

Planning Rough Order of Magnitude (PROM): Documentation

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Introduction

The creation of a planning level rough order of magnitude (PROM) was created to provide a consistent and updateable method to create or verify cost estimates for planning projects (0-15%) to include ODOT's Capital Investment Plan (CIP).

Planning documents such as Transportation System Plans (TSPs) include cost estimates, which are then used to develop financially constrained lists of transportation projects and/or programs as required by OAR 660-012. For metropolitan areas, the financially constrained list should not exceed 125% of projected funding available. Prior to PROM version 1, 2026, there was no methodology to vet proposed transportation improvement project cost estimates or financially constrained lists.

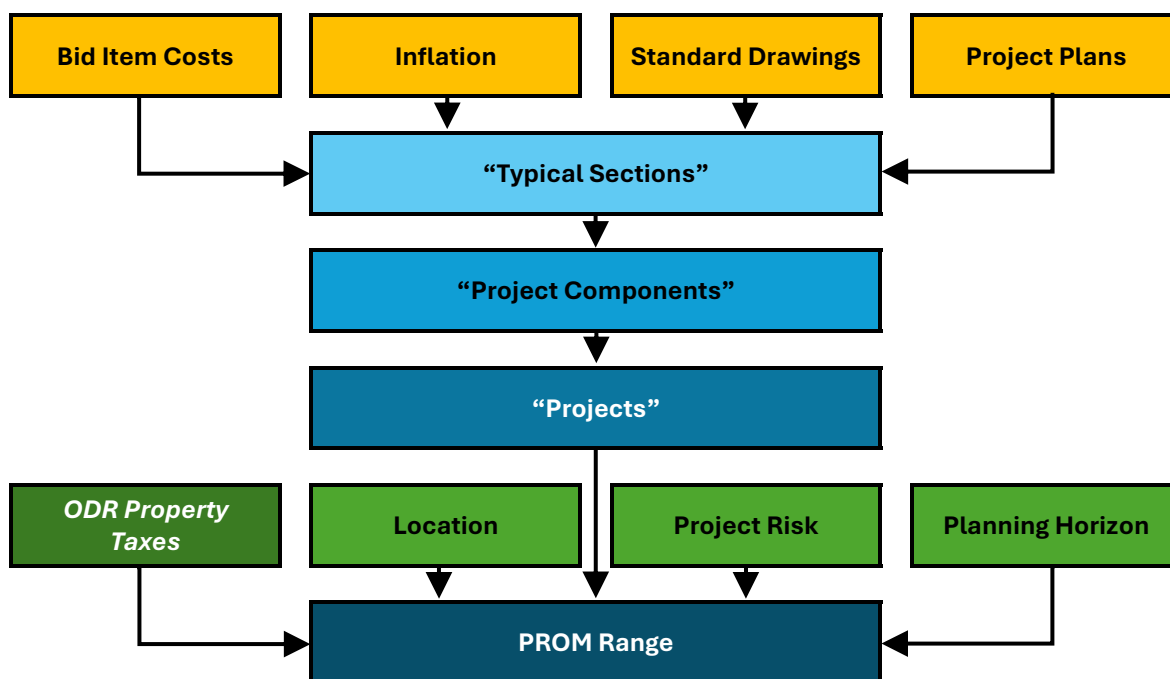
This document will detail the PROM methodology, that is not intended for major or mega projects. All costs and indices should be updated on an annual basis; however population adjustment factors may be updated less frequently—no less than every five years.

OVERVIEW

Rough Order of Magnitude (ROM) is an early, high-level project estimate used for initial project screening, feasibility and budgeting that is represented as a range. A range is based on a Project's expected baseline costs that is then adjusted by different factors such as location, risk, and planning horizon.

For this tool, "Project" baseline costs are developed from one or more "Project Components" that is derived from "Typical Sections." Figure 1 depicts an overview of the method.

Figure 1. PROM Methodology Overview



BID ITEM COSTS

Bid item costs are proposed prices for individual unit of work for a project. The majority of ODOT bid items are standardized and described in the Standard Specifications for Construction. Compiled bid item data is analyzed for the most representative unit costs for further cost development. This was done in 11 steps:

1. Five most recent years of bid item data was compiled.
2. Unit costs not associated with the top 3 overall project bids are excluded from the data set analyzed.
3. Bid item unit costs are inflated to a common, typically the current, year. See Bid Item Inflation section.
4. If a bid item has less than 5 proposed costs, an average of the remaining adjusted items is used. If it has 5 or more, steps 5-11 are followed to calculate a bid item cost.
5. A linear regression model is calculated for each bid item from the remaining adjusted item costs.
6. The standard deviation (SD) for each bid item is calculated from the remaining adjusted costs.
7. The average unit cost for each item is then calculated with the following thresholds:
 - a. Upper – two SD above the mean.
 - b. Lower – the larger value between step 5's Y-intercept, and step 6's two SD below the mean.
8. Steps 5 and 6 are repeated, utilizing thresholds developed in step 7.
9. The second iteration of average unit cost is calculated with new limits, like step 7.
10. The standard deviations from step 6 and step 8 are compared.
11. The iteration of average unit cost is associated with the lower standard deviation from step 10.

