

## 2019-2020 BUDGET

### PROPOSED Bridge of the Gods 15 year Maintenance and Preservation Program

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**Introduction:** As a part of the Addendum Agreement with ODOT regarding the 2013 repairs to the Bridge of the Gods, ODOT assisted the Port in the development of a 10 Year Maintenance and Preservation Plan for the bridge. WSDOT similarly assisted. Port policy is to retain a 15-year Maintenance and Preservation Plan to ensure a Bridge rating of 80,000 lb.

Initially the Port purchased the BOG as a revenue source to help pay for Port operations as well as for BOG repairs and maintenance.

During the 2016-17 budget years, the Bridge of the Gods was certified as a part of the National Highway System and included in the Skamania Transportation Plan. The Ten Year IGA between the Port and ODOT was also revised and updated during 2016-17.

**GOAL:** The goal of the Maintenance and Preservation Plan is to ensure the BOG continues to function safely at 80,000 pounds.

#### YEAR SIX 2019-2020

#### THE 15 YEAR MAINTENANCE and PRESERVATION PLAN

#### Work Elements: (The work to be done)

|                                    |                                    |
|------------------------------------|------------------------------------|
| Deck welding and repair            | Guard rail repair and replacement  |
| Deck replacement                   | Bridge electrical system upgrades  |
| Replacement of additional clips    | Stringer welds to deck             |
| Toll Booth automation              | 4 gussets related to SHDV          |
| Toll Booth structural enhancements | Repainting                         |
| Gusset work/repair                 | Repairs to floor beams and trusses |
| Concrete deck repair               | Substructure concrete patch/repair |
| Signage enhancements               | Lighting improvements              |
| Entrance road and access roads     | Expansion joint clean/replacement  |
| Underwater enhancements            | Engineering work                   |
| Concrete Deck Sealing              | Spot Painting FSS/stringers        |
| Grid Deck wearing surface replace  | Stringer welds to FBs              |
| Pin cleaning/painting/repair       | Ladder cage repairs                |

**Source of Funds:** Funds will come from bridge tolls, grants and other funding earmarked specifically for the BOG. It is anticipated that both states and the federal government will provide some funding for major elements of the 15 Year Plan.

**Revenue:**

|   |                   |
|---|-------------------|
| Grant from State of Oregon to preliminary engineer & design the Bike Ped Crossing | \$1,500,000       |
| WA BOG Grant  | \$ 500,000        |
| Bridge Revenue  | <u>\$ 962,241</u> |
| Total   | \$2,962,241       |

**Plan Year Six: 2019-2020:**

**1. Port Bridge Engineer Project:**

|  | <u>Current</u> | <u>Proposed</u> |
|--|----------------|-----------------|
| Basic engineering support to be provided by the Port's BOG engineer: |                |                 |
| a. On call assistance and consultation                               | \$100,000      | \$75,000        |
| b. Engineering, design and bidding of projects                       |                |                 |
| c. Additional work as needed/requested                               |                |                 |
| d. Plan Update and grant applications.                               |                |                 |
| (1) Update 15 Year Plan.   |                |                 |
| (2) Prepare Grants.  |                |                 |
| a. Toll technology support.  |                |                 |

**2. Specific Projects: (Number in parenthesis is from the 15 Year Plan)**

|  | <u>Current</u> | <u>Proposed</u> |
|--|----------------|-----------------|
| 1. Deck welding fall and spring  | \$50,000       | \$ 50,000       |
| a. Welding will not be done on weekends or Fridays unless an emergency arises. |                |                 |
| b. Limit to 2-3 weeks seasonally, spring and fall.                             |                |                 |

