CERTIFICATE OF APPROPRIATENESS
APPLICATION FORM

PLANNING & DEVELOPMENT DEPARTMENT

PROPERTY

Address 1807 Wroxton

Historic District / Landmark Landmark HCAD # 0540960000011

Subdivision Southampton Place Lot 11 Block 34

DESIGNATION TYPE

- [x] Landmark
- [ ] Protected Landmark
- [ ] Archaeological Site
- [ ] Contributing
- [ ] Noncontributing
- [ ] Vacant

PROPOSED ACTION

- [x] Alteration or Addition
- [ ] Restoration
- [ ] New Construction
- [ ] Relocation
- [ ] Demolition
- [ ] Excavation

DOCUMENTS

- [ ] Application checklist for each proposed action and all applicable documentation listed within are attached

OWNER

Name Tapley House LLC

Company N/A

Mailing Address 1807 Wroxton Road
Houston, Texas 77005

Phone

Email [redacted]

Signature

Date 10-29-14

APPLICANT (if other than owner)

Name David Bucek, FAIA

Company Stern and Bucek Architects

Mailing Address 1610 Commerce Street
Houston, Texas 77002

Phone 713-527-0186

Email [redacted]

Signature

Date 10-29-14

ACKNOWLEDGEMENT OF RESPONSIBILITY

Requirements: A complete application includes all applicable information requested on checklists to provide a complete and accurate description of existing and proposed conditions. Preliminary review meeting or site visit with staff may be necessary to process the application. Owner contact information and signature is required. Late or incomplete applications will not be considered.

Deed Restrictions: You have verified that the work does not violate applicable deed restrictions.

Public Records: If attached materials are protected by copyright law, you grant the City of Houston, its officers, agencies, departments, and employees, non-exclusive rights to reproduce, distribute and publish copyrighted materials before the Houston Archaeological and Historical Commission, the Planning Commission, City Council, and other City of Houston commissions, agencies, and departments, on a City of Houston website, or other public forum for the purposes of application for a Certificate of Appropriateness or building permit, and other educational and not for profit purposes. You hereby represent that you possess the requisite permission or rights being conveyed here to the City.

Compliance: If granted, you agree to comply with all conditions of the COA. Revisions to approved work require staff review and may require a new application and HAHC approval. Failure to comply with the COA may result in project delays, fines or other penalties.

Planner: _____ *Application received:* ___/___/___ *Application complete:* ___/___/___

Rev. 10.2014

1807 Wroxton – COA Scope

1. Replace existing deteriorated wood windows, with new aluminum windows with bronze finish, similar to the original proposed steel windows. The existing windows have significant rot/damage due to the lack of flashing and complications resulting from the experimental nature of the design and the use of diagonal wood siding, which the wood industry does not recommend. The majority of the existing lower sills and jambs have been replaced with wood not matching the original and these repairs have compromised the integrity of the frames. Note, the original windows were designed to be steel, per the original drawings, but wood was substituted at the time of construction to reduce cost.

2. Add a 462 S.F. second floor addition at the rear of the property above the former craft room.

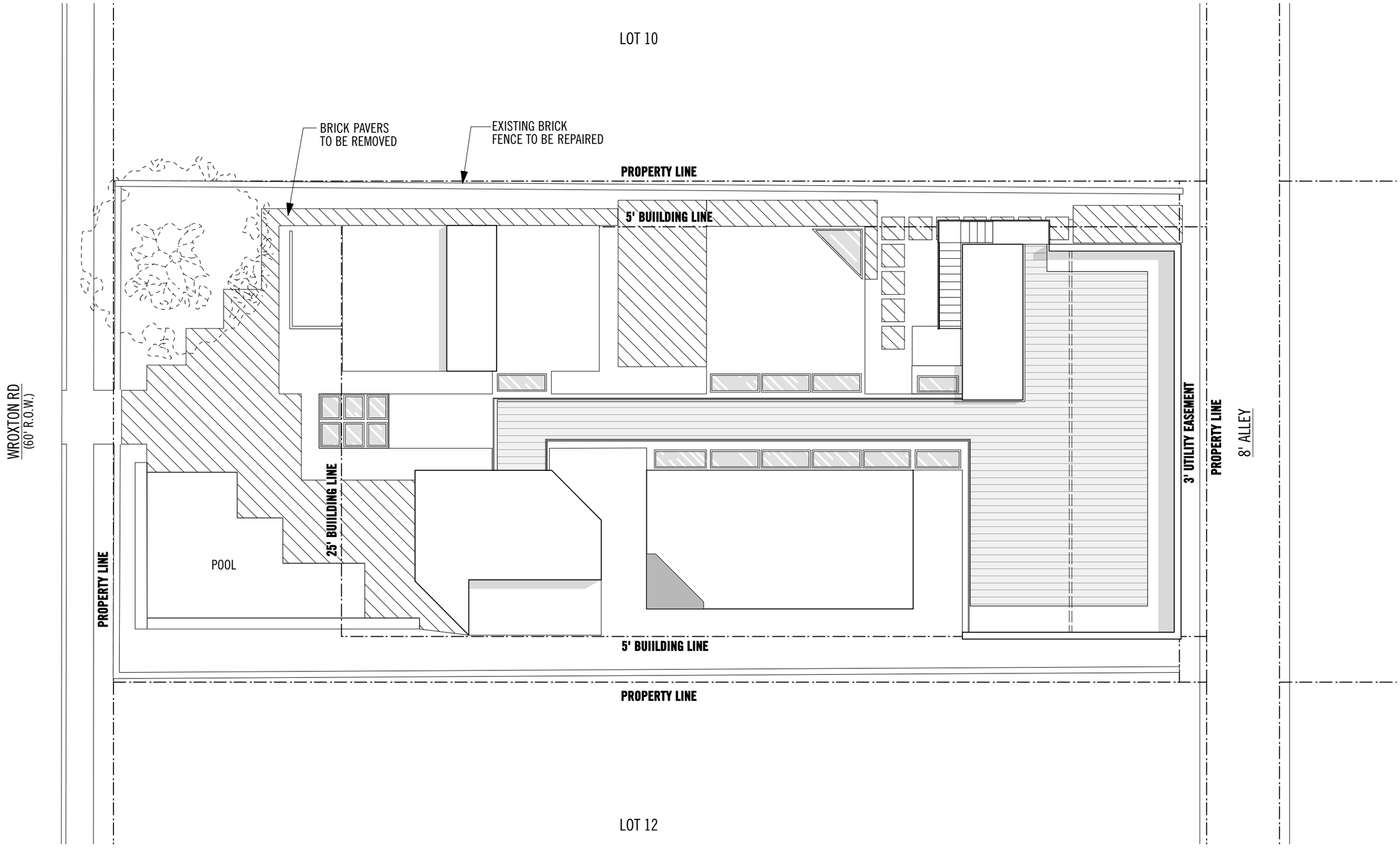
3. Add a 93 S.F. second floor addition to the side of the two-story bedroom suite, above the existing one-story portion.

4. Raise the height of the dead level flat roofs, to add insulation, provide positive roof slope and provide proper drainage around the skylight openings. The existing roofs lack proper drainage and numerous water penetrations have resulted, due to the experimental nature of the design and the limited areas provided to install flashing.

5. Re-construct the central corridor, which has experienced significant deterioration, and replace with a steel structure, similar to the original design intent, not built due to cost.

6. Replace the existing second floor horizontal railings with tempered glass. Note, the existing 32" tall horizontal rails are 4" shorter than required by code, and have 14" tall openings, which exceed the 3 15/16" maximum currently allowed. The glass railing is intended to provide minimal visual impact, similar to the open steel rail design.

7. Replace the existing exterior wood siding, which is significantly deteriorated, has numerous patches that do not conform to the original siding layout and the original un-finished appearance is no longer visible, and has been painted numerous times. Per the inspection report, the use of diagonal siding is a design flaw, which is not recommended by the wood industry. Given the significant deterioration of the wood siding historically, and the original design concept of utilizing the exterior cladding to clad many of the interior surfaces to open the inside to the exterior, the client is requesting to replace the existing siding with Senergy Plaster. Note: during this time period, Charles Tapley clad the exterior of his projects, which combined flat roofed forms with sloping roof forms, with wood siding or plaster.



Existing Site Plan

SCALE: 3/32"=1'-0"

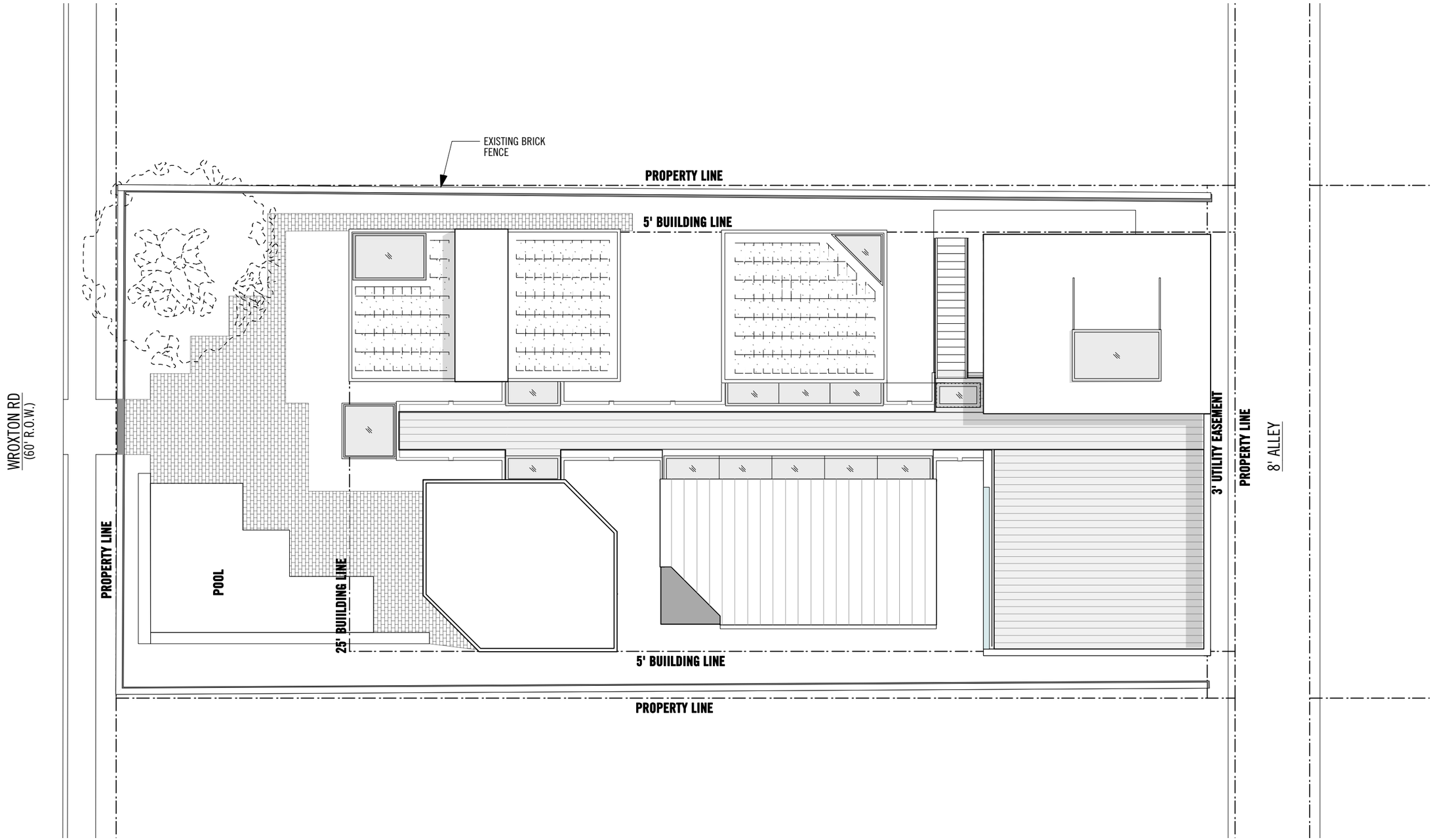
1807 Wroxton, Houston, Texas

Stern and Bucek Architects

1610 COMMERCE STREET
HOUSTON, TEXAS 77002

TEL 713.527.0186
FAX 713.527.8190

October 29, 2014



Proposed Site Plan

SCALE: 3/32"=1'-0"

