

Agency: Commerce, Community and Economic Development**Grants to Municipalities (AS 37.05.315)****Grant Recipient: Haines Borough****Federal Tax ID: 47-0888706****Project Title:****Project Type: Remodel, Reconstruction and Upgrades**

Haines Borough - High School Roof

State Funding Requested: \$60,000**House District: 34 / Q**

One-Time Need

Brief Project Description:

Needed repairs of roof areas of the Haines School contiguous with the main building and not a part of the 2008 addition

Funding Plan:

Total Project Cost:	\$60,000
Funding Already Secured:	(\$0)
FY2015 State Funding Request:	<u>(\$60,000)</u>
Project Deficit:	\$0

Funding Details:

*Jensen Yorba Lott, Haines High School Roof Report
(\$8,000)*

Detailed Project Description and Justification:

The Haines Borough desired to determine the condition, likely maintenance issues, and remaining service life on the roof coverings for the old portions of the Haines School. They requested Jensen Yorba Lott, Inc. to accomplish an inspection of the roofs and provide recommendations that would address these concerns. On May 6, 2013, Tony Yorba, Principal Architect with Jensen Yorba Lott Inc., conducted the inspection. The attachment documents the inspection, provides a labor and materials budget (in 2013 value funds) for recommended repairs, and offers an opinion of expected life for the roof assembly.

Project Timeline:

FY15 - \$60,000 in design, construction administration and construction to seven areas of the Haines School roof.

Entity Responsible for the Ongoing Operation and Maintenance of this Project:

Haines Borough/Haines Borough School District

Grant Recipient Contact Information:

Name:	Julie Cozzi
Title:	Interim Borough Manager
Address:	103 Third Avenue Haines, Alaska 99827
Phone Number:	(907)766-2231
Email:	jcozzi@haines.ak.us

Total Project Snapshot Report

2014 Legislature

TPS Report 62215v1

Has this project been through a public review process at the local level and is it a community priority? Yes No

Haines High School Roof Report

August 13

2013

The following is our final roof report for the Haines High School, including the swimming pool building roof, from our site inspection on May 6, 2013. The roof areas mentioned can be found on the attached roof plan at the end of the report.

Prepared By:
Tony Yorba,
CEFPI, RCI



INTRODUCTION:

As a matter of best practices in building maintenance, the Haines Borough desired to determine the condition, likely maintenance issues, and remaining service life on the roof coverings for the old portions of the Haines High School. They requested Jensen Yorba Lott, Inc. to accomplish an inspection of the roofs and provide recommendations that would address these concerns. On May 6, 2013, Tony Yorba, Principal Architect with Jensen Yorba Lott Inc., conducted the inspection. The following documents the inspection, provides a labor and materials budget (in 2013 value funds) for recommended repairs, and offers an opinion of expected life for the roof assembly.

GENERAL:

The High School complex consists of a number of built areas (see attached aerial photo at end of report). This report concerns itself with those roof areas of the high school contiguous with the main building and not a part of the 2008 addition. The attached roof plan illustrates the areas included and excluded from this report. The areas included in the report are numbered 1 through 8 and are described as follows:

1. Swimming Pool
2. Gymnasium Entry
3. Gymnasium
4. Low roof, original High School
5. Mechanical Penthouse
6. Low roof, original High School
7. Music Room
8. Original High School Academic Area

The following are more detailed descriptions of each of these 8 areas:

Area 1: Pool Roof

Roof Type: Modified bitumen membrane over plywood substrate, installed approximately 1999.

Action Items:

1. Clean moss and dirt out of gutters.
2. Seal leak in downspout on south facing gutter, low end of roof.
3. Re-seal modified bitumen and EPDM at metal flashing between pool roof and gymnasium roof.
4. Repair cracks in membrane and at membrane to wall connection at south wall transition to concrete wall at gymnasium.
5. Curb transition membrane flashing was cracked or had membrane separation at several roof mounted exhaust fans and should be repaired.

Area 1 Budget: \$2,500

Area 2: Low roof at entry hall in front of the gymnasium

Roof Type: Exposed EPDM Membrane mechanically fastened over steel deck, (age uncertain).

