



# **Capital Improvement Plan 2022-2032**

**DRAFT**

**Version 7  
May 25th, 2022**

## **EXECUTIVE SUMMARY**

### **Purpose**

Skagit 911 engages in a number of activities to assess and plan for the short- and long-term needs of our public safety community. The Capital Improvement Plan (CIP) represents our strategy to provide a comprehensive and resilient public safety emergency communications system. It is a planning document that identifies infrastructure needs, a provisional schedule, and funding options.

The CIP is updated as new information becomes available regarding priorities, funding sources and availability, and project cost estimates and schedules. It provides a means for our Technical Advisory Boards and the Board of Directors to determine capital priorities. Key criteria used for project consideration and prioritization include: our community's ability to contact 911, public safety responder needs, project and maintenance costs, and funding sources.

### **Goals of the Capital Improvement Plan**

The goal of the CIP is to:

- Provide a roadmap to a comprehensive and resilient public safety emergency communications system.
- Maintain and upgrade existing infrastructure to support critical public safety radio communications.
- Identify and develop capital projects to meet the highest priorities in public safety needs
- Align priorities with available funding.
- Increase communication and planning with public safety partners.

### **Fiscal Impact and Planning**

The CIP serves as a planning and implementation tool for the development, construction, rehabilitation, and maintenance of the Skagit 911 communications systems. Capital improvements are projects that provide tangible long-term benefits, and the CIP process includes identifying, prioritizing and developing funding for necessary projects.

The CIP is paired with the Equipment Reserve and Replacement (ER&R) plan to ensure that current technologies are maintained and replaced on the appropriate schedule, while planning for new technologies and critical needs.

The infrastructure and maintenance needs exceed available resources, which results in competing priorities for limited funds. While Skagit 911 utilizes internal funding sources strategically and partners with outside agencies to utilize grant funding where available, this remains an issue that has not been resolved.

### **Summary**

As evidenced by history, without cohesive and established plans, implementation of basic communications infrastructure and technology will be managed in crisis mode as technologies fail. Comprehensive planning allows for increased coordination between Skagit 911 and its public safety partners, identifies fiscal parameters and broadens transparency for the public, who rely on the services provided.

The 2022-2032 Capital Improvement Plan advances the mission to support our citizens and public safety partners by building, sustaining, and improving a comprehensive and hardened emergency communications system.

## **DEFINITIONS**

**CAD:** Computer-aided dispatch (CAD) systems are utilized by dispatchers, call-takers, and 911 operators to prioritize and record incident calls, identify the status and location of responders in the field, and effectively dispatch responder personnel. Emergency responders in the field can receive messages initiated by CAD systems via their mobile data terminals (MDTs), radios, and cell phones. CAD systems may also interface with a geographic information system (GIS), an automatic vehicle location (AVL) system, a caller identification (ID) system, logging recorders, and various databases. A unified CAD (UCAD) system interfaces with multiple agencies and/or computer systems that serve law enforcement, fire, and EMS and provides communication across multiple agencies and jurisdictions.

**Public Safety Grade:** The term “Public Safety Grade” refers to equipment and systems that will remain operational during and immediately following a major natural or manmade disaster on a local, regional, and nationwide basis. Other words used in place of PSG is network hardening or network sustainability.

**Redundant:** Used to describe part of a system that has the same function as another part and that exists so that the entire system will not fail if the main part fails.

**Backhaul Network:** The physical parts of a Public Safety Radio system that connect individual radio communication sites back to the 911 center.

**Geo-redundancy:** Geo-redundancy means placing physical components of the system in geographically diverse locations to safeguard against loss of an entire system due to catastrophic events and natural disasters.

**Mobile Radio:** A mobile radio is a two-way radio located in an Emergency Response Vehicle.

**Portable Radio:** A portable radio is the two-way radio carried by First Responders.

**Interoperable (Interop):** The basic ability of different communication equipment (radios) to readily connect and exchange information between them, over the Public Safety Radio spectrum.

**Interoperable Frequency:** A radio frequency used by multiple agencies of different jurisdictions.

## **CAPITAL IMPROVEMENT PLAN UPDATE AND APPROVAL PROCESS**

1. Skagit 911 staff will review and update the Capital Improvement Plan.
2. The Law and Fire Technical Committees will review the proposed Capital Improvement Plan.
3. The Finance Committee will review the proposed Capital Improvement Plan.
4. The Advisory Board will assist Skagit 911 staff with prioritization of Capital Improvement Plan projects and recommendations for funding.
5. The Capital Improvement Plan will be presented to the Board of Directors for approval.
6. Funded projects will be included in the proposed budget for the following year.

