

## CHAPTER 4. CONSERVATION MEASURES AND MITIGATION

Conservation measures and mitigation for the South Medford Interchange Project will continue to evolve as the project progresses and consultation and coordination with regulatory agencies carries on. The DEIS and FEIS disclosed the major parameters for the project. Through continued consultations, various divisions and departments of the state and federal government may agree upon refinements to the conservation measures and mitigation.

This chapter includes measures that would offset, in part or in whole, impacts that would result from the Preferred Alternative.

### Traffic, Transportation, and Safety

Opportunities would be explored to minimize right-of-way, land use, socioeconomic, and other impacts further, for example, by using minimum roadway design standards that nonetheless maintain the highway's safe and efficient operation.

To increase safety for bicyclists and pedestrians, separate and continuous bicycle lanes and pedestrian facilities would be added on both sides of Oregon 99 between the south and north termini of the project. Improvements along Oregon 99 would include relocation of power lines in a manner that would not damage the existing trees in Veteran's Park.

To increase safety, bicycle and pedestrian facilities to be constructed adjacent to Bear Creek Park as part of the South Medford Interchange Project would be designed in coordination with the City of Medford and would integrate with bicycle and pedestrian facilities being developed by the City within the Park.

ODOT would continue to work with Jackson County to provide an interim multi-purpose path through the project area. This would likely involve an Interagency Agreement outlining shared uses of ODOT and County properties for a combination of multipurpose uses such as path use and ODOT facility maintenance.

Directional signage would be installed at the interchange to guide traffic from the interchange towards South Gateway Center area and downtown Medford via the Garfield Street connector, and to regional medical centers on Barnett via the Highland Drive connector. To discourage interstate-related travelers from using the community's Bear Creek Park as a rest stop, the interchange signage would not include directions to the park.

### Land Use

Future design efforts would be focused on how to avoid or minimize impacts to the wastewater pipe that parallels Bear Creek. The project team would coordinate with the Bear Creek Valley Sanitary Authority to identify special characteristics and maintenance requirements associated with this pipe.

The 1.8 ha (4.4 ac) parcel located to the southeast of the RRRink will be severed from the parent parcel and will not have legal access. The owner would be compensated for the loss of access. If it is determined that the remnant property is uneconomic to the owner, an offer would be made to acquire the remnant.

## Rights-of-Way and Relocation

Applicable federal and state laws govern property acquisitions and relocation for highway projects. Relocation assistance would be provided eligible individuals displaced from their residence or business. Property acquisition, relocation assistance, and compensation procedures would be conducted in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 as amended, the Code of Federal Regulations (2002 CFR Title 46, vol. 1, Title 49, Part 24), Federal Law 91.646, and pertinent state laws, including Oregon Revised Statutes 281.045 to 281.105. A summary of ODOT's land acquisition and relocation programs can be found in Appendix F of the DEIS.

Relocation benefits are quite different for businesses than for residential occupants. Businesses may be eligible for reimbursement of moving costs, search costs and reestablishment costs. The reestablishment benefit is limited to \$10,000. Also, ODOT could provide a fixed payment to eligible businesses for project-related impacts. The fixed payment is in lieu of all other relocation payments and is limited to \$20,000.

## Cultural Resources

If any unrecorded historic or prehistoric archaeological resources were to be revealed during construction activities associated with the Preferred Alternative, all work would cease until a qualified, professional archaeologist can ascertain the nature of the discovery. All equipment would be removed from the area of discovery to a minimum of 30 meters (98 feet) from the site, and barrier fencing installed around the discovery, until such discovery is officially recorded and evaluated by an archaeologist. If the newly

discovered resource is determined significant (eligible for listing on the National Register of Historic Places), then appropriate mitigation measures would be developed and approved by the SHPO and ODOT.

## Biological Resources

With respect to biological resources, "conservation measures" are typically strategies developed prior to construction in order to minimize or avoid impacts to sensitive resources. Several biological resources conservation measures are also required by ODOT's *Standard Specifications for Highway Construction*, which is applicable to all ODOT construction contracts (see Appendix H and <http://www.odot.state.or.us/tsspecs/2002-std-specs.htm>).

Since the DEIS release, biological conservation measures have been partially modified through the development of the original Biological Assessment (BA) and revised BA, which is currently under review by NOAA Fisheries. Final conservation measures for biological resources will consist of a combination of *Standard Specification* requirements, proposed conservation measures from the DEIS and the BA, and potentially additional measures from the NOAA Fisheries Biological Opinion (BO).

