

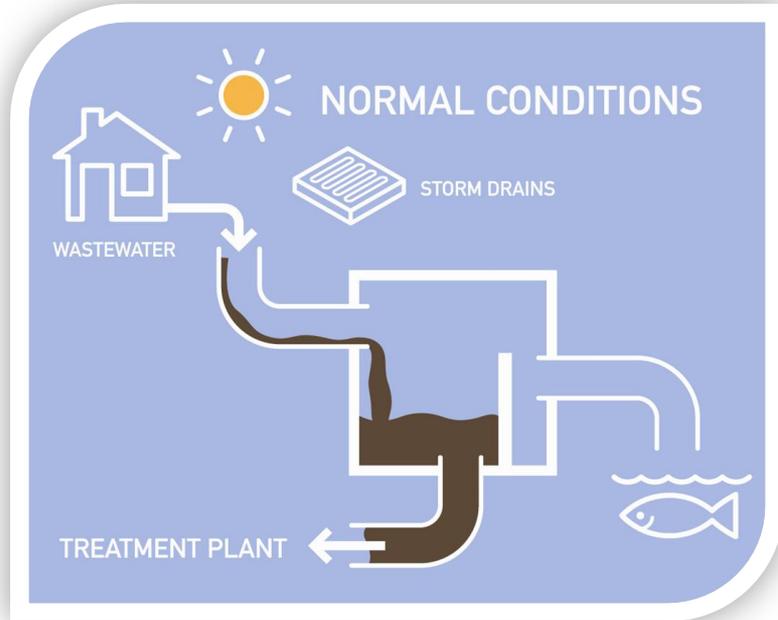
Genesee Area Combined Sewer Overflow Reduction Project



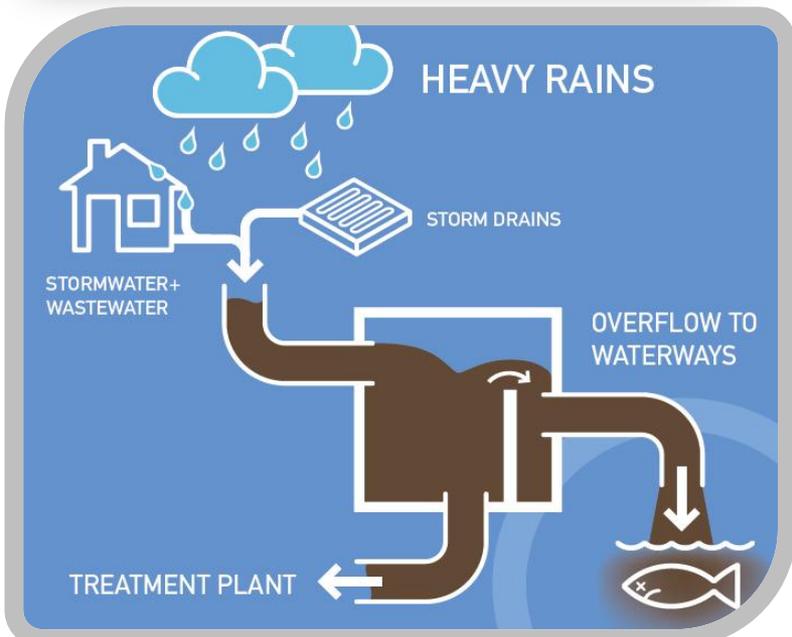
**COMBINED SEWER
OVERFLOW REDUCTION**

November 9, 2010

What is a Combined Sewer Overflow?



- *Wastewater* (from homes) and *stormwater* (from rooftops, streets) flow in a single pipe - a “combined sewer.”



- During heavy rains, stormwater (~90%) and sewage (~10%) exceed the system, causing a combined sewer overflow (CSO) into nearest waterway.

Combined Sewer Overflows (CSOs)

- 90 permitted CSO outfalls
- 100 million gallons CSO discharge annually
- About 200 CSO discharge events annually



