



Agenda
Public Works and Parks Committee Regular Meeting
April 6, 2026 | 5:30 PM

Public Works Wastewater Treatment Plant
26729 98th Dr. NW
Stanwood, WA 98292

This meeting will be conducted in person at the City of Stanwood Public Works Wastewater Treatment Plant, 26729 98th Dr. NW, Stanwood, WA 98292
<https://www.stanwoodwa.org>.

- 1. Call to Order**
- 2. Roll Call**
- 3. New Business**
 - a. Pioneer Hills Lift Station Rehabilitation
 - b. SR 532 & 72nd Ave NW Intersection Improvements
 - c. Twin City Plaza Concept Plan
- 4. Committee Comments**
- 5. Staff Comments**
- 6. Adjourn**



City of Stanwood Public Works and Parks Committee Staff Report

Item Number: 3.a.
Date: April 6, 2026
Subject: Pioneer Hills Lift Station Rehabilitation
Contact Person: Alan Lytton, City Engineer
Attachments:
1. 6429 ExA
2. 6429 ExB
3. TM - Stanwood Pioneer Hills Lift Station

ISSUE

Pioneer Hills Lift Station

BACKGROUND:

The Pioneer Hills Lift Station is a component of the City's wastewater system and is approximately 25 years old. While the facility remains operational, a recent predesign technical memorandum identified multiple deficiencies related to aging equipment, corrosion, and non-compliance with current electrical and fire codes.

The existing station includes skid-mounted pumps, aging mechanical and electrical systems, and lacks a standby power source.

The predesign evaluation identified several necessary upgrades to maintain reliable operation and meet current regulatory requirements, including:

- Replacement of pumps, piping, and mechanical systems
- Installation of a standby generator
- Electrical and SCADA system upgrades
- Wet well rehabilitation
- Replacement of the existing roof and building modifications

A key driver of the project is the addition of a standby generator, which will provide redundancy and allow the station to operate during power outages.

The addition of a standby generator is considered a substantial electrical upgrade and triggers the requirement to bring the facility into compliance with current National Electrical Code (NEC) and NFPA 820 standards.

Due to the proximity of the wet well and the presence of sewer gases, the existing building is currently classified as a hazardous (Class 1, Division 1) environment. Under current codes, this requires one of the following:

- Installation of explosion-proof electrical equipment, or
- Reconfiguration of the building (including ventilation, door relocation, and sealing pathways such as floor drains) to eliminate hazardous classification

As a result, the project must include significant electrical system upgrades and building modifications to ensure compliance. These improvements are necessary not only to support the generator installation but also to address existing life-safety risks and bring the facility up to modern standards.

EXHIBIT A

SCOPE OF WORK

CITY OF STANWOOD PIONEER HILLS LIFT STATION REHABILITATION DESIGN

INTRODUCTION

In February 2025, Gray & Osborne completed an evaluation of the City of Stanwood's (City) Pioneer Hills Lift Station. The lift station is located within the City limits, on the east side of Pioneer Highway, approximately 900 feet north of Nordic Way. The evaluation identified a number of deficiencies at the existing station, and included alternatives for rehabilitation and upgrade options and cost estimates.

Per your request, Gray & Osborne is pleased to provide a Scope of Work and Fee Proposal for design of the rehabilitation of the Pioneer Hills Lift Station. It is our understanding that the City would like the design to include the following improvements.

- Replacement of the existing pump skid with new skid-mounted pumps.
- Installation of a standby generator and automatic transfer switch (ATS). The generator will be designed with a standard factory-provided sound-attenuated enclosure and subbase fuel tank.
- Construction of a gravity retaining wall to provide site space for the proposed standby generator and access to the concrete masonry unit (CMU) building.
- Replacement of the lift station motor control starters with new variable frequency drives (VFDs).
- Upgrade of the existing electrical, SCADA, and instrumentation in the station.
- Removal of the existing natural gas-powered pump and elimination of the natural gas service.
- Replacement of the existing lift station piping, and the addition of a magnetic flow meter inside the building.
- Upgrade of the existing HVAC system to meet current code requirements, including National Fire Protection Association (NFPA) 820.

- Structural improvements, including relocation of the existing access doors, replacement of the roof, and other CMU modifications to accommodate the HVAC improvements.
- Rehabilitation of the existing wet well, including providing an epoxy lining.

We have developed the following specific Scope of Work for the design of the project.

PROPOSED SCOPE OF WORK

The following elements are included in this Scope of Work.

Task 1 – Project Management

Project management services will include coordination with all Subconsultants, allocation of staff resources for the project, tracking of project progress and schedule, review of draft and final work submitted by the Subconsultants, meetings with City staff to review findings, and administrative services, such as processing invoices.

Task 2 – Survey

Survey services will include defining the limits of the existing rights-of-way and property line. Obtain vertical and horizontal control necessary for design of the project, obtain pertinent topographical information to include identifying existing and obvious utilities, and pertinent topographical features to facilitate design of the project. Survey services are to include the following.

- A. Rights-of-Way and Property Research – Acquire and utilize readily-available records of survey, plat maps, Assessor maps, etc., from the County Auditor’s Office within the project area as required for establishing the existing rights-of-way and easements. This work will include the following.
 - 1. Identify current rights-of-way in the vicinity of the property.
 - 2. Overlay the rights-of-way and current property easements on a Plan view of the project corridor.
- B. Topographic Survey
 - 1. Establish vertical and horizontal control on the City-adopted datum for survey and mapping at a scale of not more than 1 inch equal to 20 feet (horizontal) and 1 inch equal to 5 feet (vertical).

Vertical control will be suitable for establishing 2-foot contour intervals and to support the design and construction included in this Scope of Work.

2. Acquire supplemental topographical survey of the site (within and adjacent to the project corridor) to include establishing surface grades, pavement edges, visually-obvious utilities (including utility poles, hydrants, valves, etc.), buildings, fences, major trees and significant landscaping, sidewalks, etc., in sufficient detail to support an adequate level of design. The top and bottom of the slope will be surveyed to support the Wall Design.

Task 3 – Utility Data Acquisition

Acquire record drawings and/or as-built information from utility purveyors known to provide service in the project corridor. Services are to include the following.

- A. Provide written requests for all utility purveyors known to provide utility service in the project area.
- B. Review data provided by utility purveyors and incorporate into project design as may be applicable.

Task 4 – Geotechnical Investigation and Report

Conduct field explorations to determine design recommendations to support the proposed Gravity Wall Design. This Task will culminate in the preparation of a Final Geotechnical Report in the City-approved format. Services are to include the following.

- A. Perform a geotechnical analysis (PanGEO, Inc., the Geotechnical Subconsultant) to determine existing subsurface conditions. The City will provide 1 Call Service.
- B. Laboratory Testing – Conduct appropriate laboratory tests on selected samples in accordance with appropriate American Society for Testing and Materials (ASTM) methods. Natural moisture content and grain size distribution tests will be conducted on soil samples. Other laboratory tests will be performed on an as-needed basis, based on the types of soils encountered.
- C. Engineering Analyses – Perform engineering analyses to address geotechnical engineering issues that may be associated with the project improvements.

- D. Report – PanGEO, Inc. (PanGEO) will prepare a Draft Report which will be submitted to the City by Gray & Osborne. The Draft Report will summarize the results of the geotechnical study and include a site map with approximate test pit locations, description of surface and subsurface conditions (soil and groundwater), existing pavement thickness, design parameters, and earthwork recommendations. Gray & Osborne will submit one copy of the Draft Report to the City for its review. Our Subconsultant, PanGEO, will revise the Draft Report to address review comments provided by the City and/or Gray & Osborne.

Note: The geotechnical work is for geotechnical evaluation of physical soil properties only. Evaluation of contaminated soils, fill, and groundwater are specifically excluded from this Task.

Task 5 – Site Civil Design

Site civil design for the project will include the following elements.

- A. Completion of the proposed Site Plan.
- B. Development of the Grading and Drainage Plans.
- C. Retaining wall design.
- D. Site Demolition Plan.
- E. Site Restoration Plan.
- F. Site fencing.

Task 6 – Structural Design

The new lift station will retrofit the CMU building to house electrical equipment and a canopy structure to cover the proposed standby generator. Our Structural Design of the station will include the following elements.

- A. Gravity Wall Design.
- B. Generator Equipment Pad Design.
- C. CMU Building Modification Design.
- D. Design of a new metal roof.

Task 7 – Mechanical Design

Mechanical design will include the following.

- A. Mechanical design of a duplex skid-mounted lift station. It is anticipated that we will be designing a dry-prime, suction lift system.
- B. Replacement of the lift station suction and discharge piping.
- C. Replacement of station instrumentation, including new level sensors, emergency floats, and the addition of a flow meter.
- D. Demolition of existing pump station skid, HVAC system, natural gas service, lift station, electrical rack, and generator.
- E. Rehabilitation of the existing wet well, including a new epoxy coating system.
- F. New emergency bypass connection.

Task 8 – Electrical Design and Coordination

Electrical design will include the following.

