Warm Mineral Springs
Building Condition Assessment
City of North Port, Florida
September 5, 2013

Lou Sperduto, Property Maintenance Manager
City of North Port
4970 City Hall Boulevard
North Port, Florida  34286

Re: Warm Mineral Springs - Building Condition Assessment
KHA No.: 048285020

Dear Mr. Sperduto:

In accordance with our agreement dated July 31, 2013, Kimley-Horn and Associates, Inc. (“KHA”) has conducted an inspection and condition assessment of the Warm Mineral Springs Buildings. The specific purpose of this assessment was to document and report on issues discovered that, in KHA’s opinion would be of interest to the City and County. As a part of this investigation, David Stewart, P.E. and Peter Van Buskirk, P.E. made a site visit on August 8, 2013.

The opinions and recommendations expressed in this report are based on a review of existing conditions and the information currently available to KHA. These opinions and conclusions may be amended or supplemented should new information become available. This report has been prepared solely for the City of North Port and Sarasota County for the purposes stated herein and should not be relied upon by any other party or for any other purpose. Specifically, this report may not be used in connection with actual renovation or construction of any kind. Any reliance on this report by any party other than the City of North Port and Sarasota County shall be without liability to Kimley-Horn and Associates, Inc. or its employees.

Please call me at 561-840-0854 if you have any questions.

Very Truly Yours,

KIMLEY-HORN AND ASSOCIATES, INC.
CA 00000696

David W. Stewart, P.E.
Florida 31180

Attachments: Building Condition Assessment
Table 1 – List of Deficiencies
Report Figures 1 through 5
Photographs 1 through 32
Executive Summary

The purpose of the assessment was to supplement the City and County’s knowledge about the Warm Mineral Springs Buildings and to assist the Client in making decisions regarding leasing and maintaining the buildings. Kimley-Horn and Associates, Inc. (“KHA”) reviewed prior reports, observed existing conditions and reviewed prior and current building codes.

Warm Mineral Springs is a natural spring surrounded by a passive park of approximately 80 acres. It is jointly owned by the City of North Port and Sarasota County. The subject buildings are one-story structures estimated to be approximately 53 years old based on the Sarasota County Property Appraiser’s website. The spring, but not the buildings, is on the National Register of Historic Places.

The two main buildings are separated by approximately 60 feet but joined by a promenade (Figure 1; Photos 1, 2 and 3). The buildings provide restrooms and lockers for visitors to the spring. Additional facilities include meeting, exercise and spa treatment rooms. A gift shop and small dining room are also provided.

The buildings are generally in poor but serviceable condition. Numerous construction and maintenance deficiencies were observed and are listed in the attached Table 1. Correcting all of the observed deficiencies would require substantial improvements that would likely trigger additional upgrades to fully comply with current building codes. Significant issues are summarized below.

Unsafe Conditions (Normal Use)

The building code defines unsafe and dangerous conditions that should be corrected whenever they occur. The following items are considered to present an unsanitary condition or a risk of injury during normal use of the buildings.

- Water supply and sanitary waste systems (Photos 4 and 5)
- Deterioration of 3 interior roof rafters in the Women’s Locker room (Photo 6)
- Inadequate support of fuel gas piping (Photo 9)
- Exposed electrical raceways and junction boxes (Photos 10 and 11)
- Improvised electrical wiring (Photo 12)
Unsafe Conditions (during Wind Storms)
The following items are considered to present a risk of injury or building collapse during wind events. These issues are related to the stability of the structure and its ability to resist lateral loads. An increased risk occurs as the wind speed increases.

- Steel column and beam bracing (Photos 13, 14 and 15)
- Hollow structural tile bracing (Photo 16)
- Roof rafter framing and connections (Photos 17 to 21)
- Stability of wall framing (tile, doors and windows) (Photo 22)

Other Repairs
These items do not meet the definition of unsafe but represent deterioration of the original construction. These issues would be included in the routine maintenance.

- Irrigation pump and piping
- Steel column base connections (Photo 24)
- Broken window glass (Photo 25)
- Site grading higher than finish floor (Photo 26)
- Roof covering
- Deterioration of roof edge rafters at approximately 22 locations (Photos 7 and 8)
- Gutters and downspouts (Photo 27)
- Pergola steel and wood framing (Photos 23 and 24)
- Plumbing vents
- A/C and heating equipment and distribution (Photo 28)
- Ceramic floor tile

Voluntary Improvements
The building code provides for the voluntary improvement or strengthening of buildings and building systems to better serve the original purpose or the current building codes. A voluntary improvement while classified as retrofit would still be considered an alteration. These elements could be improved to comply with current codes.

