



**Historic Preservation Commission
Department of Planning, Housing, and Zoning**

**County Commissioners Hearing Room
400 High Street
Chestertown, Maryland**

AGENDA

April 6, 2023
5:30 p.m.

Members of the public are welcome to attend meetings in person or via conference call.

Public participation and audio-only call-in number:

1. Dial **1-872-239-8359**
2. Enter Conference ID: **712 386 177#**

Members of the public are asked to mute their phones/devices, until the Commission Chair opens the floor for comment.

MINUTES

Request a motion to adopt the minutes of October 30, 2020, and summary of November 29, 2022, as presented.

APPLICATIONS FOR REVIEW

GENERAL DISCUSSION

Discussion of the current condition and proposed next steps for Turners Creek Granary:

- BOCC Agenda Item 2023-03-14
- BOCC Minutes 2023-03-14, p. 5
- Photographs from 2022-11-04
- K-122 Granary at Turner's Creek
- Granary Engineers Report 2009

STAFF REPORTS

ADJOURN

Meetings are conducted in Open Session unless otherwise indicated. All or part of the Planning Commission meetings can be held in closed session under the authority of the MD Open Meetings Law by vote of the members. Breaks are at the call of the Chairman. Meetings are subject to audio and video recordings.

All applications will be given the time necessary to assure full public participation and a fair and complete review of all projects. Agenda items are subject to change due to cancellations.

Kent County Historic Preservation Commission Meeting Summary

The Kent County Historic Preservation Commission (HPC) met on Tuesday, **November 29, 2022**, at 6:00 p.m. in the County Commissioners' Hearing Room at 400 High Street, Chestertown, Maryland. It was a hybrid meeting, and the following HPC members were in attendance: Jeremy Rothwell, Max Ruehrmund, and Melinda Zupon (remotely). There was not a quorum, and a work session was held. Staff in attendance were Shelley Heller, County Administrator (remotely); Mike Moulds, PE, Director of Public Works (remotely); William Mackey, DPHZ Director; Penelope Young-Carrasquillo, Grants Manager; and Campbell Safian, Planning Specialist.

Jeremy Rothwell called the meeting to order at 6:10 p.m.

GENERAL DISCUSSION / WORK SESSION

Discussion of the current condition and proposed next steps for Turner's Creek Granary:

- Turner's Creek is a popular public landing for boats and kayaks.
- The granary in its current condition, cannot accommodate human occupancy.
- An active use for the granary must be determined to justify the rehabilitation and maintenance costs.
- The granary is suitable for storage purposes, such as kayaks.
- It was recommended that the County create a partnership with a non-profit organization or an educational program that will use the building, such as the Sultana Foundation or the Eastern Shore Land Conservancy.
- Adding signage in and around the granary will inform the public about the granary's historical significance.
- The Department of Public Works are subject-matter experts on how to properly seal the granary, to prevent further damage from weather elements and vandalism.
- Surrounding the granary with a chain link fence would prevent public access.
- Grant funding must be obtained to update the 2009 Granary Engineers Report.
- The Engineers Report will analyze the granary's structural condition and its potential uses.
- Grant applications could be submitted, such as the American Battlefield Protection Program, in an effort to limit the amount of money that the County would expend towards the restoration of the granary.
- Acting Chair inquired about the process for photographs related to permits and inspecting sites.

ADJOURNMENT

Jeremy Rothwell adjourned the meeting at 7:10 p.m.

Jeremy Rothwell, Acting Chair

Campbell Safian, Planning Specialist

**Kent County Historic Preservation Commission
Meeting Summary**

The Kent County Historic Preservation Commission (HPC) met virtually on Friday, **October 30, 2020**, at 10:00 a.m. via Microsoft Teams with a livestream from the Commissioners' Hearing Room, 400 High Street, Chestertown, Maryland. The following members were in attendance: Elizabeth Beckley, Chair; Jennifer Moore; Don Othoson; Jeremy Rothwell; Max Ruehrmund; and Melinda Zupon. Also present was Robert Tracey, Community Planner; William Mackey, Director; and Brian Jones, Clerk.

In addition, Anthony Lamb and John Brown were present representing the applicant.

Chair Beckley called the meeting to order at 10:20 a.m.

GENERAL DISCUSSION / WORK SESSION

Mr. Brown provided an overview of the applicant's goals and objectives. The applicant would like to work with the Kent County Historic Preservation Commission to obtain a Kent County Historic Site Designation.

Mr. Tracey provided a presentation. The presentation included:

- A site plan of the property.
- Pictures of the structure.
- The criteria used to designate historic properties.
- Property information from the Maryland Department of Assessment and Taxation (SDAT).

After further discussion, members will conduct a site visit on Saturday, October 31st, 2020, at 1 p.m.

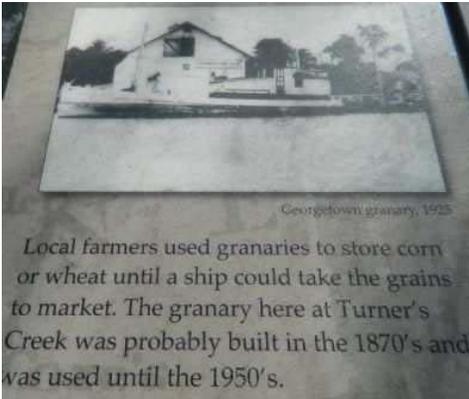
ADJOURNMENT

With there being no further business, Chair Beckley adjourned the meeting at 10:55 a.m.

