



FINDINGS OF FACT STAFF REPORT

Date: January 22, 2010 OPRD Coastal Land Use Coordinator: Tony Stein

OPRD File Number: BA-658-09 County: Tillamook Applicants: Patrick Bowman

Project Location: 17850 Ocean Boulevard, Rockaway Beach
Tillamook County Assessor's Map # 01N, 10W, 07DA, tax lot 2000.

Brief Project Description: The application seeks to convert the existing Emergency Permit (BA# 640-08) issued February 29th, 2008 into a permanent shoreline protection structure. The proposed project involves the construction of a riprap revetment approximately 80 feet in length and 16 feet in height above the beach level. The rip rap revetment will be installed on a varied slope between 2H to 1V to 1.5H to 1V, and extend from 13 feet to 20 feet beyond the toe of the slope onto the ocean shore. The structure will tie into an existing riprap revetment (BA # 627-07) fronting the Bowman residence and adjacent properties to the south.

ADMINISTRATIVE RULE STANDARDS AND RELEVANT FACTS

I. GENERAL STANDARDS, OAR 736-020-0010

Project Need – There shall be adequate justification for a project to occur on and alter the ocean shore area.

During the winter of 2007/2008, the formation of a very large rip embayment fronting the subject property caused rapid sand erosion and a lowering of beach elevations along this section of the beach. Significant ocean conditions in conjunction with this rip embayment resulted in a direct and continuous wave attack on the dune bluff and the northern flank of the existing rip rap revetment. Beach sand eroded rapidly at the base of the dune adjacent to the subject property, removing existing vegetation and causing the northern flank of the riprap to unravel. Set back measurements from the top of the dune bluff to the northwest corner of the foundation of the Bowman residence was 15 feet. OPRD staff authorized emergency shoreline protection for the Bowman property on February 29th, 2008. The previous year, in October 2007, OPRD issued permit (BA# 627-07) to Robert Abbott, Glenn Shannon and Patrick Bowman to convert an Emergency Permit (BA# 622-07) to a permanent shoreline protective structure fronting the three properties.

The applicant had previously submitted an Ocean Shore Alteration Permit application (BA# 651-08) in July of 2008. This application was denied by OPRD based on a lack of information and consideration of alternative designs, project modifications, and the submission of a riprap revetment design that did not meet the standards for structural safety and property protection.

A geologic hazard report included in the application (Professional Services Industries, Inc., June 22, 2007) and a Dune Hazard Report Update (Professional Services Industries Inc, October 7, 2008) document the conditions of the site during the winter of 2006/2007 and after the winter of 2007/2008, respectively. The PSI

geologic report (October 7, 2008) summarizes last season's erosion rates, current condition of the existing riprap and project need. It states that "the northern 20 feet of riprap placed on the property was completely razed by wave erosion. Along the northern property line, the dune had receded approximately 72 feet since November 19th, 2007. The foredune to the north of the property appears to have receded up to 85 feet from the time the riprap was placed."

A finding of project need follows the review of all other applicable standards and is included in the findings summary at the end of this report.

Protection of Public Rights – Public ownership of or use easement rights on the ocean shore shall be adequately protected.

The proposed riprap would occupy an approximately 80 foot width of beach area along the base of the 11-foot high bluff. The presence of the riprap and the encroachment on the ocean shore will reduce the amount of usable beach area. In evaluating similar riprap projects, OPRD has found this amount of encroachment to be acceptable when the need for the project was considered justified. The project will occupy an estimated 1,500 square feet of beach area which was previously available for public use.

Public Laws – The applicant shall comply with federal, state, and local laws and regulations affecting the project.

The Tillamook County Department of Community Development has certified that the project is in compliance with the Tillamook County Comprehensive Plan and Land Use Code. State of Oregon regulations are being addressed under the review of this permit. Federal regulations could potentially involve a U.S. Army Corps of Engineers permit. However, a Corps permit is usually not required for this type of project. A condition of the permit will require that the applicants obtain any required permits from the Corps, if applicable.

Alterations and Project Modifications – There are no reasonable alternatives to the proposed activity or project modifications that would better protect the public rights, reduce or eliminate the detrimental affects on the ocean shore, or avoid long-term cost to the public.

According to the application, to avoid the dune erosion hazard it was determined that it was impractical to relocate the Bowman home because of its large size and the high relocation cost. Submitted with the application was an estimate from Emmert International to relocate the Bowman home, minus the cost of foundation engineering, foundation costs and additional services.

The subject property is located within a moderate risk, coastal erosion hazard-prone area that will continue to be subject to ocean flooding and erosion problems. Relocating the Bowman home may not provide the necessary protection to the residence and would not avoid the need for placing riprap or other material on the ocean shore.

