

ADDRESS: 11 BOATHOUSE ROW

Proposal: Remove addition, construct addition

Review Requested: Final approval

Owner: University of Pennsylvania

Applicant: Ke Feng, University of Pennsylvania

History: 1875; College Boat Club of the University of Pennsylvania

Individual Designation: 1/5/1984

District Designation: None

Staff Contact: Laura DiPasquale, laura.dipasquale@phila.gov

BACKGROUND:

Opened in 1875 for the College Boat Club of the University of Pennsylvania, the building at 11 Boathouse Row features several building campaigns spanning over a century. The core of the building is the original two-story stone Victorian Gothic boathouse dating to 1875.

A two-bay wide addition, which is one story at the north and two stories at the south, was added to the east about 1920. In 1980, a one-bay wide addition was added to the west side of the building, after being reviewed and approved by the Historical Commission. Plans for the addition are in the Historical Commission's files and show that an addition was also proposed on the east side of the building, where the current work is proposed, but was never realized.

This in-concept application proposes to demolish the 1920's addition and to construct a new addition in the footprint of the historic addition, but with larger massing. The new addition would be two bays in depth, and feature two cross-gabled portions extending from the roof of the 1875 building at the north and south, with large modern dormers with recessed doors to create balconies. The area between the gabled-roof portions of the new addition would feature an asphalt-shingled mansard with a parapet to conceal rooftop mechanical equipment. The application also proposes to enlarge the south-facing dormer of the 1980's addition to match the dormer balconies proposed on the new addition to the east, to reconstruct the south-facing balcony on the 1875 building, and to install historically-appropriate windows and doors.

The Architectural Committee reviewed a similar in-concept application in September 2020 and recommended denial, with the following comments and recommendations:

- The roof height of the proposed addition should be reduced so that the ridge lines of the cross-gables where they intersect the roof of the historic 1875 building are lower.
- The height of the proposed addition along the north elevation should be lower than the south elevation, which should be lower than the 1980's addition to the west.
- The north and south planes of the addition should be pulled back from the central historic portion of the existing historic building.
- The east elevation of the connector between the two gable portions of the addition presents as a blank wall of shingles and should be reduced in scale and better articulated in order to be more compatible with the historic building.
- The proposed dormers are incompatible with the historic building and should be reduced in scale and split into two dormers.
- The proposed dormer balconies compete with the historic balcony of the central 1875 portion of the building.

This revised application takes into consideration some, but not all, of the Architectural Committee's comments. As recommended, the height of the north portion of the addition is reduced, as is the connector between the north and south cross gables. The single dormer on the north elevation has been split into two dormers, the dormer eaves lowered, and the detailing modified to appear less contemporary. The height of the south portion of the addition and width of the single dormer window and balcony remain unchanged, as does the largely unarticulated east elevation.

SCOPE OF WORK:

- Demolish eastern additions
- Construct new addition
- Modify dormer on western/1980's addition
- Reconstruct south-facing balcony and install historically-appropriate windows and doors on 1875 building

STANDARDS FOR REVIEW:

- *Standard 9: New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment.*
 - The proposed addition is differentiated from the old, but remains overly large, competing with the historic building in scale, massing, and architectural features. The height of the south portion of the addition should be further reduced and the east elevation better articulated. The application partially complies with this Standard.

STAFF RECOMMENDATION: Approval of the restoration work to the 1875 building, and approval of the proposed addition, provided the height of the southern portion of the addition is reduced and the east elevation made more compatible in scale and features, pursuant to Standard 9.

ADDITIONAL FIGURES:



Figure 1: South elevation of original 1875 boat house, c. 1904



Figure 2: South elevation, circa 1930, after 1920's addition to the east.

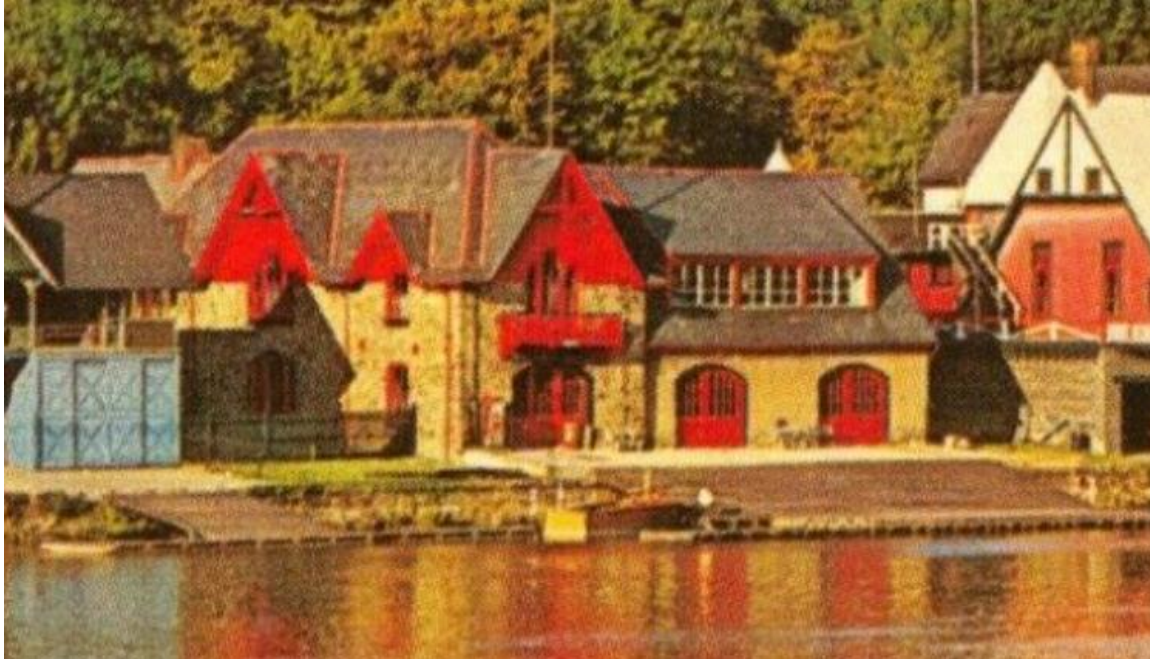


Figure 3: South elevation, circa 1970, prior to construction of western addition.



Figure 4: Current south elevation.



Figure 5: Proposed north elevation, 1980, showing east and west additions.



Figure 6: Proposed east elevation, 1980, showing retention of 1920's addition to the south, with new addition to the north.



Figure 8: Birds eye view looking northwest at the 11 Boathouse Row.

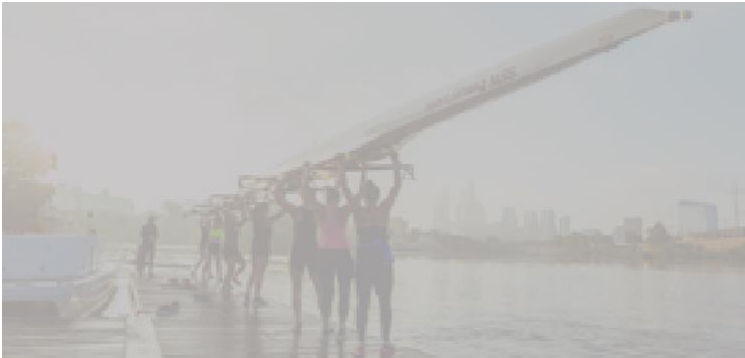


UNIVERSITY OF PENNSYLVANIA BOATHOUSE

RENOVATION & ADDITION TO THE PENN BOATHOUSE

11 Boathouse Row, Philadelphia, PA 19130

Applicant: University of Pennsylvania





UNIVERSITY OF PENNSYLVANIA BOATHOUSE

RENOVATION & ADDITION TO THE PENNBOATHOUSE

11 Boathouse Row, Philadelphia, PA 19130

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PROJECT GOALS

- ◆ **Showcase Penn Rowing**
- ◆ **Increase Usable Space**
- ◆ **Improve Overall Functionality**
- ◆ **Bolster recruitment**
- ◆ **Expand and Upgrade the Locker Rooms**
- ◆ **Remediate Existing Structural Concerns**
- ◆ **Improve Training and Team Spaces**
- ◆ **Preserve a Historic Landmark**

EXECUTIVE SUMMARY

The University of Pennsylvania College Boat Club crew teams have been at the forefront of elite college rowing teams since first rowing under the UPenn banner in 1879. The College Boat Club is recognized for its historical significance at the local and national levels. The site is individually listed in the Philadelphia Historic Register. Below is a timeline of construction:

- 1874-1875 Initial construction of two story, one-bay by three-bay boathouse
- 1920 North gable end extended to north, one story boat bay addition to east (Edward F. Hoffman, Jr., Architect)
- Circa 1930 Second story built over south end of 1920 east addition
- 1980-1983 Two-story west addition, second story over north end of 1920 east addition, new fire stair, all windows replaced (Francis Cauffman Wilkinson & Pepper, Architects).

The College Boat Club as it stands today has a near-center stone gable (the original boathouse) with lower stucco additions to the east and west. The form and height of the additions allow the original building to predominate the composition on the north (Kelly Drive) and south (Schuylkill River) elevations. These relationships will be maintained in the new Project.

The proposed project will retain and restore the original stone boathouse and 1980-83 west addition, including preservation of existing original trim and reconstruction of the original windows and doors on both the north and south elevations, as well as the original south balcony. The east additions are proposed to be demolished (see page 7, Structural Narrative). The first story, built in 1920, will be reconstructed, including the stucco finish, wood trim, windows and doors, all character-defining features of this addition.

A new second story will be built in the spirit of the existing c. 1930 addition, the principal changes being the addition of larger shed dormers on the south and north elevations, to accommodate new glazed doors onto new balconies. A steep-slope mansard roof, similar to the existing roof, will connect the two gables on the east elevation and mask roof-top HVAC equipment from view. The 1980-1983 west addition will be retained and restored.

Aspects of the boathouse interior that are considered character-defining, and will also be preserved and restored, include the original "members room" on the second floor of the original boathouse, with its decorative exposed truss ceiling and bead-board walls. The character of the 1920 boat bay interior is also worthy of mention, with its exposed wood framing and sawtooth roof and skylights which will be recomposed and define the character of the new Erg Room on the second floor. The interior rehabilitation will also preserve and expose the original exterior stonework at the second floor of the east (side) wall. Second floor windows on this east wall will also be retained, and re-purposed as doorways between the original building and new east addition.

It is a primary objective of this project to provide space and program equity for the men and women crew programs. The original facility, despite multiple additions, has been unable to keep pace with the increased volume of members and program needs. The boathouse footprint is currently maximized relative to its neighbors', Penn AC and Vesper, property lines; additional space is only available through the construction of a second-floor infill addition over the one-story boat bay as proposed. In addition to programmatic expansions and functional improvements, this project will also upgrade all building systems, including heating, cooling, security, and fire protection. Heavy use of the building, wear and tear, exposure to weather, further compounded by settlement of the building and aging infrastructure, inevitably lead to the need for repairs and restoration of parts of the boathouse.



SUMMARY OF 9/14 PHILADELPHIA HISTORICAL COMMISSION COMMENTS

Overview

- Overall massing and scale of proposed addition is large compared to the original central pavilion
- Detail at new dormers is not contextually sensitive

Kelly Drive Facade

- Ridge at new addition should be lowered to match existing West Bay ridge
- Dormer scale should be reduced and detail should comport with existing shed dormer details

Schuylkill Facade

- Dormers should be reduced in scale, defer to the original central pavilion and should reference existing shed dormer details
- New East & West Bay balconies should be more recessive.

East Façade (facing Vesper)

- Scale of main roof gable facing east is large and undifferentiated
- Consider reducing scale and incorporating glazing

SUMMARY OF DESIGN REVISIONS

Overview

- Reduced overall massing and scale of second story addition, revised dormers and lowered ridge lines
- Revised detailing to be consistent with existing dormer

Kelly Drive Facade

- Ridge lowered 30" to align with West Bay ridge line
 - Concealed flat roof (beyond) and rooftop equipment lowered 30"
- Dormer modified – divided into two smaller dormers
 - Reduced elevation of eave
 - Modified detail to reference existing shed dormers

Schuylkill Facade

- Dormers modified
 - Reduced height of dormers and glazing by 24" to match existing West Bay dormer height
 - Modified detailing to reflect existing shed dormer details & materials
- Modified balconies
 - Reduced projection and scale of balcony elements to be more recessive
 - Modified details to be more contextual

East Façade (facing Vesper)

- Reduced main gable parapet height by 36" and north gable end height by 30"
- Incorporated fenestration consistent with existing