- A. New VFD motor starters.
- B. New control panel.
- C. Updated Lighting Plan.
- D. Standby generator and ATS.
- E. Initial design utility service coordination for power and communication as required.

Task 9 – Review Meetings

It is anticipated that there will be up to four review meetings with staff during the project. The 30 Percent Design, 60 Percent Design, 90 Percent Design, and Final Design. It is assumed that these meetings will be held virtually.

Task 10 – Quality Assurance/Quality Control

Gray & Osborne will conduct internal reviews at the 30 percent, 60 and 90 percent PS&E levels. At these reviews, Gray & Osborne senior staff will review the Contract Documents for constructability, cost control, risk to the City, and consistency.

Task 11 – Bid Services

Gray & Osborne will provide bid services for the project including, but not limited to, answering bid questions, preparing Contract Addenda, attending a pre-bid walkthrough, preparing the Bid Summary, reviewing bidder qualifications, and preparing the Recommendation to Award Letter.

DELIVERABLES

We will provide review materials for each of the following milestones.

1. 30 Percent Design - Plans and Engineer’s Estimate.
2. 60 Percent Design – Plans, Specifications, and Engineer’s Estimate.
3. 90 Percent Design – Plans, Specifications, and Engineer’s Estimate.
4. Final Bid Documents – Plans, Specifications, and Engineer’s Estimate.
5. Bid Services – Pre-bid walkthrough, Bid Summary, and Recommendation to Award.

PROJECT SCHEDULE

The project is scheduled to advertise in February, which is historically a good time to bid and schedule summer work. In order to meet that bid schedule, we have developed the following schedule for the project.

Authorization	April 2026
30 Percent Submittal	July 2026
60 Percent Submittal	October 2026
90 Percent Design	December 2026
Advertise	February 2027
Open Bids.....	March 2027
Award.....	April 2027

BUDGET

Exhibit B attached provides a detailed breakdown of the hours and rates for the design.

PROJECT ASSUMPTIONS REGARDING CITY RESPONSIBILITIES

This Scope of Work and the resulting maximum amount payable is based on the following assumptions as required for the development of the project. See also item assumptions noted in the aforementioned Tasks. Changes in these assumptions and responsibilities may cause a change in scope of the services being offered and result in a corresponding adjustment of the Contract price.

1. This Scope of Work assumes that the City will provide overall coordination and approval of the project, including the timely (2 weeks) review of all submittals.
2. This Scope of Work assumes that the City will provide Gray & Osborne with relevant capacity requirements and record drawings of existing sanitary sewer infrastructure along the project alignment, as may be available and/or pertinent to the project.
3. This Scope of Work does not include any services for cultural resources or archaeological assessment.
4. This Scope of Work assumes that the City will prepare, advertise, and circulate the SEPA Checklist Document if required, pay any costs of publication, and make timely threshold determinations.
5. This Scope of Work does not include permitting services. Should the City desire any permitting services, including delineations, supplemental survey, reports and/or permit preparation, this Contract can be supplemented to include the additional services.

EXHIBIT B

**ENGINEERING SERVICES
SCOPE AND ESTIMATED COST**

CITY OF STANWOOD - PIONEER HILLS LIFT STATION REHABILITATION DESIGN

Tasks	Principal Hours	Project Manager Hours	Project Engineer Hours	Civil Engineer Hours	Structural Engineer Hours	Electrical Engineer Hours	AutoCAD/GIS Technician/Engineer Intern Hours	Professional Land Surveyor Hours	Field Survey Crew Member Hours
1 Project Management		16							
2 Survey		2					16	20	20
3 Utility Data Acquisition				8		8			
4 Geotechnical Investigation and Report		2			4				
5 Site Civil Design									
A. 30 Percent		2		24			16		
B. 60 Percent		2		24			16		
C. 90 Percent		2		24			16		
D. Final		2		16			16		
6 Structural Design									
A. 30 Percent		1			24		16		
B. 60 Percent		1			24		16		
C. 90 Percent		1			24		12		
D. Final		1			8		4		
7 Mechanical Design									
A. 30 Percent		2	16	24			24		
B. 60 Percent		2	24	24			24		
C. 90 Percent		2	24	24			24		
D. Final		2	8	8			8		
8 Electrical Design and Coordination									
A. 30 Percent		2				48	16		
B. 60 Percent		2				48	16		
C. 90 Percent		2				48	16		
D. Final		2				40	8		
9 Review Meetings		6		6		6			
10 Quality Assurance/Quality Control	24	12	12	12	12				
11 Bid Services		12		16	2	2	4		
Hour Estimate:	24	78	84	210	98	200	268	20	20
Fully Burdened Billing Rate Range:*	\$170 to \$270	\$170 to \$270	\$150 to \$210	\$140 to \$190	\$120 to \$245	\$120 to \$245	\$70 to \$190	\$140 to \$220	\$80 to \$160
Estimated Fully Burdened Billing Rate:*	\$260	\$240	\$175	\$155	\$180	\$200	\$140	\$220	\$140
Fully Burdened Labor Cost:	\$6,240	\$18,720	\$14,700	\$32,550	\$17,640	\$40,000	\$37,520	\$4,400	\$2,800

Total Fully Burdened Labor Cost:	\$ 174,570
Direct Non-Salary Cost:	
Mileage & Expenses (Mileage @ current IRS rate)	\$ 230
Subconsultant:	
PanGEO, Inc.	\$ 20,000
Subconsultant Overhead (10%)	\$ 2,000
TOTAL ESTIMATED COST:	\$ 196,800

* Actual labor cost will be based on each employee's actual rate. Estimated rates are for determining total estimated cost only. Fully burdened billing rates include direct salary cost, overhead, and profit.



TECHNICAL MEMORANDUM

TO: CITY OF STANWOOD
FROM: ERIC DELFEL, P.E.
JAMES LIVINGSTON, P.E.
DATE: FEBRUARY 14, 2025
SUBJECT: PIONEER HILLS LIFT STATION
PREDESIGN REPORT
CITY OF STANWOOD, SKAGIT COUNTY,
WASHINGTON
G&O #24558.00

INTRODUCTION

The City of Stanwood (City) requested a Scope of Work to complete the following improvements at the Pioneer Hills Lift Station.

- Replace the existing wood framed roof.
- Remove the existing natural gas backup pump system and install a new standby generator (with an automatic transfer switch).
- Replace the existing motor starters.

After a site visit was conducted with City staff on August 25, 2024, the City added additional items to the improvements list, including the following.

- Add new magnetic flow meter.
- Replace the existing pumps with new pumps.
- Replace the existing mechanical piping with new mechanical piping.

The City has contracted with Gray & Osborne to prepare this Technical Memorandum to discuss the steps needed to complete this work.

Based on our site visit, we noted various code compliance concerns with the National Electrical Code (NEC) and National Fire Protection Association Code (NFPA), that will impact the installation of aforementioned items noted. As such, this Technical Memorandum will identify the issues and options to rectify the issue.



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Also included in this Technical Memorandum is an assessment of the existing facility, including the Concrete Masonry Unit (CMU) building, concrete wet well, and the mechanical and electrical systems. For the City’s consideration, we have analyzed two options for the replacement of the existing mechanical systems to include a similar skid-mounted pump system, or conversion to a submersible station.

BACKGROUND

The Pioneer Hills Lift Station is located on the east side of Pioneer Highway on Parcel 32041900206400. The Lift Station is a wet well mounted pump station, equipped with two skid-mounted Gorman-Rupp self-priming pumps with a design capacity of 500 gallons per minute (gpm) and 72 feet of discharge head. The pumps and electrical equipment are located within a CMU structure with a wood truss roof with asphalt shingles. The structure partially sits on a rectangular concrete wet well. The water level in the wet well is measured by a transducer and floats. Sewer discharges through a 6-inch ductile iron force main into the City’s gravity sewer system.

Power is received from Snohomish County Public Utility District via a local utility power meter and power distribution panel mounted on the pump house. The lift station receives 277V/480V three-phase power via a 250-amp fused main switch. The loads onsite include the two 20-hp motors, a 45 kVA-stepdown transformer feeding a 208V/120VAC panelboard, a gas room heater, and exhaust fan. The facility does not have standby power.

SIZING AND CAPACITY

The City’s *2015 Comprehensive Plan* concluded that the station is adequately-sized to serve buildout flows; therefore, any replaced equipment does not have to be upsized.

Recommended sizing for wet well operating storage volume is:

$$V = \frac{QT}{4}$$

Where:

V = Wet well operating volume in gallons

Q = Design pumping rate in gallons per minute

T = Time between starts in minutes = 7.5 minutes (15 minutes for each pump)



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This method of sizing ensures that under all flow conditions, pump cycling does not exceed four starts per hour per pump. Although pump manufacturers typically specify the maximum allowable number of starts to be between 10 and 30 starts per hour per pump, the more conservative value of 4 was selected to minimize pump cycling and to maximize pump and motor life. This value is also sufficiently conservative that, if one pump is out of service, the pump starts for the remaining pump will not exceed 8 starts per hour.

