Burlington City Hall
Council Chambers
833 South Spruce Street
Burlington, WA 98233

Skagit Transit Board of Directors Agenda

Regular Meeting
August 20, 2025
11:00 a.m.

Join virtually at:
https://tinyurl.com/BoardofDirectors-August-20th
Meeting ID: 247 209 492 396 2
Passcode: WW3wc73W

1. **CALL TO ORDER**
2. **PLEDGE OF ALLEGIANCE**
3. **ROLL CALL OF MEMBERS**
4. **PUBLIC COMMENT**
5. **CONSENT / ACTION ITEMS**

   All matters listed within the Consent Agenda have been distributed to each member of the Skagit Transit Board of Directors for reading and study, are considered to be routine, and will be enacted by one motion of the Board with no separate discussion. If separate discussion is desired, that item may be removed from Consent Action Items and placed on Regular Action Items by request.

   a) Approval of July Meeting Minutes ..... Page 3
   b) Approval of July Special Meeting Minutes ..... Page 5
   c) Approval of Claims and Payroll
      June Payroll Direct Deposit and Checks $1,272,647
      June Direct Federal withholding transfer..... $346,470
      June Claims Checks and ACH #4094-4248..... $647,670
   d) Approve June Budget Update..... Page 7

6. **FULL DISCUSSION / ACTION ITEMS**
   a) Approve 2025-2030 Transit Development Plan (TDP) ..... Page 8
   b) Approve Resolution 2025-09 Authorization for Disposal of Surplus Vehicles & Parts Page 304
7. **INFORMATION ITEMS**
   a) CEO Update
   b) Employee Recognition
   c) June Productivity and Ridership ..... Page 312
   d) Hydrogen Study Presentation, Matt Potter ..... Page 313
   e) August CAC Report ..... Page 466
8. **ADJOURNMENT**

Skagit Transit Board of Directors Officers

Commissioner Peter Browning…….. Chair Commissioner Lisa Janicki……. Vice Chair

Skagit Transit Board of Directors Membership and Votes

Mayor of Anacortes ……	1
Mayor of Burlington ……	1
Mayor of Mount Vernon ……..	1
Mayor of Sedro-Woolley ……..	1
Skagit County Commissioner District 1 ..	1
Skagit County Commissioner District 2 ..	1
Skagit County Commissioner District 3 ..	1
Anacortes Councilperson ……..	1
Sedro-Woolley Councilperson……..	1

Non-Voting Members

Community Advisory Committee Chair

Skagit Transit Labor Union Representative

Quorum Requirement

A quorum consists of a simple majority (5) of the total votes (9).

Title VI Notice to the Public: Skagit Transit fully complies with Title VI of the federal Civil Rights Act of 1964 and related statutes, and does not discriminate on the basis of race, color or national origin. For more information, or to obtain a Title VI Complaint Form, visit Skagit Transit's website at https://www.skagittransit.org/about-us/civil-rights-discrimination/

Aviso resumido del Título VI al público: Skagit Transit cumple plenamente con el Título VI de la Ley federal de derechos civiles de 1964 y los estatutos relacionados, y no discrimina por motivos de raza, color u origen nacional. Para mayor información, o para obtener un Formulario de queja del Título VI, visite el sitio web del Skagit Transit en https://www.skagittransit.org/about-us/civil-rights-discrimination/

ADA Notice to the Public: Skagit Transit fully complies with Section 504 of the Rehabilitation act of 1973 and the Americans with Disabilities Act of 1990 (ADA) and does not discriminate on the basis of disability. For more information, or to file a grievance contact the ADA Coordinator, Jennifer Davidson at 360-757-5178 or jdavidson@skagittransit.org.

Aviso de la ADA para el público: Skagit Transit cumple plenamente con la Sección 504 de la Ley de Rehabilitación de 1973 y la Ley de Americanos con Discapacidades de 1990 (ADA) y no discrimina por motivos de discapacidad. Para obtener más información, o para presentar una queja, póngase en contacto con el Coordinador de la ADA, Jennifer Davidson en 360-757-5178 o jdavidson@skagittransit.org.

RECORD OF THE PROCEEDINGS
SKAGIT TRANSIT BOARD OF DIRECTORS

Wednesday, July 16, 2025

The Skagit Transit Board of Directors met in a regular meeting in Burlington, WA. Commissioner Peter Browning, Board Chair, called the meeting to order at 11:04 a.m., followed by the Pledge of Allegiance and roll call. Due to technical difficulties with the MS Teams application, the majority of the meeting was not recorded.

Members Present
Peter Browning, Skagit County Commissioner (Chair)
Ron Wesen, Skagit County Commissioner
Peter Donovan, City of Mount Vernon, Mayor
Julia Johnson, City of Sedro Woolley, Mayor
Matt Miller, City of Anacortes, Mayor (stepped out of the meeting for 1 minute at 11:44 a.m.)
Bill Aslett, City of Burlington, Mayor (Left the meeting at 11:22 a.m.)
Tracy Cook, Labor Representative (non-voting member))

Members Present via Teleconference
Lisa Janicki, Skagit County Commissioner (Vice Chair)
Carolyn Moulton, City of Anacortes, Councilmember (Joined the meeting at 11:37 a.m.)
Judy Jones, Community Advisory Committee (Chair, non-voting member)

Members Absent:
Joe Burns, City of Sedro-Woolley, Councilmember

Providing Legal Counsel:
Cedric Adams, WSTIP

Staff Present
Larissa Farrell, Clerk of the Board
Crystle Stidham, Chief Executive Officer
Greg Latham, Director of Maintenance, Operations, and Facilities
Jennifer Davidson, Director of HR and Risk Management
Joe Stewart, Director of Finance
Chris Arkle, Manager of Finance and Accounting
Nate Burns, Procurement and Contracts Coordinator
Maleah Kuzminsky, Planning and Outreach Manager
Eric Gambill, Security Supervisor

Staff Present via Teleconference:
Ryan Quast, Electronics Systems Technician
Taylor Patti, Financial Analyst
Mika Ela-Bergman, Maintenance Support Technician
Abby Bissell, HR Generalist
Wayne Simmons, Facilities Supervisor
Susan Libby, Travel Trainer
Belle Tromp, Operations Manager
Eric Esparza, Capital Projects Manager
Rogelio Conejo, Community Engagement Coordinator
Josh Klinger, Maintenance Supervisor
Rebekah Tuno, Grants Manager

Members of Public Present
Colleen Kennedy; Mike Kerr

Members of the Public Present via Teleconference:
Patty; BV; 1-916-501-8890; Joe Kunzler; 1-208-308-8876; Rosie Ventura; Press; Transit Rider; Cameron's Notetaker; Grace Jesperson; 00000; Josh Nylander; Chris Summers

1 Executive Session - RCW 42.30.110(1)(i)

The board met in executive session to review potential litigation. Mr. Browning stated that the Board would meet for 15 minutes from 11:07 a.m. to 11:22 a.m. The board resumed the regular meeting at 11:22 a.m.

2 Public Comment

Public comment was made.

3 Consent / Action Items

a) Approval of June Meeting Minutes
b) Approval of June Special Meeting Minutes
c) Approval of Claims and Payroll
   May Payroll Direct Deposit and Checks
   May Direct Federal withholding transfer
   May Claims Checks and ACH #3885-4093
d) Approve May Budget Update

Mr. Miller moved to approve all Consent/Action items. Ms. Johnson seconded the motion. The motion passed unanimously.

4 Full Discussion/Action Items:

a) Approve Grant Awards
Ms. Stidham summarized the report as presented in the board packet.

Mr. Aslett moved to approve the Grant Awards. Mr. Wesen seconded the motion. The motion passed unanimously.

b) Approve Resolution 2025-08 Allowing Staff to Withdraw of Funds from STS.001: Skat General
Ms. Stidham read the report as presented in the board packet.

Mr. Donovan moved to approve Resolution 2025-08 Allowing Staff to Withdraw of Funds from STS.001: Skat General. Mr. Aslett seconded the motion. The motion passed unanimously.

c) Approve Award 24-021, Mobile Fare Ticketing
Ms. Stidham read the report as presented in the board packet.

Ms. Johnson moved to approve Award 24-021, Mobile Fare Ticketing to Cubic Transportation Systems for a period of three years plus two optional years for a total of five years. Mr. Miller seconded the motion. The motion passed unanimously.

5 Information Items
a) Transit Development Plan
b) CEO Update
c) May Ridership
d) July CAC Report

Peter Browning adjourned the meeting at 12:29 p.m.

Attest:

_____
Peter Browning, Chair Skagit Transit Board of Directors

_____
Larissa Farrell, Clerk of Skagit Transit Board

RECORD OF THE PROCEEDINGS
SKAGIT TRANSIT BOARD OF DIRECTORS

Wednesday, July 28, 2025

The Skagit Transit Board of Directors met in a virtual special meeting conducted via Microsoft Teams. Commissioner Peter Browning, Board Chair, called the meeting to order at 12:02 p.m., followed by roll call.

Members Present

Members Present via Teleconference
Peter Browning, Skagit County Commissioner (Chair)
Lisa Janicki, Skagit County Commissioner (Vice Chair)
Ron Wesen, Skagit County Commissioner
Peter Donovan, City of Mount Vernon, Mayor
Julia Johnson, City of Sedro Woolley, Mayor
Matt Miller, City of Anacortes, Mayor
Bill Aslett, City of Burlington, Mayor
Joe Burns, City of Sedro-Woolley, Councilmember
Carolyn Moulton, City of Anacortes, Councilmember
Judy Jones, Community Advisory Committee (Chair, non-voting member)

Members Absent:
Tracy Cook, Labor Representative (non-voting member)

Providing Legal Counsel:
Cedric Adams, WSTIP
Suzane Michael, Fisher & Phillips LLP

Staff Present
Joe Stewart, Director of Finance
Chris Arkle, Manager of Finance and Accounting
Nate Burns, Procurement and Contracts Coordinator
Maleah Kuzminsky, Planning and Outreach Manager
Eric Gambill, Security Supervisor

Staff Present via Teleconference:
Larissa Farrell, Clerk of the Board
Crystle Stidham, Chief Executive Officer
Jennifer Davidson, Director of HR and Risk Management
Kelly Myiow, Payroll and Leave Administrator
Ryan Long, Maintenance Parts Technician
Jason Kelley, NW Technology

Members of Public Present

Members of the Public Present via Teleconference:
Colleen; Mike Kerr; Dodo; Ralph Kramden; Resident; Resident; Andrea M; 123; Bell Lugosi; 1-425-319-2078

1 Executive Session - RCW 42.30.110(1)(i)

The board met in executive session to review potential litigation. Mr. Browning stated that the Board would meet for 30 minutes from 12:05 p.m. to 12:35 p.m. At 12:35 p.m., Mr. Browning re-entered the room and announced they would need a 5-minute extension. At 12:41 p.m., Mr. Browning again re-entered the room and announced another 5-minute extension. The board re-entered the room and resumed the regular meeting at 12:48 p.m.

2 Full Discussion/Action Items:

a) Approve Communication Related to Potential Litigation

Ms. Janicki clarified that the communication (letter) referenced here (and attached to these minutes) is a letter to Skagit Transit staff and would be distributed by the Human Resources department to employees.

Mr. Wesen moved to approve the communication related to potential litigation. Ms. Johnson seconded the motion. The motion passed unanimously.

b) Approve Legal Expenses

Ms. Janicki moved to table this action item. Mr. Aslett seconded to table this action item.

Peter Browning adjourned the meeting at 12:51 p.m.

Attest:

_____
Peter Browning, Chair Skagit Transit Board of Directors

_____
Larissa Farrell, Clerk of Skagit Transit Board

Docusign Envelope ID: 7051F577-260F-4C13-80F1-FAEDCD6F90C2

SKAGIT TRANSIT

Memo 00.2025.13

To: All Employees

From: Commissioner Peter Browning, Chair of the Skagit Transit Board of Directors, on behalf of the Skagit Transit Board of Directors

Date: July 28, 2025

Subject: Media Inquiries

As many of you are aware, a former disgruntled employee who was terminated in 2023 has been publicly making a number of false or grossly exaggerated claims and has filed a lawsuit against Crystle Stidham and Skagit Transit. These actions have understandably raised questions and concerns among employees. The Board is aware of the allegations, claims, and lawsuit, has heard from both sides on the matter, and supports Crystle in her defense against the claims. In fact, both the State Auditor and an independent workplace investigator reviewed these accusations prior to the lawsuit being filed and found no evidence of malfeasance.

Due to anticipated legal action and media attention, we do not expect to make further public comments at this time. However, we want to reassure you that we recognize the impact these claims may have and the uncertainty they can create. The Skagit Transit Board remains confident in Crystle's leadership and the organization's continued ability to fulfill its mission with professionalism and the highest integrity.

Thank you for your patience and cooperation as we navigate this lengthy legal process.

Regards,

DocuSigned by:
Peter Browning
9FB11B1D22C2430...

Commissioner Peter Browning
Chair of the Skagit Transit Board of Directors

TO: Skagit Transit Board of Directors

FROM: Chris Arkle, Accounting & Finance Manager

SUBJECT: Monthly Budget Update Report for June 2025

INFORMATION: The monthly budget reports are presented for your review. Items of interest are:

Revenues:

Sales Tax Received:

June	2025	2024	2023
	1,547,095	1,392,761	1,572,012

Grant Revenue:

Federal Operating	-
Federal Capital	-
Local Operating	-
State Operating	-
State Capital	-

Fare Revenue:

	2025	2024	2023	2022
June	66,053	59,024	70,448	64,108
Yrly-Budget	791,764	718,000	684,500	592,964
Mon-Budget	65,980	59,833	57,042	49,414

Expenses

Capital	
Route Improvements	-
Skagit Station	-
Park & Ride	10,499
Revenue Equipment	16,733
Service Equipment	-
Vanpool Equipment	-
MOA 2	-
Bldgs. - MOA	240,130
Garage/Shop Equipment	14,522
Office Furniture/Equip.	-
Intangible Asset - SW	-
Communications & IS	-

Ending Cash:

June 2025	June 2024	June 2023
1,859,235	3,621,530	3,116,784

Reserves:

	June 2025	June 2024	June 2023
Operating	5,739,005	5,485,351	5,206,025
Facilities	10,400,000	10,400,000	10,400,000
Capital Replacement	6,067,784	5,339,932	4,538,156
Non-Designated	1,719,298	1,643,313	1,559,686
Total	23,926,087	22,868,596	21,703,867

RECOMMENDATION: Staff recommends the Board approve the monthly budget report.

TO: **Skagit Transit Board of Directors**

FROM: **Crystle Stidham, Chief Executive Officer**

SUBJECT: **Approve Skagit Transit's 2025-2030 Transit Development Plan**

INFORMATION:

Skagit Transit has prepared its 2025–2030 Transit Development Plan (TDP). The draft plan was released for public review on July 15, 2025, initiating a 30-day comment period that concluded on August 14, 2025.

All public comments received during this period were included in the August 20, 2025, Board of Directors packet for review and consideration. Skagit Transit staff reviewed these comments and made updates to the draft TDP to reflect community input where appropriate.

RECOMMENDATION:

Skagit Transit staff recommends that the Board of Directors approve the 2025–2030 Transit Development Plan for submission to the Washington State Department of Transportation by the legislatively required deadline of September 1, 2025.

BUDGET IMPACT:

None at this time.

SKAGIT TRANSIT

2025-2030
TRANSIT DEVELOPMENT PLAN (TDP)

DRAFT

PREPARED BY

SKAGIT TRANSIT

DRAFT PUBLISHED

JULY 14TH, 2025

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  - Public Transportation MGMT System Inventory
  - Supporting Documents
    - Skagit Transit Final Long-Range Transit Plan
    - Skagit Transit Approved Budget FY 2025

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Letter from the CEO

Dear Skagit Transit Stakeholders,

I am pleased to present Skagit Transit's ***2025–2030 Transit Development Plan (TDP)***. This plan outlines our vision for the future of transit services and represents our commitment to enhancing mobility, connectivity, and sustainability in our community.

As our region continues to grow and evolve, it is crucial that we anticipate and meet the transportation needs of our residents and businesses. This TDP reflects a thorough analysis of current conditions, growth projections adopted by the Growth Management Act Steering Committee (GMASC), and future opportunities.

This plan is not just a document; it is a commitment to providing safe, reliable, and sustainable transit options that support economic growth, reduce congestion, lower per-capita vehicle miles traveled (VMT) and greenhouse gas (GHG) emissions, and enhance the quality of life for all residents.

I encourage you to review this Transit Development Plan and provide feedback. Your input is invaluable as we work together to shape the future of transit in Skagit County.

Thank you for your continued support and partnership as we embark on this important journey.

Sincerely,

Crystle Stidham

CEO
Skagit Transit

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Section 1: Plan Overview

Skagit Transit is the primary provider of public transportation in Skagit County. Our Six-Year Transit Development Plan (TDP) serves as a comprehensive roadmap outlining our vision for the future of transit in the public transportation benefit area (PTBA). It builds on past successes while addressing current challenges, emerging technologies, and new planning obligations under the Growth Management Act (GMA) and the Climate Commitment Act (CCA).

We have developed a plan that prioritizes reliability, innovation, efficiency, and environmental stewardship. Our objective is to meet the growing demand for transit services, while aligning with local, state, and regional goals to reduce per-capita VMT, lower GHG emissions, and support land use patterns that enable sustainable transportation choices.

This plan conforms to Washington's transportation policy goals (RCW 47.04.280):

- **Economic Vitality**: To promote and develop transportation systems that stimulate, support, and enhance the movement of people and goods to ensure a prosperous economy.
- **Preservation**: To maintain, preserve, and extend the life and utility of prior investments in transportation systems and services.
- **Safety**: To provide for and improve the safety and security of transportation customers and the transportation system.
- **Mobility**: To improve the predictable movement of goods and people throughout Washington State.
- **Environment**: To enhance Washington's quality of life through transportation investments that promote energy conservation, support healthy communities, and protect the environment.
- **Stewardship**: To continuously improve the quality, effectiveness, and efficiency of the transportation system.

Skagit Transit aligns its objectives with Washington State's transportation-oriented plans and the local *Skagit 2045 Regional Transportation Plan*. In addition, Skagit Transit plays a critical role in helping local jurisdictions meet GMA obligations to reduce per-capita VMT and GHG emissions. Without Skagit Transit's services, local governments would be unable to achieve these targets. This TDP underscores the importance of transit in meeting these regional planning objectives.

These plans reflect our shared commitment to sustainable and accessible transit solutions. Links to key plans referenced in this TDP:

- Skagit 2045 Regional Transportation Plan
- Growth Management Act (GMA)
- Climate Commitment Act (CCA)

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Section 2: Organization Overview

Agency Values

Mission

Skagit Transit connects communities and fosters growth by providing sustainable, innovative, efficient, and equitable public transportation options. We are dedicated to enhancing mobility and quality of life for all residents through reliable, safe, and cost-effective service excellence. By embracing technology, innovation, and community input, we strive to be a leader in shaping the future of public transit, making Skagit County more accessible and livable for everyone.

Vision

To be the lifeline of Skagit County, empowering our communities through a sustainable and innovative public transit system. We envision a future where every resident has access to reliable, efficient, fast, and frequent transportation that connects them to opportunities, services, and each other. Our vision is to contribute toward a more connected, sustainable, and thriving Skagit County for all.

Organizational Values

- Efficiency: We are committed to delivering fast, frequent, and reliable service as cost-effectively as possible.
- Safety: We ensure that the safety of employees, passengers, and the public is always our top priority.
- Service Excellence: We provide safe, clean, reliable, courteous, and on-time service.
- Workforce Development: We attract, develop, and retain a world-class workforce.
- Fiscal Responsibility: We manage every taxpayer and customer-generated dollar as if it were our own.
- Innovation and Technology: We actively identify best practices for continuous improvement.
- Sustainability: We reduce, reuse, and recycle internal resources and reduce greenhouse gas emissions.
- Integrity: We rely on professional ethics and honesty.
- Teamwork: We blend our individual talents to achieve world-class performance.

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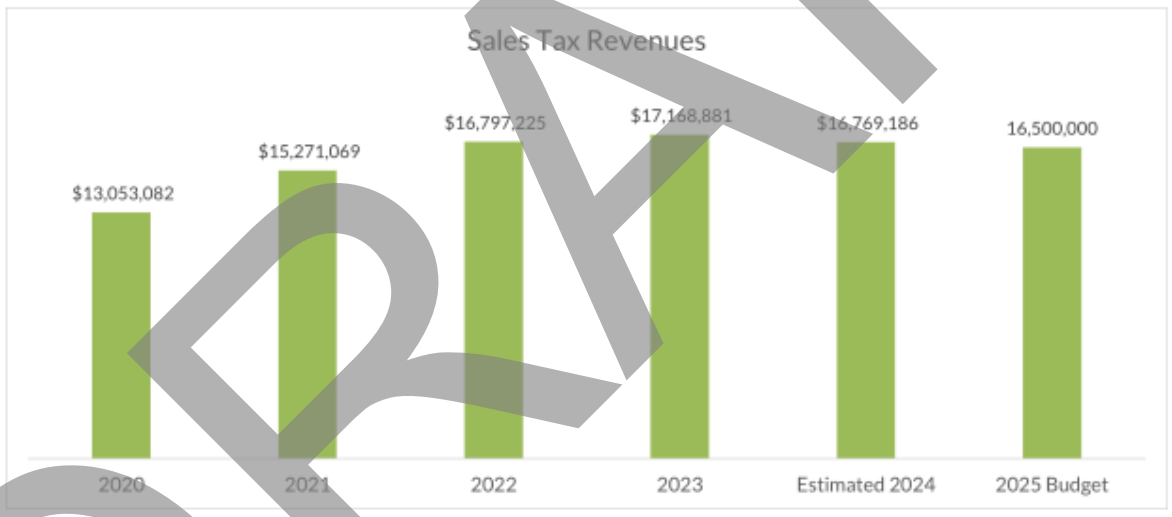
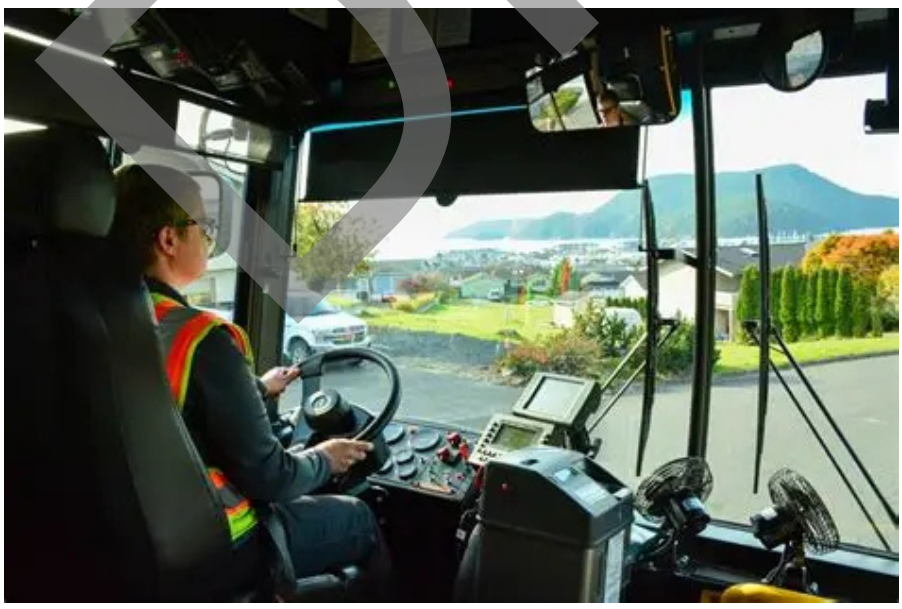
Section 2: Organization Overview

Agency History and Funding

Skagit Transit was established in 1993 under RCW 36.57A with an initial 0.2% sales tax. Today, Skagit Transit is supported by a 0.4% local sales tax (equivalent to $0.04 per $10 spent) plus state and federal grants. In 2023, sales tax revenues totaled $17,168,881, a 2.2% increase from 2022.

Skagit Transit's services are essential for achieving regional climate and land use goals under the GMA and CCA. In partnership with local governments, Skagit Transit enables land use patterns that support multimodal transportation, reduce per-capita VMT, and lower GHG emissions. This integrated planning approach is critical to meeting statutory climate targets.





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Section 2: Organization Overview

Structure of Governance

Skagit Transit is governed by a nine-member Board of Directors consisting of elected officials from Skagit County, Anacortes, Burlington, Mount Vernon, Sedro Woolley, and other local jurisdictions. There is also a non-voting labor representative.

Peter Browning
Chair
COMMISSIONER
SKAGIT COUNTY

Lisa Janicki
Vice Chair
COMMISSIONER
SKAGIT COUNTY

Ron Wesen
Board Member
SKAGIT COUNTY
COMMISSIONER

Bill Aslett
Board Member
MAYOR
BURLINGTON

Peter Donovan
Board Member
MAYOR
MOUNT VERNON

Matt Miller
Board Member
MAYOR
ANACORTES

Julia Johnson
Board Member
MAYOR
SEDRO-WOOLLEY

Carolyn Moulton
Board Member
CITY COUNCIL
ANACORTES

Joe Burns
Board Member
CITY COUNCIL
SEDRO-WOOLLEY

Tracy Cook
Non-Voting
AFSCME LOCAL 176
PRESIDENT

Judy Jones
Non-Voting
CAC CHAIR
SKAGIT TRANSIT

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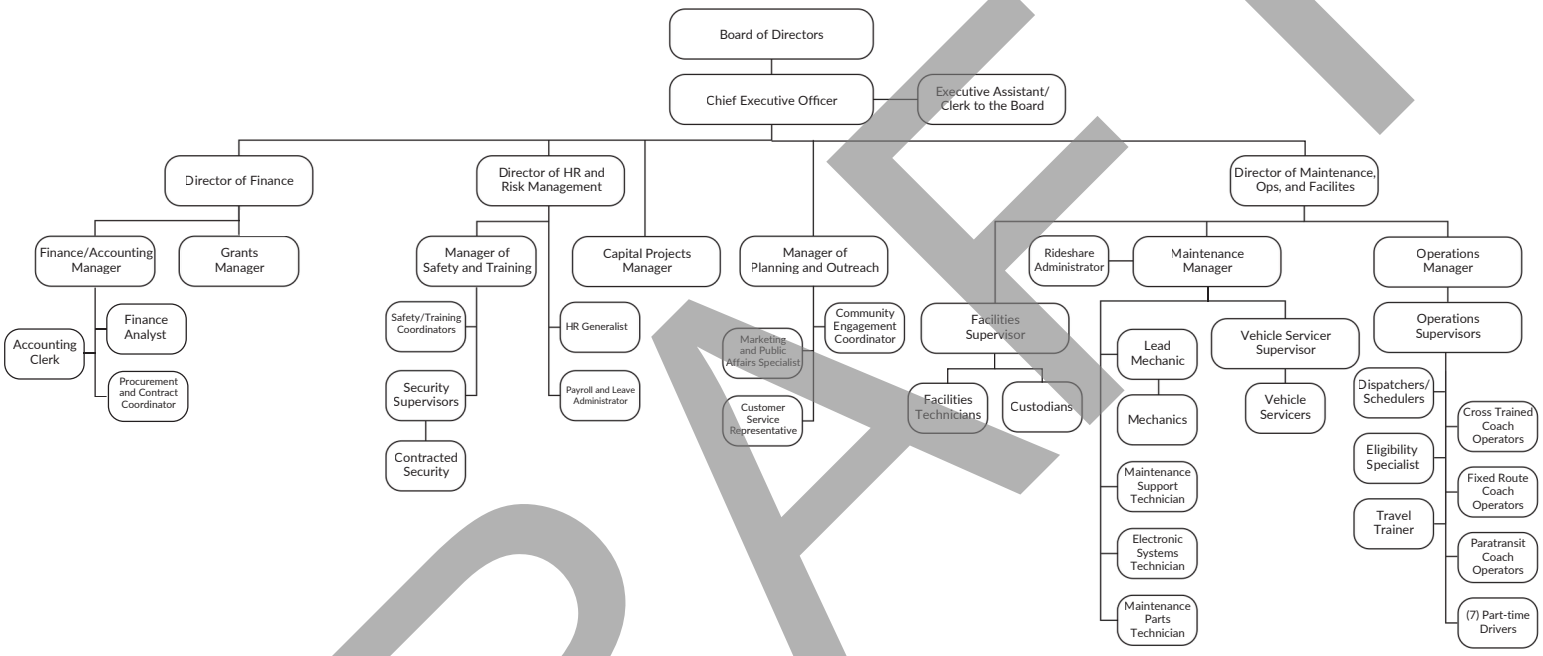
Section 2: Organization Overview

Skagit Transit Organization Chart

Skagit Transit employs a staff of 157, inclusive of 19 administrative positions. The organizational structure is outlined below.



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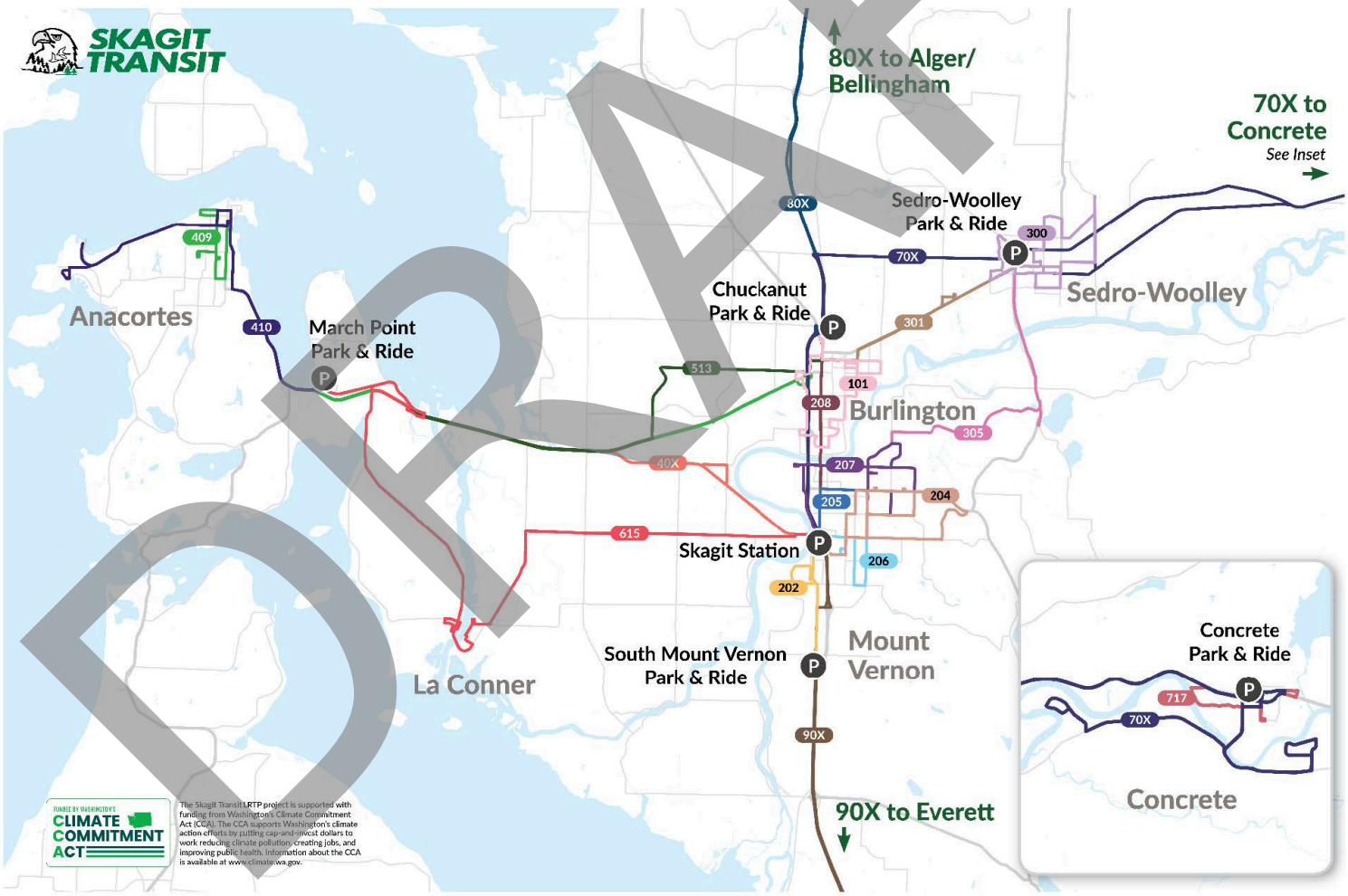
Section 3: Existing System Conditions

System Area and Service Map

Skagit Transit provides service throughout the Public Transportation Benefit Area (PTBA), covering most of Skagit County's incorporated cities and adjacent communities.

Skagit County embodies a diverse demographic landscape shaped by its unique geographical features and economic activities. As of the latest census data, Skagit County is home to a dynamic population characterized by both urban and rural communities, with notable growth and demographic shifts in recent years.



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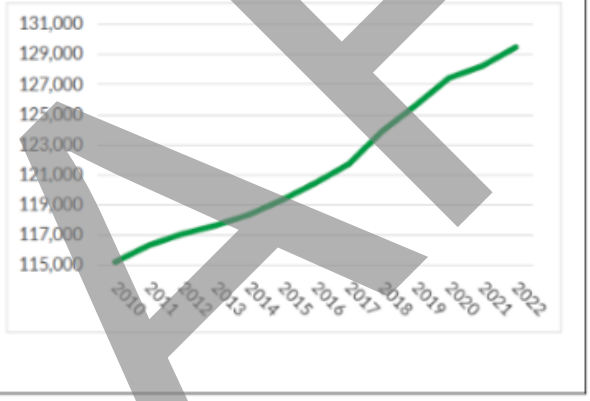
Section 3: Existing System Conditions

Demographic Profile

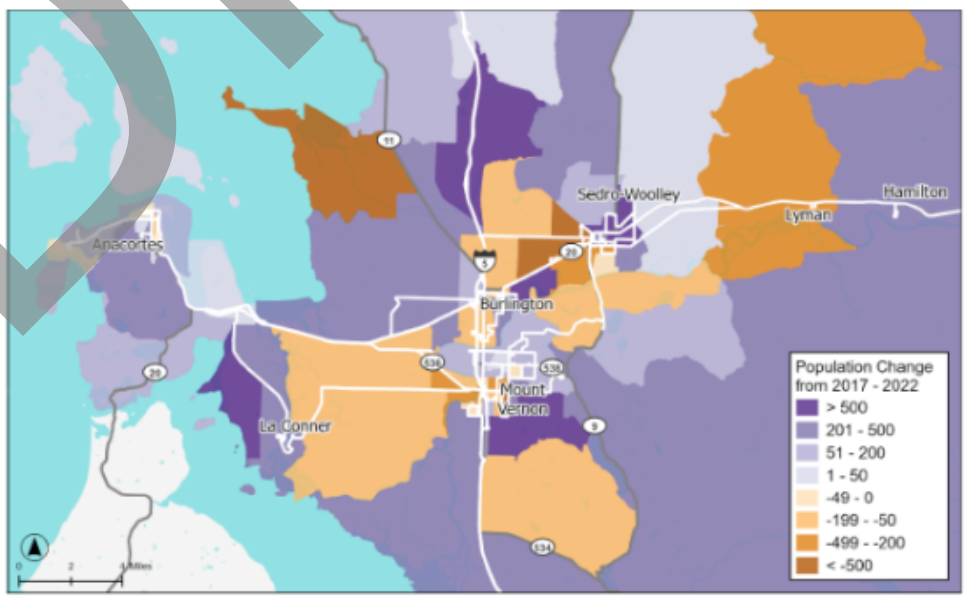
The population of Skagit County has been steadily increasing by an average of 1% each year since 2010. The table below displays the population of Skagit County over time. The Skagit Council of Governments projects that this steady growth will continue and that the county will be home to approximately 160,000 people and 80,000 jobs by 2045. Skagit County's 2024 OFM population estimate is 132,736 reflecting a 2.4% increase since 2020.

Year	Population	Percent Change
2010	115,231	-
2011	116,327	1.0%
2012	117,087	0.7%
2013	117,641	0.5%
2014	118,364	0.6%
2015	119,343	0.8%
2016	120,475	0.9%
2017	121,725	1.0%
2018	123,907	1.8%
2019	125,612	1.4%
2020	127,442	1.5%
2021	128,228	0.6%
2022	129,480	1.0%



Source: US Census, 2022

As seen in the graphic below, population growth over the past few years has been spread across the county, with concentrations of higher growth in south Mount Vernon, east Burlington, Sedro-Woolley, west of La Conner and north of Concrete. Some areas of the county have lost population, including Lyman, west Sedro-Woolley, and Samish Island.



Source: US Census, 2017 and 2022

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Section 3: Existing System Conditions

Demographic Profile

Age Distribution

The median age is 43.1 years. Youth (under 18) and seniors (65+) comprise approximately 44% of the population — key demographics likely to rely on transit.

Race/Ethnicity

- 71.7% White alone, not Hispanic or Latino
- 20.3% Hispanic/Latino
- 2.8% Asian
- 5.2% Other
- Four tribal nations: Swinomish, Upper Skagit, Samish, Sauk-Suiattle

Housing

- Median rent (2024): $1,439/month
- Median home value: $486,200

Transit reduces household transportation costs — typically the second-largest expense after housing — enabling residents to allocate more toward housing, education, and health. Reliable transit service also reduces the need for costly parking, helping make housing more affordable.

Economic Profile

- Median household income: $85,474
- Unemployment: 4.6% (2024)

Transit expands job access, increases workforce participation, and reduces transportation cost burdens, strengthening the local economy.

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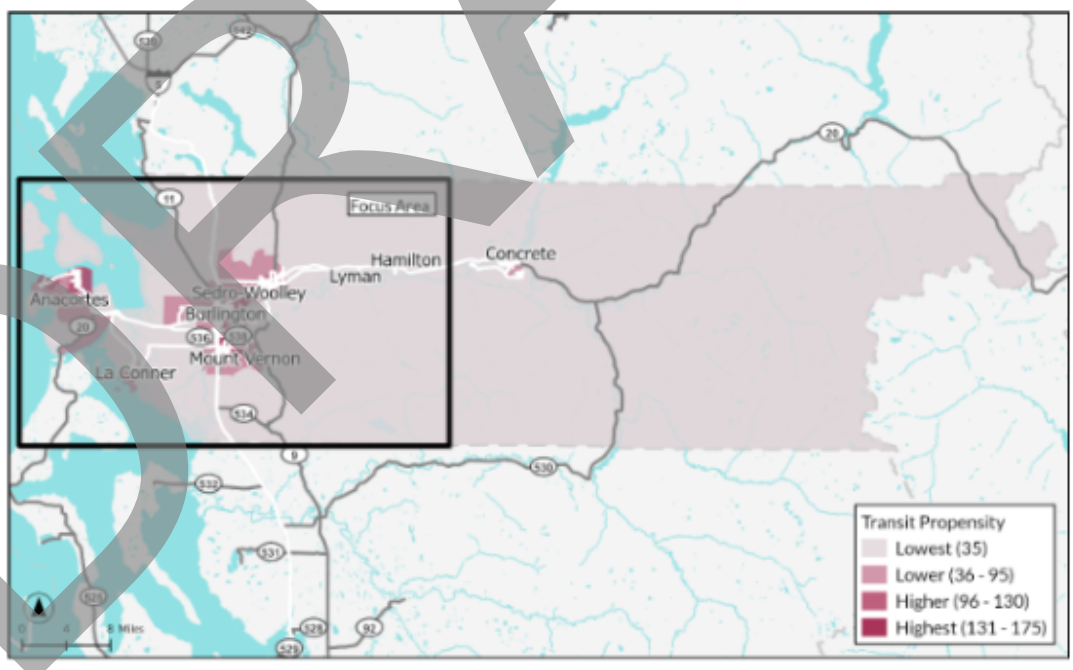
Section 3: Existing System Conditions

Traffic Propensity

A comprehensive market analysis of demographic and socioeconomic conditions was conducted to ensure that transit service is provided equitably across Skagit County. Transit propensity is a composite measure of transit need based on multiple factors, including:

- Population density
- Low-income population
- Youth (<18 years old) population
- Senior (>65 years old) population
- Households with Zero Vehicles available
- Black, Indigenous, and People of Color (BIPOC), including people of Hispanic origin
- Households with at least one reported disability

The transit propensity of Skagit County is shown in the table below. In Skagit County, the areas with the highest transit propensity are concentrated in the urbanized areas of the county, particularly Mount Vernon, but they also include Anacortes, Burlington, La Conner, and Sedro-Woolley.



Source: US Census, 2022

Zero-Car and Low-Car Households

- It is estimate that 1.2% of households have no vehicle
- Many households have fewer cars than licensed drivers, highlighting the need for high-quality transit that reduces car dependency.

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Section 3: Existing System Conditions

Facilities

At Skagit Transit, we facilitate community connectivity by ensuring access to a diverse array of essential and quality-of-life destinations. This commitment is supported by the operation and maintenance of several key facilities and park and ride lots, which play a crucial role in supporting the mobility of our residents. We offer free parking at all locations for up to 10 days. For stays longer than 72 hours, vehicle registration is required, and a parking pass will be issued.

Maintenance, Operations and Administration (MOA) Office
600 County Shop Lane
Burlington, WA 98233

This facility houses Skagit Transit's administrative offices, maintenance and operations, ensuring efficient and effective management of transit services. Parking at this facility is for employees only.

Maintenance, Operations and Administration (MOA2) Construction Site
11784 Bay Ridge Drive
Burlington, WA 98233
The future site for expanded maintenance and operational activities to support the growing demands of Skagit County's residents. Parking at this facility is for employees only.

Skagit Station
105 E. Kincaid Street
Mount Vernon, WA 98273

Skagit Station is a multi-modal transportation facility owned and operated by Skagit Transit. Skagit Transit leases space to AMTRAK within the confines of the station and parking lot. The lot's capacity has room for 44 vehicles.

Skagit Transit routes 202, 204, 205, 206, 207, 208, 615, 40X, 70X, 80X, 90X. Riders can connect directly with Amtrak and Greyhound services, as well as make connections to WTA, Island Transit and FlixBus.

Note: Route 80X is jointly operated by Skagit Transit and WTA.

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Section 3: Existing System Conditions

Facilities

South Mount Vernon Park and Ride
4225 Old Hwy 99 South Rd.
Mount Vernon, WA 98273

Located in Mount Vernon just off I-5, on Old Highway 99. The facility is owned, operated and maintained by Skagit Transit. The lot's capacity has room for 382 vehicles. Amenities here include lighting and security cameras.

Skagit Transit routes 202 and 90X, as well as Rideshare operate, from this location.

Chuckanut Park and Ride
999 N. Burlington Blvd.
Burlington, WA 98233

Located near I-5 Exit 231 in north Burlington, this facility is owned by WSDOT and is maintained and operated by Skagit Transit. Skagit Transit owns the bus island and transfer station located at the Park and Ride. The lot's capacity has room for 369 vehicles. Amenities here include lighting and security cameras.

Skagit Transit routes 208, 301, 409, 513, 80X, 90X, as well as Rideshare operate, from this location. Please note some route 80X buses are operated by Whatcom Transit Authority (WTA).

Alger Park and Ride
1480 Lake Samish Rd.
Bellingham, WA 98229

Located in Alger just off I-5 at exit 240. This facility is owned, operated and maintained by Skagit Transit. The lot's capacity has room for 54 vehicles. Amenities here include lighting and security cameras.

Route 80X, as well as Rideshare, operate from this location.

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Section 3: Existing System Conditions

Fleet

Skagit Transit operates a diverse and well-maintained fleet of vehicles to meet the transportation needs of Skagit County residents. Our fleet includes a variety of vehicles tailored to provide reliable service to our community and non-revenue functions.

Fixed Route Coaches: We maintain a fleet of fixed route coaches equipped to provide regular scheduled services along established routes throughout Skagit County. These coaches are designed for comfort, accessibility, and efficiency, ensuring a reliable transit experience for our passengers. All fixed route coaches are ADA compliant and equipped with bike racks to accommodate passengers' diverse needs and preferences.

Paratransit Vehicles: To serve individuals with disabilities and others who require specialized transportation, we operate ADA compliant and equipped vehicles with features necessary for accessibility.

Rideshare Vehicles: We offer a fleet of 40 Rideshare vans. These vehicles are available to groups of commuters who share rides to common destinations, promoting cost-effective and sustainable transportation options for daily commuters in Skagit County.

Non-Revenue Vehicles: Our fleet includes non-revenue vehicles essential for various operational purposes such as maintenance, administrative support, and service enhancements. These vehicles ensure that our transit services operate smoothly behind the scenes, supporting the overall efficiency of our operations.

Future Fleet Expansion: As part of our ongoing commitment to improving transit services in Skagit County, we continually assess our fleet needs and explore opportunities for future expansion and modernization. This includes exploring advancements in vehicle technology, operational efficiencies, and service enhancements to meet evolving community needs.

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Section 3: Existing System Conditions

Service Standards

Skagit Transit provides fixed-route, demand-response, vanpool, and specialized paratransit services across Skagit County and portions of neighboring counties. The system is anchored by Skagit Station in Mount Vernon, which serves as a multimodal hub connecting riders to local routes, intercity bus services, Amtrak Cascades, and regional partners such as Island Transit, Whatcom Transportation Authority, and Community Transit.

As of 2025, Skagit Transit operates:

- 19 fixed routes serving urban, suburban, and rural communities
- Paratransit services in compliance with the Americans with Disabilities Act (ADA)
- Vanpool program for commuters traveling within and beyond the county

System Strengths:

- Strong regional connectivity to neighboring counties and major employment centers
- A growing network of mobility options, including demand-response services
- Modernized fleet with a transition underway toward zero-emission vehicles
- Centralized multimodal hub that supports seamless transfers between modes

System Challenges:

- Variability in service frequency and span of service across routes
- Rural coverage gaps where fixed-route service is not feasible
- Infrastructure limitations at certain stops, including significant ADA accessibility gaps
- Capacity constraints during peak hours on select routes
- Funding limitations that restrict rapid service expansion
- Staffing constraints leading to service disruption and cancellations

Performance Snapshot (2024 Baseline):

- Annual Ridership: ~1.2 million passenger trips
- On-Time Performance: ~86% systemwide
- Service Coverage: ~72% of county population within ¼ mile of fixed-route service
- Fleet Composition: 30 fixed-route buses (diesel), 26 paratransit vehicles (propane), 40 rideshare/vanpool vans, 32 non-revenue vehicles

The existing system reflects a balance between urban core transit needs and rural mobility challenges. While key routes operate at or near capacity during peak travel periods, other corridors have lower demand, creating opportunities for service restructuring, frequency adjustments, and targeted demand-response expansions.

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Section 3: Existing System Conditions

Service Standards, Continued

These conditions provide the foundation for the expanded service standards outlined in this plan, ensuring that future service improvements are grounded in both current performance realities and the long-term mobility needs of the community.

Planning Initiatives

As Skagit Transit implements expanded service standards and monitors existing system performance, the agency will use these metrics as a roadmap for continuous improvement. The integration of Level of Service (LOS) benchmarks into both operational decision-making and land-use coordination will ensure that future growth is matched with the transit capacity needed to support it.

Over the next six years, Skagit Transit will prioritize:

- Targeted service enhancements to address high-demand corridors and underserved areas
- Infrastructure improvements that expand ADA accessibility and passenger amenities
- Technology integration to provide real-time service data, streamline trip planning, and improve operational efficiency
- Fleet modernization with an emphasis on zero-emission vehicles to meet sustainability goals
- Collaborative planning with local jurisdictions to align transit investments with regional growth strategies

By maintaining a clear link between system conditions, service standards, and strategic priorities, Skagit Transit will be well-positioned to deliver reliable, equitable, and sustainable mobility options that keep pace with the evolving needs of the community.

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Section 3: Existing System Conditions

Service Standards

Service standards are clearly defined performance benchmarks that guide how Skagit Transit measures, maintains, and improves the quality, reliability, and effectiveness of its public transportation services. These standards provide a framework for planning, delivering, and evaluating transit operations, ensuring that services are equitable, efficient, and responsive to community needs.

Historically, Skagit Transit's primary service standard has focused on route frequency; however, in alignment with the Washington State Growth Management Act (GMA) – RCW 36.70A.070 – we are expanding our approach to incorporate a broader set of measurable indicators to ensure service standards are being met. These will include, but are not limited to:

- ***On-Time Performance*** – Percent of trips operating within an acceptable time window.
- ***Service Coverage*** – Geographic reach and population served within a defined walking distance of a stop.
- ***Passenger Loads*** – Average occupancy rates to ensure comfort and safety.
- ***Span of Service*** – Hours of operation that meet the travel needs of various rider groups, and the minimum frequency of service deployed.
- ***Accessibility Standards*** – Compliance with ADA requirements for all vehicles, stops, and facilities.
- ***Customer Satisfaction*** – Rider feedback on service quality, safety, and convenience.

By implementing this expanded set of service standards, Skagit Transit will be better positioned to assess performance across multiple dimensions of service delivery. These standards will also serve as Level of Service (LOS) benchmarks, as now required under the GMA, providing a consistent framework for coordination with local jurisdictions on land use, development review, and long-range transit planning.

Through regular monitoring and public reporting, Skagit Transit will use these benchmarks to identify service gaps, guide resource allocation, and ensure that transit services keep pace with the evolving needs of our growing communities.

	Minimum	Ideal
Rural	180 minutes	60 minutes
Urban	60 minutes	30 minutes
Connectors	120 minutes	30 minutes non-peak 15 minutes in peak

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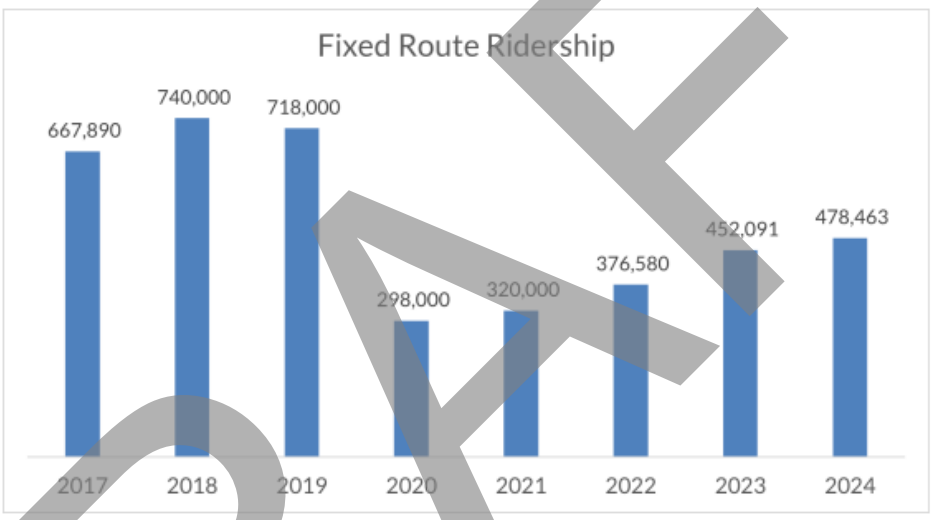
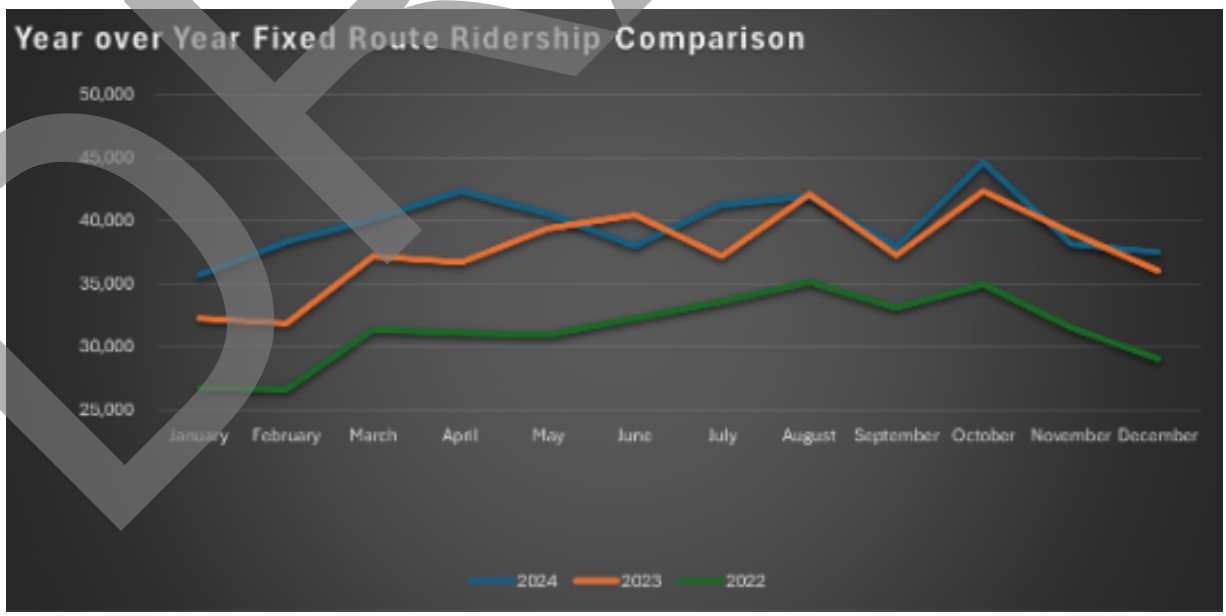
Section 3: Existing System Conditions

Ridership Statistics - Fixed-Route

2024 Fixed Route Ridership Statistics

Skagit Transit's fixed route service includes both local and commuter bus service. Following the Ridership dropped significantly 2020-2021 due to the COVID-19 Pandemic, but has steadily increased since then. Ridership is approximately 33% below pre-pandemic numbers.





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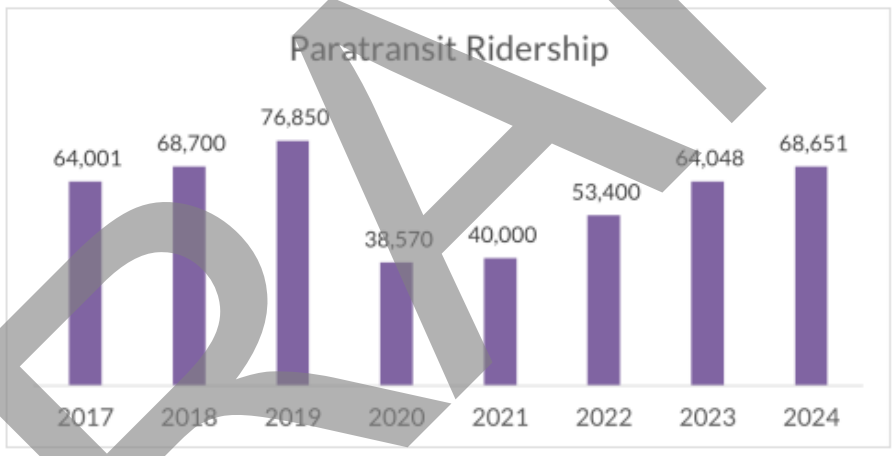
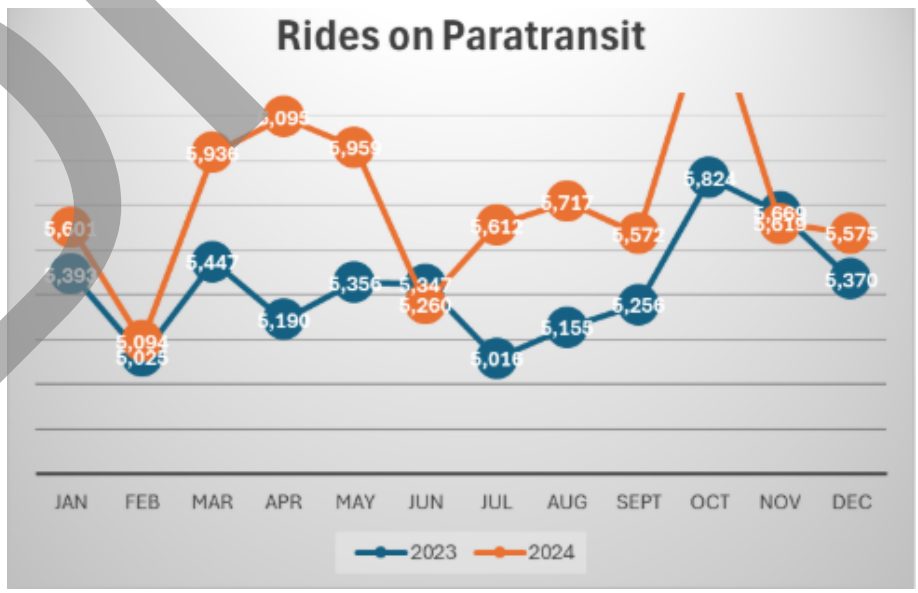
Section 3: Existing System Conditions

Ridership Statistics - Paratransit

2024 Paratransit Ridership Statistics

This service provides essential mobility solutions for individuals with disabilities within Skagit County. This pre-scheduled curb-to-curb service extends up to ¾ of a mile around fixed local routes during equivalent hours, providing access to individuals whose conditions and/or disabilities prevent them from using Skagit Transit's fixed-route buses. Paratransit is a shared ride service, meaning clients may be required to remain onboard while other passengers are picked up and dropped off on the way to the rider's destination. ADA transit service operates during the same hours as the fixed route line it complements. We are committed to ensuring that all members of our community have access to reliable transportation, regardless of mobility challenges.





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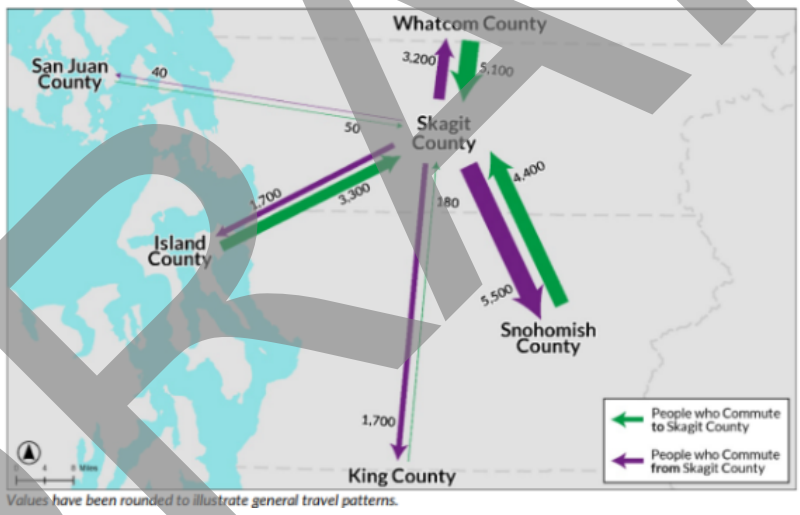
Section 3: Existing System Conditions

Ridership Statistics - Vanpool Rideshare

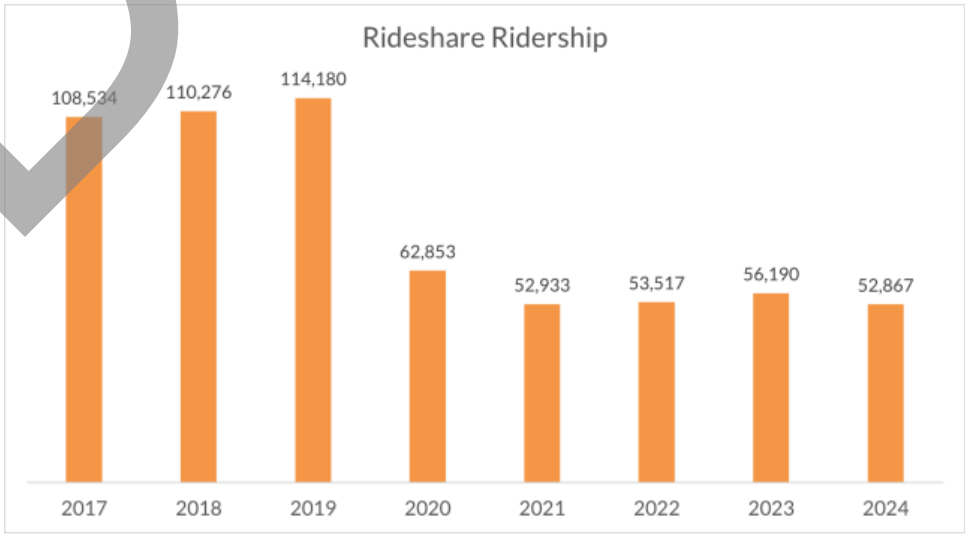
2024 Vanpool Ridership Statistics

Our Rideshare program provides a flexible transportation option for groups of three or more. This growing program allows individuals to share rides on-demand, maximizing vehicle occupancy, minimizing commuting costs, and promoting environmental sustainability by reducing the number of single-occupancy vehicles on the road.

On average, 13,030 workers commute to Skagit County every day, approximately 40% of which come from Whatcom County as shown in Figure 3 below. A number of commuters also come from Snohomish (4,400) and Island (3,300) counties. Approximately 12,140 workers commute out of Skagit County to parts of Snohomish (5,500), Whatcom (3,200), Island (1,700) and King (1,700) counties. 2024 ridership was lower than expected due to a temporary strike at Boeing that impacted Rideshare services.



2024 Rideshare Ridership Statistics



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Section 3: Existing System Conditions

Service Standards - Fare Revenue

Skagit Transit's fare structure is designed to balance affordability, equity, and operational sustainability while ensuring convenient access for all riders. Fares are set to be competitive within the region and align with comparable transit agencies, while also supporting the agency's long-term financial stability.

Current Fare Structure

- Local Fixed Route: $1.00 regular / $0.50 reduced
- Connector Routes (Inter-County Trips): $2.00 regular / $1.00 reduced
- Day Pass: $3.00 regular / $1.50 reduced
- 31-Day Pass: $30.00 local / $50.00 regional connector
- Youth (18 & under): Free (funded by the Climate Commitment Act)
- Paratransit: $2.00 per ride / free on fixed-route

Umo Pass and Fare Capping

Skagit Transit's electronic fare payment system, Umo, offers fare capping to ensure passengers never pay more than the cost of a day or month pass:

- Local Fixed Route: Day pass cap at $3.00; 31-day pass cap at $30.00
- Regional Connectors: 31-day pass cap at $50.00
- Paratransit: Monthly cap at $60.00
- Reduced Fare One-Day Pass: $1.50
- Reduced Fare 31-Day Pass: $15.00
- County Connector 31-Day Pass: $50.00 regular / $25.00 reduced
- Skagit–Whatcom One-Day Pass: $6.00 regular / $3.00 reduced
- Youth (18 & under): Free

This system automatically calculates and caps fares so riders receive the best value without needing to pre-purchase a pass.

Reduced Fare Structure

- Skagit Transit Reduced Fare Permit: Free for seniors (65+), Medicare cardholders, and individuals with disabilities; valid on all Skagit Transit fixed-route services.
- Regional Reduced Fare Permit: $3.00 one-time fee; available to seniors (65+), Medicare cardholders, and individuals with disabilities; valid on multiple transit systems across the Puget Sound region, including Skagit Transit, King County Metro, and Sound Transit.

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Section 4: Needs Assessment

Needs Assessment Overview

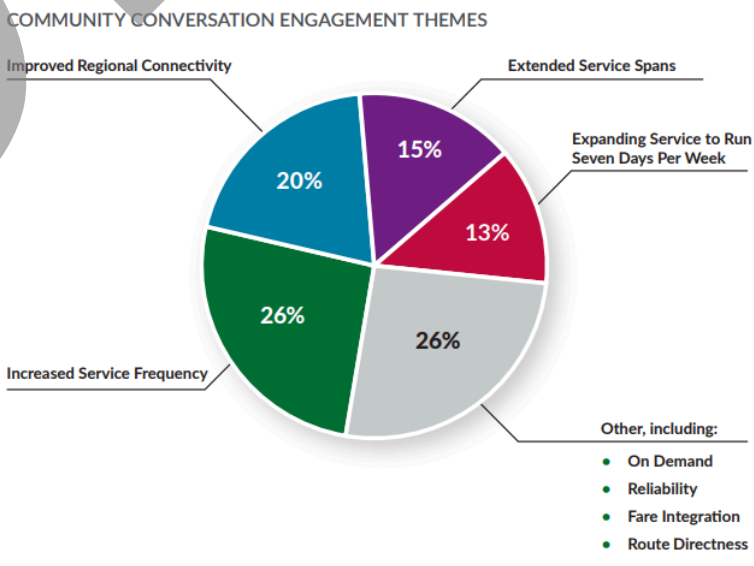
As part of our commitment to continuous improvement and strategic planning, Skagit Transit has developed a comprehensive Long-Range Transit Plan (LRTP). This plan serves as the foundation for our needs assessment, ensuring that our future transit services are aligned with community growth, emerging trends, and stakeholder expectations. The LRTP seeks to establish a vision for the future, guide investment and decision-making, anticipate growth and change, and engage the public and community stakeholders. The LRTP was adopted by the Skagit Transit Board of Directors on June 18th, 2025 and can be found in the appendix of this plan.

Key studies included in the Long-Range Transit Plan:

- Comprehensive Operational Analysis (COA) — Identifies service efficiencies and route improvements.
- Regional Transit Study — Focuses on partnerships with Whatcom and Island Transit; evaluates inter-county express service and connections to Amtrak, ferries, and other modes.
- Microtransit Feasibility Study — Assesses demand-responsive options for low-density areas.

By integrating these studies into our long-range planning process, we ensure a thorough and data-driven approach to addressing current challenges while anticipating and preparing for future demands and improving efficiency. This TDP emphasizes improving connections between non-auto modes, including Amtrak, ferries, and regional transit, to reduce VMT and GHG emissions as required under the CCA and GMA. Without these connections, state climate goals cannot be met.

Over the course of our long-range transit planning, nearly 600 themes from community members and stakeholders were catalogued. Analysis of the feedback revealed that the most frequently requested service enhancements included:



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Section 4: Needs Assessment

Needs Assessment Overview

Service recommendations consist of route network and schedule adjustments to enhance service for existing riders, as well as expanded offerings to attract and retain new riders. Capital recommendations consist of passenger facility upgrades, a bus stop improvement program. The LRTP also supports future Transit Development Plans, which are updated annually and detail immediate term service modifications. Transit access and integration investments include crossing and pedestrian network enhancements, fare and data integration investments, and speed and reliability upgrades.

Longe-Range Transit Plan Elements

Comprehensive Analysis of Current Operations – An analysis looking at existing operations to then identify opportunities for service improvements, route efficiencies, and overall system upgrades to meet the current and future demands of ridership.

On-Demand Transit Assessment – Explores an alternative service model that allows for on-demand service for areas with lower population density or during low ridership periods when fixed-route service may not be as effective.

Service Recommendations and Implementation Strategy - A range of service and capital investments suggested to be made over the next decade to support the agency's mission. The LRTP intends to be resource-neutral with additional services and investments that could be made if new resources become available. Three phases define a recommended implementation strategy that is illustrative of a reasonable scenario for acquiring additional vehicles and onboarding additional operators, as resources are secured.

Capital Improvements - Beyond service improvements, capital investments can enhance the system through infrastructure and technological upgrades. These investments increase reliability, comfort, and safety. This section recommends capital investments and improvements for the following passenger and operator facilities. Passenger and operator facility improvements are recommended for: March Point Park & Ride, Anacortes Transit Hub & Sedro-Woolley Park & Ride.

In effort to improve rider comfort at higher ridership stops, a Bus Stop Improvement Program is also recommended as a capital investment to deliver a consistent and improved passenger experience. Access to and from transit stops impact, rider convenience and safety for people who walk, bike or roll. Skagit Transit and partnering jurisdictions should consider developing a sidewalk and crossing improvement program that would enhance connections to ensure rider safety and ease of access. 8

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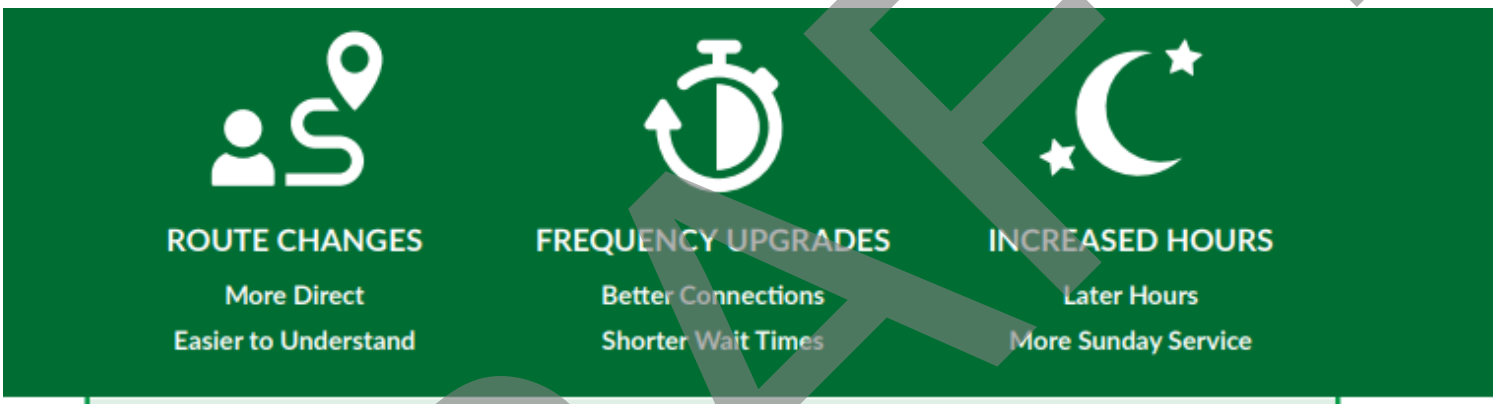
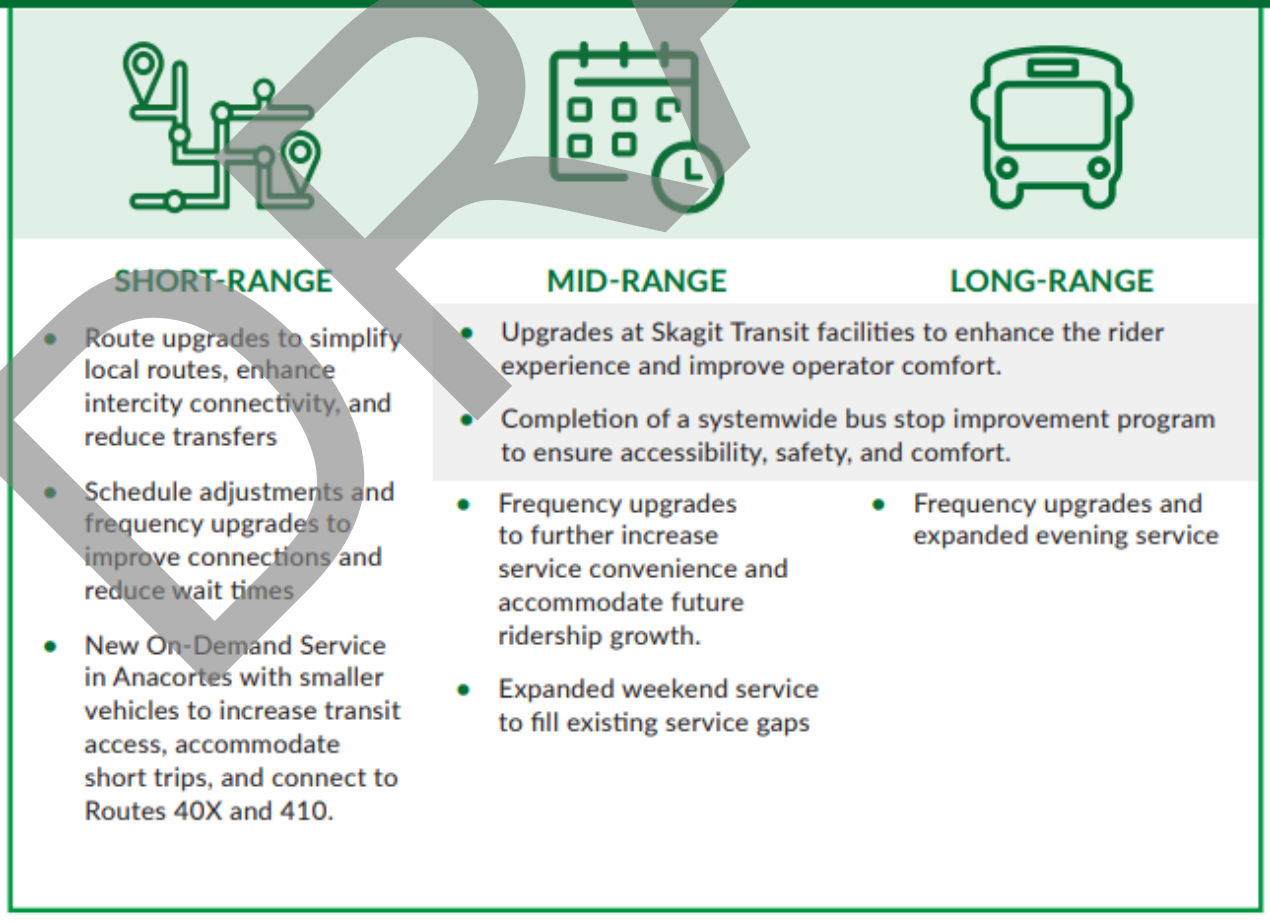
Section 4: Needs Assessment

Needs Assessment Overview

Skagit Transit is committed to maximizing the efficiency of existing resources to provide fast, frequent, direct, and reliable service between regional centers (e.g., Mount Vernon, Anacortes, Sedro Woolley, Burlington). For example, we aim to streamline connections such that riders no longer require multiple transfers for key regional trips like between downtown Mount Vernon and the Anacortes ferry terminal.





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Section 4: Needs Assessment

Fleet Expansion

Future Fleet Expansion

As part of our ongoing commitment to improving transit services in Skagit County, we continually assess our fleet needs and explore opportunities for future expansion and modernization. This includes exploring advancements in vehicle technology, operational efficiencies, and service enhancements to meet evolving community needs.

- ***Fixed Route***: Skagit Transit plans to increase the size of our fixed-route fleet to expand service, while ensuring resiliency and contingency in our operations.
- ***Paratransit***: Skagit Transit plans to increase the size of our paratransit fleet, ensuring we can accommodate future expansion of ridership.
- ***Rideshare Program***: We plan to grow and enhance our Rideshare program alongside fleet expansion, increasing access to convenient, flexible transportation options for our riders.
- ***Microtransit Pilot Program***: Skagit Transit is pursuing grant funding for a microtransit pilot that will support on-demand, flexible service in low-density areas. Feedback on transit service and needs was collected from in-person and virtual community engagement events in Skagit County. Feedback included the desire for more transit available to riders where they live and to destinations, particularly in the Anacortes area. Between September and November 2024, Skagit Transit conducted a survey that covered a variety of topics related to public transit in Skagit County, including on-demand transit service. In this survey, respondents were asked to rank the five potential on-demand pilot zones in order of choice. In this survey, nearly a third (32%) of respondents identified Anacortes as their top choice for an on-demand pilot program, the most support of the five.

Skagit Transit currently operates a fleet of the following vehicles:

- 30 Fixed Route Coaches — ADA compliant, equipped with bike racks.
- 26 Paratransit Vehicles — ADA compliant, providing door-to-door service.
- 40 Rideshare Vans — Supporting cost-effective commuting.
- 32 Non-Revenue Vehicles — Supporting operations and maintenance.

Skagit Transit is committed to evaluating a transition to a zero-emissions fleet. Vehicle replacements will prioritize low- and no-emission technologies, including battery-electric and hydrogen fuel options, as funding and infrastructure allow.

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Section 4: Need Assessment

Fleet Expansion

This chart below reflects our Expansion and Replacement Plan. Vehicles may not be received in the same calendar year as that in which they are ordered and are contingent upon available funding.

Rolling Stock Expansion and Replacement Plan

2025-2030 SUMMARY OF ROLLING STOCK FOR EXPANSION AND REPLACEMENT			
Year	**Type**	**Expansion (Quantity)**	**Replacement (Quantity)**
2025	Commuter Bus	0	0
	Fixed Route	0	0
	Paratransit	0	5
	Vanpool	0	0
	Support	0	1
2026	Commuter Bus	4	2
	Fixed Route	0	2
	Paratransit	2	5
	Vanpool	4	12
	Support	1	5
2027	Commuter Bus	3	0
	Fixed Route	0	0
	Paratransit	1	7
	Vanpool	4	0
	Support	1	5
2028	Commuter Bus	3	0
	Fixed Route	0	0
	Paratransit	0	3
	Vanpool	4	10
	Support	0	3
2029	Commuter Bus	0	0
	Fixed Route	0	1
	Paratransit	0	6
	Vanpool	4	11
	Support	0	2
2030	Commuter Bus	0	0
	Fixed Route	0	3
	Paratransit	0	0
	Vanpool	0	0
	Support	0	1

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Section 4: Need Assessment

Revenue Considerations and Opportunities

Revenue Strategies and Fiscal Responsibility

Skagit Transit's Transit Development Plan identifies a pressing need to address declining cash reserves and rising expenditures. As responsible stewards of taxpayer funds, the agency remains committed to controlling costs, actively seeking reductions in both capital and operational spending. At the same time, diversifying funding sources beyond federal and state grants will provide more predictable and sustainable income.

While fare revenue remains an important funding stream, it represents only a small portion of Skagit Transit's overall operating budget. To support long-term service sustainability and growth, the agency is pursuing additional revenue opportunities, including:

- Onboard and facility-based advertising (bus exteriors, interiors, shelters, and digital displays)
- Partnership programs with local businesses, schools, and institutions to sponsor service or passes
- Event-based transit promotions tied to regional attractions and community events
- Pursuit of grants and supplemental funding to offset fare-free initiatives and capital investments

These strategies aim to diversify revenue, reduce reliance on farebox income, and maintain affordable pricing for riders while sustaining high-quality service delivery.

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Section 5: Planned Activities by Year

Highlights of Planned Activities

Over the course of the next five years, Skagit Transit aims to maintain efficient fixed-route service, support a growing Rideshare program, and continue providing ADA complementary paratransit service within three-quarters of a mile of local fixed routes. In addition, Skagit Transit plans to enhance regional connectivity, by expanding service into underserved and unserved urban areas and enhance service to rural areas where demand has exceeded current service levels.

The relocation of Skagit Transit's Maintenance, Operations, and Administrative (MOA) Base is the largest capital facilities project planned during this period. Skagit Transit has acquired a former FedEx facility and adjacent land to redevelop its new MOA facility. Over the next two to three years, the agency will work to complete the redevelopment and transition all operations and equipment to the new site by 2028.

The following tables outline the activities Skagit Transit plans to undertake from 2025 through 20230. These include the introduction of new transit services, adjustments to existing services, planning initiatives, the MOA base relocation, and equipment acquisitions.
Several of these capital projects and service expansions will require grant funding to proceed. Because the availability and timing of grant awards can be uncertain, project timelines may shift accordingly. If sufficient funding is not secured, projects will be reevaluated and adjusted as necessary.

Skagit Transit's key initiatives focus on expanding access, improving efficiency, evaluating a transition to zero-emission vehicles, and strengthening regional connections.

Highlights of Planned Activities

- Streamline fixed route service to reduce transfers and improve direct connections between key regional centers.
- Evaluate transit software solutions that will improve accessible and the rider experience.
- Expand Rideshare services to support workforce participation and reduce car dependency.
- Evaluate service models and deployments with the intention of increasing frequency and growing ridership.
- Launch microtransit pilot in partnership with local governments and community stakeholders.
- Relocate and complete MOA2 to support fleet growth and zero-emission infrastructure.
- Enhance connections to Amtrak, Washington State Ferries (WSF), and regional transit providers.
- Develop and adopt formal transit Level of Service (LOS) standards in compliance with GMA requirements.

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Section 5: Planned Activities by Year

*Highlights of Planned Activities - **2025***

All activities will emphasize support for land use patterns that reduce per-capita VMT and GHG emissions, in alignment with local comprehensive plans and the Climate Commitment Act.
All projects will seek federal, state, or other grants to offset costs.

Planning

- Update agency Transit Development Plan
- Partner with the county, cities, MPOs, such as SCOG, and other stakeholders on regional transportation planning
- Complete and Implement a Long-Range Transit Plan, to include Regional Transit Study, Micro Transit Study and a Comprehensive Operational Analysis
- Update the Zero-Emissions Fleet Transition Plan
- Develop and implement a long-range capital plan
- Develop an ADA Transition Plan for Skagit Transit facilities through a contracted position
- Conduct an audit of existing software programs
- Assist in the upgrade and replacement of dispatch hardware and communication equipment as necessary
- Select and implement a Micro Transit dispatching software
- Procure a software consultant
- Land acquisition to accommodate growth of agency services and personnel

Services

- Preservation of existing service
- Implement service recommendations from the recently completed 2025 Regional Transit, Microtransit, and Comprehensive Operational Analysis Studies (LRTP)
- Improve existing services and optimization of routes
- Increase frequency
- Pilot fixed-route service on Guemes Island
- Expand Rideshare services
- Pilot microtransit services in Fidalgo Island

Facilities

- Start construction on phases 2 and 3 for the MOA Base relocation project
- Begin planning efforts for the relocation of personnel and equipment associated with the construction of MOA 2
- Continue to review and revise design work as needed for MOA base relocation project to incorporate zero-emission infrastructure.
- Continue to improve ADA accessibility and compliance at existing stops
- Update and upgrade all facilities as needed to maintain a state of good repair.

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Section 5: Planned Activities by Year

Highlights of Planned Activities - 2025, Continued

Facilities

- Add passenger amenities at new stops per adopted Agency guidelines
- Camera upgrades to improve safety and security at Skagit Station, the Park & Rides, and the MOA
- Upgrade and replace dispatch hardware and communication equipment as necessary
- Upgrade HVAC at Skagit Station
- Upgrade fire suppression system at Skagit Station
- Continual improvement and upgrades to transit centers
- Zero emissions infrastructure to upgrade transit centers
- Continue to improve ADA accessibility and compliance at existing stops
- Add passenger amenities at stops, per agency guidelines
- Upgrade camera systems to improve safety and security at Skagit Station, the Park and Rides, the MOA, and bathroom A&E/construction at Skagit Station
- Complete architectural and engineering plans for phase 2/3 of MOA 2
- Go out to bid for phase 2/3 of MOA 2
- Investigate potential solar investment opportunities
- Add fiber connection to Sedro-Woolley Park & Ride to accommodate future camera systems integration
- Replace existing septic system with new City of Anacortes side sewer connect at Marches Point Park & Ride
- Design of driver breakroom facilities at the Sedro-Wooley Park and Ride

Equipment

- Replace computer servers and other IT hardware as necessary.
    - Replace internet modems on revenue fleet vehicles
- Develop plan for Wi-Fi implementation on fixed route coaches
    - Purchase replacement vehicles in conjunction with the Replacement Schedule
    - Purchase expansion vehicles in accordance with the Long-Range Transit Plan
- Upgrade and replace dispatch hardware and communication equipment as necessary.
    - Select and implement mobile fare ticketing software and related hardware to improve data and fare collection.
    - Improve safety through implementation of equipment/software upgrades on existing coaches such as cloud-based cameras and an air quality monitoring system
    - Replace radio system

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Section 5: Planned Activities by Year

Highlights of Planned Activities - 2026

Planning

- Transit Development Plan Update
- Continue to implement ADA Transition Plan
- Partner with the county, cities, MPOs (such as SCOG, and other stakeholders) on regional transportation planning
- Review and revise service standard guidelines
- Continue to implement zero-emission transition plan that evaluates the efficacy of zero-emission technologies to support service deployment

Services

- Preservation of existing service
- Implement service recommendations from the 2025 Micro Transit, Regional Transit, and Comprehensive Operational Analysis Studies (as defined in the LRTP)
- Upgrade agency website upgrades to improve accessibility and ADA compliance
- Continue to implement rider materials and marketing strategies that target at-risk populations through material translation and accessibility tools and improvements
- Evaluate options for improving rider experience through automated scheduling systems, and a rider app

Facilities

- Continue construction on phases 2 and 3 of MOA 2
- Continue migration planning for personnel and equipment relocation as associated with the needs of construction for MOA 2
- Continue to improve ADA accessibility and overall passenger amenities at bus stops by adding and replacing passenger amenities such as seating, shelter facilities, lighting, landing pads, etc.
- Upgrade maintenance facilities by purchasing new equipment and materials to add new capabilities such as body shop repair equipment, canopy over revenue vehicle parking, etc.
- Construct pedestrian canopy on the bus island at major transfer points
- Continual improvement and upgrades to transit facilities and infrastructure as necessary
- Zero-emissions infrastructure to upgrade transit centers

Equipment

- Purchase expansion vehicles as identified in the LRTP
- Replace computer servers and other IT hardware as necessary.
- Upgrade and replace dispatch hardware and communication equipment as necessary.
- Improve safety through implementation of equipment/software upgrades on existing coaches such as cloud-based cameras and an air quality monitoring systems
- Purchase additional equipment to support revenue operations and maintenance at the MOA 2

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Section 5: Planned Activities by Year

Highlights of Planned Activities - 2027

Planning

- Update Transit Development Plan
- Review and update the Zero-Emissions Fleet Transition Plan as needed
- Continue to review and revise service standard guidelines as needed
- Partner with the county, cities, MPOs, such as SCOG, and other stakeholders on regional transportation planning
- Conduct Triennial Rider Survey for development of Average Passenger Trip Length data
- Customer satisfaction survey

Services

- Preservation of existing service
- Service Evaluation of changes implemented from the long- range plan
- As funding allows, implement service recommendations from the recently completed 2025 Microtransit, Regional Transit, and Comprehensive Operational Analysis Studies

Facilities

- Complete construction of MOA 2
- Begin to transfer personnel and furniture to MOA 2
- Procure new furniture as needed to support the move to MOA 2
- Continue to improve ADA accessibility and overall passenger comfort at bus stops by adding and replacing passenger amenities such as seating, cover, lighting, landing pads, etc.
- Continual improvement and upgrades to transit centers
- Zero-emissions infrastructure to upgrade transit centers
- Begin commissioning of MOA 2 Facility as required by local jurisdictions

Equipment

- Purchase replacement vehicles according to the schedule
- Upgrade vehicles to zero-emission alternatives as facilities and funding allows.
- Replace computer servers and other IT hardware as necessary
- Upgrade and replace dispatch hardware and communication equipment as necessary.
- Implement wi-fi to both fixed route and paratransit revenue fleets as needed
- Upgrade mobile data terminals to keep up with current data technology.
- Improve safety through implementation of equipment/software upgrades on existing coaches such as cloud-based cameras and an air quality monitoring system.

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Section 5: Planned Activities by Year

Highlights of Planned Activities - 2028

Planning

- Transit Development Plan Update
- Review and update the Zero Emissions Fleet Transition Plan
- Review and revise service standard guidelines
- Partner with the county, cities, MPOs, such as SCOG, and other stakeholders on regional transportation planning
- Conduct Triennial Rider Survey for development of Average Passenger Trip Length data
- Customer satisfaction survey

Services

- Preservation of existing service
- Service Evaluation of changes implemented from the long- range plan
- As funding allows, implement service recommendations from the recently completed 2025 microtransit, Regional Transit, and Comprehensive Operational Analysis Studies

Facilities

- Complete the transfer personnel to MOA 2
- Continue to improve ADA accessibility and overall passenger comfort at bus stops by adding and replacing passenger amenities such as seating, cover, lighting, landing pads, etc.
- Continual improvement and upgrades to transit centers
- Zero emissions infrastructure to upgrade transit centers

Equipment

- Purchase replacement vehicles according to the schedule on page 27
- Upgrade vehicles to zero emission alternatives as support facilities and funding allows.
- Replace computer servers and other IT hardware as necessary.
- Upgrade and update mobile data terminals and fare collection equipment to improve data and fare collection.
- Upgrade and replace dispatch hardware and communication equipment as necessary.
- Add Wi-Fi to both fixed route and paratransit revenue fleets.
- Upgrade and update mobile data terminal to keep up with current data technology.
- Improve safety through implementation of equipment/software upgrades on existing coaches such as cloud-based cameras and an air quality monitoring system.

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Section 5: Planned Activities by Year

Highlights of Planned Activities - 2029

Planning

- Transit Development Plan Update
- Review and update the Zero Emissions Fleet Transition Plan
- Review and revise service standard guidelines
- Partner with the county, cities, MPOs, such as SCOG, and other stakeholders on regional transportation planning
- Conduct Triennial Rider Survey for development of Average Passenger Trip Length data
- Customer satisfaction survey

Services

- Preservation of existing service
- Service Evaluation of changes implemented from the long-range plan
- As funding allows, implement service recommendations from the recently completed 2025 Microtransit, Regional Transit, and Comprehensive Operational Analysis Studies

Facilities

- Continue to improve ADA accessibility and overall passenger comfort at bus stops by adding and replacing passenger amenities such as seating, cover, lighting, landing pads, etc.
- Continual improvement and upgrades to transit centers
- Zero emissions infrastructure to upgrade transit centers

Equipment

- Purchase replacement vehicles according to the schedule on page 27
- Upgrade vehicles to zero emission alternatives as support facilities and funding allows.
- Replace computer servers and other IT hardware as necessary.
- Upgrade and update mobile data terminals and fare collection equipment to improve data and fare collection.
- Upgrade and replace dispatch hardware and communication equipment as necessary.
- Add Wi-Fi to both fixed route and paratransit revenue fleets.
- Upgrade and update mobile data terminal to keep up with current data technology.
- Improve safety through implementation of equipment/software upgrades on existing coaches such as cloud-based cameras and an air quality monitoring system.

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Section 5: Planned Activities by Year

Highlights of Planned Activities - 2030

Planning

- Transit Development Plan Update
- Review and update the Zero Emissions Fleet Transition Plan
- Review and revise service standard guidelines
- Partner with the county, cities, MPOs, such as SCOG, and other stakeholders on regional transportation planning
- Conduct Triennial Rider Survey for development of Average Passenger Trip Length data
- Customer satisfaction survey

Services

- Preservation of existing service
- Service Evaluation of changes implemented from the long-range plan
- As funding allows, implement service recommendations from the recently completed 2025 Microtransit, Regional Transit, and Comprehensive Operational Analysis Studies

Facilities

- Continue to improve ADA accessibility and overall passenger comfort at bus stops by adding and replacing passenger amenities such as seating, cover, lighting, landing pads, etc.
- Continual improvement and upgrades to transit centers
- Zero emissions infrastructure to upgrade transit centers

Equipment

- Purchase replacement vehicles according to the schedule
- Upgrade vehicles to zero-emission alternatives as support facilities and funding allows.
- Replace computer servers and other IT hardware as necessary.

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Section 6: Notable Activities FY24

Highlights of Past Activities - 2024

- Implemented new payroll system - PayNW
- Successfully passed Washington State Audit
- Completion of COOP
- Successfully completed FTA Triennial Review
- Implemented Simplify Transit - Rider Notification System
- Strengthened community partnerships through robust outreach program
- Updated Skagit Transit Policies and Procedures to include bylaws
- Successfully negotiated Skagit Transit dispatch employee contracts
- Submitted sixteen new grant applications and managed twenty-one existing grants
- Completed Workplace Harassment Training for all employees
- Upgraded cameras and transitioned Sierra Wireless to XR90s
- Implemented Track-It! customer service software
- Installed Verkada air quality sensors
- In-serviced five fixed-route, (8) seven-passenger, and (3) fifteen-passenger vehicles
- Donated surplus van to support medical transportation for Veterans
- Secured funding for a battery electric bus through grant from Puget Sound Energy
- Updated and renewed many out-of-date and non-compliant contracts.
- Phase 2 and 3 Permit Submission for MOA 2 - 90% Design

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Section 7: Capital Improvement Plan

The Capital Improvement Program includes the capital expenses identified throughout this document. Grant funds will actively be sought to cover the costs of design, engineering, and construction of the MOA Relocation Project included in this report. In the event that grant funding is not available or insufficient to complete this project within the next six years, timelines for completion will be reevaluated.

Skagit Transit maintains planning documents for the implementation of capital projects. These plans have been utilized in our Transportation Improvement Program (TIP), Transportation Development Plan (TDP), and Skagit Transit's annual budgeting process.

This Capital Improvement Plan (CIP) is a planning tool to further articulate these plans and bring them all together to coordinate with the operating budget. The CIP will be updated every year for inclusion in the annual budget process, discussions, and approvals. The CIP must be fiscally constrained and maintain for the purpose of keeping all assets at a state of good repair to protect Skagit Transit's capital investments and minimize future maintenance and replacement costs. Five-year forecasts also help mitigate challenges of applying a one-year budget to multi-year projects. Using this methodology will also help in long-range financial forecasting.

2025 FY Capital Grants

Skagit Transit takes advantage of available Grant funds to purchase capital assets and to supplement its operations. Operating Grant funds represent 29% of Operating Revenues while Capital Grants pays for approximately 80% of intended Capital Purchases aside from MOA 2 for the 2025 Budget. Most of our Grant funding comes from the Federal Transit Administration and the Washington State Department of Transportation.

Capital	
FY 2023 5339(b) MOA2 Construction Phase 3	$ 5,000,000
FY 2025 RAISE Grant	$ 19,500,000
Federal Section FY 2024 5307 & 5339 Capital MOA Design Phases 2 and 3	$ 391,412
FWHA Flexed to FTA 5307 SCOG Award -Shelter Purchase	$ 304,300
FY 2022 Flexed 5307 Bus Shelter Purchase	$ 68,062
2022 WSDOT Pass Through FTA Section 5339 - Maintenance Equipment	$ 59,668
Total Federal Capital	$ 25,323,442

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Section 7: Capital Improvement Plan

The following table lists all capital expenses budgeted for fiscal year 2025. Skagit Transit relies on Federal and State Grants to supplement its capital purchases. The 2025 Capital Budget will be funded by Grant Funds from the FTA and WSDOT.

2025 Capital Budget			
	Unit Price	Qty	Total
Revenue Vehicle			
Paratransit Electric Coach Expansion	$350,000	1	$350,000
Paratransit Electric	$350,000	2	$700,000
Paratransit Propane	$250,000	3	$750,000
Capital Engine Replacement	$62,000	2	$124,000
	Total		**$1,924,000**
Staff Vehicle			
Vehicle Replacement - Operations	$53,000	1	$53,000
Vehicle Replacement - Security	$53,000	2	$106,000
Vehicle Replacement - Facilities	$127,000	1	$127,000
Vehicle Replacement	$51,080	1	$51,080
Vehicle Expansion - Facilities	$75,000	1	$75,000
	Total		**$412,080**
Garage/Shop Equipment			
Paratransit Electric Chargers	$37,694	3	$113,082
	Total		**$113,082**
Route Improvements			
ADA Transition	$150,000	1	$150,000
Bus Shelters	$372,362		$372,362
	Total		**$522,362**
Skagit Station/Park&Ride			
Chuck-a-nut Re-Seal Parking Lot	$100,000	1	$100,000
SMV Re-Seal Parking Lot	$80,000	1	$80,000
SS Re-Seal Parking Lot	$40,000	1	$40,000
HVAC	$100,000	1	$100,000
Security Doors	$20,000	5	$100,000
	Total		**$420,000**
MOA II			
Phases 2 & 3 Construction	$40,000,000	1	$40,000,000
Architect - Design Support for Construction	$1,200,000	1	$1,200,000
Architect - Finish Design 100%	$535,000	1	$535,000
	Total		**$41,735,000**
Total Capital Budget			**$ 45,126,524**

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Section 8: Operating Revenue & Expenses - 2025

1. Operating expenditures for 2027 were increased by a 3% inflationary rate
2. Used a 3.5% Sales Tax Growth Rate for 2026 and a 2.5% thereafter
3. Used a 2.5% revenue growth rate for non-sales tax operational revenues out the 2027-2030 numbers.

	2025		
	Operating	**Capital**	**Total**
Beginning Cash Balance January 1st.	$ 7,213,053	$ 15,926,266	$ 23,139,319
Operating Revenues			-
Sales Tax	16,500,000		16,500,000
Passenger Fares	791,765		791,765
Non Transportation Revenues	992,500		992,500
Federal Operating Grants	5,088,790		5,088,790
State Operating Grants	2,296,801		2,296,801
Other Grants			-
Other Revenues			-
Transfers			-
Total Operating Revenues	**25,669,856**		**25,669,856**
Subtotal Available	32,882,909	15,926,266	48,809,175
Operating Expenses			
Rideshare	966,301		966,301
Fixed Route/Commuter	18,100,732		18,100,732
Demand Response (ADA)	6,601,681		6,601,681
Other	-		-
Total Operating Expenses	**25,668,715**		**25,668,715**
Net Cash Available	**7,214,194**	**15,926,266**	**23,140,460**
Capital Revenues			
Federal Grants	-	4,220,000	4,220,000
State Grants	-	-	-
Other	-	600,000	600,000
Fund Transfers (Matching & Non-Grant)			-
Subtotal Capital Revenue	-	**4,820,000**	**4,820,000**
Capital Expenditures			
System P&M			
Maintenance & Other	-	220,000	220,000
Fixed Route/Commuter	-	320,000	320,000
Demand Response	-	1,633,082	1,633,082
Service/Staff Vehicles	-	286,000	286,000
MOA2	-	2,000,000	2,000,000
Transit Shelters/Improvements	-	490,180	490,180
Rideshare	-		-
System Expansion			-
Maintenance & Other Equipment	-		-
Demand Response	-	350,000	350,000
Fixed Route/Commuter	-		-
Service/Staff Vehicles	-	75,000	75,000
Transit Center	-		-
Transit Shelters	-		-
Rideshare Vans	-		-
Subtotal Capital Obligations	-	**5,374,262**	**5,374,262**
Cash Transfer			
Ending Cash Balance 12/31	**$ 7,214,194**	**$ 15,372,004**	**$ 22,586,198**

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Section 8: Operating Revenue & Expenses - 2026

	2026 Operating	2026 Capital	2026 Total
Beginning Cash Balance January 1st.	$ 7,214,194	$ 15,372,004	$ 22,586,198
Operating Revenues			-
Sales Tax	17,077,500	-	17,077,500
Passenger Fares	808,807	-	808,807
Non Transportation Revenues	1,286,329	-	1,286,329
Federal Operating Grants	3,111,735		3,111,735
State Operating Grants	3,509,244		3,509,244
Other Grants	-		-
Other Revenues	-	-	-
Transfers			-
Total Operating Revenues	**25,793,615**	-	**25,793,615**
Subtotal Available	33,007,809	15,372,004	48,379,813
Operating Expenses			
Rideshare	984,607	-	984,607
Fixed Route/Commuter	18,433,638	-	18,433,638
Demand Response (ADA)	6,726,745	-	6,726,745
Other	-	-	-
Total Operating Expenses	**26,144,990**	-	**26,144,990**
Net Cash Available	**6,862,819**	**15,372,004**	**22,234,823**
Capital Revenues			
Federal Grants	-	4,006,296	4,006,296
State Grants	-	9,332,601	9,332,601
Other	-	-	-
Fund Transfers (Matching & Non-Grant)			-
Subtotal Capital Revenue	-	**13,338,897**	**13,338,897**
Capital Expenditures			
System P&M			
Maintenance & Other	-	769,808	769,808
Fixed Route/Commuter	-	2,674,264	2,674,264
Demand Response	-	1,175,000	1,175,000
Service/Staff Vehicles	-	352,000	352,000
MOA2	-	8,000,000	8,000,000
Transit Shelters/Improvements	-	-	-
Rideshare	-	638,725	638,725
System Expansion			-
Maintenance & Other Equipment			-
Demand Response		580,000	580,000
Fixed Route/Commuter		-	-
Service/Staff Vehicles		58,000	58,000
Transit Center			-
Transit Shelters			-
Rideshare Vans		212,908	212,908
Subtotal Capital Obligations	-	**14,460,705**	**14,460,705**
Cash Transfer			
Ending Cash Balance 12/31	**$ 6,862,819**	**$ 14,250,196**	**$ 21,113,014**

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Section 8: Operating Revenue & Expenses - 2027

	2027		
	Operating	Capital	Total
Beginning Cash Balance January 1st.	$ 6,862,819	$ 14,250,196	$ 21,113,014
Operating Revenues			-
Sales Tax	17,504,438	-	17,504,438
Passenger Fares	829,027	-	829,027
Non Transportation Revenues	1,318,487	-	1,318,487
Federal Operating Grants	3,111,735		3,111,735
State Operating Grants	3,509,244		3,509,244
Other Grants			-
Other Revenues	-	-	-
Transfers			-
Total Operating Revenues	**26,272,930**	-	**26,272,930**
Subtotal Available	33,135,749	14,250,196	47,385,945
Operating Expenses			
Rideshare	1,014,145	-	1,014,145
Fixed Route/Commuter	18,986,647	-	18,986,647
Demand Response (ADA)	6,928,547	-	6,928,547
Other	-	-	-
Total Operating Expenses	**26,929,340**	-	**26,929,340**
Net Cash Available	**6,206,409**	**14,250,196**	**20,456,605**
Capital Revenues			
Federal Grants	-	16,473,984	16,473,984
State Grants	-	1,662,436	1,662,436
Other	-	-	-
Fund Transfers (Matching & Non-Grant)			-
Subtotal Capital Revenue	-	**18,136,420**	**18,136,420**
Capital Expenditures			
System P&M			
Maintenance & Other	-	585,512	585,512
Fixed Route/Commuter	-	-	-
Demand Response	-	1,645,000	1,645,000
Service/Staff Vehicles	-	290,000	290,000
MOA2	-	15,000,000	15,000,000
Transit Shelters/Improvements	-	-	-
Rideshare	-	-	-
System Expansion			-
Maintenance & Other Equipment			-
Demand Response		345,000	345,000
Fixed Route/Commuter		-	-
Service/Staff Vehicles		58,000	58,000
Transit Center			-
Transit Shelters			-
Rideshare Vans		212,908	212,908
Subtotal Capital Obligations	-	**18,136,420**	**18,136,420**
Cash Transfer			
Ending Cash Balance 12/31	**$ 6,206,409**	**$ 14,250,195**	**$ 20,456,605**

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Section 8: Operating Revenue & Expenses - 2028

	2028		
	Operating	Capital	Total
Beginning Cash Balance January 1st.	$ 6,206,409	$ 14,250,195	$ 20,456,605
Operating Revenues			-
Sales Tax	17,942,048	-	17,942,048
Passenger Fares	849,753	-	849,753
Non Transportation Revenues	1,351,449	-	1,351,449
Federal Operating Grants	3,111,735	-	3,111,735
State Operating Grants	3,482,419	-	3,482,419
Other Grants			-
Other Revenues	-	-	-
Transfers			-
Total Operating Revenues	**26,737,404**	-	**26,737,404**
Subtotal Available	32,943,813	14,250,195	47,194,009
Operating Expenses			
Rideshare	1,044,570	-	1,044,570
Fixed Route/Commuter	19,556,247	-	19,556,247
Demand Response (ADA)	7,136,404	-	7,136,404
Other	-	-	-
Total Operating Expenses	**27,737,220**	-	**27,737,220**
Net Cash Available	**5,206,594**	**14,250,195**	**19,456,789**
Capital Revenues			
Federal Grants	-	17,000,000	17,000,000
State Grants	-		-
Other	-	-	-
Fund Transfers (Matching & Non-Grant)			-
Subtotal Capital Revenue	-	**17,000,000**	**17,000,000**
Capital Expenditures			
System P&M			
Maintenance & Other	-	318,512	318,512
Fixed Route/Commuter	-	-	-
Demand Response	-	705,000	705,000
Service/Staff Vehicles	-	174,000	174,000
MOA2	-	17,000,000	17,000,000
Transit Shelters/Improvements	-	-	-
Rideshare	-	532,271	532,271
System Expansion			-
Maintenance & Other Equipment			-
Demand Response		-	-
Fixed Route/Commuter		-	-
Service/Staff Vehicles		-	-
Transit Center			-
Transit Shelters			-
Rideshare Vans		212,908	212,908
Subtotal Capital Obligations	-	**18,942,691**	**18,942,691**
Cash Transfer			-
Ending Cash Balance 12/31	**$ 5,206,594**	**$ 12,307,504**	**$ 17,514,097**

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Section 8: Operating Revenue & Expenses - 2029

	2029 Operating	2029 Capital	2029 Total
Beginning Cash Balance January 1st.	$ 5,206,594	$ 12,307,504	$ 17,514,097
Operating Revenues			-
Sales Tax	18,390,600	-	18,390,600
Passenger Fares	870,997	-	870,997
Non Transportation Revenues	1,385,236	-	1,385,236
Federal Operating Grants	3,111,735	-	3,111,735
State Operating Grants	3,482,419	-	3,482,419
Other Grants			-
Other Revenues	-	-	-
Transfers			-
Total Operating Revenues	**27,240,985**	-	**27,240,985**
Subtotal Available	32,447,579	12,307,504	44,755,083
Operating Expenses			
Rideshare	1,075,907	-	1,075,907
Fixed Route/Commuter	20,142,934	-	20,142,934
Demand Response (ADA)	7,350,496	-	7,350,496
Other	-	-	-
Total Operating Expenses	**28,569,336**	-	**28,569,336**
Net Cash Available	**3,878,242**	**12,307,504**	**16,185,746**
Capital Revenues			
Federal Grants		7,000,000	7,000,000
State Grants			-
Other			-
Fund Transfers (Matching & Non-Grant)			-
Subtotal Capital Revenue	-	**7,000,000**	**7,000,000**
Capital Expenditures			
System P&M			
Maintenance & Other	-	130,512	130,512
Fixed Route/Commuter	-	668,566	668,566
Demand Response	-	1,410,000	1,410,000
Service/Staff Vehicles	-	116,000	116,000
MOA2	-	7,000,000	7,000,000
Transit Shelters/Improvements	-	-	-
Rideshare	-	585,498	585,498
System Expansion		-	-
Maintenance & Other Equipment			-
Demand Response		-	-
Fixed Route/Commuter		-	-
Service/Staff Vehicles		-	-
Transit Center			-
Transit Shelters			-
Rideshare Vans		212,908	212,908
Subtotal Capital Obligations	-	**10,123,485**	**10,123,485**
Cash Transfer			-
Ending Cash Balance 12/31	**$ 3,878,242**	**$ 9,184,019**	**$ 13,062,262**

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Section 8: Operating Revenue & Expenses - 2030

	2030 Operating	2030 Capital	2030 Total
Beginning Cash Balance January 1st.	$ 3,878,242	$ 9,184,019	$ 13,062,262
Operating Revenues			-
Sales Tax	18,850,365	-	18,850,365
Passenger Fares	892,772	-	892,772
Non Transportation Revenues	1,419,867	-	1,419,867
Federal Operating Grants	3,111,735	-	3,111,735
State Operating Grants	3,482,419	-	3,482,419
Other Grants			-
Other Revenues	-	-	-
Transfers			-
Total Operating Revenues	**27,757,156**	-	**27,757,156**
Subtotal Available	31,635,399	9,184,019	40,819,418
Operating Expenses			
Rideshare	1,108,184	-	1,108,184
Fixed Route/Commuter	20,747,222	-	20,747,222
Demand Response (ADA)	7,571,011	-	7,571,011
Other	-	-	-
Total Operating Expenses	**29,426,417**	-	**29,426,417**
Net Cash Available	**2,208,982**	**9,184,019**	**11,393,002**
Capital Revenues			
Federal Grants	-	186,157	186,157
State Grants	-	-	-
Other	-	-	-
Fund Transfers (Matching & Non-Grant)			-
Subtotal Capital Revenue	-	**186,157**	**186,157**
Capital Expenditures			
System P&M			
Maintenance & Other	-	130,512	130,512
Fixed Route/Commuter	-	2,005,698	2,005,698
Demand Response	-	-	-
Service/Staff Vehicles	-	58,000	58,000
MOA2	-	-	-
Transit Shelters/Improvements	-	-	-
Rideshare	-	-	-
System Expansion		-	
Maintenance & Other Equipment			
Demand Response		-	
Fixed Route/Commuter		-	
Service/Staff Vehicles		-	
Transit Center			
Transit Shelters			
Rideshare Vans		-	
Subtotal Capital Obligations	-	**2,194,210**	**2,194,210**
Cash Transfer			-
Ending Cash Balance 12/31	**$ 2,208,982**	**$ 7,175,966**	**$ 9,384,948**

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Thank you for taking the time to review Skagit Transit's 2025-2030 Transit Development Plan.

SkagitTransit.org
Planning@SkagitTransit.org
360-757-8801

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APPENDIX

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Operating Data 2025-2030

OPERATING DATA 2025-2030

(All figures, in thousands of units)

Fixed Routes	#	Budgeted **2025**	Estimated **2026**	Estimated **2027**	Estimated **2028**	Estimated **2029**	Estimated **2030**
Vehicle hours		77	82	84	85	87	89
Vehicle revenue hours		74	79	81	82	84	86
Vehicle miles		1148	1198	1222	1246	1271	1297
Vehicle revenue miles		1100	1150	1173	1196	1220	1245
Passenger trips		424	488	561	645	742	854
Fatalities							
Reportable injuries							
Collisions							
Diesel fuel consumed		190	205	212	214	214	214
Commuter Routes	#	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**
Vehicle hours		22	27	32	32	32	32
Vehicle revenue hours		21	26	31	31	31	31
Vehicle miles		612	662	712	712	712	712
Vehicle revenue miles		576	626	676	676	676	676
Passenger trips		153	176	202	233	268	308
Fatalities							
Reportable injuries							
Collisions							
Diesel fuel consumed		74	100	115	115	115	115
ADA Demand Respon	#	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**
Vehicle hours		45	47	50	52	55	57
Vehicle revenue hours		40	42	45	47	49	52
Vehicle miles		580	609	639	671	705	740
Vehicle revenue miles		507	533	559	587	616	647
Passenger trips		86	90	95	99	104	109
Fatalities							
Reportable injuries							
Collisions							
Diesel fuel consumed		2	0	0	0	0	0
Propane fuel consumed		116	123	130	138	147	155
Vanpools	#	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**
Vehicle hours		19	19	19	20	20	21
Vehicle revenue hours		19	19	19	20	20	21
Vehicle miles		665	678	692	706	720	734
Vehicle revenue miles		665	678	692	706	720	734
Passenger trips		57	58	60	61	62	63
Fatalities							
Reportable injuries							
Collisions							
Gasoline consumed		33	34	34	35	36	37

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Public Hearing and Distribution Process

1.1. Plan Adoption

The Skagit Transit Board of Directors is scheduled to adopt this Transit Development Plan on Aug. 20, 2025.

1.2. Public Participation Process

Public comment period: July 14, 2025 – Aug. 14, 2025

Comments can be mailed to: mkuzminsky@skagittransit.org or by mail to:
Skagit Transit Planning: 600 County Shop Lane, Burlington, WA 98233

Public hearing: Skagit Transit introduced the TDP through public hearing on July 16th, 2025. The Skagit Transit Board of Directors are scheduled to approve this plan at a public hearing, which will be held on August 20, 2025 at 11:00AM at Burlington City Hall 833 S Spruce St, Burlington WA 98233 or via ZOOM. The ZOOM invite is obtainable at www.skagittransit.org in the "Calendar" section.

Notice posted to website: On July 14th, 2025 at http://www.skagittransit.org/news/

Requests for paper or digital copies: Skagit Transit allowed the public to request a paper or digital copy of the Transit Development Plan on or after July 14 by emailing mkuzminsky@skagittransit.org or calling 360-757-8801.

Skagit Station
Customer Service Counter
105 E. Kincaid Street Mount Vernon, WA 98273

Maintenance, Operations and Administration (MOA)
Office Reception
600 County Shop Lane Burlington, WA 98233

1.3. Plan Distribution

On September 1, 2025, Skagit Transit will distribute the adopted Transportation Development Plan to:

- WSDOT Public Transportation Division online grants management system compliance module.
- All cities, counties, and regional transportation planning organizations within which Skagit Transit operates

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Rolling stock inventory and verification of continued use form

Revenue vehicles used in providing public transportation, including vehicles used for carrying passengers on fare-free services.
Refer to instructions tab for vehicle codes.

Agency/or: Skagit Transit Inventory year: 2024

No.	Year	Make/model	Vehicle code	Vehicle identification number (VIN)	Agency /organization vehicle numbe	Actual life odometer	Meets financial needs of SGR? Yes/no	Is the vehicle safe? Yes/no	Agency's ULB (Year)	Agency's ULB (Miles)	Maintenance current? Yes/no	Performs its designed function? Yes/no	Replacement cost ($)	Planned replacement year	Planned replacement fuel type	ADA access? Yes/no	Seating capacity	Fuel type	WSDOT title? Yes/no
1	2014	Gillig/40ft Suburban Low Floor	01	15GGD2713E1183921	141	475,084	Yes	Yes	15	750,000	Yes	Yes	$571,774	2029	Diesel	Yes	36+2	D	No
2	2014	Gillig/40ft Suburban Low Floor	01	15GGD2715E1183922	142	465,346	Yes	Yes	15	750,000	Yes	Yes	$571,774	2029	Diesel	Yes	36+2	D	No
3	2018	Gillig/40ft Suburban Low Floor	01	15GGD2716J3191463	181	420,844	Yes	Yes	15	750,000	Yes	Yes	$571,774	2033	Diesel	Yes	35+2	D	No
4	2020	Gillig/40ft Suburban Low Floor	01	15GGD2719L3195220	2001	342,651	Yes	Yes	15	750,000	Yes	Yes	$571,774	2035	Diesel	Yes	36+2	D	Yes
5	2020	Gillig/40ft Suburban Low Floor	01	15GGD2710L3195221	2002	346,949	Yes	Yes	15	750,000	Yes	Yes	$571,774	2035	Diesel	Yes	36+2	D	Yes
6	2020	Gillig/40ft Suburban Low Floor	01	15GGD2712L3195222	2003	335,627	Yes	Yes	15	750,000	Yes	Yes	$571,774	2035	Diesel	Yes	36+2	D	Yes
7	2020	Gillig/40ft Suburban Low Floor	01	15GGD2714L3195223	2004	393,523	Yes	Yes	15	750,000	Yes	Yes	$571,774	2035	Diesel	Yes	36+2	D	Yes
8	2020	Gillig/40ft Suburban Low Floor	01	15GGD2716L3195224	2005	305,200	Yes	Yes	15	750,000	Yes	No	$571,774	2035	Diesel	Yes	36+2	D	Yes
9	2009	NABI/31LFW-01	03	1N9313666 9A140004	091	582,934	Yes	Yes	12	500,000	Yes	Yes	$526,764	2024	Diesel	Yes	25+2	D	No
10	2009	NABI/31LFW-01	03	1N931366X9A140006	093	628,397	Yes	Yes	12	500,000	Yes	Yes	$526,764	2024	Diesel	Yes	25+2	D	No
11	2009	NABI/31LFW-01	03	1N9313666 9A140007	094	634,771	Yes	Yes	12	500,000	Yes	Yes	$526,764	2024	Diesel	Yes	25+2	D	No
12	2009	NABI/31LFW-01	03	1N9313665 9A140009	096	595,226	Yes	Yes	12	500,000	Yes	Yes	$526,764	2024	Diesel	Yes	25+2	D	No
13	2011	Gillig/35ft Low Floor	02	15GGB2715B1178544	111	469,373	Yes	Yes	15	750,000	Yes	Yes	$555,203	2026	Diesel	Yes	32+2	D	Yes
14	2014	Gillig/35ft Low Floor	02	15GGB271XE1183923	143	463,360	Yes	Yes	15	750,000	Yes	Yes	$555,203	2029	Diesel	Yes	32+2	D	No
15	2014	Gillig/35ft Low Floor	02	15GGB2711E1183924	144	438,451	Yes	Yes	15	750,000	Yes	Yes	$555,203	2029	Diesel	Yes	32+2	D	No
16	2016	Gillig/35ft Low Floor	02	15GGB2717G1186443	161	391,028	Yes	Yes	15	750,000	Yes	Yes	$555,203	2031	Diesel	Yes	32+2	D	No
17	2017	Gillig/35ft Low Floor	02	15GGB2713h1187378	171	380,432	Yes	Yes	15	750,000	Yes	Yes	$555,203	2032	Diesel	Yes	29+2	D	Yes
18	2017	Gillig/35ft Low Floor	02	15GGB2715H1187379	172	336,066	Yes	Yes	15	750,000	Yes	Yes	$555,203	2032	Diesel	Yes	29+2	D	Yes
19	2017	Gillig/30ft Low Floor	03	15GGE2712H1093127	174	291,702	Yes	Yes	15	750,000	Yes	Yes	$526,764	2032	Diesel	Yes	26+2	D	No
20	2019	Gillig/30ft Low Floor	02	15GGE2715K3093506	191	348,369	Yes	Yes	15	750,000	Yes	Yes	$526,764	2034	Diesel	Yes	29+2	D	No
21	2019	Gillig/30ft Low Floor	02	15GGE2717K3093507	192	361,550	Yes	Yes	15	750,000	Yes	Yes	$526,764	2034	Diesel	Yes	29+2	D	No
22	2019	Gillig/30ft Low Floor	02	15GGE2719K3093508	193	378,052	Yes	Yes	15	750,000	Yes	Yes	$526,764	2034	Diesel	Yes	29+2	D	No
23	2019	Gillig/30ft Low Floor	02	15GGE2710K3093509	194	392,447	Yes	Yes	15	750,000	Yes	Yes	$526,764	2034	Diesel	Yes	29+2	D	No
24	2019	Gillig/30ft Low Floor	02	15GGE2717K3093510	195	357,528	Yes	Yes	15	750,000	Yes	Yes	$526,764	2034	Diesel	Yes	29+2	D	No
25	2019	Gillig/30ft Low Floor	02	15GGE2719K3093511	196	364,742	Yes	Yes	15	750,000	Yes	Yes	$526,764	2034	Diesel	Yes	29+2	D	No
26	2020	Gillig/35ft Low Floor	02	15GGB2710L3195225	2006	286,468	Yes	Yes	15	750,000	Yes	Yes	$555,203	2035	Diesel	Yes	30+2	D	Yes
27	2020	Gillig/30ft Low Floor	03	15GGE2713L3093649	2007	288,200	Yes	Yes	15	200,000	Yes	Yes	$526,764	2035	Diesel	Yes	30+2	D	Yes
28	2020	Gillig/30ft Low Floor	03	15GGE2715L3093650	2008	266,038	Yes	Yes	15	200,000	Yes	Yes	$526,764	2035	Diesel	Yes	30+2	D	Yes
29	2020	Gillig/30ft Low Floor	03	15GGE2711L3093651	2009	293,750	Yes	Yes	15	200,000	Yes	Yes	$526,764	2035	Diesel	Yes	30+2	D	Yes
30	2022	Gillig/40ft Low Floor	03	15GGB2714N3197689	2201	130,768	Yes	Yes	15	200,000	Yes	Yes	$541,421	2037	Diesel	Yes	30+2	D	No
31	2024	Gillig/40ft Low Floor	03	15GGD2713R3200713	2401	16,342	Yes	Yes	15	200,000	Yes	Yes	$615,622	2039	Diesel	Yes	34+2	D	Yes
32	2024	Gillig/40ft Low Floor	03	15GGD2715R3200714	2402	18,553	Yes	Yes	15	200,000	Yes	Yes	$615,622	2039	Diesel	Yes	34+2	D	Yes
33	2024	Gillig/40ft Low Floor	03	15GGD2717R3200715	2403	24,122	Yes	Yes	15	200,000	Yes	Yes	$615,622	2039	Diesel	Yes	34+2	D	Yes
34	2024	Gillig/40ft Low Floor	03	15GGD2719R3200716	2404	27,668	Yes	Yes	15	200,000	Yes	Yes	$615,622	2039	Diesel	Yes	34+2	D	Yes
35	2024	Gillig/40ft Low Floor	03	15GGD2710R3200717	2405	17,067	Yes	Yes	15	200,000	Yes	Yes	$615,622	2039	Diesel	Yes	34+2	D	Yes
36	2013	Chevy/Startrans Senator	11	1GB6G5BLXC1171643	757	133,735	Yes	Yes	7	200,000	Yes	Yes	144398	2020	Propane	Yes	10+3	D	No
37	2013	Chevy/Startrans Senator	11	1GB6G5BL6C1200281	758	134,439	Yes	Yes	7	200,000	Yes	Yes	144398	2020	Propane	Yes	10+3	D	No
38	2015	Chevy/Startrans Senator	11	1GB6G5BL6E1158200	759	104,522	Yes	Yes	7	200,000	Yes	Yes	144398	2022	Propane	Yes	10+4	D	No
39	2015	Chevy/Startrans Senator	11	1GB6G5BL9E1158448	760	138,965	Yes	Yes	7	200,000	Yes	Yes	144398	2022	Propane	Yes	10+4	D	No
40	2015	Chevy/Startrans Senator	11	1GB6G5BL9E1157243	761	117,301	Yes	Yes	7	200,000	Yes	Yes	144398	2022	Propane	Yes	10+4	D	No
41	2016	Ford/Aerotech	11	1FDFE4FS8GDC55022	762	149,321	Yes	Yes	7	200,000	Yes	Yes	144398	2026	Propane	Yes	14+2	LP	Yes
42	2016	Ford/Aerotech	11	1FDFE4FS5GDC55026	763	180,526	Yes	Yes	7	200,000	Yes	Yes	144398	2026	Propane	Yes	14+2	LP	No
43	2016	Ford/Aerotech	11	1FDFE4FS1GDC55024	764	183,689	Yes	Yes	7	200,000	Yes	Yes	144398	2026	Propane	Yes	14+2	LP	No
44	2016	Ford/Aerotech	11	1FDFE4FSXGDC55023	765	154,288	Yes	Yes	7	200,000	Yes	Yes	144398	2026	Propane	Yes	14+2	LP	No
45	2016	Ford/Aerotech	11	1FDFE4FS3GDC55025	766	150,543	Yes	Yes	7	200,000	Yes	Yes	144398	2026	Propane	Yes	14+2	LP	No
46	2018	Ford/Aerotech	11	1FDFE4FS4HDC78671	767	130,479	Yes	Yes	7	200,000	Yes	Yes	$144,398	2025	Propane	Yes	15+4	LP	Yes
47	2018	Ford/Aerotech	11	1FDFE4FS8HDC78673	768	137,982	Yes	Yes	7	200,000	Yes	Yes	$144,398	2025	Propane	Yes	15+4	LP	Yes
48	2018	Ford/Aerotech	11	1FDFE4FSXHDC78674	769	156,531	Yes	Yes	7	200,000	Yes	Yes	$144,398	2025	Propane	Yes	15+4	LP	Yes
49	2018	Ford/Aerotech	11	1FDFE4FS3HDC78676	770	145,437	Yes	Yes	7	200,000	Yes	Yes	$144,398	2025	Propane	Yes	15+4	LP	Yes
50	2018	Ford/Aerotech	11	1FDFE4FS2HDC78670	771	158,585	Yes	Yes	7	200,000	Yes	Yes	$144,398	2025	Propane	Yes	15+4	LP	Yes
51	2018	Ford/Aerotech	11	1FDFE4FS1HDC78675	772	153,764	Yes	Yes	7	200,000	Yes	Yes	$144,398	2025	Propane	Yes	15+4	LP	No
52	2018	Ford/Aerotech	11	1FDFE4FS6HDC78672	773	166,537	Yes	Yes	7	200,000	Yes	Yes	$144,398	2025	Propane	Yes	15+4	LP	Yes
53	2019	Ford/Aerotech	11	1FDFE4FS8KDC51156	774	118,545	Yes	Yes	7	200,000	Yes	Yes	$144,398	2025	Propane	Yes	15+4	LP	No
54	2019	Ford/Aerotech	11	1FDFE4FSXKDC51157	775	114,535	Yes	Yes	7	200,000	Yes	Yes	$144,398	2025	Propane	Yes	15+4	LP	No
55	2019	Ford/Aerotech	11	1FDFE4FS1KDC51158	776	113,562	Yes	Yes	7	200,000	Yes	Yes	$144,398	2025	Propane	Yes	15+4	LP	No
56	2020	Ford/Aerotech	11	1FDFE4FS6KDC64553	777	104,732	Yes	Yes	7	200,000	Yes	Yes	$144,398	2026	Propane	Yes	15+4	LP	Yes
57	2020	Ford/Aerotech	11	1FDFE4FS4KDC64549	778	88,186	Yes	Yes	7	200,000	Yes	Yes	$144,398	2026	Propane	Yes	15+4	LP	Yes
58	2020	Ford/Aerotech	11	1FDFE4FS5KDC64552	779	70,121	Yes	Yes	7	200,000	Yes	Yes	$144,398	2026	Propane	Yes	15+4	LP	Yes
59	2020	Ford/Aerotech	11	1FDFE4FS8KDC64554	780	96,222	Yes	Yes	7	200,000	Yes	Yes	$144,398	2027	Propane	Yes	15+4	LP	Yes
60	2020	Ford/Aerotech	11	1FDFE4FS2KDC64551	781	81,327	Yes	Yes	7	200,000	Yes	Yes	$144,398	2027	Propane	Yes	15+4	LP	Yes
61	2020	Ford/Aerotech	11	1FDFE4FS0KDC64550	782	82,084	Yes	Yes	7	200,000	Yes	Yes	$144,398	2027	Propane	Yes	15+4	LP	Yes
62	2015	Dodge/Grand Caravan	13	2C4RDGCG3FR661128	1026	116,823	Yes	Yes	5	125,000	Yes	Yes	$26,533	2020	Unleaded	No	7	G	No
63	2015	Dodge/Grand Caravan	13	2C4RDGCG0FR691008	1028	98,959	Yes	Yes	5	125,000	Yes	Yes	$26,533	2020	Unleaded	No	7	G	No
64	2018	Chrysler Pacifica	13	2C4RC1AG3JR234026	1029	108,851	Yes	Yes	5	125,000	Yes	Yes	$26,533	2023	Unleaded	No	7	G	Yes
65	2018	Chrysler Pacifica	13	2C4RC1AG3JR234029	1031	123,626	Yes	Yes	5	125,000	Yes	Yes	$26,533	2023	Unleaded	No	7	G	Yes
66	2018	Chrysler Pacifica	13	2C4RC1AG5JR234030	1032	91,161	Yes	Yes	5	125,000	Yes	Yes	$26,533	2023	Unleaded	No	7	G	Yes
67	2018	Chrysler Pacifica	13	2C4RC1AG7JR234031	1033	98,109	Yes	Yes	5	125,000	Yes	Yes	$26,533	2023	Unleaded	No	7	G	Yes
68	2018	Chrysler Pacifica	13	2C4RC1AG7JR234028	1034	113,481	Yes	Yes	5	125,000	Yes	Yes	$26,533	2023	Unleaded	No	7	G	Yes
69	2019	Chrysler Pacifica	13	2C4RC1AG3KR653477	1035	78,655	Yes	Yes	5	125,000	Yes	Yes	$26,533	2023	Unleaded	No	7	G	No
70	2019	Chrysler Pacifica	13	2C4RC1AG5KR653478	1036	97,303	Yes	Yes	5	125,000	Yes	Yes	$26,533	2023	Unleaded	No	7	G	No
71	2019	Chrysler Pacifica	13	2C4RC1AG5KR653479	1037	113,148	Yes	Yes	5	125,000	Yes	Yes	$26,533	2023	Unleaded	No	7	G	No
72	2019	Chrysler Pacifica	13	2C4RC1AG3KR653480	1038	96,371	Yes	Yes	5	125,000	Yes	Yes	$26,533	2023	Unleaded	No	7	G	No
73	2019	Chrysler Pacifica	13	2C4RC1AG5KR653481	1039	92,535	Yes	Yes	5	125,000	Yes	Yes	$26,533	2023	Unleaded	No	7	G	No
74	2019	Chrysler Pacifica	13	2C4RC1AG7KR653482	1040	87,401	Yes	Yes	5	125,000	Yes	Yes	$26,533	2023	Unleaded	No	7	G	No
75	2023	Chrysler Pacifica Touring L	13	2C4RC1BG5PR592056	1041	27,220	Yes	Yes	5	200,000	Yes	Yes	$44,995	2028	Unleaded	No	7	G	Yes
76	2023	Chrysler Pacifica Touring L	13	2C4RC1BG9PR592058	1042	24,732	Yes	Yes	5	200,000	Yes	Yes	$44,995	2028	Unleaded	No	7	G	Yes
77	2023	Chrysler Pacifica Touring L	13	2C4RC1BG1PR592054	1043	20,406	Yes	Yes	5	200,000	Yes	Yes	$44,995	2028	Unleaded	No	7	G	Yes
78	2023	Chrysler Pacifica Touring L	13	2C4RC1BG7PR592057	1044	23,455	Yes	Yes	5	200,000	Yes	Yes	$44,995	2028	Unleaded	No	7	G	Yes
79	2023	Chrysler Pacifica Touring L	13	2C4RC1BG0PR592059	1045	30,389	Yes	Yes	5	200,000	Yes	Yes	$44,995	2028	Unleaded	No	7	G	Yes
80	2023	Chrysler Pacifica Touring L	13	2C4RC1BG7PR592060	1045	30,389	Yes	Yes	5	200,000	Yes	Yes	$44,995	2028	Unleaded	No	7	G	Yes
81	2023	Chrysler Pacifica Touring L	13	2C4RC1BG3PR592055	1046	19,171	Yes	Yes	5	200,000	Yes	Yes	$44,995	2028	Unleaded	No	7	G	Yes
82	2023	Chrysler Pacifica Touring L	13	2C4RC1BG3PR592055	1047	34,496	Yes	Yes	5	200,000	Yes	Yes	$44,995	2028	Unleaded	No	7	G	Yes
83	2024	Chrysler Pacifica Touring L	13	2C4RC1BG6RR144220	1048	10,323	Yes	Yes	5	200,000	Yes	Yes	$44,995	2028	Unleaded	No	7	G	Yes
84	2024	Chrysler Pacifica Touring L	13	2C4RC1BG8RR144221	1049	5,160	Yes	Yes	5	200,000	Yes	Yes	$44,995	2028	Unleaded	No	7	G	Yes
85	2024	Chrysler Pacifica Touring L	13	2C4RC1BGXRR144222	1050	6,270	Yes	Yes	5	200,000	Yes	Yes	$44,995	2028	Unleaded	No	7	G	Yes
86	2024	Chrysler Pacifica Touring L	13	2C4RC1BG1RR144223	1051	3,937	Yes	Yes	5	200,000	Yes	Yes	$44,995	2028	Unleaded	No	7	G	Yes
87	2024	Chrysler Pacifica Touring L	13	2C4RC1BG3RR144224	1052	3,169	Yes	Yes	5	200,000	Yes	Yes	$44,995	2028	Unleaded	No	7	G	Yes
88	2024	Chrysler Pacifica Touring L	13	2C4RC1BG5RR144225	1053	56	Yes	Yes	5	200,000	Yes	Yes	$44,995	2028	Unleaded	No	7	G	Yes
89	2024	Chrysler Pacifica Touring L	13	2C4RC1BG7RR144226	1054	3,190	Yes	Yes	5	200,000	Yes	Yes	$44,995	2028	Unleaded	No	7	G	Yes
90	2017	Ford/XZYB Transit 15	13	1FBZX2YG5HKA31295	408	138,841	Yes	Yes	5	125,000	Yes	Yes	$40,960	2022	Unleaded	No	15	G	No
91	2017	Ford/XZYB Transit 15	13	1FBZX2YG1HKB26372	413	155,132	Yes	Yes	5	125,000	Yes	Yes	$40,960	2022	Unleaded	No	15	G	No
92	2018	Ford/XZYB Transit 15	13	1FBZX2YM0JKB41912	414	101,624	Yes	Yes	5	125,000	Yes	Yes	$40,960	2023	Unleaded	No	15	G	No
93	2018	Ford/XZYB Transit 15	13	1FBZX2YM0JKB41903	415	125,831	Yes	Yes	5	125,000	Yes	Yes	$40,960	2023	Unleaded	No	15	G	No
94	2018	Ford/XZYB Transit 15	13	1FBZX2YM2JKB41913	416	103,470	Yes	Yes	5	125,000	Yes	Yes	$40,960	2023	Unleaded	No	15	G	No
95	2018	Ford/XZYB Transit 15	13	1FBZX2YM7JKB41910	417	81,035	Yes	Yes	5	125,000	Yes	Yes	$40,960	2023	Unleaded	No	15	G	No
96	2018	Ford/XZYB Transit 15	13	1FBZX2YM9JKB41911	418	143,113	Yes	Yes	5	125,000	Yes	Yes	$40,960	2023	Unleaded	No	15	G	No

SKAGIT TRANSIT
LONG RANGE TRANSIT PLAN
JUNE 2025

DRAFT

Skagit Transit
600 County Shop Lane
Burlington, WA 98233

Prepared by:

Kimley»Horn
Expect More. Experience Better.

1201 Third Avenue
Suite 2800
Seattle, Washington 98101

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Acronyms & Abbreviations

ADA	Americans with Disabilities Act
AoPP	Areas of Persistent Poverty
BEB	Battery-Electric Bus
BIPOC	Black, Indigenous, and People of Color
EV	Electric Vehicle
HDC	Historically Disadvantaged Communities
LRTP	Long-Range Transit Plan
MOA	Maintenance, Operations, and Administration
OTP	On-Time Performance
SR	State Route
WADOL	Washington Department of Licensing
WTA	Whatcom Transportation Authority

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1 LONG-RANGE TRANSIT PLAN PURPOSE

1.1 Project Purpose and Timeline

In recent years, Skagit Transit service decisions have largely been guided by the 2018 Strategic Plan, which prioritized community-supported service improvements. Since 2018, the population of Skagit County has increased by about 6% and travel patterns have evolved. People are making different trips, at different times of the day, and for different reasons.

This Long-Range Transit Plan (LRTP) provides Skagit Transit with a framework for enhancing and expanding transit over the next 10 years to better serve existing riders and attract new riders. The LRTP has three elements, **all supported by County-wide engagement to better understand the opportunities and challenges of the rider experience** and recommend improvements accordingly:

- **Comprehensive Analysis of Current Operations** – An analysis looking at existing operations to then identify opportunities for service improvements, route efficiencies, and overall system upgrades to meet the current and future demands of ridership. This analysis is in **Section 2** of this LRTP.
- **On-Demand Transit Assessment** – Explores an alternative service model that allows for on-demand service for areas with lower population density or during low ridership period when consistent bus service is not required. This assessment is in **Section 3** of this LRTP.
- **Service Recommendations and Implementation Strategy -** A range of service and capital investments suggested to be made over the next decade to support the agency's mission. The LRTP intends to be resource-neutral with additional services and investments that could be made if new resources become available. Three phases define a recommended implementation strategy that is illustrative of a reasonable scenario for acquiring additional vehicles and onboarding additional operators, as resources are secured. These recommendations are in **Sections 5 to 6** of this LRTP.

1.2 Skagit Transit Mission, Vision, and Values

Mission

The mission of Skagit Transit is to connect communities and foster growth by providing sustainable, innovative, and equitable public transportation options. We are dedicated to enhancing the mobility and quality of life for all residents through reliable, safe, excellence in customer service. By embracing technology, innovation, and community input, we strive to be a leader in shaping the future of public transit, making Skagit County more accessible and livable for everyone.

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Vision

The vision of Skagit Transit is to be the lifeline of Skagit County, empowering our communities through a sustainable and innovative public transit system. We envision a future where every resident has access to reliable, efficient, and environmentally friendly transportation, connecting them to opportunities, services, and each other. Our vision is to contribute towards a more connected, sustainable, and a thriving Skagit County for all.

Values

To achieve this Mission and Vision, Skagit Transit has defined values to guide its work:

- **Safety:** We commit to ensure that our employees, passengers and the general public's safety are always our first consideration.
- **Service Excellence:** We commit to provide safe, clean, reliable, on-time, courteous service for our clients and customers.
- **Workforce Development:** We commit to make Skagit Transit a learning organization that attracts, develops, motivates, and retains a world class workforce.
- **Fiscal Responsibility:** We commit to manage every taxpayer and customer-generated dollar as if it were coming from our own pocket.
- **Innovation and Technology:** We commit to actively participate in identifying best practices for continuous improvement.
- **Sustainability:** We commit to reduce, re-use, and recycle all internal resources and reduce greenhouse gas emissions.
- **Integrity:** We commit to rely on the professional ethics and honesty of every Skagit Transit employee.
- **Teamwork:** We commit to actively blend our individual talents to achieve world-class performance and service.

Skagit Transit's mission, vision, and values guide the work of the LRTP.

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2 COMPREHENSIVE ANALYSIS OF EXISTING CONDITIONS

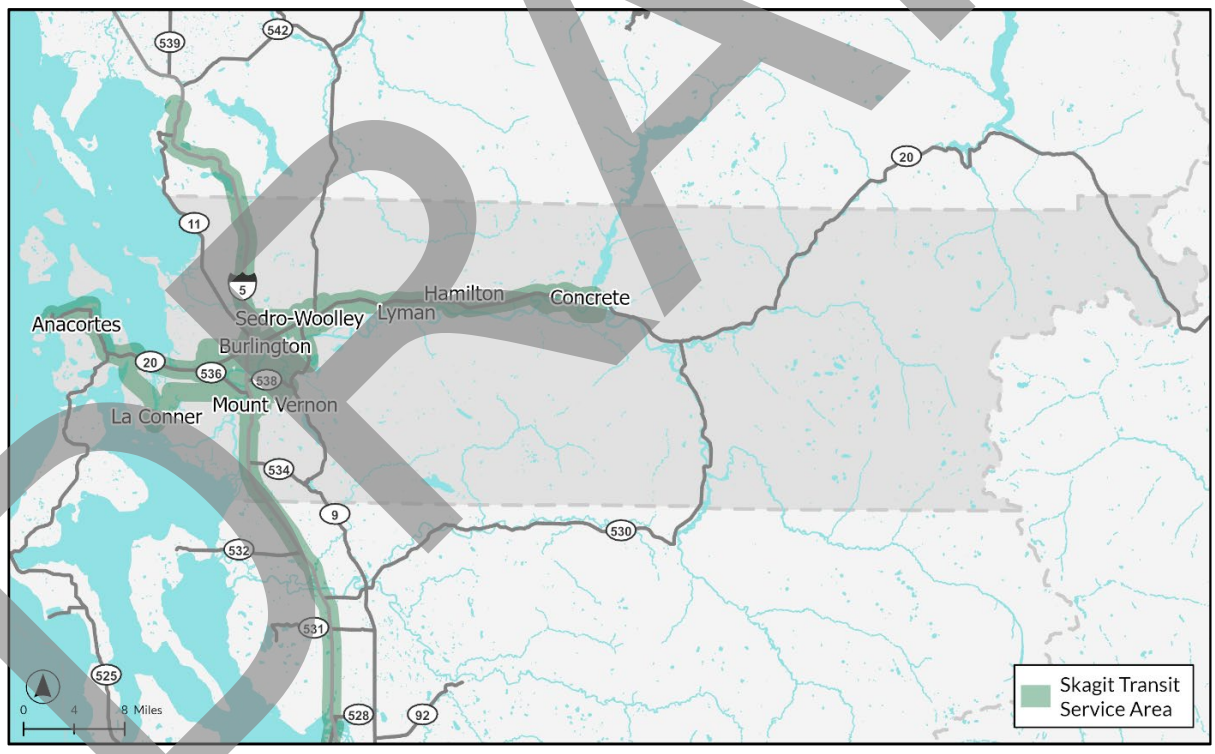
2.1 Skagit Transit Service Area

Skagit Transit operates 19 fixed-route bus routes and paratransit service throughout Skagit County with connections to San Juan, Snohomish, Island, and Whatcom Counties. The service area includes the cities of Anacortes, Burlington, Concrete, La Conner, Mount Vernon, and Sedro-Woolley. Skagit Transit service extends outside of the county to Bellingham and Everett.