|  |           |             |
|--|-----------|-------------|
| 2. Unanticipated Work Items/minor repairs<br>(repairs, signage, beatification, leaky joints,<br>barricades, BOG security, flagging etc.) | \$30,000  | \$ 30,000   |
| 4. Bridge building maintenance & repair,<br>(shed, toll booth, & IT building)  | \$10,000  | \$ 10,000   |
| 5. Washington & Oregon approaches.   | \$ 70,000 | \$ 266,000  |
| 6. Bike – Ped Crossing Engineering & Design  | \$ 0.00   | \$2,000,000 |
| 7. Psquare Technology annual fee.  | \$ 32,700 | \$ 32,760   |
| 8. Kapsch annual fee.  | \$ 0.00   | \$ 18,481   |
| 9. Toll Technology   | \$200,000 | \$ 280,000  |

|                            |                    |                    |
|----------------------------|--------------------|--------------------|
| <b>PROJECT WORK TOTAL:</b> | <b>\$1,329,600</b> | <b>\$2,762,241</b> |
|----------------------------|--------------------|--------------------|

|                                      |                  |                   |
|--------------------------------------|------------------|-------------------|
| <b>2019-20 Set Aside Bridge Fund</b> | <b>\$200,000</b> | <b>\$ 200,000</b> |
|--------------------------------------|------------------|-------------------|

|                     |                    |                    |
|---------------------|--------------------|--------------------|
| <b>GRAND TOTAL:</b> | <b>\$1,529,600</b> | <b>\$2,962,241</b> |
|---------------------|--------------------|--------------------|

**2019-2020 Set Aside Bridge Fund:**

For replacement, grant match or major repairs.  
( Total set-aside ending June 2019 equals \$715,000 )

|  |                   |
|--|-------------------|
| <b>Total set-aside for 2019-2020 allocation.</b> | <b>\$ 915,000</b> |
|--|-------------------|

# 15-Year Maintenance Preservation Plan - Bridge of the Gods and Approaches

## Adopted by the Port of Cascade Locks Commission - Jan. 17, 2019

Port of Cascade Locks

4/17/2019

|        |                    |                             |
|--------|--------------------|-----------------------------|
| Legend | Tier 1 Expenditure | Port Funds                  |
|        | Tier 2 Expenditure | Possible OR, WA, Fed. Funds |

