

October 2020 BAR Action

Watkins, Robert <watkinsro@charlottesville.gov>

Wed 10/21/2020 12:39 PM

To: William Sherman <wshermanarch@gmail.com>; Thomas Keogh <tkeogh@trainarchitects.com>

Cc: Werner, Jeffrey B <wernerjb@charlottesville.gov>

Certificate of Appropriateness Application

BAR 20-09-04

128 Chancellor Street

Tax Parcel 290132000

Center for Christian Study, Owner

Thomas Keogh, Train Architects, and William Sherman, Applicants

Exterior alterations and addition

Dear Tom and Bill,

Last night, the Charlottesville Board of Architectural Review reviewed the above-referenced project as part of the consent agenda. Breck Gastinger moved to approve the consent agenda and Cheri Lewis seconded the motion. Items on the consent agenda were approved (8-0).

The following motion for approval, found in the staff report, is associated with your project.

Having considered the standards set forth within the City Code, including City Design Guidelines for Site Design and Elements, for New Construction and for Rehabilitations, I move to find that the proposed alterations and addition satisfy the BAR's criteria and are compatible with this property and other properties in The Corner ADC district, and that the BAR approves the application as submitted..

Please let me know if you have any questions.

Best,

Robert

Robert Watkins
Assistant Historic Preservation and Design Planner
Neighborhood Development Services
PO Box 911
Charlottesville, VA 22902

City of Charlottesville
Board of Architectural Review
Staff Report
October 20, 2020



Certificate of Appropriateness

BAR 20-09-04

128 Chancellor Street

Tax Parcel 290132000

Center for Christian Study, Owner

Thomas Keogh, Train Architects, and William Sherman, Applicants

Exterior alterations and addition



Year Built: c1926
District: The Corner ADC
Status: Contributing

Rectangular form, three-bay frame shingled swelling with Craftsman and Colonial Revival stylistic elements. Constructed as a dwelling, the house was occupied until 1969 when it transitions to other uses. Since the 1980s it is served as the Center for Christian Study. (Historic survey attached.)

Prior BAR Actions

June 2014 – Admin review of exterior deck alterations.

August 18, 2020 – Preliminary discussion.

September 15, 2020 – BAR accepted applicant’s request for deferral.

Application

- Applicant’s submittal: William Sherman Architect, and Train Architects drawings *Center for Christian Study Expansion Study*:
 - *BAR Submission*, dated July 2020, REV. September 2020: Cover, sheets 1 through 15.
 - *Supplemental Submittal*, dated September 2020: Cover, pages 1 through 11, Marvin cut sheets (Ultimate windows and Signature doors), BEGA light fixture cut sheets (recessed ceiling luminaires, recessed ceiling downlights, recessed luminaires, and bollard light).

- *Site Lighting Supplemental Submittal*, dated 09 October 2020: Cover, sheets E1.02, E2.00, E2.01, and BEGA light fixture cut sheets (recessed ceiling luminaires, recessed ceiling downlights, recessed luminaires, and bollard light).

CoA request for a proposed three-story addition of approximately 10,500 square feet (3,500 SF per floor) at the rear of the existing structure and alterations at the front entry terrace

Materials and components

Roofing [at addition]:

- New addition: Flat (Low-Slope); White EPDM
- New Bathroom addition south side: Asphalt shingles to match existing
- (Existing flat roof: Black EPDM)

Gutters/Downspouts:

- New addition: internal drains with scuppers; no gutters and downspouts
- New bathroom addition south side: new gutters and downspouts to match existing

Cornice:

- Capped parapet wall. Metal flashing. (See sheet 5 of in September 2020 Supplemental Submittal.)

Siding and Trim:

- Cedar shingles with 6" exposure painted to match the existing cedar shingles
- James Hardie Aspyre Reveal Panel System; NOM 2'x8' panels painted Benjamin Moore Light Pelham Gray; see color elevations for example.
- Trim Flat trim; painted white

Doors and Windows:

- Windows Marvin aluminum clad wood windows; white cladding
- Window Wall Marvin structurally mulled window system-glass and panel infill (no spandrel glass); white cladding
- Glass Clear glass to match BAR standards
- Doors Marvin aluminum clad wood doors; white cladding

Soffit:

- James Hardie Soffit Panel; painted to match cedar shingles

Parking garage:

- Ceiling material: 5/8" exterior gyp sheathing
- Wall material: James Hardie Aspyre Reveal System to match exterior

Concrete retaining wall at rear.

- See attached sketch with elevations (north and south ends) and outline exterior material specification. (Sheet 9 in September 2020 Supplemental Submittal.)

Front Terrace and Landscaping

- Note: Work at the front terrace has been removed from this CoA request

Lighting

- Fixture A. Perimeter walk around new addition: low in wall mounted lights for a walking surface: BEGA LED recessed wall luminaires – asymmetrical.
- Fixture B. South exit way: BEGA shielded LED bollard
- Fixture C. Garage interior: Recessed fixtures to meet code minimum light levels: BEGA LED recessed ceiling luminaires - Vortex optics - Symmetric wide
- Fixture D. Ground level exits from parking garage: recessed downlights in soffit above: BEGA LED recessed ceiling downlights - narrow beam

Discussion

All specified lighting fixtures are available with lamping at a Color Temperature of 3,000K lamping. (The garage, soffit and low wall have lamping available at 2,700K.) BAR should consider a condition(s) regarding the lamping.

Suggested Motions

Approval: Having considered the standards set forth within the City Code, including City Design Guidelines for Site Design and Elements, for New Construction and for Rehabilitations, I move to find that the proposed alterations and addition satisfy the BAR's criteria and are compatible with this property and other properties in The Corner ADC district, and that the BAR approves the application as submitted..

[.. as submitted with the following modifications...]

Denial: Having considered the standards set forth within the City Code, including City Design Guidelines for Site Design and Elements, for New Construction and for Rehabilitations, I move to find that the alterations and addition do not satisfy the BAR's criteria and are not compatible with this property and other properties in The Corner ADC ADC district, and that for the following reasons the BAR denies the application as submitted...

Criteria, Standards, and Guidelines

Review Criteria Generally

Sec. 34-284(b) of the City Code states that, in considering a particular application the BAR shall approve the application unless it finds:

- (1) That the proposal does not meet specific standards set forth within this division or applicable provisions of the Design Guidelines established by the board pursuant to Sec.34-288(6); and
- (2) The proposal is incompatible with the historic, cultural or architectural character of the district in which the property is located or the protected property that is the subject of the application.

Pertinent Standards for Review of Construction and Alterations include:

- (1) Whether the material, texture, color, height, scale, mass and placement of the proposed addition, modification or construction are visually and architecturally compatible with the site and the applicable design control district;
- (2) The harmony of the proposed change in terms of overall proportion and the size and placement of entrances, windows, awnings, exterior stairs and signs;
- (3) The Secretary of the Interior Standards for Rehabilitation set forth within the Code of Federal Regulations (36 C.F.R. §67.7(b)), as may be relevant;
- (4) The effect of the proposed change on the historic district neighborhood;

- (5) The impact of the proposed change on other protected features on the property, such as gardens, landscaping, fences, walls and walks;
- (6) Whether the proposed method of construction, renovation or restoration could have an adverse impact on the structure or site, or adjacent buildings or structures;
- (7) Any applicable provisions of the City's Design Guidelines.

Pertinent ADC District Design Guidelines

Chapter II – *Site Design and Elements*

Chapter III – *New Construction and Additions*



**VIRGINIA
HISTORIC LANDMARKS COMMISSION
HISTORIC DISTRICT SURVEY FORM**

File No. 104-130-37
Negative no(s). 7297

Street address 128 Chancellor St.

Town/City Charlottesville

Historic name

Common name

- Material**
- wood frame (siding: weatherboard, shingle, aluminum, bricktex, _____)
- brick (bond: Flemish, stretcher, _____-course American, _____)
- stone (random rubble, random ashlar, coursed ashlar, _____)
- log (siding: weatherboard, shingle, aluminum, bricktex, _____)
- stucco cast iron
- concrete block terra cotta
- enameled steel glass and metal
- other: _____

Number of Stories

- 1 2 1/2
- 1 1/2 3
- 2 _____

Roof Type

- shed mansard
- gable gambrel
- pediment parapet
- hipped flat
- other: _____

Roof Material

- slate tile
- wood shingle pressed tin
- composition not visible
- standing seam metal
- other: _____

Dormers

- 0 3 shed hipped
- 1 4 gable _____
- 2 _____ pedimented

Number of bays — Main facade

- 1 4 7
- 2 5 8
- 3 6 _____

Porch

- yes no

Stories

- 1 3
- 2 _____

Bays

- 1 (center) 2 4
- 1 (side) 3 _____

General description

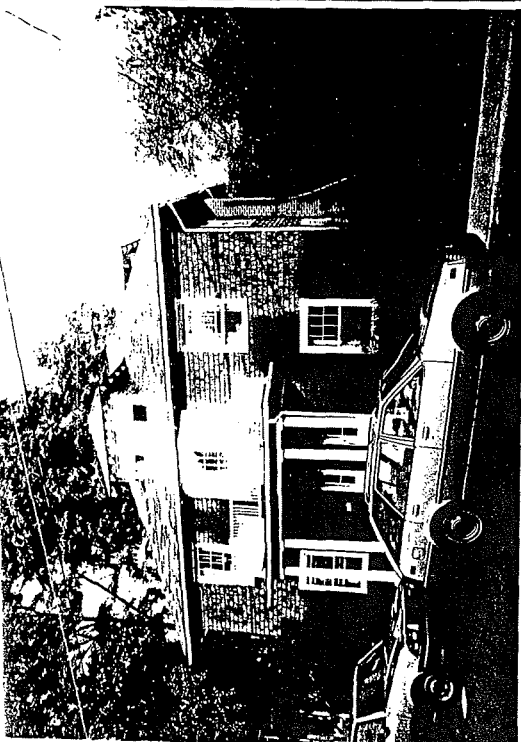
Front porch with balustraded upper deck and paired Roman Doric posts.

Building type

- detached house garage government industrial
- detached town house farmhouse commercial (office) school
- row house apartment building commercial (store) church
- double house gas station railroad _____

Style/period: Craftsman/ Colonial Revival Date: c. 1926 Architect/builder

Location and description of entrance Central entry with top- and side-lights.



Miscellaneous descriptive information (plan, exterior and interior decoration, cornice/eave type, window type and trim, chimneys, additions, alterations)

This house features projecting eaves, a symmetrical facade, and a central 3-sided bay on the upper floor that opens out onto the porch deck. The house is located on a lot that slopes toward the rear.

Historical information

According to the real estate records and the Sanborn maps, this house was built ca. 1926.

Source CReal Estate records; Sanborn maps;

Surveyed by Jeff O'Dell, VHLC

Date 8-83



3/2/1996



Board of Architectural Review (BAR) Certificate of Appropriateness

Please Return To: City of Charlottesville
Department of Neighborhood Development Services
P.O. Box 911, City Hall
Charlottesville, Virginia 22902
Telephone (434) 970-3130

Please submit ten (10) hard copies and one (1) digital copy of application form and all attachments.
Please include application fee as follows: New construction project \$375; Demolition of a contributing structure \$375;
Appeal of BAR decision \$125; Additions and other projects requiring BAR approval \$125; Administrative approval \$100.
Make checks payable to the City of Charlottesville.
The BAR meets the third Tuesday of the month.
Deadline for submittals is Tuesday 3 weeks prior to next BAR meeting by 3:30 p.m.

Owner Name	Univers. of Christian Ministries (Cba Center for Christian Study)	Applicant Name	Tom Keogh - train architects Bill Sherman - William Sherman Architect
Project Name/Description	Center for Christian Study Addition	Parcel Number	090105000
Project Property Address	129 Chancellor Street, Charlottesville, VA 22903		

Applicant Information

Address: Tom Keogh, train Architects
612 E. Jefferson St., Charlottesville, VA 22902
Email: tkeogh@trainarchitects.com
Phone: (W) 434.243.2965 (C) 434.242.5111


Property Owner Information (if not applicant)

Center for Christian Study
Address: Bill Wilder - Executive Director
129 Chancellor St., Charlottesville, VA 22903
Email: bill@studycenter.net
Phone: (W) 434.817.1050 (C) 434.996.9900

Do you intend to apply for Federal or State Tax Credits for this project? no

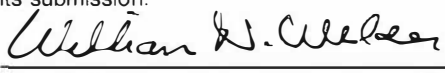
Signature of Applicant

I hereby attest that the information I have provided is, to the best of my knowledge, correct.

 7/23/2020
Signature Date
Thomas R Keogh 7/23/2020
Print Name Date

Property Owner Permission (if not applicant)

I have read this application and hereby give my consent to its submission.

 7-23-20
Signature Date
Bill Wilder 7/23/2020
Print Name Date

Description of Proposed Work (attach separate narrative if necessary): _____

List All Attachments (see reverse side for submittal requirements): _____

For Office Use Only	Approved/Disapproved by: _____
Received by: _____	Date: _____
Fee paid: _____ Cash/Ck. # _____	Conditions of approval: _____
Date Received: _____	_____
Revised 2016	

HISTORIC DISTRICT ORDINANCE: You can review the *Historical Preservation and Architectural Design Control Overlay Districts* regulations in the City of Charlottesville Zoning Ordinance starting with Section 34-271 online at www.charlottesville.org or at Municode.com for the City of Charlottesville.

DESIGN REVIEW GUIDELINES: Please refer to the current *ADC Districts Design Guidelines* online at www.charlottesville.org.

SUBMITTAL REQUIREMENTS: The following information and exhibits shall be submitted along with each application for Certificate of Appropriateness, per *Sec. 34-282 (d)* in the City of Charlottesville Zoning Ordinance:

- (1) Detailed and clear depictions of any proposed changes in the exterior features of the subject property;
- (2) Photographs of the subject property and photographs of the buildings on contiguous properties;
- (3) One set of samples to show the nature, texture and color of materials proposed;
- (4) The history of an existing building or structure, if requested;
- (5) For new construction and projects proposing expansion of the footprint of an existing building: a three-dimensional model (in physical or digital form);
- (6) In the case of a demolition request where structural integrity is at issue, the applicant shall provide a structural evaluation and cost estimates for rehabilitation, prepared by a professional engineer, unless waived by the BAR.

APPEALS: Following a denial the applicant, the director of neighborhood development services, or any aggrieved person may appeal the decision to the city council, by filing a written notice of appeal within ten (10) working days of the date of the decision. Per *Sec. 34-286*. - City council appeals, an applicant shall set forth, in writing, the grounds for an appeal, including the procedure(s) or standard(s) alleged to have been violated or misapplied by the BAR, and/or any additional information, factors or opinions he or she deems relevant to the application.

Center for Christian Study Expansion Study

Center for Christian Study
128 Chancellor Street
Charlottesville, VA 22903

BAR Submission
July 2020 REV. September 2020

Cover and sheets 1 - 15
(* Sheets 16 and 17 removed *)

September 2020 BAR Review
Supplemental Submittal
Cover, sheets 1 - 11, spec sheets:
Marvin window and door spec (9 sheets)
LED lighting spec (3 sheets)
(Fine Concrete spec sheets removed *)

* Work at front of parcel removed from CoA request (Sept 28, 2020)

Center for Christian Study Expansion Study

Center for Christian Study
128 Chancellor Street
Charlottesville, VA 22903

BAR Submission
July 2020 REV. September 2020

William Sherman Architect
T r a i n Architects
612 East Jefferson Street
Charlottesville, Virginia 22902
ph 434.293.2965 fax 295.5122



128 Chancellor Street

History

Description from Charlottesville Corner Survey, Charlottesville, Va.

128 Chancellor Street: Detached dwelling. Craftsman / Colonial Revival. Ca. 1926. Frame with wood shingles: 3 stories; hipped roof; 1 oversized front hipped dormer; symmetrical 3-bay front; 1-bay front porch w/ paired Roman Doric columns and balustrade upper deck. One of only three shingle-clad dwellings in the District, this house features a 3-sided bay opening onto the upper porch deck.

A 4-story addition (3 stories of finished space and one parking level) was designed and constructed in 1996 -1998. The addition includes a semi-detached open exit stair along the north elevation. Frame construction with wood shingles' hipped and flat roofs both; is a style similar to the original construction but with a modern twist reflective of its era

Narrative

The Center of Christian Study is one of the leading Christian Study Centers in the Nation. Active in the University community since the 1970's, it first occupied a rented house on Elliewood Avenue. It purchased the house on Chancellor Street in 1976. The Center's program thrived in that location and grew to the extent that it began design work on an addition to the original house in 1996. Construction of that addition, which occupies the middle third of the site, was completed in 1998.

The Center continued to thrive in that "Corner" location and by the 2010's they were clearly outgrowing their facility. In 2015, the Center engaged William Sherman Architect with Train Architects to study their site and its potential for expansion. Working with the City of Charlottesville guidelines and code requirements regarding allowable building

area, building height, and property line setbacks, it was determined that a 3-story addition of approximately 10,500 GSF (3,500 GSF per floor) could be constructed on the rear third of the site. It was also determined that a project of that size could provide the space necessary to meet the center's current needs and projected growth over the next five to ten years. The project to design an addition at the rear of the site was begun in 2019.

Description of proposed work and Design Intent

The addition to the existing Christian Studies Center will continue leave the residential character of the institution and the original building with the Chancellor Street entrance unchanged. This character is central to the identity of the institution as a "home" for university students and will be reflected in the development of the interior as a space that is domestic in character while creating the capacity to support the larger-scaled institutional needs.