Action Items:

1. Maintain surveillance of concrete walls where leaks in joints could defeat the roof assembly.
2. Roof surface should be cleaned to assist maintenance

3. Roof ponds due to distance to roof drain- install additional roof drain and daylight to grade if ponding worsens
4. Keep surveillance of membrane transition detail at roof edge shared with the music room.
5. Several seams were observed that were beginning to fail and should be cleaned and resealed.

Area 2 Budget: \$6,000

Area 3: Gymnasium Roof

Roof Type: Exposed EPDM membrane mechanically fastened over steel deck, (age uncertain).

Action Items:

1. Clear moss and sludge from roof surface to keep roof drains clear and to assist with maintenance.
2. Reset and patch fasteners that protrude from the roof substrate as much as 3/8 inch in many areas. Observed 5 in a row where the membrane was torn above them, north side, approximately 24 inches from the parapet, approximately 20 feet from the west end of building.
3. No overflows are provided, current code requires them.
4. Found two areas where the substrate board was either very soft, or bowed as much as two inches. Both conditions are associated with water intrusion. It may be warranted to cut the membrane and determine the cause of the condition. One area is immediately adjacent to the south roof drain. The other is in the southwest corner of the roof. It is assumed the soft areas must be cut and replaced.

Area 3 Budget: \$10,000

Area 4: Roof above former boiler room area

Roof Type: Modified bitumen roof membrane over insulation hot mopped to concrete deck, approximately 1999.

Action Items:

1. Moss, dirt and sludge should be cleared to ensure operation of the single roof drain, and to facilitate maintenance.
2. Parapet cap is rust stained, but it is only superficial and can be removed from the surface of the paint. Rust is residue from boiler stacks that were removed from the area.
3. Pitch pockets have failed. Some pitch pockets are no longer needed and should be removed. Those still needed should be replaced.
4. Keep metal and concrete walls under surveillance to ensure leaks do not develop at existing joints.
5. Some seams in the parapet wall shared with the main high school roof are failing and should be resealed.
6. Patching at mechanical equipment installed as part of recent school renovation was accomplished with non mineralized modified bitumen membrane. Alligatoring is already appearing where the aromatics in the membrane and asphaltic sealant evaporated. These should be monitored and corrected by placement of mineral granules if they worsen.

Area 4 Budget: \$9,000

Area 5: High roof at mechanical room

Roof Type: Modified bitumen roof membrane over insulation hot mopped to steel deck, approximately 1999.

Action Items:

1. The roof is ponding significantly to the east. The roof structure may be deflecting from the load imposed by mechanical equipment suspended from the steel bar joist roof structure. Consideration should be given to adding a new roof drain which could be connected to the piping below the existing roof drain.
2. Roof to wall base flashing is loose at the wall shared with the gymnasium, and should be repaired.
3. Water cut off seal is failing at roof edge along parapets and should be replaced.

Area 5 Budget: \$4,000

Area 6: Low roof next to Music Room

Roof Type: Durolast PVC roof, approximately 2011.

Action Items:

1. Keep roof to wall area under surveillance to ensure the roof is not defeated by leaks through the existing joints.
2. The PVC membrane is very thin, and prone to punctures. Efforts should be taken to ensure this roof stays clear of any debris that could conceal sharp objects.
3. Roof drain design is prone to clogging. Since only one roof drain and no overflows are provided, effort should be taken to ensure it remains clear by removing moss and sludge.

Area 6 Budget: \$0

Area 7: Music Room

Roof Type: EPDM membrane mechanically fastened over steel deck, (age uncertain).

Action Items:

1. Keep moss and sludge off roof to facilitate maintenance.
2. Goose neck exhaust fan should be sealed- it appeared to have a gap between the metal flashing and the curb on the north side.
3. Only one roof drain exists here, add an additional roof drain

Area 7 Budget: \$3,000

Area 8: Old High School roof

Roof Type: Modified bitumen over insulation, hot mopped to concrete deck.

Action Items:

1. Patching at mechanical equipment installed as part of recent school renovation was accomplished with non mineralized modified bitumen membrane. Alligatoring is already appearing where the aromatics in the membrane and asphaltic sealant evaporated. These should be monitored and corrected by placement of mineral granules if they worsen.
2. Maintain surveillance of the metal wall panels installed at the east side of the roof, as the vertical seams in these panels could allow water to defeat the perimeter seal and leak under the roof membrane.