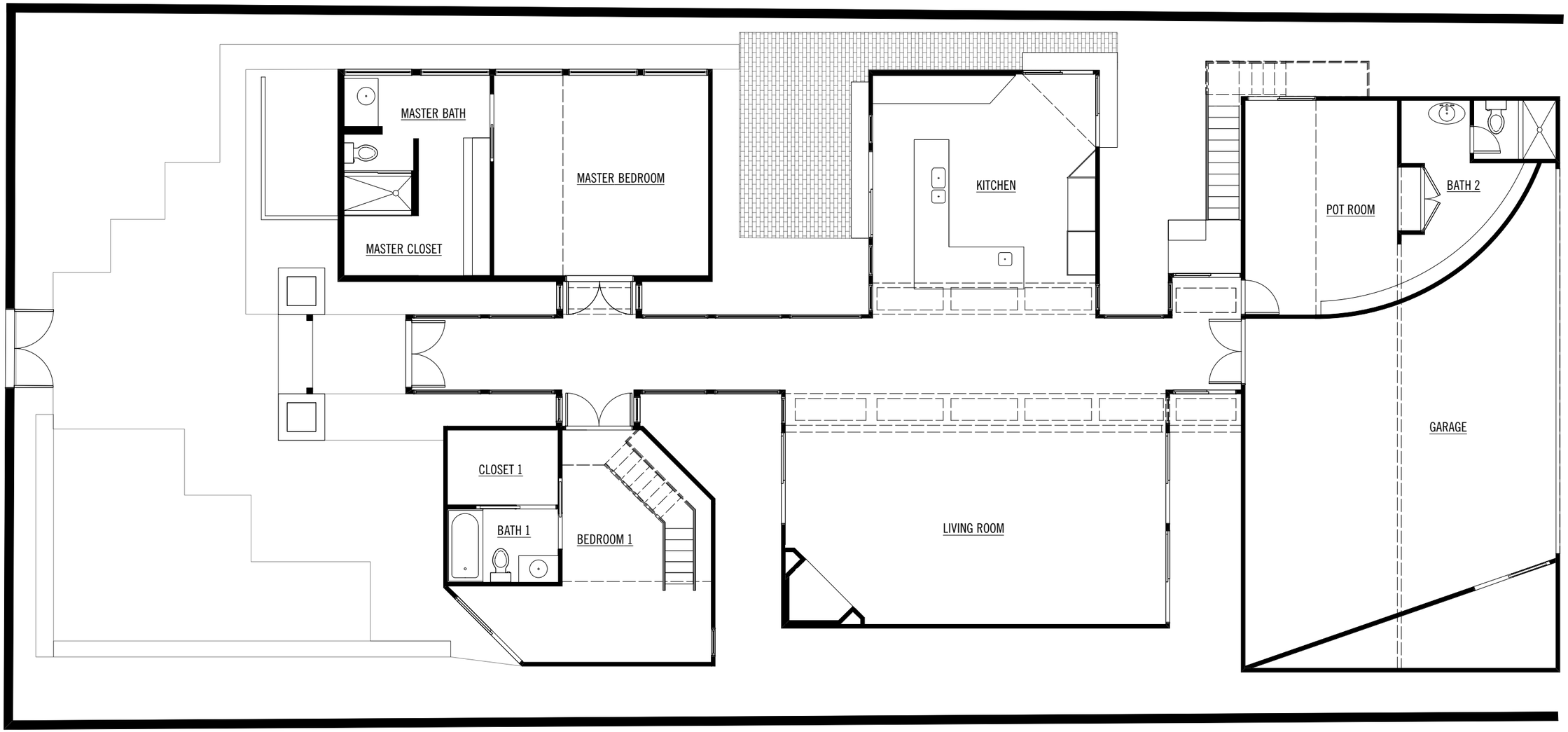
1807 Wroxton, Houston, Texas

Stern and Bucek Architects

1610 COMMERCE STREET
HOUSTON, TEXAS 77002

TEL 713.527.0186
FAX 713.527.8190

October 29, 2014



Existing First Floor Plan

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

1807 Wroxton, Houston, Texas

Stern and Bucek Architects

1610 COMMERCE STREET
HOUSTON, TEXAS 77002

TEL 713.527.0186
FAX 713.527.8190

October 29, 2014

LEGEND

- NEW WALL
- EXISTING BRICK WALL
- EXISTING WALL

Proposed First Floor Plan

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

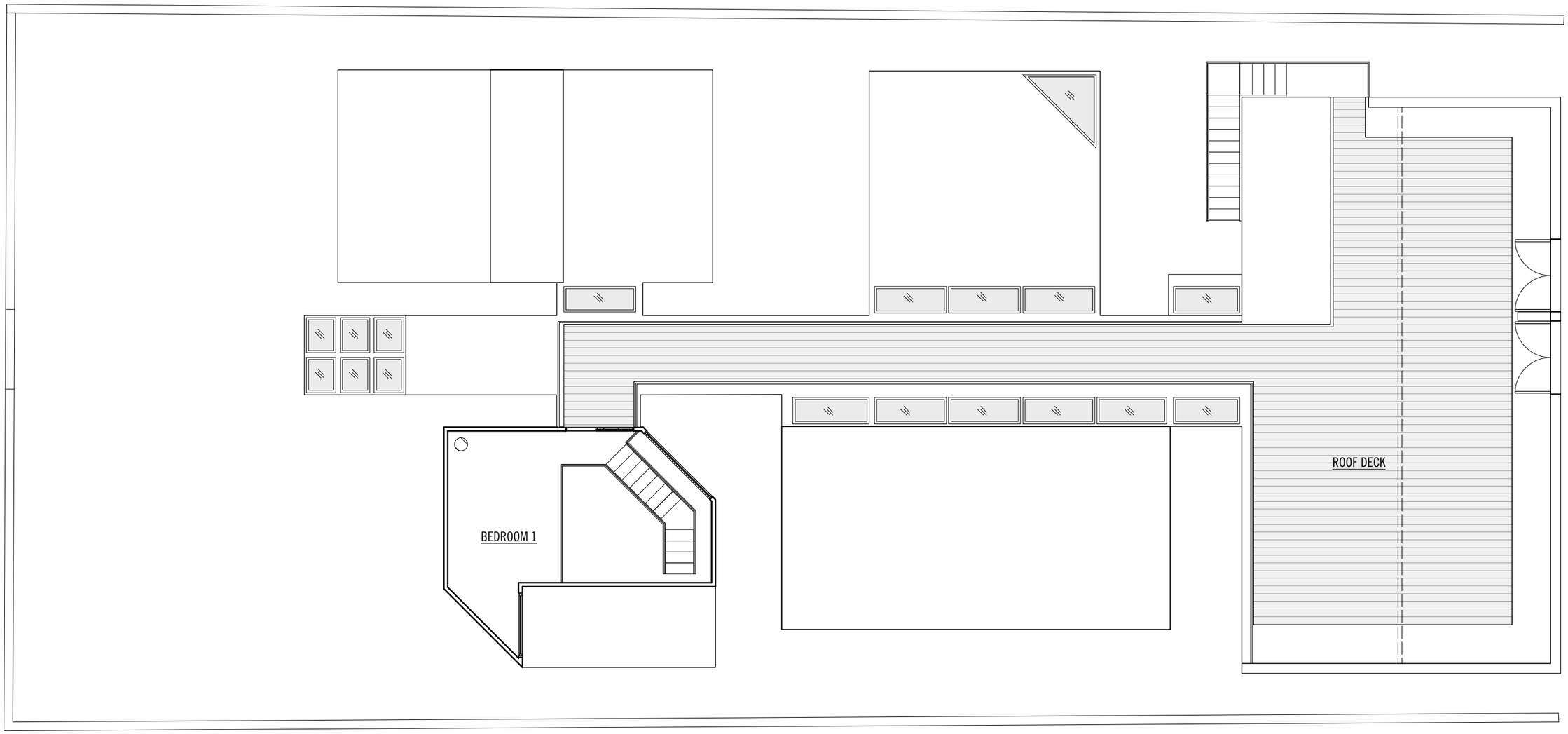
1807 Wroxton, Houston, Texas

Stern and Bucek Architects

1610 COMMERCE STREET
HOUSTON, TEXAS 77002

TEL 713.527.0186
FAX 713.527.8190

October 29, 2014



Existing Second Floor Plan

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

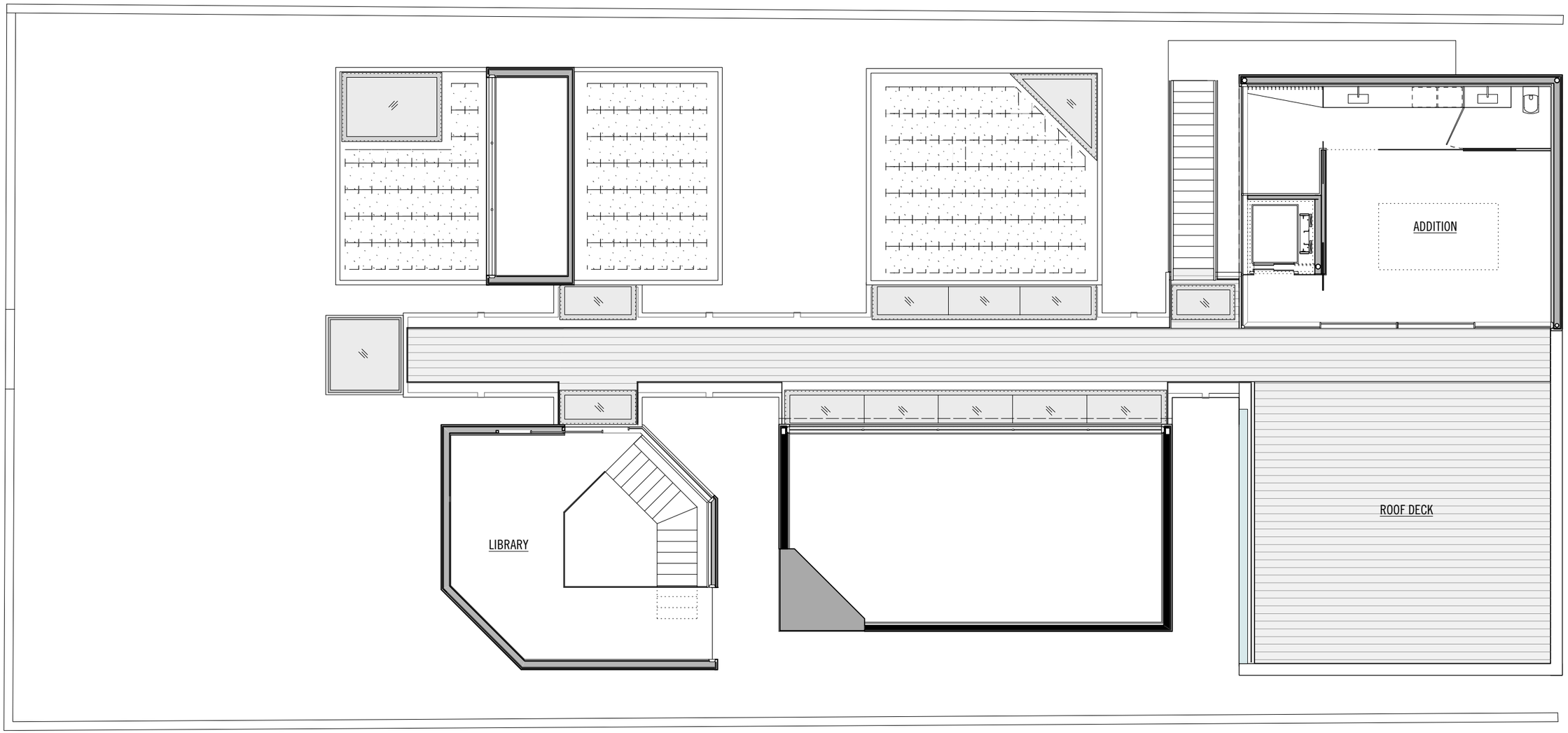
1807 Wroxton, Houston, Texas

Stern and Bucek Architects

1610 COMMERCE STREET
HOUSTON, TEXAS 77002

TEL 713.527.0186
FAX 713.527.8190

October 29, 2014



LEGEND

- NEW WALL
- EXISTING BRICK WALL
- EXISTING WALL

Proposed Second Floor Plan

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

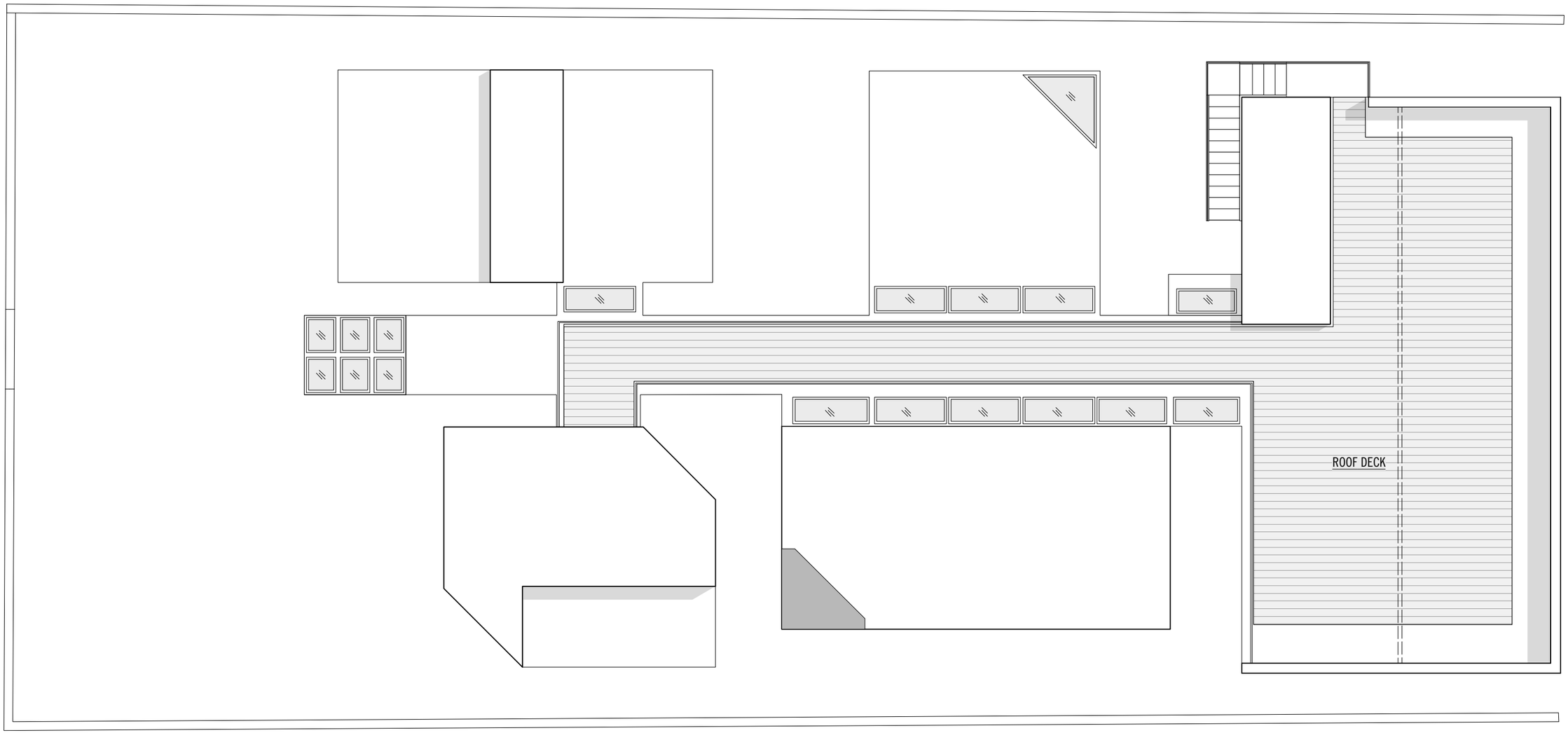
1807 Wroxton, Houston, Texas

Stern and Bucek Architects

1610 COMMERCE STREET
HOUSTON, TEXAS 77002

TEL 713.527.0186
FAX 713.527.8190

October 29, 2014



Existing Roof Plan

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

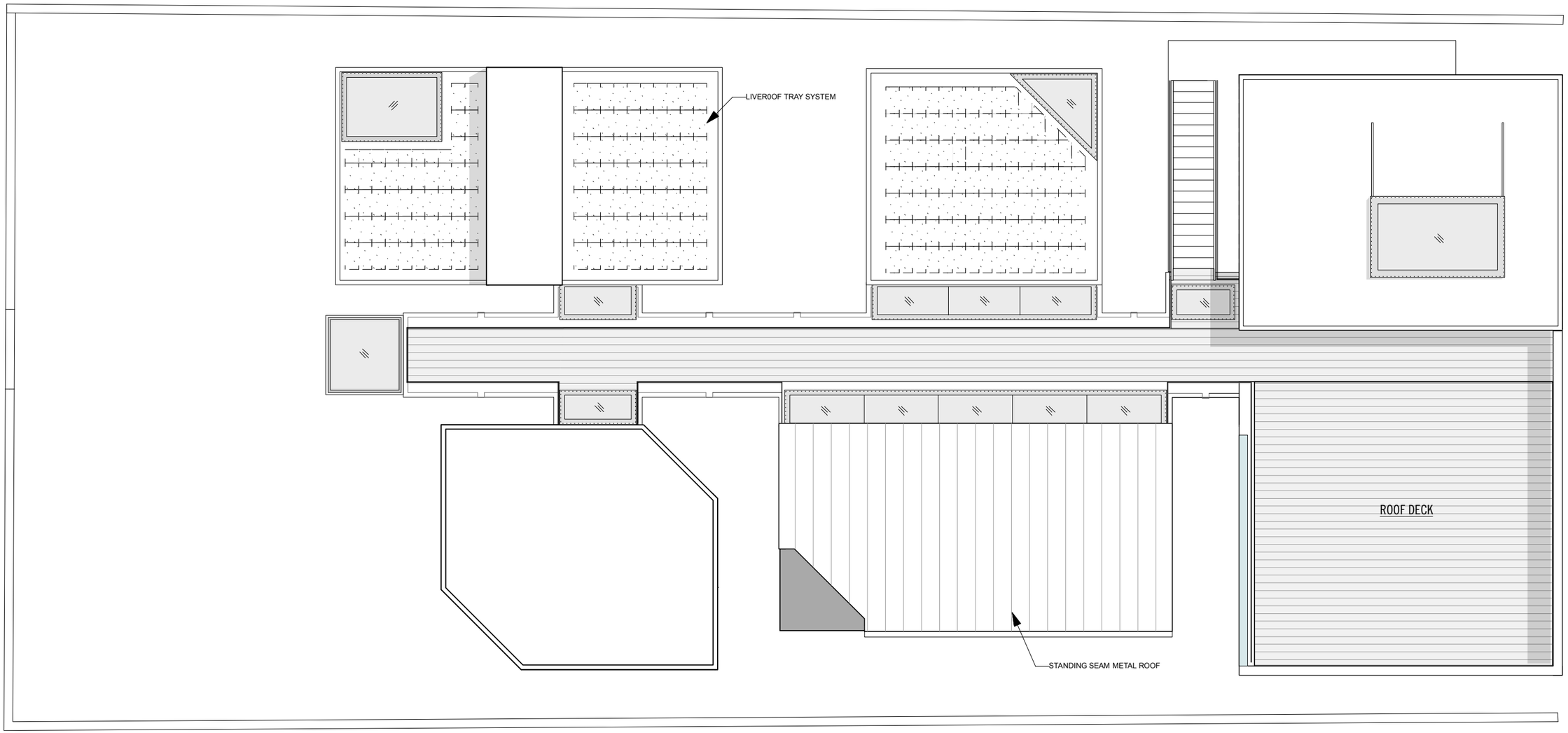
1807 Wroxton, Houston, Texas

Stern and Bucek Architects

1610 COMMERCE STREET
HOUSTON, TEXAS 77002

TEL 713.527.0186
FAX 713.527.8190

October 29, 2014



Proposed Roof Plan

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

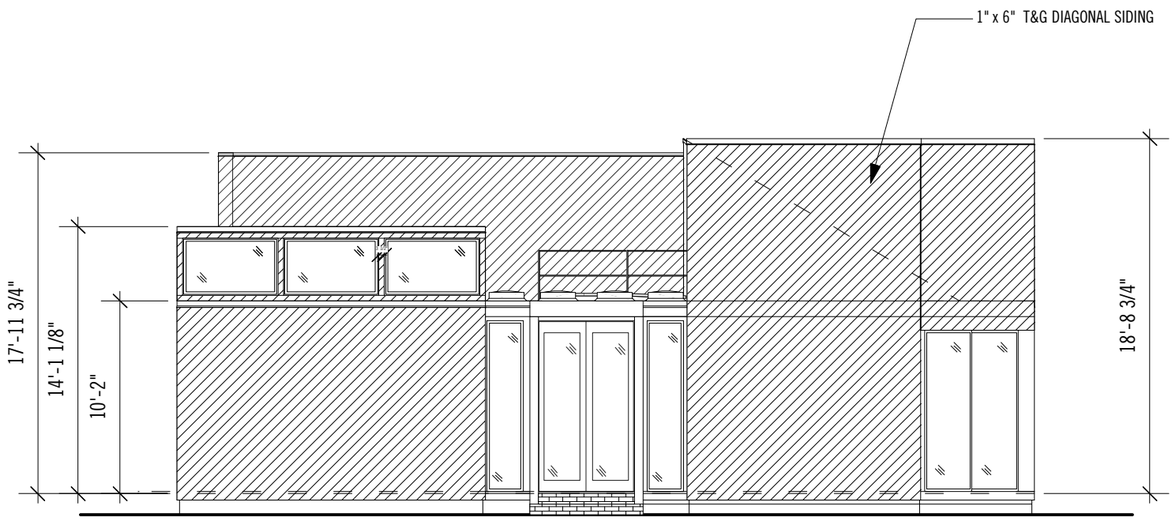
1807 Wroxton, Houston, Texas

Stern and Bucek Architects

1610 COMMERCE STREET
HOUSTON, TEXAS 77002

TEL 713.527.0186
FAX 713.527.8190

October 29, 2014



Existing North Elevation

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

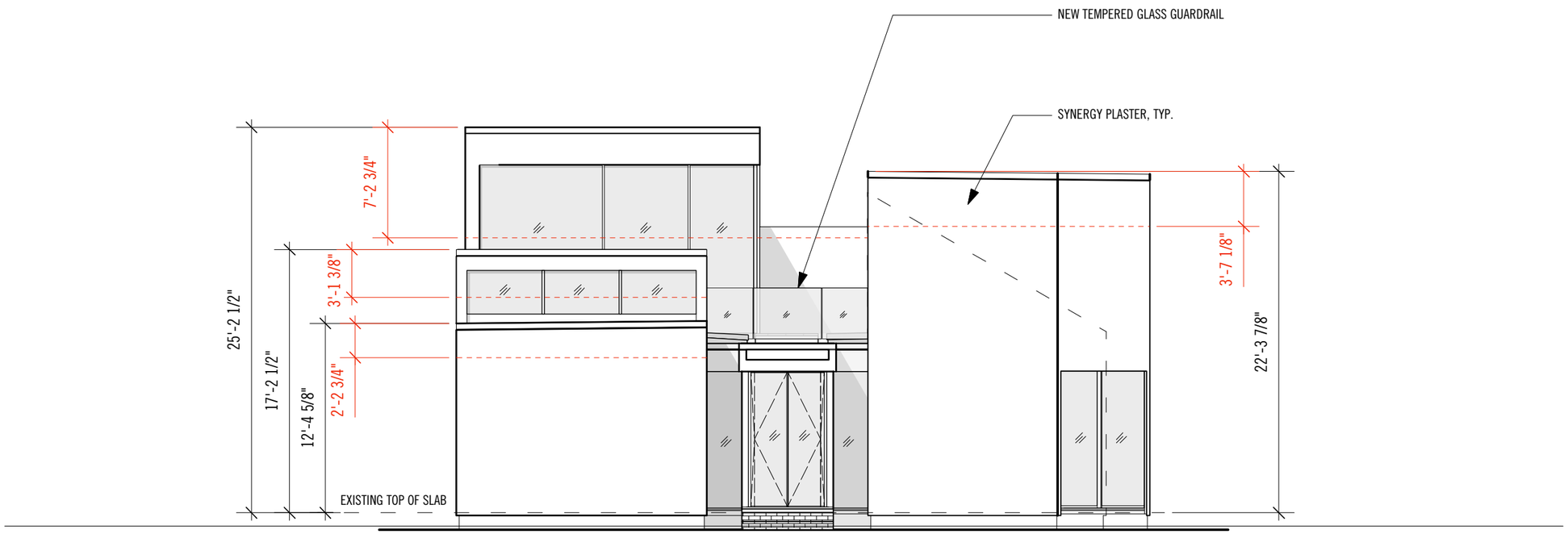
1807 Wroxton, Houston, Texas

Stern and Bucek Architects

1610 COMMERCE STREET
HOUSTON, TEXAS 77002

TEL 713.527.0186
FAX 713.527.8190

October 29, 2014



LINE OF EXISTING ROOF HEIGHT

Propsed North Elevation

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

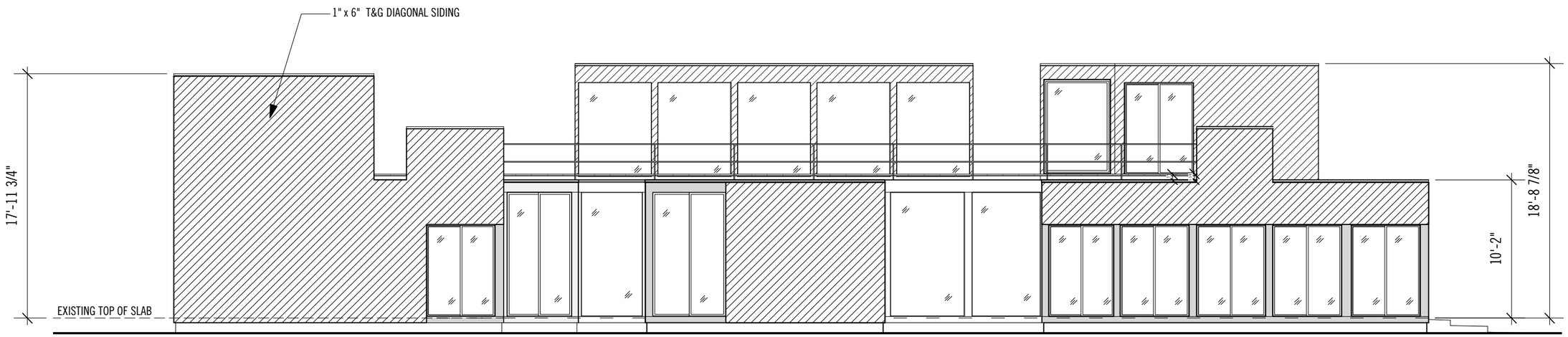
1807 Wroxton, Houston, Texas

Stern and Bucek Architects

1610 COMMERCE STREET
HOUSTON, TEXAS 77002

TEL 713.527.0186
FAX 713.527.8190

October 29, 2014



Existing East Elevation

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

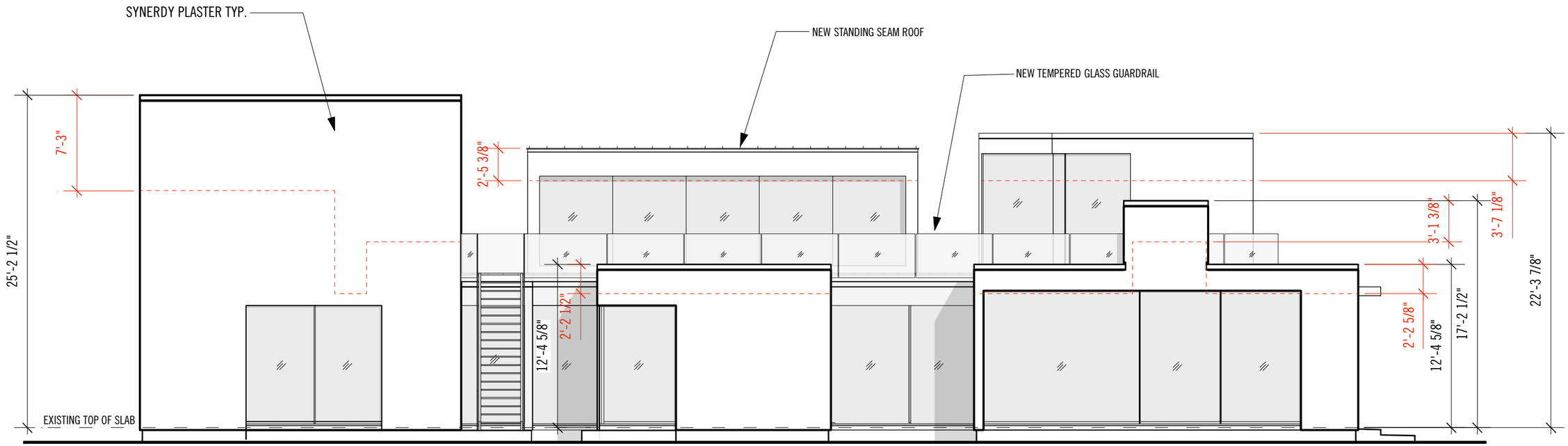
1807 Wroxton, Houston, Texas

Stern and Bucek Architects

1610 COMMERCE STREET
HOUSTON, TEXAS 77002

TEL 713.527.0186
FAX 713.527.8190

October 29, 2014



LINE OF EXISTING ROOF HEIGHT

Proposed East Elevation

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

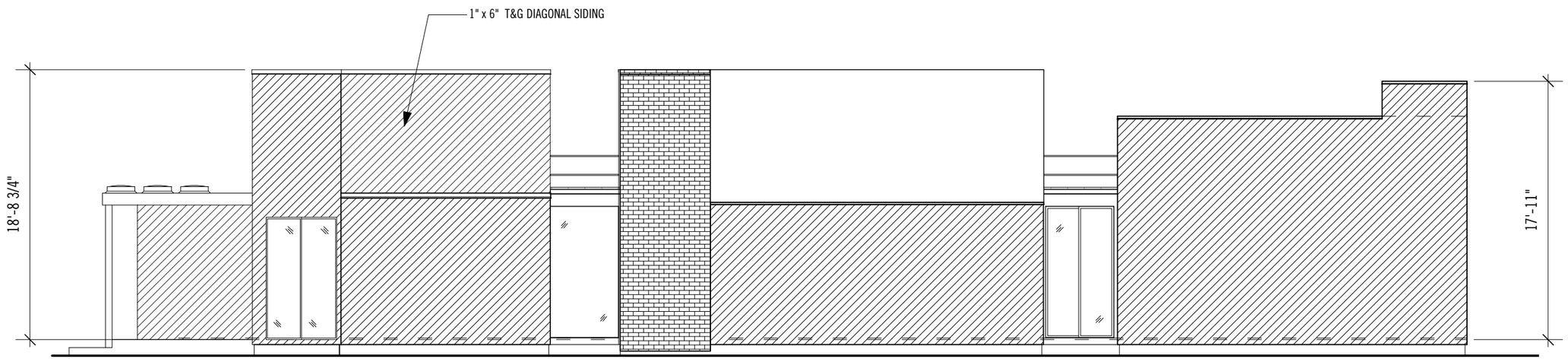
1807 Wroxton, Houston, Texas

Stern and Bucek Architects

1610 COMMERCE STREET
HOUSTON, TEXAS 77002

TEL 713.527.0186
FAX 713.527.8190

October 29, 2014



Existing West Elevation

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

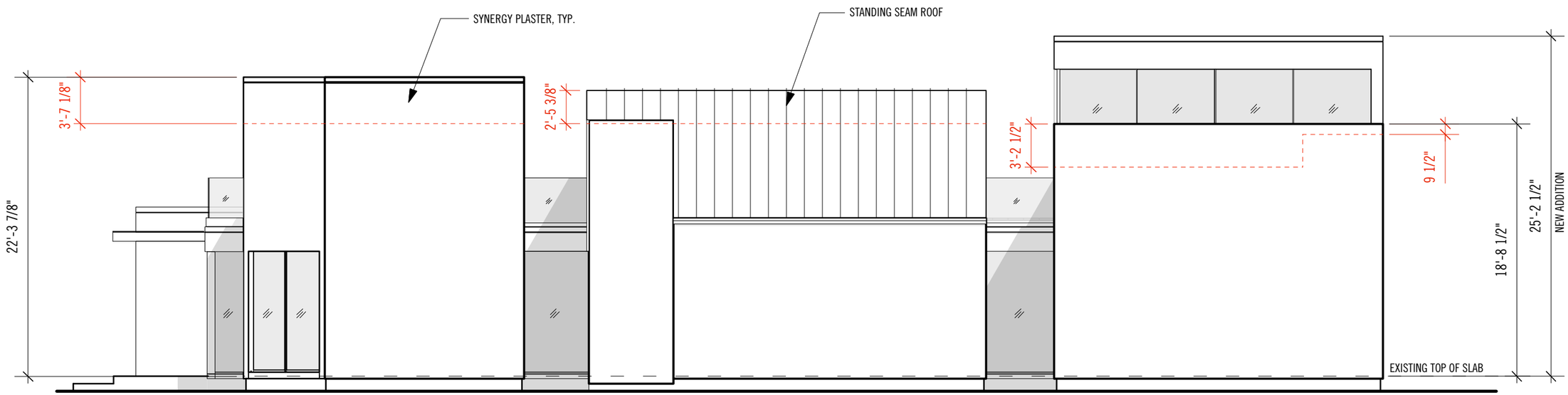
1807 Wroxton, Houston, Texas

Stern and Bucek Architects

1610 COMMERCE STREET
HOUSTON, TEXAS 77002

TEL 713.527.0186
FAX 713.527.8190

October 29, 2014



LINE OF EXISTING ROOF HEIGHT

Proposed West Elevation

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

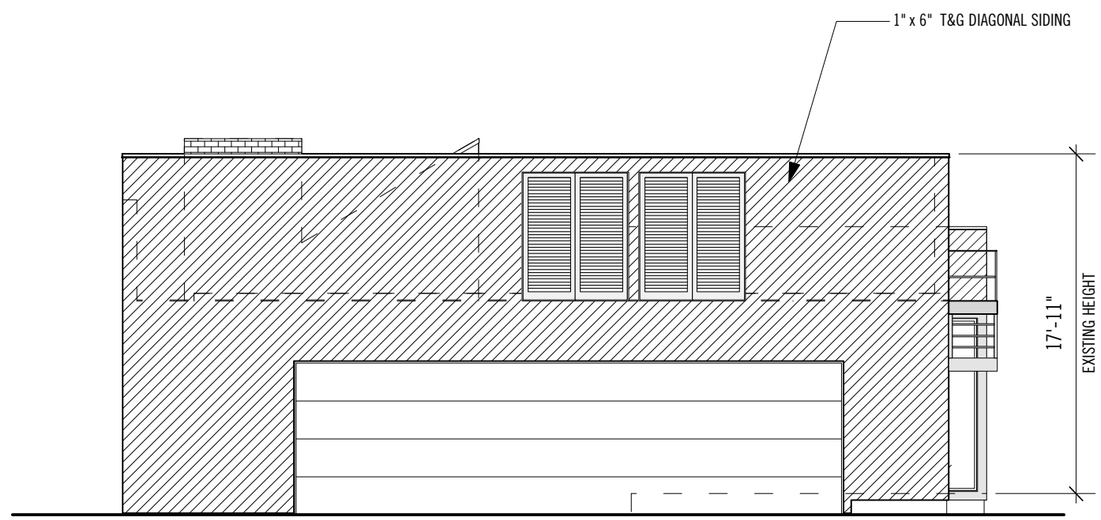
1807 Wroxton, Houston, Texas

Stern and Bucek Architects

1610 COMMERCE STREET
HOUSTON, TEXAS 77002

TEL 713.527.0186
FAX 713.527.8190

October 29, 2014



Existing South Elevation

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

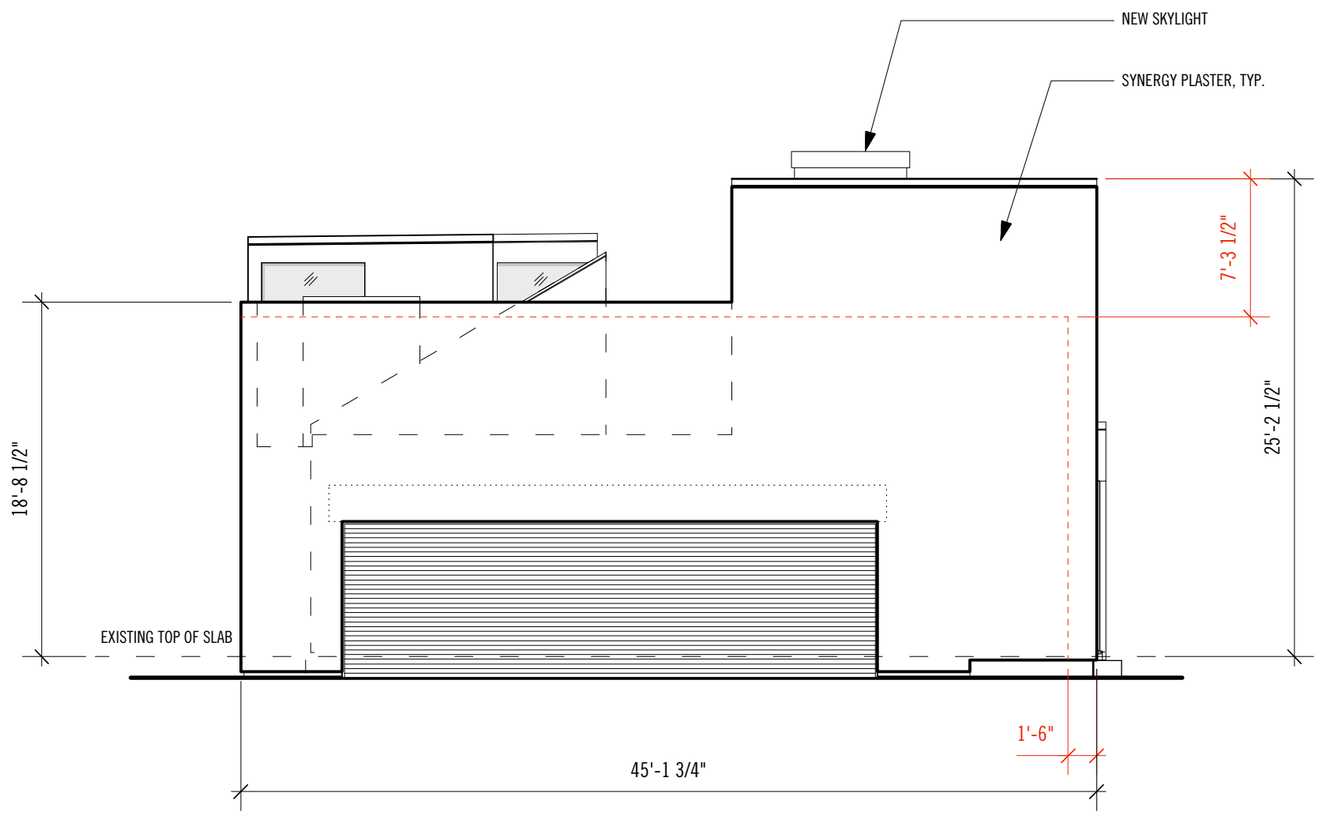
1807 Wroxton, Houston, Texas

Stern and Bucek Architects

1610 COMMERCE STREET
HOUSTON, TEXAS 77002

TEL 713.527.0186
FAX 713.527.8190

October 29, 2014



LINE OF EXISTING ROOF HEIGHT

Proposed South Elevation

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

1807 Wroxton, Houston, Texas

Stern and Bucek Architects

1610 COMMERCE STREET
HOUSTON, TEXAS 77002

TEL 713.527.0186
FAX 713.527.8190

October 29, 2014

Existing - Front Elevation Perspective

View From Across Wroxton Rd

1807 Wroxton, Houston, Texas

Stern and Bucek Architects

1610 COMMERCE STREET
HOUSTON, TEXAS 77002

TEL 713.527.0186
FAX 713.527.8190

October 29, 2014

Proposed - Front Elevation Perspective

View From Across Wroxton Rd

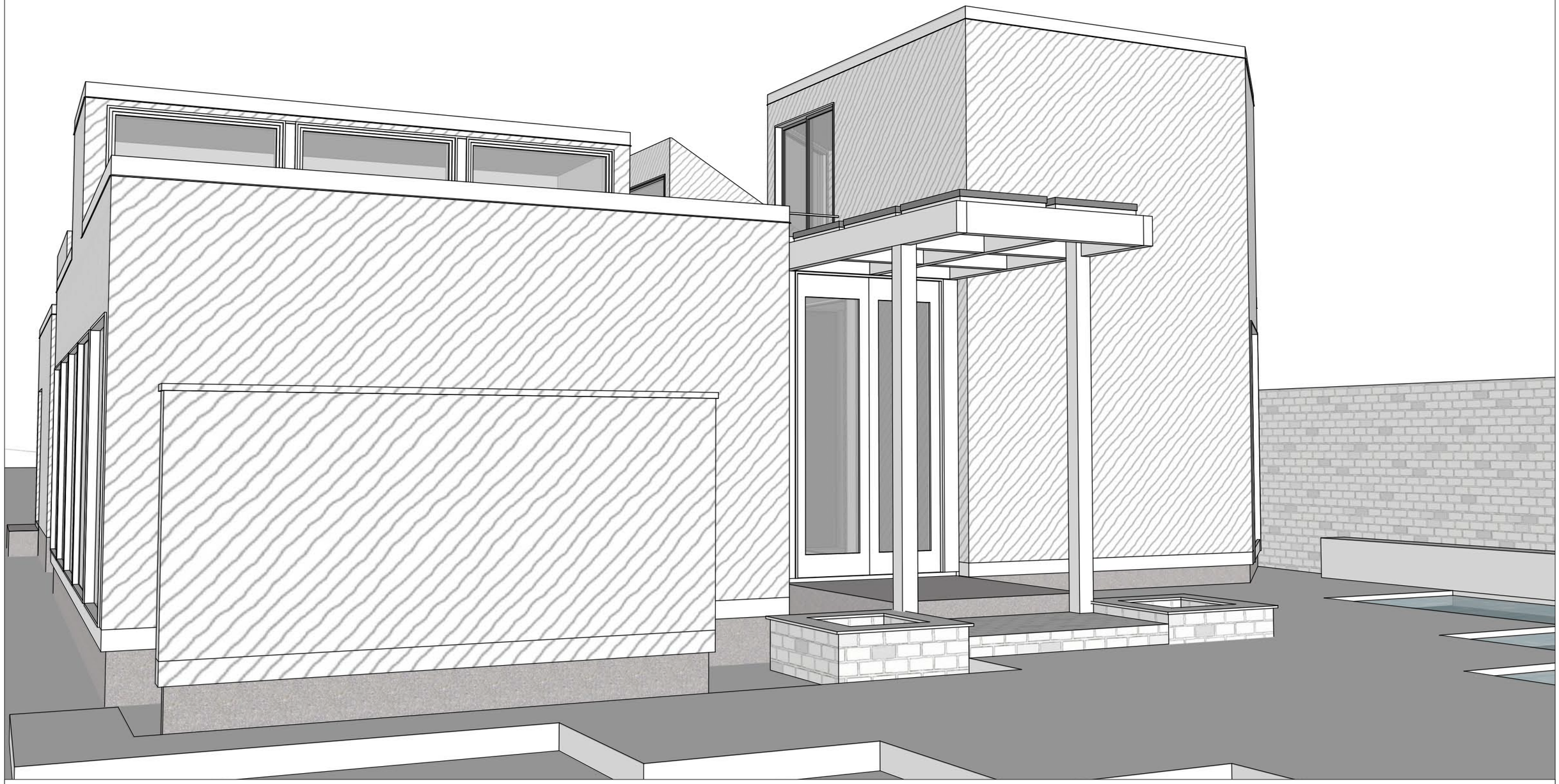
1807 Wroxton, Houston, Texas

Stern and Bucek Architects

1610 COMMERCE STREET
HOUSTON, TEXAS 77002

TEL 713.527.0186
FAX 713.527.8190

October 29, 2014



Existing - Perspective

View From North Eastern Corner of Property Line - Front Fence Not Shown

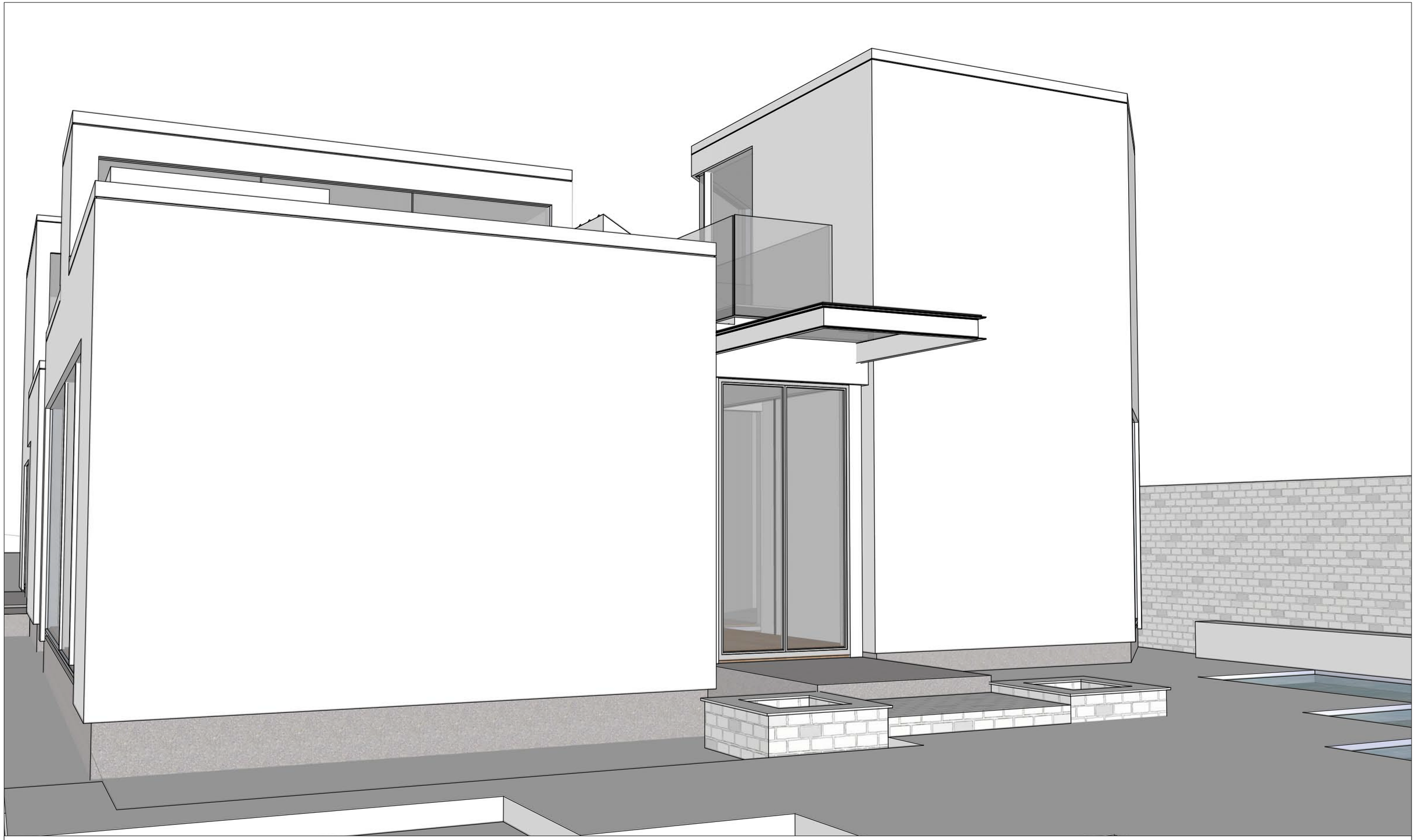
1807 Wroxton, Houston, Texas

Stern and Bucek Architects

1610 COMMERCE STREET
HOUSTON, TEXAS 77002

TEL 713.527.0186
FAX 713.527.8190

October 29, 2014



Proposed - Perspective

View From North Eastern Corner of Property Line - Front Fence Not Shown

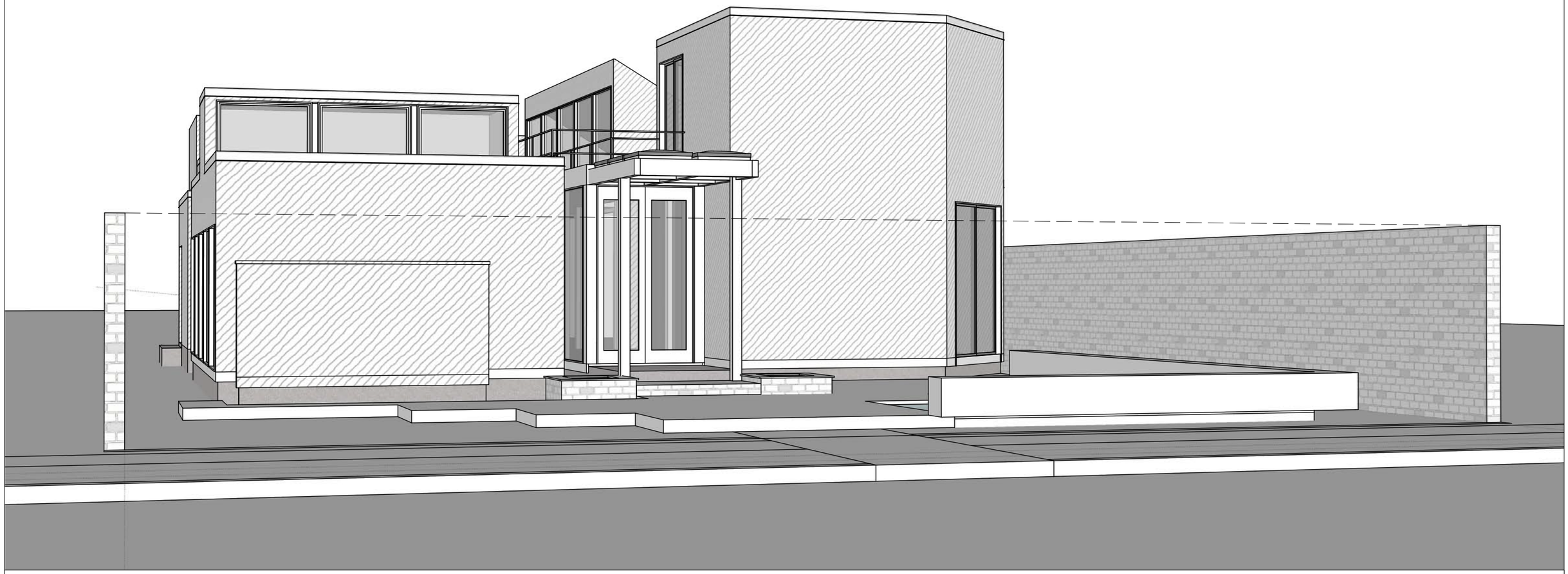
1807 Wroxton, Houston, Texas

Stern and Bucek Architects

1610 COMMERCE STREET
HOUSTON, TEXAS 77002

TEL 713.527.0186
FAX 713.527.8190

October 29, 2014



Existing - Perspective

View From North Eastern Corner Across Wroxton Rd - Front Fence Not Shown

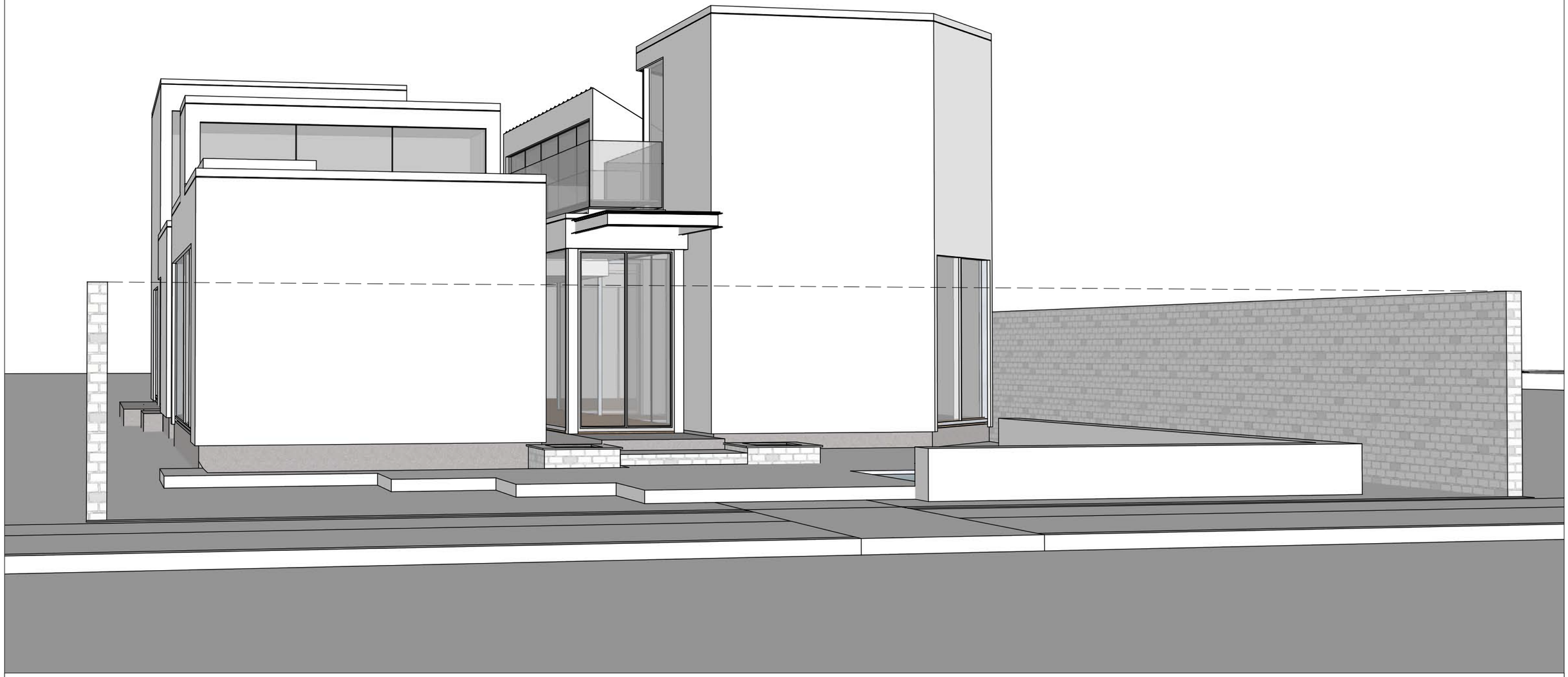
1807 Wroxton, Houston, Texas

Stern and Bucek Architects

1610 COMMERCE STREET
HOUSTON, TEXAS 77002

TEL 713.527.0186
FAX 713.527.8190

October 29, 2014



Proposed - Perspective

View From North Eastern Corner Across Wroxton Rd - Front Fence Not Shown

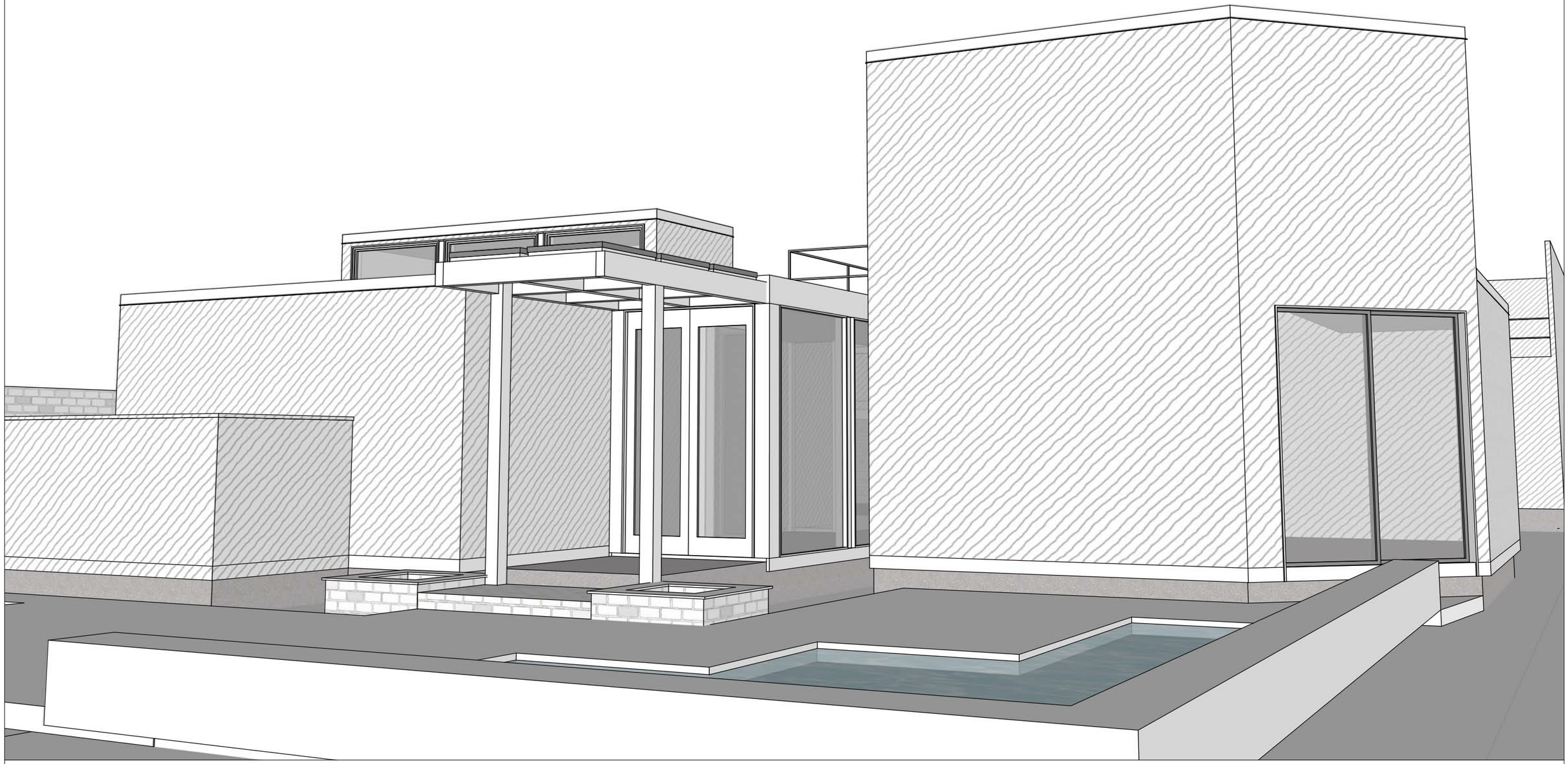
1807 Wroxton, Houston, Texas

Stern and Bucek Architects

1610 COMMERCE STREET
HOUSTON, TEXAS 77002

TEL 713.527.0186
FAX 713.527.8190

October 29, 2014



Existing - Perspective

View From North Western Corner of Property Line - Front Fence Not Shown

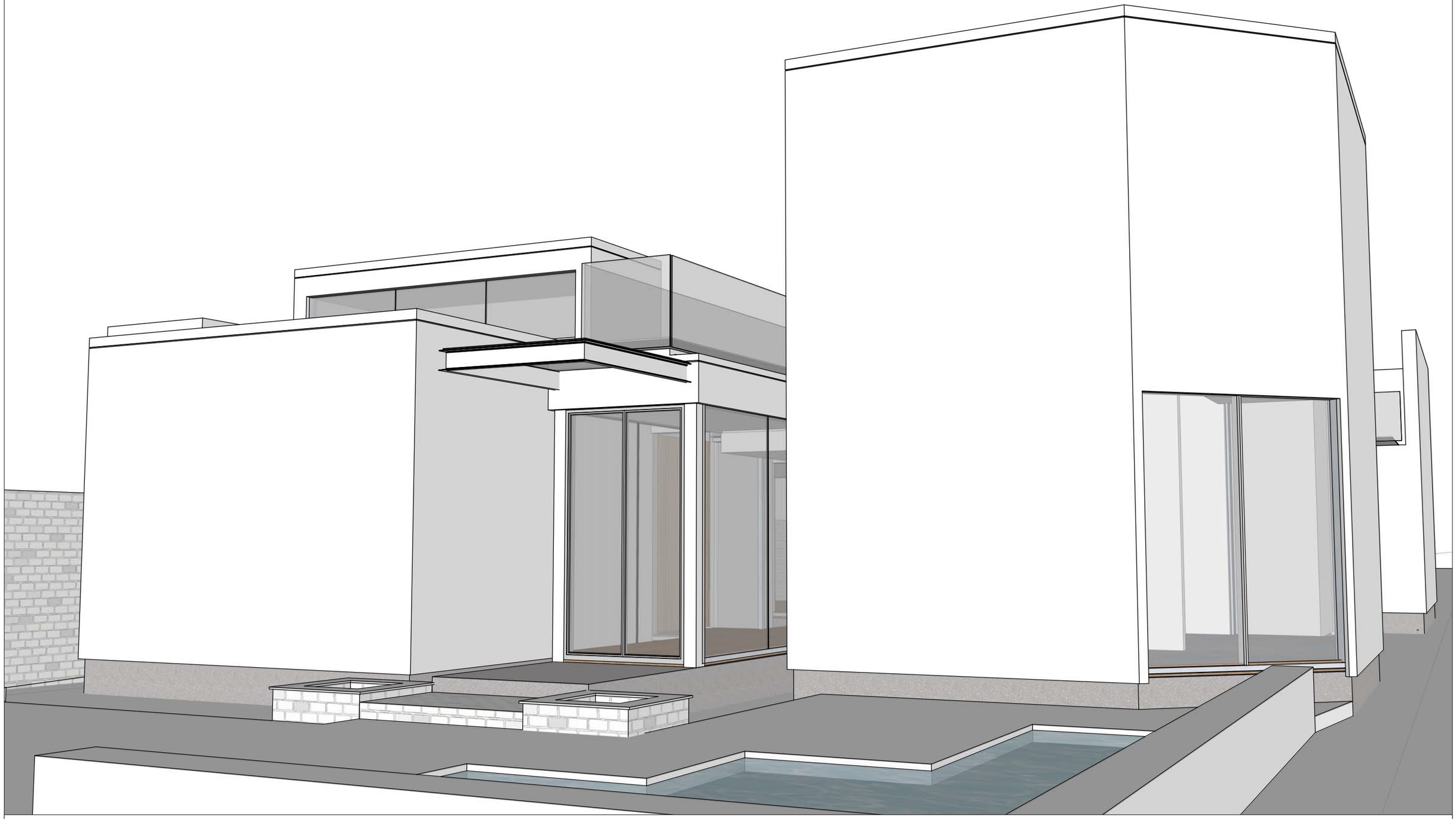
1807 Wroxton, Houston, Texas

Stern and Bucek Architects

1610 COMMERCE STREET
HOUSTON, TEXAS 77002

TEL 713.527.0186
FAX 713.527.8190

October 29, 2014



Proposed - Perspective

View From North Western Corner of Property Line - Front Fence Not Shown

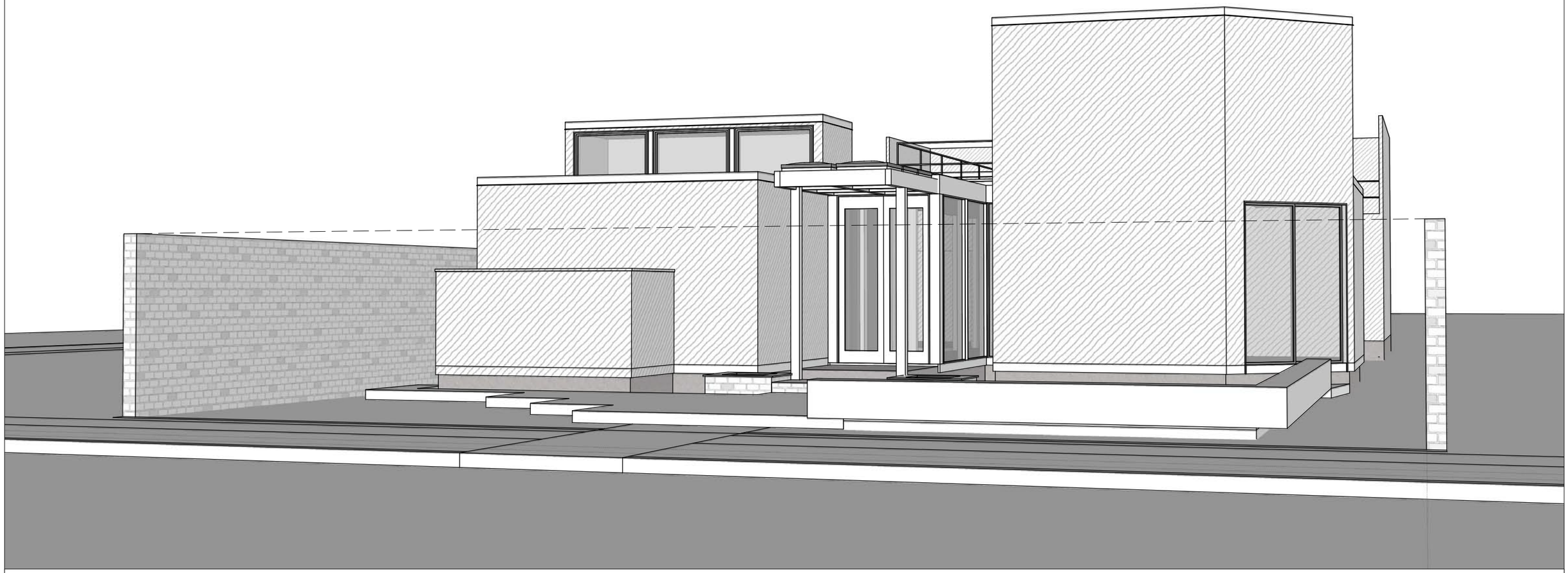
1807 Wroxton, Houston, Texas

Stern and Bucek Architects

1610 COMMERCE STREET
HOUSTON, TEXAS 77002

TEL 713.527.0186
FAX 713.527.8190

October 29, 2014



Existing - Perspective

View From North Western Corner Across Wroxton Rd - Front Fence Not Shown

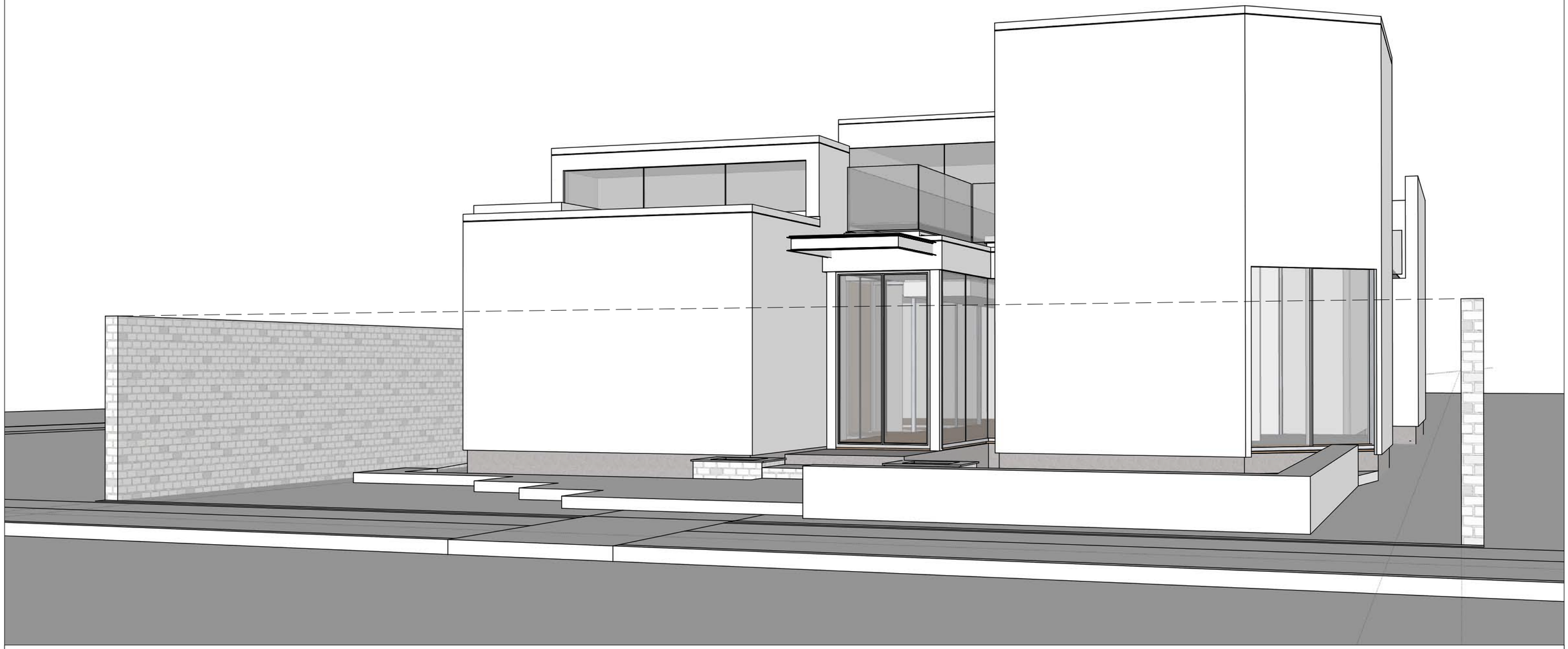
1807 Wroxton, Houston, Texas

Stern and Bucek Architects

1610 COMMERCE STREET
HOUSTON, TEXAS 77002

TEL 713.527.0186
FAX 713.527.8190

October 29, 2014



Proposed - Perspective

View From North Western Corner Across Wroxton Rd - Front Fence Not Shown

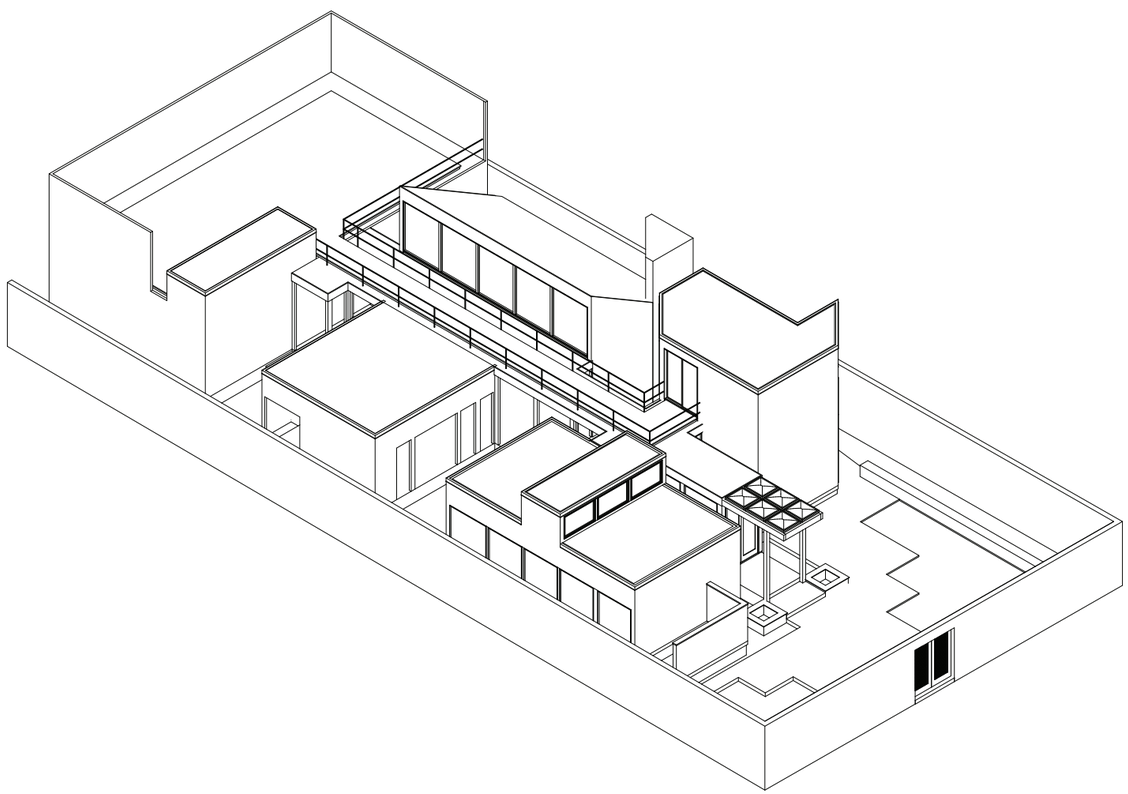
1807 Wroxton, Houston, Texas

Stern and Bucek Architects

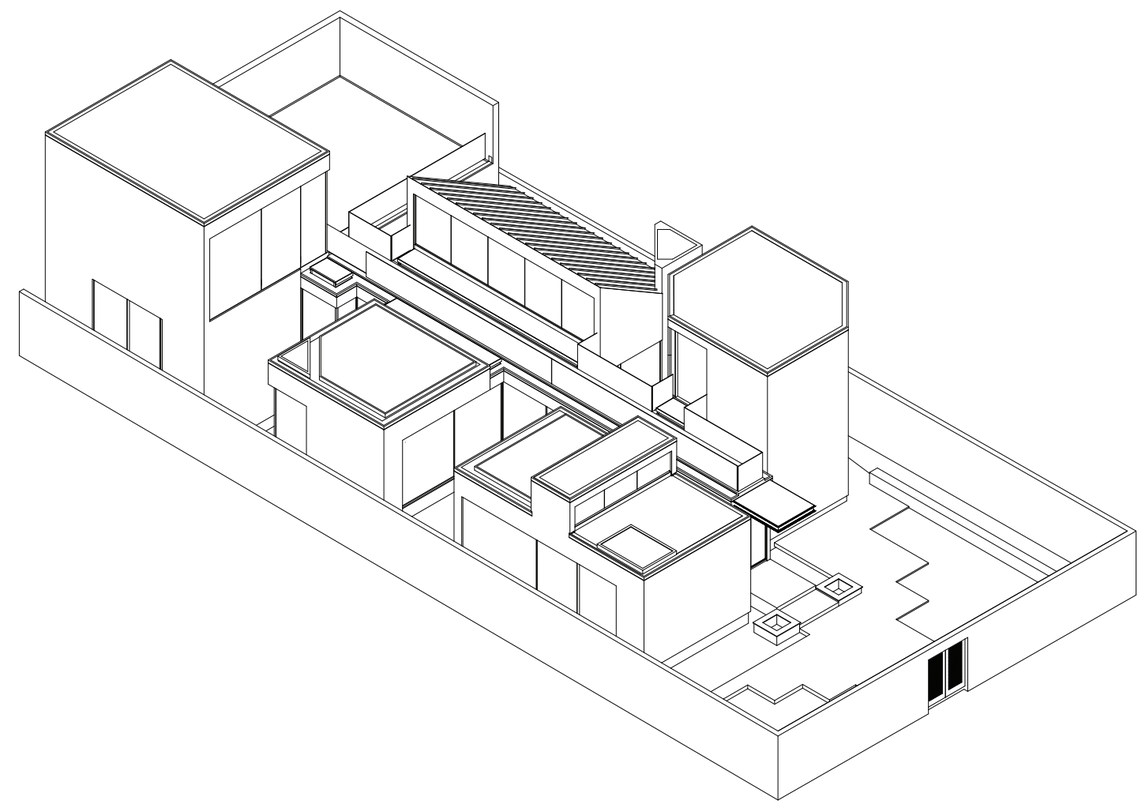
1610 COMMERCE STREET
HOUSTON, TEXAS 77002

TEL 713.527.0186
FAX 713.527.8190

October 29, 2014



Existing



Proposed

Isometric

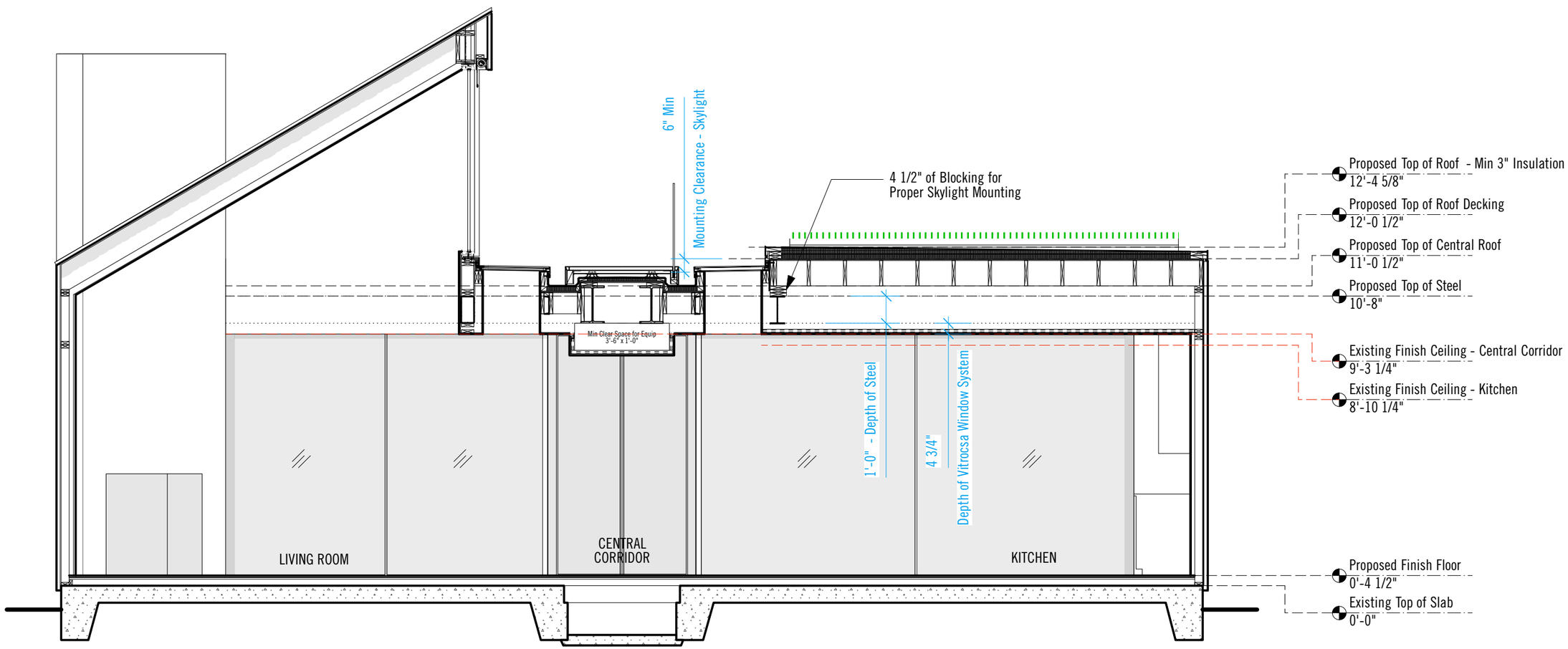
1807 Wroxton, Houston, Texas

Stern and Bucek Architects

1610 COMMERCE STREET
HOUSTON, TEXAS 77002

TEL 713.527.0186
FAX 713.527.8190

October 29, 2014



LINE OF EXISTING CONDITIONS

Propsed Building Section

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

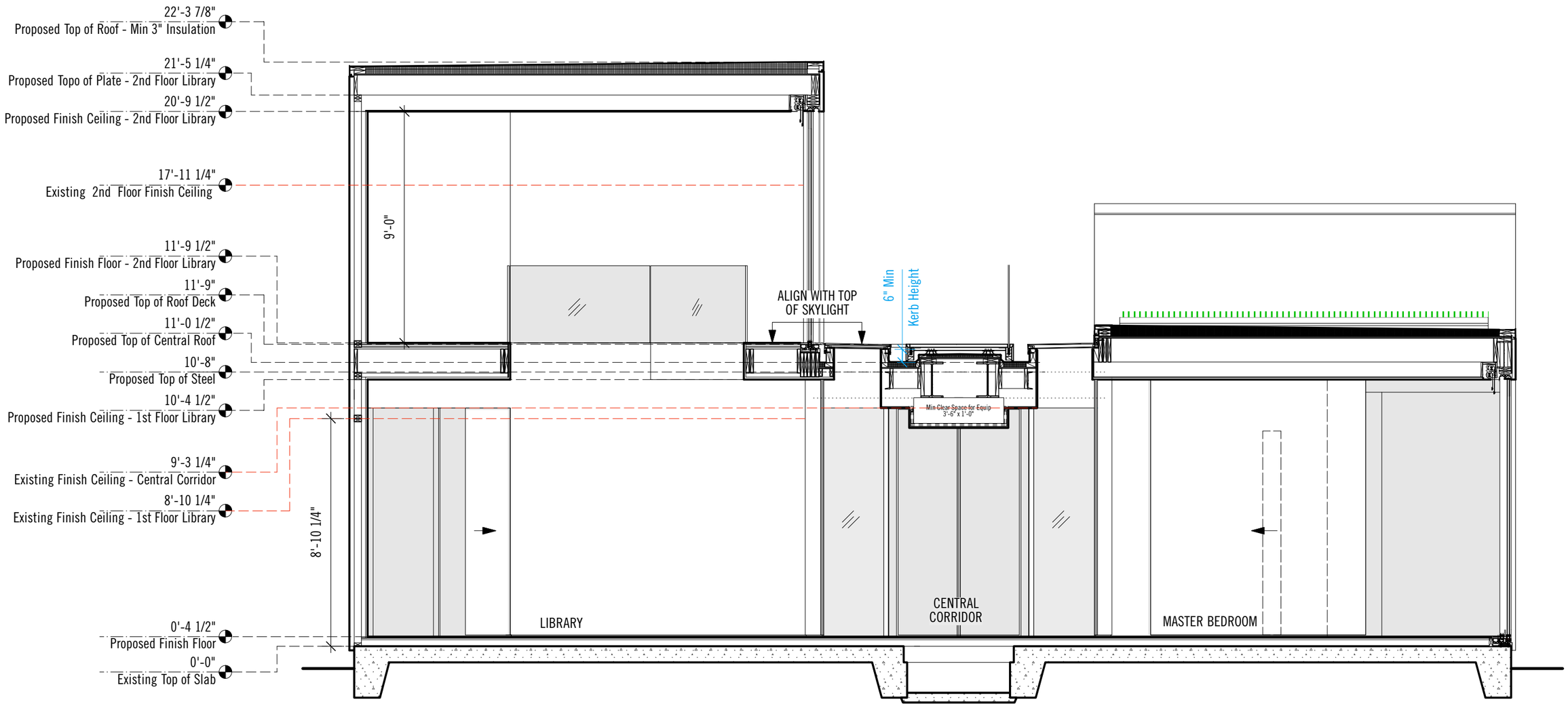
1807 Wroxton, Houston, Texas

Stern and Bucek Architects

1610 COMMERCE STREET
HOUSTON, TEXAS 77002

TEL 713.527.0186
FAX 713.527.8190

October 29, 2014



Propsed Building Section

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

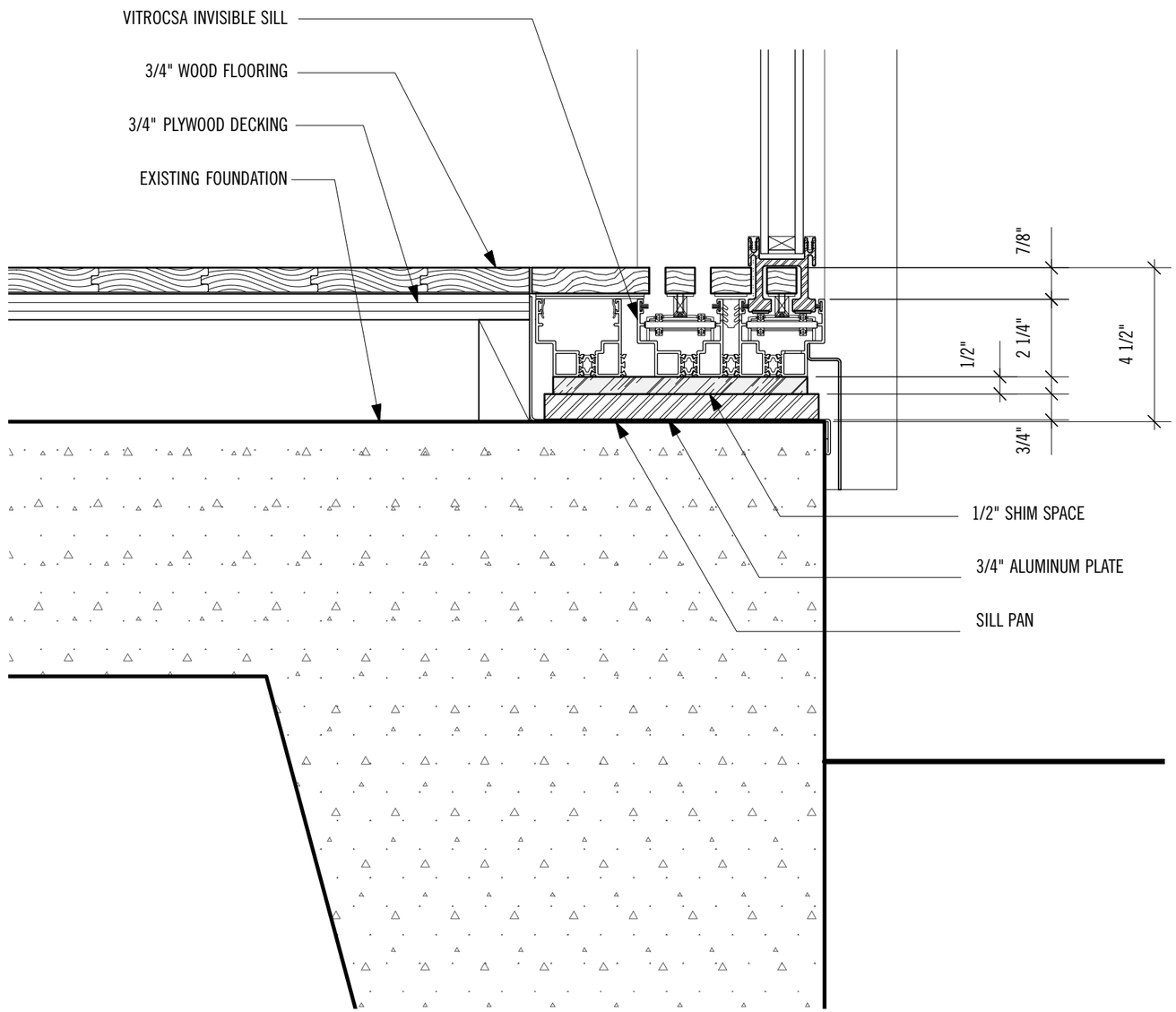
1807 Wroxton, Houston, Texas

Stern and Bucek Architects

1610 COMMERCE STREET
HOUSTON, TEXAS 77002

TEL 713.527.0186
FAX 713.527.8190

October 29, 2014



Detail - Vitrocsa Sill

SCALE: 3"=1'-0"

1807 Wroxton, Houston, Texas

Stern and Bucek Architects

1610 COMMERCE STREET
HOUSTON, TEXAS 77002

TEL 713.527.0186
FAX 713.527.8190

October 29, 2014

Client requested 2nd floor finish floor
be level with exterior roof deck
for wheel chair access to the exterior.
The existing Sill has a 8 1/2" step down
to 2nd floor finsih floor.