The language of the exterior reflects this dual reading of the domestic to institutional scales as well, with a continuity of materials and an articulation of the massing into discrete volumes on the new addition that echo the original building. The design recognizes that the institutional spatial requirements demand a shift from the residential scale, while the relationship to the context as viewed from below requires the articulation of appropriately scaled volumes rather than the appearance of one large mass. Each of the resulting three primary elements of the new addition are clad in cedar shingles, stained to match the existing building, complemented by the white trim at the windows.

The three shingled elements include the new library reading room above the great hall with a large-scale window to the east, the curved meeting rooms to the north, and the stair and elevator tower to the south. The central large window at the common spaces serves as a singular lantern to identify the institutional program of gathering, while framing the view to the east from each room. The curved wall and window of the upper meeting room refers to the corner turrets found in the historical Shingle Style architecture that informed the original building, while providing a sweeping view to the Southwest Mountains. The stair tower and elevator are meant to provide an unobtrusive backdrop to the rear yard of the adjacent property.

The core of the building to which the three primary volumes attach forms a quiet background, a spatial and material reveal between the new addition and the existing building. The material will be a rainscreen wall panel system, reinterpreting the paneled material in the connecting links of the existing building.

All modifications to the existing building are being done in a way to precisely match the existing architecture, so that the original structure will appear essentially unchanged from the front and sides, including the beloved outdoor stair, decks and terraces.

The existing parking area will be accommodated under the new addition.



1. 1926 WEST (CHANCELLOR ST)



2. 1996 ADDITION NORTH



3. 1996 ADDITION NORTHEAST



4. 1996 ADDITION EAST



5. 1996 ADDITION SOUTH



5. 1996 ADDITION EAST (ELLIEWOOD AVE)

LOCATION
 A. EXISTING 1926
 B. EXISTING 1996 ADDITION
 C. PROPOSED NEW ADDITION



1. NORTH WALK LOOKING EAST



2. NORTH WOOD DECKS



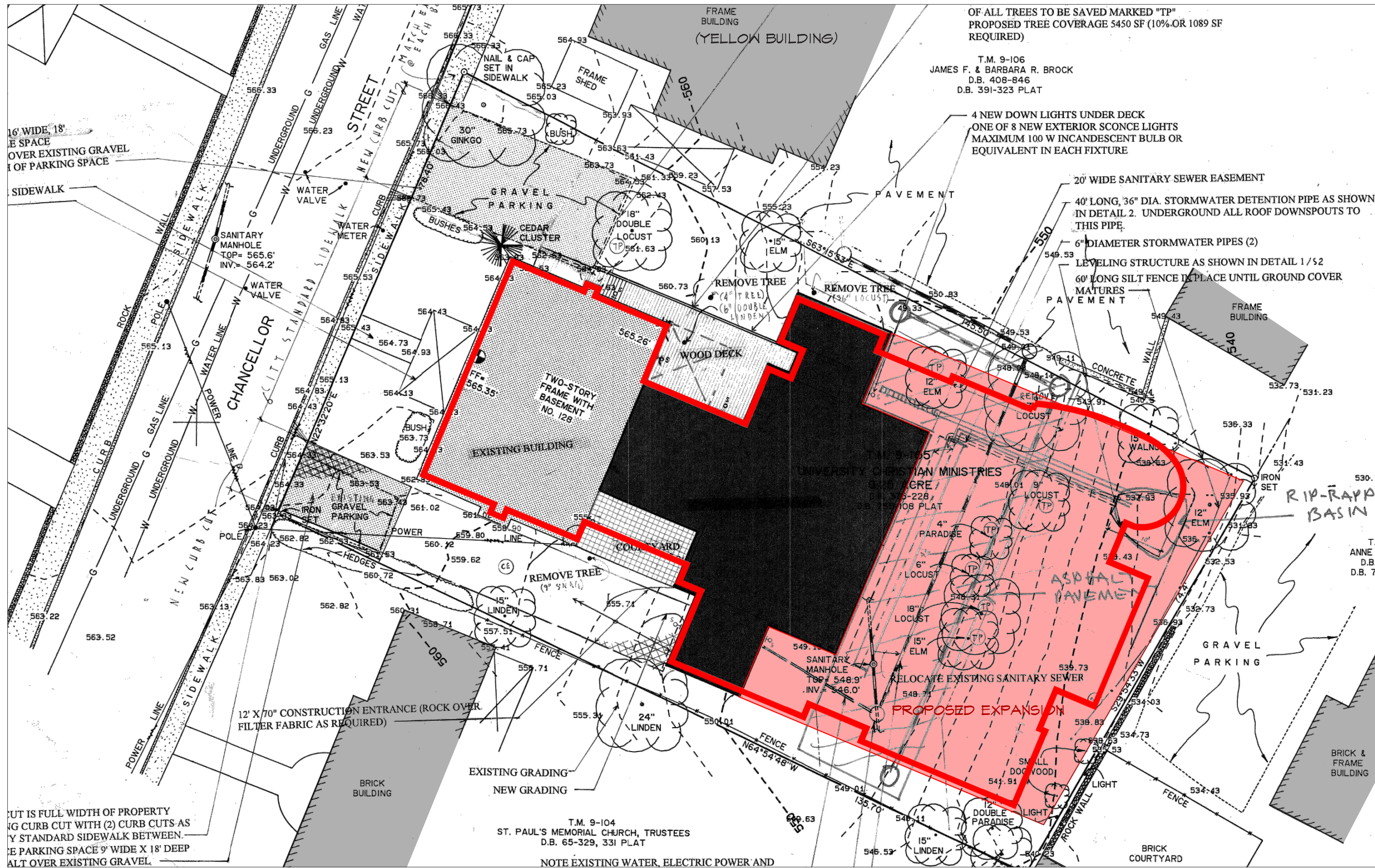
3. 1996 ADDITION - SOUTH ELEVATION - DETAIL OF WOOD PANELING



4. 1996 ADDITION - DETAIL OF NORTH STAIR



5. SOUTH COURTYARD AND WALKWAY



OF ALL TREES TO BE SAVED MARKED "TP"
 PROPOSED TREE COVERAGE 5450 SF (10% OR 1089 SF REQUIRED)

T.M. 9-106
 JAMES F. & BARBARA R. BROCK
 D.B. 408-846
 D.B. 391-323 PLAT

4 NEW DOWN LIGHTS UNDER DECK
 ONE OF 8 NEW EXTERIOR SCONCE LIGHTS
 MAXIMUM 100 W INCANDESCENT BULB OR
 EQUIVALENT IN EACH FIXTURE

20' WIDE SANITARY SEWER EASEMENT
 40' LONG, 36" DIA. STORMWATER DETENTION PIPE AS SHOWN
 IN DETAIL 2. UNDERGROUND ALL ROOF DOWNSPOTS TO
 THIS PIPE.
 6" DIAMETER STORMWATER PIPES (2)
 LEVELING STRUCTURE AS SHOWN IN DETAIL 1/52
 60' LONG SILT FENCE IN PLACE UNTIL GROUND COVER
 MATURES
 PAVEMENT

12' X 70" CONSTRUCTION ENTRANCE (ROCK OVER
 FILTER FABRIC AS REQUIRED)

RELOCATE EXISTING SANITARY SEWER
PROPOSED EXPANSION

CUT IS FULL WIDTH OF PROPERTY
 WITH CURB CUT WITH (2) CURB CUTS AS
 STANDARD SIDEWALK BETWEEN.
 PARKING SPACE 9' WIDE X 18' DEEP
 ALT OVER EXISTING GRAVEL

T.M. 9-104
 ST. PAUL'S MEMORIAL CHURCH, TRUSTEES
 D.B. 65-329, 331 PLAT

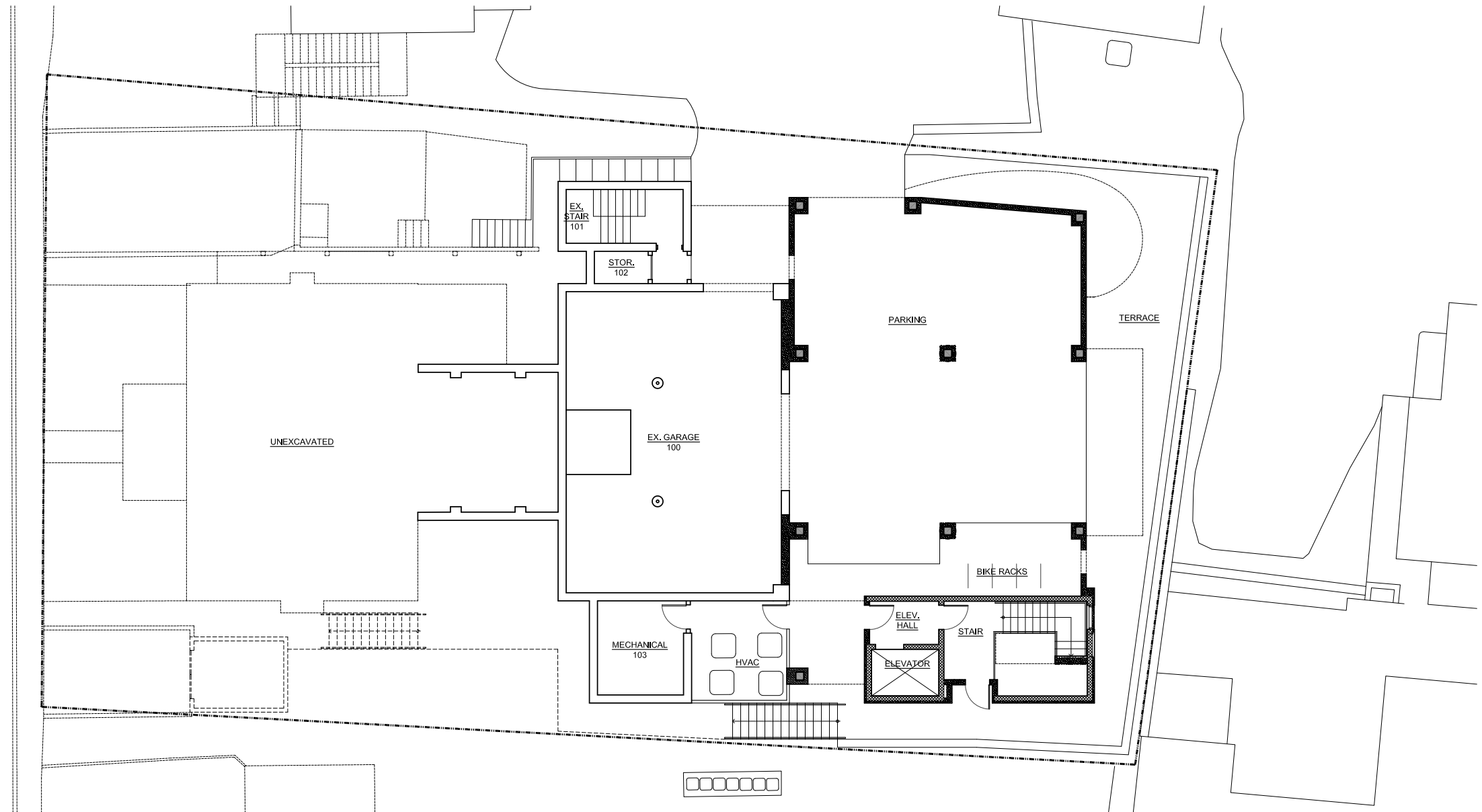
NOTE EXISTING WATER, ELECTRIC POWER AND

Existing Site Plan w/ Expansion



Center for Christian Study Expansion Study

128 Chancellor St, Charlottesville, VA 22903



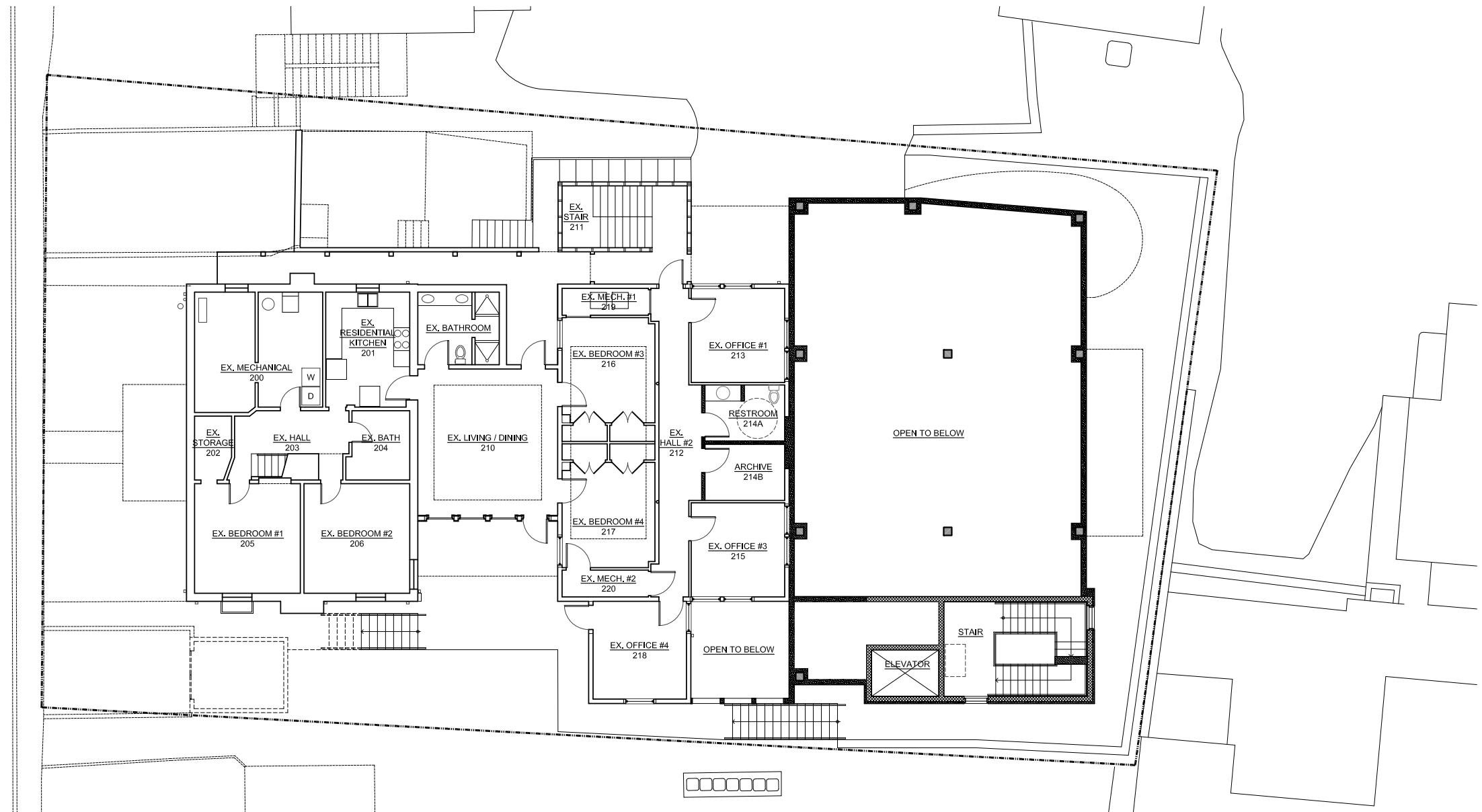
BASEMENT LEVEL PLAN

Scale: $\frac{1}{16}'' = 1'-0''$



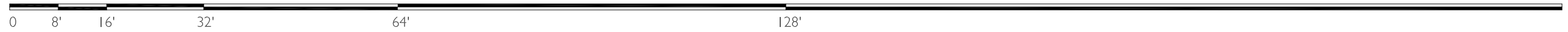
Center for Christian Study Expansion Study

