HISTORIC AND DESIGN REVIEW COMMISSION

December 20, 2017

HDRC CASE NO:	**2017-633**
ADDRESS:	413 N PINE ST
LEGAL DESCRIPTION:	NCB 578 (120 BOSTON ST), BLOCK C LOT 10
ZONING:	RM-4, H
CITY COUNCIL DIST.:	2
DISTRICT:	Dignowity Hill Historic District
APPLICANT:	Rick Archer
OWNER:	Benjamin Bowman
TYPE OF WORK:	Amendment to a previously approved design to include partial demolition, porch replacement and construction of a side addition
APPLICATION RECEIVED:	December 01, 2017
60-DAY REVIEW:	January 30, 2018

REQUEST:

The applicant is requesting conceptual approval to:

1. Demolish the addition constructed on northwest corner (rear) of the historic structure and replace the walls and roof of a previously enclosed porch with a new addition.
2. Replace the existing front porch roof structure with a new roof.
3. Replace the existing, stucco finish with a historically-appropriate plaster.
4. Construct a side (south) addition that includes covered parking and a rooftop terrace.
5. Amend the location of previously approved solar panels.
6. Amend the previously approved window repair to include possible window replacement.

APPLICABLE CITATIONS:

Historic Design Guidelines, Chapter 2, Guidelines for Exterior Maintenance and Alterations

2. Materials: Masonry and Stucco

A. MAINTENANCE (PRESERVATION)
i. Paint—Avoid painting historically unpainted surfaces. Exceptions may be made for severely deteriorated material where other consolidation or stabilization methods are not appropriate. When painting is acceptable, utilize a water permeable paint to avoid trapping water within the masonry.
ii. Clear area—Keep the area where masonry or stucco meets the ground clear of water, moisture, and vegetation.
iii. Vegetation—Avoid allowing ivy or other vegetation to grow on masonry or stucco walls, as it may loosen mortar and stucco and increase trapped moisture.
iv. Cleaning—Use the gentlest means possible to clean masonry and stucco when needed, as improper cleaning can damage the surface. Avoid the use of any abrasive, strong chemical, sandblasting, or high-pressure cleaning method.

B. ALTERATIONS (REHABILITATION, RESTORATION, AND RECONSTRUCTION)
i. Patching—Repair masonry or stucco by patching or replacing it with in-kind materials whenever possible. Utilize similar materials that are compatible with the original in terms of composition, texture, application technique, color, and detail, when in-kind replacement is not possible. EIFS is not an appropriate patching or replacement material for stucco.
ii. Repointing—The removal of old or deteriorated mortar should be done carefully by a professional to ensure that masonry units are not damaged in the process. Use mortar that matches the original in color, profile, and composition when repointing. Incompatible mortar can exceed the strength of historic masonry and results in deterioration. Ensure that the new joint matches the profile of the old joint when viewed in section. It is recommended that a test panel is prepared to ensure the mortar is the right strength and color.
iii. Removing paint—Take care when removing paint from masonry as the paint may be providing a protectant layer or hiding modifications to the building. Use the gentlest means possible, such as alkaline poultice cleaners and strippers, to remove paint from masonry.
iv. Removing stucco—Remove stucco from masonry surfaces where it is historically inappropriate. Prepare a test panel to ensure that underlying masonry has not been irreversibly damaged before proceeding.

6. Architectural Features: Doors, Windows, and Screens

A. MAINTENANCE (PRESERVATION)
i. Openings—Preserve existing window and door openings. Avoid enlarging or diminishing to fit stock sizes or air conditioning units. Avoid filling in historic door or window openings. Avoid creating new primary entrances or window openings on the primary façade or where visible from the public right-of-way.
ii. Doors—Preserve historic doors including hardware, fanlights, sidelights, pilasters, and entablatures.
iii. Windows—Preserve historic windows. When glass is broken, the color and clarity of replacement glass should match the original historic glass.
iv. Screens and shutters—Preserve historic window screens and shutters.
v. Storm windows—Install full-view storm windows on the interior of windows for improved energy efficiency. Storm window may be installed on the exterior so long as the visual impact is minimal and original architectural details are not obscured.

B. ALTERATIONS (REHABILITATION, RESTORATION, AND RECONSTRUCTION)
i. Doors—Replace doors, hardware, fanlight, sidelights, pilasters, and entablatures in-kind when possible and when deteriorated beyond repair. When in-kind replacement is not feasible, ensure features match the size, material, and profile of the historic element.
ii. New entrances—Ensure that new entrances, when necessary to comply with other regulations, are compatible in size, scale, shape, proportion, material, and massing with historic entrances.
iii. Glazed area—Avoid installing interior floors or suspended ceilings that block the glazed area of historic windows.
iv. Window design—Install new windows to match the historic or existing windows in terms of size, type, configuration, material, form, appearance, and detail when original windows are deteriorated beyond repair.
v. Muntins—Use the exterior muntin pattern, profile, and size appropriate for the historic building when replacement windows are necessary. Do not use internal muntins sandwiched between layers of glass.
vi. Replacement glass—Use clear glass when replacement glass is necessary. Do not use tinted glass, reflective glass, opaque glass, and other non-traditional glass types unless it was used historically. When established by the architectural style of the building, patterned, leaded, or colored glass can be used.
vii. Non-historic windows—Replace non-historic incompatible windows with windows that are typical of the architectural style of the building.
viii. Security bars—Install security bars only on the interior of windows and doors.
ix. Screens—Utilize wood screen window frames matching in profile, size, and design of those historically found when the existing screens are deteriorated beyond repair. Ensure that the tint of replacement screens closely matches the original screens or those used historically.
x. Shutters—Incorporate shutters only where they existed historically and where appropriate to the architectural style of the house. Shutters should match the height and width of the opening and be mounted to be operational or appear to be operational. Do not mount shutters directly onto any historic wall material.

7. Architectural Features: Porches, Balconies, and Porte-Cocheres

A. MAINTENANCE (PRESERVATION)
i. Existing porches, balconies, and porte-cocheres—Preserve porches, balconies, and porte-cocheres. Do not add new porches, balconies, or porte-cocheres where not historically present.
ii. Balusters—Preserve existing balusters. When replacement is necessary, replace in-kind when possible or with balusters that match the originals in terms of materials, spacing, profile, dimension, finish, and height of the railing.
iii. Floors—Preserve original wood or concrete porch floors. Do not cover original porch floors of wood or concrete with carpet, tile, or other materials unless they were used historically.

B. ALTERATIONS (REHABILITATION, RESTORATION, AND RECONSTRUCTION)
i. Front porches—Refrain from enclosing front porches. Approved screen panels should be simple in design as to not change the character of the structure or the historic fabric.
ii. Side and rear porches—Refrain from enclosing side and rear porches, particularly when connected to the main porch

or balcony. Original architectural details should not be obscured by any screening or enclosure materials. Alterations to side and rear porches should result in a space that functions, and is visually interpreted as, a porch.
iii. Replacement—Replace in-kind porches, balconies, porte-cocheres, and related elements, such as ceilings, floors, and columns, when such features are deteriorated beyond repair. When in-kind replacement is not feasible, the design should be compatible in scale, massing, and detail while materials should match in color, texture, dimensions, and finish.
iv. Adding elements—Design replacement elements, such as stairs, to be simple so as to not distract from the historic character of the building. Do not add new elements and details that create a false historic appearance.
v. Reconstruction—Reconstruct porches, balconies, and porte-cocheres based on accurate evidence of the original, such as photographs. If no such evidence exists, the design should be based on the architectural style of the building and historic patterns.

Historic Design Guidelines, Chapter 3, Guidelines for Additions

1. Massing and Form of Residential Additions

A. GENERAL
i. Minimize visual impact—Site residential additions at the side or rear of the building whenever possible to minimize views of the addition from the public right-of-way. An addition to the front of a building would be inappropriate.
ii. Historic context—Design new residential additions to be in keeping with the existing, historic context of the block. For example, a large, two-story addition on a block comprised of single-story homes would not be appropriate.
iii. Similar roof form—Utilize a similar roof pitch, form, overhang, and orientation as the historic structure for additions.
iv. Transitions between old and new—Utilize a setback or recessed area and a small change in detailing at the seam of the historic structure and new addition to provide a clear visual distinction between old and new building forms.

B. SCALE, MASSING, AND FORM
i. Subordinate to principal facade—Design residential additions, including porches and balconies, to be subordinate to the principal façade of the original structure in terms of their scale and mass.
ii. Rooftop additions—Limit rooftop additions to rear facades to preserve the historic scale and form of the building from the street level and minimize visibility from the public right-of-way. Full-floor second story additions that obscure the form of the original structure are not appropriate.
iii. Dormers—Ensure dormers are compatible in size, scale, proportion, placement, and detail with the style of the house. Locate dormers only on non-primary facades (those not facing the public right-of-way) if not historically found within the district.
iv. Footprint—The building footprint should respond to the size of the lot. An appropriate yard to building ratio should be maintained for consistency within historic districts. Residential additions should not be so large as to double the existing building footprint, regardless of lot size.
v. Height—Generally, the height of new additions should be consistent with the height of the existing structure. The maximum height of new additions should be determined by examining the line-of-sight or visibility from the street. Addition height should never be so contrasting as to overwhelm or distract from the existing structure.

3. Materials and Textures

A. COMPLEMENTARY MATERIALS
i. Complementary materials—Use materials that match in type, color, and texture and include an offset or reveal to distinguish the addition from the historic structure whenever possible. Any new materials introduced to the site as a result of an addition must be compatible with the architectural style and materials of the original structure.
ii. Metal roofs—Construct new metal roofs in a similar fashion as historic metal roofs. Refer to the Guidelines for Alternations and Maintenance section for additional specifications regarding metal roofs.
iii. Other roofing materials—Match original roofs in terms of form and materials. For example, when adding on to a building with a clay tile roof, the addition should have a roof that is clay tile, synthetic clay tile, or a material that appears similar in color and dimension to the existing clay tile.

4. Architectural Details

A. GENERAL
i. Historic context—Design additions to reflect their time while respecting the historic context. Consider character-defining features and details of the original structure in the design of additions. These architectural details include roof form, porches, porticos, cornices, lintels, arches, quoins, chimneys, projecting bays, and the shapes of window and door openings.
ii. Architectural details—Incorporate architectural details that are in keeping with the architectural style of the original structure. Details should be simple in design and compliment the character of the original structure. Architectural details that are more ornate or elaborate than those found on the original structure should not be used to avoid drawing undue attention to the addition.
iii. Contemporary interpretations—Consider integrating contemporary interpretations of traditional designs and details for additions. Use of contemporary window moldings and door surroundings, for example, can provide visual interest while helping to convey the fact that the addition is new.

