

**DELAWARE TOWNSHIP**

**FIVE YEAR**

**CAPITAL IMPROVEMENT PLAN**

Project No. 1228004

October 2013

**Prepared For:**

Delaware Township  
116 Wilson Hill Road  
Dingmans Ferry, PA 18328

Prepared By:



**Boucher & James, Inc.**  
CONSULTING ENGINEERS

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**DELAWARE TOWNSHIP**  
**5 YEAR**  
**CAPITAL IMPROVEMENT PROGRAM**

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## EXECUTIVE SUMMARY

Delaware Township has engaged its Engineer, Boucher & James, Inc. to assess eight buildings owned by the Township. The purpose of the assessment is to catalog the condition of the structures and to determine their compliance with applicable codes. Upon evaluation, a five year program is to be established in which needed improvements are identified, opinions of construction costs developed and priorities established for implementing the improvements. The buildings to be considered are:

- The Main Township Building
- Emergency Management Services-building located adjacent to main Township Building
- Salt Shed
- Recycling Center
- Library Building (Akenac Park)
- Maintenance Building (Akenac Park)
- Community Building (Akenac Park)
- Bath House (Akenac Park)

### SCOPE OF ASSESSMENT

The buildings to be assessed are quite divergent with respect to use, age, and type of construction. Some provide access to the public, others do not. Some are used seasonally, others year round. Because of the diversity, it was determined an evaluation by a team of architects and engineers would provide the most comprehensive appraisal for Delaware Township. Boucher & James, Inc. engaged the services of Schoonover and Vanderhoof to aid in the assessment.

### METHODOLOGY

The methodology employed included the following four steps:

1. Documentation
2. Assessment
3. Recommendation
4. Prioritization

#### 1. Documentation

The documentation process consisted of measuring each structure, photographing each structure and a visual inspection of the building and its components to determine their condition. A drawing showing the building's footprint, photographs and a narrative of inspection findings form the basis for the assessment.

#### 2. Assessment

The condition of a building's structural components were evaluated for integrity and, if applicable, remaining lifespan, i.e., roof coverings. If applicable, HVAC, electrical and plumbing components were analyzed. An opinion of remaining useful life was developed.

Buildings were also observed for code compliance, and specifically for ADA requirements. Observations are noted following the documentation in each individual section.

3. Recommendation

Following documentation and assessment, an opinion of repairs and/or remedial actions to be undertaken was offered. Each recommendation for each structure is accompanied by an opinion of construction cost.

4. Prioritization

At a workshop meeting on September 18, 2013, during which the draft report was reviewed, the Board of Supervisors offered its ideas on prioritization which follows on Page 3. The Board's primary concern centered around the Akenac Recreation Building. For the complete discussion and schedule of costs, see 5 Year Prioritization on Page 3 and 5 Year Prioritization Costs in Appendix A.

## 5 YEAR PRIORITIZATION

A draft report was presented to the Board of Supervisors and discussed at a workshop meeting on September 18, 2013. After a review of the report a discussion of Supervisor priorities ensued. It was determined additional effort should be expended upon the Akenac Recreational Building and an evaluation of the cost to replace the municipal building in ten years.

The Supervisors agreed that more analysis should be devoted to the costs associated with winterizing the recreation building so it could be made available for year round use. There was extensive discussion about the condition of the masonry piers supporting the structure and the possibility of alternative foundation designs. Replacement versus repair was also discussed, but it was concluded salvage of the existing building was preferable to replacement, if it could be accomplished in a cost effective manner.

Addendum A and Addendum B, at the back of the report, contain our detailed analysis for repairs to the Akenac Recreation Building and for the replacement of the municipal offices, respectively.

The Bath House and Salt & Cinder Shed should both be addressed in the next five years.

The Bath House – Given the condition of the bath house and the fact that it is not ADA compliant, compels us to recommend total replacement be considered within the next five years. Some discussion has ensued considering utilization and conversion of the existing cabins for this use. The Board may want to consider this option further.

Salt & Cinder Shed – This building is in need of attention within the next five years. The less costly approach would be to remove all material in the Spring and make a detailed analysis of its condition, especially of the floor and fasteners. Based on observable conditions we believe suitable repairs could be made in the range of \$15,000-\$20,000.

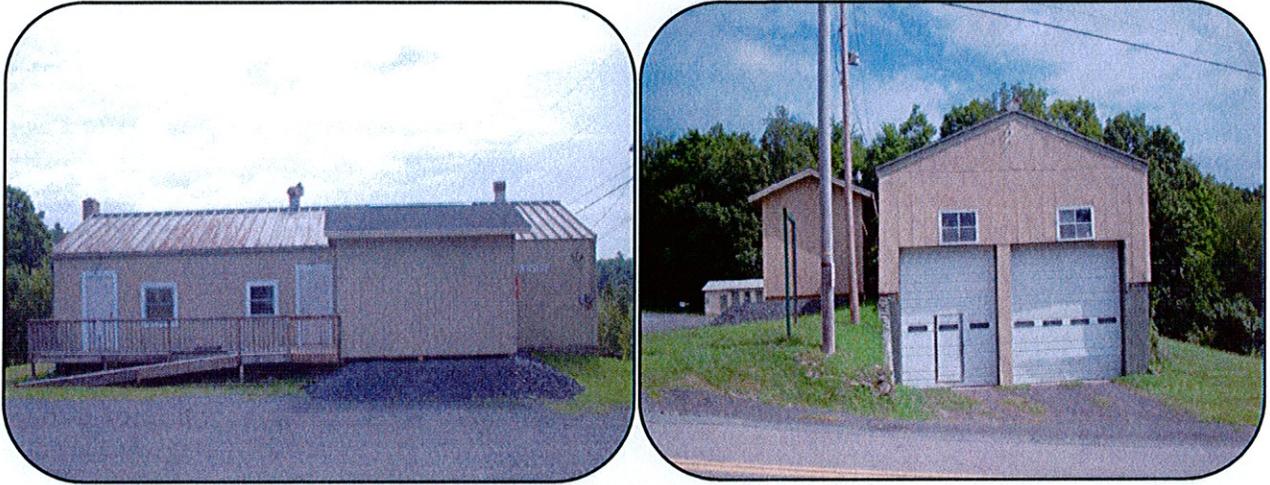
The last five year priority which should be done sooner rather than later, is to move the shed in front of the Emergency Management Building and add gutters and downspouts. We believe this can be done by Township staff.

The Recycling Center, Library/Historical Society Building at Akenac Park and Maintenance Building at Akenac Park are the lowest on the list of priorities. While some non-compliance issues have been identified, along with a need for some minor improvements or repairs, we believe all can be accommodated in the future. Township staff should monitor these structures as part of their routine maintenance plan.

For planning purposes Addendum C at the back of this report provides the Township with a schedule of costs for years 2014-2018.

# **WILSON HILL ROAD FACILITIES**

## DELAWARE TOWNSHIP EMERGENCY MANAGEMENT BUILDING



### **SUMMARY**

The Emergency Management Building is a one-story building with a walkout/drive out basement area. The basement is totally below grade except for the area where the upward acting doors are located.

### **BUILDING INFORMATION**

**SIZE:** The Upper Level of the building is approximately 920 square feet. The Lower Level is approximately 1,680 square feet and the adjacent shed is approximately 192 square feet.

**CONSTRUCTION TYPE:** The building would be classified as a Type 5B wood frame building because of the wood construction at the first floor. The shell of the building above the basement is what appears to be an old pre-engineered metal building with metal framing and metal trusses.

**FOUNDATION:** The foundation walls are a combination of concrete and concrete masonry units.

**FLOOR:** The floor in the lower level is a concrete floor. The floor for the upper level is a wood frame floor consisting of wood floor joists and wood columns to support the floor.

**WALLS:** The walls in the lower level are a combination of concrete and concrete masonry units. The walls in the upper level are a combination of wood frame and pre-engineered building frame.

**ROOF:** The roof construction consists of metal trusses and a metal roof.

**NUMBER OF STORIES:** One-story building with a basement.

**UTILITIES: ELECTRIC:** Yes      **HEAT:** No - Lower Level      **WATER:** Yes -  
Yes - Upper Level      Upper Level

**TOILET ROOMS:** 1 on Upper Floor      **ACCESSIBLE:** No  
None of Lower Level

**ACCESSIBILITY:** The upper level has a deck that is not handicapped accessible, but with some minor modifications it could be made accessible.

**OBSERVATIONS**

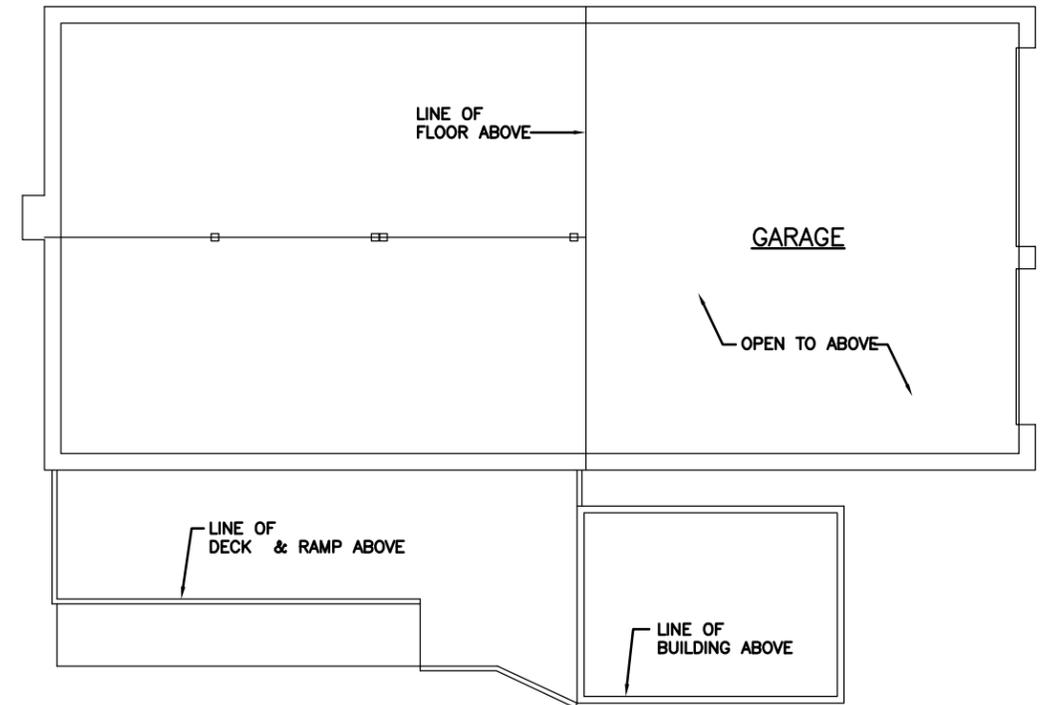
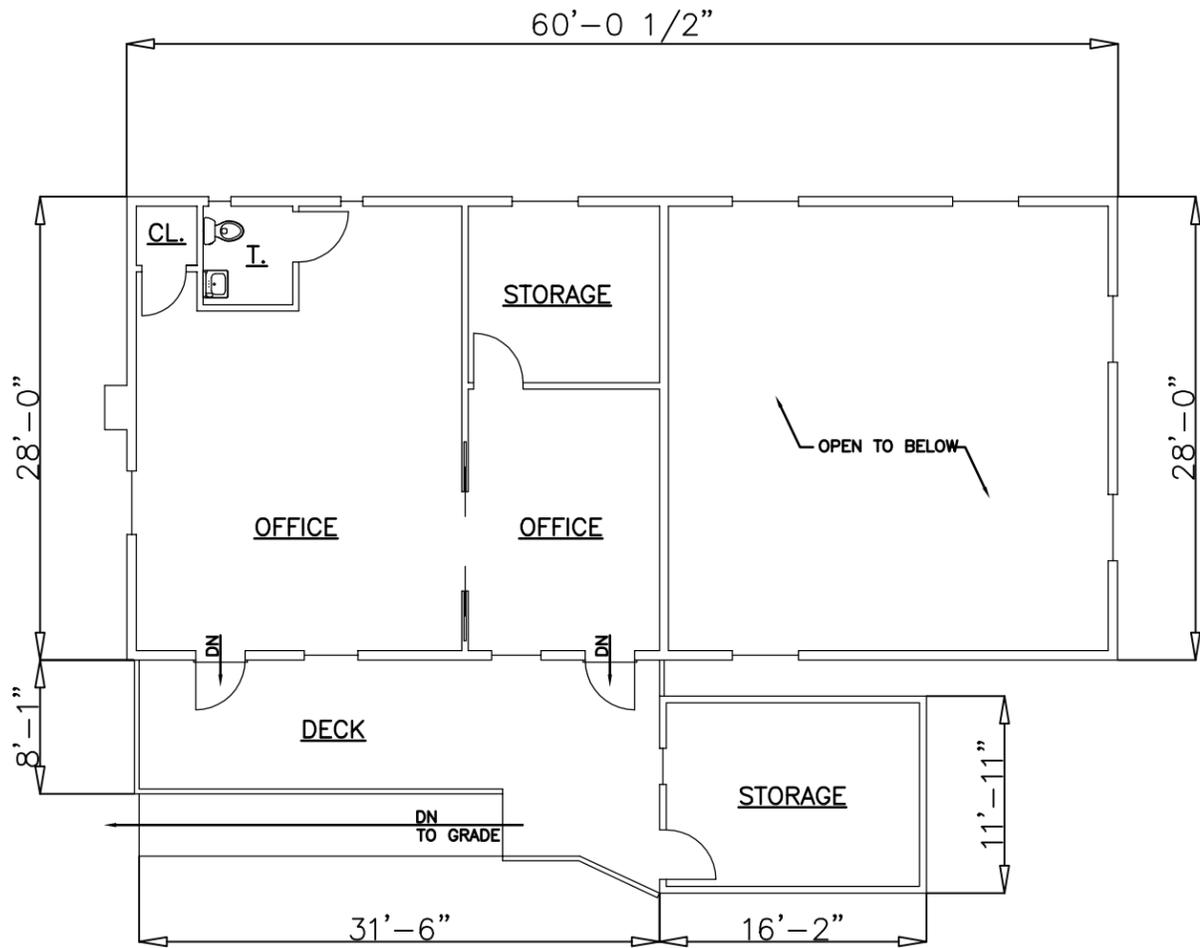
1. The entrance to the Upper Level is from a deck. Attached to the deck is a small storage building. The storage building has no heat and no water.
2. There is insulation in the Office Area on the Upper Level.
3. The existing concrete and concrete masonry wall that is adjacent to the deck and the small storage building, appears to have a water problem. This needs to be addressed.
4. The Lower Level has no insulation. There is insulation in the floor that supports the office area on the Upper Level.
5. The small adjacent storage building should be moved in order to help relieve some of the water problems on the adjacent concrete foundation. The storage building appears to have no foundation and it is sitting on a gravel base and doesn't appear to be anchored to the ground.

