



## Ogden City

E# 1770626 BK2139 PG277  
DOUG CROFTS, WEBER COUNTY RECORDER  
16-MAY-01 11:44 AM FEE \$0.00 DEP JPM  
REC FOR: OGDEN.CITY

**COMMUNITY DEVELOPMENT DEPARTMENT**  
**INSPECTION SERVICE DIVISION**  
2484 WASHINGTON BLVD., SUITE #230 - OGDEN, UTAH 84401-2319  
OFFICE (801) 629-8950 FAX (801) 629-8924 T.D. (801) 629-8949

### CERTIFICATE OF NON-COMPLIANCE

I, Wayne E. Glover, Inspection Official of the City of Ogden, do hereby certify that the following described property was inspected by Wayne E. Glover, of the Ogden City Inspection Division, 2549 Washington Blvd. 2nd Floor, Ogden, Utah 84401-2319. The inspection was made on the 15<sup>th</sup> day of May, 2001.

Type of building: unreinforced block single story commercial building.

Street address: 2687 Washington Blvd.

**Legal description:**

PART OF LOT 1, BLOCK 11, PLAT A, OGDEN CITY SURVEY, WEBER COUNTY, UTAH: BEGINNING AT THE SOUTHEAST CORNER OF SAID LOT 1; AND RUNNING THENCE WEST ALONG THE NORTH LINE OF 27<sup>TH</sup> STREET 110.0 FEET, THENCE NORTH 45.0 FEET, THENCE EAST 110.0 FEET TO THE WEST LINE OF WASHINGTON BLVD, THENCE SOUTH ALONG SAID WEST LINE 45.0 FEET TO THE POINT OF BEGINNING.

Land Serial Number: 01-009-0001

The inspection revealed conditions within the building and/or premises which render the property substandard and/or dangerous. These conditions are as follows:

ARW Engineers performed a limited site survey and investigation of this existing building and has determined that the building is not in compliance with the current parapet ordinance and that it is also structurally and seismically deficient in several areas.

1. No out-of-plane attachments of bracing for the walls or parapets.
2. Lack of adequate roof diaphragm shear capacity.
3. Lack of adequate attachment of the roof diaphragm to the unreinforced clay masonry walls.
4. Walls exceed height to thickness ratios for unreinforced masonry.
5. Large cracks in unreinforced clay masonry walls.

See attached full report for further details.

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A Certificate of Compliance and Correction will be prepared by this office when all required work has been completed, inspected and approved by this Division.

DATED this 16<sup>th</sup> day of May, 2001.

Wayne E. Glover  
Wayne E. Glover, Building

Official

STATE OF UTAH )  
                  SS:  
COUNTY OF WEBER)

On this 16<sup>th</sup> day of May, 2001, personally appeared before me, Wayne E. Glover, Building Official of Ogden City, who acknowledged that he signed the above certificate and that the statements contained therein are true.

Deann Wallwork  
NOTARY PUBLIC

Residing at Ogden, UT  
My Commission Expires 3/14/02





May 10, 2001

Mr. Rudy Fernandez  
Rudy's Social Club  
2687 Washington Blvd.  
Ogden, UT 84401

**RE: LIMITED STRUCTURAL INVESTIGATION OF THE BUILDING LOCATED AT 2687  
WASHINGTON BLVD. IN OGDEN, UTAH.**  
Job # 01112

To Whom it May Concern:

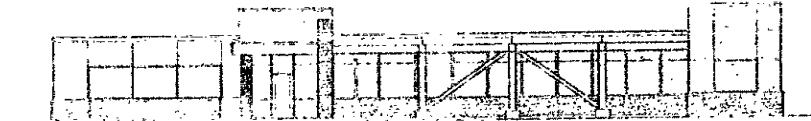
On Tuesday, May 8, 2001, at the request of Rudy Fernandez of Rudy's Social Club in Ogden, Utah, ARW Engineers performed a limited site survey and investigation of the existing building located at 2687 Washington Blvd. in Ogden, Utah. Mr. Fernandez requested that ARW Engineers make an investigation of the building to determine if the building was in compliance with the Ogden City Parapet Ordinance and to appraise the overall structural integrity of the building. Based on this limited survey, it has been determined that the building is not in compliance with the current parapet ordinance and that it is also structurally and seismically deficient in several areas.

**EXISTING CONDITION AND CONSTRUCTION**

A limited survey was performed at the site by ARW Engineers to determine if the building was in compliance with the Ogden City Parapet Ordinance and to appraise the overall structural integrity of the building. There were no original drawings of the building available at the time of the investigation. The roof framing and wall construction were visible through an attic access hole near the back of the building and by knocking holes through the plaster walls and ceiling with a hammer.

