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<b>LOCAL HISTORIC DISTRICT:</b>	Dilworth
<b>ADDRESS OF PROPERTY:</b>	325 East Boulevard
<b>SUMMARY OF REQUEST:</b>	Demolition
<b>OWNER:</b>	Gary West, Max Maintenance Company
<b>APPLICANT:</b>	Gary West, Max Maintenance Company

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**Details of Proposed Request***Existing Conditions*

The existing structure is listed as a contributing structure in the National Register, ca. 1915. The structure is a 2.5 story bungalow with a broad side gabled block with exposed rafter ends, wood shingled on second and half stories, engaged porch on square posts on piers, front gable projection with flanking shed dormers and a gabled entry.

*Proposal*

The proposal is to demolish the structure. Reports of the structure's condition have been submitted.

**Policy & Design Guidelines for Demolitions**

The Commission will make a determination as to whether or not this house is determined to be contributing to the Dilworth Local Historic. With affirmative determination, the Commission can apply up to 365 Day Stay of Demolition. Or if the Commission determines that this property is no longer contributing, then demolition may take place without a delay.

1. No building or structure located within a Local Historic District can be demolished without a Certificate of Appropriateness.
2. The Historic District Commission will evaluate demolition applications to determine if the structure in question contributes to the character of the Local Historic District. If
3. The HDC finds that the structure does not contribute to the character of the district or is unsalvageable, immediate approval of the demolition request may be granted.
4. Should the Historic District Commission find that the structure does contribute to the character of the historic district, the HDC can delay the issuance of a Certificate of Appropriateness authorizing demolition for a period not to exceed 365 days, in order to work with the owner to seek alternatives to demolition.

5. When an application for demolition receives a 365-day delay, any consideration of applications for proposed new construction on the same site will be deferred for 90 days.
6. When an application for demolition receives a 365-day delay, the Historic District Commission Staff will seek an alternative to demolition and will contact, within one month of the delay vote, the property owner who has applied for demolition, Historic Charlotte, Inc., and Preservation North Carolina to inform them of the threatened status of the building.
7. A permanent injunction against demolition can be invoked only in cases where a building or structure is certified by the State Historic Preservation Officer as being of statewide significance.
8. Applications for the demolition of dilapidated accessory structures may be eligible for administrative approval. All other demolition applications will be reviewed by the full Commission.
9. The maximum delay period for the issuance of a Certificate of Appropriateness authorizing demolition shall be reduced by the HDC where the Commission finds that the owner would suffer extreme hardship or be permanently deprived of all beneficial use or return from the property by virtue of the delay.

Any project that the Historic District Commission determines would require significant and substantial exterior demolition may, at the discretion of the Commission, be subject to the HDC policy on Demolition.

#### **Summary of Inspector's Report**

*Yates Structural Engineering - See attached full report*

The entire house was not observed due to the potential for harm that might ensue in the probing of deteriorated wood members. The inspection was conducted by me, A. Wynn Yates, PE and John Teates, President of Rand Structural Services. John has constructed homes in the Dilworth neighborhood and is in the business of making structural repairs to homes such as described in this report. It is our professional opinion that the cost of repairs to this home would far exceed its replacement cost.

