



City Council Staff Report

Date:

November 15, 2023

Applicant:

Mapleton City Public Works

Location:

Mapleton Canyon

Prepared By:

Rob Hunter, City Engineer/
Public Works Director

Public Hearing:

No

Attachments:

Contract Modifications
Additional Design Labor Detail

REQUEST

Approve the Contract Modifications for the Additional Design and Construction Engineering Management for Horrocks on the Mapleton Canyon Springs Redevelopment and Chlorine Building

BACKGROUND & DESCRIPTION

The contract for Horrocks Engineers to design the Mapleton Canyon Springs Redevelopment and Chlorine Building included Mapleton Public Works issuing a series of task orders for each step of the evaluation and design. The previous task orders did not include substantial final design work and coordination required for phasing and negotiating restrictions with the US Forest Service. In addition, spring redevelopment is a technical process that requires experienced construction management to ensure the redevelopment results in renewing spring flows and water quality. Horrocks was selected as the consultant on this project because of their background in design and construction management of spring redevelopment projects. Their construction management will also include noxious weed surveys and reports required by the US Forest Service.

EVALUATION

With the proposed additional design fees of \$53,200, the total design contract amount will be \$168,200. The proposed Construction Engineering Management fees are \$328,460. Therefore, the total proposed design + construction management fee is \$496,660, or 10.2% of the construction costs. Staff's evaluation is that this is a reasonable fee for design + construction management, especially for a technically specialized project.

RECOMMENDATION

Approve the contract modification for Horrocks, not to exceed \$381,660 (\$53,200 in Additional Design fees and \$328,460 in Construction Engineering Management fees).

November 6, 2023

Mapleton City
Rob Hunter, P.E.

RE: Mapleton Canyon Springs Redevelopment and Clorine Building

Mr. Hunter

Please see attached scope and cost for the Construction Engineering Management of the Mapleton Canyon Springs Redevelopment and Clorine Building Replacement.

As you know, our design costs have overrun due to multiple changes in direction and phasing of the plan set and extended coordination with the US Forest Service. US Forest Service coordination, permitting and requirements has greatly extended our time and effort to get the plans and specifications prepared and ready for bid.

We are requesting an additional \$53,200.00 in design fees to cover our design costs.

Contract Modification:

Additional Design	\$ 53,200.00
CEM	\$328,460.00
	TOTAL \$381,660.00

If you have any questions or comments, please feel free to contact me.

Sincerely



David Dillman, PE

Sr. Principal

Cell: 801-376-7330

Office 801-763-5142

dave@horrocks.com

Attachments: CEM – scope of work, hour spread sheet, rate schedule

Project Name: Mapleton Spring Redevelopment Project

Construction Engineering Services

Work Plan

General

This contract is for Construction Engineering Services for the Mapleton Canyon Spring Redevelopment Project. The work tasks are listed below.

Work Tasks

The basic work categories include Construction Management, Inspection Materials Testing and Project Closeout. The specific activities are as follows:

Construction Management

- Change Orders
 - Horrocks will review all requests for change orders to determine if a change order is warranted. Horrocks will prepare a justification and Engineer's Estimate, review schedule impacts for any time adjustments, prepare the change order and submit for signatures and processing.
- Requests for Information (RFI's)
 - Horrocks will review and respond to all RFI's submitted on the project.
- Weekly project update and partnering meetings.
 - Horrocks will prepare agendas, schedule and conduct meetings, and take meeting minutes. Horrocks will have RE, Inspector, in attendance at all meetings.
- Traffic Control and Maintenance of Traffic (MOT) Review
 - Horrocks will review and accept all submitted traffic control and MOT Plans and Detour Plans.
- Coordinate Public Involvement
 - Provide timely updates of information to 3rd party PI and city.
- Manage 3rd Party Utility and Stakeholder Coordination
 - Horrocks will facilitate and manage coordination.
- Review of Submittals
 - Horrocks will review and accept all submittals on the project including, but not limited to, materials certification, Traffic Control plans, Critical Path Method (CPM) schedules, mix design and material testing source suitability and targets.
- Project documentation
 - Horrocks will review and accept project documentation such as material certifications, prompt payment, subcontract, etc.
- Pay Estimates
 - Horrocks will review and process monthly partial payment requests. This work will include meeting with the contractor and agreeing on quantities for each monthly payment request.
- Review and check quantities