Based on this investigation, it was verified that the roof is rounded in the middle and is constructed of 1x8 wood planks laid perpendicular to 2x10 roof joists. The joists bear at the interior of the building on nailer plates fastened to steel bow-string trusses that are spaced approximately 10'-0" to 12'-0" on center. At the East and West end of the building, the joists are fire-cut and bear into an unreinforced clay masonry wall. The trusses that support the joists are constructed of various sizes of angles bolted together via gusset plates. All of the trusses bear on unreinforced double-wythe clay masonry walls at the North and South side of the building. The foundation construction could not be verified.

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## STRUCTURAL DEFICIENCIES

Based on this limited site investigation, several structural deficiencies and concerns were observed and are listed below:

1. **No out-of-plane attachments or bracing for the walls or parapets.** The roof appears to have been replaced somewhat recently. However, during the re-roofing, it is evident that no attempt was made to brace the parapets back to the roof diaphragm or to provide any positive attachment to brace the slender unreinforced clay masonry walls. Concern: Lack of these attachments increase the potential for catastrophic failure of the building during a seismic event.
2. **Lack of adequate roof diaphragm shear capacity.** Based on previous investigations of similar buildings, the 1x8 wood roof planks are inadequate to resist seismic shear forces induced in the roof diaphragm from an earthquake. Concern: Lack of adequate roof diaphragm shear strength could result in collapse of the building during an earthquake.
3. **Lack of adequate attachment of the roof diaphragm to the unreinforced clay masonry walls.** Because there is no positive attachment between the roof diaphragm and the walls, there is no lateral support for the building during a seismic event. Concern: Lack of this attachment creates an overstress in all of the roof elements and could lead to catastrophic failure of the building during a seismic event.
4. **Walls exceed height to thickness ratios for unreinforced masonry.** The code requires that the height of all unreinforced masonry be limited to no more than 16 times the thickness of the wall. The walls for this building have a height-to-thickness ratio of approximately 22. Concern: Walls exceeding the height-to-thickness ratio of 16 are subject to catastrophic failure during a seismic event.
5. **Large cracks in unreinforced clay masonry walls.** At several locations around the building it was noted that several large cracks have developed due to possible settlement or over-loading of the walls. Concern: Although many of these cracks are cosmetic, several of them indicate a possible over-stress of the walls due to gravity loads and could lead to eventual failure of the bearing walls.

## RECOMMENDATIONS

Based on the site investigation and the noted structural deficiencies listed above, the following recommendations are made to improve the structural integrity of the building for gravity and seismic loads:

1. Provide out-of-plane attachment of the parapets and walls to the roof diaphragm to prevent the walls and parapets from pulling away from the building during a seismic event. These braces should be placed approximately 4'-0" on center around the entire perimeter of the building.

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2. Replace or re-sheath the entire roof with plywood to improve the shear capacity of the roof diaphragm.
3. Provide a continuous attachment of the roof diaphragm to the masonry walls around the entire perimeter of the building. This will allow an adequate transfer of shear forces from the roof diaphragm to the masonry shear walls during a seismic event.
4. Reduce the effective height of the wall by providing out-of-plane braces to all walls, or thicken all of the walls with reinforced shot-crete to reduce the height-to-thickness ratio and to provide adequate support for the walls during a seismic event.
5. Strengthen the walls at points of over-stress or provide other means to support gravity loads (ie: columns beneath trusses).

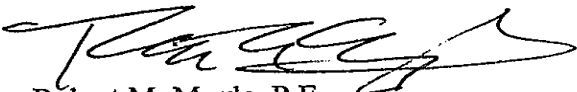
Each of the items listed above compromise the structural integrity of the building during gravity loading or seismic activity.

### CONCLUSIONS

The purpose of this letter is to provide information for the needed structural upgrades to the building located at 2687 Washington Blvd. in Ogden, Utah. These recommendations, if followed, will help reduce the risk of structural failure and damage due to seismic activity and will result in an improvement over the current condition. It should be noted that the recommendations in this letter are based on ARW Engineers past experience with buildings of similar construction and are an attempt to improve the structural integrity of the building to bring it into closer compliance with current Ogden City Ordinances and UBC seismic requirements. It should also be noted that upgrading the building to meet these recommendations may not be the course of action chosen by the Owner or by the City of Ogden. Nevertheless, in order to maintain the building for years to come, we recommend that as an absolute minimum, these deficiencies be corrected. ARW Engineers will be happy to provide any additional information, analysis, specific details and drawings necessary to implement these recommendations.

Please feel free to contact us if you need any additional information about any of the items listed above.

Signed,



Robert M. Moyle, P.E.  
Assistant Project Engineer

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Reviewed by,  
Barry K. Arnold, P.E., S.E.  
Principal  
ARW Engineers

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