According to this sizing method and the estimated current pumping rate of 500 gpm, the required wet well operating volume is 937 gallons. The current operating volume of the system is approximately 3,083 gallons (1.5-foot operating depth). There is significant surplus operating storage in the existing wet well.

CONDITIONS ASSESSMENT AND CODE COMPLIANCE CONCERNS

The physical condition and operational functions of the Pioneer Hills Lift Station have been evaluated based on Gray & Osborne’s site visit on August 25, 2024, a review of station record drawings, and discussions with the operational staff at the City.

General

Mechanical and electrical systems for wastewater applications typically have a useful life of 20 to 30 years. Mechanical and electrical equipment operating in the corrosive wet well environment are particularly vulnerable to failure, and so it is important to replace equipment when needed to ensure the reliability of the station. The existing equipment is approximately 25 years old, and due to lead time of electrical equipment and time required to design a project, the equipment will be almost 30 years old if an effort to replace the equipment is undertaken now. Replacement of the key mechanical and electrical systems would be prudent if the City is undertaking a project at this time.

Building

The pumps and electrical equipment are located within a 14 by 20-foot CMU structure with a gable wood truss roof with asphalt shingles, gutters, and downspouts. At the time of the site visit, a tarp, secured with lumber, was located on the roof which was previously installed to address leaks. Based on the visual inspection, the CMU structure appears to be in serviceable condition. The wooden roof structure also appears to be in serviceable condition. However, the existing asphalt shingles have failed and should be replaced, even if on a temporary basis. The National Fire Protection Association Code 820 (NFPA 820) states that wastewater facilities are required to be constructed out of non-combustible materials. Therefore, the wood truss roof will need to be replaced with a metal roof.



Wet Well

The underground wet well is a 16 by 20-foot concrete structure that is approximately 8 feet deep. Based on the operating storage volume calculation, the wet well has adequate storage volume. During the site visit, the wet well was not entered for inspection, and there was minimal visibility from the surface to ascertain the condition. Although the condition of the wet well could not be inspected, concrete structures of this age and environment likely have experienced some corrosion, but should be salvageable if it is rehabilitated with a new coating system. Under anaerobic wastewater conditions, sulfides cannot be oxidized, leading them to combine with hydrogen to produce hydrogen sulfide gas (H₂S). This gas reacts with the concrete and can lead to deterioration and spalling of the concrete surfaces.

Although the concrete surfaces of the existing wet well could not be visibly inspected during the site visit, it is likely that the existing wet well is in reasonable condition and can continue to be used. In order to protect the concrete surfaces and extend the useful life of the wet well, it is recommended that the wet well be rehabilitated with a new coating system.

The suction and discharge piping within the wet well were visible, and significant corrosion was evident. Piping in the wet well should be replaced.

Mechanical System

The existing pump system manufactured by Gorman-Rupp consists of two skid-mounted self-priming pumps. The skid system supporting the pumps is showing signs of corrosion that should be rehabilitated, or the skid system should be replaced. The pumps are currently operational, but due to exposure to wastewater over a period of nearly 30 years, they are likely due for replacement. The natural gas-powered backup pump has not been operational in years, meaning there is currently no redundancy if both electrically-powered pumps were to fail.

In addition to the mechanical issues associated with the existing pumps and piping, the location of the skid-mounted system is not ideal and creates some NEC clearance violations. Removal of the gas-powered pump and replacement of the electric pumps due to age and condition provides the City with an opportunity to remedy these code compliance issues.



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Electrical System

The electrical equipment does not meet several current sections of the most recent edition of the NEC. Some of these include the following.

- The motor control panel door does not allow the required 24 inches of clearance from the adjacent wall when fully open. This clearance requirement also applies to the egress path from all large electrical equipment.
- The outside hatch for the wet well is not far enough away from the building door, at only 23 inches.
- There is an open drain to the wet well inside the building. This allows sewer gases to enter the pump house from the wet well, which under current code is not allowed, and requires the electrical equipment to either be moved outside the building, moved to a newly constructed room with adequate ventilation, or all electrical equipment must be made explosion-proof.

The telemetry equipment currently in place appears to have been installed in 2019 and can likely be reused. However, City operations staff indicated that a new control panel with an updated operator interface would be preferable.

NFPA 820 Compliance Issues

Table 1 illustrates the applicable requirements of NFPA 820 for the Pioneer Hills Lift Station.



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TABLE 1

NFPA 820 Table 4.2.2 (Hazardous Area Classifications)

Row	Location and Function	Fire and Explosion Hazard	Ventilation	Extent of Classified Area	NEC – Area Electrical Classification	Materials of Construction	Fire Protection Measures
14a,14c	Wastewater Pumping Station Wet Wells – Liquid side of a pumping station serving a sanitary sewer or combined system.	Possible ignition of flammable gases and floating flammable liquids.	None or less than 12 ACH.	Entire room or space, plus envelope of 3 feet around vents.	Class 1, Division 1	Noncombustible material	Combustible gas detection system required.
16	Above Grade Wastewater Pumping Station – Pump room physically separated with no personnel access to wet well; pumping of wastewater from a sanitary or combined sewer system through closed pumps and pipes.	N/A	None	N/A	Unclassified	Noncombustible, limited combustible, or low-flame spread index material.	Portable fire extinguishers required.
17	Above Grade Pumping Station – Pump room not physically separated from wet well; pumping of wastewater from a sanitary or combined sewer system through closed pumps and pipes.	Possible ignition of flammable gases and floating flammable liquids,	12 ACH	Entire room or space plus an envelope of 3 feet around vents.	Class 1, Division 2	Noncombustible, limited combustible, or low-flame spread index material.	Portable fire extinguishers required.



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The NFPA 820 provides the fire code guidance for equipment in a sewage environment. The code is used to determine the environment of each space within the pump station and divides them into classifications. These classification determinations define the level of fire protection necessary for operations. Because sewage can produce and contain flammable gas compounds, such as methane, direct sewage gas environments, like the wet well, are classified as Class 1, Division 1, which is the highest level of protection required.

The classification of a space can have a significant impact on electrical code requirements and the cost of equipment. For example, electrical equipment within a Class 1, Division 1 space must be “explosion proof,” because electrical sparks can ignite methane gas and cause an explosion. Also, corrosion is typically an issue within a Class 1, Division 1 space, so corrosion-resistant materials, such as 316 Stainless Steel are required to protect the durability and reliability of the facility. These added protections significantly impact the cost of the equipment, so it is generally advisable to minimize the electrical equipment within the Class 1, Division 1 spaces.

Another common classification area in lift station applications is Class 1, Division 2. These are areas that are occasionally exposed to sewer gases, but not under normal use. This would include sewage that is within an enclosed pipe that has to occasionally be dismantled for maintenance, such as a check valve or flow meter within a force main.

The final classification that is identified is “Unclassified,” meaning there are no restrictions placed on the space from a fire code perspective.

Per Table 4.2.2 Row 16 of the NFPA 820, above grade pump stations that are physically separated from the wet well are Unclassified. However, in the case of the Pioneer Hills Lift Station, it is our opinion that two issues change the classification of the station to Class 1, Division 1. First, the wet well hatch is located immediately in front of the door to the building. Because the door is less than 5 feet from the hatch, everything within the building is classified as Class 1, Division 1. The existing equipment is not rated for Class 1, Division 1 use. Relocation of the access door or the wet well hatch would change the classification of the room to Unclassified.

In addition, our inspection also noted an open floor drain to the wet well in the middle of the room. Open ventilation to sewer gases is another condition that classifies the building as a Class 1, Division 1 space. Installing a P-trap with a trap primer would be a simple change that would reclassify the building as Unclassified.



PERMITTING REQUIREMENTS

There is very little available space on the existing site to install an outdoor standby generator, and space within the building is also limited. The existing lift station is less than 100 feet from Douglass Creek to the stations north, and has steep slopes on two sides. Proximity to the creek may require a Sensitive Use Allowance Permit if it is determined that the proposed work will take place within creek setbacks.

Installation of a retaining wall will likely be required to create the footprint and accessibility for a standby generator with subbase fuel tank and outdoor enclosure. The City has available property to install a cut-wall to the south of the existing building, approximately 15-feet from the existing building to provide adequate clearances for the generator. Construction of the wall will likely require a Geotechnical Report.

A Building Permit may also be required due to the recommended improvements to the roof and CMU block building. The State Environmental Policy Act (SEPA) Checklist and a Clearing and Grading Permit will also likely be required for the project.

ALTERNATIVES EVALUATION

We have evaluated two alternatives for rehabilitation of the lift station, including replacement of the existing suction-prime pumps and package skid with equivalent equipment, and conversion of the station to a submersible pump station. Based on our inspection of the site and discussions with City staff, the following improvements will be required for both alternatives.

- Installation of a diesel standby generator with an automatic transfer switch, subbase fuel tank, and factory sound-attenuating enclosure.
- Installation of a new retaining wall.
- Relocation of the building doorway access.
- Replacement of the wet well piping, isolation valves, check valves, and other piping.
- Installation of a magnetic flow meter.
- Replacement of the roof with a metal (NFPA 820-compliant) roof.
- Replacement of the existing motor starters.