- As a part of our QMP, Horrocks will review and check all quantities measured for payment on the project weekly.
- Process Reviews
 - Horrocks will perform internal process reviews as a part of our QC plan including, but not limited to documentation, quantities, material testing requirements, material certification and daily diaries.
- Complete Claims Review
 - Horrocks will review any claims for validity and coordinate with Mapleton City.
- Final inspection
 - Horrocks will schedule and conduct a final inspection that will include walking the project and developing a punch list of work items required to be completed to achieve physical completion.

US Forest Service

- Vegetation and Forest Botanist Coordination
 - Horrocks will provide a qualified field biologist to perform a preconstruction survey of the current noxious/ invasive weed infestations.
 - Develop a site-specific plan for noxious/ invasive plant prevention and control.
 - Follow USFS policies and guidance and permit requirements.

Field Inspection

- Daily inspection of the work
 - Horrocks will have a part time inspector on site while the contractor is working to inspect and document the contractor's work.
 - Complete field documentation and measurement of quantities including Visual Inspections.
- Daily diary entries
 - The Horrocks inspector will enter daily diary entries for each pay item to properly document the contractor work and progress. The inspector will also document in the diary any activity or conversation that does not pertain to a pay item.
- Traffic Control and MOT inspection
 - Horrocks will perform daily traffic control inspection to ensure the traffic control is in accordance with the approved traffic control plan.
- Environmental Compliance
 - Environmental Compliance is very important on all projects. Horrocks will continually observe contractor to make sure BMP are set and commitments followed.
- Sampling of soils
 - Horrocks will sample all soils as requirements and submit to our lab in American Fork for testing.
- Concrete Testing in the field
 - Horrocks will test all concrete placed on the project as per specifications.
- Tickets
 - Horrocks will gather all material tickets and total them for quantity and payment.
- Density testing in the field
 - Horrocks inspectors will perform density testing on materials incorporated into the project using a Nuclear Density Gauge per APWA current edition.
- Safety inspections
 - Safety of workers and the traveling public is very important on all projects. Horrocks will continually observe contractor work for safety.

Materials Testing

- Soils Testing
 - Horrocks will use our American Fork lab to perform materials testing on native materials, Untreated Base Course (UTBC), and HMA. All material testing will be completed and shared with the contractor.
- Concrete Strength
 - Horrocks will use our American Fork lab to perform concrete strength test. All material testing will be completed and shared with the contractor.
- Sampling of materials at plants
 - Horrocks will sample sand and aggregate from the plant supplying concrete.
 - Horrocks will sample binder for the plants supplying HMA.
- Lab Documentation and Test Results
 - Coordinate with the RE and FE on all test results.

Division of Drinking Water coordination and permitting

- Prepare O&M Manual
- Prepare As Built drawings.
- Submit Operating Permit to DDW

Assumptions

1. Assume Construction begins November 2023 complete September 15, 2024
2. Contractor Work Hours 7AM to 5:30P.
4. End of Construction = Contact Completion
5. Horrocks will prepare O&M Manual and submit Operating Permit to DDW.
6. Soil, Aggregate and HMA sampling and testing by Horrocks

Horrocks Engineers - Construction Engineering Services

Mapleton City

Mapleton Canyon Spring Redevelopment and Chlorine Building

Project No.

