

DEVELOPMENT AGREEMENT

Effective Date: _____, 2023.

PARTIES:

Main Street White Salmon, LLC, a Washington limited liability company (“Owner”) owns that certain real property located within the City of White Salmon (“City”) more particularly described as follows:

Klickitat County, WA
Lot 2 of SP 2009-10, recorded under Auditor File No. 1093016, records of Klickitat County, Washington.

Subject to compliance with certain terms and conditions, as more particularly described herein, a portion of the property as described is to be sold to the City subject to a Low Income Housing Covenant.

The City of White Salmon is a Washington municipal corporation, and is responsible for land use planning and permitting.

Owner and City are collectively referred to as the Parties.

AUTHORITIES

The parties are authorized to enter this Development Agreement by RCW 36.70B.170(1).

Whereas, pursuant to RCW 36.70B.170, a development agreement may set forth the development standards and other provisions that will apply to, govern and vest the development, use and mitigation of the development of real property for the duration specified in the agreement, which statute provides:

(1) A local government may enter into a Development Agreement with a person having ownership or control of real property within its jurisdiction. A city may enter into a development agreement for real property outside its boundaries as part of a proposed annexation or a service agreement. A development agreement must set forth the development standards and other provisions that will apply to and govern and vest the development, use, and mitigation of the development of the real property for the duration specified in the agreement. A development agreement will be consistent with applicable development regulations adopted by a local government planning under chapter 36.70A RCW;

Whereas, the legislative findings supporting the enactment of this section provide:

The legislature finds that the lack of certainty of the approval of development projects can result in a waste of public and private resources, escalate housing costs for consumers and discourage the commitment to comprehensive planning which would make maximum efficient use of resources at the least economic cost to the public. Assurance to a development project applicant that upon government approval the project may proceed in accordance with existing policies and regulations, and subject to conditions of approval, all as set forth in a development agreement, will strengthen the public planning process, encourage private, participation and comprehensive planning, and reduce the economic costs of development. Further, the lack of public facilities and services is a serious impediment to development of new housing and commercial uses. Project applicants and local governments may include provisions and agreements whereby applicants are reimbursed over time for financing public facilities. It is the intent of the legislature by RCW 36.70B.170 through 36.70B.210 to allow local governments and owners and Owners of real property to enter into development agreements;

RECITALS:

WHEREAS, the Parties have heretofore negotiated and executed that certain Agreement for Purchase and Sale of Real Estate dated April 13, 2022; and

WHEREAS, the conditions and contingencies of said Agreement could not be timely met by the Parties and accordingly multiple Addendums to Agreement for Purchase and Sale of Real Estate have been executed (collectively the 'Agreement' which shall further include all subsequently executed Amendments thereto); and

WHEREAS, by the terms of the Agreement, the City is to acquire Lots 22-31 of a proposed subdivision (the "Property") with application by Owner thereof to be processed and considered according to law and the terms of the Agreement as set forth; and

WHEREAS, Owner is to retain the remainder of said developed property ('Adjacent Property') under the terms and conditions of the Agreement as set forth; and

WHEREAS, said Agreement identified in Section 6(d) thereof certain conditions precedent to the obligations of Owner which include obtaining all necessary entitlements to proceed with development of Final Plat and Site Plan Approval for the Property and Adjacent Property and other conditions as set forth therein which application was reviewed, subject to public hearing, and approved by City Council, subject to the conditions as set forth within this Agreement as stipulated by Developer; and

WHEREAS, the City completed the process for implementation of revised R-PUD standards as more particularly described in the Agreement; and

WHEREAS, WSMC 17.75.050E2 provides that the City and a developer may enter into a Development Agreement to address adequacy of necessary utilities as part of the approval criteria for an R-PUD development application and the terms as set forth herein are intended to be a part of such application as a condition of approval thereof; and

WHEREAS, the City desires to provide for additional and necessary infrastructure planning to include a booster pump station (the 'North Main Pump Station') with anticipated three-pump system, two pumps for domestic flow and one pump for high flow demands; and

WHEREAS, the City has obtained necessary financing for the construction of the North Main Pump Station; and

WHEREAS, the Parties intend by this Development Agreement to provide certainty for development of the Property and Adjacent Property such as to allow the contingencies and conditions for closing of the Agreement to timely occur to include but not be limited to availability of fire flow to meet the minimum requirements for the preliminary proposed development as prescribed by the International Fire Code, Appendix B and dedication of right of way for the construction of a new water system pump station; and

WHEREAS, this development agreement is authorized by an Ordinance of the City Council of the City of White Salmon following a hearing as required by RCW 36.70B.170;

AGREEMENT

NOW, THEREFORE, the Parties agree as follows:

1. **DEVELOPMENT AGREEMENT:** This Agreement is a Development Agreement to be implemented under the authority of and in accordance with RCW 36.70B.170 through RCW 36.70B.210. It shall become a contract between the Owner and the City upon action by the City Council of the City of White Salmon, following a hearing as required by RCW 36.70B.170.
2. **CONCEPTUAL OVERVIEW:** Owner intends to develop a subdivision on the as depicted on the conceptual proposed layout as submitted as part of City File WS-SUB-2023.001. The development will feature 31 lots to range in size, with adequate provisions for streets, landscaping, and other features.
3. **VESTING:** Owner has timely submitted all applications and materials with the City for the contemplated subdivision development to meet the timelines for closing as set forth in the Agreement, as amended, and was vested as of the date upon which the application was deemed substantially complete by City.