*House Master-See attached full report*

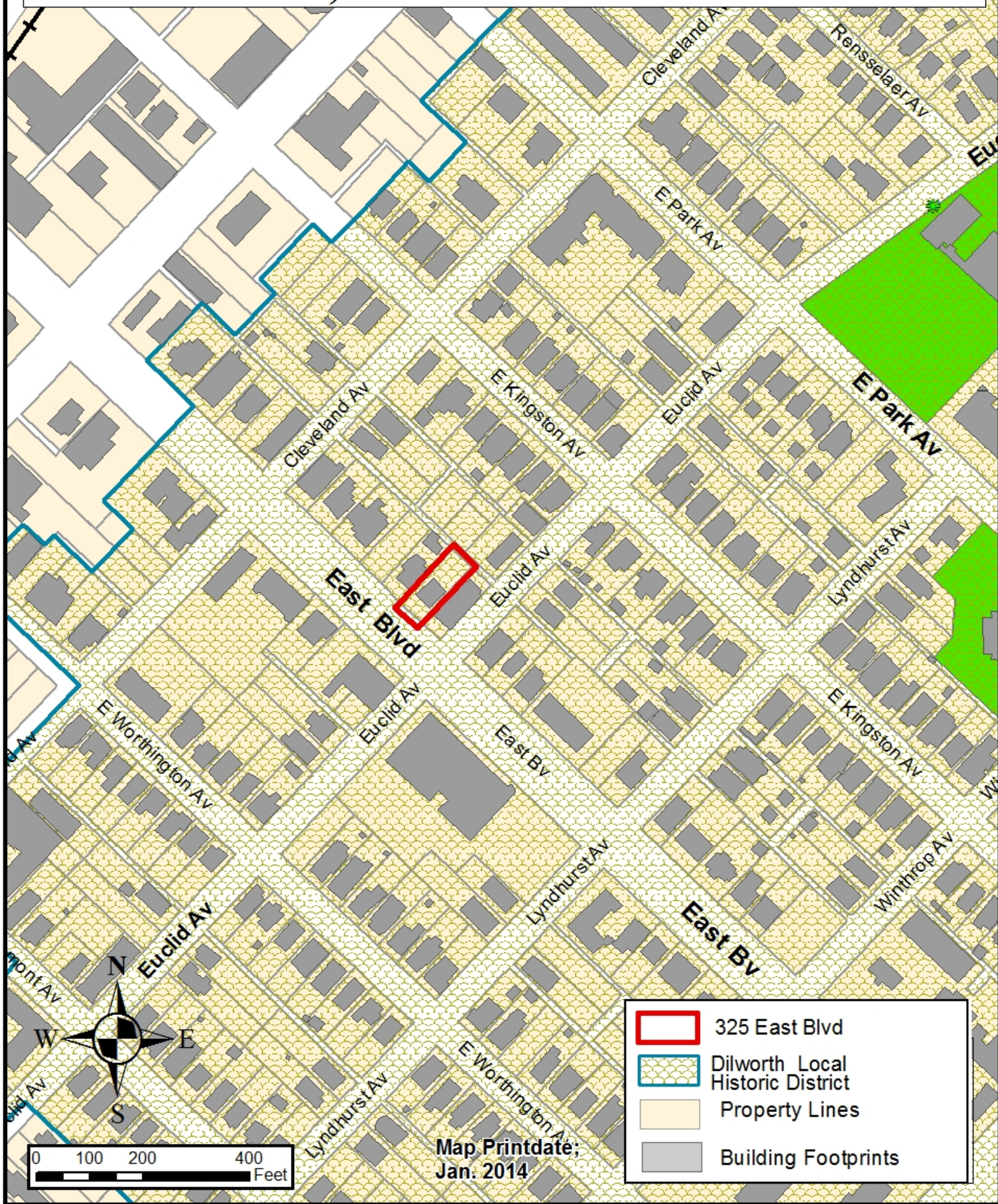
#### **Staff Analysis**

The Commission will determine if a 365 Day Stay of Demolition should be placed on the structure.



# Charlotte Historic District Commission - Case 2014-021

## District Location; DILWORTH









**325 East Blvd.  
Charlotte, NC 28203  
Limited Structural Observations  
Photo Narrative  
for  
Gary West  
Dwelle Property Management  
and Real Estate Inc.  
756 Tyvola Road, Ste 119  
Charlotte, NC 28217  
by  
A. Wynn Yates, PE  
Yates Structural Engineering, PA  
3300 Elstree Drive  
Charlotte, NC 28226  
704-650-5541  
wyates@yseng.com**

**August 29 and September 5, 2013  
(Revised) January 8, 2014**

**Photo #1**

This is the front of the main house. Today's investigation began with the intent of addressing structural deficiencies in need of immediate repair and/or structural entities that are not functioning as intended. The first observation trip made August 29, 2013 was confined to the perimeter of the house. On September 5, 2013, a second job-site observation trip was made where much of the interior was visible with the exceptions being the attic floor, which was covered three feet deep with costumes. There were also areas of the house, where deterioration of the structure was determined to be so advanced that there appeared to be a threat to one's safety if entered.

