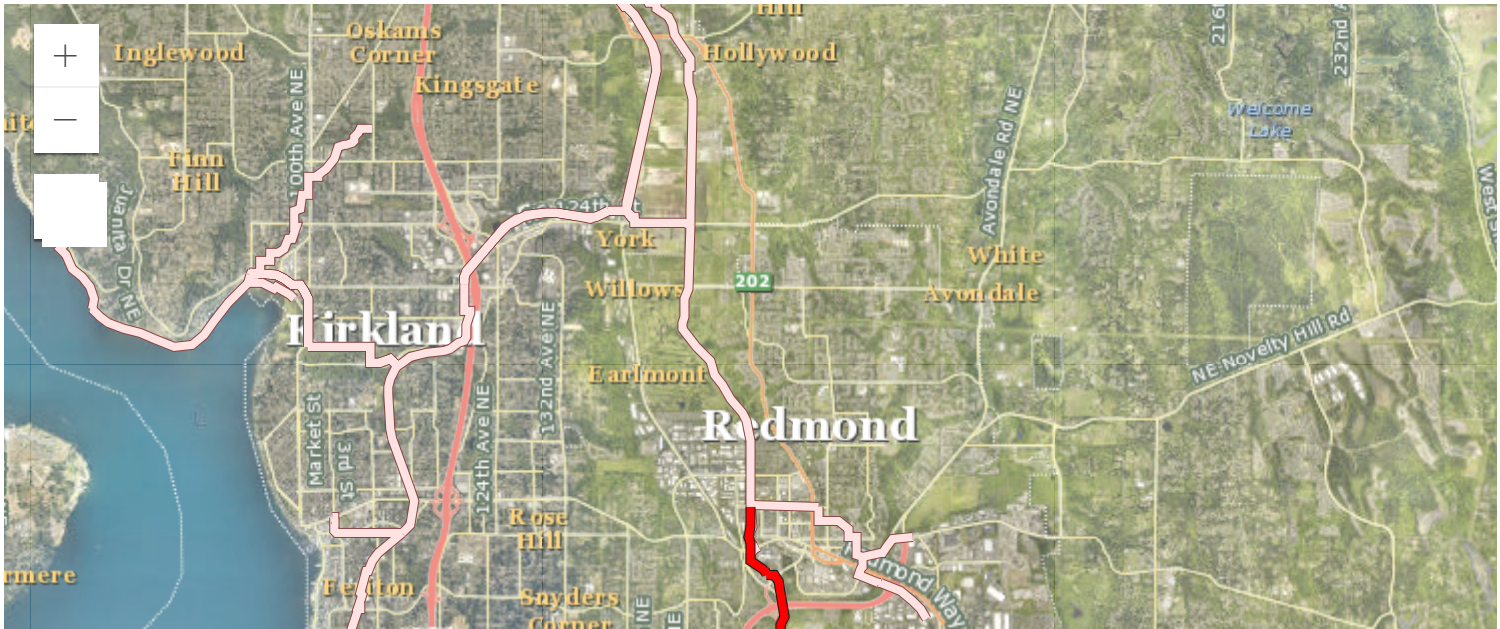
Lake Hills and NW Lake Sammamish Sewer Upgrade Project