This Development Agreement shall be followed by work based on best efforts and good faith negotiations between the Owner and City, to develop details regarding infrastructure design, approval, funding and implementation which may be needed in addition to those elements previously agreed as set forth within the Agreement or herein. Final details shall be formalized either through an amendment to this Development Agreement or a supplemental additional infrastructure agreement. While not contemplated at this time, these negotiations may include the Owner assuming construction and cost related to additional public improvements to serve adjoining or other properties, e.g. upsizing of utility lines, and in such event the Owner shall be credited for any improvements set forth in final approved plans where such improvements are in excess of standard code requirements or are in excess of that required to serve the development, or as otherwise provided in the Agreement.

Section 2 of the Agreement outlines the obligations of the Developer and City as relates to consideration to be paid, credits which shall be granted, and waiver of otherwise applicable residential water connection fees which terms, upon closing of the transaction, shall be incorporated by reference into this Development Agreement and shall be binding upon the parties hereto.

The Agreement further provides for the City to pay the construction cost of the sewer line for Developer's adjacent R-PUD in the amount and subject to the cost limits as set forth.

Failure of the Agreement to close shall be and act as an immediate termination of the obligations set forth within this Development Agreement including but not limited to the consideration, credits, fee waivers, and shared construction cost elements.

4. UTILITY INFRASTRUCTURE.

A. The City has determined that any new development in the existing Strawberry Mountain pressure zone, in which this proposed subdivision currently exists, will impact the City's utility water systems and, without mitigation, will over burden public services as prohibited pursuant to WSMC 17.75.050E.

The mitigation measures set forth in this Agreement are based on the City's development standards. The mitigation measures referenced in this Agreement include water service improvements, construction thereof when implemented, which will allow City systems to operate at a level of service equivalent to that level of service existing prior to the development and use of the Property and Adjacent Property. The mitigation measures described herein are reasonable, and mitigate the identified impacts. The mitigation measures are a condition of Subdivision final plat approval and further are a condition to the City's obligation under the Agreement, as amended.

B. The Parties have discussed the proposed plans for the proposed development, including utility needs, and negotiated in good faith the conceptual

design and intent of the water infrastructure to be installed by the City (the "Improvements") as outlined in the attached Technical Memorandums attached as Exhibit A. The City has commenced a preliminary design report which includes utilizing the area to be dedicated in the southeast corner of the open space as designated on the proposed preliminary plat and has further received Council approval to engage a water engineer to assist in the final design elements. The general dimensions as set forth therein are subject to confirmation in the final report to be completed, with such minor adjustments as may be deemed necessary.

C. It is the intent of the Parties that the Improvements will not only serve the Subdivision, but will also serve the City consistent with adopted plans.

D. This Development Agreement provides that the City shall design and construct the Improvements as required, subject to Owner dedication of right of way as set forth in Section 7 herein and further subject to compliance by Owner with the Agreement.

5. CONSTRUCTION OF PUMP STATION

A. The City shall design and construct the North Main Pump Station to provide the minimum fire flow required by the International Fire Code for one and two-family dwellings, group R-3 and R-4 buildings and townhouses with a fire-flow calculation area of three thousand six hundred square feet and less, prior to the City's issuance of final occupancy for the 6th lot in the Subdivision generally consistent with the description set forth in the Technical Memorandum. In the event the Booster Pump Station is not completed after occupancy of the 5th lot, it is contemplated and the parties have both received adequate assurances that an additional 10 lots would potentially be available for connection by Owner. However, the City is legally constrained from issuing or guaranteeing further certificates at this time and any Owner request for such additional connections would be considered at time of building permit application submission subject to overall capacity limitations of the existing system as reviewed and approved by the city's engineer. The Pump Station Upgrade Infrastructure will be designed, constructed and maintained according to City and State standards. The City and the Owner will maintain a dialog throughout the construction process and cooperate to minimize unforeseen cost overruns. The City shall not develop Lots 22-33 as proposed to be acquired until the North Main Pump Station is operational.

7. DEDICATION OF RIGHT OF WAY

A. The Owner will convey(s), grant(s) and dedicate(s) unto the City, its successors and assigns, herein a perpetual right-of-way easement for public improvement purposes to facilitate the construction, operation and maintenance of the booster pump station as described in 6(A) including any transformer.

- B. The configuration of said dedication shall be similar in nature to that as shown in the Technical Memorandum. The dedication and the location thereof will be formally established by separate document upon completion of the Booster Pump Station preliminary design.

8. CONDITION OF APPROVAL

This Development Agreement shall be and act as a condition of approval for the R-PUD application submitted by Owner pursuant to WSMC Section 17.75.050.