Other alternatives, such as vegetative stabilization, sand alteration, cobble placement and non-structural enhancement west of the existing bluff slope, are not addressed in the application. The geologic report recommends appropriate engineering controls to be implemented to avoid additional erosion and mass wasting due to the effect of high tides and storm surges.

Considering the above factors, the use of riprap shore protection constitutes the most reasonable option for controlling erosion at this site.

Public Costs – There are no reasonable special measures which might reduce or eliminate significant public costs. Prior to submission of the application, the applicant shall consider alternatives such as nonstructural solutions, provision for ultimate removal responsibility for structures when no longer needed, reclamation of excavation pits, mitigation of project damages to public interests, or a time limit on project life to allow for changes in public interest.

Public costs associated with the proposed riprap will be the loss of approximately 1,500 square feet of upper beach area. Alternative shore protection methods other than riprap have been discussed above. These alternatives are not considered reasonable special measures, as they would fail to provide the needed long-term protection for the property.

Compliance with LCDC Goals – The proposed project shall be evaluated against the applicable criteria included within Statewide Planning Goals administered by the Department of Land Conservation and Development.

Tillamook County has certified that the project is in compliance with the Tillamook County Comprehensive Plan and Land Use Code, which are acknowledged by LCDC as meeting the Statewide Planning Goal requirements.

II. SCENIC STANDARDS, OAR 736-020-0015

Projects on the ocean shore shall be designed to minimize damage to the scenic attraction of the ocean shore area.

Natural Features – The project shall retain the scenic attraction of key natural features, for example, beaches, headlands cliffs, sea stacks, streams, tide pools, bedrock formations, fossil beds and ancient forest remains.

The project would cover the existing dune face, and encroach some distance out onto the ocean shore., This level of scenic alteration has been acceptable for other riprap projects where the need for the project has been justified and where alternatives have been adequately considered.

Shoreline Vegetation – The project shall retain or restore existing vegetation on the ocean shore when vital to scenic values.

There is no existing vegetation that would be affected by the proposed riprap revetment.

View Obstruction – The project shall avoid or minimize obstruction of existing views of the ocean and beaches from adjacent properties.

The proposed riprap revetment would not affect existing views from adjacent properties.

Compatibility with Surroundings – The project shall blend in with the existing shoreline scenery (type of construction, color, etc.).

Other riprap revetments are located to the south of the subject property, and the proposed project will be similar to these existing structures.

III. RECREATION USE STANDARDS, OAR 736-020-0020

Recreation Use – The project shall not be a detriment to public recreation use opportunities within the ocean shore area except in those cases where it is determined necessary to protect sensitive biological resources such as state or federally listed species.

The riprap would occupy some beach area, but would not significantly affect public recreation use opportunities. The proposed structure is orientated in an east/west direction and will occupy an area of approximately 1,500 square feet. During extreme high tides in the winter, wave run-up can reach the upper areas of the beach, and may cover the entire beach at times. During normal conditions, however, the existence of the riprap would not be a detriment to typical recreation uses.

Recreation Access – The project shall avoid blocking off or obstructing public access routes within the ocean shore area except in those cases where it is determined necessary to protect sensitive biological resources such as state or federally listed species.

Riprap revetments encroach some distance out from the natural dune toe, and increase the chance of high water covering the entire beach area. Under normal conditions, the structure will not block or obstruct any important public access routes within the ocean shore area.

IV. SAFETY STANDARDS, OAR 736-020-0030

The project shall be designed to avoid or minimize safety hazards to the public and shoreline properties. The following safety standards shall be applied, where applicable, to each application for an ocean shore permit.

Structural Safety – The project shall not be a safety hazard to the public due to inadequate structural foundations, lack of bank stability, or the use of weak materials subject to rapid ocean damage.

The proposed design by HLB otak indicates that the riprap would be structurally safe and built to current design standard specifications. The riprap is composed of three sections including an armor layer of large rock, underlying filter layer and trenched toe protection. Rocks would be placed individually to form an interlocking structure, as is the standard practice for revetment design. The proposed 2H: 1V and 1:5H: 1V slope design will be constructed to blend into the existing riprap revetment fronting the subject property. The proposed structure is orientated in an east west line along the northern boundary of the Bowman property, and will incorporate a 2H: 1V slope on the western end and gradually increase to a 1:5H: 1V slope on the eastern end. Rocks would be placed individually to form an interlocking structure, as is the standard practice for revetment design.

Obstructional Hazards – the project shall minimize obstructions to pedestrians or vehicles going onto or along the ocean shore area.