Elizabeth Beckley, Chair

Brian Jones, Clerk

blj



POS 2009
\$58,500
Stabilization



Where history and safety intersect/collide



The Granary at Turners Creek



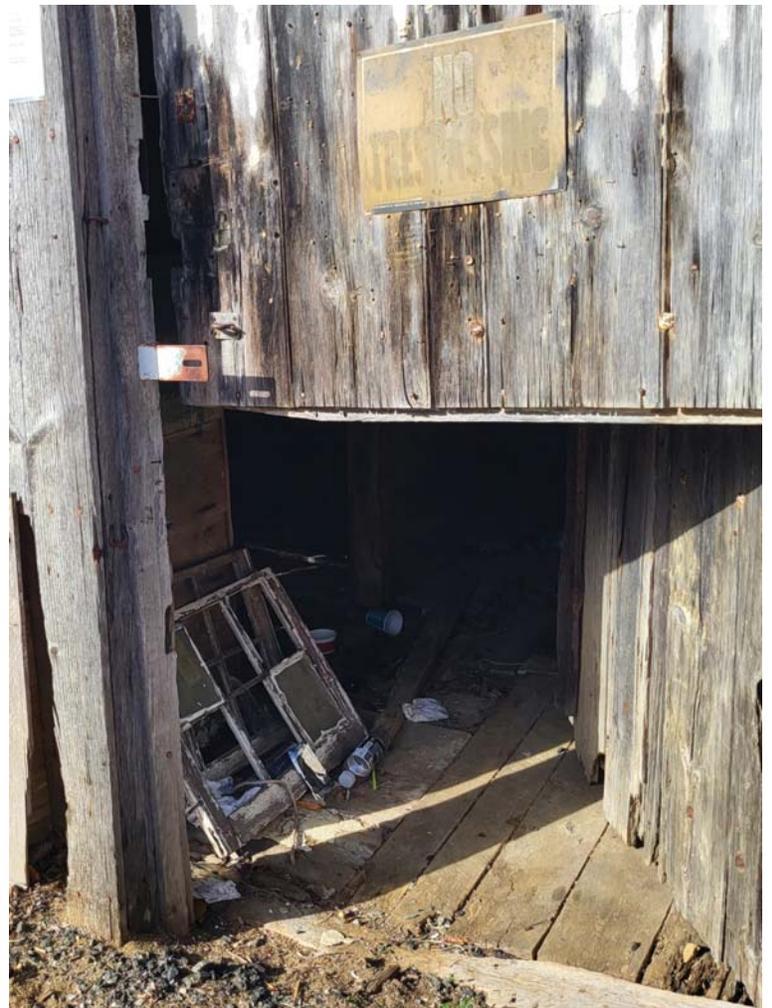
Ms. Merritt and Mr. Miller on behalf of Herbert Dennis, Warden, Kent County Detention Center presented a personnel request to fill a vacant Correctional Officer position. Discussion took place. On a motion by Commissioner Price and seconded by Commissioner Nickerson, the Commissioners unanimously approved the recommended candidate at the salary recommended.

COUNTY ADMINISTRATOR

Shelley L. Heller, County Administrator, advised of several matters concerning Turner's Creek that needed to be discussed. Ms. Coleman, Mr. Mackey, Mike Moulds, Director, Public Works, and Ms. Young- Carrasquillo were also present for the discussion.

- The **condition of the granary building** is a hazard as is. The County received \$58,500.00, in 2009 for the stabilization of the structure. The County must use the funds at Turner's Creek location only. If the County intends to demolish the Granary, the County will have to spend the \$58,500.00 on another project within the Turner's Creek area and have it approved by the Department of Natural Resources (DNR). DNR would have to approve the demolition of the structure as well. Testimony was offered by Jennifer Moore, President, and Max Ruehrmund, Member (of the 5th Election District) of the Historic Preservation Commission (HPC). A letter from Jeremy Rothwell, Member (of the First District), HPC was received before the meeting and was referenced during testimonies. The HPC members prefer to keep the structure at its current location and rehabilitate the structure. Ms. Moore cited some of the history and the condition of the structure and suggested a feasibility study and research grants to rehabilitate the structure. Mr. Ruehrmund suggested the County install a fence up against the building to deter residents from entering the building. Mr. Moulds stated a fence would not keep the support beams on the first floor from rotting further and will not hold the second floor. The building may fall in any direction, not just straight down into the center of the building. The fence would only keep people out of the building and does not help with stabilization. Commissioner Fithian stated many watermen utilize the landing and if the building was to fall, it would present a problem. The last time there was interest in the structure was in 1974, by The Chesapeake Maritime. Mr. Moulds stated over the years the structure has been modified using modern materials and may not withstand the elements as it would have if it were to be in its original state. Commissioner Fithian asked members of the HPC to reach out to Wayne Gilchrest for resources and research grants that may be available and present their findings at a later meeting. Commissioner Price suggested the County install a fence to keep patrons out of the building and investigate liability insurance to protect the County should the building fall. Discussion took place. On a motion made by Commissioner Price and seconded by Commissioner Nickerson, the Commissioners unanimously approved the County (in the near future) to contract with the fencing company the County is using for the property at Daisy Drive, to put the fence up against the building, and post warning signs on the property, and the cost should not exceed \$4,500.00 and Contingency Funds are to be used.
- Additionally, we have notifications for two separate areas of the property that are being farmed. The property was acquired with Program Open Space (POS) funding, which is





K-122

Granary at Turner's Creek

Architectural Survey File

This is the architectural survey file for this MIHP record. The survey file is organized reverse-chronological (that is, with the latest material on top). It contains all MIHP inventory forms, National Register nomination forms, determinations of eligibility (DOE) forms, and accompanying documentation such as photographs and maps.

Users should be aware that additional undigitized material about this property may be found in on-site architectural reports, copies of HABS/HAER or other documentation, drawings, and the “vertical files” at the MHT Library in Crownsville. The vertical files may include newspaper clippings, field notes, draft versions of forms and architectural reports, photographs, maps, and drawings. Researchers who need a thorough understanding of this property should plan to visit the MHT Library as part of their research project; look at the MHT web site (mht.maryland.gov) for details about how to make an appointment.

All material is property of the Maryland Historical Trust.

Last Updated: 01-23-2020

GRANARY AT TURNER'S CREEK
Kennedyville, Maryland
(19th)

The granary at Turner's Creek public landing is a two story frame structure which rests on brick piers and has a shallow gable roof. The exterior siding is whitewashed board and batten up to the gables where butted vertical boards are used. The roof is covered with corrugated steel and its rafter ends are exposed. It is a well-preserved example of the barn framings system of the late 19th century.

From colonial days until well into the twentieth century, farm products were shipped from dispersed points along the rivers of the Chesapeake Bay. This building was used to house grain awaiting transport on to market on steamboats, and is probably the last warehouse remaining from this period.

MARYLAND HISTORICAL TRUST

INVENTORY FORM FOR STATE HISTORIC SITES SURVEY

1 NAMEHISTORIC *GRANARY AT TURNER'S CREEK*

AND/OR COMMON

2 LOCATIONSTREET & NUMBER *Turners Creek Wharf* *1st*CITY, TOWN *Kennedyville* VICINITY OF _____ CONGRESSIONAL DISTRICT _____STATE *Maryland* COUNTY *Kent***3 CLASSIFICATION**

CATEGORY	OWNERSHIP	STATUS	PRESENT USE	
<input type="checkbox"/> DISTRICT	<input checked="" type="checkbox"/> PUBLIC	<input type="checkbox"/> OCCUPIED	<input type="checkbox"/> AGRICULTURE	<input type="checkbox"/> MUSEUM
<input checked="" type="checkbox"/> BUILDING(S)	<input type="checkbox"/> PRIVATE	<input checked="" type="checkbox"/> UNOCCUPIED	<input type="checkbox"/> COMMERCIAL	<input type="checkbox"/> PARK
<input type="checkbox"/> STRUCTURE	<input type="checkbox"/> BOTH	<input type="checkbox"/> WORK IN PROGRESS	<input type="checkbox"/> EDUCATIONAL	<input type="checkbox"/> PRIVATE RESIDENCE
<input type="checkbox"/> SITE	PUBLIC ACQUISITION	ACCESSIBLE	<input type="checkbox"/> ENTERTAINMENT	<input type="checkbox"/> RELIGIOUS
<input type="checkbox"/> OBJECT	<input type="checkbox"/> IN PROCESS	<input checked="" type="checkbox"/> YES: RESTRICTED	<input type="checkbox"/> GOVERNMENT	<input type="checkbox"/> SCIENTIFIC
	<input type="checkbox"/> BEING CONSIDERED	<input type="checkbox"/> YES: UNRESTRICTED	<input type="checkbox"/> INDUSTRIAL	<input type="checkbox"/> TRANSPORTATION
		<input type="checkbox"/> NO	<input type="checkbox"/> MILITARY	<input checked="" type="checkbox"/> OTHER <i>vacant</i>

