jef mentioned that we're
22 going to be upgrading the skin. That's, just to clarify, on
23 the interior of the building, not on the exterior. The
24 exterior will just be repair and replacement as necessary of
25 the historic elements. Inside the school there's going to

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1 be eight classrooms, and a multipurpose room. On the
2 outside, we're looking at that ramp -- so yeah, that will be
3 lowered eight inches. I think that'll help clear up that
4 facade a little bit. And then, on the, you just showed the
5 long side, that side, we'll be taking that ramp out and the
6 door as was mentioned. That side has a pretty even spacing
7 of windows, but there are some areas where there aren't
8 windows for a length of the facade. We're looking to add
9 additional windows that are in keeping with the existing
10 spacing and style, just to get some more light into the
11 classrooms. And the paving on this side of the building
12 will be mostly removed, other than a loading area, which
13 will also help environmentally because its the floodplain.

14 MR. FULLER: The paving actually right now
15 literally overhangs the creek. So we're trying to take that
16 out. I know that's not something for your side as much, but
17 we're trying to turn this back into a green area so it's
18 useful. And we will plan to locate some of our condensing
19 units behind screened walls.

20 MS. CENTRONE: Yes, there's paving on the other
21 side of the creek as well, which will also come out to
22 create a grassy play area for the primary school students.
23 The preschool play area will be at the back end of the
24 building. And so, that little extension where the exit door
25 is, there's a door missing. We're going to add a door in.

1 In one of the options for MEP, there will be a condensing
2 unit placed back there, but it would be screened with
3 fencing and landscaping. And that area will have the paving
4 removed as well. Is that time up?

5 MR. KIRWAN: Time is up, but we'll let you close.

6 MS. CENTRONE: Okay. So that would be -- the play
7 area is required to be a minimum of 2250 square feet, and it
8 just fits in there without getting into the floodplain. So
9 we're keeping it out of the floodplain, and we'll put some
10 composite climbing equipment in that area.

11 MR. FULLER: A couple of specifics we'd like to
12 hear from the Commission on. Again, it's sort of dealing
13 with conflicting requirements. From a standpoint, from an
14 environmental standpoint, nobody's happy to see us put
15 fencing around the creek because it tends to, it's in the
16 floodplain, but at the same time we can't let little kids
17 fall into the creek. So that what we're right now proposing
18 is a split rail fence with a six inch more or less chicken
19 wire that's backed into it, as a solution that it's at least
20 small enough to keep the kids from getting through, but at
21 least larger debris if it were to flood would go through
22 there.

23 We then have a fence around the actual play area.
24 We're proposing chain link fence, which again, is not
25 particularly in keeping with what's here, but we think it's

1 the most appropriate for the protection of the children, and
2 it will be, again, on this back side of the building where
3 you really won't be seeing it from the street or anyplace
4 else. One of the other issues we've talked about is the --
5 what happens to the front door of the building. Our
6 proposal is right now is to stay with the glass door, and
7 quite frankly, probably use black mullion so that as you're
8 driving down the street, it looks like an open barn door.
9 You know, we don't want to accentuate it to do anything
10 special with it.

11 We're obviously going to clean up the front ramp
12 from the concrete and the pipe rail that's out there. But,
13 that and then the issues on the mechanical units. We did
14 consider looking at a system that would require us basically
15 to try to create louvers over each one of the windows to
16 bring in outside air individually. What we're really, we
17 feel that that's really not the right solution with the
18 fabric of the building. So what we're looking at is, we're
19 putting a, one fresh air handling unit on this back end of
20 the building that will basically be ducted throughout the
21 rest of the building, and then we're going with either a VRF
22 or a condensing split systems with a lot of small units, and
23 we basically create three groups of condensers or VRS that
24 on would be on this back side, and two, on the back short
25 side, and the other two would be on the back long side.



1 MS. CENTRONE: On other item we forgot to mention
2 is, there is a chimney on the street side of the building.
3 The chimney to the right of the right hand silo there will
4 be removed. We don't believe that it's a historic chimney.
5 We think that it was added for mechanical equipment.
6 There's a lot of mechanical equipment inside the building in
7 that area that will be removed, and we would patch the roof
8 back in to match existing. The metal roof will stay, and I
9 don't know, it sounded like there was maybe there was some
10 confusion about whether it would be taken off or stripped.
11 It will stay and be coated to make it waterproof. Because
12 right now it does leak a little bit.