MISCELLANEOUS PROVISIONS

Recitals. Each of the Recitals contained herein are intended to be, and are incorporated as, covenants between the Parties and will be so construed.

Execution of Agreement; Counterparts; Electronic Signatures. This Agreement may be executed in several counterparts; each of which shall be deemed an original and all of which shall constitute one and the same instrument, and shall become effective when counterparts have been signed by each of the Parties and delivered to the other Parties; it being understood that all Parties need not sign the same counterparts PROVIDED that all signature pages will be recorded together, and the complete recorded Agreement will constitute the final instrument. The exchange of copies of this Agreement and of signature pages by facsimile transmission (whether directly from one facsimile device to another by means of a dial-up connection or whether mediated by the worldwide web), by electronic mail in "portable document format" (".pdf") form, or by any other electronic means intended to preserve the original graphic and pictorial appearance of a document, or by combination of such means, shall constitute effective execution and delivery of this Agreement as to the Parties and may be used in lieu of the original Agreement for all purposes. Signatures of the Parties transmitted by facsimile shall be deemed to be their original signatures for all purposes.

Effective Date. This Agreement is effective on the date of execution by the last party to execute this Agreement.

Termination. This Agreement will terminate upon the mutual agreement of the Parties in writing, which will be recorded.

City's Reserved Authority. Notwithstanding anything in this Agreement to the contrary, the City will have the authority to impose new or different regulations to the extent required by a serious threat to public health and safety as required by RCW 36.70B or as may be provided in the Agreement, as amended.

Authorization. The persons executing this Agreement on behalf of Owner and the City are authorized to do so and, upon execution by such parties, this Development Agreement will be a valid and binding obligation of such parties in accordance with its terms. The

Parties have each obtained any and all consents required to enter into this Agreement and to consummate or cause to be consummated the transactions contemplated hereby.

Run with the Land. This Agreement will run with the land and be binding on the Parties' successors and assigns, and will be recorded with the Klickitat County Auditor.

Term. The Term of this Agreement will expire on December 31, 2024, unless earlier extended or terminated by the Parties.

Public Hearing. The White Salmon City Council has approved execution of this Agreement by resolution after a public hearing.

Dispute Resolution. Should a disagreement arise between the Parties, the Parties agree to attempt to resolve the disagreement by first meeting and conferring. If such meeting proves unsuccessful to resolve the dispute, the disagreement may be resolved by a civil action.

Venue. This Agreement will be construed in accordance with the laws of the State of Washington, and venue is in the Klickitat County Superior Court.

Performance. Failure by any Party at any time to require performance by the other Parties of any of the provisions hereof will not affect the Parties' rights hereunder to enforce the same, nor will any waiver by a Party of the breach hereof be held to be a waiver of any succeeding breach or a waiver of this clause.

Severability. If any portion of this Agreement will be invalid or unenforceable to any extent, the validity of the remaining provisions will not be affected thereby. If a material provision of this Agreement is held invalid or unenforceable such that a Party does not receive the benefit of its bargain, then the other Parties will renegotiate in good faith terms and provisions that will effectuate the spirit and intent of the Parties' agreement herein.

Inconsistencies. If any provisions of the White Salmon Municipal Code and land use regulations are deemed inconsistent with this Agreement, the court shall first attempt to harmonize the provisions and if unable to do so, the provisions of this Agreement will prevail, excepting the City's reserved authority as explicitly defined herein.

Amendments. This Agreement may only be amended by mutual written agreement of the Parties, and all amendments will be recorded in the Klickitat County deed records.

Survival. Any covenant or condition set forth in this Agreement, the full performance of which is not specifically required prior to the expiration or earlier termination but which by its terms is to survive the termination of this Agreement, will survive the expiration or earlier termination of this Agreement and will remain fully enforceable thereafter.

Non-waiver. Waiver by any Party of strict performance of any provision of this Agreement will not be deemed a waiver of or prejudice a Party's right to require strict performance of the same or any other provision in the future. A claimed waiver must be in writing and signed by the Party granting a waiver. A waiver of one provision of this Agreement will be a waiver of only that provision. A waiver of a provision in one instance will be a waiver only for that instance, unless the waiver explicitly waives that provision for all instances.

Headings, Table of Contents. The section headings are for convenience in reference and are not intended to define or limit the scope of any provision of this Agreement.

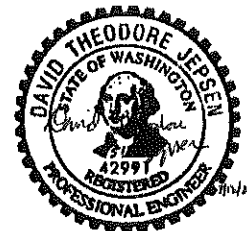
Interpretation of Agreement; Status of Parties. This Agreement is the result of arm's-length negotiations between the Parties and will not be construed against any Party by reason of its preparation of this Agreement. Nothing contained in this Agreement will be construed as creating the relationship of principal and agent, partners, joint venturers, or any other similar relationship between the Parties.

Future Assurances. Each of the Parties will promptly execute and deliver such additional documents and will do such acts that are reasonably necessary, in connection with the performance of their respective obligations under this Agreement according to the Schedule so as to carry out the intent of this Agreement.

Signatures appear on the following pages.