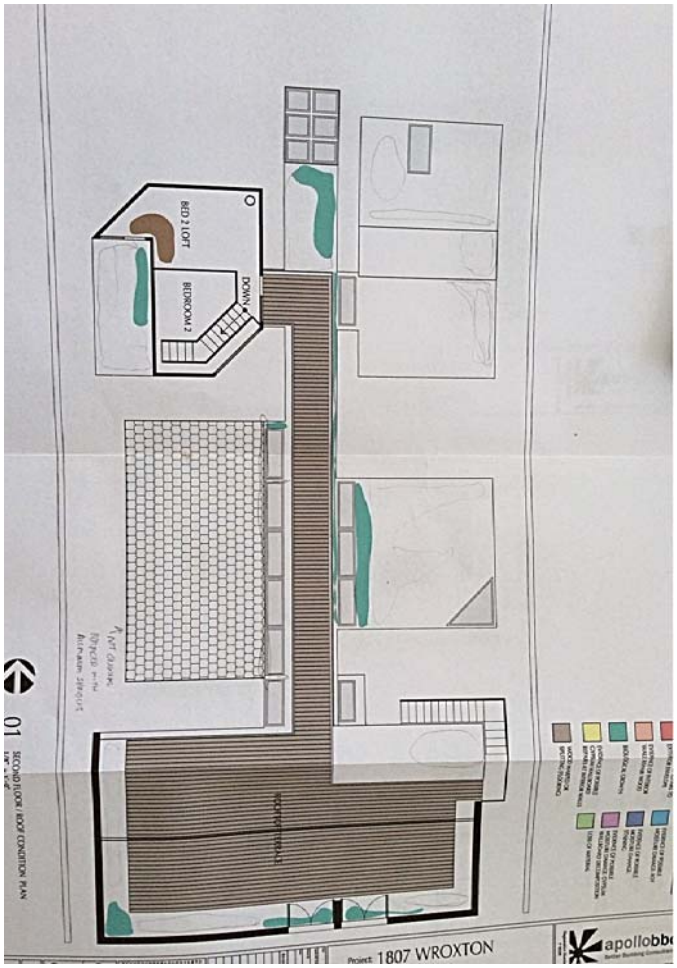
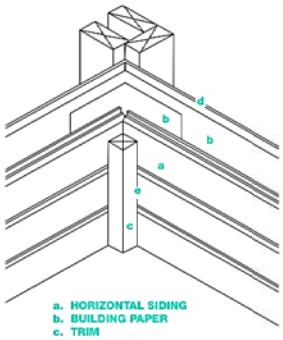
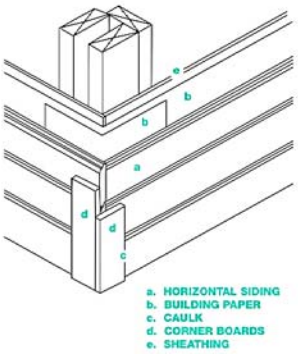


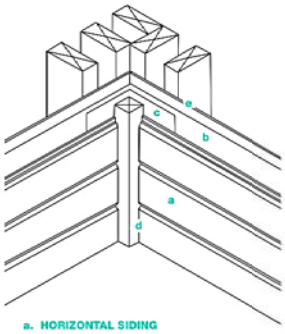
Figure B: CORNER DETAILS



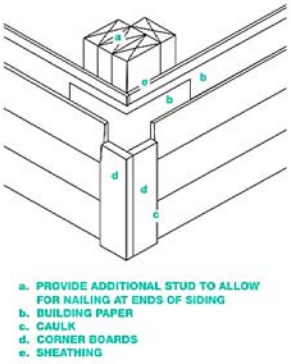
Inside Corner Detail-a



Outside Corner Detail-a



Inside Corner Detail-b



Outside Corner Detail-b

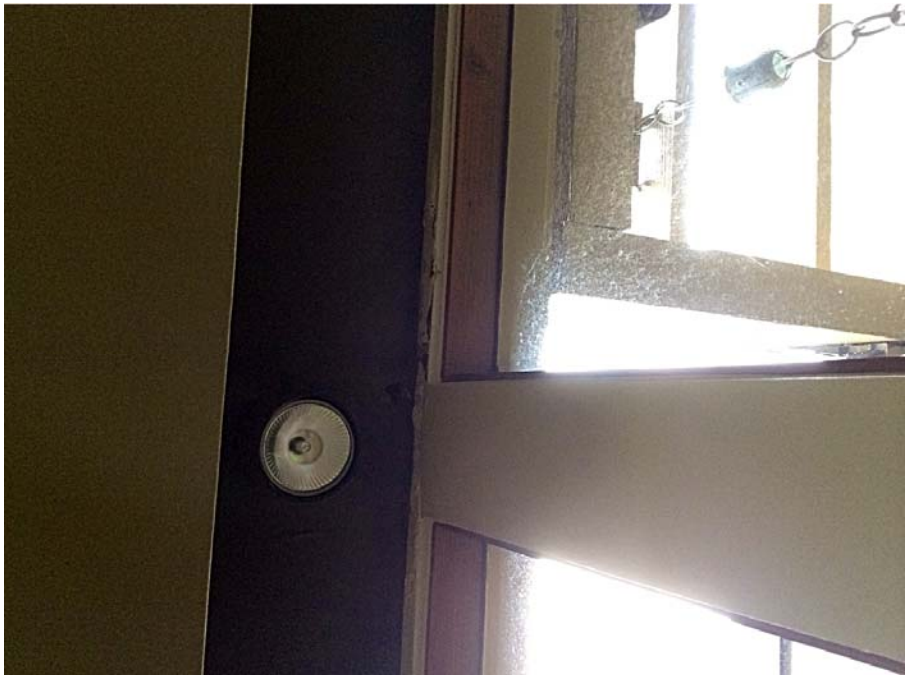
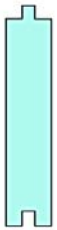
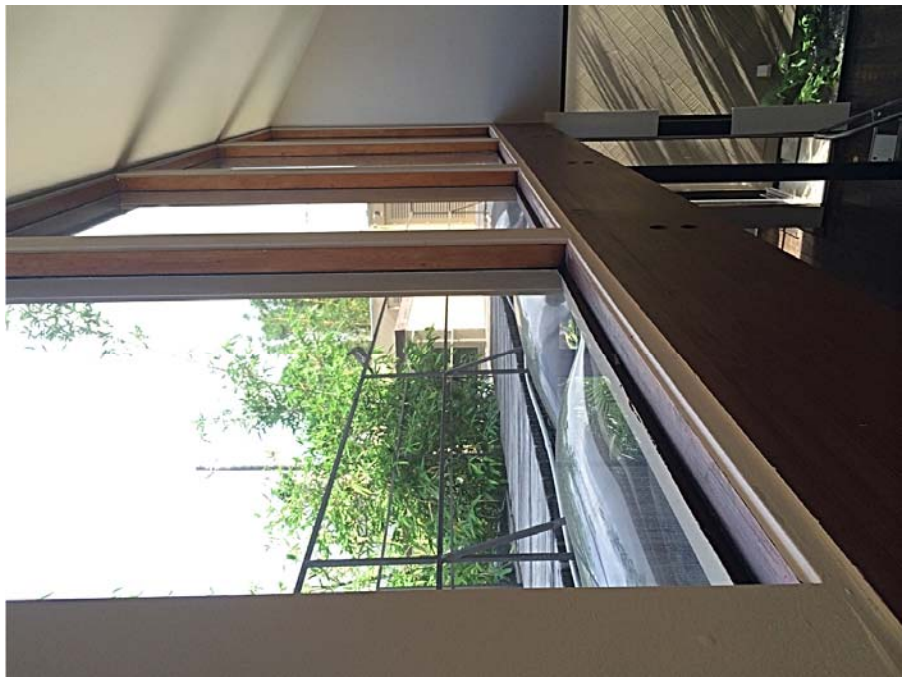
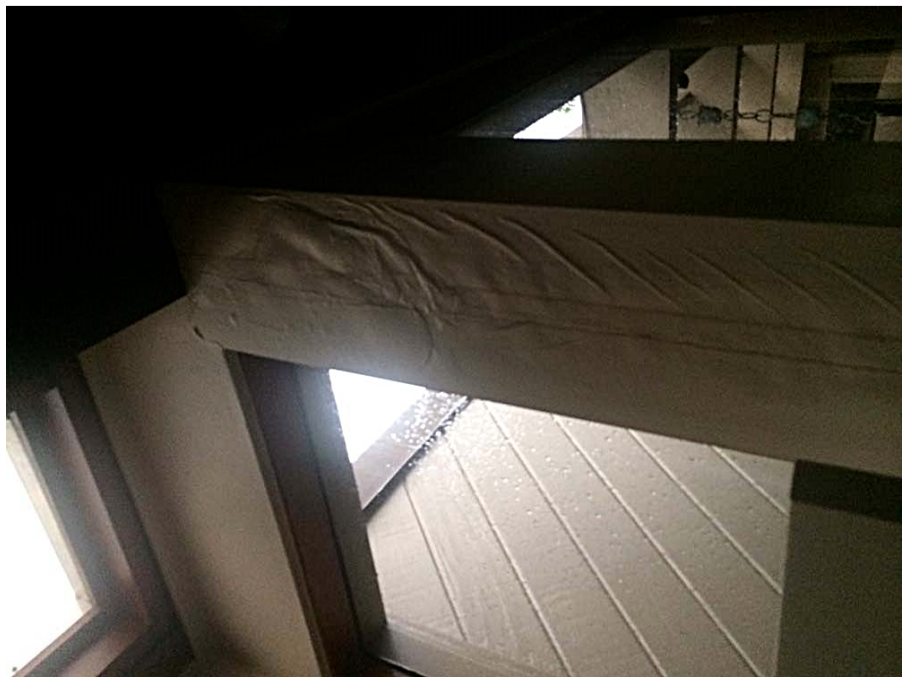


Figure C: SIDING PATTERNS, NOMINAL SIZES & RECOMMENDED NAILING

Siding Patterns		Nominal Sizes* Thickness & Width	Nailing 6" and Narrower	8" and Wider
	**TONGUED & GROOVED** Tongued & Grooved siding is available in a variety of patterns. T&G lends itself to different effects aesthetically. Refer to *Standard Patterns* (G-16) for pattern profiles. Sizes given here are for Plain Tongued & Grooved. Do not nail through overlapping pieces. Horizontal or vertical applications. Tongued edge up in horizontal applications.	1 x 4 1 x 6 1 x 8 1 x 10 1 x 12 Note: T&G patterns may be ordered with ¼, ⅜, or 7/16" tongues. For wider widths, specify the longer tongue and pattern.	Plain Use one casing nail per bearing to blind nail.	Plain Use two siding or box nails 3-4" apart to face nail.





A dynamic STUCCO and glass ENVIRONMENT

Architect: John Casbarian, associate architect
Charles Tapley & Associates

Three considerations were primary in the creation of this home: enough public space for entertaining, adequate private space for adults plus growing children and effective use of a beautiful lot.

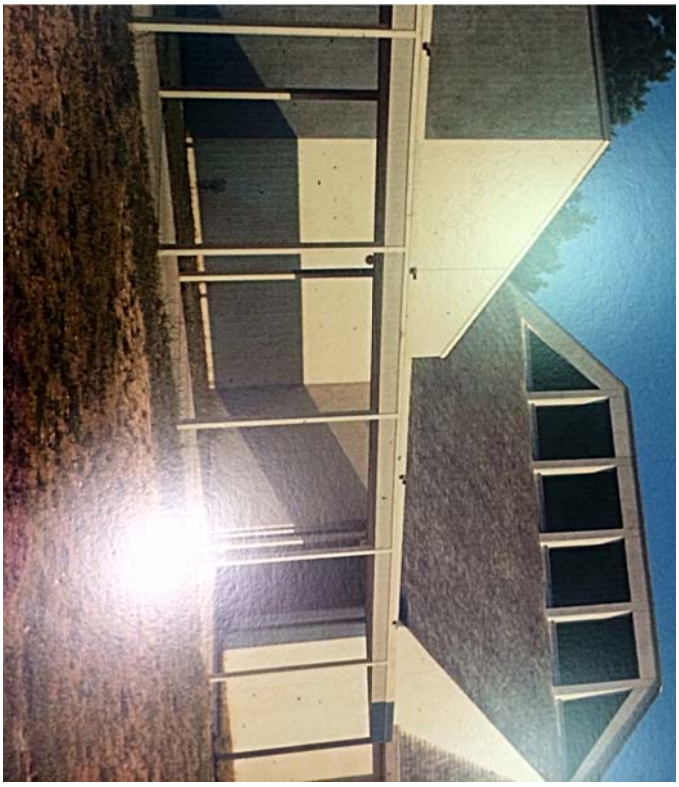
The architects began by designing around and with the site. It was disturbed as little as possible; the house itself is located on a relatively flat and treeless portion of the site. Yet it is also situated and shaped to respond to the location of major trees and to the path of the sun.

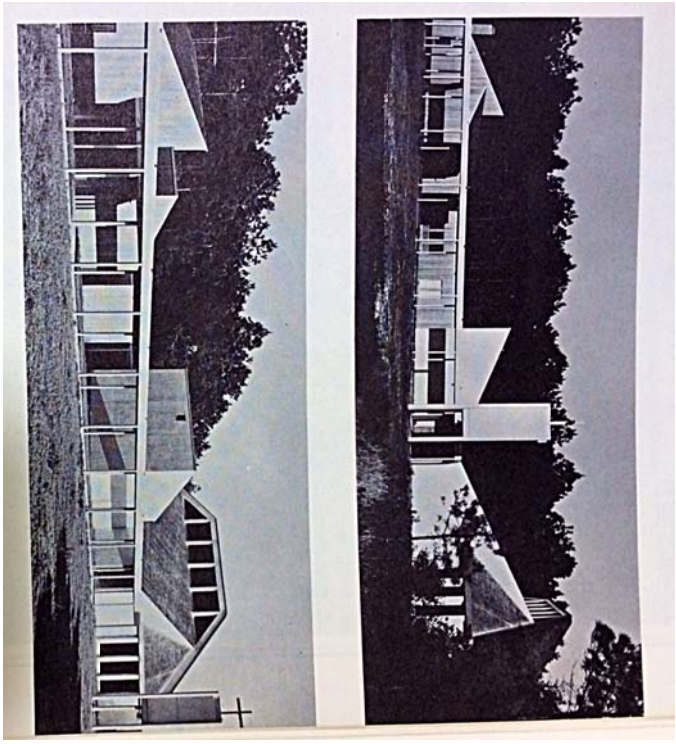
A basic L-shape, the house is pivoted on one end — the living room with master bedroom above — to maximize the view of a ravine on

The living room is pivoted to provide a view of the ravine on the lot.

The spacious entry gallery and dining room are set on a different level from the play area.

February 1977





The buildings were located on and around a large raised central plaza, contained by retaining walls, to give maximum visual impact to public buildings, maximum privacy to sleeping quarters, and to compose the open area of the plaza into the visual heart of the project. The raising of the plaza made logical the relationship between the areas of architecture, between the existing runway and the buildings, and provided needed drainage.

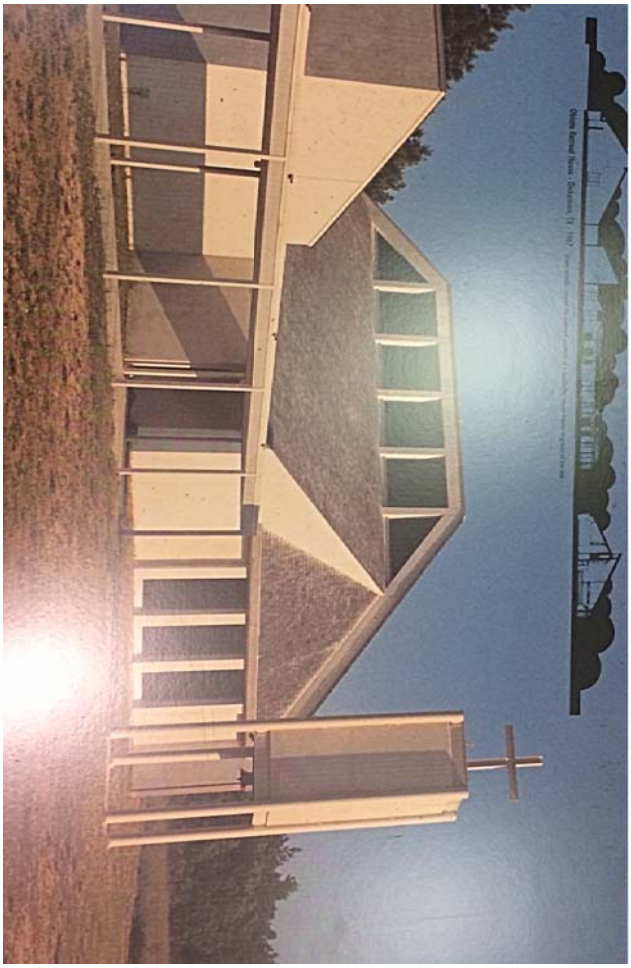
Steel and wood frame construction was used; stucco and wood solids and plate glass voids. Wood shingle roofing was used on all sloping roofs and the chapel ceiling; built-up roof on all flat areas.

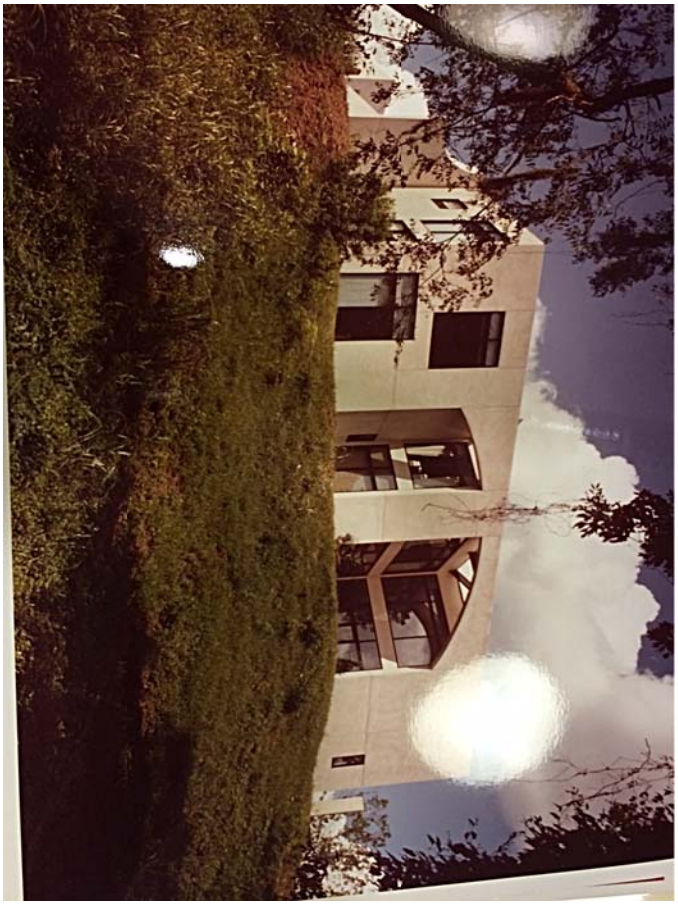
An attempt was made to allow each of the buildings to express its identity, yet blend together to form the retreat "place" with the plaza.

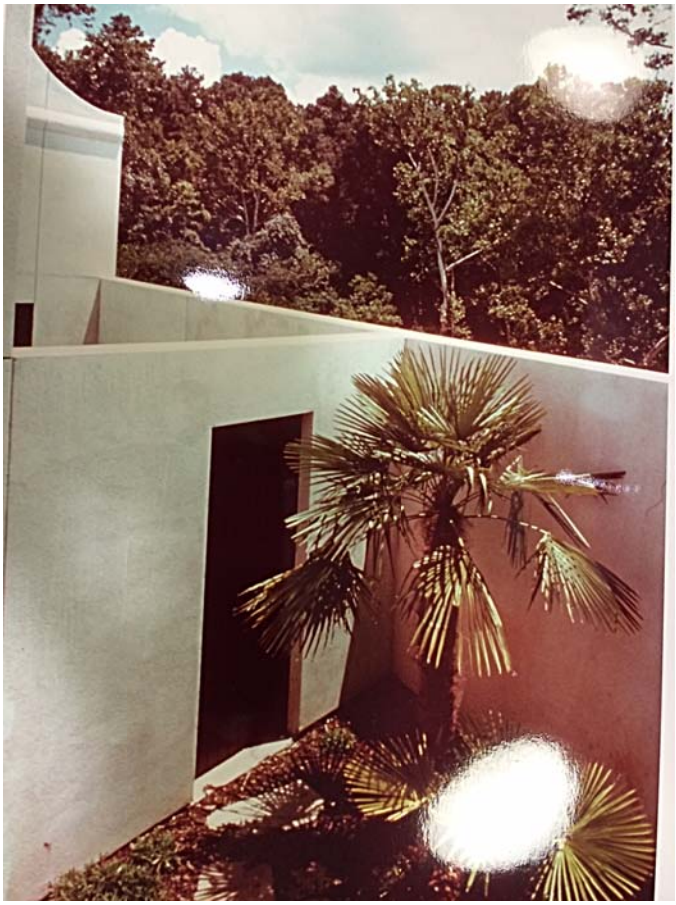
Views were controlled in order to keep the vistas away from neighboring homes; the placement of the complex in the runway allows for this.

In the design of the project, the retreat participant was of prime importance: his comfort, his convenience, his outlook. In establishing his needs, the participant became a less fluid design element than the buildings, hence all design components were qualified on this basis in an attempt to make the retreat a meaningful experience to the participant in physical, spiritual and sensory aspects.

It is a project of simple materials. In moments of quiet retreat the light and shadows of the buildings give the site its own pattern and scale and music. By separateness space is enclosed, security is held. In moments of song and activity, the dispersion of the buildings allows privacy. ■







Building Enclosure Assessment

1807 Wroxton Road, Houston, TX 77005

apollobbc
Better Building Consultants

Building Enclosure Assessment

1807 Wroxton Road, Houston, TX 77005

April 4, 2014

Prepared For
Suzanne Bowers
Houston, Texas

Project No. 13H-0250

apollobbc
Better Building Consultants

Apollo BBC, Inc.
5116 Bissonnet, No. 262
Bellaire, Texas 77401
800.370.5456

Table of Contents

Executive Summary 1

Background 2
Building Specifics 3

Scope of Work 4
Whole Building Air-Leakage Testing 4
Fenestration Air Leakage Testing 4
Tracer Smoke Testing and Infrared Thermography (IRT) 4
Condition Map 4

Systems Overview 6
Building Enclosure Systems 6
HVAC System 9

Condition Assessment 10
Deterioration/Damage 10
Condensation Resistance 11
Leakage Protection 12
Durability 15
Air Tightness 15
Thermal Control 16
Mechanical HVAC Systems 16

Recommendations 18
Deterioration/Damage 18
Condensation Resistance, Leakage Protection & Air Tightness 18
Thermal Control 19

Limitations 20

Appendix A
Existing Condition Glossary
Condition Drawings
Condition Photo Survey

Executive Summary

At the owner's request, Apollo BBC was asked to evaluate the performance and condition of the enclosure systems for the building located at 1807 Wroxton Road, Houston, Texas. This evaluation is a part of a comprehensive effort consisting of this building enclosure assessment and a separate energy evaluation report. This report documents our findings related to the construction, materials, performance, and condition of the residence's enclosure assemblies as well as recommendations to resolve the identified issues and improve enclosure performance.

During our evaluation, we identified functional performance issues with the building's roof, wall, window, and floor systems resulting in the building inadequately controlling heating and cooling and mitigating ongoing moisture penetration problems. We recommend addressing deficiencies with the building's leakage protection strategies, air tightness, and thermal control to resolve the ongoing air and water leakage problems and provide improved interior thermal comfort.

This report discusses the residence's context, existing conditions, analysis of the deficiencies in the design and construction of the building's envelope, and proposed recommendations for addressing these problems. Our goal is to help provide suggestions that may influence a remodel that would result in a building that performs without water penetration problems.

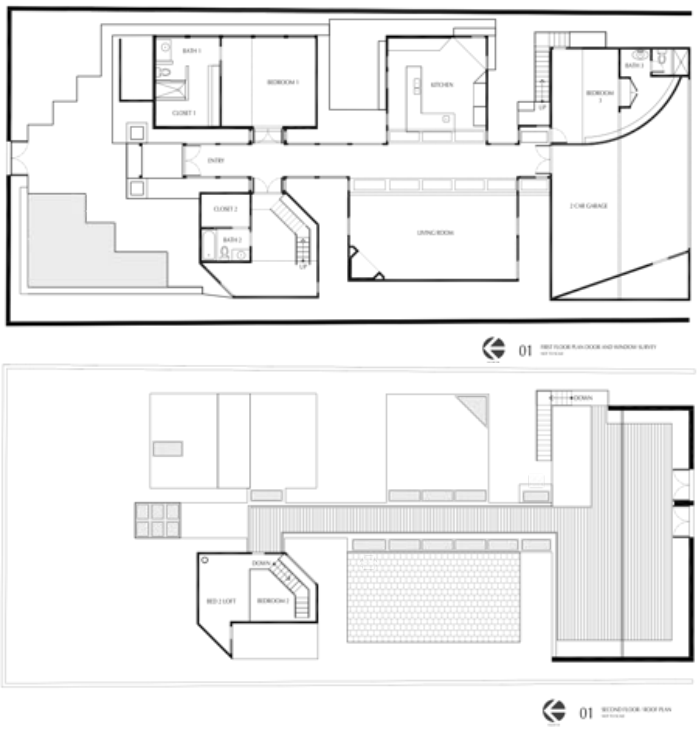
A complete listing of the issues we identified and their definitions are included as Appendix A in this report.

Background

1807 Wroxton was built in 1967 and is a single story residence (approximately 2,517 square feet) designed by Houston architect Charles Tapley. The site includes a masonry wall that follows the perimeter of the lot with a house in the center that is axial in plan. The plan is defined by a thin rectangle at its center whose axis is interrupted by two rectangular spaces at its core, a large rectangular space at its end (south), and two independent attachments at its beginning (north). One attachment is rectangular in shape (east) while the other is hexagonal (west). The hexagonal space is the only multi story area with a loft at its second level. Public and private areas are delineated by how they are attached to the central axis. Public spaces connect directly to the central axis while private spaces are attached via glass hyphens on at least one side. The two public spaces bleed into one another to shape the kitchen and living room areas. The private spaces consist of 3 bedrooms with full baths and the axis terminates at a 2-car garage that is accessed by a rear alley.

The roof of the house contains an outdoor living area that may be accessed at both the front and rear of the house. The front access stair is located within the hexagonal bedroom/loft area while the rear stair is located outside and adjacent to the rear bedroom. The outdoor space consists of 2x decking that rests on the roofing and follows the residence's axial plan.

Although we did not observe major construction campaigns, we did observe numerous additions to the house that were not part of its original design. We observed the addition of a mechanical pad at the left front of the house, exterior return air ducts, an exterior wood framed trellis in the courtyard, a wood framed entrance canopy, and new awnings above fenestration.



Building Specifics

Location

The site is located on lot 11, block 34, of the Southampton Place Subdivision, Houston, Texas (29.724569 latitude, -95.403807 longitude).

Soil

Based on previous work in the area, it has been our experience to find clayey soils or clay mixed with sand. This type of soil tends to absorb water easily, expands, and does not dry quickly.

Climate

The climate for this site is classified as humid subtropical. The warmest month (on average) is July at 94.4 °F (34.7 °C), and the coldest month being January at 53.1 °F (11.7 °C). The average yearly precipitation level is 49.8 inches (1,260 mm). Severe weather occurs generally in the form of flooding. The site may experience super cell thunderstorms (that can sometimes create tornadoes) in the spring and tropical cyclones during its hurricane season. According to the online Harris County Flood Control District Map, this site has a 1% chance of flooding in any given year and a minimum of a 26% chance during a 30-year period of time from a 100year flood. The building has a .2% chance of flooding in any given year and a minimum of 6% chance of flooding during a 30-year period of time from a 500-year flood.

Jurisdictional Considerations

There are jurisdictional requirements for the site that may influence future additions or modifications to the residence. The homeowner's association for this address is The Southampton Civic Club Inc. and there are deed restrictions that have established building setbacks and prevent the establishment of businesses within the neighborhood. Southampton is also a part of the University Place Super Neighborhood Council. To our knowledge, there are no historic designations for this site.

Utility Infrastructure

The utility infrastructure for the site includes connections to the City of Houston's public utilities and access to electric power and telecommunication lines via the alley at the back of the lot.

Scope of Work

Apollo BBC personnel, Gordon Shepperd, PE, Marcus Eliason, PE, Matt Wright, Clemente Zamarripa, and Jason Cantu, were on site Wednesday October 16th through Friday October 18th to observe and document the condition of assemblies and materials as well as conduct whole building air-leakage, window air leakage, and tracer smoke testing, as well as perform infrared thermographic evaluation. Lastly, we created a condition map to document issues related to building condition and performance.

Whole Building Air-Leakage Testing

Building air-leakage tests evaluate the performance and continuity of a building's air barrier assembly. We conducted a whole building air-leakage test at 1807 Wroxton to quantify the enclosure's construction tightness.

This test measures air leakage rates through the building envelope under controlled pressurization and depressurization. To initiate testing, "intentional" holes in the building envelope (exhaust vents and air intakes) were sealed followed by a walk through to make sure that all the building's fenestrations were closed and locked. The HVAC system was disabled and all the interior doors were opened to create a single uniform zone. The method then uses interconnected computer controlled variable speed fans to calculate the airflow necessary to bring the building to a constant pre-determined pressure.

Fenestration Air Leakage Testing

We identified the building's fenestration types; at least one of each window and door type was tested to determine its performance. Testing each window and door type was essential to determine positive or negative effects on building air tightness. We sealed the door or window and tested the type under depressurization. The results of each test included air leakage rates for fenestration types.

Tracer Smoke Testing and Infrared Thermography (IRT)

Tracer smoke and an IR camera detected air leaks at specific locations under pressurization and depressurization. During pressurization, we monitored the exterior of the building via IR camera to determine leakage. During depressurization we monitored air leakage from the building's interior via IR camera and tracer smoke.

Condition Map

In conjunction with the building performance tests, a condition index, glossary, and map with elevations of the masonry privacy walls surrounding the site were created. We visually identified deteriorated building fabric and the erosive environment in which the fabric exists (mechanisms for deterioration). Identifying these mechanisms provides a base map for both air and moisture leakage locations because the mechanisms are usually directly related to air

tightness and moisture infiltration. During the walkthrough, 9 mechanisms in plan and 5 mechanisms at the perimeter masonry walls were recorded, documented, and photographed. The condition maps and photo survey were then analyzed for enabling factors that could be causing the mechanisms for deterioration.

Systems Overview

Apollo BBC reviewed the architect's original construction documents to better understand the intent of the building's enclosure design, compared them to two core samples taken in situ, and removed building cladding in select areas. Mechanical HVAC drawings provided by the owner were also reviewed and a photo survey of the existing system was conducted. The focus of the HVAC assessment was to understand possible interactions with the building's enclosure.

Building Enclosure Systems

The structure's enclosure system comprises a cavity wall assembly with areas of sliding doors, single pane floor to ceiling windows, clerestory windows, and skylights in framed openings. The building's roof is a low slope membrane roof or painted aluminum shingles. We focused our review on the wall/roof systems and fenestration described in the contract documents.

Designed Wall Materials and Assembly

The architect's typical exterior wall construction shows the use of a cavity wall assembly comprised of (from exterior to interior): ¾" (1x6) unfinished (raw) cedar tongue and groove siding installed at a diagonal, ½" building board, 3" batt insulation between 2x4 studs @ 16" on center, and tongue and unfinished (raw) groove siding on the interior. The plans also indicate

Section C of the architect's lighting detail on the reflected ceiling plan sheet calls for ¾" (1x6) cedar tongue and groove siding installed at a diagonal, ¾" plywood, 3" batt insulation between 2x4 studs, and a ¾" wood interior.

The architect's design also specified steel structural columns and steel framing at doorways and fenestration. This was annotated primarily at clerestory fenestration, skylights, and hallway glass hyphens.

Constructed Wall Materials and Assembly

Apollo BBC took core samples at the master bedroom's south wall and the roof outside the hexagonal room's loft area. The current construction appears to be inconsistent with the architect's original drawings. The original unfinished and weathered tongue and groove siding has received multiple coats of paint and we did not observe steel framing at primary fenestration. After removing a portion of the exterior tongue and groove siding, a layer of thin tarpaper was found over what may be either plywood or building fiberboard (Figure 1). All the interior walls are gyp board with batt insulation between 2x4 studs (Figure 2) rather than unfinished

Figure 1 - Removal of exterior cladding

diagonal siding. After removing interior cladding, we observed 2x stud columns between site built wood framed windows and aluminum sliding doors.

After removing material at the base level of the main hallway, we discovered that the 2x4 stud walls were resting on 2x6 lumber over what seemed to be a layer of ½" wallboard. It was not apparent if there was a moisture barrier below the wallboard and stud walls.

At the exterior, we observed trimmed diagonal siding along the building's base and the addition of horizontal trimming. When the additional trim was placed is unclear.

Figure 2 - Removal of floorboards opposite exterior wall with bio growth

Designed Roof Materials and Assembly

According to the original architectural drawings, the roof is a 30 year built up roof comprising ¾" ply wood decking over 2x6 joists, with a layer of 1" insulation, and layers of rolled asphlt. The detail sheet for the house shows 2x6 joists at 6" on center that supports ¾" plywood decking, 1" of insulation, and then built up roofing.

The living room volume was designed to have a westward sloping shed roof clad with cedar shingles over ¾" decking.

Constructed Roof Materials and Assembly

After taking a roof core sample, we observed 3 layers of rolled asphalt roofing material over a layer of black asphalt and fiberboard (Figure 4). Only one roof core sample was taken (Figure 5).

At the living room volume, we observed that the cedar shingles have been replaced with painted aluminum shingles.

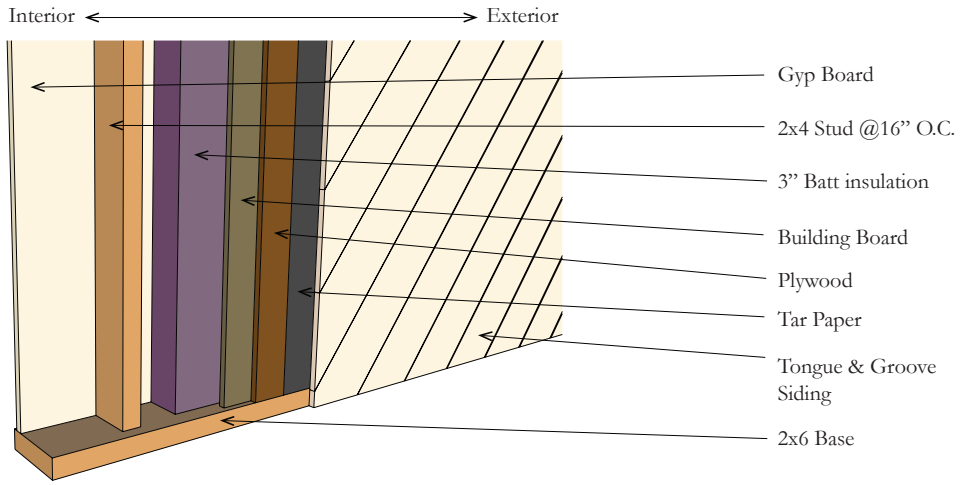


Figure 3 - Existing wall section

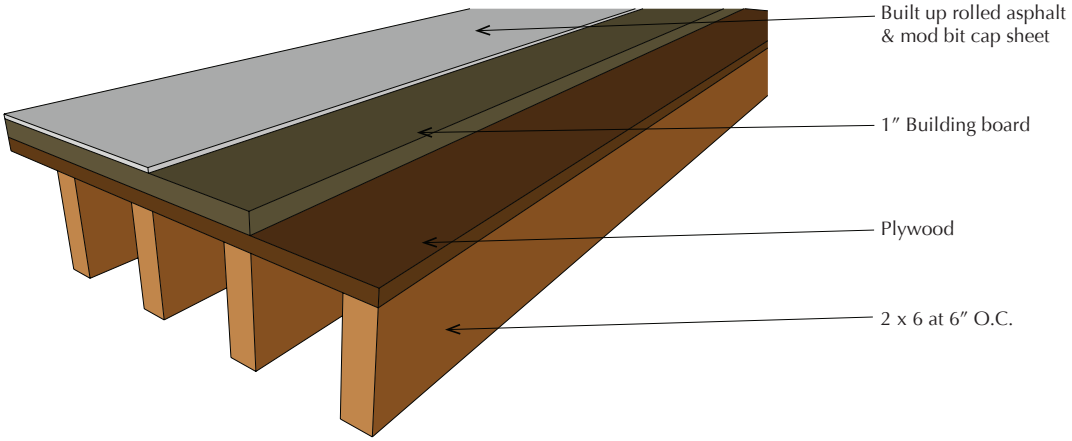


Figure 4 - Existing roof section

Figure 5 - Roof core sample

Fenestration and Doors

The fenestration for the project consists of aluminum-framed sliding doors, wood framed (single pane & 2 new double paned) floor to ceiling windows, double paned clerestory windows, and skylights. We observed the single pane aluminum-framed sliding doors in roughly eight sizes (refer to drawing 3 in Appendix A). The doors at the master and rear bedroom were smaller (approximately 5' x 6'-6") than those at the hexagonal and living rooms. The wood framed single pane windows were largest at the hallway areas (approximately 5' x 9') while the fixed clerestory widows are approximately 2' x 4' at the master bedroom (refer to drawing 4 in Appendix A). All clerestory windows except for those at the living room face north. The large framed windows double as both window and structural curtain wall where they occur. As both floor and wall cladding was removed, we observed that many of the window components had either been replaced or modified primarily at window bases. Because fenestration profiles and glazing was not consent, we do not believe that all of them are original.

HVAC System

HVAC is provided to the building through three split-system air conditioning units comprised of an interior evaporating unit and an exterior condensing unit. Supply air is ducted to the space. Return air is collected through wall registers to rigid metal ductwork run on the exterior of the home to air handling units mounted in the garage or the exterior of the home. No mechanical ventilation is provided to the home. The home has two distinct HVAC zones, with two, 5-ton units providing cooling to the living room, kitchen, central corridor, pot room, and loft and a 2.5-ton unit providing cooling to the bedroom. Heating for the main living areas of the home is through two gas-fired furnaces, and through an electric strip heater in the indoor air-handling units for the front bedroom.

The house was designed with supply running laterally down the house's central core along the ceiling through a rectangular duct with registers on the left and right sides. Return air was designed to run along the central core through return registers built into the wood flooring that takes air into a plenum. The plenum funneled air below the living room towards the house's western façade, to its rear, and into the garage. The central hall plenum has been abandoned and now return air is funneled only though the ducts on the western façade. In order to facilitate the return air system, an elevated return air duct system was built and attached to the western exterior of the house. A separate, short, underground return duct services the master bedroom.

The age of the HVAC systems varies with older condensing units reportedly installed in 1993, and a newer condensing unit installed in 2009. Estimated seasonal energy efficiency rating (SEER) for the older units is 9, with the newer unit having a SEER of 13. The split systems use R-22, and HCFC refrigerant. The interior furnace units were reportedly installed in 2000.

Control of the HVAC systems is through wall-mounted programmable thermostats. Reported setpoints for heating and cooling are generally 72°F and 77°F, respectively. The system is not scheduled with unoccupied setbacks. A thermostat in the loft area controls a duct-mounted fan to provide additional air delivery to the space.

Operable sliding doors provide ventilation outdoor air to the house. Ceiling mounted exhaust fans serve the toilet rooms.

Condition Assessment

A condition map and surveys (Appendix A) were created to better understand possible sources for some mechanisms for deterioration that were found.

Deterioration/Damage

Previously repaired areas are good starting points to find past and current deterioration. Evidence of repairs to the exterior envelope, interior wood components, and gyp board were located. Other conditions found were: biological growth, split or warped wood flooring, rot from possible moisture damage, staining from moisture, and loss of material. Conditions at the perimeter masonry privacy wall were: biological growth, deep holes in the mortar, cracks, significant mortar loss, and vegetation that may be facilitating/accelerating the degradation of the brick and mortar.

At the primary structure, loss of material was predominantly on the building's exterior towards the base of the diagonal siding. Most sides of the exterior with the exception of the southwest corner of the garage seem to have had the bottom of the siding trimmed and replaced with a 1x trim piece. When this occurred is unknown. Further the condition of the remaining siding was very poor. The siding exhibited signs of cupping, warping, cracking, corner separations, and raised grain. Areas that displayed evidence of repair were improperly fastened. Siding that was entirely replaced was also poorly installed and have already begun to show signs of excess wear. All of exterior wooden wall material has been painted multiple times and does not resemble the original installation condition or intent.

Areas that exhibited cracking or warping were predominantly around thresholds and more so at building connection points. This may be due to improper, damaged, or weathered seals. These areas also tended to show signs of staining and rot at the base of the 2x stud walls.

Damage at the windows and doors was primarily located at the structure adjacent to the window and door fixtures. Sixteen of the eighteen doors surveyed exhibited one or more conditions of: moisture at adjacent structure, rust (where adjacent to plastered metal corners), rot, warped adjacent floorboards, and cracked sealants (refer to drawing 3 in Appendix A). Forty of the forty-eight windows and skylights surveyed on the site showed some kind of damage condition. These conditions included: rot, moisture damage, staining, rot at adjacent structure, and hairline cracks.

When surveying the conditions of the exterior masonry privacy wall, we focused our efforts on the areas facing the house. The exterior areas were either not accessible because of neighboring properties or were so heavily covered with vegetation that conditions were not readily apparent. The primary mechanisms observed at the areas that were accessible were vegetation, biological growth, and severe mortar loss. Severe mortar loss was most evident at the north wall sections facing the entry courtyard. Areas where deep holes were located tended to be associated to severe mortar loss locations (refer to drawings 7-12 in Appendix A).

