



January 21, 2011

Dear Interested Parties:

Thank you for your continuing interest in the Lake Oswego to Portland Transit Project. This package includes an errata to the Draft Environmental Impact Statement (DEIS) as well as replacement pages for the DEIS. Replacement pages are provided when, there were more than one correction or an entire table has been updated.

The errata corrects or clarifies known errors that were in the DEIS released for public review on December 3, 2010. These revisions do not change the relative performance of the alternatives and options evaluated in the DEIS, nor do any of the revisions change the DEIS findings regarding the affected environmental and environmental consequences of the alternatives and options.

The errata may be updated if additional corrections or clarifications are warranted. Updated DEIS errata and replacement pages can be found on the project website:
www.oregonmetro.gov/lakeoswego and copies can be requested and be made available at Metro.

Sincerely,



Bridget Wieghart
Metro Project Manager

Attachment: Lake Oswego to Portland Transit Project Errata and replacement pages

Errata for the Printed and CD version of the Draft Environmental Impact Statement

The errata corrects or clarifies known errors that were in the DEIS released for public review on December 3, 2010. These revisions do not change the relative performance of the alternatives and options evaluated in the DEIS, nor do any of the revisions change the DEIS findings regarding the affected environmental and environmental consequences of the alternatives and options.

The errata may be updated if additional corrections or clarifications are warranted. Updates will be made available with additional errata or in the Final EIS. Updated DEIS errata and replacement pages can be found on the project website: www.oregonmetro.gov/lakeoswego and copies can be requested and be made available at Metro.

Corrected or clarified text is shown below. The original and corrected text is underlined to highlight the changes or clarifications.

| PAGE | CORRECTION OR CLARIFICATION |
|-----------------|---|
| SUMMARY | |
| Page S-7 | <p>Update in Table S-2 Summary of Environmental Effects by Alternative (average weekday, 2035) change: "<u>Available Floor Area in New Station Areas (millions of square feet)</u>" to "<u>Allowed New Floor Area in New Station Areas (millions of square feet)</u>"</p> <p>Change in same row: "<u>42.825 or 44.492</u>" to "<u>23 or 25</u>"</p> |
| Page S-8 | <p>Fourth bullet under "The Streetcar Alternative would..." Change: "<u>Up to 1,530 additional short-term jobs...</u>" to "<u>Up to 1,500 additional short-term jobs...</u>"</p> <p>Same page, 12th bullet under "The Streetcar Alternative would..." Change: "<u>The addition of up to 42.830 square feet of available Floor Area Ration within new streetcar station areas; and</u>" to "<u>Station areas with over 23 million square feet of allowed new floor area; and</u>"</p> |
| Page S-9 | <p>Second bullet, under "The Macadam In-Street design option would result in:" change "<u>1.67 million more square feet of Available Floor Area within new station areas;</u>" to "<u>1.5 million more square feet of allowed new floor area within new station areas;</u>"</p> |

Same page, **second bullet** under “The **Macadam Additional design option** would result in:” change “1.67 million more square feet of Available Floor Area within new station areas;” to “1.5 million more square feet of allowed new floor area within new station areas;”

Page S-10 Update in **Table S-3 Environmental Effects and Capital Cost of Streetcar Design Options in Segment 3 – Johns Landing** change: “Available Floor Area in New Station Areas (millions of square feet)” to “Allowed New Floor Area in New Station Ares (millions of square feet)”
Change in same row: “4.450, 6.120, 6.120” to “2.6, 4.1, 4.1”

CHAPTER 3 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

Section 3.2 Economic Activity

Page 3-11 **Second bullet**, change: “As Table 3.1-4 shows, 75 percent...” to “As Table 3.1-4 shows, 76 percent...”

Page 3-12 **Fourth paragraph**, change: “...compared to the Willamette Shore Line Option (51 acres with a ratio under two compared to 39 acres). Similarly, there would be nearly twice as much unused allowed floor area...” to “...compared to the Willamette Shore Line Option (36 acres with a ratio under two compared to 20 acres). Similarly, there would be three times more unused allowed floor area...”

In the **same paragraph**, change: “...in the Carolina Street and Nebraska Street station areas is nearly the same, 25 acres in the Carolina Street station area have an improvement to land value ratio under two, compared with 14 acres in the Nebraska Street station area.” to “...in the Carolina Street and Nebraska Street station areas is nearly the same, 27 acres in the Carolina Street station area have an improvement to land value ratio under two, compared with 13 acres in the Nebraska Street station area.”