"Mitigation" generally refers to improvement of species habitat and/or site conditions as a response to area disturbance. Proposed mitigation for impacts to biological resources, as reflected in the BA, includes:

- Construction of two stormwater treatment and detention facilities. These facilities would receive stormwater from new as well as

previously existing impervious surfaces in the project area;

- Planting and maintaining new riparian vegetation; and
- Removal of undesirable, pre-existing rip-rap from Bear Creek in the project area

The NOAA Fisheries BO could require additional mitigation. The FHWA Record of Decision (ROD) will summarize any additional mitigation or conservation measures from the BO, as appropriate.

## Socioeconomics

Mitigation would be to provide reasonable access to affected properties for impacts to businesses resulting from altered access. Compensation for losses or damage would be at fair market value based on appraisal. In some cases, access would also be changed from full ingress and egress to something more restrictive such as to “right in, right out” only or “right in, right out, left in” only. These access changes are considered regulatory, and no compensable damages can be appraised. Land and associated improvements that are acquired and any damages to owners’ remaining property would be compensated at the appraised fair-market value.

Mitigation for the Barnett Bridge closure would include installation of traffic signs at decision points notifying the public of the bridge closure, public outreach campaign, rideshare program, and a program to assist those with medical needs that necessitate crossing the creeks.

Mitigation during construction would include on-site traffic management, alternate routing, signage, and project phasing to

minimize disruptions to businesses and neighborhoods.

To mitigate the reduction in access to the businesses on the south side of Barnett Road between Bear Creek and Highland Drive under the Preferred Alternative, traffic signals would be retained to the intersection of Barnett Road and Alba Drive and a U-turn for westbound traffic would be provided.

## Visual Resources

All mitigation measures to offset visual impacts that involve landscaping would take into consideration opportunities and constraints related to other factors, such as safety, water conservation, weed control, and maintenance cost concerns.

Measures would be implemented to mitigate visual impacts of slopes. Form, texture, and color contrasts in large fill slopes would be reduced to the extent practicable. Measures may include:

- revegetating slopes with appropriate grasses, shrubs, or trees, preferably native whenever possible, to soften visual discontinuities; considering soil type and depth; suitability for prevailing weather conditions; degree of slope; and safety concerns; and
- texturing slopes by regularly serrating them with adequate soils (which also enhances revegetation) and scarification through random appearance that introduces surface variation (especially in areas near relatively natural sites, such as the floodway and Bear Creek) to improve moisture retention and revegetation potential.

To lessen visual impacts of retaining walls and bridge/interchange structures the project

would coordinate treatment themes with the North Medford Interchange Project. It would also coordinate with MURA and the Bear Creek Greenway activities, City of Medford Parks and Recreation Department, and Jackson County Roads and Parks Department for features located within parks or along the Greenway. Based on ongoing coordination regarding thematic approaches, treatments would likely include:

- use of treated (painted, stained, pigmented, chemical-pressured, impressed) materials with low color contrast (to blend into the predominate surrounding environment), and
- the use of surface textures as deemed appropriate.

To buffer or screen sensitive viewers from modified and adverse visual elements, the project would limit removal of existing vegetation to the extent practicable considering construction requirements, safety, hazard mitigation, and maintenance concerns. Vegetation screening is most effective if installed close to the viewer on property otherwise purchased for right-of-way. Specific locations would be field-verified and designed once sufficient design accuracy is achieved.

To lessen visual impacts along creeks, the project would consider the natural appearance desired for the Bear Creek Greenway. Vegetation planted along the creeks to offset visual impacts would also be consistent with the mitigation measures recommended in the Biological Resources section.

To minimize night lighting impacts, consideration would be given to using directional street lighting.

## Noise

The following construction noise control measures would be included in the project specifications:

No construction would take place without the approval of the Project Engineer, within 300 meters (984 feet) of an occupied dwelling unit on Sundays or legal holidays and between the hours of 10:00 p.m. and 6:00 a.m. on other days. Some traffic control measures may not be practicable or safe to implement during daytime hours.

Completing these measures may require exceptions or refinements to the limitation on hours of construction.

Each internal combustion engine used for any purpose on the job or related to the job would be equipped with a muffler of a type recommended by the manufacturer. No internal combustion engine would be operated on the project without said muffler.

All equipment will comply with pertinent equipment noise standards of the U.S. Environmental Protection Agency (40 CFR 204).

No pile driving or blasting operations would be conducted within 900 meters (2,953 feet) of an occupied dwelling unit on Sundays, legal holidays and between the hours of 8:00 p.m. and 8:00 a.m. on other days, without the approval of the Engineer.

The noise from rock crushing or screening operations performed within 900 meters (2,952 feet) of any occupied dwelling would be mitigated by strategic placement of material stockpiles between the operation and the affected dwellings or by other means approved by the Engineer.