On January 8, 2014, a follow-up job site observation was made. The three-foot high stack of costumes in the attic had been removed and the entire house was easily accessed due to a massive clean-up effort completed after our August and September site visits. Addition data was gathered from areas first thought to be unsafe. Pictures taken on January 8, 2014 are designated with letter suffixes in this revised report.

In light of the increased accessibility to all areas of the home, it was decided that a formal home inspection would be beneficial to better determine the overall condition of the house. That inspection was performed by John Galop of HouseMaster Property Inspection Services and is included as an addendum to this report.

For the purposes of this inspection, all location references are determined as if one is facing the front door of the house from the exterior of the dwelling.

#### Photos #2 - #5

These pictures show the overhanging roof extensions to the left of the house, with a flying barge board supported with intermediate braces. There is a significant bend in the roof due to the inadequacy of the supporting buttress and the roof sheathing. The slate roof covering has responded to the bend by falling off the house as best seen in Photo #5.

#### Photo #6

This picture shows a tree stump immediately to the left. The proximity of the tree to the house has caused structural damage to the footing (corbelled brick) and foundation wall.

#### Photos #6A - #6B

These pictures show the original diagonal wood sheathing as well as the lapped wood siding. The extent of the damage to the diagonal wood sheathing is visible in these pictures. There are indications that the damage extends well up to the height of the two-story wall and even into the third level left gable wall. This report is based on visual observations only. No intrusive measures were authorized or undertaken. The severity of the damage to various wood components is based on exposed wood decomposition. Concealed and latent deterioration is ubiquitous, but not verifiable in absolute terms.

#### Photos #7 - #9

Stair-step cracking of the front porch brick (highlighted in yellow) seen in Photos #8 and #9 are not related to the proximity of living trees. On the other hand, the stair-step cracking seen in Photo #9 at the left foundation wall just below the left/front corner of the house is the result of tree root heave and or deterioration and decay of dead roots of the tree stump seen in Photo #6.

#### Photo #10

This picture and Photo #8 show exposed wood porch framing at the left/rear corner of the covered front porch. Vermin are free to enter the crawl through the gaps seen in these pictures.

#### Photos #10A - #10C

These pictures show the front porch framing, which for the most part is replacement construction. The new floor joists span left-to-right and are supported by single-ply, front-to-back joist/girders spaced approximately four-feet on center. Photo #10C shows a front-to-back, single-ply supporting member located approximately three feet to the left of the right foundation wall supporting left-to-right joists to the left that span at least 8'. The combined joist loads from both sides of the front-to-back, single-ply joist calls into question the entire framing of the front porch floor. This replacement construction is not code-worthy and must be replaced.

#### Photo #11

This picture shows a wood framed window mounted in the foundation wall on the left/front living room. There is damage to the wood in part because the sill height is less than 4" clear of the exterior grade and in part because this house has been subjected to long periods of attack from wood-destroying insects.



#### Photo #12 - #13

One comforting observation is the masonry chimney on the left side of the house shows no visible evidence of having pulled away from the face of the house.

#### Photos #14 - #16

These pictures were taken at the front stoop stairs leading up to the covered front porch. There are several gaps that are of concern, seen in the close-ups. The load-path of the load-bearing pier seen in the Photo #15 is questionable. Again, the large gaps have allowed untold nesting of wild life over the years.