Exterior from Kelly Drive, 12.05.2019



Exterior from the Schuylkill, 12.05.2019



Exterior from the Schuylkill c.1930



East Elevation, 07.30.2019



West Elevation , 07.30.2019



East Elevation , 03.04.2018

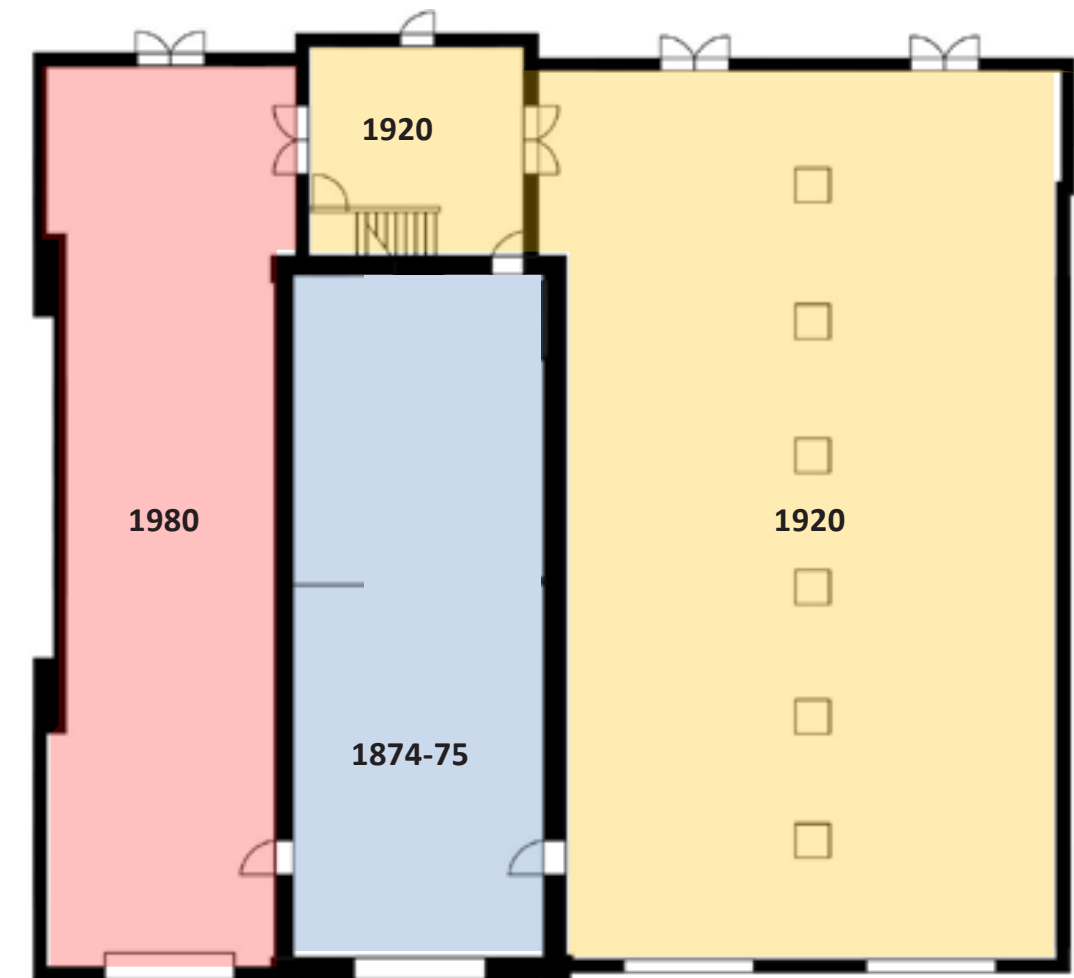
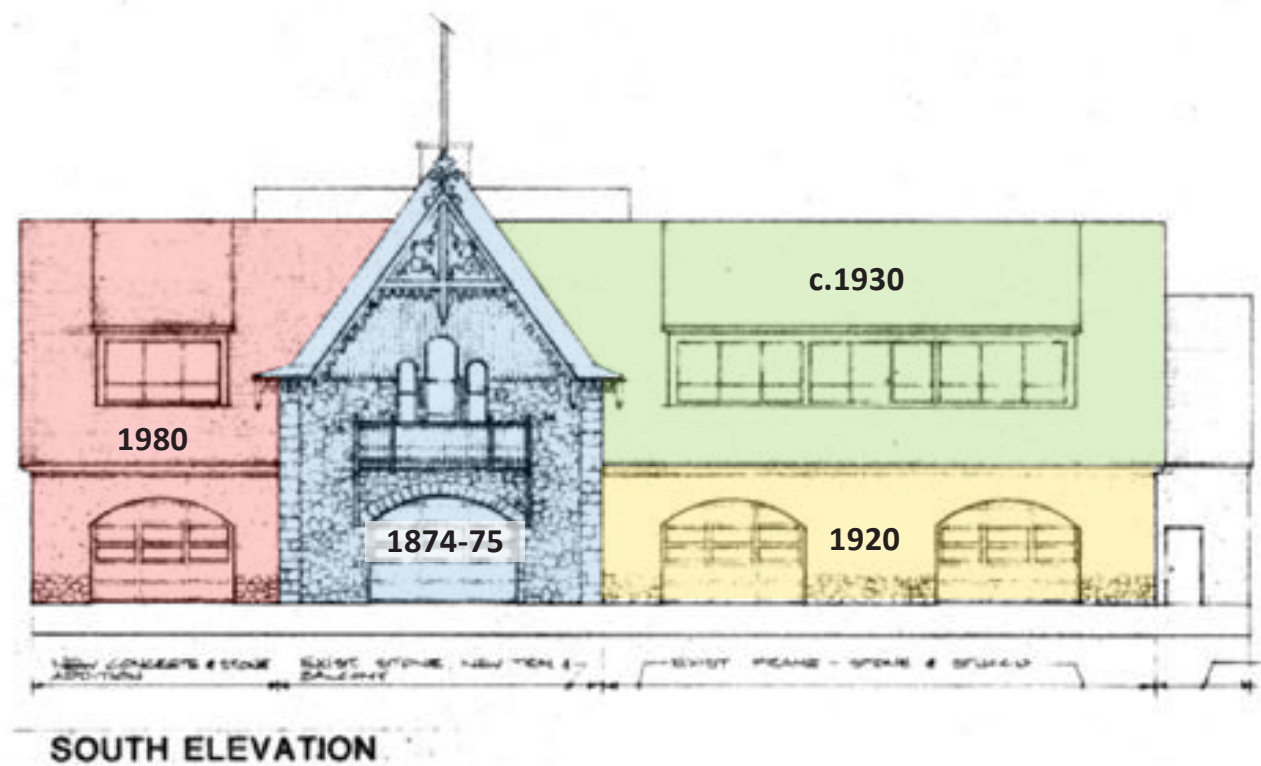


East Elevation 12.05.2019



West Elevation , 07.30.2019

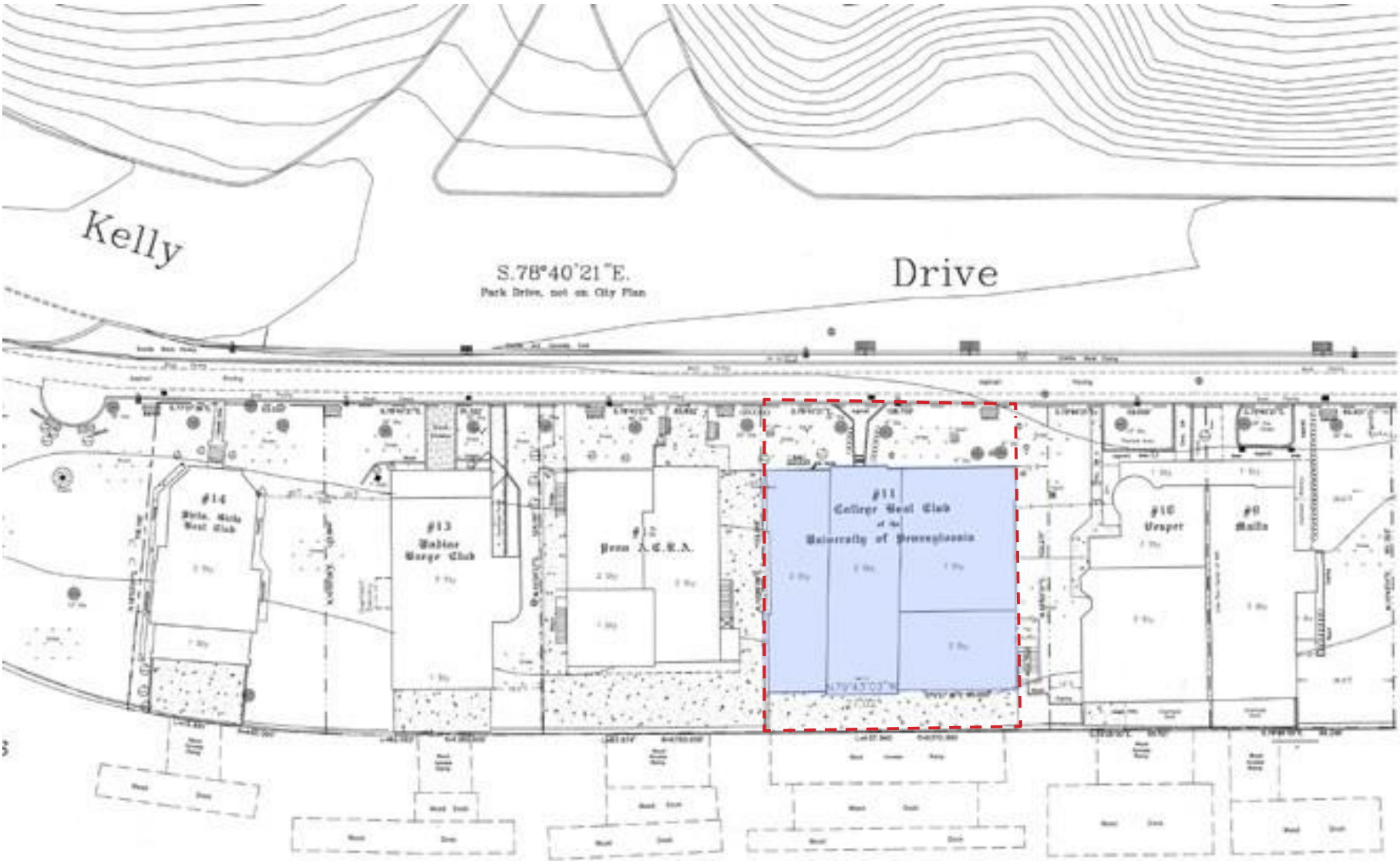
- 1874-75 Original Pavilion
- 1920 Addition
- c.1930 Addition
- 1980 Addition