**RECOMMENDATIONS**

1. Move the shed adjacent to the building. Its proximity is causing rainwater to flow down along the foundation of the building. Cost - \$0.00.
2. Provide the building with gutters and downspouts. The estimated cost is \$3,000.00.
3. Provide additional earth against the foundation on downhill side to help channel rainwater and runoff away from the foundation. This could be done by Township forces when fill becomes available from other projects. The estimate cost to fill, grade and seed is \$2,000.00.
4. There is one large crack in the foundation wall which could be cleaned and grouted, after rainwater is redirected, by moving the adjacent shed and installing gutters and downspouts. The estimated cost is \$1,000.00.

The ramp does not meet current ADA requirements. This could be upgraded for about \$5,000.00.

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PROJECT :	<b>5 Year Capital Project</b> Delaware Township Pike County, PA
APPLICANT :	<b>Delaware Township</b> 116 Wilson Hill Road Dingmans Ferry, PA 18328

JOB NO.:	125575
DRAWN BY:	J. Sellers
CHECKED BY:	JST
SCALE:	NTS
PLAN STATUS:	

TITLE :	<b>EMERGENCY MANAGEMENT BUILDING</b> UPPER LEVEL +/- 920 SQ. FT. LOWER LEVEL +/- 1,680 SQ. FT.
<b>Boucher &amp; James, Inc.</b> CONSULTING ENGINEERS DOYLESTOWN    STROUDSBURG    MORGANTOWN REGIONAL OFFICE: 2738 RIMROCK DRIVE, STROUDSBURG, PA 18360 VOICE: (570) 629-0300    FAX: (570) 629-0306 <a href="http://www.bjengineers.com">www.bjengineers.com</a>	
PROJECT NAME :	<b>5 Year Capital Project</b>

SHEET	1 OF 1
DATE:	8/8/13

## DELAWARE TOWNSHIP MUNICIPAL BUILDING



### SUMMARY

The Delaware Township Municipal Building is a one-story building that consists of a multi-purpose room, office areas and a garage. The building has a Certificate of Occupancy from the Pennsylvania Department of Labor and Industry issued on July 11, 1980. It was designated then as an A5 and D3 occupancy. The building is a pre-engineering metal building with insulated walls and insulated roof.

### BUILDING INFORMATION

**SIZE:** The building is a 10,325 square foot building.

**CONSTRUCTION TYPE:** The construction type for the building was designated by Labor and Industry at the time as ordinary. Under the new Building Code, the building would be designated as either Type 3B building or a Type 2B building.

**FOUNDATION:** The foundation for the building is a concrete masonry foundation.

**FLOOR:** The floor is a concrete slab on grade.

**WALLS:** The exterior walls are insulated wall panels.

**ROOF:** The roof is a metal building type insulated roof.

**NUMBER OF STORIES:** One-story.

**UTILITIES: ELECTRIC:** Yes      **HEAT/COOLING:** Yes      **WATER:** Yes

**TOILET ROOMS:** 1 Men's Room/1 Women's Room in the Multi-Purpose/Office. There is also 1 toilet room in the Garage.

**ACCESSIBLE:** The toilet rooms in Multi-Purpose/Office are accessible. The toilet room in the Garage is not accessible.

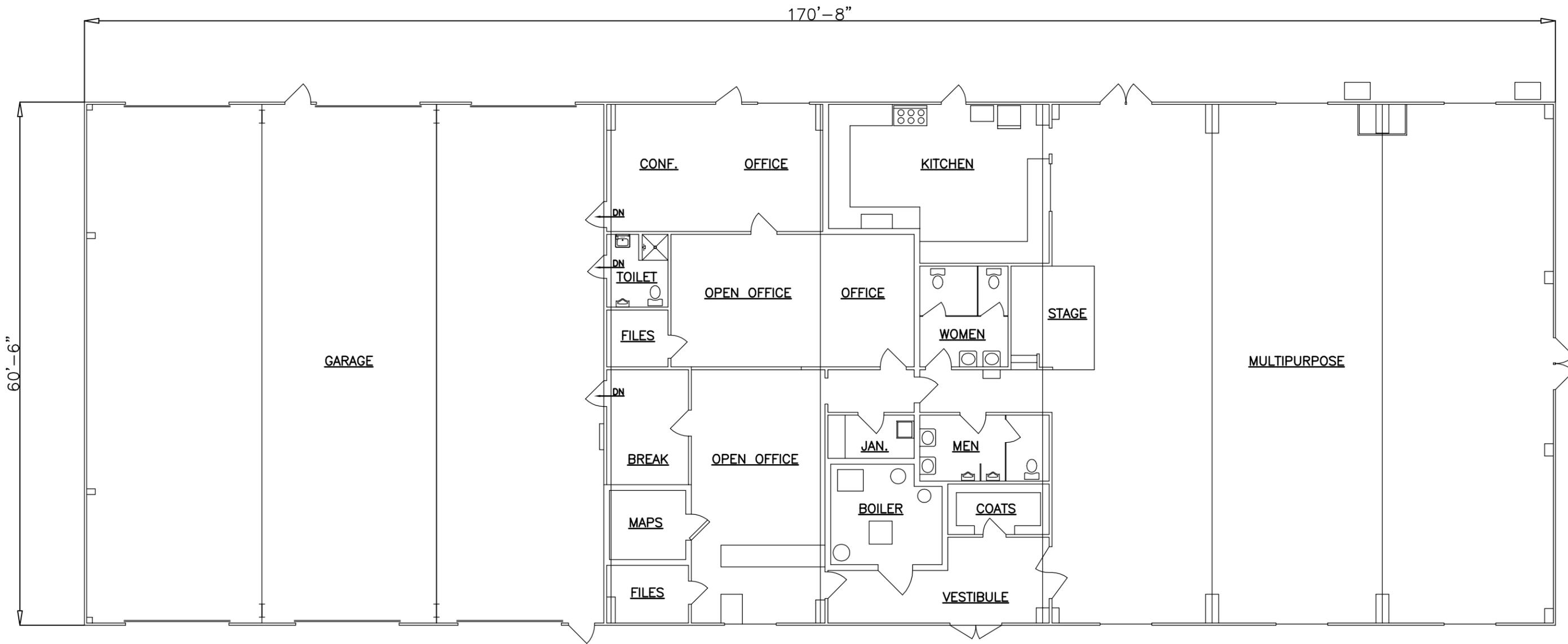
**ACCESSIBILITY:** The building is accessible.

### **OBSERVATIONS**

1. The building is in relatively good condition. It is approximately 33 years old.
2. In the multi-purpose room, it appears that there has been some movement in the slab on grade and it's around the perimeter of the building. Something has happened to make the floor move and it is visible.
3. The roof over the office and multi-purpose room appears to be in good condition even though it was applied in 1985-1986.
4. The floor in the garage could use a grout topping.
5. It is our understanding that the boiler was replaced in the Spring of 2013 . It is our understanding that the heating in the community room office does not appear to be adequate in the Winter. However, additional insulation was placed above the ceiling in the Winter of 2012/Spring 2013. We recommend the situation be evaluated after the room is in use through the next winter season.

### **RECOMMENDATIONS**

1. While not necessary, the floor in the garage could be topped with a grout to seal cracks and indentations from spalled concrete. Estimated cost \$7,000.00.
2. We do not recommend the uneven floor in the community room be repaired. The cost to repair versus the added utility does not seem to be beneficial in our mind. However, if the Township wishes to repair, we would recommend removal of the existing floor covering, blending the uneven surfaces with an application of grout and reapplying a floor covering. Estimated cost \$15,000.00-\$20,000.00.



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<p>PROJECT :</p> <p><b>5 Year Capital Project</b> Delaware Township Pike County, PA</p>	<p>JOB NO.:</p> <p>125575</p> <p>DRAWN BY:</p> <p>J. Sellers</p> <p>CHECKED BY:</p> <p>JST</p> <p>SCALE:</p> <p>NTS</p> <p>PLAN STATUS:</p>	<p>TITLE :</p> <p><b>Municipal Building +/- 10,325 SQ. FT.</b></p> <p><b>Boucher &amp; James, Inc.</b> CONSULTING ENGINEERS DOYLESTOWN    STROUDSBURG    MORGANTOWN REGIONAL OFFICE: 2738 RIMROCK DRIVE, STROUDSBURG, PA 18360 VOICE: (570) 629-0300    FAX: (570) 629-0306 <a href="http://www.bjengineers.com">www.bjengineers.com</a></p> <p>PROJECT NAME :</p> <p><b>5 Year Capital Project</b></p>	<p>SHEET</p> <p><b>1 OF 1</b></p> <p>DATE:</p> <p>8/8/13</p>
<p>APPLICANT :</p> <p><b>Delaware Township</b> 116 Wilson Hill Road Dingmans Ferry, PA 18328</p>			

## DELAWARE TOWNSHIP RECYCLING CENTER



### **SUMMARY**

The Delaware Township Recycling Center is a one-story wood frame pole building.

