

Roadway Preservation and Maintenance Projects Report

November 15, 2017

Purpose

The King County Council passed Ordinance 18409 in November of 2016, which completed the 2017/2018 biennial budget process. Recognizing the importance of pavement preservation and the current lack of funding for road services, the Council identified an additional \$19 million to substantially increase funding for roadway preservation. The ordinance also included a proviso calling on the Executive to report on the status of pavement project delivery in the newly created Road Major Maintenance Fund (3855) and the Roads Capital Fund (3860), which is phasing out and will close at the end of 2018. The proviso reads as follows:

SECTION 62.P1.

Of this appropriation, \$250,000 shall not be expended or encumbered until: (1) the executive transmits a report pertaining to projects in the county road major maintenance fund (3855) and roads capital fund (3860), that are either substantially complete roadway preservation and maintenance projects or roadway preservation and maintenance projects that have not reached substantial completion but have had moneys appropriated, and a motion that should approve the report; and (2) a motion approving the report is passed by the council. The motion shall reference the subject matter, the proviso's ordinance, ordinance section and proviso number in both the title and body of the motion.

For the purposes of this proviso, roadway preservation and maintenance projects that have reached substantial completion are "completed projects" and roadway preservation and maintenance projects that have not reached substantial completion are "incomplete projects."

The report shall include, but not be limited to, the following information by council district pertaining to projects in the county road major maintenance fund (3855) and roads capital fund (3860):

- A. The locations and lane miles, if applicable, of all completed and incomplete projects, such as roadway name and cross street termini;*
- B. The capital project number or numbers associated with the completed and incomplete projects;*
- C. The pavement ratings, if applicable, for all completed and incomplete projects;*
- D. Actual costs for completed projects and projected total costs for incomplete projects;*
and

E. Actual completion dates for all completed projects and the anticipated start dates of all incomplete projects.

The executive must file the report and the motion required by this proviso by December 15, 2017, in the form of a paper original and an electronic copy with the clerk of the council, who shall retain the original and provide an electronic copy to all councilmembers, the council chief of staff, the policy staff director and the lead staff for the transportation, economy and environment committee or its successor. If the plan and motion are not transmitted by that date, appropriation authority for the \$250,000 restricted by this proviso will lapse.

Approach to Delivery of Expanded Capital Program

The division has been in a funding decline for the last 13 years, and staffing in the division has been severely cut. The unanticipated expansion of Roads' capital program required the division to mobilize a rapid and focused approach to deliver the new program. The approach included the following actions:

- **Established a Project Delivery Office** – Reassigned an existing leader and created a matrixed project delivery team. This team and the Engineering Services Section Manager worked together to establish and emphasize an updated system of project controls and reporting. The team focused on timely troubleshooting of contracting, permitting, right-of-way, and other emergent issues, and is promoting a culture of excellence in project delivery division-wide. This allowed division management to identify obstacles to project delivery and reallocate resources as needed.
- **Expanded internal monitoring and oversight** – Monitoring and oversight have been expanded and consist of:
 - Monthly project status meetings with project managers and the Engineering Services Section Manager and Project Delivery Office Manager
 - Quarterly project update presentations attended by peers, Roads management, PSB staff, and representatives from the DOT Director's office
 - Biannual Core Leadership Team retreats to review the status of all projects scheduled for delivery in the current year
 - Quarterly meetings between Roads staff and the DOT Director
- **Separated the roles of Engineering Services Section Manager from the duties of the County Road Engineer** – This allows the section manager to focus primarily on capital program delivery and management of staff and resources, while the County Road Engineer focuses on the technical dimensions and complex decision making associated with management of an aging, deteriorating infrastructure system within a business

environment of inadequate resources to meet all needs. The benefits of this separation of responsibilities was demonstrated when the Tolt Hill Bridge had to be closed/load limited. The County Road Engineer was able to lead the response to this critical emergent issue, while the Engineering Services Section Manager was able to continue to focus on ongoing capital program delivery efforts. The new Engineering Services Section Manager brings over 30 years of design and construction experience from the Washington State Department of Transportation.

