

**Lee County Board Of County Commissioners
Agenda Item Summary**

Blue Sheet No. 20030855

1. REQUESTED MOTION:

ACTION REQUESTED:

Approve Addendum to the Construction Manager Agreement, for RFQ-01-08 North Lee County Water Treatment Plant, with Kellogg Brown & Root Inc. (Contract #1960) to include the Guaranteed Maximum Price (GMP) in the amount of \$24,000,000.00 (includes the 5% CM Fee). Also request Board approve waiving of any formal process (if needed) and authorize the use of the Direct Material Purchase Orders based on CM's competitive process, which allows the County to purchase directly from suppliers of equipment and/or materials as a cost/time saving measure. Also approve budget transfer of \$4,000,000.00 from Utilities Capital Improvement Reserves and \$7,000,000.00 from Water Connection Fee Reserves to the North Lee County Water Treatment Plant project and amend FY 02/03 - 06/07 CIP accordingly.

WHY ACTION IS NECESSARY: Board approval is required.

WHAT ACTION ACCOMPLISHES: Provides for complete construction of the North Lee County Water Treatment Plant.

2. DEPARTMENTAL CATEGORY:

10. Utilities

COMMISSION DISTRICT #:

C10P

3. MEETING DATE:

08-05-2003

4. AGENDA:

- CONSENT
- ADMINISTRATIVE
- APPEALS
- PUBLIC
- WALK ON
- TIME REQUIRED:

5. REQUIREMENT/PURPOSE:
(Specify)

- STATUTE
- ORDINANCE
- ADMIN. CODE AC-4-4
- OTHER

6. REQUESTOR OF INFORMATION:

- A. COMMISSIONER
- B. DEPARTMENT Public Works
- C. DIVISION Utilities
- BY: Rick Diaz, Director

[Handwritten signature]
7/23/03

7. BACKGROUND:

On October 23, 2001, the Board approved award to Kellogg Brown & Root Inc. for RFQ-01-08, Construction Management for the North Lee County Water Treatment Plant in the amount of five percent (5%) of the total construction project and also authorized staff to enter into a Construction Manager Agreement.

At this time the Utilities Division is requesting Board approve the Guaranteed Maximum Price (GMP) of \$24,000,000.00 (includes The 5% CM Fee). In order for the County to take advantage of saving the sales tax and as a time saving measure we are requesting Authorization to waive any formal process and allow for the purchase of materials/equipment from various vendors selected by the Construction Manager and the County.

Funds will be available in account: 20708448734.506540; 20708448712.506540 and 20708448730.506540

- Attachment: 1. Letter from Kellogg Brown & Root dated July 2, 2003
2. Budget Transfers (2)

8. MANAGEMENT RECOMMENDATIONS:

9. RECOMMENDED APPROVAL:

A Department Director	B Purchasing or Contracts	C Human Resources	D Other	E County Attorney	F Budget Services			G County Manager
					OA	OM	Risk	GC
<i>[Signature]</i> 7/23/03	<i>[Signature]</i> 7/23/03	N/A	<i>[Signature]</i> 7/23/03	<i>[Signature]</i> 7/23/03	<i>[Signature]</i> 7/24/03	<i>[Signature]</i> 7/24	<i>[Signature]</i> 7/24/03	<i>[Signature]</i> 7/24/03

10. COMMISSION ACTION:

- APPROVED
- DENIED
- DEFERRED
- OTHER

Rec. by CoAtty
Date: *7/23/03*
Time: *1:00 pm*
Forwarded To: *Budget*
7/23/03 1:25pm

RECEIVED BY
COUNTY ADMIN *Pat*
7/23/03
COUNTY ADMIN
FORWARDED TO:
7/24/03

REQUEST FOR TRANSFER OF FUNDS

FUND NAME: Water Connection Fees DATE: 07/22/03 BATCH NO. _____

FISCAL YEAR: 02/03 FUND #: 48712 DOC TYPE: YB LEDGER TYPE: BA

TO: Capital Projects Water System Projects
 (DIVISION NAME) (PROGRAM NAME)

NOTE: PLEASE LIST THE ACCOUNT NUMBER BELOW IN THE FOLLOWING ORDER:
 FUND #-DEPT/DIV #-PROGRAM #-OBJECT CODE #-SUBFUND #-PROJECT#-COST CENTER #.
 (EXAMPLE: BB5120100100.503450)

ACCOUNT NUMBER	OBJECT NAME	DEBIT
20708448712.506540	Construction - Improvements	\$ 7,000,000

TOTAL TO: \$ 7,000,000

FROM: Non-Departmental Reserves
 (DIVISION NAME) (PROGRAM NAME)

ACCOUNT NUMBER	OBJECT NAME	CREDIT
GC5890148712.509918	Reserves for Fund Balance	\$ 7,000,000

TOTAL FROM: \$ 7,000,000

EXPLANATION: Per Blue Sheet 20030855 - Transfer funds from Reserves for the North Lee County Water Treatment project.