FINDINGS:

a. The structure at 413 N Pine was constructed circa 1890 and first appears on the 1904 Sanborn map. The structure feature strong traditional elements and an original limestone façade which is currently covered by non-original stucco. Per the 1904 Sanborn maps, this structure featured both a front and a side (southern) porch. A side addition has been constructed on the southern façade at the location of the side porch. This addition does not appear on the 1951 Sanborn map and was probably constructed between 1955 and 1960 based on the addition's building materials.
b. At the January 18, 2016, Historic and Design Review Commission hearing, a Certificate of Appropriateness was issued for repair of the stone façade, the installation of a standing seam metal roof, the installation of a french drain, repair to all existing wood windows and replacing non-original windows with wood windows, the construction of a rear retaining wall, the demolition of a side addition on the southern facade, the construction of a small, shed-roofed addition to replace the existing side (southern) addition, the installation of solar panels the received Historic Tax Certification.
c. At this time, the applicant has proposed to modify items in the previously approved design as well as to demolish and reconstruct a rear addition, replace the existing front porch and apply plaster to the limestone façade. There have been no design modifications or proposed amendments to the installation of a french drain, installation of new roofing, removal of existing stucco, the construction of a rear retaining wall and Historic Tax Certification.
d. CONCEPTUAL APPROVAL – Conceptual approval is the review of general design ideas and principles (such as scale and setback). Specific design details reviewed at this stage are not binding and may only be approved through a Certificate of Appropriateness for final approval. Conceptual approval of any element provided for review does not guarantee additional approvals or final approval.
e. DEMOLITION OF EXISTING ADDITION – The applicant has proposed to demolish the walls and roof of a rear (west façade) addition and to reconstruct the addition to feature a modified roof and cladding materials. The applicant has provided an engineer's report that notes that this portion of the structure is not original due to construction materials and methods that differ from those the historic structure. The engineer's report also notes that the structural integrity of the addition has been compromised. This rear addition does not appear until the 1951 Sanborn Map and appears to have originally been an open air porch. Staff finds the removal and reconstruction of the non-original walls to be appropriate.
f. RECONSTRUCTION OF REAR ADDITION – The applicant, per conceptual construction documents has proposed to reconstruct the rear walls of the addition as they currently exist; however, the applicant has proposed a flat roof to replace the existing shed roof. The Guidelines for Additions 1.A.iii. notes that similar roof forms, including pitches, form, overhangs and orientation should be used when constructing an addition to a historic structure. Staff finds the flat roof to be inconsistent with the Guidelines.
g. SIDE ADDITION AMENDMENT – While a non-contributing addition has previously been constructed to the side of the historic house, any replacement addition should continue to seek conformance with the historic design guidelines and should be designed as to not distract from the original construction. The previously-approved replacement addition consisted of a modest, shed-roof form that met the Guidelines and was subordinate to the historic, stone house. The current application proposes to dramatically increase the footprint, massing, and height of the side addition.
h. SIDE ADDITION DESIGN – According to the Guidelines for Additions, new additions should be sited at the side or rear of the building whenever possible to minimize views of the addition from the public right-of-way. Additions should be subordinate to the principal façade of the original structure in terms of their scale and mass,

and should feature similar roof forms and compatible materials. The proposed addition features a flat roof with a terrace and railing, wood siding, limited fenestration on the front façade, and a cantilevered portion on the south end that extends over a subgrade parking area. While the overall form of the proposed addition aids to provide a clear visual transition between the old and new construction, the siting and scale in relation to the front façade distracts from the historic house. The proposed side addition is in the same plane as the front façade and should be set back substantially or repositioned to the rear of the house consistent with the Guidelines. The addition should also seek to incorporate more compatible materials, roof form, and fenestration patterns that are complimentary of the historic house. The proposed side addition is a significant departure from the historic design guidelines in terms of siting and overall design and is not appropriate. Given the age and significance of the historic house, a more respectful addition should be considered.

i. MATERIALS – regarding materials, the applicant has proposed materials that include wood siding, steel or aluminum windows, plaster and steel railing. The Guidelines for Additions 3.A. notes that materials that match in type, color and texture to those found on the historic structure should be used on additions. Staff finds the use of wood siding to be inconsistent with the Guidelines.

j. WINDOWS – The applicant has proposed for the addition to feature steel or aluminum windows. Aluminum clad wood windows may be appropriate; however, these windows should feature profiles that relate to the historic wood windows of the historic structure, not contemporary, industrial profiles as suggested by precedents provided by the applicant. Additionally, white manufacturer's color is not allowed, and color selection must be presented to staff. There should be a minimum of two inches in depth between the front face of the window trim and the front face of the top window sash. This must be accomplished by recessing the window sufficiently within the opening or with the installation of additional window trim to add thickness. Window trim must feature traditional dimensions and an architecturally appropriate sill detail. Window track components must be painted to match the window trim or concealed by a wood window screen set within the opening. Details on each should be submitted to staff for review.

k. FRONT PORCH MODIFICATIONS – The applicant has provided a structural report noting that approximately 70 percent of the roof structure's material is no longer structurally sound or has experienced significant deterioration. The applicant has proposed to reconstruct the front porch roof structure; however, the applicant has proposed to reconstruct this structure by using an exposed steel structure and flat roof. Staff finds the reconstruction of the existing porch roof to be appropriate to repair and replace damaged elements; however, materials that match the existing should be used. The porch should be reconstructed to match the existing, original profile.

l. STUCCO REPLACEMENT – The applicant has proposed to remove the non-original stucco and apply an alternative plaster finish. When appropriate materials such as a lime-based plaster are specified, this type of work is eligible for administrative approval. However, no materials specifications have been provided to staff at this time.

m. SOLAR PANEL AMENDMENT – Previously, two locations for solar panels were proposed; on the shed roof of the previously proposed addition and on the southern roof slope of the primary historic structure's roof. Mounting on the previously proposed addition's slope was recommended by staff and approved by the HDRC. At this time, the applicant has proposed to locate solar panels on the southern roof slope of the historic structure, visible from the public right of way. Staff supports the installation of solar panels at this property' however, suggests that the applicant propose an alternative location that would limit the solar panels' visibility from the public right of way.

n. WINDOW REPLACEMENT – The applicant has noted the potential replacement of existing windows. Staff finds the proposed replacement of non-original windows with a more architecturally appropriate window to be appropriate; however, the applicant should repair all existing wood windows.

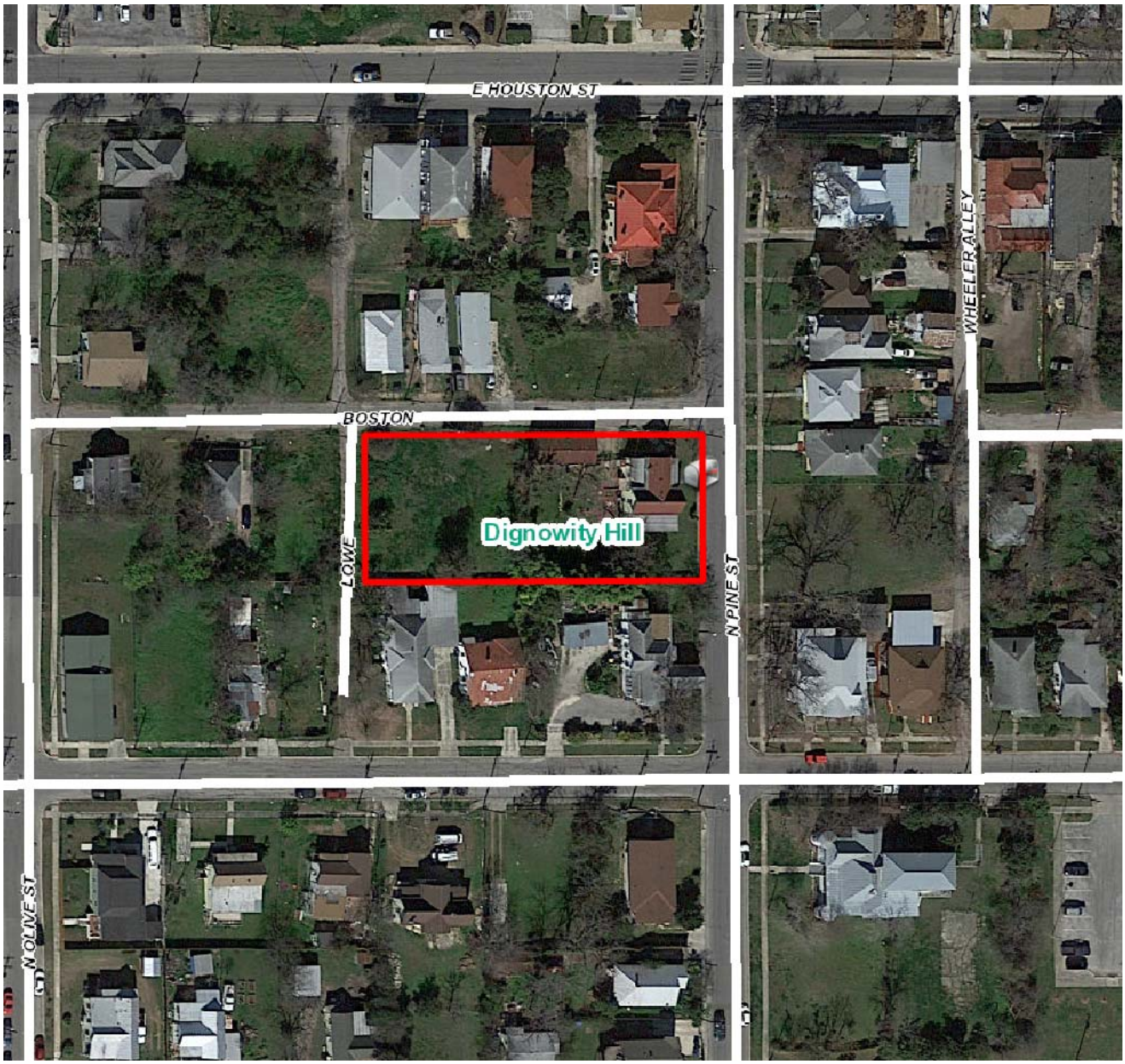
RECOMMENDATION:

1. Staff recommends conceptual approval of item #1, the demolition of the addition constructed on northwest corner of the historic structure and replace the walls and roof of a previously enclosed porch with a new addition with the following stipulations:
    i. That the addition feature a cladding material more appropriate for a plaster and masonry façade and not wood siding.
    ii. That the addition feature a sloped roof structure.
2. Staff recommends conceptual approval of item #2, the reconstruction of the front porch with the stipulation that the profile of the porch, including height, massing, materials and roof slope remain as is.
3. Staff does not recommend approval of stucco replacement at this time. Staff recommends that appropriate specifications are submitted to staff for administrative approval. Cementitious stucco is not recommended.

4. Staff does not recommend approval of the proposed side (south) addition. This proposed addition is not appropriate and should be redesigned to be subordinate to the historic house consistent with the Historic Design Guidelines.
5. Staff does not recommend approval of item #5 at this time. Staff recommends the applicant continue to explore mounting location that would not result in the solar panels being located on a primary roof slope of the historic structure where visible from the public right of way.
6. Staff recommends that any non-original windows be replaced with architecturally appropriate windows that match the profile of the historic wood windows found in the structure. Additionally, staff recommends that all historic wood windows be repaired.