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- Demolition and removal of the existing natural gas-powered pump and associated gas service.
- Installation of a new SCADA control panel with Operator Interface Unit (OIU).
- Recoat the existing wet well with an epoxy coating.
- Installation of a bypass pumping connection to provide bypass pumping during construction.
- Fill the existing floor drain or install a P-trap (with a trap primer).

Alternative 1 – Replace Pumps In-Kind

The first option evaluated is the replacement of the existing Gorman Rupp skid mount system with a similar skid-mounted system. With this option, the existing skid system would simply be removed and replaced with updated but equivalent equipment.

Advantages of this alternative include the following.

- Known operation that has worked for over 25 years.
- Above grade installation provides immediate inspection access to the pumps.

Disadvantages of this option include the following.

- Skid installation inside of the building makes pump replacement more difficult than a submersible option.
- Suction prime pumps are generally less efficient and require more energy long-term, than submersible pumps.
- Priming systems, depending on the pumping system, can be a maintenance issue over time.

Alternative 2 – Convert to a Submersible Station

The second option evaluated is the replacement of the existing Gorman Rupp skid mount system with submersible pumps. With this option, the existing skid system would be removed and a duplex submersible station with rails and piping would be mounted inside



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the wet well, utilizing the existing hatch. Piping would be installed in the building to accommodate the isolation valves, check valves, and flow meter. Due to surplus storage capacity, the wet well fillet could be modified simply by filling concrete and reducing available storage to save modification costs.

Advantages of this alternative include the following.

- Common configuration with local representation for parts and components can make it easier to maintain.
- Submersible pumps are generally more efficient than self-priming pumps, leading to lower power costs.
- Pump and motor removal are relatively simple operations when compared to skid-mounted pumps.
- Hoist system could be incorporated into the new roof system to make removal of pumps easier.
- The pump room will have more space for the proposed electrical improvements if the pumps are installed in the wet well.
- Less noise inside the building from the pump motors.

Disadvantages of this option include the following.

- Requires the installation of a seal-off vault and new electrical conduit for pumps to the pump room.
- Wet well fillet will need to be reconfigured to accommodate the submersible pumps.
- Duration of bypass pumping during construction is likely to be longer in this alternative, which does come with a higher risk level for spills.

PROJECT COSTS

Table 1 summarizes the estimated project costs, including engineering design and construction management, for the two alternatives for Pioneer Hills Lift Station. The total project costs include construction costs, sales tax, engineering and construction administration assistance, and a 20 percent construction contingency.



Technical Memorandum – Pioneer Hills Lift Station Predesign Report
February 14, 2025

A detailed cost estimate for each proposed alternative is enclosed with this Memorandum.

TABLE 2

Estimated Project Costs for Pioneer Hills Lift Station Alternatives

Alternative	Total Estimated Project Cost
Replacement of Existing Skid and Pump Configuration	\$1,673,000
Submersible Pump Station	\$1,741,000

In this case, the alternative of the replacement of the existing skid-mounted pumps with similar models in a similar configuration has marginally lower capital costs when compared to the submersible pump option.

CONCLUSIONS AND RECOMMENDATIONS

Based on our site visit, the Pioneer Hills Lift Station continues to function at its current state, albeit with multiple code compliance issues. At a minimum, we recommend the following.

- Prep and recoat the wet well with Raven 405 coating or equivalent.
- Within the wet well, remove and replace the 6-inch, ductile iron suction piping and discharge piping. Additionally, in the wet well, replace the float switches and level transducer.
- Install a new metal roof on the building.
- Remove the natural gas-powered pump. Install a new diesel-powered standby generator with subbase fuel tank and automatic transfer switch adjacent to the pump house. A retaining wall will be required on the south side of the site to create the needed space for the generator.
- Relocate the main pump house entrance to the south side of the structure. The floor drain shall be filled or equipped with a P-trap to seal the wet well from the interior of the structure.
- Remove the existing louvers and fill the vacated space with a CMU block.



Technical Memorandum – Pioneer Hills Lift Station Predesign Report
February 14, 2025

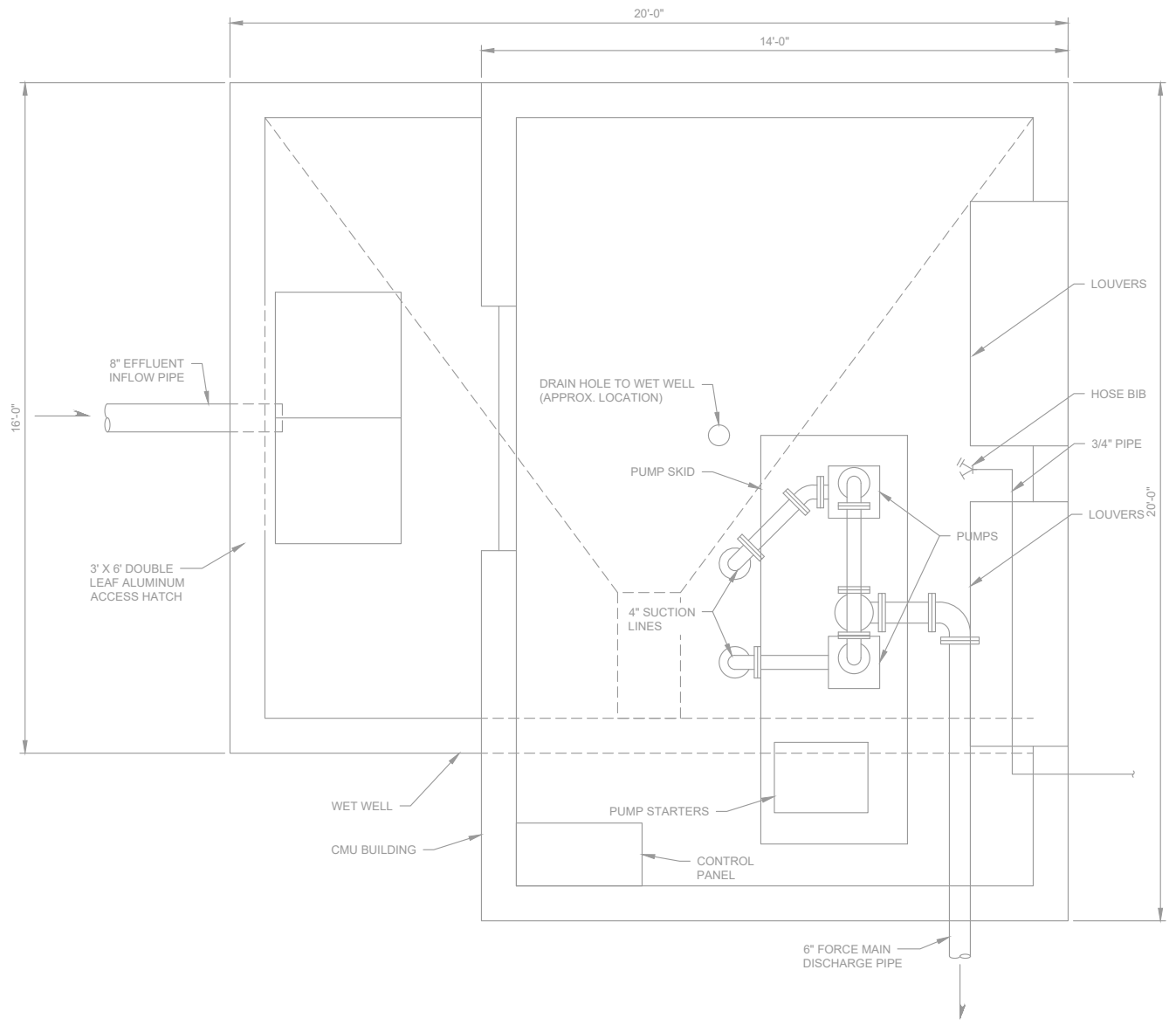
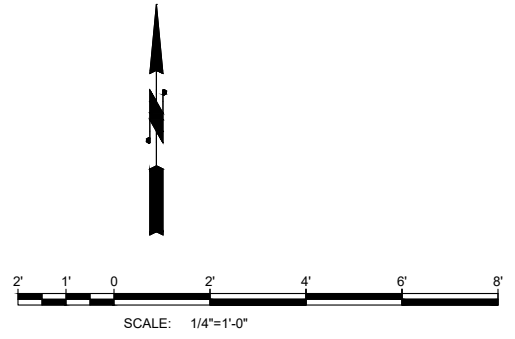
- Replace all of the electrical components, including the control panel, automatic transfer switch, motor starters, transformer and panelboard, and electrical service disconnect with new components.
- Reconfigure the piping inside the pump house for a 6-inch magnetic flow meter.

Both the submersible and skid-mounted configurations are viable options and there are benefits and drawbacks to each. Our preliminary cost estimates indicate the skid-mounted alternative has marginally lower costs.