- Fire protection water supply (Photo 32)
- Roof plywood sheathing
- Roof gable framing (Photo 29)
- Plumbing fixtures (Photos 30 and 31)
Substantial Structural Alterations
The observed condition of the buildings does not constitute substantial structural damage as defined in the building code because it is not the result of deterioration of the structural elements. As such, the building structural elements could be maintained as is.

However, retrofitting the structure to better resist wind loads would be classified as a substantial structural alteration and a Level 3 alteration since it affects more than 30 and 50 percent (respectively) of the floor area of Buildings 1 and 2. The code would require an engineering evaluation to determine the structural adequacy of the building. Within this evaluation, it would be necessary to demonstrate that the altered structure complies with the current building code wind loads. To accomplish this would substantially impact the building architecture. It would require substantial structural alterations to the roof system, steel framing, exterior walls, doors windows and foundations.
2 Purpose and Scope

The purpose of the assessment was to supplement the City and County’s knowledge about the Warm Mineral Springs Buildings and to assist the Client in making decisions regarding leasing and maintaining the buildings.

The field review was performed in general conformance with ASTM 2018-08 Standard Guide for Property Condition Assessments (“PCA”). The principal of representative observations was applied to the buildings as a whole and to individual components and systems. KHA’s recommendations have been determined under time constraints, without the aid of testing, exploratory probing, the removal of materials, engineering design, or other technically exhaustive means. The report includes additional discussion and recommendation that are normally beyond the scope of a base line PCA.

3 System Descriptions and Observations

3.1 Overall General Description

The subject property consists of a natural spring surrounded by a passive park of approximately 80 acres. It is jointly owned by the City of North Port and Sarasota County. The subject buildings are one-story structures estimated to be approximately 53 years old based on the Sarasota County Property Appraiser’s website. The spring is on the National Register of Historic Places. The buildings do not appear to have been included in this designation.

The two main buildings are separated by approximately 60 feet but joined by a promenade (Photos 1, 2 and 3). The buildings provide restrooms and lockers for visitors to the spring. Additional facilities include meeting, exercise and spa treatment rooms. A gift shop and small dining room are also provided.

The north building (Building 1) is a one story structure, approximately 102 feet long by 61 feet wide. The north end of the building widens to about 77 feet. The long axis of the building is oriented generally north-south with the entrance facing south (Figure 1). Building 1 contains an exercise room, massage therapy, women’s and men’s lockers, skin care, nail salon, restrooms, kitchen and dining area.

The south building (Building 2) is also one-story, approximately 62 feet long by 47 feet wide. The south end of the building widens to about 62 feet. The entrance faces south toward the parking lot and site entrance road. Building 2 contains meeting rooms, gift shop, storage, electric room and restrooms.
Buildings 1 and 2 are joined by promenade approximately 60 feet in length. A 10 feet wide pergola provides partial shade to the promenade (Photos 2 and 3).

### 3.2 Site Utilities

The electric service is provided by an overhead service drop to the north-west corner of Building 2. The service was recently updated.

Water is supplied by two irrigation wells and one domestic water well. The systems are powered by small electric pumps (1.0 HP) with minimal pressure tanks.

Sanitary waste is minimally treated and disposed of on site. The building sewer flows to a holding tank. A manually operated electric pump transfers partially treated sewage to two distribution tanks and a drain field. The tanks and drain field are in close proximity to surface water flowing from the spring.

**Observed Deficiencies**

a) Domestic water system is currently non-potable.

b) The pump body, discharge piping and suction piping of the well pump west of Building 1 are heavily corroded. Piping is not properly supported (Photo 4).

c) Sanitary system does not meet current standards for on-site disposal (Photo 5).
   
   a. Transfer pump must be manually operated.
   
   b. Drain field is too close to surface water body.

### 3.3 Structural Frame and Building Envelope

The building foundations are concealed below grade and were not included in the assessment. No deficiencies were observed that would suggest a problem with the foundations.

The building is framed with a combination of structural steel frames and structural tile masonry infill walls. The vertical loads are carried by steel beams supported on steel columns. The structural tile infill walls partially resist the lateral loads.

The sidewalls are a combination of hollow structural tile, glass storefront windows, awning type windows and aluminum framed fixed glass. The structural tile units are nominally 4” wide, 5” tall and 12” long. They are laid in running bond. These hollow tiles are considered load bearing when properly braced. In
this case the tiles are not being used to carry vertical loads. They are subjected to lateral wind loads and shear loads from the steel framing (Figure 2).

The exterior doors are a combination of glass, sliding glass and flush, hollow metal.

The roof system is a folded-plate design consisting of a major roof aligned north-south and multiple minor roofs aligned east-west. The major roof slope is approximately 4 on 12 (20 degrees). The major roof is framed with 2x6 wood rafters spaced at 24 inches. The minor roofs are framed with 3x6 wood rafters spaced at 48 inches. The rafters are sheathed with 5/8 inch plywood. The major roof is framed on top of the system of minor roofs. The ceiling above the center hallway in both buildings is framed with 2x6 joists spaced at 24 inches, covered with plywood.