Condensation Resistance

A majority of the damage found at 1807 Wroxton was related to moisture causing floor damage (warping and splitting), rot, staining, and loss of material. One of the causes for moisture accumulation at the window and door areas may be due to a lack of condensation resistance. During cold months, we observed condensation on windows, doors, and skylights that were allowing for excess moisture to pool (Figures 6-9). If not addressed, this moisture may cause damage to the finishes and building structure.

Figure 6 – Entry hall doors and windows exhibiting excess condensation

Figure 7 – Clerestory windows with excess condensation

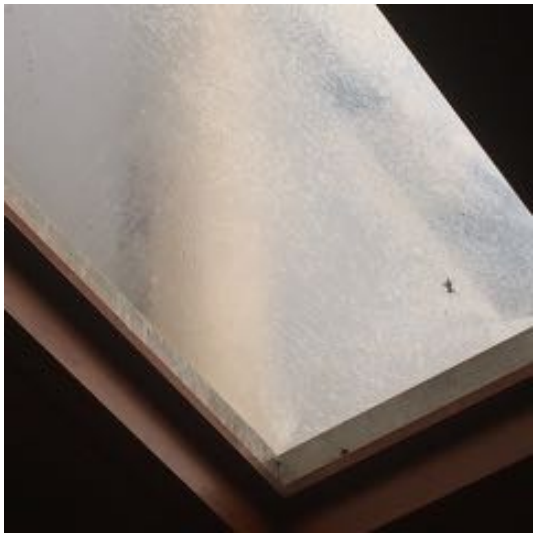


Figure 8 – Condensation at skylight with moisture pooling at aluminum frame

Figure 9 – Condensation at sliding glass doors

Leakage Protection

In addition to condensation, excessive moisture accumulation at damage areas is a result of inadequate leakage protection. After looking at a map of these issues and where they most frequently occur, the source for the moisture infiltration pathology is most likely due to the construction and design of the exterior cladding materials as well as the inability of the discontinuous moisture-resistant barrier behind the cladding to direct water out of the wall. At each location where we documented evidence of water infiltration, the angled 2x6 siding on the exterior was directing moisture directly into the building (Figure), and the existing asphalt impregnated paper had not been detailed in a way to direct water from interior spaces to the exterior of the walls.

In addition to exterior wall cladding, the roof's design and condition is contributing to deterioration and damage. A lack of slope, age, improper flashing, poor drainage, poor condition, inadequate maintenance, and inappropriate repairs is accelerating the deterioration and damage mechanism. Water infiltration from both improperly flashed windows and roofing is deteriorating the wood structure, wood window frames, and sill plates.

Figure 10 - Direction of the siding directs water to the corner of the building

Figure 11 - View of the interior side of the previous photo

Shown in the photo above is channeling water towards the corner of the building, causing water to pool, and go through any holes that may exist. Those holes are then allowing moisture the wet the cavity wall materials and spread to the interior of the garage. Evidence of staining at the wall's top and on the ceiling may suggest that the angle of the siding at the roof level is forcing water to pool, flow though the roof membranes, and enter the building (Figure 12).

Figure 12 - Siding at the roof level is angled toward the corner of the building providing a path for water penetration and damage below

Photo 13 – The siding at the roof level is angled toward the corner of the building providing a path for excess moisture and damage

More examples of excess wetting from the angled design and layered rolled roofing come from the right side of the garage, between the living room's fireplace and sliding door, and at the front of the house by the hexagonal bedroom.

Figure 14 – View of the exterior wall outside of right side garage area and rear bedroom's bath

Figure 15 - The angled siding on the exterior of this rear bathroom wall appears to be directing water towards this area

The exterior of this wall also shows where diagonal siding has been removed and replaced with a type of building board. Based on the conditions at the area, we believe that this wetting has been an ongoing issue.

Figure 16 – View of the exterior siding from the chimney that is directing water towards the sliding door

Figure 17 - Interior view of the living room wall between the chimney and the sliding door

Figures 18 and 19 further indicate where the diagonal pattern design of the exterior cladding is forcing moisture towards building connections most susceptible to leaks and damage. The diagonal siding that meets at the glass hyphen window at the front of the house is providing a means for water to penetrate to interior spaces.

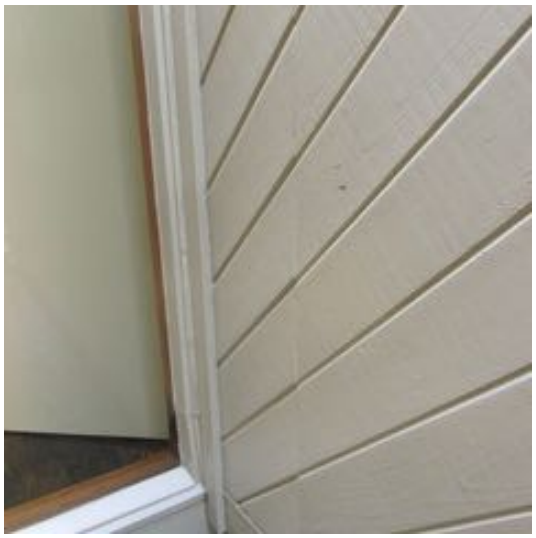


Figure 18 - Area where the hexagonal room meets the glass hyphen window. This area exhibits both evidence of a previous repair and the siding is angled toward the window.

Figure 19 - Interior view of junction between the hyphen window and the diagonal siding exhibiting deterioration associated with ongoing water penetration.

Durability

Another area of concern was found at the rooftop level. When the roof core sample was taken, water was found in the membrane layers. Moisture at these layers and rot observed at the decking system are diminishing the roof's durability. With decreased durability comes an increase in the likelihood of water intrusion to interior spaces.

Figure 20 – The rooftop decking is showing signs of weathering and rot

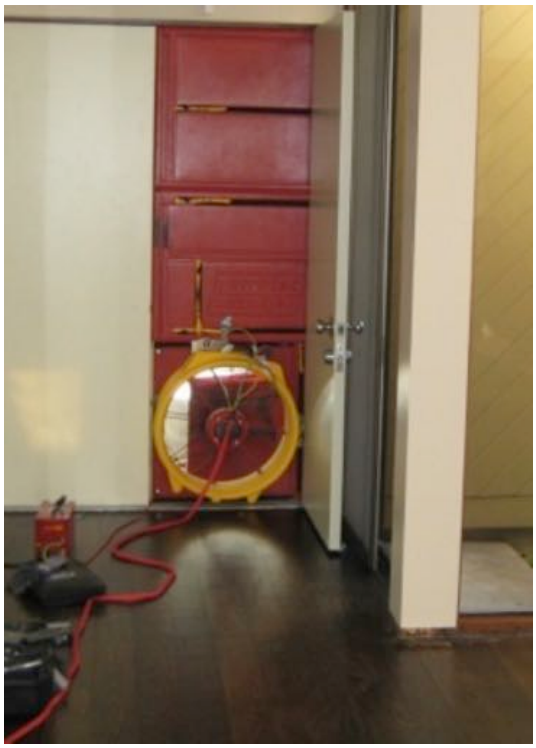


Figure 21 - Whole building air leakage testing

Air Tightness

Air tight building envelopes are important to reduce overall energy loss and to ensure a durable long lasting building envelope as it is related to preventing both air and moisture intrusion. As water makes its way into the building and deteriorates/damages the building's cladding, new air passages are created. As air begins to move through the leaky walls, the conditions necessary for deterioration are increased. There are now more opportunities for condensation and weathering.

Testing

The test revealed that the building, overall, was very leaky. According to ASHRAE, air leakage should be less than .25cfm per square foot of building enclosure surface area at a 50 Pa air pressure differential. This building has a

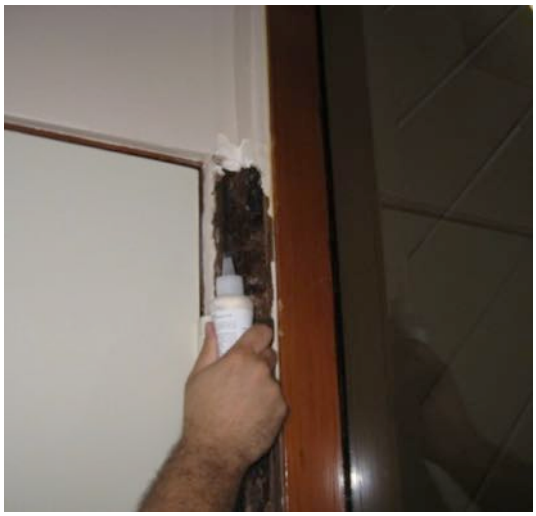


Figure 22 - Tracer smoke going through damaged cladding

.93 cfm per square foot leakage rate, which means it is leaking and performing poorly as a system. Specific leakage areas were identified with both tracer smoke and infrared thermography.

Pathways

The majority of the leakage pathways were at building material intersections and where cladding damage was most visible. These areas showed rot, weathering, and signs of previous repairs. The photo at the right shows tracer smoke easily traveling through the damaged areas to the building's exterior. This also occurred at floor to wall connections.

Fenestration Testing

Fenestration was tested individually to reveal which ones leaked the most. Generally, although the single pane windows leaked the least, the sliding doors showed poor performance. The skylights generally leaked the most; all but one failed to meet the accepted standard for allowable leakage rates. Air leakage testing at these areas tended to exhibit signs of wood warping and water staining from water infiltration. An acceptable leakage rate for a typical window according to the American Architectural Manufacturers Association (AAMFA) is .45CFM per square foot. Some of the leakage rates for the representative fenestration types for this building were:

- 10CFM for the rectangular skylights
- .75CFM at the small clerestory windows
- 1.05CFM at the short sliding doors
- .88CFM at the tall sliding doors
- .39CFM at the thin fixed windows
- .8CFM at the wide fixed windows

Thermal Control

We evaluated the building's thermal control systems including roof, wall insulation, and glazing. In general, the building was designed with minimal roof insulation, wall batt insulation, and single pane fenestration systems. Both the roof and wall core samples verified the design and proved that the building is poorly insulated. Coupled with air traveling in and out of the building, because of a lack of insulation excessive heat gain and loss should be expected. Thermal control is also affected by leakage protection and air tightness. The more leaks the building has, the harder it is for the building's systems to control interior climate.

Mechanical HVAC Systems

We evaluated the building's mechanical HVAC systems with respect to building enclosure performance, specifically its construction and design.

HVAC Condition

The homeowner reported issues regarding the system's ability to provide occupant comfort. The lack of occupant comfort appears to be related to the control of systems and building return air pathways. The control of the system affects occupant comfort because thermostat location choices are on exterior walls and sun exposed spaces. Additionally, the main systems serve numerous spaces with varied and different load profiles.

The return air path also affects system performance as the ductwork is run on the exterior of the residence. Exterior mounted ductwork is not an industry best practice as the exterior conditions will raise or lower the return air temperature, depending on season. This will affect the mechanical system's ability to heat and cool the space.

Additionally, the owner reported that portions of the under floor air plenums flood in high rain events and require a sump pump to remove water. We observed microbial growth amplification on the interior lining of the return air ductwork. There is also likely material degradation due to water ponding on top of the exterior run ducts and sealant.

Recommendations

In creating a strategy for mitigating the adverse conditions at 1807 Wroxton, we have made recommendations for repairing deteriorated or damaged building fabric, addressing leakage protection, air tightness, and thermal control.

Deterioration/Damage

Areas that display deterioration or damage should be repaired or replaced. In order to correct warping and cracking conditions occurring at the wooden floors, we recommend that damaged areas are repaired and that an air and moisture barrier is added to the foundation. Air and moisture coming from the foundation may potentially be causing condensation. The addition of an air and moisture barrier will help mitigate this as well as protect the building's fabric.

Condensation Resistance, Leakage Protection & Air Tightness

As a whole, the building under performs in comparison to accepted industry standards. If any of the window components are retained or new aluminum framed ones are installed in their stead, it is recommended that they meet recommended AAMA CRF requirements, are sealed, and tested for leaks. Also, if new metal-framed windows are installed, or glazing with butt joints is used, loads would have to be redistributed/calculated around the window openings.

Although there are multiple types of sliding doors, none seem to be performing well. None are airtight and therefore also allow for water intrusion. To reduce the risk of air and water intrusion, we recommend that if new sliders are installed, that they meet the minimum AAMA standard of .45CFM per square foot.

The skylights leaked the most in terms of allowing air to come in and out of the building. New skylights should not only meet AAMA minimum standards but also need to be properly integrated into the vapor barrier system. Ensuring that the skylights are sealed and flashed will be essential to assisting with both thermal control and energy consumption. To reduce air and moisture infiltration, we recommend exterior wall sheathing should be removed and a continuous air and moisture barrier with an airspace should be used. The challenge will ideally be detailing the corners if angled siding is to be rehabilitated and reinstalled. The ends require flashing and treatment in a way that would prevent them from rotting prematurely as well as enabling conditions for rot at nearby wooden trim pieces. If another cladding type is used, it is recommended that the joints are properly flashed, sealed, and protected.

Because moisture on each side of the building's sliding doors is apparent, at a minimum, it is recommended that they be sealed with the air barrier. Whether new doors are installed or the current ones are reconditioned, it is recommended that they are sealed and tested for leaks. The recommendations above are largely to reduce air leakage and water migration. In order to ensure that our recommendations are effective, we suggest that a whole building air leakage test is performed once construction is complete and that a minimum air leakage rate of .25 cubic feet per minute be achieved. Windows should be tested and a temperature with humidity

monitor should be installed below the roof membrane to verify that there is no moisture passing through the roofing membrane.

Thermal Control

Apollo BBC recommends removing the current roof system in favor of using a slick and reflective single ply membrane. Using a slick membrane will help shed water at a quicker rate and the reflectivity will help with better energy performance. Because the slope of the roof is so low, it would help to provide additional insulation that would increase its rise. Doing this would increase energy performance while increasing its ability discharge water.

Regarding draining areas without a drip edge, because we are unsure as to how the roof drains, we recommend installing roof drains. These drains would replace the scuppers by the alley parapet. We also recommend using aluminum edges where drip edges are used. Because adding insulation will add height to the roof, we recommend that insulation be added to the bottom side if there are limitations to how high the roof can be built up.

If there is an opportunity to put a living roof on this site, it will be important that it does not exceed 50psf at the area above the garage, 40psf above the rear room's clerestory windows, 30psf at the main living area, 40psf at the master bedroom, and that the membrane has no leaks. Note that the framing should be redone at the main hallway area to accommodate live loads and a green roof. In order to make sure the roof performs well, it is advised that calculations are taken using WUFI (Wärme und Feuchte instationär) software to determine heat and moisture transfer through the building components and leakage tests are conducted.

Limitations

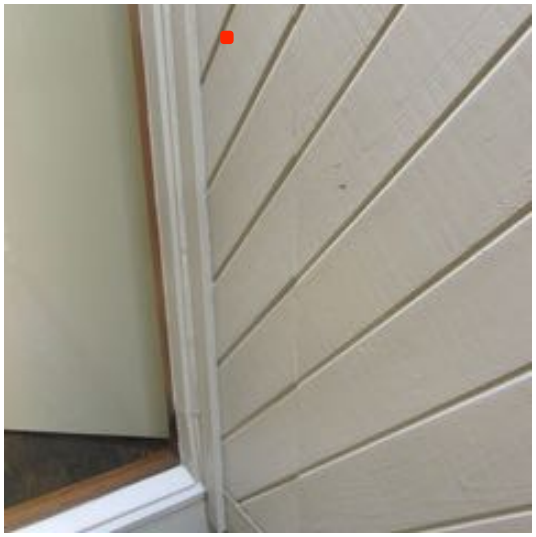
The information provided in this document is directed to the client and may not contain information for others or for other uses.

Some of the comments, opinions and recommendations stated in this document are based, in part, on information provided by others. If the information described in this document provided by others is incorrect, or if additional information becomes available, Apollo BBC may need to revise the comments, opinions and recommendations presented in this document.

Appendix A

Existing Condition Glossary

Evidence of repairs to exterior envelope refers to areas that appear to: be recently painted, have different texture from the original deep grooved cedar, show tongue and groove joints that are tight with little evidence of weathering or warping, and where joint lines are interrupted, cut, or do not match.



Condition Figure 23 - Example of repairs to exterior envelope: evidence of different wood textures, grooves, and apparent cut line.

Evidence of repairs to wooden components of interior walls refers to areas where new wood has been added.

Condition Figure 24 - Evidence of interior wall repair: wood. 2X stock lumber has been added to bottom of window.

Biological growth refers to areas that appear to have biological activity. For example: algae, bacteria, and lichens.

Condition Figure 25 - Evidence of what appears to be biological growth

Evidence of possible gyp board repairs to interior walls refers to areas that appear to be recently painted or uneven gyp board texture.

Condition Figure 26 - Irregularity in gyp board texture and pattern as a result of possible repairs

Wood warped or splitting refers to areas where boards may have deformed or cracked due to excess moisture.

Condition Figure 27 - Warped and cracked floor boards

Rot refers to areas where necessary conditions for rot to occur were apparent.

Condition Figure 28- Building fabric deterioration due to rot

Evidence of moisture damage from staining refers to areas where there is discoloration to building fabric caused by excess moisture. This may be from past damage or an ongoing symptom.

Condition Figure 29 - Evidence of staining on walls form excess moisture in the area

Gyp board decomposition refers to areas where gyp board wall material is missing or crumbling due to moisture infiltration.

Condition Figure 30 - Gyp board decomposition due to excess moisture

Loss of material refers to areas where building fabric has been removed in its entirety or material that has decayed and no longer exists.

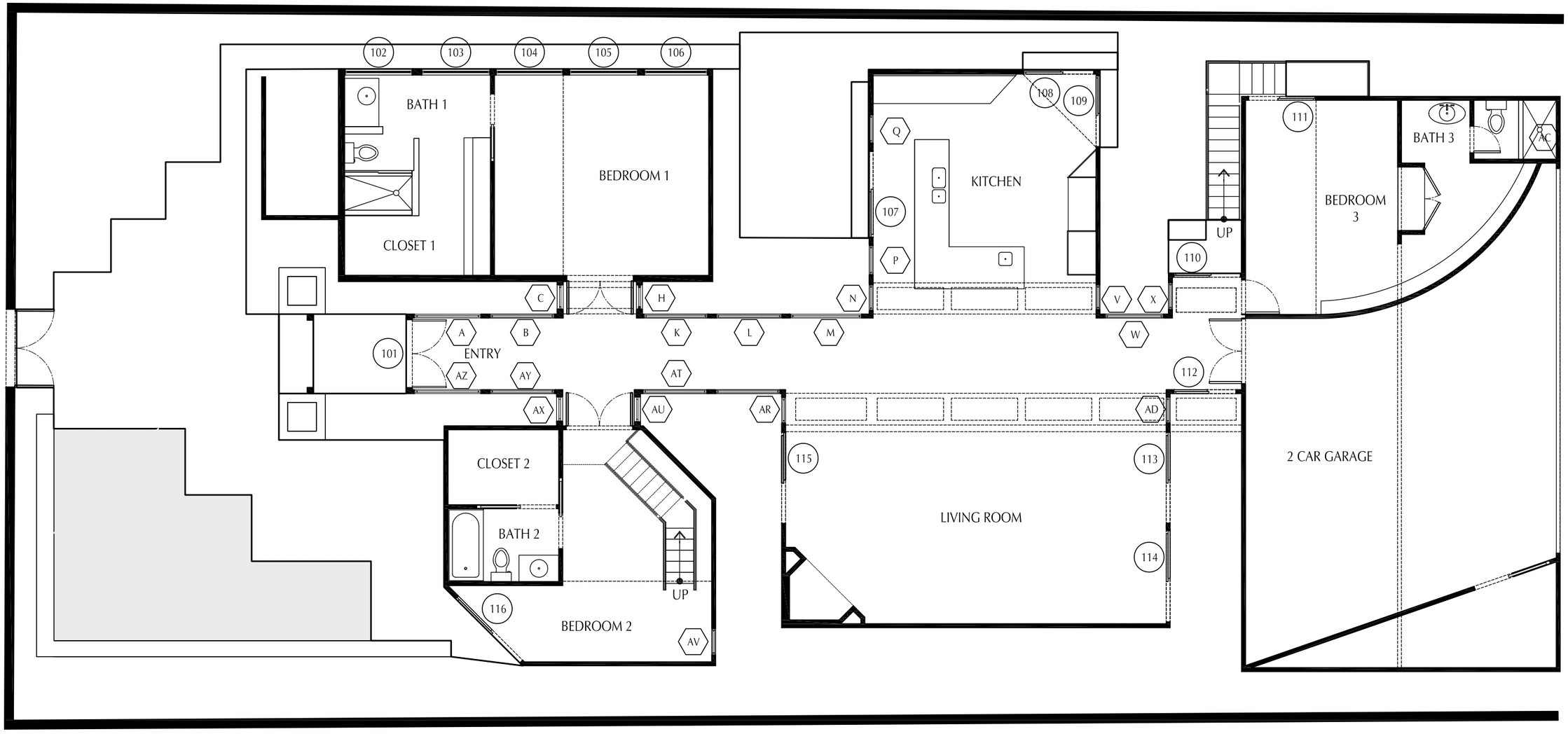
Condition Figure 31 - Loss of material due to rot

LEGEND

DOORS

WINDOWS

RE: DRAWINGS 3 & 4 FOR CONDITION SURVEYS AND TYPES



NORTH

01 FIRST FLOOR PLAN DOOR AND WINDOW SURVEY

1/8" = 1'-0"

apollobbc
Better Building Consultants

Registration Number F-8506

Apollo BBC, Inc. | 5116 Bissonnet, No. 292 | Bellaire, TX 77401 | 800.370.5456

Project: 1807 WROXTON

Client: Suzanne Bowers

Address: 1701 Herman Drive #3404
Houston, TX 77004

Date:	3-25-14
Apollo BBC Project Number:	13H-0250
Drawn By:	Jason Cantu
Note:	
Revisions:	Date:

ALL IDEAS, PLANS AND SPECIFICATIONS CONTAINED IN THESE DRAWINGS ARE THE PROPERTY OF APOLLO BBC. THE PURCHASER'S RIGHT IS CONDITIONAL AND LIMITED TO CONSTRUCT A SINGLE PROJECT ON THE LOT STATED HEREIN, AND USE IS LIMITED SPECIFICALLY TO SUCH PROPERTY. THE USE OR REPRODUCTION OF THESE PLANS CONCERNING ANY OTHER CONSTRUCTION IS STRICTLY PROHIBITED WITHOUT WRITTEN PERMISSION OF APOLLO BBC. WRITTEN DIMENSIONS SHALL HAVE PRECEDENCE OVER SCALED DIMENSIONS. ALL PLANS DESIGNED FOR THE CONSTRUCTION OF THIS BUILDING SHOULD BE REVIEWED AND REFERRED TO BEFORE ANY CONSTRUCTION BEGINS. IN THE EVENT OF ANY CONFLICTS OR INCONSISTENCIES IN THE PLANS, APOLLO BBC SHOULD BE CONTACTED IMMEDIATELY. IF NO SUCH CONTACT IS MADE, THEN THE CONTRACTOR AND SUBCONTRACTORS, THEIR AGENTS AND EMPLOYEES, ASSUME ALL LIABILITY ASSOCIATED WITH SUCH CONFLICTS OR INCONSISTENCIES.

NOT FOR CONSTRUCTION

NOT FOR CONSTRUCTION

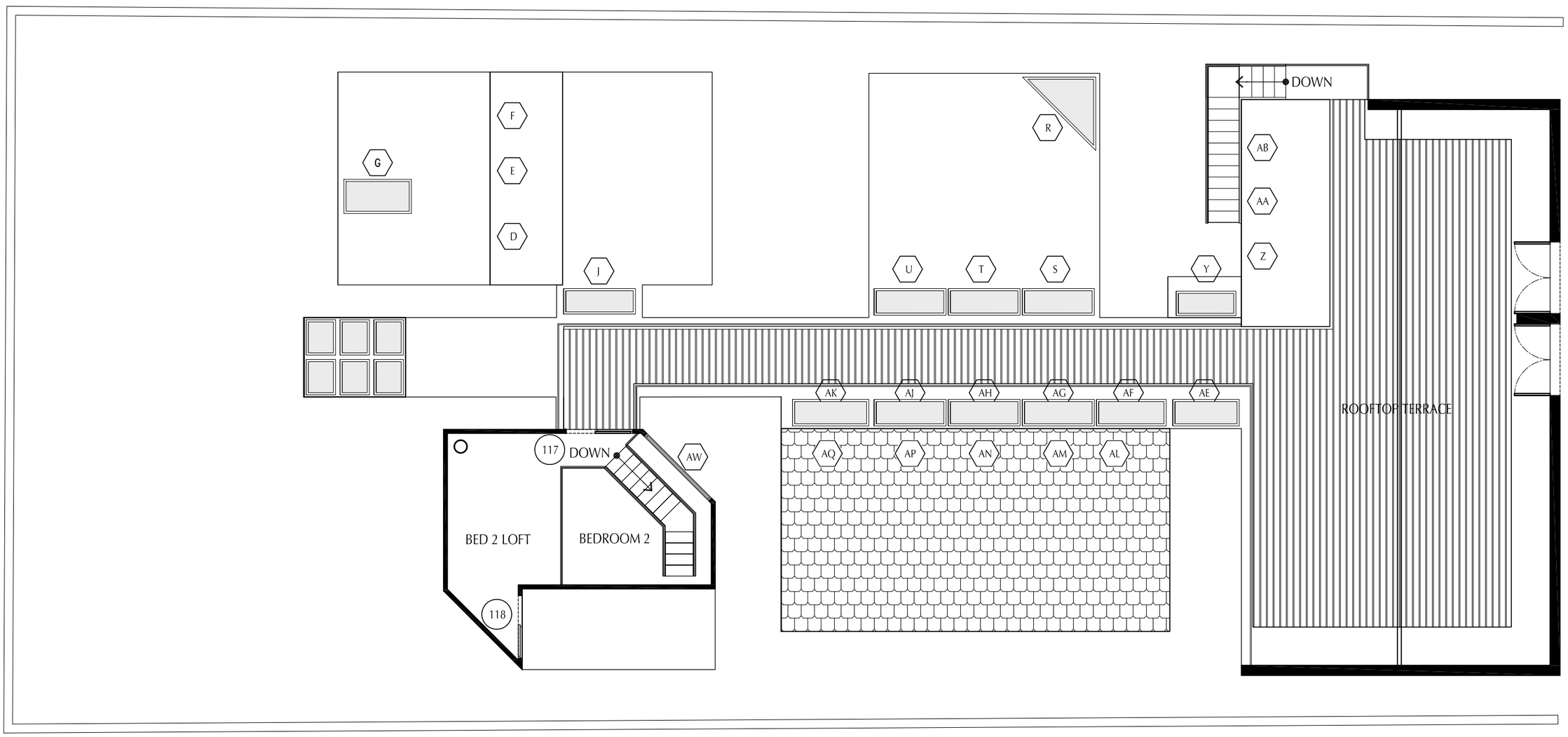
FIRST FLOOR

LEGEND

DOORS

WINDOWS

RE: DRAWINGS 3 & 4
FOR CONDITION
SURVEYS AND TYPES



NORTH

01 SECOND FLOOR / ROOF PLAN DOOR & WINDOW SURVEY
1/8" = 1'-0"

apollobbc
Better Building Consultants
Registration Number F-8506
Apollo BBC, Inc. | 5116 Blossomset, No. 292 | Bellaire, TX 77401 | 800.370.5456

Project: 1807 WROXTON
Client: Suzanne Bowers
Address: 1701 Herman Drive #3404
Houston, TX 77004

Date:	3-25-14
Apollo BBC Project Number:	13H-0250
Drawn By:	Jason Cantu
Note:	
Revisions:	Date:

ALL IDEAS, PLANS AND SPECIFICATIONS CONTAINED IN THESE DRAWINGS ARE THE PROPERTY OF APOLLO BBC. THE PURCHASER'S RIGHT IS CONDITIONAL AND LIMITED TO CONSTRUCT A SINGLE PROJECT ON THE LOT STATED HEREIN, AND USE IS LIMITED SPECIFICALLY TO SUCH PROPERTY. THE USE OR REPRODUCTION OF THESE PLANS CONCERNING ANY OTHER CONSTRUCTION IS STRICTLY PROHIBITED WITHOUT WRITTEN PERMISSION OF APOLLO BBC. WRITTEN DIMENSIONS SHALL HAVE PRECEDENCE OVER SCALED DIMENSIONS. ALL PLANS DESIGNED FOR THE CONSTRUCTION OF THIS BUILDING SHOULD BE REVIEWED AND REFERRED TO BEFORE ANY CONSTRUCTION BEGINS. IN THE EVENT OF ANY CONFLICTS OR INCONSISTENCIES IN THE PLANS, APOLLO BBC SHOULD BE CONTACTED IMMEDIATELY. IF NO SUCH CONTACT IS MADE, THEN THE CONTRACTOR AND SUBCONTRACTORS, THEIR AGENTS AND EMPLOYEES, ASSUME ALL LIABILITY ASSOCIATED WITH SUCH CONFLICTS OR INCONSISTENCIES.

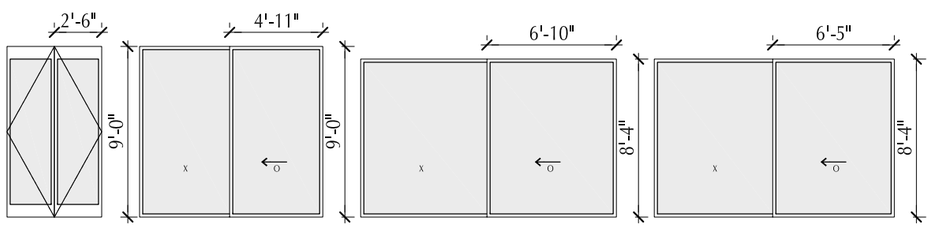
NOT FOR CONSTRUCTION

NOT FOR CONSTRUCTION

SECOND FLOOR

DOOR CONDITION SURVEY

MARK	TYPE	SIZE		CONDITION REMARKS
		WIDTH	HEIGHT	
FIRST FLOOR & SECOND FLOORS				
101	A	2'-6"	9'-0"	CUSTOM WOOD FRONT DOORS WITH SINGLE PANE GLASS.
102	B	5'-0"	6'-6"	ANDERSON SLIDING DOOR. DOUBLE PANE GLASS. LOW E SMART SUN. MOISTURE AT STUDS & RUST AT PLASTER METAL CORNERS. NOT ORIGINAL.
103	B	5'-0"	6'-6"	ANDERSON SLIDING DOOR. DOUBLE PANE GLASS. LOW E SMART SUN. MOISTURE AT STUDS & RUST AT PLASTER METAL CORNERS.
104	B	5'-0"	6'-6"	ANDERSON SLIDING DOOR. DOUBLE PANE GLASS. LOW E SMART SUN. ROT AT STUD WALL BASE & WARPED FLOOR BOARDS.
105	B	5'-0"	6'-6"	ANDERSON SLIDING DOOR. DOUBLE PANE GLASS. LOW E SMART SUN. ROT AT STUD WALL BASE & WARPED FLOOR BOARDS.
106	B	5'-0"	6'-6"	ANDERSON SLIDING DOOR. DOUBLE PANE GLASS. LOW E SMART SUN. ROT AT STUD WALL BASE & WARPED FLOOR BOARDS. NOT ORIGINAL.
107	C	6'-5"	8'-4"	TEMPERED GLASS SLIDING DOOR.
108	D	5'-3"	8'-4"	SINGLE PANE SLIDING GLASS DOOR. SPLIT SEALANTS, SPLIT FLOORING, AND ROT @ STRUCTURE. DIFFICULT TO OPERATE.
109	D	5'-3"	8'-4"	SINGLE PANE SLIDING GLASS DOOR. SPLIT SEALANTS, SPLIT FLOORING, AND ROT @ STRUCTURE.
110	E	4'-11"	9'-0"	SINGLE PANE SLIDING GLASS DOOR. CRACKED SEALANTS, SPLIT/WARPED FLOORING, AND ROT @ STRUCTURE.
111	F	5'-3"	6'-6"	SINGLE PANE SLIDING GLASS DOOR. MISSING SEALANT AND WARPED FLOOR BOARDS.
112	G	4'-8"	8'-1"	SINGLE PANE SLIDING GLASS DOOR. BASE BELOW DOOR APPEARS TO BE NEW.
113	H	6'-10"	8'-4"	SINGLE PANE SLIDING GLASS DOOR. SEALANTS HAVE CRACKS, APPARENT MOISTURE DAMAGE TO THE FLOORING W/ ROT @ STRUCTURE, & DIFFICULT TO OPERATE.
114	H	6'-10"	8'-4"	SINGLE PANE SLIDING GLASS DOOR. SEALANTS HAVE CRACKS AND THERE IS APPARENT MOISTURE DAMAGE TO THE FLOORING W/ ROT @ STRUCTURE. INOPERABLE.
115	H	6'-10"	8'-4"	SINGLE PANE SLIDING GLASS DOOR. ROT @ STRUCTURE. DIFFICULT TO OPERATE.
116	H	6'-10"	8'-4"	SINGLE PANE SLIDING GLASS DOOR. SEALANTS HAVE CRACKS AND THERE IS APPARENT MOISTURE DAMAGE TO THE FLOORING W/ ROT @ STRUCTURE. INOPERABLE.
117	A	5'-0"	6'-6"	SINGLE PANE SLIDING GLASS DOOR. SEALANTS HAVE CRACKS.
118	J	4'-8"	7'-4"	SINGLE PANE SLIDING GLASS DOOR. SEALANTS HAVE CRACKS. DIFFICULT TO OPERATE.

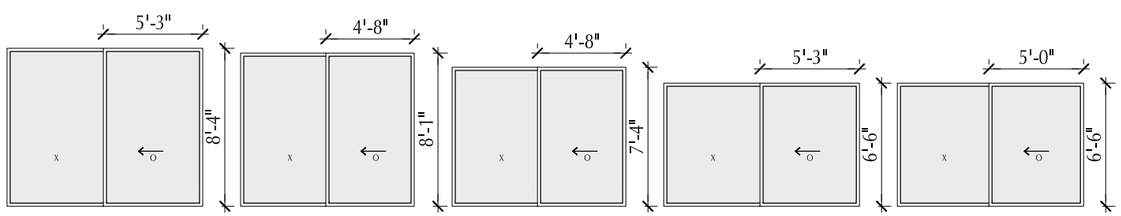


TYPE A
2'-6" X 9'-0"

TYPE B
4'-11" X 9'-0"
SLIDING DOOR

TYPE C
6'-10" X 8'-4"
SLIDING DOOR

TYPE D
6'-5" X 8'-4"
SLIDING DOOR



TYPE E
5'-3" X 8'-4"
SLIDING DOOR

TYPE F
4'-8" X 8'-1"
SLIDING DOOR

TYPE G
4'-8" X 7'-4"
SLIDING DOOR

TYPE H
5'-3" X 6'-6"
SLIDING DOOR

TYPE J
5'-0" X 6'-6"
SLIDING DOOR

01 DOOR TYPES
1/8" = 1'-0"

WINDOW CONDITION SURVEY

MARK	SIZE		CONDITION REMARKS
	WIDTH	HEIGHT	
FIRST FLOOR & SECOND FLOORS			
A	5'-0"	8'-11"	TEMPERED. BASE HAS BEEN REPLACED. NOT ORIGINAL. RIGHT FRAME SHOWS SIGNS OF ROT.
B	5'-0"	8'-11"	TEMPERED. LEFT & RIGHT BASES SHOW SIGNS OF ROT. FRAME IS 1X OVER 2X CONSTRUCTION.
C	1'-2"	8'-11"	THE BASE HAS ROT AND THE TRIM IS WARPED AROUND THE ENTIRE WINDOW.
D	4'-0"	2'-0"	DOUBLE PANED AND DOUBLE SILL WINDOW. THERE WERE NO SIGNS OF MOISTURE DAMAGE. NOT ORIGINAL.
E	4'-0"	2'-0"	DOUBLE PANED AND DOUBLE SILL WINDOW. THERE WERE NO SIGNS OF MOISTURE DAMAGE. NOT ORIGINAL.
F	4'-0"	2'-0"	DOUBLE PANED AND DOUBLE SILL WINDOW. THERE WERE NO SIGNS OF MOISTURE DAMAGE. NOT ORIGINAL.
G	4'-9"	3'-3"	STAINING ON SKYLIGHT FRAME.
H	2'-0"	8'-11	BASE APPEARS TO BE NEW. THERE IS NEW SPRAY FOAM AND EVIDENCE OF ROT AND STAINING.
J	5'-2"	1'-6"	SKYLIGHT SHOWS SOME SIGNS OF STAINING AT METAL FRAME.
K	4'-11"	8'-10"	TEMPERED. WATER STAINS AT BASE AND ROTTEN STUDS.
L	4'-10"	8'-10"	TEMPERED. WATER STAINS AT BASE AND ROTTEN STUDS.
M	5'-5"	8'-10"	TEMPERED. WATER STAINS AT BASE AND ROTTEN STUDS.
N	2'-0"	8'-10"	TEMPERED. THE FLOOR BOARDS ARE SPLIT AT THE WINDOW'S BASE, MOISTURE STAINS ARE APPARENT, & STRUCTURE IS ROTTEN.
P	2'-3"	8'-4"	BASE APPEARS TO BE NEW AND THERE IS ROT @ THE STRUCTURAL MEMBERS.
Q	2'-3"	8'-4"	BASE APPEARS TO BE NEW AND THERE IS ROT @ THE STRUCTURAL MEMBERS.
R	5'-3" 5'-1"	6'-10"	TRIANGULAR SKYLIGHT IN KITCHEN. SIGNS OF STAINING AT METAL FRAME.
S	1'-6"	4'-10"	EXTERIOR SHOWS SIGNS OF DETERIORATION.
T	1'-6"	4'-10"	EXTERIOR SHOWS SIGNS OF DETERIORATION.
U	1'-6"	4'-10"	EXTERIOR SHOWS SIGNS OF DETERIORATION.
V	2'-0"	8'-10"	NEW BASE WITH ROT AT STRUCTURE.
W	4'-6"	8'-11"	TEMPERED. NEW BASE WITH ROT AT STRUCTURE.
X	2'-0"	8'-11"	TEMPERED. THE BASE IS NEW, THE STRUCTURE HAS ROT, AND THE WINDOW FRAME IS WARPED AND CRACKED.
Y	1'-8"	8'-11"	SKYLIGHT. STAINED @ METAL FRAME, SEALS ARE INADEQUATE/POORLY REPAIRED, IMPROPER FLASHING, INCORRECT HEIGHT, & GLAZING IS DAMAGED/CRACKED.
Z	5'-0"	2'-8"	CLERESTORY WINDOW. ANDERSON DOUBLE PANED. NOT ORIGINAL.
AA	5'-0"	2'-8"	CLERESTORY WINDOW. ANDERSON DOUBLE PANED. NOT ORIGINAL.
AB	5'-0"	2'-8"	CLERESTORY WINDOW. ANDERSON DOUBLE PANED. NOT ORIGINAL.
AC	2'-3"	5'-0"	NO DAMAGED OBSERVED.
AD	2'-0"	8'-10"	TEMPERED. THE BASE HAS ROT AND IS WARPED WITH STAINS. THE BASE IS OLD AND HAS MOISTURE STAINS.
AE	4'-10"	1'-5"	SKYLIGHT. METAL FRAME SHOWS SIGNS OF STAINING FROM MOISTURE.
AF	4'-10"	1'-5"	SKYLIGHT. STAINED @ METAL FRAME, SEALS ARE INADEQUATE/POORLY REPAIRED, IMPROPER FLASHING, INCORRECT HEIGHT, & GLAZING IS DAMAGED/CRACKED.
AG	4'-10"	1'-5"	SKYLIGHT. STAINED @ METAL FRAME, SEALS ARE INADEQUATE/POORLY REPAIRED, IMPROPER FLASHING, INCORRECT HEIGHT, & GLAZING IS DAMAGED/CRACKED.
AH	4'-10"	1'-5"	SKYLIGHT. STAINED @ METAL FRAME, SEALS ARE INADEQUATE/POORLY REPAIRED, IMPROPER FLASHING, INCORRECT HEIGHT, & GLAZING IS DAMAGED/CRACKED.
AJ	4'-10"	1'-5"	SKYLIGHT. STAINED @ METAL FRAME, SEALS ARE INADEQUATE/POORLY REPAIRED, IMPROPER FLASHING, INCORRECT HEIGHT, & GLAZING IS DAMAGED/CRACKED.
AK	4'-10"	1'-5"	SKYLIGHT. STAINED @ METAL FRAME, SEALS ARE INADEQUATE/POORLY REPAIRED, IMPROPER FLASHING, INCORRECT HEIGHT, & GLAZING IS DAMAGED/CRACKED.
AL	5'-0"	6'-5"	EVIDENCE OF WATER INFILTRATION/STAINING, & SILL ROT.
AM	5'-0"	6'-5"	EVIDENCE OF WATER INFILTRATION/STAINING, & SILL ROT.
AN	5'-0"	6'-5"	EVIDENCE OF WATER INFILTRATION/STAINING, & SILL ROT.
AP	5'-0"	6'-5"	EVIDENCE OF WATER INFILTRATION/STAINING, & SILL ROT.
AQ	5'-0"	6'-5"	EVIDENCE OF WATER INFILTRATION/STAINING, & SILL ROT.
AR	2'-0"	8'-10"	TEMPERED. BASE IS OLD AND THERE IS ROT @ THE STRUCTURAL MEMBERS.
AS	4'-8"	8'-7"	ANDERSON DOUBLE PANE SMART SUN LOW E DOUBLE SILL WITH A NEW BASE. THERE ARE MOISTURE STAINS ON THE STRUCTURE. NOT ORIGINAL.
AT	4'-7"	8'-7"	ANDERSON DOUBLE PANE SMART SUN LOW E DOUBLE SILL WITH A NEW BASE. THERE ARE MOISTURE STAINS ON THE STRUCTURE. NOT ORIGINAL.
AU	1'-11"	8'-10"	TEMPERED. MOISTURE STAINS VISIBLE.
AV	2'-0"	8'-3"	TEMPERED & BASE HAS MOISTURE STAINS.
AW	7'-0"	7'-0"	NO DAMAGED OBSERVED.
AX	1'-10"	8'-10"	TEMPERED. SOME OF THE STRUCTURE HAS BEEN REPLACED, THE BASE IS NEW, AND THE LEFT STRUCTURAL MEMBER HAS ROT.
AY	4'-11 3/4"	8'-10"	NEW BASE AND TRIM. STAINS @ STRUCTURE, ROT AT STRUCTURE, SOME STRUCTURE IS MISSING, AND SEALANTS ARE MISSING.
AZ	5'-0"	8'-10"	TEMPERED. MOISTURE STAINED BASE AND STRUCTURE.

apollobbc
Better Building Consultants
Registration Number F-8506
Apollo BBC, Inc. | 5116 Blossomset, No. 292 | Bellaire, TX 77401 | 800.370.5456

Project: 1807 WROXTON
Client: Suzanne Bowers
Address: 1701 Herman Drive #3404
Houston, TX 77004

Date: 3-25-14
Apollo BBC Project Number: 13H-0250
Drawn By: Jason Cantu
Note:

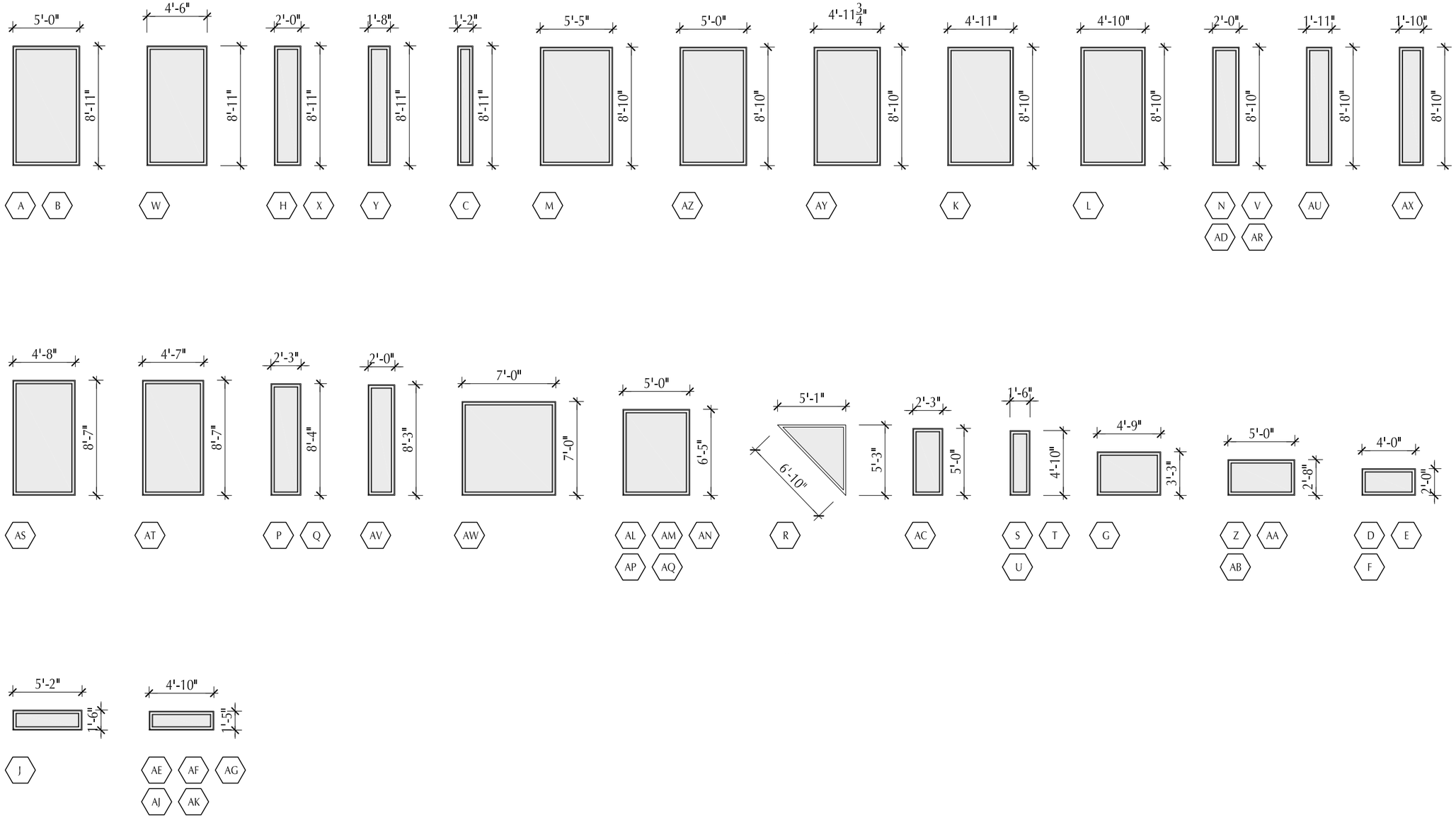
Revisions:	Date:

ALL IDEAS, PLANS AND SPECIFICATIONS CONTAINED IN THESE DRAWINGS ARE THE PROPERTY OF APOLLO BBC. THE PURCHASER'S RIGHT IS CONDITIONAL AND LIMITED TO CONSTRUCT A SINGLE PROJECT ON THE LOT STATED HEREIN, AND USE IS LIMITED SPECIFICALLY TO SUCH PROPERTY. THE USE OR REPRODUCTION OF THESE PLANS CONCERNING ANY OTHER CONSTRUCTION IS STRICTLY PROHIBITED WITHOUT WRITTEN PERMISSION OF APOLLO BBC. WRITTEN DIMENSIONS SHALL HAVE PRECEDENCE OVER SCALED DIMENSIONS. ALL PLANS DESIGNED FOR THE CONSTRUCTION OF THIS BUILDING SHOULD BE REVIEWED AND REFERRED TO BEFORE ANY CONSTRUCTION BEGINS. IN THE EVENT OF ANY CONFLICTS OR INCONSISTENCIES IN THE PLANS, APOLLO BBC SHOULD BE CONTACTED IMMEDIATELY. IF NO SUCH CONTACT IS MADE, THEN THE CONTRACTOR AND SUBCONTRACTORS, THEIR AGENTS AND EMPLOYEES, ASSUME ALL LIABILITY ASSOCIATED WITH SUCH CONFLICTS OR INCONSISTENCIES.

