Haymarket Town Council
15000 Washington Street, #100, Haymarket, Virginia 20169
Monday, December 5, 2011 – Mayor Pamela E. Stutz

Call to Order

Mayor Stutz calls the meeting to order at 7:00 p.m.

Roll Call

Tobias, Leake, Stutz, Kenworthy, Weir
Absent: Scarbrough & Cole

Citizen's Time

Suzanne Leake – Resident and a teacher at Haymarket Baptist Church Preschool. Haymarket Baptist Church Preschool was invited to the Town's holiday event last weekend. They had requested a 5:00 time slot for the preschoolers to perform. They had it all arranged and last Friday an email was sent changing the time slot for the children to perform. The children and parents waited quite a long time while another group was performing; eventually they just left and were never able to perform. She requests an apology letter from the Town.

Gerry Kennedy – responds to Mrs. Leake. He says the email correspondence chain reflects that Spend the Day in Haymarket emailed Haymarket Baptist Church 12 days ago about the change of time. Mr. Kennedy responds that he will write a letter to Ms. Frasz.

Minutes

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Tobias motions to approve the minutes of November 7 & 15, 2011 with one correction provided to the Clerk, Weir seconds;
Ayes: 4
Nays: 0
Absent: Cole & Scarbrough

Piedmont Tire & Auto

Erosion & Sediment Control Bond

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Tobias motions to authorize the release of Letter of Credit #1944 in the amount of $38,537.54 for the Erosion & Sediment Control bond for Piedmont Tire & Auto Site Plan #AFSP20110301 approved by the Town Council on March 7, 2011, Leake seconds;
Tobias-Yes, Leake-Yes, Kenworthy-Yes, Weir-Yes, Cole-Absent, Scarbrough-Absent

Villages of Haymarket

Town Planner reminds that this item was reviewed by the Town Council last month.
John McBride – Representing the applicant addresses the Council
Council issues a staff directive to prepare a modified package for the January meeting for the Preliminary Plat for Villages of Haymarket Phase II.

**Council changes the January 2012 meeting from January 3 to January 10, 2012

Structural Engineer Reports

Council has requested the Mr. Hall's comments be on record in their entirety.

Mr. David Hall is here to discuss his reports for the Hulfish House and the Haymarket Post Office
In brief summary: the post office recommendation is to build a pole building inside the building. He fears raising the building would destroy it. He would replace the bottom floor and stabilize the 2nd floor.

Hulfish House – Floor framing of the Hulfish house is not sufficient to carry any type of light retail or office load. The water in the basement must be taken care of. He does not believe it's a structural issue so much as it is a health issue. The moisture and humidity can destroy the structure eventually. The main bearing wall that goes between the front room and the back room has been destroyed.

Leake asks if roof replacement would be one of the first things to be done to both buildings. He does not feel the roofs are a structural problem more an architectural issue. He again states that the water entering the building should be addressed immediately, and it could be expensive. The engineer also states that the Hulfish house cannot even take a residential load at this time. He would not replace the flooring, but sister the joists. Once the floor boards are up you get a better idea of the floor joists, but right now they span too far for any type of occupancy.

Weir –asks for Engineer's opinion on potential damage through this winter. He responds that the roof structure itself is in pretty good condition. When he went into the attic the structure itself looked pretty sound. We might want to consider intermediate shoring for this winter. He feels the same way about the Post Office. He recommends a stud wall for this winter to mitigate the 2nd floor of the Old Post Office. He also recommends that any exposed areas should be tarped for this winter.

We also asks about the foundation: condition of the footers, with the exception of the front and rear we are abandoning the foundation. Hulfish house foundation is in pretty good condition and would not need to use the same methods as the Old Post Office. He still recommends putting in some intermediate joists in the Hulfish House. Weir asks if there is extensive termite damage. The engineer did not see any signs of termites, but that is not to say they weren't there at some point in the past. A hole was cut in the floor, the cellar itself has a stone foundation, it looks like they didn't finish the stone wall, but beam is probably rotted, he is proposing from the front foundation to the other foundation wall a shoring up and the bearing wall needs shoring, it is sagging about six inches. You will have to excavate the central footings and have those checked.

Tobias asks about estimates. He is thinking that the post office building, just for the structure, not counting all the bells and whistles, just for framing: $25,000-$50,000. Hulfish might be less on the framing part. The cost could be $30,000 for waterproofing the cellar. He comments to keep in mind that this is a stone foundation, stone leaks. Shoring would be in the $20,000 range, perhaps less. If we would like to not have any occupancy at all on the 2nd floor of both buildings you can eliminate the cost of stabilization for both to just the first level. His reports assume 50lbs. per square foot of load on both floors, for both buildings. The Old Post Office will need additional things done if the 2nd floor is to be used by office, or order to meet code (such as access), the stairwell does not meet code and will not be able to be used. In the Hulfish House the front stairs meets code, but barely, the back stairs do not.

Leake asks about other historic structures, could you not use it for museum or historical structure. If there is any assembly space at all, the code requirements would be different than for office or retail. It would still have to be looked at.

Mayor asks about foundation, her home is similar to both of these buildings and she has standing water a lot, but uses a sump pump. The engineer comments that a lot of times they will put in a concrete wall on the interior of the foundation, so the look is still there, but the building has some waterproofing.

The Town Attorney asks if the flooring could for milling purposes. Mr. Hall does not recommend it.

Tobias: asks about these improvements and the impact on historic structures. Mr. Hall comments that typically historic resources govern the exterior only.

Mayor would like to know where the council stands on the two structures:

Tobias – Demo Hulfish; fix the Old Post Office
Leake – Rent the Old Post Office, Hulfish just look good, appealing to the eye.
Milt – Feels there is more history in the post office, Hulfish should come down.
Weir – Bring down the Hulfish, restore the Old Post Office
Mayor suggests that we would allocate $150,000 toward the Post Office. Her suggestion would be to move forward with renovations on the Old Post Office.

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Tobias motions to advertise a public hearing on January 10, 2012 for the consideration of demolition of the Hulfish House and at the same time, a proper advertising to include a sign on the fence and possibly a listing for rent or sale, Kenworthy seconds;.
Discussion: Town Attorney would like to research this matter before it is voted on.

**Short break for the Town Attorney to research the minutes.

Town Attorney advises the Mayor that the motion was out of order as there had been no notice of the action and all members of the council should have the opportunity to be present before any action is taken.

Mayor rules the Tobias motion out of order.

Weir motions to suspend the rules, Tobias seconds;
Tobias-Yes, Leake-No, Kenworthy-Yes, Weir-Yes, Cole-Absent, Scarbrough-Absent

Tobias moves to move forward on the previous motion for scheduling a public hearing for the consideration of demolition of the Hulfish House and at the same time place a sign on the property that it is for sale and/or rent, Weir seconds; Discussion: Town Attorney asserts that there are fundamental principles that must take place. Weir is in favor of this we are not taking an action here, we are merely acting upon the information that has been provided by the structural engineer. We are going to have a hearing where the intent is to revisit how to proceed. Mayor feels that if you are going to ask to demo the Hulfish House, why not both of them. She asks that having only looked at it tonight feel if Weir has enough information to move forward with demolition, Weir responds yes with regard to the Hulfish House as the report confirms his suspicions.
Tobias-Yes, Leake-No, Kenworthy-Yes, Weir-Yes, Scarbrough-Absent, Cole-Absent

*Weir asks staff provide the structural engineer reports to public and have it available for the public hearing.

Zoning Permit Application

Tobias motions to approve zoning permit application; Tobias motions that the Town Council approve Zoning Permit #20111114 for a medical office to be located at 15111 Washington Street, #121, in accordance with Section 58-177(9) of the Town Code, Weir seconds
Ayes: 4 Nays: 0 Absent: Scarbrough & Cole

Building Official's Report – James R. Lowery, Jr.

- DR Horton will not have any houses occupied in 2011, probably around March 2012
- Cupcake Heaven has moved to 15125 Washington Street (Bloom Building)

Mayor asks if the storage yard on the Wolf property has been resolved. The Town Planner comments that he and the Town Manager and he have met with the property owner and will report back to council on this matter.