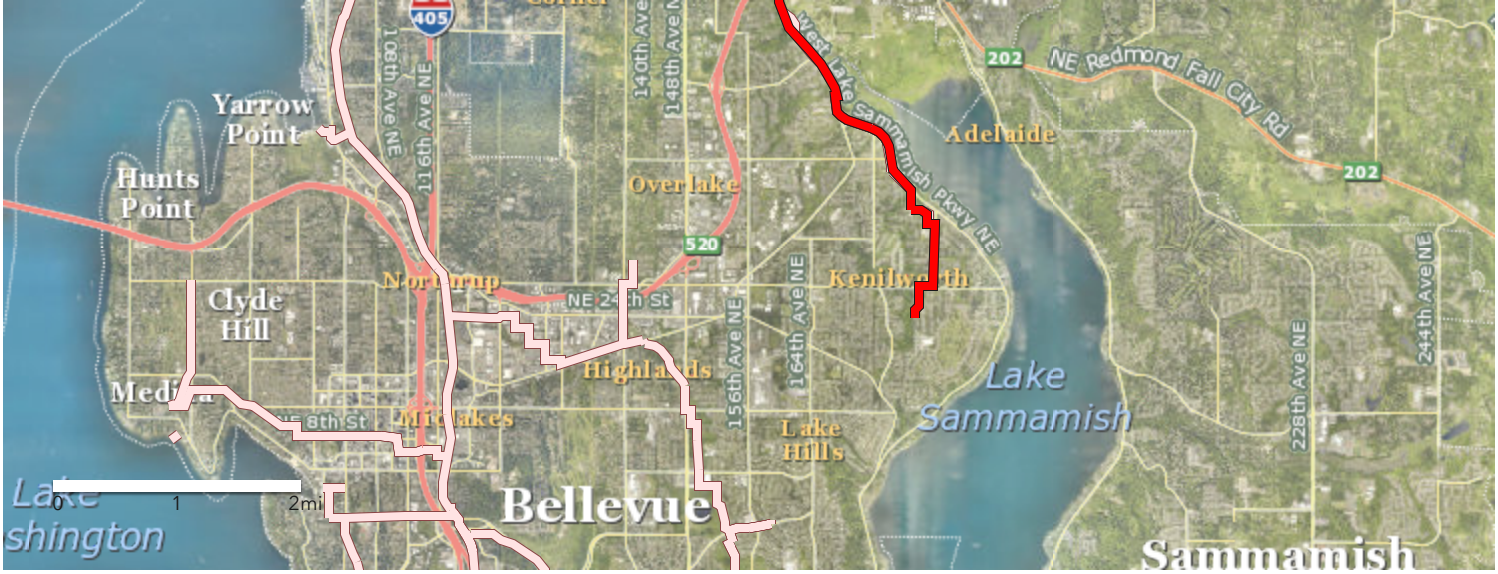
Online open house live until Jan. 31, 2020

There's a lot of construction work planned for the Redmond area in the next few years. One of these projects is King County's Lake Hills and NW Lake Sammamish Sewer Upgrade. King County needs to upgrade this regional sewer pipe that is undersized and aging.

This 4.5-mile-long sewer pipe is located underground in trails, roads, parks, and private property. Construction will take about three years to complete. We know this project will be disruptive to the Redmond community. Our goal is to make sure that when we start our work in 2021, you know what to expect ahead of time.

Project area map





Legend

King County sewer system

Lake Hills/NW Lake Sammamish sewer pipe

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Use the plus and minus buttons in the upper left corner of the map to zoom in or out

Final design is moving forward

King County continues to make progress on the project design. We've been working closely with local jurisdictions, including the City of Redmond, and partner agencies to get feedback on the final design. We've also been working closely with you to better understand your priorities and keep you informed of project updates.

Over the past year, we have:

- Completed the State Environmental Policy Act (SEPA) review process
- Refined Sammamish River Trail detour routes
- Made draft plans for how we'll replace trails, repave streets and sidewalks, and replant trees and shrubs after construction
- Continued to coordinate with Tribes
- Begun acquiring permits from the City of Redmond, City of Bellevue and state and federal agencies
- Continued conversations with you to share the latest project information and incorporate your feedback into our design wherever possible

How to use this online open house

Please use the tabs at the top of the page to learn more about this year's progress. We also invite you to provide feedback on our project communications and reach out to us with any questions or concern.

Continue

Project overview

King County Wastewater Treatment Division (WTD) has nearly 400 miles of underground pipes in the region that collect sewage from homes and businesses. The pipes take sewage to one of our treatment plants to be cleaned. This system of pipes and treatment plants help keep us healthy and keep Puget Sound, lakes, and rivers clean.

The Lake Hills and NW Lake Sammamish sewer pipe is an important part of this underground network of pipes. This sewer pipe has been serving Redmond and Bellevue for 50 years. The water you use travels down your drain to City sewer systems. The City's pipes send wastewater to King County's sewer system where it is carried to the Brightwater Treatment Facility (https://www.kingcounty.gov/depts/dnrp/wtd/system/brightwater.aspx) in Woodinville.

We are working on a project to upgrade 4.5 miles of this sewer pipe. King County will build the new pipe under trails, roads, parks, and private property in Redmond. The route of the new pipe will almost entirely follow the route of the existing pipe. Construction is expected to begin in 2021 and take three years to complete.


