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Responses to Questions

Kappa Delta Renovations/Expansion

AG Architects Project No. 18-738.1
3 January 2019

These are the questions received from Michael Behrendt, Town Planner, on 17 December 2018, along with our responses:

- According to your application there are 45 residents now. Are these all members of the sorority or does this include others? This number will not increase, right?
  I count 1 single and 1 double room on the first floor, 10 double rooms on the second floor, 10 double rooms on the third floor. This totals 43 occupants (of the sorority?). The guest and house director would equal 45. Is that correct?

  Only members of Kappa Delta Sorority, including the House Director, currently live in the building. The number of occupants is not planned to increase beyond the 45 members. This would include 1 single room and 1 double room on the first floor, 10 double rooms on the second floor, 10 double rooms on the third floor, the first floor "Guest Room" for a related guest or to serve as an "Accessible" single, and the first floor House Director.

- Can you give more information about composite siding? Is this the same as on the building now? The existing is not being replaced, right? The colors will be the same, right?

  The existing and proposed siding is Royal Building Products Celect Cellular Composite Siding, 7" Clapboard and 7" Shake siding with Azek or equal Cellular PVC Trim. The existing material is planned to remain on the first floor and be replaced on the second floor where windows and the accent band are changing. The colors will be Cotton (yellow) and Latte (gray/brown), which match the existing colors as near as possible. We will bring samples to the Planning Board Public Hearing.

1) The application was accepted as complete and the public hearing was set for January 9.

   We are providing information for the 9 January 2019 Public hearing.

2) The site walk is scheduled for next Wednesday, December 19 at 3:00. Please join us. Can you stake the corners of the addition?

   The site walk took place as scheduled. The building corners and limits of grading were marked out.

3) The board did not approve the waiver for the site survey. When can you get the survey information to us?

   The boundary survey has been scheduled to be completed by Doucet Survey. The tentative date for completion is 18 January 2019.

4) Please submit a new or revised response to the 8 criteria for the conditional use for the height of the building to exceed 30 feet.

Our responses to the eight criteria for the conditional use for the height of the building to exceed thirty feet are attached. The maximum height for buildings along this section of Madbury Road are limited to thirty-five feet height. The proposed building is 34'-6 1/4" high, only 2' -2" higher than the existing building.

5) Please post the sign for the public hearing for the conditional uses. Be sure to post it by Saturday, December 30 at the latest. Please email me when the sign is up. "A sign measuring two by three (2 x 3) feet shall be placed on the property by the applicant not less than ten (10) calendar days prior to the time of the public hearing by the Planning Board. The sign shall remain on the property until the conclusion of the public hearing. This sign shall be visible from the most heavily traveled street right-of-way adjacent to the property. The sign shall state the date of the public hearing, the time, the location and the action to be considered."

The signs for the Public Hearing for the Conditional Uses were posted on Friday 29 December2018. An email has been sent to Michael Behrendt confirming when it was posted.

6) We will see you at the Conservation Commission this Monday for the conditional use for the Wetland Buffer.

The meeting with the Conservation Commission took place on Monday 17 December 2018. The Conditional Use for building within the wetland buffer was approved.

7) Please coordinate with April about the water and sewer and if any permit or fee is needed.

Use of the existing sewer and water utilities has been reviewed with April Talon at Public Works. Whether a permit fee is required or not is pending a review by Public Works with the Water and Wastewater Committee.

8) For the patio, do you have a sample of the stone pavers?

The pavers for the patio are planned to be Techo Bloc Eva Pavers, Champlain Grey. A catalog cut sheet is attached, and we will bring a sample to the Planning Board Public Hearing.

9) Please submit the energy checklist. Then we will arrange a meeting with Audrey and a rep of the Energy Committee

The Energy Considerations Checklist has been submitted to the Town Planner. A meeting with the Energy Committee and Building Inspector has been scheduled for Monday 7 January 2018 at 3:00 PM.

10) Please provide cut sheets of the lights – wall packs and bollard lights. The lighting regs set a maximum of .5 footcandles at a residential property line. Some areas are higher than that.

Cut sheets for site lights including the wall packs, bollards and entry soffit lights are attached and also included in the updated Civil Drawings. The lighting regulations set a maximum of 1 footcandle at non-residential property lines, which the adjacent Alpha Chi Omega sorority is. The updated Site Lighting Layout plan attached and included with the updated Civil drawings complies with the 1 footcandle limit.

11) Please arrange to meet with Mike Lynch about recycling.

Mike /Sievert has met with April Talon at Public Works and confirmed that recycling bins will be used for recycling and that the Town will pick up recycling at the curb on their bi-weekly schedule.

12) Is any landscaping proposed?

Landscaping is proposed as shown in the Landscaping Plan L2 included with the updated Civil drawings.

13) Do you have a design for the fence? Note that the retaining wall around the patio is marked as the fence line.

The existing aluminum picket fence is being reused to the extent feasible. A photo of the existing fence is attached. The fence is also located along the top of the patio retaining wall for safety.

14) Will you be able to place the silt fence on the adjacent lot?

The silt fence is proposed to be located on the adjacent lot as shown in the Civil drawings. Discussions with Alpha Chi Omega are in process.

15) Please provide a construction staging and phasing plan.

The construction staging and Construction Management Plan are included with the updated submission.

16) Can the bike racks be covered with a roof? Is there an opportunity for bike storage inside? Bike storage would be required for 15 bikes. You are showing storage for 8 bikes (4x2). Can you add more racks anywhere? Please submit a waiver request if you can't make space for 15 bikes.

The existing outdoor bike rack which has 17 spaces is planned to be reused as shown in the updated Civil drawings. A photo of the existing bike rack is attached. The bike rack is not planned to be covered and storage indoors is not feasible.

17) Given the close proximity to the adjacent fraternity it would be helpful to get some feedback from the fraternity on the plans. Have you met with them?

Kappa Delta has contacted Alpha Chi Omega Sorority and discussions are in process in order to identify any concerns they may have and to address access during construction. Confirmation will be provided concerning these issues.

18) Art, please give an explanation for how you arrived at the height of the building, based on the definition.

BUILDING HEIGHT – The vertical distance from the mean grade elevation (average grade around the perimeter of the building) to the mean roof elevation. For sloped roofs this is equal to one-half (1/2) of the vertical distance from eave to ridge. For flat roofs, including those with parapets, this is measured to the surface of the roof. Approved roof-mounted appurtenances such as solar arrays, utilities, and telecommunications structures are not considered part of the "building height."

The height of the proposed building was determined in accordance with the Zoning definitions. A full description of how this was calculated is attached.

19) Are there any other issues?

The project is planned to be constructed in two phases due to construction timing, costs and financial limitations. A full description of the proposed phasing is included in the attached description, phasing plans and phasing elevations.

20) When can you get this additional information to us?

The requested information is enclosed and is being provided by 3 January 2019.

MJS ENGINEERING, P.C.
CIVIL • STRUCTURAL • ENVIRONMENTAL

5 Railroad Street • P. O.Box 359
Newmarket, NH 03857
Phone: (603) 659-4979
Email: mjs@mjs-engineering.com

Letter of Intent – Site Plan and Conditional Use Permit Applications for Kappa Delta Sorority Located at 25 Madbury Road, Tax Map 2 / Lot 12-2

November 17, 2018
Revised January 3, 2019

1.0 Project Purpose

The intent of this project is to permit the construction of a new building addition and remodel the existing interior of the existing building to improve living conditions and provide accessibility. Site improvements include new entrances, grading and stormwater treatment.

2.0 Existing Conditions

The subject parcel is located in the Central Business Zoning District (CBD). The parcel is bordered on the south and west by Madbury Commons, the north by another sorority and the east by Madbury Road. The parcel has approximately 152' of frontage on Madbury Road, which is also the main access to and from the parcel. The existing structure is a 2-1/2 story building occupied by the Kappa Delta Sorority with 22 paved parking spaces. The southerly portion of the parking lot is a porous parking area and provides stormwater treatment for the existing parcel. Municipal water and sewer, overhead utilities and natural gas serve the property from Madbury Road. There are no changes proposed to the parking as part of this proposal.

3.0 Redevelopment Proposal

Kappa Delta Sorority is proposing to renovate and expand their existing building in order to improved living conditions and to provide accessibility. The building currently has bedrooms located in the basement, and additional bedrooms/bunk rooms on the upper floors. The existing third floor bedrooms are located under a sloped roof line, hence the 2-1/2 story designation. The proposed improvements include renovating the second floor, reconstructing the third floor and roof, and adding a three-story addition with a basement to the northwesterly rear corner of the existing building. The new addition will include an accessible entrance and accessible bedrooms on the first floor. The site changes include an accessible walkway, minor grading at the front of the parcel and a reconstructed paver stone patio, small retaining wall and underground stormwater treatment facility which meets or exceeds the Town stormwater requirements.

Approvals Being Requested from the Planning Board

The Site Plan Review Regulations and Zoning Regulations will require the following approvals based on the current proposed development scope of work.

1. Planning Board Approvals:
    - Site Plan approval for construction of the new addition and site improvements per RSA 674:43 and the Durham Site Plan Review Regulations.
    - Conditional Use permit, pursuant to Article XII.1;175-53 Table of Uses, Category of Use IV: Institutional use Fraternity/Sorority.
    - Conditional Use Permit, pursuant to Article XIII, Section 175-61; A.1, A.3, A.4 and A.5, of the Wetland Conservation Overlay District for construction of utilities including sewer and gas, a non-residential building within the upland buffer strip in a commercial or office-residential zoning district, a precast block retaining wall and the construction of outdoor recreational facilities that do not require the construction of buildings or structures.
    - Conditional Use Permit, Article XIII, Section 175-54 max building height by conditional use to allow 35', note 7

A. *Request for Site Plan Approval*

In accordance with the site plan review regulations, this submission package includes the Application and Site Plan Review Checklist, and also the following plans are included:

1. Existing Conditions Plan
2. Site Plan
3. Grading, Drainage, Utility & Erosion Control Plans
4. Detail Sheets
5. Drainage Report/Stormwater Management Plan (Report)
6. Architectural design sheets

B. *Conditional Use Permit approval;*

In accordance with the conditional use regulations, this submission package includes the CUP Application along with the above listed plans and supporting documentation.