### **Footnote:**

*General definition of a CAD system provided by Homeland Security:*

[https://www.dhs.gov/sites/default/files/publications/CAD\\_TN\\_0911-508.pdf](https://www.dhs.gov/sites/default/files/publications/CAD_TN_0911-508.pdf)

*More information on public safety radio communication systems:*

<https://psc.apcointl.org/2018/07/19/public-safety-grade-communications-radios-then-and-now/>;

[https://www.npstc.org/download.jsp?tableId=37&column=217&id=3066&file=Public\\_Safety\\_Gr](https://www.npstc.org/download.jsp?tableId=37&column=217&id=3066&file=Public_Safety_Gr);

## DETAILED PROJECT INFORMATION

<b>Critical Technology and Services</b>		
<b>Project Title:</b> CAD System Placeholder	<b>Project Cost</b>	<b>\$3,000,000 to \$5,000,000</b>
<b>Priority:</b> FT / LT / AB / Skagit 911 / Final	<b>Unfunded</b>	
<b>Project Description</b>		
<p>The current CAD system was purchased in September 1989 by the Skagit County Sheriff. Currently, all Fire agencies within Skagit County are required to contact Skagit 911 (who is also a <i>user of the Spillman CAD system</i>) in order to contact Skagit County (the <i>owner of the Spillman CAD system</i>) for all requests. Requests for services within the system may be denied by Skagit County. This includes adding units, adding modules, fixing system errors, permission changes and password reset services). Law agencies and the EMS department within Skagit County are not required to go through Skagit 911 for requests.</p> <ul style="list-style-type: none"> <li>Law, Fire and EMS representatives are currently creating a list of system limitations to present to a combined committee for review to determine if these issues are limitations of the current system or are policy issues.</li> </ul> <p>Should Skagit 911 take ownership of a CAD system ownership, below are some requirements:</p> <ul style="list-style-type: none"> <li>A minimum of two full time employees to manage the system and provide 24/7 support to for user agencies.</li> <li>The current Skagit 911 building has no space for expansion. This project would require secure hardware/server space as well as office and work areas.</li> </ul>		
<b>Expected Completion</b>	TBD	
<b>Total Capital Cost</b>	<i>Estimated \$3,000,000 to \$5,000,000</i>	
<b>Funding Source</b>	<i>Sales Tax Revenue and User Fees</i>	
<b>New Wages</b>	\$300,000	
<b>Annualized System Operating Costs</b>		
Site / Tower Rent	NA	
Phone / Fiber	NA	
Power	NA	
Projected Annual Maintenance	TBD	
<b>Expected Life Span</b>		
Shelter / Building	NA	
Equipment	<i>Dependent on technology implemented</i>	
Generator	NA	

Facilities		
<b>Project Title:</b> <b>New 911 Building</b>	<b>Project Cost</b>	<b>\$15,000,000 to \$20,000,000</b>
<b>Priority:</b> <b>FT / LT / AB / Skagit 911 / Final</b>	<b>Unfunded</b>	
<b>Project Description</b>		
<p>Skagit 911 was built in 1998 to provide services for a population of 99,389, with an original staff of thirty (30) employees. Skagit 911 shares a 9,845 square foot building with Skagit County EMS (<i>Emergency Medical Services</i>) and Skagit County DEM (<i>Department of Emergency Management</i>). When the building was constructed, it was designed for the needs of the community and public safety agencies at the time. There was no plan or consideration for growth in the final design.</p> <p>Skagit County's population has since increased to 131,945 and the staffing level has grown to fifty-three (53) employees. The technology for Skagit 911 to meet the needs of the community while still meeting state and federal requirements has changed significantly. Skagit 911's dispatch space was remodeled in 2017 to allow additional consoles as call and radio volume required more dispatchers to meet community and user agency needs. The remodel was contained within the original footprint of the building by condensing the space to add additional staff and equipment. This remodel was intended to provide space for current needs with a plan to expand the building or build a new facility within three to five years.</p> <p>Current space needs include:</p> <ul style="list-style-type: none"> <li>▪ A larger dispatch floor space to meet space needs</li> <li>▪ Adequate space for kitchen and break facilities</li> <li>▪ A space for Dispatchers to rest during long shifts</li> <li>▪ An office or workspace for the Senior Radio Technician</li> <li>▪ Office and storage space for the IT department <ul style="list-style-type: none"> <li>○ Two IT employees occupy a small conference room</li> </ul> </li> <li>▪ An office for the Human Resources Coordinator.</li> <li>▪ A meeting or conference room</li> <li>▪ Adequate storage for technical services supplies and spare parts.</li> <li>▪ An adequate training facility. <ul style="list-style-type: none"> <li>○ The current 911 Dispatcher/Call-Taker training facility is housed in an older modular building behind Skagit 911 that can support training six (6) training employees. This building also houses the Deputy Operations Manager and the Training Supervisor as there is no room in the main facility. The building has inadequate heating, cooling, fire suppression and electrical systems.</li> </ul> </li> </ul> <p>In 2019 the Washington State Legislature provided grant funding of \$500,000 to Skagit County for the design of a new facility. The new facility will be located behind the current 911 center and would be built to meet the current federal and state standards of a 911 center. The design also takes into consideration the future growth of the community and the potential of regionalization of 911 services within Washington State.</p>		
<b>Expected Completion</b>	TBD	
<b>Total Capital Cost</b>	<i>Estimated \$15,000,000 to \$20,000,000</i>	
<b>Funding Source</b>	<i>Sales Tax Revenue – Financed/Bonded</i>	
<b>New Wages</b>	NA	
<b>Annualized System Operating Costs</b>		
	Site / Tower Rent	<i>Unknown if any</i>
	Phone / Fiber	TBD
	Power	TBD
	Projected Annual Maintenance	<i>Estimated \$100,000-\$200,000</i>
<b>Expected Life Span</b>		
	Shelter / Building	<i>50 Years</i>
	Equipment	<i>5-15 Years</i>
	Generator	<i>20 Years</i>