The roof covering is a spray applied, polyurethane foam, over a base sheet and 3/4 inch rigid foam insulation board. The thickness of the spray applied foam was found to be 1.25 to 1.5 inches thick at one location.

The pergola is framed with 2x6 joists spaced at 16 inches. The joists bear on a wood plate, bolted to the top flange of a 12 inch deep steel beam. The beams span approximately 20 feet to 4 inch steel columns. Full depth wood blocking is provided at the joist midspan. Partial depth blocking is provided at the joist bearing points.

Observed Deficiencies

a) Steel building columns are not braced in one or more directions or are marginally braced with glass walls or windows (Figure 3).

b) Connections between the steel beams and columns are not stiffened with web braces or any type of moment connection.

c) Structural tile is of a type that cannot be reinforced in the vertical direction. The presence of horizontal reinforcement was not determined.

d) Major roof rafters bear weight on to the plywood sheathing of the minor roof. The 2x4 plate provided is not adequate to distribute loads.

e) Roof framing (Figure 4):

   a. Rafters are not anchored to resist wind uplift.

   b. Framing does not provide an adequate diaphragm to laterally brace the walls of the building.

   c. Rafter span limits roof live load capacity to less than 20 psf.

   d. Rafters are deteriorated at the ends, reducing bearing capacity by 30 to 100 percent. Observed at 3 interior locations and 22 edge locations (Photos 6, 7 and 8).

   e. Rafters at eave of minor roofs are not adequately supported on the valley beams (Photo 19).
f. Rafter ties (collar ties) are spaced at 8 feet. Lower end of rafters are unbraced.
g. Gable end framing is not adequate for hurricane loads.
h. Gable access doors are not adequate for hurricane loads.
f) Wall framing does not adequately transfer lateral wind loads to the foundations.
   a. Hollow structural tile does not span from floor to ceiling and the horizontal span between supports is excessive.
   b. The bottom of the awning and fixed glass windows is attached to an aluminum purlin that has an excessive span between supports.
g) Water penetrations occur at the low point in the minor roof. Potential water damage to base of steel columns.
h) Broken window glass was observed at seven locations.
i) Site grading is higher than the finish floor at the south end of Building 2.
j) Exterior doors are not adequate for hurricane loading.
k) The threshold of the Nail Salon door is not adequate to prevent water intrusion.
l) Roof covering is deteriorated or penetrated at numerous locations and is approaching the end of its useful life.
   a. Minor roof valleys have inadequate slope. Valleys accumulate debris and some rooted vegetation is present.
   b. Large areas (up to 36 sf) have been patched with modified bitumen roof covering.
   c. Large blisters indicate moisture penetration.
   d. Plumbing stack flashings are not properly sealed or are missing.
   e. Exhaust vent flashings are incomplete or missing.
   f. Spray foam insulation is exposed at several locations.
m) Gutters and downspouts are disconnected, damaged or have inadequate slope at numerous locations.
n) Pergola framing
   a. Wood joist blocking is incomplete at north end.
   b. Steel columns are corroded at the base. One column has lost approximately 25 percent of the section.
   c. Steel beams are corroded.
   d. Wood top plate supporting joists and partial depth blocking is deteriorated.
   e. Wood joists are deteriorated at three locations.

### 3.4 Mechanical and Electrical Systems

The plumbing system consists of new and old materials with a mixture of age, type and condition. Visible piping consists of copper, galvanized steel and polyvinylchloride (“PVC”). Domestic hot water in Building 1 is produced by a gas-fired hot water heater. The hot water supply in Building 2 was not identified.
Space heating in Building 2 is provided by a gas-fired furnace. Heat is distributed by sheet metal ducts routed in the attic space above the center hallway. A source of heat for Building 1 was not identified.

Air conditioning in Building 1 is provided with a mixture of spilt-systems and wall mounted package systems. There are 8 wall units serving roughly the north half of the building. The exercise and massage therapy rooms have spilt systems. The women’s and men’s locker rooms are mechanically ventilated but not air conditioned. The restrooms are naturally ventilated by opening the awning windows. Air conditioning in Building 2 is primarily a central split system. The Electric room and one small meeting room have wall mounted units (Figure 5).

The electrical distribution system has been modified many times over the years. The structural tile walls prevent running concealed raceways in many areas. Consequently many of the newer circuits run in exposed conduits or have been improvised with extension cords.