13 MR. FULLER: Thank you for giving us a few extra
14 minutes.

15 MR. KIRWAN: Absolutely. Thank you for your
16 testimony, appreciate it. Any questions --

17 MS. CENTRONE: Sorry. The Rabbi just reminded me,
18 there are also some windows behind the shrubs near the
19 chimney. There are some windows that were blocked over,
20 they either have mechanical louvers or just plywood filled
21 in. We're going to try to restore them to match the others.
22 There's one that might be too far into the corner, but.

23 MR. KIRWAN: Questions for the applicant?

24 MS. BARNES: If we could come back to the front
25 where you are going to drop the interior floor level and

1 reconfigure this. Help me understand a little bit better
2 how this is going to work? I'm a tad confused.

3 MR. FULLER: Basically, what we found is in some
4 parts of the old barn, some of the old concrete is actually
5 there buried under a slab. Basically right now, there's
6 three levels of the interior slab, and it's a more or less
7 flat concrete. But what we found is there's sort of buried
8 underneath that, there's troughs, there's other things like
9 that. And our intention is to go in, we did some
10 doublechecking as to depths of foundations. It looks like
11 we can probably excavate down somewhere in the 8 to 12 inch
12 range. So in the interior of the building, it is our
13 intention to basically over excavate down 12 inches plus or
14 minus so that we can get down to the top of the existing
15 footings. We'll pour a new slab at that elevation. So the
16 finished floor on the inside will drop roughly 8 to 10. If
17 we can get anymore, we'll do it, because while we're there,
18 we'll just go to whatever extent we can get to. So then at
19 the front --

20 MS. BARNES: And what's going to happen?

21 MR. FULLER: We'll demolish the entire front stoop
22 and ramp that's out there, and we'll be rebuilding. We have
23 to have the stairs to come up. It's still going to be two
24 steep. We're still going to have to have a ramp, but we'll
25 come up, and in our final HAWP we'll have details of sort of

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1 a screen ramp system and coming up in front of the building.

2 MS. BARNES: So you'll have steps up to the front
3 entrance, and then steps down as you come inside?

4 MR. FULLER: No.

5 MS. CENTRONE: No. It'll be, I think we have five
6 steps up right now. It'll be four, probably four steps up
7 instead, and it'll be a single run ramp, similar to the
8 longer portion there, but shorter than it is now because it
9 doesn't need to go as far.

10 MR. FULLER: But the stoop on the outside will
11 align with the new footing, the new floor on the inside.

12 MS. BARNES: Thank you. And I appreciated the
13 clarification about the coating on the metal roof, because I
14 was concerned about the metal roof, which is a clearly
15 defining feature of the barn.

16 MR. KIRWAN: Yeah, I think just as a follow-up
17 question. I was going to ask it as a question but, you've
18 somewhat answered it. I think when you come back, whether
19 it's another preliminary, would probably make sense to do
20 before you come back for a final HAWP. Mainly because we've
21 got a lot of missing Commissioners here, but I think there's
22 a lot of information that we would need to at least see, you
23 know, solutions to. You've talked about solutions, but I
24 think we want to graphically see those solutions, such as
25 the front entrance. But, I think it would be helpful in

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1 your future presentation of materials, to provide us with
2 some information on that coating system. I would want to
3 feel a little relieved that we're not going to lose the
4 detail in the seams in the metal roof. I'd like to kind of
5 get a better sense of how thick the coating is, you know,
6 and all those things. But with your application the next
7 time, provide that information with it. Commissioner
8 Carroll?

9 MR. CARROLL: I just, I understand you've got
10 quite a large building here, and trying to get the HVAC
11 system in there. Have you considered using the ventilators
12 that are on the top of the building at all, because you said
13 that you're not putting anything in the loft. Is there any
14 opportunity for getting HVAC system up there and possibly
15 using those for fresh air?

16 MS. CENTRONE: So there's not a current -- we're
17 not currently planning to use that space, but in the future
18 they'd like to use it as an assembly space. They would like
19 to keep that area as open as possible and reduce duct work
20 and maintain that aesthetic of the peak without adding a lot
21 of duct work to the peak.

