1. Purpose and Need

1.1 Purpose of Proposed Project

The purpose of the proposed action is to increase traffic safety, improve operational conditions, and alleviate future capacity problems on, and adjacent to, U.S. Highway 101 (U.S. 101) in downtown Brookings, Oregon.

1.2 Need of the Proposed Project

The 1999 Oregon Highway Plan (OHP) designates U.S. 101 as both a Statewide Highway and a National Scenic Byway. The downtown area of Brookings (between Pacific Avenue and Alder Street) is in the process of being designated as a Special Transportation Area (STA) to enhance its function as a downtown "Main Street" that serves the community, and to help provide safe pedestrian movement along and across the highway. U.S. 101 serves as the primary arterial for local transportation needs within the Brookings city limits, and is a major regional route serving tourism and recreation destinations, commerce, and freight movement. The functions served by U.S. 101 are vital to the economic viability of Oregon's south coast region.

Analysis of recent crash history for the study area shows that the section of U.S. 101 between Pacific Avenue and Oak Street exceeds the statewide average for similar highways and traffic volumes by 35 percent. In addition, the study area includes five sites within the top 10 percent statewide ranking for the Safety Priority Index System (SPIS)[1]. Most of the crashes occurred where U.S. 101 intersects with local streets. The most common types of accidents involved turning movements and rear-end collisions, although pedestrians have also been involved. Without transportation and safety improvements, the crash rate is expected to increase.

Increases in local and regional traffic, population growth, and economic development are projected to cause a deterioration of operational and safety conditions on U.S. 101 in downtown Brookings. In future years, vehicle "queuing" would become an increasing problem, as lines of vehicles stopped at signals would block more secondary roads and driveways. Future congestion problems would also negatively affect bicycle and pedestrian mobility. Currently there are no dedicated bicycle lanes on U.S. 101, and many sidewalks are not in compliance with ADA standards.

[1] "The Safety Priority Index System (SPIS) is a method developed by ODOT for identifying hazardous locations on state highways. The SPIS score is based on three years of crash data and considers crash frequency, crash rate, and crash severity. ODOT bases its SPIS on 0.10 mile segments to account for variances in how crash locations are reported. To become a SPIS site, a location must meet one of the following criteria: three or more crashes have occurred at the same location over the previous three years, and one or more fatal crashes have occurred at the same location over the previous three years."

The Oregon Department of Transportation (ODOT) estimates that by the year 2027, without any major transportation system improvements, congestion at three signalized U.S. 101 intersections would substantially exceed state mobility standards (see Table 1-1). Volume-to-capacity ratios for five unsignalized intersections are also expected to exceed allowable standards by 2027 (see Table 1-2).

Table 1-1 Existing and Future Volume-to-Capacity Ratios for Selected Signalized Intersections

Signalized Intersection	v/c Mobility Standard[2]	v/c Ratio[1]		
		Year 2002	Year 2007	Year 2027[3]
Chetco Avenue/5th Street	0.80	0.63	0.73	1.16
Chetco Avenue /Center Street	0.90[4]	0.57	0.59	1.21
Chetco Avenue /Oak Street	0.90[4]	0.65	0.69	1.19

[1]The volume-to-capacity ratio is a measure of roadway congestion, calculated by dividing the number of vehicles passing through a section of highway during the peak hour by the capacity of the section.

[2] The v/c mobility standard is set by ODOT to maintain acceptable and reliable levels of mobility on the state highway system.

[3]Exceedances of v/c mobility standard are shaded.

[4]v/c mobility standard of 0.90 assumes that the Special Transportation Area (STA), the designation between Pacific Avenue and Alder Street, would be adopted. Without adoption of STA the standard would be 0.80.

Table 1-2 Existing and Future Volume-to-Capacity Ratios for Selected Unsignalized Intersections

Unsignalized Intersection	v/c Mobility Standard[3]	v/c Ratio[1]		
		Year 2002	Year 2007	Year 2027[2]
Chetco Avenue/Mill Beach Street	0.90	0.27	0.33	1.16
Chetco Avenue/Pacific Avenue	0.90	0.34	0.40	2.0+
Chetco Avenue/Mill Street	0.90	0.27	0.32	1.65
Chetco Avenue/Fern Avenue	0.90	0.27	0.32	1.37
Chetco Avenue/Alder Street	0.90	0.36	0.48	2.0+

[1]The volume-to-capacity ratio is a measure of roadway congestion, calculated by dividing the number of vehicles passing through a section of highway during the peak hour by the capacity of the section.

[2]Exceedances of v/c mobility standard are shaded.