Observed Deficiencies
a) Many of the plumbing fixtures are dated and worn.
b) Several plumbing stacks are not functional. They are plugged or crimped above the roof.
c) In the Men’s Restroom, the urinal sanitary waste line is not vented.
d) In the Dining Area, a floor drain cover is broken.
e) No ADA fixtures are provided.
f) The A/C evaporator/air handler in the attic of Building 1 is not operable.
g) In the attic of Building 2, the A/C ductwork is separated from the gift shop register.
h) In the attic of Building 2, the gas line for the furnace is not properly supported.
i) The furnace in Building 2 lacks an intake filter for the air handler.
j) Insulation of the building envelop is minimal. The sidewalls (hollow structural tile and glass) have an average R-value of approximately 1.6. The roof has an R-value of approximately 15.
k) Communication wires are routed across the roof and are not properly anchored.
l) Exposed electrical raceways are incomplete, junction boxes are open, and cover plates are missing.
m) Improvised electrical wiring in the Nail Salon and Meeting/Exercise Room

3.5 Life Safety / Fire Protection

Fire protection sprinkler systems are not provided in either of the buildings. In Building 1, portable fire extinguishers are provided at three locations in addition
to the hood fire suppression system in the dining room. In Building 2 only one portable fire extinguisher is provided in the electrical room.

Observed Deficiencies
a) No hydrants are available within a reasonable distance of the buildings. The spring provides a sufficient volume of water but truck access is blocked by site fencing.
b) The hose distance from the spring to the farthest point on the buildings exceeds 530 feet when fence obstructions are considered.
c) The spillway flowing from the spring may not have sufficient depth to serve as a water source.
d) Door thresholds do not meet egress requirements at the Meeting/Exercise Class Room, Men’s and Ladies’ Restrooms, Dining Area and Gift Shop.

3.6 Interior Elements

Floor coverings consist of bare concrete, ceramic tile or carpet. Wall finishes are glazed structural tile, painted structural tile, painted gypsum board, prefinished wood paneling or mirror.

Interior partitions are a combination of hollow structural tile, wood frame and glass. Interior doors are non-rated, flush metal doors.

Observed Deficiencies
a) Replacement ceramic floor tile is not properly set in the Skin Care room. Tiles appear to have been thin-set with mortar instead of adhesive.
b) Attic space in both buildings is used for storage of materials and trash.
c) The interior partition between the storage areas in Building 2 has a large, rectangular hole.

4 Document Reviews and Interviews

During the site visit, Lou Sperduto was interviewed regarding the site utilities including the sanitary waste disposal system.

The following documents were provided to KHA for review prior to our site inspection.


5 Discussion

5.1 Original Building Code

The 2010 Florida Building Code allows existing structures that met building codes at the time of construction to be repaired and maintained using the original materials. For the purpose of this assessment, the Southern Standard Building Code, 1960-1961 was used as the code for the original construction. A limited review of this code revealed the following deficiencies in the original construction.

DESIGN WIND LOADS: the required design wind load against the exterior walls was 25 psf acting inward or outward.[1205.2]. The roof design uplift pressure was 31 psf acting perpendicular to the surface. The roof overhangs were required to be designed for 50 psf in uplift. Adequate anchorage of the roof, walls and columns was required [1205.3].

EXTERIOR WALL THICKNESS: non-load bearing masonry walls must be a minimum of 6 inches thick [1404.2 (c)]. The existing structural tile has a nominal thickness of 4 inches. This would be acceptable if the tile were considered equivalent to structural glass block with an allowable minimum thickness of 3.5 inches [1413.1]

LATERAL SUPPORT OF EXTERIOR MASONRY WALLS: exterior walls must be supported at right angles to the wall to resist wind loads and prevent buckling. For a 4 inch thick wall, the maximum distance between supports is limited to 6 ft [1405.1, Table 5].

The existing walls span horizontally up to 26 feet without lateral support. The exterior walls are approximately eight feet high and are unsupported at the top edge. Structural tile of this type can be used for partitions up to 15 feet high [Ramsey 1956, pg 95]. In an exterior wall they must be adequately supported to resist wind loading.
PLYWOOD ROOF SHEATHING: the allowable loading of the roof sheathing is limited by the plywood thickness and the distance between supports. The existing roof sheathing is limited by code to a total load of 20 psf [Table 1708.10]. This would not meet current code requirements of 20 psf minimum plus the roof dead load of approximately 5 psf.

5.2 Current Building Code

The scope and magnitude of the rehabilitation of the Warm Mineral Springs Buildings will be decided by others at a later time. The current building codes allow for repairs, alterations, additions and occupancy changes within prescribed conditions.

REPAIRS. Patching, restoration and minor replacement of building elements, to maintain the building in good or sound condition with respect to the original loads or performance requirements [2010 FBC, E402.1-3].

ADDITION. An extension or increase in floor area, number of stories, or height of a building or structure. Consideration of additions is outside the scope of this condition assessment.