Service is provided seven days a week, except for six major holidays[1]. Service hours vary by route and day with weekday service starting between 4:45 a.m. and 7:40 a.m. and ending between 4:45 p.m. and 9:05 p.m. Service hours are reduced or suspended on weekends depending on the route.

The Skagit Transit service area, defined by the ¾-mile boundary around fixed routes where paratransit service is provided, is shown in **Figure 2-1**. Skagit Transit is funded by a Public Transportation Benefit Area which covers the entirety of Skagit County. **Figure 2-2** is a system map showing Skagit Transit's existing routes.

Figure 2-1: Skagit Transit Service Area



Source: Skagit Transit

[1] Major holidays include New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day.

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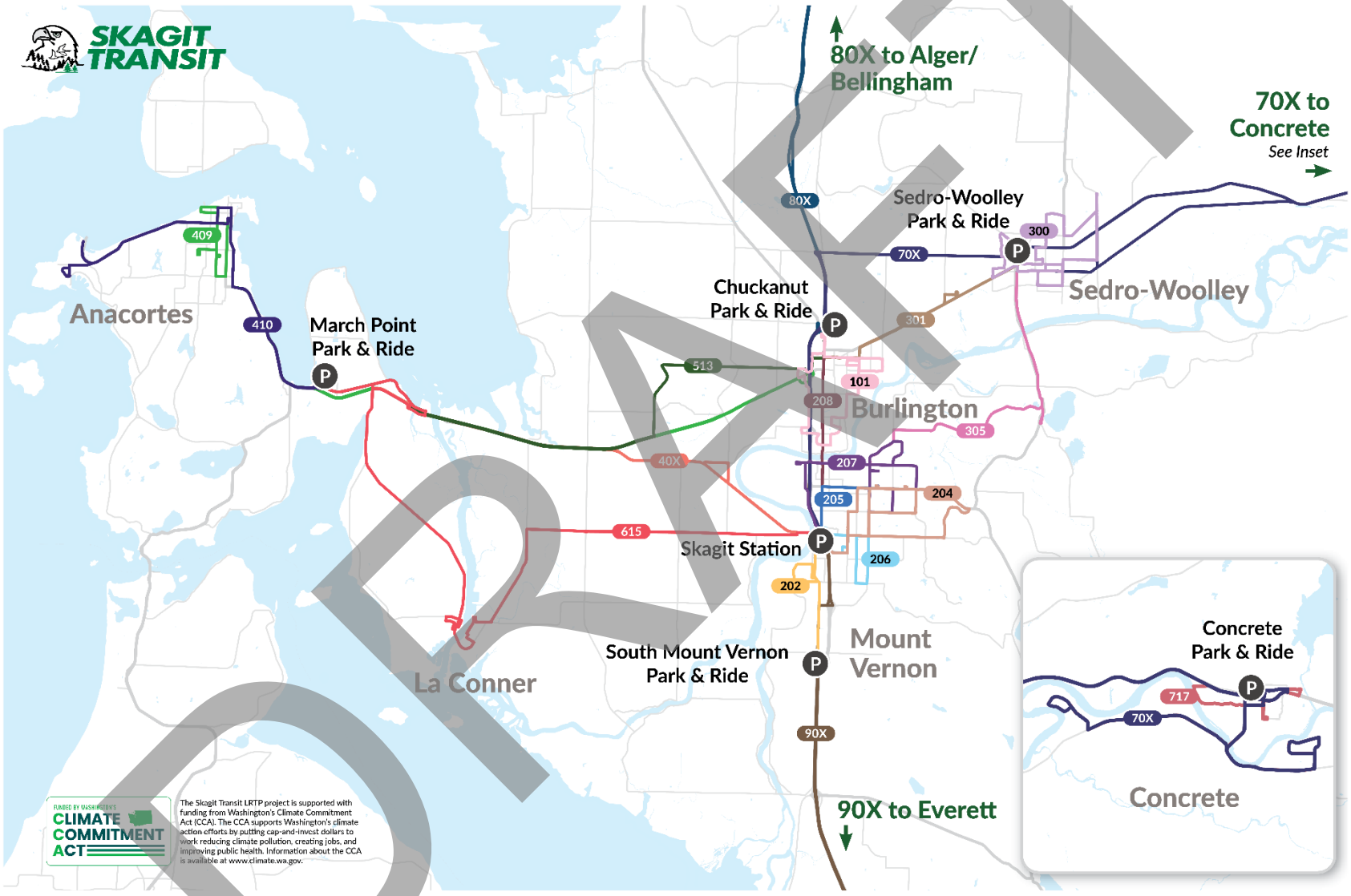
Figure 2-2: Skagit Transit System Map



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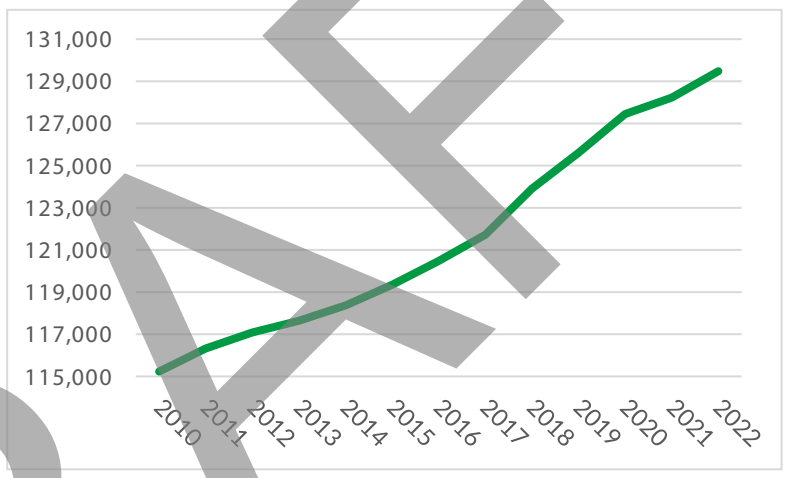
Source: Skagit Transit

2.2 Demographics and Transportation Patterns

The population of Skagit County has been steadily increasing by an average of 1% each year since 2010. **Table 2-1** displays the population of Skagit County over time. The Skagit Council of Governments projects that this steady growth will continue and that the county will be home to approximately 160,000 people and 80,000 jobs by 2045.

Table 2-1: Skagit County Population

Year	Population	Percent Change	Population Change Over Time
2010	115,231	-	
2011	116,327	1.0%	
2012	117,087	0.7%	
2013	117,641	0.5%	
2014	118,364	0.6%	
2015	119,343	0.8%	
2016	120,475	0.9%	
2017	121,725	1.0%	
2018	123,907	1.8%	
2019	125,612	1.4%	
2020	127,442	1.5%	
2021	128,228	0.6%	
2022	129,480	1.0%	



Source: US Census, 2022

Figure 2-3 and **Figure 2-4** show where more recent population change is occurring in Skagit County. Population growth over the past few years has been spread across the county, with concentrations of higher growth in south Mount Vernon, east Burlington, Sedro-Woolley, west of La Conner and north of Concrete. Some areas of the county have lost population, including Lyman, west Sedro-Woolley, and Samish Island.

The population density in Skagit County is shown in **Figure 2-5** and **Figure 2-6**. Population in Skagit County is concentrated on the west side in the cities of Anacortes, Burlington, Mount Vernon, Sedro-Woolley, and the surrounding area.

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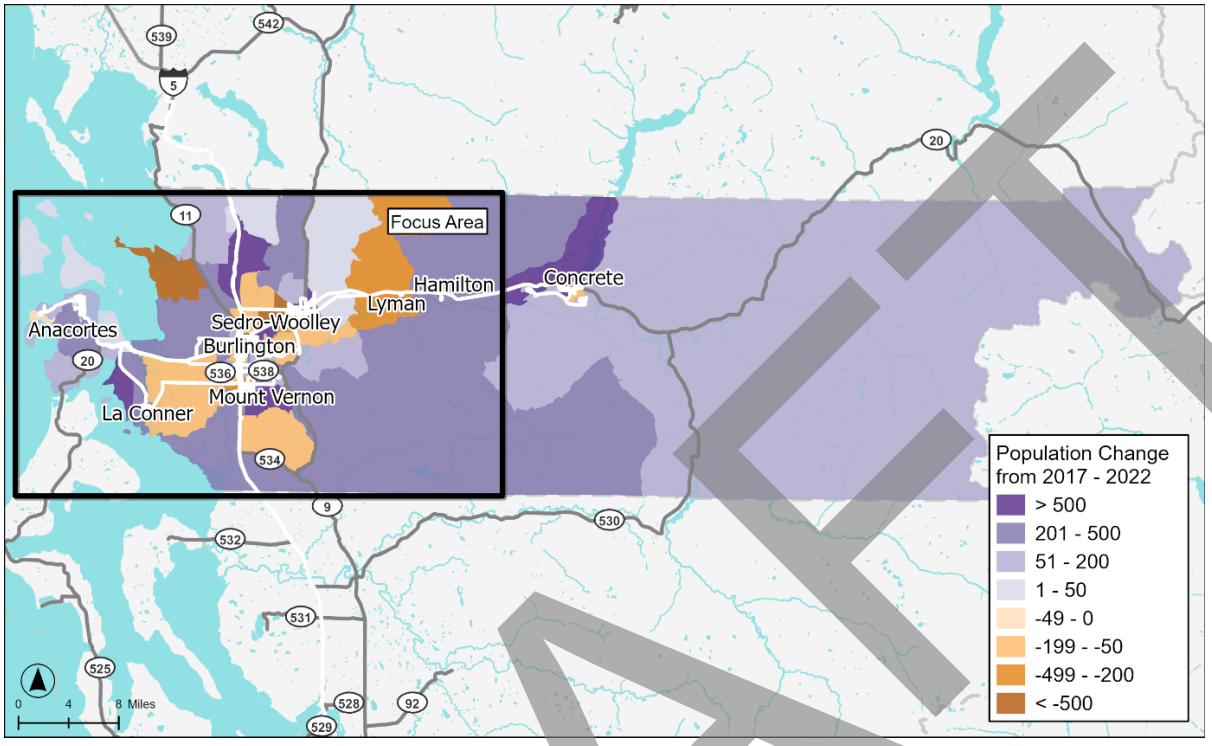
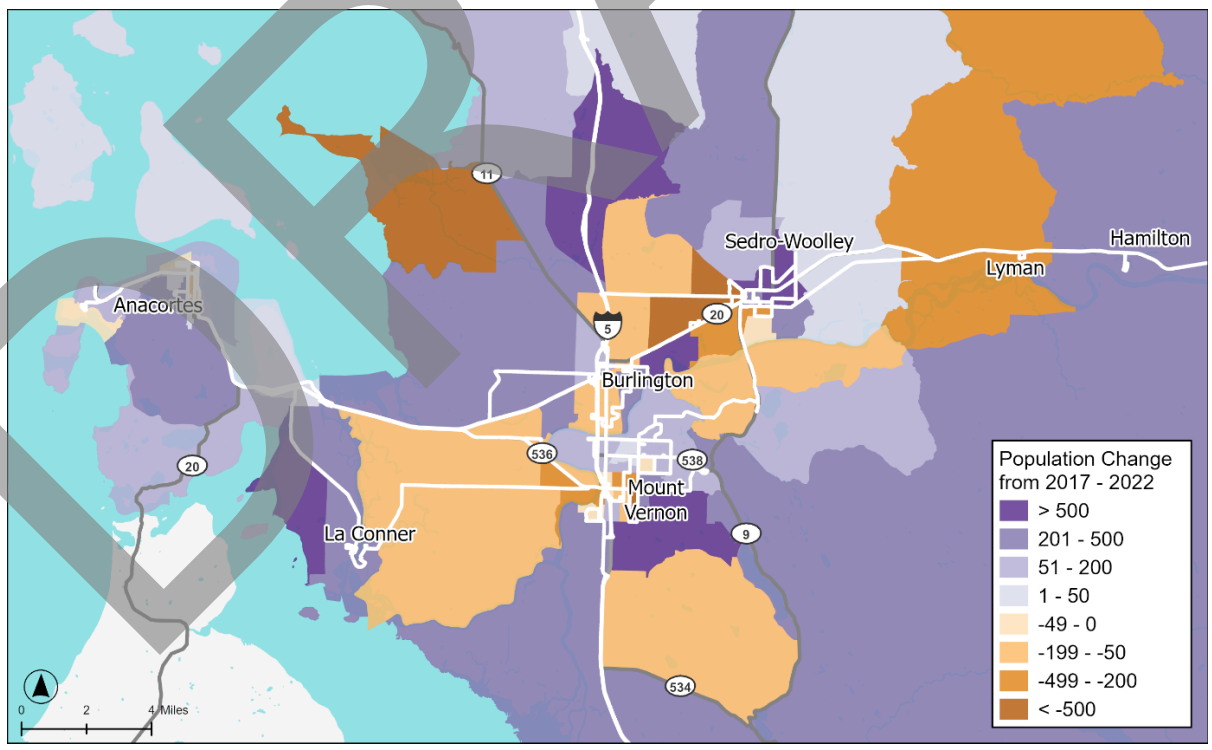
Figure 2-3: Population Change in Skagit County from 2017 to 2022



Source: US Census, 2017 and 2022

Figure 2-4: Population Change in Skagit County from 2017 to 2022, Focus Area



Source: US Census, 2017 and 2022

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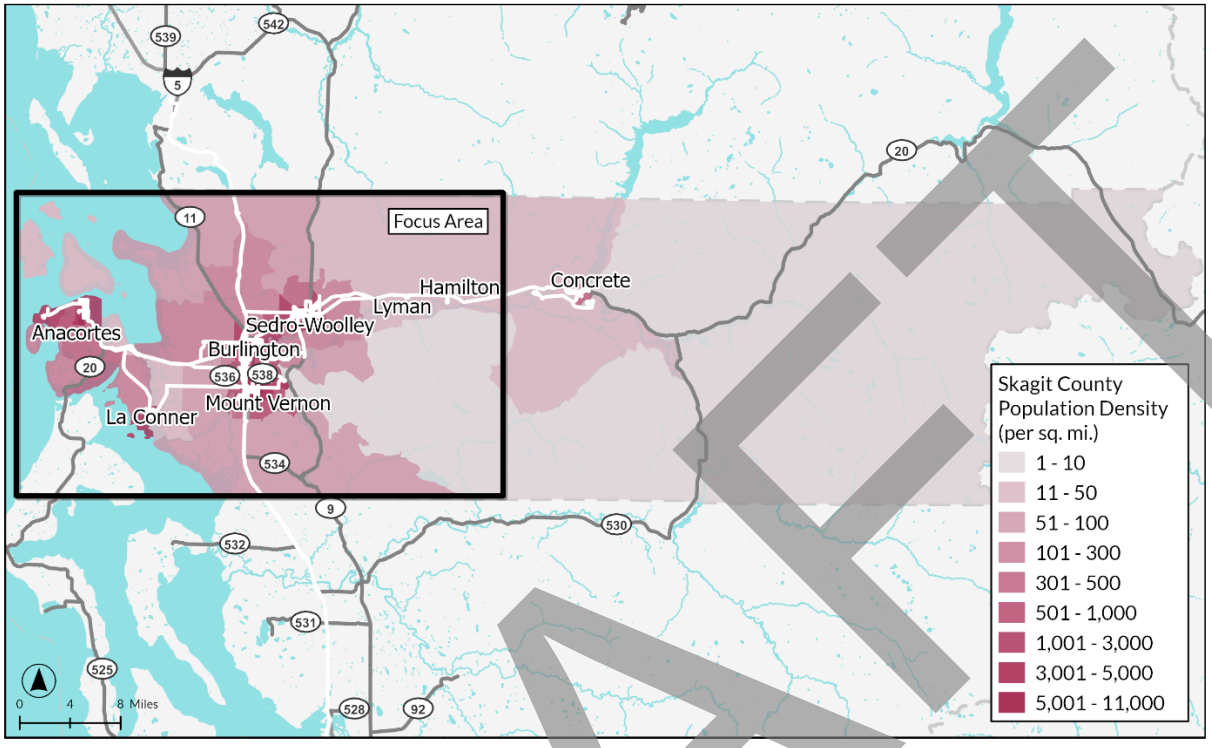
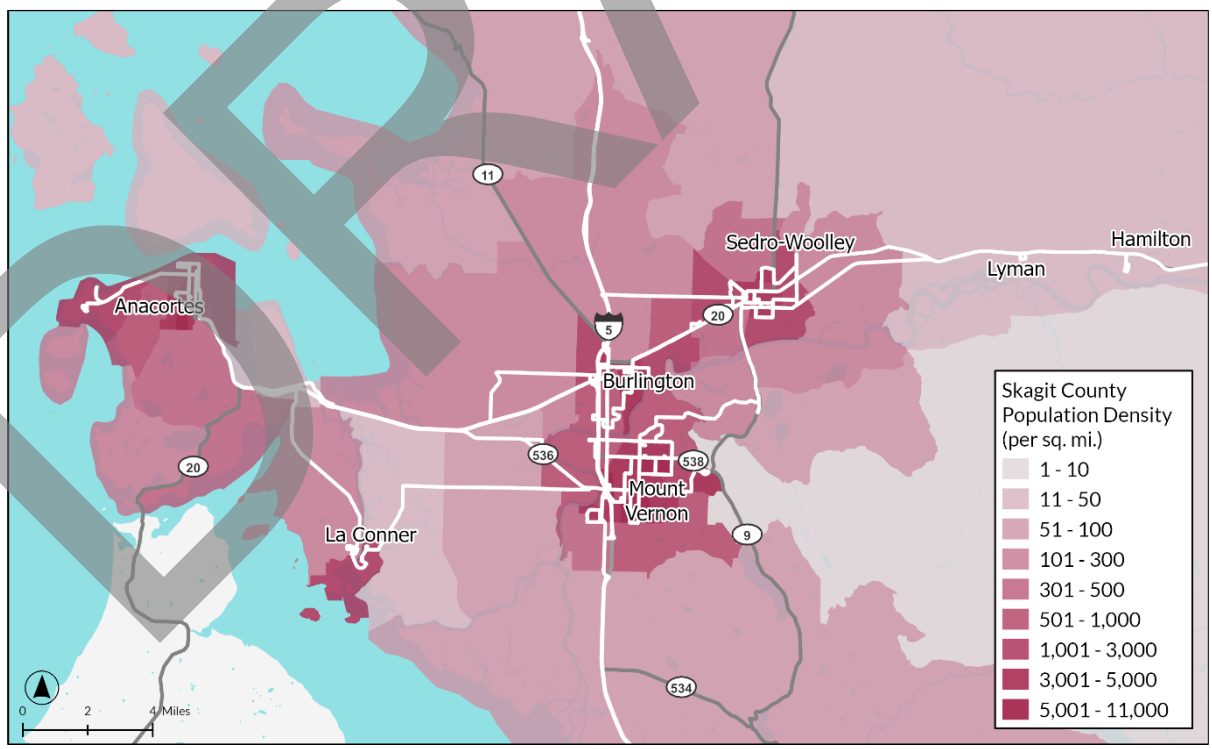
Figure 2-5: Skagit County Population Density



Source: US Census, 2022

Figure 2-6: Skagit County Population Density, Focus Area



Source: US Census, 2022

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2.3 Demographic and Socioeconomic Analysis

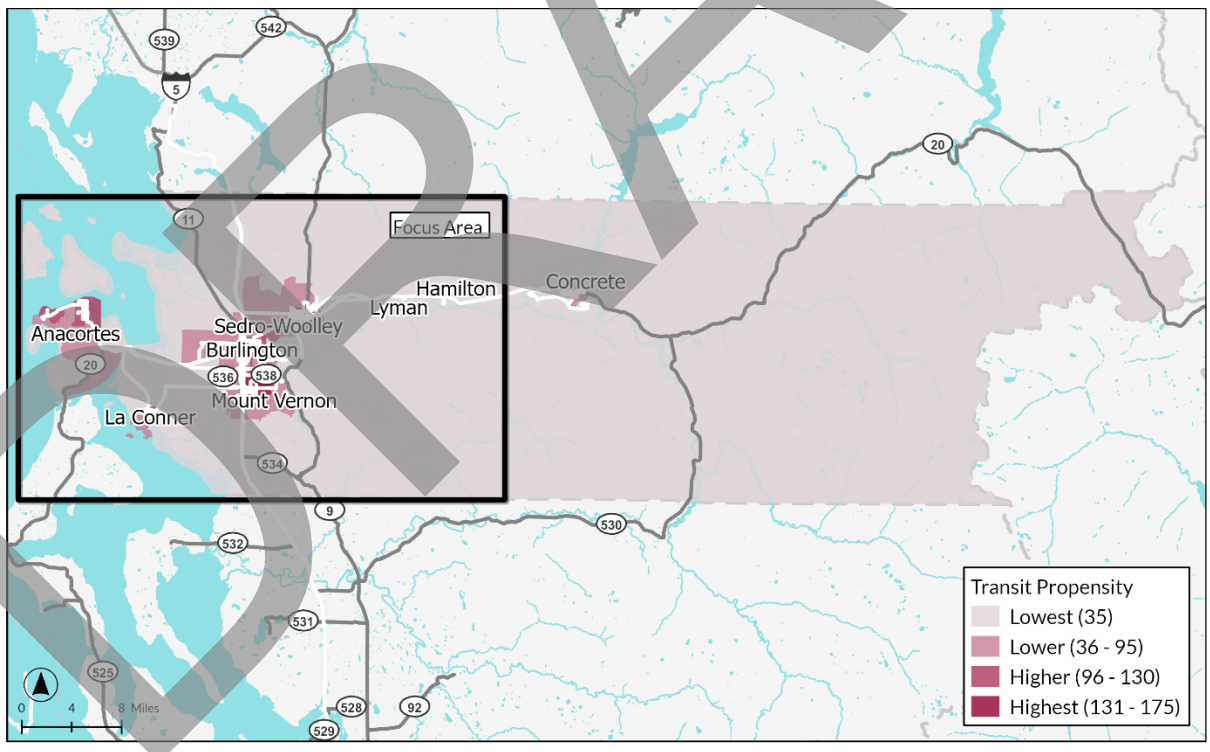
A comprehensive market analysis of demographic and socioeconomic conditions was conducted to ensure that transit service is provided equitably across Skagit County. The complete Existing Conditions Analysis is included in Appendix A.

Transit propensity is a composite measure of transit need based on multiple factors, including:

- Population density
- Low-income population
- Youth (<18 years old) population
- Senior (>65 years old) population
- Households with Zero Vehicles available
- Black, Indigenous, and People of Color (BIPOC), including people of Hispanic origin
- Households with at least one reported disability

The transit propensity of Skagit County is shown in **Figure 2-7** and **Figure 2-8**. In Skagit County, the areas with the highest transit propensity are concentrated in the urbanized areas of the county, particularly in Mount Vernon, but they also include Anacortes, Burlington, La Conner, and Sedro-Woolley.

Figure 2-7: Transit Propensity in Skagit County



Source: US Census, 2022

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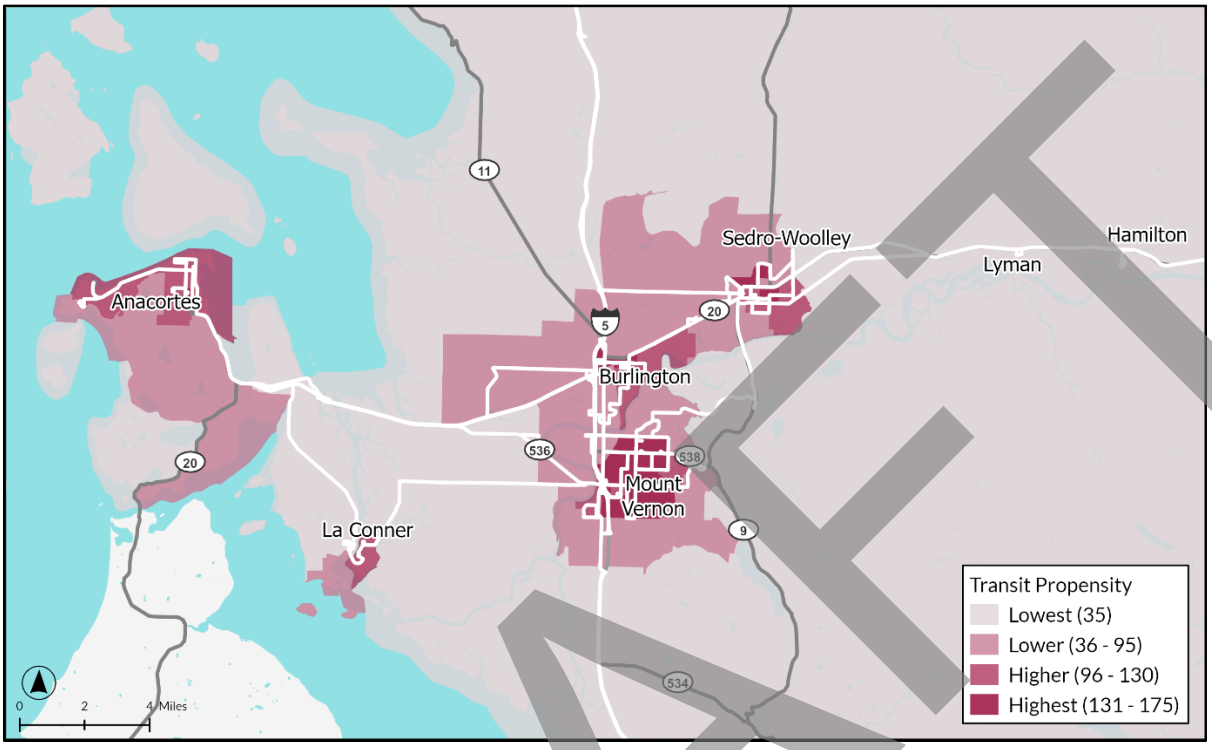
Figure 2-8: Transit Propensity in Skagit County, Focus Area



Source: US Census, 2022

2.4 Employment and Commute Patterns

Figure 2-9 shows job distribution in Skagit County. The size of each circle indicates the number of jobs within each census block group. Job sites in Skagit Transit's service area are most concentrated near the cities of Anacortes, Burlington, Mount Vernon, and Sedro-Woolley. Outside of cities there are a few major job centers such as the refineries on March's Point, the industrial corridor along State Route (SR) 20 near March's Point, the Swinomish Indian Reservation, and the Skagit Regional Airport.

Figure 2-10 shows the distribution of workers' residences in Skagit County. The size of each circle indicates the number of workers' residences within each census block group. There are large concentrations of workers in the major cities as well as an even spread in the outlying areas including a substantial number across Fidalgo Island.

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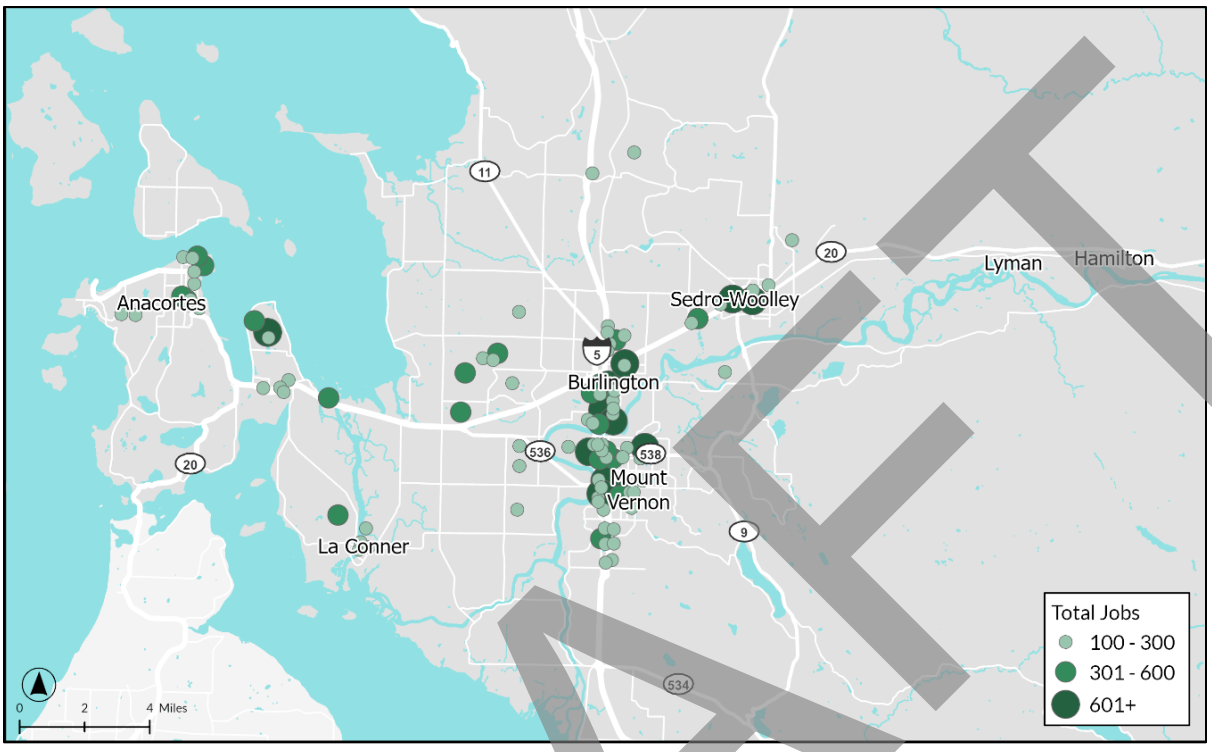
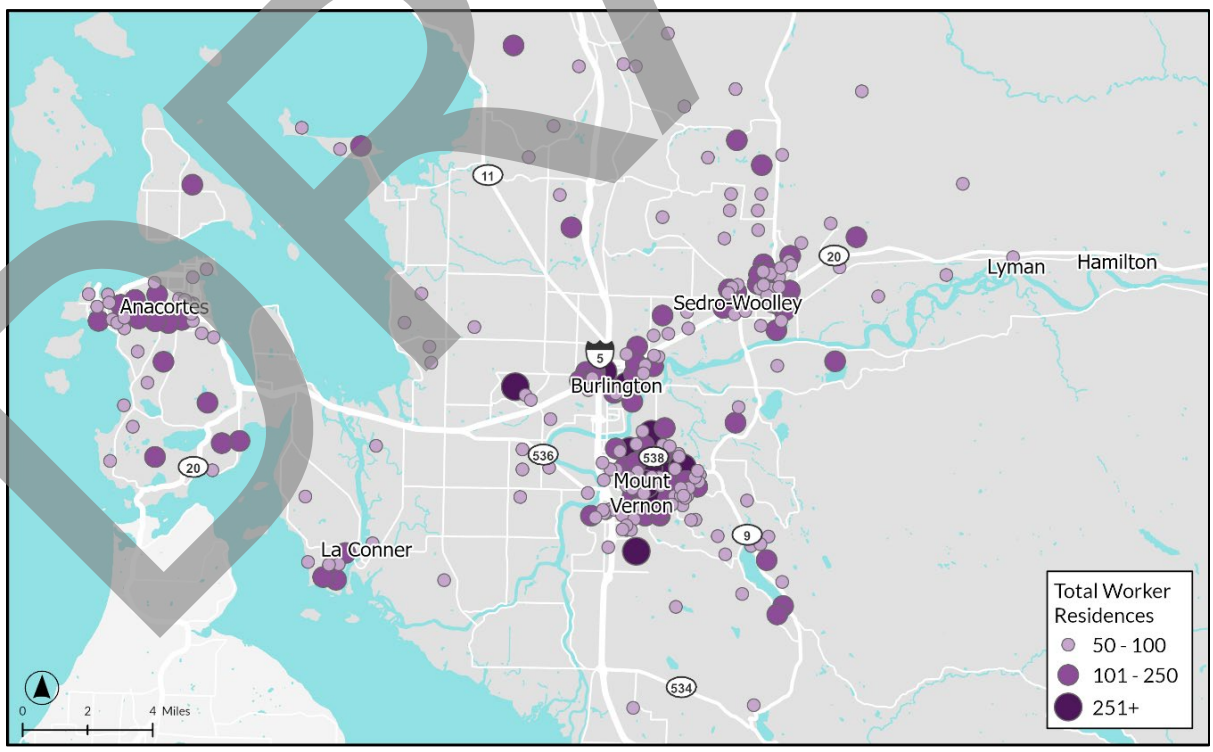
Figure 2-9: Job Distribution in Skagit County, Focus Area



Source: US Census, 2021

Figure 2-10: Worker Residence Distribution in Skagit County, Focus Area



Source: US Census, 2021

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County-to-County Commuting Flows

Table 2-2 and **Figure 2-11** illustrate where people living in Skagit County and neighboring counties are traveling to and from for work. **Figure 2-12** through **Figure 2-17** illustrate the predominant residence locations for key employment centers connected by Skagit Transit's existing service. In every instance, the majority of people live and work in the same county or city, but there is a noticeable number of cross-county and cross-city trips. It should be noted that current Skagit Transit ridership is more often during midday rather than during typical commuting hours, suggesting that most riders are using transit for non-work trips, however data for non-work trips is not readily available for analysis.

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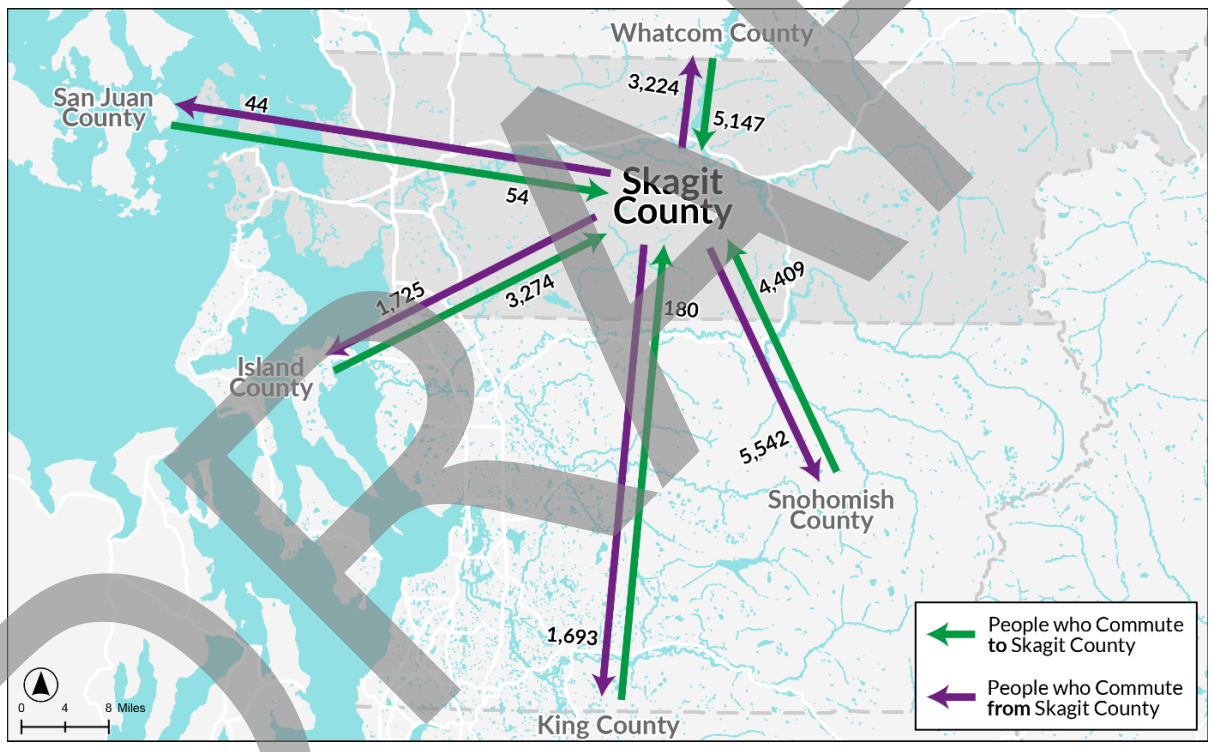
Table 2-2: 2016 – 2020 5-Year ACS Commuting Flows by County

		Workplace County					
		San Juan	*Skagit*	Snohomish	Whatcom	Island	King
Residence County	San Juan	7,348	*54*	22	19	3	154
	Skagit	*44*	*44,155*	*5,542*	*3,224*	*1,725*	*1,693*
	Snohomish	7	*4,409*	266,640	708	770	132,906
	Whatcom	87	*5,147*	1,530	97,518	91	1,029
	Island	9	*3,274*	5,537	256	26,466	2,149
	King	94	*180*	37,754	474	180	1,122,695

Source: US Census, 2020

Figure 2-11: 2016 – 2020 5-Year ACS Commuting Flows by County



Source: US Census, 2020

City-to-City Commuting Flows

Figure 2-12 through **Figure 2-17** illustrate the commuting patterns for people who live in key employment areas within Skagit County and within Skagit Transit's Service Area. Work sites and household locations are based on the Census' Longitudinal Employer-Household Dynamics program which survey employers to link home and work locations for employees. Key destinations for workers in Skagit County identified were Anacortes, Bellingham, Burlington, Everett, Mount Vernon, and Sedro-Woolley. These do not illustrate the origins and destinations for all workers in Skagit County but do cover the highest concentrations of jobs.

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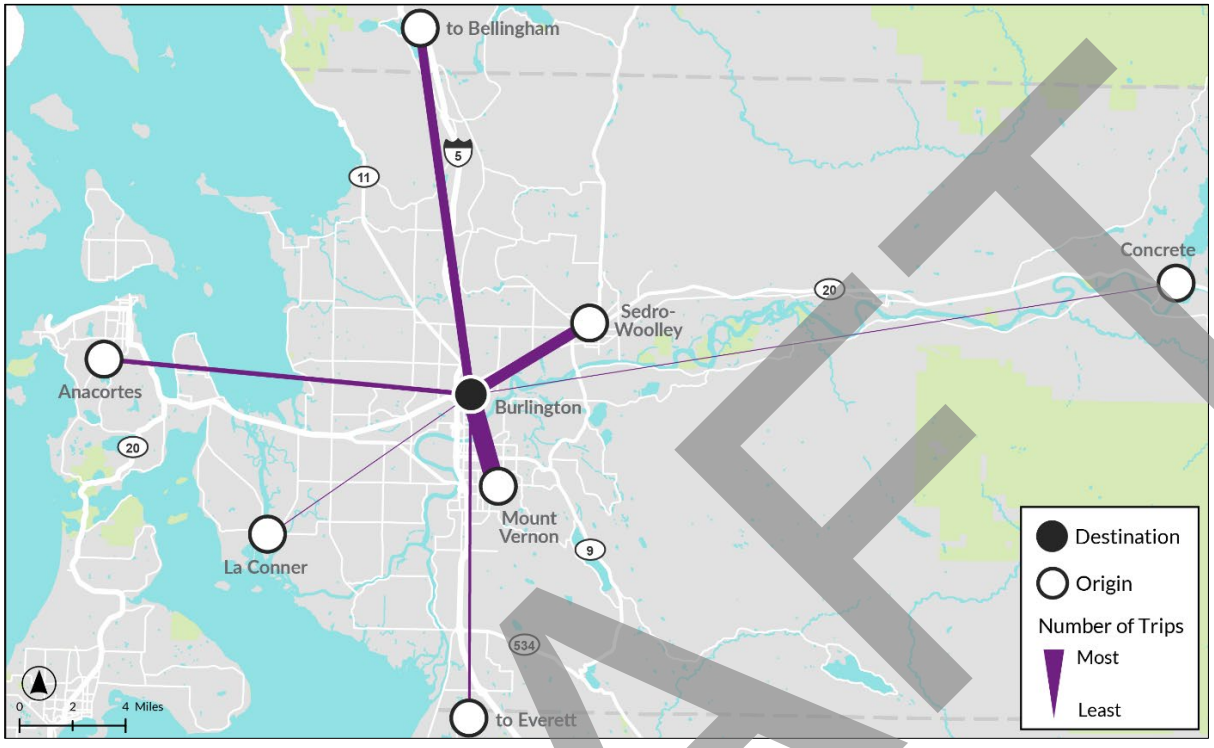
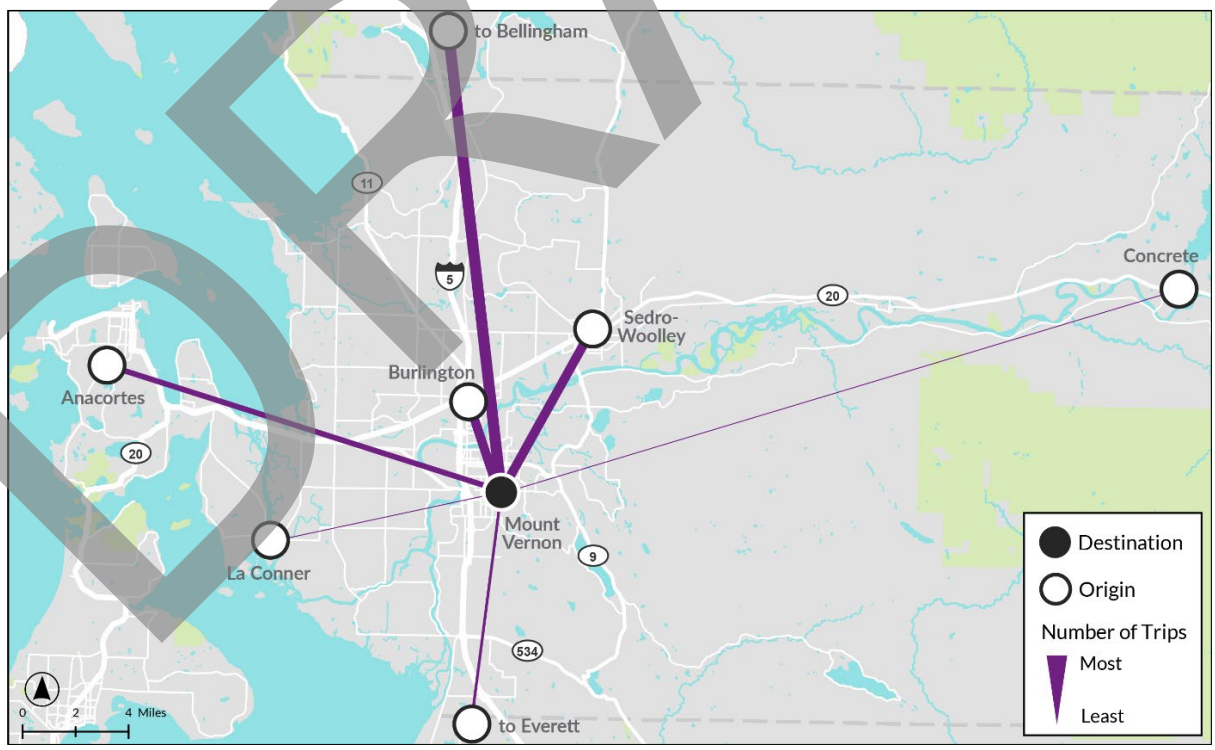
Figure 2-12: Origins of People Who Work in Burlington



Source: US Census, 2021

Figure 2-13: Origins of People Who Work in Mount Vernon



Source: US Census, 2021

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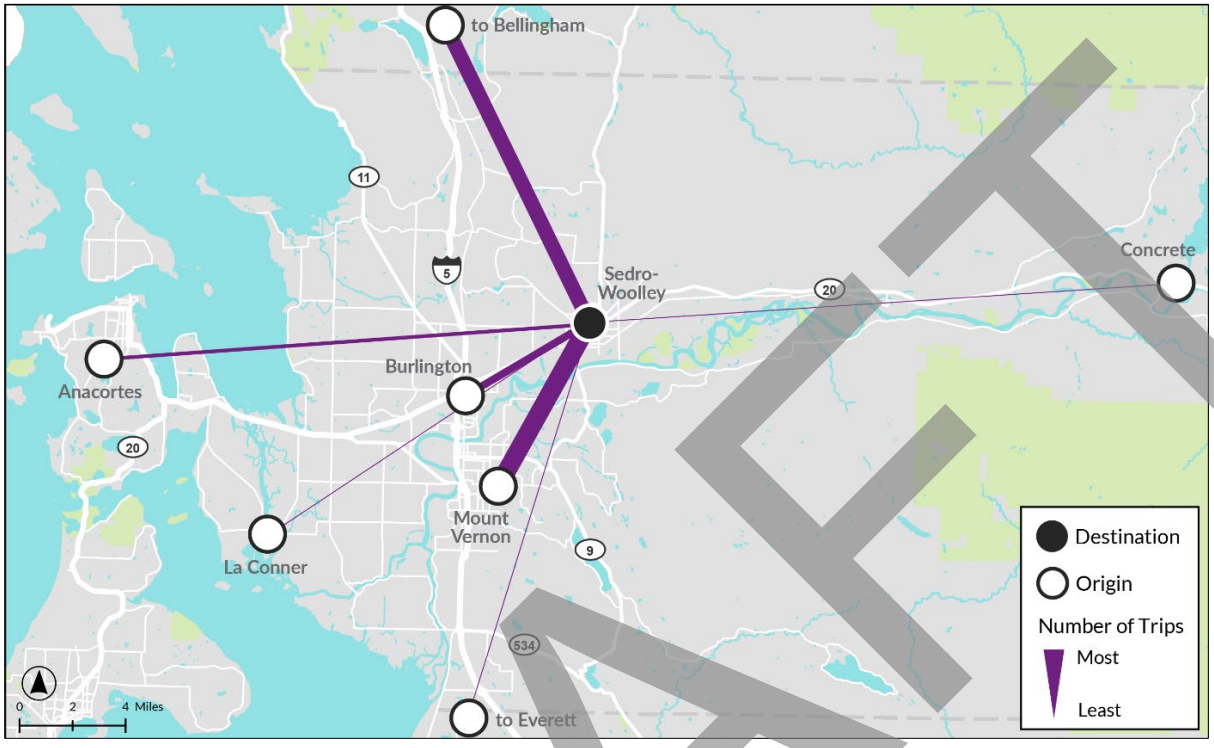
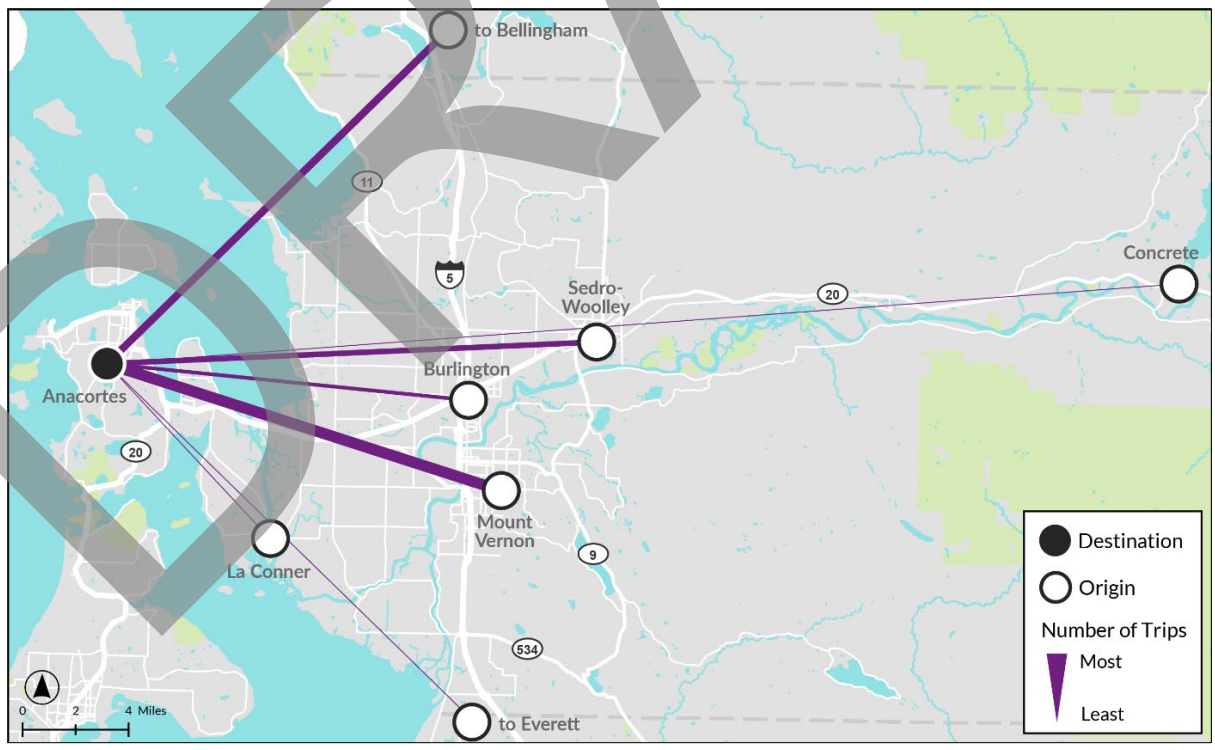
Figure 2-14: Origins of People Who Work in Sedro-Woolley



Source: US Census, 2021

Figure 2-15: Origins of People Who Work in Anacortes



Source: US Census, 2021

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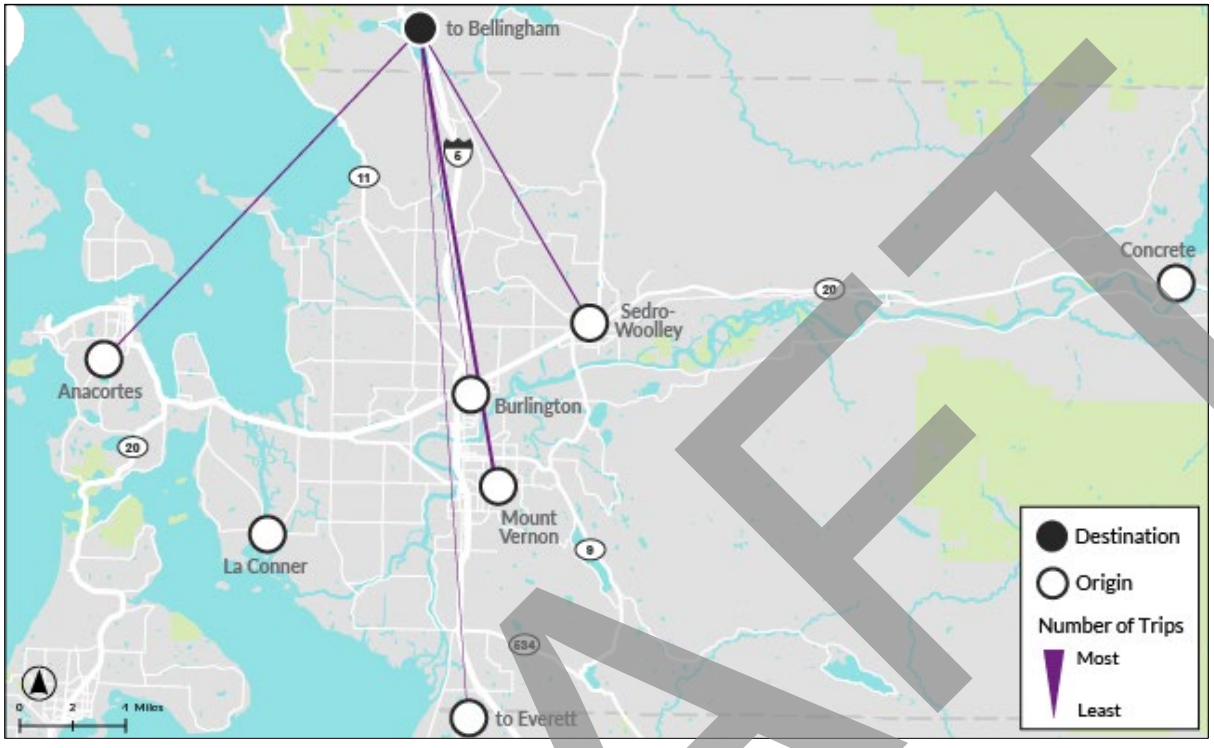
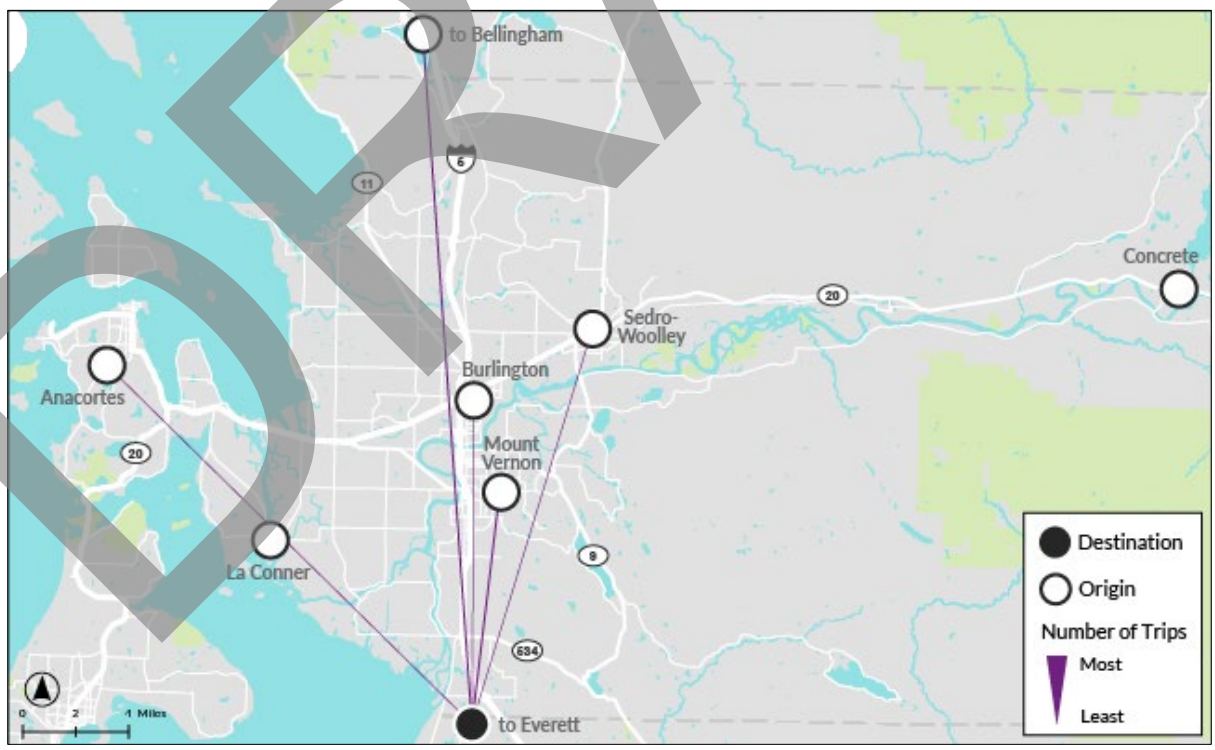
Figure 2-16: Origins of People Who Work in Bellingham



Source: US Census, 2021

Figure 2-17: Origins of People Who Work in Everett



Source: US Census, 2021

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2.5 Existing Skagit Transit Service

Facilities and Equipment

Skagit Transit operates Skagit Station, a multi-modal transportation facility and five park and ride facilities: Alger, Chuckanut, March Point, South Mount Vernon, and Sedro-Woolley. These facilities are important connection points in the system and routes are timed to arrive simultaneously in pulses to allow passengers to transfer.

Skagit Transit's fleet consists of 31 low floor buses, 25 paratransit vehicles, and 35 rideshare vans.

Service Types

Skagit Transit offers local and commuter fixed-route buses, paratransit service, and rideshare. Each of these service categories are described below:

- Fixed-Route Local
    - Operates within Skagit County, providing local service within or between cities throughout the day
    - 30- to 120-minute frequencies
    - Routes ranging from 5 to 44 miles of round-trip service (including several one-way loop routes)
    - Includes flex route 717
    - Prioritizes the use of local roads but occasionally includes highway operations
- Fixed-Route Commuter
    - Limited stop, direct service to another county or employment hub
    - 60- to 240-minute frequencies
    - Route lengths from 25 to 70 miles of round-trip service
    - All commuter routes include highway operations
- Paratransit
    - Curb-to-curb service for individuals whose conditions, disabilities, and/or circumstances prevent them from using fixed-route service
    - Operates within ¾-mile of fixed-route service
    - Pre-scheduled service
- Rideshare
    - Carpool service for groups making trips that start or end in Skagit County
    - Skagit Transit owned vehicles operated by members of the rideshare group
    - Monthly fee and per mile charge paid by group

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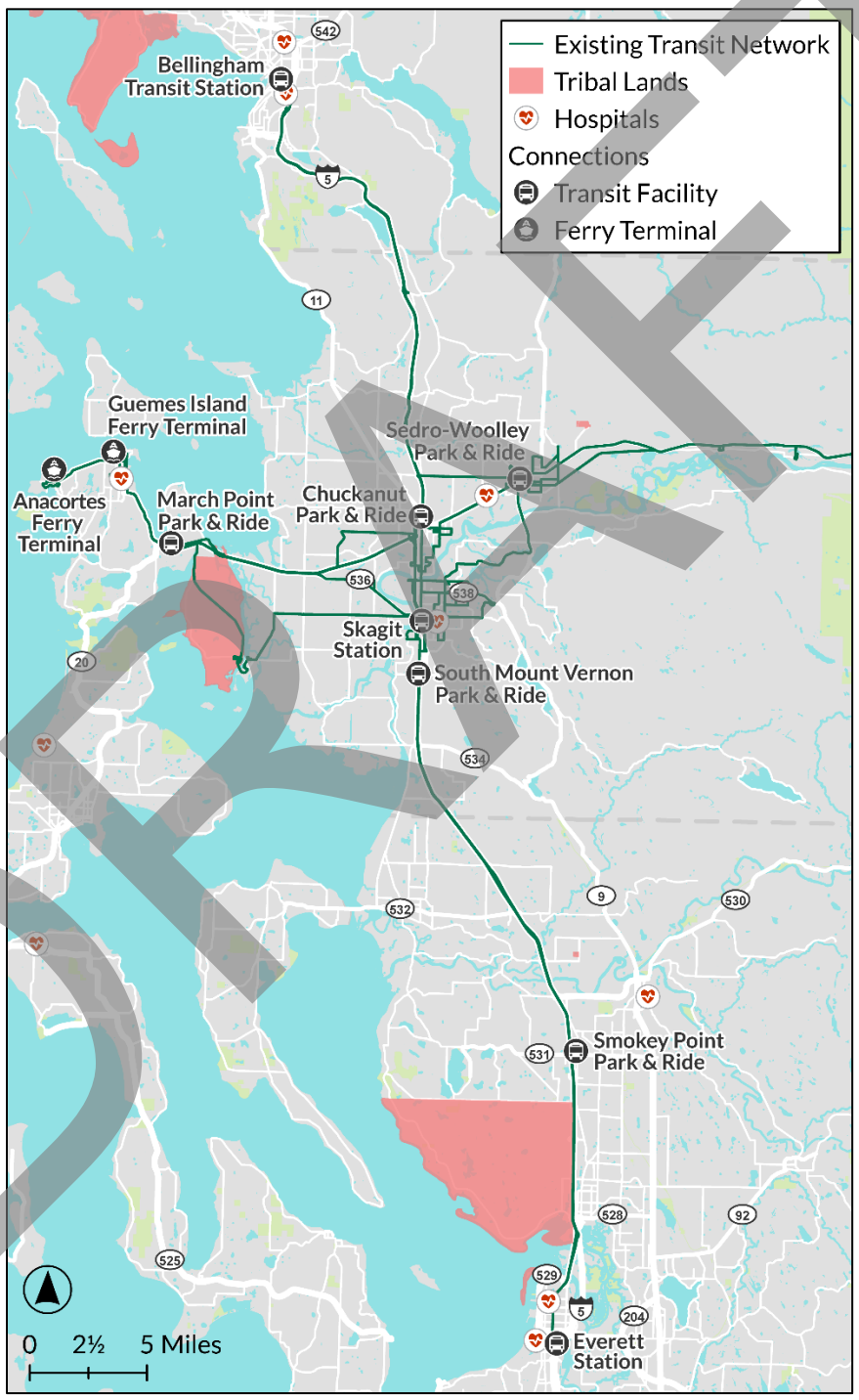
Key Destinations

Figure 2-18 displays key destinations along the Skagit Transit Network, including the cities of Bellingham and Everett and other regional transit and ferry connections. There are also connections to a number of hospitals/medical hubs throughout the system.

Figure 2-18: Key Destinations along Existing Transit Network



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2.6 Regional Transit Partners

Skagit Transit operates three routes in partnership with other regional transit agencies.

Route 80X, which provides service between Skagit Station and Bellingham Station, is jointly operated by Skagit Transit and Whatcom Transportation Authority (WTA). The route serves Western Washington University in Bellingham when classes are in session.

Route 90X provides service between Skagit Station and Everett Station. Everett Station is a regional transit hub with connections to Amtrak, Community Transit, Everett Transit, Greyhound bus service, and Sounder rail service.

Island Transit's Route 411W provides service between Whidbey Island and March Point Park-and-Ride in Anacortes. Skagit Transit's Route 40X provides a connection between March Point and Mount Vernon for Route 411W passengers.

Skagit Transit routes connect with other regional transit agencies including:

- Island Transit, Amtrak, and Greyhound at Skagit Station
- Everett Transit and Community Transit at Everett Station
- WTA at Bellingham Station
- Skagit County Guemes Island Ferry service at Guemes Island Ferry Terminal
- Washington State Ferries at Anacortes Ferry Terminal

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2.7 Existing Service Performance Evaluation

Skagit Transit's existing fixed-route service was evaluated both system-wide and route-by-route using the service and performance metrics listed below for calendar year 2023. These key indicators help summarize the strengths and weaknesses of existing service and form the basis for system evaluation and future recommendations. The evaluation of existing service is presented in a series of tables and figures and summarized in the route profiles located in Appendix A.

This evaluation considers the following components:

- Level of Service
  - **Service Period** – Daily operating hours
  - **Service Frequency** – Length of time between bus arrivals
- Service Statistics
  - **Annual Ridership –** Number of boardings per year
  - **Operating Expense** – Expenses to operate service including labor, equipment, and overhead
  - **Revenue Hours** – Number of hours a bus is providing service
  - **Peak Vehicle Requirement** – Number of vehicles required to operate at peak frequency
- Efficiency Performance Measures
  - **Passenger Trips per Hour** – Annual Ridership divided by Annual Revenue Hours
  - **Cost per Passenger Trips Served** – Operating Expense divided by Annual Ridership
  - **On-Time Performance** – Ratio of on-time to late and early bus arrivals

Level of Service

Table 2-3 displays existing route service levels for daily operating hours and service frequency.

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Table 2-3: Route Level of Service (FY 2023)

Route		Weekdays		Saturday		Sunday	
		Span	Frequency	Span	Frequency	Span	Frequency
Fixed-Route							
101	Burlington	6:25 AM to 8:25 PM	60 minutes	8:25 AM to 5:25 PM	60 minutes	8:25 AM to 5:25 PM	60 minutes
202	Mount Vernon	6:15 AM to 8:15 PM	30 minutes	8:15 AM to 5:45 PM	30 minutes	8:15 AM to 5:45 PM	30 minutes
204	Mount Vernon	6:15 AM to 8:50 PM	60 minutes	8:15 AM to 5:45 PM	60 minutes	8:15 AM to 5:15 PM	60 minutes
205	Mount Vernon	6:00 AM to 9:00 PM	30 minutes	8:00 AM to 5:30 PM	30 minutes	8:00 AM to 5:30 PM	30 minutes
206	Mount Vernon	6:35 AM to 8:05 PM	30 minutes	8:05 AM to 5:35 PM	30 minutes	8:05 AM to 5:35 PM	30 minutes
207	Mount Vernon	6:15 AM to 9:05 PM	60 minutes	8:15 AM to 5:15 PM	60 minutes	8:15 AM to 5:15 PM	60 minutes
208	Mount Vernon/ Burlington	6:20 AM to 8:15 PM	30 minutes	8:15 AM to 5:45 PM	30 minutes	8:15 AM to 5:45 PM	30 minutes
300	Sedro-Woolley Loop	5:45 AM to 7:45 PM	60 minutes	7:45 AM to 4:45 PM	60 minutes	7:45 AM to 4:45 PM	60 minutes
301	Sedro-Woolley/ Burlington	5:45 AM to 8:45 PM	60 minutes	7:45 AM to 4:45 PM	60 minutes	7:45 AM to 4:45 PM	60 minutes
305	Sedro-Woolley/ Mount Vernon	7:40 AM to 6:40 PM	60 minutes	8:40 AM to 4:40 PM	60 minutes	8:40 AM to 4:40 PM	60 minutes
409	Anacortes	6:45 AM to 4:20 PM	30 minutes	7:50 AM to 4:25 PM	30 minutes	No Service	No Service
410	Anacortes	6:05 AM to 7:40 PM	60 minutes	8:10 AM to 5:10 PM	60 minutes	No Service	No Service
513	Burlington/ Anacortes	6:15 AM to 7:15 PM	60 minutes	No Service	No Service	No Service	No Service
615	La Conner/ March Point	6:00 AM to 7:40 PM	120 minutes	8:00 AM to 5:40 PM	120 minutes	No Service	No Service
717	Concrete/Cape Horn/Cedar Grove	6:35 AM to 7:35 PM	60 minutes	8:40 AM to 4:40 PM	240 minutes	No Service	No Service
Fixed-Route Commuter							
40X	Mount Vernon/ Anacortes	6:15 AM to 7:15 PM	60 minutes	8:40 AM to 5:15 PM	60 minutes	No Service	No Service
70X	Upriver Connector	6:40 AM to 6:15 PM	180 minutes	8:10 AM to 3:15 PM	240 minutes	No Service	No Service
80X	Bellingham Connect	6:45 AM to 6:15 PM	60 minutes	8:05 AM to 6:00 PM	120 minutes	8:05 AM to 6:00 PM	120 minutes
90X	Everett Connect	4:45 AM to 6:15 PM	120 minutes	8:00 AM to 4:00 PM	120 minutes	8:00 AM to 4:00 PM	120 minutes

Source: Skagit Transit, 2023; Whatcom Transit Authority, 2023

Note: span does not include early morning express runs

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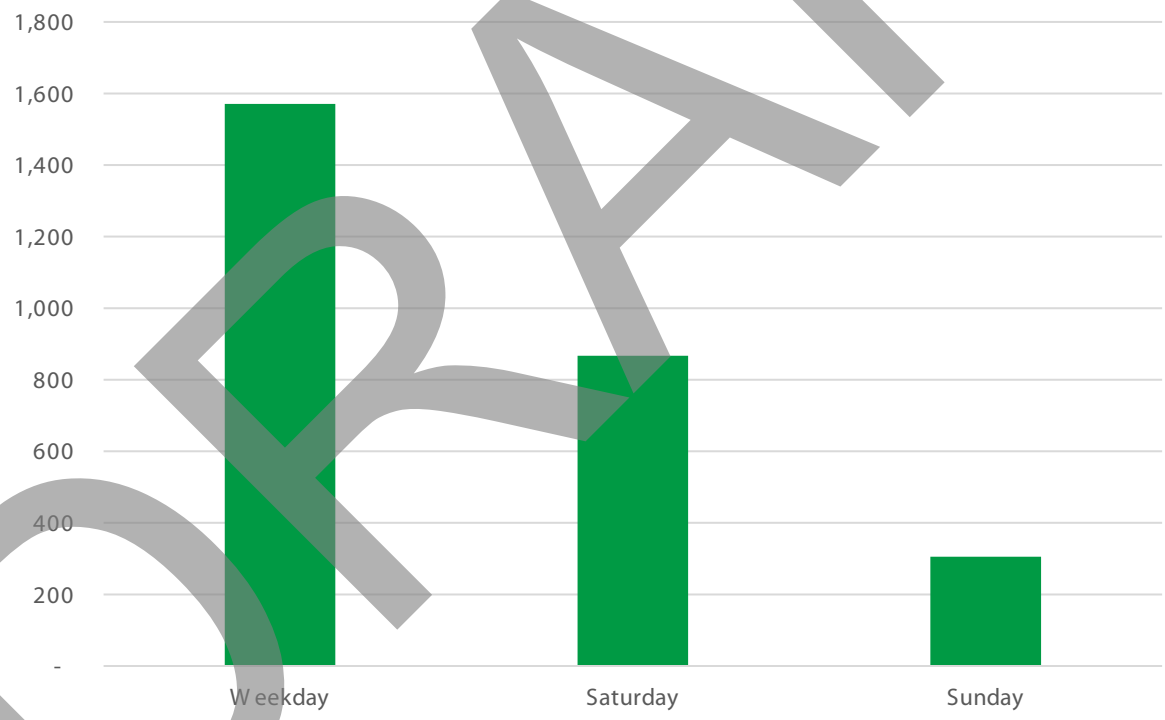
System-Level Service Statistics

Ridership on Skagit Transit was heavily impacted by the COVID-19 pandemic. While ridership is growing every year, it is still below what it was in 2019.

Figure 2-19 and **Figure 2-20** show ridership by day across the system and broken out by individual route. Weekdays saw more ridership than either Saturday or Sunday across the system except for Route 409 in Anacortes which had higher ridership on Saturdays than on weekdays (and does not operate on Sundays). Route 208 between Mount Vernon and Burlington had the highest ridership overall and for all day types with an average of boardings 280 per weekday, 169 boardings per Saturday, and 121 boardings per Sunday. Route 101 had the lowest ridership overall and for all day types for buses that run seven days a week. The route is new—launched in May 2023—and accounting for the shorter year, it had an average of 15 boardings per weekday, 8 boardings per Saturday, and 4 boardings per Sunday. Routes 40X, 70X, 409, 410, 615, and 717 do not operate on Sundays and Route 513 does not operate on weekends.

Figure 2-19: Ridership by Day



Source: Skagit Transit, 2023; Whatcom Transportation Authority, 2023

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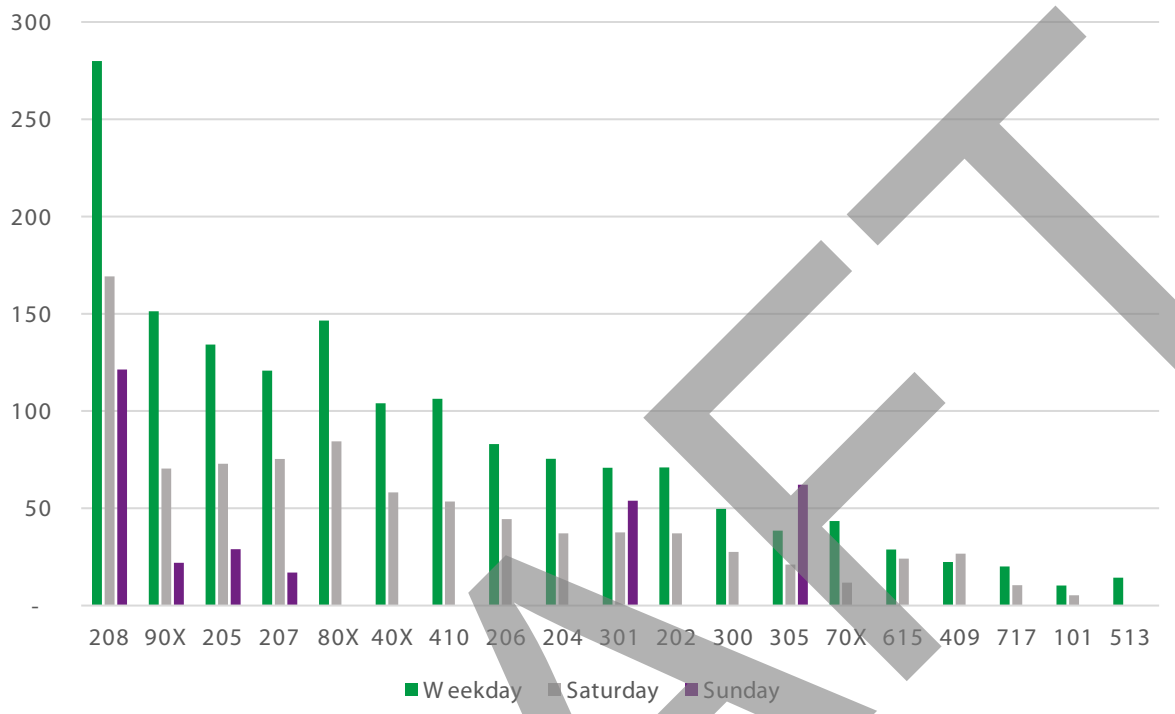
Figure 2-20: Route Ridership by Day



Source: Skagit Transit, 2023; Whatcom Transportation Authority, 2023

The highest ridership routes were the local urban routes serving the Mount Vernon/Burlington area with the 208, which runs between Mount Vernon and Burlington, having the highest overall ridership and the Mount Vernon serving routes 205 and 207 ranking high as well. The express route 70X did not have as high of ridership as the others as it serves the much sparser populated eastern part of Skagit County. Many of the one-way urban circulator routes such as the 101, 300, and 409 ranked near the bottom in terms of ridership, performing similarly to the routes serving rural areas such as routes 615, 717, and 513. The express routes serving Anacortes, Bellingham, and Everett also had some of the highest ridership.

Ridership by time of day in 2023 is shown in **Figure 2-21** and **Figure 2-22**. Across the system, ridership was highest in the midday period; only the 90X had more ridership in the evening peak time.

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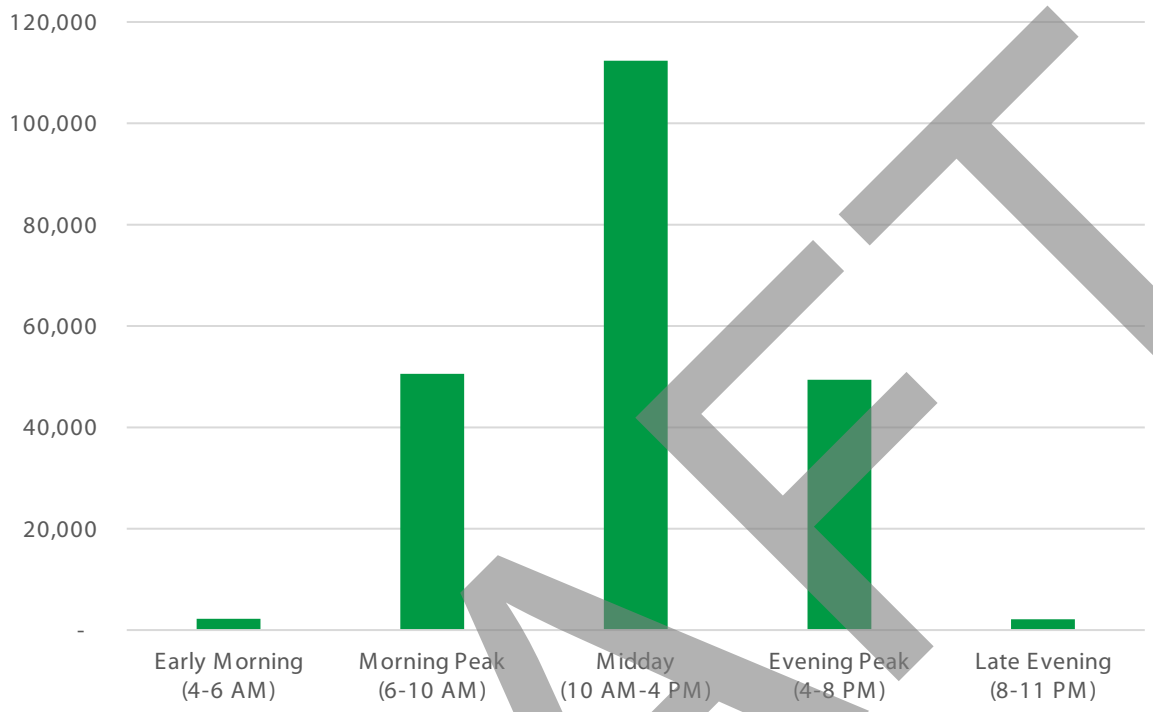
Figure 2-21: Ridership by Time of Day



Source: Skagit Transit, 2023

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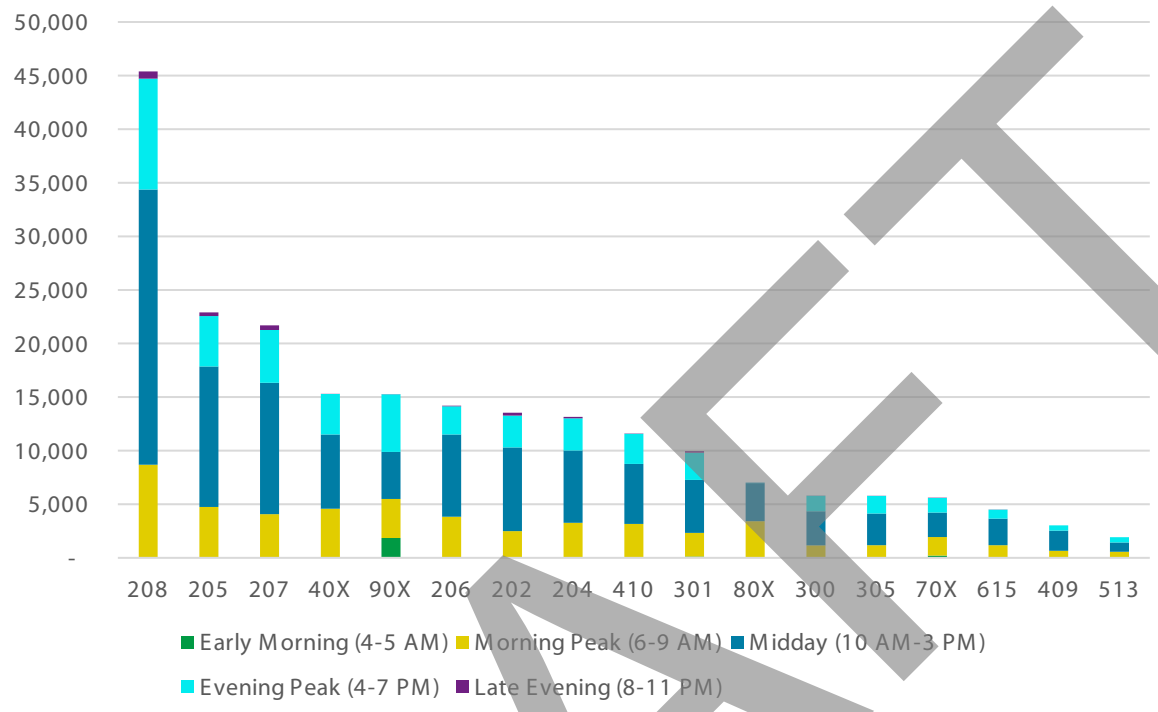
Figure 2-22: Ridership by Time of Day, by Route



Source: Skagit Transit, 2023

Note: Data on route 80X only includes Skagit Transit operated service

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Service Statistics

Table 2-4 includes key service statistics by route.

Table 2-4: Route Service Statistics (2023)

Route and Principal Service Area		Annual Ridership (2023)	Revenue Hours (2023)	Operating Expense (2023)	Peak Vehicle Requirement
Fixed-Route					
101	Burlington	3,057	3,084	$511,883	1
202	Mount Vernon	21,417	4,615	$766,170	1
204	Mount Vernon	22,528	4,701	$780,286	1
205	Mount Vernon	40,564	4,268	$716,708	1
206	Mount Vernon	25,050	4,268	$708,408	1
207	Mount Vernon	37,493	6,026	$1,000,261	2
208	Mount Vernon/ Burlington	86,484	8,945	$1,484,906	2
300	Sedro-Woolley Loop	15,246	4,411	$732,146	1
301	Sedro-Woolley/ Burlington	21,516	4,742	$787,097	1
305	Sedro-Woolley/ Mount Vernon	11,807	3,989	$662,193	1
409	Anacortes	7,106	3,182	$528, 284	1
410	Anacortes	29,894	4,186	$694,923	1
513	Burlington/ Anacortes	3,656	1,365	$226,645	1
615	La Conner/ March Point	8,594	2,434	$404,119	1
717	Concrete/Cape Horn/Cedar Grove	5,660	3,996	$663,402	1
Fixed-Route Commuter					
40X	Mount Vernon/ Anacortes	29,542	4,085	$640,473	1
70X	Upriver Connector	11,688	4,425	$623,946	1
80X	Bellingham Connect	45,333	2,808*	$395,921*	1*
90X	Everett Connect	45,478	4,318	$1,152,330	3

Source: Skagit Transit, 2023; Whatcom Transit Authority, 2023

*Only includes Skagit Transit delivered service

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Efficiency Performance Measures

Table 2-5 includes efficiency performance measures by route showing on-time performance and passenger trips per hour for each route.

Table 2-5: Route Performance Measures (2023)

Route	Principal Service Area	On-Time Performance	Passenger Trips per Hour		
			Weekday	Saturday	Sunday
Fixed-Route					
101	Burlington	77.3%	1.1	0.9	0.5
202	Mount Vernon	80.8%	5.0	3.8	2.8
204	Mount Vernon	70.3%	5.2	3.8	2.7
205	Mount Vernon	89.6%	10.2	7.7	5.4
206	Mount Vernon	71.2%	6.5	4.5	3.1
207	Mount Vernon	79.3%	6.2	7.7	5.5
208	Mount Vernon/ Burlington	62.6%	10.3	8.7	6.2
300	Sedro-Woolley Loop	85.2%	3.6	3.2	2.4
301	Sedro-Woolley/ Burlington	68.3%	4.8	4.0	3.0
305	Sedro-Woolley/ Mount Vernon	51.0%	3.3	2.3	1.8
409	Anacortes	62.8%	2.1	2.8	-
410	Anacortes	79.3%	7.4	5.4	-
513	Burlington/ Anacortes	74.4%	2.7	-	-
615	La Conner/ March Point	80.5%	3.8	2.5	-
717	Concrete/Cape Horn/Cedar Grove	56.3%	1.4	1.7	-
Fixed-Route Commuter					
40X	Mount Vernon/ Anacortes	94.4%	7.4	6.1	-
70X	Upriver Connector	70.4%	2.7	1.8	-
80X	Bellingham Connect*	90.1%	9.8	8.4	6.0
90X	Everett Connect	76.3%	5.4	7.1	6.3

Skagit Transit, 2023

*Only includes Skagit Transit delivered service

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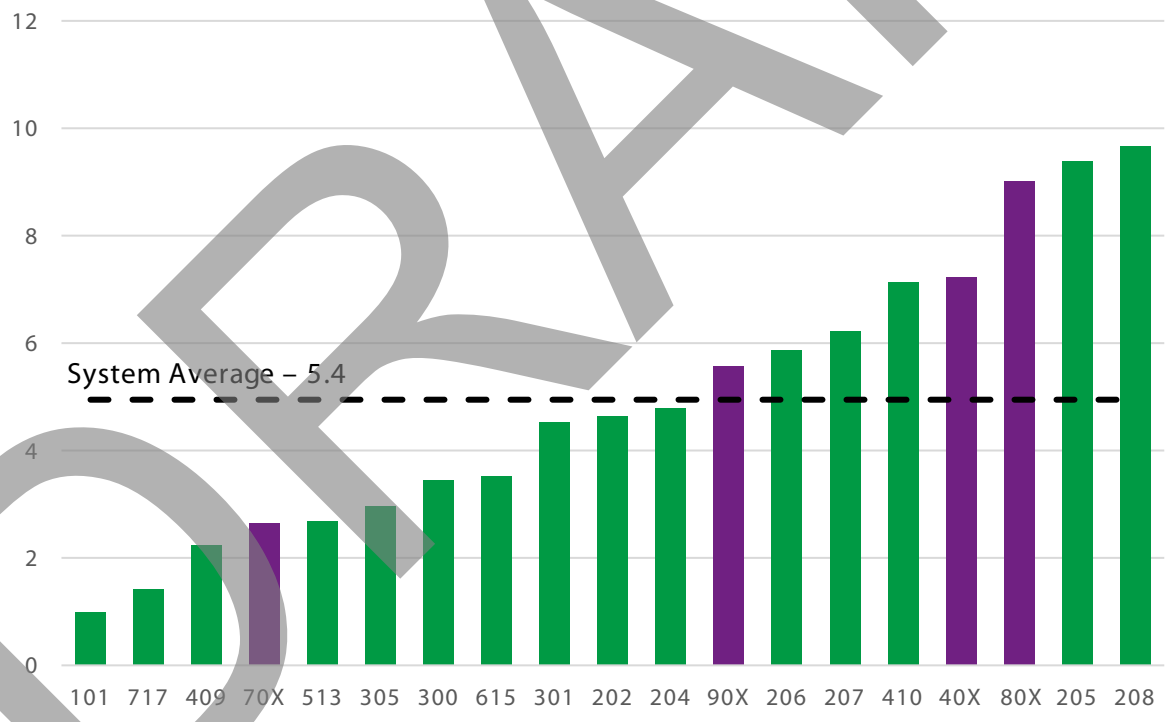
Passenger Trips per Hour

Figure 2-23 shows passenger trips per hour or productivity by route for all fixed-route buses operated by Skagit Transit. This is a measurement of boardings per hour that the bus is in revenue service, i.e., picking up passengers and not laying over or returning to base, and illustrates how productive each route is. Overall, the Skagit Transit system had an average productivity of 5.4 boardings per revenue hour. Since productivity is driven by a route's ridership, routes with high ridership will generally have a higher productivity. However, certain routes like the 90X, which had the second highest ridership, rank lower in terms of productivity because they are longer and require more revenue hours to operate. However, route 90X still ranked above average. The 40X and 80X commuter routes also performed on the higher end. Route 70X to Concrete however, did not rank as well as the other commuter routes due to its lower ridership. Route 208 had the highest productivity overall with 9.7 boardings per revenue hour. Route 101 had the lowest productivity with 1.0 boardings per revenue hour. In general, routes serving Skagit Station are higher performing routes. one-way loop routes, like the 101, 300, and 409 tend to be lower-productivity routes.

Figure 2-23: Productivity (Boardings/Revenue Hour) by Route



Source: Skagit Transit, 2023

Note: Data on route 80X only includes Skagit Transit operated service

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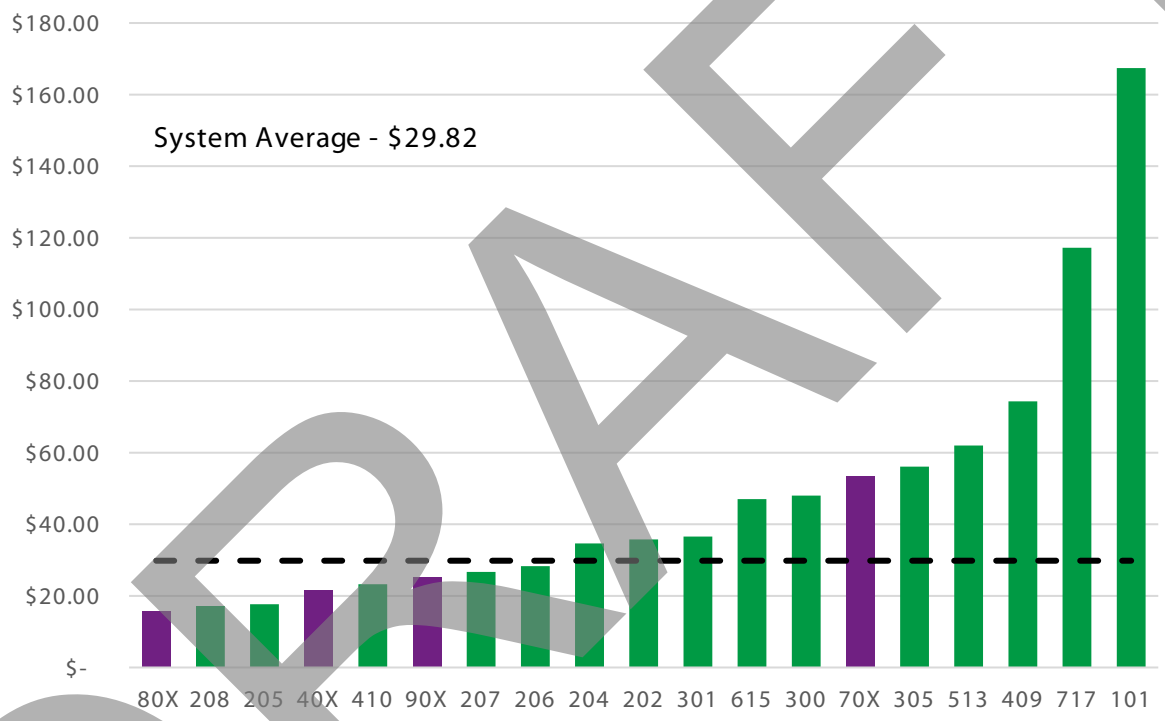
Cost per Passenger Trip Served

Figure 2-24 shows the cost per boarding for all fixed-route buses operated by Skagit Transit. Costs include labor, equipment, and overhead. Since costs are fixed, routes with higher ridership have a lower cost per rider. Overall, the Skagit Transit system had an average cost of $29.82 per boarding. This falls within the range of cost per boarding for neighboring transit agencies, including Island Transit ($33.77 per boarding), Community Transit ($23.62 per boarding), and WTA ($10.04 per boarding). Route 101 had the highest cost. Route 80X had the lowest cost, $15.64 per boarding. Fare revenues collected were not considered as part of this analysis.

Figure 2-24: Cost per Boarding by Route



Source: Skagit Transit, 2023

Note: Data on route 80X only includes Skagit Transit operated service

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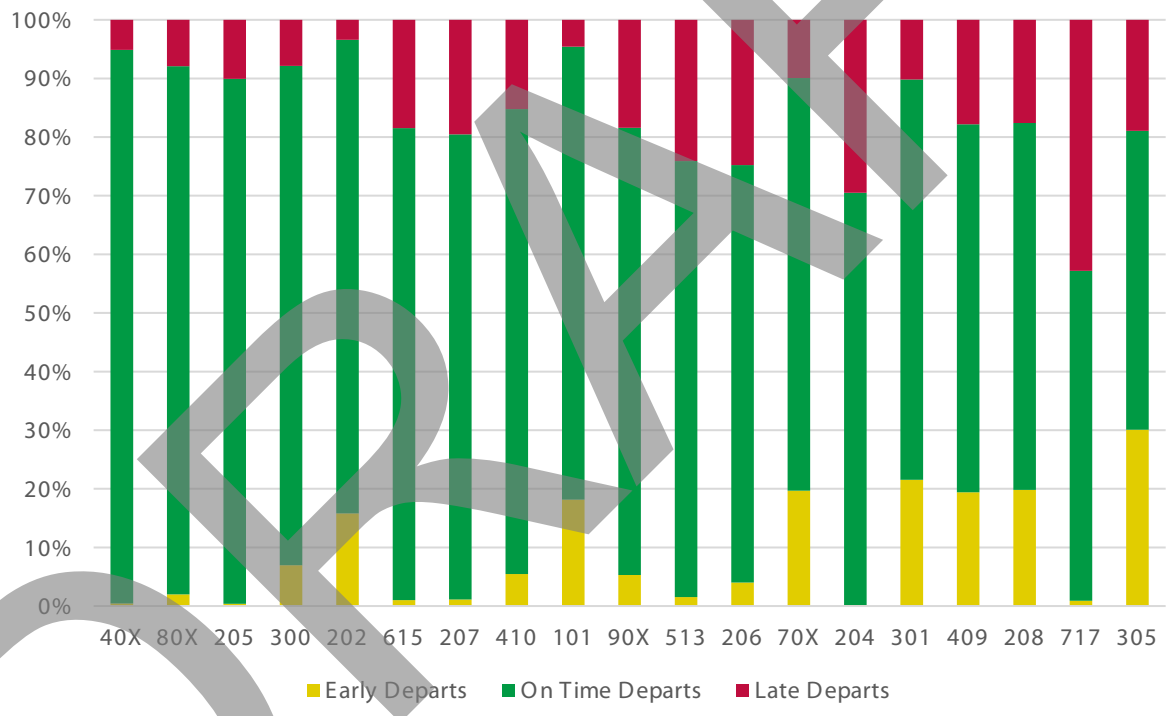
On-Time Performance

Skagit Transit currently measures on-time performance (OTP) at the system level and strives for 90% during peak periods and 95% during off-peak periods. Skagit Transit considers runs that arrive within 5 minutes of the posted arrival time as on-time.

Figure 2-25 shows OTP at the route level and uses industry standards to for on-time, early, and late designations. Trips departing early are defined as trips leaving one minute or more before the scheduled time, and trips defined as leaving late are defined by trips departing five minutes or more past the scheduled time.

Route 40X had the highest on-time performance with 94% of trips departing on-time. Route 305 was the lowest performing, with only 51% of trips departing on-time.

Figure 2-25: On-Time Performance by Route



Source: Skagit Transit, 2023

Note: Data on route 80X only includes Skagit Transit operated service

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Existing Conditions Findings

Despite the rural nature of Skagit County as a whole, there are areas that have a higher propensity for transit use and Skagit Transit service is already aligned to serving these locations. Routes that serve areas of high transit propensity with direct, reliable service have higher ridership and productivity. Furthermore, the lack of evening and weekend service on some routes may discourage some riders from using the system. There may be an opportunity for adjusted service patterns to better serve the denser parts of the region with more frequent and direct service. More service in middays and extending service span and days of service could also bring more riders onto transit who currently do not use Skagit Transit.

Continued expansion of regional transit service, like the Sound Transit extension into Snohomish County in August 2024 and eventually to Everett Station, potential expansion of Amtrak Cascades service, and robust demand for Washington State Ferries and Guemes Island Ferry service indicate opportunities and need for modified service investments to connect to the broader regional transit network of Western Washington.

Ultimately, the growth of Skagit County regional connections to key destinations will continue to support transit ridership, but relatively low countywide density and reliance on cars for many trips mean that Skagit Transit will need to make strategic decisions on service deployment.

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3 ON-DEMAND STUDY

Currently, Skagit Transit provides fixed-route service and paratransit service. To continue to advance its mission as part of this LRTP, Skagit Transit has investigated the provision of "on-demand" services.

This section provides an overview of on-demand service in the context of existing transit services and opportunities for service in the future. On-demand transit is an emerging service type and there are several considerations that are important for Skagit Transit in exploring whether and how to incorporate on-demand transit into its services.

A review of on-demand service operating in communities with similar land use characteristics as Skagit County provides additional guidance on service design and policies.

Finally, this section recommends the most viable opportunities for on-demand service in Skagit County based on fixed-route service gaps, market conditions, best practices, and community feedback.

Partial funding for this analysis was provided by the Federal Transit Administration's Areas of Persistent Poverty (AoPP) program, which supports increased transit access for environmental justice populations.

3.1 Overview of Transit Services

Fixed-Route Transit

Fixed-route service, described in **Section 2**, is the backbone of Skagit Transit, providing transit riders with consistent routes and schedules throughout much of Skagit County. Skagit Transit provides two types of fixed-route bus service:

- Local routes that operate on arterial streets in urban areas
- Limited stop/express routes that operate on highways and/or county roads and connect to urban areas

Skagit Transit has a fixed-stop policy in which passengers board and disembark service at designated fixed-route bus stop locations along each route. Some riders must transfer between routes to reach their destination.

Paratransit

Skagit Transit also provides point-to-point paratransit service for individuals that are unable to use fixed-route service due to a physical or cognitive disability. The Americans with Disabilities Act (ADA) requires paratransit to provide service within ¾-mile of any fixed bus route, at the same hours and days of operation, for no more than twice the fixed-route fare.

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Eligible paratransit riders can schedule trips via phone or mobile app. Trips are typically scheduled at least one day in advance. Skagit Transit allows reservations up to a week in advance and encourages riders to book trips as soon as possible.

On-Demand Transit

Non-paratransit on-demand service is typically introduced in select areas where transit demand exists yet cannot support or accommodate large fixed-route buses. Similar to paratransit, on-demand service allows riders to be picked up near their origin and dropped off near their destination on a one-seat ride. However, on-demand service differs from paratransit in that it is open to the public and is limited to one or more geographic zones to minimize duplication with fixed-route service.

On-demand service resembles privately operated ride-hailing services, such as Uber and Lyft – where riders use a mobile app to request and pay for their trip. Advantages of on-demand services include trained operators, accessible vehicles, and the ability to group passengers traveling in the same direction into shared rides.

Figure 3-1 depicts the similarities and differences between these three transit service options.

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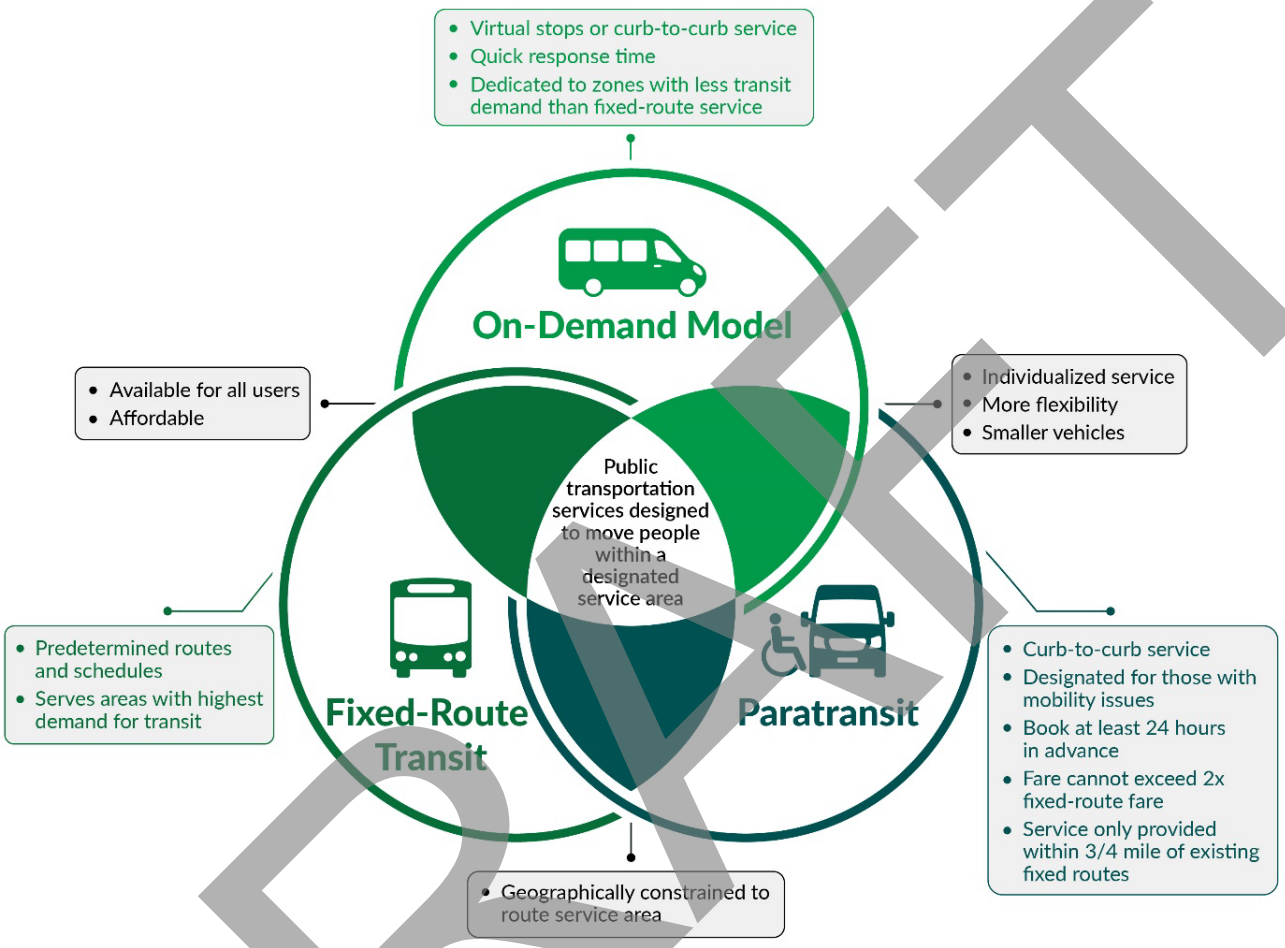
Figure 3-1: Comparison of Transit Service Options



3.2 On-Demand Service Opportunities and Design Considerations

Potential Benefits

On-demand service has the potential to provide many benefits to communities, including:

- Providing coverage in areas with transit demand yet not suitable for fixed-route service
- Providing a convenient and flexible transit service option
- Providing a first/last-mile connection to the fixed-route network
- Attracting new transit riders
- Increasing community support for public transit

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Service Design Considerations

Network Connectivity

If an area has a high demand for transit, then fixed-route bus service should always be considered first, given it is generally more cost-effective than on-demand service. However, sometimes an area has moderate transit demand but is not able to fully support fixed-route service due to features such as:

- Lower population densities
- Destinations spread over a broad area
- Street network constraints
- Pedestrian network limitations
- Challenging topographies

In areas that experience one, or a combination, of these challenges on-demand service may be a potential solution. It is important to underscore that on-demand service should not compete with fixed-route service and overlaps between fixed-route and on-demand service coverage should be minimized. *Instead, on-demand service should always complement the larger, fixed-route bus network.*

Service Purpose(s)

On-demand service is most successful when it serves a clear purpose that is not achievable by fixed-route service. For example, on-demand service can function as a first- and last-mile connection to the fixed-route services to create a broader transit catchment area or simply provide shorter trips to destinations within a defined zone.

Service Area/Zone

On-demand transit service should be confined to a defined zone ranging from 2- to 5-square miles in area. Limiting zones to this area generally allows for shorter wait times for on-demand trips while allowing a zone to be served by a smaller number of vehicles at the same time. If zones expand beyond this area, wait times start to be less competitive or service is more costly to provide because more vehicles need to be in operation. In addition to connecting residential areas with fixed-route service, on-demand zones should include a combination of destinations such as grocery stores, senior centers, community centers, schools, medical facilities, libraries, parks, etc.

Potential Market Groups

In evaluating potential areas for an on-demand service, several components need to be considered, including demographics and socio-economic characteristics. Areas where households with limited vehicle access are abundant indicate a potential for transit demand. Adults older than 65 are a key market group for on-demand service as it has the potential to enhance mobility

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for those who are unable or prefer not to drive. Youth under the age of 18 are another important market group due to their lower likelihood of owning or operating a personal vehicle.

Capacity and Vehicle Type

On-demand services typically utilize smaller vehicles than bus routes. Vehicles should be fully accessible and have sufficient capacity to accommodate multiple riders. Medium-duty cutaways and passenger vans are the most common on-demand vehicle types. The number of vehicles required to operate on-demand service depends on the zone size, street network, pick-up and drop-off policy, and goal wait time.

Hours of Service and Goal Wait Time

The hours of operation should be determined based on the unique needs of riders within the on-demand zone. For example, on-demand service could operate earlier and/or later than bus service if riders were connecting to/from the first/last bus trips of a specific route. Alternatively, on-demand service could also be only needed during midday time periods to provide access to public facilities, health centers, or other destinations without a commute-focused trip pattern.

Fares

Unlike paratransit, on-demand service does not have a price maximum of twice the fixed-route fare. Transit agencies can establish fares based on the anticipated cost per ride or any other metric. Skagit Transit will have to examine how to incorporate on-demand transit with existing fare structure and reduced fare programs.

Pick-up and Drop-off Options

One of the primary benefits of on-demand service is that riders can be picked up and dropped off within close proximity of their origin and destination when both endpoints are within the service zone. The most common service access options are "curb-to-curb" and "virtual stops".

Similar to paratransit, "curb-to-curb" access provides riders with the convenience of direct service to/from both endpoints of their trip. With this option, transit agencies identify locations where riders can be picked up or dropped off. While the "virtual stop" option provides less flexibility than the "curb-to-curb" option, it maximizes operational efficiency. Unlike regular bus stops, "virtual stops" do not have physical infrastructure, such as signage or benches, and can therefore be easily adjusted in response to operator or rider feedback.

Booking

On-demand service works similarly to a ride-hailing service; riders reserve a trip by using a digital app or contacting a call center where a ride is deployed for pick-up at/near their location and drop-off at/near their destination.

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Service Delivery

Many transit agencies operate on-demand service "in-house", utilizing their own operators, staff, and vehicles to deliver service. For this service delivery option, transit agencies typically purchase a new software or use existing paratransit software to manage trip planning and operations.

Another service delivery option is a "turnkey service contract", in which the on-demand service is operated and maintained by a third-party operator that often provides vehicles. While more costly, this option may eliminate the need to purchase and maintain new vehicles.

3.3 Peer Review

On-demand service design, policies, and performance can vary based on specific rider needs and unique conditions of the service zone. A review of on-demand programs in peer areas summarizes typical program characteristics.

On-demand transit services have grown in number across the country and existing programs offer useful insight into the factors responsible for their success. The counties and agencies identified for peer review operate on-demand services in primarily rural, lower population areas with similar geographic challenges and existing fixed-route transit systems to Skagit Transit.

Peer On-Demand Service Overview

The peer review consisted of four on-demand services, three of which are located in Northwest Washington. Three of the on-demand programs are still active. **Table 3-1** shows the programs and some notable characteristics about the programs, including vehicle type, on-demand fares relative to fixed-route fares, and the average size of their operation areas. A summary of each program follows in the next section.

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Table 3-1: Peer On-Demand Service Comparison

Characteristic	Lynden Hop	Zip Shuttle	Island Transit GO!	RideMICRO
Location	Lynden, WA	Snohomish County, WA	Island County, WA	Brunswick, Pender, and New Hanover Counties, North Carolina
Operating Agency	Whatcom Transit Authority	Community Transit	Island Transit	Wave Transit
Implemented	June 2021	October 2022	January 2023	October 2021
Status	Discontinued June 2024	Active	Active	Active
Vehicle Type	Van	Van	Van	Van
On-Demand Fare (single trip)	$1	$2.50 Free for 18 and under	Free	$2
Fixed-Route Fare	$3 (day pass)	$2.50 Free 18 and under	Free	$2
Number of Zones	1	4	3	4
Average Zone Size (square miles)	5.4	9.9	5.1	27.25

Peer On-Demand Service Profiles

Lynden Hop

Operated by WTA, the Lynden Hop pilot program operated an on-demand fleet made up of ADA-accessible vans. The citywide service allowed riders to travel anywhere within the City of Lynden, located 15 miles north of Bellingham. The system was discontinued following its initial pilot period, citing high operational costs. However, WTA is currently drafting a new microtransit study and may incorporate some form of on-demand service again in the future.

Zip Shuttle

The Zip Shuttle program started in Alderwood as a pilot in 2022 and has expanded to four zones within Snohomish County—Alderwood, Arlington, Darrington, and Lake Stevens. This service operates a van fleet, and rides are booked through the Zip Shuttle app. This program offers rides at the same fare price as Community Transit's fixed-route service, with free rides for people under the age of 18.

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Island Transit GO!

Island Transit GO! currently operates in three zones on Whidbey Island and Camano Island. Riders must schedule a pick-up at least two hours in advance of their ride but can be booked in the Island Transit app as early as two weeks before. The system's app-based technology matches multiple riders traveling in a similar direction into a single vehicle. A special zone is designated for active military personnel at the Naval Air Station Whidbey Island, with rides only given to those with proper military identification.

RideMICRO

Located along the Atlantic Coast of North Carolina, Wave Transit operates the RideMICRO on-demand program in low-density areas surrounding Wilmington. Passengers of this service can book an on-demand ride from a virtual stop and be connected to Wave Transit's fixed-route service or brought to a destination within the same zone. The four RideMICRO zones are much larger than other zones examined in this section. Advantages of larger zones include increased coverage and origin-destination possibilities. Potential disadvantages include additional resources (vehicles and drivers) and/or longer response times.

3.4 Skagit County On-Demand Opportunities

Five areas in Skagit County were evaluated for potential on-demand service – Anacortes, Bow/Edison, Burlington, Mount Vernon, and Sedro-Woolley.

Disadvantaged Community Evaluation

Each area was evaluated to determine its status for the following classifications:

- AoPP[2]
- Historically Disadvantaged Communities (HDC)
- Federally recognized Tribal lands and Tribal Designated Statistical Areas

Of the study areas, only Anacortes meets all three classifications.

[2] Source: USDOT AoPP & HDC Map tool

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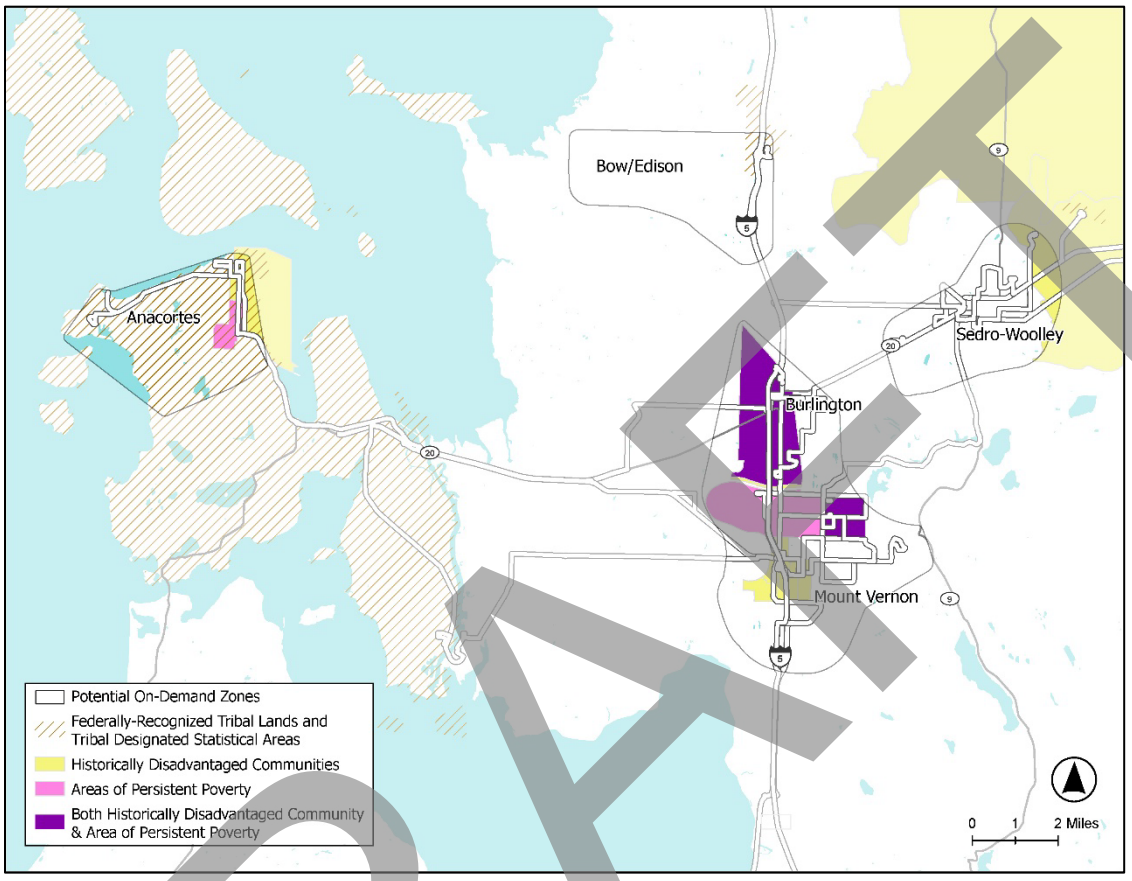
Figure 3-2: Potential On-Demand Zones with Community Classifications



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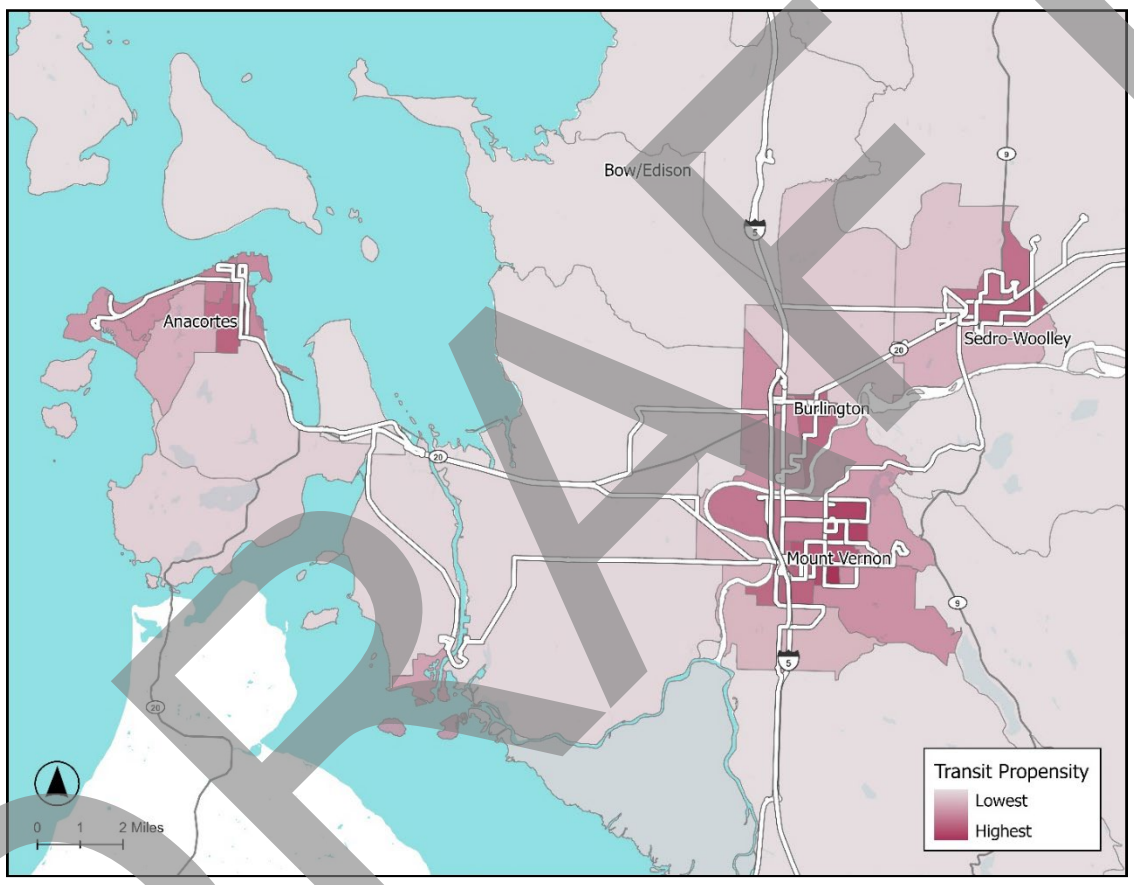
Land Use and Transit Propensity

The availability and level of transit service within Skagit County is directly related to land use and transit propensity. Anacortes, Burlington, and Mount Vernon have a mix of land uses, densities, and activity centers. Bow/Edison is predominately rural.

Transit propensity for the areas in this study are shown in **Figure 3-3**.

Figure 3-3: Transit Propensity in On-Demand Transit Study Area



Source: US Census, 2022

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Current Fixed-Route Options

Anacortes

Anacortes is currently served by two routes. Route 409 is a one-way loop route that connects Downtown Anacortes with the Guemes Island Ferry Terminal and several community destinations south of downtown. Route 409 is one of the lowest ridership routes of the entire Skagit Transit system, carrying two to three riders per hour on weekdays and Saturdays, with no service offered on Sundays. On-time performance is 63%, which is the second lowest in the system.

Route 410 connects Downtown Anacortes with Skyline/Bayside Marina and the Anacortes Ferry Terminal on the western end of Anacortes. Route 410 also extends to March Point Park & Ride, southeast of Anacortes, which provides a connection to Routes 40X and 615. Potential service changes could also support integration of an on-demand zone in this area.

Bow/Edison

Bow/Edison is not currently served by any Skagit Transit routes.

Burlington

Burlington is served by Routes 101 and 208. Route 101 circulates throughout the city on a one-way loop, connecting neighborhoods with a variety of destinations, while Route 208 serves the Burlington Boulevard commercial corridor and connects with Mount Vernon to the south.

Mount Vernon

Skagit Station, located on the edge of Downtown Mount Vernon, is the primary hub for Skagit Transit services. The facility is also a regional hub, providing connections with Amtrak, Greyhound, Whatcom Transit, and Island Transit.

Skagit Station is served by several local routes that operate within the city (Routes 202, 204, 205, 206, 207, and 208) and multiple limited/express routes that connect to other parts of the county, as well as Bellingham and Everett (Routes 40X, 70X, 80X, 90X, 305, and 615).

Sedro-Woolley

Sedro-Woolley is served by Routes 70X, 300, 301, and 305. Route 300 circulates on a one-way loop within the city, Route 301 connects to Burlington, and Route 305 connects with Skagit Valley College in Mount Vernon. Route 70X connects the outlying communities of Concrete, Hamilton, and Lyman with Sedro-Woolley, while also providing a direct connection to Skagit Station.

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Evaluation Summary

The following is a summary of the on-demand service opportunity area evaluation. Overall, Anacortes presents the best opportunity for piloting on-demand service. Sedro-Woolley is a secondary candidate for on-demand service, in conjunction with changes to fixed-route service. On-demand service is not recommended at this time in Burlington and Mount Vernon, which have higher levels of fixed-route service, or Bow/Edison, which does not currently have sufficient demand.

Table 3-2: On-Demand Service Opportunity Area Evaluation Summary

Category	Anacortes	Bow/ Edison	Burlington	Mount Vernon	Sedro-Woolley
Federally Recognized Tribal Lands	Yes	No	No	No	No
Historically Disadvantaged Community	Yes	No	Yes	Yes	Yes
Area of Persistent Poverty	Yes	No	Yes	Yes	No
Share of Population that are Older Adults (>65)	31%	8%	11%	19%	13%
Land Use	Mixed	Rural	Mixed	Mixed	Mixed
Transit Propensity	Moderate	Low	Moderate	Moderate	Moderate
Major Regional Destinations	Yes	No	No	Yes	No
Opportunity to Replace Underperforming Fixed-Route Service	Yes	N/A	No	No	Yes
Existing Skagit Transit Hub/Connections	Downtown Anacortes/ Guemes Ferry	None	Chuckanut P&R	Skagit Station	Sedro-Woolley P&R
Community Interest	High	Low	High	High	Moderate

3.5 Recommended Anacortes On-Demand Zone

The recommended initial Anacortes on-demand zone, depicted in **Figure 3-4**, would provide residents with a convenient and flexible transit option to access many destinations, including Downtown Anacortes, Island Hospital, Anacortes Public Library, Anacortes Senior Center, Anacortes High School, and the Guemes Island Ferry Terminal. The zone would also serve as a first mile/last mile connection to/from Routes 40X and 410

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The initial Anacortes on-demand zone would require one dedicated vehicle, ideally a cutaway or accessible van. The small zone area would ensure short response and travel times. Expansion of the zone should be considered if the response time can be maintained, as adding resources could increase the agency's cost per trip. If successful, there is potential to expand the on-demand zone to cover a larger portion of Fidalgo Island (shown in **Figure 3-5**).

Figure 3-4: Map of Potential Anacortes On-Demand Pilot Program

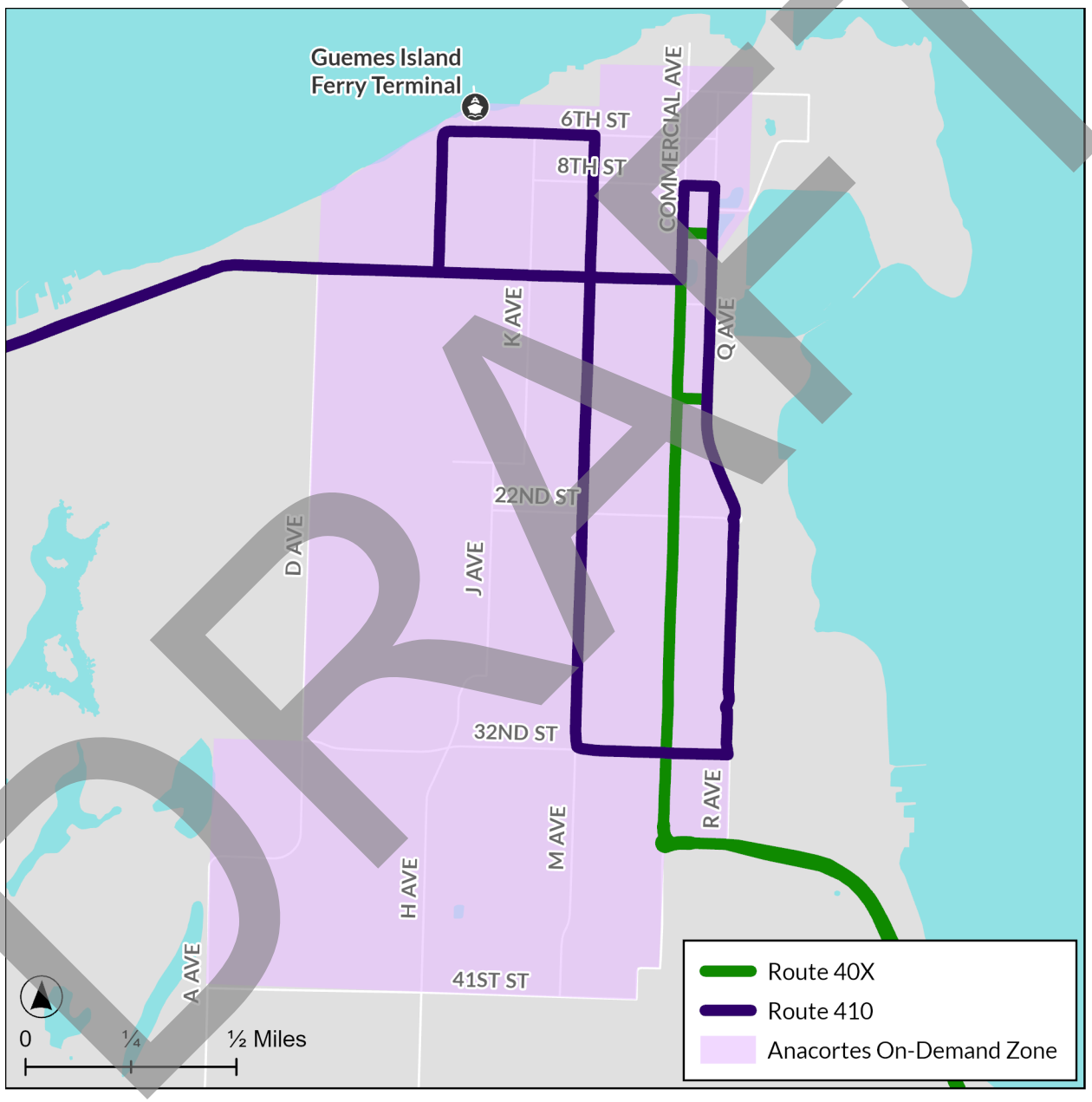

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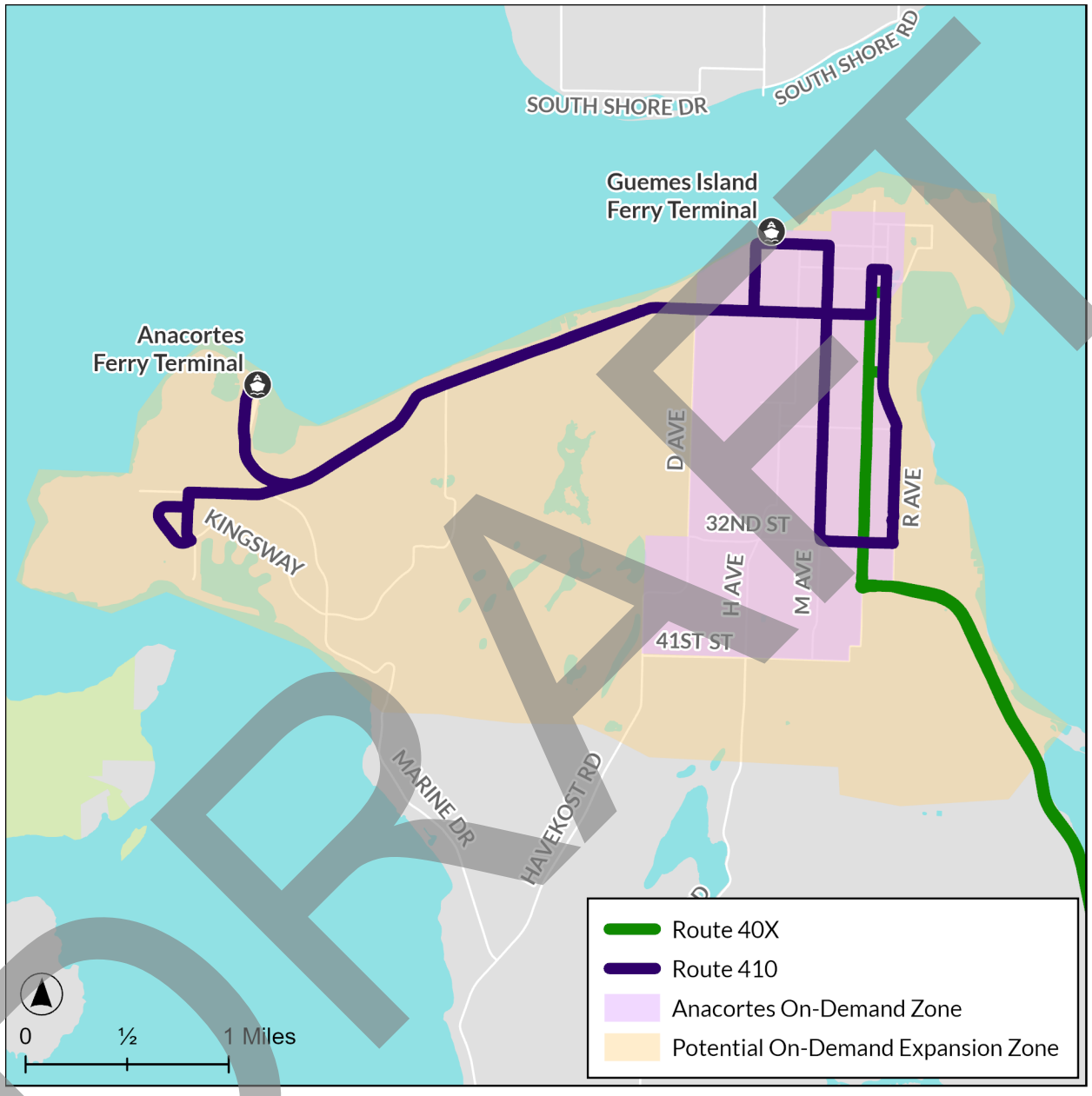
Figure 3-5 Potential Anacortes On-Demand Pilot Program and Potential Expansion Zone



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Service Delivery Options

There are several models of service delivery for on-demand transit, including in-house operations and turnkey providers. These options have different considerations outlined below.

In-House Operations

Skagit Transit may choose to develop an on-demand program in-house and have direct control over every component of the service. This is the most cost-effective option, and it would allow Skagit Transit to retain full control of the on-demand vehicle fleet, drivers, marketing materials, and ridership data. Development of the digital application and software required to operate would be the only outsourced elements of this operation approach.

Turnkey Provider

An alternative to operating an in-house on-demand program, would be to contract with a turnkey provider such as Via, TripMaster (CTS), or Moovit. This would shift responsibility of development, maintenance, and staffing of the on-demand service. This includes app development, call center and customer service, vehicles, fuel and any repairs, and payment processing. While this model would ensure Skagit Transit has operational capacity to carry on fixed-route services elsewhere, the following are aspects of the program that should be contractually retained:

- Operating schedule and fares
- Zonal boundaries and pick-up/drop-off locations
- Vehicle advertising
- Ownership of trip-level data

Skagit Transit should retain the power to dictate the program's operating schedule and fare structure, as well as the geographic boundaries of the operating zone and pick-up/drop-off locations. Clear expectations and agreement on timelines for any changes to the above points should be discussed during procurement negotiations. Secondly, it is important to discuss the management of advertising as it relates to the vehicles themselves. Often, on-demand vehicles will have exterior agency branding and can further offset operating costs with the use of for-sale advertising both on the interior and exterior of the on-demand vehicle itself. It is typically better for the transit agency to manage this advertising to keep adverts in line with the agency's other marketing initiatives and content. Most importantly, Skagit Transit should make it a priority to retain ownership of the trip level data procured by the on-demand service. Understanding where and when trips are being made is vital to leveraging the full benefits of an on-demand program. With autonomy of these service elements retained, Skagit Transit can adjust on-demand and fixed-route transit services over time to offer the most efficient service to their community.

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Implementation

Initial Marketing

Successful peer on-demand services all demonstrated high levels of marketing efforts immediately following the program's inception. Several unsuccessful programs studied as a part of this report received similar feedback from community members regarding a lack of information about the program, the pick-up/drop-off locations, and the ease of use including app and non-app-based scheduling. Marketing should be used to address all these issues and should meet potential riders using a diversity of approaches.

Utilizing existing municipal and county information channels to distribute on-demand marketing is essential for amplifying good public participation in the service. These channels should include newsletters, coordination with local news and organizations, opening events, graphics along well-traveled routes (e.g., billboards), an online webpage, and more. The key to a successful on-demand transit program is to ensure that community members are made aware of the service.

Finally, with the roll out of an on-demand program, there is an opportunity for additional marketing on the transit vehicles themselves. The large vans used for on-demand services will be seen by nearly all community members as the service is implemented. These vehicles should not blend into the rest of traffic but should stand out, so the on-demand service is further advertised. During this time of selecting and promoting such branding on on-demand vehicles, it can be beneficial to also develop refreshed branding on other fixed transit lines. The appearance of a fresh new look can go a long way to boosting interest in a system, and its subsequent ridership.

Continued Public Engagement

Should this pilot program be implemented in Anacortes, it is imperative that community engagement remains at the central core of the program's operations. The most direct method to get feedback from users of the on-demand service is through customer satisfaction surveys, which can be offered on the app after rides, in the hopes that most on-demand users will give their honest input on their experiences with the service, as well as providing commentary that highlights potential opportunities for improvement. It is also important to engage with potential riders who do not use the on-demand service, giving them a platform to state what Skagit Transit could do to better promote and operate the system to gain higher levels of ridership. This kind of survey could be posted at fixed-route bus stops or on county-operated websites.

Performance Monitoring

As this service would be the first of its kind in Skagit County, it is likely that adjustments will be necessary. As the system matures, updates will be made to increase efficiency, safety, and overall system usage. As such, it is important that ridership data is collected frequently, with

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ample opportunities for community members to give feedback on how to improve the on-demand service.

Using these performance indicators, Skagit Transit can evaluate the sustainability of on-demand services within the region. If data from this pilot program shows that on-demand service is a viable mode of transportation in Anacortes, Skagit Transit may increase service in the area through the addition of more vehicles, or an expansion of the total service area. Skagit Transit may also explore other potential on-demand zones in Burlington, Bow/Edison, Mount Vernon, and elsewhere throughout the county. The following are typical performance metrics used to determine the performance of an on-demand system.

Ridership

Ridership should be a primary metric for Skagit Transit to track the success of an on-demand service. If Skagit Transit decides to operate a turnkey on-demand service, it is imperative that the agency retain complete access to ridership data, to maintain clarity and accuracy in understanding riding trends, popular pick-up and drop-off locations, and potential areas for service expansion or removal. To the extent possible, through ridership surveys or other means, it would be useful to track the demographics of riders to understand who an on-demand service would be serving.

Operating Cost

Operating cost is another metric by which Skagit Transit can track the on-demand service's success. Understanding the average cost per ride is vital to controlling costs and improving the rider experience. Poor performing on-demand programs have ignored or been unable to calculate this metric and usually terminate their programs due to cost overruns. There is no industry standard when it comes to an ideal operating cost, but the local economy and cost of living plays a pivotal role in ultimately deciphering what constitutes a healthy cost per vehicle revenue hour. It is ultimately up to the judgement of Skagit Transit to decipher this value.

On Time Performance

Another important component to determining the overall success of an on-demand program is its OTP. This can be done by analyzing the amount of time that passes between a rider ordering a pick-up and a vehicle arriving to make the pick-up. It is ultimately up to Skagit Transit to determine what length of time is appropriate between these events but given the size of the Anacortes On-Demand Pilot Program area, it seems reasonable for 20-minute headways to be the gauge between on-time and late pick-ups.

Percentage of Shared Rides

Another metric to consider is the percentage of shared rides at any given time. If an on-demand vehicle sees a high percentage of shared rides, it is a testament to the system's feasibility as a transportation mode within the City of Anacortes.

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3.6 Next Steps

Based on this evaluation of on-demand service options, potential on-demand service zones, and a more in-depth analysis of a potential Anacortes On-Demand Transit pilot zone, Skagit Transit will need to identify operating parameters, secure funding, and procure the needed service and/or vehicles to operate an on-demand pilot. There would also be time and effort needed to successfully launch a service, including the data framework and marketing and promotion efforts described above.

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4 COMMUNITY ENGAGEMENT

Community engagement was centered around understanding the types of transit improvements and investments that would enhance local and regional mobility for both existing and future riders. Project outreach took place throughout 2024, with strategic engagement occurring during two rounds of project engagement:

- Round 1 – Existing Conditions and Community Visioning (Spring 2024)
- Round 2 – Feedback on Initial Service Recommendations (Fall 2024)

Public and Stakeholder Feedback was advertised and collected through both virtual and in-person avenues, such as:

- Media and on-board information flyers
- In-person and virtual open houses
- Project information tabling at community events
- Interactive map-based visioning exercises
- Community stakeholder meetings
- Interactive online engagement mapping tool
- Online surveys and paper feedback forms

Following each round, analysis of the results from all engagement materials were summarized and used as inputs to the development of service recommendations.

4.1 Round 1 - Existing Conditions and Community Visioning

Round 1 engagement focused on understanding the opportunities and challenges riders/potential riders face when using system and how the community would like to use the system in the future. The first round included two meetings with representatives from neighboring transit agencies and regional planning commissions, nine public workshops, and online engagement materials. Predominant themes in Round 1 included community desires to increase service span and frequency, enhancement of regional connectivity, and the potential extension of service coverage to new areas.

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Figure 4-1: Round 1 Community Engagement In-Person Options

Saturday, March 23 @ 1 PM – 2:30 PM	**Anacortes Library** 1220 10th St, Anacortes, WA 98221
Tuesday, March 26 @ 5 PM – 6:30 PM	**Sedro Woolley City Hall** 325 Metcalf St, Sedro-Woolley, WA 98284
Wednesday, March 27 @ 5 PM – 6:30 PM	**La Conner Middle School Library** 305 N 6th St, La Conner, WA 98257
Tuesday, April 2 @ 10 AM – 11:15 AM	**Concrete Community Center** 45821 Railroad Ave, Concrete, WA 98237
Wednesday, April 3 @ 5 PM – 6:30 PM	**Fidalgo School Library** 13590 Gibralter Rd, Anacortes, WA 98221
Thursday, April 4 @ 5 PM - 6:30 PM	**Anacortes Library** 1220 10th St, Anacortes, WA 98221
Saturday, April 6 @ 1 PM – 2:30 PM	**Skagit Station** 105 E Kincaid St, Mount Vernon, WA 98273
Tuesday, April 9 @ 5 PM – 6:30 PM	**Edison School Library** 5801 Main Ave, Bow, WA 98232
Wednesday, April 10 @ 5:30 PM – 7 PM	**Burlington Library** 820 E Washington Ave, Burlington, WA 98233

Figure 4-2: March 26, 2024 Open House at Anacortes Library

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Figure 4-3: Dot-on-Map Visioning Exercise, Highlighting Desired Origins and Destinations

4.2 Round 2 - Feedback on Initial Service Recommendations

For the second round of engagement, the project team organized 10 public events, which included three open houses, alongside informational booths at farmers' markets and other community gatherings. A second online survey was deployed, designed to gather focused feedback on specific potential enhancements to Skagit Transit operations and to ascertain which improvements the respondents prioritized for implementation. A web-based map with existing and proposed future transit route maps enabled users to interact and provide comments on potential route changes. Key themes during Round 2 of public engagement were consistent with Round 1 feedback and included enhancement of service frequencies, improved regional connectivity, the provision of weekend service across all routes, and the extension of weekday service hours into the later evening periods.

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Figure 4-4: Round 2 Community Engagement In-Person Options

September 28 @ 10 AM - 3 PM *28 de septiembre de 10 AM-3 PM*	**Fall Fest - Burlington Skagit River Bank** 1100 S Skagit St, Burlington, WA 98233
October 5 @ 9 AM - 2 PM *5 de octubre de 9 AM - 2 PM*	**Mount Vernon Farmers Market** 501 Main St, Mount Vernon, WA 98273
October 12 @ 9 AM - 2 PM *12 de octubre de 9 AM - 2 PM*	**Anacortes Farmers Market** 611 R Ave, Anacortes, WA 98221
October 15 @ 12 PM - 1 PM *15 de octubre de 12 PM - 1 PM*	**Virtual Open House**
October 15 @ 6 PM - 7 PM *15 de octubre de 6 PM - 7 PM*	**Virtual Open House**
October 16 @ 3 PM - 7 PM *16 de octubre de 3 PM - 7 PM*	**Sedro-Woolley Farmers Market** 617 Metcalf St, Sedro-Woolley, WA 98284
October 18 @ 9 AM - 3 PM *18 de octubre @ 9 AM - 3 PM*	**Veterans Standdown - Skagit County Fairgrounds** 501 Taylor St, Mount Vernon, WA 98273
October 22 @ 10:30 AM - 11:30 AM *22 de octubre de 10:30 AM - 11:30 AM*	**Open House - Concrete Community Center** 45821 Railroad Ave, Concrete, WA 98237
October 26 @ 9 AM - 4 PM *26 de octubre @ 9 AM - 4 PM*	**Fall Spooktacular Market - Skagit County Fairgrounds** 501 Taylor St, Mount Vernon, WA 98273
November 2 @ 12 PM - 4 PM *2 de noviembre de 12 PM - 4 PM*	**Dia De Los Muertos Celebration - Sedro-Woolley Library** 110 W State St, Sedro-Woolley, WA 98284

Figure 4-5: October 12, 2024 Open House at Anacortes Farmers Market

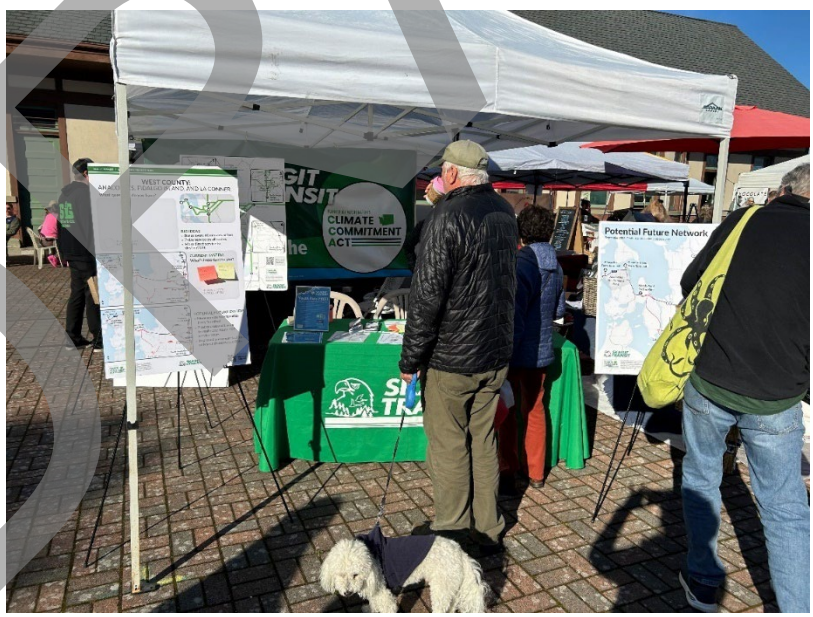

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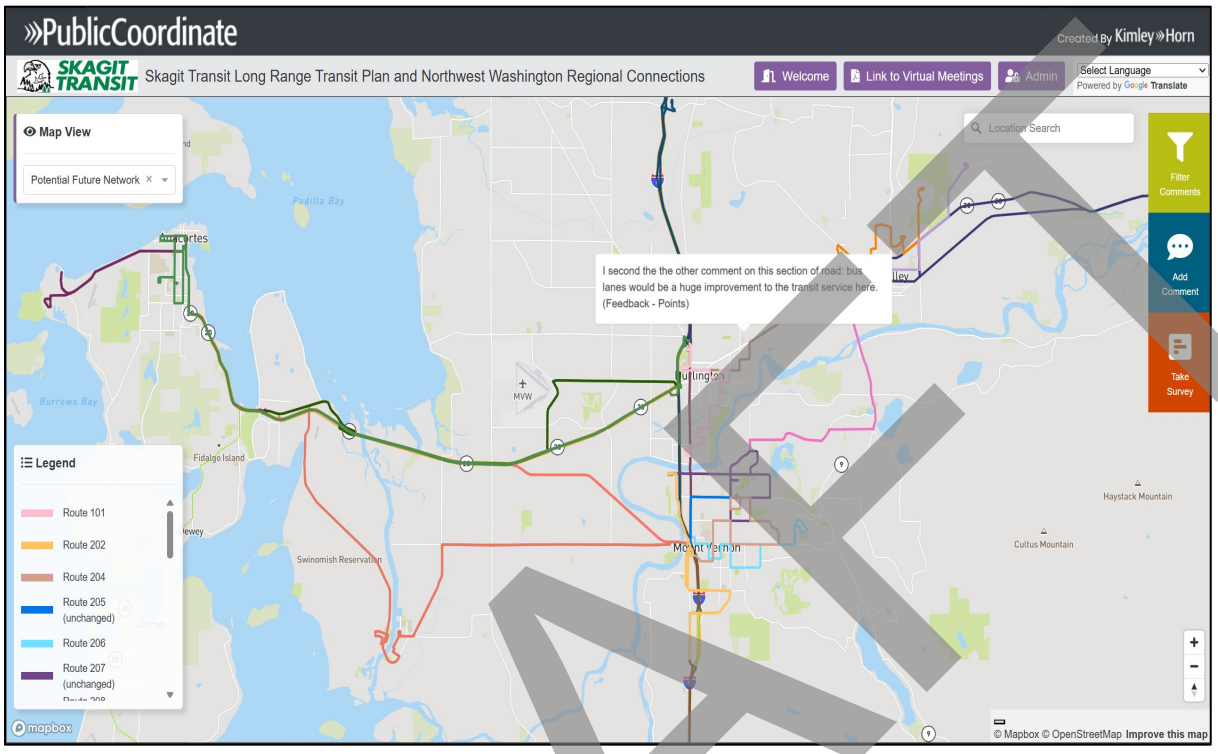
Figure 4-6: Interactive Online Mapping Tool Used Throughout the Project



4.3 Community Interest in On-Demand Service

Feedback on transit service and needs was collected from in-person and virtual community engagement events in Skagit County. Feedback included the desire for more transit available to riders where they live and to destinations, particularly in the Anacortes area.

