



CITY OF WHEATLAND

CITY COUNCIL MEETING STAFF REPORT

January 22, 2019

SUBJECT: Malone Culvert Failure – Project Status

PREPARED BY: Dane H. Schilling – City Engineer

Recommendation

This report is an update and is for information only. No action is requested by Staff at this time.

Background

Malone Avenue was established with other roads in Wheatland at incorporation. Malone Avenue crosses over South Grasshopper Slough (formerly Baxter Slough) approximately 400-ft south of Main Street. The road was constructed over the slough with an elliptical corrugated steel plate arch culvert ("culvert") that is approximately 5-ft tall by 8-ft wide. The steel plates are bolted together and secured to the ground with two concrete footings along the bottom edges of the culvert. The culvert has a soil invert (natural bottom) and the cover over the pipe is very thin at approximately 18- to 20-inches. A high-pressure gas main, telephone duct, a water main and sewer main cross the culvert. In recent years the southerly footing sheared apart and displaced vertically near the middle of the structure. City staff has been monitoring the condition of the structure for several years.

On March 22, 2018, City staff became aware that the culvert was failing catastrophically during a storm event and the road was closed due to safety concerns. Malone Avenue is the primary access to the City's wastewater treatment plant. Staff made arrangements with Reclamation District 2103 to use the Bear River Levee as an alternative means of access. However, making left-turns from the levee road onto Highway 65 is difficult due to limited sight distance combined with highway speeds, and even more difficult in larger utility vehicles.

Staff recommended performing the removal of the existing structure under an emergency resolution to ensure removal can be completed before seasonal run-off began in the 2018-19 rain season.

On July 24, 2018, Pursuant to California Public Contract Code 22050 the City Council found that the situation warranted emergency action and authorized emergency contracting for repairs to the Malone Avenue Culvert. The City Council voted to continue the emergency action at subsequent Council Meetings as required by the Public Contract Code.

On September 24, 2018, the City received bids for the removal of the failed culvert and awarded a contract to B&M Builders in the amount of \$41,725.

On January 22, 2019, the City Council, pursuant to Public Contract Code section 22050, found that the emergency action was no longer necessary and terminated the July 2018 finding for emergency action.

Update

During the course of the removal work (Phase 1) it was discovered that a City-owned sewer force main, a small waterline, a telephone cable and a small abandoned natural gas service were placed over the old culvert causing the need to revise the scope of the contractor's work and issue a change order relocate, remove or protect these utilities in-place. The most notable cost item of this change order was due to the City's 8-inch sewer force main. The forcemain could not be out of service for more than 4-hrs at a time so a temporary by-pass was required. Coastland Engineering quickly designed a by-pass facility and designed a new segment of the forcemain to go under Grasshopper Slough. The Phase 1 contractor provided pricing for the change order which was reviewed by Coastland and the City, and approved by the City. This change order totaled \$70,222 plus the associated design work provided by Coastland. It should be noted that this change order work would have been required in Phase 2 if timing and physical constraints hadn't necessitated its removal in Phase 1.

The removal of the old culvert and utility work is now complete and the waterway is now clear of obstructions. The roadway remains closed until Phase 2 is complete.

In the course of the design of Phase 2, Coastland examined various options for the replacement culvert including a steel plate arch (similar to the old structure), precast reinforced concrete pipe, galvanized steel pipe and precast concrete arch designs. In that process Coastland determined that the costs associated with trying to preserve the natural bottom of the waterway to avoid environmental permitting was more costly than obtaining a permit and employing conventional methods for the culvert construction. This revised approach is expected to save \$120,000 or more in construction costs which will more than offset the additional design and environmental efforts. The downside to this approach is that the City must obtain a streambed alteration permit from the State before work can commence. The environmental consultant has performed the necessary environmental surveys and applied for the required permit. In addition, Coastland in conjunction with Raney Planning and Management prepared a CEQA Notice of Exception for the project.

Staff anticipates bringing the construction drawings and specifications to the City Council in late May, and bidding the second phase (the new culvert) in early June 2019. Replacement work is expected to be complete and the roadway re-opened before the 2019 rain season begins.

Fiscal Impact

There is no fiscal impact from this update. The next fiscal item will involve the authorization to bid Phase 2 of the project.