- **Added staff in key disciplines** – Roads has added technical staff to provide expertise and enhanced capacity in the areas of land surveying, computer-aided drafting, roadway design, construction inspection, and project scheduling and controls.

Focus On Roadway Preservation Accomplishments

Roadway surface preservation is key to the longevity of a roadway. The paved surface protects the roadbed from water and heavy vehicle damage. While the roadway surface may be repaired in individual projects by utility companies or developers doing work within the road rights-of-way, the division also has a dedicated roadway surface preservation program. In the 2017/2018 budget process, Council increased the funding for the roadway preservation program from \$15.8 million to \$34.8 million. This funding includes revenues from the road fund, competitive grants received from the Puget Sound Regional Council, anticipated funding from newly adopted franchise fees, and from the Real Estate Excise Tax.

The 2017/18 program includes \$34.8 million in funding for the following:

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| 1. Contracted roadway surface preservation: | \$26 million |
| 2. High risk surface repairs: | \$2 million |
| 3. Two grant-funded projects: | |
| White Center Overlay (1129715) | \$1.9 million |
| NE Stillwater Hill Road Reconstruction (1129714) | \$4.9 million |

1. Contracted Roadway Surface Preservation

Roads staff design a roadway surface repair program that is contracted out for construction and includes a combination of asphalt overlay and bituminous surface treatment (i.e., chip seal). The program was recently developed by the County Road Engineer and engineering staff to ensure the limited funding could be stretched to preserve more road miles every year. County construction inspectors oversee the work. Given the limited number of contractors available and the amount of paving being done in the region, a typical overlay contract spans two years. In the

Pacific Northwest there are a limited number of dry warm days that are required for successful paving.

In 2017, the division had three pavement preservation contracts underway. Two contracts, the 2016 Countywide Pavement Preservation contract, and the 2016 King County Federal Overlay contract (which was procured separately due to federal grant funding requirements), are in fund 3860. The 2016 Countywide Pavement Preservation contract was for \$4,902,907 of county work and was completed in November 2017. The 2016 King County Overlay contract was for \$1,337,590 and was completed in September 2017.

The 2017 Countywide Pavement Preservation contract, in fund 3855, is for \$13,575,705 and is approximately 60 percent complete. The specific locations for the 2018 pavement preservation program are still being determined, but the contract will advertise early in 2018. By the end of 2017, Roads will have completed roadway preservation work on 46 road segments, bringing 108 lane miles up to a pavement condition score of 100 (on an industry standard scale of 1 to 100).

2. High Risk Surface Repairs

To ensure Roads can preserve as much of the road system as possible, the County Road Engineer designed this program to prolong the life of high-volume roadways through the repair of defects in the roadway surface where a segment of an arterial is on the verge of failure. These treatments extend the service life of the roadway segments for an additional three to five years. The paving engineers identify distressed segments, and Roads maintenance crews perform the repairs. The annual funding amount for this program is \$1 million, and Roads has completed \$963,000 of work as of October 30, 2017.

3. Grant-Funded Projects

The division was successful in obtaining grants from the Puget Sound Regional Council (PSRC) to fund the White Center Overlay and NE Stillwater Hill Road Reconstruction projects. In May of 2017, PSRC balanced its project awards to its current revenues and notified Roads that the awarded funds for White Center were being moved out to 2019, and the funds for NE Stillwater Hill were being moved to 2020. The division has put these projects on hold until the grant funding is available.

Roadway Preservation and Maintenance Projects List

Figure 1 contains the data requested in the proviso sections A-E: namely, a detailed listing of road segments completed or under contract, their location, actual or anticipated completion date, lane and centerline miles, council district, and pavement condition score, by capital project number.

Roads successfully accomplished a larger pavement preservation program than anticipated when the budget was submitted to council in fall of 2016. By the end of 2017, Roads will deliver \$6.8 million worth of preservation projects from the roads construction fund (3860), and will close that fund by December 31, 2018, as planned.