22 MR. CARROLL: Okay, thank you.

23 MS. BARNES: I also wanted to say and I neglected
24 to before, that I really appreciate the effort being
25 undertaken to use this property, because as was noted, it

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1 had been vacant for a number of years and that does the
2 property no good. You end up with demolition by neglect.
3 You lose the resource and it was obviously a very prominent
4 as a dairy farm at one point. So, I applaud the daring and
5 the commitment to look at undertaking what is a pretty
6 daunting project. So thank you very much for that.

7 MR. KIRWAN: Any other questions? Let's move into
8 deliberations. I'll just go ahead and kick things off.
9 Pigtailling onto what Commissioner Barnes just said, I think
10 this is a great opportunity that you guys have undertaken,
11 and we greatly appreciate it as people who are concerned
12 with preservation in the county, that you guys are bringing
13 this building back to life. It's a great thing that you're
14 doing, and we thank you for that.

15 I think I, you know, generally look at this
16 preliminary as kind of a conceptual review of what you
17 intend to do with this building. I don't really have
18 anything that I'm majorly concerned with. I think it's
19 really going to be in the details. We're going to want to
20 see more information. So, I think if you come back for a
21 second preliminary, I think we want to see, you know, the
22 elevation of the front of the barn with the new stair system
23 and the ramp, and the doors, so we can really understand
24 what that's going to look like. Similarly, the new window
25 changes and all those other things. I think in addition to

1 the site plan you provided, we want to see the floor plan
2 and the elevations, and all those other things that Staff
3 can clearly advise you on to provide when you come back.

4 So, I think that's really what I'm anxious to see
5 and eager to see when you come back. I think there's some
6 great things to talk about once you do. To sort of answer
7 Mr. Fuller's points that he wanted us to address. I think
8 generally with the fencing you've proposed, I think all
9 those things are fine in concept. Again, we usually would
10 see the fence drawings in a future application. So I think
11 seeing those will be helpful. I think, you know, the
12 fencing you described around the creek seems appropriate.
13 The chain link for the playground seems appropriate. You
14 know, a black vinyl coated chain link might be the more
15 appropriate than just a galvanized metal.

16 I think the front door you described sounds
17 appropriate to me. I don't think it necessarily has to look
18 like an historic barn door. I think it could look like a
19 modern entrance door system, and described with black
20 mullions makes sense. The mechanical units, the chimney
21 being removed, the restoration of windows that have been
22 filled in, I think all that sounds terrific. So, I think
23 really it's just, I think we'd be very excited to see those
24 things graphically next time you come in.

25 MR. CARROLL: I just want to say that I'm familiar

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1 with this building and I do want to applaud you for taking
2 this on, because I didn't even realize that there were the
3 floodplains. And, I mean, as an architect, that just makes
4 me lose sleep thinking about it. This facade is being
5 described as the front, but I think the way that most people
6 experience the building really is from the Darnestown Road
7 side. And when you go around to that side, the silos and
8 the roof are really the most prominent features. So those
9 are the things that I'm going to be looking at. When you
10 get around to the back and you're talking about taking out
11 that secondary ramp and some windows, and that block
12 building, I just think it's not very visible. I think it's,
13 you know, what you do back there is really, you know, we're
14 going to be able to be a lot more lenient.

15 The address is the Dufief road side. But I think
16 this is really the way that people experience the building.
17 And, I think dropping the floor, you know, every inch you
18 take out of the ramp you lose a foot of ramp, so it's,
19 that's great. Like I said, I applaud you for taking this
20 on, and I don't see any reason to stand in your way with any
21 of this. I do want to see, I wrote down, membrane roof,
22 when they said that at first, I thought, ugh, that would be
23 a huge change for this building. So, I do want to see some
24 specs on the coating just to make sure that the roof still
25 reads as a metal roof. But, I don't see any reason to give

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1 you guys a hard time about any of this. So, just to say
2 thank you for taking it on.

3 MR. FULLER: Just to, again, to reinforce the
4 issue on the membrane, it's basically a product that's been
5 out, people have been putting it on standing seam roofs for
6 a really long time, and it covers little pit holes, things
7 like that. It gives you an extra 20 years of life out of
8 the standing seam type roof system. So, the character of
9 the roof will stay as is, and it overlaps the seams. So
10 being a membrane, it actually helps when you have a standing
11 seam to get to it. It's not going to solve some of the air
12 gaps we have in the roof that we have to deal with.