ALTERATION. Any construction or renovation to an existing structure other than a repair or addition. Alterations are classified as Level 1, Level 2, and Level 3. Level 1 alterations include the removal and replacement or the covering of existing materials, elements, equipment, or fixtures using new materials, elements, equipment, or fixtures that serve the same purpose. A Level 1 alteration does include work undertaken for purpose of repair [403.1].

Level 2 alterations include the reconfiguration of space, adding or removing any door or window, the reconfiguration or extension of any system, or the installation of any additional equipment [404.1].

Level 3 alterations apply where the work area within any 12- month period exceeds 50 percent of the area of the building. Alterations exclusively to plumbing, mechanical or electrical systems are excluded [405.1].

RETROFIT. The voluntary process of strengthening or improving buildings or structures, or individual components of buildings or structures, for the purpose of making existing conditions better serve the purpose for which they were originally intended or current building codes.
SUBSTANTIAL IMPROVEMENT. Work which equals or exceeds 50 percent of the market value of the structure before the improvement is started or repairs to substantial structural damage. The term does not however include work required to correct health, sanitary or safety code violations identified by the building official and that are the minimum necessary to assure safe living conditions.

6 Recommendations

Recommendations for correcting some of the observed deficiencies are included in the attached Table 1. Many items overlap with other deficiencies and will require additional investigation or preliminary engineering design to determine the appropriate correction.

Additional in-depth analysis is recommended for the following items:

Roof and Roof Structure
- Analysis:
  - Evaluate options to improve diaphragm action of roof structure
  - Evaluate options to connect roof and wall systems to resist lateral loads.

Septic/Plumbing Service
- Tests and Inspection:
  - Pump out the tanks and determine the type of baffling, inlet and outlet elevations.
  - Probe drain field limits, perform soil boring and percolation test.
- Analysis:
  - Calculate peak design flow based on plumbing fixture count.
  - Check treatment tank volume and drainfield size.

Structural Components
- Test and Inspections:
  - Open the structural tile wall to inspect the base of the steel columns for corrosion damage.
  - Investigate the structural tile walls for steel reinforcement using non-destructive testing methods
- Analysis
  - Evaluate lateral bracing options for walls and steel framing
Environmental Hazards

- Test and Inspections: perform a Phase I Environmental survey for asbestos, lead and other hazardous materials.

7 Opinions of Probable Cost

The attached Table 1 contains an opinion of probable cost for correction or mitigation of some of the observed deficiencies. In many cases there is insufficient information to anticipate the scope of construction required. In other cases an issue overlaps other deficiencies and a comprehensive approach must be developed.

Costs where shown are gross approximations intended to shown the relative magnitude of the issue. Client direction, additional investigation and preliminary design will be required before competent opinions of cost can be prepared. To the construction costs must be added design, permitting and contractor’s general conditions. A scope contingency of 30 percent should be added to account for concealed conditions that are discovered during construction.

Because the Consultant does not control the cost of labor, materials, equipment or services furnished by others, methods of determining prices, or competitive bidding or market conditions, any opinions rendered as to costs, are made on the basis of its experience and represent its judgment as an experienced and qualified professional, familiar with the industry. The Consultant cannot and does not guarantee that proposals, bids or actual costs will not vary from its opinions of cost.
References


### TABLE 1 - WARM MINERAL SPRINGS - LIST OF DEFICIENCIES

**NOTE:** COSTS WHERE SHOWN ARE GROSS APPROXIMATIONS INTENDED TO SHOW THE RELATIVE MAGNITUDE OF THE ISSUE. COSTS MARKED “TBD” ARE TO BE DETERMINED AFTER ADDITIONAL INVESTIGATION, PRELIMINARY DESIGN AND/OR CLIENT DIRECTION.

