

RECORD OF DECISION
FOR
SOUTH CORRIDOR: PORTLAND-MILWAUKIE LIGHT RAIL PROJECT
CLACKAMAS AND PORTLAND, OREGON

DECISION

The Federal Transit Administration (FTA), pursuant to 23 CFR Section 771.127, hereby issues this South Corridor: Portland-Milwaukie Light Rail Project Record of Decision (ROD) finding that the requirements of the National Environmental Policy Act (NEPA) have been satisfied for the construction and operation of the South Corridor: Portland-Milwaukie Project (Project) by TriMet. This ROD also provides findings on other environmentally-related federal statutory requirements.

This ROD is based on the close monitoring and independent evaluation of the process followed by Metro and TriMet as well as local project partners Clackamas County, City of Milwaukie, City of Portland and the Oregon Department of Transportation in setting forth and considering the effects of the project and the available alternatives. This process included the preparation the *South/North Corridor Project Draft Environmental Impact Statement* (February 1998), the *South Corridor Supplemental Draft Environmental Impact Statement* (December 2002), the *South Corridor: Portland-Milwaukie Supplemental Draft Environmental Impact Statement* (May 2008) and the *South Corridor: Portland-Milwaukie Final Environmental Impact Statement* (October 2010), respectively, and the determinations made herein (all collectively referred to as the "Environmental Review Documents").

This ROD describes the Portland-Milwaukie Light Rail Project, background of the project's development, alternatives considered, the public opportunity to comment, the public comments and responses thereto, and the basis for the decision and mitigation measures required. However, this summary does not supersede or negate any of the information, descriptions, or evaluations provided in the environmental review documents. This ROD and the associated published Environmental Review Documents constitute the FTA environmental record for the project and are incorporated herein by reference. The summary descriptions are provided in this ROD to provide a summary of the basis of the record of decision.

The Project is the Locally Preferred Alternative (LPA) that extends the current light rail system an additional 7.3 miles of light rail, adds ten stations, two park-and-rides, and a new bridge across the Willamette River. The route would begin near PSU, at the southern end of downtown Portland, connecting with the Downtown Portland Transit Mall light rail that opened in 2009 at SW 5th and 6th avenues. The Project also includes expansion of the Ruby Junction Maintenance Facility and some related improvements. The LPA to Park Avenue would end in unincorporated Clackamas County at SE Park Avenue. In addition, the LPA Phasing Option describes how some elements of the LPA

to Park Avenue could be deferred or modified in the project's initial construction and operation.

BASIS FOR DECISION

PROCESS

The Project began in the early 1990's with system planning looking at a wide range of transit mode and alignment alternatives and continued into the 2000's as described below and in Chapter 2 and Appendix L of the Portland-Milwaukie LRT FEIS (October 2010). System planning and analyses included pre-alternatives analyses, alternative analyses and draft, supplemental draft and final environmental impact statements.

PURPOSE AND NEED

The purpose leading to the proposed light rail investment was originally defined by the *South/North Corridor Project DEIS* in 1998. The purpose and need was updated with the *South Corridor Supplemental DEIS* in December 2002 and a subsequent South Corridor LPA decision in 2003, and was confirmed in the most recent LPA decision in 2008. The purpose is:

To implement a major transit improvement in the South Corridor that maintains livability in the metropolitan region, supports land use goals, optimizes the transportation system, is environmentally sensitive, reflects community values, and is fiscally responsive.

The Phase I investment for the South Corridor (the MAX Green Line) is now complete and in operation, and Phase II focuses on the need to develop light rail within the Portland-Milwaukie Corridor. The *need* for a major transit investment in the Portland-Milwaukie Corridor is identified as:

- Historic and projected rapid population and employment growth in the corridor, which creates an unmet demand for increased travel choices and transit capacity
- High levels of existing traffic congestion and travel delay in the corridor and deteriorating travel conditions in the future
- The need for high-quality transit service in the corridor to achieve regional and local land use objectives

The Federal Transit Administration in consultation with TriMet and Metro has determined that the Project as described in the FEIS and which is incorporated herein meets the purpose and need for the project and the goals established for the project as described and evaluated in each of the Environmental Review Documents.

OTHER NEPA CONSIDERATIONS

In addition to earlier NEPA documents cited above, a supplemental draft environmental impact statement (SDEIS) was completed and distributed for comment in 2008. Comments were gathered and responses were completed, along with more detailed environmental analysis and this was compiled in the FEIS. The FEIS also included consideration of environmental findings, Endangered Species Act and Magnuson-Stevens Act findings, Section 106 compliance, Section 4(f) findings, as well as Environmental Justice, air quality conformity, floodplain, wetland findings which are summarized below and detailed in the FEIS. On the basis of consideration of all of these South Corridor: Portland-Milwaukie FEIS (2010) findings as well the South Corridor SDEIS (2002) and the findings on Project purpose and need, the FTA finds that the Project has met all applicable standards and that this ROD is complete and supports the determination that all NEPA requirements have been met.

BACKGROUND

A number of alternative analyses were completed in the past for the South Corridor and which lead to a 1998 *South/North Draft Environmental Impact Statement* and a 2002 *South Corridor Supplemental Draft Environmental Impact Statement (SDEIS)*. The *South/North Corridor Project DEIS (1998)* examined a major transit capital investment from Vancouver, Washington, to downtown Portland and across the Willamette River to Clackamas County. The *South Corridor Project SDEIS (2002)* included high capacity transit alternatives connecting downtown Portland and Clackamas County, including a light rail alignment to Milwaukie, and an I-205 alignment to the Clackamas Regional Center connecting to the east side Metropolitan Area Express (MAX) line.

Alternatives considered in these analyses included both transit mode choices as well as alternative alignments. Transit mode choices analyzed and considered for the South Corridor during the period from 1993-2003 include: No-Build, Bus Rapid Transit, Busway, Commuter Rail, High-Occupancy Vehicle Lanes, High Occupancy Toll Lanes, River Transit and Light Rail. (A brief description of alternatives analyzed may be found in Attachment B, to this ROD and in more detail in Chapter 2 and Appendix L of the FEIS.)

Following on these assessments, on April 17, 2003 the Metro Council adopted a two-phased major transit investment strategy for the South Corridor. Phase I was the I-205/Portland Mall Light Rail Project, now completed and in operation and known as the TriMet MAX Green Line. Phase II was a light rail line to Milwaukie and Clackamas County. Light rail was the preferred transit mode over busway, bus rapid transit and No-Build alternatives. However, there were questions about the precise Portland-Milwaukie alignment location and additional analysis was requested.

The region's decision to select light rail and a new Willamette River bridge crossing for the South Corridor and move forward in two phases of investment is documented in the *South Corridor Project LPA Report (Metro 2003)*. The *South Corridor I-205/Portland Mall FEIS* of 2004 further confirmed the LPA's selection of light rail for the Portland-

Milwaukie Corridor. The 2003 LPA report further specified that the new Willamette River Bridge would provide a shared transitway accommodating light rail, buses, and streetcar, with a multi-use path.

LOCALLY PREFERRED ALTERNATIVE AND PHASING OPTION

Following up on the two phase decision in 2003 and *South Corridor I-205/Portland Mall FEIS* (2004), analysis was initiated for the Portland-Milwaukie corridor. In May 2008, FTA, TriMet, and Metro published a *Supplemental Draft Environmental Impact Statement* (SDEIS), which modified the *South/North Corridor Project Draft Environmental Impact Statement* (DEIS, February 1998), as well as the *South Corridor Project SDEIS* published in December 2002. In July 2008, the Metro Council identified a Locally Preferred Alternative (LPA) for the Portland-Milwaukie Light Rail Project, including a new alignment and bridge across the Willamette River. The LPA and the reasons for its selection were documented in the *Portland-Milwaukie Light Rail Project Locally Preferred Alternative Report* (Metro 2008).

RECORD OF DECISION PROJECT DESCRIPTION

The project for which this Record of Decision is issued is noted as the Locally Preferred Alternative described in the FEIS, which is incorporated herein, and provided below.

Locally Preferred Alternative (LPA):

All transit improvements included within the No-Build Alternative, plus:

- A double-tracked light rail between downtown Portland and Milwaukie, terminating at SE Park Avenue, generally parallel to and east of SE McLoughlin Boulevard, with 10 light rail stations, (plus a previously deferred SW Jackson station and a future SE Harold station) and 20 additional light rail vehicles (17 to 20 vehicles with the phasing option).
- Adjustments to the bus routing to eliminate or modify bus routes that would duplicate light rail service and adjustment of routes to connect to light rail stations or transit centers.
- An 800-space park-and-ride structure at SE Tacoma Street (with as few as 320 spaces on a surface lot with the phasing option).
- A 600-space park-and-ride structure at SE Park Avenue (or a structure with as few as 355 spaces with the phasing option).
- Elevated structures and track over SW Harbor Dr., the Willamette River, SE Powell Blvd., SE Harold St., Crystal Springs Creek, SE Tacoma St. ramps, Johnson Creek, the Tillamook Branch line, SE Lake Road, Kellogg Lake, and SE McLoughlin Blvd.

- A new Willamette River bridge that will accommodate light rail, buses, bicycles, pedestrians, and a future streetcar.
- Access to the new Willamette River bridge and transitway for bus lines 9, 17, and 19, allowing rerouting of buses from congested streets.
- Expansion of the Ruby Junction Maintenance Facility to accommodate 17 to 20 additional light rail vehicles (a smaller expansion size if phasing is used).
- New and consolidated control center for light rail transit (LRT) operations located at TriMet's Center Street facility.

The following road improvements and modifications in addition to those in the 2004 Regional Transportation Plan (RTP) financially constrained highway network:

- Modifications to segments of roadways along SW Lincoln Street; SW Harbor Drive; SW Moody Avenue between SW River Parkway and SW Gibbs Street and SE Water Avenue from the north side of the OMSI parking lot to SE Caruthers; and SE 8th, SE 9th, and SE 17th avenues in Portland.
- Reconfiguration of access to SE McLoughlin Boulevard at the Tacoma Station.
- Reconfigurations that would close SE Adams Street and SE Sparrow Street to through traffic.

The FEIS also identifies and addresses bridge area facilities that include streetcar and roadway improvements that are also included in this ROD.

LPA Phasing Option:

The Project under this ROD is the full build-out of the LPA, as described above. However, financial conditions may require a phased build-out of the LPA (LPA Phasing Option). The LPA Phasing Option differs from the LPA by eliminating or deferring the elements of the LPA noted above in order to reduce the project cost. TriMet is seeking additional funding for the project to proceed with the LPA, but may need to implement some of the cost-reduction elements identified in the LPA Phasing Option. In the FEIS, TriMet, Metro and FTA fully evaluated the environmental and community impacts of all of these elements as part of the LPA, and also consider the impacts of their deletion from the project as part of the LPA Phasing Option. If TriMet's financial plan requires additional deferral or elimination of project elements not identified in the ROD, TriMet, Metro and FTA will follow the environmental procedures defined in 23 CFR Part 771.129, and FTA may issue an amended ROD to identify the modified elements and any additional commitments to mitigate environmental and community impacts for such amended project.

DESCRIPTION OF OTHER ALTERNATIVES EVALUATED IN THE FEIS

Light rail alternative routes and stations for the Portland-Milwaukie Light Rail Project are described in Chapter 2 and Appendix L of the Portland-Milwaukie Light Rail Project FEIS, which are incorporated herein by reference. Evaluation of alternatives is

described in Chapter 5.2 of the FEIS. Besides the Locally Preferred Alternative as well as an LPA Phasing Option for the proposed light rail line extension, the Portland-Milwaukie Light Rail Project FEIS evaluated the No-Build, Minimum Operable Segment.

The No-Build Alternative:

The No-Build Alternative represents the transportation system and the environment as they would exist without the proposed Portland-Milwaukie Light Rail Project. The No-Build Alternative includes Existing transit services and facilities, plus:

- Some increases in route frequency and/or run times to avoid peak overloads and/or to maintain schedule reliability.
- Incremental increases in service hours and vehicle procurement, consistent with available revenue sources and consistent with the RTP's year 2025 financially constrained transit network.
- A new #30 Johnson Creek bus route on SE Johnson Creek Boulevard that would connect the Clackamas Transit Center and downtown Milwaukie.
- The South Corridor Project on the Downtown Portland Transit Mall and I-205.
- A 100-space shared park-and-ride at Clackamas Community College.
- Minor changes in transit operations and routing in the South Corridor.
- Expansion of TriMet's Powell Garage facility to accommodate at least 50 additional buses.

Road improvements included in the Regional Transportation Plan (RTP) year 2025 financially constrained highway network. See Appendix B of the *Detailed Definition of Alternatives Report* (Metro 2010) for a detailed listing of the planned roadway projects within the Portland-Milwaukie project area.

MOS Option:

Also not included in this ROD Project, a Minimum Operating Segment (MOS) option was included in the FEIS in case the full Project length could not be completed. It assumed the following configuration.

All transit improvements included with the LPA to Park Avenue except:

- Light rail would terminate in Milwaukie at SE Lake Rd., with no structure from SE Lake Rd. to SE McLoughlin Blvd. and would include 16 additional light rail vehicles.
- A 1,000-space park-and-ride facility at SE Tacoma St. and a 275-space facility at SE Lake Rd. There would be no park-and-ride at SE Park Ave.
- Expansion of the Ruby Junction Maintenance Facility to accommodate 16 additional light rail vehicles.
- All Roadway Improvements and modifications included in the LPA to Park Avenue, except SE Sparrow Street would not be closed.

PUBLIC OPPORTUNITY TO COMMENT

During the alternative analyses as well as draft and final environmental impact statements, a robust public involvement program was provided. Outreach tools included a transportation hotline, web site, online questionnaire, mailing list to maintain contact with interested parties, a newsletter and e-newsletter and project fact sheets. Community meetings and a citizen advisory committee representing interests in the corridor were also facilitated. With the completion of the South/North Transit Corridor Draft Environmental Impact Statement (1998) and the South Corridor Supplemental Draft Environmental Impact Statement (2002), additional opportunities were provided for public comments. Those that commented on these documents were notified of the opportunity to comment on the revised alternatives included in the *Portland-Milwaukie Light Rail Project SDEIS* distributed on May 1, 2008, and Notice of Availability published in the Federal Register on May 9, 2008. In May 2008, advertisements were placed in the Oregonian, the Clackamas Review, the Oregon City News, El Hispanic News, and the Asian Reporter to announce the publication of the SDEIS and invite participation in the subsequent public comment period. The SDEIS was also posted on Metro and TriMet's websites. In addition, approximately 12,000 postcards and newsletters were mailed to interested persons notifying them of the availability of the document and the opportunity for comment. (Prior to the SDEIS comment period over 50 public meetings were held notifying the public of the upcoming comment period and the opportunity to comment). The document was also available for review at Metro, at public libraries and at four community open houses (held May 21, 22, 27, and 28, 2008). Targeted door-to-door canvassing in May was done, handing out project newsletters and discussing the proposed Project.

The 45-day local public comment period ended on June 23, 2008, and included numerous neighborhood meetings and a public hearing on June 9, 2008. The project accepted public comments in a variety of formats, including by email, by written correspondence, through remarks delivered during the public hearing, and by comment forms provided at the neighborhood meetings and the public hearing. All forms of comments received by the close of the comment period have been individually listed by party or individual, and the comments were then further detailed by the topics raised. For the FEIS, the project then responded in writing to all comments made during the public comment period. TriMet, Metro, and FTA also responded through correspondence and meetings to a number of the commenting parties, such as federal or state agencies or others requesting specific information or contact.

A total of 339 comments were submitted in the form of 150 emails, 11 public testimonies at the public hearing, 123 comment cards, 52 letters, and 3 telephone messages during the 45-day public comment period. The majority of these comments came from individuals, largely residents living adjacent to or near the proposed facility.

Further, three open houses were held in February and March 2009. Postcards were mailed to more than 17,000 property owners along the alignment, paid announcements

were placed in the Clackamas Review, electronic announcements were sent to the project subscriber list and calendar listings were sent to a number of community newsletters and web sites. Two open houses were again held to mark 25% engineering and share information about the FEIS in February 2010. To promote these events, TriMet sent announcements to 17,000 property owners, more than 3,300 email subscribers and advertised in the Clackamas Review. During this period further project design features were refined, based in part on comments received. During the LPA adoption process, public comment was taken at Council meetings at the cities of Portland, Milwaukie and Oregon City and the TriMet and Clackamas County boards.

In addition, outreach and coordination with a Citizen Advisory Committee, Willamette River Bridge Advisory Committee, Milwaukie Monthly meetings, property owners, river users, neighborhood organizations and other stakeholders were held. A detailed description of these efforts are documented in Chapter sections 6.1 and 6.2 of the FEIS.

The South Corridor: The Portland-Milwaukie FEIS also had a notice of availability ad placed in the Oregonian as well as being posted on the Metro website (<http://www.oregonmetro.gov/index.cfm/go/by.web/id=34510>), 371 postcards were mailed and documents made available at local libraries. No written comments on the FEIS were received other than from the U. S. Environmental Protection Agency (EPA) dated November 22, 2010, a copy attached. No follow-up response to comments is deemed needed.

MITIGATION MEASURES TO MINIMIZE HARM

Attachment C, which is incorporated herein by reference, establishes the mitigation measures that are required of TriMet and Metro under this Portland-Milwaukie Light Rail Project ROD and will be relied up by other federal permitting agencies including the U.S. Coast Guard, the U.S. Army Corps of Engineers, the Federal Highway Administration and the National Marine Fisheries Service. The mitigation commitments were identified in the Portland-Milwaukie Light Rail Project FEIS.

Implementation of the mitigation measures in Attachment C are material conditions of this Portland-Milwaukie Light Rail Project ROD and will be incorporated in any grant agreement that the FTA may award TriMet for the construction of Portland-Milwaukie Light Rail Project.

The Federal Transit Administration finds that with the accomplishment of these mitigation commitments TriMet will have taken all reasonable, prudent and feasible means to avoid or minimize impacts from the Project.

Mitigation Monitoring Program to Ensure Compliance

To ensure compliance with required mitigation and to assist with FTA oversight, TriMet shall establish a mitigation-monitoring program, to be approved by FTA, which will track,

monitor and report the status of the environmental mitigation actions identified in this ROD. The mitigation-monitoring program may, upon approval of FTA, be revised as necessary during the permitting process in order to facilitate implementation of those measures during final design and construction. Under this program, TriMet will conduct regular reviews for compliance with environmental mitigation commitments with corrective actions as may be required.

On a quarterly basis, TriMet will submit a PMLR Environmental Mitigation Program Status Report describing the status of the mitigation-monitoring program to the FTA. Implementation of identified mitigation measures during final design and construction will be the responsibility of TriMet's.