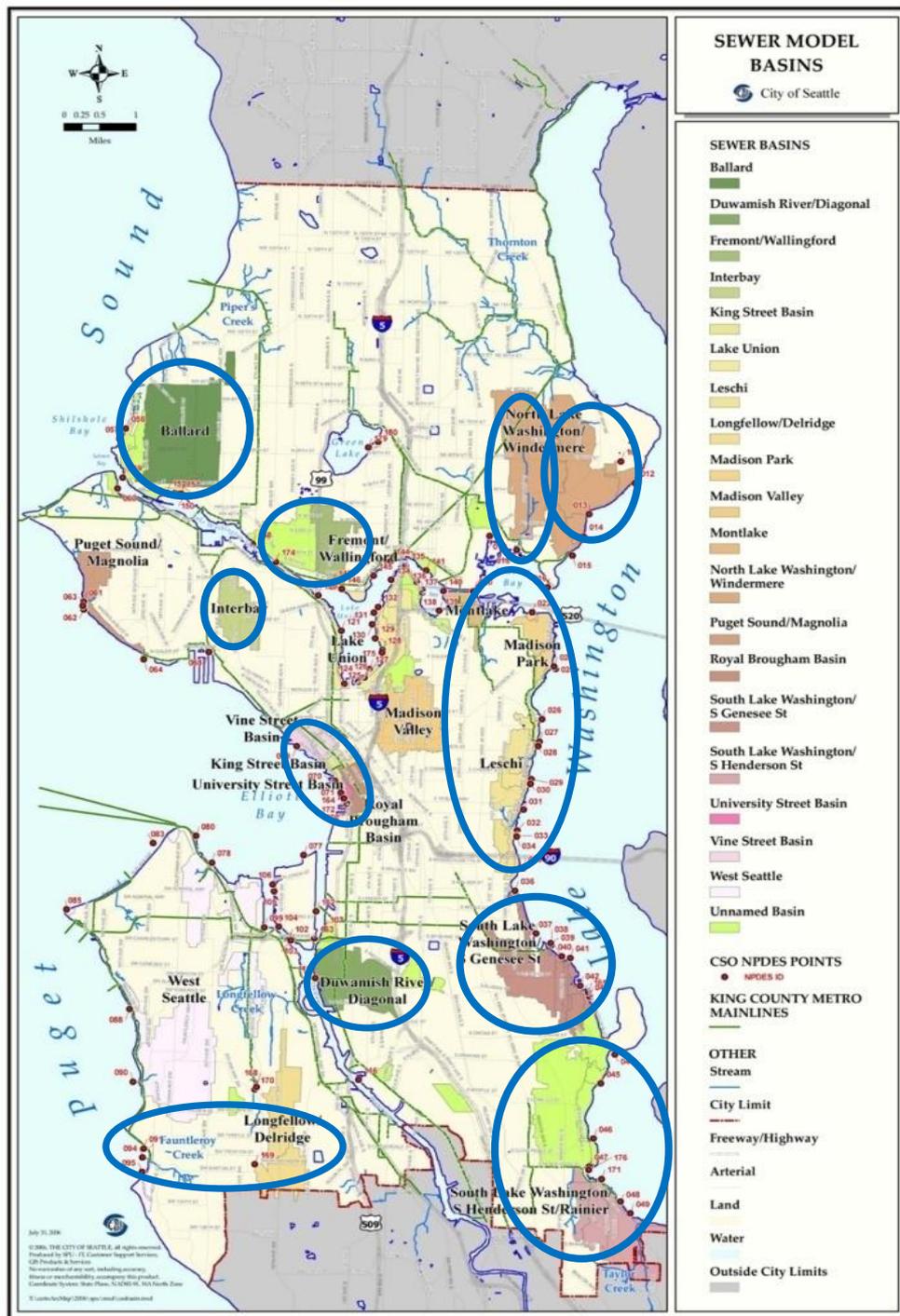
CSO Reduction Program Goals

- 💧 Comply with Clean Water Act, state/federal regulations
- 💧 Improve water quality
- 💧 Finish historic effort
- 💧 Minimize rate impacts
- 💧 Partner for cost-effective solutions



Focus on Next 5 Years

- Improve existing system through retrofits
- Construct CSO reduction projects
 - Windermere, Genesee, and Henderson basins
- Pilot green infrastructure projects
- Complete Long-term Control Plan