It is our understanding that the City currently does not have sufficient budget to fund either alternative. Due to long lead times for equipment such as generators and motor control centers, construction of lift stations typically takes 18 to 24 months. Including the design and permitting phases, a lift station project typically takes approximately 3 years. This provides the City with needed time to either budget for the project or secure outside funding. Examples of available outside funding could include the Public Works Board, the Washington State Department of Ecology Centennial Clean Water, or municipal bonds.

APPENDIX A

FIGURES

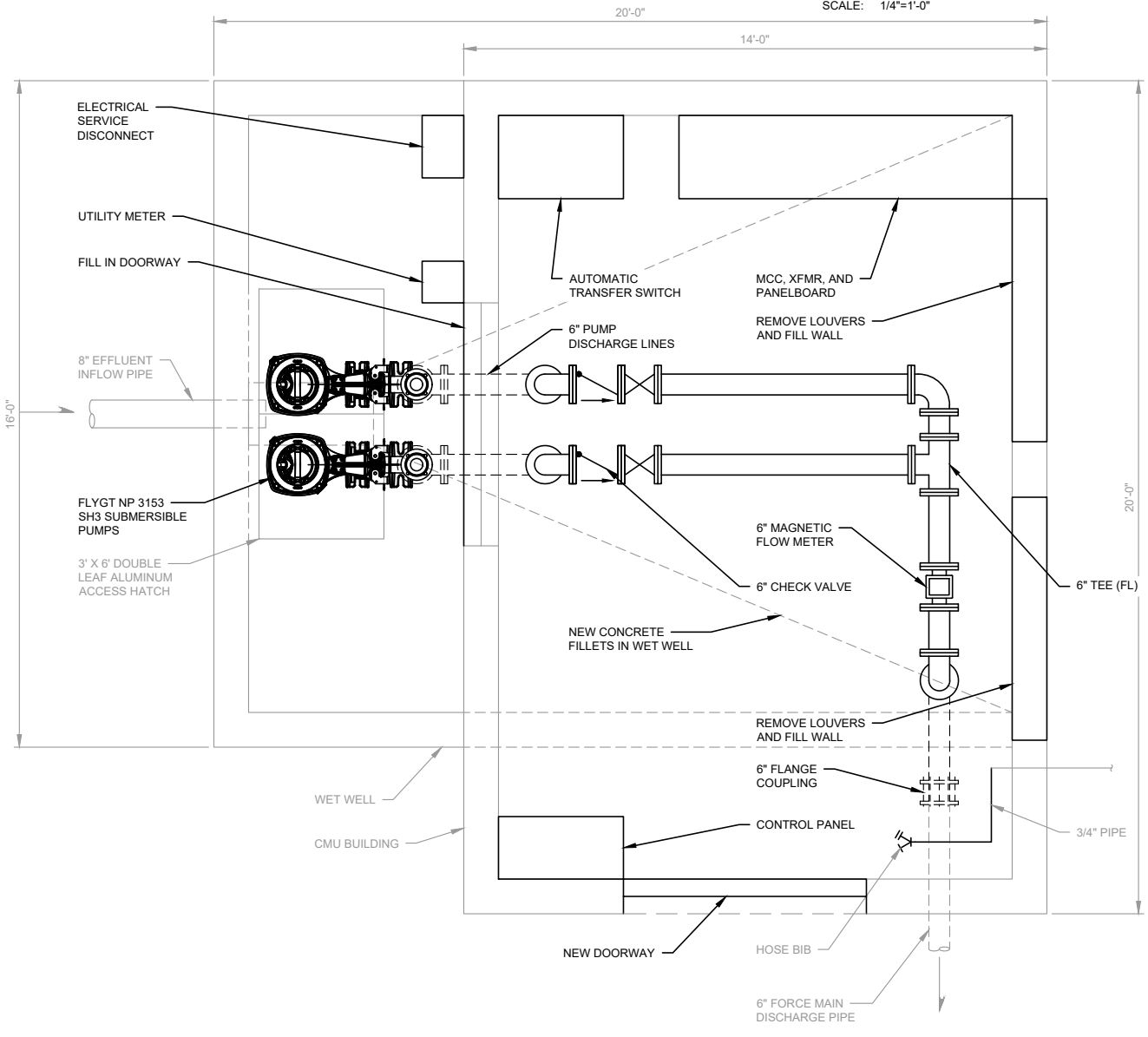
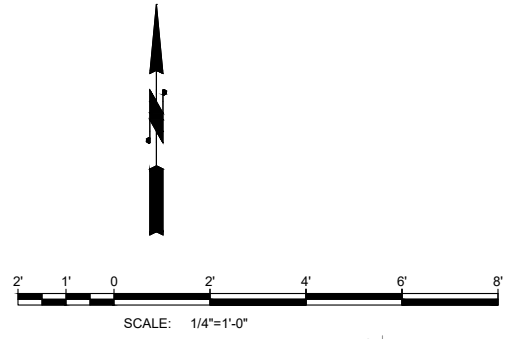


CITY OF STANWOOD
PIONEER HILLS LIFT STATION
FIGURE 1
EXISTING LIFT STATION PLAN


Gray & Osborne, Inc.
 CONSULTING ENGINEERS



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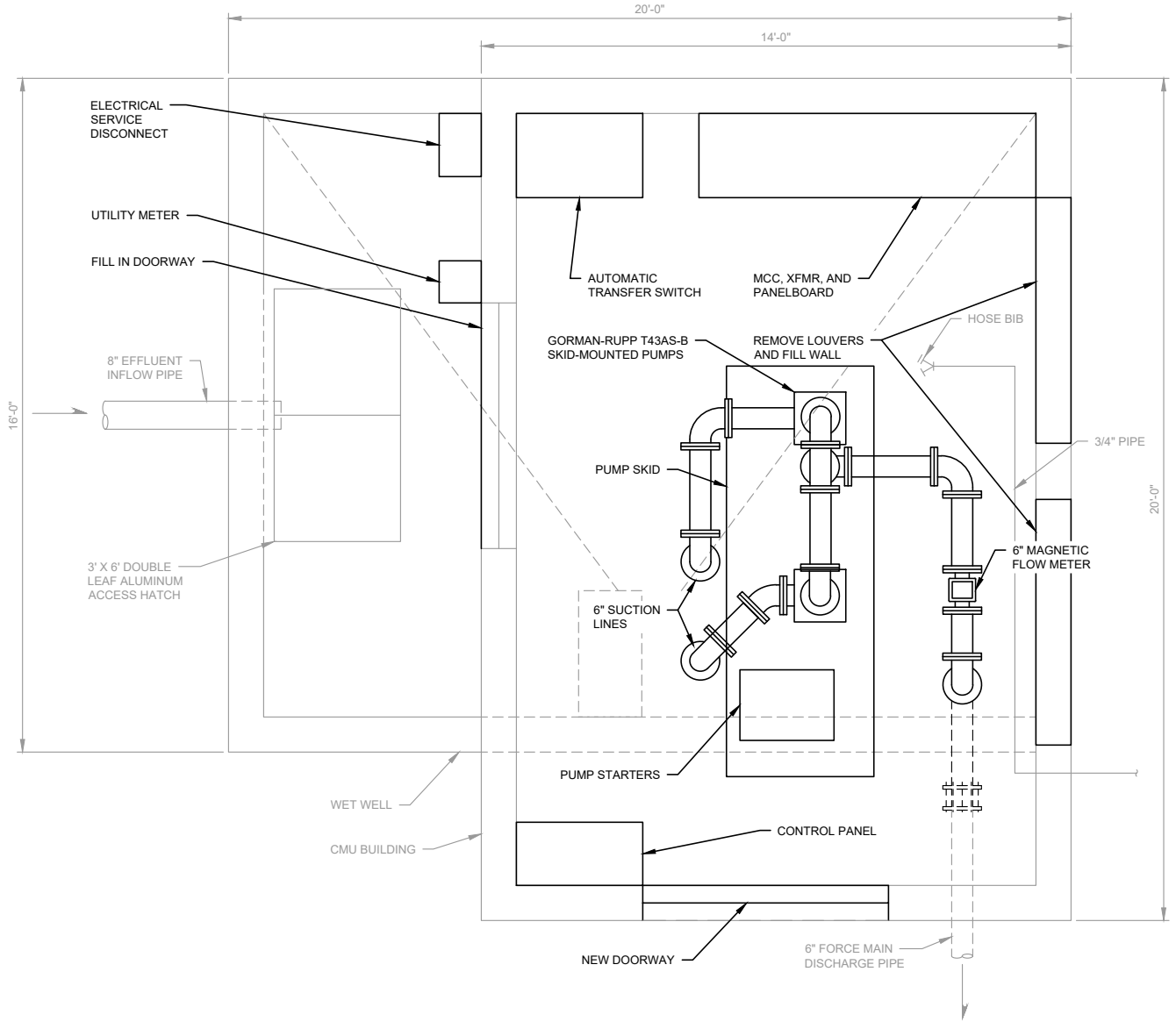
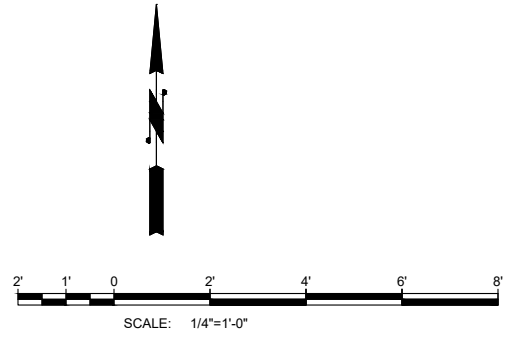


