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City Council Committee Meeting Agenda

Public Works / Parks Committee

This meeting will be conducted in person at ***City Of Stanwood Public Works
Wastewater Treatment Plant located at 26729 98th DR NW, Stanwood WA 98292***

Monday, July 1, 2024, 5:30 PM

1. Discuss Stanwood Strategic Plan 2024 Edition
2. WWTP Possible Upgrades
3. Review Heritage Park Soccer Field and Parking Lot Scope of Work



**CITY OF STANWOOD
PUBLIC WORKS COMMITTEE
STAFF REPORT**

ITEM NUMBER: 1

DATE: July 1, 2024

SUBJECT: City of Stanwood Strategic Plan

CONTACT PERSON: Pat Adams, Human Resources Manager

Attachment A: Draft City of Stanwood Strategic Plan

The 2023-2024 work plan included the adoption of a Strategic Plan for the City of Stanwood. While the Council has historically adopted budgeting goals every two years, the City does not have a long-term Strategic Plan that outlines City priorities that span several years or budget cycles. A Strategic Plan can provide elected leaders with the framework, or roadmap, for making policy and resource decisions consistent with the City's vision and mission statements. Because strategic plans typically cover a five-to-six-year period, it also provides the time necessary to implement long-term infrastructure projects, such as the IS4 project, or economic development strategies like the Downtown Beautification initiatives. Since strategic plans are adopted by the Council, they can also be updated as needed to adapt to changing priorities.

The attached draft Plan contains goals and initiatives derived from the extensive public outreach conducted from the Comprehensive Plan project. Each goal is based on a recurring theme that was important to the community while the initiatives provide strategies on how to achieve that goal.

Attached are the draft goals and initiatives for the Committee's consideration.

STAFF RECOMMENDATION: That the Public Works Committee discuss the Draft City of Stanwood Strategic Plan.

Remember Yesterday. Imagine Tomorrow.



STANWOOD STRATEGIC PLAN

2024 Edition



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INTRODUCTION

This Strategic Plan is an aspirational, guiding document that will inform annual goal setting, budgeting, and programmatic evaluation processes. By articulating a long-term Community Vision, the Plan paints a picture of the desired future of the community. The vision, mission and core values listed herein were derived from community outreach efforts which included public surveys, open houses, and one-on-one discussions with City residents at special events. Out of this public outreach, four primary themes arose:

- The City of Stanwood is the commercial and cultural center of the greater Stanwood/Camano region;
- The City strives to be self-sufficient - providing employment, access to locally grown food, community activities, and a full range of goods and services for its residents and surrounding rural communities;
- Preserve our small-town character, which gives the community its distinctive identity; and
- Downtown Stanwood as the heart and core of the community.

Strategic goals for the five-year period from 2024 to 2029 focus the City on the actions and investments it needs to make now to continue to support the community's progress towards that vision. While the City of Stanwood is the primary actor in this Plan, success toward these goals will require the support of the entire community. Partnerships with community-based organizations will be needed to rally the energies and resources of Stanwood's community institutions and informal community groups to supplement and reinforce the efforts of the City.

The Vision contained on the following pages describes a community with a high quality of life and strong character, supported by a vital economy and quality City services. This Vision and the Goals that have been established to achieve this Vision, call for investments in the community that will sustain and build on those qualities that make Stanwood special.

Strong communities are built on resilient foundations. For Stanwood, investing in those foundations can preserve its heritage and maintain the vitality of a thriving City. This Plan calls for strategic investments in our parks, neighborhoods, facilities, and infrastructure that will both improve the quality of life for residents and make the community a more attractive place for new residents, new businesses, and visitors. This vitality and growth will broaden our tax base and ease the burden on individual taxpayers.

While many of the initiatives called for in this Plan can be accomplished under existing City resources, the more visionary elements will require residents to weigh the benefits of these actions with the increased financial resources that will likely be needed to support the improvements to City services and investments in capital projects called for in this Plan.

As an example, there is goal calling for improvements to and expansions of the City's parks, trails, and public spaces. These investments will enhance the quality of life for residents while strengthening the City's economic development opportunities and tourism draws. However, funding for these desired enhancements will need to be secured. More specific work plans with estimated costs, action plans, staffing, and other resources needed will be developed separately for each Goal.

ELECTED OFFICIALS

Sid Roberts, Mayor

Dani Gaumond, Councilmember

Marcus Metz, Councilmember

Darren Robb, Councilmember

Robert 'Chili' Hicks, Councilmember

Steve Shepro, Councilmember

Andreena Bergman, Councilmember

Tim Schmitt, Councilmember



Back Row: Steve Shepro, Chili Hicks, Sid Roberts, Tim Schmitt, Andreena Bergman

Front Row: Dani Gaumond, Marcus Metz, Darren Robb

CITY MANAGEMENT

Shawn Smith, City Administrator

David A. Hammond, Finance Director

Patricia Love, Community Development Director

Kevin Hushagen, Public Works Director

Jason Toner, Police Chief

John Cermak, Fire Chief

MISSION, VISION AND VALUES

Our Mission

The Mission of the City of Stanwood is to create and maintain a community where people can live, work and play in an environment that is safe, vibrant and aesthetically pleasing. Stanwood is inclusive of everyone; includes the community in its decision-making processes; enables a thriving local economy; provides transparent government; and is responsive to the needs of the community.



Our Vision

Promote historic downtown Stanwood as the commercial and cultural heart of the Greater Stanwood/Camano region while strategically planning for future growth and economic development opportunities of the entire City.



Our Values



The following core values represent the desires of the community and provides a common basis for developing and implementing the City's Strategic Plan:

Sense of Community: Retain the City's strong sense of community by fostering a family friendly culture that protects the areas natural beauty, celebrates its rural roots, promotes local businesses, encourages community events, and provides spaces for people to work and play.

Livability: Continue to make Stanwood a desirable place to live by investing in the historic downtown, new uptown commercial areas and residential neighborhoods to create an aesthetically pleasing community.

Mobility: Stanwood should provide for all forms of multi-modal transportation, including trails, sidewalks, bike lanes, transit and private vehicles.



Growth: Apply adaptive in-fill growth management strategies to meet population and employment targets by providing a range of housing types and business opportunities that fosters a healthy community while conserving our adjacent rural lands.

Economic Development: Focus on retaining the City's role as the center of the Greater Stanwood area by pursuing new endeavors that support the downtown and leverage Stanwood's location as an urban center surrounded by world-class agricultural land.

Environment: Protect the environment while promoting access and tourism to local natural features.

Parks: Develop a park system that provides public spaces for all age ranges that brings people together to create a more vibrant, healthy and equitable community.

Public Safety: Deliver high quality public safety and other City services to ensure that Stanwood is a safe and healthy place to live, work and play.