NOT FOR CONSTRUCTION

NOT FOR CONSTRUCTION

DOOR TYPES



01 WINDOW TYPES

1/8" = 1'-0"

apollobbc
Better Building Consultants

Registration Number F-8506

Apollo BBC, Inc. | 5116 Blossomset, No. 292 | Bellaire, TX 77401 | 800.370.5456

Project: 1807 WROXTON

Client: Suzanne Bowers

Address: 1701 Herman Drive #3404
Houston, TX 77004

Date:	3-25-14
Apollo BBC, Project Number:	13H-0250
Drawn By:	Jason Cantu
Note:	

Revisions:	Date:

ALL IDEAS, PLANS AND SPECIFICATIONS CONTAINED IN THESE DRAWINGS ARE THE PROPERTY OF APOLLO BBC. THE PURCHASER'S RIGHT IS CONDITIONAL AND LIMITED TO CONSTRUCT A SINGLE PROJECT ON THE LOT STATED HEREIN, AND USE IS LIMITED SPECIFICALLY TO SUCH PROPERTY. THE USE OR REPRODUCTION OF THESE PLANS CONCERNING ANY OTHER CONSTRUCTION IS STRICTLY PROHIBITED WITHOUT WRITTEN PERMISSION OF APOLLO BBC. WRITTEN DIMENSIONS SHALL HAVE PRECEDENCE OVER SCALED DIMENSIONS. ALL PLANS DESIGNED FOR THE CONSTRUCTION OF THIS BUILDING SHOULD BE REVIEWED AND REFERRED TO BEFORE ANY CONSTRUCTION BEGINS. IN THE EVENT OF ANY CONFLICTS OR INCONSISTENCIES IN THE PLANS, APOLLO BBC SHOULD BE CONTACTED IMMEDIATELY. IF NO SUCH CONTACT IS MADE, THEN THE CONTRACTOR AND SUBCONTRACTORS, THEIR AGENTS AND EMPLOYEES, ASSUME ALL LIABILITY ASSOCIATED WITH SUCH CONFLICTS OR INCONSISTENCIES.

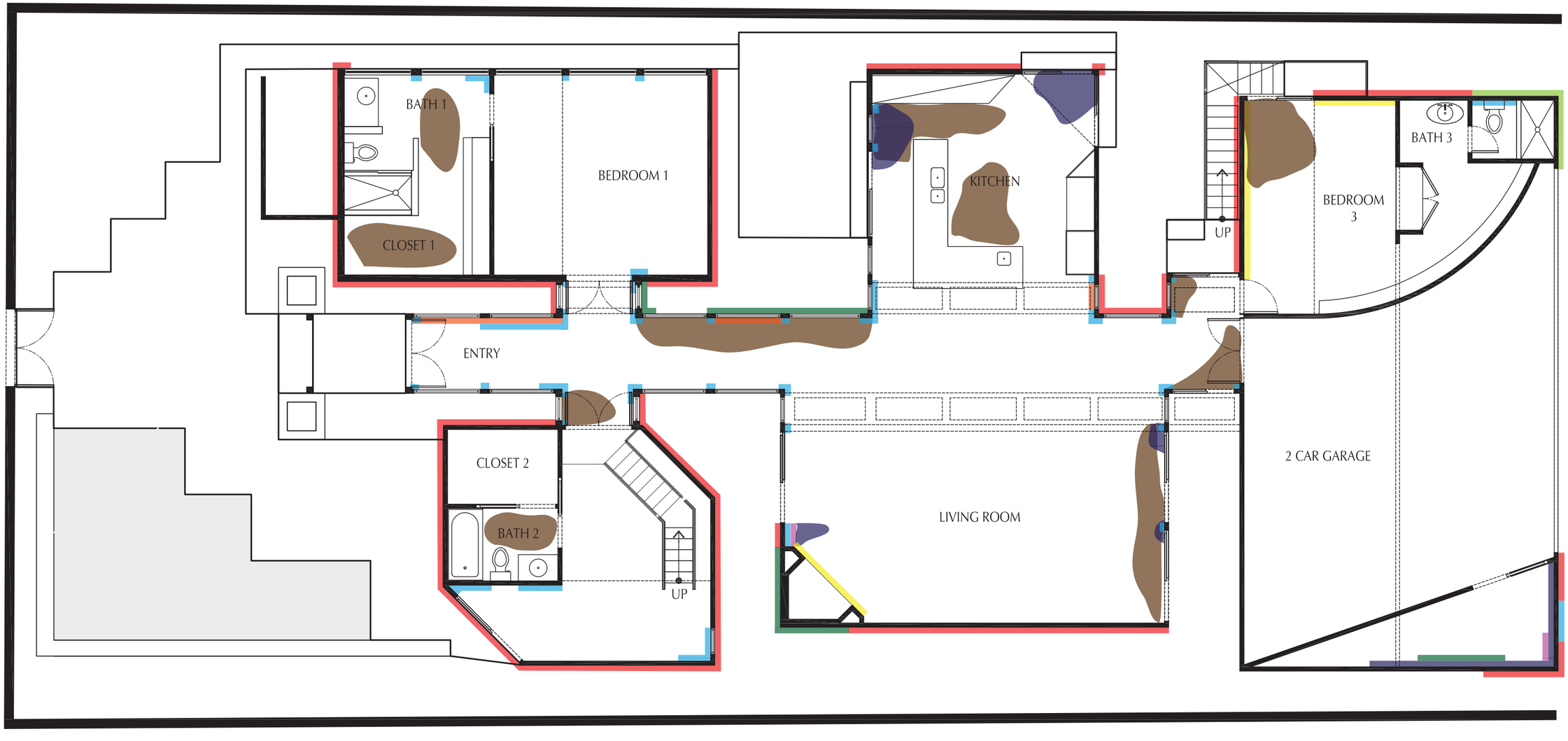
NOT FOR CONSTRUCTION

NOT FOR CONSTRUCTION

WINDOW TYPES

CONDITION LEGEND

- EVIDENCE OF REPAIRS TO EXTERIOR ENVELOPE
- EVIDENCE OF INTERIOR WALL REPAIR: WOOD
- BIOLOGICAL GROWTH
- EVIDENCE OF POSSIBLE GYPSUM WALLBOARD REPAIRS AT INTERIOR WALLS
- WOOD WARPED OR SPLITTING (FLOORING)
- EVIDENCE OF POSSIBLE MOISTURE DAMAGE: ROT
- EVIDENCE OF POSSIBLE MOISTURE DAMAGE: STAINING
- EVIDENCE OF POSSIBLE MOISTURE DAMAGE: GYPSUM WALLBOARD DECOMPOSITION
- LOSS OF MATERIAL



NORTH

01 FIRST FLOOR CONDITION PLAN
1/8" = 1'-0"

apollobbc
Better Building Consultants
Registration Number F-8506
Apollo BBC, Inc. | 5116 Blossomdell, No. 292 | Bellaire, TX 77401 | 800.370.5456

Project: 1807 WROXTON
Client: Suzanne Bowers
Address: 1701 Herman Drive #3404
Houston, TX 77004

Date:	3-25-14
Apollo BBC Project Number:	13H-0250
Drawn By:	Jason Cantu
Note:	
Revisions:	Date:

ALL IDEAS, PLANS AND SPECIFICATIONS CONTAINED IN THESE DRAWINGS ARE THE PROPERTY OF APOLLO BBC. THE PURCHASER'S RIGHT IS CONDITIONAL AND LIMITED TO CONSTRUCT A SINGLE PROJECT ON THE LOT STATED HEREIN, AND USE IS LIMITED SPECIFICALLY TO SUCH PROPERTY. THE USE OR REPRODUCTION OF THESE PLANS CONCERNING ANY OTHER CONSTRUCTION IS STRICTLY PROHIBITED WITHOUT WRITTEN PERMISSION OF APOLLO BBC. WRITTEN DIMENSIONS SHALL HAVE PRECEDENCE OVER SCALED DIMENSIONS. ALL PLANS DESIGNED FOR THE CONSTRUCTION OF THIS BUILDING SHOULD BE REVIEWED AND REFERRED TO BEFORE ANY CONSTRUCTION BEGINS. IN THE EVENT OF ANY CONFLICTS OR INCONSISTENCIES IN THE PLANS, APOLLO BBC SHOULD BE CONTACTED IMMEDIATELY. IF NO SUCH CONTACT IS MADE, THEN THE CONTRACTOR AND SUBCONTRACTORS, THEIR AGENTS AND EMPLOYEES, ASSUME ALL LIABILITY ASSOCIATED WITH SUCH CONFLICTS OR INCONSISTENCIES.

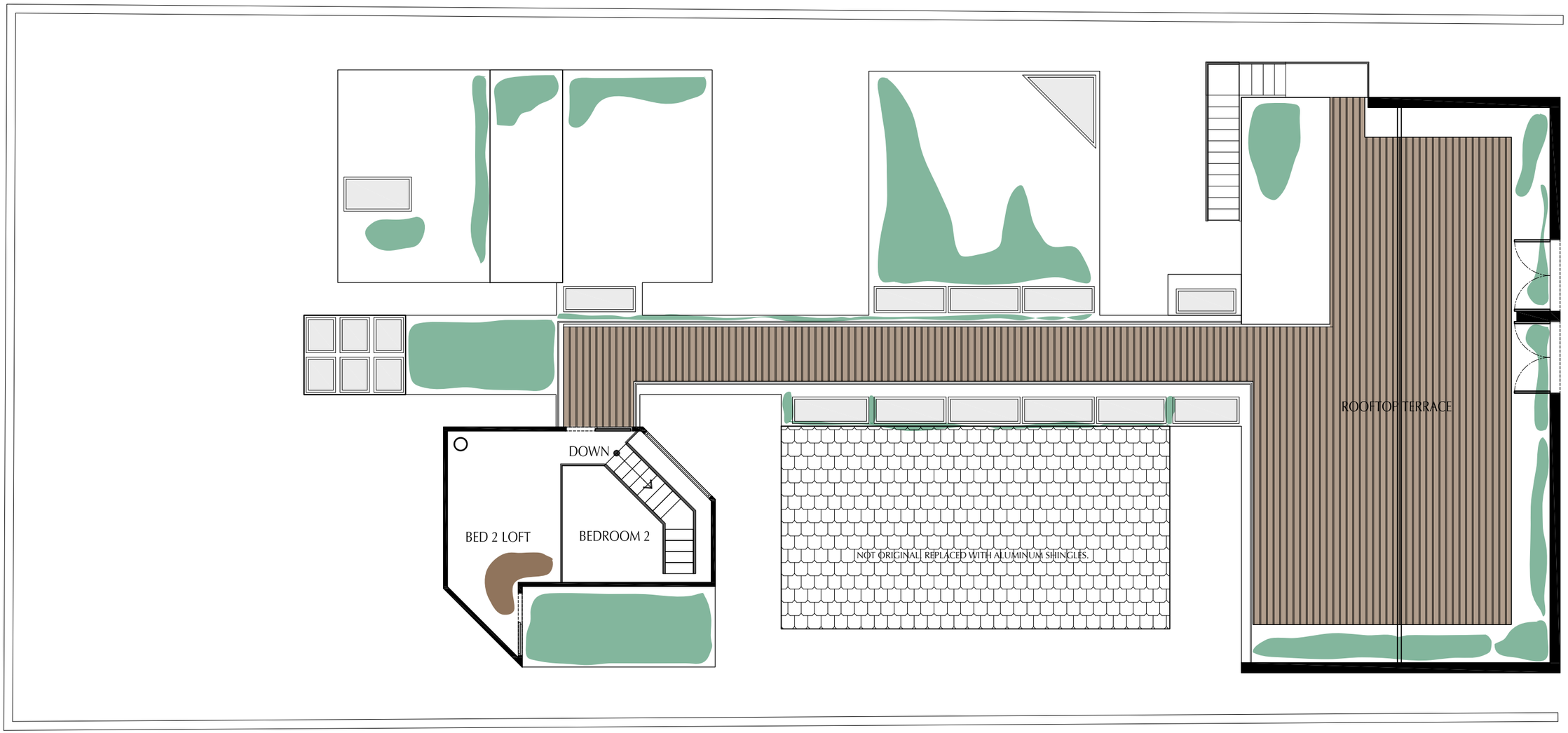
NOT FOR CONSTRUCTION

NOT FOR CONSTRUCTION

FIRST FLOOR

CONDITION LEGEND

- EVIDENCE OF REPAIRS TO EXTERIOR ENVELOPE
- EVIDENCE OF INTERIOR WALL REPAIR: WOOD
- BIOLOGICAL GROWTH
- EVIDENCE OF POSSIBLE GYPSUM WALLBOARD REPAIRS AT INTERIOR WALLS
- WOOD WARPED OR SPLITTING (FLOORING)
- EVIDENCE OF POSSIBLE MOISTURE DAMAGE: ROT
- EVIDENCE OF POSSIBLE MOISTURE DAMAGE: STAINING
- EVIDENCE OF POSSIBLE MOISTURE DAMAGE: GYPSUM WALLBOARD DECOMPOSITION
- LOSS OF MATERIAL



NORTH

01 SECOND FLOOR / ROOF CONDITION PLAN
1/8" = 1'-0"

apollobbc
Better Building Consultants
Registration Number F-8506
Apollo BBC, Inc. | 5116 Blossomset, No. 282 | Bellaire, TX 77401 | 800.370.5456

Project: 1807 WROXTON
Client: Suzanne Bowers
Address: 1701 Herman Drive #3404
Houston, TX 77004

Date:	3-25-14
Apollo BBC Project Number:	13H-0250
Drawn By:	Jason Cantu
Note:	
Revisions:	Date:

ALL IDEAS, PLANS AND SPECIFICATIONS CONTAINED IN THESE DRAWINGS ARE THE PROPERTY OF APOLLO BBC. THE PURCHASER'S RIGHT IS CONDITIONAL AND LIMITED TO CONSTRUCT A SINGLE PROJECT ON THE LOT STATED HEREIN, AND UNLESS LIMITED SPECIFICALLY TO SUCH PROPERTY. THE USE OR REPRODUCTION OF THESE PLANS CONCERNING ANY OTHER CONSTRUCTION IS STRICTLY PROHIBITED WITHOUT WRITTEN PERMISSION OF APOLLO BBC. WRITTEN DIMENSIONS SHALL HAVE PRECEDENCE OVER SCALED DIMENSIONS. ALL PLANS DESIGNED FOR THE CONSTRUCTION OF THIS BUILDING SHOULD BE REVIEWED AND REFERRED TO BEFORE ANY CONSTRUCTION BEGINS. IN THE EVENT OF ANY CONFLICTS OR INCONSISTENCIES IN THE PLANS, APOLLO BBC SHOULD BE CONTACTED IMMEDIATELY. IF NO SUCH CONTACT IS MADE, THEN THE CONTRACTOR AND SUBCONTRACTORS, THEIR AGENTS AND EMPLOYEES, ASSUME ALL LIABILITY ASSOCIATED WITH SUCH CONFLICTS OR INCONSISTENCIES.

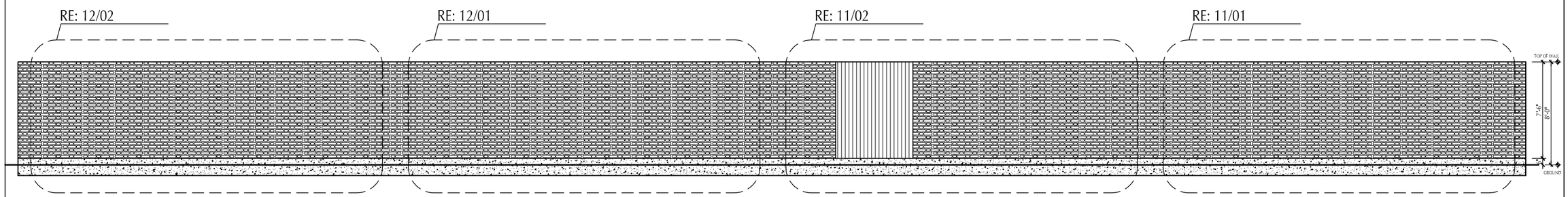
NOT FOR CONSTRUCTION

NOT FOR CONSTRUCTION

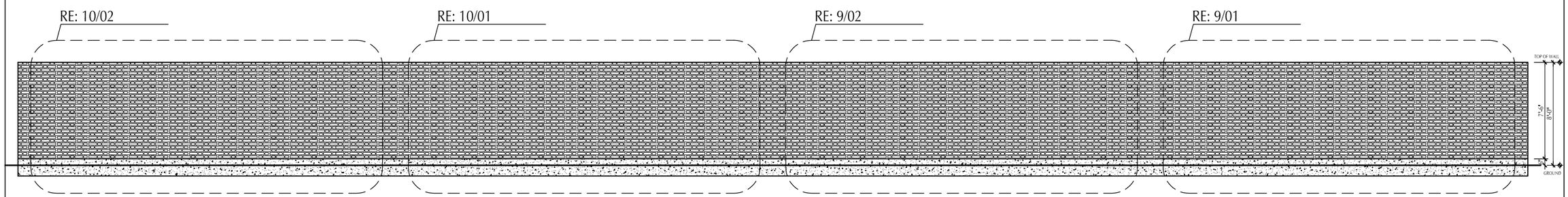
SECOND FLOOR

CONDITION LEGEND

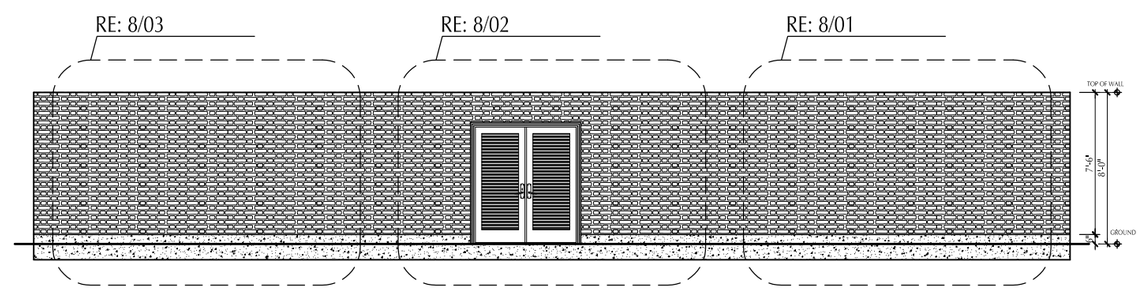
- BIOLOGICAL GROWTH
- MORTAR LOSS
- DEEP HOLES
- VEGETATION
- CRACKS



03 WEST WALL
1/8" = 1'-0"



02 EAST WALL
1/8" = 1'-0"



01 NORTH WALL
1/8" = 1'-0"

apollobbc
Better Building Consultants
Registration Number F-8506
Apollo BBC, Inc. | 5116 Blossomset, No. 282 | Bellaire, TX 77401 | 800.370.5456

Project: 1807 WROXTON
Client: Suzanne Bowers
Address: 1701 Herman Drive #3404
Houston, TX 77004

Date:	3-25-14
Apollo BBC Project Number:	13H-0250
Drawn By:	Jason Cantu
Date:	
Revisions:	Date:

ALL IDEAS, PLANS AND SPECIFICATIONS CONTAINED IN THESE DRAWINGS ARE THE PROPERTY OF APOLLO BBC. THE PURCHASER'S RIGHT IS CONDITIONAL AND LIMITED TO CONSTRUCT A SINGLE PROJECT ON THE LOT STATED HEREIN, AND USE IS LIMITED SPECIFICALLY TO SUCH PROPERTY. THE USE OR REPRODUCTION OF THESE PLANS CONCERNING ANY OTHER CONSTRUCTION IS STRICTLY PROHIBITED WITHOUT WRITTEN PERMISSION OF APOLLO BBC. WRITTEN DIMENSIONS SHALL HAVE PRECEDENCE OVER SCALED DIMENSIONS. ALL PLANS DESIGNED FOR THE CONSTRUCTION OF THIS BUILDING SHOULD BE REVIEWED AND REFERRED TO BEFORE ANY CONSTRUCTION BEGINS. IN THE EVENT OF ANY CONFLICTS OR INCONSISTENCIES IN THE PLANS, APOLLO BBC SHOULD BE CONTACTED IMMEDIATELY. IF NO SUCH CONTACT IS MADE, THEN THE CONTRACTOR AND SUBCONTRACTORS, THEIR AGENTS AND EMPLOYEES, ASSUME ALL LIABILITY ASSOCIATED WITH SUCH CONFLICTS OR INCONSISTENCIES.

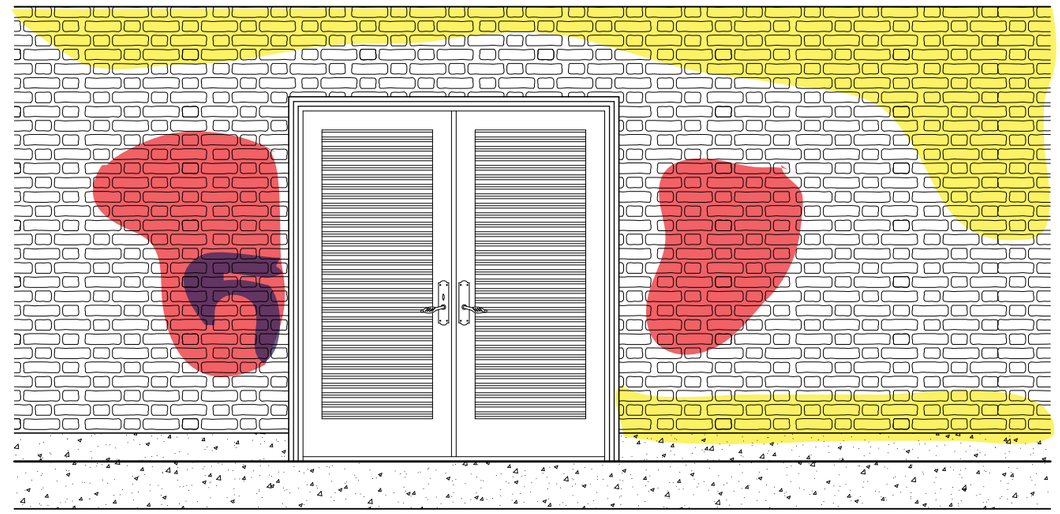
NOT FOR CONSTRUCTION

NOT FOR CONSTRUCTION

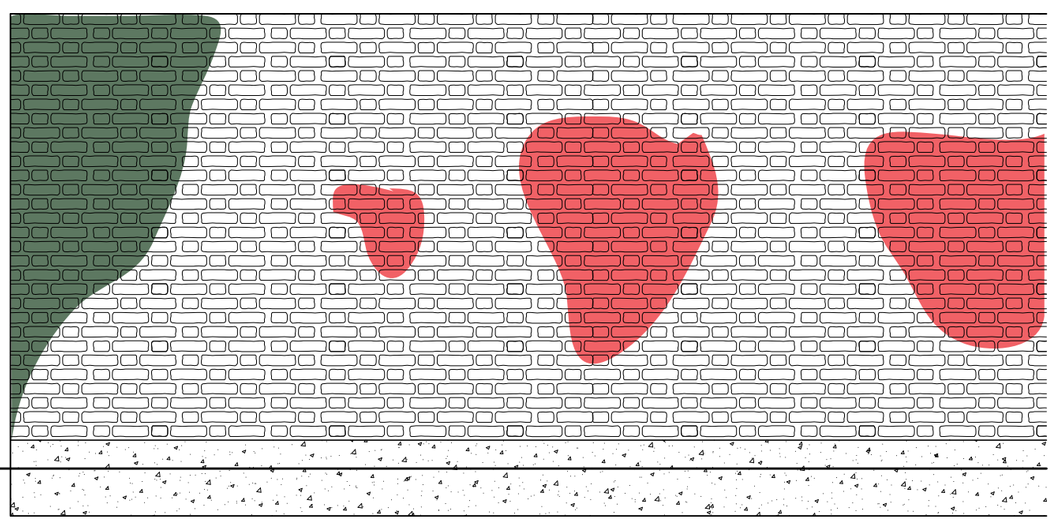
WALL CONDITION KEY

CONDITION LEGEND

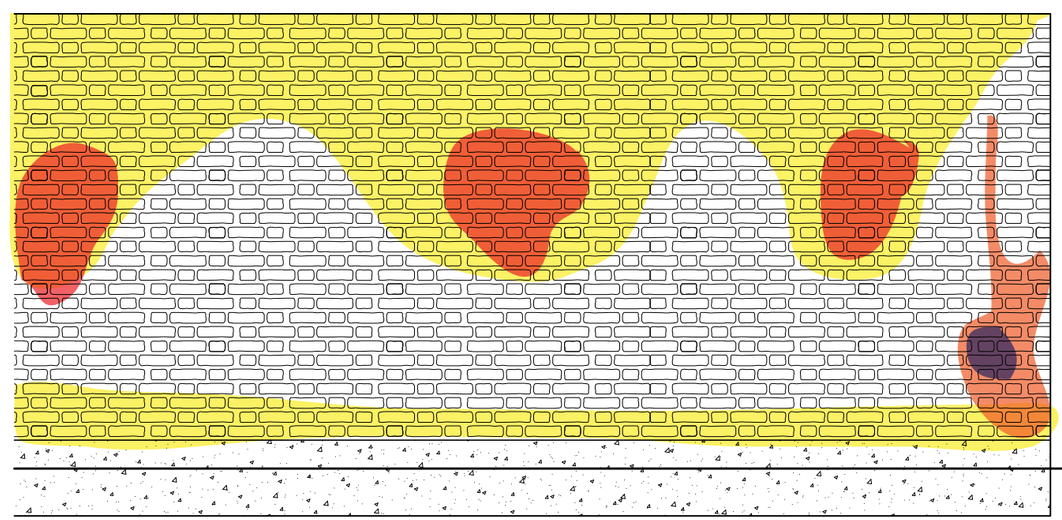
- BIOLOGICAL GROWTH
- MORTAR LOSS
- DEEP HOLES
- VEGETATION
- CRACKS



02 NORTH WALL SECTION B
3/8" = 1'-0"



03 NORTH WALL SECTION C
3/8" = 1'-0"



01 NORTH WALL SECTION A
3/8" = 1'-0"

apollobbc
Better Building Consultants
Registration Number F-8506
Apollo BBC, Inc. | 5116 Blossomset, No. 292 | Bellaire, TX 77401 | 800.370.5456

Project: 1807 WROXTON
Client: Suzanne Bowers
Address: 1701 Herman Drive #3404
Houston, TX 77004

Date:	3-25-14
Apollo BBC Project Number:	13H-0250
Drawn By:	Jason Cantu
Note:	
Revisions:	Date:

ALL IDEAS, PLANS AND SPECIFICATIONS CONTAINED IN THESE DRAWINGS ARE THE PROPERTY OF APOLLO BBC. THE PURCHASER RIGHT IS CONDITIONAL AND LIMITED TO CONSTRUCT A SINGLE PROJECT ON THE LOT STATED HEREIN, AND USE IS LIMITED SPECIFICALLY TO SUCH PROPERTY. THE USE OR REPRODUCTION OF THESE PLANS CONCERNING ANY OTHER CONSTRUCTION IS STRICTLY PROHIBITED WITHOUT WRITTEN PERMISSION OF APOLLO BBC. WRITTEN DIMENSIONS SHALL HAVE PRECEDENCE OVER SCALED DIMENSIONS. ALL PLANS DRAWING FOR THE CONSTRUCTION OF THIS BUILDING SHOULD BE REVIEWED AND REFERRED TO BEFORE ANY CONSTRUCTION BEGINS. IN THE EVENT OF ANY CONFLICTS OR INCONSISTENCIES IN THE PLANS, APOLLO BBC SHOULD BE CONTACTED IMMEDIATELY. IF NO SUCH CONTACT IS MADE, THEN THE CONTRACTOR AND SUBCONTRACTORS, THEIR AGENTS AND EMPLOYEES, ASSUME ALL LIABILITY ASSOCIATED WITH SUCH CONFLICTS OR INCONSISTENCIES.

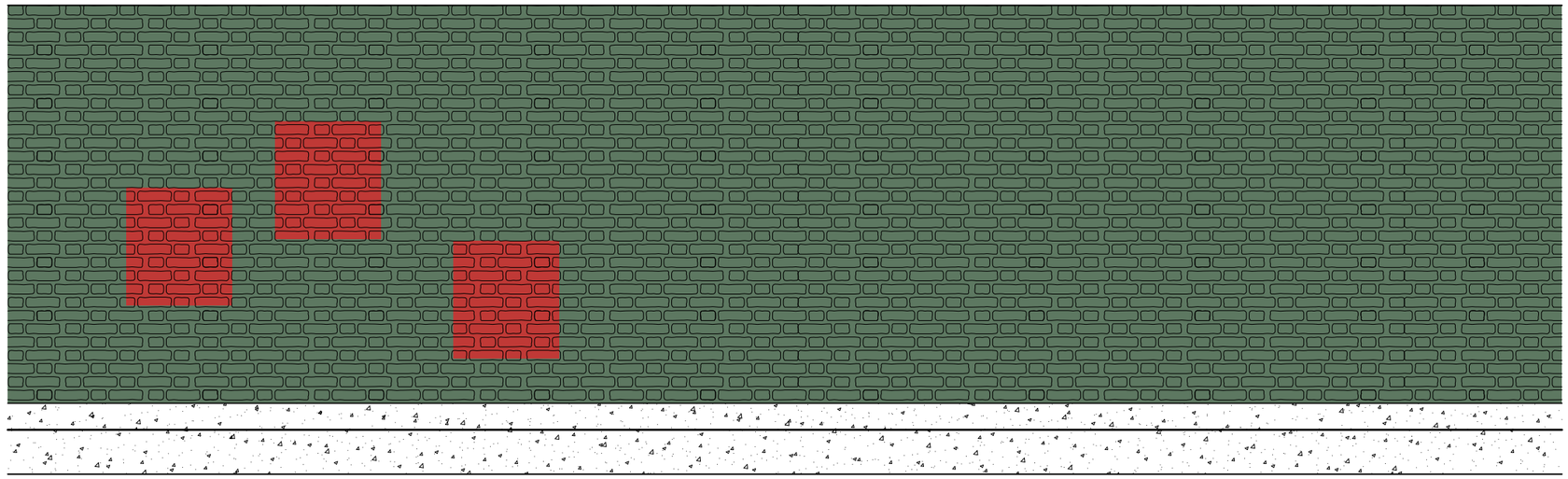
NOT FOR CONSTRUCTION

NOT FOR CONSTRUCTION

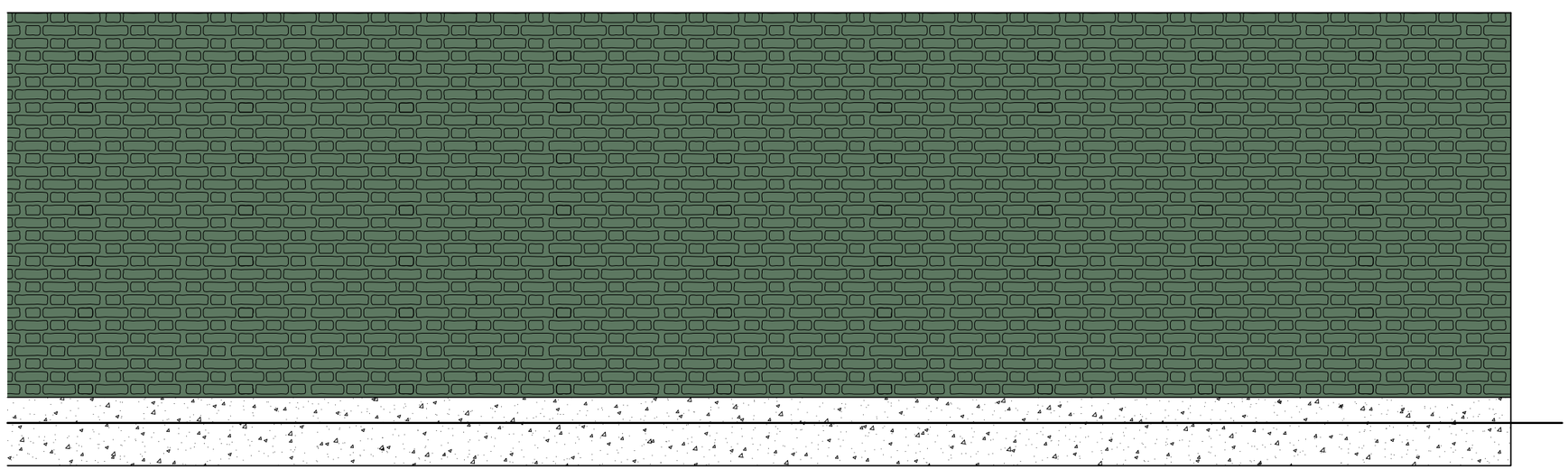
NORTH WALL

CONDITION LEGEND

- BIOLOGICAL GROWTH
- MORTAR LOSS
- DEEP HOLES
- VEGETATION
- CRACKS



02 EAST WALL SECTION B
3/8" = 1'-0"



01 EAST WALL SECTION A
3/8" = 1'-0"

apollobbc
Better Building Consultants
Registration Number F-8506
Apollo BBC, Inc. | 5116 Blossomset, No. 292 | Bellaire, TX 77401 | 800.370.5456

Project: 1807 WROXTON
Client: Suzanne Bowers
Address: 1701 Herman Drive #3404
Houston, TX 77004

Date:	3-25-14
Apollo BBC Project Number:	13H-0250
Drawn By:	Jason Cantu
Note:	
Revisions:	Date:

ALL IDEAS, PLANS AND SPECIFICATIONS CONTAINED IN THESE DRAWINGS ARE THE PROPERTY OF APOLLO BBC. THE PURCHASER RIGHT IS CONDITIONAL AND LIMITED TO CONSTRUCT A SINGLE PROJECT ON THE LOT STATED HEREIN, AND ONLY LIMITED SPECIFICALLY TO SUCH PROPERTY. THE USE OR REPRODUCTION OF THESE PLANS CONCERNING ANY OTHER CONSTRUCTION IS STRICTLY PROHIBITED WITHOUT WRITTEN PERMISSION OF APOLLO BBC. WRITTEN DIMENSIONS SHALL HAVE PRECEDENCE OVER SCALED DIMENSIONS. ALL PLANS DESIGNED FOR THE CONSTRUCTION OF THIS BUILDING SHOULD BE REVIEWED AND REFERRED TO BEFORE ANY CONSTRUCTION BEGINS. IN THE EVENT OF ANY CONFLICTS OR INCONSISTENCIES IN THE PLANS, APOLLO BBC SHOULD BE CONTACTED IMMEDIATELY. IF NO SUCH CONTACT IS MADE, THEN THE CONTRACTOR AND SUBCONTRACTORS, THEIR AGENTS AND EMPLOYEES, ASSUME ALL LIABILITY ASSOCIATED WITH SUCH CONFLICTS OR INCONSISTENCIES.

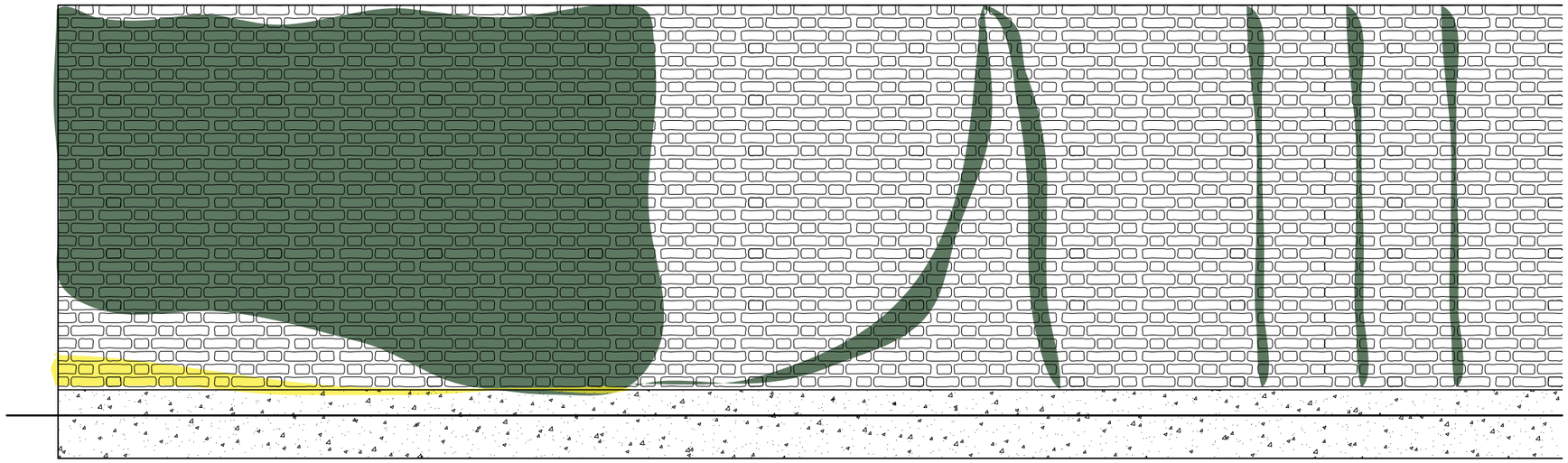
NOT FOR CONSTRUCTION

NOT FOR CONSTRUCTION

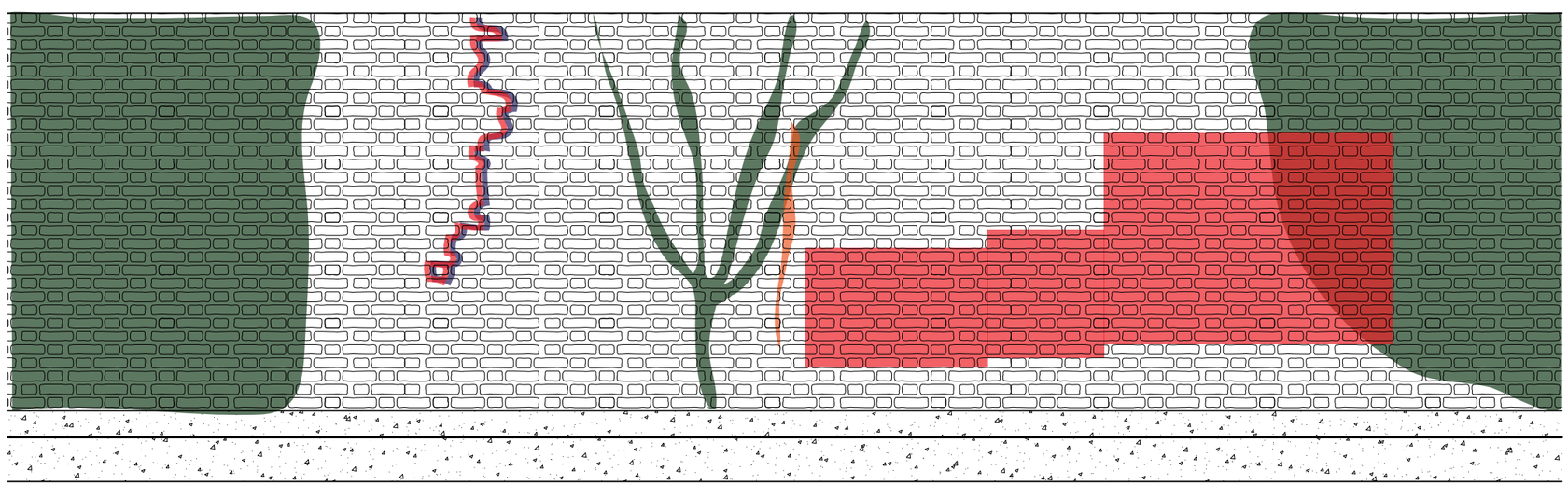
EAST WALL

CONDITION LEGEND

- BIOLOGICAL GROWTH
- MORTAR LOSS
- DEEP HOLES
- VEGETATION
- CRACKS



02 EAST WALL SECTION D
3/8" = 1'-0"



01 EAST WALL SECTION C
3/8" = 1'-0"

apollobbc
Better Building Consultants
Registration Number F-8506
Apollo BBC, Inc. | 5116 Blossomset, No. 292 | Bellaire, TX 77401 | 800.370.5456

Project: 1807 WROXTON
Client: Suzanne Bowers
Address: 1701 Herman Drive #3404
Houston, TX 77004

Date:	3-25-14
Apollo BBC Project Number:	13H-0250
Drawn By:	Jason Cantu
Note:	
Revisions:	Date:

ALL IDEAS, PLANS AND SPECIFICATIONS CONTAINED IN THESE DRAWINGS ARE THE PROPERTY OF APOLLO BBC. THE PURCHASER RIGHT IS CONDITIONAL AND LIMITED TO CONSTRUCT A SINGLE PROJECT ON THE LOT STATED HEREIN, AND USE IS LIMITED SPECIFICALLY TO SUCH PROPERTY. THE USE OR REPRODUCTION OF THESE PLANS CONCERNING ANY OTHER CONSTRUCTION IS STRICTLY PROHIBITED WITHOUT WRITTEN PERMISSION OF APOLLO BBC. WRITTEN DIMENSIONS SHALL HAVE PRECEDENCE OVER SCALED DIMENSIONS. ALL PLANS DESIGNED FOR THE CONSTRUCTION OF THIS BUILDING SHOULD BE REVIEWED AND REFERRED TO BEFORE ANY CONSTRUCTION BEGINS. IN THE EVENT OF ANY CONFLICTS OR INCONSISTENCIES IN THE PLANS, APOLLO BBC SHOULD BE CONTACTED IMMEDIATELY. IF NO SUCH CONTACT IS MADE, THEN THE CONTRACTOR AND SUBCONTRACTORS, THEIR AGENTS AND EMPLOYEES, ASSUME ALL LIABILITY ASSOCIATED WITH SUCH CONFLICTS OR INCONSISTENCIES.

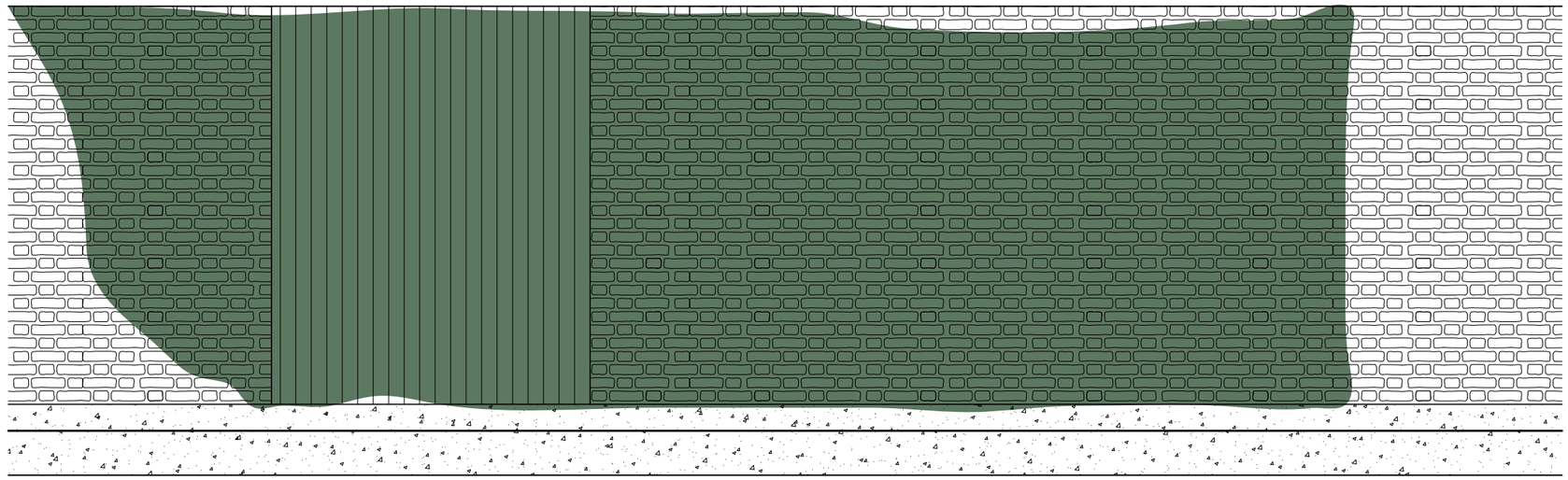
NOT FOR CONSTRUCTION

NOT FOR CONSTRUCTION

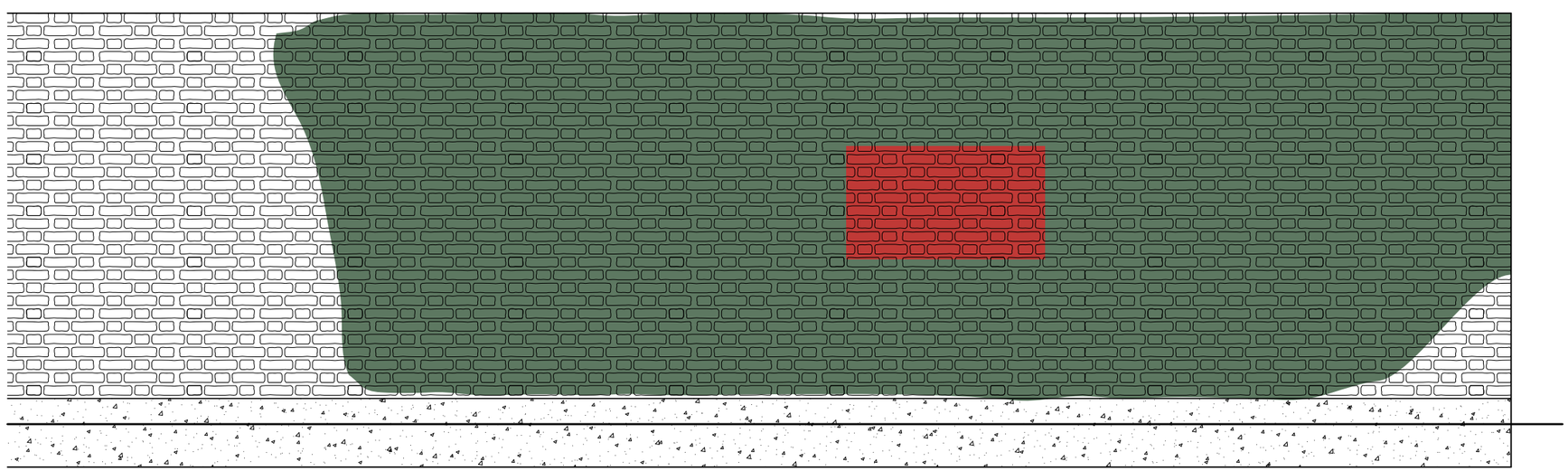
EAST WALL

CONDITION LEGEND

- BIOLOGICAL GROWTH
- MORTAR LOSS
- DEEP HOLES
- VEGETATION
- CRACKS



02 WEST WALL SECTION B
3/8" = 1'-0"



01 WEST WALL SECTION A
3/8" = 1'-0"

apollobbc
Better Building Consultants
Registration Number F-8506
Apollo BBC, Inc. | 5116 Blossomset, No. 292 | Bellaire, TX 77401 | 800.370.5456

Project: 1807 WROXTON
Client: Suzanne Bowers
Address: 1701 Herman Drive #3404
Houston, TX 77004

Date:	3-25-14
Apollo BBC Project Number:	13H-0250
Drawn By:	Jason Cantu
Note:	
Revisions:	Date:

ALL IDEAS, PLANS AND SPECIFICATIONS CONTAINED IN THESE DRAWINGS ARE THE PROPERTY OF APOLLO BBC. THE PURCHASER'S RIGHT IS CONDITIONAL AND LIMITED TO CONSTRUCT A SINGLE PROJECT ON THE LOT STATED HEREIN, AND USE IS LIMITED SPECIFICALLY TO SUCH PROPERTY. THE USE OR REPRODUCTION OF THESE PLANS CONCERNING ANY OTHER CONSTRUCTION IS STRICTLY PROHIBITED WITHOUT WRITTEN PERMISSION OF APOLLO BBC. WRITTEN DIMENSIONS SHALL HAVE PRECEDENCE OVER SCALED DIMENSIONS. ALL PLANS DRAWINGS FOR THE CONSTRUCTION OF THIS BUILDING SHOULD BE REVIEWED AND REFERRED TO BEFORE ANY CONSTRUCTION BEGINS. IN THE EVENT OF ANY CONFLICTS OR INCONSISTENCIES IN THE PLANS, APOLLO BBC SHOULD BE CONTACTED IMMEDIATELY. IF NO SUCH CONTACT IS MADE, THEN THE CONTRACTOR AND SUBCONTRACTORS, THEIR AGENTS AND EMPLOYEES, ASSUME ALL LIABILITY ASSOCIATED WITH SUCH CONFLICTS OR INCONSISTENCIES.