522
BRIGHTWATER TREATMENT PLANT
BOTHELL
WOODINVILLE
Sammamish River
405
KIRKLAND
REDMOND
405
Marymoor Park
202
BELLEVUE
520
Lake Sammamish
Wastewater Pipe
Section of Pipe to be Upgraded
N
0 1 2 Miles
The wastewater from the Lake Hills area flows north to the Brightwater Treatment Plant.
N
0 1 2 Miles

Project area

The 4.5-mile-long sewer pipe runs underground between 177th Avenue N.E. and N.E. 85th Street. The pipe begins in Redmond's Idylwood neighborhood and continues along West Lake Sammamish Parkway between Idylwood and Marymoor parks. From there, the pipe runs under the Sammamish River Trail to N.E. 85th Street near Redmond City Hall.

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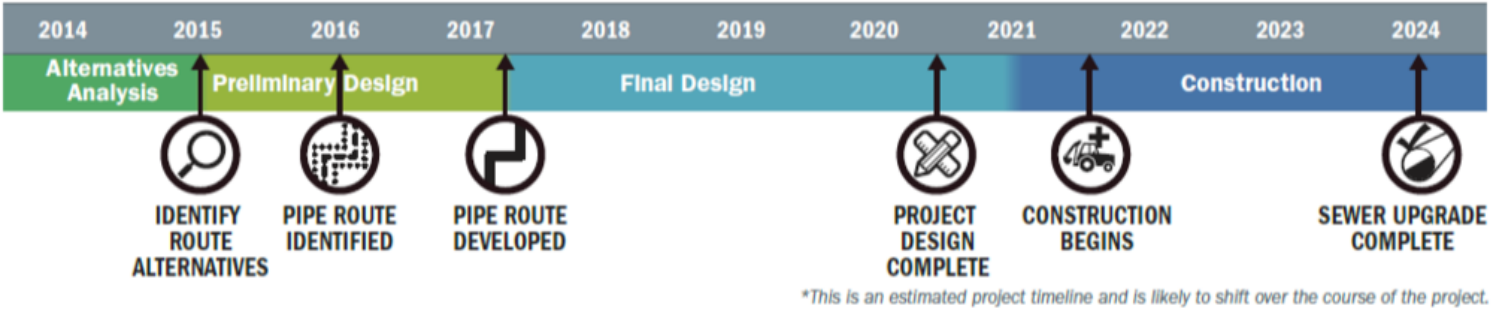
Schedule



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We recently completed environmental review and preliminary restoration plans for the project. Over the next year, we'll be refining plans for managing traffic and submitting permits needed to complete the work. We plan to complete design in 2020, hire a contractor in early 2021 and begin construction in 2021.

Construction was previously scheduled to begin 2020. Construction has been pushed back to allow more time for developing restoration plans and designing a fish-passable culvert at Country Creek. The culvert is a tunnel that allows water from Country Creek to flow under West Lake Sammamish Parkway.

Project cost and regional funding

We estimate construction costs will be $60 million. This estimate is likely to change as the project design progresses.

Because King County operates a regional sewer system, ratepayers throughout the entire service area help cover the cost of this project and other improvement projects through their monthly sewer bill. Improvement projects are also partially funded by borrowed funds (bonds).

Our commitment to you

King County is committed to working with you throughout the life of this project. During design, we'll share project progress regularly and incorporate your input where possible. During construction, our goal is to let you know about upcoming activities so you can plan ahead.

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Our outreach efforts to date include:

- 7 community meetings
- 9 community events
- 19 community briefings
- 48 project updates and fieldwork notices

- 700 conversations with community members

Your feedback is important to us.

King County recognizes that construction can be disruptive to those who live, work, or play nearby. We've been working with you to identify ways we can reduce disruption to your community during construction. Here is what we've heard so far and how we're working to incorporate your input where we can:

Marymoor and Idylwood parks

What we heard

- Maintain park access, especially during the busy summer months**.**

How we're incorporating your feedback

- We will drill under the Marymoor Park entrance at West Lake Sammamish Parkway rather than dig across it. This will allow us to keep the park entrance open.
- We will avoid road closures in front of Idylwood Park and the overflow parking lot during busy summer months.

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West Lake Sammamish Parkway

What we heard

- Limit disruptions.
- Avoid work during peak commuting hours.
- Always keep at least one lane open.