The building is divided into two sections; one has a drive through which will allow people to drive a vehicle or carry things through the building, unload them and put them in other portions of the building.

Part of the building has low head room and this area is equipped with storage bins for sorting materials.

The ceiling height in the drive through area is approximately 10' high and the ceiling height in the adjacent storage area is a sloping ceiling, which slopes from approximately 10' high to 5'4".

### **BUILDING INFORMATION**

**SIZE:** The building is 1,610 square feet. It is approximately 40' by 40'.

**CONSTRUCTION TYPE:** The building is what is termed in the construction industry as a pole building.

It is classified as a Type 5B wood frame structure.

The building itself is classified itself by the International Building Code as an S type occupancy.

**FOUNDATION:** The foundation for the building are treated wood poles.

**FLOOR:** The floor is a concrete floor.

**WALLS:** The walls are wood framing with metal siding.

**ROOF:** The roof is a wood truss metal roof and skylights.

**NUMBER OF STORIES:** One-story building without windows with one man door for egress and 2 upward acting garage doors.

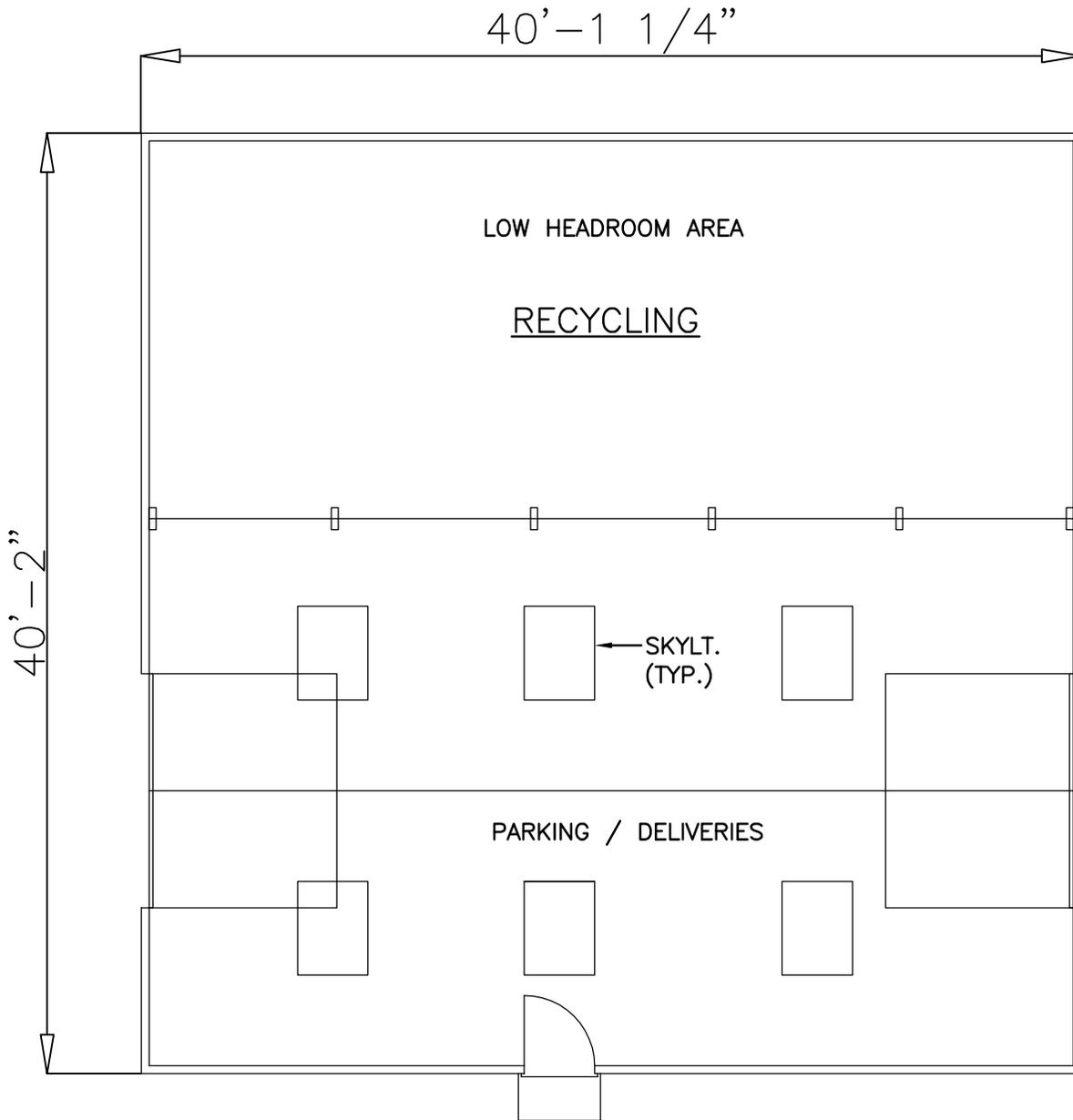
**UTILITIES: ELECTRIC:** Yes      **HEAT:** No      **WATER:** Unsure

**TOILET ROOMS:** None      **ACCESSIBLE:** N/A

**ACCESSIBILITY:** If it isn't already accessible, with a reasonable amount of work it could be made accessible.

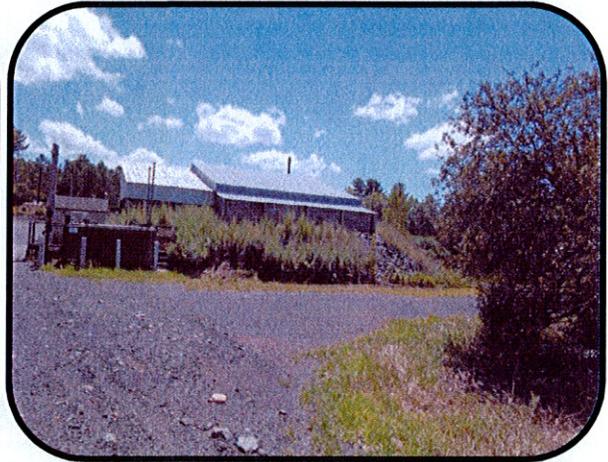
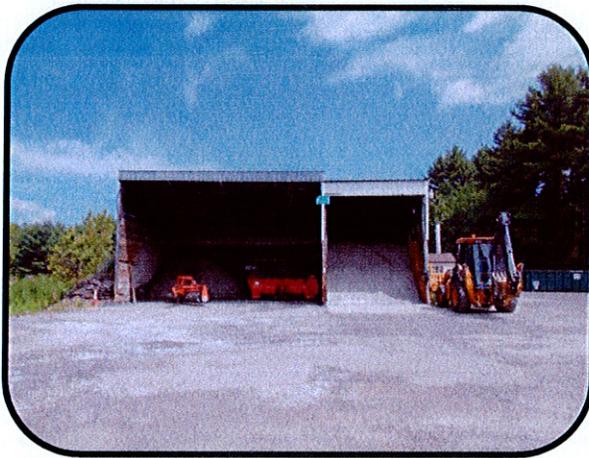
**RECOMMENDATION**

1. Install emergency lighting. The estimate cost is \$2,000.00.



DATE		REVISION		BY	CHKD.
<b>5 Year Capital Project</b> Delaware Township Pike County			<b>RECYCLING BUILDING +/-1,610 SQ. FT.</b>		
<b>Delaware Township</b> 116 Wilson Hill Road Dingmans Ferry, PA 18328			<b>Boucher &amp; James, Inc.</b> CONSULTING ENGINEERS DOYLESTOWN STROUDSBURG + MORGANTOWN		 <a href="http://www.bjengineers.com">www.bjengineers.com</a>
DR. BY: J Sellers	CK. BY: JST	SCALE: NTS	DATE: 8/8/13	JOB No. 1228004	SHEET: 1 OF 1
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## DELAWARE TOWNSHIP SALT & CINDER SHED



### SUMMARY

The Salt and Cinder Storage Shed is a 3-sided building with a roof. There are no doors or windows on the building. The entire front of the building is open for easy access to load and unload the salt and cinders.

### BUILDING INFORMATION

**SIZE:** The building is approximately 1,472 square feet.

**CONSTRUCTION TYPE:** The building is classified as Use Group U shed and Type 5B construction. The building is basically what appears to be a treated wood foundation with some wood siding and metal siding. The roof is all wood frame.

**FOUNDATION:** The foundation for the building is a treated wood foundation.

**FLOOR:** The floor is a combination of bituminous paving and concrete floor that appears as if it has had some heavy use.

**WALLS:** The walls are a combination of wood siding and metal siding.

**ROOF:** The roof is a metal roof on wood framing.

**NUMBER OF STORIES:** One-story building.

**UTILITIES: ELECTRIC:** Yes      **HEAT:** No      **WATER:** No

**TOILET ROOMS:** None      **ACCESSIBLE:** N/A

**ACCESSIBILITY:** The building is accessible.

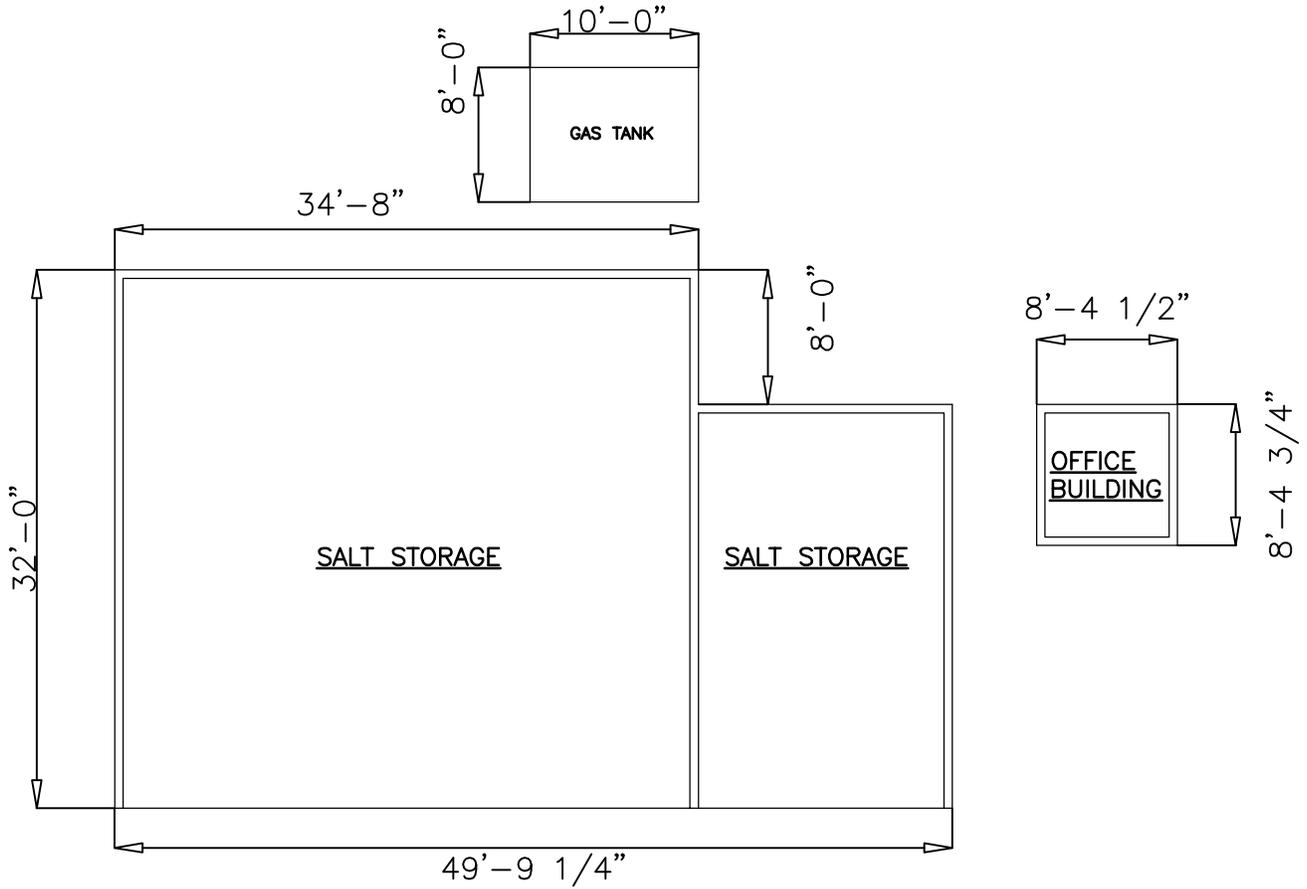
**OBSERVATIONS**

1. The building appears as if it is 15-20 years old. In some places in the building, the metal is rusting. Because of the salt and caustic conditions caused by the salt, the fasteners should be reviewed to determine whether or not they are structurally sound. If not, the whole structure could have new fasteners that are designed for caustic conditions.
2. Most of the floor was not observable because of the cinders and ashes on it, but it may be in a state of deterioration.