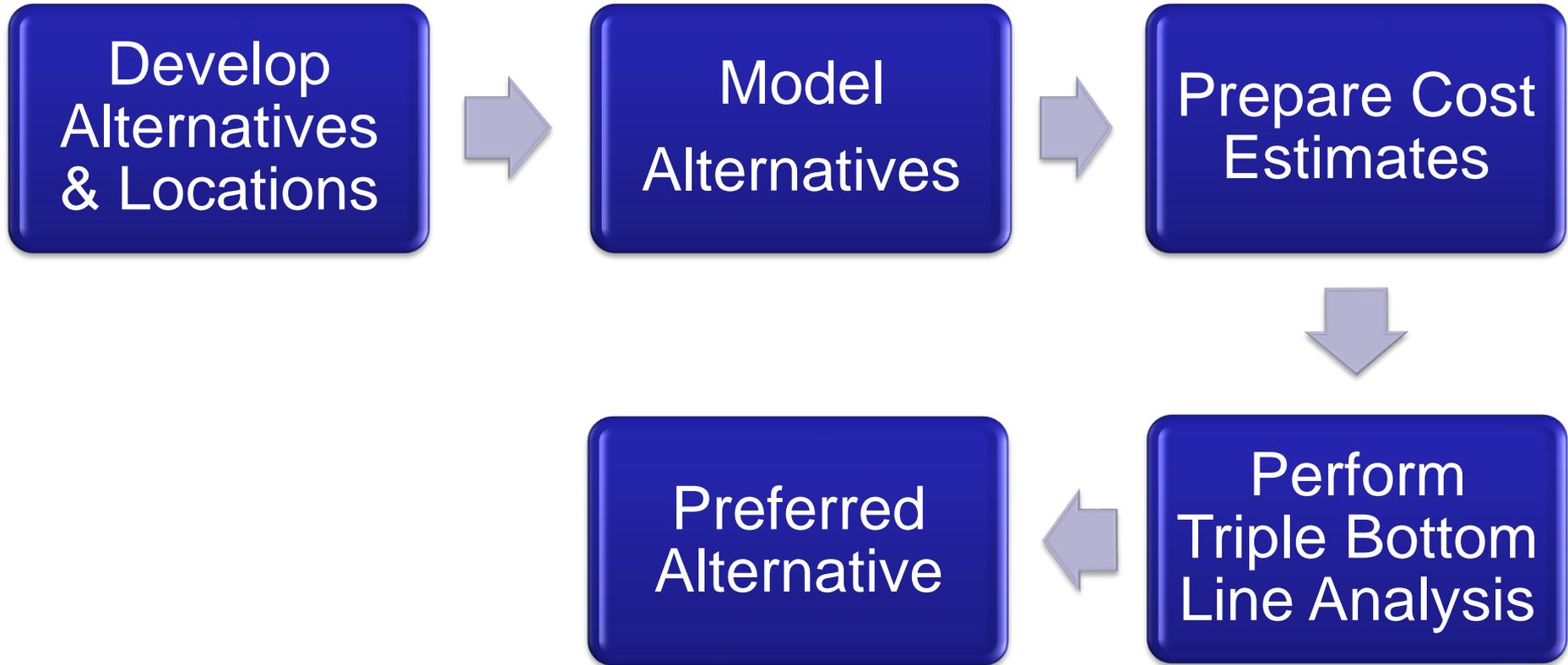


Genesee CSO Reduction Project

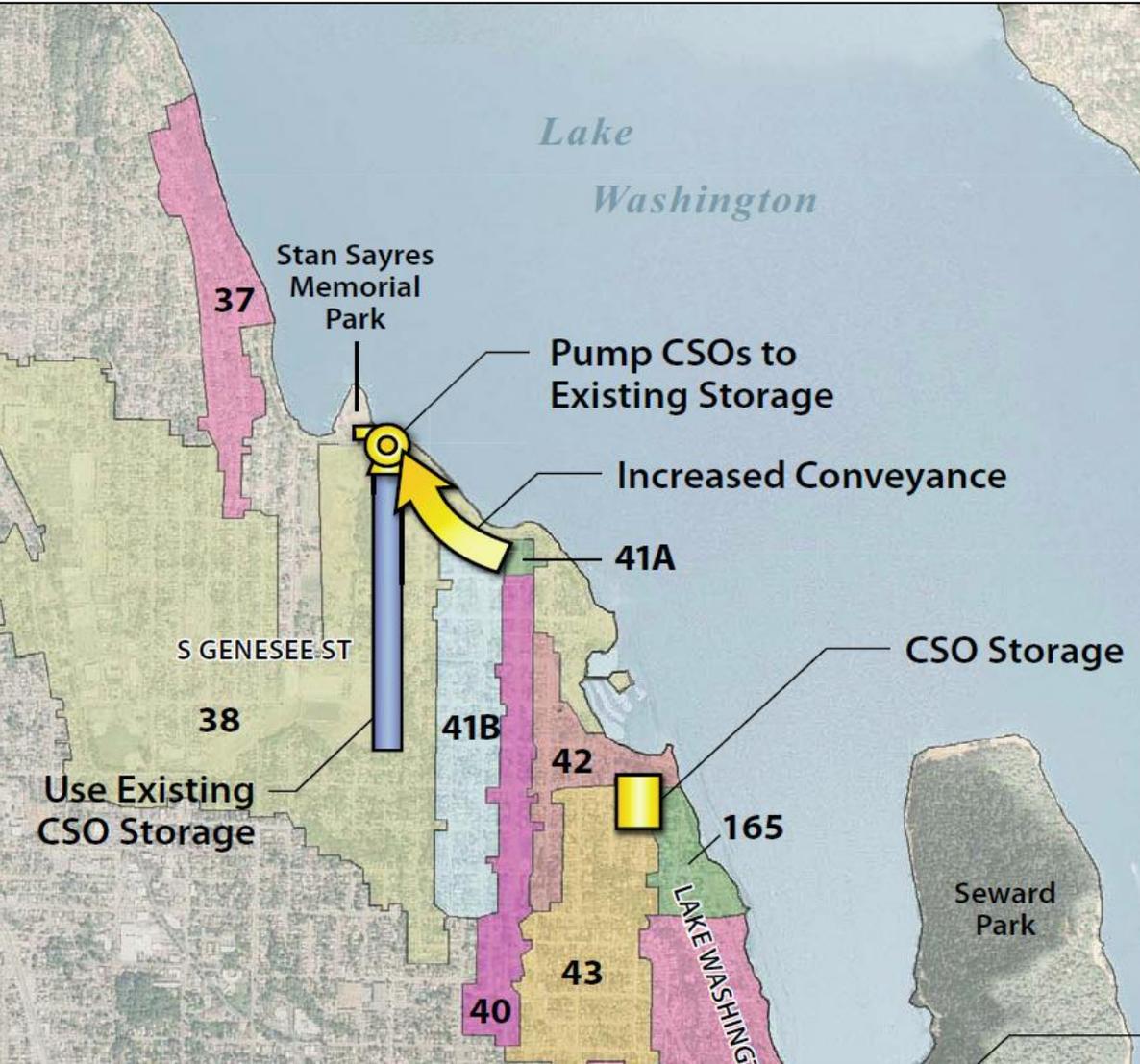


- 💧 Top Priority Basin
- 💧 700 Acres
- 💧 Construction 2013-2015
- 💧 Reduces CSOs from 10 times to 1 time per year
- 💧 Storage Volumes:
 - 💧 Basins 40/41: 430,000 gal
 - 💧 Basin 43: ~250,000 gal

Genesee CSO Reduction Screening Process



Genesee Alternative #1: Pipe, Pump and Store



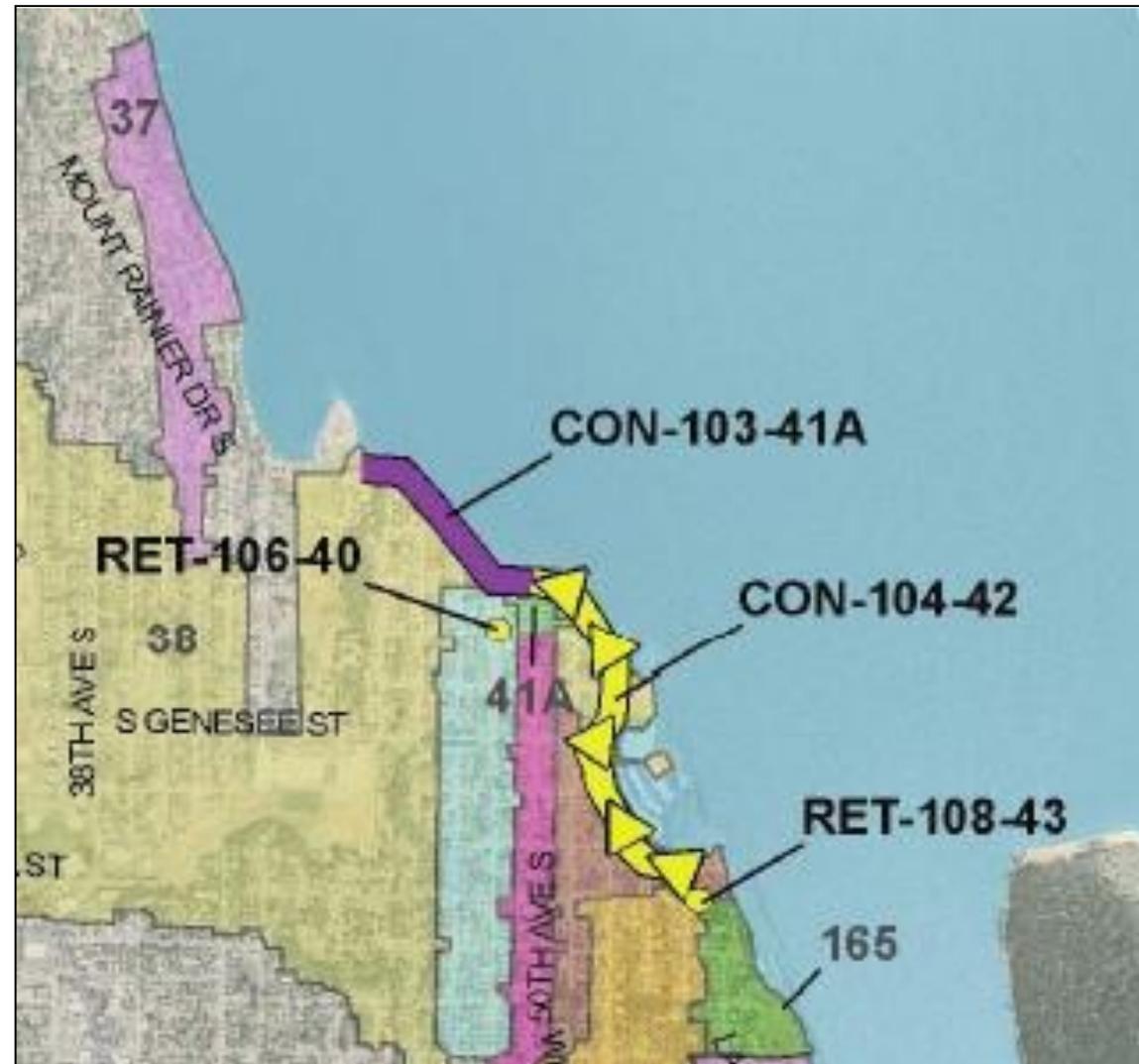
Includes:

- Pipeline under Lake Washington Blvd
- New pump station near Stan Sayres Park
- Enlarging existing storage facility on S. Alaska St.