| GROUP   | NO. | Priority (L/M/H) | TYPE     | PROJECT NAME   | 2019-2020        | 2020-2021        | 2021-2022        | 2022-2023        | 2023-2024        | 2024-2025        | 2025-2026        | 2026-2027        |
|---|-----|------------------|----------|--|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| <b>OREGON ROADWAY</b>                               |     |                  |          |  |                  |                  |                  |                  |                  |                  |                  |                  |
| A   | 1   | M                | Enhance  | Wa Na Pa & Toll Booth Road Intersection Improvements | \$ 1,800,000     | \$ 909,000       |                  |                  |                  |                  |                  |                  |
| <b>TOLL FACILITIES</b>                              |     |                  |          |  |                  |                  |                  |                  |                  |                  |                  |                  |
|   | 2   | L                | Enhance  | Toll Automation Design (Ultimate)                    |                  | \$ 650,000       |                  |                  |                  |                  |                  |                  |
|   | 3   | L                | Enhance  | Toll Automation & Infrastructure Improvements        |                  |                  | \$ 4,250,000     | \$ 1,086,000     |                  |                  |                  |                  |
|   | 4   | M                | Enhance  | Point of Sale Integration                            | \$ 25,000        |                  |                  |                  |                  |                  |                  |                  |
|   | 5   | M                | Maint.   | Tolling System Maintenance: P-Square                 | \$ 32,760        | \$ 33,907        | \$ 35,093        | \$ 36,322        | \$ 37,593        | \$ 38,909        | \$ 40,270        | \$ 41,680        |
|   | 6   | M                | Maint.   | Tolling System Maintenance: Kapsch                   | \$ 18,480        | \$ 19,127        | \$ 19,796        | \$ 20,489        | \$ 21,206        | \$ 21,948        | \$ 22,717        | \$ 23,512        |
|   | 7   | M                | Maint.   | Tolling System Maintenance: Hood River               | \$ 100,000       | \$ 103,500       | \$ 107,123       | \$ 110,872       | \$ 114,752       | \$ 118,769       | \$ 122,926       | \$ 127,228       |
| <b>BRIDGE OF THE GODS &amp; APPROACH STRUCTURES</b> |     |                  |          |  |                  |                  |                  |                  |                  |                  |                  |                  |
|   | 8   | H                | Maint.   | Engineering Services (Basic Annual Contract)         | \$ 75,000        | \$ 77,625        | \$ 80,342        | \$ 83,154        | \$ 86,064        | \$ 89,076        | \$ 92,194        | \$ 95,421        |
|   | 9   | H                | Maint.   | WA Approach - Bridge Deck Overlay                    |                  |                  |                  | \$ 109,000       |                  |                  |                  |                  |
|   | 10  | M                | Maint.   | OR Approach - Bridge Deck Overlay & Joint Rehab      |                  |                  | \$ 95,000        |                  |                  |                  |                  |                  |
|   | 11  | H                | Maint.   | Cantilever Truss Painting Projects                   | \$ 100,000       | \$ 867,000       | \$ 2,023,000     | \$ 945,000       | \$ 2,205,000     | \$ 867,000       | \$ 2,023,000     | \$ 945,000       |
|   | 12  | H                | Maint.   | WA Approach - Truss Painting                         |                  |                  |                  |                  |                  |                  |                  |                  |
|   | 13  | H                | Maint.   | OR Approach - Girder Painting                        |                  |                  |                  |                  |                  |                  |                  |                  |
|   | 14  | H                | Maint.   | Deck Welding Repairs                                 | \$ 51,750        | \$ 53,561        | \$ 55,436        | \$ 57,376        | \$ 59,384        | \$ 61,463        | \$ 63,614        | \$ 65,840        |