**RECOMMENDATIONS**

Depending upon priorities there are two avenues that can be pursued.

1. Repairs. The fasteners in the entire structure should be examined, tightened and/or replaced, if failing. We estimate this could be performed for \$15,000-\$20,000.00.
2. The Township may wish to consider replacing the existing facility with a new salt shed constructed of corrosive resistive materials. We estimate this could be done for approximately \$80,000.00.

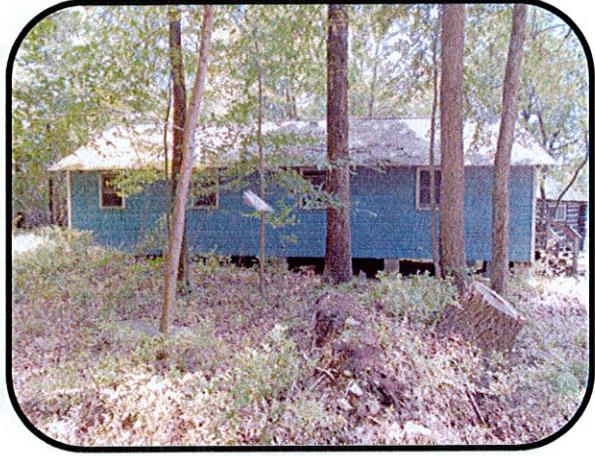
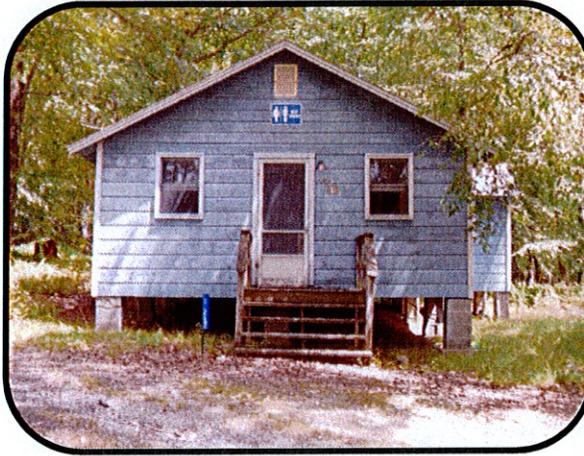


DATE	REVISION	BY	CHKD.
<b>5 Year Capital Project</b> Delaware Township Pike County		<b>SALT STORAGE BUILDING +/- 1,472 SQ. FT.</b>	
<b>Delaware Township</b> 116 Wilson Hill Road Dingmans Ferry, PA 18328		<b>Boucher &amp; James, Inc.</b> CONSULTING ENGINEERS DOYLESTOWN STROUDSBURG + MORGANTOWN <small>www.bjengineers.com</small>	
DR. BY: J Sellers	CK. BY: JST	SCALE: NTS	DATE: 8/8/13
		JOB No. 1228004	SHEET: 1 OF 1
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# **AKENAC PARK FACILITIES**

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## AKENAC PARK BATH HOUSE/COMFORT STATION



### **SUMMARY**

The Bath House/Comfort Station is a wood frame building that appears to have been built 30 to 40 years ago. The building consists of small dressing cubicles and a shower for both men and women. There is one means of egress out of the building. The building is built on piers. There is a small storage room. We're making an assumption that there's an electric panel in the storage room. At the rear of the building, there is a small enclosure that houses a water heater. There are 3 water closets, 2 sinks and one shower in both the Men's and Women's rooms. There is a vestibule in the front of the building where people can wait for someone to use the bath house/comfort station.

### **BUILDING INFORMATION**

**SIZE:** The building is approximately 942 square feet.

**CONSTRUCTION TYPE:** The building would be classified by the International Building Code as a 5B type wood frame building. The occupancy of the building would be classified as a B occupancy.

**FOUNDATION:** The foundation for the building is wood beams on top of concrete masonry unit piers.

**FLOOR:** The floor of the building is wood frame with what appears to be a vinyl composition tile or sheet vinyl floor.

**WALLS:** The walls are wood frame. The exterior face of the wall has horizontal lap siding. The interior face of the wall is wood paneling.

**ROOF:** The roof is a wood frame roof with asphalt shingles.

**NUMBER OF STORIES:** One-story building.

**UTILITIES: ELECTRIC:** Yes      **HEATING:** No      **WATER:** Yes

**TOILET ROOMS:** There are toilet rooms as mentioned in the Summary. There are toilets, sinks and showers for each of the toilet rooms.

**ACCESSIBLE:** No

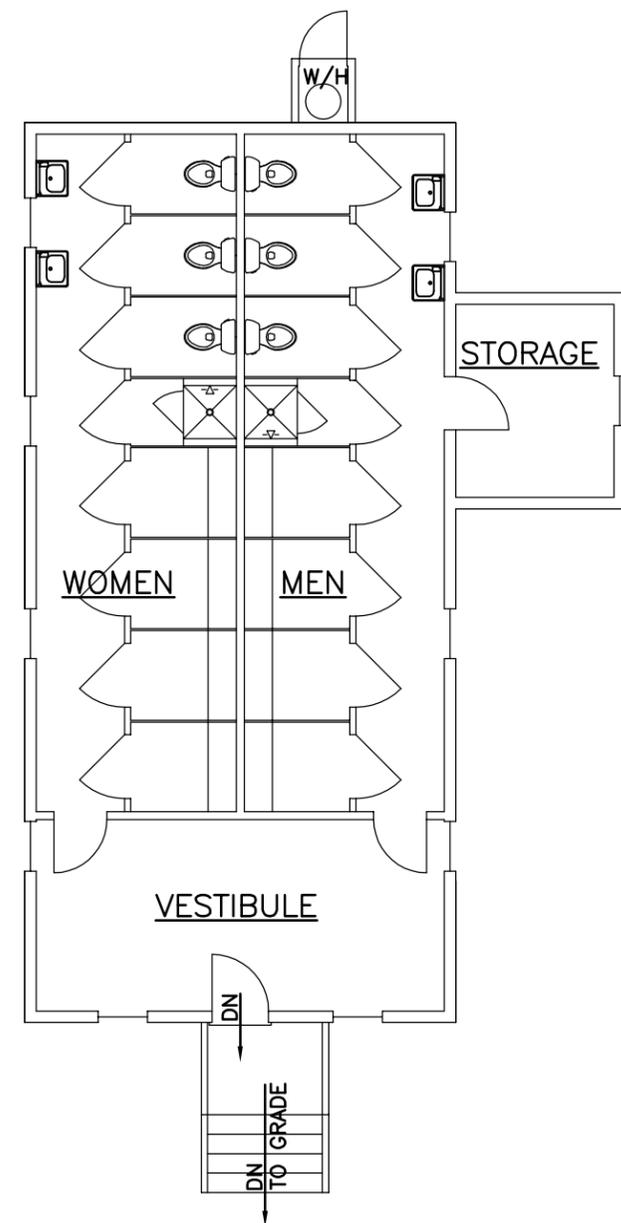
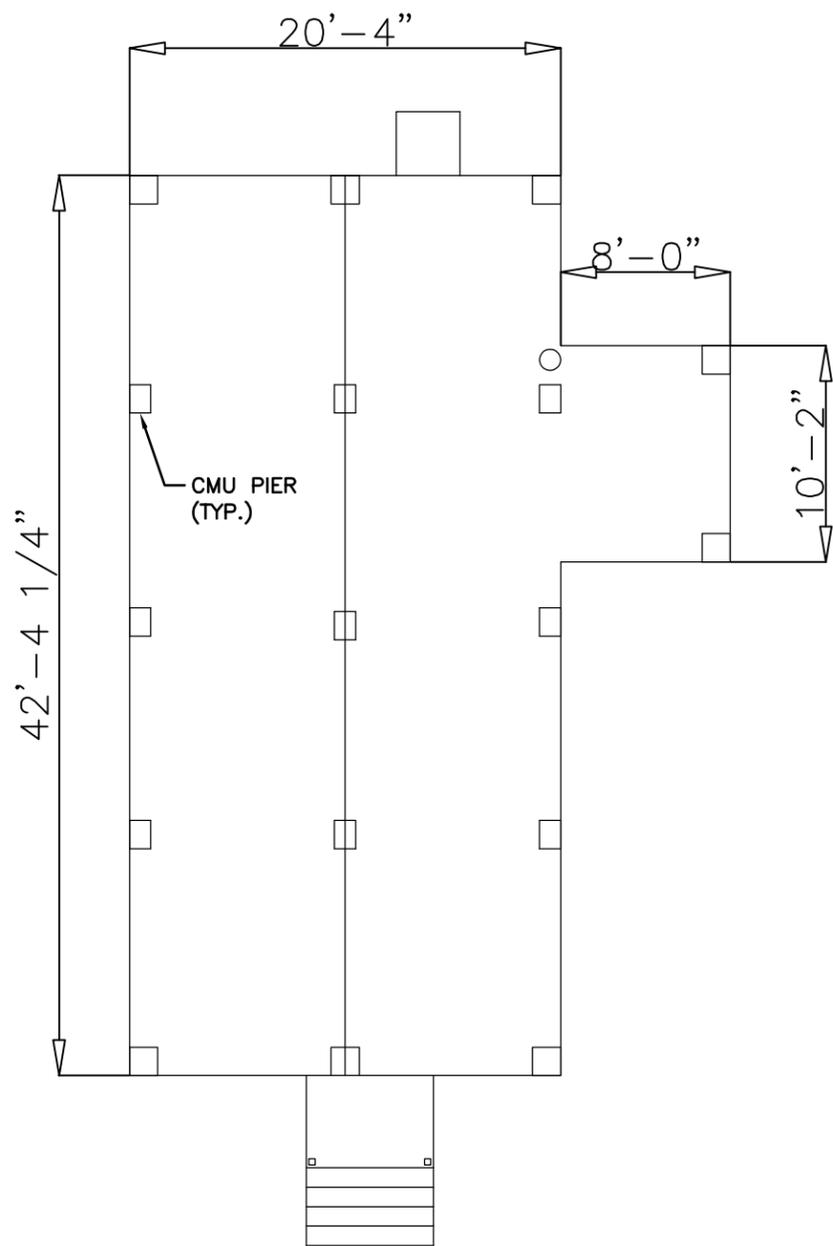
**ACCESSIBILITY:** The front entrance of the building is not accessible. A ramp or a lift would be required to make it accessible. There aren't any handicapped toilet stalls and the shower stalls are not handicapped accessible.

