



FINDINGS OF FACT STAFF REPORT

Date: October 5, 2007

OPRD Coastal Land Use Coordinator: Tony Stein

OPRD File Number:

BA-627-07

County:

Tillamook

Applicants: Bob Abbott, Glenn Shannon and Patrick Bowman

Project Location:

17800, 17820, 17850 Ocean Boulevard, Rockaway Beach
Tillamook County Assessor's Map # 01N, 10W, 07DA, Tax Lots 2000, 2100 and 2200.

Brief Project Description:

The application seeks to convert the existing Emergency Permit (BA 622-07) issued June 1st, 2007, into a permanent shoreline protection structure. The proposed project involves the construction of a riprap revetment, approximately 180 feet in length and 15 feet in height above the beach level with an approximate slope of 2H to 1V. The riprap revetment will extend 30 feet beyond the toe of the slope of the dune bluff onto the ocean shore. The proposed structure will tie into an existing riprap revetment to the south (DSL# SP 16876), issued to the Shorewood RV Park in March 1999.

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 spring of 2007, the formation of a very large rip embayment west of the subject properties caused rapid sand erosion and the lowering of beach elevations along this section of the beach. Moderate wave and ocean conditions in conjunction with this rip embayment, resulted in a direct and continuous wave attack on the dune bluff and on the northern flank of the Shorewood RV riprap revetment. OPRD staff issued verbal approval to begin emergency protection for the Bowman, Shannon and Abbott properties on June 1st, 2007, after several high tides and moderate storm events had occurred. A scour point developed along the open dune face and eroded approximately 60 feet eastward towards the Bowman, Shannon and Abbott homes, and undermined the existing Shorewood RV riprap structure to the south. Beach sand erosion at the base of the dune bluff fronting the subject properties also removed existing vegetation and a series of protective pilings previously constructed to stop storm tossed wood debris from damaging property and homes during high tides and large storm events.

During a series of moderate spring storms from March to late May, 2007, the top of the dune had steepened and set back measurements from the top of the bluff to the Bowman, Shannon and Abbott residences were 43,

53, and 70 feet respectively. A geologic hazard report included in the application (Professional Service Industries, Inc., June 22, 2007) documents the conditions of the site at the time of the report, discusses erosion rates and dune stability. The report indicates that dune face had eroded an additional 20 feet from May 26th to June 4th, 2007. PSI reports that based on measurements of vegetated corridors, an estimated total of 120 feet of stabilized dune and associated vegetation has been lost from the western margin of the site since 1989.

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 approximately 180 foot width of beach area along the base of the 15-foot dune bluff. The presence of the riprap and the encroachment on the ocean shore will reduce the amount of usable beach area, and could even cause north to south access to be blocked during winter high water events. 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 5,400 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 City of Rockaway Beach has certified that the project is in compliance with the City of Rockaway 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.

The subject properties are located within a low-lying, hazard-prone developed area that will continue to be subject to ocean flooding and erosion problems. These problems are amplified due to the extensive armoring on the adjacent property that exists to the south. Relocating the homes may not provide the necessary protection to the residences and would not avoid the need for placing riprap or other material on the ocean shore. The submitted engineering report by HLB otak states that moving the buildings on the subject property towards the east is likely to result in the installation of additional riprap in the future- more than what is currently being proposed. The riprap on the adjacent property to the south (TL-2400 Shorewood RV Park) currently extends out to the Beach Zone Line and concentrates wave energy at the northern end of the revetment, where the subject properties are located. HLB otak also states that if the houses are moved and no protection is placed, the beach erosion will continue to progress inland, and the northern end of the existing riprap will be undermined and require frequent repairs and expansion to the east. As erosion continues, they also expect that the subject properties will eventually require riprap protection for the new building locations.

Other alternatives, such as vegetative stabilization, sand alteration, cobble placement and non-structural enhancement west of the existing bluff slope, are addressed in the application. These alternatives were not considered an option, due to the near vertical dune bluff slope, rapid rate of erosion, the existing beach profile and the presence of rip embayments offshore.