Genesee Alternative #2: Storage Under Street

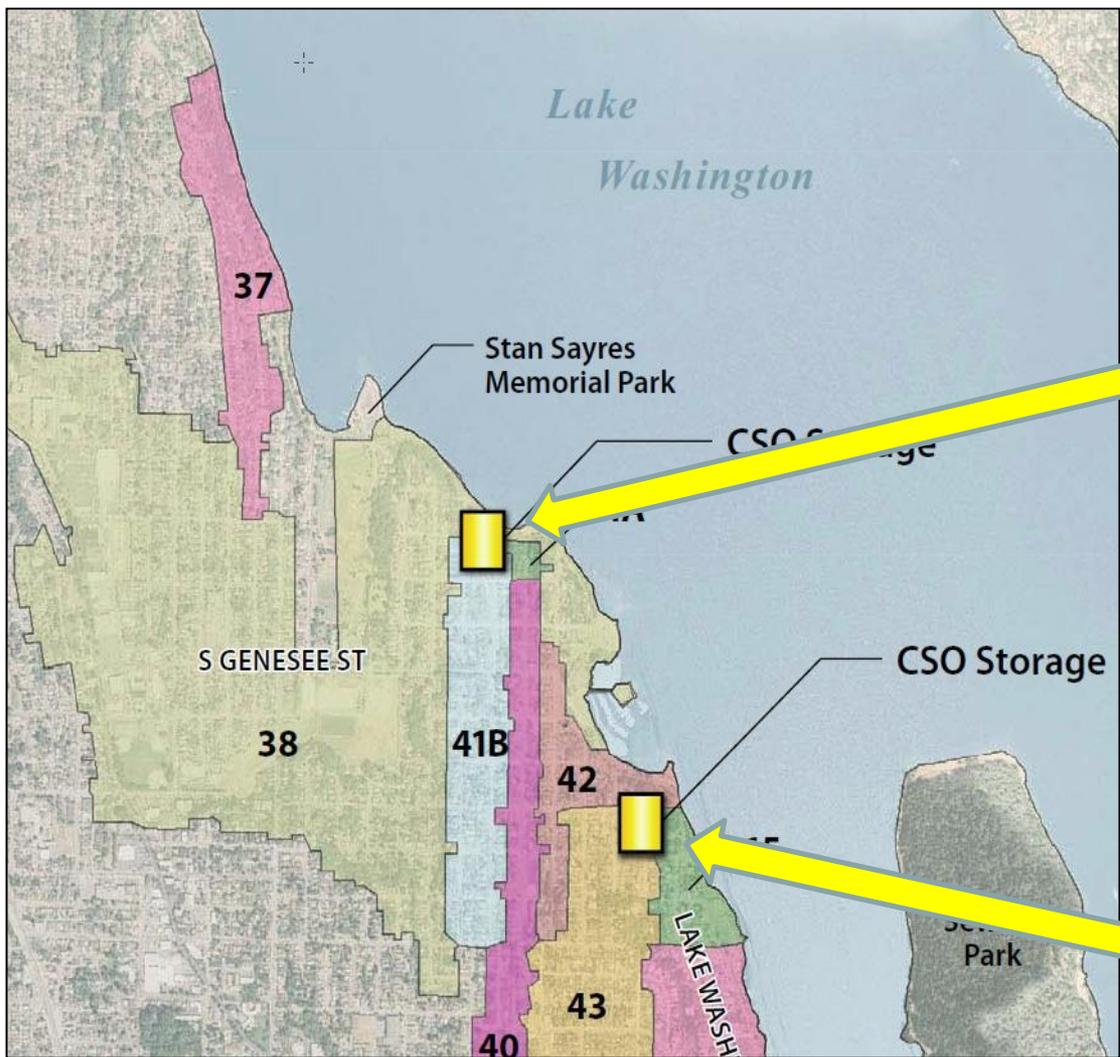
Includes:

- Storage in-line with pipeline under Lake Washington Blvd
- Project would require 15-foot-wide excavation down middle of street



Genesee Basin Alternative #3: Distributed Storage (Recommended)