### **OBSERVATIONS**

1. The building is supported by a number of concrete masonry unit piers. These piers do not appear to be below the frost level and some of the piers are leaning, cracked and so forth. The piers should be temporarily stabilized until a decision is made pertaining to the structure.
2. The floor structure of the building is 2 x 6 floor joists at 16" on center with a main girder that supports these floor joists. On the initial observation, these appear to be marginally structurally adequate for the live loads for a facility of this type.
3. The exterior walls are 2" x 4" studs.
4. The rafters are 2" x 6" rafters at 24" on center. These rafters appear that they are marginally adequate for given design loads that they are required to carry for this type of structure.
5. The asphalt shingles on the roof have a great amount of moss on their surface. The shingles may be at the end of their life span.
6. The siding on the building appears to be horizontal wood siding. It appears to be similar to a Dutch lap type of siding. The siding is in need of painting and maintenance.
7. There didn't appear to be any insulation in the building at all. The building is probably not used during the winter months.
8. As mentioned before, the building is not handicapped accessible and if a ramp were to be built to make the building accessible, it would probably be somewhere in the range of 50+ feet. This means that the floor level is approximately 40" above grade and the ramp would need a landing at the top, an intermediate landing somewhere in the middle of the ramp, and a landing at the end. In all reality, it would probably be from the upper level of the ramp to the landing would be somewhere in the area of 55'. Another solution may be to have a lift instead of a ramp.
9. A new septic system is currently being permitted for this building.

**RECOMMENDATIONS:**

1. All aspects of this building are in need of repair. Repairing one item, for example does not alleviate the need for a more or less immediate repair to the roof. This is further compounded by the fact that it is not ADA compliant. We estimate the cost to completely refurbish the building and making it ADA compliant to be \$110,000.00. Even with this estimate it is difficult to estimate an accurate cost for the foundation (pier) repair.
2. A new building, ADA compliant is estimated to cost \$190,000.00.



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PROJECT :	<b>5 Year Capital Project</b> Delaware Township Pike County, PA
APPLICANT :	<b>Delaware Township</b> 116 Wilson Hill Road Dingmans Ferry, PA 18328

JOB NO.:	125575
DRAWN BY:	J. Sellers
CHECKED BY:	JST
SCALE:	NTS
PLAN STATUS:	

TITLE :	<b>AKENAC BATH HOUSE BUILDING +/- 942 SQ. FT.</b>
<b>Boucher &amp; James, Inc.</b> CONSULTING ENGINEERS DOYLESTOWN    STROUDSBURG    MORGANTOWN REGIONAL OFFICE: 2738 RIMROCK DRIVE, STROUDSBURG, PA 18360 VOICE: (570) 629-0300    FAX: (570) 629-0306 	
PROJECT NAME :	<b>5 Year Capital Project</b>

SHEET	1 OF 1
DATE:	8/8/13

## DELAWARE TOWNSHIP LIBRARY/HISTORICAL SOCIETY



### SUMMARY

The Library/ Historical Society Building is a one-story building that houses the Library and Historical Society. It is a wood framed building constructed on a foundation of masonry piers and wood beams. The building is both heated and air conditioned. The building appears to be in good repair.

### BUILDING INFORMATION

**SIZE:** The heated and cooled space of the building is 2,248 square feet. There are 2 small porches -- one at each end of the building. These porches have a combined area of 280 square feet.

**CONSTRUCTION TYPE:** The construction type as stated above is a wood frame building. It's classified under the International Building Code as Type 5B. The building has a Certificate of Occupancy from the Pennsylvania Department of Labor and Industry. The building received the Certificate of Occupancy permit on February 7, 2005. The building was classified as an A3 assembly-type building that allows an occupancy amount of 4 to 100 people to occupy the building.

**FOUNDATION:** The foundation as stated previously consists of masonry piers and wood beams.

**FLOOR:** The floors are wood frame construction.

**WALLS:** The walls are wood frame construction. The exterior walls are wood sided which is generally referred to as T-111 and the surfaces of the interior walls are generally gypsum board construction.

**ROOF:** The roof construction is wood frame with asphalt shingles.

**NUMBER OF STORIES:** One-story building.

**UTILITIES: ELECTRIC:** Yes      **HEATING:** Yes      **WATER:** Yes  
**AIR CONDITIONING:** Yes

**TOILET ROOMS:** 2      **ACCESSIBLE:** At the time the toilet rooms were approved by Labor and Industry, they probably met the requirements for accessibility. Under the new Code, they may be required to have more space and maneuvering clearance in order to be considered accessible.

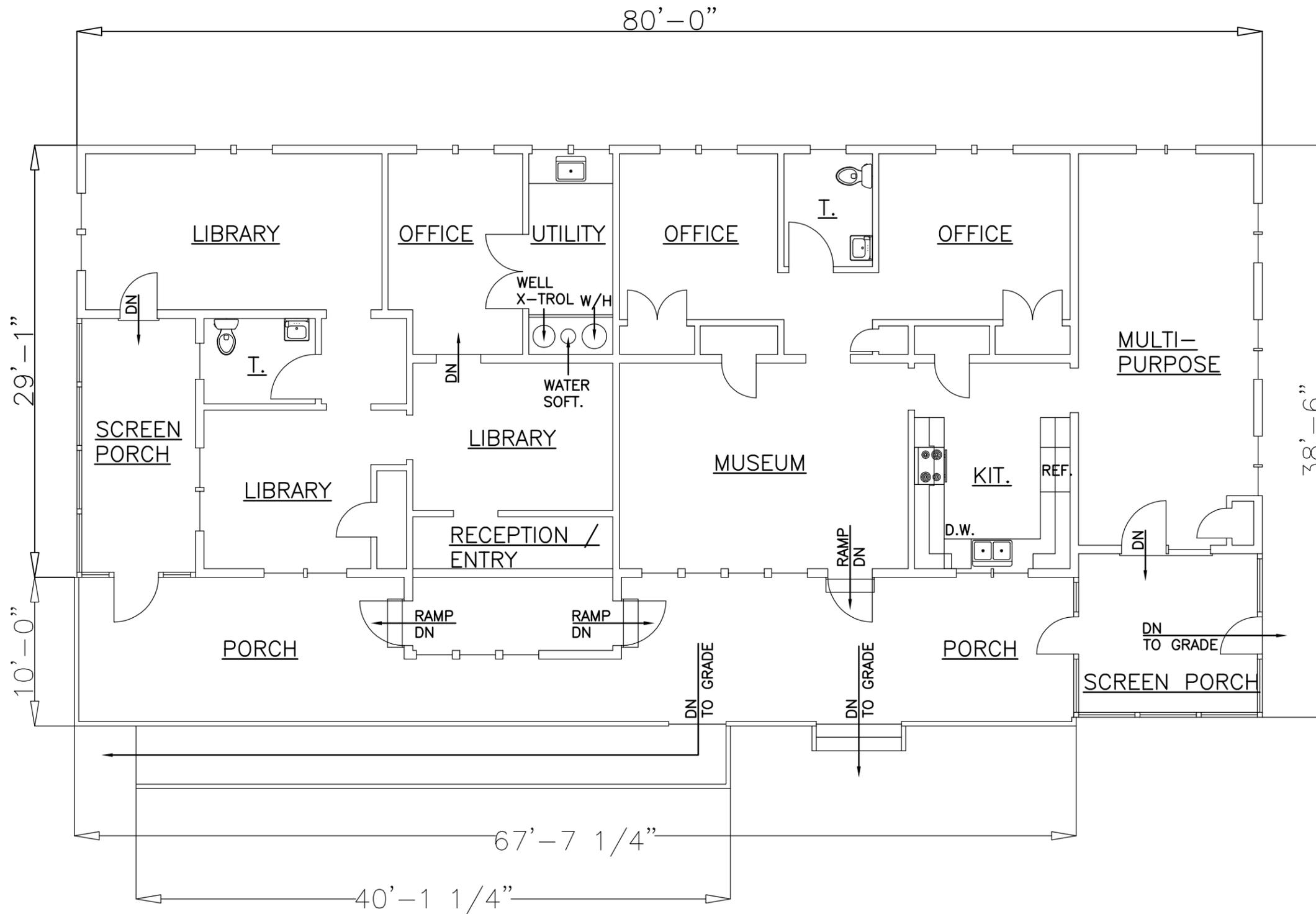
**ACCESSIBILITY:** There is a ramp. The existing ramp needs some work and the entrances to the building need some work in order to be made accessible. The ramp doesn't meet the present requirements and the 2 entrance doors to both the Library and Historical Society do not meet today's standards for accessibility. The exit from the multi-purpose room does not meet the handicapped code.

**OBSERVATION**

The building appears to be in very good shape and does not appear to have too many problems.

**RECOMMENDATION**

Other than typical building maintenance we see no need to recommend repairs or improvements to this building. Should the Township wish to bring the access ramp and doors into strict compliance with current ADA criteria we would estimate it could be done by township labor at a cost of approximately \$5,000.00. If done under prevailing wage guidelines our estimate would be \$7,000.00.

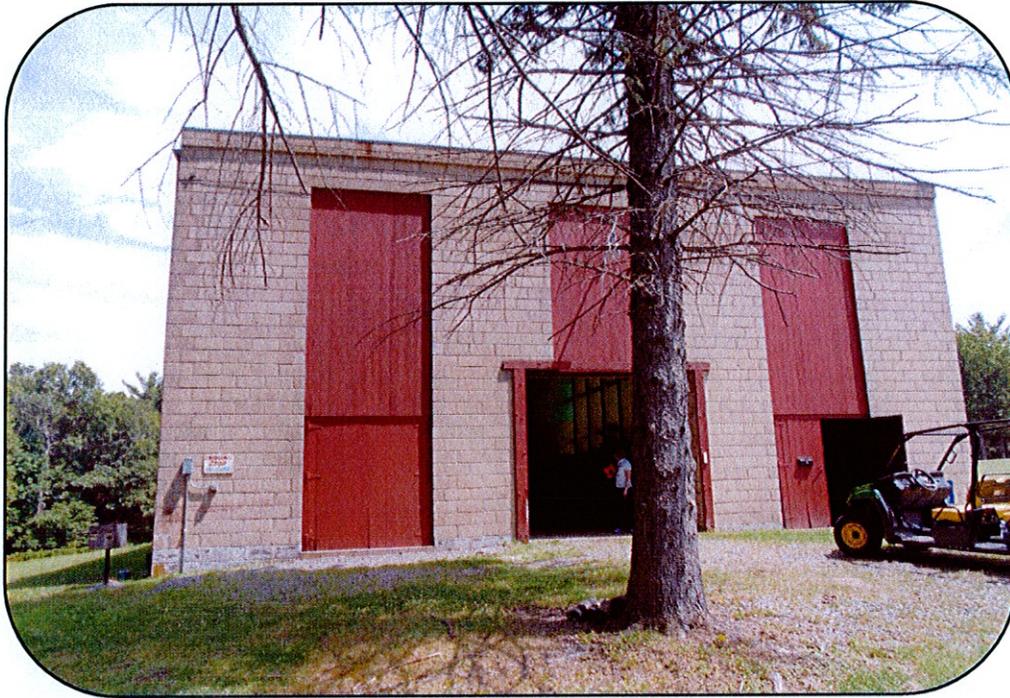


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<p>PROJECT :</p> <p><b>5 Year Capital Project</b> Delaware Township Pike County, PA</p>	<p>JOB NO.:</p> <p>125575</p> <p>DRAWN BY:</p> <p>J. Sellers</p> <p>CHECKED BY:</p> <p>JST</p> <p>SCALE:</p> <p>NTS</p> <p>PLAN STATUS:</p>	<p>TITLE :</p> <p><b>LIBRARY/HISTORICAL SOCIETY BUILDING</b> +/- 2,248 SQ. FT. (LIVING) +/- 280 SQ. FT. (SCREEN PORCHES)</p> <p><b>Boucher &amp; James, Inc.</b> CONSULTING ENGINEERS DOYLESTOWN    STROUDSBURG    MORGANTOWN REGIONAL OFFICE: 2738 RIMROCK DRIVE, STROUDSBURG, PA 18360 VOICE: (570) 629-0300    FAX: (570) 629-0306</p> <p><b>5 Year Capital Project</b></p>	<p>SHEET</p> <p><b>1 OF 1</b></p> <p>DATE:</p> <p>8/8/13</p>
<p>APPLICANT :</p> <p><b>Delaware Township</b> 116 Wilson Hill Road Dingmans Ferry, PA 18328</p>			



## **AKENAC PARK MAINTENANCE BUILDING**



### **SUMMARY**

The Maintenance Building is a large building which appears to have served as a multi-purpose building in the past.