GOALS AND INITIATIVES



GOAL 1

Strengthen our Foundations for Connecting Neighbors and Enhancing Neighborhoods.

This goal focuses on strengthening the physical connections between Stanwood neighborhoods and the social fabric that connects neighbors and the community as a whole; retaining a strong sense of community and fostering a family-friendly culture.

Initiatives

- Strengthen partnership with schools, non-governmental organizations, volunteers, public agencies and the business community to implement the goals and policies contained in the Comprehensive Plan.
- Work with partners to bring a strong regional approach to transportation and transit issues.
- Work with regional stakeholders to enhance rail service and related regional trail connections to Stanwood.
- Continue to partner with WSDOT to improve SR 532 intersections.
- Increase multi-modal mobility connections throughout the community through the use of complete streets guidelines.
- Prioritize connecting neighborhoods to schools, parks and shopping by improving and building new and infill sidewalks, trails and multi-purpose paths.



GOAL 2

Cultivate an Outstanding Quality of Life for all Residents.

Continue to make Stanwood a desirable place to live by investing in the historic downtown, new uptown commercial areas and residential neighborhoods to create a safe, healthy, vibrant and esthetically pleasing community.

Initiatives

- Implementation of the Capital Improvement Program (CIP).
- Invest in Twin City Mile Project.
- Implement the City's Beautification Action Plan, improving the City's attractiveness as a regional destination.
- Adopt plans and ordinances that provide for Mixed-Use developments to encourage businesses and residents to key areas.
- Reduce our environmental impact through sustainable practices and responsible resource management.
- Collaborate with local businesses and non-profits to enhance the appearance of downtown historic Stanwood by sponsoring regular clean-up events or incentives.
- Prioritize maintenance of city-owned properties to foster a sense of community pride and investment in the shared spaces that define Stanwood.



GOAL 3

Maintain Financial Stability, Efficiency and Accountability.

Be responsive to the needs of the community while safeguarding the financial stability and economic success of the City.

Initiatives

- Evaluate, develop and maintain finance policies and procedures to provide clear guidance and ensure compliance.
- Simplify manual processes to drive efficiency and effectiveness, and prepare for transition to automation and digitization.
- Support continual learning through staff development plans, training and certification opportunities.
- Identify and leverage benefits of different work modes to implement a flexible work structure that is fair, equitable, agile and effective.
- Develop dynamic and forward-looking financial information to proactively support capital and operational planning.
- Define a reporting strategy to ensure timely review of information and identification of issues requiring action.



GOAL 4

Deliver High Quality Public Safety and Other City Services to Ensure that Stanwood is a Safe and Healthy Place to Live, Work and Play.

Continue to serve and partner with the community to preserve public safety and promote a safe and secure environment for all who live, work and visit the City of Stanwood.

Initiatives

- Encourage and fund public engagement opportunities such as National Night Out, Touch a Truck, Coffee with a Cop, Townhall Talks with the Mayor, or other similar programs to create positive community interactions with the Police Department and City Hall.
- Pursue development of Neighborhood Watch and Volunteer Citizen's Patrol.
- Create local partnerships to help address the needs of those dealing with homelessness, addiction, mental illness, abuse, poverty and veteran issues.
- Apply Crime Prevention through Environmental Design (CPTED) principles when designing parks and other City improvements.
- Access local trends and strategies to improve the City's community policing program to enhance community relationships through de-escalation/crisis training and adopting crime prevention programs that build a stronger and safer City.
- Implement code enforcement strategies to reduce nuisances, enhance visual appearance and improve overall health and safety.



GOAL 5

Set Clear Targets for Growth, and Implement Measures to Ensure that Growth Occurs in a Sustainable and Controlled Manner.

Balance the need for growth with the need to maintain stability and sustainability.

Initiatives

- Adopt zoning regulations that allow a variety of housing types in residential zones.
- Encourage the use of sustainable and energy efficient building materials as part of the City's land use development code.
- Apply growth management strategies to meet population and employment targets.
- Ensure public services, utilities, and infrastructure are available to accommodate growth, protect public health and safety, and enhance the quality of life for current and future residents.
- Adopt design guidelines for new development consistent with northwest architectural themes such as pitched roofs and use of natural wood and stone materials.



GOAL 6

Promote Local Businesses and the City as a Great Place to do Business.

Small businesses drive the Stanwood economy, creating jobs, services, and a tax base to support City services. The City's economic development efforts will create jobs by supporting existing and new companies within our community. The focus will be on local businesses and creating a climate where they can thrive.

Initiatives

- Collaborate with partners, such as the School District, YMCA or the Community Resource Center, to strengthen the skills and employment opportunities of Stanwood residents.
- Update the City's Economic Development Plan to evaluate the City's current business climate, incorporate new strategies to promote economic growth, create new job opportunities, and to enhance the attractiveness of the City to potential new businesses.
- Promote Stanwood's offerings to regional visitors.
- Work with community and business partners to expand arts and cultural offerings.
- Focus economic development efforts on recruiting and retaining businesses to build a strong and sustainable local economy.
- Seek grants, or other sources of funding, to implement the City's Economic Development Plans.



GOAL 7

Establish a Sustainable Model for Strengthening and Expanding our Parks, Trails and Public Spaces.

Improvements to our existing parks system are envisioned to increase the number, quality and diversity of the community's parks, trails and public spaces, with additional programming to activate these spaces. These important investments in the Stanwood community will require new resources to fund these improvements.

Initiatives

- Complete the downtown loop trail system, commonly known as the Stanwood Port Susan Trail.
- Fund the build out of Church Creek and Heritage Park Master Plans.
- Evaluate opportunities to locate a neighborhood park in the uptown area.
- Create inclusive and vibrant public gathering and recreational spaces for people of all ages and abilities.
- Work with partners to increase educational, recreational, and cultural opportunities.
- Establish a sustainable funding model to maintain and expand the City's existing park system.
- Assess the feasibility of establishing a Recreation Program as part of the new funding model.
- Strengthen Tribal and City cultural ties by adding historic Stillaguamish Tribal names or descriptions on park signs and the City's website.



**CITY OF STANWOOD
PUBLIC WORKS COMMITTEE
STAFF REPORT**

ITEM NUMBER: 2

DATE: July 1, 2024

SUBJECT: Wastewater Treatment Plant Possible Upgrades

CONTACT PERSON: Alan Lytton, City Engineer

ATTACHMENT: Presentation- Liquid Steam Alternatives

Alan Lytton and Leigh Danielson meet via Zoom with RH2 to review a presentation regarding a potential upgrade to the Wastewater Treatment Plant. Alan is asking for feedback from the committee on the liquid steam alternatives and is prepared to answer any questions the committee might have.

STAFF RECOMMENDATION: That the Public Works Committee discuss the Liquid Steam Alternatives to the Wastewater Treatment Plant.