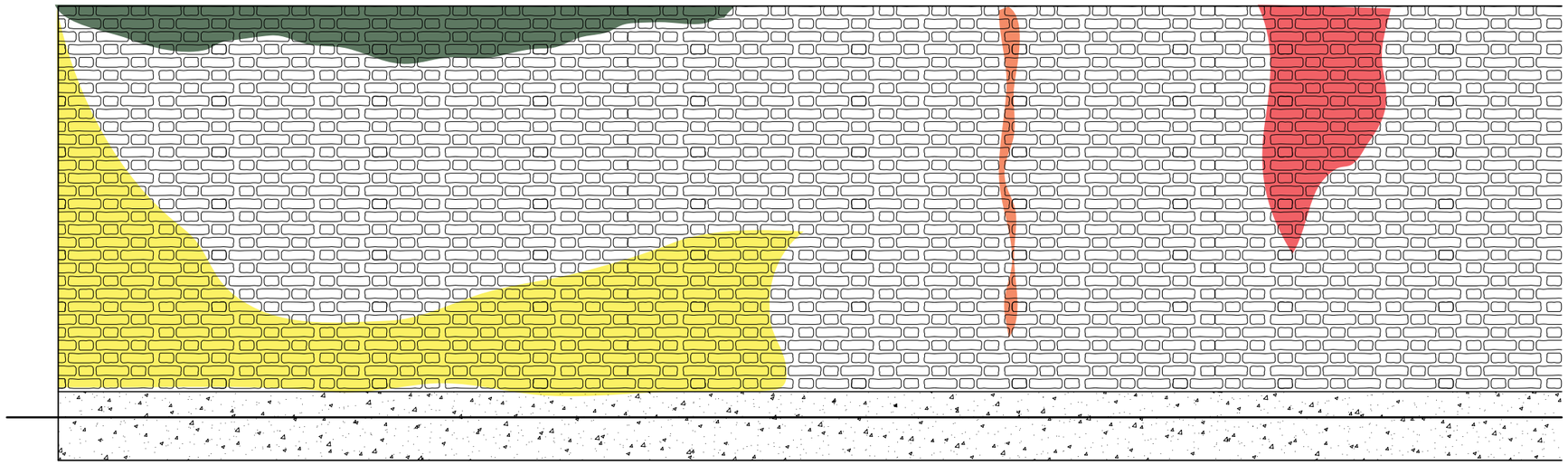
NOT FOR CONSTRUCTION

NOT FOR CONSTRUCTION

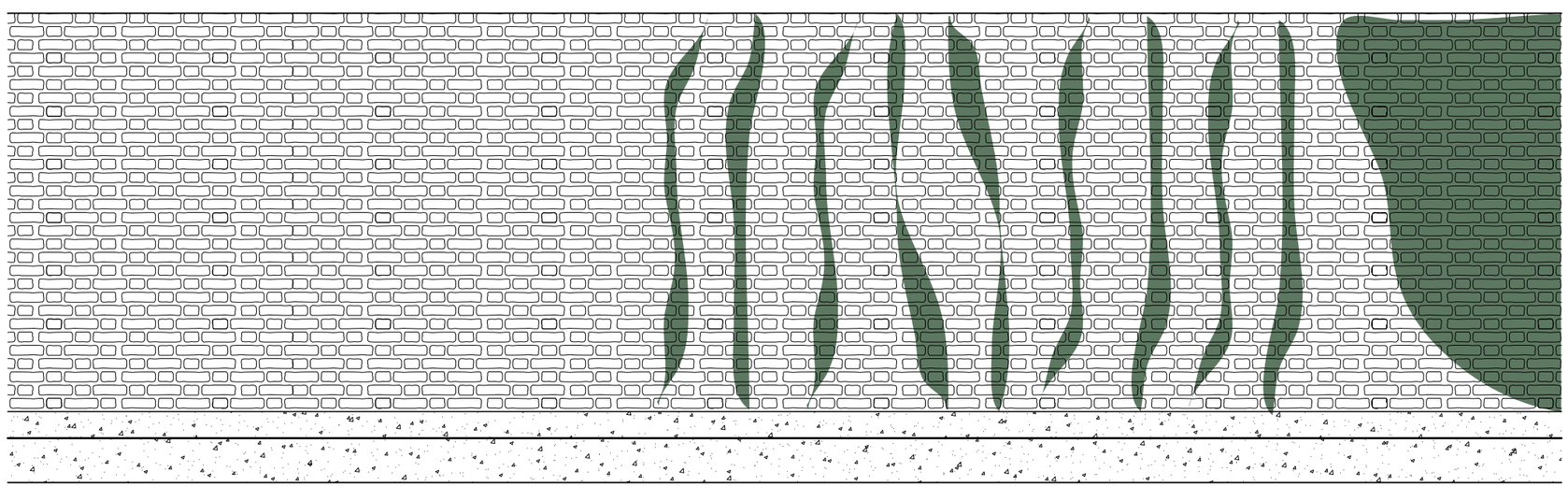
WEST WALL

CONDITION LEGEND

- BIOLOGICAL GROWTH
- MORTAR LOSS
- DEEP HOLES
- VEGETATION
- CRACKS



02 WEST WALL SECTION D
3/8" = 1'-0"



01 WEST WALL SECTION C
3/8" = 1'-0"

apollobbc
Better Building Consultants
Registration Number F-8506
Apollo BBC, Inc. | 5116 Blossomset, No. 292 | Bellaire, TX 77401 | 800.370.5456

Project: 1807 WROXTON

Client: Suzanne Bowers
Address: 1701 Herman Drive #3404
Houston, TX 77004

Date:	3-25-14
Apollo BBC Project Number:	13H-0250
Drawn By:	Jason Cantu
Note:	
Revisions:	Date:

ALL IDEAS, PLANS AND SPECIFICATIONS CONTAINED IN THESE DRAWINGS ARE THE PROPERTY OF APOLLO BBC. THE PURCHASER RIGHT IS CONDITIONAL AND LIMITED TO CONSTRUCT A SINGLE PROJECT ON THE LOT STATED HEREIN, AND USE IS LIMITED SPECIFICALLY TO SUCH PROPERTY. THE USE OR REPRODUCTION OF THESE PLANS CONCERNING ANY OTHER CONSTRUCTION IS STRICTLY PROHIBITED WITHOUT WRITTEN PERMISSION OF APOLLO BBC. WRITTEN DIMENSIONS SHALL HAVE PRECEDENCE OVER SCALED DIMENSIONS. ALL PLANS DESIGNED FOR THE CONSTRUCTION OF THIS BUILDING SHOULD BE REVIEWED AND REPORTED TO REPORT ANY CONSTRUCTION DEFECTS. IN THE EVENT OF ANY CONFLICTS OR INCONSISTENCIES IN THE PLANS, APOLLO BBC SHOULD BE CONTACTED IMMEDIATELY. IF NO SUCH CONTACT IS MADE, THEN THE CONTRACTOR AND SUBCONTRACTORS, THEIR AGENTS AND EMPLOYEES, ASSUME ALL LIABILITY ASSOCIATED WITH SUCH CONFLICTS OR INCONSISTENCIES.

NOT FOR CONSTRUCTION

NOT FOR CONSTRUCTION

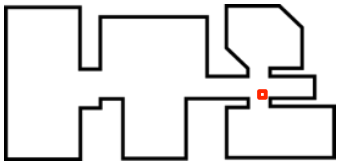
WEST WALL

Conditions Photo Survey

Evidence of repairs to exterior envelope:

Photo 1 – Diagonal siding pattern at roof does not match

Photo 2 – New diagonal siding at corner



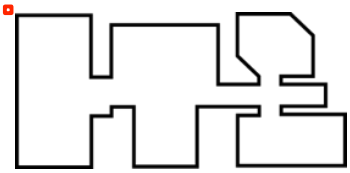


Photo 3 – New siding at sliding door

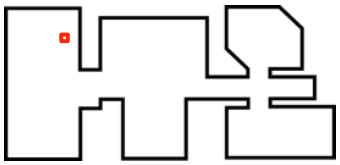


Photo 4 – New siding without trim at base

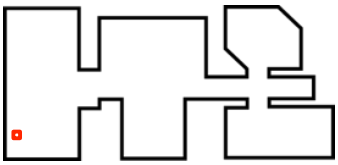


Photo 5 – New siding does not match near HVAC corner

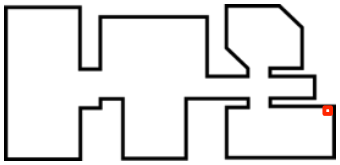


Photo 6 – New siding with signs of rot at base

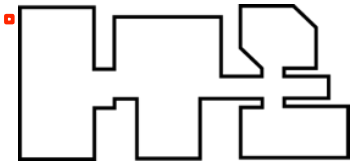


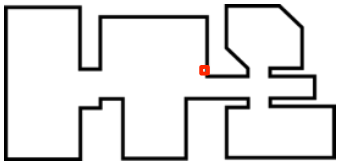
Photo 7 – New siding at garage corer

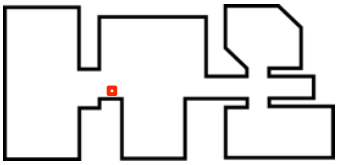
Photo 8 – New siding at garage door

Evidence of interior wall repair: wood

Photo 9 - Wood repair at main hall window

Photo 10 - Wood repair at kitchen window





Biological growth

Photo 11 – Bio growth at rooftop terrace

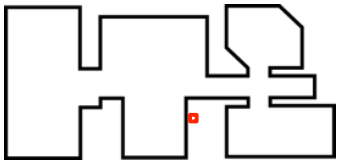
Photo 12 - Bio growth at wooden catwalk

Photo 13 – Bio growth at garage storage

Photo 14 - Bio growth at main hallway

Photo 15 - Bio growth at main hallway

Photo 16 - Bio growth at main hallway



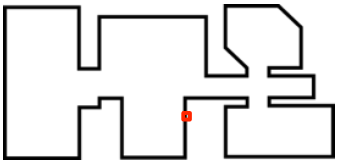
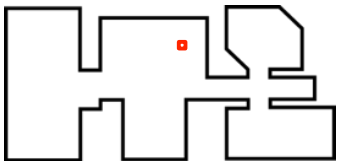
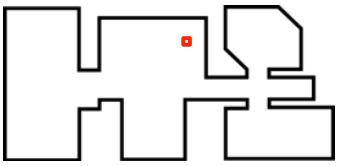


Photo 3 - Bio growth at chimney

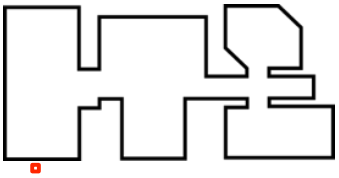
Photo 18 - Bio growth at chimney





Evidence of possible gyp board repairs at interior walls

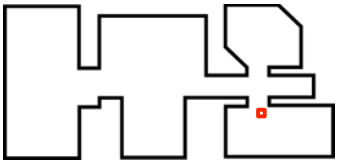
Photo 19 - Gyp board repairs at rear bedroom



Wood split or warped (flooring)

Photo 20 - Splitting, warping, and stains at front bedroom

Photo 21 - Splitting and warping at main hallway



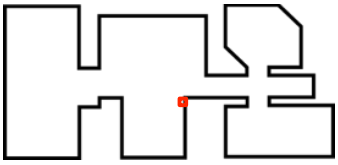
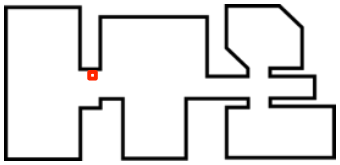


Photo 22 - Splitting, warping, and stains at living room thresholds

Photo 23 - Splitting, warping, and stains at rear sliding door



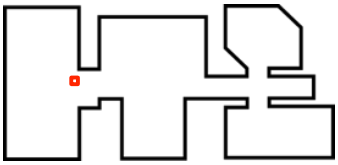
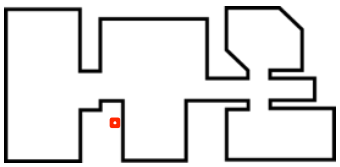


Photo 24 - Splitting and warping at kitchen



Evidence of possible moisture damage: rot

Photo 4 - Rot at garage

Photo 26 - Rot at garage

Photo 27 - Rot at A/C plenum

Photo 58 - Rot at hallway framing

Photo 29 - Rot outside hallway window

Photo 6 - Rot at living room sliding door next to chimney: view 1

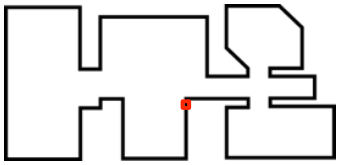


Photo 31 - Rot at living room sliding door next to chimney: view 2

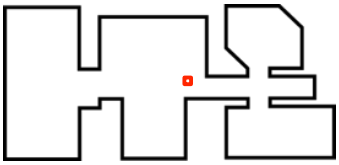
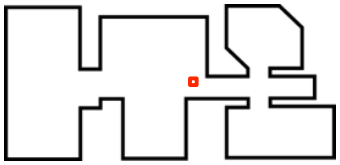


Photo 32 - Rot at glass hyphen next to hexagonal room



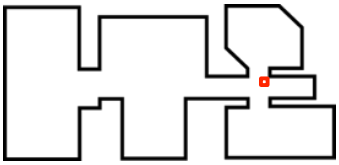


Photo 33 - Rot at rear bathroom: view 1

Photo 34 - Rot at rear bathroom: view 2

Photo 35 - Rot at master bath sliding door

Photo 36 - Rot at master bath sliding door

Evidence of possible moisture damage: staining

Photo 37 - Stains at garage storage

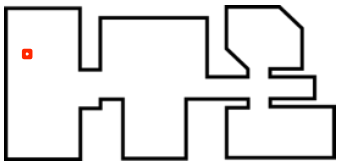
Photo 38- Stains at garage storage

Photo 39 - Stains at garage storage

Photo 40 - Stains at garage storage

Photo 7 - Stains at garage storage

Photo 42 - Stains at living room sliding doors



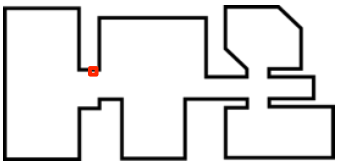
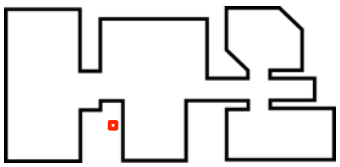


Photo 43 - Stains at kitchen

Photo 44 - Stains at master bath sliding doors



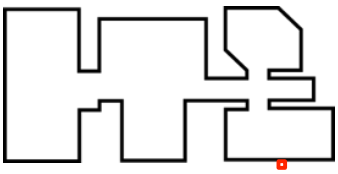
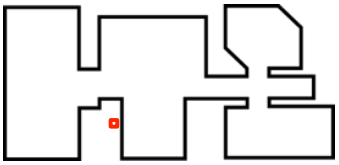


Photo 45 - Stains at baster bath walls

Photo 46 - Stains at master bath sliding door

Evidence of possible moisture damage: gyp board decomposition

Photo 8 - Gyp board decomposition at kitchen



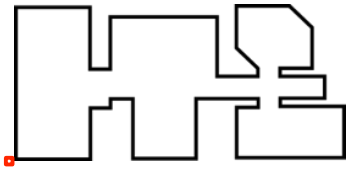
Loss of material

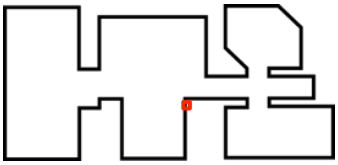
Photo 48- Horizontal siding replaced at rear

Photo 49 - Horizontal siding missing by garage

Photo 50 - Horizontal siding replaced at rear: view 2

Photo 51 - Wood missing and painted at hallway window

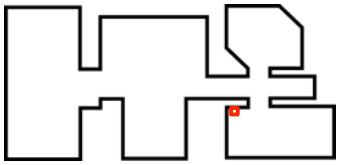




Additional Examples of Damage

Photo 52 – Damage at interior column

Photo 53 – Damage at interior column



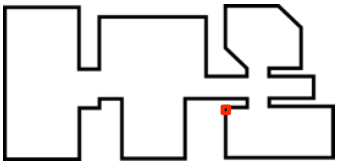
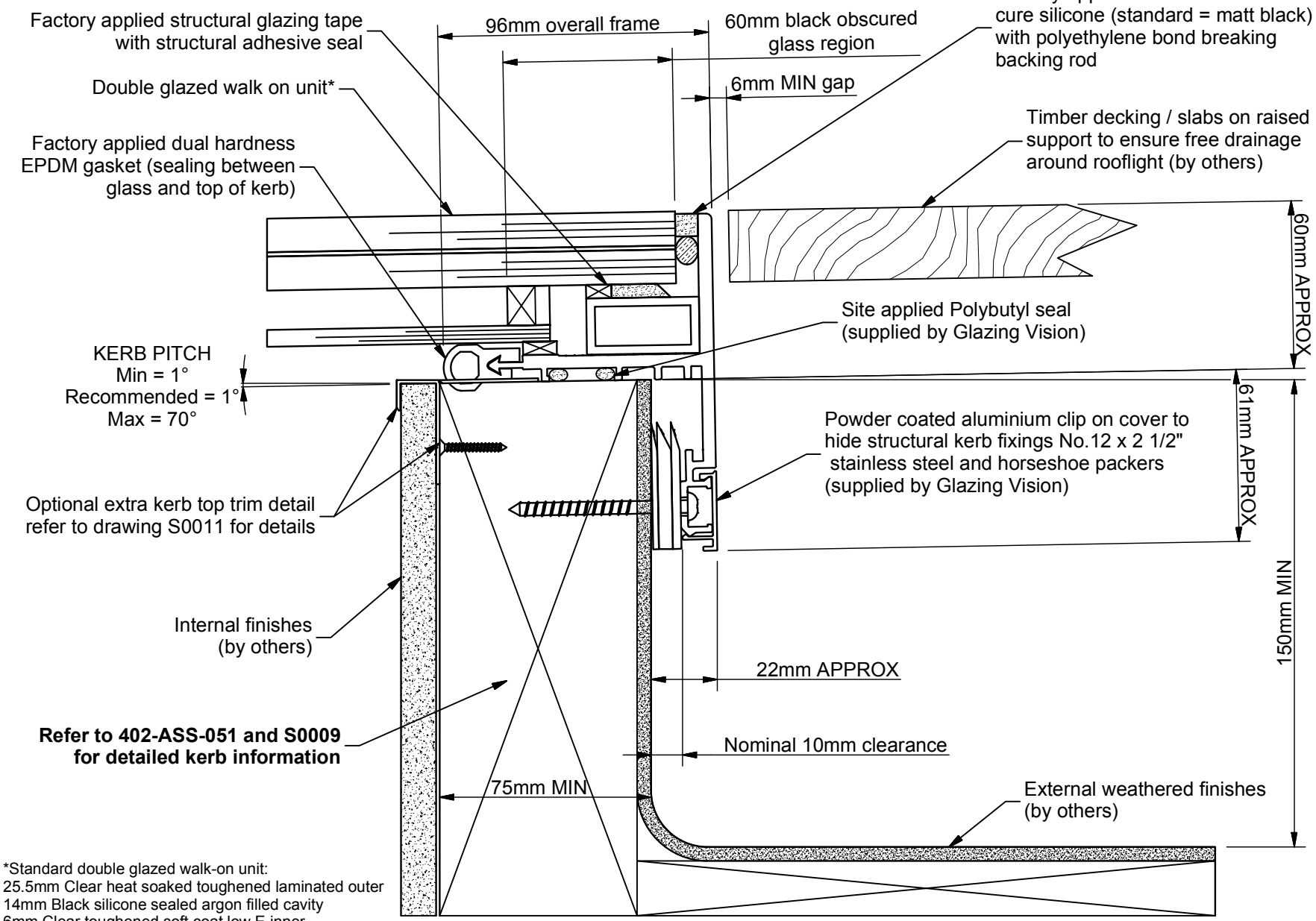


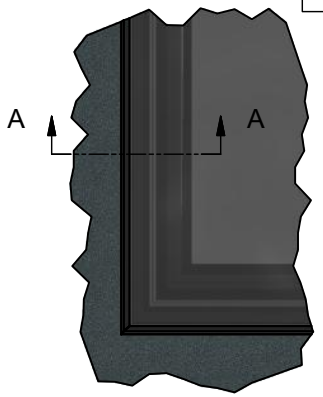
Photo 54 – Damage at interior column

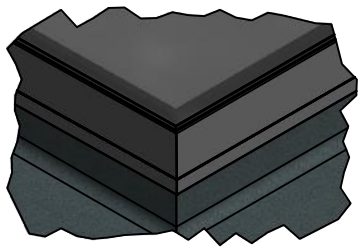
Photo 55 – Damage to clerestory window sill

A4

Section A-A (Scale 1 : 2)







*Standard double glazed walk-on unit:
25.5mm Clear heat soaked toughened laminated outer
14mm Black silicone sealed argon filled cavity
6mm Clear toughened soft coat low E inner

GLAZING VISION

Saw Mills Road
Diss
Norfolk
IP22 4RG

Tel: +44 (0)333 8000 881
Fax: +44 (0)333 8000 882
[redacted]
Website: www.glazing-vision.co.uk

IT IS GLAZING VISION'S POLICY TO CONTINUOUSLY DEVELOP AND IMPROVE OUR PRODUCTS. AND THEREFORE RESERVE THE RIGHT TO MODIFY OR CHANGE THE DETAIL DESIGN AT OUR DISCRETION AND WITHOUT PRIOR NOTICE.
THIS DRAWING IS COPYRIGHT AND THE SOLE PROPERTY OF GLAZING VISION LTD. THE DESIGNS/INFORMATION IT CONTAINS ARE PRIVATE AND CONFIDENTIAL. IT MUST NOT BE, COPIED, EXHIBITED OR COMMUNICATED TO THIRD PARTIES FOR ANY PURPOSE OTHER THAN THAT FOR WHICH IT WAS ISSUED WITHOUT THEIR WRITTEN PERMISSION.

Third angle projection unless otherwise noted.
Tolerances:
Whole numbers = ±1mm
One decimal place = ±0.5mm
Two decimal places = ±0.2mm
Angular = ±0.5 degree
IF IN DOUBT - ASK! DO NOT SCALE
Supplier to deburr & remove sharp corners

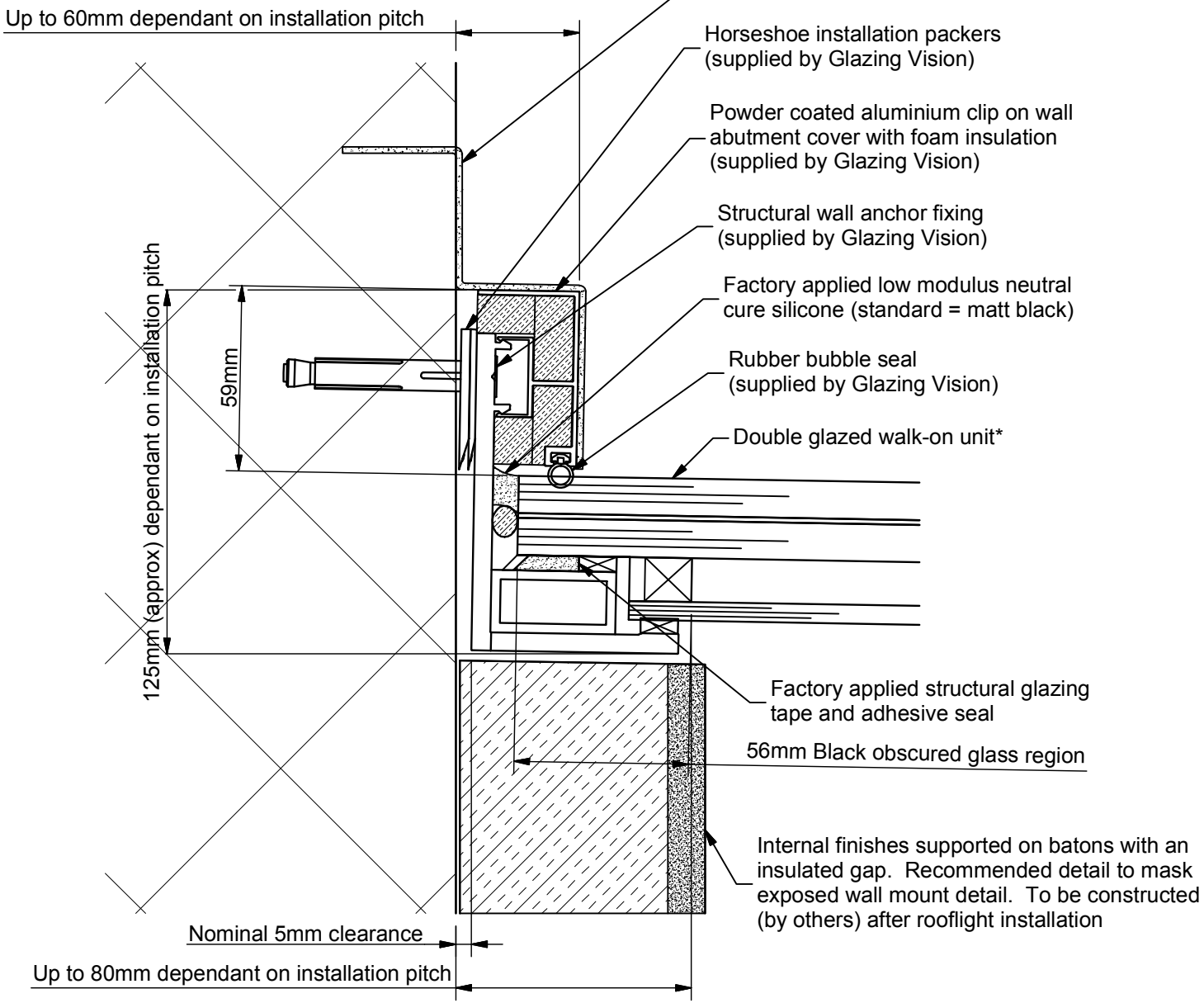
Rev	Revision Description	Drawn/ Date
N	Re-drawn and changed to new profile	James B 03.10.12
O	Amended to new standard glass specification for Eurocode compliance (NA BS EN 1991-1-1 2002)	PGW 08.08.13

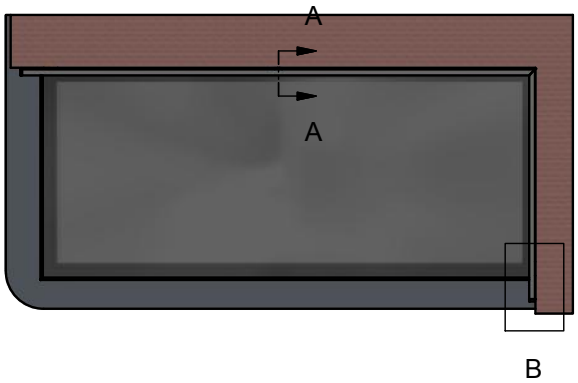
Product: 402 - GV Standard Flushglaze
Description: Walk on Flushglaze kerb mount detail
Materials: As above
Finish: Std = RAL7015 Grey matt
Weight: N/A
Quantity: N/A
Scale: 1:2 @ A4
Drawn By: JamesB
Drawn Date: 03.10.12
Drawing No: 402-ASS-003
Checked By:
Check Date:

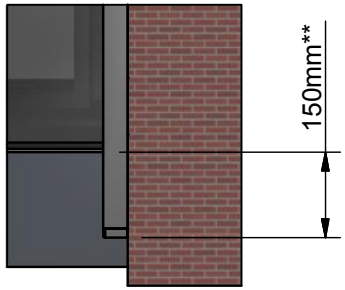
This is a standard drawing depecting 2-wall abutted configuration
Various configurations are available as standard

A4

Section A-A (Scale 1 : 2)







NOTE: Weathering flashing (by others) not shown above for clarity of Glazing Vision detail

*Standard double glazed walk on unit:
25.5mm Clear heat soaked toughened laminated outer
14mm Black silicone sealed argon filled cavity
6mm Clear toughened soft coat low E inner

Wall **must extend a minimum of 150mm beyond outside face of kerb to ensure correct weathering (see detail above)

GLAZING VISION

Saw Mills Road
Diss
Norfolk
IP22 4RG

Tel: +44 (0)333 8000 881
Fax: +44 (0)333 8000 882
[redacted]
Website: www.glazing-vision.co.uk

IT IS GLAZING VISION'S POLICY TO CONTINUOUSLY DEVELOP AND IMPROVE OUR PRODUCTS. AND THEREFORE RESERVE THE RIGHT TO MODIFY OR CHANGE THE DETAIL DESIGN AT OUR DISCRETION AND WITHOUT PRIOR NOTICE.
THIS DRAWING IS COPYRIGHT AND THE SOLE PROPERTY OF GLAZING VISION LTD. THE DESIGNS/INFORMATION IT CONTAINS ARE PRIVATE AND CONFIDENTIAL. IT MUST NOT BE, COPIED, EXHIBITED OR COMMUNICATED TO THIRD PARTIES FOR ANY PURPOSE OTHER THAN THAT FOR WHICH IT WAS ISSUED WITHOUT THEIR WRITTEN PERMISSION.

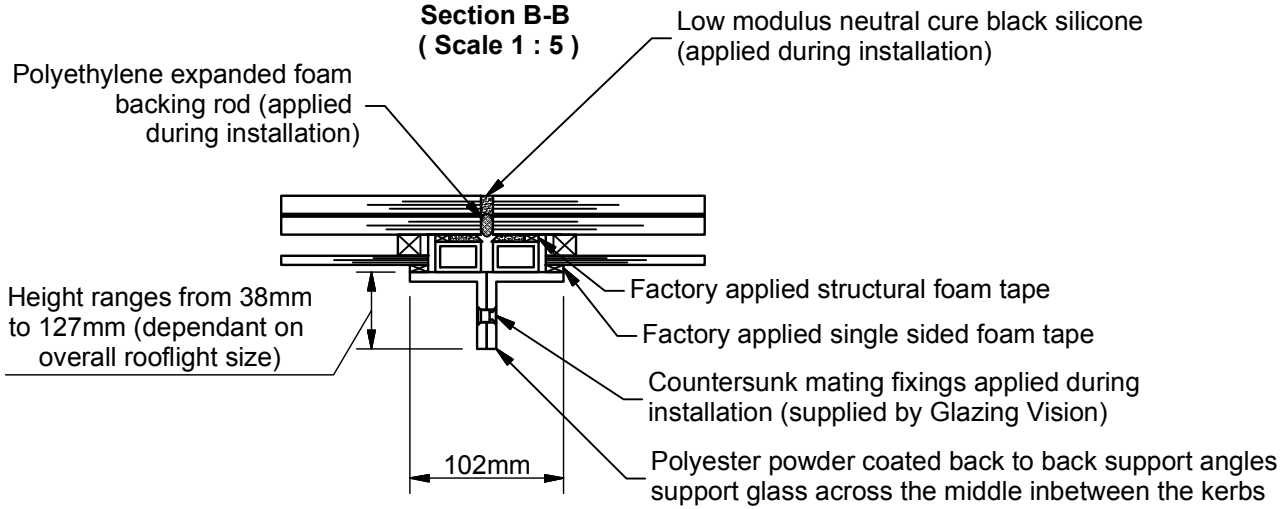
Third angle projection unless otherwise noted.
Tolerances:
Whole numbers = ±1mm
One decimal place = ±0.5mm
Two decimal places = ±0.2mm
Angular = ±0.5 degree
IF IN DOUBT - ASK! DO NOT SCALE
Supplier to deburr & remove sharp corners

Rev	Revision Description	Drawn/ Date
K	Re-drawn with new profile	JamesB 04.10.12
L	Amended to new standard glass specification for Eurocode compliance (NA BS EN 1991-1-1 2002)	PGW 08.08.13

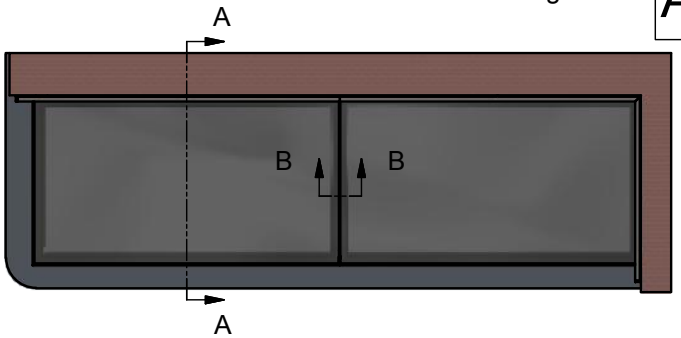
Product: 402 - GV Standard Flushglaze		**Checked By:**
Description: Walk-on Flushglaze wall mount detail (pitches up to 5 degrees)		
Materials: As above		**Check Date:**
Finish: Std RAL7015 Grey matt	**Drawn By:** JamesB	
Weight: N/A	**Drawn Date:** 04.10.12	
Quantity: N/A	**Drawing No:** 402-ASS-008	
Scale: 1:2 @ A4		

A4

Section B-B
(Scale 1 : 5)

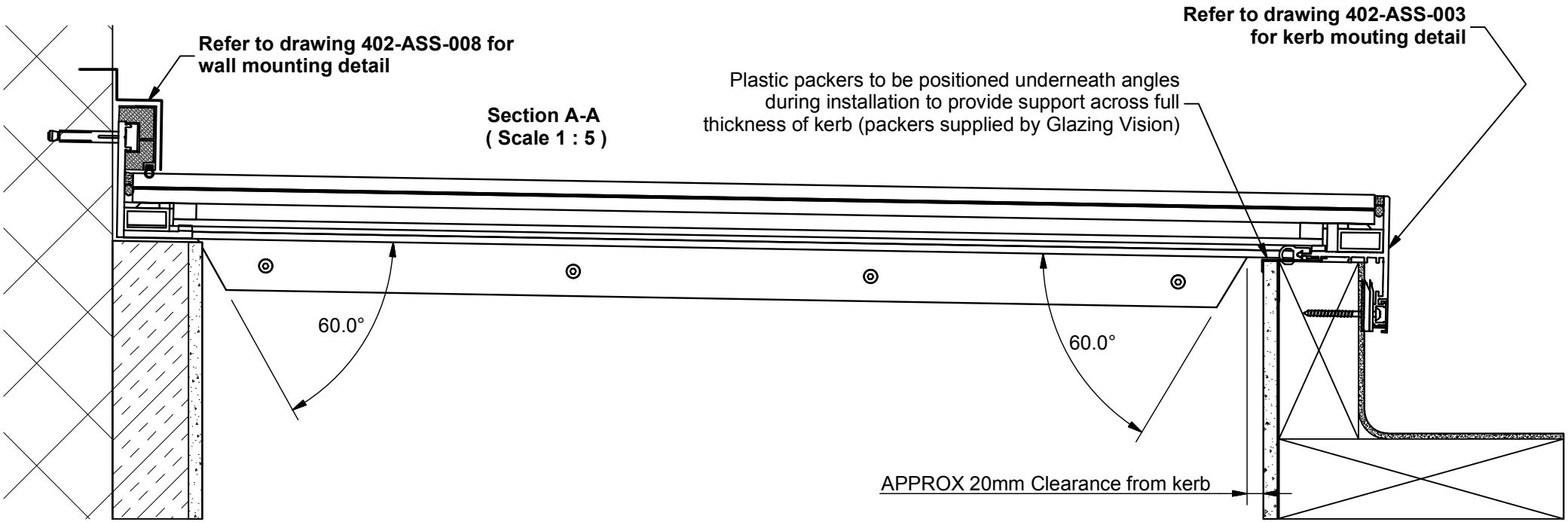


This view is of a 2-wall abutted configuration



NOTE: This is a standard reference drawing which includes both wall and kerb mounting details to illustrate the possible configurations for the Flushglaze range. It is not an order specific drawing and therefore does not reflect your specific order dimensions or configuration. Ensure you check your order confirmation meets the specifics of your order before signing.

Section A-A
(Scale 1 : 5)



GLAZING VISION

Saw Mills Road
Diss
Norfolk
IP22 4RG

Tel: +44 (0)333 8000 881
Fax: +44 (0)333 8000 882
[redacted]
Website: www.glazing-vision.co.uk

IT IS GLAZING VISION'S POLICY TO CONTINUOUSLY DEVELOP AND IMPROVE OUR PRODUCTS. AND THEREFORE RESERVE THE RIGHT TO MODIFY OR CHANGE THE DETAIL DESIGN AT OUR DISCRETION AND WITHOUT PRIOR NOTICE.
THIS DRAWING IS COPYRIGHT AND THE SOLE PROPERTY OF GLAZING VISION LTD. THE DESIGNS/INFORMATION IT CONTAINS ARE PRIVATE AND CONFIDENTIAL. IT MUST NOT BE, COPIED, EXHIBITED OR COMMUNICATED TO THIRD PARTIES FOR ANY PURPOSE OTHER THAN THAT FOR WHICH IT WAS ISSUED WITHOUT THEIR WRITTEN PERMISSION.

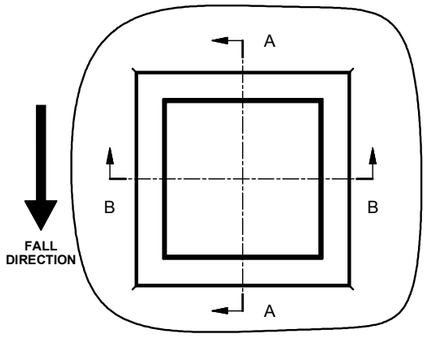
Third angle projection unless otherwise noted.
Tolerances:
Whole numbers = ±1mm
One decimal place = ±0.5mm
Two decimal places = ±0.2mm
Angular = ±0.5 degree
IF IN DOUBT - ASK! DO NOT SCALE
Supplier to deburr & remove sharp corners

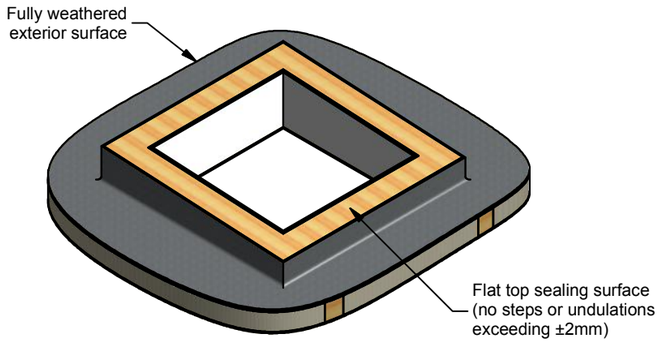
Rev	Revision Description	Drawn/ Date
L	Re-drawn and new profile	JamesB 10.10.12
M	Amended to new glass specification for Eurocode compliance (NA BS EN 1991-1-1 2002)	PGW 08.08.13

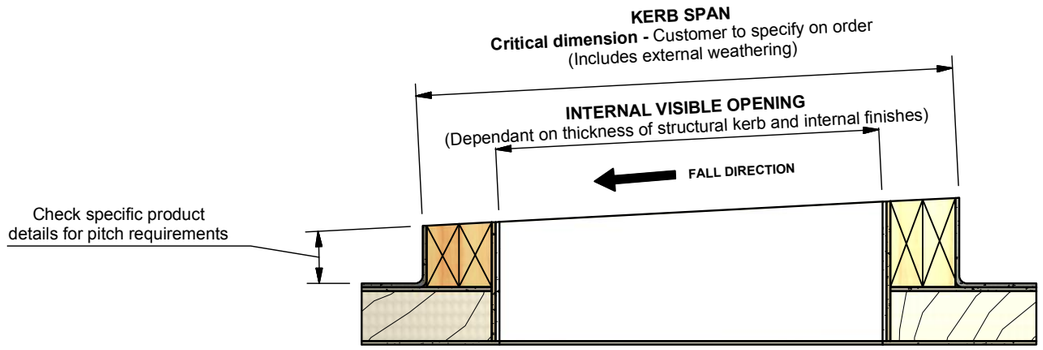
Product: 402- GV Standard Flushglaze
Description: Walk-on Flushglaze back to back detail
Materials: As shown
Finish: Standard = RAL7015 Grey
Weight: N/A
Quantity: N/A
Scale: 1 : 5 @ A4
Drawn By: JamesB
Drawn Date: 10.10.12
Drawing No: 402-ASS-016
Checked By:
Check Date:

Kerb mounting detail

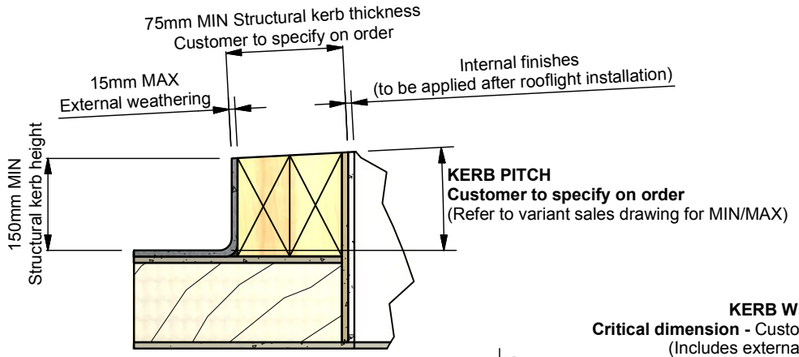
PLEASE NOTE: All of the kerb structure to be constructed by the customer. Refer to S0009 for other wall configurations and kerb pitches. If any variables do not match this standard detail, contact Glazing Vision.

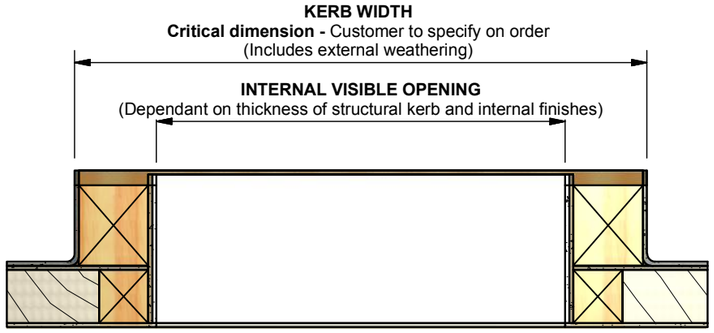






SECTION A-A (ENLARGED)

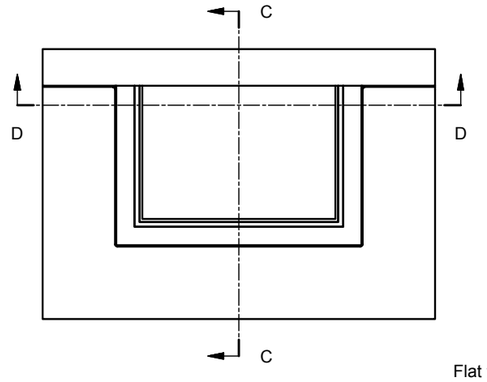


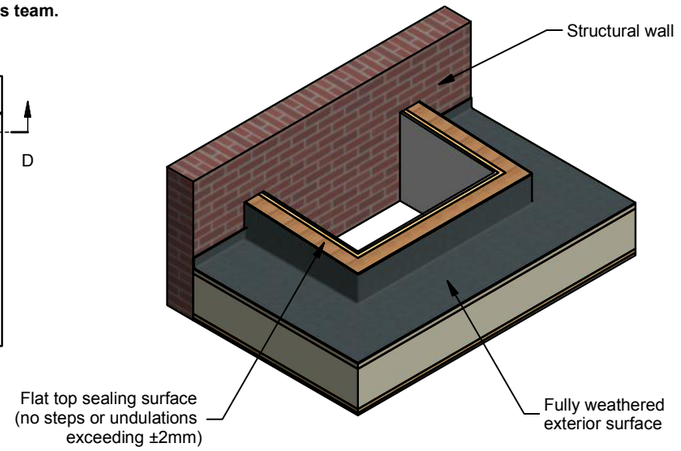


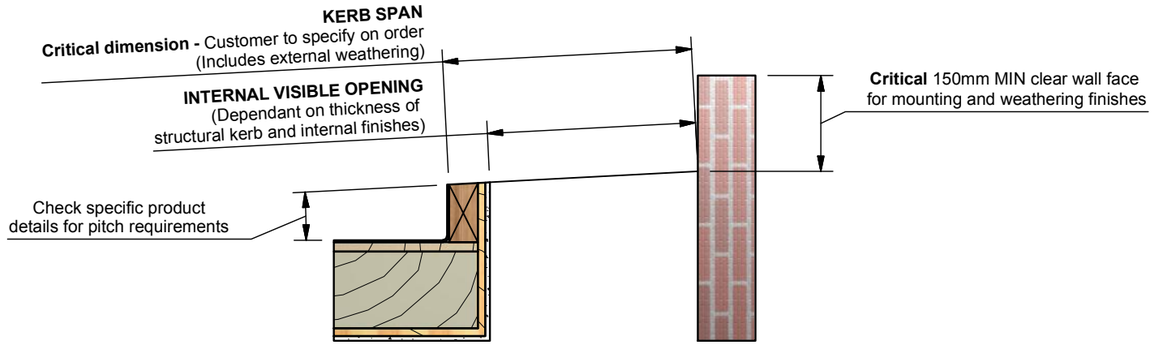
SECTION B-B (ENLARGED)

Wall mounting detail

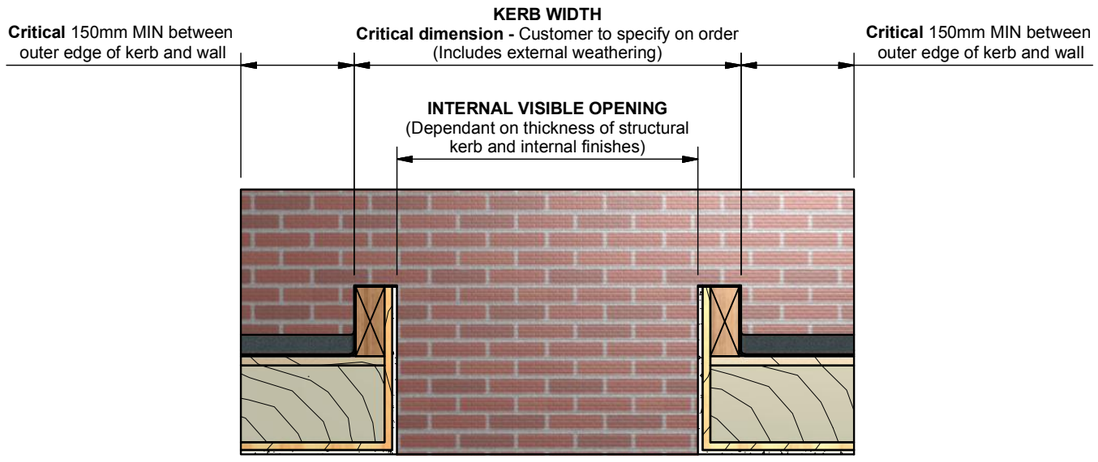
PLEASE NOTE: Configuration below is of a 1 wall abutted Flushglaze and is for illustrative purposes.
Flushglaze units are available in various configurations.
For further information, please seek assistance from our Sales team.