Estimated by DHD: 10/30/2023

Task: Construction Engineering Services

ASSIGNMENT/CLASSIFICATION	2023												Project Documentation Audit/Review	TOTAL HOURS	HOURLY RATE	HOURLY TOTALS
	November	December	January	February	March	April	May	June	July	August	September	October				
PROJECT MANAGER/RESIDENT ENGINEER David Dillman	20	10	10	10	10	10	60	60	60	60	10	10	2	332	\$270.00	\$89,640.00
RESIDENT ENGINEER Mark Clark	20	24	24	24	24	24	24	24	24	24	24	24		284	\$236.00	\$67,024.00
FIELD ENGINEER														0	\$148.00	\$0.00
SR. FIELD TECHNICIAN II Wade Taylor	40	88	88	88	88	88	88	88	88	88	40			872	\$138.00	\$120,336.00
ENVIORNMENTAL SPECIALIST/LANDSCAPE ARCITEC Zach Scott/Nathan Clarke	24	24			10	10	10	10	10	10	10			118	\$170.00	\$20,060.00
SR. FIELD TECHNICIAN II (Lab Materials Testing) Travis Bair														2	\$174.00	\$348.00
FIELD TECHNICIAN (Lab Materials Testing) Adam Arriloa				10	10			20	20					60	\$91.00	\$5,460.00
ENGINEERING INTERN Isaac Dillman		10	10	10	10	10	10	10	10	10	10	40		160	\$98.00	\$15,680.00
CAD TECHNICIAN (T-3)														0		\$0.00
TBA														0	\$170.00	\$0.00
SURVEYOR (LS)														0	\$151.00	\$0.00
SR. SURVEYOR														16	\$102.00	\$1,632.00
SURVEYOR																
TOTALS	104	156	140	150	152	142	192	212	212	192				4	1844	
Avg. Staff/Day	0.6	0.9	0.8	0.9	0.9	0.8	1.1	1.2	1.2	1.1			0.0			

DIRECT EXPENSES

	Rate	Unit	Quantity	Amount
VEHICLE MILEAGE	\$0.69	MILE	12,000	\$8,280.00
PER DIEM	\$125.00	DAY		\$0.00
GEOTECHNICAL	\$0.00	LUMP	0	\$0.00
NUCLEAR DENSITY GAGE	\$16.70	TEST	0	\$0.00
ASPHALT CONTENT TEST UNIT & BULK DENSITY	\$44.40	TEST	0	\$0.00
GPS SURVEY UNIT	\$16.70	HOUR	0	\$0.00
DIRECT EXPENSE TOTAL				\$8,280.00

Comments:

HOURLY TOTALS

\$320,180.00

DIRECT EXPENSE

\$8,280.00

SUBTOTAL

\$328,460.00

TOTAL

\$328,460.00

CONSTRUCTION ENGINEERING MANAGEMENT TOTAL

I certify that the above stated rates and estimated costs are accurate and projected through planned project completion in 2024.

Date:

Signed:

Horrocks Engineers

Notes: 1. Assume 10 1/2 months of construction 40 hr work week.

2. Construction begins November 2023 - September 15, 2024

3. One part time inspector 20 hrs./wk.

4. Resident Engineer Ghrs/wk.

5. Materials testing per Mapleton City and APWA Requirements.

6. Noxious Weed Monitoring: Assume initial survey and 10/month support dring summer of 2024

Q:\12019\UT-0149-1901 Mapleton City Engineering Consulting\Management\Contract\Springs CEM\Mapleton Canyon Spring Redevelopment 2023 CEM manhour est