The exterior walls are generally masonry, the floors are concrete and the roof framing is a system of steel beam construction that supports a wood frame flat roof structure.

There are 2 fireplaces in the existing building.

### **BUILDING INFORMATION**

**SIZE:** The building is 3,200 square feet.

**CONSTRUCTION TYPE:** The construction type under the International Building Code would generally be a 3B type of construction. Some of the exterior walls have some wood frame construction in them which would place it into a 5B type of construction. In any event, the building could be considered a 3B or 5B and still not have any problems.

**FOUNDATION:** The foundation is concrete masonry unit and concrete.

**FLOOR:** The floor of the building is a concrete floor.

**WALLS:** The walls are concrete masonry unit.

**ROOF:** The roof is a wood frame roof on steel beams.

**NUMBER OF STORIES:** One-story building.

**UTILITIES: ELECTRIC:** Yes      **HEATING:** No      **WATER:** No

**TOILET ROOMS:** 0

**ACCESSIBILITY:** The building could be made accessible very easily.

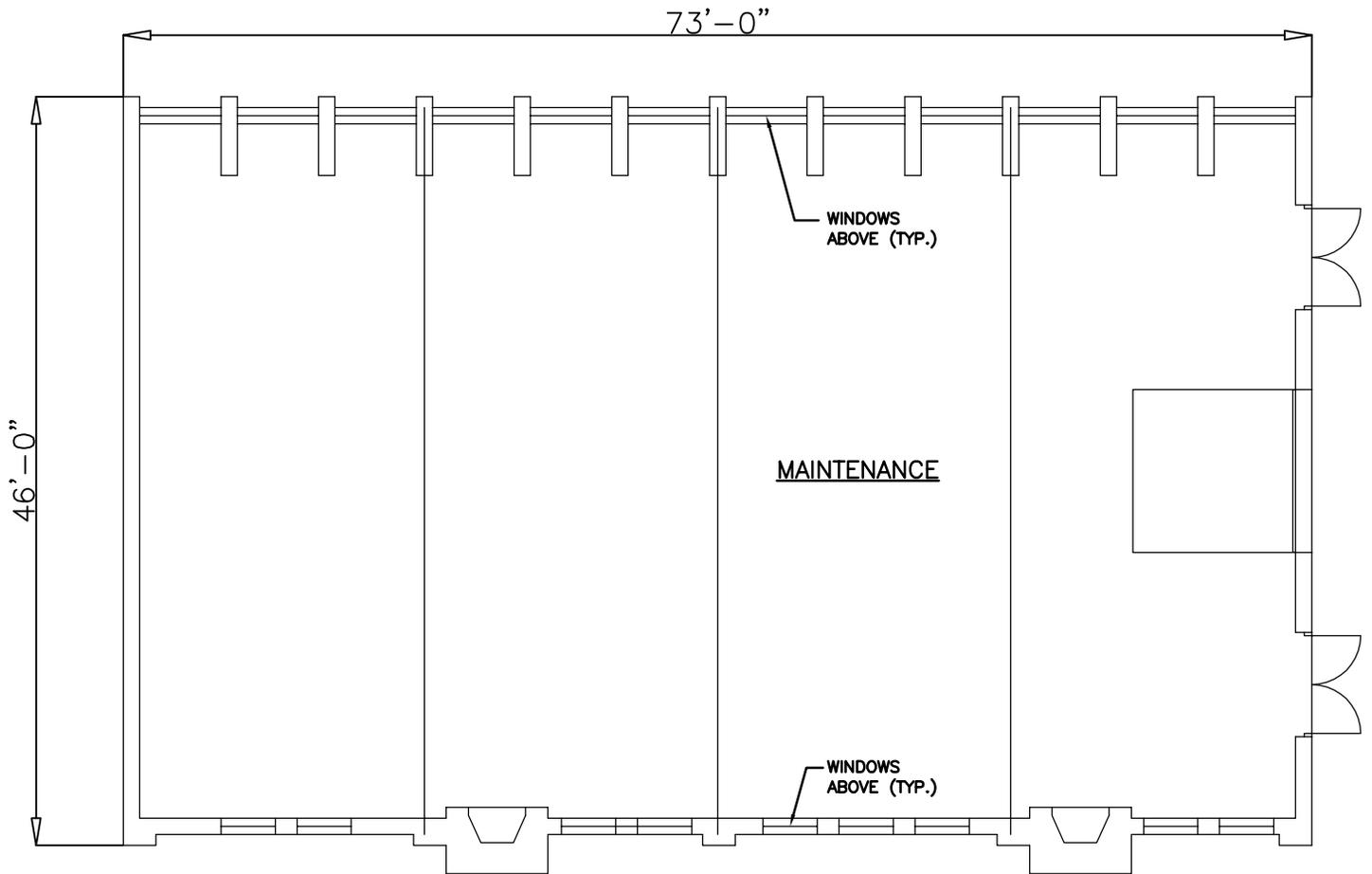
### **OBSERVATIONS**

1. There are some minor cracks in some of the concrete masonry unit walls.
2. There appears to be some rainwater damage on some of the exterior concrete masonry unit walls and these should be repaired.
3. The gutters and downspouts should be reviewed to determine if they are large enough to handle the rainwater.
4. The masonry portion of the building appears to need a cleaning and it probably never had a water repellent treatment.
5. The building now has two means of egress, but they are not reasonably remote. Another exit door should be placed in the building to make the exits reasonably remote.
6. There is electric in the building, but there isn't any emergency lighting or no exit signs in the building.
7. The current building code would require toilet rooms.
8. A new rubber roof membrane with celotex underlayment with twenty (20) year warranty was applied in summer of 2013.

### **RECOMMENDATIONS**

1. Calculate size of new rain gutters and downspouts and install. The estimated cost is \$6,000.00.
2. Patch cracks in foundation and masonry units. The estimated costs is \$3,000.00 to \$5,000.00.

3. Apply waterproofing to masonry walls. The estimated cost is \$5,000.00.
4. Provide emergency lighting. The estimated cost is \$3,000.00.
5. Provide another access door. The estimate cost is \$5,000.00.



DATE	REVISION	BY	CHKD.
<b>5 Year Capital Project</b> Delaware Township Pike County		<b>AKENAC MAINTENANCE BUILDING +/- 3,260 SQ. FT.</b>	
<b>Delaware Township</b> 116 Wilson Hill Road Dingmans Ferry, PA 18328		<b>Boucher &amp; James, Inc.</b> CONSULTING ENGINEERS DOYLESTOWN STROUDSBURG + MORGANTOWN <small>www.bjengineers.com</small> 	
DR. BY:	CK. BY:	SCALE:	DATE:
N	JST	NTS	8/8/13
		JOB No.	SHEET:
		1228004	1 OF 1
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## AKENAC PARK RECREATION CENTER



### SUMMARY

The Akenac Recreation Building is a one-story facility that has a large recreation room, 3 toilet rooms and a kitchen. There is a fireplace in the recreation room, a deck outside the building and a screen porch and a covered porch.

### BUILDING INFORMATION

**SIZE:** The enclosed portion of the building is 3,930 square feet and the screened porch and the covered porch has a square footage of 784 square feet.

**CONSTRUCTION TYPE:** The construction type for the building would be considered a 5B wood frame building and the building could be classified by the International Building Code as an A3 occupancy, which would be designated as a recreation/community building.

**FOUNDATION:** The foundation for the building is concrete masonry unit piers and wood beams.

**FLOOR:** The floor is wood frame construction.

**WALLS:** The walls are wood frame with wood siding on the exterior and wood paneling on the interior.

**ROOF:** The roof system is wood frame trusses. The rafters span from truss to truss and the roof covering is asphalt shingles.

**NUMBER OF STORIES:** One-story

**UTILITIES: ELECTRIC:** Yes                      **HEAT:** No                      **WATER:** Yes

**TOILET ROOMS:** 1 Men's Room/1 Women's Room      **ACCESSIBLE:** 1 Unisex

**ACCESSIBILITY:** The building is not accessible.

### **OBSERVATIONS**

1. There is a grid of piers that support the building and it is questionable whether the piers go down to frost level.
2. The beams that support the floor joists are questionable. The floor joists themselves are marginally adequate. They are 2 x 8's at 16" on center and they are spanning 10 feet.
3. The floor structure and supporting foundation of the building should be analyzed to determine whether it is adequate.
4. The walls appear to be 2x4 wood construction with wood siding on the exterior and wood paneling on the interior.
5. The roof structural system consists of wood trusses that span the entire width of the building and are supported by wood columns that extend down to masonry piers under the building. The rafters span from truss to truss. The roof sheathing is wood framing. The roof covering is asphalt shingles. The truss and roof structure should be analyzed to determine if it meets the requirements of the Building Code.
6. There does not appear to be any insulation in the building. It's possible that this building is not used in the Winter months. If it were going to be used in the future during Winter months, it would have to be insulated.
7. The building appears to need another means of egress. The remoteness of the doors does not meet Code. It's a recommendation that another door be placed near the rear of the building.
8. In the Kitchen, the floor tile should be analyzed to determine whether it contains any asbestos.
9. The grade around the building should be studied to make the building officially a one-story building. There may be some fill that would have to be brought in to make the

building one story. If the building is two stories, it would have to be totally fire rated or sprinkled.

10. If the building is going to be used year round, it should be determined how the building could be insulated.
11. If the building is going to be used year round and it is going to serve as a restaurant, the building would have to be either sprinkled or divided into fire areas. Each of the fire areas would have to be under an occupant load of 100.
12. To meet handicapped accessibility requirements, the building should have two accessible means of egress. These means of egress could be provided by ramps.
13. The porch roof structure should be analyzed to determine whether or not it is adequate to meet the Building Code.
14. The electrical service should be analyzed to determine whether or not it is adequate.

### **RECOMMENDATIONS**

This building has unique character and currently appears to be the “heart” of the Akenac complex of buildings. Unfortunately, its rustic character may be more or less impacted depending upon the nature and to what extent (year round) the building is going to be used. We are aware that the Township is seeking a grant in the amount of \$250,000.00 to construct an annex to the building which will house a new kitchen.

As suggested under Observations, the intensity of projected use may dictate the type and extent of improvements necessary.

#### **A. Minimum Recommendations**

1. To maintain the building under any scenario will require repairs to the supporting piers. During our initial observations we were unable to determine if they have frost protection. Due to the shifting of some of the piers we believe they do not. However, after careful consideration it may not be feasible to provide frost protection due to the difficulty of working beneath the existing structure. With that understanding, all piers should be thoroughly checked for plumb and structural integrity. Repairs are estimated to cost \$25,000.00, although this estimate is subject to revisions on closer inspection.
2. The floor beams appear to be marginally adequate. A structural evaluation should be performed. Assuming additional support is needed, the existing beams could be augmented with additional framing. The estimate cost is \$10,000.00-\$15,000.00.
3. There are areas where the siding should be repaired. The estimated cost is \$3,000.00.

