



City of Grand Island

Tuesday, October 08, 2002

Council Session

Item G24

#2002-315 - Approving Change Order #1 for General Work Contract - Burdick Station GT-2 and GT-3 Combustion Turbine Project - Utilities Department

Background:

In the design and construction of a project of this magnitude and complexity, the construction and design processes run concurrently, one phase building upon another as information from successful bidders becomes available. For example, foundation design is dependent on loading information received from successful equipment bidders. But transformer specifications are not finalized until all information is received from the generator supplier, which can be several months. At the same time construction must begin on generator foundations in order to be able to receive those units. Rather than wait for all detailed vendor information, the General Construction Contract is prepared and awarded early in the process with anticipated additional work allowance of 5 - 10% in the project budget. The alternative would be to wait for all detailed information before contract award, which would add many months to the project, require extended storage of large equipment, and double handling.

Discussion:

The Industrial Company (TIC) was awarded the construction contract in December of 2001 in the amount of \$10,997,615. That contract includes the erection of the combustion turbines, foundations, piping systems, electrical duct banks, area drainage, transformers, circuit breakers, substation modifications, fire protection, fuel oil and natural gas systems, controls systems, pollution control systems, roads and buildings; essentially the entire project.

Since construction began there have been numerous additions and changes as system and sub-system specific information has become available and engineering design finalized. Proposed Change Order No. 1 to the General Construction Contract covers additions and changes since initial construction. The total Change Order amount is \$705,382.43. Of that amount, \$197,558.43 is back charged to equipment suppliers (primarily GE) for changes or additions to their equipment. The actual Change Order cost to the Utilities Department is \$507,824, 4.6% of the original General Work Contract price, 1% of total project cost. Each change has been reviewed and negotiated by our engineering consultants, Sargent and Lundy, and Utilities Department Staff.

Recommendation:

It is the recommendation of the Utilities Department that Change Order No. 1 to the General Work Contract be approved in the amount of \$705,382.43. A listing of each of the items

included in the Change Order is attached. Also attached is the most recent Project Cost and Price Summary.

Fiscal Effects:

Expenditure of \$705,382.43 from Electric Fund 520, with back charge of \$197,558.43 to other contractors. There are sufficient funds available. The Project remains within original cost projections.

Alternatives:

None recommended. See attached RESOLUTION.

Staff Contact: Gary Mader; Dale Shotkoski

City of Grand Island
 Utilities Department
 General Work Contract - Change Order 1

(submitted with Memo 10/1/02)

<u>Change Order Request</u>	<u>Description</u>	<u>Amount</u>
001	Add warehouse rebar splices	\$ 2,650.00
002	Backcharge to GEEPE	\$ 4,371.00
003	Revise substation caissons	\$ 44,034.00
004	Revisions to fuel oil pipe support and turbine control center foundations	\$ 9,689.00
005	Revise fuel oil heater foundation	\$ 4,431.00
006	Revise stack, fuel filter, water injection, and transformer foundations	\$ 10,617.00
007	Delete pipe vault	\$ (5,611.00)
008	Add insulation and heat trace to fuel oil piping	\$ 547.00
009	Delete demineralized water valves	\$ (2,153.00)
010	set	\$ (10,376.00)
011	Revisions to fire loop pipe specifications	\$ 56,312.00
012	Revise fuel oil piping support design	\$ 45,538.00
013	Revisions to fencing and pavement, add fuel oil pipe bridge	\$ 59,300.00
014	Add instrument devices	\$ 6,848.00
015	Revise electrical one-line diagram	\$ 5,016.00
017	Revise circulating water piping	\$ 55,958.00
018	Revise demineralized water piping	\$ 1,498.00
019	Revise fuel oil pump house piping	\$ 70,000.00
020	Revision to site piping plan drawings	\$ 21,627.00
021	Revise oil/water separator foundation and manhole extentions	\$ 41,965.00
023	Backcharges to GEEPE	\$ 68,068.01
024	Revisions to Instrument Index	\$ (2,313.00)
028	Delete road textile underlayment	\$ (3,781.00)
029	Revise tunnel pavement	\$ 77,000.00
030	Revise auxiliary transformer foundations	\$ 2,944.00
031	Delete HVAC filtering section	\$ (11,900.00)
032	Relocate fire water piping	\$ 5,127.00
033	Relocate fire water hydrant	\$ 6,476.00
034	Add circulating water valves	\$ 5,481.00
035	Backcharges to GEEPE	\$ 34,846.42
036	Add fuel oil tank floating suction	\$ 10,900.00
037	Backcharge to Valmont	\$ 959.00
039	Backcharges to GEEPE	\$ 89,314.00
	Total	\$705,382.43