|   | 15  | L                | Maint.   | Bridge Cleaning                                      |                  | \$ 7,490         |                  | \$ 8,014         |                  | \$ 8,575         |                  | \$ 9,176         |
|   | 16  | L                | Maint.   | Electrical & Navigation Light Maintenance            |                  |                  |                  | \$ 5,000         |                  |                  |                  |                  |
|   | 17  | M                | Retrofit | Seismic Retrofit Engineering                         |                  |                  |                  | \$ 968,000       |                  |                  |                  |                  |
|   | 18  | M                | Retrofit | Seismic Retrofit Construction: Phase 1               |                  |                  |                  |                  | \$ 5,887,500     | \$ 5,887,500     |                  |                  |
|   | 19  | M                | Rehab.   | Open Grid Deck Replacement                           |                  |                  |                  |                  |                  |                  |                  |                  |
| <b>WASHINGTON ROADWAY</b>                           |     |                  |          |  |                  |                  |                  |                  |                  |                  |                  |                  |
| D   | 20  | L                | Rehab.   | WA BOG Sign Replacement                              |                  | \$ 50,000        |                  |                  |                  |                  |                  |                  |
|   | 21  | M                | Maint.   | WA Parking Lot Paving and Parking Blocks             |                  |                  |                  | \$ 124,000       |                  |                  |                  |                  |
|   | 22  | L                | Enhance  | WA Signage Enhancements                              |                  |                  |                  |                  |                  |                  |                  |                  |
| <b>Pedestrian Crossing</b>                          |     |                  |          |  |                  |                  |                  |                  |                  |                  |                  |                  |
| E   | 23  | H                | Enhance  | BOG Pedestrian Crossing Preliminary Design & Study   | \$ 1,185,000     |                  |                  |                  |                  |                  |                  |                  |
|   | 24  | H                | 0        | BOG Pedestrian Crossing Final Design & Construction  |                  | \$ 3,300,000     | \$ 1,075,000     | \$ 13,325,000    | \$ 7,300,000     |                  |                  |                  |
| <b>SUMMARY OF EXPENDITURES</b>                      |     |                  |          |  | <b>2019-2020</b> | <b>2020-2021</b> | <b>2021-2022</b> | <b>2022-2023</b> | <b>2023-2024</b> | <b>2024-2025</b> | <b>2025-2026</b> | <b>2026-2027</b> |
| Unanticipated                                       |     |                  |          |  | \$ 50,000        | \$ 51,750        | \$ 53,561        | \$ 55,436        | \$ 57,376        | \$ 59,384        | \$ 61,463        | \$ 63,614        |
| Tier 1 Expenditures                                 |     |                  |          |  | \$ 402,990       | \$ 995,210       | \$ 392,790       | \$ 440,227       | \$ 432,999       | \$ 338,740       | \$ 341,721       | \$ 362,857       |
| Total for Tier 1 & Pedestrian Crossing Expenditures |     |                  |          |  | \$ 452,990       | \$ 1,046,960     | \$ 446,351       | \$ 495,663       | \$ 490,375       | \$ 398,124       | \$ 403,184       | \$ 426,471       |
| Tier 2 Expenditures                                 |     |                  |          |  | \$ 2,985,000     | \$ 5,076,000     | \$ 7,348,000     | \$ 15,356,000    | \$ 10,473,000    | \$ 6,754,500     | \$ 7,910,500     | \$ 945,000       |
| Total for Tier 1 & Tier 2 Expenditures              |     |                  |          |  | \$ 3,437,990     | \$ 6,122,960     | \$ 7,794,351     | \$ 15,851,663    | \$ 10,963,375    | \$ 7,152,624     | \$ 8,313,684     | \$ 1,371,471     |