Page 3-13 **Table 3.1-4 Station Area Redevelopment Potential**, the table has been updated and values have changed. See replacement page attached

Same table change footnote (see replacement page attached):
“¹Redevelopment potential measurement area, as shown in Figure 3.1-4 through 3.1-9.” To “¹Redevelopment potential measurement area is discussed in more detail in the Land Use Technical Report”

Page 3-14 **Fifth paragraph**, change: “Existing development on the properties uses only 4 percent of the allowed floor area and has a value less than the value of the land it occupies.” to “Existing development on the properties, in the Segment 4 portion of the Nevada Street station area, uses less than 25 percent of the allowed floor area and has a value less than the value of the land it occupies.”

Same page, **sixth paragraph**, change: “The property is a family-owned recreational boating dealership was in continuous operations at the site between 1929 and 2010. Table 3.1-4 shows that existing improvements use less than 25 percent of allowed floor area and have a value less than the value of the land.” to “The property was a family-owned recreational boating dealership in continuous operations at the site between 1929 and 2010. Table 3.1-4 shows that existing improvements use only 6 percent of allowed floor area and have a value less than the value of the land.”

Page 3-16

First bullet, change: “It shows that 83 percent of the floor area allowed by existing and planned zoning of the B Avenue and Lake Oswego terminus station areas is unused by existing development.” to “It shows that 88 percent of the floor area allowed by existing and planned zoning of the B Avenue and Lake Oswego terminus station areas is unused by existing development.”

Same page, **second bullet**, change: “Table 3.1-4 shows that 39 percent have ratios of less than one, 55 percent less than two, and 71 percent less than three.” to “Table 3.1-4 shows that 30 percent have ratios of less than one, 41 percent less than two, and 76 percent less than three.”

Page 3-27

Update **Table 3.2-3 Summary of Economic Impact, By Alternative** – see replacement page attached.

Page 3-28

Second paragraph, change: “...the Streetcar Alternative would be \$2.64 million higher than the No-Build Alternative...” to “...the Streetcar would be \$1.25 million higher than the No-Build Alternatives...”

Page 3-28

Last paragraph, change: “The Streetcar Alternative could potentially result in TriMet’s acquisition of approximately 26 to 63 partial or full parcels...” to “The Streetcar Alternative could potentially result in TriMet’s acquisition of approximately 28 to 60 partial or full parcels...”

Page 3-30

First paragraph, change (see replacement page attached as well): “...described more fully the Land Use Technical Report (URS, August 2010).” to “...described more fully in the Land Use Technical Report (URS, November 2010).”

Same page, **third paragraph**, change (see replacement page attached as well): “The Enhanced Bus Alternative would result in approximately 240 construction-related, short-term jobs and about \$10.5 million in additional regional income, compared to the 1,430 to 1,530 jobs...” to “The Enhanced Bus Alternative would result in approximately 240 construction-related, short-term jobs and about \$10.5 million in additional regional income, compared to the 1,430 to 1,500 jobs...”

Page 3-30

Table 3.2-7 Short-Term Employment and Change in Personal Income by Alternative, change the number of short-term jobs and the personal income for the streetcar. See replacement page attached.

Page 3-31 **Table 3.2-8 Summary of the Streetcar Alternative Construction Costs (2030 dollars) and Total Short-Term Employment by Segment and Design Option**, change the construction costs and some of the short-term job numbers. See replacement page attached.

CHAPTER 4 TRANSPORTATION

Page 4-11 **First paragraph under Table 4.2-1**Change: “*The Streetcar Alternative would increase the corridor transit VMT by 37 percent (Macadam Avenue design options) and 46 percent (Willamette Shore Line design option).*” To “*The Streetcar Alternative would increase the corridor transit VMT by 7 percent (Macadam Avenue design options) and 6 percent (Willamette Shore Line design option).*”

Page 4-20 **Table 4.2-6 Average Weekday Work and Non-Work Transit Trips and Transit Mode Share Between the Corridor and Portland CBD, Year 2035**, total transit trips for Streetcar design options are swapped. Change: “16,720” to “16,800” and change “16,800” to “16,720”