Between September and November 2024, Skagit Transit conducted a survey that covered a variety of topics related to public transit in Skagit County, including on-demand transit service. In this survey, respondents were asked to rank the five potential on-demand pilot zones in order of choice. In this survey, nearly a third (32%) of respondents identified Anacortes as their top choice for an on-demand pilot program, the most support of the five.

4.4 Summary of Public Engagement

Over the course of the project, nearly 600 themes from community members and stakeholders were catalogued. Analysis of the feedback revealed that the most frequently requested service enhancements included:

- Increased service frequency (26%)
- Improved regional connectivity (20%)
- Extended operational spans (15%)
- Expanding service to run seven days per week (13%)

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The remaining 26% of respondents encompassed a variety of other concerns, such as punctuality, safety and comfort, route directness, and potential locations for on-demand service. These themes and specific comments, combined with the analysis in **Section 21** lead directly to the service recommendations in **Section 45**.

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5 RECOMMENDATIONS

Based on the analysis in **Sections 2 and 3** alongside the engagement feedback summarized in **Section 4**, there are opportunities for improvements to Skagit Transit's service. These recommendations are organized around transit service recommendations, phasing recommendations, and capital improvement recommendations. Each of these recommendations are focused on improving the customer experience for Skagit Transit's existing riders and making the system attractive for future riders.

5.1 Service Recommendations

Network Recommendations

The LRTP service recommendations are divided into three planning horizons or phases – Short-Range, Mid-Range, and Long-Range – as detailed in **Table 5-1**.

Short-Range recommendations can be implemented within one to two years with a minimal increase in service hours and no additional vehicles. Short-Range recommendations would restructure the Skagit Transit network and optimize transit service through the following actions:

- Route modifications that improve directness and ease of use
- Service consolidations that reduce duplication of routes
- Route extensions that reduce passenger transfers
- More direct connections that reduce passenger wait times
- New stops that increase access to employment and other destinations
- Frequency and span of service upgrades to improve convenience
- On-demand service in Anacortes to provide first/last mile connection to bus service

The Short-Range recommendations provide a framework to build on top of as more resources become available. Mid- and Long-Range service investments would strengthen route schedules. These investments require the procurement of additional vehicles and a moderate increase in service hours.

Table 5-1: Summary of Service Recommendations by Phase

Phase	Planning Horizon	Route Changes	Frequency Upgrades	Later Service	Sunday Expansion	Service Hours	Peak Vehicles
Existing	-	-	-	-	-	-	-
Short-Range	1-2 years	Yes	Yes	Yes	Yes	Minimal increase	No change
Mid-Range	3-5 years	No	Yes	Yes	Yes	Moderate increase	Moderate increase
Long-Range	6-10 years	No	Yes	Yes	No	Moderate increase	Moderate increase

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Route Realignment Recommendations

As part of the future recommended transit system, many routes are recommended to be realigned to improve directness and connectivity, consolidated services to remove unnecessary redundancies, or extended to reach key destinations. Recommended route restructures or realignments include:

- Connector Routes
    - Route 40X is recommended to be realigned and extended to downtown Anacortes.
    - Route 70X is recommended to be realigned to improve connections and directness by serving downtown Sedro-Woolley.
    - Additional stop service is recommended for Route 80X and Route 90X in order to improve access to destinations and regional connections.
- Central County
    - Routes 204, 206, and 207 in Burlington and Mount Vernon are recommended to be consolidated into a new route, Route 201.
    - Routes 101 in Burlington and 202 in Mount Vernon are recommended to be converted to two-way routes to streamline service. Route 202 is recommended to be extended to Chuckanut Park & Ride to improve network connectivity.
- East County
    - Route 300 in Sedro-Woolley is recommended to be discontinued and its service area covered by Routes 301 and 513.
    - Routes 301 and 305 in Sedro-Woolley are recommended be extended to expand coverage and improve connectivity.
- West County
    - Route 409 in Anacortes is recommended to be discontinued and replaced by Routes 40X, 410, and a potential on-demand service.
    - Route 410 on Fidalgo Island is recommended to be shortened to only serving Anacortes with minor realignments to improve connectivity to key locations

Figure 5-1 depicts the future recommended system, including the recommended route network and the Anacortes On-Demand Zone. Detailed service recommendations are presented for each route and geographic area in **Appendix B**.

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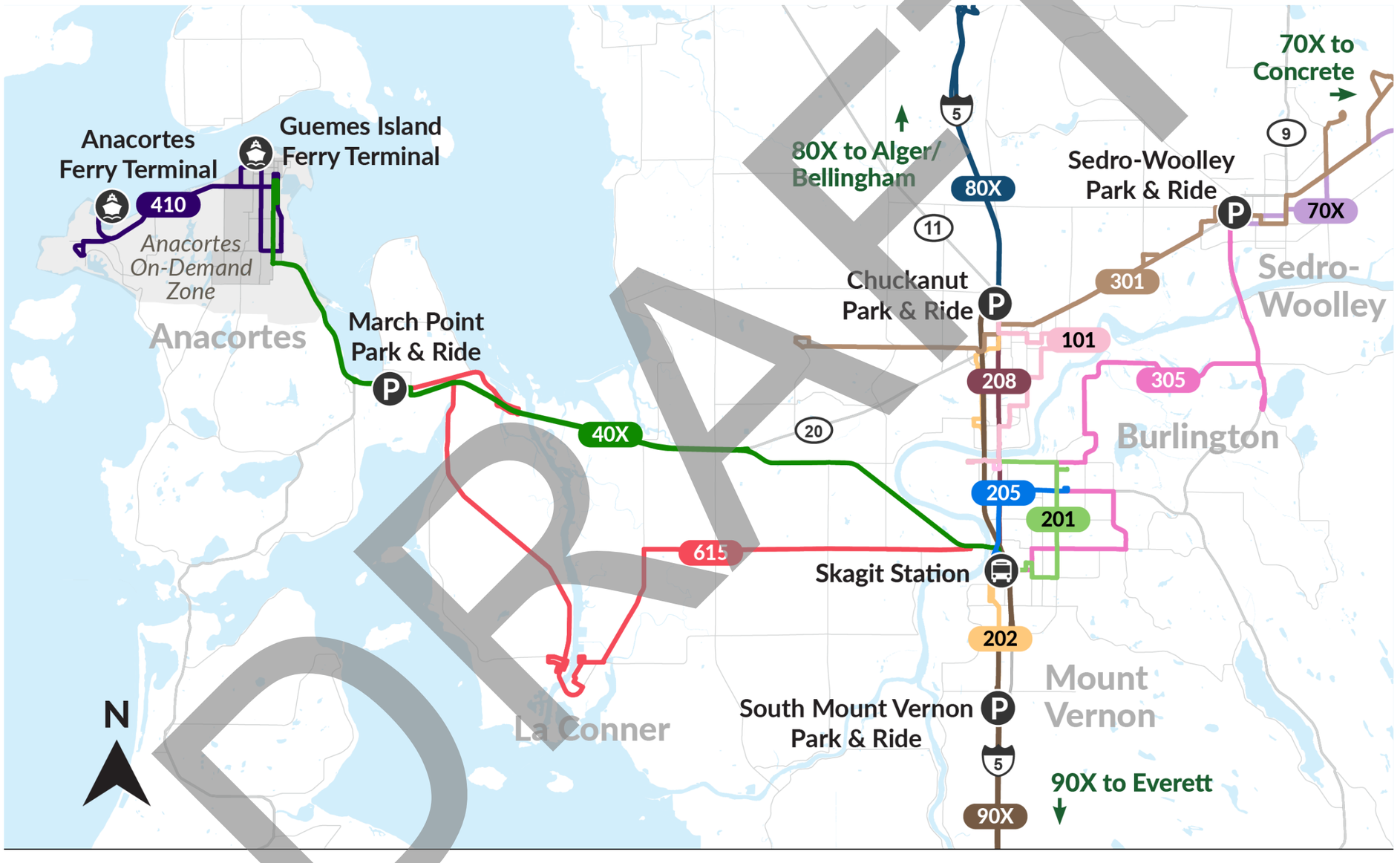
Figure 5-1: Recommended Transit Network



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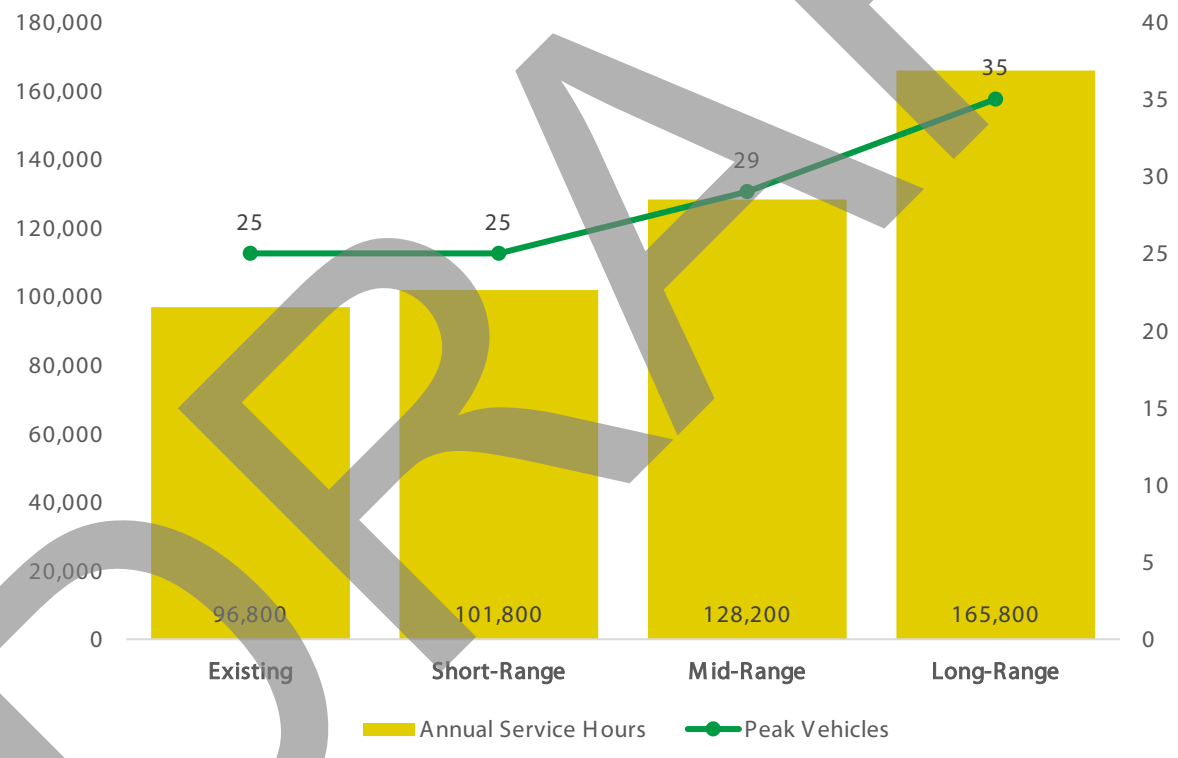
5.2 Summary By Phase

Service recommendations are divided into three timeframes. Short-Range recommendations require a minor increase in service hours but no additional peak vehicles. Short-Range recommendations consist of route and schedule changes that reset the network and provide a foundation for future growth.

Mid- and Long-Range recommendations consist of frequency and span improvements that would require an increase in service hours, acquisition of additional vehicles, and onboarding new operators.

Mid-Range (approximately 3 to 5 years) and Long-Range (approximately 6 to 10 years) service investments require additional resources. **Figure 5-2** summarizes the increase in annual hours and peak vehicles for each phase.

Figure 5-2: Annual Service Hours and Peak Vehicle Needs



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5.3 Short-Range Service Recommendations

Short-Range recommendations focus on restructuring the network to simplify routes, increase directness, reduce transfers, and minimize service duplication. The recommendations include new, discontinued, and consolidated routes that collectively enhance network connectivity. Short-Range service recommendations could be implemented within two years of plan adoption, would not require additional peak vehicles, and would have a minimal change in annual service hours.

Figure 5-3 Short-Range - Phase 1 & 2 Service Recommendation Summary

New Service	Significant Change	Minor Change	No Change	Discontinued Route
201 Mount Vernon	40X Mount Vernon / Anacortes	70X Sedro-Wooley / Concrete	205 Mount Vernon	204 Mount Vernon
Anacortes On-Demand Zone	101 Burlington	80X Bellingham Connect	208 Mount Vernon	206 Mount Vernon
	202 South Mount Vernon/Chuckanut	90X Everett Connect	615 La Conner	207 Mount Vernon
	301 Sedro-Wooley		717 Concrete	300 Sedro-Wooley
	305 Clear Lake			409 Anacortes
	410 Anacortes			513 Burlington / Anacortes

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Table 5-2: Short-Range Service Recommendations

Existing Route	Action
Connector Routes	
40X Mount Vernon/Anacortes	Extend to Downtown Anacortes and add Sunday service.
70X Sedro-Woolley/Concrete	Improve frequency and add Sunday service. Shorten to Chuckanut P&R.
80X Bellingham Connect	Potentially add stop at Skagit Valley Casino Resort.
90X Everett Connect	Add stop at Smokey Point Transit Center and upgrade midday frequency.
Central County	
101 Burlington	Convert to two-way, upgrade frequency, and extend to Walmart.
201 Mount Vernon	New route replacing segments of 204, 206, and 207.
202 South Mount Vernon/Chuckanut	Convert to two-way along 2nd Street. Extend to Chuckanut Park & Ride. Rename route.
204 Mount Vernon	Replace with new Route 201 and extended 305.
205 Mount Vernon	No change.
206 Mount Vernon	Replace with new Route 201.
207 Mount Vernon	Replace with new Route 201 and extended Route 305.
208 Mount Vernon	No change.
East County	
300 Sedro-Woolley	Replace with extended Routes 301 and 513.
301 Sedro-Woolley	Extend to Job Corps and Upper Skagit Reservation.
305 Clear Lake	Extend to Skagit Station.
717 Concrete	No change.
West County	
409 Anacortes	Replace with Routes 40X, 410, and potential on-demand service.
410 Anacortes	Shorten to Downtown Anacortes and extend to Island Hospital.
513 Burlington/Anacortes	Reinvest into Route 40X and replace with extended Route 301.
615 La Conner	No change.

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Figure 5-4: Potential Short-Range Phasing

	West County	Connector Routes	Central County	East County	Annual Estimated Net Service Hours	Estimated Net Peak Hour Service Vehicles
Short Range: Phase 1		90X	101 202 205 208 204 206 207 201 *Replaces 204, 206, and 207*	305	0	-1,000
Short Range: Phase 2	409 410 On-Demand Zone 513	40X *Replaces 409 and 513* 70X	300 301 *Replaces 300 and 513*		0	5,000

New service | Significant change | Minor route change | No route change | Discontinued route

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Timed Connections

In addition to the route alignment and frequency changes recommended in the Short-Range timeframe, several schedule adjustments are recommended to improve connections at Skagit Station, Sedro-Woolley Park & Ride, Downtown Anacortes, and Chuckanut Park & Ride. **Table 5-3** details the recommended weekday connection times at these locations. To successfully streamline the connection times, it is recommended that Skagit Transit prioritize the use of bus bays at Skagit Station for Skagit Transit vehicles and work with regional transit partners to ensure connectivity.

Table 5-3: Recommended Weekday Connections Times

Connection Points	Approximate Minutes After Hour			
	0:00	0:15	0:30	0:45
Skagit Station **Note: Route 90X connection times fluctuate due to variable frequency.*		40X 90X* 201 202 205 208 305 615		80X 90X* 201 205 208
Sedro-Woolley Park & Ride		70X WB 301 WB 305		70X EB 301 EB
Downtown Anacortes (TBD)		40X 410		
Chuckanut Park & Ride	80X NB	101 208 301 EB	70X 80X	101 208 301WB

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5.4 Mid-Range Service Recommendations

Mid-Range recommendations focus on increasing service levels and adding Sunday service to Routes 410, 615, and 717. Mid-Range service investments should be implemented incrementally over a three-year period. Mid-range recommendations would require an additional four peak vehicles and growth of approximately 30,000 annual service hours or about 30% from existing service hours. Resources for these changes would need to be secured.

Table 5-4: Mid-Range Service Recommendations

Existing Route	Action
Connector Routes	
40X Mount Vernon/Anacortes	Improve weekday frequency to 30 minutes. Improve Sunday frequency to 60 minutes.
70X Sedro-Woolley/Concrete	Increase weeknight and weekend frequency to 90 minutes.
80X Bellingham Connect	Improve weekday frequency to 60 minutes. Improve weekend frequency to 60 minutes.
90X Everett Connect	Improve weekday frequency to 45 to 60 minutes. Improve weekend frequency to 60 minutes.
Central County	
101 Burlington	Improve Sunday frequency to 30 minutes.
201 Mount Vernon	Improve Sunday frequency to 30 minutes.
205 Mount Vernon	Improve Sunday frequency to 30 minutes.
208 Mount Vernon	Improve Sunday frequency to 30 minutes.
East County	
301 Sedro-Woolley	No change.
305 Clear Lake	No change.
717 Concrete	Add Sunday service.
West County	
410 Anacortes	Improve weekday frequency to 30 minutes and add Sunday service.
615 La Conner	Improve weekday frequency to 60 minutes and add Sunday service.

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5.5 Long-Range Service Recommendations

Long-Range recommendations focus on further increasing level of service, including increasing the weekday frequency of Route 208 to 20 minutes, Routes 301 and 305 to 40 minutes, and Route 70X to 60 minutes. Additional weekend frequency improvements are also recommended. Finally, the Long-Range recommendations include later hours for all routes. Long-Range service investments are anticipated to be implemented incrementally over a five-year period as resources can be secured. Long-range recommendations would require an additional six peak vehicles over the Mid-Range total, and a further 30% growth in annual service hours.

Table 5-5: Long-Range Service Recommendations

Existing Route	Action
Connector Routes	
40X Mount Vernon/Anacortes	Extend night service.
70X Sedro-Woolley/Concrete	Increase frequency to 60 minutes. Extend night service.
80X Bellingham Connect	Extend night service.
90X Everett Connect	Extend night service.
Central County	
101 Burlington	Extend night service.
201 Mount Vernon	Extend night service.
202 South Mount Vernon/Chuckanut	Extend night service.
205 Mount Vernon	Extend night service.
208 Mount Vernon	Increase weekday frequency to 20 minutes. Extend night service.
East County	
301 Sedro-Woolley	Increase weekday frequency to 30 minutes. Extend night service.
305 Clear Lake	Increase weekday frequency to 30 minutes. Extend night service.
717 Concrete	Extend night service.
West County	
410 Anacortes	Extend night service.
615 La Conner	Increase weekend frequency to 60 minutes. Extend night service.

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5.6 Capital Investments

Beyond service improvements, capital investments can enhance the system through infrastructure and technological upgrades. These investments increase reliability, comfort, and safety. This section recommends capital investments and improvements for passenger and operator facilities, bus stops, and fleets.

Passenger and Operator Facilities

As resources allow, Skagit Transit can program upgrades to bus transfer centers and park and rides. These are locations where riders transfer from one bus to another to another and from longer distance express routes to local service, so passenger facility improvements at transit centers not only benefit Skagit Transit, but also the surrounding regional transit network. As incremental service improvements are made, Skagit Transit and regional transit partners can use these as opportunities to upgrade these locations into transit service hubs that are comfortable and welcoming for customers.

Skagit Station Upgrades

Skagit Station Transit Center is a prominent regional multimodal hub, with capital facilities that serve a broad array of customers beyond Skagit Transit riders. There are opportunities to make upgrades to operator facilities at Skagit Station, as well as continuing to invest in passenger experience for bus riders since many riders start or end trips or transfer between buses at Skagit Station.

March Point Park & Ride

Given the importance of March Point Park & Ride as a major connection point in the Skagit Transit system and for Island Transit passengers, and the distance from other facilities[3], this is a location that would benefit from significant facility upgrades that would improve the user experience. Recommended improvements include improved shelters, benches and lighting, electric vehicle (EV) charging, real-time signs, ADA accessibility improvements, and potentially the construction of a public restroom. Other enhancements to be considered include improved wayfinding, and improved pedestrian and bicycle access and storage.

Anacortes Transit Hub

Upon implementation of the service recommendations in Anacortes, including extending the 40X, and piloting on-demand services, there is an opportunity to establish a transit and mobility hub within downtown Anacortes. There is potential to explore options at 10th Street and Q Avenue on the east side of downtown for a transit hub that may include the addition of lighting, designation of bus only dwelling spaces, real-time information signage, and the construction of an operator's restroom. There are also opportunities to link to other mobility options with the broader walkable downtown of Anacortes.

[3] March Point Park & Ride is 12 miles from Skagit Station (Central County), and 5 miles from Downtown Anacortes (West County).

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Sedro-Woolley Park & Ride Upgrades

Existing facilities at Sedro-Woolley Park & Ride are limited to shelters, an operator restroom that is not currently operable, and some lighting. Future facility upgrades may include shelter and amenity upgrades, including improved shelters and lighting, EV charging stations, real-time information signs, and completion and utilization of the operator restroom.

Bus Stop and Access Improvements

Bus Stop Guidelines

The core of Skagit Transit's service is to provide Skagit County residents access to the transit network in a safe and convenient manner. Bus stops should be properly placed and recognizable at a distance. Skagit Transit's bus stop guidelines are designed in collaboration with partnering agencies in Skagit County. Each bus stop has a unique set of characteristics that must be accounted for when establishing a stop.

Another objective is to provide information and education to staff at partnering agencies, business and property owners, as well as developers for the placement and improvement of our bus stops. This will help retain focus on objectives such as accessibility for people with disabilities.

More information on bus stop spacing and recommended stop locations and associated timepoints can be found in **Appendix D**.

Bus Stop Improvement Program

To improve rider comfort at higher ridership stops, there are opportunities to work with local jurisdictions across the county to deliver a consistent and improved passenger experience. Upgrading the 10 stops listed in **Table 5-7** would mean there would be shelters at the top 20 highest ridership stops within the Skagit Transit system and support the connection of the 80X to serve the Skagit Casino Resort. The Skagit Casino Resort, owned by the Upper Skagit Indian Tribe, is one of the 10 largest employers in Skagit County. Adding 80X service to the casino would not be an increase in service hours but it would require resources to add a stop. These bus stop improvements can be considered as part of an ongoing Bus Stop Improvement Program to make capital investments at high ridership locations.

The following table is a preliminary inventory of existing facilities at high ridership stops that currently do not have shelters, most of which are served by Route 208, the highest ridership route in the system. Prioritized elements are highlighted in yellow.

Table 5-6: Capital Cost Estimate

Shelters	$100K
Design, Permitting and Installation Allowance	$20K/Stop = $200K (assumes minimal new pads for shelters)
30% Contingency	$90K
Total Capital Estimate = $390K	

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Table 5-7: Initial Recommendations for Bus Stop Improvements

System Ridership Rank	Stop (ID)	Routes Served	Bench	Shelter	Lighting	Notes
#8	Riverside Dr and College Way (1268)	205, 208	Yes	**No**	**No**	Bench within sidewalk width; stop serves commercial center
#10	2nd St at County Courthouse (1253)	205, 208	Yes	**No**	**No**	Bench sheltered under building; stop serves WA DOL Mount Vernon Office
#11	Burlington Blvd and Fairhaven (1421)	208	Yes	**No**	**No**	Bench within sidewalk width; stop serves LaborMax staffing agency
#13	Riverside Dr North of College Way (1429)	208	Yes	**No**	**No**	Bench within sidewalk width; stop serves commercial center
#14	College Way & LaVenture at McDonald's (1227)	205, 305	**No**	**No**	**Partial**	Lighting from adjacent McDonald's drive-through; sidewalk too narrow for a bench or shelter
#15	Hwy 99 and Anderson Rd (1212)	202	**Partial**	**No**	**No**	Seating within sidewalk width; two seats attached to bus stop sign
#17	Riverside Dr. at Westwinds Motel (1410)	208	Yes	**No**	**No**	Stop serves commercial center
#19	College Way and Urban Ave (1260)	205	Yes	**No**	**No**	Stop serves commercial center
#20	Burlington Blvd Near Target Shopping Center (1423)	208	**No**	**No**	**No**	Stop serves commercial center and Grafton Place Apartments; no trash can
NEW	N/A	80X	**No**	**No**	**No**	New stop at Skagit Casino Resort

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Fleet Replacement and Expansion

Skagit Transit anticipates completing construction on a new maintenance, operations, and administration base by 2026. This facility is critical to the success of the LRTP and will include an electric charging depot to support the transition to a zero-emissions fixed-route and paratransit fleet. Additional charging station could be installed at Skagit Station or other end-of-line facilities to increase vehicle range. **Table 5-8** includes upcoming investments for the zero-emissions fleet transition.

Table 5-8: Upcoming Zero Emissions Fleet Investments

	Cost	Timing	Notes
Design and Construction for near-term MOA2 facility improvements	$9M	Before 2026	Need to complete to transition fleet vehicles that have reached end of useful life with ZE versions.
Procure electric staff relief vehicles	$50K/vehicle	Optional and ongoing	6 per year from 2026 to 2030
Procure paratransit	$360K/vehicle	Beginning 2026	Replace 3 to 4 existing vehicles per year from 2026 to 2032
Procure BEB	$1.1M vehicle $3.3M total	Beginning 2026	Replace 3 buses with BEBs in 2026
Skagit Station wireless chargers	TBD	Beyond 2026	Will increase vehicle range for longer routes. 2 paratransit/ 8 fixed-route

5.7 Transit Access and Integration Investments

Transit Access

Access to and from transit hubs impact travel times, rider convenience, and safety for people who walk, bike or roll. Transit agencies and local jurisdictions can partner on sidewalk improvement projects, safe street crossings, and improving bicycle connections to provide safe and easy access. Other strategies for improving connections between transit and rider destinations in lower density areas, include on-demand service. As discussed in **Section 3** on-demand service is typically introduced in select areas where transit demand exists, yet fixed-route transit service may not be an appropriate option. These are also areas where level of comfort for pedestrians and cyclists may see the largest benefit some access improvements.

Skagit Transit can engage with local jurisdictions within its service areas to program ongoing investments that prioritize potential mobility improvements and make street designs near and connecting to fixed-route transit service safe and accessible for transit customers.

Skagit Transit can also work with local jurisdictions as new development is proposed to support safe and accessible access to existing and future transit.

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Fare Payment Integration

ORCA is the primary fare system provider of the region and is used by Community Transit, Everett Transit, Sound Transit, Kitsap Transit, Pierce Transit, King County Metro, and Washington State Ferries. Skagit Transit currently uses Umo as their fare system provider. A transition to the ORCA system would allow for more seamless connections between providers and increase the quality of data available for ongoing service performance monitoring. Investments and upgrades required may include fare collection hardware and software upgrades that are compatible with the ORCA system, fare structure realignment, establishment of interagency data sharing and processing protocols, and upon implementation, customer communication and education.

Integration into the broader Puget Sound via the ORCA fare system is a lever that would dramatically benefit customers and impact regional access and information-sharing as populations and transit investments expand into the North Puget Sound.

However, the cost of adopting the ORCA system for Skagit Transit is estimated at approximately $350,000, which represents a substantial commitment of resources and there may be opportunities to coordinate fare payment integration with other regional transit providers like Whatcom Transportation Authority and Island Transit (Island Transit does not currently charge fares to riders).

Speed and Reliability Upgrades

Speed and reliability investments improve travel time and consistency of service which can have benefits for passengers and operators alike. Skagit Transit's existing operations data does not allow for systematic identification of delay points in the system, but expanding the deployment of real-time vehicle tracking technology can help with improvements to On-Time Performance and transit speed and reliability. Analysis and partnership with local jurisdictions can help identify where spot improvements such as queue jumps, bulb outs, right turn facilitation and transit signal priority may benefit transit operations and how these tools could be deployed on a systematic basis.

There are also locations where more substantial upgrades may be needed to improve transit operations. For example, buses exiting Skagit Station at Kincaid Street are not able to make a left-turn headed eastbound and instead must make across the train tracks to head east. The close spacing with the I-5 offramps and signal make changes in this location challenging, but a transit signal for eastbound buses to make a left out of Skagit Station would greatly improve rider experience and service reliability.

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6 PHASING APPROACH AND IMPLEMENTATION STRATEGY

This section describes recommendations for implementing the foundational Short-Range service recommendations, and how to effectively build towards the future Mid- to Long-Range improvements.

The service recommendations described as a part of the LTRP is best used as a planning tool that is backed by ongoing performance evaluation. Upon initiating each time-range milestone, point-in-time service monitoring should take place to analyze metrics that may illuminate needed plan refinements. Towards the end of each phase, it is recommended that Skagit Transit conduct targeted outreach to communicate upcoming changes. Ongoing coordination with regional transit agencies is also recommended for successful service integration as well as intercounty performance monitoring.

A detailed breakdown of recommendation phasing, related routes, increased annual service hours, and additional peal vehicles can be found in **Figure** 6-1.

6.1 Short-Range

The foundational Short-Range recommendations are broken out into two phases:

- Short-Range - Phase 1
- Short-Range - Phase 2

Laying the framework for future improvements, these Short-Range service modifications will require small refinements, targeted outreach and communication before finalization and implementation over the course of 2026-2027. No additional peak vehicles are required for either phase of the Short-Range recommendations. **Figure 6-2** describes the post-LRTP process in more detail, which can also be generally replicated as an implementation strategy for Mid-Range and Long-Range recommendations.

6.2 Mid-Range

Mid-Range LRTP improvements can be broken into three phases:

- Mid-Range - Phase 1: Focusing on increasing weekday frequency improvements on core routes
- Mid-Range - Phase 2: Add/upgrade Sunday service, and updating frequency
- Mid-Range - Phase 3: Upgrading frequency on intercounty routes

Mid-Range phases require an increase in resources, and like the Short-Range changes, will necessitate a round of targeted outreach and rider communication ahead of service changes.

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6.3 Long-Range

Long-Range LRTP recommendations are broken into five phases:

- Long-Range - Phase 1: Service upgrades to Central County and Anacortes
- Long-Range - Phase 2: Upgrades to Sedro-Woolley Route 301
- Long-Range - Phase 3: Extended evening hours on connector routes
- Long-Range - Phase 4: Service upgrades for Clear Lake/La Conner service
- Long-Range - Phase 5: East County service upgrades

Long-Range phases require an increase in resources, and like the previous phases, require outreach and communication ahead of the service changes.

6.4 Service Re-Evaluation and Performance Monitoring

The service changes in this LRTP will reshape Skagit Transit service and provide a basis for future growth. Service changes benefit from periodic monitoring of ridership and reliability performance measures to determine if there minor modifications would benefit operations and passenger experience. Skagit Transit should closely monitor the system to understand trends and determine if service refinements are necessary. Skagit Transit should evaluate services on a regular three- to five-year cycle that can inform future phases of implementation. This process would identify any changes in countywide growth, challenging access points, bottlenecks, and potential capital investments that may support system efficiencies.

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Figure 6-1: LRTP Recommendation Timeline, Associated Phases, and Resources

Mid-Range and Long-Range phases dependent on additional resources

SHORT-RANGE

Phase 1
Laying the foundation for future system improvements

Routes: 90X, 101, 201, 202, 205, 208, 305

Central County

Annual Service Hours: 55,800

Additional Peak Vehicles: None

Phase 2
Laying the foundation for future system improvements

Routes: 410, 40X, 70X, 301, Anacortes On-Demand Zone

West County

Annual Service Hours: 32,100

Additional Peak Vehicles: None

Re-evaluate service before proceeding

MID-RANGE

Phase 1
Weekday frequency improvements on core routes

Routes: 40X, 101

Annual Service Hours: 7,700

Additional Peak Vehicles: 2 buses

Phase 2
Add/upgrade Sunday service and upgrade infrequent routes

Routes: 70X, 201, 202, 205, 410, 615, 717

Annual Service Hours: 10,000

Additional Peak Vehicles: 1 bus

Phase 3
Upgrade frequency on intercounty routes

Routes: 80X, 90X

Annual Service Hours: 10,300

Additional Peak Vehicles: 1 bus

Re-evaluate service before proceeding

LONG-RANGE

Phase 1
Central County and Anacortes upgrades

Routes: 101, 201, 202, 205, 208, 410

Annual Service Hours: 5,800

Additional Peak Vehicles: 1 bus

Phase 2
Sedro-Woolley upgrades

Routes: 301

Annual Service Hours: 7,700

Additional Peak Vehicles: 2 buses

Phase 3
Later service on connector routes

Routes: 40X, 80X, 90X

Annual Service Hours: 7,000

Additional Peak Vehicles: None

Phase 4
Clear Lake/LaConner upgrades

Routes: 305, 615

Annual Service Hours: 9,900

Additional Peak Vehicles: 2 buses

Phase 5
East County upgrades

Routes: 70X, 717

Annual Service Hours: 400

Additional Peak Vehicles: 1 bus

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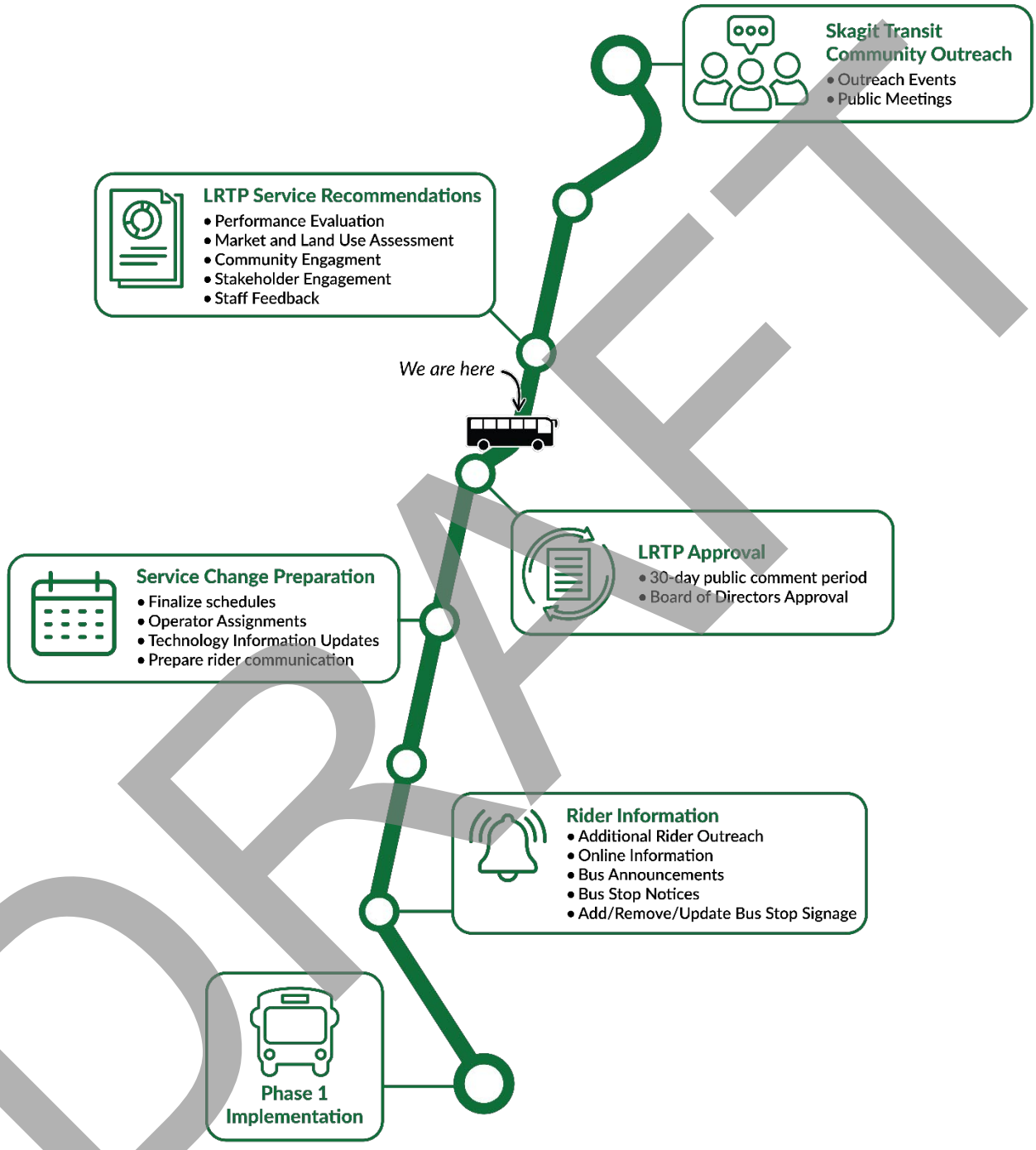
Figure 6-2: LRTP Path to Implementation



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APPENDIX A

EXISTING CONDITIONS

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APPENDIX A: EXISTING CONDITIONS ANALYSIS

MARKET ANALYSIS

The market analysis examines multiple demographic and socio-economic characteristics that influence transit demand and need, including:

- Population density
- Low-income population
- Youth (<18 years old) population
- Senior (>65 years old) population
- Households with Zero Vehicles available
- Black, Indigenous and People of Color (BIPOC), including people of Hispanic origin
- Households with at least one reported disability

Low-income and minority populations, in particular, are a focus of environmental justice and are important to examine to ensure that transit service is provided equitably.

The population density in Skagit County is shown in Figure 1 and Figure 2. Figure 1 includes the entirety of Skagit County and indicates the Focus Area used in subsequent maps. The County's population is concentrated on the west side in the cities of Burlington, Mount Vernon, Sedro-Woolley, Anacortes, and the surrounding area.

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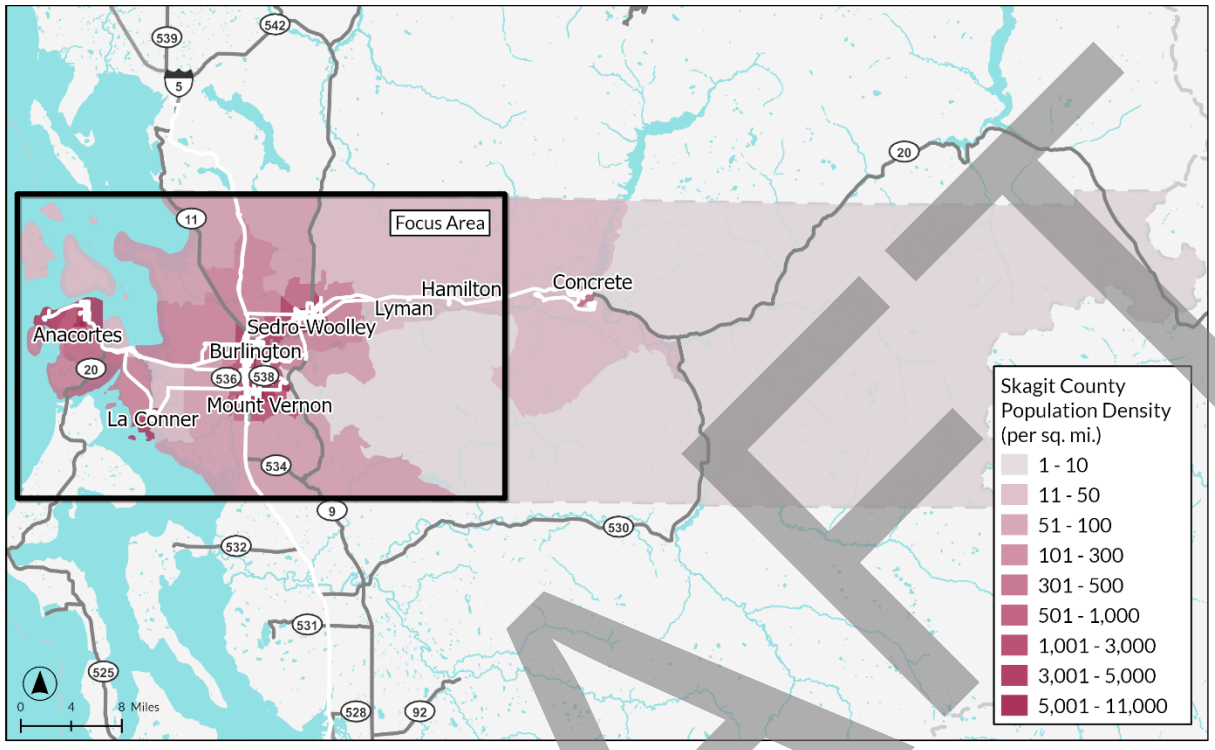
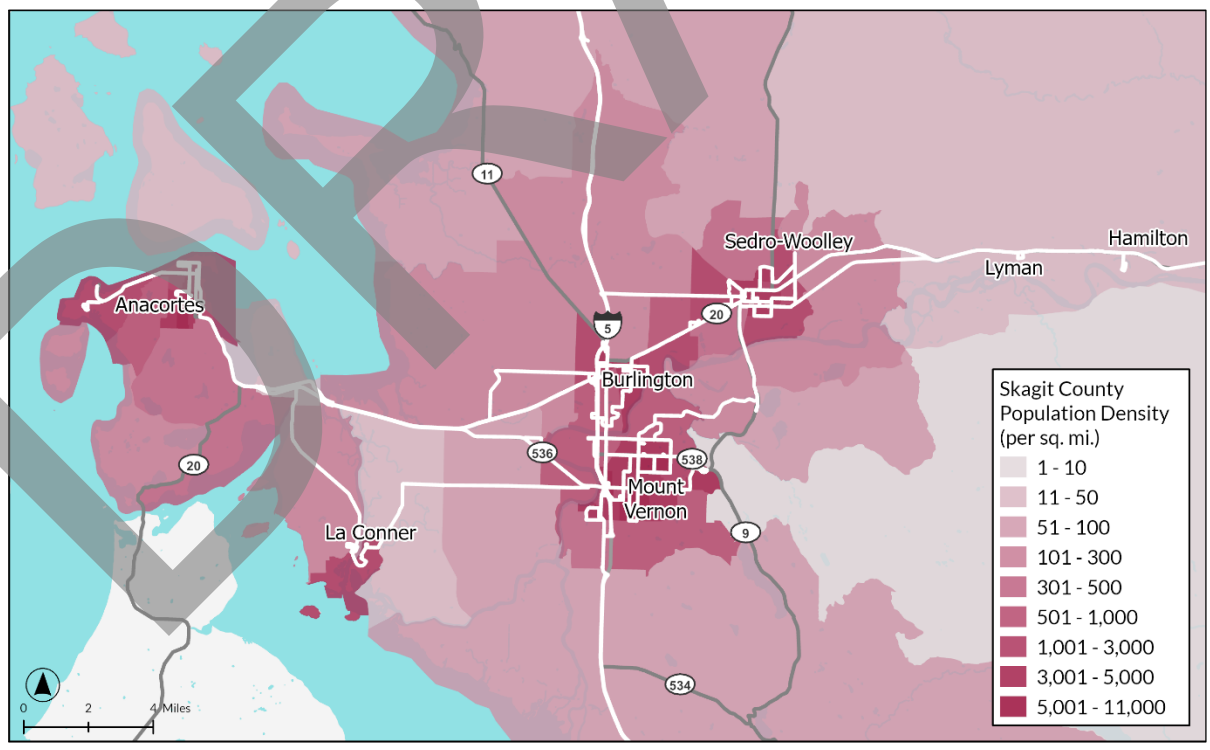
Figure 1: Skagit County Population Density



Source: US Census, 2022

Figure 2: Skagit County Population Density, Focus Area



Source: US Census, 2022

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The low-income population density, defined as individuals with incomes 200% of the federal poverty limit or less, in Skagit County is shown in Figure 3 and Figure 4. The low-income population in the county is concentrated in the cities, particularly Mount Vernon and Anacortes.

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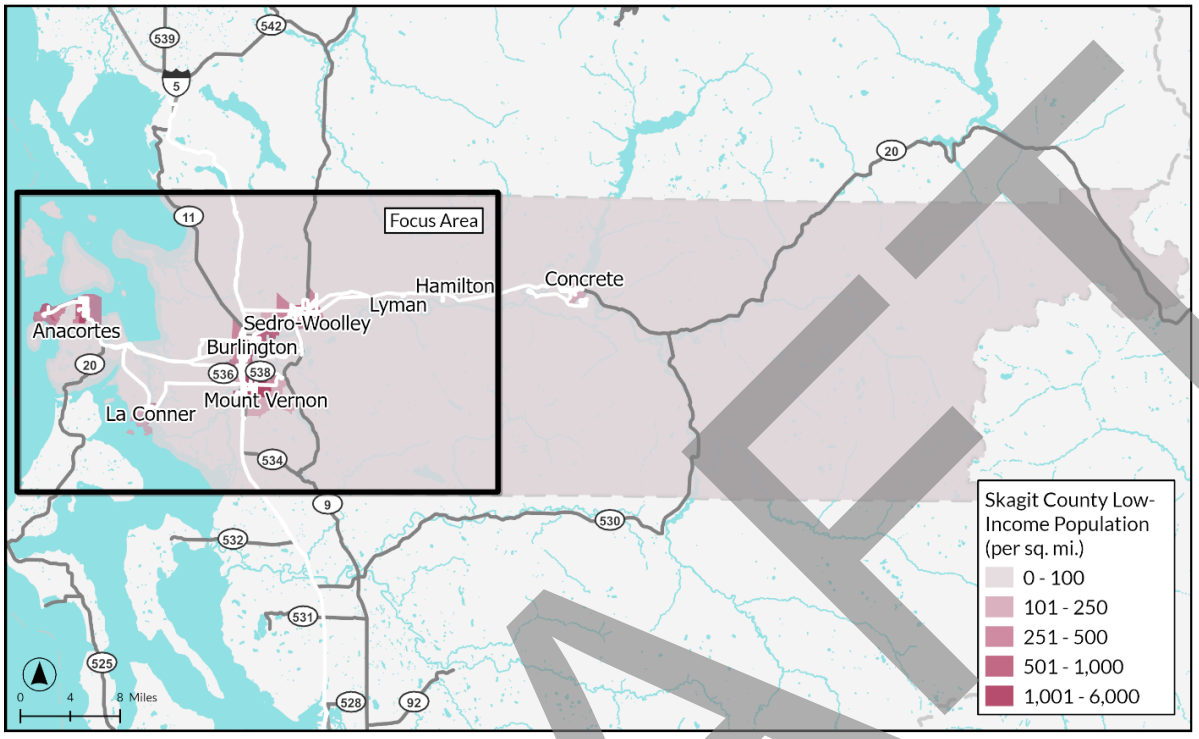
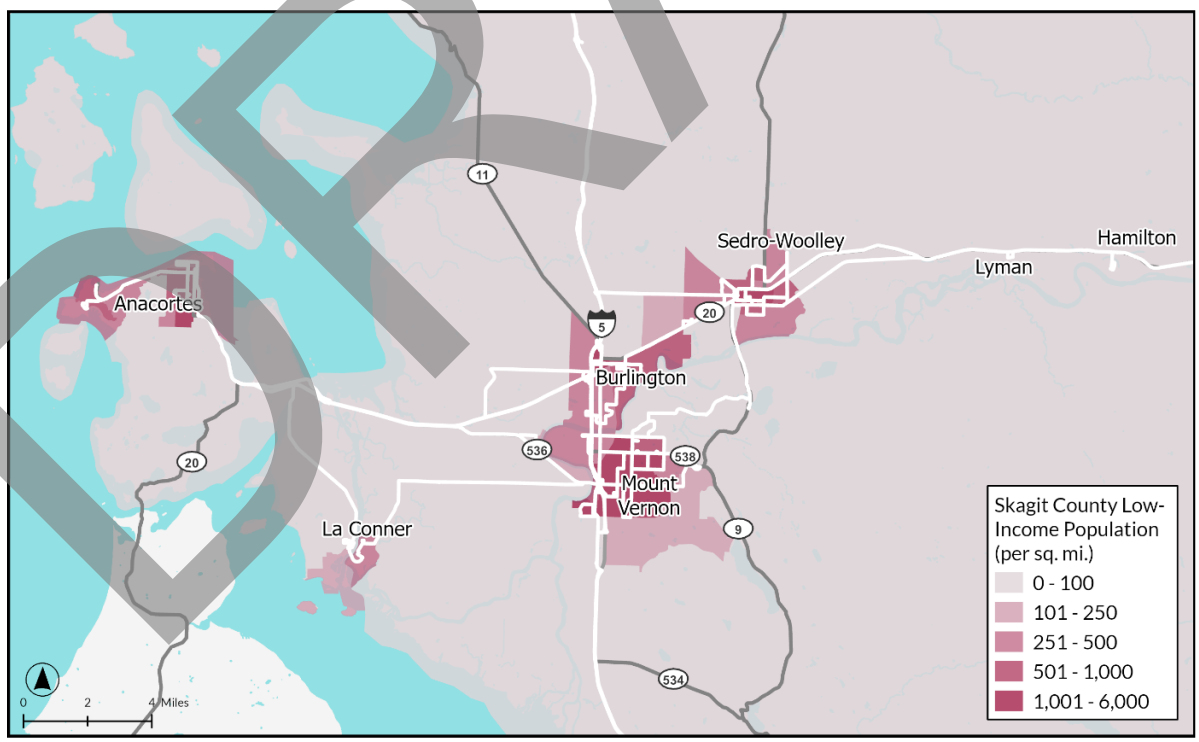
Figure 3: Skagit County Low-Income Population



Source: US Census, 2022

Figure 4: Skagit County Low-Income Population, Focus Area



Source: US Census, 2022

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Figure 5 and Figure 6 show census tracts with persistent poverty in Skagit County. Areas of persistent poverty are defined by the Bipartisan Infrastructure Law as census tracts which have a poverty rate of at least 20 percent as measured by the 2014-2018 5-year American Community Survey; there are seven of these tracts in Skagit County. These areas include the two most eastern census tracts in the County including Concrete, the cities of Lyman and Hamilton, north Mount Vernon, west Burlington, and a portion of central Anacortes.

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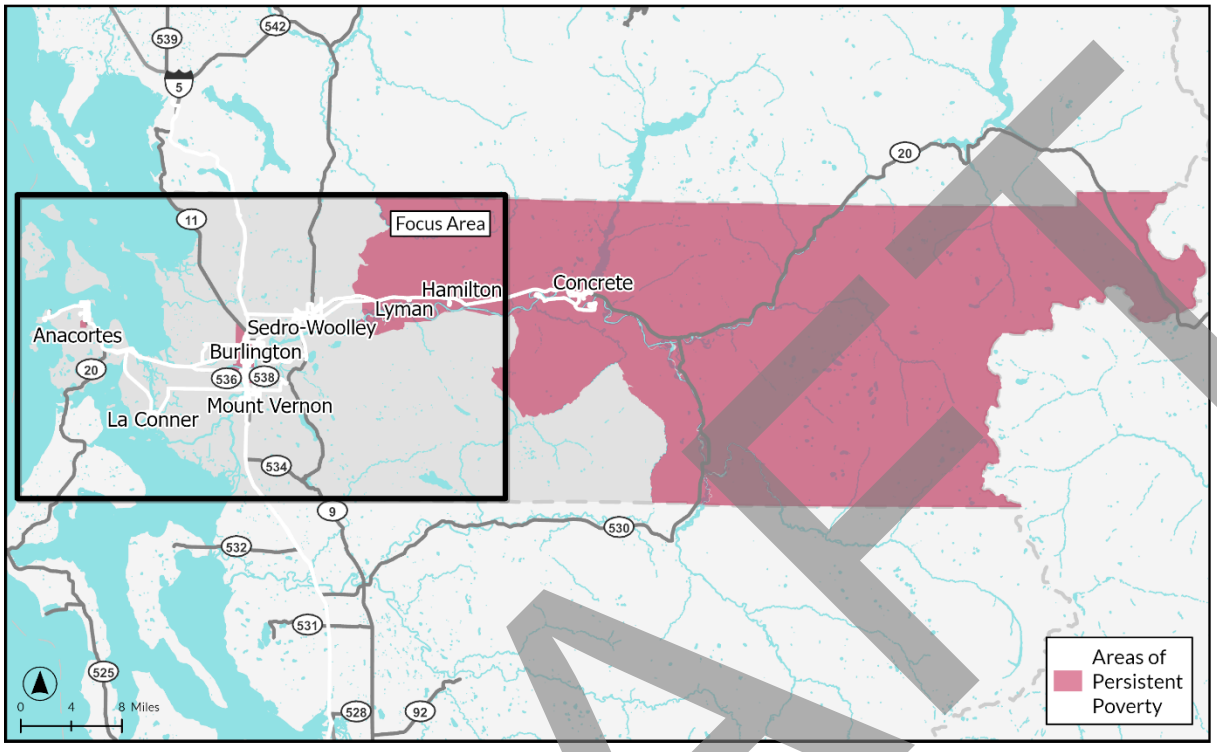
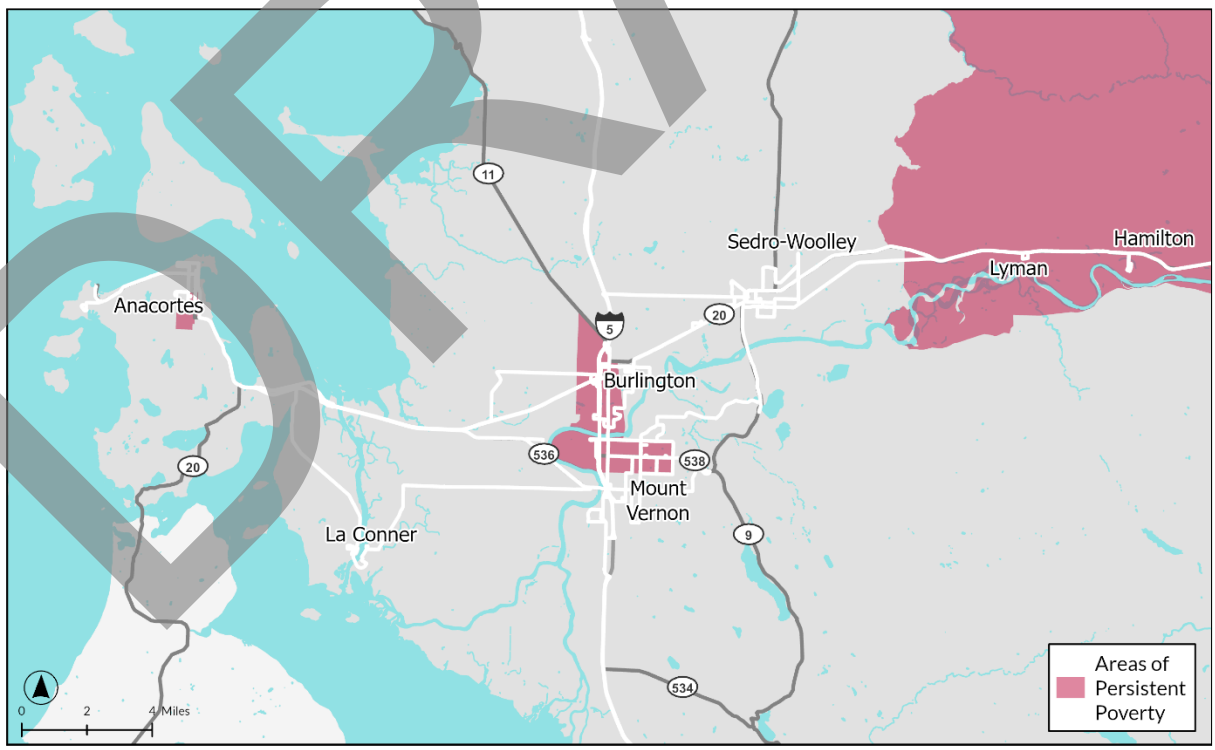
Figure 5: Skagit County Areas of Persistent Poverty



Source: US Census, 2022

Figure 6: Skagit County Areas of Persistent Poverty, Focus Area



Source: US Census, 2022

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The density of residents under 18 years of age in Skagit County is shown in shown in Figure 7 and Figure 8. Minors in Skagit County are generally concentrated within the urbanized areas of the county and surrounding areas, especially in the Mount Vernon area and Fidalgo Island.

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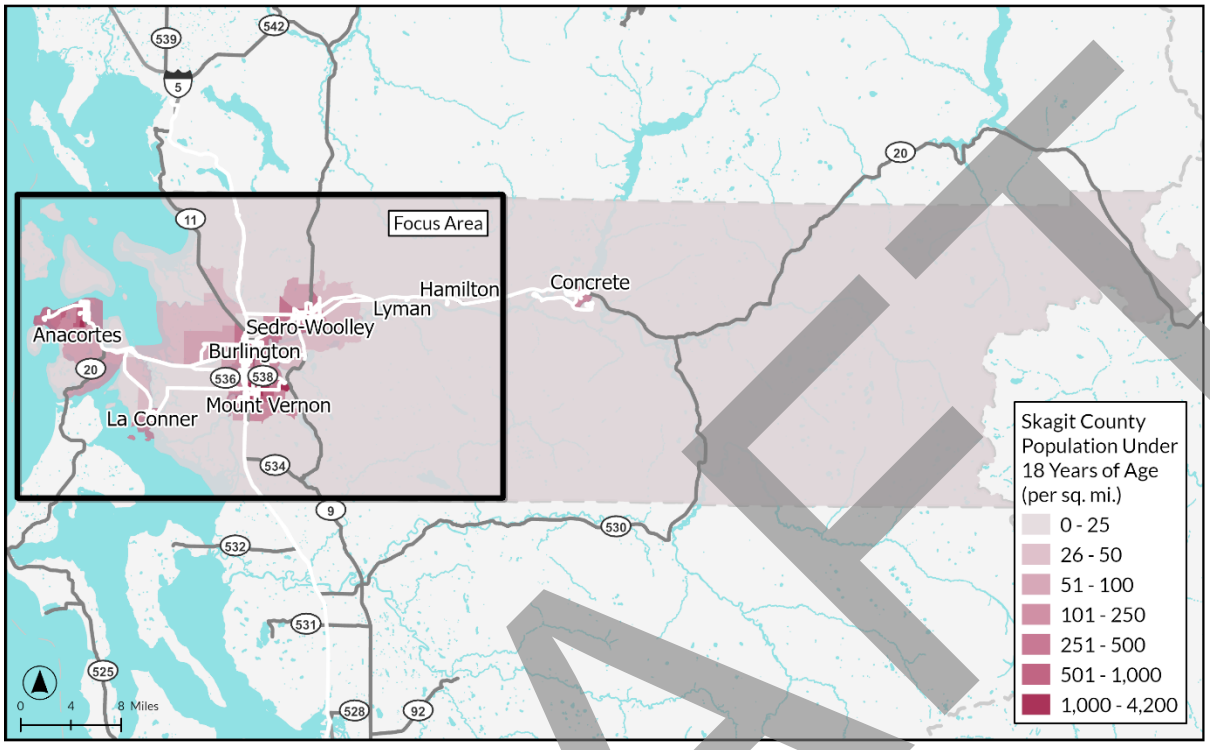
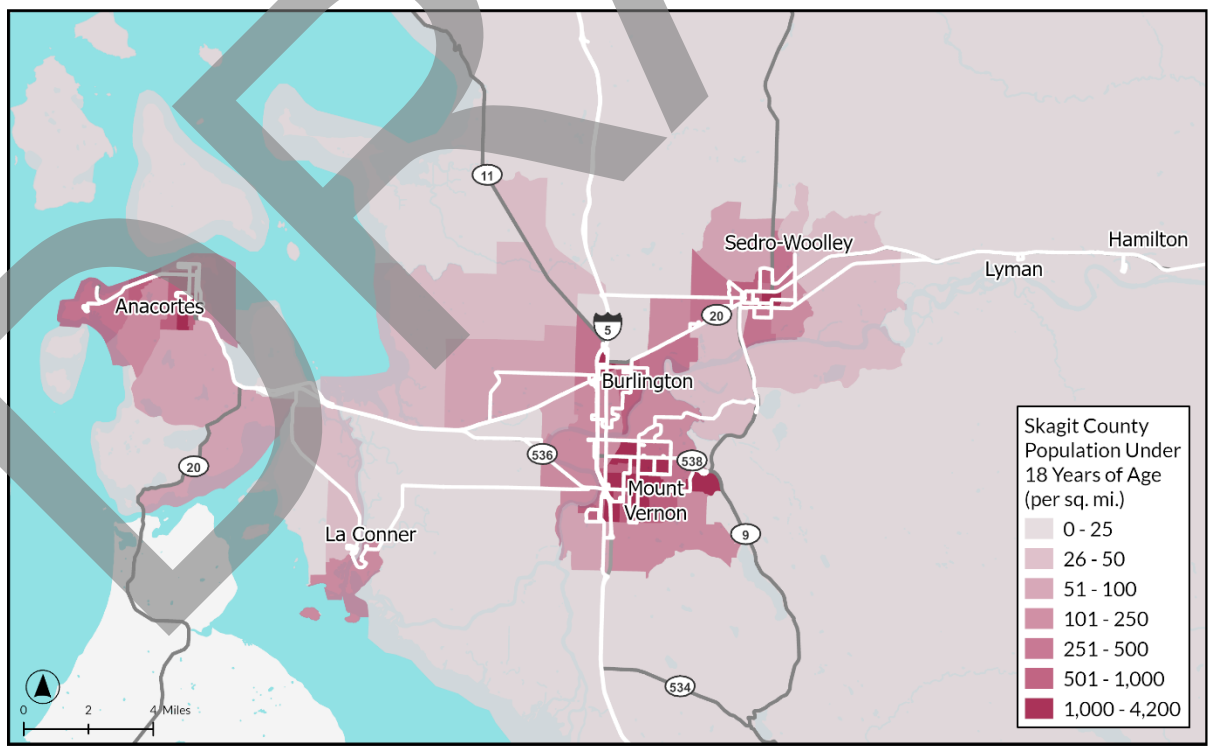
Figure 7: Skagit County Population Under 18 Years of Age



Source: US Census, 2022

Figure 8: Skagit County Population Under 18 Years of Age, Focus Area



Source: US Census, 2022

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The population over 65 in Skagit County is shown in Figure 9 and Figure 10. Skagit County has a higher concentration of people over 65 years of age in Anacortes and Mount Vernon as well as near La Conner and across Fidalgo Island.

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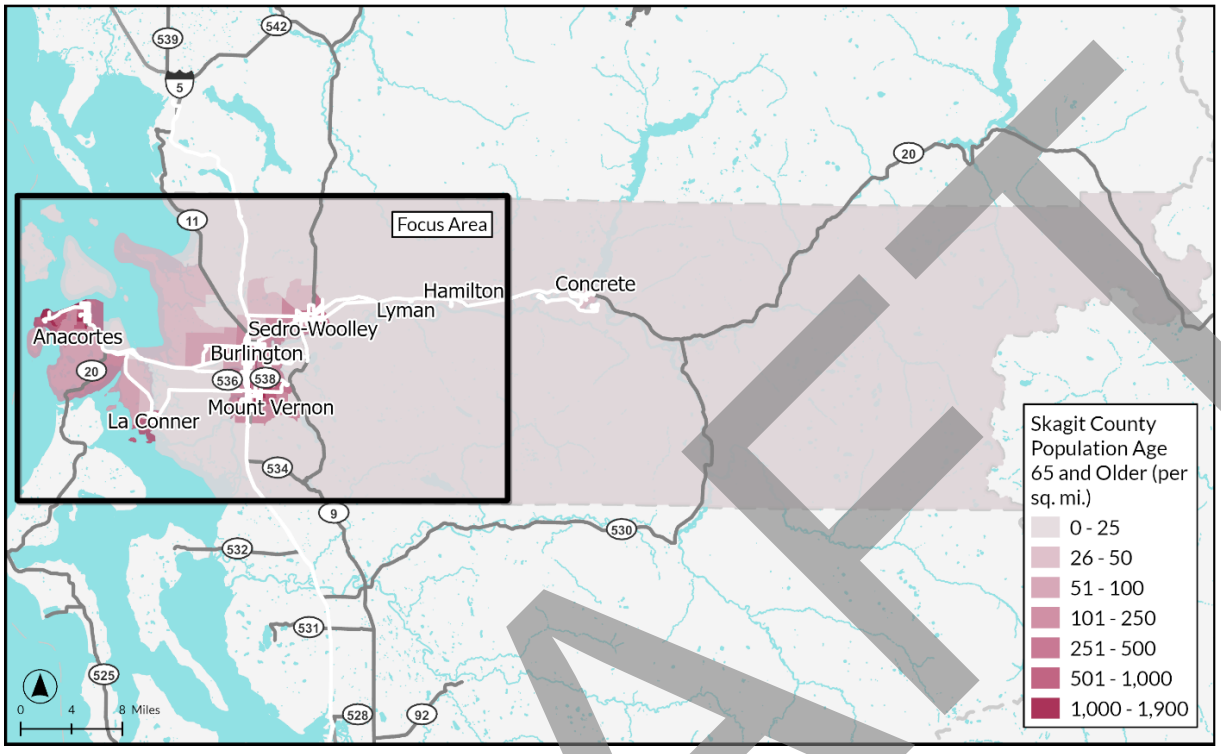
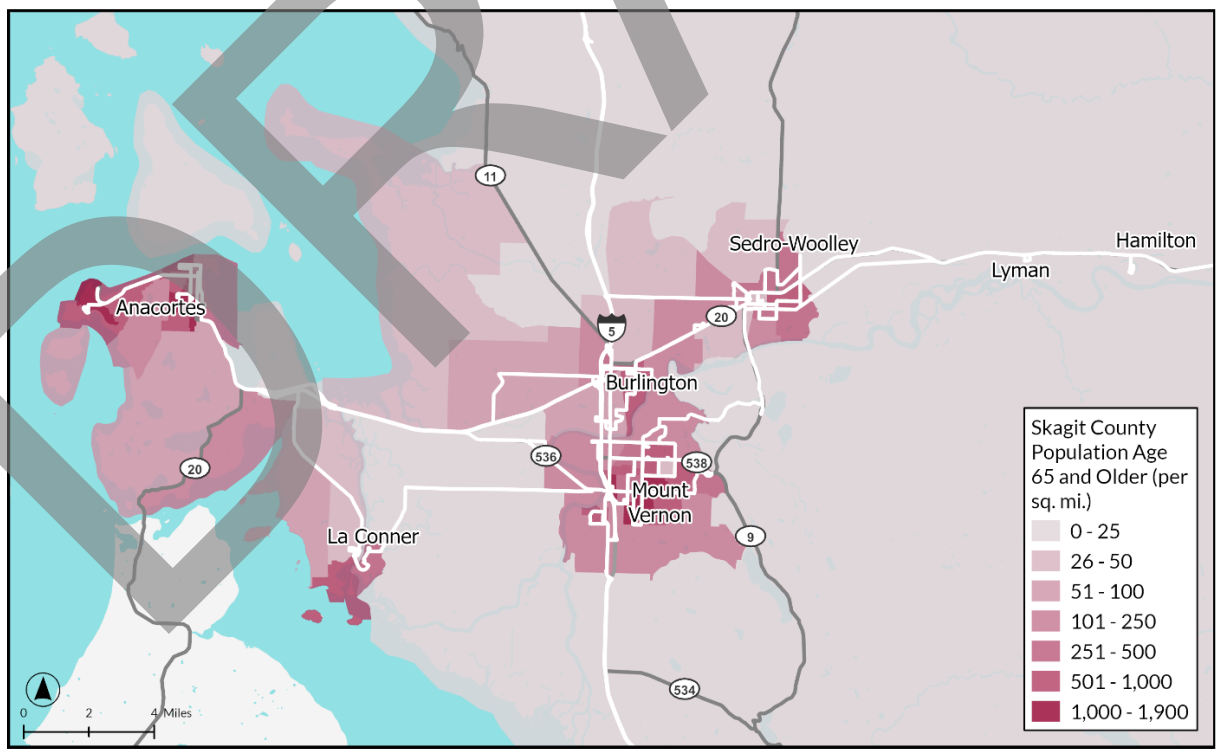
Figure 9: Skagit County Population Age 65 and Older



Source: US Census, 2022

Figure 10: Skagit County Population Age 65 and Older, Focus Area



Source: US Census, 2022

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Households without access to a vehicle in Skagit County are shown in Figure 11 and Figure 12. The highest concentration of zero-vehicle households within the County are located within the downtown municipalities of Mount Vernon and Anacortes.

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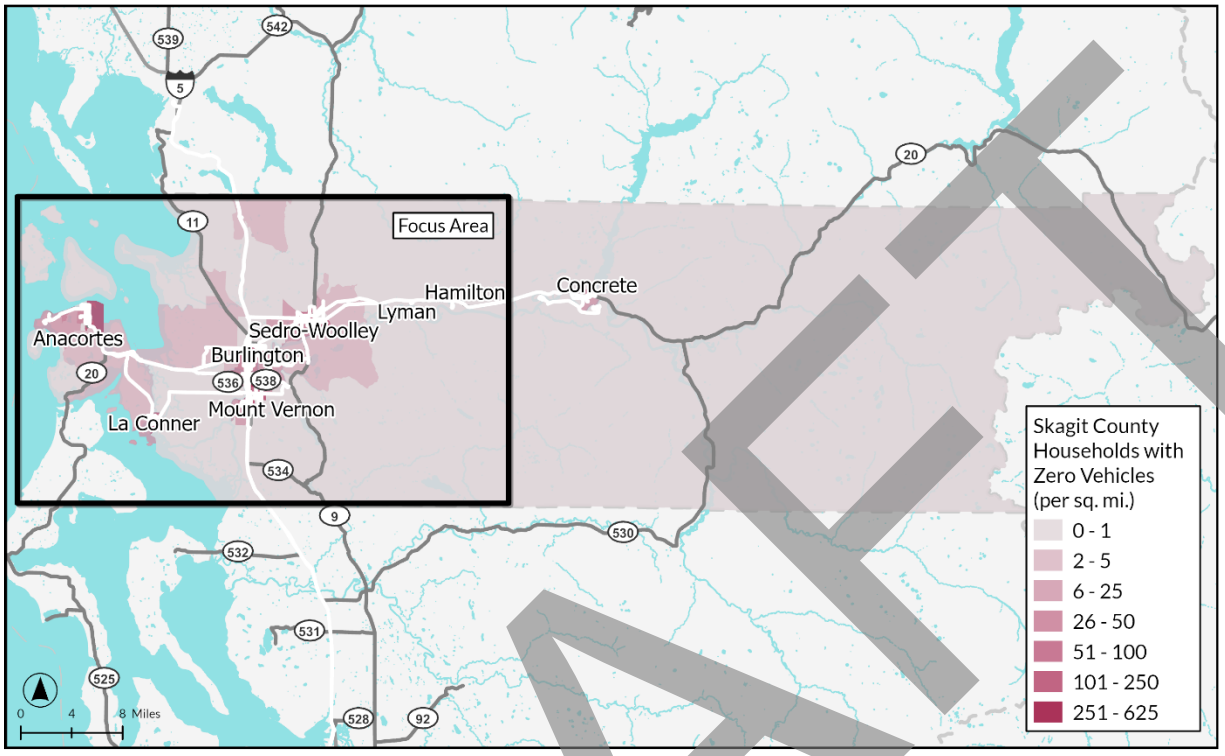
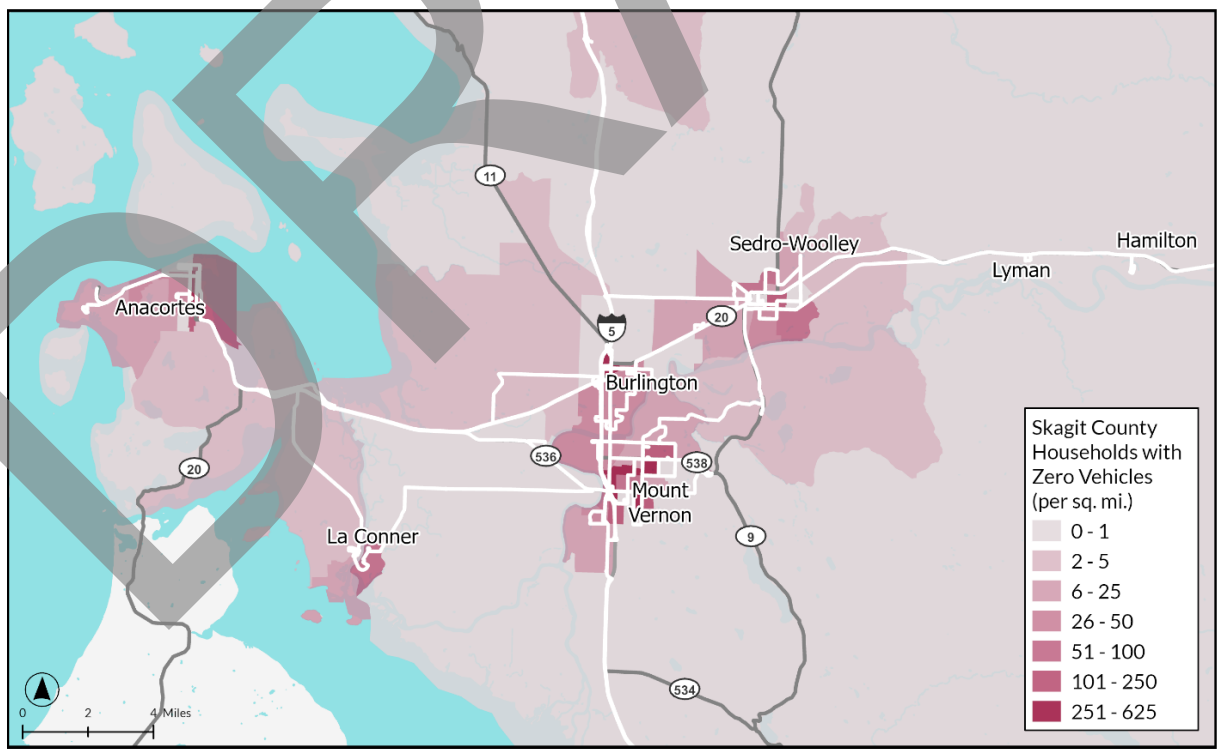
Figure 11: Skagit County Households with Zero Vehicles



Source: US Census, 2022

Figure 12: Skagit County Households with Zero Vehicles, Focus Area



Source: US Census, 2022

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BIPOC and Hispanic population density is shown in Figure 13 and Figure 14. Mount Vernon has the highest concentration of BIPOC and Hispanic people in the County followed by Sedro-Woolley and Burlington, including along SR 20.

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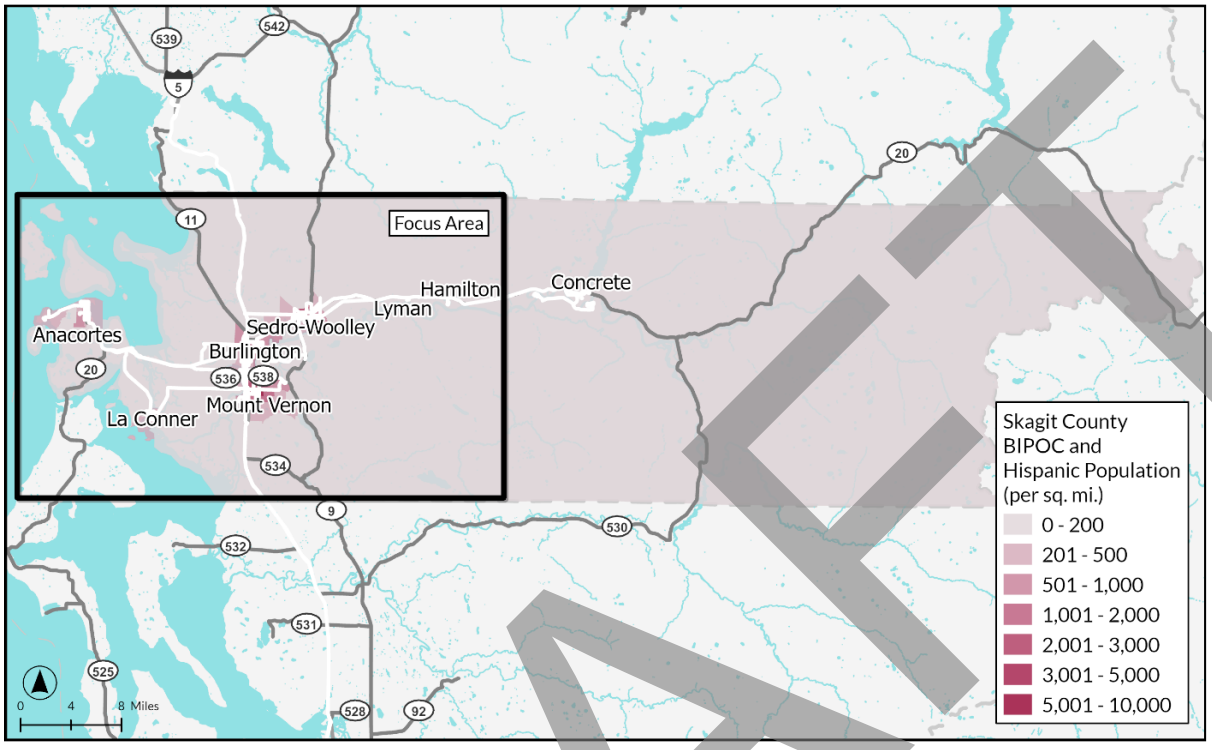
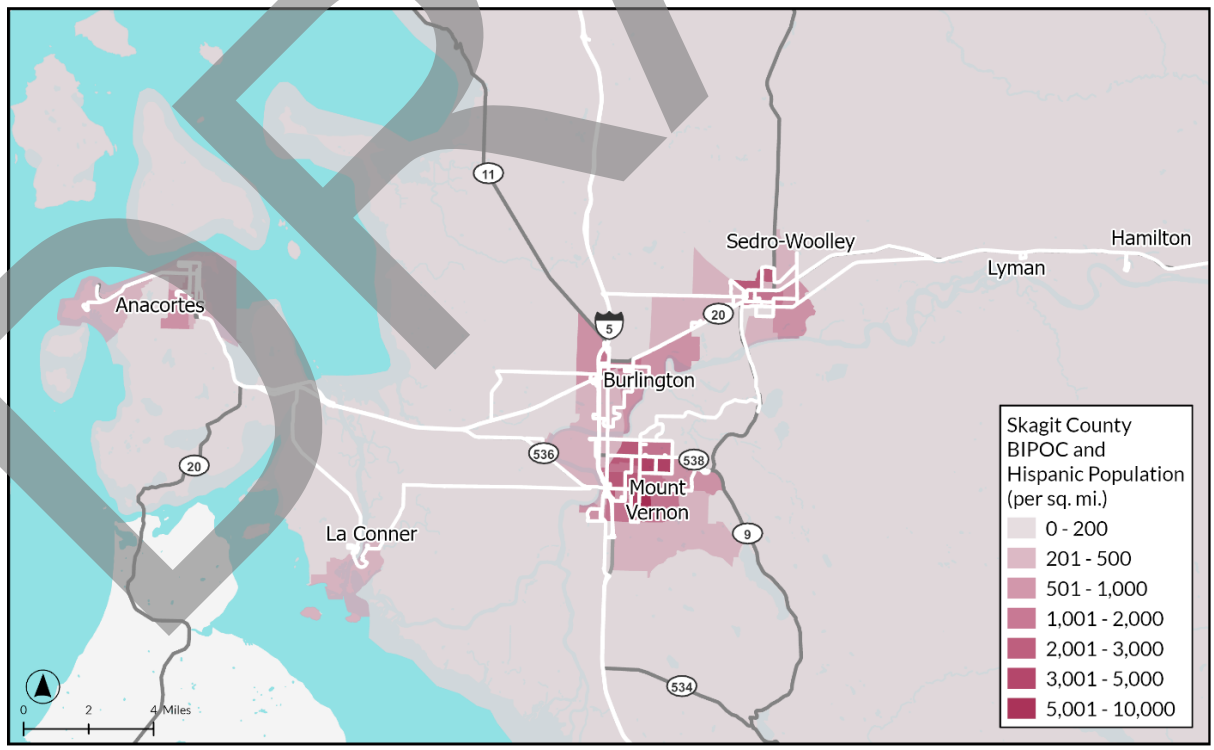
Figure 13: Skagit County BIPOC and Hispanic Population



Source: US Census, 2022

Figure 14: Skagit County BIPOC and Hispanic Population, Focus Area



Source: US Census, 2022

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Households in Skagit County with at least one reported disability are shown in Figure 15 and Figure 16. Mount Vernon has the highest concentration of households with at least one reported disability in the County followed by Sedro-Woolley and Anacortes.

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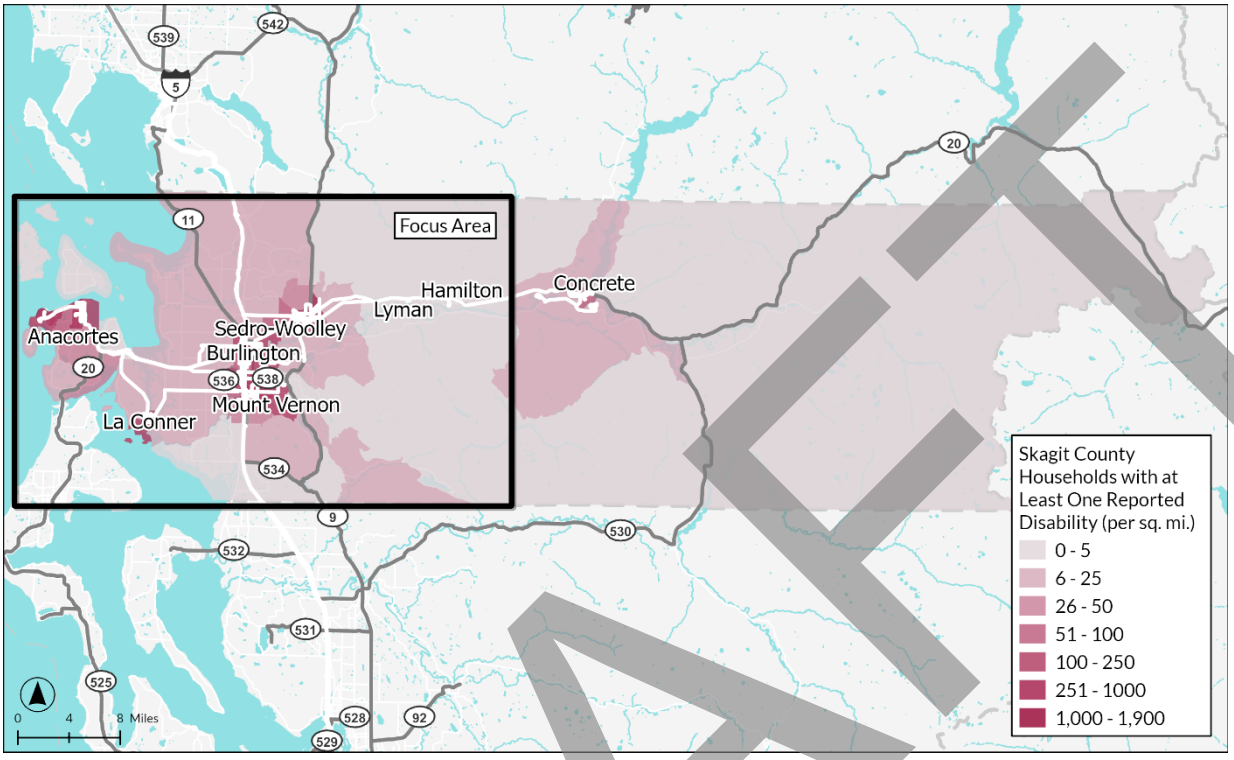
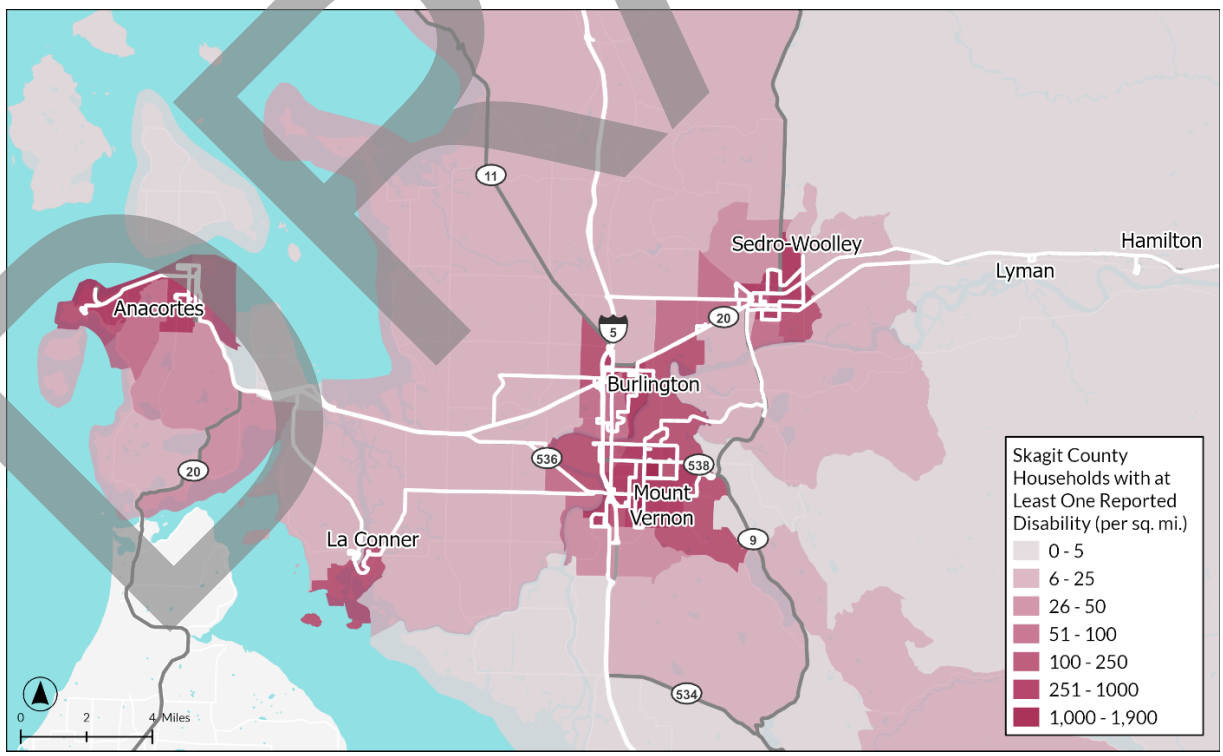
Figure 15: Skagit County Households with at Least One Reported Disability



Source: US Census, 2022

Figure 16: Skagit County Households with at Least One Reported Disability, Focus Area



Source: US Census, 2022

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TRANSIT PROPENSITY METHODOLOGY

Combining the demographic analysis discussed in Appendix A identifies areas where the demographics and socioeconomic factors indicate a higher propensity, or likelihood, to use transit than other areas.

To identify higher transit propensity areas, each block group is assigned seven scores – of 5, 10, 15, 20, or 25 – based on the presence of each of the socioeconomic factors: low-income, zero-vehicle, aged 65 and older, BIPOC, Hispanic, and disabled populations (see Table 1). These scores are then added together to calculate a propensity score (see Table 2). Block groups were given an absolute score, but the maps below are normalized to show how block groups compare within the county. Areas with a high propensity score have populations that are more likely to be core transit riders and therefore service to those areas should be prioritized from an equity perspective. These populations also overlap with groups that are often the focus of environmental justice efforts.

Table 1: Transit Propensity Scoring Methodology

Socioeconomic Factor	Count				
Population	< 200	201 – 400	401 – 800	801 – 1,600	> 1,600
Low-income					
Aged 65 and older					
BIPOC					
Hispanic					
Zero Vehicle	< 20	21 – 40	41 – 80	81 – 160	> 160
Disabled					
Transit Propensity Score	**5**	**10**	**15**	**20**	**25**

Table 2: Example Transit Propensity Score

Socioeconomic Factor	Count	Score
Population	2,623	25
Low-income	525	15
Aged 65 and older	1,041	20
BIPOC	357	10
Hispanic	170	5
Zero Vehicle	17	5
Disabled	252	25
Transit Propensity	**-**	**105**

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ROUTE PROFILES

The following graphics provide a one-page overview of each Skagit Transit route using the data explored above including ridership, operating expenses, revenue hours, vehicle requirement, and level of service. They also indicate major destinations served by each route.

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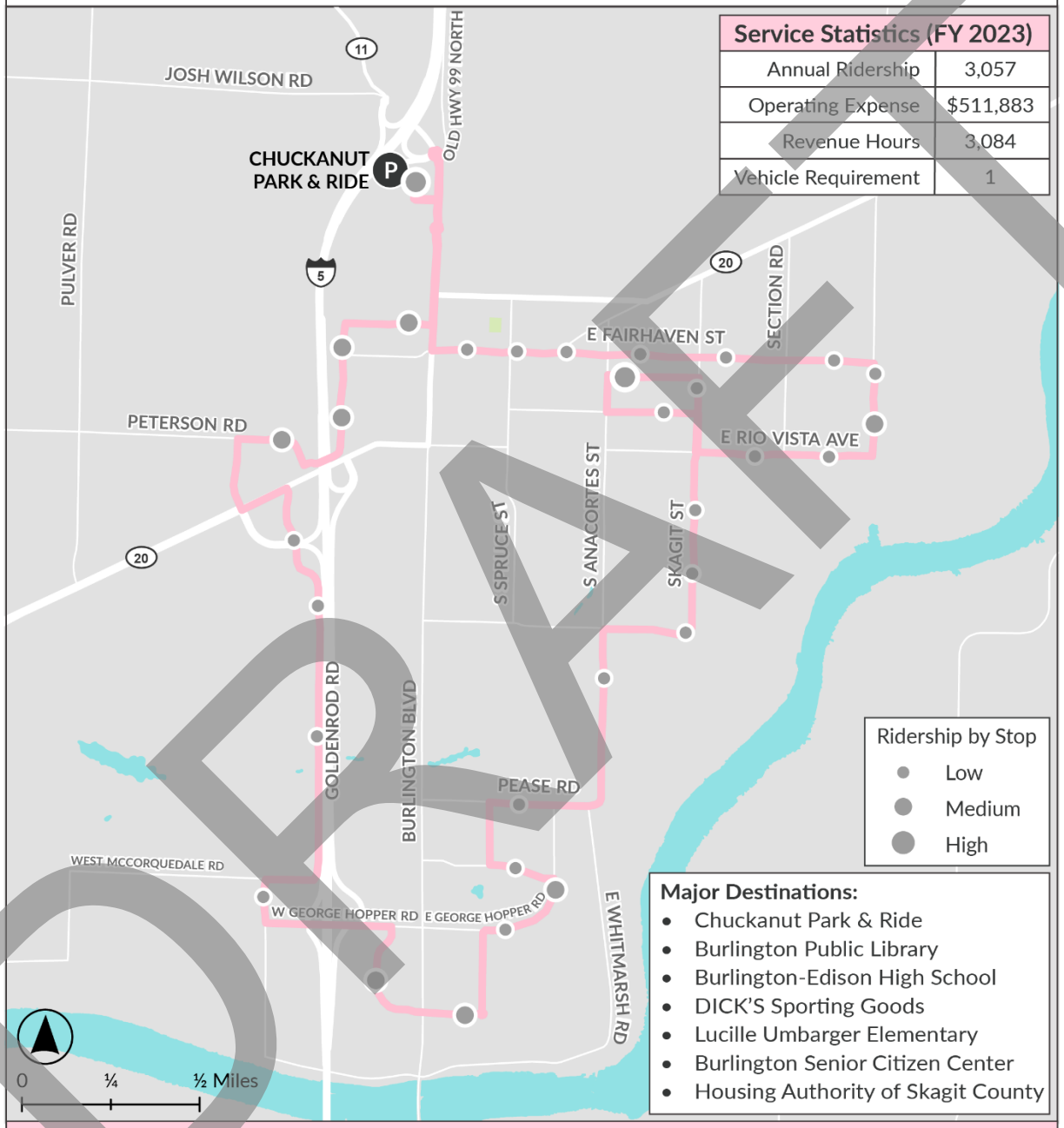
Route 101: Burlington

SKAGIT TRANSIT

Route 101 operates as a loop within central Burlington and serves the Burlington Public Library, DICK'S Sporting Goods, and the Chuckanut Park & Ride where Route 101 then continues as Route 513 to the March Point Park & Ride.



Service Statistics (FY 2023)	
Annual Ridership	3,057
Operating Expense	$511,883
Revenue Hours	3,084
Vehicle Requirement	1

Ridership by Stop
- Low
- Medium
- High

Major Destinations:
- Chuckanut Park & Ride
- Burlington Public Library
- Burlington-Edison High School
- DICK'S Sporting Goods
- Lucille Umbarger Elementary
- Burlington Senior Citizen Center
- Housing Authority of Skagit County

Level of Service

Weekday Start of First & Last Trip	Weekday Frequency	Saturday Start of First & Last Trip	Saturday Frequency	Sunday Start of First & Last Trip	Sunday Frequency
6:25 AM - 8:25 PM	60 Minutes	8:25 AM - 5:25 PM	60 Minutes	8:25 AM - 5:25 PM	60 Minutes

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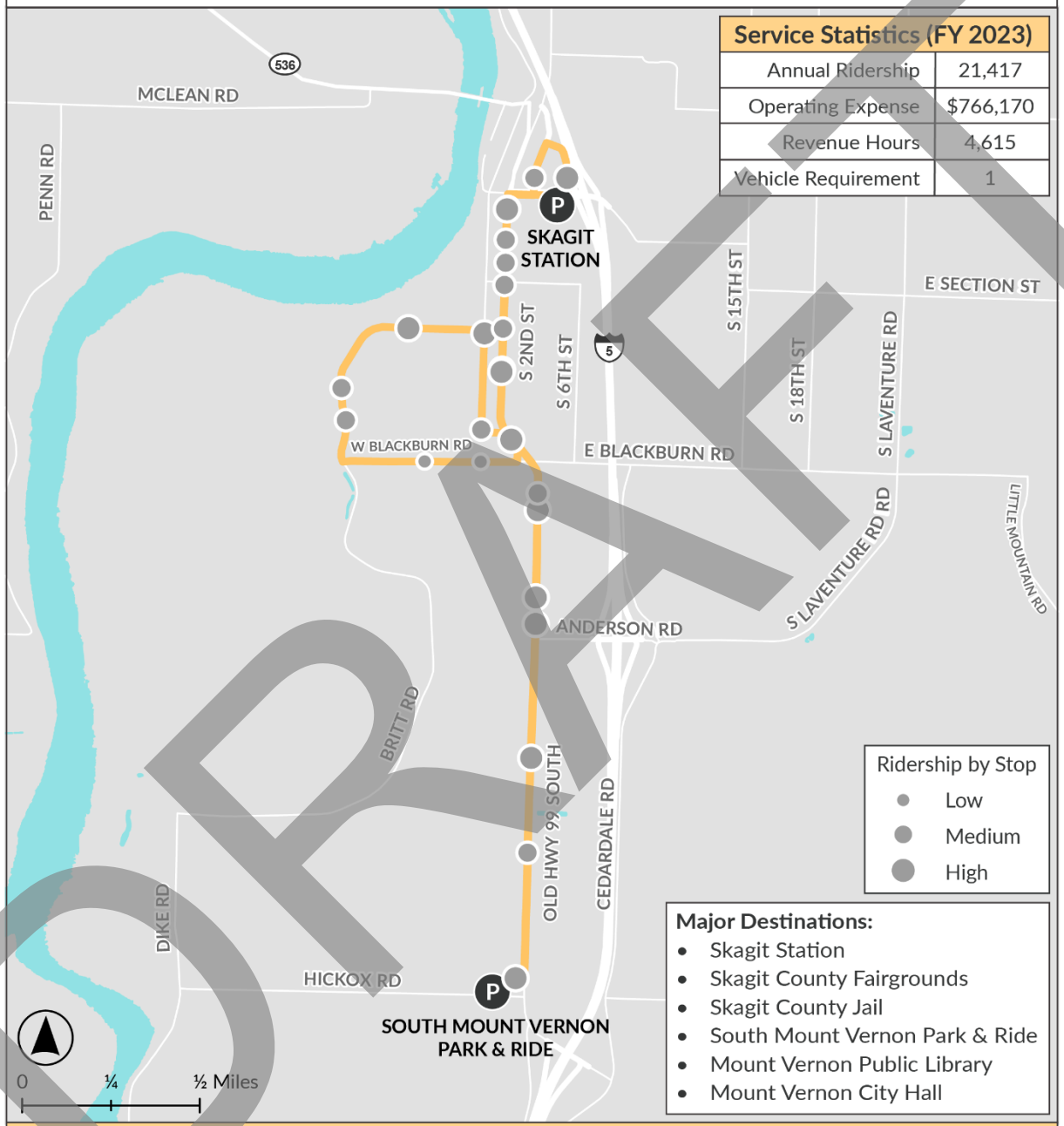
Route 202: Mount Vernon

SKAGIT TRANSIT

Route 202 provides service to South Mount Vernon between Skagit Station and South Mount Vernon Park & Ride and serves the Skagit County Fairgrounds and Skagit County Jail before returning to Skagit Station where Route 202 then continues as Route 208.



Service Statistics (FY 2023)	
Annual Ridership	21,417
Operating Expense	$766,170
Revenue Hours	4,615
Vehicle Requirement	1

Ridership by Stop
- Low
- Medium
- High

Major Destinations:
- Skagit Station
- Skagit County Fairgrounds
- Skagit County Jail
- South Mount Vernon Park & Ride
- Mount Vernon Public Library
- Mount Vernon City Hall

Level of Service

Weekday Start of First & Last Trip	Weekday Frequency	Saturday Start of First & Last Trip	Saturday Frequency	Sunday Start of First & Last Trip	Sunday Frequency
6:15 AM - 8:15 PM	30 Minutes	8:15 AM - 5:45 PM	30 Minutes	8:15 AM - 5:45 PM	30 Minutes

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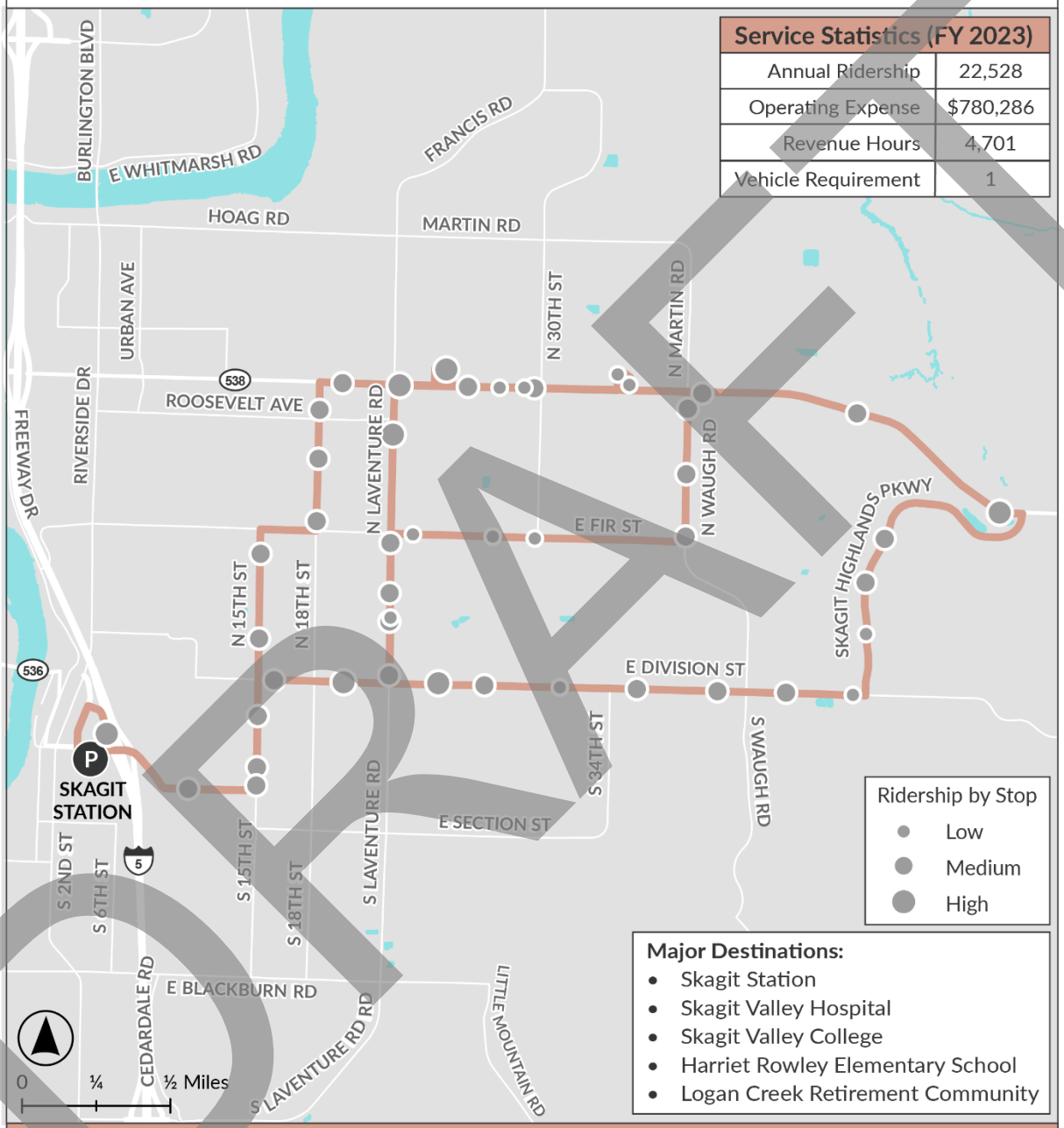
Route 204: Mount Vernon

SKAGIT TRANSIT

Route 204 operates as a loop in eastern Mount Vernon and serves Skagit Station, Skagit Valley Hospital, Skagit Valley College, and Harriet Rowley Elementary School before returning to Skagit Station where Route 204 then continues as Route 207.



Service Statistics (FY 2023)	
Annual Ridership	22,528
Operating Expense	$780,286
Revenue Hours	4,701
Vehicle Requirement	1

Ridership by Stop
- Low
- Medium
- High

Major Destinations:
- Skagit Station
- Skagit Valley Hospital
- Skagit Valley College
- Harriet Rowley Elementary School
- Logan Creek Retirement Community

Level of Service

Weekday Start of First & Last Trip	Weekday Frequency	Saturday Start of First & Last Trip	Saturday Frequency	Sunday Start of First & Last Trip	Sunday Frequency
6:15 AM - 8:50 PM	60 Minutes	8:15 AM - 5:15 PM	60 Minutes	8:15 AM - 5:15 PM	60 Minutes

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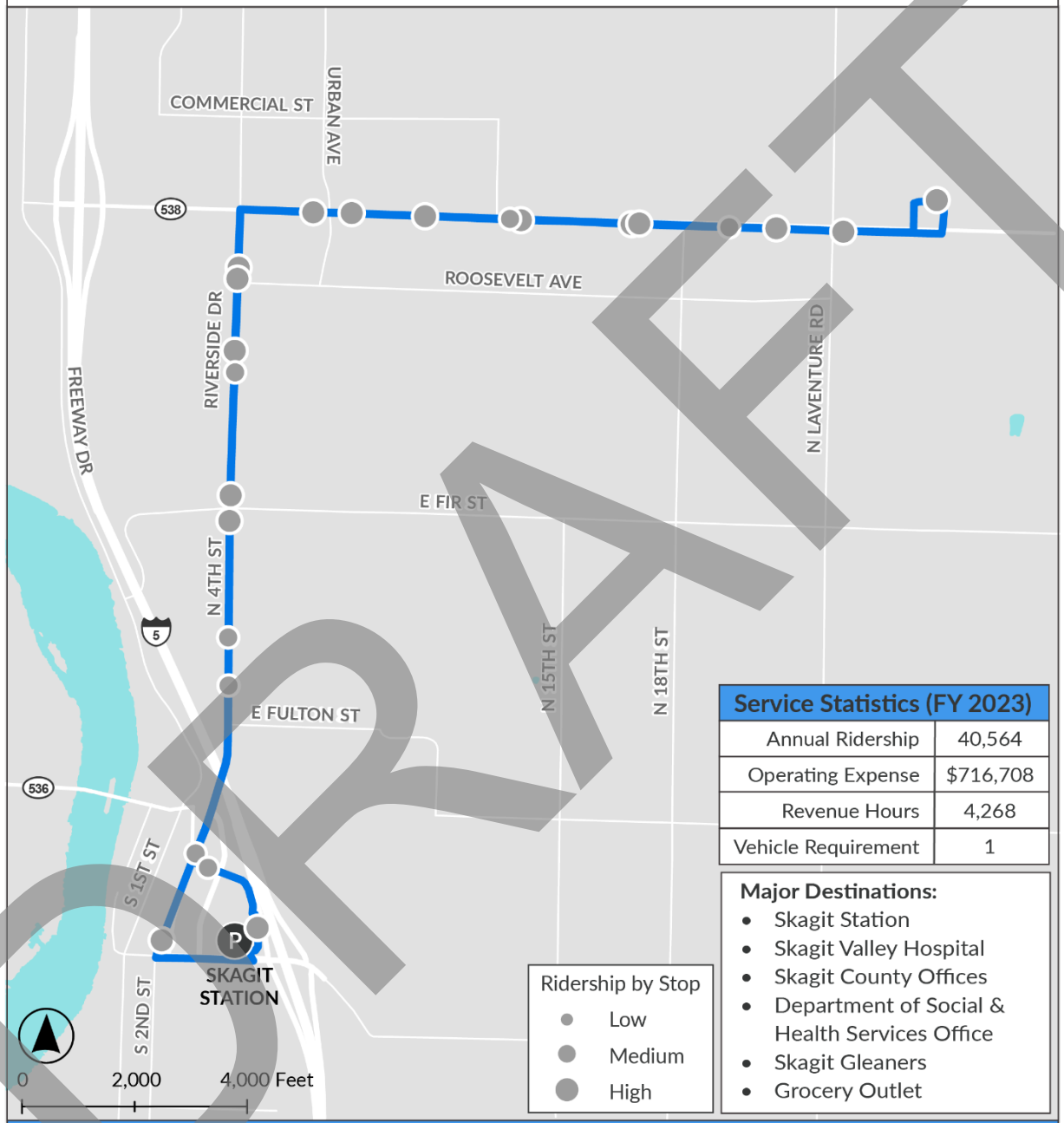
Route 205: Mount Vernon

SKAGIT TRANSIT

Route 205 provides service to north Mount Vernon between Skagit Station and Skagit Valley College and serves Skagit Gleaners, Grocery Outlet, and the Skagit County Offices before returning to Skagit Station where Route 205 then continues as Route 206.



Service Statistics (FY 2023)	
Annual Ridership	40,564
Operating Expense	$716,708
Revenue Hours	4,268
Vehicle Requirement	1

Major Destinations:

- Skagit Station
- Skagit Valley Hospital
- Skagit County Offices
- Department of Social & Health Services Office
- Skagit Gleaners
- Grocery Outlet

Level of Service

Weekday Start of First & Last Trip	Weekday Frequency	Saturday Start of First & Last Trip	Saturday Frequency	Sunday Start of First & Last Trip	Sunday Frequency
6:00 AM - 9:00 PM	30 Minutes	8:00 AM - 5:30 PM	30 Minutes	8:00 AM - 5:30 PM	30 Minutes

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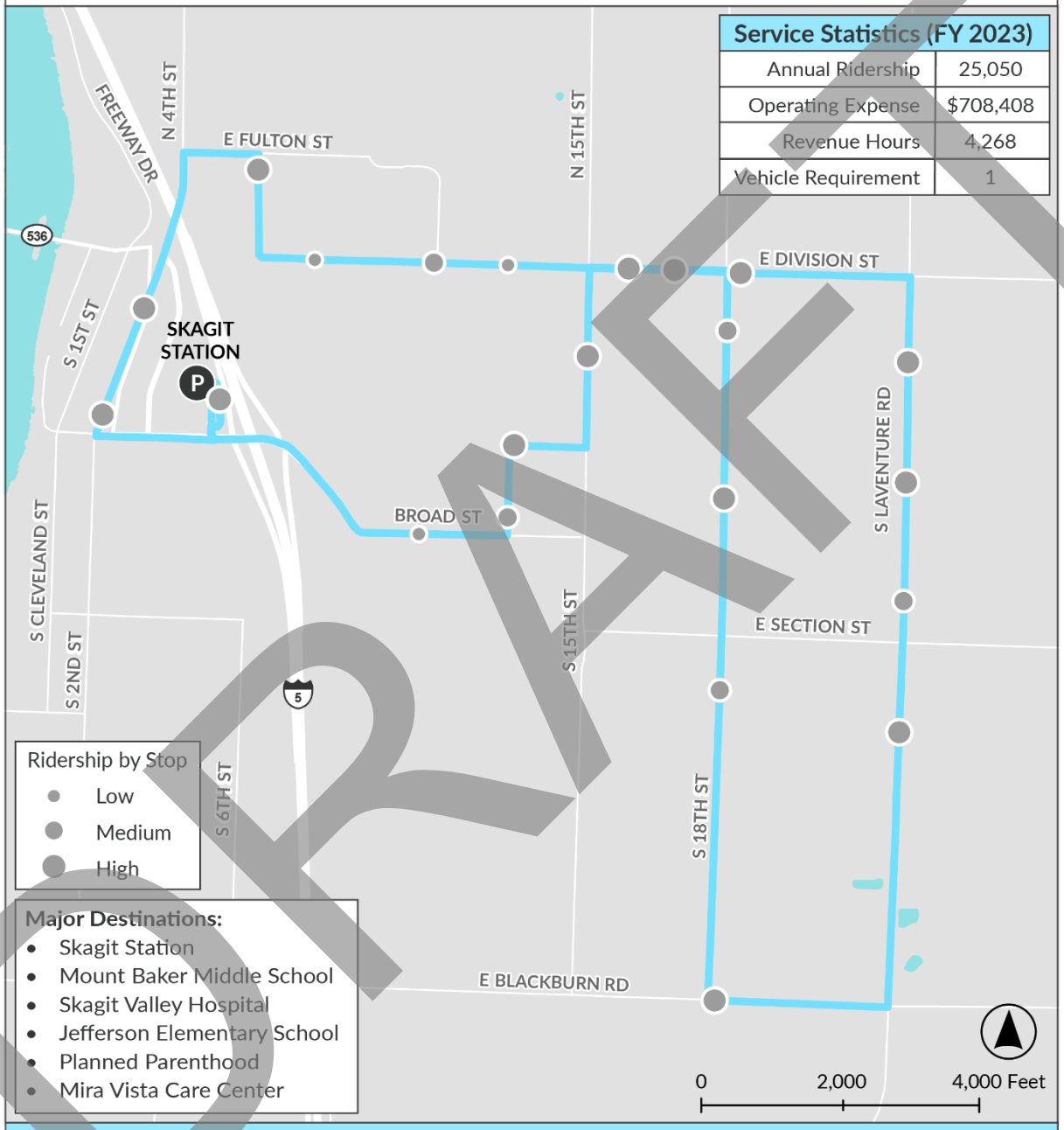
Route 206: Mount Vernon

SKAGIT TRANSIT

Route 206 operates as a loop within central Mount Vernon and serves Mount Baker Middle School, Skagit Valley Hospital, and Skagit Station where Route 206 then continues as Route 205.



Service Statistics (FY 2023)	
Annual Ridership	25,050
Operating Expense	$708,408
Revenue Hours	4,268
Vehicle Requirement	1

Level of Service

Weekday Start of First & Last Trip	Weekday Frequency	Saturday Start of First & Last Trip	Saturday Frequency	Sunday Start of First & Last Trip	Sunday Frequency
6:35 AM - 8:05 PM	30 Minutes	8:05 AM - 5:35 PM	30 Minutes	8:05 AM - 5:35 PM	30 Minutes

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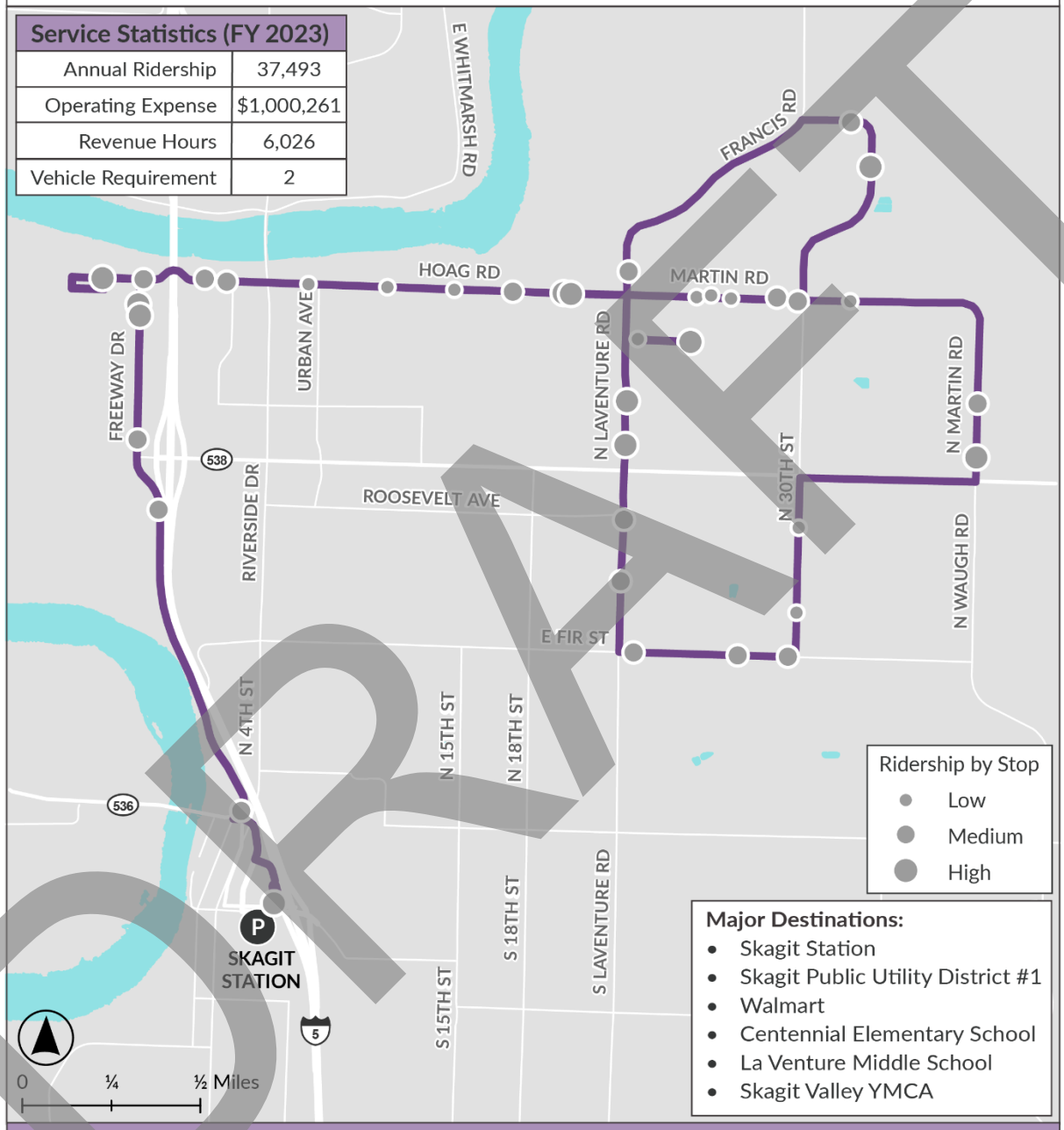
Route 207: Mount Vernon

Route 207 provides service to north Mount Vernon and serves Skagit Public Utility District #1, Walmart, Centennial Elementary School, La Venture Middle School, and Skagit Station where Route 207 then continues as Route 204.

Service Statistics (FY 2023)	
Annual Ridership	37,493
Operating Expense	$1,000,261
Revenue Hours	6,026
Vehicle Requirement	2



Level of Service

Weekday Start of First & Last Trip	Weekday Frequency	Saturday Start of First & Last Trip	Saturday Frequency	Sunday Start of First & Last Trip	Sunday Frequency
6:15 AM - 9:05 PM	60 Minutes	8:15 AM - 5:15 PM	60 Minutes	8:15 AM - 5:15 PM	60 Minutes

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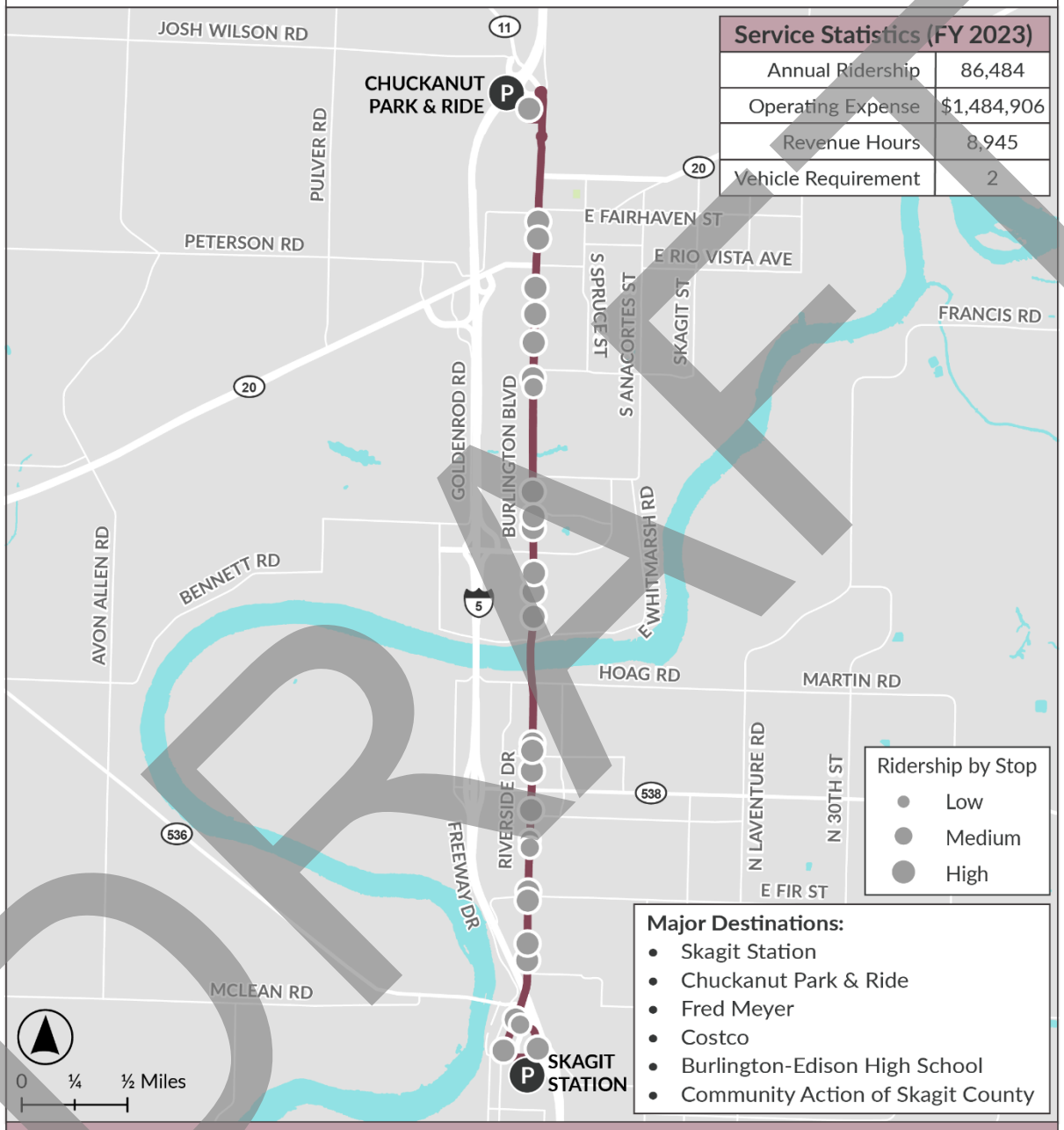
Route 208: Mount Vernon / Burlington

Route 208 provides service between Skagit Station in Mount Vernon and Chuckanut Park & Ride in Burlington and serves Fred Meyer, Costco, and Burlington-Edison High School before returning to Skagit Station where Route 208 continues as Route 202.



Service Statistics (FY 2023)	
Annual Ridership	86,484
Operating Expense	$1,484,906
Revenue Hours	8,945
Vehicle Requirement	2

Level of Service

Weekday Start of First & Last Trip	Weekday Frequency	Saturday Start of First & Last Trip	Saturday Frequency	Sunday Start of First & Last Trip	Sunday Frequency
6:20 AM - 8:15 PM	30 Minutes	8:15 AM - 5:45 PM	30 Minutes	8:15 AM - 5:45 PM	30 Minutes

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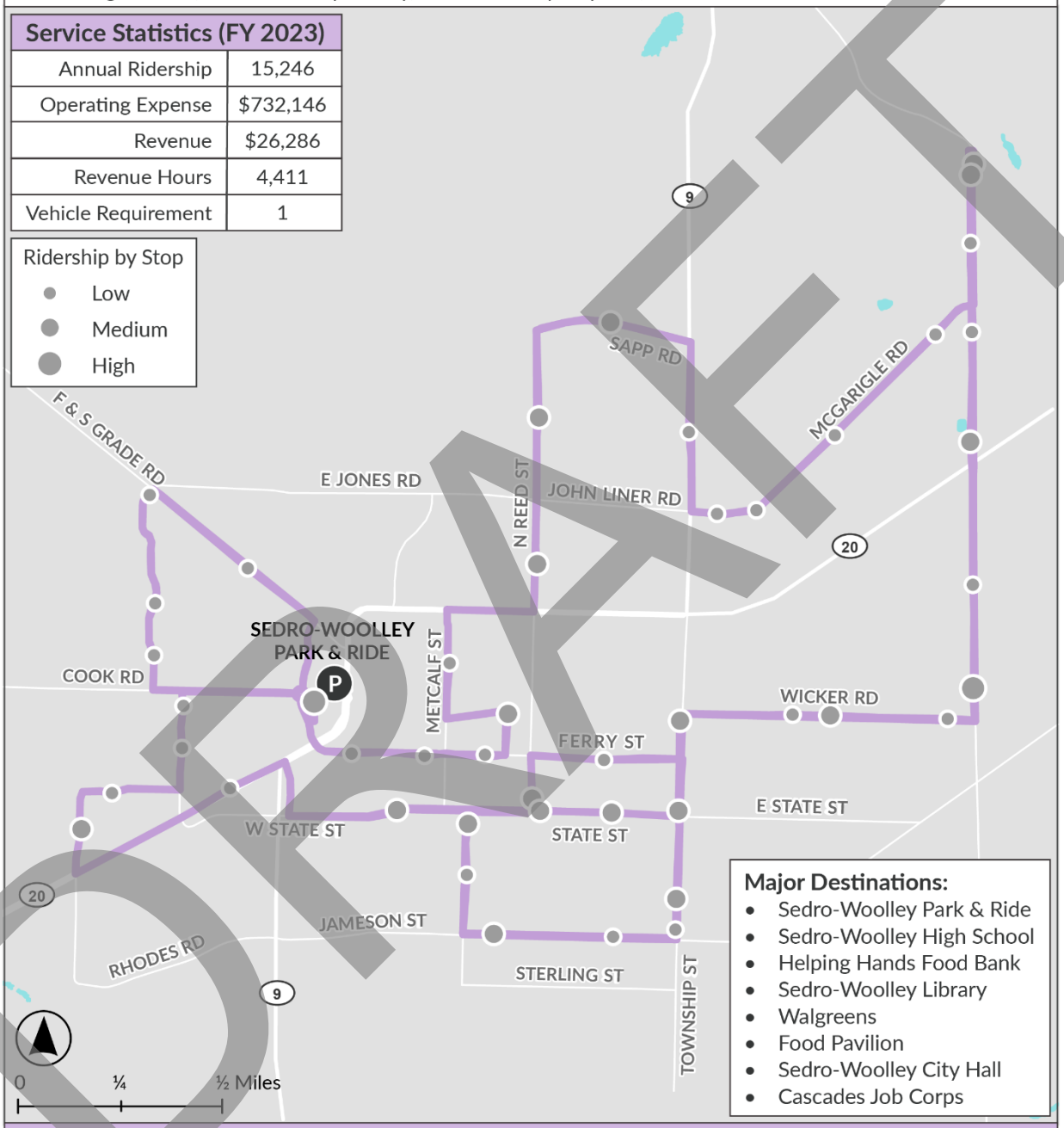
Route 300: Sedro-Woolley Loop

SKAGIT TRANSIT

Route 300 operates as a loop within Sedro-Woolley and serves the Sedro-Woolley Park & Ride, Sedro-Woolley High School, Sedro-Woolley Library, Sedro-Woolley City Hall, and a number of retail destinations.

Service Statistics (FY 2023)	
Annual Ridership	15,246
Operating Expense	$732,146
Revenue	$26,286
Revenue Hours	4,411
Vehicle Requirement	1



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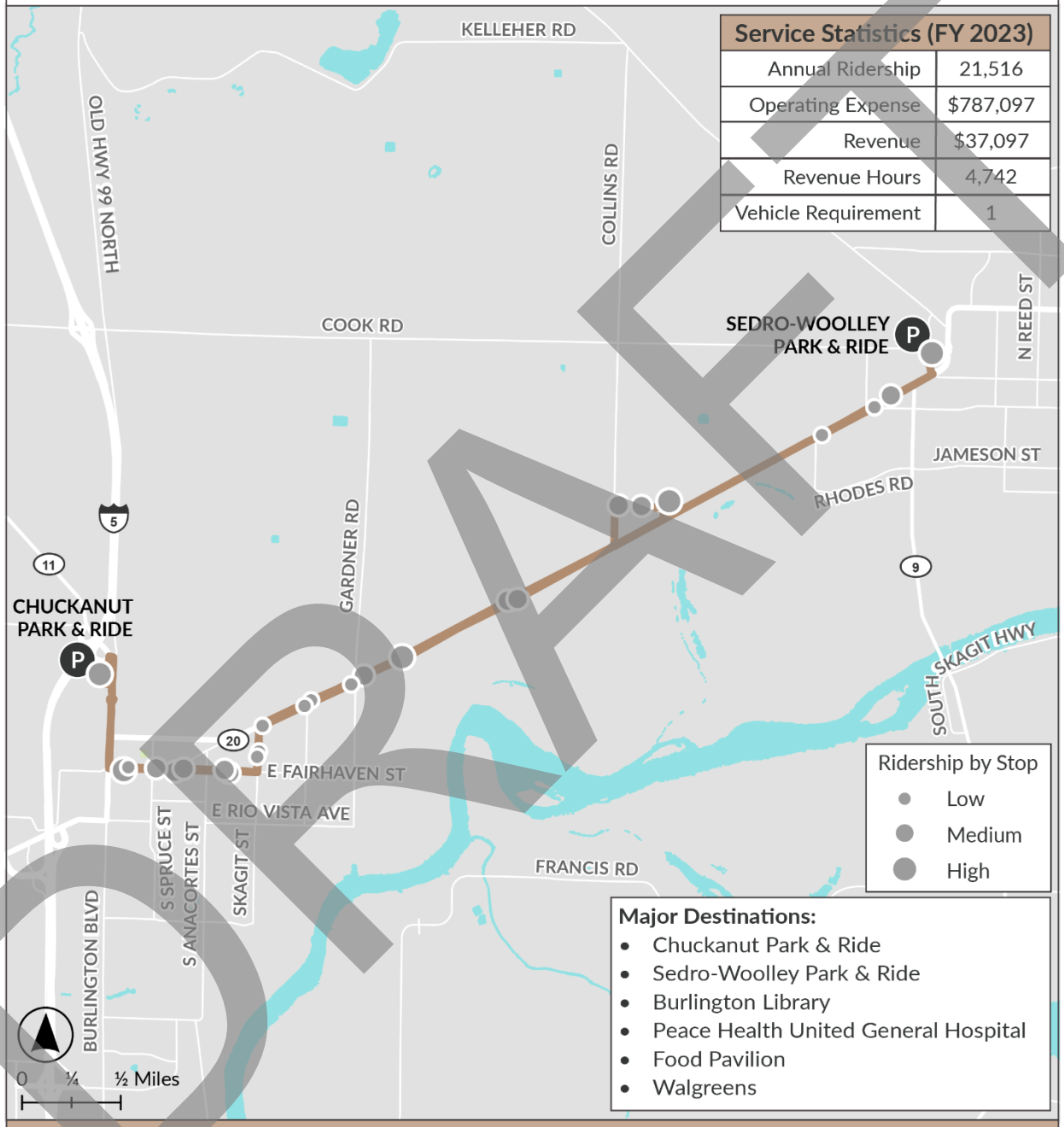
Level of Service

Weekday Start of First & Last Trip	Weekday Frequency	Saturday Start of First & Last Trip	Saturday Frequency	Sunday Start of First & Last Trip	Sunday Frequency
5:45 AM - 7:45 PM	60 Minutes	7:45 AM - 4:45 PM	60 Minutes	7:45 AM - 4:45 PM	60 Minutes

Route 301: Sedro-Woolley / Burlington

SKAGIT TRANSIT

Route 301 provides service between Chuckanut Park & Ride in Burlington and Sedro-Woolley Park & Ride with stops at the Burlington Library and Peace Health United General Hospital.



Service Statistics (FY 2023)	
Annual Ridership	21,516
Operating Expense	$787,097
Revenue	$37,097
Revenue Hours	4,742
Vehicle Requirement	1

Level of Service

Weekday Start of First & Last Trip	Weekday Frequency	Saturday Start of First & Last Trip	Saturday Frequency	Sunday Start of First & Last Trip	Sunday Frequency
5:45 AM - 8:45 PM	60 Minutes	7:45 AM - 4:45 PM	60 Minutes	7:45 AM - 4:45 PM	60 Minutes

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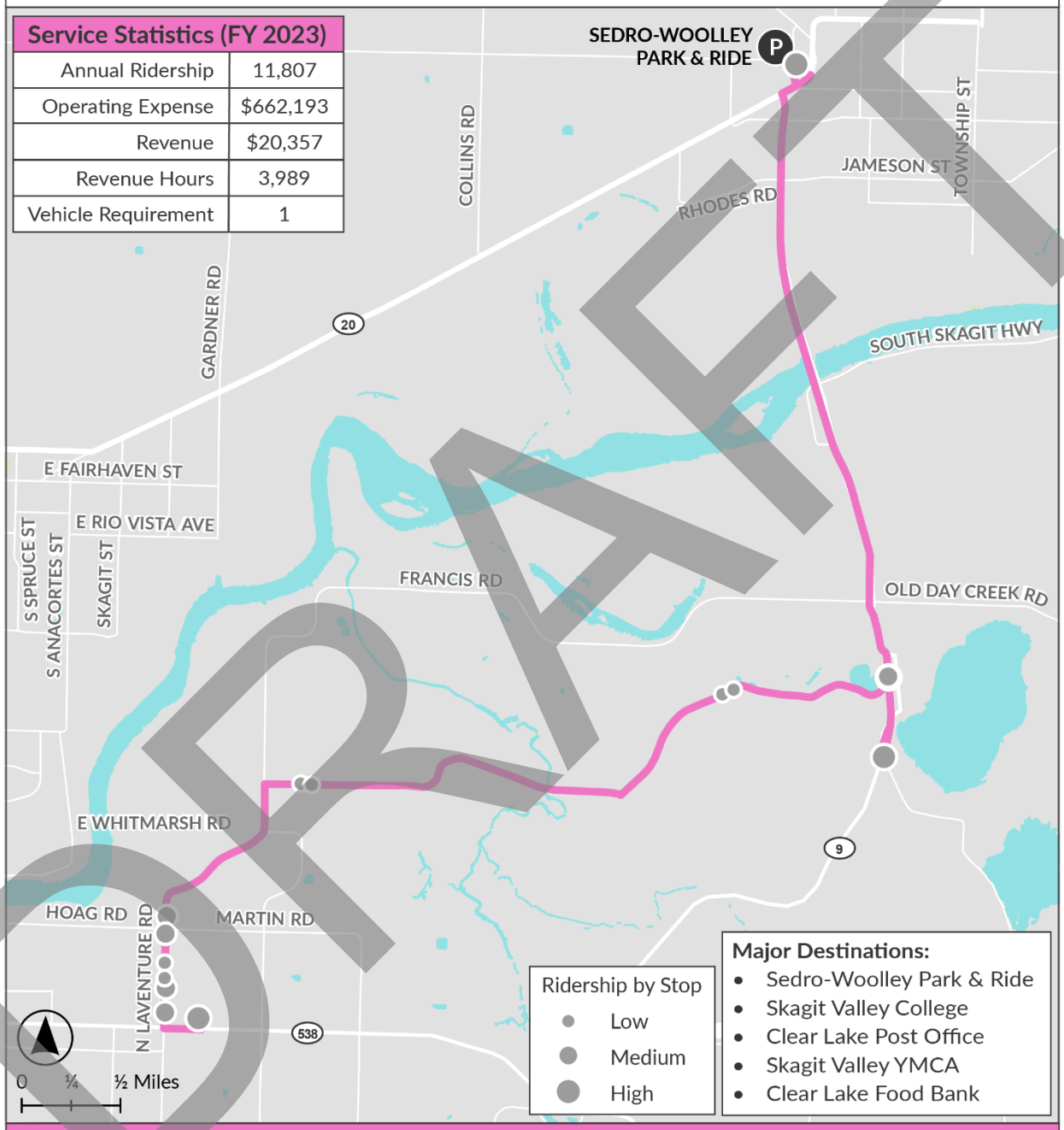
Route 305: Sedro-Woolley / Mount Vernon

SKAGIT TRANSIT

Route 305 provides service between Sedro-Woolley Park & Ride and Skagit Valley College with stops at Clear Lake Post Office and Skagit Valley YMCA.

Service Statistics (FY 2023)	
Annual Ridership	11,807
Operating Expense	$662,193
Revenue	$20,357
Revenue Hours	3,989
Vehicle Requirement	1



Level of Service

Weekday Start of First & Last Trip	Weekday Frequency	Saturday Start of First & Last Trip	Saturday Frequency	Sunday Start of First & Last Trip	Sunday Frequency
7:40 AM - 6:40 PM	60 Minutes	8:40 AM - 4:40 PM	60 Minutes	8:40 AM - 4:40 PM	60 Minutes

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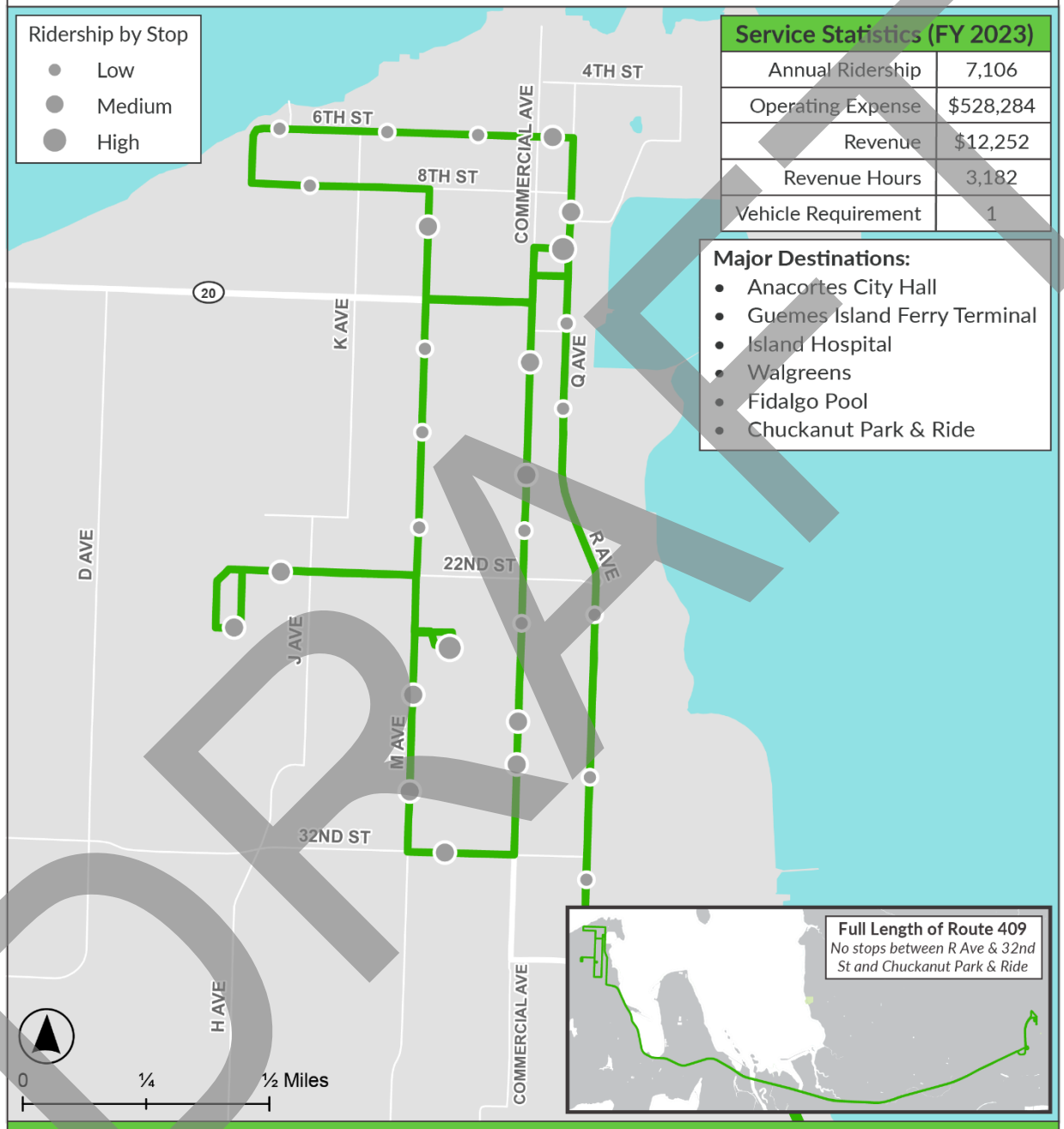
Route 409: Anacortes

SKAGIT TRANSIT

Route 409 operates as a loop within central Anacortes and serves Anacortes City Hall, the Guemes Island Ferry Terminal, and Island Hospital. Route 409 starts and ends its daily service at Chuckanut Park & Ride in Burlington.



