

**Willamette Water Supply System Commission
Board Meeting Minutes
Thursday, May 7, 2020**

Commissioners present:

Tualatin Valley Water District (TVWD): Jim Duggan
Hillsboro: David Judah
Beaverton: Denny Doyle

Committee Members present:

TVWD: Tom Hickmann, Management Committee
Justin Carlton, Finance Committee
Carrie Pak, Operations Committee
Hillsboro: Niki Iverson, Management Committee
Lee Lindsey, Finance Committee
Beaverton: Chad Lynn, Management Committee
David Winship, Operations Committee

Managing Agency Administrative Staff present:

Dave Kraska, Willamette Water Supply Program (WWSP) Director; WWSS Commission General Manager
Bill Van Derveer, WWSP Program Manager
Lisa Houghton, WWSP Finance Manager
Clark Balfour, TVWD General Counsel
Faye Branton, WWSP Administrative Assistant; WWSS Commission Recorder

Other Attendees:

Mike Britch, WWSP Engineering and Construction Manager
Lisa Houghton, WWSP Finance Manager
Christina Walter, WWSP Permitting and Outreach Manager
Joel Cary, TVWD Water Resources Division Manager

No members of the public were present.

CALL TO ORDER

Chairman Duggan called the regular Willamette Water Supply System (WWSS) Commission meeting to order at 12:00 p.m.

ROLL CALL

Ms. Branton administered the roll call and noted attendance.

1. GENERAL MANAGER'S REPORT

Mr. Kraska presented a safety moment on hand sanitizer safety. ([See presentation.](#))

The General Manager's report included an overview of etiquette for remote meetings; the Approvals and Procurement Forecast for April through June 2020; updates on projects planning, permitting, and communications; and status updates on the design and construction of projects.

2. PUBLIC COMMENT

There were no public comments.

3. CONSENT AGENDA

- A.** Approve the April 2, 2020 meeting minutes.

Motion was made by Judah seconded by Doyle, to approve the consent agenda as presented. The motion passed unanimously with Doyle, Duggan, and Judah voting in favor.

4. BUSINESS AGENDA

- A.** Consider approving an amendment to Kiewit Infrastructure West, Co. (Kiewit) CM/GC Contract No. 2018-013 for Guaranteed Maximum Price (GMP) in the amount of \$49,026,130.00 for phase 1 of construction of the Raw Water Facilities (RWF_1.0) Project of the Willamette Water Supply Program (WWSP). *Staff Report – Mike Britch*

Mr. Britch presented the staff report requesting the Board's approval of an amendment to the Kiewit Construction Management/General Contractor (CM/GC) contract for a GMP for phase 1 of construction of the WWSP RWF_1.0 project. (*See presentation.*)

In response to Commissioner's question, staff replied that this is one of the WWSP's most challenging projects from a technical standpoint. The last official baseline budget (Baseline 4.1) reflects our understanding of the RWF_1.0 project in the fourth quarter of 2018. There have been a number of scope modifications to the project since that time. Many factors, including project complexity, city requirements, market capacity at the time, and level of difficulty in construction of this pipeline contributed to the cost. This is the first construction project on the Program that has come in over staff estimates. Market conditions will be closely monitored and factored into future construction procurements.

Motion was made by Doyle seconded by Judah to approve the Kiewit CM/GC contract amendment for GMP in the amount of \$49,026,130.00 for phase 1 of construction of the Raw Water Facilities (RWF_1.0) Project of the Willamette Water Supply Program (WWSP). The motion passed unanimously with Doyle, Duggan, and Judah voting in favor.

- B.** Consider approving an amendment in the amount of \$885,133.00 (with no contract term extension) to the CDM Smith contract No. 2018-014 to provide additional design services for the water treatment plant (WTP_1.0) project of the Willamette Water Supply Program. *Staff Report – Mike Britch*

Mr. Britch presented the staff report requesting the Board's approval of an amendment in the amount of \$885,133.00 (with no contract term extension) to the CDM Smith contract No. 2018-014 to provide additional design services for the WWSSP water treatment plant (WTP_1.0) project. (*See presentation.*)

Motion was made by Judah seconded by Doyle, to approve an amendment in the amount of \$885,133.00 (with no contract term extension) to the CDM Smith contract No. 2018-014 to provide additional design services for the water treatment plant (WTP_1.0) project of the Willamette Water Supply Program. The motion passed unanimously with Doyle, Duggan, and Judah voting in favor.