EXHIBIT A

TECHNICAL MEMORANDUM No. 5



To: Jan Brending, City Clerk/Treasurer,
City of White Salmon, Washington

From: David Jepsen, P.E., Anderson Perry & Associates, Inc.

Re: Reservoir Capacity Issues in the Strawberry Mountain and North Main /Simmons
Road Pressure Zones

Date: July 15, 2022

Job/File No.: 250-12-02, w/attach

Based on preliminary calculations on reservoir capacity, the reservoir capacity at the Strawberry Mountain Reservoirs is insufficient to handle current and future water demand in the Strawberry Mountain and North Main/Simmons Road pressure zones. In this technical memorandum, the basis for the current and future reservoir capacity needed at the Strawberry Mountain Reservoirs are reviewed along with possible solutions to address the reservoir capacity needs of the supplied pressure zones.

Background

Due to the location of its sources and topographic elevation changes in its service area, the City of White Salmon has several different pressure zones for supplying water to its customers. The City's pressure zones for the Central Region (where the bulk of the City's customers reside) are shown in the attached draft Figure 3-4. The Strawberry Mountain, Strawberry Reservoir, and North Main /Simmons Road pressure zones are served by the Strawberry Mountain Reservoirs. Water is conveyed from the Los Altos Reservoir to the Strawberry Mountain Reservoirs through the Los Altos Pump Station, which is located on the Los Altos Reservoir site. For the purposes of this technical memorandum, the Strawberry Mountain and Strawberry Reservoir pressure zones will be referred to as the Strawberry Mountain pressure zone.

The Strawberry Mountain Reservoirs supply of the Strawberry Mountain and North Main/Simmons Road pressure zones is a relatively recent development. Historically, these pressure zones were supplied water from different reservoirs. The Strawberry Mountain pressure zone was served by the Strawberry Mountain Reservoirs and the North Main/Simmons Road pressure zone was supplied water from the Spring Street Reservoir by a booster pump station referred to as the Main Street Pump Station.

The Main Street Pump Station consisted of two 320 gallon per minute (gpm) pumps located in a below ground vault adjacent to Spring Street. The station pumps could only be controlled from within the vault and required to be manually switched to allow alternate operation of the pumps. The pumps could not operate at the same time; one pump operated continually, requiring a pressure relief valve to expel high pressure water during low demand. As a belowground facility, the Main Street station was considered a high risk for failure due to flooding and a safety concern for entry as a confined space. In addition, this station was unable to provide the 2,000 gpm fire flow that was needed in the North Main /Simmons

Road pressure zone. For these reasons, decommissioning of this pump station was recommended in the City's 2014 Water System Plan (WSP).

To provide sufficient fire flow to the North Main/Simmons Road pressure zone and to eliminate the Main Street Pump Station, the construction of an additional reservoir tank at Strawberry Mountain and installation of at least two pressure reducing valve (PRV) stations were recommended to serve the North Main/Simmons Road area from the Strawberry Mountain Pressure Zone. One of PRV stations would be located on Cochran Lane (just north of Loop Road); the other station would be located off a new 10-inch diameter line on Spring Street that would connect to the Main Street Pump Station piping (off the Strawberry Mountain Reservoir). In the 2014 WSP, construction of another 99,200-gallon tank was recommended at the Strawberry Mountain Reservoir site to provide an additional 55,000 to 65,000 gallons of nested standby and fire flow storage projected to be needed with the addition of the North Main/Simmons Road pressure zone. Since the 2014 WSP, the implemented improvements included decommissioning and removal of the Main Street Pump Station and installation of the Cochran PRV station (installed adjacent to Loop Road). The additional reservoir storage tank and installation of a new 10-inch main and pressure reducing valve station were not constructed.

Based on 2020 consumption records and revised capacity calculations, the Strawberry Mountain Reservoirs lack sufficient storage and additional storage of approximately 140,000 gallons, 210,000 gallons, and 290,000 gallons are needed for 2021, 2031, and 2041, respectively (assuming nesting of standby and fire flow storage). Since 2014, water demand has increased more than anticipated, which has resulted in the increase in reservoir storage amount over than forecasted. With these reservoir capacity deficits at the Strawberry Mountain Reservoirs, the City would need to implement a solution or institute a moratorium on new water services in the Strawberry Mountain and North Main/Simmons Road pressure zones.

Options

Two basic options for resolving the current and future reservoir deficit at the Strawberry Mountain Reservoirs are as follows: 1) construct new reservoir storage tank at Strawberry Mountain or 2) construct a new pump station off North Main Avenue to serve the North Main/Simmons Road pressure zone. A more detailed description of the components and work needed to implement each of these basic options is discussed below.

