



City of Norman, OK

Municipal Building
Council Chambers
201 West Gray
Norman, OK 73069

Master

File Number: K-1314-136, CO#5

File ID: K-1314-136, CO#5

Type: Contract

Status: Consent Item

Version: 2

Reference: Item 14

In Control: City Council

Department: Utilities Department

Cost: \$324,283.30

File Created: 10/31/2017

File Name: Change Order #5 Archer Western

Final Action:

Title: CHANGE ORDER NO. FIVE TO CONTRACT K-1314-136: BY AND BETWEEN THE NORMAN UTILITIES AUTHORITY AND ARCHER WESTERN CONSTRUCTION, L.L.C. INCREASING THE CONTRACT AMOUNT BY \$324,283.30 FOR A REVISED CONTRACT AMOUNT OF \$52,226,706 AND GRANTING AN EXTENSION OF 124 CALENDAR DAYS TO THE CONTRACT, AUTHORIZING ACCEPTANCE OF THE WATER RECLAMATION FACILITY (WRF) PHASE 2 IMPROVEMENTS AS OF AUGUST 1, 2017, AND EXECUTION OF MAINTENANCE BOND MB-1718-24 FOR THE WRF PHASE 2 MAINTENANCE IMPROVEMENTS.

Notes: ACTION NEEDED: Acting as the Norman Utilities Authority, motion to approve or reject Change Order No. Five to Contract K-1314-136 with Archer Western Construction, L.L.C., increasing the contract amount by \$324,283.30 for a revised contract amount of \$52,226,706 and granting an extension of 124 calendar days; and if approved, authorize the execution of the change order and Maintenance Bond MB-1718-24 for the WRF Phase II Maintenance Improvements and acceptance of the WRF Phase 2 Improvements as of August 1, 2017.

ACTION TAKEN: _____

Agenda Date: 11/28/2017

Agenda Number: 14

Attachments: Revised CO#5 102417, Change Order No. 5 backup abbreviated, MB-1718-24

Project Manager: Mark Daniels, Utilities Engineer

Entered by: mark.daniels@normanok.gov

Effective Date:

History of Legislative File

Ver- sion:	Acting Body:	Date:	Action:	Sent To:	Due Date:	Return Date:	Result:
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Text of Legislative File K-1314-136, CO#5

Body

BACKGROUND: The Wastewater Master Plan (WWMP), adopted by the Norman Utilities Authority (NUA) in 2001, recommended that additional facilities treating an average design flow (ADF) of 21.5 million gallons per day (MGD) would ultimately be needed to serve the area approved for urban development under the 2025 Land Use and Transportation Plan. The WWMP recommended expansion of the South Water Reclamation Facility (WRF) from 12 to 17 MGD and construction of a new North WRF with an ultimate ADF of 4.5 MGD.

More recently, staff recommended and the NUA agreed that the South WRF would be rehabilitated and expanded first and the North WRF would be designed and constructed in the future when the capacity of the recently expanded Lift Station D was consumed. Based on this premise, Norman voters approved a rate increase in October 2013, in part for expanded treatment capacity at the South WRF.

Regulatory Requirements: Our Oklahoma Pollutant Discharge Elimination System (OPDES) permit for the South WRF issued by Oklahoma Department of Environmental Quality (DEQ), required construction of new disinfection facilities and compliance with final discharge limits by July 1, 2013. On September 12, 2014, the NUA and DEQ agreed to Consent Order 13-077 which included the following schedule:

1. Complete construction of disinfection facilities by January 1, 2016;
2. Attain compliance with final limits for Fecal Coliform by July 1, 2016;
3. Complete construction of all facilities by January 1, 2017;
4. Attain compliance with final limits for Total Suspended Solids by July 1, 2017.

The NUA completed items 1 and 2 prior to the deadlines imposed by the DEQ and has attained compliance with discharge parameters specified in item 4 by the deadline. On March 2, 2017, the DEQ inspector verbally agreed construction was substantially complete as all process treatment units were placed into service and operational. As a part of this change order, the WRF Phase 2 Improvements will be considered complete on August 1, 2017.

Engineering Services: On March 8, 2011, the NUA approved Contract K-1011-148 authorizing Garver Engineering, Inc. (Garver), to proceed with the Engineering Report (ER) and Surveying Phases. The ER was finalized and submitted to the DEQ on November 18, 2011; the DEQ approved the ER on June 27, 2013. On June 12, 2012, the NUA approved Amendment No. 1 authorizing Garver to proceed with the Final Design and Bidding phases. The plans and specifications for the improvements were submitted to the DEQ on August 1, 2013 and the DEQ approved them on November 26, 2013. On April 22, 2014, the NUA approved Amendment No. 2 authorizing Garver to proceed with the construction phase services including construction administration, full-time construction observation through November 2016, preparation of operation and maintenance manuals, equipment start-up and staff training, and implementation of the supervisory control and data acquisition (SCADA) system. On February 14, 2017, the NUA approved Amendment No. 3 authorizing Garver to proceed with design of the WRF Phase 2 Maintenance Additions as well as extending the construction phase services through November 2017.