128 Chancellor St, Charlottesville, VA 22903



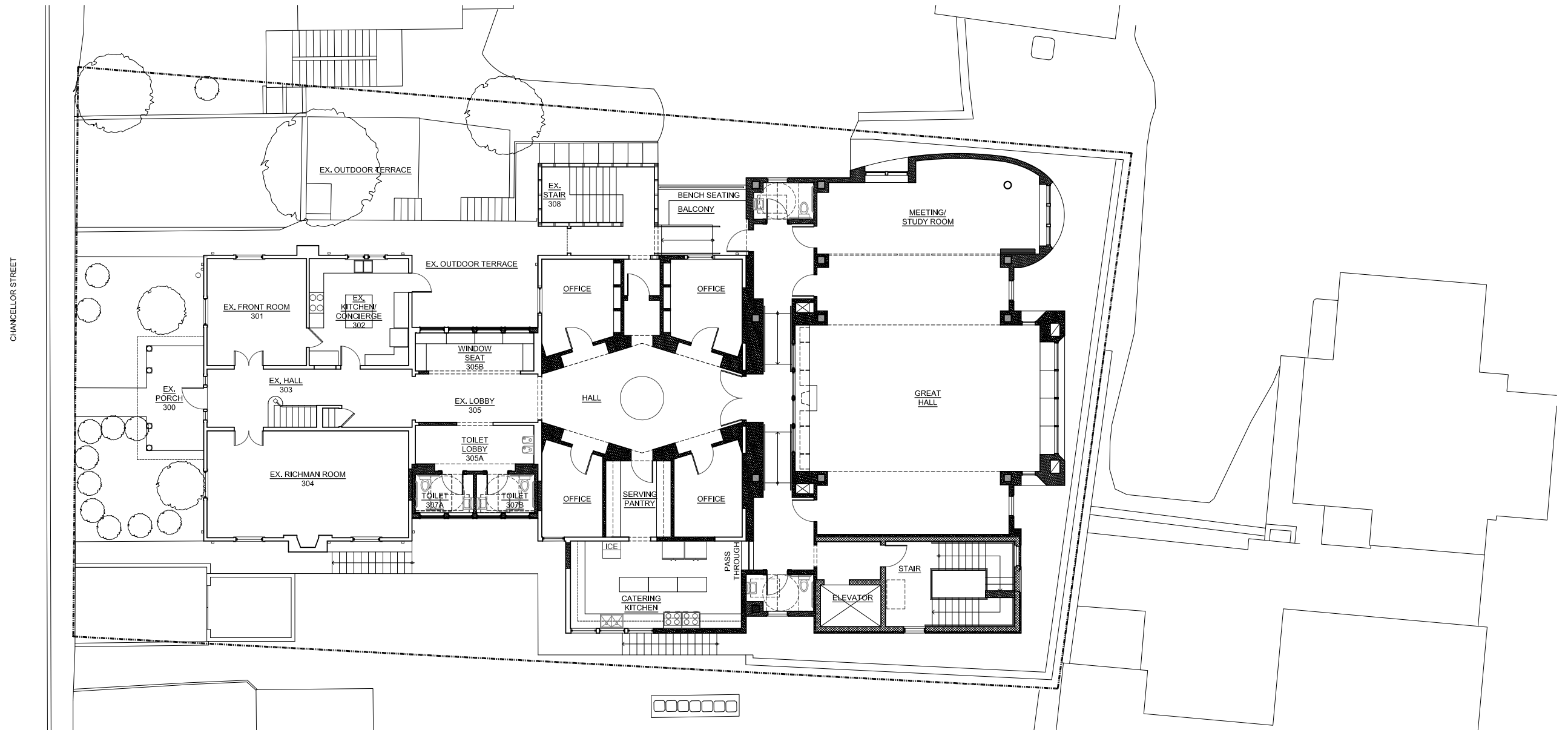
LOWER/OFFICE LEVEL PLAN

Scale: 1/16" = 1'-0"



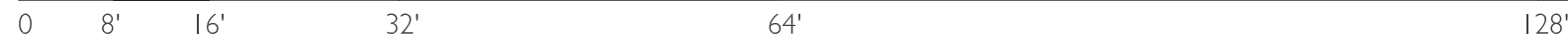
Center for Christian Study Expansion Study

128 Chancellor St, Charlottesville, VA 22903



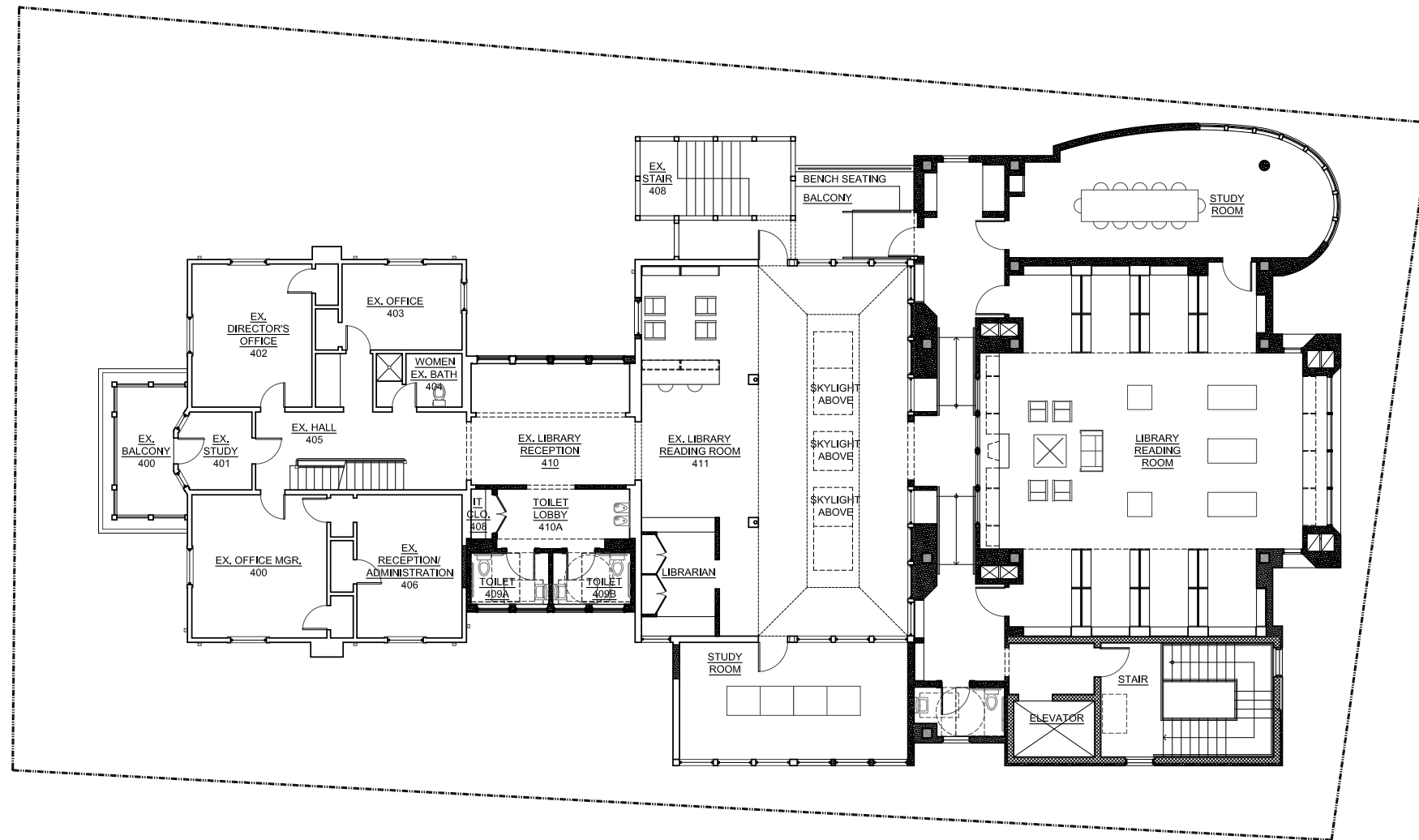
FIRST LEVEL PLAN

Scale: $\frac{1}{16}'' = 1'-0''$



Center for Christian Study Expansion Study

128 Chancellor St, Charlottesville, VA 22903



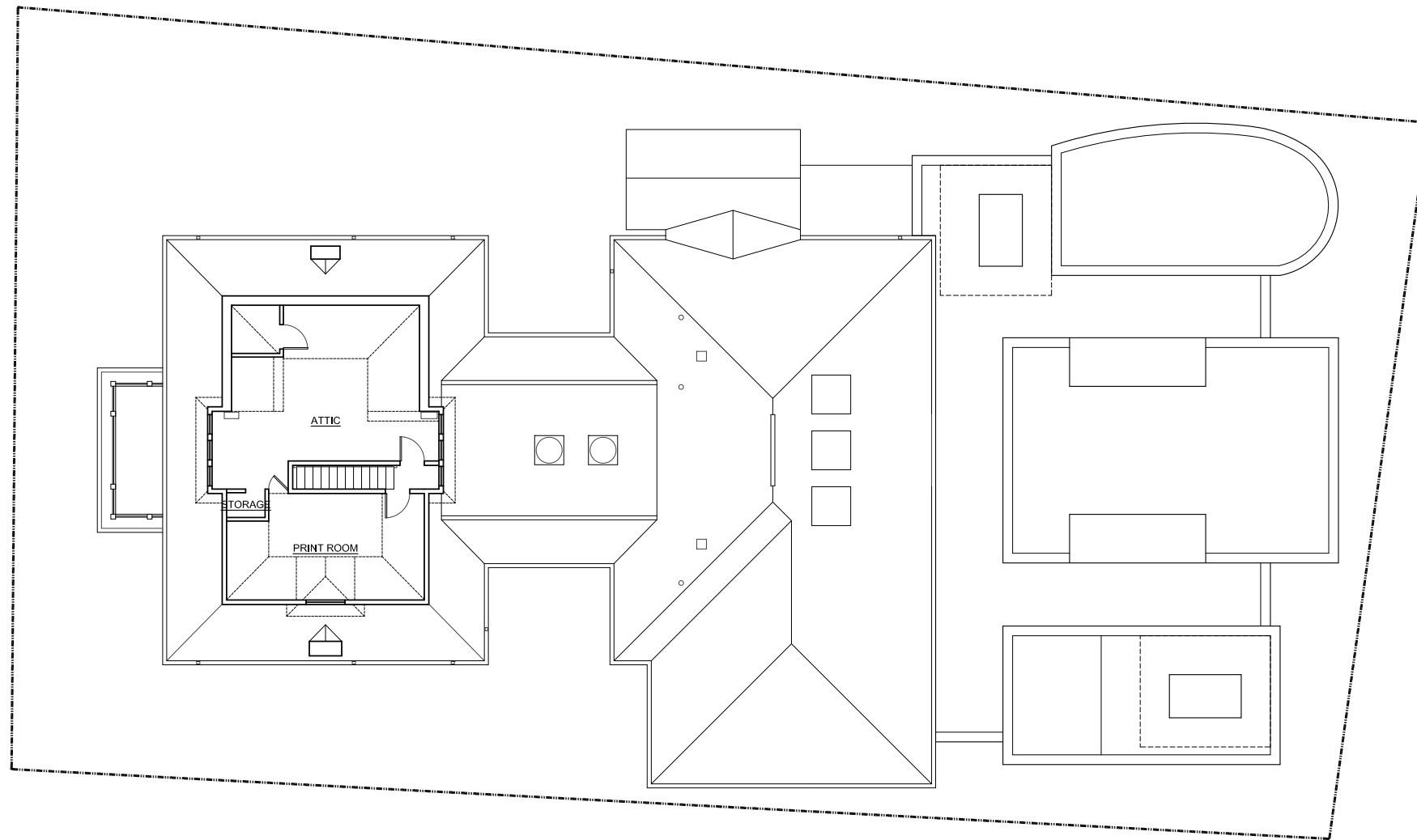
UPPER LEVEL PLAN

Scale: $\frac{1}{16}'' = 1'-0''$



Center for Christian Study Expansion Study

128 Chancellor St, Charlottesville, VA 22903



ATTIC & ROOF PLAN

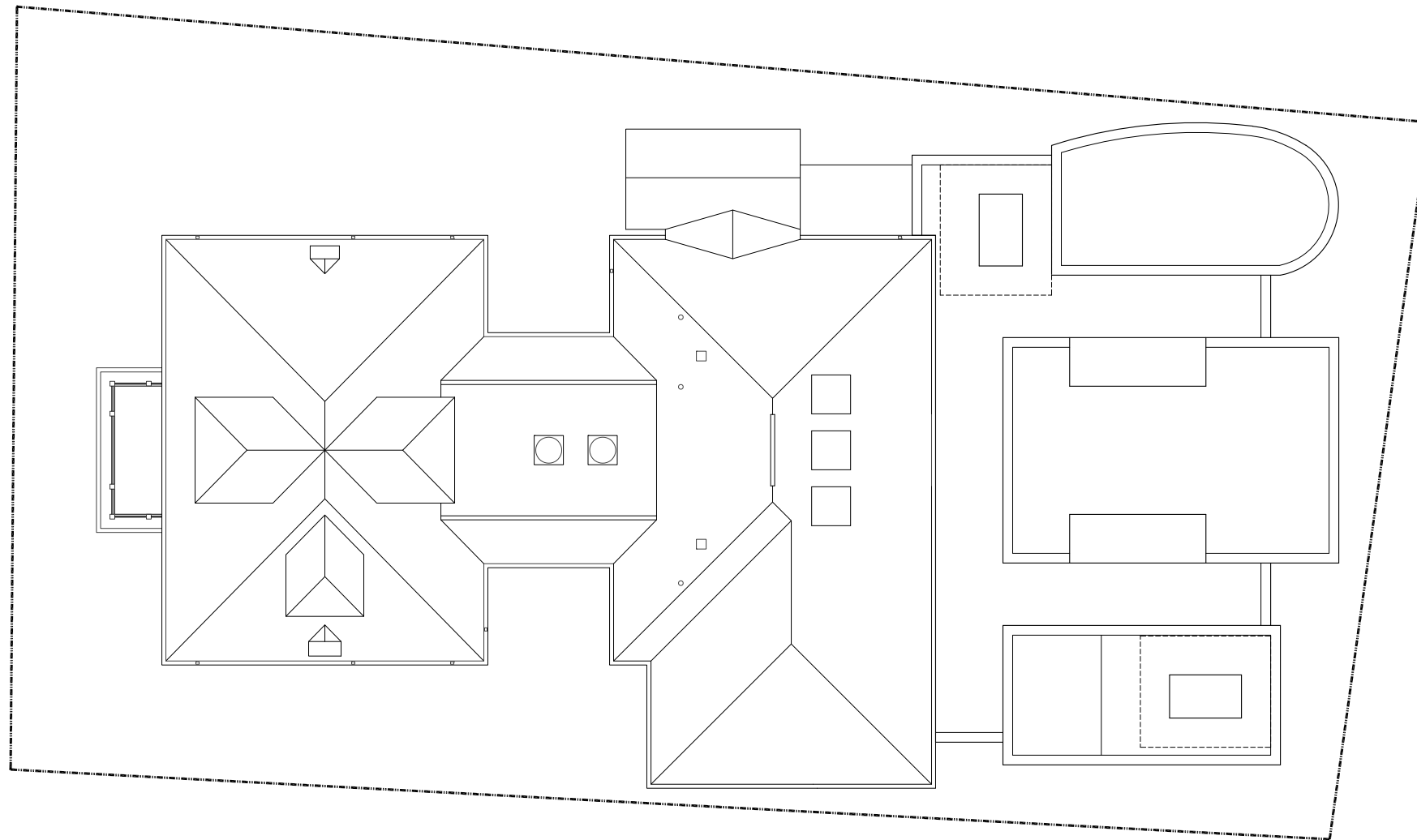
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0 8' 16' 32' 64' 128'



Center for Christian Study Expansion Study

128 Chancellor St, Charlottesville, VA 22903



ROOF PLAN

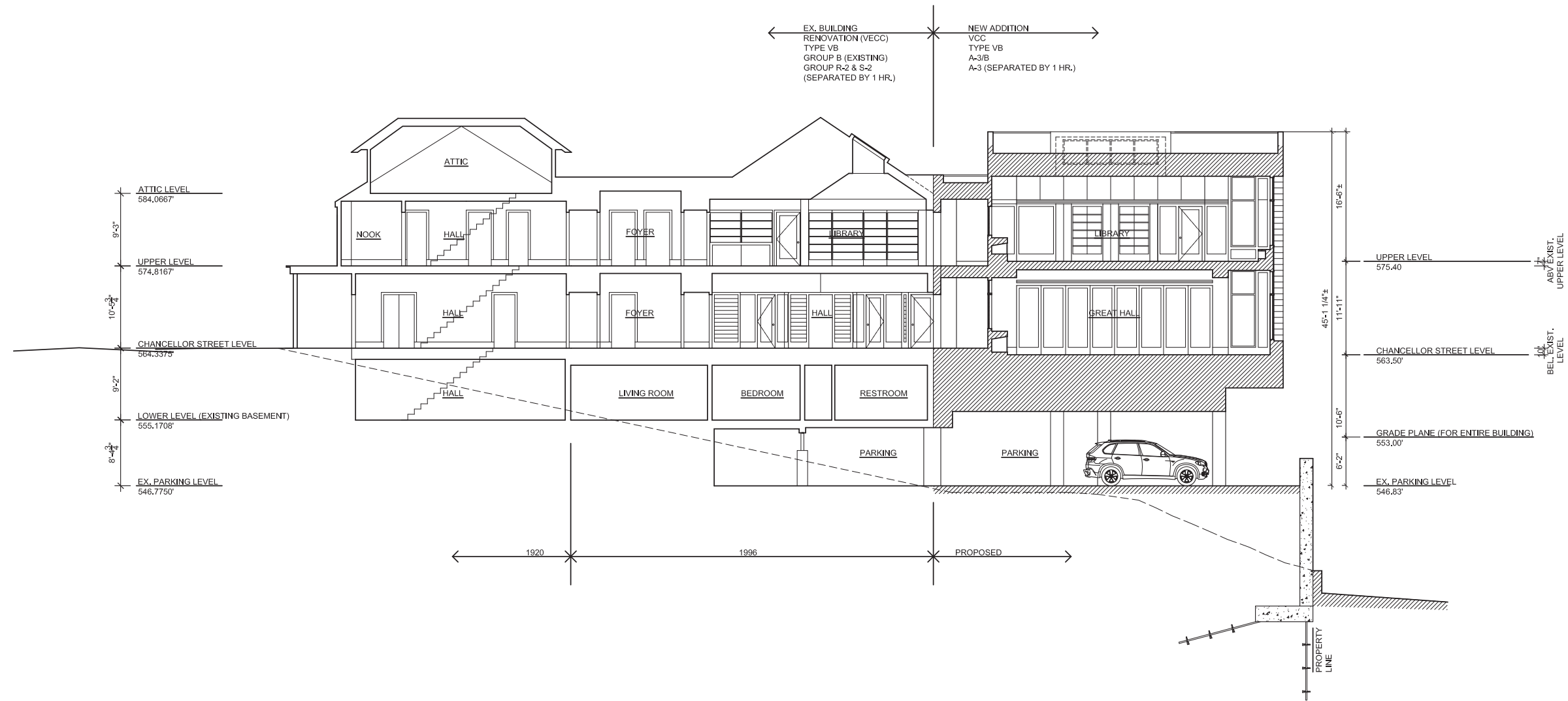
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0 8' 16' 32' 64' 128'