Option 1: New Reservoir Storage at Strawberry Mountain Site

This option would include the construction of a nominal 300,000-gallon (minimum) reservoir tank at the Strawberry Mountain Reservoir site. The proposed tank construction is glass-fused-to-steel because of the City's familiarity with this type of tank (same type of construction at Dock Grade and Childs Reservoirs) and the ability to increase capacity in the future (raise the tank walls) if the foundation is overdesigned at initial construction. Nominal dimensions of the new tank would be 45-foot diameter and 29 feet tall, with the possibility of raising the tank to a max water level height of 47 feet or taller (additional 210,000-gallon capacity with 47-foot sidewall). The new reservoir tank would work at the same water level as the existing reservoirs until additional height was added. This option would likely require the relocation of the existing booster pump station, depending on the needed realignment of the existing Strawberry Mountain Road (private). This existing road occupies a significant portion of the site and realignment is needed to provide more space on the site.

The new tank and existing reservoirs would be used to supply Strawberry Mountain and North Main /Simmons Road pressure zones. Once the tank is raised, the existing reservoirs would exclusively supply the booster pump station serving the Strawberry Reservoir area. Since the existing reservoirs would likely have too much storage for the Strawberry Reservoir area (not enough turnover in the tanks), one of the reservoirs could be taken out of service or decommissioned (most likely the West Reservoir) or both reservoirs could be operated at a reduced water level.

In addition to a new reservoir tank at Strawberry Mountain, the installation of a new booster pump station and transmission main are needed to replace the existing Los Altos Pump Station and convey higher flows to the Strawberry Mountain Reservoir site. These booster pump station and transmission main improvements are needed regardless of a new reservoir tank is constructed at the Strawberry Mountain site. This station is in an underground vault, has outdated controls, no drain, covered with rust along the bottom edge, no standby emergency generator or transfer switch, and limited flow capacity (approximately 175 gpm). The Washington State Department of Health (DOH) considers the location of the Los Altos Booster Station as a high risk for failure due to flooding and a safety concern for entry as a confined space.

A new aboveground booster pump station is recommended to convey water from the Los Altos Reservoir to the Strawberry Mountain Reservoirs. The proposed two pump system would have a 500 to 900 gpm range capacity and located in a fiberglass enclosure downhill from the reservoir, most likely in public right-of-way. Emergency backup power generator is also recommended; diesel or natural gas are potential generator fuel sources. The emergency generator would be installed on a concrete pad and have a residential grade cover to minimize noise during operation.

To convey the new booster pump station flow to the Strawberry Mountain Reservoirs, a larger diameter transmission water main (10- or 12-inch diameter) would need to be installed from the new station location to the existing 10-inch diameter water main located at the intersection of NW Spring Street and NW Country View Road (length approximately 1,600 linear feet).

While this option provides needed reservoir storage needed in the City (specifically to serve the Strawberry Mountain Reservoirs and North Main/Simmons Road pressure zones), additional reservoir storage is needed to supplement the Los Altos/Spring Street Reservoirs' capacity. Due to the age of the existing Spring Street Reservoir and future capacity needs off the Los Altos and Spring Street pressure zones, a nominal 1.0 million gallon reservoir is proposed to replace the existing Spring Street Reservoir. With this option, the proposed new reservoir tank to replace the existing Spring Street Reservoir will be needed between 2031 and 2041.

In addition, the replacement of the Spring Street water main on Spring Street from where the water main enters NW Spring Street from the reservoir tank to NE Fields Avenue is needed with either option (see below for further discussion of this main).

Option 2: New North Main Avenue Pump Station

This option would include the construction of a new booster pump station to supply the domestic need and a portion of the fire flow need for the North Main/Simmons Road pressure zone. It is proposed that this new pump station would be supplied water from the Spring Street Reservoir instead of the Strawberry Mountain Reservoir. The existing Cochran Lane PRV would remain in service but reconfigured to operate only during high flow demand events (i.e., fire flow). The new result of these changes is that the current reservoir capacity deficit at Strawberry Mountain Reservoirs is eliminated,

and the future reservoir capacity deficits are reduced to approximately 9,000 gallons and 50,000 gallons in 2031 and 2041. If the Los Altos Pump Station is replaced with larger capacity pumps that are greater than the peak hour demand for the Strawberry Mountain pressure zone, then the future reservoir deficits are eliminated in 2031 and reduced to 20,000 gallons in 2041, respectively.

The proposed station would have two or three pumps to handle domestic usage, and minimum one pump to handle high demand. At a minimum, two domestic pumps and one high demand pump would be needed immediately. In the future, an additional domestic supply pump would be needed at later date to handle future demand. Due to the potential size and number of pumps, the pump skid would need to be housed in a large fiberglass structure or building (approximately 12 by 16 feet). The location of this booster pump station needs to be adjacent to North Main Avenue, ideally between NW Spring Street and the intersection of NW Loop Road and North Main Avenue. A specific location for this station has not been identified.

Standby on-site backup power generator would be essential for this pump station to operate during a power outage. One possible fuel source for this station is natural gas as an existing main is in North Main Avenue. The emergency generator would be installed on a concrete pad and have a residential grade cover to minimize noise during operation.