 DIVISION DIRECTOR SIGNATURE DATE

DBS: APPROVAL DENIAL _____

APPROVAL _____ DENIAL _____

CO. ADMIN.: APPROVAL _____ DENIAL _____

7/23/03

 DEPARTMENT DIRECTOR SIGNATURE DATE

[Signature] 7/23/03
 OPERATIONS ANALYST SIGNATURE DATE

 BUDGET OPERATIONS MANAGER SIGNATURE DATE

 CO. ADMIN. SIGNATURE DATE

BCC APPROVAL DATE _____

 BCC CHAIRMAN SIGNATURE

BA NO: _____ AUTH CODE: _____ TRANS DATE: _____



1803 BRIAR CREEK BOULEVARD • SAFETY HARBOR, FL 34695
PHONE 727.723.3945 • FAX 727.726.2298

July 2, 2003

Mr. Rick Diaz
Lee County Utilities
1500 Monroe St., 3rd Floor
Ft. Myers, FL 33901

Dear Mr. Diaz,

Kellogg Brown & Root, Inc. (KBR) is pleased to provide Lee County with the attached Guaranteed Maximum Price (GMP) proposal for the North Lee County Water Treatment Plant.

Everyone at KBR, and especially the staff assigned to this project, is looking forward to working with you and your staff toward an expeditious start and successful completion of this project.

If you or your staff has any questions, comments or concerns about this GMP, please feel free to contact either Joe Dignam or myself.

Sincerely,

E. Michael White
Director of Construction
Eastern Region, Infrastructure Americas

JUL 17 2003

June 25, 2003

Mr. Ivan Velez
Lee County Utilities
1500 Monroe St., 3rd Floor
Ft. Myers, FL 33901

Dear Ivan,

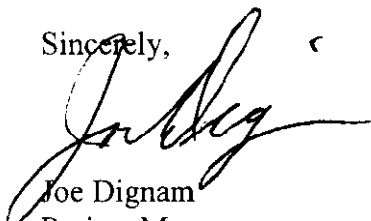
Per previous conversations, this letter is to confirm that in order to reduce the Guaranteed Maximum Price Proposal (GMP) for the North Lee County Water Treatment Plant, KBR has included several value engineering proposals into its pricing. These value engineering proposals are as follows:

1. Use Crom Corporation standard details for the construction of the Water storage tanks. savings \$40,000.00
2. Degassifier/Odor control system changes proposed by TSE Jacobs. Savings \$120,000.00
3. Change the remote electrical and instrumentation cabinets at the well heads from stainless steel to fiberglass. Savings \$50,000.00
4. Miscellaneous changes in electrical equipment and switchgear. Savings \$78,000.00

The total of the Value engineering proposals is \$288,000.00 and this number is reflected in the GMP. Since these items have already been included in the GMP, formal acceptance of them later by Lee County will not result in any further price reduction.

If you or your staff has any questions, comments or concerns about this, please feel free to contact me.

Sincerely,



Joe Dignam
Project Manager
Lee County WTP

June 25, 2003

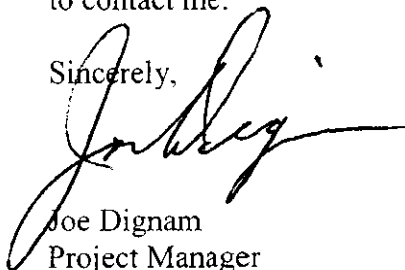
Mr. Ivan Velez
Lee County Utilities
1500 Monroe St., 3rd Floor
Ft. Myers, FL 33901

Dear Ivan,

Per our conversation, this letter is to confirm that the Guaranteed Maximum Price (GMP) Proposal submitted by Kellogg Brown & Root, Inc. (KBR) is not a line item GMP. Any shortfalls in applicable line items in the GMP, including KBR Labor and other General Conditions, shall be defrayed by the construction contingency contained within the GMP. Conversely, any savings in applicable line items through lower than expected sub pricing and any accepted value engineering items shall be added to the contingency. The contingency will be released according to the terms of the original contract between The Board of Commissioners Lee County, Florida and Kellogg Brown & Root dated January 30, 2002.