LEVEL 1



Penn Boathouse Existing Aerial View



Penn Boathouse Survey & Plan of Properties 1999

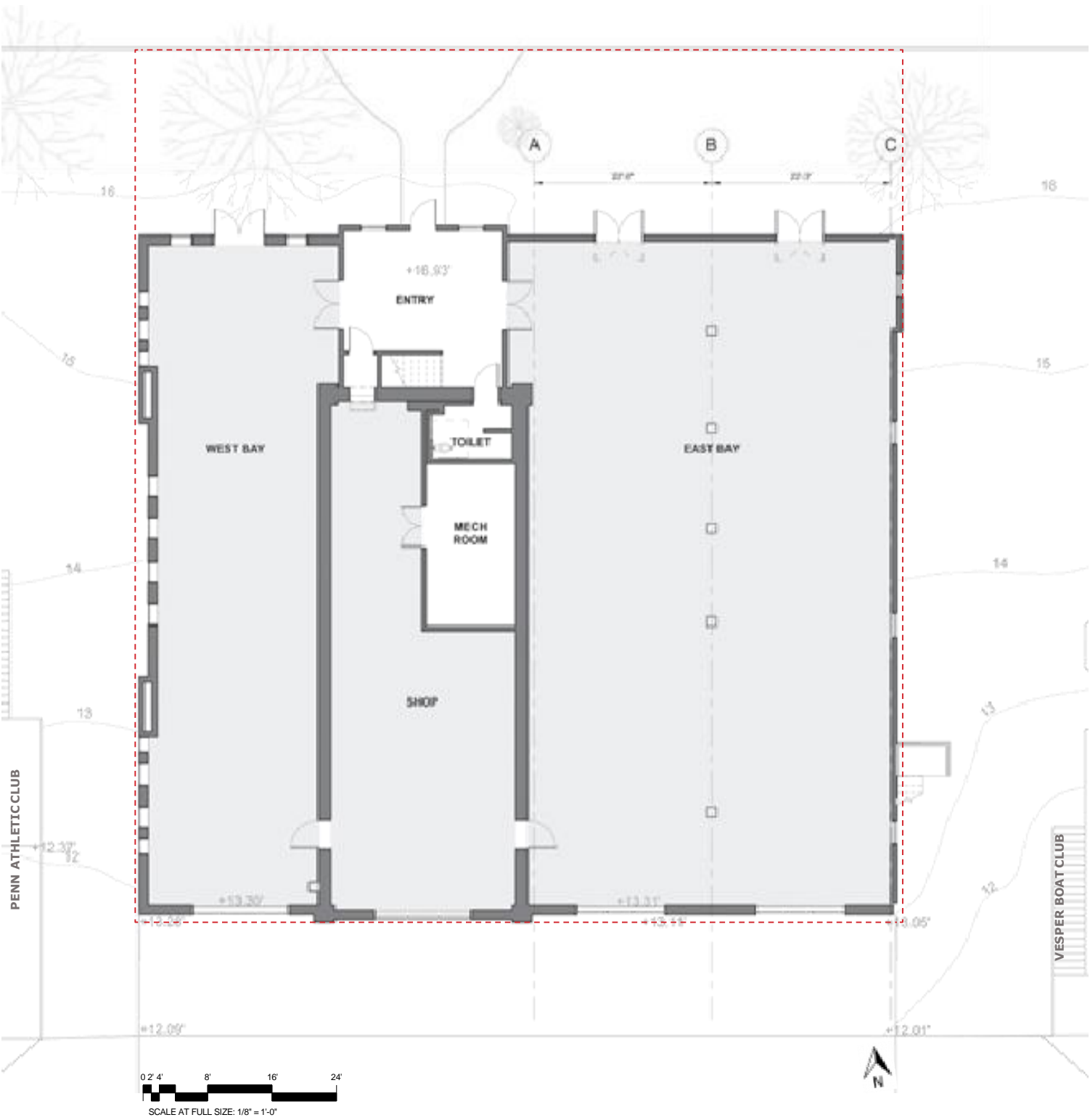




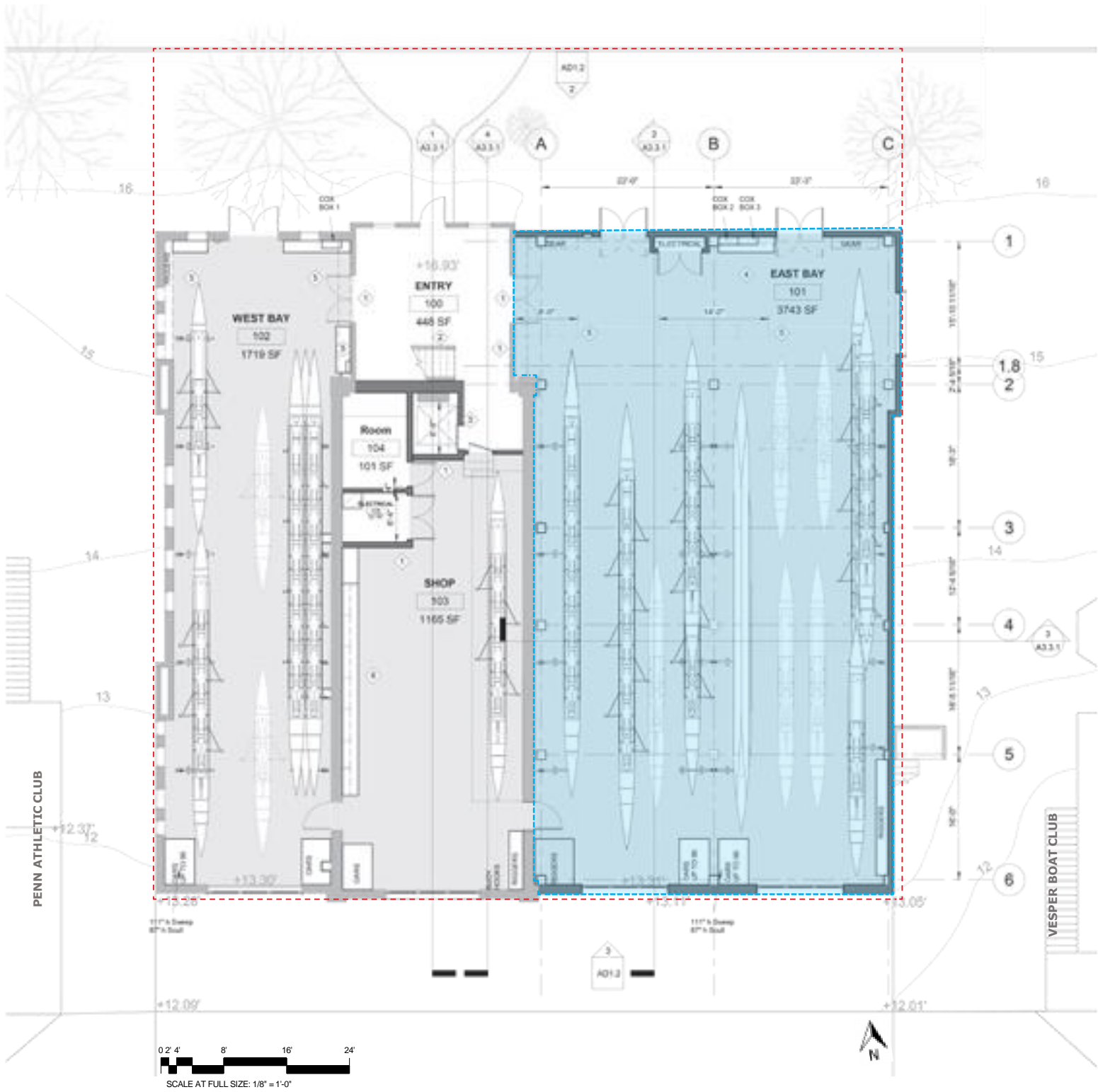
UNIVERSITY OF PENNSYLVANIA BOATHOUSE

RENOVATION & ADDITION TO THE PENNBOATHOUSE
11 Boathouse Row, Philadelphia, PA 19130

EXISTING VS PROPOSED PLANS: FLOOR 1



FLOOR 1: EXISTING



FLOOR 1: PROPOSED

REBUILT / NEW CONSTRUCTION



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EXISTING VS PROPOSED PLANS: FLOOR 2



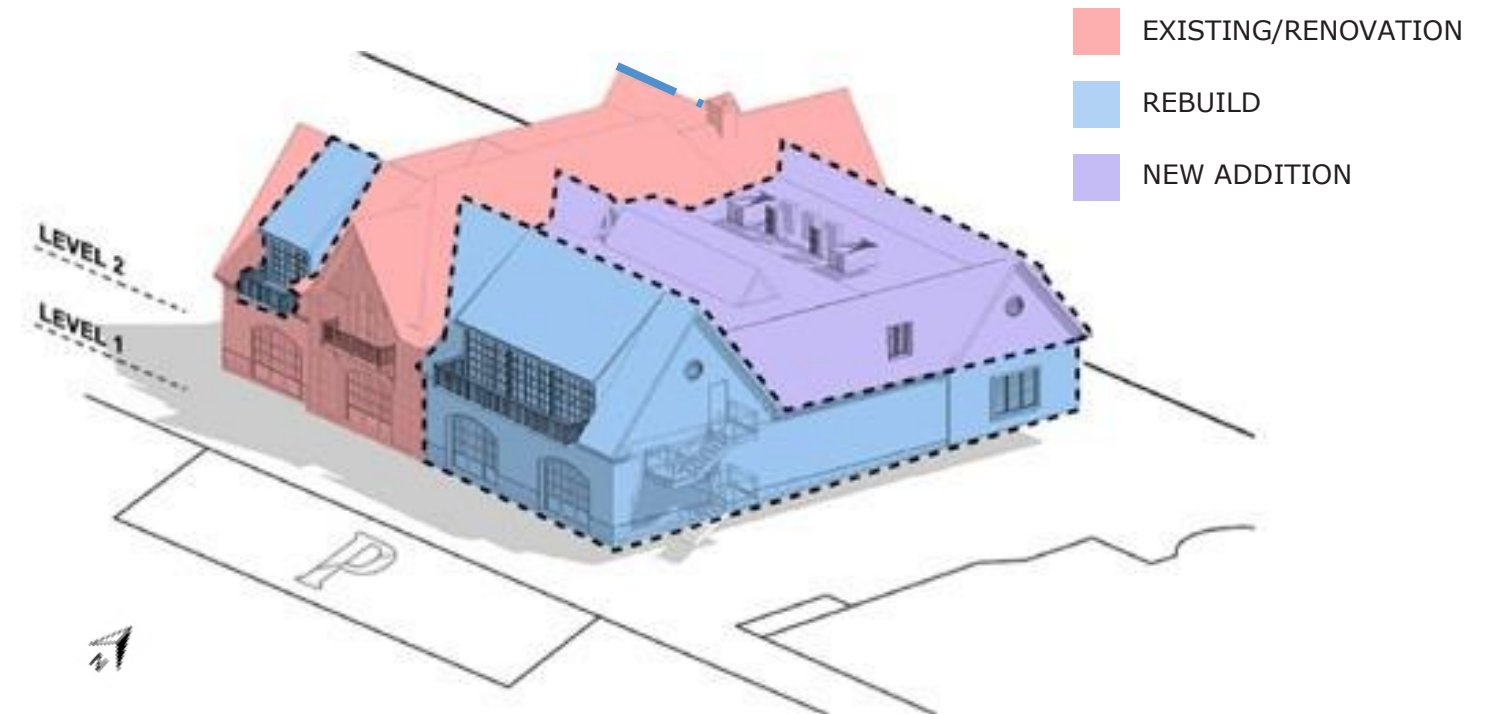
FLOOR 2: EXISTING



FLOOR 2: PROPOSED
REBUILT / NEW CONSTRUCTION



**Existing Penn
Boathouse**



**Proposed
Scope**

The addition overbuilds the existing footprint to create additional square footage with a second floor “infill”. The axonometric diagrams above show how the new building massing references the existing gables and dormers, preserving the scale and character of the Schuylkill elevation.

The proposed addition will reflect the existing building’s character and scale, referencing existing details and proportions in the new construction. The material palette is consistent with the original through its use of stone, stucco, wood trim, and roofing.

The original boathouse was constructed in 1874 with the east and west wings built in 1921 and 1980, respectively. The west wing is a two-story addition constructed of concrete masonry, steel and wood and was built to house the women's boats. The second floor of the west wing was constructed at a different floor elevation than the floor elevation of the original boathouse. The original east wing was a one-story shed structure that was modified in the early 1930's to include a small vertical addition on the river side. It currently houses the men's boats.

The east wing was constructed primarily with dimensional wood construction forming the exterior stud walls on three sides and the roof. These perimeter walls bear on short concrete foundation walls that do not bear on continuous spread footings. This has accounted for some of the settlement that these walls have experienced. The roof, with its multiple roof monitors, is supported at the east perimeter, west original boathouse masonry wall, and at its centerline by several timber columns that bear on shallow spread footings.

A structural condition assessment was completed for the east wing to determine if the structure could support a full overbuild addition. The assessment determined that the existing foundations, roof framing members, and columns have insufficient vertical load capacity and lateral load resistance to support the code required loads for the proposed program designated for the second floor. An attempt to strengthen the existing roof framing would result in a significant loss of vertical height within the boat bay that would severely diminish the vertical space required to maximize boat stacking. Compounding the loss of vertical space would be the additional loss of footprint to introduce supplemental columns. In addition, all of the foundations would need to be underpinned to increase their bearing capacity. This would be a risky operation in soils that are not known for their cohesiveness.

The proposed two-story addition would be constructed on the footprint of the current east wing. The structure would consist of a cast-in-place concrete supported second floor overtopped by a structural steel and timber roof structure. The new concrete columns would bear on reinforced concrete pile caps supported by mini-piles. The structure would be designed to conform to flood plain management requirements. Other additions would include an elevator within the footprint of the original boathouse. Overbuild construction or construction of a new floor level will be required at the original boathouse's second floor to provide a more uniform second floor elevation for ADA accessibility. Decayed framing within the 1921 addition at the front of the original 1874 boathouse would also be repaired and supplemented.