Page 4-23 **Last paragraph** was cut off. Starting with “*The modified signal...*” the rest of the paragraph should read: “*...timing would provide an improved V/C compared to the No-Build but would increase queuing on the SW Landing Drive, the westbound approach and in the northbound left turn land. Not that in Segment 3, Landing Drive is currently a private road serving the private businesses and residential properties. Land Drive would be converted to a public road for the Macadam In-Street and Macadam Additional Lane design options and it may need to be upgraded to meet City of Portland street standards.*”

CHAPTER 5 FINANCE

Page 5-3 **Table 5.1-1 Capital Costs for Lake Oswego to Portland Transit Project in Millions of 2010 and Year of Expenditure Dollars**, change footnote 3 from “... *the Streetcar Alternative “High cost” assumes the following options by segment: South Waterfront – South Portal; Johns Landing – Macadam In-Street...*” to “... *the Streetcar Alternative “High cost” assumes the following options by segment: South Waterfront – South Portal; Johns Landing – Macadam Additional Lane...*”

CHAPTER 6 EVALUATION OF ALTERNATIVES

Page 6-13 **Table 6.1-7 Measures Assessing Effects to the Economic, Built and Natural Environment By Alternative (2035)**, change: “Available Floor Area in New Station Areas” to “Allowed New Floor Area in Station Areas”
Change in same row: “42.825 or 44.492” to “23 or 25”

Page 6-14

Change the **Table 6.1-8** name: “*Table 6.1-8 Available Floor Area in New Station Areas within New Station Areas and Potential Displacements by Streetcar Design Option (2035)*” to “*Table 6.1-8 Allowed New Floor Area in New Station Areas within New Station Areas and Potential Displacements by Streetcar Design Option (2035)*”

Same table, change column heading: “*Available Floor Area in New Station Areas*” to “*Allowed New Floor Area in New Station Areas*”

Same table, change values for Segment 3: “*4.450, 6.120, 6.120*” to “*2.6, 4.1, 4.1*”

Same table, change values for Segment 5: “*0, 0*” to “*-,-*”

Same table change values for Segment 5: “*25.550, 25.550*” to “*9.8, 9.8*”

Same page, **second paragraph**, change: “*...(51 acres with a ratio under two, compared to 39 acres, respectively);*” to “*...(36 acres with a ratio under two compared to 20 acres, respectively);*”

Same page, **second paragraph**, change: “*...3) 25 acres in the Carolina Station area have an improvement to land value ratio under two, compared with 14 acres in the Nebraska Station area;*” to “*...3) 27 acres in the Carolina Station area have an improvement to land value ratio under two, compared with 13 acres in the Nebraska Station area;*”

Page 6-15

Second bullet, change: “*There would be approximately 44.50 million square feet of available floor area within the Streetcar Alternative’s new station areas. The new station areas in the Johns Landing Segment under the Willamette Shore Line design options would have 4.45 million square feet of available floor area, compared to 6.12 million square feet under the two Macadam design options.*” to “*There would be approximately 25 million square feet of allowed new floor area within the Streetcar Alternative’s new station areas. The new station areas in the Johns Landing Segment under the Willamette Shore Line design options would have 2.6 million square feet of allowed new floor area, compared to 4.1 million square feet under the two Macadam design options.*”

Page 6-21

Fourth bullet, change: “*The addition of up to 42,830 square feet available floor area within the new streetcar station areas*” to “*The addition of up to 25 million square feet allowed new floor area within the new streetcar station areas*”

Same page, **fifth bullet**, change: “*Up to 1,530 additional short-term construction jobs and 27 additional long-term jobs*” to “*Up to 1,500 additional short-term construction jobs and 13 additional long-term jobs*”

Second bullet, under “The **Macadam In-Street design option** would result in:” change “1.67 million more square feet of Available Floor Area within new station areas;” to “1.5 million more square feet of allowed new floor area within new station areas;”

Same page, **second bullet** under “The **Macadam Additional design option** would result in:” change “1.67 million more square feet of Available Floor Area within new station areas;” to “1.5 million more square feet of allowed new floor area within new station areas;”