How we're incorporating your feedback

- Work will be completed in sections to limit disruptions.
- We anticipate vehicle lane, bike lane and sidewalk closures during construction.
- We're working closely with the City of Redmond to identify working hours and safe detour routes for each section of roadway.
- We may not be able to maintain a thru-traffic lane in the narrowest sections of the road. Local and emergency access at these locations will be maintained.

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Sammamish River Trail

What we heard

- Limit disruptions.
- Find safe and efficient detour routes.

- Find safe and efficient detour routes.
- Ensure detour routes are well marked.
- Use project restoration as an opportunity to improve the trail.

How we're incorporating your feedback

- Work will be completed in sections to limit disruptions.
- We've developed preliminary detour routes (https://www.kingcounty.gov/~/media/depts/dnrp/wtd/capital-projects/LkHillsNWLkSam/docs/190416_Sammamish-River-Trail-Detours.ashx?la=en) based on direction we've received from the City of Redmond, King County Parks, and your community.
- In addition to standard safety signage, we will use supplemental wayfinding along detour routes.
- We've partnered with King County Parks to widen part of the trail during project restoration.

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Private property

What we heard

- Relocate the sewer off private property.
- Maintain access to homes and businesses along the sewer route during construction.

How we're incorporating your feedback

- *There were no alternative sewer routes that would allow us to avoid private property while keeping flows moving through the sewer pipes using gravity.*
- King County is working closely with private property owners to acquire easements and share information about what

to expect during construction.

- While you may experience delays during construction, we will maintain access to homes and businesses along the sewer route during construction.

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Healthy habitats

What we heard

- Identify and avoid sensitive plant and animal habitats.
- Protect, restore, and enhance fish and wildlife habitat.

How we're incorporating your feedback

How we're incorporating your feedback

- We've avoided sensitive environmental areas where possible. Where we couldn't avoid sensitive areas, we are developing protection and restoration plans.
- We will install habitat enhancing log structures and plant trees and shrubs on the banks of the Sammamish River near Leary Way.
- We'll prioritize replanting with native and drought-tolerant trees.
- We're designing a culvert at Country Creek to allow fish to move further upstream.

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Schools

What we heard

- Limit construction near Audubon Elementary School during the school year.
- Coordinate with schools to maintain safe bus and walking routes.

How we're incorporating your feedback

- Work in front of the entrance to Audubon Elementary School will only be allowed when school is not in session.
- We're coordinating with the Lake Washington School District and Bellevue School District so bus and walking routes can be safely rerouted ahead of construction.

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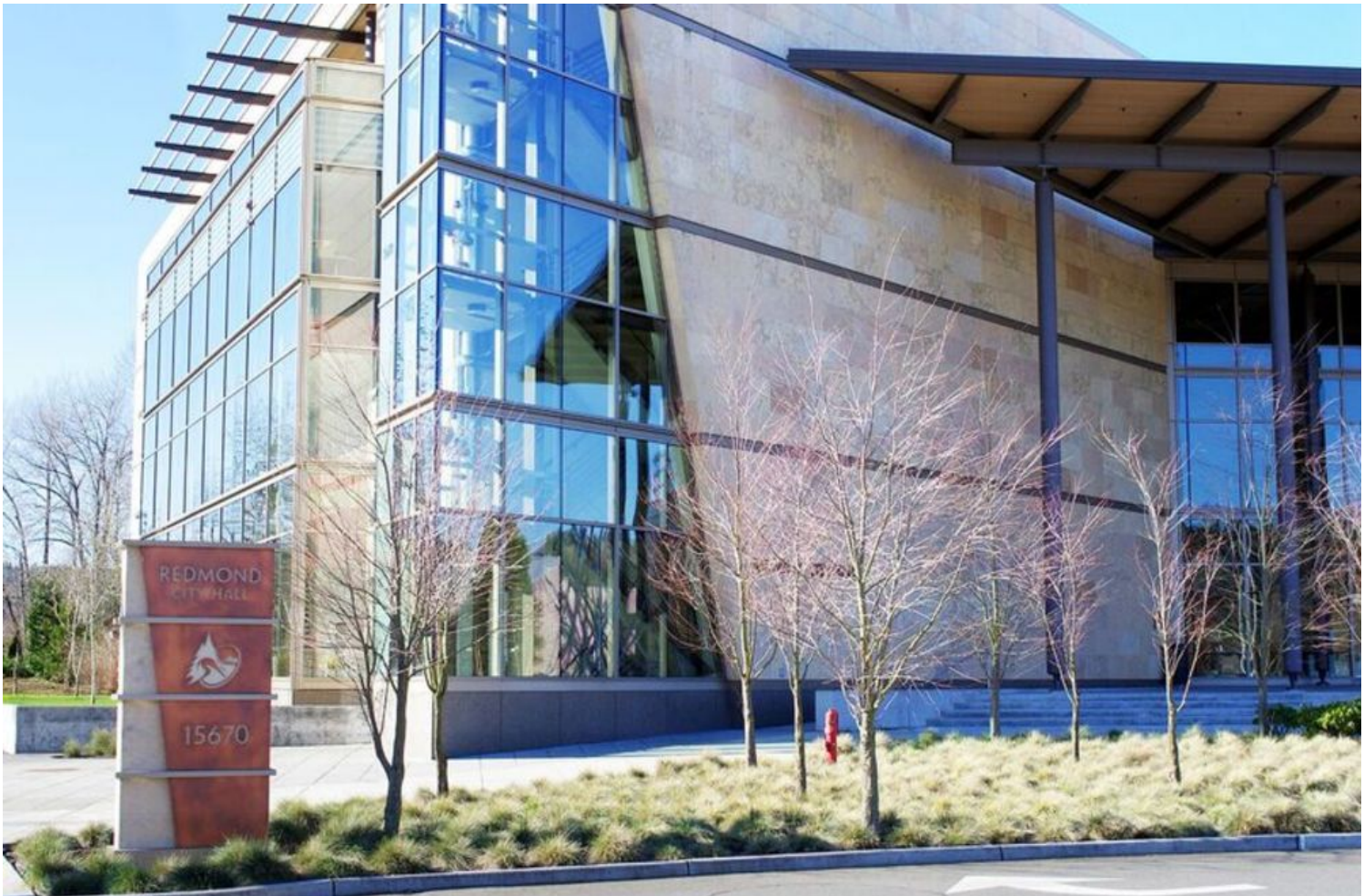
Other projects