Test Pit TP-1, Footing 20" Below Grade, Geotechnical Report, September 2019



Test Pit TP-2, No Footing Encountered, Geotechnical Report, September 2019



Roof Above Men's Boat Bay, July 2019



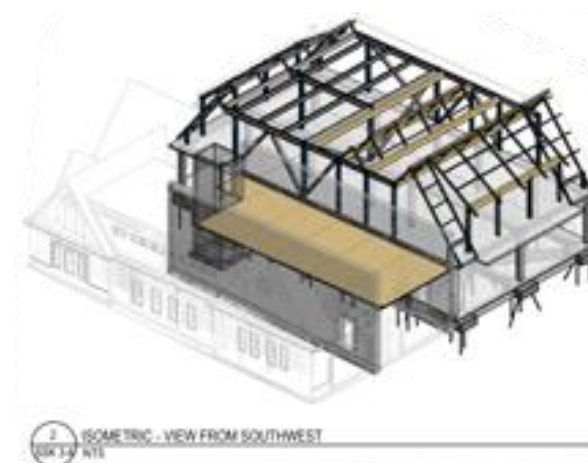
Existing East Wall, August 2019



Existing East Wall, August 2019

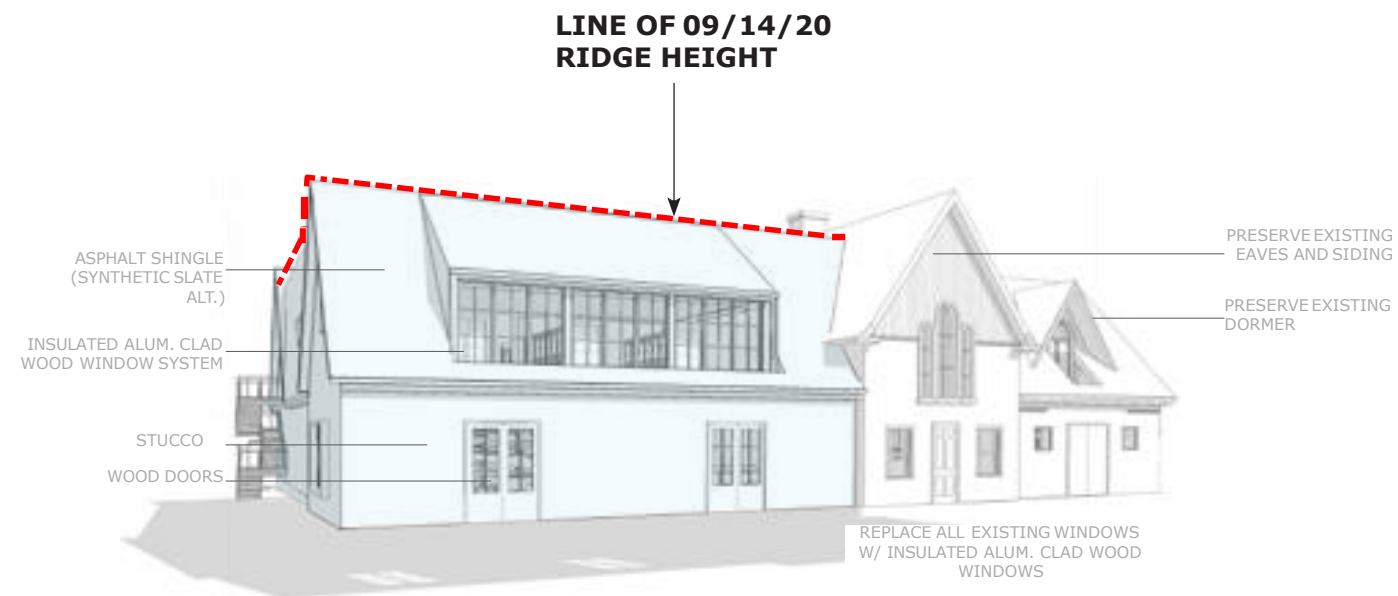


Ceiling Above Main Entry, July 2019



Structural Diagrams

09/14/2020: North Elevation View



KELLY DRIVE FACADE

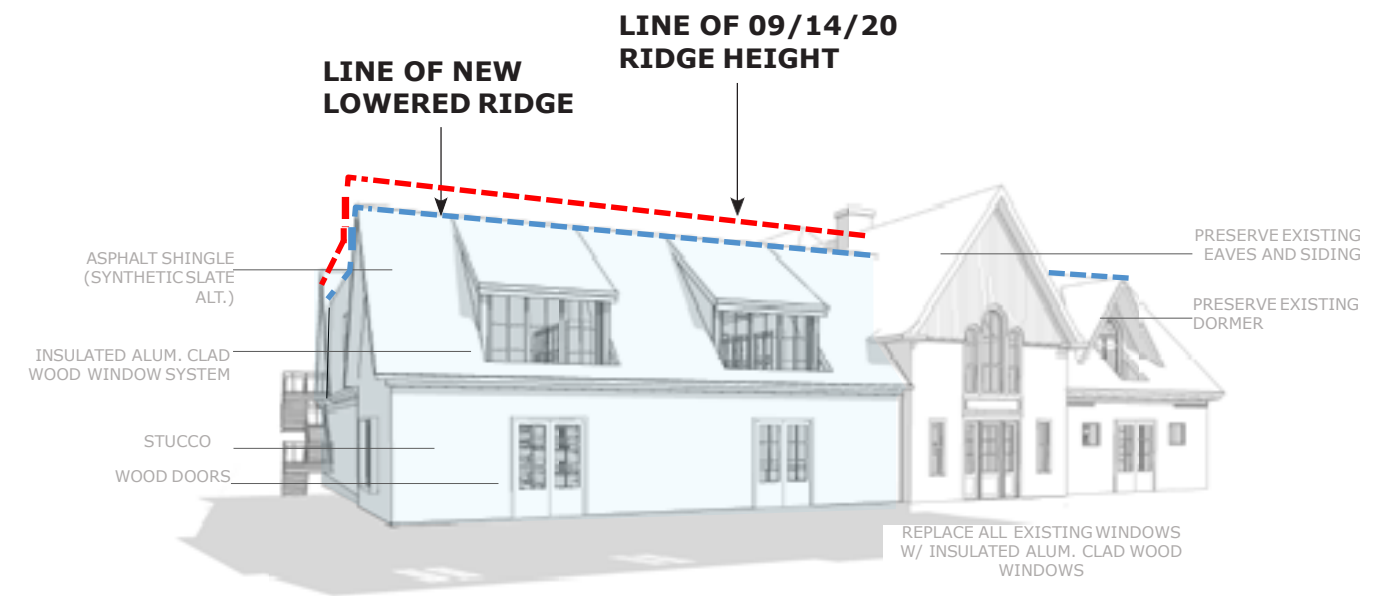
Ridge at new addition should be lowered to match existing West Bay ridge

Dormer scale should be reduced and detail should comport with existing shed dormer details

KELLY DRIVE FACADE/NORTH ELEVATION

REBUILT /NEW CONSTRUCTION

REVISED: North Elevation View



KELLY DRIVE FACADE

Ridge lowered 30" to align with West Bay ridge line

Concealed flat roof (beyond) and roof top equipment lowered 30"

Dormer modified - broke into two separate dormers

Reduced elevation of eave

Modified detail to reference existing shed dormers

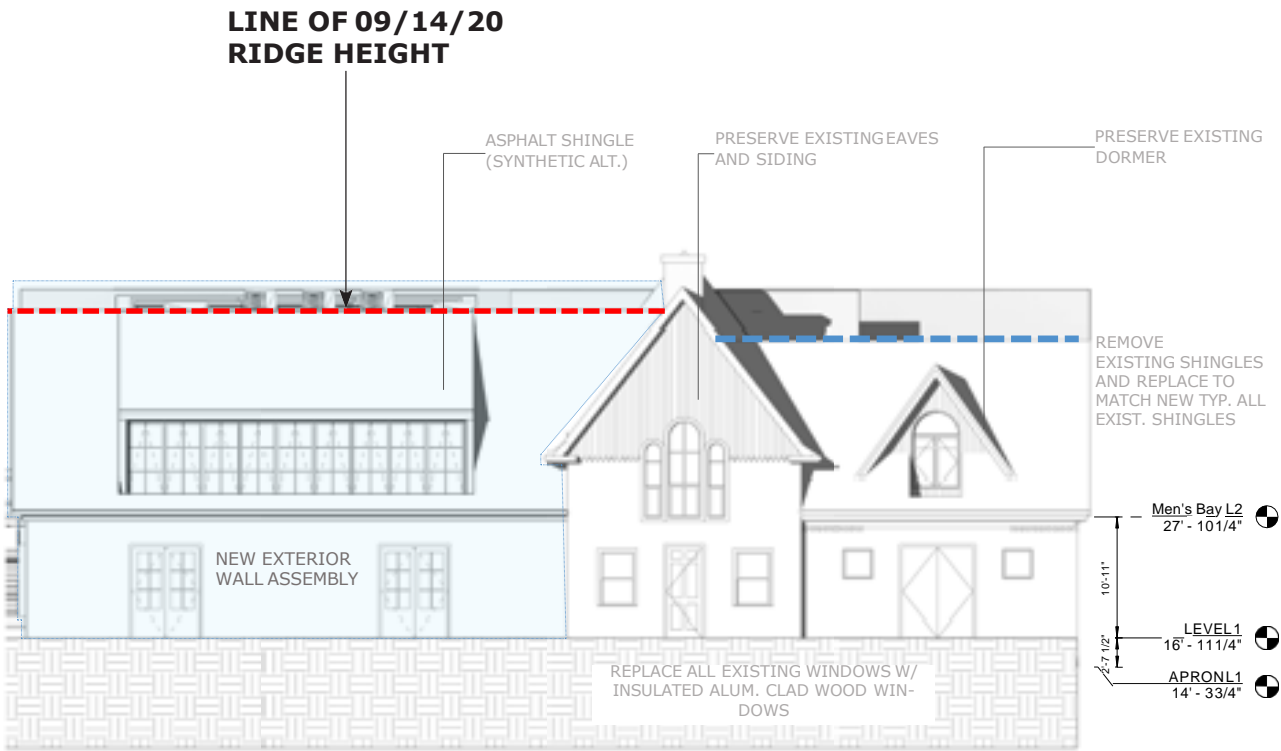


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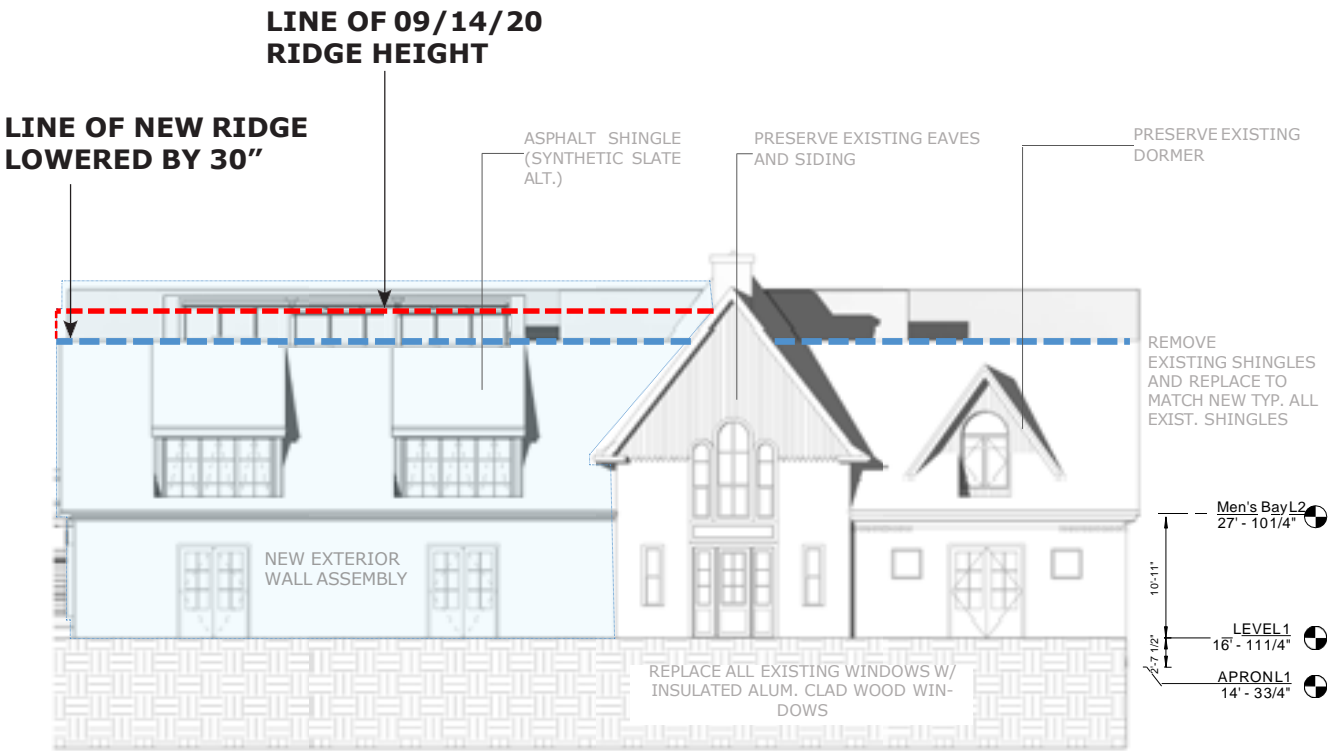
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KELLY DRIVE FACADE/NORTH ELEVATION