Treasurer's Report – James Naradzay

Provides the Treasurer's Report

Closed Session

The Town Manager advises Council of the necessary closed session discussions: Leases, Town Center Property; Town Contractors; and Annexation

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Weir moves to divide, Tobias seconds;

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Tobias motions to enter into closed session pursuant to 2.2-3711-A(7) consultation with the Town Attorney on a matter requiring specific legal advise namely leases, status of leases on Town Center Property, Weir seconds;
Tobias-Yes, Leake-Yes, Kenworthy-Yes, Weir-Yes, Cole-Absent, Scarbrough-Absent

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Tobias to enter into closed session pursuant to 15-2907(b) Annexation, Weir seconds;
Tobias-Yes, Leake-Yes, Kenworthy-Yes, Weir-Yes, Cole-Absent, Scarbrough-Absent

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Leake motions to enter into closed session pursuant to 2.2-3711 A(1) for discussion and consideration of a named employee of the Town of Haymarket, Weir seconds;
Tobias-Yes, Leake-Yes, Kenworthy-Yes, Weir-Yes, Cole-Absent, Scarbrough-Absent

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Weir motions that the Council of the Town of Haymarket does hereby certify that to the best of each member's knowledge, only public business matters lawfully exempt from the open meeting requirements by Virginia law were discussed in the closed session, to which this certification applies, and only such public business matters as were identified in the motion convening the closed session were heard, discussed or considered by Council, Leake seconds; Discussion:
Tobias-Yes, Leake-Yes, Cole-Absent, Scarbrough-Absent, Kenworthy-Yes, Weir-Yes, Stutz-Yes

******

Tobias motions to appropriate up to $2,500 to retain the services of Mary K Earhart for consultation, analysis, and further training on Quickbooks and to help the Town comply with standard government accounting principles and practices. Funds to come from the Professional Services/CFO line item, Weir seconds;
Tobias-Yes, Leake-No, Kenworthy-Yes, Weir-Yes, Scarbrough-Absent, Cole-Absent

Police Report – Chief James E. Roop

Quote and grant information. DMV gives a list of vendors; the PD has chosen the 1 vendor who sells the same camera that is already installed in the other vehicles.

New vehicle will be on the road by the 19th.

Tobias motions to appropriate up to $5,000 from Capital Improvements for the purchase of an in-car camera from Watch Guard, with the money to be returned to that line item when the grant is received, Kenworthy seconds;
Tobias-Yes, Leake-Yes, Kenworthy-Yes, Weir-Yes, Cole-Absent, Scarbrough-Absent

Tobias asks about court, can we have coverage at night time.

Leake asks if they could at least try to carpool, he happened to be in court and saw 3 cruisers at the same time.

Weir asks why we cannot have 2 court days.

******

Tobias motions to continue the regularly scheduled meeting of December 5, 2011 to December 19 @ 7pm, Kenworthy seconds;
Ayes: 4
Nays: 0
Absent: Cole & Scarbrough

Submitted:

Jennifer Preli, Town Clerk

Approved:

Pamela E. Stutz, Mayor

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Structural Engineer Report

Date: November 28, 2011 (revised)
Subject: Old Post Office Building, Haymarket, VA


Front View of Ex. Building


Rear View of Ex. Building

This report is a follow-up to my site visit on this date to inspect the subject existing building. I have reviewed the structure and following are my findings.

The building is a two-story wood framed building which is supported by a stone foundation. The original structure, consisting of the two-stories is eligible for the Virginia Historical Register and was originally constructed in the late 1800's or early 1900's. Two small additions were later added to the rear of the original building. Both the first and 2nd floor of the structure are framed with 2x8 floor joists spanning approximately 19'-4". The 2nd floor sags approximately 4" in the center and the 1st floor sags towards the chimney.. It is apparent from both the outside and inside that the foundation in the vicinity of the chimney has also failed. The following photos depict the condition:


View of left side of house at obvious foundation failure


View of interior at chimney showing sagging floor

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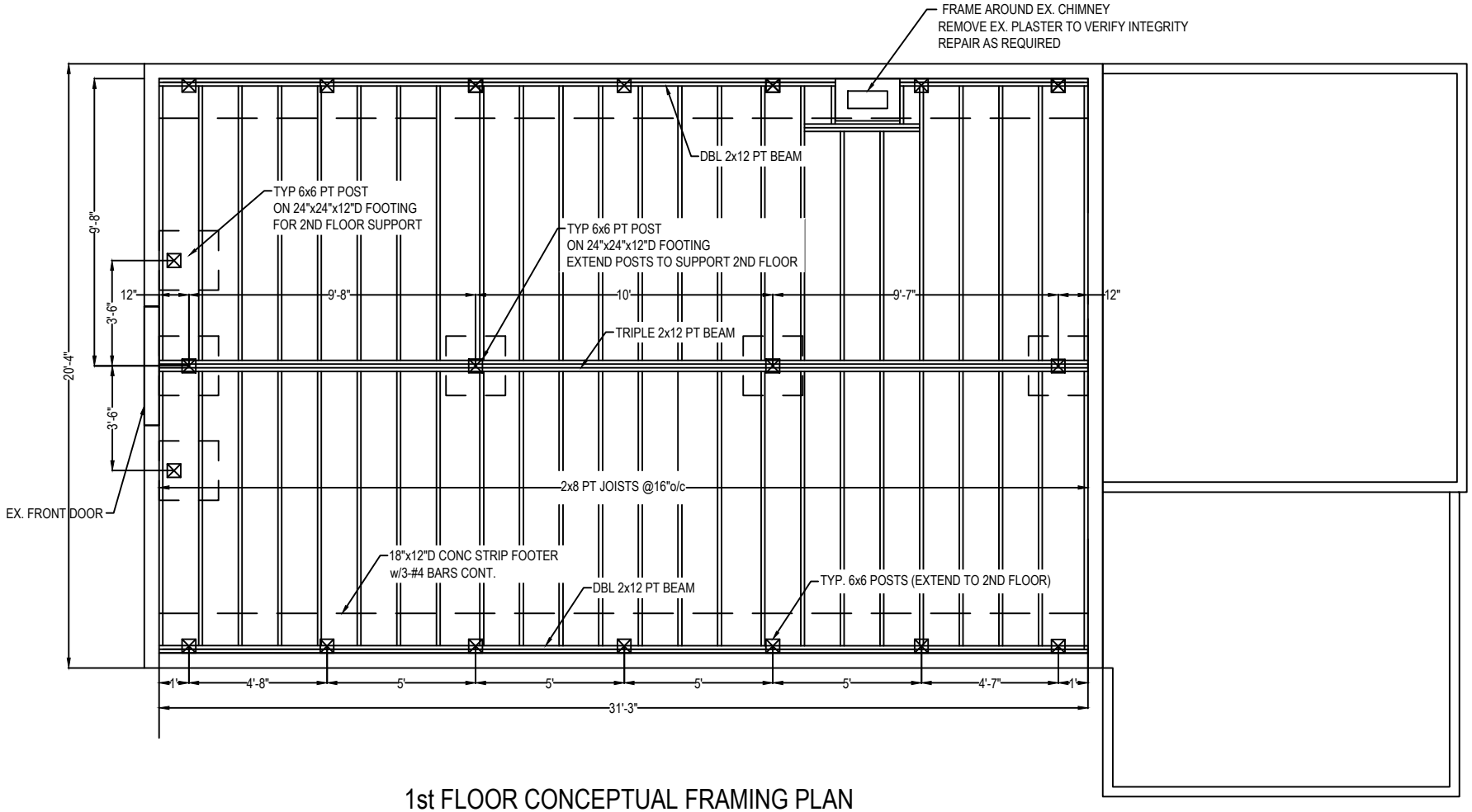
It is understood that the Town would like to use the structure for light retail on the first floor and possible storage and/or offices on the 2nd floor. The existing floor joists on both floors are over spanned for light retail loading which requires a live load capacity of 50 pounds per square foot (psf). In order to accommodate this load it will be necessary to reinforce the structure as well as underpin the existing walls. The conceptual details and sequence for these repairs are shown on Exhibit A which is attached to this report. In summary this plan calls for the complete removal of the 1st floor and re-framing with a center support for the floor which will also carry up to the 2nd floor as well as the roof peak. The 1st floor will be allowed to "float" inside the building walls but be attached to the walls. The walls should be left as is (with a noticeable sag in framing but re-side exterior to hide sag) however, the base of the walls will need to be reconstructed and a concrete footer placed beneath the wall to brace the wall in place. The bottoms of the wall joists should be "sistered" where they are rotted and placed on a new sill plate to be placed on top of a footing (see Section View in exhibit A). It is recommended that the wall work be completed on the outside of the wall by removing the bottom three feet of the clapboard siding to access the wall framing from the outside. The sequence of work recommends milestones for re-inspection by the engineer.