4 OWNER OF PROPERTYNAME *County Commissioners of Kent County*Telephone #: *778-4600, ext. 34*STREET & NUMBER
*Court House*CITY, TOWN *Chestertown* _____ VICINITY OF *Maryland 21620* STATE, zip code**5 LOCATION OF LEGAL DESCRIPTION**COURTHOUSE *Kent County Court House*
REGISTRY OF DEEDS, ETC.Liber #: *EHP 60/1*

Folio #:

STREET & NUMBER

CITY, TOWN _____ STATE _____

6 REPRESENTATION IN EXISTING SURVEYSTITLE *Maryland Historical Trust Survey*DATE *1970* _____ FEDERAL STATE _____ COUNTY _____ LOCAL _____DEPOSITORY FOR
SURVEY RECORDS *Maryland Historical Trust*CITY, TOWN *Annapolis,* _____ STATE *Maryland*

7 DESCRIPTION

K-122

CONDITION		CHECK ONE	CHECK ONE
<input type="checkbox"/> EXCELLENT	<input type="checkbox"/> DETERIORATED	<input checked="" type="checkbox"/> UNALTERED	<input checked="" type="checkbox"/> ORIGINAL SITE
<input checked="" type="checkbox"/> GOOD	<input type="checkbox"/> RUINS	<input type="checkbox"/> ALTERED	<input type="checkbox"/> MOVED DATE _____
<input type="checkbox"/> FAIR	<input type="checkbox"/> UNEXPOSED		

DESCRIBE THE PRESENT AND ORIGINAL (IF KNOWN) PHYSICAL APPEARANCE

The granary at Turner's Creek public landing is a two story frame structure which rests on brick piers and has a shallow gable roof. The exterior siding is whitewashed board and batten up to the gables where butted vertical boards are used. The roof is covered with corrugated steel and its rafter ends are exposed.

Examination of the interior framing shows the building to be four 10 ft bays long and three bays wide. The central bays on the short (gable) ends are only 6½ ft wide to accommodate a central aisle or corridor running the length of the building.

Doors lead into both ends of this corridor. On the south gable the door is a board and batten "Dutch" door with wide V-groove beaded boards and long penny-end strap hinges that are placed on the inside of the door. Evidence remains of an early lock with a key hole, now upside down. The details of this door show that it is earlier than the rest of the granary and has been reused from another building.

The door on the north gable is also a board and batten, but appears to be contemporary with this structure. Above each first floor door is a board door on the second level.

Window openings -- simple wooden shutters cut out from the siding -- are located in the center of each side bay on both stories. There are also six over six sash windows in the upper part of each gable.

Inside the original grain bins remain on the first floor on both sides of the corridor. The floor of each bin is raised about 14." The partition walls of the bins are constructed of full 2" by 4" studs (nailed with well-made wire nails) and horizontal boarding. In the southwest corner of the building is a store-room or, perhaps, a part-time office area. Wooden chutes leading from the second story to the corridor were used to fill a trolley or conveyor for loading and unloading grain.

The structural system consists of "Y" braced posts at the bays and diagonally braced corner posts. The posts rest on a sill which spins between piers. Flooring, random width planks about 2" thick, are nailed to the sills. Second floor joists rest on a false plate and span side to side with summer beams running the length of the building at the corridor walls. At about 3 ' above the floor is an

CONTINUE ON SEPARATE SHEET IF NECESSARY

PERIOD		AREAS OF SIGNIFICANCE -- CHECK AND JUSTIFY BELOW				
<input type="checkbox"/> PREHISTORIC	<input type="checkbox"/> ARCHEOLOGY-PREHISTORIC	<input type="checkbox"/> COMMUNITY PLANNING	<input type="checkbox"/> LANDSCAPE ARCHITECTURE	<input type="checkbox"/> RELIGION		
<input type="checkbox"/> 1400-1499	<input type="checkbox"/> ARCHEOLOGY-HISTORIC	<input type="checkbox"/> CONSERVATION	<input type="checkbox"/> LAW	<input type="checkbox"/> SCIENCE		
<input type="checkbox"/> 1500-1599	<input checked="" type="checkbox"/> AGRICULTURE	<input type="checkbox"/> ECONOMICS	<input type="checkbox"/> LITERATURE	<input type="checkbox"/> SCULPTURE		
<input type="checkbox"/> 1600-1699	<input checked="" type="checkbox"/> ARCHITECTURE	<input type="checkbox"/> EDUCATION	<input type="checkbox"/> MILITARY	<input type="checkbox"/> SOCIAL/HUMANITARIAN		
<input type="checkbox"/> 1700-1799	<input type="checkbox"/> ART	<input type="checkbox"/> ENGINEERING	<input type="checkbox"/> MUSIC	<input type="checkbox"/> THEATER		
<input checked="" type="checkbox"/> 1800-1899	<input checked="" type="checkbox"/> COMMERCE	<input type="checkbox"/> EXPLORATION/SETTLEMENT	<input type="checkbox"/> PHILOSOPHY	<input type="checkbox"/> TRANSPORTATION		
<input type="checkbox"/> 1900-	<input type="checkbox"/> COMMUNICATIONS	<input type="checkbox"/> INDUSTRY	<input type="checkbox"/> POLITICS/GOVERNMENT	<input type="checkbox"/> OTHER (SPECIFY)		
		<input type="checkbox"/> INVENTION				

SPECIFIC DATES *last quarter 19th century*. BUILDER/ARCHITECT

STATEMENT OF SIGNIFICANCE

The granary at Turner's Creek is significant because it is a well-preserved example of a common barn-framing system of the mid-19th to early 20th centuries, and because it is one of the last rural warehouses for grain remaining in Kent County.

In his will of 1858 Peregrin Wethered who also owned Knock's Folly (K-114) devised to his daughter Mary his "...Turners Creek point property consisting of granary-wharf store house dwelling Houses ..." indicating that the "point" was already established as a site for grain shipping. The use of wire nails in the present structure, however, is evidence that an earlier structure was the subject of Wethered's bequest. Although portions of the present granary are earlier, this structure probably dates from the late 19th century and is representative of the commercial and building practices of that age.*

In 1974 the Turner's Creek property was sold by the descendants of Peregrin Wethered to the County Commissioners of Kent County. The granary was leased by them to the Kent Museum who, with the assistance of a grant from the Maryland Historical Trust, made repairs to the roof and siding. Currently, however, the building is unused, and is situated so close to the bulkhead that it interferes with both the commercial fishermen who use the wharf in the spring and with summer pleasure boaters.