Staff reiterated that they are making every possible effort to keep project costs within or below budget and expressed appreciation of Commissioners' understanding and support.

- C. Acting as the Local Contract Review Board (LCRB), consider approving a motion to read by title only a draft resolution declaring an exemption from competitive bidding for the RES_1.0 project (combined with the PLM_5.3 project) and approving a Construction Manager/General Contractor (CM/GC) delivery method for construction, receive oral testimony or written comments and direct that the resolution be brought back for a second reading and adoption at the July 2, 2020 Board meeting.

Mr. Britch presented the staff report that explained the process used by the WWSP to select the Construction Manager/General Contractor (CM/GC) delivery method for construction of the combined RES_1.0 / PLM_5.3 project. Included in the presentation was an explanation of how this selection requires action by the LCRB to allow this exemption from traditional competitive bidding, and the required public process to maintain compliance with State statutes. *(See presentation.)*

Acting in capacity as the LCRB, motion was made by Doyle seconded by Judah to approve reading by title only a draft resolution declaring an exemption from competitive bidding for the RES_1.0 project (combined with the PLM_5.3 project) and approving a Construction Manager/General Contractor (CM/GC) delivery method for construction, receive oral testimony or written comments, and directed that the resolution be brought back for a second reading and adoption at the July 2, 2020 Board meeting. The motion passed unanimously with Doyle, Duggan, and Judah voting in favor.

- D. Consider adopting Resolution WWSS-07-20 approving a License Agreement between the Willamette Water Supply System Commission ("Licensor") and the Washington County Sheriff's Office ("Licensee") for Law Enforcement Training at the RES_1.0 property prior to demolition of the existing structures, and authorizing the WWSS General Manager to enter into similar agreements with other local agencies for the use of the RES_1.0 property and its structures until those structures are removed from the property.
– *Staff Report – Christina Walter*

Ms. Walter presented the staff report requesting adoption of Resolution WWSS-07-20.

Motion was made by Judah seconded by Doyle to adopt Resolution WWSS-07-20 approving a License Agreement between the Willamette Water Supply System Commission ("Licensor") and the Washington County Sheriff's Office ("Licensee") for Law Enforcement Training at the RES_1.0 property prior to demolition of the existing structures, and authorizing the WWSS General Manager to enter into similar agreements with other local agencies for the use of the RES_1.0 property and its structures until those structures are removed from the property. The motion passed unanimously with Doyle, Duggan, and Judah voting in favor.

5. INFORMATION ITEMS

A. Planned June Business Agenda items – Staff Report – Joelle Bennett

Ms. Bennett presented an overview of the anticipated business agenda items for the June 4, 2020 WWSS Commission Board meeting. Staff anticipates recommending approval of (1) PLM_4.3 Resolution of Public Necessity; (2) WWSS IGA Exhibit 1 Amendment to Modify Allocation of Reservoir Capacity; (3) WWSS IGA Exhibit 1 Amendment to Add a City of Beaverton Turnout on Grabhorn Road; (4) Adding a City of Beaverton Hall Boulevard 16-inch pipeline to the COB_1.0 project; (5) PLW_1.3 Construction Contract Approval; (6) WWSP Program and Construction Management Services FY 2021 Annual Work Plan; and (7) WWSP 2020 Rebaseline Schedule and Budget.

In response to Commissioner’s question, staff will consult the WWSS IGA re: Board members abstaining from taking action on WWSS business agenda items and report findings to Commissioners prior to the regular June Board meeting.

- B.** The next Board meeting is scheduled on June 4, 2020, at the Hillsboro Civic Center, Room 113B/C, 150 E. Main Street, Hillsboro, OR or via dial-in conference, to be determined based on the COVID-19 situation.

6. COMMUNICATIONS AND NON-AGENDA ITEMS

- A.** None scheduled.

ADJOURNMENT

There being no further business, Chairman Duggan adjourned the meeting at 1:35 p.m.

James Duggan, Chair

Denny Doyle, Vice Chair

Willamette Water Supply
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Safety Minute:

Hand Sanitizer Safety

1

Hand Sanitizer Safety

Hand sanitizers can help prevent the spread of germs and harmful bacteria, but there are potential dangers to keep in mind.