If you or your staff has any questions, comments or concerns about this, please feel free to contact me.

Sincerely,



Joe Dignam
Project Manager
Lee County WTP

Guaranteed Maximum Price Proposal

NORTH LEE COUNTY WATER TREATMENT PLANT Lee County, Florida

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July 2, 2003

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	a. GMP Project Estimate Summary
	b. GMP Detail Cost estimate
	c. Non-Labor General Conditions Summary
	d. Construction Management Labor Estimate
Section 5	Preliminary Project Schedule

Section 2 - List of Drawings

The following is a list of the Drawings which served as the basis for the preparation of this Guaranteed Maximum Price Proposal.

DRAWING #	DRAWING DESCRIPTION	ISSUE DATE
	MWH PROJECT NO. 3220089, VOLUME 3	
	<u>GENERAL DRAWINGS</u>	
G-1	Cover	1-9-03
G-2	Location Maps and Building Area Index	1-9-03
G-3	List of Drawings I	1/13/03
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GC-2	Erosion Control and Drainage Details	1-9-03
GC-3	Water Details	1-9-03
GC-4	Earthwork Sections	1-9-03
GC-5	Trenching Details	1-9-03
GC-6	Gate and Fence Details	1-9-03
C-1	General Site Plan	1-9-03
C-2	Clearing Plan	1-9-03
C-3	Paving, Grading and Drainage NW Quarter	1-9-03
C-4	Paving, Grading and Drainage NE Quarter	1-9-03
C-5	Well and Entrance Road Site Plans	1-9-03
C-6	Yard Piping – General Plan	1-9-03
C-7	Process Area –Yard Piping	1-10-03
C-8	Process Area – Yard Piping	1-10-03
C-9	Raw Water Line 1 - Plan and Profile	1-10-03
C-10	Raw Water Line 1 - Plan and Profile	1-9-03
C-11	Raw Water Line 1 - Plan and Profile	1-9-03
C-12	Raw Water Line 1 - Plan and Profile	1-9-03
C-13	Raw Water Line 2 - Plan and Profile	1-9-03

DRAWING #	DRAWING DESCRIPTION	ISSUE DATE
C-14	Raw Water Line 3 - Plan and Profile	1-13-03
C-15	Raw Water Line 3 - Plan and Profile	1-9-03
C-16	Finished Water Line – Plan and Profile	1-9-03
C-17	Raw Water Wells – Plan, Section and Details	1-13-03
C-18	Wellhead and Pump Details	
C-19	On-Site Disposal System	1-9-03
C-20	Details	1-9-03
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GA-1	General Life Safety Plan	1-9-03
GA-2	General Door Schedule	1-9-03
GA-3	General Room Finish Schedule	1-9-03
GA-4	General Door Details	1-9-03
GA-5	General Door, Window and Louver Details	1-9-03
GA-6	General Miscellaneous Details	1-9-03
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1A-2	Architectural Floor Plan II	1-9-03
1A-3	Architectural Mezzanine and Roof Plans	1-9-03
1A-4	Architectural Exterior Elevations I	1-9-03
1A-5	Architectural Exterior Elevations II	1-9-03
1A-6	Architectural Reflected Ceiling Plan I	1-9-03
1A-7	Architectural Reflected Ceiling Plan II	1-9-03
1A-8	Architectural Enlarged Plan I	1-9-03
1A-9	Architectural Enlarged Plan II	1-9-03
1A-10	Architectural Interior Elevations	1-9-03
1A-11	Architectural Wall Sections	1-9-03
1A-12	Architectural Sections and Details	1-9-03
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GS-1	General Notes and Standard Details I	1-9-03
GS-2	Standard Details – II	1-9-03
GS-3	Standard Details – III	1-9-03
GS-4	Standard Details – IV	1-9-03
GS-5	Standard Details – V	1-9-03
GS-6	Standard Details – VI	1-9-03
GS-7	Standard Details – VII	1-9-03
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DRAWING #	DRAWING DESCRIPTION	ISSUE DATE
1S-1	Process Building – Foundation and Floor Overall Plan	1-9-03
1S-2	Process Building – Foundation and Floor Plan I	1-9-03
1S-3	Process Building – Foundation and Floor Plan II	1-9-03
1S-4	Process Building – Foundation and Floor Plan III	1-9-03
1S-5	Process Building – Mezzanine Plan	1-9-03
1S-6	Process Building – Sections and Details I	1-9-03
1S-7	Process Building - Sections and Details II	1-9-03
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1S-13	Process Building - Sections and Details VIII	1-9-03
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IP-2	Process Building – Plan I – Chemical Feed Rooms	1-9-03

