



KING COUNTY

1200 King County Courthouse
516 Third Avenue
Seattle, WA 98104

Signature Report

September 9, 2015

Motion 14422

Proposed No. 2015-0173.1

Sponsors Dunn

1 A MOTION approving a report identifying the Southeast
2 May Valley Road Landslide Repair, various road surface
3 improvements and two snow and ice material depot
4 projects as projects that will receive funding identified in
5 the 2013 Annual Budget Ordinance, Ordinance 17476,
6 Section 135, Proviso P1, as amended.

7 WHEREAS, the King County council in adopting the 2013 Annual Budget
8 Ordinance, Ordinance 17476, Section 135, Proviso P1, as amended by Ordinance 17907,
9 Section 3, stated that the \$2,941,152 supplemental appropriation to the county road
10 construction fund for CIP project 1026789 RSD Cost Model Cont 386 shall not be
11 expended or encumbered until the executive has transmitted, and the council has
12 approved by motion, a report that identifies the project or projects that will receive this
13 funding, and

14 WHEREAS, the King County executive has transmitted to the council reports that
15 contain the required information responding to the proviso, and

16 WHEREAS, the road services division's first strategic priority is public safety,
17 and

18 WHEREAS, repairing slide areas and a failing road segments are high safety
19 priorities, and

20 WHEREAS, a slide on Southeast May Valley Road has seriously damaged a
21 roadway and is impeding travel, and

22 WHEREAS, the road services division has determined it can better provide
23 service during snow and ice events by constructing materials depots and improving
24 existing materials storage sites for salt, sand, and deicer. During storms, using distributed
25 materials storage sites reduces travel time, allowing for more time to apply treatment to
26 roads. Otherwise, trucks must travel back and forth to regional maintenance facilities to
27 refill, and

28 WHEREAS, with limited funding, the road services division is prioritizing
29 segments of deteriorating road surface for square cut patching and repairs that will
30 improve the road surface and experience for drivers, and

31 WHEREAS, the proviso response reports provide a description of the projects,
32 and the project justification, scope, cost and schedule, and

33 WHEREAS, the council has reviewed the road services division reports;

34 NOW, THEREFORE, BE IT MOVED by the Council of King County:

35 The Southeast May Valley Road Landslide Repair report, which is Attachment A
36 to this motion, the Snow and Ice Facilities Projects report, which is Attachment B to this
37 motion, and Attachment C to this motion, which includes the delineation of road

38 segments that will receive surface improvements and the identification and costs for all
39 projects, are hereby approved.
40

Motion 14422 was introduced on 5/4/2015 and passed by the Metropolitan King
County Council on 9/8/2015, by the following vote:

Yes: 8 - Mr. Phillips, Mr. von Reichbauer, Mr. Gossett, Ms. Lambert,
Mr. Dunn, Mr. McDermott, Mr. Dembowski and Mr. Uptegrove
No: 0
Excused: 1 - Ms. Hague

KING COUNTY COUNCIL
KING COUNTY, WASHINGTON



Larry Phillips, Chair

ATTEST:



Anne Noris, Clerk of the Council

Attachments: A. Project Report Summary - Southeast May Valley Road Landslide Repair, B. Snow and
Ice Facilities Project, C. 2015 Road Surface Work - May Valley Road - Snow & Ice Project Info

PROJECT REPORT SUMMARY

Southeast May Valley Road Landslide Repair

The Road Services Division will repair a section of Southeast May Valley Road that was damaged in a landslide in March 2014. The project area is between East Renton Highlands and Squak Mountain.

The landslide caused the pavement in the southern lane to crack and settle. Since then, for safety reasons, we have restricted that part of the road to one lane of traffic. Temporary traffic signals allow traffic to move through the area in alternating directions.

In 2015, with additional county funds allocated in the 2015-2016 budget and emergency relief funds from the Federal Highway Administration, the county will repair the road. We have completed a geotechnical analysis for the project and are now doing design work.