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Alcohol Poisoning

- At 60% ethyl alcohol, even a small dose can be dangerous
- If ingested, can lead to dizziness, slurred speech, headaches and, in extreme cases, brain damage or death

Safety Tips

- Always supervise children's use
 - Use a pea-sized amount
 - Rub hands together until dry
 - Keep hands out of mouths
- Avoid sweet smelling sanitizers
- Store out of children's reach
- Use soap and water whenever possible

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Potential Fire Hazard

- Alcohol-based hand sanitizers are classified as Class IC flammable liquid
- Liquid, gel, and vapors can be flammable
- If ignited, can burn very hot, very quickly

Safety Tips

- Only use dime sized amount
- Rub hands until dry
- Never use near a heat source or open flame
- Beware of static electricity
- Store away from all heat and ignition sources

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Hand Sanitizer Safety

- Use soap and water instead
- Supervise children using it
- Use sparingly and rub hands until dry
- Avoid ingestion
- Keep and store away from flame and heat

Willamette Water Supply System Commission

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Willamette Water Supply

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4A-1 RWF_1.0 Contract Amendment for Guaranteed Maximum Price for Phase 1 Construction

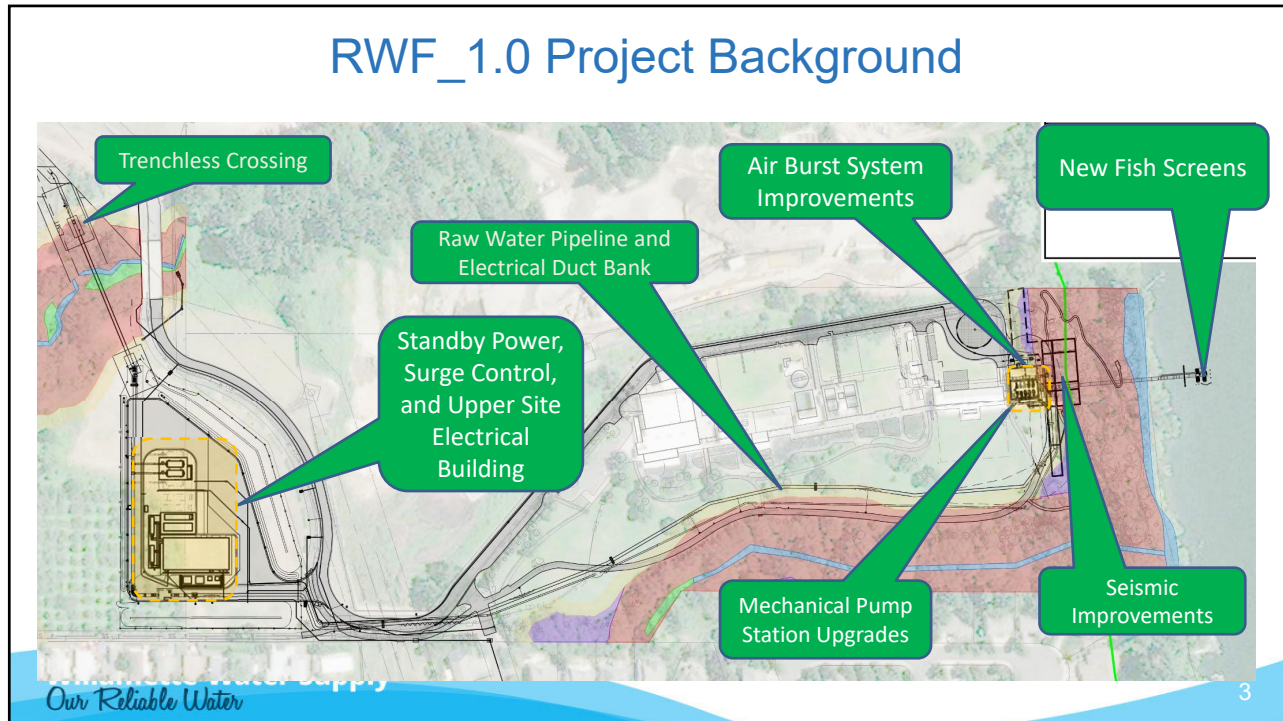
May 7, 2020

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Agenda

- Project and cost management background
- Bid process
- GMP review
- GMP comparison to Baseline budget
- Requested Board action

