

**CITY HISTORIC ZONING COMMISSION**  
**STAFF REPORT - CERTIFICATE OF APPROPRIATENESS APPLICATION**

MEETING DATE: 4/21/2011

► FILE NO.: 40711FTS

APPLICANT: Neely Realty (Owner)

ADDRESS OF PROPERTY: 1416 Forest Ave 37916

HISTORIC DISTRICT: Ft Sanders NC-1

TYPE OF WORK: Level IV. Demolition or relocation of contributing structure

► DESCRIPTION OF WORK: Demolish existing structure and replace with a duplex

PROPERTY DESCRIPTION: Craftsman (19250)

Two story frame with brick veneer. Front facing gable roof with asphalt shingle covering. Three over one double hung windows. Side entrance under second story enclosed porch. Transom and sidelights at front entry. Brick foundation. Brick buttresses at front steps. Rectangular plan.



► APPLICABLE DESIGN GUIDELINES:

Fort Sanders NC-1, adopted by the Knoxville City Council on September 13, 2000.

► STAFF RECOMMENDATION:

DENY Certificate No 40711FTS; if demolition approved, deny design of replacement structure. The engineer's report does not indicate that demolition is the only alternative for this structure. Any replacement would need changes.

COMMENTS:

The structural engineering report by Mallia does not indicate that the structural deficiencies are fatal to the building, although it does acknowledge the difficulty of repairing the rotation being suffered by the foundation. In addition, if demolition were to be approved, the proposed design of the new structure omits several requirements contained in the adopted design guidelines.

- 1) The foundation height does not appear to be consistent with other pre-1940 buildings, or with the building that is to be demolished (pg 6, #1).
- 2) The design does not appear to meet the requirements for porches with an outside entrance from the street for every 50 to 75

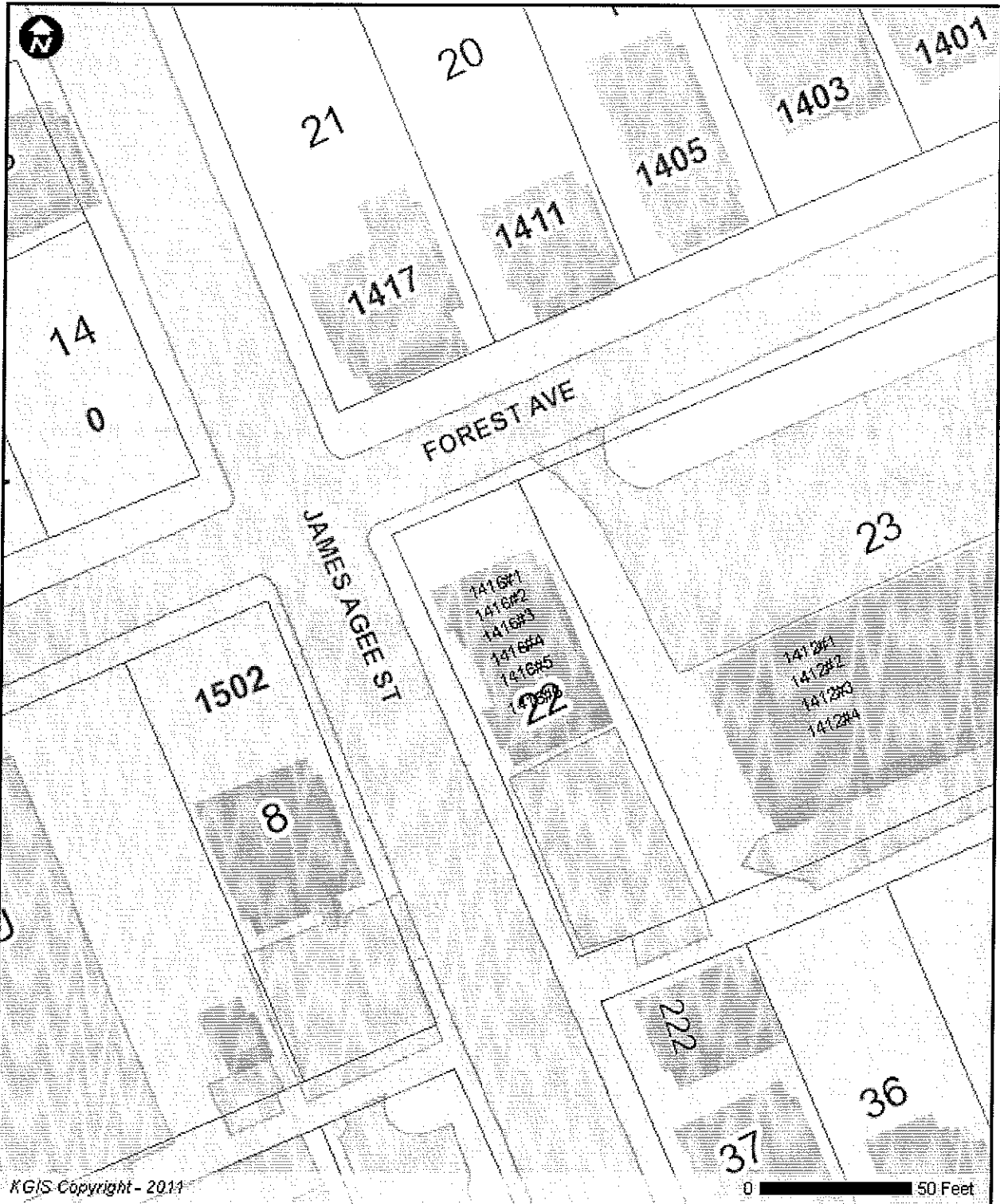
feet of street frontage. (pg. 6, #4)