13 MR. KIRWAN: So, is it really more of a coating,
14 liquid applied coating than it is a membrane?

15 MR. FULLER: It is a membrane. It ends up as a
16 membrane, but it is not like an EPDM. It's not something
17 that has texture to itself when you paint it on, it's a two-
18 part paint system that you put down a base that spans it,
19 then you put a coloring system on.

20 MS. CENTRONE: It's applied by a painting
21 contractor.

22 MR. CARROLL: I would be exaggerating if I said I
23 had fond memories of doing that on a roof. But I have done
24 it on a roof, and it's a fiber impregnated paint that goes
25 on the roof.

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1 MR. FULLER: I almost rolled off of my front porch
2 --

3 MR. CARROLL: Put it on with a mop.

4 MR. WHIPPLE: Even if you could give us some
5 photographs of it, where it's been installed, would be
6 helpful.

7 MR. RAICHIK: Just to point out, Mr. Carroll, the
8 front of the building, Jeff will correct me, what you see
9 here on the building basically will not, there's nothing
10 changing on this, from this facade, if I have that correct.

11 MR. FULLER: I hope it cleans up and looks a
12 little better.

13 MR. RAICHIK: Yeah, except for that. New barn
14 doors, etcetera. But the facade, which is the, as you said,
15 the primary feature, is going to remain as you see it.

16 MR. KROTH: But I just want to make sure you're
17 still committed after you heard what they said?

18 MR. RAICHIK: I may have heard the word naïve
19 somewhere.

20 MS. CENTRONE: We will be adding a green traffic
21 island to the parking lot to break up that expanse of
22 asphalt as well.

23 MR. KIRWAN: Yes, I saw that. That'll help a lot.

24 MS. LEGG: I also want to thank you guys for
25 coming in for a prelim and I think that a second preliminary

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1 hearing would be really helpful. Some of the things I'd
2 really like to see is sort of your plans for the fence,
3 where it's going, what the site plan is going to look like
4 without the asphalt. Just some more details. But I guess
5 you all have gathered that from the previous Commissioners
6 who have spoken.

7 MR. FIRESTONE: I think it looks like you're
8 heading in the right direction with this project. At this
9 point, you know, conceptually it sounds fine. We need more
10 details. A lot more details. So when you come back,
11 probably for another preliminary, details. More visuals.

12 MS. BARNES: I would like very much to see this
13 project succeed, and as has been noted, we'll need more
14 detail so that we can better understand it. I have to say
15 the longer I look at this particular image, the more I'm
16 struck by how the silos appear to be guard towers guarding
17 what is almost fortress like because of the roof. And I
18 think it's really very, very dramatic, and I like the idea
19 that you plan to restore those barn doors, and while it's
20 not the primary facade, it is the one that will be most
21 visible, I believe, to people passing by. So it's quite
22 stunning. Thank you.

23 MR. KIRWAN: All right. So you've heard from all
24 of us tonight who are here. So I think you've got some good
25 direction, and we do look forward to seeing you come back

1 and seeing further development.

2 MR. FULLER: We'll definitely be back whether we
3 come as a preliminary or final, to be determined. We
4 recognize if we come as a final that we're taking the risk
5 on ourselves.

6 MR. KIRWAN: Thank you very much. And, I do want
7 to say a special hello to former Commissioner Fuller. Thank
8 you for coming in tonight, it's good to see you. It's been
9 a while. The next item on our agenda is the tax credit
10 applications for calendar year 2016, Group III.

11 MR. KYNE: Yes. We have seven tax credit
12 applications this time that we are asking you to grant us
13 approval to forward on to the Office of Finance.

14 MR. KIRWAN: Do we have a motion?

15 MS. BARNES: I would like to move that we approve
16 the transmittal of Group III of tax credit applications to
17 the Office of Finance.

18 MR. KIRWAN: Do we have a second?

19 MR. FIRESTONE: I'll second.

20 MR. KIRWAN: All right. Any discussion? All in
21 favor, please raise your right hand.

22 VOTE.

23 MR. KIRWAN: That motion has been approved. Thank
24 you. I think we had two Staff items.

25 MR. KYNE: That is correct. We had a Staff item

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