Cost and Price Summary

Spec Title	Spec. No.	Pre-Award Estimated Cost	Contract Award Status	Actual or Projected Contract Price	Comments	
Combustion Turbine Generator	B-3001	30,000,000	Awarded	29,861,000		
Change Order for CTs and PTs	B-3001		Awarded	65,000		
Change Order for Stack deduct	B-3001		Awarded	(74,000)		
Change Order for Fuel Oil Skid deduct	B-3001		Pending	(6,500)		
Change Order for Spare Parts	B-3001		Awarded	216,610		
Geo technical Investigation	B-3002	40,000	Awarded	39,340		
Initial Site Preparation	B-3003	1,000,000	Awarded	3,412,386	See Comment 1	
Pre Cast Concrete	B-3004	79,800	Awarded	42,002		
Rebar Detailing	B-3005	6,000	Awarded	5,250		
Change Order 1	B-3005		Awarded	0	included in SWCN-4	
Change Order 2	B-3005		Awarded	1,275		
Change Order 3	B-3005		Awarded	112		
General Work Contract	B-3006	12,915,097	Awarded	10,997,615	See Comment 4	
Total of all Change Orders	B-3006	See Details on Page 2		1,588,609		
TIC work backcharge to GE		See Details on Page 2		(250,046)	See Comment 5	
Fuel Gas Conditioning	B-3007	300,000	Awarded	261,895		
Main Power Transformers	B-3008	950,000	Awarded	947,800		
Motor Control Centers	B-3009	40,000	Awarded	17,697		
DCS	B-3010	90,000	Awarded	232,685	See Comment 2	
Change Order 1	B-3010		Awarded	16,924		
Change Order 2	B-3010		Awarded	6,620		
Disconnect Switches	B-3012	88,840	Awarded	75,516		
Relay Panels	B-3013	307,000	Awarded	98,600		
Substation Structural Steel	B-3014	31,000	Awarded	151,785		
Circuit Breakers	B-3016	208,500	Awarded	149,585		
Data Logger	B-3017	43,730	Awarded	39,930		
Gas Metering Station	Kinder-Morgan	250,000	Awarded	245,000		
Emission Compliance Test	Air Hygiene	32,000	Awarded	32,000		
Spare Parts		300,000	Included w/B-3001	0		
Indirects	Not to exceed	3,292,372	Partially Incurred	3,000,000	Estimate at completion	
SWCN 1 (FO piping to GT-1)			Awarded	12,000		
SWCN 2 (Env.Compliance Plan for Existing Units)			Awarded	120,000		
SWCN 3 (Design Ductbank)			Awarded	50,000		
SWCN 4 (Acousitc encl foundation changes)			Awarded	0	See Comment 5	
SWCN 5 (not used)			N/A	0		
SWCN 6 (not used)			N/A	0		
SWCN 7 (Start-up manager)			Awarded	100,380		
SWCN 8 (Compliance Guidance Document for Air Permit)			Awarded	12,000		
SWCN 9 (Performance Testing)			Awarded	107,000		
Contingency		2,000,000	N/A	0		
Project Total		51,974,339		51,576,070	Difference =	398,269
Pending GE TA time			Pending	425,000		
Pending LDs from GE			Pending	(3,036,311)		
Sales Tax for CT			Paid	1,496,300		
Adjusted Project Cost		51,974,339		50,461,059	Difference =	1,513,280
Comments						
1. The soil borings revealed that the size of the lake that need to be excavated was considerably larger and deeper than originally anticipated and estimated.						
2. The scope in the original estimate was for additional I/Os. The new scope includes these I/Os plus a new operator console and new interface with GE's Mark V controller.						
3. Deleted.						
4. We expect some change orders to occur that will modify the price.						
5. CGI to bill to GE for changes and TIC charges itemized on Page 2.						

