VISUAL IMPACT ASSESSMENT

HUM 254 Four Bridges

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Statement of Compliance: Produced in compliance with National Environmental Policy Act (NEPA) and California Environmental Quality Act (CEQA) requirements, as appropriate, to meet the level of analysis and documentation that has been determined necessary for this project.

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PURPOSE OF STUDY AND ASSESSMENT METHOD

The purpose of this visual impact assessment (VIA) is to document potential visual impacts caused by the proposed project and propose measures to lessen any detrimental impacts that are identified. Visual impacts are demonstrated by identifying visual resources in the project area, measuring the amount of change that would occur as a result of the project, and predicting how the affected public would respond to or perceive those changes. This visual impact assessment follows the guidance outlined in the publication *Visual Impact Assessment for Highway Projects* published by the Federal Highway Administration (FHWA) in March 1981.

PROJECT DESCRIPTION, LOCATION, AND SETTING

The project proposes to upgrade the railings on four bridges at the following locations on State Route 254 in Humboldt County:

- Ohman Creek Bridge #4-7, PM 0.88
- Elk Creek Bridge #4-8, PM 10.43
- Bridge Creek Bridge #4-9, PM 10.80
- Bear Creek Bridge #4-12, PM 43.02

The proposed rail upgrade will consist of a modified Type 80 see-through bridge and bicycle railing. The proposed work will include upgrading bridge railing, guard railing including crash cushions, and repaving the existing roadway approximately 200 feet on each side of the bridges. The overhangs of each structure will be reconstructed to carry the additional weight of the new railing. The disturbed area for the crash cushions is 50 square feet. Asphalt concrete taper widths and lengths will vary depending on the end treatment that is applied at each structure.

The proposed project is located on Route 254 which is know as the Avenue of the Giants. The four bridges are located between Post Miles 0.8 and 43.1 in Humboldt County, California. The project is located in the interior Coast Range of Northwestern California. The landscape is characterized by forest covered mountains which surround the Eel River floodplain. The land use within the corridor or project corridor is primarily rural with small towns and businesses located along the Eel River valley The northern portion of the Avenue of the Giants between Pepperwood and Redcrest includes small pockets of development and the southern portion of Route 254 is mostly located within Humboldt Redwoods State Park. Although the roadway is not a candidate or officially designated as a scenic highway within the California Scenic Highway System, it is considered a highly scenic route through large stands of old growth redwood forests which attract tourists from all over the world. The old growth redwood groves which are located throughout the Route 254 corridor are considered a highly valuable scenic resource.

VISUAL RESOURCES AND RESOURCE CHANGE

Visual resources of the project setting are defined and identified below by assessing *visual character* and *visual quality* in the project corridor. *Resource change* is assessed by evaluating the visual character and

the visual quality of the visual resources that comprise the project corridor before and after the construction of the proposed project.

The visual character of the proposed project will be compatible with the existing visual character of the corridor. Visual character is composed of pattern elements and pattern character. Pattern elements are the artistic attributes inherent in the elements that compose a landscape. They include the primary visual attributes of objects such as form, line, color and texture. The form of an object is its visual mass, bulk or shape. Line is introduced by the edges of objects or parts of objects. The color of an object is both its visual or reflective brightness and its hue. Texture is apparent surface coarseness. Awareness of pattern elements varies with distance.

The existing visual character of Route 254 at all four of the bridge locations is rural and heavily forested. Old growth redwood trees are common and dominate the visual attention of the traveling public. These vertically structured trees are extremely large in scale with a coarse bark that is reddish brown in color. The roadway itself has many curves where it snakes around stands of old growth redwoods. The red-wood forest is often located within close proximity of the roadway with little or no shoulders. The exist-ing bridge structure will be remain, four unique bridge rail types will be replaced with the uniform de-sign of the Type 80 railing with the addition of a steel bicycle railing structure that will be bolted to the outside of the proposed bridge rail. The bicycle railing is curved towards the outside with three horizon-tal tubular rails that are attached to double parallel tubular vertical rails.

The visual quality of the existing corridor will be moderately altered by the proposed project. Visual quality is measured by analyzing changes to vividness, intactness and unity. Vividness is the visual power or memorability of landscape components as they combine on striking and distinctive visual patterns. Intactness is the visual integrity of the natural and man-built landscape and its freedom from encroaching elements. Unity is the visual coherence and compositional harmony of the landscape considered as a whole.

Route 254 travels through stands of old growth redwood forests intermixed with rural and small town development. Although no longer in operation, remnants of timber processing mills are visible along the roadside. The combination of natural and man-built development influence how the traveler perceives the viewers experience. The traveling public and local residents may notice that existing bridge railing at each of the four locations is different in design and material. It is expected that only local residents will notice the change in bridge rail design. The proposed Type 80 rail is a modest design with subtle aesthetic features and coloration designed to aid the new structure in blending in with the surrounding natural environment.

