

AGENDA
GIG HARBOR CITY COUNCIL STUDY SESSION
Thursday, September 14, 2023 - 3:00 PM
Community Rooms

This meeting may also be accessed through Zoom at <https://zoom.us/j/93216056382> or by calling (253) 215-8782 and entering Meeting ID 932 1605 6382.

CALL TO ORDER/ROLL CALL

DISCUSSION ITEMS

1. Introduction of Appointees to the Design Review Board -
Kristine Isberg and Dean Wilder
Mayor Tracie Markley
2. Lift Station 1a Rehabilitation Options
Public Works Director Jeff Langhelm
3. Proposed Water Utility Rate Tiers (continued from September 7
special meeting)
Public Works Director Jeff Langhelm

ADJOURN

PUBLIC COMMENT & DECORUM

Public comment will not be accepted this study session.

AMERICANS WITH DISABILITIES (ADA) ACCOMMODATIONS

ADA accommodations can be provided upon request. Those requiring special accommodations should contact the city clerk at cityclerk@gigharborwa.gov or (253) 853-7613 at least 24 hours prior to the meeting.



**City of Gig Harbor
City Council Meeting Agenda Bill**

Meeting Date: September 14, 2023

SUBJECT: Lift Station 1a Rehabilitation Options
Public Works Director Jeff Langhelm

SUBMITTED BY: Project Engineer Marcos McGraw

DEPARTMENT: Public Works

PHONE: 253-853-2647

SUGGESTED MOTION: None.

BACKGROUND INFORMATION: Sanitary sewer lift station 1 is located in the southwest corner of Crescent Creek Park. This lift station generally consists of original equipment dating back to its original construction in 1974. This facility has out-lived its serviceable life. The current city budget includes Objective 4 within the Wastewater Capital Fund for replacement of existing pumps, electrical appurtenances, and mechanical equipment.

On May 2, 2023, the city executed a contract with Kennedy-Jenks to prepare design options for presentation to council various rehabilitation options. These options consist of minimal upgrades (option 1), moderate upgrades (option 2), and full improvements (option 3), as shown in the attached alternatives analysis.

At the September 11 study session, city staff and representatives from Kennedy-Jenks will present details related to each option. Based on input from council, staff will return with an amendment to the Kennedy-Jenks contract for the final design of the preferred option.

FISCAL CONSIDERATION: Budgeting for construction costs will be included in the 2025-26 budget.

ATTACHMENTS:

1. Pairwise Presentation (PDF)

STRATEGIC PLAN PRIORITY: Ensure sustainable future for public services and facilities

Lift Station 1A Improvements



Project Background and Drivers



LS1A is the City's oldest lift station, serving Wastewater Basin 1. Components of this lift station are near the end of their useful life.

The 2018 Capital Improvements Program identifies LS1A as requiring improvements.



Improvements – Alternatives Analysis

To identify appropriate upgrades, a range of alternatives were considered:

1.

**Minimal
Improvements**

2.

**Moderate
Improvements**

3.