CITY OF STANWOOD
PIONEER HILLS LIFT STATION
FIGURE 2
PROPOSED LIFT STATION PLAN
(SUBMERSIBLE PUMP OPTION)

Gray & Osborne, Inc.
CONSULTING ENGINEERS



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CITY OF STANWOOD
PIONEER HILLS LIFT STATION
FIGURE 3
PROPOSED LIFT STATION PLAN
(SKID MOUNTED PUMP OPTION)






Gray & Osborne, Inc.
 CONSULTING ENGINEERS

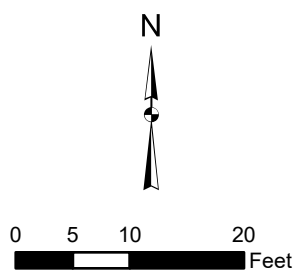


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Source: Washington State DNR, Snohomish County GIS, City of Stanwood, Gray & Osborne, Inc., Quantum Spatial, Maxar, Microsoft

-  20' Contour Line
-  5' Contour Line
-  Proposed Generator
-  Proposed Retaining Wall
-  Parcel



CITY OF STANWOOD
 PIONEER HILLS LIFT STATION
FIGURE 4
TOPOGRAPHY



APPENDIX B

COST ESTIMATES

**CITY OF STANWOOD
PIONEER HILLS LIFT STATION
ENGINEER'S PRELIMINARY COST ESTIMATE
ALTERNATIVE 1 (SKID MOUNTED PUMPS)
February 10, 2025**

<u>ITEM NO.</u>	<u>DESCRIPTION</u>	<u>ESTIMATED QUANTITY</u>	<u>UNIT</u>	<u>PRICE</u>	<u>AMOUNT</u>
1.	Minor Changes	1	MC	\$20,000.00	\$20,000.00
1.	Mobilization, Cleanup, and Demobilization	1	LS	\$100,000.00	\$100,000.00
2.	Demolition	1	LS	\$25,000.00	\$25,000.00
3.	Temporary Erosion and Sediment Control (TESC)	1	LS	\$3,000.00	\$3,000.00
4.	Sewer Bypass Pumping	1	LS	\$75,000.00	\$75,000.00
5.	CMU Building Modifications	1	LS	\$20,000.00	\$20,000.00
6.	Roof Replacement	1	LS	\$110,000.00	\$110,000.00
7.	Modular Block Wall	200	SF	\$150.00	\$30,000.00
8.	Standby Generator	1	LS	\$130,000.00	\$130,000.00
9.	SCADA Control Panel	1	LS	\$30,000.00	\$30,000.00
10.	Automatic Transfer Switch	1	LS	\$20,000.00	\$20,000.00
11.	General Electrical	1	LS	\$180,000.00	\$180,000.00
12.	Abandon Gas Service and Remove Gas Pump	1	LS	\$8,000.00	\$8,000.00
13.	Gorman Rupp Pumps, Motors, and Skid	1	LS	\$120,000.00	\$120,000.00
14.	Valves, Piping, and Magnetic Flow Meter	1	LS	\$45,000.00	\$45,000.00
15.	Rehabilitate Existing Wet Well	1	LS	\$55,000.00	\$55,000.00
16.	Site Restoration	1	LS	\$10,000.00	\$10,000.00
	Subtotal				\$981,000.00
	Sales Tax at 9.3% per Washington State Dept of Revenue				\$91,233.00
	Subtotal				\$1,072,233.00
	Contingency (20%)				\$214,446.60
	Total Construction Cost:				\$1,286,679.60

**CITY OF STANWOOD
PIONEER HILLS LIFT STATION
ENGINEER'S PRELIMINARY COST ESTIMATE
ALTERNATIVE 2 (SUBMERSIBLE PUMPS)
February 10, 2025**

<u>ITEM NO.</u>	<u>DESCRIPTION</u>	<u>ESTIMATED QUANTITY</u>	<u>UNIT</u>	<u>PRICE</u>	<u>AMOUNT</u>
1.	Minor Changes	1	MC	\$20,000.00	\$20,000.00
1.	Mobilization, Cleanup, and Demobilization	1	LS	\$100,000.00	\$100,000.00
2.	Demolition	1	LS	\$25,000.00	\$25,000.00
3.	Temporary Erosion and Sediment Control (TESC)	1	LS	\$3,000.00	\$3,000.00
4.	Sewer Bypass Pumping	1	LS	\$100,000.00	\$100,000.00
5.	CMU Building Modifications	1	LS	\$20,000.00	\$20,000.00
6.	Roof Replacement	1	LS	\$110,000.00	\$110,000.00
7.	HVAC Rehabilitation	1	LS	\$15,000.00	\$15,000.00
8.	Modular Block Wall	200	SF	\$150.00	\$30,000.00
9.	Standby Generator	1	LS	\$130,000.00	\$130,000.00
10.	SCADA Control Panel and Programming	1	LS	\$30,000.00	\$30,000.00
11.	Automatic Transfer Switch	1	LS	\$20,000.00	\$20,000.00
12.	General Electrical	1	LS	\$180,000.00	\$180,000.00
13.	Abandon Gas Service and Remove Gas Pump	1	LS	\$8,000.00	\$8,000.00
14.	Submersible Pumps	1	LS	\$110,000.00	\$110,000.00
15.	Valves, Piping, and Magnetic Flow Meter	1	LS	\$45,000.00	\$45,000.00
16.	Rehabilitate Existing Wet Well	1	LS	\$65,000.00	\$65,000.00
17.	Site Restoration	1	LS	\$10,000.00	\$10,000.00
	Subtotal				\$1,021,000.00
	Sales Tax at 9.3% per Washington State Dept of Revenue				\$94,953.00
	Subtotal				\$1,115,953.00
	Contingency (20%)				\$223,190.60
	Total Construction Cost:				\$1,339,143.60



City of Stanwood Public Works and Parks Committee Staff Report

Item Number: 3.b.
Date: April 6, 2026
Subject: SR 532 & 72nd Ave NW Intersection Improvements
Contact Person: Alan Lytton, City Engineer
Attachments: 1. BID TAB-SR532NW and 72nd Intersection Stamped

ISSUE

SR 532 & 72nd Ave NW Intersection Improvements

BACKGROUND:

The SR 532 & 72nd Avenue intersection has been identified as a priority location for pedestrian safety improvements. This project is intended to enhance accessibility and improve safety for pedestrians crossing SR 532.

The planned improvements include:

- Installation of a marked crosswalk on the East side of 72nd where none currently exist
- Pedestrian pushbuttons (APS)
- No right turn blockout similar to the existing on South side of SR 532.
- ADA-compliant curb ramps
- Associated drainage improvements

We received two bids, the low being Reaper Construction at \$178,400. The low bid is approximately 15% above the engineer's estimate of \$154,565 and exceeds the project budget of \$150,000. Staff recommends proceeding with the award despite the overage due to the importance of pedestrian safety at this location. The budget overage can be accommodated through available funds within the Public Works budget or project contingencies.



BID TABULATION
SR 532 ST NW & 72nd AVE NW Intersection Improvements
Bid Opening: Thursday March 26, 2026 @ 2PM