The statements below demonstrate how this development project complies with the provisions of the general conditions for a Conditional Use Permit contained within Article VII, Section 175-23.C of the Town of Durham Zoning Ordinance and specific conditions for a CUP contained within Section 175-61.B for the Wetlands Conservation Overlay (WCO). The numbering below coincides with the applicable sections. The plans incorporate best management practices for the construction and thereby satisfy the CUP criterion.

175-23.C

1. *Site Suitability:*

   The property is suitable for the proposed expansion because the use currently exists on the site and has since at least 1996. This expansion will provide significantly improved living conditions and accessibility.

   (a) The access to the site is existing, currently provides adequate access and is not changing. Pedestrian access is provided to and from the site by existing sidewalks along Madbury Road. The site is directly connected to the downtown via sidewalks and other public accesses through adjacent parcels.
   (b) Adequate emergency services can be provided with no issue and this expansion does not change the access. Pedestrian access is available to the site and a connection into town currently exists. The site is serviced by municipal water and sewer and natural gas and will remain unchanged; the schools will not be impacted by this development; solid waste will be handled onsite with disposal by a private waste company via the screened dumpster and the owner has an existing recycling program in place.
   (c) The environmental constraints on and adjacent to the property are minimal. The site is not within the floodplain, has no wetlands nor steep slopes. However, the development proposal incorporates a balanced environmental design approach by minimizing grading changes, and providing stormwater treatment. The stormwater collection/treatment system is classified by the NHDES as a best management practice incorporating filtration and detention. The stormwater system will collect, treat, and improve the quality of the stormwater runoff and reduce the peak flow discharged from the site. The existing landscaping is very adequate and there is minimal landscape improvements being added to the north where the new accessible access is being constructed.
   (d) The site is suitable because of the availability of appropriate utilities to serve the existing and intended use and the stormwater system will meet LID standards and provide collection, filtration, some infiltration, and detention.

2. *External Impacts:*

   The external impacts of the proposed use on the abutting properties and the neighborhood will be no greater than the impacts of adjacent existing uses or other uses permitted in the zone:

- The traffic generated by the use will not change because the number of tenants is not increasing. Therefore, there will not be a negative impact to the surrounding properties or public ways as it currently exists and similar to all the other surrounding uses. The proposed building expansion will have minimal impact to abutting properties with respect to noise, odors, vibrations, fumes, and lighting because the use is already in place, the proposed parking area is unchanged. Dust is not an issue and trash removal is provided and is adequate to properly serve the lot uses.
- *The location, nature, design, and height of the structure and its appurtenances, its scale with reference to its surroundings, and the nature and intensity of the use will have no adverse effect on the surrounding environment and will not discourage the appropriate and orderly development and use of the land and buildings in the neighborhood because*:

- The proposed development complies with all of the above requirements because it is an existing structure being used as a sorority and has been for the past 20 years.
- The design of the structure is similar to all of the surrounding 3-4 story mixed use buildings and several other fraternities and sororities in the neighborhood. In addition, the building does not exceed 35' in height. See explanation in response to planner.
- Landscaping and lighting will meet the latest site plan requirements.

3. *Character of the site development:*

   The proposed layout and design of the site shall not be incompatible with the established character of the neighborhood and shall mitigate any external impacts of the use on the neighborhood because:
   - The parking lot remains unchanged and is similar in size to the parking lots on the adjacent properties.
   - The parking lot is existing and is mostly to the site and rear of the parcel and is no different that parking on adjacent properties.
   - Adequate vehicular and pedestrian access to and within the property is provided from existing streets and sidewalks.

4. *Character of the buildings and structures:*

   The design of any new buildings or structures and the modifications of existing buildings or structures on the site shall not be incompatible with the established character of the neighborhood because:
   - The scale, materials, grade and other site amenities conforms to the development standards within the regulations and is similar to other existing structures on and adjacent to the site. In fact, this building is much closer in scale and character to the several other fraternities and sororities in the neighborhood than the mixed use building on the adjacent parcel.

5. *Preservation of natural, cultural, historic, and scenic resources:*

   The proposed use of the site, including all related development activities, shall preserve identified natural, cultural, historic, and scenic resources on the site and shall not degrade such identified resources on abutting properties because:
   - The existing property affords no significant wildlife habitat, is absent of graveyards, wetlands and floodplains, and preserves the existing building character with very minimal changes to the front of the parcel.

6. *Impact on property values:*

   The proposed development will not cause or contribute to a significant decline in property values of adjacent properties:
   - The renovation and expansion provides for improved bedroom sizes and configuration, removes bedrooms from the basement, provides accessibility and will complement adjacent properties. This renovation/expansion will increase the value of this and surrounding properties because of all the improvements.

7. *Availability of Public Services and Facilities:*
   - The site is serviced by municipal water and sewer and this will not change with this proposal.

- Solid waste will be stored in the onsite dumpster and collected and disposed via a private waste disposal company.
- Drainage will be controlled on site and released at a lesser rate than existing as documented in the included Drainage Analysis. The quality of the stormwater leaving the site will be equal to or improved from the existing condition.
- Electric, telephone, and data utilities will be changed to underground from an existing pole on Madbury Road.
- Police and Fire Department review and comment is conducted as part of the application. This site has a central and easily accessible location from the police and fire departments via town roads and there are not changes proposed to this layout.
- The intended use will not cause a demand on any of the municipal services as there is no increase in occupants.

8. *Fiscal impacts:*
    - The facility will not have a negative fiscal impact as there are no school age children living on the site, and no municipal facilities used at the site.
    - Solid Waste/Recycling will be handled by a private contractor and paid for directly by the property owner.
    - Maintenance of the site is the owner's responsibility.

175-61.B

1. *There is no alternative location on the parcel that is outside of the WCO District that is feasible for the proposed use.*

    The building currently exists and was originally constructed in or around the early 1900's with additions on both the north and south around 1965 when the wetland conservation district was not in place as it is today. The wetland is located on the adjacent parcel, but the buffer extends onto this parcel. Given the disposition of the lot with the large front yard and parking lot to the south, this is the only location on the lot for the small addition, which has a minimal impact to the integrity of the building with respect to architecture, size and scale. There is already an existing patio on the parcel in this location, which is being constructed and a stormwater treatment system is being constructed under this area to collect and treat the runoff from the existing roof and the new addition. No alternative location on the parcel that is outside the WCO District is available that would allow the proposed use without a large negative impact to the proposed development and surrounding properties.

2. *The amount of soil disturbance will be the minimum necessary for the construction and operation of the facilities as determined by the Planning Board.*

    The proposed site layout and associated grading and drainage design has been prepared with the primary intent of minimizing soil disturbance by constructing a small retaining wall to maintaining the existing grades and vegetation to the extent feasible. The soil disturbance for this construction is limited to the northwestern side of the site for the building addition, stromwater collection and treatment and patio. The project does not disturb the remaining 80% of the lot.

3. *The location, design, construction, and maintenance of the facilities will minimize any detrimental impact on the wetland and mitigation activities will be undertaken to counterbalance any adverse impacts.*

Every feasible effort has been made in the design of the site layout and grading to minimize any detrimental impacts described above and mitigation activities incorporated as well. These include:

- Providing a significant renovation of the interior to maximize the existing space, and thereby minimize the need for an addition.
- Minimizing grading changes and applying jute matting erosion control to the slopes to provide greater slope stability.
- Use of temporary erosion control measures like silt soxx; construction of a permanent stormwater control systems in addition to the porous pavement that was previously installed to control stormwater from the site;
- Reconstructing the existing roof runoff from the building, which flows directly to the wetland from the parcel by constructing a new collection and treatment system for runoff from the existing and proposed addition.

4. *Restoration activities will leave the site, as nearly as possible, in its pre-existing condition and grade at the time of application for the Conditional Use Permit.*

   Any disturbances outside of the current limits of disturbance on the property will be fully restored and re-vegetated.

If you have any questions or need additional information, please do not hesitate to contact me.

Sincerely;

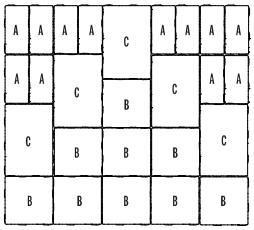
Michael J. Sievert PE
MJS Engineering

Techo Bloc

EVA

DESCRIPTION: Paver **TEXTURE:** Slate

PALLET OVERVIEW



Specifications per pallet	Imperial	Metric
Cubing	**132.48 ft²**	12.31 m²
Weight	3 725 lbs	1 690 kg
Number of rows	11	
Coverage per row	12.04 ft²	1.12 m²
Linear coverage per row	16.46 lin. ft	5.02 lin. m

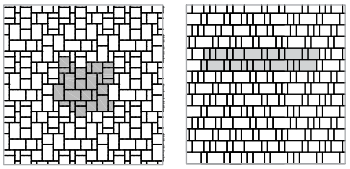
	Unit dimensions	in	mm	Units/pallet
A	Height	2 3/8	60	132 units
	Depth	8 3/4	223	
	Length	4 3/8	112	
B	Height	2 3/8	60	99 units
	Depth	8 3/4	223	
	Length	8 3/4	223	
C	Height	2 3/8	60	55 units
	Depth	8 3/4	223	
	Length	13 3/16	335	

NOTES

See page 44 to 47 for more technical information.