**Full
Improvements**

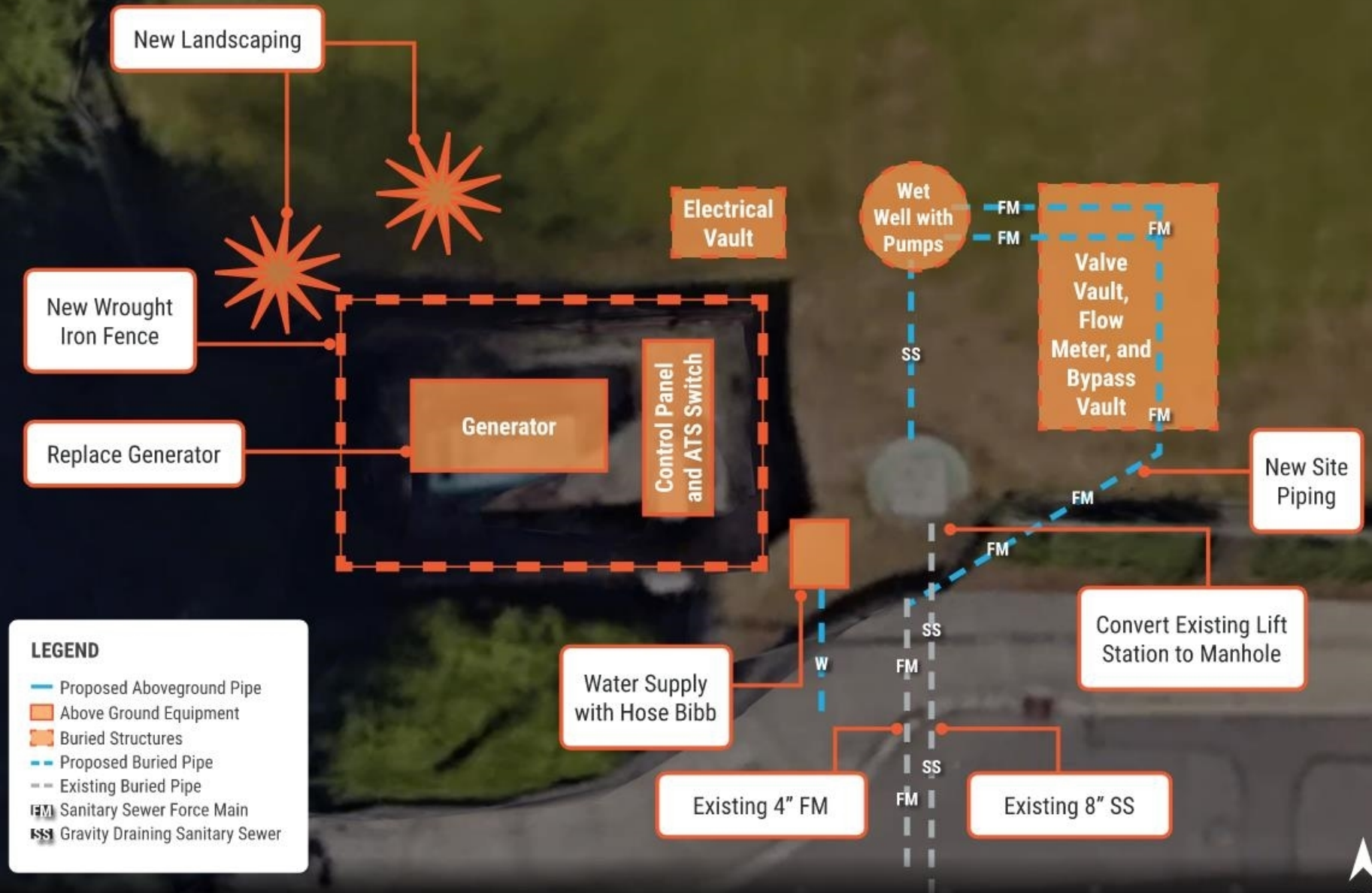
Minimal Improvements Option

PROS:

- Lowest capital cost
- Smallest footprint
- Potential landscape improvements

CONS:

- No aesthetic improvements
- No shelter for O&M activities
- Generator provided backup power
- No odor control