CASE MANAGER:

Edward Hall



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Flex Viewer

Powered by ArcGIS Server

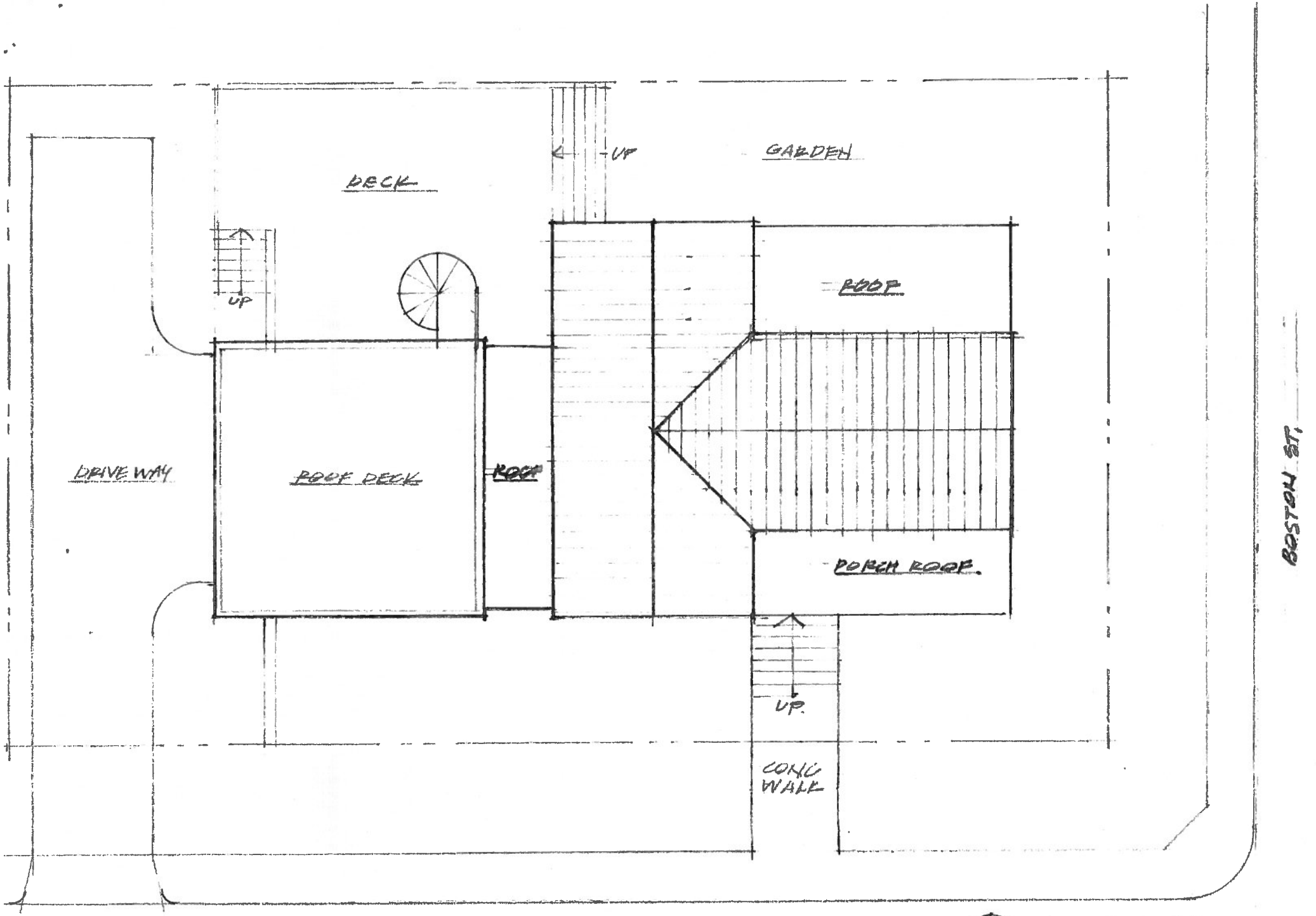
Printed:Jan 13, 2017

East (N Pine Street)

West

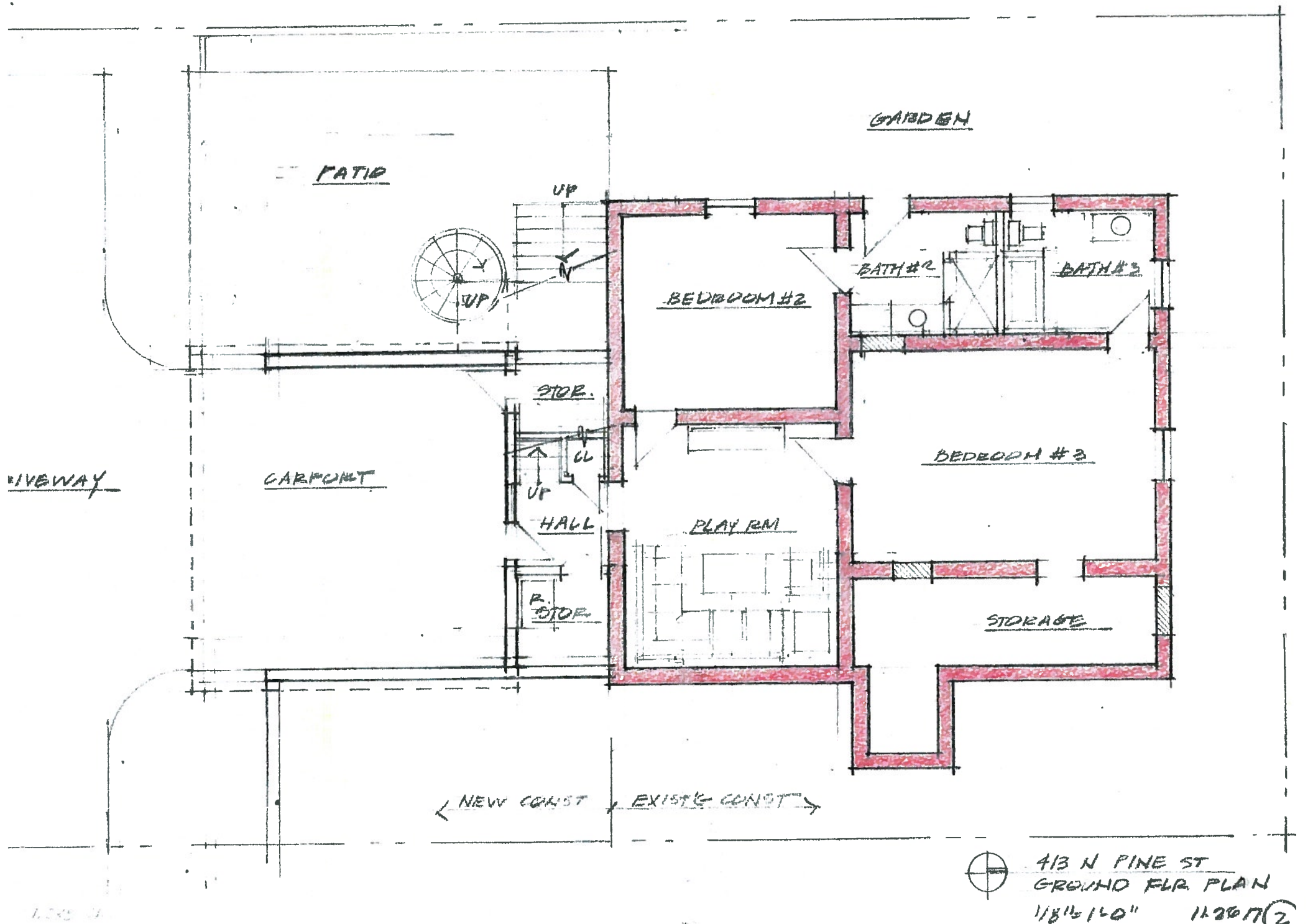
South

North (Boston Street)