#### Photos #17 - #23

The most visibly prevalent presence of wildlife is pigeons, which are nesting in every nook and cranny and making damaging deposits all across the front of the house. The large tree (trunk diameter approximately 3'-6") in the front yard is a concern due to its proximity to the right side of the front porch and roof above and because so many of its branches hang above the front half of the house.

#### Photo #24

There is some visible stair-step cracking of the brick at the right/front corner of the covered front porch, but nothing on the order of that seen at the left/front corner of the porch

#### Photo #25

This picture was taken at the right side of the house and shows a large opening accessing the sunken crawl. There is no hinged access door at this opening. The intended means of access to the crawl is not known or immediately obvious.

#### Photo #26

This picture of the crawl located under the right/front corner of the house was taken by inserting a camera through the wall opening, during the first job site observation trip. See the photos that follow for photos taken on subsequent visits to the home.

#### Photos #27 - #29

These pictures show the partial basement located under the right/rear corner of the building. A number of vertical 4x4 posts have been added in an effort to support deteriorated first and second floor framing above. They are too tall and are improperly supported at both ends; top and bottom. There is considerable water in the basement where no provisions for removal exist. Photos #54, #55 and #56 show more views of the right/rear partial basement.

#### Photos #30 - #34

These pictures were taken at the right/rear corner of the property looking back-to-front. The rear roof of the second floor right/rear bathroom above the clerestory window slopes down from right-to-left more than 3" across a distance less than eight feet in length. As was discovered during the second job-site observation trip, the bathroom floor is perilously close to catastrophic failure as a result of extensive damage caused by wood destroying insects.



#### Photos #35 - #36

These pictures were taken atop the two-level rear deck looking back across the slate covered, left/rear quadrant roof. Even though the overhang seen to the right in Photo #35 is not properly supported, there is not the same loss of shingles as seen at the left/front corner of the house.

#### Photos #37 - #40

These pictures show a two-story wood deck designed and constructed to be free-standing.

#### Photo #41

The rear wall of the house has suffered extreme damage as a result of wood destroying insects. While not visible in this picture, the damage will be seen in the photos that follow later in this report.

#### Photos #42 - #43

These pictures show the back yard as seen from the upper level of the recently constructed, left/rear, two-story, exterior, wood deck. The car has been removed and the yard has been cleared of waste since these pictures were taken.

#### Photos #44 - #47

These pictures and those that follow were taken on September 5, 2013. As seen in Photos #44 and #45 there is extensive damage at the rear portion of the left/rear, first floor room and to the rear wall adjacent to the deck as seen in Photo #41. Not seen in these pictures is the damage to the rim band below, which not surprisingly is extensive as well.

#### Photos #48 - #50

These pictures show just a few examples of hardwood floor covering devoured by wood destroying insects. The first and second floors are not at all flat. Deviations in levelness measure as much as 4". A small portion of the extreme dips and ridges can be explained by the natural aging of wood in which long term creep can cause floor sagging twice that allowed by codes in response to prescriptive superimposed live loads. Sag due to creep is non-recoverable deflection as opposed to elastic deformations/sagging, which recovers its un-deflected position once the superimposed load is removed.

The most significant floor deflections occur around the stair openings at the first, second and third floors. The right rear quadrant of the house has deflections so extreme, safety is a concern. Photos #65A through #65G show a broken front-to-back girder that is so compromised, it has contributed to the much of the 2" (+/-) sagging seen at all three of the supported levels near the center of the house.

#### Photos #51 - #53

These pictures show a few of areas of ceiling where persistent roof leaking has broken the bond between the plaster ceilings and the wood lath. The water entering the interior of the building has increased its vulnerability to attack from wood destroying insects as well as led to decay associated with saturated wood.