2



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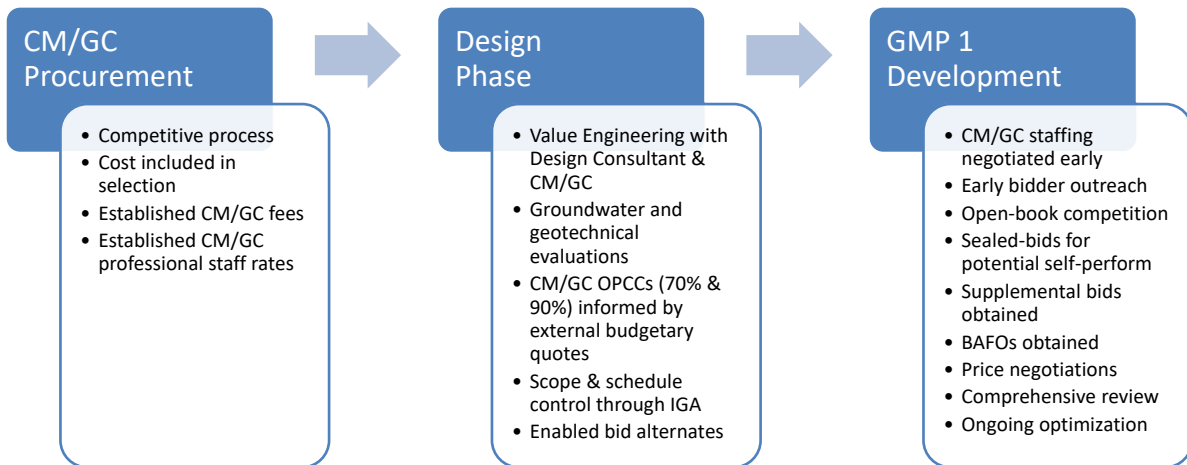
RWF_1.0 Background

- Kiewit contract for CM/GC services was executed in June 2018
 - Included design phase services
 - Planned to be amended to include separate GMPs for phase 1 and 2 of construction
- Phase 1 includes underground, high risk elements
- Phase 1 NTP planned for June 5, 2020
- Phase 2 GMP development planned to start in March 2022

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Actions Taken for Cost Management through GMP 1



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Bidding Process

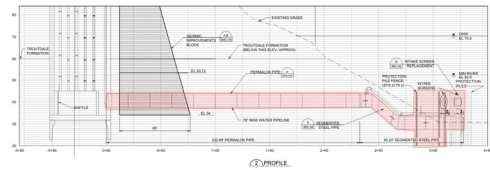
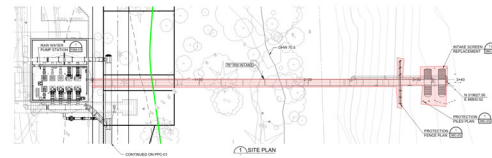
- Two outreach meetings were held
 - November 19
 - January 28, included site walk
- Questions jointly addressed
 - All technical questions routed to design team
 - Kiewit responded to scoping questions



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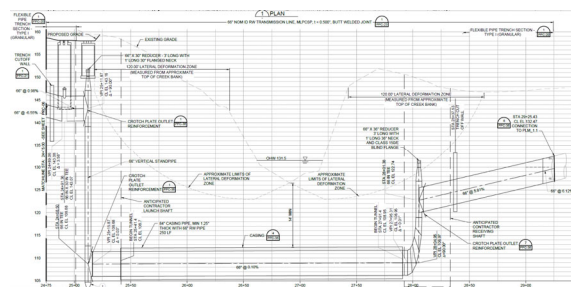
Bidding Process

- 4 best value (technical and cost) work packages
 - WWSP developed evaluation criteria
 - Prequalification step
- 18 minimum requirement and qualifications (low bid)
- 1 Kiewit self-performed work package with a negotiated price
- WWSP administered key procurement activities
- No bid protest
- “Open Book Approach” to bid review



Best Value Work Packages: Trenchless Crossing

- Pump test to quantify groundwater conditions
- Multiple technologies: Auger bore and pipe ramming
- 4 prequalified firms
- 2 responsive bidders
 - Fowler – Pipe ramming
 - Gonzales – Auger bore
- Tunneling Company and Northwest Boring did not submit bids