Service Statistics (FY 2023)	
Annual Ridership	7,106
Operating Expense	$528,284
Revenue	$12,252
Revenue Hours	3,182
Vehicle Requirement	1

Major Destinations:

- Anacortes City Hall
- Guemes Island Ferry Terminal
- Island Hospital
- Walgreens
- Fidalgo Pool
- Chuckanut Park & Ride

Level of Service

Weekday Start of First & Last Trip	Weekday Frequency	Saturday Start of First & Last Trip	Saturday Frequency	Sunday Start of First & Last Trip	Sunday Frequency
6:45AM - 4:20 PM	30 Minutes	7:50 AM - 4:25 PM	30 Minutes	No Service	No Service

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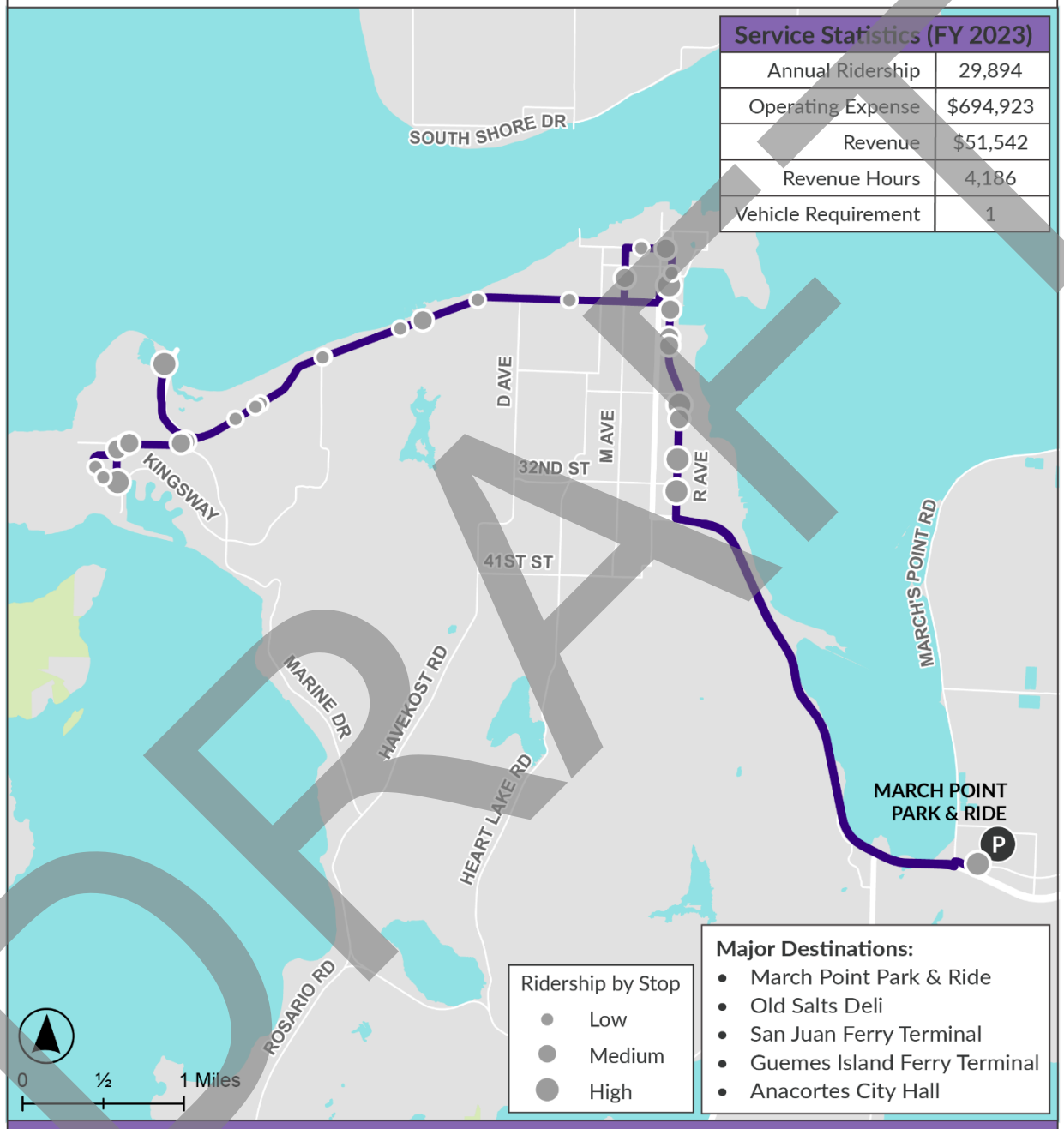
Route 410: Anacortes

SKAGIT TRANSIT

Route 410 provides service between March Point Park & Ride and Old Salts Deli with stops in downtown Anacortes, San Juan Ferry Terminal, and the Guemes Island Ferry Terminal by request.



Service Statistics (FY 2023)	
Annual Ridership	29,894
Operating Expense	$694,923
Revenue	$51,542
Revenue Hours	4,186
Vehicle Requirement	1

Level of Service

Weekday Start of First & Last Trip	Weekday Frequency	Saturday Start of First & Last Trip	Saturday Frequency	Sunday Start of First & Last Trip	Sunday Frequency
6:00 AM - 7:40 PM	60 Minutes	8:10 AM - 5:10 PM	60 Minutes	No Service	No Service

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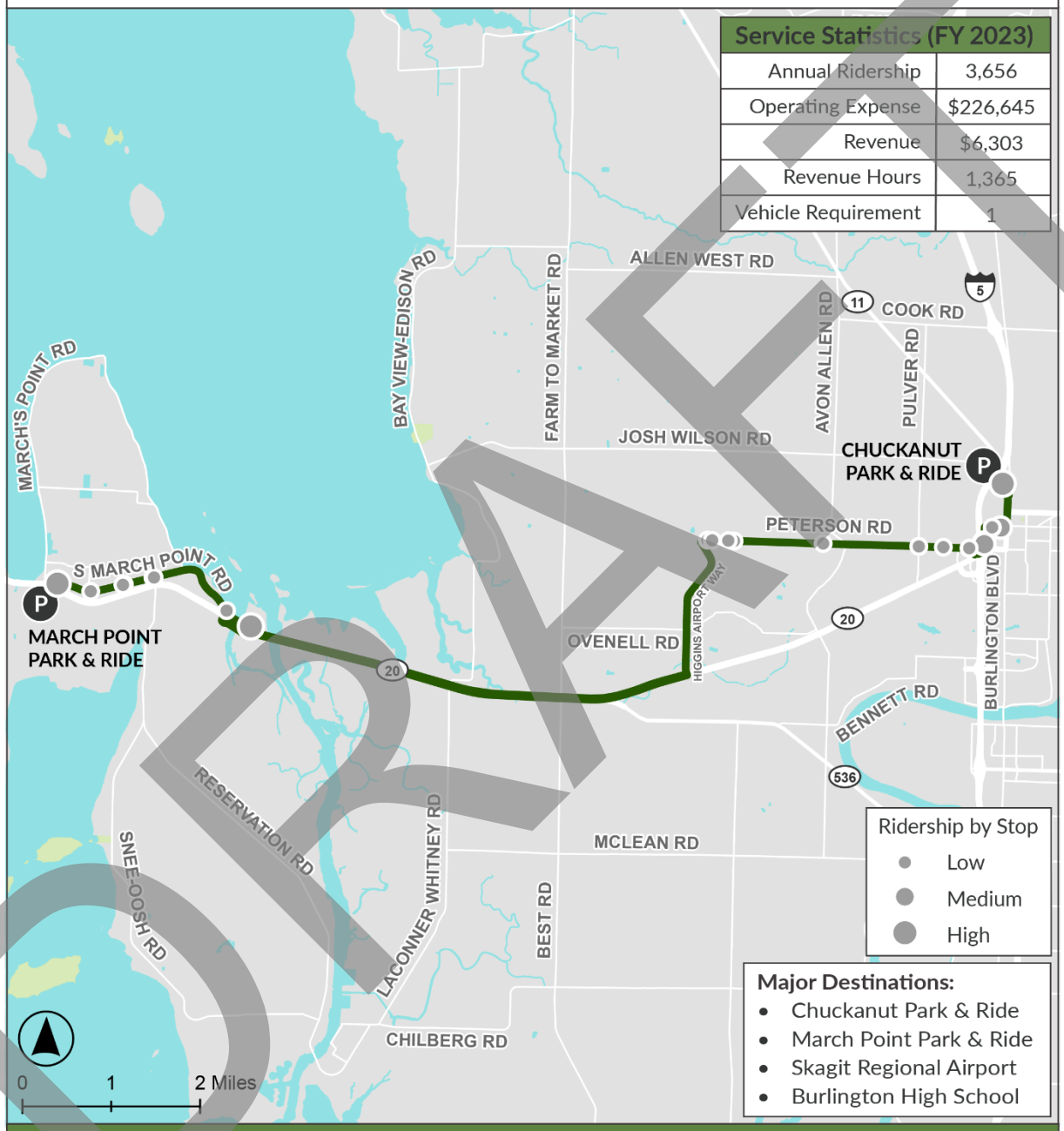
Route 513: Burlington / Anacortes

SKAGIT TRANSIT

Route 513 provides service between Chuckanut Park & Ride in Burlington and March Point Park & Ride in Anacortes with a stop at Skagit Regional Airport before returning to Chuckanut Park & Ride where Route 513 continues as Route 101.



Level of Service

Weekday Start of First & Last Trip	Weekday Frequency	Saturday Start of First & Last Trip	Saturday Frequency	Sunday Start of First & Last Trip	Sunday Frequency
6:15 AM - 7:15 PM	60 Minutes	No Service	No Service	No Service	No Service

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Route 615: La Conner / March Point

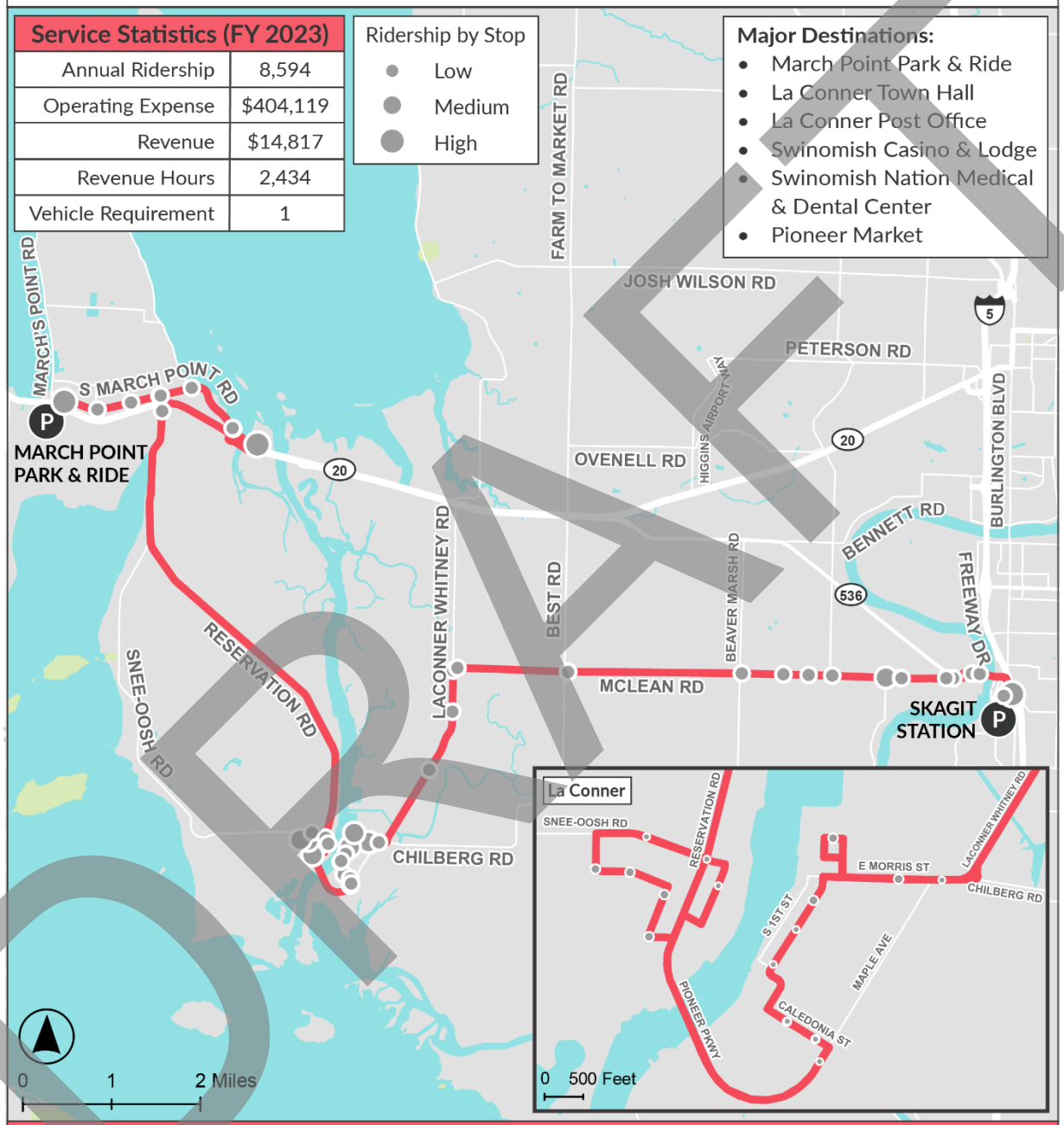
SKAGIT TRANSIT

Route 615 provides service between March Point Park & Ride in Anacortes and La Conner Town Hall with stops at Shelter Bay and Swinomish Casino & Lodge.

Service Statistics (FY 2023)	
Annual Ridership	8,594
Operating Expense	$404,119
Revenue	$14,817
Revenue Hours	2,434
Vehicle Requirement	1

Ridership by Stop
- Low
- Medium
- High

Major Destinations:
- March Point Park & Ride
- La Conner Town Hall
- La Conner Post Office
- Swinomish Casino & Lodge
- Swinomish Nation Medical & Dental Center
- Pioneer Market



Level of Service

Weekday Start of First & Last Trip	Weekday Frequency	Saturday Start of First & Last Trip	Saturday Frequency	Sunday Start of First & Last Trip	Sunday Frequency
6:00 AM - 7:40 PM	120 Minutes	8:00 AM - 5:40 PM	120 Minutes	No Service	No Service

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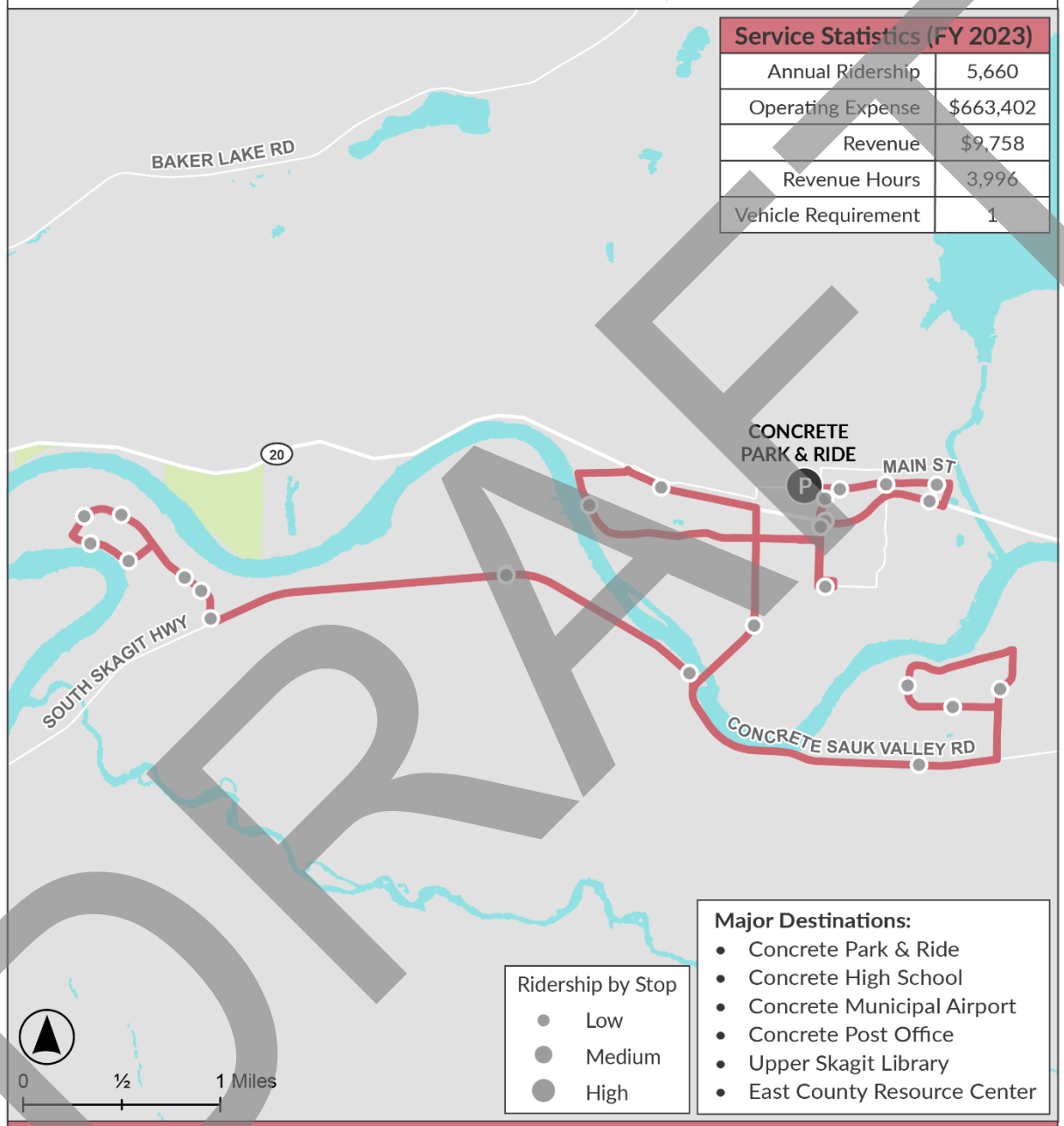
Route 717: Concrete Flex

Route 717 is a flex route that provides service between Concrete Park & Ride, Cape Horn, and Cedar Grove with flex service to destinations within ¾ mile of the posted route.



Service Statistics (FY 2023)	
Annual Ridership	5,660
Operating Expense	$663,402
Revenue	$9,758
Revenue Hours	3,996
Vehicle Requirement	1

Major Destinations:

- Concrete Park & Ride
- Concrete High School
- Concrete Municipal Airport
- Concrete Post Office
- Upper Skagit Library
- East County Resource Center

Level of Service

Weekday Start of First & Last Trip	Weekday Frequency	Saturday Start of First & Last Trip	Saturday Frequency	Sunday Start of First & Last Trip	Sunday Frequency
6:35 AM - 7:35 PM	60 Minutes	8:40 AM - 4:40 PM	240 Minutes	No Service	No Service

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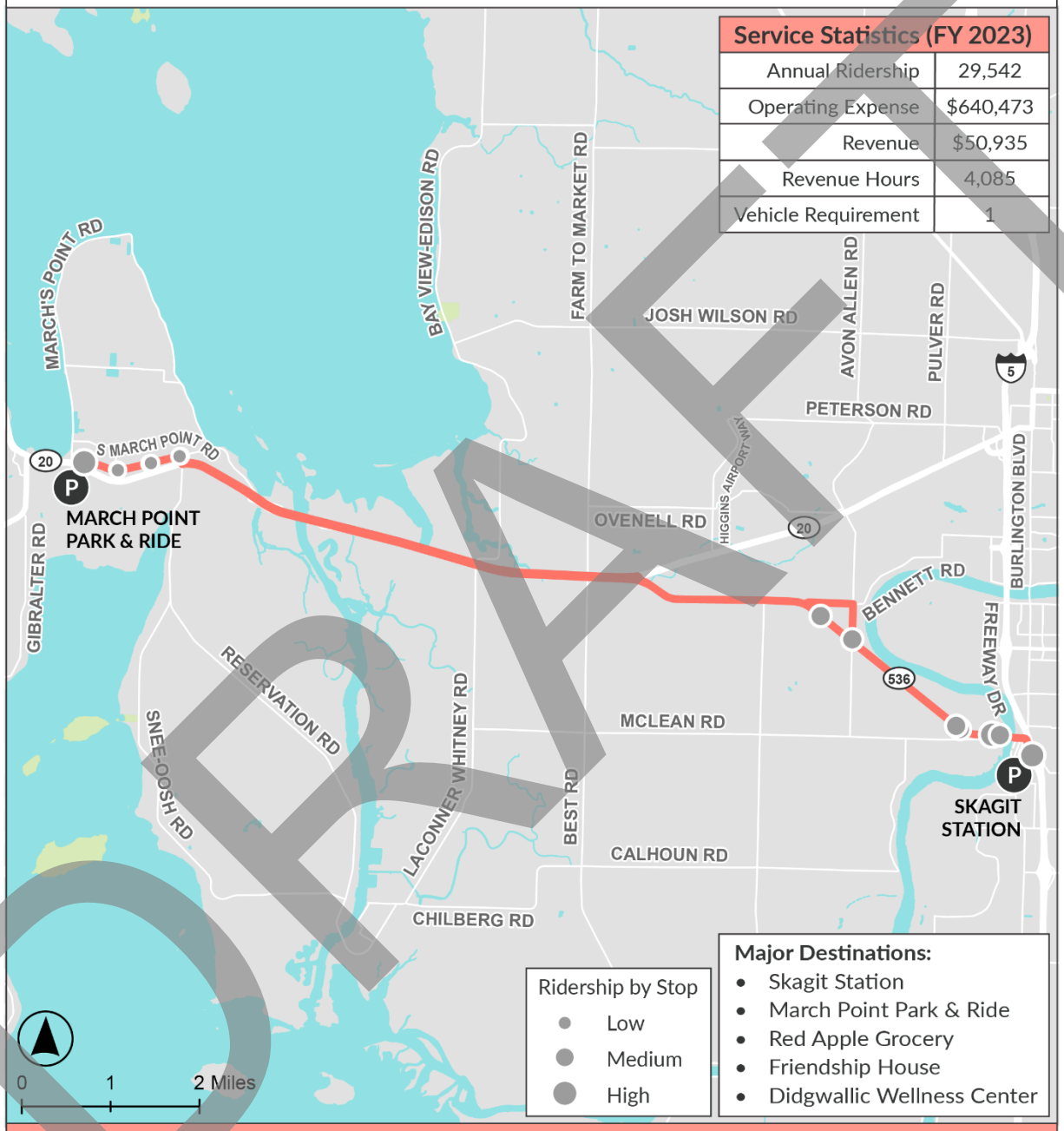
Route 40X: Mount Vernon / Anacortes

SKAGIT TRANSIT

Route 40X is an express route that operates between Skagit Station in Mount Vernon and March Point Park & Ride in Anacortes with limited stops in between.



Level of Service

Weekday Start of First & Last Trip	Weekday Frequency	Saturday Start of First & Last Trip	Saturday Frequency	Sunday Start of First & Last Trip	Sunday Frequency
6:15 AM - 7:15 PM	60 Minutes	8:40 AM - 5:15 PM	60 Minutes	No Service	No Service

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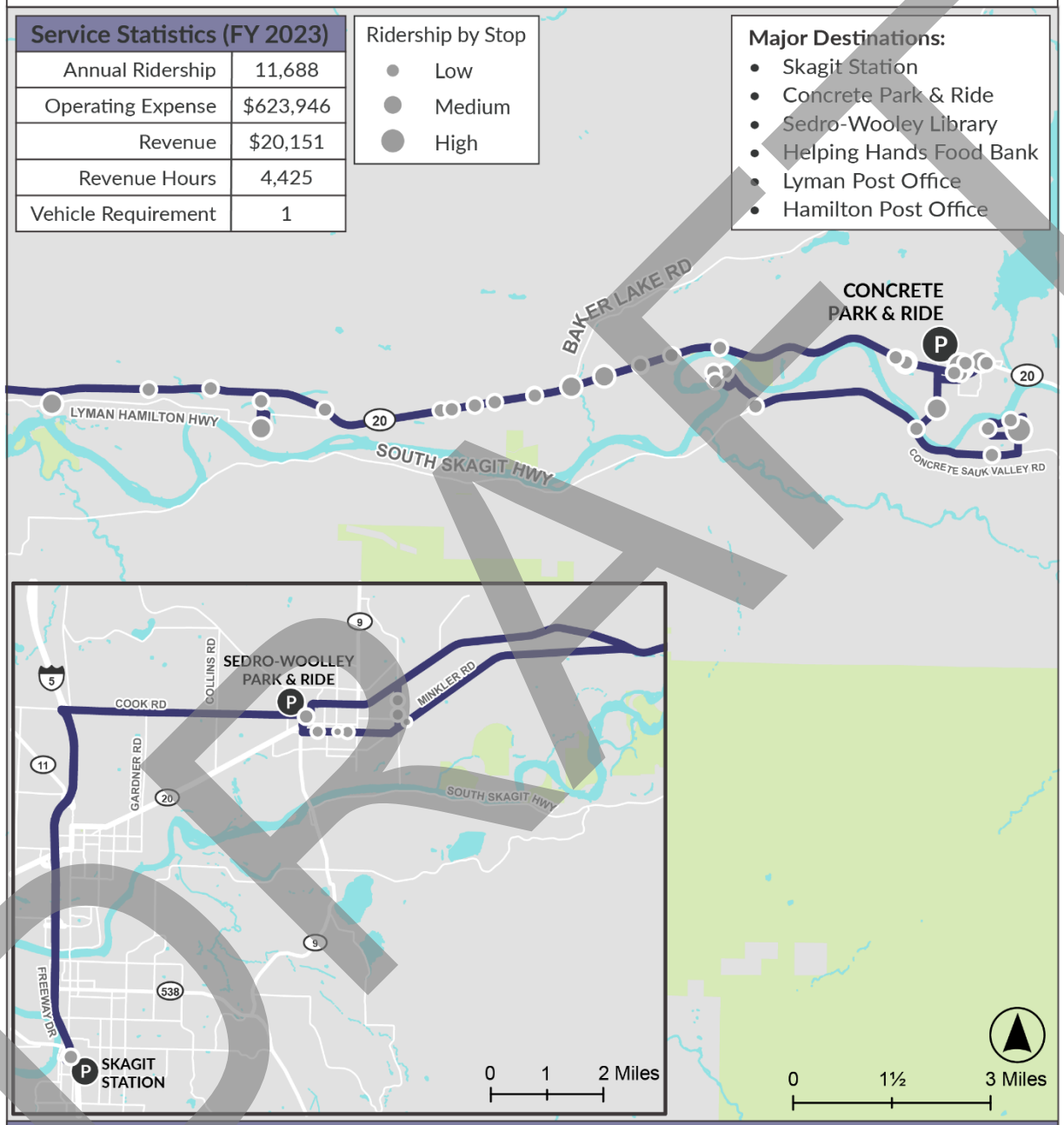
Route 70X: Upriver Connector

Route 70X is an express route that operates between Skagit Station in Mount Vernon and Concrete Park & Ride in Concrete with stops in Sedro-Woolley, Lyman, and Hamilton.

Service Statistics (FY 2023)	
Annual Ridership	11,688
Operating Expense	$623,946
Revenue	$20,151
Revenue Hours	4,425
Vehicle Requirement	1

Ridership by Stop
- Low
- Medium
- High

Major Destinations:
- Skagit Station
- Concrete Park & Ride
- Sedro-Wooley Library
- Helping Hands Food Bank
- Lyman Post Office
- Hamilton Post Office



Level of Service

Weekday Start of First & Last Trip	Weekday Frequency	Saturday Start of First & Last Trip	Saturday Frequency	Sunday Start of First & Last Trip	Sunday Frequency
6:40 AM - 6:15 PM	180 Minutes	8:10 AM - 3:15 PM	240 Minutes	No Service	No Service

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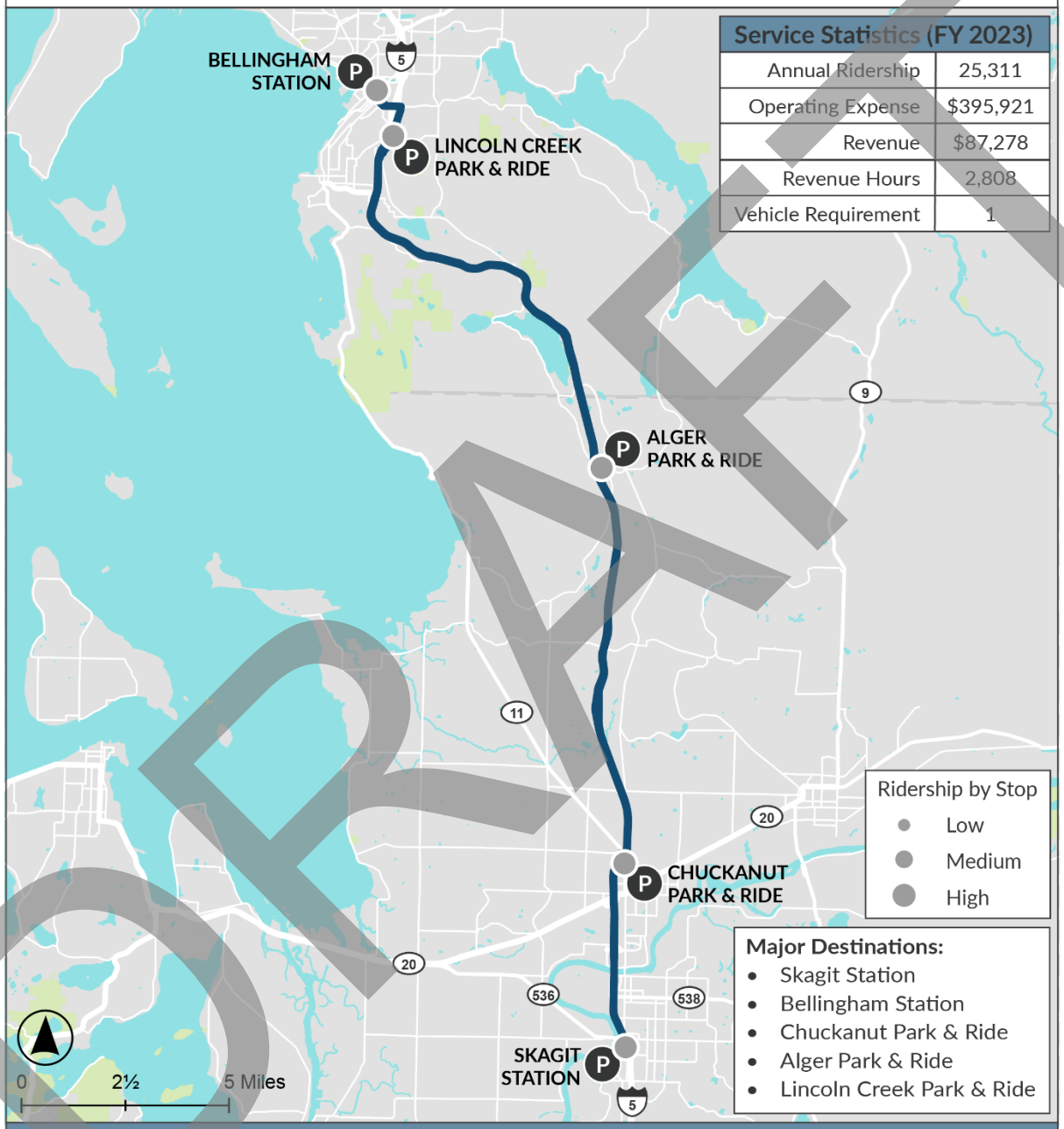
Route 80X: Bellingham Connect

SKAGIT TRANSIT

Route 80X is an express route that operates between Skagit Station in Mount Vernon and Bellingham Station with three stops in between at Chuckanut Park & Ride, Alger Park & Ride, and Lincoln Creek Park & Ride.



Service Statistics (FY 2023)	
Annual Ridership	25,311
Operating Expense	$395,921
Revenue	$87,278
Revenue Hours	2,808
Vehicle Requirement	1

Level of Service

Weekday Start of First & Last Trip	Weekday Frequency	Saturday Start of First & Last Trip	Saturday Frequency	Sunday Start of First & Last Trip	Sunday Frequency
6:45AM - 8:05 PM	120 Minutes	8:05 AM - 6:00 PM	120 Minutes	8:05 AM - 6:00 PM	120 Minutes

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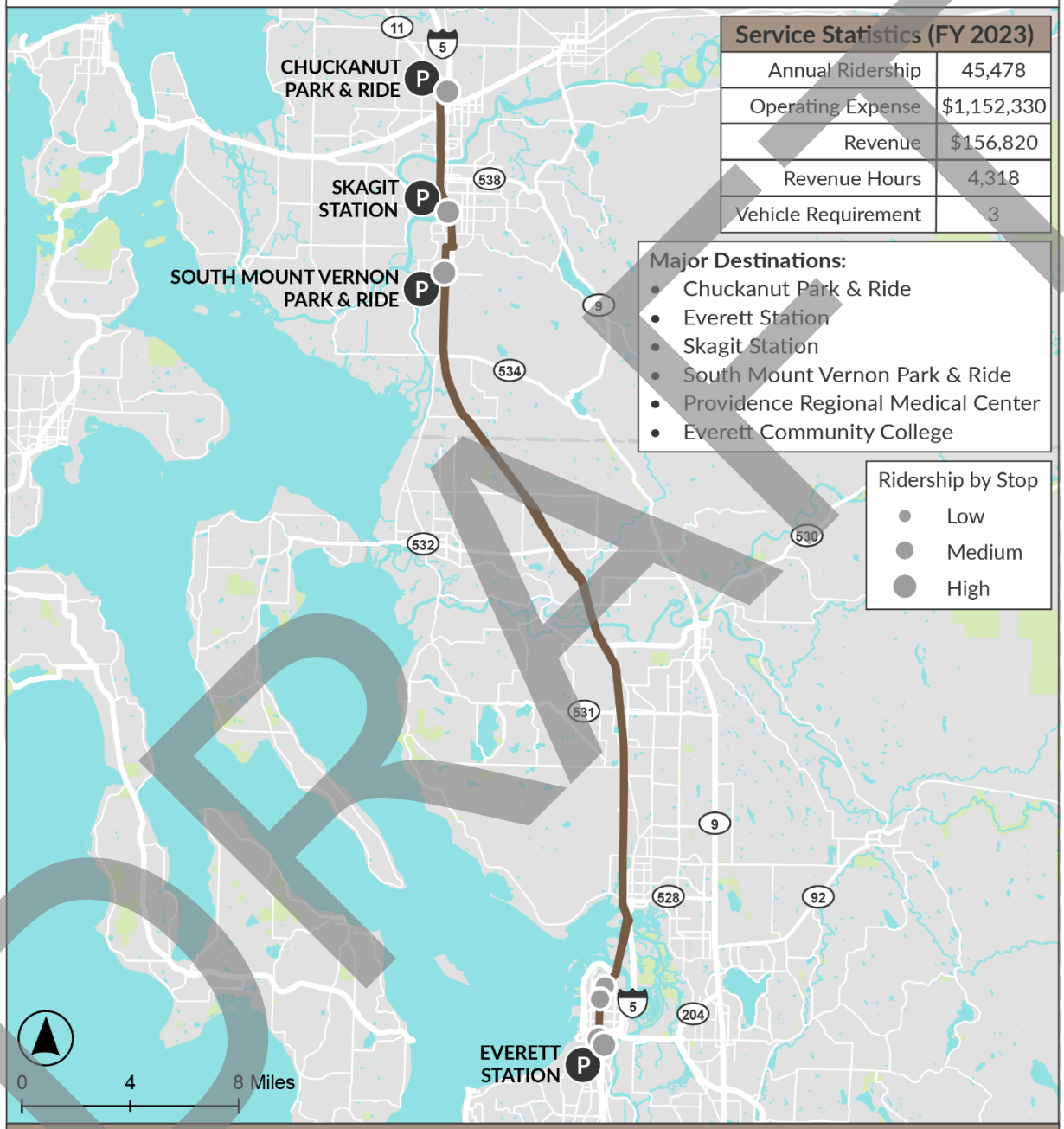
Route 90X: Everett Connect

Route 90X is an express route that operates between Chuckanut Park & Ride in Burlington and Everett Station with five stops in between including Skagit Station and South Mount Vernon Park & Ride.



Service Statistics (FY 2023)	
Annual Ridership	45,478
Operating Expense	$1,152,330
Revenue	$156,820
Revenue Hours	4,318
Vehicle Requirement	3

Major Destinations:

- Chuckanut Park & Ride
- Everett Station
- Skagit Station
- South Mount Vernon Park & Ride
- Providence Regional Medical Center
- Everett Community College

Ridership by Stop

- Low
- Medium
- High

Level of Service

Weekday Start of First & Last Trip	Weekday Frequency	Saturday Start of First & Last Trip	Saturday Frequency	Sunday Start of First & Last Trip	Sunday Frequency
4:45 AM - 6:15 PM	120 Minutes	8:00 AM - 4:00 PM	120 Minutes	8:00 AM - 4:00 PM	120 Minutes

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APPENDIX B

ROUTE-LEVEL SERVICE RECOMMENDATIONS

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APPENDIX B: ROUTE-LEVEL SERVICE RECOMMENDATIONS

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Route 40X Mount Vernon/Anacortes

Action: Extend to Anacortes.

Route 40X provides express service between Skagit Station in Mount Vernon and March Point Park & Ride, where riders can transfer to/from Route 410, which serves Anacortes and the Anacortes Ferry Terminal. Route 40X does not currently operate on Sundays.

Extending Route 40X to 10th Street and Q Avenue in Anacortes would eliminate transfers at March Point Park & Ride for riders traveling between Anacortes and Skagit Station in Mount Vernon. Adding Sunday service would further enhance transit access.

Service requirements for Route 40X are shown in Table 1. Figure 1 depicts the extended Route 40X alignment.

Existing Route 40X Alignment

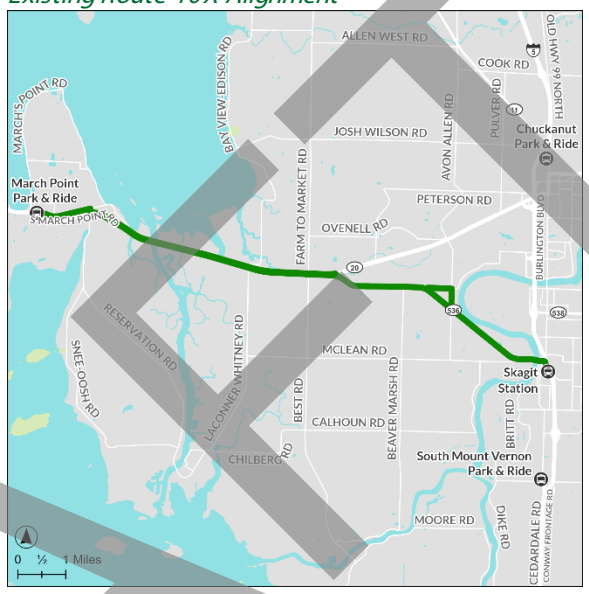

Table 1 Recommended Route 40X Service Improvements

Phase	Day	Start	End	Frequency	Peak Buses	Approx. Annual Hours
Existing	Weekday	6:15 AM	8:00 PM	60	1	4,100
	Saturday	8:15 AM	6:00 PM	60	1	
	Sunday	-	-	-	-	
Short-Range	Weekday	6:15 AM	8:00 PM	60	2	8,500
	Saturday	8:15 AM	6:00 PM	60	2	
	Sunday	9:15 AM	5:00 PM	120	1	
Mid-Range	Weekday	6:15 AM	8:00 PM	30-60	4	14,900
	Saturday	8:15 AM	6:00 PM	60	2	
	Sunday	9:15 AM	5:00 PM	60	2	
Long-Range	Weekday	6:15 AM	10:00 PM	30-60	4	16,300
	Saturday	8:15 AM	8:00 PM	60	2	
	Sunday	9:15 AM	7:00 PM	60	2	

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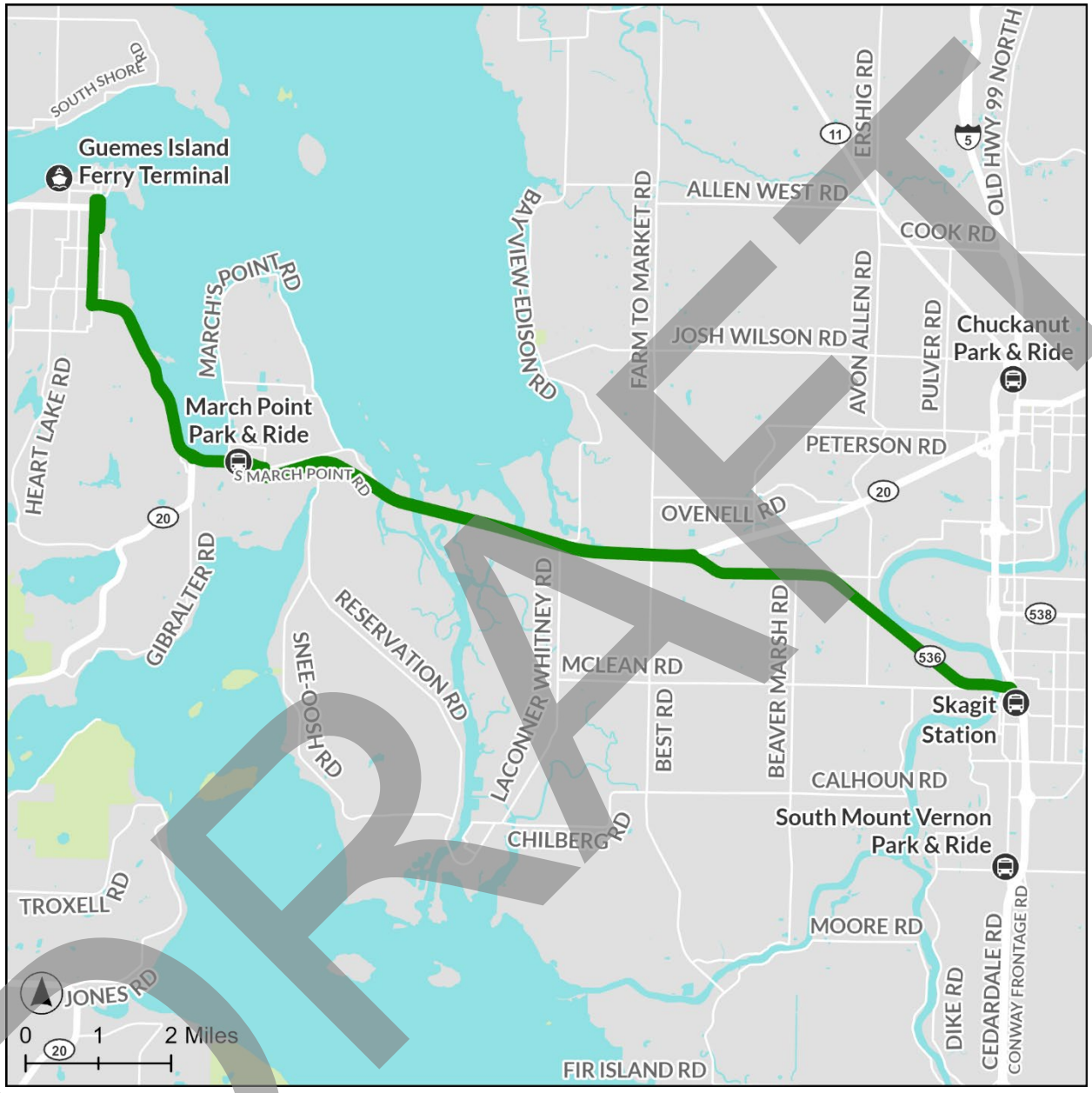
Figure 1 Recommended Route 40X Alignment



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Route 70X Sedro-Woolley/Concrete

Action: Add trips and Sunday service. Shorten to Chuckanut Park & Ride.

Route 70X is hybrid route that provides express and local service between Skagit Station in Mount Vernon, Sedro-Woolley, Lyman, Hamilton, and Concrete. Route 70X currently runs infrequently and does not operate on Sundays.

Adding weekday trips and Sunday service would improve transit access for current and potential riders along the SR 20 corridor. Realigning Route 70X to operate two-way through Downtown Sedro-Woolley would improve access and consistency. Shortening the 70X to the Chuckanut Park & Ride would enable more consistency in travel time for riders and a more manageable route for operators, even though it would require some passengers to transfer to reach Skagit Station. It is recommended that Routes 70X and 717 are merged into a singular route during Saturday service in the short-range term, to adjust for optimal resource allocation. Service requirements for Route 70X are shown in Table 2. Figure 2 depicts the recommended Route 70X alignment.

Existing Route 70X Alignment

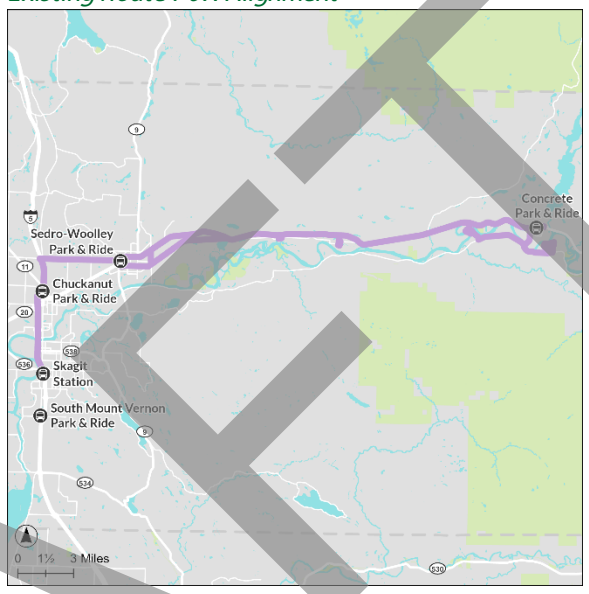

Table 2 Recommended Route 70X Service Improvements

Phase	Day	Start	End	Frequency	Peak Buses	Approx. Annual Hours
Existing	Weekday	6:40 AM	8:55 PM	90-180	2	4,800
	Saturday	8:10 AM	6:00 PM	180	1	
	Sunday	-	-	-	-	
Short-Range	Weekday	6:30 AM	7:45 PM	90-180	2	7,800
	Saturday	8:00 AM	6:45 PM	120	1	
	Sunday	9:00 AM	5:45 PM	180	1	
Mid-Range	Weekday	6:30 AM	7:45 PM	90	2	8,800
	Saturday	8:00 AM	6:45 PM	90	2	
	Sunday	9:00 AM	6:00 PM	90	2	
Long-Range	Weekday	6:30 AM	10:45 PM	60	3	15,900
	Saturday	8:00 AM	8:00 PM	60	3	
	Sunday	9:00 AM	7:30 PM	60	3	

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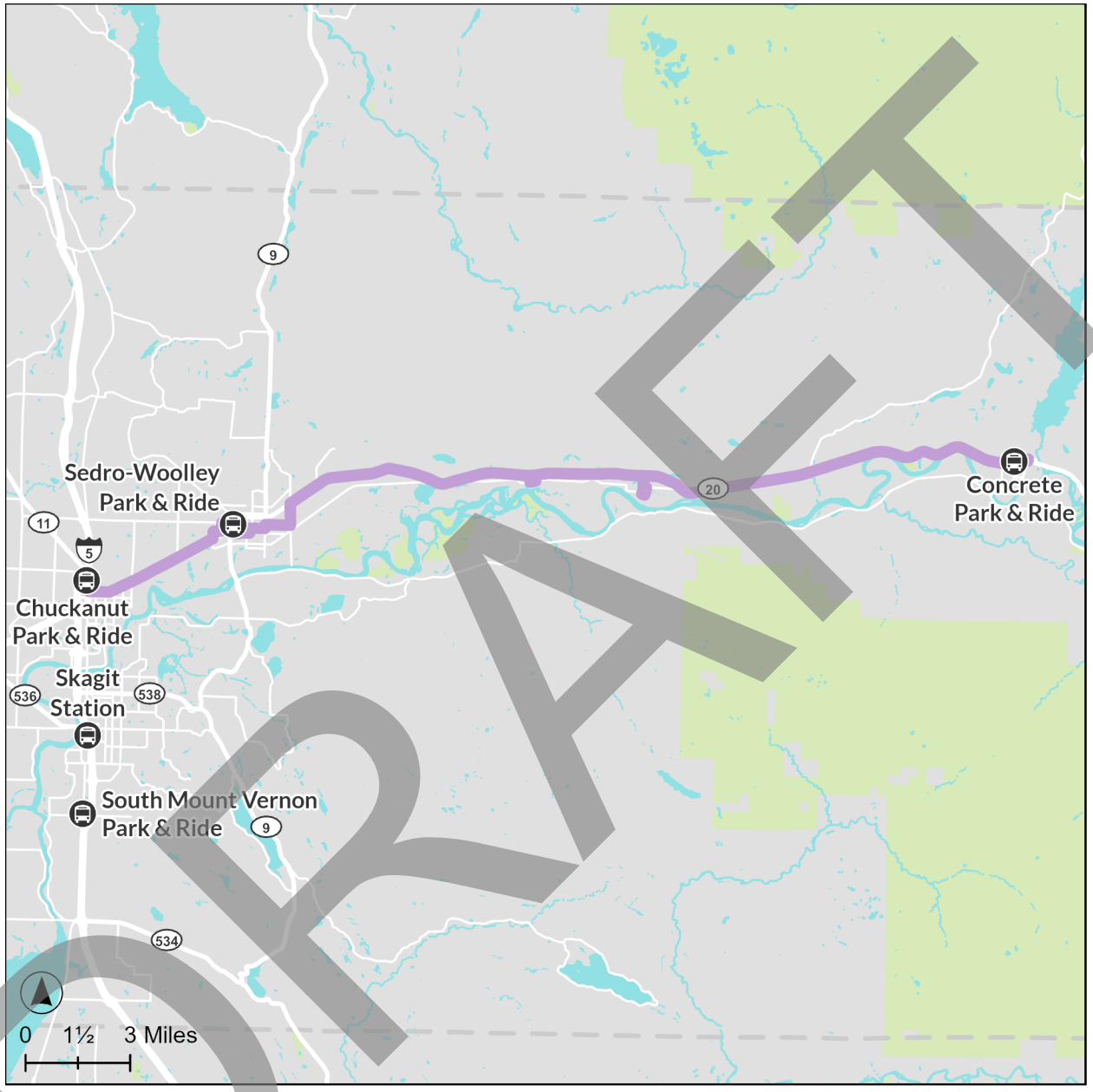
Figure 2 Recommended Route 70X Alignment



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Route 80X Bellingham Connect

Action: Add stop at Skagit Valley Casino Resort.

Route 80X provides limited stop service between Skagit Station in Mount Vernon and Bellingham Station.

The Skagit Casino Resort, owned by the Upper Skagit Indian Tribe, is one of the 10 largest employers in Skagit County. Adding 80X service to the casino would add approximately 5 minutes to trips in each direction but not require additional resources. Details of how to add a stop to service the Casino Resort would need to be confirmed.

Service requirements for Route 80X are shown in Table 3. Figure 3 depicts the recommended Route 80X alignment.

Existing Route 80X Alignment

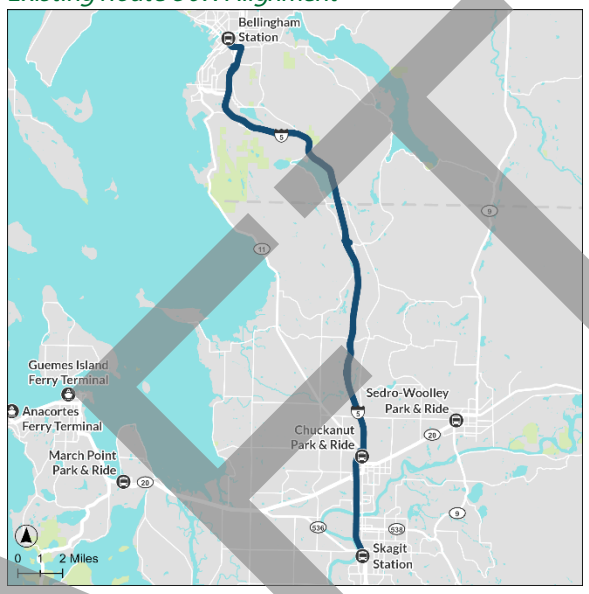

Table 3 Recommended Route 80X Service Improvements

Phase	Day	Start	End	Frequency	Peak Buses	Approx. Annual Hours
Existing	Weekday	6:40 AM	8:07 PM	60-120	2	5,900
	Saturday	8:05 AM	6:45 PM	120	1	
	Sunday	8:05 AM	6:45 PM	120	1	
Short-Range	Weekday	6:45 AM	8:45 PM	60-120	2	5,900
	Saturday	7:45 AM	5:45 PM	120	1	
	Sunday	9:00 AM	4:45 PM	120	1	
Mid-Range	Weekday	6:45 AM	8:45 PM	60	2	9,100
	Saturday	7:45 AM	5:45 PM	60-120	2	
	Sunday	9:00 AM	4:45 PM	60-120	2	
Long-Range	Weekday	6:45 AM	10:45 PM	60	2	10,500
	Saturday	7:45 AM	7:45 PM	60	2	
	Sunday	9:00 AM	6:45 PM	60	2	

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Figure 3 Recommended Route 80X Alignment

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Route 90X Everett Connect

Action: Add stop at Smokey Point Transit Center in Arlington.

Route 90X provides limited stop service between Chuckanut Park & Ride and Downtown Everett.

Smokey Point Transit Center in Arlington is major hub for Community Transit (CT), served by eight CT routes. Adding a stop at Smokey Point Transit Center would improve interagency connectivity. Smokey Point Transit Center is also adjacent to the Cascade Industrial Center, a developing manufacturing and industrial hub for the region. In 2029, CT's Swift Gold Line Bus Rapid Transit will open, providing a frequent connection between Arlington, Marysville, and Everett. When Gold Line service opens, Skagit Transit should operate direct to Everett Station from Smokey Point Transit Center via I-5.

Service requirements for Route 90X are shown in Table 4. Figure 4 depicts the recommended Route 90X alignment.

Existing Route 90X Alignment

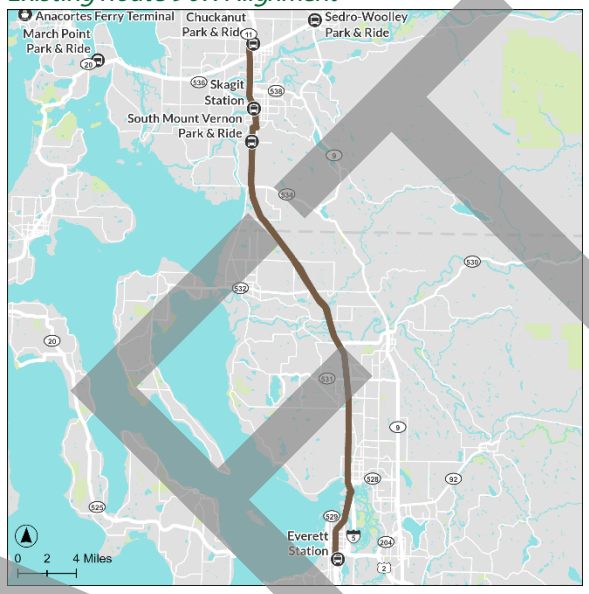

Table 4 Recommended Route 90X Service Improvements

Phase	Day	Start	End	Frequency	Peak Buses	Approx. Annual Hours
Existing	Weekday	4:45 AM	7:30 PM	40-120	3	8,500
	Saturday	8:00 AM	5:45 PM	120	1	
	Sunday	8:00 AM	5:45 PM	120	1	
Short-Range	Weekday	5:00 AM	8:00 PM	60-180	3	11,200
	Saturday	8:00 AM	8:00 PM	90	2	
	Sunday	8:45 AM	5:45 PM	90	2	
Mid-Range	Weekday	5:00 AM	8:00 PM	45-60	4	18,100
	Saturday	8:00 AM	8:00 PM	60	3	
	Sunday	8:45 AM	5:45 PM	60	3	
Long-Range	Weekday	5:00 AM	11:00 PM	45	4	22,200
	Saturday	8:00 AM	9:30 PM	60	3	
	Sunday	8:45 AM	7:15 PM	60	3	

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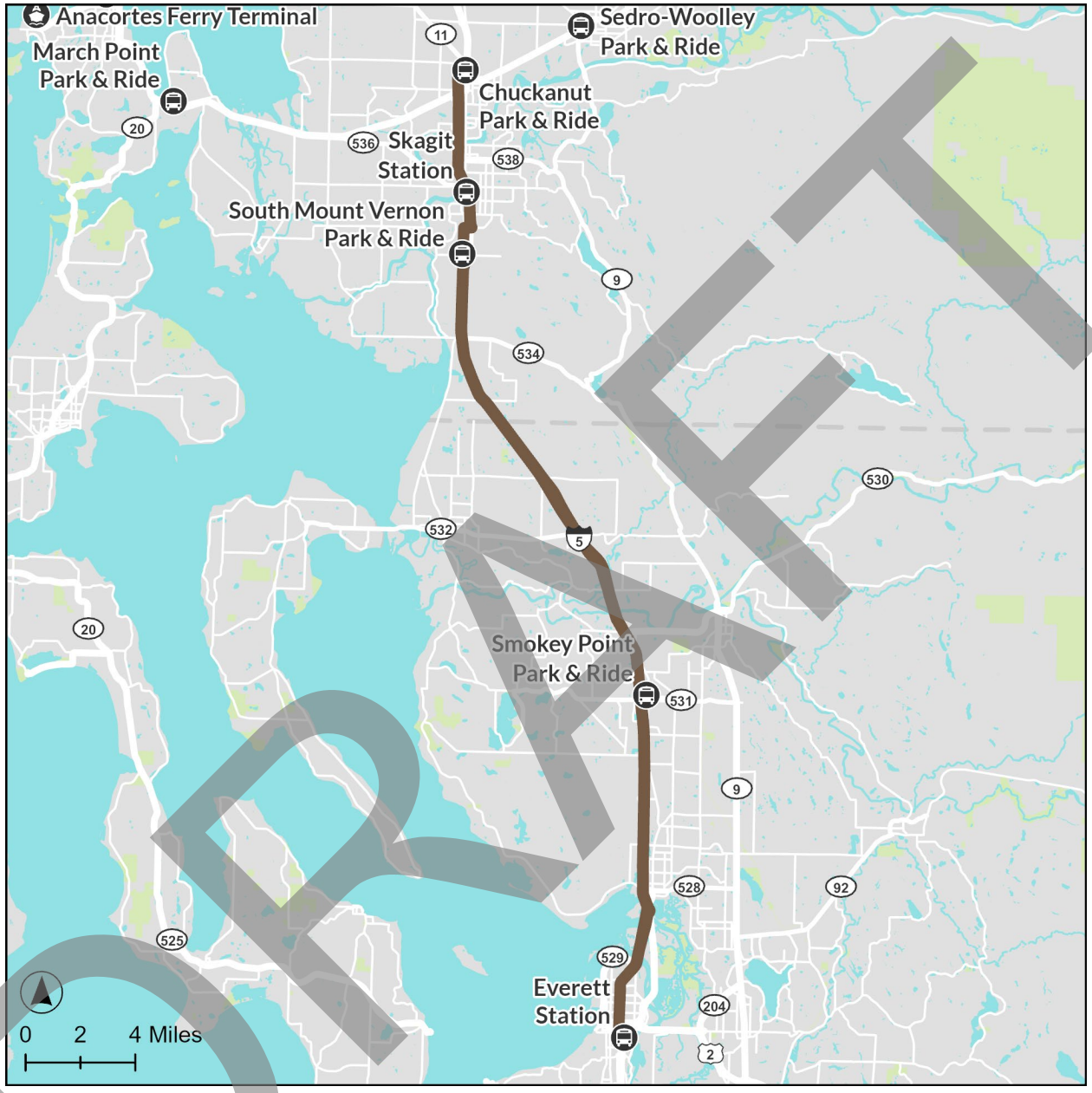
Figure 4 Recommended Route 90X Alignment



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Central County

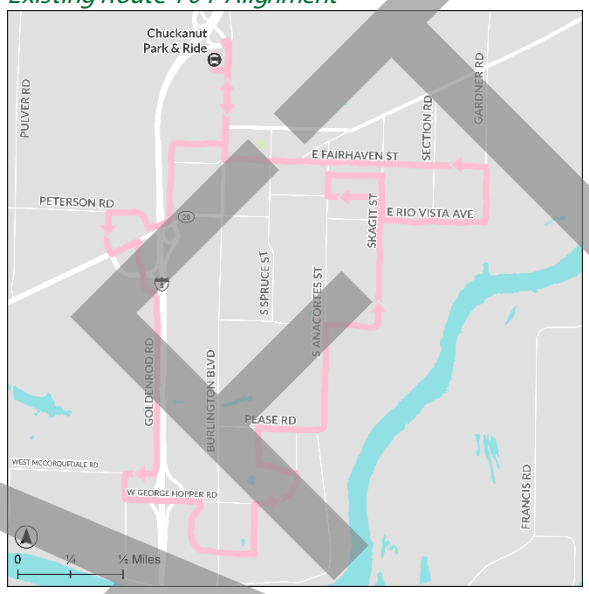
Route 101 Burlington

Action: Convert to two-way service, extend to Walmart, and add a bus.

The existing Route 101 is a one-way loop that provides broad transit coverage across Burlington. Chuckanut Park-and-Ride is the layover location for Route 101, which runs hourly on weekdays and weekends.

The recommended Route 101 would provide direct, two-way service along the most productive segments of the existing route, thus maintaining coverage east of I-5. Extending Route 101 south of the Skagit River to Walmart Supercenter, one of the highest ridership stops in the system, would eliminate transfer for many Burlington residents. Adding a second bus on weekdays would upgrade the frequency to 30 minutes.

Existing Route 101 Alignment



Service requirements for the recommended Route 101 are shown in Table 5. Figure 5 depicts the recommended Route 101 alignment, which would require new bus stops along S Section Street between E Fairhaven Ave and Rio Vista Ave.

Table 5 Recommended Route 101 Service Improvements

Phase	Day	Start	End	Frequency	Peak Buses	Approx. Annual Hours
Existing	Weekday	6:25 AM	9:10 PM	60	1	4,800
	Saturday	8:25 AM	6:05 PM	60	1	
	Sunday	8:25 AM	6:05 PM	60	1	
Short-Range	Weekday	6:15 AM	9:15 PM	30-60	2	8,400
	Saturday	7:45 AM	6:45 PM	30-60	2	
	Sunday	9:15 AM	5:15 PM	60	1	
Mid-Range	Weekday	6:15 AM	9:15 PM	30	2	9,700
	Saturday	7:45 AM	6:45 PM	30-60	2	
	Sunday	9:15 AM	5:15 PM	30-60	2	
Long-Range	Weekday	6:15 AM	10:15 PM	30	2	10,400
	Saturday	7:45 AM	7:45 PM	30-60	2	
	Sunday	9:15 AM	7:15 PM	30-60	2	

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Figure 5 Recommended Route 101 Alignment

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Route 201 Mount Vernon

Action: Consolidate indirect routes in Mount Vernon into a new route.

Existing Routes 206 and 207 primarily serve Hoag Road, Laventure Road, and Division Street in Mount Vernon. Each route is comprised of large one-way loops that take many riders out of direction. Consolidating segments of these routes into a new, direct route would provide East Mount Vernon residents with improved access to the three primary transit destinations in the city: Skagit Station, Skagit Valley College, and Walmart Supercenter.

Service requirements for the recommended Route 201 are shown in Table 6. Figure 6 depicts the recommended Route 201 alignment.

Existing Route 206 and 207 Alignments

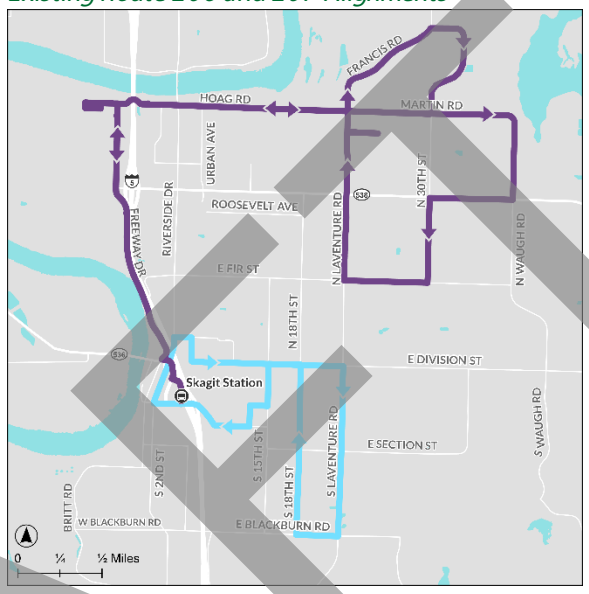

Table 6 Recommended Route 201 Service Improvements

Phase	Day	Start	End	Frequency	Peak Buses	Approx. Annual Hours
Short-Range	Weekday	6:15 AM	9:15 PM	30-60	2	8,400
	Saturday	8:00 AM	7:00 PM	30-60	2	
	Sunday	9:00 AM	6:00 PM	60	1	
Mid-Range	Weekday	6:15 AM	9:15 PM	30	2	9,700
	Saturday	8:15 AM	6:45 PM	30-60	2	
	Sunday	8:45 AM	6:45 PM	30-60	2	
Long-Range	Weekday	6:15 AM	10:15 PM	30	2	10,300
	Saturday	8:15 AM	7:45 PM	30-60	2	
	Sunday	8:45 AM	7:45 PM	30-60	2	

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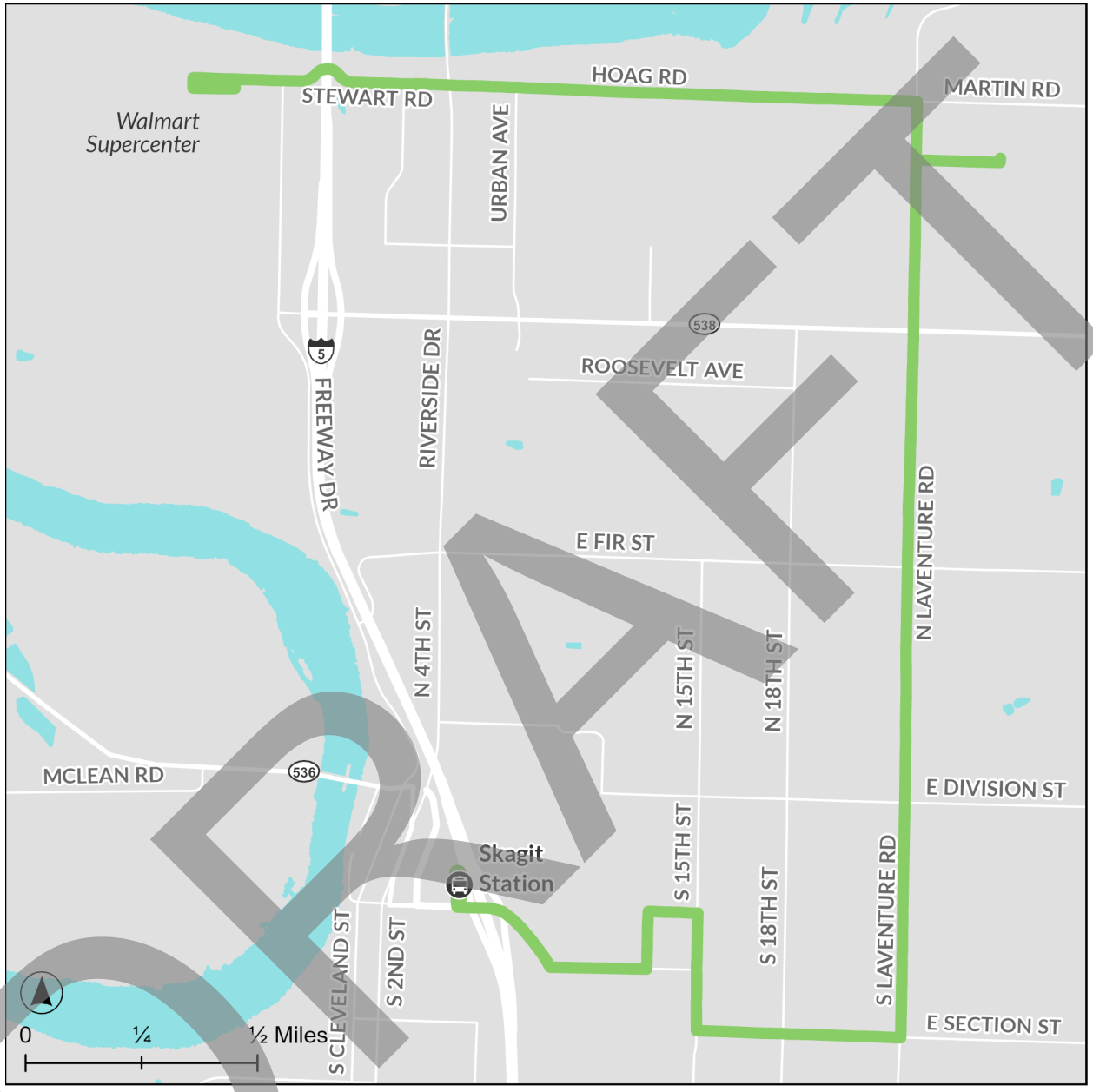
Figure 6 Recommended Route 201 Alignment



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Route 202 South Mount Vernon/Chuckanut

Action: Streamline service

The existing Route 202 serves South Mount Vernon west of I-5, connecting Skagit Station and South Mount Vernon Park & Ride. In the southbound direction, the route deviates to Blackburn Road, Britt Road, and Hazel Street to expand service coverage. The recommended Route 202 would streamline service along 2nd Street between Hazel Street and Blackburn Road, providing two-way service within one block of the Senior Center, Skagit Valley Food Bank, and Friendship House emergency shelter. Extending Route 202 to Chuckanut Park & Ride and Goldenrod Road would improve network connectivity in Burlington. Service requirements for the recommended Route 202 are shown in Table 7. Figure 7 depicts the recommended Route 202 alignment, which would run hourly.

Existing Route 202 Alignment

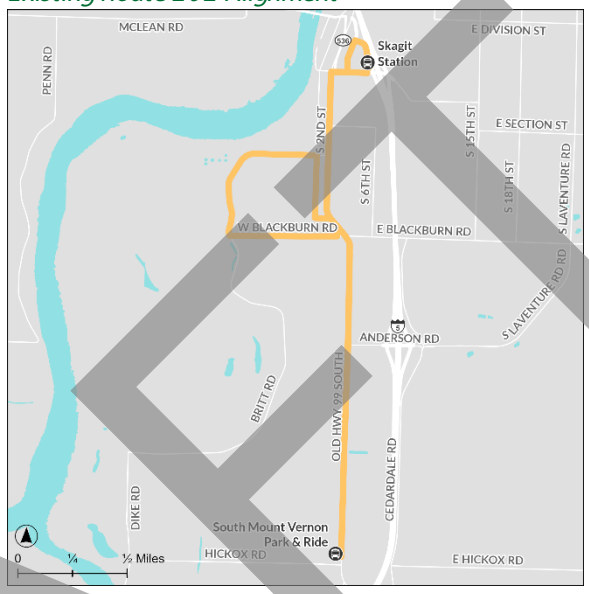

Table 7 Recommended Route 202 Service Improvements

Phase	Day	Start	End	Frequency	Peak Buses	Approx. Annual Hours
Existing	Weekday	6:15 AM	8:40 PM	60	1	4,800
	Saturday	8:15 AM	6:10 PM	60	1	
	Sunday	8:15 AM	6:10 PM	60	1	
Short-Range	Weekday	6:15 AM	8:45 PM	60	1	4,500
	Saturday	8:15 AM	6:45 PM	60	1	
	Sunday	9:15 AM	5:45 PM	60	1	
Mid-Range	Weekday	6:15 AM	8:45 PM	60	1	4,700
	Saturday	8:15 AM	6:45 PM	60	1	
	Sunday	9:15 AM	5:45 PM	60	1	
Long-Range	Weekday	6:15 AM	9:45 PM	60	1	5,000
	Saturday	8:15 AM	7:45 PM	60	1	
	Sunday	9:15 AM	6:45 PM	60	1	

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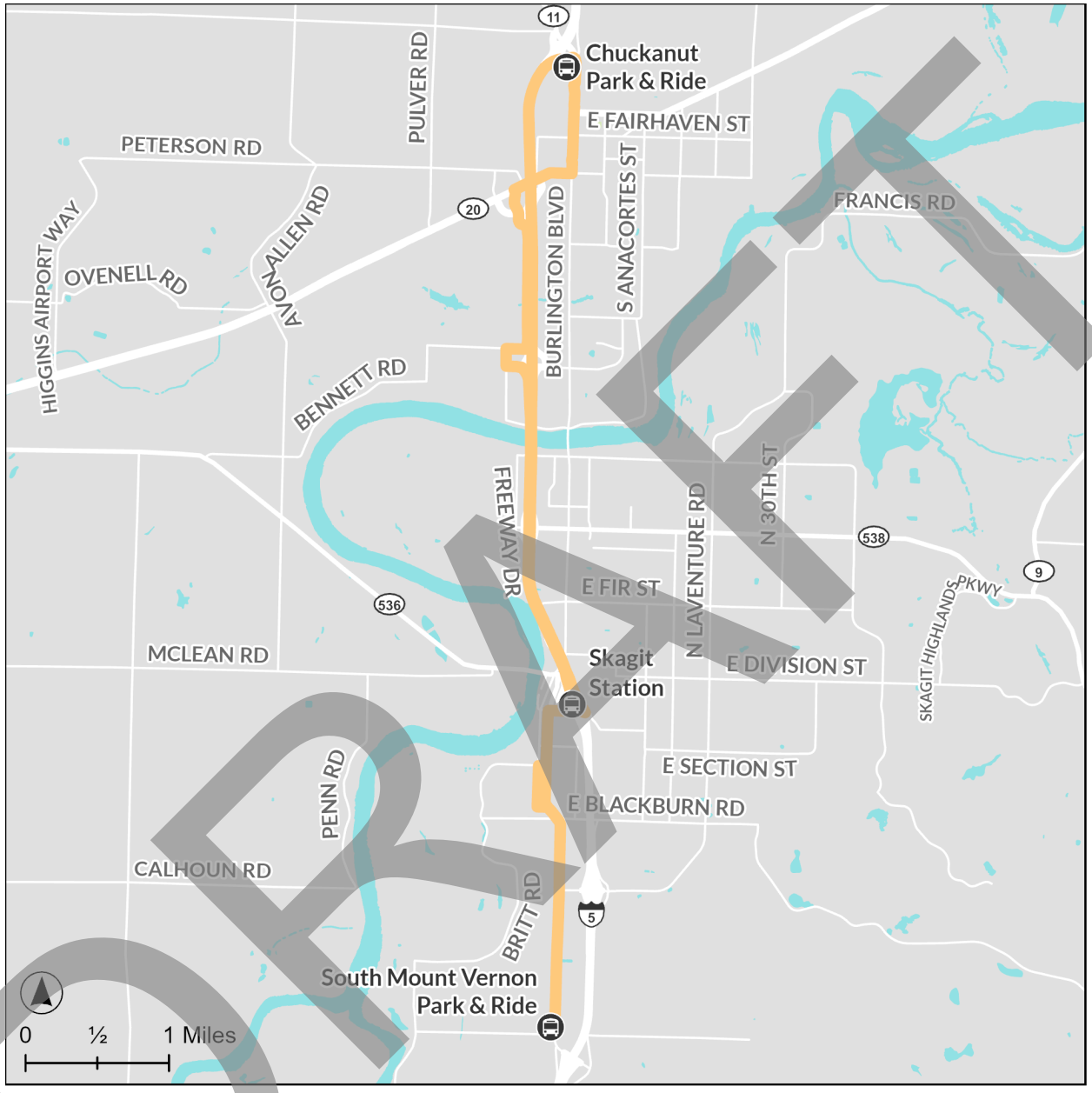
Figure 7 Recommended Route 202 Alignment



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Route 204 Skagit Station/SV Hospital/SV College

Action: Replace with Routes 201 and 305

Route 204 connects neighborhoods in east Mount Vernon to Skagit Station, Skagit Valley College, and multiple medical and recreational destinations. The route consists of a small one-way loop within a larger one-way loop, resulting in indirect travel for most existing riders.

The recommendation for Route 204 is to replace it with a new Route 201 and the extended Route 305. The new Route 201 would operate two-way along La Venture Rd, providing more direct connections to Skagit Station and Skagit Valley College. The extended Route 305 would provide two-way service on N Waugh Rd and E Division St, while also providing a one-seat ride between Sedro-Woolley and Skagit Station.

Figure 8 depicts the recommended Route 201 and 305 alignments that would replace the existing Route 204.

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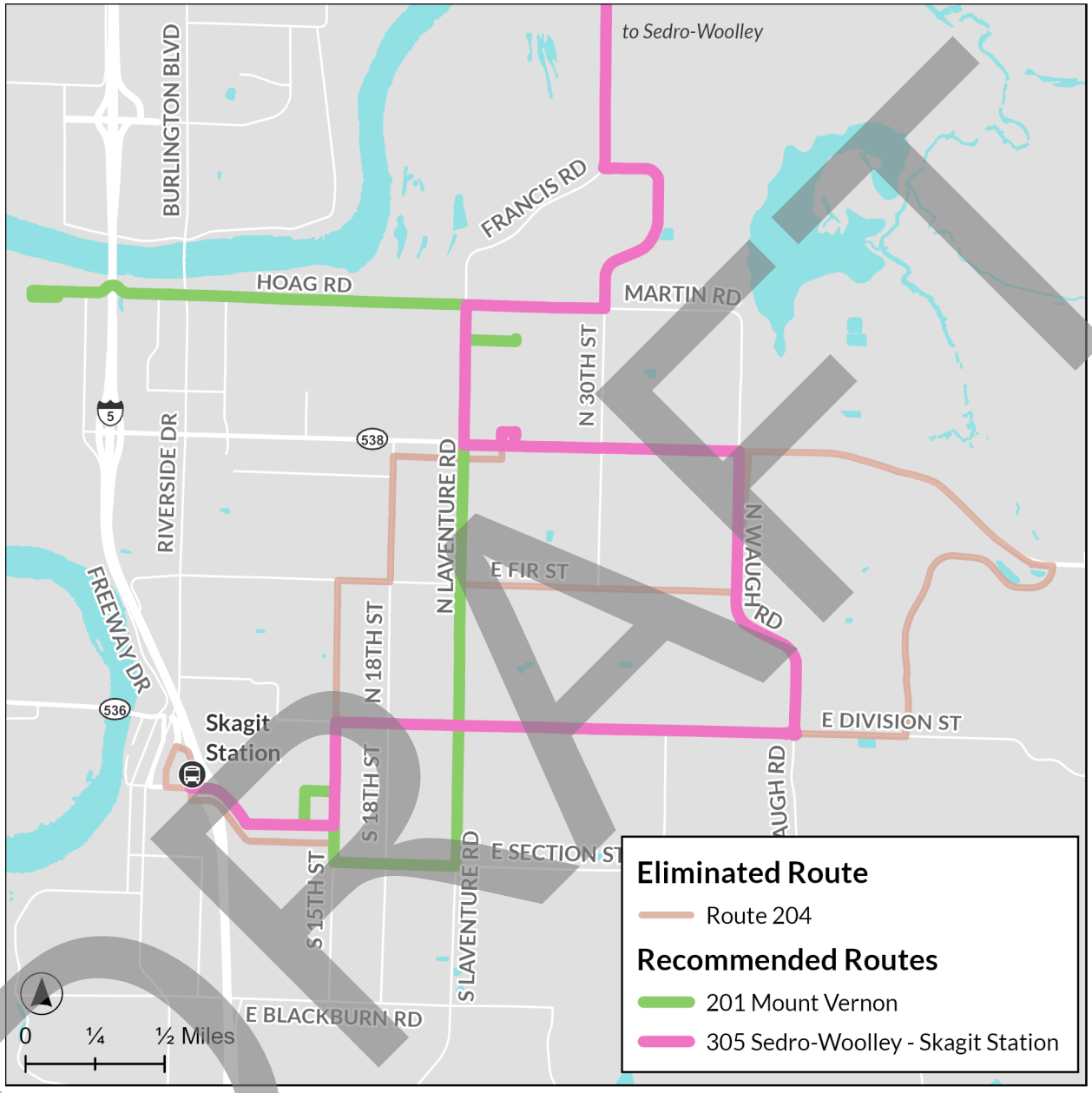
Figure 8 Recommended Route 201 and 305 Alignment to Replace Route 204



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Route 205 College Way

Action: No route changes.

Route 205 is one of the two most productive routes in the Skagit Transit system, connecting Skagit Station with Skagit Valley College while also serving two primary commercial corridors in Riverside Drive and College Way.

No routing changes are recommended; however, it is recommended that Route 205 is interlined with Route 202 to provide connecting riders with a one-seat ride and conserve resources on weekends.

Service requirements for Route 205 are shown in Table 8. Figure 9 depicts the unchanged Route 205 alignment.

Table 8 Recommended Route 205 Service Improvements

Phase	Day	Start	End	Frequency	Peak Buses	Approx. Annual Hours
Existing	Weekday	6:00 AM	9:00 PM	30	1	4,900
	Saturday	8:00 AM	6:00 PM	30	1	
	Sunday	8:00 AM	6:00 PM	30	1	
Short-Range	Weekday	6:15 AM	8:45 PM	30	1	4,500
	Saturday	8:15 AM	6:45 PM	30-60	1	
	Sunday	9:15 AM	5:45 PM	30-60	1	
Mid-Range	Weekday	6:15 AM	8:45 PM	60	1	4,700
	Saturday	8:15 AM	6:45 PM	30	1	
	Sunday	9:15 AM	5:45 PM	30-60	1	
Long-Range	Weekday	6:15 AM	9:45 PM	30	1	5,000
	Saturday	8:15 AM	7:45 PM	30-60	1	
	Sunday	9:15 AM	6:45 PM	30-60	1	

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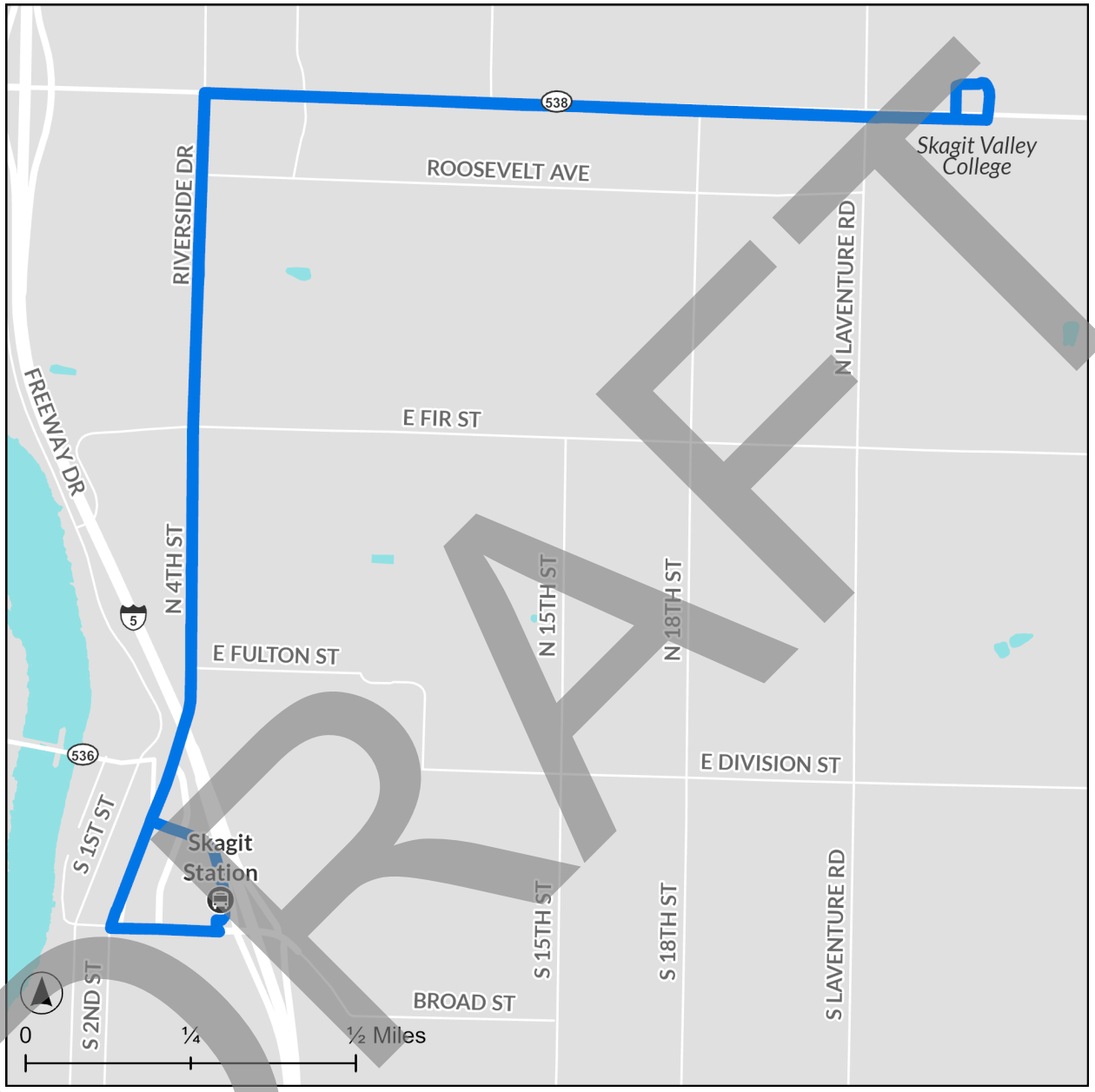
Figure 9 Recommended Route 205 Alignment



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Route 206 Skagit Station/South Mount Vernon

Action: Replace with Route 201

Route 206 serves downtown Mount Vernon, connecting the areas south of Division St to Skagit Station with two one-way loops.

The recommendation for Route 206 is to replace it with service on the new Route 201. The new route would provide direct service to Skagit Station along Broad St and E Section St and a connection to Walmart along S Laventure Rd and Hoag Rd. The new Route 201 would simplify service to Skagit Station and provide a new direct north-south service in Mount Vernon.

Figure 10 depicts the recommended Route 201 alignment that would replace the existing Route 206.

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Figure 10 Recommended Route 201 Alignment to Replace Route 206

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Route 207 Skagit Station/Walmart/LaVenture Rd/YMCA

Action: Replace with Routes 201 and 305

Route 207 connects Skagit Valley College and north Mount Vernon to Walmart and Skagit Station with two-way service on Freeway Dr and Hoag Rd and a one-way loop on La Venture Rd and Martin Rd around Skagit Valley College.

The recommendation for Route 207 is to replace it with service on the new Routes 201 and 305. The new routes would provide two-way service along Hoag Rd, La Venture Rd, and College Way, connecting Skagit Valley College and Walmart to central and south Mount Vernon and Skagit Station.

Figure 11 depicts the recommended Route 201 and 305 alignments that would replace the existing Route 207.

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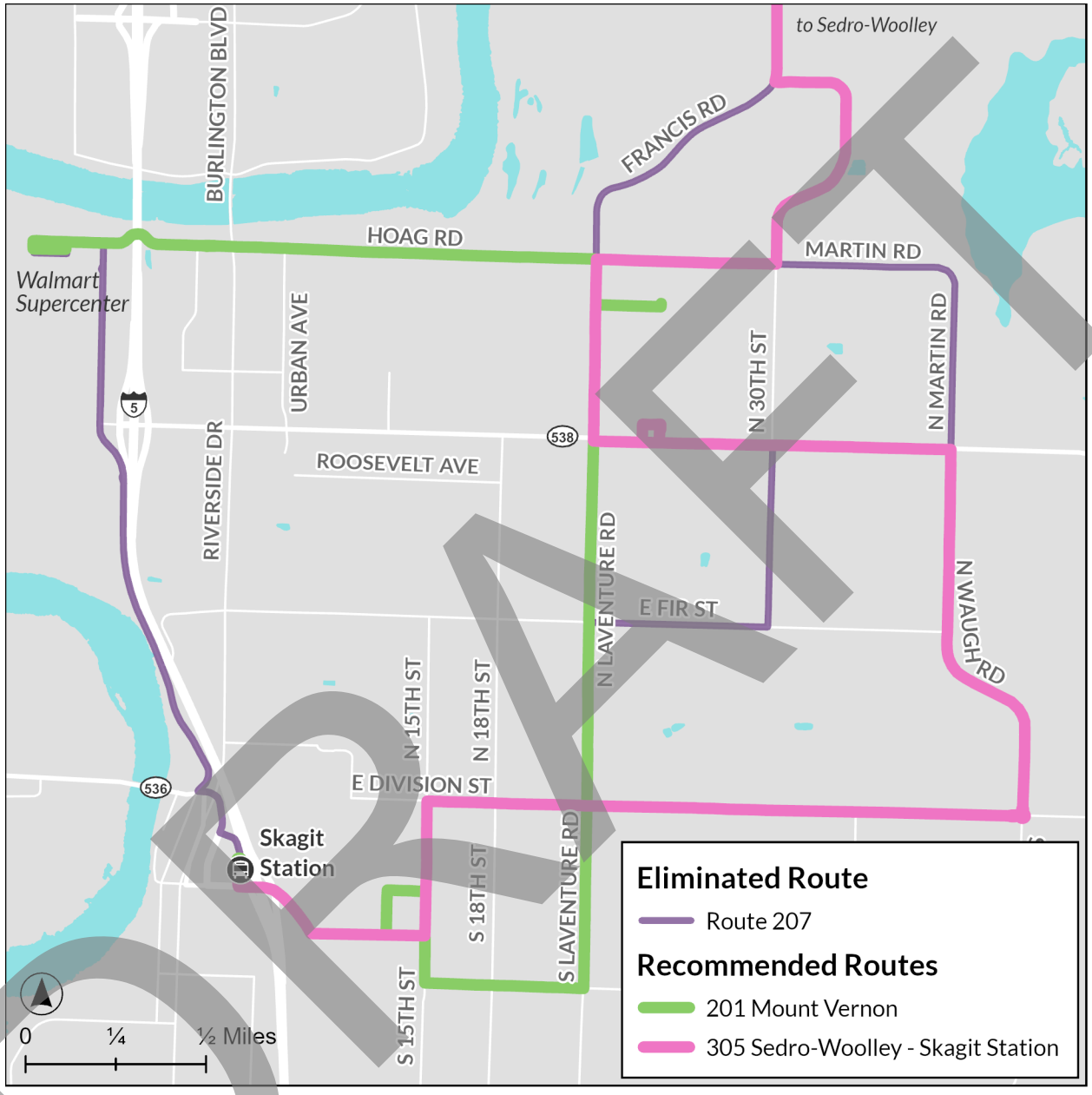
Figure 11 Recommended Route 201 and 305 Alignments to Replace Eliminated Route 207



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Route 208 Burlington-Mount Vernon

Action: No route changes.

Route 208 is one of the two most productive routes in the Skagit Transit system, connecting Skagit Station with Chuckanut Park & Ride while also serving the primary commercial corridors Mount Vernon and Burlington – Riverside Drive and Burlington Boulevard.

No routing changes are recommended to Route 208.

Service requirements for Route 208 are shown in Table 9. Figure 12 depicts the unchanged Route 208 alignment.

Table 9 Recommended Route 208 Service Improvements

Phase	Day	Start	End	Frequency	Peak Buses	Approx. Annual Hours
Existing	Weekday	6:20 AM	9:00 PM	30	2	9,600
	Saturday	8:15 AM	6:10 PM	30	2	
	Sunday	8:15 AM	6:10 PM	30	2	
Short-Range	Weekday	6:15 AM	9:15 PM	30	2	9,700
	Saturday	8:15 AM	7:15 PM	30-60	2	
	Sunday	9:15 AM	6:00 PM	30-60	2	
Mid-Range	Weekday	6:15 AM	9:15 PM	30	2	9,700
	Saturday	8:15 AM	7:15 PM	30-60	2	
	Sunday	9:15 AM	6:00 PM	30-60	2	
Long-Range	Weekday	6:15 AM	10:15 PM	20-30	3	13,300
	Saturday	8:15 AM	8:15 PM	30-60	2	
	Sunday	9:15 AM	7:00 PM	30-60	2	

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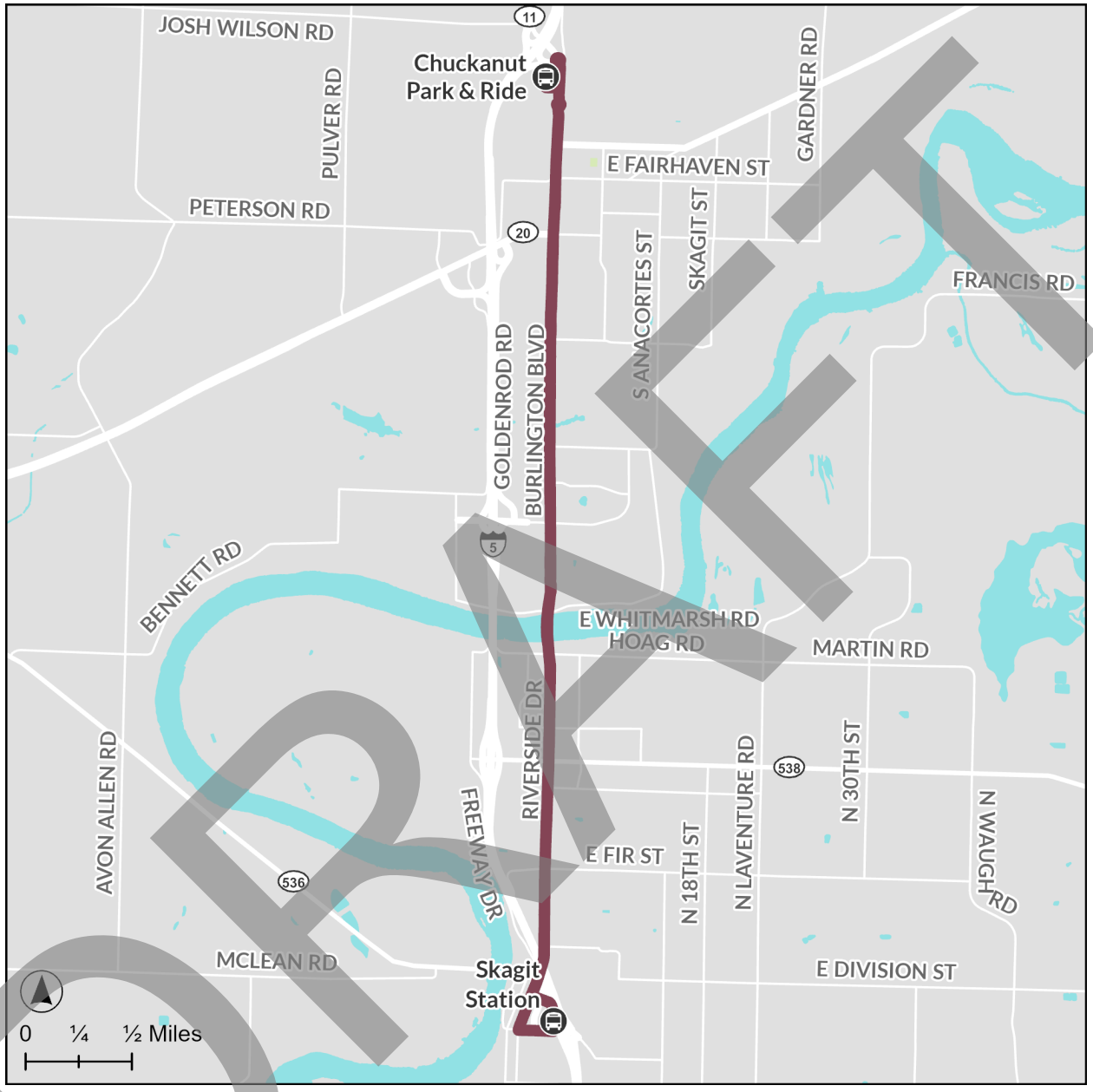
Figure 12 Recommended Route 208 Alignment



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East County

Route 300 Sedro-Woolley

Action: Replace with Routes 301 and 70X

Route 300 serves downtown Sedro-Woolley and surrounding neighborhoods with a one-way loop.

The recommendation for Route 300 is to replace it with service on the extended Route 301 and the modified Route 70X. The extended Route 301 would provide two-way service to north Sedro-Woolley along N Reed St and N Township St and introduce fixed-route service to the Upper Skagit Reservation off Hwy 20. The modified Route 70X would provide two-way service along Fruitdale Rd, Wicker Rd, State St, and Ferry St; this change would connect central and east Sedro-Woolley to Concrete and Chuckanut Park & Ride.

Figure 13 depicts the recommended Routes 301 and 70X alignments that would replace the existing Route 300.

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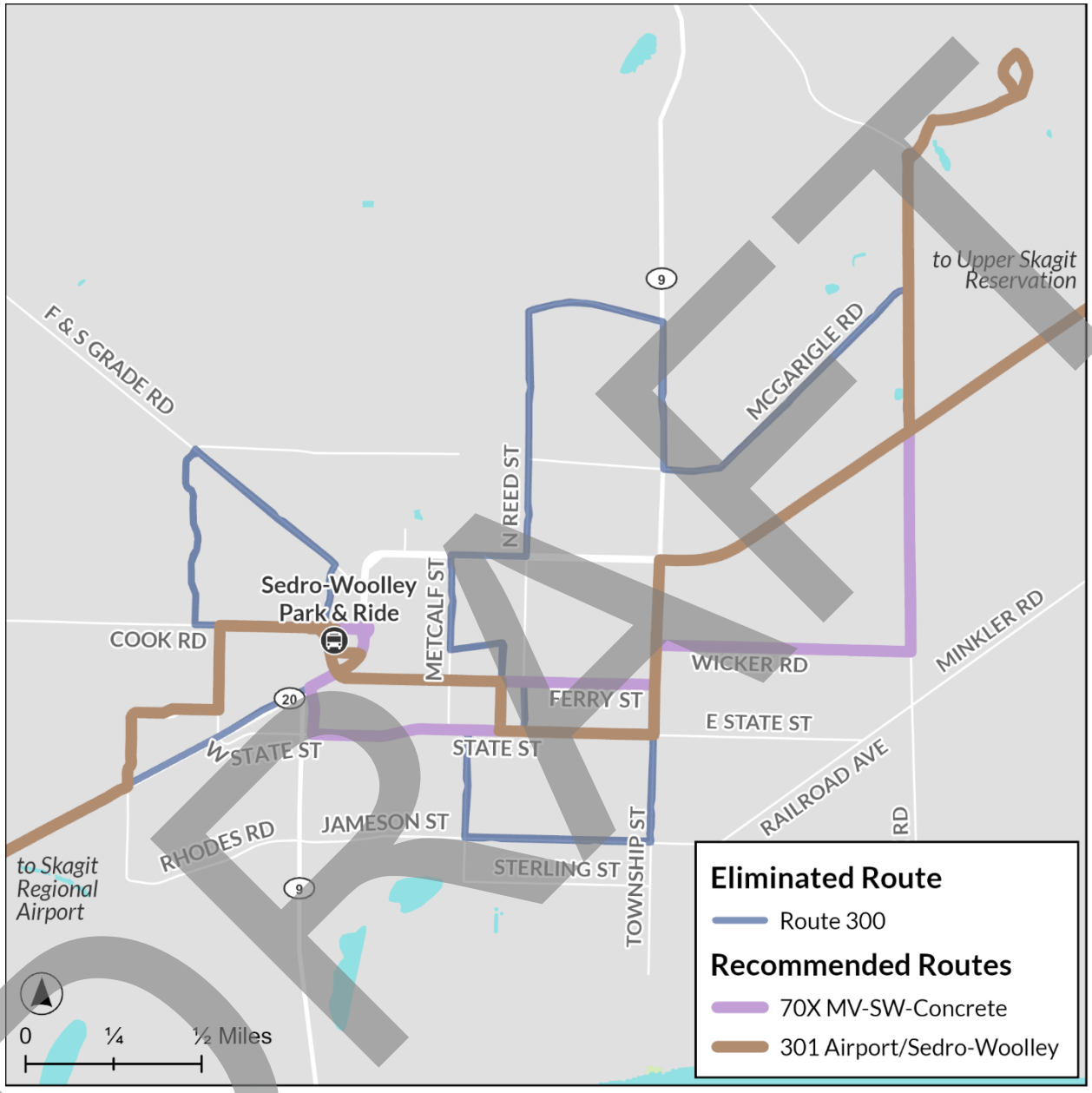
Figure 13 Recommended Route 301 Alignment to Replace Route 300



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Route 301 Sedro-Woolley

Action: Extend to Skagit Regional Airport and Upper Skagit Reservation.

Existing Route 301 connects Chuckanut Park & Ride in Burlington with Sedro-Woolley Park & Ride.

The recommended Route 301 would extend service west to Skagit Regional Airport and east through North Sedro-Woolley.

Extending Route 301 to Skagit Valley Regional Airport would replace a segment of existing Route 513.

Based on service requests from Job Corps and the Upper Skagit Indian Tribe, Skagit Transit will extend Route 301 to both locations on every trip. Stop and trip-level ridership should be monitored at both locations to determine if any adjustments are necessary.

Service requirements for Route 301 are shown in Table 10. Figure 14 depicts the recommended Route 301 alignment.

Existing Route 301 Alignment

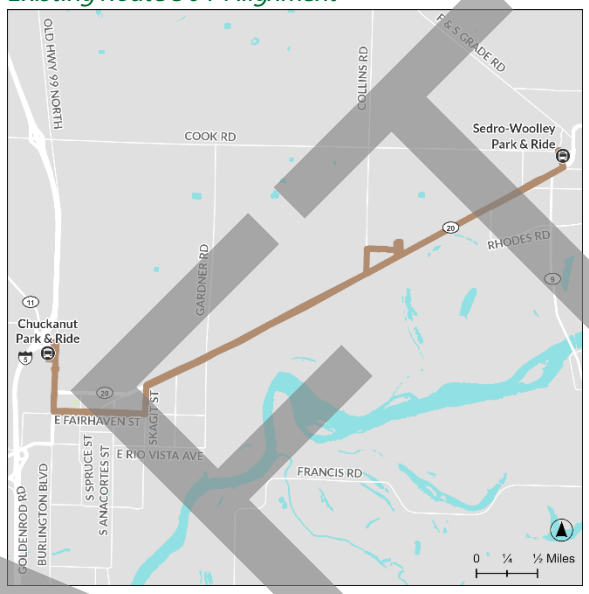

Table 10 Recommended Route 301 Service Improvements

Phase	Day	Start	End	Frequency	Peak Buses	Approx. Annual Hours
Existing	Weekday	5:45 AM	8:40 PM	60	1	4,900
	Saturday	7:45 AM	5:40 PM	60	1	
	Sunday	7:45 AM	5:40 PM	60	1	
Short-Range	Weekday	5:30 AM	8:30 PM	60	2	9,400
	Saturday	7:30 AM	6:30 PM	60	2	
	Sunday	8:30 AM	4:30 PM	60	2	
Mid-Range	Weekday	5:30 AM	8:30 PM	60	2	9,400
	Saturday	7:30 AM	6:30 PM	60	2	
	Sunday	8:30 AM	4:30 PM	60	2	
Long-Range	Weekday	5:30 AM	10:30 PM	30-60	4	17,100
	Saturday	7:30 AM	8:30 PM	60	2	
	Sunday	8:30 AM	6:30 PM	60	2	

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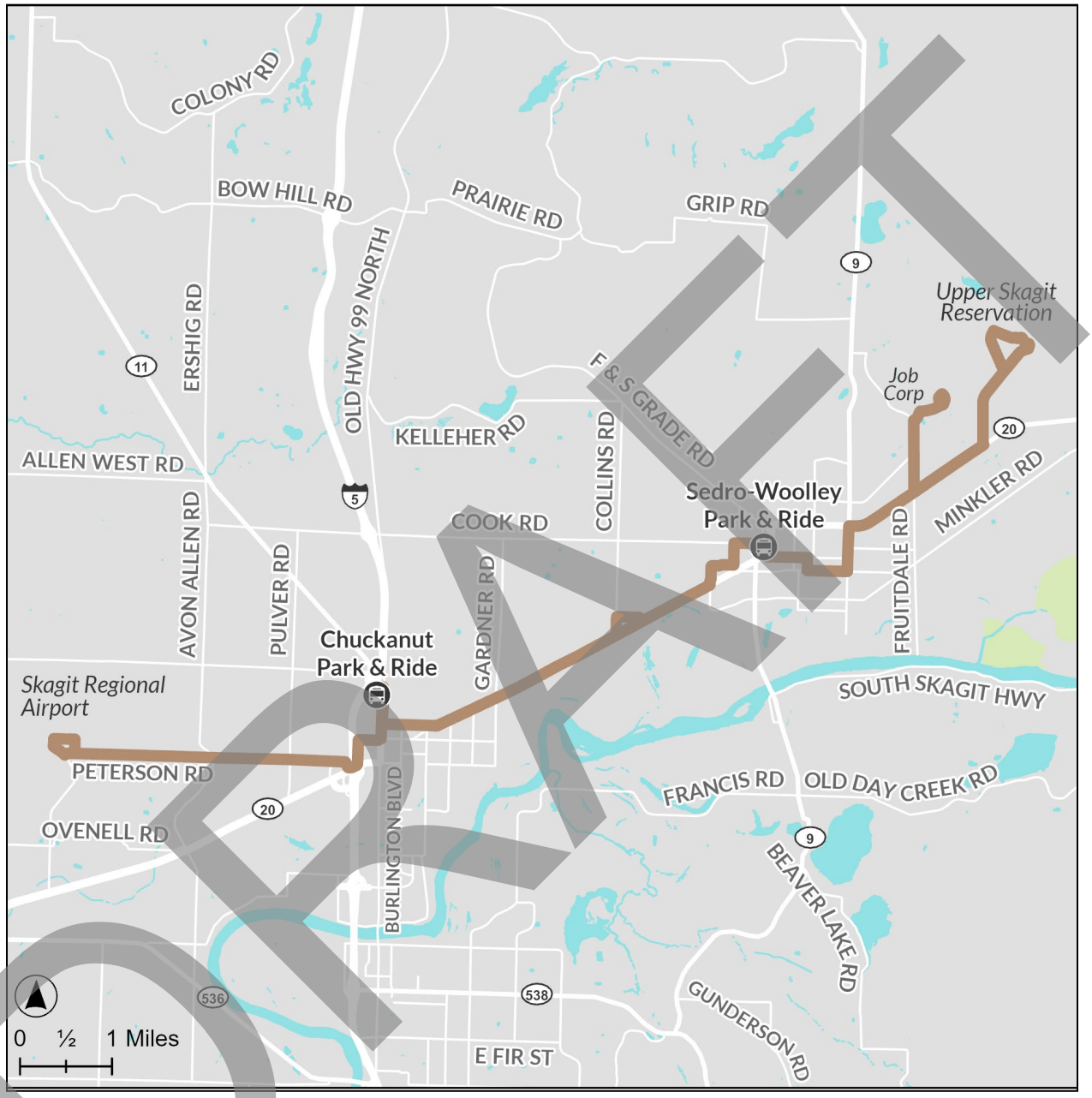
Figure 14 Recommended Route 301 Alignment



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Route 305 Clear Lake

Action: Extend to Skagit Station

Existing Route 305 connects Sedro-Woolley and Clear Lake to Skagit Valley College. The route runs hourly seven days a week and provides service to northeast Mount Vernon and the community of Clear Lake.

The recommended Route 305 would extend the route to Skagit Station. Extending the route to Skagit Station would improve connectivity with other Skagit Transit routes and reduce transfers. It would also replace several segments of Route 204, which is recommended to be discontinued.

Service requirements for Route 305 are shown in Table 11. Figure 15 depicts the recommended Route 305 alignment.

Existing Route 305 Alignment

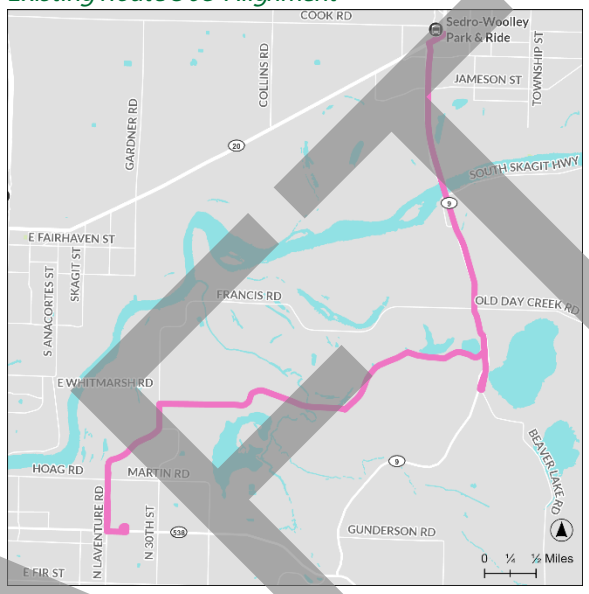

Table 11 Recommended Route 305 Service Improvements

Phase	Day	Start	End	Frequency	Peak Buses	Approx. Annual Hours
Existing	Weekday	7:40 AM	7:37 PM	60	1	4,100
	Saturday	8:14 AM	5:37 PM	60	1	
	Sunday	8:14 AM	5:37 PM	60	1	
Short-Range	Weekday	6:15 AM	8:15 PM	60	2	9,100
	Saturday	8:15 AM	5:15 PM	60	2	
	Sunday	9:15 AM	4:15 PM	60	2	
Mid-Range	Weekday	6:15 AM	8:15 PM	60	2	9,100
	Saturday	8:15 AM	5:15 PM	60	2	
	Sunday	9:15 AM	4:15 PM	60	2	
Long-Range	Weekday	6:15 AM	10:15 PM	30-60	4	16,500
	Saturday	8:15 AM	7:15 PM	60	2	
	Sunday	9:15 AM	6:15 PM	60	2	

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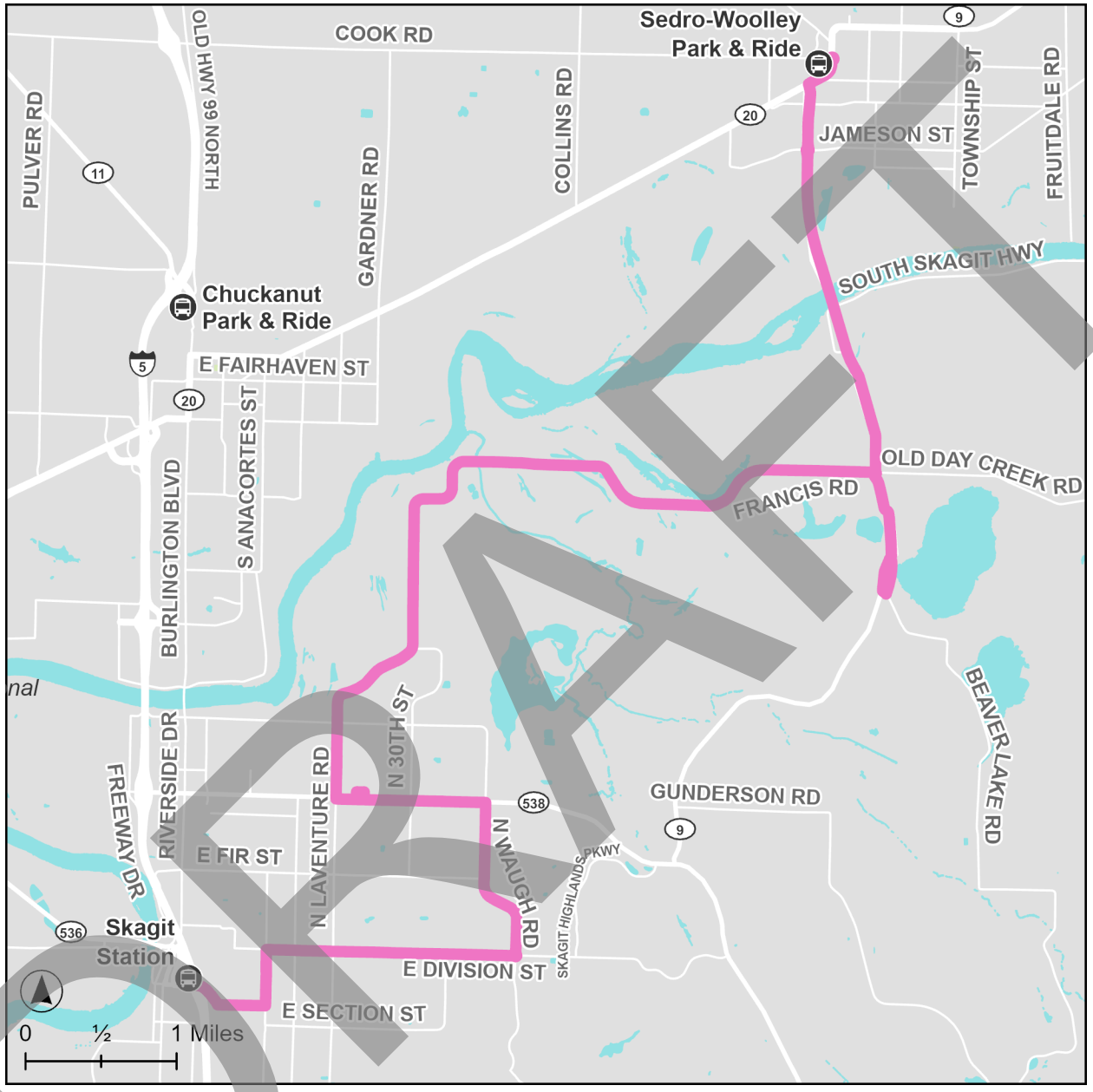
Figure 15 Recommended Route 305 Alignment



Route 717 Concrete

Action: No change in routing.

Route 717 circulates throughout Concrete while also serving the Cape Horn and Cedar Grove areas south of the Skagit River. Route 717 connects with Route 70X at the Concrete Park & Ride. No alignment changes are recommended for Route 717. It is recommended that Routes 717 and 70X are merged into a singular route during Saturday service in the short-range term to adjust for optimal resource allocation.

Service requirements for Route 717 are shown in Table 12. The recommended Route 171 alignment is depicted in Figure 16.

Table 12 Recommended Route 717 Service Improvements

Phase	Day	Start	End	Frequency	Peak Buses	Approx. Annual Hours
Existing	Weekday	6:35 AM	8:20 PM	60	1	3,600
	Saturday	8:40 AM	5:12 PM	3 trips	1	
	Sunday	-	-	-	-	
Short-Range	Weekday	6:00 AM	8:00 PM	60	1	3,900
	Saturday	9:00 AM	6:00 PM	120	1	
	Sunday	-	-	-	-	
Mid-Range	Weekday	6:00 AM	8:00 PM	60	1	4,600
	Saturday	9:00 AM	6:00 PM	60	1	
	Sunday	9:00 AM	6:00 PM	60	1	
Long-Range	Weekday	6:00 AM	9:00 PM	60	1	4,900
	Saturday	9:00 AM	6:00 PM	60	1	
	Sunday	9:00 AM	6:00 PM	60	1	

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Figure 16 Recommended Route 717 Alignment

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West County

Route 409 Anacortes

Action: Replace with Route 410 and On-Demand Service

Route 409 serves downtown Anacortes with a one-way loop that runs primarily on Commercial and M Avenues.

The recommendation for Route 409 is to replace it with the extended Route 40X, the shortened Route 410, and the Anacortes On-Demand Zone pilot.

The extended Route 40X would serve Commercial Ave in both directions south of 10th Street.

The shortened Route 410 would serve several destinations currently served by Route 409, including Island Hospital, Anacortes Public Library, Safeway, and Guemes Island Ferry Terminal.

The Anacortes on-demand zone would provide curb-to-curb service to destinations east of A Avenue, north of 41st Street, west of Commercial Ave, and south of 3rd Street.

Figure 17 depicts the Recommended Route 410 and Anacortes On-Demand Zone to replace existing Route 409.

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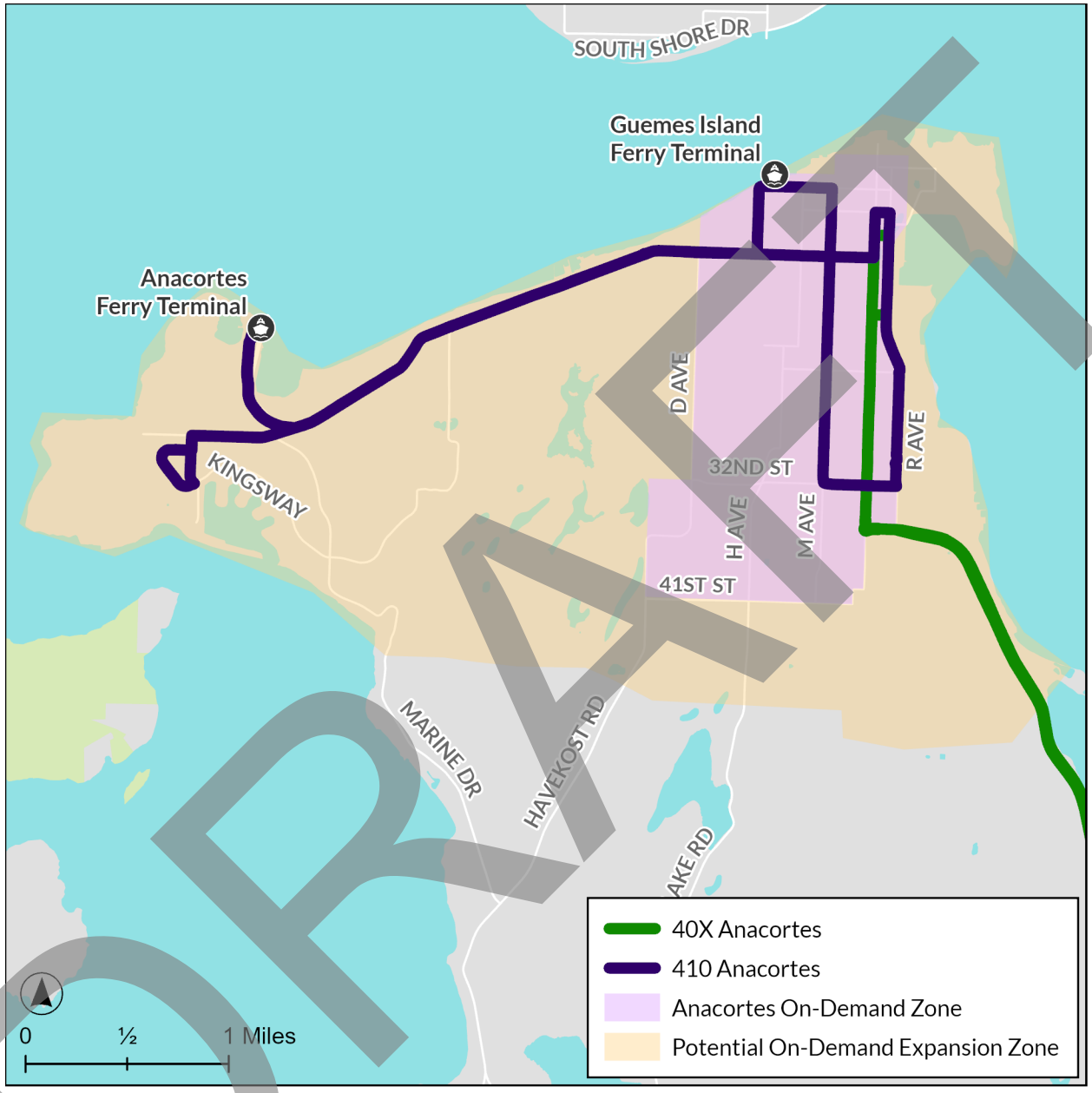
Figure 17 Recommended Route 410 Alignment and Anacortes On-Demand Zone to Replace Route 409



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Route 410 Anacortes

Action: Shorten route to Anacortes.

Existing Route 410 connects riders traveling to or from Anacortes with existing Routes 40X, 513 and 615 at March Point Park & Ride.

The recommended Route 40X extends to Anacortes to reduce transfers to riders traveling to Anacortes and/or provide a better transfer location for connecting at March Point Park & Ride.

In coordination with the Route 40X extension, Route 410 would only operate within Anacortes and connect with Route 40X at 10th Street and Q Avenue. Route 410 would also be extended to Island Hospital.

Service requirements for Route 410 are shown in Table 13. Figure 18 depicts the recommended Route 410 alignment.

Existing Route 410 Alignment

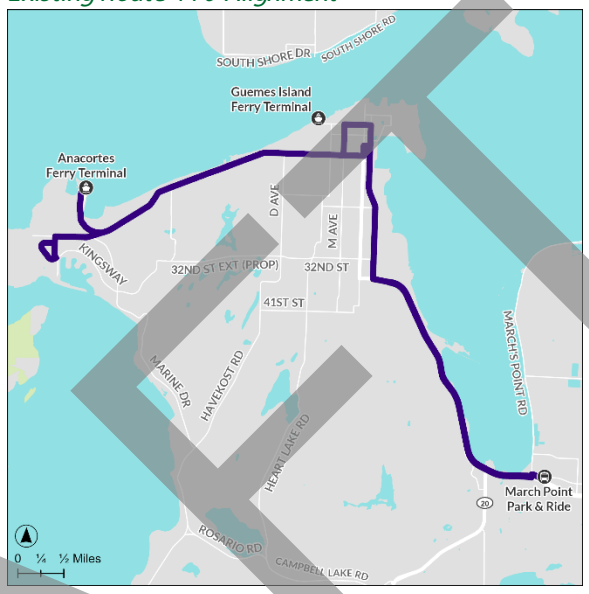

Table 13 Recommended Route 410 Service Improvements

Phase	Day	Start	End	Frequency	Peak Buses	Approx. Annual Hours
Existing	Weekday	6:03 AM	8:30 PM	60	1	4,200
	Saturday	8:06 AM	5:35 PM	60	1	
	Sunday	-	-	-	-	
Short-Range	Weekday	6:00 AM	8:00 PM	30-60	2	6,400
	Saturday	8:00 AM	6:00 PM	60	1	
	Sunday	-	-	-	-	
Mid-Range	Weekday	6:00 AM	8:00 PM	30-60	2	7,600
	Saturday	8:00 AM	6:00 PM	60	1	
	Sunday	9:00 AM	5:00 PM	60	1	
Long-Range	Weekday	6:00 AM	9:00 PM	30-60	2	8,000
	Saturday	8:00 AM	7:00 PM	60	1	
	Sunday	9:00 AM	6:00 PM	60	1	

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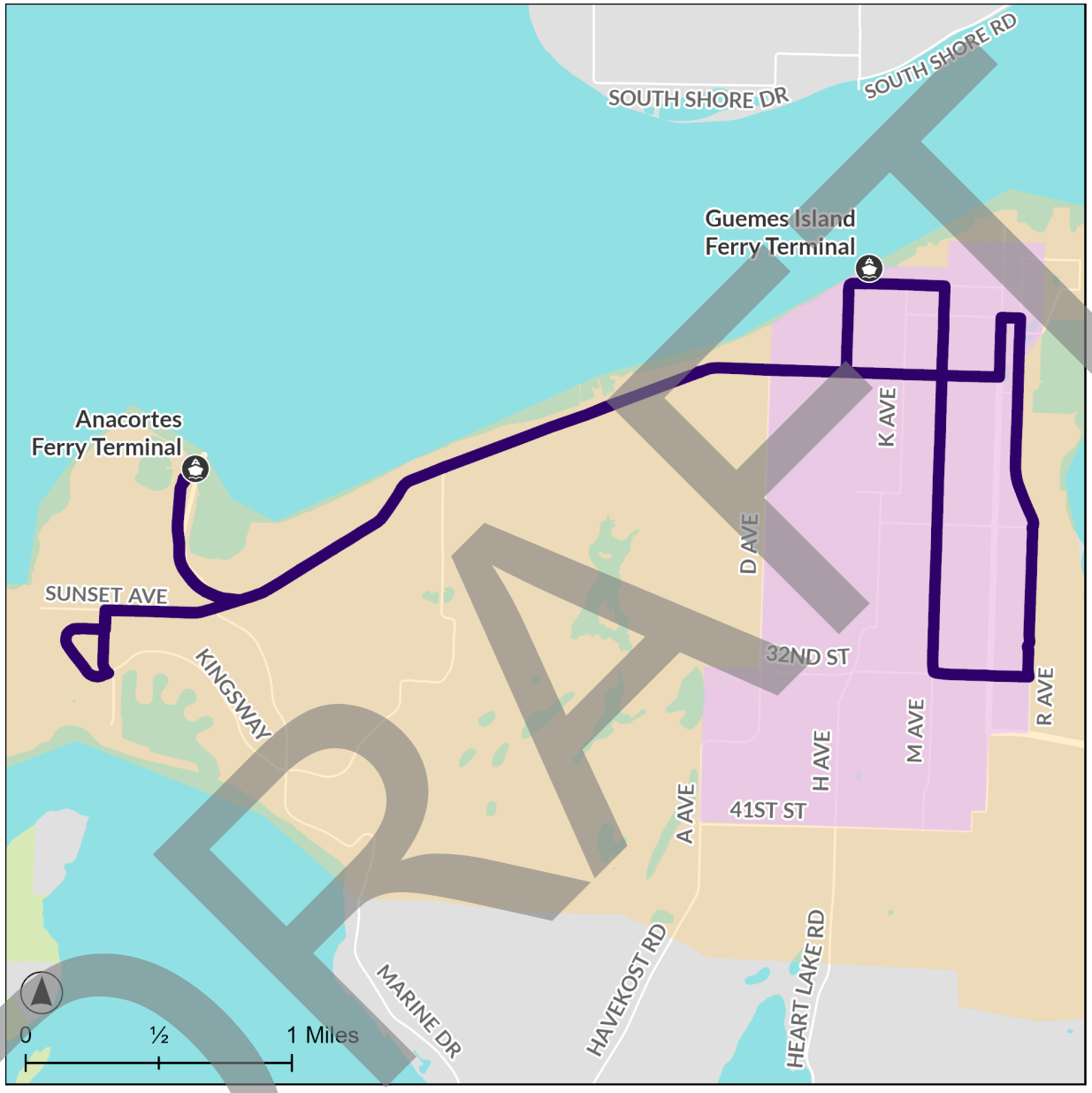
Figure 18 Recommended Route 410 Alignment



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Route 615 LaConner

Action: No change in routing.

Route 615 connects LaConner and Swinomish Village with Skagit Station and Anacortes via a transfer at March Point Park & Ride. Route 615 also serves the Swinomish Lodge and Casino. No alignment changes are recommended for Route 615.

Service requirements for Route 615 are shown in Table 14. Figure 19 depicts the recommended Route 615 alignment.

Table 14 Recommended Route 615 Service Improvements

Phase	Day	Start	End	Frequency	Peak Buses	Approx. Annual Hours
Existing	Weekday	6:00 AM	8:30 PM	120	1	4,300
	Saturday	8:00 AM	6:30 PM	120	1	
	Sunday	-	-	-	-	
Short-Range	Weekday	6:00 AM	8:00 PM	120	1	4,100
	Saturday	8:45 AM	6:15 PM	120	1	
	Sunday	-	-	-	-	
Mid-Range	Weekday	6:00 AM	8:00 PM	60	2	8,100
	Saturday	8:45 AM	6:15 PM	120	1	
	Sunday	9:00 AM	5:00 PM	120	1	
Long-Range	Weekday	6:00 AM	10:00 PM	60	2	10,400
	Saturday	8:45 AM	8:15 PM	60	2	
	Sunday	9:00 AM	7:00 PM	60	2	

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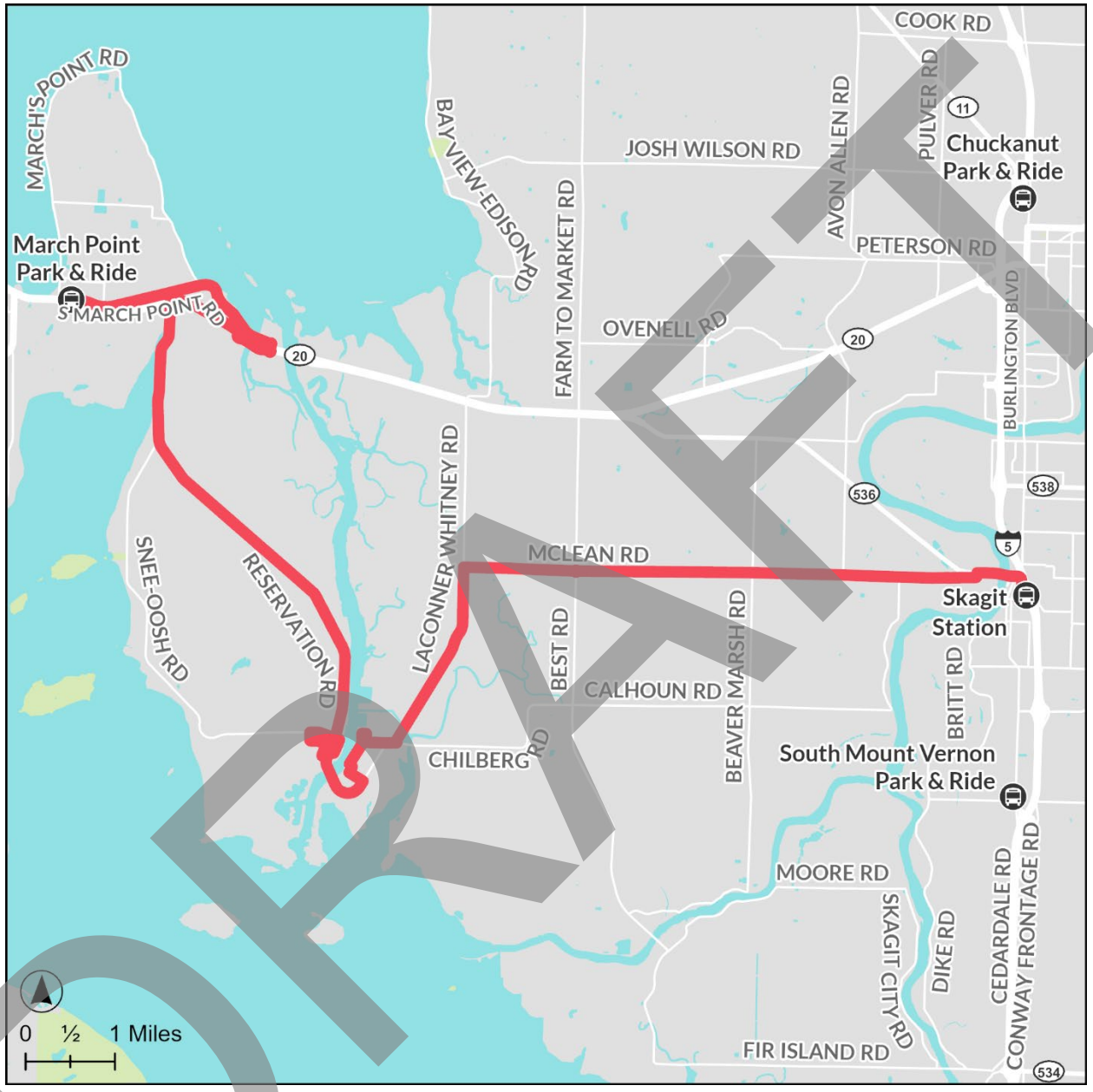
Figure 19 Recommended Route 615 Alignment



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APPENDIX C

SHORT-RANGE TIMETABLES AND BUS STOP ACTIONS

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APPENDIX C: SHORT-RANGE TIMETABLES AND BUS STOP ACTIONS

Key Connections

All routes that serve a transit hub will depart the station at either the :15 and/or :45 of each hour, with the only exceptions being Routes 205 and 70X.