3) The siding appears to duplicate board and batten siding, which is appropriate for accessory buildings, but not for primary buildings. (pg. 9, #3 and #5)

4) There does not appear to be at least 50% transparency on the Forest elevation, or the James Agee. (pg. 10, #8)

5) There does not appear to be parking provision, or provision for landscaping (pg. 11)

6) The requirement for bays or porches on the side elevation adjoining James Agee does not appear to have been met. (pgs 17 and 20)



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0 50 Feet

### 1416 Forest Avenue

Certificate No. 40711FTS

Knoxville Historic Zoning Commission Meeting of April 21, 2011

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**PROJECT REPORT**

March 9, 2011

**SUBJECT:** 1416 Forrest Avenue  
Knoxville, Tennessee 37916

**REQUESTED BY:** Mr. Tim Dunnavant, Architect

**DATE OF SITE VISIT:** March 9, 2011

**MEC PROJECT No:** 11027

**INTRODUCTION:**

This report has been based solely on visual observations at the site. No destructive or material testing has been performed. The opinion provided herein is not intended as a comprehensive engineering assessment of the entire subject structure, but of the exposed structural elements only. In the event that any additional information becomes available, we reserve the right to revise the opinion contained within.

This report has been prepared for the exclusive use of Mr. Tim Dunnavant and the Owners of the subject structure. Third parties must not rely on this report without consulting with the author at Mallia Engineering Company, Inc.

The scope of this inspection was to opine on the structural integrity of the subject structure.

**OBSERVATION:**

The subject is an old two story house which has been converted into 4 apartments. The floor structure is composed of 2x8 wood joists spaced at 16 inches on center. The foundation is composed of perimeter walls and a crawl space. Part of the crawl space is tall enough to stand. Wood beams that support the joists are composed of two or three plies 2x8 and are supported by wood posts.