Center for Christian Study Expansion Study

128 Chancellor St, Charlottesville, VA 22903



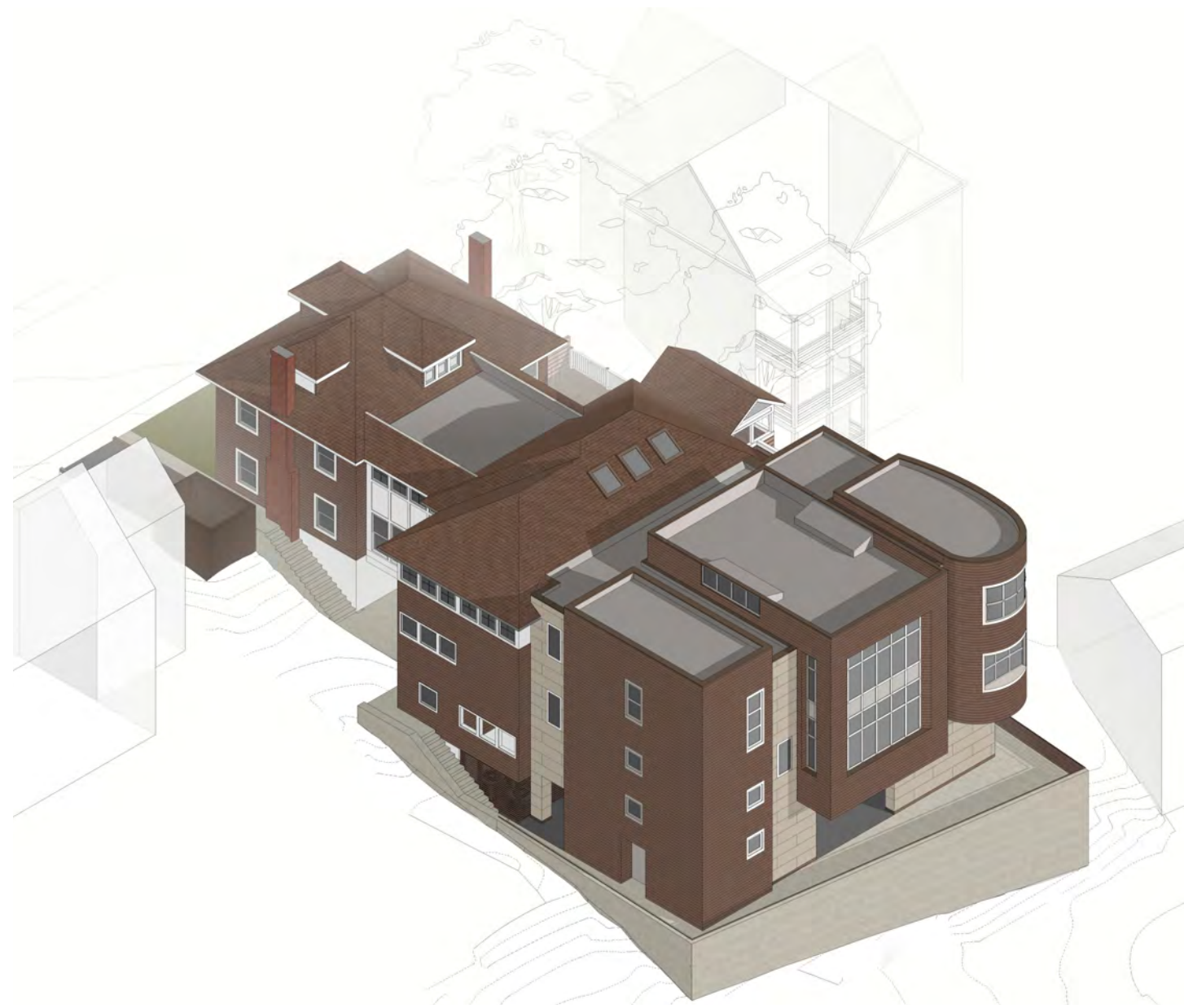
LONGITUDINAL SECTION

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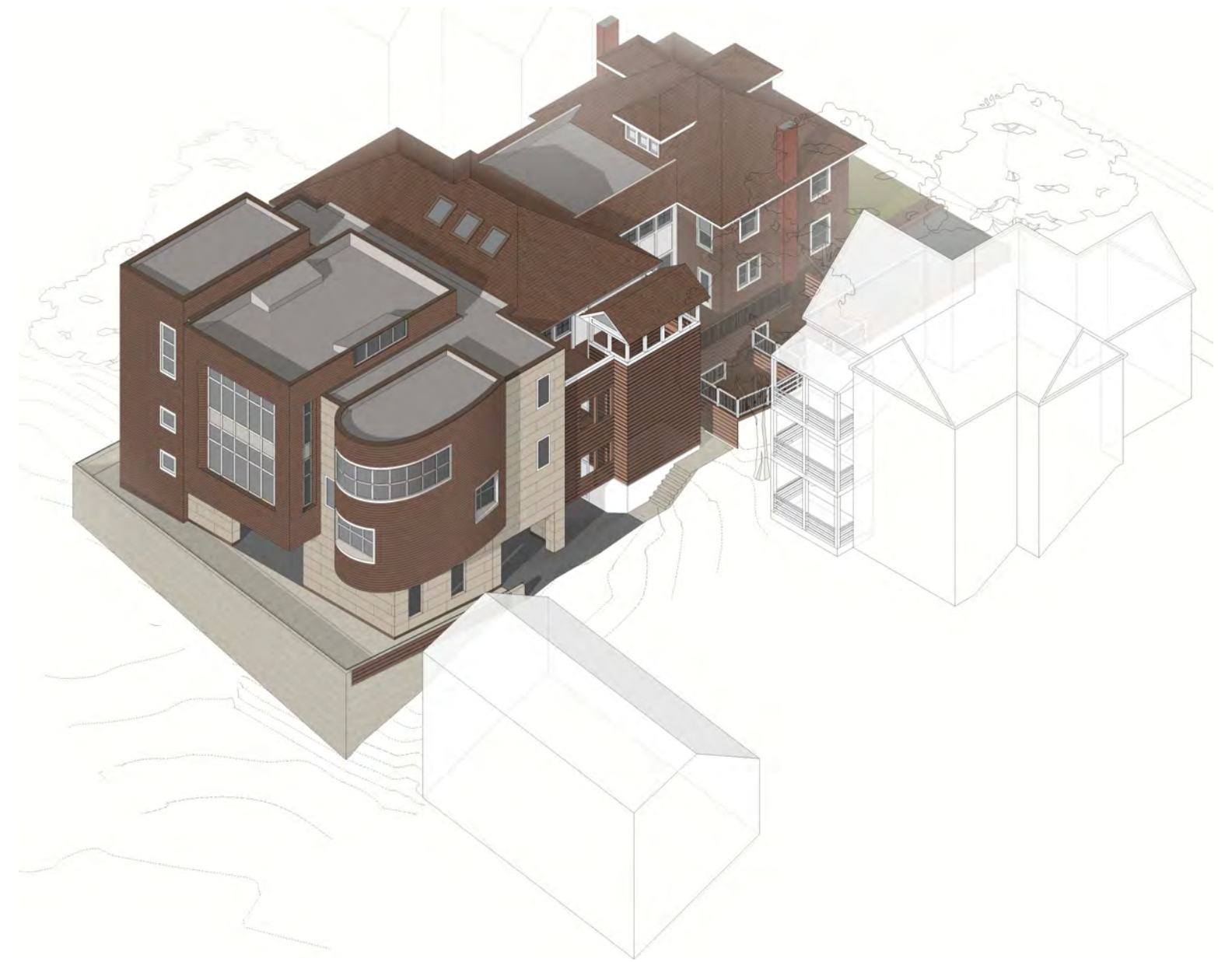


Center for Christian Study Expansion Study

128 Chancellor St, Charlottesville, VA 22903



Southeast Isometric



Northeast Isometric

Center for Christian Study Expansion Study
128 Chancellor St, Charlottesville, VA 22903



West (Chancellor Street) Elevation



South Elevation



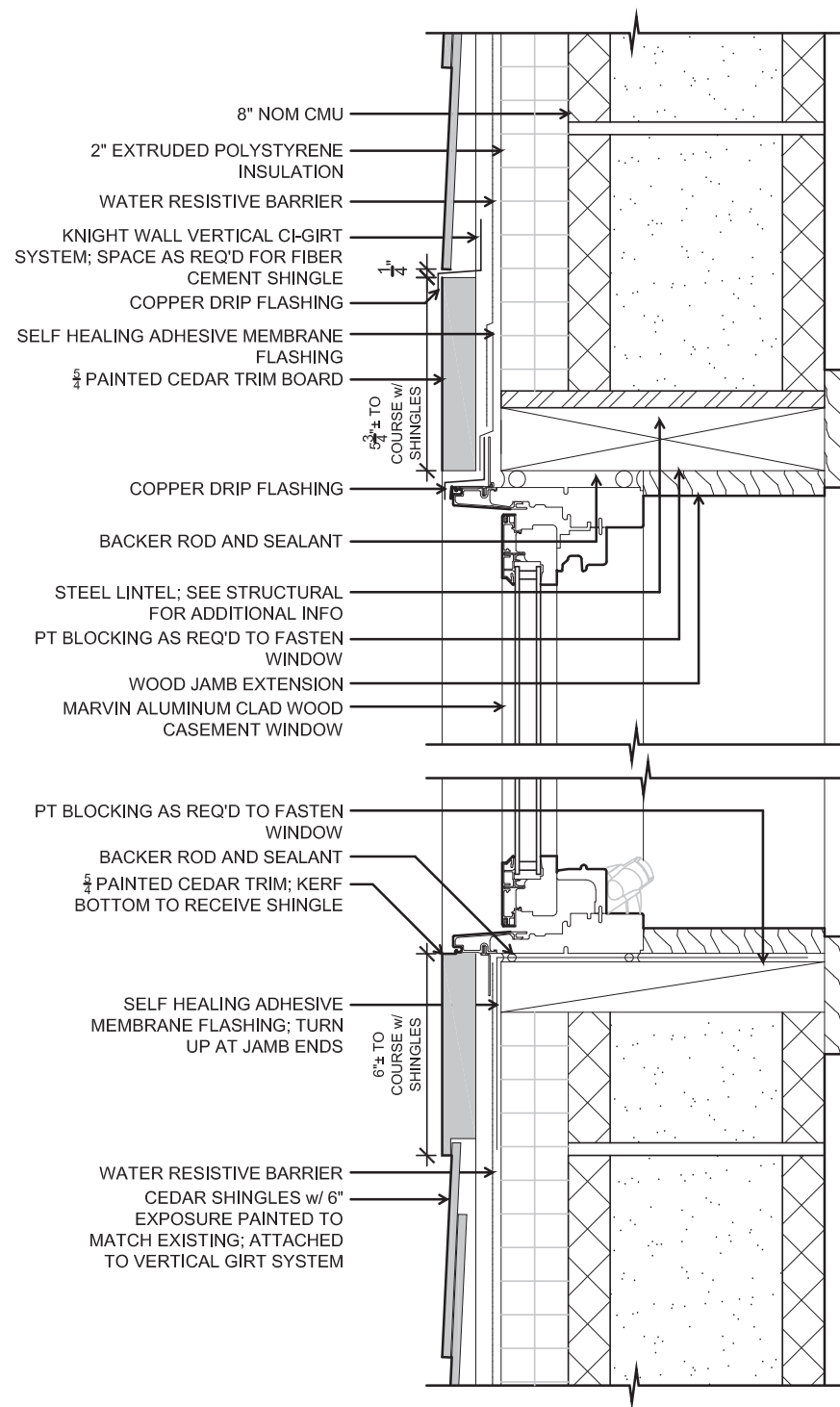
East Elevation



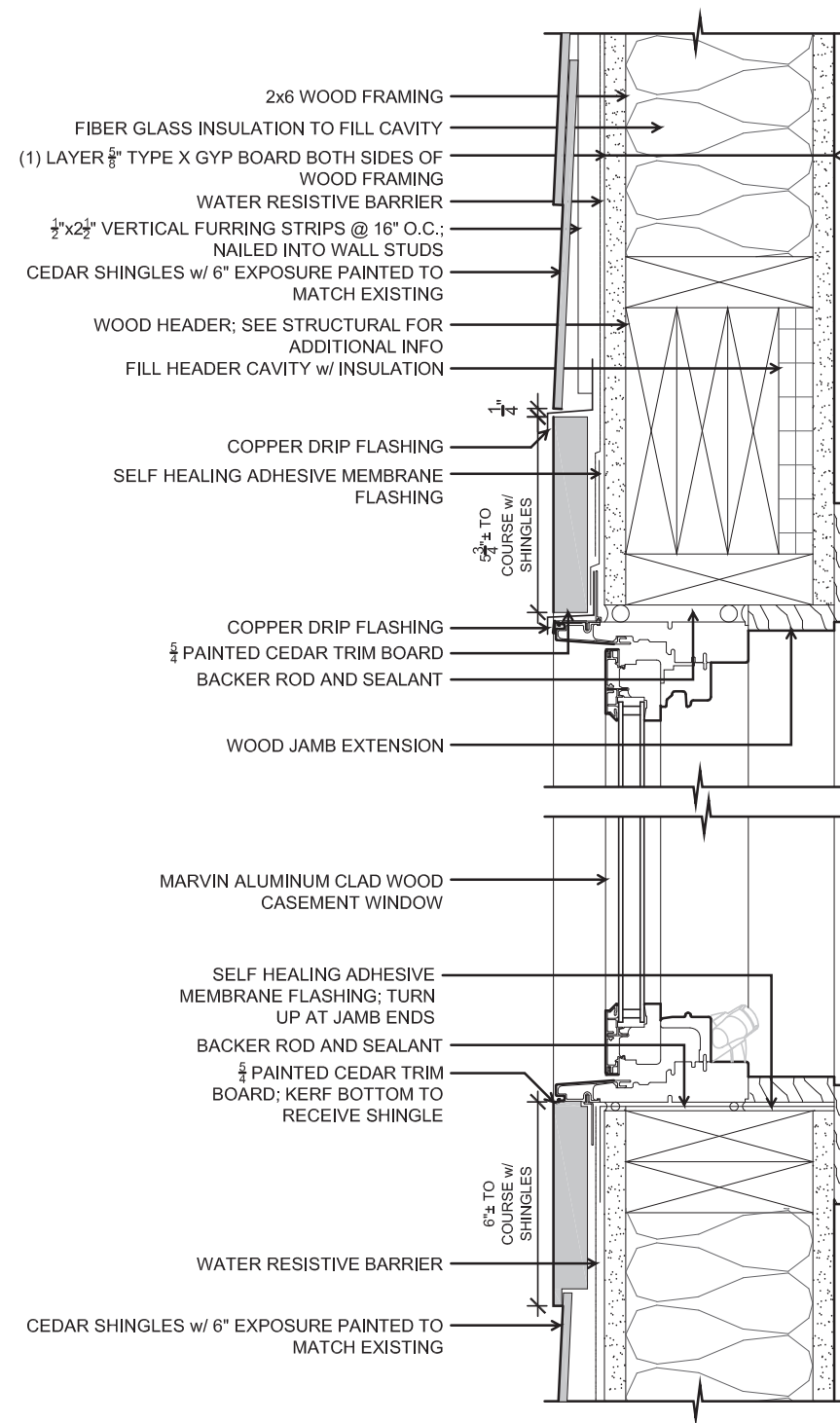
North Elevation

Center for Christian Study Expansion Study

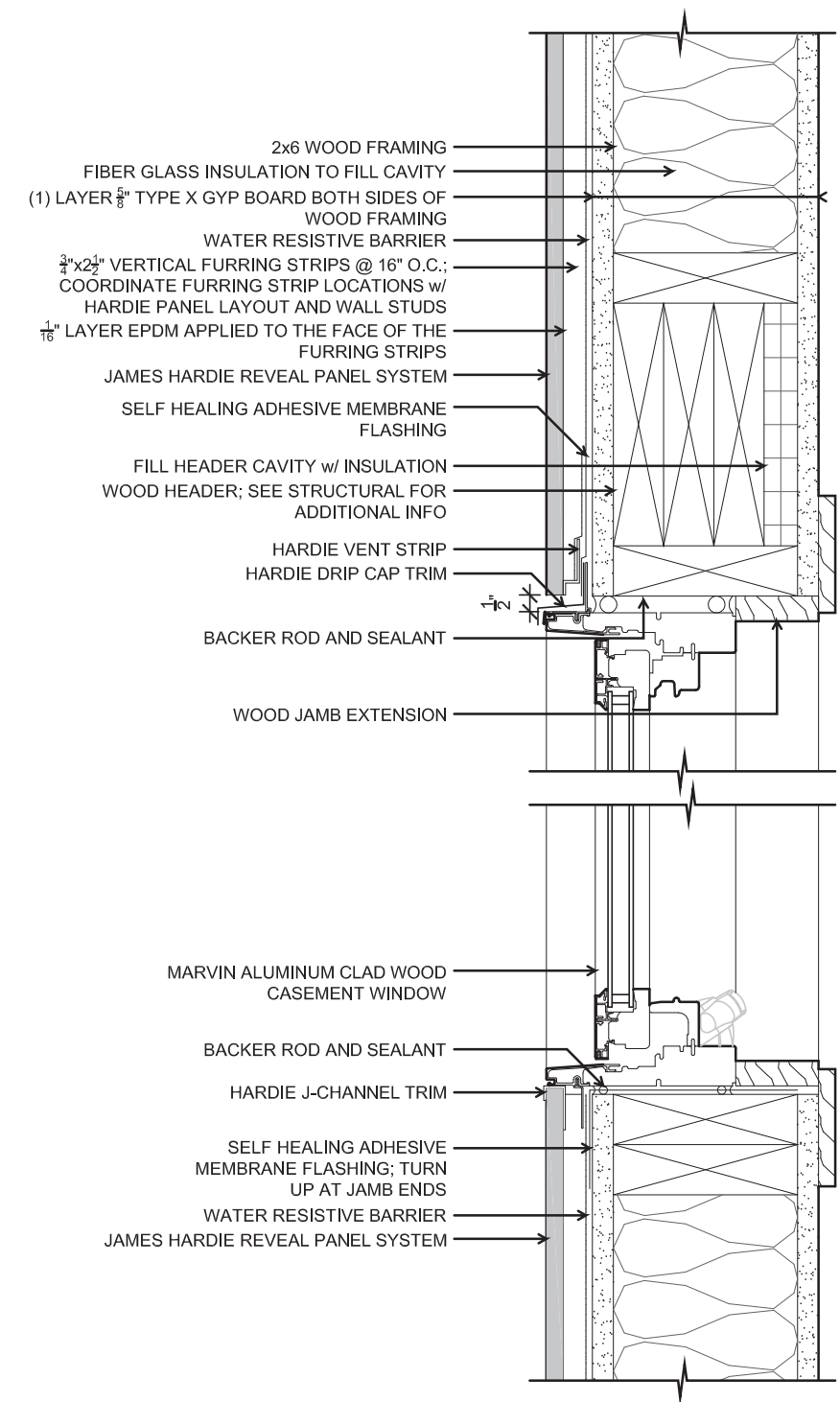
128 Chancellor St, Charlottesville, VA 22903