DETERMINATIONS AND FINDINGS

National Environmental Policy Act, Environmental Quality Improvement Act and Executive Order 11514, Protection and Enhancement of Environmental Quality

Title 42, sections 4321 through 4347 and 4371 through 4375 of the United States Code as well as Executive Order 11514, Protection and Enhancement of Environmental Quality require that federal agencies evaluate the environmental impacts of their actions and integrate such evaluations into their decision-making processes and that each federal department and agency affecting the environment implement appropriate policies. The environmental record for the Portland-Milwaukie Light Rail Project includes the previously referenced Portland-Milwaukie Light Rail Project Supplemental Draft EIS (May 2008) and the Portland-Milwaukie Light Rail Project FEIS (October 2010) as well as earlier NEPA documents cited and included as the Environmental Review Documents. These documents, all incorporated herein by reference, represent the detailed statements required by NEPA and by 49 U.S.C. Section 5324(b) on:

- The environmental impacts of the proposed project;
- The adverse environmental effects which cannot be avoided should the proposed project be implemented;
- Alternatives to the proposed project; and
- Irreversible and irretrievable impacts on the environment which may be involved in the project should it be implemented.

Having carefully considered the environmental record noted above and findings below, the mitigation measures as required in Appendix C herein, and the written and oral comments offered by other agencies and the public on this record, and pursuant to 49 U.S.C. Section 5324(b) for consideration of economic, social, and environmental interests, FTA has determined that:

- The environmental project review application includes a record of the environmental impact of the proposal; adverse environmental effects that cannot

be avoided; alternatives to the proposal; and irreversible and irretrievable impacts on the environment.

- FTA has cooperated and consulted with the Secretary of the Interior and the Administrator of the Environmental Protection Agency on the Project;
- A public hearing on the Project has been held and FTA has reviewed each transcript of a public hearing submitted under 49 U.S.C. Section 5323(b) to establish that an adequate opportunity to present views was given to all parties having a significant economic, social, or environmental interest in the project and makes the following findings:
 - (a) an adequate opportunity to present views was given to all parties having a significant economic, social, or environmental interest;
 - (b) the preservation and enhancement of the environment and the interest of the community in which the project is located were considered;
 - (c) all reasonable steps have been taken to minimize adverse environmental effects of the proposed project;
 - (d) where adverse environmental effect are likely to result from the project, no feasible and prudent alternative to the effect exists and all reasonable steps have been taken to minimize the effect; and
 - (e) the Project meets its purpose and need and that the requirements of NEPA have been met.

Executive Order 13175 Consultation and Coordination with Indian Tribe Governments

Consultation and coordination was conducted with the following Indian Tribe Governments: the Confederated Tribes of the Grand Ronde Community of Oregon, the Confederated Tribes of the Siletz Reservation, the Confederated Tribes of the Warm Springs Reservation of Oregon, the Cowlitz Indian Tribe and the Chinook Indian Tribe. In addition, the Columbia River Inter-Tribal Fish Commission was also provided Project materials and invited to comment. Meetings with the Oregon State Historic Preservation Office and Tribes were held and correspondence was transmitted to and from the Tribes. Comments received were responded to and incorporated into the FEIS. Accordingly, FTA concludes that Executive Order 13175 has been addressed by the Project.

Executive Order 12372 Intergovernmental Review of Federal Programs

This order directs federal agencies to consult with and solicit comments from state and local governments whose jurisdictions would be affected by a federal action.

During the course of the alternatives analysis, the SDEIS, selection of the locally preferred alternative, completion of preliminary engineering and the FEIS, state and local agencies were directly involved in the Project. Technical, executive and steering committees comprised of state and local staff, executives and elected/appointed officials were coordinated with during each Project phase. Documentation of these efforts are included in Chapter 6 of the FEIS.

Accordingly, FTA finds that the requirements of Executive Order 12372 have been met by the Portland-Milwaukie Light Rail Project.

Endangered Species Act (ESA)

The ESA of 1973, as amended, provides a means to conserve the ecosystems that threatened and endangered species depend on and a program to conserve such species. The ESA requires federal agencies to ensure that any action authorized, funded or carried out by them is not likely to jeopardize the continued existence of any listed species or result in direct mortality or destruction or adverse modification of critical habitat of listed species. This requirement is fulfilled by consultation and review of the proposed actions and mitigation with the appropriate agency responsible for the conservation of the affected species.

The ESA consultation requirements were implemented for the Portland-Milwaukie Light Rail Project light rail project by the FTA in consultation with the National Oceanic and Atmospheric Administration - National Marine Fisheries Service (NMFS). On October 12, 2009, the FTA submitted a Biological Assessment (BA) to NMFS and on February 4, 2010 provided an amended BA based on Project changes and additional requested information.

During the preparation of the BA, regular informal consultations occurred between NMFS, FTA, TriMet, Metro and biologists working on the BAs, including briefing sessions, telephone updates, and periodic review drafts.

On June 23, 2010 a Biological Opinion (BO) was issued by NMFS. In the BO, NMFS concluded that the action, as proposed, is not likely to jeopardize the continued existence of Lower Columbia River (LCR) Chinook salmon (*Oncorhynchus tshawytscha*), Upper Willamette River (UWR) spring-run Chinook salmon, LCR coho salmon (*O. kisutch*), LCR steelhead (*O. mykiss*), and UWR steelhead or result in the destruction or adverse modification of designated critical habitat for LCR Chinook salmon, UWR Chinook salmon, LCR steelhead, and UWR steelhead. Critical habitat has not been proposed or designated for LCR coho salmon. NMFS also concludes that

the proposed action is not likely to adversely affect green sturgeon (*Acipenser medirostris*) and Columbia River (CR) chum (*O. keta*).

As required by section 7 of the ESA, NMFS also provided an incidental take statement with the BO. The incidental take statement describes reasonable and prudent measures NMFS considers necessary or appropriate to minimize the impact of incidental take associated with this action. The take statement sets forth nondiscretionary terms and conditions, including reporting requirements, that TriMet must comply with to carry out the reasonable and prudent measures. Incidental take from actions that meet these terms and conditions will be exempt from the ESA's prohibition against the take of listed species. Accordingly, FTA finds that with the terms and conditions contained in the Biological Opinion, the Endangered Species Act has been addressed.

Magnuson-Stevens Act

The Magnuson-Stevens Act (MSA) directs Federal agencies to consult with NMFS on all actions, or proposed actions that may adversely affect Essential Fish Habitat (EFH). Adverse effects include the direct or indirect physical, chemical, or biological alterations of the waters or substrate and loss of, or injury to, benthic organisms, prey species and their habitats, and other ecosystem components, if such modifications reduce the quality or quantity of EFH. Adverse effects on EFH may result from actions occurring within EFH or outside EFH, and may include site-specific or EFH-wide impacts, including individual, cumulative, or synergistic consequences of actions (50 CFR 600.810). Section 305(b) also requires NMFS to recommend measures that may be taken by the action agency to conserve EFH.

As described above, NMFS and the U.S. Fish and Wildlife Service were provided a Biological Assessment (BA). On the basis of the BA, NMFS in consultation with the U.S. Fish and Wildlife Service and other state agencies issued a Biological Opinion (BO). With regard to the MSA, NMFS concluded that the proposed action will have the following adverse effects on EFH designated for Pacific Coast salmon: Degradation of floodplain connectivity, forage and water quality required for rearing and migration in the Lower Willamette River as described in the BO.

Accordingly, as documented on page 45 of the June 23, 2010 Biological Opinion concerning the MSA and EFH, NMFS found that the following two conservation measures are necessary to avoid, mitigate, or offset the impact of the proposed action on EFH, as follows:

1. Term and Condition 1b, related to the pile driving work window.
2. Term and Condition 2a, b and c related to pile driving monitoring and reporting.

These conservation recommendations are a subset of the ESA terms and conditions. Accordingly, FTA finds that with the above cited terms and conditions, the Magnuson-Stevens Act has been addressed.

Fish and Wildlife Coordination Act

Title 16, sections 661-667 of the United States Code) require consultation with the U. S. Fish and Wildlife Service whenever the waters of channel of a body of water are modified by department or agency of the U.S, with a view to the conservation of wildlife resources.

During the course of the Portland-Milwaukie Light Rail Project, the U.S. Fish and Wildlife service was consulted, including discussions about the least environmentally damaging, practical alternative (LEDPA). The Project concluded that the Locally Preferred Alternative is the LEDPA because:

- The LPA supports state, regional and local plans and policies that accommodate growth in a way that is less environmentally impactful than other land use and transportation alternatives; and,
- There have been a wide range of alternative modes and alignments considered for the South Corridor; and,
- The LPA mode and alignment have fewer environmental impacts than the next most effective transit alternative mode; and,
- The light rail alignment better meets evaluation criteria including environmental sensitivity compared to a number of other alignments; and
- There have been extensive avoidance and minimization actions taken by the Project, as documented in the FEIS to reduce the overall impact of the Project.

The Project also provided opportunities for review and comment for the U.S. Fish and Wildlife Service by providing copies of the Biological Assessment and administrative review copies of the Final Environmental Impact Statement prior to publication.

Accordingly, FTA finds that the standards and policies of the Fish and Wildlife Coordination Act have been met.

Marine Mammal Protection Act

Title 16, Chapter 31, Marine Mammal Protection Act states that: "... certain species and population stocks of marine mammals are, or may be, in danger of extinction or depletion as a result of man's activities; (and) (2) such species and population stocks should not be permitted to diminish beyond the point at which they cease to be a significant functioning element in the ecosystem of which they are a part, and, consistent with this major objective, they should not be permitted to diminish below their optimum sustainable population.

As concluded in the Biological Assessment (February 2010), Steller sea lion (*Eumetopias jubatus*) and southern resident killer whale DPS (*Orcinus orca*) are subject to the Marine Mammal Protection Act, but will not experience disturbance or harassment as result of the Portland-Milwaukie Light Rail Project. The Biological

Assessment was reviewed by the U.S. Fish and Wildlife Service as well as the National Marine Fisheries Service and both agencies concurred with these findings. Accordingly, FTA finds that the Marine Mammal Protection Act has been addressed.

Migratory Bird Treaty Act/Bald and Golden Eagle Protection Act

The Migratory Bird Treaty Act (Title 16, sections 703-712, United States Code) prohibits the taking, killing, or possessing of native migratory birds. Further the Bald and Golden Eagle Protection Act prohibits the taking or possessing of Bald or Golden Eagles. Mitigation of construction impacts to birds protected by the Act that the Portland-Milwaukie Light Rail Project will use include: where native vegetation removal is unavoidable, remove potential bird nest trees outside of nesting season and if clearing is necessary during bird nesting season, have a qualified biologist survey the clearing area for migratory bird nests prior to clearing. These conditions were conveyed to the U.S. Fish and Wildlife Service and the National Marine Fisheries Service prior to publication of the FEIS.

FTA finds that these mitigating actions meet the requirements and standards of the Migratory Bird Act and the Bald and Golden Eagle Act

National Historic Preservation Act (Section 106)/Executive Order 11593 Protection and Enhancement of the Cultural Environment/Executive Order 13007 Protection and Accommodation of Access to Indian Sacred Sites

Section 106 of the National Historic Preservation Act of 1966, as amended¹, requires that federal agencies identify and assess the effects of federally assisted undertakings on historic resources, archaeological sites, and traditional cultural properties, and to consult with interested parties to find acceptable ways to avoid or mitigate adverse effects.

To comply with Section 106 regulations, FTA has consulted with the State Historic Preservation Officer (SHPO), the Advisory Council on Historic Preservation (ACHP) and the National Park Service to determine the project's adverse effects. Consultations and coordination also involved interested parties, including the Chinook, Cowlitz, Confederated Tribes of the Grand Ronde Community of Oregon, Confederated Tribes of the Siletz Indians and Confederated Tribes of the Warm Spring Reservation of Oregon Tribes and the Columbia River Inter-Tribal Fish Commission, as well as the City of Portland Historic Landmarks Commission and the City of Milwaukie Historic Preservation Commission.

Three (3) resources eligible for listing on the National Register will be adversely affected by the Portland-Milwaukie Light Rail Project LPA – Royal Food Warehouse and Office, 2425 SE 8th Avenue, Portland, Westmoreland Park, 7605 SE McLoughlin Boulevard,

¹ Related regulations also addressed in this section and the MOU include the Archaeological and Historic Preservation Act of 1974, the Native American Graves Protection and Repatriation Act and the Antiquities Act of 1906.

and the R. Derwey House, 2206 SE Washington Street, Milwaukie. The Oregon State Historic Preservation Office (SHPO) concurred with these determinations on an Oregon SHPO form dated April 4, 2008 (and on February 5, 2010 for Westmoreland Park). Mitigation for the adverse effects will be conducted in accordance with the Memorandum of Agreement (MOA) dated June 2010 signed by the SHPO, TriMet and FTA and included in the FEIS as Appendix N.

Secondary impacts to five additional historic built environment resources at 2405 SE Harrison, 2326 SE Monroe, 2313 SE Wren, and 2206 SE Washington streets in Milwaukie; and 1635 SE Rhone Street in Portland due to noise and vibration will be mitigated in accordance with the terms of the MOA.

No archaeological resources that are eligible for listing in the National Register of Historic Places (NRHP) have yet been identified within the portion of the Project APE where there may be direct impacts. If any archaeological sites are discovered that may be eligible for listing on the NRHP, then consultation with SHPO regarding inadvertent discovery, documentation, evaluation, assessment, and mitigation measures, if necessary, will be necessary.

Based on the cultural resources analysis and coordination with the Tribes, SHPO, and cities, FTA finds that there are three adverse effects, there is adequate mitigation for these and secondary impacts and suitable procedures to address any inadvertent discovery. Attachment D to this Record of Decision includes a fully executed copy of the Memorandum of Agreement and is identical to Appendix N of the FEIS. Based on the foregoing, FTA finds that the requirements under the National Historic Preservation Act (16 U.S.C 470) and, in particular, Section 106 consultation, for this project has been fulfilled.

Department of Transportation Act, Section 4(f)

Section 4(f) of the Department of Transportation (DOT) Act of 1966, 49 U.S.C. 303(c) requires that use of land from a significant publicly owned park, recreation area, wildlife and waterfowl refuge, or historic site, be approved and constructed only if: 1) There is no feasible and prudent alternative to the use of the land; and 2) The project includes all possible planning to minimize harm to the site. A Section 4(f) evaluation must be prepared that describes the affected resources, discusses the direct impacts and the proximity impacts that would substantially impair the use of these resources, and identifies and evaluates alternatives that avoid such impacts and measures to minimize or mitigate for unavoidable adverse effects. FTA included Section 4(f) evaluations in Appendix K of the Portland-Milwaukie Light Rail Project FEIS. These evaluations have been provided to the Department of the Interior which has found that appropriate consultation with state and local agencies has occurred. The Department of the Interior stated in its e-mail dated March 31, 2010 that it concurs with the Section 4(f) evaluation and FTA determination

FTA concludes that except for the No-Build Alternative, the use of one or more Section 4(f) properties appears unavoidable for the light rail project's LPA or its MOS. However, all previously considered alternatives that have the potential to meet the project's purpose and need also required the use of one or more Section 4(f) resources (Royal Foods, Westmoreland Park and R. Derwey House). This reflects the difficulty of developing a new light rail facility to serve a densely developed urban area. More than 20 different alignment and modal alternatives were considered through the alternatives analysis and previous National Environmental Policy Act environmental reviews conducted for this project. Chapter 2 and Appendix L of the FEIS provide documentation for why previous alternatives have not been advanced, including as a result of their lower effectiveness in meeting the project's purpose and need, and because their costs and environmental impacts were higher than the alternatives carried forward.

When there are no prudent and feasible alternatives that can avoid all Section 4(f) resources, the Section 4(f) analysis must determine that the selected alternative results in the least overall harm to Section 4(f) resources.

Accordingly, based on consideration of the facts and conclusions included in Appendix K of the FEIS, FTA has determined that:

1. There is no feasible and prudent alternative that completely avoids the use of Section 4(f) property;
2. The LPA to Park Avenue is the alternative that causes "least overall harm" and still meets the project's purpose and need; and
3. The LPA to Park Avenue incorporates all possible planning to minimize harm to Section 4(f) resources.

FTA, TriMet, Metro, and SHPO, when applicable, have further determined that the LPA to Park Avenue will have a *de minimis* impact to the recreational and historic resources listed below. These findings would not change with the LPA Phasing Option. Attachments to the Final 4(f) evaluation (Appendix K of the Portland-Milwaukie LRT FEIS, 2010) include supporting documentation of the *de minimis* determinations for these resources in the form of concurrence from agencies with jurisdictions over these resources (the date of the SHPO or local agency concurrence date shown in parentheses): Portland State University School (SHPO 02/05/2010); Eastside Willamette River Greenway Trail (Portland Park Bureau 01/28/2010); SE Rhone Street Residence (SHPO 02/05/2010); Brooklyn Yard (SHPO 04/22/08); Springwater Corridor Trail (SHPO 04/22/08, Portland Park Bureau 01/28/2010); Spanish Revival House (SHPO 04/22/08); Oregon Pacific Railroad (SHPO 02/05/2010); Union Pacific Railroad (SHPO 04/22/08); Westmoreland Park (as a recreational resource) (SHPO 02/05/2010, Portland Park Bureau 01/28/2010); Trolley Trail (01/14/2010 North Clackamas Parks and Recreation District) ; Railroad Trestle (Tillamook Branch Line) (SHPO 01/07/2010); SE Wren Street House (SHPO 02/05/2010).

Construction of the LPA to Park Avenue would require the temporary occupancy of a portion of Robert Kronberg Park. FTA has further determined that if specific conditions

are met, a temporary occupancy does not constitute a use within the meaning of Section 4(f).

Based upon all of the findings above and the mitigation as described in Attachment C, Mitigation, to this ROD, FTA concludes that all of the provisions of Section 4(f) have been addressed.

Executive Order 12898 Environmental Justice

Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority and Low-Income Populations" (February 11, 1994), provides that "each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority and low-income populations." The Department of Transportation Order (No. 5680.1) to Address Environmental Justice in Minority Populations and Low-Income Populations requires agencies to 1) explicitly consider human health and environmental effects related to transit projects that may have a disproportionately high and adverse effect on minority and low-income populations; and 2) implement procedures to provide "meaningful opportunities for public involvement" by members of these populations during project planning and development. Specifically, the DOT Order states, in part:

8.b. In making determinations regarding disproportionately high and adverse effects on minority and low-income populations, mitigation and enhancements measures that will be taken and all offsetting benefits to the affected minority and low-income populations may be taken into account, as well as the design and comparative impacts and the relevant number of similar existing system elements in non-minority and non-low-income areas.

8.c. The Operating Administrators and other responsible DOT officials will ensure that any of their respective programs, policies or activities that will have a disproportionately high and adverse effect on minority populations or low-income populations will only be carried out if further mitigation measures or alternatives that would avoid or reduce the disproportionately high and adverse effect are not practicable. In determining whether a mitigation measure or an alternative is "practicable," the social, economic (including costs) and environmental effects of avoiding or mitigating the adverse effects will be taken into account.

As part of the public project planning process through completion of the Portland-Milwaukie Light Rail Project FEIS, FTA and the Project local partners implemented meaningful outreach efforts to minority and low-income communities to assure their active participation. The outreach efforts are described in the Environmental Justice analyses included in these environmental documents.

Adverse impacts such as unmitigated noise impacts, traffic impact, visual impacts, and displacements do not fall disproportionately on low-income communities. The light rail

alignment would affect four out of eleven neighborhoods that have slightly higher ratios of low income populations than Multnomah County. The Downtown Portland neighborhood has a noticeably higher proportion of low-income people than any of the three larger geographies. However, the area near the alignment does not appear to contain low-income housing or areas, and the project would provide offsetting benefits.