I observed the following deficiencies:

1. Although the floor framing is adequately sized for the floor load, the floors are wavy and sagging.
2. There is standing water in the crawl space. I could see one spot where water is coming into the crawl space through the brick foundation wall. The foundation walls must be excavated, waterproofed, and a foundation drain placed to capture any water that



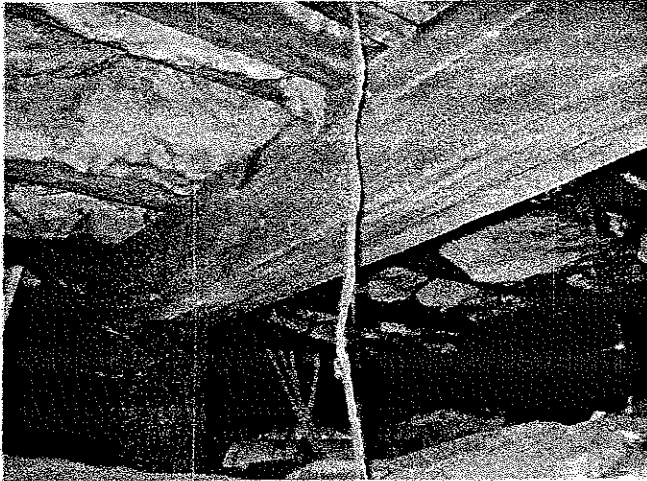
percolates to the bottom of the footing. The foundation drain must daylight to discharge any water.

3. The wood posts that support the beams in the crawl space rest on brick or concrete piers. The wood posts do not appear to be pressure treated. This is a code violation that must be remedied by supporting the posts on a metal post base. Also, some posts show sign of water damage; these posts have to be replaced.
4. From my vantage point in the crawl space, I did not see any structural members that were rotted or in need of replacement, however the stairs to the crawl space must be replaced.
5. The foundation walls on the four sides of the house are rotating and settling. The rotation of the foundation walls is bowing the walls. Rotation may be caused by the lateral pressure imposed on the foundation walls from the exterior. This lateral pressure may originate from the unbalanced fill (exterior grade level higher than the interior crawl space grade level, and by hydrostatic pressure (water in the soil). The foundation walls must be supported against further settlement and rotation. Future settlement may be prevented by providing support to the foundation walls with devices such as Atlas foundation jacks; however the jacks will not prevent rotation. Furthermore the jacks must be spaced at no more than half the height of the foundation wall to ensure proper continuous support (assume 24 inches on center). Future rotation can be prevented by building counterfort walls (wing walls) along the inside of the foundation walls spaced at four to six feet on center.
6. There are several window lintels that are sagging and must be repaired to prevent further cracking of the brick.
7. Settlement cracks on the façade where the brick is still near level can be repaired simply by re-pointing the cracked mortar joint with type N mortar. Where the brick is severely out of level, portion of the brick wall must be removed and replaced.

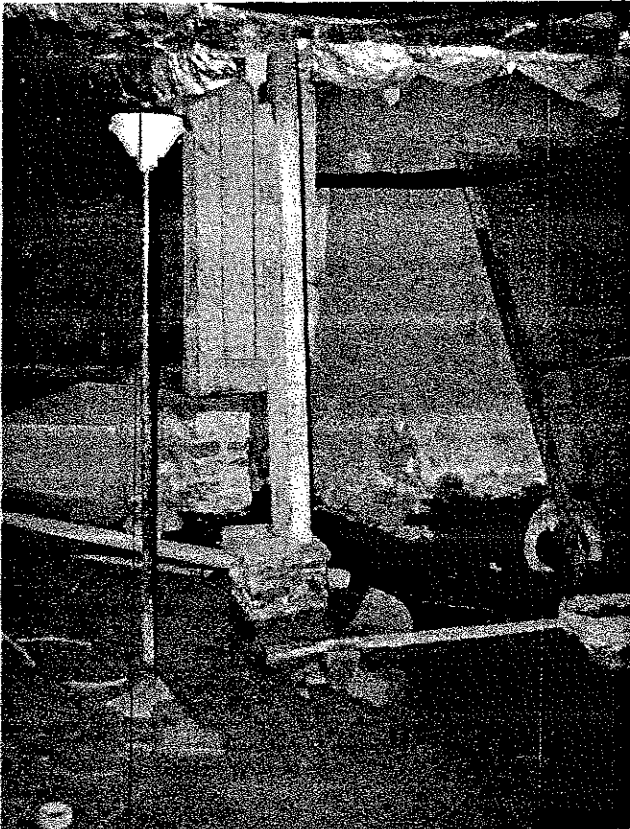
#### CONCLUSION:

NOTE: this report does not attempt at rendering an opinion on the construction feasibility nor of the fiscal feasibility of the enumerated repairs above.

Item #5 is particularly cumbersome at best if not extremely difficult to execute.



Floor framing in crawl space.



Standing water in crawl space.



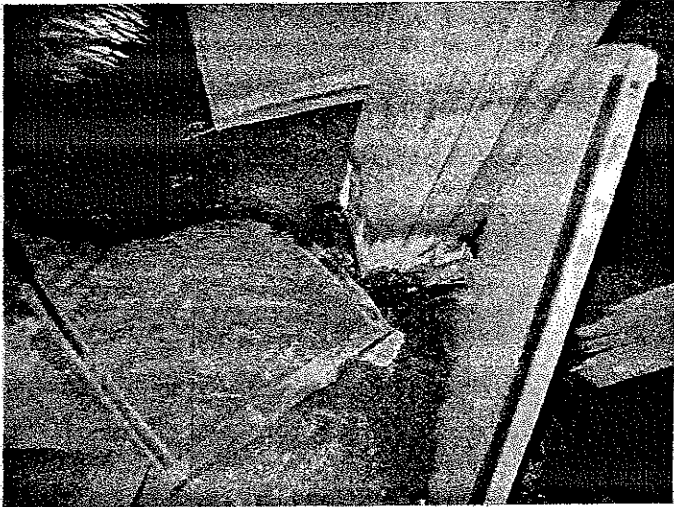


Brick work to be repaired.

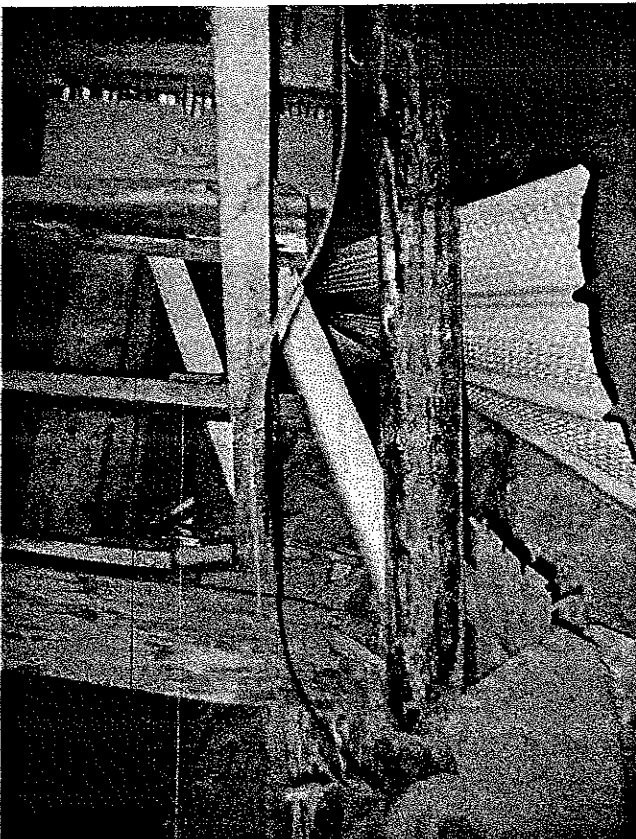


Brick work to be repaired.