Stanwood, WA WWTP Introduction to Liquid Stream Alternatives

June 20, 2024

Projected Flow and Load

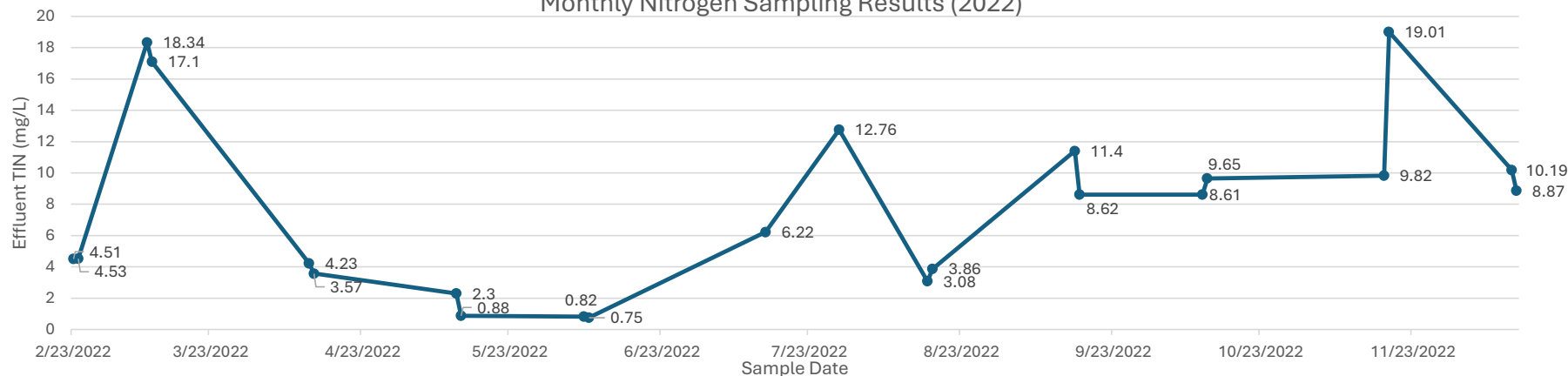
- 85% hydraulic capacity reached in 2035
- 100% hydraulic capacity reached in 2042
- 85% BOD capacity reached in 2040
- 85% TSS capacity reached in 2039

Parameter	Existing (2020)	2034	2044	NPDES Permit Rating	85% of Permit Rating
Hydraulic Loading (MGD)					
Annual Average Daily Flow	0.58	0.78	1.01	-	-
Maximum Month Daily Flow	0.85	1.24	1.61	1.50	1.28
Peak Hour Flow	2.30	3.10	4.04	-	-
BOD Loading (ppd)					
Annual Average Daily BOD	1,559	2,246	2,841	-	-
Maximum Month Daily BOD	1,914	3,039	3,845	4,100	3,485
TSS Loading (ppd)					
Annual Average Daily TSS	1,562	1,940	2,536	-	-
Maximum Month Daily TSS	2,725	3,041	3,973	4,100	3,485

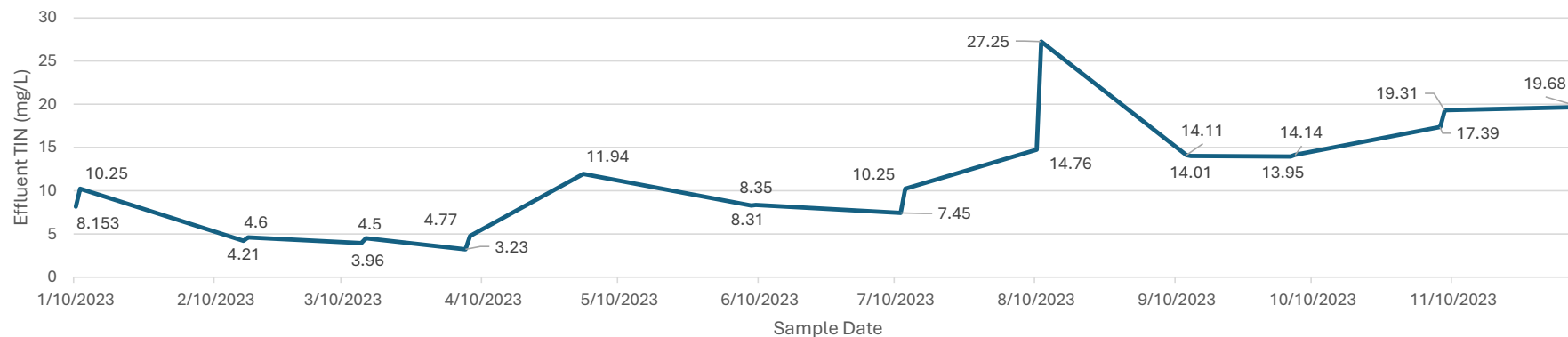
Green shaded cells exceed 85% of the rated capacity and orange shaded cells exceed 100% of the rated capacity.

Nitrogen Removal

Monthly Nitrogen Sampling Results (2022)



Monthly Nitrogen Sampling Results (2023)



- PSNGP Average Annual effluent TIN limit: 10 mg/L
- WWTP Average Annual effluent TIN 2022: 7.7 mg/L

- WWTP Average Annual effluent TIN 2023: 11.1 mg/L*
- WWTP Average Annual effluent TIN 2024 through May: 9.88 mg/L

Biowin Process Modeling

Used to assess capacity of the alternatives in different flow/load scenarios.

- Winter liquid temperature 13°C
- Carrousel® internal recycle rate of 6Q to 15Q
- RAS recycle 50%
- Influent from flow and load projections and textbook ratios
- Operate at SRT_a for full nitrification, ~15 days for Carrousel®
- SVI is measure of settleability (lower SVI = better settling)