<b>Critical Communication Infrastructure</b>																																																			
<b>Project Title: Mobile and Portable Public Safety Grade Radio Enterprise System</b>	<b>Project Cost</b> <b>\$14,000,000</b>																																																		
<b>Priority: FT / LT / AB / Skagit 911 / Final</b>	<b>Unfunded</b>																																																		
<b>Project Description</b>																																																			
<p>The mobile and portable radios are currently owned and maintained by each user agency (<i>Law, Fire and EMS</i>). The core radio system, the majority of the radio repeaters and sites and dispatch radios are owned and maintained by Skagit 911. Skagit 911 manages the programming of the radio equipment. User agencies must plan for and fund the replacement of their mobile and portable radios and many agencies are currently using obsolete equipment which can negatively impact the safety of responders and the ability of Skagit 911 to communicate with them.</p> <p><b>Proposal:</b> With an additional revenue source, Skagit 911 would become the provider and maintain all mobile and portable radios within Skagit County. Skagit 911 would have the ability to set aside funds annually to replace all portables and mobiles in Skagit County when these radios are at the end of their life span. Estimated costs and life cycle for replacement of all responder agencies radios are detailed below.</p> <p><i>Important Note: Numbers below are future cost estimates.</i></p> <table border="1"> <thead> <tr> <th><i>Equipment Type</i></th> <th><i>Cost Per Unit</i></th> <th><i>Total Units</i></th> <th><i>Total Cost</i></th> <th><i>Notes</i></th> </tr> </thead> <tbody> <tr> <td><i>Multi Band Portable - Law Enforcement</i></td> <td>8,000</td> <td>305</td> <td>\$2,440,000</td> <td>Includes accessories</td> </tr> <tr> <td><i>Multiband Mobile - Law Enforcement</i></td> <td>8,000</td> <td>220</td> <td>\$1,760,000</td> <td>Includes remote head</td> </tr> <tr> <td><i>Multiband Mobile - Law Motorcycles</i></td> <td>10,000</td> <td>10</td> <td>\$100,000</td> <td>Includes P25 phase 2 trunking</td> </tr> <tr> <td><i>Single Band Portable - Fire NFPA 1802</i></td> <td>10,000</td> <td>700</td> <td>\$7,000,000</td> <td>Includes accessories</td> </tr> <tr> <td><i>Single Band Portable - Fire IP68</i></td> <td>7,000</td> <td>120</td> <td>\$840,000</td> <td>Includes accessories</td> </tr> <tr> <td><i>Multiband Mobile - Fire</i></td> <td>8,000</td> <td>225</td> <td>\$1,800,000</td> <td>Includes remote head</td> </tr> <tr> <td><i>Multiband Mobile - Fire - Special</i></td> <td>10,000</td> <td>30</td> <td>\$300,000</td> <td>Includes P25 phase 2 trunking</td> </tr> <tr> <td><i>Spare Parts</i></td> <td>25,000</td> <td>1</td> <td>\$25,000</td> <td></td> </tr> <tr> <td><b>Totals:</b></td> <td><b>86,000</b></td> <td><b>1611</b></td> <td><b>\$14,265,000</b></td> <td></td> </tr> </tbody> </table> <p>All portables and radios would be placed on a 12-year cycle. The estimated annual payment to reach the 14-million-dollar project cost would be \$1,188,750. Additional staffing would be required to properly maintain the mobile and portable public safety grade radio enterprise system. A minimum of one full-time radio technician will be needed and potentially one part-time employee as well.</p>		<i>Equipment Type</i>	<i>Cost Per Unit</i>	<i>Total Units</i>	<i>Total Cost</i>	<i>Notes</i>	<i>Multi Band Portable - Law Enforcement</i>	8,000	305	\$2,440,000	Includes accessories	<i>Multiband Mobile - Law Enforcement</i>	8,000	220	\$1,760,000	Includes remote head	<i>Multiband Mobile - Law Motorcycles</i>	10,000	10	\$100,000	Includes P25 phase 2 trunking	<i>Single Band Portable - Fire NFPA 1802</i>	10,000	700	\$7,000,000	Includes accessories	<i>Single Band Portable - Fire IP68</i>	7,000	120	\$840,000	Includes accessories	<i>Multiband Mobile - Fire</i>	8,000	225	\$1,800,000	Includes remote head	<i>Multiband Mobile - Fire - Special</i>	10,000	30	\$300,000	Includes P25 phase 2 trunking	<i>Spare Parts</i>	25,000	1	\$25,000		<b>Totals:</b>	<b>86,000</b>	<b>1611</b>	<b>\$14,265,000</b>	
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<b>Total Capital Cost</b>	<i>Estimated \$14,000,000</i>																																																		
<b>Funding Source</b>	<i>Sales Tax and User Fees</i>																																																		
<b>New Wages</b>	<i>\$173,000</i>																																																		
<b>Annualized System Operating Costs</b>																																																			
Site / Tower Rent	NA																																																		
Phone / Fiber	NA																																																		
Power	NA																																																		
Projected Annual Maintenance	<i>\$50,000</i>																																																		
<b>Expected Life Span</b>																																																			
Shelter / Building	NA																																																		
Equipment	<i>12 Years</i>																																																		
Generator	NA																																																		