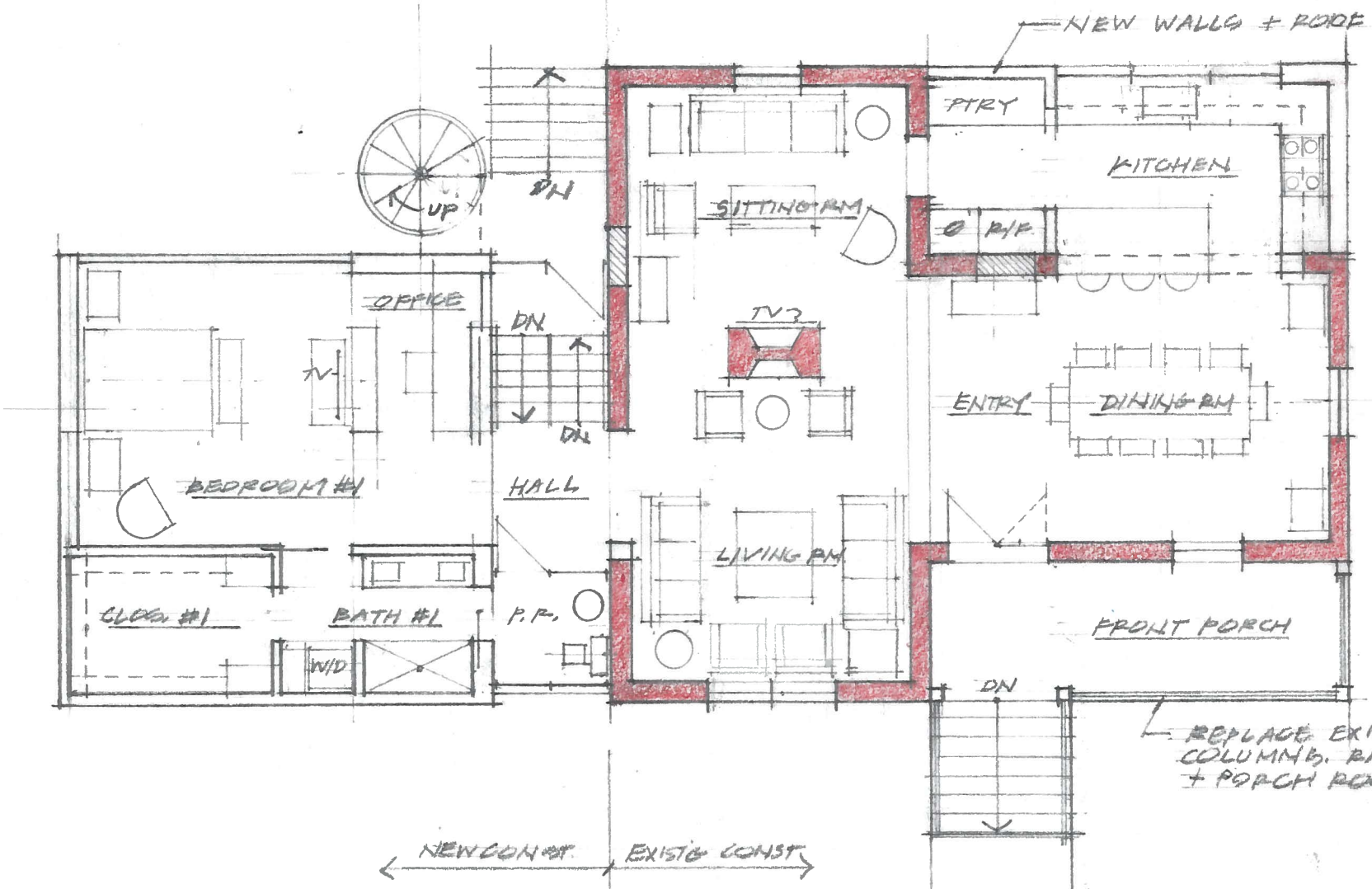


413 N PINE ST
SITE PLAN
1"=10'-0" 11.20.17

1



413 N PINE ST
GROUND FLR PLAN
1/8"=1'-0" 11.26.17 (2)



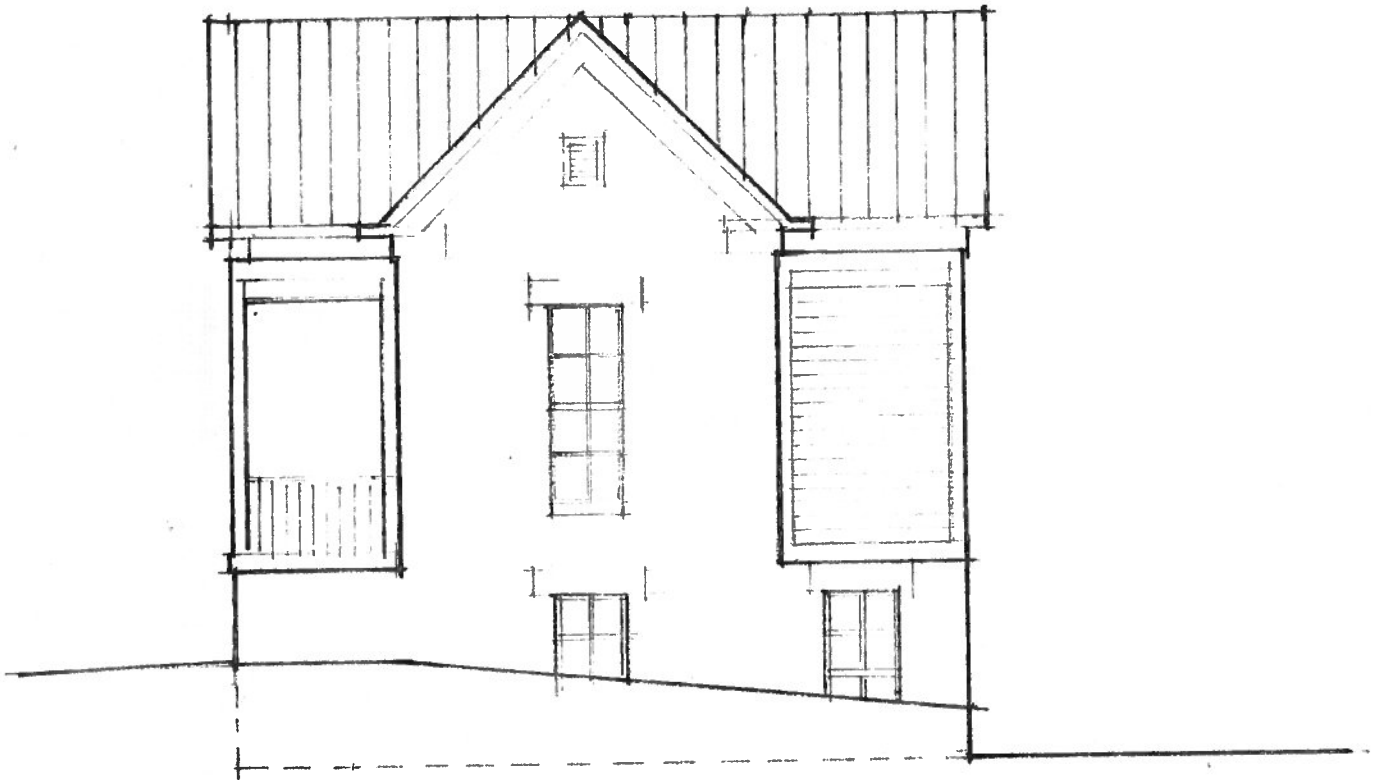
413 N PINE ST.
LEVEL 2 FLOOR PLAN
1/8"=1'-0" 11.20.17

413 N PINE ST.

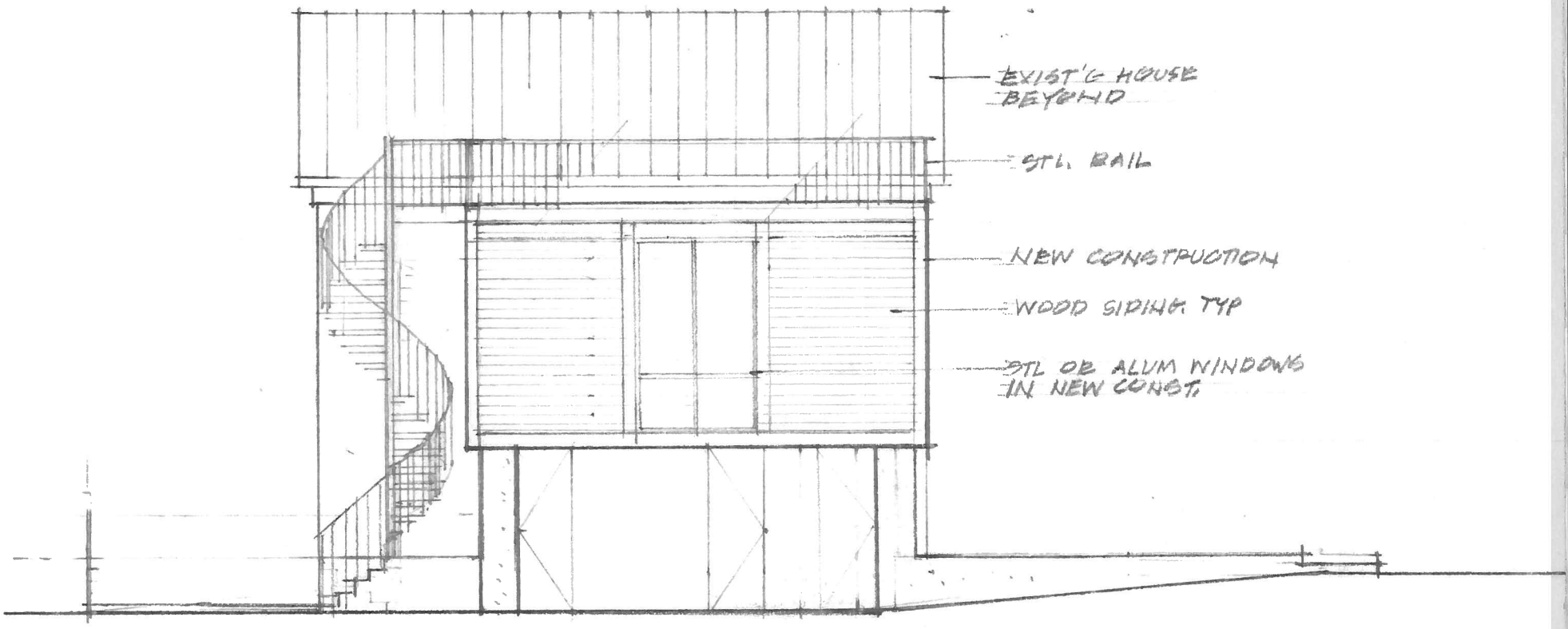
EAST ELEVATION

1/8" = 1'-0" 11.26.17

413 N PINE ST
WEST ELEVATION
1/8" = 1'-0" 11.26.17

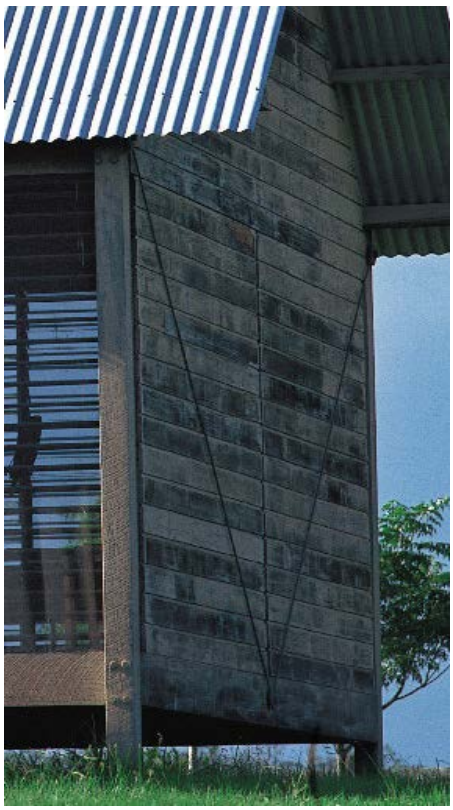


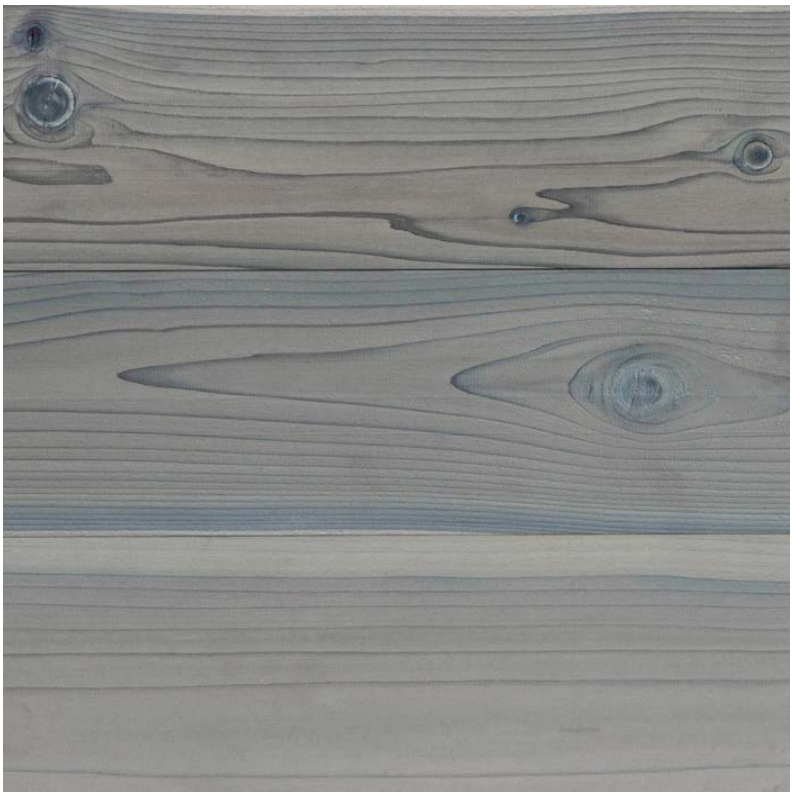
413 N PINE ST
NORTH ELEVATION
1/8"=1'-0" 11.26.17



413 N PINE ST
SOUTH ELEVATION
1/8" = 1'-0" 11.25.17

Wood Siding Precedents



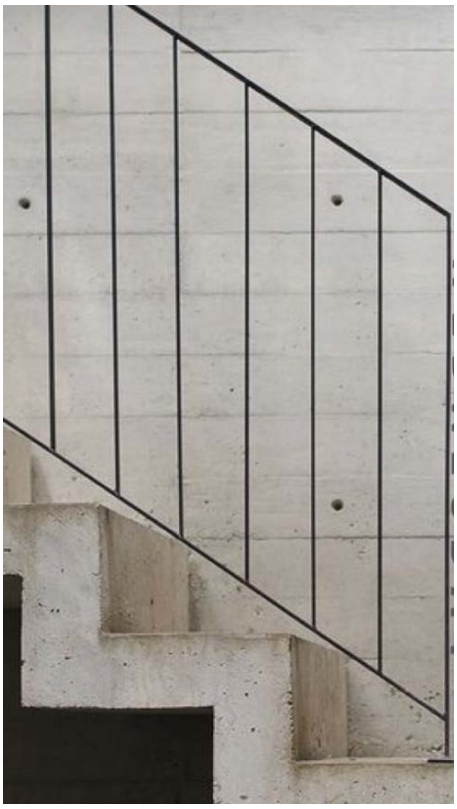


Porch Precedents

Crockett Street House C 1875

New Window Precedents

Railing Precedent



GROSE ENGINEERING

Registered Professional Engineer (P.E. Lic. #70882, Firm Lic. #2588)
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(210) 275-5237 E-mail: groseengineering@gmail.com
CONSULTING AND INSPECTION SERVICES

November 1, 2016

Mr. Ben Bowman

RE: General Condition Inspection for purchase of residential building for issues of concern regarding: safety, function, durability habitability, structural integrity.