Departs Skagit Station

- 40X – :15
- 80X – :45
- 90X – :15
- 201 – :15 / :45
- 202 – :15
- 205 – :15 / :45
- 208 – :15 / :45
- 305 – :15
- 615 – :45

Departs Chuckanut Park-and-Ride

- 101 – :15 / :45
- 202 – :56 – Unable to time connection with other routes
- 205 – :15 / :45
- 301 – :15 / :45
- 70X – :00 / :30 – Departures vary; 70X does not depart every 30 minutes

Departs Sedro-Woolley Park-and-Ride

- 301 – :15 / :45
- 305 – :15
- 70X – :15 / :45 – Departures vary; 70X does not depart every 30 minutes

Departs Anacortes (10th & Q)

- 40X – :15
- 410 – :00

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Timetables

Route 40X *– Anacortes*

Weekday

Westbound			Eastbound		
Skagit Station	March Point Park & Ride	10th St at Q Ave	10th St at Q Ave	March Point Park & Ride	Skagit Station
6:15	6:40	6:55	6:15	6:30	6:55
7:15	7:40	7:55	7:15	7:30	7:55
8:15	8:40	8:55	8:15	8:30	8:55
9:15	9:40	9:55	9:15	9:30	9:55
10:15	10:40	10:55	10:15	10:30	10:55
11:15	11:40	11:55	11:15	11:30	11:55
12:15	12:40	12:55	12:15	12:30	12:55
13:15	13:40	13:55	13:15	13:30	13:55
14:15	14:40	14:55	14:15	14:30	14:55
15:15	15:40	15:55	15:15	15:30	15:55
16:15	16:40	16:55	16:15	16:30	16:55
17:15	17:40	17:55	17:15	17:30	17:55
18:15	18:40	18:55	18:15	18:30	18:55
19:15	19:40	19:55	19:15	19:30	19:55

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Saturday

Westbound			Eastbound		
Skagit Station	March Point Park & Ride	10th St at Q Ave	10th St at Q Ave	March Point Park & Ride	Skagit Station
8:15	8:40	8:55	9:15	9:30	9:55
9:15	9:40	9:55	10:15	10:30	10:55
10:15	10:40	10:55	11:15	11:30	11:55
11:15	11:40	11:55	12:15	12:30	12:55
12:15	12:40	12:55	13:15	13:30	13:55
13:15	13:40	13:55	14:15	14:30	14:55
14:15	14:40	14:55	15:15	15:30	15:55
15:15	15:40	15:55	16:15	16:30	16:55
16:15	16:40	16:55	17:15	17:30	17:55

Sunday

Westbound			Eastbound		
Skagit Station	March Point Park & Ride	10th St at Q Ave	10th St at Q Ave	March Point Park & Ride	Skagit Station
9:15	9:40	9:55	10:15	10:30	10:55
11:15	11:40	11:55	12:15	12:30	12:55
13:15	13:40	13:55	14:15	14:30	14:55
15:15	15:40	15:55	16:15	16:30	16:55

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Route 70X – *Mount Vernon – Sedro-Woolley – Concrete*

Weekday

Eastbound					Westbound				
Chuckanut Park & Ride	Sedro-Woolley Park & Ride	Lyman	Hamilton	Concrete Park & Ride	Concrete Park & Ride	Hamilton	Lyman	Sedro Woolley Park & Ride	Chuckanut Park & Ride
6:30	6:45	7:10	7:20	7:40	8:00	8:20	8:30	8:55	9:10
8:00	8:15	8:40	8:50	9:10	9:30	9:50	10:00	10:25	10:40
9:30	9:45	10:10	10:20	10:40	11:00	11:20	11:30	11:55	12:10
11:00	11:15	11:40	11:50	12:10	12:30	12:50	13:00	13:25	13:40
12:30	12:45	13:10	13:20	13:40	14:00	14:20	14:30	14:55	15:10
14:00	14:15	14:40	14:50	15:10	15:30	15:50	16:00	16:25	16:40
15:30	15:45	16:10	16:20	16:40	17:00	17:20	17:30	17:55	18:10
17:00	17:15	17:40	17:50	18:10	18:30	18:50	19:00	19:25	19:40

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Saturday – Interline with Route 717

Eastbound					Westbound				
Chuckanut Park & Ride	Sedro-Woolley Park & Ride	Lyman	Hamilton	Concrete Park & Ride	Concrete Park & Ride	Hamilton	Lyman	Sedro Woolley Park & Ride	Chuckanut Park & Ride
8:00	8:15	8:40	8:50	9:10	9:30	9:50	10:00	10:25	10:40
10:00	10:15	10:40	10:50	11:10	11:30	11:50	12:00	12:25	12:40
12:00	12:15	12:40	12:50	13:10	13:30	13:50	14:00	14:25	14:40
14:00	14:15	14:40	14:50	15:10	15:30	15:50	16:00	16:25	16:40
16:00	16:15	16:40	16:50	17:10	17:30	17:50	18:00	18:25	18:40

Sunday

Eastbound					Westbound				
Chuckanut Park & Ride	Sedro-Woolley Park & Ride	Lyman	Hamilton	Concrete Park & Ride	Concrete Park & Ride	Hamilton	Lyman	Sedro Woolley Park & Ride	Chuckanut Park & Ride
9:00	9:15	9:40	9:50	10:10	10:30	10:50	11:00	11:25	11:40
12:00	15:15	12:40	12:50	13:10	13:30	13:50	14:00	14:25	14:40
15:00	15:15	15:40	15:50	16:10	16:30	16:50	17:00	17:25	17:40

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Route 80X – *Bellingham Connect*

Weekday

Northbound					Southbound				
Skagit Station	Chuckanut Park & Ride	Alger Park & Ride	Lincoln Creek Park & Ride	Bellingham Station	Bellingham Station	Lincoln Creek Park & Ride	Alger Park & Ride	Chuckanut Park & Ride	Skagit Station
6:45	6:55	7:14	7:34	7:37	7:45	7:48	8:08	8:29	8:38
7:45	7:55	8:14	8:34	8:37	8:45	8:48	9:08	9:29	9:38
8:45	8:55	9:14	9:34	9:37	9:45	9:48	10:08	10:29	10:38
10:45	10:55	11:14	11:34	11:37	11:45	11:48	12:08	12:29	12:38
12:45	12:55	13:14	13:34	13:37	13:45	13:48	14:08	14:29	14:38
14:45	14:55	15:14	15:34	15:37	15:45	15:48	16:08	16:29	16:38
15:45	15:55	16:14	16:34	16:37	16:45	16:48	17:08	17:29	17:38
16:45	16:55	17:14	17:34	17:37	17:45	17:48	18:08	18:29	18:38
17:45	17:55	18:14	18:34	18:37	18:45	18:48	19:08	19:29	19:38
18:45	18:55	19:14	19:34	19:37	19:45	19:48	20:08	20:29	20:38

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Saturday

Northbound					Southbound				
Skagit Station	Chuckanut Park & Ride	Alger Park & Ride	Lincoln Creek Park & Ride	Bellingham Station	Bellingham Station	Lincoln Creek Park & Ride	Alger Park & Ride	Chuckanut Park & Ride	Skagit Station
7:45	7:55	8:14	8:34	8:37	8:45	8:48	9:08	9:29	9:38
9:45	9:55	10:14	10:34	10:37	10:45	10:48	11:08	11:29	11:38
11:45	11:55	12:14	12:34	12:37	12:45	12:48	13:08	13:29	13:38
13:45	13:55	14:14	14:34	14:37	14:45	14:48	15:08	15:29	15:38
15:45	15:55	16:14	16:34	16:37	16:45	16:48	17:08	17:29	17:38

Sunday

Northbound					Southbound				
Skagit Station	Chuckanut Park & Ride	Alger Park & Ride	Lincoln Creek Park & Ride	Bellingham Station	Bellingham Station	Lincoln Creek Park & Ride	Alger Park & Ride	Chuckanut Park & Ride	Skagit Station
8:45	8:55	9:14	9:34	9:37	9:45	9:48	10:08	10:29	10:38
10:45	10:55	11:14	11:34	11:37	11:45	11:48	12:08	12:29	12:38
12:45	12:55	13:14	13:34	13:37	13:45	13:48	14:08	14:29	14:38
14:45	14:55	15:14	15:34	15:37	15:45	15:48	16:08	16:29	16:38

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Route 90X – *Everett Connect*

Weekday

Southbound				Northbound			
Chuckanut Park & Ride	Skagit Station	South Mount Vernon Park & Ride	Everett Station	Everett Station	South Mount Vernon Park & Ride	Skagit Station	Chuckanut Park & Ride
5:00	5:10	5:15	6:15	6:30	7:30	7:35	7:45
6:00	6:10	6:15	7:15	7:30	8:30	8:35	8:45
7:00	7:10	7:15	8:15	8:30	9:30	9:35	9:45
8:00	8:10	8:15	9:15	9:30	10:30	10:35	10:45
9:30	9:40	9:45	10:45	11:00	12:00	12:05	12:15
11:00	11:10	11:15	12:15	12:30	13:30	13:35	13:45
12:30	12:40	12:45	13:45	14:00	15:00	15:05	15:15
14:00	14:10	14:15	15:15	15:30	16:30	16:35	16:45
15:00	15:10	15:15	16:15	16:30	17:30	17:35	17:45
16:00	16:10	16:15	17:15	17:30	18:30	18:35	18:45
17:00	17:10	17:15	18:15	18:30	19:30	19:35	19:45
20:00	20:10	20:15	21:15	21:30	22:30	22:35	22:45

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Saturday

Southbound				Northbound			
Chuckanut Park & Ride	Skagit Station	South Mount Vernon Park & Ride	Everett Station	Everett Station	South Mount Vernon Park & Ride	Skagit Station	Chuckanut Park & Ride
8:00	8:10	8:15	9:15	9:30	10:30	10:35	10:45
9:30	9:40	9:45	10:45	11:00	12:00	12:05	12:15
11:00	11:10	11:15	12:15	12:30	13:30	13:35	13:45
12:30	12:40	12:45	13:45	14:00	15:00	15:05	15:15
14:00	14:10	14:15	15:15	15:30	16:30	16:35	16:45
15:30	15:40	15:45	16:45	17:00	18:00	18:05	18:15
17:00	17:10	17:15	18:15	18:30	19:30	19:35	19:45
18:30	18:40	18:45	19:45	20:00	21:00	21:05	21:15

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Sunday

Southbound				Northbound			
Chuckanut Park & Ride	Skagit Station	South Mount Vernon Park & Ride	Everett Station	Everett Station	South Mount Vernon Park & Ride	Skagit Station	Chuckanut Park & Ride
9:00	9:10	9:15	10:15	10:30	11:30	11:35	11:45
10:30	10:40	10:45	11:45	12:00	13:00	13:05	13:15
12:00	12:10	12:15	13:15	13:30	14:30	14:35	14:45
13:30	13:40	13:45	14:45	15:00	16:00	16:05	16:15
15:00	15:10	15:15	16:15	16:30	17:30	17:35	17:45
16:30	16:40	16:45	17:45	18:00	19:00	19:05	19:15

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Route 101- *Burlington*

Weekday

Southbound				Northbound			
Chuckanut Park & Ride	Anacortes St near Burlington Public Library	Walnut St at George Hopper Rd	WalMart	WalMart	Walnut St & George Hopper Rd	Burlington Senior Center	Chuckanut Park & Ride
6:15	6:19	6:34	6:39	6:45	6:52	7:06	7:12
6:45	6:49	7:04	7:09	7:15	7:22	7:36	7:42
7:15	7:19	7:34	7:39	7:45	7:52	8:06	8:12
7:45	7:49	8:04	8:09	8:15	8:22	8:36	8:42
8:15	8:19	8:34	8:39	8:45	8:52	9:06	9:12
8:45	8:49	9:04	9:09	9:15	9:22	9:36	9:42
9:15	9:19	9:34	9:39	9:45	9:52	10:06	10:12
9:45	9:49	10:04	10:09	10:15	10:22	10:36	10:42
10:15	10:19	10:34	10:39	10:45	10:52	11:06	11:12
10:45	10:49	11:04	11:09	11:15	11:22	11:36	11:42
11:15	11:19	11:34	11:39	11:45	11:52	12:06	12:12
11:45	11:49	12:04	12:09	12:15	12:22	12:36	12:42
12:15	12:19	12:34	12:39	12:45	12:52	13:06	13:12
12:45	12:49	13:04	13:09	13:15	13:22	13:36	13:42
13:15	13:19	13:34	13:39	13:45	13:52	14:06	14:12
13:45	13:49	14:04	14:09	14:15	14:22	14:36	14:42
14:15	14:19	14:34	14:39	14:45	14:52	15:06	15:12
14:45	14:49	15:04	15:09	15:15	15:22	15:36	15:42
15:15	15:19	15:34	15:39	15:45	15:52	16:06	16:12
15:45	15:49	16:04	16:09	16:15	16:22	16:36	16:42
16:15	16:19	16:34	16:39	16:45	16:52	17:06	17:12

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16:45	16:49	17:04	17:09	17:15	17:22	17:36	17:42
17:15	17:19	17:34	17:39	17:45	17:52	18:06	18:12
18:15	18:19	18:34	18:39	18:45	18:52	19:06	19:12
19:15	19:19	19:34	19:39	19:45	19:52	20:06	20:12
20:15	20:19	20:34	20:39	20:45	20:52	21:06	21:12

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Saturday

Southbound				Northbound			
Chuckanut Park & Ride	Anacortes St near Burlington Public Library	Walnut St at George Hopper Rd	WalMart	WalMart	Walnut St & George Hopper Rd	Burlington Senior Center	Chuckanut Park & Ride
7:45	7:49	8:04	8:09	8:15	8:22	8:36	8:42
8:15	8:19	8:34	8:39	8:45	8:52	9:06	9:12
8:45	8:49	9:04	9:09	9:15	9:22	9:36	9:42
9:15	9:19	9:34	9:39	9:45	9:52	10:06	10:12
9:45	9:49	10:04	10:09	10:15	10:22	10:36	10:42
10:15	10:19	10:34	10:39	10:45	10:52	11:06	11:12
10:45	10:49	11:04	11:09	11:15	11:22	11:36	11:42
11:15	11:19	11:34	11:39	11:45	11:52	12:06	12:12
11:45	11:49	12:04	12:09	12:15	12:22	12:36	12:42
12:15	12:19	12:34	12:39	12:45	12:52	13:06	13:12
12:45	12:49	13:04	13:09	13:15	13:22	13:36	13:42
13:15	13:19	13:34	13:39	13:45	13:52	14:06	14:12
13:45	13:49	14:04	14:09	14:15	14:22	14:36	14:42
14:15	14:19	14:34	14:39	14:45	14:52	15:06	15:12
14:45	14:49	15:04	15:09	15:15	15:22	15:36	15:42
15:15	15:19	15:34	15:39	15:45	15:52	16:06	16:12
15:45	15:49	16:04	16:09	16:15	16:22	16:36	16:42
16:15	16:19	16:34	16:39	16:45	16:52	17:06	17:12
16:45	16:49	17:04	17:09	17:15	17:22	17:36	17:42
17:45	17:49	18:04	18:09	18:15	18:22	18:36	18:42

DRAFT

Sunday

Southbound				Northbound			
Chuckanut Park & Ride	Anacortes St near Burlington Public Library	Walnut St at George Hopper Rd	WalMart	WalMart	Walnut St & George Hopper Rd	Burlington Senior Center	Chuckanut Park & Ride
9:15	9:19	9:34	9:39	9:45	9:52	10:06	10:12
10:15	10:19	10:34	10:39	10:45	10:52	11:06	11:12
11:15	11:19	11:34	11:39	11:45	11:52	12:06	12:12
12:15	12:19	12:34	12:39	12:45	12:52	13:06	13:12
13:15	13:19	13:34	13:39	13:45	13:52	14:06	14:12
14:15	14:19	14:34	14:39	14:45	14:52	15:06	15:12
15:15	15:19	15:34	15:39	15:45	15:52	16:06	16:12
16:15	16:19	16:34	16:39	16:45	16:52	17:06	17:12

DRAFT

Route 201 – *Mount Vernon*

Weekday

Southbound				Northbound				
WalMart	YMCA	Laventure Rd at Division St	Skagit Station	Skagit Station	Laventure Rd at Division St	Austin Lane	YMCA	WalMart
6:44	6:51	6:57	7:06	6:15	6:23	6:30	6:33	6:39
7:14	7:21	7:27	7:36	6:45	6:53	7:00	7:03	7:09
7:44	7:51	7:57	8:06	7:15	7:23	7:30	7:33	7:39
8:14	8:21	8:27	8:36	7:45	7:53	8:00	8:03	8:09
8:44	8:51	8:57	9:06	8:15	8:23	8:30	8:33	8:39
9:14	9:21	9:27	9:36	8:45	8:53	9:00	9:03	9:09
9:44	9:51	9:57	10:06	9:15	9:23	9:30	9:33	9:39
10:14	10:21	10:27	10:36	9:45	9:53	10:00	10:03	10:09
10:44	10:51	10:57	11:06	10:15	10:23	10:30	10:33	10:39
11:14	11:21	11:27	11:36	10:45	10:53	11:00	11:03	11:09
11:44	11:51	11:57	12:06	11:15	11:23	11:30	11:33	11:39
12:14	12:21	12:27	12:36	11:45	11:53	12:00	12:03	12:09
12:44	12:51	12:57	13:06	12:15	12:23	12:30	12:33	12:39
13:14	13:21	13:27	13:36	12:45	12:53	13:00	13:03	13:09
13:44	13:51	13:57	14:06	13:15	13:23	13:30	13:33	13:39
14:14	14:21	14:27	14:36	13:45	13:53	14:00	14:03	14:09
14:44	14:51	14:57	15:06	14:15	14:23	14:30	14:33	14:39
15:14	15:21	15:27	15:36	14:45	14:53	15:00	15:03	15:09
15:44	15:51	15:57	16:06	15:15	15:23	15:30	15:33	15:39
16:14	16:21	16:27	16:36	15:45	15:53	16:00	16:03	16:09
16:44	16:51	16:57	17:06	16:15	16:23	16:30	16:33	16:39
17:14	17:21	17:27	17:36	16:45	16:53	17:00	17:03	17:09

DRAFT

17:44	17:51	17:57	18:06	17:15	17:23	17:30	17:33	17:39
18:44	18:50	18:58	19:06	18:15	18:23	18:30	18:33	18:39
19:44	19:50	19:58	20:06	19:15	19:23	19:30	19:33	19:39
20:44	20:50	20:58	21:06	20:15	20:23	20:30	20:33	20:39

DRAFT

Saturday

Southbound				Northbound				
WalMart	YMCA	Laventure Rd at Division St	Skagit Station	Skagit Station	Laventure Rd at Division St	Austin Lane	YMCA	WalMart
8:14	8:21	8:27	8:36	7:45	7:53	8:00	8:03	8:09
8:44	8:51	8:57	9:06	8:15	8:23	8:30	8:33	8:39
9:14	9:21	9:27	9:36	8:45	8:53	9:00	9:03	9:09
9:44	9:51	9:57	10:06	9:15	9:23	9:30	9:33	9:39
10:14	10:21	10:27	10:36	9:45	9:53	10:00	10:03	10:09
10:44	10:51	10:57	11:06	10:15	10:23	10:30	10:33	10:39
11:14	11:21	11:27	11:36	10:45	10:53	11:00	11:03	11:09
11:44	11:51	11:57	12:06	11:15	11:23	11:30	11:33	11:39
12:14	12:21	12:27	12:36	11:45	11:53	12:00	12:03	12:09
12:44	12:51	12:57	13:06	12:15	12:23	12:30	12:33	12:39
13:14	13:21	13:27	13:36	12:45	12:53	13:00	13:03	13:09
13:44	13:51	13:57	14:06	13:15	13:23	13:30	13:33	13:39
14:14	14:21	14:27	14:36	13:45	13:53	14:00	14:03	14:09
14:44	14:51	14:57	15:06	14:15	14:23	14:30	14:33	14:39
15:14	15:21	15:27	15:36	14:45	14:53	15:00	15:03	15:09
15:44	15:51	15:57	16:06	15:15	15:23	15:30	15:33	15:39
16:14	16:21	16:27	16:36	15:45	15:53	16:00	16:03	16:09
16:44	16:51	16:57	17:06	16:15	16:23	16:30	16:33	16:39
17:14	17:21	17:27	17:36	16:45	16:53	17:00	17:03	17:09
17:44	17:51	17:57	18:06	17:15	17:23	17:30	17:33	17:39
18:44	18:50	18:58	19:06	18:15	18:23	18:30	18:33	18:39

DRAFT

Sunday

Southbound				Northbound				
WalMart	YMCA	Laventure Rd at Division St	Skagit Station	Skagit Station	Laventure Rd at Division St	Austin Lane	YMCA	WalMart
8:44	8:51	8:57	9:06	8:15	8:23	8:30	8:33	8:39
9:44	9:51	9:57	10:06	9:15	9:23	9:30	9:33	9:39
10:44	10:51	10:57	11:06	10:15	10:23	10:30	10:33	10:39
11:44	11:51	11:57	12:06	11:15	11:23	11:30	11:33	11:39
12:44	12:51	12:57	13:06	12:15	12:23	12:30	12:33	12:39
13:44	13:51	13:57	14:06	13:15	13:23	13:30	13:33	13:39
14:44	14:51	14:57	15:06	14:15	14:23	14:30	14:33	14:39
15:44	15:51	15:57	16:06	15:15	15:23	15:30	15:33	15:39
16:44	16:51	16:57	17:06	16:15	16:23	16:30	16:33	16:39
17:44	17:51	17:57	18:06	17:15	17:23	17:30	17:33	17:39
18:44	18:50	18:58	19:06	18:15	18:23	18:30	18:33	18:39

DRAFT

Route 202 – *South Mount Vernon/Chuckanut*

Weekday

Southbound					Northbound		
Chuckanut Park & Ride	Goldenrod Rd at Stevens Rd	Skagit Station	Cleveland Ave at Taylor St	South Mount Vernon Park & Ride	South Mount Vernon Park & Ride	Skagit Station	Chuckanut Park & Ride
-	-	6:15	6:19	6:27	6:27	6:45	6:53
6:56	7:04	7:15	7:19	7:27	7:27	7:45	7:53
7:56	8:04	8:15	8:19	8:27	8:27	8:45	8:53
8:56	9:04	9:15	9:19	9:27	9:27	9:45	9:53
9:56	10:04	10:15	10:19	10:27	10:27	10:45	10:53
10:56	11:04	11:15	11:19	11:27	11:27	11:45	11:53
11:56	12:04	12:15	12:19	12:27	12:27	12:45	12:53
12:56	13:04	13:15	13:19	13:27	13:27	13:45	13:53
13:56	14:04	14:15	14:19	14:27	14:27	14:45	14:53
14:56	15:04	15:15	15:19	15:27	15:27	15:45	15:53
15:56	16:04	16:15	16:19	16:27	16:27	16:45	16:53
16:56	17:04	17:15	17:19	17:27	17:27	17:45	17:53
17:56	18:04	18:15	18:19	18:27	18:27	18:45	18:53
18:56	19:04	19:15	19:19	19:27	19:27	19:45	19:53
19:56	19:04	20:15	20:19	20:27	20:27	20:45	-

DRAFT

Saturday

Southbound					Northbound		
Chuckanut Park & Ride	Goldenrod Rd at Stevens Rd	Skagit Station	Cleveland Ave at Taylor St	South Mount Vernon Park & Ride	South Mount Vernon Park & Ride	Skagit Station	Chuckanut Park & Ride
-	-	8:15	8:19	8:27	8:27	8:45	8:53
8:56	9:04	9:15	9:19	9:27	9:27	9:45	9:53
9:56	10:04	10:15	10:19	10:27	10:27	10:45	10:53
10:56	11:04	11:15	11:19	11:27	11:27	11:45	11:53
11:56	12:04	12:15	12:19	12:27	12:27	12:45	12:53
12:56	13:04	13:15	13:19	13:27	13:27	13:45	13:53
13:56	14:04	14:15	14:19	14:27	14:27	14:45	14:53
14:56	15:04	15:15	15:19	15:27	15:27	15:45	15:53
15:56	16:04	16:15	16:19	16:27	16:27	16:45	16:53
16:56	17:04	17:15	17:19	17:27	17:27	17:45	17:53
17:56	18:04	18:15	18:19	18:27	18:27	18:45	-

DRAFT

Sunday

Southbound					Northbound		
Chuckanut Park & Ride	Goldenrod Rd at Stevens Rd	Skagit Station	Cleveland Ave at Taylor St	South Mount Vernon Park & Ride	South Mount Vernon Park & Ride	Skagit Station	Chuckanut Park & Ride
-	-	9:15	9:19	9:27	9:27	9:45	9:53
9:56	10:04	10:15	10:19	10:27	10:27	10:45	10:53
10:56	11:04	11:15	11:19	11:27	11:27	11:45	11:53
11:56	12:04	12:15	12:19	12:27	12:27	12:45	12:53
12:56	13:04	13:15	13:19	13:27	13:27	13:45	13:53
13:56	14:04	14:15	14:19	14:27	14:27	14:45	14:53
14:56	15:04	15:15	15:19	15:27	15:27	15:45	15:53
15:56	16:04	16:15	16:19	16:27	16:27	16:45	16:53
16:56	17:04	17:15	17:19	17:27	17:27	17:45	-

DRAFT

Route 205 – *Skagit Station – Skagit Valley College*

Weekday

Northbound		Southbound	
Skagit Station	Skagit Valley College	Skagit Valley College	Skagit Station
6:15	6:28	6:28	6:40
6:45	6:58	6:58	7:10
7:15	7:28	7:28	7:40
7:45	7:58	7:58	8:10
8:15	8:28	8:28	8:40
8:45	8:58	8:58	9:10
9:15	9:28	9:28	9:40
9:45	9:58	9:58	10:10
10:15	10:28	10:28	10:40
10:45	10:58	10:58	11:10
11:15	11:28	11:28	11:40
11:45	11:58	11:58	12:10
12:15	12:28	12:28	12:40
12:45	12:58	12:58	13:10
13:15	13:28	13:28	13:40
13:45	13:58	13:58	14:10
14:15	14:28	14:28	14:40
14:45	14:58	14:58	15:10
15:15	15:28	15:28	15:40
15:45	15:58	15:58	16:10
16:15	16:28	16:28	16:40
16:45	16:58	16:58	17:10
17:15	17:28	17:28	17:40
17:45	17:58	17:58	18:10

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18:15	18:28	18:28	18:40
18:45	18:58	18:58	19:10
19:15	19:28	19:28	19:40
19:45	19:58	19:58	20:10
20:15	20:28	20:28	20:40
20:45	20:58	20:58	21:10
21:15	21:28	21:28	21:40

DRAFT

Saturday

Northbound		Southbound	
Skagit Station	Skagit Valley College	Skagit Valley College	Skagit Station
8:15	8:28	8:28	8:40
8:45	8:58	8:58	9:10
9:15	9:28	9:28	9:40
9:45	9:58	9:58	10:10
10:15	10:28	10:28	10:40
10:45	10:58	10:58	11:10
11:15	11:28	11:28	11:40
11:45	11:58	11:58	12:10
12:15	12:28	12:28	12:40
12:45	12:58	12:58	13:10
13:15	13:28	13:28	13:40
13:45	13:58	13:58	14:10
14:15	14:28	14:28	14:40
14:45	14:58	14:58	15:10
15:15	15:28	15:28	15:40
15:45	15:58	15:58	16:10
16:15	16:28	16:28	16:40
16:45	16:58	16:58	17:10
17:15	17:28	17:28	17:40
17:45	17:58	17:58	18:10
18:15	18:28	18:28	18:40
18:45	18:58	18:58	19:10
19:15	19:28	19:28	19:40
19:45	19:58	19:58	20:10
20:15	20:28	20:28	20:40
20:45	20:58	20:58	21:10
21:15	21:28	21:28	21:40

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Sunday

Northbound		Southbound	
Skagit Station	Skagit Valley College	Skagit Valley College	Skagit Station
9:15	9:28	9:28	9:40
9:45	9:58	9:58	10:10
10:15	10:28	10:28	10:40
10:45	10:58	10:58	11:10
11:15	11:28	11:28	11:40
11:45	11:58	11:58	12:10
12:15	12:28	12:28	12:40
12:45	12:58	12:58	13:10
13:15	13:28	13:28	13:40
13:45	13:58	13:58	14:10
14:15	14:28	14:28	14:40
14:45	14:58	14:58	15:10
15:15	15:28	15:28	15:40
15:45	15:58	15:58	16:10
16:15	16:28	16:28	16:40
16:45	16:58	16:58	17:10
17:15	17:28	17:28	17:40
17:45	17:58	17:58	18:10
18:15	18:28	18:28	18:40

DRAFT

Route 208 – *Burlington-Mount Vernon*

Northbound				Southbound			
Skagit Station	Riverside Dr at Commercial St	Burlington Blvd at Cascade Mall Dr	Chuckanut Park & Ride	Chuckanut Park & Ride	Burlington Blvd at Cascade Mall Dr	Riverside Dr at Commercial St	Skagit Station
6:15	6:24	6:32	6:41	6:45	6:52	7:01	7:08
6:45	6:54	7:02	7:11	7:15	7:22	7:31	7:38
7:15	7:24	7:32	7:41	7:45	7:52	8:01	8:08
7:45	7:54	8:02	8:11	8:15	8:22	8:31	8:38
8:15	8:24	8:32	8:41	8:45	8:52	9:01	9:08
8:45	8:54	9:02	9:11	9:15	9:22	9:31	9:38
9:15	9:24	9:32	9:41	9:45	9:52	10:01	10:08
9:45	9:54	10:02	10:11	10:15	10:22	10:31	10:38
10:15	10:24	10:32	10:41	10:45	10:52	11:01	11:08
10:45	10:54	11:02	11:11	11:15	11:22	11:31	11:38
11:15	11:24	11:32	11:41	11:45	11:52	12:01	12:08
11:45	11:54	12:02	12:11	12:15	12:22	12:31	12:38
12:15	12:24	12:32	12:41	12:45	12:52	13:01	13:08
12:45	12:54	13:02	13:11	13:15	13:22	13:31	13:38
13:15	13:24	13:32	13:41	13:45	13:52	14:01	14:08
13:45	13:54	14:02	14:11	14:15	14:22	14:31	14:38
14:15	14:24	14:32	14:41	14:45	14:52	15:01	15:08
14:45	14:54	15:02	15:11	15:15	15:22	15:31	15:38
15:15	15:24	15:32	15:41	15:45	15:52	16:01	16:08
15:45	15:54	16:02	16:11	16:15	16:22	16:31	16:38
16:15	16:24	16:32	16:41	16:45	16:52	17:01	17:08
16:45	16:54	17:02	17:11	17:15	17:22	17:31	17:38
17:15	17:24	17:32	17:41	17:45	17:52	18:01	18:08

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17:45	17:54	18:02	18:11	18:15	18:22	18:31	18:38
18:15	18:24	18:32	18:41	18:45	18:52	19:01	19:08
18:45	18:54	19:02	19:11	19:15	19:22	19:31	19:38
19:15	19:24	19:32	19:41	19:45	19:52	20:01	20:08
19:45	19:54	20:02	20:11	20:15	20:22	20:31	20:38
20:15	20:24	20:32	20:41	20:45	20:52	21:01	21:08

DRAFT

Saturday

Northbound				Southbound			
Skagit Station	Riverside Dr at Commercial St	Burlington Blvd at Cascade Mall Dr	Chuckanut Park & Ride	Chuckanut Park & Ride	Burlington Blvd at Cascade Mall Dr	Riverside Dr at Commercial St	Skagit Station
8:15	8:24	8:32	8:41	8:45	8:52	9:01	9:08
8:45	8:54	9:02	9:11	9:15	9:22	9:31	9:38
9:15	9:24	9:32	9:41	9:45	9:52	10:01	10:08
9:45	9:54	10:02	10:11	10:15	10:22	10:31	10:38
10:15	10:24	10:32	10:41	10:45	10:52	11:01	11:08
10:45	10:54	11:02	11:11	11:15	11:22	11:31	11:38
11:15	11:24	11:32	11:41	11:45	11:52	12:01	12:08
11:45	11:54	12:02	12:11	12:15	12:22	12:31	12:38
12:15	12:24	12:32	12:41	12:45	12:52	13:01	13:08
12:45	12:54	13:02	13:11	13:15	13:22	13:31	13:38
13:15	13:24	13:32	13:41	13:45	13:52	14:01	14:08
13:45	13:54	14:02	14:11	14:15	14:22	14:31	14:38
14:15	14:24	14:32	14:41	14:45	14:52	15:01	15:08
14:45	14:54	15:02	15:11	15:15	15:22	15:31	15:38
15:15	15:24	15:32	15:41	15:45	15:52	16:01	16:08
15:45	15:54	16:02	16:11	16:15	16:22	16:31	16:38
16:15	16:24	16:32	16:41	16:45	16:52	17:01	17:08
16:45	16:54	17:02	17:11	17:15	17:22	17:31	17:38
17:15	17:24	17:32	17:41	17:45	17:52	18:01	18:08
18:15	18:24	18:32	18:41	18:45	18:52	19:01	19:08

DRAFT

Sunday

Northbound				Southbound			
Skagit Station	Riverside Dr at Commercial St	Burlington Blvd at Cascade Mall Dr	Chuckanut Park & Ride	Chuckanut Park & Ride	Burlington Blvd at Cascade Mall Dr	Riverside Dr at Commercial St	Skagit Station
9:15	9:24	9:32	9:41	9:30	9:37	9:46	9:53
9:45	9:54	10:02	10:11	10:00	10:07	10:16	10:23
10:15	10:24	10:32	10:41	10:30	10:37	10:46	10:53
10:45	10:54	11:02	11:11	11:00	11:07	11:16	11:23
11:15	11:24	11:32	11:41	11:30	11:37	11:46	11:53
11:45	11:54	12:02	12:11	12:00	12:07	12:16	12:23
12:15	12:24	12:32	12:41	12:30	12:37	12:46	12:53
12:45	12:54	13:02	13:11	13:00	13:07	13:16	13:23
13:15	13:24	13:32	13:41	13:30	13:37	13:46	13:53
13:45	13:54	14:02	14:11	14:00	14:07	14:16	14:23
14:15	14:24	14:32	14:41	14:30	14:37	14:46	14:53
14:45	14:54	15:02	15:11	15:00	15:07	15:16	15:23
15:15	15:24	15:32	15:41	15:30	15:37	15:46	15:53
15:45	15:54	16:02	16:11	16:00	16:07	16:16	16:23
16:15	16:24	16:32	16:41	16:30	16:37	16:46	16:53
16:45	16:54	17:02	17:11	17:00	17:07	17:16	17:23
17:15	17:24	17:32	17:41	17:30	17:37	17:46	17:53

DRAFT

Route 301 – *Airport – Sedro-Woolley*

Weekday

Eastbound						Westbound					
Peterson Rd at Westar Ln	Chuckanut Park & Ride	United General Hospital	Sedro-Woolley Park & Ride	Sedro Woolley Park & Ride	Upper Skagit Reservation	Upper Skagit Reservation	Sedro-Woolley Park & Ride	Sedro-Woolley Park & Ride	United General Hospital	Chuckanut Park & Ride	Peterson Rd at Westar Ln
5:30	5:40	5:50	6:00	6:15	6:30	6:30	6:50	7:00	7:10	7:20	7:30
6:30	6:40	6:50	7:00	7:15	7:30	7:30	7:50	8:00	8:10	8:20	8:30
7:30	7:40	7:50	8:00	8:15	8:30	8:30	8:50	9:00	9:10	9:20	9:30
8:30	8:40	8:50	9:00	9:15	9:30	9:30	9:50	10:00	10:10	10:20	10:30
9:30	9:40	9:50	10:00	10:15	10:30	10:30	10:50	11:00	11:10	11:20	11:30
10:30	10:40	10:50	11:00	11:15	11:30	11:30	11:50	12:00	12:10	12:20	12:30
11:30	11:40	11:50	12:00	12:15	12:30	12:30	12:50	13:00	13:10	13:20	13:30
12:30	12:40	12:50	13:00	13:15	13:30	13:30	13:50	14:00	14:10	14:20	14:30
13:30	13:40	13:50	14:00	14:15	14:30	14:30	14:50	15:00	15:10	15:20	15:30
14:30	14:40	14:50	15:00	15:15	15:30	15:30	15:50	16:00	16:10	16:20	16:30
15:30	15:40	15:50	16:00	16:15	16:30	16:30	16:50	17:00	17:10	17:20	17:30
16:30	16:40	16:50	17:00	17:15	17:30	17:30	17:50	18:00	18:10	18:20	18:30
17:30	17:40	17:50	18:00	18:15	18:30	18:30	18:50	19:00	19:10	19:20	19:30
18:30	18:40	18:50	19:00	19:15	19:30	19:30	19:50	20:00	20:10	20:20	20:30

DRAFT

Saturday

Eastbound						Westbound					
Peterson Rd at Westar Ln	Chuckanut Park & Ride	United General Hospital	Sedro-Woolley Park & Ride	Sedro Woolley Park & Ride	Upper Skagit Reservation	Upper Skagit Reservation	Sedro-Woolley Park & Ride	Sedro-Woolley Park & Ride	United General Hospital	Chuckanut Park & Ride	Peterson Rd at Westar Ln
7:30	7:40	7:50	8:00	8:15	8:30	8:30	8:50	9:00	9:10	9:20	9:30
8:30	8:40	8:50	9:00	9:15	9:30	9:30	9:50	10:00	10:10	10:20	10:30
9:30	9:40	9:50	10:00	10:15	10:30	10:30	10:50	11:00	11:10	11:20	11:30
10:30	10:40	10:50	11:00	11:15	11:30	11:30	11:50	12:00	12:10	12:20	12:30
11:30	11:40	11:50	12:00	12:15	12:30	12:30	12:50	13:00	13:10	13:20	13:30
12:30	12:40	12:50	13:00	13:15	13:30	13:30	13:50	14:00	14:10	14:20	14:30
13:30	13:40	13:50	14:00	14:15	14:30	14:30	14:50	15:00	15:10	15:20	15:30
14:30	14:40	14:50	15:00	15:15	15:30	15:30	15:50	16:00	16:10	16:20	16:30
15:30	15:40	15:50	16:00	16:15	16:30	16:30	16:50	17:00	17:10	17:20	17:30
16:30	16:40	16:50	17:00	17:15	17:30	17:30	17:50	18:00	18:10	18:20	18:30

DRAFT

Sunday

Eastbound						Westbound					
Peterson Rd at Westar Ln	Chuckanut Park & Ride	United General Hospital	Sedro-Woolley Park & Ride	Sedro Woolley Park & Ride	Upper Skagit Reservation	Upper Skagit Reservation	Sedro-Woolley Park & Ride	Sedro-Woolley Park & Ride	United General Hospital	Chuckanut Park & Ride	Peterson Rd at Westar Ln
8:30	8:40	8:50	9:00	9:15	9:30	9:30	9:50	10:00	10:10	10:20	10:30
9:30	9:40	9:50	10:00	10:15	10:30	10:30	10:50	11:00	11:10	11:20	11:30
10:30	10:40	10:50	11:00	11:15	11:30	11:30	11:50	12:00	12:10	12:20	12:30
11:30	11:40	11:50	12:00	12:15	12:30	12:30	12:50	13:00	13:10	13:20	13:30
12:30	12:40	12:50	13:00	13:15	13:30	13:30	13:50	14:00	14:10	14:20	14:30
13:30	13:40	13:50	14:00	14:15	14:30	14:30	14:50	15:00	15:10	15:20	15:30
14:30	14:40	14:50	15:00	15:15	15:30	15:30	15:50	16:00	16:10	16:20	16:30

DRAFT

Route 305 – *Sedro-Woolley – Skagit Station*

Weekday

Southbound					Northbound				
Sedro-Woolley Park & Ride	Clear Lake Post Office	College Way at 26th St	Division St at Stanford Dr	Skagit Station	Skagit Station	Division St at 18th St	Skagit Valley College	Clear Lake Post Office	Sedro-Woolley Park & Ride
6:15	6:27	6:52	7:03	7:08	6:15	6:19	6:31	6:56	7:08
7:15	7:27	7:52	8:03	8:08	7:15	7:19	7:31	7:56	8:08
8:15	8:27	8:52	9:03	9:08	8:15	8:19	8:31	8:56	9:08
9:15	9:27	9:52	10:03	10:08	9:15	9:19	9:31	9:56	10:08
10:15	10:27	10:52	11:03	11:08	10:15	10:19	10:31	10:56	11:08
11:15	11:27	11:52	12:03	12:08	11:15	11:19	11:31	11:56	12:08
12:15	12:27	12:52	13:03	13:08	12:15	12:19	12:31	12:56	13:08
13:15	13:27	13:52	14:03	14:08	13:15	13:19	13:31	13:56	14:08
14:15	14:27	14:52	15:03	15:08	14:15	14:19	14:31	14:56	15:08
15:15	15:27	15:52	16:03	16:08	15:15	15:19	15:31	15:56	16:08
16:15	16:27	16:52	17:03	17:08	16:15	16:19	16:31	16:56	17:08
17:15	17:27	17:52	18:03	18:08	17:15	17:19	17:31	17:56	18:08
18:15	18:27	18:52	19:03	19:08	18:15	18:19	18:31	18:56	19:08
19:15	19:27	19:52	20:03	20:08	19:15	19:19	19:31	19:56	20:08

DRAFT

Saturday

Southbound					Northbound				
Sedro-Woolley Park & Ride	Clear Lake Post Office	College Way at 26th St	Division St at Stanford Dr	Skagit Station	Skagit Station	Division St at 18th St	Skagit Valley College	Clear Lake Post Office	Sedro-Woolley Park & Ride
8:15	8:27	8:52	9:03	9:08	8:15	8:19	8:31	8:56	9:08
9:15	9:27	9:52	10:03	10:08	9:15	9:19	9:31	9:56	10:08
10:15	10:27	10:52	11:03	11:08	10:15	10:19	10:31	10:56	11:08
11:15	11:27	11:52	12:03	12:08	11:15	11:19	11:31	11:56	12:08
12:15	12:27	12:52	13:03	13:08	12:15	12:19	12:31	12:56	13:08
13:15	13:27	13:52	14:03	14:08	13:15	13:19	13:31	13:56	14:08
14:15	14:27	14:52	15:03	15:08	14:15	14:19	14:31	14:56	15:08
15:15	15:27	15:52	16:03	16:08	15:15	15:19	15:31	15:56	16:08
16:15	16:27	16:52	17:03	17:08	16:15	16:19	16:31	16:56	17:08

DRAFT

Sunday

Southbound					Northbound				
Sedro-Woolley Park & Ride	Clear Lake Post Office	College Way at 26th St	Division St at Stanford Dr	Skagit Station	Skagit Station	Division St at 18th St	Skagit Valley College	Clear Lake Post Office	Sedro-Woolley Park & Ride
9:15	9:27	9:52	10:03	10:08	9:15	9:19	9:31	9:56	10:08
10:15	10:27	10:52	11:03	11:08	10:15	10:19	10:31	10:56	11:08
11:15	11:27	11:52	12:03	12:08	11:15	11:19	11:31	11:56	12:08
12:15	12:27	12:52	13:03	13:08	12:15	12:19	12:31	12:56	13:08
13:15	13:27	13:52	14:03	14:08	13:15	13:19	13:31	13:56	14:08
14:15	14:27	14:52	15:03	15:08	14:15	14:19	14:31	14:56	15:08
15:15	15:27	15:52	16:03	16:08	15:15	15:19	15:31	15:56	16:08

DRAFT

Route 410 – *Anacortes*

Weekday

Westbound				Eastbound		
10th St at Q Ave	Guemes Island Ferry Terminal	Anacortes Ferry Terminal	Skyline Marina	Skyline Marina	Oakes Ave at Glasgow St	10th St at Q Ave
6:00	6:14	6:29	6:34	6:34	6:40	6:52
7:00	7:14	7:29	7:34	7:34	7:40	7:52
8:00	8:14	8:29	8:34	8:34	8:40	8:52
9:00	9:14	9:29	9:34	9:34	9:40	9:52
9:30	9:44	9:59	10:04	10:04	10:10	10:22
10:00	10:14	10:29	10:34	10:34	10:40	10:52
10:30	10:44	10:59	11:04	11:04	11:10	11:22
11:00	11:14	11:29	11:34	11:34	11:40	11:52
11:30	11:44	11:59	12:04	12:04	12:10	12:22
12:00	12:14	12:29	12:34	12:34	12:40	12:52
12:30	12:44	12:59	13:04	13:04	13:10	13:22
13:00	13:14	13:29	13:34	13:34	13:40	13:52
13:30	13:44	13:59	14:04	14:04	14:10	14:22
14:00	14:14	14:29	14:34	14:34	14:40	14:52
14:30	14:44	14:59	15:04	15:04	15:10	15:22
15:00	15:14	15:29	15:34	15:34	15:40	15:52
15:30	15:44	15:59	16:04	16:04	16:10	16:22
16:00	16:14	16:29	16:34	16:34	16:40	16:52
16:30	16:44	16:59	17:04	17:04	17:10	17:22
17:00	17:14	17:29	17:34	17:34	17:40	17:52
18:00	18:14	18:29	18:34	18:34	18:40	18:52
19:00	19:14	19:29	19:34	19:34	19:40	19:52

DRAFT

Saturday

Westbound				Eastbound		
10th St at Q Ave	Guemes Island Ferry Terminal	Anacortes Ferry Terminal	Skyline Marina	Skyline Marina	Oakes Ave at Glasgow St	10th St at Q Ave
8:00	8:14	8:29	8:34	8:34	8:40	8:52
9:00	9:14	9:29	9:34	9:34	9:40	9:52
10:00	10:14	10:29	10:34	10:34	10:40	10:52
11:00	11:14	11:29	11:34	11:34	11:40	11:52
12:00	12:14	12:29	12:34	12:34	12:40	12:52
13:00	13:14	13:29	13:34	13:34	13:40	13:52
14:00	14:14	14:29	14:34	14:34	14:40	14:52
15:00	15:14	15:29	15:34	15:34	15:40	15:52
16:00	16:14	16:29	16:34	16:34	16:40	16:52
17:00	17:14	17:29	17:34	17:34	17:40	17:52

Sunday

There is no scheduled Sunday service for this route in the short-term future.

DRAFT

Route 615 – *La Conner – March Point*

Weekday

Westbound					Eastbound				
Skagit Station	Washington School	La Conner	Swinomish Casino	March Point Park & Ride	March Point Park & Ride	Swinomish Casino	La Conner	Washington School	Skagit Station
5:45	5:48	6:06	6:28	6:34	6:34	6:40	7:01	7:19	7:21
7:45	7:48	8:06	8:28	8:34	8:34	8:40	9:01	9:19	9:21
9:45	9:48	10:06	10:28	10:34	10:34	10:40	11:01	11:19	11:21
11:45	11:48	12:06	12:28	12:34	12:34	12:40	13:01	13:19	13:21
13:45	13:48	14:06	14:28	14:34	14:34	14:40	15:01	15:19	15:21
15:45	15:48	16:06	16:28	16:34	16:34	16:40	17:01	17:19	17:21
17:45	17:48	18:06	18:28	18:34	18:34	18:40	19:01	19:19	19:21

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Saturday

Westbound					Eastbound				
Skagit Station	Washington School	La Conner	Swinomish Casino	March Point Park & Ride	March Point Park & Ride	Swinomish Casino	La Conner	Washington School	Skagit Station
8:45	8:48	9:06	9:28	9:34	9:34	9:40	10:01	10:19	10:21
10:45	10:48	11:06	11:28	11:34	11:34	11:40	12:01	12:19	12:21
12:45	12:48	13:06	13:28	13:34	13:34	13:40	14:01	14:19	14:21
14:45	14:48	15:06	15:28	15:34	15:34	15:40	16:01	16:19	16:21
16:45	16:48	17:06	17:28	17:34	17:34	17:40	18:01	18:19	18:21

Sunday

There is no scheduled Sunday service for this route in the short-term future.

DRAFT

Route 717 – *Concrete*

Weekday

Loop					
Concrete Park & Ride	Concrete High School	South Shore Dr at Fir St	Cedar Grove Ave at Baker Dr	Concrete High School	Concrete Park & Ride
6:00	6:04	6:22	6:35	6:46	6:48
7:00	7:04	7:22	7:35	7:46	7:47
8:00	8:04	8:22	8:35	8:46	8:47
9:00	9:04	9:22	9:35	9:46	9:47
10:00	10:04	10:22	10:35	10:46	10:47
11:00	11:04	11:22	11:35	11:46	11:47
12:00	12:04	12:22	12:35	12:46	12:47
13:00	13:04	13:22	13:35	13:46	13:47
14:00	14:04	14:22	14:35	14:46	14:47
15:00	15:04	15:22	15:35	15:46	15:47
16:00	16:04	16:22	16:35	16:46	16:47
17:00	17:04	17:22	17:35	17:46	17:47
18:00	18:04	18:22	18:35	18:46	18:47
19:00	19:04	19:22	19:35	19:46	19:47

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Saturday – Interlined with Route 70X

Loop					
Concrete Park & Ride	Concrete High School	South Shore Dr at Fir St	Cedar Grove Ave at Baker Dr	Concrete High School	Concrete Park & Ride
9:00	9:04	9:22	9:35	9:46	9:47
11:00	11:04	11:22	11:35	11:46	11:47
13:00	13:04	13:22	13:35	13:46	13:47
15:00	15:04	15:22	15:35	15:46	15:47
17:00	17:04	17:22	17:35	17:46	17:47

Sunday

There is no scheduled Sunday service for this route in the short-term future.

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Short-Range Service Changes – New Bus Stops

Code	Name	Route(s) Served
7051	Anacortes St near Burlington Public Library	101 (NB)
7178	Walnut St & George Hopper Rd	101 (NB)
7181	Burlington & Sakuma Brothers	101 (NB)
<Null>	Skagit St at Washington Ave (NB)	101 (NB)
7052	Anacortes St near Burlington Public Library	101 (SB)
7053	Fairhaven Ave at Skagit St (SB)	101 (SB)
7054	Fairhaven at Betty Ct (SB)	101 (SB)
7055	Gardner Rd at Sanchez Ln (SB)	101 (SB)
7056	Gardner Rd at Sunset Dr (SB)	101 (SB)
7057	Rio Vista west of Gardner Rd (SB)	101 (SB)
7058	Rio Vista at Wade Pl (SB)	101 (SB)
7059	Lucille Umbarger School (SB)	101 (SB)
7060	Skagit St at Schuler Ave (SB)	101 (SB)
7061	Skagit River Park (SB)	101 (SB)
7062	Anacortes St at Annett Ln (SB)	101 (SB)
7063	Pease Rd at Walnut St (SB)	101 (SB)
7067	Burlington Blvd at Sakuma Brothers Ave (SB)	101 (SB)
7068	Burlington Community Center (SB)	101 (SB)
7179	Walnut St at George Hopper Rd	101 (SB)
7146	Section at 15th (SB)	201 (IB)
7148	Section at 18th (SB)	201 (IB)
7138	Hoag at Continental (NB)	201 (OB)
7141	Laventure at Fir (NB)	201 (OB)
7142	Laventure Rd at Division St	201 (OB)
7143	Laventure at Section (NB)	201 (OB)
7147	Section at 18th (NB)	201 (OB)
7170	Skagit County Community Justice Center (SB)	202 (OB)
7011	Upper Skagit Reservation	301 (EB & WB)
7015	Northern State Recreation Area	301 (EB)
7016	NEW Helmick Road and Alpine Lane	301 (EB)
7032	SR 20 at Carriage Ct (WB)	301 (WB)
7033	SR 20 at Fruitdale Rd (WB)	301 (WB)
<Null>	Life Care of Sedro-Woolley (WB)	301 (WB)
<Null>	Trail Rd & Cook Rd	301 (WB)
<Null>	Trail Rd & Hodgin	301 (WB)
<Null>	Janicki Playfields	301 (WB)
<Null>	1041 Hodgin St	301 (WB)
7080	Waugh at Lupine	305 (IB)

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7125	College at 33rd	305 (IB)
7069	MV Haggen	305 (OB)
7071	Division at Leann	305 (OB)
7072	Division at 39th	305 (OB)
7073	Waugh at Lupine	305 (OB)
7127	College at 33rd	305 (OB)
7128	College at Martin	305 (OB)
7172	17900 Memorial Highway	40X (EB)
7171	17900 Memorial Highway	40X (WB)
7177	M Ave & 24th St (NB/nearside)	410 (WB)
7014	Fruitdale Road south of Highway 20	70X (IB)
<Null>	Ferry East of Eastern	70X (IB)
<Null>	Liberty Bell	70X (IB)
<Null>	Wicker at Cedar Apts.	70X (IB)
<Null>	Wicker Rd. at Claybrook	70X (IB)
<Null>	Wicker at Mobile Village Park	70X (IB)
<Null>	SR 20 at Hamilton Cemetery Rd.	70X (IB)
7034	Fruitdale Road at SR 20	70X (OB)
7041	Ferry and Borseth	70X (OB)
7180	Ferry & Metcalf	70X (OB)
<Null>	704 E State St	70X (OB)
<Null>	Township South of Wicker Rd.	70X (OB)
<Null>	West of 24703 Wicker Rd.	70X (OB)
<Null>	SR 20 Hamilton Cemetery Rd.	70X (OB)
7025	The Skagit Casino Resort	80X (NB & SB)

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Short-Range Service Changes - Eliminated Stops

Name	Route(s) Served
155 N Norris St	101
Burlington Public Library	101
Comfort Suites	101
Dick's Sporting Goods	101
E McCorquedale Rd	101
Housing Authority	101
I-5 Auto World	101
Nevitt near Holiday Sports	101
W Victoria Ave	101
Fairhaven Avenue and Holly Street	101, 301
Blackburn and Brit	202
Blackburn and Walter	202
Blackburn & Cleveland	202
Britt Rd at Vera CT	202
Hazel and Douglas	202
15th Street and Spruce Street	204
15th Street Park	204
18th Street and College Way	204
18th Street and Fir Street	204
18th Street and Viewmont Drive	204
College Way and Waugh	204
College Way at 7Th Day Adventist Church	204
Division and Waugh	204
Fir & 30th Eastbound	204
Fire Station 3 Skagit Highlands	204
Fir St & Cedar Court	204
Mt Vernon Church of the Nazarene	204
Skagit Highlands and Glacier	204
Skagit Highlands Parkway near Mount Baker Loop	204
Skagit Highlands Parkway north of Skagit River Pl.	204
Wa 538 and Skagit Highlands Pkwy	204
11th st at E Division	206
13th Street and Broad Street	206
18th Street and Broadway	206
18th Street and Division	206
18th Street at Bethany Covenant Church	206

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18th Street at Jefferson School	206
6th Street & Fulton	206
Division at Skagit Regional Hospital	206
E Division St	206
Mount Baker Middle School	206
Skagit Valley Hospital	206
30th & Green Way	207
30th & Inverness	207
30th St. across from Skagit Valley Mobile Manor	207
30th St. at Bakerview Place	207
Centennial Elementary School	207
College Play Field Park	207
Fir St. at Park Village	207
Fir Street and LaVenture	207
Freeway Dr at Walmart	207
Freeway Dr. in front of Burger King	207
Freeway Drive at Skagit Regional Clinics	207
Freeway Dr. Skagit P.U.D.	207
Freeway Dr., W. Division and 1st Street	207
Martin & 24th Place	207
Martin and 30Th	207
Martin at Grand Market	207
Martin @ Jungle Playland	207
Martin & Monica	207
Martin & Tundra Loop	207
Westbound Fir at 30th	207
1041 Hodgin St	300
3rd and State Street	300
Ferry St Catholic Church	300
F&S Grade Rd	300
Jameson Street and 4th Street	300
Jameson Street and 7th Street westbound	300
Janicki Playfields	300
Kilnger @ Rohrer Loop	300
Klinger at F&S Grade Rd	300
Klinger at Thurmond	300
McGarigle at Evergreen Elementary School	300
McGarigle at Parkland Loop	300
McGarigle near Calkins Place	300
McGarigle Road & Township Street	300

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Puget & Northern	300
Reed St. across from Valley View Mobile Home Park	300
Reed St and Hyatt Place	300
Reed Street and State Street	300
Sapp Road and Brickyard Blvd	300
Sedro-Woolley City Hall	300
Sedro-Woolley High School	300
SR 9 south Cultus Mountain Dr.	300
Township between Nelson & Bennett	300
Township near Jameson	300
Trail & Hodgin	300
Trail Rd & Cook Rd	300
Sedro Woolley Library	300, 70X
The Pavilion east of U.G.H.	301
Fairhaven & Regent	301
Skagit St. and Hazel Ave. just north of Home Place	301
Skagit Street & Victoria Avenue	301
Mud Lake Rd SB	305
Swan Road and Carol Place eastbound	305
Mud Lake Rd NB	305
Swan Road and Carol Place westbound	305
24th & H Ave	409
8th Street and J Avenue	409
Anacortes Senior Center	409
Island Hospital (24th Street by Main Entrance)	409
6th St & N St.	409, 410
Anacortes City Hall	409, 410
Q Avenue and 8th Street	409, 410
R ave & 33rd st.	409, 410
R Ave. and 32nd St.	409, 410
Memorial Hwy and Avon Allen	40X
Minkler Rd & Jenny Lane	70X

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APPENDIX D

BUS STOP GUIDELINES

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APPENDIX D: BUS STOP GUIDELINES

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1. Bus Stop Guidelines

The core mission of Skagit Transit's service is to provide citizens access to the transit network in a safe and convenient manner. Bus stops should be properly placed, accessible, and recognizable at a distance. Skagit Transit's Bus Stop Guidelines are a reference in which the agency uses to achieve this core mission. The key factors considered in relation to bus stops are outlined below.

1.1. Spacing

Determining optimal stop spacing is a crucial aspect of public transit planning. Skagit Transit must balance the need for convenience with operational efficiency. Ideally, bus stops should not be too close together, which could cause unnecessary delays in service, or too far apart, which might result in long walks for passengers to and from stops.

In cities and towns within Skagit County, the recommended distance between bus stops typically ranges from 900- to 1200-feet, approximately equivalent of 3 to 5 city blocks. This spacing arrangement facilitates efficient transit through high-density zones while ensuring sufficient stops to minimize overall pedestrian travel times to various destinations within the area. Local routes in urban environments across the county employ this stop-spacing strategy, including Routes 101, 201, and 410.

Spacing should be adjusted based on local needs. Stop spacing should be considered outside of the general guidelines when it accommodates a significant distance or physical barriers. For example, in rural parts of the county, stops will be more spread out, reflecting lower demand or geographical challenges like the absence of sidewalks, presence of natural barriers, or insufficient right-of-way.

1.2. Placement

Bus stops are located along a street in one of three positions: far-side, near-side, or mid-block. This position is determined by the location of any cross street. Each position has certain positive and negative characteristics. The exact placement will depend on the presence of certain characteristics such as stop lights, pedestrian crossings, and other physical elements of a location.

1.2.1. Far-Side Bus Stops

Far-side bus stops are preferable in urban areas as they facilitate smoother reintegration of buses into traffic flow, post-intersection. This configuration encourages pedestrians to cross behind the bus, given that the intersection is located at the rear. Additionally, this approach mitigates conflicts between buses and right-turning vehicles.

Advantages

- Minimizes conflicts between right-turning vehicles and buses
- Encourages pedestrians to cross behind the bus

Disadvantages

- Following a traffic stop, a far-side stop impedes bus operations and traffic flow

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- Intersections may be blocked during peak periods by queuing buses

1.2.2. Near-Side Bus Stops

Near-side bus stops are also effective in urban environments, enabling buses to serve passengers while stopped at a traffic light. This configuration allows the driver to observe oncoming traffic, including other buses which may carry transfer passengers.

Advantages

- Buses can serve passengers while at a red light, which prevents double stopping
- Provides driver with opportunity to look for oncoming traffic including other buses with potential passengers

Disadvantages

- Stopped buses may obscure curbside traffic control devices and pedestrians crossing the intersection
- Increases conflicts with vehicles making right-turns

1.2.3. Mid-Block Bus Stops

Within urban areas, mid-block bus stops should be limited to scenarios where there are existing infrastructure constraints. Mid-block stops alleviate sight distance issues for drivers and pedestrians, but they necessitate parking restrictions on the block. If there is an absence of mid-block crossings, mid-block stops can encourage users to cross the street without using a designated crosswalk.

Advantages

- Minimizes sight distance problems for vehicles and pedestrians

Disadvantages

- May impact existing parking restrictions
- Encourages users to cross street mid-block, which can be unsafe if designate crossing does not exist
- Increases walking distance for patrons crossing at intersections

Additional considerations when determining the placement of a bus stop include:

Sightlines

Bus stops should be situated in locations that ensure the bus is clearly visible to both passengers and other drivers. This facilitates safe anticipation of the bus entering and exiting traffic.

Topography

Whenever feasible, bus stops should be placed on relatively flat terrain to facilitate safe and convenient boardings and alightings.

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Parking
Bus stops should not be placed near areas designated for vehicle parking to avoid conflicts.

Speed
Placement of bus stops along high-speed roadways should be avoided as it can complicate re-entry into traffic flow and exacerbate congestion.

Turn Lanes
Placing a bus stop in proximity to a turn lane can increase the risk of collisions between buses and turning vehicles. Stops located far-side tend to allow for smoother traffic flow and easier merging of buses back into the travel lane.

Traffic
High traffic volumes require careful placement of bus stops to minimize disruptions. Far-side stops may be best in high-density areas to avoid exacerbating congestion at busy intersections.

Sidewalks
Where possible, avoid placing bus stops along streets that lack adequate pedestrian infrastructure.

Right-of-Way
Bus stops should be placed where they do not obstruct the right-of-way, minimizing the risk of conflicts and collisions.

Land Use
Land use patterns directly impact rider demand. Bus stops benefit from placement near high foot traffic, such as residential neighborhoods, business districts, shopping centers, schools, and hospitals.

1.3. Accessibility
Aligning a stop placement strategy with updated land use information promotes accessibility and ridership. For example, positioning bus stops close to activity centers, such as hospitals or essential shopping needs in Mount Vernon could make transit an attractive transportation option. Beyond the stops themselves, ensuring clear, safe pedestrian pathways connecting stops to activity centers increases the likelihood that individuals will chose to take transit.

The design and layout of bus stops is required to meet ADA compliance. ADA guidelines stipulate that bus stops must be at least 5-foot by 8-foot and include a flat, hardened surface to accommodate mobility devices. Additionally, each stop should include a connection to an existing pedestrian pathway (minimum width of 5 feet).

1.4. Amenities
1.4.1. Signage
Signage should be legible and indicate routes that service the stop. It should be positioned at the far end of the bus stop to enable drivers to align the bus doors as closely as possible to the shelter, resulting in convenient boarding for waiting passengers.

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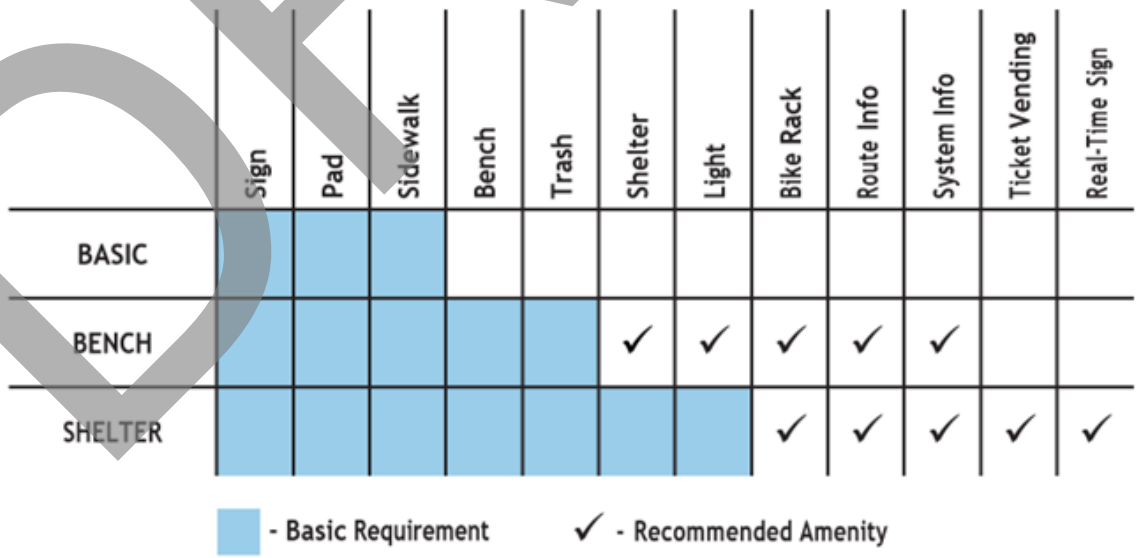
1.4.2. Types of Amenities

There is a range of amenities available for bus stops. Amenities required at a given stop are contingent upon the overall demand and ridership patterns of the location. Higher quality amenities should be prioritized at stops located within high-density areas with significant daily boardings. Stops located in rural or lower-traffic areas may not necessitate a suite of amenities. Potential amenities for bus stops include the following:

- Benches
- Shelters
- Route Maps
- Timetables
- Information Displays
- Trash Receptacles
- Lighting
- Accessibility Features, such as ramps and accessible seating for persons with disabilities
- Bike Racks

Skagit Transit is committed to enhancing the passenger experience at bus stops with practical and comfortable amenities. Amenities should be given higher priority to stops that exhibit higher ridership volumes. Shelters should be placed at high performing stops that have 30 or more daily boardings, while a bench should suffice for stops with 10-30 daily riders. All stops, regardless of total ridership, should have a sign, bus pad, and adequate sidewalks, as shown in Figure 1-2 below.

Figure 1-1 Skagit Transit Bus Stop Amenity Matrix



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Shelters that provide weather protection seat two passengers and have additional space for mobility devices. Shelters are offered in two sizes: the full-sized model and the cantilever model, which features shorter side walls for use in smaller spaces without sacrificing roof coverage or seating capacity. The full-sized shelters measure 5-foot by 10-foot, and cantilever shelters are 3-foot by 10-foot. Each shelter includes a concrete pad that is 6 inches larger on each side to ensure a secure installation.

Where space is limited and a traditional bench is not feasible, Skagit Transit deploys Simme-Seats, a compact and efficient seating solution that integrates a bus stop sign pole. Renowned for their ease of installation and low maintenance, Simme-Seats provide a convenient seating option while conserving space.

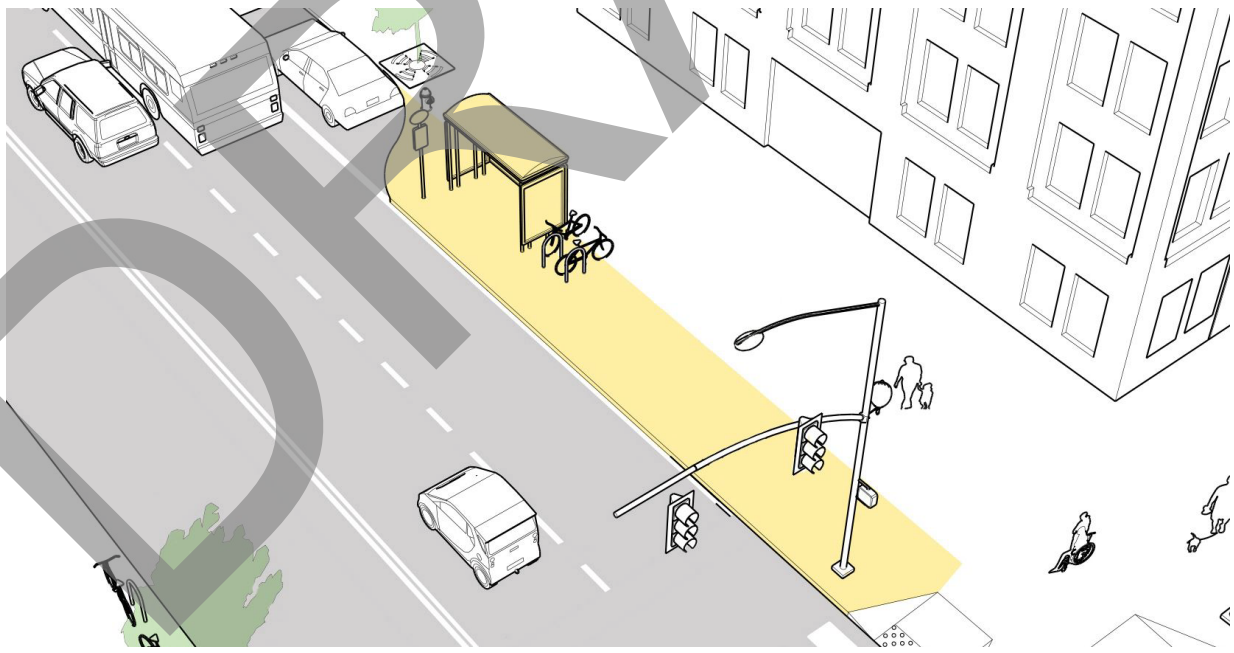
A concrete pad of 2-foot by 4-foot is required for the installation of Simme-Seats, offering a solid and durable seating arrangement for passengers.

1.4.3. Pullouts and Bulb Outs

Pullouts are a cost-effective solution for bus stops located on streets with curbside parking. These designated zones allow buses to pull out of the main travel lane to facilitate passenger boarding and alighting, thereby enhancing traffic flow and reducing congestion.

Bulb outs, also known as curb extensions, are sidewalk extensions that project into the parking lane, enabling buses to board and alight passengers without exiting the travel lane. This design minimizes the need for buses to merge in and out of traffic, thereby improving efficiency and safety. The bulb out is particularly useful in densely populated areas.

Figure 1-2 Bus Bulb Out



Source: NACTO

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1.5. Coordination with Cities and Counties

Although Skagit Transit holds the ultimate authority over bus stop placement, best practices dictate that these decisions be made in coordination with adjoining agencies. Collaborative efforts in determining bus stop locations ensure that they are strategically placed in areas that are safe, efficient, and capable of meeting both current and future demand.

Process for Requesting Stop Additions, Changes, and Removals

The following summarizes the process of adding, changing, or removing a bus stop. While this procedure is often treated on a case-by-case basis, the structure remains largely the same:

1. **Identifying request type**

The process for managing requests to add, remove, or upgrade a stop varies. For example, adding a new stop necessitates a more extensive review and planning process compared to the removal of an existing stop.

2. **Request review**

Upon receiving the request, Skagit Transit will review and analyze its potential impacts, taking into consideration how implementation might impact local ridership, businesses, and accessibility. This analysis provides planners with a clearer understanding of whether to proceed with the request.

3. **Safety review**

Following the request review, officials will assess the potential safety impacts of the request. For example, if a new stop is being requested in a rural area, the site may necessitate updated pedestrian facilities, such as sidewalks, crosswalks, or ADA-accessible ramps.

4. **Decision**

Following a thorough review, Skagit Transit will decide on implementation.

5. **Notification**

If the request is approved for implementation, Skagit Transit will post notifications of the change. This can be accomplished by posting flyers at bus stops, within buses, and by publishing the notice on the Skagit Transit website. Concurrently, Skagit Transit will secure the necessary permits required for project execution.

6. **Implementation**

Upon proper notification of the public, project implementation may commence.

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SKAGIT TRANSIT

FY 2025 Budget

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Questions or Comments regarding this budget please contact:

Crystle Stidham
Chief Executive Officer
Skagit Transit cstidham@skagittransit.org
Phone – 360.757.9155

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Income From Operations	2023 Budget	2024 EOY Amended Budget	2025 Budget
Revenues			
Operating Revenues			
Operational Income	18,949,325	17,448,500	18,284,265
Operating Grants	7,940,392	7,736,463	7,385,591
Total Operating Revenues	26,889,717	25,184,963	25,669,856
Operating Expenditures	22,609,701	24,788,409	25,668,716
Total Surplus/(deficit) from Operations	4,280,016	396,554	1,139

Capital Projects Summary	2023 Budget	2024 EOY Amended Budget	2025 Budget
Capital Grant Revenues	1,332,217	7,336,698	25,323,442
Capital Expenditures	3,262,285	10,088,666	45,126,524
Total Deficit from Capital Projects	(1,930,068)	(2,751,968)	(19,803,082)
Total Surplus\(Deficit)	2,349,948	(2,355,414)	(19,801,943)

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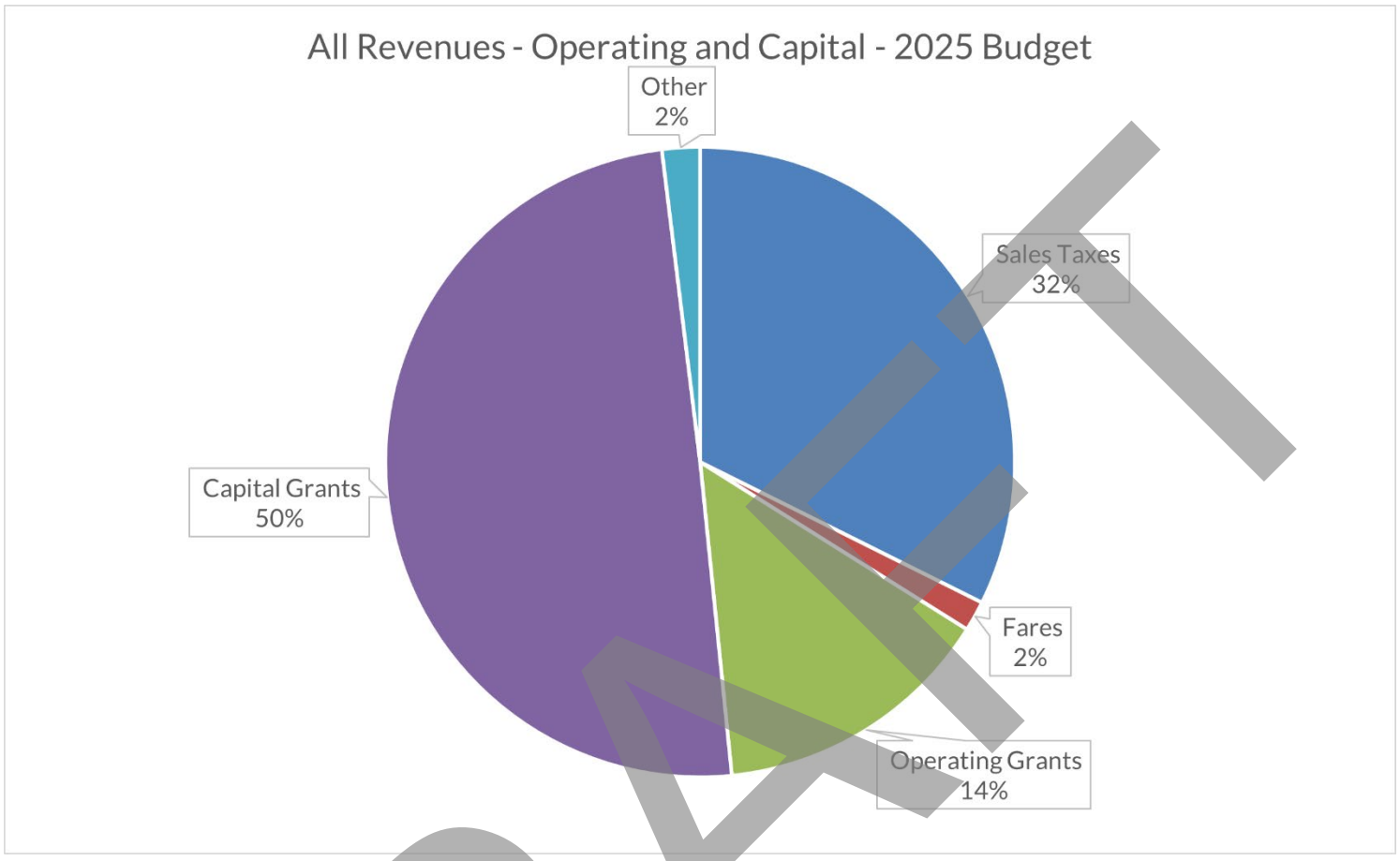
2025 Budget Highlights – Revenue Projections

All Revenues – Operating and Capital

Categories	2024		2025	Budget Change
	Budget	Estimated Year End Actuals	Budget	2025 vs. 2024 (%)
Sales Taxes	15,750,000	16,769,186	16,500,000	5%
Operating Grants	7,736,463	7,736,463	7,385,591	-5%
Capital Grants	7,336,698	7,336,698	25,323,442	245%
Fares	718,000	756,300	791,765	10%
Other	980,500	1,302,283	992,500	1%
Total Revenues	**32,521,661**	**33,900,930**	**50,993,298**	57%


All Revenues - Operating and Capital - 2025 Budget
Other
2%
Sales Taxes
32%
Capital Grants
50%
Fares
2%
Operating Grants
14%

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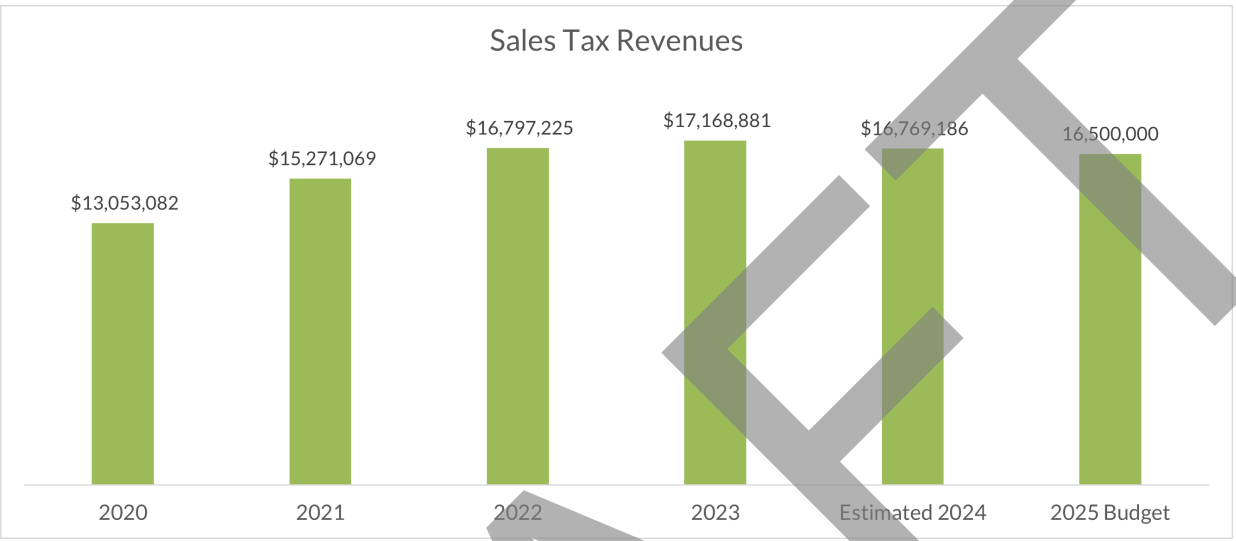
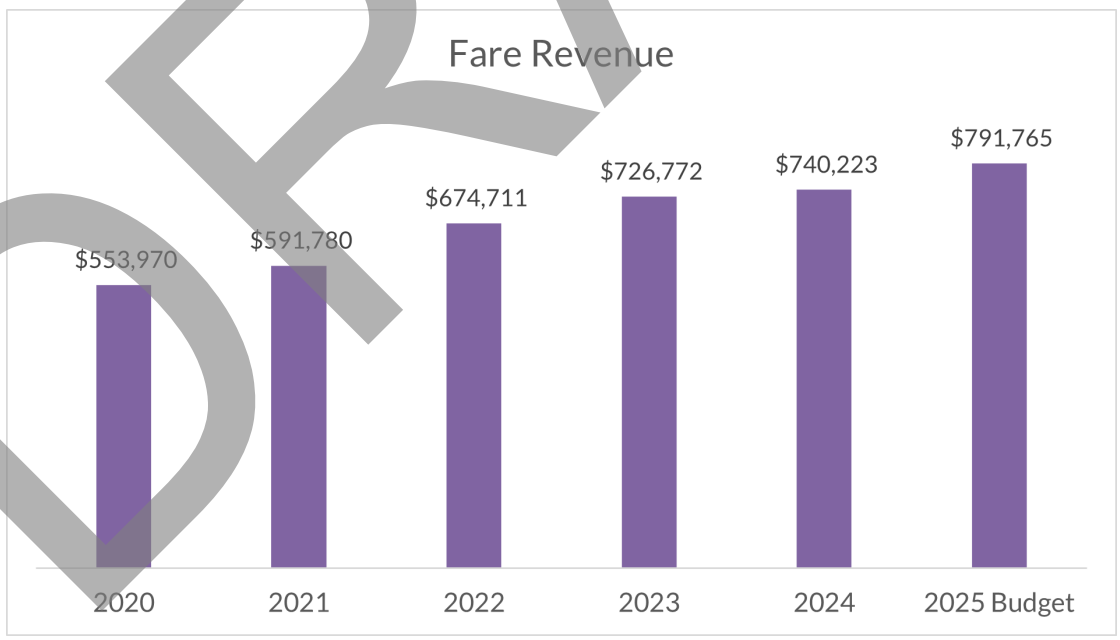
Sales Taxes - Skagit Transit receives 4/10 of 1% of sales tax collections in the Public Transportation Benefit Area (PTBA) and is the main source of our operating revenues. The data presented for 2024 represent actual collections received through September of 2024 plus a conservative estimate of what we expect to receive for the remainder of the year.



Fares - Fare revenues come from Fixed Route/Paratransit passenger payments and Rideshare rider fees. Revenues from fares represent less than 2% of total operating revenues. In 2019, the Board approved a Fare increase effective Jan 1, 2020. In 2019 the Board also approved charging a $2 Fare for each Paratransit Ride. Paratransit Rides were free prior to 2020.



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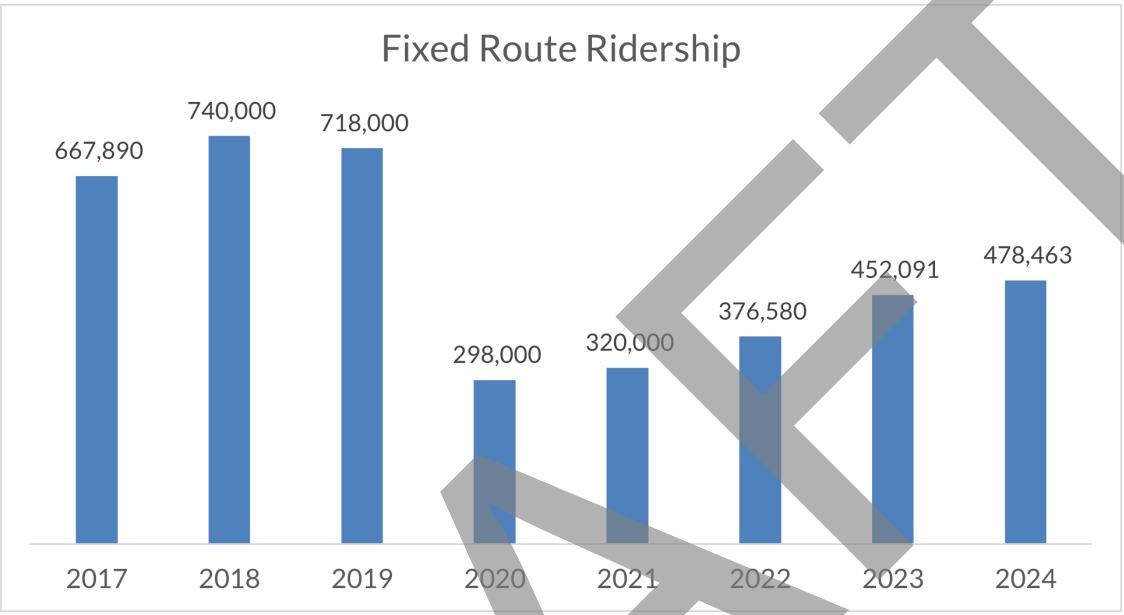
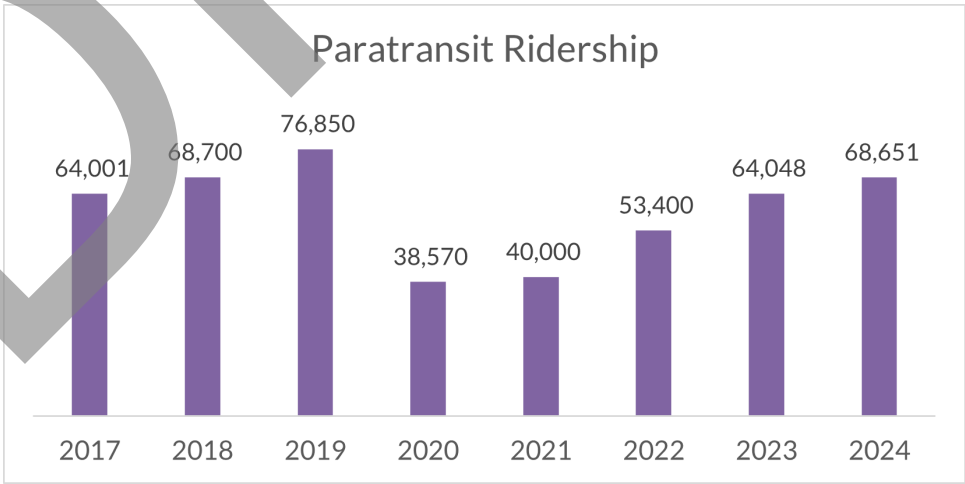
Transportation Mode Summaries

Fixed Route Service: Skagit Transit's fixed route service includes both local and commuter bus service. During the pandemic, ridership dropped significantly but has steadily increased since then. Ridership is approximately 33% below pre-pandemic numbers.



Paratransit: Skagit Transit directly operates the complimentary ADA paratransit service for our service area. During the pandemic, ridership dropped significantly but has steadily increased since then. Ridership is approximately 11% below pre-pandemic numbers.



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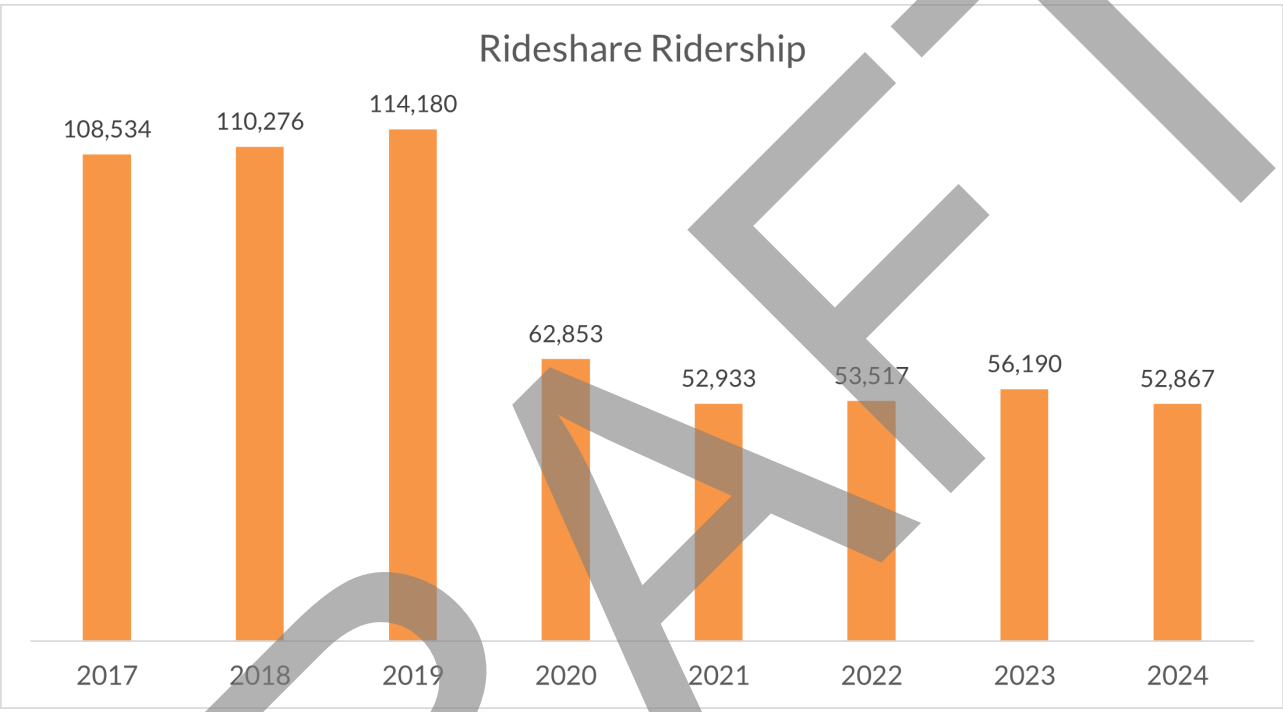
Rideshare Service: Skagit Transit's Rideshare service provides a shared ride to work for commuters. The COVID era greatly reduced ridership and the ability to work remotely continues to be a barrier for growth. As a result, Skagit Transit reduced its Rideshare van fleet from 56 to 33 vehicles in 2021. Following the pandemic, there has been an increase in interest in Rideshare and we are beginning to rebuild our fleet.

2024 ridership was lower than expected due to a temporary strike at Boeing that impacted Rideshare services.



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FY 2025 Grants

Skagit Transit takes advantage of available Grant funds to purchase capital assets and to supplement its operations. Operating Grant funds represent 29% of Operating Revenues while Capital Grants pays for approximately 80% of intended Capital Purchases aside from MOA 2 for the 2025 Budget. Most of our Grant funding comes from the Federal Transit Administration and the Washington State Department of Transportation.

State Grants	
Operating	
State Special Needs - Operating Assistance	$ 2,296,801
Community Engagement Coordinator - $19,482	
Total State Operating	$ 2,296,801
TOTAL STATE GRANTS	**$ 2,296,801**
Federal Grants	
Operating	
Section 5307 Annual Operating Funds - Operations Assistance	$ 4,265,347
State Rural Mobility - NW Regional Transportation Study	$ 140,000
FTA Section 5311 - Increase Frequency West Sk. County Rt. 615	$ 242,492
FTA Section 5311 - Increase Frequency East Sk. County Rt. 717	$ 303,023
FY 2022 FTA AoPP Program - Microtransit Study	$ 60,000
FTA Section 5310 - Mobility Management - Community Engagement Coordinator	$ 77,928
Total Federal Operating	$ 5,088,790
Capital	
FY 2023 5339(b) MOA2 Construction Phase 3	$ 5,000,000
FY 2025 RAISE Grant	$ 19,500,000
Federal Section FY 2024 5307 & 5339 Capital MOA Design Phases 2 and 3	$ 391,412
FWHA Flexed to FTA 5307 SCOG Award -Shelter Purchase	$ 304,300
FY 2022 Flexed 5307 Bus Shelter Purchase	$ 68,062
2022 WSDOT Pass Through FTA Section 5339 - Maintenance Equipment	$ 59,668
Total Federal Capital	$ 25,323,442
TOTAL FEDERAL GRANTS	**$ 30,412,232**
TOTAL GRANTS	**$ 32,709,033**

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2025 Budget Highlights – Operating Expense

The fiscal year 2025 budget is 4% higher than the 2024 budget due to the reasons summarized in the narratives below.

Operating Expenses by Expense Category

Salaries & Benefits – The increase in budgeted salaries and benefits compared to 2024 is due to a 4.25% COLA increase, an increase in medical premiums, and budgeted overtime. This percentage would have been even greater, however, we had a reduction in workforce in 2024.

Services – The decrease is due to the elimination of 24-hour security services needed for the Construction of the new Maintenance Operations and Administration Facility (MOA2), and contracted positions.

Casualty and Liability – Skagit Transit is a member of the Washington State Transit Insurance Pool (WSTIP). WSTIP is a 25-member self-insurance program located in Olympia, Washington. WSTIP provides Skagit Transit's auto, general, and public officials' liability coverages, auto physical damage coverage, employee infidelity/crime coverage, and cyber liability coverage.

	2024		2025	Change
	Budget	EOY Estimate	Budget Request	2024 Budget to 2025 Budget Change
Salaries and Wages	10,609,142	10,798,368	11,394,715	7.40%
Overtime	524,160	774,013	556,160	6.11%
Benefits	7,740,349	8,315,749	7,893,691	1.98%
Services	1,531,007	1,141,257	1,206,350	-21.21%
Supplies and Materials	3,431,701	3,221,428	3,449,900	.53%
Utilities	251,000	287,655	310,500	23.71%
Casualty & Liability	579,735	539,362	732,000	26.26%
Assessments	22,000	23,013	25,750	17.05%
Leases & Rentals	66,806	52,034	70,800	5.98%
Misc.	32,509	32,085	28,850	-11.25%
Total	24,788,409	25,184,963	25,668,716	3.55%

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Staffing Summary – the following shows the budgeted FTE's by Department and compares to last year's budget. There will be five less FTEs in 2025.

Department	2024 Budget	2025 Budget	Change
Fixed Route/Paratransit Drivers	86	86	0
Rideshare	1	1	0
Operations	20	20	0
Administration	8	7	-1
Executive	6	6	0
Human Resources	2	3	1
Information Technology	3	0	-3
Safety and Training	3	3	0
Security	3	3	0
Maintenance	19	19	0
Facilities	9	8	-1
Total	**160**	**156**	-4

Expenses by Department

Department	2024 Amended Budget	2025 Proposed Budget	Change 2025 vs 2024 Budget
Fixed Route	8,351,640	9,677,507	15.88%
Paratransit	2,398,129	2,626,138	9.51%
Vanpool	437,105	278,234	-36.35%
Operations	2,606,660	2,649,782	1.65%
Administration	1,927,269	1,864,889	-3.24%
Executive	1,228,561	1,129,128	-8.09%
Human Resources	518,099	578,328	11.63%
Information Technology	1,217,280	662,200	-45.60%
Safety and Security	1,153,726	1,094,835	-5.10%
Maintenance	3,258,410	3,566,313	9.45%
Facilities	1,402,929	1,186,511	-15.43%
Skagit Station	114,800	127,050	10.67%
MOA2	67,100	94,850	41.36%
Park and Rides	106,700	132,950	24.60%
Capital*	10,860,409	45,126,524	315.51%
Total	35,648,818	70,795,240	98.59%

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2025 Capital Budget

The following table lists all capital expenses budgeted for fiscal year 2025. Skagit Transit relies on Federal and State Grants to supplement its capital purchases. The 2025 Capital Budget will be funded by Grant Funds from the FTA and WSDOT.

2025 Capital Budget			
	Unit Price	**Qty**	**Total**
Revenue Vehicle			
Paratransit Electric Coach Expansion	$350,000	1	$350,000
Paratransit Electric	$350,000	2	$700,000
Paratransit Propane	$250,000	3	$750,000
Capital Engine Replacement	$62,000	2	$124,000
	Total		**$1,924,000**
Staff Vehicle			
Vehicle Replacement - Operations	$53,000	1	$53,000
Vehicle Replacement - Security	$53,000	2	$106,000
Vehicle Replacement - Facilities	$127,000	1	$127,000
Vehicle Replacement	$51,080	1	$51,080
Vehicle Expansion - Facilities	$75,000	1	$75,000
	Total		**$412,080**
Garage/Shop Equipment			
Paratransit Electric Chargers	$37,694	3	$113,082
	Total		**$113,082**
Route Improvements			
ADA Transition	$150,000	1	$150,000
Bus Shelters	$372,362		$372,362
	Total		**$522,362**
Skagit Station/Park&Ride			
Chuck-a-nut Re-Seal Parking Lot	$100,000	1	$100,000
SMV Re-Seal Parking Lot	$80,000	1	$80,000
SS Re-Seal Parking Lot	$40,000	1	$40,000
HVAC	$100,000	1	$100,000
Security Doors	$20,000	5	$100,000
	Total		**$420,000**
MOA II			
Phases 2 & 3 Construction	$40,000,000	1	$40,000,000
Architect - Design Support for Construction	$1,200,000	1	$1,200,000
Architect - Finish Design 100%	$535,000	1	$535,000
	Total		**$41,735,000**
Total Capital Budget			**$ 45,126,524**

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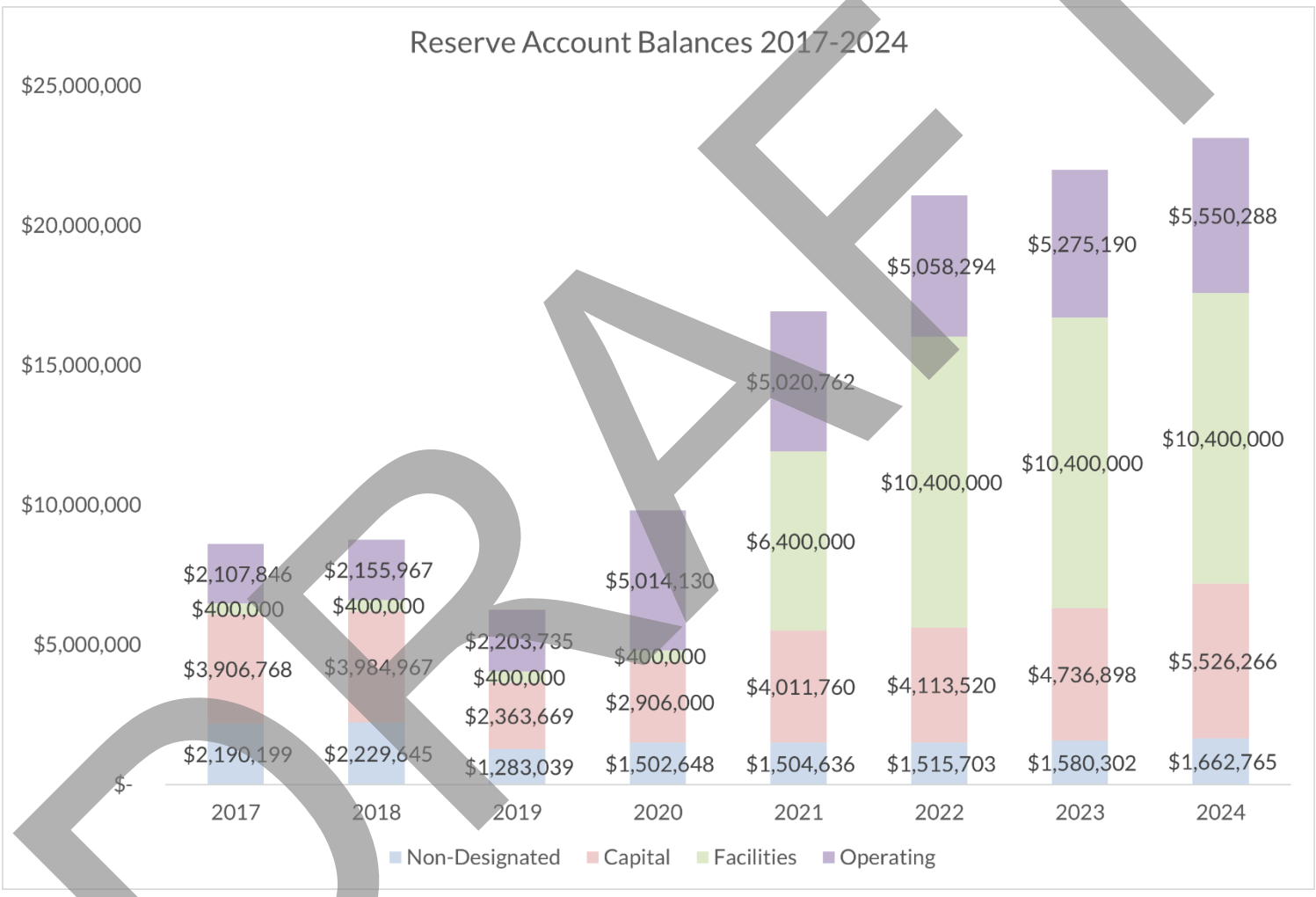
Reserve Account Balances

The Skagit Transit Board of Directors established a reserve account by Resolution #50. In subsequent actions, the Board separated the account into four distinct categories namely Operating, Capital Replacement, Facilities, and Non-Designated. Skagit Transit reserves are invested with the Skagit County Investment Pool (SKIP). Skagit Transit's operating reserve doubled in 2020. The increase in the Reserve levels in 2020 through 2022 was primarily due to federal stimulus funds received from the Federal Government. Interest rates are back to historical averages resulting in increased interest income for 2024.



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Fixed Route (10)				
	GL	**2024 Budget Request**	**End Of Year Estimate 12/31/2024**	**2025 Budget Request**
Expense				
Operators' Salaries and Wages	501010	4,010,481	4,086,079	4,638,436
Operators' Overtime	501015	370,000	602,979	440,000
Employer's FICA Expense	502010	356,669	429,176	430,963
PERS Pension Plan	502025	436,395	545,486	521,044
Medical Insurance	502030	962,756	995,121	1,096,175
Dental/Vision Insurance	502040	100,634	107,426	103,157
Life Insurance Plans	502050	4,047	6,571	4,158
Group Disability Insurance	502060	51,875	52,304	56,650
Unemployment Comp Insurance	502070	10,000	30,272	10,000
Worker's Comp Insurance	502080	245,390	248,562	256,928
WA State Paid FML	502085	6,900	12,127	7,598
General Leave	502090	433,738	451,525	467,615
Holiday Pay	502100	218,118	265,523	241,062
Other Paid Absence	502120	15,000	586	2,000
Jury Duty	502165	0	1,612	3,000
Bereavement Leave	502155	0	6,428	10,000
First Stop Health	502110	209	0	0
Other Benefits	502140	50,250	88,800	52,500
Uniform Allowance	502130	30,000	16,475	30,000
On Call Pay	502105	0	181	0
Guaranteed Hours	502160	0	3,424	3,500
Third Party Sick Pay	502175	0	15,134	15,000
Medical Premium Opt Out Reimbu	502180	0	30,748	31,000
Wellness Benefit	502185	0	6,214	17,500
Professional and Technical Services	503030	10,000	0	
Security Services	503070	1,600	1,560	1,600
Other Services	503990	4,941	5,114	5,750
Drug and Alcohol Testing	503991	5,000	2,298	5,000
CDL Testing/DMV Checks	503994	2,000	0	
Ultra-Low Sulfur Fuel	504013	950,000	885,589	900,000
Propane	504016	0	20	0
Office Supplies	504200	200	0	1,000
Cleaning/Sanitation Supplies	504240	1,000	0	0
Misc Operating Supplies	504260	20,000	7,755	20,000
Sm Tools/Equip/Furn-Other	504340	5,000	0	0
Postage	504991	1,000	1,500	2,000
Premium For PL/PD Insurance	506030	10,510	215,143	298,871
Dues, Memberships, Subscriptions	509010	5,000	0	0
Travel & Meeting Expense	509020	2,000	0	0
Conference Registration	509022	2,000	1,050	2,000
Training / Seminars	509024	2,500	0	2,500
Promotional Items	509080	500	0	0
Other Miscellaneous Expenses	509990	500	0	500
Employee Recruitment	509992	1,600	1,053	0
Employee Incentive	509993	2,059	150	0
Total Expense		$ 8,329,871	$ 9,123,984	9,677,507

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Paratransit (12)				
	GL	**2024 Budget Request**	**End Of Year Estimate 12/31/2024**	**2025 Budget Request**
Expense				
Operators' Salaries and Wages	501010	1,164,440	812,965	1,284,645
Operators' Overtime	501015	75,000	80,676	75,000
Employer's FICA Expense	502010	108,730	79,494	120,509
PERS Pension Plan	502025	133,035	99,876	147,446
Medical Insurance	502030	270,158	197,874	289,681
Dental/Vision Insurance	502040	25,388	17,961	25,388
Life Insurance Plans	502050	1,140	804	1,140
Group Disability Insurance	502060	15,808	10,701	16,524
Unemployment Comp Insurance	502070	5,000	0	5,000
Worker's Comp Insurance	502080	68,921	42,948	69,099
WA State Paid FML	502085	2,104	2,252	2,220
General Leave	502090	142,463	87,062	146,752
Holiday Pay	502100	66,413	45,707	68,882
Other Paid Absence	502120	2,000	0	250
Jury Duty	502165	0	0	750
Bereavement Leave	502155	0	0	1,000
First Stop Health	502110	59	0	59
Other Benefits	502140	14,250	14,400	14,250
Uniform Allowance	502130	6,000	14,118	10,000
Guaranteed Hours	502160	0	319	250
Third Party Sick Pay	502175	0	1,012	700
Professional and Technical Services	503030	1,500	0	0
Other Services	503990	0	1,290	2,000
Drug & Alcohol Testing	503991	1,000	741	1,000
Ultra-Low Sulfur Fuel	504013	5,100	4,876	5,000
Propane	504016	135,000	169,498	230,000
Office Supplies	504200	200	0	0
Cleaning/Sanitation Supplies	504240	500	0	0
Misc Operating Supplies	504260	500	0	0
Fare Cards	504280	500	0	0
Postage	504991	1,500	1,500	1,500
Shipping	504992	100	0	0
Premium For PL/PD Insurance	506030	149,520	77,092	107,094
Veh License/Registration Fee	507040	500	4	0
Other Miscellaneous Expenses	509990	300	0	0
Employee Incentive	509993	1,000	375	0
Total Expense		$ 2,398,129	$ 1,763,543	$ 2,626,138

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Vanpool (14)				
	GL	2024 Budget Request	End Of Year Estimate 12/31/2024	2025 Budget Request
Expense				
Salaries and Wages	501020	68,003	68,806	0
Employer's FICA Expense	502010	6,072	6,228	0
PERS Pension Plan	502025	7,429	8,078	0
Medical Insurance	502030	24,070	25,678	0
Dental/Vision Insurance	502040	2,809	2,996	0
Life Insurance Plans	502050	69	74	0
Group Disability Insurance	502060	887	743	0
Worker's Comp Insurance	502080	305	299	0
WA State Paid FML	502085	117	182	0
General Leave	502090	7,632	8,851	0
Holiday Pay	502100	3,737	4,381	0
Other Benefits	502140	750	1,200	0
Wellness Benefit	502185	0	576	0
Training Services	503034	1,000	0	500
Drug & Alcohol Testing	503991	250	0	0
Gas	504012	125,000	120,202	135,000
Safety Training Material & Supply	504250	500	0	0
Sm Tools/Equip/Furn-Mtce	504310	1,000	0	0
Safety Supplies	504330	500	293	500
Premium For PL/PD Insurance	506030	182,526	94,109	130,734
Non-Insured PL/PD Claims	506040	1,000	0	0
Veh License/Registration Fee	507040	1,000	2,141	2,000
Dues, Memberships, Subscriptions	509010	0	7,306	8,500
Travel & Meeting Expense	509020	500	185	500
Conference Registration	509022	500	150	500
Training / Seminars	509024	500	0	0
Bridge, Tunnel, and Highway Toll	509030	200	0	0
Other Miscellaneous Expenses	509990	750	0	0
Total Expense		$ 437,105	$ 352,478	$ 278,234

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Ops Admin and Dispatchers (18)				
	GL	2024 Budget Request	End Of Year Estimate 12/31/2024	2025 Budget Request
Expense				
Non-Operator Salaries and Wages	501020	1,430,007	1,402,790	1,497,600
Non-Operator Overtime	501025	0	22,785	20,000
Employer's FICA Expense	502010	135,431	133,053	135,737
PERS Pension Plan	502025	165,704	165,664	166,078
Medical Insurance	502030	368,572	362,984	328,357
Dental/Vision Insurance	502040	34,942	36,146	35,289
Life Insurance Plans	502050	1,260	1,236	1,146
Group Disability Insurance	502060	18,689	15,946	18,463
Unemployment Comp Insurance	502070	10,000	17,582	20,000
Worker's Comp Insurance	502080	34,930	26,187	32,742
WA State Paid FML	502085	2,620	3,809	2,982
General Leave	502090	177,342	165,322	174,737
Holiday Pay	502100	82,989	100,005	82,096
Other Paid Absence	502120	2,000	0	250
Jury Duty	502165	0	621	750
Bereavement Leave	502155	0	4,326	2,000
First Stop Health	502110	0	0	0
Other Benefits	502140	15,000	20,400	15,000
Uniform Allowance	502130	0	4,739	3,000
Third Party Sick Pay	502175	0	56	100
Wellness Benefit	502185	0	5,759	6,500
Legal/Public Notices	503025	0	420	750
Professional and Technical Services	503030	5,000	1,301	2,500
Graphic Design	503033	750	0	0
Training Services	503034	5,000	0	5,000
Other Services	503990	2,000	1,050	2,000
Drug & Alcohol Testing	503991	1,800	654	1,800
Vaccination Services	503995	500	0	0
Office Supplies	504200	3,000	2,647	3,000
Small Tools Replacement/Repair	504230	500	0	0
Cleaning/Sanitation Supplies	504240	5,000	5,015	5,500
Misc Operating Supplies	504260	2,000	0	0
Bus Stop/Poles and Signs	504270	500	0	0
Fare Cards	504280	20,000	21,737	32,500
Sm Tools/Equip/Furn-Mtce	504310	2,000	85	2,000
Safety Supplies	504330	4,000	0	4,000
Sm Tools/Equip/Furn-Other	504340	1,000	652	1,000
Ergonomic Equipment & Furniture	504350	3,000	1,699	3,000
Other Materials & Supplies	504990	2,500	435	2,500
Postage	504991	500	750	1,000
Premium For PL/PD Insurance	506030	14,525	7,489	10,404
Dues, Memberships, Subscriptions	509010	100	0	0
Travel & Meeting Expense	509020	25,000	10,268	17,500
Misc Travel Expense	509021	500	0	0
Conference Registration	509022	3,000	4,125	5,000
Training / Seminars	509024	5,000	450	1,000
Other Miscellaneous Expenses	509990	500	1,005	1,500
Books & Periodicals	509991	1,000	0	0
Employee Recruitment	509992	12,000	8,224	0
Employee Incentive	509993	1,500	556	0
Equipment Lease	512120	5,000	2,567	5,000
Total Expense		$ 2,606,660	$ 2,560,537	$ 2,649,782

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Administration (20)				
	GL	2024 Budget Request	End Of Year Estimate 12/31/2024	2025 Budget Request
Expense				
Non-Operator Salaries and Wages	501020	603,509	575,485	697,910
Non-Operator Overtime	501025	0	1,935	1,000
Employer's FICA Expense	502010	65,814	57,190	62,616
PERS Pension Plan	502025	80,525	91,237	76,612
Medical Insurance	502030	189,108	136,263	113,790
Dental/Vision Insurance	502040	15,789	13,216	12,918
Life Insurance Plans	502050	504	473	414
Group Disability Insurance	502060	7,802	6,191	7,130
Unemployment Comp Insurance	502070	5,000	27,976	5,000
Worker's Comp Insurance	502080	2,426	2,076	2,001
WA State Paid FML	502085	1,273	1,595	1,211
General Leave	502090	84,541	113,358	80,757
Holiday Pay	502100	40,160	37,159	40,004
Other Paid Absence	502120	2,000	0	0
Other Benefits	502140	6,000	9,984	5,250
Wellness Benefit	502185		1,632	1,800
Professional and Technical Servic	503030	100,000	82,557	305,000
Legal Services	503032	1,000	0	0
Audit Services	503035	45,000	4,590	60,000
Consulting Services	503036	60,000	0	50,000
Temporary Help	503040	256,000	89,908	15,000
Other Services	503990	22,000	26,394	35,000
Vaccination Services	503995	0	165	0
Office Supplies	504200	12,000	19,800	25,000
Cleaning/Sanitation Supplies	504240	100	8	0
Fare Cards	504280	2,500	195	1,000
Forms	504290	1,500	2,350	1,750
Sm Tools/Equip/Furn-Other	504340	1,000	0	1,000
Ergonomic Equipment & Furniture	504350	500	0	500
Other Materials and Supplies	504990	600	2,896	2,000
Postage	504991	3,000	4,591	4,500
Utilities	505025	48,000	69,990	75,000
Premium For PL/PD Insurance	506030	157,312	81,110	112,676
Non-Insured PL/PD Claims	506040		7,500	5,000
State & Sales Tax	507020	2,000	1,745	2,000
Property Assessment	507990	1,500	1,615	1,750
Dues, Memberships, Subscriptions	509010	15,000	36,188	40,000
Travel & Meeting Expense	509020	3,000	784	6,000
Misc Travel Expense	509021		1,401	0
Conference Registration	509022	2,000	1,718	2,500
Training / Seminars	509024	3,500	345	3,500
Fines & Penalties	509060		396	0
Other Miscellaneous Expenses	509990	5,000	446	1,000
Books & Periodicals	509991	500	0	0
Employee Recruitment	509992	73,000	66,973	0
Employee Incentive	509993	500	0	0
Equipment Lease	512120	4,104	3,509	4,000
Building Lease	512121	2,202	790	2,300
Total Expense		1,927,269	1,583,732	1,864,889

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Executive (25)				
	GL	2024 Budget Request	End Of Year Estimate 12/31/2024	2025 Budget Request
Expense				
Non-Operator Salaries and Wages	501020	467,562	462,258	493,798
Non-Operator Overtime	501025	0	10,641	3,000
Employer's FICA Expense	502010	41,427	43,649	44,273
PERS Pension Plan	502025	50,688	50,983	53,936
Medical Insurance	502030	61,208	42,784	57,605
Dental/Vision Insurance	502040	6,644	5,364	7,362
Life Insurance Plans	502050	273	254	297
Group Disability Insurance	502060	4,706	4,441	4,835
Unemployment Comp Insurance	502070	2,000	0	2,000
Worker's Comp Insurance	502080	1,530	2,958	1,530
WA State Paid FML	502085	801	1,216	852
General Leave	502090	51,668	49,792	54,908
Holiday Pay	502100	25,304	23,763	27,032
Other Benefits	502140	3,750	5,616	20,000
DRS 457 Benefit	502143	7,000	7,071	0
Third Party Sick Pay	502175	0	47	0
Medical Premium Opt Out Reimbu	502180	0	5,125	0
Other Paid Absence	502120	500	0	0
Uniform Allowance	502130	0	864	0
Wellness Benefit	502185	0	2,297	2,500
Advertising	503020	5,000	2,262	10,000
Legal/Public Notices	503025	5,000	1,747	5,000
Professional and Technical Servic	503030	330,000	201,140	150,000
Legal Services	503032	40,000	20,006	40,000
Graphic Design	503033	2,500	0	10,000
Repair/Maintenance - Other	503051	500	0	0
Other Services	503990	500	225	500
Vaccination Services	503995	500	0	0
Office Supplies	504200	1,000	1,435	2,000
Software	504210	0	152	0
Sm Tools/Equip/Furn-Other	504340	500	0	0
Ergonomic Equipment & Furniture	504350	1,000	0	1,000
Other Materials & Supplies	504990	1,000	1,095	1,200
Postage	504991		309	500
Shipping	504992		65	0
Property Assessment	507990	2,000	0	0
Dues, Memberships, Subscriptions	509010	60,250	22,121	50,000
Travel & Meeting Expense	509020	5,000	17,627	20,000
Misc Travel Expense	509021		6,195	7,500
Conference Registration	509022	10,250	7,790	10,250
SKAT Board/CAC Meeting Expens	509023	0	1,575	1,750
Training / Seminars	509024	2,000	698	2,000
Promotional Items	509080	5,000	3,026	7,500
Other Miscellaneous Expenses	509990	0	2,927	5,000
Employee Recruitment	509992	1,500	11,818	0
Employee Incentive	509993	15,000	12,252	15,000
Building Lease	512121	15,000	15,542	16,000
Total Expense		$ 1,228,561	$ 1,049,130	$ 1,129,128

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HR (26)				
	GL	2024 Budget Request	End Of Year Estimate 12/31/2024	2025 Budget Request
Expense				
Salaries and Wages	501020	232,929	240,628	251,331
Employer's FICA Expense	502010	20,779	21,919	22,421
PERS Pension Plan	502025	25,424	27,195	27,433
Medical Insurance	502030	33,678	35,930	33,678
Dental/Vision Insurance	502040	2,276	3,827	2,276
Life Insurance Plans	502050	114	122	114
Group Disability Insurance	502060	2,039	2,020	2,078
Unemployment Comp Insurance	502070	20,000	0	0
Worker's Comp Insurance	502080	609	605	609
WA State Paid FML	502085	402	614	434
General Leave	502090	26,118	28,663	28,181
Holiday Pay	502100	12,579	13,770	13,572
Other Benefits	502140	1,500	2,400	1,500
Wellness Benefit	502185	0	726	1,000
Advertising	503020	1,500	0	0
Legal/Public Notices	503025	250	0	0
Professional and Technical Servic	503030	2,500	0	0
Labor Law Service	503031	5,000	42,363	100,000
Legal Services	503032	25,000	0	0
Temporary Help	503040	65,000	32,550	0
Drug & Alcohol Testing	503991	250	0	0
Office Supplies	504200	3,000	464	3,000
Safety Training Material & Supply	504250	0	461	500
Misc Operating Supplies	504260	250	0	250
Forms	504290	250	0	250
Sm Tools/Equip/Furn-Other	504340	2,500	0	500
Ergonomic Equipment & Furniture	504350	500	0	500
Wellness Program Activity/Supplie	504600	6,150	3,045	13,000
Other Materials & Supplies	504990	500	197	500
Postage	504991	750	1,125	1,500
Dues, Memberships, Subscriptions	509010	2,500	4,316	5,000
Travel & Meeting Expense	509020	5,000	3,754	5,000
Misc Travel Expense	509021	0	41	100
Conference Registration	509022	7,500	1,701	2,000
Training / Seminars	509024	3,750	113	3,750
Other Miscellaneous Expenses	509990	750	0	750
Books & Periodicals	509991	250	0	100
Employee Recruitment	509992	5,000	1,156	45,000
Employee Incentive	509993	1,500	194	12,000
Total Expense		$ 518,099	$ 469,900	$ 578,328

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Information Technology (30)				
	GL	2024 Budget Request	End Of Year Estimate 12/31/2024	2025 Budget Request
Expense				
Non-Operator Salaries and Wages	501020	229,384	297,420	0
Non-Operator Overtime	501025	0	7,704	0
Employer's FICA Expense	502010	27,325	29,377	0
PERS Pension Plan	502025	33,433	37,012	0
Medical Insurance	502030	71,383	76,151	0
Dental/Vision Insurance	502040	7,115	7,589	0
Life Insurance Plans	502050	207	221	0
Group Disability Insurance	502060	2,961	2,903	0
Worker's Comp Insurance	502080	901	894	0
WA State Paid FML	502085	529	831	0
General Leave	502090	41,604	50,103	0
Holiday Pay	502100	16,284	19,579	0
Other Paid Absence	502120	500	0	0
Other Benefits	502140	2,250	3,600	0
Bereavement Leave	502155	0	1,446	0
Wellness Benefit	502185	0	576	0
Professional and Technical Servic	503030	50,000	42,940	75,000
Office Supplies	504200	200	0	0
Software	504210	424,906	601,122	325,000
Cleaning/Sanitation Supplies	504240	0	63	0
Small Computer Equipment	504300	120,000	112,977	110,000
Sm Tools/Equip/Furn-Mtce	504310	35,000	1,200	12,000
Sm Tools/Equip/Furn-Other	504340	0	8,885	0
Shipping	504992	300	60	200
Telephone Service	505022	15,000	13,855	15,000
Cellular Phone	505023	50,000	47,873	55,000
Radio	505024	20,000	2,786	10,000
Fiber Optics	505026	25,000	24,653	27,000
Internet Fee	505027	27,000	29,209	33,000
Dues, Memberships, Subscriptions	509010	16,000	1,500	0
Training / Seminars	509024	0	481	0
Total Expense		$ 1,217,280	1,423,013	$ 662,200

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Safety & Security (35)				
	GL	2024 Budget Request	End Of Year Estimate 12/31/2024	2025 Budget Request
Expense				
Non-Operator Salaries and Wages	501020	535,842	408,580	512,626
Non-Operator Overtime	501025	30,000	0	0
Employer's FICA Expense	502010	0	38,789	46,240
PERS Pension Plan	502025	50,155	40,524	56,576
Medical Insurance	502030	130,449	115,675	130,449
Dental/Vision Insurance	502040	13,512	12,118	13,512
Life Insurance Plans	502050	390	334	390
Group Disability Insurance	502060	5,605	6,191	5,947
Worker's Comp Insurance	502080	8,636	10,742	8,636
WA State Paid FML	502085	793	1,102	895
General Leave	502090	55,332	47,125	63,664
Holiday Pay	502100	26,646	36,914	28,151
Uniform Allowance	502130	0	2,108	2,500
Other Benefits	502140	4,500	7,200	4,500
Bereavement Leave	502155	0	1,654	0
Professional and Technical Service	503030	250	0	0
Repair/Maintenance - Other	503051	0	(135)	0
Security Services	503070	270,592	322,763	200,000
Other Services	503990	75	240	0
Drug & Alcohol Testing	503991	100	0	0
CDL Testing/DMV Checks	503994	200	0	0
Office Supplies	504200	150	102	150
Cleaning/Sanitation Supplies	504240	200	0	0
Safety Training Material & Supply	504250	5,000	1,998	5,000

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Safety & Security (35)				
	GL	**2024 Budget Request**	**End Of Year Estimate 12/31/2024**	**2025 Budget Request**
Misc Operating Supplies	504260	50	0	50
Sm Tools/Equip/Furn-Mtce	504310	50	0	50
Safety Supplies	504330	4,000	3,795	4,500
Sm Tools/Equip/Furn-Other	504340	250	504	500
Ergonomic Equipment & Furniture	504350	1,500	162	1,000
Other Materials & Supplies	504990	200	233	300
Dues, Memberships, Subscriptions	509010	4,000	234	4,000
Travel & Meeting Expense	509020	2,500	(326)	1,500
Misc Travel Expense	509021	250	0	200
Conference Registration	509022	500	0	500
Training / Seminars	509024	750	0	2,500
Other Miscellaneous Expenses	509990	250	0	250
Employee Recruitment	509992	250	0	250
Employee Incentive	509993	750	1,053	0
Total Expense		$ 1,153,726	1,059,680	$ 1,094,835

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Vehicle/Services Maintenance (41)				
	GL	2024 Budget Request	End Of Year Estimate 12/31/2024	2025 Budget Request
Expense				
Non-Operator Salaries and Wages	501020	1,367,526	1,249,386	1,507,684
Non-Operator Overtime	501025	0	8,758	15,000
Employer's FICA Expense	502010	120,638	117,953	134,310
PERS Pension Plan	502025	147,604	143,013	164,332
Medical Insurance	502030	284,663	289,131	313,648
Dental/Vision Insurance	502040	30,388	32,411	32,603
Life Insurance Plans	502050	1,119	1,114	1,212
Group Disability Insurance	502060	16,223	14,068	17,641
Unemployment Comp Insurance	502070	10,000	0	10,000
Worker's Comp Insurance	502080	66,255	51,981	69,977
WA State Paid FML	502085	2,328	3,275	2,592
General Leave	502090	147,325	127,386	162,783
Holiday Pay	502100	73,318	86,162	81,211
Other Paid Absence	502120	2,000	0	2,000
Other Benefits	502140	14,250	12,750	15,000
Boot Allowance	502142	3,800	5,760	6,000
Third Party Sick Pay	502175	0	1,971	2,000
Medical Premium Opt Out Reimbu	502180	0	5,125	5,500
Wellness Benefit	502185	0	2,502	3,000
Advertising	503020	100	0	0
Legal/Public Notices	503025	200	0	0
Professional and Technical Servic	503030	500	0	0
Graphic Design	503033	500	0	0
Temporary Help	503040	10,000	1,551	7,500
Contract Maintenance Services	503050	11,500	8,526	12,500
Repair/Maintenance - Other	503051	45,000	25,599	35,000
GFI Services	503055	1,000	0	0
Non-Insured PL/PD Claims	506040	0	0	20,000
Vehicle Washing/Cleaning	503061	100	0	0
Other Services	503990	4,000	975	4,000
Drug & Alcohol Testing	503991	1,200	660	1,200
CDL Testing/DMV Checks	503994	800	0	800
Ultra-Low Sulfur Fuel	504013	8,907	7,880	11,000
Lubricants	504014	53,000	36,249	50,000
Fuel Staff Vehicles	504015	33,000	39,132	45,000
Fuel Equipment	504017	100	0	0
Tires and Tubes	504020	125,124	125,854	175,000
Office Supplies	504200	1,500	195	1,500
Small Tools Replacement/Repair	504230	5,500	431	5,500
Cleaning/Sanitation Supplies	504240	14,000	14,523	16,000
Fare Cards	504280	1,000	0	0
Small Computer Equipment	504300	4,000	0	0
Sm Tools/Equip/Furn-Mtce	504310	16,000	5,291	16,000
Small Tools & Equipment - Vehicl	504311	4,100	1,462	4,100
Safety Supplies	504330	6,000	685	6,000
Sm Tools/Equip/Furn-Other	504340	3,000	0	3,000
Ergonomic Equipment & Furniture	504350	500	0	500
Building Repair Supplies	504360	500	0	500
Equipment Repair Supplies	504370	3,000	751	3,000
GFI Repair Supplies	504375	8,000	3,394	8,000
Vehicle Washing Supplies	504385	8,000	6,100	8,000
Revenue Vehicle Parts/Supplies	504390	450,000	434,581	465,000
Non Revenue Vehicle Parts/Suppl	504400	15,000	7,939	15,000
Shop Supplies	504405	25,000	19,589	25,000

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Vehicle/Services Maintenance (41)				
	GL	**2024 Budget Request**	**End Of Year Estimate 12/31/2024**	**2025 Budget Request**
Other Materials & Supplies	504990	2,000	0	2,000
Postage	504991	1,000	1,500	2,500
Shipping	504992	1,000	0	0
Premium For PL/PD Insurance	506030	60,342	31,113	43,221
Travel & Meeting Expense	509020	12,000	8,623	12,000
Conference Registration	509022	2,000	488	2,000
Training / Seminars	509024	8,000	0	8,000
Other Miscellaneous Expenses	509990	1,000	450	1,000
Employee Recruitment	509992	12,000	12,520	0
Employee Incentive	509993	1,500	381	0
Equipment Rental	512060	5,000	0	5,000
Equipment Lease	512120	5,000	2,218	5,000
Total Expense		$ 3,258,410	$ 2,951,405	$ 3,566,313

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Facilities Maintenance (45)				
Facilities Maintenance (45)	**GL**	**2024 Budget Request**	**End Of Year Estimate 12/31/2024**	**2025 Budget Request**
Expense				
Non-Operator Salaries and Wages	501020	653,618	677,322	498,685
Non-Operator Overtime	501025	0	1,502	2,160
Employer's FICA Expense	502010	63,941	62,164	44,821
PERS Pension Plan	502025	78,233	74,373	54,840
Medical Insurance	502030	191,618	187,637	135,586
Dental/Vision Insurance	502040	18,065	17,134	12,447
Life Insurance Plans	502050	642	636	504
Group Disability Insurance	502060	8,131	7,230	6,316
Unemployment Comp Insurance	502070	5,000	0	5,000
Worker's Comp Insurance	502080	34,380	28,106	27,178
WA State Paid FML	502085	1,234	1,765	865
General Leave	502090	85,396	77,797	56,490
Holiday Pay	502100	40,227	59,530	29,120
Other Paid Absence	502120	2,000	0	2,000
Other Benefits	502140	7,500	6,750	6,750
Boot Allowance	502142	2,000	1,400	1,600
Jury Duty	502165	0	1,525	0
Professional and Technical Servic	503030	2,500	0	2,500
Temporary Help	503040	7,500	0	2,500
Contract Maintenance Services	503050	1,000	0	1,000
Repair/Maintenance - Other	503051	8,000	8,593	25,000
Custodial Services	503060	22,000	8,912	25,000
Vehicle Washing/Cleaning	503061	0	1,966	0
Security Services	503070	1,000	259	1,000
Other Services	503990	1,000	98	1,000
Ultra-Low Sulfur Fuel	504013	1,000	0	1,000
Lubricants	504014	100	0	100
Fuel Equipment	504017	2,000	2,235	3,000
Tires and Tubes	504020	0	942	0
Office Supplies	504200	200	221	500
Small Tools Replacement/Repair	504230	1,000	393	1,000
Cleaning/Sanitation Supplies	504240	12,000	14,324	16,000
Misc Operating Supplies	504260	750	94	750
Bus Stop/Poles & Signs	504270	6,000	1,429	6,000
Sm Tools/Equip/Furn-Mtce	504310	5,000	3,220	123,400
Safety Supplies	504330	1,500	1,637	2,000
Sm Tools/Equip/Furn-Other	504340	3,500	4,831	6,000
Building Repair Supplies	504360	30,000	23,511	30,000
Equipment Repair Supplies	504370	7,000	11,703	13,000
Revenue Vehicle Parts/Supplies	504390	0	157	250
Non Rev Vehicle Parts/Supplies	504400	2,000	1,347	2,000
Shop Supplies	504405	10,000	6,327	8,000
Ground Maintenance Supplies	504510	10,000	1,209	10,000
Other Materials & Supplies	504990	2,500	96	2,500
Cellular Phone	505023		925	0
Travel & Meeting Expense	509020	5,000	1,764	5,000
Conference Registration	509022	1,000	3,330	4,000
Training / Seminars	509024	2,500	557	2,500
Other Miscellaneous Expenses	509990	150	75	150
Books & Periodicals	509991	1,000	0	0
Employee Recruitment	509992	1,000	1,750	0
Equipment Rental	512060	3,000	1,772	3,000
Equipment Lease	512120	3,000	3,665	4,000
Total Expense		$ 1,402,929	$ 1,312,214	$ 1,186,511

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Skagit Station (50)				
	GL	2024 Budget Request	End Of Year Estimate 12/31/2024	2025 Budget Request
Expense				
Professional and Technical Servic	503030	1,000	0	0
Temporary Help	503040	5,000	0	0
Contract Maintenance Services	503050	1,000	0	0
Repair/Maintenance - Other	503051	5,000	1,351	5,000
Custodial Services	503060	25,000	9,945	25,000
Security Services	503070	1,000	1,567	2,000
Office Supplies	504200	200	0	200
Cleaning/Sanitation Supplies	504240	7,000	5,101	7,000
Bus Stop/Poles & Signs	504270	1,000	0	1,000
Sm Tools/Euip/Furn-Mtce	504310	100	0	100
Safety Supplies	504330	1,000	0	1,000
Sm Tools/Equip/Furn-Other	504340	1,000	570	1,000
Building Repair Supplies	504360	12,000	12,672	20,000
Equipment Repair Supplies	504370	2,000	35	1,500
Ground Maintenance Supplies	504510	5,000	3,024	5,000
Other Materials & Supplies	504990	500	0	500
Utilities	505025	35,000	39,165	45,000
Property Assessment	507990	3,000	2,150	3,250
Equipment Rental	512060	6,000	5,137	6,000
Equipment Lease	512120	3,000	2,815	3,500
Total Expense		$ 114,800	$ 83,532	$ 127,050

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MOA 2 - Bay Ridge (51)				
	GL	2024 Budget Request	End Of Year Estimate 12/31/2024	2025 Budget Request
Expense				
Professional and Technical Servic	503030	2,000	1,108	2,000
Repair/Maintenance - Other	503051	4,000	11,838	13,000
Security Services	503070	2,500	376	2,500
Other Services	503990	600	849	1,000
Fuel Equipment	504017	200	3,697	4,000
Cleaning/Sanitation Supplies	504240	9,000	5,367	9,000
Sm Tools/Equip/Furn-Other	504340	1,500	565	1,500
Building Repair Supplies	504360	2,500	894	2,500
Equipment Repair Supplies	504370	200	0	2,000
Shop Supplies	504405	100	0	100
Ground Maintenance Supplies	504510	500	64	500
Other Materials & Supplies	504990	2,000	0	2,000
Utilities	505025	33,000	37,786	42,500
Internet Fee	505027	3,000	342	3,000
Premium For PL/PD Insurance	506030	4,000	0	4,000
Property Assessment	507990	500	639	750
Dues, Memberships, Subscriptions	509010	500	0	500
Equipment Rental	512060	1,000	0	3,000
Equipment Lease	512120	0	318	1,000
Total Expense		$ 67,100	$ 63,842	$ 94,850

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Park & Ride (52)				
	GL	2024 Budget Request	End Of Year Estimate 12/31/2024	2025 Budget Request
Expense				
Professional and Technical Svcs	503030	4,000	7,426	9,000
Contract Maintenance Services	503050	2,000	740	2,000
Repair/Maintenance - Other	503051	6,000	6,334	7,000
Security Services	503070	1,000	156	1,000
Other Services	503990	1,000	0	750
Cleaning/Sanitation Supplies	504240	3,500	3,983	4,000
Miscellaneous Operating Supplies	504260	200	0	200
Bus Stop/Poles & Signs	504270	1,000	264	1,000
Building Repair Supplies	504360	7,000	1,758	7,000
Equipment Repair Supplies	504370	1,500	0	1,500
Ground Maintenance Supplies	504510	5,000	3,794	5,000
Other Materials & Supplies	504990	1,000	788	1,000
Utilities	505025	45,000	56,104	60,000
Property Assessment	507990	15,000	17,508	20,000
Other Miscellaneous Expenses	509990	500	0	500
Equipment Rental	512060	5,000	4,174	5,000
Equipment Lease	512120	8,000	7,037	8,000
Total Expense		$ 106,700	$ 110,066	$ 132,950

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Capital (55)				
	GL	2024 Budget Request	End Of Year Estimate 12/31/2024	2025 Budget Request
Expense				
Legal/Public Notices	503025	150,000	0	
Route Improvements	555010	455,000	(33,654)	522,362
Park & Ride	555030	270,000	1,015	420,000
Revenue Equipment	555040	4,188,523	3,379,701	1,924,000
Service Equipment	555050	46,743	72,719	412,080
Vanpool Vehicles	555051	608,859	705,101	
Bldg - New MOA	555118	4,000,000	3,051,365	41,735,000
Bldgs. - MOA	555120	0	0	
Garage/Shop Equipment	555121	7,984	44,141	113,082
Office Furniture/Equipment	555122	0	0	
Intangible Asset	555123	502,711	35,202	
Communications & Information Systems	555124	0	12,763	
Total Expense		$ 11,880,377	$ 7,268,353	$ 45,126,524

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References

1. “Transportation Plans.” Skagit Council of Governments (SCOG), January 3, 2019. Retrieved from https://www.scog.net/transportation-plans/
2. “Access Skagit County.” 2025 Skagit County Comprehensive Plan Update, Skagit County Planning & Development Services. Retrieved from www.skagitcounty.net/Departments/PlanningAndPermit/2025CPA.htm
3. “Climate Commitment Act.” Washington State Department of Ecology. Retrieved from https://ecology.wa.gov/Air-Climate/Climate-Commitment-Act
4. Skagit Transit. (2023). 2023 Financial Report. Retrieved from https://www.skagittransit.org/assets/1/7/2019_Annual_Financial_Report_(PDF).pdf
5. U.S. Census Bureau. QuickFacts: Skagit County, Washington; Washington. Retrieved from https://www.census.gov/quickfacts/fact/table/US/PST045224
6. Skagit Transit. Long-Range Transit Plan (Final), June 11, 2025, p. 53.

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Name	Comment Received	Staff Response
Joe Kunzler	Dear Skagit Transit; The 2025-2030 Draft Transit Development Plan (hereafter TDP) is arguably the most consequential in Skagit Transit's post-pandemic history or herstory – up to you. We have a transit agency that plans to end 2025 with an operating balance of $7.2~ million but end 2029 with an operating balance of $3.9~ million and end 2030 with an operating balance of $2.2~ million. A loss of on average $1 million a year, with apparently no ideas to stop the loss in operating funds – and that's not the only issue with the proposed TDP as there are others in the TDP such as no performance benchmarks as required by the WSDOT Transit Development Plan Guidebook. *Financial Crisis at Skagit Transit* 1. Let's start with according to the Revised Code of Washington (RCW) that governs transit development plans in RCW 35.58.2795, the RCW requires most relevantly, "The program shall contain information as to how the municipality intends to meet state and local long-range priorities for public transportation, capital improvements, significant operating changes planned for the system, and how the municipality intends to fund program needs." 2. Yet there is no discussion of a plan B if grants are unavailable or ungranted to meet the proposals of the TDP. No mention of options to self-help with local revenue. Now, if I'm living in Everett (0.6) or Marysville (1.2) or Ferndale (0.6) with a higher sales tax rate, I would be less than sympathetic to a transit agency that has sat at 0.4% since 2008. I've gone so far to convey this to two consecutive Puget Sound Regional Council (PSRC) meetings, pointing out in one that "we've got to help ourselves and do our fair share". But there are also other self-help options I would like to propose here: 3. Installing vending machines at Chuckanut Park & Ride, March's Point Park & Ride, and other Skagit Transit properties where this is feasible. 4. Offering advertising opportunities in several ways: o Selling exclusive advertising/sponsorship contracts to local businesses to sponsor a shelter or bench in a Skagitonian community o General advertising on at least paratransit, which is substantially more expensive to provide than fixed route. Advertising on fixed route vehicles as a last resort. 5. To me, it's a matter of getting Skagit Transit the funding to provide reliable service of decent quality. For instance, we have no bus shelter outside the Sedro-Woolley Senior Center for passengers waiting for the current 300 & 70X	1. Skagit Transit has sought to clarify this information in Section 3: Existing System Conditions: Service Standards 2. This feedback has been noted and addressed in the Needs Assessment: Revenue Considerations and Opportunities 3. Skagit Transit has taken note of this recommendation. 4. This feedback has been noted and addressed in the Needs Assessment: Revenue Considerations and Opportunities 5. Skagit Transit will continue to evaluate all service changes based on performance measures and data. 6. No response required at this time. 7. Skagit Transit has sought to clarify this information in Section 3: Existing System Conditions: Service Standards

	morning express and it's 2025! Yes, these amenities cost money – but there are creative ways of funding those important touches locally. Additionally, paratransit is both a moral responsibility and a highly exhaustive, expensive endeavor that deserves more financial support. 6. Then there is the matter of the information presented by Joe Stewart, Director of Finance to the July 2025 Skagit Transit Board. A presentation only recorded because of a concerned citizen up on YouTube via "2025-07-16 Skagit Transit Board of Directors Partial Recording" at https://youtu.be/LRByzGTZca0?si=NHC04aOLK57Zubsp. The information is clearly concerning, and the underwhelming response by Skagit Transit leadership do not inspire confidence. Nor does the lack of required local performance measures and targets in the TDP… *No required "Local performance measures and targets"* Going over the WSDOT Transit Development Plan Guidebook, is this on page 13: "A performance measure is an indicator of how you provide a particular aspect of transit service. A performance target is a numeric threshold that defines whether you are providing that aspect of transit service at the desired level. You may establish targets based on goals, current performance, industry standards, and peer data. At a minimum, you should include your transit asset management and most current safety performance measures and targets." Yet a review of this year's Draft TDP includes an absence of the following: 7. On-time performance • Repayment of debt • Revenue growth • Ridership goals • Route reliability I'd start there. You may notice the last point. *Failure to Plan for Getting Adequate Operator Supply* Another omission here is a plan to ensure that there are enough operators to service all of Skagit Transit's fixed routes. Over the past few years, Skagit Transit has had endemic route cancellations. Yet there is nothing in the Draft TDP regarding recruiting and retaining operators. *Conclusion* Skagit Transit needs to use the 2025-2030 Draft TDP as an opportunity to set a positive direction forward in the face of crises.	

	The Long Range Plan does not substitute for a TDP that addresses issues of fiscal crisis, legal requirements for performance targets and a plan to have ample operators. This Draft TDP requires a severe overhaul. Very respectfully submitted; Joe A. Kunzler	
Chris Jones	1. Skagit Transit needs a more positively aggressive recruitment strategy to attract and retain coach operators. 2. Skagit Transit should also improve its marketing imprint throughout the service area and work consistently to handle concerns and disputes so that the agency can consider requesting more funding from voters to assist in achieving goals and objectives in the Transit Development Plan. 3. Reviewing this document I was unable to determine the fare information presented by graphs.	1. Skagit Transit is committed to ensuring the agency's staffing needs are met through a robust hiring, training and retention plan. 2. This feedback has been noted and addressed in the Needs Assessment: Revenue Considerations and Opportunities 3. Skagit Transit has sough to address this issue by running this document through an accessibility reader to ensure this document is accessible to all users.
Judy Jones	1. First of all, in the final publication of the plans, (I have also asked Crystle), please recognize the CAC as a contributing feedback entity. 2. Page 4 Section 2: Organization Overview Agency History and Funding: In future, we should look at different marketing strategies that will lead to eventual over-all community buy-in, in case Skagit Transit should want to ask for another tenth percent raise on sales tax on the ballot. Years ago, Intercity Transit did just that, successfully receiving funding, so now has that solid foundation in addition to any other they might have. I was	1. The Community Advisory Committee did not provide public comment on this plan, rather individual CAC members elected to provide feedback as individuals.

	told that at the time it was a fairly easy ask, as the community believes in and values its transit system. o While Skagit Transit works very hard in marketing the way it does, we experience few people knowing about and showing up at public meetings, if at all. Some are not even aware that Skagit County has a transit system, let alone a volunteer citizens committee. So, while Transit is doing all the right things to show up at festivals and fairs and delivering literature to all the appropriate public places, something is missing, and I believe will take a professional marketing consultant to analyze and recommend best actions to take. o I have had this same conversation with Crystle. We should learn from Intercity Transit what has worked in their county, and apply strategies that would work for us here in Skagit County. I keep saying it, but the end-game should be to get community buy-in. 3. Page 5. "There is also a non-voting labor representative." In addition, the non-voting CAC Chair position should also be noted, added in. 4. A question: Who is the ADA Coordinator, Jennifer Davis? I hadn't heard, but am curious. 5. Page 14. In the Long-Range plan, I failed to ask about what was actually showing on the slide, when it came to showing the future of the route 300. Is this a situation where micro transit would be expanding to Sedro-Woolley? Will this future proposed change affect current para transit coverage? o While I realize decisions have to be made according to demand and not on individual route information, it is that very individual route information that should indicate that a larger need is there. If response is not received from many, it goes back to the above recommendation made, that current marketing practices should be re-evaluated and upgraded. The "tell" is when current strategies net few to zero results, in some instances. The same goes for online marketing.	2. This feedback has been noted and addressed in the Needs Assessment: Revenue Considerations and Opportunities 3. The CAC Non-Voting Chair has been identified in the Organization Overview: Structure of Governance 4. Skagit Transit names key positions in planning documents, but has elected not to publish staff names. This information is provided upon request. 5. Skagit Transit will continue to evaluate all service changes based on performance measures and data.
Ray Bock	My only concern was that it looked like Sedro Woolley was being gutted and I hoped it wasn't for the benefits of Mount Vernon and Burlington. If the proposed cuts are due to ridership and overlap then I agree with the proposed cuts and will wait to see how things go. Anyway, have a great day. Thanks, Ray Bock	None required. Skagit Transit will continue to evaluate all service changes based on performance measures and data.

TO: Skagit Transit Board of Directors

FROM: Crystle Stidham, Chief Executive Officer

SUBJECT: Approve Resolution 2025-09 Authorization for Disposal of Surplus Vehicles and Parts

INFORMATION:

Skagit Transit identified 4 revenue vehicles and 1 piece of shop equipment that have met the Useful Life Benchmark (ULB) and are now surplus. Additionally, Skagit Transit has identified excess parts inventory, valued at $81,392.24, that are no longer being used in maintenance. In accordance with Skagit Transit's policy and procedures for disposition of surplus property, all vehicles, equipment, and parts will be prepared for sale through an open or sealed bid auction.

Pursuant to RCW 46.70, the auctioneer shall be a licensed and bonded vehicle dealer. The only such auction house in close proximity to Skagit Transit for transferring the vehicles and parts is Bellingham Public Auto Auction, LLC. The scheduled auction date is September 1-7, 2025.

RECOMMENDATION:

Skagit Transit staff is asking the board to authorize the Chief Executive Officer to dispose of surplus vehicles, equipment, and parts by process of auction and transfer of agency program support.