The purpose of steps 5-11 is to ignore unbalanced bids. Unbalanced bidding is a pricing tactic that assigns artificially low or high unit costs to work items so that their overall project bid appears competitive (low), or an overall highball project bid. The latter is often used by contractors when they already have sufficient work and need an inflated profit margin to make the extra work worthwhile.

BID ITEM INFLATION

Inflation is the average increase in prices of goods and services over time. Construction inflation consistently outpaces the consumer price index (CPI). FHWA's National Highway Construction Cost Index (NHCCI) was originally considered to be used for this tool, but it was determined to be too broad. A proprietary "Projected Cost Index for State & Local Spending on Highway Capital Projects" index was deemed more suitable, especially since it is currently used by ODOT's economist for Statewide Transportation Improvement Programs (STIP) that are ODOT's CIP for state and federally funded projects.

The tool incorporates inflation in 2 ways:

1. Normalize bid items to a uniform year directly using the index, and
2. Projected future year dollars that uses the average of annual growth rates from the index.

Example 1: **Average Annual Growth Rate Calculation**

Future Year	+1	+2	+3	+4	+5
Annual Rate of Cost Escalation*	4.7%	5.1%	2.6%	1.2%	0.3%

* From STIP Index

$$\text{Growth Rate}_{\leq 5 \text{ years}} = 2.8\% = \text{AVERAGE}(4.7\%, 5.1\%, 2.6\%, 1.2\%, 0.3\%)$$

For questions regarding the index, please contact an economist in ODOT's Finance and Budget Division, see Appendix for contact.

TYPICAL SECTIONS

A "Typical Section" is a generalized cross-section of a structure that includes roadways, bridges, sidewalks, etc. Units of measure are assigned to each typical section, typically by foot for each. Quantities per unit of measure (UoM) are then developed using Standard Specifications for Construction, Standard Drawings & Details, specific project plans, or specific project contracts from ODOT electronic plans and specs (eBIDS).

Example 2 : **Separated Sidewalk Typical Section** based on Standard Roadway Drawing [RD721\(7/2025\)](#)

Separated Sidewalk		UoM: 1-LNFT	Est. Baseline U/C: \$150				
Required Work	Item Number	Unit	U/C 5-yr AVG	Width	Length	Depth	\$ / UoM
GENERAL EXCAVATION	0330-0105000K	CUYD	\$61	12 FT	1 FT	1 FT	\$27
CONCRETE WALKS	0759-0128000J	SQFT	\$16	6 FT	1 FT	-	\$96
TOPSOIL	1040-0101000K	CUYD	\$151	5 FT	1 FT	0.3 FT	\$9
AGGREGATE BASE	0641-0102000M	TON	\$52	6 FT	1 FT	0.3 FT	\$7
LAWN SEEDING	1030-0138000J	SQYD	\$16	6 FT	1 FT	-	\$11

Definitions: UoM = Unit of Measure, LNFT = Linear Foot, U/C = Unit Cost

PROJECT COMPONENTS

A "Project Component" is a distinct portion of a project and is composed of one or more typical sections. Units of measure are again assigned for each component. Number of typical sections per UoM are developed also using Standard Specifications for Construction, Standard Drawings & Details, specific project plans, or specific project contracts from ODOT electronic plans and specs (eBIDS).

Example 3: **Culvert Replacement ($\leq 10'$ Deep)** based on experience

Culvert Replacement ($\leq 10'$ Deep)	UoM: EACH	Est. Baseline U/C: \$110,000	
Typical Section	Count	Typical U/C	Total Cost
Remove/Replace Culvert (36" @ 10' 2-Lanes)	1	\$74,000	\$74,000
Temporary Water & Turbidity Management	1	\$36,000	\$36,000

Note: Culvert Replacement typical section includes trench resurfacing, end slopes, and sloped end sections

It is assumed that components will represent approximately 80% of the project's construction cost. The remaining 20% of costs include traffic and erosion control.