What we heard

- Coordinate with other planned construction projects.

How we're incorporating your feedback

- We’re coordinating closely with the City of Redmond, Microsoft, and Sound Transit to understand schedules for their construction projects.
- We’ll look for opportunities to collaborate with other projects to reduce disruptions caused by multiple projects happening at once.



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We expect to finish our design in late 2020. Once the designs are complete, we'll be sure to share final design decisions related to these priorities.

What to expect during construction

Construction is expected to begin in 2021 and take approximately three years to complete. During construction, you can expect:

- Typical work hours
  - 7 a.m. to 7 p.m. on weekdays
  - 9 a.m. to 6 p.m. on Saturdays
- Large equipment, truck traffic
- Noise, vibration, dust
- Trail closures and detours
- Road closures and detours

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Residents should plan for road closures and detours during construction.

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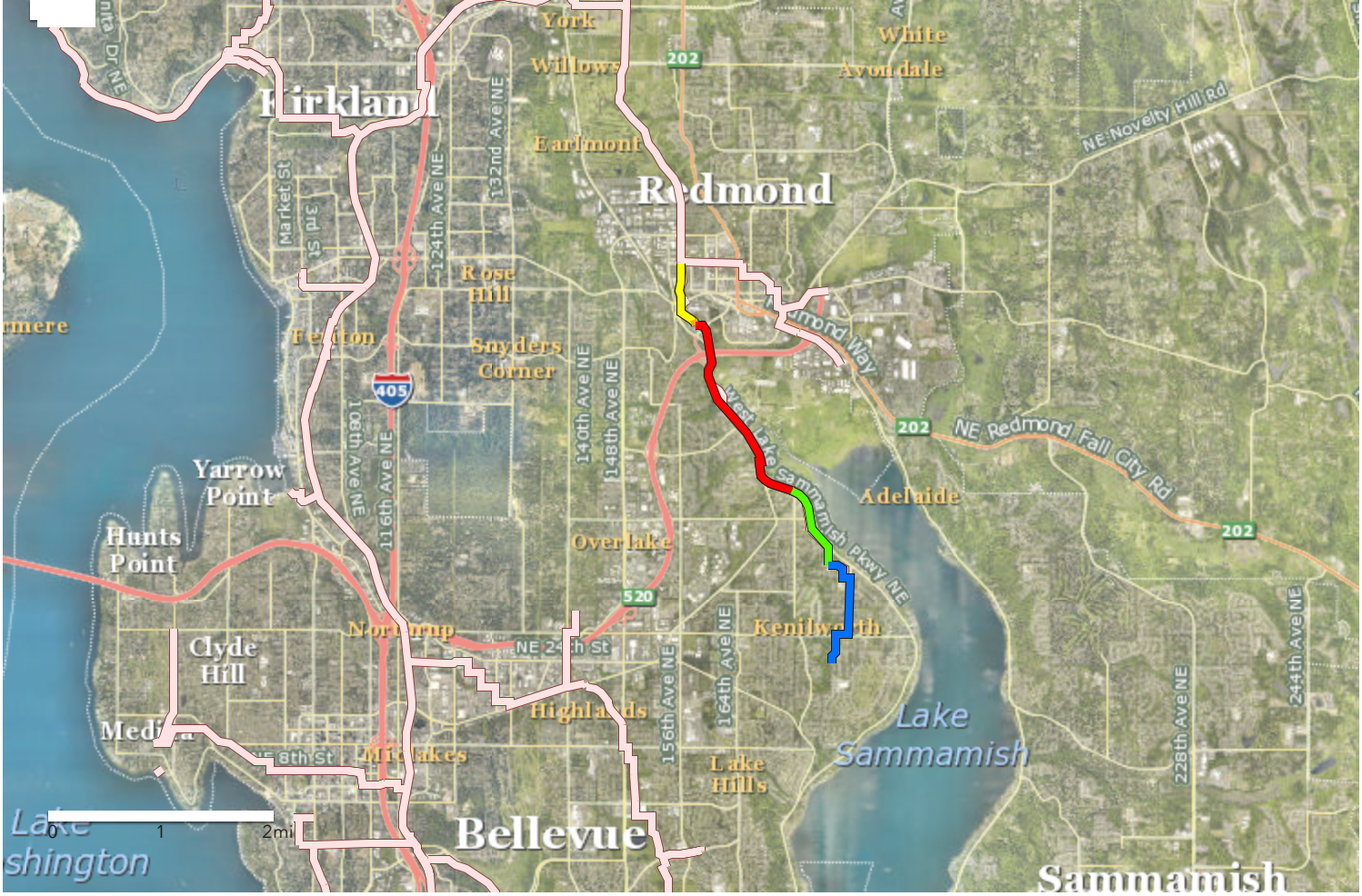
Traffic flaggers will be used when necessary.

Construction segments and schedule

The project is divided into five segments (https://storymaps.arcgis.com/stories/e2c704b77c844f6aa8e115f7cbfef4c0)based on unique conditions – soil type and groundwater levels, existing utilities, environmentally sensitive areas, and cultural resources. Construction methods and durations will vary by segment. **The segments are *not* representative of the order the pipe will be installed.**

We will have a more detailed construction schedule in 2021 after we hire a contractor.

Construction segments map



Legend

- Segment 1
- Segment 2
- Segment 3
- Segment 4
- Segment 5