Like many other of Kent's barns, outbuildings, and storehouses for which there is no longer a use, its survival is in doubt. The granary is generally in good repair, however, and could probably be moved without too much difficulty and reused.

* Wire nails did not replace cut nails in common building practice until the 1890's.

CONTINUE ON SEPARATE SHEET IF NECESSARY

9 MAJOR BIBLIOGRAPHICAL REFERENCES

*Kent County Land Records and Kent County Wills, Court House, Chestertown, Md.
Lake, Griffing, and Stevenson Atlas of 1877.
Nelson, Lee. "Nail Chronology."
National Park Service Technical Leaflet, 1962.*

CONTINUE ON SEPARATE SHEET IF NECESSARY

10 GEOGRAPHICAL DATA

ACREAGE OF NOMINATED PROPERTY _____

VERBAL BOUNDARY DESCRIPTION

LIST ALL STATES AND COUNTIES FOR PROPERTIES OVERLAPPING STATE OR COUNTY BOUNDARIES

STATE	COUNTY
STATE	COUNTY

11 FORM PREPARED BY

NAME / TITLE		<i>Marsha L. Fritz</i>	
ORGANIZATION	<i>Kent County Planning Commission</i>	DATE	<i>4/7/80</i>
STREET & NUMBER	<i>Court House</i>	TELEPHONE	<i>(301) 778-4600, ext. 67</i>
CITY OR TOWN	<i>Chestertown, MD 21620</i>	STATE	

The Maryland Historic Sites Inventory was officially created by an Act of the Maryland Legislature, to be found in the Annotated Code of Maryland, Article 41, Section 181 KA, 1974 Supplement.

The Survey and Inventory are being prepared for information and record purposes only and do not constitute any infringement of individual property rights.

RETURN TO: Maryland Historical Trust
The Shaw House, 21 State Circle
Annapolis, Maryland 21401
(301) 267-1438

interrupted intermediate plate used primarily for nailing the exterior siding. A similar system is used for the second story.

The roof is framed with 3" by 5" rafters that are 2' on center and nailed without a rooftree at the ridge. Leaning "Y" braces at each bay are pegged into purlins set midway down each slope.

Most framing members are circular sawn and joined with mortise and tenon joints. Sheathing and interior partitions are nailed with wire nails. This combination of two connection systems is very common in barns and outbuildings in the last half of the nineteenth century, and even into the twentieth.

This granary is a remnant of the dispursed system for shipping of agricultural commondities by water in the Tidewater region from the colonial period until the early twentieth centry. The Lake, Griffing, and Stevenson Atlas of 1877, for example, shows several warehouses or storehouses at public or private landings throughout the county where steam boats could pick up grain or fruit for transport.