At the Ruby Junction Maintenance Facility (the twelfth affected neighborhood, but not directly along the light rail alignment itself), the project identified the potential for disproportional impacts to low-income and minority persons (three of nine affected residential properties have minority residents, two of nine are likely low-income, out of 14 total properties to be acquired near Ruby Junction). When considered with the 20 residential displacements for the project as a whole, the proportions of minority and low-income displaced residents are similar to or slightly above Multnomah County levels and the Metro regional levels, but they are not disproportionately high. In addition, given the project's commitments to provide compensation and relocation assistance in accordance with federal regulations, these impacts would be mitigated, avoiding high and adverse impacts to low-income or minority populations.

Therefore, according to the definition established in Executive Order 12898, the Portland-Milwaukie Light Rail Project would, in general, not result in high and adverse human health, environmental, social, and/or economic impacts. Accordingly, FTA finds that the project would not have disproportionately high and adverse effects on the minority or low-income populations of the South Corridor: Portland-Milwaukie Light Rail corridor², as provided under the DOT Order on Environmental Justice, particularly in light of the offsetting benefits to minority and low-income populations. The Portland-Milwaukie Light Rail Project would provide improved access to transit, reduced travel time, and improved accessibility to employment and services. Appendix B of the Portland-Milwaukie Light Rail Project FEIS discusses these determinations.

Executive Order 13045 Protection of Children from Environmental Health Risks and Safety Risks

This executive order requires federal actions and policies to identify and address disproportionately adverse risks to the health and safety of children. Executive Order 13045 requires federal agencies carrying out "covered regulatory actions" to identify and assess environmental health and safety risks that may disproportionately affect children. The proposed Project is not a covered regulatory action as defined in Executive Order 13045, and therefore does not directly apply.

Regardless, consideration was given in Section 3.10 of the FEIS as to whether the Project would cause noise or vibration impacts to nearby schools and none were found. Vibration mitigation for impacted receptors will also reduce the chance of any vibration

² These populations are further described in Chapter 3-3, Community Impact Assessment, pages 3-50 through 3-75 and Appendix B, Environmental Justice, of the South Corridor: Portland-Milwaukie Light Rail Project Final Environmental Impact Statement.

to schools in the area. In addition, the Project was not found to increase air pollution, rather analysis shows better air quality with the Project. Further, the FEIS in Chapter 3.16, Safety and Security describes the design and operational methods to address safety and security, including before opening the new light rail line, TriMet takes special care to educate new users, especially children, on how to be safe around its system. Accordingly, no impacts on the health or safety of children are anticipated. FTA therefore concludes that the Project is consistent with Executive Order 13045.

Americans for Disability Act/Architectural Barriers Act

Title 29, section 35.150 addresses a number of issues relating to accessibility including access to the workplace (title I), and access to places of public accommodation and commercial facilities (title III). The Act states that "Each service, program, or activity must be operated so that, when viewed in its entirety, it is readily accessible to and usable by individuals with disabilities, unless it would result in a fundamental alteration in the nature of a service, program, or activity or in undue financial and administrative burdens". Further, the Architectural Barriers Act further specifies accessibility standards. The Portland-Milwaukie Light Rail Project, as illustrated in the 100 Percent Preliminary Design Plan and Profiles, has been designed to meet all ADA requirements and the Final Design will produce further construction details. In addition, the light rail vehicles to be purchased as part of the Project will all be low-floor vehicles that provide accessibility for disabled individuals.

Accordingly, FTA finds that the standards and requirements of the ADA and ABA have been met.

Clean Air Act

The Portland-Milwaukie Light Rail Project is subject to conformity requirements imposed by the Clean Air Act (CAA). The CAA (Title 42 United States Code Section 7506(c)) requires that transportation projects conform to the purposes of the State Implementation Plan (SIP) or Maintenance Plan (SIP/MP). Conformity to a SIP/MP means that the transportation project will not produce new violations of the National Ambient Air Quality Standards (NAAQS) established by the U.S. Environmental Protection Agency, worsen existing violations, or delay timely attainment of the NAAQS.

The EPA conformity regulation (40 CFR part 93) establishes criteria that a transportation project must meet in order to be found by FTA to conform to the SIP/MP. The conformity criteria are that the project be included in a conforming Regional Transportation Plan (RTP) and Transportation Improvement Program (TIP), and that the project not cause or contribute to any localized violation of the NAAQS, known as "hot spots." The Portland-Milwaukie Light Rail Project is included in the region's 2035 Regional Transportation Plan and in the 2010-2013 Metropolitan Transportation Improvement Plan, both of which have been found by FTA and FHWA, in consultation with EPA to conform, in accordance with the CAA as amended.

Further, for carbon monoxide (CO), analyses at specific intersections described in Chapter 3.11 of the Portland-Milwaukie Light Rail Project FEIS, show that the project would not create a new localized violation of the NAAQS for CO and would not worsen an existing violation. For the project, these intersections represent the "worst case" conditions, and no violations of air quality standards are predicted. FTA therefore finds that the Portland-Milwaukie Light Rail Project conforms with the SIP/MP in accordance with the EPA regulations governing such determinations.

Executive Order 11988 Floodplains

Pursuant to Executive Order 11988 Floodplain Management issued May 24, 1977 floodplains were assessed within the 100-year floodplains and floodways defined by the Federal Emergency Management Agency (FEMA) as well as for locations with reported flooding problems or within locally managed floodplains. The Portland-Milwaukie Light Rail Project would impact 5.3 acres of floodplain. Actions to be taken to address these impacts include floodplain cut and fill balancing at Crystal Springs Creek, Johnson Creek, and Kellogg Lake for removal and fill within the floodplain. Further, to address a net rise in the base flood elevation of the Willamette River, TriMet will obtain a Conditional Letter of Map Revision will be completed through the Federal Emergency Management Administration.

The Portland-Milwaukie Light Rail Project LPA would create up to 20.3 acres of impervious surfaces. Hydrologic and water quality impacts will be minimized by following the City of Portland's stormwater management program and *2008 Stormwater Management Manual*; the project will meet the City of Portland's stormwater criteria along the entire light rail alignment. The City of Portland criteria were developed to manage stormwater to meet EPA's Clean Water Act and Safe Drinking Water Act. Through the application of the City's Stormwater Management Manual, the project will incorporate design criteria, best practices and standards that will protect water quality in rivers and streams (including 303(d) listed waters), and protect watershed health as well as protect groundwater as a drinking water resource.

Accordingly, FTA finds that the impacts of the Portland-Milwaukie Light Rail Project to 100-year floodplains or floodways have been identified, alternatives evaluated, impacts avoided through: 1) the balanced cut and fill approach within the Crystal Springs Creek, Johnson Creek and Kellogg Lake floodplains and 2) retention and detention best management practices for stormwater runoff throughout the Project alignment. Further, with regard to the Willamette River floodplain and floodway, impacts have been identified and evaluated, alternatives considered and impacts minimized, documented by a Conditional Letter of Map Revision submitted to the Federal Emergency Management Administration. FTA finds that for the Willamette River floodplain and floodway that the Project design and alignment have been determined to have negligible impact and to be the only practicable alternative consistent with Executive Order 11988. Therefore, FTA finds that all of the provisions of Executive Order No.

11988, Floodplain Management, have been fulfilled by the Portland-Milwaukie Light Rail Project.

Clean Water Act/Water Quality

Discharges of water are addressed in several federal regulations including Title 33, Section 401 of the Federal Water Pollution Act (Clean Water Act) as well as Title 40, Parts 122 and 125, United States Code (the National Pollution Discharge Elimination System (NPDES), stormwater runoff requirements (Title 40, Section 122.26(b)(14)(x) United States Code and Ambient Water Quality Criteria (Title 40, Part 131 United States Code). With the use of the City of Portland Stormwater Manual, as well as observance of best practices and conformance with the City of Portland NPDES permit, the FTA finds that water quality requirements will be addressed by the Portland-Milwaukie Light Rail Project.

Clean Water Act/Rivers and Harbors Act (Section 10)/NEPA/Wetlands and Fill in U.S. Waters/Executive Order 11990 Protection of Wetlands

Three major federal laws apply to wetland resources: the National Environmental Policy Act (NEPA), the Clean Water Act (sections 401 and 404), and the Rivers and Harbors Act (Section 10), as well as an Executive Order. NEPA establishes the process for evaluating the environmental impacts of projects such as Portland-Milwaukie Light Rail Project. This ROD concludes the NEPA process, which included the publication of the Portland-Milwaukie Light Rail Project Supplemental Draft EIS and the Portland-Milwaukie Light Rail Project FEIS by FTA. The Clean Water Act, administered by the U.S. Army Corps of Engineers and the U.S. Environmental Protection Agency (EPA), includes two sections applicable to the Portland-Milwaukie Light Rail project: Section 404 regulates placement of dredge or fill material into the waters of the U.S. including wetlands. Section 401 ensures that federally permitted projects are consistent with state water quality standards, certification for which is administered by the Oregon Department of Environmental Quality. The Rivers and Harbors Act's Section 10 applies to activities in, over, and affecting navigable waters to preserve the navigability of U.S. waters. The Corps of Engineers administers the permit process.

FTA prepared a wetland report for the Portland-Milwaukie Light Rail Project consistent with U.S Army Corps of Engineers guidance for conducting wetland determinations and delineations, as described in the Corps of Engineers Wetlands Delineation Manual, referred to as the 1987 manual (Environmental Laboratory 1987). A Wetland Delineation Report (September 2009) has also been prepared and provided to the U.S. Army Corps of Engineers and Oregon Department of State Lands. A letter of concurrence received from the Oregon Department of State Lands (October 28, 2009). The Project would impact approximately 1.11 acres of wetlands. FTA shall require TriMet to mitigate impacts to these wetlands in through partial funding of the City of Portland's Westmoreland Park Duck Pond Restoration Project or its equivalent. The final mitigation package will be developed during final design and through the appropriate permitting processes in compliance with the requirements of and in

coordination with the U.S. Army Corps of Engineers, U.S. EPA, Oregon Department of State Lands, Oregon Department of Environmental Quality, and local jurisdictions as may be required. Accordingly, the FTA finds that Clean Water Act/Rivers and Harbors Act (Section 10)/NEPA Wetlands and Fill in U.S. Waters/Executive Order 11990 Protection of Wetlands have been addressed.

Navigation and Navigable Waters/U.S. Rivers and Harbors Act (Section 9)/General Bridge Act of 1946

Title 33, Chapter 11, Subchapter I, Section 491 of the United States Code that for any persons proposing "...to construct and maintain a bridge across or over any of the navigable waters of the United States, such bridge shall not be built or commenced until the plans and specifications for its construction, together with such drawings of the proposed construction and such map of the proposed location as may be required for a full understanding of the subject, have been submitted to the Secretary of Transportation for the Secretary's approval..." Further, the U.S. Rivers and Harbors Act (Title 33, Chapter 9, Subchapter I, Section 401 of the United States Code) also requires federal permission to construct a bridge over navigable waters. These provisions are administered by the U. S. Coast Guard. FTA and representatives of the Project have met with the U.S. Coast Guard on several occasions to discuss the Project. The U.S. Coast Guard was also provided an administrative review copy for the FEIS prior to publication for review and comment.

The Portland-Milwaukie Light Rail Project will submit this ROD and application to the U.S. Coast Guard for such permit to build the Willamette River Transit Bridge, a portion of the Portland-Milwaukie Light Rail Project. The U.S. Coast Guard permit may not be acted upon until the National Environmental Policy Act is addressed and their navigation requirements met. The SDEIS and FEIS along with this ROD may be used by the U.S. Coast Guard to fulfill the NEPA requirements. FTA concludes that all coordination with the U.S. Coast Guard has been completed for the Portland-Milwaukie Light Rail Project. FTA is also ready to further coordinate with the U.S. Coast Guard about navigation and the Willamette River Transit Bridge should the U.S. Coast Guard request assistance.

Wild and Scenic Rivers Act

Title 16, Chapter 28 of the United States Code concerns the Wild and Scenic Rivers Act. While portions of the Willamette River (the North Fork of the Middle Fork) and the Clackamas River are designated as wild and scenic, they are many miles distant from the Project and metropolitan area. Accordingly, FTA finds that the Wild and Scenic Act does not apply to the Portland-Milwaukie Light Rail Project.

The Safe Drinking Water Act of 1974/Sole Source Aquifer

The Safe Drinking Water Act of 1974 (Title 42, Chapter 6A, Subchapter 12, Part C, Section 300H) requires that projects that are to receive "federal financial assistance" and which have the potential to contaminate the aquifer "so as to create a significant

hazard to public health" are subject to EPA review and approval. There is only one EPA designated sole source aquifer in Oregon (the North Florence-Dunal Aquifer which is approximately 170 miles distant). Accordingly, FTA finds that the Project does not pose any threat to a designated sole source aquifer.

Resource Conservation and Recovery Act

There are several provisions in federal regulations that regulate the generation, transportation, treatment, storage, and disposal of hazardous waste. These regulations include the Resource Conservation and Recovery Act [title 42, Chapter 82, Subchapter III and Sections 6901 through 6992K, as well as other related regulations (40 CFR Parts 61,107, 171-177,241, 257, 260 261,263, 263, 264,94, 270)]. As described in Section 3.13 of the Portland-Milwaukie Light Rail FEIS, there are 374 existing potential hazardous materials sites within the Project study area. Extensive mitigation procedures are described in section 3.13.3, Mitigation on pages 3-270 through 3-272 to ensure safe handling of all hazardous materials encountered by the Project. Accordingly, FTA finds that upon completion of all listed mitigation, the Resource Conservation and Recovery Act will be addressed

Noise Control Act of 1972/Quiet Communities Act

There are several federal regulations concerning protection from noise impacts. These regulations include the Noise Control Act of 1972 (and as amended by the Quiet Communities Act of 1978 see Title 42, Sections 4901 through 4918 United States Code) which requires federal agencies to develop programs to promote an environment free of noise that jeopardizes public health or welfare and that agencies comply with state and local noise ordinances. FTA developed criteria, most recently documented in Transit Noise and Vibration Impact Assessment Manual, May 2006) which addresses Title 42. The Portland-Milwaukie Light Rail Project FEIS, section 3.10 identifies the noise and vibration analysis methods, impacts and mitigation, including compliance with local noise regulations as applicable (Ruby Junction Maintenance Facility in Gresham). In addition, the Project is coordinating with local jurisdictions, especially with the cities of Portland and Milwaukie, with their applications for quiet zones. These zones, if approved by the Federal Rail Administration, would substantially reduce noise, including that associated with this Portland-Milwaukie Light Rail Project. However, even without the quiet zone approval, but with the completion of the mitigation measures cited in the FEIS, the FTA finds that the noise and vibration requirements of these acts will be met.

Farmland Protection Policy

Federal agencies (Title 7, Chapter 658 of the United States Code) are required to account the adverse effects of their programs on the preservation of farmland. The State of Oregon has land use planning regulations, including urban growth boundaries, to protect farmland. Metro, as the responsible agency for the urban growth boundary around the Metro area, has approved plans and regulations for managing the region's urban growth boundary to protect farmland. The Portland-Milwaukie Light Rail Project,

is an implementing facility of Metro regional growth management policies and plans to ensure a compact urban form and farmland protection. Accordingly, the FTA finds that the Portland-Milwaukie Light Rail Project decreases the potential for loss of farmland in the Metro region and that the Project is compatible with state and local programs to protect farmland and that no further action by the Portland-Milwaukie Light Rail Project is needed concerning this Act.

This Portland-Milwaukie Light Rail Project Record of Decision is hereby approved.



Date 11/29/10

R. F. Krochalis, Regional Administrator
Region X
Federal Transit Administration

ATTACHMENT A
Map of Locally Preferred Alternative

A: Light Rail Alternative



B: Ruby Junction



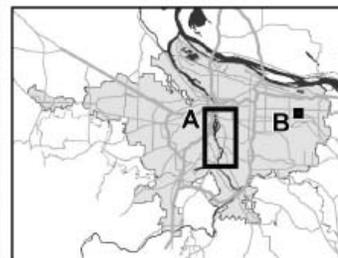
Portland-Milwaukie Light Rail Project

Locally Preferred Alternative and Minimum Operable Segment

Figure S-3

- Light Rail
- Shared Transitway
- Station
- Future Station
- Park-and-Ride
- MOS Park-and-Ride
- Existing Light Rail
- Existing Streetcar
- Under Construction, Streetcar
- Portland Aerial Tram
- Railroad
- County Line

Note: For details on Park-and-Ride capacity please see Table 2.1-1



ATTACHMENT B
Alternatives Considered

ALTERNATIVES CONSIDERED

The Locally Preferred Alternative (LPA) evaluated in the Portland-Milwaukie Project Final Environmental Impact Statement (FEIS) is based on over 30 years of regional land use and transportation systems planning, and an environmental process initiated in 1993. Appendix L of the FEIS provides a detailed written description as well as charts and maps. This appendix of the ROD provides brief summary of alternatives considered.