It should be noted that this report is based solely on my observations of the visible components at the time of my visit and my previous experience with similar structures. Any existing conditions differing from assumed conditions which may be uncovered at a later date will need to be further evaluated. It is recommended that we be involved during the construction to confirm our concepts or make minor changes as called for by existing conditions.

I trust this evaluation will be of assistance; however, should you have any questions, please call me.

Sincerely,

David R. Hall, P.E., SECB



1st FLOOR CONCEPTUAL FRAMING PLAN

SCALE: $\frac{3}{16}$" = 1'-0"

EXHIBIT A
OLD POST OFFICE SE REPORT
TOWN OF HAYMARKET, VA

PAGE 1 NOVEMBER 28, 2011

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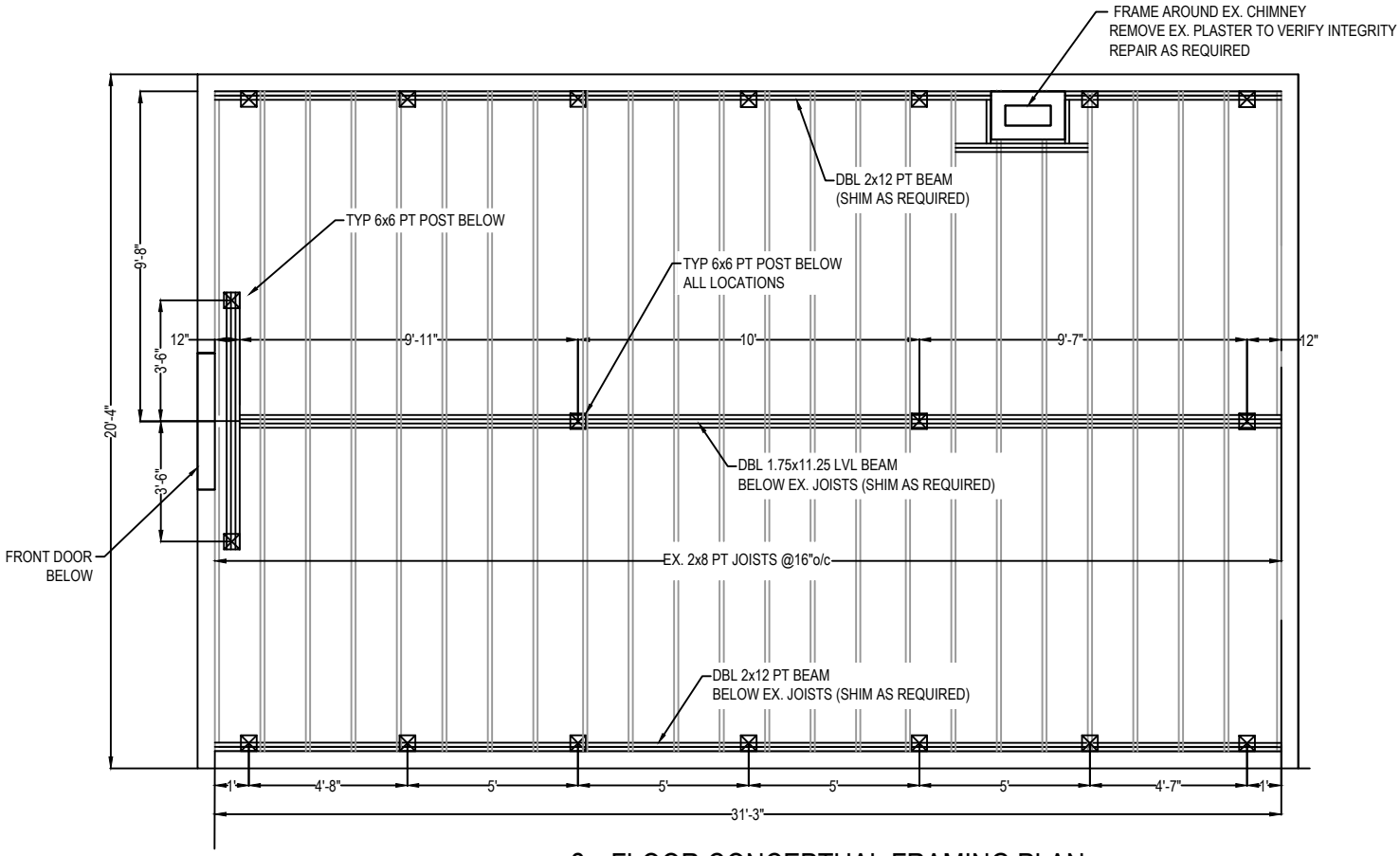

2nd FLOOR CONCEPTUAL FRAMING PLAN

SCALE: $\frac{3}{16}$" = 1'-0"

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PAGE 2 NOVEMBER 28, 2011

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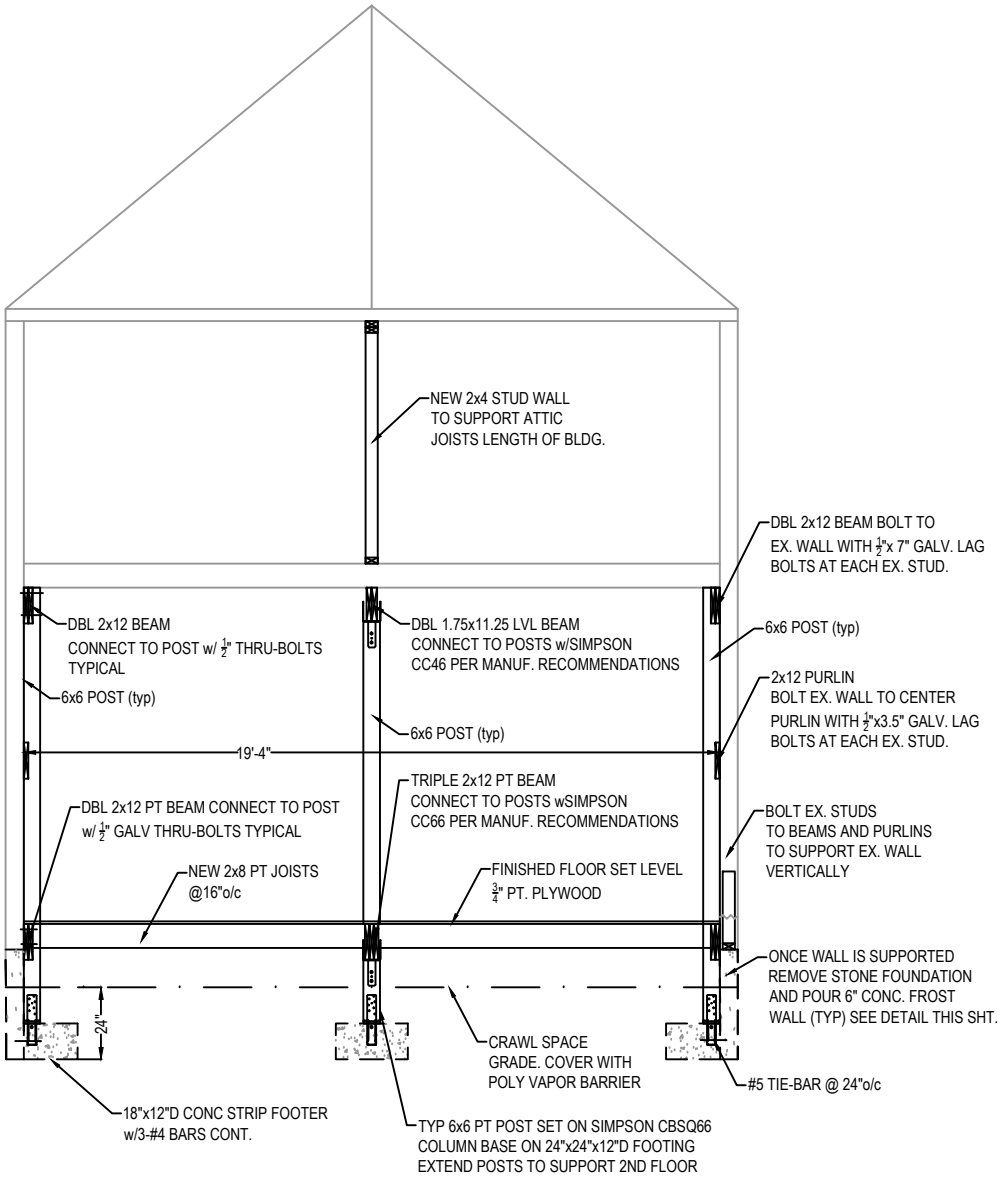
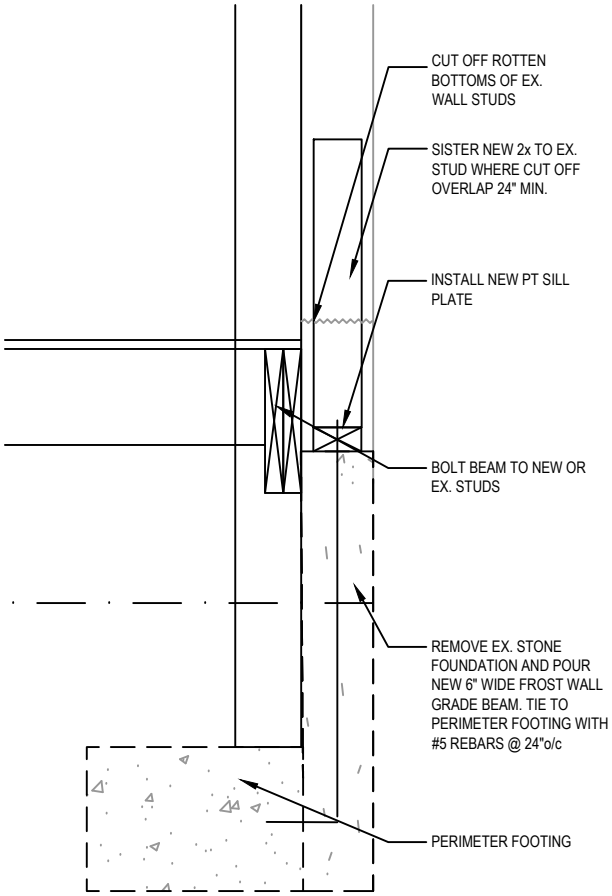