FEE SCHEDULE

	<u>Hourly Billed Rate</u>		<u>Hourly Billed Rate</u>
<u>Engineers</u>		<u>Other Professionals (Cont'd)</u>	
Sr. Principal Engineer IV	\$374.00	Sr. Communication Specialist III	\$205.00
Sr. Principal Engineer III	\$352.00	Sr. Communication Specialist II	\$184.00
Sr. Principal Engineer II	\$329.00	Sr. Communication Specialist	\$165.00
Sr. Principal Engineer	\$308.00	Communication Specialist V	\$146.00
Principal Engineer V	\$290.00	Communication Specialist IV	\$128.00
Principal Engineer IV	\$270.00	Communication Specialist III	\$110.00
Principal Engineer III	\$249.00	Communication Specialist II	\$93.00
Principal Engineer II	\$227.00	Communication Specialist	\$76.00
Principal Engineer	\$205.00	Communications Intern	\$59.00
Sr. Associate Engineer V, P.E.	\$337.00	Sr. Public Involvement Specialist VI	\$278.00
Sr. Associate Engineer IV, P.E.	\$318.00	Sr. Public Involvement Specialist V	\$249.00
Sr. Associate Engineer III, P.E.	\$300.00	Sr. Public Involvement Specialist IV	\$230.00
Sr. Associate Engineer II, P.E.	\$280.00	Sr. Public Involvement Specialist III	\$209.00
Sr. Associate Engineer, P.E.	\$258.00	Sr. Public Involvement Specialist II	\$190.00
Associate Engineer V, P.E.	\$236.00	Sr. Public Involvement Specialist	\$170.00
Associate Engineer IV, P.E.	\$214.00	Public Involvement Specialist V	\$149.00
Associate Engineer III, P.E.	\$193.00	Public Involvement Specialist IV	\$131.00
Associate Engineer II, P.E.	\$170.00	Public Involvement Specialist III	\$112.00
Associate Engineer, P.E.	\$149.00	Public Involvement Specialist II	\$93.00
Sr. Engineer VIII, P.E.	\$391.00	Public Involvement Specialist	\$77.00
Sr. Engineer VII, P.E.	\$367.00	GIS Programmer/Sr. Analyst II	\$244.00
Sr. Engineer VI, P.E.	\$345.00	GIS Programmer/Sr. Analyst	\$214.00
Sr. Engineer V, P.E.	\$324.00	Sr. GIS Analyst II	\$167.00
Sr. Engineer IV, P.E.	\$302.00	Sr. GIS Analyst	\$145.00
Sr. Engineer III, P.E.	\$280.00	GIS Analyst II	\$121.00
Sr. Engineer II, P.E.	\$258.00	GIS Analyst	\$98.00
Sr. Engineer, P.E.	\$240.00	Sr. Graphics Specialist VI	\$269.00
Engineer V, P.E.	\$221.00	Sr. Graphics Specialist V	\$240.00
Engineer IV, P.E.	\$202.00	Sr. Graphics Specialist IV	\$221.00
Engineer III, P.E.	\$183.00	Sr. Graphics Specialist III	\$202.00
Engineer II, P.E.	\$161.00	Sr. Graphics Specialist II	\$184.00
Engineer, P.E.	\$140.00	Sr. Graphics Specialist	\$165.00
Engineering Intern IV	\$174.00	Graphics Specialist V	\$146.00
Engineering Intern III	\$148.00	Graphics Specialist IV	\$128.00
Engineering Intern II	\$123.00	Graphics Specialist III	\$109.00
Engineering Intern	\$98.00	Graphics Specialist II	\$90.00
<u>Other Professionals</u>		Graphics Specialist	\$72.00
Sr. Principal Planner	\$306.00	Graphics Intern	\$53.00
Sr. Associate Planner	\$244.00	<u>Technicians</u>	
Sr. Planner VI	\$290.00	Sr. Design Technician IV	\$234.00
Sr. Planner V	\$263.00	Sr. Design Technician III	\$208.00
Sr. Planner IV	\$247.00	Sr. Design Technician II	\$187.00
Sr. Planner III	\$231.00	Sr. Design Technician	\$168.00
Sr. Planner II	\$216.00	Design Technician IV	\$149.00
Sr. Planner	\$200.00	Design Technician III	\$131.00
Planner V	\$184.00	Design Technician II	\$112.00
Planner IV	\$168.00	Design Technician	\$93.00
Planner III	\$154.00	Sr. CAD Technician II	\$152.00
Planner II	\$138.00	Sr. CAD Technician	\$130.00
Planner	\$122.00	CAD Technician II	\$109.00
Sr. Environmental Specialist VII	\$328.00	CAD Technician	\$90.00
Sr. Environmental Specialist VI	\$300.00	Jr. CAD Technician	\$71.00
Sr. Environmental Specialist V	\$281.00	Sr. Field Technician IV	\$250.00
Sr. Environmental Specialist IV	\$265.00	Sr. Field Technician III	\$220.00
Sr. Environmental Specialist III	\$244.00	Sr. Field Technician II	\$199.00
Sr. Environmental Specialist II	\$226.00	Sr. Field Technician	\$177.00
Sr. Environmental Specialist	\$205.00	Field Technician IV	\$156.00
Environmental Specialist VI	\$184.00	Field Technician III	\$133.00
Environmental Specialist V	\$168.00	Field Technician II	\$112.00
Environmental Specialist IV	\$152.00	Field Technician	\$93.00
Environmental Specialist III	\$133.00	Jr. Field Technician II	\$75.00
Environmental Specialist II	\$111.00	Jr. Field Technician	\$55.00
Environmental Specialist	\$89.00	Sr. Vacuum Truck/Camera Technician	\$147.00
Sr. Communication Specialist VI	\$275.00	Vacuum Truck/Camera Technician II	\$118.00
Sr. Communication Specialist V	\$250.00	Vacuum Truck/Camera Technician	\$96.00
Sr. Communication Specialist IV	\$224.00		