K-122

Granary at Turner's Creek
Kennedyville

View to north

M.L.Fritz

1/1980

J. Tyler Comblett
FREE-LANCE PHOTOGRAPHY
CHESTERTOWN, MARYLAND

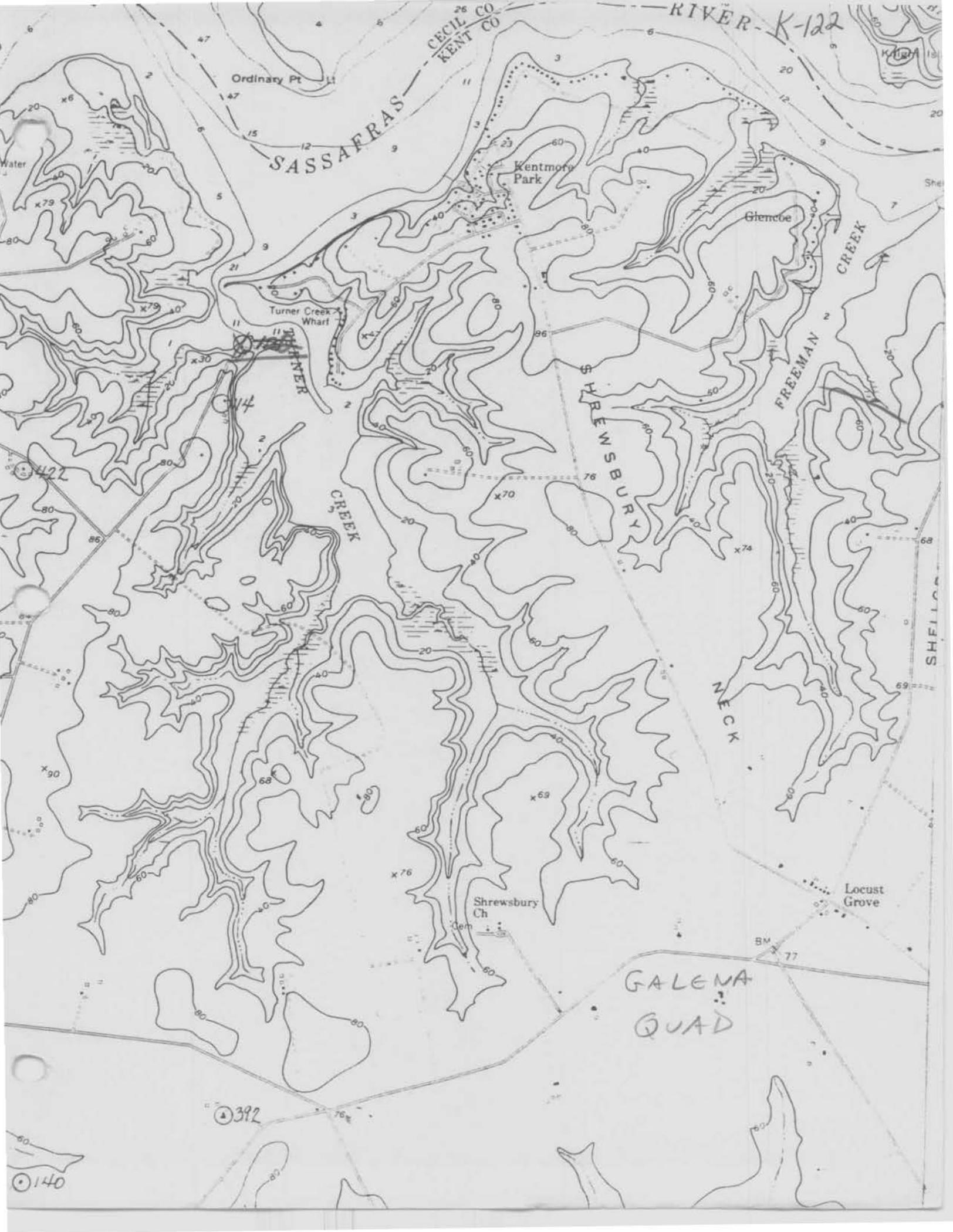
MAY 21 1980

1501225204

1. STATE <i>Maryland</i> COUNTY <i>Kent</i> TOWN <i>Kennedysville</i> VICINITY STREET NO. <i>Rt 448, at Turner's Creek</i> ORIGINAL OWNER ORIGINAL USE <i>Granary</i> PRESENT OWNER <i>W.O. Henderson</i> PRESENT USE <i>Storage</i> WALL CONSTRUCTION <i>frame</i> NO. OF STORIES <i>2</i>	HISTORIC AMERICAN BUILDINGS SURVEY INVENTORY <i>K-122</i> 2. NAME <i>Granary on Turner's Creek</i> DATE OR PERIOD <i>c. 1800 ?</i> STYLE ARCHITECT BUILDER
3. FOR LIBRARY OF CONGRESS USE	
4. NOTABLE FEATURES, HISTORICAL SIGNIFICANCE AND DESCRIPTION OPEN TO PUBLIC <i>No</i> <p style="text-align: center;">The Granary on Turefir's Creek is a large frame structure along side of the creek. It's frame hewn and pegged. Many of the original bins and floors remain intact. The exterior is covered with whitewashed board and batten-</p> <p style="text-align: center;">Presently used by fishermen to store their gear, etc. Poor condition.</p>	
5. PHYSICAL CONDITION OF STRUCTURE <i>Endangered ?</i> Interior Exterior <i>poor</i>	
6. LOCATION MAP (Plan Optional)	7. PHOTOGRAPH
8. PUBLISHED SOURCES (Author, Title, Pages) INTERVIEWS, RECORDS, PHOTOS, ETC.	9. NAME, ADDRESS AND TITLE OF RECORDER <i>Michael Bourne</i> DATE OF RECORD <i>5/15/10</i>

SUPPLEMENTAL INFORMATION AND PHOTOGRAPHS MAY BE ADDED ON SHEET OF SAME SIZE





Ordinary Pt

CECIL CO
KENT CO

SASSAFRAS

RIVER - K-122

Kentmory Park

Glencoe

Turner Creek Wharf

TURNER CREEK

SHREWSBURY CREEK

SHREWSBURY CREEK

FREEMAN CREEK

NECK

SHELL CREEK

Shrewsbury Ch

Locust Grove

GALENA
QUAD

392

140

422

**GREDELL
& ASSOCIATES**
STRUCTURAL ENGINEERS

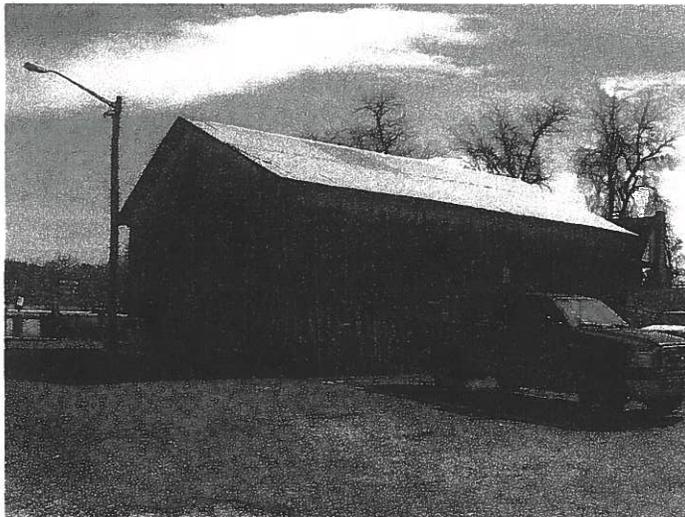
March 23, 2009

County Commissioners of Kent County
709 Morgnec Road
Chestertown, MD 21620
Attn: Mr. James M. Wright, Jr.
Kent County Engineer

WO 2810
STRUCTURAL CONDITION ASSESSMENT
THE GRANARY
TURNER'S CREEK PUBLIC LANDING
KENNEDYVILLE, MARYLAND

Commissioners

We have completed our review of The Granary at Turner's Creek Public Landing. The review consisted of visual observations and selective probing of those portions of the structure which were safely accessible during our visit on 12 March 2009. The request for this study was prompted by concerns regarding the structural stability of the building; in particular, at the first floor/ground level where damage from rot and termite infestation is extensive. The primary purpose of this report is to determine the scope of work to stabilize, preserve and eventually restore the building structure. In addition, we have determined allowable floor and roof loading as input for your consideration of uses of the building that are compatible with the building structure. To assist the reader with the orientation of the structural elements discussed, we have provided framing plans with superimposed structural grid lines. For orientation purposes we have assumed that the entrance to the corridor is located on the south side of the building facing the access road.



*The Granary, Turner's Creek Public Landing, Northwest Elevation
Gredell & Associates 12 March 2009*

The Granary is a two story, timber frame storage building constructed mid to late 1800's. The building is rectangular in plan measuring approximately 34 1/2' east-west and 46' north-south. The building rises over a shallow crawl space approximately 15' to the eave line of a gable form roof where the ridge runs north-south. The floor plan is a double loaded, narrow, central, north-south running central corridor double loaded with grain bins, east and west and open floor space at the second level.

FINDINGS

Foundations

The foundations for the building are constructed of uncoursed stone rubble masonry approximately 20" wide that run east west as shown on the attached sketch 1 of 4. The foundations are in poor condition with the structural matrix of the mortar reduced to sand. As a result the stones in the wall are loose and the section has become unraveled and subsiding. At the north wall "A" the foundation has been rebuilt with cast-in-place concrete.



Framing

The framing is post and beam construction; nominally 7x7 with mortise and tenon joinery throughout. The building structure is comprised of five (5) timber bents at approximately 12' centers (three interior and two at the exterior walls) and running east-west, lines "A" through "E". Floor joists and rafters overframe the primary members. Noteworthy is that the mortise and tenon joinery is unshouldered. Accordingly the capacity of the load bearing connections is limited to the strength of the 2" wide tenon rather than the full width of the beam (approximately 1/3 the capacity of the shouldered connection). Where beams and purlins are spliced, half lap, pinioned scarf joints are provided. Lateral bracing of the building is provided in both directions:

- East west diagonal bracing 3x4 1/2 is provided at each bent at both the first and second floors. The brace extends from the at the floor level to the 6x6 tie beam above. The connection of the tie beam to the post is a wrought iron, U strap and 2 pins secured by tapered keys at the second floor and a strap / rod connection at the roof eave level.

- Lateral bracing north-south is provided by knee bracing at first and second floor levels on the east and west exterior walls as indicated by the elevation shown on sketch 4 of 4. Mortise and tenon joinery was observed at all bracing connections.