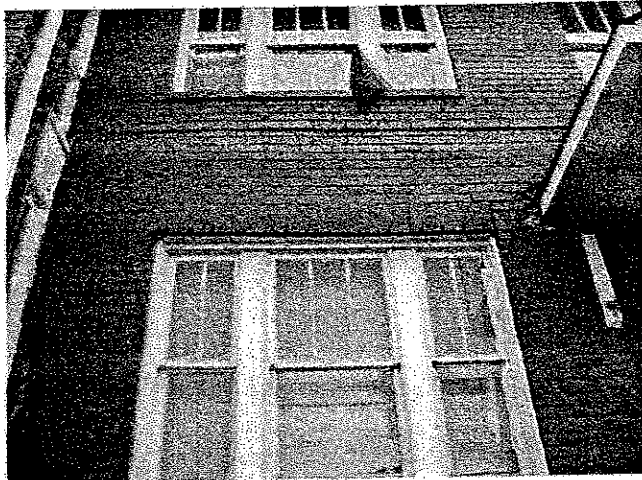


Damaged post base.

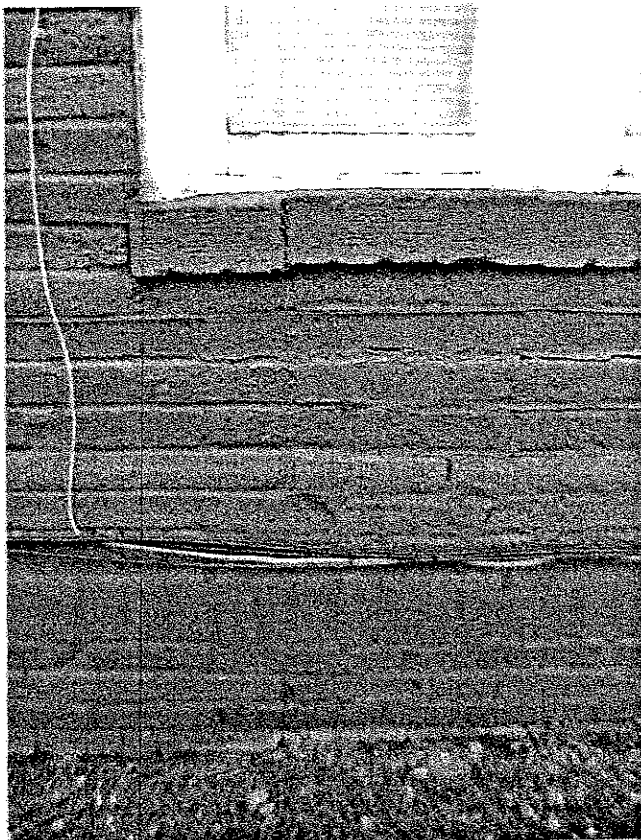


Stairs to crawl space to be replaced.