**Table Notes:**

\* All costs presented in this estimate are for planning purposes only. Actual costs will vary depending on the actual scope, market conditions, and the time implementation. Estimates include construction, contingency, and professional services as warranted.

\*\* The Port of Cascade Locks reserves the right to modify and make alterations to the 15-Year Plan as needed.

# 15-Year Maintenance Preservation Plan - Bridge of the Gods and Approaches

## Adopted by the Port of Cascade Locks Commission - Jan. 17, 2019

Port of Cascade Locks

4/17/2019

|        |                    |                             |
|--------|--------------------|-----------------------------|
| Legend | Tier 1 Expenditure | Port Funds                  |
|        | Tier 2 Expenditure | Possible OR, WA, Fed. Funds |

|  |     |                  |          |  |                     |                     |                     |                     |                   |                   | 15-YR             |                                   |  |
|--|-----|------------------|----------|--|---------------------|---------------------|---------------------|---------------------|-------------------|-------------------|-------------------|-----------------------------------|--|
| GROUP  | NO. | Priority (L/M/H) | TYPE     | PROJECT NAME   | 2027-2028           | 2028-2029           | 2029-2030           | 2030-2031           | 2031-2032         | 2032-2033         | 2033-2034         | Total 15-Year Expenditure*        | Changes from 10-Year Plan (Mar. 21, 2016)<br>No Note = No change |
| <b>OREGON ROADWAY</b>  |     |                  |          |  |                     |                     |                     |                     |                   |                   |                   |                                   |  |
| A  | 1   | M                | Enhance  | Wa Na Pa & Toll Booth Road Intersection Improvements |                     |                     |                     |                     |                   |                   |                   | \$ 2,709,000                      |  |
| Subtotal   |     |                  |          |  |                     |                     |                     |                     |                   |                   |                   | \$ 2,709,000                      |  |
| <b>TOLL FACILITIES</b>   |     |                  |          |  |                     |                     |                     |                     |                   |                   |                   |                                   |  |
|  | 2   | L                | Enhance  | Toll Automation Design (Ultimate)                    |                     |                     |                     |                     |                   |                   |                   | \$ 650,000                        |  |
|  | 3   | L                | Enhance  | Toll Automation & Infrastructure Improvements        |                     |                     |                     |                     |                   |                   |                   | \$ 5,336,000                      |  |
|  | 4   | M                | Enhance  | Point of Sale Integration                            |                     |                     |                     |                     |                   |                   |                   | \$ 25,000                         |  |
|  | 5   | M                | Maint.   | Tolling System Maintenance: P-Square                 | \$ 43,139           | \$ 44,649           | \$ 46,211           | \$ 47,829           | \$ 49,503         | \$ 51,235         | \$ 53,028         | \$ 632,127                        |  |
|  | 6   | M                | Maint.   | Tolling System Maintenance: Kapsch                   | \$ 24,335           | \$ 25,186           | \$ 26,068           | \$ 26,980           | \$ 27,925         | \$ 28,902         | \$ 29,913         | \$ 356,584                        |  |
|  | 7   | M                | Maint.   | Tolling System Maintenance: Hood River               | \$ 131,681          | \$ 136,290          | \$ 141,060          | \$ 145,997          | \$ 151,107        | \$ 156,396        | \$ 161,869        | \$ 1,929,568                      |  |
| Subtotal   |     |                  |          |  |                     |                     |                     |                     |                   |                   |                   | \$ 8,929,279                      |  |
| <b>BRIDGE OF THE GODS &amp; APPROACH STRUCTURES</b>            |     |                  |          |  |                     |                     |                     |                     |                   |                   |                   |                                   |  |
|  | 8   | H                | Maint.   | Engineering Services (Basic Annual Contract)         | \$ 98,761           | \$ 102,217          | \$ 105,795          | \$ 109,498          | \$ 113,330        | \$ 117,297        | \$ 121,402        | \$ 1,447,176                      |  |
|  | 9   | H                | Maint.   | WA Approach - Bridge Deck Overlay                    |                     |                     |                     |                     |                   |                   |                   | \$ 109,000                        |  |
|  | 10  | M                | Maint.   | OR Approach - Bridge Deck Overlay & Joint Rehab      |                     |                     |                     |                     |                   |                   |                   | \$ 95,000                         |  |
|  | 11  | H                | Maint.   | Cantilever Truss Painting Projects                   | \$ 2,205,000        | \$ 717,900          | \$ 1,675,100        |                     |                   |                   |                   | \$ 14,473,000                     |  |
|  | 12  | H                | Maint.   | WA Approach - Truss Painting                         |                     |                     | \$ 1,575,900        | \$ 3,677,100        |                   |                   |                   | \$ 5,253,000                      |  |
|  | 13  | H                | Maint.   | OR Approach - Girder Painting                        |                     |                     |                     |                     | \$ 206,100        | \$ 480,900        |                   | \$ 687,000                        |  |