Budget Impact

Estimated ($48,000)

RESOLUTION NO. 2025-09

A RESOLUTION OF SKAGIT TRANSIT BOARD OF DIRECTORS AUTHORIZING THE SURPLUS OF EQUIPMENT

WHEREAS, RCW 43.19.1919 authorizes the sale, donation, or exchange of property that is no longer used; and

WHEREAS, Resolution No. 2025-09 of the Skagit Transit System details the policy and procedures for disposition of surplus property; and

WHEREAS, Skagit Transit has identified the following vehicles to be excess equipment:

Vehicle #	Year	Make	Model	VIN #	Mileage	Hours
111	2011	Gillig	35 Ft. Low Floor	15GGB2715B1178544	469,373	43,430
757	2013	Chevrolet	Startrans Senator	1GB6G5BLXC1171643	136,328	N/A
758	2013	Chevrolet	Startrans Senator	1GB6G5BL6C1200281	134,665	N/A
760	2015	Chevrolet	Startrans Senator	1GB6G5BL9E1158448	139,250	N/A
001	1998	Clark	GCX25 Forklift	GX230-0198-8795KOF	N/A	3,579

Skagit Transit Surplus Parts Auction List				
Faster#	**Part Description**	**Quantity**	**Item Price**	**Total**
013021	air gauge NABI	1.000	$75.810	$75.810
013024	air cock assy NABI	2.000	$675.000	$1,350.000
020006	Battery Disconnect Switch (ARBOC)	3.000	$27.045	$81.135
040011	gas spring Startrans	2.000	$30.434	$60.867
040012	gas spring (NABI engine door)	6.000	$15.828	$94.970
040015	gas spring	5.000	$39.006	$195.028
040016	Radiator Hatch Shock (Nabi)	7.000	$12.141	$84.986
041006	end cap LH	5.000	$5.664	$28.319
044024	Cover Plate Down Rear NABI	3.000	$90.517	$271.550
044025	cover plate down front NABI	3.000	$97.650	$292.950
051027	ARBOC/STARTRANS Front Brake Pads	2.000	$63.750	$127.500
052020	ARBOC/Startrans Front Rotor	2.000	$65.585	$131.170
052024	Rotor Startrans (No ARBOC)	2.000	$60.302	$120.603
054036	Bearing Set (NABI)	4.000	$134.615	$538.460
054037	Bearing Set (NABI)	2.000	$56.817	$113.633
054039	Bearing Race (NABI)	4.000	$93.098	$372.390
054041	Bearing Set (NABI)	4.000	$77.198	$308.790
055006	Differentail Pinion Seal Chevy	1.000	$30.090	$30.090
055008	Rear Wheel Seals (Chevy Vanpool)	6.000	$9.238	$55.430
059011	ABS, Modulator Valve (091-096)	1.000	$129.950	$129.950
059033	disc pad retaining kit NABI	4.000	$4.060	$16.240
059034	mounting kit NABI	4.000	$50.420	$201.680
059035	padwear indicator kit NABI	2.000	$28.900	$57.800
059040	caliper, rt Rr ARBOC	2.000	$188.885	$377.770
059041	caliper lft Rr ARBOC	2.000	$188.885	$377.770
059050	Brake Booster (Chevy)	1.000	$399.790	$399.790
059051	Parking Brake Cable PS (Chevy)	2.000	$13.610	$27.220
059052	Parking Brake Cable DS (Chevy)	2.000	$12.960	$25.920
059053	Parking Brake Pedal Module (Chevy)	1.000	$119.372	$119.372
059087	Brake Pedal Position Sensor (Arboc)	2.000	$7.525	$15.050
07003	Cap, Surge Tank	4.000	$14.588	$58.350
080020	Rear Axle Oil Seal (Chevy	3.000	$13.257	$39.772
090016	P.A. System Speaker (NABI)	3.000	$87.755	$263.265
09061	Gauge, Oil Pressure NABI	1.000	$38.730	$38.730
09063	Gauge Coolant Temp NABI	2.000	$23.689	$47.378
09064	Voltmeter 24V NABI	2.000	$23.690	$47.380
09065	Gauge, Fuel Level NABI	2.000	$21.114	$42.228
09066	Speedometer (NABI)	2.000	$104.255	$208.510
09085	Solenoid, Door Nabi	2.000	$250.480	$500.960

09166	Nabi Door Edge Pressure Switch	4.000	$56.910	$227.640
092003	Model 10 RED LED (Startrans)	5.000	$7.183	$35.917
092015	strobe light	3.000	$77.613	$232.838
092026	lamp licence plate NABI	4.000	$7.900	$31.600
092027	Lamp socket inst panl NABI	7.000	$36.023	$252.161
093013	12VDC Solenoid Valve	5.000	$44.376	$221.882
093123	Arboc Door Switch Outside	3.000	$25.738	$77.215
093129	switch, door Arboc	7.000	$24.586	$172.105
093303	switch toggle NABI hazzard	1.000	$10.865	$10.865
094007	Hourmeter (NABI)	4.000	$43.169	$172.675
095011	proximity switch, (kneel NABI)	2.000	$44.080	$88.160
095012	Fire Alarm Sensor NABI	4.000	$280.235	$1,120.940
095022	Water in Fuel Sensor Chevy	2.000	$34.255	$68.510
096042	Nabi Alternator Neihoff C703	2.000	$2,677.980	$5,355.960
099032	I/O module NABI	2.000	$1,237.730	$2,475.460
110003	sealing washer (ISL)	4.000	$0.320	$1.280
11029	Idler Pulley (Chevy-Duramax)	4.000	$13.973	$55.890
11083	Bracket, Fuel filter (121-123/091-096)	2.000	$11.480	$22.959
111021	glow plug	2.000	$18.327	$36.653
111034	Nabi Steering Wheel	2.000	$73.795	$147.590
112008	Exhaust Pipe (NABI)	1.000	$610.360	$610.360
112010	NOx (Nitrogen Oxide) Sensor (Chevy)	1.000	$237.000	$237.000
112038	V-band clamp NABI	4.000	$18.651	$74.604
112039	v-band clamp NABI	4.000	$28.273	$113.090
112057	Exhaust Gasket Nabi	12.000	$8.197	$98.366
112058	DPF Gasket (Chevy)	1.000	$10.975	$10.975
112061	Exhaust Clamp (ARBOC-Chevy)	3.000	$67.073	$201.220
112067	DPF Sensor Connector (Chevy-Duramax)	3.000	$26.790	$80.370
112071	Exhaust Pipe Couplers (Nabi)	3.000	$33.635	$100.905
113017	Coolant Reservoir Chevy (Arboc-Startrans)	2.000	$118.325	$236.650
113020	Lower Radiator Hose	3.000	$190.543	$571.630
113026	Thermostat (Chevy-Duramax)	2.000	$39.420	$78.840
113027	Thermostat (Chevy-Duramax)	2.000	$42.390	$84.780
114007	turbo actuator kit VGT "07 ISL"	3.000	$978.820	$2,936.460
114011	Throttle Body (Duramax)	1.000	$158.680	$158.680
114012	Intake Manifold Cover (111)	2.000	$143.253	$286.505
116008	A/C Receiver Drier/Accumulator (Chevy)	2.000	$77.320	$154.640
116009	A/C Evaporator Core (Chevy)	1.000	$251.240	$251.240
116048	Filler Neck (Chevy)	1.000	$26.765	$26.765
116050	Belt Tensioner Duramax	2.000	$89.825	$179.650
117000	belt 6 ltr Ford	3.000	$63.525	$190.575

117005	Engine Belt (Startrans 759-761)	3.000	$40.113	$120.338
117021	Belt NABI ISL	2.000	$37.833	$75.665
117022	Belt NABI A/C Compressor	4.000	$32.135	$128.540
117025	Hose Silicone Reducer (NABI)	10.000	$19.354	$193.543
119033	Sensor, Nitrogen Oxide (NOX-111)	2.000	$437.682	$875.363
119036	Seal Cylinder Repair Kit (W/C-Chevy)	1.000	$70.797	$70.797
119044	EGR valve 6ltr Ford	2.000	$232.865	$465.730
119046	gasket 6ltr (egr cooler cleaning)	3.000	$1.870	$5.610
119047	gasket 6ltr (egr cooler cleaning)	3.000	$3.593	$10.780
119048	intake gasket kit 6ltr (egr cooler clean	1.000	$98.860	$98.860
119049	thermostat 6ltr	1.000	$21.890	$21.890
119055	Belt Tensioner NABI	2.000	$689.798	$1,379.595
119056	pulley, belt tensioner	2.000	$110.876	$221.752
119083	bearing, NABI belt tensioner pulley	2.000	$57.180	$114.359
119096	Tube Fuel Transfer (091-096)	2.000	$43.510	$87.020
119115	Tank, Coolant Recovery	1.000	$19.700	$19.700
130000	air filter (NABI)	1.000	$68.070	$68.070
130007	Air Filter (Ford-916)	1.000	$47.860	$47.860
130020	Fuel Filter (Ford-916)	10.000	$44.098	$440.980
130021	Transmission Filter (Ford-916)	2.000	$11.670	$23.340
130022	Transmission Filter (916)	3.000	$9.030	$27.090
130026	Nabi Hydraulic Filter	3.000	$18.197	$54.590
130036	Nabi Fuel Filter	2.000	$18.634	$37.268
16013	Heater Core	1.000	$311.560	$311.560
161000	circulating pump	1.000	$697.079	$697.079
161026	NABI defrost blower assembly	1.000	$193.000	$193.000
162015	Coolant Shutoff Valve (Nabi)	3.000	$18.895	$56.684
162022	heater control cable NABI	1.000	$26.149	$26.149
162023	heater control cable NABI	3.000	$19.350	$58.050
162027	boost pump repair kit Arboc/Startrans	2.000	$75.000	$150.000
162032	Heater Control Valve NABI	4.000	$116.248	$464.993
170002	2012 Chevy Express Plug Wire Kit	1.000	$60.550	$60.550
180009	Sun Visor	2.000	$146.110	$292.220
180011	Nabi Secondary Sun Visor	2.000	$174.339	$348.677
183001	cap, rubrails	6.000	$2.140	$12.840
184001	Pretoria ballast NABI	2.000	$240.815	$481.630
191016	relay (NABI WC lift box)	5.000	$14.186	$70.930
191018	Proximity Switch NABI W/C Ramp	4.000	$257.937	$1,031.748
191026	rack, pinion gear	1.000	$563.108	$563.108
191029	Nabi W/C Relay Box	1.000	$0.001	$0.001
192098	Nabi Ramp Lift Sleeves	2.000	$80.618	$161.235

200012	Side Marker LED Arboc	4.000	$14.671	$58.685
201008	Startrans Clearance Light	5.000	$7.810	$39.048
201009	Startrans Red Clearance Light	6.000	$10.849	$65.095
201013	3/4 4X4 Thin-Line Red (Startrans)	3.000	$6.933	$20.800
201093	license lamp, Startrans	4.000	$13.232	$52.927
201094	interior lamp Startrans	4.000	$8.480	$33.920
201095	Clearance Light Assembly (NABI)	5.000	$12.792	$63.960
201096	Amber Clearance Light (NABI)	4.000	$16.600	$66.400
201097	Light 7" Amber LED Arboc (151-152)	4.000	$66.371	$265.484
201099	Taillight 6" LED Backup Arboc (151-152)	4.000	$41.176	$164.703
201100	Taillight 6"LED Red Arboc (151-152)	3.000	$25.237	$75.711
201103	LED Porch Light (151-152)	10.000	$42.260	$422.601
202007	bulb, dash NABI 158	4.000	$1.075	$4.300
202009	Head Lamp Assembly, DS	1.000	$284.450	$284.450
202014	90MM low beam LED headlamp	2.000	$156.618	$313.235
202016	Hi-Beam Headlight Assembly (Nabi)	2.000	$96.825	$193.650
222033	NABI Glass Dest Sign-Non Heated	1.000	$452.045	$452.045
23049	ODK	2.000	$694.399	$1,388.797
260023	drag link nabi	2.000	$827.434	$1,654.867
26012	Nabi Hydraulic Filter	2.000	$12.465	$24.930
27017	leveling valve NABI front	3.000	$124.356	$373.067
272029	shock absorber NABI	6.000	$167.192	$1,003.150
272032	Air Spring (091-096)	6.000	$78.973	$473.840
292017	Transmission Dipstick Nabi	2.000	$72.342	$144.683
292050	Nabi Steering shaft	1.000	$293.220	$293.220
30049	Windshield Washer Pump (NABI)	2.000	$12.725	$25.450
301014	wiper blade (31-3/4in) NABI	8.000	$29.495	$235.960
301015	Nabi Wiper Arm	4.000	$236.725	$946.900
301028	Wiper Motor (NABI)	4.000	$446.443	$1,785.770
301029	Wiper Motor (NABI)	1.000	$436.610	$436.610
331065	Recliner Knob Drivers Seat (Chevy)	4.000	$6.600	$26.400
331066	Recliner Knob Spacer Seat (Chevy)	4.000	$1.942	$7.769
331067	Screw Recliner Knob Seat (Chevy)	5.000	$0.738	$3.689
333002	Drivers Seat Belt Kit Chevy (Startrans)	2.000	$173.628	$347.255
333029	remote release kit NABI	1.000	$319.990	$319.990
333056	Antiskid Tape 33.5 x 5 (Arboc)	2.000	$27.350	$54.700
350004	Radiator Fan Clutch (Chevy)	2.000	$177.410	$354.820
352008	Pump Hydraulic Eaton (091-096)	1.000	$1,614.580	$1,614.580
352207	Nabi Fan Control Solenoid	1.000	$400.940	$400.940
370125	Macromatic Encapsulated Timer Relay	3.000	$41.296	$123.888
381003	4 PSI switch NABI	3.000	$31.840	$95.520

381005	35 PSI switch NABI	1.000	$24.700	$24.700
381006	80PSI switch NABI	2.000	$77.000	$154.000
390007	2 Pin Connector (Arboc Air Compressor)	4.000	$14.990	$59.960
390008	Connector Pigtail (Arboc Air Compressor)	3.000	$15.990	$47.970
452000	Ribbed Blue Flooring (Nabi)	5.000	$142.670	$713.350
452001	Smooth Blue Flooring (NABI)	6.000	$89.950	$539.700
452002	Ribbed Yellow Flooring (NABI)	1.000	$91.160	$91.160
700155	Spark Plug (Express)	16.000	$7.448	$119.170
042016	universal bumper-BS long	1.000	$0.010	$0.010
053051	Auto Slack Adjuster LH Front (071-075)	1.000	$100.000	$100.000
059030	brake chamber front NABI	2.000	$115.694	$231.387
059031	brake chamber front NABI	2.000	$97.295	$194.590
06086	Lug Nut Chevy (Arboc-Startrans)	11.000	$4.829	$53.119
071005	radiator, Startrans/Arboc	2.000	$406.875	$813.750
071006	Radiator Assembly (071-075)	1.000	$2,506.400	$2,506.400
071007	Radiator Asm, (Nabi 091-096)	1.000	$6,140.870	$6,140.870
112030	DPF filter"091-096"	2.000	$2,416.675	$4,833.350
112033	DOC Catalyst (091-096)	1.000	$4,386.830	$4,386.830
112069	DPF Filter Chevrolet	1.000	$2,951.610	$2,951.610
191025	Wheelchair Ramp, Assembly	1.000	$3,723.160	$3,723.160
191037	Wheelchair Ramp Platform Trim 48" (Nabi)	4.000	$471.648	$1,886.590
221008	Tempered Side Window Glass	3.000	$50.360	$151.080
222018	windshield D/S	3.000	$509.020	$1,527.060
222019	windshield C/S	2.000	$279.455	$558.910
272027	Rear Shock Absorber (StarTrans)	4.000	$41.784	$167.134
351005	Nabi Compressor line	1.000	$312.960	$312.960
				$81,392.24

NOW, THEREFORE, BE IT RESOLVED AND IT IS HEREBY ORDERED, that the Skagit Transit Board of Directors hereby authorizes the surplus and disposal of the above referenced equipment in a manner consistent with Skagit Transit Resolution No. 62 (policy on surplus and disposal of Skagit Transit property).

PASSED in open public meeting this 20th day of August 2025.

SKAGIT TRANSIT SYSTEM
SKAGIT COUNTY, WASHINGTON

By _____
Peter Browning, Chair Skagit Transit Board of Directors

By _____
Crystle Stidham, Chief Executive Officer

ATTEST TO FORM:

_____

Larissa Farrell, Clerk of Skagit Transit

APPROVED AS TO FORM:

_____

Dannon Traxler, Counsel to Skagit Transit

Skagit Transit - JUNE 2025

Total Fixed Route Ridership	
Unlinked Passenger Trips (UPT)	41,416
Compared to Previous Year-to-Date	38,469
Net **Increase**/Decrease Year-over-Year	7.12% Δ

(MB) Local Route Service Supplied	
Passenger Miles Traveled (PMT)	106,252.84
Vehicle Revenue Miles (VRM)	88,889.30
Vehicle Revenue Hours (VRH)	5,441.60
Vehicles Operated in Maximum Service	19
Vehicles Available for Maximum Service	22
Spare Ratio	14%

(MB) Local Route Service Efficiency	
Operating Expense per VRM	$ 10.90
Operating Expense per VRH	$ 177.98
Unlinked Passenger Trips per VRM	0.348
Unlinked Passenger Trips per VRH	5.680
Operating Expenses per PMT	$ 9.12
Operating Expenses per UPT	$ 31.34

Fixed Route Vehicle Operator Statistics	
Operator Count - (52 Bid Drivers + 9 Extra Board)	61
Total Operator Hours	13,105.05
Operator Productive Hours	7,858.41
Operator Non-Productive Hours	2,134.55
Operator Productivity %	78.64%
Supervisor Coverage Hours	269.52
Operator Overtime Hours	1,552.09
Operator Sum of Paid Overtime	$ 74,725.49
Extra Board Hours	1560

Route On-Time Departure Performance	
CB-Total	77.90%
MB-Total	70.20%
Grand Total	74.05%

(CB) Commuter Route Service Supplied	
Passenger Miles Traveled (PMT)	223,737.31
Vehicle Revenue Miles (VRM)	50,484.35
Vehicle Revenue Hours (VRH)	1,638.13
Vehicles Operated in Maximum Service	7
Vehicles Available for Maximum Service	8
Spare Ratio	13%

(CB) Commuter Route Service Efficiency	
Operating Expense per VRM	$ 5.42
Operating Expense per VRH	$ 166.91
Unlinked Passenger Trips per VRM	0.168
Unlinked Passenger Trips per VRH	5.174
Operating Expenses per PMT	$ 1.22
Operating Expenses per UPT	$ 32.26

Fixed Route Road Calls	
Road Calls	36
Previous Year	35
Road Failures	13
Compared to Previous Year-to-Date	14

Grant Reimbursable Operating Expenses	
Local Funds	$1,926,620.82
State Funds	$ 90,699.18
Federal Funds	$ -
Total Operating Expenses	$ 2,017,320.00

Operating Expenses By Class	
Labor	$ 706,484.50
Salaries	$ 408,798.85
Fringe & Paid Absences	$ 297,685.65
Services	$ 879.00
Materials & Supplies	$ 107,282.48
Fuels & Lubricants	$ 107,282.48
Tires & Tubes	
Other Materials	
Utilities	
Casualty & Liability	$ 33,797.44
Taxes	
Purchased Transportation	
Operating Lease Expenses	
Miscellaneous Expenses	$ 54.00
Special & Extraordinary	

Grant Reimbursable Capital Expenses	
Local Funds	
State Funds	
Federal Funds	
Total Capital Expenses	$ -

Fixed Route Safety & Security Events	
Major Events	0.92
Non-Major Events	2.92

Social Media Statistics	
Twitter (X) Impressions	1238
Twitter (X) Followers	809
Instagram Followers	133
Instagram Impressions	1140
Facebook Impressions	741
Facebook Followers	7526

Route On-Time Departure Performance			
Route	Early	On Time	Late
40X	0.00%	92.90%	7.10%
70X	17.40%	73.90%	8.70%
80X	0.00%	78.10%	21.90%
90X	4.20%	66.70%	29.20%
101	2.80%	88.90%	8.30%
202	18.30%	81.70%	0.00%
204	0.00%	73.40%	26.60%
205	0.00%	95.00%	5.00%
206	30.50%	47.60%	22.00%
207	0.00%	79.20%	20.80%
208	25.80%	55.90%	18.30%
300	7.30%	61.80%	30.90%
301	53.60%	46.40%	0.00%
305	25.50%	72.30%	2.10%
409	13.30%	52.20%	34.40%
410	1.40%	55.70%	42.90%
513	0.00%	94.30%	5.70%
615	0.00%	98.60%	1.40%
717	23.20%	50.00%	26.80%

NTD Monthly Ridership Forms - CB				
	Ridership	VRM	VRH	VOMS
June	8,475	50,484	1,638	7

NTD Monthly Ridership Forms - MB				
	Ridership	VRM	VRH	VOMS
June	30,908	88,889	5,442	19

NTD Monthly Ridership Forms - DR				
	Ridership	VRM	VRH	VOMS
June	6,386	42,660	3,423	22

NTD Monthly Ridership Forms - VP				
	Ridership	VRM	VRH	VOMS
June	4,487	49,844	1,409	27

Para Service Operating Expenses	
Operating Expenses per VRM	$ 65,126.14
Operating Expenses per VRH	$ 233,198.22
Operating Expenses per UPT	$ 68.13

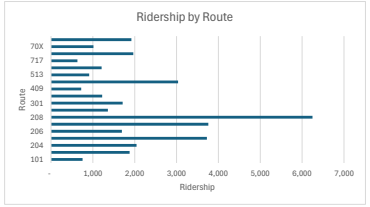
Para Service Efficiency	
Unlinked Passenger Trips per VRM	6.68
Unlinked Passenger Trips per VRH	1.87

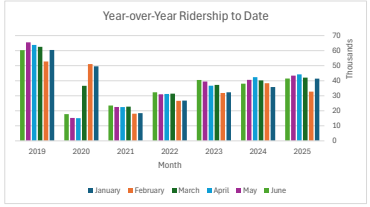
Paratransit Route Vehicle Driver Statistics	
Driver Count - 21 plus 4 extra board	25
Total Driver Hours	3,112.00
Driver Productive Hours	1,478.00
Driver Non-Productive Hours	686.00
Operator Productivity %	68.30%
Overtime	255.00
Extra Board Hours	693

Paratransit Service Consumption		
Passenger Miles Traveled (PMT)	35186.844	
Compared to Previous Year-to-Date	28982.586	Net Δ
Unlinked Passenger Trips (UPT)	6386	17.63%
Compared to Previous Year-to-Date	5260	

Paratransit Service Supplied	
Vehicle Revenue Miles (VRM)	42660
Vehicle Revenue Hours (VRH)	3422.7
Vehicles Operated in Maximum Service	20
Vehicles Available for Maximum Service	26
Spare Ratio	23%

Fixed Route Statistics by Month							
Route	Ridership	VRM	Total Miles	VRH	Total Hours	Route Cost	Cost Per UPT
101	755	4,087.34	4,156.33	365.08	373.03	$ 22,740.37	$ 30.12
202	1,878	5,165.89	5,507.63	317.08	328.14	$ 21,998.14	$ 11.71
204	2,045	5,793.24	6,143.58	347.50	359.52	$ 23,474.81	$ 11.48
205	3,724	4,283.33	4,638.57	405.00	417.30	$ 24,572.17	$ 6.60
206	1,694	4,072.85	4,408.39	379.25	390.59	$ 23,503.80	$ 13.87
207	3,760	7,976.79	8,509.60	477.25	497.68	$ 29,713.36	$ 7.90
208	6,247	7,471.02	7,509.10	632.17	642.21	$ 34,133.33	$ 5.46
300	1,359	5,609.11	6,055.23	313.67	329.02	$ 22,360.58	$ 16.45
301	1,712	5,250.46	5,415.53	402.50	409.44	$ 24,769.66	$ 14.47
305	1,222	6,454.72	6,802.96	279.65	294.66	$ 21,618.78	$ 17.69
409	721	3,615.73	3,661.22	262.67	268.76	$ 18,814.17	$ 26.09
410	3,038	6,649.19	7,367.67	337.88	358.87	$ 24,194.01	$ 7.96
513	912	8,624.82	8,571.86	284.83	369.15	$ 25,281.25	$ 27.72
615	1,209	7,516.61	7,954.44	341.92	361.52	$ 24,641.75	$ 20.38
717	632	6,318.20	7,569.89	295.15	326.90	$ 23,204.74	$ 36.72
40X	1,966	8,103.94	8,678.64	329.50	349.47	$ 24,661.55	$ 12.54
70X	1,014	10,131.91	10,554.03	364.38	381.92	$ 26,926.54	$ 26.55
80X	1,920	7,089.81	7,350.97	231.75	238.84	$ 20,009.64	$ 10.42
90X	3,575	25,158.69	25,497.04	712.50	757.21	$ 49,033.34	$ 13.72
Unknown	2033						
Totals	41416	139373.65	146352.68	7079.730	7454.230	$ 485,652.00	





SKAGIT TRANSIT ZERO EMISSION ANALYSIS

SKAGIT TRANSIT

PCG

PROJECT GOALS

#1	• Deepen staff and board understanding of the opportunities and challenges posed by zero emission technology for transit buses.
#2	• Assess Skagit Transit's current fleet and operations to determine the feasibility of transitioning to zero-emission buses through 2050.
#3	• Develop different scenarios that focus on either a Battery Electric Bus, a Hydrogen Fuel Cell Electric Bus, or a combination of both technologies.
#4	• Compare the different scenarios on a Total Cost of Ownership basis including major elements such as, fleet procurement, fuel procurement, maintenance costs, midlife replacement costs, and facilities infrastructure costs.
#5	• Research funding and incentives that could help support Skagit Transit in transitioning to a zero-emission fleet.
#6	• Gather key insights and provide recommendations to Skagit Transit, provide data and expertise to help support Skagit Transit in discussions with its utility provider (Puget Sound Energy), and support Skagit Transit in developing key relationships that can support its decision-making process and accelerate learning.

SKAGIT TRANSIT

PCG

PROJECT PROCESS

Service Assessment	• Assess the feasibility of Zero Emission Bus (ZEB) Technology to ST's 2024 Fixed Route Service. • Project improvements in ZEB technologies to judge feasibility through the transition period (2025-2050).
Fleet Assessment	• Develop ZEB scenarios for analysis (Baseline, Battery Electric, Mixed Fleet, Fuel Cell Electric Buses). • Create Fleet Procurement schedule for each scenario based on existing asset replacement schedule and service assessment results for each scenario.
Fuel & Maintenance Assessment	• Calculate the fuel and energy consumption requirements for each scenario over the transition period. • Calculate and compare the fuel costs associated with each scenario.
Facility Assessment	• Assess the refueling infrastructure requirements. • Assess costs and electrical capacity requirements. • Provide facilities assessment for compatibility with hydrogen refueling station and hydrogen bus maintenance.
Funding and Incentives	• Assess available funding and incentives programs for zero emission buses and fuels including grant programs, WA State Department of Ecology Carbon Fuel Standard, 45V Hydrogen Production Tax Credit, and 48E Clean Electricity Investment Tax Credit.
Total Cost of Ownership	• Calculate and compare the Total Cost of Ownership for each scenario.

SKAGIT TRANSIT

PCG

ANALYSIS OF ZEB SCENARIOS

Key Constraints	• Replace Skagit Transit's existing fixed route fleet, consisting of 30 diesel buses, with Zero Emission Buses (ZEBs) in accordance with the end of useful life of each bus. • Replace buses on a 1:1 basis. If a ZEB bus can not be procured each year due to feasibility constraints, analysis will fall back to procuring a diesel bus. • All bus procurements will be 40 ft in length through the transition period.
ZEB Technology Scenarios	1. Baseline (Diesel Only) 2. BEB Depot and On-Route Charging 3. Mixed Fleet (BEB Depot and FCEB) 4. FCEB Only

SKAGIT TRANSIT

PCG

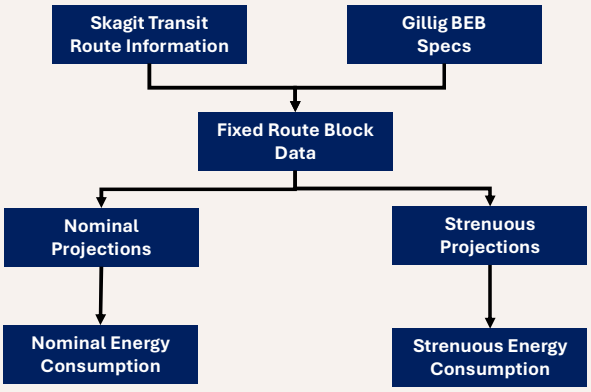
SERVICE ASSESSMENT

To perform the Service Assessment, we:

1. Estimate the energy requirements of Skagit Transit's blocks under nominal and strenuous conditions.

2. Compare energy requirements vs. the usable energy capacity of battery electric buses (BEBs) and hydrogen fuel cell electric buses (FCEBs).

3. Project improvements in BEB and FCEB energy capacity over the transition period to compare block feasibility over time.



SKAGIT TRANSIT

PCG

Assumptions
BEB & FCEB Fuel Capacity

Battery Electric Bus Options

Source	29 ft	35 ft	40 ft	60 ft
Gillig			686 kWh	
Gillig			588 kWh	
Gillig			490 kWh	
New Flyer			525 kWh	

Hydrogen Fuel Cell Bus Options

Source	29 ft	35 ft	40 ft	60 ft
New Flyer			56 kg	
New Flyer			38 kg	
Gillig			TBD	

Key Considerations:
Per the Skagit Transit project team, the agency will exclusively procure 40-foot buses for the Fixed Route Fleet moving forward. All 30 fixed route buses operated by Skagit Transit are Gillig models.

The project team decided to analyze block feasibility under three scenarios:

1. **Battery Electric Buses with Depot Charging Only**
   - The analysis will be done with Gillig's 686 kWh battery pack, the largest model on the market today.
2. **Battery Electric Buses with On-Route Charging**
   - The analysis will be done with Gillig's 588 kWh battery pack and bus fittings to accept wireless Inductive Charging. Gillig's larger model (686 kWh) is only compatible with overhead pantograph on-route charging.
3. **Hydrogen Fuel Cell Buses with tank configuration for extended range**
   - The analysis will be done with New Flyer's FCEB with a 56kg tank at 350 Bar. The New Flyer standard 40ft bus model holds a 37.5kg tank. First deployments of larger tank capacity delivering to Humboldt Transit and Lewis County Transit this year. Gillig is developing an FCEB model for production in 2027, but specifications have not been announced yet.

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Assumptions
Usable Fuel Calculations

Calculated Usable Fuel Capacities for Analysis

Bus Type	Useful Life (years)	Fuel Capacity	Usable Fuel Capacity (%)	Usable Fuel Capacity
Diesel	15	120 gallon(s)	95%	114 gallon(s)
BEB Depot	12	686 kWh(s)	72%	494 kWh(s)
BEB On-Route	12	588 kWh(s)	72%	423 kWh(s)
FCEB	12	56.0 kg(s)	93%	52.1 kg(s)

BEB Usable Fuel Calculation Logic:

1. **Nameplate Capacity (686 kWh):** Start with the battery's rated capacity.
2. **Midlife Degradation (–10%):** After roughly six years, we assume 10 % capacity loss, so 686 kWh × 90 % = **617 kWh**.
3. **Top Reserve (–10%):** Manufacturers often do not allow charging above 90 % of the battery to protect battery health. At midlife, 617 kWh × 90 % ≈ **556 kWh**.
4. **Bottom Reserve (–10%):** Similarly, to avoid deep discharge, we do not discharge below 10 % of 617 kWh ≈ **62 kWh**.
5. **Usable Midlife Capacity:** The difference between the top (556 kWh) and bottom (62 kWh) reserves is **494 kWh**, which is around **72 % of the original 686 kWh**.
6. **Midlife Replacement:** To maintain a reasonable level of capacity, we assume the battery will be replaced or refurbished at the midlife point.

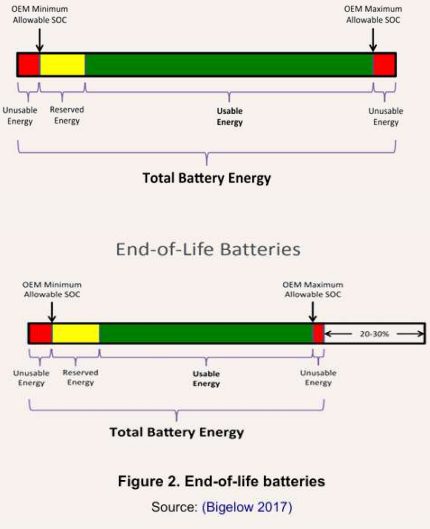

Figure 2. End-of-life batteries
Source: (Bigelow 2017)

Assumptions
Efficiency Adjustments
(Terrain & Road Type) (Nominal vs. Strenuous)

Factor	Proposed Value/Multiplier	Real-World Benchmarks & Rationale
Baseline Efficiency	BEB: **2.0 kWh/mile** FCEB: **8.5 miles/kg**	- Typical 40-ft BEBs in mild climates range 1.8-2.5 kWh/mile - NREL study shows Foothill Transit (CA): ~1.9 kWh/mile; Long Beach Transit (CA): ~1.82 kWh/mile; King County Metro (WA): ~2.3 kWh/mile.
Terrain	Flat: **1.00x** Some Hills: **1.05x** Hilly: **1.10x**	- Modeling studies indicate an uphill grade can add 0.5-0.7 kWh/mile for every 1% slope increase.
Road Type	Urban: **1.15x** Rural: **1.00x** Highway/Interstate: **1.05x**	- Stop-and-go-driving can increase kWh/mile by 10-20%. - High speeds can add energy demand due to drag and reduced regenerative braking.
Auxilliary/Accessory Loads	Nominal: **~6kW** Strenuous: **~15 kW** Strenuous w/ Diesel Heaters: **8 kW**	Studies indicate weather has a signifcant impact on energy usage. Regional transit agencies (e.g. Intercity Transit) use similar projections in their transiton studies.
Strenuous Conditions	**1.15x**	- Reflects max passenger load, heavy traffic, and other operator related factors.

Sources:

1. Estimates are based on feedback from other regional transits (Community Transit, Spokane Transit, King County Metro, TriMet, and Link Transit).
2. Review of available literature, including studies conducted by NREL, CTE, Stantec, and FTA.
3. More advanced modeling and block simulations can be offered by National Labs, including Argonne National Labs (ANL).

Assumptions
EV Charging (On-Route)

Charger Type	Charger Capacity (kW)	Notes and Rationale
Inductive On-Route Charger (1 charger per inductive pad)	300 kW	Most common Inductive Charger adopted by Link Transit, Everett Transit, Lewis County Transit and Kitsap Transit. Agencies report actual charging rates typically between 150-220 kW.

Charging Rate		
On-Route Charger (Maximum Acceptance & Efficiency)	175 kW @ 90% efficiency	Gillig recommends limiting charge rate to 175 kW to preserve warranty.

Layovers		
Minimum Layover Allowable for On-Route Charging	5 Minutes (Based on ST's existing layover times w/ assumed 1 minute time to position on pad)	Spokane Transit advises against relying on a 5-minute layover for the Pantograph. However, Link Transit and Lewis County Transit have successfully implemented inductive charging within 5-minute intervals.

Sources:
1. Estimates are based on feedback from other regional transits (Community Transit, Spokane Transit, King County Metro, TriMet, and Link Transit), as well as discussions with Gillig.

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Assumptions
(On-Route Charging Locations)

On-Route Charging Locations Assumptions

1. The project team assessed the requirement for on-route charging locations and determined feasibility based on several factors:
    a) Skagit site ownership
    b) Number of blocks utilizing the location
    c) Discussions with the utility
    d) Current route profiles, layover times.

Layover Location	On-Route Feasible
Chuckanut P&R	Yes
Skagit Station	Yes
March's Point P&R	Yes
MOA-2	Yes
Concrete P&R	Yes

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Assumptions
Capacity and Efficiency Improvements

Bus Type	Fuel Capacity Improvements	Fuel Efficiency Improvements
Diesel	0%	0%
BEB Depot	5%	0%
BEB On-Route	5%	0%
FCEB	2.5%	2.5%

Improvement Period	2 years

Battery Electric Buses:
- **Historical Trend**: Data from DOE and NREL evaluations indicate that 40-ft BEBs increased battery capacity from roughly 150–300 kWh in early deployments (circa 2015) to 500–660 kWh in recent models.
- **Assumption Rationale**: A 5% capacity improvement every two years reflects the observed, discrete upgrade cycles in battery energy density and system integration. This rate compounds to roughly a 28% increase over a decade, providing a conservative yet credible projection.

Hydrogen Fuel Cell Buses:
- **Historical Trend**: Field data show fuel economy improvements from about 5–6 miles per kg H_2 in early models to approximately 8-9 miles per kg in current deployments, driven by advancements in fuel cell stack design and system optimization.
- **Assumption Rationale**: Assuming a 2.5% efficiency gain every two years in capacity and efficiency aligns with the step-improvements seen historically. This incremental enhancement matches DOE targets and offers a realistic baseline for forecasting performance over time.

SKAGIT TRANSIT PCG

Block Feasibility Analysis Example

	1-101/1-513A	1											40ft BEB Depot - Strenuous Conditions							
Row Flag	Block ID	Task #	Route ID	Direction	Start Time	End Time	Duration (hours)	Daily Mileage	Avg MPH	Layover (minutes)	Layover Location	Stops	BEB Depot Efficiency Strenuous (kWh/mile)	BEB Depot Accessory Load Strenuous (kWh)	BEB Depot Strenuous Consumption (kWh)	SOC Start (Strenuous)	SOC End (Strenuous)	SOC End % (Strenuous)	Depot Charging Strenuous (kWh)	BEB Depot Feasibility (Strenuous)
	1-101/1-513A	1	Deadhea	Outbound	6:15 AM	6:20 AM	0.08	1	10	5	Chuckanut P&R		2.0	2.50	4	556	551	89%	0.00	Yes
	1-101/1-513A	2	101	Loop	6:25 AM	7:10 AM	0.75	10	14	5	Chuckanut P&R		2.6	12.50	40	551	512	83%	0.00	Yes
	1-101/1-513A	3	513	West	7:15 AM	7:40 AM	0.42	13	32	5	Chuckanut P&R		2.3	7.50	38	512	473	77%	0.00	Yes
	1-101/1-513A	4	513	East	7:45 AM	8:10 AM	0.42	14	33	15	Chuckanut P&R		2.3	10.00	42	473	432	70%	0.00	Yes
	1-101/1-513A	5	101	Loop	8:25 AM	9:10 AM	0.75	10	14	5	Chuckanut P&R		2.6	12.50	40	432	392	63%	0.00	Yes
	1-101/1-513A	6	513	West	9:15 AM	9:40 AM	0.42	13	32	5	Chuckanut P&R		2.3	7.50	38	392	354	57%	0.00	Yes
	1-101/1-513A	7	513	East	9:45 AM	10:10 AM	0.42	14	33	15	Chuckanut P&R		2.3	10.00	42	354	312	51%	0.00	Yes
	1-101/1-513A	8	101	Loop	10:25 AM	11:10 AM	0.75	10	14	5	Chuckanut P&R		2.6	12.50	40	312	272	44%	0.00	Yes
	1-101/1-513A	9	513	West	11:15 AM	11:40 AM	0.42	13	32	5	Chuckanut P&R		2.3	7.50	38	272	234	38%	0.00	Yes
	1-101/1-513A	10	513	East	11:45 AM	12:10 PM	0.42	14	33	15	Chuckanut P&R		2.3	10.00	42	234	192	31%	0.00	Yes
	1-101/1-513A	11	101	Loop	12:25 PM	1:10 PM	0.75	10	14	5	Chuckanut P&R		2.6	12.50	40	192	152	25%	0.00	Yes
	1-101/1-513A	12	513	West	1:15 PM	1:40 PM	0.42	13	32	5	Chuckanut P&R		2.3	7.50	38	152	114	18%	0.00	Yes
	1-101/1-513A	13	513	East	1:45 PM	2:10 PM	0.42	14	33	15	Chuckanut P&R		2.3	10.00	42	114	72	12%	0.00	Yes
	1-101/1-513A	14	101	Loop	2:25 PM	3:10 PM	0.75	10	14	5	Chuckanut P&R		2.6	12.50	40	72	32	5%	0.00	No
	1-101/1-513A	15	513	West	3:15 PM	3:40 PM	0.42	13	32	5	Chuckanut P&R		2.3	7.50	38	32	-6	-1%	0.00	No
	1-101/1-513A	16	513	East	3:45 PM	4:10 PM	0.42	14	33	15	Chuckanut P&R		2.3	10.00	42	-6	-48	-8%	0.00	No
	1-101/1-513A	17	101	Loop	4:25 PM	5:10 PM	0.75	10	14	5	Chuckanut P&R		2.6	12.50	40	-48	-88	-14%	0.00	No
	1-101/1-513A	18	513	West	5:15 PM	5:40 PM	0.42	13	32	5	Chuckanut P&R		2.3	7.50	38	-88	-126	-20%	0.00	No
	1-101/1-513A	19	513	East	5:45 PM	6:10 PM	0.42	14	33	15	Chuckanut P&R		2.3	10.00	42	-126	-168	-27%	0.00	No
	1-101/1-513A	20	101	Loop	6:25 PM	7:10 PM	0.75	10	14	5	Chuckanut P&R		2.6	12.50	40	-168	-207	-34%	0.00	No
	1-101/1-513A	21	513	West	7:15 PM	7:40 PM	0.42	13	32	5	Chuckanut P&R		2.3	7.50	38	-207	-246	-40%	0.00	No
	1-101/1-513A	22	513	East	7:45 PM	8:10 PM	0.42	14	33	15	Chuckanut P&R		2.3	10.00	42	-246	-287	-47%	0.00	No
	1-101/1-513A	23	101	Loop	8:25 PM	9:10 PM	0.75	10	14	0	Chuckanut P&R		2.6	11.25	39	-287	-326	-53%	0.00	No
	1-101/1-513A	24	Deadhea	Inbound	9:10 PM	9:15 PM	0.08	1	12	0			2.0	1.25	3	-326	-329	-53%	0.00	No
1-101/1-513A							12.00	275	27	180			2.40	225.00	885				0	No

Skagit Transit operates 23 unique blocks in its daily weekday service. Block efficiencies are calculated based on both primary and accessory loads (HVAC, lights, etc.).

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Results
Service Assessment (Nominal Conditions)

BlockID	Daily Mileage	Platform Hours	BEB Efficiency Nominal (Primay + Aux)	BEB Efficiency Strenuous (Primay + Aux)	Total kWh Required (Nominal)	Total kWh Required (Strenuous)	Nameplate BEB Depot Required
90X-3	161	15.0	2.27	2.82	365	455	632
409	148	10.8	2.73	3.73	406	554	769
3-207	174	8.8	2.55	3.32	445	579	804
2-208/2-202A	168	14.6	2.81	3.92	471	658	914
1-208/1-202A	168	14.7	2.81	3.93	473	661	918
206	160	14.3	3.02	4.18	485	670	930
2-205/305	192	13.8	2.67	3.63	514	699	971
1-205/305	207	14.1	2.60	3.53	540	733	1,018
1-300/1-301A	208	15.3	2.72	3.71	566	771	1,071
2-300/2-301A	208	15.4	2.73	3.72	567	773	1,074
1-207/1-204A	219	15.2	2.86	3.83	626	839	1,165
2-207/2-204A	219	15.2	2.87	3.84	627	841	1,168
2-101/2-513A	264	14.2	2.40	3.20	636	845	1,174
70X CONN/3-208/3-202	238	16.4	2.64	3.59	628	854	1,185
1-101/1-513A	275	15.0	2.42	3.22	664	885	1,229
90X-2	318	13.4	2.27	2.84	722	904	1,255
80X	299	12.9	2.49	3.19	744	954	1,325
615	336	15.1	2.27	2.96	762	992	1,378
40X	347	14.1	2.34	3.01	812	1,044	1,450
410	319	15.5	2.56	3.30	816	1,052	1,462
717	350	15.4	2.43	3.10	850	1,084	1,505
70X	380	14.7	2.33	2.98	885	1,133	1,574
90X-1	507	15.0	2.28	2.86	1,155	1,449	2,013
Average		14.3	2.57	3.41			

*__Note__: 90X-2 and 90X-3 have substantial midday layovers at MOA-2 depot.

SKAGIT TRANSIT

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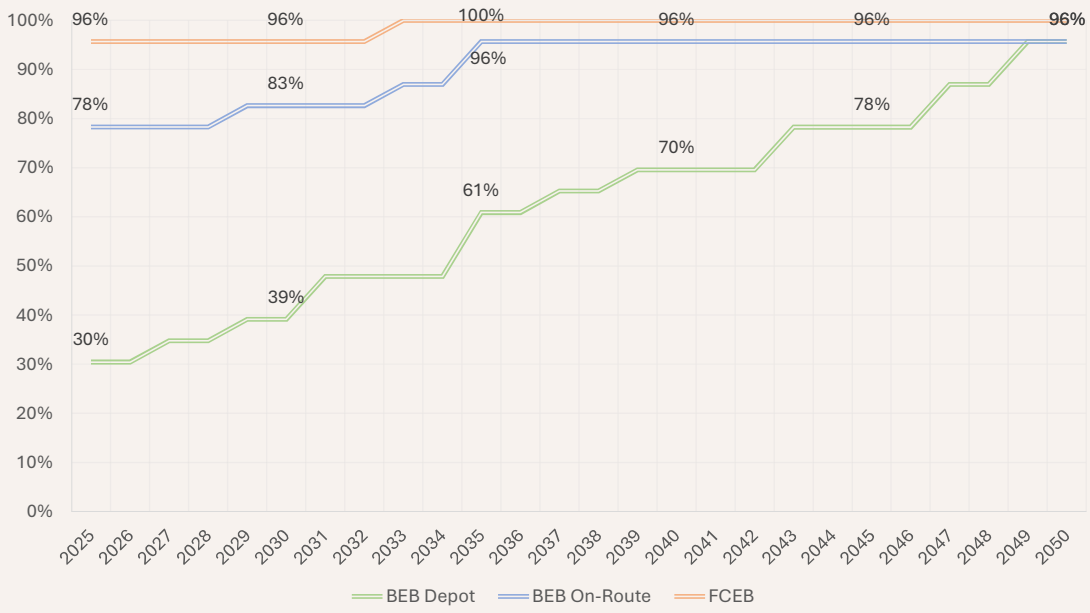
Results
Service Assessment (Nominal Conditions)



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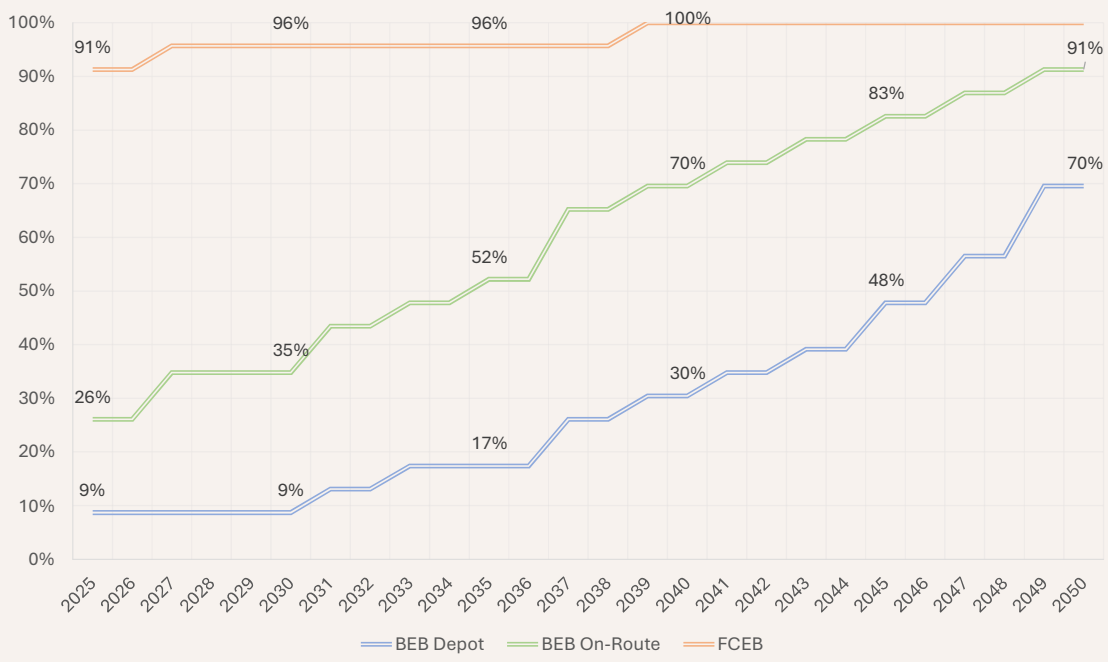
Results
Service Assessment
(Strenuous Conditions)



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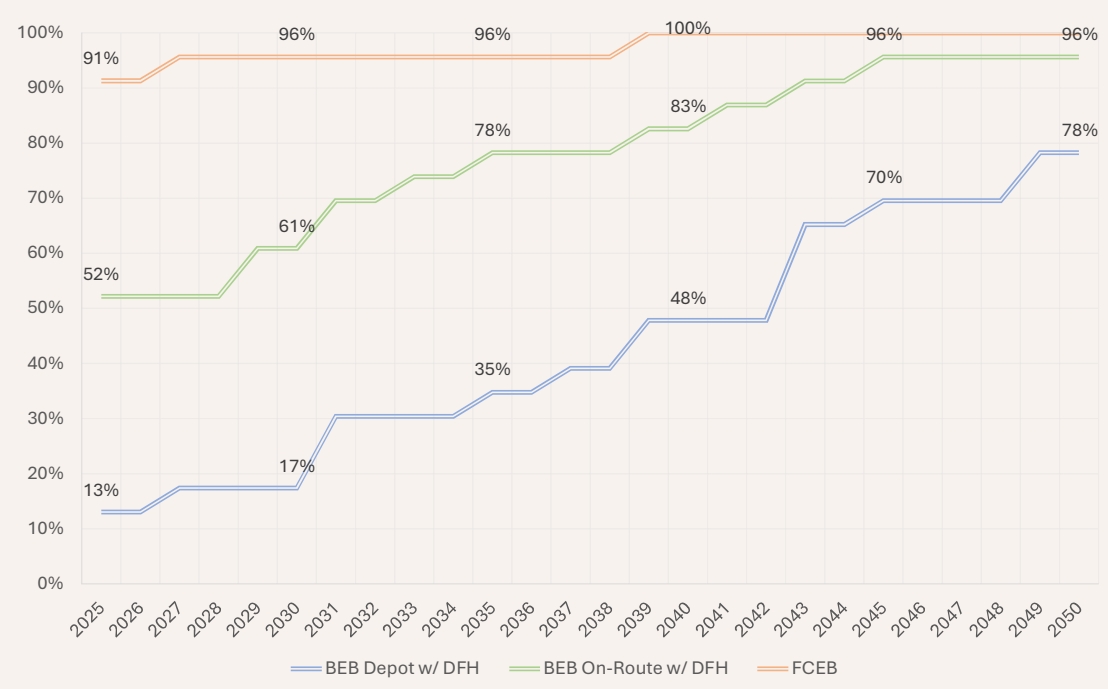
Results
Service Assessment
(Strenuous Conditions w/ Diesel Heaters)



SKAGIT TRANSIT

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FLEET ASSESSMENT

SKAGIT TRANSIT

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FLEET ASSESSMENT

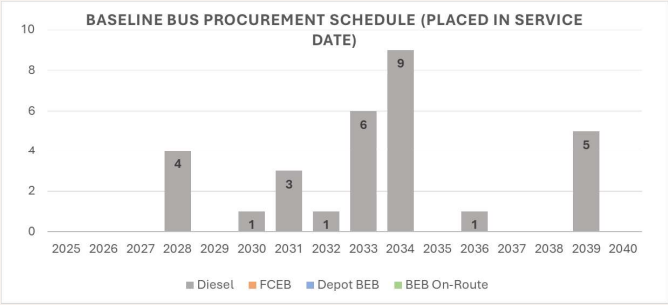
To perform the Fleet Assessment, we:

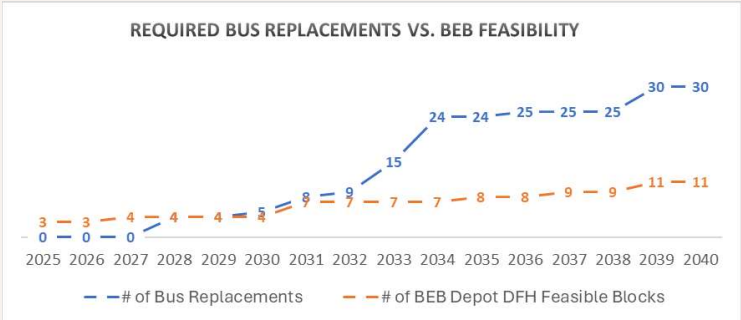
1. **Establish a Baseline Scenario**: The retirement schedule replaces all diesel buses in-kind.

2. **Compare the results of the Service Assessment against the fleet replacement schedule**: If the procurement of an additional ZEB would result in the % of ZEBs in the fleet exceeding the % of feasible blocks each year, we assume the agency will need to purchase a diesel bus or longer-range ZEB option (BEB On-Route or FCEB) instead.

3. **Establish multiple ZEB scenarios**: Diesel buses are replaced with Zero Emission Buses (ZEBs) by the retirement schedule as feasible on a 1:1 basis. We develop the following scenarios:
   a) **BEB Only**
   b) **Mixed Fleet (BEB Depot & FCEB)**
   c) **FCEB only**

4. **Project Capital Costs**: Using the best available data on current bus costs and applying inflation throughout the transition period, we model the total cost of bus procurement throughout the transition period (2025-2050).





SKAGIT TRANSIT

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Assumptions
Bus Capital Costs

Bus Type	Value
Diesel	$730,000
BEB Depot	$1,215,000
BEB Depot w/ DFH	$1,220,000
BEB On-Route	$1,315,000
BEB On-Route w/ DFH	$1,320,000
FCEB	$1,600,000

Capital Cost Inflation Rate	0.00%

SKAGIT TRANSIT

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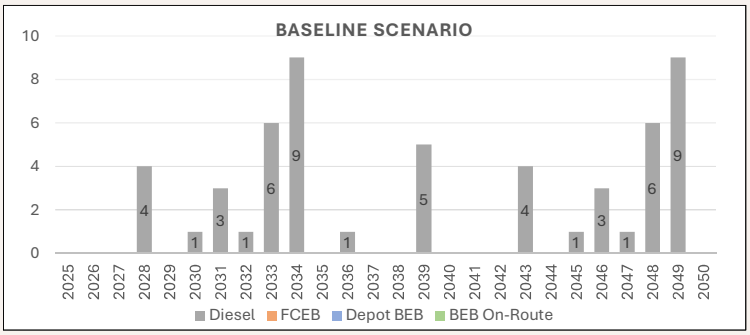
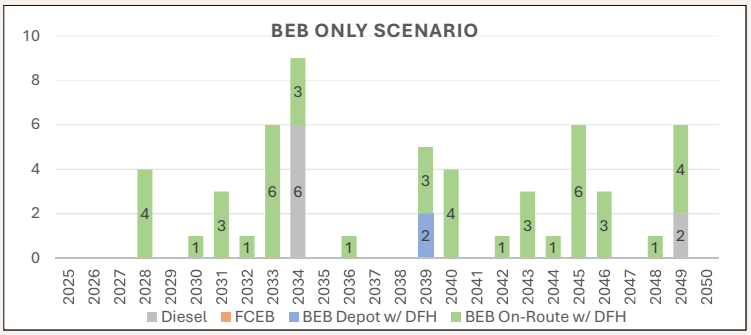
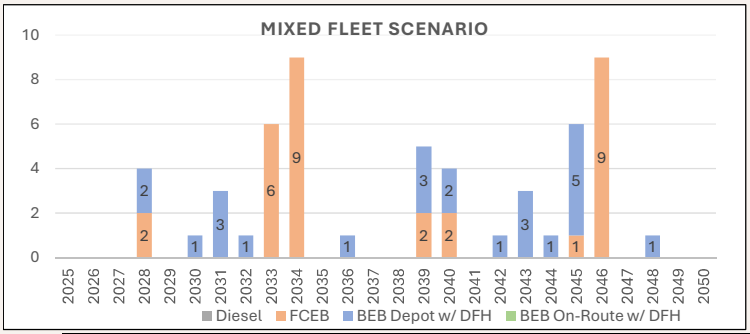
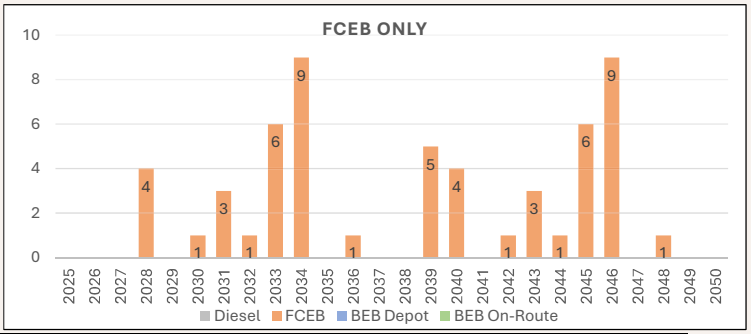
FLEET ASSESSMENT: Annual Procurements









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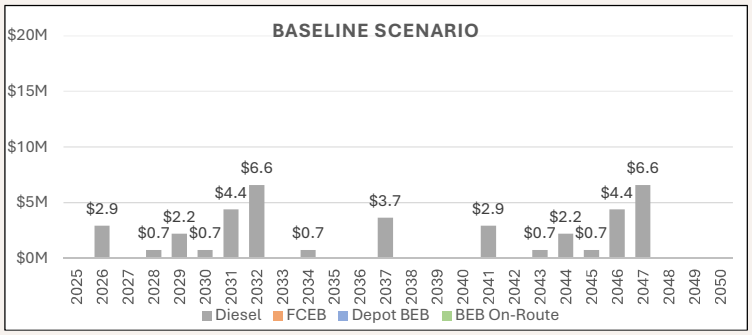
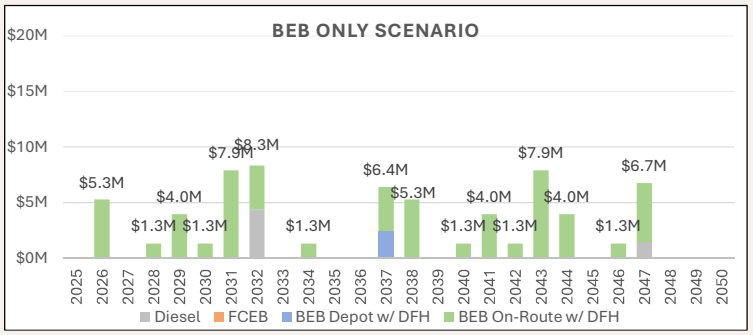
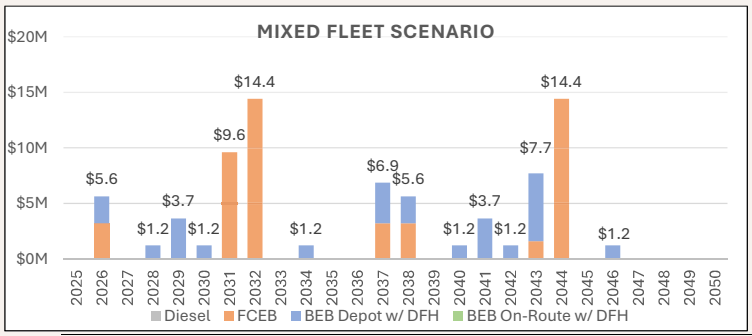
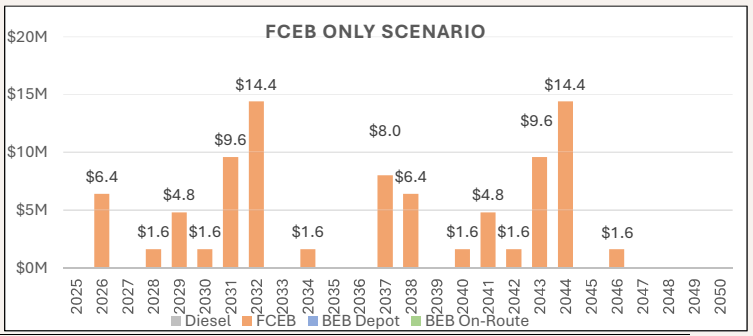
FLEET ASSESSMENT: Bus Capital Costs









SKAGIT TRANSIT

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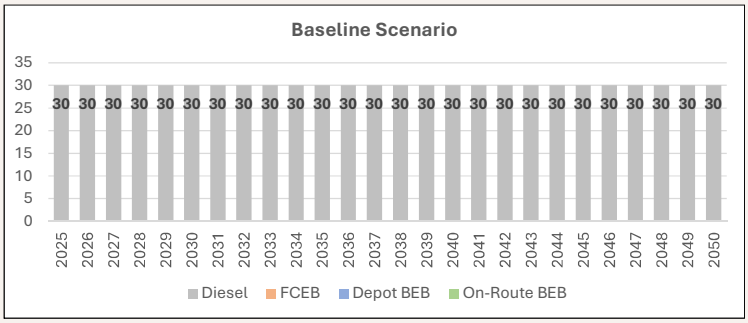
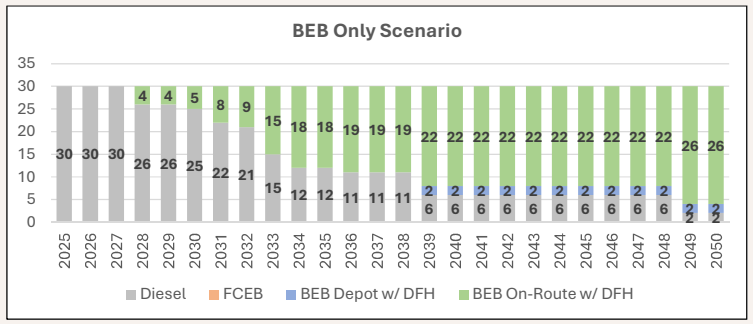
FLEET ASSESSMENT: Fleet Composition




BEB Only Scenario
35
30
25
20
15
10
5
0
30 30 30 26 26 25 22 21 15 12 12 11 11 11 2 2 2

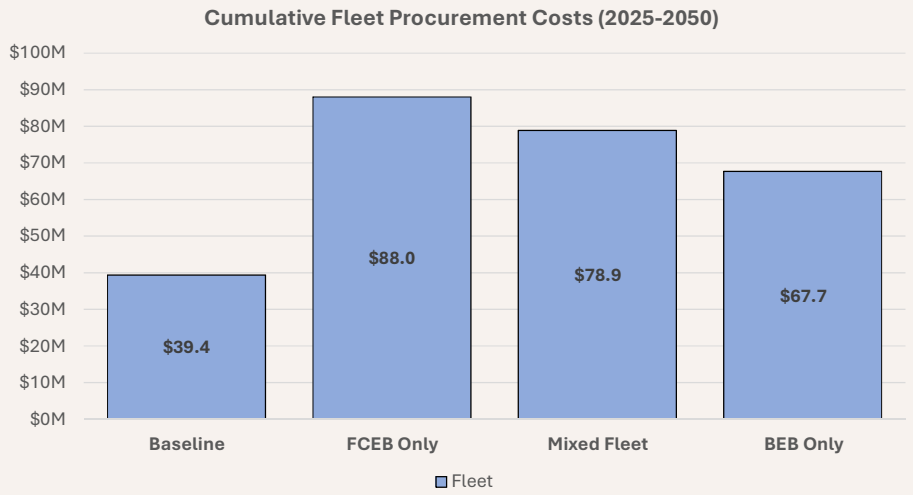
Fleet Assessment
Results

% of ZEB in Fleet

Scenario	2030	2035	2040	2045	2050
Baseline	-	-	-	-	-
BEB Only	17%	60%	80%	80%	93%
Mixed Fleet	17%	80%	100%	100%	100%
FCEB	17%	80%	100%	100%	100%

# of ZEB in Fleet

Scenario	2030	2035	2040	2045	2050
Baseline	0	0	0	0	0
BEB Only	5	18	24	24	28
Mixed Fleet	5	24	30	30	30
FCEB	5	24	30	30	30



SKAGIT TRANSIT

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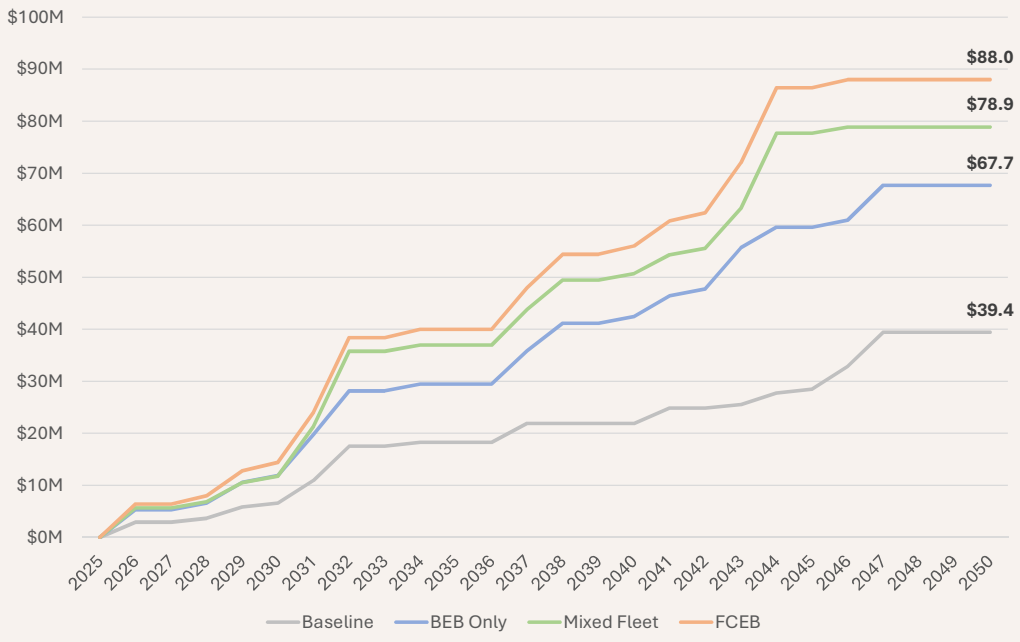
FLEET ASSESSMENT:
Cumulative Fleet Procurement Costs



SKAGIT TRANSIT

FUEL ASSESSMENT

FUEL ASSESSMENT

To perform the Fuel Assessment, we:

1. Review the bus inventory for each year of the analysis. Based on the scenario, buses are assigned to the block on each day type (Weekday, Saturday, Sunday) based on the feasibility of completing those blocks.
2. Based on bus assignments, calculate the annual fuel required for each fuel type.
3. Choose fuel prices based on the likely EV tariff with Skagit Transit's utility, PSE, and hydrogen quotes from peer data and supplier quotes.
4. Calculate annual fuel bill.

Assumptions
(Chargers)

Depot Charging Assumptions:

1. **ChargePoint Express Plus**
   a) 40 kW Power module
   b) 5 modules max for a 200 kW Power Block
   c) 2 dispensers per Power Block
   d) 1 200kw charger per two BEBs in active service
   e) 90% Efficiency

On-Route Charge Assumptions:

1. **InductEV or equivalent**
   a) 300 kW Inductive Charger +Pad
   b) Avg 175 kW
   c) 1 pad per charger
   d) 90% Efficiency

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Assumptions
(Fuel Costs)

Diesel	Value	Basis
Renewable Diesel ($/gallon)	$3.88	ST 2024 data. Price adjusts annually in line with EIA data for diesel in the Pacific region.

Hydrogen	Value	Basis
H2 Price (2025-2029)($/kg)	$15	Current market estimate
H2 Price (2030-2039)($/kg)	$10	Est. based on industry feedback w/in state supply available.
H2 Price (2040-2050)($/kg)	$7	Est. based on industry feedback w/in state supply available at scale.

Electricity	Value	Basis
Basic Charge ($/month/facility)	$436.32	PSE Schedule 26
Energy Charge ($/kWh)	$0.075963	PSE Schedule 26
Demand Charge ($/kW/month/facility)	$18.025	PSE Schedule 26 ; Blended rate of Winter Charge ($21.63/kW) and Summer Charge ($14.42/kW)

General Fuel Cost Inflation Rate	0.00%

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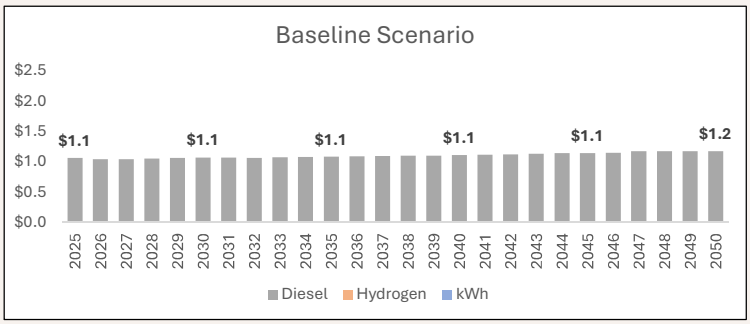
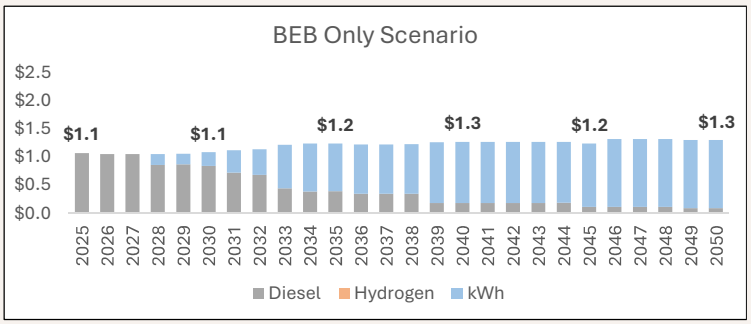
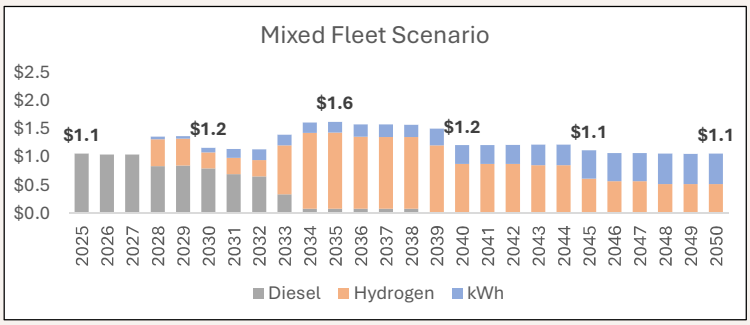
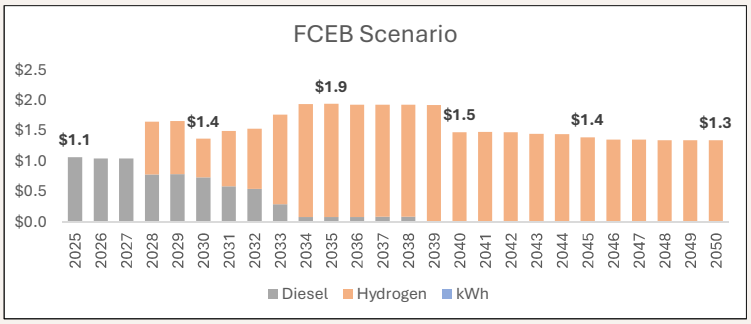
FUEL ASSESSMENT: Annual Fuel Cost ($ Millions)









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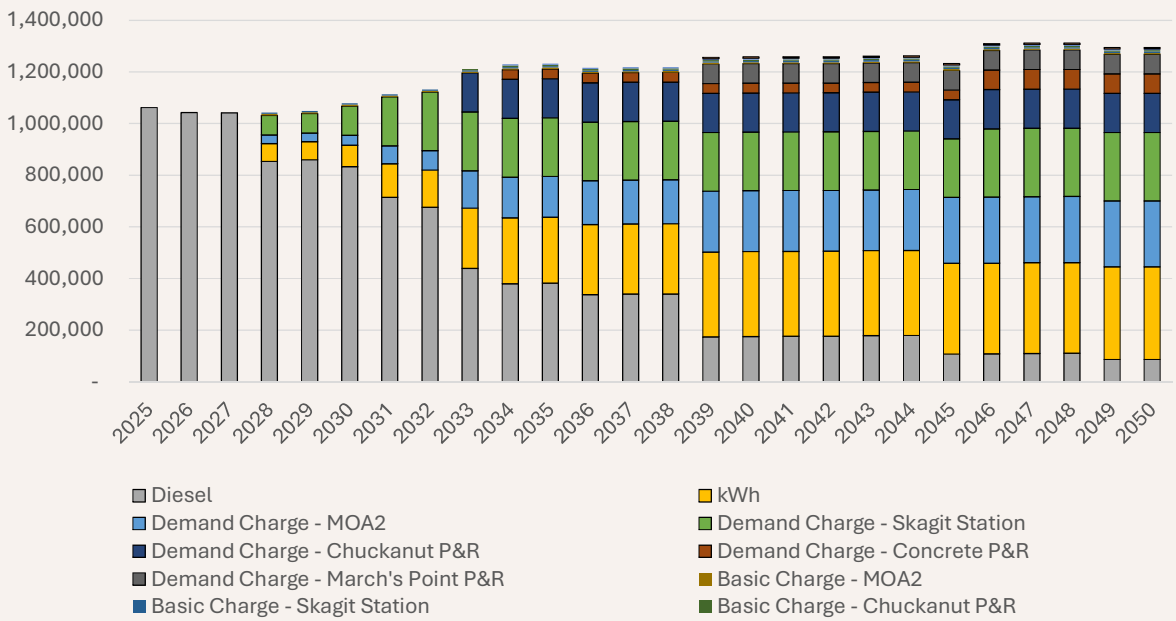
FUEL ASSESSMENT: BEB Only Breakdown ($)



2050 Key Insights

- The energy (kWh) charges make up the highest portion (28.0%).
- Demand charges (all locations combined) represent about 64.0% of the total cost.
- Diesel fuel cost falls to 6.7%, showing a shift away from diesel.
- Each basic charge group is less than half a percent.

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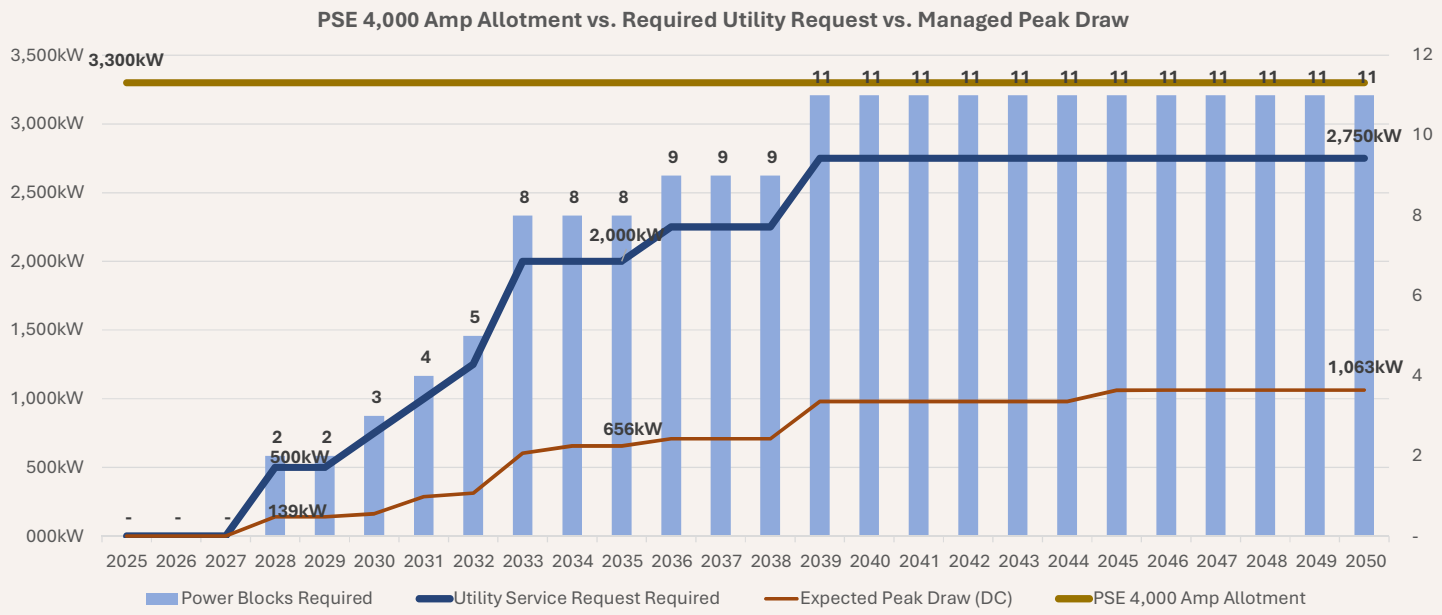
PSE Allotment vs. Required Utility Request vs. Managed Peak Draw



SKAGIT TRANSIT

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Fuel Assessment

Results

% of ZEB in Fleet

Scenario	2030	2035	2040	2045	2050
Baseline	-	-	-	-	-
BEB Only	17%	60%	80%	80%	93%
Mixed Fleet	17%	80%	100%	100%	100%
FCEB	17%	80%	100%	100%	100%

# of ZEB in Fleet

Scenario	2030	2035	2040	2045	2050
Baseline	0	0	0	0	0
BEB Only	5	18	24	24	28
Mixed Fleet	5	24	30	30	30
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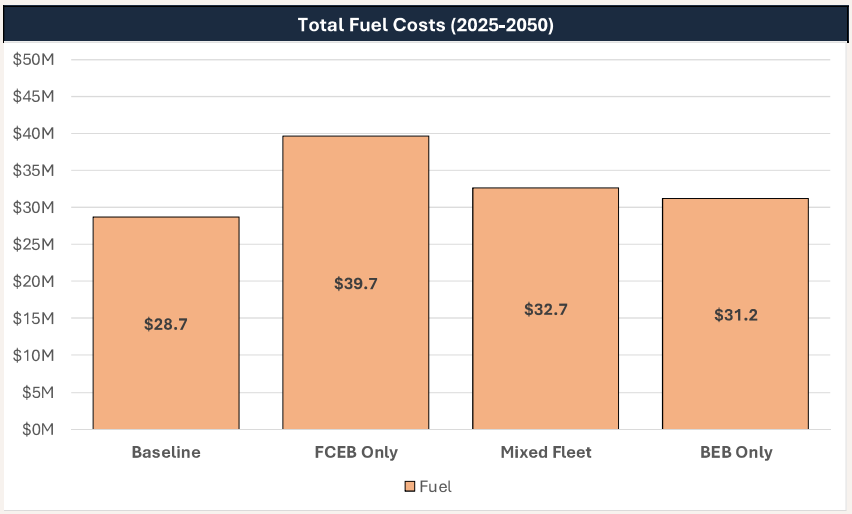

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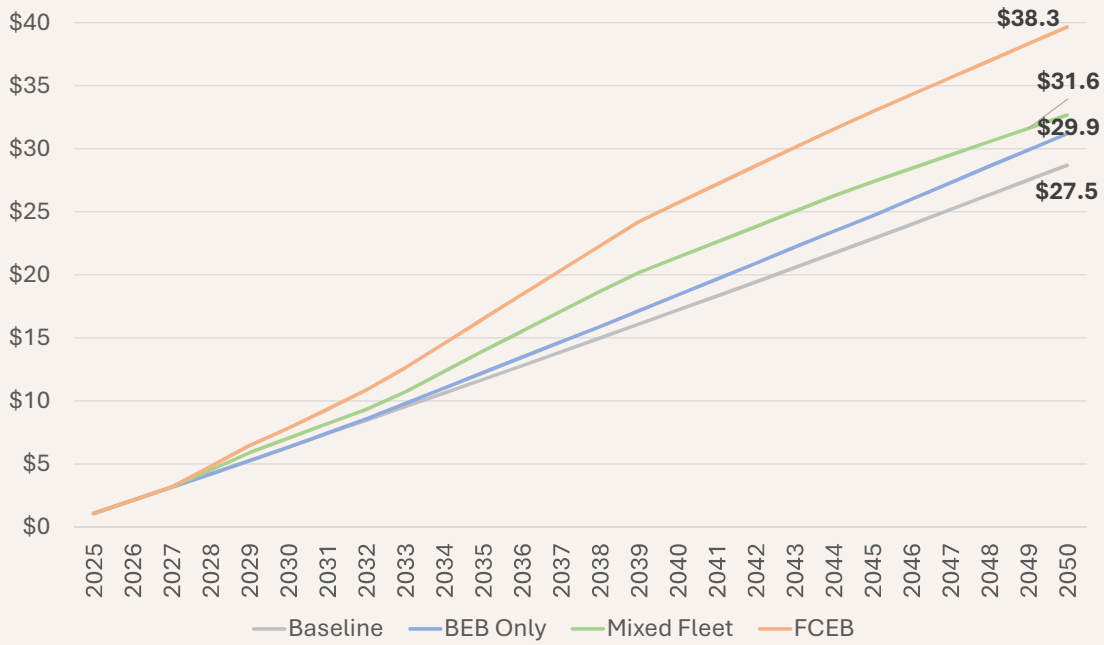
FUEL ASSESSMENT:
Cumulative Fuel Cost Comparison



SKAGIT TRANSIT

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MAINTENANCE ASSESSMENT

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MAINTENANCE ASSESSMENT

To perform the Maintenance Assessment, we:

1. Review publicly available data from national labs and other transit agencies with ZEB deployments to estimate maintenance costs for ZEBs.
2. Utilize historical averages (2022-2024) to determine a baseline $/mile maintenance cost for Skagit Transit's existing diesel fleet.
3. Based on research, estimate a $/mile cost for maintaining ZEB over the transition period.
4. Based on block assignments in each Scenario, determine the total annual mileage driven by each bus technology type and compare associated costs derived from $/mile calculations.

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Assumptions
(Maintenance Costs)

Maintenance Costs	Unit	$/Mile	Midlife Replacement Costs
Diesel	$/mile	$0.49	$60,000
BEB Depot	$/mile	$0.34	$350,000
BEB On-Route	$/mile	$0.34	$300,000
FCEB	$/mile	$0.37	$30,000
O&M Inflation	%/yr	0%	0%

Key Considerations

1. Review of Skagit Transit maintenance cost history from 2022-2024
2. BEB Midlife Replacement Costs are based on industry feedback, including a battery replacement cost estimate from King County Metro of $50,000 per battery pack. The 686-kWh Gillig bus features 7 battery packs, while the 588-kWh inductive-capable bus from Gillig has 6 battery packs.
3. After review of publicly available information and discussions with other transit agencies, representative $/mile figures for ZEB have not been established. Thus, the analysis utilizes determination from NREL that expects maintenance costs for BEB and FCEB to be 30% and 25% less than diesel, respectively.

Year	Miles driven	Fleet mpg	Maintenance* spend	Maint. $ / mile
2022	1,574,717	6.37	$ 658, 425	**$ 0.418**
2023	1,652,191	6.28	951,760	**$ 0.576**
2024	1,779,973	6.34	853,556	**$ 0.480**

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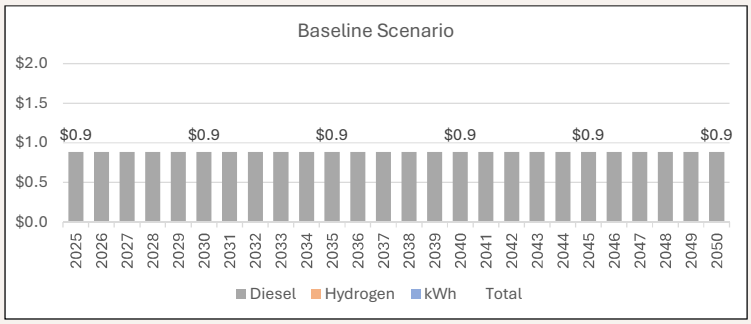
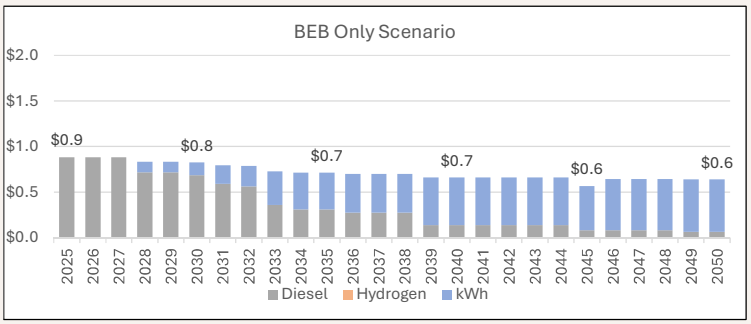
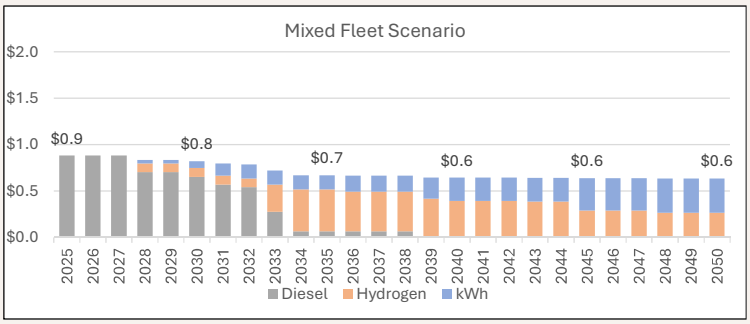
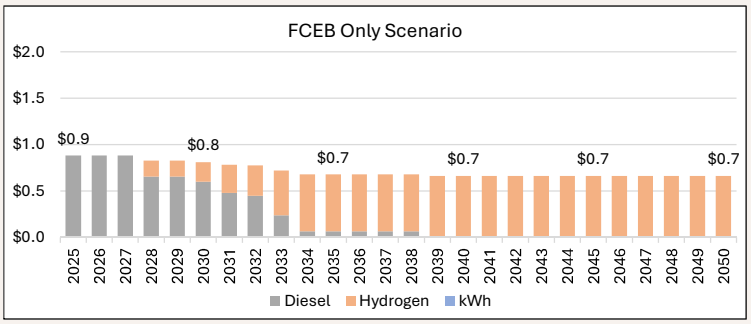
MAINTENANCE ASSESSMENT: Annual Maintenance Cost ($ Millions)









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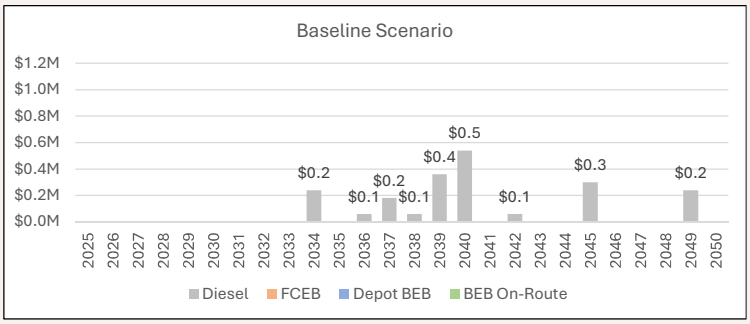
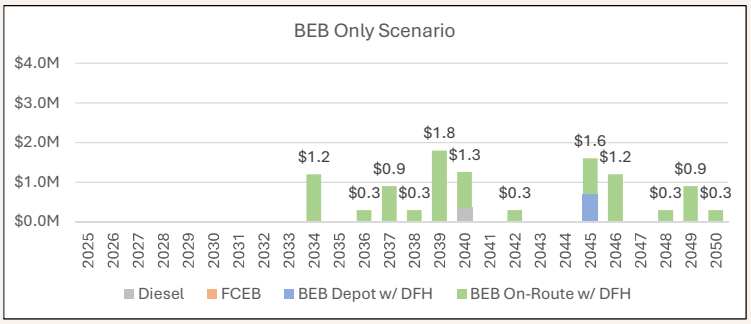
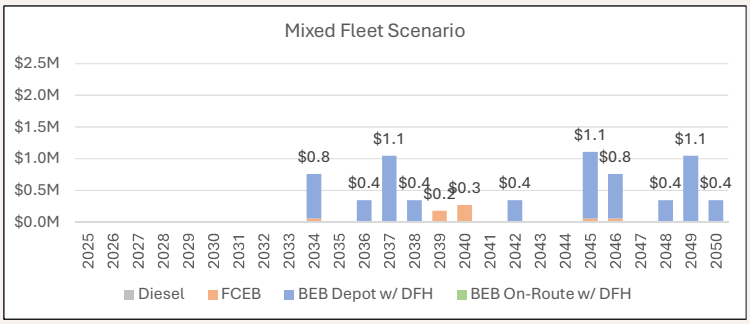
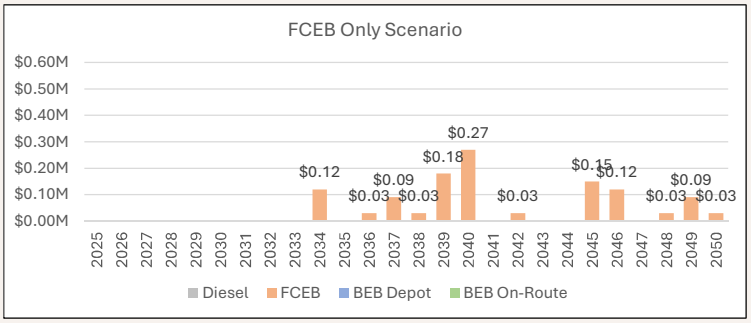
MAINTENANCE ASSESSMENT: Midlife Replacement Cost ($ Millions)









SKAGIT TRANSIT

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Maintenance Assessment
Results

% of ZEB in Fleet

Scenario	2030	2035	2040	2045	2050
Baseline	-	-	-	-	-
BEB Only	17%	60%	80%	80%	93%
Mixed Fleet	17%	80%	100%	100%	100%
FCEB	17%	80%	100%	100%	100%

# of ZEB in Fleet

Scenario	2030	2035	2040	2045	2050
Baseline	0	0	0	0	0
BEB Only	5	18	24	24	28
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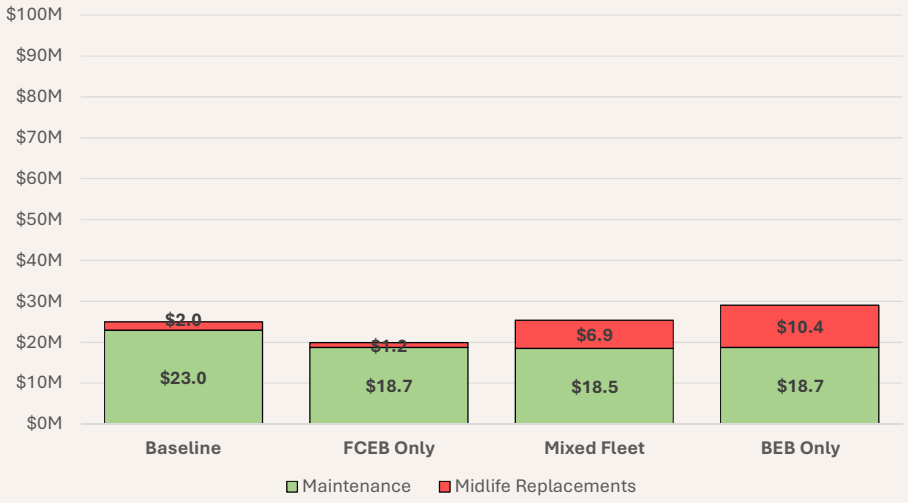

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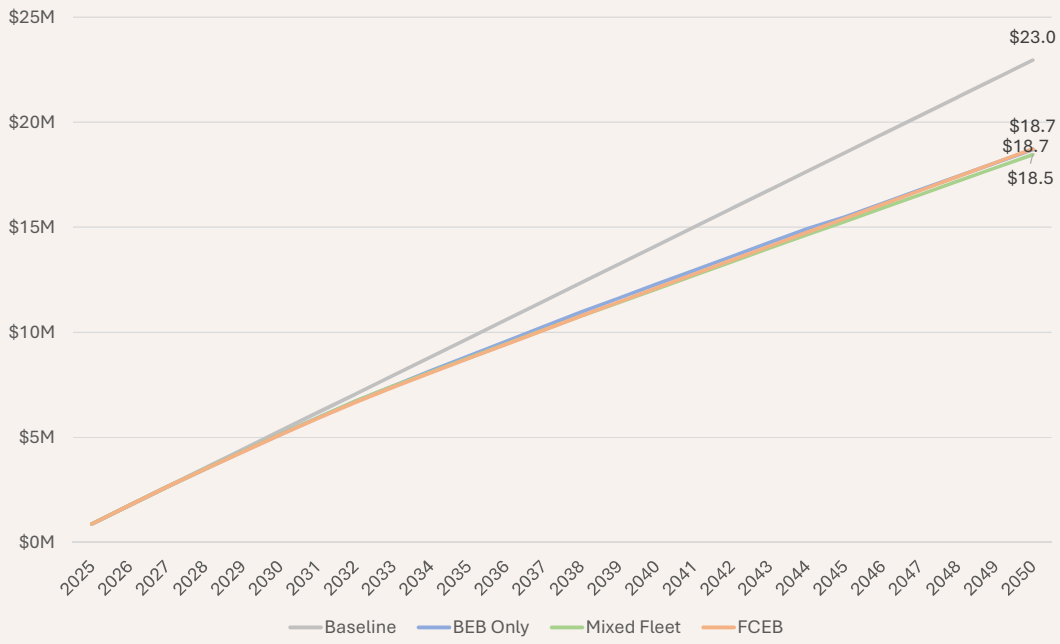
Maintenance Assessment:
Cumulative Maintenance Cost Comparison



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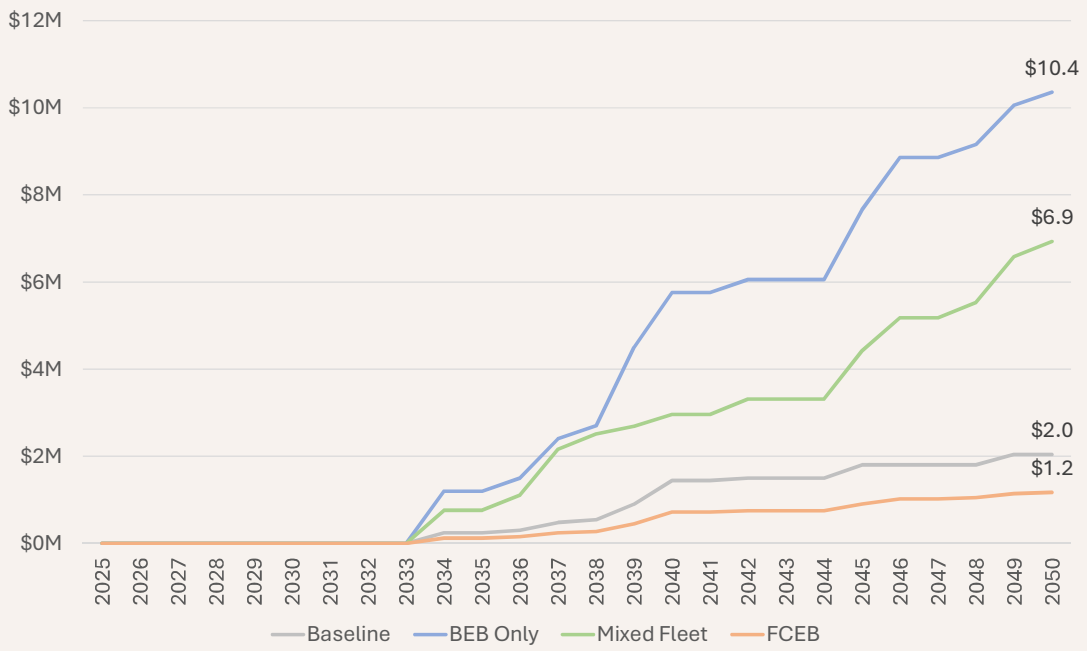
Maintenance Assessment:
Cumulative Midlife Replacement Cost Comparison



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FACILITY ASSESSMENT

SKAGIT TRANSIT

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FACILITY ASSESSMENT

To perform the Facility Assessment, we:

1. Aggregate findings from the Service, Fleet, Fuel, and Maintenance assessments to understand the operational requirements of each scenario.
2. Determine the appropriate refueling equipment infrastructure to support the transition.
3. Estimate the equipment and installation costs.
4. Compare costs across scenarios.

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Assumptions
(Facility Costs)

Hydrogen Station Costs	Unit	Value
Hydrogen Station Infrastructure Planning	$	200,000
Permanent Hydrogen Refueling Station Cost	$	4,500,000
Hydrogen Storage Trailer Cost	$	750,000
Maintenance Bay Upgrades	$ per bay	200,000
Hydrogen Temporary Refueling Station	$	500,000

BEB Depot Infrastructure Costs	Unit	Value
BEB Depot Infrastructure Planning	$	$200,000
200 kW Charger Cost w/ 2 dispensers	$	$200,000
Charger Installation Cost	$	$85,000

BEB On-Route Infrastructure Costs	Unit	Value
BEB On-Route Infrastructure Planning	$	$100,000
300 kW Charger + Pad Equipment Cost	$	$350,000
300 kW Charger + Pad Installation Cost	$	$105,000

Electrical Upgrade Costs	Unit	Value
1MW Electrical Upgrades	$	$100,000
1.5MW Electrical Upgrades	$	$200,000
2.5MW Electrical Upgrades	$	$300,000

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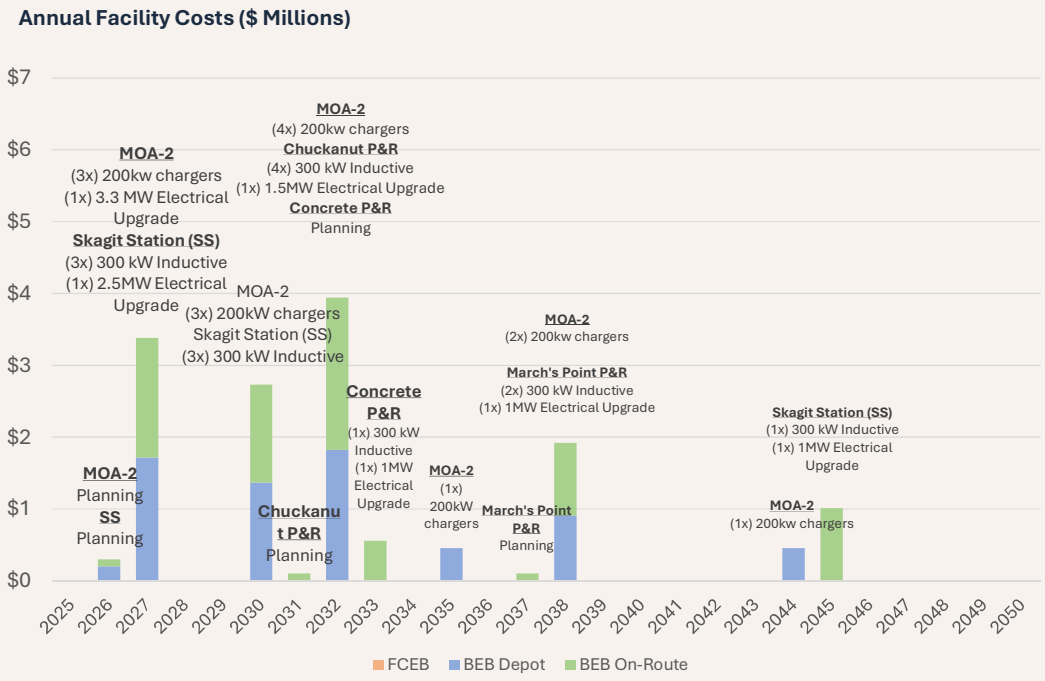
Facility Assessment:
BEB Only Scenario



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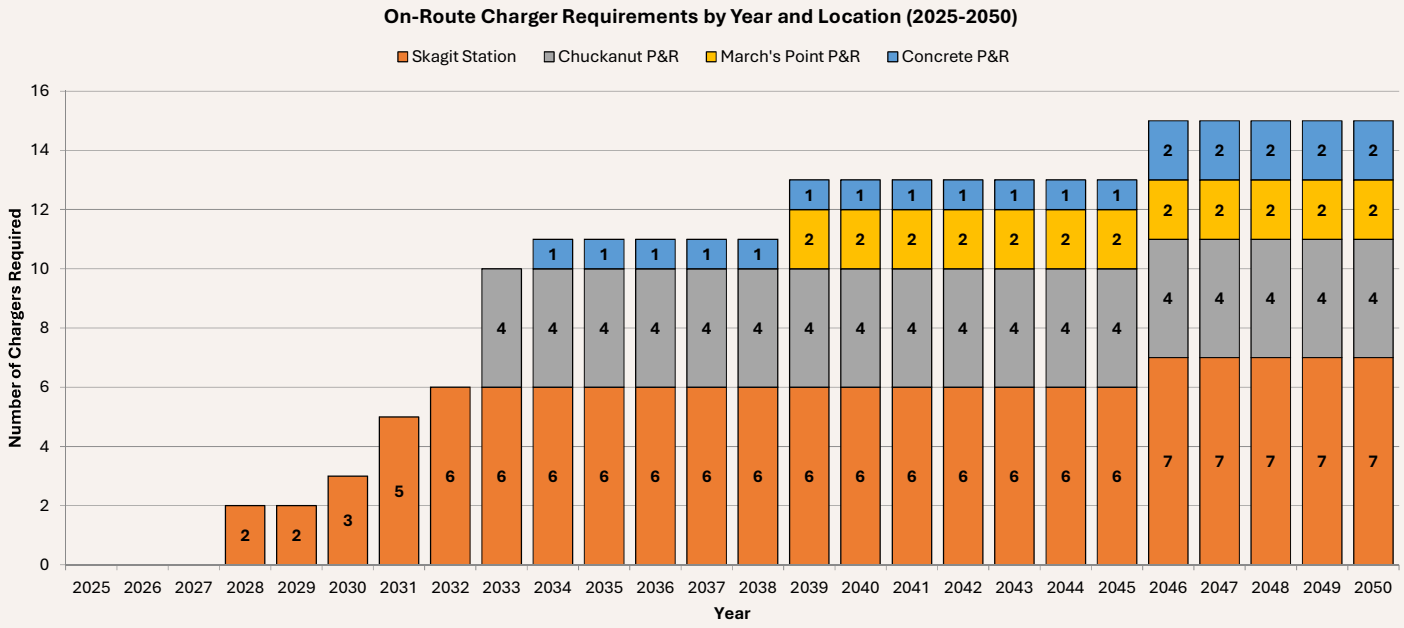
BEB Only Scenario: On-Route Charger Build-Out



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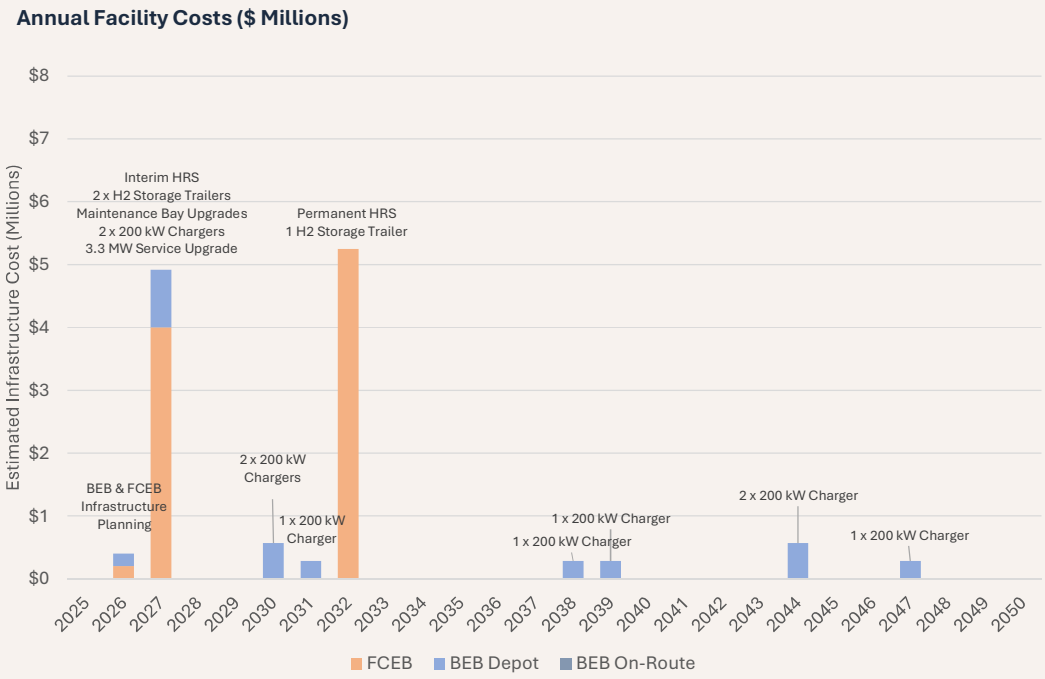
Facility Assessment:
Mixed Fleet Scenario



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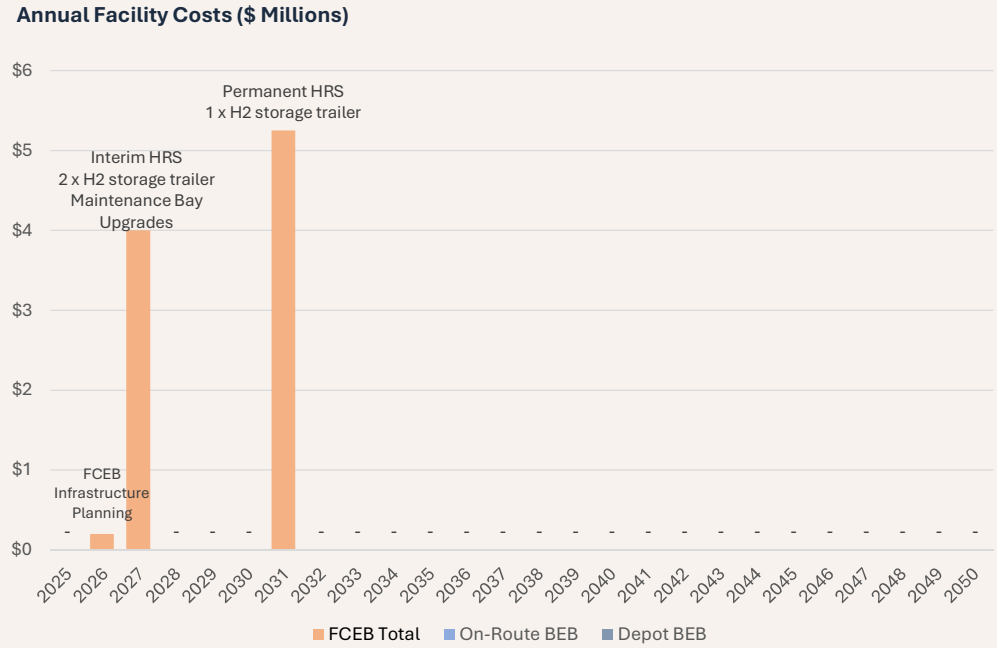
Facility Assessment:
FCEB Only Scenario



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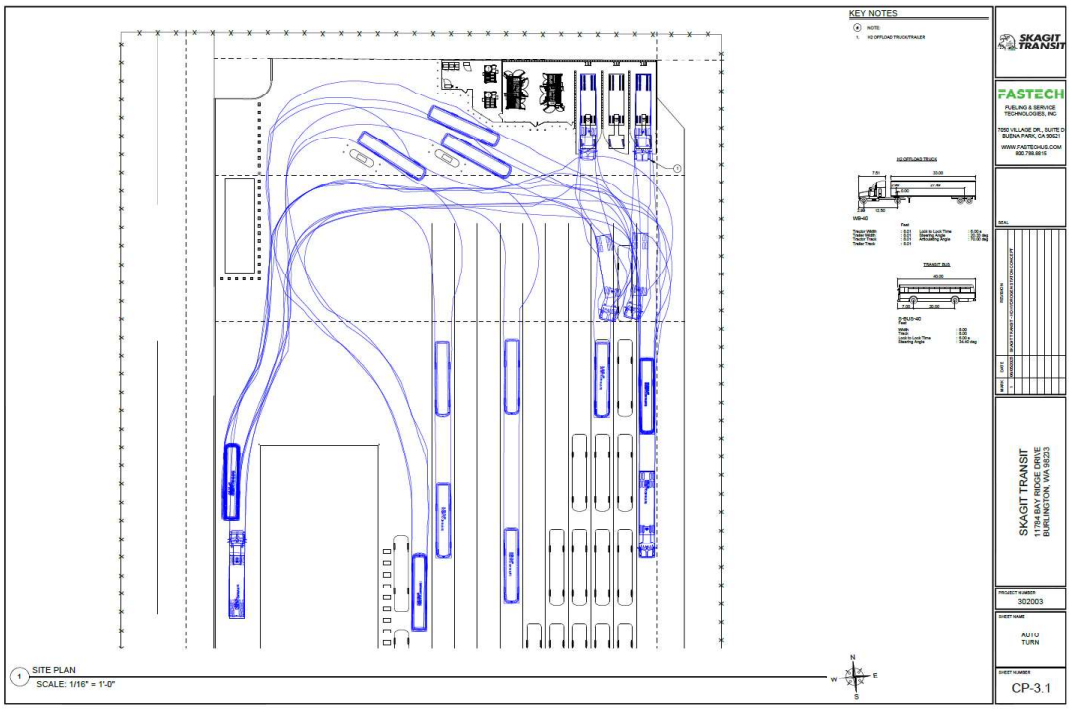
HRS: Conceptual Drawings – V2



SKAGIT TRANSIT PCG

Facility Assessment Results

% of ZEB in Fleet

Scenario	2030	2035	2040	2045	2050
Baseline	-	-	-	-	-
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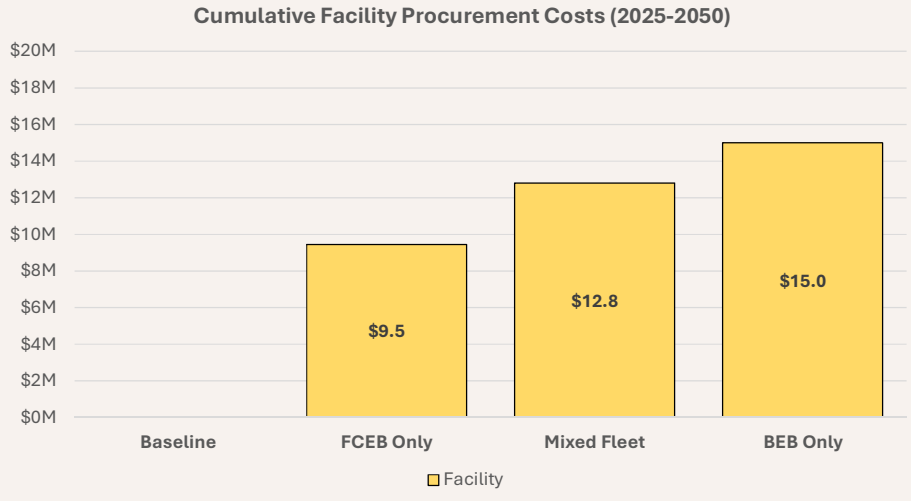
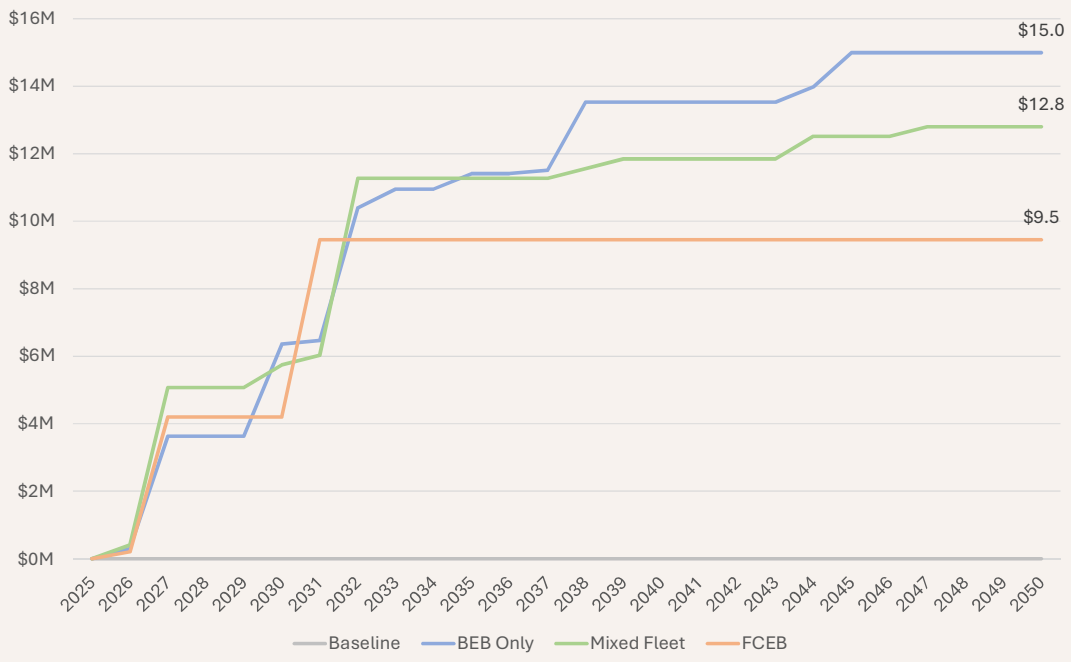


SKAGIT TRANSIT PCG

Facility Assessment: Cumulative Cost Comparison



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Total Cost of Ownership

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Total Cost of Ownership
Results

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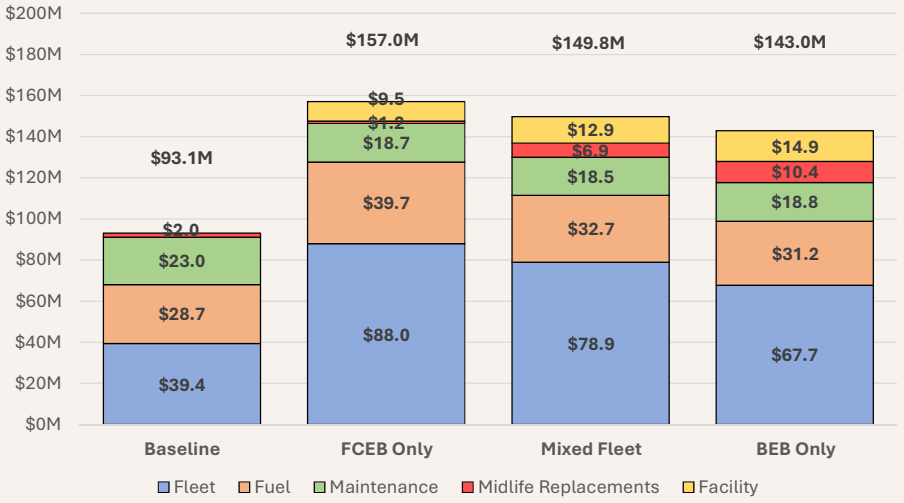

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Major Takeaways

1. Baseline scenario remains a significantly cheaper option from a Total Cost of Ownership perspective vs. the adoption of ZEBs. Capital costs for buses and infrastructure contribute considerably to this delta and can be partially offset by federal and state grant funding availability.

2. The hydrogen supply environment is highly uncertain. The FCEB only scenario projects high capital and fuel costs, but opportunities exist for these costs to come down over time with scale and policy support. FCEB offers the most flexibility and operational surety if the supply market develops.

3. BEB scenario offers the cheapest ZEB scenario and a potential path to complete decarbonization with technology improvements and slight service adjustments. It is also highly dependent on the build out and reliability of on-route charging, introducing significant risk to Skagit's service during grid outages and emergencies.

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Hydrogen Refueling Station Conceptual Drawings

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HRS: Conceptual Drawings

Minimum Distance from Outdoor Bulk Gaseous/Liquified Hydrogen Systems to Exposure				
Type	**Liquified H_2 (LH2)**		**Gaseous h2 (GH2)**	
Pressure	**>120 psig**		**>7500 to <15000 psig**	
Internal Pipe Diameter (ID)	**>827 kPa**		**>51,711 to <103,421 kPa**	
d(mm)	**d=1.5 in (38.1mm)**		**d=7.16mm**	
Exposure Group 1	**m**	**ft**	**m**	**ft**
1. Lot lines 2. Air Intakes (HVAC, Compressors, other.) 3. Operable openings in buildings and structures 4. Ignition sources such as open flames and wielding	**14.9**	**49**	**5**	**16**
Exposure Group 2	**m**	**ft**	**m**	**ft**
5. Exposed persons other than those servicing the system 6. Parked Cars 7. Buildings of combustible construction** 8. Hazardous materials storage systems above ground or fill/vent openings for belowground storage** 9. Ordinary combustibles including fast-burning solids such as ordinary lumber, excelsior, paper, or combustible waste and vegetarian other than that found in maintained landscape areas.	**11.6**	**38**	**4**	**13**
Exposure Group 3	**m**	**ft**	**m**	**ft**
10. Buildings of non-combustible non-fire-rated construction 11. Buildings of combustible construction* 12. Flammable gas storage systems above or below ground 13. Hazardous materials' storage systems above or below ground* 14. Heavy timber, coal, or other slow burning combustible solids 15. Ordinary combustibles, including fast-burning solids such as ordinary lumber, excelsior, paper, or combustible waste and vegetation other than that found in maintained landscaped areas.* 16. Un-openable openings in buildings and structures. 17. Encroachment by overhead utilities (horizontal distance from the vertical plane below the nearest overhead electrical wire of building service) 18. Piping containing other hazardous materials 19. Flammable gas metering and regulating stations such as natural gas or propane.	**10**	**33**	**4**	**13**

*= Gaseous Only
**= Liquid Only

FASTECH

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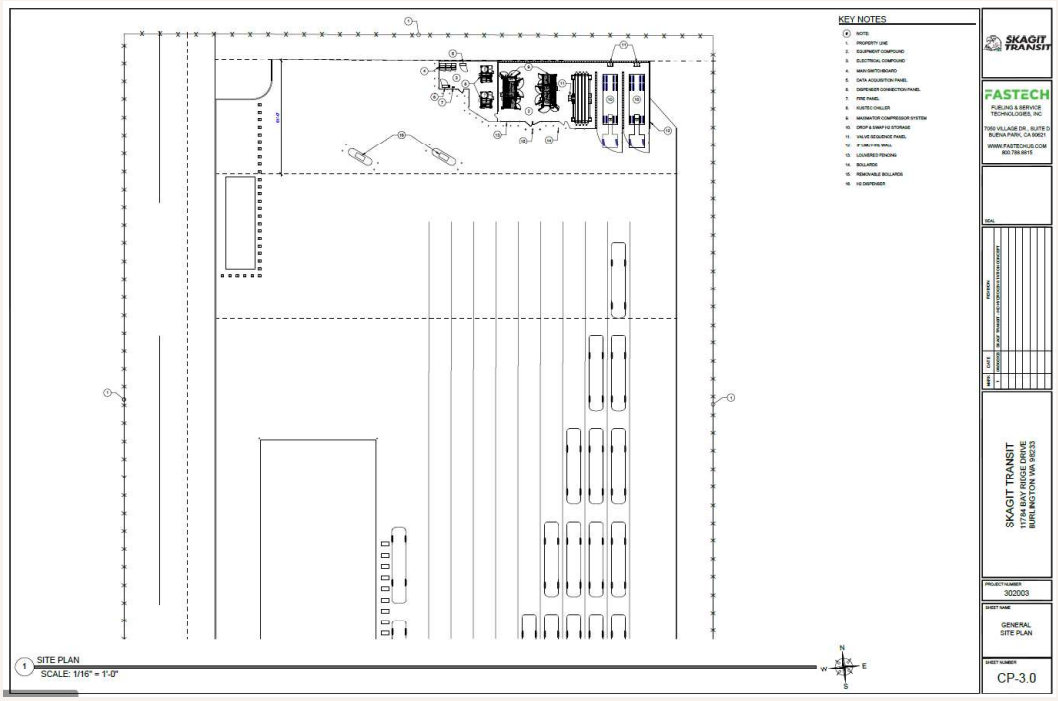
HRS: Conceptual Drawings – V1



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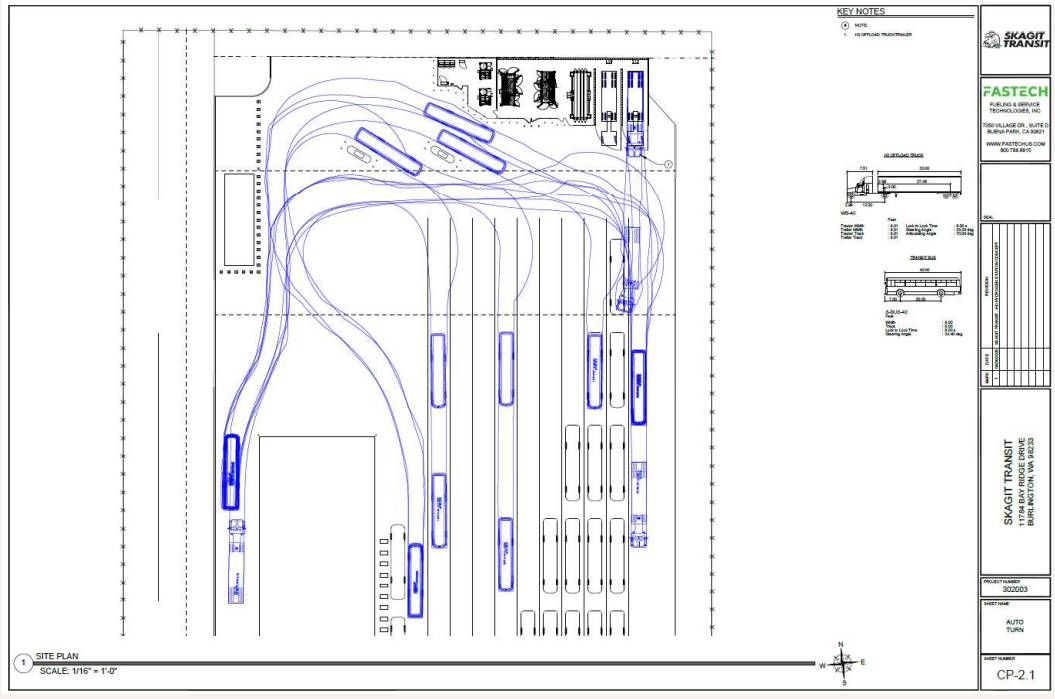
HRS: Conceptual Drawings – V1



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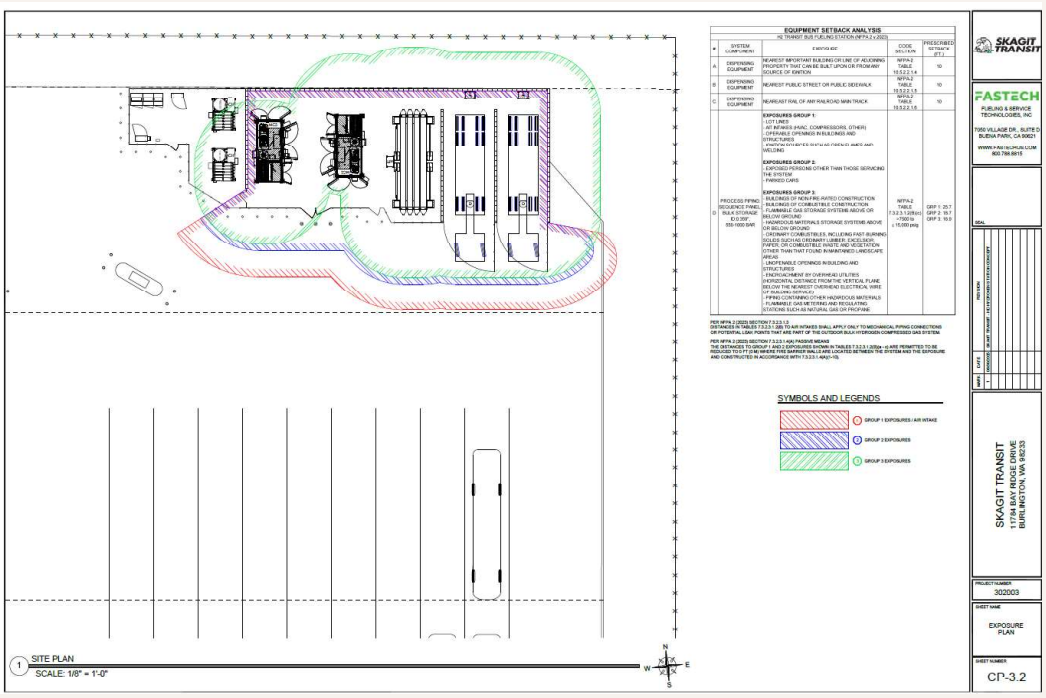
HRS: Conceptual Drawings – V1



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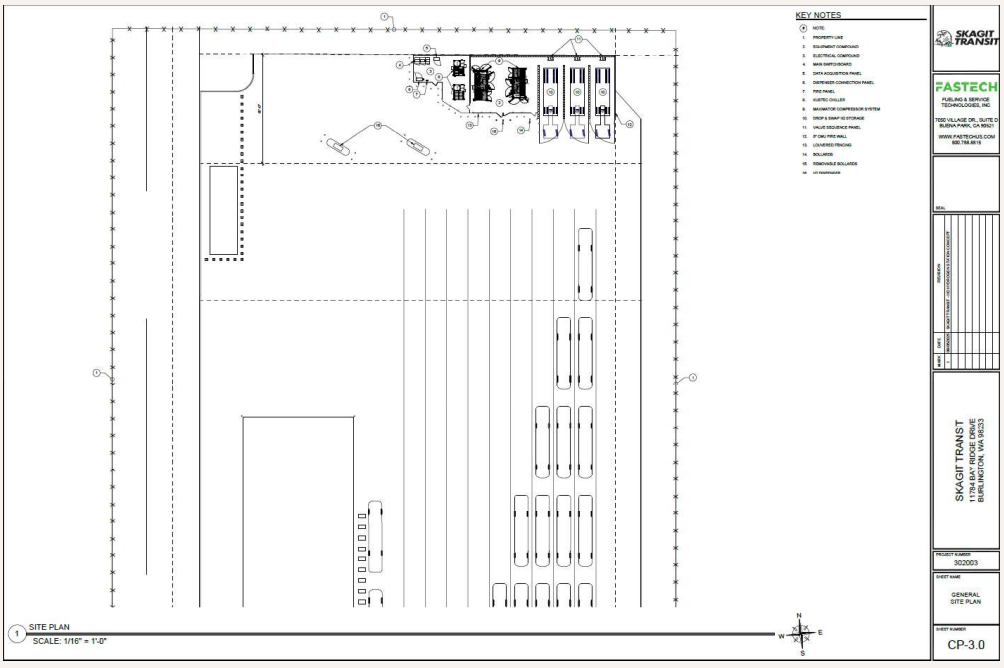

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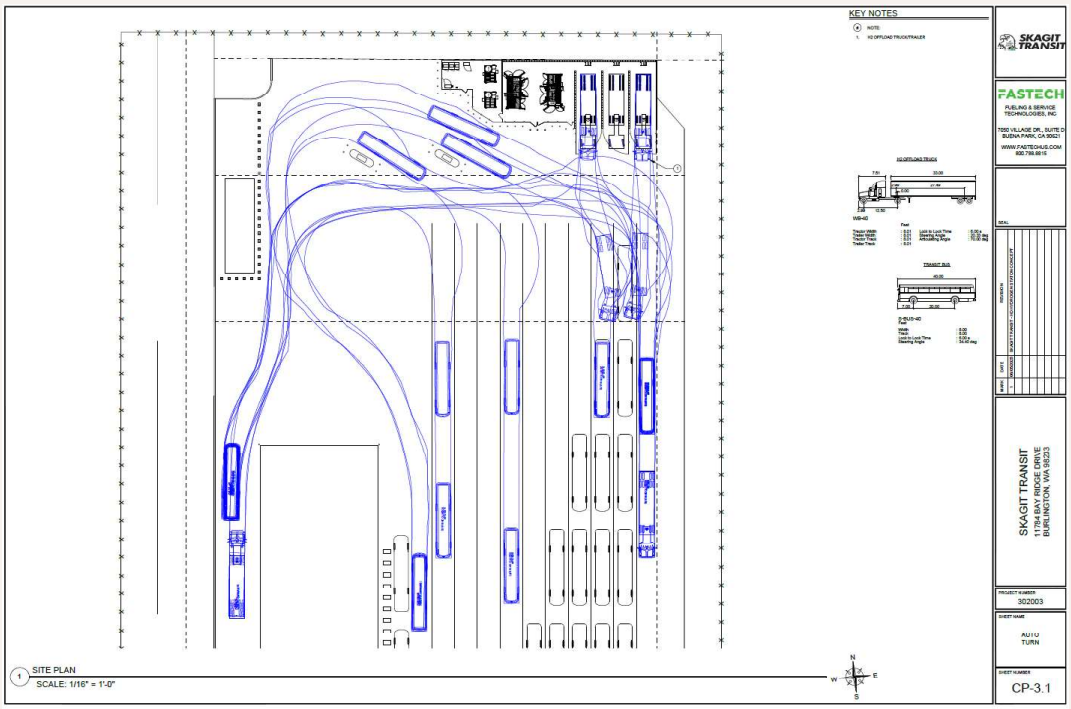
HRS: Conceptual Drawings – V2



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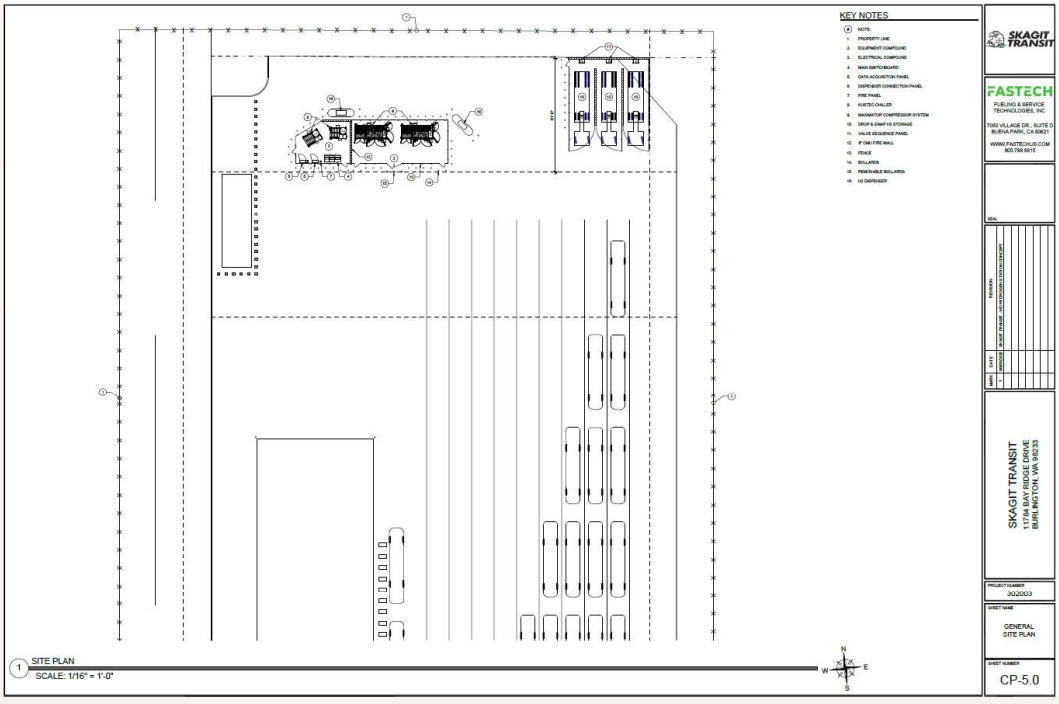

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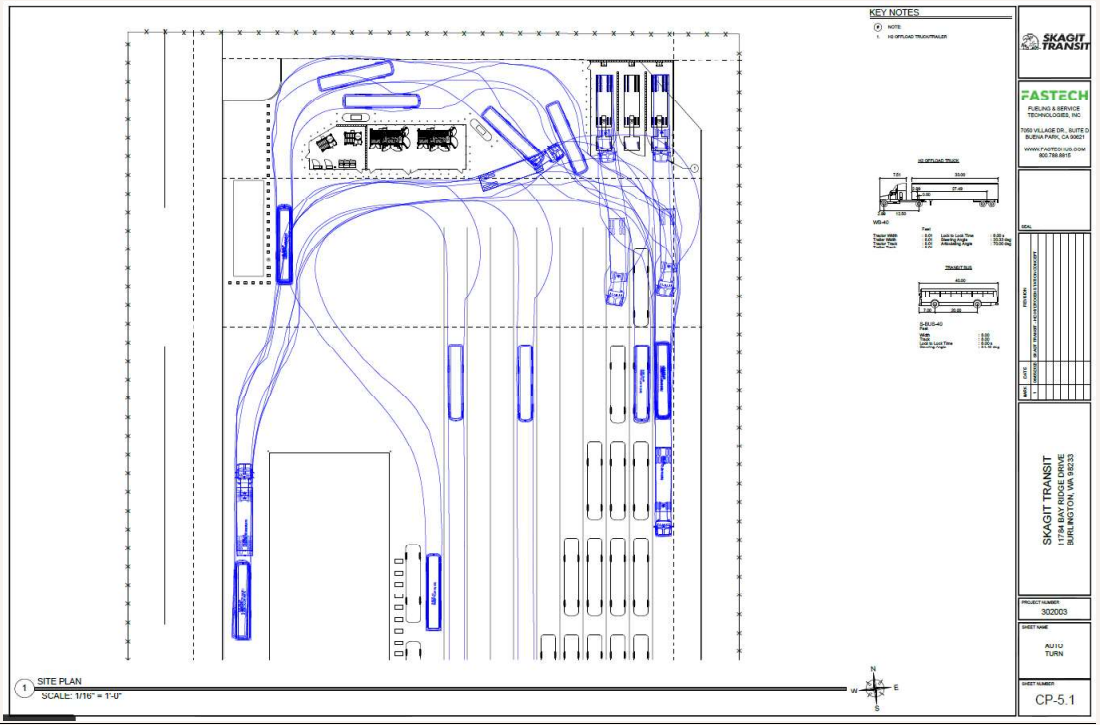

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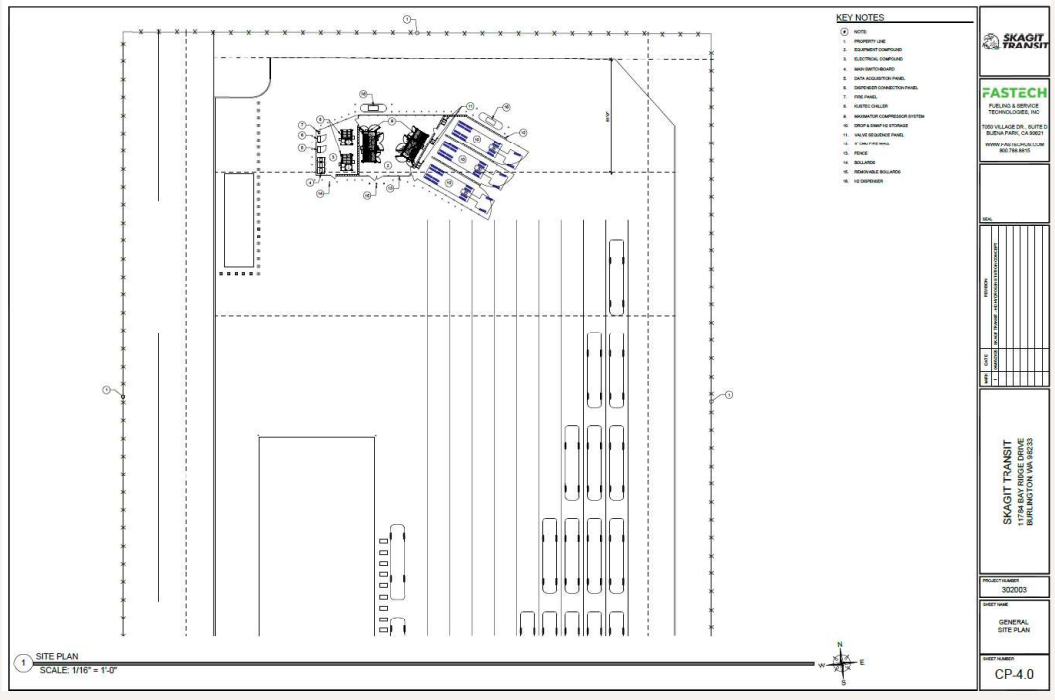

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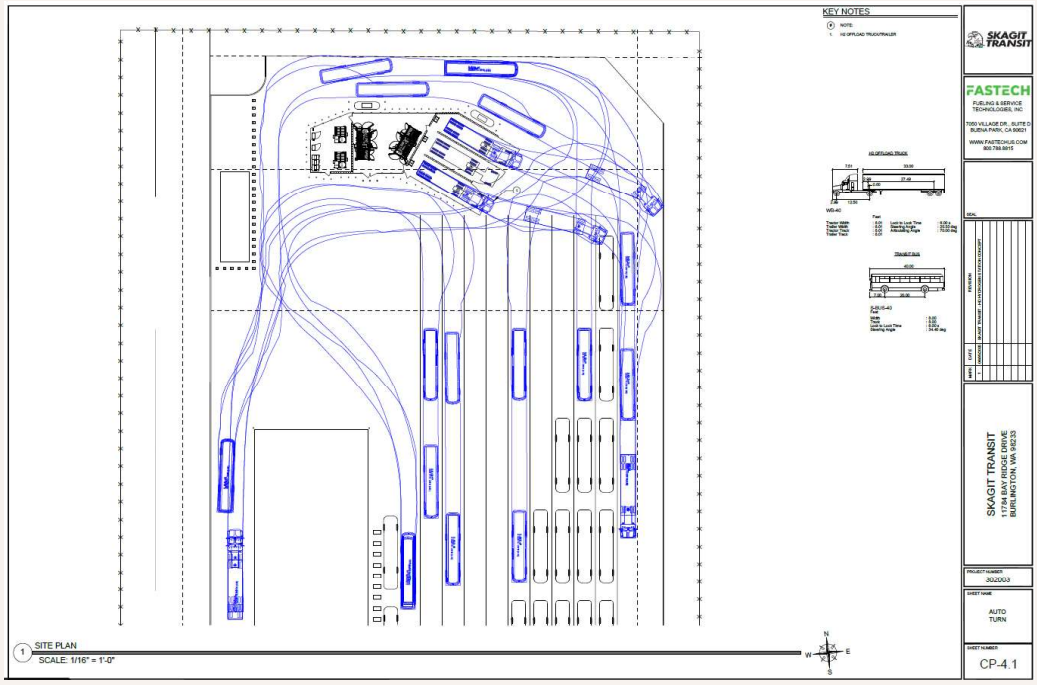

Final Report: Skagit Transit Zero Emission Bus Analysis

Prepared by:

Potter Consulting Group, LLC

Prepared for:

Skagit Transit

Executive Summary

Skagit Transit (Skagit) retained **Potter Consulting Group, LLC (PCG)**, with technical support from **FASTECH** and **TrEnergy**, to chart a practical and cost-aware pathway for transitioning its 30-bus fixed-route and commuter fleet to zero-emission technology by 2050. The study evaluates battery-electric buses (BEBs) and hydrogen fuel cell-electric buses (FCEBs), using detailed 2024 weekday service data (23 blocks on 19 routes), a 2025–2050 planning horizon, 40-foot bus equivalency, and constant-dollar ($2025) cost assumptions.

Methodology

The analysis followed a collaborative, data-driven sequence, with each phase building on prior insights:

- **Information Gathering and Initial Planning**: Collected fleet, route, schedule, facility, and cost data; defined goals and roles for scenario development.
- **Service Assessment**: Evaluated blocks for BEB/FCEB viability, considering route length, layovers, topography, and climate under normal/challenging conditions.
- **Fleet Assessment**: Developed procurement schedules per scenario, aligning replacements with feasibility and retirement cycles.
- **Fuel Assessment**: Projected energy/fuel needs (electricity, hydrogen, diesel) and costs using utility rates and forecasts.
- **Maintenance Assessment:** Estimated costs from historical data and benchmarks, including tech differences and midlife replacements (e.g., batteries).
- **Facilities Assessment**: Determined infrastructure needs (chargers, dispensers, upgrades) with vendor/utility input for design and costing.
- **Total Cost of Ownership Assessment**: Integrated all elements for TCO comparisons, covering procurement, fuel, maintenance, midlife, and facilities.

The analysis evaluated four specific scenarios that would give clear insights into the opportunities and challenges related to ZEB technology adoption.

Transition Scenarios Analyzed

1. **Baseline (Diesel)** – Skagit will continue to procure diesel buses in line with its diesel replacement cycle. The scenario serves as the comparison to which all other scenario can be evaluated.