Carrousel® Process

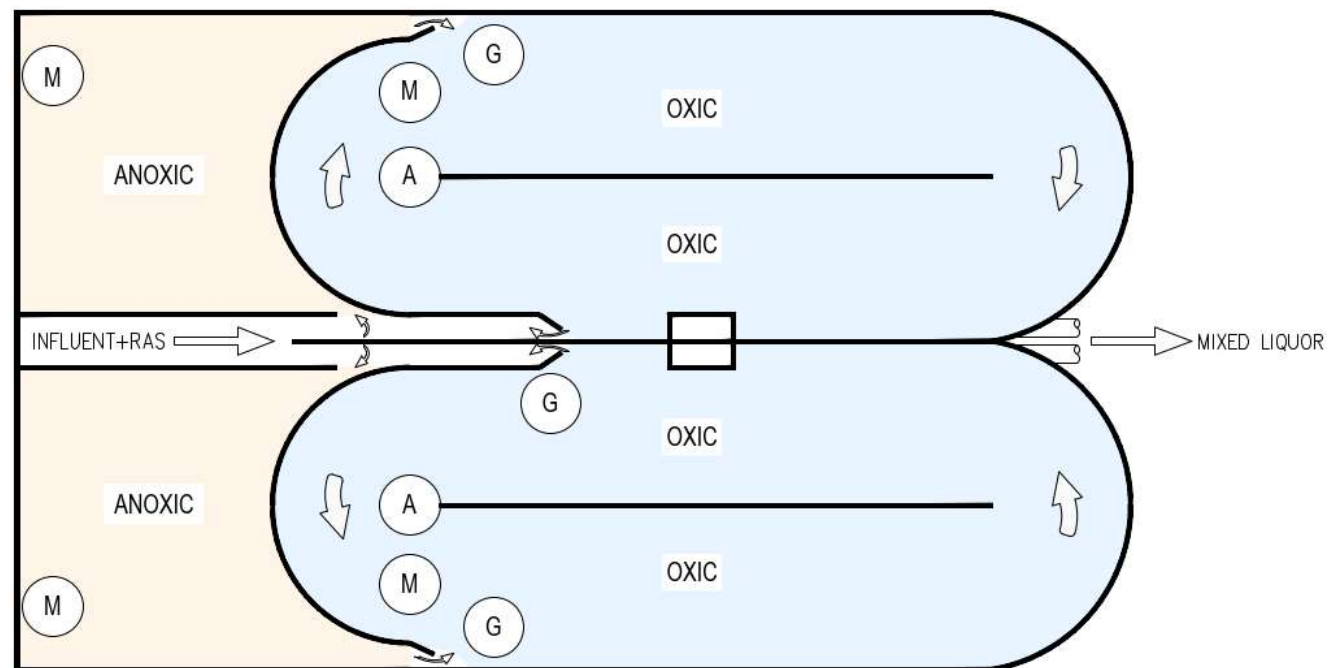
Maintain the existing process without expansion through the planning period.

Necessary work:

- Replace mixer-aerators
- Install ORP analyzers
- Replace DenitIR gates
- Replace effluent weirs
- Other refurbishment as needed

Total cost of in-kind replacement: \$4M

Adequate capacity?



M = Mixer
A = Mixer-aerator
G = Gate

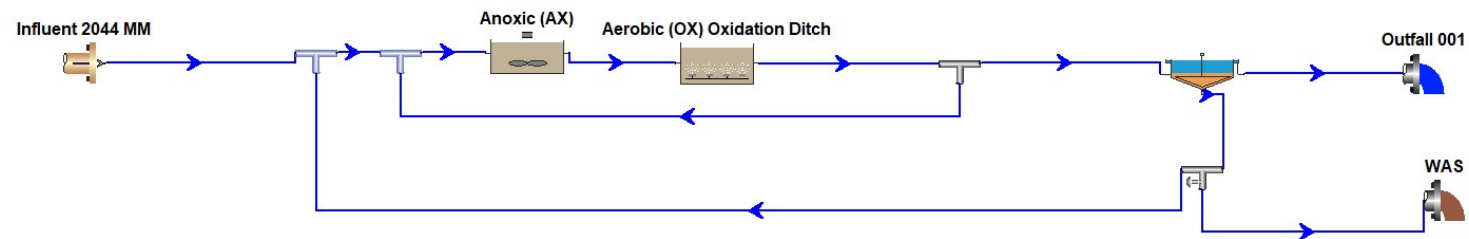
Carrousel® Process

- Capacity assessed by modeling 2044 max month conditions

- Model results:

- Both mixer-aerators required for aeration demand

- Required MLSS is not possible with an average SVI of 250 mL/g

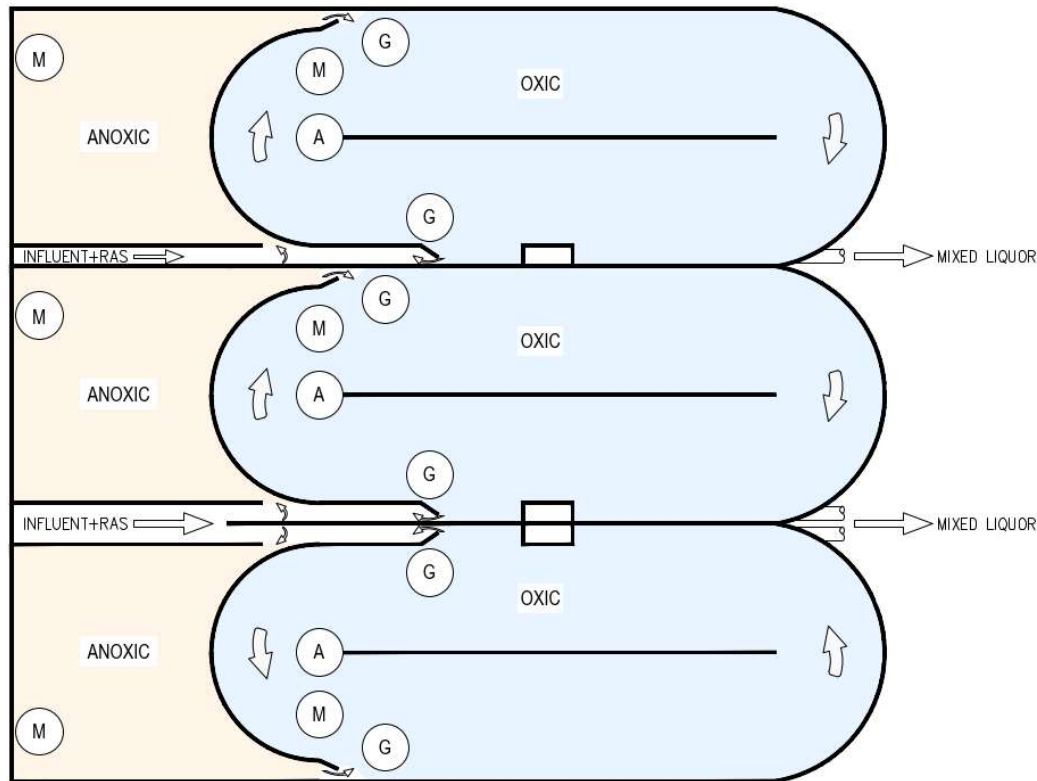


Process Parameters	Effluent Parameters						Process Results (OX)	
SRT _a	BOD	TSS	NH ₃	Nitrate	Nitrite	TIN	OTR	MLSS
Days	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(lb/hr)	(mg/L)
15	5.04	15.2	0.59	5.55	0.15	6.29	217.77	5,049.08

