FINDINGS OF FACT
STAFF REPORT

Date:	June 10, 2010	OPRD Coastal Land Use Coordinator:	Tony Stein		
OPRD File Number:	BA-664-10	County:	Lincoln	Applicant:	James and Maria Crowe

Project Location: 13554 S. Coast Highway,
Newport, OR
Lincoln County Assessor's Map #12S-11W-07 CB, tax lot 200.

Brief Project Description:

The proposed project involves the construction of a riprap revetment approximately 70 feet in length and 15 feet in height above beach level. Plans call for armor rock 2.0 to 6.0 feet in diameter, keyed 8 feet into the mudstone at the toe of the slope and placed in an interlocking state with a slope of 1.5H to 1V. The proposed riprap revetment will project approximately 35 feet from the bluff face onto the ocean shore, and include a riprap rock stairway within the revetment footprint.

The application is also requesting approval for unpermitted stairway constructed on the subject property in April 2009. The applicant proposes to tie-in the existing metal stairway to the top of the riprap to provide a safe, and negotiable private beach access for the owner and visitors.

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.

According to the geologic report by Richard Larrett, Engineering Geologist (September 30, 2009), the lower portion of bluff (approximately 8 feet) at this site is in Nye Mudstone, and is relatively resistant to erosion by high ocean waves. Groundwater seeping along the contact between bedrock and the overlying soils in addition to erosion by high ocean waves topping the bedrock, has resulted in an over steepened bluff face and slope movement in the soil materials. Larrett reports that the recession rate for the bluff top along the central portion of this site has been approximately 14 feet in less than 5 years or approximately 3 feet per year. DOGAMI has calculated the average rate of erosion along this portion of the beach as 0.4 feet per year. The geologic report includes a site map which shows the foundation of the Crowe residence approximately 23 feet from the top of the bluff. A review of a 1984 Oregon Department of Transportation aerial photograph shows that the Crowe residence at that time was an estimated 35 feet from the edge of the bluff.

Several temporary wooden retaining walls were also constructed to aid in reducing soil erosion and increasing slope stability. Larrett concludes that these walls will fail and slope movement will continue up the slope and

increase bluff top recession, and a riprap structure is necessary to protect the bluff face from erosion from high ocean waves, and will minimize the potential for erosion by the groundwater seepage along the soil/rock boundary.

The proposal also includes connecting an existing stairway constructed of two galvanized metal ramps with one stair landing, leading from the Crowe residence down the bluff to the top of the riprap revetment. The closest public beach access is located 1/4 mile to the north at the Lost Creek State Recreation Site. Alternative public access routes are located approximately 1, 330 feet to the north and 2,130 feet to the south, however each of these access ways require a walk along Highway 101 in a high volume and high speed area.

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 will occupy an average width of 12 feet in and on existing bedrock on the beach along the base of the bluff. This encroachment onto the ocean shore is generally less than similar riprap revetments found along this stretch of shoreline. 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 840 square feet of beach area which was previously available for public use. The beach is wide and flat at this location, and the presence of the riprap will not significantly affect public ownership or easement rights on the ocean shore.

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

The Lincoln County Planning Department has certified that the project is in compliance with the Lincoln County Comprehensive Plan and Land Use Code. The Lincoln County Planning Department has signed the County Planning Department Affidavit form and has determined that the project has been reviewed and is consistent with the local comprehensive plan and zoning ordinances. State laws and regulations are being addressed through this permit review.

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 applicant 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 geologic report states that moving the Crowe house away from the top of the bluff to the east is not feasible due to the location of the septic drain field and its proximity to the highway. The septic drain field is located 3 feet from the Crowe residence and approximately 15 feet from the western boundary of Highway 101.

The geologic report rules out non-structural methods of shore protection, including vegetative stabilization, sand nourishment, and non-structural dynamic revetments, primarily based on the shallow cover of sand over the bedrock and the relatively flat beach slope where ocean waves usually reach to the back portion of the beach at high tide. The report states that the vegetation has eroded from the existing slope by high ocean waves in the vicinity of recent mass slope movement. The geologic report recommends a riprap revetment as the appropriate measure to protect the property.

Considering these factors, the use of riprap shore protection constitutes the most reasonable option for controlling bluff 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.