A component's baseline cost is calculated:

$$Cost_{Component\ Baseline\ U/C\ (1.25)} = Cost_{component\ Baseline\ U/C} / 0.80 \quad \text{Eq. 1}$$

Furthermore, this component baseline estimate accounts for only construction costs. So an additional ~72% percentage is added to account for preliminary engineering, construction engineering, and construction contingency.

$$Cost_{Component\ Baseline} = Cost_{Component\ Baseline\ U/C\ (1.25)} * (1 + (25\% + 12\% + 35\%)) \quad \text{Eq. 2}$$

PROJECTS

A “Project” is the combination of project components.

Example 4: **Project to mill/fill 3” of a 3-lane road for 6-miles with one culvert replacement.**

6-mi 3-ln Pavement Mill/Fill w/ Culvert Replacement		Baseline Est.:	\$4,660,000
Project Component	Count	Component baseline cost	Total Cost
Culvert Replacement (≤ 10' Deep)	1	\$110,000	\$110,000
Pavement Preservation General (≤10 mi: 1-lane)	3	\$1,517,000	\$4,550,000

RIGHT OF WAY (ROW) ACQUISITION

The acquisition of right of way (ROW) is a project aspect that is sometimes trivialized in the planning stage though it can be a significant budget risk. Oregon Property Tax Statistics and publicly available zoning maps per county were reviewed. Unfortunately, not all Oregon counties have readily available zoning maps, so 12 county groups were developed based on criteria that includes geography, access to interstates, number/size of urban centers, see Table 1. For each of the 12 county groups, average unit costs for “Residential”, “Commercial/Industrial”, “Farm/Forest”, and “Other” zoned land use was developed.

Table 1. County Groups

Group	Group Description	# Counties	Counties
1	METRO	3	Clackamas, Multnomah, Washington
2	North Willamette Valley	3	Marion, Polk, Yamhill
3	South Willamette Valley	3	Benton, Lane, Linn
4	South Urban Corridor	3	Douglas, Jackson, Josephine
5	Central Oregon	3	Crook, Deschutes, Jefferson
6	Columbia River Gorge	3	Hood River, Sherman, Wasco
7	NE Mountains	3	Umatilla, Union, Wallowa
8	SE Frontier	3	Harney, Lake, Malheur
9	Klamath & Morrow	2	Klamath, Morrow
10	N Coast	4	Clatsop, Columbia, Lincoln, Tillamook
11	S Coast	2	Coos, Curry
12	Rural Interior/East	4	Baker, Gilliam, Grant, Wheeler

Note: These groups were developed with the help of AI (Copilot)