Alternatives considered include two basic types – transportation modes and alignments. There are eight transportation modes that were considered since 1993 and a No-Build alternative. Table L-1, below, shows when modes were considered. The transportation modes were:

- Transportation System Management
- Bus Rapid Transit
- Busway
- Commuter Rail
- High Occupancy Vehicle Lanes
- High Occupancy Toll Lanes
- River Transit
- Light Rail

**Table L-1
Modes Evaluated in Previous Studies**

	1993-95	1997-98	1999-2000	2001-02
	South/North AA ¹	South/North DEIS ²	South Corridor AA ³	South Corridor SDEIS ⁴
No-Build	X	X	X	X
Transportation System Management	X			
River Transit	X		X	
Commuter Rail	X		X	
Busway	X		X	X
Bus Rapid Transit			X	X
HOV/HOT Lanes			X	
Light Rail	X	X		X

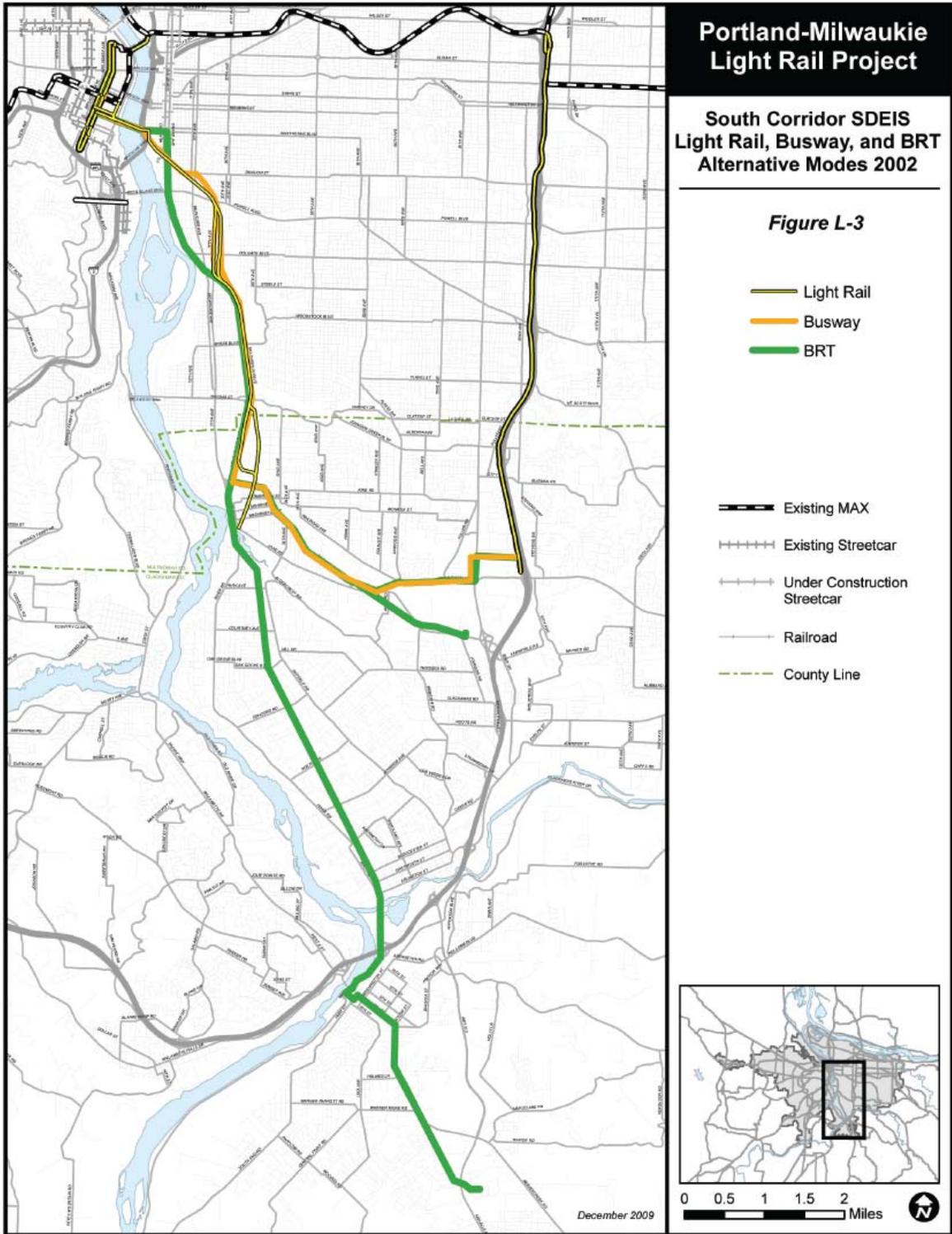
1 Tier 1 Description of Alternatives Report (Metro 1993), Tier 1 Final Recommendation Report (Metro 1994), South/North Design Option Briefing Document (1995).

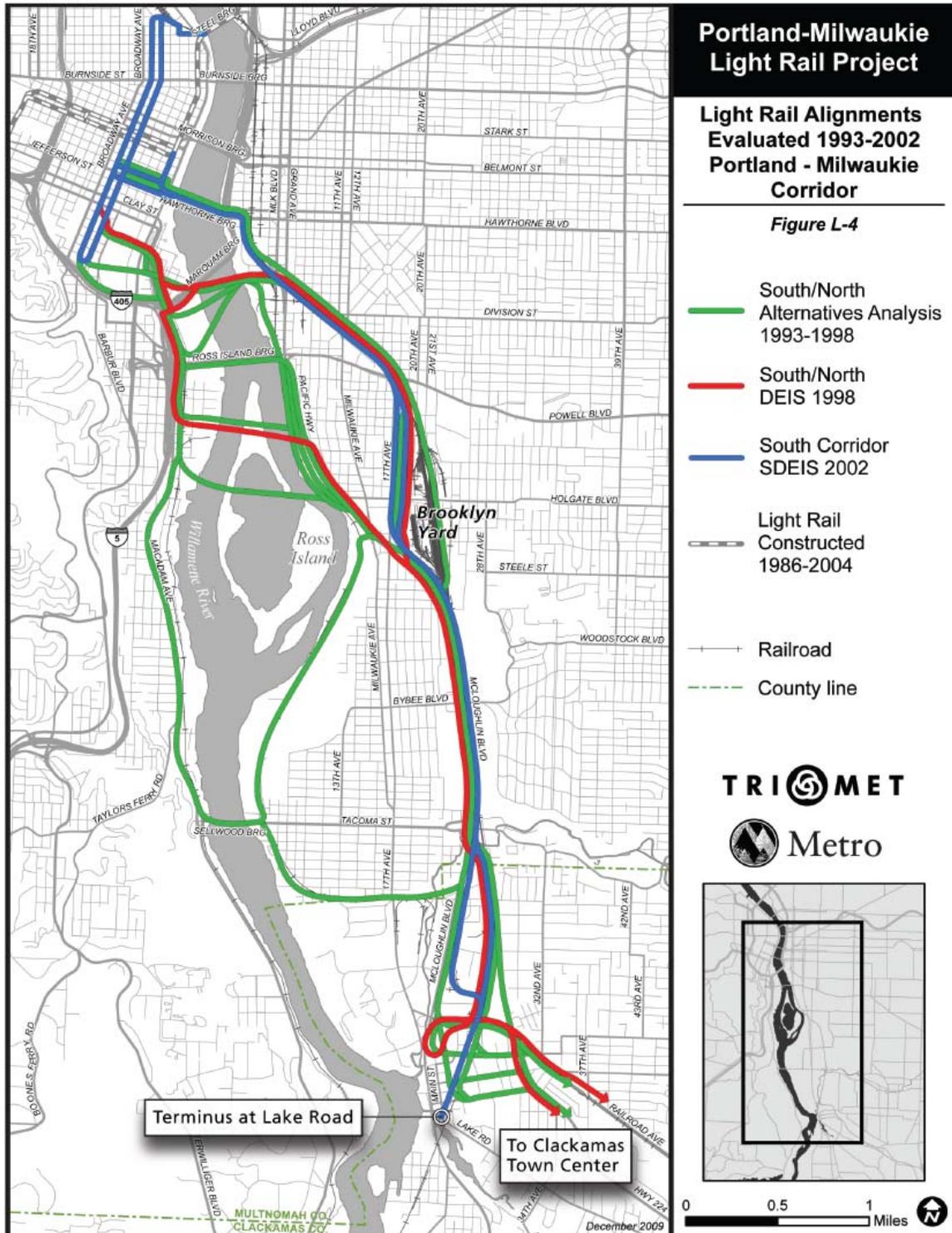
2 South/North Corridor Project Draft Environmental Impact Statement (Metro, Federal Transit Administration 1996).

3 South Corridor Study Wide Range of Alternatives Report (Metro 2000), South Corridor Transportation Alternatives Study Evaluation Report (Metro 2000).

4 South Corridor Supplemental Draft Environmental Impact Statement (Metro 2002).

In addition, there were numerous alignments for light rail and light rail and busway and BRT that were analyzed between 1993 and 2008. Maps showing these alignments are included notated below.