Connections with the existing 8-inch diameter piping on Main Avenue would need to be made to the new booster pump station and to the water main on Spring Street. City staff has indicated that the existing 10-inch diameter steel water main on Spring Street between where existing main enters Spring Street from the reservoir to NE Fields Avenue needs to be replaced as part of this option (approximately 1,600 linear feet). The existing steel water main has been a continuing source of leak repair work for City staff. The new water main in this street is recommended to be 12-inch diameter to improve hydraulics not only to the North Main/Simmons Road pressure zone but also the Spring Street pressure zone. Along with the new 12-inch diameter main, extension of approximately 300 linear feet of 8-inch diameter pipe, connected to the Strawberry Mountain pressure zone, is recommended to serve some of the existing services on Spring Street that have lower pressures due to their proximity to the Spring Street Reservoir.

One ramification of shifting the North Main/Simmons Road pressure zone demand from Strawberry Mountain Reservoir to Spring Street Reservoir is the accelerated need to replace the existing Spring Street Reservoir tank from between 2031 and 2041 to sometime before 2031. As mentioned under Option 1 above, the replacement of the Los Altos Pump Station and installation of new transmission main is needed with either option.

Comparison of Options

A comparison of Options No. 1 and No. 2 in terms of estimated project cost (both short term and long term), project timing, advantages and disadvantages, and uncertainties is summarized in Table 1. Short-term costs refer to the immediate construction cost for implementing the option. Long-term costs refer to the cost for other improvements that would need to be eventually implemented (at current dollars) in the next 15 years. Estimated project costs include construction, contingency, sales tax, engineering, environmental and cultural review, and legal, administration, and financing costs. The project contingency was set at 25 percent as an attempt to address current inflation rate and supply chain issues. The project costs for each option (short-term costs) do not include the cost for property acquisition.

**TABLE 1
COMPARISON OF OPTIONS NO. 1 AND NO. 2**

No. 1 – New Reservoir Tank at Strawberry Mountain	No. 2 – New North Main Ave. Pump Station
<p>Estimated Project Cost (Short Term): \$3.6 million</p> <p>New Reservoir Tank: \$2.2 million New Booster Pump Station: \$580,000 New Transmission Main: \$800,000</p>	<p>Estimated Project Cost (Short Term): \$1.8 million</p> <p>New Pump Station: \$900,000 New Transmission Main: \$875,000</p>
<p>Estimated Project Cost (Long Term): \$5.6 million</p> <p>New Spring Street Water Main: \$875,000 Spring Street Reservoir Replacement (2031-2041): \$4.0 million Transmission Main with New Reservoir: \$750,000</p>	<p>Estimated Project Cost (Long Term): \$6.2 million</p> <p>Additional Pump at Station: \$35,000 Los Altos Pump Station: \$580,000 New Los Altos Transmission Main: \$800,000 Spring Street Reservoir Replacement (before 2031): \$4.0 million Transmission Main with New Reservoir: \$750,000</p>
<p>Total Estimated Project Cost (Short and Long Term): \$9.2 million</p>	<p>Total Estimated Project Cost (Short and Long Term): \$8.0 million</p>
<p>Project Timing: 19 months</p> <p>Design: 7 months Bidding and Contract Execution: 2 months Construction (including submittal review and approval): 10 months Electrical Transformer Ordered by KPUD: 6 months</p>	<p>Project Timing: 14 months</p> <p>Design: 6 months Bidding and Contract Execution: 2 months Construction (including submittal review and approval): 6 months Electrical Transformer Ordered by KPUD: 6 months</p>
<p>Advantages:</p> <ul style="list-style-type: none"> • Provides additional reservoir storage for both pressure zones • Flexibility for future storage capacity • Operation of reservoir tank instead of booster pump station (easier and less operational costs) • More time to construct replacement tank for Spring Street Reservoir <p>Disadvantages:</p> <ul style="list-style-type: none"> • Higher short-term capital costs • Longer time needed to address reservoir capacity issues 	<p>Advantages:</p> <ul style="list-style-type: none"> • Eliminates reservoir deficit at Strawberry Mountain thereby eliminating need for new reservoir tank at site • Least short-term capital costs • Shortest anticipated lead time to implement • Provides fire flow from two directions in North Main/Simmons Road pressure zone <p>Disadvantages:</p> <ul style="list-style-type: none"> • Operation of a booster pump station instead of a reservoir (harder and more operational costs) • Less time to construct replacement tank for Spring Street Reservoir
<p>Uncertainties:</p> <ul style="list-style-type: none"> • Realignment of the Strawberry Mountain Road • Location of and electrical service for the new booster pump station • Type of tank construction and location of replacement tank for Spring Street Reservoir 	<p>Uncertainties:</p> <ul style="list-style-type: none"> • Location of and electrical service for the new booster pump station • Connection point for new booster pump station • Type of construction and location of replacement tank for Spring Street Reservoir • Energy building code requirements for new station

Conclusions

Options No. 1 and No. 2 both a viable options for the City to implement to mitigate the current and future reservoir deficit at the Strawberry Mountain Reservoirs. Option No. 2, New North Main Avenue Pump Station appears to be a more cost-effective solution and can be implemented in a more timing fashion. However, this option accelerates the need for replacing the Spring Street Reservoir tank within the next 10 years.