Alternative shore protection methods other than riprap shore protection 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. Public costs of the riprap include the loss of some upper beach area, heavy equipment activity on the beach during construction, and the visual presence of additional riprap and a beach access stairway. These costs can be reduced through careful and efficient construction practices. There will be no public costs to maintain the structures, as maintenance and needed repairs are the responsibility of the upland property owner.

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.

Lincoln County has certified that the project is in compliance with the Lincoln County Comprehensive Plan and Land Use Code, which are acknowledged by LCDC as meeting the Statewide Planning Goal requirements. The subject property has been determined to be a developed prior to January 1st, 1977, and meets the eligibility requirements for shoreline protection under Goal 18. The adjacent home to the north (TL 100) was also developed prior to January 1st, 1977. The adjacent property to the south (TL300) has been determined to have a status of "not developed", and therefore is not eligible for shoreline protection.

Based on the submitted engineering and geologic reports, The Lincoln County Department of Planning and Development has determined that the proposed project is necessary to protect development that existed on January 1, 1977.

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 proposed project will change the visual appearance of the existing shoreline as no riprap or permitted stairways exist in the immediate area. However, there are properties several hundred feet to the south that are fronted with riprap shoreline protection structures and beach access stairways. The riprap will be placed at an elevation of 15 feet in height above beach level, with the removal of the wooden retaining walls from the area of riprap installation. The riprap placement is designed to minimize the alteration of the ocean shore area, and in evaluating other projects; this change has been accepted when the need for the project has been justified. No key natural features such as beaches, sea stacks, bedrock formations, fossil beds or other features will be significantly affected.

The existing metal ramp stairway with handrails and cross structural braces significantly detracts from the natural features of the upper bluff, and is not compatible with scenic attraction of the ocean shore area.

The use of aluminum metal stairways on the ocean shore is discouraged and building materials such as wood are more easily disguised and are more compatible with the bluff face and adjacent cliffs. Under typical viewing conditions, metal structures and their reflective characteristics are not compatible with the scenic qualities of the ocean shore and bluffs, and beach users can easily distinguish between metal and less intrusive building materials, such as wood.

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

Vegetation exists on the mid and upper bluff face along the length of the property, and shore pine exists along the top edge of the bluff. There will be some loss of vegetation on the lower bluff with installation of the riprap, proposed stairway and the existing wooden walls.

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

The proposed riprap structure is located well below the top of the bluff and will 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.).

The existing galvanized metal ramps and concrete landing were designed to provide access from the top of the bluff to the top of the proposed riprap revetment. Metal ramps are not normally used for this type of beach access and the structure is not compatible with the existing shoreline scenery. OPRD is denying the placement of the existing stair structure as built in conjunction with the riprap. A requirement will be added as a condition of approval requiring that a new submitted design be more compatible and less intrusive with the surrounding area.

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 beach is quite wide here, and during normal conditions, the existence of the riprap will not be a detriment to typical recreational uses. During high tides in the winter, however, 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.

There is no state or federally listed species within this ocean shore area. In addition, there are no Oregon State Sensitive species found utilizing this area of shoreline.

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.

The project will not extend out onto the ocean shore to cause an obstruction to public access along the shoreline during normal ocean conditions.

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 rip rap design indicates that the riprap will be structurally safe under normal ocean conditions and will not be an obstructional hazard. The engineering and geologic report recommends riprap armor rock approximately 2.0 to 6.0 feet in diameter, placed in an interlocking state.

No information is provided in the application or geologic report on design specifications or structural integrity of the existing metal stairway, landing, hand rails or the wooden retaining walls. The existing stairway construction does not appear to be constructed in a manner that protects the safety of the homeowners or beach users in the event of damage or collapse onto the ocean shore. A requirement will be added as a condition of approval requiring the submission of a new design that is structurally sound and stable above the proposed riprap structure and rock stairway within the revetment.

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

The proposed riprap revetment will project out from the existing bluff toe approximately 12 feet. This normally will not affect lateral beach access, except during times of extreme high water. During these periods, however, wave run-up is likely to be hitting the upper beach area and steep bluffs on nearby properties, therefore the proposed riprap will not create a new obstruction to beach access.