1890s Residential Property:
413 N. Pine St., San Antonio, Texas 78202
Date of Inspection: October 28, 2016, 10:30 am

Dear Mr. Bowman:

Following my inspection at the subject property, I offer the following analysis, opinion and findings of the subject issues of concern and potential magnitude of severity of the issues.

When describing conditions below, directions are given from the viewer. Front faces the street, left and right are as seen from the street facing the house.

Right / Front

Left / Front

BACKGROUND

The subject property is two-story masonry and wood structure built ~1890. It has had at least one major addition from original to the left side and possibly other additions to the back areas. Additionally, there appears to have been multiple changes in use of the basement areas and second floor areas over the life of the structure. There have been multiple uses employed to the living spaces, adding or removing mechanical and electrical features and changing function of rooms over time. Downstairs, partly below ground level, is currently being used as the kitchen, dining, bedroom, bathroom and laundry. It is possible that the first floor originally may not have been a habitable part of the house but incorporated into the living space at a later date. Upper floor areas are bedrooms, living areas and an additional bathroom. Original function and configuration of the habitable spaces is unknown. It is likely that when this building was originally constructed, it had no interior plumbing, mechanical or electrical features.

VISUAL INSPECTIONS

Foundation:

Visual (Level A) Foundation Inspection: *The methodology of a Level "A" engineering performance evaluation inspection is visual. The engineering evaluation of the visually apparent foundation performance will be based on visual observations using generally accepted engineering standards. No destructive methods to determine composition were undertaken. This report focuses on the performance of structure observable at the time of inspection.*

The foundation construction and composition is not readily determinable without additional destructive testing. It appears to be a non-reinforced concrete or native stone stem wall construction. The foundation walls support observable cut, native rock, and limestone block walls. The walls are un-reinforced, extending to the roofline and are covered with a thin masonry rendering. The floor, throughout, on the first floor appears to have been placed after the original stem walls were constructed. The floor does not appear to be constructed to a standard that would be used as a living area. It is likely that the concrete comprising the floor was placed at a much later date than the original 1890s construction.

It is significant to note that the "Addition" foundation, spanning the left side of the original house, was added at a later date. It may be not be the same composition as the original house foundation; however it appears to be consistent with the masonry stem wall construction as in the original part of the house. (In this report the part of the house that was constructed subsequent to the main "original" part of the house, along the entire left side, will be referred to as the "Addition".)

Exterior:

- The house is located on a sloping grade. In the front the stem walls are four to five feet below the exterior grade. The grade varies uniformly front to back and is level with the first floor area at the back of the house. Above grade drainage is generally maintained in an acceptable manner around the foundation.
- There are some cracks indicating that there has been some foundation movement in the past. Cracking present was not associated with observable significant differential settlements in the stem walls. Masonry walls, supported by the foundation stem walls, appear to be generally free of open cracks or separations that would indicate foundation differential settlements or movements.
- The cracking to the walls in most areas are closed with few signs of previous repairs indicating that there has not been significant ongoing or cyclical movements of the supporting stem walls.

Interior:

- There are isolated areas in the lower and upper floors where cracking to the masonry walls is visible. Cracks are not throughout the structure nor show signs of distress associated with significant differential settlement of the foundation below.
- There is a general moisture intrusion condition on the walls that are below ground. This condition is predominantly on the front and right sides where the stem walls extend below the existing exterior ground level of the first floor. There are signs of exterior moisture penetrating to the first floor living areas. On the first floor front wall, efflorescence of dissolved minerals on the surface of the front masonry wall (photo below) is evident along the entire length. There is moisture on the wall to the touch and a general high humidity condition throughout along with a detectable mildew odor.
- On the wall in the kitchen, common with the right exterior wall, the cabinets appear to have been substantially degraded by the moisture in the walls. In some areas, warping and disintegrating of composite particle board material in base cabinets is evident.
- All other interior walls, away from the exterior walls, on the first floor, show signs of moisture intrusion. It appears that the moisture is coming from the below and rising up in the walls through capillary action. This is the general condition throughout the first floor.

Efflorescence from exterior moisture, front wall.

Interior first floor wall showing moisture.

Other Structural Features:

Exterior:

- Original wood porch covers, soffits, fascia, and other exposed wood have been degraded over the years from exposure to natural environmental factors. It is estimated that there may be as much as 70% or more of the exterior trim materials that need to be replaced. Much of the wet and dry rot is un-observable without additional destructive testing.
- The "Addition" on the left side, shows signs of significant degradation of wood materials from the exterior. This part of the house appears to have been added at a later date and was not built with the same materials or methods as the original part.

Wood rot of trim materials and possible rot of underlying structural members especially on the "Addition".

Interior:

- The original part of the 1890s house appears to be structurally sound and has generally maintained its integrity over the life of the structure.
- In the "Addition", there are upstairs areas where rotting wood floors are evident of structural failures of the supporting floor joists below. Primarily this is in the area of the connection of the "Addition" to the main original structure indicating that there may be leaks promoting the decay of the structure.
- Inspection of the original part roof framing found a high level of consistent construction and almost no wood rot in the rafters and ceiling joists. Where the rafters penetrated to the exterior there was some wood rot observable, however this appeared to be limited to 10% or less of the structure.

- Roof structure of the "Addition" was not observable due to the shed type roof construction. There were significant sagging areas of the Addition ceiling indicating that there may be significant degrading of the wood rafters above and to the connection point to the original structure.

Addition and attachment to original house showing low sloped roof and sources of leaks at attachment point. There are many areas on the exterior that are showing signs of degradation from the plywood construction. Interior wood framing and floor structures may be affected from the intrusion of moisture through the degrading and rotting plywood sheathing.

Mechanical, Plumbing, Electrical, Fire Safety:

- Air conditioning and heating is provided by window units.
- Plumbing system has been modified over the decades. Originally the house most likely did not include indoor plumbing. Venting and pipes are mostly attached to the exterior indicating that the plumbing system was added to the house after original construction. It is evident that the system that exists has been modified many times as the use of the rooms was changed and the "Addition" was added. Building code access and minimum space requirements were not generally followed on the downstairs bathroom.
- Electrical system has been added to and modified over the years. It is possible that no electrical features were part of the original house. There is evidence that many systems were employed over the years and that there has never been a total renovation or official permitted work for electrical changes.
- There is not a modern fire protection/smoke detection system in the house.
- Due to the removal and addition of several types of electrical systems over the years, there may be significant deficiencies hidden in walls that could cause a fire.

ANALYSIS AND FINDINGS

Structural Features:

Original House: In my opinion the foundation is generally stable and performing function as an integral part of the structure. The moisture condition observed on the interior is indicative of ground water or

runoff water collecting around and under the foundation. The moisture condition is detrimental to the durability of the foundation and should be mitigated with a French drain or other methods to eliminate the intrusion of moisture to the habitable areas. Structure of the original house (not including the "Addition" along the left side) is in good condition. There are some areas where the rafters have been affected by moisture intrusion at the soffit areas; however these do not appear to be extensive throughout the roof structure.

"Addition": The "Addition" part of the house is substantially different from the original house construction. The low sloped roof is leaking at the attachment point to the original house and there are many sources of moisture intrusion from degrading sheathing materials. Sagging ceilings and soft rotting areas of the floors are indicative of significant rotting of underlying structural members. These conditions are in a large way inherent in the way the "Addition" was constructed. Roof areas of the "Addition" are nearly flat and there is a significant possibility that the roof structure will have to be substantially altered or removed in order to repair damage to the underlying rafters and connection to the main house.

Overall Condition and Performance: safety, function, durability, habitability and structural integrity:
Structural performance along with mechanical, electrical, plumbing and fire safety features consider the capability of the building to serve its intended purpose to safely and comfortably provide shelter for the inhabitants. Primary elements of concern are: **safety, function, durability, habitability and structural integrity**. Below are my opinions of these elements based on the known facts and measurements taken at the time of inspection. The following is an overall impression from the visual inspection of the observable features.

Safety:

- There are significant and serious safety issues with this building that should be addressed immediately. Moisture intrusion can have a serious effect on inhabitant health. It is recommended that water intrusion through the foundation walls and other sources of moisture be mitigated and stopped. In the "Addition" areas there are numerous sources of moisture intrusion that could affect health of the inhabitants. Modifications to the roof slope and attachment to the original house should be considered to prevent future leaks and further degradation.
- There is a general wood wet and dry rotting condition to the exterior wood materials. Attachment of soffits and facial materials are failing and there is a danger of some of the parts falling off at any time.
- The back porch cover structural members are degrading from exposure to moisture. The failure of the support is could occur at any time allowing the porch roof to fall. It is imperative that this area be either temporarily reinforced or removed. For fire safety reasons, the access door to the house should not be blocked to maintain safe means of egress in the event of a fire or other emergency.
- There are significant and numerous electrical deficiencies that need to be addressed. It is recommended that the entire electrical system be evaluated for suitability in capacity and in relation to fire safety and code compliance.
- There are several areas in the bathrooms that violate minimum spacing and access requirements. These are potential areas for trips or falls and should be redesigned and constructed to meet current minimum safe standards.

Function:

- The house is currently occupied and functioning to provide shelter to the inhabitants. As mentioned above under "safety" there is significant concern about the ability of the structure and systems to function safely over time. In particular is the intrusion of moisture that could or is already having an effect on inhabitant health.

Durability:

- If changes to the water intrusion to the foundation and other sources from the roof and wall areas are not stopped, the house will continue to degrade and become uninhabitable.

- Over time the structural integrity of the foundation and other parts of the structure will be compromised with continued water intrusion.

Habitability:

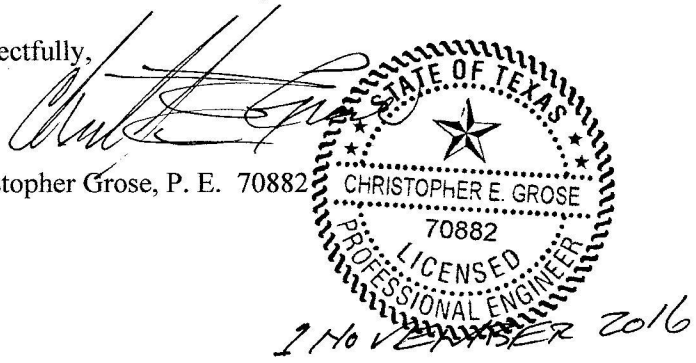
- As described above, the building is currently being inhabited. Habitability will become impossible if changes are not made to mitigate water intrusion and degradation of the materials.
- There may be hidden electrical problems that could cause a fire or lesser damages that will affect habitability.