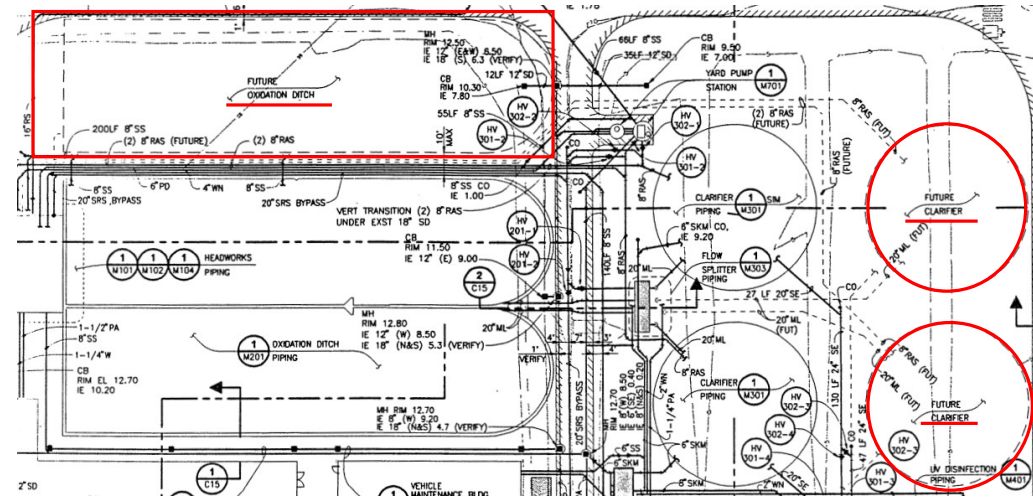
Conclusion: The existing process cannot meet the projected capacity for the planning period without expansion or modification.

Carrousel® Process Expansion (Alternative 1)

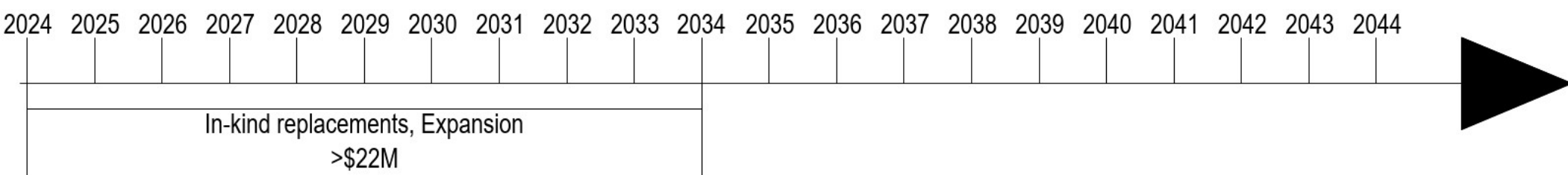
- Carrousel® process with additional ditch and/or clarifiers per 2004 plans and facility plan



M = Mixer
A = Mixer-aerator
G = Gate



Carrousel® Process Expansion (Alternative 1)



Model results for expanded Carrousel® at 2044 MM conditions:

Process Parameters	Effluent Parameters						Process Results (OX)	
SRT _a	BOD	TSS	NH ₃	Nitrate	Nitrite	TIN	OTR	MLSS
Days	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(lb/hr)	(mg/L)
15	3.71	10.37	0.58	5.21	0.15	5.94	217.78	3,438.29

Carrousel[®] Process Expansion (Alternative 1)

Pros:

- Simple, existing process
- Mixer-aerator above-deck maintenance (no diffusers)

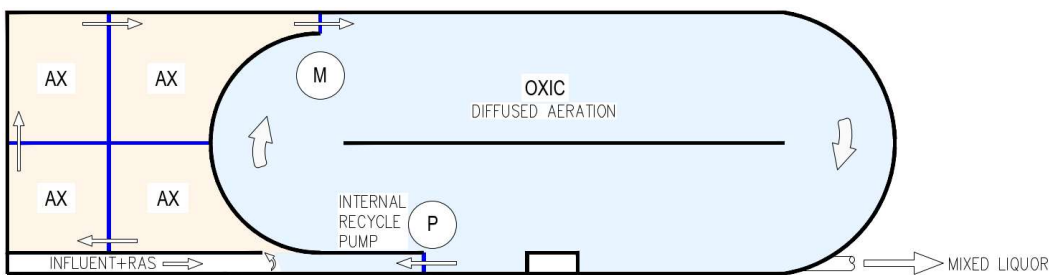
Cons:

- High cost
- Capacity limited by poor mixed liquor settleability
- Poor IR rate control can limit TIN removal
- Challenging construction of third ditch and clarifiers (geotechnical, mechanical)
- Space-intensive, maximum of three ditches possible

Other Alternatives

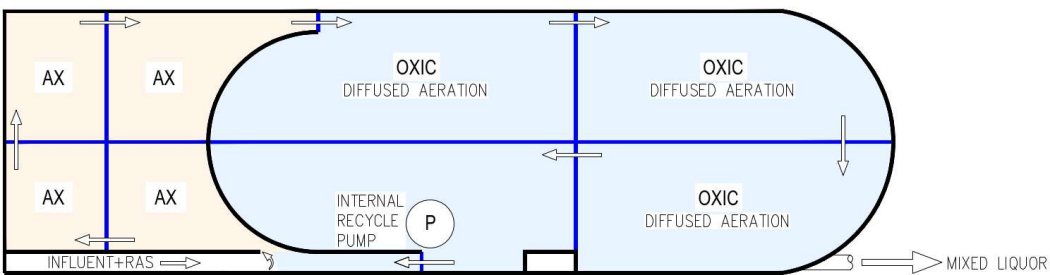
Instead of expanding footprint to expand capacity, make process changes to expand capacity within existing footprint.

Alternative 2: Conversion to Diffused Aeration



AX = Anoxic
M = Mixer
P = Pump

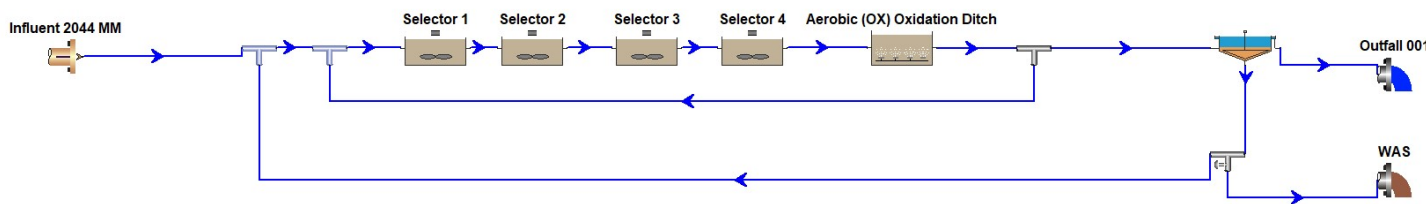
Alternative 3: Plug Flow Reactors



Alternative 2

Conversion to diffused aeration.