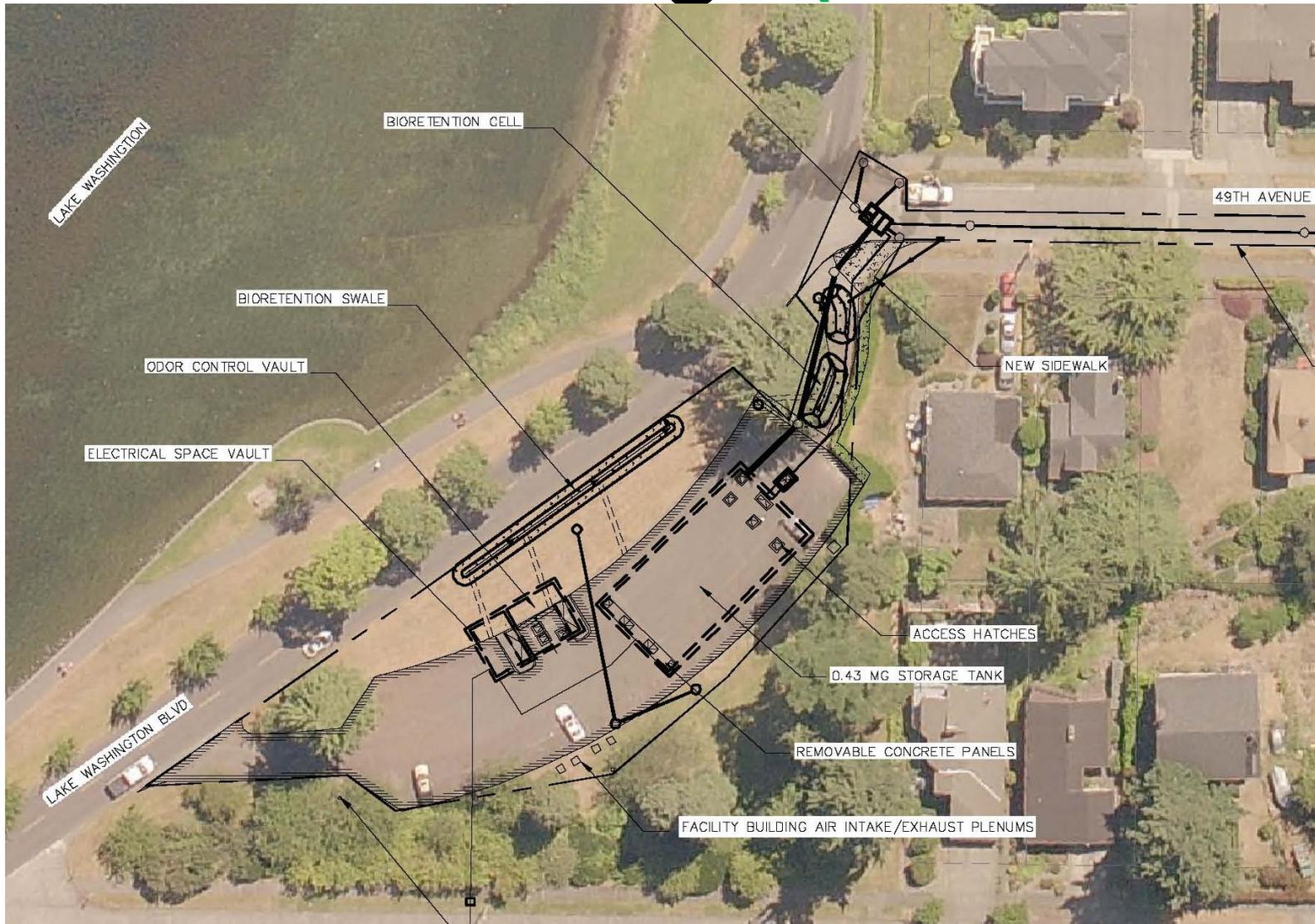
a) Storage in Triangle Parking Lot



b) Storage on S. Alaska St or 54th Ave S.



Genesee Alternative #3a: Distributed Storage (Recommended)



Community Feedback and Report Out

Storage in Triangle Parking Lot



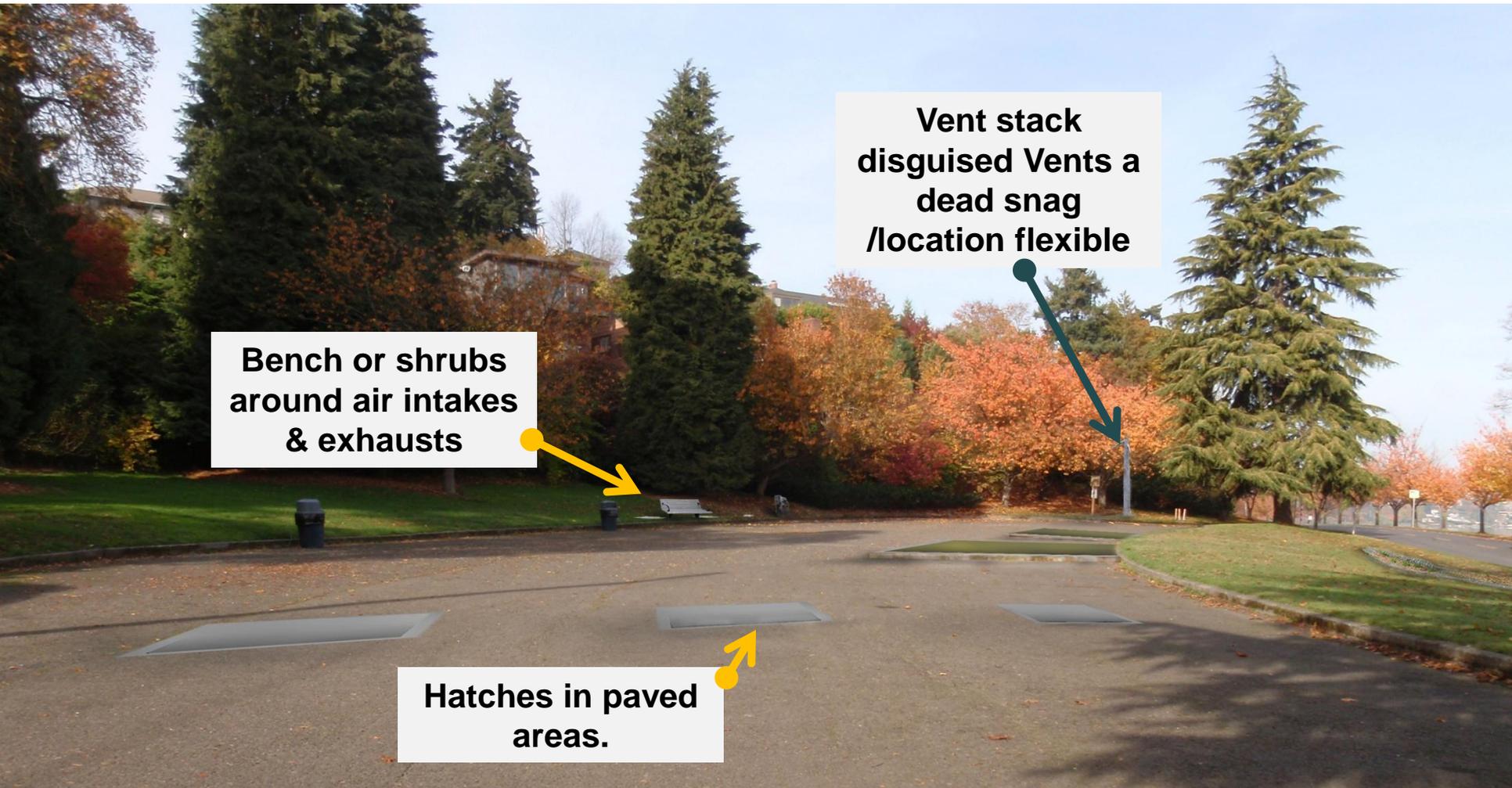
- Minimize impact on trees
- Hide ventilation stacks and hatches, as much as possible
- Consider turning parking lot into green space after construction

Rendering of Triangle Parking Lot Storage (430,000 Gallon Storage)



Will revise to reduce impact of water quality swale on major tree.