2. **BEB Only (Depot + On-Route)** – This scenario replaces diesel buses with BEBs. As it was identified early, BEB with overnight charging only had limited feasibility; this scenario emphasizes BEB buses with on-route charging capabilities.
3. **Mixed Fleet (Depot BEB + FCEB)** – This scenario was developed as a technology hedge or scenario in which significant on-route charging is determined infeasible and the agency must rely on a mix of depot-only charged BEBs and FCEBs.
4. **FCEB Only** – replace all retirements 1:1 with FCEBs.

Key Findings

Service Assessment:

The service analysis showed that a battery-electric bus (BEB) fleet relying only on overnight depot charging would be markedly limited in operational coverage, able to serve just 2 of Skagit's 23 weekday blocks under strenuous conditions. Because of this constraint, a successful zero-emission bus (ZEB) transition for Skagit would require substantial reliance on on-route charging or the use of fuel cell electric buses (FCEBs) to meet service needs and maintain reliability.

Fleet Assessment:

Fleet procurement costs were the single largest driver of the Total Cost of Ownership (TCO) differences between the ZEB scenarios and the Baseline diesel scenario. BEBs are currently priced between $1.3 million and $1.4 million, while FCEBs are about $1.6 million, compared to approximately $730,000 for a diesel bus. Although industry expectations suggest future price declines, market trends in recent years show price increases rather than decreases, providing no credible basis for modeling lower costs. Under these conditions, both the FCEB-Only and Mixed Fleet scenarios could achieve 100% ZEB by 2039, whereas the BEB-Only scenario would not be able to operate the demanding 90X-1 block, limiting it to roughly 90% ZEB in the mid-2040s and preventing full fleet conversion.

Maintenance Assessment:

ZEB technology is expected to lower routine maintenance costs compared to diesel buses, primarily due to fewer moving parts. However, BEBs face the challenge of significant battery degradation, with complete midlife battery replacements estimated at $300,000–$350,000 per bus. While BEBs offer the lowest routine maintenance costs, the high cost of battery replacement makes them the most expensive scenario in lifetime maintenance expenditures.

Fuel Assessment:

The reference price for renewable diesel is $3.88 per gallon. For hydrogen to be cost-competitive, it would need a delivered price of $5–$7 per kilogram, yet current prices

stand at around $15 per kilogram—two to three times the cost of diesel. BEB electricity prices under PSE's Schedule 26 are favorable on an energy-only basis, but substantial demand charges—calculated from the highest 15-minute usage in a month—have risen sharply and are projected to account for 64% of BEB fueling costs in 2050 with four on-route charging sites. PSE is piloting a new rate structure rewarding off-peak charging (4 PM–9 PM), which could significantly lower BEB fuel costs relative to current tariffs.

Facility Assessment:
Facility requirements differ significantly by scenario. An FCEB-Only fleet would require the least investment, with a single hydrogen fueling station at MOA-2. The Mixed Fleet option would add to that the need for substantial EV charging infrastructure at MOA-2. The BEB-Only scenario would require the most costly buildout, including on-route charging installations at Skagit Station, Chuckanut P&R, Concrete P&R, and March's Point P&R. Along with high infrastructure costs, this scenario poses higher implementation risks due to public-facing projects, potential utility capacity constraints, and permitting challenges. Service reliability would also be highly dependent on multiple on-route charging sites, making operations vulnerable to any single point of failure.

Total Cost of Ownership:
Over 80% of the TCO difference between ZEB and Baseline scenarios is attributable to the higher capital costs for vehicles and facilities. While fuel costs are particularly high in the FCEB-Only case, they contribute far less to the total difference than procurement costs. Grant funding could offset some of these premiums, but FCEB-Only would remain the highest-cost scenario over the transition period due to its combination of elevated vehicle purchase prices and fuel expenses.

Cost Outcomes

Over 2025–2050, the total cost of ownership (TCO, $ millions, 2025$) is:

Category	Baseline	BEB Only	Mixed Fleet	FCEB Only
Fleet procurement	39.4	67.7	78.9	88.0
Fuel	28.7	31.2	32.7	39.7
Maintenance & Midlife	25.0	29.2	25.4	19.9
Facilities	0.0	14.9	12.9	9.5
Total	**93.1**	**143.0**	**149.9**	**157.1**
Δ vs. Baseline	–	+49.9	+56.8	+64.0

Risks to Monitor

- Hydrogen price and supply uncertainty through the 2030s—secure indexed, reviewable supply contracts.
- Siting, permitting, and reliability of on-route chargers if BEB expansion depends on them.
- High BEB battery midlife replacement cost ($300k–$350k/bus) and limited warranty availability.
- Availability of the extended range (56 kg) FCEB configuration.
- Potential shifts in electricity tariffs—demand vs. time-of-use—that could alter BEB operating costs or make on-site hydrogen production more attractive.

Recommended Path

Given current uncertainties in both electric and hydrogen markets, PCG recommends a **Mixed ZEB transition** that leverages the strengths of both technologies while avoiding early over-commitment to a single fuel:

- Deploy an initial cohort of depot-charged BEBs on feasible blocks and install on-route charging at Skagit Station to expand coverage.
- Field a pilot cohort of FCEBs served by an interim trailer-based hydrogen station at MOA-2, transitioning to a permanent facility as fleet needs grow.
- Engage Puget Sound Energy now to participate in the Schedule 558 EV charging tariff pilot.
- Aggressively pursue FTA Low-No and 5339(b) funds, WSDOT capital programs, and PSE Transportation Electrification grants, and capture §48/48E tax credit value for BESS and hydrogen equipment.
- Use 6–12 month “stage gates” to reassess route feasibility, BEB performance, hydrogen pricing, and adjust the technology mix accordingly.

Bottom line: Skagit can credibly achieve a reliable 100% ZEB fleet by 2039 without a county-wide on-route charging build-out. A Mixed Fleet strategy offers the best balance of operational coverage, lifecycle cost, and implementation risk, while positioning Skagit to maximize outside funding and adapt as technology and market conditions evolve.

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1. Introduction

1.1 Purpose and Context

The transportation industry is at a pivotal moment, facing mounting pressure to address climate change, improve air quality, and modernize infrastructure for the 21st century. Public transit agencies, as providers of essential mobility services, are uniquely positioned to lead in this transformation. In Skagit County, Skagit Transit (Skagit) has long recognized its responsibility to provide safe, reliable, and forward-thinking service to its community. As zero-emission vehicle (ZEV) technology matures and public policy increasingly favors low- and zero-emission solutions, Skagit has proactively sought to chart a course toward a cleaner, more sustainable fleet.

In this context, Skagit contracted with Potter Consulting Group, LLC (PCG) to conduct a comprehensive fleet analysis for its fixed-route bus operations, evaluating the feasibility and implications of transitioning to zero-emission technology by 2050. The study, supported by technical partners FASTECH and TrEnergy, focuses on two primary zero-emission technologies: battery electric buses (BEBs) and fuel cell electric buses (FCEBs). This report summarizes the findings of this analysis, providing a data-driven foundation for Skagit's long-term fleet planning and investment decisions.

1.2 Project Goals

The main goal of this project is to provide Skagit with practical, locally relevant insights into transitioning to zero-emission bus technology. The specific objectives are to:

i. **Assess Feasibility**: Determine the operational viability of deploying BEBs and FCEBs across Skagit's fixed-route service, considering route profiles, duty cycles, and local conditions.
ii. **Model Costs:** Develop robust total cost of ownership (TCO) projections for each transition scenario, including vehicle procurement, fuel, maintenance, midlife replacement, and infrastructure requirements.
iii. **Compare Scenarios**: Analyze the relative strengths and limitations of different technology pathways—BEB-only, FCEB-only, mixed fleets, and the status quo—across operational, financial, and service quality dimensions.
iv. **Identify Funding Opportunities**: Catalog federal, state, and utility funding and incentive programs that can support the transition and reduce the financial burden on Skagit and its riders.
v. **Develop Recommendations**: Provide clear, evidence-based recommendations to guide Skagit's decision-making and implementation strategy through 2050.

1.3 Project Partners and Collaboration

This study was carried out by Potter Consulting Group, LLC (PCG), with technical assistance from FASTECH and TrEnergy. PCG collaborated closely with Skagit's staff throughout the project to ensure that the analytical approach, key assumptions, and results were aligned with Skagit's unique operational context and strategic priorities. Regular communication with Skagit's leadership and operations teams helped ensure that the analysis accurately reflected real-world service demands and local constraints.

1.4 Policy and Funding Environment

A dynamic policy and funding landscape influences the shift to zero-emission transit. At the federal level, programs such as the Federal Transit Administration's Low or No Emission Grant Program (Low-No) and the Buses and Bus Facilities Program offer substantial resources for acquiring clean vehicles and infrastructure. In Washington State, legislative actions—including the Climate Commitment Act, the Clean Fuel Standard, and the Move Ahead Washington transportation package—create strong incentives and expectations for public agencies to cut greenhouse gas emissions and promote sustainable mobility solutions.

While there is currently no absolute statewide mandate requiring all transit agencies to have a 100% zero-emission fleet by a specific date, the dominant message from both state and federal policymakers is clear: the future of public transportation is zero-emission. This policy environment, along with increasing public support for clean transportation, presents both an opportunity and a necessity for Skagit to set an example.

1.5 The Case for Zero-Emission Transit

Environmental and Public Health Benefits

Diesel buses, while reliable, are major sources of greenhouse gases and local air pollutants, including nitrogen oxides (NO_x) and particulate matter (PM). Switching to zero-emission buses will greatly reduce these emissions, improving air quality and public health for Skagit County residents. These advantages are especially important for vulnerable groups, such as children, seniors, and people with respiratory conditions.

Economic and Operational Considerations

Although the initial investment in zero-emission vehicles and infrastructure is higher than for conventional diesel buses, these costs could be offset over time by lower fuel and maintenance expenses. BEBs and FCEBs have fewer moving parts and require less routine maintenance, which can lead to significant savings over the vehicle's lifespan. Additionally,

state and federal grants, tax credits, and utility incentives can help bridge funding gaps and speed up the transition.

From an operational perspective, BEBs and FCEBs offer quieter, smoother rides, enhancing the passenger experience and reducing noise pollution in neighborhoods and commercial districts. As battery and fuel cell technologies continue to advance, the range, reliability, and flexibility of zero-emission buses are expected to improve, making them increasingly viable for a wide range of transit applications.

Community Engagement and Local Priorities

Skagit's successful transition to a zero-emission fleet will rely on strong partnerships with local governments, utility providers, and community groups. Effective engagement will ensure that Skagit's plans match local priorities, solve accessibility issues, and gain broad support for investing in sustainable transit.

2. Project Process and Methodology

The development of Skagit Transit's zero-emission fleet transition analysis was rooted in a collaborative, data-driven process designed to ensure local relevance and practical outcomes. Throughout the project, Skagit staff worked closely with PCG, supported by FASTECH, TrEnergy, and input from peer transit agencies and technology vendors. This partnership enabled the creation of a robust set of assumptions and analytical steps tailored to Skagit's unique operational environment.

Collaborative Approach

From the beginning, the project team focused on ongoing collaboration with Skagit's operations, planning, and maintenance staff. They held regular workshops and feedback sessions to understand operational realities, verify data, and improve assumptions. The team also consulted with other transit agencies that have adopted zero-emission technologies, using their lessons learned to guide scenario development. Vendor engagement provided current information on vehicle capabilities, charging and refueling solutions, and infrastructure needs.

Stepwise Analytical Process

The analysis followed a structured sequence, with each phase building on the insights and data developed in the previous step:

- **Information Gathering and Initial Planning:**
  The project started with thorough data collection, including fleet inventories, route

maps, block schedules, facility layouts, and historical cost data. Early planning sessions established project goals, clarified roles, and laid the groundwork for scenario development.

- **Service Assessment:**
  The team conducted a thorough evaluation of Skagit's fixed-route service blocks, examining factors such as route length, layover durations, topography, and climate. This analysis determined the operational viability of deploying battery electric buses (BEBs) and fuel cell electric buses (FCEBs) on each block, under both normal and challenging conditions.

- **Fleet Assessment:**
  Building on the service assessment, the team created procurement schedules for each transition scenario. This step identified which vehicles could be replaced with BEBs or FCEBs, and when, based on operational feasibility and asset retirement cycles.

- **Fuel Assessment:**
  The analysis then estimated the fuel and energy needs for each scenario, projecting annual and total consumption of electricity, hydrogen, and diesel. Local utility rates, hydrogen price forecasts, and renewable diesel costs were included to ensure accuracy.

- **Maintenance Assessment:**
  Maintenance costs were estimated using historical data, industry benchmarks, and input from peer agencies. The analysis considered differences in maintenance requirements among diesel, BEB, and FCEB technologies, including mid-life component replacements such as battery packs.

- **Facilities Assessment:**
  Facility requirements were assessed for each scenario, including the number and type of chargers or hydrogen dispensers, electrical upgrades, site constraints, and maintenance bay modifications. Vendor input and utility consultations guided the design of the infrastructure and the cost estimates.

- **Total Cost of Ownership Assessment:**
  Finally, all previous analyses were combined to calculate the total cost of ownership (TCO) for each scenario. This thorough assessment included vehicle procurement, fuel, maintenance, midlife replacements, and facility investments, offering a clear comparison of long-term costs and benefits.

Through this collaborative and sequential process, the project team developed a set of recommendations that are grounded in local data, operational realities, and the latest industry knowledge, ensuring that Skagit Transit's transition plan is both ambitious and achievable.

The project team also had FASTECH develop a conceptual design of a hydrogen refueling station at MOA-2 (See **Appendix B**) and the facility modifications required at MOA-2 to service FCEBs in the maintenance garages (See **Appendix C**). Additionally, the project team engaged with Puget Sound Energy to discuss the possibilities for a microgrid development near MOA-2. These discussions are still at an early stage, but an overview of the opportunity is discussed in **Appendix D**.

3. Transition Scenarios

A key part of Skagit Transit's zero-emission fleet analysis was creating and assessing four different transition scenarios. Each one shows a different way to update the fixed-route bus fleet, considering operational feasibility, costs, infrastructure needs, and long-term sustainability. These scenarios help Skagit understand the trade-offs and opportunities of each option, aiding strategic decisions for the agency's future.

3.1 Scenario Overview

The four scenarios analyzed are:

1. **Baseline (Diesel Only):**
   Continued operation of Skagit's fixed-route service with diesel vehicles, following the current procurement schedule through 2050. No adoption of zero-emission technologies.
2. **BEB Only & On-Route Charging:**
   Transition to battery electric buses (BEBs) as diesel vehicles are retired, using a combination of overnight depot charging and on-route charging to support operational needs. Vehicle deployment is based on block feasibility, ensuring BEBs can meet service requirements under typical and demanding conditions.
3. **Mixed Fleet (FCEB/BEB Depot):**
   Transition to a combination of BEBs (charged at the depot) and fuel cell electric buses (FCEBs). Technology assignment for each block is based on operational feasibility, with BEBs serving blocks within their range and charging capabilities, and FCEBs deployed on longer or more demanding routes.

4. **FCEB Only:**
   Complete transition to FCEBs, replacing all diesel vehicles based on block feasibility. This scenario evaluates the potential for a hydrogen-powered zero-emission fleet, with FCEBs serving all fixed-route blocks.

3.2 Scenario Rationale

- **Baseline:** Serves as a reference case, allowing Skagit to compare the costs, emissions, and operational impacts of maintaining the status quo versus transitioning to zero-emission technologies.
- **BEB Only & On-Route Charging:** Reflects the growing maturity of battery electric bus technology and the potential for widespread electrification, while acknowledging the need for on-route charging to serve longer or more demanding blocks.
- **Mixed Fleet (FCEB/BEB Depot):** Offers operational flexibility by utilizing the strengths of both BEBs and FCEBs, eliminating the need for on-route charging, and maximizing zero-emission deployment while supporting Skagit's diverse service routes.
- **FCEB Only:** Evaluates the feasibility of a fully hydrogen-powered fleet.

4. Assumptions

This section defines the standard technical and operational assumptions used across the Service, Fleet, Fuel, Maintenance, Facilities, and TCO analyses. Scenario-specific methods are described in their respective sections.

4.1 Global Conventions

- **Study horizon:** 2025–2050
- **Operational basis:** Skagit Transit **2024** blocks, schedules, layovers, routes
- **Normalization:** All fixed-route buses modeled as **40-ft** for comparability
- **Units:** Energy in **kWh** (BEB) and **kg H_2** (FCEB); distance in **miles**; power in **kW**
- **Costs:** All costs are shown in $2025 with no general inflation or discounting applied.
- **Data sources:** Skagit fleet/operations (2022–2024), 2024 service schedules; prior terrain/road-type assignments; manufacturer literature; peer agency planning values.

4.2 Baseline (Skagit Today)

4.2.1 Fleet, Useful Life & Replacement

- **Current fixed-route/commuter fleet: 30** diesel buses (Gillig; 29–40 ft)
- **Useful life (diesel): 15 years**
- **Replacement logic:** Follows end-of-life timing of the existing diesel fleet (Baseline schedule shown in Fleet section)

***Table 1** – Skagit Existing Fleet*

Placed in Service	Fuel	Length	Manufacturer	Qty
2014	Diesel	40 ft	Gillig	2
2014	Diesel	35 ft	Gillig	2
2016	Diesel	35 ft	Gillig	1
2017	Diesel	35 ft	Gillig	2

2017	Diesel	29 ft	Gillig	1
2018	Diesel	40 ft	Gillig	1
2019	Diesel	29 ft	Gillig	6
2020	Diesel	40 ft	Gillig	5
2020	Diesel	35 ft	Gillig	1
2020	Diesel	29 ft	Gillig	3
2022	Diesel	35 ft	Gillig	1
2024	Diesel	40 ft	Gillig	5
Total				**30**

Figure 1 shows the expected fleet replacement schedule for the existing fleet through 2050, assuming the Baseline scenario.

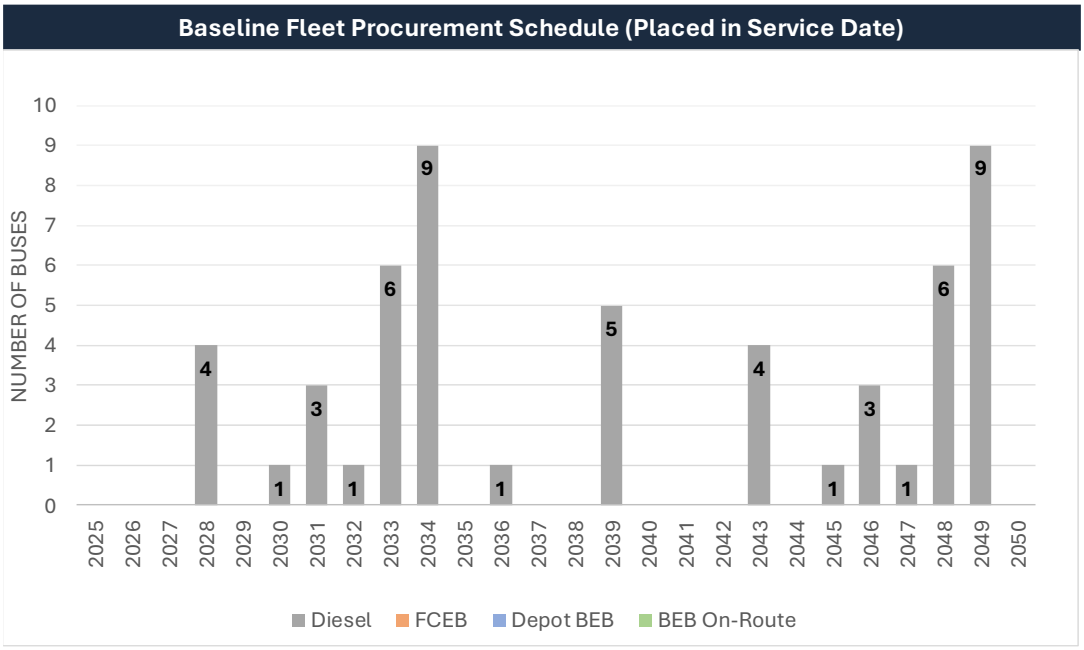

***Figure 1** - Baseline Bus Replacement Schedule*

4.2.2 Service Catalog: Routes & Blocks (2024)

- **Routes: 19** fixed routes
- **Blocks: 54** total → **23** weekday, **18** Saturday, **13** Sunday
- **Terrain & road type:** Prior Kimley-Horn classifications applied per route/block

Table 2 lists the 19 fixed routes (23 total with split variations) with classified Terrain and Road Type determined by a previous Kimley Horn study. **Table 3** lists Skagit's 23 weekday blocks, which represent the actual service requirements for a bus in daily operation.

***Table 2** - Skagit Transit Fixed Routes*

Route	Daily Mileage	Terrain	Road Type	Buses in Daily Service
101	154	Flat	Urban	1
202	194	Flat	Urban	1
204	211	Hilly	Urban	1
205	171	Hilly	Urban	1
206	141	Hilly	Urban	1
1-207	190	Some Hills	Urban	1
2-207	114	Some Hills	Urban	1
1-208	136	Flat	Urban	1
2-208	196	Flat	Urban	1
300	382	Flat	Urban	1
301	194	Flat	Urban	1
305	227	Flat	Rural	1
409	130	Flat	Urban	1
410	249	Flat	Urban	1
513	132	Flat	Rural	1
615	195	Flat	Rural	1
717	251	Hilly	Rural	1
40X	352	Flat	Highway	1
70X	446	Flat	Highway	1
80X	244	Some Hills	Interstate	1
90X1	543	Flat	Interstate	1
90X2	161–168	Flat	Interstate	1
90X3	84–168	Flat	Interstate	1

***Table 3** - Skagit Transit Weekday Block Data*

#	BlockID	Routes Operated	Pull Out	Pull In	Platform Hours	Daily Mileage
1	1-101/1-513A	Route 101, Route 513	6:15	21:15	15.00	275
2	2-101/2-513A	Route 101, Route 513	6:05	20:15	14.17	264
3	1-207/1-204A	Route 204, Route 207	6:05	21:15	15.17	219
4	2-207/2-204A	Route 204, Route 207	6:05	21:15	15.17	219
5	3-207	Route 204, Route 207, Route 90X-3	9:35	18:20	8.75	174
6	1-208/1-202A	Route 202, Route 208	6:05	20:45	14.67	168
7	2-208/2-202A	Route 202, Route 208	6:15	20:50	14.58	168
8	1-300/1-301A	Route 300, Route 301	5:30	20:47	15.28	208
9	2-300/2-301A	Route 300, Route 301	5:30	20:55	15.42	208
10	40X	Route 40X	6:05	20:10	14.08	347

11	70X	Route 70X	6:25	21:05	14.67	380
12	70X CONN/3-208/3-202	Route 202, Route 208, Route 70X	4:40	21:05	16.42	238
13	80X	Route 207, Route 40X, Route 80X	5:50	18:45	12.92	299
14	90X-1	Route 90X-1	4:35	19:35	15.00	507
15	90X-2	Route 90X-2	5:05	18:30	13.42	318
16	90X-3	Route 90X-3	5:25	20:25	15.00	161
17	206	Route 206	6:25	20:40	14.25	160
18	1-205/305	Route 205, Route 305	5:50	19:55	14.08	207
19	2-205/305	Route 205, Route 305	7:25	21:10	13.75	192
20	409	Route 409	6:40	17:30	10.83	148
21	410	Route 410	5:25	20:55	15.50	319
22	615	Route 615	5:35	20:40	15.08	336
23	717	Route 717	5:45	21:10	15.42	350

4.2.3 Baseline Fuel & O&M

- **Diesel price (starting point): $3.88/gal** (Skagit 2024 reported R99 cost)
- **Diesel propulsion efficiency: 6.3 mpg** (Skagit 2022–2024; normalized to 40-ft)
- **Routine maintenance (diesel): $0.49/mi** (labor + parts; 2022–2024 average)
- **Midlife event (diesel):** Engine + transmission overhaul at ~**Year 7**, planning value **$60,000**

4.2.4 Existing Facilities & Utility Readiness

- **Diesel fueling:** On-site tank with **two** fueling lanes (current operations)
- **Electric service (MOA-2): 4,000-amp** allotment reserved with PSE for future ZEB support

4.3 Zero-Emission Technology Assumptions

4.3.1 Technology selection (planning basis)

Table 4 breaks down the different ZEB technology selections used in the study**.** As Skagit operates a complete Gillig fixed route and commuter bus fleet, Gillig's models for depot and inductive-capable BEBs were used. As Gillig does not have an FCEB model, New Flyer's FCEB with the extended range storage configuration was used for the analysis.

***Table 4** - Zero Emission Bus Technology Selections*

Manufacturer	Bus Type	Length	Nameplate Capacity	Usable Capacity (planning, midlife)	Useful Life
Gillig	BEB — Depot charge only	40 ft	686 kWh	494 kWh	12 years
Gillig	BEB — Inductive-capable (on-route)	40 ft	588 kWh	423 kWh	12 years
New Flyer	FCEB	40 ft	56 kg H_2 storage	52 kg H_2	12 years

Notes (how "usable capacity" is defined):

- **BEBs:** Planning usable energy at mid-life equals 72% of the nameplate capacity. This calculation omits the top and bottom 10% of the battery pack, as specified by the manufacturer, since batteries tend to degrade faster when charged to full or depleted too low. It also assumes a 10% degradation at midlife. The model considers battery packs are replaced at the midlife point, making 72% of the nameplate capacity a suitable planning figure. This approach ensures that block feasibility remains accurate throughout the 12-year lifespan of the bus.
- **FCEBs:** Usable hydrogen assumes an operational reserve; for the 56 kg configuration, we model ~52 kg available for service.
- **Feasibility screen:** Blocks are deemed feasible only if achievable at vehicle mid-life, ensuring they remain viable across the whole service life.

4.3.2 Technology improvement over time (applies to future procurements only)

- **BEB energy density:** +5% every two years. This increases onboard energy without reducing passenger capacity. Improvements apply cohort-by-cohort; earlier buses do not retroactively gain capacity.
- **FCEB efficiency/storage:** +2.5% every two years (modeled as a combined effect of incremental fuel-cell efficiency gains and storage improvements). Also cohort-specific.

Clarifications: We hold bus length at 40 ft for all procurements; no price learning is assumed here (cost assumptions are handled in the Fleet and Facilities sections). Optional diesel-fired heaters are considered only in the energy modeling for strenuous-condition cases; they do not change "usable capacity," but they reduce auxiliary electric load.

4.3.4 Charging & Refueling Operating Parameters

- **Depot BEB charging (MOA-2): 200 kW** DC fast chargers, **two dispensers per charger**; **~90%** AC→DC efficiency; planning within reserved 4,000-amp service.
- **On-route BEB charging: 300 kW** inductive pads; per-event charging **limited to 175 kW** to protect battery health/warranty; **~90%** transfer efficiency.
    - **Layover eligibility:** Only layovers **≥5 minutes**; **1 minute** reserved for pad alignment.
    - **Candidate sites for modeling:** Skagit Station, Chuckanut P&R, Concrete P&R, March's Point P&R.
- **FCEB refueling performance:** Two lanes; typical transit **fast fill 7–15 minutes/bus** with on-site compression and high-pressure buffer storage. **Station connected load ~250 kW** (compression/controls/thermal).

4.4 Energy Modeling Assumptions

4.4.1 BEB Propulsion & Auxiliary Loads

To calculate the energy requirements of Skagit's blocks and their ability to be completed by BEBs, the project team conducted energy modeling of Skagit's blocks based on the following assumptions:

- **Baseline propulsion (40-ft BEB): 2.0 kWh/mile** (flat, rural, nominal conditions).
- **Multipliers** apply **multiplicatively to propulsion energy only**; auxiliary loads are time-based and added separately.

Table 5 *- Propulsion Multipliers & Auxiliary Loads*

Item	Value	Notes
Road type – Rural	**1.00×**	Baseline
Road type – Urban	**1.15×**	Stop-and-go/accessories
Road type – Highway	**1.05×**	Higher speed

Terrain – Flat	**1.00×**	Baseline
Terrain – Some hills	**1.05×**	Moderate elevation change
Terrain – Hilly	**1.10×**	Significant elevation change
Strenuous factor	**1.15×**	Peak loads/driver/style margin
Aux load (nominal)	**6 kW**	~4 kW HVAC + 2 kW other
Aux load (strenuous)	**15 kW**	~13 kW HVAC + 2 kW other
Aux (stren. with DFH)	**8 kW**	DFH offsets HVAC electric

(BEB propulsion)

Propulsion kWh/mi = 2.0 × (Road multiplier) × (Terrain multiplier) × (Strenuous, if applied)

(Total route energy)

Total kWh = (Propulsion kWh/mi × route miles) + (Aux kW × operating hours)

4.4.2 Converting Electrical Demand to Hydrogen (FCEB)

- **Hydrogen LHV: 33 kWh/kg**
- **Fuel-cell efficiency: 51%** → **16.83 kWh/kg** effective
- **Conversion:**
  - kg H_2 per mile = (Total electrical kWh/mi) ÷ 16.83
  - **Example: 2.0 kWh/mi ≈ 0.12 kg/mi** (≈ **8.4 mi/kg**)

4.6 Data Inputs & Sources (Overview)

- **Internal:** 2024 blocks/schedules, fleet inventory, historical operations and maintenance data.
- **External:** Kimley-Horn terrain/road-type classifications; manufacturer literature/specifications; peer-agency and industry planning values for kWh/mi, auxiliary loads, and hydrogen conversion factors.

5. Service Assessment

This service assessment determines whether deploying zero-emission buses (ZEBs) is operationally feasible across Skagit Transit's fixed-route service network. The planning team evaluated feasibility under both normal and challenging conditions. For procurement and planning, the analysis emphasizes results from the strenuous conditions scenario to ensure buses can operate reliably year-round on any route segment. The focus is on weekday schedules, which reflect peak service demand. Feasibility is measured by comparing projected route energy requirements—including distance, topography, duty cycles, efficiency factors, and auxiliary loads—to the onboard energy capacity of each ZEB technology. Future projections account for expected advancements in vehicle technology, especially energy storage. The complete analysis, including nominal and strenuous conditions for each technology, is in **Appendix A**.

5.1 Service Assessment Results

Figure 2 illustrates the projected percentage of feasible blocks under strenuous conditions with diesel-fired heaters (DFH), across various technology types and anticipated improvements over the transition period.

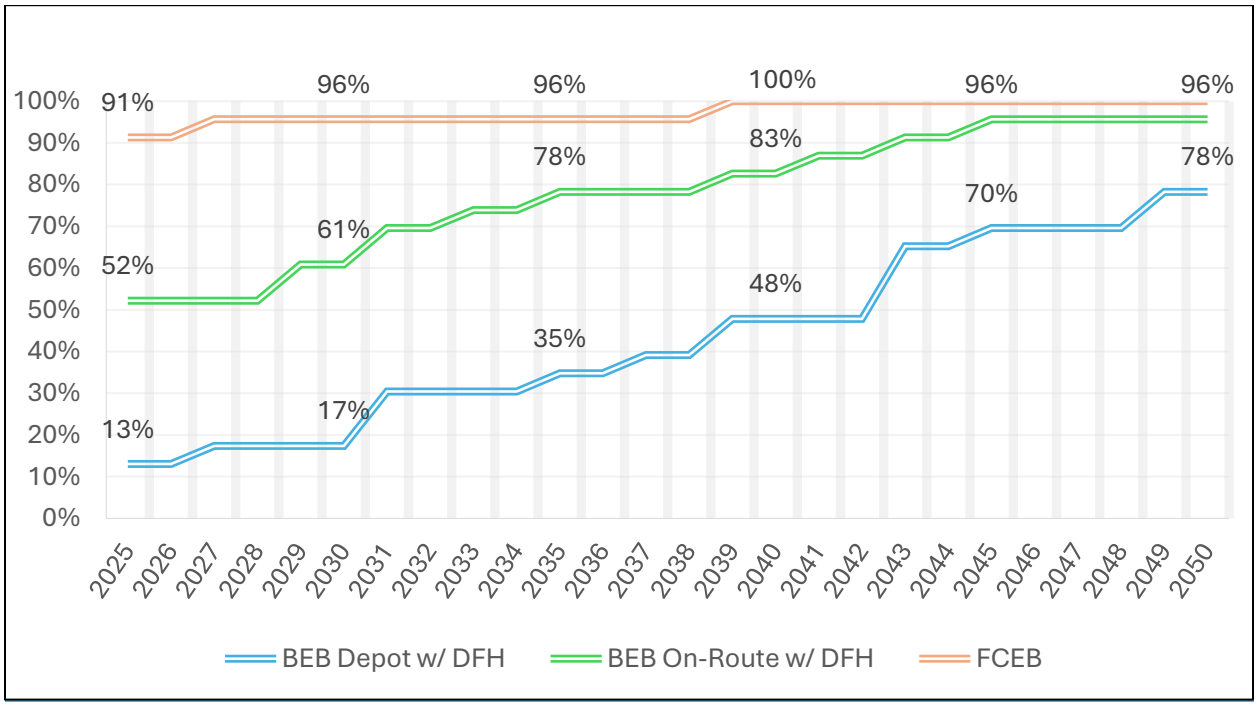

***Figure 2** -Projected Block Achievability (Strenuous Conditions w/ DFH)*

Initial results highlight the limitations of battery electric buses (BEBs) that rely solely on depot charging for Skagit Transit's route blocks. With current technology, a single charge

can only cover the 90X-3 and 409 blocks. However, the 90X-2 block becomes feasible due to its long midday layover at the depot, which allows for recharging. Modest improvements in battery energy density of about 5% every two years are expected to increase the number of feasible blocks during the transition. Still, fewer than half of Skagit's blocks are achievable through 2042, and about one-quarter are considered infeasible throughout the entire period.

Adding on-route charging at key locations like Skagit Station, Chuckanut Park & Ride, March's Point Park & Ride, and Concrete Park & Ride significantly improves results. Nearly half of Skagit's blocks are feasible with current BEB technology using this approach. As battery technology continues to improve, all but one block (90X-1, due to its exceptional length and demands) is projected to be achievable by 2045.

Fuel cell electric bus (FCEB) technology shows stronger initial performance, especially with the latest custom-made New Flyer 40-ft model that has 56 kg of hydrogen storage. This setup enables nearly all (91%) of Skagit's blocks to be completed today, emphasizing FCEB's benefits for longer trips on a single fill-up. Notably, New Flyer's standard 40-ft FCEB model holds only 37.5 kg of hydrogen; if the expanded-capacity version becomes unavailable, initial feasibility drops to 50% of the blocks.

5.2 Service Assessment Key Takeaways for Skagit Transit

- **BEB Depot-Only Charging Limitations**: Current technology supports only a small subset of blocks, with gradual improvements yielding less than 50% feasibility by 2042. About one-quarter of blocks may remain infeasible long-term, underscoring the need for alternative strategies to handle extended duty cycles.
- **Benefits of On-Route Charging:** Installing charging stations at key park-and-ride sites nearly doubles initial feasibility and, combined with technological advancements, enables almost full coverage (except 90X-1) by 2045. This underscores on-route charging as a critical enabler for broader BEB adoption.
- **FCEB Advantages for Long Routes:** The custom 56 kg hydrogen storage model provides high immediate feasibility (91% of blocks), making FCEBs ideal for Skagit's longer routes without requiring mid-route infrastructure. However, reliance on the standard 37.5 kg model could halve this feasibility, emphasizing the importance of securing vehicles with enhanced capacity.
- **Strenuous Conditions as Planning Focus**: Prioritizing year-round operability under peak demands supports robust procurement decisions, while revealing technology gaps that can be bridged through future improvements and infrastructure investments.

6. Fleet Assessment

The purpose of the Fleet Assessment is to determine the right type and number of zero-emission buses (ZEBs) needed for Skagit Transit, as well as to create a transition plan and estimate the capital costs for each scenario. This assessment combines the findings from the Service Assessment with Skagit Transit's existing fleet replacement plan to outline a projected timeline for replacements and the expected total capital costs.

Key assumptions for this analysis are as follows:

- **Vehicle Lifecycles:** Diesel buses are replaced on a 15-year schedule; ZEBs are replaced every 12 years.
- **Replacement Approach:** Replacements are conducted on a 1:1 basis, with each outgoing vehicle replaced by one ZEB. The replacement schedule follows the scenario definition.
- **Deployment Constraint:** The number of ZEBs in the fleet each year cannot exceed the percentage of blocks deemed feasible for that technology, as determined by the Service Assessment.
- **Capital Costs:** All costs are stated in 2025 dollars, with no additional inflation factor applied.

***Table 6** - Bus Capital Cost Including Optional Package*

Bus Type	Unit Cost ($2025)
Diesel	$730,000
BEB Depot	$1,215,000
BEB Depot w/ DFH	$1,220,000
BEB On-Route	$1,315,000
BEB On-Route w/ DFH	$1,320,000
FCEB	$1,600,000

***Source:** All costs are based on WA State Contract Pricing as of 4/1/2025 and reflect Skagit Transit's selected options package.*

Market Notes: Recent industry trends indicate that, although battery-electric bus (BEB) prices were initially expected to decrease as the market matured and battery manufacturing capacity expanded, prices have now stabilized and, in some cases, even risen. This shift is due to ongoing supply chain disruptions and the increased adoption of

larger battery capacities in new models. For fuel cell electric buses (FCEBs), prices might decrease as national order volumes grow, but currently, there isn't enough consistent market data to predict lower costs. Therefore, this study assumes that current FCEB prices will remain steady for planning purposes.

6.1 Baseline Scenario

In the Baseline scenario, Skagit replaces retired diesel buses with new 40-foot diesel buses according to a 15-year replacement schedule at the end of their useful life. Therefore, this scenario shows the costs Skagit expects through 2050 if the fleet composition remains unchanged.

Figure 3 shows the number of new diesel buses scheduled to be added each year through 2050 in this scenario.

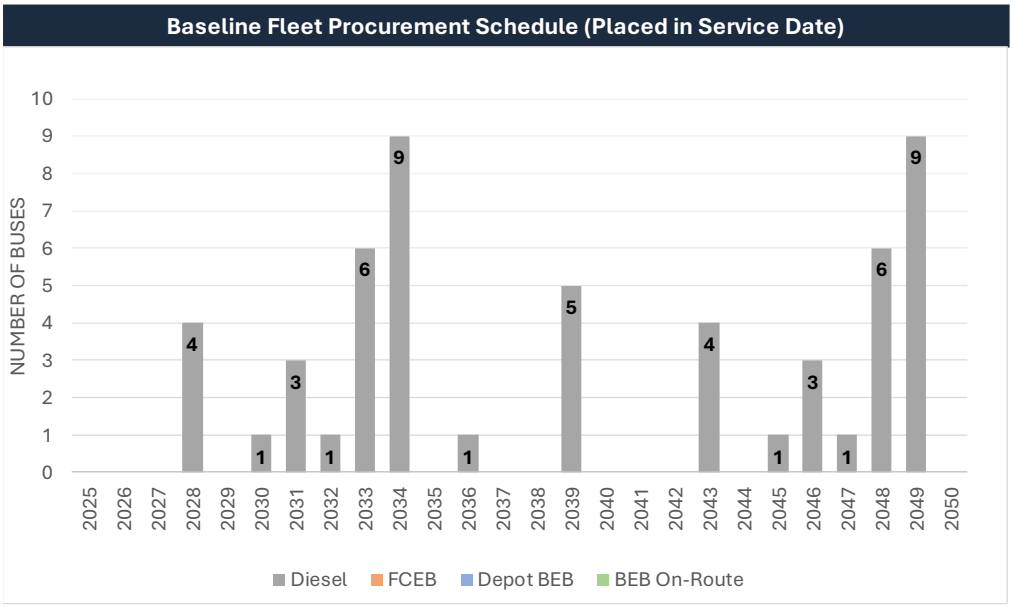

***Figure 3** - Projected Bus Deployments, Baseline Scenario*

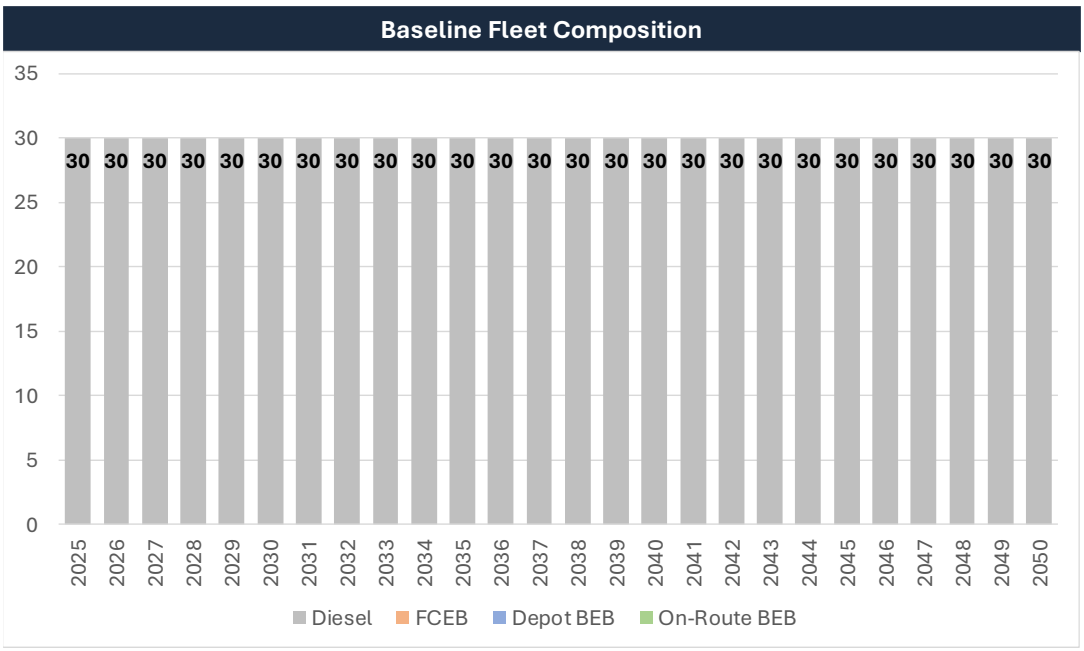

Figure 4 - *Annual Fleet Composition, Baseline Scenario*

Figure 4 shows the annual fleet composition through 2050 for the Baseline scenario. As shown above, the Baseline scenario results in 0% of the fleet being ZEB by 2050.

Figure 5 shows the annual fleet procurement costs for the Baseline scenario. For planning purposes, bus procurement costs are estimated two years before the placed in service dates shown in **Figure 3.**

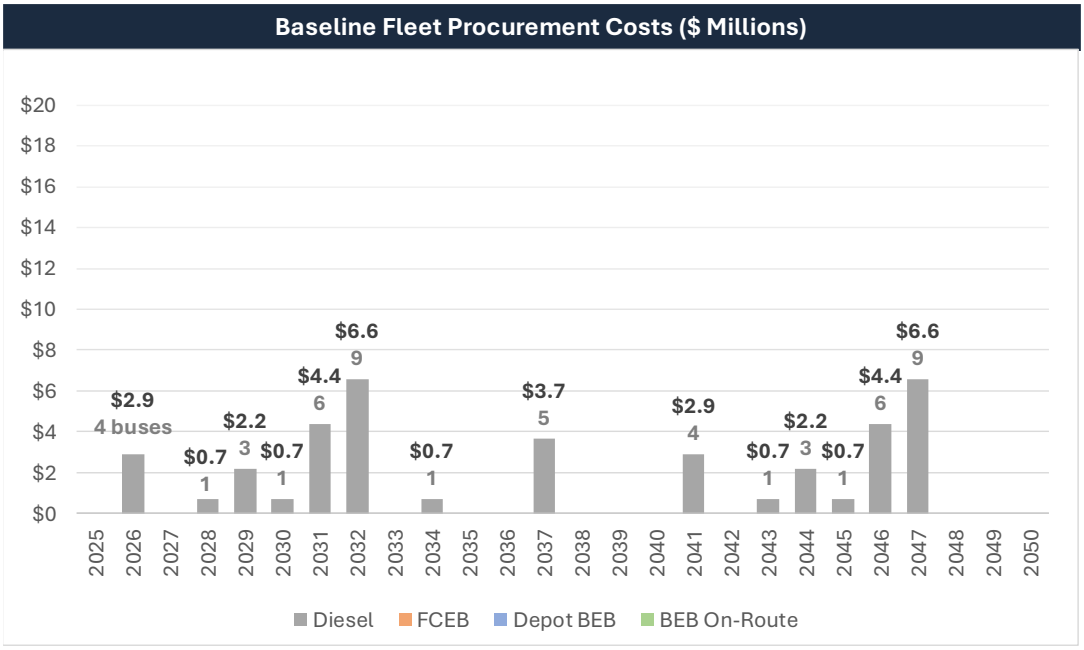

Figure 5 *- Annual Bus Procurement Costs, Baseline Scenario*

6.2 BEB Only Scenario

In the BEB Only scenario, Skagit's existing diesel buses are replaced with battery electric buses. Since the initial analysis showed limited feasibility for depot-only charged BEBs, the replacement buses mainly feature BEBs with on-route inductive charging capability.

Figure 6 shows the annual number of buses planned for deployment by type in the BEB Only scenario. In this scenario, most of the fleet can switch to BEBs according to the replacement schedule. In 2034, several of Skagit's blocks remain infeasible with BEB technology due to range limitations and inadequate layover times for on-route charging. Therefore, during this period, all feasible BEB blocks are assigned, and any extra BEB procurements would exceed the constraint ratio of BEBs in the fleet relative to feasible blocks. As a result, to maintain current service levels, diesel bus procurements are planned for 2034. Since the 90X-1 block remains infeasible throughout the entire transition period, two additional diesel buses are scheduled for procurement in 2049 to cover that block.

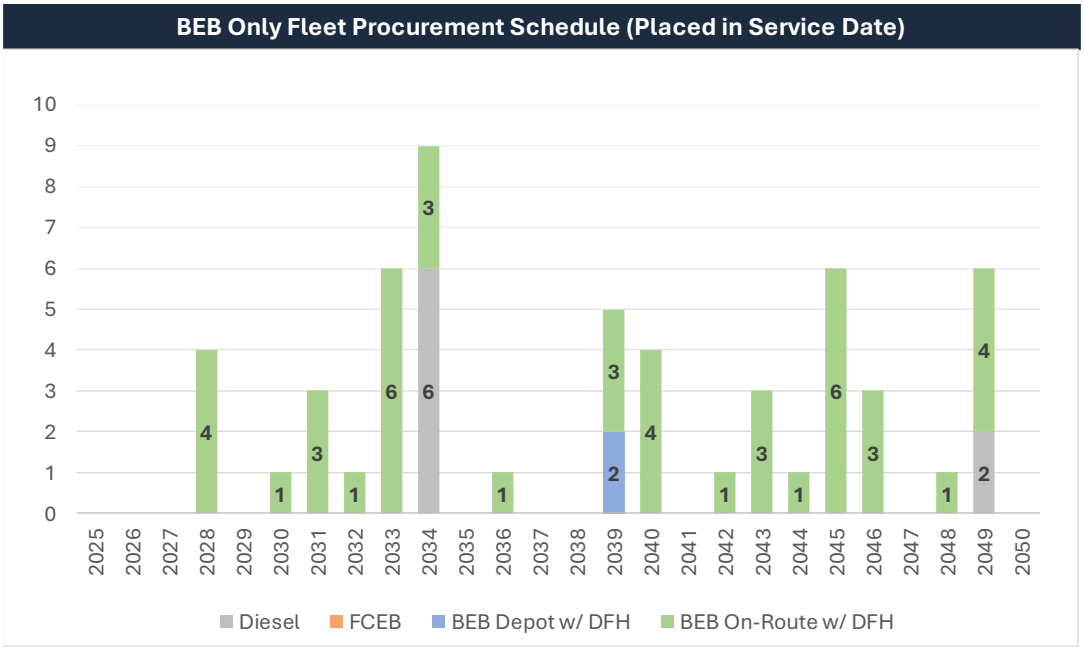

***Figure 6** - Annual Bus Deployments, BEB Only Scenario*

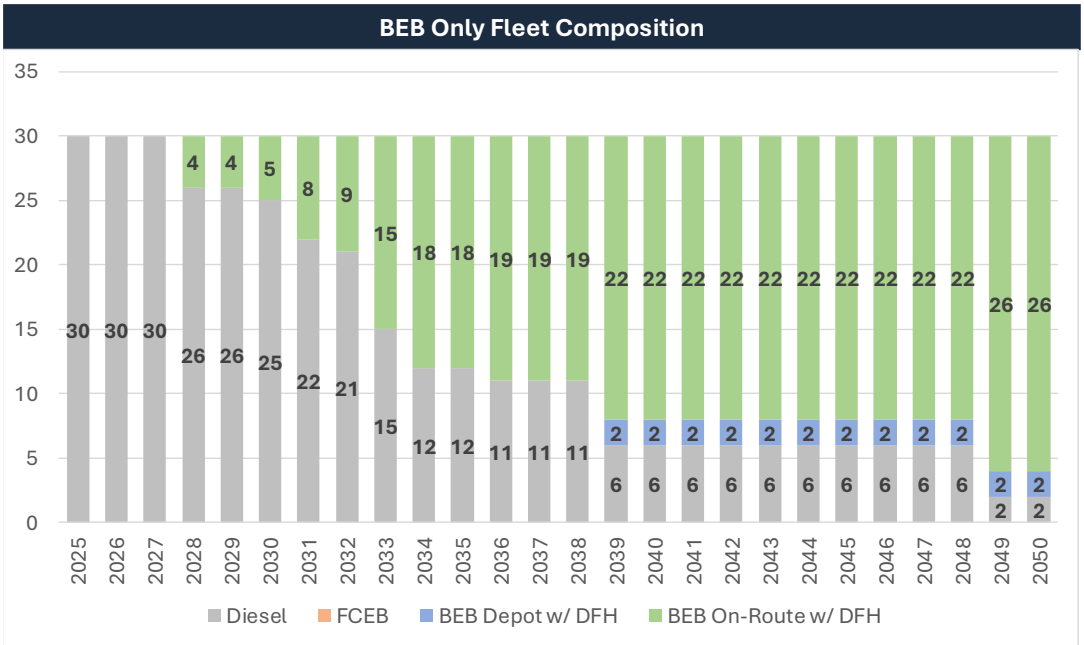

***Figure 7** - Annual Fleet Composition, BEB Only Scenario*

Figure 7 shows the annual fleet composition for the 30 fixed route and commuter bus fleets. Notably, the fleet never reaches 100% ZEB but is projected to hit 80% ZEB by 2040 and just under 94% ZEB by 2050.

Figure 8 illustrates the annual bus procurement costs for the BEB Only scenario. For planning, procurement values are set two years before the expected placed in service dates for the buses shown in **Figure 6**.

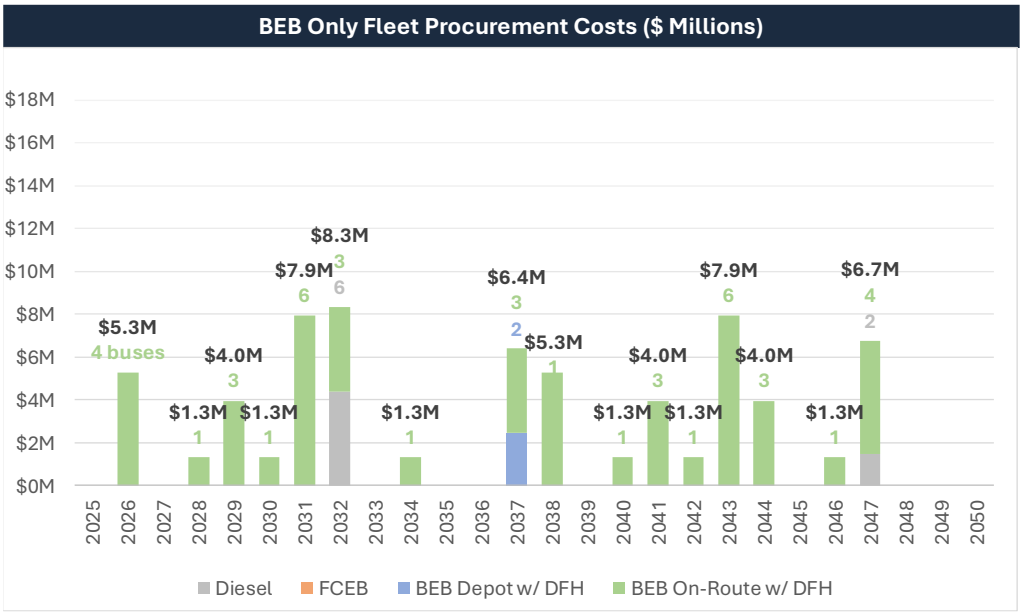

***Figure 8** - Annual Fleet Procurement Costs, BEB Only Scenario*

6.3 Mixed Fleet Scenario

The Mixed Fleet scenario was created to evaluate the costs and benefits of using both BEBs with depot-only charging technology and FCEBs. In this scenario, the emphasis is on adding BEBs. If all BEB capable blocks are assigned in a procurement year, FCEBs are purchased to meet the more difficult blocks. This scenario thus presents a ZEB pathway where on-route charging is regarded as impractical.

Figure 9 illustrates the yearly count of buses by type scheduled for deployment in the Mixed Fleet scenario.

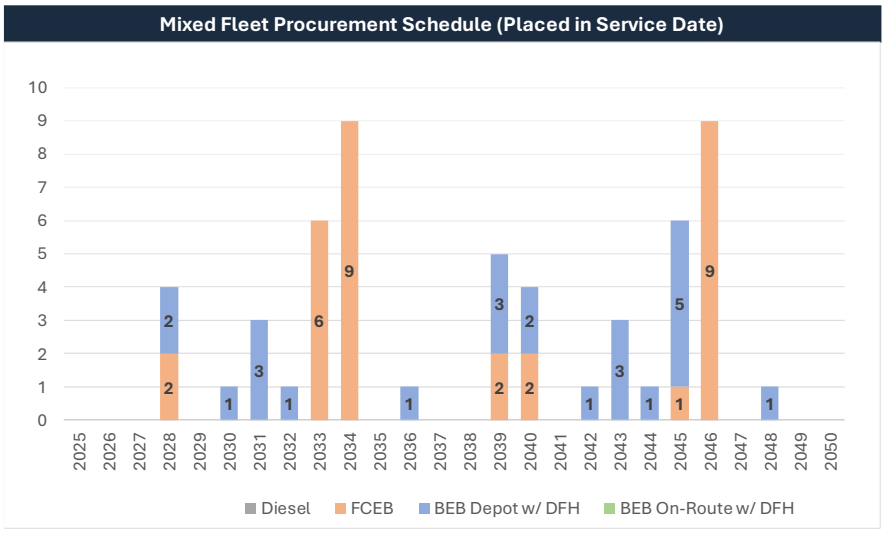

Figure 9 *- Annual Bus Deployments, Mixed Fleet Scenario*

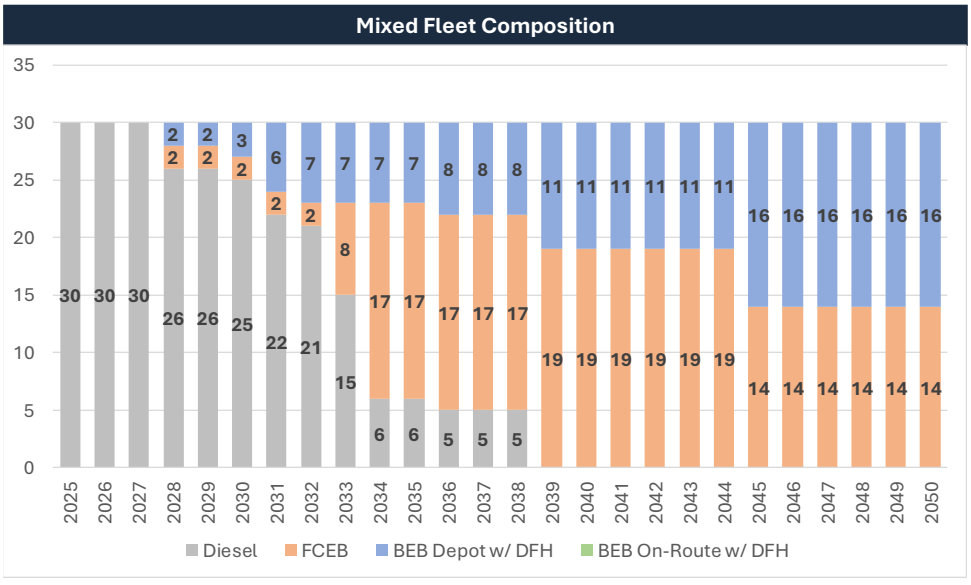

Figure 10 *- Annual Fleet Composition, Mixed Fleet Scenario*

Figure 10 shows the annual fleet composition of the Mixed Fleet scenario. This scenario can achieve 100% ZEB by 2039, consistent with current bus replacement plans. Due to limitations in BEB range, the fleet remains mostly FCEB from 2033 to 2045, when more options become available with BEB technology, and the fleet shifts to nearly a 50/50 split of BEB and FCEB between 2045 and 2050.

Figure 11 displays the yearly bus procurement costs for the Mixed Fleet scenario. For planning purposes, procurement values are established two years before the expected in-service dates shown in **Figure 9**.

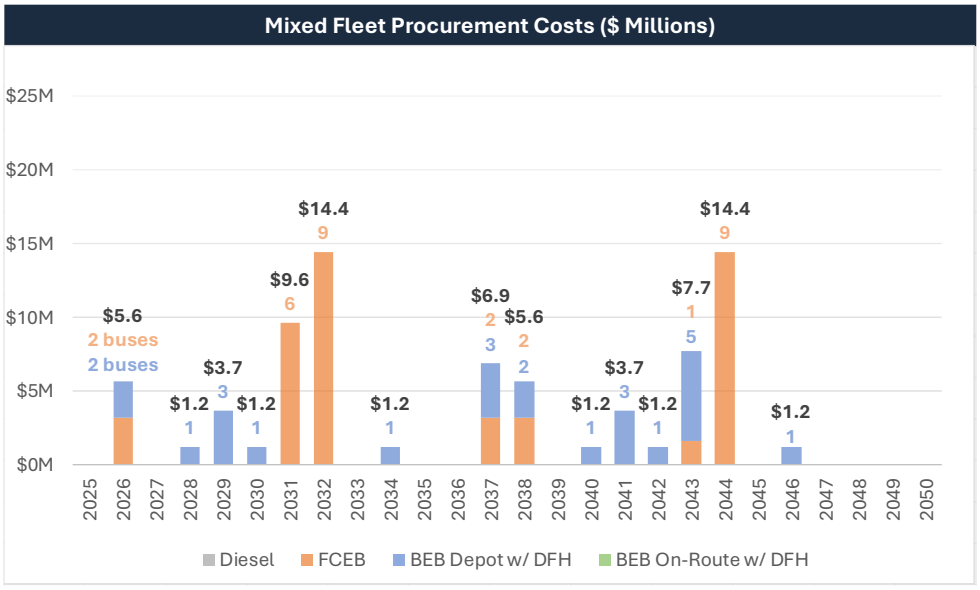

***Figure 11** - Annual Bus Procurement Costs, Mixed Fleet Scenario*

6.4 FCEB Only Scenario

The FCEB Only scenario was developed to review the costs and ZEB benefits of utilizing only FCEB technology.

Figure 12 illustrates the annual number of buses by type planned for deployment in the FCEB-only scenario. Initially, Skagit's two longest routes, the 90X-1 and 70X, were not feasible under demanding conditions. With anticipated biannual improvements in storage capacity and efficiency, both routes will become feasible by 2039.

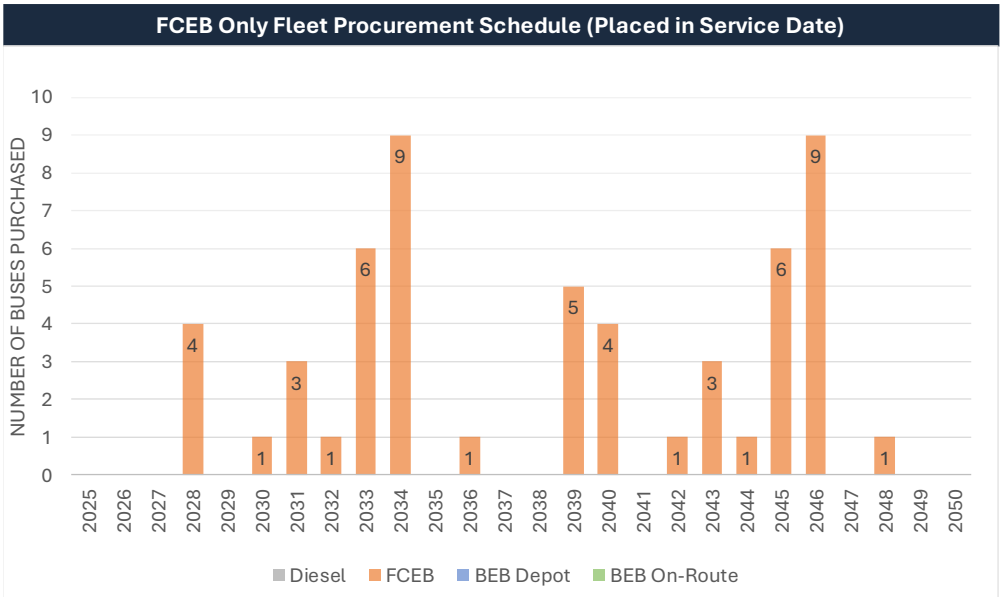

Figure 12 *- Annual Bus Deployments, FCEB Only Scenario*

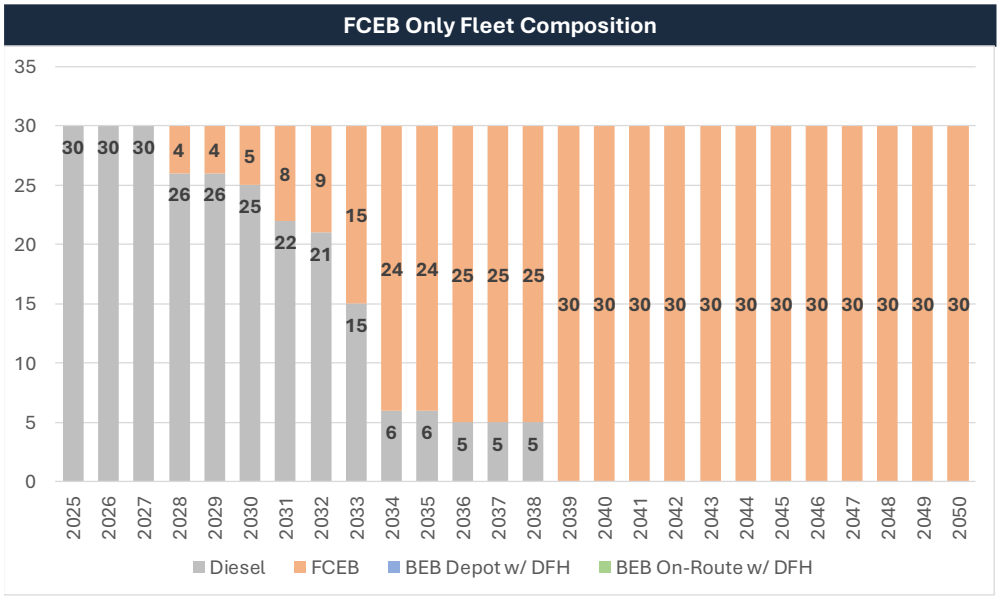

Figure 13 *- Annual Fleet Composition, FCEB Only Scenario*

Figure 13 shows the annual fleet makeup for the FCEB-only scenario. Similar to the Mixed Fleet scenario, the FCEB Only scenario can reach 100% ZEB by 2039, aligning with existing bus replacement timelines.

Figure 14 shows the annual bus procurement costs for the FCEB Only scenario. For planning purposes, procurement costs are established two years before the buses are placed in service as shown in **Figure 12**.

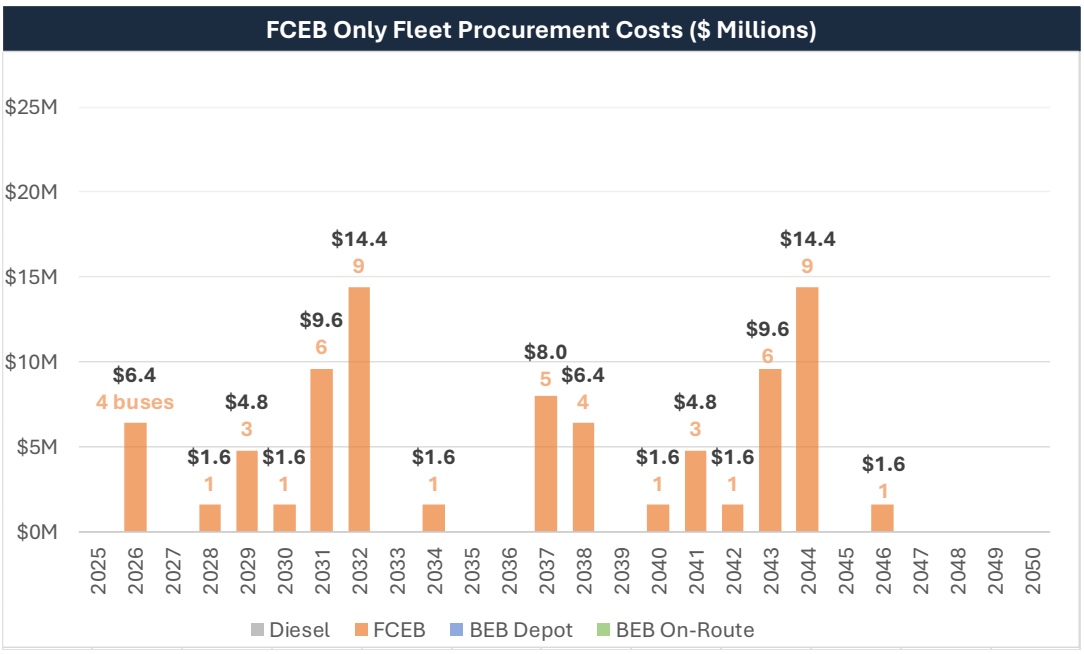

***Figure 14** - Annual Bus Procurement Costs, FCEB Only Scenario*

6.5 Fleet Assessment Cost Comparison

The schedules for transition and fleet composition were used to calculate the total capital costs for bus purchases during the transition period. The difference in the total cost projection between the ZEB scenarios and the Baseline over this period is clear. For example, the BEB Only Scenario is expected to incur $67.7 million in fleet capital costs from 2025 to 2050, which is $28.3 million more than the Baseline.

By the end of the transition period, the total bus capital costs vary significantly depending on the technology chosen for each transition scenario. **Figure 15** summarizes the total combined costs for each transit scenario and the percentage of ZEBs in the fleet in 2050 for that scenario. Although all transition scenarios result in a whole or nearly whole zero-emission fleet for the agency, there is a $20.3 million difference between the least expensive (BEB Only) and the most expensive (FCEB Only) options.

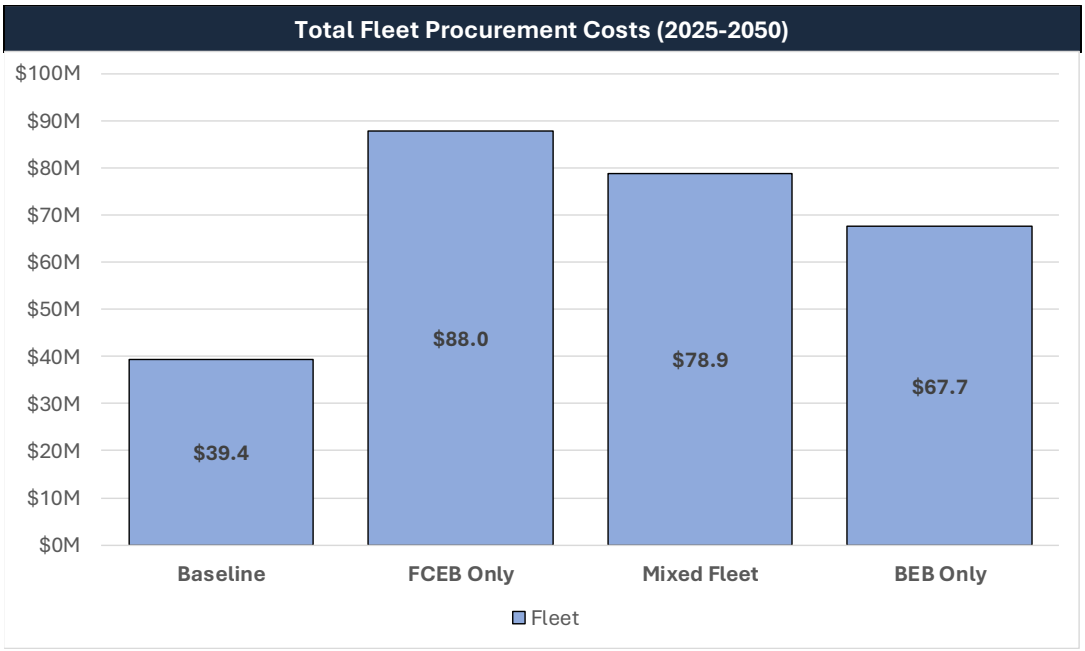

Figure 15 *- Total Fleet Procurement Costs (2025-2050)*

Table 7 summarizes the delta in fleet procurement costs through 2050, as well as displays the percentage of ZEBs in the fleet by 2050.

Table 7 *- Fleet Procurements Costs Vs. Baseline & ZEB % in 2050*

Scenario	Cost	Additional Cost vs. Baseline	% of BEB	% of FCEB	% of Diesel
Baseline	$39.4	$0.0	0%	0%	100%
BEB Only	$67.7	$28.3	93%	0%	7%
Mixed Fleet	$78.9	$39.5	53%	47%	0%
FCEB Only	$88.0	$48.6	0%	0%	100%

6.6 Fleet Assessment Key Takeaways for Skagit Transit

- **Baseline Scenario as Cost Benchmark**: Continuing with diesel replacements offers the lowest capital outlay ($39.4 million through 2050) but results in 0% ZEB adoption, missing environmental and regulatory goals for zero-emission transitions.
- **BEB Only Scenario Affordability with Trade-offs**: This approach provides the most cost-effective ZEB pathway ($67.7 million total, $28.3 million premium over Baseline) by leveraging on-route charging, achieving ~80% ZEB by 2040 and under 94% by 2050; however, persistent infeasibility for blocks like 90X-1 necessitates retaining some diesel buses, limiting full compliance.

- **Mixed Fleet Scenario for Balanced Full Transition**: Combining depot-only BEBs and FCEBs enables 100% ZEB by 2039 at intermediate costs (estimated ~$78.9 million), diversifying technologies to address feasibility constraints without on-route infrastructure; the fleet evolves to a near 60/40 BEB-FCEB split by 2045–2050, optimizing for Skagit's varied route demands.
- **FCEB Only Scenario for Robust Feasibility at Higher Cost**: Relying solely on FCEBs achieves 100% ZEB by 2039 ($88 million total, $20.3 million more than BEB Only), capitalizing on superior range for challenging routes like 90X-1 and 70X with anticipated efficiency gains; this highlights FCEBs' suitability for long-haul operations but underscores the substantial price premium.
- **Cost Premiums and Funding Imperative**: All ZEB scenarios incur significant increases over Baseline due to stabilized or rising prices (e.g., BEBs at $1.215–$1.32 million per unit, FCEBs at $1.6 million), with no assumed reductions; Skagit Transit will require heavy reliance on state and federal grants to offset these gaps, especially amid ongoing market trends like supply chain challenges and battery cost fluctuations.
- **Integration with Service Feasibility**: Deployment constraints tied to block achievability ensure realistic planning, but emphasize the need for technological advancements (e.g., 5% biannual battery improvements) and strategic procurement to accelerate ZEB adoption while maintaining service levels.

7. Maintenance Assessment

This section estimates how Skagit Transit's maintenance costs might change during the shift from diesel to zero-emission buses (ZEBs), based on current data and peer agency experience. Both scheduled and unscheduled maintenance, along with major midlife replacement events, are included for each vehicle type.

Approach

The analysis draws on several data sources and modeling steps:

- **Historical cost baseline:** Skagit's 2022–2024 diesel work-order data established a reference $/mile cost for diesel maintenance.
- **Peer & industry input:** Interviews with West Coast transit agencies operating ZEBs, coupled with discussions with vehicle manufacturers, provided insight into real-world costs, midlife overhaul needs, and recent warranty trends.
- **Fleet modeling:** Annual total mileage was aligned with Skagit's 2024 data. The fleet composition and operational assignments were modeled year-by-year, focusing on deploying ZEBs on the most demanding routes within their range.
- **Midlife replacements:** For all bus types, major midlife overhaul/replacement costs are incurred after Year 6 of service.

Key Findings from Research

- **Variation in ZEB maintenance costs**: agencies report a wide range, from significant savings to costs comparable to or higher than diesel, reflecting evolving technology and limited historical data.
- **Typical savings:** Industry data and Department of Energy (DOE) studies suggest average reductions in routine maintenance costs of 30% for battery-electric buses (BEBs) and 25% for fuel cell electric buses (FCEBs) relative to diesel.
- **Midlife components:** Lower routine maintenance costs for ZEBs may be offset by the higher cost of midlife component replacements, especially BEB battery packs and FCEB fuel cell stacks. Extended battery warranties are now uncommon, increasing agencies' financial risk.

Assumptions

Table 8 and **Table 9** summarize the maintenance and midlife replacement costs assumed for the analysis. Routine maintenance assumptions were developed based on studies conducted by NREL and Foothill Transit Agency, while midlife replacement costs were derived from planning figures used by King County Metro for BEB replacements.

Table 8 - Maintenance Cost Estimates

Bus Type	Maintenance Cost ($/mile)	Basis / Source
Diesel	$0.49	Skagit 2022–2024 average (labor + parts)
BEB	$0.34	$0.49 × 0.70 (−30%) NREL
FCEB	$0.37	$0.49 × 0.75 (−25%); Foothill Transit study

Table 9 - Midlife Overhaul Cost Estimates

Bus Type	Overhaul Scope	Cost Estimate	Source / Rationale
Diesel	Engine & Transmission Rebuild	$60,000	Skagit 2022–2024 Data; aligns with local overhaul practice
BEB – Gillig 588 kWh	Battery pack replacement (6 packs × $50k)	$300,000	King County Metro estimate; no OEM warranty
BEB – Gillig 686 kWh	Battery pack replacement (7 packs × $50k)	$350,000	King County Metro estimate; no OEM warranty
FCEB	Fuel cell stack replacement	$30,000	2023 Ballard (OEM) Guidance

7.1 Maintenance Assessment Cost Comparison

The maintenance cost model uses the transition schedule and changing fleet composition to estimate Skagit Transit's total fleet maintenance and overhaul expenses over the analysis period. Routine maintenance costs and major midlife replacements for each technology type are combined to project cumulative maintenance expenses by scenario.

The results show noticeable differences in long-term maintenance cost estimates between the ZEB transition scenarios and the diesel baseline.

- **Routine Savings:** In all zero-emission bus (ZEB) scenarios, annual routine maintenance costs are expected to decrease compared to the diesel baseline—due to the lower $/mile maintenance rates of both BEBs and FCEBs.
- **Midlife Overhaul Differences:** However, these savings are often outweighed—sometimes heavily—by higher midlife component replacement costs for battery-electric buses (BEBs), which require battery pack replacements costing $300,000–$350,000 per bus (compared to $60,000 for a diesel midlife overhaul). Fuel cell electric buses (FCEBs), on the other hand, have a much lower midlife fuel cell stack replacement cost of $30,000, which is below the diesel baseline.

By the end of the analysis period, cumulative maintenance and overhaul costs diverge substantially by technology:

- **Baseline (Diesel):** Highest annual maintenance costs, but relatively modest midlife costs.
- **BEB Only Scenario:** Lowest routine maintenance, but overall maintenance cost reduction is partially offset by substantial periodic battery replacement expenses.
- **FCEB Only Scenario:** Benefits from both lower routine maintenance and midlife overhauls, making it the least expensive technology in terms of combined lifetime maintenance and replacement costs.
- **Mixed Fleet:** Produces an intermediate cost profile, depending on the proportion of BEBs and FCEBs deployed.

Figure 16 summarizes the combined total maintenance and midlife overhaul costs for each scenario over the planning period. The difference between the lowest (FCEB Only) and the highest (BEB Only) total maintenance costs exceed $9.3 million, illustrating the significant impact technology choice has on Skagit Transit's maintenance budget.

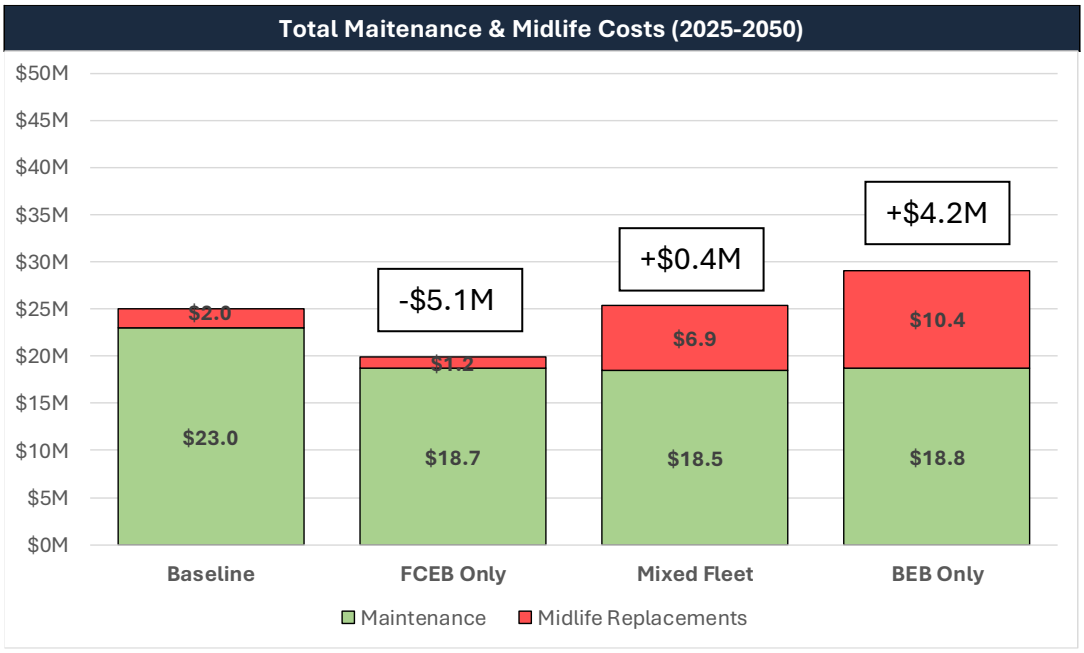

***Figure 16** - Total Maintenance and Midlife Costs (2025-2050)*

7.2 Maintenance Assessment — Key Takeaways

1) Routine maintenance is lower for ZEBs, and BEB is the cheapest.

- **Planning rates used in the study**: Diesel = $0.49/mi, BEB ≈ $0.34/mi (−30%), FCEB ≈ $0.37/mi (−25%).
- Across the transition, that translates to roughly ~20% lower total routine maintenance spends versus the diesel baseline in every ZEB scenario (BEB the lowest, FCEB next, diesel highest).

2) Midlife costs flip the ranking.

- **FCEB midlife (fuel-cell stack):** ~$30k per bus, with prices trending down—lowest among the three.
- **Diesel midlife (engine/transmission):** ~$60k per bus—middle of the pack.
- **BEB midlife (battery packs):** ~$300k–$350k per bus—exceptionally high and the dominant driver of maintenance/midlife in BEB-heavy fleets.

3) Budgeting implication: large but infrequent spikes.

- Without robust extended battery warranties (now uncommon), agencies bear the risk of battery replacements.
- Expect lumpy spend when BEB cohorts hit years 6–8; plan an internal "battery midlife reserve" or time replacements to known grant cycles to smooth impacts.

4) Potential to treat some battery swaps as capital—TBD.

- If a battery replacement extends useful life or materially increases range/efficiency, it may qualify as capital (capex) and could be paired with grants.
- Eligibility depends on program rules and sponsor guidance; confirm early with FTA/WSDOT grant managers and your auditors.

5) Uncertainty remains—keep validating assumptions.

- Real-world ZEB maintenance data are still limited and variable across agencies and duty cycles.
- Skagit should track its own work-order data, monitor battery pricing and stack costs, and revisit warranty offerings annually to refine per-mile and midlife assumptions.

8. Fuel Assessment

The Fuel Assessment calculates fuel consumption and expenses for each technology—diesel, electric, and hydrogen—examined in the relevant scenario.

Methodology:

Using the ZEB performance data from the Service Assessment and the composition of the fleet in each year of the analysis from the Fleet Assessment, PCG developed a simulation that assigned bus types to blocks in each year based on feasibility. In doing so, the analysis determined the fuel usage in each year of the transition for each scenario.

To compare total fuel usage across each scenario, the analysis converted total fuel usage into diesel gallon equivalent (dge). To calculate fuel costs, the study reviewed the mileage and performance of the bus type serving each route in each year and multiplied it by the relevant fuel cost and/or utility tariff for that year.

Assumptions:

Diesel Cost: The project team utilized Skagit's 2024 data to determine the average cost of renewable diesel (R99), which was $3.88 per gallon. This was set as the starting fuel price for diesel in 2025. Diesel price was adjusted using U.S. EIA AEO 2025 Pacific Region projections.

Electricity Costs: Charging costs for BEBs are calculated separately for depot and on-route sites, using Puget Sound Energy's (PSE) Schedule 26 tariff. The three main cost components are:

- **Basic Monthly Charge** – A fixed fee of $436.32 per facility, billed each month regardless of usage.
- **Energy Charges** – Billed at $0.075963 per kilowatt-hour (kWh) for all electricity consumed.
- **Demand Charges** – Billed at $18.025 per kilowatt (kW) based on the highest 15-minute average load in each billing cycle at each facility.

Hydrogen: The hydrogen supply market in the Pacific Northwest faces significant uncertainty. Currently, only one small electrolyzer project is active in the state, with a few additional small production sites expected to start in 2025 and 2026. The nearest major production sites are in California and Nevada. Although initiatives like the Pacific Northwest Hydrogen Hub aim to boost locally produced hydrogen, many of these projects target 2030 for start-up, and their feasibility and costs remain uncertain due to evolving

regulations, tax policies, and rising renewable energy prices in the PNW. While some early-stage projects indicate prices between $5 and $10 per kg, there is not enough certainty to rely on these estimates. Therefore, the project team developed a scenario in which hydrogen prices are set as follows.

- **2025-2029**: **$15 per kg**, intended to represent the cost of hydrogen being delivered from major out-of-state production sites or small in-state pilot projects.
- **2030-2039: $10 per kg**, intended to represent the cost of hydrogen produced at extensive facilities in the state as part of the Pacific Northwest Hydrogen Hub program.
- **2040-2050: $7 per kg**, intended to represent hydrogen produced from in-state suppliers when the market is developed at scale.

Fuel cost estimates are summarized in **Table 10** below.

Table 10 *- Fuel Cost Assumptions*

Fuel Type	Cost per Unit	Notes
Diesel	$3.88/DGE	Skagit's reported cost for renewable diesel (R99).
Electricity	**Basic**: $432 per month/facility **Energy**: $0.075963/kWh **Demand:** $18.02/kW/facility	Puget Sound Energy Schedule 26
Hydrogen (2025-2029)	$15	Current market estimate (out-of-state or small-scale)
Hydrogen (2030-2039)	$10	Industry feedback on in-state supply
Hydrogen (2040-2050)	$7	Industry feedback on scaled in-state market

EV Charging Analysis

Fuel cost modeling for battery electric bus (BEB) scenarios uses two primary charging strategies: Depot Overnight Charging and On-Route Charging. Both are costed using Puget Sound Energy's (PSE) Schedule 26 tariff, effective January 29, 2026.

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a) Depot Overnight Charging (MOA-2)

- **Charger Deployment:** One 200 kW plug-in charger (two dispensers) installed for every two BEBs placed in service**.**

- **Charging Window:** Overnight from the end of service to the next morning's pull-out, with a one-hour buffer before and after to allow operational flexibility.
- **Charging Rate Management:** Chargers operate at the minimum average rate needed to fully recharge each bus within its window, minimizing peak demand and preserving battery health.

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b) On-Route Charging

- **Site Eligibility:** Provided at selected layover locations with at least five minutes of dwell time (one minute reserved for bus positioning).
- **Equipment:** 300 kW inductive pad chargers, limited to 175 kW per bus to protect battery warranties and extend life.
- **Sizing Method:**
    - Charger counts are based on the maximum number of buses scheduled to charge simultaneously at a location in the 2024 weekday block schedule.
    - Each bus charging concurrently is allocated a dedicated charger to ensure service reliability without queuing delays.
    - This sizing method results in higher charger counts at busy layover points—such as Skagit Station—where multiple routes converge and dwell at the same time.

Figure 17 shows projected charger requirements by year and location using this approach.

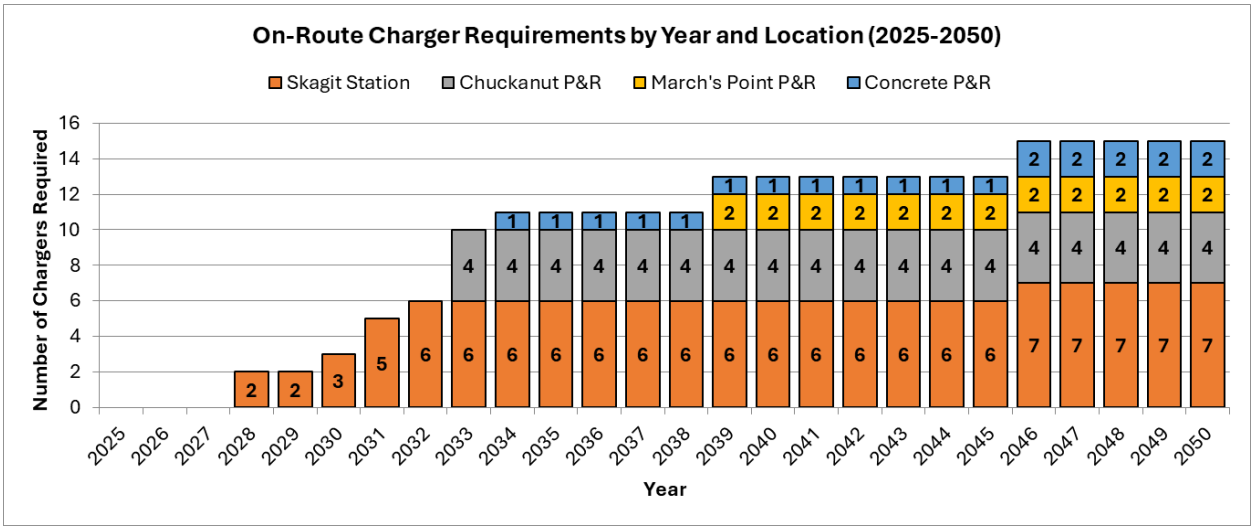

***Figure 17** - On-Route Charger Requirements by Year and Location*

8.1 Baseline Scenario

In the Baseline scenario, the analysis assumes Skagit's service continues at Skagit's 2024 service levels throughout the transition period and diesel technology.

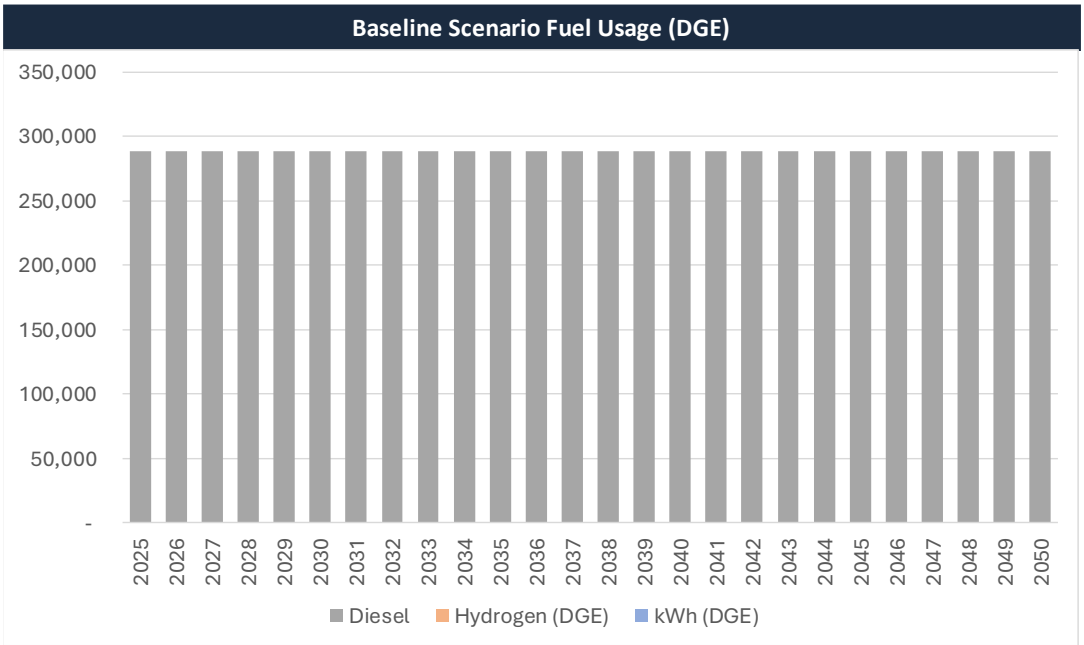

***Figure 18** - Annual Fuel Usage (DGE), Baseline Scenario*

Figure 18 shows the annual fuel consumption by fuel type during the transition for the Baseline scenario. PCG used Skagit's reported yearly fuel consumption to calculate the average miles per gallon efficiency, normalizing for a complete 40 ft diesel fleet. Since Skagit's service levels remain consistent throughout the transition and the technology specifications for the diesel bus stay the same, energy consumption is fixed at 288,314 diesel gallons equivalent (dge).

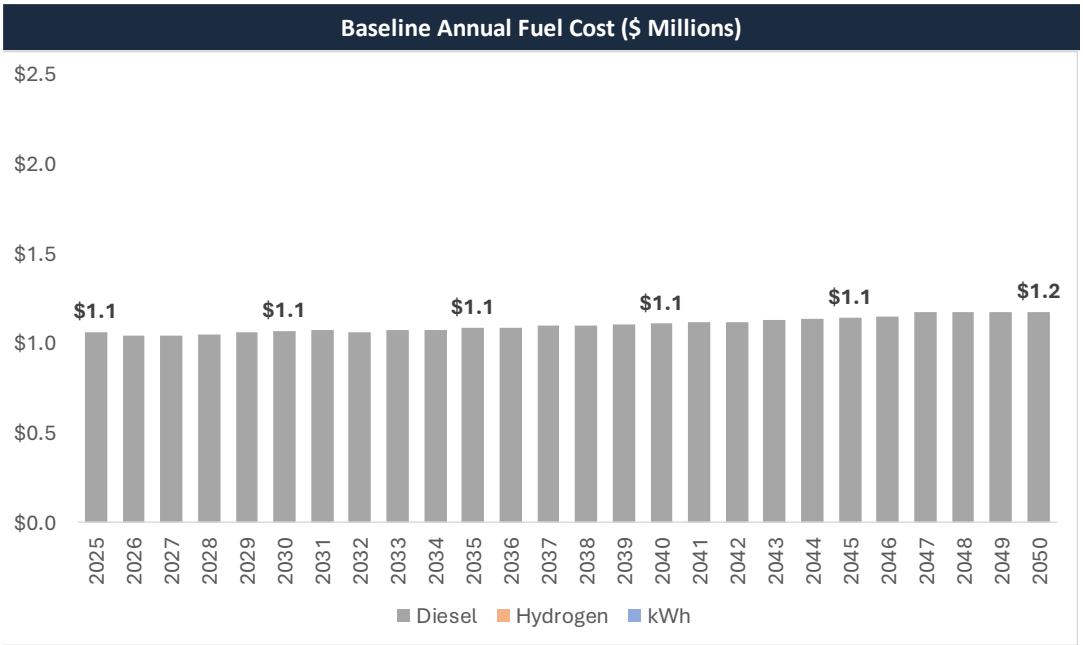

***Figure 19** - Annual Fuel Costs, Baseline Scenario*

Figure 19 shows the projected annual fuel costs for each fuel type in the Baseline scenario, based on the consumption quantities (in DGE) shown in **Figure 18**. As with the current analysis, costs are reported in 2025 dollars (no inflation) throughout the transition period. The analysis also uses data from EIA's AEO 2025 to forecast changes in diesel prices through 2050. EIA's data predicts a slight increase in diesel prices in the Pacific region during the transition, which is why prices gradually rise from $1.1M to $1.2M by 2050. In the Baseline scenario, the average annual fuel cost per bus in the fleet is $36.9K.

8.2 BEB Only

In the BEB Only scenario, the analysis assumes Skagit adopts primarily BEB buses with on-route charging capability. The model assumes overnight charging is conducted at MOA-2 and opportunity charging is conducted on-route and expanded at locations over time as more BEBs enter the fleet.

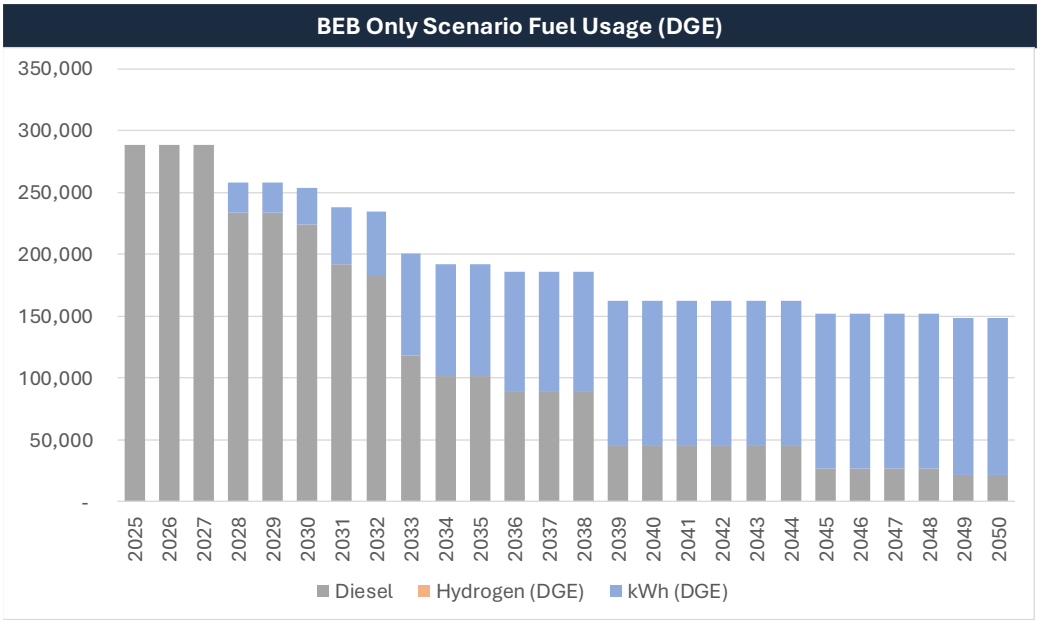

***Figure 20** - Annual Fuel Usage, BEB Only Scenario*

Figure 20 displays the annual fuel usage breakdown for the BEB Only scenario. Since the block feasibility assessment concluded that the 90X-1 with over 500 miles of route during Skagit's weekday service is not feasible with current layover scheduling, even with on-route charging, a diesel bus remains on the route during the transition period. The graph also shows how fuel usage, measured in diesel gallon equivalent (DGE), decreases throughout the transition, highlighting the efficiency of BEBs compared to diesel buses. DGE fuel usage declines approximately 48%, from 288,314 DGE to 127,543 DGE.

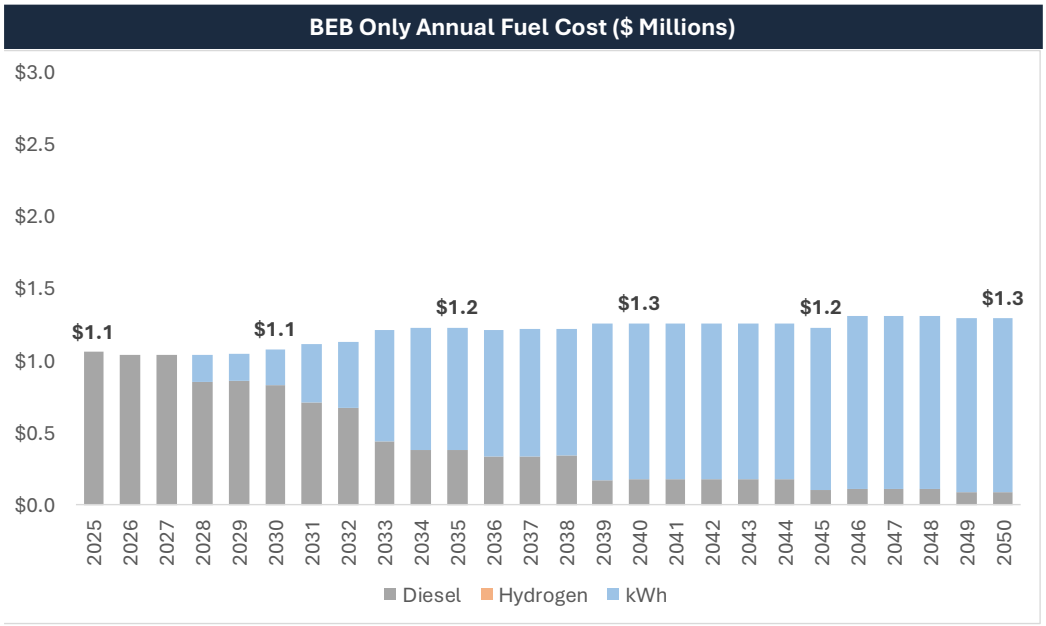

***Figure 21** - Annual Fuel Costs, BEB Only Scenario*

Figure 21 depicts the annual fuel costs for the BEB Only scenario based on PSE's Schedule 26 applied across all facilities. Relative to the Baseline scenario, the BEB Only scenario shows slight cost increases throughout the transition period as more BEB buses are deployed and more on-route charging is deployed to match them.

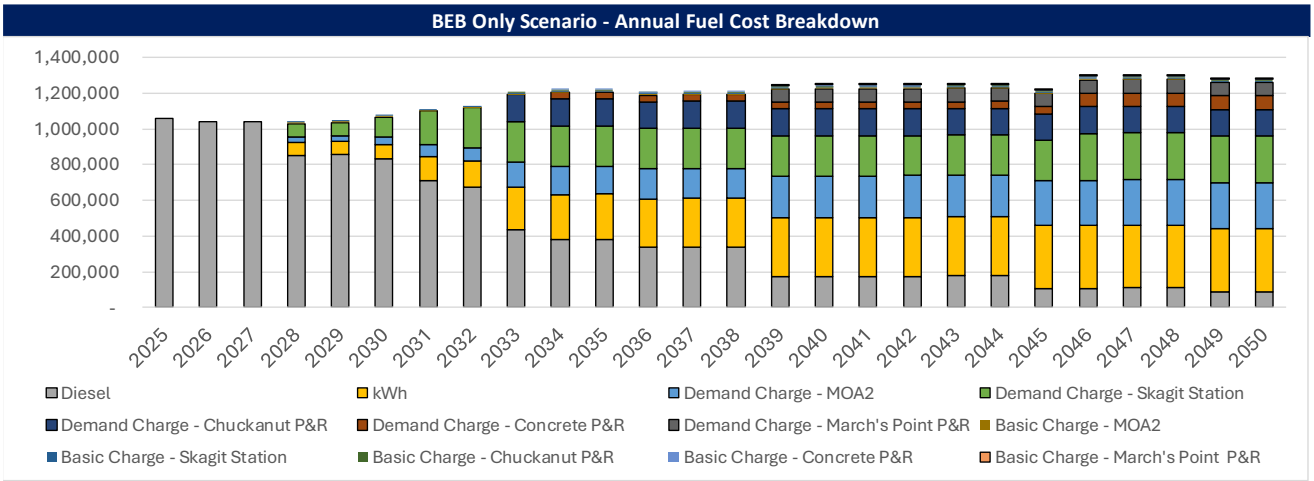

***Figure 22** - Annual Fuel Cost Breakdown by Charge Type, BEB Only Scenario*

Figure 22 offers a more detailed view of the different types of charges Skagit will face in the BEB Only scenario. In this graph, energy costs are generally applied to all kWh used by Skagit's fleet, including MOA-2 and each of the four on-route charging stations. Notably, when looking at kWh energy charges alone, fuel costs drop significantly during the transition period. However, demand charges rise as more BEBs join the fleet and additional on-route charging is required at multiple locations. By 2050, with 22 of Skagit's 23 blocks served by BEBs, demand charges make up over 62% of Skagit's total fuel costs and are approximately 2.28 times higher than energy costs. The average annual fuel cost per bus is about $39,500 in the BEB Only scenario.

8.3 Mixed Fleet Scenario

In the Mixed Fleet scenario, Skagit transitions its fleet to ZEBs utilizing BEBs with depot-only charging as the priority. In procurement years where BEB capabilities are insufficient to complete additional Skagit blocks, FCEBs are procured instead.

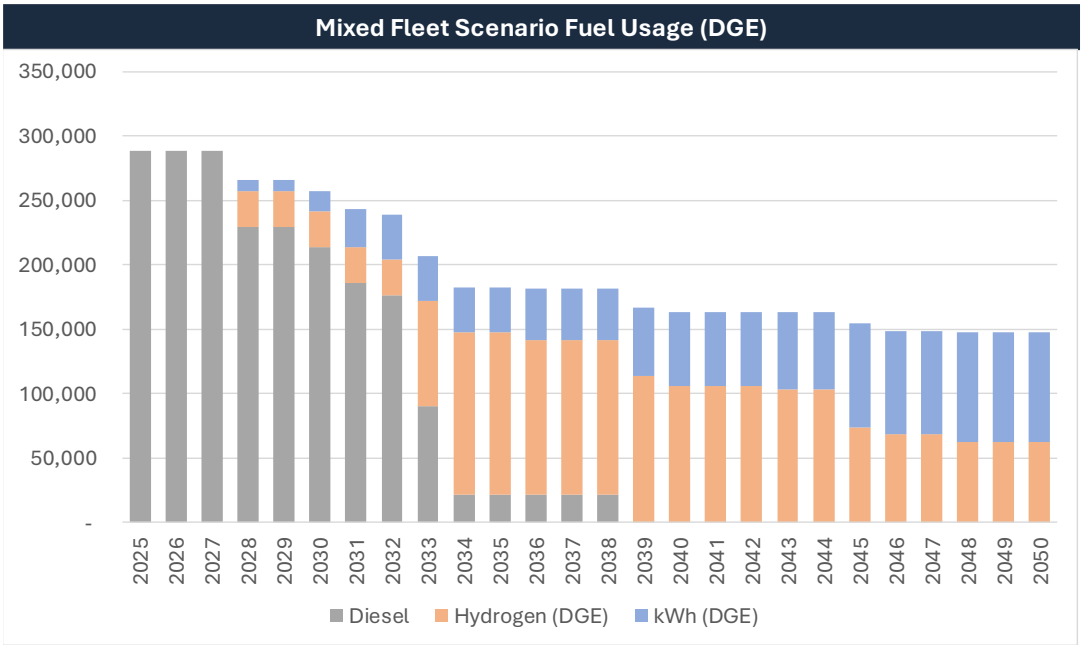

***Figure 23** - Annual Fuel Usage, Mixed Fleet Scenario*

Figure 23 shows the annual fuel use by fuel type in the Mixed Fleet Scenario. Since both FCEB and BEBs are more efficient than diesel ICE buses, fuel use in diesel equivalent (dge) decreases throughout the transition period. As discussed in the Fleet Assessment, BEB with depot-only charging faces significant range limits to complete Skagit Transit blocks, and many procurements through the 2030s are FCEBs. Therefore, hydrogen accounts for a large portion of annual fuel use through the 2030s. As BEB battery density is projected to increase throughout the transition, BEBs with greater range can complete more of Skagit's blocks toward the end of the transition. By the mid-2040s, electricity for BEBs makes up most of the fuel, roughly 60%, with hydrogen comprising the remaining 40%. Importantly, this scenario can operate with 100% ZEB by 2039.

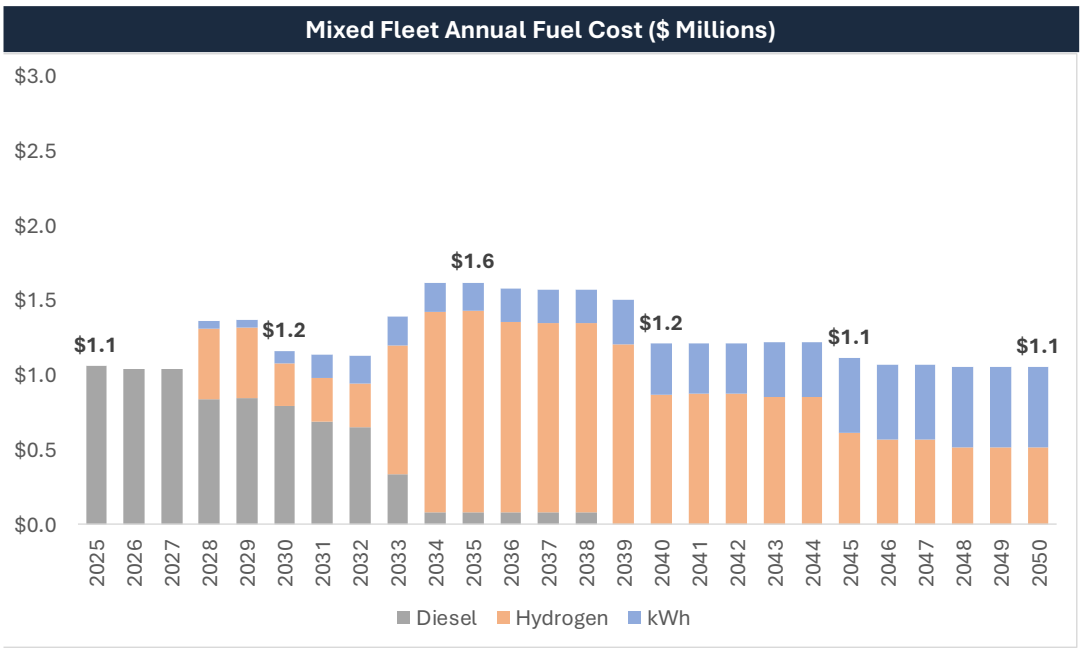

***Figure 24** - Annual Fuel Costs, Mixed Fleet Scenario*

Figure 24 shows the annual fuel cost for the Mixed Fleet scenario, broken down by fuel type. Fuel costs increased during the first decade as Skagit added more FCEBs. With hydrogen costs projected at $15 per kg throughout the 2020s and $10 per kg during the 2030s, this creates a significant fuel cost premium compared to diesel estimates. In the 2040s, hydrogen prices drop to $7 per kg, and BEBs operate on more of Skagit's blocks. Since Skagit avoids demand charges related to on-route charging in this scenario, BEB fuel costs are limited to basic, energy, and demand charges at MOA-2 (where peak demand can be managed most effectively). The combination of lower hydrogen prices and increased BEB usage greatly decreases fuel costs in the 2040s, leading to the lowest estimated annual fuel cost of any scenario between 2045-2050. The average annual fuel cost per bus in the Mixed Fleet scenario is about $41,860.

8.4 FCEB Only

In the FCEB Only scenario, diesel buses are replaced with FCEBs on a 1:1 basis throughout the transition period.

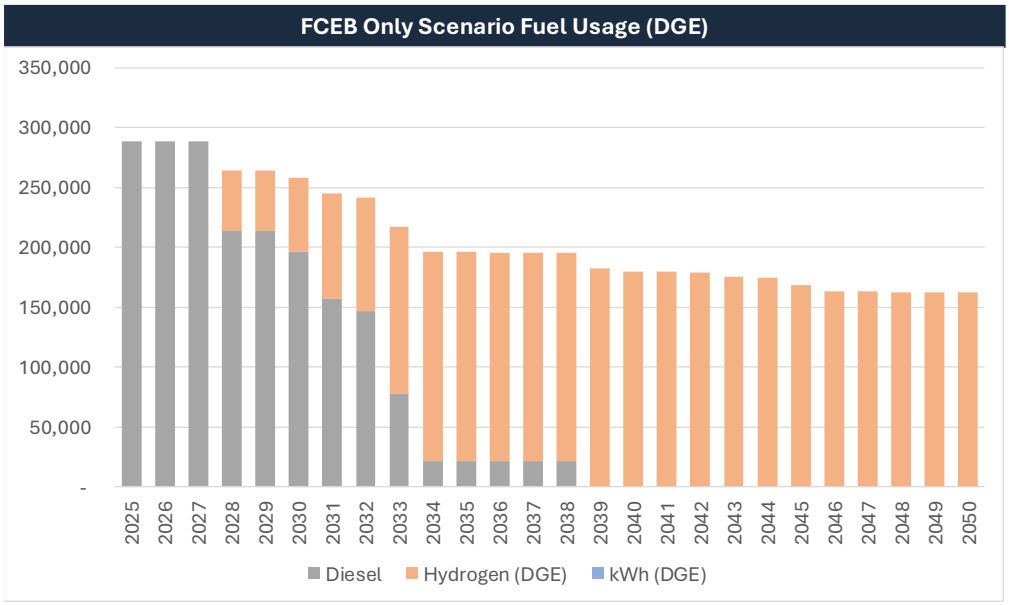

Figure 25 - Annual Fuel Usage, FCEB Only Scenario

Figure 25 shows the annual fuel usage by fuel type in the FCEB Only scenario. As in the BEB and Mixed Fleet scenarios, annual fuel usage reported in diesel gallon equivalent (dge) decreases throughout the transition, highlighting the energy efficiency of FCEBs.

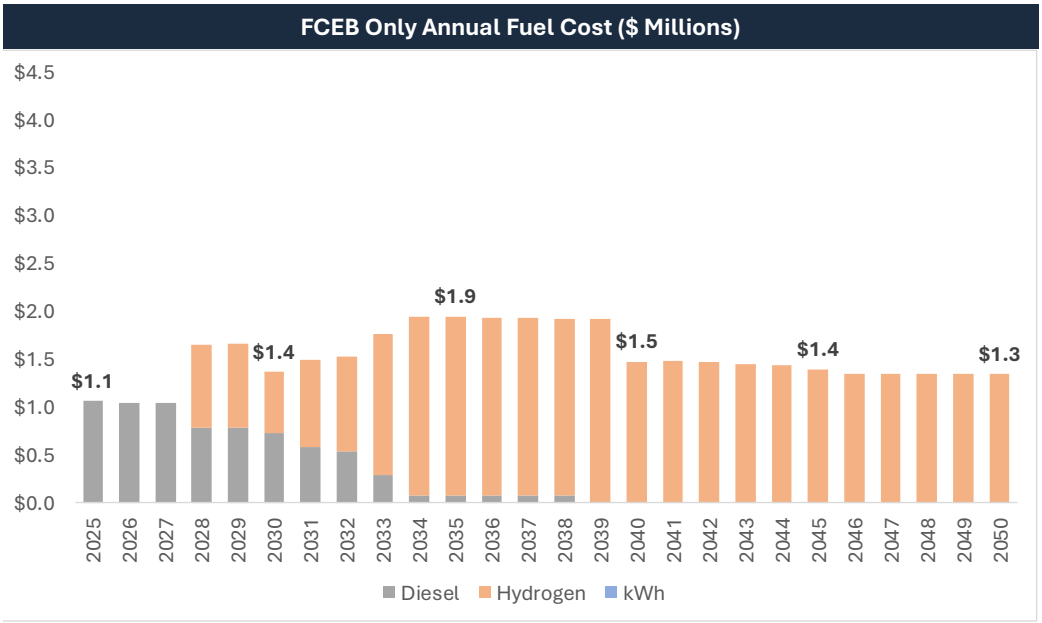

Figure 26 - Annual Fuel Costs, FCEB Only Scenario

Figure 26 displays projected annual fuel costs by fuel type for the FCEB Only scenario. In this case, fuel costs increase rapidly as FCEBs are quickly added to Skagit's fleet, while hydrogen prices of $15 per kg and $10 per kg during the 2020s and 2030s, respectively, remain high compared to diesel. In the 2040s, hydrogen prices fall to $7 per kg, significantly lowering the annual fuel costs. Although closer to the alternative scenarios, the FCEB Only scenario in 2050 still has the highest annual fuel cost. The average annual fuel price per bus in the FCEB Only scenario is roughly $50,850.

To compare, the average hydrogen price during the transition would need to be $5.60 per kilogram to match the total fuel cost of the Baseline scenario. It is also worth noting that the underlying assumption that Skagit's diesel buses perform at an efficiency of 6.3 mpg is supported by Skagit's data but is significantly higher than industry averages. Re-running the Baseline analysis at a lower efficiency of 5 mpg for the 40 ft diesel fleet increases the fuel costs throughout the transition period. Under that assumption, the average hydrogen price during the transition would need to be $7.01 per kg to match the cumulative fuel costs in the FCEB-only scenario as in the Baseline scenario.

8.5 Fuel Assessment Cost Comparison

The Fuel Assessment uncovers clear patterns in energy consumption and costs across different scenarios, influenced by technology efficiencies, price forecasts, and operational plans. **Figure 27** highlights the total fuel expenditure comparison for the four scenarios.

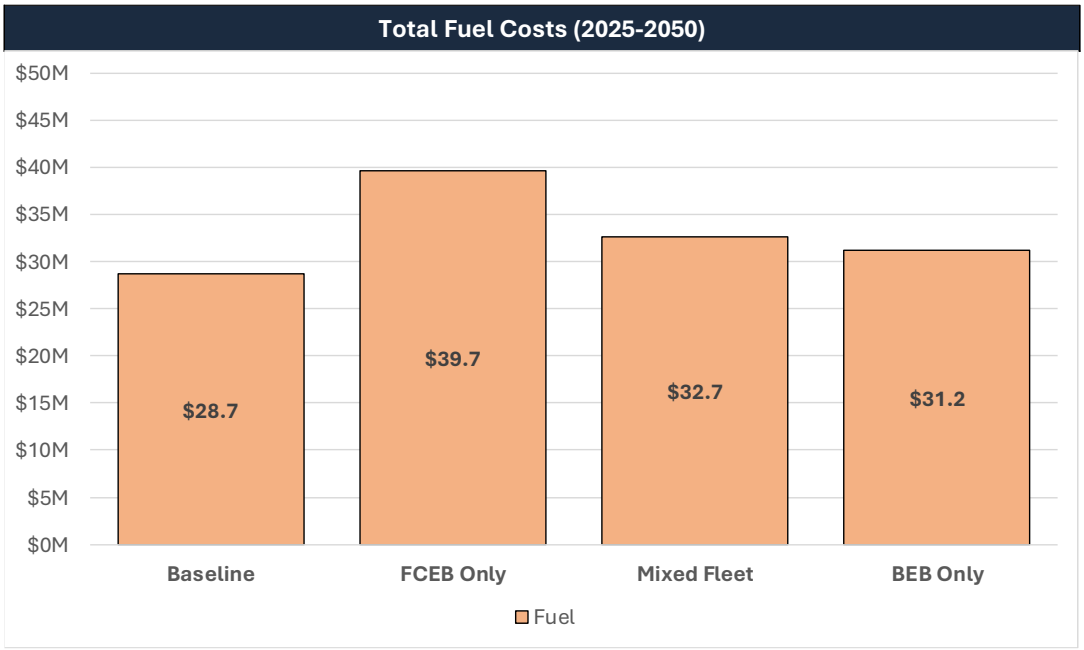

***Figure 27** - Total Fuel Costs Comparison (2025-2050)*

8.6 Fuel Assessment - Key Findings

- **Energy Efficiency Advantages**: Zero-emission scenarios reduce total consumption in diesel gallon equivalents (DGE) by 30–50% relative to the Baseline by 2050, owing to superior propulsion and regenerative braking in BEBs and FCEBs. However, this does not always translate to cost savings due to variable pricing structures.
- **Baseline Stability**: Diesel costs escalate gradually per EIA forecasts, averaging $1.1–1.2 million annually, with no infrastructure-related premiums.
- **BEB-Driven Scenarios:** Electricity expenses in BEB Only rise with fleet growth, where total demand charges (including both depot and on-route charging) dominate (over 60% of costs by 2050). Yet, overall costs remain closest to Baseline among ZEB paths, supported by low per-kWh rates.
- **Hydrogen scenarios:** Early reliance on hydrogen in Mixed and FCEB-only scenarios significantly increases annual fuel costs, as hydrogen prices at $15-$10 per kg are a substantial premium over diesel at $3.88. By the 2040s, as expected, hydrogen prices falling to $7 per kg will allow for cost convergence or savings later on. Uncertainty in the development of the hydrogen market—linked to policy changes, supply chain advancements, and clean production incentives—creates risks; prices could vary widely from assumptions based on regional hub progress.
- **Mixed Fleet Dynamics:** By prioritizing depot-charged BEBs for feasible routes and FCEBs for others, this scenario avoids on-route charging infrastructure and limits electricity demand charges to the controllable MOA-2 depot. This results in the lowest annual fuel costs among all scenarios from 2045–2050, averaging under $1.0 million annually, as BEB adoption increases with battery improvements and hydrogen prices decline.

9. Facilities Assessment

This section provides a clear breakdown of the infrastructure and costs required for Skagit Transit's transition to a zero-emission fleet, covering both Battery Electric Bus (BEB) charging and Hydrogen Fuel Cell Electric Bus (FCEB) refueling solutions. The assessment reflects operational modeling, agency requirements, vendor and utility engagement, and alignment with regional best practices.

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1. **Battery Electric Bus (BEB) Charging Infrastructure**

Facility Planning and Upgrades

- **Design & Planning**: Site plans indicate optimal charger placement, efficient bus parking allocation, and ensure scalability for future expansion.
- **Charger Procurement & Installation**: Selection is based on operational constraints (available charging windows, yard layout) and installation needs (pads, conduits, wiring).
- **Utility Electrical Upgrades**: Upgraded capacity—such as new transformers or substations—may be necessary, with costs typically borne by the agency.

***Note**: While initial EV deployments may use existing utility capacity, large-scale BEB operations nearly always require significant upgrades. Early utility coordination is critical for feasibility and cost planning. Skagit Transit has secured a 4,000-amp service for its main north bus parking lot and is engaged in discussions for future on-route charging, though not all future sites (e.g., park & rides) have been addressed in detail.*

Depot Charging Solutions

Agencies like Skagit cannot simply provide a ground-level pedestal charger for each bus due to space limitations. Instead, common approaches include overhead pantograph chargers or ceiling-mounted plug-in dispensers, maximizing ground space.

Modern Level 3 (DC fast) chargers typically deliver 100–200kW and may support multiple buses, bring capital cost savings but also introducing a reliability risk if one charger fails.

Core Analysis Assumptions (Depot Charging):

Table 11 summarizes the key cost and operational assumptions for the Facilities Assessment section.

Table 11 *- Depot Charging Assumptions*

Item	Unit/Description	Cost Assumption
Depot Infrastructure Planning	Per depot	$200,000
200kW Charger w/ Two Dispensers	One per two BEBs	$200,000
Charger Installation	Per charger	$85,000
Utility Upgrade (4,000A)	Per site (MOA-2)	$350,000
Charger Efficiency	DC output as % of AC input	90%

2. **On-Route Charging Infrastructure**

For high-frequency or extended routes, on-route fast charging addresses energy demands and schedule adherence, though it is constrained by site space and power supply. The two leading methods are conductive and inductive charging.

1. **Conductive Charging (Pantograph)**

- **How it works**: A physical connector (usually a pantograph arm) lowers from a charging station onto the bus's roof, forming a direct electrical connection.
- **Setup:** Requires bus roof hardware modifications and a visible charging structure.
- **Pros:** High charge rate and a mature, widely adopted technology.
- **Cons:** Visible equipment increases the risk of vandalism/collisions and adds moving parts requiring more maintenance.

2. **Inductive Charging (Pad)**

- **How it works:** The bus parks over a ground pad and receives energy wirelessly via electromagnetic induction—no physical connections.
- **Setup:** Only a pad embedded in the road or ground is required, creating a minimal visual footprint.
- **Pros**: No exposed electrical contacts (safer), visually unobtrusive.
- **Cons:** High installation cost, slightly lower energy efficiency, and limited vendors.

The project team determined Inductive Charging as the preferred style for the analysis. **Table 12** summarizes the cost and operational assumptions for on-route charging.

Table 12 - On-Route Charging Cost Assumptions

Item	Unit	Cost Assumption
Infrastructure Planning	Per site	$100,000
300kW Charger & Pad	Per unit	$350,000
Installation	Per unit	$105,000
Electrical Upgrades	Per site	$100,000–$300,000
Charger Efficiency	DC/AC	90%
Output (rated/limited)	kW	300/175
Minimum Layover	Minutes	5

3. Hydrogen Refueling Infrastructure

Refueling stations function similarly to traditional bus fueling but require special consideration for hydrogen's properties and delivery. For Skagit, the assessment adopts a delivered gaseous hydrogen station model, informed by the region's supply chain and projected growth. Conceptual drawings done by Fastech of a hydrogen refueling station at MOA-2 can be found in **Appendix B.**

Core Implementation Elements

- **Planning**: Involves selecting sites, creating layouts, managing permitting, and coordinating supply logistics, with scalability in mind.
- **Storage**: Uses "drop-and-swap" high-pressure tube trailers, maintaining a buffer of full and empty trailers to ensure uninterrupted supply.
- **Refueling Equipment**: On-site compressors, chillers, dispensers and buffer storage systems enable fast, reliable refueling to meet peak daily hydrogen demand.
- **Temporary Station Option**: A mobile, skid-based fueling station can be used for early fleet phases.
- **Maintenance Bay Upgrades**: Enhanced ventilation, gas detection, and staff training are required for bus maintenance facilities.

Table 13 summarizes the cost and operational assumptions used for the hydrogen refueling station in this analysis. Fastech's full report of maintenance facility requirements at MOA-2 to be compliant with working on FCEB can be found in **Appendix C**.

Table 13 - Hydrogen Station Cost Assumptions

Component	Unit	Cost Assumption	Notes
Infrastructure Planning	Per site	$200,000	Layout, permits, and coordination
Permanent Refueling Station	Per site	$4,500,000	Includes all equipment and safety
Storage Trailer	Per trailer	$750,000	Modern, high-pressure tubes
Maintenance Bay Upgrades	Per bay	$200,000	Estimated for 10 bays

9.1 BEB Only

The BEB Only scenario transitions Skagit Transit's diesel fleet to battery electric buses (BEBs) using a combination of depot charging at MOA-2 and on-route charging at layover sites: **Skagit Station, Chuckanut Park & Ride, Concrete Park & Ride,** and **March's Point Park & Ride**.

Facility investments are staged to align with BEB procurements, ensuring charging capacity is available when required but avoiding excess early-stage capital spending. All costs are presented in **2025 dollars** with no inflation escalation.

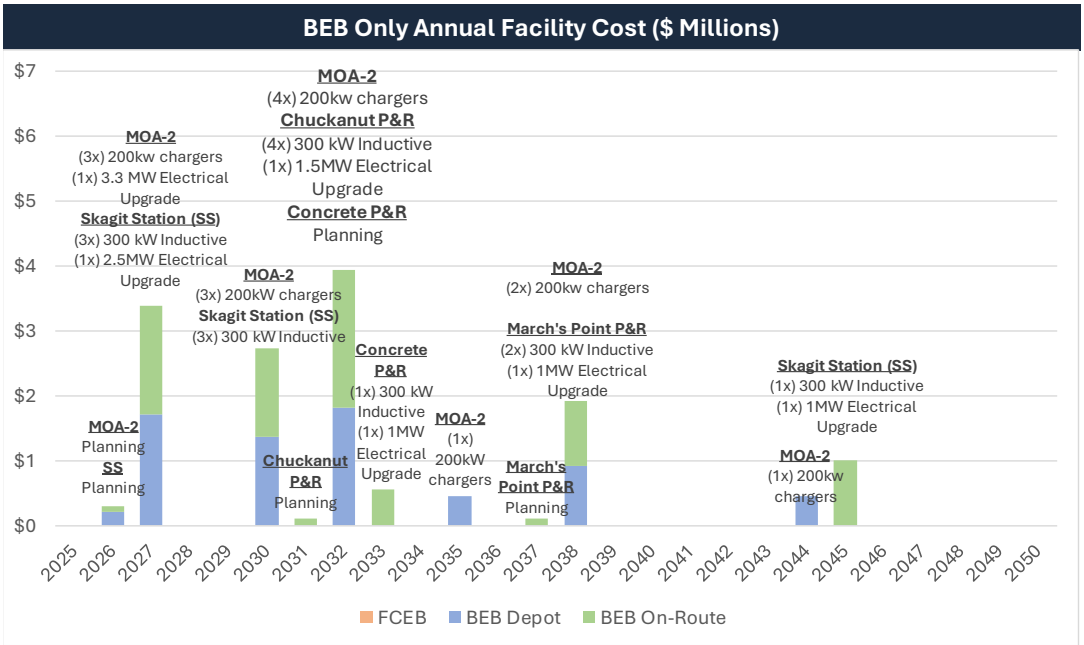

Figure 28 - Annual Facility Costs, BEB Only Scenario

Figure 28 projects the cumulative total cost breakdown over the transition period. The total costs include all the power upgrade projects, all charger and dispenser installations, and all planning projects.

Depot Charging – MOA-2

- **Configuration**: 200 kW plug-in chargers, each with two dispensers.
- **Phasing**: Chargers are added in step with BEB deliveries, beginning in 2027.
- **Power**: Skagit secured a 4,000-amp service allotment from Puget Sound Energy at project start. No further electrical capacity upgrades are needed.
- **Capacity**: Final build-out is 14 chargers (28 dispensers), with 11 active to serve 22 BEBs in daily service; three chargers are reserved as spares.

On-Route Charging Sites

Four on-route sites are equipped with 300 kW inductive chargers (limited to 175 kW output to preserve battery health). Each site has a **1:1 pad-to-charger ratio** to ensure availability during peak layovers.

- **Skagit Station**: Initial site, with power upgrades and chargers phased in to meet increasing BEB assignments.
- **Chuckanut P&R**: Added in 2032 to support routes requiring additional mid-day charging.
- **Concrete P&R**: Added in 2033, expanded in 2045.
- **March's Point P&R**: Added in 2038 to serve east-west route coverage.

***Table 14** - Final Build-Out – Equipment & Grid, BEB Only Scenario*

Site / Facility	Chargers	Dispensers/Pads	Minimum Required Grid (MW)
MOA-2 (Depot)	14	28	3.055 MW
Skagit Station (ST)	7	7	1.7 MW – 2.9 MW *(if sizing for rated 300 kW or managed 175 kw)*
Chuckanut P&R	4	4	1 MW - 1.66 MW
Concrete P&R	2	2	486 - 833 kW

March's Point P&R	2	2	750 kW

Note: Minimum Required Grid is determined by taking the nameplate rating of the chargers (in daily service) multiplied by the number of chargers, divided by the charger efficiency (0.9), and multiplied by an additional 25% to account for safety margin and headroom.

Table 15 *- BEB Only Scenario Cumulative Facility Costs Through 2050*

Site / Facility	Total Cost ($2025)
MOA-2 Depot	6,920,000
Skagit Station	3,685,000
Chuckanut P&R	2,120,000
Concrete P&R	1,110,000
March's Point P&R	1,110,000
Grand Total	**14,945,000**

Expense Timeline by Site

Table 16 *- MOA-2 Depot Facility Expenses by Year, BEB Only Scenario*

Year	Purpose	Total Amount ($2025)
2026	• BEB infrastructure planning – $200,000	200,000
2027	• 3 × 200 kW chargers – $1,365,000 • Initial power upgrade (4,000 A) – $350,000	1,715,000
2030	• 3 × 200 kW chargers – $1,365,000	1,365,000
2032	• 4 × 200 kW chargers – $1,820,000	1,820,000
2035	• 1 × 200 kW charger – $455,000	455,000
2039	• 2 × 200 kW chargers – $910,000	910,000
2044	• 1 × 200 kW charger – $455,000	455,000

Table 17 *- Skagit Station Facility Expenses by Year, BEB Only Scenario*

Year	Purpose	Total Amount ($2025)
2026	• BEB infrastructure planning – $100,000	100,000
2027	• 3 × 300 kW chargers – $1,365,000 • Power upgrade – $300,000	1,665,000
2030	• 3 × 300 kW chargers – $1,365,000	1,365,000
2045	• 1 × 300 kW charger – $455,000 • Power upgrade – $100,000	555,000

Table 18 *- Chuckanut P&R Facility Expenses by Year, BEB Only Scenario*

Year	Purpose	Total Amount ($2025)
2031	• BEB infrastructure planning – $100,000	100,000
2032	• 4 × 300 kW chargers – $1,820,000 • Power upgrade – $200,000	2,020,000

Table 19 *- Concrete P&R Facility Expenses by Year, BEB Only Scenario*

Year	Purpose	Total Amount ($2025)
2032	• BEB infrastructure planning – $100,000	100,000
2033	• 1 × 300 kW charger – $455,000 • Power upgrade – $100,000	555,000
2045	• 1 × 300 kW charger – $455,000	455,000

Table 20 *- March's Point P&R Facility Expenses by Year*

Year	Purpose	Total Amount ($2025)
2037	• BEB infrastructure planning – $100,000	100,000
2038	• 2 × 300 kW chargers – $910,000 • Power upgrade – $100,000	1,010,000

9.2 Mixed Fleet

The Mixed Fleet Scenario supports a combined deployment of Fuel Cell Electric Buses (FCEBs) and Battery Electric Buses (BEBs) while phasing out diesel buses by 2039. Infrastructure is implemented in phases to match fleet growth, optimize capital spending, and maintain operational resiliency.

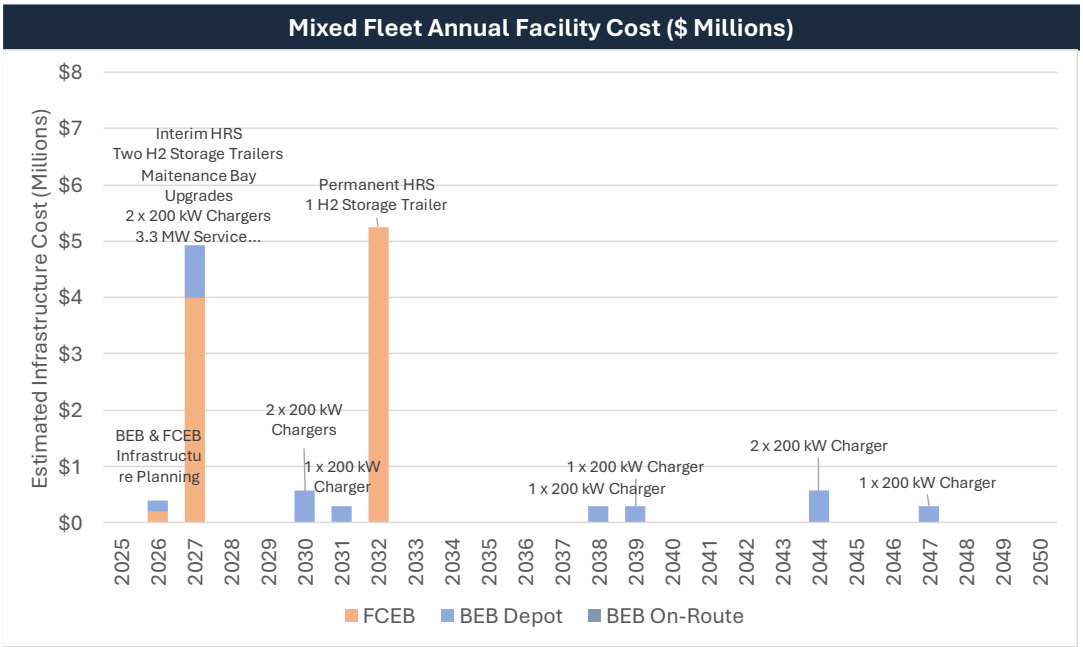

Figure 29 - Annual Facility Costs, Mixed Fleet Scenario

Figure 29 breaks down the annual cost for the Mixed Fleet scenario by category, assuming that planning occurs two years before infrastructure is placed in service and procurement occurs one year before service.

9.2.1 FCEB Hydrogen Infrastructure

A. Interim Hydrogen Refueling Solution (2028–2032)

Early-Stage Flexibility: FCEBs entering service in 2028 are fueled using a temporary, trailer-based hydrogen delivery system. This modular solution helps minimize upfront capital costs and eliminates the need for major on-site electrical upgrades—compression and logistics are handled off-site.

Storage Details: Two high-pressure tube trailers of ~750 kg each (nominal 1,500kg; ~1,350kg usable total) provide ample storage.

Operational Buffer: At a weekday demand of 89kg/day, a single trailer supports ~7.6 days of fueling. With two trailers on site, operational coverage increases to ~15.2 days, providing a robust safety margin even as one trailer is refilled elsewhere.

Scalability: This approach allows Skagit Transit to flexibly support growing FCEB numbers without prematurely investing in permanent facilities. Temporary, trailer-based systems are a proven industry method for pilot deployments and early fleet phases.

B. Permanent Hydrogen Refueling Station (2033 and beyond)

Transition to Permanence: As FCEB fleet size and hydrogen demand increase, a permanent station is commissioned in 2033.

Station Design: The facility features two fueling lanes, on-site compression and cooling, cascading buffer storage, and a third tube trailer (bringing usable storage to ~2,025kg).

Capacity Sizing: This supports daily hydrogen demand from 288kg in 2033, peaking at 474kg in 2034–35, and tapering to ~248kg by 2049–50.

Days of Coverage: At these projected usage rates, two trailers cover up to 4.7 days at 288kg/day and ~2.85 days at 474kg/day. Adding a third trailer extends coverage to 7.0 and 4.3 days, respectively.

Utility Needs: The station will require a 250kW connected load (~0.313MW, including headroom), well within utility capabilities for depot-scale refueling. All fueling typically occurs overnight; each bus is refueled in 7–15 minutes for quick turnaround.

Phased Costs: This staged approach—temporary trailers first, followed by a high-capacity permanent station—ensures infrastructure spending remains closely coupled with real-world demand, maximizing cost-effectiveness and operational readiness.

C. Maintenance Bay Upgrades (2027)

Safety Compliance: To safely service hydrogen-powered buses, ten maintenance bays are upgraded with enhanced ventilation, hydrogen detection, and specialty electrical systems, aligning with relevant codes.

Timing and Cost: These upgrades are completed by 2027, ahead of major FCEB deployments, at an estimated $200,000 per bay ($2,000,000 total).

9.2.2 BEB Depot Charging Infrastructure

BEBs in this scenario use depot-only charging at MOA-2.

- **Configuration:** 10 × 200 kW chargers at final build-out, with two dispensers per charger (20 total).
- **Operations:** 8 chargers active for 16 BEBs in service by 2050; 2 chargers remain as spares for resiliency.
- **Minimum grid capacity:** 2.2 MW at MOA-2. Fits well within a 4,000 amp allotment from PSE.

Table 21 - Final Build-Out – Equipment & Grid, Mixed Fleet Scenario

Site / Facility	Chargers	Dispensers/Pads	Minimum Required Grid (MW)
BEB Depot (MOA-2)	10	20	2.22 MW
FCEB Hydrogen Station	N/A	N/A	0.313 MW

Table 22 *- Cumulative Facility Costs Through 2050, Mixed Fleet Scenario*

Site / Facility	Total Cost ($2025)
BEB Depot (MOA-2)	3,400,000
FCEB Hydrogen Station	9,450,000
Grand Total	12,850,000

Expense Timeline by Site

Table 23 *- MOA-2 BEB Charging Facility Costs, Mixed Fleet Scenario*

Year	Purpose	Total Amount ($2025)
2026	• BEB infrastructure planning	200,000
2027	• 2 × 200 kW chargers – $570,000 • ~3.3 MW electrical service upgrade – $350,000	920,000
2030	• 2 × 200 kW chargers	570,000
2031	• 1 × 200 kW charger	285,000
2038	• 1 × 200 kW charger	285,000
2039	• 1 × 200 kW charger	285,000
2043	• 2 × 200 kW chargers	570,000
2047	• 1 × 200 kW charger	285,000
Total		**3,400,000**

Table 24 - MOA-2 FCEB Refueling Facility Costs, Mixed Fleet Scenario

Year	Purpose	Total Amount ($2025)
2026	• FCEB infrastructure planning	200,000
2027	• Maintenance bay upgrades (10 bays × $200k = $2M) • Interim HRS – $500,000 • Hydrogen storage (2 trailers) – $1,500,000	4,000,000
2032	• Permanent hydrogen refueling station	4,500,000
2033	• Additional hydrogen storage trailer	750,000
Total		**9,450,000**

9.3 FCEB Only

The FCEB Only Scenario transitions Skagit Transit's diesel fleet to a fully fuel cell electric bus (FCEB) fleet by 2039. The plan involves phasing in hydrogen infrastructure to match fleet adoption and increasing hydrogen demand, while upgrading maintenance facilities to support FCEB technology.

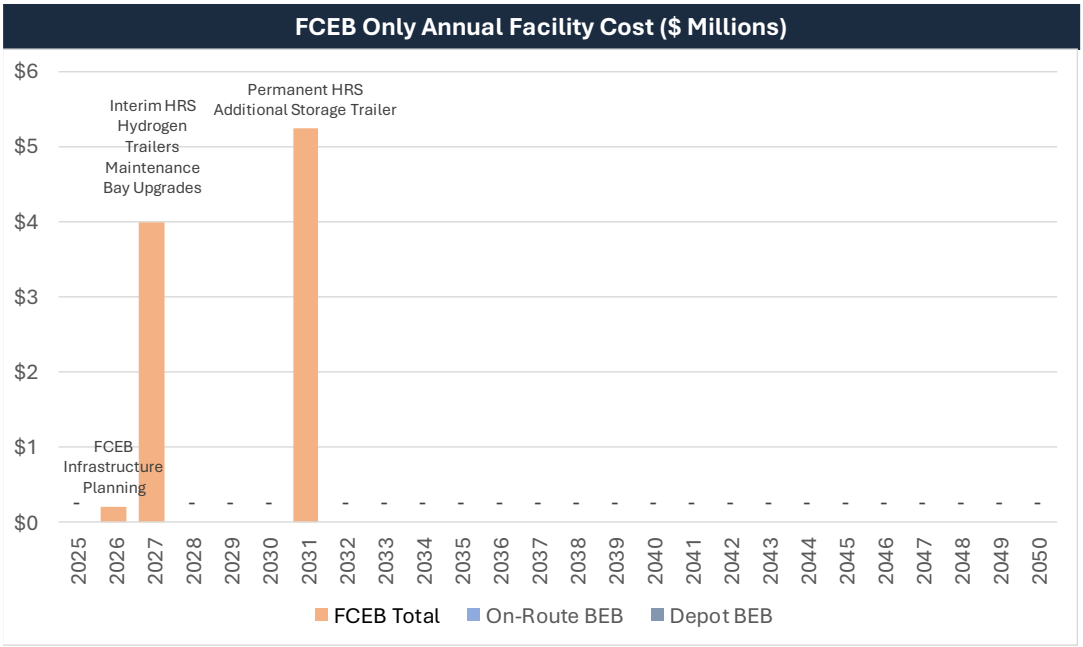

Figure 30 - Annual Facility Costs, FCEB Only Scenario

Figure 30 breaks down the annual cost for the FCEB Only scenario by category, assuming that planning occurs two years prior to infrastructure being placed in service and procurement occurs one year before service.