During construction, crews will excavate unstable soil, build a retaining wall, rebuild the roadway, and re-install guardrail. Utility poles that were affected by the landslide have already been moved.

Photos of the damage



Road closure and detour

Southeast May Valley Road will be closed near the project area while this work is being done. Detour signs will re-route traffic onto Issaquah-Hobart Road, Southeast Newport Way, and State Route 900 (see map).

Project schedule

Work is scheduled to begin in early summer 2015 so it can be completed after the current school year ends and before the 2015 school year begins. Southeast May Valley Road will be closed completely during construction and will reopen in late summer, after the work is finished.

Project budget

The project budget is outlined on Attachment C. FHWA does not cover all of the costs of this project, so King County monies had to be identified to complete the project funding package in order for the project to move forward.

Snow and Ice Facilities Projects

Roads first strategic priority is public safety. People and equipment are the tools to deliver safety services on County roads; readily available materials at facilities that are in the right locations ensures that Roads is able to effectively and efficiently deliver snow and ice response services. As documented in the division's recent Facilities Master Plan update, many of the County's existing maintenance shops, including snow and ice facilities, do not meet all the functional needs and require significant capital improvements or require replacement.

Snow and ice facility functions

Snow and ice facilities provide bulk salt, sand and anti-ice solution storage.

Covered sand storage protects the sand from moisture to minimize freezing in cold weather since frozen sand is unusable during sanding operations. Efficiency is lost as crews try to remove frozen sand from the pile before it can be loaded in the sander truck. If not yet frozen, loading wet sand into the sander truck can eventually freeze in the truck plugging the sander that crews must break up by hand and remove. Not having the sand readily available because it is frozen results in significant delays in road treatment. Using frozen sand can cause damage to vehicles following to close behind the sander or passing in the opposite direction. When sand freezes in the sander staff are put at risk of injury as they try to remove it from the equipment and get it working again.

Covered bulk salt storage protects the salt from rain to prevent groundwater contamination. Dissolved salt may leech to the soil and impact the environment. In addition, premature loss of salt is costly making it unavailable when needed for snow and ice operations. Covered storage for the bulk salt will prevent runoff of salts dissolved by precipitation and ensures their availability when needed to treat the road.

Liquid anti-ice is typically stored in a 6,000 – 10,000 gallon plastic tank containing a brine solution used for preventing the formation of ice on the roadway. Having the anti-ice solution readily available allows immediate access when needed so that it can be applied prior to freezing temperature conditions. Timely application of the anti-ice solution prevents the formation of ice and improves snow removal during plowing by creating a thin layer of water between the snow and the pavement. Once snow has been removed, the roadways dry up quickly reducing the need to return and plow them again. The anti-ice storage tank needs to be properly sized with adequately sized pumps and hoses for quick loading. The storage tank requires a secondary liner sufficient to contain and capture spills during transfer to the application truck or to the tank from the delivery truck or spills from a tank rupture. In addition to the secondary containment requirement the tank must be covered to

prevent contaminating rain water and increasing the cost of disposal of spilled material.

Snow and ice site locations

Snow and ice facilities located strategically throughout the service area help reduce travel time and increase work efficiency and response time by having the ability to access sand and salt materials without having to travel all the way back to the regional maintenance shops.

Currently Roads has 13 sites designated as snow and ice sites. Most are located at regional maintenance shops, the Renton maintenance headquarters and the others at satellite sites that serve limited functions including snow and ice. Locations of these snow and ice sites are shown on the attached map with the snow and ice routes. Additional snow and ice sites are being assessed to further reduce travel time on snow and ice response in order to increase efficiency of service delivery.

Snow and ice sites covered storage structures

The 11 snow and ice sites identified by Roads all need covered storage structures constructed for sand, bulk salt, and anti-ice tanks. Storage structures should be constructed on an impermeable pad. Storage structures should also allow for gathering any stormwater or runoff that may occur. These permanent storage structures should be constructed with sufficient strength to withstand pressure from the material and the stress of loaders pushing materials against walls. These structures should provide adequate access to the stockpile for delivery and loading equipment.