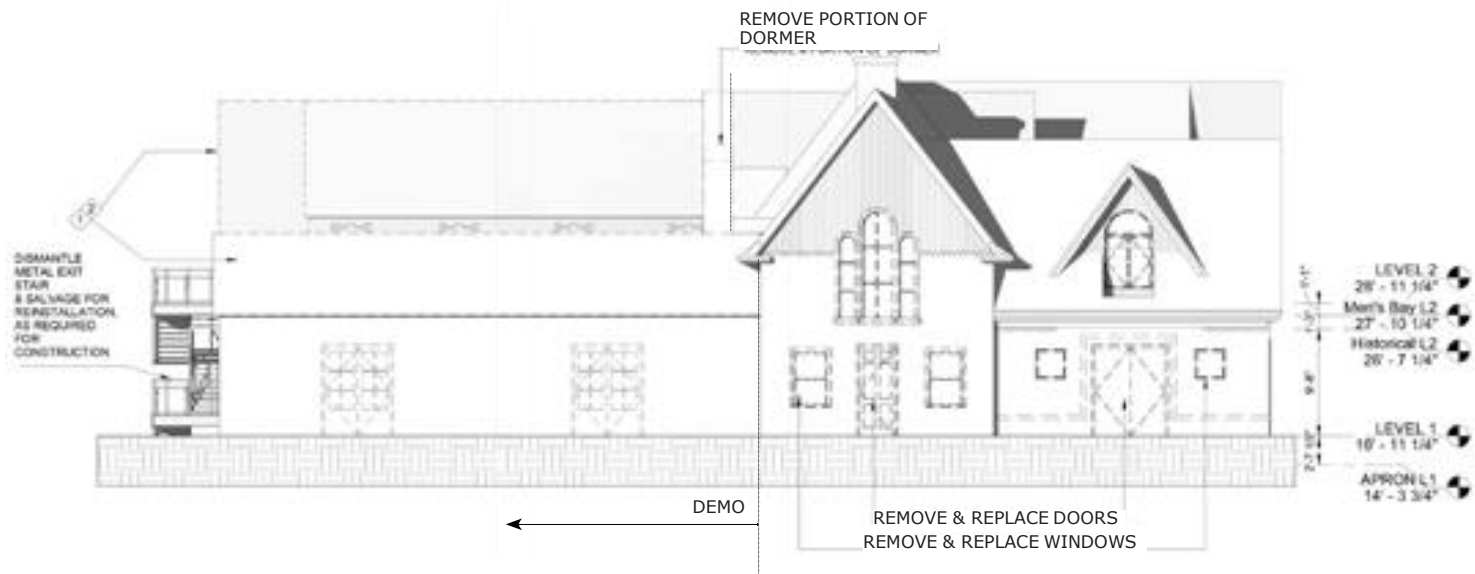
REBUILT /NEW CONSTRUCTION



09/14/2020: North Elevation



REVISED: North Elevation



EXISTING: North Elevation

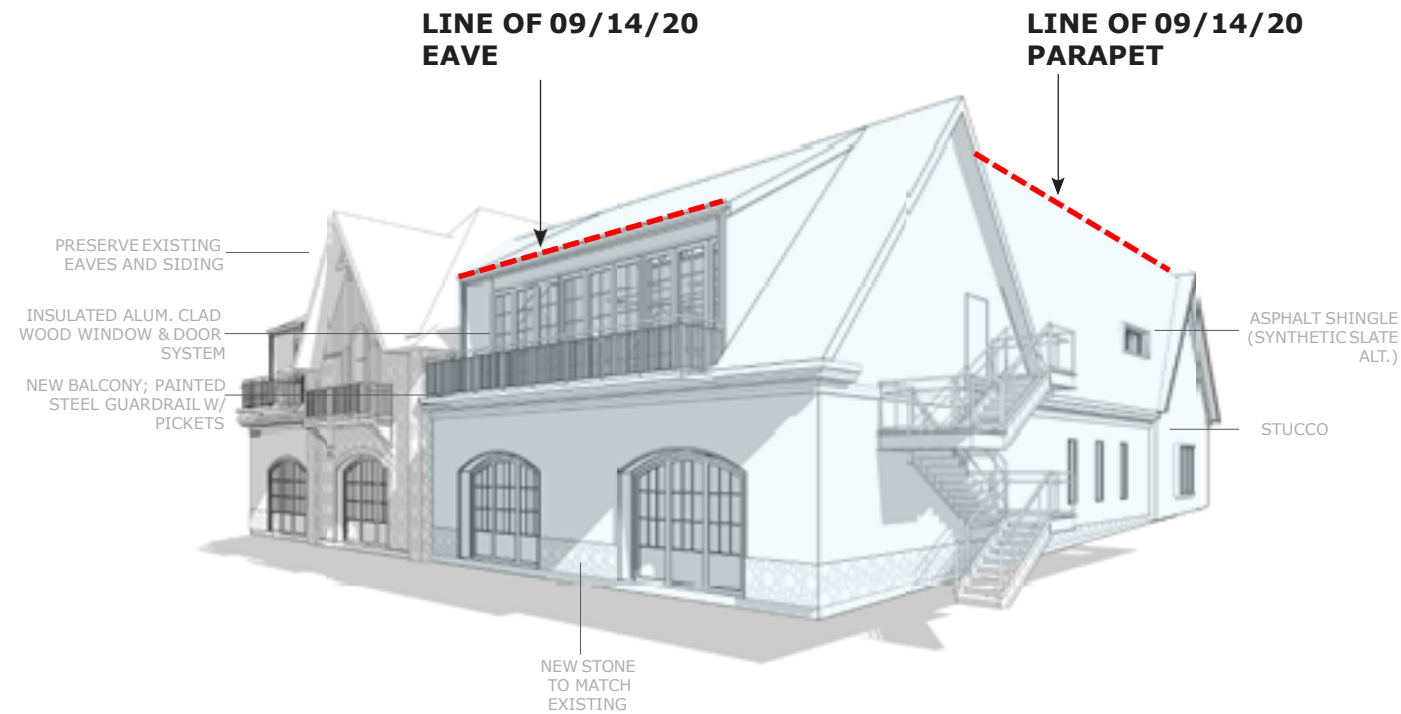


09/14/20 North Elevation Rendering from Kelly Drive



Revised North Elevation Rendering from Kelly Drive

09/14/2020: South Elevation View



SCHUYLKILL FACADE

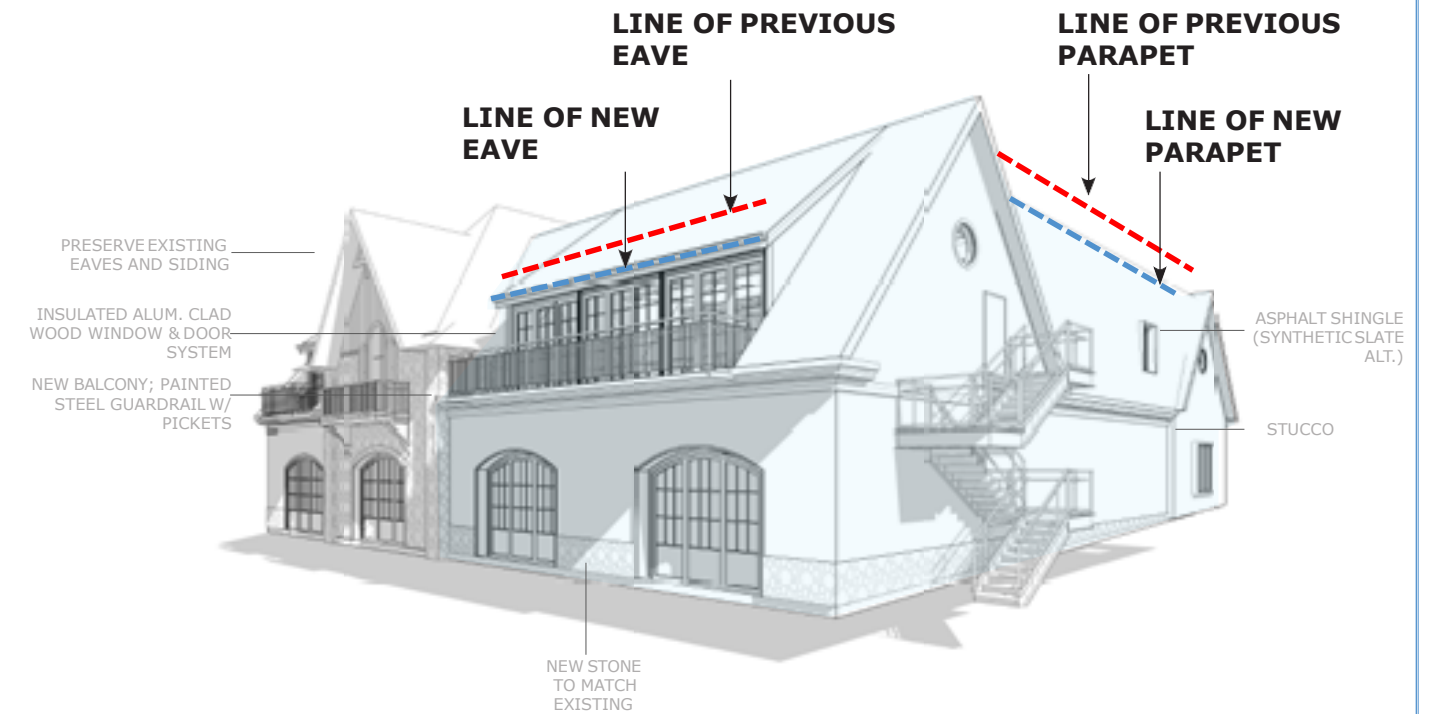
Dormers overwhelm the facade - they should be reduced in scale and character should reference existing shed dormer details

New East & West Bay balconies overwhelm facade

SCHUYLKILL FACADE/SOUTH ELEVATION

REBUILT /NEW CONSTRUCTION

REVISED: South Elevation View



SCHUYLKILL FACADE

Dormers modified

Reduced height of dormers and glazing by 24" to match existing West Bay dormer height

Modified detailing to reflect existing shed dormer details & materials

Modified balconies

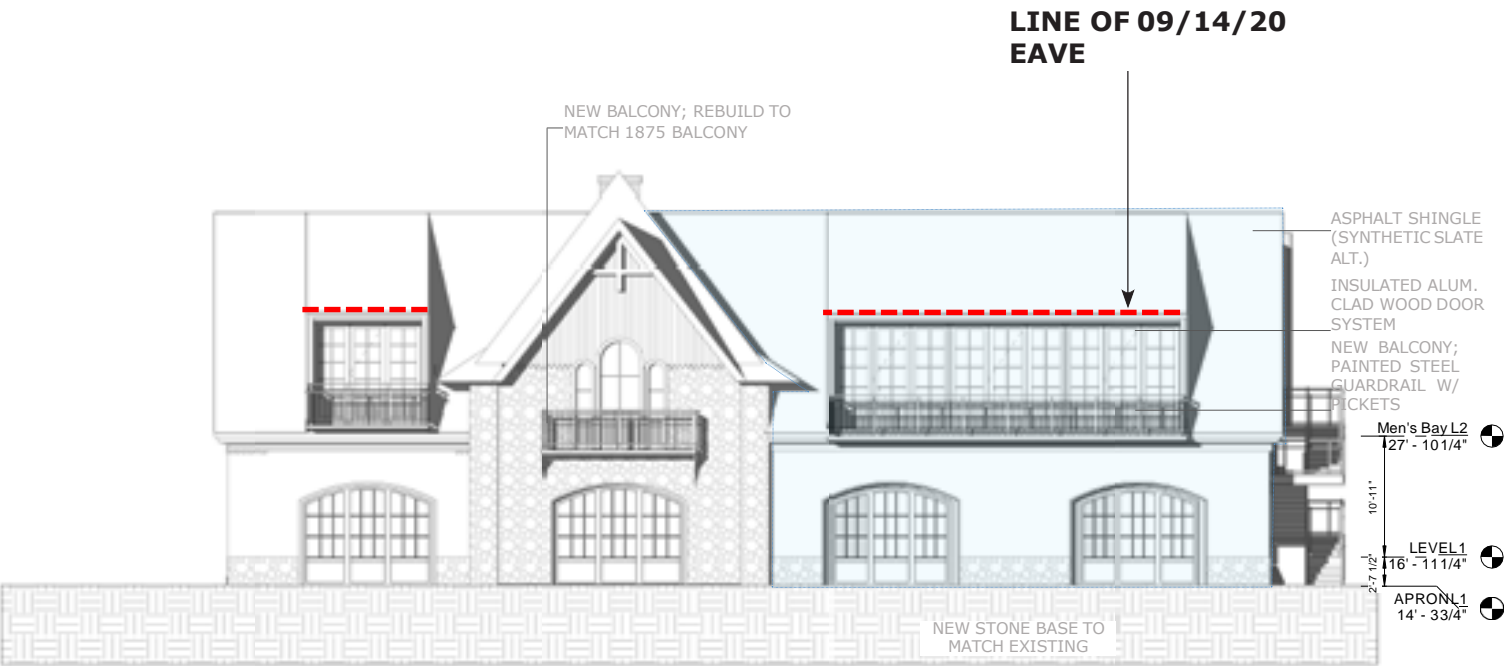
Reduced projection and scale of balcony elements to be more subdued