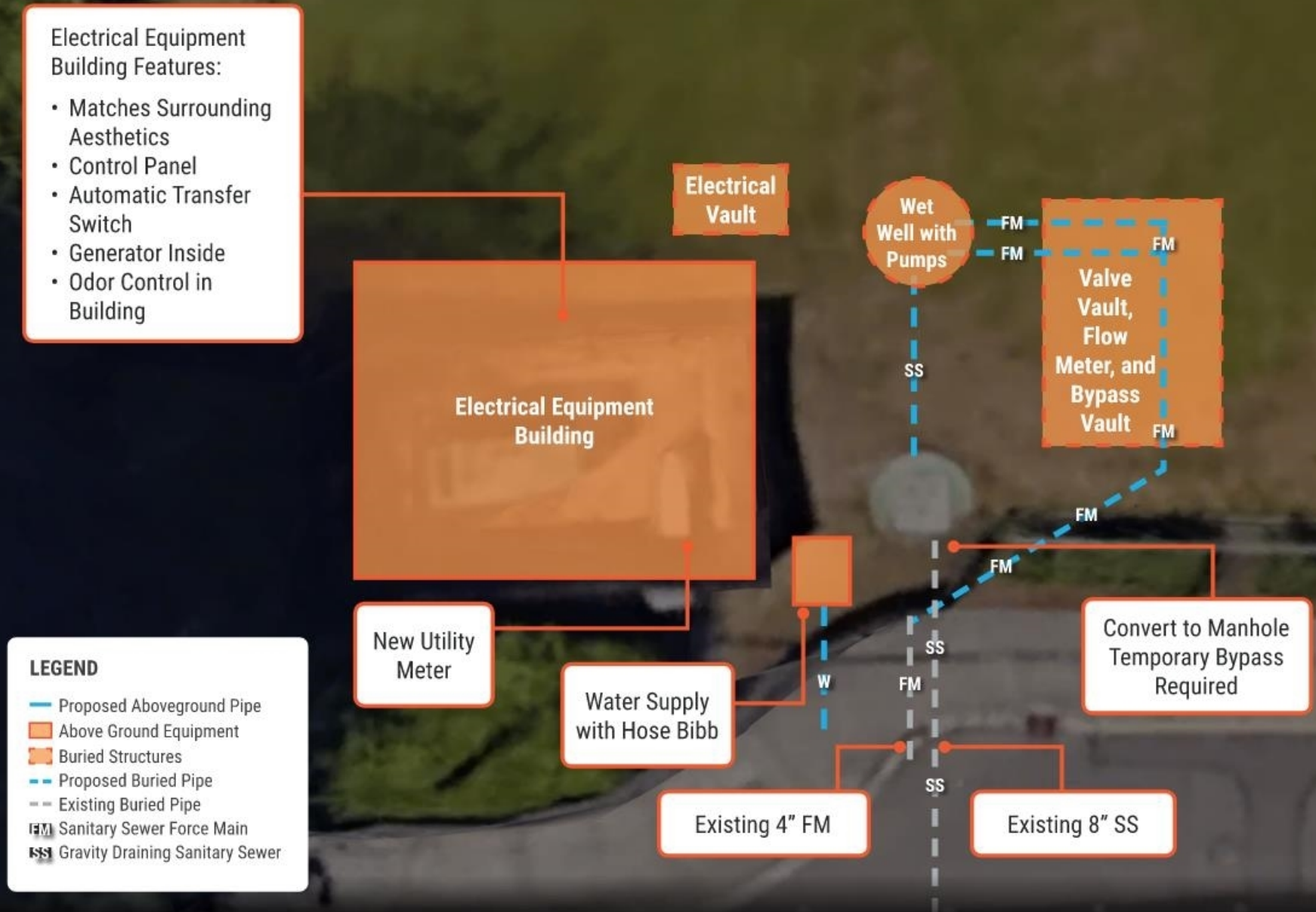
Moderate Improvements Option

PROS:

- Moderate ranking for capital construction costs
- Building for electrical equipment and odor control
- Aesthetics improvements. Will match surroundings
- Odor control provided

CONS:

- Generator provided backup power
- Larger footprint



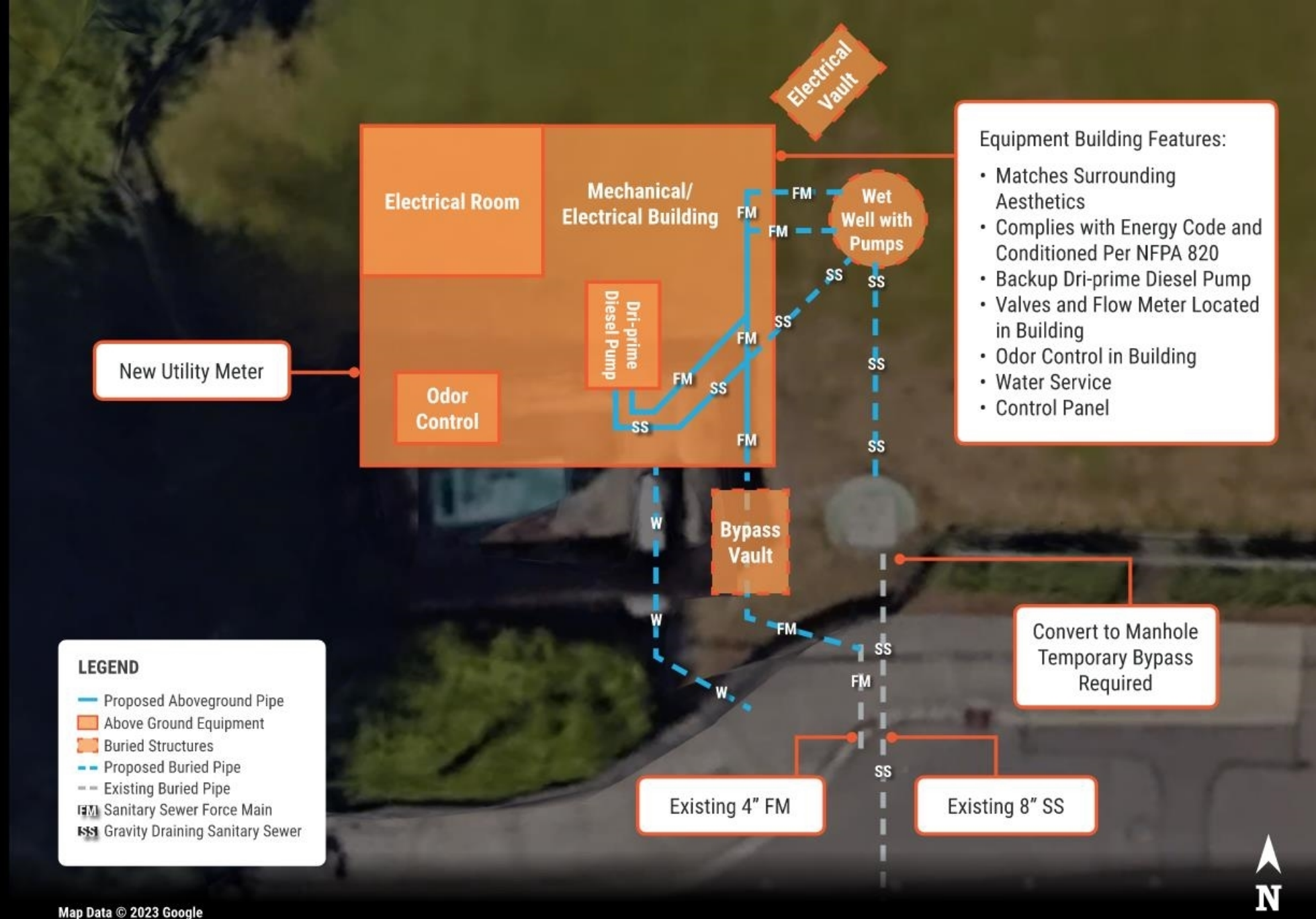
Full Improvements Option

PROS:

- Highest reliability, including backup power source
- Valve operation, electrical and mechanical O&M work performed under cover
- Water available onsite for cleaning
- Aesthetics improvements. Will match surroundings
- Odor control provided
- Full compliance with City Pump Station Design Standards

CONS:

- Highest capital cost
- Larger footprint



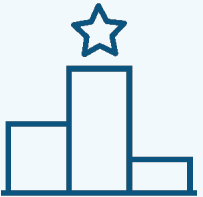
Alternatives Evaluation: Pairwise Analysis



Identify
evaluation criteria



Weight criteria
using a Pairwise
Comparison



Rate and rank
alternatives using a
weighted criteria



Alternatives Evaluation Criteria



- **System Reliability:** Conformance with Pump Station Design Standards, ease of facilitating ongoing operations, and system vulnerabilities.
- **Design Manual Conformance:** Degree of conformance to City Design Manual and willingness to request deviation
- **Capital Costs:** Conceptual Opinion of Probable Costs including design, construction, and engineering services during construction.
- **Permitting Complexity:** Timeline required for permitting
- **Public Impact:** Impacts to the community during and after construction.

Pairwise Comparison



Pairwise Comparison ranks a set of options based on preferences. Uses one-to-one comparisons to rank a list of options.

Example: Compare Criterion A: System Reliability to Criterion B: Permitting. Assign a rating of 1 through 5. To assign this rating, complete this sentence with the following options:

System Reliability is _____ than Permitting

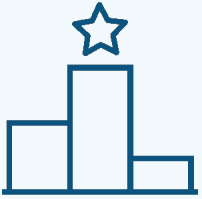
- a) *Much less important ----- 1 point*
- b) *Somewhat less important ---- 2 points*
- c) *Equally important ----- 3 points*
- d) *Somewhat more important -- 4 points*
- e) *Much more important -----5 points*

The total number of points each criteria receives is divided by total points to rank the importance of the criteria.

Pairwise Comparison Results for LS1A

		Criteria "B"					Point Total	Weighting
		Reliability	Design Manual Conformance / DRB	Capital Costs	Permitting	Public Impact		
Criteria "A"	Reliability	-	5	4.5	5	4	18.5	31%
	Design Manual Conformance/ DRB	1	-	3	4	4	12	20%
	Capital Costs	1.5	3	-	4	2.5	11	18%
	Permitting	1	2	2	-	4	9	15%
	Public Impact	2	2	3.5	2	-	9.5	16%
Total							60	100%

Rating Alternatives



Alternatives are assigned a rating for each criterion. Rating systems vary based on criteria, but generally compare alternative to the status quo:

Example: Complete this sentence.

