

Updates Regarding Service to Ketron Island

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TACOMA  **POWER**
TACOMA PUBLIC UTILITIES

Agenda

- Issue background
- Service Options
- Cost to Customers
- Next Steps
- Feedback

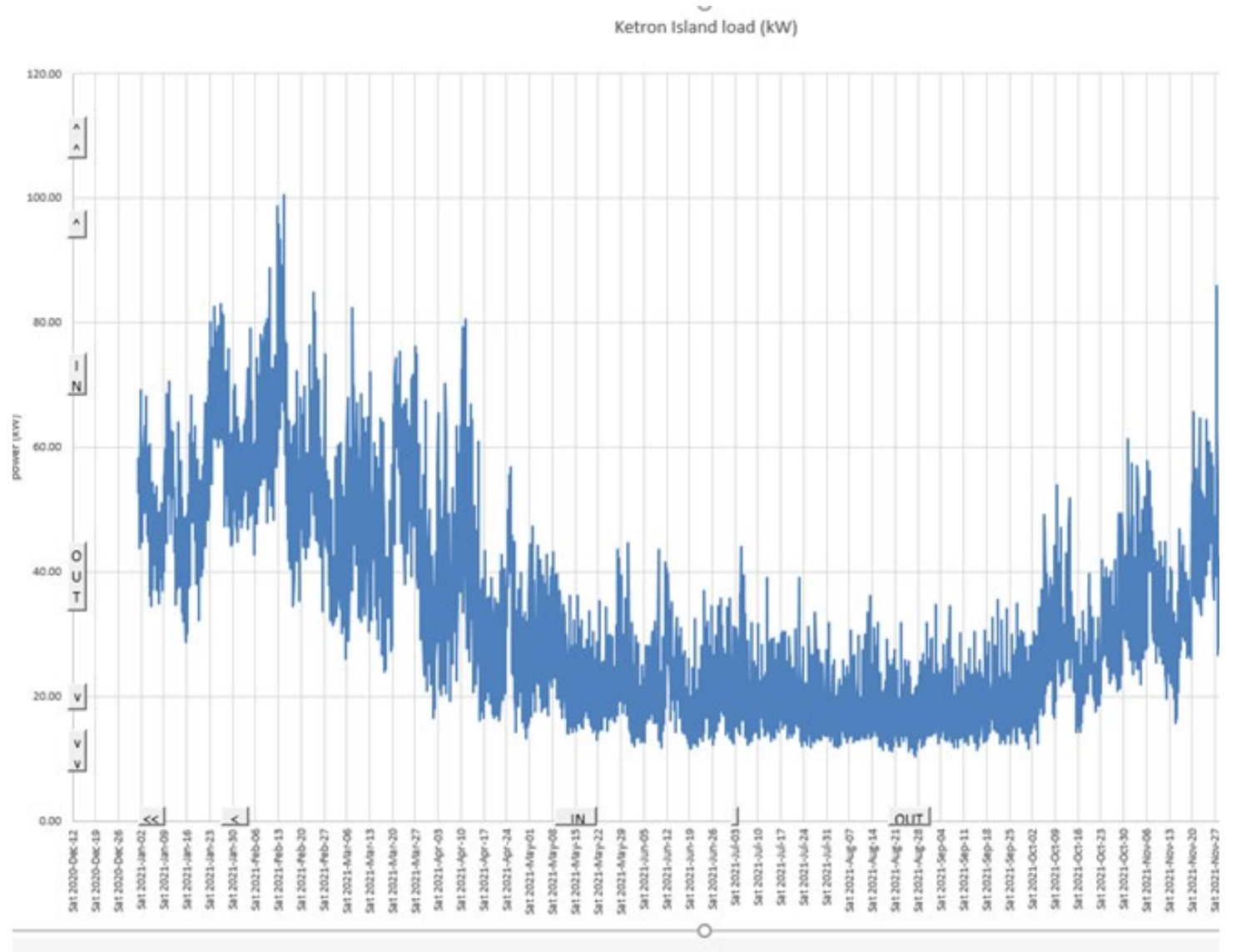


Background

- Tacoma Power has provided service since 1965
- 10 miles from Tacoma, 1.4 miles across 230 acres of land
- Approximately 23 accounts of which fewer than 7 homes are year-round residences
- There are two small general schedule accounts for the ferry dock and the water treatment plant
- Development was supposed to support 265 homes
- Pierce County assessed value of homes \$6.5 M
- Ferry Service which was 9 trips a day has been reduced to 2 to 3 trips with required notice.
- [The Curious Case of Ketron Island – The Sunday Long Read](#)