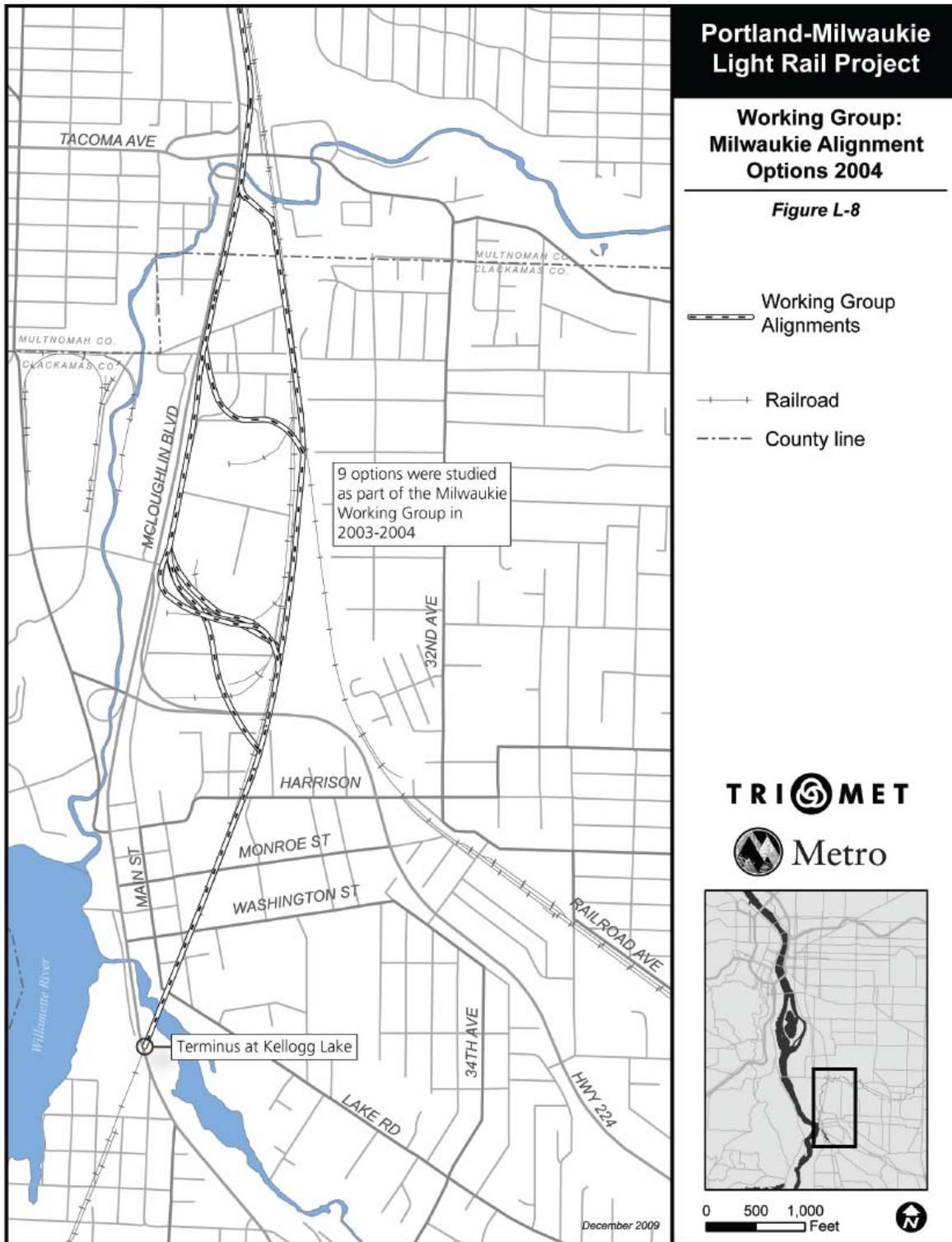


Figure L-9. The 2003 LPA and the Refinement Study Areas

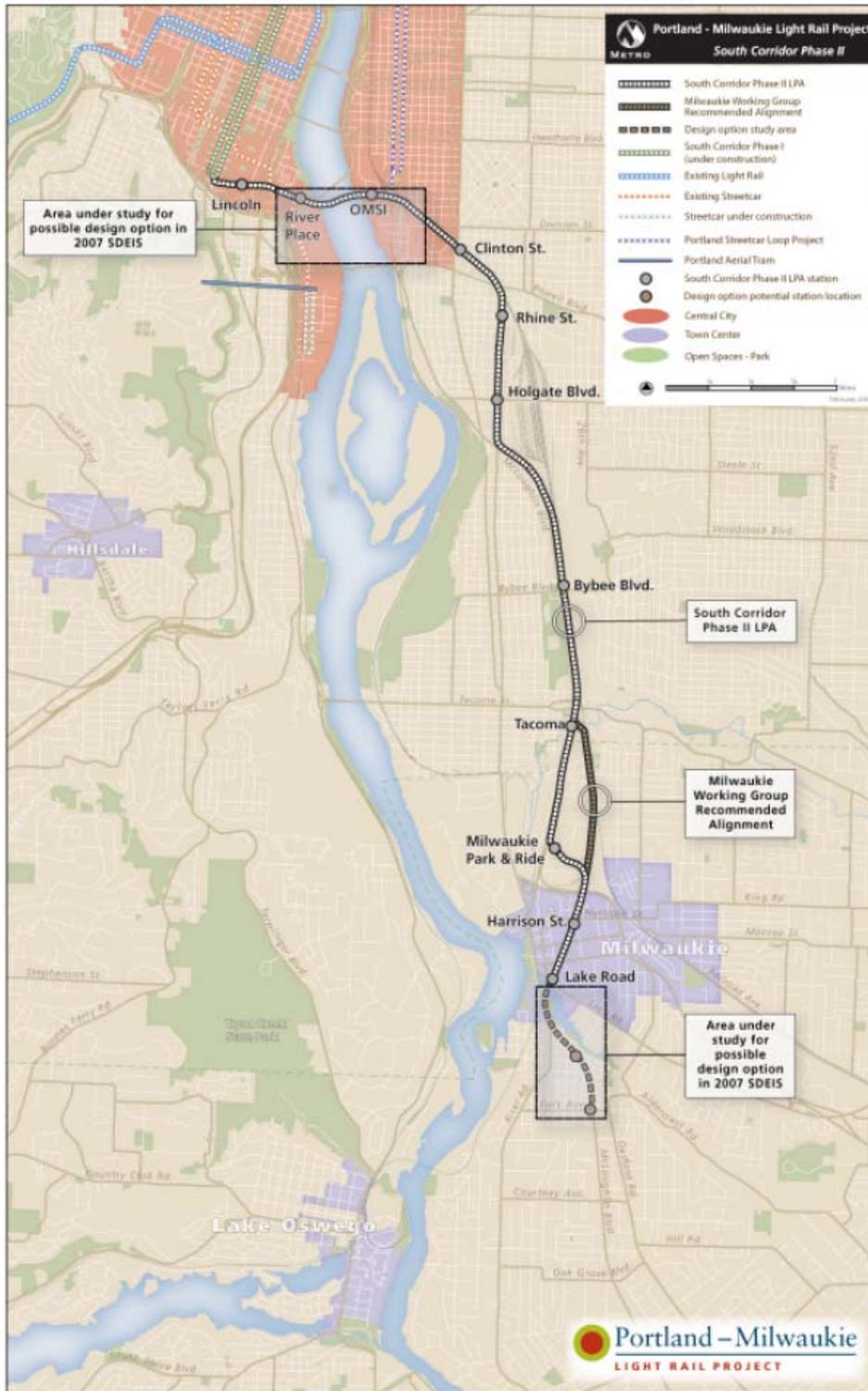


Figure L-10 Willamette River Crossing Refinement Study options



Figure L-11 Area Recommended for Willamette River Options

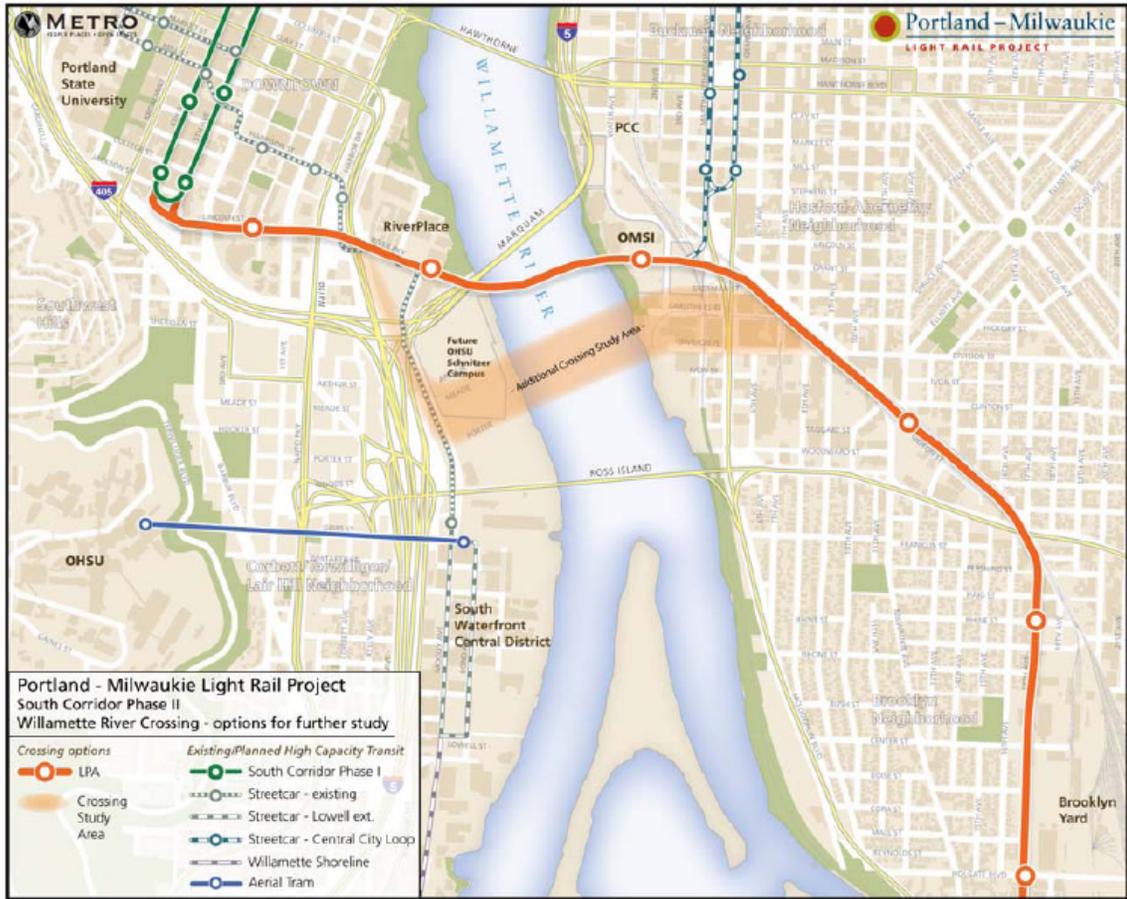


Figure L-12. Refinement Study: Alignments Tacoma Station to Project Terminus

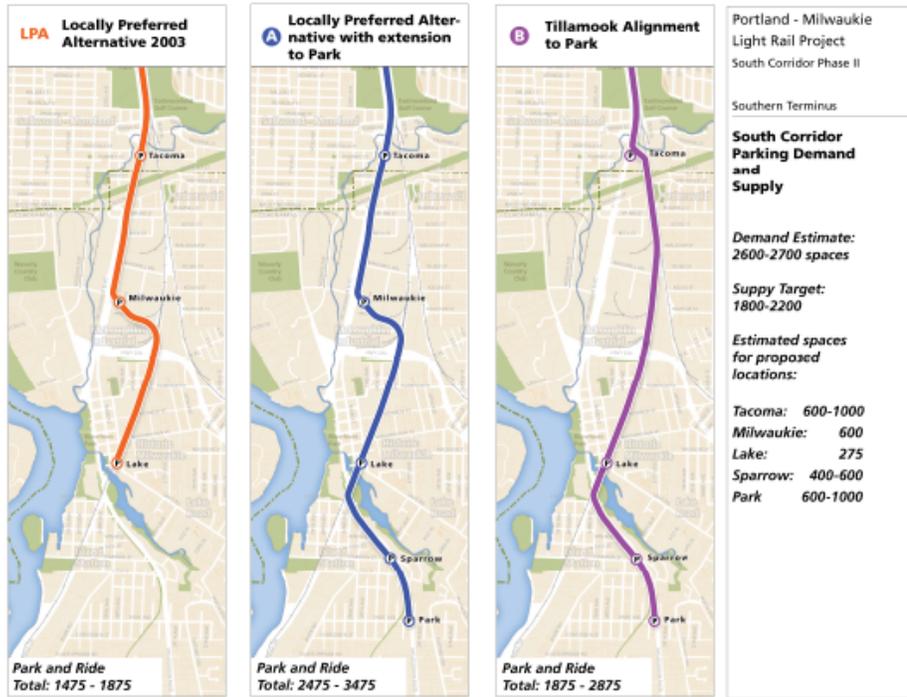
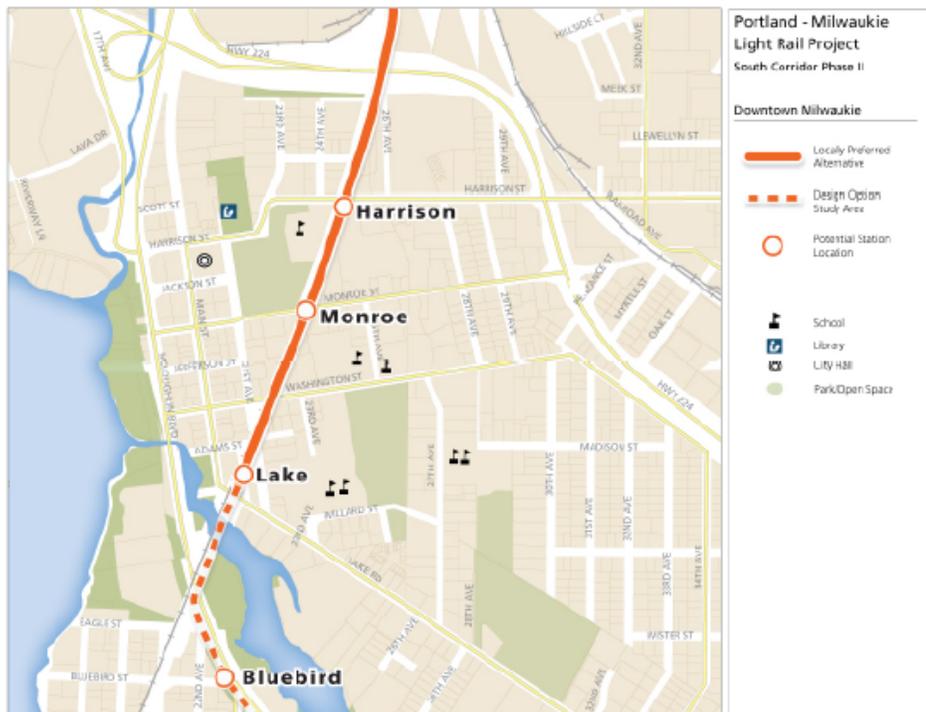
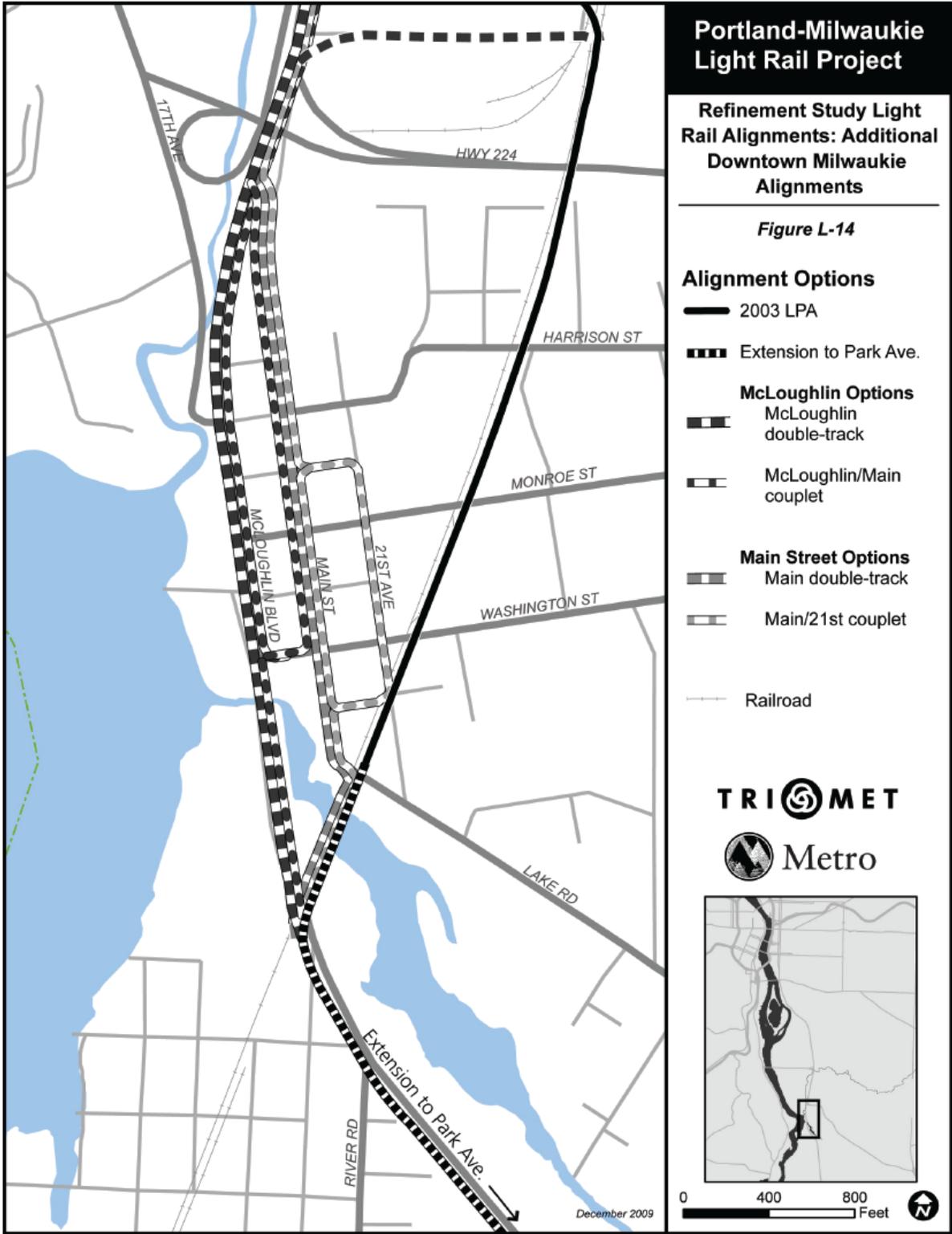


Figure L-13. Downtown Milwaukie station options





L-15 Southern Terminus Study Options



ATTACHMENT C

Summary of Required Mitigation Measures

1. Introduction

This attachment summarizes mitigation measures described in Chapters 3 and 4 of the South Corridor: Portland-Milwaukie FEIS (2010), as well as the Biological Assessment for the project, the Final 4(f) Evaluation, and the Memorandum of Agreement defined through the project’s Section 106 consultations regarding Historic, Cultural, and Archaeological Resources. If mitigation measures have been omitted from the referenced source documents in this summary, the source documents shall control.

Mitigation is listed in two categories – long-term, to be completed prior to the Project opening, and Short-term, to be initiated prior to or concurrent with Project construction.

As noted above, Implementation of the mitigation measures in Attachment C are material conditions of this Portland-Milwaukie Light Rail Project ROD and will be incorporated in any grant agreement that the FTA may award TriMet for the construction of Portland-Milwaukie Light Rail Project.

The Federal Transit Administration finds that with the accomplishment of these mitigation commitments TriMet will have taken all reasonable, prudent and feasible means to avoid or minimize impacts from the preferred alternative.

2. Long-Term Mitigation

The following are the mitigating actions that TriMet commits to complete to address the long-term impacts of the South Corridor: Portland-Milwaukie Light Rail Project.

Significant Impact Topic ¹	Mitigation	Status
Acquisitions and Displacements (see section 3.1, starting on page 3-2 of PMLR FEIS)	TriMet will conduct property acquisitions and provide for relocation of displaced parties in compliance with 49 CFR Part 24 Uniform Relocation Assistance and Real Property Acquisition Act of 1970, as amended. Advisory Services will be offered to relocated businesses, including coordination with Portland Development Commission, Portland State University, Portland Community College, State of Oregon, and other business planning services.	Hardship acquisitions approved by FTA underway. All other acquisitions awaiting LONP or FFGA.
Community Impact Assessment and Environmental Justice (see Section 3.3,	Mitigated with the project’s commitments in other environmental areas and through TriMet’s public involvement programs to provide outreach and communications to a variety of populations, including those whose primary language is not English.	On-going public involvement and relocation assistance as part of acquisitions and displacements,

¹ * Includes only those Federal Act/requirements or other state or local policies for which there is a significant impact. A discussion of all Federal Act/requirements and whether they include a significant impact or not may be found in the ROD Determinations and Findings section.

Significant Impact Topic¹	Mitigation	Status
starting on page 3-50 and Appendix B of PMLR FEIS)		above
Visual Quality and Aesthetics (see section 3.4, starting on page 3-75 of PMLR FEIS)	For areas identified as having high impacts (South Waterfront and Willamette River, Hosford-Abernethy, historic Milwaukie, Island Station, and Oak Lodge), TriMet will continue to work during final design in coordination with local jurisdictions and neighborhood representatives to develop project elements that minimize effects to neighborhood scale and character. This will include coordination with the City of Portland's Design Review Process (for the South Waterfront and Willamette River) and the City of Milwaukie Design and Landmarks Committees (for downtown Milwaukie and the Kellogg Lake).	Yet to commence
Historic, Archaeological, and Cultural Resources (see section 3.5, starting on page 3-100 of PMLR FEIS)	<p><u>Historic Resources</u></p> <p>The Project will have three adverse effects to historic resources (Royal Foods Warehouse and Office, 2425 SE 8th Avenue, Portland, Westmoreland Park, 7605 SE McLoughlin Boulevard, and R. Derwey House, 2206 SE Washington Street, Milwaukie). Mitigation for the adverse effects will be conducted in accordance with the signed formal Memorandum of Agreement (MOA) with the SHPO, TriMet and FTA and executed for inclusion in the FEIS (See Appendix N, Agency Coordination and Correspondence).</p> <p>Secondary impacts to five additional historic built environment resources at 2405 SE Harrison, 2326 SE Monroe, 2313 SE Wren, and 2206 SE Washington streets in Milwaukie and 1635 SE Rhone Street in Portland due to noise and vibration will be mitigated in accordance with the terms of the MOA.</p> <p><u>Archaeological Resources</u></p> <p>Potential adverse impacts to archaeological resources due to construction will be mitigated by the identification, avoidance, monitoring, minimization, and treatment procedures defined in the MOA. (See Appendix N, Memorandum of Agreement).</p>	Yet to commence
Parks and Recreational Resources (see section 3.6, starting on page 3-119 of PMLR FEIS)	During Final Design, FTA and TriMet will continue to coordinate with Portland Parks and Recreation (PP&R), the City of Milwaukie, Metro and the North Clackamas Parks and Recreation Department (NCPRD) to develop project design and construction details consistent with the letters of understanding and mitigation commitments included within Appendix K, Section 4(f) Final Evaluation. The project will meet the City of Portland and the City of Milwaukie applicable permitting requirements for development within the Greenway Zone.	On-going
Ecosystems (see section 3.8, starting on page 3-140 of PMLR FEIS)	The Biological Opinion issued by National Oceanic and Atmospheric Administration (NOAA) Fisheries for the project (June 23, 2010) identifies mitigation measures and terms and conditions for construction and operation of the project. The project will comply with these measures, terms, and conditions. See Section M.4 for a listing.	Yet to commence

Significant Impact Topic ¹	Mitigation	Status
	<p><u>Wetlands</u> The project will meet the requirements of Section 404 permit conditions to be approved by the United States Army Corps of Engineers (USACE) and Oregon Department of State Lands (DSL). Unavoidable impacts to wetlands will be mitigated through compensatory wetland mitigation. Wetlands mitigation requirements will be met through partial funding of the City of Portland's Westmoreland Park Duck Pond Restoration Project, and in compliance with the permitting requirements of the USACE and the Oregon DSL.</p> <p>If for some reason the Westmoreland Park Restoration Project is not a feasible means to mitigate wetland and fish passage impacts, the Portland-Milwaukie Light Rail Project plans to purchase necessary credits at the Foster Creek wetland mitigation bank.</p> <p><u>Wildlife</u> Provide for nesting and roosting habitats where practicable for native birds and bats.</p> <p><u>Vegetation, Waterways and Fisheries</u> The project will mitigate detrimental effects to vegetation, waterways and fisheries, including impacts to both habitat quality and quantity, through compliance with federal, state, and local regulations and permitting requirements, including the conservation recommendations and terms and conditions stipulated in the Biological Opinion, and as described below for Water Quality and Hydrology.</p> <p>The project will mitigate for impacts to the Willamette River and its associated habitat by partnering with the City of Portland on a planned city project that will provide creation and enhancement of shallow water and active channel areas at a site located south (upstream) of the Ross Island Bridge on the western bank and adjacent to two derelict pile fields that are proposed to be removed by the project. The site is known as the Central District and is part of the planned South Waterfront Greenway and consists of two properties. The city's project will upgrade an existing path to meet City of Portland greenway standards (two separated paths for bicycles and pedestrians), while excavating the existing bank to provide approximately 25,500 square feet of shallow-water beach habitat and 17,400 square feet of re-naturalized riverbank. In addition, 20,000 square feet of derelict piles will be removed</p>	
<p>Water Quality and Hydrology (see section 3.9, starting on page 3-177 of PMLR FEIS)</p>	<p>Hydrologic and water quality impacts will be minimized by following the City of Portland's stormwater management program and <i>2008 Stormwater Management Manual</i>; the project will meet the City of Portland's stormwater criteria along the entire light rail alignment. The City of Portland criteria were developed to manage stormwater to meet EPA's Clean Water Act and Safe Drinking Water Act. Through the application of the City's Stormwater Management Manual, the project will incorporate design criteria, best practices and standards that will protect water quality in rivers and</p>	<p>Yet to commence</p>

Significant Impact Topic ¹	Mitigation	Status
	<p>streams (including 303(d) listed waters), and protect watershed health as well as protect groundwater as a drinking water resource.</p> <p>To address a net rise in the base flood elevation of the Willamette River, TriMet will obtain a Conditional Letter of Map Revision (CLOMR) in consultation with the City of Portland and FEMA.</p> <p>The project will provide floodplain cut and fill balancing at Crystal Springs Creek, Johnson Creek, and Kellogg Lake for removal and fill within the floodplain.</p>	
<p>Noise (see section 3.10, starting on page 3-198 of PMLR FEIS)</p>	<p>Village at Lovejoy Fountain 2nd & 3rd floors – sound insulation Village at Lovejoy Fountain 4th & 5th floors– sound insulation American Plaza Ground & 2nd floors– sound insulation American Plaza 3rd, 4th & 5th floors– sound insulation Digital One/Mission Control– sound insulation 2-SFR on SE 17th Ave. at SE Rhone St– sound insulation North of SE Harrison St. (east – SFR) - Sound Insulation (or walls) and directional bells North of SE Harrison St. (west – SFR) - Sound Insulation (or walls) & directional bells with shrouds Spring Creek Apartments (closest MFR to tracks)- Insulation and directional bells with shrouds Spring Creek Apartments (closest MFR to crossing) - Insulation and directional bells SE Monroe St. (SFR nearest tracks)- Insulation and directional bells SE Monroe St. (SFR 2nd home) - Insulation and directional bells SE Monroe St. (SFR 3rd home) - Insulation and directional bells SE Lake Rd. (SFR) – noise wall or insulation SE Wren St. (closest SFR) – noise wall SE Wren St. (other SFR) – noise wall SE 27th Ave. (SFR south of displacement) – noise wall SE 27th Ave. (SFR south of displacement) – noise wall SE 27th Ave. (SFR near switch) – noise wall</p>	<p>Yet to commence</p>
<p>Vibration (see section 3.10, starting on page 3-198 of PMLR FEIS)</p>	<p>Unitus Credit Union/PSU Classrooms - Flange bearing crossover Lovejoy Fountain Apartments (MFR)- Rail boot Portland Opera- Flange bearing crossover SE Rhone St. and SE 17th Ave. (SFR)- Ballast mats North of SE Harrison St. (west – SFR)- Tire derived aggregate North of SE Harrison St. (east – SFR) - Tire derived aggregate South of SE Harrison St. (closest MFR to track) - Tire derived aggregate South of SE Harrison St. (MFR) - Tire derived aggregate SE Monroe St. (SFR) - Tire derived aggregate SE Washington St. "L" Bldg- Tire derived aggregate Tartan and Thistle Restaurant- Tire derived aggregate SE Washington St. (Center) - Tire derived aggregate SE 21st at SE Adams St. (Jenco Scientific and Electrodyne Inc.) - Tire derived aggregate SE Lake Rd. (SFR by structure) - Resilient fasteners SE 27th Ave. (SFR south of displacement)- Ballast mats SE 27th Ave. (SFR south of displacement) – Spring frog</p>	<p>Yet to commence</p>

Significant Impact Topic¹	Mitigation	Status
	SE 27th Ave. (SFR near switch) – Spring frog	
Hazardous Materials (see section 3.13, starting on page 3-253 of PMLR FEIS)	Properties proposed for lease or acquisition will be evaluated in further detail using Environmental Site Assessments (ESAs) for the potential for encountering hazardous materials or incurring environmental liability. All hazardous materials encountered during construction will be addressed in accordance with applicable state and federal regulations.	Yet to commence
Utilities (see section 3.14, starting on page 3-272 of PMLR FEIS)	No significant long term impacts to utilities are expected and no additional mitigation measures are required.	Yet to commence
Safety and Security (see section 3.16 starting on page 3-290 of PMLR FEIS)	TriMet will apply its existing safety and security programs to include the project.	Yet to commence
Section 4(f) (see section 3.17, starting on page 3-300 of PMLR FEIS)	Impacts to Section 4(f) properties will be addressed in accordance with the mitigation commitments defined in the Final Section 4(f) Evaluation and its accompanying letters of concurrence and agreements.	Yet to commence
Traffic – Pedestrian (see Chapter 4 of the PMLR FEIS)	Clinton Station - Provide new traffic signals with crosswalks in the SE 11th Avenue/SE 12th Avenue/SE and alternate bicycle crossing for Clinton Street area to address gaps in the pedestrian and bicycle systems. Rhine Station - Provide sidewalks, crosswalks, and pedestrian facilities for the new 17th Avenue overcrossing of SE Powell Blvd.	Yet to commence
Traffic – Bicycle (see Chapter 4 of the PMLR FEIS)	Clinton Station - Provide bicycle access along SE Clinton Street for the portion of roadway that crosses SE 11th Avenue and SE 12th Avenue. This would provide direct access to the Clinton Station to/from the west. Rhine Station - Provide multi-use path for the new SE 17th Avenue overcrossing of SE Powell Boulevard.	Yet to commence
Traffic – Off-Street Parking (see Chapter 4 of the PMLR FEIS)	Lincoln Station - Consistent with real property acquisition commitments (Section M-1), compensate the property owner for the loss of approximately seven off-street parking spaces at 2000 SW 5th Avenue. OMSI Station - Consistent with real property acquisition commitments (Section M-1), compensate the Portland Opera for the loss of up to nine off-street parking spaces. Clinton Station - Consistent with real property acquisition commitments (Section M-1), compensate the property owner for the loss of approximately twenty off-street parking spaces between SE 11th and SE 12th, south of SE Clinton Street. 17th Avenue/Holgate Station - Replace TriMet's impacted off-street parking supply to other off-street locations nearby or undertake a combination of relocation and parking management strategies that address loss of any off-street parking spaces near the station. Consistent with real property acquisition commitments (Section M-1), compensate the property owners for the loss of other off-street lots.	Yet to commence