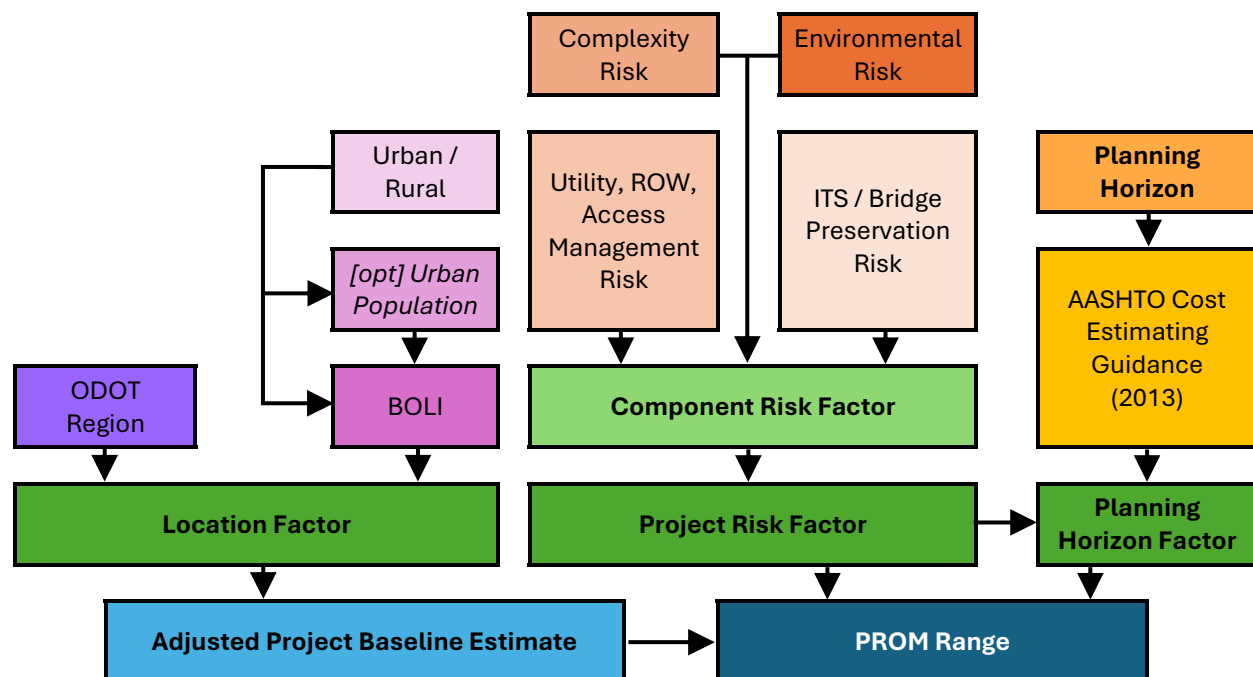
ADJUSTMENT FACTORS

Adjustment factors for project estimates are necessary for accuracy. Costs and estimates are unique from project to project. This holds true for common, routine projects such as a restriping project. To manage the fluctuation of costs, three categories for adjustment factors are used:

- A. Location,
- B. Project Risks,
- C. Planning Horizon.

Figure 2 illustrates how adjustment factors impact a project's baseline estimate or the PROM.

Figure 2. Adjustment Factor Overview



LOCATION FACTOR

Oregon is geographically, culturally, and demographically diverse, and that is reflected in project costs. Less populated regions tend to have higher bid-item costs, likely due to lower density of local contractors. This is affirmed in Oregon's Bureau of Labor and Industries (BOLI)'s prevailing wage¹ zone differentials. At the same time, high-population, urban centers tend to have higher bid-item costs likely due to, but not limited to, risks associated with increased labor costs (COLA), increased work restrictions like traffic control, increased site constraints, traffic control requirements, and utility conflicts.

¹ "Prevailing wage rates are the amounts that must be paid to construction workers on all public works projects in Oregon."

These trends were identified by analyzing 150 bid items from the compiled 5-year bid item data.

1. Five most recent years of bid item data was compiled.
2. Unit costs not associated with the top 3 overall project bids are excluded from the data set.
3. Bid item unit costs are inflated to a common, the current, year. See Bid Item Inflation section.
4. Bid costs were averaged overall and by region for the 150 most common bid items on projects that are not:
 - a. **Acre** unit-cost items often associated with seed mixes that are highly variable
 - b. **Each** unit-cost items often associated with traffic signal items that are highly variable and temporary items that are more often associated with unbalanced bids
 - c. **Lump Sum** unit-cost items that are highly variable in work requirements

5. Calculate a bid item's (BI) factor by comparing average region and statewide unit cost (UC):

$$BI\ UC\ Factor_{Reg\#} = (BI\ UC_{Reg\#\ Avg} - BI\ UC_{Avg}) / BI\ UC_{Avg} \quad \text{Eq. 3}$$

6. Calculate the bid item's cost percentage compared to the total project's bid:

$$BI\ Cost\ \%_{Reg\#} = Item\ Total\ Cost_{Reg\#} / Project\ Total\ Cost_{Reg\#} \quad \text{Eq. 4}$$

7. Calculate a region's overall factor with a weighted average of Bid Item Factor and Percent Cost:

$$Region\ Factor = \Sigma(BI\ UC\ Factor_{Reg\#} * BI\ Cost\ \%_{Reg\#}) \quad \text{Eq. 5}$$

RISK FACTOR

Project risks are uncertain conditions or activities that can impact the project's schedule, budget, or ability to complete its objectives. For the purposes of PROM, five risk categories were identified from an ODOT Scoping Risk Worksheet², construction experience, and ODOT's Project Risk Engineer:

- A. Complexity,
- B. Utility / Right-of-Way / Access Management,
- C. Environmental,
- D. ITS / Bridge Preservation, and
- E. Estimating Confidence / Scope Creep.

The level of risk for each of these five categories is estimated for each component, see Appendix and Table 2. Proportional risk buffer costs are added to a component's baseline cost.

$$Component\ Buffer_{Risk\ A} = Cost_{Comp.Base} * Risk\ Percentage_A \quad \leftarrow \text{using Table 2} \quad \text{Eq. 6}$$

$$Cost_{Comp.Adj} = Cost_{Comp.Base} + \Sigma(Component\ Buffer_{Risk}) \quad \text{Eq. 7}$$

Next, a component's risk value is calculated and factored according to Table 2.

$$Risk\ Value_{Comp.} = \Sigma(Risk\ Value_n) + Risk\ Value_{Est.Confidence} \quad \text{Eq. 8}$$

² ODOT Scoping OPO presentation 11/16/22

Note that Estimating Confidence / Scope Creep has double weight, and ITS/Bridge Preservation Risk value is either 4 or “n/a”.