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IP-5	Process Building – Plans IV – Future Membrane Trains	1-9-03
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2P-6	Chemical Tanks Details III	1-9-03
2P-7	Chemical Tanks Details IV	1-9-03
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4P-4	High Service Pump Station – Sections and Details - Flow Meter	1-10-03
4P-5	Finished Water Storage Tank – Tank Drain Pump Station	1-10-03
5P-1	Injection Well – General Well	1-9-03
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IM-5	Process Building – HVAC Sections II	1-9-03
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GE-7	Perimeter Lighting and Security Cameras	1-9-03
GE-8	Power Distribution System Single Line Diagram and Conduit Development	1-9-03
GE-9	Protective Relaying	1-9-03
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GE-24	Field Devices Conduit Development - 2	1-9-03
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GE-26	Field Devices Conduit Development - 4	1-9-03
GE-27	Field Devices Conduit Development - 5	1-9-03
GE-28	Field Devices Conduit Development - 6	1-9-03
GE-29	Field Devices Conduit Development - 7	1-9-03
GE-30	Field Devices Conduit Development - 8	1-9-03
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GE-35	Brine Pond Pumps Control and Power Feed	1-9-03

DRAWING G #	DRAWING DESCRIPTION	ISSUE DATE
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GE-38	Sand Separator LCP Power Feed	1-9-03
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GE-41	Control Schematics – 3	1-9-03
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IE-2	Process Building Mechanical Area Equipment Location Plan	1-9-03
IE-3	Process Building Mechanical Area Instrument Location Plan	1-9-03
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IE-5	Process Building Chemical Area Instrument Location Plan	1-9-03
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DRAWING #	DRAWING DESCRIPTION	ISSUE DATE
	<u>INSTRUMENTATION DRAWINGS</u>	
GI-1	Symbols and Nomenclature – I	1-13-03
GI-2	Symbols and Nomenclature – II	1-13-03
GI-3	Control Room Equipment Console	1-13-03
GI-4	Panel Elevations – I	1-13-03
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GI-6	Panel Elevations – III	1-13-03
GI-7	Instrumentation Details – I	1-13-03
GI-8	Instrumentation Details – II	1-13-03
GI-9	Instrumentation Details – III	1-13-03
GI-10	Network Motor Operated Valve Details	1-13-03
GI-11	Membrane Wet Panel	1-13-03
I-1	Plant Control System Block Diagram	1-13-03
I-2	Raw Water Wells P&ID	1-13-03
I-3	Sand Separator P&ID	1-13-03
I-4	Cartridge Filters P&ID	1-13-03
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I-12	Future Train No.3 Second Stage Membranes P&ID	1-13-03
I-13	Future Train No.4 First Stage Membranes P&ID	1-13-03
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I-15	Degasifiers and Clearwell System P&ID	1-13-03
I-16	Clearwell and Transfer Pumps P&ID	1-13-03
I-17	High Service Pump Station P&ID	1-13-03
I-18	Air Quality Control System	1-13-03
I-19	Sulfuric Acid Feed System P&ID	1-13-03
I-20	Sodium Hypochlorite Feed System I P&ID	1-13-03
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I-24	Caustic Soda Feed System II P&ID	1-13-03
I-25	Caustic Soda Feed System III P&ID	1-13-03
I-26	Corrosion Inhibitor Feed System P&ID	1-13-03
I-27	Ammonia Feed System P&ID	1-13-03

DRAWING #	DRAWING DESCRIPTION	ISSUE DATE
I-28	Fluoride Feed System P&ID	1-13-03
I-29	Air Compressor System P&ID	1-13-03
I-30	Concentrate System P&ID	1-13-03
I-31	Cleaning System – I	1-13-03
I-32	Cleaning System – II	1-13-03
I-33	Scavenger System	1-13-03
I-34	Utility Water System P&ID	1-13-03
I-35	Electrical Utilities – P&ID	1-13-03
I-36	Electrical Utilities – P&ID	1-13-03
I-37	Network Device Block Diagram	1-13-03
I-38	Motorized Valves PLC Interconnection Diagram	1-13-03