Roads has exceeded 2017 delivery goals for work under the new county road major maintenance fund (3855). By year end, Roads will deliver \$9.3 million worth of preservation projects under this fund, against a goal of \$7.0 million. Road expects to have the remaining funds under contract in early 2018.

Delivery of Projects in Funds 3860 and 3855

Figure 2 identifies all the projects and programs in fund 3860 that had carryover funding into 2017. All but one of the projects have been completed in 2017. The six programs within fund 3860 are on track to be fully completed and closed by December 31, 2018. The figure lists all the individually numbered projects with council district and identifies the adopted programs which had carryover funding into this biennium. No new appropriations were made to this fund in the 2017/2018 budget process.

The only project that may not be completed by December of 2018 is the West Snoqualmie Valley Road/NE 124th culvert replacement (1125758). This project is funded by a County Road Administration Board grant. The grant funds for construction will be available in 2018; however, the project requires an Army Corps of Engineers permit. Timelines for obtaining Corps permits have become extremely lengthy, due to federal staffing issues. Given the length of time anticipated to obtain the Corps permit, and the fact that the work is subject to a fish window for construction, it may not be feasible to build this project until the fish window in the summer of 2019. If that is the case, Roads will request a new project in the 2019/20 budget process.

Fund 3855 was newly established in the 2017/2018 budget process and contains projects and programs that will span multiple years so none have been completed at this point, but they are all on schedule.

Conclusion

The successful delivery of Roads' largest ever roadway preservation program demonstrates the ability to focus resources, build and sustain a common goal division-wide, and deliver much-needed preservation work. Roads will continue to build on the tools and strengths established in 2017 to support similarly successful delivery in 2018.

Figure 2: Projects in Fund 3860 with 2017 funding

Council District	Number	Name	Status	Completion Date
Various	1027160	RSD BRG PRIORITY MAINTNCE	Underway	31-Dec-18
Various	1111819	RSD C W DRAINAGE PRESERVATION	Underway	31-Dec-18
Various	1027161	RSD CLEAR ZONE SAFETY PROGRAM	Underway	31-Dec-18
Various	1124986	RSD CW HRRRP	Underway	31-Dec-18
Various	1027158	RSD CW ROADWAY PRESERVATION	Underway	31-Dec-18
Various	1027163	RSD QUICK RESPONSE	Underway	31-Dec-18
Standalone projects				
03	1026730	RSD NOVELTY HILL RD AVON 238	Complete	31-Oct-15
03	1026731	RSD LK ALICE RD SE CLVRT RPLC	Complete	31-Dec-16
03	1026735	RSD W SNOQUALMIE VALLEY RD NE	Complete	29-Sep-17
08	1026739	RSD SOUTH PARK BRG	Complete	2-Jan-17
09	1111177	RSD ISSAQUAH HOBART RD SE	Complete	31-Oct-15
03	1115255	RSD NE WD/DVL RD@W SNOQ VLY RD	Complete	24-Mar-17
09	1116541	RSD 181 AV SE&CVNGTN SAWYER RD	Complete	6-Jan-17
09	1116542	RSD SE COVINGTON SAWYER ROAD	Complete	31-Dec-16
05	1116543	RSD 78 AVE S/S 126-RENTON AV S	Complete	24-Mar-17
05	1116547	RSD RENTON AV S/68 AV-74 AV S	Complete	31-Dec-16
03	1116885	RSD WOODINVILLE DUVALL ITS	Complete	30-Nov-17
08	1116888	RSD SW ROXBURY/28 AV-30 AV SW	Complete	29-Oct-17
09	1116945	RSD ISSQ-HBRT RD SE/15 ML BRDG	Complete	31-Mar-16
10	1124491	RSD 2015/16 RDWY LGT LED CONV	Complete	31-Dec-16
03	1124962	RSD SKY RV BR #999Z(MNY CK)RPR	Complete	30-Nov-17
03	1125758	RSD W SNOQ VLY RD/NE124-W/D RD	Underway	1-Nov-19
03	1127277	RSD BARING BRIDGE #509A	Complete	1-Apr-17
07	1127278	RSD BRRYDALE OXING BRDG#3086OX	Complete	1-Apr-17