The timber framing in the building rests on heavy timber sills (east-west) that bear on the rubble stone masonry foundation walls and timber girders (north-south) that support the interior heavy timber posts that form the central corridor of the granary. The poor condition of the masonry foundations coupled with the rot and termite damage in and above the crawl space (see photograph above) has caused the building to subside as much as 8" as witnessed by the "humping" of the floor in the central corridor. The total extent of the termite damage is

unknown; however, it extends at least 3' above the first floor level at the exterior posts, girts and bracing. Weakening of the second floor beam at C2 is witnessed by a tension crack at a beam splice with evidence of previous damage caused by infestation. At the northwest corner "A1" the entire post has been consumed by rot and termite damage along with beams, girts and bracing that are joined. The framing at each level of the building is described as follows:



- The first floor is framed with heavy timber joists 3x12@18" spanning north-south and bearing on the heavy timber sills and beams located at each of the bent lines. Noteworthy, is that the bay at the northwest corner of the building is framed with 3x8@16" centers running north-south. Rot and termite damage is extensive in the sills and the floor beams. The floor joists appear less affected and it appears that a majority of these members may be reusable.
- The second floor is framed with 3x8@24" joists spanning east-west and bearing on timber beams 7x8 ("2", "3") and 6x8 ("1", "4"). Except for the deterioration that has occurred at the northwest corner of the building adjacent to post "A1", the structural condition of the second floor framing appears good.
- The primary structure of the gable form roof is comprised of 3x5 1/2 timber purlins spanning north-south and 3x5 rake posts set on 6x6 tie beams located at the three interior bent locations. The roof loads are transferred to the second floor 6x6 tie beams at the second floor with 3x5 posts located near the rake posts that support the purlins. Knee bracing 3x4 1/2 provides lateral stability for the structure. Rafters 3x5@24" overframe the purlin and the eave beam. At the ridge the rafters are plumb cut and meet with a simple butted joint. Purlin splicing is

achieved with half lap, pinioned scarf joints made adjacent to the knee bracing. The structural condition of the roof appears fair to good.

Through our diagnosis of the structural elements in the building, we have determined a live load capacity of the floors and the roof. The allowable floor loading is provided as input to the owner in determining both use and materials that are compatible with the strength of the structure. The building code has minimum requirements for floor structure in pounds per square foot (PSF) of live load as a function of use- residential (40), office and fixed seating (50), assembly (100) and light storage (125), etc. Strength involves determining the tributary live loading of the structure that produces the maximum allowable stresses in the member. Determination of the live load capacity of the floor, ceiling and roof framing was based on these strength parameters: flexure 1450 PSI, horizontal shear 120 PSI. These values are considered non-conservative and represent the values found in "old" timber. The following table shows the allowable uniformly distributed live loading for the various areas of the building.

Existing Framing
Allowable uniformly distributed live loading (PSF)

<u>Member</u>	<u>Size</u>	<u>Span</u> <u>(ft)</u>	<u>Strength</u>
First Floor			
Joist	3x8@16	12	250
	3x12@18	"	
Second floor			
Joist	3x8@24	14	50
Corridor beam	7x8	12	30
Exterior beam	6x8	12	60
roof			
Rafters	3x5@24	9	50
Purlins(2)	3x5 1/2	8	10
False plate	6x6	12	30
Transfer / tie beam (1)	6x6	14	0

(1) allowable uniformly distributed roof load transferred to the second floor framing by the supporting posts

(2) assumes partial support by knee bracing

RECOMMENDATIONS

Due to the extent of the deterioration in the framing at the lower, first floor, there appears to be no feasible method of temporarily stabilizing the structure at that level. Instead, we recommend the building be stabilized by providing temporary support at the second level. Provide structural needle beams (east-west) adjacent to the five bents (three interior and two exterior) that span approximately 40' and supported by structural transfer beams (north-south) set on timber crib shoring towers. Transfer of the dead load of the building would be achieved by jacking to the desired elevation in combination with blocking.

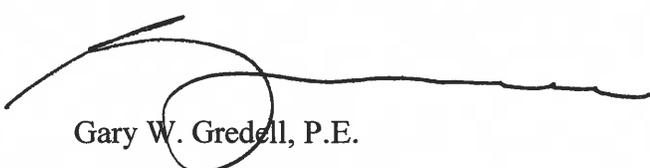
Once properly shored, the lower portion of the building would be repaired / rebuilt at a time when funding was made available. In summary, the work would proceed as follows:

1. Perform a geotechnical investigation in order to determine the subgrade conditions and to provide recommendations for type and capacity for the building foundations both for temporary shoring and for permanent foundations.
2. Construct temporary shoring including needle beams, transfer girders and timber crib shoring towers on timber footings. Lift the structure by jacking in order to transfer building loads to the temporary shoring. Provide temporary closure of the building by erecting fire retardant timber frame walls to the level of the second floor to protect the remaining structure from damage by weather and / or irresponsible acts by vandals
3. Remove and salvage first floor decking and joists for reuse in the restored structure.
4. Remove timber sills and girders from the site.
5. Depending on the results of the geotechnical investigation, either reuse stable portions of the existing foundations found below grade or replace with size and type suitable to support building loads.
6. Install sills and reframe the floor with suitable salvaged joists and decking
7. Remove first floor girts, bracing and portions of the posts adversely affected by rot and termite damage. Provide Dutchman repairs with half lap splices for posts, girts and bracing. Complete replacement of the post "A1" will be required.

This report has for been prepared in order to provide you with an understanding regarding the structural condition of the Granary building. It could serve as a basis for determining a magnitude of costs for the recommended repairs; however, under no circumstances should be considered as a basis for construction. Upon your review of the report, please call us so that we might discuss how you plan to proceed. At your request, we would be pleased to prepare the necessary construction documentation for the recommended repairs, both temporary and permanent.

We appreciate this opportunity to work with you and look forward to continuing our services with you on this project.