SUMMARY OF TIC CHANGE ORDERS

10/02/2002
Revision 6

TIC Change Orders for Specification B-3006	COR Status	Actual or Projected Price	Comments
Change Order Request 1	Awarded	2,650	
Change Order Request 2	Awarded	4,371	See Comment 5
Change Order Request 3	Awarded	44,034	
Change Order Request 4	Awarded	9,689	
Change Order Request 5	Awarded	4,431	
Change Order Request 6	Awarded	10,617	
Change Order Request 7	Awarded	(5,611)	
Change Order Request 8	Awarded	547	
Change Order Request 9	Awarded	(2,153)	
Change Order Request 10	Awarded	(10,376)	
Change Order Request 11	Awarded	56,312	
Change Order Request 12	Awarded	45,538	
Change Order Request 13	Awarded	59,300	
Change Order Request 14	Awarded	6,848	
Change Order Request 15	Awarded	5,016	
Change Order Request 16	Pending	77,810	
Change Order Request 17	Awarded	55,958	
Change Order Request 18	Awarded	1,498	
Change Order Request 19	Awarded	70,000	
Change Order Request 20	Awarded	21,627	
Change Order Request 21	Awarded	41,965	
Change Order Request 22	Rejected	0	
Change Order Request 23	Awarded	68,068	See Comment 5
Change Order Request 24	Awarded	(2,313)	
Change Order Request 25	Pending	62,658	
Change Order Request 26	Pending	18,084	
Change Order Request 27	Rejected	0	
Change Order Request 28	Awarded	(3,781)	
Change Order Request 29	Awarded	77,000	
Change Order Request 30	Awarded	2,944	
Change Order Request 31	Awarded	(11,900)	
Change Order Request 32	Awarded	5,127	
Change Order Request 33	Awarded	6,476	
Change Order Request 34	Awarded	5,481	
Change Order Request 35	Awarded	34,846	See Comment 5
Change Order Request 36	Awarded	10,900	
Change Order Request 37	Awarded	959	Backcharge to Val
Change Order Request 38	Pending	45,986	
Change Order Request 39	Awarded	89,314	See Comment 5
Change Order Request 40	Pending	119,721	
Change Order Request 41	Pending	86,978	
Change Order Request 42			
Change Order Request 43	Pending	150,530	
Change Order Request 44			
Change Order Request 45	Pending	271,040	
Change Order Request 46	Pending	(3,027)	
Pending GEEPE Backcharges	Pending	53,447	See Comment 5
TOTAL		1,588,609	
Back Charge to GE		250,046	

R E S O L U T I O N 2002-315

WHEREAS, on December 4, 2001, by Resolution 2001-328, the City Council for the City of Grand Island awarded the bid for general contract work on combustion turbines at Burdick Station to The Industrial Company of Steamboat Springs, Colorado; and

WHEREAS, it has been determined that modifications to the work to be performed by The Industrial Company are necessary; and

WHEREAS, such modifications have been incorporated into Change Order No. 1; and

WHEREAS, the result of such modifications will increase the contract amount by \$705,382.43 of which \$197,558.43 is back charged to equipment suppliers for changes or additions to their equipment.

NOW, THEREFORE, BE IT RESOLVED BY THE MAYOR AND COUNCIL OF THE CITY OF GRAND ISLAND, NEBRASKA, that the Mayor be, and hereby is, authorized and directed to execute Change Order No. 1, between the City of Grand Island and The Industrial Company of Steamboat Springs, Colorado to provide the modifications as outlined on Exhibit "A" attached hereto and incorporated herein by reference.

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Adopted by the City Council of the City of Grand Island, Nebraska on October 8, 2002

RaNae Edwards, City Clerk

Approved as to Form	?
October 3, 2002	? City Attorney