The table below provides the site location, preliminary scope and cost estimate.

	Location by site name	Scope	Cost estimate
1.	North Bend Pit	Construct covered storage for sand, bulk salt, and anti-ice tank(s).	\$498,750
2.	Diamond Regional Maint. Shop	Construct covered storage for sand, bulk salt, and anti-ice tank(s); and construct sander racks.	\$498,750 – covered storage \$255,000 – sander racks
3.	Renton Maint. HQ	Construct covered storage for sand, bulk salt, and anti-ice tank(s).	\$334,350
4.	Cadman Regional Maint. Shop	Construct covered storage for sand, bulk salt, and anti-ice tank(s).	\$540,100

5.	Krain	Construct covered storage for sand, bulk salt, and anti-ice tank(s).	\$498,750
6.	Fall City Regional (Preston) Maint. Shop	Construct covered storage for sand, bulk salt, and anti-ice tank(s); and construct sander racks.	\$498,750 – covered storage \$255,000 – sander racks
7.	Vashon Regional Maint. Shop	Construct covered storage for sand, bulk salt, and anti-ice tank(s).	\$367,000
8.	Lake Youngs	Construct covered storage for sand and bulk salt.	\$334,350
8.	Mileta	Construct covered storage for sand and bulk salt.	\$334,350
8.	Stillwater	Construct covered storage for sand and bulk salt.	\$334,350
8.	Woodinville	Construct covered storage for sand and bulk salt.	\$334,350

2015 Road Surface Work, May Valley Rd, Snow & Ice Project Info

Road	Limits	Length (miles)	Estimated Costs
North County			
NE Novelty Hill Rd	197th Ct NE to 208th Ave NE	0.48	\$ 137,000.00
238th Ave NE	NE 72nd St to NE 63rd Pl	0.45	\$ 134,000.00
236th Ave NE	NE 58th Pl to NE 51st St	0.47	\$ 104,000.00
Sahalee Way NE	NE 50th St to SR-202	0.11	\$ 55,000.00
244th Ave NE	SR-202 to Sammamish C/L	0.18	\$ 50,000.00
140th PL NE/ 148th Ave NE	Woodinville C/L to Woodinville C/L	1.27	\$ 195,000.00
South County			
15th Ave SW	SW Roxbury St to SW 100th St	0.25	\$ 96,000.00
68th Ave S	SR-900 to Renton C/L	0.27	\$ 61,000.00
S 132nd St / S 133rd St	SR-900 to Renton C/L	0.93	\$ 112,000.00
Renton Ave	Seattle C/L to Renton C/L	1.66	\$ 164,000.00
140th Ave SE	SE Petrovitsky Rd to SE 171st Way	0.20	\$ 83,000.00
SE 232nd St	Intersection @ SE Petrovitsky	0.01	\$ 15,000.00
		<u>6.28</u>	<u>\$ 1,206,000.00</u>

May Valley Road	In April of 2014 a 300' long portion of the slope beneath the road slipped along May Valley Road @22500 block. Repair work to build a new retaining wall, replace the guardrail and preform the environmental mitigation will happen Summer 2015. The road is currently operating on 1 lane each direction controlled by a roboflagger.	Total project costs: \$1,550,000 with the county share at :	<u>\$ 355,000.00</u> <u>\$ 1,561,000.00</u>
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Snow and ice facility repair and emergency preparation

Krain Pit in Enumclaw	Construct covered storage for sand, bulk salt, and anti-ice tank(s).	<u>\$ 498,750.00</u>
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Black Diamond Regional Maint. Shop	Construct covered storage for sand, bulk salt, and anti-ice tank(s); and construct sander racks.	<u>\$753,000.00</u>
		<u>\$ 2,812,750.00</u>