Ketron Island Electrical Load

- 2022 peak was around 100kW
- 23 Power accounts
 - 2 are designated for Water Well
 - 2 designated for a marina
 - 1 for Pierce County Ferry Terminal
 - Remaining are residential services
- Environmental limitations to growth (sewer and water)



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- An aerial photograph of Ketron Island, a long, narrow island covered in dense green forest. The island is surrounded by deep blue water. A small pier or structure is visible at the tip of the island. The text is overlaid on the left side of the image.
- The submarine cable that feeds Ketron Island is beyond end of the manufacture's life span at 59 years old. The cost to replace the cable is significant.

Ketron Island Service Options

Options	Replace Submarine Cable	Non-Wires Solutions (Distributed generation islanded from the utility)	Emergency Service (diesel gen)
Cost	\$10M-15M	Unknown	Unknown
Schedule	4 to 7 years	Varies depending on solutions	Days to weeks
Schedule Drivers	Environmental studies and permitting Supply chain limitations for submarine cables Limited number of installers	Supply chain limitations Immature technologies	Availability of diesel gen set
Environmental Constraints	Marine and shoreline permits (Salmon, Eelgrass, shellfish, raptors, etc.)	Emissions limitations	Emissions limitations
Customer Participation	Minimal	Extensive	Minimal

Submarine Cable Cost to Customers

- Cost variability of submarine cable installations
 - Dependent on environmental requirements
 - Market for submarine cables is volatile (limited worldwide production)
 - Installers are limited and mobilization is expensive
- Charge all submarine cable costs to Ketrion customers
 - \$3,555 monthly fee (\$13.5 M)
 - 30-year recovery from 23 customers
- Recover costs from residential class
 - Additional one-time 0.75% rate increase on residential class.
 - Cost-causation principle