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

The geologic report states that the proposed structure will blend into the bluff face at the boundary of the adjacent properties to the north and south to minimize loss of shear strength of the adjacent soil materials. It also states that the riprap revetment return on either end will have a radius with a flatter slope to minimize reflected wave energy on the adjacent properties.

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 is to provide protection to the upland property and provide beach access.

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.

Oregon Department of Fish and Wildlife (ODFW) provided comments on the application and were uncertain as to predicting the precise impacts of individual shoreline protective structures on physical processes and the biological processes that are strongly influenced by these physical processes. ODFW stated that it does not have enough information to evaluate this permit comprehensively and made several recommendations that are outside the scope of this individual application.

Estuarine values and navigation interests.

The project is not adjacent to an estuary, and does 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 will be impacted by the proposed riprap.

Air and water quality of the ocean shore area.

The project will take place above the ordinary high tide line, and will 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 does 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. OPRD received 12 requests for a public hearing. A public hearing was held on April 26, 2010 and 3 individuals testified. In addition, 6 letters were received after the public hearing within the written comment period.

The public testimony and letters received raised a variety of issues, including justification for project need and lack of supporting evidence, failure to consider non-structural alternatives, recreational beach access concerns, structural safety and visual incompatibility of the stairway, ineligibility of the property to meet Goal 18 requirements, and the impacts of the riprap revetment to adjacent properties. Most of the major issues raised from the public comments received have been addressed in this report.

VII. FINDINGS SUMMARY

Project Need – The proposed riprap is necessary to provide protection from ocean-caused erosion. Although the beach profile and adjacent bluff slope has not changed significantly in the past few decades, there is evidence of steady and/or episodic erosion events impacting the bluffs and adjacent properties. The proposed

riprap will not entirely eliminate all landslide risk, but will control erosion and undermining of the lower bluff slope, which is one of the primary causes of upper slope failure. OPRD staff has monitored this area for a number of years, and has observed that the property has sustained ocean caused bank erosion and bank sloughing during recent large ocean storm and rain events. The riprap boulders are being placed to buttress the existing bluff face and minimize potential slope movement and top recession.

The lower and mid-section of the bluff is subject to direct wave energy which reduces the bluff stability and likely contributes to the collapse of soil material along the bluff face. During extended periods of intense rainfall coupled with high tides and heavy storm surf, bluff erosion and subsequent mass failure is expected to continue. The property owner has no other reasonable options to help reduce erosion of the bluff, and provide long-term protection to the property.

The current stairway structure does not appear to be structurally sound, nor does it appear to be in a stable and safe condition for pedestrian use. A properly designed and constructed stairway constitutes a reasonable solution for providing safe access down over the bluff to the top of the riprap, while causing no impacts to the ocean shore.

Alterations and Project Modifications: Although a mudstone toe is found at the toe of the slope at the site, it will not stop the erosion at the mid-bluff area and eventual sloughing on the top of the bluff. Other types of less structural methods would not provide the protection necessary to control wave erosion within the bluff slope, and the riprap project has been recommended by the project geologist. Need for the riprap is justified, and the proposed method of erosion control is appropriate.

Compatibility with Surroundings:
The existing metal stairway is not compatible with the surrounding bluffs or the immediate scenic features found along the ocean shoreline. The applicant will be required to resubmit a new design that is safe and uses construction materials finished in colors and tones that blend with the surrounding landscape.

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	☒	☐	Structural Safety	☒	☐
Protection of Public Rights	☒	☐	Obstructional Hazards	☒	☐
Public Laws	☒	☐	Neighboring Properties	☒	☐
Alteration and Project Modifications	☒	☐	Property Protection	☒	☐
Public Costs	☒	☐	Fish and Wildlife Resources	☒	☐
Compliance with LCDC Goals	☒	☐	Estuarine Values and Navigation Interests	☒	☐
Natural Features	☒	☐	Historic, Cultural and Archeological Sites	☒	☐
Shoreline Vegetation	☒	☐	Natural Areas	☒	☐
View Obstruction	☒	☐	Air and Water Quality of the ocean shore	☒	☐
Compatibility with Surroundings	☒	☐	Areas of Geologic Interest	☒	☐
Recreation Use	☒	☐	Use of Native Plant Species when Necessary	☒	☐
Recreation Access	☒	☐		☒	☐

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