APPENDIX E PRELIMINARY SECTION 4(F) ASSESSMENT

- E-13** **Second Paragraph**, change: “*The No-Build Alternative would likely result in indirect adverse effects to the Red Electric Eastside Line...*” To “*The No-Build Alternative would likely result in indirect adverse effects (the potential adverse effect would result in a Section 4(f) use) to the Red Electric Eastside Line...*”
- E-13** **Second Paragraph under section E.5.2 Enhanced Bus Alternative**, change: “*The Enhanced Bus Alternative would likely result in indirect adverse effects to the Red Electric Eastside Line, for the same reasons as the described for the likely adverse effect of the No-Build Alternative to the Red Electric Eastside Line.*” To “*The Enhanced Bus Alternative would likely result in a constructive use of the Red Electric Eastside Line, for the same reasons as the described for the likely adverse effect (Section 4(f) use) of the No-Build Alternative to the Red Electric Eastside Line.*”
- E-24** **First paragraph under section E.5.3.2 Streetcar Alternative Effects on Historic Resources**, change: “*Of the eligible historic resources in the corridor, the **Red Electric Eastside Rail Line** (generally the Willamette Shore Line right of way) would be effected by the Streetcar Alternative.*” To “*Of the eligible historic resources in the corridor, the Red Electric Eastside Rail Line (generally the Willamette Shore Line right of way) would potentially result in a no adverse effect (which would be a de minimis impact under Section 4(f)) or a potential adverse effect (which would be a use under Section 4(f)), depending on further design work, analysis and coordination to be completed during Preliminary Engineering.*”
- E-25** **First paragraph**, change: “*Effects to the Red Electric Eastside Rail Line...*” to “*Changes to the Red Electric Eastside Rail Line...*”

E-28

Last paragraph, change: *“That design work would be conducted in consultation with FTA and the Oregon SHPO with the intent to avoid any adverse effect...”* to: *“That design work would be conducted in consultation with FTA and the Oregon SHPO with the intent to avoid any adverse effect (Section 4(f) use)....”*

Same paragraph, change: *“...the project would need to demonstrate, consistent with Section 4(f) requirements that there is no prudent or feasible alternative to that adverse effect and that all possible planning to minimize harm was done.”*
To *“...the project would need to demonstrate, consistent with Section 4(f) requirements that there is no prudent or feasible alternative to that use and that all possible planning to minimize harm was done.”*

Table 3.1-4 Station Area Redevelopment Potential

| Station Area ¹ by Segment | Floor Area | | | Unused As % of Allowed | Ratio of Value of Improvements to Value of Land ^{3, 4} | | | | | | | | | | Total | |
|--------------------------------------|-----------------------|----------|--------|------------------------|---|---------|-------|-----------|-------|-----------|-------|-----------|-------|------------|-------|-------|
| | Square Feet (X 1,000) | | | | Allowed | Under 1 | | 1 to 1.99 | | 2 to 2.99 | | 3 to 3.99 | | 4 and Over | | Acres |
| | Allowed ² | Existing | Unused | Acres | | % | Acres | % | Acres | % | Acres | % | Acres | % | | |
| 2-South Waterfront | | | | | | | | | | | | | | | | |
| Bancroft ⁵ | 7,092 | 447 | 6,644 | 94 | 25 | 83 | 4 | 13 | 0 | 0 | 0 | 0 | 1 | 4 | 31 | 100 |
| Hamilton | 4,484 | 718 | 3,765 | 84 | 12 | 48 | 6 | 23 | 1 | 5 | 0 | 0 | 6 | 24 | 26 | 100 |
| Total | 11,576 | 1,166 | 10,410 | 90 | 38 | 67 | 10 | 17 | 1 | 2 | 0 | 0 | 7 | 13 | 56 | 100 |
| 3-Johns Landing | | | | | | | | | | | | | | | | |
| Boundary, Wil. Sh. L. | 1,344 | 649 | 695 | 52 | 16 | 73 | 4 | 19 | 2 | 8 | 0 | 0 | 0 | 0 | 22 | 100 |
| Boundary, Mac. Opts. | 3,138 | 1,074 | 2,064 | 66 | 28 | 68 | 8 | 19 | 3 | 6 | 0 | 1 | 3 | 6 | 42 | 100 |
| Carolina | 1,851 | 609 | 1,243 | 67 | 19 | 61 | 8 | 24 | 2 | 7 | 1 | 4 | 1 | 4 | 31 | 100 |
| Nebraska | 1,563 | 459 | 1,104 | 71 | 7 | 44 | 6 | 33 | 2 | 11 | 1 | 5 | 1 | 6 | 17 | 100 |
| Nevada | 1,202 | 395 | 807 | 67 | 7 | 39 | 7 | 42 | 1 | 6 | 0 | 1 | 2 | 13 | 17 | 100 |
| Total, Wil. Sh. L. | 4,109 | 1,503 | 2,605 | 63 | 30 | 54 | 17 | 30 | 5 | 8 | 1 | 2 | 3 | 6 | 56 | 100 |
| Total, Mac. In-St. | 6,191 | 2,078 | 4,113 | 66 | 54 | 60 | 23 | 25 | 6 | 6 | 2 | 2 | 6 | 7 | 90 | 100 |
| Total, Mac. Ad. Ln. | 6,191 | 2,078 | 4,113 | 66 | 54 | 60 | 23 | 25 | 6 | 6 | 2 | 2 | 6 | 7 | 90 | 100 |
| 4-Sellwood Bridge | | | | | | | | | | | | | | | | |
| Sellwood Bridge | 252 | 16 | 236 | 94 | 2 | 100 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 100 |
| 6-Lake Oswego⁶ | | | | | | | | | | | | | | | | |
| B Avenue | 5,712 | 742 | 4,970 | 87 | 19 | 43 | 8 | 19 | 2 | 5 | 2 | 5 | 13 | 29 | 44 | 100 |
| Lake Oswego | | | | | | | | | | | | | | | | |
| Terminus | 5,399 | 557 | 4,842 | 90 | 7 | 17 | 1 | 3 | 28 | 68 | 2 | 6 | 3 | 6 | 42 | 100 |
| Total, Both Options | 11,111 | 1,299 | 9,812 | 88 | 26 | 30 | 10 | 11 | 30 | 35 | 5 | 5 | 15 | 18 | 86 | 100 |
| TOTAL⁷ | | | | | | | | | | | | | | | | |
| From | 27,047 | 3,984 | 23,063 | 85 | 96 | 48 | 36 | 18 | 36 | 18 | 6 | 3 | 26 | 13 | 200 | 100 |
| To | 29,130 | 4,559 | 24,571 | 84 | 118 | 50 | 46 | 20 | 37 | 16 | 6 | 3 | 29 | 12 | 236 | 100 |