SECTION C-C (ENLARGED)



SECTION D-D (ENLARGED)

GLAZING VISION
Saw Mills Road
Diss
Norfolk
IP22 4NX
Tel: +44 (0)333 8000 881
[redacted]
Website: www.glazing-vision.co.uk

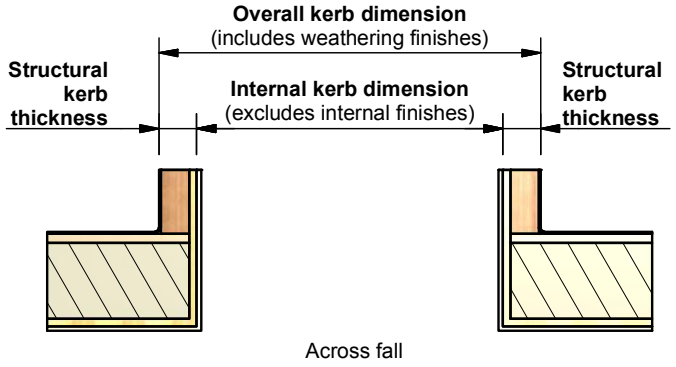
IT IS GLAZING VISION'S POLICY TO CONTINUOUSLY DEVELOP AND IMPROVE OUR PRODUCTS. AND THEREFORE RESERVE THE RIGHT TO MODIFY OR CHANGE THE DETAIL DESIGN AT OUR DISCRETION AND WITHOUT PRIOR NOTICE.
THIS DRAWING IS COPYRIGHT AND THE SOLE PROPERTY OF GLAZING VISION LTD. THE DESIGNS/INFORMATION IT CONTAINS ARE PRIVATE AND CONFIDENTIAL. IT MUST NOT BE, COPIED, EXHIBITED OR COMMUNICATED TO THIRD PARTIES FOR ANY PURPOSE OTHER THAN THAT FOR WHICH IT WAS ISSUED WITHOUT THEIR WRITTEN PERMISSION.

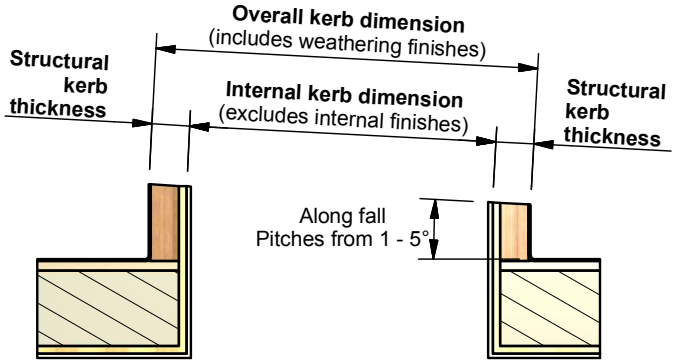
Third angle projection unless otherwise noted.
Tolerances:
Whole numbers = ±1mm
One decimal place = ±0.5mm
Two decimal places = ±0.2mm
Angular = ±0.5 degree
IF IN DOUBT - ASK! DO NOT SCALE
Supplier to deburr & remove sharp corners

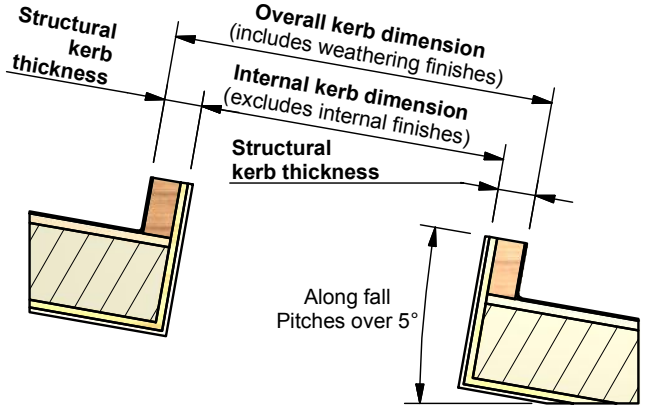
Rev	Revision Description	Drawn/ Date
A	Increased to A3 drawing to include wall abutment detail	PGW 26/5/2011
B	Amended critical dim to 150mm	JOB 31.8.11

Product: 402 - Flushglaze
Description: Flushglaze kerb detail
Materials: N/A
Finish: N/A
Weight: N/A
Quantity: N/A
Scale: NTS - Ref only
Drawn By: PGW
Drawn Date: 06/01/2011
Drawing No: 402-ASS-051
Checked By:
Check Date:

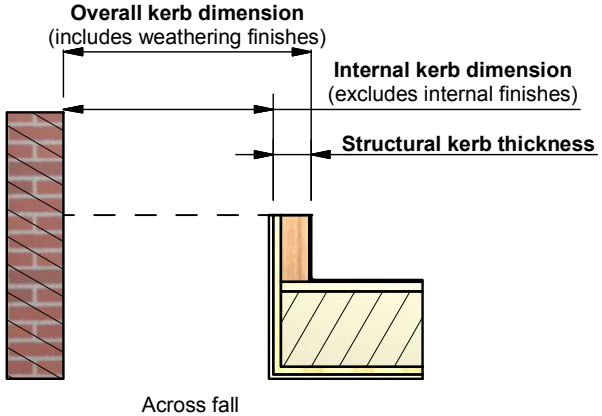
Kerb to Kerb

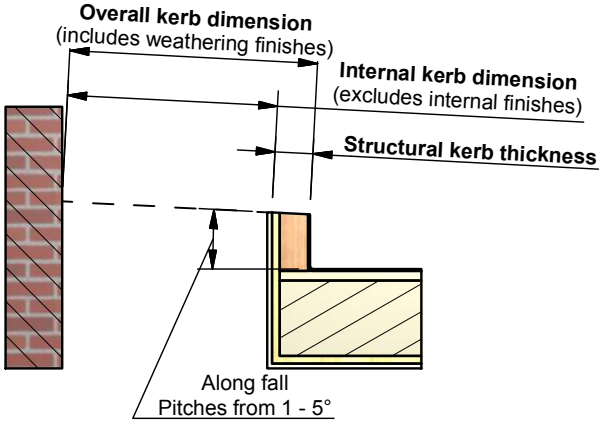


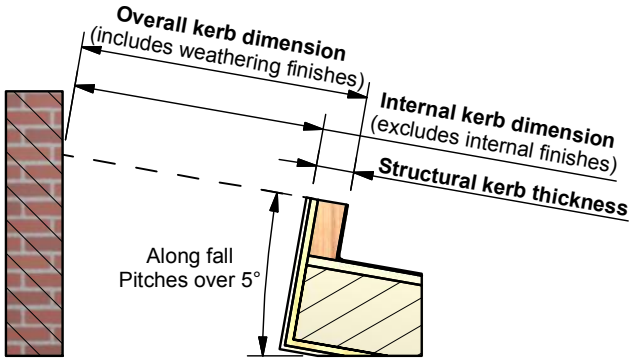




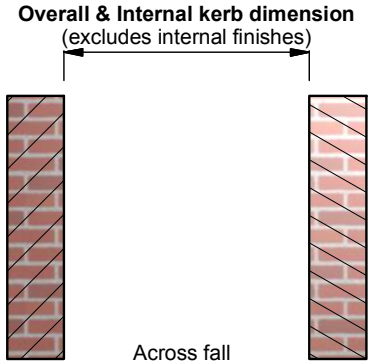
Wall to Kerb







Wall to Wall



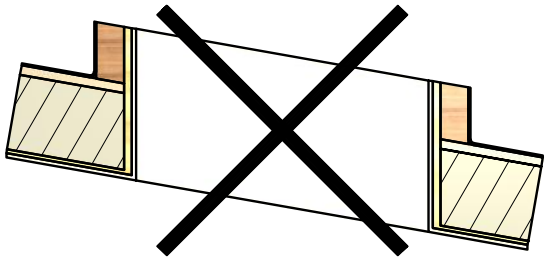
The critical dimensions we require when ordering your rooflight

External kerb dimension; is a critical dimension for ensuring the rooflight's frame fits over the outside of the kerb.

Internal kerb dimension; is a critical dimension for ensuring internal details fit (e.g. glass fins on a Multipart Flushglaze). It is essential that internal finishes are applied after rooflight installation.

Structural kerb thickness; is a critical dimension for ensuring the rooflight is suitably supported and any internal frame details do not clash with the kerb (e.g. back-to back support angles on a Multi-Part Flushglaze. Or manual crank handle on a Manual VisionVent).

PLEASE PASS THIS TO YOUR BUILDER
Builder to refer to order confirmation for required kerb sizes



For pitches greater than 5 degrees, the pitch must be built into the roof. The kerb must be constructed perpendicular to the roof.

GLAZING VISION
Saw Mills Road
Diss
Norfolk
IP22 4RG
Tel: +44 (0)333 8000 881
[redacted]
Website: www.glazing-vision.co.uk

IT IS GLAZING VISION'S POLICY TO CONTINUOUSLY DEVELOP AND IMPROVE OUR PRODUCTS. AND THEREFORE RESERVE THE RIGHT TO MODIFY OR CHANGE THE DETAIL DESIGN AT OUR DISCRETION AND WITHOUT PRIOR NOTICE.
THIS DRAWING IS COPYRIGHT AND THE SOLE PROPERTY OF GLAZING VISION LTD. THE DESIGNS/INFORMATION IT CONTAINS ARE PRIVATE AND CONFIDENTIAL. IT MUST NOT BE, COPIED, EXHIBITED OR COMMUNICATED TO THIRD PARTIES FOR ANY PURPOSE OTHER THAN THAT FOR WHICH IT WAS ISSUED WITHOUT THEIR WRITTEN PERMISSION.

Third angle projection unless otherwise noted.
Tolerances:
Whole numbers = ±1mm
One decimal place = ±0.5mm
Two decimal places = ±0.2mm
Angular = ±0.5 degree
IF IN DOUBT - ASK! DO NOT SCALE
Supplier to deburr & remove sharp corners

Rev	Revision Description	Drawn/ Date
A	Amended contact numbers	JOB 19/2/2010
B	Reproduced in Inventor, amended layout, updated to new Diss address	PGW 20/1/2011

Product: Standard Products		**Checked By:**
Description: Kerb dimensioning information for Standard Products (1 of 2)		
Materials: N/A		**Check Date:**
Finish: N/A	**Drawn By:** peterw	
Weight: N/A	**Drawn Date:** 19/01/2011	
Quantity: N/A	**Drawing No:** S0009	
Scale: N/A		

Senergy®

Senerflex®
Pressure Equalized Design

TYPICAL DETAILS
1017744

1. Senerflex Pressure Equalized Design Application (Plan VIew)
2. Senerflex Pressure Equalized Design Application (Isometric View)
3. Aesthetic Groove (Plan View)
4. Insulation Boards / Reinforcing Mesh Application at Openings
5. Window Head (Flush)
6. Window Head (Recessed)
7. Window Jamb Detail (Flush)
8. Window Jamb Detail (Recessed)
9. Window Sill Detail (Flush)
10. Window Sill Detail (Recessed)
11. Roof Edge Flashing Detail
12. Metal Coping Detail
13. Parapet Cap Detail
14. Expansion Joint Detail at Floorline
15. Expansion Joint at Change in Substrate
16. Section at Fascia/Soffit
17. Expansion Joint Detail
18. Pipe Penetration
19. Corner Mesh Application with STRONG 15 or HI-IMPACT 20 (Plan View)
20. Corner Mesh Application with FLEXGUARD 4, INTERMEDIATE 6 or 12 (Plan View)
21. Light Fixture
22. Termination at Foundation
23. Kick-out Flashing Detail

24-A. Closure Block Layout on Typical Building Elevation

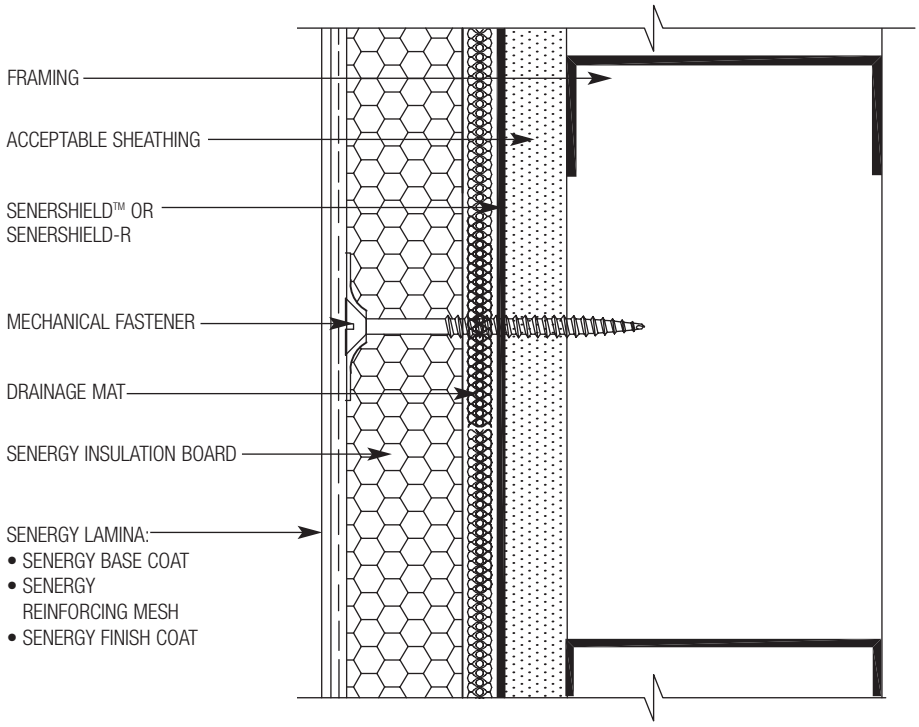
24-B. Section Through Closure Block

24-C. Section Expansion Joint Intersection

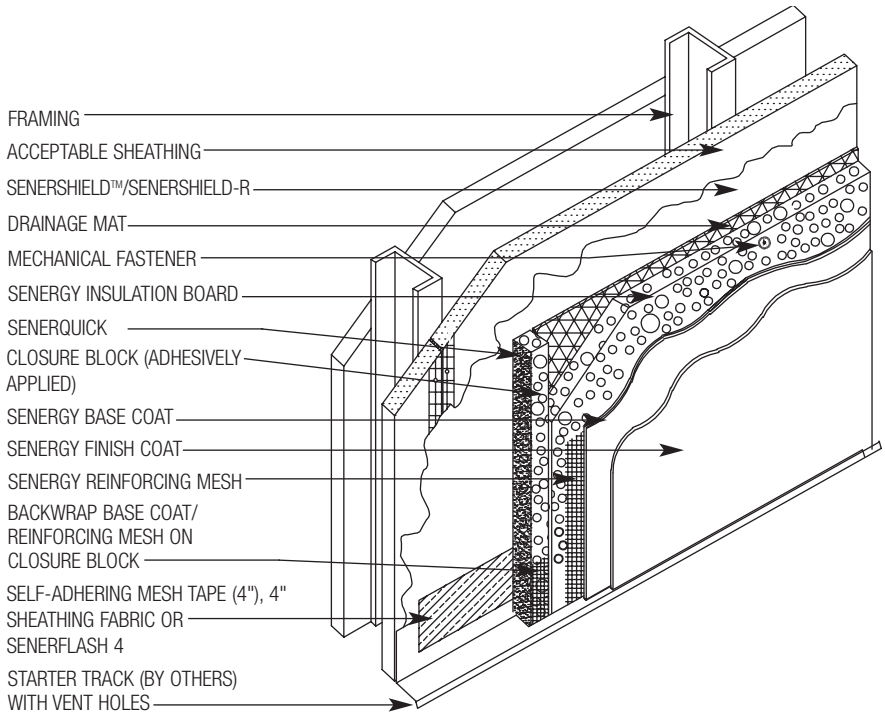
24-D. Closure Block at Window Head

24-E. Starter Track/Closure Block Intersection at Top of Pressure Equalized Compartment

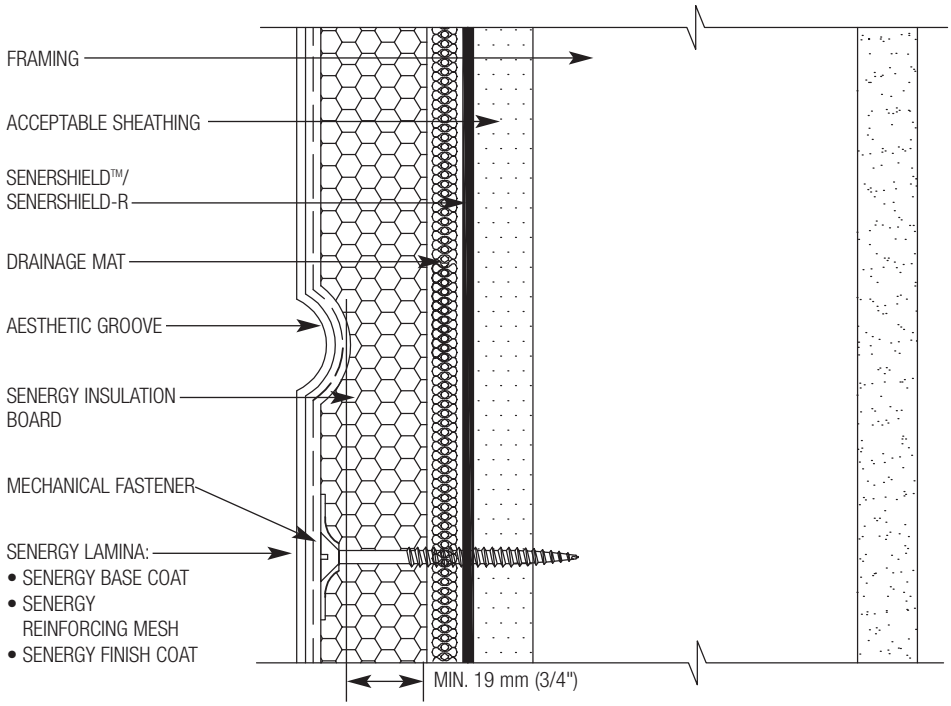
BASF
The Chemical Company



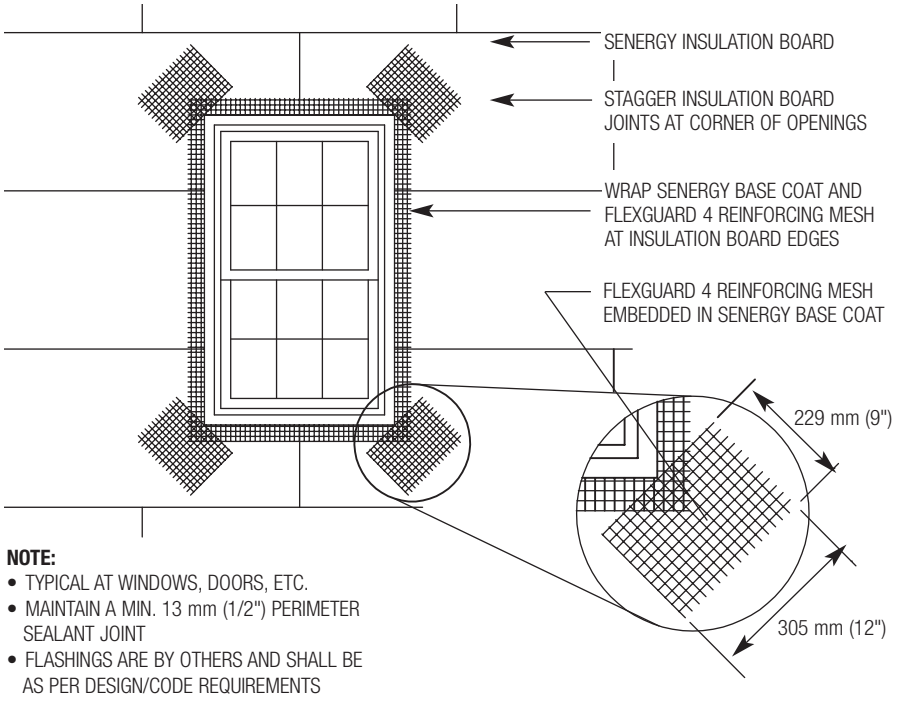
PE-01 TYPICAL SENERFLEX PRESSURE EQUALIZED DESIGN APPLICATION (PLAN VIEW)



PE-02 TYPICAL SENERFLEX PRESSURE EQUALIZED DESIGN APPLICATION (ISOMETRIC VIEW)

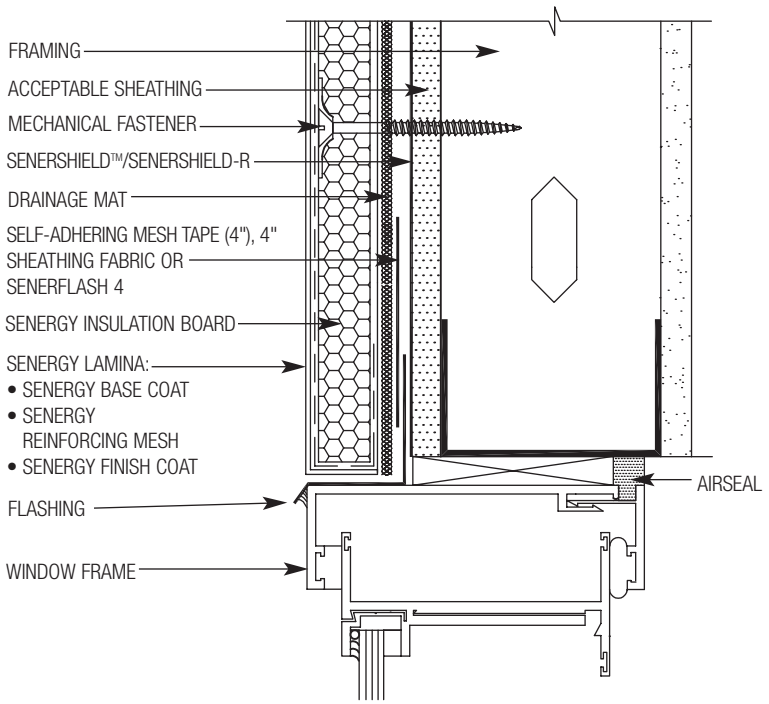


PE-03 TYPICAL AESTHETIC GROOVE (PLAN VIEW)

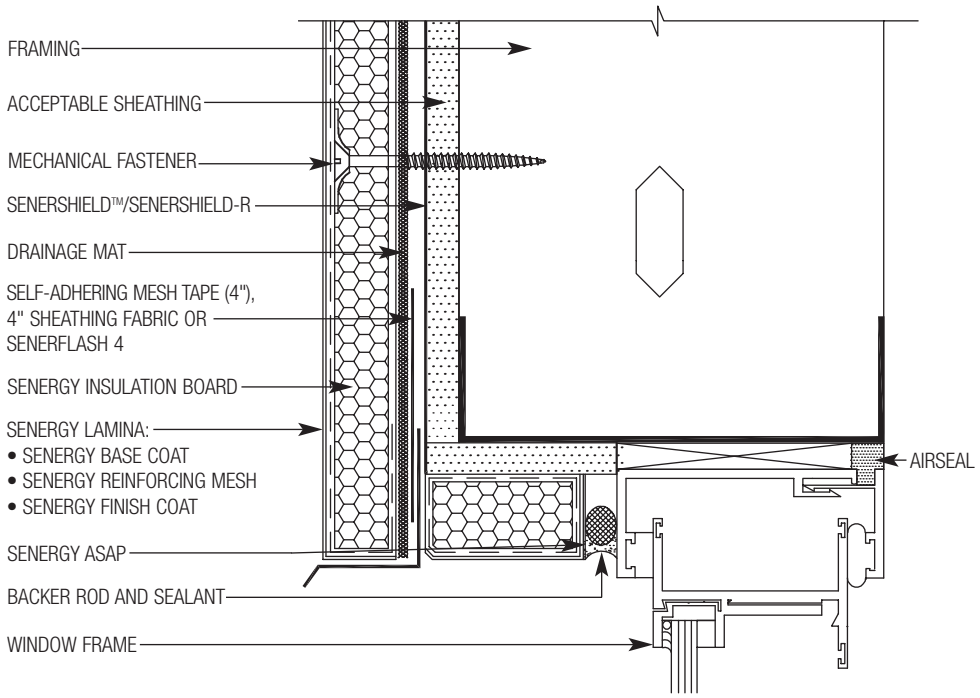


NOTE:
- TYPICAL AT WINDOWS, DOORS, ETC.
- MAINTAIN A MIN. 13 mm (1/2") PERIMETER SEALANT JOINT
- FLASHINGS ARE BY OTHERS AND SHALL BE AS PER DESIGN/CODE REQUIREMENTS

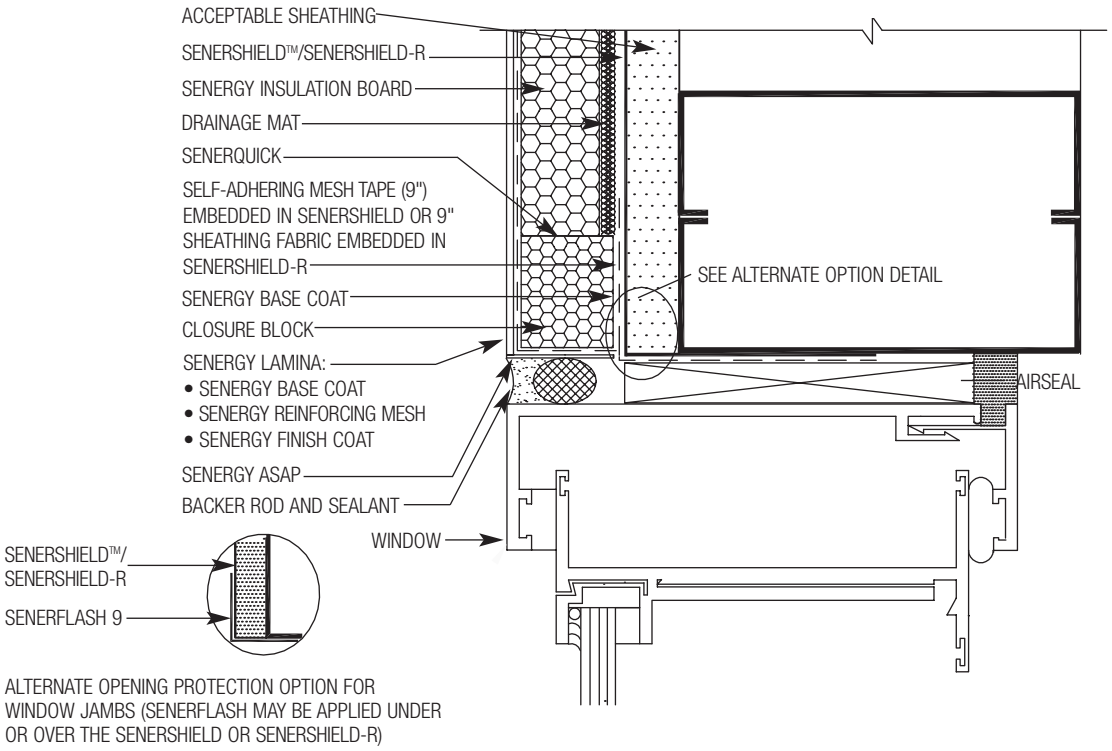
PE-04 TYPICAL INSULATION BOARDS/REINFORCING MESH APPLICATION AT OPENINGS



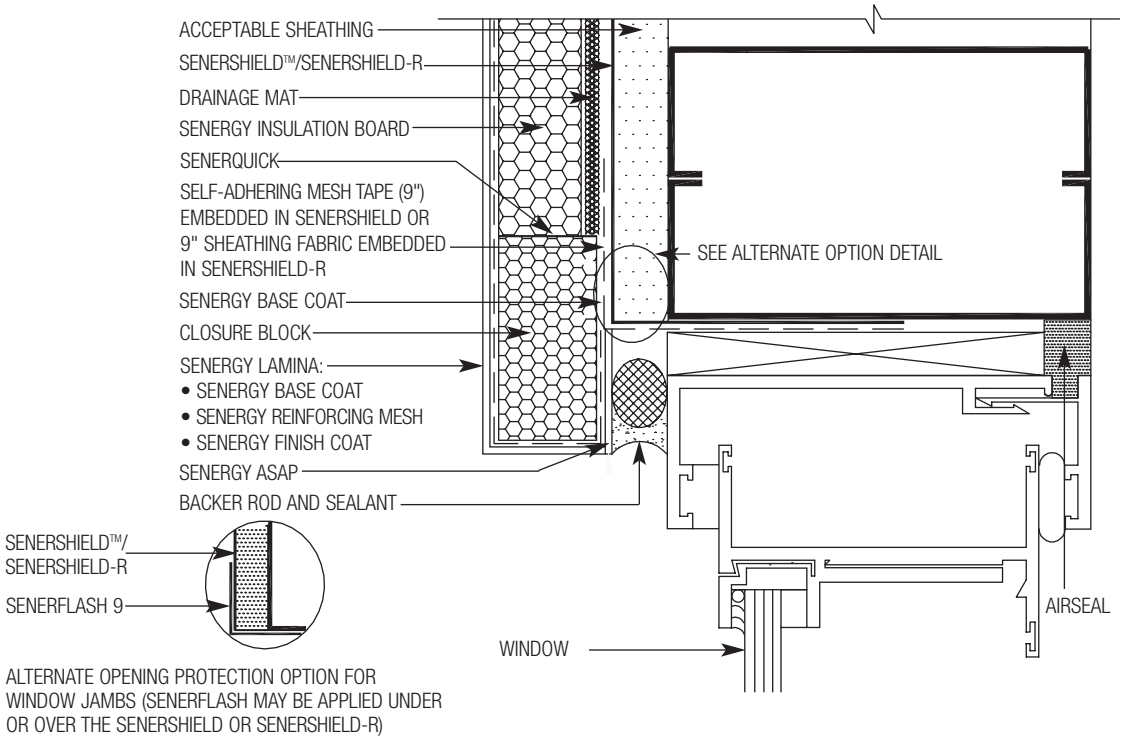
PE-05 TYPICAL WINDOW HEAD (FLUSH)



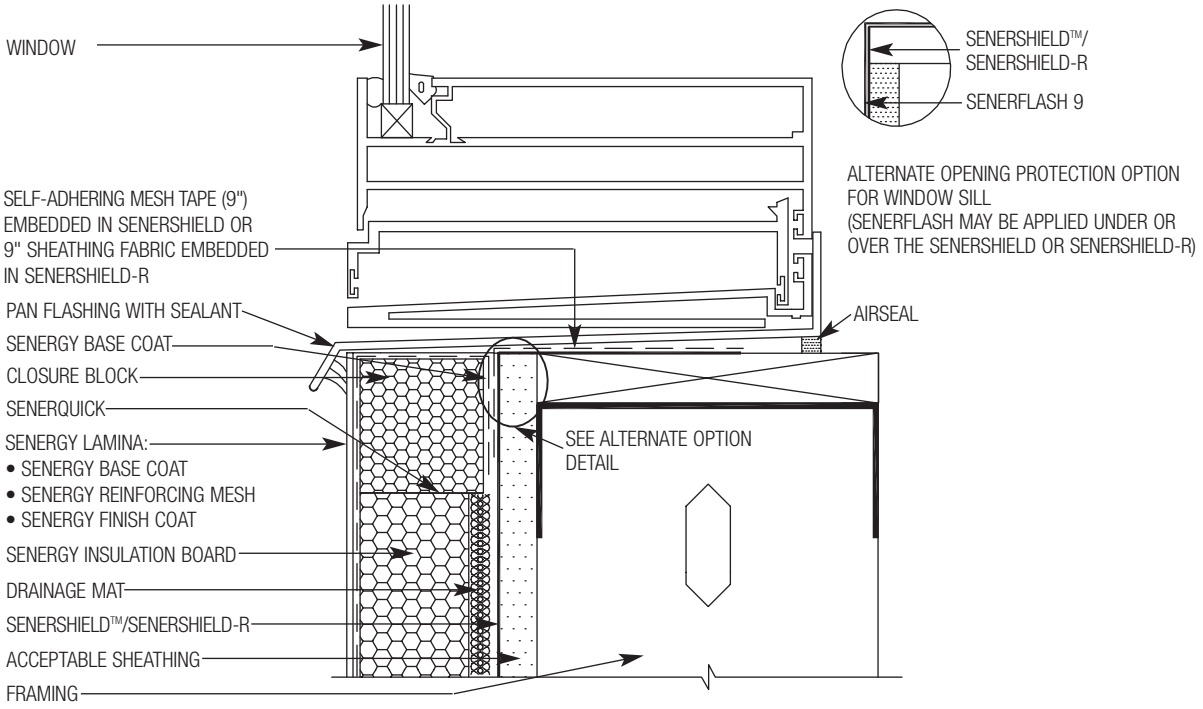
PE-06 TYPICAL WINDOW HEAD (RECESSED)



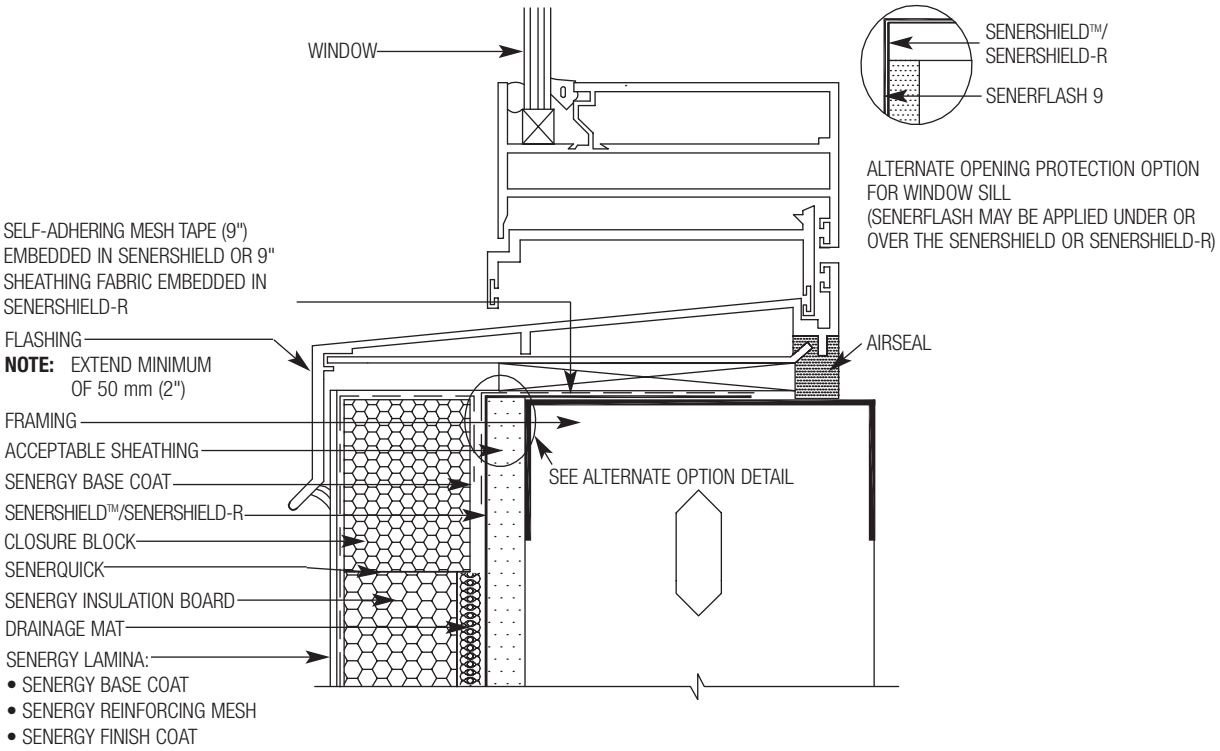
PE-07 TYPICAL WINDOW JAMB DETAIL (FLUSH)



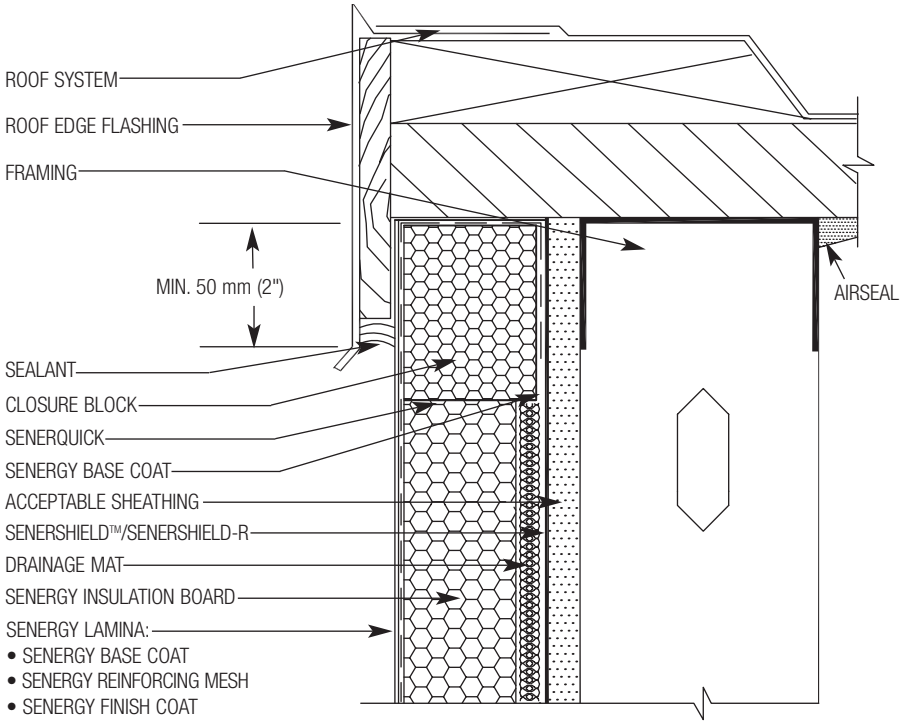
PE-08 TYPICAL WINDOW JAMB DETAIL (RECESSED)



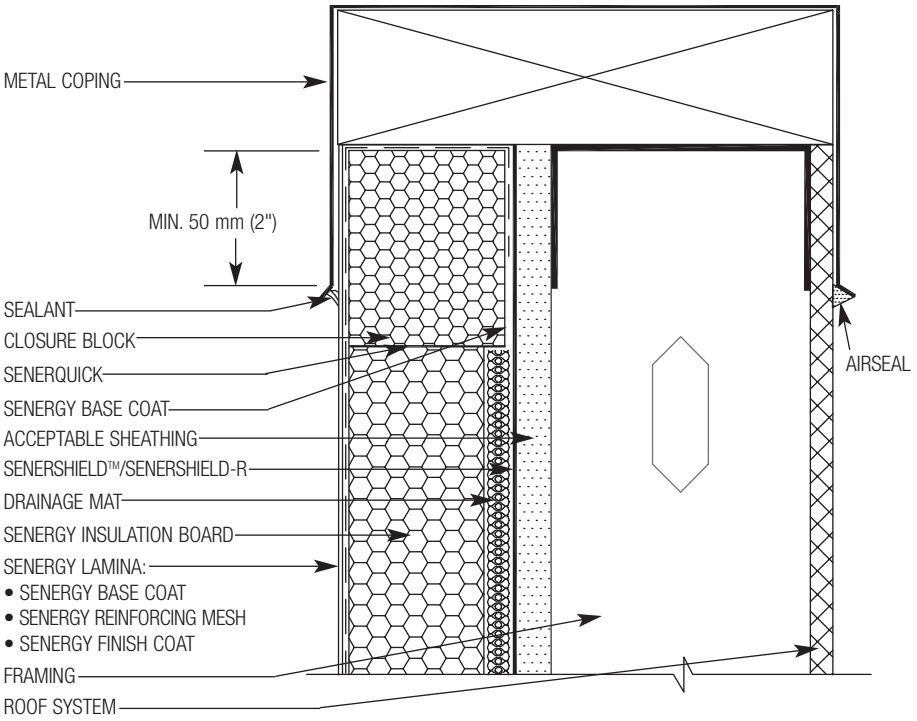
PE-09 TYPICAL WINDOW SILL DETAIL (FLUSH)



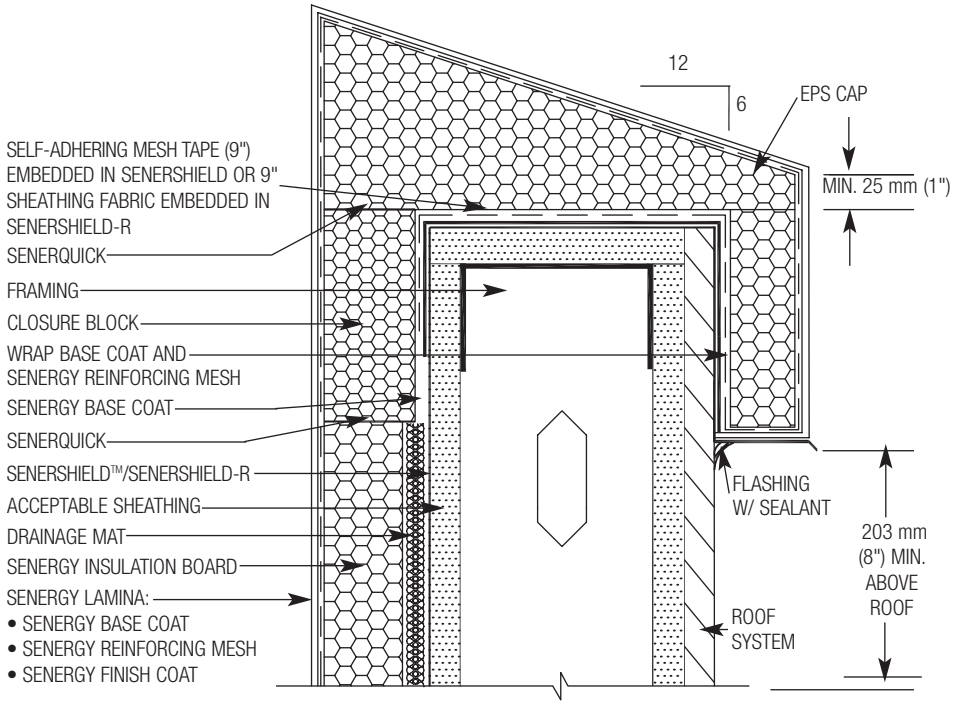
PE-10 TYPICAL WINDOW SILL DETAIL (RECESSED)



