STACKS
ARCHITECTURAL FIRM, PLC

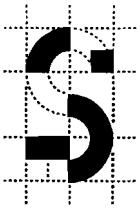
March 6, 2006

Mayor Doug Formon and Jonesboro City Council
City of Jonesboro
515 West Washington Avenue
Jonesboro, Arkansas 72401

RE: JUSTICE COMPLEX TRUSSES

Dear Mayor and City Council:

This letter is being written at the request of Mayor Doug Formon. Mayor Formon has asked for us to provide some historical information on the renovation of the old Safeway building, which is now known as the Justice Complex.



In April of 1993, our firm was invited to respond to a "Call for Architects" to provide professional services for the renovation of the building. Attached is a copy of the first page of information provided to us prior to being hired as the architect for the project. You will note that the City had already determined to renovate the building for use as a Police Department, Municipal Court, Information Systems Department, City Attorney's Office, and Fire Department Administrative Offices. Our firm was selected to provide architectural and engineering services for the project after an interview process by the Building Committee and then recommended to the mayor and city council. We entered into an agreement with the City on May 24, 1993. We appeared at the City Council meeting when the recommendation to hire our firm was made. At that meeting, Alderman Gene Vance recommended that we hire Ray Wooten of Reaves & Sweeney, Incorporated to provide structural engineering services. It is our belief that Mr. Wooten had helped the City determine the usability of the structure either before or after the purchase in 1989.

Immediately upon approval of our agreement with the City, we began the design process. After approval of the design concept, we started development of the construction drawings, which includes the plans and specifications on the project. Attached is a letter dated July 6, 1993 from structural engineers, Reaves & Sweeny, Incorporated outlining the renovation required to bring the building into compliance with current seismic standards of the existing standard building code. All of the items were included in the original plans and specifications. Also attached is a calculation of the dead load imposed on the trusses.

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REAVES
SWEENEY
MARCOM

October 26, 1995

Hubert Brodell, Mayor
City of Jonesboro
314 West Washington
Jonesboro, Arkansas

RE: ROOF STRUCTURE - JONESBORO COURTS/OFFICE/POLICE CENTER

Dear Mayor Brodell:

After reviewing the building with Joe Tomlinson and Ron Shipley the city building inspectors, Tony Pardew of Olympus Construction, Eddie Buck of Kermit Buck & Co., and Ken Stacks of Arnold & Stacks Architects, P.A. I have determined that the building is not in imminent danger from structural failure. However, there are three trusses which have damage in addition to the original damaged truss that require shoring to prevent further damage.

I am in general agreement with Fred Hegi's report dated October 23, 1995 with the exception of having to vacate the building. We will have all the damage trusses supported and I believe that no further damage will occur once these supports are in place. I believe the addition of these supports will relieve some of the anxiety of the employees and city officials.

During the repair process, the existing built up roof must be removed to bring the overall weight in line with the existing condition prior to renovation. After all repairs have been made, all trusses should be reviewed to insure that during repair that no other damage occurred.

After this review the metal roof structure should be inspected to determine if any of the columns need to be moved and insure that all connections are properly installed.

We will continue to work with the contractor and architect to correct this situation. If you have any questions please do not hesitate to call.

Sincerely,

Reaves Sweeney Marcom Incorporated

William T. Gavin

William T. Gavin, P.E.

Arnold & Stacks
ARCHITECTS, P.A.

October 26, 1995

Mr. Bill Gavin
Reaves, Sweeney & Marcom
800 Park Avenue
Memphis, Tennessee

RE: ROOF STRUCTURE - JONESBORO COURTS/OFFICE/POLICE CENTER

Dear Bill:

This letter is to confirm the statements made in our telephone conversations last evening with Mayor Brodell, Councilman Gene Vance, Police Chief Floyd Johnson, and Fire Chief Wayne Masterson.

1. We informed you of the concerns addressed by Fred Hegi, a structural engineer who visited the building and made a brief inspection. We faxed you a copy of his letter outlining his concerns.
2. We discussed your review of the structure on three recent visits to the project. You indicated that in your opinion that the structure was not in imminent danger of failure.
3. You told us that wood structures like this one may have a failure of some members, but total failure or collapse would not happen without notice of sagging, deflection, or other visible signs over a period of time.
4. Based upon your comments, the mayor chose to delay evacuation of the building until you could come to the building today and confirm the structural stability visually and in writing.

It is imperative that the building be restored to structural soundness, quickly. We are looking to you and your firm to provide the guidance on repairs and inspection of the roof structure. We must address the concerns in the letter from Fred Hegi, make certain that the contractor did the installation correctly and completely, and provide a step by step procedure for correcting this problem.

We will assist you in this process in any manner that you request within our ability and means. Thank you for your prompt attention to this matter.

Sincerely,

Arnold & Stacks Architects, P.A.