Rendering of Triangle Parking Lot – Screening Example



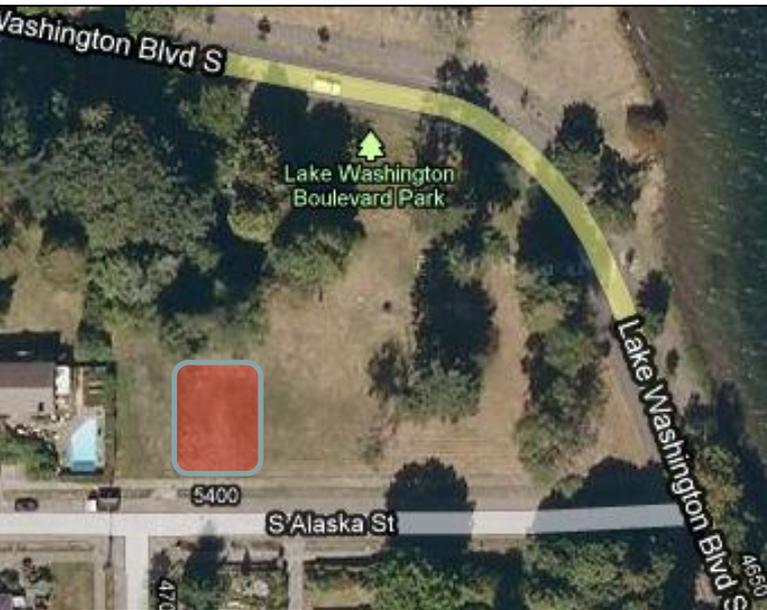
**Bench or shrubs
around air intakes
& exhausts**

**Vent stack
disguised Vents a
dead snag
/location flexible**

**Hatches in paved
areas.**

Basin 43: Community Feedback & Report Out

Storage in park



- Protect/maintain green space and trees.
- Minimize odor control facility noise.
- SPU revised tank layout:
 - Existing utilities conflicts & hydraulic challenges affecting tank size
 - Multiple revisions to site layout and renderings

Genesee Alternative #3b(1) - Revised: Storage in S. Alaska Open Space

Vent stack, air intakes & exhausts moved close to trees and away from house.

24" ABOVE GROUND TREATED AIR STACK

Reduced number of inspection hatches and size.

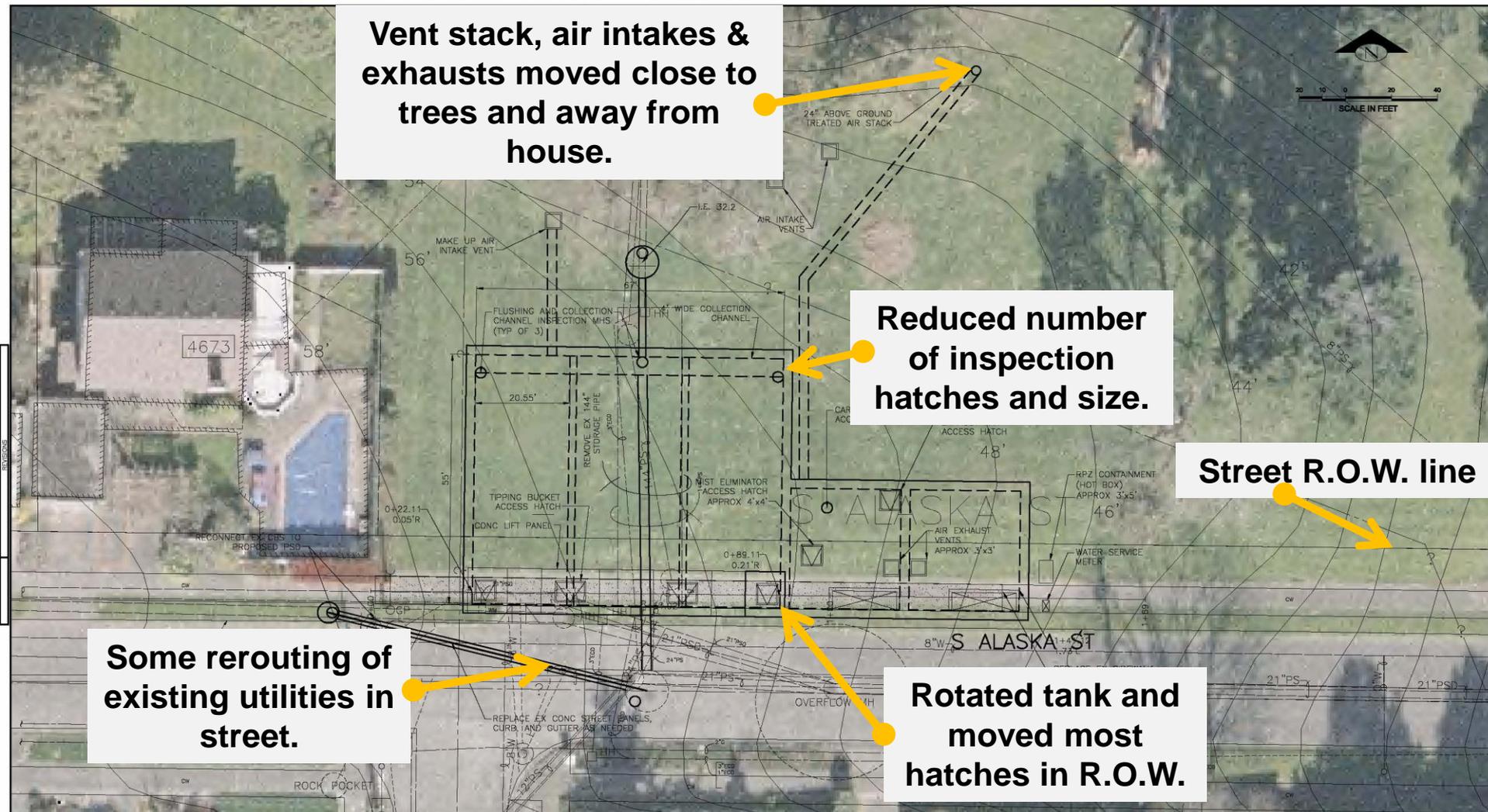
Street R.O.W. line

Some rerouting of existing utilities in street.