Attachments

- 1. Progress Payment for B&M Builders**



PROJECT PAYMENT ESTIMATE
Malone Avenue Culvert Replacement
Phase 1

PROJECT PAYMENT REQUEST # 1
Billing Period Ending Date:

No.	ITEMS	CONTRACT			PREV. PAY REQUESTS		CURRENT PAY REQUEST					
		Contract Quantity Total	Additional Quantity Total	Units	Unit Price	Contract Total	Additional Total	Previous % Complete	Previous Total	% Complete This Period	Total	Approx. Total % Complete
ORIGINAL CONTRACT												
1	Roadway Excavation	150	0	CY	\$125.00	\$18,750.00	\$0.00	0%	\$0	100%	\$18,750.00	100%
2	Clearing and Grubbing	1	0	EA	\$5,000.00	\$5,000.00	\$0.00	0%	\$0	100%	\$5,000.00	100%
3	Temporary Fence	200	0	LF	\$7.00	\$1,400.00	\$0.00	0%	\$0	100%	\$1,400.00	100%
4	Utility Pot-holing (max Depth: 4 feet)	4	11	EA	\$500.00	\$2,000.00	\$5,500.00	0%	\$0	100%	\$7,500.00	37.5%
5	Utility Pot-holing (max Depth: 12 feet)	4	1	EA	\$800.00	\$3,200.00	\$2,400.00	0%	\$0	100%	\$5,600.00	25%
6	Demolition and Removal of Existing Culvert	1	0	EA	\$5,000.00	\$5,000.00	\$0.00	0%	\$0	100%	\$5,000.00	100%
7	Hydroseed Slope	1500	250	SF	\$1.00	\$1,500.00	\$250.00	0%	\$0	100%	\$1,750.00	11%
8	Erosion Control Mat - MWS/TM13C	1500	0	SF	\$3.25	\$4,875.00	\$0.00	0%	\$0	100%	\$4,875.00	100%
						\$43,725.00	\$8,150.00	0%	\$0.00	100%	\$51,875.00	
APPROVED CHANGE ORDERS												
CC001	Sanitary Sewer Bypass	1		LS	\$20,710.00	\$20,710.00		0%	\$0	0%	\$20,710.00	100%
CC002	Remove and relocate existing force main (Add All 1 FOR \$9605 not used)	1		LS	\$49,512.00	\$49,512.00		0%	\$0	0%	\$49,512.00	100%
EW001	Unsanitary Water Main Repair at Culvert	1		LS	\$1,209.04	\$1,209.04		0%	\$0	0%	\$1,209.04	100%
EW002	GM Construction-Non-existent Check Valve Delay	1		LS	\$3,190.67	\$3,190.67		0%	\$0	0%	\$3,190.67	100%
EW003	Locate Valves at Various Areas	1		LS	\$3,699.72	\$3,699.72		0%	\$0	0%	\$3,699.72	100%
EW004	Install waddle	1		LS	\$928.76	\$928.76		0%	\$0	0%	\$928.76	100%
EW005	Add Blawrock to Roads and repair water line	1		LS	\$5,379.31	\$5,379.31		0%	\$0	0%	\$5,379.31	100%
						\$94,829.52		0%	\$0.00		\$94,829.52	

CONTRACT AMOUNT \$ PAY REQUESTS TO DATE
Original Contract Amount \$43,725.00
Additional Contract Amount \$3,350.00
Approved Change Orders \$84,829.52
Revised Contract Amount \$129,704.52

CERTIFICATION OF CONTRACTOR
According to the best of my knowledge and belief, I certify that all items and amounts show on this Project Final Payment and Change Orders Summary are correct; that all work has been performed and/or material supplied in full accordance with the requirements of the referenced Contract Documents and/or duly authorized substitutions, alterations, and/or additions, and that payment requested herein for said work is the full and final amount due and no other compensation will be requested.

Approval Signatures: _____
 Date: 3/6/19
 5/7/19
 Contractor: _____
 BMM Builder: _____
 Authorized Signature
 Ctr: _____
 Construction Manager

Retention to Date \$0.00
Back Charges to Date \$0.00
THIS PAY REQUEST
 Contract Amount Earned \$45,075.00
 Change Order Amount Earned \$84,829.52
 Total Earned This Request \$129,704.52
 Retention 5% This Request \$6,485.23
 Back Charges This Request \$0.00
PAYMENT THIS REQUEST \$123,219.29

Remaining Contract Amount After This Payment \$0.00
Total Retention After This Payment \$6,485.23
Total Back Charges After This Payment \$0.00