Maintenance yards, batch plants, haul roads, and other construction-oriented operations

would be placed in locations that will be the least disruptive to the community.

Should a specific noise-impact complaint occur during the construction of the project, the contractor at its own expense could be required to implement one or more of the following noise mitigation measures as directed by the project manager:

- Shut off idling equipment.
- Reschedule nearby construction operations to avoid periods of noise annoyance identified in the complaint.
- Notify nearby residences whenever extremely noisy work would be occurring.
- Use portable noise screens to provide shielding for jack hammering or other similar type activities when work is close to noise-sensitive areas.
- Construction noise limits and mitigation are a city of Medford issue to be negotiated prior to construction.

## Air Quality

To minimize combustion emissions during construction, all heavy-duty equipment would be properly maintained.

Operating procedures would be incorporated into project construction to reduce potential sources of fugitive dust from the project area. These would include, but not necessarily limited to the following:

- watering surfaces that might produce dust in dry weather,
- covering piles of fill material as much as feasible,
- restricting the size of active piles to the extent practicable,

- preventing trucks and shovels from dumping material at excessive heights,
- maintaining roadways,
- maintaining low vehicle speeds,
- washing truck wheels, and
- using aggregate construction entrances.

## Hazardous Materials

On the basis of preliminary work completed to date, additional environmental site investigation could be necessary at the Hale Property. A more extended sampling and analysis program at this property would help establish background levels of hazardous substances. If necessary, a remedial action plan would be developed and implemented from information collected. Sampling might include a number of activities, depending on the nature of the situation.

Any actions taken will need to comply with ODOT's Hazardous Materials Procedure for Transportation Projects (ENV-16-02). ODOT's *Standard Specifications for Highway Construction* require contractors to develop and implement a Pollution Control Plan to prevent point-source pollution related to contractor operations.

Mitigation measures would include all activities necessary to comply with the Resource Conservation Recovery Act (42 U.S.C. 6901 et seq. (1976)) and the Comprehensive Environmental Response, Compensation, and Liability Act (42 U.S.C. s/s 9601 et seq. (1980)). A Preliminary Site Assessment would then be required.

## Hydraulics

Mitigation measures to offset adverse impacts to the floodplain and floodway are presented below. These measures would be

applicable to the construction stages of the project.

Placement of bridge piers in the designated floodway would be minimized to the extent practicable, and Roadway fill would be restricted in the designated floodway. Because the project, along with the I-5 Bridge Replacement Project, would result in a “no rise” condition, no further mitigation measures are proposed.

## Water Quality

### *Construction Impacts*

The project would be subject to the requirements of ODOT’s NPDES 1200-CA permit for the discharge of stormwater from construction sites, as well as ODOT’s standard specifications on erosion and pollution control See Appendix H. The NPDES permit requires the development and implementation of an erosion and sediment control plan. The erosion and sediment control plan would be completed and approved prior to the beginning of construction. Alterations to the plan could be made during the course of the project, subject to the approval of the Engineer. At a minimum, the erosion control plan would call for the placement of features to limit the amount of water flowing across disturbed ground, barriers or settling ponds to trap eroded sediments, temporary ground cover while construction is ongoing, and permanent erosion control upon completion of the project. Periodic inspection of the construction site would be conducted to ensure that erosion and sediment controls are in place and are effective.

To minimize turbidity impacts, mitigation measures would include features such as coffer dams and in-stream silt curtains, as well as designs that avoid or minimize the number of piers in the channel. Restrictions

on the length of time turbidity could be elevated from in-stream work is likely to be imposed by the regulatory agencies.

To avoid contamination by chemical pollutants, pollution control plans would specify the following:

- Construction chemicals and fuels must be stored a minimum of 46 meters (151 feet) from any potential receiving water and will be above the 10-year flood elevation.
- Storage sites must be contained to prevent groundwater as well as surface water contamination.
- Clean up and containment materials must be stored on site and be accessible in case of an accident.
- Equipment must be in good working order to minimize the chance of accidental leaks.
- Equipment used in water needs to be cleaned of dirt, oil and grease prior to entering the water.
- Green or curing concrete would not come in contact with streams. Water that has come in contact with curing concrete would not be discharged into streams.

### *Post-Construction Impacts*

Effective treatment and detention of stormwater for 140 percent of the new impervious surface area would be provided.

Mitigation for impacts to low flows is difficult. Stormwater treatment and detention facilities would be designed to incorporate or allow for subsurface infiltration. Basing the treatment on infiltration, however, is problematic, since infiltration facilities are extremely sensitive to soil characteristics and groundwater and are maintenance intensive. Maintenance

lapses could reduce treatment efficiency and limit infiltration.