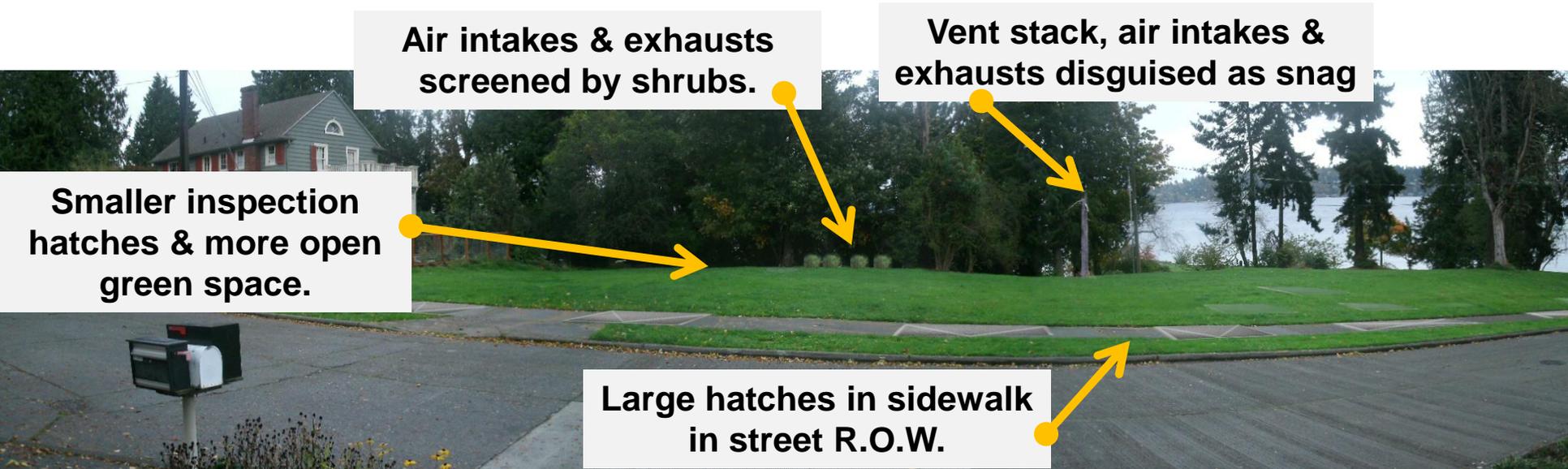
Rotated tank and moved most hatches in R.O.W.

Work In Progress

STORAGE TANK IN PARK
PLAN VIEW
GENESEE NPDES 43



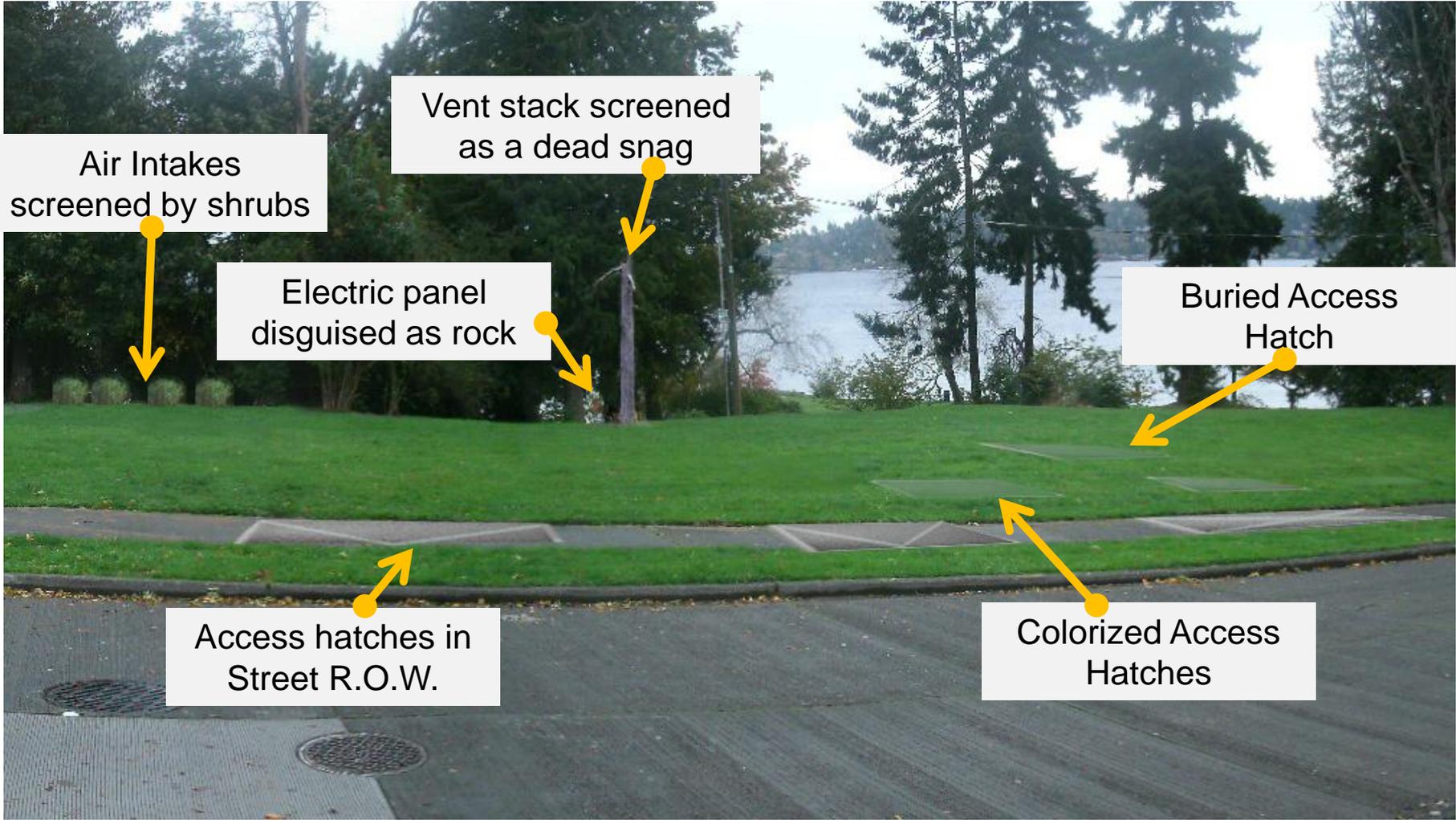
Rendering of S. Alaska Storage – Example Screening