Section 2 List of Specifications dated January, 2003

<u>SPECIFICATION</u>	<u>TITLE</u>
<u>DIVISION 00 BID REQUIREMENTS</u>	
<u>00700</u>	General Conditions
<u>00800</u>	Supplementary General Conditions
<u>DIVISION 01 GENERAL REQUIREMENTS</u>	
<u>01010</u>	Summary of Work
<u>01070</u>	Abbreviations of Institutions
<u>01090</u>	Reference Standards

<u>SPECIFICATION</u>	<u>TITLE</u>
<u>01300</u>	Contractor Submittals
<u>01311</u>	CPM Construction Schedule
<u>01400</u>	Quality Control
<u>01505</u>	Mobilization
<u>01510</u>	Temporary Utilities
<u>01520</u>	Security
<u>01530</u>	Protection of Existing Facilities
<u>01550</u>	Site Access and Storage
<u>01560</u>	Temporary Environmental Controls
<u>01590</u>	Field Offices
<u>01600</u>	Products, Materials, Equipment and Substitutions
<u>01650</u>	Hydraulic Structure Testing and Disinfection
<u>01656</u>	Pressure Pipe Testing and Disinfection
<u>01660</u>	Equipment Testing and Plant Startup
<u>01700</u>	Project Closeout
<u>DIVISION 02 SITEWORK</u>	
<u>02100</u>	Site Preparation
<u>02140</u>	Dewatering
<u>02200</u>	Earthwork
<u>02210</u>	Site Grading
<u>02221</u>	Excavation and Backfilling for Utilities

<u>SPECIFICATION</u>	<u>TITLE</u>
<u>02281</u>	Soil Treatment - Termite Control
<u>02315</u>	Site Earthwork
<u>02490</u>	Precast Concrete Manholes and Vaults
<u>02565</u>	Ductile Iron Pipe
<u>02594</u>	Large Diameter Polyethylene Pressure Pipe
<u>02831</u>	Chain Link Fences and Gates
<u>02930</u>	Seeding and Sodding
<u>DIVISION 03 CONCRETE</u>	
<u>03100</u>	Concrete Formwork
<u>03200</u>	Reinforcement Steel
<u>03290</u>	Joints in Concrete
<u>03300</u>	Cast-in-Place Concrete
<u>03315</u>	Grout
<u>03400</u>	Precast Concrete
<u>DIVISION 04 MASONRY</u>	
<u>04232</u>	Reinforced Concrete Block Masonry
<u>DIVISION 05 METALS</u>	
<u>05100</u>	Structural Steel Framing
<u>05300</u>	Metal Decking

<u>SPECIFICATION</u>	<u>TITLE</u>
<u>05400</u>	Cold Formed (Light) Metal Framing
<u>05500</u>	Miscellaneous Metalwork
<u>DIVISION 06 WOOD AND PLASTICS</u>	
<u>06100</u>	Rough Carpentry
<u>06200</u>	Finish Carpentry and Millwork
<u>DIVISION 07 THERMAL AND MOISTURE PROTECTION</u>	
<u>07120</u>	Fluid Applied Waterproofing
<u>07210</u>	Building Insulation
<u>07600</u>	Flashing and Sheet Metal
<u>07920</u>	Sealants and Caulking
<u>DIVISION 08 DOORS AND WINDOWS</u>	
<u>08110</u>	Steel Doors and Frames
<u>08120</u>	Aluminum Doors and Frames
<u>08360</u>	Overhead Doors
<u>08520</u>	Aluminum Windows
<u>08710</u>	Finish Hardware
<u>08800</u>	Glazing
<u>DIVISION 09 FINISHES</u>	

<u>SPECIFICATION</u>	<u>TITLE</u>
<u>09250</u>	Gypsum Board
<u>09310</u>	Ceramic Tile
<u>09500</u>	Acoustical Tile
<u>09650</u>	Resilient Flooring
<u>09682</u>	Carpet
<u>09800</u>	Protective Coating
<u>09900</u>	Architectural Paint Finishes
<u>DIVISION 10 SPECIALTIES</u>	
<u>10160</u>	Metal Toilet Compartments
<u>10400</u>	Identifying Devices
<u>10500</u>	Lockers
<u>10520</u>	Fire Protection Specialties
<u>10600</u>	Partitions
<u>10700</u>	Exterior Sun Control Devices
<u>10800</u>	Toilet and Bath Accessories
<u>DIVISION 11 EQUIPMENT</u>	
<u>11000</u>	Equipment General Provisions
<u>11100</u>	Pumps General
<u>11103</u>	Vertical Turbine Pumps
<u>11111</u>	Horizontal Ansi End Suction Pumps