Window: Marvin Aluminum Clad Wood Window
 Facade: Cedar Shingles; painted to match existing



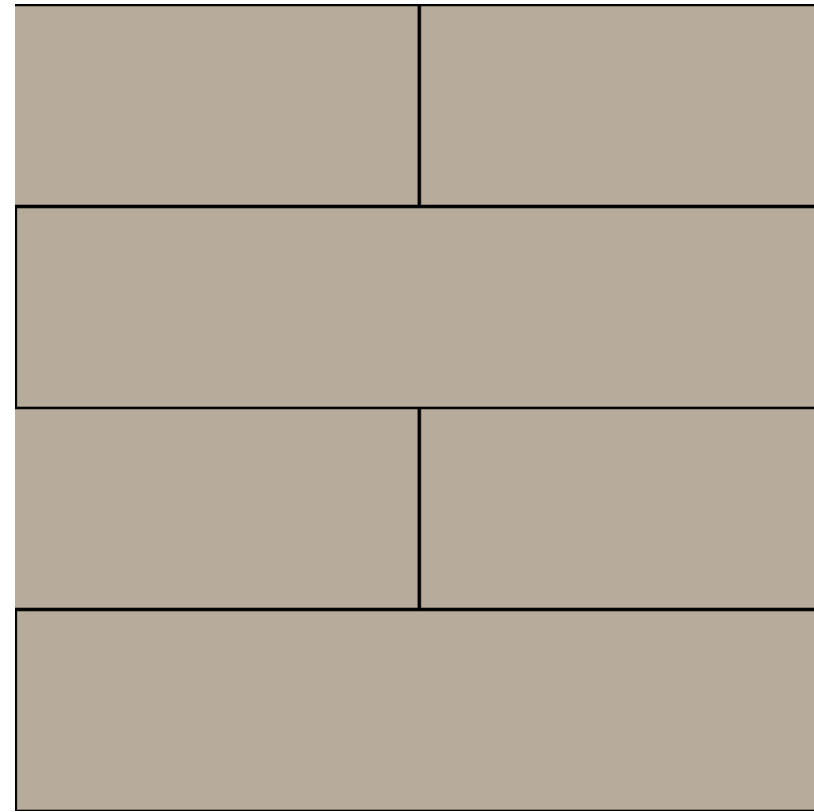
Window: Marvin Aluminum Clad Wood Window
 Facade: Cedar Shingles; painted to match existing



Window: Marvin Aluminum Clad Wood Window
 Facade: James Hardie Aspyre Reveal Panel System; painted



CEDAR SHINGLES -
STAINED TO MATCH EXISTING



JAMES HARDIE REVEAL
CEMENT PANEL SYSTEM



ALUMINUM CLAD
WOOD WINDOW



STOREFRONT / CURTAIN WALL
WINDOW SYSTEM
NOTE: MULLION COLOR TO BE DETERMINED

Center for Christian Study Expansion

Center for Christian Study
128 Chancellor Street
Charlottesville, VA 22903

September 2020 BAR Review
Supplemental Submittal

Center for Christian Study Expansion
128 Chancellor Street
Charlottesville, VA 22903

Table of Contents:

Cover

Table of Contents

Outline Exterior Material Specification

BAR Comment Responses

Supplemental Drawings

Product Literature

Outline Exterior Material Specification

Roof	New addition: Flat (Low-Slope); White EPDM New Bathroom addition south side: Asphalt shingles to match existing Existing flat roof: Black EPDM
Cornice/Coping	Metal; color to match façade color below coping
Gutters/Downspouts	New addition: internal drains with scuppers; no gutters and downspouts New bathroom addition south side: new gutters and downspouts to match existing
Siding	Cedar shingles with 6" exposure painted to match the existing cedar shingles James Hardie Aspyre Reveal Panel System; NOM 2'x8' panels painted Benjamin Moore Light Pelham Gray; see color elevations for example
Trim	Flat trim; painted white
Flashing	Metal; white to match window frame/trim
Soffits	James Hardie Soffit Panel; painted to match cedar shingles
Rear Retaining Wall	Smooth metal formed concrete with formwork joints; natural color
Guardrails	Horizontal wood boards to match north stair, painted to match existing
Windows	Marvin aluminum clad wood windows; white cladding
Window Wall	Marvin structurally mulled window system-glass and panel infill (no spandrel glass); white cladding
Glass	Clear glass to match BAR standards
Doors	Marvin aluminum clad wood doors; white cladding
Front Terrace Pavers	Sand set Brick Pavers (formerly concrete pavers and changed to address drainage and aesthetics)

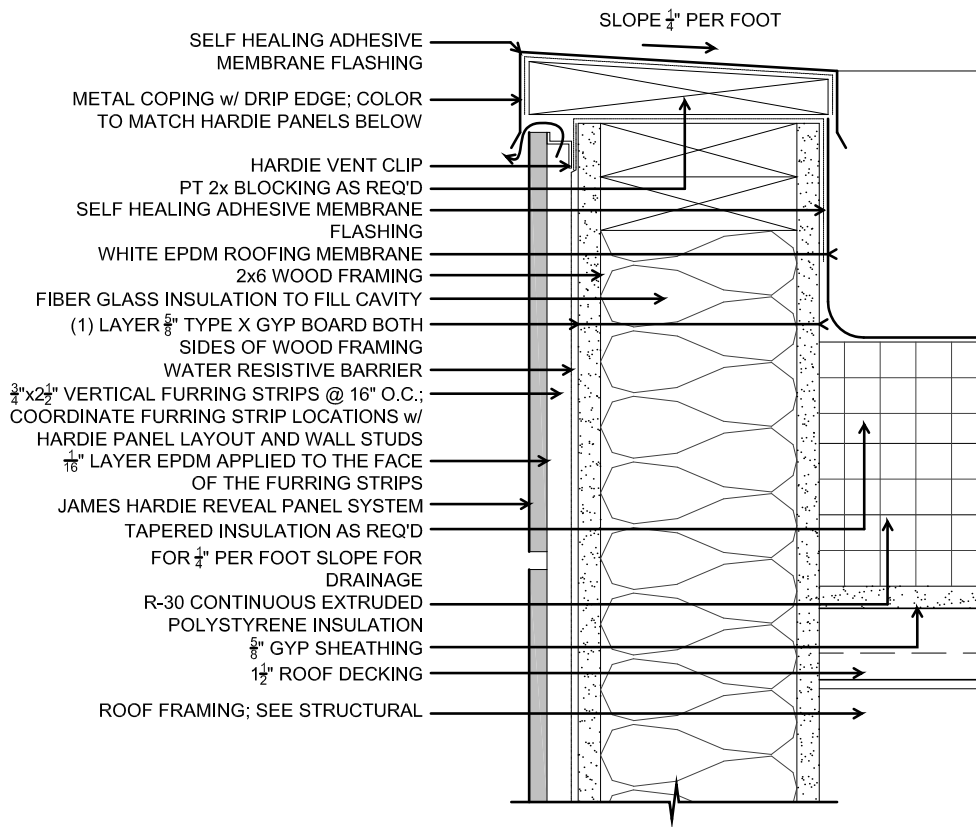
BAR Comment Responses

- 1) Roofing [at addition]: See outline exterior material specification.
- 2) Gutters/Downspouts: See outline exterior material specification.
- 3) Cornice: Capped parapet wall. See outline exterior material specification and attached supplemental drawings for additional information.
- 4) Siding and Trim: See outline exterior material specification.
- 5) Doors and Windows: See outline material specification and attached product literature for additional information.
 - a. Which openings are storefront and which are Marvin windows? All glazing in the project to be Marvin clad windows. Storefront/curtain wall windows have been replaced with Marvin's structurally mulled window system.
 - b. What are the lite arrangements for the windows? No muntins / divisions are being proposed for the windows; see exterior elevations for additional information.
 - c. Colors for window and storefront components? See outline exterior material specification.
- 6) Soffits material: See outline exterior material specifications.
- 7) Parking Garage:
 - a. Ceiling material: 5/8" exterior gyp sheathing
 - b. Wall material: James Hardie Aspyre Reveal System to match exterior
 - c. Lighting: Recessed fixtures to meet code minimum light levels
- 8) Concrete retaining wall at rear: See attached sketch with elevations (north and south ends) and outline exterior material specification.
- ~~9) Front Terrace and Landscaping:~~
 - ~~a. Benches tables and chairs? "Fine Concrete"; see attached product literature for additional information.~~
 - ~~b. Concrete pavers: Front terrace ground material has been revised to brick pavers. Pattern to be determined.~~

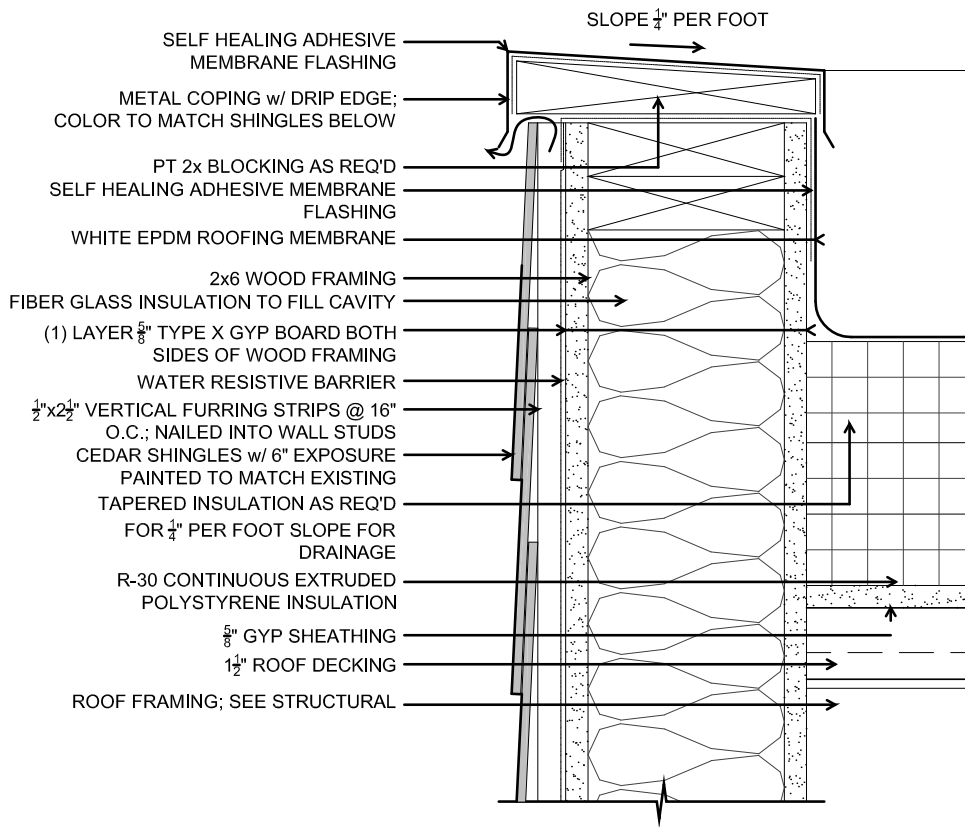
- ~~c. Trash enclosure: Horizontal wood panels similar to north stair enclosure. See photo on sheet 16 of September BAR submittal and attached supplemental drawings for additional information.~~
 - ~~d. New wood deck: to match existing wood deck on the north side of the building.~~
 - ~~e. Planter boxes: Custom by "Fine Concrete"~~
 - ~~f. New sidewalk and driveway apron: to match existing.~~
 - ~~g. Lighting: Minimum required to illuminate egress paths - low wall mounted or bollards~~
 - ~~h. Manhole (front entry): cast iron~~
- 10) Exterior Lighting: See attached "basis of design" product literature for additional information
- a. Ground level exits from parking garage: recessed downlights in soffit above
 - b. Perimeter walk around new addition: low in wall mounted lights for a walking surface
 - c. South exit way: bollards

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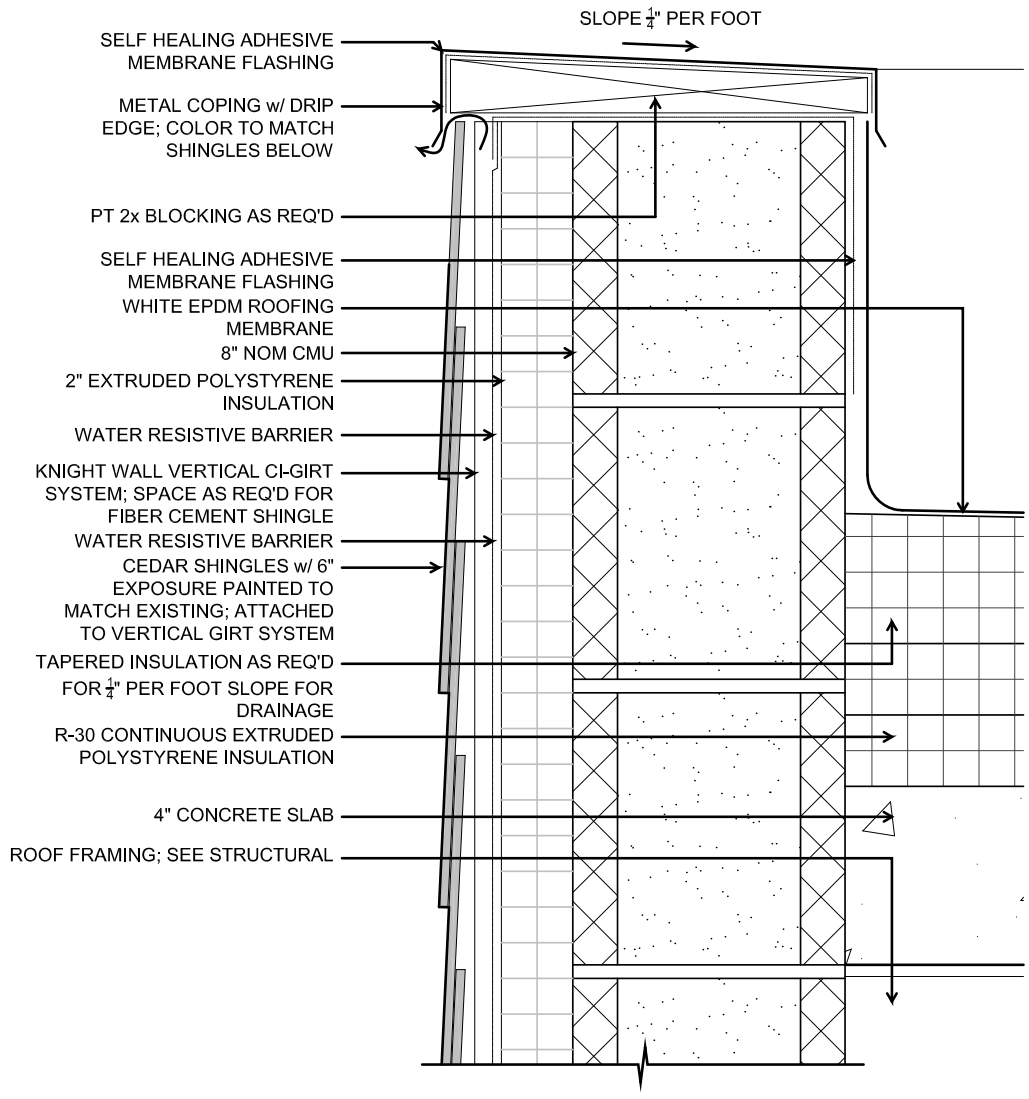
Supplemental Drawings