CONCEPTUAL SECTION VIEW

SCALE: $\frac{3}{16}$" = 1'-0"



DETAIL OF WALL REPAIR AT EXTERIOR

SCALE: $\frac{3}{4}$" = 1'-0"

NOTE: ALL CONCRETE TO HAVE F'c = 2500 PSI

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EXHIBIT A
OLD POST OFFICE SE REPORT
TOWN OF HAYMARKET, VA

SUGGESTED SEQUENCE OF CONSTRUCTION

This sequence of construction is a suggestion only and may be subject to change based on selected contractor's procedures or on findings during further demolition and construction of project.

1. Mobilize to site. Install safety fence around building.
2. Remove existing floor boards and ceiling boards on 1st floor.
3. Contractor to verify all dimensions.
4. Remove plaster off of existing chimney to verify integrity and repair as necessary.
5. Call for engineering inspection to confirm proposed new framing. Adjustments may be necessary based on uncovered conditions.
6. Remove existing 1st floor framing. Brace existing exterior walls as required during and after removal. Submit bracing methods to Engineer for approval.
7. Install new footings as specified on page 1.
8. After concrete cures, install posts and main beam and perimeter beam framing for 1st floor as specified on page 1.
9. Install new 1st floor joists as specified on page 1.
10. Install posts and main beam and perimeter beam for 2nd floor as described on page 2.
11. Install new stud bearing wall on 2nd floor to support attic joists and ridge of roof.
12. Call for engineering inspection to verify new framing.
13. Bolt existing perimeter wall studs to purlins and beams as specified on page 3.
14. Remove bottom 3' of exterior siding to expose stud framing.
15. Call for engineering inspection to confirm repair detail.
16. Repair bottom of existing exterior wall as specified in detail on page 3.
17. Re-set and reframe rough opening of 1st floor windows as necessary to remove racking of windows and make operable.
18. Apply new insulation and siding to exterior walls.
19. Install new ceiling above 1st floor.
20. Repair/Install new flooring boards on 1st and 2nd floors.

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Structural Engineer Report

Date: December 1, 2011
Subject: Hulfish House, Haymarket, VA

This report is a follow-up to my site visit to inspect the structural condition of the existing building.


Photo 1 - Front View of Ex. Building


Photo 2- Rear View of Ex. Building

The main building is a two-story wood framed building which is supported by a stone foundation. The original structure was reportedly constructed in the mid 1800's. The original structure was once attached to a smaller structure which was a servant quarters and kitchen for the house. The two structures were connected at one time; however, the connecting building has been previously demolished. The stone foundation for this connection still exists. The front room of the building sits over a dirt crawl space and the rear portion of the house sits over a cellar which is flooded with about 18" of water. Both the 1st and 2nd floor of the structure are framed with 2x8 floor joists.


Photo 3 -View of left side of building


Photo 4- View of right side of building

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The main structure is in fair condition considering its age and non-use over the last several years. There is evidence of rotting wood in areas where the structure has leaked in the past. It is recommended that siding be removed in suspect areas and those areas be inspected by the engineer to confirm if repairs are necessary.

The kitchen structure is also in fair condition and appears to have the first floor on grade and the 2nd floor is framed with 2x8's. The stairway leading to the 2nd floor does not meet code. For the purposes of this report the kitchen area is considered suitable for light storage.