<table>
<thead>
<tr>
<th>Issue Description</th>
<th>Unsafe</th>
<th>Repair</th>
<th>Retrofit</th>
<th>Alteration</th>
<th>Recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Domestic water system is currently non-potable</td>
<td>YES</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
<td>YES (repair includes new RO package treatment system, reject water disposal in sandfield. Retrofit includes approx. 2,500 LF new water main extension.)</td>
</tr>
<tr>
<td>b) The pump body, discharge piping and suction piping of the well pump west of Building 1 are heavily corroded. Piping is not properly supported.</td>
<td>NO</td>
<td>1,500</td>
<td>TBD</td>
<td>TBD</td>
<td>R/R pump and piping.</td>
</tr>
<tr>
<td>c) Sanitary system does not meet current standards for site disposal.</td>
<td>YES</td>
<td>40,000</td>
<td>212,000</td>
<td>TBD</td>
<td>Repair includes remove and replace (&quot;R/R&quot;) septic system and drain field. Retrofit includes grinder pump lift station and approx. 2,900 LF force main.</td>
</tr>
<tr>
<td>a) Transfer pump must be manually operated.</td>
<td>NO</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
</tr>
<tr>
<td>b) Drain field is too close to surface water body.</td>
<td>NO</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
</tr>
<tr>
<td>c) Exhaust vent flashings are incomplete or missing.</td>
<td>NO</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
</tr>
<tr>
<td>d) Plumbing stack flashings are not properly sealed or are missing.</td>
<td>NO</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
</tr>
<tr>
<td>e) Roof framing</td>
<td>NO</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
</tr>
<tr>
<td>f) Rafters are not anchored to resist wind uplift.</td>
<td>NO</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
</tr>
<tr>
<td>g) Frame does not provide an adequate diaphragm to laterally brace the walls of the building.</td>
<td>NO</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
</tr>
<tr>
<td>h) Rafter span limits roof live load capacity to less than 20 psf.</td>
<td>NO</td>
<td>YES</td>
<td>TBD</td>
<td>TBD</td>
<td>Remove roof covering and partially remove sheathing. Add connectors.</td>
</tr>
<tr>
<td>i) Rafters are deteriorated at the ends, reducing bearing capacity by 30 to 100 percent. Observed at 3 interior locations and 22 roof edge locations.</td>
<td>YES</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
<td>Damaged rafters at interior locations create risk to public. R/R damaged rafters at 3 interior locations. Edge roof rafters create risk to trades walking on the roof. Notify trades of hazard until rafter repairs can be scheduled.</td>
</tr>
<tr>
<td>j) Rafters at eave of minor roofs are not adequately supported on the valley beams.</td>
<td>NO</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
<td>Improve connection.</td>
</tr>
<tr>
<td>k) Rafter ties (collar ties) are spaced at 8 feet. Lower end of rafters are unbraced.</td>
<td>NO</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
<td>Add rafter ties. Possible use of tie-beams, tie-rods or RC pilasters to correct lower end. Integrate with other lateral bracing improvements.</td>
</tr>
<tr>
<td>l) Gable end framing is not adequate for hurricane loads.</td>
<td>NO</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
</tr>
<tr>
<td>m) Gable access doors are not adequate for hurricane loads.</td>
<td>NO</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
</tr>
<tr>
<td>n) Wall framing does not adequately transfer lateral wind loads to the foundations.</td>
<td>NO</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
</tr>
<tr>
<td>a) Hollow structural tile does not span from floor to ceiling and the horizontal span between supports is excessive.</td>
<td>NO</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
</tr>
<tr>
<td>b) The bottom of the awning and fixed glass windows is attached to an aluminum par fallen that has an excessive span between supports.</td>
<td>NO</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
</tr>
<tr>
<td>g) Water penetrations occur at the low point in the minor roof. Potential water damage to base of steel columns.</td>
<td>NO</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
</tr>
<tr>
<td>h) Broken window glass was observed at seven locations.</td>
<td>NO</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
</tr>
<tr>
<td>i) Site grading is higher than the finish floor at the south end of Building 2.</td>
<td>NO</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
</tr>
<tr>
<td>j) Exterior doors are not adequate for hurricane loading.</td>
<td>NO</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
</tr>
<tr>
<td>k) The threshold of the Nail Salon door is not adequate to prevent water intrusion.</td>
<td>NO</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
</tr>
<tr>
<td>l) Roof covering is deteriorated or penetrated at numerous locations and is approaching the end of its useful life.</td>
<td>NO</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
</tr>
<tr>
<td>m) Large areas (up to 36 sf) have been patched with modified bitumen roof covering.</td>
<td>NO</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
</tr>
<tr>
<td>n) Large blisters indicate moisture penetration.</td>
<td>NO</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
</tr>
<tr>
<td>o) Plumbing stack flashings are not properly sealed or are missing.</td>
<td>NO</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
</tr>
<tr>
<td>TABLE 1 - WARM MINERAL SPRINGS - LIST OF DEFICIENCIES</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>------------------------------------------------------</td>
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</tr>
<tr>
<td>NOTE: COSTS WHERE SHOWN ARE GROSS APPROXIMATIONS INTENDED TO SHOWN THE RELATIVE MAGNITUDE OF THE ISSUE. COSTS MARKED “TBD” ARE TO BE DETERMINED AFTER ADDITIONAL INVESTIGATION, PRELIMINARY DESIGN AND/OR CLIENT DIRECTION.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>LEVEL 2</strong></td>
