

2011 NOMINATION FORM

Ida Lee Willis Memorial Foundation Historic Preservation Awards Program

NOMINATIONS must be postmarked or received in the Kentucky Heritage Council office by Monday, April 11. Entries may also be submitted via email to kyheritage@ky.gov or by fax at 502-564-5820. For each entry, submit a completed nomination form, narrative description and supporting documentation to:

Kentucky Heritage Council / State Historic Preservation Office
300 Washington Street
Frankfort, KY 40601
ATTN: Ida Lee Willis Awards

1. Nominee

Bill Faulconer

Chaplin Hills Timberwrights

Address 35 Old Orchard Road

Perryville KY Zip 40468

Phone 859 332 4089 Email faulconerms@aol.com



2. Award

Preservation Project Award

3. Description

Merchant's Row in Perryville is a rare collection of extant buildings from the Civil War era. Many of the buildings were acquired by the community through use of Federal Transportation Enhancement Grants. However, once acquired, funding to restore the buildings has not been forthcoming. The Restoration of the circa 1850 Burton's Store, on Merchant's Row in Perryville is a great instance of a local preservationist who decided to provide for his community an example of how a building should be correctly restored. When initial work on Burton's Store began it was envisioned as a simple project to do minor repairs to the building prior to painting it. But when the damaged siding was removed for replacement there was revealed extensive and unknown structural damage. Bill and his crew initially began by lifting the building to allow the stone foundation to be rebuilt. This revealed deteriorated and decayed sill plates that needed repair. Pursuing the rotted areas eventually led to removal of the entire damaged front façade. Poor repairs and alterations to the building over the years had changed the original appearance and structurally weakened it. The careful deconstruction of portions of the building revealed early construction details and window locations. Following carefully the Secretary of the Interior's Guidelines for Rehabilitation, Bill and his crew ultimately spent 10 full months restoring the building. Bill donated all his labor and that of his crew to the project. This included new wiring, insulation and interior finish. When he handed the building back to the city it was a "turn key" project. During the public open house on completion of the project Bill told me he wanted to do something for the community and he wanted to provide a model for the renovation of the remaining buildings on Merchant's Row. He has certainly done that and I can't think of another individual who has gone to this extent for a preservation project in Kentucky.

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Public

4. Supporting Documentation

Attach or enclose any photographs, articles, publications or letters of support for the nominee that would assist in the determining the impact of his/her contribution. Before and after photographs should be included for a Preservation Project Award. When submitting by mail, materials may also be submitted on a CD/DVD attached to the nomination form. When submitting via email, please submit all files in one email in PDF format; do not send multiple files. For questions, contact Diane Comer at 502-564-7005, ext. 120, or diane.comer@ky.gov.

5. Submitter of Nomination

Name Patrick Kennedy

Title / Organization Kentucky Heritage Council

Address 300 Washington St.

City Frankfort State Ky Zip 40601

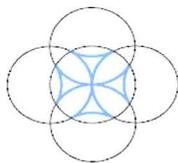
Phone 502-564-7005 X 138 Email patrick.kennedy@ky.gov