For Criterion A: System Reliability: When compared to existing conditions, this alternative will result in..."

- 1. Insignificant changes when compared to the status quo.*
- 2. Some improvements in a few considerations for this criterion.*
- 3. Some improvements in many considerations for this criterion.*
- 4. Significant improvements in many considerations for this criterion.*

Ratings are multiplied by the weighting factor for the criteria, and the sum for each alternative is used to compare them. A higher number indicates the alternative better aligns with project priorities.

Capital Costs Comparison

- Class 5 AACE Opinion of Probable Cost
 - Conceptual costs based on limited details
 - Accuracy range typically between +50% to -30% of estimate
- Include Engineering, Construction, and Engineering Services During Construction (ESDC)
- Assumes Construction in 2025
- For Alternatives Evaluation, alternatives are assigned rating based on dividing the most expensive alternative by costs for other alternatives.

Example:

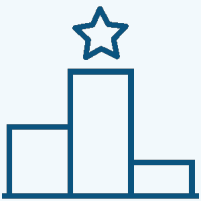
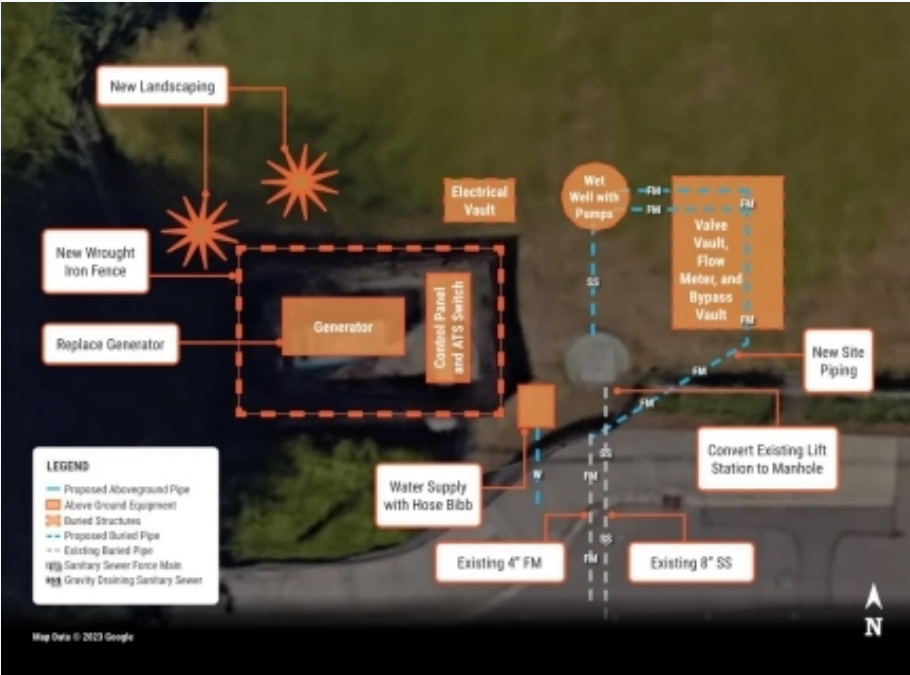
If the most expensive alternative has a capital cost estimate of \$3 million, and the evaluated alternative has an estimated cost of \$1 million:

$$\frac{3 \text{ Million}}{1 \text{ Million}} = 3 = \text{Alternative Rating}$$

Alternative Ratings and Results for LS1A

Alternatives	Evaluation Criteria Ratings					Point Total
	Reliability	Design Manual Conformance/ DRB	Capital Costs	Permitting	Public Impact	
Alternative 1 Minimum Improvements	2	2	2	2	1	1.84
Alternative 2 Moderate Improvements	3	3	1.2	2	4	2.68
Alternative 3 Full Improvements	4	3	1	2	3	2.79