<td><strong>LEVEL 3</strong></td>
<td><strong>RECOMMENDATION</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-------------</td>
<td>-------------</td>
<td>---------------------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>UNSAFE</strong></td>
<td><strong>REPAIR</strong></td>
<td><strong>RETROFIT</strong></td>
<td><strong>ALTERATION</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>f) Spray foam insulation is exposed at several locations.</td>
<td>NO</td>
<td>TBD</td>
<td>R/R gutters and downspouts.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>m) Gutters and downspouts are disconnected, damaged or have inadequate slope at numerous locations.</td>
<td>NO</td>
<td>TBD</td>
<td>R/R damaged wood. Clean and paint structural steel. Chip out concrete around column base, weld repair to column/base connection.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>n) Pergola Framing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Wood post blocking is incomplete at north end.</td>
<td>NO</td>
<td>TBD</td>
<td>R/R damaged wood. Clean and paint structural steel. Chip out concrete around column base, weld repair to column/base connection.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b) Steel columns are corroded at the base. One column has lost approximately 25 percent of the section.</td>
<td>NO</td>
<td>TBD</td>
<td>R/R damaged wood. Clean and paint structural steel. Chip out concrete around column base, weld repair to column/base connection.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>l) Steel beams are corroded.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Wood joist blocking is incomplete at north end.</td>
<td>NO</td>
<td>TBD</td>
<td>R/R damaged wood. Clean and paint structural steel. Chip out concrete around column base, weld repair to column/base connection.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b) Steel columns are corroded at the base. One column has lost approximately 25 percent of the section.</td>
<td>NO</td>
<td>TBD</td>
<td>R/R damaged wood. Clean and paint structural steel. Chip out concrete around column base, weld repair to column/base connection.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c) Steel beams are corroded.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d) Wood top plate supporting joists and partial depth blocking is deteriorated.</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>e) Wood joists are deteriorated at three locations.</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>3.4 Mechanical and Electrical Systems</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Many of the plumbing fixtures are dated and worn.</td>
</tr>
<tr>
<td>b) Several plumbing stacks are not functional. They are plugged or crimped above the roof.</td>
</tr>
<tr>
<td>c) In the Men’s Restroom, the urinal sanitary waste line is not vented.</td>
</tr>
<tr>
<td>d) In the Dining Area, a floor drain cover is broken.</td>
</tr>
<tr>
<td>e) No ADA features are provided.</td>
</tr>
<tr>
<td>f) The A/C evaporator/air handler in the attic of Building 1 is not operable.</td>
</tr>
<tr>
<td>g) In the attic of Building 2, the A/C ductwork is separated from the gift shop register.</td>
</tr>
<tr>
<td>h) In the attic of Building 2, the gas line for the furnace is not properly supported.</td>
</tr>
<tr>
<td>i) The furnace in Building 2 lacks an intake filter for the air handler.</td>
</tr>
<tr>
<td>j) Insulation of the building envelop is minimal. The sidewalls (hollow structural tile and glass) have an average R-value of 1.6. The roof has an R-value of approximately 15.</td>
</tr>
<tr>
<td>k) Communication wires are routed across the roof and are not properly anchored.</td>
</tr>
<tr>
<td>l) Exposed electrical raceways are incomplete, junction boxes are open, and cover plates are missing.</td>
</tr>
<tr>
<td>m) Improvised electrical wiring in the Nail Salon and Meeting/Exercise Room</td>
</tr>
<tr>
<td>a) No hydrants are available within a reasonable distance of the buildings. The spring provides a sufficient volume of water but truck access is blocked by site fencing.</td>
</tr>
<tr>
<td>b) The hose distance from the spring to the farthest point on the buildings exceeds 530 feet when fence obstructions are not considered.</td>
</tr>
<tr>
<td>c) The spillway flowing from the spring may not have sufficient depth to serve as a water source.</td>
</tr>
<tr>
<td>d) Door thresholds do not meet egress requirements at the Meeting/Exercise Class Room, Men’s and Ladies’ Restrooms, Dining Area and Gift Shop.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>3.5 Life Safety / Fire Protection</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Replacement ceramic floor tile is not properly set in the Skin Care room. Tiles appear to have been thin-set with mortar instead of adhesive.</td>
</tr>
<tr>
<td>b) Attic space in both buildings is used for storage of materials and trash.</td>
</tr>
<tr>
<td>c) The interior partition between the storage areas in Building 2 has a large, rectangular hole.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BASE CONSTRUCTION SUBTOTALS</th>
<th>$114,400</th>
<th>$49,100</th>
<th>-</th>
<th>$80,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>BASE CONSTRUCTION TOTAL</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
</tr>
<tr>
<td>CONTRACTOR’S GENERAL CONDITIONS</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
</tr>
<tr>
<td>VISUAL DESIGN</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
</tr>
<tr>
<td>ENGINEERING DESIGN</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
</tr>
<tr>
<td>PERMITTING</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
</tr>
<tr>
<td>OVERALL PROJECT TOTAL</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
</tr>
<tr>
<td>COSTS MARKED “TBD” ARE TO BE DETERMINED AFTER ADDITIONAL INVESTIGATION, PRELIMINARY DESIGN AND/OR CLIENT DIRECTION.</td>
<td></td>
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</tr>
</tbody>
</table>
Figure 2 – Exterior Walls and Windows