**The Restoration of Burton's Store
Perryville, KY**

May 1, 2010 to February 1, 2011



**Report Prepared by Bill Faulconer
Photos by Linda Faulconer, Timothy Wilkinson and Vicki Goode**



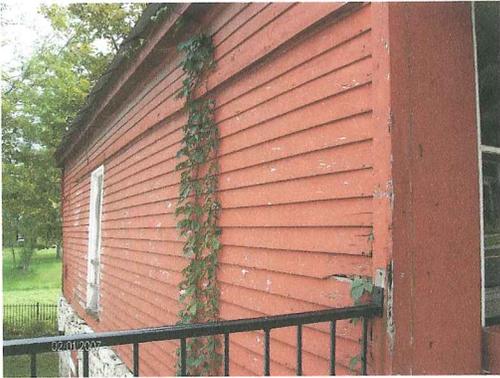
**Chaplin Hills
Timberwrights**



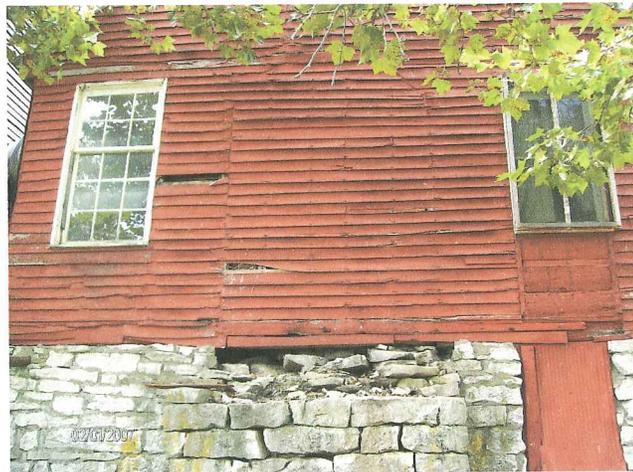
**Faulconer
Mechanical Service**

The Building As We Found It

Burton's store, 334 South Buell Street, Perryville is a 20'x 34' single story structure constructed about 1850. The west gable end of the building faces Buell Street while the east gable backs up to the Chaplin River.



The hand hewn timber frame is erected upon a dry laid stone foundation that is nearly 8 feet high at the rear of the building. The framing method is scribe rule, and the design is a late example of English derivation as exhibited by the "English tying joint" used at the top of each corner post. In this system, the top of each corner post has two tenons. The lower tenon is parallel to, and receives, the top plate of the side walls, while the upper tenon, the "teazle tenon", receives the tie beam, which in turn passes over the top plate and clasps it in place.



The sill plates, top plates, and corner posts are white oak, and all other framing members are tulip or yellow poplar (*Liriodendron tulipifera*). The poplar floor and ceiling joists, wall studs, and rafters were hewn first, then transported to a sash mill for further reduction to 3"x 8" floor and ceiling joists, and 3"x 4" studs and rafters. It is not unusual to find timbers in this building with one or more hewn surfaces, and the rest sawn. The 8"x 8" oak sill plates are 34 feet long down the sides and each is a single piece of wood. The top plates on the sidewalls are 4"x 6"x 34 feet and

also hewn from single pieces of wood. The floor and ceiling joists and the wall studs are all on approximately 2 foot centers with occasional exceptions to accommodate door and window openings.

Originally, an 8"x 8" cross beam at the center of the building connected the two long sill plates to prevent spread. It was tenoned and pegged at each end into mortises in the sills. Diagonal braces descended from the center stud in each side wall to this beam, and the braces, in turn, became part of a partition wall that once separated the front public part of the store from the private section in the rear, where the proprietor lived with his family.

Behind this partition, there also once existed a stairway leading to the two attic rooms. These rooms are fully plastered and trimmed to the same extent as downstairs, and were additional living space for the proprietor. At some point, the tie beam, braces, partition wall and stairway were all removed, and with them went a great deal of the stability of the building. The original flooring, upstairs and down had been tongue & grooved poplar. Both floors were removed in the past and only the downstairs was replaced with pine.



The Lift

Our initial task was to prepare the building for lifting and leveling to overcome



decades of settling, and to hold the weight of the building while repairs were made to the stone foundation. A lift of over 5 inches was to be required. We exposed the sill plates by removing a small amount of exterior siding on all four sides. Inspection revealed the total failure of the front sill plate due to decay. The damage extended around the corners on both sides to include the joinery and the first two feet of both long sills. The rear sill was okay, but was actually two pieces, having

been originally separated by a stone fireplace and chimney. The long sill on the north side had serious decay immediately below the doorway.