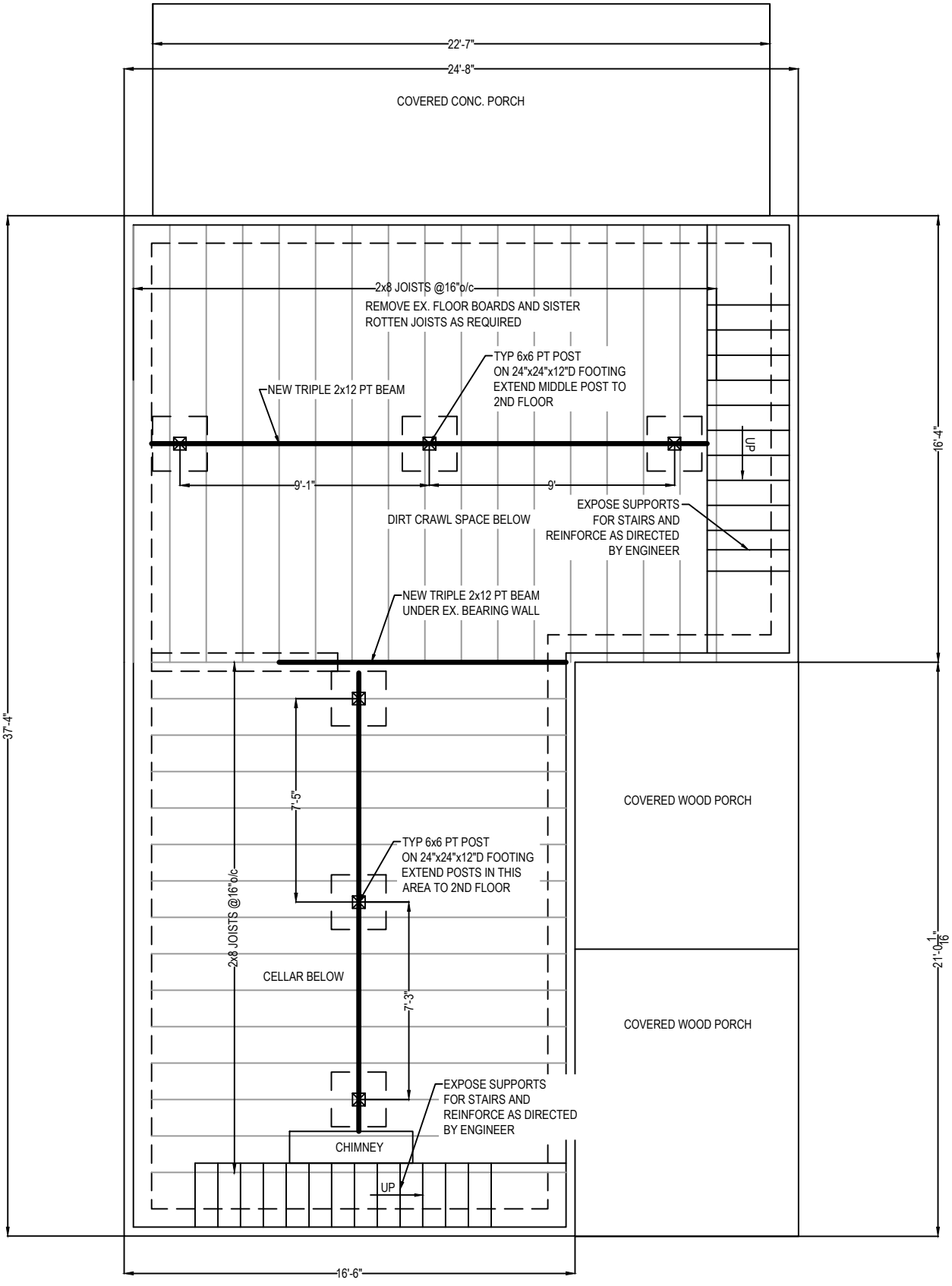
It is understood that the Town would like to use the main structure for light retail and/or offices on both the 1st and 2nd floor. The existing floor joists on both floors are over spanned for light retail or office loading which requires a live load capacity of 50 pounds per square foot (psf). In fact a check of the floor capacity shows that they do not meet residential loading either. In order to accommodate the required loading it will be necessary to reinforce the structure as well as repair rotted areas within the structure. The conceptual details and sequence for these repairs are shown on Exhibit A which is attached to this report. In summary this plan calls for the reinforcement of both the 1st and 2nd floors with shoring, reconstruction of the center bearing wall between the front and rear rooms, replacement or supplementing existing rotted floor joists and wall studs. The sequence of work recommends milestones for re-inspection by the engineer at various times to confirm existing conditions. It is also recommended that the cellar have a sump pump installed to keep water from flooding the space.

It should be noted that this report is based solely on my observations of the visible components at the time of my visit and my previous experience with similar structures. Any existing conditions differing from assumed conditions which may be uncovered at a later date will need to be further evaluated. It is recommended that we be involved during the construction to confirm our concepts or make minor changes as called for by existing conditions.

I trust this evaluation will be of assistance; however, should you have any questions, please call me.

Sincerely,

David R. Hall, P.E., SECB



1st FLOOR CONCEPTUAL FRAMING PLAN

SCALE: $\frac{3}{16}$" = 1'-0"

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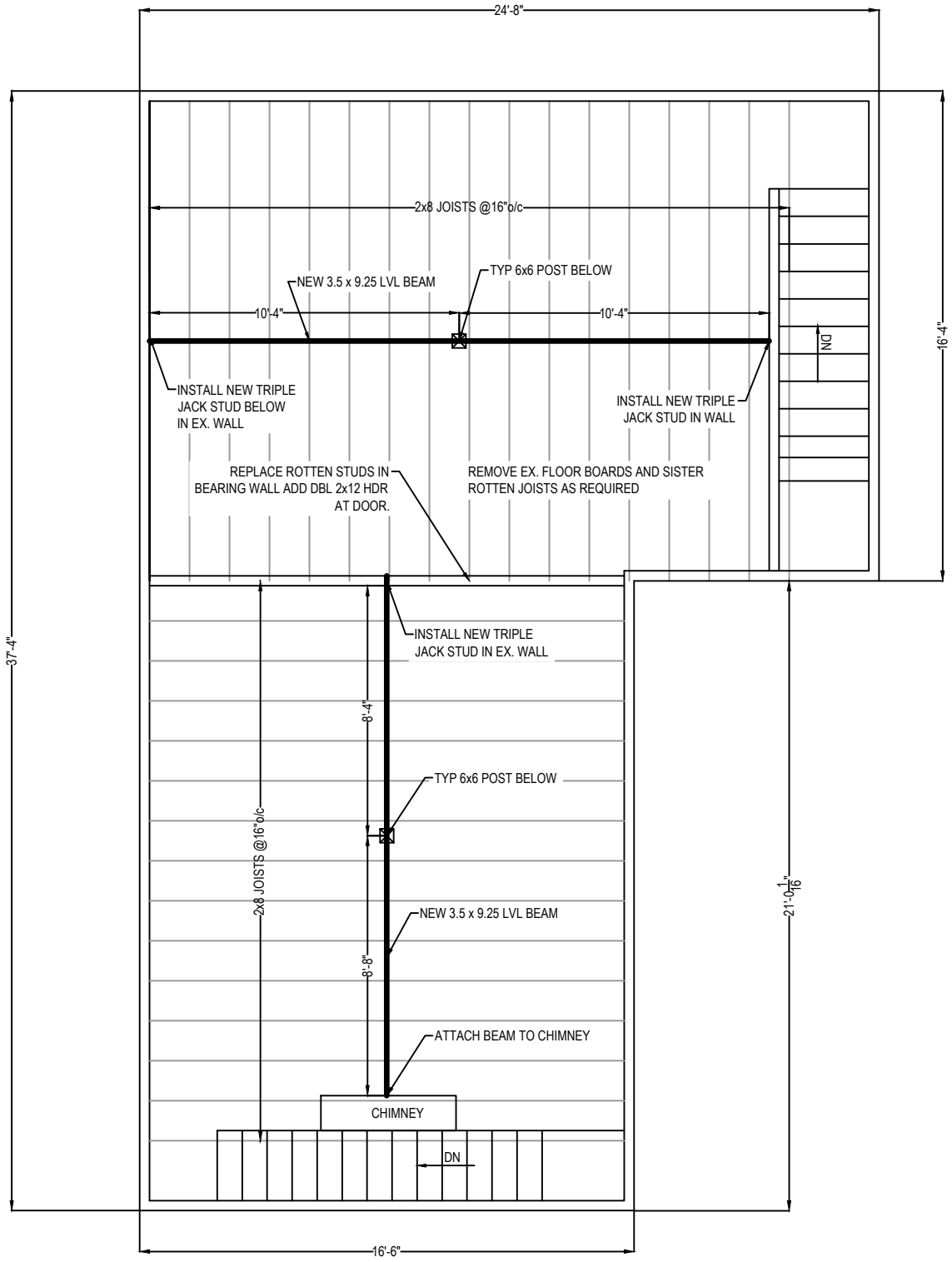
EXHIBIT A
HULFISH HOUSE SE REPORT
TOWN OF HAYMARKET, VA
PAGE 1 DECEMBER 1, 2011



2nd FLOOR CONCEPTUAL FRAMING PLAN

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EXHIBIT A
HULFISH HOUSE SE REPORT
TOWN OF HAYMARKET, VA

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1. Mobilize to site. Install safety fence around building.
2. Remove existing floor boards and ceiling on 1st floor.
3. Contractor to verify all dimensions.
4. Remove plaster off of existing chimneys to verify integrity and repair as necessary.
5. Call for engineering inspection to confirm proposed new shore framing. Adjustments may be necessary based on uncovered conditions.
6. Install new footings as specified on page 1.
7. After concrete cures, install posts and shoring beams for 1st floor as specified on page 1.
8. Install 1st floor sister joists to existing rotten as specified on page 1.
9. Install new beam below 1st floor at opening between crawl space and cellar.
10. Remove plaster and reconstruct center bearing wall between front and rear rooms. Install new header beam across door.
11. Expose supports under stairways and call for engineering inspection to confirm if additional support is required.
12. Call for engineering inspection to verify new 1st floor framing.
13. Replace rotten floor joists on 2nd floor as necessary. Remove flooring to verify. Call for engineering inspection to confirm.
14. Install 2nd floor shoring beams as indicated on page 2
15. Remove bottom 3' of exterior siding to expose stud framing.
16. Call for engineering inspection to confirm if repair is required.
17. Repair bottom of existing exterior wall by sistering studs.
18. Re-set and reframe rough opening of all windows as necessary to remove racking of windows and make operable.
19. Apply new insulation and siding to exterior walls.
20. Install new ceiling above 1st floor.
21. Repair/Install new flooring boards on 1st and 2nd floors.