Modified details to be more contextual

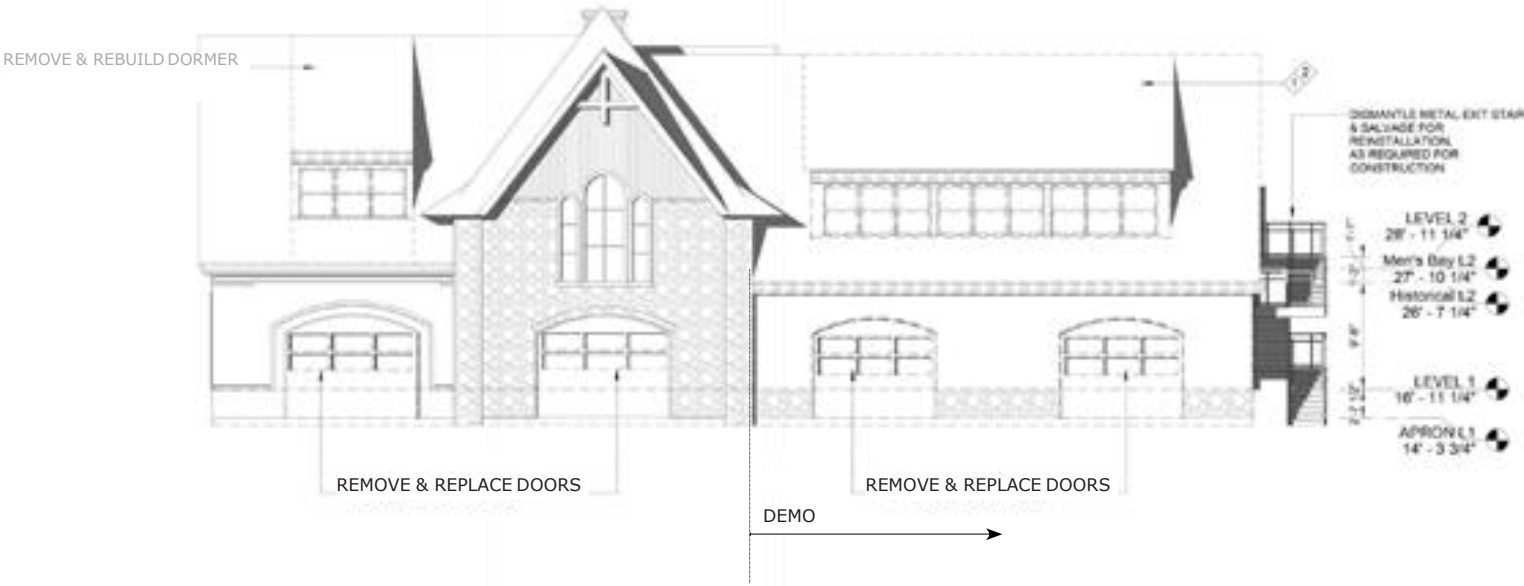


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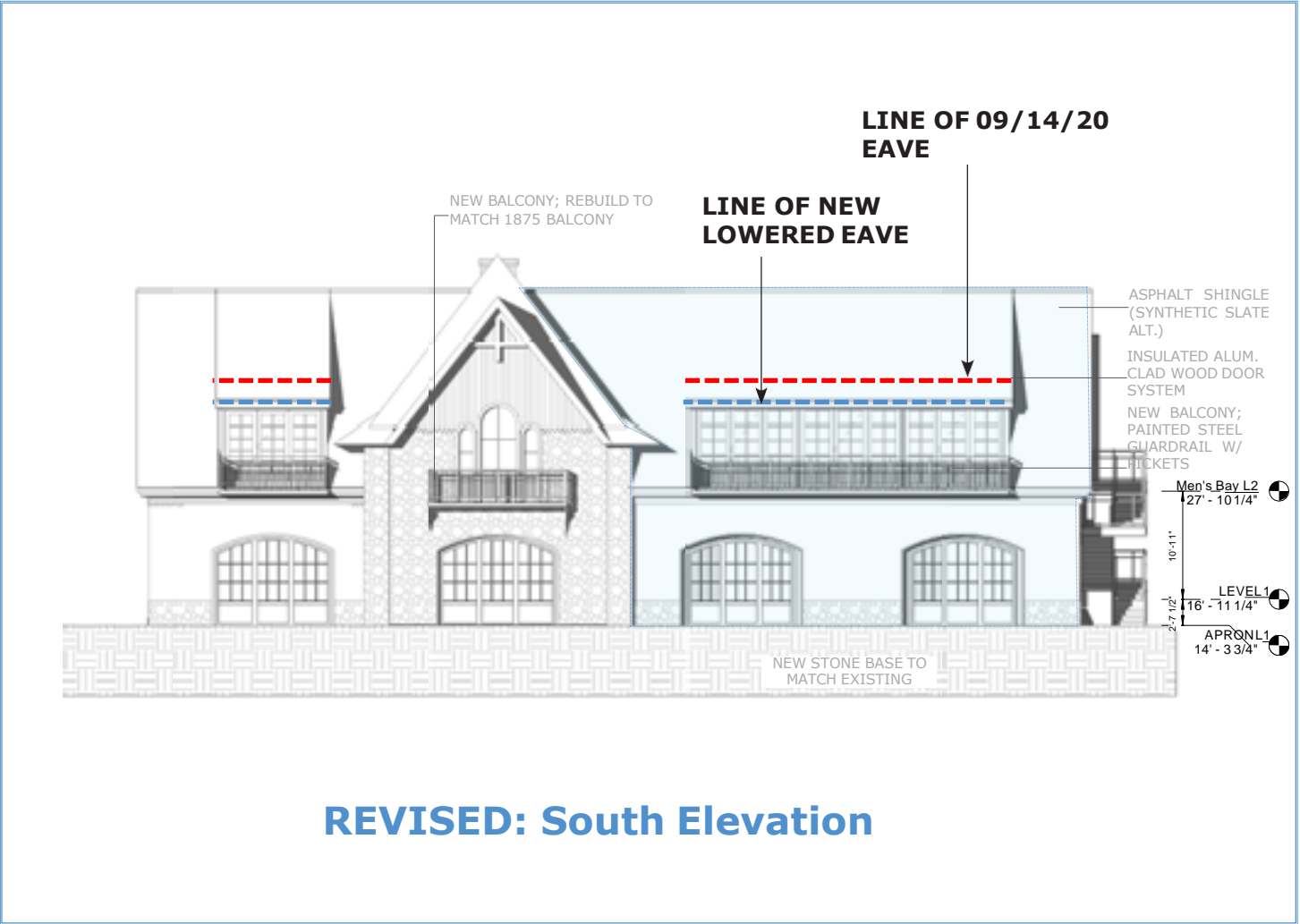
09/14/2020 South Elevation



EXISTING: South Elevation

SCHUYLKILL FACADE/SOUTH ELEVATION

REBUILT /NEW CONSTRUCTION



REVISED: South Elevation





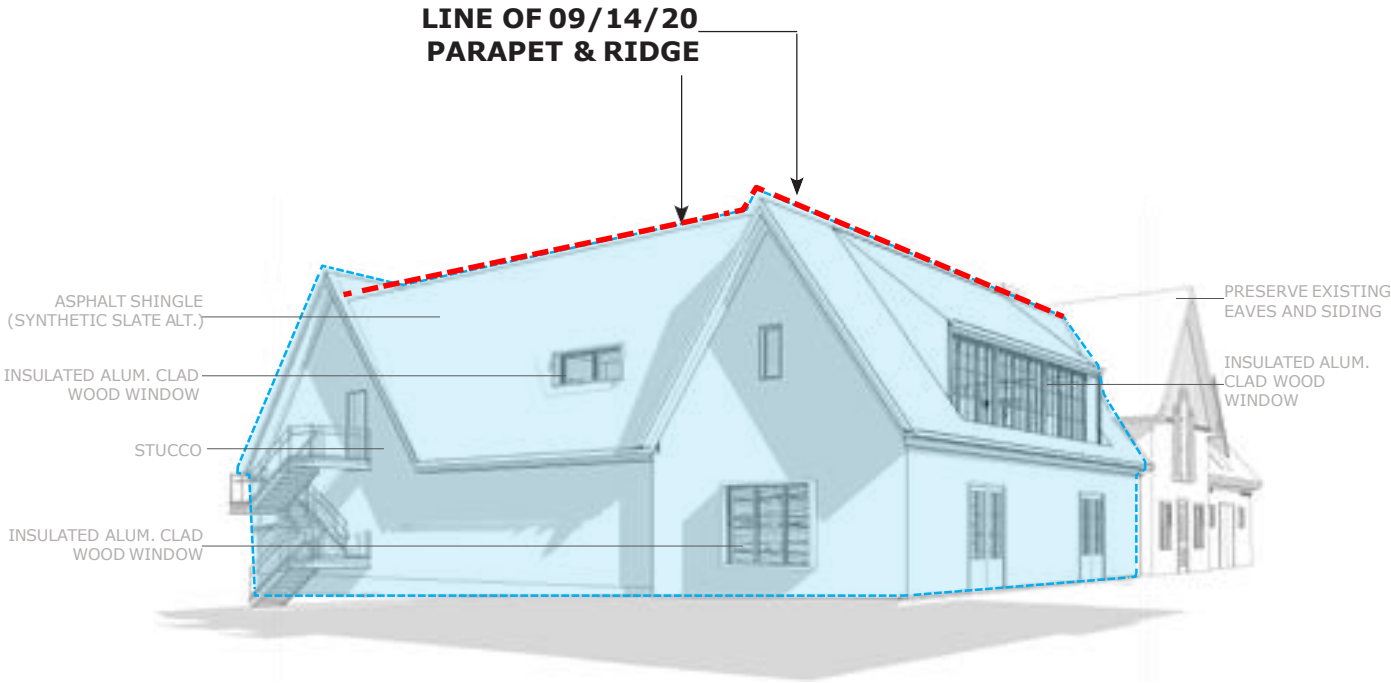
Revised South Elevation Rendering





Revised View from the Schuylkill

09/14/2020 East Elevation View

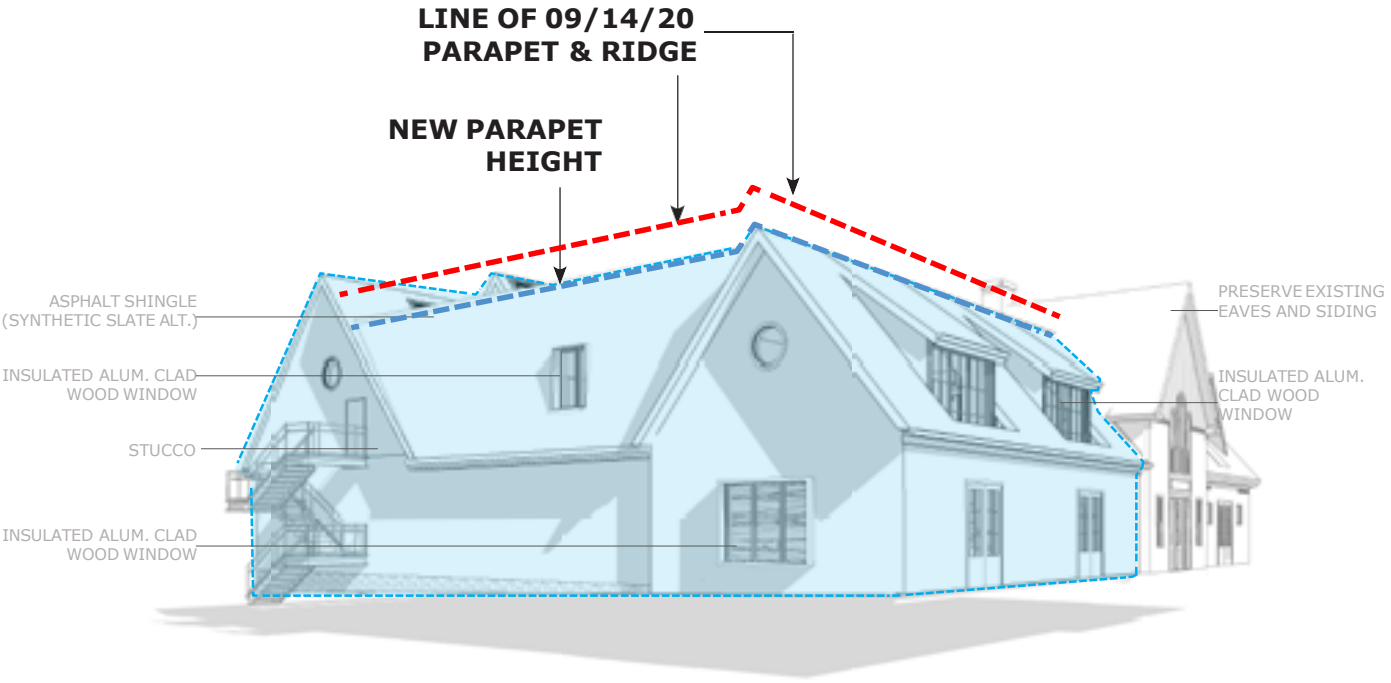


EAST FACADE

Facade scale is too large and undifferentiated (looks like a “billboard”)

Facade should reference existing facade - reduce scale, incorporate glazing

REVISED: East Elevation View



EAST FACADE

Reduced parapet height by 36” and north gable end by 30”

Incorporated fenestration consistent with existing, including rounds and double-hungs