Vegetative stabilization is considered unfeasible due to the sheer steepness of the exposed bluff face. Dynamic revetments are ruled out due to the need for more structural and longer lasting protection. A riprap revetment is the preferred method of shore protection because of the need for a durable, more structural means of shore protection to prevent additional erosion and mass wasting due to the effect of high tides and storm surges.

The engineering report recommends a riprap revetment to limit additional shoreline erosion. 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 5,400 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.

The City of Rockaway has certified that the project is in compliance with the Rockaway 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.).

A riprap revetment is located to the south of the subject properties, and the proposed project will be similar to this existing structure. However, it would provide a noticeable visual contrast to the adjoining unprotected property to the north.

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 will occupy an area of approximately 5,400 square feet (0.12 acre). During high tides in the winter, wave run-up often reaches the upper areas of the beach, and may cover the entire beach at times. The loss of additional beach area will increase the chance of this occurring. 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 bluff 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. Any change in the line of vegetation migrating eastward of the proposed riprap revetment could result in an additional loss and seasonal blockage of public access routes.

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 indicates that the riprap would be structurally safe and built to current 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.

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 dune bluffs 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.

In the geologic report, SRI states that if the riprap placed under this application is not approved, that public access north and south could be permanently affected. SRI adds that this permit draws the line on the current developed area and may stop the eastward expansion of the Shorewood RV Park wave refraction.

During high tide events and storm surges, shoreline protection alterations at this site may change the existing beach profile and the position of the line of vegetation.

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 to the south of the subject properties. The adjacent property to the north of the proposed riprap may see flank erosion from the revetment structure. HLB otak reports that at the termination of the riprap on the north, the end shall be tapered to a 45 degree angle, with a 2:1 slope, so as to reduce the potential for flanking erosion.

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 revetment would be to provide protection to the upland properties. It will also limit the eastward expansion of the dune scarp along the existing northern flank of the Shorewood RV Park riprap revetment.

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. No requests for a public hearing were received.

VII. FINDINGS SUMMARY

Project Need – The proposed riprap is necessary to provide protection from ocean caused erosion. Dune bluff conditions and proximity of the houses to the bluff edge have caused the geologist to recommend the riprap revetment. There is evidence of significantly lower beach levels, active erosion and undercutting occurring at the toe of the dune bluff and the subsequent loss of upland vegetation. The dune previously consisted of a gentle westward slope, but has now undercut to a nearly vertical slope varying in height from 8 to 12 feet.

Alternatives – There are no other reasonable alternatives for controlling the erosion and protecting the residences. House relocation and non-structural alternatives are not appropriate due to the physical conditions of the site and the lack of available room to move the existing houses to a safe location. Some public costs will be associated with the project. However, these costs can be reduced through careful and efficient riprap construction practices, and planning for additional erosion north of the subject properties. Other types of less structural methods would not provide the protection necessary to control wave erosion at the toe of the slope.

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

During high water events and storm surges, the upland protected properties may protrude further westward as the surrounding dune bluffs erode, the line of vegetation migrates eastward and adjacent unprotected properties are reduced in size. The adjacent tax lot to the north of the subject properties does not meet Goal 18 requirements and would be ineligible to receive riprap to protect the property. Should this occur, the subject properties may request additional rip rap along the north flank of this proposed structure, due to the dune erosion and the eastward migration of the line of vegetation. This could create an artificial point of land (in conjunction with Shorewood RV Park) during periods of sand loss and/or low beach profiles, thus affecting north and south pedestrian and vehicular access. Requests for additional riprap may be denied by OPRD

because of the effect that an eastward extending flank could have on the adjoining ineligible property. Other non-structural means of erosion control would be required in lieu of riprap if this occurs. The permit applicants should consider other alternatives to eliminate or reduce the obstruction.

Based on the above considerations, OPRD finds that there is 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