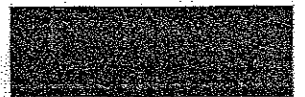


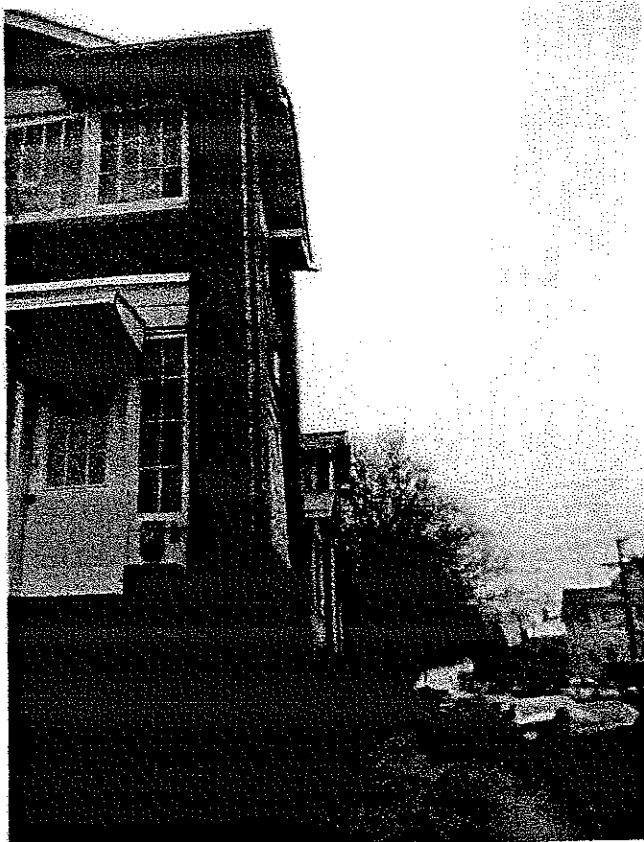


Sagging window lintel



Cracks and settlement of the brick wall.






Rotation of the brick wall.



Settlement of the brick wall

  
Maurice Mallia, PE



MARCH 9 2011  
Date:



**TTD Architect**  
Timothy Todd Dunnavant

6, April 2011

Ann Bennett

**RE: 1416 Forest Ave.**

Based on the information provided by Mallia Engineering Company and Janco Construction, we ask the board to allow the existing structure to be demolished.

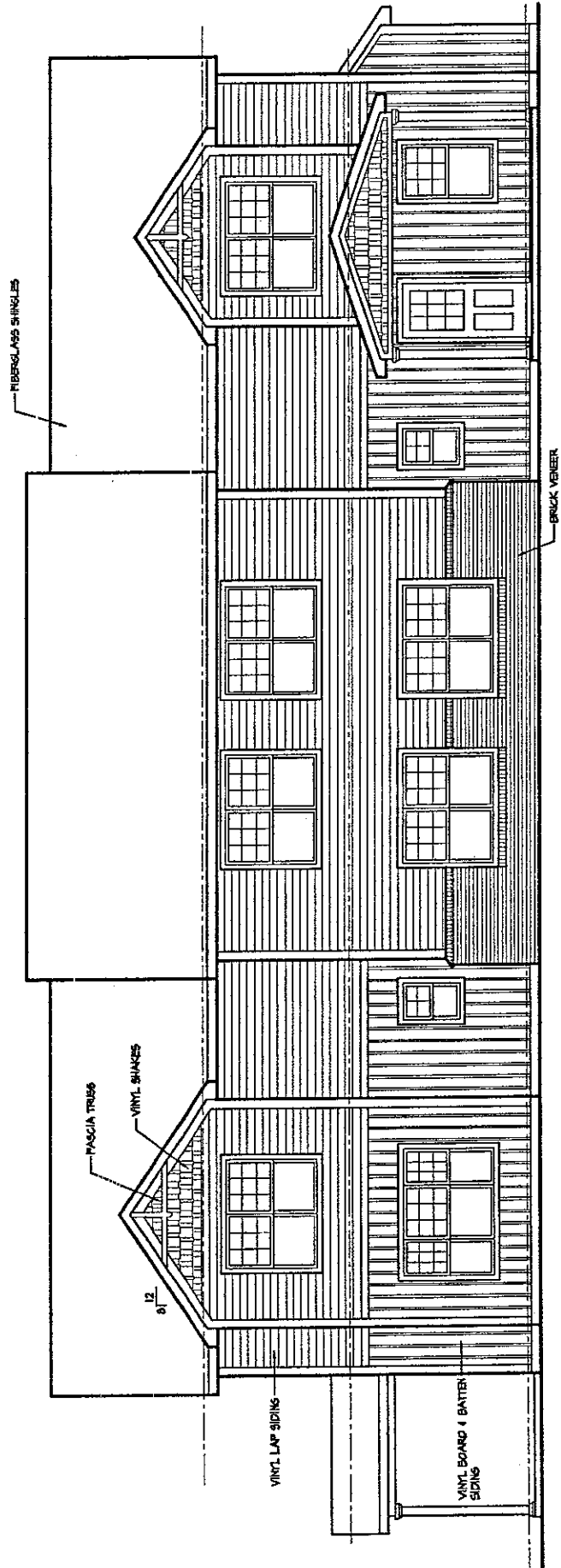
Neely Development regrets having to go to this measure, for they have done numerous renovations in the area and have not come upon a house in such bad structural condition.