Exposing the sill plate in front also revealed further decay in the southwest corner post. Exposing the corner post indicated extensive rot in the tie beam above. By pursuing the rot, we ultimately removed the entire front façade. Both diagonal braces in front had been



removed when the façade we see today was added in the latter 19th century. The new, much larger windows did not leave room for the diagonal braces so they were simply removed. This loss of structural support, plus the decay and failure of other structural parts resulted in severe sagging in the front of the store and a 4 inch out-of-plumb lean toward the adjacent building to the south.



The decayed timbers behind the front façade were removed, documented and duplicated. We designed and cut 4 foot repair stubs with simple half-lap joints to replace the rotted ends of the sidewall sill plates, and then cut the matching joinery into the ends of the old sills. These scarf joints were bolted due to space considerations but the bolts are hidden by later construction. After that, the



subsequent joinery was accurately duplicated and fastened with 3/4 inch diameter pegs, as it was originally. After the front sill had been replaced, we laminated a repair beam to connect the two sill pieces in the back across the former fireplace. When repairs to this timber were completed, the sill plate was continuous around all four sides, and structurally sound enough to bear the weight of the building.



Lifting the building off its foundation required the insertion of three temporary lifting beams through holes made in the foundation in extremely tight quarters. We elected to build wooden box beams which allowed us to hand lift the separate components, and then assemble them into beams after they were in place.

With the beams assembled, cribbing stacks were built beneath each of the six projecting beams. When everything was ready, hydraulic jacks were used to raise the building. The lift took about two hours after five weeks of preparation.



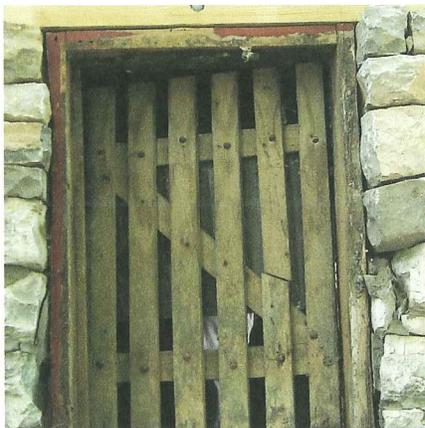
Recreating The Old Building

While the stone masons took over beneath the floor, we continued structural repairs on the front gable end. We made a duplicate of the 7" x 7" southwest corner post and installed it, then installed the duplicate 4" x 8" tie beam across the top. We learned from the mortise locations on the original tie beam that the store front looked quite



different when it was built than it does today. Both the door and the window openings to either side were much smaller when it was built. After documenting the earlier design evidence, we proceeded to rebuild the façade to the later appearance that we encountered when we started.

When we had enough structure in place, we rigged a diagonal pull to correct the 4 inch lean of the front wall towards the south. We slightly redesigned the front window sash panels as we rebuilt them, to allow diagonal braces to be reinstalled. The new 45° braces just cleared the lower outside corners of the modified sashes, replacing the 3-4-5 triangle braces removed many years before. The front of the building remained square and plumb after releasing the tension.



In the basement, we had to recreate two basement vents, a 4' x 5' doorframe and door, and a new frame around a hinged slatted window. Terry Goode reproduced the two most excellent basement vents, while our crew built the door and window. These items were built into the stone walls by the masons as they worked. While



the building was raised, we also installed a $\frac{5}{8}$ inch diameter tension rod through bored holes at the center of each side sill plate to draw together the spread caused by removal of the center tie beam many years before.



When the masons were ready, we transferred the weight of the building from our rigging back to the foundation. We disassembled and removed our lifting beams and all the cribbing. The masons repaired the holes where the beams came out and the lift was complete.