Construction: Bids for the WRF Phase 2 Improvements were received from three pre-qualified contractors on March 27, 2014. Archer Western Construction, LLC (Archer Western) with regional offices in Irving, Texas was the low bidder. On April 22, 2014, the NUA awarded the bid and approved Contract K-1314-136 with Archer Western in the amount of \$48,822,550; the next lowest bid was \$49,978,000 or 2.4% higher. Approved funding for the WRF Phase 2 Improvements is 40.7% from the Sewer Excise Tax (SET) Fund 322 and 59.3% from the Water Reclamation Fund 32. The project funding is augmented by a State Revolving Fund (SRF) loan from the Oklahoma Water Resources Board (OWRB) for up to \$50,300,000. Future revenues from the Water Reclamation Fund and the Sewer Excise Tax Fund are dedicated to pay back the SRF loan.

The WRF Phase 2 Improvements added Disinfection Facilities, expanded the average daily design flow from 12 to 17 MGD and rehabilitated many existing processes. Archer Western began construction of the improvements on June 2, 2014. The original work was broken into two phases with the Disinfection Facilities to be completed by November 24, 2015 and all work to be complete by November 18, 2016 (Final Completion). The NUA approved Change Order No. 1 (CO#1) on September 8, 2015 which included several Contract Modification Requests (CMR's) and a time extension of 47 calendar days through January 4, 2017. The NUA approved CO#2 on May 10, 2016 increasing the contract amount by \$98,546.78 and approving a time extension of 32 calendar days through February 5, 2017. The NUA approved CO#3 on December 13, 2016 increasing the contract amount by \$152,808.92 and approving a time extension of 53 days through March 30, 2017. The NUA approved CO#4 on February 14, 2017 amending the contract by adding new work identified as the WRF Phase 2 Maintenance Additions. CO#4 increased the contract amount by \$2,828,517 (or 5.8% of the original contract amount) for a revised contract amount of \$51,902,422.70 and increased the contract time by 227 calendar days requiring completion by November 12, 2017. The original WRF Phase 2 Improvements were scheduled to be complete by March 30, 2017.

The Disinfection Facilities were placed into operation on October 29, 2015 and these facilities meet discharge disinfection requirements. On March 2, 2017, the DEQ inspector verbally agreed the WRF Phase 2 Improvements were substantially complete and operational. Ancillary items such as paving, yard lighting, fencing, landscaping and final cleanup were complete by August 1, 2017. The most recent construction payment through September 30, 2017 was for a total amount of \$48,980,949 or 94.4% of the contract amount while 96.8% of the work is complete. At this time, the FYE17 construction budget for the WRF Phase 2 Improvements (WW0065) includes contingency funds totaling approximately \$1,236,000.

DISCUSSION: Proposed CO#5 will increase the contract amount by \$324,283.30 from \$51,902,422.70 to \$52,226,706 and grant a time extension of 124 calendar days for the WRF Phase 2 Improvements through August 1, 2017. The CMR's in CO#5 are briefly described below and increase the original contract amount by 0.66% bringing the total of all change orders to 6.97%. The State Competitive Bidding Act allows processing of change orders up to 10% of the original contract amount or about \$4.88 million; unit price bid items are exempted from this maximum amount. The CMRs can be divided into groups as follows:

Owner-Directed CMR's: Modifications requested by the NUA are generally to remedy maintenance situations or add operational improvements not originally included in the project scope; these 14 CMR's total \$266,484.66.