During high water events during the winter, wave run-up can cover the entire beach, washing up the unprotected foredunes and riprap revetments. Any level of encroachment onto the beach would increase the chance of the entire beach being submerged, leaving no room for pedestrians or emergency vehicles.

Neighboring Properties – The project shall be designed to avoid or minimize ocean erosion or safety problems for neighboring properties.

The riprap will be tied into the existing riprap structure fronting the Bowman residence and properties to the south. The adjacent property (TL 1900, vacant lot) to the north is unprotected and was undeveloped as of January 1, 1977.

Property Protection – Beachfront property protection projects shall be designed to accomplish a reasonable degree of increased safety for the on-shore property to be protected.

The purpose of the proposed revetment is to provide protection to the upland residence along the northern property boundary.

V. NATURAL AND CULTURAL RESOURCE STANDARDS, OAR 736-020-0030

Projects on the ocean shore shall avoid or minimize damage to the following natural resources, habitat, or ocean shore conditions, and where applicable, shall not violate state standards:

Fish and wildlife resources including rare, threatened or endangered species and fish and wildlife habitats.

There are no reported fish and wildlife resources that would be impacted by the proposed project.

Estuarine values and navigation interests.

The proposed project is not adjacent to an estuary, and would not affect navigable water on the ocean.

Historic, cultural and archeological sites.

Notice of the application was provided to the State Historic Preservation Office, and to the Confederated Tribes of Siletz and the Confederated Tribes of Grand Ronde. There were no reports of historic, cultural, or archeological sites at this location.

Natural areas (vegetation or aquatic features).

There is no existing significant vegetation or aquatic features that would be impacted by the proposed riprap.

Air and water quality of the ocean shore area.

The project would take place above the ordinary high tide line, and would not cause foreign materials or pollutants to enter the water. Riprap placed at the site will be free of debris or foreign materials. The proposed project will not adversely affect water quality on the ocean shore. Air quality will not be affected, except for a negligible amount of exhaust from the use of heavy equipment during the construction period.

Areas of geologic interest, fossil beds, ancient forest remnants.

None of these features have been identified at the site.

When necessary to protect native plant communities or fish and wildlife habitat on the subject or adjacent properties, only native, non-invasive, plant species shall be used for revegetation.

The site is within a developed residential area, and there are no known protected native plant communities or fish and wildlife habitat on or adjacent to the subject property.

VI. PUBLIC COMMENT

Notice of the proposed project was posted at the site for 30 days in accordance with ORS 390.650. Individual notification and a copy of the application were mailed to government agencies and individuals on OPRD’s ocean shore mailing list. During the comment period, one request was received for a public hearing.

VII. FINDINGS SUMMARY

Project Need – The proposed riprap is necessary to provide protection from ocean caused erosion. Recent loss of beach sand and the erosion of the dune face and proximity of the home to the edge of the dune escarpment have caused the geologist to recommend the riprap revetment. There is evidence of significant active erosion, in the form of end cutting and unraveling of the north flank of the riprap revetment.

Structural Safety – The submitted revetment design from HLB otak meets general standards for riprap placement on the ocean shore. The placement of riprap rock on slopes of 2H:1V or 1:5H:1V is a commonly used revetment design for ocean shoreline protection in a high energy dune-backed beach environment.

Based on the above considerations, OPRD finds that there is not adequate justification for the project to occur on and alter the ocean shore area.

The following checklist summarizes whether the application satisfies the general, scenic, recreation, safety and natural and cultural resource standards as defined in OAR 736-020-0010 through 736-020-0030:

Standard	Yes	No	Standard	Yes	No
Project Need	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Structural Safety	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Protection of Public Rights	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Obstructional Hazards	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Public Laws	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Neighboring Properties	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Alteration and Project Modifications	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Property Protection	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Public Costs	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Fish and Wildlife Resources	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Compliance with LCDC Goals	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Estuarine Values and Navigation Interests	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Natural Features	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Historic, Cultural and Archeological Sites	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Shoreline Vegetation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Natural Areas	<input checked="" type="checkbox"/>	<input type="checkbox"/>
View Obstruction	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Air and Water Quality of the ocean shore	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Compatibility with Surroundings	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Areas of Geologic Interest	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Recreation Use	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Use of Native Plant Species when Necessary	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Recreation Access	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>

VIII. STAFF RECOMMENDATION:

Based on an analysis of the facts and in consideration of the standards evaluated under OAR-736-020-0005 through OAR 736-020-0030, I recommend the following action:

- Approval
- Approval with conditions
- Denial

Tony Stein
Coastal Land Use Coordinator