The plan begins with a lower-cost interim fueling solution using trailer-based hydrogen delivery. This early-phase approach allows Skagit to deploy its first FCEBs without committing to the full capital outlay of a permanent station. As the fleet grows and daily hydrogen consumption increases, a permanent refueling station with expanded storage is commissioned to support full operations. Maintenance facility upgrades are scheduled early to ensure compliance with hydrogen safety standards and to prepare for servicing an all-FCEB fleet.

Hydrogen Infrastructure Phasing

Interim Hydrogen Refueling (2028–2030)
The first FCEBs arrive in 2028 and are fueled using a portable, trailer-based hydrogen delivery system. This approach avoids immediate investment in a permanent station and requires no major electrical upgrades since compression occurs off-site.

- **Storage capacity:** Two high-pressure tube trailers (nominal 1,500 kg; ~1,350 kg usable).
- **Weekday demand progression:**
  - 2028: 172 kg/day
  - 2029: 210 kg/day
  - 2030: 298 kg/day
- **Days of coverage:**
  - **One trailer on-site:** 3.9 days (172 kg/day) → 2.3 days (298 kg/day).
  - **Two trailers on-site:** 7.8 days (172 kg/day) → 4.5 days (298 kg/day).

This coverage ensures Skagit has a comfortable operational buffer during the early FCEB deployments, even when one trailer is off-site being refilled.

Permanent Hydrogen Refueling Station (2031+)
By 2031, weekday hydrogen demand reaches 487 kg/day, pushing the limits of the interim system. A permanent station is commissioned to meet growing needs.

- **Station design:** Two fueling lanes with on-site compression and cascading buffer storage for rapid fills.
- **Storage capacity:** Third trailer added, bringing total usable storage to ~2,025 kg.
- **Demand progression:**
  - 2031: 487 kg/day
  - 2034 peak: 637 kg/day
  - 2040–2050: ~597 kg/day

- **Days of coverage:**
  - **Two trailers on-site:** 2.8 days (487 kg/day) → 2.1 days (637 kg/day).
  - **Three trailers on-site:** 4.2 days (487 kg/day) → 3.2 days (637 kg/day).
- **Grid requirements:** 250 kW connected load; ~0.313 MW service request (includes ~25% headroom).
- **Operations:** All fueling occurs overnight as buses return from service; typical refuel time is 7–15 minutes per bus.

Maintenance Bay Upgrades (2027)
To prepare for hydrogen bus maintenance:

- **Scope:** Ten bays upgraded with ventilation, hydrogen detection, alarms, and electrical classification improvements.
- **Timing:** Completed before large-scale FCEB adoption and permanent station commissioning.
- **Unit cost:** $200,000 per bay.

Table 25 *- Final Build-Out – Equipment & Grid, FCEB Only Scenario*

Site / Facility	Chargers	Dispensers/Pads	Minimum Required Grid (MW)
FCEB Hydrogen Station	N/A	N/A	0.313

Table 26 *- Cumulative Facility Costs Through 2050, FCEB Only Scenario*

Site / Facility	Total Cost ($2025)
FCEB Hydrogen Station and Maintenance Bays	9,450,000
Grand Total	9,450,000

Expense Timeline

Table 27 *- Hydrogen Refueling Facility Expenses by Year, FCEB Only Scenario*

Year	Purpose	Total Amount ($2025)
2026	• FCEB infrastructure planning	200,000
2027	• Maintenance bay upgrades (10 bays × $200k = $2M) • Interim HRS – $500,000 • Hydrogen storage (2 trailers) – $1,500,000	4,000,000

2031	• Permanent hydrogen refueling station – $4,500,000 • Additional hydrogen storage trailer – $750,000	5,250,000
Total		9,450,000

9.4 Facility Assessment Cost Comparison

To evaluate the relative infrastructure cost impacts of each transition scenario, facility investment requirements were summed for all elements described in this section — including planning and design, equipment procurement, installation, electrical upgrades, and hydrogen storage/dispensing systems — through 2050. All costs are expressed in 2025 dollars with no inflation escalation. **Figure 31** depicts the total costs for each scenario through 2050.

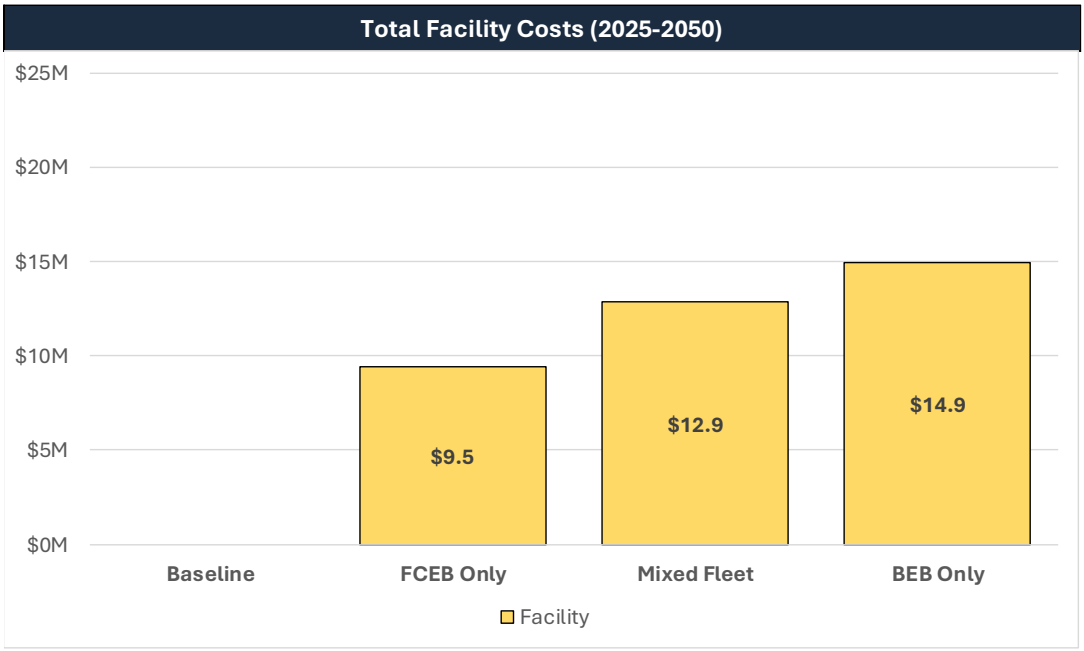

Figure 31 *- Cumulative Facility Capital Costs by Scenario (2025–2050)*

9.5 Key Takeaways – Facilities Assessment

1. **BEB-Only = Highest Cost & Complexity**
    - Requires multiple on-route charging sites, triggering numerous public-facing projects, permitting and ROW (right-of-way) challenges, high-capacity utility interconnections, and long lead times.
    - Operational reliability is highly dependent on on-route charger uptime — an outage can strand service, making redundancy planning critical.

- At ~$14.95M, it is the most expensive facilities pathway.

2. **FCEB-Only = Simplest & Least Expensive**
    - Centralized hydrogen fueling mirrors traditional diesel operations: fast, overnight, and in-yard.
    - Infrastructure is essentially one permanent station (often preceded by a temporary trailer setup) plus maintenance bay safety upgrades.
    - At ~$9.45M, it is the cheapest and lowest-complexity option — minimal permitting risks compared to BEB on-route builds.
3. **Mixed Fleet = Balanced Cost, No On-Route Charger Risk**
    - Combines BEB depot charging for shorter, predictable blocks with hydrogen FCEB for long or demanding routes.
    - Avoids on-route charger construction entirely, reducing permitting, ROW, and public site risks.
    - Concentrates complexity at MOA-2 due to the-co-location of both technologies, but offers resilience and flexibility if one energy source faces price or supply issues.
    - Mid-range cost at ~$12.85M.
4. **Decision Hinges on Risk Tolerance & Operational Philosophy**
    - **BEB-Only:** highest investment, maximum electrification, but operationally vulnerable to downtime at public chargers.
    - **FCEB-Only:** least cost, simple rollout, but dependent on hydrogen supply chain and pricing.
    - **Mixed Fleet:** operational adaptability and technology redundancy, at the cost of managing two systems.

10. Total Cost of Ownership Comparison

The Total Cost of Ownership analysis combines all major lifecycle cost elements—**fleet procurement, maintenance, fuel, and facilities**—to provide a comprehensive view of long-term financial impacts for each transition scenario from 2025 through 2050. **Figure 32** displays the total costs incurred through 2050 for each scenario.

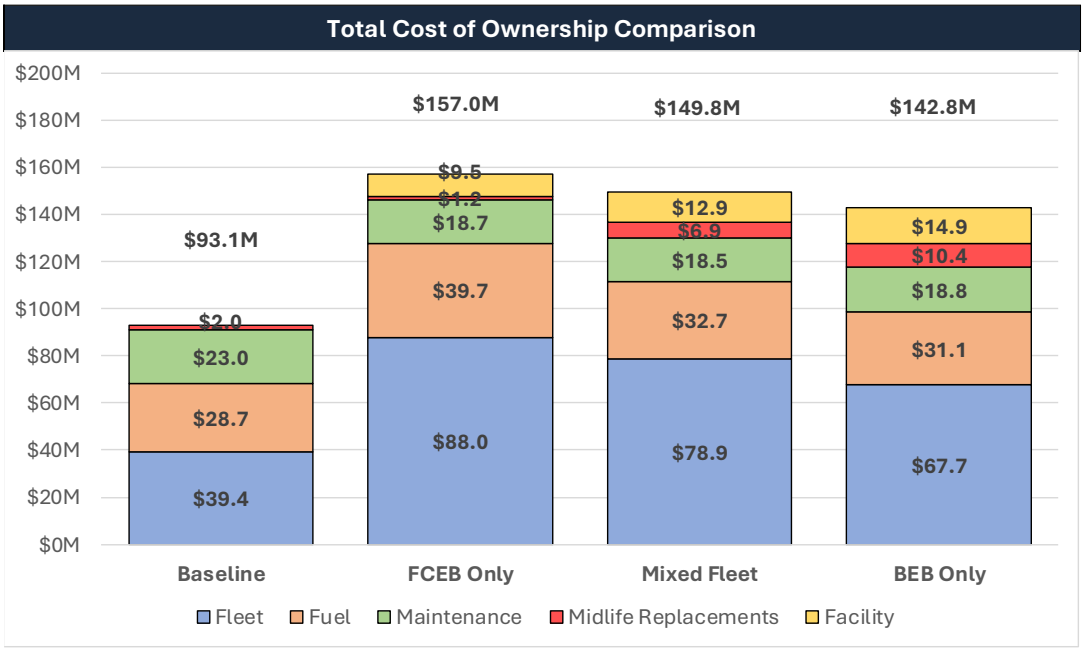

***Figure 32** - Total Cost of Ownership (2025-2050)*

Figure 32 provides a summary of the delta for each category vs. Baseline. The data clearly shows that capital costs for vehicle procurements and facilities account for most of the cost differences. For this reason, pursuing grant funding that can offset capital costs on fleet and facilities becomes critical for a ZEB transition.

***Table 28** - Additional Cost vs. Baseline by Category (2025–2050)*

Scenario	Fleet Procurement	Maintenance	Fuel	Facilities	Total Delta vs. Baseline
BEB Only & On-Route	+28.26M	+4.13M	+2.51M	+14.95M	**+49.85M**
Mixed Fleet (BEB Depot + FCEB)	+39.46M	+0.39M	+3.99M	+12.85M	**+56.69M**
FCEB Only	+48.58M	−5.10M	+10.97M	+9.45M	**+63.90M**

11. Funding Opportunities (As of August 2025)

Purpose: This section outlines the grants, incentives, and credits that Skagit Transit can use to fund a transition to a zero-emission bus (ZEB) fleet. The focus is on capital funding for buses and infrastructure, as these represent the main opportunities for Skagit Transit to adopt ZEBs. (Many federal tax credits from the 2022 Inflation Reduction Act (IRA) are phasing out before Skagit Transit is likely to utilize them, so grants will be the primary near-term funding source.) All programs listed are either currently open or expected to reopen within the next 12 months, or at least in the next 3–5 years. Each entry includes eligible uses, funding value, match requirements, application timing, and availability of funds, so decision-makers can prioritize near-term opportunities.

11.1 Federal Discretionary Grants (FTA / USDOT)

How to use this table: pair vehicles and facility scope; line up state & utility dollars as a match; submit shovel-ready packages.

Table 29 *- Federal Grant Programs*

Program	What It Can Fund for Skagit	Typical Federal Share	Typical Award / Program Size	Application Window (last / next)
FTA Low-No (49 U.S.C. 5339(c))	BEBs, FCEBs, depot chargers, hydrogen stations, maintenance/facility upgrades	Vehicles up to 85%; facilities 80% (up to 90% for ADA/CAA equip.)	Program size FY 2025: ~$1.1 B; award sizes vary widely by agency scale	Closed Jul 2025; next expected Spring 2026 (FY 2026 NOFO) [1]
FTA Buses & Bus Facilities Competitive (5339(b))	Bus replacements/rehab; depot/on-route charging; hydrogen yard fueling; maintenance bays	Usually 80% (buses up to 85%; ADA/CAA equip to 90%)	Program size FY 2025: ~$398 M	Closed Jul 2025; next expected Spring 2026 [2]
USDOT RAISE	Multimodal & station/road/power works that enable ZEBs (e.g., Skagit Station access + utility)	Up to 80%; 100% possible for rural/AoPP	Program size FY 2025: $1.5 B; award range: urban ≥$5 M; rural ≥$1 M; typical caps ~$25 M	Annual winter NOFO; next expected Jan 2026 [3]
FHWA Charging & Fueling	Public hydrogen and DCFC along corridors	80%	Round 2 (2024) awards: ~$636 M;	National rounds; next expected

Infrastructure (CFI)	& hubs; can support P&R or shared sites		BIL total $2.5 B (FY22–26)	2026 window [4]
FHWA CMAQ / Carbon Reduction Program (via WSDOT/MPOs)	Flexible funds for ZEB-enabling projects (charging/H_2, access, TDM) programmed locally	Typically 80%	Scale by state apportionments (e.g., WA CMAQ ~$210 M/FFY 2024; CRP implemented via WSDOT)	Rolling via STIP/TIP cycles [5]

11.2 Washington State Grants

Table 30 *- State Grant Programs*

Program	What It Can Fund	Match	Typical Award / Program Size	Application Window
WSDOT Green Transportation Capital	Buses, depot/on-route charging, H_2 stations, facility electrification	Tiered 0–20% by agency size	2025–27 awards: ~$31.3 M (8 projects); prior cycles similar magnitude	Biennial; next FY 27–29 call in 2026 [6]
WSDOT State "Buses & Bus Facilities" (State Capital)	State capital for bus/facility projects (often to match FTA)	Varies by appropriation	2025–27 awards: ~$38 M (9 projects)	Biennial; next call 2026 [7]
WSDOT Consolidated Grant Programs (5310/5311/5339(a) + state Rural Mobility/Paratransit/Tribal)	Vehicles, facilities, rural/tribal mobility	Varies	> $250 M per biennium across programs; single awards range widely; Tribal Mobility up to $10 M/biennium	Biennial; 2025–27 awards issued; next cycle opens 2026 [8]
WA Dept. of Commerce—Clean Energy Fund (CEF) / Grid Modernization / Decarb.	Microgrids, BESS, solar PV, site electrification; some H_2 equipment	Varies (often 20–50% cost-share; some public grants higher)	Prior rounds: $100 M-class Grid Modernization awards statewide; project awards typically $1–$10 M	Competitive rounds expected FY 26–27 and FY 27–29 [9]

11.3 Local / Utility (Puget Sound Energy)

Table 31 *- Local and Utility Grant Programs*

Program	What It Can Fund	Value / Match	Window	Notes
PSE Transportation Electrification "TER" Project Grants	Make-ready, chargers, some site civil; pilot H_2 make-ready considered	$50k–$1.5 M grants; 0–50% match	Annual; 2025 closed Jul 16; next opens 2026	Can pair as federal match; PSE also offers Grant-Matching for non-PSE awards. [10]
Up & Go Electric®—Fleet	Advisory + site engineering; may defray make-ready	Case-by-case	Ongoing intake	Entry point for design + Schedule 558 enrollment. [10]
Schedule 558 "Fleet EV" Tariff	Demand-friendly depot charging rates; later subscription pricing	Tariff (not a grant)	Enrollment opens Dec 31, 2025; subscription option Jan 1, 2027	Capacity-limited pilot (cap 3 MW / 35 points-of-delivery). Act early. [11]

11.4 Federal Tax Credits (status under OBBBA)

Note: As a public entity, Skagit can generally use Elective Pay ("Direct Pay") on eligible credits (turns the credit into cash), but we omit a column here per request. We highlight the deadline risk created by OBBBA and where 48E still works for BESS / H_2 equipment.

Table 32 *- Federal Tax Credits*

Credit (Code)	What It Can Fund for Skagit	Value (base; bonuses possible)	Key Deadlines (OBBBA-adjusted)
Alternative Fuel Refueling Property (§30C)	H_2 dispensers/compression/storage, DCFC	Up to 30% of cost; $100k cap per item (PW&A + eligible tract)	Must be in service by Jun 30, 2026. Short window for small pilots only. [12]
Commercial Clean Vehicle (§45W)	New FCEBs/BEBs (>14k lb)	30% of cost up to $40k/veh	Vehicles in service after Sep 30, 2025 are ineligible. Unlikely to help bus procurements. [13]
Clean Hydrogen Production (§45V)	Electrolyzer-based H_2 production (if Skagit or a partner produces fuel)	Up to $3/kg for 10 yrs (CI-based; PW&A rules apply)	Must begin construction by Dec 31, 2027 under OBBBA (moved up from 2033). Critical to suppliers and Skagit if it chooses to produce H_2. [14]

Investment Tax Credit—Energy Property (§48/§48E)	BESS (stand-alone & microgrid), H_2 storage & compression, electrolyzers, fuel cells; solar PV	Base 30% (plus bonuses for domestic content, energy communities)	Solar/wind: if begin construction by Jul 4, 2026, you can place in service after 2027 under IRS "begin-construction" rules; if you start after 7/4/2026, solar/wind must be placed in service by 12/31/2027 to qualify. This placed-in-service limit does *not* apply to *energy storage* (BESS) or H_2 equipment, which retain 48E eligibility on the original timeline. [15]

Implications for Skagit

Treat §48/§48E as the durable lever for microgrid BESS at MOA-2 and H_2 storage/compression at a future station.

§45V is now a near-term decision (2027 start-construction)—material for Skagit only if Skagit opt to produce hydrogen (directly or via a P3). It remains crucial to external suppliers, affecting your future delivered H_2 price. [14]

11.5 Washington Clean Fuel Standard (CFS)

Use: Generate credits for low-carbon electricity (BEB charging) and green H_2 (FCEB fueling).

Value: Early-program prices have ranged widely (roughly \$20–\$100/ton CO_2e since 2023; ~\$20–\$40/ton in mid-2024), dependent on CI and market balance. [16]

Timing: Register facilities before first kWh/kg to bank credits from day one. Ongoing program with tightening CI.

Fit: Offsets O&M; becomes meaningful as ZEB energy use scales.

11.6 Planning & O&M Support

Low-No Workforce set-aside: 5% of award may support ZEB training (BEB HV safety, H_2 safety). [1]

FTA 5307/5337 formula: Eligible for transition planning, facility design/PE, charging management pilots.

EPA / EJ grants: Community engagement and air-quality co-benefit projects (monitor annually).

11.7 Private Financing (as a complement to grants)

Leasing / "ZEB-as-a-Service": Shift CAPEX to OPEX; lessor monetizes tax credits.

Energy-as-a-Service: Third party funds solar/BESS or electrolyzer and sells output; structure to capture 48E/45V value.

Use cases: Bridge match gaps or align cash flow to deliveries; grants are still cheaper—use P3s surgically.

11.8 Near-Term Priorities (2025–2027)

- **Compete in FY 2026 Low-No + 5339(b) (Spring 2026 NOFO):** bundle buses and depot/H_2 scope; line up WSDOT + PSE as match. [12]
- Target RAISE 2026 for station/corridor utility upgrades that don't fit FTA boxes (rural 100% funding possible). [3]
- **Engage PSE now**: enroll in Up & Go, position for Schedule 558 (limited cap), and prep TER grant apps for 2026. [1011]
- Small, fast pilot by Jun 30, 2026, if it unlocks §30C (e.g., one public DCFC or a small H_2 dispenser). [12]
- Hydrogen production decision by late-2026: if pursuing onsite (or P3), begin construction by 12/31/2027 to secure §45V. [14]

11.9 Timing Risks (credits)

- §45W vehicles: ends after Sep 30, 2025—unlikely to benefit bus orders. [13]
- §30C refueling: ends after Jun 30, 2026—treat as pilot-scale only. [12]
- §48E solar/wind: post-OBBBA, begin by 7/4/2026 to avoid the 12/31/2027 placed-in-service cutoff; storage/H_2 equipment not subject to that cutoff. [15]
- §45V hydrogen: must begin by 12/31/2027—key for producers (and your supply price). [14]

11.10 Strategic Funding Shifts

- **Shift from §30C to §48E**: design projects around BESS and H_2 storage/compression/electrolyzers to capture 30% ITC on durable assets. [15]
- **Bake BESS into depots/microgrids**: taps 48E, cuts demand charges, boosts resilience. [15]
- **Braid match**: use WSDOT Green Transportation Capital + PSE TER/Grant-Match to cover 15–20% on FTA awards. [610]
- **Plan for §45V**: either be (or partner with) a producer before the 2027 start-construction cutoff—or require suppliers to pass through 45V value in fuel pricing. [14]

Action items (next 60–90 days)

- **Confirm FY 2026 grant targets** (Low-No + 5339(b) scopes; RAISE candidate).
- **Kick off utility pre-design with PSE** (Up & Go intake; **Schedule 558** intent).
- Select one "30C-eligible" pilot only if low-effort by 6/30/2026.
- Frame the §45V decision gate (late-2026): internal production vs. contracted supply.

12. Conclusions & Recommendations

Skagit should pursue an all-of-the-above zero-emission strategy that pairs hydrogen FCEBs for operational flexibility with BEBs for lowest long-run cost, supported by targeted on-route charging to extend BEB coverage where it is most practical.

12.1 What the analysis shows

- **FCEB fit:** FCEBs are the easiest operational match to Skagit's duty cycles today (range, refuel time, minimal schedule changes) and can cover nearly all blocks without on-route infrastructure. Hydrogen price uncertainty and currently high delivered prices, however, make a rapid, full-fleet FCEB transition financially challenging in the near term.
- **BEB economics**: BEBs offer the best path to the lowest total cost among ZEB options when charging can be managed and tariffs are favorable, but several blocks remain range-limited without on-route charging and cold-weather performance requires careful planning.

- **On-route charging**: Adding on-route capability materially expands BEB feasibility but introduces added siting, interconnection, reliability, and public-facing construction complexity.
- **Mixed approach:** A mixed fleet hedges technology and market risk, preserves service reliability, and allows Skagit to capture FCEB's operational advantages while BEB costs and performance continue to improve.

12.2 Recommendation

Pursue a mixed ZEB program that combines:

1. Depot-charged BEBs on blocks that fit within current constraints,
2. targeted on-route charging where it unlocks high-value BEB blocks, starting with Skagit Station, and
3. A pilot cohort of FCEBs fueled via an interim delivered-hydrogen station.

Use federal and state funding to offset capital costs, and secure a low-cost hydrogen supply agreement with nearby providers (Lewis County Transit, Douglas County PUD, or NovoHydrogen) while avoiding large, irreversible hydrogen commitments until market prices stabilize. Facility upgrades at MOA 2 to enable mixed-technology maintenance should be advanced in alignment with NFPA 2 and IFC 2024.

12.3 Near-term program (next 12–24 months)

- **Initial BEBs + Skagit Station on-route pilot**
    - Procure an initial BEB tranche.
    - Design and build on-route charging at Skagit Station to trial priority BEB blocks, gather performance data, and validate layover integration before expanding to any additional sites.
    - Engage PSE immediately to access Schedule 558 EV Charging Tariff.
- **FCEB pilot + interim hydrogen fueling**
    - Procure a pilot FCEB cohort.
    - Deploy a modular, trailer-based interim hydrogen station.
    - Execute a supply agreement with one or more local counterparties (Lewis County Transit, Douglas County PUD, NovoHydrogen) with price-review triggers, indexation, and reopener provisions.

- **Funding and commercial levers**
    - Package bus and infrastructure scope for FTA Low-No and 5339(b), braid WSDOT and PSE funds as match, and prioritize grant designs that defray BEB on-route and hydrogen station capital.
    - **Test the market**: some current FCEB and HRS offerings are pricing below the values assumed in the model; run an RFI or refresh state contract pricing to capture potential savings.
- **MOA 2 readiness**
    - Advance hydrogen detection/ventilation, electrical classification, and charger placement within MOA 2; develop SOPs and training for both technologies.
- **Stage gates and learning plan**
    - Establish 6–12-month review gates to update block assignments, charger counts, hydrogen volumes, and TCO as real performance and prices materialize.

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Appendix A: Full Results of the Service Assessment

This appendix provides the detailed results of the Service Assessment, expanding on the summary presented in Section 5 of the main report. The assessment evaluates the operational feasibility of deploying Battery Electric Buses (BEBs) and Fuel Cell Electric Buses (FCEBs) across Skagit Transit's 23 weekday fixed-route blocks, based on 2024 schedules. Feasibility is determined by comparing projected energy requirements (propulsion + auxiliary loads) against usable onboard energy capacity at midlife (the planning benchmark to ensure viability throughout the 12-year vehicle life).

Energy modeling incorporates:

- **Base Propulsion:** 2.0 kWh/mi for BEBs (nominal, flat rural); converted to 0.12 kg/mi for FCEBs at 51% fuel cell efficiency.
- **Multipliers**: Road type (urban: 1.15×, highway: 1.05×), terrain (some hills: 1.05×, hilly: 1.10×), strenuous factor (1.15× for peak loads).
- **Auxiliary Loads**: Nominal (6 kW), strenuous (15 kW), strenuous with Diesel-Fired Heater (DFH) (8 kW).
- **Technology Improvements**: BEB energy density +5% every 2 years; FCEB efficiency/storage +2.5% every 2 years (cohort-specific).
- **Charging/Refueling:** Depot-only for BEBs (up to 200 kW, overnight); on-route inductive (300 kW limited to 175 kW, ≥5 min layover); FCEB fast-fill (7-15 min).

While most service days Skagit may expect results aligned with Nominal Conditions, it is considered best practice to use Strenuous Conditions when determining the feasibility of blocks for planning purposes. Otherwise, the agency risks deploying buses onto blocks that are achievable part of the year and infeasible during other parts of the year. Feasibility is marked as "Yes" if net energy required ≤ midlife usable capacity; projections show achievability over time.

BEB Depot

Nominal Conditions

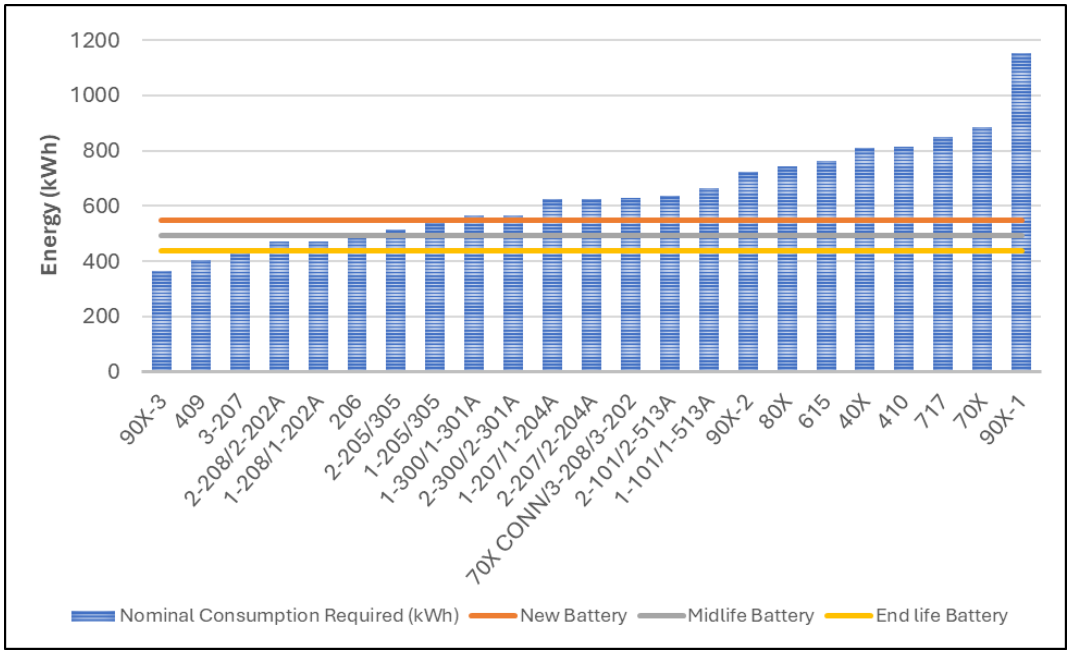


Figure 33 *- Block Energy Requirements vs BEB Depot, Nominal Conditions*

Table 33 *- Number of Feasible Blocks, BEB Depot, Nominal Conditions*

Nameplate Capacity	Usable Capacity (New)	Usable Capacity (Midlife)	Usable Capacity (End)	Feasible (New)	Feasible (Midlife)	Feasible (End)
686 kWh	549 kWh	494 kWh	439 kWh	8 of 23	6 of 23	2 of 23
				35%	26%	9%

Under nominal conditions, the current BEB technology with a single depot charge can complete 8 of Skagit's 23 weekday blocks. It was also determined that two of Skagit's 2024 blocks, the 90X-2 and 90X-3, have significant layovers at the depot during the day, enough to recharge the battery and complete the blocks. Therefore, in total, 9 out of the 23 blocks are feasible with current technology under nominal conditions.

Strenuous Conditions

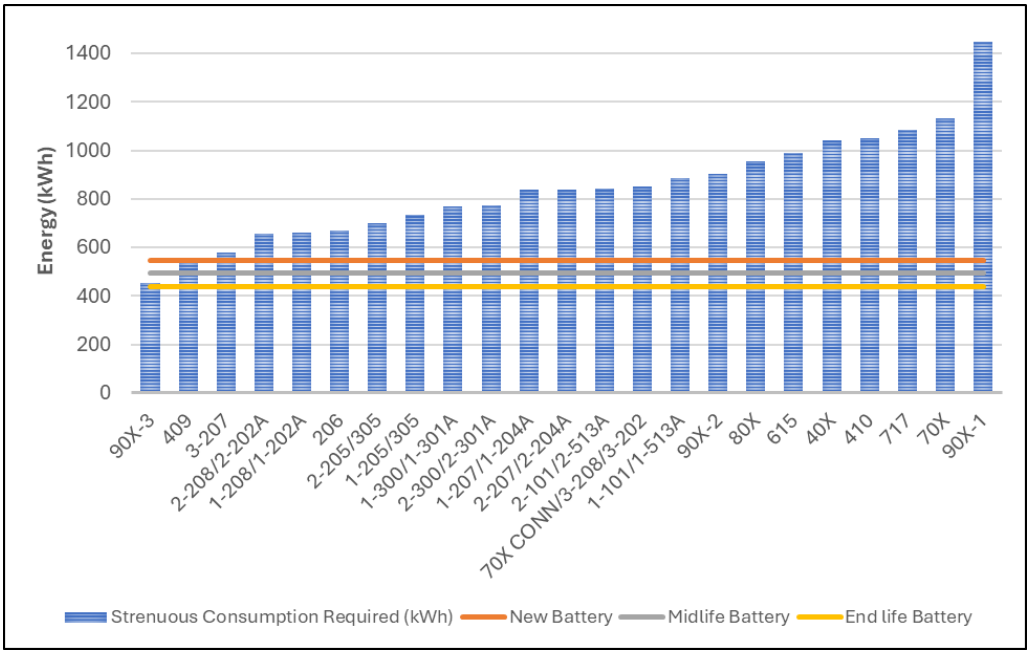


Figure 34 *- Block Energy Requirements vs BEB Depot, Strenuous Conditions*

Table 34 *- Number of Feasible Blocks, BEB Depot, Strenuous Conditions*

Nameplate Capacity	Usable Capacity (New)	Usable Capacity (Midlife)	Usable Capacity (End)	Feasible (New)	Feasible (Midlife)	Feasible (End)
686 kWh	549 kWh	494 kWh	439 kWh	1 of 23	1 of 23	0 of 23
				4%	4%	0%

Under the projected high energy demands, significantly more energy is needed to complete the blocks with current technology. With the ability to midday charge the 90X-2 and 90X-3 blocks at the depot, 2 of Skagit's 23 weekday blocks are considered feasible through the midlife point. This indicates a notable reduction and limited feasibility due to the additional energy requirements of cold weather, full passenger loads, and higher traffic conditions. Additionally, under strenuous conditions and without using diesel-fired heaters, a large portion of the battery's usable capacity is consumed by running the HVAC system to heat or cool the bus.

Strenuous Conditions with Diesel-Fired Heaters (DFH)

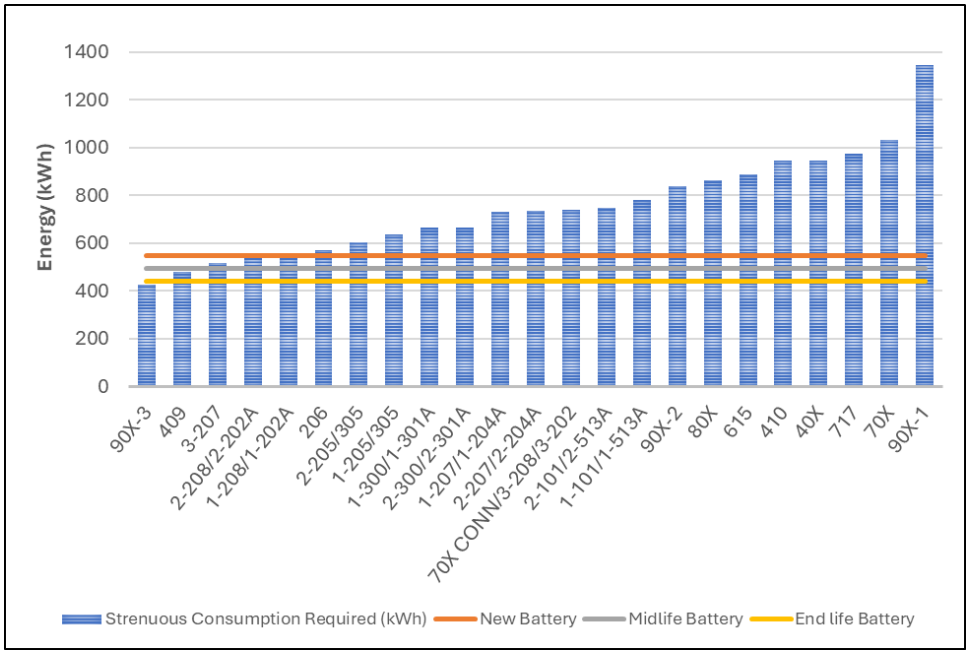


Figure 35 *– Block Energy Requirements Vs. BEB Depot, Strenuous Conditions w/ DFH*

Table 35 *- Number of Feasible Blocks, BEB Depot, Strenuous Conditions w/ DFH*

Nameplate Capacity	Usable Capacity (New)	Usable Capacity (Midlife)	Usable Capacity (End)	Feasible (New)	Feasible (Midlife)	Feasible (End)
686 kWh	549 kWh	494 kWh	439 kWh	3 of 23	2 of 23	1 of 23
				13%	9%	4%

Using diesel-fired heaters can reduce some of the auxiliary load needs of BEB in cold weather. With a midday charging opportunity at MOA-2 for the 90x-2 and 90X-3, this makes it possible to extend the feasibility to 3 of Skagit's 23 weekday blocks through the midlife point.

BEB On-Route

In theory, on-route charging can indefinitely extend the range of a BEB. In practice, its effectiveness depends on the length of the layover and how many buses are charging simultaneously during those layovers. Using on-route charging at specific locations within the current layover times from the 2024 route schedule increases the number of blocks possible compared to a depot-only charging model. Key on-route charging stops include Skagit Station, Chuckanut Park & Ride, March's Point Park & Ride, and Concrete Park & Ride. Some blocks remain unfeasible with on-route charging because the scheduled time at layovers doesn't provide enough charge to meet the block's requirements. Feasibility could be improved by extending layover periods. Currently, the analysis limits on-route charging to 175 kW, as recommended by the manufacturer, but advancements in battery chemistry could enable higher charging rates and improve block feasibility.

Nominal Conditions

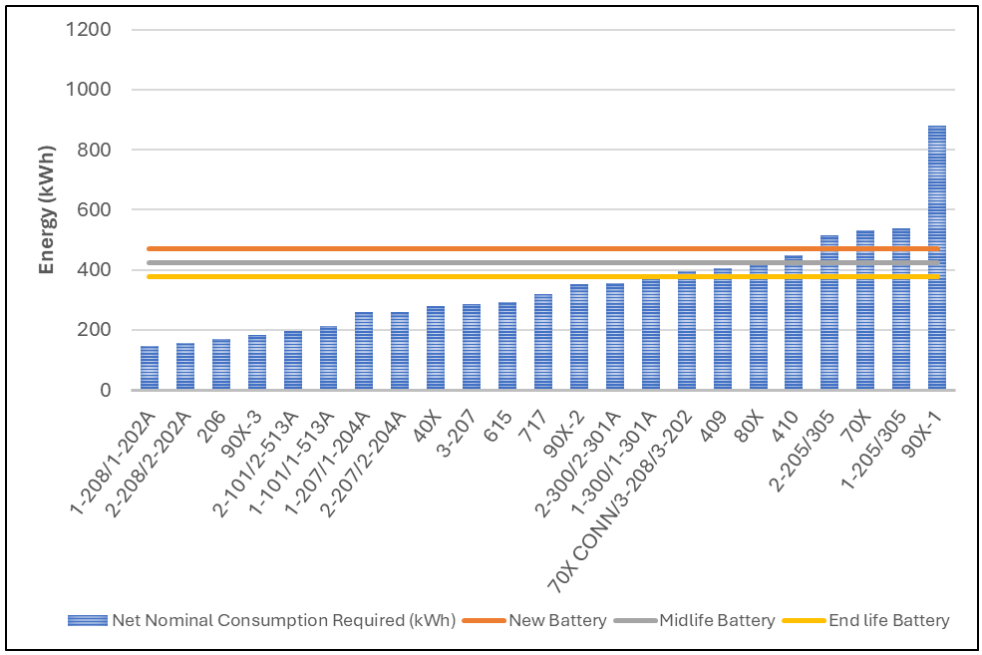


Figure 36 - Block Energy Requirements vs BEB On-Route, Nominal Conditions

***Table 36** - Number of Feasible Blocks, BEB On-Route, Nominal Conditions*

Nameplate Capacity	Usable Capacity (New)	Usable Capacity (Midlife)	Usable Capacity (End)	Feasible (New)	Feasible (Midlife)	Feasible (End)
588 kWh	470 kWh	423 kWh	376 kWh	19 of 23	18 of 23	14 of 23
				83%	78%	61%

The above chart displays the net energy (kWh) needed for each block after accounting for the energy a BEB can recover during the given layover duration and location of each block. Under nominal conditions, nearly 80% of Skagit's weekday blocks are achievable with current technology.

Strenuous Conditions

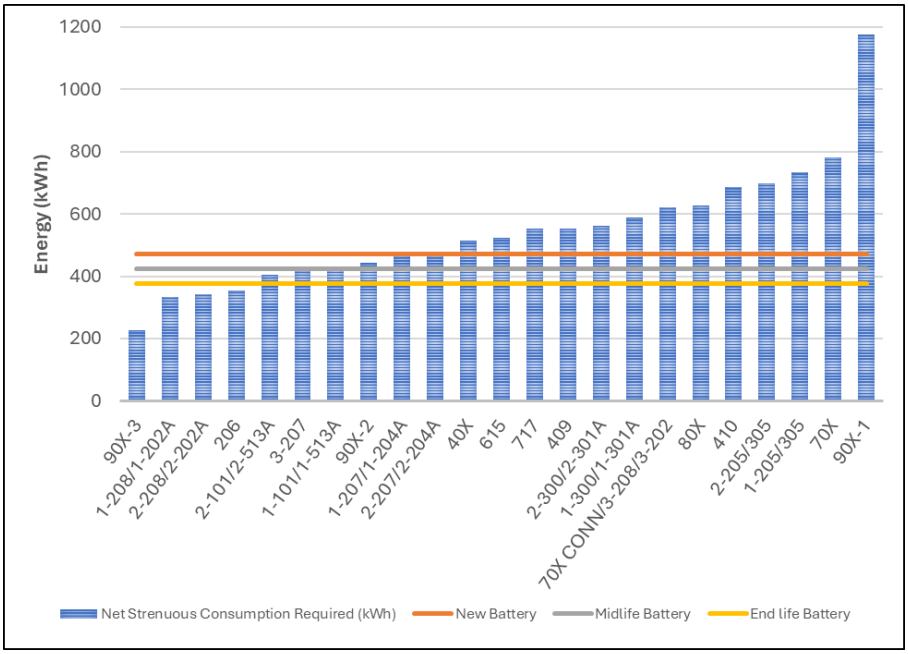


Figure 37 *- Block Energy Requirements vs BEB On-Route, Strenuous Conditions*

Table 37 *- Number of Feasible Blocks, BEB On-Route, Strenuous Conditions*

Nameplate Capacity	Usable Capacity (New)	Usable Capacity (Midlife)	Usable Capacity (End)	Feasible (New)	Feasible (Midlife)	Feasible (End)
588 kWh	470 kWh	423 kWh	376 kWh	8 of 23	6 of 23	4 of 23
				35%	26%	17%

Under strenuous conditions, such as the results of the BEB with Depot only charging, there is a notable decrease in block feasibility. At the midpoint of the bus's lifespan, six of Skagit's weekday blocks are feasible with on-route charging based on the current schedule. Further analysis shows that three additional blocks (1-101/1-513A, 1-207/1-204A, and 2-207/2-204A) surpass the feasibility threshold on their last task, which involves returning to the depot. They might be feasible through on-route charging at their final layover spot before returning to the depot, but this is not included in the model because there is no specified layover time for these final stops.

Strenuous Conditions with Diesel-Fired Heaters (DFH)

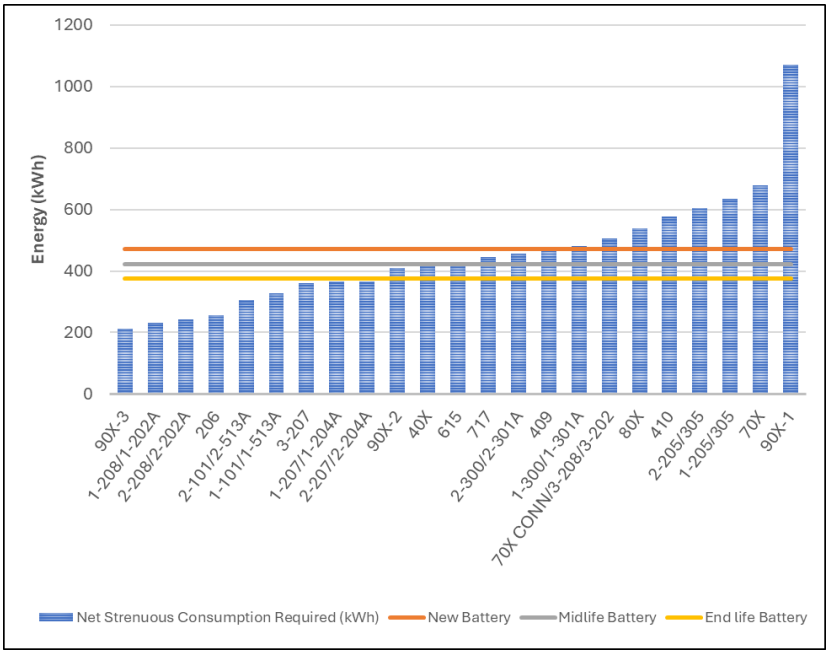


Figure 38 *- Block Energy Requirements vs BEB On-Route, Strenuous Conditions w/ DFH*

Table 38 *- Number of Feasible Blocks, BEB On-Route, Strenuous Conditions w/ DFH*

Nameplate Capacity	Usable Capacity (New)	Usable Capacity (Midlife)	Usable Capacity (End)	Feasible (New)	Feasible (Midlife)	Feasible (End)
588 kWh	470 kWh	423 kWh	376 kWh	14 of 23	12 of 23	9 of 23
				61%	52%	39%

In the BEB with on-route charging projections, including diesel heaters under strenuous conditions, the number of feasible blocks doubled. This highlights the importance of using diesel-fired heaters to conserve battery capacity for driving rather than using it for heating the bus.

Figure 39-41 summarizes the block feasibility through the transition period under nominal conditions, strenuous conditions, and strenuous conditions with diesel-fired heaters.

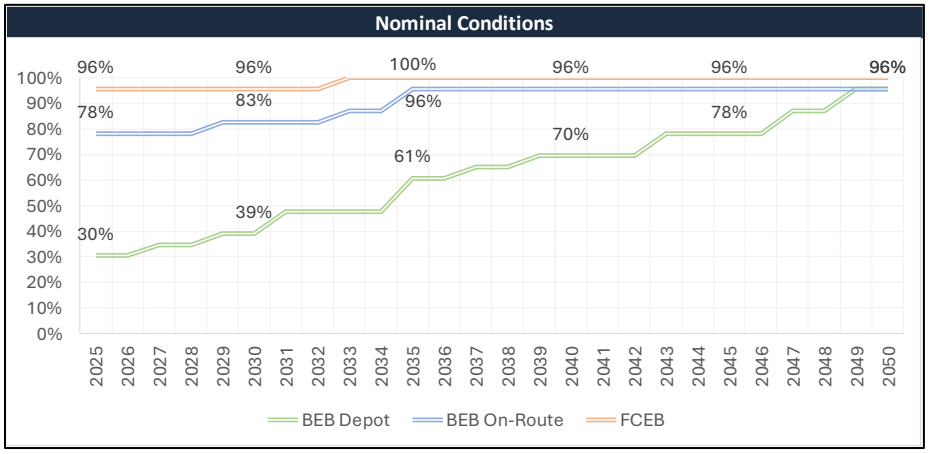


***Figure 39** - Projected Block Achievability (Nominal Conditions)*

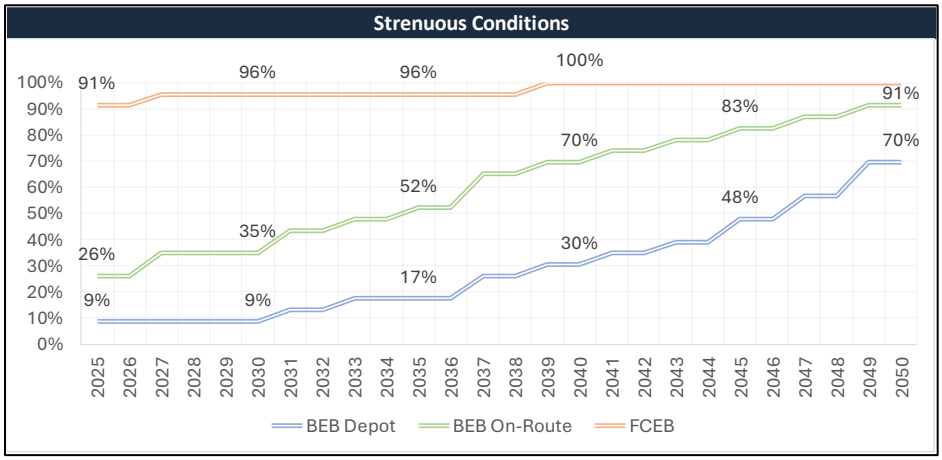


***Figure 40** - Projected Block Achievability (Strenuous Conditions)*

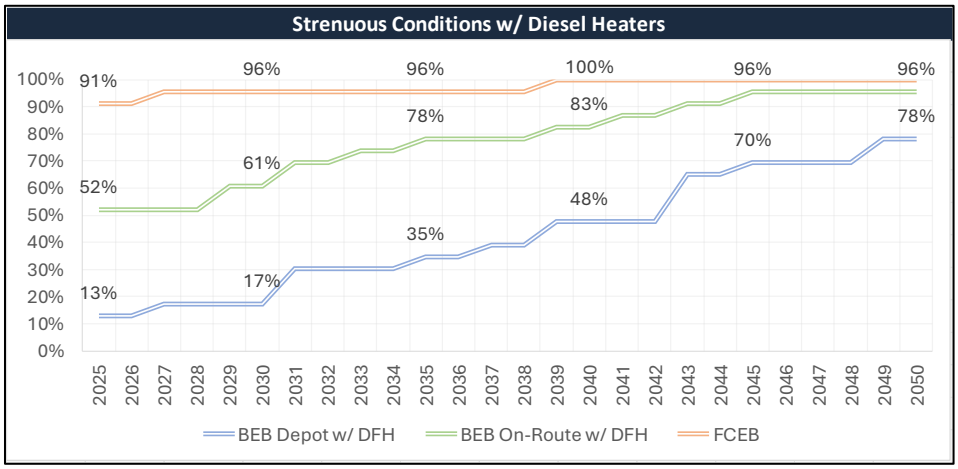
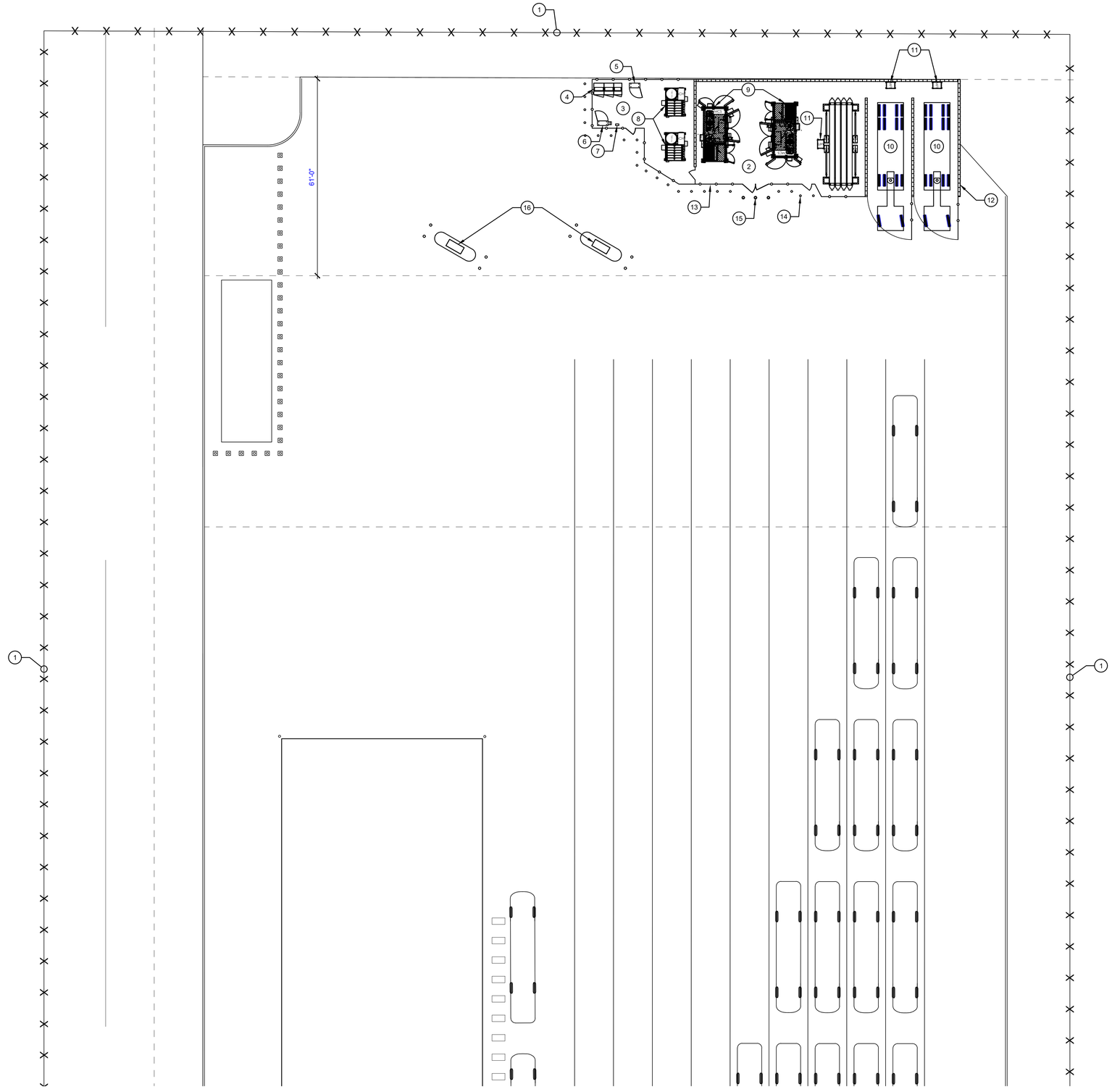


***Figure 41** - Projected Block Achievability (Strenuous Conditions w/ DFH)*

Appendix B: FASTECH Hydrogen Refueling Station Conceptual Design

[Next Page]



1 SITE PLAN

SCALE: 1/16" = 1'-0"

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KEY NOTES

#	NOTE:
1.	PROPERTY LINE
2.	EQUIPMENT COMPOUND
3.	ELECTRICAL COMPOUND
4.	MAIN SWITCHBOARD
5.	DATA ACQUISITION PANEL
6.	DISPENSER CONNECTION PANEL
7.	FIRE PANEL
8.	KUSTEC CHILLER
9.	MAXIMATOR COMPRESSOR SYSTEM
10.	DROP & SWAP H2 STORAGE
11.	VALVE SEQUENCE PANEL
12.	8" CMU FIRE WALL
13.	LOUVERED FENCING
14.	BOLLARDS
15.	REMOVABLE BOLLARDS
16.	H2 DISPENSER

SKAGIT TRANSIT

FASTECH
FUELING & SERVICE TECHNOLOGIES, INC
7050 VILLAGE DR., SUITE D
BUENA PARK, CA 90621
WWW.FASTECHUS.COM
800.788.8815

SEAL

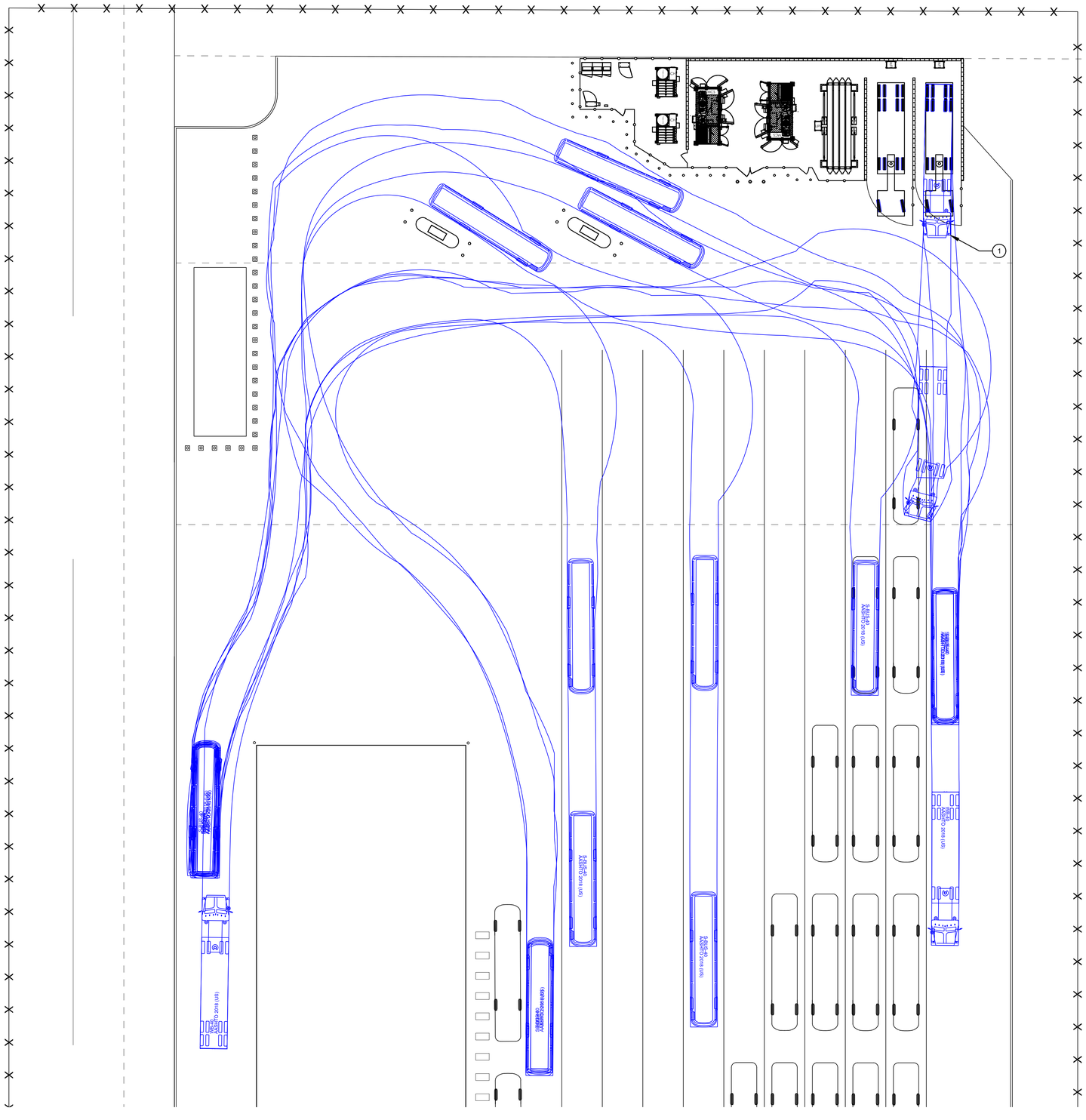
MARK	DATE	REVISION
1	06/30/2025	SKAGIT TRANSIT - HD HYDROGEN STATION CONCEPT

SKAGIT TRANSIT
11784 BAY RIDGE DRIVE
BURLINGTON, WA 98233

PROJECT NUMBER
302003

SHEET NAME
GENERAL SITE PLAN

SHEET NUMBER
CP-3.0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SKAGIT TRANSIT
40' BUS
SKAGIT TRANSIT
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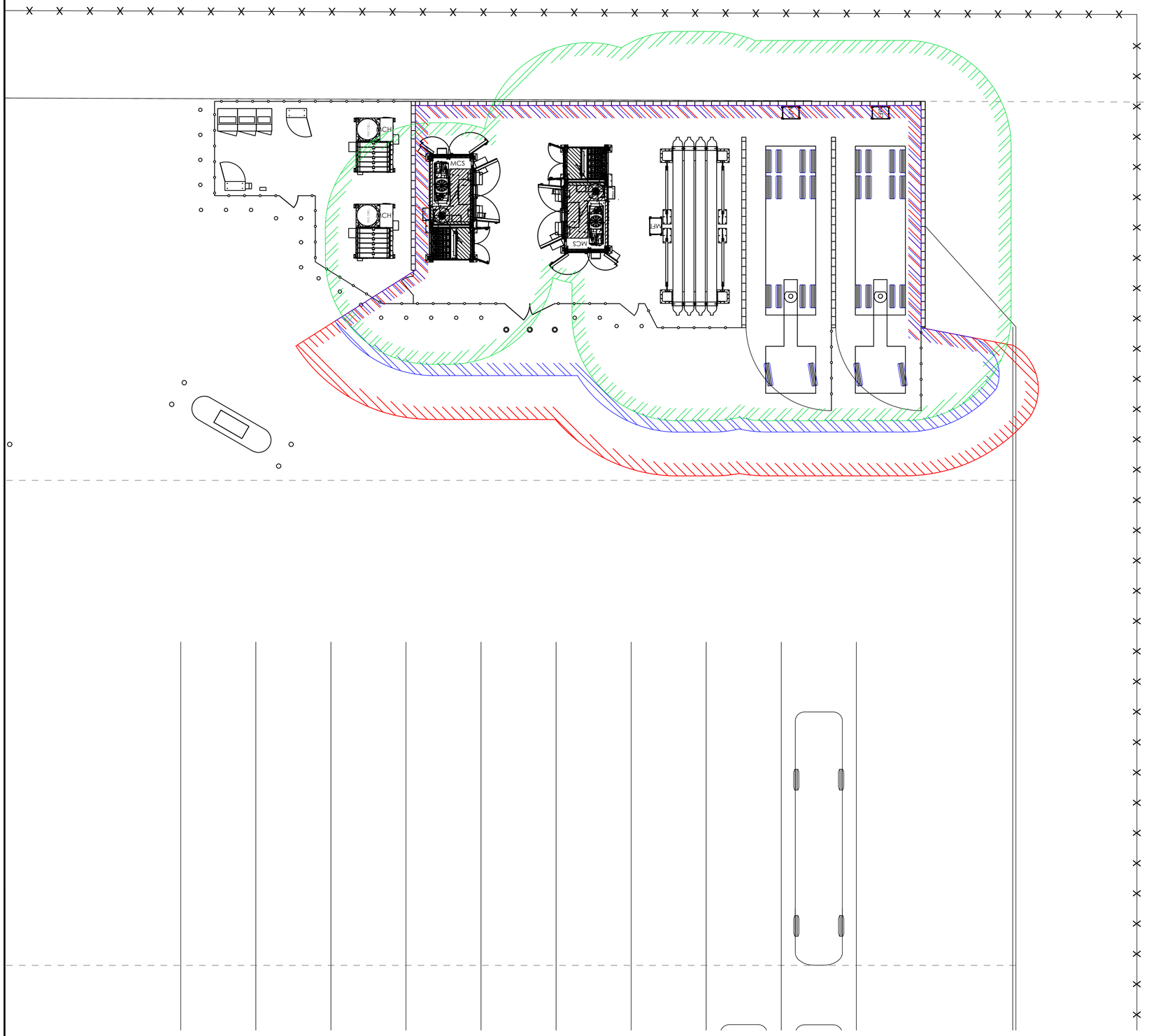
SKAGIT TRANSIT
40' BUS



1 SITE PLAN

SCALE: 1/8" = 1'-0"

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EQUIPMENT SETBACK ANALYSIS

H2 TRANSIT BUS FUELING STATION (NFPA 2 v.2023)

#	SYSTEM COMPONENT	EXPOSURE	CODE SECTION	PRESCRIBED SETBACK (FT.)
A	DISPENSING EQUIPMENT	NEAREST IMPORTANT BUILDING OR LINE OF ADJOINING PROPERTY THAT CAN BE BUILT UPON OR FROM ANY SOURCE OF IGNITION	NFPA-2 TABLE 10.5.2.2.1.4	10
B	DISPENSING EQUIPMENT	NEAREST PUBLIC STREET OR PUBLIC SIDEWALK	NFPA-2 TABLE 10.5.2.2.1.5	10
C	DISPENSING EQUIPMENT	NEAREAST RAIL OF ANY RAILROAD MAIN TRACK	NFPA-2 TABLE 10.5.2.2.1.6	10
D	PROCESS PIPING: SEQUENCE PANEL; BULK STORAGE ID:0.359", 550-1000 BAR	**EXPOSURES GROUP 1:** - LOT LINES - AIT INTAKES (HVAC, COMPRESSORS, OTHER) - OPERABLE OPENINGS IN BUILDINGS AND STRUCTURES - IGNITION SOURCES SUCH AS OPEN FLAMES AND WELDING **EXPOSURES GROUP 2:** - EXPOSED PERSONS OTHER THAN THOSE SERVICING THE SYSTEM - PARKED CARS **EXPOSURES GROUP 3:** - BUILDINGS OF NON-FIRE-RATED CONSTRUCTION - BUILDINGS OF COMBUSTIBLE CONSTRUCTION - FLAMMABLE GAS STORAGE SYSTEMS ABOVE OR BELOW GROUND - HAZARDOUS MATERIALS STORAGE SYSTEMS ABOVE OR BELOW GROUND - ORDINARY COMBUSTIBLES, INCLUDING FAST-BURNING SOLIDS SUCH AS ORDINARY LUMBER; EXCELSIOR; PAPER; OR COMBUSTIBLE WASTE AND VEGETATION OTHER THAN THAT FOUND IN MAINTAINED LANDSCAPE AREAS - UNOPENABLE OPENINGS IN BUILDING AND STRUCTURES - ENCROACHMENT BY OVERHEAD UTILITIES (HORIZONTAL DISTANCE FROM THE VERTICAL PLANE BELOW THE NEAREST OVERHEAD ELECTRICAL WIRE OF BUILDING SERVICE) - PIPING CONTAINING OTHER HAZARDOUS MATERIALS - FLAMMABLE GAS METERING AND REGULATING STATIONS SUCH AS NATURAL GAS OR PROPANE	NFPA-2 TABLE 7.3.2.3.1.2(B)(c) >7500 to ≤ 15,000 psig	GRP 1: 25.7 GRP 2: 18.7 GRP 3: 16.9

PER NFPA 2 (2023) SECTION 7.3.2.3.1.3
DISTANCES IN TABLES 7.3.2.3.1.2(B) TO AIR INTAKES SHALL APPLY ONLY TO MECHANICAL PIPING CONNECTIONS OR POTENTIAL LEAK POINTS THAT ARE PART OF THE OUTDOOR BULK HYDROGEN COMPRESSED GAS SYSTEM.

PER NFPA 2 (2023) SECTION 7.3.2.3.1.4(A) PASSIVE MEANS
THE DISTANCES TO GROUP 1 AND 2 EXPOSURES SHOWN IN TABLES 7.3.2.3.1.2(B)(a - c) ARE PERMITTED TO BE REDUCED TO 0 FT (0 M) WHERE FIRE BARRIER WALLS ARE LOCATED BETWEEN THE SYSTEM AND THE EXPOSURE AND CONSTRUCTED IN ACCORDANCE WITH 7.3.2.3.1.4(A)(1-10).

SYMBOLS AND LEGENDS

1 GROUP 1 EXPOSURES / AIR INTAKE

2 GROUP 2 EXPOSURES

3 GROUP 3 EXPOSURES

SKAGIT TRANSIT

FASTECH
FUELING & SERVICE TECHNOLOGIES, INC
7050 VILLAGE DR., SUITE D
BUENA PARK, CA 90621
WWW.FASTECHUS.COM
800.788.8815

SEAL

MARK	DATE	REVISION
1	06/30/2025	SKAGIT TRANSIT - HD HYDROGEN STATION CONCEPT

SKAGIT TRANSIT
11784 BAY RIDGE DRIVE
BURLINGTON, WA 98233

PROJECT NUMBER
302003

SHEET NAME
EXPOSURE PLAN

SHEET NUMBER
CP-3.2

Appendix C: FASTECH Maintenance Building A Code Review

[Next Page]

FASTECH

Skagit Transit
Zero-Emission Vehicle Maintenance
Building A Code Review

ABSTRACT

Skagit Transit has employed KPFF, a full service architectural and engineering firm, to finalize permit plans for a Maintenance, Operations and Administration Facility which has been in the planning stages for several years. KPFF has taken previous incomplete plans and completed them for permitting and construction. The facility was originally designed to accommodate diesel vehicles only for maintenance of the Skagit Transit fleet. Recently, Skagit Transit has embarked on transitioning their vehicle fleet to zero emission vehicles. As a result, the facility design will need to accommodate both electric and hydrogen fueled vehicles. The current plans do not comply with relevant codes to allow the maintenance of zero-emission vehicles.

FASTECH

Summary

FASTECH has reviewed the plans provided and analyzed elements of Building A. Our focus has been to identify only those elements that do not conform to a code compliant repair garage for both major repair and light repair of hydrogen vehicles. Major repair refers to work on the hydrogen storage systems, the fuel system, repairs that require defueling of the vehicle and maintenance that require open-flame cutting or welding. Minor repair refers to tasks like lubrication, inspections, other vehicle engine tune-ups, part replacement, tire rotation and similar routine maintenance work (See NFPA 2 Section 3.3.214 Repair Garages). It is FASTECH's understanding that Building A will be used for major and minor repairs of hydrogen fleet vehicles. Comments have been separated into architectural, electrical and mechanical deficiencies. A page turn of the Building A drawings was conducted and selected sheets were marked-up to highlight existing non-compliant conditions. A reference list of relevant drawing sheet comments are included herein which include the sheet number, comment and relevant code that applies. The current plans do not conform to a code compliant repair garage for either major or minor repairs.

Applicable Code References*

NFPA 2-23 (CH 6, CH 18)	Hydrogen Technologies Code
NFPA 70 -23 (ART 500)	National Electrical Code
NFPA 30A-24 (CH 7)	Flammable and Combustible Liquids Code
NFPA 51B-24	Standard for Fire Prevention during Welding, Cutting, and Other Hot Work
IFC-21 (CH 23)	International Fire Code
IMC-21	International Mechanical Code

*****Abbreviated list of the most applicable codes. There are other codes that may apply and have similar or redundant language. We recommend the designer familiarize themselves with all applicable codes.

General Observations

The facility currently shows five (5) bays for short term heavy maintenance, five (5) bays for long term heavy maintenance, two (2) bays for light maintenance and one (1) bay for body work. A trailer maneuvering space is also allocated. The proximity of these areas to each other without proper barriers subject this building to a comprehensive modification plan to accommodate zero-emission maintenance in any bays. These modifications will affect wall construction materials, electrical and mechanical changes and installing a hydrogen gas detection system. The hydrogen detection system will be interconnected to certain devices to cause an action for a safe remedy in the event of a hydrogen release inside the building.

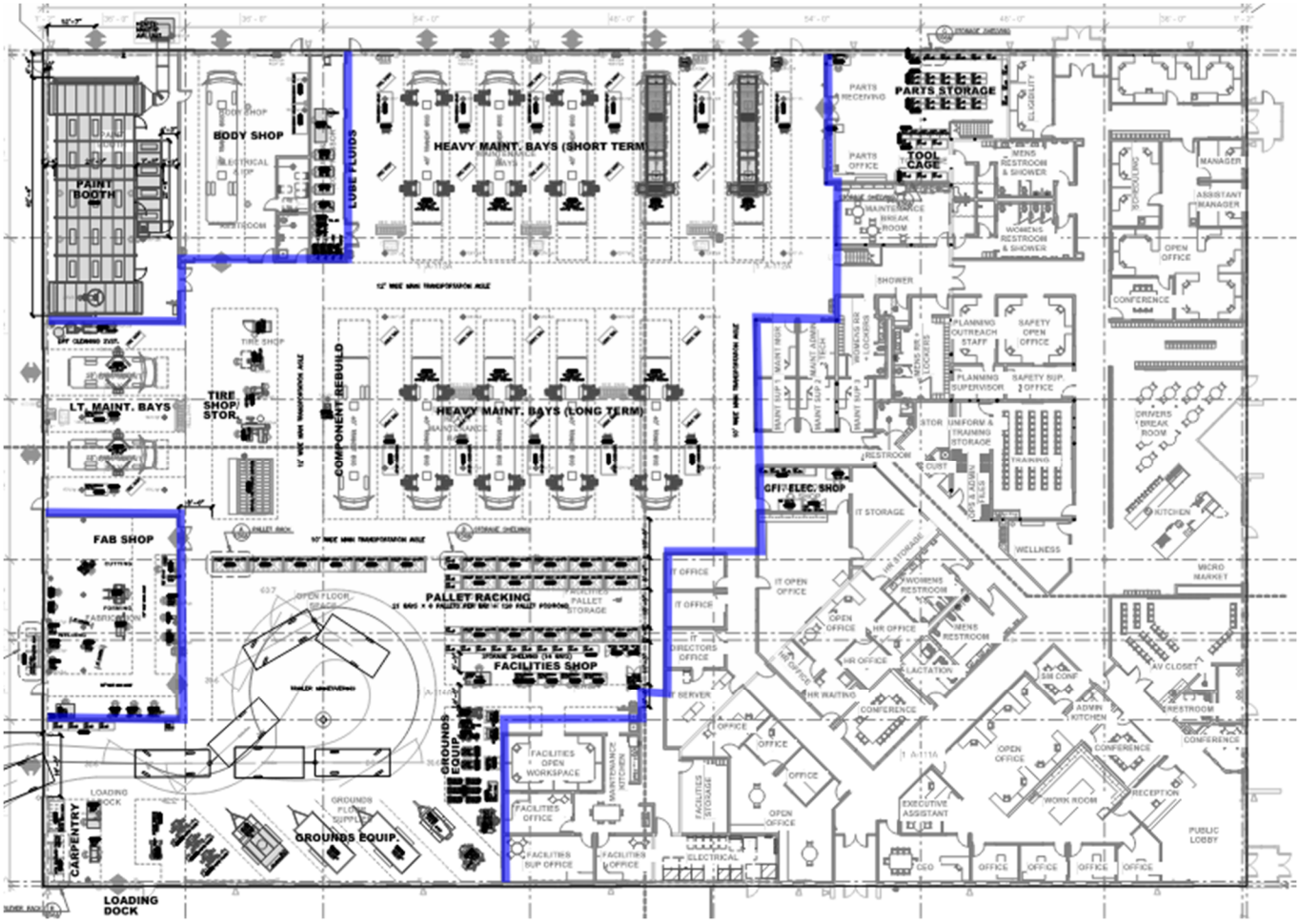

Figure 1

Architectural Observations

As stated above, all the bays described above are in close proximity to each other and have no fire wall barrier separation (See figure 1). NFPA 2 Section 18.3.1.7.1 requires repair booths to be separated by a minimum 3 ft. from other operations or by a one hour fire wall partition. Areas with the potential of arcing, sparking or welding would need 35 ft. separation from the H2 vehicle location per NFPA 30A Section 9.8.1. Since all bays are essentially connected, all the surrounding operational areas would need one hour fire walls separating from designated work areas (See Sheet A-110A mark-ups). These areas potentially include Tire Shop, GFI/Elec Shop, Pallet Racking, Facilities Shop, etc.., depending on equipment used as well as all non-repair shop employee work stations and offices. The mezzanine level is a combination open space and mechanical rooms. Area A and B on the mezzanine level (See Figure 3) would need to be partitioned with a one-hour fire wall sealed at the ceiling from all bay areas below per NFPA 18.3.1.5.

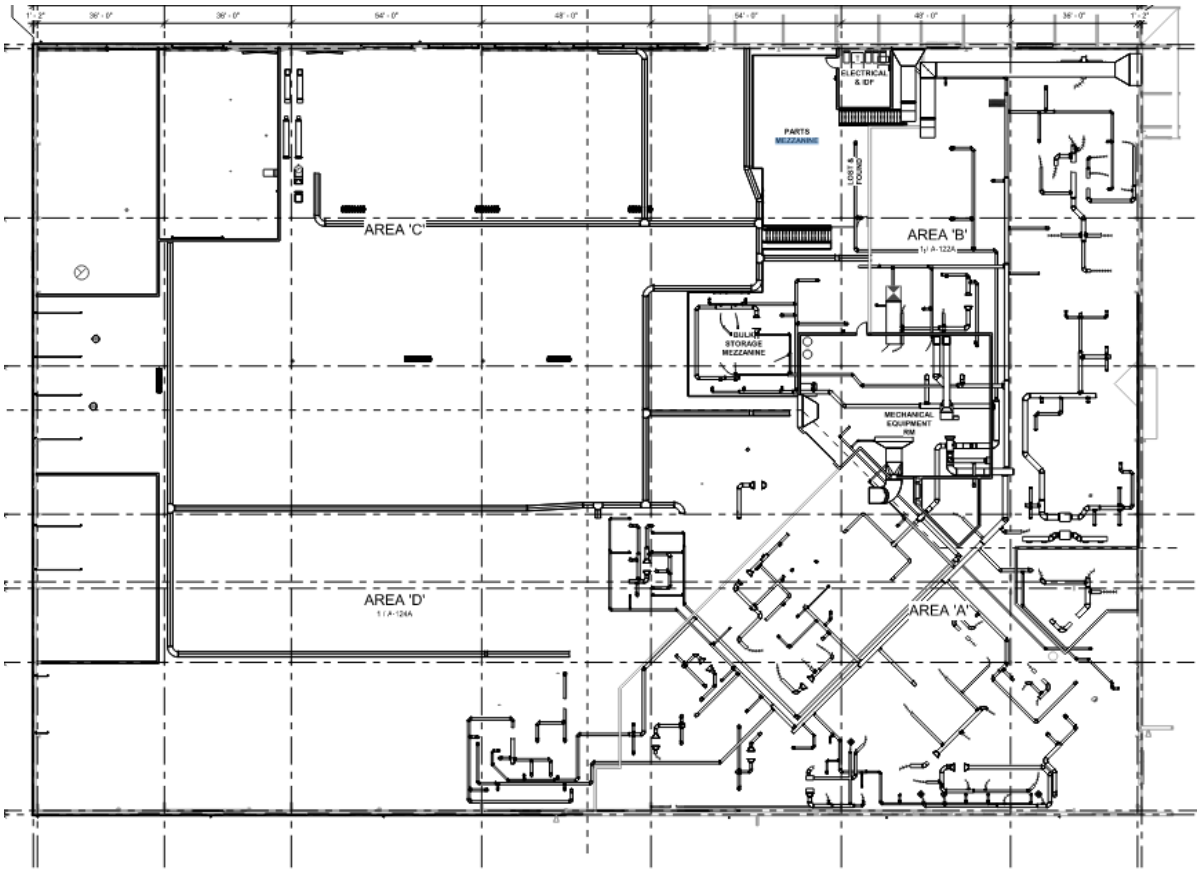

Figure 2

Electrical Observations

Location of all electrical devices and conduit mounting heights need to be confirmed. Code compliance would require all electrical devices including lights (See Figure 3) to be installed a minimum 18" below the ceiling. Cable trays shown in Sheet E-230.2A, while appear to be below 18" from ceiling, the requirement should be noted so contractor makes no field deviations from noted elevation of 17' 8 1/16" BOC. All existing bay door motors are not EXP or classified. Selected motors based on make-up air requirements would need to be rated for classified areas during alarm conditions. The current radiant heaters shown on Sheet E-224A are not compliant for hydrogen vehicle maintenance, nor are they interconnected to shut off during an emergency event. All fans, motor and associated conduit would also need to be a minimum 18" below ceiling and noted as such in drawings.

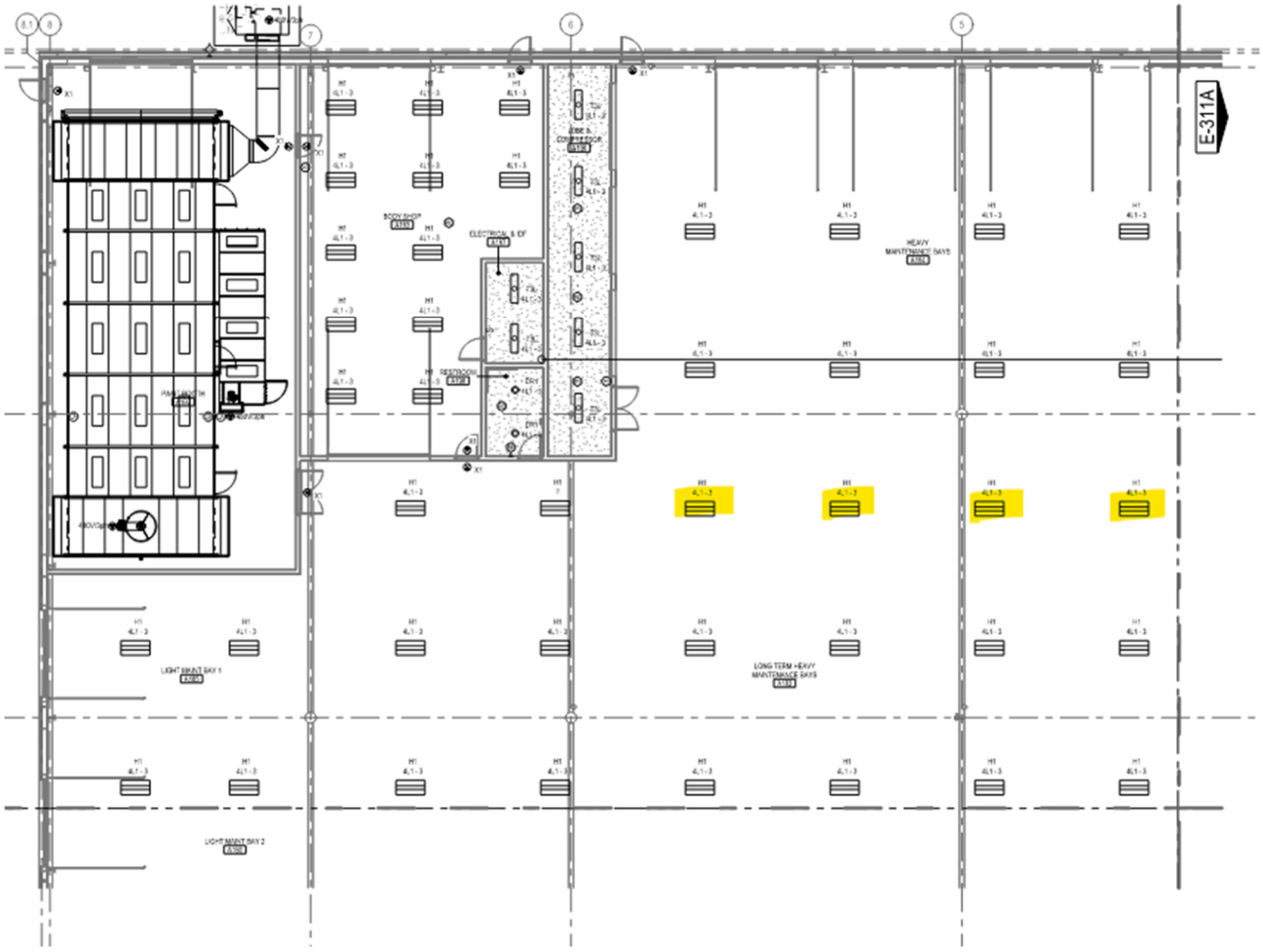

Figure 3

Mechanical Observations

The working bay area is served by a Heat Recovery Ventilator (HRV-1) and resides on the mezzanine level in a mechanical room. The HRV-1 exhaust intake does not appear to pull air from areas above the classified

area, within 18" below ceiling. The Energy Recovery Ventilator (ERV-1) is also in the mechanical room. While these units are enclosed, the wall facing the bays doesn't appear to be fire resistant. No hydrogen detection sensors exist in any exhaust inlets, building high points and return air inlets, these will be required per NFPA 2 Section 18.3.3.2. All existing building fan coil units appear acceptable if they don't circulate air from the repair garage area.

General Requirements and Recommendations

A facility of this size with multiple work bays that will be updated to allow major maintenance on hydrogen vehicles will require extensive changes to the existing plans. These changes will include the following:

1. One hour fire walls between vehicle repair areas and non-vehicle repair areas. (NFPA 2 Section 18.3.1.5)
2. All walls and ceilings should be void of pockets, gas traps and non-combustible materials. (NFPA 2 Section 18.3.1.2.1 & 2
3. Non exhaust return air openings must be greater than 18 in. below ceiling (NFPA 2 Section 18.3.4.2
4. Exhaust air intakes for the H2 ventilation system must be within 12" of ceiling. (NFPA 2 Section 6.18.2.1.4.2)
5. There shall be air tight separation between repair garage air handling system and other facility air handling systems. There can be no comingling of return or exhaust air between systems.
6. All access ways into the repair garage should be self-closing to limit any communication of air between the treated and un-treated spaces.
7. All exhaust and return air inlets serving the repair garage as well as ceiling high points over repair bays must have hydrogen detectors at inlet (NFPA 2 Section 18.3.3.2).
8. All devices including lighting, heaters, conduits, junction boxes and motors shall be below 18 in from ceiling. (NFPA 2 Section 18.3.6.1.2)
9. Hydrogen detectors shall be connected to a gas detection alarm system panel and shall engage at 25% the lower flammability limit (LEL). (NFPA 2 Section 18.3.3.3)
10. The alarm system shall shut off heaters, HVAC systems including HRV-1, motors, power outlets in general work space in repair garage.
11. The alarm system shall turn on a distinct audible and visual alarm. Alarms should be visible from everywhere inside the repair area, at entrances approached by vehicles, and inside all occupied spaces adjacent to the repair area.
12. H2 ventilation exhaust fans shall be classified with EXP motors and recommend Spark B resistance, they shall activate upon alarm condition (NFPA 2 Section 18.2.1.8.3)
13. A callout from the alarm monitoring panel to a 3rd party may be desired by the owner/operator.
14. A manual shut off switch for ventilation system shall be located outside hydrogen vehicle maintenance area. (NFPA 6.18.2.1.2)
15. The minimum rate of exhaust in vehicle repair area shall no less than 1 cfm/ft^2 of floor space (NFPA 2 Section 6.18.1). Additionally, at an LEL of 40% an increase in exhaust rate shall be a minimum of 1 cfm per 12 ft^3 of space (Recommended based on interpretation of IFC 2311.8.8)
16. The ventilation rate may need to be based on analysis considering volume of hydrogen stored in vehicles. This rate will most likely be substantially higher than referenced previously (NFPA 2 Section 18.5.5.1).
17. Selected bay doors shall open upon alarm, recommended 2 ft. maximum. This is to induce circulation of new makeup air from below as the exhaust air is removed from above.

18. All heaters shall be replaced with units having exposed surfaces no greater than 750 degrees F (NFPA 2 Section 18.3.4.4.2)
19. Areas with the potential of arcing, sparking or welding would need 35 ft. separation (NFPA 30A Section 9.8.1)
20. Hydrogen defueling equipment is required for any major repair garage and should be installed as part of fueling facility equipment. (NFPA 2 Section 18.3.2.2.1)The intention is for the defueling equipment to be available for use but does not need to be in the facility. We recommend a location that is outdoors.
21. All personnel working in a repair garage should be trained on the handling of hydrogen vehicles, characteristics of hydrogen and general hydrogen gas safety.

Design Considerations

Skagit Transit has options to remedy the current design to allow maintenance of hydrogen vehicles. A complete modification of the existing design to accommodate hydrogen vehicle maintenance is likely the most expensive option based on the observations outlined in this document. Skagit Transit could choose the option of dedicating one or more service bays with appropriate barriers and controls dedicated to servicing hydrogen vehicles as a major repair garage. A separate building could also be a solution but may have unacceptable implications considering the schedule, entitlement and real estate required. All alternatives will require prescriptive application of NFPA 2 Chapter 18 as well as other applicable codes. However, if Skagit Transit installs a defueling system and each and every vehicle is defueled to approximately 400 standard cubic feet (1 kg) or less of hydrogen, major repairs can be performed under the requirements of a minor repair garage per NFPA 2 Section 18.2.5.1.2. In that case, minor repair garages are only subjected to NFPA 30A requirements per NFPA 2 Section 18.2.6.1. If Skagit Transit works on vehicle fueling systems, the facility requirements are not significantly different between major and minor repairs. The only significant difference we can detect is NFPA 30A does not require 1 hour fire walls. However, fire walls are a reasonable measure to take with hydrogen and risk of operational complacency. Another rationale for a smaller separate dedicated space for hydrogen vehicle maintenance is all personnel would likely have more awareness to the dedicated space and less likely to comingle equipment or activity causing a non-compliant condition. FASTECH recommends, as a best-practice, defueling vehicles to below 400 cubic ft. (1 kg) to reduce risk of hydrogen gas escaping in the maintenance garage for all (major and minor) extended repair activities, regardless of garage design.

FASTECH has provided observations and analysis to the best of its ability. No specific design or recommendation has been made and the intent has been to provide an overview of code requirements in an existing design package.

FASTECH
Mike Norrell, PE
Allen Young, PE

Appendix D: Microgrid Opportunity Overview

What is a Microgrid?

A **microgrid** is essentially a local, self-contained electric grid that can operate independently or in tandem with the main utility grid. It consists of a group of interconnected loads (e.g. buildings, charging stations) and distributed energy resources (such as solar panels, batteries, generators) within a defined boundary, controlled as a single entity[1]. Crucially, a microgrid can disconnect from the utility grid and operate in "island mode" using its own generation and storage. This capability allows critical facilities to keep running during wider power outages. In normal operation, a microgrid can also remain connected and interact with the grid, drawing power or exporting surplus power as needed. Advanced microgrids use smart controls to optimize the flow of energy between local sources, storage, and the grid, improving reliability and power quality for the host site.

In practical terms, a microgrid for Skagit Transit's 22-acre site would include on-site power generation and storage that could keep transit operations powered even if the broader electric grid goes down. It would also manage energy more efficiently during normal times. Below we outline the potential components of such a microgrid, its benefits, costs and sizing considerations, example projects, and paths to implementation.

Potential Microgrid Components for Skagit Transit

For Skagit Transit's site, a microgrid could incorporate several key components working together:

- **Solar Photovoltaic (PV) Array:** An on-site solar PV installation can generate renewable electricity, offsetting a portion of the facility's energy use with clean power. With 22 acres available, a substantial solar farm (potentially on the order of a few megawatts) could be installed. For context, regions in western Washington receive about *3 to 4 peak sun hours* per day on average (e.g. ~3.5 in Vancouver, WA), meaning a 1 kW solar panel system can produce on the order of 1,000–1,300 kWh per year under local conditions[2]. Solar output is higher in summer and lower in the cloudy winter months, so solar alone would be supplemented by other resources. Surplus solar energy (if any) could potentially be exported to the grid – subject to interconnection limits and net metering rules – or used to charge batteries or even to run an electrolyzer for hydrogen production. (Washington's net metering law currently guarantees retail credit for systems up to 100 kW, with larger systems typically credited at a lower generation-only rate for excess energy, so a large solar array might use most of its output on-site rather than selling it to the grid.)

- **Battery Energy Storage System (BESS):** A large battery system provides energy storage to the microgrid, enabling peak shaving (reducing spikes in grid power draw) and backup power capabilities. During normal operations, the battery can charge when electricity demand is low or when solar output is abundant, and discharge during peak load periods to reduce demand charges and time-of-use costs. This helps lower the transit facility's utility bills by shaving high peaks in consumption and shifting usage to off-peak times. In the event of a grid outage, the BESS can instantly supply power to keep critical systems running. Sizing the battery storage appropriately is a key consideration – it must be large enough (in kW and kWh) to support priority loads for the desired duration of an outage, or at least bridge the gap until a backup generator starts. Common designs for microgrids use lithium-ion battery storage sized for a few hours of supply at full load. For example, a recent microgrid design for Santa Barbara MTD's transit facility proposed a 650 kW / 2,610 kWh battery (about a 4-hour duration) to support bus charging operations[3]. Similarly, the Anaheim Transportation Network in California deployed a transit depot microgrid with ~545 kW of solar PV and a 2.57 MWh battery to support its electric bus fleet[4]. These examples illustrate the scale of storage that transit agencies are pairing with solar to increase resilience and manage energy use. Costs for battery storage in 2025 typically range around $200–$500 per kWh installed, reflecting significant cost declines in recent years. The optimal battery size for Skagit will depend on the site's peak load profile, desired outage protection window, and budget – and it may be prudent to design a system that can be expanded over time as transit electrification loads grow.
- **Backup Generator / Dispatchable Source:** To achieve longer-duration resilience or to cover periods of low solar production, most microgrids include a dispatchable generator. Several options could be considered:
    - ***Natural Gas Engine Generator****:* A conventional natural gas-fired generator (or microturbine) could provide reliable backup power. Natural gas generators are a proven technology for emergency power with relatively low emissions (compared to diesel) and a continuous fuel supply via the gas utility. However, they are still fossil-fueled (unless running on renewable biogas) and may face fuel supply interruptions in rare disaster scenarios (or be subject to carbon reduction goals).
    - ***Diesel or Renewable Diesel Generator:*** Diesel gensets are common for backup power; if used, Skagit could opt to run it on renewable diesel fuel to cut lifecycle carbon emissions. Renewable diesel is a drop-in fuel made from

bio-feedstocks that can reduce greenhouse gas emissions ~50–80% compared to fossil diesel. This option would leverage familiar generator technology and high reliability, but would require on-site fuel storage and raises emissions concerns (though using renewable diesel or biodiesel mitigates some of those).

- ***Fuel Cell Generator**:* An emerging alternative is a stationary fuel cell system. Fuel cells electrochemically convert fuel (such as natural gas or hydrogen) into electricity with low emissions and high reliability. For instance, one microgrid in Woodbridge, CT uses a **2.2 MW fuel cell** as its primary power source, capable of islanded operation for critical facilities[5]. If Skagit pursues a hydrogen strategy, a **hydrogen fuel cell** could eventually serve as a green backup generator, running on hydrogen produced on-site. In the near term, a natural-gas-fueled fuel cell (like a molten carbonate or solid oxide fuel cell) could be considered – these have the advantage of continuous high-quality power and lower emissions (virtually no pollutants and quieter operation) compared to combustion generators, though initial costs are higher.

Each of these generation options involves trade-offs in fuel cost, emissions, and reliability. The microgrid could also include more than one type of generator for redundancy. Notably, if a generator is added, the battery storage can be smaller than what a purely solar+battery system would require; the generator can extend the islanding duration indefinitely, provided fuel is available, while the battery manages instantaneous load changes and optimizes generator run times. However, a generator brings maintenance requirements and, unless using a hydrogen fuel cell or renewable-fueled engine, some emissions at the site. All these components—solar, storage, and generator—would be coordinated by a microgrid controller, which manages software and hardware that balance generation and load, switch the microgrid to island mode during outages, and maintain stable operation. A sophisticated controller can also perform economic optimization (e.g., deciding when to charge or discharge the battery) and ensure safe interconnection with PSE's grid. While microgrid control systems add some cost—around tens of thousands of dollars—they are vital for the system's operation.

Benefits of a Microgrid for Skagit Transit

Implementing a microgrid at Skagit Transit's facility could provide a range of operational and economic benefits. Below are key benefits and value streams, many of which align with Skagit Transit's goals of reliability, cost savings, and clean energy use:

- **Reliability and Resiliency:** A microgrid would dramatically improve the resilience of transit operations to power outages. In the event of a grid failure (due to storms, earthquakes, regional blackouts, etc.), the microgrid could island and keep critical systems powered – for example, maintaining bus charging infrastructure, fueling (hydrogen compressors/pumps), lighting, communications, and emergency systems at the base. This ensures continuity of transit services or at least the ability to deploy buses for emergency response when the community might otherwise be without transportation. The U.S. DOE notes that microgrids can supply critical loads during outages, mitigating the economic and social costs of disruptions[6]. For Skagit Transit, this means buses can be charged or fueled and kept in service to support the community even during prolonged outages, enhancing emergency preparedness. Additionally, the presence of on-site generation and storage provides power quality benefits (voltage/frequency support) and reduces vulnerability to momentary grid disturbances. Overall, the microgrid acts as an insurance policy against downtime, increasing the reliability of electric or fuel-cell bus fleets which would otherwise be dependent on the grid.
- **Peak Shaving and Demand Charge Reduction:** One of the immediate economic benefits of a battery-backed microgrid is the ability to shave peak power demand drawn from the utility. Skagit Transit's electrical demand will rise substantially as it adds battery-electric bus (BEB) chargers or large hydrogen electrolyzers – potentially leading to high demand charges under PSE's tariffs. By strategically discharging the BESS during peaks (for example, when several buses are fast-charging simultaneously), the facility's grid draw can be leveled out. This can yield significant savings on the utility bill, since demand charges (based on the highest kW peak each month) can represent a large portion of costs under standard commercial rate schedules. PSE has been actively exploring how battery storage can reduce peak loads; in a 2019 pilot at a company facility, PSE demonstrated using a 183 kWh battery for peak shaving and demand charge management[7]. A larger microgrid-scale BESS at Skagit could likewise cut down the peaks. This is especially relevant if Skagit is on PSE's Schedule 26 (a general service large power tariff) which likely has substantial demand charges – a common scenario where peak shaving improves economics. Even as PSE's rate structures evolve, the ability to control and flatten the load profile will be valuable. For instance, PSE is introducing an EV fleet charging rate (Schedule 558) with time-of-use pricing to encourage off-peak charging[8]. Under such a tariff, a microgrid could charge buses or produce hydrogen in off-peak hours (or using solar in mid-day) and rely on the battery during expensive peak periods (e.g. 4–9 pm) – again minimizing cost. In

short, the microgrid can optimize energy usage timing, drawing from the grid when power is cheapest and using on-site energy when grid power is costly. Over time, as utilities move toward more time-variable rates, this flexibility to avoid peak prices will become even more valuable. (It's worth noting that if Skagit enrolls in the new Schedule 558 pilot, demand charges are structured differently and peak energy prices are higher during certain hours; the microgrid's control strategy would adjust accordingly. Future time-of-use regimes could either increase or decrease the savings from the microgrid, so the project team will need to monitor tariff changes – see *Economic Considerations* below.)

- **Energy Cost Savings and Revenues:** In addition to demand charge mitigation, a microgrid can reduce overall energy costs through onsite generation. Solar PV produces electricity at a low marginal cost (essentially free sunlight), which displaces purchasing that energy from the utility. If the solar array is sized to generate a substantial portion of annual consumption, Skagit could see lower average energy costs (after paying back the capital investment). Moreover, if at times the microgrid produces more power than the site is using (for example, a sunny summer weekend day), it may be possible to export and sell the surplus. Under current net metering policy, excess generation in a month would be credited on the bill (at full retail up to 100 kW, or at least at the utility's avoided cost for larger systems). While Skagit likely wouldn't plan to be a net exporter on a regular basis (since the microgrid will be sized for the transit load), having the option to feed power back to the grid provides a measure of revenue or savings and can support the wider community's energy needs. For example, the planned Montgomery County microgrid in Maryland will send renewable energy back to the grid when generation exceeds the depot's demand. Skagit's microgrid could do similarly on a smaller scale, essentially using the grid as a sink for extra solar energy when needed (subject to interconnection agreements with PSE). Furthermore, if an energy-as-a-service model is used (discussed later), the microgrid operator might aggregate energy savings over time, providing Skagit a predictable energy cost that is lower or more stable than the status quo. Overall, studies have started to show that microgrids, once considered very costly, are becoming cost-effective: one industry analysis notes that despite upfront costs, microgrids often offer long-term operational savings and reduced electricity expenses – potentially up to 30% or more in some cases[9]. These savings come from a combination of peak shaving, using cheaper self-generation, and improved energy efficiency on-site.
- **Renewable Energy and Emissions Reduction:** A microgrid aligns with Skagit Transit's sustainability goals by enabling a higher use **of renewable energy.** By

incorporating solar (and possibly other renewables) and storage, the microgrid can significantly reduce reliance on grid electricity that may come from fossil fuels. This cuts the carbon footprint of transit operations – charging electric buses with solar power or running a hydrogen station on solar-derived electricity makes those transportation fuels truly green. Microgrids with renewables thus deliver environmental benefits in terms of lower greenhouse gas emissions and air pollutants. In addition, using on-site solar hedges against future electricity price increases or carbon charges, since the cost of solar energy is fixed upfront. If Skagit opts for a renewable-fueled generator (like renewable diesel or a hydrogen fuel cell), the microgrid could be nearly zero-emission in operation, enhancing public health and air quality. Many transit agencies are pursuing microgrids specifically as a strategy to ensure their zero-emission buses are supported by clean energy infrastructure, not just a cleaner tailpipe. For example, Montgomery County's new bus depot microgrid will be the first on the East Coast to produce green hydrogen on-site with solar, part of an effort to reach net-zero emissions for the transit fleet[10]. Skagit's microgrid could similarly ensure that both battery buses and fuel-cell buses are powered with renewable energy, amplifying the environmental benefits of fleet electrification. If the solar array generates more than the transit facility needs at times, that extra clean energy going to the grid also helps PSE meet renewable targets and benefits the broader community. In summary, the microgrid would be a visible commitment to renewable energy, potentially eligible for renewable energy credits (RECs) or other sustainability recognition, and it dovetails with Washington state's clean energy policies.

- **Electric Bus Charging Support:** As Skagit Transit expands its battery-electric bus (BEB) fleet, the electrical charging infrastructure will become a mission-critical load. High-power chargers (which might be 50 kW, 150 kW or higher each for fast charging) can create very large spikes in power demand when multiple buses charge simultaneously. A microgrid with a BESS can buffer these spikes by discharging power during peak charging times, effectively "smoothing out" the load seen by the utility. This can avoid costly utility infrastructure upgrades (such as enlarging transformers or feeders to the site) by keeping the net demand below certain thresholds. It also can improve the power quality delivered to the bus chargers – the battery and controller can help maintain stable voltage which is good for charger performance. Moreover, in an outage scenario, the microgrid could potentially keep a subset of chargers active using solar + battery + generator power, so that a limited number of buses could be recharged to maintain essential service routes. This resiliency for charging is increasingly important; an analysis by CALSTART of a

microgrid deployed for Anaheim's bus fleet highlights that transit agencies are turning to microgrids to avoid fleet immobilization during grid failures. Essentially, the microgrid becomes an enabling technology for bus fleet electrification, ensuring that the electric buses – which are only as reliable as their charging source – have a redundant and robust power supply. By peak shaving and managing energy use, the microgrid also reduces the operational cost per mile of running BEBs (since charging can be done at lower off-peak rates or via solar). In the long run, this supports Skagit's budget by keeping fueling (charging) costs predictable and low. Some agencies have even integrated Vehicle-to-Grid (V2G) capabilities, where bus batteries can discharge back to the depot or grid in emergencies; the Snohomish PUD Arlington project is demonstrating V2G with fleet vehicles as part of its microgrid. Skagit could explore V2G in the future as its fleet grows, effectively turning buses into part of the energy storage system – but even without V2G, the stationary BESS will cover many of the same benefits.

- **Hydrogen Production and Fueling Operations:** If Skagit Transit decides to pursue fuel cell electric buses (FCEBs) in the future, it will likely develop a hydrogen fueling station and on-site hydrogen production (electrolyzer) on the 22-acre parcel. A microgrid can play a key role here. Hydrogen electrolyzers are large electrical loads; for example, a 1 MW electrolyzer can produce about 20 kg of hydrogen per hour, and Skagit mentioned the possibility of a 1–2.5 MW electrolyzer in the future. By coordinating the electrolyzer's operation with the microgrid, Skagit could optimize hydrogen production—such as running the electrolyzer mainly during times of day when solar PV is generating excess power or when grid electricity rates are lowest. This approach would maximize renewable electricity use for hydrogen, creating truly green hydrogen fuel, and reduce costs by avoiding production during peak grid periods. Additionally, the electrolyzer could serve as a controllable load that provides grid services, allowing it to be quickly turned down or off if needed to reduce load during a microgrid island event or to smooth demand fluctuations. Essentially, the hydrogen system and the microgrid can be co-optimized for energy management. During a grid outage, the microgrid could keep the hydrogen station operational, enabling FCEBs to be refueled and continue operating. Fuel cell buses, with their longer range, could be especially valuable for emergency response if power is out for an extended period. This resiliency in fueling infrastructure is a major benefit—lessons learned from agencies that had buses but couldn't charge or fuel them during disasters. Moreover, Skagit could generate revenue if it produces more hydrogen than needed: excess hydrogen could be sold to partner fleets or the public, creating a new income stream. The microgrid would support low-cost

production by powering the electrolyzer during optimal times. For example, Montgomery County's transit microgrid project plans to produce hydrogen on-site not only for its own FCEBs but also to help jumpstart a regional hydrogen economy, all powered by its solar and battery resources. Skagit could become a regional clean hydrogen producer, leveraging inexpensive solar power on its land. Lastly, if a fuel cell generator is incorporated into the microgrid, there is synergy with the hydrogen infrastructure. The same hydrogen produced for buses could also fuel stationary fuel cells during outages, creating a resilient, closed-loop system. This approach is being tested in some innovative projects, such as Snohomish PUD's Arlington microgrid, which included a small electrolyzer and hydrogen fuel cell combination to store solar energy as hydrogen. Although this technology is still emerging, it highlights the microgrid's potential as a platform for integrating advanced energy solutions like hydrogen.

In summary, the microgrid would not only provide emergency power and reduce bills, but also position Skagit Transit as a leader in clean energy integration – enabling reliable transit operations even under duress and supporting the transition to zero-emission buses (whether battery-electric or hydrogen fuel cell). These benefits come with complexity and cost considerations, which we discuss next.

Microgrid Costs and Sizing Considerations

The feasibility of a microgrid depends on careful engineering and economic analysis. Key considerations include the system's capital costs, operating costs, and optimal sizing of each component to meet Skagit's needs. Based on industry data and early discussions, here are some high-level insights on cost and sizing:

- **Capital Cost Estimates:** Microgrids require an upfront investment in equipment (solar panels, batteries, generators, control systems, electrical infrastructure) and development work. A useful rule-of-thumb from a National Renewable Energy Lab study is that microgrids in the U.S. average $2–5 million per MW of capacity (installed)[6]. This means a 1 MW microgrid might cost on the order of $2–5 million, though the actual figure varies widely with the technologies used and whether that MW is in generation, storage, or both. To break it down further:
    - Solar PV costs approximately $2–$5 per watt in today's market for commercial-scale ground-mounted systems. At the lower end (~$2/W), 1 MW of solar (~1000 kW) would cost around $2 million. Solar prices have been decreasing, but factors like prevailing wage construction, interconnection, and site preparation can increase costs. For Skagit's

hypothetical scenario, a 2 MW solar array might cost roughly $4–5 million installed. However, solar can often be financed or third-party owned through power purchase agreements to spread out the cost.

- Battery storage costs approximately $200–$500 per kWh, as mentioned earlier. For example, a 1 MWh (1000 kWh) battery might cost between $200,000 and $500,000 for the battery modules and power electronics, although additional costs for integration and enclosure exist. A larger 4 MWh battery, like the around 7.4 MWh planned for Montgomery County's project, could cost $1–$2 million or more. Costs are quickly improving; by 2030, 4-hour battery systems are expected to fall within the $150–$300 per kWh range for utility-scale projects. Besides the initial purchase, it's important to consider replacement costs—lithium-ion batteries typically last about 10–15 years before experiencing significant degradation, which may require reinvestment during the project's lifespan.
- **Generators and Fuel Cells:** Costs differ by type. A standby natural gas or diesel generator might cost around $300–$500 per kilowatt installed, so a 1 MW generator could be $0.3–0.5 million. Adding features like emissions controls or soundproofing can increase costs. Fuel cell systems tend to be more expensive; a 1 MW fuel cell might cost several millions, often including heat recovery equipment. However, fuel cells can sometimes be financed through third parties; for example, Bloom Energy often sells energy from fuel cells as a service. In the Woodbridge microgrid example, a 2.2 MW fuel cell was part of a $3 million state grant—showing unit costs are somewhat higher than traditional generators, but with added value from heat utilization.
- Controls and integration typically account for about 5-15% of the project cost. Controller expenses can range from around $50,000 for simpler setups to several hundred thousand dollars for more complex systems. Engineering design, testing, and permitting are also significant costs — the project team will spend on studies like load flow and protection coordination to ensure the microgrid can safely connect with PSE's grid and comply with all codes.

For planning purposes, if Skagit considered, for example, a microgrid with about 1 MW of solar, a 1–2 MWh battery, and a backup generator, the capital cost could be roughly a few million dollars. A larger system, supporting an electrolyzer and multiple buses, might cost over $10 million. Actual costs will vary based on final sizing, technology choices, and market conditions such as equipment prices and labor. It's also worth noting that many

microgrid projects secure state or federal grants or use innovative financing to lower the upfront costs – more on that under Business Models.

- **Operating Costs:** Once built, a microgrid incurs ongoing operation and maintenance (O&M) costs that need to be budgeted. Solar PV has relatively low maintenance costs, such as occasional panel cleaning and inverter servicing, often estimated at a few tens of dollars per kW annually. Batteries require monitoring and eventual cell replacement or augmentation; some warranties cover maintenance. An EPA estimate for battery system O&M is approximately $80 per kW per year, including HVAC for battery containers, routine inspections, software, and so on. Generators need regular servicing, like oil changes, exercising, and fuel testing if diesel—O&M costs are roughly $0.02–$0.03 per kWh generated or may be covered by a fixed monthly service contract. Fuel costs can be significant if the generator operates frequently; for example, natural gas at $5–$10/MMBtu or diesel at $4/gallon translates to about $0.10-$0.20 per kWh. However, in practice, a microgrid's generator is typically kept as backup or for occasional peak shaving, so fuel use and costs are usually low except during emergencies. Additionally, demand charges or standby fees may be imposed by utilities for maintaining a grid connection as backup (some utilities have "standby rates" if a customer self-generates most of the time). PSE's tariffs and special arrangements (such as Schedule 558 for EV charging) should be reviewed to determine if standby fees apply or if the microgrid can reduce certain fixed charges. Conversely, operating a microgrid can reduce overall costs and save money on utility bills, and it may even generate revenue by providing services—such as participating in demand response programs or selling frequency regulation if the ISO market permits aggregation. While these opportunities are not yet common in PSE territory, they could become more feasible as markets evolve.
- **Sizing Strategies:** Determining the right size for each component of the microgrid is a complex optimization problem, balancing up-front cost against the level of resilience and savings achieved. Strategies include:
    - **Solar PV Sizing:** This often comes down to how much onsite load you want to offset on an annual basis and how much space is available. In Skagit's case, space (22 acres) is ample – potentially up to ~4–5 MW of solar could fit if desired (as a reference, 1 MW requires ~5 acres for a ground mount PV in many cases). It may not make economic sense to install the maximum possible PV if it far exceeds the current load, because during low-demand periods excess generation would be curtailed or sold at low rates. A more

conservative approach might be to size solar to cover a significant portion (say 30–50%) of current energy usage, and then leave room for expansion as loads grow (with more buses or an electrolyzer). For example, Santa Barbara's transit microgrid study found that ~641 kW of solar would offset roughly 25% of their bus charging energy at one site, given space constraints. In Skagit's case, 25% offset might be achieved with a certain kW now, but as electric buses increase, that same array becomes a smaller fraction of total use – hence scaling solar in phases could make sense. Another factor is net metering limits: if only up to 100 kW is credited at full retail, one might size just above that if self-consumption is high, or consider splitting into multiple meters (if possible) to utilize virtual net metering (though Washington's policies there are limited). We will need to coordinate with PSE on how a large solar + storage system would be treated (possibly as a "non-export" system where controls ensure no feeding into grid above a set limit, which can simplify interconnection).

- **Battery Sizing:** The BESS should be sized to achieve the desired peak reduction and outage duration. A common sizing approach for demand management is to have enough battery capacity (kW) to handle the highest anticipated spike (or at least shave it down to a target level) and enough energy (kWh) to sustain that output through the peak period. If, for instance, daily peaks last 2-3 hours, a 2- or 4-hour duration battery is often chosen. Many commercial systems use 4-hour batteries to also possibly arbitrage energy time-of-use rates. The Santa Barbara example of ~650 kW/2610 kWh was roughly a 4-hour battery at full power, which can cover early evening peaks. Anaheim's microgrid battery (2.57 MWh) likewise provides a few hours of support for their bus charging needs. If Skagit's goal is to cover an outage, the battery might be sized for, say, X hours of critical loads (e.g., perhaps 1–2 hours to ride through until a generator starts, or longer if we want silent, emissions-free backup for short outages). With a generator in the system, the battery doesn't need to cover multi-day outages by itself – that would be the generator's role. However, if a generator were *not* included (a purely renewable microgrid), then to cover a multi-hour or multi-day outage, the battery and solar together would have to be very large, which is typically cost-prohibitive. (One study found that excluding a backup diesel generator in a building microgrid would require a much larger battery system and increase the levelized cost of energy significantly, illustrating the value of a generator for long outages.) Thus, for Skagit, a likely strategy is to include a generator

for heavy lifting, and size the battery more for daily cycling and short-term backup. The exact size will come from detailed modeling of Skagit's load profile with buses and/or electrolyzer: we will look for the point where the battery delivers maximum demand charge savings and resiliency benefit per dollar invested. It may turn out that an initial BESS of moderate size (e.g. 1–2 MWh) is justified for early needs, with plans to scale up capacity as the electric fleet grows.

- **Generator Sizing:** Typically, the backup generator is sized at or above the peak critical load that might need to be carried during an outage. If Skagit eventually has a scenario of simultaneously fast-charging many buses or running a 2 MW electrolyzer, a generator in the 2–3+ MW range might be considered to fully back up those operations (as an illustration, Santa Barbara's plan included a 1.5 MW generator for a depot with dozens of buses charging). In early stages, a smaller generator (e.g. 500 kW or 1 MW) could suffice if the immediate loads are lower or if non-critical loads can shed during an outage. Multiple generators can also be used (e.g. two 1 MW units instead of one 2 MW unit) for redundancy and modularity. Fuel supply is a consideration: a natural gas genset can run indefinitely as long as the gas grid is operational (with an assumption that in most outages the gas system is intact), whereas a diesel genset is limited by on-site fuel storage (though one can store enough diesel for, say, 24-72 hours and arrange refueling contracts). Using a fuel cell as backup might involve sizing it for average load and letting the battery cover peaks, since fuel cells ramp slower; or using multiple fuel cell modules. These are design decisions that would be refined in later phases.

- **Economic Feasibility and Tariff Uncertainty:** It's important to recognize that the economic payback of a microgrid depends heavily on utility rate structures. As noted, modeling savings under PSE's current Schedule 26 (large general service) could show substantial demand charge reductions. However, if Skagit chooses Schedule 558 (the new EV fleet charging tariff) or if PSE broadly shifts to time-of-use rates (as part of rate modernization and possibly in response to Washington's energy policies), the value proposition changes. Schedule 558, for instance, is designed to offer fleet operators low off-peak energy rates and higher on-peak rates, with, we expect, reduced demand charges to encourage charging during off-hours. Under such a setup, a microgrid's battery might be used more for energy arbitrage—avoiding buying energy at peak times by utilizing stored or off-peak energy—rather than solely reducing demand charges. The overall savings could be less if demand

charges aren't the primary cost driver anymore. Additionally, future time-of-use (TOU) pricing (beyond the pilot phase) could either enhance microgrid economics (if there are significant price differences that the battery or solar can leverage) or complicate them (if, for example, peak periods shift seasonally or if utility implements fixed delivery charges that can't be offset). Since PSE's Schedule 558 is new (effective mid-2025) and participation is currently limited, and since broader TOU programs are still in pilot stages, there is uncertainty in the long-term rate environment. The project team will adopt a conservative approach in economic analysis, likely running scenarios based on different tariff assumptions (Schedule 26 versus 558, current rates versus potential future TOU rates) to explore the range of possible outcomes. It will be explicitly noted that the microgrid's financial ROI could change if PSE alters its rate design—representing a risk factor in the business case. Nonetheless, the resiliency benefits are largely independent of rates and could justify the project even if direct cost savings are minimal. Many transit agencies view the microgrid as critical infrastructure to ensure transit operations (similar to how a hospital values a backup generator for life safety), and any energy cost savings are an added benefit. We will keep this perspective in mind when assessing the "fit" of a microgrid at Skagit.

- **Challenges and Complexity:** Implementing a microgrid comes with several obstacles. The high initial capital cost is a significant barrier, as microgrids require substantial investment before savings are seen. They are also intricate systems demanding specialized design, integration, and maintenance skills. Skagit would be entering a new operational area—managing energy resources—which may require new training or partnerships with experienced operators. Additionally, there are regulatory and interconnection challenges; working closely with PSE will be essential to ensure the microgrid is connected safely, especially if it can export power. Protection schemes (to prevent backfeeding during outages) and cyber-security concerns for the control system are also important. Finally, sizing the microgrid for future growth is complex; building it too small could lead to inadequacies as the bus fleet or hydrogen load expands, while oversizing early on could harm economic viability. A phased or modular approach can help, but it demands careful planning. Despite these hurdles, the trend indicates microgrids are becoming more common, and utilities and regulators are gaining more experience, which reduces uncertainties.

Given costs and complexity, Skagit Transit is exploring different ways to implement a microgrid that maximize benefits and minimize financial and technical risks. This is where partnerships and business models come into play.

Examples of Microgrid Projects (Regional and Transit)

Skagit Transit is not alone in considering a microgrid for transit applications – there are several relevant projects and pilots both in the Pacific Northwest region and among transit agencies nationally. These examples provide valuable lessons and demonstrate the art of the possible:

- **Snohomish PUD Arlington Microgrid (Washington):** Just south in Snohomish County, the PUD built an innovative microgrid at its Arlington facility. It features a 500 kW solar array and a 1 MW / 1.4 MWh lithium-ion battery system, along with a vehicle-to-grid (V2G) setup and a microgrid controller. (Early reports also mentioned a 350 kW diesel generator for extended backup.) This microgrid is designed to provide backup power to a local emergency operations center and demonstrate how solar plus storage can maintain critical services during disasters. Of note, they also integrated a small hydrogen element—using solar power to generate hydrogen, which can then be used in a fuel cell to produce electricity—as a clean energy storage pilot. The Arlington project, completed in 2022, shows a successful example of a utility-led microgrid improving community resiliency. The scale is somewhat smaller than Skagit's needs, but it showcases technologies like battery storage for backup that are directly applicable.
- **Puget Sound Energy Microgrid Projects (Washington):** PSE has been exploring microgrids and battery storage, showing interest in collaborating on such projects. In 2023, PSE installed a community microgrid on Samish Island (Skagit County) with a 50 kW/332 kWh battery and an 8 kW solar array. Although small, this demo has successfully islanded a small neighborhood multiple times and is testing how batteries and solar can balance local grid issues and protect against outages. PSE is also building a larger microgrid in Tenino, WA, featuring a 1 MW/2 MWh battery and a 150 kW solar array at a substation to provide backup power to a high school that serves as a community shelter. Additionally, PSE deployed a 2 MW battery in Glacier, WA, mainly for grid support but capable of isolating part of the community during outages. These projects show PSE's dedication to grid modernization and their openness to working on microgrid solutions. In discussions, PSE has expressed interest in co-developing a microgrid at the Skagit Transit site, supporting critical transportation infrastructure and gaining experience from a larger-scale project. The outcomes from the Samish microgrid pilot will guide PSE's future projects, and a Skagit Transit microgrid could be a next step, possibly representing one of PSE's first utility-customer microgrid partnerships.

- **Anaheim Transportation Network (ATN) Microgrid (California):** The ATN, a transit operator in Anaheim, CA, deployed a microgrid to power its fleet of electric buses – one of the first transit-specific microgrids in the U.S. The system includes about 545 kW of solar PV and a 2.57 MWh battery storage (with microgrid controls) to support ATN's bus charging depot. The goal was to improve fleet resiliency (keeping buses operating during outages) and to manage the high demand charges from charging dozens of buses at once. Early performance data shows the microgrid has successfully reduced peak grid demand and provided reliable charging. This project, supported by CALSTART and others, provides a close example to what Skagit is considering – albeit in a sunnier climate. It highlights the advantage of pairing solar with storage at a bus yard and demonstrates that even medium-sized agencies can adopt advanced solutions to keep their electrified fleets dependable.
- **Montgomery County' Brookville" and' EMTOC" Transit Microgrids (Maryland):** Montgomery County, MD, has become a national leader in transit microgrids. Their first project, the Brookville Smart Energy Bus Depot, came online in 2022 as part of a public- private partnership with AlphaStruxure. It integrated solar PV canopies, battery storage, and EV bus chargers under a microgrid control system – allowing the depot to keep buses charged during outages and optimize energy use. Building on that success, in 2024 they broke ground on an even larger microgrid at their new EMTOC depot in Rockville, MD. This will be the largest transit depot microgrid in the U. S., featuring 5 MW of solar PV, a 2 MW/7. 7.4 MWh battery system, and a 1 MW electrolyzer to produce green hydrogen on- site. The system is designed to eventually support around 200 buses, with about 70% planned to be fuel- cell buses, and will allow the entire facility to operate off- grid indefinitely if needed. What' s notable is the business model: these projects are delivered through an Energy- as- a- Service (EaaS) contract with AlphaStruxure (a joint venture of Schneider Electric and Carlyle). There were zero upfront costs to the County – AlphaStruxure finances, builds, owns, and operates the microgrids, and the County pays for energy services over a 25- year term. This model transferred design and performance risk to the private partner and ensured the microgrid was optimized to meet the County' s goals. The Montgomery County case demonstrates how transit agencies can successfully partner with experts to deploy microgrids that meet resilience and sustainability targets. It also highlights hydrogen production: by generating hydrogen with solar power, the County will fuel its future fuel- cell bus fleet with truly clean fuel, and the microgrid can island and continue producing hydrogen as needed for operations. Skagit Transit can draw inspiration from this project, as it closely mirrors the idea of combining BEB charging and FCEB fueling in

one energy hub. While Skagit' s scale may be smaller, the principles- solar, storage, hydrogen, and grid isolation- remain the same.

- **Other Notable Projects:** In California, Santa Barbara MTD has studied a microgrid for its bus yard, recommending about 0.64 MW of solar, roughly 2.6 MWh battery storage, and a backup generator, as mentioned. The state of New Jersey is developing the "NJ TransitGrid" project to supply a microgrid for part of its rail transit system, featuring distributed generation to improve resilience after transit outages during Hurricane Sandy – demonstrating that even larger transit systems are investing in standalone power for reliability. In central California, SunLine Transit (Riverside County) has installed solar power and battery storage to operate its hydrogen electrolyzer for fuel-cell buses, aiming for energy self-sufficiency in hydrogen production (they often state that their hydrogen is made from solar energy). These examples show that transit agencies nationwide are exploring microgrids or similar setups to support zero-emission fleets. It is becoming a best practice to pair "greener" fleets with "greener" and more resilient infrastructure—ensuring clean buses are charged or fueled by clean, reliable energy.

Each of these projects provides valuable insight into technology choices, financing mechanisms, and the importance of utility cooperation. They also show that the microgrid concept is proven at scales relevant to Skagit. Skagit Transit is in an excellent position to leverage lessons learned from these pioneers and maybe improve upon them by tailoring the microgrid to local needs and opportunities (for instance, taking advantage of our unique 22-acre site and potential utility partnerships).

Partnerships and Business Models for Development

Given the scale and complexity of a potential microgrid, Skagit Transit is considering various partnership structures and business models to implement the project in a cost-effective and low-risk manner. Some options include:

- **Utility Partnership:** Working directly with PSE (Puget Sound Energy) makes sense, since PSE has a vested interest in supporting electrification and ensuring reliable critical services. A partnership could range from simply coordinating closely on design and interconnection (with Skagit owning the assets) to a deeper involvement where PSE owns or operates certain components. For example, PSE might own the battery as part of its grid (similar to how some utilities rate-base storage projects) or participate in a joint pilot where costs and benefits are shared. PSE's interest in the Samish Island and Tenino microgrids shows they are actively exploring this area. They also have "non-wires solutions" programs that deploy utility-owned DERs to

avoid infrastructure upgrades. If Skagit's bus electrification would otherwise require costly grid upgrades, PSE might find it attractive to invest in a microgrid/BESS at the transit site as an alternative that benefits both parties. A utility partnership might also unlock state energy grants or leverage PSE's clean energy funds to help cover part of the project. The key will be structuring it to meet regulatory approvals (utilities generally can't invest in generation serving a single customer without special arrangements, unless as a pilot/demonstration or under a tariff). Washington's regulatory environment is evolving to support utility backing for community resilience, making this timely. Staying engaged with PSE (which has already shown interest in the concept) will aid in navigating interconnection and optimizing the microgrid's operation in harmony with the grid.

- **Third-Party Energy-as-a-Service (EaaS):** Another option is to hire an experienced third-party microgrid developer to design, finance, build, and operate the microgrid under an Energy-as-a-Service model. In an EaaS setup, Skagit Transit would not pay the capital costs upfront; instead, the provider would invest the money and then sell the energy (and resilience service) back to Skagit through a long-term agreement, like a power purchase agreement or a service fee structure. This model has been used in Montgomery County transit projects with AlphaStruxure, as noted. In that case, the 6.84 MW microgrid project was delivered at no upfront cost to the County via an EaaS contract. Skagit could issue a Request for Proposals to companies such as AlphaStruxure, Schneider Electric microgrid division, Siemens, Bloom Energy, Engie, Ameresco, Schneider/Carlyle, and others, to explore the creative solutions they can offer. The advantage of EaaS is that it transfers performance and financial risk to the developer—they only get paid if the system performs as expected. It also makes things easier for Skagit by eliminating the need to become an expert in microgrid operations; the third-party would handle monitoring and maintenance to meet agreed-upon uptime and savings goals. Payments can be structured to be equal to or less than what Skagit would pay a utility, so savings are immediate or at least cost-neutral, plus they gain increased resilience. One point to consider is that over a long contract, the total payments might exceed the capital cost, since the developer needs to recover investment and profit, but this approach provides budget predictability and avoids upfront bonding for Skagit. Other public agencies have shown that EaaS can be a practical way to complete projects swiftly with expert involvement. If Skagit adopts this approach, we would likely include performance guarantees, such as minimum islanded hours and power quality standards, in the contract. AlphaStruxure, in particular, has shown interest in transit depots—its CEO has highlighted the increasing load from electrification and the

need to plan infrastructure accordingly. Working with such firms could also bring innovative ideas, like advanced microgrid controls or creative uses of land, such as solar carports.

- **Land Lease / Developer Model:** Skagit could consider leveraging its 22-acre parcel by leasing part of the land to an energy developer. For example, Skagit could lease land to a solar developer (or a team that does solar+storage) to build a large solar farm on-site. The developer could then either sell power to Skagit under a PPA (possibly at a discounted rate) or even sell to PSE (if structured as a grid-connected resource with Skagit having an option to buy output or receive lease revenue). One option involves utilizing PSE's Green Direct program or similar—PSE might buy the output of a dedicated solar farm on Skagit's land to supply renewable energy to Skagit Transit's account. Alternatively, Skagit could simply take lease payments to offset its energy costs, while the developer handles selling the energy. A variation of this is a community solar or microgrid model where multiple stakeholders invest and share the benefits. Land lease models are appealing if Skagit wants to avoid owning generation assets—where the land represents the contribution of equity. However, to truly realize the resiliency benefits, the arrangement must ensure islanding capability for Skagit's loads. This likely means at least the battery and control system need to be dedicated to Skagit. A developer could retain ownership but would be contractually committed to maintaining power to Skagit during outages. This model might work if, for example, a renewable energy company (e.g., Avangrid Renewables, active in the region's wind/solar development) or an infrastructure fund sees value in a long-term project on this site. Avangrid's subsidiary in Connecticut (United Illuminating) has implemented microgrids, owning generation like fuel cells under special programs—showing that large energy firms are interested in such projects. Engaging Avangrid or a similar company could bring both capital and expertise, possibly with PSE's coordination if exporting to the grid.
- **Public-Private Co-Development:** Another option is a joint investment where Skagit Transit partners with another entity (or multiple entities) to share costs and benefits. For example, Skagit could team up with the local port authority, county, or even a large neighboring electricity user to create a broader microgrid district focused on resilience. Federal or state funding could serve as a partner in this effort, with grant money reducing Skagit's financial share. In co-development, Skagit might own specific components, such as the generator or some solar equipment, while a partner owns the rest and operates it together. This approach can be complex but is often used to leverage each party's strengths, like one securing grants and another

providing technical expertise. We will likely investigate whether any state programs, like Washington's Clean Energy Fund, could support a public-private microgrid demonstration. For example, Snohomish PUD's Arlington project received state grants, and PSE's Glacier battery project was funded by Commerce. Skagit could utilize similar programs within a co-funding model.

- **Skagit-Owned (Traditional Procurement):** One straightforward model is for Skagit Transit to directly procure the microgrid components (using capital budget or financing) and own and operate them. This approach gives Skagit full control over the assets and all the related savings. The challenge is that it requires a significant initial investment and development expertise. Skagit would likely hire an engineering firm or EPC contractor to design and build the system, then either train staff or hire an operator for ongoing management. Because microgrids are innovative, many transit agencies hesitate to take complete ownership unless they have internal expertise or a city partnership, such as a public works or energy department, to assist. However, owning the microgrid could allow Skagit to potentially gain more financial benefits over time (after loans are paid off, essentially accessing "free" solar power, etc.). We would also directly own any environmental attributes like RECs and carbon credits, which could be valuable. There are also hybrid options like leasing equipment (lease-to-own) or performance contracting (ESCO models) that can lower upfront costs even if the agency owns the system. Currently, Skagit is open to creative approaches and will evaluate them based on lifecycle cost, risk, and how well they align with our core mission, which is providing transit service, not power production—this is why third-party operations are appealing to some extent.

To summarize, several business models are under consideration — from utility-driven to third-party EaaS to Skagit-led. The choice will depend on which approach best aligns with Skagit Transit's financial limits and risk appetite. Notably, partnerships with organizations like AlphaStruxure or Avangrid could bring private investment and technical expertise, while a PSE partnership might facilitate regulatory support and potential funding. We have already held initial talks with PSE, who expressed interest in a microgrid development partnership (aligned with their corporate focus on grid resilience). As we move forward, we may issue an RFI (Request for Information) or RFP to the industry to gather proposals and compare them to an in-house option. The main goal is to find a solution where Skagit benefits from a microgrid's reliability, cost savings, and sustainability — all without excessive financial or operational risks.

Future Development and Recommendations

The microgrid opportunity for Skagit Transit is compelling, but its full value will unfold over time as the agency's fleet electrification and potential hydrogen production ramp up. Therefore, our recommendation is to adopt a **phased and flexible approach** in pursuing the microgrid, ensuring it can scale with future demand and technological developments:

- **Phase 1 – Feasibility and Pilot:** In the near term, conduct a detailed feasibility study (building on this overview) to model the microgrid's performance under current conditions and near-future scenarios. This should include load analysis for the first batch of electric buses and any initial hydrogen facilities. It may be advantageous to start with a pilot-scale installation – for example, **install a moderate-sized BESS initially (perhaps 500 kW/1 MWh) and a smaller solar array or generator** – to gain operational experience and demonstrate the benefits (peak shaving, resilience for existing loads). This pilot microgrid could support the existing facility's critical loads (offices, maintenance, security systems) and a few bus chargers. The goal in Phase 1 is to verify the controllers, coordinate procedures with PSE for islanding, and train staff on microgrid operation, all while limiting the initial investment. During this phase, we also recommend working closely with PSE to integrate the microgrid controls – possibly allowing PSE to participate via their control center (some microgrid projects let the utility interface for seamless transition, etc.). **Success criteria** for Phase 1 would be a demonstrated ability to island for a set duration (e.g. 1 hour) and measurable demand reduction on peak days, which would confirm the value proposition.
- **Phase 2 – Expansion with Fleet Growth:** As Skagit Transit adds more battery-electric buses (and therefore higher nightly charging loads) over the next few years, expand the microgrid accordingly. This likely involves increasing solar PV capacity on the 22-acre site and adding more battery modules to boost energy and power capacity. The modular design of many BESS systems makes it relatively easy to increase storage in increments, such as adding another 1 MWh container as new chargers come online. By Phase 2, we should also confirm the inclusion of a permanent backup generator or fuel cell sized for the increasing load. If not already installed in Phase 1, a ~1–2 MW generator could be deployed during this phase to ensure continuity of critical functions and charging during widespread outages. We must ensure any new bus charging infrastructure is microgrid-ready—that is, it can be sub-fed from the microgrid and managed (for load shedding or sequencing) by the microgrid controller. This might involve specifying chargers capable of receiving control signals or integrating a site energy management system. During Phase 2, revisiting the financial model with actual data from Phase 1 and updated utility rates will be essential. If PSE's Schedule 558 (EV TOU rate) is adopted for the bus fleet, we

will incorporate this into operations—programming the microgrid to prioritize battery discharge during the 4–9 pm peak period if buses are charging then, and to charge the battery after 9 pm when off-peak rates resume. We will also explore new technologies like second-life EV batteries for storage or more V2G if any buses support it, as these could enhance the microgrid at a lower cost. By the end of Phase 2, the microgrid should be scaled to comfortably support the mid-term fleet (for example, dozens of BEBs).

- **Phase 3 – Hydrogen Integration (if pursued):** If Skagit moves forward with fuel cell buses and develops the hydrogen production and fueling station on-site, this would likely happen a few years down the line (mid to late 2020s or early 2030s). This phase would incorporate the electrolyzer load into the microgrid. It may require significant resource expansion; for example, if a 2 MW electrolyzer is added, we might also increase solar capacity by a few megawatts and add more MWh of storage to supply clean energy. Coordination with PSE will be vital: a 2 MW electrolyzer is a major load on the grid, so the microgrid's ability to smooth power and even operate the electrolyzer off-grid during certain times will be a key focus. We would also consider adding a hydrogen fuel cell to the microgrid for backup power. For instance, some hydrogen produced could be stored and used in a stationary fuel cell to generate electricity when solar is unavailable—effectively using hydrogen as long-term energy storage. This concept is being piloted in some microgrids, including a smaller scale at SnoPUD Arlington. This would allow Skagit to showcase a genuinely carbon-free microgrid that uses summer solar to produce hydrogen, stores it, and then runs the fuel cell in winter or during outages to generate electricity—creating a self-sustaining energy cycle. Even without that, managing the electrolyzer's operation through the microgrid controller will deliver cost and efficiency benefits. The microgrid can ramp down the electrolyzer if other critical loads need power and ramp it up when there is excess solar or low-cost grid power. Phase 3 would essentially transform the site into an "energy hub" that balances transit energy needs across electricity and hydrogen in real time.
- **Continuous Optimization:** Throughout all phases, Skagit should gather operational data and collaborate with partners (such as utilities and third-party operators) to enhance the microgrid's performance. There may be opportunities to join utility programs (like peak reduction incentives or future demand response markets) to generate revenue by using the microgrid for grid services when spare capacity is available. We will also monitor technological advancements—such as flow batteries or new chemistries becoming more affordable for long durations—that could be retrofitted to work alongside lithium batteries for improved resilience.

Cybersecurity will remain a constant priority, ensuring the microgrid control system stays protected from threats.

- **Re-Evaluate Economics Periodically:** It is advisable that at each significant fleet electrification milestone (such as when a new batch of buses or a major load like an electrolyzer comes online), Skagit should re-evaluate the microgrid's business case. This involves reviewing assumptions regarding utility rates, fuel costs, and reliability requirements. If at any point the economics underperform—such as when new tariffs reduce savings or largely eliminate demand charges—Skagit can adjust its strategy. This might include emphasizing the resiliency benefits or seeking additional grant funding to fill financial gaps. Conversely, if energy prices increase or outages become more frequent—thus boosting the value of resilience—it strengthens the case for further investment. Since initial discussions and modeling show promise, we expect to proceed but recommend maintaining flexibility due to uncertainties in the energy landscape.

Recommendation: At this juncture, the project team recommends moving into a formal feasibility assessment with PSE and potential development partners, to refine the microgrid design and business model. This should include comprehensive modeling against PSE Schedule 26 and 558, and consultation with specialists (some of whom have worked on the example projects cited). Early engagement with potential EaaS providers (like AlphaStruxure or others) could yield proposals that help gauge market interest. We also suggest engaging with state energy authorities (e.g. WA Department of Commerce) and transit agencies who have done this, to gather support and possibly form a consortium for knowledge-sharing. Ultimately, **suppose the economics prove viable (or can be made viable with outside funding) and the reliability benefits are as significant as expected. In that case, Skagit Transit should proceed with developing a microgrid on the 22-acre parcel**. It is a forward-looking investment that will pay dividends in keeping transit service running when it's most needed, and in controlling long-term energy costs and emissions.

In conclusion, Skagit Transit's microgrid opportunity is a notable case of transit and energy sectors converging. The project team's exploration to date – including discussions with PSE and research into comparable projects – indicates strong interest and a plausible path forward. We are still in an **early stage of determining the exact fit and economics**, but the groundwork laid out here provides a foundation. The next steps will involve tighter economic analysis, stakeholder partnerships, and staged implementation planning. With prudent development, the microgrid can become a showcase of resiliency and sustainability for Skagit Transit, supporting battery electric and fuel-cell bus operations for decades to come, and potentially even generating new revenue (through energy or fuel

sales) in the future. The dynamic nature of electricity tariffs (like Schedule 558's experimental TOU rates) will be monitored – any final project must be resilient not just physically, but financially under evolving conditions. By remaining adaptive and collaborative, Skagit Transit can successfully navigate these uncertainties.

Overall Recommendation: Proceed to the next phase of project development (feasibility study and partner engagement) for the Skagit Transit microgrid, with a focus on a phased build-out that aligns with fleet electrification timelines. Structure the project in a way that capitalizes on partnerships (utility or private sector) to reduce upfront costs and leverage expertise. Keep the option open to scale up for hydrogen production integration. And keep stakeholder communication (including board and public) informed of the benefits – reliability, cost control, and clean energy leadership – that this microgrid can provide to Skagit Valley's transit system.

By taking these steps, Skagit Transit can position itself at the forefront of resilient, clean transportation energy infrastructure, much like other pioneering transit agencies, while ensuring prudent stewardship of public resources.

Footnotes/Citations

1. NREL – Definition and benefits of microgrids
2. SunBridge Solar – Washington solar insolation (~3.5 sun hours/day ~1280 kWh/kW-year)
3. Santa Barbara MTD Resilient Transit Project – Proposed microgrid sizing (641 kW PV, 650 kW/2610 kWh BESS, 1.5 MW gen)
4. CALSTART/ATN – Anaheim transit microgrid performance (545 kW PV, 2.57 MWh BESS)
5. Avangrid/UI – Woodbridge CT microgrid with 2.2 MW fuel cell (fuel cell integration for town resilience)
6. U.S. DOE – Microgrid resilience and cost overview (2018 NREL cost study)
7. PSE – Poulsbo commercial battery demo (peak shaving and demand charge management)
8. PSE – EV Fleet Charging Rate Schedule 558 (TOU structure for off-peak charging)
9. Logic20/20 (2025) – Microgrid costs for solar, storage, controller; long-term savings
10. AlphaStruxure Press Release – Microgrid features enabling bus charging and green hydrogen production
11. PSE – Statement on future projects using results of microgrid testing
12. AlphaStruxure Press Release (2024) – Montgomery County EMTOC microgrid delivered via EaaS (zero upfront cost)
13. Microgrid Knowledge (Walton, 2024) – Montgomery County transit microgrid (5 MW solar, 2 MW/7.4 MWh battery, 1 MW electrolyzer)

CAC REPORT

August 12, 2025

First of all, the CAC has voted to recommend the Skagit Transit Board approve Mike Kerr for membership to the committee, bringing us back to full capacity.

Maleah gave an overview of what to expect during our upcoming September 9 combination committee/working meeting, fielding member questions. Note that this meeting will be from 4:00 – 6:00 PM, in order to allow for enough time for both regular and working meetings.

Judy next gave an overview of event ideas for the upcoming Week Without Driving opportunity during the week of September 29 - October 5. More to come.

Regarding the Transit Development Plan, Maleah answered member questions and is encouraging all members to send comments to her.

There was a short debriefing on the July 15 route 300 evaluation trip for those who were unable to participate.

The ridership update and staff report were given by Cheryl, along with a listing of current events in which Skagit Transit is taking part.

During the round-table session, concerns over the severe technology degradation of the conference room handling of virtual meetings was addressed. This has been an ongoing problem for over a year, and for this meeting, only two to three mics were functioning. Jason, with IT, also present, stated bids are still being received, that the system is fourteen years old. No solutions are being offered to attendees at this time.

Next meeting, September 9 at the Skagit Station conference room from 4:00 - 6:00 PM with the virtual option?

Respectfully Submitted,

Judy Jones

CAC Chair