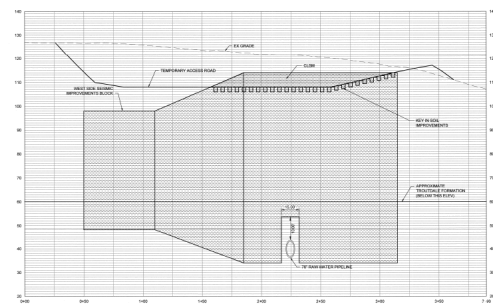
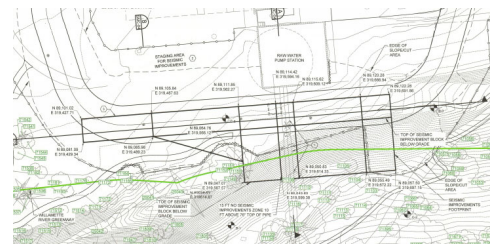
Bid Results for Trenchless Crossing

Bidders	Bid	After Bid Leveling / BAFO	Total Score
1. Fowler	\$8,350,000	\$8,181,000	961
2. Gonzalez	\$ 7,866,759	\$7,991,759	914
Baseline 4.1	\$4,610,000	N/A	N/A

- Budget based on Kiewit OPCC (and consistent with WWSP experience (e.g., PLM_5.1 trenchless crossing is ~\$3.8M))
- High risk work package with potential to encounter boulders (Kiewit carried \$1 million in contingency)

Best Value Work Packages: Seismic Improvements

- Deep Soil Mixing (DSM) added to supplement jet grout
- Footprint reduced throughout design
- 3 prequalified firms
- 2 responsive bidders
 - Condon Johnson
 - Keller
- 1 non-responsive bidder
 - Malcolm
 - Submitted an alternative approach
 - Did not meet RFP requirements



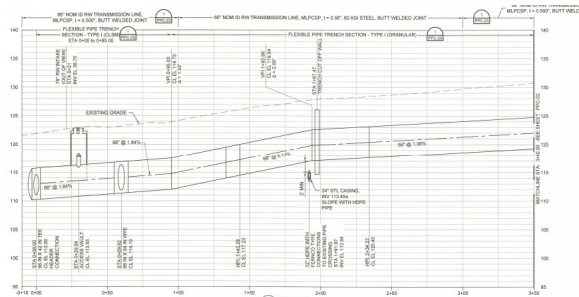
Bid Results for Seismic Improvements

Bidders	Bid	After Bid Leveling / BAFO	Total Score
1. Condon Johnson	\$4,997,310	\$5,492,700	1000
2. Keller	\$9,060,000	\$9,060,000	693
3. Malcolm – Non-responsive	N/A	N/A	N/A
Baseline 4.1	\$9,362,964	N/A	N/A

- Condon Johnson's original bid was for a lower bench elevation
- Increased risk with Keller's approach
- Keller's approach resulted in larger volumes of treatment and spoils
- VE in final design helped reduce costs

Best Value Work Packages: 66" Pipeline

- 11 prequalified firms, including Kiewit
- 4 responsive bidders
- Bids received by WWSP
- Bids evaluated by WWSP only



Bid Results for 66" Pipeline

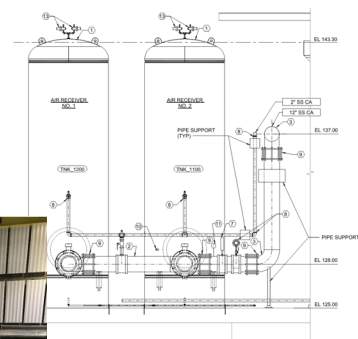
Bidders	Bid	Total Score
1. Kiewit	\$8,800,552	952
2. Emery and Sons	\$9,854,725	925
3. James W. Fowler	\$9,700,000	917
4. MEI	\$9,085,073	924
Baseline 4.1	\$5,106,569	N/A

- Unit cost of pipeline submitted with 70% OPCC (single supplier budgetary quote) was inconsistent with actual, competitively-procured WWSP pipeline bids; Baseline 4.1 used adjusted unit cost
- Unique project elements
 - Pipe wall thickness and joints
 - Pinch point construction
 - Tie-in to existing pipe header
 - Flow meter and vault

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Best Value Work Packages: Mechanical

- 2 prequalified firms, including Kiewit
- 2 responsive bidders
- Bids received by WWSP
- Bids evaluated by WWSP only



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Bid Results for Mechanical

Bidders	Bid	Total Score
1. Kiewit	\$1,301,397	641
2. Harder	\$1,483,576	549
Baseline 4.1	\$1,161,235	N/A

- Revised specification requirements for pump improvements
 - IGA required to advance land use
 - WWSP staff negotiated WRWTP pump movement scope