Table 2: Risk Values and Risk Percentage

Risk Level	Risk Value	Risk Percentage
Negligible	1	5%
Very Low	2	10%
Low	3	15%
Moderate	4	25%
High	5	35%
Very High	6	50%

Table 3: Project Risk Factors

Total Risk Value	Risk Factor
≤ 8	1.2
≤ 10	1.25
≤ 12	1.3
≤ 14	1.35
≤ 16	1.4
≤ 18	1.45
> 18	1.5

Finally, a total project risk factor is calculated by the weighted average of component risk factor, according to Table 3, relative to the component’s percent cost of the overall project.

$$Risk\ Factor_{Proj} = \Sigma(Risk\ Factor_{Comp.n} * (Cost_{Comp.n}/Cost_{project})) \quad Eq. 9$$

Example 5: Project Risk factor Calculation - Project XYZ to install a RRFB with sidewalk & streetlights

Project XYZ		Project Risk Factor: 1.35			Project Estimate: \$755,000				
Components	Baseline Estimate	Complexity Risk	Utility / AC / ROW Risk	Enviro. Risk	ITS / Bridge Pres. Risk	Scope Creep Risk	Risk Value (Comp.)	Risk Factor (Comp.)	Risk Buffer
Separated Sidewalk (500')	\$110,000	Negligible	Moderate	High	No	Very Low	14	1.35	\$65,000
RRFB w/ Median Refuge	\$345,000	Low	Low	Low	No	Very Low	13	1.30	\$160,000
Street Lights (100')	\$45,000	Low	Moderate	High	No	Very Low	16	1.40	\$30,000

$$Risk\ Value_{Separated\ Sidewalk\ (SS)} = \Sigma(Negligible, Moderate, High, No, (2 * Very Low))$$

$$Risk\ Value_{SS} = 14 = \Sigma(1, 4, 5, (n/a), (2 * 2)) \leftarrow \text{using table 2's Risk Values}$$

$$Risk\ Factor_{SS} = 1.35 \leftarrow \text{using Table 2}$$

$$Cost_{Construct\ Separated\ Sidewalk\ (SS)} = (Cost_{Baseline} - Cost_{PE,CA,CE}) \\ = \$75,000 = (\$110,000 - \$35,000)$$

$$\begin{aligned}
& \text{Component Buffer}_{\text{Risk Separated Sidewalk (SS)}} \\
&= (\text{Cost}_{\text{Construct}}) * \Sigma(\text{Negligible, Moderate, High, No, (2 * Very Low)}) \\
&\text{Component Buffer}_{\text{Risk SS}} = (\text{Cost}_{\text{Construct SS}}) * \Sigma(5\%, 25\%, 35\%, (n/a), (2 * 10\%)) \\
&= \$65,000 \approx ((\$75,000) * (85\%)) \\
\\
&\text{Cost}_{\text{Adj. Separated Sidewalk}} = \text{Cost}_{\text{Baseline}} + \text{Cost}_{\text{Risk Buffer Separated Sidewalk}} \\
&= \$175,000 = (\$100,000 + \$65,000) \\
\\
&\text{Cost}_{\text{Project Baseline}} = \Sigma(\text{Cost}_{\text{Adj. Baseline component}}) \\
&= \$755,000 = (\$175,000 + \$505,000 + \$75,000) \\
\\
&\% \text{Cost}_{\text{Component}} = \text{Cost}_{\text{Separated Sidewalk}} / \text{Cost}_{\text{Project}} \\
&= 23\% = (\$175,000 / \$755,000) \\
\\
&\text{Risk Factor}_{\text{Project}} = \Sigma(\text{Risk Factor}_{\text{Separated Sidewalk}} * \% \text{Cost}_{\text{component}}) \\
&= \Sigma(1.35 * 23\%, 1.30 * 67\%, 1.40 * 10\%) \\
&= 1.35 \approx (1.32) \leftarrow \text{when rounded up}
\end{aligned}$$

PLANNING HORIZON

A planning horizon is the length of time from “today” to when a project is expected to be implemented. Typically, projects that have longer planning horizons have higher risks due to limited knowledge also known as “project definition”. This is reflected in AASHTO’s 2013 Practical Guide to Cost Estimating. See Figure 3 where the project’s estimate range expands with less project definition.