Structural Integrity:

- By definition structural integrity *"is the ability of an item to hold together under a load, including its own weight, resisting breakage or bending"*. At this time the original part of the building continues to exhibit a functional level of structural integrity. Stopping the water intrusion in the foundation is necessary for continued functional performance and structural integrity.
- On the "Addition" there is a low level of functional structural integrity. Repair of rotting and degrading wood members is imperative for the functional performance of the "Addition". Due to moisture intrusion, it is possible that there are areas or the "Addition" roof structure that are significantly compromised in strength at the attachment point with the main house. This area should be investigated as soon as possible to verify the level of structural integrity for safety concerns.
- Porch structure in back and numerous soffit and fascia areas all around are in danger of falling down without significant removal and/or repairs being made.

Please advise if I can provide any additional information or explanation on these findings. I am available for phone consultation at any time.

Respectfully,



Christopher Grose, P. E. 70882

1 NOVEMBER 2016

PREVIOUSLY APPROVED DESIGN

HDRC Application - 413 N. Pine

The HDRC application contained herein is focused on the substantial rehabilitation proposed for the caliche block structure located at 413 N. Pine St circa 1890. The existing building has seen significant neglect over the past 130 years and is largely in a state of disrepair. It is the intent of the applicant to bring the structure into current building code and inhabitability standards for many years to come as the applicant's personal residence. The proposed scope of work includes the following:

Stone: remove damaged stucco from the exterior and interior stone walls to expose the condition of stone underneath. Remove hard portland cement from stone walls, repoint and stabilize caliche block with soft, breathable materials. Install a French drain and below-grade drainage mat along North, East and South facades to prevent pressure-driven moisture infiltration that is currently degrading below-grade stone. Infill attic 3 vents to be exposed at interior. Existing stone walls to remain exposed at exterior.

Roof: Install new standing seam metal roof to include 4" rigid insulation to roof assembly above existing decking. Replace as required damaged soffit and roof trim in kind. Install gutters. Extend existing primary chimney above the roofline. Demolish and cover existing secondary chimney below the roofline. Remove water damaged window pediment at Pine St. frontage. Install inconspicuous solar array on south-facing roof plane.

Windows and Doors: it is the intent of the applicant to repair the remaining original windows as much as possible, to the extent feasible as governed by cost, practicality, and existing damage sustained as outlined in OHP's published historic guidelines for windows. A number of aluminum windows have been installed in the structure to replace the existing windows over time. This application intends to replace all of these windows with new wood windows, also to meet the OHP's historic guidelines for windows. Remove window bars and all window air conditioner units. Locate new central air condenser in back yard.
The only existing exterior doors to the structure that have not been replaced with 6-lite (or similar) hollow metal doors are located at the primary entrance. It is the intent of the application to repair and retain these existing doors and the transom windows above.

Additions: Demolition of the non-original, unpermitted wood addition along southern edge of the original building. The addition has significant structural problems as outlined in the attached structural engineer's report which has recommended demolition or temporary shoring. Replace with screen porch to include 3 in 12 sloped roof for positive drainage. Wood siding will be presented to the street frontage and creeping fig will be planted generously and encouraged to climb and cover the street-facing frontages in order to minimize the presence of the smaller, replacement addition as much as possible. Fenestration will be installed as a clerestory window to match the existing clerestory window assembly above the front door.

Remove wood infill wall at western façade and replace with handrail. Extend roof overhang +1' to maintain adequate coverage.

Remove lower-level awning roof at northeast below-grade entrance, build retaining wall to provide landing and positive drainage at entry. Remove water heater closet at northwest corner of building.

Fencing: Install 6' wood privacy fence at rear of home to consist of 1x6 horizontal slats with an included remote access vehicular gate along Boston Street. Install wire loop garden fence to enclose front yard of home.

Please see the attached supporting materials for further explanation of the scope of work outlined above.

EXISTING PHOTOS

PREVIOUSLY APPROVED DESIGN

EXISTING NE CORNER

PROPOSED NE CORNER

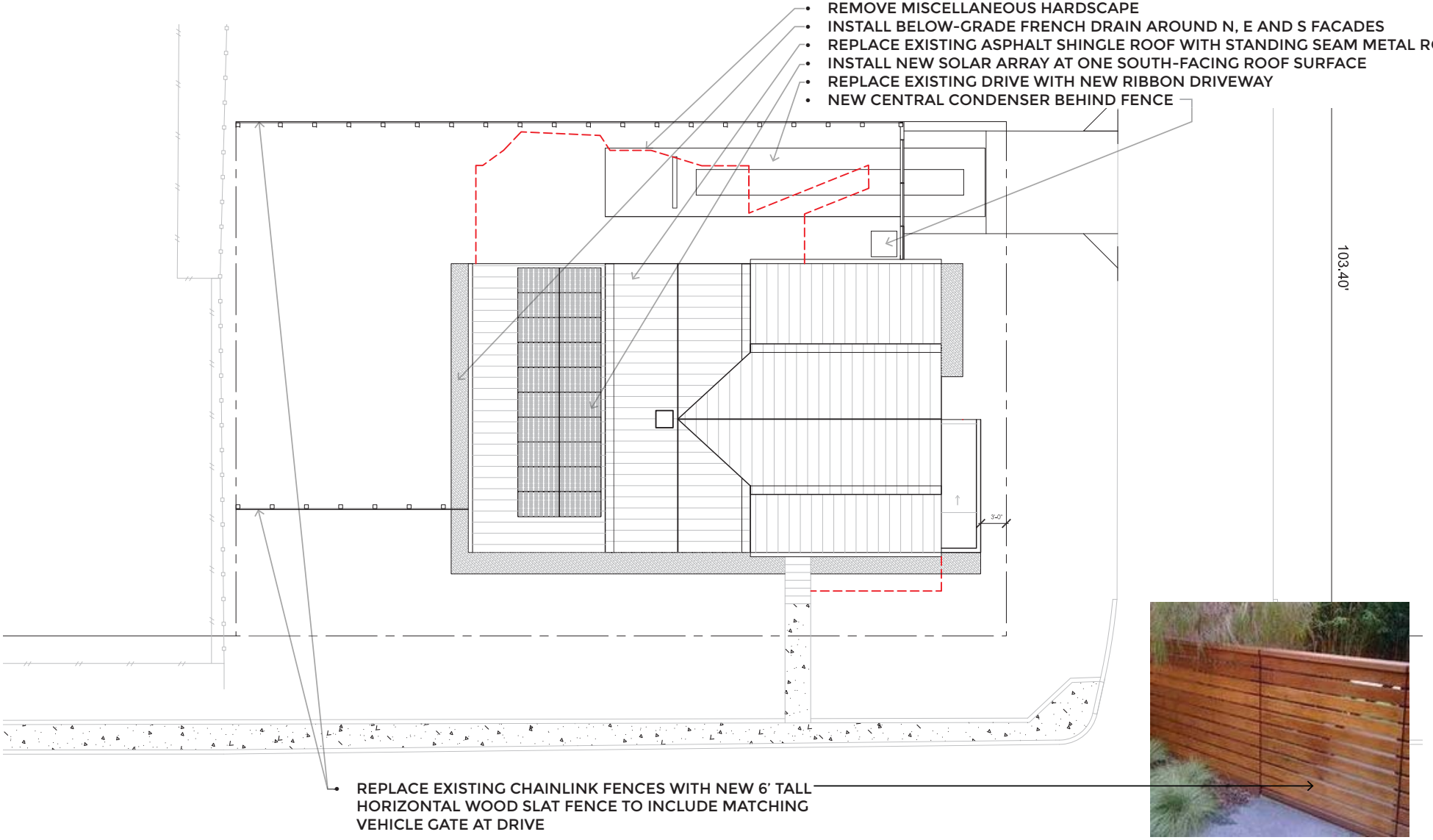
PREVIOUSLY APPROVED DESIGN

EXISTING SE CORNER

PROPOSED SE CORNER

PREVIOUSLY APPROVED DESIGN

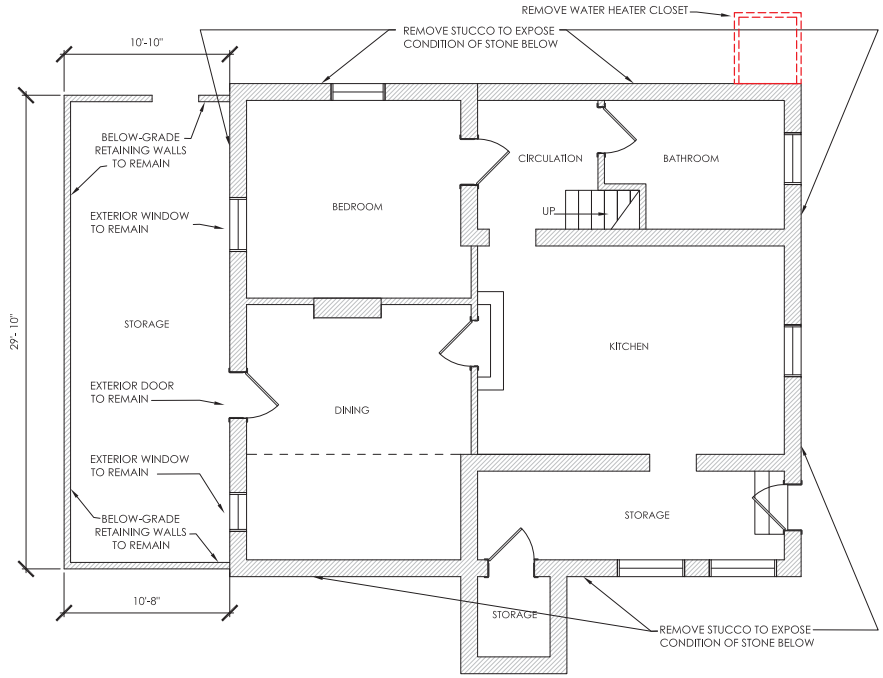
- REMOVE MISCELLANEOUS HARDSCAPE
- INSTALL BELOW-GRADE FRENCH DRAIN AROUND N, E AND S FACADES
- REPLACE EXISTING ASPHALT SHINGLE ROOF WITH STANDING SEAM METAL ROOF
- INSTALL NEW SOLAR ARRAY AT ONE SOUTH-FACING ROOF SURFACE
- REPLACE EXISTING DRIVE WITH NEW RIBBON DRIVEWAY
- NEW CENTRAL CONDENSER BEHIND FENCE