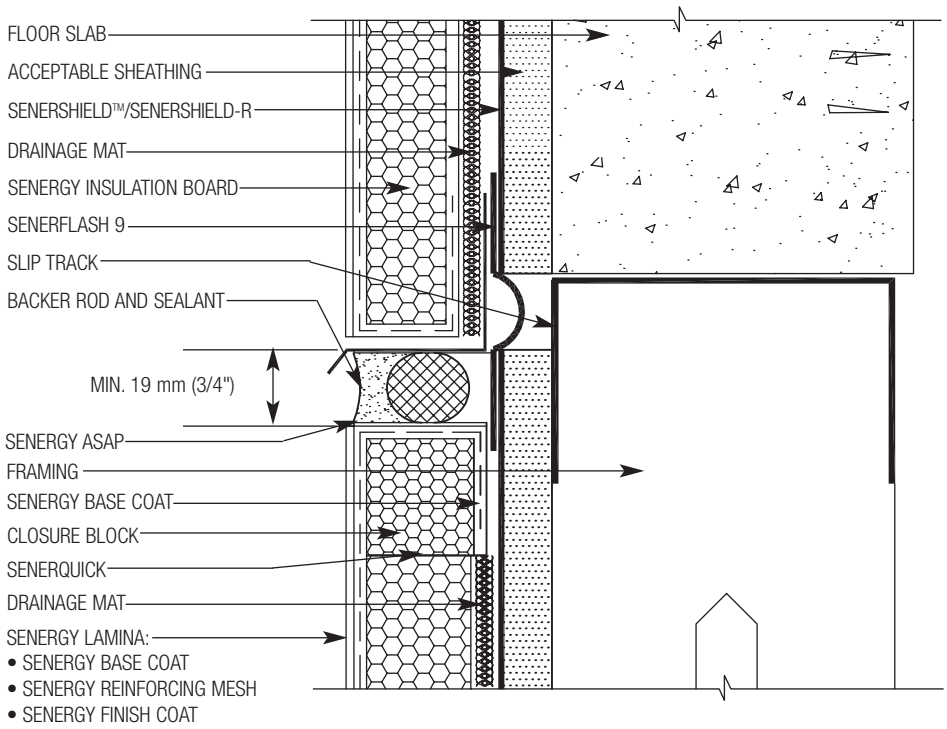
PE-11 TYPICAL ROOF EDGE FLASHING DETAIL



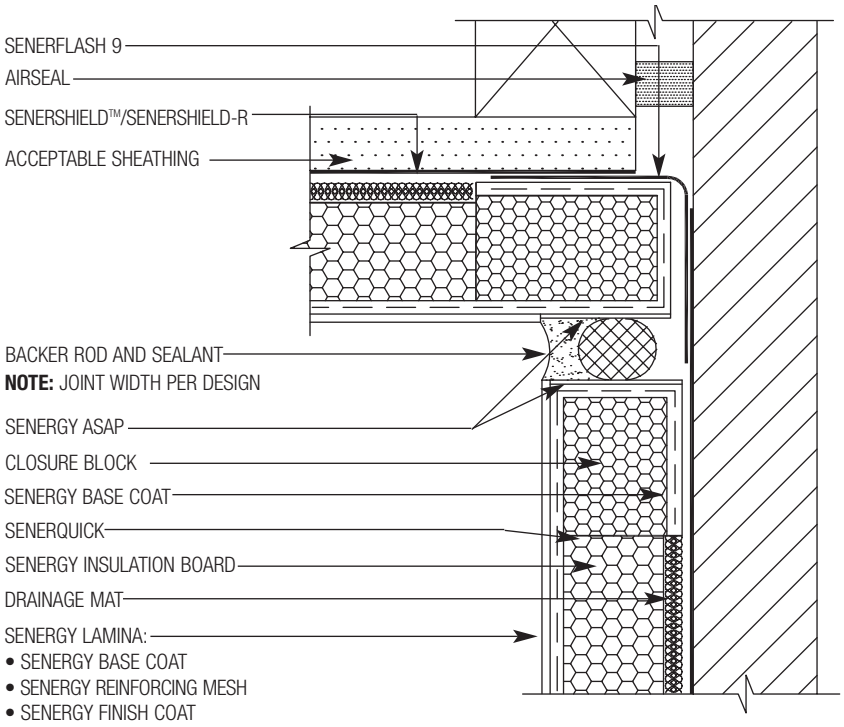
PE-12 TYPICAL METAL COPING DETAIL



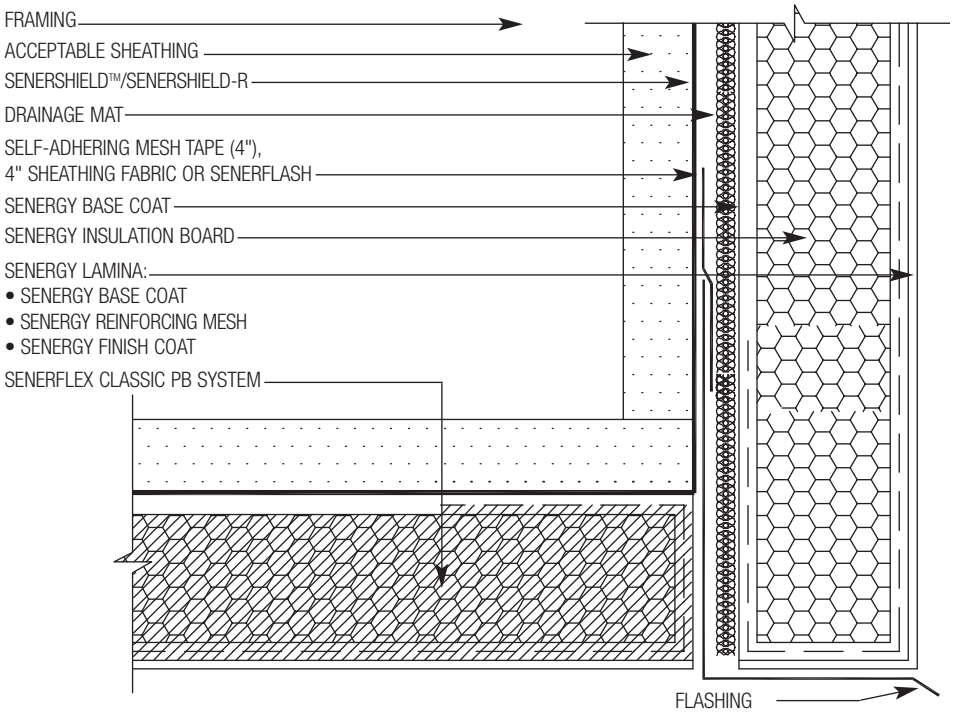
PE-13 TYPICAL PARAPET CAP DETAIL



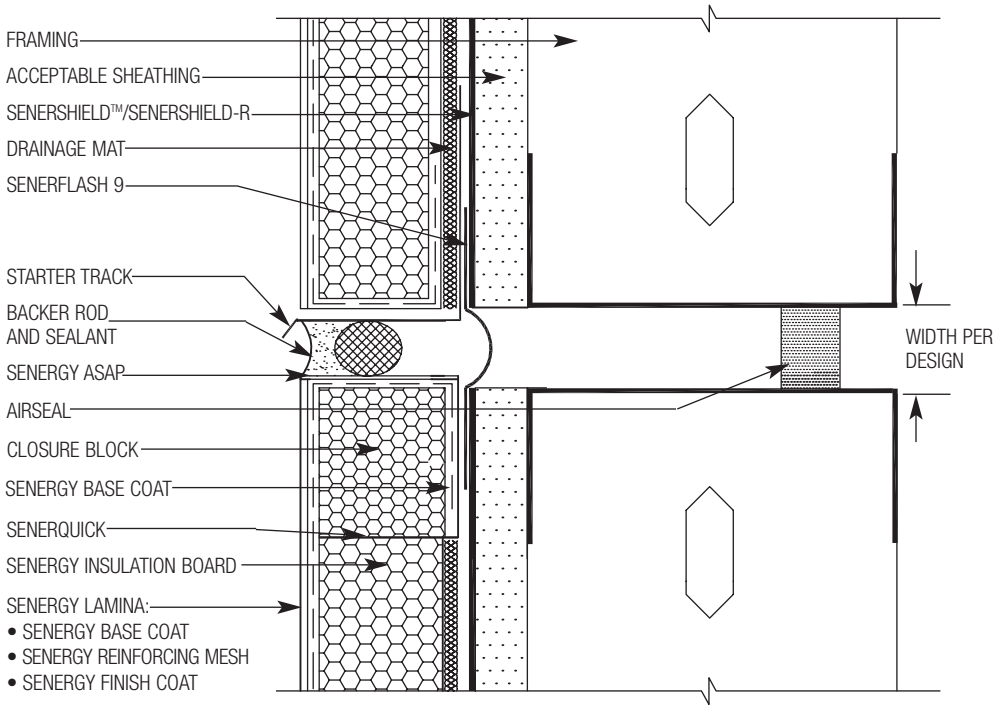
PE-14 TYPICAL EXPANSION JOINT DETAIL AT FLOORLINE



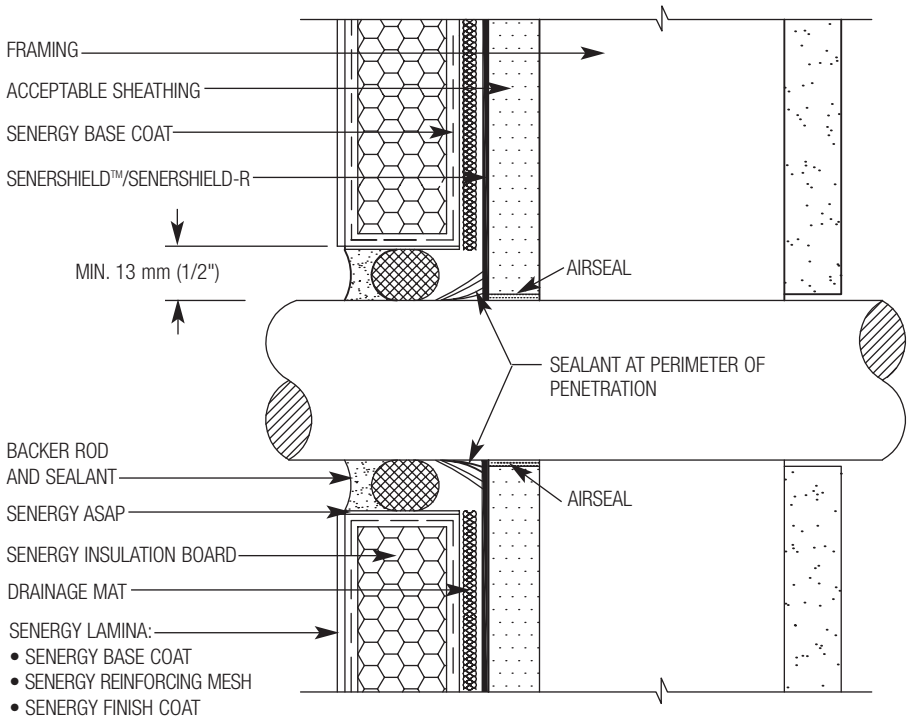
PE-15 TYPICAL EXPANSION JOINT AT CHANGE IN SUBSTRATE



PE-16 TYPICAL SECTION AT FASCIA/SOFFIT

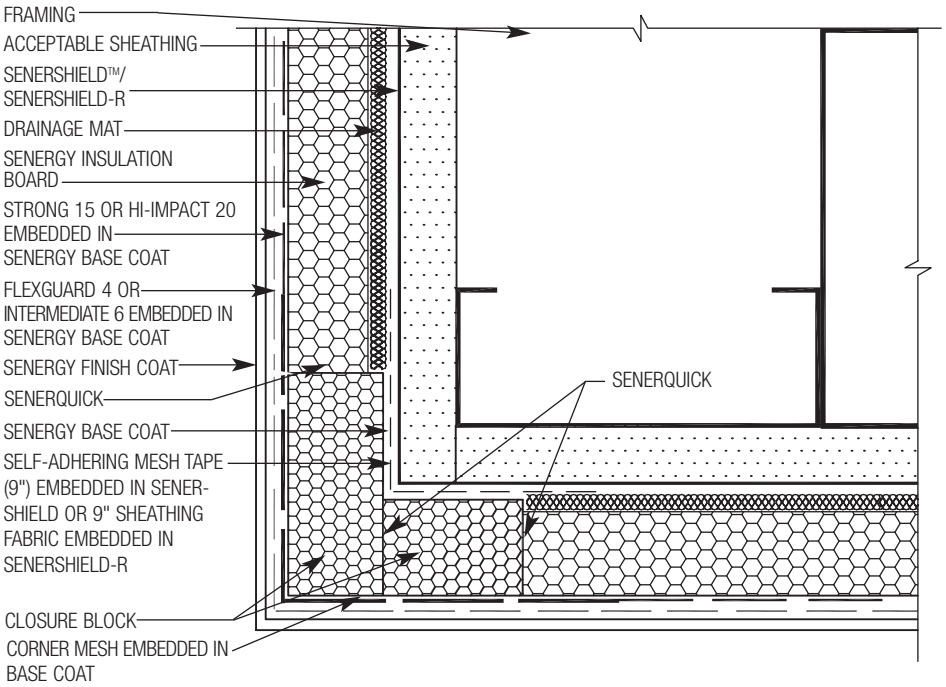


PE-17 TYPICAL EXPANSION JOINT DETAIL



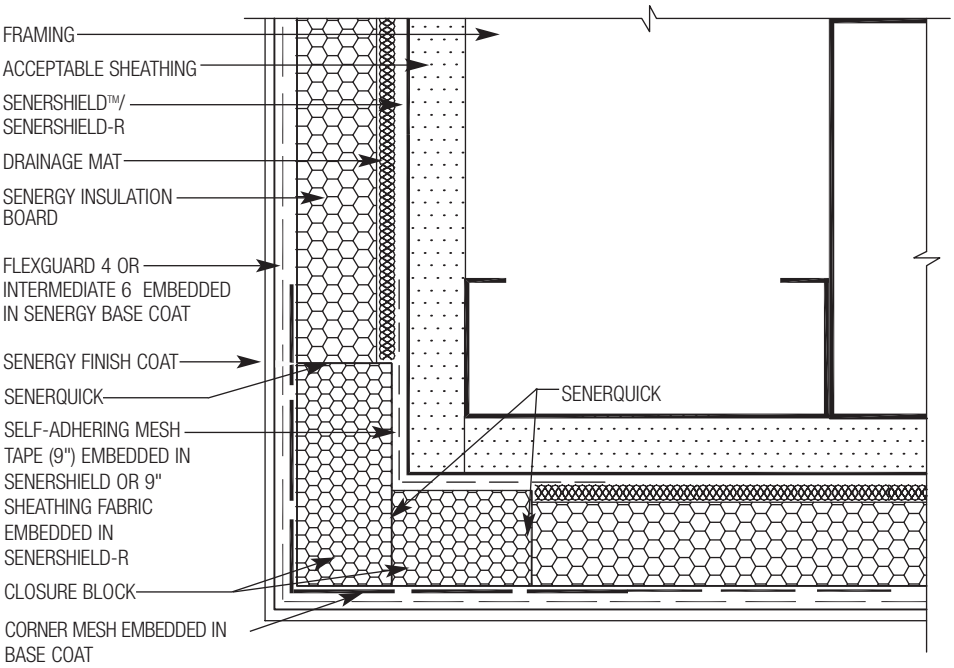
PE-18 TYPICAL PIPE PENETRATION

NOTE:
- BUTT EDGE OF STRONG 15 OR HI-IMPACT 20 TO CORNER MESH
- A CONTINUOUS OVERLAY OF FLEXGUARD 4 OR INTERMEDIATE 6 IS REQUIRED OVER STRONG 15, HI-IMPACT 20 OR CORNER MESH

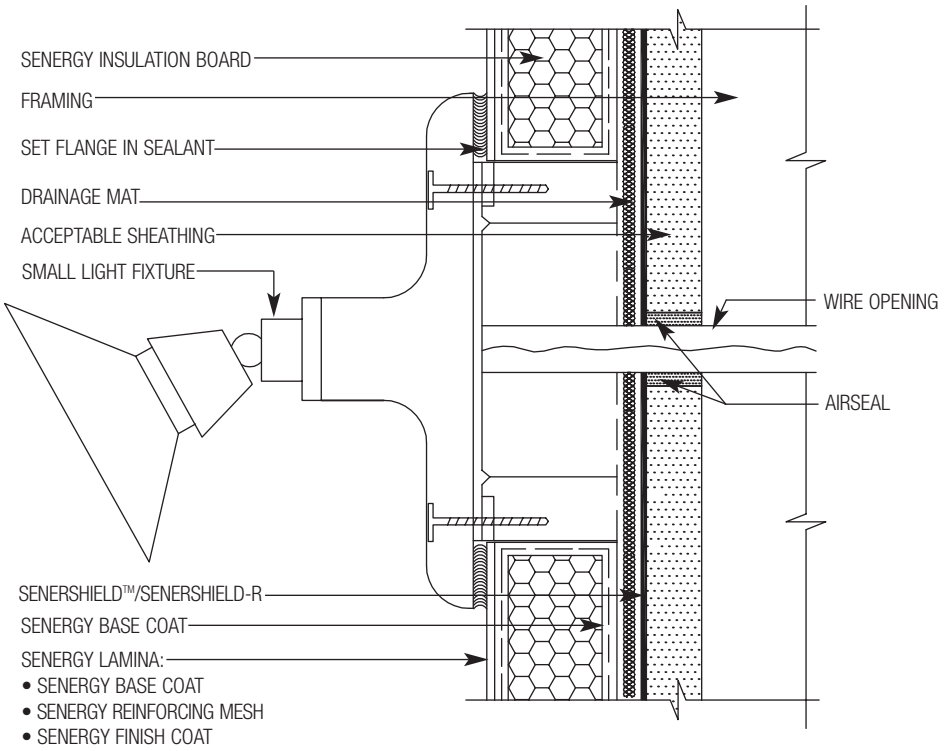


PE-19 TYPICAL CORNER MESH APPLICATION WITH STRONG 15 OR HI-IMPACT 20 (PLAN VIEW)

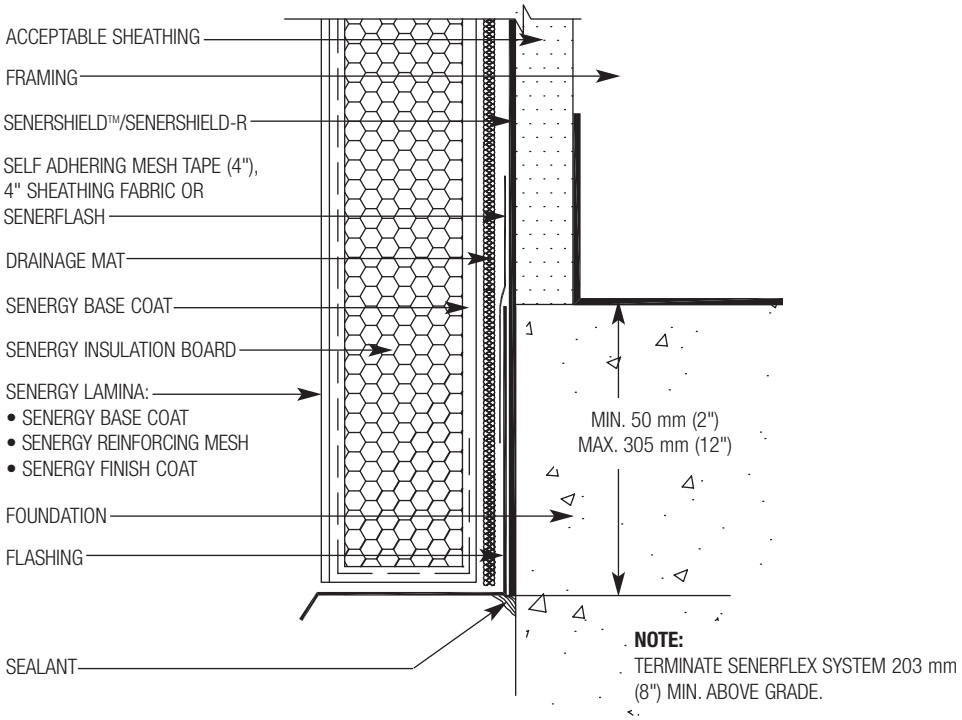
NOTE:
A CONTINUOUS OVERLAY OF FLEXGUARD 4, INTERMEDIATE 6 OR 12 IS REQUIRED OVER CORNER MESH



PE-20 TYPICAL CORNER MESH APPLICATION WITH FLEXGUARD 4, INTERMEDIATE 6 OR 12 (PLAN VIEW)

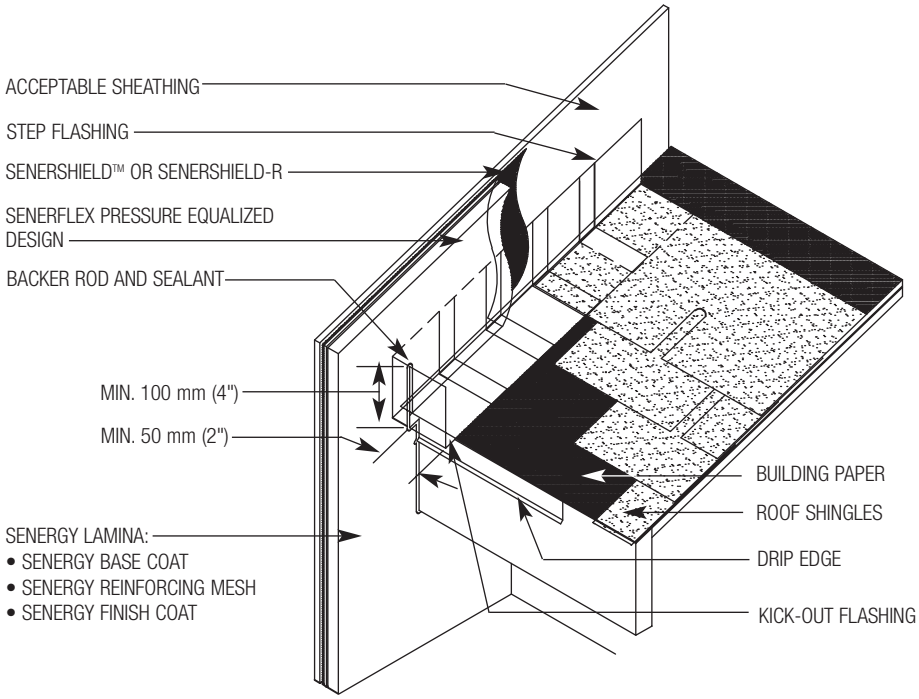


PE-21 TYPICAL LIGHT FIXTURE

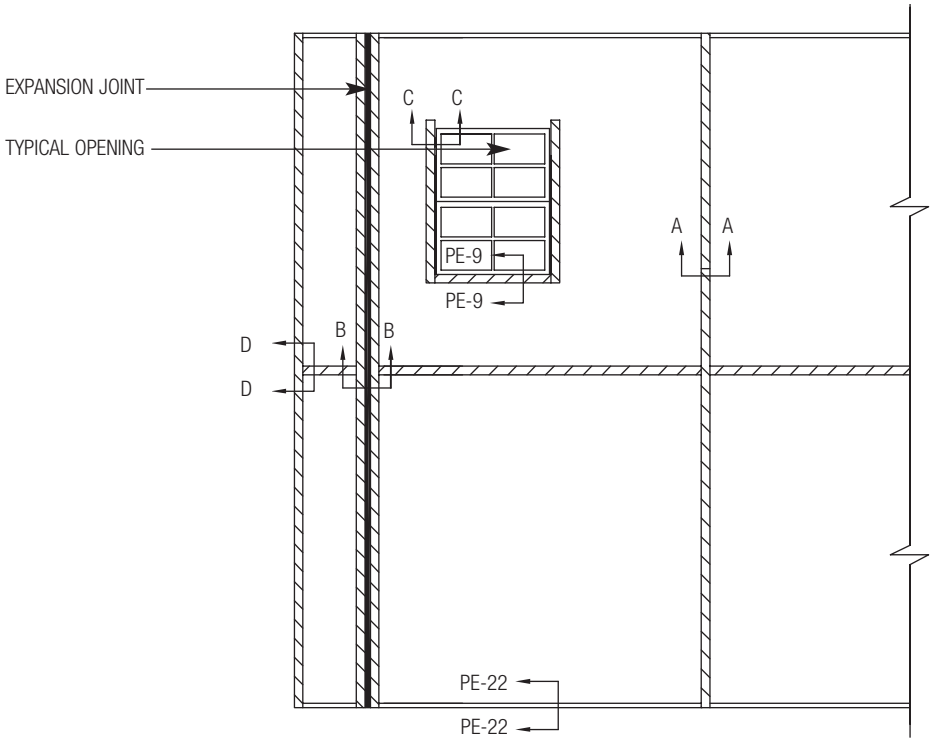


PE-22 TYPICAL TERMINATION AT FOUNDATION

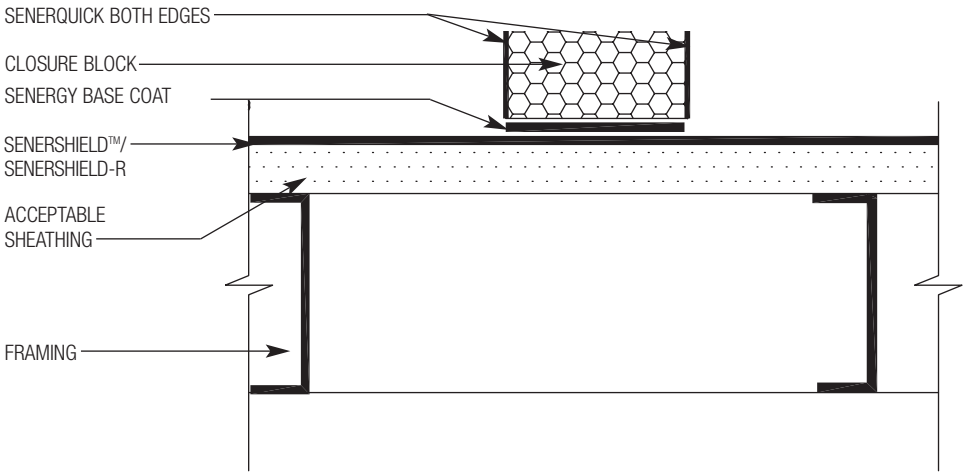
NOTE:
- KICK-OUT FLASHING MUST BE ANGLED 100˚ MIN. TO ALLOW FOR PROPER DRAINAGE.
- KICK-OUT FLASHING SEAMS MUST BE SOLDERED OR SEALED WITH APPROPRIATE SEALANT.
- TERMINATE SENERFLEX PRESSURE EQUALIZED DESIGN MIN. 50 mm (2") ABOVE ROOF.



PE-23 TYPICAL KICK-OUT FLASHING DETAIL

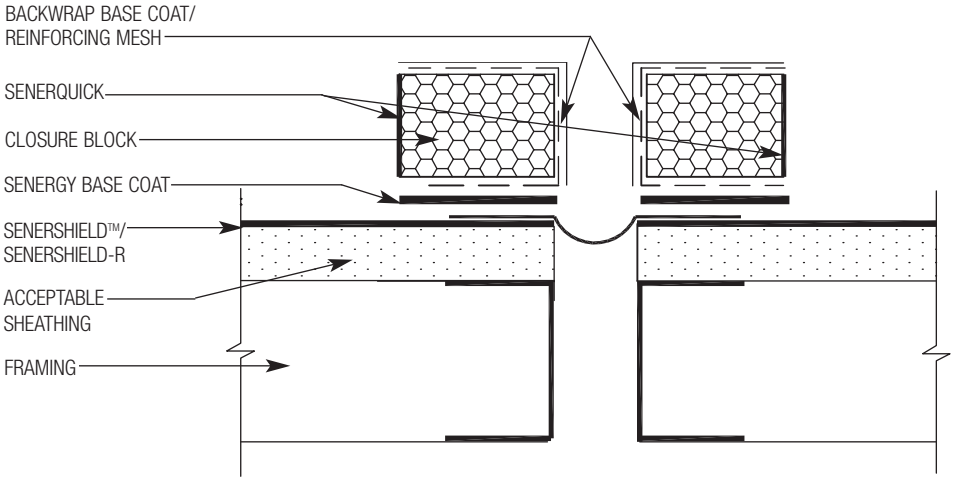


PE-24-A TYPICAL CLOSURE BLOCK LAYOUT ON TYPICAL BUILDING ELEVATION



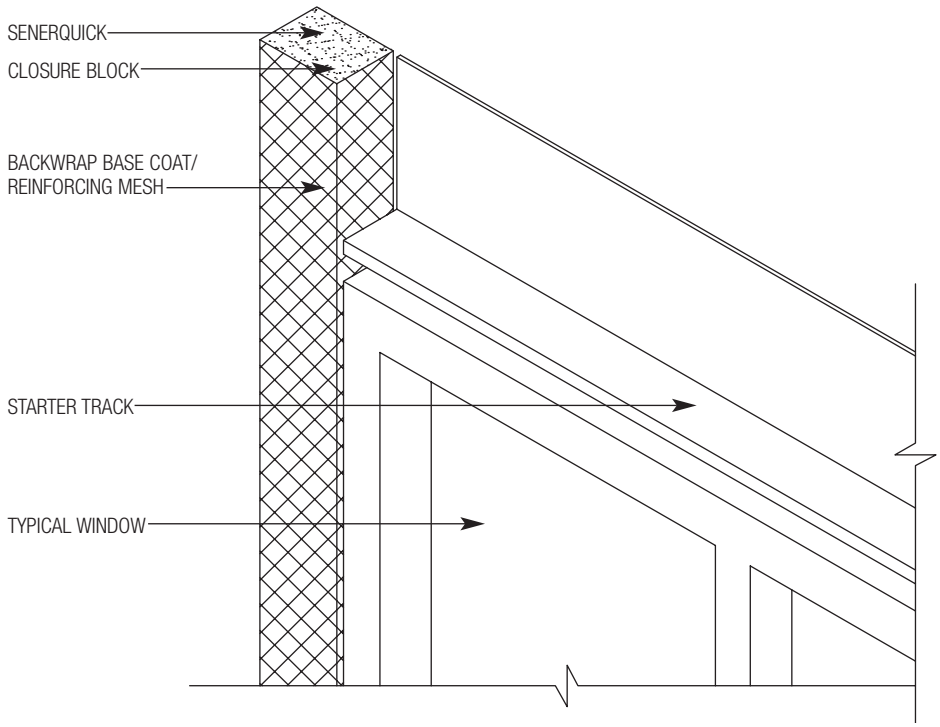
NOTE:
OTHER COMPONENTS HAVE BEEN
OMITTED FOR CLARITY.

PE-24-B TYPICAL SECTION THROUGH CLOSURE BLOCK

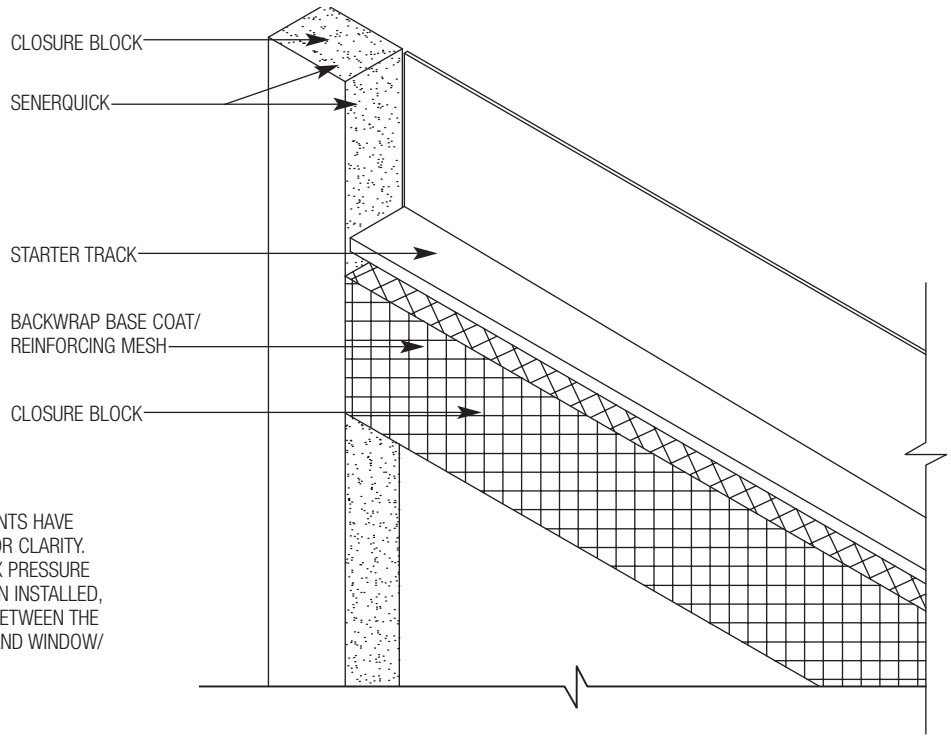


NOTE:
OTHER COMPONENTS HAVE BEEN
OMITTED FOR CLARITY.

PE-24-C TYPICAL SECTION EXPANSION JOINT INTERSECTION



PE-24-D TYPICAL CLOSURE BLOCK AT WINDOW HEAD



NOTE:
- OTHER COMPONENTS HAVE BEEN OMITTED FOR CLARITY.
- AFTER SENERFLEX PRESSURE EQUALIZED DESIGN INSTALLED, APPLY SEALANT BETWEEN THE STARTER TRACK AND WINDOW/ CLOSURE BLOCK.

PE-24-E TYPICAL STARTER TRACK/CLOSURE BLOCK INTERSECTION AT TOP OF PRESSURE EQUALIZED COMPARTMENT

General Notes

BASF Wall Systems is an operating unit of BASF Construction Chemicals, LLC. (herein after referred to as "BASF Wall Systems")

These details are presented in good faith by BASF Wall Systems and represent typical and/or general conditions. They are offered as a guide for consideration to assist the designer, specifier, installer and/or owner. The responsibility remains with the user for the design of any system. For conditions not shown, consult BASF Wall Systems for specific recommendations. Consult current Senergy technical bulletins for such information as acceptable sealants, insulation attachment methods, installation of air/weather barriers, residential policy, code and test reports, geo-climatic considerations, etc. Installation requirements for sealant (joint size configuration, primers, bond breakers) shall be in accordance with sealant manufacturer's specifications and instructions.

Technical Support

Consult the BASF Wall Systems Technical Services Department for specific recommendations concerning all other applications. Consult the Senergy website, www.senergy.cc, for additional information about products and systems and for updated literature.

Residential Policy

On one and two-family residential framed construction, BASF Wall Systems requires that the wall system selected be one that includes provisions for moisture drainage. The choices include Senturion® line of water managed EIFS, commercial Senerflex® Wall Systems integrating moisture management features, Senergy Stucco Wall System, and Senergy Cement-Board Stucco™ Systems. Senergy Exterior Surfacing Systems for insulating concrete forms are also acceptable. There are no exceptions to this policy. Under no circumstances will BASF Wall Systems warrant the use of any other system on this type of construction without expressed written authorization from BASF Wall Systems [Residential construction using EIFS on masonry (CMU) or poured concrete does not require the additional water management provisions described above.] See the Senergy Residential Policy Bulletin for a more detailed discussion of this topic. Consult BASF Wall Systems Technical Services Department for specific recommendations concerning all other applications. Consult the Senergy web-site, www.senergy.cc for additional information about products and systems and for updated literature.

Disclaimer

This information and all further technical advice are based on BASF Wall Systems' present knowledge and experience. However, BASF assumes no liability for providing such information and advice including the extent to which such information and advice may relate to existing third party intellectual property rights, especially patent rights. In particular, BASF Wall Systems disclaims any and all CONDITIONS AND WARRANTIES, WHETHER EXPRESS OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE OR MERCHANTABILITY. BASF WALL SYSTEMS SHALL NOT BE RESPONSIBLE FOR CONSEQUENTIAL, INDIRECT OR INCIDENTAL DAMAGES (INCLUDING LOSS OF PROFITS) OF ANY KIND. BASF Wall Systems reserves the right to make any changes according to technological progress or further developments. It is the customer's responsibility and obligation to carefully inspect and test any incoming goods. Performance of the product(s) described herein should be verified by testing and carried out only by qualified experts. It is the sole responsibility of the customer to carry out and arrange for any such testing. Reference to trade names used by other companies is neither a recommendation, nor an endorsement of any product and does not imply that similar products could not be used.

BASF Wall Systems

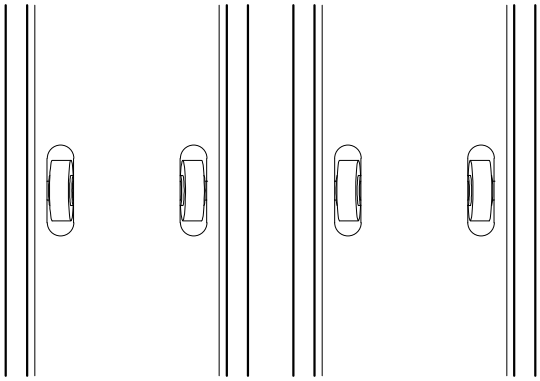
3550 St. Johns Bluff Road South
Jacksonville, FL 32224-2614
Phone 800 • 221 • 9255
Fax 904 • 996 • 6300
www.senergy.cc

©2007 BASF Construction Chemicals, LLC. Printed in U.S.A. 07/07

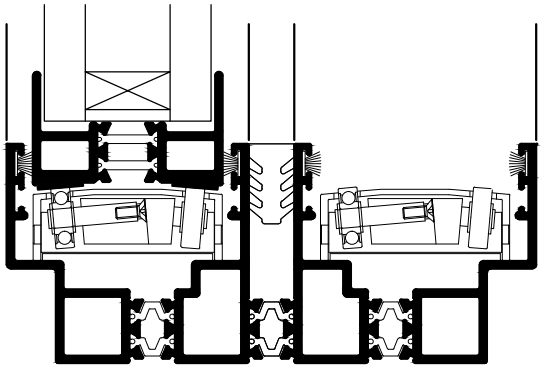
Optional Custom Track Systems

The Custom 4x4 Track System
Required for Sliding Panel Weights above 100lbs per Running Foot

Horizontal Section | Scale 1:2

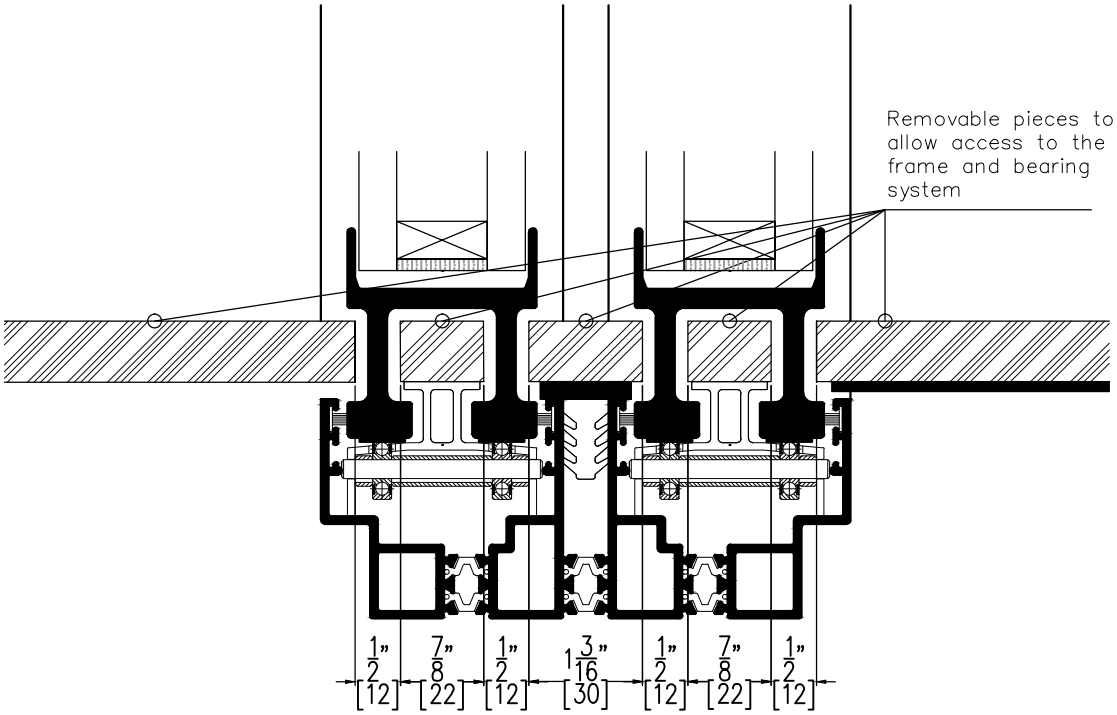


Vertical Section | Scale 1:2



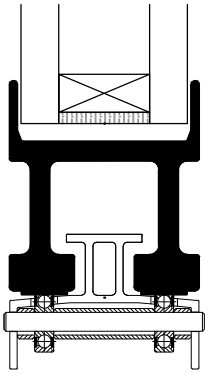
Vertical Sections | Invisible sill option |

Available for TH+Only

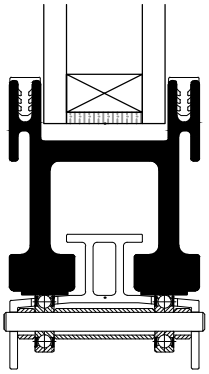


Vertical Sections | Invisible sill option |

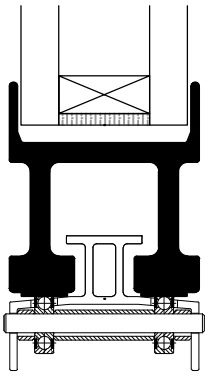
1¾" [44 mm] glass



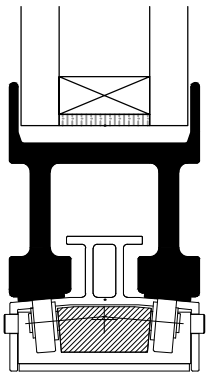
1¼" [32 mm] glass



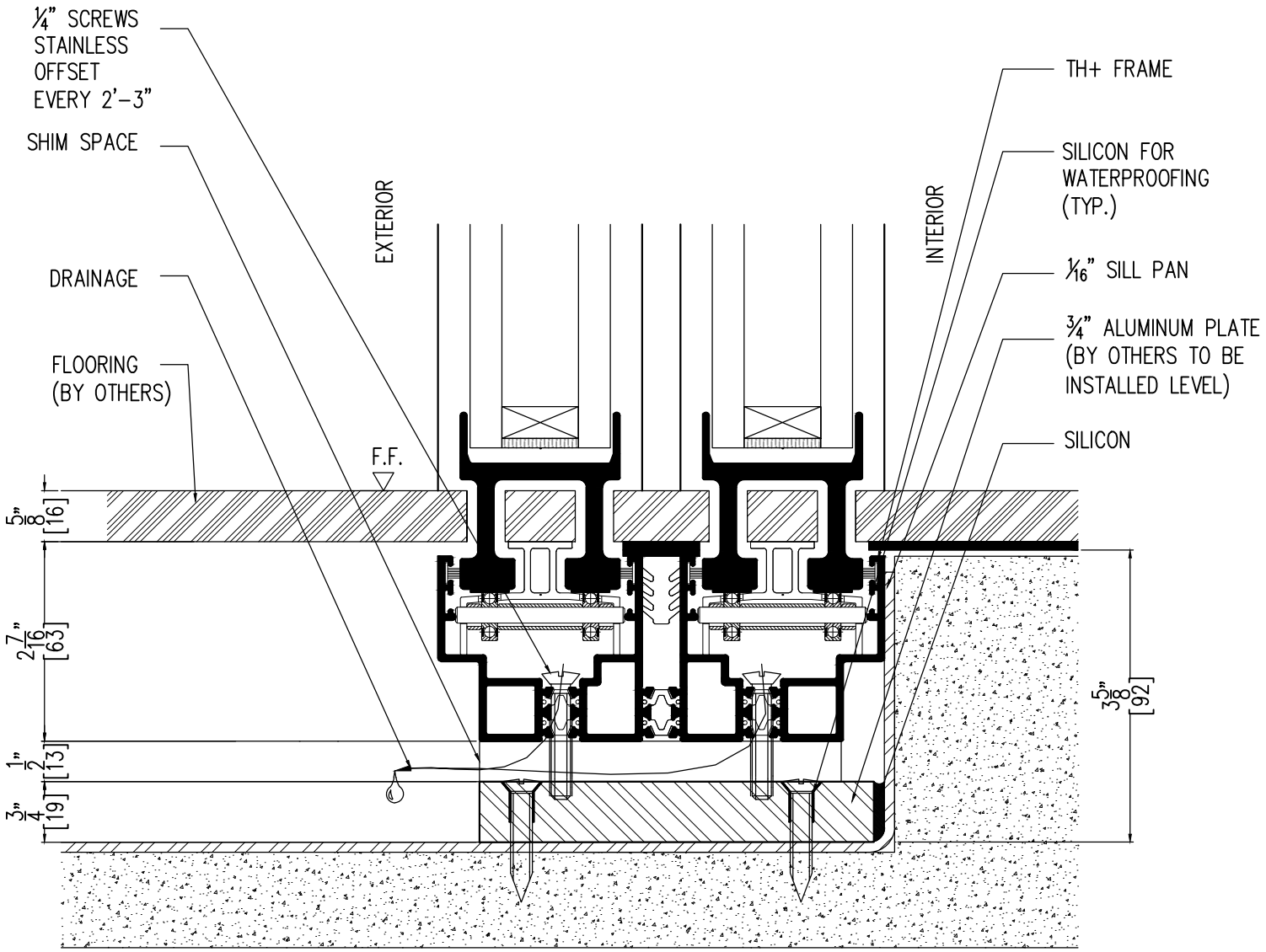
1¾" [44 mm] glass



1¾" [44 mm] glass
4x4 bearings

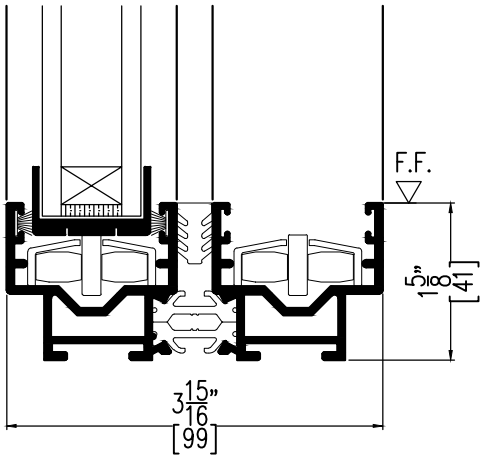


Vertical Sections | Installation Detail |

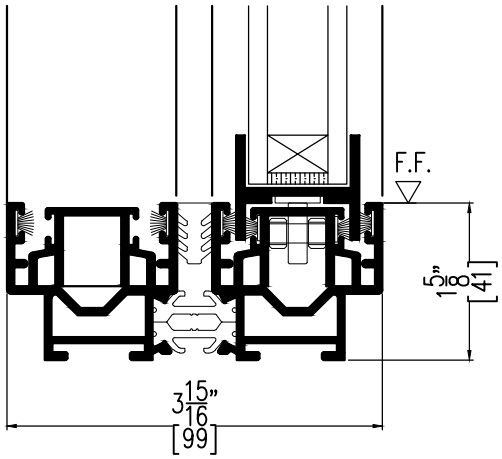


Vertical Sections | Standard & Custom Flush Tracks |

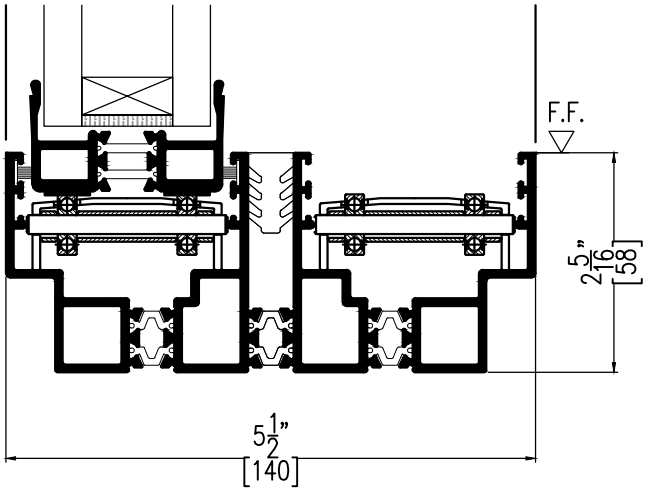
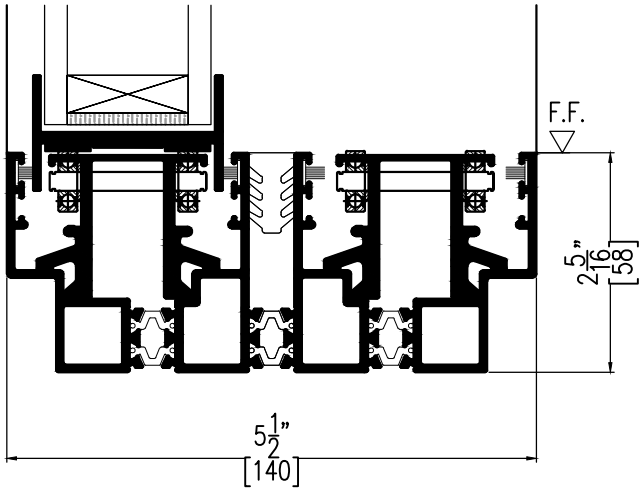
3001 Standard Track



3001 Custom Flush Track



TH+ Standard Track



TH+ Custom Flush Track