#### Photo #54

As noted in Photo Narrative #27 - #29, there are 4x4 wood posts that were added in the right/rear partial basement to shore up the failed first floor above. This picture shows one such post that is supported at its base with precast concrete deck pedestal (patio block). Beneath the pedestal is a masonry or concrete plinth used to spread the load over a larger foot-print. Except for the fact that the 4x4 has pin-connections at both ends, there is some merit to the concept of spreading the load in the manner chosen at this location. However, the pinned-ends of the post effectively double its height (from a structural engineer point-of-view), which is already higher than allowed for free-standing 4x4's. Its effective design height is in the range of twenty-feet, which means it is entirely too high and would buckle under the prescribed superimposed live load. This explanation is included to illustrate the current delicacy of this structure and its vulnerability to structural failure in the near term.

#### Photos #55 - #56

These pictures were taken from within the right/rear basement looking up at the destroyed/shored portions of the first floor. The structural repairs are inadequate and would never have been permitted or inspected by a building inspector.

#### Photos #56A - #56B

These pictures were taken at the first floor level during the January 8, 2014 data gathering job site observation trip in the room to the rear of the stairs located on the right side of the house. A piece of loose OSB is currently used to keep someone from falling through the floor. The edge of it can be seen in Photo #56B where someone is foolishly standing on it.

#### Photo #56C

This picture was taken standing in the partial basement located at the right/rear corner of the main house looking up at the first floor structure above. New OSB sub-flooring was added atop a badly damaged, left-to-right floor joists that had been repaired by adding a short scab to the rear. The scab did not function as intended prompting the addition of a 4x4 post. Like all of the 4x4 added posts, it was not properly supported. See the next picture.

#### Photo #56D

This picture shows the post located just to the rear of the stairs that lead down from the first floor to the basement level. A 4x4 wood post can be seen seated atop a concrete masonry unit, CMU oriented on its side. The 8"x16"x8" block does not function as an effective footing. The loose connection between the block and wood post does not prevent lateral translation. If posts were to be effective, they would have to be installed in accordance with Section R407 of the 2012 NC Residential Code, which stipulates protection against decay and most importantly specifies in Section R407.3 that columns shall be restrained to prevent lateral translation at both ends.

#### Photos #56E - #56F

These pictures show another example of 4x4 wood post that was added and is free to translate laterally in conflict with the governing code and "accepted engineering practice." Photo #56F shows only loose brick remaining at the base of the 4x4 seen in this picture, which is taken in the crawl just to the rear of the rear wall of the front/left first floor room. There are several other conditions present in the crawl that are similar in nature to the one seen in these photos.

#### Photo #56G - #56J

These pictures were taken in the vicinity of the floor opening of the interior basement access stairs. Shelter tubes abound.

#### Photos #56K - #56L

These pictures show inadequate support of the basement access stair stringers where they intersect the first floor framing. Previous photos showed considerable damage at the base of the basement access stairs, such that total replacement of the basement access stairs would be required.

#### Photos #56M - #56P

These pictures show a left-to-right, 2x10 floor joist located about 20" to the front of the basement access opening. The supplemental sister added to one side of the defective 2x10 joist is not effective. There is rotation of the joist and 2-by scab, best seen in Photo #56N. A full-length, point-to-point floor joist should be added to supplement poorly behaving floor joists such as the one seen in these three photos.

#### Photos #57 - #58

These pictures were taken looking up from the right/rear corner of the first floor to the ravished second floor structural framing. Photo #58 is a close-up of the Photo #57 and shows an abundance of shelter tubes and the destruction of the wood resulting from wood destroying insects.

#### Photo #59

This picture shows the high second floor walls at the left/rear corner of the first floor room located above the partial right/rear basement. A replacement joist can be seen spanning front-to-back, just to the left of badly damaged joist, which was not replaced, but was supplemented with a full-length "sister" joists.

#### Photos #60 - #62

This picture shows joists that were notched down probably to accommodate a deep setting bed for bathroom tile floor covering in the bathroom above. The notching greatly reduced the capacity of the joists as well as violated accepted engineering practices. The notching is but one of several reasons the bathroom floor and clerestory rear wall are so dramatically tilted as seen in Photos #61 and #62.