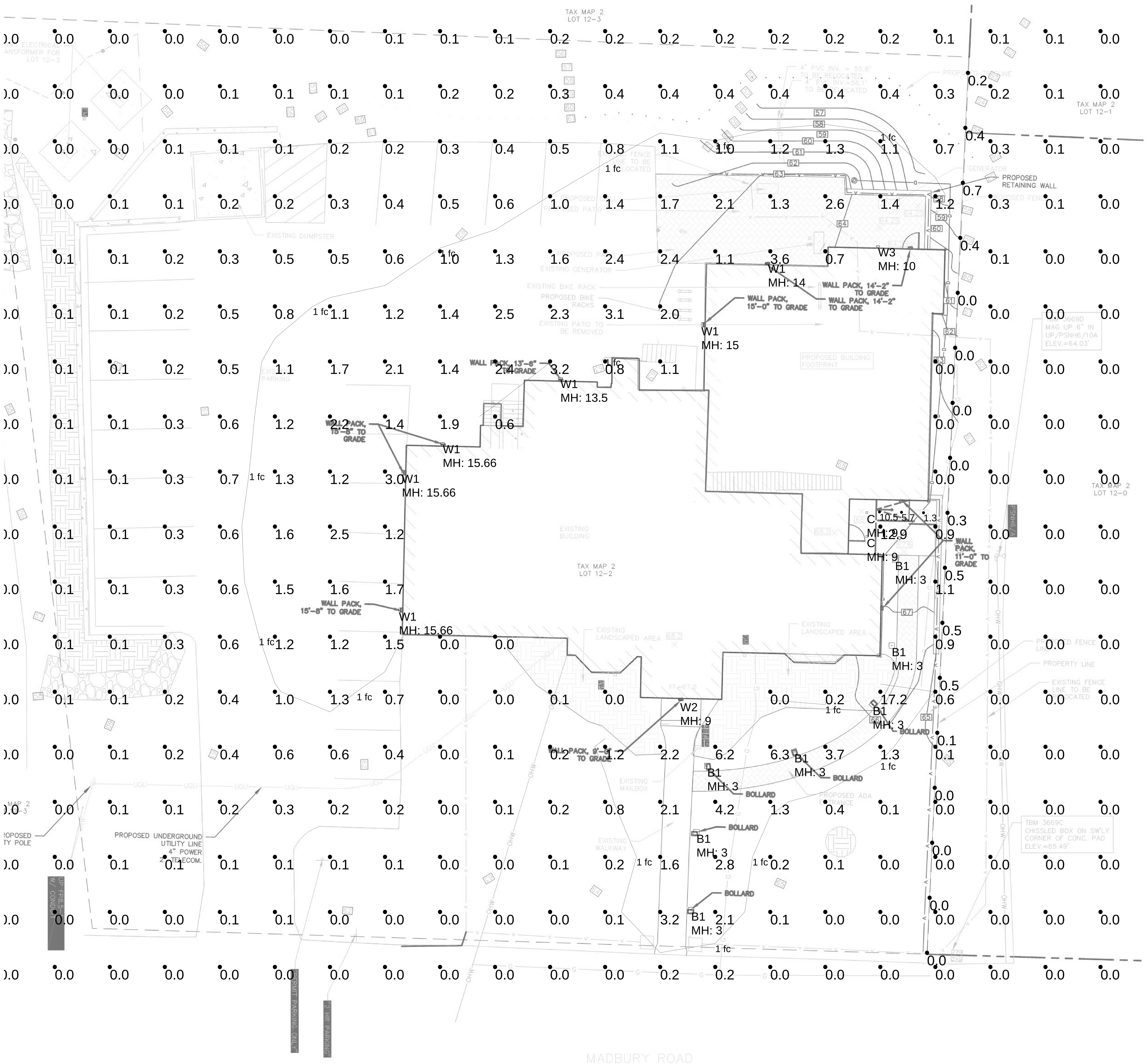
*Harvest gold is only available in Midwestern USA. See page 15 for list of Eastern and Midwestern States.

01 | Modular pattern **02** | Linear pattern



Patterns are for design inspiration only. The installer is responsible to calculate & purchase the correct amount of material.

sandlewood | shale grey | mojave beige | champlain grey | harvest gold* | chestnut brown



PLAN VIEW

NOTES:
1) EXACT MOUNTING DETAILS TO BE DETERMINED AT JOBSITE BY OTHERS.
2) CALCULATIONS MAY or MAY NOT SHOW THE EFFECT OF SHADOWING CAUSED BY BUILDINGS AND OBJECTS WITHIN THE CALCULATED SPACE OR IN THE SITE AREA.
3) READINGS SHOWN ARE INITIAL HORIZONTAL FOOTCANDLES ON A FLAT SITE WITHOUT REFLECTIONS OR OBSTRUCTIONS UNLESS OTHERWISE INDICATED.
4) THIS CALCULATION IS BASED ON LIMITED INFORMATION SUPPLIED BY OTHERS TO SWANEY LIGHTING ASSOCIATES AND STANDARD ASSUMPTIONS OF THE SPACE AND/OR SITE.
5) CONFORMANCE TO CODES AND OTHER LOCAL REQUIREMENTS AS DETERMINED BY THE AHJ ARE THE RESPONSIBILITY OF THE OWNER AND/OR THE OWNER'S REPRESENTATIVE.
6) THIS LAYOUT DRAWING MUST BE COORDINATED WITH THE SITE LOCATION FOR CORRECT FIXTURE ORIENTATION.
7) DOCUMENTS PRINTED OR PLOTTED FROM ELECTRONIC FILES MAY APPEAR AT OTHER THAN THE DESIRED OR ASSUMED GRAPHIC SCALES. IT IS THE RESPONSIBILITY OF THE RECIPIENT TO VERIFY THAT THE PRINTED OR PLOTTED-TO-SCALE DRAWING IS PRINTED TO SCALE.

Calculation Summary

Label	Avg	Max	Min	Avg/Min	Max/Min
property line	0.21	0.7	0.0	N.A.	N.A.
RAMP	5.83	10.5	1.3	4.5	8.1
SITE	0.53	17.2	0.0	N.A.	N.A.

Luminaire Schedule (note fixture cataloge numbers are not complete)

Type	Qty	Lum. Lumens	LLF	Lum. Watts	Description
B1	7	1679	0.900	20.4	SL1-18L3K
C	2	1080	0.900	12.7	LF4SQSL-4SQSL11L30K8
W1	6	2588	0.900	28.6	LNC2-12L-3K-070-4
W2	1	1680	0.900	22.2	LNC-9LU-3K-4
W3	1	849	0.900	13	LNC-5LU-3K-4-X

SITE 12-20-18 rev 2.AGI

GENERATED BY SWANEY LIGHTING, SCARBOROUGH ME - 207-883-7100 - swaneylighting.com

TITLE

KAPPA DELTA

SITE LIGHTING LAYOUT

Date:12/20/2018

GENERATED FOR: AG ARCHITECTS

SCALE NOT TO SCALE

Page 1 of 1

SWANEY LIGHTING ASSOCIATES, INC.

SL1

Site Lightforms Bollard

Fixture B1

FEATURES

- SL1 is specifically designed and engineered to combine contemporary form with rugged cast aluminum vandal resistant construction
- SL1 offers path lighting with IDA approved full-cutoff optics
- One-piece extruded aluminum shaft for a clean sharp cornered appearance with superior strength
- Battery back-up, emergency battery pack and houseside shield options

c UL us LISTED

3000K and warmer CCTs only

ORDERING. INFORMATION (Example)

SL1	18L3K120	WH

FIXTURE

SL1 Site Lightforms

ELECTRICAL MODULE

LED

		Color Temperature	Voltages
18L	LEDs[5]	**2K** Amber	**UV** Universal Voltage (120 thru 277)
36L	LEDs[5]	**3K** 3000K	
		4K 4000K	
		5K 5000K	

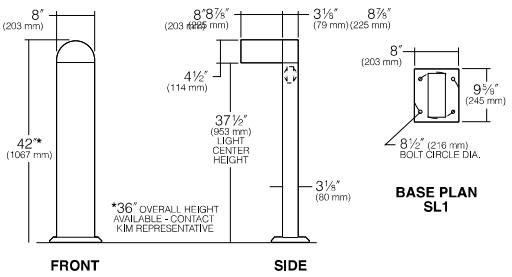
FIXTURE FINISH

BL	Black
DB	Dark Bronze
LG	Light Gray
TT	Titanium
PS	Platinum Silver
WH	White
CC	Custom Color*

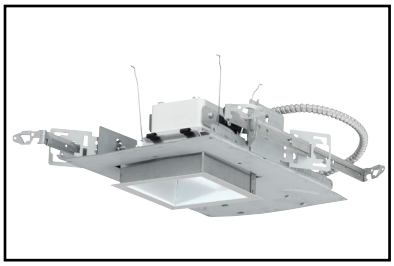
*Consult representative

SL1 SITE LIGHTFORMS

Maximum weight: 37 lb



Fixture C



4" Square LED Open Downlight

LF4SQSL

120V–277V
0-10V Dimming

DATE: TYPE:

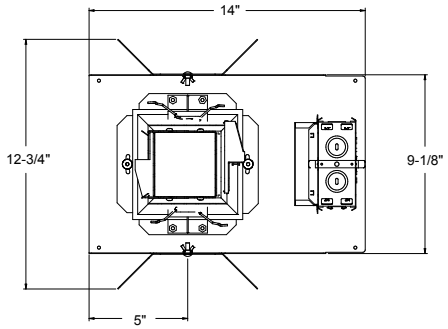
FIRM NAME:

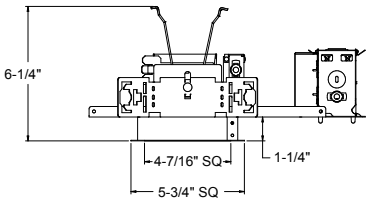
PROJECT:

LiteFrame®

ENERGY STAR

Ceiling Cutout: 5-1/4"x 5-1/4"
Maximum Ceiling Thickness 1 1/4"
For conversion to millimeters, multiply inches by 25.4
Not to Scale





See page 4 for EMR, CP and NX(W)E lineart

APPLICATIONS:
LiteFrame LF4SQSL is a 4" specification grade LED open downlight that utilizes high efficiency LEDs to obtain color consistency, energy savings, and low maintenance costs. 50,000 hours minimum life up to 35°C (95°F) in open plenum applications.

