

Technical Memorandum

September 26, 2023

Project# 19531.016

To: Dayna Webb, PE
City of Oregon City

From: Marc Butorac, PE, PTOE, PMP; Amy Griffiths; Nicholas Gross; Sophia Semensky

CC: Mahasti Hastings, Oregon Department of Transportation (ODOT)

RE: TM#2: Evaluation Criteria and Performance Measures
McLoughlin Boulevard Enhancements - 10th Street to tumwata village

EVALUATION CRITERIA AND PERFORMANCE MEASURES

This memorandum articulates the evaluation criteria and performance measures developed to fulfill the Corridor Vision Statement (Reference 1) and the Purpose and Need Statement (Reference 2) for the McLoughlin Boulevard Enhancements - 10th Street to tumwata village Project (Project) as well as the City of Oregon City Transportation System Plan (TSP – Reference 3) goals. The evaluation criteria and performance measures are clear, actionable, and measurable so that the Project Team can make informed decisions about the performance and trade-offs of alternatives to best suit the Project's intended outcomes and corridor vision.

Guiding Goals and Policies

The purpose of the Project is to develop a shared-use path that will improve multimodal safety and fill the gap for people walking and biking along the OR99E corridor between 10th Street and Railroad Avenue through pedestrian, bicycle, and streetscape enhancements. The following list of needs have been compiled and summarized based on a review of the Corridor Vision and Purpose and Need Statement:

- Contribute to the sense of place and community identity by creating a community amenity desired by residents, business and property owners, and visitors of Oregon City.
- Designs that aid in reducing traffic speeds within the corridor are encouraged.
- The chosen alignment will support future designs for art, cultural, and historic interpretation throughout the project.
- Review all comments from tribal governments participating in or responding to the conceptual planning process with the agency (ODOT) Tribal Liaison.
- Fill a critical gap in safe, comfortable, and accessible facilities for people of all ages and abilities who are walking and biking by providing a regional active transportation link.
- Support Oregon City's goals for tourism, economic and community development by improving walking and biking facilities to better integrate and reorientate downtown's relationship with the Willamette River.
- Minimize impacts to the environmental aspects of the site.
- Preserve and protect the historical and cultural aspects of the site.

- Provide connectivity to the planned Willamette Falls Riverwalk, tumwata village, and potential future envisioned Oregon City-West Linn pedestrian-bicycle bridge.
- Provide additional opportunities to access the Willamette River.
- Represent an implementable, safe, and fundable alternative.

Evaluation Criteria and Performance Measures

Evaluation criteria have been developed based on information available in the project Purpose and Need Statement, as well as the goals and policy guidance from the City of Oregon City TSP. These criteria were reviewed and further refined to ensure alignment with the Project Corridor Vision Statement. For each criterion, a set of performance measures were developed to assess and differentiate between the alternatives. The performance measures provide a performance-based decision framework for the selection of a preferred alternative. Aligning with the principals of performance-based design guidance outlined in the Highway Design Manual (HDM – Reference 4), the performance measures are designed to be clear, actionable, and measurable to differentiate between alternatives specific to this project.

Table 1 provides the Evaluation Criteria, Description, Performance Measures, Relevance to Purpose and Need Statement, and Relevance to TSP Goals, as described in further detail below.

- **Evaluation Criteria** are derived from the needs identified in the Purpose and Needs Statement and goals and supplemental policies from the City of Oregon City TSP and will be used to evaluate draft alternatives.
- **Description** includes the purpose and general explanation of the evaluation criteria, connecting the criteria to the specific community or agency values (based on the TSP) and desired outcomes for the Project.
- **Performance Measures** are the measurements used to assess the evaluation criteria.
- **Relevance to Purpose and Need Statement** documents how the criteria align with the Project Purpose and Need Statement.
- **Relevance to TSP Goals** documents how the criteria align with the TSP.