Also, attached you will find drawings of the proposed duplex residence to be built on the site.

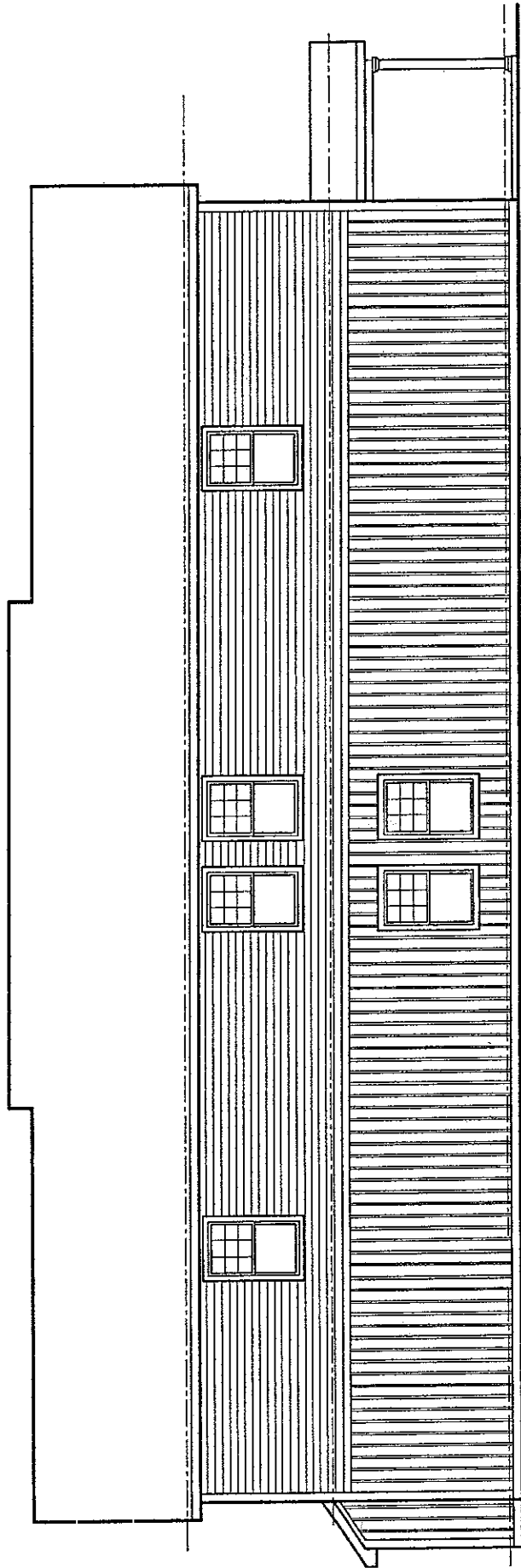
Thank you for your consideration, if you have any questions do call me at the number below.