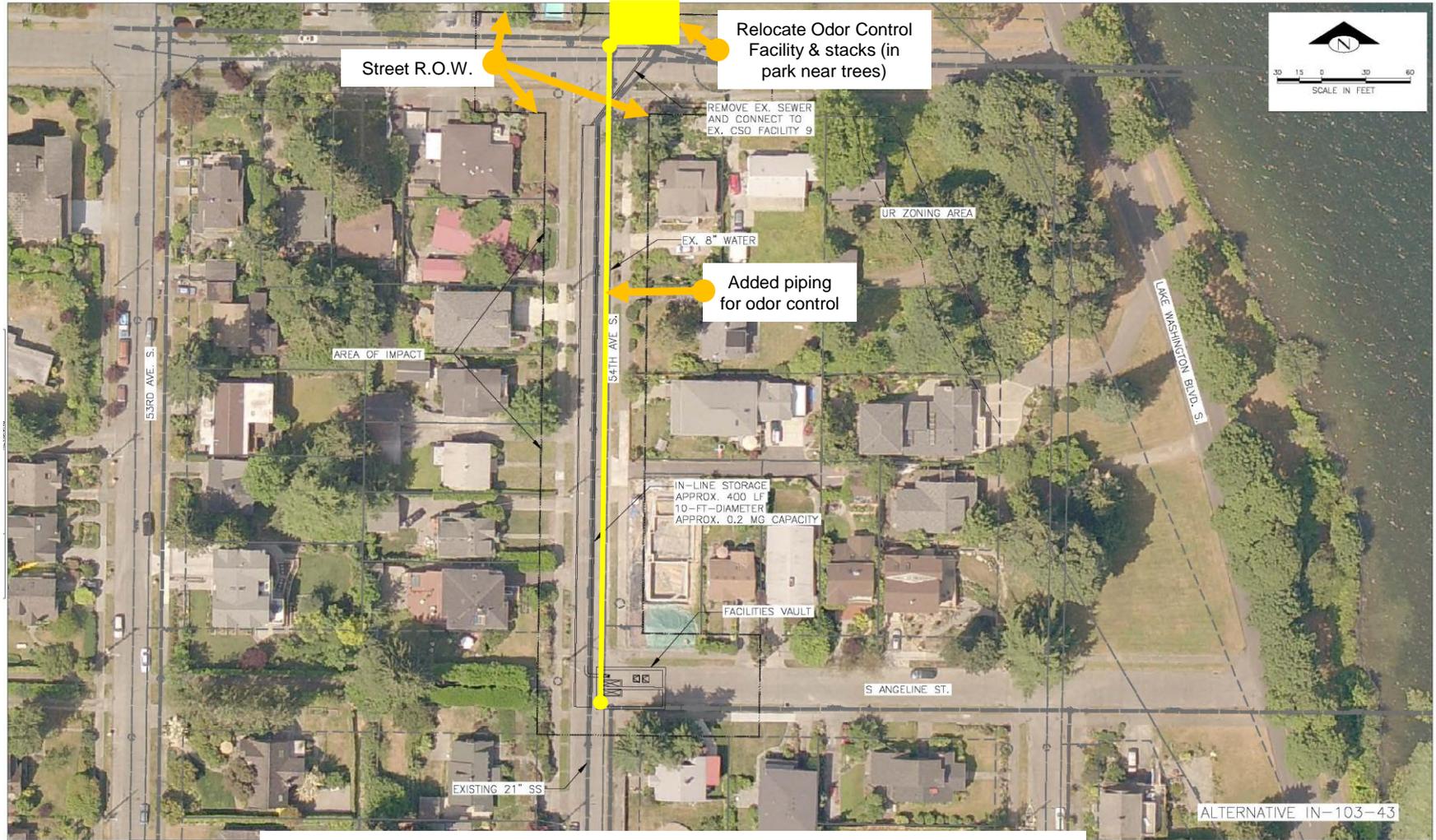
Expand existing storage in Park near S. Alaska St.

Capacity: Approx. 250,000 gallons

Zoomed-in View of Rendering for S. Alaska Storage



Genesee Alternative #3b(2): Storage in 54th Ave S



Work in Progress

Community Feedback and Report Out

Storage in 54th Ave S.



- Open excavation with road closure not acceptable
- Odor control facility at 54th Ave S & S. Angeline not acceptable
- Trenchless construction blocking one lane of 54th & access pit in park site not desirable

Status of Storage on 54th Ave S.



- Evaluating cost-benefit of open-cut vs trenchless (cost is approx. 25% more than open-cut).
- Moving odor control to north end in park & R.O.W.; increases costs (adds piping to draw odors from south end of tank).

Next Steps

December 2010:

- Meeting with Mayor to present revised Park and 54th Avenue S. alternatives and Triangle Parking Lot

February 2011:

- Council Meeting (public hearing) to confirm preferred alternative
- Council may or may not adopt an ordinance authorizing use of park sites for this CSO facility

Project Outreach

Presentations and briefings to community:

- ✓ **June 7** - Mt. Baker Community Club
- ✓ **June 23** - Southeast District Council
- ✓ **August 21** - On-site Question & Answer sessions
- ✓ **August 26** - Genesee Park Neighbors Association
- ✓ **Sept. 14** - Lakewood/Seward Park Community Association
- ✓ **Sept. 21** - Public Meeting
- ✓ **Oct. 12** - Alaska St. SW & 54th Ave S. Neighborhood Meeting
- ✓ **Nov. 1** - Friends of Seattle Olmsted Parks
- ✓ **Nov. 9** - Public Meeting

On-going Project Communications

- ❑ SPU will send out project updates through the e-mail distribution list (listserv)
- ❑ Presentations, project updates, and other information will be posted to the project website (www.seattle.gov/cso/genesee)
- ❑ You can send emails directly to the project team (SPU_GCSO@Seattle.gov)
- ❑ You can call and leave a message for the project team (206-826-4767)

Contact Information

SPU_GCSO@Seattle.gov

206-826-4767

www.seattle.gov/CSO

If you would like to be included on the project email list – sign up in back, or sign up at www.Seattle.gov/cso/genesee