Table 1: Evaluation Criteria and Performance Measures

Evaluation Criterion	Description	Performance Measures	Relevance to Purpose and Needs Statement	Relevance to TSP Goals
User Experience	The alternative provides comfortable facilities for people walking and biking, regardless of age and ability.	<ul style="list-style-type: none"> – Level of Vertical and Horizontal Separation from Roadway – Shared Use Facility Width – Shared Use Path Grade/Ramping Structures – Directness of Route – Personal Security 	<ul style="list-style-type: none"> – Provides safe, comfortable, and accessible facilities for people of all ages and abilities who are walking and biking. 	<ul style="list-style-type: none"> – Health and Safety – Equitable, Balanced, and Connected – Convenient and Available
Constructability	The alternative is implementable, fundable, and in alignment with coordination needs of the U.S. Army Corps of Engineers, U.S. Coast Guard, and Mobility Advisory Committee (MAC).	<ul style="list-style-type: none"> – Constructability – Life-Cycle Cost – Viaduct Maintenance – Risk of Coast Guard Compatibility – Mobility – Vulnerability to Extreme Events 	<ul style="list-style-type: none"> – Ensures that the preferred alternative can be constructed and implemented within the constraints of the existing environment. 	<ul style="list-style-type: none"> – Fundable – Compliant
Environmental Feasibility	The alternative preserves the cultural, historical, and environmental aspects of the site and minimizes impacts to historical structures.	<ul style="list-style-type: none"> – Cultural – Historical – Environmental – U.S. Army Corps of Engineers Coordination Needs 	<ul style="list-style-type: none"> – Adheres strictly to standards that negate localized environmental impacts and does not impact the river or nearby communities. 	<ul style="list-style-type: none"> – None
Community	The alternative receives public support and aligns with the values and vision of the community.	<ul style="list-style-type: none"> – Public Support – Tribal Support – Local Business Support 	<ul style="list-style-type: none"> – Supports economic and community development. – Recognizes the role and voice of tribes in the Willamette Falls area and emphasizes tribal and community involvement in decision-making. 	<ul style="list-style-type: none"> – Prosperity

Scoring and Evaluation

Alternatives are evaluated based on the extent to which they meet the performance measures included in each evaluation criterion. The proposed methodology for evaluating each performance measure is summarized in Table 2. The methodology uses a scoring scale from -1 to +1, with scores corresponding to the following conditions:

- **Score of -1:** Alternative has a negative impact on the measure.
- **Score of 0:** Alternative does not have a substantive impact on the measure.
- **Score of +1:** Alternative has a positive impact on the measure.

The performance measures are currently weighted equally, and the total score ranges between -18 (worst possible score) and +18 (best possible score) based on the four evaluation criteria listed in Table 1. A partial point scoring may be used where there is a proportional or relative benefit or impact with respect to other alternatives. The Community evaluation criterion will not be scored until public, tribal, and local business input has been received.

