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TECHNICAL MEMORANDUM #2

DATE: April 1, 2024

TO: Virginia Elandt | ODOT

FROM: Garth Appanaitis, PE | DKS Associates
Joel McCarroll, PE | DKS Associates
Hallie Turk, EI | DKS Associates

SUBJECT: OR 42-US 101 Passing Lanes Study
Evaluation and Prioritization Criteria

DKS P#22129-004

INTRODUCTION

The purpose of this memo is to establish criteria to evaluate and prioritize ways to improve passing lanes on the OR 42 and US 101 study corridors. These criteria are based on the project goals and objectives described in Technical Memo #1.

EVALUATION CRITERIA

Evaluation criteria will be used to determine potential passing lane locations. The evaluation process eliminates potential project locations from prioritization if they do not meet minimum feasibility. This approach identifies and documents the full range of locations considered, identifies project deficiencies that cannot be overcome through project design or other mitigation efforts, and removes locations that will not be considered. The criteria will be qualitatively evaluated for each project using the following scale:

- 5 – strong benefit (e.g., high benefit or low cost)
- 4 – moderate benefit (e.g., some benefit)
- 3 – neutral outcome
- 2 – moderate concern (e.g., low benefit)
- 1 – strong concern (e.g., no benefit or high cost)

The evaluation criteria will be added together for each project to identify those potential projects that seem to be most favorable without additional analysis. If a proposed project evaluation results in any "1" responses, the project will not be advanced to the prioritization stage unless a feasible solution is proposed. A vehicle turnout may be considered as an alternate treatment in locations where it is determined that a passing lane is not feasible. The initial project scoring will be applied

uniformly for each criterion (five points each) but may be later weighted at the discretion of the project team if some criteria are deemed to be more important.

Table 1 summarizes the proposed evaluation criteria on each goal area:

- Goal 1 – Corridor Mobility
  - Operations
- Goal 2 – Corridor Safety
  - Vehicle and Multimodal Safety
- Goal 3 – Cost and Risk
  - Structures
  - Access
  - Right of Way (and proximity to railroad right of way)
  - Potential project risks related to environmental, geotechnical, archeological or other known factors

TABLE 1: EVALUATION CRITERIA

CRITERIA	CONSIDERATION
OPERATIONS	Does the project location have existing operational deficiencies that will be improved with implementation of a passing lane or slow-moving vehicle turnout?
SAFETY	*Vehicle safety*: Does the project location have existing safety deficiencies or a history of head-on or sideswipe crashes that will be improved with the implementation of a passing lane or slow-moving vehicle turnout? Does the project not introduce additional conflict points? *Multimodal safety*: Does the project location allow for wide shoulders for cyclists?
STRUCTURES	Does the location not include any structures (bridge, culverts, utilities, etc.) that could be impacted and would not need any new/replaced structures?
ACCESS	Are the passing lane project boundaries located over 2,500 feet from significant driveways or public streets?
RIGHT OF WAY	Can the proposed project be implemented without impacting right of way (including parks) that will require displacement or impacting railroad right of way?
POTENTIAL RISKS	The proposed project is not located near elements including environmental, geotechnical, archeological or other known factors that may introduce project risks?

PRIORITIZATION CRITERIA

These criteria will help prioritize and group ideas for improvements relative to each other (near, mid, long range or phase 1, phase 2, phase 3 etc.). A qualitative score of low/medium/high will be assigned to each criterion, with significant positive impacts resulting in "high" and significant negative impacts (cost burdens or risks) resulting in "low." This scale would also result in the following numerical scale: high (3 points), medium (2 points), low (1 point).

The criteria scoring (low, medium, high) will be applied as a relative comparison among the potential projects. Initial guidance on the scoring is indicated below, but may be further refined based on the actual data and analysis in order to reflect the differences between project benefits or challenges.

Prioritization criteria include:

- Goal 1: Operational Measures
  - Overall travel time
  - Presence of existing passing opportunities
- Goal 2: Safety
  - Head-on or sideswipe crash history on existing segment
  - Potential to mitigate future head-on or sideswipe crashes
- Goal 3: Cost and Risk
  - Timeframe for Implementation
  - Cost and Funding
  - Wildlife Crossing
  - Environmental Impacts
  - Archaeology
  - Geotechnical Impacts
  - Bridges and Structures

Table 2 summarizes the proposed prioritization criteria.

TABLE 2: PRIORITIZATION CRITERIA

CRITERIA	CONSIDERATION
TRAVEL TIME	Higher score for projects with more mobility improvement (overall travel time)
EXISTING PASSING	Higher score for no presence of existing downstream passing lane
CRASH HISTORY	Higher score for more frequent occurrence of head-on or sideswipe crashes on the existing segment.
CRASH MITIGATION	Higher score for projects that target segments with outlier crashes (higher % of head-on or sideswipe crashes) *Note: HSM provides CMF for passing lane*
TIMEFRAME FOR IMPLEMENTATION	Less than 5 years (High), 5 to 20 years (Medium), over 20 years (Low)
COST	Less than $5 Million (High), $5- 10 Million (Medium) More than $10 Million (Low)
WILDLIFE CROSSING	Does the project impact wildlife migration? Will a structure be required to mitigate impacts? No = High, Yes = Low
ENVIRONMENTAL IMPACTS	Does the project impact threatened or endangered species? Does the project impact wetlands? Will impacts require mitigation? No mitigation = High, Low- Cost Mitigation = Medium, High-Cost Mitigation = Low

CRITERIA	CONSIDERATION
ARCHAEOLOGY	Does the project impact an archaeological site? Will impacts require mitigation? No mitigation = High, Low-Cost Mitigation = Medium, High-Cost Mitigation = Low
GEOTECHNICAL IMPACTS	Does the project impact a known geotechnical risk? Will impacts require mitigation? No impact = High, Limited Mitigation = Medium, High-Cost Mitigation = Low
DRAINAGE AND STORMWATER	How can drainage and stormwater be accommodated with the proposed solution? High = easily accommodated, Medium = average accommodation, Low = difficult to accommodate
BRIDGES AND STRUCTURES	Does the project segment include an existing structure (bridge or culvert)? No structure = High, Culvert = Medium, Bridge = Low