Store Front Windows and Doors.

Triangle Fixed Glass

Awning Type Windows

Hollow Structural Tile

Image Source: Sperduto 7/25/2013
Top of column and steel frame is not braced in the direction(s) indicated.

Store front windows are not equal to shear wall, bracing or other form of lateral support. Typical where indicated.

Image Source: Sperduto 7/25/2013
Figure 4 – Roof Framing

Minor roof rafters have unbalanced thrust reactions. Typical at all end bays.

ALL RAFTER CONNECTIONS LACK ADEQUATE CAPACITY TO RESIST WIND UPLIFT.

EDGE OF ROOF IS SUBSTANTIALLY DAMAGED BY DETERIORATED RAFTER CONNECTIONS.
Figure 5 – A/C and Ventilation

- **Natural Ventilation via Windows.**
- **Wall Mounted A/C.**
- **Ventilation Only.**
- **Split System A/C**

Image Source: Sperduto 7/25/2013
Photo No. 1

Remarks: Typical exterior elevation.
Location: Building 1, NW corner

Photo No. 2

Remarks: Main roof intersects five minor hip roofs.
Location: Building 1, South Elevation
Photo No. 3

Remarks:

Location: Building 2, North Elevation

Photo No. 4

Remarks: Corroded pump casing and piping. Piping not properly supported.

Location: Building 1
Photo No. 5

Remarks: Sanitary waste treatment system. Transfer pump is manually switched.

Location:

Photo No. 6

Remarks: Damaged rafters.

Location: Building 1, Women's Locker
Photo No. 7

Remarks: Damaged rafter connection to valley beam.
Location: Building 1

Photo No. 8

Remarks: Damaged rafter connection to valley beam. Note spray foam filler in joint.
Location: Building 1
Photo No. 9

Location: Building 2, Attic

Photo No. 10

Remarks: Open junction box with exposed electric wiring.
Location: Building 2, Attic
Photo No. 11

Remarks: Open electric box. Rust stains from wall leak.

Location: Building 1, Skin Care

Photo No. 12

Remarks: Electric circuit improvised with extension cord.

Location: Building 1, Nail Care
Photo No. 13

Remarks: Typical steel beam/column connection.
Location: Building 1, Storage

Photo No. 14

Remarks: Typical steel beam/column connection. Top of column is unsupported.
Location: Building 1, Exercise
Photo No. 15

Remarks: Typical wall mounted A/C.
Location: Building 1, Nail Care

Photo No. 16

Remarks: Hollow structural tile with glazed face on two sides. Nominal dimensions 4"w x 5"h x 12"l.
Location: Typical
Remarks: Valley between minor hip roofs has inadequate slope.
Location: Building 2

Remarks: Major roof intersects minor roofs. Roof covering is worn and patched at multiple locations.
Location: Building 1
Photo No. 19

Remarks: Typical roof overhang. Typical wall, window section.

Location: Building 1, West Elevation

Photo No. 20

Remarks: Typical major roof connection to minor roof. Toe-nails only. No hurricane straps.
Load bears on plywood, not 2 x 4 plate.

Location: Building 2, Attic
Remarks: Typical rafter/ridge beam connection. Toe-nails only. No hurricane straps.

Location: Building 2, Attic

Remarks: Wall section lacks structural continuity.

Location: Building 1, East Elevation
Photo No. 23

Remarks: Pergola framing with wood joists on steel beams.

Location: Building 1/Promenade

Photo No. 24

Remarks: Base of steel column is corroded. A similar condition could exist with building columns.

Location: Promenade
Remarks: Glass storefront windows do not adequately brace steel columns. Broken glass above awning windows.
Location: Building 1, Dining

Remarks: Site grade is higher than finish floor.
Location: Building 2, Meeting
Photo No. 27

Remarks: Gutters and downspouts are heavily deteriorated.
Location: Typical

Photo No. 28

Remarks: A/C duct is not connected to register. A/C system is cooling attic.
Location: Building 2, Attic
Photo No. 29

Remarks: Attic access doors are improvised plywood panels. Not hurricane rated.
Location: Building 2, North Elevation

Photo No. 30

Remarks: Plumbing fixtures are worn and outdated. Waste line is not vented at this location.
Location: Building 1, Men's Restroom
Photo No. 31

Remarks: Fixtures are not ADA compliant.

Location: Building 1, Women's Restroom

Photo No. 32

Remarks: Wall mounted fire suppression system for cooking equipment.
Buildings lack fire protection systems or fire hydrants on site.

Location: Building 1, Dry Storage