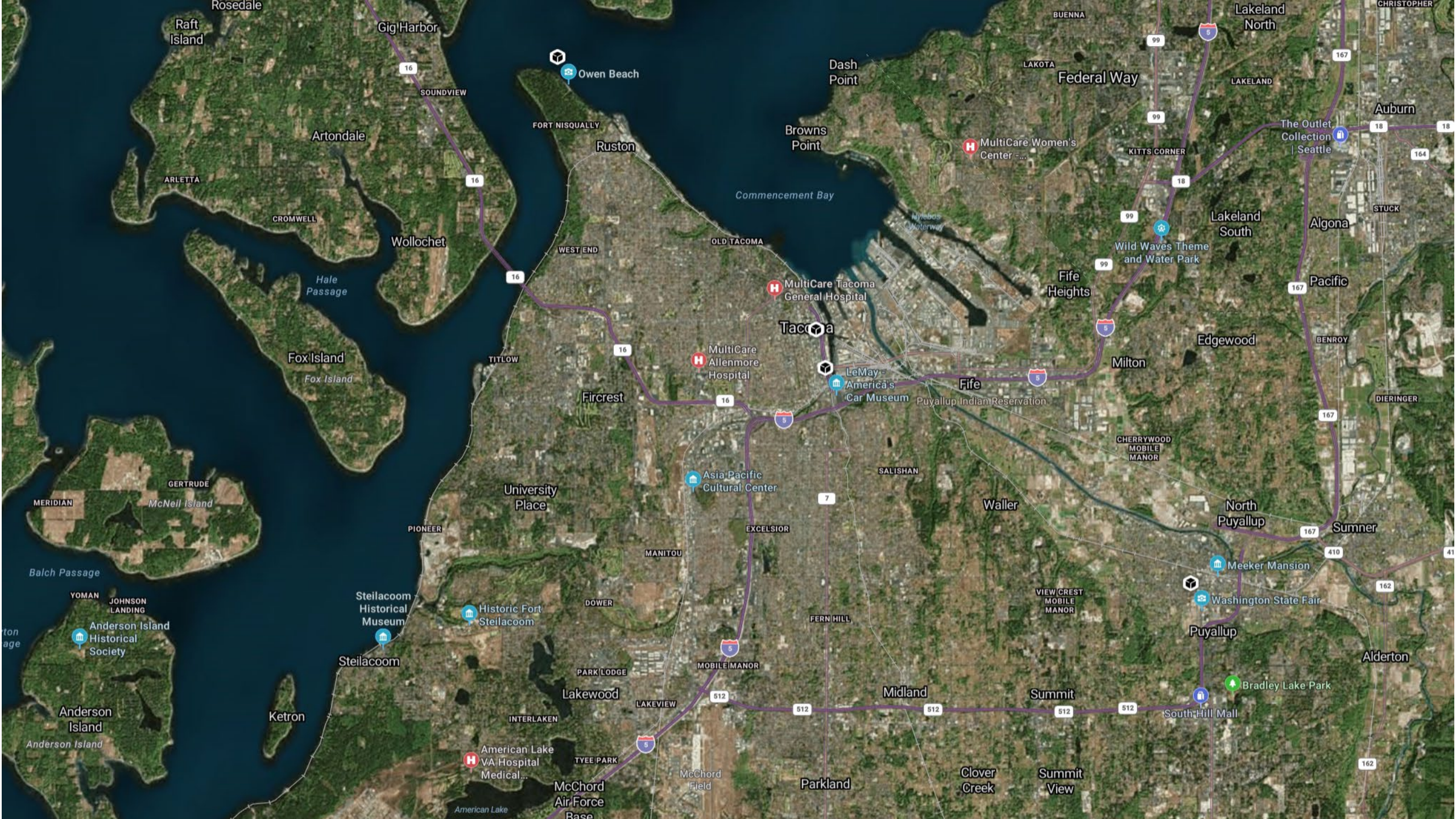




Next Steps

- Refine submarine cable cost estimate
- Non-wire feasibility study and cost estimates
- Contingency plan development
- Community outreach
- Bring results of feasibility study back to PUB





Rosedale

Gig Harbor

Owen Beach

Dash Point

Federal Way

Lakeland North

Artondale

Ruston

Browns Point

MultiCare Women's Center

Auburn

ARLETTA

CROMWELL

Wollochet

WEST END

OLD TACOMA

KITTS CORNER

LAKELAND

The Outlet Collection Seattle

Fox Island

TITLOW

Fircrest

MultiCare Allenmore Hospital

MultiCare Tacoma General Hospital

Tacoma

LeMay - America's Car Museum

Fife

Milton

Lakeland South

Algona

STUCK

MERIDIAN

GERTRUDE

McNeil Island

University Place

MultiCare Tacoma General Hospital

Asia Pacific Cultural Center

LeMay - America's Car Museum

Puyallup Indian Reservation

CHERRYWOOD MOBILE MANOR

Edgewood

Pacific

DIERINGER

Balch Passage

YOMAN

JOHNSON LANDING

Anderson Island Historical Society

Stellacoom Historical Museum

Historic Fort Steilacoom

DOWER

MANITOU

EXCELSIOR

Waller

CHERRYWOOD MOBILE MANOR

North Puyallup

Sumner

410

Washington State Fair

Meeker Mansion

Puyallup

Alderton

Anderson Island

Ketron

Stellacoom

Lakewood

LAKEVIEW

MOBILE MANOR

FERN HILL

Midland

Summit

South Hill Mall

Bradley Lake Park

American Lake VA Hospital Medical...