[3] The v/c mobility standard is set by ODOT to maintain acceptable and reliable levels of mobility on the state highway system. The v/c mobility standard of 0.90 assumes that the Special Transportation Area (STA), the designation between Pacific Avenue and Alder Street, would be adopted. Without adoption of STA the standard would be 0.80.

1.3 Goals and Objectives

The project Purpose and Need statement is the primary driver of the proposed action. IN addition, the Stakeholders Committee and Project Development Team also identified goals and objectives for this project to aid in the defining of conceptual alternatives and to identify alternatives to be further evaluated in the EA. The goals and objectives for the Highway 101 – Downtown Brookings Transportation Solutions Project are:

Goal 1: Improve traffic operations and traffic and pedestrian safety in the study area

The project should ensure that U.S. 101 continues to adequately serve local Brookings traffic by meeting the volume to capacity (v/c) standards through year 2027. The project should also improve traffic and pedestrian safety on Chetco Avenue by reducing the occurrence of accidents, particularly in Safety Priority Index System (SPIS) locations that are in the top 10 percent statewide.

Goal 2: Provide a pedestrian and bicycle friendly environment

The project should include sidewalks adequate for safe and comfortable pedestrian travel and incorporate features that accommodate the disabled and elderly members of the community. Features could include shorter pedestrian crossing distances, longer pedestrian signal phases, audible signals, Braille crossing signs, and complete curb cuts. The project should also incorporate traffic calming measures and new crosswalks as appropriate, while improving accommodation for bicyclists by including bike lanes that make it easy for bicyclists to travel throughout the city.

Goal 3: Ensure the project is compatible with long–term land use plans

The project should create potential for new development and redevelopment while supporting the City's comprehensive plan designations throughout the city.

Goal 4: Provide good visibility for new and existing businesses in the study area

The project should ensure that new streetscape designs maintain the visibility of storefronts while also creating opportunities for tourist traffic to stop in Brookings. Upon completion the project should provide adequate signage to direct travelers to business locations and off-street parking facilities.

Goal 5: Ensure effective access for large vehicles and emergency vehicles within the study area

The project should maintain, and where possible, improve emergency vehicle access throughout the city. The project should use design specifications that accommodate the needs of freight mobility and access so that movements needed for large trucks and all emergency vehicles can be ensured.

Goal 6: Implement, as practical, the suggestions found in the Brookings Downtown Master Plan

The Brookings Downtown Master Plan was adopted by the City Council in early 2003. It is described as "a tool to help both revitalize and celebrate the core area of downtown Brookings [by] improving the experience for both residents and visitors to downtown." Any large-scale project located in the business and residential area along Chetco Avenue and Railroad Street must consider the desired outcomes stated in the Downtown Master Plan.

To achieve the goals stated in the Downtown Master Plan the project design should encourage traffic flow through downtown that is conducive to local commerce, while ensuring that new streets, and improvements to existing streets, are scaled for a small town feel. Amenities such as

landscaping, street furniture, pedestrian-level lighting, gateways, underground utilities and other features should also be incorporated to create an attractive environment for residents and visitors. The project should integrate the history and heritage of Brookings into opportunities for public art and the preservation of historic resources.

Goal 7: Maintain or increase the current quantity of parking in the study area to benefit commerce

Chetco Avenue is the "Main Street" for Brookings. Businesses line both sides of U.S. 101, with many other businesses being along Railroad Street, and locations in between. In order to maximize the potential for business from local residents and out of town visitors, the project should maintain on-street parking; provide adequate signage directing visitors to existing public parking areas, and support opportunities and plans for new off-street parking.

Goal 8: Design a project that will not make implementation cost prohibitive

Once evaluations of the potential impacts of this project are completed the funding for the project will need to be secured. As planning for this project continues, the potential public allotments for such projects should be kept in mind so that estimated costs do not exceed the reasonably foreseeable budgetary allotments. In order to achieve incremental improvements for the city, and pursue funding opportunities over time, the project should also be phased to implement the highest priority components first.

Goal 9: Minimize displacements and disruptions to businesses, residences and civic facilities

The roadway development associated with capacity improvements would likely require purchasing, and potentially displacing existing uses. Every attempt should be made to minimize permanent displacements of businesses, residences or civic facilities. The construction of this project also could cause temporary construction-related disruptions to businesses, residences and civic facilities, and these too should be minimized.

Goal 10: Minimize noise impacts, particularly to residential areas and civic facilities

Wherever possible, the project should minimize impacts cause by increased noise levels from traffic. To do this, potential noise levels should be evaluated, and mitigation measure measures considered in accordance with Federal Highway Administration's (FHWA) noise impact standards.