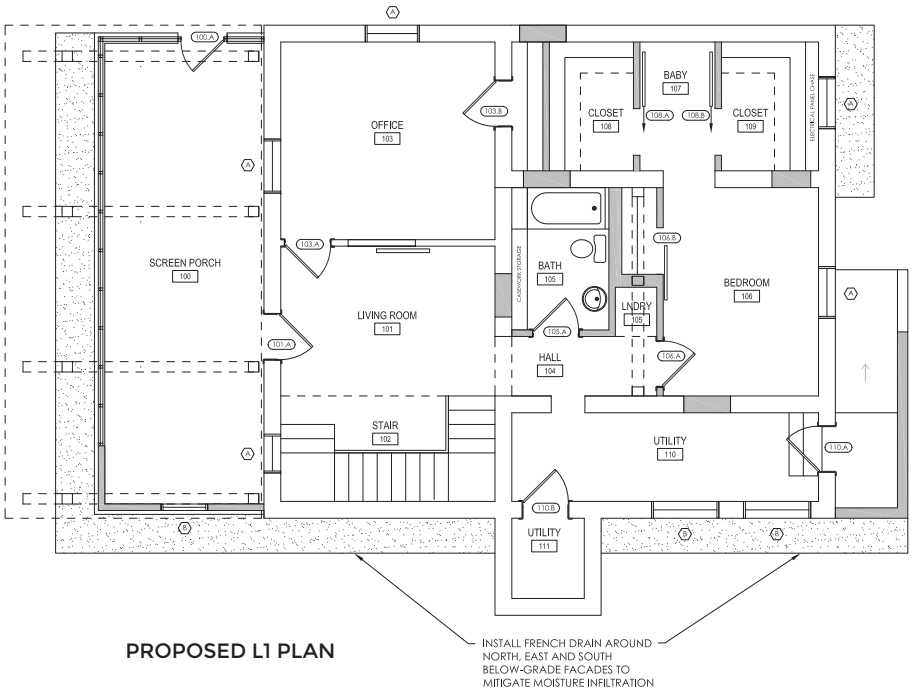
- REPLACE EXISTING CHAINLINK FENCES WITH NEW 6' TALL HORIZONTAL WOOD SLAT FENCE TO INCLUDE MATCHING VEHICLE GATE AT DRIVE

PROPOSED SITE PLAN

PREVIOUSLY APPROVED DESIGN

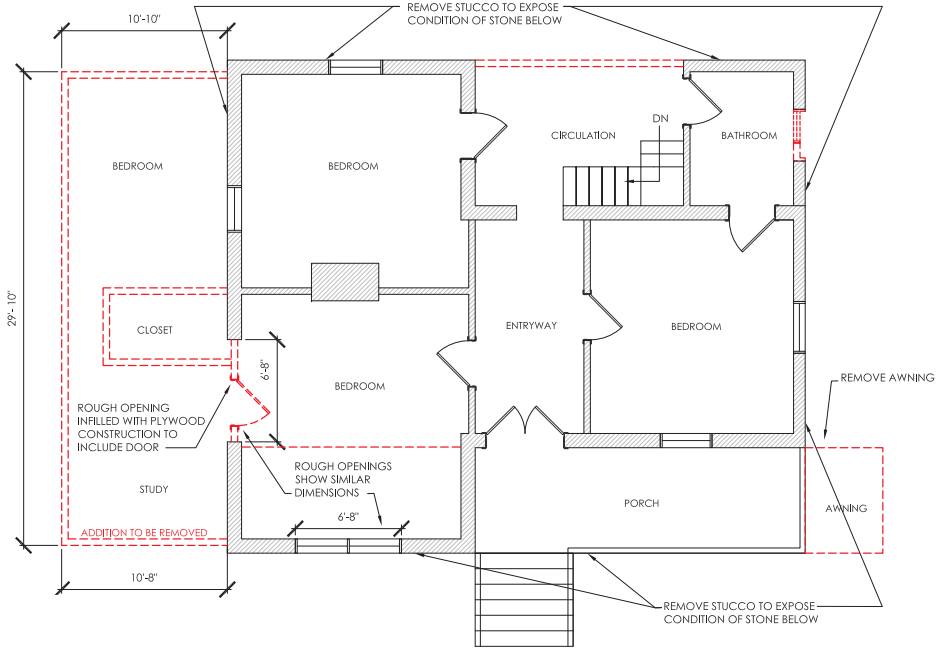


EXISTING L1 PLAN

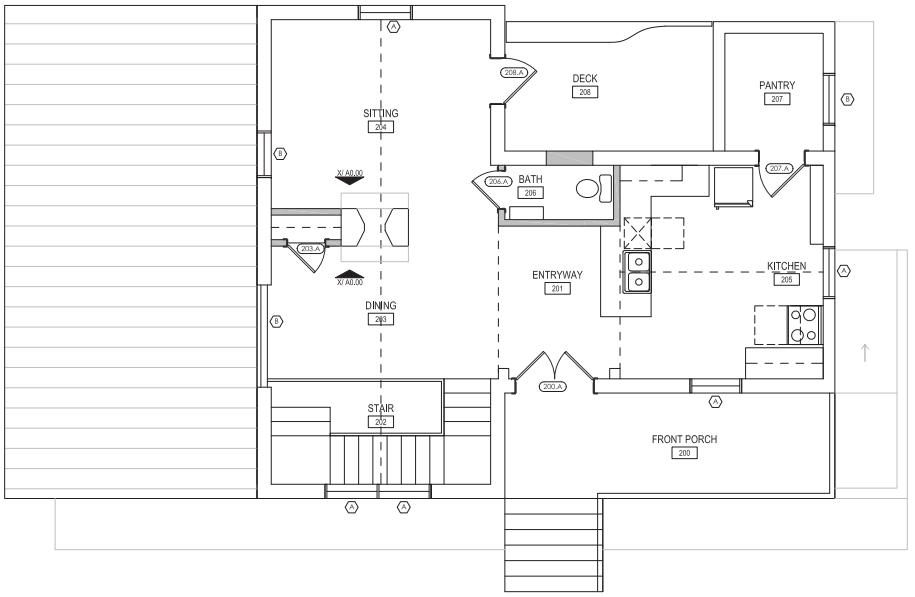


PROPOSED L1 PLAN

PREVIOUSLY APPROVED DESIGN



EXISTING L2 PLAN



PROPOSED L2 PLAN

PREVIOUSLY APPROVED DESIGN

- REMOVE EXISTING ASPHALT SHINGLE ROOF AND REPLACE WITH NEW STANDING SEAM METAL ROOF
- ADD 4" RIGID INSULATION TO ROOF ASSEMBLY ABOVE EXISTING DECKING
- INFILL ATTIC VENT (EXPOSED AT INTERIOR)
- REMOVE DAMAGED WINDOW PEDIMENT- SIMILAR DETAILS NOT PRESENT ANYWHERE ELSE IN HOUSE
- INSTALL NEW GUTTERS

EXISTING EAST FACADE

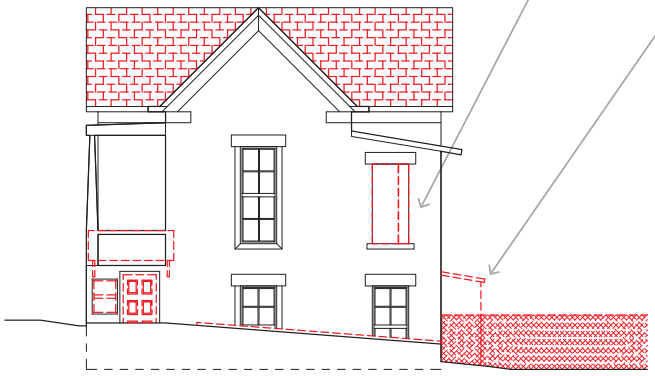
- REMOVE LOWER-LEVEL AWNING ROOF, BUILD RETAINING WALL TO PROVIDE LANDING AND POSITIVE DRAINAGE AT ENTRY
- REMOVE EXISTING ADDITION AND REPLACE WITH NEW SCREEN PORCH CLAD IN WOOD SIDING AT PINE STREET FACADE. FRONT FACADE TO PLANTED GENEROUSLY WITH CREEPING FIG TO CREATE PLANT SCREEN AND MINIMIZE PRESENCE OF ADDITION.
- NEW CLERESTORY TO MATCH CLERESTORY AT FRONT DOOR
- INSTALL NEW PRIVACY FENCE AT REAR OF HOME

PROPOSED EAST FACADE

PREVIOUSLY APPROVED DESIGN

- EXISTING WINDOW SIZE HAS BEEN REDUCED AND CONVERTED TO ALUMINUM WINDOW. REPLACE WITH NEW WINDOW TO MEET CRITERIA OF OHP WINDOW REPLACEMENT GUIDELINES.

- REMOVE WATER HEATER ADDITION
- REMOVE LOWER-LEVEL AWNING ROOF, BUILD RETAINING WALL TO PROVIDE LANDING AND POSITIVE DRAINAGE AT ENTRY



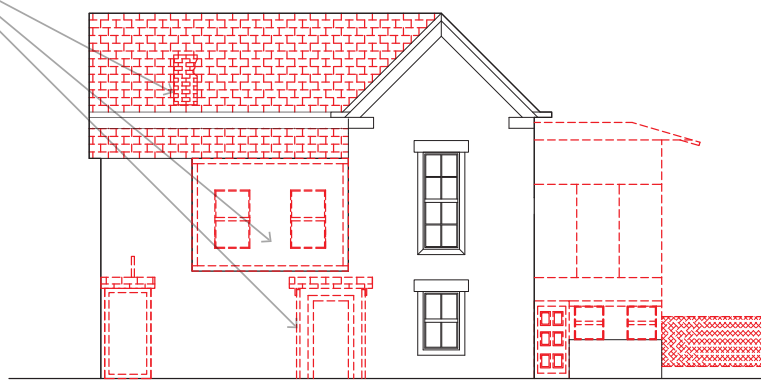
EXISTING NORTH FACADE

PROPOSED NORTH FACADE

PREVIOUSLY APPROVED DESIGN

FENCE LINE

- INFILL EXISTING HOLLOW METAL DOOR WITH STONE TO MATCH EXISTING CALICHE. IF MATCHING STONE CANNOT BE FOUND, INFILL WITH TAN BRICK TO MATCH EXISTING COLOR . INFILL WOULD BE VERY DIFFICULT TO SEE FROM PUBLIC R.O.W- SHEILDED BY PROPOSED REAR FENCE.
- REMOVE EXISTING WOOD INFILL AND REPLACE WITH HANDRAIL
- REMOVE EXISTING DAMAGED CHIMNEY



EXISTING WEST FACADE

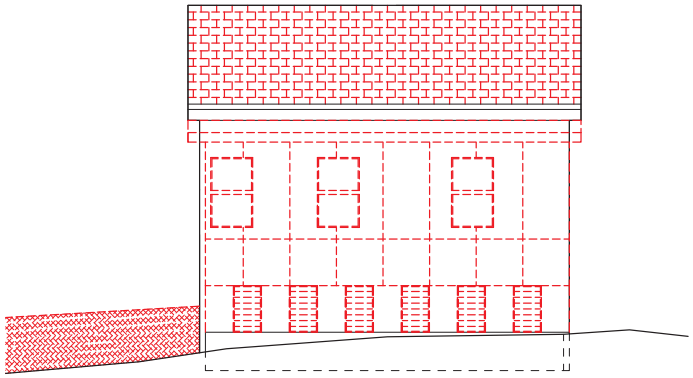
- EXTEND EXISTING PRIMARY CHIMNEY
- REPAIR DAMAGED SHED ROOF SEGMENT EXTEND OVERHANG +/- 1'.
- REMOVE EXISTING ADDITION, REPLACE WITH SINGLE STORY SCREEN PORCH

PROPOSED WEST FACADE

EXISTING PHOTOS

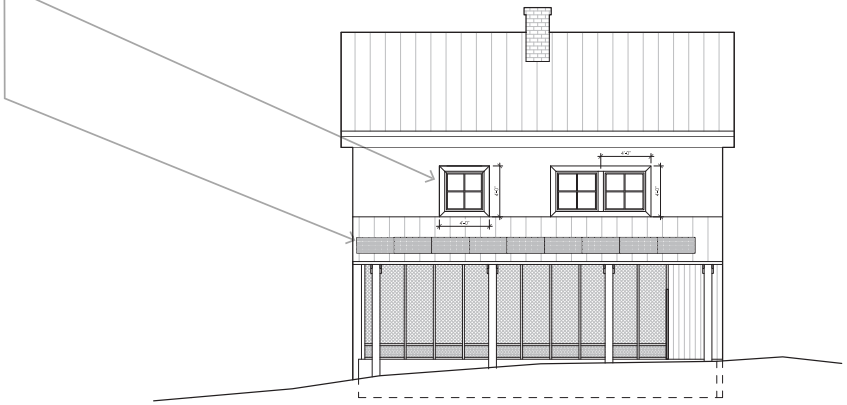
PREVIOUSLY APPROVED DESIGN

- REMOVE EXISTING ADDITION INCLUDING FLAT ROOF AND STRUCTURALLY COMPROMISED WOOD CONSTRUCTION. EXISTING BELOW-GRADE MASONRY (CINDER BLOCK) RETAINING WALL TO REMAIN.