Capital Costs – Minimal Improvements

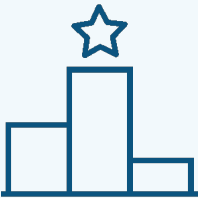
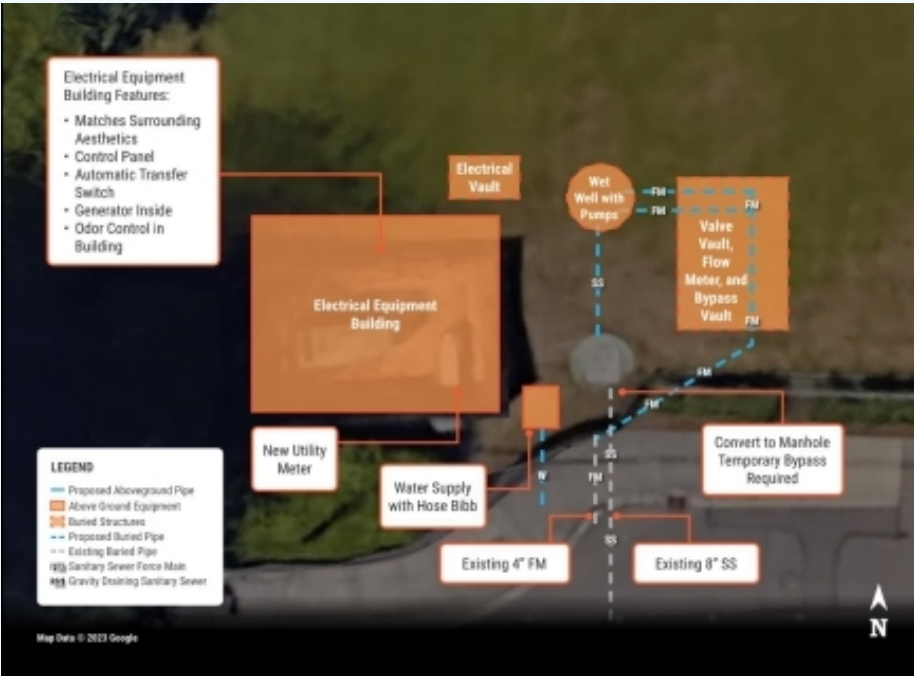


Pairwise rating: 1.84

DIV. No.	ITEM DESCRIPTION	MATERIALS	INSTALLATION	SUB-CONTRACTOR	TOTAL
1	General Requirements	-	-	-	See Below
2	Existing Conditions	400	47,600	53,500	101,500
3	Concrete	52,756	21,189	-	73,944
4-7	Building/Structure Shell	-	-	-	-
9	Coatings	500	500	2,111	3,111
10	Specialties	250	500	-	750
22	Mechanical (Plumbing)	840	1,217	-	2,057
23	Mechanical (HVAC)	-	-	-	-
26	Electrical & Process Integration	92,400	32,950	16,153	141,503
31	Site Work (Shoring, Excavation)	5,447	24,476	-	29,924
32	Site Improvements (Fencing, Landscaping)	1,505	1,270	9,000	11,775
33	Piping	41,263	12,242	-	53,505
43-46	Equipment	126,640	12,805	-	139,445
	Subtotals	322,002	154,748	80,764	557,514
	Division 1 Costs @ 10%	32,200	15,475	8,076	55,751
	Subtotals	354,202	170,223	88,840	613,265
	Contractor MU on Sub @ 15%			13,326	13,326
	Subtotals	354,202	170,223	102,166	626,591
	Contractor OH&P @ 15%	53,130	25,533		78,664
	Subtotals	407,332	195,757	102,166	705,255
	Estimate Contingency @ 30%				211,577
	Subtotal				916,832
	Escalate to Midpt of Const. @ 6%				137,525
	Estimated Bid Price				1,054,356
	WA State Sales Tax 8.75%				92,256
	Construction Subtotal				1,146,613
	Design				285,000
	Subtotal				1,431,613
	Engineering Services During Construction				281,000
	Subtotal				1,712,613
	Total Estimate				1,720,000