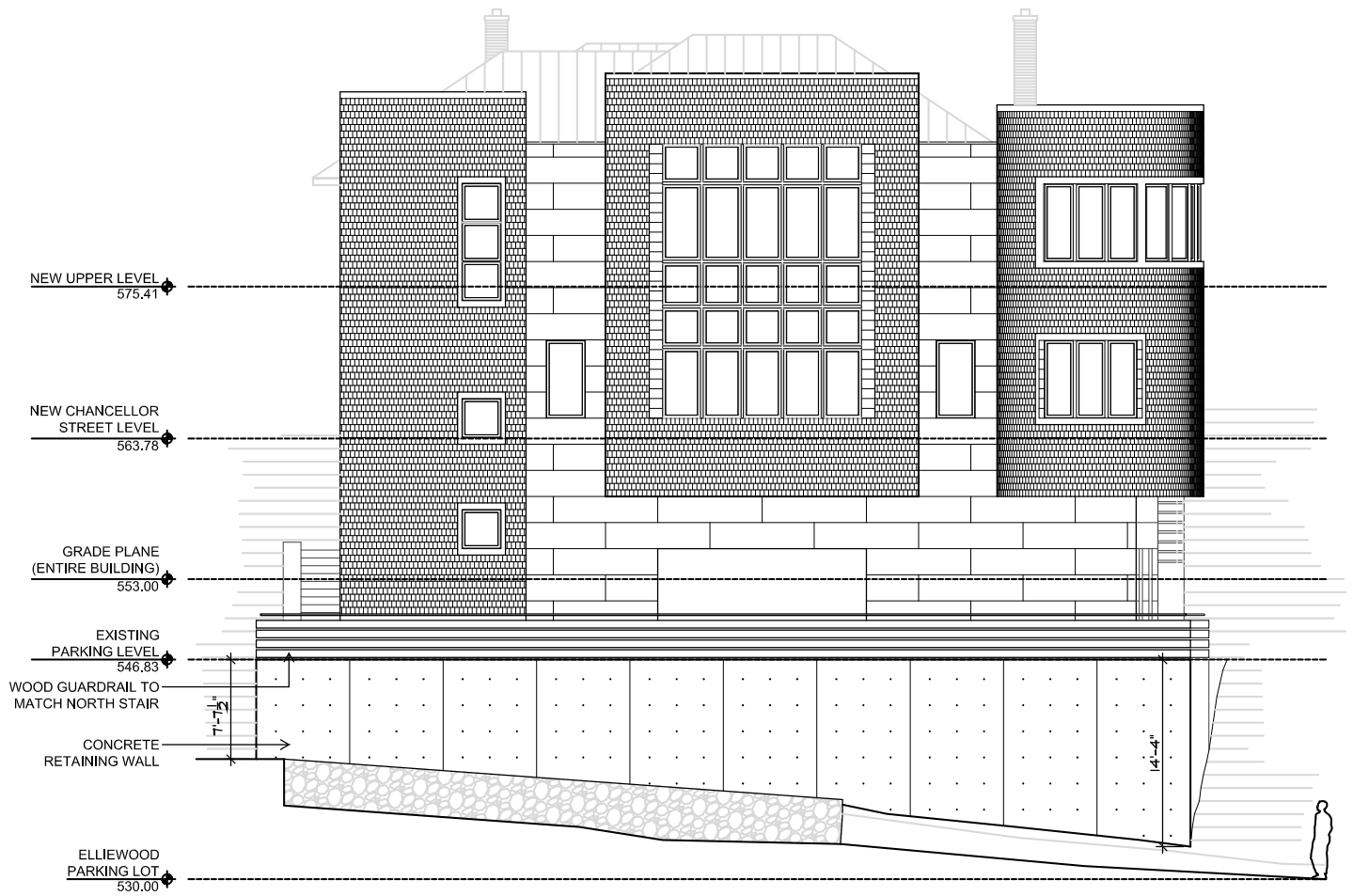
Wood Framed Parapet w/ Hardie Panel Facade



Wood Framed Parapet w/ Cedar Shingle Facade



CMU Parapet w/ Cedar Shingle Facade



East Elevation



West (Front) Elevation

Center for Christian Study Expansion
128 Chancellor Street
Charlottesville, VA 22903

Product Literature

ULTIMATE
MARVIN SIGNATURE™ COLLECTION



WINDOWS



Awning and Picture windows in Ebony

ULTIMATE CASEMENT



Casement and Picture windows with Satin Nickel hardware



Casement windows with Matte Black hardware

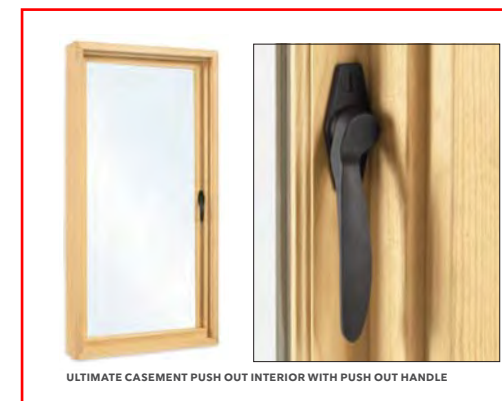
ULTIMATE CASEMENT

The Ultimate Casement window is offered in some of the largest sizes in the industry, with a secure multi-point lock, durable hardware that ensures smooth operation, and Marvin's exclusive Wash Mode for easy cleaning—even on upper floors. With many design options, including round top shapes, the Ultimate Casement window flexes to fit your vision and can be sized to complement the most expansive views.



ULTIMATE CASEMENT INTERIOR WITH FOLDING HANDLE

ULTIMATE CASEMENT EXTERIOR WITH FOLDING HANDLE



ULTIMATE CASEMENT PUSH OUT INTERIOR WITH PUSH OUT HANDLE

ULTIMATE PICTURE



Picture and Awning windows in White painted interior finish



Casement and Direct Glaze Picture windows

ULTIMATE PICTURE

The Ultimate Picture window offers a classic style in a non-operable window, bringing natural light into a room or highlighting an unobstructed outdoor view. Durable and energy efficient, it can be sized to match accompanying double hung, single hung, or casement windows. An aluminum-clad exterior provides durability and flexible finish options, or an all-wood option is ideal for historic renovation projects where a wood exterior is needed to match original architectural details.



DIRECT GLAZE
Direct glaze refers to a window with no sash. The glass is glazed directly into the frame and is stationary.

IN-SASH
In-sash windows are non-operable, and they can match the profiles of windows with operable sashes.

DIRECT GLAZE PICTURE WINDOW

IN-SASH PICTURE WINDOW

ULTIMATE BAY + BOW



Bay window



Bow window

ULTIMATE BAY

Ultimate Bay windows are a group of connected windows extending outward from a room at desired angles—allowing light and views from multiple directions. Some feature a larger operating or stationary window flanked by smaller windows. Ultimate Bay windows can create space indoors for a cozy nook or window seat, or maximize a scenic view to serve as a room’s focal point.



INTERIOR BAY WITH ULTIMATE CASEMENT AND PICTURE WINDOWS

ULTIMATE BOW

Ultimate Bow windows are a series of windows connected to form a gentle outward curve. Typically made up of four or more windows, Ultimate Bow windows can create a small nook, open up a view, bring in more light, and boost visual appeal from inside and out. Bow windows are available with casement, double hung, or picture windows.



INTERIOR BOW WITH ULTIMATE CASEMENT AND PICTURE WINDOWS



DOORS



Multi-Slide doors in Bronze

DOOR TERMS + DEFINITIONS



1. FRAME

The door frame includes the head jamb across the top, side jambs and the sill at the bottom. Marvin frames are built strong to stand up to heavy door usage year after year.

2. RAIL

The horizontal wood members of a door are called rails, the vertical components are called stiles. The bottom rail on a French door design is about 8 inches high, harmonizing with traditional design preferences. On other doors, narrow bottom rails match 4 ¾ inch stiles for a clean, uncluttered appearance.

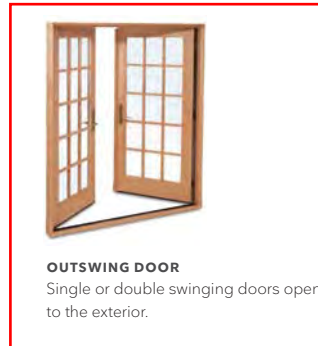
3. SILL

Our door sills are made of Ultrex®, pultruded fiberglass based materials that are virtually impervious to time, weather, and pressure. Ultrex door sills provide excellent performance in hot or cold climates, plus durability over the long haul by being resistant to warping, denting, and fading.

4. PANELS

In a door, the panel is the main section, operating or stationary, that is installed into the frame. Marvin doors come in many sizes, some of the industry's largest, but all share the tight tolerances for fit and quality finishes.

DOOR OPERATING STYLES



OUTSWING DOOR

Single or double swinging doors open to the exterior.



INSWING DOOR

Single or double swinging doors open to the interior.



SLIDING DOOR

Save space with a door panel that operates by sliding along a track.



BI-FOLD DOOR

This door folds to the side and can include up to sixteen panels.



LIFT AND SLIDE DOOR

For openings as large as 48 feet wide and 12 feet high, substantial door panels fully open into pocket or stacked configurations.



MULTI-SLIDE DOOR

Another option to blend interior and outdoor living with a modular frame system.

MAKE EVERY ENTRANCE GRAND

Marvin doors are designed to maximize the potential of any opening, view, and living space.

INTERIOR FINISH OPTIONS

PINE

VERTICAL GRAIN
DOUGLAS FIR

DOUGLAS FIR

CHERRY

WHITE OAK

MAHOGANY

MAPLE
Custom option

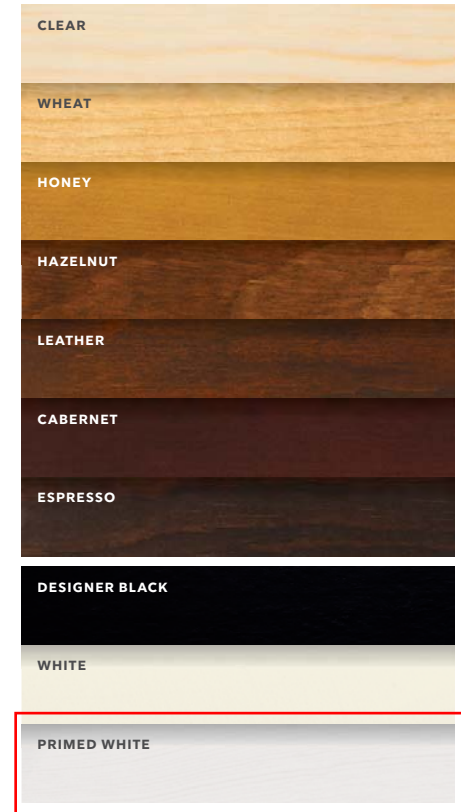
BLACK WALNUT
Custom option

WOOD SPECIES

Offering a rich, warm look, many custom options, and design versatility, wood is a premium choice. Wood can be used on both the interior and exterior of a window or door. As a lower maintenance option, wood can also be used on only the interior with an extruded aluminum cladding exterior. Marvin offers both options, leading the industry in sourcing, processing, and utilizing high quality wood.

STAIN + PAINT

When compared to painting or staining on the job site, factory-stained finishes offer consistent quality and performance resulting from our expertise with wood as a material and years of perfecting our staining process. Painting on the job site or scheduling off-site finishing is an extra step that takes time and coordination. Choose our painted interior finish option on any Marvin windows and doors with a wood or clad exterior for a factory-painted option that arrives ready to install.



* Stain colors shown on Pine. To see more about finishes visit Marvin.com.

EXTERIOR FINISH OPTIONS

STONE WHITE

COCONUT CREAM

SIERRA WHITE

CASHMERE

PEBBLE GRAY

HAMPTON SAGE

CADET GRAY

CLAY

CASCADE BLUE

SUEDE

GUNMETAL

WINEBERRY

BRONZE

BAHAMA BROWN

EVERGREEN

EBONY

BRIGHT SILVER (PEARLESCENT)

COPPER (PEARLESCENT)

LIBERTY BRONZE (PEARLESCENT)

CUSTOM COLOR: ANY COLOR YOU WANT



EXTRUDED ALUMINUM

Extruded aluminum is an extremely tough cladding that protects wood windows, mimics the profiles of wood, and provides superior durability. It is the most commonly ordered Marvin material.

Select a color from our palette of 19 durable extruded aluminum colors, including a spectrum of rich hues and three pearlescent finishes. If you have more specialized needs, we can also work with you to create a custom color.

WOOD SPECIES

Wood is a premium material for windows and doors, offering classic aesthetic appeal, many options for customization, and design versatility.

We treat exposed millwork with a water repellent wood preservative to help it last longer. Choose from one of the four options below. Each is ready to be finished to match your project's exacting requirements.

PINE

VERTICAL GRAIN
DOUGLAS FIR

MAHOGANY

WESTERN RED CEDAR
Exterior trim package only



Ultimate Double Hung G2 window in Ebony



Ultimate Double Hung G2 window in Suede

Application

Linear LED recessed ceiling luminaires with symmetric wide light distribution. The patent pending 'vortex reflector' rotates a parabolic reflector around the vertical axis to for a complex vortex shape. The vortex balances maximum efficiency with optimal glare control while eliminating shadows and artifacts in a uniquely rectangular shape.

Materials

Luminaire housing and trim constructed of die-cast marine grade, copper free ($\leq 0.3\%$ copper content) A360.0 aluminum alloy
 Clear safety glass
 Reflector surface made of pure anodized aluminum
 Silicone applied robotically to casting, plasma treated for increased adhesion
 High temperature silicone gasket
 Mechanically captive stainless steel fasteners
 Stainless steel screw clamps

NRTL listed to North American Standards, suitable for wet locations
 Protection class IP65
 Weight: 14.1 lbs

Electrical

Operating voltage	120-277VAC
Minimum start temperature	-20° C
LED module wattage	48.0W
System wattage	55.0W
Controllability	0-10V dimming down to 0.1%
Color rendering index	Ra > 80
Luminaire lumens	5,880 lumens (3000K)
Lifetime at Ta = 15° C	369,000 h (L70)
Lifetime at Ta = 35° C	111,000 h (L70)

LED color temperature

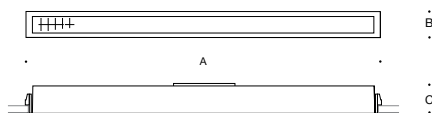
- 4000K - Product number + **K4**
- 3500K - Product number + **K35**
- 3000K - Product number + **K3**
- 2700K - Product number + **K27**

BEGA can supply you with suitable LED replacement modules for up to 20 years after the purchase of LED luminaires - see website for details

Finish

All BEGA standard finishes are matte, textured polyester powder coat with minimum 3 mil thickness.

Available colors	Black (BLK)	White (WHT)	RAL:
	Bronze (BRZ)	Silver (SLV)	CUS:



Recessed ceiling luminaires · Vortex optic · Symmetric wide

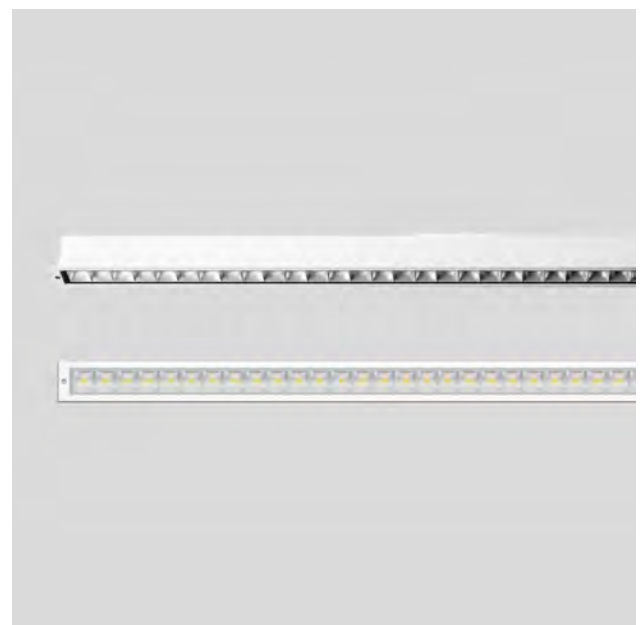
	LED	β	A	B	C
24305	48.0W	52°	60 3/8	3	3 1/2

β = Beam angle

BEGA 1000 BEGA Way, Carpinteria, CA 93013 (805) 684-0533 info@bega-us.com

Due to the dynamic nature of lighting products and the associated technologies, luminaire data on this sheet is subject to change at the discretion of BEGA North America. For the most current technical data, please refer to bega-us.com
 © copyright BEGA 2018 Updated 02/14/19

Type:
 BEGA Product:
 Project:
 Modified:



Application

LED recessed ceiling luminaire with narrow beam light distribution designed for downlighting atriums, canopies, passages and other interior and exterior locations.