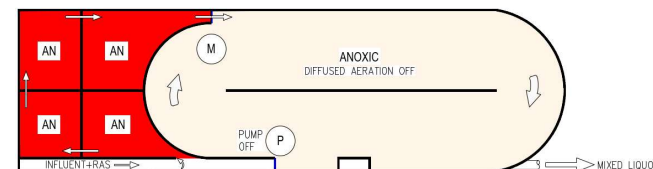
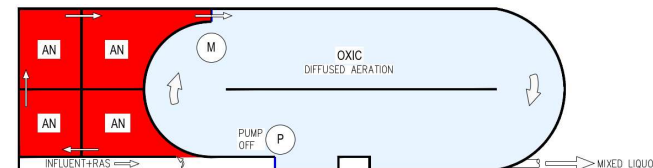
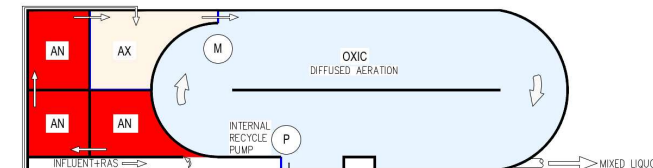
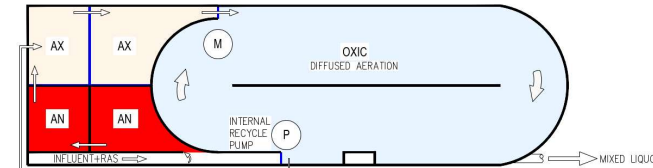
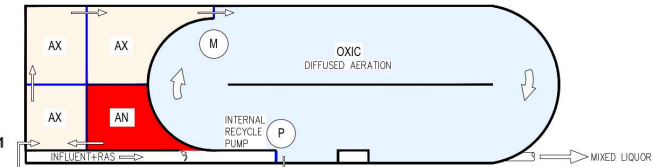
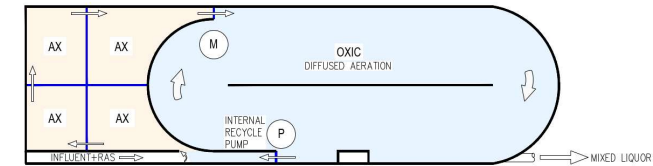
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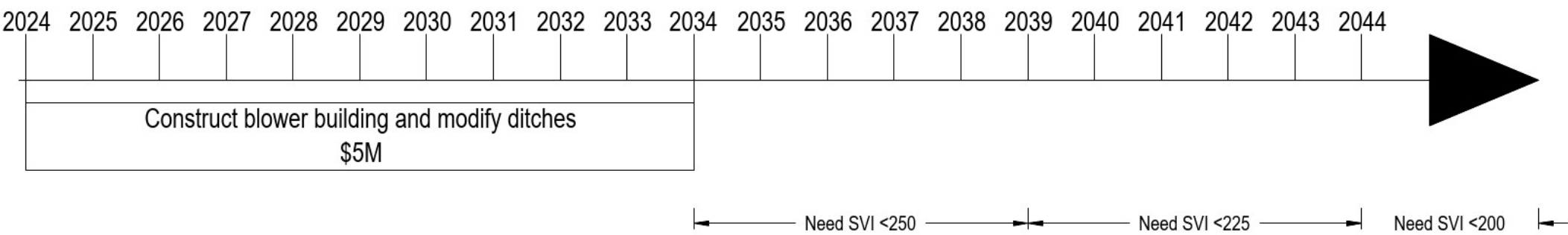
Necessary work:

- Remove existing mixer-aerators and anoxic mixers
- Add partition walls and mixers to selector basins
- Replace denitrification gates with pumped IR
- Upgrade to larger directional mixers in ditches
- Install diffused aeration
- Construct blower building
- Surface wasting

AX = Anoxic
AN = Anaerobic
M = Mixer
P = Pump



Alternative 2



Model results at 2044 MM conditions:

Process Parameters	Effluent Parameters						Process Results (OX)	
SRT _a	BOD	TSS	NH ₃	Nitrate	Nitrite	TIN	OTR	MLSS
Days	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(lb/hr)	(mg/L)
15	5.06	15.23	0.61	5.72	0.16	6.49	217.31	5,060.28

Alternative 2

Pros:

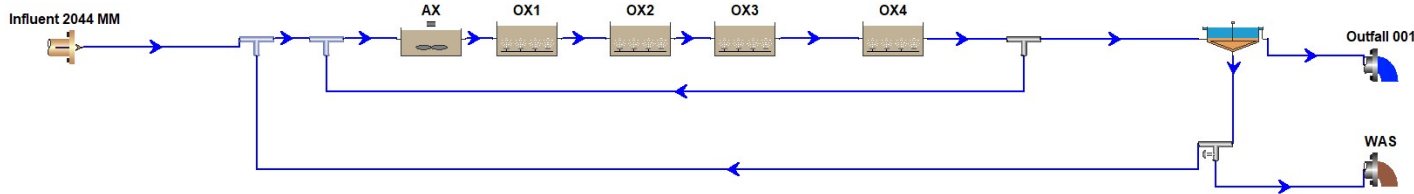
- Cost will be lower than Alternative 1 (\$5M vs. \$22M)
- The process improvement means third and fourth clarifiers can be deferred indefinitely
- Improve settling with better control of selector basins and controlling IR rate with a variable-speed pump
- Ability to add surface wasting as physical selector for improved settling
- Can treat 2044 maximum month projections
- Design options: baffles without structural concrete partition walls, blowers on the ditch platforms instead of in a building

Cons:

- Maintenance of submerged diffused aeration
- Additional instrumentation and controls

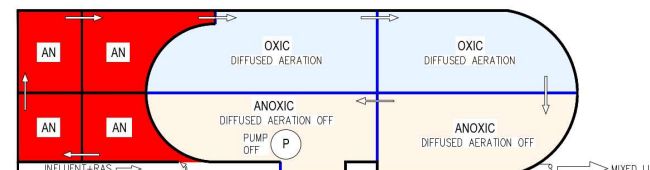
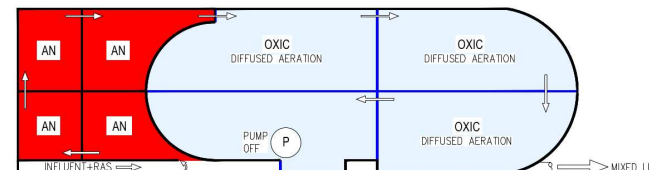
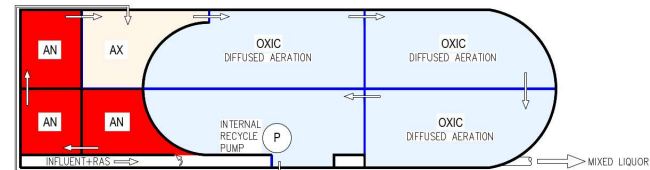
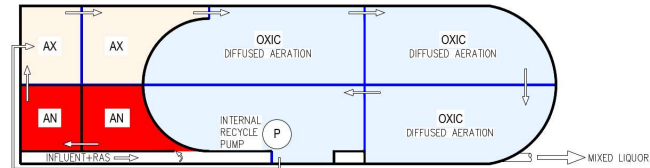
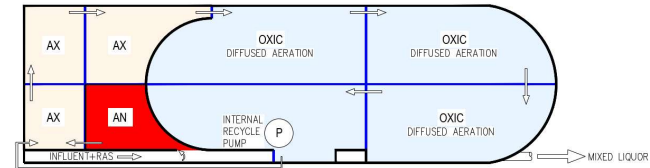
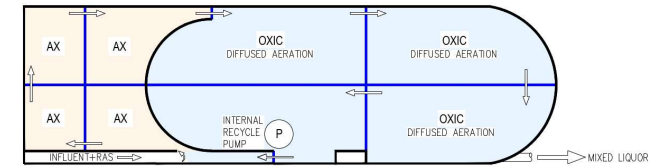
Alternative 3

