

**Engineering Committee
Reporting Items
February 25, 2008**

Note: No meeting was held. The following items are reporting items that would have been presented.

1. Project Contracts, Task Orders, and Change Orders
 - a. Approved by the General Manager:
 - i. Task Order 9.17 - \$15,350.50 to CH2M Hill for Professional Services regarding the PRCEP/Title transfer Project.
 - ii. POMA - \$8,899.48 to Carollo Engineers for final construction management services that were associated with the Point of the Mountain Aqueduct Project. Final services included completion of as-built drawing review, completion of punch list items, and coordination with District GIS staff (Task Order Amendment 25.10.1).
 - iii. POMWTP - \$7,693.60 to Clyde-Ellsworth to install Plexiglas inside Fluoride room along upper-level walkway and to provide and install a larger expansion tank on the HVAC boiler system. (Change Order 89)
 - iv. Task Order 9.18 - \$5,300.00 to CH2M Hill for QA/QC services on the 2008 CIP Project.
 - v. Task Order 1.53 - \$5,014.00 to BC&A for QA/QC services on the 2008 CIP Project.

Metropolitan Water District of Salt Lake & Sandy
Engineering Committee Packet Information
Last Update: February 21, 2008

Agenda Item: Consider approval LCWTP On-Site Improvements - \$150,000.00 (*estimate subject to change*) for replacement of undersized ASTAT and bypass contactor for backwash pumps.

Objective: Discuss and consider approval of issues related to the LCWTP Pumping Plant

Background: In mid-November, 2007, Marcus Sheldrake (Black & Veatch) began the programming activities related to the LCWTP Pumping Facility, and consequently found several deficiencies in the Pumped Backwash System.

1. The motors provided for the system were 400 hp, 600 rpm units, per the specifications. It was discovered that the motors lacked thermal sensors (RTDs), as required by the specifications.
2. Start circuits were wired such that run status was not correctly reported to the SCADA system.
3. It was noted that the ASTATs (soft starts) have an Underwriter's Lab rating of 500 amps, which is less than the full-load amperage on the motor nameplates (527 amps), and also less than the observed current draw during test pumping (504-512 amps). In a discussion between Marcus, the GE field technician and GE's ASTAT "guru", the guru indicated that the ASTATs could handle loads 20% greater than the U.L. listing.

In an effort to facilitate the programming, Marcus worked to provide a wiring modification to the start circuits, which would correct the run status reporting. The OnSite construction team requested that GE provide a written verification that the ASTATs would be covered by warranty, given the "expert's" statement relative to the overload condition. This request was made the third week of December, 2007.

On January 30, 2008, Alder provided GE's response to the question of warranty. They stated that not only the ASTATs, but the bypass contactors as well were undersized, and that the "application is not acceptable." GE further stated that the next size contactor would not fit in the MCC, as configured.

A meeting was held February 1 in which the motor RTDs, the ASTATs and the contactors were discussed. Options for correcting the MCCs were to add stand-alone contactors on the Pump Building mezzanine, or to reconfigure the MCCs to provide space to fit the larger contactors and ASTATs. Lead time was estimated at 6-8 weeks to provide equipment for the stand-alone solution, or 12 weeks to provide equipment for the reconfigured MCCs.

At a subsequent meeting, held February 6, the preferred option was presented as reconfiguring the MCCs. At that meeting GE stated that they would need a purchase order to proceed, and Alder stated they would look to the District to provide a Change Order to the contract. Their collective position was that the drawings and specifications did not clearly indicate low-speed (600 rpm) motors, so the equipment was sized for standard speed (1800 rpm) motors. After the meeting, Skyline mentioned to Duane Jensen that the equipment cost is on the order of \$100,000.

A review of submittals reveals that the pumps and motors were approved April 26, 2005, and the MCCs were approved January 13, 2006.

It is noted that on February 11, the question came up about the sufficiency of the Finished Water pumps, motors and starters, as the motors for these installations are also low speed (720 rpm). The motor nameplate states full-load amperage at 251, while the submittal for the MCC indicates a full-load amperage for an 1800 rpm motor at 226.

Change order pricing has been estimated to be \$150,000. A final cost is expected on February 25 in advance of board meeting.

Discussions are ongoing regarding any contractual remedies related to this cost and the substandard installation.

Recommendation: Pending receipt and review of a satisfactory change order price, staff recommends approval of the change order.

Salt Lake Aqueduct Encroachment Agreements Status Report

Agreements Completed through December 31, 2007			
Application No.	Applicant	Location	Description of Encroachment
S-06-1002	Qwest	4500 S & Wasatch Blvd	Fiber Optics crossing
S-06-1005	Jeff Anderson	Lindon	Sewer line, landscape, fence
S-06-1009	UTOPIA	Utah County locations	4 separate telecom crossings
S-07-1011	Sam Hymas	Lindon	Sewer line, landscape, fence
S-07-1018	T-Mobile	Terminal Reservoir	Sublease for Clearwire
Agreements Completed Since January 1, 2008			
S-07-1002	Comcast	Alpine	Fiber Optics
S-07-1007	Gary Healey	Highland	Grazing, temporary shed
S-07-1016	Jim Theurer	Lindon	Landscape
S-06-1002	Serdar Investments	Cottonwood Heights	Driveway and utilities
Agreements Circulating for Approval, Signature			
S-06-1004	Cedar Hills	Timpanogas Cove Park improvements	
S-06-1010	Questar	SLC, above Wasatch	Renewal of expired agreement
S-07-1009	Evan Pringle	Highland	Landscape and hardscape
S-07-1017	Steven Harris	Highland	Landscape
S-07-1023	Gary Pay	Highland	Landscape
S-06-1013	Canberra Estates	Lindon	Street and parallel utilities
Applications Under Review			
S-07-1025	LDS Church	Skyline High School	Parking lot, water line
S-07-1027	Highland City	Beacon Hills Sports Park	– landscape and trail
S-08-1030	Diane Teichert	Alpine	Utilities, landscape for new subdivision
Not assigned	US Forest Service	Utah County	Gates to limit ATV access
Not assigned	Edelwiess Investors	Draper/Suncrest	Streets and utilities
Other Encroachments (non-traditional agreements required)			
S-07-1010	Suncrest	Draper	Condemnation for detention basin
S-07-1012	Waterpro	Corner Canyon	Waterline on fee title, outside aqueduct corridor – needs easement
P-07-1028	White City	Highland Drive, Sandy	Waterline parallel to POMA
Not assigned	UDOT	Near POMWTP	Trail in UTA R/W crossing Raw Water Pipeline