Materials

Luminaire housing and faceplate constructed of die-cast marine grade, copper free ($\leq 0.3\%$ copper content) A360.0 aluminum alloy
 Clear safety glass
 Silicone optical collimating lens
 Reflector surface made of pure anodized aluminum
 High temperature silicone gasket
 Stainless steel screw clamps
 Galvanized steep rough in ceiling pan with through wiring box

NRTL listed to North American Standards, suitable for wet locations
 Protection class IP65
 Weight: 2.2 lbs

Electrical

Operating voltage	120-277V AC
Minimum start temperature	-20° C
LED module wattage	8.3 W
System wattage	9.7 W
Controlability	0-10V dimming down to 0.1%
Color rendering index	Ra > 80
Luminaire lumens	1,194 lumens (3000K)
Lifetime at Ta=15°C	> 500,000 h (L70)
Lifetime at Ta=45°C	270,000 h (L70)

LED color temperature

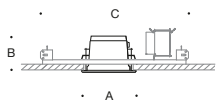
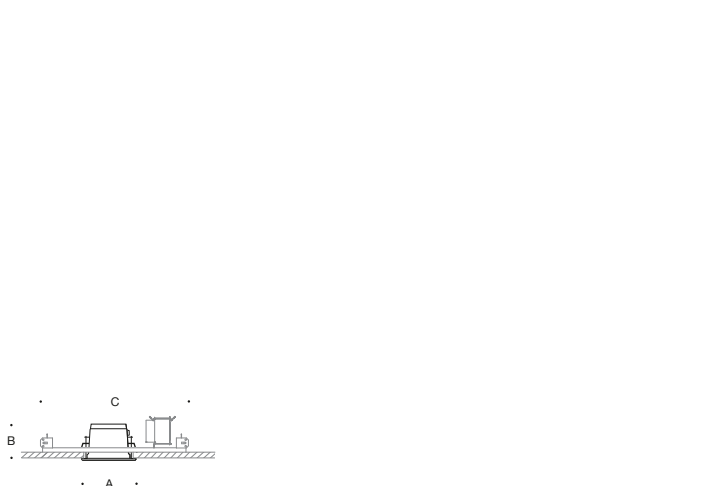
- 4000K - Product number + **K4**
- 3500K - Product number + **K35**
- 3000K - Product number + **K3**
- 2700K - Product number + **K27**

BEGA can supply you with suitable LED replacement modules for up to 20 years after the purchase of LED luminaires - see website for details

Finish

All BEGA standard finishes are matte, textured polyester powder coat with minimum 3 mil thickness.

Available colors	Black (BLK)	White (WHT)	RAL:
	Bronze (BRZ)	Silver (SLV)	CUS :



LED recessed ceiling downlights · narrow beam

	LED	β	A	B	C
24817	8.3 W	21°	5%	5	18

β = Beam angle

BEGA 1000 BEGA Way, Carpinteria, CA 93013 (805) 684-0533 info@bega-us.com

Type:
 BEGA Product:
 Project:
 Modified:



Application

LED recessed wall luminaire with asymmetrical light distribution for the illumination of ground surfaces, building entrances, stairs and footpaths.

Materials

Luminaire housing constructed of die-cast aluminum marine grade, copper free (≤0.3% copper content) A360.0 aluminum alloy
 Clear safety glass
 Silicone applied robotically to casting, plasma treated for increased adhesion
 High temperature silicone gasket
 Mechanically captive stainless steel fasteners
 Stainless steel screw clamps
 Composite installation housing

NRTL listed to North American Standards, suitable for wet locations
 Protection class IP65
 Weight: 2.1 lbs

Electrical

Operating voltage 120-277V AC
 Minimum start temperature -40° C
 LED module wattage 8.4W
 System wattage 11.0W
 Controlability 0-10V, TRIAC, and ELV dimmable
 Color rendering index Ra > 80
 Luminaire lumens 480 lumens (3000K)
 LED service life (L70) 60,000 hours

LED color temperature

- 4000K - Product number + **K4**
- 3500K - Product number + **K35**
- 3000K - Product number + **K3**
- 2700K - Product number + **K27**
- Amber - Product number + **AMB**

Wildlife friendly amber LED - Optional

Luminaire is optionally available with a narrow bandwidth, amber LED source (585-600nm) approved by the FWC. This light output is suggested for use within close proximity to sea turtle nesting and hatching habitats. Electrical and control information may vary from standard luminaire.

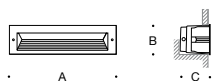
LED module wattage 8.7 W (Amber)
 System wattage 10.7 (Amber)
 Luminaire lumens 111 lumens (Amber)

BEGA can supply you with suitable LED replacement modules for up to 20 years after the purchase of LED luminaires - see website for details

Finish

All BEGA standard finishes are matte, textured polyester powder coat with minimum 3 mil thickness.

Available colors	Black (BLK)	White (WHT)	RAL:
	Bronze (BRZ)	Silver (SLV)	CUS :



LED recessed wall luminaires · asymmetrical				
	LED	A	B	C
33055	8.4 W	12 1/2	2 3/4	5

Type:
 BEGA Product:
 Project:
 Modified:



Fully enclosed luminaire with installation housing ensures seamless integration and weathertight operation.



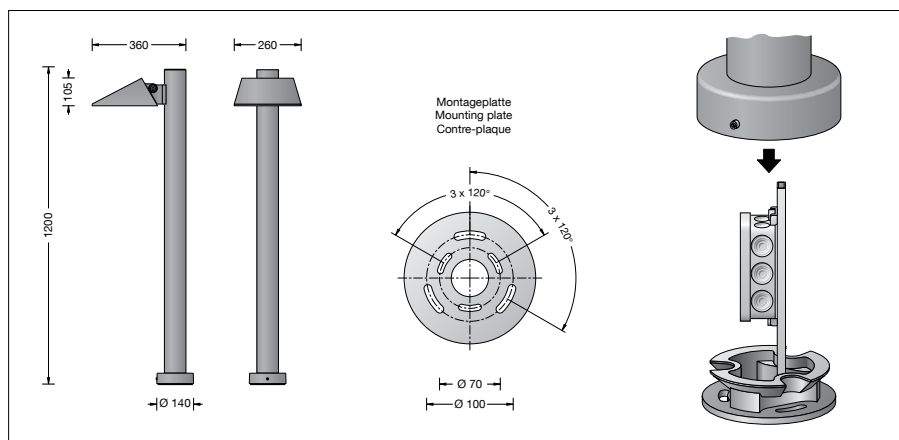
BEGA**84 107**

Bollard

IP 65

Project · Reference number

Date



Product data sheet

Product description

Luminaire made of aluminium alloy, aluminium and stainless steel
 Safety glass
 Silicone gasket
 Reflector made of pure anodised aluminium
 Swivel range 90°
 Luminaire with mounting plate for bolting onto a foundation or an anchorage unit
 Mounting plate with two pitch circles:
 \varnothing 70 mm, 3 elongated holes 7 mm wide
 \varnothing 100 mm, 3 elongated holes 9 mm wide
 Luminaire can be aligned on the mounting plate around 360°
 Mounting bracket with connection box for through-wiring of up to 5 x 2,5[□]
 LED power supply unit
 220-240 V \sim 0/50-60 Hz
 DC 176-276 V
 DALI controllable
 A basic isolation exists between power cable and control line
 BEGA Thermal Control®
 Temporary thermal regulation to protect temperature-sensitive components without switching off the luminaire
 Safety class I
 Protection class IP 65
 Dust-tight and protection against water jets
 Impact strength IK08
 Protection against mechanical impacts < 5 joule
CE – Conformity mark
 Weight: 7.0 kg

Application

Shielded LED bollard with asymmetrical light distribution for the illumination of squares, access roads and entry areas.
 The luminaire housing is adjustable, allowing the light distribution to be adapted to the requirements of the installation site.

Lamp

Module connected wattage	19.4 W
Luminaire connected wattage	22.2 W
Rated temperature	$t_a = 25$ °C
Ambient temperature	$t_{a \max} = 50$ °C

84 107 K4

Module designation	LED-0872/940
Colour temperature	4000 K
Colour rendering index	CRI > 90
Module luminous flux	3310 lm
Luminaire luminous flux	2661 lm
Luminaire luminous efficiency	119,9 lm/W

84 107 K3

Module designation	LED-0872/930
Colour temperature	3000 K
Colour rendering index	CRI > 90
Module luminous flux	3130 lm
Luminaire luminous flux	2516 lm
Luminaire luminous efficiency	113,3 lm/W

Service life · Ambient temperature

Rated temperature $t_a = 25$ °C	
LED psu:	> 50,000h
LED module:	> 200,000h (L80 B50) > 100,000h (L90 B50)

Ambient temperature $t_{a \max} = 50$ °C (100 %)	
LED psu:	50,000h
LED module:	91,000h (L80 B50) 100,000h (L70 B50)

Inrush current

Inrush current: 12 A / 24.2 μ s
 Maximum number of luminaires of this type per miniature circuit breaker:
 B 10A: 50 luminaires
 B 16A: 50 luminaires
 C 10A: 50 luminaires
 C 16A: 50 luminaires

Light technique

Luminaire data for the light planning program DIALux for outdoor lighting, street lighting and indoor lighting as well as luminaire data in EULUMDAT- and IES-format you will find on the BEGA web page www.bega.com.

Article No. 84 107

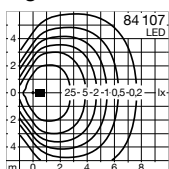
LED colour temperature optionally 4000 K or 3000 K
 4000 K – Article number + **K4**
 3000 K – Article number + **K3**

Colour graphite or silver
 graphite – article number
 silver – article number + **A**

Accessory

70 895 Anchorage unit with mounting flange made of hot-dip galvanised steel. Total length 400 mm. 3 stainless steel fixing screws M8. Pitch circle \varnothing 100 mm.

See the separate instructions for use.

Light distribution

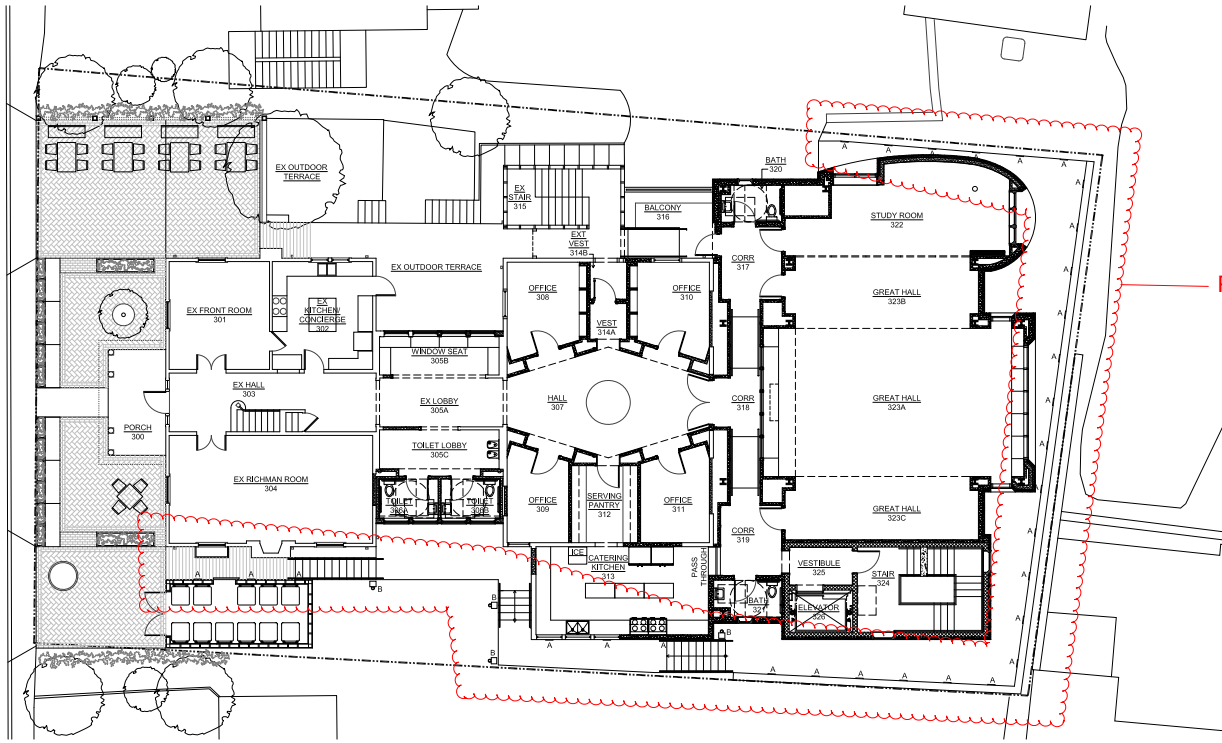
Center for Christian Study Expansion

Center for Christian Study
128 Chancellor St
Charlottesville, VA 22903

Site Lighting Supplemental Submission
09 October 2020

William Sherman Architects

T r a i n Architects
612 East Jefferson Street
Charlottesville, Virginia 22902
ph 434.293.2965 fax 295.5122

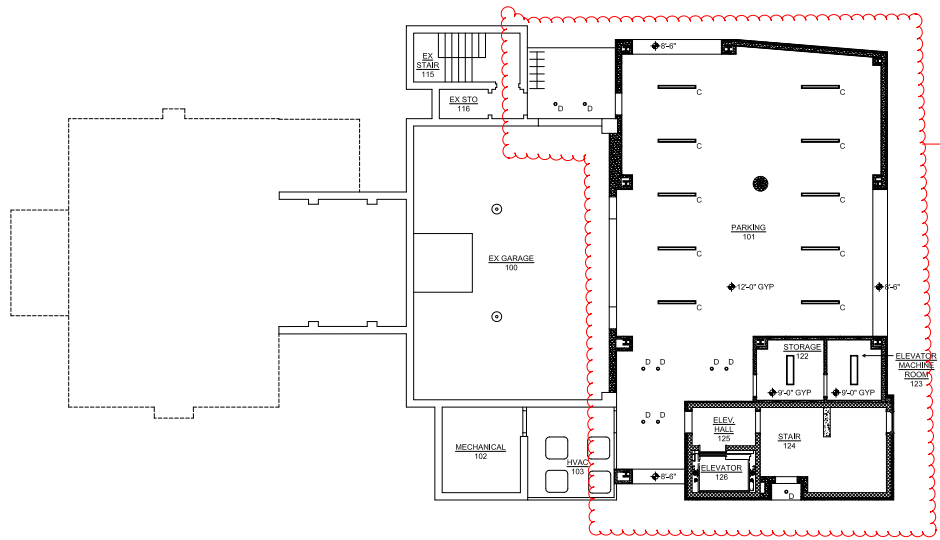


Path lights and bollards, types A and B

06 Chancellor Street Level Site Lighting Plan
 Scale: 3/8" = 1'



Design Development Documents	
<p>Center For Christian Study Expansion 128 Chancellor Street Charlottesville, VA 22903 Design Development Documents 06 October 2020 A06-A-17/06/20/002-000</p> <p>William Sherman Architect Train Architects <small>www.trainarchitects.com</small></p>	<p>Rev. 01: Not Used Rev. 02: Not Used Rev. 03: Not Used Rev. 04: Not Used Rev. 05: Not Used</p>
<p>Chancellor Street Level Site Lighting Plan</p>	<p>E1.02</p>



Parking lighting and soffit lighting at exits from stair tower and parking, types C and D

06

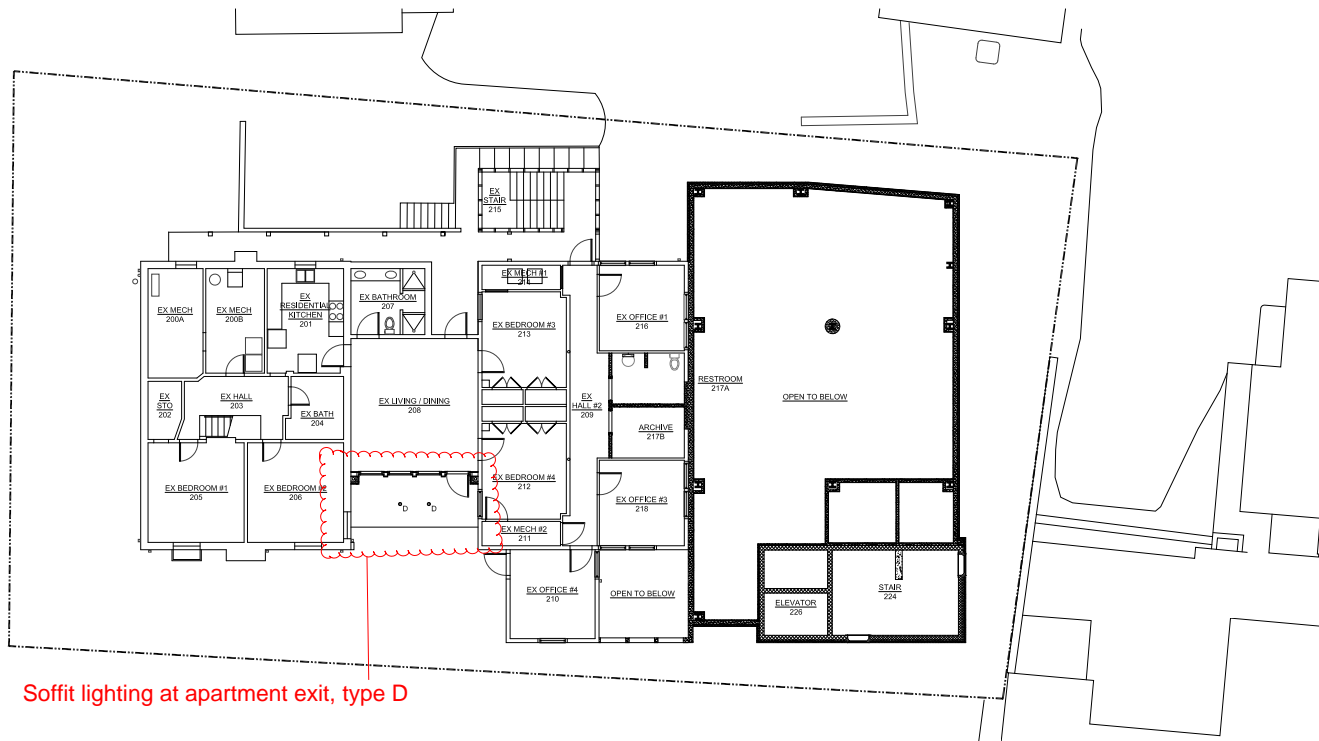
Parking Level Lighting Reflected Ceiling Plan

Scale: 3/8" = 1'



North

Design Development Documents	
<p>Center For Christian Study Expansion</p> <p>128 Chancellor Street Charlottesville, VA 22903</p> <p>Design Development Documents 06 October 2020 Architectural 002</p> <p>William Sherman Architects Train Architects</p>	<p>Rev. 01: Not Used Rev. 02: Not Used Rev. 03: Not Used Rev. 04: Not Used Rev. 05: Not Used</p>
<p>Parking Level Lighting Reflected Ceiling Plan</p>	<p>E2.00</p>



Soffit lighting at apartment exit, type D

06 Lower Level Lighting Reflected Ceiling Plan
 Scale: 3/8" = 1'



Design Development Documents	
<p>Center For Christian Study Expansion 128 Chancellor Street Charlottesville, VA 22903</p> <p>Design Development Documents 06 October 2020 AIA A 193/201/2002 060</p> <p>William Sherman Architect Train Architects</p>	<p>Rev. 01: Not Used Rev. 02: Not Used Rev. 03: Not Used Rev. 04: Not Used Rev. 05: Not Used</p>
<p>Lower Level Lighting Reflected Ceiling Plan</p>	<p>E2.01</p>



Application

LED recessed wall luminaire with asymmetrical light distribution for the illumination of ground surfaces, building entrances, stairs and footpaths.