Item No.	Spec Section	ITEM DESCRIPTION	Qty	UNITS	Engineer's Estimate		Reaper Construction Inc.		National Facility Contractors LLC	
					UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT
1	1-04.4 SP	Mobilization	1	LS	\$ 30,000.00	\$30,000.00	\$20,000.00	\$ 20,000.00	\$ 17,400.00	\$ 17,400.00
2	1-05.4 SP	Removal of Structures and Obstructions	1	LS	\$ 5,000.00	\$5,000.00	\$ 7,500.00	\$ 7,500.00	\$ 6,500.00	\$ 6,500.00
3	1-05.18 SP	Roadway Excavation Inc. Haul	15	CY	\$ 65.00	\$975.00	\$ 250.00	\$ 3,750.00	\$ 185.00	\$ 2,775.00
4	1-07.17 SP	Planing Bituminous Pavement	35	SY	\$ 65.00	\$2,275.00	\$ 200.00	\$ 7,000.00	\$ 300.00	\$ 10,500.00
5	1-09.7 SP	Project Temporary traffic control	1	LS	\$ 40,000.00	\$40,000.00	\$20,000.00	\$ 20,000.00	\$ 18,500.00	\$ 18,500.00
6	1-10 SP	ADA Features Survey	1	LS	\$ 5,000.00	\$5,000.00	\$ 5,000.00	\$ 5,000.00	\$ 7,500.00	\$ 7,500.00
7	2-01	Salvaging Culvert and Headwall	40	LF	\$ 150.00	\$6,000.00	\$ 100.00	\$ 4,000.00	\$ 95.00	\$ 3,800.00
8	2-02 SP	Crushed surfacing base course	5	CY	\$ 65.00	\$325.00	\$ 500.00	\$ 2,500.00	\$ 165.00	\$ 825.00
9	2-02 SP	HMA cl. 1/2 In. PG 58H-22	10	TN	\$ 300.00	\$3,000.00	\$ 300.00	\$ 3,000.00	\$ 425.00	\$ 4,250.00
10	2-02 SP	Cement Conc. Traffic Curb and Gutter	75	LF	\$ 45.00	\$3,375.00	\$ 66.00	\$ 4,950.00	\$ 165.00	\$ 12,375.00
11	2-02 SP	Cement Conc. Sidewalk	15	SY	\$ 135.00	\$2,025.00	\$ 240.00	\$ 3,600.00	\$ 525.00	\$ 7,875.00
12	2-02 SP	Cement Conc. Curb Ramp Ty. Parallel	2	EA	\$ 4,000.00	\$8,000.00	\$ 3,600.00	\$ 7,200.00	\$ 9,500.00	\$ 19,000.00
13	2-03	Cement Conc. Curb Ramp Ty. Directional	1	EA	\$ 4,000.00	\$4,000.00	\$ 3,600.00	\$ 3,600.00	\$ 10,500.00	\$ 10,500.00
14	2-03	Catch Basin Type 1	1	EA	\$ 5,000.00	\$5,000.00	\$ 1,750.00	\$ 1,750.00	\$ 9,500.00	\$ 9,500.00
15	2-09	Silt Fence	120	LF	\$ 7.00	\$840.00	\$ 5.00	\$ 600.00	\$ 10.00	\$ 1,200.00
16	2-09	Paint Line	40	LF	\$ 5.00	\$200.00	\$ 10.00	\$ 400.00	\$ 7.00	\$ 280.00
17	2-10 SP	Profiled Plastic Line	110	LF	\$ 10.00	\$1,100.00	\$ 20.00	\$ 2,200.00	\$ 24.00	\$ 2,640.00
18	2-12	Plastic Crosswalk Line	200	SF	\$ 20.00	\$4,000.00	\$ 15.00	\$ 3,000.00	\$ 36.00	\$ 7,200.00
19	4-04	Plastic Stop Line	40	LF	\$ 30.00	\$1,200.00	\$ 15.00	\$ 600.00	\$ 30.00	\$ 1,200.00
20	5-04 SP	Plastic Crossshatuch Wide Line	225	LF	\$ 10.00	\$2,250.00	\$ 30.00	\$ 6,750.00	\$ 25.00	\$ 5,625.00
21	5-04 SP	Traffic Signal System.	1	LS	\$ 30,000.00	\$30,000.00	\$71,000.00	\$ 71,000.00	\$ 42,000.00	\$ 42,000.00

Subtotal Computed Price					\$ 154,565.00		\$ 178,400.00		\$ 191,445.00
Total Computed Cost					\$ 154,565.00		\$ 178,400.00		\$ 191,445.00



3/27/2026



City of Stanwood Public Works and Parks Committee Staff Report

Item Number: 3.c.
Date: April 6, 2026
Subject: Twin City Plaza Concept Plan
Contact Person: Alan Lytton, City Engineer
Attachments: 1. PWC TCP Concept Plan 040626 (1)

ISSUE

The purpose of this agenda item is for Committee review and comment on the preliminary concept plan for the Twin City Plaza park.

BACKGROUND

The City obtained ownership of the Twin City Plaza site in September 2025 as part of the Twin City Mile and Beautification Project. At the time of acquisition, the City Council directed staff to pursue environmental cleanup and site remediation funding through the appropriate state agencies.

Since that time, the City has secured site cleanup funds from a settlement agreement with Chevron and a Brownfields Revolving Loan Fund grant from the Department of Commerce. These funds are anticipated to cover the cost of site cleanup and a five-year monitoring period.

In late 2025 the City Council authorized funds to prepare 10 percent concept plan for the site. Since this authorization, Public Works has mowed the property, removed the chain link fence, a site survey has been completed, and a preliminary concept plan has been prepared.

DISCUSSION:

Staff and the design team of Perteet and HBB met to discuss post cleanup development and project objectives for the new park. The design team was encouraged to explore creative ideas that would establish a fun and integrated space for a gateway and pocket park for the west end neighborhood. Materials such as brick and concrete were emphasized to reflect the character and themes of the Twin City Mile. Additionally, the park should serve as a visual entry gateway or sense of arrival to the west end.

To further refine the vision, staff and the project consultants conducted a mini charrette to collaboratively explore design ideas and priorities. This session generated a number of ideas that inspired the park design:

- If possible, frame or highlight views of the smokestack at Hamilton Landing Park as a visual landmark;
- Minimize planting beds to reduce long-term maintenance requirements;
- Recognize the site's size and potential to function as a flexible gathering space for the community;
- Incorporate site elements such as public art and park signage to enhance identity and wayfinding;
- Include posts for decorative banners;
- Provide benches and seating areas;
- Be mindful of traffic conditions along 271st Street NW in the design and layout of the space;
- Install fencing and vegetative screening to provide a buffer between the park and adjacent residential property;
- Consider accommodating a small pop-up market or similar temporary community use;
- Integrate playful or whimsical elements such as small hidden features (a gnome, frogs, birds or other ideas) to engage children and encourage exploration. The design team was given flexibility to creatively interpret these ideas.

Using this input, the design team developed six preliminary ideas. These were reviewed and evaluated by staff across multiple departments, including Public Works, Community Development, the Executive team, and the Mayor. Preferences were ranked, and elements from the various concepts were combined to produce a "preferred" plan.

The preferred concept is now being circulated for public review and comment. Feedback gathered during this phase will be used to create the final design. The resulting plan will serve as the basis for detailed design, engineering, and eventual construction.

Next steps in the process includes review by Council Committees, the Parks, Trails, and Advisory Committee (PTAC), as well as the west end business owners and the broader community to solicit additional input on the proposed design.

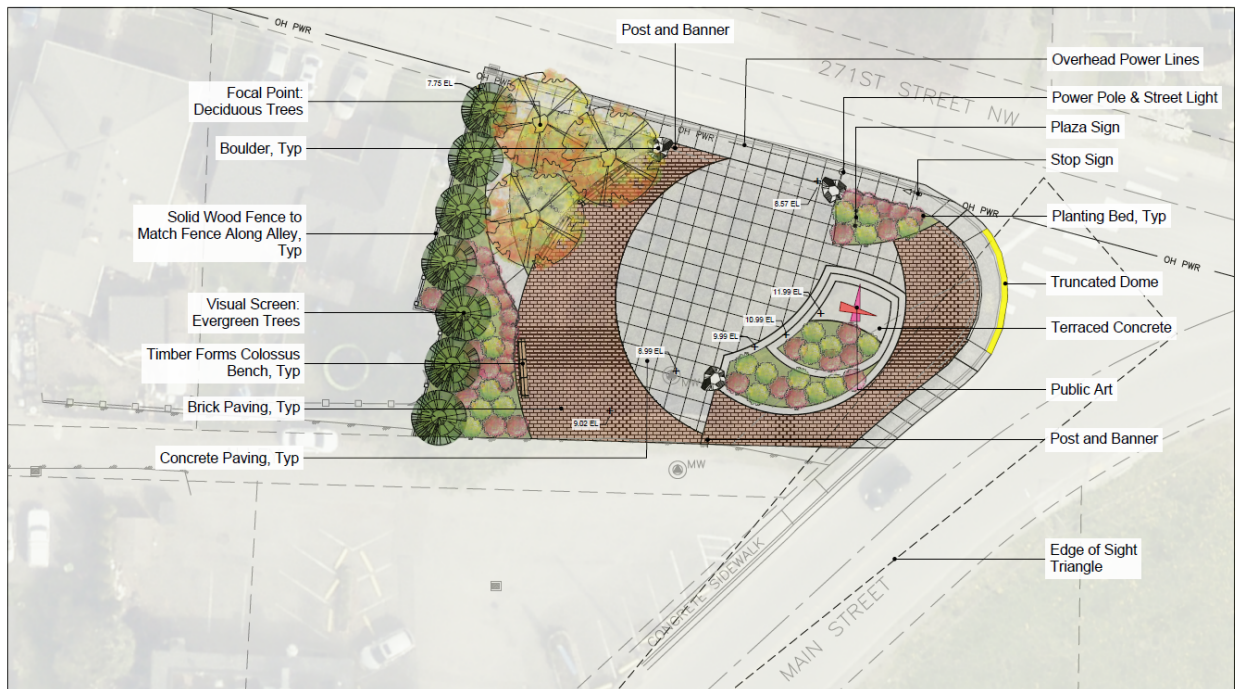
FINANCIAL IMPACT:

High level cost estimates will be provided with the final concept plan.