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Structural Engineers
Warrenton, Virginia - (540)349-8385

Title : Haymarket Structures
Dsgnr: dave hall
Project Desc.: Evaluations of Existing Structures
Project Notes :

Job # 212001.00

Printed: 3 DEC 2011, 11:36AM

Wood Beam

File: c:\Users\Dave Hall.DRHDG\ENERCALC Data Files\haymarket.ec6
ENERCALC, INC. 1983-2011, Build:6.11.10.09, Ver:6.11.10.09

Lic. # : KW-06002593 — Licensee : DRH DESIGN GROUP INC.

Description : check on ex. 1ST floor joists HULFISH HOUSE

Material Properties

Calculations per NDS 2005, IBC 2009, CBC 2010, ASCE 7-05

Analysis Method : Allowable Stress Design
Load Combination 2006 IBC & ASCE 7-05

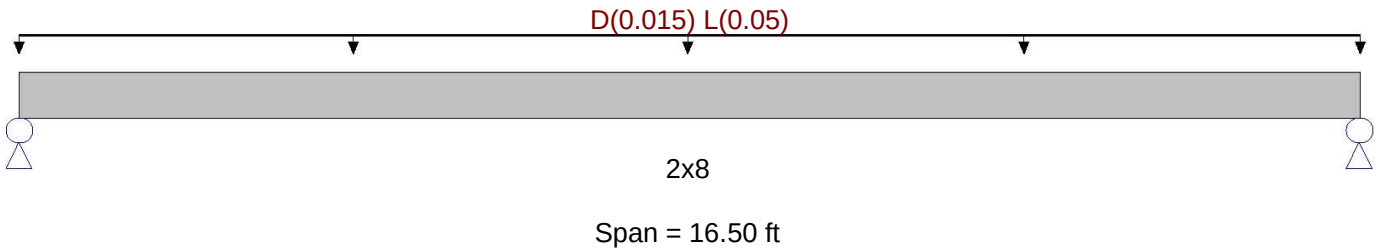
Wood Species : Southern Pine
Wood Grade : No.2: 2" - 4" Thick : 8" Wide

Beam Bracing : Beam is Fully Braced against lateral-torsion buckling

Fb - Tension	1,200.0 psi
Fb - Compr	1,200.0 psi
Fc - Prll	1,550.0 psi
Fc - Perp	565.0 psi
Fv	175.0 psi
Ft	650.0 psi

E : Modulus of Elasticity

Ebend- xx	1,600.0 ksi
Eminbend - xx	580.0 ksi
Density	35.440 pcf



Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Uniform Load : D = 0.0150, L = 0.050 ksf, Tributary Width = 1.0 ft, (proposed floor loads)

DESIGN SUMMARY

Design N.G.

Maximum Bending Stress Ratio	=	1.683 : 1	Maximum Shear Stress Ratio	=	0.393 : 1
Section used for this span		2x8	Section used for this span		2x8
fb : Actual	=	2,020.02 psi	fv : Actual	=	68.79 psi
FB : Allowable	=	1,200.00 psi	Fv : Allowable	=	175.00 psi
Load Combination		+D+L+H	Load Combination		+D+L+H
Location of maximum on span	=	8.250 ft	Location of maximum on span	=	15.923 ft
Span # where maximum occurs	=	Span # 1	Span # where maximum occurs	=	Span # 1

Maximum Deflection

Max Downward L+Lr+S Deflection	1.103 in	Ratio =	179 <360
Max Upward L+Lr+S Deflection	0.000 in	Ratio =	0 <360
Max Downward Total Deflection	1.434 in	Ratio =	138 <180
Max Upward Total Deflection	0.000 in	Ratio =	0 <180

Maximum Forces & Stresses for Load Combinations

Load Combination / Segment Length	Span #	Max Stress Ratios M	Max Stress Ratios V	C_d	$C_{F/V}$	C_r	C_m	C_t	C_L	Moment Values M	Moment Values fb	Moment Values Fb	Shear Values V	Shear Values fv	Shear Values Fv
+D												0.00	0.00	0.00	0.00
Length = 16.50 ft	1	0.388	0.091	1.000	1.000	1.000	1.000	1.000	1.000	0.51	466.16	1200.00	0.12	15.87	175.00
+D+L+H					1.000	1.000	1.000	1.000	1.000			0.00	0.00	0.00	0.00
Length = 16.50 ft	1	1.683	0.393	1.000	1.000	1.000	1.000	1.000	1.000	2.21	2,020.02	1200.00	0.50	68.79	175.00
+D+0.750Lr+0.750L+H					1.000	1.000	1.000	1.000	1.000			0.00	0.00	0.00	0.00
Length = 16.50 ft	1	1.360	0.317	1.000	1.000	1.000	1.000	1.000	1.000	1.79	1,631.56	1200.00	0.40	55.56	175.00
+D+0.750L+0.750S+H					1.000	1.000	1.000	1.000	1.000			0.00	0.00	0.00	0.00
Length = 16.50 ft	1	1.360	0.317	1.000	1.000	1.000	1.000	1.000	1.000	1.79	1,631.56	1200.00	0.40	55.56	175.00
+D+0.750Lr+0.750L+0.750W+H					1.000	1.000	1.000	1.000	1.000			0.00	0.00	0.00	0.00
Length = 16.50 ft	1	1.360	0.317	1.000	1.000	1.000	1.000	1.000	1.000	1.79	1,631.56	1200.00	0.40	55.56	175.00
+D+0.750L+0.750S+0.750W+H					1.000	1.000	1.000	1.000	1.000			0.00	0.00	0.00	0.00
Length = 16.50 ft	1	1.360	0.317	1.000	1.000	1.000	1.000	1.000	1.000	1.79	1,631.56	1200.00	0.40	55.56	175.00
+D+0.750Lr+0.750L+0.5250E+H					1.000	1.000	1.000	1.000	1.000			0.00	0.00	0.00	0.00
Length = 16.50 ft	1	1.360	0.317	1.000	1.000	1.000	1.000	1.000	1.000	1.79	1,631.56	1200.00	0.40	55.56	175.00
+D+0.750L+0.750S+0.5250E+H					1.000	1.000	1.000	1.000	1.000			0.00	0.00	0.00	0.00
Length = 16.50 ft	1	1.360	0.317	1.000	1.000	1.000	1.000	1.000	1.000	1.79	1,631.56	1200.00	0.40	55.56	175.00

DRH Design Group, Inc.
Structural Engineers
Warrenton, Virginia - (540)349-8385

Title : Haymarket Structures
Dsgnr: dave hall
Project Desc.: Evaluations of Existing Structures
Job # 212001.00

Project Notes :

Printed: 3 DEC 2011, 11:36AM

Wood Beam

File: c:\Users\Dave Hall.DRHDG\ENERCALC Data Files\haymarket.ec6
ENERCALC, INC. 1983-2011, Build:6.11.10.09, Ver:6.11.10.09

Lic. # : KW-06002593 — Licensee : DRH DESIGN GROUP INC.

Description : check on ex. 1ST floor joists HULFISH HOUSE

Overall Maximum Deflections - Unfactored Loads

Load Combination	Span	Max. "-" Defl	Location in Span	Load Combination	Max. "+" Defl	Location in Span
D+L	1	1.4337	8.333		0.0000	0.000

Vertical Reactions - Unfactored

Support notation : Far left is #1 — Values in KIPS

Load Combination	Support 1	Support 2
Overall MAXimum	0.536	0.536
D Only	0.124	0.124
L Only	0.413	0.413
D+L	0.536	0.536

DRH Design Group, Inc.
Structural Engineers
Warrenton, Virginia - (540)349-8385

Title : Haymarket Structures
Dsgnr: dave hall
Project Desc.: Evaluations of Existing Structures
Job # 212001.00

Project Notes :

Printed: 3 DEC 2011, 11:45AM

Wood Beam

File: c:\Users\Dave Hall.DRHDG\ENERCALC Data Files\haymarket.ec6
ENERCALC, INC. 1983-2011, Build:6.11.10.09, Ver:6.11.10.09

Lic. # : KW-06002593 — Licensee : DRH DESIGN GROUP INC.