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Use the plus and minus buttons in the upper left corner of the map to zoom in or out.

Construction methods

Open-cut

Most of the sewer pipe will be installed using open-cut construction. In open-cut construction, crews dig from the surface to the pipe depth, lay the pipe, then cover the pipe and restore the surface.

Open-cut construction:

- Is the most common method for installing pipes
- Is preferred for shallower work zones
- Provides flexibility during construction to work around existing utilities
- Requires digging trenches and using backhoes and dump trucks
- Causes surface disruptions

Open-cut trenching examples shown below.

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Crews excavate before open-cut installation.

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Open-cut installation of 60" pipe.

Trenchless

Trenchless construction does not require digging from the surface to the pipe depth. Instead, two shafts are built on either end of the pipe. Then the pipe is installed using a hammer, auger, drill, or microtunneling machine. This method is only feasible in certain types of soils and conditions.

We expect to use trenchless construction in two places along the sewer route:

- We'll drill under the Marymoor Park entrance off West Lake Sammamish Parkway.
- The Sammamish River and its banks provide important habitat for fish and wildlife, including migrating salmon. To

Trenchless construction examples:

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Shaft construction using interlocking concrete cylinders.

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A microtunneling machine will be used to build the pipe under the Sammamish River.

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Crews will likely use a trenchless construction method, called an auger bore, to drill under the entrance to Marymoor Park off of West Lake Sammamish Parkway.