Building Onto The Renewed Frame

Although we had leveled the building at this point, we still had not leveled the floor. For some unexplained reason in the past, the floor was lowered progressively from back to front, by deepening the joist pockets from nothing at the back, to over 2 inches at the front. It was at this time that the center tie beam was removed, because it could not be lowered like the joists without a lot of effort. Interestingly, the descending floor made the sill plates appear to gradually rise out of the floor as you look from back to front. These four inch projections from the wall were trimmed in an awkward fashion and detracted immensely from the interior appearance. We raised all of the joists back to level with the sill plates and filled in the gaps at the bottom of the joist pockets with custom sized spacer blocks.



When the front façade was completed, we built and installed the front porch. Next we boxed in the cornices by installing new soffits and fascias. Then we rebuilt and re-hung the front doors, built new window frames for all six windows, and repaired the side door frame. The two downstairs rear windows had sashes that were rebuilt and glazed by the Lowerys. The front windows, rebuilt by us, were also glazed by them. The upstairs window sashes were built by us.





500 pounds of lead flashing was installed all around the sill-to-foundation connection. Some galvanized sheet metal flashing was used in areas that were hidden, and copper flashing was used over all doors, windows, and various elements of the front façade.

When all else was ready, the old, worn out exterior siding was removed, the walls insulated with R-13 fiberglass, covered with TYVEK and the new siding installed. We chose a cement based fiber board manufactured by the James L. Hardie Company, to replace the original ½” x 6” rough sawn horizontal lapped siding installed with a 4” reveal. It is sufficiently superior to the poplar available to us today, and it is sufficiently indistinguishable from the original material after installation to meet with Frankfort’s approval in some instances. It was used here to prove its usefulness to us in future projects.



Inside, the wiring and plumbing were upgraded, the bathroom completely remodeled and the ceiling was insulated with R-30 fiberglass. ¾” OSB was installed in the attic to replace the flooring and a new high efficiency furnace and air conditioner were installed. In the basement, all of the plumbing and gas piping were replaced. Heat tape was installed on all water piping. The electrical wiring was straightened out and additional circuits run for the new water heater, the new a/c condenser, and for future expansion. A laminated beam, used to support the floor joists in the center, was replaced and supported on four metal jack posts. With all else in place, the joist spaces beneath the floor were insulated.

With the installation of the gutters and downspouts, the storm windows on the back and a storm door on the side, the project will be complete.