Facilities			
<b>Project Title: 911 Back-Up Facility</b>		<b>Project Cost</b>	<b>\$900,000</b>
<b>Priority: FT / LT / AB / Skagit 911 / Final</b>		<b>Unfunded</b>	
<b>Project Description</b>			
<p>Skagit 911 currently has one location in which it can take emergency and non-emergency calls and dispatch first responders. Should this location be compromised by a manmade or natural disaster, the ability of Skagit 911 to receive 911 calls and dispatch appropriate resources would be impacted.</p> <p><b>Equipping a location as Skagit 911's back-up facility:</b>            Current technological advances now provide an opportunity for Skagit 911 to equip a secondary location with the minimum technology necessary to continue services seamlessly. The minimum requirements include:</p> <ul style="list-style-type: none"> <li>▪ Six dispatching and call-taking consoles each equipped with a 911 phone computer, radio computer, COE (<i>common office environment</i>) computer and CAD computer.</li> <li>▪ Connectivity to the radio system core and Spillman CAD system database.</li> <li>▪ Connectivity to the state ESinet, which carries the 911 telephone calls</li> </ul> <p>This back-up facility could be used as an off-site training facility for entry-level 911 Call-Takers/Dispatchers as needed and would provide a secure hub to continue its mission of responding to emergencies in Skagit County.</p>			
<b>Expected Completion</b>	TBD		
<b>Total Capital Cost</b>	<i>Estimated \$900,000</i>		
<b>Funding Source</b>	<i>Sales Tax and 911 Phone Tax</i>		
<b>New Wages</b>	NA		
<b>Annualized System Operating Costs</b>			
	Site / Tower Rent	NA	
	Phone / Fiber	NA	
	Power	NA	
	Projected Annual Maintenance	<i>TBD</i>	
<b>Expected Life Span</b>			
	Shelter / Building	<i>30 Years</i>	
	Equipment	<i>5-15 Years</i>	
	Generator	<i>20 Years</i>	

<b>Critical Technology and Services</b>		
<b>Project Title:</b> Radio System Core Dynamic Resilience	<b>Project Cost</b>	<b>\$1,000,000</b>
<b>Priority:</b> FT / LT / AB / Skagit 911 / Final	<b>Unfunded</b>	
<b>Project Description</b>		
This project would add geo-diversity to radio system core components. In the event of a core failure, either from technical, manmade or natural disaster, Skagit 911 and first responders would be able to continue to use the radio communication system.		
<b>Expected Completion</b>	TBD	
<b>Total Capital Cost</b>	Estimated \$1,000,000	
<b>Funding Source</b>	Sales Tax	
<b>New Wages</b>	NA	
<b>Annualized System Operating Costs</b>		
Site / Tower Rent	NA	
Phone / Fiber	NA	
Power	NA	
Projected Annual Maintenance	TBD	
<b>Expected Life Span</b>		
Shelter / Building	NA	
Equipment	TBD	
Generator	NA	

<b>Critical Communication Infrastructure</b>		
<b>Project Title:</b> Radio Site Backhaul Redundancy	<b>Project Cost</b>	<b>\$600,000</b>
<b>Priority:</b> FT / LT / AB / Skagit 911 / Final	<b>Unfunded</b>	
<b>Project Description</b>		
This project provides multiple paths for redundancy and reliability for all the radio repeater/tower sites within or used by Skagit County's first responders. Some radio sites are located in regions of Skagit and Whatcom County that become isolated due to seasonal weather or natural disasters (mudslides and snowstorms, for example). When this happens, Skagit 911 techs cannot access the radio site to make emergency repairs if needed. The radio site backhaul redundancy project would prevent any radio frequency from going down and creating a first responder safety risk.		
<b>Expected Completion</b>	TBD	
<b>Total Capital Cost</b>	Estimated \$600,000	
<b>Funding Source</b>	Sales Tax	
<b>New Wages</b>	NA	
<b>Annualized System Operating Costs</b>		
Site / Tower Rent	NA	
Phone / Fiber	NA	
Power	NA	
Projected Annual Maintenance	TBD	
<b>Expected Life Span</b>		
Shelter / Building	NA	
Equipment	TBD	
Generator	NA	