Note: Wil. Sh. L. means Willamette Shore Line; Mac. In-St means Macadam In-Street; Mac. Ad. Ln. means Macadam Additional Lane; L.O. Trm. means Lake Oswego Terminus; MOS means Minimum Operable Segment.

Numbers exclude land zoned for parks and open space.

¹ Redevelopment potential measurement area is discussed in more detail in the Land Use Technical Report.

² Allowed by the floor area ratio specified in the applicable zoning regulations, but see footnote 6.

³ Ratios in Segments 2, 3, and 4 are based on assessed market values in 2008. Ratios in Segment 6 are based on assessed values in 2009.

⁴ The ratios of the value of improvements to the value of land do not include residential or commercial condominiums because tax assessments do not separately assess the value improvements and land for them. Figure 3.1-5 identifies the properties that are excluded from the ratios because they are residential or commercial condominiums.

⁵ The ratios of the value of improvements to the value of land do not include the lock bounded by Moody, Bond, Lowell, and Abernethy because the apartment buildings on it are under construction. The floor area square footages include the block.

⁶ The allowed floor area numbers assume that the City of Oswego rezones to Multi-Family Residential/East End Commercial the land now zoned Industrial. The existing Industrial zoning would not allow the type of commercial and residential uses that make up mixed-use development and allows only one-third as much floor area.

⁷ Totals do not add across because the column totals sum ranges.

Sources: Data provided by Metro. Portland data from City of Portland Bureau of Planning and Sustainability "Development Capacity Analysis." Lake Oswego data from Metro. Table prepared by URS Corp. with GIS analysis by David Evans and Associates.

greatest employment growth rate over the next 25 years are forecast to be Lake Oswego (89 percent), South Waterfront/OHSU (64 percent), Johns Landing (60 percent), and Dunthorpe/Riverdale (52 percent).

3.2.2 Economic Impacts

Transit-related projects generate distinct economic impacts during both the construction and operations phases. Project construction results in a one-time increase in economic activity, while operations produce long-term economic benefits to the local community. Both sources of economic activity result in increased economic output, employee compensation and employment throughout the region. There are additional long-term economic impacts, including changes to jurisdictions' tax bases that would occur due to acquisition of property and the displacement of residences and businesses. These fiscal impacts are also evaluated in this section.