GMP 1 Refinements During Negotiation Phase

- Draft submitted on March 13
- Review by WWSP and SMEs
- Several updates and refinements over 4 weeks
 - CM/GC contingency
 - Continued outreach efforts
 - Received additional bids for upper site civil work
 - Received additional bid for underground infrastructure (ductbank and utilities)
 - Addition of summary sheets with outreach information, bids received, and bid leveling
- Confirmation of Owner's contingency

GMP 1 Review Summary

Summary of Bid Information (74% of GMP 1)			
1 bidder	\$1.04 M		3%
2 bidders	\$15.31 M		45%
3 (or more) bidders	\$13.12 M		38%
1 source fixed or value	\$4.72 M		14%

- Majority of items had 2 bidders, representing slightly higher bids
- Small quantity of interested bidders is a local and national trend
- Kiewit is continuing outreach and receiving bids

GMP vs. Baseline 4.1 Budget

Cost Item	Amount
Current Budget (Baseline 4.1) – Phase 1	\$41,779,232
GMP No.1 total (including contingency*)	\$51,095,816
Amount over Baseline 4.1 Budget – Phase 1	\$9,316,584
Current Budget (Baseline 4.1) – Phase 1 and 2	\$77,322,406
Projected GMP total – Phase 1 and 2** (including contingency*)	\$92,132,198
Amount over Baseline 4.1 Budget – Projected Total	\$14,809,792

* Contingency includes:

- CM/GC contingency – 2.9% (held within contract)
- Owner's contingency – 3.7% (held within contract)
- Additional contingency budget – 4.5% (held outside contract)

** Phase 2 GMP is estimated, not yet competitively, procured

Baseline 4.1

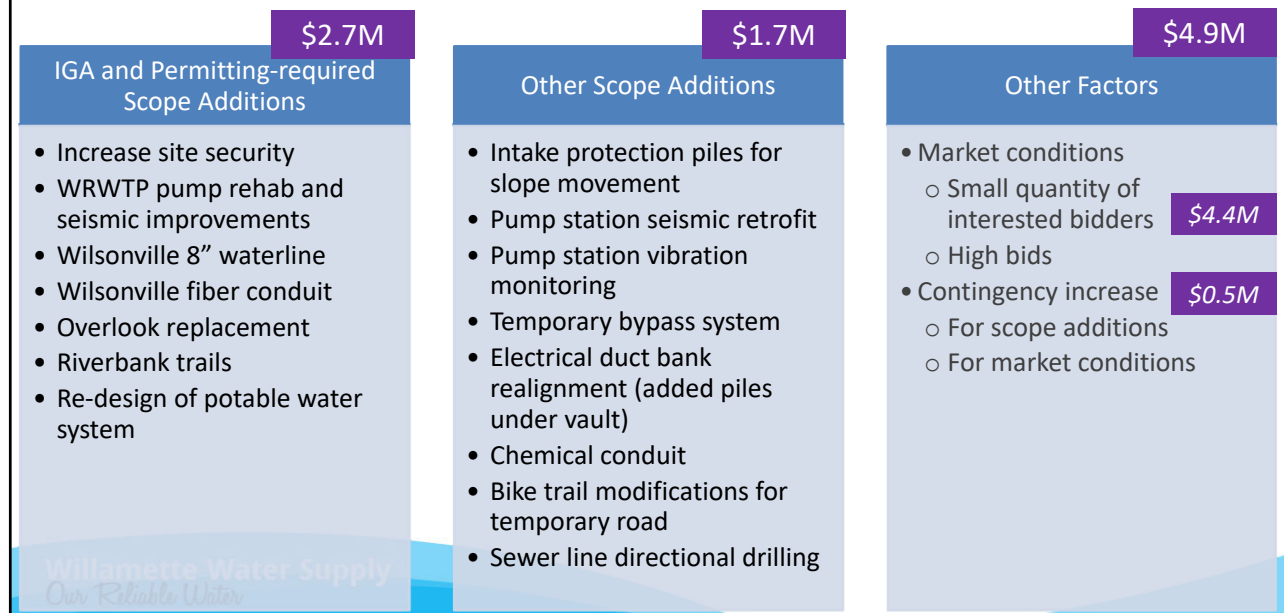
- Prepared Q4 2018
- Used Class 2 OPCC for RWF_1.0 (+20% to -15% accuracy)
- Post-70% design scope additions not included

Budgets to be adjusted in Baseline 5.2

GMP vs. Baseline 4.1 Budget – Phase 1

- Major work packages under budget (\$2.8M)
 - Intake water work package
 - Upper site civil improvements
 - Lower site valve vault