#### Photos #63 - #65

These pictures show the interior stairs that lead from the first to second floors with an intermediate landing and a single flight of stairs from the second floor to the third level. The stair treads tilt and lean and have so much give that they feel as if they will fail at any moment.

#### Photos #65A - #65F

These pictures show the 4x10 girder that runs from front-to-back under the left wall of the corridor that aligns with the front entry vestibule. The girder has failed completely and is one of the areas that first made us fear for our safety. The most dramatic picture is Photo #65G, which was taken looking right-to-left and shows the girder broken and sagging under the wall above. In fact, the floor above has a 3"-4" dip in it and is at risk of catastrophic failure.



#### Photos #66 - #68

These pictures show the third level of the house knee-deep with costumes. One comforting aside is that the floor at this level has theoretically been load tested and proven capable of supporting "light storage" (20 pounds per square foot) without failure having ensued.

#### Photos #69 - #70

These pictures show the main gable roof rafters and the front reverse gable roof rafters. There is no ridge board or gusset at the intersection of sloping rafters as seen in Photo #69. As seen in Photo #70, there is only a piece of roof planking used as a ridge board. There are collar ties or ridge straps. The roof framing is inadequate.

#### Photos #71 - #75

These pictures show a left-to-right girder located at the right/rear quadrant of the main, left-to-right gable roof. The intent of the member is to function as a beam aiding in the support of the low-pitched roof rafters above the right/rear roof. The yellow highlighting shows notches and severed sections of the beam, which render it ineffective as a beam. The roof loads are not properly accounted for and are imposing unforeseen loads on walls below not intended to support the ends of the low and high pitched rafters.

#### Photos #76 - #79

These pictures address the condition and support of the cantilever roof support brackets seen in Photos #77 and #78. There is insufficient back-span length to the 2-ply, vertically stacked 4-by cantilevered horizontal brackets. In addition, the only tie-down at the end of the brackets is a single 1-by as seen in Photos #76 and #79.

#### Photo #80

This picture shows side-by-side floor joists notched in the middle third of their span.

#### Photo #81

This picture shows a PVC pipe passing through a floor joist that has been over-notched.

#### Photos #82

This picture shows a truncated/notched/structurally compromised joist configuration.

#### Photo #83

This picture shows another example of modifications to existing floor joists to accommodate plumbing; in this case, lead piping.

### **Summation:**

The entire house was not observed due to the potential for harm that might ensue in the probing of deteriorated wood members. The inspection was conducted by me, A. Wynn Yates, PE and John Teates, President of Rand Structural Services. John has constructed homes in the Dilworth neighborhood and is in the business of making structural repairs to homes such as described in this report. It is our professional opinion that the cost of repairs to this home would far exceed its replacement cost.

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Charlotte, NC 28203  
Limited Structural Observations  
Photo Essay  
for  
Gary West  
Dwelle Property Management  
and Real Estate Inc.  
756 Tyvola Road, Ste 119  
Charlotte, NC 28217  
by  
A. Wynn Yates, PE  
Yates Structural Engineering, PA  
3300 Elstree Drive  
Charlotte, NC 28226  
704-650-5541  
wyates@yseng.com**