Total economic effects include direct³⁷ effects of the transit employment, as well as indirect³⁸ and induced³⁹ effects resulting from resulting spending in the economy. Table 3.2-3 summarizes economic impacts by alternative in terms of economic output, employee compensation, and employment.

Table 3.2-3 Summary of Economic Impacts, By Alternative

| Economic Impact | Enhanced Bus | | Streetcar | |
|--|-----------------------------|------------------------------------|-----------------------------|------------------------------------|
| | O&M (annual) | Construction (one-time) | O&M (annual) | Construction (one-time) |
| <i>Output (millions 2009\$)</i> | | | | |
| Direct | \$2.79 | \$26.00 | \$1.25 | \$154.4 to \$162.8 |
| Indirect | \$1.21 | \$6.80 | \$0.54 | \$40.1 to \$42.4 |
| Induced | \$1.45 | \$6.30 | \$0.65 | \$37.5 to \$40.2 |
| Total Output | \$5.45 | \$39.10 | \$2.44 | \$232.0 to \$244.6 |
| <i>Employee Compensation (millions 2009\$)</i> | | | | |
| Direct | \$1.84 | \$6.30 | \$0.82 | \$37.7 to \$39.7 |
| Indirect | \$0.40 | \$2.10 | \$0.18 | \$12.7 to \$13.4 |
| Induced | \$0.44 | \$1.90 | \$0.20 | \$11.3 to \$12.0 |
| Total Employee Compensation | \$2.68 | \$10.40 | \$2.54 | \$61.6 to \$65.1 |
| <i>Employment (Jobs)</i> | | | | |
| Direct | 28 | 137 | 13 | 810 to 850 |
| Indirect | 9 | 49 | 4 | 290 to 310 |
| Induced | 13 | 55 | 6 | 320 to 340 |
| Total Employment | 49 | 240 | 22 | 1,430 to 1,500 |

Source: Metro/TriMet; January 2010, and IMPLAN Pro 2.0.1025.

The IMPLAN economic impact assessment model estimates that every \$10 million in transit operations costs would result in 101 direct long-term jobs, including vehicle operators, maintenance staff, and administrative and supervisory staff. Because the analysis compares the operating costs of

³⁷ Direct economic effects refer to changes in output, income, and employment attributable to expenditures and/or production values specified as direct final demand.

³⁸ Indirect economic effects refer to changes in output, income, and employment resulting from iterations of businesses making expenditures initially caused by the direct economic effects.

³⁹ Induced economic effects refer to changes in output, income, and employment caused by expenditures associated with increased household income generated by the direct and indirect effects.

in assessed value and property tax revenue caused by displacement of properties, properties close to streetcar stations would likely experience an increase in value upon completion of the project, thereby increasing property tax revenue in the long term. The likely impact of this type of activity is described more fully in the *Land Use Technical Report* (URS, November 2010).

The Streetcar Alternative could also result in the potential loss in business tax revenue to the City of Portland if businesses within the Portland city limits are required or decide to close or relocate out of the taxing district due to property acquisitions. Lake Oswego does not collect business taxes. The Streetcar Alternative would result in between one and six building acquisitions, depending on the design options chosen (see Section 3 for additional detail). Of these, one of the building displacements is within the Portland city limits and designated for commercial land uses. According to the City of Portland Revenue Bureau, the displaced property has four business accounts associated with it. Most likely these businesses pay the city business license fee and county income tax;⁴⁰ however, the displaced businesses would likely relocate within the same area, thereby offsetting the loss of business revenues and business tax revenues.

The Enhanced Bus Alternative would result in approximately 240 construction-related, short-term jobs and about \$10.5 million in additional regional income, compared to the 1,430 to 1,500 jobs and \$61.6 to \$66.0 million in additional personal income that would be generated by the Streetcar Alternative (see Table 3.2-7), depending on the design option. Table 3.2-8 summarizes construction costs and short-term jobs for the Streetcar Alternative by segment and design option.

Table 3.2-7 Short-Term Employment¹ and Change in Personal Income by Alternative

| Alternative | Short-Term Jobs² | Personal Income² (millions) |
|--------------------|------------------------------------|---|
| No-Build | 0 | \$0.0 |
| Enhanced Bus | 240 | \$10.5 |
| Streetcar | 1,430 to 1,500 | \$62.5 to \$65.8 |

Source: TriMet, URS Corporation, and IMPLAN Pro 2.0.1025.