Option No. 1, New Reservoir Tank at Strawberry Mountain provides needed reservoir capacity in the City but appears to be more costly and take longer to construct. However long term, the new reservoir tank should take less maintenance and have lower operating costs than the new booster pump station in Option No. 2. With this option, the replacement of Spring Street Reservoir is not needed until between 2031 and 2041.

With both options, there are a number of uncertainties, including the location of and electrical service for the North Main Avenue Pump Station and Los Altos Pump Station, realignment of Strawberry Mountain Road, connection point for piping associated with and energy code requirements for the North Main Avenue Pump Station, and type of construction and location for the reservoir tank to replace the Spring Street Reservoir.

Ultimately, the City will need to weigh project costs, timing, advantages and disadvantages, and uncertainties for each option to determine which option best fits its current and future needs.

TECHNICAL MEMORANDUM No. 1

To: Jan Brending, City Clerk/Treasurer,
City of White Salmon, Washington

From: David Jepsen, P.E., Anderson Perry & Associates, Inc. (AP)
Jay Peninger, AP

Re: North Main/Simmons Road Pressure Zones Booster Pump Station Location

Date: August 30, 2022

Job/File No.: 250-22-02

Based on preliminary calculations, reservoir capacity at the Strawberry Mountain Reservoirs is insufficient to manage current and future water demand in the Strawberry Mountain and North Main/Simmons Road pressure zones. To address this reservoir storage deficiency, the construction of a new booster pump station off North Main Street is proposed. This pump station would connect to the water main off Spring Street, thereby providing water for the North Main/Simmons Road pressure zone from a different reservoir with capacity i.e., Spring Street Reservoir. In this technical memorandum, the location for this new booster pump station will be addressed.

Background

Due to the location of its sources and topographic elevation changes in its service area, the City of White Salmon has several different pressure zones for supplying water to its customers. The Strawberry Mountain, Strawberry Reservoir, and North Main/Simmons Road pressure zones are served by the Strawberry Mountain Reservoirs. For the purposes of this technical memorandum, the North Main/Simmons Road pressure zones will be referred to as the North Main pressure zone.

The North Main pressure zone was originally supplied water from the Spring Street Reservoir, by a booster pump station referred to as the Main Street Pump Station. The Main Street Pump Station consisted of two 320-gpm pumps located in a below ground vault adjacent to Spring Street. The City decommissioned this station because of the substantial risk for failure due to flooding, a safety concern for entry as a confined space, and inability to provide the 2,000-gpm fire flow that was needed in the North Main pressure zone.

The proposed booster pump station will likely be a three-pump skid system: two pumps for domestic flow and one pump for high demand i.e., fire flow. The size of the anticipated booster pump skid will require that the skid be installed in a building structure, with nominal dimensions of 12 feet by 16 feet, include a backup generator, access for maintenance, and security fencing. Depending on setback from the structure to the fence line, it is anticipated that the footprint of the site would not exceed forty-five feet by forty-five feet (45' X 45').

Options

AP staff met with City staff to review possible locations for the proposed booster pump station. Several possible booster pump sites were identified and then narrowed down to three for further evaluation. The selected locations were chosen due to their proximity to North Main Avenue, availability of land, and anticipated ease for utility services i.e., electric, natural gas, and water.

The sites selected for further evaluation are as follows: 1) Main Street White Salmon, LLC Site: the southeast corner of Lot 2 of Short Plat No. SPL 2009-10 (Auditor File No. 1093016), this site is in the City; 2) FM & BL, LLC Site: the northwest corner of Lot 3 of Short Plat No. SPL 2008-48 (Auditor File No. 10830523), this site is in the County; or 3) Alley Site: existing alley between North Main Avenue and NE Estes Avenue, this site is in the County. A more detailed description of the components and work needed to implement each of these options is discussed below. An overview of the location of these sites is presented in Figure 1.

Option 1: Main Street White Salmon, LLC Site - Lot 2 of Short Plat No. SPL 2009-10

This option would require securing an easement or right-of-way from the property owner of parcel No. 03111909100200, which is currently in the early stages of the development review process for a subdivision. This dedication could be a condition of the plat or part of a developer's agreement. An existing utility easement identified on the recorded short plat under auditor file No. 1093016, could be utilized to provide power to the site. Natural gas runs parallel to the site in North Main and would be able to provide service for the backup generator. Existing 8-inch diameter water main also parallels the site on the east lane of North Main. Construction of the building could be accomplished at the sidewalk grade and be set partially below the natural contours of the existing grade, thereby reducing visual impacts to the surrounding community.

Option 2: FM & BL, LLC Site - Lot 3 of Short Plat No. SPL 2008-48

This option would require purchasing an easement or right-of way from the property owner of parcel No. 30111908480300. An access agreement from the owners of parcels No. 30111908480300 and 03111908480200 to accommodate the access restriction to North Main Avenue, established with County Resolution 01009, as identified on the recoded short plat under auditor file No. 1083052.