HOUSING:
One-piece 22 gauge non-corrosive steel platform. Pre-wired j-box with snap-on cover for easy access. Snap-in- connection from driver compartment allows easy installation of light engine/trim assembly without tools above or below the ceiling and can be upgraded to accommodate technology improvements. Approve for 8 (4 in/4 out) No. 12 AWG conductors rated for 90°C through wiring.

REFLECTOR:
Self-trim standard. Painted white self-trim (WT) available as option. Reflector is made from anodized Alanod Miro 4 aluminum

LED LIGHT ENGINE:
The LF4SQSL uses the Philips Fortimo DLM LED Module. This module provides controlled color consistency (3 SDCM) from fixture to fixture. The system is designed for optional life and lumen maintenance (>50,000 hours at 70% lumen maintenance). Both reflector and light engine assembly are mechanically retained to housing.

LED DRIVER:
The LF4SQSL utilizes the Philips Fortimo LED Driver specifically designed to optimize efficiency of the Fortimo DLM Module. Driver is designed to match the 50,000 hour minimum life expectancy of the system. Meets UL Class 2, inherent short circuit protection, self limited, overload protected. If critical temperatures are reached on driver or LED module, integrated thermal feedback loop will gradually reduce current to protect system life. Driver is universal 120V-277V. Optional Lutron Series A driver is also available.

DIMMING:
Comes standard with 0-10V dimming capability. Flicker-free dimming to 10%. 0-10V control may consume up to 1mA. 0-10V, Lutron 2 wire, 3 wire, and EcoSystem dimming available to 1% and DMX with RDM (remote device management) dimming to less than 0.1%.

INSTALLATION:
Adjustable Bar hangers included(not with CP option). Universal adjustable mounting brackets also accept 1/2" EMT conduit or 1 1/2" or 3/4" lathing channel (by others) or Prescolite 24" bar hangers (B24 or B6). Housing provides up to 6° rotational adjustment of the square trim.

CERTIFICATIONS:
CSA certified to US and Canadian safety standards. Suitable for wet locations. Approved for through wiring. Non-IC rated. EMR is damp rated and for US use only. ENERGY STAR qualified with open clear Alzak reflector. UL approved for NSF2 non-food zone applications.

WARRANTY:
5 year warranty. See www.prescolite.com for details.

STANDARD 0-10V DIMMING

ALTERNATIVE -DIMMING TO 1% & 0.1%

CATALOG NUMBER:

EXAMPLE: LF4SQSL-4SQSL20L35K8

Order housing, reflector, and accessories separately

HOUSING	DRIVER OPTIONS	VOLTAGE OPTION	HOUSING OPTIONS		TRIM APERTURE	OUTPUT	KELVIN	REF. COLOR OPTIONS	TRIM OPTIONS		ACCESSORIES
❑ **LF4SQSL** Standard Lumen 0-10V 10% dimming 120-277V	*Standard 0-10V 10% Dimming*	*Standard 120V-277V*	❑ **EMR**[3] Emergency Battery Pack with remote test switch and indicator light	❑ **WT** Painted White Flange only	❑ **4SQSL** Semi-Diffuse Clear Alzak	❑ **11L** 1100 Lumen Module	❑ **27K** 2700 Kelvin	*Standard Clear Alzak*			❑ **B24**[5] Set of two 24" bar hangers for T-bar ceilings
	❑ **DM1** 0-10V dimming at 1%	❑ **347** 347V	❑ **CP**[2,3,10,12] Chicago Plenum			❑ **15L** 1500 Lumen Module	❑ **30K** 3000 Kelvin	❑ **CG** Champagne Gold Alzak			❑ **B6**[5] Set of two (2) bar hangers for ceiling joist up to 24" centers
	❑ **DMT**[7,8] SpectraSync™ Tunable White		❑ **LV**[6] Lutron Vive Enabled, 0-10V, 120-277V			❑ **20L**[10] 2000 Lumen Module	❑ **35K** 3500 Kelvin	❑ **BL** Black Alzak			❑ **LiteGear**[4] Inverter, single phase central lighting, 125VA-250VA
	❑ **DMTW**[9] SpectraSync™ Tunable Dim to Warm		❑ **NXWE**[2,11,12] NX Wireless Enabled				❑ **40K** 4000 Kelvin	❑ **WE** Wheat Alzak			❑ **LPS Series**[4] LitePower micro-inverter, 20VA-55VA
			❑ **NXE**[2,11,12] NX Enabled, Dual SmartPorts				❑ **50K** 5000 Kelvin	❑ **LW** Light Wheat Alzak			
							❑ **2230TD**[13] 2200K-3000K SpectraSync™ Dim to Warm	❑ **PW** Pewter Alzak			
							❑ **2750T**[13] 2700K-5000K SpectraSync™ Tunable White	❑ **WH** Painted Matte White Reflector and Flange			
							❑ **2765T**[13] 2700K-6500K SpectraSync™ Tunable White	❑ **BC** Painted Black Reflector and Flange			

CRI

❑ **8** 80+ CRI
❑ **9** 90+ CRI

Use with HDM/2DM/DMX dimming option: Match Housing to Trim Output

❑ **LF4SQSL11L**
❑ **LF4SQSL15L**
❑ **LF4SQSL20L**

❑ **HDM**[1] Hi-Lume 1% 3-wire/ EcoSystem LED Driver
❑ **2DM**[1] Hi-Lume 1% 2-wire LED Driver (120V only)
❑ **DMX**[1] DMX with RDM dimming to <0.1%

❑ **120** 120V
❑ **277** 277V

❑ **LVE (HDM Only)** Lutron Vive Enabled, EcoSystem

**HDM, 2DM & DMX also available with EMR and WW*

Notes:
1 For HDM, 2DM and DMX options, housing output must match trim output
2 Not available with EMR, DMX, LV or LVE
3 Not available with 347V
4 See Central Inverter compatibility note and web links on page 3
5 Accessories should be selected with CP housing if required.
6 LV requires standard dimming or DM1
7 Must select either 2750T or 2765T Kelvin with DMT driver option
8 Not available with LV or LVE
9 Must select 2230TD with DMTW driver option
10 Not compatible with DMT or DMTW
11 Not available with CP option
12 Not available with HDM, 2DM or DMX
13 Only available in 90+ CRI

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PHOTOMETRIC DATA

LiteFrame - 4" LF4SQSL Downlight

DRIVER DATA	4SQSL20L	4SQSL15L	4SQSL11L
Input Voltage	120-277V	120-277V	120-277V
Input Frequency	50/60 Hz	50/60 Hz	50/60 Hz
Input Current	0.105A (120V)	0.133A (120V)	0.184A (120V)
	0.045A (277V)	0.058 (277V)	0.08A (277V)
Input Power	22.3W	16.1W	12.7W
Power Factor	≥0.90	≥0.90	≥0.90
THD	<20%	<20%	<20%
EMI Filtering	FCC 47CFR	FCC 47CFR	FCC 47CFR
	Part 15, Class A	Part 15, Class A	Part 15, Class A
Operating Temperature	-20°C to 35°C	-20°C to 35°C	-20°C to 35°C
Dimming	0-10V	0-10V	0-10V

Over-voltage, over-current, short-circuit protected

*Power consumption and photometric output may vary slightly with various driver and CRI options.

When operating in EM mode, the fixture will deliver approximately 30% of the published full lumen output.

Lumen Multiplier Table

Photometrics published below are for the 3000K, 80 CRI. This table may be used to approximate the lumen values at different Kelvin temperatures and CRI.

4000 Kelvin	1.07
3500 Kelvin	1.00
3000 Kelvin	1.00
2700 Kelvin	0.95

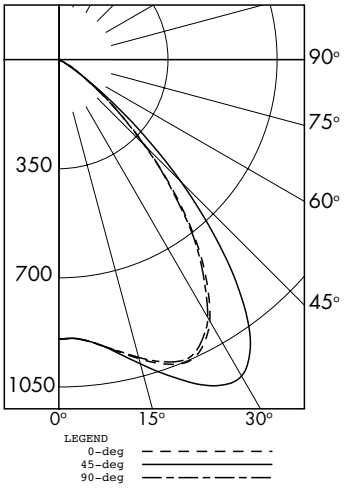
80 CRI.....1.00
90 CRI.....0.91

Delivered Lumens

The table below shows the delivered lumens for the various lumen outputs.