Significant Impact Topic ¹	Mitigation	Status
	<p>Lake Road Station - Coordinate with the City of Milwaukie to apply its existing parking management strategies and maximize station access benefits to minimize effects of parking removal.</p>	
<p>Traffic – Motor Vehicle/Road (see Chapter 4 of the PMLR FEIS)</p>	<p>SW Naito Parkway/SW Harrison Street - Increase green time for the northbound movement for the AM peak hour. Provide vehicle queue detection northbound at SW Lincoln Street and provide a northbound clear-out phase; this clear-out phase will need to consider the northbound vehicle queue to the Hawthorne Bridge.</p> <p>SE Water Avenue/light rail alignment - Install signals at the east and west ends of the OMSI Station that are triggered when buses and light rail trains are entering and leaving the station.</p> <p>SE 8th Avenue between SE Division Place and SE Division Street - Add gates on SE 8th Avenue at the light rail tracks to prevent conflicting movements between light rail and vehicles.</p> <p>SE 8th Avenue/SE Division Street – Include a clear-out for vehicles on SE 8th Avenue to avoid conflicts with trains and light rail. Prohibit eastbound right turns on red.</p> <p>SE 8th Avenue/SE Division Place - Include a clear-out phase for vehicles on SE 8th Avenue to avoid conflicts with trains and light rail.</p> <p>SE 11th Avenue/SE Division Street - Signal timing at this intersection will need to be coordinated with the other signals in the near vicinity (12th/Division, 11th/Clinton, 12th/Clinton, Milwaukie/Gideon, 8th/Division Street, and 8th/Division Place); advanced traffic signal control strategies and/or other innovative software and hardware may be necessary.</p> <p>SE 12th Avenue/SE Division Street - Improve intersection to allow larger trucks to turn northbound to westbound. The new street improvement will allow for adequate turning radii for WB-67 trucks (with 53 foot trailers). Signal timing at this intersection will need to be coordinated with the other signals in the near vicinity (11th/Division, 11th/Clinton, 12th/Clinton, Milwaukie/Gideon, 8th/Division Street, and 8th/Division Place).</p> <p>SE 11th Avenue/SE Clinton Street - Implement advanced traffic signal control strategies to coordinate signal timing and allow for progression of southbound movement at this intersection with the traffic signals at SE 11th Avenue/SE Division Street and SE Milwaukie Avenue/SE Powell Boulevard to operate with a clear-out phase as trains approach the at-grade crossing on SE 11th Avenue. New signals in this area should include 2070 controllers or conform to the most up-to-date City of Portland standards.</p> <p>SE Clinton Street/SE 12th Avenue - Implement advanced traffic signal control strategies to coordinate signal timing and allow for progression of vehicles along SE 11th and 12th avenues and adequate clear-out phasing for vehicles to get off the light rail tracks as trains</p>	<p>Yet to commence</p>

Significant Impact Topic ¹	Mitigation	Status
	<p>approach. New signals in this area should include 2070 controllers or conform to the most up-to-date City of Portland standards.</p> <p>SE Milwaukie Avenue/SE Gideon Street - Restripe the second eastbound lane as a shared through/left. By providing the left-turn capability from both lanes, queuing and operations will improve in this short connecting segment. New signals in this area should include 2070 controllers or conform to the most up-to-date City of Portland standards.</p> <p>SE Milwaukie Avenue/SE Powell Boulevard - Extend striping of southbound left-turn pocket north to approximately SE Gideon Street. Roadway cross section would also include bicycle lanes on both the east and west sides of the roadway in this section.</p> <p>SE 8th Avenue/SE Woodward Street – During Final Design work with ODOT and City of Portland staff to address queuing. Install advance queue warning detectors and flashing beacons for the northbound SE McLoughlin Boulevard exit ramp onto Powell Boulevard.</p> <p>17th Ave./SE Pershing Street - Traffic control to provide a safe crossing for motor vehicles, light rail, and pedestrians/bikes is required. A gated crossing is anticipated to provide safe operations with minimal queuing and delay.</p> <p>SE 17th Ave./SE Holgate Blvd - Provide a minimum of 300 feet for the southbound left turn. Provide a minimum of 300 feet for the westbound left turn. Provide a minimum of 100 feet for the eastbound left turn. Operate intersection with a 110-second cycle length. Coordinate light rail operations with north-south vehicle phases.</p> <p>SE 17th Ave./SE McLoughlin Blvd - Provide dual southbound left-turn lanes. Add pedestrian crossing on west leg of intersection. Provide a minimum of 300 feet for the westbound right-turn lane. Adjust signal timing to optimize southbound left-turn lane green time without impacting green time along SE McLoughlin Boulevard.</p> <p>Tacoma Park-and-Ride south access - Consolidate business accesses south of park-and-ride with access road. Only allow right-in operations to minimize affects of weaving on SE McLoughlin Boulevard.</p> <p>SE Tacoma St./SE McLoughlin Blvd. SB Off-Ramp - Restripe for dual stage left turn onto SE Tacoma St. – or - Modify interchange and signalize intersection – or - Do nothing and seek a design exception.</p> <p>SE Tacoma St./SE McLoughlin Blvd. NB On- /Off-Ramp - Restripe SE Tacoma Street between park-and-ride access and SE Tenino Drive to be a two-way center turn lane. Seek design exception to allow for operations over 0.85 V/C ratio rather than widen SE Tacoma Street to meet standards.</p> <p>SE Johnson Creek Blvd./SE 32nd Ave - Add westbound right-turn pocket of 100 feet.^(c) Signalize intersection.</p> <p>SE Park Ave./SE Oatfield Rd – LPA Phasing Option (355 spaces) – Add eastbound right-turn pocket. Retain east-west stop controlled intersection. Retain</p>	

Significant Impact Topic ¹	Mitigation	Status
	southbound , northbound, and westbound queuing. LPA (600 spaces)- Signalization. Add eastbound right-turn pocket. Add northbound left-turn lane. Add southbound left-turn lane.) SE Park Ave. between SE 27th Ave. and SE McLoughlin Blvd - Stripe for back to back left turns slight side by side left turns in middle of section to accommodate eastbound and westbound queuing.	
Biological Opinion (See Appendix Q of the PMLR FEIS)	See Short-Term Mitigation Measures, below.	Yet to commence.

3. Short-Term Mitigation

The following are the mitigating actions that TriMet commits to complete to address the short-term construction impacts of the South Corridor: Portland-Milwaukie Light Rail Project.

Significant Impact Topic	Mitigation	Status
<p>Acquisitions and Displacements (see section 3.1, starting on page 3-2 of PMLR FEIS)</p>	<p>None required</p>	<p>Yet to commence</p>
<p>Land Use and Economy (see section 3.2, starting on page 3-10 of PMLR FEIS)</p>	<p>Develop and implement a construction outreach plan that will ensure that impacted community members such as local residents, businesses, community members, institutions, and property owners are fully informed about potentially major disruptions such as temporary street closures; utility relocations; out of the ordinary construction noise, vibration, light, or glare; changes in transit service; and parking availability.</p> <p>Make a plan to establish effective communication with residents and businesses through means such as holding public meetings with project team members and the contractor and producing materials and processes to distribute information about construction updates, alerts, and construction schedules.</p> <p>Provide outreach to impacted community members such as affected business owners, institutions, chambers of commerce, merchants associations, ethnic community organizations, and others on measures to assist impacted businesses maintain their customer base during construction; this could include promotional programs and other marketing or advertising programs to encourage patronage during construction.</p> <p>Provide clear signage to identify and make accessible paths to and from major transportation facilities, such as designated pedestrian routes, bicycle lanes, bus routes and stops, designated truck routes, and tunnel entrances.</p> <p>Provide a hotline service, ombudsman or other easily accessible points of contact for the public to leave construction complaints and obtain timely resolution.</p> <p>Maintain access to businesses and other properties during construction activities when possible and coordinate closely with businesses during times of limited access due to public safety or construction-related issues.</p>	<p>Yet to commence</p>

Significant Impact Topic	Mitigation	Status
<p>Parks and Recreational Resources (see section 3.6, starting on page 3-119 of PMLR FEIS)</p>	<p>During final design, short-term mitigation measures will be coordinated with park owners, and will incorporate the terms and agreements defined in the FEIS Appendix K, Final Section 4(f) evaluation. Mitigation measures will include providing detour routes around construction areas and temporarily modifying access points to maintain access to park resources where possible. Construction duration around park facilities will be minimized to the extent possible</p>	<p>Yet to commence</p>
<p>Ecosystems (see section 3.8, starting on page 3-140 of PMLR FEIS)</p>	<p>The project will comply with terms and conditions in the Biological Opinion listed below. Other construction period impact mitigation for fisheries, wetlands, and Endangered Species are incorporated within the mitigation measures and permit compliance commitments established for long term impacts.</p> <p>The project will comply with the requirements of the Migratory Bird Treaty Act and will provide protection for active bird nests by conducting preconstruction surveys and either avoiding or relocating nests that could be affected by vegetation removal and other clearing or grading conducted for the project.</p> <p>In addition to protection for bird nests, the project will further define during final design and construction planning specific mitigation measures to avoid or reduce potential impacts, including the following:</p> <p>Avoid removal of native vegetation.</p> <p>Where native vegetation removal is unavoidable, perform clearing activities outside of the bird nesting season (approximately March 1 to September 1), and, where practicable, leave cut trees and large shrubs on-site to provide cover for small mammals, ground-nesting birds, reptiles and amphibians.</p> <p>If clearing is necessary during the bird nesting season, have a qualified biologist survey the clearing areas for migratory bird nests prior to clearing.</p> <p>Retain snags, downed woody material, and forest floor duff to the greatest extent possible.</p> <p>Avoid disturbing bats during the breeding season (May to September). If this is not feasible and if approved by the Project Manager, apply exclusionary methods prior to this date to exclude bats from accessing suitable habitat. An exclusionary device is any method that denies bats physical access to the nest site area (for example: nets and hole blockers).</p> <p>Exclusionary devices must be installed a minimum of 30 days before the bat breeding season.</p> <p>Inspect, maintain, and repair bat exclusionary devices to prevent active occupancy by bats during the breeding season.</p>	<p>Yet to commence</p>

Significant Impact Topic	Mitigation	Status
	Provide for nesting and roosting habitats where practicable for native birds and bats.	
Water Quality and Hydrology (see section 3.9, starting on page 3-177 of PMLR FEIS)	The light rail project will mitigate its potential short-term impacts through full compliance with applicable regulations including the erosion control manuals and National Pollutant Discharge Elimination System (NPDES) permitting requirements of the local jurisdictions.	Yet to commence
Air Quality (see section 3.11, starting on page 3-241 of PMLR FEIS)	Construction contractors will comply with state regulations (OAR 340-208-0210) requiring that reasonable precautions be taken to avoid dust emissions. TriMet is assessing the use of incentives with the contractors to encourage best management practices with regard to air quality and diesel powered construction equipment. This includes incentives for using low-sulfur fuel for diesel equipment, cleaner fuels for other equipment, properly maintaining equipment, reducing idling, retrofitting diesel engines with verified technologies, and replacing older equipment and engines.	Yet to commence
Hazardous Materials (see section 3.13, starting on page 3-253 of PMLR FEIS)	Lead and asbestos surveys will be conducted prior to the acquisition of buildings and structures, consistent with OAR 248, and abatement will be conducted prior to demolition, renovation or repair. The project will comply with all other applicable state and federal regulatory and permitting requirements for the handling of hazardous materials, and no additional mitigation is proposed	Yet to commence
Public Services (see section 3.15, starting on page 3-280 of PMLR FEIS)	TriMet will coordinate with the police departments, fire and rescue providers, schools, USPS, and hospitals regarding construction detours and changes that will occur as a result of project construction.	Yet to commence
Section 4(f) (see section 3.17, starting on page 3-300 of PMLR FEIS)	Construction period impacts to Section 4(f) properties will be addressed in accordance with the mitigation commitments defined in the Final Section 4(f) Evaluation and its accompanying letters of concurrence and agreements.	Yet to commence
Traffic/Transit (see Chapter 4 of the PMLR FEIS)	During construction, affected transit stops will be temporarily relocated to the nearest possible location on the same transit route without interfering with the construction process. During construction, temporary sidewalks and/or pathways will be provided to replace any sidewalks and/or trails adjacent to the project that are affected by construction. To minimize the amount of truck excavation trips to and from the sites, efforts will be made to recycle as much of the excavated earth from the project sites as practical. A comprehensive public outreach program will be developed to inform local residents and businesses of potential delays and impacts to the local street network due to temporary	On-going

Significant Impact Topic	Mitigation	Status
	<p>construction.</p> <p>In the vicinity of the TriMet Center Street Facility (17th Avenue area), to help minimize on-street parking impacts and where available, temporary parking will be identified to mitigate the temporary loss of on-street parking due to construction.</p> <p>Where available, staging areas will be used to help minimize the impact of materials and equipment intruding into surrounding residential or commercial areas.</p>	
<p>Biological Opinion (see Appendix Q of the PMLR FEIS)</p>	<p>In-Water Work Periods - All work within the active channels of project waterways will be completed in accordance with the Oregon Guidelines for Timing of In-Water Work to Protect Fish and Wildlife Resources (ODFW 2008). Specific to this project, these in-water work periods are: Johnson Creek and tributaries (Crystal Springs, Crystal, and Spring creeks), July 15 to August 31; Kellogg Creek and tributaries (Courtney Springs Creek), July 15 to September 30; and Willamette River, July 1 to October 31 (July 10 to October 15 for pile driving operations).</p> <p>Cessation of Work - Project operations shall cease under high-flow conditions that may result in inundation of the project area, except for efforts to avoid or minimize resource damage. The project shall protect cofferdams from overtopping and fish harm.</p> <p>Piling Installation - When possible, a vibratory hammer shall be used to install pilings. If the use of an impact hammer is necessary to install the piling to the load-bearing depth, the piling will be installed first with a vibratory hammer, until it proves no longer effective, and then proofed with an impact hammer. When using an impact hammer to drive or proof steel piles, one of the following sound attenuation devices must be used to reduce sound pressure levels by a minimum of 10 dB: (1) Completely isolate the pile from flowing water by dewatering the pile. (2) If water velocity is 1.6 feet per second or less, surround the piling being driven by an unconfined bubble curtain that will distribute small air bubbles around 100% of the piling perimeter for the full depth of the water column. (3) If water velocity is greater than 1.6 feet per second, surround the piling being driven by a confined bubble curtain (e.g., a bubble ring surrounded by fabric or metal sleeve) that will distribute air bubbles around 100% of the piling perimeter for the full depth of the water column.</p> <p>Bubble Curtain - For each pile to be driven in the water, install and operate a bubble curtain with the following specifications: (1)General - A confined bubble curtain is composed of an air compressor(s), supply lines to deliver the air, distribution manifolds or headers, perforated aeration pipe(s), and a means of confining the bubbles. (2) The confinement shall extend from the substrate to a sufficient elevation above the maximum water level expected during pile installation such that when the air delivery system is adjusted properly, the bubble curtain does not act as a water pump (i.e., little or no water should be pumped out of the top of the confinement system). (3) The confinement shall contain resilient pile guides that prevent the pile and the confinement from coming into contact with each other and do not transmit vibrations to the confinement sleeve and into the water column (e.g. rubber spacers, air filled cushions). (4) In water less than 15 meters deep, the system</p>	<p>Yet to commence</p>

Significant Impact Topic	Mitigation	Status
	<p>shall have a single aeration ring at the substrate level. In waters greater than 15 m deep, the system shall have at least two rings, one at the substrate level and the other at mid-depth. (5) The lowest layer of perforated aeration pipe shall be designed to ensure contact with the substrate without sinking into the substrate and shall accommodate for sloped conditions. (6) Air holes shall be 1.6 mm (1/16-inch) in diameter and shall be spaced approximately 20 mm (3/4 inch) apart. Air holes with this size and spacing shall be placed in four adjacent rows along the pipe to provide uniform bubble flux. (7) The system shall provide a bubble flux of 2.0 cubic meters per minute per linear meter of pipe in each layer (21.53 cubic feet per minute per linear foot of pipe in each layer). The total volume of air per layer is the product of the bubble flux and the circumference of the ring: $Vt = 2.0 \text{ m}^3/\text{min}/\text{m} * \text{Circ of the aeration ring in m}$ or $Vt = 21.53 \text{ ft}^3/\text{min}/\text{ft} * \text{Circ of the aeration ring in feet}$ (8) Flow meters shall be provided as follows: (a) Pressure meters shall be installed at all inlets to aeration pipelines and at points of lowest pressure in each branch of the aeration pipeline. (b) Flow meters shall be installed in the main line at each compressor and at each branch of the aeration pipelines at each inlet. In applications where the feed line from the compressor is continuous from the compressor to the aeration pipe inlet the flow meter at the compressor can be eliminated. (c) Flow meters shall be installed according to the manufacturer's recommendation based on either laminar flow or non-laminar flow.</p> <p>Contaminated Sediments - Resuspension of contaminated sediments in the water column will be minimized during in-water work at the Willamette River and Kellogg Lake. Sediments within the footprint of the work bridges or areas of riverbed disturbance at the Willamette River would be capped with a clean sand layer prior to pile installation. At Kellogg Lake, similar measures may be taken if deemed necessary.</p> <p>Hydroacoustic Monitoring - Hydroacoustic monitoring of impact pile installation will occur according to a protocol approved by NMFS.</p> <p>Pile Driving Monitoring - TriMet shall prepare a pile driving monitoring plan, as described in Underwater Noise Monitoring Plan, Washington State Department of Transportation, (2009), at least 60 days before pile driving commences, and submittal. Pile driving shall be monitored at a minimum of two locations, approximately 30 feet and 521 feet (Willamette) and 154 feet (Kellogg) from the piles. At Johnson and Crystal Springs Creek pile driving will be monitored in water, in line with the crossing. During construction, pile driving activities shall be monitored. If an impact hammer is used and hammer strikes are exceed, contact NMFS immediately at 503-231-2307 or Christina.fellas@noaa.gov.</p> <p>Temporary Bridge Pile Removal. Temporary piles shall be removed with a vibratory hammer and shall never be intentionally broken by twisting or bending. Except when piles are hollow and when they were placed in clean, sand-dominated substrate, the holes left by the removed pile shall be filled with clean, native sediments immediately following removal. No filling of holes shall be required when hollow piles are removed from clean, sand-dominated substrates.</p> <p>Fish Capture and Release - In accordance with an approved</p>	