3. Clear moss and sludge from roof surface and especially around roof drains to prevent a blockage.
4. Replace failed pitch pocket near abandon mechanical openings in the southwest corner of the roof.
5. Re-seal cracks in flashing around goose neck exhaust caps.
6. Moisture is present on a roof seam around a fish mouth the membrane seam about 25 feet from the west wall, midway between the north and south walls. The seam should be re-sealed.
7. Repair bubble in membrane approximately 4 feet from the east wall, 10 feet south of the corner of the upper level mechanical room.

Area 8 Budget: \$9,000

PHOTOS:

AREA 1: Pool Roof



Pool roof looking west.



Moss filled gutters.



Leak point in gutter.



Potential leak point between gym roof and pool roof.



Close up of potential leak point between gym roof and pool roof.



Leak point between pool roof and concrete wall.

AREA 2: Low roof at entry hall in front of gymnasium



Overall view, low roof at entry hall – note ponding



Potential failed seam.



Potential leak point at intersection with music room.

AREA 3: Gymnasium Roof



Overall view of gym roof.



Moss buildup.



Membrane damage at protruding fasteners.



Area where soft roof substrate was encountered.

AREA 4: Roof above former boiler room area



Overall view of Area 4. Roof with moss buildup at roof drain.



Rust stain at parapet.



Failed pitch pocket.



Potential leak point at concrete wall.



Failing asphalt sealant.

AREA 5: High roof at mechanical room



Overall view of Area 4 with ponding evident.



Moss buildup at roof drain.



Leak point at adjacent structure.

AREA 6: Low roof next to music room



Overall view of Area 6.

Area 7: Music Room



Overall view of Area 7.



Leak point in roof penetration.

Area 8: Old High School Roof



Overall view of Area 8.



“Alligatoring” of four year old flashing surface.



Potential leak point at wall seams.



Failed pitch pocket.



Seam failure at exhaust cap.

AERIAL



Aerial photo of High School complex.

A RESOLUTION OF THE HAINES BOROUGH ASSEMBLY ADOPTING THE ALASKA CAPITAL PROJECT SUBMISSION AND INFORMATION SYSTEM PRIORITIES (CPSIS) AND LEGISLATIVE PRIORITIES.

WHEREAS, the Haines Borough Assembly has determined to prioritize the Borough's FY 2015 legislative priorities; and

WHEREAS, it is the intent of the Assembly to provide the Alaska Governor, Legislature, and state officials adequate information to represent the needs of the Borough concerning legislative requests including necessary funding requirements,

NOW, THEREFORE BE IT RESOLVED, by the Haines Borough Assembly, Haines, Alaska:

Section 1. The following Capital Budget priorities are identified as the Haines Borough priorities for the state of Alaska for FY 2015:

1. Wastewater Treatment Facility Upgrades
2. Lutak Dock Upgrades - Phase I
3. Public Safety Building Replacement
4. Road Improvements - Phase IV
5. South Portage Cove Harbor Expansion
6. Lutak / Oceanview Area Slump Mitigation & Drainage Improvements
7. HS/Pool Locker Rooms and Mechanical Systems
8. Mosquito Lake School Sprinkler System
9. High School Air Handling Unit Replacement
10. Vocational Education Building Mechanical Upgrades
11. Mosquito Lake School Air Handler Replacement
12. High School Roof
13. Port Chilkoot Dock Improvements - Phase III

Section 2. The following Operating Budget priorities are identified as the Haines Borough priorities for the state of Alaska for Fiscal Year 2015:

1. Municipal Revenue Sharing
2. Federal Shakwak Project Funding Support
3. Adequate funding for both operations and capital needs of the Alaska Marine Highway

Section 3. The Borough Manager is hereby instructed to advise the Governor, Legislature, and appropriate State agencies of the Borough's legislative priorities and take all appropriate steps to provide background information and testimony in representing the Borough's best interests.

Haines Borough
Resolution No. 13-12-525

Page 2 of 2

Adopted by a duly-constituted quorum of the Haines Borough Assembly on the 10th day of December, 2013.

Attest:



Michelle Webb, Interim Borough Clerk


Stephanie Scott, Mayor