Figure 3. 2013 AASHTO Practical Guide to Cost Estimating Table 1.3 (Cost Estimating Classification)

Table 1-3. Cost Estimating Classification

Project Development Phase	Project Maturity (% project definition completed)	Purpose of the Estimate	Estimating Methodology	Estimate Range
Planning	0 to 2%	Conceptual Estimating—Estimate Potential Funds Needed (20-year plan)	Parametric (Stochastic or Judgment)	–50% to +200%
	1% to 15%	Conceptual Estimating—Prioritize Needs for Long-Range Plans (IRP—10-year plan)	Parametric or Historical Bid-Based (Primarily Stochastic)	–40% to +100%
Scoping	10% to 30%	Design Estimating—Establish a Baseline Cost for Project and Program Projects (IRP and STIP)	Historical Bid-Based or Cost-Based (Mixed, but Primarily Stochastic)	–30% to +50%
Design	30% to 90%	Design Estimating—Manage Project Budgets against Baseline (STIP, Contingency)	Historical Bid-Based or Cost-Based (Primarily Deterministic)	–10% to +25%
Final Design	90% to 100%	PS&E Estimating—Compare with Bid and Obligate Funds for Construction	Cost-Based or Historical Bid-Based Using Cost Estimate System (Deterministic)	–5% to +10%

This PROM methodology defines 4 planning horizons: <5 years, ≥5 years, ≥10 years, and ≥20 years. Table 4 details the upper and lower range modifiers based on planning horizon.

Table 4. PROM Range Modifiers – Planning Horizon (based on AASHTO 2013)

Planning Horizon	Lower Range Modifier	Upper Range Modifier
<5 years	-10%	25%
≥5 years	-30%	50%
≥10 years	-40%	100%
≥20 years	-50%	200%

PROM RANGE

The PROM range is influenced by the project baseline's estimate, risk, and planning horizon. The higher the estimate, the greater the risks, or the further the planning horizon, the larger the range.

The subsequent lower and upper range calculations are rounded down and up, respectively, to the Project Base Cost's order of magnitude. Example 6 demonstrates the rounding convention while Examples 7 and 8 demonstrate lower and upper limit calculations.

Example 6: PROM Range Rounding Example

Project Cost	Order of Magnitude	Round Down	Round Up
\$3,300,000	7	\$3,000,000	\$4,000,000
\$15,000,000	8	\$10,000,000	\$20,000,000
\$755,000,000	9	\$700,000,000	\$800,000,000

$$Lower\ Limit_{Base} \approx Cost_{Project\ Base} * AVERAGE(1 - Range\ Modifier_{Lower}, 1.25) \quad Eq. 10$$

$$Upper\ Limit_{Base} \approx Cost_{Project\ Base} * AVERAGE(1 + Range\ Modifier_{Upper}, Risk\ Factor_{Project}) \quad Eq. 11$$

For future PROM ranges, the lower and upper limits are based on the inflated project cost and similar range modifiers used for base PROM ranges.

$$Lower\ Limit_{Future} \approx MAX(Lower\ Limit_{Base} * (1 + GrowthRate), Cost_{Project\ Future}, (Cost_{Project\ Future} * AVERAGE(1 - Range\ Modifier_{Lower}, 1.25))) \quad Eq. 12$$

Example 7: Lower Limit Calculation

$$\text{If: } Lower\ Limit_{Base} = \$13,000,000, \quad Cost_{Project\ Future} = \$18,000,000, \\ GrowthRate_{10years} = 35\%, \quad GrowRange\ Modifier_{Lower} = -40\%$$

$$\text{Then: } Lower\ Limit_{Future} = MAX(\$13 * (1 + 35\%), \$18, (\$18 * AVERAGE(1 - 0.40, 1.25))) * 10^6 \\ = \$18,000,000 = MAX(\$17, \$18, \$12) * \$1,000,000 \\ \approx \$10,000,000 \leftarrow \text{when rounded down}$$

$$Upper\ Limit_{Future} = Upper\ Limit_{Base} * (1 + GrowthRate) \quad \text{Eq. 13}$$

$$Upper\ Limit_{Adj.Future} = Upper\ Limit_{Future} + Range\ Modifier_{Upper2} \quad \text{Eq. 14}$$

$$\begin{aligned} \text{If: } & \text{ROUNDED}(Upper\ Limit_{Future}) > \text{ROUNDED}(Upper\ Limit_{Base} * (1 + GrowthRate)) , \text{ then} \quad \text{Eq. 15} \\ & Range\ Modifier_{Upper2} = 0, \text{ else} \\ & Range\ Modifier_{Upper2} = 10^{Order\ of\ Magnitude_{CostProject\ Future}} \end{aligned}$$

Example 8: Upper Limit Calculation

$$\begin{aligned} \text{If: } & Upper\ Limit_{Base} = \$13,000,000, \quad Cost_{BaseProject\ Future} = \$18,000,000, \\ & GrowthRate_{10years} = 35\%, \quad GrowRange\ Modifier_{Lower} = -40\% \end{aligned}$$

$$\text{Then: } Upper\ Limit_{Future} = \$20,000,000 \approx \$17,550,000 = (\$13,000,000 * (1 + 35\%))$$

$$\$20,000,000_{Future} = \$20,000,000_{Base}$$

$$\therefore Range\ Modifier_{Upper2} = \$10,000,000$$

$$\begin{aligned} Upper\ Limit_{FuAdj.Future} &= \$20,000,000 + \$10,000,000 \\ &= \$30,000,000 \leftarrow \text{when rounded up} \end{aligned}$$