Significant Impact Topic	Mitigation	Status
	<p>fish salvage plan, a qualified biologist will capture and remove fish in any area that is to be isolated from the active channel of any project waterway.</p> <p>Sick, injured, or dead fish - The applicant posts the following notice prominently at the work site: NOTICE: If a sick, injured or dead specimen of a threatened or endangered species is found in the project area, the finder must notify NMFS through the contact person identified in the transmittal letter for this Opinion, or through the NMFS Office of Law Enforcement at 1-800-853-1964, and follow any instructions. If the proposed action may worsen the fish's condition before NMFS can be contacted, the finder should attempt to move the fish to a suitable location near the capture site while keeping the fish in the water and reducing its stress as much as possible. Do not disturb the fish after it has been moved. If the fish is dead, or dies while being captured or moved, report the following information: (1) NMFS consultation number; (2) the date, time, and location of discovery; (3) a brief description of circumstances and any information that may show the cause of death; and (4) photographs of the fish and where it was found. The NMFS also suggests that the finder coordinate with local biologists to recover any tags or other relevant research information. If the specimen is not needed by local biologists for tag recovery or by NMFS for analysis, the specimen should be returned to the water in which it was found, or otherwise discarded. Fish Passage. Fish passage must be provided for any adult or juvenile fish within the action area during construction, unless passage did not exist prior to construction. After construction, fish passage that meets NMFS's fish passage criteria (NMFS 2008a) must be provided for the life of the project.</p> <p>Fish Screens - NMFS must review and approve all fish screens for surface water diverted by gravity or pumps that exceeds the flow rate of 3 cubic feet per second. Each fish screen must be installed, operated, and maintained according to NMFS's fish screen criteria (NMFS 2008a).</p> <p>Surface Water Diversion - Surface water may be diverted only if water from developed sources is unavailable or inadequate. When surface water is diverted, water shall only be taken from the source with the greatest flow, and a fish screen that meets the above criteria shall be utilized. No water will be diverted from Crystal Springs Creek, Johnson Creek, Crystal Creek, Spring Creek, or Courtney Springs Creek.</p> <p>Construction Discharge Water - All water discharged during construction (e.g., concrete washout, pumped water for work area isolation, and drilling fluids) shall be treated with the best available technology in order to remove any contaminants, sediments, debris, etc. Pollutants such as green concrete, contaminated water, silt, welding slag, sandblasting abrasive, or grout cured less than 24 hours shall not be allowed to contact any wetland, waterbody, or stream channel below OHW.</p> <p>Staging Areas - The environmental impacts of heavy machinery on-site will be minimized to the greatest extent possible. A vehicle staging area will be located 150 feet or more from any waterbody or in an isolated hard zone. Vehicles will be fueled, maintained, and stored in this location. Vehicles and equipment will be inspected daily for fluid leaks before</p>	

Significant Impact Topic	Mitigation	Status
	<p>operation within 50 feet of any waterbody, and will be repaired, if necessary, before leaving the staging area. Inspections will be documented in a record that will be available for review on request. Vehicles will be steam-cleaned before operation below OHW and as often as necessary to ensure that mud, grease, external oil, and other contaminants do not enter surface water. Generators, pumps, cranes, and any other stationary equipment operated within 150 feet of waterbodies shall be diapered, contained, and maintained as necessary to prevent contaminants from entering surface waters.</p> <p>Preconstruction Activity - Before significant alteration to the action area, the clearing limits shall be flagged, and erosion and sediment controls shall be installed and properly functioning.</p> <p>Site Preparation - Native materials found on-site (e.g., large wood, vegetation, topsoil, and channel bed materials) shall be preserved to the greatest extent possible and used in restoration.</p> <p>Pesticide-Treated Wood - Pesticide-treated wood will not be installed below OHW. During the removal of pesticide-treated wood piers on-site, no wood debris shall be allowed to fall into the water, and any debris falling into the water shall be removed immediately. Pesticide-treated wood and debris will be disposed of properly, and will be stored in a dry place away from OHW until disposal.</p> <p>Erosion and Sediment Control Plan and Pollution Control Plan - These plans shall describe practices that will be used to: contain and control a spill of hazardous materials; avoid or minimize pollution and erosion at all roads, stream crossings, drilling sites, construction sites, borrow pits, equipment and material storage sites, fueling operations, and staging areas; control dust pollution; prevent construction debris from dropping into any waterbody, and to remove any material that does drop with a minimum of disturbance; avoid or minimize resource damage if the action area is inundated by precipitation or high stream flow; stabilize all disturbed soils following any break in work, unless construction will resume within four days; and inspect erosion and sediment controls, monitor in-stream turbidity, and make repairs to best management practices that are not functioning correctly.</p> <p>Site Stabilization - All disturbed areas shall be stabilized following any break in work unless construction will resume within four days.</p> <p>Work Area Isolation - Any action, except for piling installation or removal, that involves a substantial amount of excavation, backfilling, embankment construction, or similar work below OHW where adult or juvenile fish are reasonably certain to be present, or 300 feet or less upstream from spawning habitats, must be effectively isolated from the active stream. A work area isolation plan will be developed and reviewed by NMFS before the commencement of this work.</p> <p>Site Restoration - Any action that results in significant disturbance of riparian vegetation, soils, streambanks, or the stream channel must clean up and restore those features after the action is complete. If disturbance is to occur, a notification shall be sent to NMFS explaining how site restoration will be completed.</p>	

Significant Impact Topic	Mitigation	Status
	<p>Scour Protection - Permanent scour protection will be necessary at the Willamette River bridge's two in-water tower structures. The scour protection installed around the western tower will minimize potential disturbance to the Zidell Companies' sediment cap and to contaminated materials within their sediment management area. Scour protection will also be provided for the west work bridge piles below OHW inside Zidell's sediment management area, in addition to the scour protection around the western tower. Permanent scour protection at the eastern tower will prevent the undermining of the City of Portland's 36-inch critical water line and other nearby utility lines.</p>	

ATTACHMENT D

Portland-Milwaukie Light Rail Project FEIS Section 106 Memorandum of Agreement

MEMORANDUM OF AGREEMENT

**AMONG
THE FEDERAL TRANSIT ADMINISTRATION,
TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT (TRIMET), AND OREGON STATE
HISTORIC PRESERVATION OFFICE (SHPO)**

**IMPLEMENTING
SECTION 106 OF THE NATIONAL HISTORIC PRESERVATION ACT
REGARDING THE PORTLAND-MILWAUKIE LIGHT RAIL PROJECT**

RECITALS:

By the authority granted in ORS 190.110 and 283.110, state agencies may enter into agreements with units of local government or others state agencies for the performance of any or all functions and activities that a party to the agreement, its officers, or agents have the authority to perform.

By the authority granted in ORS 366.558, the State of Oregon may enter into cooperative agreements with the United States Federal Government for the performance of work on projects with the allocation of costs on terms and conditions and

WHEREAS the Portland-Milwaukie Light Rail project (Project) involves the development of light rail extending from Portland, Oregon, to the City of Milwaukie and north Clackamas County, and includes a new Willamette River Bridge and other facilities needed in support of the light rail system; and

WHEREAS the Project has involved the preparation of Draft, Supplemental and Final Environmental Impact Statements (DEIS, SDEIS and FEIS), in accordance with the National Environmental Policy Act of 1969 (NEPA) (42 U.S.C. 4321 et seq.), as amended, and pursuant to 23 Code of Federal Regulations (CFR) Part 771, for the development of light rail extending from Portland, Oregon, to the City of Milwaukie and north Clackamas County, and including a new Willamette River Bridge and other facilities needed in support of the light rail system; and

WHEREAS the Federal Transit Administration (FTA) is the NEPA lead agency for the Portland-Milwaukie Light Rail Project, located in Multnomah and Clackamas Counties, Oregon, with Metro and TriMet as local lead agencies; and

WHEREAS, FTA has determined that the Project is an undertaking, as defined in 36 CFR § 800.16(y), subject to review under Section 106 of the National Historic Preservation Act (NHPA), 16 U.S.C. § 470f and its implementing regulations, 36 CFR § 800; and

WHEREAS, FTA has determined that construction and operation of the Project will result in effects to historic properties and has consulted with the Oregon State Historic Preservation Office (SHPO) and the Advisory Council on Historic Preservation (ACHP) pursuant to 36 CFR Parts 800.6 and 800.14; and

WHEREAS, “Signatories” means the required and invited signatories (FTA, Oregon SHPO, TriMet); “Concurring Parties” means Consulting Parties that have signed this Memorandum of Agreement (Agreement); and “Consulting Parties” means Signatories, Concurring Parties, all interested and affected tribes, and other interested parties consulted on the Project, regardless of whether they agreed to sign the Agreement; and

WHEREAS, the Federal Transit Administration and the Oregon SHPO have agreed to be signatory parties to this Agreement; and

WHEREAS, federally recognized tribes including the Confederated Tribes of the Grand Ronde Community of Oregon, Confederated Tribes of the Siletz Indians, Confederated Tribes of the Warm Springs Reservation of Oregon, and Cowlitz Indian Tribe, and a non-federally recognized tribe, the Chinook Indian Tribe, have been consulted early in and throughout the Section 106 process and regarding this Agreement and invited to concur in the Agreement; and

WHEREAS, FTA has consulted with the above-listed Indian tribes for which the Area of Potential Effect (APE) has cultural significance, and have invited the tribes to sign this Agreement as concurring parties; and

WHEREAS, FTA in consultation with the Oregon SHPO and the interested tribes have defined the undertaking’s APE in accordance with 36 CFR 800.16(d) to cover all construction or operation activities associated with the undertaking as well as those areas needed for wetland mitigation, stormwater facilities, staging and casting yards; and

WHEREAS, the FTA, in conjunction with Metro and TriMet, and in consultation with the Oregon SHPO, conducted cultural resource studies in accordance with 36 CFR 800 as part of project planning and the preparation of the FEIS to identify and evaluate historic properties, which are resources listed on or eligible for listing in the National Register of Historic Places (National Register), that are located within the APE; including archaeological surveys to facilitate archaeological site evaluation and assessment of effects in the area where ground-disturbing activities might affect archaeological historic properties; and inventory, evaluation and assessment of effects to historic buildings and structures that are historic properties identified within the areas of potential effects; and

WHEREAS, research investigations for the FEIS, employing professional techniques defined in a research design agreed to by Oregon SHPO, determined the likely presence of archaeological historic properties and outlined their potential character (predictive assessment), providing reasonable estimates of the potential adverse effects (e.g., likelihood that potential resources would need to be protected in place, and that opportunities exist to avoid, minimize and/or mitigate impacts); and

WHEREAS, access to conduct archaeological investigations necessary to discover potential buried historic properties is restricted in portions of the Project due to the actively and intensively used urban landscapes, such as roadways, sidewalks, existing buildings, and parking lots, and conducting archaeological subsurface excavations in these areas is practically and logistically problematic or prevented; and

WHEREAS, some private properties within the direct effect area of the APE have not been surveyed due to access restrictions or are occupied by existing structures; and

WHEREAS execution and implementation of this Agreement satisfies the responsibilities the National Historic Preservation Act Section 106 process, as codified in 36 CFR 800 Subpart B; and

WHEREAS, FTA and the Oregon SHPO have agreed that the undertaking will have an adverse effect upon three historic properties and FTA has consulted with the Oregon SHPO in accordance with Section 106 of the National Historic Preservation Act (16 U.S.C. 470f) and its implementing regulations (36 CFR 800) to mitigate the Adverse Effect on these properties; and

WHEREAS, FTA has determined, and SHPO has concurred, that the undertaking will have no adverse effect upon certain other historic properties, as outlined in the FEIS and associated technical reports; and

WHEREAS, Metro and TriMet have participated in the consultation with tribes; and other information gathering has not identified any Traditional Cultural Properties in the Project area; and

WHEREAS, while background research and related archaeological investigations have not identified human remains in the APE, an Inadvertent Discovery Plan to address the potential discovery of human remains during construction has been negotiated among signatories and consulting parties and is in place for the Project; and

WHEREAS, in accordance with 36 CFR 800.6(a) (1), FTA has notified the ACHP of its adverse effect determination and the ACHP has chosen not to participate in the consultation pursuant to 36 CFR 800.6(a) (1) (iii); and

WHEREAS, pursuant to 36 CFR 800.4(b)(2), 800.5(a)(3) and 800.6(c)(6), and because access to some areas is practically and logistically restricted due to factors such as property-owner consent, the presence of buildings, or due to the active use of roads that prevent or preclude full identification and evaluation of archaeological resources that may be historic properties prior to the approval of the undertaking, FTA, Metro, TriMet, and the Oregon SHPO, in consultation with consulting parties and the ACHP, have chosen to implement a phased process and have developed procedures in this Agreement to ensure that the identification and evaluation of archaeological historic properties, assessment of effects, and development of treatment and mitigation plans for unforeseen effects to properties discovered during implementation of the undertaking are properly coordinated with all phases of the design, construction, and operation of the undertaking; and

WHEREAS, in accordance with 36 CFR 800.2(d)(3), FTA used procedures under the NEPA and NHPA to involve the public in the undertaking and solicit their views on historic properties and has distributed the SDEIS and FEIS to appropriate state and federal agencies as well as other stakeholders, partners, and the public; and

WHEREAS, pursuant to 36 CFR 800.13, FTA, TriMet, the Oregon SHPO and the ACHP have developed procedures in this Agreement to ensure that the identification and evaluation of historic properties, assessment of effects, and development of treatment and mitigation plans for unforeseen effects to previously identified historic properties and/or properties discovered during implementation of the undertaking are properly coordinated with all phases of the design and construction of the undertaking; and

WHEREAS, the FTA will issue a Record of Decision (ROD) following the publication of the FEIS issued by the FTA, anticipated in Spring/Summer 2010; and

NOW, THEREFORE, FTA, TriMet and Oregon SHPO agree that the undertaking will be implemented in accordance with the following stipulations in order to take into account the effect of the undertaking on historic properties.

-STIPULATIONS-

FTA, in cooperation with Metro and TriMet, will ensure that the following measures are carried out:

I. GENERAL REQUIREMENTS

A. As a condition of the award of any assistance under the Federal-Aid Highway and the New Starts 5309 Programs, FTA shall require that Metro and TriMet carry out the requirements of this Agreement, and all applicable laws.

B. Signatories and Consulting Parties shall keep sensitive cultural resources information confidential to the extent allowed by state and federal law. Information concerning archaeological sites is exempted from the Freedom of Information Act (FOIA) as per ORS 192.501(11) and should be excluded from all public documents and stipulations placed upon confidential documents that only approved personnel and/or qualified archaeologists [as defined by ORS 390.235(6)(b)] can access.

C. Activities carried out pursuant to this Agreement shall meet the Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation (48 FR 44716 as revised) as well as existing standards and guidelines for historic preservation activities established by the Oregon SHPO.

D. FTA, Metro, and TriMet will ensure that all work carried out under this Agreement is conducted by or under the direct supervision of a person or persons meeting the Secretary of the Interior's Professional Qualification Standards (36 CFR 61).

E. All resource management documents as specified under this Agreement will be completed prior to any construction and within two months of the release of the 90% design documents for the Project. Nothing in this Agreement shall be construed as indicating acceptance by the Consulting Parties of the resource management documents, which have yet to be developed. FTA shall in good faith attempt to reach a consensus on the contents of the resource management documents with the Consulting Parties.

The confidential resource management documents, available to approved personnel, pertain to the archaeological portion of the Project and include the following.

1. Monitoring Plan & Inadvertent Discovery Plan (Attachment A)
2. Documentation for archaeological investigations not yet completed.
 - a. High Probability Areas to be tested and archaeological sites that were not investigated prior to the FEIS completion due to access.

- b. Archaeological sites found during construction monitoring. (This report would be done during or by the end of construction in 2015.)
- 3. Mitigation/treatment plans for significant archaeological sites.
 - a. For sites found during High Probability Area testing and archaeological sites that were not investigated prior to the FEIS completion due to access, if they are found to be significant resources.
 - b. Archaeological sites found during construction monitoring. (This report would be done during or by the end of construction in 2015.)
- F. FTA shall retain ultimate responsibility for complying with all federal requirements pertaining to direct government-to-government consultation with Indian tribes. Notwithstanding any other provision of this stipulation, FTA shall honor the request of any of the Indian tribes listed herein for direct government-to-government consultation regarding the Project.
- G. Study of portions of the Project's APE have been sufficiently completed for Section 106 review prior to the publication of the FEIS and, notwithstanding the Project's need to comply with inadvertent discovery requirements, no further Section 106 activities are expected to be conducted in those areas where cultural resource studies have been completed and SHPO has concurred that no further archaeological investigations are necessary. Attachment A is based on the Section 106 Technical Report, including its inventory report, and defines those areas where additional steps, such as archaeological monitoring during construction, are needed.
- H. Definitions in 36 CFR 800.16 will be used for purposes of this Agreement.

II. PUBLIC PARTICIPATION

FTA, Metro, and TriMet have ensured that public participation in the Section 106 review process has been carried out in a manner that has also been integrated with FTA's public participation and review requirements pursuant to 23 CFR Part 771, leading to the publication of the FEIS. Documentation on historic and archaeological properties (some with locational information removed) have been made available for review to the general public offices as part of the SDEIS and FEIS publication and related public review. In accordance with Section 304 of the National Historic Preservation Act of 1966, as amended, the signatories and participating Concurring Parties to this Agreement will withhold from disclosure to the public, information about the location, character, or ownership of a historic property if it is determined that disclosure may (1) cause a significant invasion of privacy, (2) risk harm to a historic property, or (3) impede the use of a traditional religious site by practitioners (4) contains archaeological site description or location information.

The views of the Metro, TriMet, interested parties, and the general public will be considered by FTA with respect to the terms of this Agreement. Should any member of the public raise a timely and substantive objection pertaining to the manner in which the terms of this Agreement are carried out, at any time during its implementation, the FTA shall take the objection into account by consulting with the objector to resolve the objection. When FTA responds to an objection, it shall notify Metro and TriMet of the objection and the manner in which it was resolved. FTA may request assistance of the Metro and TriMet to resolve objections.