Critical Communication Infrastructure		
<b>Project Title:</b> Baker Lake Road Radio Site	<b>Project Cost</b>	<b>\$600,000</b>
<b>Priority:</b> FT / LT / AB / Skagit 911 / Final	Unfunded	
<b>Project Description</b>		
Skagit 911 has identified a need to build a new radio site near Baker Lake Road in Skagit County. There is currently no radio communication coverage in the north-central area of Skagit County. A new radio site in this region would benefit Law, Fire, and EMS agencies that respond to citizens and visitors in this area. This project would require an extensive fiber build-out to the Baker Lake Road area.		
<b>Expected Completion</b>	TBD	
<b>Total Capital Cost</b>	Estimated \$600,000	
<b>Funding Source</b>	Sales Tax	
<b>New Wages</b>	NA	
<b>Annualized System Operating Costs</b>		
Site / Tower Rent	\$20,000 (est.)	
Phone / Fiber	\$20,000 (est.)	
Power	\$5,000 (est.)	
Projected Annual Maintenance	\$1,000 (est.)	
<b>Expected Life Span</b>		
Shelter / Building	50 Years	
Equipment	15 Years	
Generator	30 Years	

Critical Communication Infrastructure		
<b>Project Title:</b> Starbird/I-5 Radio Site	<b>Project Cost</b>	<b>\$600,000</b>
<b>Priority:</b> FT / LT / AB / Skagit 911 / Final	Unfunded	
<b>Project Description</b>		
Skagit 911 has identified a need to build a new radio site near Starbird Road/I-5 in Skagit County. There is currently very poor radio communication coverage in the southwest area (surrounding I-5) of Skagit County. A new radio site in this region would benefit Law, Fire, and EMS agencies that respond to citizens and visitors in this area. This project would require an extensive fiber build-out to the Starbird/I-5 area.		
<b>Expected Completion</b>	TBD	
<b>Total Capital Cost</b>	Estimated \$600,000	
<b>Funding Source</b>	Sales Tax	
<b>New Wages</b>	NA	
<b>Annualized System Operating Costs</b>		
Site / Tower Rent	\$20,000 (est.)	
Phone / Fiber	\$20,000 (est.)	
Power	\$5,000 (est.)	
Projected Annual Maintenance	\$1,000 (est.)	
<b>Expected Life Span</b>		
Shelter / Building	50 Years	
Equipment	15 Years	
Generator	30 Years	

Critical Communication Infrastructure		
<b>Project Title:</b> <b>Anacortes Water Tower Radio Site</b>	<b>Project Cost</b>	<b>\$400,000</b>
<b>Priority:</b> <b>FT / LT / AB / Skagit 911 / Final</b>	<b>Unfunded</b>	
<b>Project Description</b>		
Skagit 911 has identified a need to build a new radio site at the Anacortes Water Tower. The radio coverage in the Skyline area of Anacortes is poor or non-existent in some areas. A new radio site in this region would benefit Law, Fire, and EMS agencies that respond to citizens and visitors in this area.		
<b>Expected Completion</b>	TBD	
<b>Total Capital Cost</b>	<i>Estimated \$400,000</i>	
<b>Funding Source</b>	<i>Sales Tax</i>	
<b>New Wages</b>	NA	
<b>Annualized System Operating Costs</b>		
Site / Tower Rent	\$20,000 (est.)	
Phone / Fiber	\$20,000 (est.)	
Power	\$5,000 (est.)	
Projected Annual Maintenance	\$1,000 (est.)	
<b>Expected Life Span</b>		
Shelter / Building	30 Years	
Equipment	5-15 Years	
Generator	20 Years	

Critical Communication Infrastructure		
<b>Project Title:</b> <b>Newhalem Radio Site</b>	<b>Project Cost</b>	<b>\$400,000</b>
<b>Priority:</b> <b>FT / LT / AB / Skagit 911 / Final</b>	<b>Unfunded</b>	
<b>Project Description</b>		
Skagit 911 has identified a need to build a new radio site in Newhalem. This new radio site would be built and funded in partnership with Seattle City Light. This would greatly improve radio communications for Fire and EMS agencies in this area. It would also create an interoperable frequency for Skagit County, the National Park Service and the Whatcom County law enforcement units. There is currently no radio communication for Skagit County's law enforcement nor an interoperable frequency for all three agencies to use when responding to emergencies together, leaving no ability for them to communicate with each other. This site has increased costs compared to other rebuilds due to the historic significance restrictions.		
<b>Expected Completion</b>	TBD	
<b>Total Capital Cost</b>	<i>Estimated \$400,000</i>	
<b>Funding Source</b>	<i>Sales Tax and Seattle City Light</i>	
<b>New Wages</b>	NA	
<b>Annualized System Operating Costs</b>		
Site / Tower Rent	\$20,000 (est.)	
Phone / Fiber	\$20,000 (est.)	
Power	\$5,000 (est.)	
Projected Annual Maintenance	\$1,000 (est.)	
<b>Expected Life Span</b>		
Shelter / Building	50 Years	
Equipment	15 Years	
Generator	30 Years	