|  | 14  | H                | Maint.   | Deck Welding Repairs                                 | \$ 68,145           | \$ 70,530           |                     |                     |                   |                   |                   | \$ 607,100                        |  |
|  | 15  | L                | Maint.   | Bridge Cleaning                                      |                     | \$ 9,818            |                     | \$ 10,505           |                   | \$ 11,240         |                   | \$ 64,819                         |  |
|  | 16  | L                | Maint.   | Electrical & Navigation Light Maintenance            |                     | \$ 5,875            |                     |                     |                   |                   | \$ 6,903          | \$ 17,778                         |  |
|  | 17  | M                | Retrofit | Seismic Retrofit Engineering                         |                     |                     |                     |                     |                   |                   |                   | \$ 968,000                        |  |
|  | 18  | M                | Retrofit | Seismic Retrofit Construction: Phase 1               |                     |                     |                     |                     |                   |                   |                   | \$ 11,775,000                     |  |
|  | 19  | M                | Rehab.   | Open Grid Deck Replacement                           |                     |                     | \$ 2,050,000        | \$ 2,050,000        |                   |                   |                   | \$ 4,100,000                      |  |
| Subtotal   |     |                  |          |  |                     |                     |                     |                     |                   |                   |                   | \$ 39,596,872                     |  |
| <b>WASHINGTON ROADWAY</b>                                      |     |                  |          |  |                     |                     |                     |                     |                   |                   |                   |                                   |  |
|  | 20  | L                | Rehab.   | WA BOG Sign Replacement                              |                     |                     |                     |                     |                   |                   |                   | \$ 50,000                         |  |
|  | 21  | M                | Maint.   | WA Parking Lot Paving and Parking Blocks             |                     |                     |                     |                     |                   |                   |                   | \$ 124,000                        |  |
|  | 22  | L                | Enhance  | WA Signage Enhancements                              |                     | \$ 12,150           |                     |                     |                   |                   |                   | \$ 12,150                         |  |
| Subtotal   |     |                  |          |  |                     |                     |                     |                     |                   |                   |                   | \$ 186,150                        |  |
| <b>Pedestrian Crossing</b>                                     |     |                  |          |  |                     |                     |                     |                     |                   |                   |                   |                                   |  |
|  | 23  | H                | Enhance  | BOG Pedestrian Crossing Preliminary Design & Study   |                     |                     |                     |                     |                   |                   |                   | \$ 1,185,000                      |  |
|  | 24  | H                | 0        | BOG Pedestrian Crossing Final Design & Construction  |                     |                     |                     |                     |                   |                   |                   | \$ 25,000,000                     |  |
| Subtotal   |     |                  |          |  |                     |                     |                     |                     |                   |                   |                   | \$ 26,185,000                     |  |
| <b>SUMMARY OF EXPENDITURES</b>                                 |     |                  |          |  | <b>2027-2028</b>    | <b>2028-2029</b>    | <b>2029-2030</b>    | <b>2030-2031</b>    | <b>2031-2032</b>  | <b>2032-2033</b>  | <b>2033-2034</b>  | <b>Total 15-Year Expenditure*</b> |  |
| Unanticipated  |     |                  |          |  | \$ 65,840           | \$ 68,145           | \$ 70,530           | \$ 72,998           | \$ 75,553         | \$ 78,198         | \$ 80,935         | \$ 964,784                        |  |
| Tier 1 Expenditures  |     |                  |          |  | \$ 366,061          | \$ 406,715          | \$ 2,369,134        | \$ 2,390,809        | \$ 341,865        | \$ 365,070        | \$ 373,115        | \$ 10,320,303                     |  |
| <b>Total for Tier 1 &amp; Pedestrian Crossing Expenditures</b> |     |                  |          |  | <b>\$ 431,901</b>   | <b>\$ 474,860</b>   | <b>\$ 2,439,664</b> | <b>\$ 2,463,807</b> | <b>\$ 417,418</b> | <b>\$ 443,268</b> | <b>\$ 454,050</b> | <b>\$ 11,285,087</b>              |  |
| Tier 2 Expenditures  |     |                  |          |  | \$ 2,205,000        | \$ 717,900          | \$ 3,251,000        | \$ 3,677,100        | \$ 206,100        | \$ 480,900        | \$ -              | \$ 67,386,000                     |  |
| <b>Total for Tier 1 &amp; Tier 2 Expenditures</b>              |     |                  |          |  | <b>\$ 2,636,901</b> | <b>\$ 1,192,760</b> | <b>\$ 5,690,664</b> | <b>\$ 6,140,907</b> | <b>\$ 623,518</b> | <b>\$ 924,168</b> | <b>\$ 454,050</b> | <b>\$ 78,671,087</b>              |  |

**Table Notes:**

\* All costs presented in this estimate are for planning purposes only. Actual costs will vary depending on the actual scope, market conditions, and the time implementation. Estimates include construction, contingency, and professional services as warranted.

\*\* The Port of Cascade Locks reserves the right to modify and make alterations to the 15-Year Plan as needed.