Power would come from the west side of North Main Avenue and require use of an existing utility easement identified on the recorded short plat under auditor file No. 1093016, with an extension north parallel to the roadway for an approximate distance of one hundred and fifty feet (150'), or a new easement would need to be obtained and required directional drilling under North Main Avenue. Natural gas runs parallel to the site in North Main and would be able to provide service for the backup generator. An 8-inch diameter main also parallels the site in the east lane of North Main. Connecting the natural gas and water would require open cut construction of the east lane in North Main. Construction on the site would require minor tree removal and county permitting for the structure and roadway access.

Option 3: Alley Site - Alley Between North Main Avenue and NE Estes Avenue

The existing alley is unimproved and located in the Urban Growth Area (UGA) and in Klickitat County jurisdiction. The alley is sixteen feet in width, has improvements encroaching from adjacent residential properties to the south, and is only accessible from NE Estes Avenue. The Mountain View Grange No. 98

is located to the north. Access is restrictive to North Main Avenue due to a significant grade change. A stormwater culvert discharges from North Main Avenue onto the west end of the alley.

In talking with one of the neighbors adjacent to the alley, both neighbors periodically use the alley. While not opposed to the City constructing a booster pump station in the alley way, the neighbor indicated that he would expect to be able to use the alley way for access. To maintain alley access to the adjoining property owners, the proposed booster pump station would need to be constructed on the westerly portion of the alley way, which would limit accessibility to the station. Access from the north appears to be limited, as the Grange property drain field appears to be just north of the alley way. The stormwater discharge fosters some issues on the very west end of the alley.

Electrical power would originate from the vicinity of North Main and Spring Street intersection. The booster station inlet water could originate from either NE Estes Avenue (with a line extension) or North Main Avenue. The booster station outlet pipe would need to connect to the water main on North Main.

Because of the limited width and access, and other limitations, this site was deemed unfeasible and dropped from further consideration.

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Comparison of Options

A comparison of Options No. 1 and 2 in terms of timing, advantages, disadvantages, and uncertainties is provided in Table 1. Possible layout of the booster pump station on the sites is shown in Figure 2.

Table 1
Comparison of Options No. 1 and 2

No. 1 – Main Street White Salmon, LLC Property Lot 2 of Short Plat No. SPL 2009-10	No. 2 – FM & BL, LLC Property Lot 3 of Short Plat No. SPL 2008-48
Land Acquisition: \$0	Land Acquisition: \$100,000 ??
<p>Project Timing: 14 months</p> Land Acquisition: 4 months (could be concurrent with design) Design: 6 months Bidding and Contract Execution: 2 months Construction (including submittal review and approval): 6 months Electrical Transformer Ordered by KPUD: 6 months	<p>Project Timing: 14 to 26 months</p> Land Acquisition: 6 months (could be 18 months if condemnation is required for access to property) Design: 6 months Bidding and Contract Execution: 2 months Construction (including submittal review and approval): 6 months Electrical Transformer Ordered by KPUD: 6 months
<p>Utilities</p> Electric – from west side down easement Natural Gas – on east side of North Main, requires open cut construction across lanes Water – on east side of North Main, requires one cut construction across lanes	<p>Utilities</p> Electric – requires boring underneath North Main Natural Gas – on east side of North Main, open cut construction on one lane Water – on east side of North Main, open cut construction on one lane
<p>Advantages:</p> <ul style="list-style-type: none"> • In City • Eliminate cost to City if land acquisition is part of plat approval • No appraisal required • Reduced cost for power connection • Opportunity to reduce visual impact to neighboring community <p>Disadvantages:</p> <ul style="list-style-type: none"> • Connection to water main and gas is on the opposite side of the roadway • Sidewalk removal and replacement 	<p>Advantages:</p> <ul style="list-style-type: none"> • Connection to water main and gas service is on the same side of the road <p>Disadvantages:</p> <ul style="list-style-type: none"> • Requires appraisal for land and access acquisition, which may involve condemnation • Multiple owners involved in the project • Additional cost for power service • May require addition utility easements • In County
<p>Uncertainties:</p> <ul style="list-style-type: none"> • Landowners’ willingness to cooperate in dedication of land as a condition of the development • County requirements for roadway restoration • Type of construction material for building and security fencing • Public concerns 	<p>Uncertainties:</p> <ul style="list-style-type: none"> • Landowners’ willingness to cooperate in the acquisition of easements, may require condemnation • County requirements for roadway restoration and building permitting (may require additional setbacks) • Type of construction materials for building and security fencing • Public concerns

Conclusions

Options No. 1 and 2 are both viable options for the City to consider for placement of the North Main Pump Station. Both sites will require work to connect utilities to the site, with Option No. 1 having less anticipated utility work than Option No. 2.

Option No. 1, Main Street White Salmon, LLC Property appears to be a more cost-effective solution and could be implemented in a more timing fashion. However, this option relies on the City acquiring an easement or right-of-way from the property owner.

Option No. 2, FM & BL, LLC Property would require the City to acquire an easement for or purchase of the property, and an easement off the access road from the adjoining property owner, as no direct access of North Main is allowed on this property.

Based on this preliminary evaluation of possible booster pump station sites, Option No.1 is the preferred option.

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