Output	CRI	Lens	Delivered Lumens	Input Watts	Lumens Per Watt	Full Catalog String
11L	80	Open	1085	12.7	85	LF4SL-4SQSL11L30K8
15L	80	Open	1454	16.1	90	LF4SL-4SQSL15L30K8
20L	80	Open	1916	22.3	86	LF4SL-4SQSL20L30K8
11L	90	Open	1038	14.1	74	LF4SL-4SQSL11L30K9
15L	90	Open	1406	19.4	72	LF4SL-4SQSL15L30K9
20L	90	Open	1853	25.5	73	LF4SL-4SQSL20L30K9

LF4SQSL-4SQSL20L30K8
LED Light Engine: 3000K, 80 CRI
System Wattage: 22.3W
Fixture Delivered Lumens: 1916
Fixture Efficacy: 86
Spacing Criteria: 1.4



CANDELA DISTRIBUTION

DEG	0°	45°	90°
0	896	896	896
5	903	902	903
15	993	1010	989
25	1046	1154	1035
35	809	1067	793
45	395	554	388
55	96	99	98
65	11	11	11
75	2	3	2
85	1	1	0
90	0	0	0

ZONAL LUMEN SUMMARY

ZONE	LUMENS	%LUMINAIRE
0-30	875	45.1
0-40	1446	74.6
0-60	1920	99.0
0-90	1938	100.0
90-180	0	0.0
0-180	1938	100.0

COEFFICIENTS OF UTILIZATION ZONAL CAVITY METHOD

Room Cavity Ratio	% Effective Ceiling Cavity Reflectance: 80				70				50				30				10			
	20% Effective Floor Cavity Reflectance: 70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
	% Wall Reflectance																			
1	112	109	106	104	110	107	104	102	103	101	99	99	97	96	96	94	93			
2	105	100	95	91	103	98	93	90	94	91	88	91	88	86	89	86	84			
3	98	91	85	80	96	89	84	79	87	82	78	84	80	77	82	78	76			
4	92	83	76	71	90	82	75	71	79	74	70	77	73	69	75	71	68			
5	86	76	69	63	84	75	68	63	73	67	63	71	66	62	69	65	61			
6	80	69	62	57	79	69	62	57	67	61	56	65	60	56	64	59	56			
7	75	64	57	52	74	63	56	51	62	56	51	60	55	51	59	54	50			
8	70	59	52	47	69	58	51	47	57	51	46	56	50	46	55	50	46			
9	66	54	47	43	65	54	47	43	53	47	42	52	46	42	51	46	42			
10	62	51	44	39	61	50	43	39	49	43	39	48	43	39	47	42	39			

LF4SQSL-4SQSL20L30K8 Test No. 18.00340

Test No. 18.00340
Tested at 25°C Ambient in accordance to IESNA LM-79-2008

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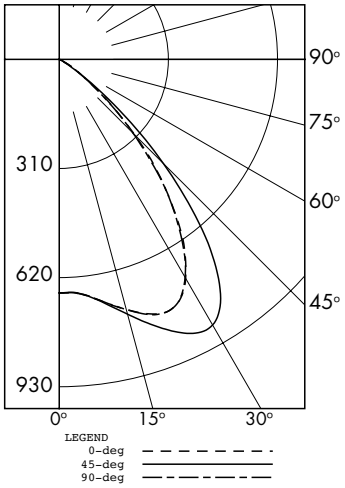
Web: **www.prescolite.com** • Tech Support: **(888) 777-4832**
701 Millennium Boulevard • Greenville, SC 29607 U.S.A. • Phone (864) 678-1000

HUBBELL® Lighting, Inc.

PHOTOMETRIC DATA

LiteFrame - 4" LF4SQSL Downlight

LF4SQSL-4SQSL15L30K8
LED Light Engine: 3000K, 80 CRI
System Wattage: 16.1W
Fixture Delivered Lumens: 1454
Fixture Efficacy: 90
Spacing Criteria: 1.4



Test No. 18.00339
Tested at 25°C Ambient in accordance to IESNA LM-79-2008

CANDELA DISTRIBUTION

DEG	0°	45°	90°
0	642	642	642
5	647	646	647
15	712	725	712
25	750	831	750
35	587	771	579
45	294	405	287
55	74	75	73
65	8	9	8
75	2	2	2
85	0	1	0
90	0	0	0

ZONAL LUMEN SUMMARY

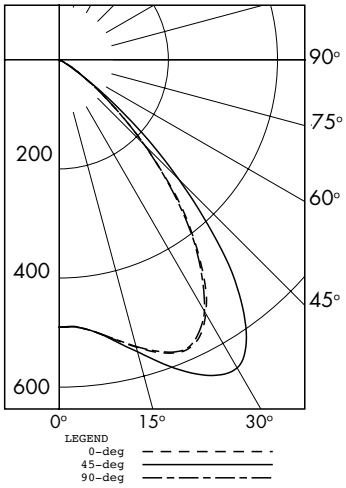
ZONE	LUMENS	%LUMINAIRE
0-30	630	44.7
0-40	1044	74.1
0-60	1395	99.0
0-90	1409	100.0
90-180	0	0.0
0-180	1409	100.0

COEFFICIENTS OF UTILIZATION ZONAL CAVITY METHOD

Room Cavity Ratio	% Effective Ceiling Cavity Reflectance: 80				70				50				30				10			
	20% Effective Floor Cavity Reflectance																			
	% Wall Reflectance																			
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
1	112	109	106	104	110	107	104	102	103	101	99	99	97	96	96	94	93			
2	105	99	95	91	103	98	93	89	94	91	87	91	88	86	88	86	84			
3	98	91	85	80	96	89	84	79	86	82	78	84	80	77	82	78	75			
4	92	83	76	71	90	81	75	70	79	74	70	77	72	69	75	71	68			
5	86	76	69	63	84	75	68	63	73	67	62	71	66	62	69	65	61			
6	80	69	62	57	78	68	62	57	67	61	56	65	60	56	64	59	55			
7	75	64	56	51	73	63	56	51	62	55	51	60	55	51	59	54	50			
8	70	59	51	47	69	58	51	46	57	51	46	56	50	46	55	50	46			
9	66	54	47	42	65	54	47	42	53	46	42	52	46	42	51	46	42			
10	62	50	43	39	61	50	43	39	49	43	39	48	42	38	47	42	38			

LF4SQSL-4SQSL15L30K8 Test No. 18.00339

LF4SQSL-4SQSL11L30K8
LED Light Engine: 3000K, 80 CRI
System Wattage: 12.7W
Fixture Delivered Lumens: 1085
Fixture Efficacy: 85
Spacing Criteria: 1.4



Test No. 18.00338
Tested at 25°C Ambient in accordance to IESNA LM-79-2008

CANDELA DISTRIBUTION

DEG	0°	45°	90°
0	490	490	490
5	494	494	494
15	545	554	544
25	578	638	575
35	451	596	445
45	222	310	221
55	54	55	54
65	6	6	6
75	1	2	1
85	0	0	0
90	0	0	0

ZONAL LUMEN SUMMARY

ZONE	LUMENS	%LUMINAIRE
0-30	483	44.7
0-40	802	74.3
0-60	1070	99.1
0-90	1080	100.0
90-180	0	0.0
0-180	1080	100.0

COEFFICIENTS OF UTILIZATION ZONAL CAVITY METHOD

Room Cavity Ratio	% Effective Ceiling Cavity Reflectance: 80				70				50				30				10			
	20% Effective Floor Cavity Reflectance																			
	% Wall Reflectance																			
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
1	112	109	106	104	110	107	104	102	103	101	99	99	97	96	96	94	93			
2	105	99	95	91	103	98	93	89	94	91	87	91	88	86	88	86	84			
3	98	91	85	80	96	89	84	79	86	82	78	84	80	77	82	78	75			
4	92	83	76	71	90	81	75	70	79	74	70	77	72	69	75	71	68			
5	86	76	69	63	84	75	68	63	73	67	62	71	66	62	69	65	61			
6	80	69	62	57	78	68	62	57	67	61	56	65	60	56	64	59	55			
7	75	64	56	51	73	63	56	51	62	55	51	60	55	51	59	54	50			
8	70	59	51	47	69	58	51	46	57	51	46	56	50	46	55	50	46			
9	66	54	47	42	65	54	47	42	53	46	42	52	46	42	51	46	42			
10	62	50	43	39	61	50	43	39	49	43	39	48	42	38	47	42	38			

LF4SQSL-4SQSL11L30K8 Test No. 18.00338

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Specifications subject to change without notice. • Printed in U.S.A. • LFR-LED-016 • 3/23/18

HUBBELL® Lighting, Inc.

Dimming Compatibility Table

Dimming Ballast	Manufacturer	Web Link
DM/DM1	Lutron DVTV	http://bit.ly/11jSvZg
DM/DM1	Leviton AWRMG-7xx, AWSMG-7xx, AWSMT-7xx	http://bit.ly/1BJn2R9
HDM	Lutron	http://bit.ly/1vtjHAl
2DM	Lutron	http://bit.ly/1S4WjXK

DMX

See instruction sheet on www.prescolite.com for connection & installation information.
Other useful links: http://www.eldoled.com/led-drivers/powerdrive/50-watt/ac-561s/

Central Inverters

For full fixture output in back-up mode, we recommend you visit www.dual-lite.com for your Central Lighting Inverter options. Please contact your local Hubbell representative for any assistance with proper sizing and loading of your inverter selection. Central lighting inverters must be ordered separately.

LiteGear: www.dual-lite.com/products/litegear_lg_series
LPS Series: www.dual-lite.com/products/lps

SpectraSync™ Color Tuning Technology: SpectraSync Color Tuning Technology

Control your space based on the needs of the application, specific activities throughout the day and preferences of the occupants with two distinct SpectraSync™ Color Tuning Technology.

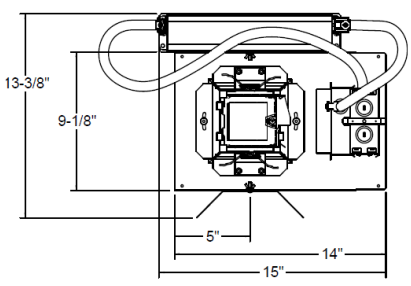
Dim to Warm: Dim to Warm mimics the familiar warming effect that occurs with traditional incandescent sources as they are dimmed. (Available with 2200K-3000K).

Tunable White: Tunable White offers users the ability to tailor CCT to their personal preference, enhancing task visibility, material and colors or the aesthetics of the space. (Available with 2700K-5000K or 2700K-6500K).