APPENDIX A (RISK WORKSHEET)

Risk Values (1-6)

1 Negligible	2 Very Low	3 Low	4 Moderate	5 High	6 Very High
Complexity					
Minimal complexity; routine maintenance, no changes. Basic "1R" pave only" on flat sites. Risks easily mitigated.	Low complexity; minor improvements, limited scope. Basic "1R" with additions like signage. Risks predictable, low impact.	3R Preservation. Basic complexity; some enhancements, straightforward. Light minor rehabilitation. Risks from minor uncertainties.	4R Rural Modernization. Single Span Bridges. Average complexity; multiple elements need planning. Mid-range "3R" with modernization. Risks from interdependencies.	Elevated complexity; significant upgrades, technical hurdles. Approaches "4R" with bridges. High risk variability.	Extreme complexity; full modernization, interdependent challenges. Full 4R with complex bridges, multi-stages. Multifaceted risks.
Utility / Right of Way (ROW) / Access Management (AM)					
No ROW, no const. easements, access management exemption. No utilities affected. Minimal overall risks	Minimal ROW/easements; few minor utilities; simple access changes. Low coordination, predictable risks.	Some ROW/easements; routine utilities; moderate access mods. Standard processes, minor delays possible.	Multiple ROW parcels/easements; multi-utilities; planned access changes. Increased coordination, potential conflicts.	Significant urban ROW/easements; complex utilities; major access controls. High acquisition/delays, stakeholder risks.	Metro area, urban ROW, significant access management. Extensive utilities/relocations. Potential legal risks.
Environmental Factors					
Project within developed ROW. No environmental impacts or permits needed. Minimal risks.	Minor work in low-sensitivity areas. Basic permits, negligible impacts. Predictable risks.	Shoulder work, categorical exclusion. Routine permits, minor environmental reviews. Low risks.	Minimal in-water work, pre-identified archaeology/historic sites. Planned permits, moderate impacts.	Significant regulated areas, in-water work, archaeology/historic sites. Complex permits, high mitigation needs.	Extensive regulated area/in-water work (e.g., drilled shafts), hazardous materials, archaeological/historic sites. Extreme permits, major risks.
Estimating Confidence / Scope Creep					
Maintenance/rural pave only. High confidence, negligible scope creep or schedule uncertainty; no stakeholder involvement to alter scope.	Detailed scope, estimate & risk understanding; actual pavement widths used. Very low creep or schedule slips; minimal stakeholder influence.	Clear problem statement and solution, limited leverage opportunities. Low creep risk, minor schedule uncertainty; low stakeholder potential to change scope.	20+ ADA ramps present, unidentified staging. Moderate scope creep potential, some schedule uncertainty; moderate stakeholder involvement risks.	Approx quantities, extensive lump sums, non-metro urban/unclear scope. High creep and schedule uncertainty; high stakeholder-driven changes.	Long delivery timeline, extensive lump sums, metro urban/unclear scope. Very high creep, major schedule uncertainty; extensive stakeholder involvement to alter scope.

Scoping Risk Worksheet Purpose

The purpose of this Scoping Risk Worksheet is to take a consistent approach when applying a risk factor to the construction estimate of each project and to document those risks and assumptions in a single document. Although the spreadsheet has a built in calculator and estimates a risk factor between 20% and 50% each Region has the ability to adjust these numbers as they see fit. This risk factor will replace the "contingency" item in our Scoping Estimates. As a reminder, any transportation project estimated to cost at least \$15 million and go before the OTC for approval in the STIP must have a Benefit-Cost Analysis complete [Benefit-Cost-Analysis Operational Notice](#)

Scoping Risk Worksheet Process

The Scoping Risk form is intended to be completed at the conclusion of the scoping process, once the initial scoping estimate is prepared. The risk form should be completed with input from technical resources and project delivery leadership within the regions. The proposed risk number should then be utilized as a factor multiplied against the total construction estimate to achieve the final scoping amount for construction. The intent would be to include this risk factor on a scoping summary page, scoping estimate, or other equivalent document, and to not list this as the contingency factor on the designer's estimate. The contingency factor on the designer's estimate can and should remain the 3.5%. This method will also provide a process forward regarding identifying a risk factor at Preliminary Plans, DAP, etc. in lieu of just having the roadway designer assume contingency numbers at each milestone. Considerations by all parties preparing scoping estimates (roadway, bridge, geo, etc.) should be reviewed so that each group is not applying additional contingency factors to their specific estimates thus multiplying the risk factor unnecessarily.