Critical Communication Infrastructure		
<b>Project Title:</b> Christian Camp Road Radio Site	<b>2022/2023 Project Cost</b>	<b>\$350,000</b>
<b>Priority:</b> FT / LT / AB / Skagit 911 / Final	Pending Financial Approval	
<b>Project Description</b>		
Skagit 911 has identified a need to build a new radio site near Christian Camp Road in eastern Skagit County. There is currently no radio communication coverage in the south-central ( <i>surrounding highway 530</i> ) area of Skagit County. A new radio site in this region would benefit Law, Fire, EMS and Tribal agencies that respond to citizens and visitors in this area.		
<b>Expected Completion</b>	TBD	
<b>Total Capital Cost</b>	Estimated \$350,000	
<b>Funding Source</b>	2021 Excess Revenue & Unspent Funds	
<b>New Wages</b>	NA	
<b>Annualized System Operating Costs</b>		
Site / Tower Rent	\$20,000 (est.)	
Phone / Fiber	\$20,000 (est.)	
Power	\$5,000 (est.)	
Projected Annual Maintenance	\$1,000 (est.)	
<b>Expected Life Span</b>		
Shelter / Building	50 Years	
Equipment	15 Years	
Generator	30 Years	

Critical Communication Infrastructure Refresh		
<b>Project Title:</b> La Conner Radio Tower Replacement	<b>Project Cost</b>	<b>\$400,000</b>
<b>Priority:</b> FT / LT / AB / Skagit 911 / Final	Unfunded	
<b>Project Description</b>		
The radio tower in La Conner is currently a wooden pole which does not meet the standard for a public safety grade communication system. This pole would be replaced with a permanent structure that could potentially bring in a wireless cellular carrier to co-locate. Cellular coverage in this area is very poor. Should a wireless carrier co-locate at this radio tower, first responders would benefit from the diversity in communication options.		
<b>Expected Completion</b>	TBD	
<b>Total Capital Cost</b>	Estimated \$400,000	
<b>Funding Source</b>	Sales Tax	
<b>New Wages</b>	NA	
<b>Annualized System Operating Costs</b>		
Site / Tower Rent	None	
Phone / Fiber	\$5,500	
Power	None	
Projected Annual Maintenance	TBD	
<b>Expected Life Span</b>		
Shelter / Building	50 Years	
Equipment	15 Years	
Generator	Needs to be replaced	

<b>Critical Communication Infrastructure Refresh</b>		
<b>Project Title:</b> Little Mountain Tower Replacement	<b>Project Cost</b>	<b>\$600,000</b>
<b>Priority:</b> FT / LT / AB / Skagit 911 / Final	<b>Unfunded</b>	
<b>Project Description</b>		
The current radio tower at Little Mountain in Mount Vernon is currently overloaded by 205% and is not tall enough to clear the trees, which cannot be removed or cut down. This tower is primarily used by Mount Vernon's Law, Fire and EMS agencies and is not able to provide appropriate coverage in areas of Mount Vernon.		
<b>Expected Completion</b>	TBD	
<b>Total Capital Cost</b>	Estimated \$600,000	
<b>Funding Source</b>	Sales Tax	
<b>New Wages</b>	NA	
<b>Annualized System Operating Costs</b>		
Site / Tower Rent	\$1,200	
Phone / Fiber	\$1,000	
Power	None	
Projected Annual Maintenance	TBD	
<b>Expected Life Span</b>		
Shelter / Building	50 Years	
Equipment	15 Years	
Generator	30 Years	

<b>Critical Communication Infrastructure</b>		
<b>Project Title:</b> Lake Cavanaugh Microwave	<b>Project Cost</b>	<b>\$300,000</b>
<b>Priority:</b> FT / LT / AB / Skagit 911 / Final	<b>Unfunded</b>	
<b>Project Description</b>		
Installation of microwave link to Lake Cavanaugh would provide connectivity and reliable communication from Skagit 911 to the Lake Cavanaugh Radio site. The current fiber circuit is unreliable and would be egregiously expensive to replace. An improved radio communication system in this area would benefit Law, Fire, and EMS responders in the area. Additionally, this would provide the option to place a callbox at Lake Cavanaugh's fire station in the event that they lose their phone lines.		
<b>Expected Completion</b>	TBD	
<b>Total Capital Cost</b>	Estimated \$300,000	
<b>Funding Source</b>	Sales Tax	
<b>New Wages</b>	NA	
<b>Annualized System Operating Costs</b>		
Site / Tower Rent	None	
Phone / Fiber	\$16,000	
Power	None	
Projected Annual Maintenance	TBD	
<b>Expected Life Span</b>		
Shelter / Building	NA	
Equipment	15 Years	
Generator	NA	