What the Building Taught Us

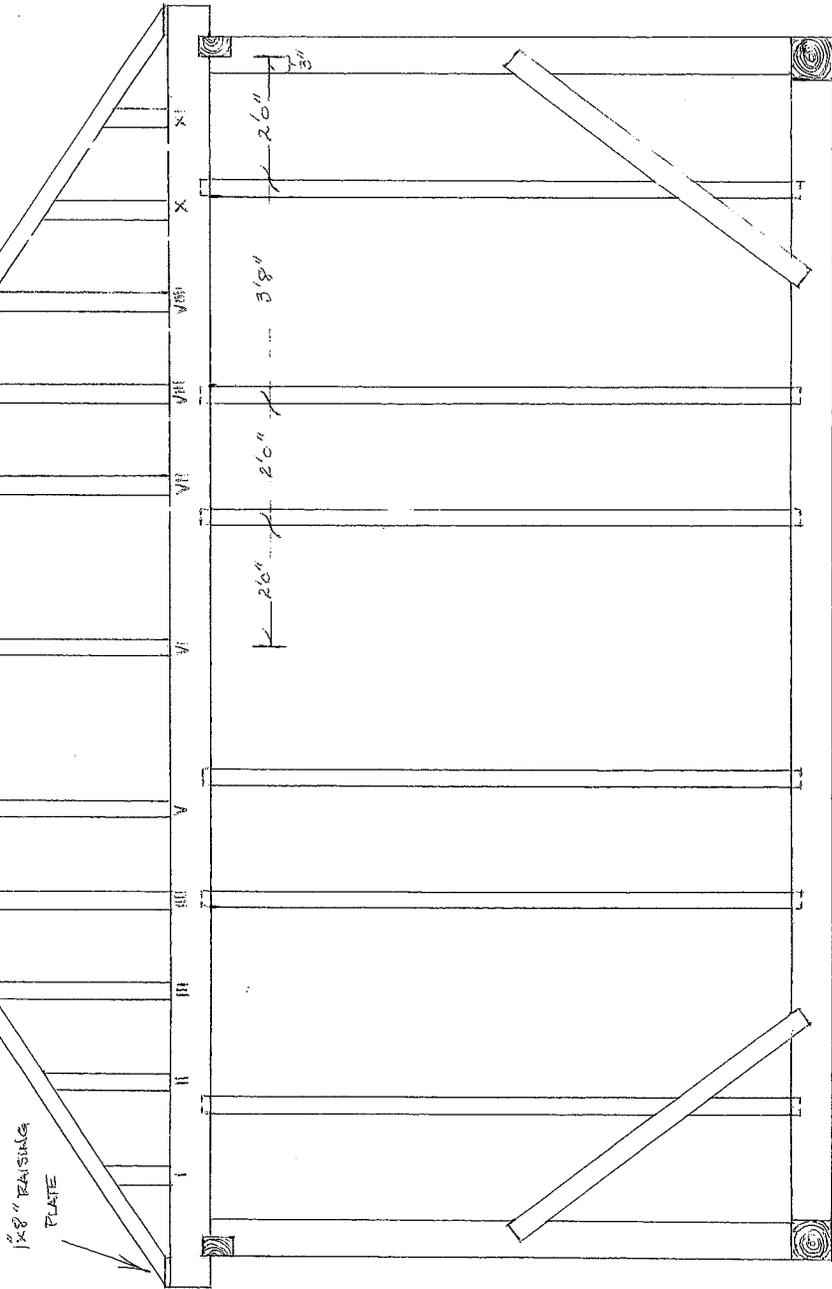
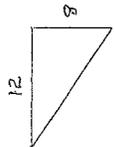
Once again, as with every old building on which we have worked we are impressed with the craftsmanship and the ingenuity of the builders. By this moment in history, inexpensive manufactured nails were having a profound effect on the design of buildings, but they were still being constructed of locally grown trees which were largely converted to usable timbers by hand.

Mind and muscle were the only available power supply with perhaps a little water power added at the sawmill, but even that trip to the mill required an immense expenditure of muscle power. This awareness of their power limitations affected every decision they made. By the way, the spread of sawmills into the region, their type and location would be an interesting research project for someone, and would help explain the development of building styles around here. Any takers?

Because the remnants of a guild system still remained at the time, the standards and practices of the trade, as well as its secrets, were passed from a master to his apprentice in a logical fashion that can often be identified with a specific cultural style and traced back nearly to Roman times. Burton's Store expresses influences from the Virginia tidewater region and its English ancestry. Similarities to the framing used on this building can be found in the Crossing Barley Barn, a 12th century tithe barn, which still exists in Essex, England.