Rates are effective through December 31, 2023



FEE SCHEDULE

	Hourly Billed Rate		Hourly Billed Rate
<u>Telecom and ITS Technicians</u>		<u>Constr. Mgmt., Inspectors and Lab (Cont'd)</u>	
Sr. Telecommunications Manager III	\$276.00	Inspector IV	\$138.00
Sr. Telecommunications Manager II	\$239.00	Inspector III	\$122.00
Sr. Telecommunications Manager	\$202.00	Inspector II	\$107.00
Sr. Telecom Site Acqstn. Specialist III	\$244.00	Inspector	\$91.00
Sr. Telecom Site Acqstn. Specialist II	\$214.00	<u>Surveyors and Technicians</u>	
Sr. Telecom Site Acqstn. Specialist	\$188.00	Sr. Licensed Surveyor II	\$275.00
Telecom Site Acquisition Specialist III	\$164.00	Sr. Licensed Surveyor	\$242.00
Telecom Site Acquisition Specialist II	\$139.00	Licensed Surveyor II	\$205.00
Telecom Site Acquisition Specialist	\$114.00	Licensed Surveyor	\$170.00
Sr. Telecom Construction Manager III	\$384.00	Sr. Surveyor/ROW Technician II	\$181.00
Sr. Telecom Construction Manager II	\$244.00	Sr. Surveyor/ROW Technician	\$151.00
Sr. Telecom Construction Manager	\$214.00	Surveyor/ROW Technician III	\$126.00
Telecom Construction Manager III	\$193.00	Surveyor/ROW Technician II	\$102.00
Telecom Construction Manager II	\$170.00	Surveyor/ROW Technician	\$76.00
Telecom Construction Manager	\$145.00	Sr. ROW Acquisition Technician IV	\$275.00
Sr. Transportation ITS Engineer III	\$281.00	Sr. ROW Acquisition Technician III	\$246.00
Sr. Transportation ITS Engineer II	\$251.00	Sr. ROW Acquisition Technician II	\$228.00
Sr. Transportation ITS Engineer	\$227.00	Sr. ROW Acquisition Technician	\$209.00
Transportation ITS Engineer III	\$201.00	ROW Acquisition Technician IV	\$190.00
Transportation ITS Engineer II	\$177.00	ROW Acquisition Technician III	\$172.00
Transportation ITS Engineer	\$151.00	ROW Acquisition Technician II	\$152.00
Transportation ITS Eng. Intern III	\$126.00	ROW Acquisition Technician	\$133.00
Transportation ITS Engineering Intern II	\$102.00	<u>Support Staff</u>	
Transportation ITS Engineering Intern	\$76.00	Sr. Administrative Assistant III	\$160.00
Sr. ITS Field Technician IV	\$231.00	Sr. Administrative Assistant II	\$131.00
Sr. ITS Field Technician III	\$202.00	Sr. Administrative Assistant	\$112.00
Sr. ITS Field Technician II	\$184.00	Administrative Assistant III	\$94.00
Sr. ITS Field Technician	\$165.00	Administrative Assistant II	\$77.00
ITS Field Technician IV	\$146.00	Administrative Assistant	\$59.00
ITS Field Technician III	\$128.00	Network Admin	\$143.00
ITS Field Technician II	\$109.00	Accounting	\$133.00