EXISTING SOUTH FACADE

- REPLACE ADDITION WITH SINGLE-STORY SCREEN PORCH TO INCLUDE 3 IN 12 ROOF PITCH FOR POSITIVE DRAINAGE AND WOOD SIDING AT PINE STREET FRONTAGE
- INSTALL LOW PROFILE SOLAR ARRAY ON ROOF
- REPLACE EXISTING PLYWOOD INFILL CONSTRUCTION TO BE EXPOSED WITH NEW WINDOWS TO MATCH OHP'S WINDOW REPLACEMENT GUIDELINES.

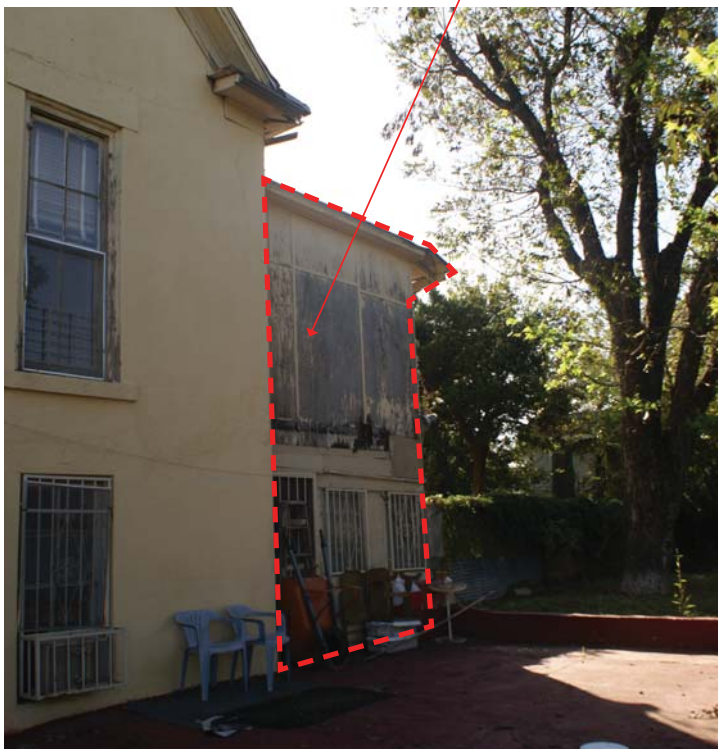


PROPOSED SOUTH FACADE

PREVIOUSLY APPROVED DESIGN

ADDITION TO BE REMOVED

ADDITION TO BE REMOVED



EXCERPT FROM STRUCTURAL ANALYSIS

> "On the "Addition" there is a low level of functional structural integrity. Repair of rotting and degrading wood members is imperative for the functional performance of the "Addition". Due to moisture intrusion, it is possible that there are areas or the "Addition" roof structure that are significantly compromised in strength at the attachment point with the main house. This area should be investigated as soon as possible to verify the level of structural integrity for safety concerns."

EXISTING PHOTOS - ADDITION

LEVEL 2

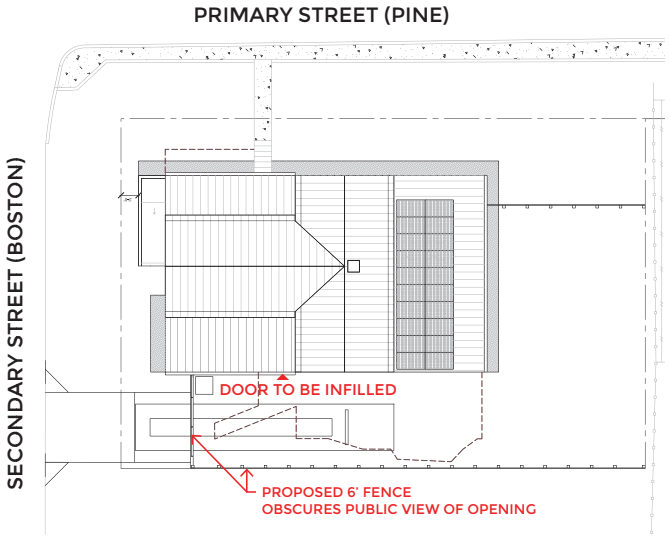
LEVEL 1

EXISTING PHOTOS- ADDITION INTERIOR

PREVIOUSLY APPROVED DESIGN

DOOR INFILL AT SIMILAR DIMENSION AND TRIM CONFIGURATION AS ADJACENT WINDOW ASSEMBLY

PREVIOUSLY APPROVED DESIGN



EXCERPTS FROM STRUCTURAL ANALYSIS

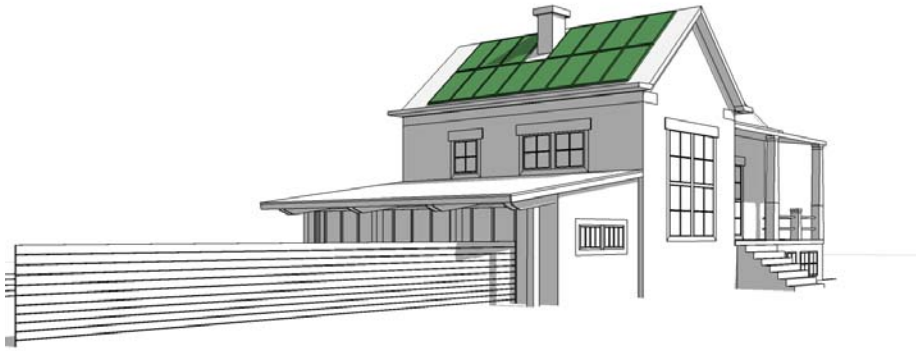
"The back porch cover structural members are degrading from exposure to moisture. The failure of the support is could occur at any time allowing the porch roof to fall. It is imperative that this area be either temporarily reinforced or removed.

Porch structure in back and numerous soffit and fascia areas all around are in danger of falling down without significant removal and/or repairs being made."

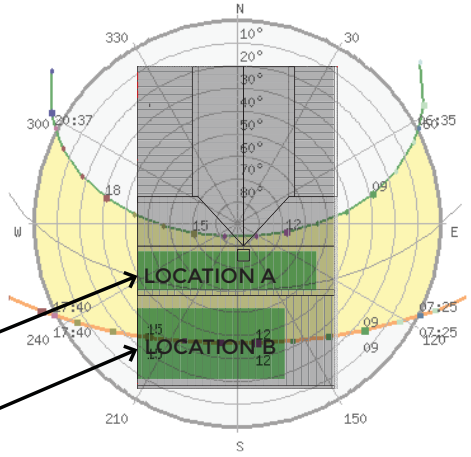
PREVIOUSLY APPROVED DESIGN

ABANDONED CHIMNEY TO BE DISASSEMBLED AND ENCAPSULATED BELOW ROOFLINE

ORIGINAL CENTRAL CHIMNEY TO BE EXTENDED



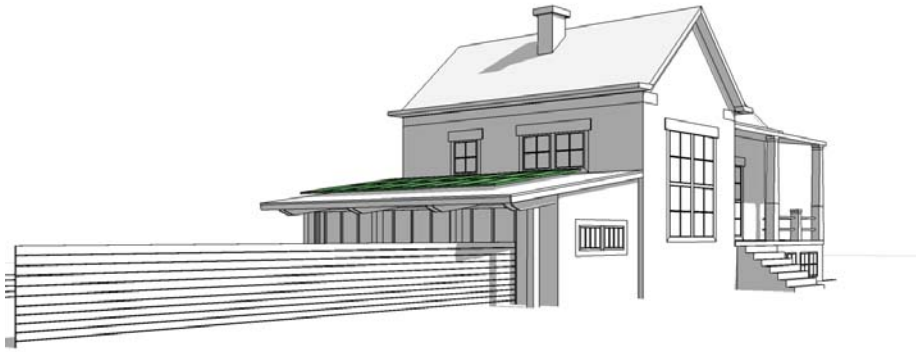
PROPOSED SOLAR PANEL LOCATION 'A'



ROOF PLAN- EFFICIENT SOLAR LOCATIONS

NORTH

PREVIOUSLY APPROVED DESIGN



PROPOSED SOLAR PANEL LOCATION 'B'
(PREFERRED LOCATION)

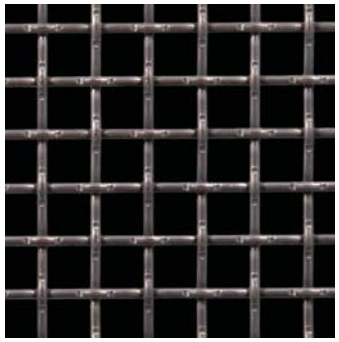
CLICK IMAGE TO ACTIVATE
ANIMATION SHOWING STREET PRESENCE WHEN DRIVING
PAST THE HOME IN BOTH N & S DIRECTIONS ALONG PINE

PREVIOUSLY APPROVED DESIGN

GALVANIZED STANDING SEAM METAL ROOF

REPOINTED AND STABILIZED CALICHE BLOCK, EXPOSED

CREEPING FIG SCREEN WALL



WEST BALCONY HANDRAIL INFILL

2" SQUARE WEAVE WIRE MESH STAINLESS- MCNICHOLS OR SIM.

SW6989 DOMINO

WINDOW RAILS AND MUNTINS

SW7018 DOVETAIL

WINDOW, DOOR AND SOFFIT TRIM

SW6497 BLUE HORIZON

FRONT PORCH SOFFIT

SW 2812 ROCKWOOD JADE

FRONT DOOR

REPLACEMENT WINDOWS:
WOOD: PELLA 450, JELD-WEN 2500, OR SIMILAR - AS NEEDED