Respectfully submitted,

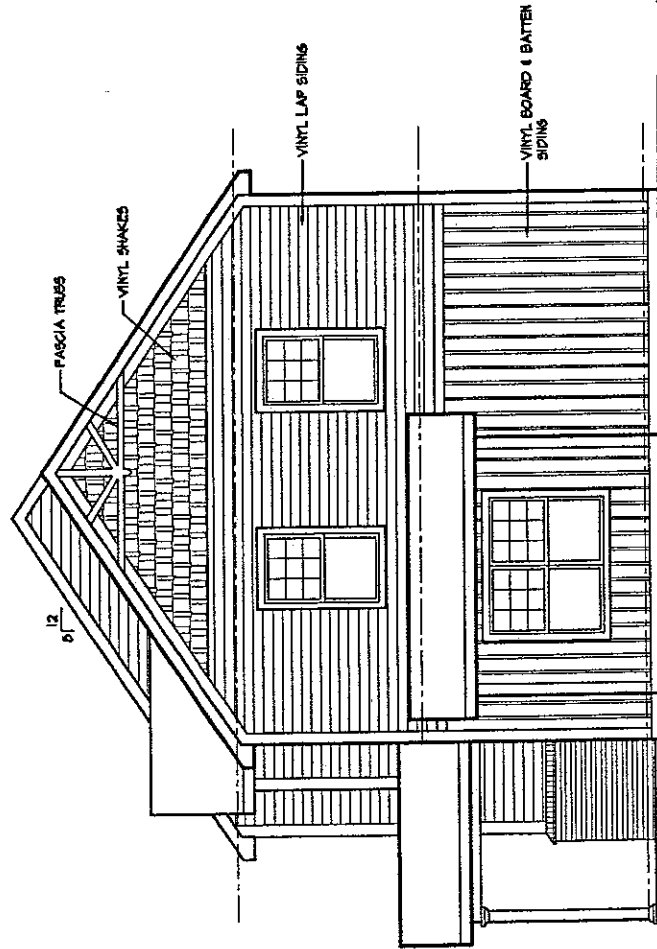
Timothy T. Dunnavant  
Architect



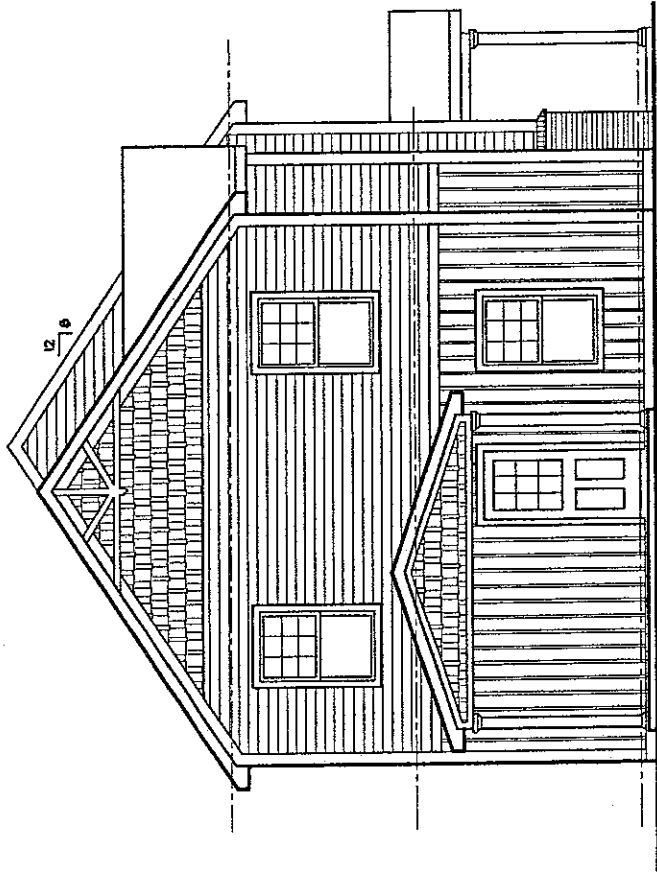
**RIGHT SIDE ELEVATION (FACING JAMES AGEE)**



LEFT SIDE ELEVATION (FACING ADJACENT APARTMENT BLDG)



REAR ELEVATION (FACING ALLEY)



FRONT ELEVATION (FACING FOREST AVE.)