McChord Air Force Base

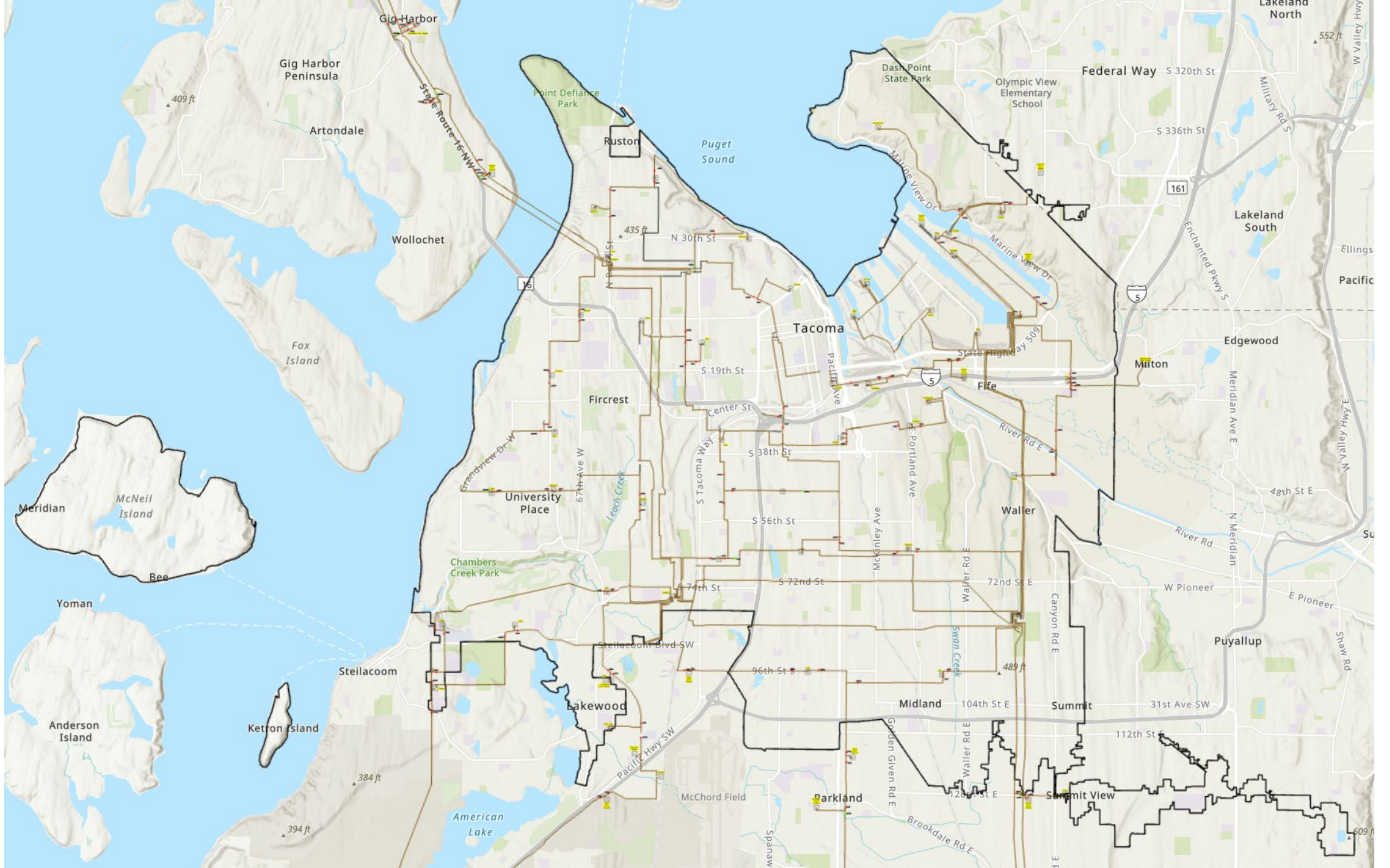
McChord Field

Parkland

Clover Creek

Summit View

162



Gig Harbor Peninsula

Artondale

Wollochet

Fox Island

Meridian

McNeil Island

Bea

Yoman

Anderson Island

Ketton Island

Steilacoom

Lakewood

American Lake

Gig Harbor

Point Defiance Park

Ruston

Fircrest

University Place

Chambers Creek Park

McChord Field

Parkland

Tacoma

Dash Point State Park

Olympic View Elementary School

Fife

Midland

Summit View

Federal Way

Milton

Edgewood

Puyallup

Lakeland South

Lakeland North

Ellings Pacific

Puget Sound