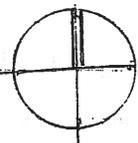
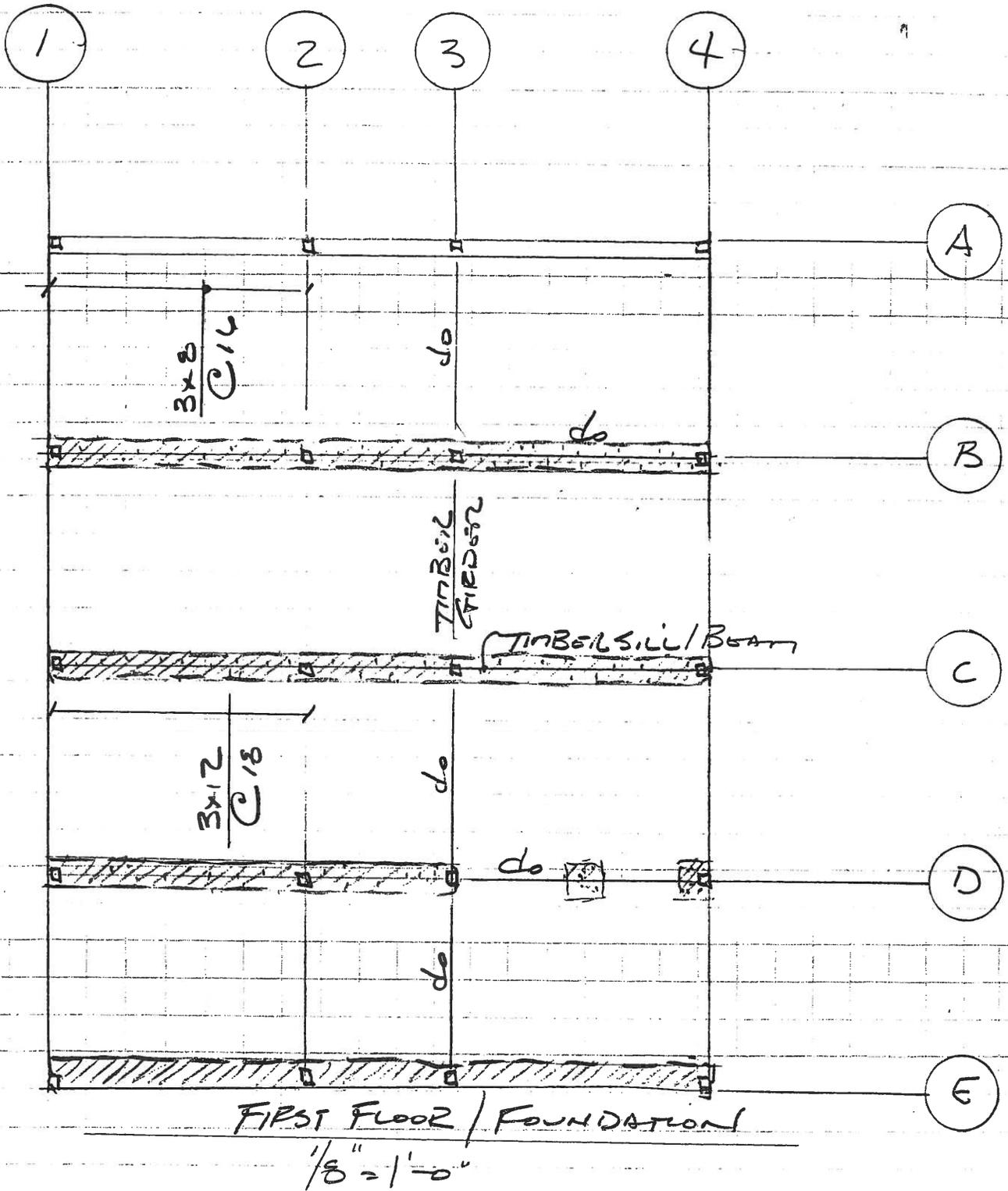
GREDELL & ASSOCIATES



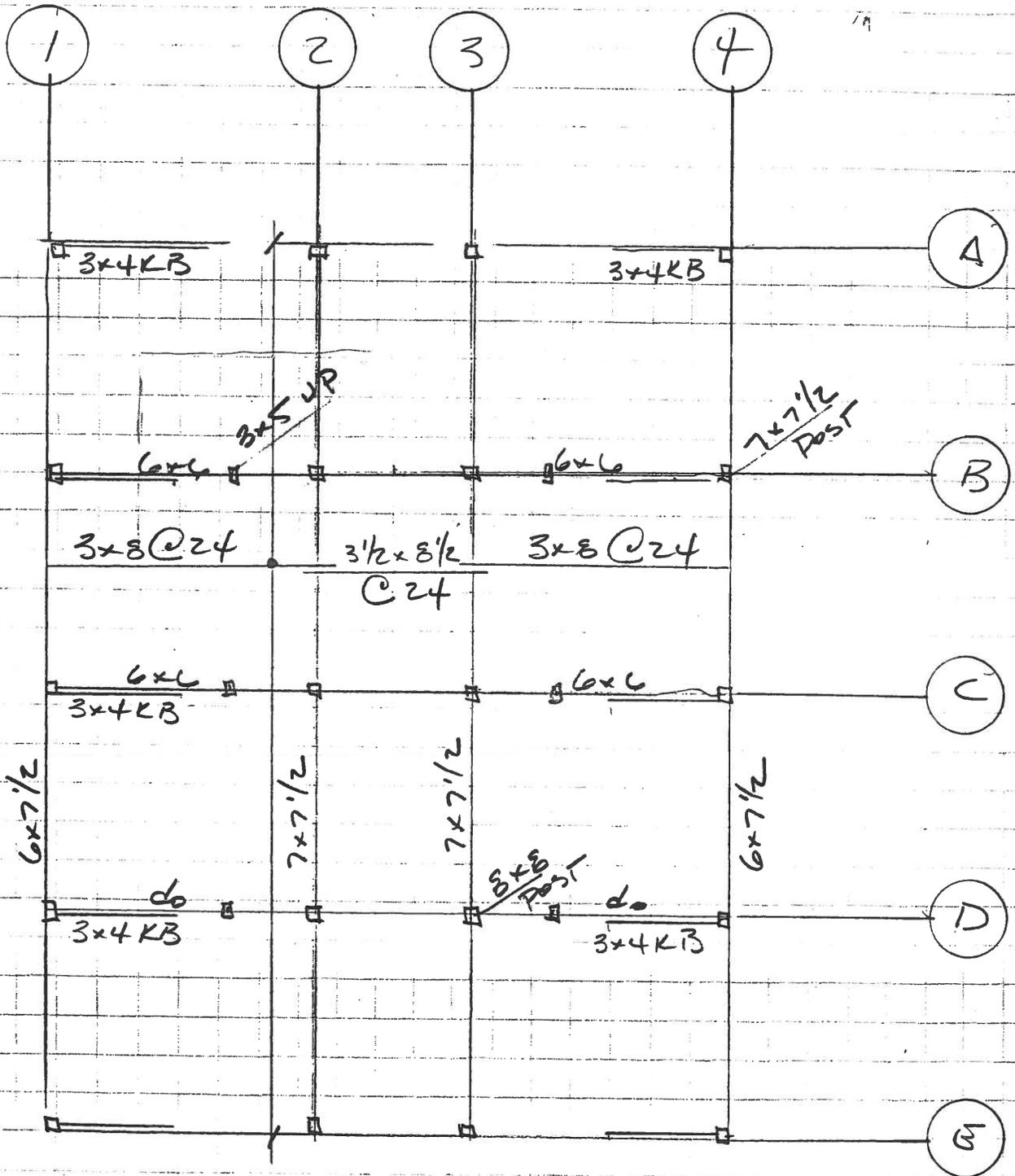
Gary W. Gredell, P.E.