Cost: \$1.7 M

Capital Costs – Moderate Improvements

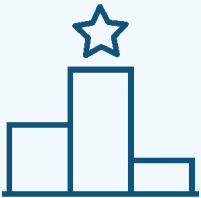
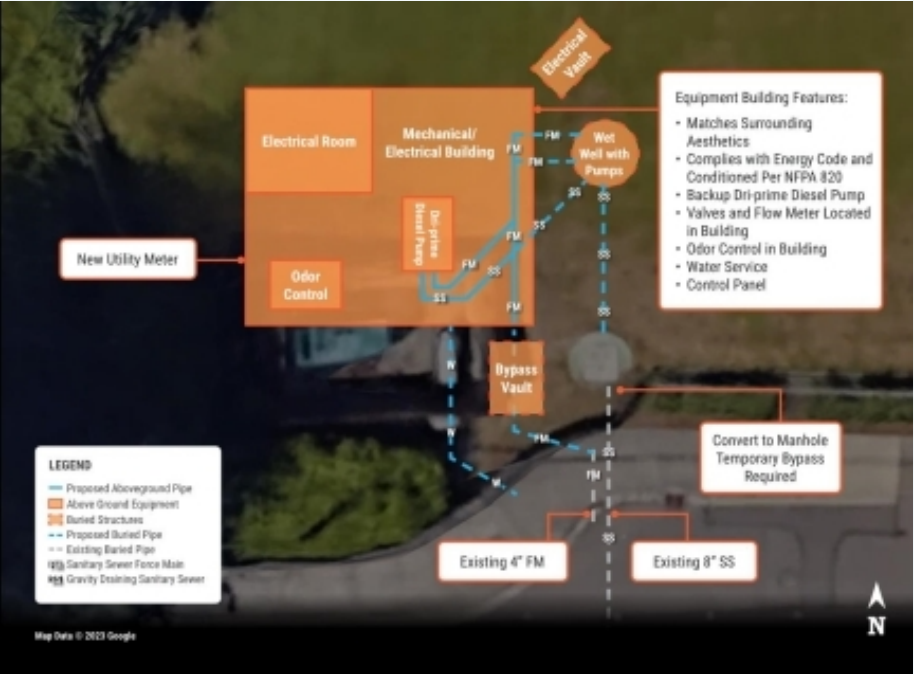


Pairwise rating: 2.68

DIV. No.	ITEM DESCRIPTION	MATERIALS	INSTALLATION	SUB-CONTRACTOR	TOTAL
1	General Requirements	-	-	-	See Below
2	Existing Conditions	2,622	49,096	63,377	118,278
3	Concrete	60,577	29,979	-	90,556
4-7	Building/Structure Shell	26,234	7,578	106,419	140,231
9	Coatings	500	500	8,697	9,697
10	Specialties	1,250	900	-	2,150
22	Mechanical (Plumbing)	8,664	7,392	-	16,056
23	Mechanical (HVAC)	-	-	7,750	7,750
26	Electrical & Process Integration	117,544	40,956	65,560	224,856
31	Site Work (Shoring, Excavation)	5,673	25,518	-	31,188
32	Site Improvements (Fencing, Landscaping)	800	800	76,000	77,600
33	Piping	47,215	14,257	-	61,473
43-46	Equipment	176,640	17,805	-	194,445
	Subtotals	447,720	194,782	327,802	970,305
	Division 1 Costs @ 10%	44,772	19,478	32,780	97,031
	Subtotals	492,493	214,260	360,583	1,067,336
	Contractor MU on Sub @ 15%			54,087	54,087
	Subtotals	492,493	214,260	414,670	1,121,423
	Contractor OH&P @ 15%	73,874	32,139		106,013
	Subtotals	566,366	246,399	414,670	1,227,436
	Estimate Contingency @ 30%				368,231
	Subtotal				1,595,667
	Escalate to Midpt of Const. @ 6%				239,350
	Estimated Bid Price				1,835,017
	WA State Sales Tax 8.75%				160,564
	Construction Subtotal				1,995,581
	Design				427,000
	Subtotal				2,422,581
	Engineering Services During Construction				421,000
	Subtotal				2,843,581
	Total Estimate				2,850,000

Cost: \$2.9 M

Capital Costs – Full Improvements



Pairwise rating: 2.79

OPINION OF PROBABLE CONSTRUCTION COST

Project: LS1A Improvement Alternatives -- Conceptual

Assumed Construction Start Date

2025

KENNEDY/JENKS
CONSULTANTS,
INC.