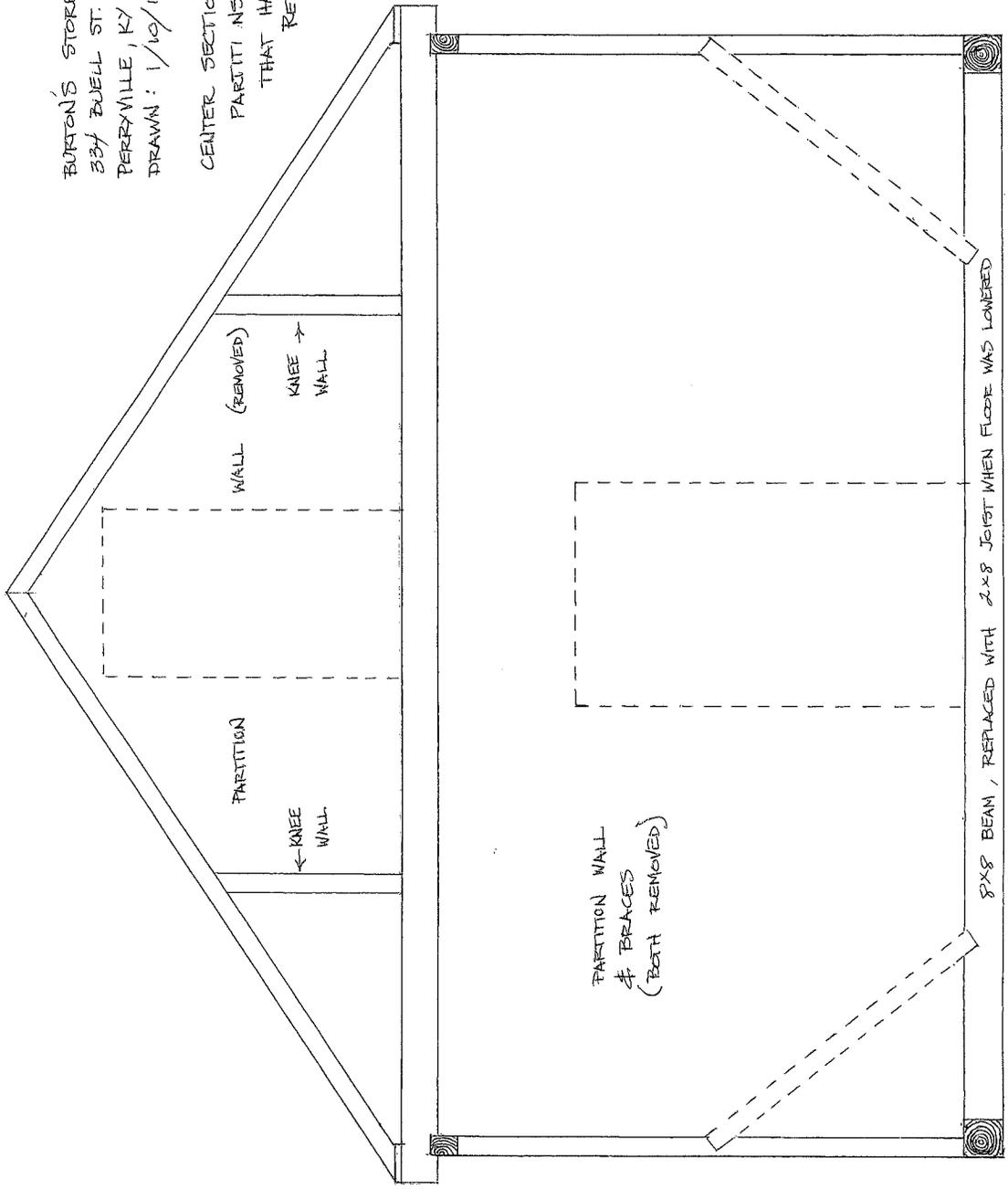
Finally, the builders were very frugal, and they used and reused everything. In the days before a quick trip to Lowe's was possible, every component was made by hand and represented significant time and effort. Although we found relatively few recycled parts on this project, there were a few. Some of these fragments could have come from the very first buildings in the area. If only they could tell us their story!