Existing Site Conditions; prior to mowing and fence removal

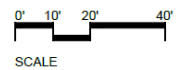


Preferred Concept Plan:



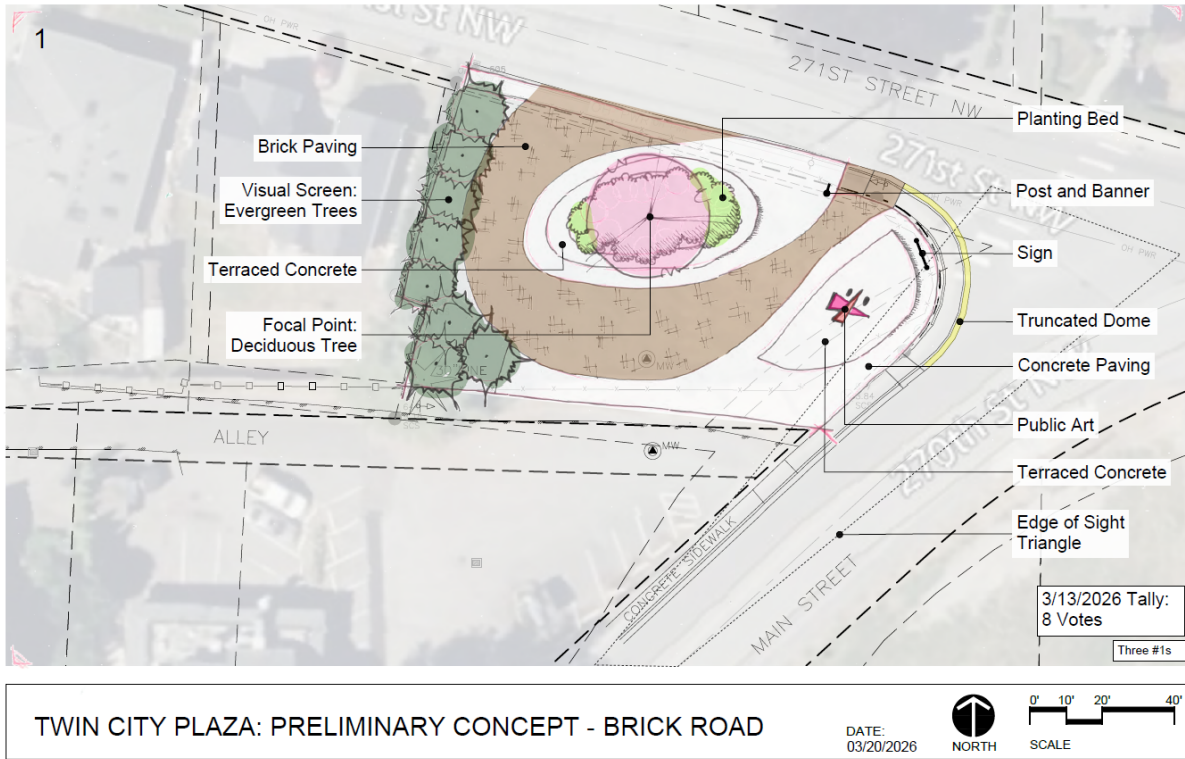
TWIN CITY PLAZA: PREFERRED CONCEPT PLAN

DATE:
3/20/2026

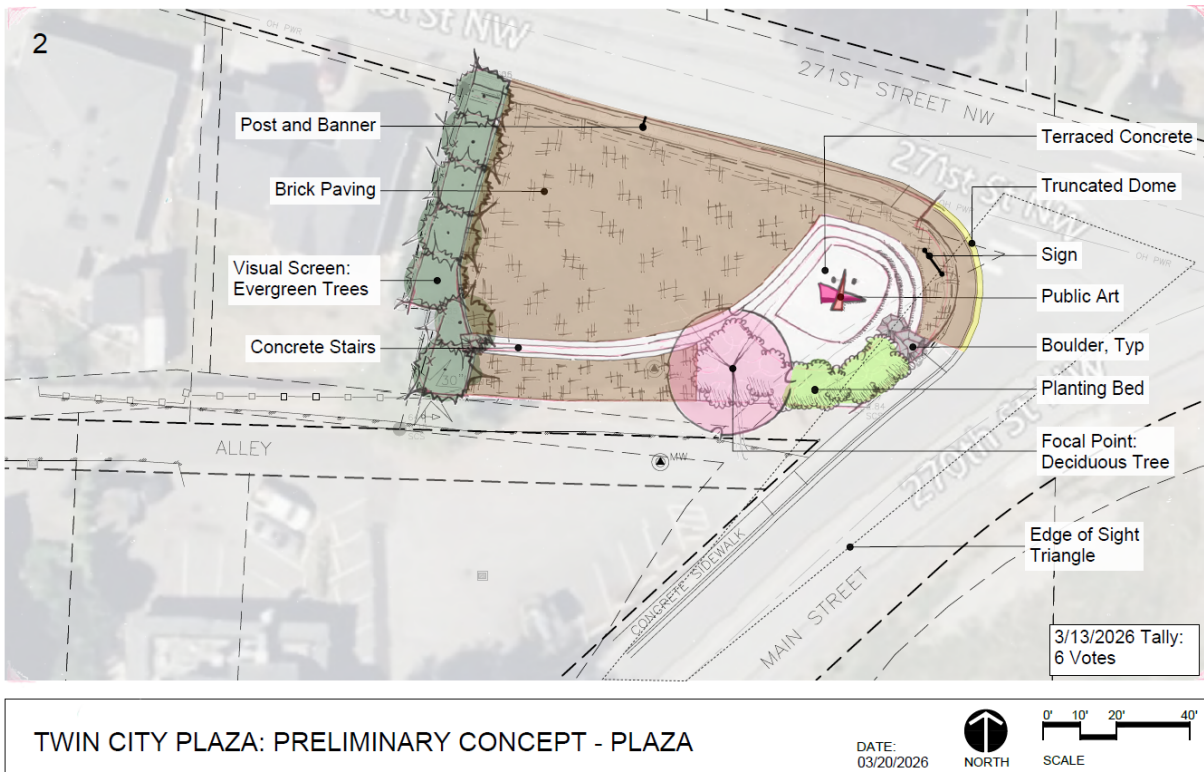


Below are the plans that inspired the preferred concept plan.

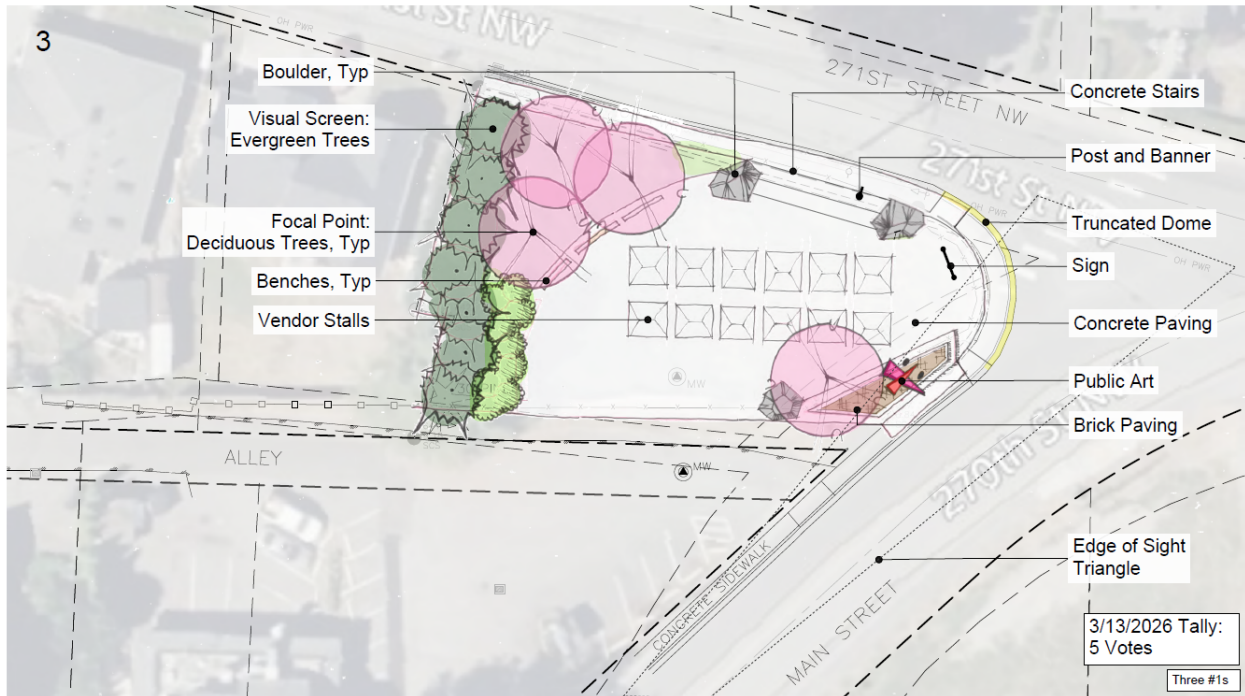
Concept Plan #1:



Concept Plan #2:



Concept Plan #3:



TWIN CITY PLAZA: PRELIMINARY CONCEPT - POP MART

DATE:
03/20/2026