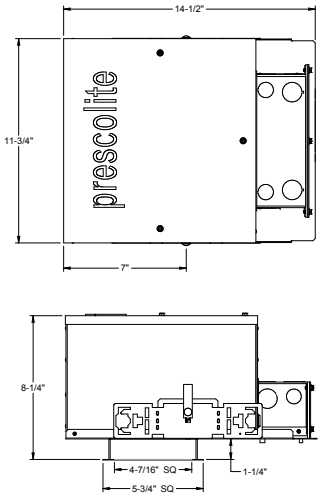
See separate SpectraSync™ Tech Sheet for additional details.

NX Distrubuted Intelligence: NX DISTRIBUTED INTELLIGENCE

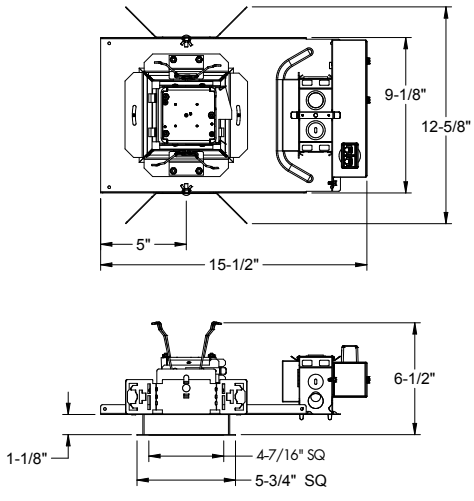
Supports indoor and outdoor applications, wired, wireless and hybrid networked NX lighting control deployments and enables emerging applications such as Hubbell Lighting's SpectraSync™ color tuning technology.
See separate NX™ Solutions Guide for additional details.
See Hubbell Controls Solution NX Brochure.



LF4SQSL EMR



LF4SQSL CP



LF4SQSL NX(W)E

Fixture W1

LNC2

LITEPAK Compact LED Wallpack

LED WALLPACKS

The small sized LNC2 is designed for perimeter illumination for safety, security and identity. No uplight and low glare lenses offer neighbor friendly lighting at typical mounting heights of 8-15'. Units have protective polyester finish for long lasting appearance. Ideal for schools, factories, hospitals, warehouses and retail applications. Energy efficient LEDs provide up to 80% energy savings with little to no maintenance when compared to traditional light sources.

- Available in multiple lumen packages, replaces up to 175w+ traditional HID sources
- Features long-life (60,000hr L96 rated), high CRI, 3000K, 4000K, and 5000K LEDs
- Includes quick-mount adapter
- Zero-uplight (excludes prismatic refractor)
- 10kA surge protector
- Diffused Lens softens high angle output for use at entrances or pedestrian pathways (standard with stock versions)
- Optional Battery Backup provides emergency lighting for the required 90 minute path of egress
- Photocell, occupancy sensor and SiteSync controls available for complete on/off and dimming control
- Listed to UL1598 for use in wet locations
- Made-to-order versions are IP-65 rated
- DesignLights Consortium® (DLC) qualified; Please refer to the DLC website for specific product qualifications at www.designlights.org

With CS-Comfort Shield

*3000K and warmer CCTs only (excludes prismatic refractor)

With FT Prismatic Refractor and SCP Sensor

STOCK ORDERING INFORMATION

Catalog Number	System Watts	Delivered Lumens	Voltage	CCT	# Drivers/ Current	Weight lbs. (kg)	PKG. CODE
LNC2-12LU-4K-3-1	29w	2662	120-277V	4000K	1@700mA	7.0 (13.3)	FCC
LNC2-12LU-5K-3-1	29w	2868	120-277V	5000K	1@700mA	7.0 (13.3)	FCC
LNC2-12LU-5K-3-1-PC-U	29w	2868	120-277V	5000K	1@700mA	7.0 (13.3)	FCC
LNC2-18LU-4K-3-1	42w	3806	120-277V	4000K	2@700mA	7.0 (13.3)	FCC
LNC2-18LU-5K-3-1	42w	4106	120-277V	5000K	2@700mA	7.0 (13.3)	FCC
LNC2-18LU-5K-3-1-PC-U	42w	4106	120-277V	5000K	2@700mA	7.0 (13.3)	FCC

MADE-TO-ORDER ORDERING INFORMATION – (BC PKG CODE)

LNC2 - [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ]

SERIES
- LNC2 Small LitePak LNC2

LED SELECTION
- 9L 9 LEDs
- 12L 12 LEDs
- 18L 18 LEDs
- P15 Prismatic Refractor
- P25 Prismatic Refractor
- P35 Prismatic Refractor

CCT/CRI
- 3K 3000K, 70 CRI
- 4K 4000K, 70 CRI
- 5K 5000K, 70 CRI

DRIVE CURRENT
- 070 700mA
- 035 350mA (12L & 18L only)

DISTRIBUTION
- 2[1] IES Type II
- 3[1] IES Type III
- 4[1] IES Type IV
- FT Forward Throw (Prismatic Refractor only)

VOLTAGE
- U 120-277V
- 1 120V
- 2 208V
- 3 240V
- 4 277V
- 5 347V
- F 480V

MOUNTING
- – Leave Blank for down position
- NV[2] Inverted

FINISH/COLOR
- DB Dark bronze textured
- BL Black textured
- GR Gray textured
- GYS Gray Smooth
- PS Platinum smooth
- WH White textured
- CC Custom Color

CONTROL OPTIONS
- SCP[4,5] Occupancy Sensor Programmable (Dim)
- PCU Universal Button Photocell
- SWP[3,6] SiteSync Pre-Commission
- SWPM[3,5,6,7] SiteSync Pre-Commission w/OCC Sensor

SPECIFY SCP/SWPM HEIGHT
- 8F Up to 8ft mount height
- 20F Up to 20ft mount height

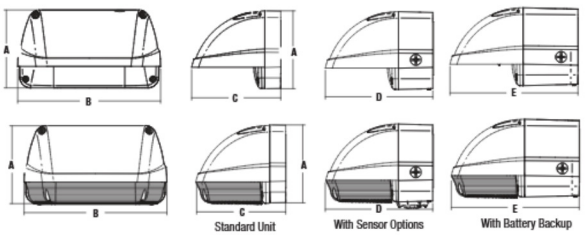
OPTIONS
- EH[3] Battery Backup Unit with Heater (-30°C)
- E[3] Battery Backup Unit (0°C)
- F[3] Fuse & Fuse-holder (not available with Battery Backup)
- CS Comfort Shield (N/A with Prismatic Refractor)
- 2DR Dual Driver (18L only)
- 2PF Dual Power Feed (18L only)
- CH Surface Conduit Hubs

1 IES distributions only available with 9L, 12L, and 18L versions
2 Not available with occupancy sensor, battery backup or prismatic refractor options
3 Must specify voltage (120 or 277 only for E & EH, 120, 277 or 347V only for SWP & SWPM
4 Must order minimum of one remote control to program dimming settings, 0-10V fully adjustable dimming with automatic daylight calibration and different time delay settings, 120-277V only
5 PCU option not applicable, included in sensor
6 18L - 700mA versions only. Not available with 2DR or 2PF options. Must specify group and zone information at time of order
7 Specify time delay; dimming level and mounting height

DIMENSIONS

A	B	C	D	E
5.54"	10.16"	6.33"	7.64"	9.10"
40.7 mm	258 mm	160.7 mm	194 mm	231 mm

	Base Model	PC Sensor	BBU Models
WEIGHT	7.0 lbs.	7.5 lbs.	9.5 lbs.
	3.2 kg	3.4 kg	4.3 kg



LNC

Fixtures W2, W3

LITEPAK

Ultra Compact LED Wallpack – Zero Uplight

*3000K and warmer CCTs only

The compact LED LNC is designed for perimeter illumination, available in 3 lumen packages replacing up to 100w HID for safety, security and general illumination applications. This compact fixture is neighbor friendly with zero uplight. Typical mounting height up to 12 feet with 40ft fixture spacing (without acrylic diffuser) and 30ft spacing with acrylic diffuser installed. Photocontrol option is available.

- IES Progress Award Winner - 2012
- 4K and 5K models meet DesignLights

Consortium (DLC) qualifications, consult DLC website for more details: http://www.designlights.org/QPL

- Listed to UL1598 for use in wet locations
- Long-life (60,000hr L96 rated)
- Quick mount adapter and designed for both recessed box or surface conduit wiring

STOCK ORDERING INFORMATION

Catalog Number	System Watts	Delivered Lumens	Voltage	CCT	# Drivers/ Current	Mounting Height	Weight lbs. (kg)	PKG. CODE
LNC-5LU-4K	12.8w	1077	120-277V	4000K	1@700mA	up to 10 ft.	4.0 (1.8)	FCC
LNC-5LU-5K	12.8w	1146	120-277V	5000K	1@700mA	up to 10 ft.	4.0 (1.8)	FCC
LNC-7LU-4K-3-1	16.4w	1539	120-277V	4000K	1@700mA	up to 11 ft.	4.0 (1.8)	FCC
LNC-7LU-5K-3-1	16.4w	1557	120-277V	5000K	1@700mA	up to 11 ft.	4.0 (1.8)	FCC
LNC-9LU-4K-3-1	20.6w	1989	120-277V	4000K	1@700mA	up to 12 ft.	4.0 (1.8)	FCC
LNC-9LU-5K-3-1	20.6w	2095	120-277V	5000K	1@700mA	10-12 ft.	4.0 (1.8)	FCC

QS10 10-Day Quick-Ship Ordering Guide

Order Limit Per Luminaire Selection: 15 (Contact factory for larger quanities) – BC Pkg Code

LNC - [ ] - [ ] - [ ] - [ ] - [ ] - [ ]