ORIGINAL FRONT ELEVATION



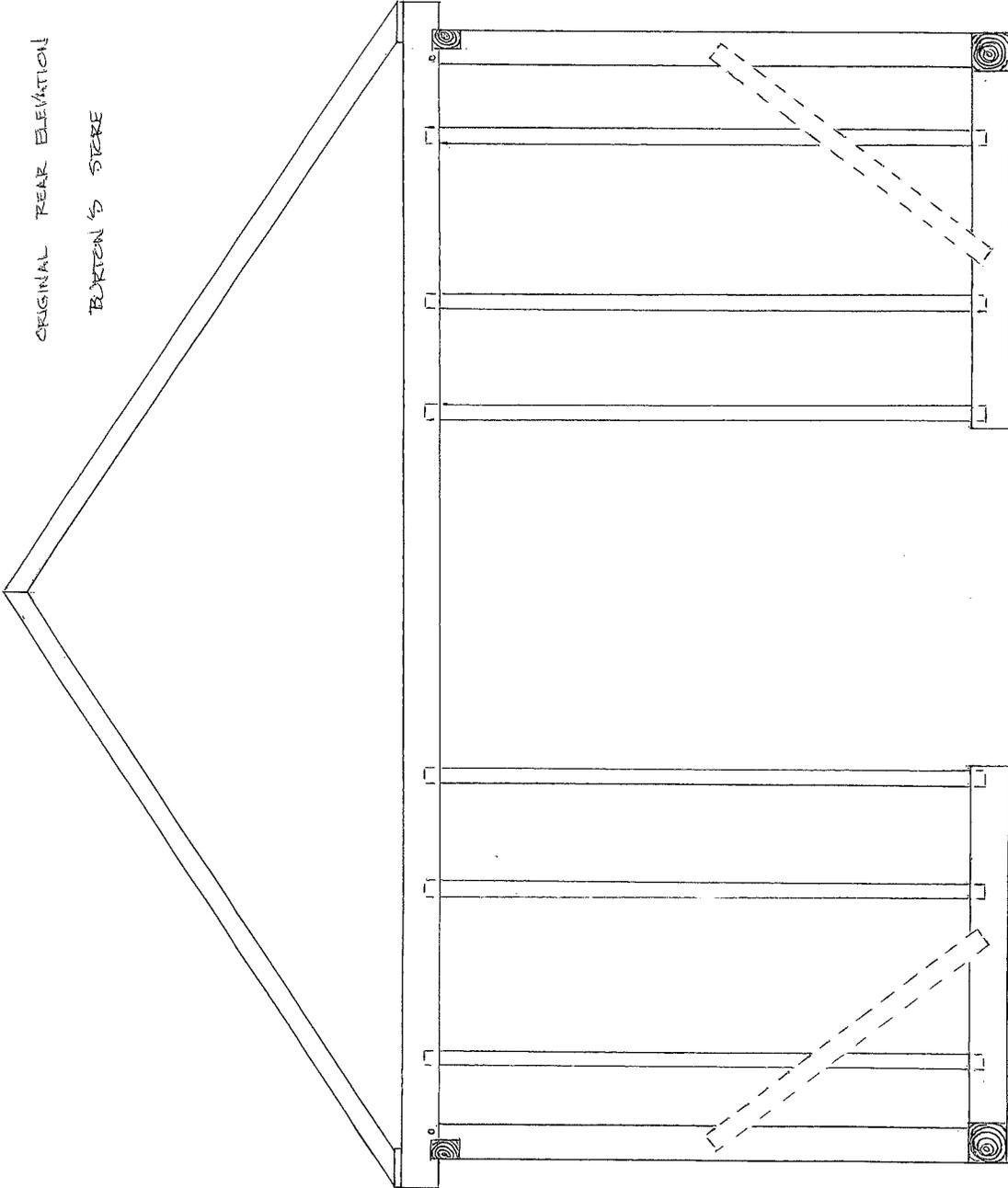
BURTON'S STORE
334 ZWELL ST.
PERRYVILLE, KY
DRAWN: 1/10/11

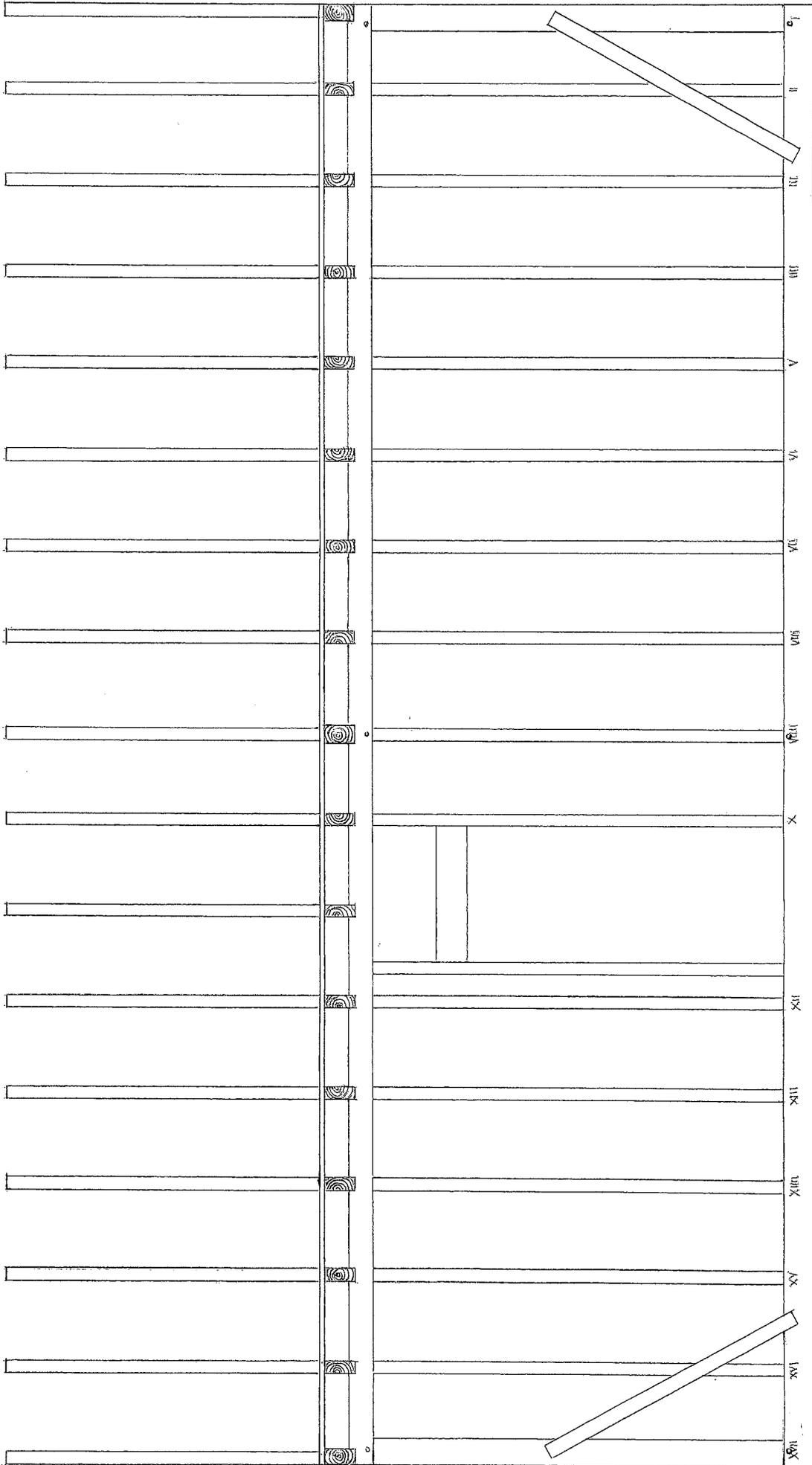
CENTER SECTION SHOWING
PARTITIONS AND BRACES
THAT HAVE BEEN PREVIOUSLY
REMOVED



ORIGINAL REAR ELEVATION

BURTON'S STORE





FRONT

BURTON'S STORE

NORTH ELEVATION

FRONT

8x8

8x8

8x8 BEAM, TURNED WITH A 2x6 JOIST WHEN THE JOIST RACKETS WERE DELETED TO "LEVEL" THE FLOOR.

FLOOR PLAN BURTON'S STORE