The proposed steel bicycle railing will be a new feature in the viewshed and will be most noticeable to the traveling public who regularly commute on Route 254. This may temporarily create negative impact to their visual perception of the traveling experience until they become accustomed the new bridge rail.

Resource Change (changes to visual resources as measured by changes in visual character and visual quality) will be moderate-low due to the change in bridge rail type and addition of bicycle railing.

VIEWERS AND VIEWER RESPONSE

Neighbors (people with views *to* the road) and *highway users* (people with views *from* the road) will not be adversely affected by the proposed project. The two key viewer groups are the traveling public who are viewing the road and roadside from their vehicles and those who view the road and its features from a nearby location such as a residence, business or recreational trail. Their visual experience is a combination of visual resources and the viewer response.

The two key elements that affect these two viewer groups and how they response to the world around them is viewer exposure and viewer sensitivity. Viewer exposure is the physical location of each viewer group, the number of people in each viewer group and the duration of their view. Visual sensitivity is the receptivity of different viewer groups to the visual environment and its elements.

Viewer exposure of the proposed bridge rail replacement by highway users and neighbors will be limited to the immediate area surrounding the bridge. Redwood trees and other dense vegetation will limit views of the bridge rail and the amount of time it will be visible. Due to the highly scenic nature of Route 254, viewer sensitivity is extremely high for both the traveling public and those within close proximity of the highway. The proposed aesthetically treated Type-80 bridge rail with bicycle railing will be designed to blend in with the surrounding natural environment with the goal of minimizing negative impacts to viewer exposure and sensitivity.

Based on viewer sensitivity and viewer exposure, it is expected that individuals who live, work or recreate within close proximity to the four bridges will be most affected by the changes to the bridge rail and it is anticipated that the average response of all viewer groups will be moderately-low to moderate.

VISUAL IMPACT

Visual impacts are determined by assessing changes to the visual resources and predicting viewer response to those changes. Visual impacts created by this project will be limited to the changes in bridge rail type and the addition of a bicycle railing. Each of the four existing bridge rails are unique in design. The project proposes to replace the existing bridge rail with a uniform bridge rail design. The following is a description of the existing bridge rail types for each structure and the proposed bridge rail.

<u>Bear Creek Bridge</u>

The existing bridge rail is similar to what is proposed. There is a concrete base with small rectangular indentations on the surface closest to the roadway. Posts and horizontal rail is constructed of timber. There are open windows between the concrete base and timber posts and railing. This is a see through design which minimizes the about of structural surface visible from the roadway.

<u>Bridge Creek Bridge</u>

The base of the existing bridge rail is similar to Bear Creek. It is concrete with small rectangular indentations closes to the roadway. There are two types of posts, thicker vertical posts support timber horizontal railing with 'V' shaped timber infill. The horizontal rail is set slightly below the main posts. The existing bridge rail looks similar to Tudor style architecture.

Elk Creek Bridge

The existing Elk Creek bridge rail follows a more standard 1930's design. The base is concrete with horizontal rectangular indentations. The posts are concrete and spaced close together with vertical open windows that are similar is size creating a picket fence pattern. The upper horizontal concrete railing slightly protrudes towards the highway compared to the vertical posts.

Ohman Creek Bridge

The existing Ohman Creek bridge is a simple timber structure. Like all the other bridge rails, the base is concrete with horizontal rectangular indentations. The posts and upper horizontal rail are timber and painted white. The rail is located slightly below the upper cap of the post. The bridge rail is simple in design.

Proposed Type-80 Bridge Rail For All Four Bridges

The proposed Type-80 bridge rail would look similar to the Bear Creek bridge rail but with the addition of a bike rail. The vertical posts and upper horizontal rail would have a rough hewn timber texture and stained dark brown. The bike railing would be stained dark brown to blend into the natural surroundings. The base would have a standard smooth concrete texture with no additional coloration.

The overall visual impacts created by this project will be moderately low. This impact is created by the by the replacement of four unique bridge rail types with one uniform design. Impacts are minimized by the inclusion of subtle aesthetic treatment of the structure including rough hewn timber texture and color on the posts and upper horizontal beam and standard concrete texture and color on the base. The goal of the aesthetic treatment is to help the proposed structure blend in to the surrounding redwood forest allowing the traveling public to visually focus on the natural environment. Existing vegetation adjacent to each of the four bridges will not be impacted and all the construction work will occur from the bridge structure itself.