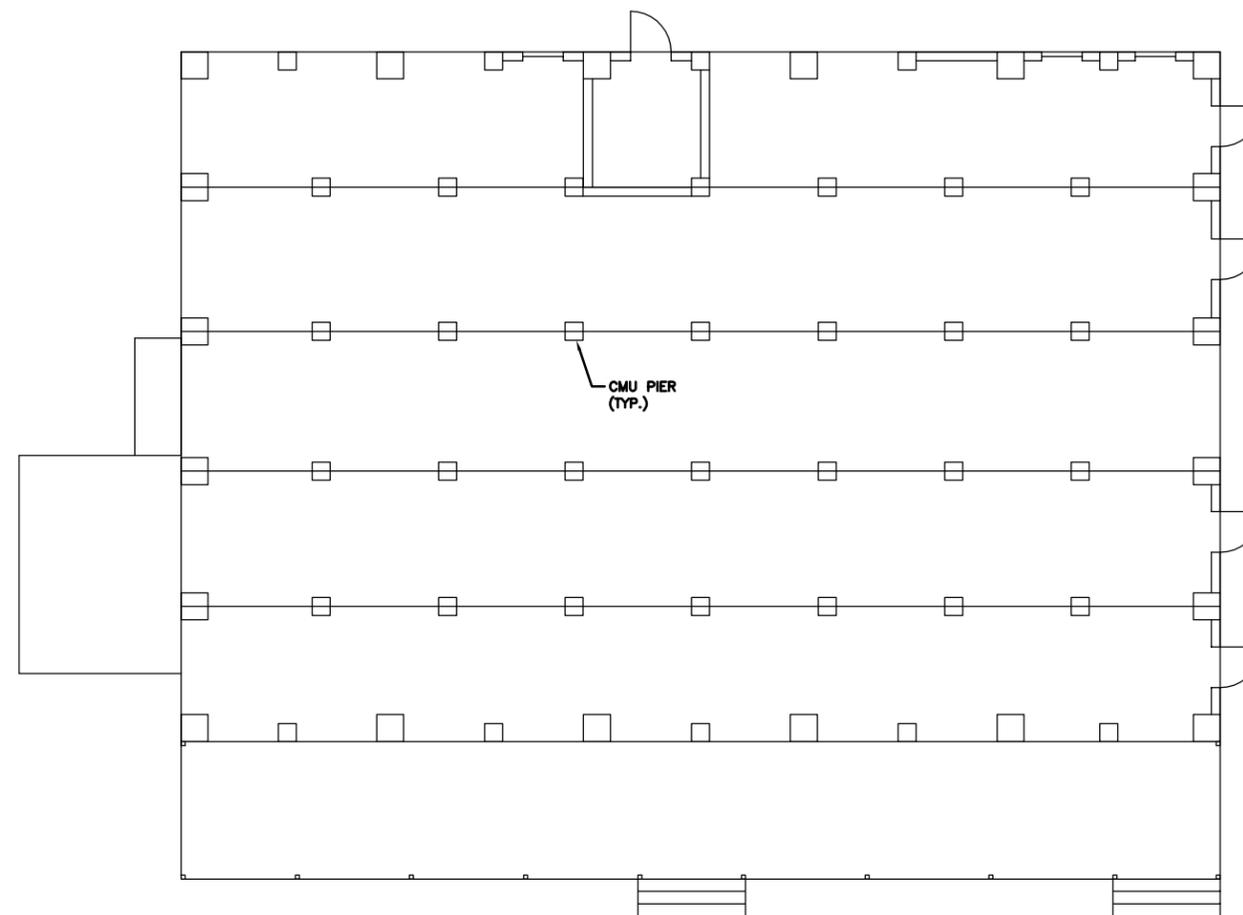
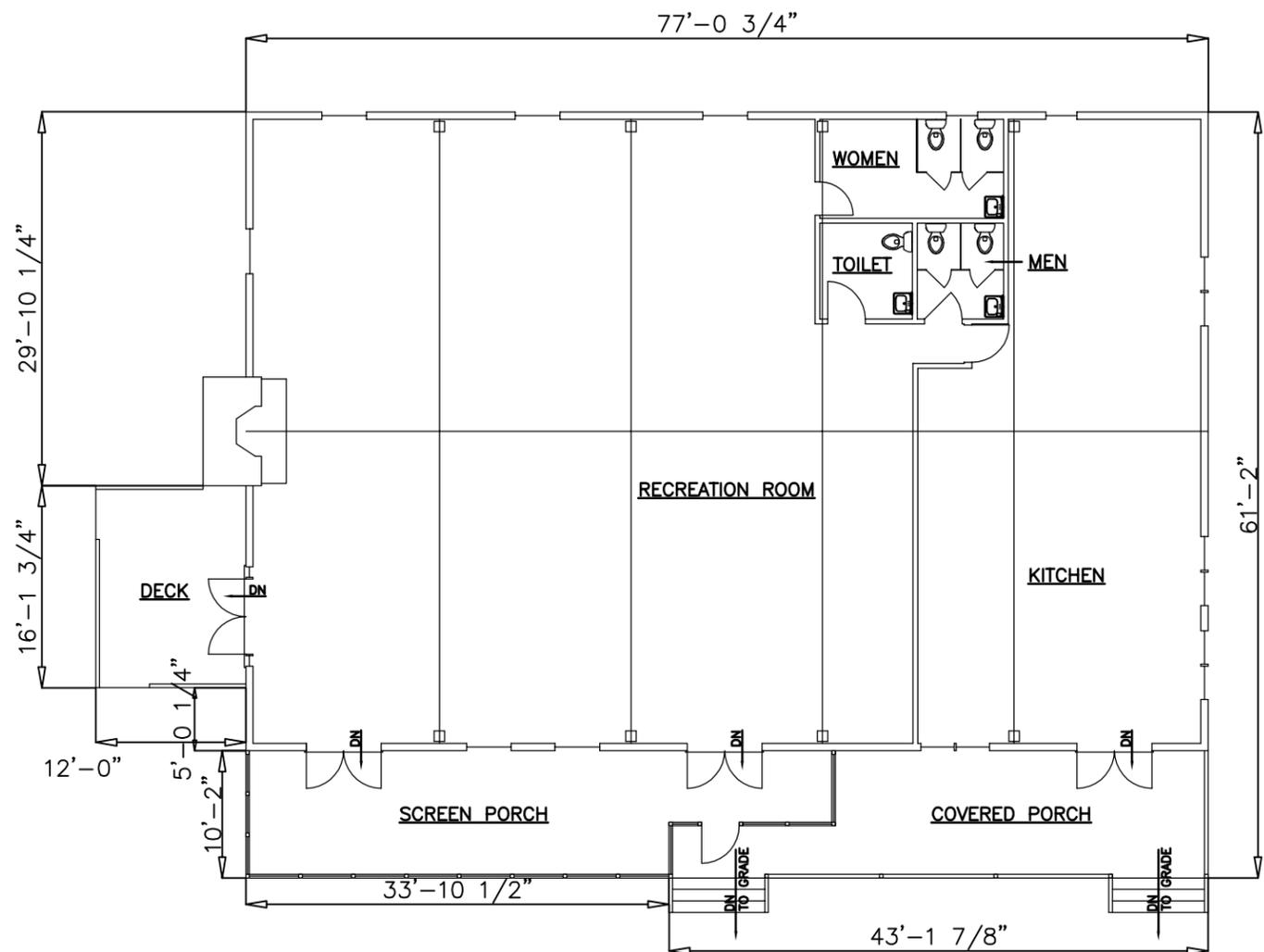
4. Ramps should be provided to make the structure ADA accessible. The estimated cost \$10,000.00.
5. Place earth along back of building to insure compliance with Building Code as a single story structure. The estimated cost is \$15,000.00 to \$20,000.00.
6. Analysis of trusses, porch and electrical systems should be performed to determine if there are additional concerns. The estimated cost is \$10,000.00.

B. Additional Recommendations

Depending upon the intended use of the building the Board may wish to consider a heating system and insulation for winter use. Also, the intensity of use may require installation of a sprinkler system. The estimated cost to accomplish this is \$200,000.00-\$225,000.00.

In summary, while this structure is the embodiment of a rustic, recreational center in its existing condition, upgrades to a more intense use may not be cost effective. The cost of the kitchen, minimum recommended improvements and conversion to year round use could cost as much as \$530,000.00 to \$550,000.00. If additional support is needed for the roof trusses, along with a new roof and upgrades to the electrical system, the costs could approach \$600,000.00 or more. Unfortunately, all this might be still supported on piers not extending deep enough for frost protection.

For comparison we estimate a new structure, similar in character, meeting current codes with a new kitchen and foundation offering frost protection would cost \$800,000.00.



PROJECT :  
**5 Year Capital Project**  
 Delaware Township  
 Pike County, PA

APPLICANT :  
**Delaware Township**  
 116 Wilson Hill Road  
 Dingmans Ferry, PA 18328

JOB NO.:  
 125575

DRAWN BY:  
 J. Sellers

CHECKED BY:  
 JST

SCALE:  
 NTS

PLAN STATUS:

TITLE :  
**AKENAC RECREATION BUILDING +/- 3,930 SQ. FT. (LIVING)**  
**+/- 784 SQ. FT. (SCREEN & COVERED PORCHES)**

**Boucher & James, Inc.**  
 CONSULTING ENGINEERS  
 DOYLESTOWN    STROUDSBURG    MORGANTOWN

REGIONAL OFFICE: 2738 RIMROCK DRIVE, STROUDSBURG, PA 18360  
 VOICE: (570) 629-0300    FAX: (570) 629-0306  
 www.bjengineers.com

PROJECT NAME :  
**5 Year Capital Project**

SHEET  
**1 OF 1**

DATE:  
 8/8/13

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## **ADDENDUM A AKENAC RECREATION BUILDING**

Jon Tresslar and John Schoonover (Architect) visited the site on October 10, 2013. The purpose of the visit was to make a more detailed inspection of the pier system foundation structure and to further assess the building for conversion to year round use.

Prior to our visit, Township staff excavated adjacent to several of the piers near the perimeter of the structure, and by hand underneath the structure at two locations. All excavations indicated the masonry blocks forming the piers were set upon approximately six to eight inches of concrete just below grade. Ledge rock was visible at various locations adjacent to and beneath the structure. Some piers may be sitting on ledge rock, others may not.

As state previously, approximately 1/3 of the 66 piers are misaligned. It is not possible to determine if this is a result of frost heave or loading. The entire roof load is transmitted through trusses to columns setting on 12 piers on the perimeter. A structural analysis may find the piers inadequate to support the column loads. However, there is no visible leaning or racking of the overall structure which has been standing 50-60 plus years. If the piers supporting the columns are in fact sitting on rock, the support analysis could prove them adequate. The remainder of the piers offer support for the floor system, only.

The front porch is supported on a concrete slab with two large cracks and noticeable deflection.

The half round log siding appears to be sound as does the roof shingles. Windows are not adequate for winter occupancy and will have to be replaced.

Water is supplied from a well adjacent to the building. However, supply lines run on top of the ground beneath the structure and are not protected from freezing.

The ADA accessible ramp is marginal and should be modified as part of an overall building upgrade. Current regulations require vehicle parking at the ramp to be a hard surface.

The interior of the building is in adequate condition for use in temperate weather. There is no insulation in the ceiling or floors. Bathrooms need modifications to meet current ADA accessible requirements. The roof trusses and wall framing are in good condition as is the wood flooring. However, there is tile flooring in the former kitchen area which could contain asbestos.

As stated, the Board would like to know our opinion of total cost to add a new separate kitchen structure, incorporate the former kitchen space into overall community area and winterize the facility. In making these improvements there will be a need to make sure all new construction is code compliant. This will require additional access, insulation in the floor, walls and ceiling and new HVAC equipment and electrical work. Outside utility lines will have to be protected, and lastly, the foundations stabilized.

After much research and consideration it is our opinion the building use would be classified A-3 under the Building Code. Under this classification one could have up to 300 occupants and not need to sprinker the building.

The park is considered to be in the 5A Climate Zone. Accordingly, the ceiling requires insulation capable of meeting R-38, the walls, R-21, and the floors, R-30. To preserve the aesthetics of the interior we recommend insulation board on top of the exposed ceiling planks. This would require removal of shingles, placing of foam board, new plywood and new shingles. We estimate this cost to be \$10/sf. The walls would need to have the interior sheathing removed and insulation placed and then new sheathing or paneling applied. Estimate \$6.00/sf. The floor could have spray-on insulation from beneath which we estimate at \$5.00/sf.