Prepared By: KJ
Date Prepared: 31-Aug-23
KJ Proj. No.: 2397007*00

SUMMARY BY DIVISION

DIV. No.	ITEM DESCRIPTION	Full Improvements Alternative			
		MATERIALS	INSTALLATION	SUB-CONTRACTOR	TOTAL
1	General Requirements	-	-	-	See Below
2	Existing Conditions	500	47,811	53,520	101,831
3	Concrete	74,528	31,423	-	105,950
4-7	Building/Structure Shell	29,149	8,420	118,243	155,813
9	Coatings	500	500	9,428	10,428
10	Specialties	1,250	900	-	2,150
22	Mechanical (Plumbing)	8,664	7,392	-	16,056
23	Mechanical (HVAC)	2,600	573	11,920	15,093
26	Electrical & Process Integration	123,153	47,456	73,528	244,136
31	Site Work (Shoring, Excavation)	5,390	24,260	-	29,650
32	Site Improvements (Fencing, Landscaping)	800	800	101,000	102,600
33	Piping	68,660	18,154	-	86,814
43-46	Equipment	300,570	49,591	-	350,161
	Subtotals	615,764	237,279	367,639	1,220,682
	Division 1 Costs @ 10%	61,576	23,728	36,764	122,068
	Subtotals	677,341	261,006	404,403	1,342,751
	Contractor MU on Sub @ 15%			60,660	60,660
	Subtotals	677,341	261,006	465,064	1,403,411
	Contractor OH&P @ 15%	101,601	39,151		140,752
	Subtotals	778,942	300,157	465,064	1,544,163
	Estimate Contingency @ 30%				463,249
	Subtotal				2,007,412
	Escalate to Midpt of Const. @ 6%				301,112
	Estimated Bid Price				2,308,524
	WA State Sales Tax 8.75%				201,996
	Construction Subtotal				2,510,520
	Design				474,000
	Subtotal				2,984,520
	Engineering Services During Construction				468,000
	Subtotal				3,452,520
	Total Estimate				3,460,000

Cost: \$3.5

Q & A

Michael Lubovich
Project Manager

(253) 835-6459

MichaelLubovich@kennedyjenks.com





**City of Gig Harbor
City Council Meeting Agenda Bill**

Meeting Date: September 14, 2023

SUBJECT: Proposed Water Utility Rate Tiers (continued from September 7 special meeting)

Public Works Director Jeff Langheltm

SUBMITTED BY: Public Works Director Jeff Langheltm

DEPARTMENT: Public Works

PHONE: (253) 853-7630

SUGGESTED MOTION: None.

BACKGROUND INFORMATION:

The city operates three utilities (water, wastewater, and stormwater) as independent enterprise funds. At the [July 20 city council study session](#), staff and our consultant, Ashley Emery with Peninsula Financial Consulting (PFC), presented the on-going maintenance, operating, and capital needs of the city's three utilities along with proposed rate adjustments for rate adjustments for each utility.

One key structural change to the city's water utility rates that has been proposed by staff is to establish tiered water rates. As directed through the June 2023 contract amendment with PFC and as a continuation of the July 20 study session, staff and PFC will present findings and considerations for tiered water rates at the September 7 study session.

Currently, the city's monthly water rates include a base charge and a consumption charge. The consumption charge is the same per unit of water (hundred cubic foot, CCF) regardless of how much water is consumed. The tiered water rates under consideration would provide a total of four tiers of rates that increase the unit cost as the number of units consumed is increased. Staff and PFC have considered applying these tiered rates across all customer classes (residential, multifamily, commercial, and government.)

At the September 7 study session, staff and PFC will review how AWWA equivalent meter factors (see attached table) are associated with water base rates, present options for establishing tiered water rates, and compare revenues for tiered water rates to existing and future water rate structures.

FISCAL CONSIDERATION: None.

ATTACHMENTS:

1. WUTC AWWA Meter Factor Sizes (PDF)

STRATEGIC PLAN PRIORITY: Ensure sustainable future for public services and facilities.

Washington Utilities and Transportation Commission

AWWA Water Meter Factor Sizes

Meter Size	AWWA Capacity (gpm)	Factor based on 5/8 inch	Factor based on 3/4 inch	Factor based on 1 inch
5/8 inch	20	1.00	0.67	0.40
3/4 inch	30	1.50	1.00	0.60
1 inch	50	2.50	1.67	1.00
1-1/2 inch	100	5.00	3.33	2.00
2 inch	160	8.00	5.33	3.20
3 inch	300	15.00	10.00	6.00
4 inch	500	25.00	16.67	10.00
6 inch	1,000	50.00	33.33	20.00
8 inch	1,600	80.00	53.33	32.00
10 inch	2,300	115.00	76.67	46.00
12 inch	4,300	215.00	143.33	86.00