Description : new main floor beam at front room of Hulfish house

Material Properties

Calculations per NDS 2005, IBC 2009, CBC 2010, ASCE 7-05

Analysis Method : Allowable Stress Design
Load Combination 2006 IBC & ASCE 7-05

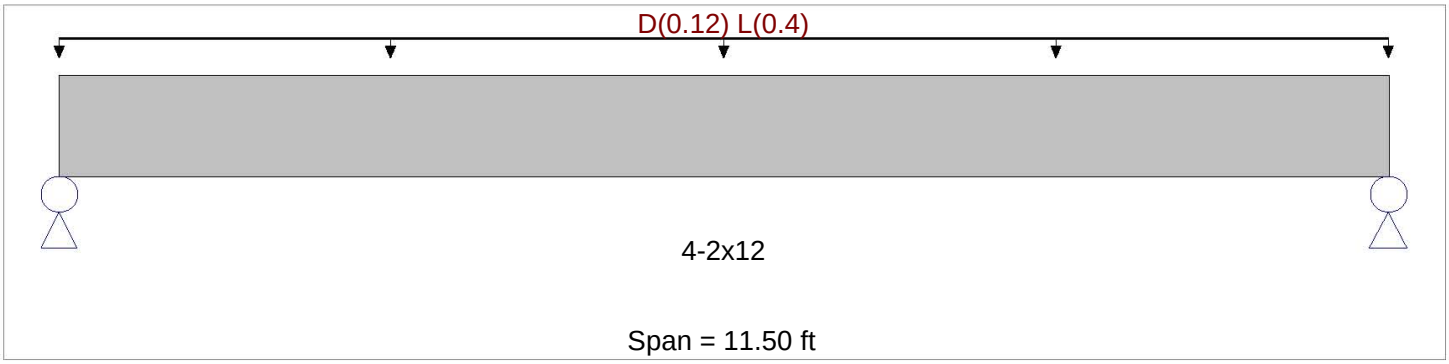
Wood Species : Southern Pine
Wood Grade : No.2: 2" - 4" Thick : 10" Wide

Beam Bracing : Beam is Fully Braced against lateral-torsion buckling

Fb - Tension	1,050.0 psi
Fb - Compr	1,050.0 psi
Fc - Prll	1,500.0 psi
Fc - Perp	565.0 psi
Fv	175.0 psi
Ft	575.0 psi

E : Modulus of Elasticity

Ebend- xx	1,600.0 ksi
Eminbend - xx	580.0 ksi
Density	35.440 pcf



Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Beam self weight calculated and added to loads
Uniform Load : D = 0.0150, L = 0.050 ksf, Tributary Width = 8.0 ft, (1st floor load)

DESIGN SUMMARY

Design OK

Maximum Bending Stress Ratio	=	0.801 : 1	Maximum Shear Stress Ratio	=	0.329 : 1
Section used for this span		4-2x12	Section used for this span		4-2x12
fb : Actual	=	841.09 psi	fv : Actual	=	57.60 psi
FB : Allowable	=	1,050.00 psi	Fv : Allowable	=	175.00 psi
Load Combination		+D+L+H	Load Combination		+D+L+H
Location of maximum on span	=	5.750 ft	Location of maximum on span	=	0.000 ft
Span # where maximum occurs	=	Span # 1	Span # where maximum occurs	=	Span # 1

Maximum Deflection

Max Downward L+Lr+S Deflection	0.139 in	Ratio =	990
Max Upward L+Lr+S Deflection	0.000 in	Ratio =	0 <360
Max Downward Total Deflection	0.187 in	Ratio =	738
Max Upward Total Deflection	0.000 in	Ratio =	0 <180

Maximum Forces & Stresses for Load Combinations

Load Combination / Segment Length	Span #	Max Stress Ratios M	Max Stress Ratios V	C_d	$C_{F/V}$	C_r	C_m	C_t	C_L	Moment Values M	Moment Values fb	Moment Values Fb	Shear Values V	Shear Values fv	Shear Values Fv
+D												0.00	0.00	0.00	0.00
Length = 11.50 ft	1	0.204	0.084	1.000	1.000	1.000	1.000	1.000	1.000	2.26	214.13	1050.00	0.66	14.66	175.00
+D+L+H					1.000	1.000	1.000	1.000	1.000			0.00	0.00	0.00	0.00
Length = 11.50 ft	1	0.801	0.329	1.000	1.000	1.000	1.000	1.000	1.000	8.87	841.09	1050.00	2.59	57.60	175.00
+D+0.750Lr+0.750L+H					1.000	1.000	1.000	1.000	1.000			0.00	0.00	0.00	0.00
Length = 11.50 ft	1	0.652	0.268	1.000	1.000	1.000	1.000	1.000	1.000	7.22	684.35	1050.00	2.11	46.86	175.00
+D+0.750L+0.750S+H					1.000	1.000	1.000	1.000	1.000			0.00	0.00	0.00	0.00
Length = 11.50 ft	1	0.652	0.268	1.000	1.000	1.000	1.000	1.000	1.000	7.22	684.35	1050.00	2.11	46.86	175.00
+D+0.750Lr+0.750L+0.750W+H					1.000	1.000	1.000	1.000	1.000			0.00	0.00	0.00	0.00
Length = 11.50 ft	1	0.652	0.268	1.000	1.000	1.000	1.000	1.000	1.000	7.22	684.35	1050.00	2.11	46.86	175.00
+D+0.750L+0.750S+0.750W+H					1.000	1.000	1.000	1.000	1.000			0.00	0.00	0.00	0.00
Length = 11.50 ft	1	0.652	0.268	1.000	1.000	1.000	1.000	1.000	1.000	7.22	684.35	1050.00	2.11	46.86	175.00
+D+0.750Lr+0.750L+0.5250E+H					1.000	1.000	1.000	1.000	1.000			0.00	0.00	0.00	0.00
Length = 11.50 ft	1	0.652	0.268	1.000	1.000	1.000	1.000	1.000	1.000	7.22	684.35	1050.00	2.11	46.86	175.00
+D+0.750L+0.750S+0.5250E+H					1.000	1.000	1.000	1.000	1.000			0.00	0.00	0.00	0.00

DRH Design Group, Inc.
Structural Engineers
Warrenton, Virginia - (540)349-8385

Title : Haymarket Structures
Dsgnr: dave hall
Project Desc.: Evaluations of Existing Structures
Job # 212001.00

Project Notes :

Printed: 3 DEC 2011, 11:45AM

Wood Beam

File: c:\Users\Dave Hall.DRHDG\ENERCALC Data Files\haymarket.ec6
ENERCALC, INC. 1983-2011, Build:6.11.10.09, Ver:6.11.10.09

Lic. # : KW-06002593 — Licensee : DRH DESIGN GROUP INC.

Description : new main floor beam at front room of Hulfish house

Load Combination / Segment Length	Span #	Max Stress Ratios M	V	C_d	$C_{F/V}$	C_r	C_m	C_t	C_L	Moment Values M	fb	Fb	Shear Values V	fv	Fv
Length = 11.50 ft	1	0.652	0.268	1.000	1.000	1.000	1.000	1.000	1.000	7.22	684.35	1050.00	2.11	46.86	175.00

Overall Maximum Deflections - Unfactored Loads

Load Combination	Span	Max. "-" Defl	Location in Span	Load Combination	Max. "+" Defl	Location in Span
D+L	1	0.1869	5.808		0.0000	0.000

Vertical Reactions - Unfactored

Support notation : Far left is #1 — Values in KIPS

Load Combination	Support 1	Support 2
Overall MAXimum	3.086	3.086
D Only	0.786	0.786
L Only	2.300	2.300
D+L	3.086	3.086

DRH Design Group, Inc.
Structural Engineers
Warrenton, Virginia - (540)349-8385

Title : Haymarket Structures
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Project Notes :

Printed: 3 DEC 2011, 1:00PM

Wood Beam

File: c:\Users\Dave Hall.DRHDG\ENERCALC Data Files\haymarket.ec6
ENERCALC, INC. 1983-2011, Build:6.11.10.09, Ver:6.11.10.09

Lic. # : KW-06002593 — Licensee : DRH DESIGN GROUP INC.