Ken Stacks, AIA

Concerning the truss that failed there are two possible reasons in my opinion. Either the bottom chord was damaged before the renovation or the truss is overloaded now. If the truss was damaged sufficiently to fail this should certainly have been spotted and repaired before any load was added to the roof. On the other hand if the bottom chord was sound before the renovation then it must be severely overloaded now. If this is the case then all of the other trusses must also be overloaded since the trusses appear to be identical and have similar loading. If they are overloaded then what might we expect if another 15 pounds per square foot of load is added in a heavy snow or ice storm?

To reiterate my recommendations I would evacuate the building immediately at least until the structural engineer has evaluated the structure in place and given you a written statement that it is safe. He is not likely to do that unless he is convinced that it is safe.

I may be considered an alarmist for making such a drastic recommendation but this building has suffered a structural failure and you are lucky the roof did not collapse. This is a gravely serious matter in my opinion. I have been fortunate to have never been directly involved in a structural failure but I have studied structural failures over a period of many years. Quite often there is ample warning of on impending disaster that is ignored by owners, and design and construction professionals alike who simply do not want to believe there is a serious problem. They make decisions based on their hope that everything will be okay. These decisions sometimes look very foolish in retrospect.

If I can be of further service please give me a call.

Sincerely,

Fred Hegi, P.E.

FH/tam

cc: Mr. Joe Tomlinson
Mr. Ron Shipley

2. The original building design probably accounted for only the weight of the original roof structure with only a minimum code required live load. Since the building is now more than 40 years old it is likely that several additional layers of roofing material have been added over the years. In addition the roof is now taking the additional weight of the new metal roof and its supporting steel structure, the additional weight of plywood decking nailed to the ceiling joists, the additional weight of the added floored areas in attic and the mechanical units, piping, etc. which have been added in the attic.

3. There are some areas of the roof which can be observed from the attic where construction defects are apparent. Several of the steel stub columns from the new metal roof down on to the existing truss panel points are not centered on the truss; some of these stub columns are not plumb and one of the columns is actually missing. Some of the steel collars which tie the steel stub columns to the trusses are twisted somewhat and the bolts are not tight and do not appear to be properly installed. There is one new steel roof purlin that was welded to a steel beam whose welds have failed. The purlin is barely connected to the supporting beam by a weld at the top flange. This purlin appears to be in danger of collapsing.

4. The existing main roof trusses appear to be over stressed along the bottom chord connections at a few locations. There is some rather deep cracking in some areas around the bolts. Of course one of the trusses has actually had its bottom chord severed according to what you, Mr. Tomlison and Mr. Shipley told me. I could not observe this damaged member from the attic but if it is indeed severed then this represents a structural failure of a major load bearing member and in my opinion you are very lucky that a section of roof did not collapse.

5. There are several areas where badly cracked truss members have been repaired with epoxy injection. Several other truss members have been reinforced by nailing 2 inch thick members on each side. Mr. Shipley said he inquired about these added members and was told by the architect that they were just for added strength.

In view of the above noted observations I would immediately contact the architect and structural engineer and ask for written certification from the structural engineer that the building is safe in its present condition with the old roof still in place. I would ask why the one truss failed and others are showing signs of distress.

There is nothing wrong with repairing the cracked trusses with epoxy injection if it is done properly. However this will only bring the member back to its original strength. It will not prevent the member from failing if it is overstressed.

FRED HEGI & ASSOCIATES
Consulting Engineers

1423 S. Broadway • Little Rock, Arkansas 72202
(501) 374-2057
FAX (501) 374-1849

October 23, 1995

Mayor Hubert Brodell
P.O. Box 1845
Jonesboro, AR 72403

RE: Police/Court Building
410 West Washington
Jonesboro, AR

Dear Mayor Brodell,

This is to confirm, record and reiterate the comments I made to you, Joe Tomlison and Ron Shipley after my inspection of the above referenced building this past Sunday (Oct. 22, 1995). I have also added some comments concerning thoughts I have had since our conversation on Sunday.

As you know I have not made a structural analysis of this building and I do not feel that you should have me to do this. My observations are based on a relatively brief inspection of the structure from the attic, a very brief look at the plans and information about the building's history and the recent renovation and subsequent problems passed on to me by yourself, Mr. Tomlison and Mr. Shipley. I am also relying on thirty years experience as a structural engineer.

Based on my observation of the building and its recent history I would be gravely concerned about the building's safety and would seriously consider evacuation immediately. This may be an over reaction but I would much prefer to be overly cautious than to risk a catastrophic failure. This recommendation is based on the following facts and assumptions.

1. The existing roof which is as much as 1 1/2 inches thick in places and was originally to have been removed according to the plans submitted to the buildings department, was not removed. The removal of the existing roof would have at least partially compensated for the extra load that has been added to the structure. Apparently the plans issued to the contractor were altered to delete the note calling for removal of the existing roof.