**August 29, September 5, 2013 and  
January 8, 2014**



Photo #1



Photo #2



Photo #3





Photo #4



Photo #5



Photo #7



Photo #6A



Photo #6B



Photo #7





Photo #8



Photo #9

Photo #10





Photo #10A



Photo #10B



Photo #10C



Photo #11

Photo #12



Photo #13



Photo #14





Photo #15

Photo #16



Photo #17





Photo #18



Photo #19



Photo #20





Photo #21



Photo #22



Photo #23



Photo #24



Photo #25



Photo #26





Photo #27



Photo #28



Photo #29



Photo #30



Photo #31

Photo #32





Photo #33

Photo #34



Photo #35



Photo #36



Photo #37



Photo #38



Photo #39





Photo #40

Photo #41



Photo #42

Photo #43







Photo #44



Photo #45



Photo #46



Photo #47





Photo #48

Photo #49



Photo #50



Photo #51



Photo #52



Photo #53





Photo #54

Photo #55



Photo #56

Photo #56A



Photo #56B



Photo #56C

Photo #56D







Photo #56E



Photo #56F



Photo #56G



Photo #56H

Photo #56J



Photo #56K



Photo #56L





Photo #56M



Photo #56N



Photo #56P





Photo #57



Photo #58



Photo #59



Photo #60



Photo #61



Photo #62





Photo #63



Photo #64



Photo #65





Photo #65A



Photo #65B



Photo #65C



Photo #65D



Photo #65E

Photo #65F



Photo #65G





Photo #66



Photo #67



Photo #68



Photo #69



Photo #70



Photo #71



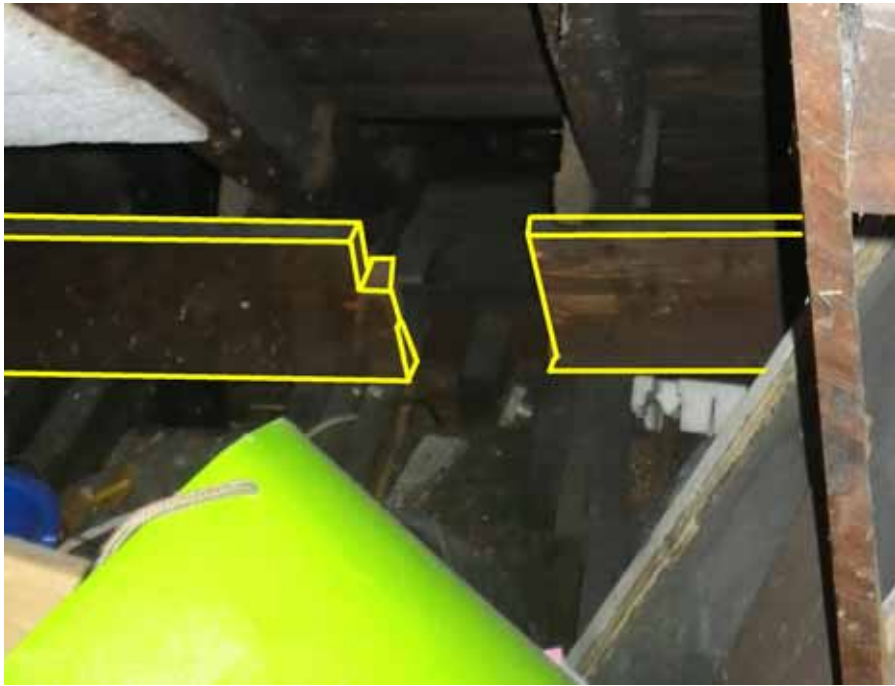


Photo #72



Photo #74



Photo #73



Photo #75

Photo #76



Photo #77



Photo #78



Photo #79





Photo #80

Photo #81



Photo #82

Photo #83



## Qualifications:

This report represents the professional opinions of Yates Structural Engineering, PA, (YSE) resulting from visual observations of readily accessible areas of the home. Structural components concealed from view were not observed. The findings bound in this report were gathered within a limited time frame. No structural calculations were performed in the preparation of this report unless noted otherwise in the body of the report. Neither non-destructive nor destructive tests were performed in the process of collecting data. YSE was not involved in the design, construction, or maintenance of this property.

YSE has no control over differential soil settlement resulting from the shrinking or swelling of expansive soils. Differential settlement can create movement in exterior masonry veneer and/or interior wall coverings, which can create new cracks or widen existing cracks. Therefore, YSE's maximum liability is limited to the amount of the consultation fee.

Yates Structural Engineering neither makes representations nor guarantees with respect to latent deficiencies or future conditions of this property. The recommendations of this report are applicable at this point in time. This report is not an overall review of this property but represents only those items mentioned within this report. Yates Structural Engineering does not do repair work and therefore has no financial interest in any repairs that are made.