Description : new main 2nd floor beams at Hulfish House

Material Properties

Calculations per NDS 2005, IBC 2009, CBC 2010, ASCE 7-05

Analysis Method : Allowable Stress Design
Load Combination 2006 IBC & ASCE 7-05

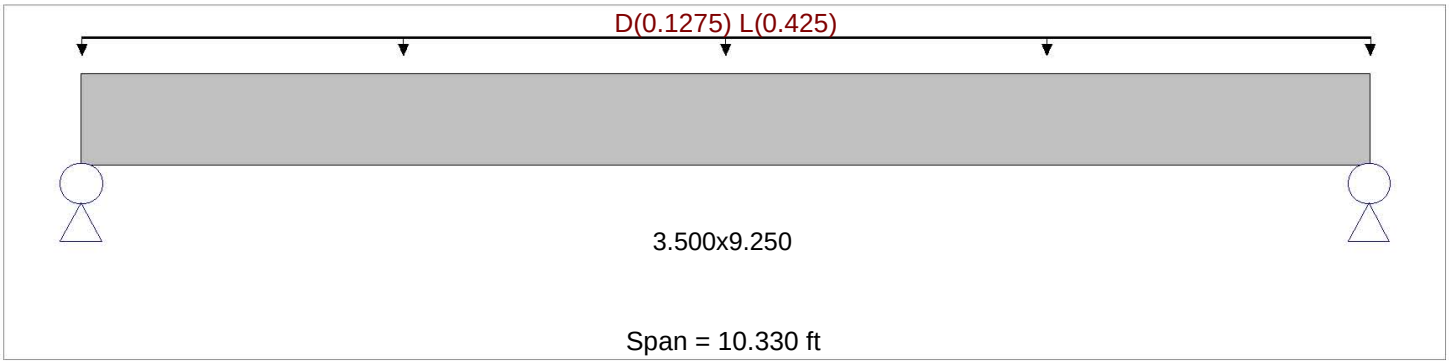
Wood Species : Georgia Pacific
Wood Grade : GP Lam 2.0E

Beam Bracing : Beam is Fully Braced against lateral-torsion buckling

Fb - Tension	2,850.0 psi
Fb - Compr	2,850.0 psi
Fc - Prll	1,600.0 psi
Fc - Perp	750.0 psi
Fv	285.0 psi
Ft	1,000.0 psi

E : Modulus of Elasticity

Ebend- xx	2,000.0 ksi
Eminbend - xx	2,000.0 ksi
Density	32.210 pcf



Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Beam self weight calculated and added to loads
Uniform Load : D = 0.0150, L = 0.050 ksf, Tributary Width = 8.50 ft, (2nd floor load)

DESIGN SUMMARY

Design OK

Maximum Bending Stress Ratio	=	0.630 : 1	Maximum Shear Stress Ratio	=	0.404 : 1
Section used for this span		3.500x9.250	Section used for this span		3.500x9.250
fb : Actual	=	1,795.06 psi	fv : Actual	=	115.20 psi
FB : Allowable	=	2,850.00 psi	Fv : Allowable	=	285.00 psi
Load Combination		+D+L+H	Load Combination		+D+L+H
Location of maximum on span	=	5.165 ft	Location of maximum on span	=	0.000 ft
Span # where maximum occurs	=	Span # 1	Span # where maximum occurs	=	Span # 1

Maximum Deflection

Max Downward L+Lr+S Deflection	0.238 in	Ratio =	521
Max Upward L+Lr+S Deflection	0.000 in	Ratio =	0 <360
Max Downward Total Deflection	0.313 in	Ratio =	395
Max Upward Total Deflection	0.000 in	Ratio =	0 <180

Maximum Forces & Stresses for Load Combinations

Load Combination / Segment Length	Span #	Max Stress Ratios M	Max Stress Ratios V	C_d	$C_{F/V}$	C_r	C_m	C_t	C_L	Moment Values M	Moment Values fb	Moment Values Fb	Shear Values V	Shear Values fv	Shear Values Fv
+D												0.00	0.00	0.00	0.00
Length = 10.330 ft	1	0.152	0.097	1.000	1.000	1.000	1.000	1.000	1.000	1.80	432.11	2850.00	0.60	27.73	285.00
+D+L+H					1.000	1.000	1.000	1.000	1.000			0.00	0.00	0.00	0.00
Length = 10.330 ft	1	0.630	0.404	1.000	1.000	1.000	1.000	1.000	1.000	7.47	1,795.06	2850.00	2.49	115.20	285.00
+D+0.750Lr+0.750L+H					1.000	1.000	1.000	1.000	1.000			0.00	0.00	0.00	0.00
Length = 10.330 ft	1	0.510	0.327	1.000	1.000	1.000	1.000	1.000	1.000	6.05	1,454.32	2850.00	2.01	93.33	285.00
+D+0.750L+0.750S+H					1.000	1.000	1.000	1.000	1.000			0.00	0.00	0.00	0.00
Length = 10.330 ft	1	0.510	0.327	1.000	1.000	1.000	1.000	1.000	1.000	6.05	1,454.32	2850.00	2.01	93.33	285.00
+D+0.750Lr+0.750L+0.750W+H					1.000	1.000	1.000	1.000	1.000			0.00	0.00	0.00	0.00
Length = 10.330 ft	1	0.510	0.327	1.000	1.000	1.000	1.000	1.000	1.000	6.05	1,454.32	2850.00	2.01	93.33	285.00
+D+0.750L+0.750S+0.750W+H					1.000	1.000	1.000	1.000	1.000			0.00	0.00	0.00	0.00
Length = 10.330 ft	1	0.510	0.327	1.000	1.000	1.000	1.000	1.000	1.000	6.05	1,454.32	2850.00	2.01	93.33	285.00
+D+0.750Lr+0.750L+0.5250E+H					1.000	1.000	1.000	1.000	1.000			0.00	0.00	0.00	0.00
Length = 10.330 ft	1	0.510	0.327	1.000	1.000	1.000	1.000	1.000	1.000	6.05	1,454.32	2850.00	2.01	93.33	285.00
+D+0.750L+0.750S+0.5250E+H					1.000	1.000	1.000	1.000	1.000			0.00	0.00	0.00	0.00

DRH Design Group, Inc.
Structural Engineers
Warrenton, Virginia - (540)349-8385

Title : Haymarket Structures
Dsgnr: dave hall
Project Desc.: Evaluations of Existing Structures
Job # 212001.00

Project Notes :

Printed: 3 DEC 2011, 1:00PM

Wood Beam

File: c:\Users\Dave Hall.DRHDG\ENERCALC Data Files\haymarket.ec6
ENERCALC, INC. 1983-2011, Build:6.11.10.09, Ver:6.11.10.09

Lic. # : KW-06002593 — Licensee : DRH DESIGN GROUP INC.

Description : new main 2nd floor beams at Hulfish House

Load Combination / Segment Length	Span #	Max Stress Ratios M	V	C_d	$C_{F/V}$	C_r	C_m	C_t	C_L	Moment Values M	fb	Fb	Shear Values V	fv	Fv
Length = 10.330 ft	1	0.510	0.327	1.000	1.000	1.000	1.000	1.000	1.000	6.05	1,454.32	2850.00	2.01	93.33	285.00

Overall Maximum Deflections - Unfactored Loads

Load Combination	Span	Max. "-" Defl	Location in Span	Load Combination	Max. "+" Defl	Location in Span
D+L	1	0.3131	5.217		0.0000	0.000

Vertical Reactions - Unfactored

Support notation : Far left is #1 — Values in KIPS

Load Combination	Support 1	Support 2
Overall MAXimum	2.891	2.891
D Only	0.696	0.696
L Only	2.195	2.195
D+L	2.891	2.891