Primary Drivers for GMP 1 \$9.3M above Baseline 4.1



Potential Savings Opportunities – Phase 1

- VE discussions with Condon Johnson
- Opportunity for additional quotes for underground work in 2021
- Reuse of fill above clean fill criteria - \$150K
- Fencing options in Park
- One pipe supplier versus two
- *Open cut alternative to trenchless crossing vetted but determined not feasible*
- *Additional quotes since Management Committee review resulted in \$100K savings*

GMP vs. Baseline 4.1 Budget – Phase 2

- Major work packages with projected cost increase
 - Upper site electrical building (1 quote)
 - WWSS pumps, motors, drives (1 quote per item)
 - Communications (not reflective of current WWSP DCS_1.0 approach)
- Basis
 - Kiewit 70% OPCC
 - Non-competitive, budgetary quotes

Potential Savings Opportunities – Phase 2

- Conduct early and robust bidder outreach for upper site building
 - Increase WWSP participation in procurement process
- Procure equipment with WTP
- Communication system procurement



Schedule

Major Project Milestones	Latest Approved Baseline	Latest Monthly Forecast	Variance (days)
WWSS Board Approval	05/07/20	05/07/20	0
Construction NTP	06/05/20	06/05/20	0
Stage Gate 4: Substantial Completion	09/06/24	09/06/24	0
Stage Gate 5: Final Acceptance	12/03/24	12/03/24	0

Requested Board Action

Approve amendment in the amount of \$49,026,130 to the Kiewit Infrastructure West, Co. for the GMP of Phase 1 of construction of the RWF_1.0 Project

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QUESTIONS

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WTP_1.0 Design Contract Amendment (Contract No. 2018-014 Amendment 8)

May 7, 2020

1

Background

- Additional design scope related to increased scale and complexity of the project:
 - “Lean” scope of work from CDM at the time of negotiations
 - Increase in WTP_1.0 design capacity (60 mgd to 72 mgd)
 - Compact main process facility
- Effects on design were known but difficult to quantify beyond a parametric approach until the 60% design submittal (enhanced water quality and level of service goals)

2

Change Negotiation

	Date	Amount
Initial Meeting with CDM	09/04/2019	\$1,900,000
WWSP Response (after mid-60% OPPC received)	11/29/2019	N/A
Meeting with CDM (where backup from CDM was requested)	01/30/2020	N/A
CDM Justification for Additional Costs (including backup)	02/19/2020	\$1,510,212
WWSP Response (with our estimate of cost)	02/28/2020	\$821,337
Final Meeting with CDM	03/12/2020	\$885,133 ⁽¹⁾

⁽¹⁾ Represents a 3.9% increase to the \$22.7 million contracted fee negotiated in July 2018

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Scope Impact to Design Contract

- Drawing count used to demonstrate increased scale and complexity of the project (net increase of 179 drawings – see table below)
- Analysis of drawing quantity accounted for:
 - Different degrees of complexity across added and deleted drawings

Milestone	Number of Drawings
Negotiations (June 2018)	1,038 ⁽¹⁾
60% Design (January 2020)	1,217 ⁽²⁾
Net Change	179 (231 added, 52 deleted)

⁽¹⁾Based on the original negotiated drawing list and CDM Smith's fee for design efforts, the resulting cost per drawing was approximately \$10,700 per drawing.

⁽²⁾The calculated cost per drawing for the net additional 179 drawings is approximately \$4,900 per drawing (45% of the cost of a negotiated drawing).

4

Budget Impact to Design Contract

Initial Contract Value	\$22,698,796.09
Amendments 1 through 7	\$1,420,884.49
Current Contract Value	\$24,119,680.58
Proposed Amendment 8	\$885,133.00
Proposed Contract Value	\$25,004,813.58

- Initial contract value for design and ESDC (with no amendments) was 9.9% of the current baseline construction cost (\$232M)
- Proposed contract value for design and ESDC including Amendments 1 through 8 is 10.8% of the current baseline construction cost
- Design and ESDC fees for a typical WTP project range from 10 to 15%
- Still a good value due to the complexity of the design that includes HAZOP, ALM, seismic criteria, resiliency, etc. that would push fees more towards the 15% value

Schedule Impact

- Despite additional design scope related to increased scale and complexity of the project, design consultant has maintained the original project schedule, successfully completing the 60% design on time.
- These changes are expected to have no impact on future schedule.
- The 90% design submittal is anticipated in December 2020.