ITS Field Technician	\$91.00	Sr. Third-Party Coordinator	\$144.00
Jr. ITS Field Technician II	\$75.00	Third-Party Coordinator III	\$115.00
Jr. ITS Field Technician	\$59.00	Third-Party Coordinator II	\$102.00
Sr. Telecom Design Manager III	\$219.00	Third-Party Coordinator	\$80.00
Sr. Telecom Design Manager II	\$187.00	<u>Equipment</u>	
Sr. Telecom Design Manager	\$157.00	Global Positioning System	Request Pricing
Telecom Design Technician III	\$128.00	Mobile LiDAR/HDS 3D Scanner	Request Pricing
Telecom Design Technician II	\$108.00	Lab Testing Equipment	Request Pricing
Telecom Design Technician	\$87.00	Vacuum Truck	Request Pricing
Telecom Design Technician Intern	\$68.00	CCTV Camera Truck	Request Pricing
<u>Construction Management, Inspectors and Lab</u>		<u>Travel and Subsistence</u>	
Sr. Construction Manager III	\$275.00	Cost	
Sr. Construction Manager II	\$244.00	Mileage	\$0.76 / mile
Sr. Construction Manager	\$213.00	Subconsultant	Cost + 12.5%
Construction Manager III	\$181.00	Other Direct Costs	Cost + 12.5%
Construction Manager II	\$150.00		
Construction Manager	\$119.00		
CM Office Tech III	\$187.00		
CM Office Tech II	\$157.00		
CM Office Tech	\$125.00		
Lab Manager II	\$206.00		
Lab Manager	\$175.00		
Lab Tech V	\$175.00		
Lab Tech IV	\$146.00		
Lab Tech III	\$128.00		
Lab Tech II	\$109.00		
Lab Tech	\$90.00		
Jr. Lab Tech	\$72.00		
Sr. Inspector IV	\$200.00		
Sr. Inspector III	\$184.00		
Sr. Inspector II	\$168.00		
Sr. Inspector	\$154.00		

Rates are effective through December 31, 2023

RESOLUTION NO. 2023-

A RESOLUTION OF THE CITY OF MAPLETON, UTAH TO APPROVE A CONTRACT MODIFICATION FOR HORROCKS FOR ADDITIONAL DESIGN AND CONSTRUCTION ENGINEERING MANAGEMENT ON THE MAPLETON SPRING REDEVELOPMENT AND CHLORINATION PROJECT

WHEREAS, Mapleton City wishes to redevelopment the springs in Mapleton Canyon to restore culinary water supply; and

WHEREAS, funding was included in the FY23 and FY24 budgets for the project, and the Department of Natural Resources Division of Water Resources has approved grant funding; and

WHEREAS, Horrocks was selected as the design and construction management consultant on this project due to their experience on similar project; and

NOW THEREFORE, BE IT RESOLVED by the City Council of Mapleton, Utah, that: the City approves the contract modification with Horrocks not to exceed **\$381,660.00** for additional design and construction engineering management.

This resolution adopted this 15^h day of November 2023, by the City Council of Mapleton City, Utah.

Dallas Hakes
Mayor

ATTEST:

Camille Brown
City Recorder