Form Instructions

1. Enter Project Name and Projectwise Scoping Folder Number
2. Enter detailed assumptions and potential risks in the comment section of each of the 5 categories.
3. Enter a numerical value in the far right column corresponding to each of the Risk Factors. Enter 4 for Red, 3 for Orange, 2 for Yellow, and 1 for Green.
4. The spreadsheet will automatically format the color based on the number you entered and provide a total risk value in the "Risk Factor" cell at the bottom right of the sheet.
5. Review the Risk Factor assigned to determine if it is indeed reflective of the project. The minimum risk factor applied will remain 1.2 or 20% even if all items are in green.
6. Complete the information at the bottom of form identifying who completed the document.

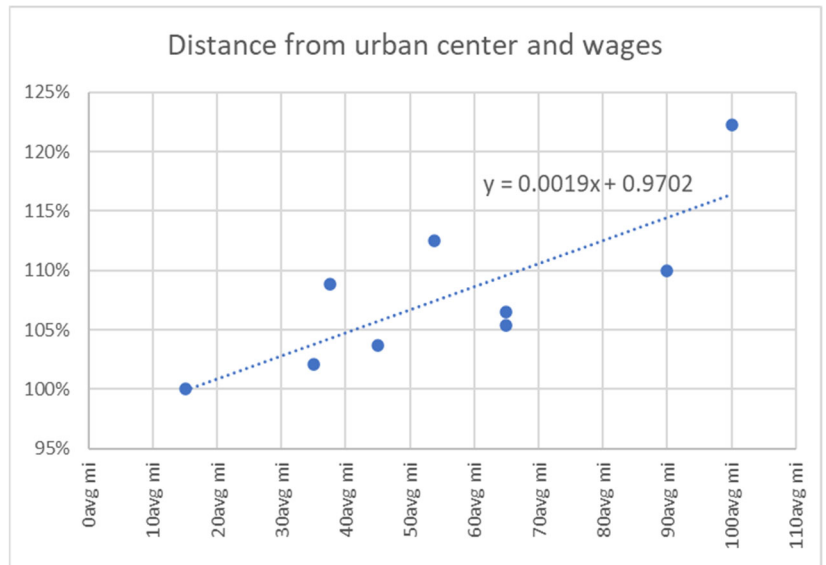
APPENDIX B (OTHER INDICIES 2026)

$$Cost_{IndexAdjusted} = Cost_{Base} * (1 + Factor)$$

REGION	
Reg #	Factor
1	0.044
2	-0.031
3	-0.020
4	-0.012
5	0.014
6	0.000

Group #	Factor	Residential	Commercial/Industrial	Farm/Forest	Other / Unknown
1	0.025	\$664001	\$466001	\$8002	\$27001
2	-0.160	\$664001	\$466000	\$8000	\$27000
3	-0.134	\$664000	\$466000	\$8000	\$27000
4	-0.051	\$664000	\$466000	\$8000	\$27000
5	-0.126	\$664000	\$466000	\$7999	\$27000
6	-0.074	\$664000	\$466000	\$8000	\$27000
7	-0.051	\$664000	\$465999	\$7999	\$26999
8	0.145	\$663999	\$465999	\$7999	\$26999
9	-0.070	\$663999	\$466001	\$7999	\$27000
10	0.706	\$664000	\$466001	\$8001	\$27001
11	0.567	\$664000	\$465999	\$8000	\$27000
12	0.028	\$663999	\$465999	\$7999	\$26999
AVG Cost:		\$664000	\$466000	\$8000	\$27000

Population	Pop Max	Factor
< 3000	3,000	0.022
< 7000	7,000	-0.096
< 12000	12,000	-0.028
< 25000	25,000	-0.027
< 50000	50,000	-0.084
< 70000	70,000	-0.017
< 120000	120,000	0.036
≥ 120000	99,999,999	-0.054
n/a	n/a	0.056



2026 ASSUMPTIONS

Field	Assumption	Comment
Base Year	2026	
Future Year	2035	
Annual Inflation Rate	3.5%	Avg. Growth Rate: $5 \leq x < 20$ Year
Bid Item Years	2020 Q1 - 2026 Q1	Original data years 2020-2025, but added additional year of data due to project timing.
Region Factors	0.044, -0.031, -0.020, -0.012, -0.014	Region groups 1-5 respectively; Statewide/Region 6 = 0.000
County Group Factors	0.0.025, -0.160, -0.134, -0.051, -0.126, -0.074, -0.051, -0.145, -0.070, 0.706, 0.567, 0.28	County groups 1-12 respectively

- Inflation Index Contact: Allen Molina, PhD. - Senior Economist (2026)

2028

(TBD)