Continued Cost Reduction

- Continuous VE efforts
- Identified and implementing deductive alternates
- Implementing lessons learned from other CM/GC contracts (RWF)
- Planning for procurement optimization (e.g., drill and blast, concrete mix design, aggregates, etc.)
- Drive CM/GC's rigorous pursuit of cost control, transparency, and accuracy during estimating
 - Upcoming 60% OPCC in mid-May (and subsequent vetting)
 - Evaluate construction delivery options

Requested Board Action

Approve an amendment in the amount of \$885,133.00 (with no contract term extension) to the CDM Smith contract to provide additional design services for the water treatment plant (WTP_1.0) project of the Willamette Water Supply Program (WWSP).

QUESTIONS

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RES_1.0 (Combined with PLM_5.3) Project Delivery Approach

May 7, 2020

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Outline

- Recommendation preview
- Project overview
- Evaluation process and results
- Implementation steps
- Recommendation

2

Recommendation Preview

Consider approving a motion to read by title only a draft resolution declaring an exemption from competitive bidding for RES_1.0 Storage Reservoirs and approving the use of the Construction Manager/General Contractor (CM/GC) delivery method for construction, receive oral testimony or written comments and direct that the resolution be brought back for a second reading and adoption at the July 2, 2020 Board meeting.

3

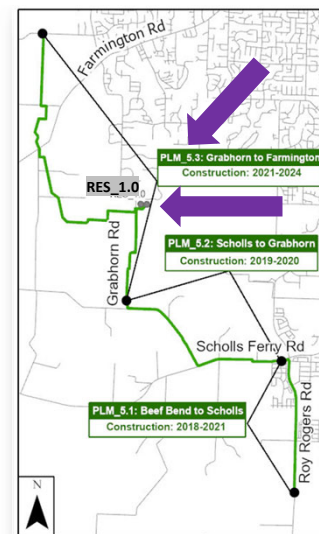
Project Overview & Challenges

Overview

- Two 15 MG circular pre-stressed concrete storage tanks (AWWA D110)
- Four vaults for 66" diameter finished water pipelines and appurtenances
- Yard piping
- Building
- Site grading/rock excavation
- Soil nail and rock bolt reinforcement
- Storm water retention, treatment, and conveyance
- Site access roadways
- Approximately 21,000 feet of 66-inch diameter welded steel pipeline (PLM_5.3)

Key Challenges

- Coordination among specialty contractors
- Site constraints
- Rock removal
- Schedule constraints
- Public outreach
- Traffic control



4

Delivery Approach Evaluation

WWSP Packaging and Delivery Alternatives Evaluation (Mar. 2019)

- Evaluated sequencing alternatives for constructing PLM_5.3 and RES_1.0 to avoid construction conflicts near the reservoir site
- Evaluated different construction delivery approaches
 - Progressive Design Build
 - Lump Sum Design Build
 - CM/GC
 - Design Bid Build
- Deferred delivery approach decision

Black & Veatch Construction Delivery Approach Evaluation (Feb. 2020)

- Reviewed updated RES_1.0 elements and schedule
- Understand delivery options
- Reviewed advantages and disadvantages of each delivery option
- **Identified recommendation for CM/GC delivery**

5

Expected Benefits of CM/GC Delivery Approach

- Provides ability to select the contractor based, in part, on qualifications
- Secures contractor participation during design, including value engineering
- Enables early contractor planning to mitigate potential schedule/cost risks
- Shifts some project delivery risk to the contractor, encouraging collaboration and focus on avoiding construction issues
- Enables early identification/mitigation of safety and public outreach concerns
- Allows for an early phase of construction for schedule-critical earthwork
- Accommodates different design consultants for RES_1.0 and PLM_5.3

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Exemption Summary

The use of CM/GC delivery for construction RES_1.0/PLM_5.3:

- Is unlikely to encourage favoritism or reduce competition
- Will likely result in cost savings and other substantial benefits

7

Implementation Steps



8

Recommendation

Consider approving a motion to read by title only a draft resolution declaring an exemption from competitive bidding for RES_1.0 Storage Reservoirs and approving the use of the Construction Manager/General Contractor (CM/GC) delivery method for construction, receive oral testimony or written comments and direct that the resolution be brought back for a second reading and adoption at the July 2, 2020 Board meeting.