SERIES
- LNC LNC Zero uplight

NUMBER OF LEDS/SOURCE/VOLTAGE
- 7LU 7 LEDs, Universal voltage 120-277V
- 9LU 9 LEDs, Universal voltage 120-277V

CCT
- 4K 4000K nominal
- 5K 5000K nominal

IES DISTRIBUTION
- 3 Type III
- 4 Type IV

FINISH
- 1 Bronze
- 2 Black
- 3 Gray
- 4 White
- 5 Platinum

OPTIONS
- PCU Button photocontrol, 120-277V

MADE-TO-ORDER ORDERING INFORMATION – (BC PKG CODE)

LNC - [ ] - [ ] - [ ] - [ ] - [ ] - [ ]

SERIES
- LNC LNC Zero uplight

NUMBER OF LEDS/SOURCE/VOLTAGE
- 7LU 7 LEDs, Universal voltage 120-277V
- 9LU 9 LEDs, Universal voltage 120-277V

CCT
- 3K 3000K nominal, 80 CRI
- 4K 4000K nominal
- 5K 5000K nominal
- AM[1] Amber (590 µm available for "Turtle Friendly"/observatory applications); Consult factory

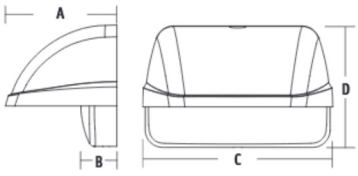
IES DISTRIBUTION
- 3 Type III
- 4 Type IV

FINISH
- 1 Bronze
- 2 Black
- 3 Gray
- 4 White
- 5 Platinum

OPTIONS
- PCU Button photocontrol, 120-277V

1 Amber LEDs are 035mA drive current

DIMENSIONS



A	B	C	D
4.8"	1.6"	8.2"	5.3"
122 mm	39 mm	209 mm	133 mm

PERFORMANCE INFORMATION

Series Number	Equivalency			Energy Savings
	MH	HPS	CFL	
LNC-5L	50w	50w	42w	82%
LNC/LNC2-7L	70w	70w	42w	82%
LNC/LNC2-9L	100w	100w	42w	82%
LNC2-12L/LNC2-18L	150w+	150w+	2x42w+	85%

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Fence Design

Kappa Delta Renovations/Expansion

AG Architects Project No. 18-738.1
28 December 2018

Existing fence design, relocated sections of fence to be reused.

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Bike Rack

Kappa Delta Renovations/Expansion

AG Architects Project No. 18-738.1
28 December 2018

Existing bike rack, to be relocated on site.

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Calculation of Roof Height

Kappa Delta Renovations/Expansion

AG Architects Project No. 18-738.1
18 December 2018

The roof height for the Kappa Delta renovation/expansion project has been calculated based on the Town of Durham's Zoning requirements, including the definitions for Mean Roof Height and Mean Grade Elevation. The calculations were completed as follows:

Roof: Attached are Drawings A4.1 and A4.2 that include the four elevations for the proposed building. There are three different roof peaks for different wings of the building. We calculated the roof height based on the highest roof peak which is the new addition to the rear of the building (refer to West Elevation 2/A4.1 and North Elevation 1/A4.2). The other two roof peaks are lower, as seen in Elevation 1/A4.1, and would result in an overall lower roof height if these were used for the height calculation. The Mean Roof Elevation equals one half of the vertical distance from eave to ridge. West Elevation 2/A4.1 identifies the ridge and eave at the high roof, and the Mean Roof Elevation is shown at the mid-point between the ridge and eave.

Grades: The two Drawings A4.1 and A4.2 show the grades at the base of the building and the areas highlighted in orange are the distance from the first floor to the grade below. We calculated the Mean Grade Elevation by determining the area between the grade and first floor elevation for all sides of the building, added the areas of all four elevations together, and divided by the total perimeter length of the building. This establishes the average grade below the first floor. It is shown on Drawings A4.1 and A4.2 as the Mean Grade Elevation, which is 3' - 11 13/16" below the first floor.

Building Height: The building height is the distance between the Mean Grade Elevation and the Mean Roof Height, which is shown on the four elevations as 34'-6 1/4". This is only 2'-2" higher than the existing roof peak, and is less than the 35' height allowed by Conditional Use.

1 East Elevation

1/4" = 1'-0"

2 West Elevation

1/4" = 1'-0"

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Kappa Delta Expansion
Durham, New Hampshire

Plan N

Consultant:

Revisions:

Date: 18 December 2018

Scale: 1/4" = 1'-0"

Drawn By: JG | Checked By: AG

Sheet: 7 of 10 | Project No.: 18-738.1

Sheet Title: Exterior Elevations

Sheet Number: A4.1

1 North Elevation

1/4" = 1'-0"

2 South Elevation

1/4" = 1'-0"

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Kappa Delta Expansion

Durham, New Hampshire

Plan N

Consultant:

Revisions:

Date: 18 December 2018

Scale: 1/4" = 1'-0"

Drawn By: JG | Checked By: AG

Sheet: 8 of 10 | Project No.: 18-738.1

Sheet Title: Exterior Elevations

Sheet Number: A4.2

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Project Phasing

Kappa Delta Renovations/Expansion

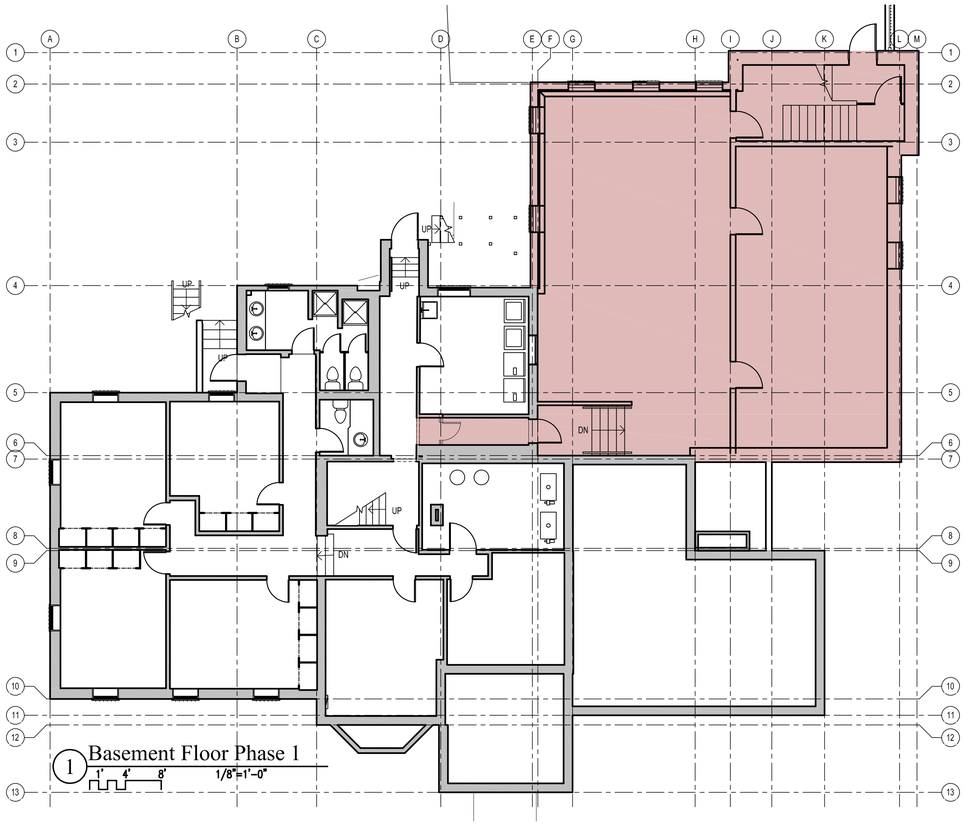
AG Architects Project No. 18-738.1
28 December 2018

Kappa Delta Sorority is proposing to expand and renovate their existing building at 25 Madbury Road in order to improve living conditions for sorority members and to provide accessibility to the first floor. The sorority currently has bedrooms located in the basement, and additional bedrooms/bunk rooms on the upper floors. The proposed improvements include creating bedrooms for the current members by adding a three story addition with basement to the rear of the existing building, renovating the second floor, and reconstructing the third floor and roof. The new addition will include an accessible entrance and accessible bedrooms, bathrooms and laundry on the first floor.