¹ Short-term employment are those jobs created during construction of the project.

² The IMPLAN economic impacts assessment model estimates that every \$10 million in streetcar or enhanced bus construction would result in an estimated 92.3 jobs, with direct average compensation of \$28,500.

The overall effects of the Lake Oswego to Portland Transit Project would be minor in the context of the number of jobs and income generated in the metropolitan area. With approximately 1 million jobs in the metropolitan area, the high end of employment generated by streetcar construction would represent less than two-tenths of one percent of all employment in the area, with the Enhanced Bus Alternative representing less than one-tenth of that estimate. As compared to the No-Build Alternative, cumulative effects of the project could include redevelopment along the proposed streetcar line, particularly station areas in established commercial areas, including Johns Landing and downtown Lake Oswego. The likely impact of this type of activity is described more fully in the *Land Use Technical Report* (URS, November 2010).

⁴⁰ Confidentiality rules prevent the disclosure of business tax and license revenue data as it relates to specific businesses.

Table 3.2-8 Summary of Streetcar Alternative Construction Costs (2010 dollars)¹ and Total Short-Term Employment² by Segment and Design Option

| Segment | Design Option | Construction Costs ¹ (millions) | Short-Term Jobs |
|-----------------------------------|-------------------------|---|-----------------|
| 1 – Downtown Portland | None | \$1.0 | 10 |
| 2 – South Waterfront ³ | None | \$7.8 | 70 |
| 3 – Johns Landing | Willamette Shore Line | \$10.1 | 90 |
| | Macadam In-Street | \$18.5 | 170 |
| | Macadam Additional Lane | \$22.3 | 210 |
| 4 – Sellwood Bridge ⁴ | None | \$23.7 | 220 |
| 5 – Dunthorpe/ Riverdale | Willamette Shore Line | \$52.6 | 490 |
| | Riverwood | \$51.3 | 470 |
| 6 – Lake Oswego | UPRR | \$43.8 | 400 |
| | Foothills | \$50.3 | 460 |
| Storage Facility Allowance | | \$2.5 | 20 |

Source: URS Corporation (for capital costs provided to TriMet to prepare the finance plan summarized in Chapter 5), and IMPLAN Pro 2.0.1025 (economic analysis).

Note: There is an additional \$48.4M estimated for the purchase of 11 streetcar vehicles. These vehicles are expected to be manufactured by Oregon Iron Works, resulting in an additional quantifiable local economic impact. Streetcar manufacturing is classified as NAICS code 336510 (Railroad rolling stock manufacturing), which corresponds to IMPLAN industry code 289 (Railroad rolling stock manufacturing). IMPLAN estimates that \$48.4M in streetcar manufacturing results in 144 jobs in this industry, with an estimated aggregated compensation of \$8.7M.

¹ All amounts exclude property acquisition costs.

² Short-term jobs are those that are associated with the construction of a project. The IMPLAN economic impacts assessment model estimates that every \$10 million in streetcar construction results in an estimated total impact of 92.3 jobs, with direct average compensation of \$28,500.

³ The South Waterfront Segment contains potential construction phasing options associated with the Streetcar alignments. The Willamette Shore Line and Moody/Bond Couplet are considered phasing options rather than design options. See Section 3.17 Phasing for more information regarding phasing options and differences between those options.

⁴ The Sellwood Bridge Segment contains potential construction phasing options associated with the Streetcar alignments. The Willamette Shore Line and New Interchange are considered phasing options rather than design options. See Section 3.17 Phasing for more information regarding phasing options and differences between those options.

3.2.3 Potential Mitigation Measures

The effects of the project's proposed alternatives would be relatively minor in the context of the number of jobs and income generated by the metropolitan region; additionally, the project has been designed to minimize the extent and number of residences, businesses, jobs and property access that would be permanently adversely affected. Compensation for partial acquisitions and easements would be provided at fair market value and relocation of displaced residences or businesses would be determined through negotiations with the property owners. Any acquisition of property and relocation of displaced residents will follow the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970.

For the Enhanced Bus Alternative and more for the Streetcar Alternative, public information relating to the project's construction timing and proximity would help to mitigate some of the potential temporary effects of the project on local businesses. A comprehensive package of public information and business assistance measures would be developed, which could include conducting public information campaigns to encourage patronage of businesses during construction. A primary goal of construction planning is to maintain adequate access to all businesses so their operations can continue during the construction phase of the project.