Convert to partitioned plug flow reactors (PFR).



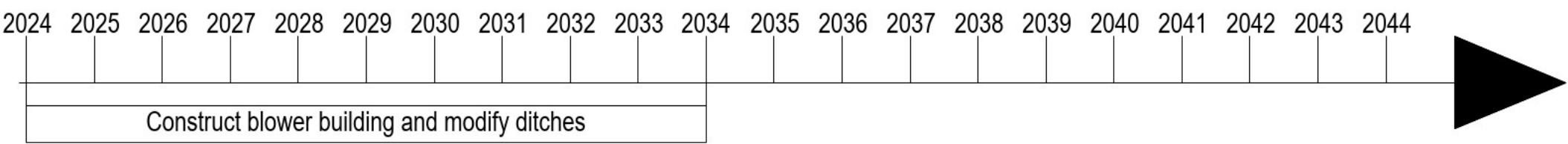
Necessary work:

- Remove existing mixer-aerators and anoxic mixers
- Add partition walls to selector basins and ditches
- Add mixers to selector basins
- Replace denitrIR gates with pumped IR
- Install diffused aeration
- Construct blower building
- Surface wasting



AX = Anoxic
AN = Anaerobic
P = Pump

Alternative 3



Model results at 2044 MM conditions:

Process Parameters	Effluent Parameters						Process Results (OX)	
SRT _a	BOD	TSS	NH ₃	Nitrate	Nitrite	TIN	OTR	MLSS
Days	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(lb/hr)	(mg/L)
10	4.59	11.25	0.16	6.38	0.05	6.59	207.95	3,736.91

Alternative 3

Pros:

- Cost of footprint/structures lower than Alternative 1, and other costs comparable to the new equipment and replacement costs of Alternative 1
- The process improvement means third and fourth clarifiers can wait much longer than if Carrousel® continued
- Improve settling with better control of selector basins and controlling IR rate with a variable-speed pump
- Ability to add surface wasting as physical selector for improved settling
- Most efficient use of footprint, exists on the same continuum as alternative 2
- Can treat 2044 maximum month projections
- Design options: baffles without structural concrete partition walls, blowers on the ditch platforms instead of in a building, compressed gas mixing instead of partitioning PFR

Cons:

- Maintenance of submerged diffused aeration
- Additional instrumentation and controls

Summary

- Is there a strong preference to continue with mixer-aerators (e.g. the existing Carrousel[®] process)?
- Thoughts on alternatives 2 and 3?



**CITY OF STANWOOD
PUBLIC WORKS COMMITTEE
STAFF REPORT**

ITEM NUMBER: 3

DATE: July 1, 2024

SUBJECT: Review Heritage Park Soccer Field and Parking Lot Scope of work

CONTACT PERSON: Alan Lytton, City Engineer

ATTACHMENT: Heritage Park Improvements Scope and fee proposal

Alan will go over the scope and fee proposal for the improvements at Heritage Park. These improvements include constructing a new soccer field 3 and additional parking.

STAFF RECOMMENDATION: That the Public Works Committee discuss the proposed fee proposal and scope for the Heritage Park Soccer and Parking project.

EXHIBIT A
SCOPE OF WORK
CITY OF STANWOOD
HERITAGE PARK IMPROVEMENTS

The City of Stanwood desires to expand the facilities provided in Heritage Park. The new facilities include:

- **RV and Car Parking Lot:** The parking lot will be approximately 630 feet by 250 feet and will have access off of Lover's Lane. Based on the existing soil conditions, it is anticipated that the pavement section will include the use of cement treated base. Storm drainage will be addressed through the use of surface features, i.e., swales, filter strips that will drain toward the existing ditch on the south side of Lover's Lane. Other features will include lighting and establishment of required landscaping areas, to comply with City Codes and Standards. A formal landscaping plan will be completed by others.
- **Soccer/Lacrosse Fields:** A new soccer/lacrosse field will be established between the new parking lot and the existing soccer fields. This field will be standard size, (115 yards by 75 yards). All slopes on the field will follow accepted guidelines. An underdrain system will be designed which will discharge to the existing ditch on the south side of Lover's Lane. Approximately 18 inches of fill material will be installed so that all soccer fields are at similar elevations. There are two other fields that have been established by the City by mowing the area, but these have not been graded and sloped. These fields will be surveyed and either top-dressed with topsoil and reseeded or cleared, regraded with topsoil and seeded.
- **Irrigation:** There is an existing irrigation pipe and hose bib located at the southwest corner of Soccer Field 1 that is used to irrigate this field. This irrigation pipe will be extended to the west and provide new hose bibs at the southwest corners of Soccer Fields 2 and 3. No spray heads, controllers or other irrigation components are included in the design. It is assumed that a backflow prevention device is located on the existing irrigation system.
- **Asphalt Pathway:** A 10-foot wide asphalt pathway will be extended along the north side of the site, approximately 1,500 feet, terminating at 102nd Avenue NE. To accommodate this pathway, the existing ditch will be filled and a pipe/culvert installed. Modifications to the existing guardrail and curb return will be analyzed to ensure compliance with the standards.

It is our understanding that the design phase will be funded with local funds and will be completed in 2024. The project will be funded with both local and Recreation and Conservation Office (RCO) funds (which have not been secured) with construction occurring in 2025.

SCOPE OF WORK

The engineering and related services contemplated for this project generally include topographic survey and mapping, geotechnical investigation, preparing plans (including project specific details), specifications, cost estimates, and bid and award support.

Our scope of work is more fully detailed below.

Task 1 – Project Management

Objective: Provide overall project management of Gray & Osborne resources, monitor and manage budget, manage and oversee the schedule of deliverables, manage quality assurance/quality control (QA/QC) program, and provide client contact.