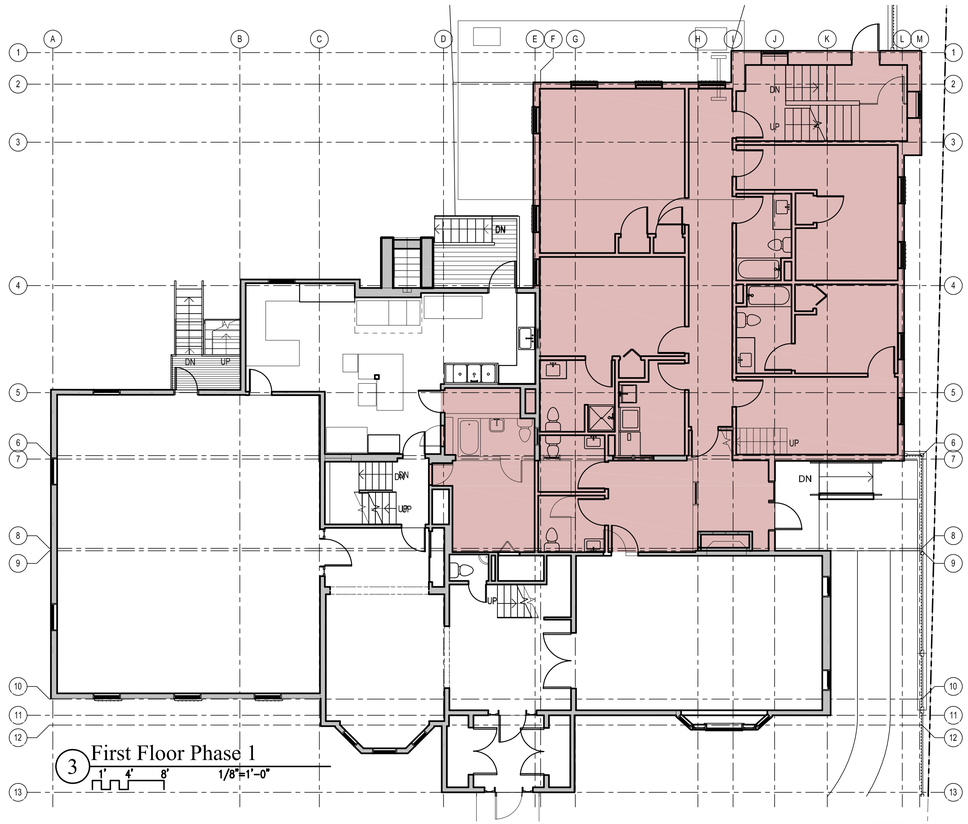
The sorority will be occupied during the University's regular semesters. Construction of the project will need to be performed in two phases in order to maximize use of time when students are gone, minimize disruption to the sorority during occupied times, and to work within the Owner's financial limitations. Phase 1 is planned to start in early spring 2019 and includes construction of the three story addition plus basement to the rear, and reconstruction and renovation of the second and third floors and roof on the North side of the building as needed to establish egress required by building codes. Phase 1 construction will include completion of all site work and is estimated to be complete by September 2019. Phase 2 will include reconstruction and renovation of the second and third floors and roof on the South side of the main entrance. Phase 2 would need to be started following the spring semester in order to allow as much time as possible in unoccupied summer months for the construction of the third floor and roof and interior renovations.

It is not yet certain whether Phase 2 would commence in May 2020 or later, depending on financial capability. As part of the Planning Board approval process we are requesting that the Conditional Use approval, including Phase 2, be permitted through September 2024. This would allow a five year period following completion of Phase 1 for Phase 2 construction to commence. The floor plans and elevations submitted with the Civil drawings show the building with both Phase 1 and Phase 2 completed. Floor plans and elevations depicting only Phase 1 are attached and noted below.

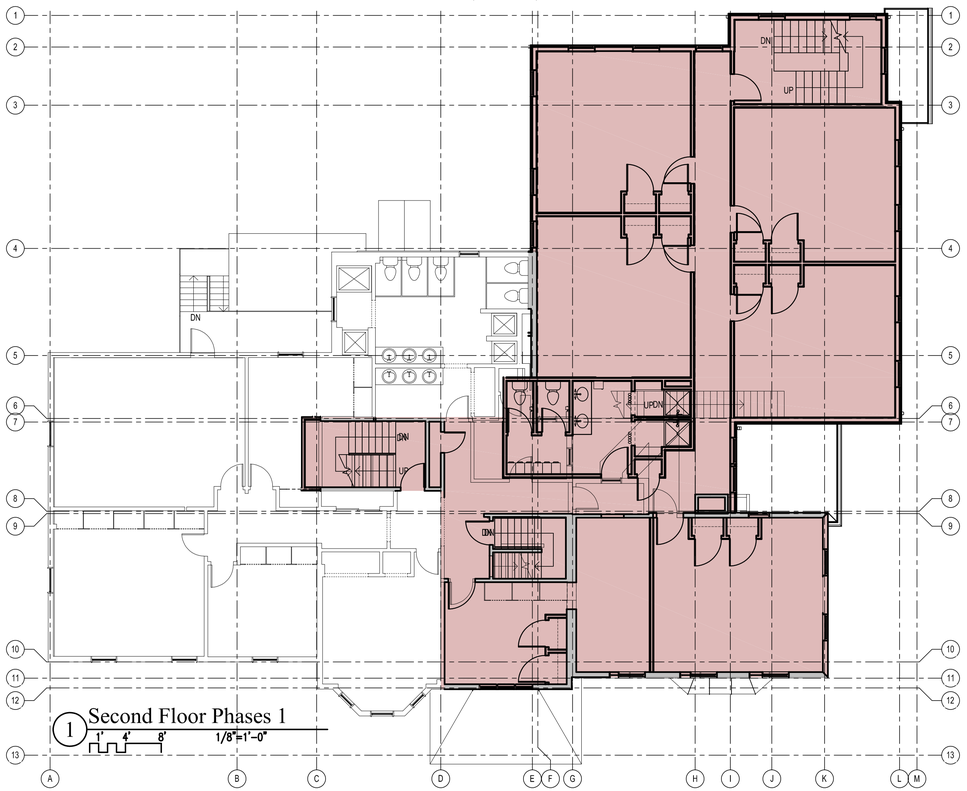
Drawings: Phasing Plan A2.1b, Phase 1
Phasing Plan A2.1c, Phase 2
Exterior Elevations Phase 1, A4.1a
Exterior Elevations Phase 1, A4.2a



1 Basement Floor Phase 1
1' 4' 8' 1/8"=1'-0"

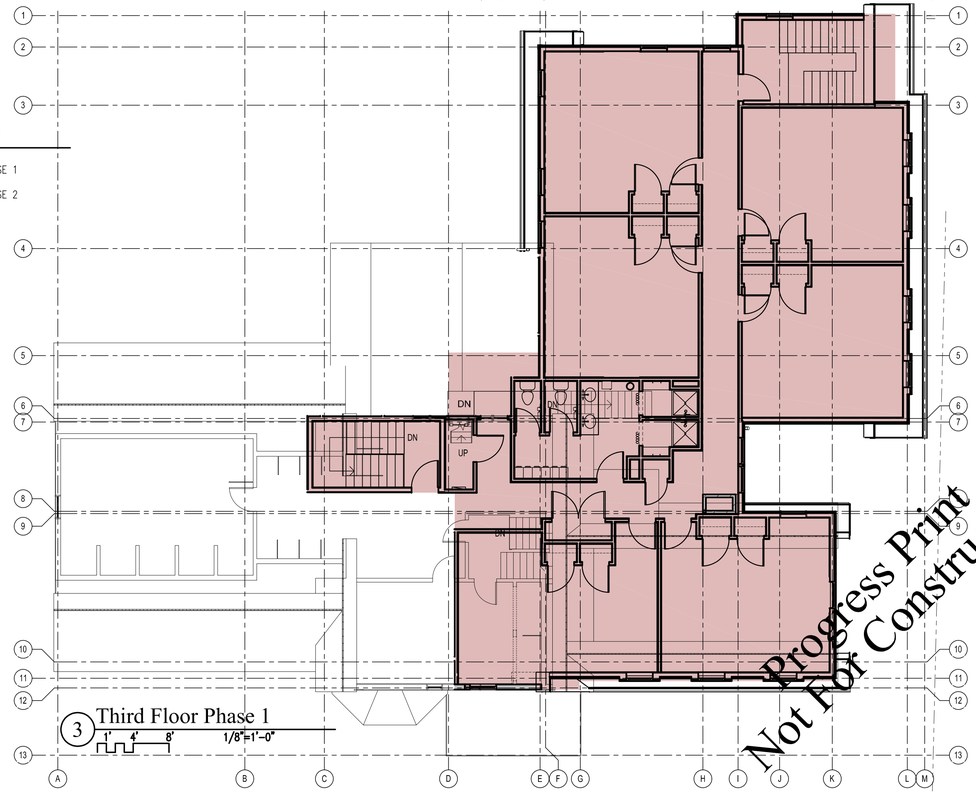


3 First Floor Phase 1
1' 4' 8' 1/8"=1'-0"



1 Second Floor Phases 1
1' 4' 8' 1/8"=1'-0"

Legend
PHASE 1
PHASE 2



3 Third Floor Phase 1
1' 4' 8' 1/8"=1'-0"

Progress Print
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Kappa Delta Expansion

Durham, New Hampshire

Plan N

Consultant:

Revisions:

Date: 18 December 2018

Scale: 1/8" = 1'-0"

Drawn By: JG | Checked By: AG

Sheet: 5 of 17 | File: 18738.1-A201-01

Sheet Title: Phasing Plan

Sheet Number: A2.1b

2 Second Floor Phase 2
1' 4' 8' 1/8"=1'-0"

Legend
PHASE 1
PHASE 2

4 Third Floor Phase 2
1' 4' 8' 1/8"=1'-0"

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Kappa Delta Expansion

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Sheet: 6 of 17 | File: 18738.1-A201-01

Sheet Title: Phasing Plan

Sheet Number: A2.1c

1 East Elevation Phase 1

1" 4' 8' 1/4"=1'-0"

REFER TO DRAWING A4.1 AND A4.2 FOR COMPLETE BUILDING WITH PHASES 1 AND 2

2 West Elevation Phase 1

1" 4' 8' 1/4"=1'-0"

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Kappa Delta Expansion

Durham, New Hampshire

Plan N.

Consultant:

Revisions:

Date: 18 December 2018

Scale: 1/4" = 1'-0"

Drawn By: JG | Checked By: AG

Sheet: 14 of 17 | File: 18738.1-A401-01

Sheet Title: Exterior Elevations Phase 1

Sheet Number: A4.1a

1 East Elevation Phase 1

1" 4' 8' 1/4"=1'-0"

2 West Elevation Phase 1

1" 4' 8' 1/4"=1'-0"

REFER TO DRAWING A4.1 AND A4.2 FOR COMPLETE BUILDING WITH PHASES 1 AND 2

Progress Print
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Kappa Delta Expansion

Durham, New Hampshire

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Consultant:

Revisions:

Date:	18 December 2018
Scale:	1/4" = 1'-0"
Drawn By: JG	Checked By: AG
Sheet: 15 of 17	File: 18738.1-A401-01

Sheet Title:
Exterior Elevations
Phase 1

Sheet Number:
A4.2a