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May 2, 2013

**EL DORADO COUNTY
DEPARTMENT OF TRANSPORTATION
PLACERVILLE AIRPORT – PLACERVILLE, CALIFORNIA
HABITAT/SECURITY FENCE AND GATES**

AIP NO. 3-06-0188-14

**CHANGE ORDER NO. 2
ENGINEER'S REPORT**

Item CO2-1 – Replace Existing Operator Concrete Pad with New Concrete Pad, Including New Electrical Duct

The existing operator pad for the automatic sliding gate for the entrance near the Tee Hangars needs to be replaced. The existing concrete pad is cracked and unstable. The Contractor is proposing to remove the existing concrete pad, expose the existing electrical duct, excavate for the new concrete pad, extend the existing duct as needed and install a new concrete pad with sufficient reinforcement. This work will be performed for a Lump Sum cost of \$3,500.

Item CO2-2 – Repair New Fence Damaged During Winter Storm

A 50-foot section of installed new 8-foot chain link fence on the south perimeter was damaged by a large oak tree that fell during a windy winter storm. The Contractor will remove the damaged fence fabric, splice in new fence fabric, restretch fabric, and install all tension wire and post ties. This work will be accomplished for a Lump Sum cost of \$800.

Item CO2-3 – Install Additional Corner Posts

The as-bid layout of the perimeter fence was changed at various locations to bypass an existing pond, large rocks, existing utilities, and very steep terrain. Initial site review and aerial photographs did not disclose the steep terrain in the southeast corner of the property. The fence at the southwest corner was moved upstream of the existing pond to keep the fence out of wet foundation conditions and allow access to the pond. The new location will provide access to the fence for maintenance and repair. Additional corner posts were needed to complete the change in the fence location. It is proposed to add additional corner posts at the new corners along the revised location of the fence. The Contractor will install 16 new 3-inch terminal posts in a 12-inch diameter hole with concrete including all bracing rails, tension bars, truss rods, and fabric ties. Each corner post assembly will be installed at a unit price of \$654.10 for a total cost of \$10,465.60

Item CO2-4 – Change Section of 8-foot Chain Link Fence, Class E-1, Non Lava Bed to 8-foot Chain Link Fence, Class E-1, Lava Bed, Furnished and Installed

Portions of the existing ground along the west, south and east perimeter are lava bed. The field measurement of the 8-foot chain link fence installed in lava bed was found to be greater than originally estimated during design since large portions of the lava bed are overlaid by 2 to 4 feet of soil and were not identified as lava bed during design. The difference in unit price between 8-foot fence in non-lava bed and 8-foot fence in lava bed is \$5.50 per linear foot. The change in excavation conditions will be paid at \$5.50 per linear foot for 3,165 linear feet for a total cost of \$17,407.50.

Item CO2-5 – Additional New 8-foot High Chain Link Fence Furnished and Installed, Class E-1, Lava Bed (Bid Item 7)

The total as-bid quantity of 8-foot High Chain Link Fence was estimated at 14,500 linear feet, with 9,400 feet in non-lava bed and 5,100 feet in lava bed. The total field measured quantity of 8-foot fence was found to be 14,810 feet, with 6,235 feet in non-lava bed and 8,575 feet in lava bed. Change Order Item CO2-4 will pay for 3,165 feet of the additional 8-foot fence installed in lava bed and the remaining 310 feet of 8-foot fence in lava bed will be paid for at the unit bid price of \$35.00 per linear foot, for a total cost of \$10,850.

Item CO2-6 – Add Electrical Pull Box at Automatic Gate

The location of the automatic gate and fence in the terminal area was changed. This change resulted in the need for an additional N9 Christy pull box to route the new electrical power for the sliding and pedestrian gates. One proposed pull box will be installed at a total cost of \$500.

Item CO2-7 – Add Frame Extension to 12-foot Swing Gates

Four 12-foot swing gates were installed along the perimeter of the airport. The existing terrain slopes drastically in most areas. Additional fence framing was added to the bottom of the gate to fill the gap and maintain the security of the fence. This work will be accomplished at the four 12-foot swing gates at a unit price of \$700 each, for a total cost of \$2,800.

Item CO2-8 – Tymetal Gate Delivery Charges

Delivery charges for materials required for the Tymetal gate in Change Order No. 1 were omitted by the Contractor in his estimate of costs for this gate. These delivery charges will be paid for under this item of Change Order No. 2 in the amount of \$2,800.

Item CO2-9 – Gate Communications

Existing specified wireless communication systems to control and operate the automatic sliding gates do not work due to the heavy amount of interference from existing communication towers. At the start of the automatic gate installation the Contractor discussed the communication portion of the access control with the Sponsor and other air vendors and concluded that the specified communicators may not be powerful enough to reach the far end devices. Upon final installation it was found that the main (local) communicator would not connect with one of the east walk gate devices at all and would lose connection with the 4 remaining devices around 100 linear feet line of sight as they were tested with the supplied battery packs, according to the manufacturer's

connection suggestions, at any height. The wireless vendor was contacted to discuss the scenario. Since there is a myriad of EM noise in the El Dorado County area the vendor specified an alternate solution. Installation of a Nano-station at each automatic gate location that will communicate with a wireless router installed in the administration office will provide remote control of the 2 automatic gates and 2 pedestrian gates. This will be accomplished for a lump sum cost of \$4,199.60.

The total cost of this Change Order No. 2 is \$53,322.70. This work is eligible for Federal participation.

There will be 15 working days added to the contract time as a result of this change order.

CONTRACT SUMMARY

Original Contract Amount	\$657,200.00
Change Order No. 1	21,820.00
Change Order No. 2	<u>53,322.70</u>
New Contract Amount	<u>\$732,342.70</u>

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