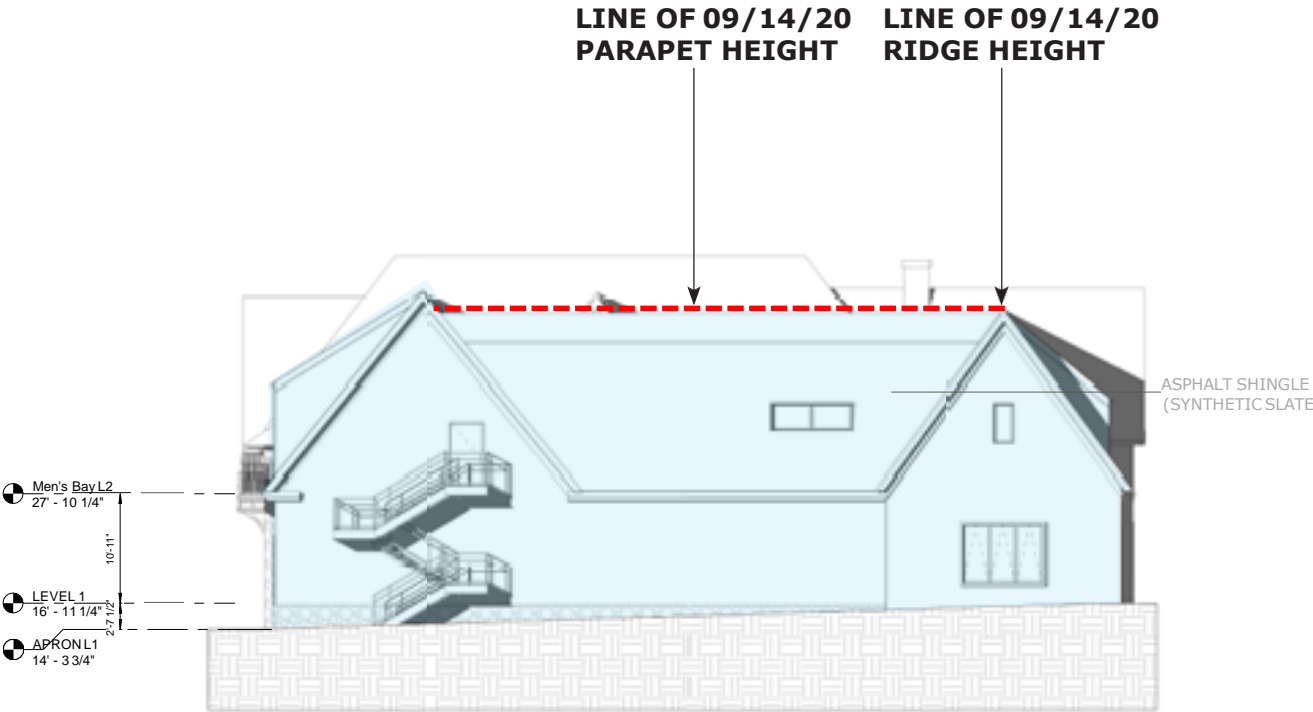


UNIVERSITY OF PENNSYLVANIA BOATHOUSE

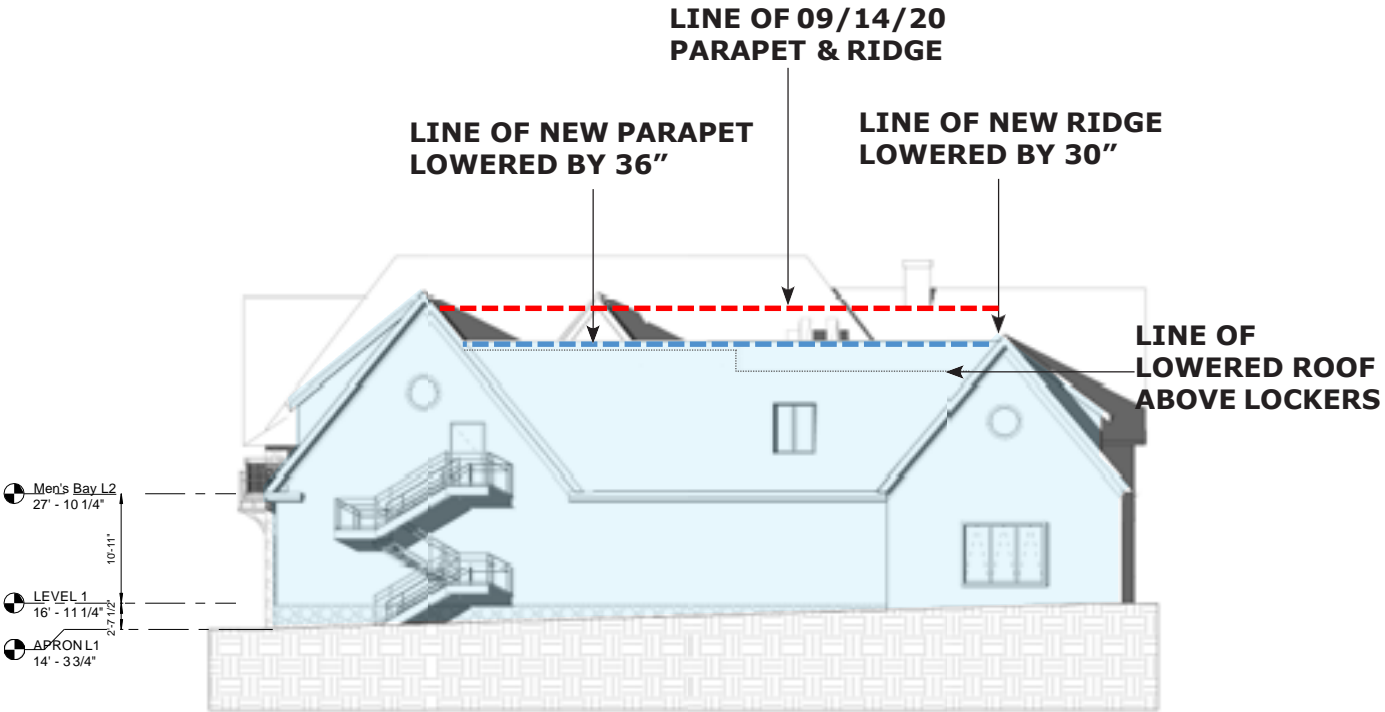
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EAST FACADE

REBUILT /NEW CONSTRUCTION



PREVIOUS: East Elevation



REVISED: East Elevation



EXISTING: East Elevation

EXISTING



Current View from the Schuylkill River Trail 07.30.2019

SIGHTLINE STUDIES

The revised design consists of a lowered ridge line of the Kelly Drive facade by 30", and lowered parapet of the East Elevation by 36". In order to reduce equipment visibility, the roof area hosting the equipment was also lowered by 30".

The view to the left shows the current visibility of the East Facade with boat racks adjacent to the facade. The images below, show the previous design with higher ridge line and steeper slopes on the left, and on the right a revised design showing reduced slopes and lowered ridge.

PREVIOUS DESIGN



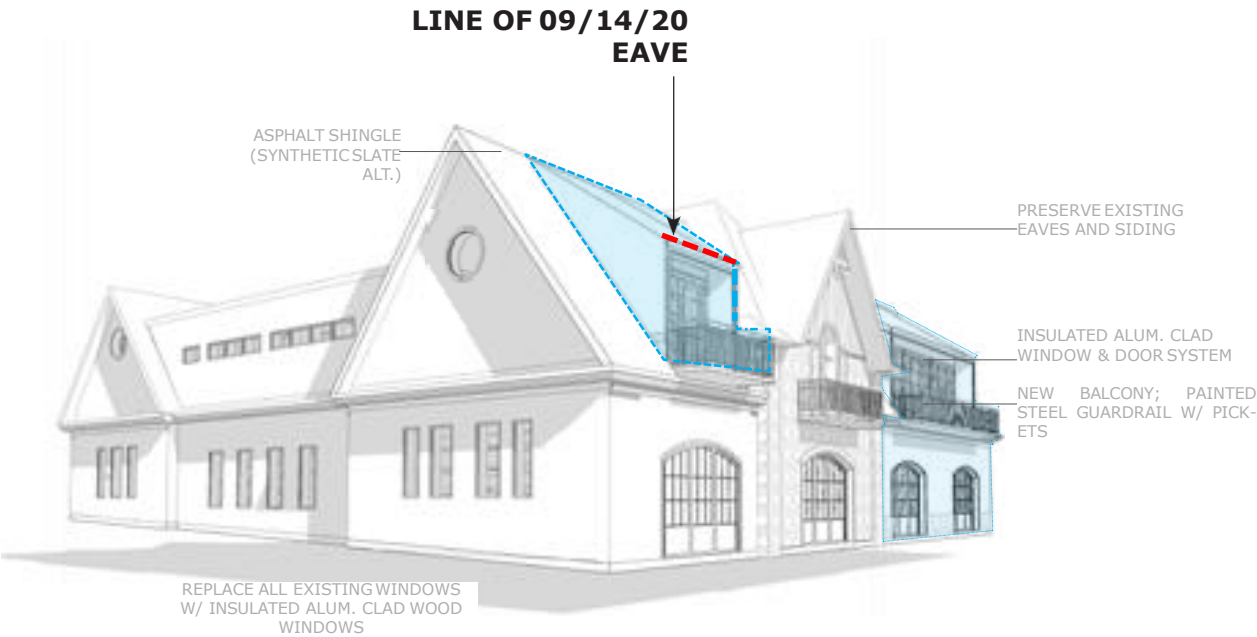
Rendering from the Schuylkill River Trail: **Raised Roof Parapet to Conceal Roof Equipment**

REVISED DESIGN

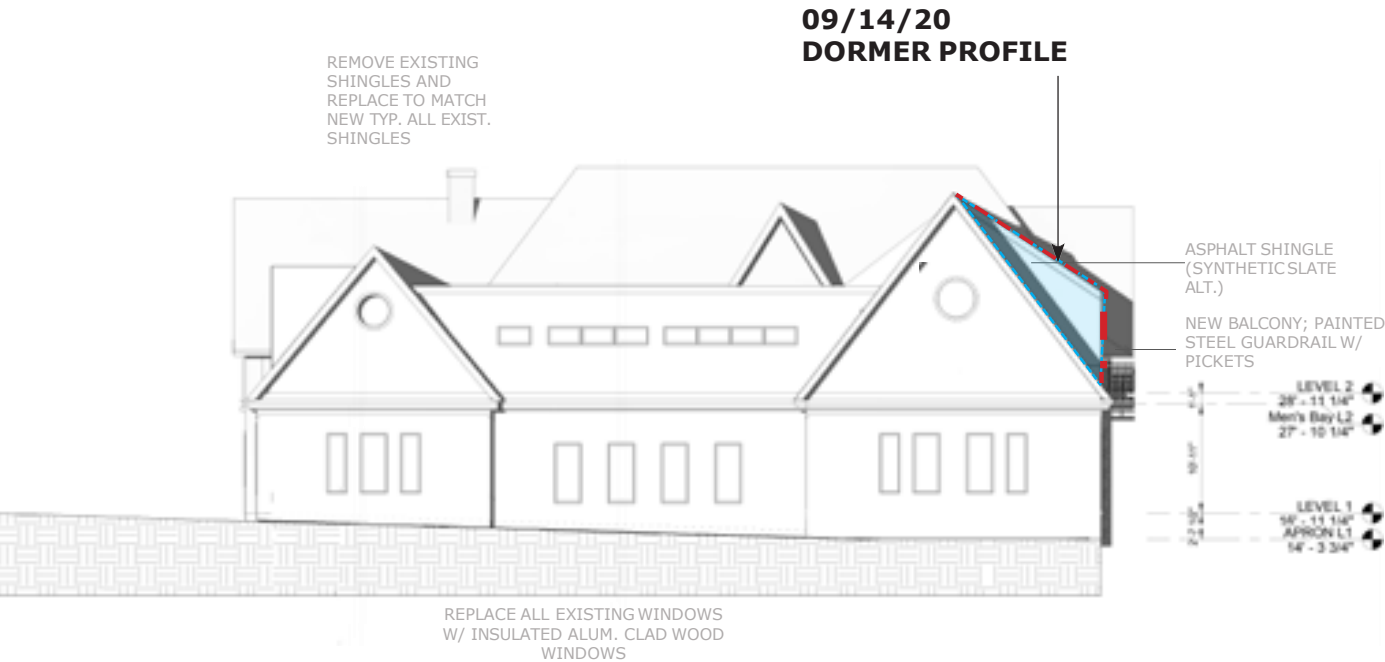


Rendering from the Schuylkill River Trail: **Lowered Ridge & Equipment to Align with West Bay**