Leach Creek

Swan Creek

Spanaw

Brookdale Rd E

State Route 16 NW 72

Maine View Dr

Marine View Dr

State Highway 509

River Rd E

River Rd

E Pioneer

Spaw Rd

Military Rd S

Enchanted Pkwy S

N Meridian

N Valley Hwy E

W Valley Hwy

N Pacific St

N 30th St

S 19th St

Center St

S 38th St

S 56th St

S 74th St

S 72nd St

96th St S

104th St E

112th St E

22nd St E

72nd St E

E Portland Ave

Mckinley Ave

Pacific Ave

S Tacoma Way

67th Ave W

Grandview Dr W

Steilacoom Blvd SW

Pacific Hwy SW

Canyon Rd E

Waller Rd E

E Pioneer

W Pioneer

31st Ave SW

48th St E

River Rd

Meridian Ave E

Edgewood

S 336th St

S 320th St

552 ft

409 ft

435 ft

384 ft

394 ft

609 ft

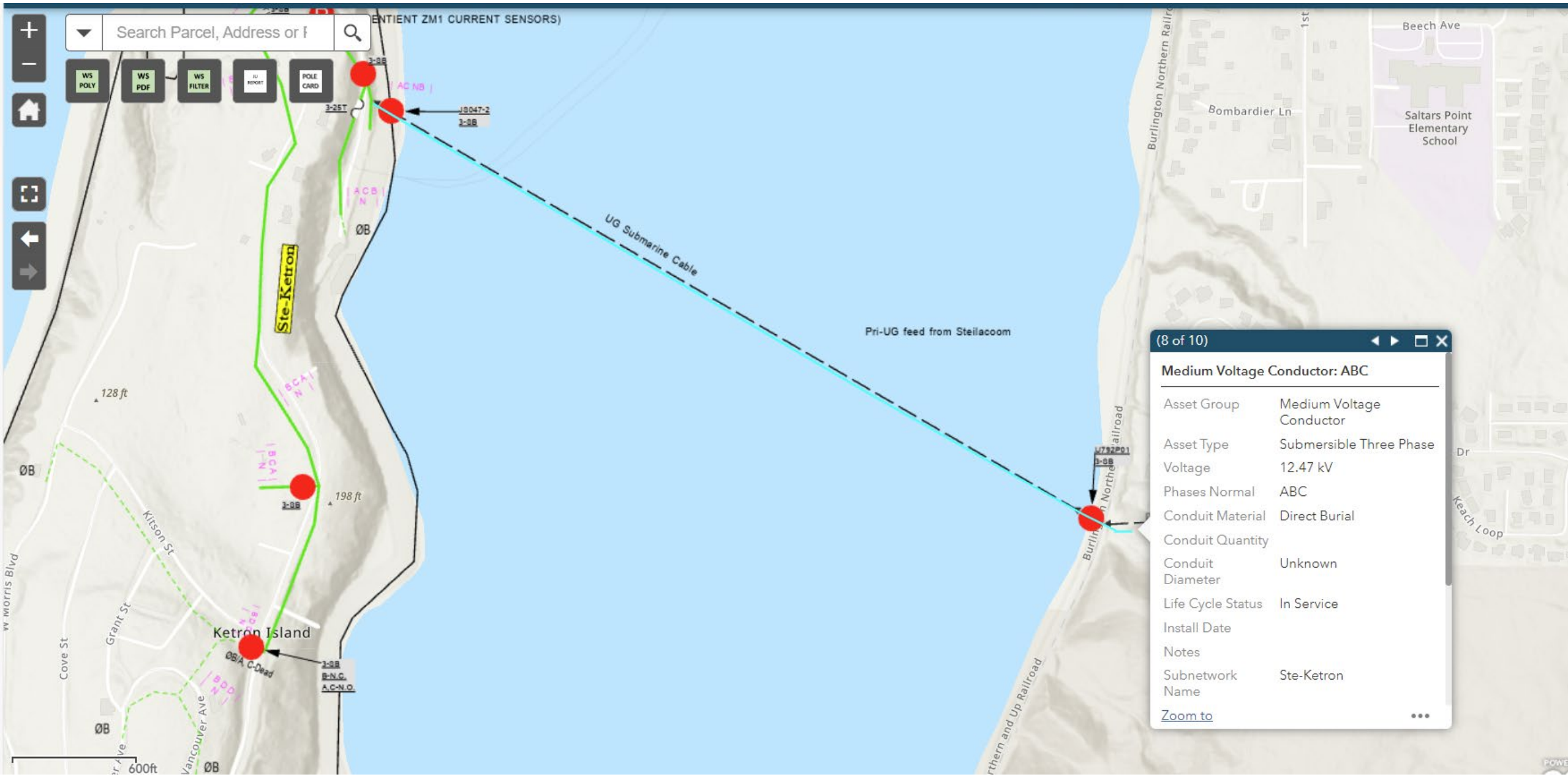
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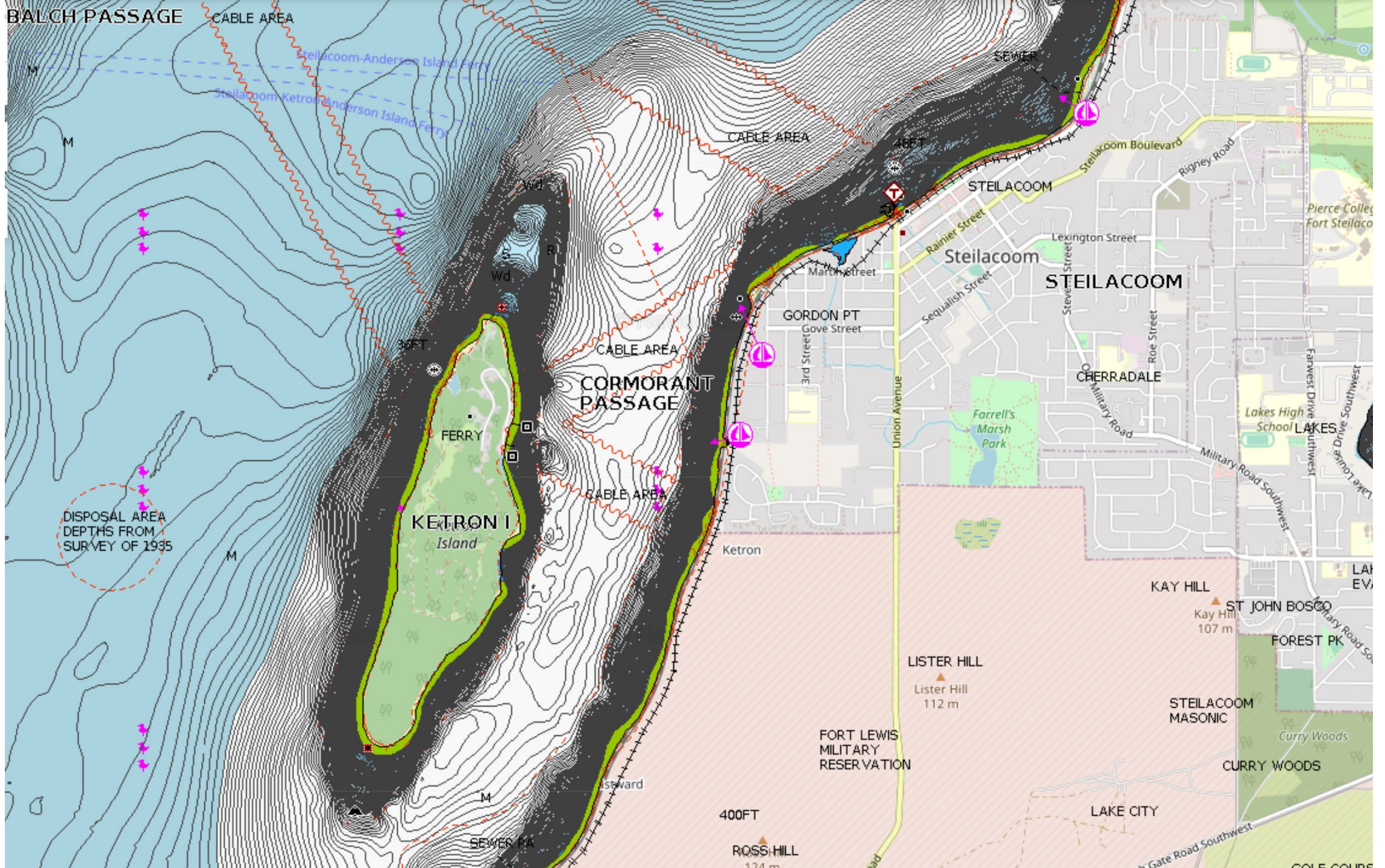
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Medium Voltage Conductor: ABC

Asset Group	Medium Voltage Conductor
Asset Type	Submersible Three Phase
Voltage	12.47 kV
Phases Normal	ABC
Conduit Material	Direct Burial
Conduit Quantity	
Conduit Diameter	Unknown
Life Cycle Status	In Service
Install Date	
Notes	
Subnetwork Name	Ste-Ketron

[Zoom to](#)



[Web site](#)