Table 2: Evaluation Criteria Scoring

Evaluation Criterion	Performance Measure	Scoring			Resources
		-1	0	+1	
User Experience	Level of Vertical and Horizontal Separation from Roadway (Quantitative)	Alternatives with less separation from the roadway will be scored lower than others on a sliding scale.	NA (Proportional scoring based on highest and lowest level of separation)	Alternatives with wider facilities and more separation from the roadway will be scored higher than others on a sliding scale.	Plan view layouts with horizontal and vertical alignments (Task 3.3.3).
	Shared Use Facility Width (Quantitative)	Alternatives with narrower facilities will be scored lower than others on a sliding scale.	NA (Proportional scoring based on highest and lowest facility width)	Alternatives with wider facilities will be scored higher than others on a sliding scale.	Plan view layouts with horizontal and vertical alignments (Task 3.3.3).
	Shared Use Path Grade/ Ramping Structures (Quantitative)	The grade of the path and ramping structures for the alternative is greater than 5 percent .	The grade of the path and ramping structures for the alternative is 2 to 5 percent .	The grade of the path and ramping structures for the alternative is less than 2 percent .	Elevation profile of paths. See PROWAG guidelines (Reference 5) for ramping grade guidance.
	Directness of Route (Quantitative)	The alternative creates an indirect route . The alternative will be scored based on a sliding scale of the number of crossings.	NA (Proportional scoring based on highest and lowest directness of route)	The alternative creates a direct route with no crossings.	Site access (Task 3.3.3).
	Personal Security (Qualitative)	The alternative is not visible from adjacent street activity and offers a low perceived sense of security.	The alternative is partially visible from adjacent street activity and offers a neutral or moderate perceived sense of security.	The alternative is visible from adjacent street activity and offers a high perceived sense of security.	Quantitative measure based on the alignment of the visibility of the path to passersby.
Constructability	Constructability (Quantitative and Qualitative)	The alternative has a high number of barriers to construction and a longer timeline for construction (compared to other alternatives). The alternative does provide moderate water accessibility for staging and construction.	The alternative has a moderate number of barriers to construction and a moderate timeline for construction (compared to other alternatives). The alternative provides moderate water accessibility for staging and construction.	The alternative has a low number of barriers to construction and a shorter timeline for construction (compared to other alternatives). The alternative provides immediate water accessibility for staging and construction.	Length of construction and impacts to transportation system during that time and other barriers to construction (Task 3.3.3).
	Life-Cycle Cost (Quantitative)	The alternative has the highest planning-level cost estimate (compared to other alternatives).	NA (Proportional scoring based on highest and lowest cost)	The alternative has the lowest planning-level cost estimate (compared to other alternatives).	Planning-level cost estimates, including utilities, retaining walls, signals, maintenance, and durability (Task 3.3.3).
	Viaduct Maintenance Accessibility (Qualitative)	The alternative negatively impacts the accessibility of the viaduct for maintenance/inspection crews.	The alternative does not impact the accessibility of the viaduct for maintenance/inspection crews.	The alternative improves the accessibility of the viaduct for maintenance/inspection crews	Location, width, and proximity of alternative alignment to viaduct (Task 3.3.3).
	Risk of U.S. Coast Guard Compatibility (Qualitative)	The alternative is unlikely to comply with U.S. Coast Guard requirements.	The alternative may comply with U.S. Coast Guard requirements.	The alternative is likely to comply with U.S. Coast Guard requirements.	Compatibility with U.S. Coast Guard requirements (Task 3.3.3).
	Mobility (Qualitative)	The alternative reduces the vertical or horizontal clearance along OR99E below the constraining pinch points in the overall system.	The alternative maintains the vertical or horizontal clearance along OR99E, but the clearance is maintained above pinch points in the overall system.	The alternative increases vertical or horizontal clearance along OR99E.	Horizontal and vertical clearance of OR99E.
	Vulnerability to Extreme Events (Quantitative)	The alternative is more vulnerable to extreme events.	The alternative is equally vulnerable to extreme events	The alternative is less vulnerable to extreme events.	Quantitative measure based upon vulnerability to extreme events (Flood, Seismic, vehicular impact)
Environmental Feasibility	Cultural (Qualitative)	The alternative has a negative impact on important tribal features.	The alternative has no or low impact on important tribal features.	The alternative has a positive impact on important tribal features.	Qualitative measure of impacts to important tribal features, including Willamette Falls (Task 3.3.3).
	Historical (Qualitative)	The alternative has a negative impact on important historical structures, including the Arch Bridge.	The alternative has no or low impact on important historical structures, including the Arch Bridge.	The alternative has a positive impact on important historical structures, including the Arch Bridge.	Qualitative measure of impacts to the historic arch bridge and any other historical structures (Task 3.3.3).
	Environmental (Qualitative)	The alternative has a negative impact on environmental features.	The alternative has no or low impact on environmental features.	The alternative has a positive impact on environmental features.	Qualitative measure of impacts to environmental features, such as plants, trees, and the river (Task 3.3.3).
	U.S. Army Corps of Engineers Coordination (Qualitative)	The alternative has high coordination needs with the U.S. Army Corps of Engineers.	The alternative has moderate to minimal coordination needs with the U.S. Army Corps of Engineers.	The alternative has no coordination needs with the U.S. Army Corps of Engineers.	Coordination required for water impacts and viaducts with the U.S. Army Corps of Engineers (Task 3.3.3)
Community ¹	Public Support (Qualitative)	The alternative is not supported by the public.	The alternative has moderate or mixed support from the public.	The alternative has high support from the public.	Online Open Houses (Task 7.5), Small Group Briefings, One-on-One Briefings, and Stakeholder Interviews (Task 7.6).
	Tribal Support (Qualitative)	The alternative is not supported by local tribes.	The alternative has moderate or mixed support from local tribes.	The alternative has high support from local tribes.	Small Group Briefings, One-on-One Briefings, and Stakeholder Interviews (Task 7.6).
	Local Business Support (Qualitative)	The alternative is not supported by local businesses.	The alternative has moderate or mixed support from local businesses.	The alternative has high support from local businesses.	Small Group Briefings, One-on-One Briefings, and Stakeholder Interviews (Task 7.6).

¹ The Community evaluation criterion will not be scored until public, tribal, and local business input has been received.

NA = not applicable.

Next Steps

The evaluation criteria will be used to assess the top three most promising alternatives as part of TM#6: Most Promising Alternatives. The application of the evaluation criteria will inform the selection of a preferred alternative to be advanced for the implementation plan. Performance measures requiring public, tribal, and business input will influence the selection of the preferred alternative as part of TM#7: Preferred Shared-use Path Alternative.

References

1. Kittelson & Associates, Inc. *Final Corridor Vision Statement, 2023.*
2. Kittelson & Associates, Inc. *Final Purpose and Need Statement, 2023.*
3. City of Oregon City. *Transportation System Plan, 2013*
4. Oregon Department of Transportation. *Highway Design Manual, 2023.*
5. U.S. Access Board. *Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way, 2023.*