Critical Communication Infrastructure Refresh		
<b>Project Title:</b> <b>Diablo Dam Radio Site Improvements</b>	<b>Project Cost</b>	<b>\$400,000</b>
<b>Priority:</b> <b>FT / LT / AB / Skagit 911 / Final</b>	<b>Unfunded</b>	
<b>Project Description</b>		
This radio site improvement project would be jointly funded in partnership with Seattle City Light. This would greatly improve radio communications for Fire and EMS agencies in this area. Currently, the equipment there has been at the end of its life span for 10 years. This project would modernize the equipment that has long since been obsolete. This site has increased costs compared to other rebuilds due to the historic significance restrictions.		
<b>Expected Completion</b>	TBD	
<b>Total Capital Cost</b>	<i>Estimated \$400,000</i>	
<b>Funding Source</b>	<i>Sales Tax</i>	
<b>New Wages</b>	NA	
<b>Annualized System Operating Costs</b>		
Site / Tower Rent	<i>Paid by SCL (Seattle City Light)</i>	
Phone / Fiber	<i>Paid by SCL</i>	
Power	<i>Paid by SCL</i>	
Projected Annual Maintenance	<i>\$1,000</i>	
<b>Expected Life Span</b>		
Shelter / Building	<i>50 Years</i>	
Equipment	<i>15 Years</i>	
Generator	NA	

Critical Communication Infrastructure Refresh		
<b>Project Title:</b> <b>Babcock Hill Radio Site Improvements</b>	<b>Project Cost</b>	<b>\$300,000</b>
<b>Priority:</b> <b>FT / LT / AB / Skagit 911 / Final</b>	<b>Unfunded</b>	
<b>Project Description</b>		
This radio site improvement project would be jointly funded in partnership with Seattle City Light. This would greatly improve radio communications for Fire and EMS agencies in this area. Currently, the equipment there has been at the end of its life for 10 years. This project would modernize the equipment that has long since been obsolete. This site has increased costs compared to other rebuilds due to the historic significance restrictions.		
<b>Expected Completion</b>	TBD	
<b>Total Capital Cost</b>	<i>Estimated \$300,000</i>	
<b>Funding Source</b>	<i>Sales Tax</i>	
<b>New Wages</b>	NA	
<b>Annualized System Operating Costs</b>		
Site / Tower Rent	<i>Paid by SCL (Seattle City Light)</i>	
Phone / Fiber	<i>Paid by SCL</i>	
Power	<i>Paid by SCL</i>	
Projected Annual Maintenance	<i>\$1,000</i>	
<b>Expected Life Span</b>		
Shelter / Building	<i>50 Years</i>	
Equipment	<i>15 Years</i>	
Generator	NA	

Critical Technology and Services		
<b>Project Title: 911 System Video/Image Storage and Processing</b>		<b>Project Cost</b> <b>\$600,000</b>
<b>Priority: FT / LT / AB / Skagit 911 / Final</b>		<b>Unfunded</b>
<b>Project Description</b>		
New technologies for citizens to send video or photo images to 911 are approaching quickly. These attachments to 911 calls will come to Skagit 911 through the state ESinet, which carries all 911 traffic in Washington state. While there is discussion at the state level on how to manage this, Skagit 911 must be prepared for the electronic processing and storage of images, and proactive in setting aside funding to meet the requirements that will come with this program. An additional full time Records Technician will be required to assist with the management of this program and meeting the Public Records Act requirements.		
<b>Expected Completion</b>	TBD	
<b>Total Capital Cost</b>	<i>Estimated \$600,000</i>	
<b>Funding Source</b>	<i>Sales Tax and 911 Phone Tax</i>	
<b>New Wages</b>	<i>\$80,000</i>	
<b>Annualized System Operating Costs</b>		
Site / Tower Rent	NA	
Phone / Fiber	NA	
Power	NA	
Projected Annual Maintenance	TBD	
<b>Expected Life Span</b>		
Shelter / Building	NA	
Equipment	TBD	
Generator	NA	