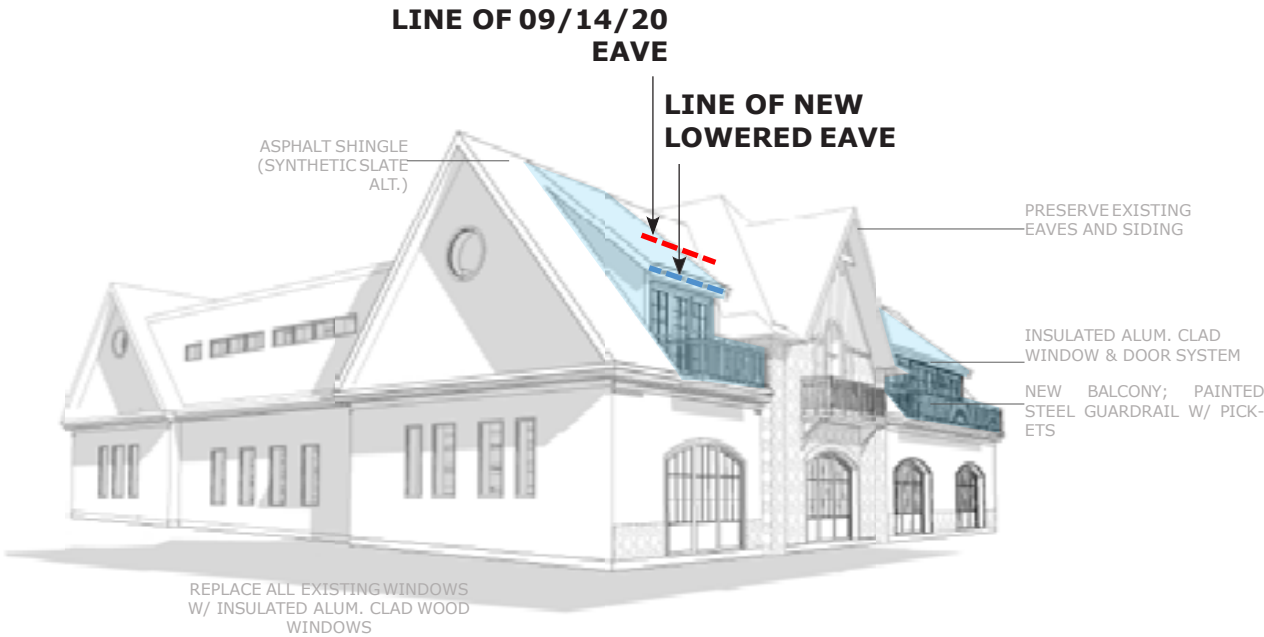
09/14/20: West Elevation View



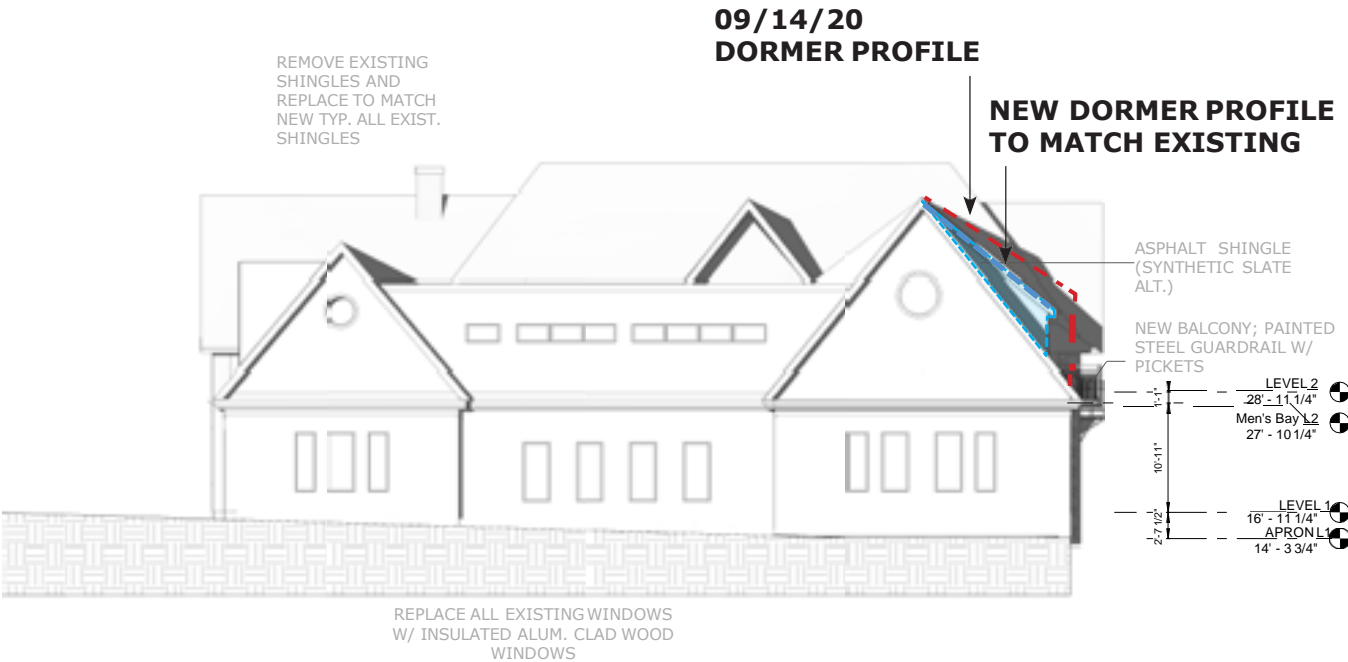
09/14/20: West Elevation



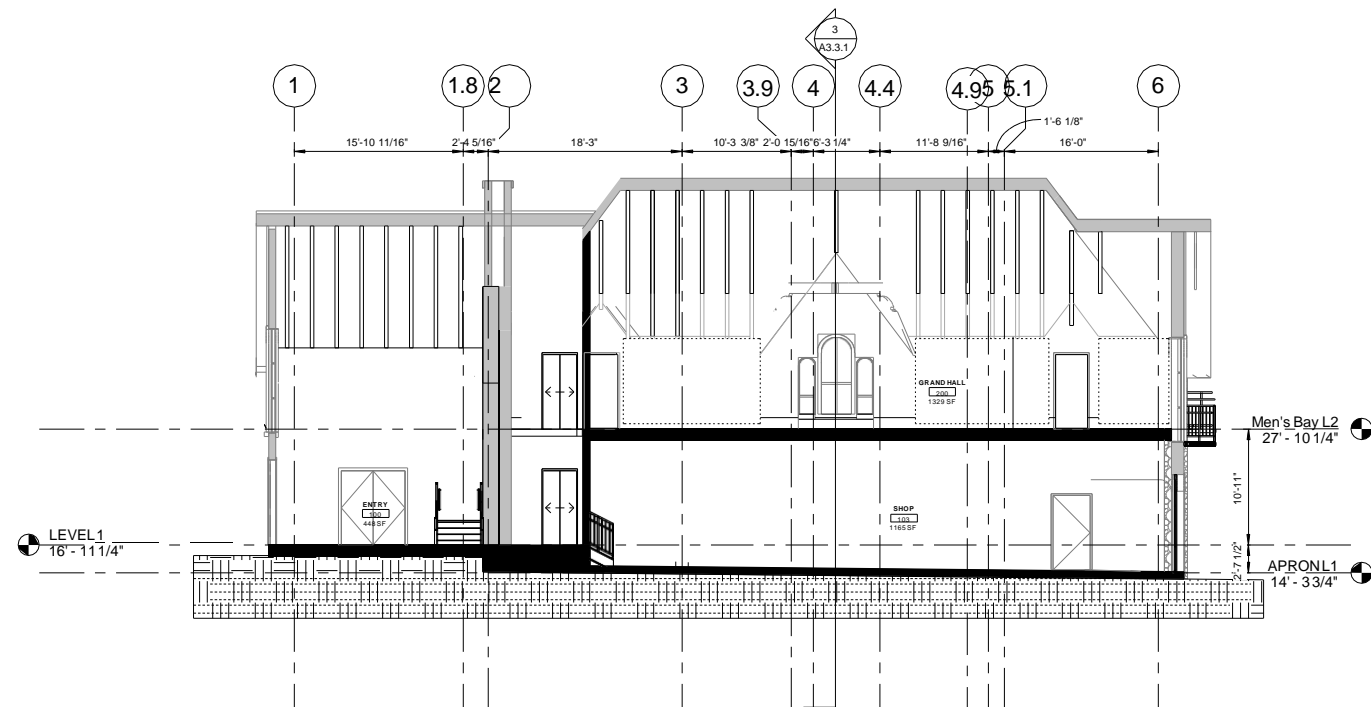
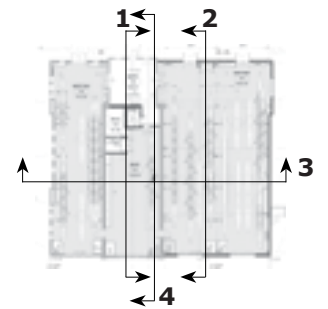
REVISED: West Elevation View



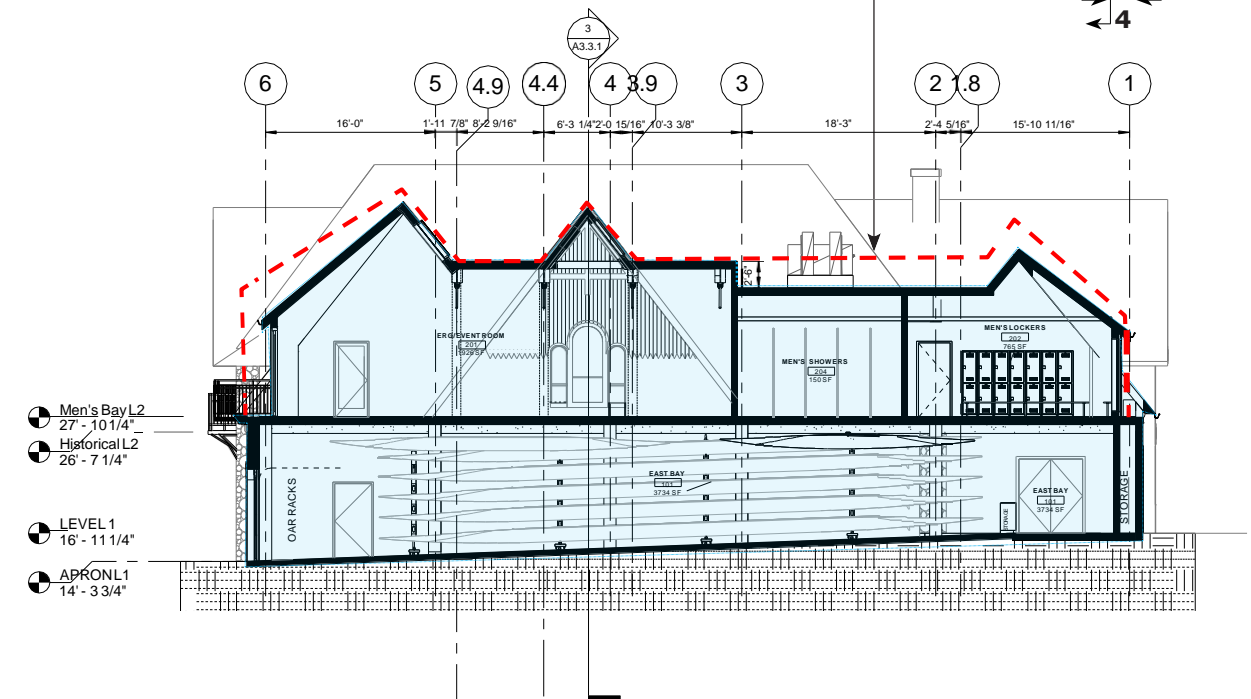
REVISED: West Elevation



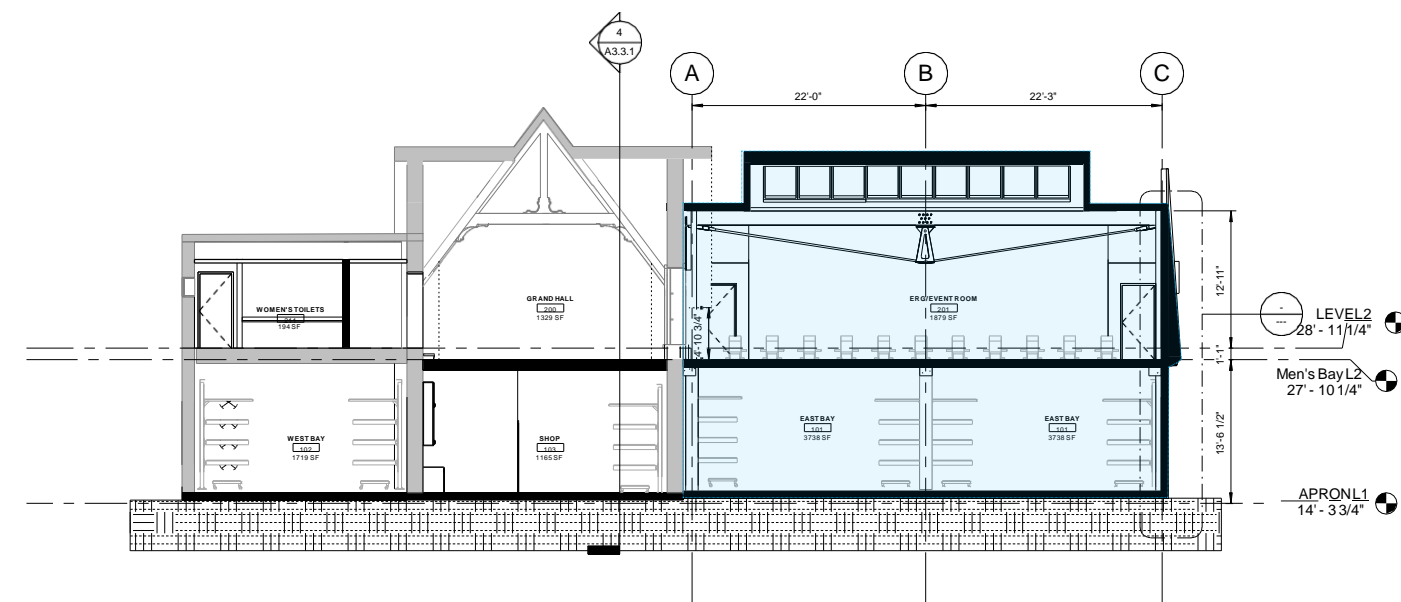
09/14/20
SECTION PROFILE



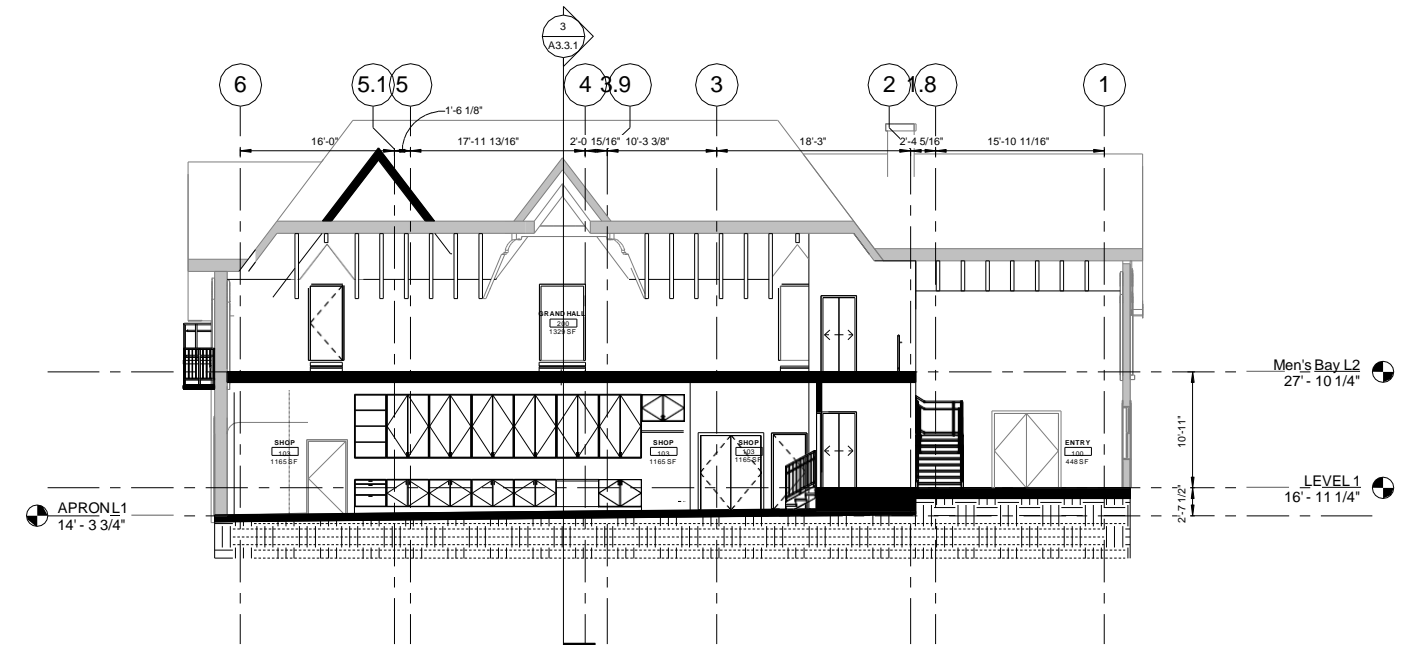
1 N-S SECTION1
SCALE: 1/8" = 1'-0"



2 N-S SECTION2
SCALE: 1/8" = 1'-0"



3 W-E SECTION2
SCALE: 1/8" = 1'-0"



4 S-N SECTION
SCALE: 1/8" = 1'-0"



North Elevation Rendering from Kelly Drive



South Elevation Rendering



View of the East Elevation from Kelly Drive



View from the Schuylkill