III. MITIGATING ADVERSE EFFECTS TO SPECIFIC HISTORIC PROPERTIES

A. Royal Foods Warehouse and Office, 2425 SE 8th Ave. Portland

The warehouse is eligible for the National Register of Historic Places (NRHP) and will be adversely affected by demolition. Mitigation measures include:

- a. Documentation shall be done according to the Oregon SHPO documentation standards by June 2013. Provide two complete sets of documentation to the Oregon SHPO, including photos, for deposit at the Oregon Historical Society and the Allied Arts and Architecture Library at the University of Oregon. Send a third set without photos to be archived at the SHPO office. Photos should be printed on proof sheets. A fourth full set may be required in cases where there is a local repository that is interested in receiving the materials. The following items are required for all state level documentation:
 1. Architectural description of the building: *Description should not be less than 500 words and use appropriate architectural terms.*
 2. Building history: *History of not less than 500 words discussing at least when the building was constructed and by whom, the building or structure's use over time, and any important persons or events associated with the resource. The project shall contact the Oregon SHPO for research suggestions.*
 3. Bibliography: *Include a bibliography of all resources used in the preparation of the document, including sources for appended archival materials described in item 8.*
 4. United States Geological Survey (USGS) Map with the location of the property marked: *A portion of the entire map may be printed for free from a website such as topoquest.com and marked by hand.*
 5. Scale site plan of the subject building or structure and adjacent buildings and structures on the same tax lot: *Drawing may be done by hand as long as it reasonably to scale. Include the name of the person completing the map, date the map was completed, map scale, and north arrow on the map. The name and/or use of each building, structure, object, and adjacent streets on the map should be labeled.*
 6. Scale Floor plans for each floor of the subject building or structure: *Drawing may be done by hand as long as it reasonable to scale. Include the name of the person completing the map, date the map was completed, map scale, and north arrow on the map. The name and/or use of each space should be labeled.*
 7. Photographs of the building or structure interior and exterior: *Photos may be taken as 35mm black-and-white 4x6 images or as color digital images. Digital and print images and prints must meet all aspects of the Oregon SHPO Digital Photo Checklist available at the SHPO website:
http://www.oregonheritage.org/OPRD/HCD/NATREG/nrhp_documents.shtml*
 8. Archival materials: *If available, include original architectural drawings or maps, brochures, photos, newspaper clippings, or other archival items of interest relating to the history of the building or structure.*

B. Westmoreland Park, 7605 SE McLoughlin

Westmoreland Park has been determined eligible as a NRHP Historic District and will be adversely affected by converting the Duck Pond into a riparian area. Mitigation measures include:

- a. Documentation for Westmoreland Park shall be done according to the Oregon SHPO documentation standards by June 2013. Provide two complete sets of documentation to the Oregon SHPO, including photos, for deposit at the Oregon Historical Society and the Allied Arts and Architecture Library at the University of Oregon. Send a third set without photos to be archived at the SHPO office. Photos should be printed on proof sheets. A fourth full set may be required in cases where there is a local repository that is interested in receiving the materials. The following items are required for all state level documentation:
 1. Architectural description of the building [property]: *Description should not be less than 500 words and use appropriate architectural terms.*
 2. Building [property] history: *History of not less than 500 words discussing at least when the building was constructed and by whom, the building [property] or structure's use over time, and any important persons or events associated with the resource. The project shall contact the Oregon SHPO for research suggestions.*
 3. Bibliography: *Include a bibliography of all resources used in the preparation of the document, including sources for appended archival materials described in item 8.*
 4. United States Geological Survey (USGS) Map with the location of the property marked: *A portion of the entire map may be printed for free from a website such as topoquest.com and marked by hand.*
 5. Scale site plan of the subject building or structure and adjacent buildings and structures on the same tax lot: *Drawing may be done by hand as long as it reasonably to scale. Include the name of the person completing the map, date the map was completed, map scale, and north arrow on the map. The name and/or use of each building, structure, object, and adjacent streets on the map should be labeled.*
 6. Scale Floor plans for each floor of the subject building or structure: *Drawing may be done by hand as long as it reasonable to scale. Include the name of the person completing the map, date the map was completed, map scale, and north arrow on the map. The name and/or use or each space should be labeled.*
 7. Photographs of the building or structure interior and exterior: *Photos may be taken as 35mm black-and-white 4x6 images or as color digital images. Digital and print images and prints must meet all aspects of the Oregon SHPO Digital Photo Checklist available at the SHPO website:
http://www.oregonheritage.org/OPRD/HCD/NATREG/nrhp_documents.shtml*
 8. Archival materials: *If available, include original architectural drawings or maps, brochures, photos, newspaper clippings, or other archival items of interest relating to the history of the building or structure.*
- b. Publish documentation, as described above, of the park's history on the City of Portland website for duration of not shorter than June 2013 to December 2015. The website will be professionally designed.
- c. As additional mitigation, the Project will develop an interpretive panel or display at the Bybee Station, describing the historic attributes and features of Westmoreland Park, including the Duck Pond and its relationship to WPA-era projects, and also the general timeline for development of Westmoreland Park and adjacent neighborhoods of the City by

date of Project completion (December 2015). The Project will consult with a historian that meets Secretary of Interior Standards and will ask SHPO to comment to the design.

- d. The Project, with the City of Portland, will prepare National Register nomination materials for a different park within the City, and will formally submit these materials to the SHPO for approval. The Project will (i) consult with SHPO to determine whether the selected property is indeed eligible, (ii) provide draft documents to SHPO for comment, and (iii) make all necessary revisions to meet the requirements of the National Park Service for National Register nominations. Nomination materials are to be completed within 24 months of the execution of this agreement. This stipulation will be considered complete once the SHPO has found the nomination to be complete and ready for submission to the Keeper of the National Register.
- e. TriMet will execute an interlocal agreement with the City of Portland incorporating the above conditions prior to providing funds for construction within Westmoreland Park.

C. Derwey House, 2206 SE Washington, Milwaukie

The R. Derwey House has been determined eligible for the NRHP and will be adversely affected by changing the setting and acquiring approximately 10 feet of land from the side yard near the railroad tracks. Mitigation measures include:

- a. Documentation shall be done according to the Oregon SHPO documentation standards by June 2013. Provide two complete sets of documentation to the Oregon SHPO, including photos, for deposit at the Oregon Historical Society and the Allied Arts and Architecture Library at the University of Oregon. Send a third set without photos to be archived at the SHPO office. Photos should be printed on proof sheets. A fourth full set may be required in cases where there is a local repository that is interested in receiving the materials. The following items are required for all state level documentation:

1. Architectural description of the building: *Description should not be less than 500 words and use appropriate architectural terms.*
2. Building history: *History of not less than 500 words discussing at least when the building was constructed and by whom, the building or structure's use over time, and any important persons or events associated with the resource. The project shall contact the Oregon SHPO for research suggestions.*
3. Bibliography: *Include a bibliography of all resources used in the preparation of the document, including sources for appended archival materials described in item 8.*
4. United States Geological Survey (USGS) Map with the location of the property marked: *A portion of the entire map may be printed for free from a website such as topoquest.com and marked by hand.*
5. Scale site plan of the subject building or structure and adjacent buildings and structures on the same tax lot: *Drawing may be done by hand as long as it reasonably to scale. Include the name of the person completing the map, date the map was completed, map scale, and north arrow on the map. The name and/or use of each building, structure, object, and adjacent streets on the map should be labeled.*
6. Scale Floor plans for each floor of the subject building or structure: *Drawing may be done by hand as long as it reasonable to scale. Include the name of the person completing the map, date the map was completed, map scale, and north arrow on the map. The name and/or use or each space should be labeled.*
7. Photographs of the building or structure interior and exterior: *Photos may be taken as 35mm black-and-white 4x6 images or as color digital images. Digital and print images and prints must meet all aspects of the Oregon SHPO Digital Photo Checklist available at the SHPO website:
http://www.oregonheritage.org/OPRD/HCD/NATREG/nrhp_documents.shtml*
8. Archival materials: *If available, include original architectural drawings or maps, brochures, photos, newspaper clippings, or other archival items of interest relating to the history of the building or structure.*

D. Other Historic Resources

Some historic properties have been found to have “no adverse effect” by the Project and will be minimally affected. For those NRHP-eligible resources the following measures are included:

1) According to the Noise and Vibration Technical Report for the FEIS, projected increases in noise and vibration require mitigation for four (4) additional historic built environment resources at 1635 SE Rhone in Portland, and 2405 SE Harrison, 2326 SE Monroe, and 2313 SE Wren in Milwaukie. After mitigation, these impacts would be reduced to levels that have “no adverse effect.” The mitigation measures would not alter the characteristics for which the properties are considered eligible for the NRHP. However, because mitigation for the impacts may require residential sound insulation such as window replacement, the mitigation action could have adverse effects to the historic buildings if done inappropriately. This Agreement requires that all noise and vibration impacts meet the Secretary of the Interior Standards for Rehabilitation and be finished by December 2014. This includes:

- a) Replace in kind an entire window using the same sash and pane configuration and other design details.
- b) Retrofit the existing windows to meet noise mitigation criteria if possible.
- c) The property owner must be consulted
- d) SHPO must approve any mitigation measures.

2) For 2313 SE Wren in Milwaukie and 1635 SE Rhone in Portland where a small right of way acquisition is required, the property owners will be fully compensated in accordance with FTA policy and the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended. Where landscaping will be removed from the properties due to construction, replacement landscaping shall be offered to mitigate the visual impact by December 2014.

IV. MITIGATING ADVERSE EFFECTS TO SPECIFIC ARCHAEOLOGICAL SITES

Identification of archaeological and historic archaeological properties and assessment of effect have been completed for areas within which investigations were allowed by landowners and access has been secured by the Project. No archaeological resources that are eligible for listing in the NRHP have yet been identified within the portion of the Project APE where there may be direct impacts. If any archaeological sites are discovered that may be eligible for listing on the National Register of Historic Place, then consultation with SHPO regarding documentation, evaluation, assessment, and mitigation measures, if necessary, will be necessary.

V. PRINCIPLES TO COMPLETE ARCHAEOLOGICAL INVESTIGATIONS

Archaeological excavations have not been completed for all areas of the Project where there may be construction activities within the APE. Some areas have been investigated and some areas contain archaeological resources that may require additional archaeological investigations. The preliminary field findings and recommendations to complete inventory, resource evaluations, and assessment of effect on archaeological historic properties are included in Attachment A.

Circumstances dictate that some of the activities needed to complete all steps of the Section 106 process will be carried out after the FEIS/ROD is issued, and will follow the protocols established in Attachment A.

VI. PROGRAMMATIC APPROACH FOR ARCHAEOLOGICAL RESOURCES

A. FTA will ensure that if completion of any additional subsurface testing, inadvertent discovery, and site eligibility determinations result in additional findings of effect, these findings will be reviewed by the Oregon SHPO and consulting Tribes. The Oregon SHPO shall review all information regarding site eligibility. If SHPO concurs that there are no archaeological sites eligible for listing on NRHP and/or there are no effects or adverse effects to significant archaeological resources, then no further archaeological investigations will be necessary. If the findings reveal there may be an adverse effect to a significant archaeological resource, then the FTA will notify SHPO and the appropriate Tribes and continue consultation to resolve the adverse effects. FTA will review the effects and provide a mitigation plan with a range of solutions to be considered for implementation as well as the level of effort for the data

recovery, analysis, curation, and interpretation options and provide this information to SHPO and the appropriate Tribes for concurrence.

B. The options to be considered will take into account whether the significance of the resource calls for preservation in place, data recovery, and documentation through monitoring, further research, or other mechanisms. All proposed mitigation options will be compatible with the historic qualities and characteristics that qualify the property as eligible for listing in the National Register, and will be developed in consultation with the Signatories to this Agreement.

C. Archaeological treatment plans will be developed for any sites that are determined eligible for listing on the National Register and that may be adversely affected by the Project. To minimize the adverse effect to eligible archaeological sites the plan will consider a variety of protective measures such as construction modifications, buffering, protective walls or fencing and construction monitoring. For those archaeological sites determined to be eligible and where adverse impacts are unavoidable, a mitigation plan is necessary. This plan may include a variety of measures such as data recovery plan or other alternatives.

D. Following the completion of the mitigation phase of the process, FTA will ensure that the applicable analysis, documentation, and report preparation and submittal is completed on the mitigation prior to the start or continuation of construction in affected locations. All cultural material recovered and data produced on public non-federal land as a result of the Project will be curated in a permanent curation facility approved by the Oregon SHPO in accordance with 36 CFR 79 and tribal consultation, as dictated by the SHPO permit. Artifacts collected on private land will be curated as dictated by the SHPO permit. All curation actions shall be completed by June 2015.

VII. REVIEW OF FUTURE DESIGN CHANGES

If any design changes having the potential to cause effects to historic properties are made to the undertaking outside the current APE, including additional staging, construction access, wetland or stormwater mitigation sites, FTA, in consultation with Metro and TriMet, will conduct a cultural resources assessment as required by 36 CFR 800, to identify and evaluate the effects upon historic properties, and will consult to resolve any additional adverse effects.

FTA will ensure that avoidance of adverse effects to historic properties is the preferred treatment during the design phase and will utilize all feasible, prudent and practicable measures to avoid adverse effects. All design enhancements that may affect historic properties in the Project corridor will be subject to review and concurrence by FTA, Metro and TriMet. The Project final mitigation plan will address potential design modifications and aesthetic treatments foreseen in final design.

VIII. ARCHAEOLOGICAL RESOURCES NOT PREVIOUSLY IDENTIFIED

This section describes procedures to be followed by the construction contractors and Project engineers, which ensure appropriate consideration of archaeological resources if encountered during construction. The FTA and Project contractors shall:

- 1) Discuss pre-construction requirements, including:

- a) Educational briefings by professional archaeologists,
 - b) Briefing materials for construction contractor personnel and FTA engineers and inspectors;
 - c) Protocol for inadvertent discovery, including contact telephone numbers for contractor personnel and FTA engineers and inspectors as per ORS 97.740-97.760 (Indian Graves and Protected Objects) and ORS 358.905-358.955 (Archaeological Objects and Sites).
- 2) Provide background information on the context of anticipated resources within the Project to the construction contractor;
 - 3) Identify in lay terms the nature of primary archaeological resources indicators (e.g. high densities of fire modified rock; high density historical municipal or industrial middens) that may represent a significant resource and which require consideration by professional archaeologist and consideration by Consulting Parties;
 - 4) Identify relevant procedures and contractor responsibilities for the inadvertent discovery of archaeological objects or sites (ORS 358.905-.955); including site protection and evaluation by a qualified archaeologist; and
 - 5) Ensure that the Project plans and documents note the areas to be included in construction monitoring under the supervision of a qualified archaeologist and that all archaeological site locations are kept confidential.

IX. INADVERTENT DISCOVERY OF HUMAN REMAINS

If human remains are encountered during the implementation of the Project activities, all activity in the vicinity of the discovery will cease and the appropriate authorities notified as outlined in the Inadvertent Discovery Plan as per ORS 97.740-.760

(Attachment A).

X. DISPUTE RESOLUTION

Should any Signatory or Concurring Party to this Agreement object at any time to any actions proposed or the manner in which the terms of this Agreement are implemented, the Signatory parties will consult with such party to resolve the objection. If FTA determines that such objection cannot be resolved, FTA will:

Forward all documentation relevant to the dispute, including the FTA's proposed resolution, to the ACHP. The ACHP will provide FTA with its advice on the resolution of the objection within thirty (30) days of receiving adequate documentation. Prior to reaching a final decision on the dispute, FTA will prepare a written response that takes into account any timely advice or comments regarding the dispute from the ACHP, Signatories and Concurring Parties, and provide them with a copy of this written response. FTA will then proceed according to its final decision.

If the ACHP does not provide its advice regarding the dispute within the thirty (30) day time period, FTA may make a final decision on the dispute and proceed accordingly. Prior to reaching such a final decision, FTA will prepare a written response that takes into account any timely comments regarding the dispute from the Signatories and Concurring Parties to the Agreement, and provide them and the ACHP with a copy of such written response.

FTA's responsibilities to carry out all other actions subject to the terms of this Agreement that are not the subject of the dispute remain unchanged.

XI. AMENDMENTS

This Agreement may be amended when such an amendment is agreed to in writing by all Signatories. The amendment will be effective on the date a copy signed by all of the Signatories is filed with the ACHP.

XII. DURATION AND TERMINATION

This Agreement will take effect immediately upon execution by the Signatory parties. FTA will send a copy of the executed Agreement to the ACHP, regardless of ACHP participation in the process. The terms of this Agreement will be satisfactorily fulfilled upon completion of the Project. Prior to such time, FTA may consult with the other participating parties to reconsider the terms of the Agreement and propose its amendment. Unless terminated, this Agreement will be in effect until December 2015 or such time as FTA, in consultation with all Signatory and Concurring Parties, determines that all of its terms have been satisfactorily fulfilled, whichever is later.

If any Signatory to this Agreement determines that its terms will not or cannot be carried out, that party will ensure immediately consult with the other parties to attempt to develop an amendment per Stipulation XI above. If within thirty days (30) days (or another time period agreed to by all Signatories) an amendment cannot be reached, any signatory may terminate the Agreement upon written notification to the other Signatories.

Once the Agreement is terminated, and prior to work continuing on the undertaking, FTA must either (a) execute a Memorandum of Agreement pursuant to 36 CFR 800.6 or (b) request, take into account, and respond to the comments of the ACHP under 36 CFR 800.7. FTA will notify the Signatories as to the course of action it will pursue.

XIII. Archeological Resources Retrieved and Preserved.

If archeological resources are retrieved and deemed by the SHPO to be significant and worthy of preservation, any costs associated with such resource retention shall be the responsibility of TriMet.

XIV. Compliance with Section 106.

With the execution and implementation of this Agreement the responsibilities the National Historic Preservation Act Section 106 process, as codified in 36 CFR 800 Subpart B are deemed satisfied.

SIGNATORIES:

Federal Transit Administration



Mr. Richard Krochalis, Region X Administrator

Date 6/17/10

Oregon State Historic Preservation Officer



Roger Roper, Assistant Director, Heritage Programs

Date 6/15/10

Tri-County Metropolitan Transportation District of Oregon



Fred Hansen, General Manager

Date 6/14/10



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10

1200 Sixth Avenue, Suite 900
Seattle, WA 98101-3140

OFFICE OF
ECOSYSTEMS, TRIBAL AND
PUBLIC AFFAIRS

November 22, 2010

Ms. Linda Gehrke, Deputy Regional Administrator
Federal Transit Administration
Jackson Federal Building, Suite 3142
915 Second Ave.
Seattle, Washington 98174

Re: South Corridor Portland-Milwaukie Light Rail Project Final Environmental Impact Statement (EPA Region 10 Project Number 98-028-FTA)

Dear Ms. Gherke:

The U.S. Environmental Protection Agency (EPA) has reviewed the South Corridor Portland-Milwaukie Light Rail Project Final Environmental Impact Statement (FEIS). Our review was conducted in accordance with our responsibilities under the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act.

We wish to commend the Federal Transit Administration (FTA) for your work to prepare this EIS, and for your responsiveness to our comments on the Draft Supplemental EIS and preliminary Final EIS. Our comments regarding water quality, hydrology, hazardous materials, and monitoring have been addressed. We are also pleased to note that TriMet is assessing the use of incentives with contractors to encourage best management practices with respect to air quality and diesel-powered equipment during construction (p. 3-249). These incentives would be for using low-sulfur fuel for diesel equipment and cleaner fuels for other equipment, properly maintaining equipment, reducing idling, retrofitting diesel engines with verified technologies, and replacing older equipment and engines -- all helpful strategies for reducing construction emissions. We encourage FTA to share the results of TriMet's assessment when it becomes available.

An especially noteworthy feature of the FEIS is the inclusion of climate change considerations -- both with respect to project contributions to greenhouse gas emissions (GHGs), and with respect to the potential effects of climate change on the project. Appendix O (pages 22-23) provides helpful estimates of potential increase in Willamette River water levels, effects of sea level rise, and a resulting overall estimate of increase in Willamette River level due to global climate change by 2099. This estimate was also used to evaluate effects on vessel passage rates. The methodology for deriving these estimates would be a welcome addition to the Appendix, as it could serve to inform and stimulate others to incorporate these considerations.