<b>Critical Technology and Services</b>		
<b>Project Title:</b> <b>Advanced Cyber Security Monitoring (Contract)</b>	<b>Project Cost</b>	<b>\$125,000</b>
<b>Priority:</b> <b>FT / LT / AB / Skagit 911 / Final</b>	<b>Unfunded</b>	
<b>Project Description</b>		
<p>Skagit 911 currently has two IT experts managing Skagit 911's entire network and cyber security as a tertiary responsibility. While Skagit 911 has been successful in protecting its systems from cyber-attacks, these malicious attacks are becoming more common and sophisticated. The system is not monitored 24/7 due to staffing and space limitations. Skagit 911 proposes contracting with a cyber security company to monitor all mission critical networks 24/7, 365 days per year and provide an immediate response to any attack.</p>		
<b>Expected Completion</b>	TBD	
<b>Total Capital Cost</b>	<i>Estimated \$125,000 Annually</i>	
<b>Funding Source</b>	<i>Sales Tax, 911 Phone Tax, User Fees</i>	
<b>New Wages</b>	NA	
<b>Annualized System Operating Costs</b>		
Site / Tower Rent	NA	
Phone / Fiber	NA	
Power	NA	
Projected Annual Maintenance	NA	
<b>Expected Life Span</b>		
Shelter / Building	NA	
Equipment	NA	
Generator	NA	

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## CARRYOVER PROJECTS FROM THE 2015-2021 CAPITAL IMPROVEMENT PLAN

The information below is directly taken from the 2015-2021 Capital Improvement Plan created in 2015. Additional notes and status updates will be written below each project.

<b>Critical Communications Infrastructure</b>				
<b>Project Title: LE 1 System Radio Replacement</b>			<b>FY Cost</b>	<b>\$0</b>
<b>Priority:</b>			2020	
<b>Project Description</b>				
This project replaces the obsolete Quantar radios with GTR8000 radios at Little, Lyman, and Erie.				
<b>Expected Completion</b>			<b>FY Complete</b>	<b>2020</b>
<b>Total Capital Cost</b>			<b>\$63,500</b>	
<b>Total Annualized Operating Costs</b>			<b>\$1,000</b>	
Site/Tower Rent	N/A			
Phone/Fiber	N/A			
Power	N/A			
Projected Annual Maint	\$1,000			
<b>Funding Source</b>			<b>Agency Specific</b>	
<b>Expected Life Span</b>			<b>YEARS</b>	
Shelter			<b>N/A</b>	
Equipment			<b>15</b>	
Generator			<b>N/A</b>	

**Status Update:** This project's funding was approved in December of 2021 as Project 2021-15. This project is currently ongoing with an estimated end date of 2023. **This projected is funded through a financing agreement with Motorola.**

LE 2 and Fire TAC 9 also need hardware replacement and are included in the 2021-15 project.



<b>Skagit 911 Technology Refreshment</b>			
<b>Project Title: Site Security/Critical Systems Monitoring</b>		<b>FY Cost</b>	<b>\$0</b>
<b>Priority:</b>		TBD	
<b>Project Description</b>			
Builds a system capable of monitoring the entire radio and computer network systems. This system would include surveillance cameras at Skagit 911. Project Benefits: This system would provide real-time intelligence on systems health and status allowing us to make repairs or operational changes before issues affect field personnel. This system would automatically page technical services personnel when issues arise.			
<b>Expected Completion</b>		<b>FY Complete</b>	<b>2018</b>
<b>Total Capital Cost</b>		<b>\$80,000</b>	
<b>Total Annualized Operating Costs</b>		<b>\$500</b>	
Site/Tower Rent	N/A		
Phone/Fiber	N/A		
Power	N/A		
Projected Annual Maint	\$500		
<b>Funding Source</b>		<b>Undetermined</b>	
<b>Expected Life Span</b>		<b>YEARS</b>	
Shelter		<b>N/A</b>	
Equipment		<b>10-15</b>	
Generator		<b>N/A</b>	

**Status Update:** This project's funding was approved in December of 2021 as Project 2021-15. This project is currently ongoing with an estimated end date of 2023. This projected is funded through a financing agreement with Motorola.

<b>Skagit 911 Technology Refreshment</b>			
<b>Project Title: Generator Replacement</b>		<b>FY Cost</b>	<b>\$250,000</b>
<b>Priority: Medium</b>		2017	
<b>Project Description</b>			
Replaces the current emergency back-up generator at Skagit 911. The current system is <del>15 years</del> <b>23 YEARS</b> old and is not able to be monitored. The generator will be undersized for the needs of the center in the near future. Project Benefits: Provides a high capacity emergency generator that meets the power needs of Skagit 911 in to the future.			
<b>Expected Completion</b>		<b>FY Complete</b>	<b>2017</b>
<b>Total Capital Cost</b>		<b>\$250,000</b>	
<b>Total Annualized Operating Costs</b>		<b>\$2,000</b>	
Site/Tower Rent	N/A		
Phone/Fiber	N/A		
Power	N/A		
Projected Annual Maint	\$2,000		
<b>Funding Source</b>		<b>FMAG Grant</b>	
<b>Expected Life Span</b>		<b>YEARS</b>	
Shelter		<b>N/A</b>	
Equipment		<b>N/A</b>	
Generator		<b>30</b>	

Status Update: This project has not received funding yet.