Putting things back together after construction

Construction will require crews to dig up roads and trails and remove trees, shrubs, and other plants along the sewer route. This year, we've focused on developing restoration plans for the project. These plans will guide how we replace trails, repave streets and sidewalks, and replant trees and shrubs after construction is complete. The final restoration plans will be reviewed and approved by Tribes, partner agencies like the Department of Ecology, and the City of Redmond.

Restoring the Sammamish River Trail

The sewer pipe is located underground directly beneath the Sammamish River Trail surface between N.E. 85th Street and N.E. 51st Street. To replace the pipe, crews will need to remove the trail surface. This work will be completed in sections.

We recognize that the trail is a popular route for recreation and commuting. Our goal is to put the trail back as good or better than we found it. When our work is complete, we plan to:

- Relocate as many maintenance holes off the trail as possible
- Plant new trees and shrubs to replace those removed
- Repave affected areas of the trail to at least the current footprint
- Widen the trail between N.E. 85th Street and Leary Way

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Rendering of trail restoration looking north from Leary Way at Dudley Carter Park.

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Rendering of trail restoration looking north towards N.E. 85th Street near The Stroll Park.

The plan for the trees

Many trees have grown up around the sewer pipe since it was installed 50 years ago. Our crews will need an area approximately 30 to 45 feet wide along the entire pipe route to safely install the new pipe. Plants and trees will be removed in these working limits. Over the length of the 4.5-mile-long sewer route we expect to remove several hundred trees.

When work is complete, we will replant at least one tree for every mature tree that is removed. For trees that are removed and are 30-inches-wide or larger, three new trees will be planted. These guidelines are set by the City of Redmond.

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Before construction

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During construction


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After construction

Roads and sidewalks

King County will repave sections of roads and sidewalks that we disrupt to install the new sewer pipe. Replacing sidewalks is an opportunity to improve accessibility. As part of the project's restoration, we'll install 24 new curb ramps at 11 locations along the sewer route.

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Example of a new curb ramp installed after a King County construction project in Seattle.

We'll also install a new sidewalk along Marymoor Way that will serve as an accessible detour route during construction. The sidewalk will remain in place after construction.

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Habitat enhancement

We've tried to avoid sensitive environmental areas in our project design where possible. Where we couldn't, we are developing restoration plans. We're working closely with Tribes, local jurisdictions, and permitting agencies to develop plans that will maximize benefits for fish and wildlife. As part of the project restoration, we will:

- Install habitat-enhancing log structures and plants on the banks of the Sammamish River near Leary Way
- Prioritize native and drought-tolerant trees for replanting plans
- Maintain and monitor critical environmental areas for 5 to 10 years after planting
- Design and install a culvert at Country Creek that will allow fish to move further upstream

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Example of a log-jam structure designed to improve fish habitat.

Improving fish habitat at Country Creek

Part of the existing Lake Hills/NW Lake Sammamish sewer pipe runs under West Lake Sammamish Parkway, very close to the culvert at Country Creek. King County must replace the culvert to install the new sewer pipe. We are partnering with the City of Redmond to improve the culvert so fish can swim through it.


N
NE Redmond Way
REDMOND
520
Marymoor Park
LAKE HILLS SEWER LINE
COUNTRY CREEK CULVERT
520
West Lake Sammamish Pkwy NE
Lake Sammamish
NE 40th St
REDMOND
156th Ave NE
Bel-Red Rd
BELLEVUE
0
1/4 Mile

(/img/fnxuxyj7xlszof5tregu_662_1200.PNG)

Country Creek is located south of the intersection of West Lake Sammamish and Bel-Red Road.

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The existing culvert at Country Creek allows water to flow under West Lake Sammamish Parkway, but it's too high above the creek surface to allow fish to swim through it.

Thank you for visiting our online open house!

Next steps

We'll spend the next year finalizing our project design by:

- Finalizing restoration plans
- Developing plans for managing traffic
- Acquiring permits from the Cities of Redmond and Bellevue and state and federal agencies

We expect to complete project design next year. Once we hire a contractor in early 2021, we will provide more detailed information on the construction schedule, detours, and more.

We want to hear from you

We are committed to keeping you informed about project progress and updates. In efforts to ensure we're doing so, we want to hear from you! Please fill out the form below and tell us how we can continue to keep you informed, and if you are receiving the information you need.