Enclosure(s)

GRANARY
- 11 4
GUL 13 MAR 09



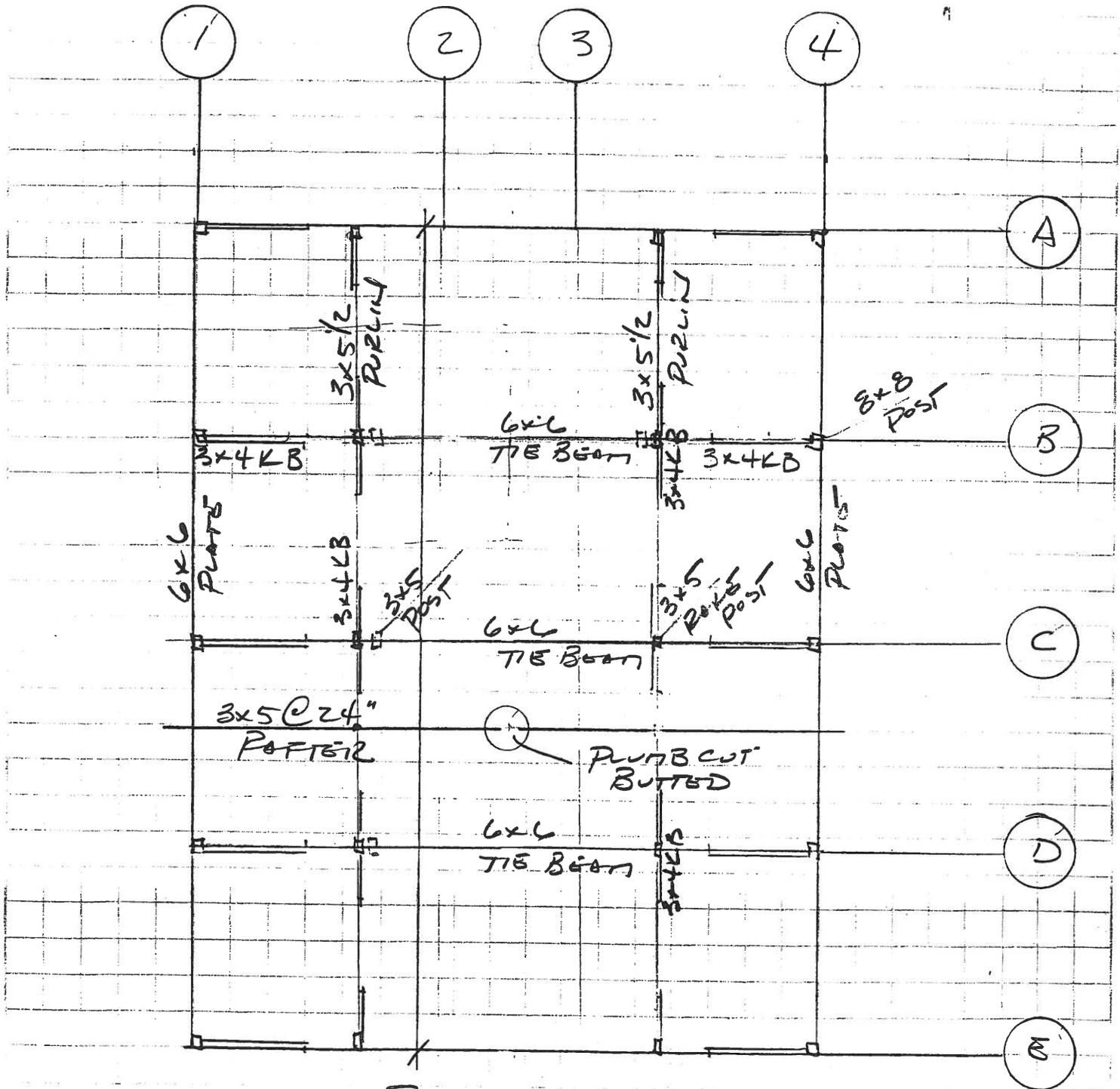
APPENDIX
24
Circled 13 MAR 09



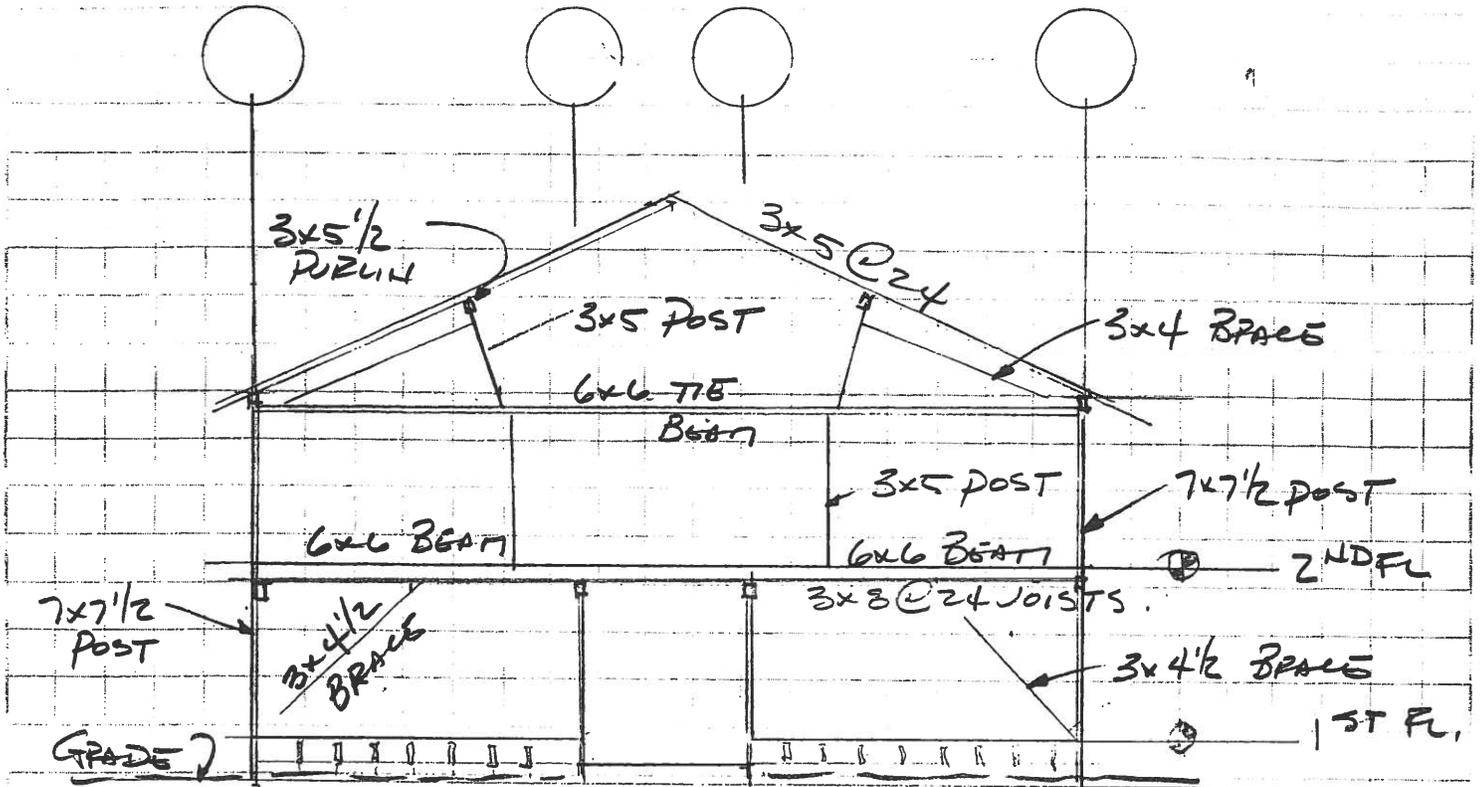
SECOND FLOOR FRAMING

1/8" = 1'-0"

Approved
3/4
Date 13 MAR 09



ROOF FRAMING
1/8" = 1'-0"



Section
1/8" = 1'-0"