Materials

Luminaire housing constructed of die-cast aluminum marine grade, copper free (≤0.3% copper content) A360.0 aluminum alloy
 Clear safety glass
 Silicone applied robotically to casting, plasma treated for increased adhesion
 High temperature silicone gasket
 Mechanically captive stainless steel fasteners
 Stainless steel screw clamps
 Composite installation housing

NRTL listed to North American Standards, suitable for wet locations
 Protection class IP65
 Weight: 2.1 lbs

Electrical

Operating voltage	120-277V AC
Minimum start temperature	-40° C
LED module wattage	8.4W
System wattage	11.0W
Controlability	0-10V, TRIAC, and ELV dimmable
Color rendering index	Ra > 80
Luminaire lumens	480 lumens (3000K)
LED service life (L70)	60,000 hours

LED color temperature

- 4000K - Product number + **K4**
- 3500K - Product number + **K35**
- 3000K - Product number + **K3**
- 2700K - Product number + **K27**
- Amber - Product number + **AMB**

Wildlife friendly amber LED - Optional

Luminaire is optionally available with a narrow bandwidth, amber LED source (585-600nm) approved by the FWC. This light output is suggested for use within close proximity to sea turtle nesting and hatching habitats. Electrical and control information may vary from standard luminaire.

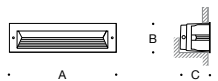
LED module wattage	8.7 W (Amber)
System wattage	10.7 (Amber)
Luminaire lumens	111 lumens (Amber)

BEGA can supply you with suitable LED replacement modules for up to 20 years after the purchase of LED luminaires - see website for details

Finish

All BEGA standard finishes are matte, textured polyester powder coat with minimum 3 mil thickness.

Available colors	Black (BLK)	White (WHT)	RAL:
	Bronze (BRZ)	Silver (SLV)	CUS :



LED recessed wall luminaires · asymmetrical

	LED	A	B	C
33055	8.4 W	12 1/2	2 3/4	5

Type:
 BEGA Product:
 Project:
 Modified:



Fully enclosed luminaire with installation housing ensures seamless integration and weathertight operation.



BEGA

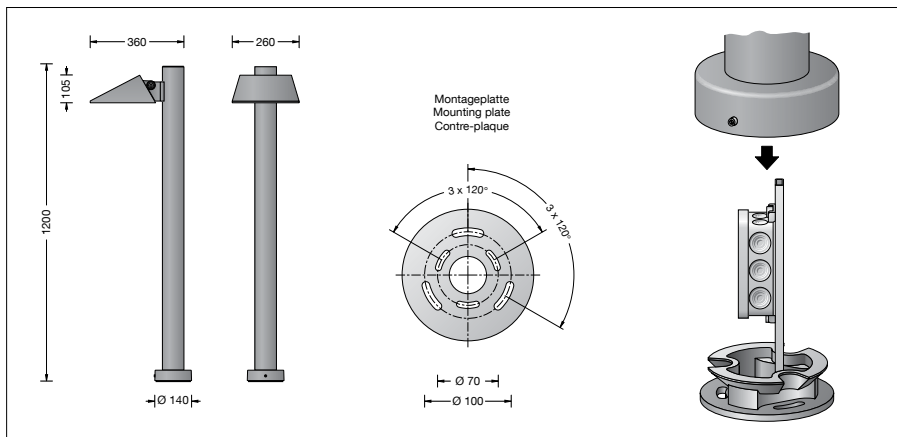
Bollard

B**84 107**

IP 65

Project · Reference number

Date



Product data sheet

Product description

Luminaire made of aluminium alloy, aluminium and stainless steel
 Safety glass
 Silicone gasket
 Reflector made of pure anodised aluminium
 Swivel range 90°
 Luminaire with mounting plate for bolting onto a foundation or an anchorage unit
 Mounting plate with two pitch circles:
 \varnothing 70 mm, 3 elongated holes 7 mm wide
 \varnothing 100 mm, 3 elongated holes 9 mm wide
 Luminaire can be aligned on the mounting plate around 360°
 Mounting bracket with connection box for through-wiring of up to $5 \times 2,5^2$
 LED power supply unit
 220-240 V \sim 0/50-60 Hz
 DC 176-276 V
 DALI controllable
 A basic isolation exists between power cable and control line
 BEGA Thermal Control®
 Temporary thermal regulation to protect temperature-sensitive components without switching off the luminaire
 Safety class I
 Protection class IP 65
 Dust-tight and protection against water jets
 Impact strength IK08
 Protection against mechanical impacts < 5 joule
CE – Conformity mark
 Weight: 7.0 kg

Application

Shielded LED bollard with asymmetrical light distribution for the illumination of squares, access roads and entry areas.
 The luminaire housing is adjustable, allowing the light distribution to be adapted to the requirements of the installation site.

Lamp

Module connected wattage	19.4 W
Luminaire connected wattage	22.2 W
Rated temperature	$t_a = 25^\circ\text{C}$
Ambient temperature	$t_{a\text{max}} = 50^\circ\text{C}$

84 107 K4

Module designation	LED-0872/940
Colour temperature	4000 K
Colour rendering index	CRI > 90
Module luminous flux	3310 lm
Luminaire luminous flux	2661 lm
Luminaire luminous efficiency	119,9 lm/W

84 107 K3

Module designation	LED-0872/930
Colour temperature	3000 K
Colour rendering index	CRI > 90
Module luminous flux	3130 lm
Luminaire luminous flux	2516 lm
Luminaire luminous efficiency	113,3 lm/W

Service life · Ambient temperature

Rated temperature $t_a = 25^\circ\text{C}$	
LED psu:	> 50,000h
LED module:	> 200,000h (L80B50) 100,000h (L90B50)

Ambient temperature $t_{a\text{max}} = 50^\circ\text{C}$ (100 %)	
LED psu:	50,000h
LED module:	91,000h (L80B50) 100,000h (L70B50)

Inrush current

Inrush current: 12 A / 24.2 μs
 Maximum number of luminaires of this type per miniature circuit breaker:
 B 10A: 50 luminaires
 B 16A: 50 luminaires
 C 10A: 50 luminaires
 C 16A: 50 luminaires

Light technique

Luminaire data for the light planning program DIALux for outdoor lighting, street lighting and indoor lighting as well as luminaire data in EULUMDAT- and IES-format you will find on the BEGA web page www.bega.com.

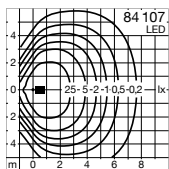
Article No. 84 107

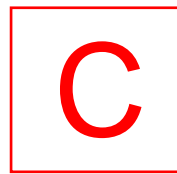
LED colour temperature optionally 4000 K or 3000 K
 4000 K – Article number + **K4**
 3000 K – Article number + **K3**
 Colour graphite or silver
 graphite – article number
 silver – article number + **A**

Accessory

70 895 Anchorage unit with mounting flange made of hot-dip galvanised steel. Total length 400 mm. 3 stainless steel fixing screws M8. Pitch circle \varnothing 100 mm.

See the separate instructions for use.

Light distribution



Application

Linear LED recessed ceiling luminaires with symmetric wide light distribution. The patent pending 'vortex reflector' rotates a parabolic reflector around the vertical axis to for a complex vortex shape. The vortex balances maximum efficiency with optimal glare control while eliminating shadows and artifacts in a uniquely rectangular shape.

Materials

Luminaire housing and trim constructed of die-cast marine grade, copper free ($\leq 0.3\%$ copper content) A360.0 aluminum alloy
 Clear safety glass
 Reflector surface made of pure anodized aluminum
 Silicone applied robotically to casting, plasma treated for increased adhesion
 High temperature silicone gasket
 Mechanically captive stainless steel fasteners
 Stainless steel screw clamps

NRTL listed to North American Standards, suitable for wet locations
 Protection class IP65
 Weight: 14.1 lbs

Electrical

Operating voltage	120-277VAC
Minimum start temperature	-20° C
LED module wattage	48.0W
System wattage	55.0W
Controllability	0-10V dimming down to 0.1%
Color rendering index	Ra > 80
Luminaire lumens	5,880 lumens (3000K)
Lifetime at Ta = 15° C	369,000 h (L70)
Lifetime at Ta = 35° C	111,000 h (L70)

LED color temperature

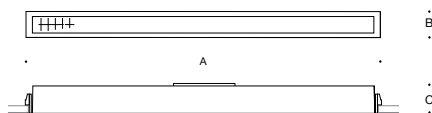
- 4000K - Product number + **K4**
- 3500K - Product number + **K35**
- 3000K - Product number + **K3**
- 2700K - Product number + **K27**

BEGA can supply you with suitable LED replacement modules for up to 20 years after the purchase of LED luminaires - see website for details

Finish

All BEGA standard finishes are matte, textured polyester powder coat with minimum 3 mil thickness.

Available colors	Black (BLK)	White (WHT)	RAL:
	Bronze (BRZ)	Silver (SLV)	CUS:

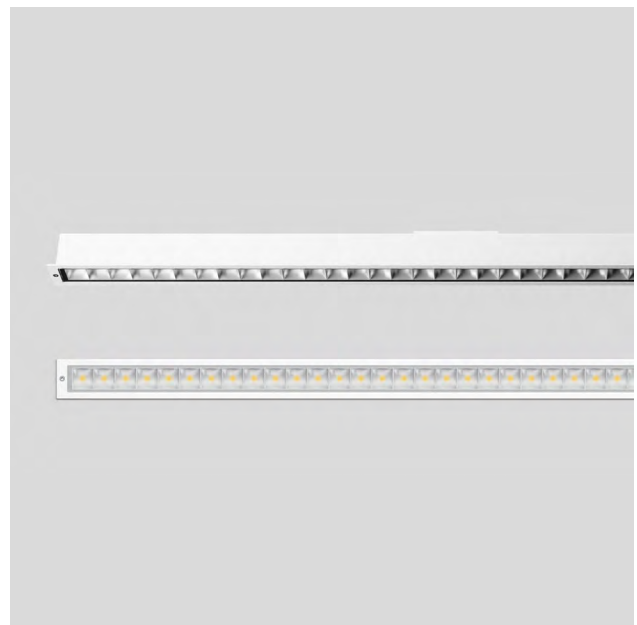


Recessed ceiling luminaires · Vortex optic · Symmetric wide

	LED	β	A	B	C
24305	48.0W	52°	60 $\frac{3}{8}$	3	3 $\frac{1}{2}$

β = Beam angle

BEGA 1000 BEGA Way, Carpinteria, CA 93013 (805) 684-0533 info@bega-us.com



LED recessed ceiling downlights - narrow beam



BEGA

Application

LED recessed ceiling luminaire with narrow beam light distribution designed for downlighting atriums, canopies, passages and other interior and exterior locations.

Materials

- Luminaire housing and faceplate constructed of die-cast marine grade, copper free ($\leq 0.3\%$ copper content) A360.0 aluminum alloy
- Clear safety glass
- Silicone optical collimating lens
- Reflector surface made of pure anodized aluminum
- High temperature silicone gasket
- Stainless steel screw clamps
- Galvanized steep rough in ceiling pan with through wiring box

NRTL listed to North American Standards, suitable for wet locations
 Protection class IP65
 Weight: 2.2 lbs

Electrical

Operating voltage	120-277V AC
Minimum start temperature	-20° C
LED module wattage	8.3 W
System wattage	9.7 W
Controlability	0-10V dimming down to 0.1%
Color rendering index	Ra > 80
Luminaire lumens	1,194 lumens (3000K)
Lifetime at Ta=15°C	> 500,000 h (L70)
Lifetime at Ta=45°C	270,000 h (L70)

LED color temperature

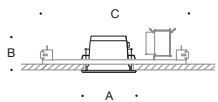
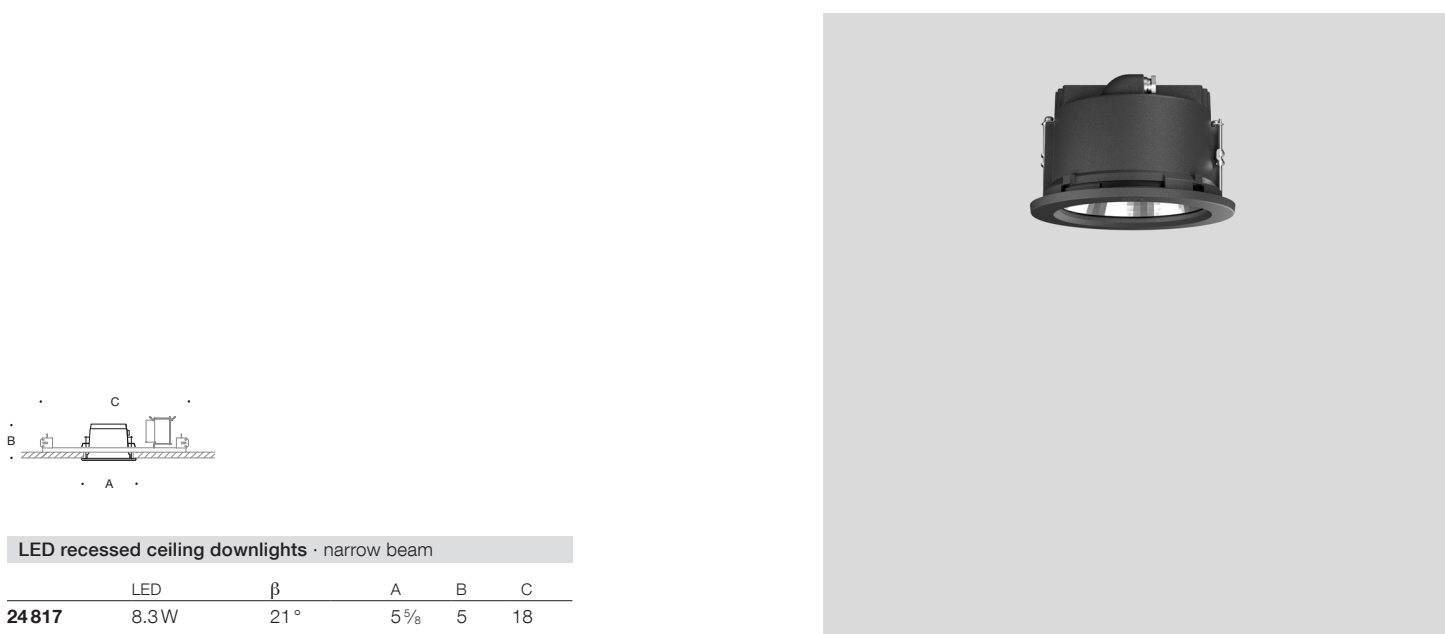
- 4000K - Product number + **K4**
- 3500K - Product number + **K35**
- 3000K - Product number + **K3**
- 2700K - Product number + **K27**

BEGA can supply you with suitable LED replacement modules for up to 20 years after the purchase of LED luminaires - see website for details

Finish

All BEGA standard finishes are matte, textured polyester powder coat with minimum 3 mil thickness.

Available colors	Black (BLK)	White (WHT)	RAL:
	Bronze (BRZ)	Silver (SLV)	CUS :



LED recessed ceiling downlights · narrow beam					
	LED	β	A	B	C
24817	8.3 W	21°	5%	5	18

β = Beam angle

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