**Roof and Insulation**

Roof	5,016 sq. ft x \$10.00	\$50,160
Walls	2,956 sq.ft. x \$6.00	\$17,736
Floor	4,500 sq.ft. x \$5.00	\$22,500
	Total Roof and Insulation	\$90,396

**HVAC System**

A new heating and air condition system will be required. Current estimates are \$17-\$21/sf.  
 Use \$19.00 4,500 sq.ft. x \$19/sq.ft.=\$85,500.00

**Plumbing**

New plumbing is required including bathroom upgrades \$18-\$23/sq.ft.  
 Use \$20/sq.ft. 4,500 sq.ft. x \$20/sq.ft. = \$90,000.00

**Electrical**

New electrical work will be required. Our history has a wider range of prices \$23-\$48 sq.ft.  
 Use \$30/sq.ft. 4,500 sq.ft. x \$30/sq.ft. = \$135,000.00

**Windows/Doors/Ramp**

New windows/doors	\$10,000.00
New access door	\$5,000.00
New handicap ramp (including paved surface)	\$5,000.00

**Foundation**

Considerable thought has been given to the foundation. Floor joists were analyzed and determined to be marginally adequate but okay. Stringers will have to be reinforced. We believe the best solution to repair and stabilize the foundation is to construct a perimeter foundation in place beneath the existing structure. The structural loads are transmitted to the ground via the column loadings on the outside piers. The perimeter foundation can be used to buttress these piers. Secondly, the enclosed foundation system will provide frost protection for the interior piers. There are 66 piers supporting the building. We estimate perhaps 20 should be rebuilt due to being out of plumb and/or of questionable supporting capacity.

We estimate the piers can be re-constructed at a cost of \$1,000/pier on average.

20 Piers at \$1,000/pier = \$20,000.00

## Perimeter Foundation

The perimeter foundation should have a footer placed below frost level; in this region 48" below grade. Bedrock could be a problem during excavation. If solid rock is encountered, at less than 48", the foundation could be pinned into the rock. The foundation wall could be a combination of concrete and masonry block. For this estimate it will be assumed a footing can be placed 48" below grade and will extend out of the ground an average height of six feet to the underside of the framing (higher in the back, less in the front). Because of difficulty in working we estimate the cost will run \$500/cy of concrete.

80 cubic yards @ \$500/cy = \$40,000.00

## Existing Porch

Remove and replace existing porch to allow for new foundation under the main structure and to provide proper support for the porch.

770 sq.ft. x \$25/sq.ft. = \$19,250.00

## Total Cost

Total estimated cost of repairs to existing structure \$500,146.00

## Contingency

Because of the unknowns we believe a contingency of 20% is warranted \$100,029.00

## Total Cost Estimate

Cost per square foot (\$600,175/4,500) \$133.37 sq.ft.

Our database of projects suggests complete renovations fall in the range of \$135-\$190/square foot. The above estimate is on the lower end of this range. This is of some concern given the level of difficulty we expect with the foundation remediation and the fact we will be using prevailing wages. However, we believe this can be explained in that the interior level of finish is minimal and rustic.

If we add the cost of the proposed kitchen to the plan we have an additional cost, estimated at \$205,000.00 to add to the Total Cost Estimate.

Total Cost Estimate \$600,175.00

Estimated Kitchen Cost \$205,000.00

**Total Cost Estimate, Plus Kitchen \$805,175.00**

New Total Square Footage = 4,500 + 900 = 5,400

**Cost Per Square Foot (\$805,175/5,400) \$149.10 sq.ft.**

For the Board's consideration we would like to offer a scenario whereby a new building would be provided along the lines of the existing footprint to include a kitchen as it was originally constructed. Schoonover and Vanderhoof have recently designed, contracted and constructed a building similar in nature at a cost of \$180/sq.ft. We have attached photos of the completed project.

Cost to construct 4,500 sq.ft. @ \$180.00/sq.ft. = \$810,000.00\*

\*This does not include sitework or demolition of the existing structure.

By remodeling the existing structure and adding the kitchen extension one will gain some additional square footage and maintain the historic ambiance. By constructing a new structure one can duplicate the ambiance (including re-using the existing truss work) and forego the complications associated with major upgrades to an older structure. Also, a new structure could potentially make use of a partial basement for placement of a new heating unit and provide additional storage.



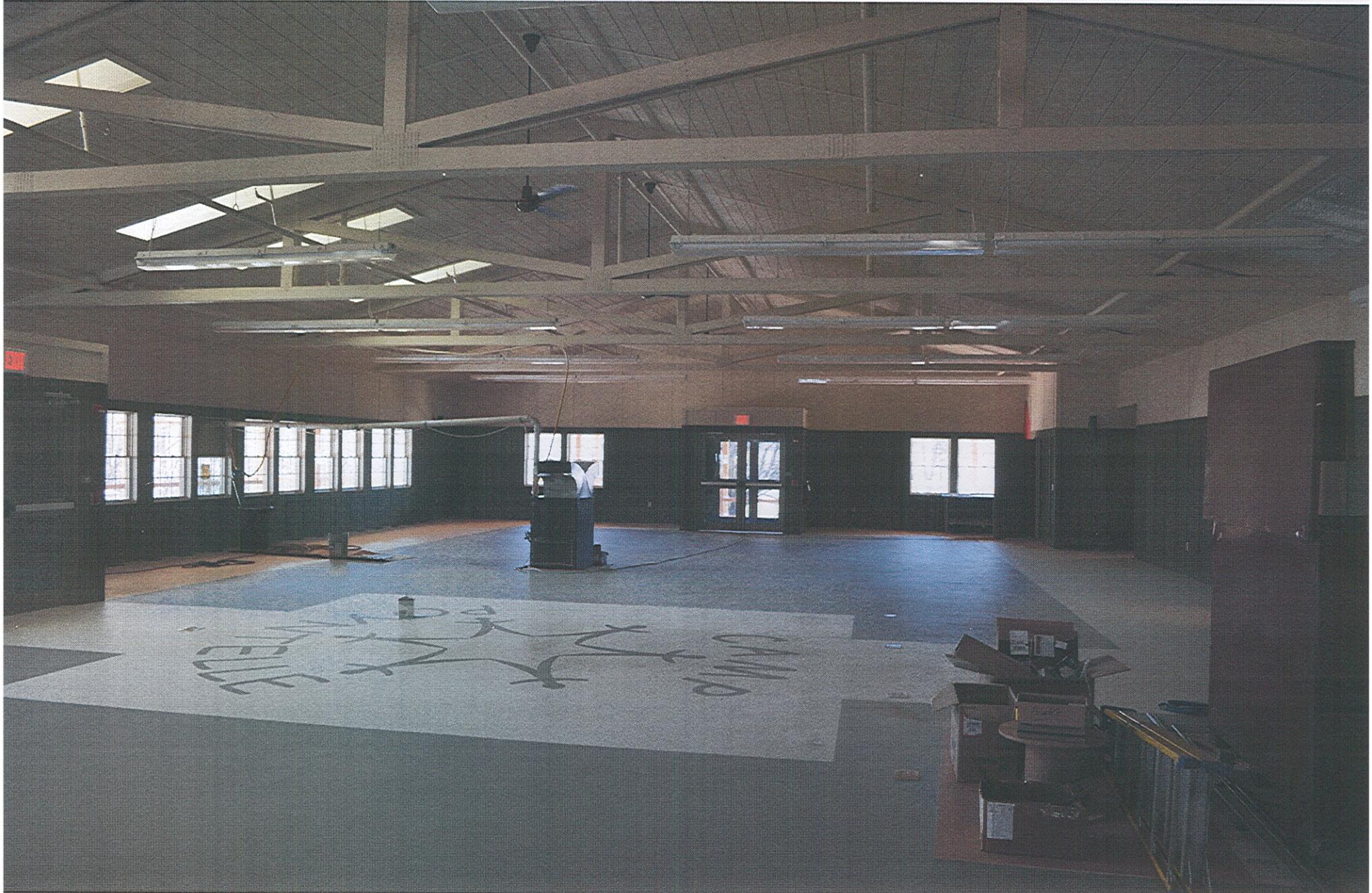
Claire Field Perlman  
Family Dining Hall  
Dedicated July 10, 2011

Claire Field Perlman  
Family Dining Hall



Claire Field Perlman  
Family Dining Hall

Claire Field Perlman  
Family Dining Hall  
Dedicated July 30, 2010



**ADDENDUM B  
NEW MUNICIPAL BUILDING**

The Board expressed interest in construction of a new municipal building in ten years. A question was how much money would have to be put aside each year to fund the project in ten years? For purposes of this analysis it will be assumed the amount of space currently being used for the municipal staff, rest rooms, kitchen and meeting/community room will be provided in a two story structure. We will also provide some additional area to accommodate the Emergency Management offices currently in a separate building and room for some expansion. The structure will be placed on the same site. The garage portion of the existing building will be retained and the remainder of building will be razed.

Current Area of Building= 60' x 110' = 6,600 sq.ft.  
 Emergency Management= 28' x 30' = 840 sq.ft.  
 7,440 sq.ft.

Rounding, provide 8,000 square feet.

Boucher & James, Inc. has recently joint ventured with Schoonover and Vanderhoof to design a new municipal building and garage complex in Smithfield Township, Monroe County, PA. Photos of the municipal building are attached. The cost of construction in today's dollars is \$210/sq.ft. This excludes sitework.

Therefore, estimated cost of a new 8,000 sq.ft. municipal building is:  
 8,000 x 210 sq.ft. = \$1,680,000.00

The total cost of a new facility at the same location is:

Demolition of existing building	\$ 50,000.00
Sitework	\$ 300,000.00
New Building	<u>\$1,680,000.00</u>
	\$2,030,000.00

Inflation for the previous ten years has averaged 2.5%. Interest rates have averaged 0.5% at best. Therefore, we will assume the net cost of money over the next ten years will compound at 2% (2.5% - .5% = 2.0%).

A present value cost of \$2,030,000 in 2014 will cost \$2,474,559 in 2024. The Township will have to make equal annual contributions of \$247,456.00 to reach a target amount of \$2,474,559.00 in the year 2024, assuming they start in 2014 with the first deposit.







**APPENDIX A  
5 YEAR PRIORITIZATION COSTS**

<b>Facility</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>Total Cost</b>
Recreation Building-Akenac Park <sup>1</sup>	\$205,000.00	\$150,043.75	\$150,043.75	\$150,043.75	\$150,043.75	\$805,175.00
New Municipal Building <sup>2</sup>	\$247,456.00	\$247,456.00	\$247,456.00	\$247,456.00	\$247,456.00	\$1,237,280.00
Bath House-Akenac Park <sup>3</sup>		\$190,000.00				\$190,000.00
Salt & Cinder Shed <sup>4</sup>		\$20,000.00				\$20,000.00
Emergency Management Bldg. <sup>5</sup>	\$10,000.00					\$10,000.00
Library/Historical Society Bldg.-Akenac Park					\$7,000.00	\$7,000.00
Maintenance Bldg-Akenac Park					\$24,000.00	\$24,000.00
Recycling Center					\$2,000.00	\$2,000.00
<b>Total</b>	<b>\$462,456.00</b>	<b>\$607,499.75</b>	<b>\$397,499.75</b>	<b>\$397,499.75</b>	<b>\$430,499.75</b>	<b>\$2,295,455.00</b>
1-Kitchen addition in 2014, renovations in years 2015-2018						
2-Present value cost of \$2,030,000 will cost \$2,474,559 in 2024. Equal contributions over 10 year period will result in target amount.						
3-Replacement Cost						
4-Repair Cost						
5-Repairs performed by Township Staff						