- CMR 61: Install 31 additional concrete yard lighting bases and 15 slab mounted bases for site lighting at WRF at a cost of \$65,308.72.
- CMR 65: Accept credit to eliminate protective coating on interior concrete walls for Secondary Clarifier Splitter Box for a savings of \$43,322.47.
- CMR 67: Install 2-inch water supply line to two new Sludge Thickening Centrifuges in Main Control Building at a cost of \$3,545.90.
- CMR 68: Remove 819 cubic yards (CY) of sludge from three (3) existing Aeration Basins prior to placement of new aeration equipment at contract bid unit price of \$19 per CY for a cost of \$15,562.52.
- CMR 70: Increase extent of new and rehabilitated asphalt paving at WRF and include concrete ribbon curb along perimeter of most new and/or rehabilitated asphalt paving at a cost of \$46,648.79; extend contract completion time by ten (10) calendar days.
- CMR 71: Modify speed controls by adding level probes and solenoid valves for progressive cavity sludge pumps downstream of thickening centrifuges at a cost of \$11,380.55; extend contract completion time by thirty-three (33) calendar days.
- CMR 73: Accept credit to modify installation of aluminum odor control covers at each of four (4) Primary Sludge Gravity Thickeners for a savings of \$9,000.
- CMR 74: Furnish and install water supply lines to Odor Control Systems A/B and D and install 4-inch drain line for Odor Control System D at a cost of \$4,214.28.
- CMR 75: Remove and replace approximately 1,615 feet of dilapidated chain link fencing and four gates along northern and eastern boundary of WRF at a cost of \$34,095.77.
- CMR 76: Furnish and install two (2) cantilever gates, motor operators and controls at Main Entrance to WRF; replace 95 feet of existing chain link fencing to southeast of southern gate at a cost of \$35,449.76.
- CMR 78: Accept credit to leave sludge removed from Aeration Basins in the sludge drying beds for a savings of \$7,410.63.
- CMR 79: Supply and install new electrical conduit and 4-wire circuit between new 600-amp circuit breaker at Main Control Building MCC to new 600-amp circuit breaker, 300 kVA transformer and MCC in new Electrical Room at a cost of \$74,292.31.
- CMR 80: Supply and install new electrical conduit and wiring to all new exterior LED lights and to central control panel at a cost of \$203,742.69; extend contract completion time by eighty-one (81) calendar days.
- CMR 82: Modify two (2) Motor Control Center (MCC) electrical panels for additional pump protection at Sludge Blend Pump Station at a cost of \$7,061.47.
- CMR 83: Accept credit for unused allowances (site lighting, testing, trash removal, and trailer supplies) for a savings of \$175,085.

Contractor Requested CMR's: Modifications requested by Archer Western generally to remedy unforeseen

conditions encountered and were not originally included in the project; these 3 CMR's total \$57,798.64.

- CMR 56: Approve additional labor and material costs to modify alignment/elevation of underground piping and avoid existing unforeseen underground obstructions for Odor Control System C at a cost of \$29,523.85.
- CMR 77: Install seal offs in existing electrical conduits at three (3) existing aeration basins to comply with classified area revisions to the National Electric Code at a cost of \$21,526.59.
- CMR 84: Supply and install two (2) new pressure transmitters for the 6-inch thickened sludge lines on the discharge side of the centrifuges for control of progressive cavity pumps at a cost of \$6,748.20.

Contract Time Extensions: As noted in CMR's 70, 71 and 80 above, CO#5 also approves a contract time extension totaling one hundred twenty-four (124) calendar days. For the original WRF Phase 2 Improvements, Substantial Completion will be extended to June 2, 2017 and Final Completion will be extended to August 1, 2017. This time extension does not modify the time of completion for the WRF Phase 2 Maintenance Improvement which remains at November 12, 2017.

Project Acceptance: NUA staff and Garver have determined that the Norman WRF Phase 2 Improvements constructed by Archer Western were complete as of August 1, 2017. As such, it is recommended that the NUA accept WRF Phase 2 Improvements and that the two-year maintenance bond (MB-1314-87) coverage period would begin on August 1, 2017 and continue through July 31, 2019.

As a part of Change Order No. 5, a new maintenance bond for the additional work approved as Change Order No. 4 on February 14, 2017 (the Norman WRF Phase 2 Maintenance Improvements) will be executed. Maintenance Bond MB-1718-24, attached hereto, will apply only to Phase 2 Maintenance Improvements. The two-year coverage period for Maintenance Bond MB-1718-24 will begin upon NUA acceptance of these improvements. This work is expected to be complete in December 2017.

Funding: At this time, the FYE17 construction budget for the WRF Phase 2 Improvements (WW0065) includes contingency funds totaling \$1,236,570 including \$798,795 in the Water Reclamation Fund (WRF) and \$437,775 in the Sewer Excise Tax (SET). As per the funding split for the project, 59.3% or \$192,300 will be funded by WRF construction account 032-9048-432.61-01 and 40.7% or \$131,983.30 of CO#5 will be funded by SET construction account 322-9048-432.61-01. With approval of CO#5, the remaining contingency amount for the WRF Phase 2 Improvements would be approximately \$912,287.

CO#5 in the amount of \$324,283.30 for the WRF Phase 2 Improvements will be submitted to the Oklahoma Water Resources Board (OWRB) for approval and inclusion in the existing SRF loan. The maximum SRF loan amount of \$50.3M will not be exceeded with inclusion of this work.

RECOMMENDATIONS: It is recommended that the Norman Utilities Authority approve Change Order No. 5 with Archer Western Construction, LLC increasing the contract amount for the Water Reclamation Facility Phase 2 Improvements by \$324,283.30 from \$51,902,422.70 to \$52,226,706 and granting a time extension of 124 calendar days through August 1, 2017. Staff also recommends acceptance of the Norman WRF Phase 2 Improvements effective August 1, 2017 and execution of Maintenance Bond MB-1718-24 for the Norman WRF Phase 2 Maintenance Improvements.