- A. Contract execution, internal accounting, and auditing.
- B. Internal resource management and prioritization of resources.
- C. Oversee subconsultant contracts.
- D. Preparation of monthly progress reports (to be submitted with monthly invoices).
- E. Manage and oversee the schedule of deliverables.

Task 2 – Survey and Mapping

Objective: Establish vertical and horizontal control and acquire pertinent topographical features suitable to support the design and mapping of the project corridor. Work also includes identifying existing right-of-way lines within the project limits.

- 1. Research and acquire public records of survey, plat maps, assessor maps, and related survey data as may be available from public agencies (City and County).
- 2. Establish vertical and horizontal control for survey and mapping at a scale of 1"=20' horizontal and 1"-5' vertical. The datum will be per City of Stanwood standards/requirements. Provide (set or establish) a minimum

of two survey control points for vertical and horizontal control within project area.

3. Perform topographical survey within the project area. The survey will establish surface grades, edges of concrete and pavement surfaces, trees, fences, gates, structures, water meters, valves, irrigation systems, storm drainage features and any significant landscaping adjacent to the areas of work.

Task 3 – Geotechnical Investigation and Report

Objective: Provide the services of a qualified geotechnical engineer to assist with the development of design documents.

Subconsultant (PanGEO, Inc.) Responsibilities:

- A. Site Reconnaissance – Conduct a site reconnaissance to look for surface features that may impact the design and construction of the proposed improvements. At the time of our site reconnaissance, we will determine and mark the locations of test pits (see Item 2 below).
- B. Test Pits – We propose excavating 6 to 8 test pits within the footprint of the proposed parking lot. The test pits will be excavated to a maximum depth of about 5 feet with a small, tracked excavator. Representative soil samples will be collected from the test pits for laboratory testing. We will coordinate our field activities with Gray & Osborne and the City. Prior to our field explorations, we will contact the one-call center for underground utility clearance. At the completion of the field work, each test pit will be backfilled with excavated soils.
- C. Laboratory Tests – Laboratory tests will be performed on selected soil samples collected from the test pits. The tests will likely include natural moisture contents, Atterberg limits, grain size distributions, and Proctor compaction tests.
- D. Engineering and Report – Perform engineering analyses and prepare a report summarizing the results of our geotechnical study. In general, our report will include:
 1. A site map with approximate test pit locations;
 2. Description of surface and subsurface (soil, groundwater) conditions, including a description of the soil conditions exposed in the test pits, summary exploration logs, and summary laboratory test results;

3. Recommendations for pavement design with cement treated base (CTB) as well aggregate base with geogrid base reinforcement. The recommendations will include the minimum thickness of CTB, cement content, thickness of asphalt wearing surface. For the aggregate base option, the minimum thickness of crushed rock base and the selection of geogrid for base reinforcement.
 4. General earthwork recommendations, including stripping depth to remove unsuitable surficial soils, selection of fill to raise the grade (if needed), and recommendations for subgrade preparation and compaction.
- E. Post-Report Consultation – Provide post-report consultation on an as-needed basis.

Task 4 – Preliminary Design

Objective: Use information generated in Tasks 2 and 3 to develop a preliminary design for the proposed improvements for the City’s evaluation, review, and comment.

- A. Develop preliminary (conceptual) plans showing the proposed improvements previously described.
- B. Review the City’s Stormwater Standards (2005 Ecology Manual) and prepare a Stormwater Site Plan to document compliance.
- C. The City’s Street and Utility Standards do not address lighting levels in parking lots. Our work will include review of lighting standards for parking lots and provide up to three options for lighting levels, luminaries and poles.
- D. Prepare and submit project specifications to include City-provided proposal, contract, and bonding forms. This work assumes project specifications (including Special Provisions) will be based on the WSDOT Standard Specifications for Road, Bridge and Municipal Construction (current version).
- E. Develop a detailed preliminary engineer’s construction cost estimate.

Task 5 – Final Design

Objective: Prepare final project plans sufficient for bidding and constructing the project.

- A. Prepare and submit final project plans to the City for review. All applicable and relevant City comments will be incorporated into the final product. Revise the project plans to incorporate any final City comments (as applicable).
- B. Prepare and submit final project specifications to the City. All applicable City comments will be incorporated into the final product.
- C. Prepare final engineer's construction cost estimate.

Task 6 – Quality Assurance/Quality Control

Objective: Provide a QA/QC review of engineering products to enhance overall quality of products.

- A. Conduct a QA/QC review at the preliminary and final design levels by key design team members to solicit comments, recommendations, and suggestions regarding engineering products, constructability issues, critical path items, risk management, and quality of the product.

Task 7 – Bid and Award Services

Objective: Assist the City in bidding and awarding the project to the lowest, responsible, responsive contractor.

- A. Answer bid inquiries received during the bid phase.
- B. Prepare addendum(s), as needed, to clarify bid documents.
- C. Generate and distribute summary of the bids received.
- D. Prepare review of bids and recommendation for award letters,

DELIVERABLES

During the course of the project and at the conclusion, the Engineer will deliver to the City the following documents:

- One electronic copy of the Stormwater Site Plan;

- Up to two hard copies and an electronic (PDF) version of the preliminary plans. An electronic (PDF) version of the preliminary specifications and cost estimate will also be provided;
- Up to two hard copies and an electronic (PDF) version of the final design plans, details and specifications. An electronic (PDF) version of the final cost estimate will also be provided.

BUDGET

The maximum amount payable to the Engineer for completion of work associated with this scope of work, including contingencies, salaries, overhead, direct non-salary costs, and net fee, will not be exceeded without prior written authorization of the City.

PROJECT ASSUMPTIONS REGARDING CITY RESPONSIBILITIES

This scope of work and the resulting maximum amount payable are based on the following assumptions and those stated City responsibilities as required for the development of the project. 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 assumes that the survey can be performed on a continuous basis and not piecemealed with multiple site visits.
2. Permits, both local and state, will be prepared, submitted, and obtained by the City.
3. The development and/or recording of a "Record of Survey" is not required or included in this scope of work.
4. The existing ditch on the south side of Lover's Lane is not fish bearing and therefore, will not require any fish related permits. This existing ditch is man-made from the project site all the way to the outfall both Port Susan and Skagit Bay. Since the ditch is manmade, it is also assumed that that ditch has adequate capacity and therefore flow control will not be necessary for this project.
5. It is assumed that all stormwater systems can be connected to the existing ditch via gravity and that pumping efforts will not be necessary. Should a pump system design be necessary, this scope will need to be amended to address the additional design efforts.
6. It is assumed that critical areas report(s) will not be needed for this project.

7. It is assumed that the Inadvertent Discovery Plan (IDP) prepared for a previous project completed at Heritage Park can be used for this project. As such, a cultural resources assessment will not be completed for this project.