<u>SPECIFICATION</u>	<u>TITLE</u>
<u>11147</u>	Diaphragm Pumps
<u>11149</u>	Submersible Sump Pumps
<u>11150</u>	Vertical Sump Pumps
<u>11175</u>	Drum Pumps
<u>11189</u>	Submersible Turbine Pumps
<u>11200</u>	Mixers and Flocculators, General
<u>11202</u>	In-Line Mixers
<u>11224</u>	Tank Mixers
<u>11258</u>	Chemical Feeding Equipment, General
<u>11259</u>	Metering Pumps
<u>11283</u>	Anhydrous Ammoniation System
<u>11363</u>	Cartridge Filters
<u>11421</u>	Pressure Sand Filters
<u>11433</u>	Low Pressure Reverse Osmosis
<u>11511</u>	Compressors, Tank-Mounted
<u>11521</u>	Heatless Air Dryers
<u>11900</u>	Miscellaneous Equipment
<u>DIVISION 12 FURNISHINGS</u>	
<u>12511</u>	Horizontal Louver Blinds
<u>12612</u>	Laboratory Casework, Metal

<u>SPECIFICATION</u>	<u>TITLE</u>
<u>DIVISION 13 SPECIAL CONSTRUCTION</u>	
<u>13121</u>	Pre-Engineered Metal Buildings
<u>13206</u>	Welded Steel Surge Tanks
<u>13255</u>	Degasifier and Air Quality Control System
<u>13675</u>	Polyethylene Tanks
<u>13695</u>	Prestressed Concrete Tank (Wire Wrapped)
<u>DIVISION 14 CONVEYING SYSTEMS (not used)</u>	
<u>DIVISION 15 MECHANICAL</u>	
<u>15000</u>	Piping, General
<u>15005</u>	Piping Identification Systems
<u>15006</u>	Pipe Supports
<u>15010</u>	Mill Piping – Exposed and Buried
<u>15015</u>	Double Contained Pipe
<u>15025</u>	Steel Pipe
<u>15030</u>	Stainless Steel Pipe
<u>15037</u>	Copper Water Tube
<u>15060</u>	PVC Pressure Pipe (ASTM D 1785, Modified)
<u>15065</u>	CPVC Pressure Pipe (ASTM F 441, Modified)
<u>15075</u>	Meters, General
<u>15079</u>	Mechanical Batch Meters

<u>SPECIFICATION</u>	<u>TITLE</u>
<u>15082</u>	Venturi Meters
<u>15121</u>	Ductile Iron Pipe
<u>15145</u>	Pipe, Ductwork, and Equipment Insulation
<u>15151</u>	Wet Pipe Sprinkler System
<u>15183</u>	Gauges
<u>15200</u>	Valves, General
<u>15201</u>	Valve and Gate Actuators
<u>15202</u>	Butterfly Valves
<u>15203</u>	Check Valves
<u>15204</u>	Ball Valves
<u>15205</u>	Diaphragm Valves
<u>15206</u>	Gate Valves
<u>15207</u>	Plug Valves
<u>15215</u>	Pressure Reducing Valves
<u>15230</u>	Miscellaneous Valves
<u>15235</u>	Fire Hydrants
<u>15430</u>	Plumbing Piping and Specialties
<u>15450</u>	Plumbing Equipment
<u>15500</u>	Heating, Ventilating & Air Conditioning
<u>15650</u>	Air Conditioning
<u>15850</u>	Fans, Blowers, and Ventilators

<u>SPECIFICATION</u>	<u>TITLE</u>
<u>DIVISION 16 ELECTRICAL</u>	
<u>16050</u>	Electrical General Provisions
<u>16110</u>	Electrical Raceway System
<u>16111</u>	Underground Raceway Systems
<u>16120</u>	Wires and Cables
<u>16140</u>	Wiring Devices
<u>16145</u>	Variable Frequency Drives
<u>16210</u>	Diesel Engine Generators
<u>16250</u>	Engine Generator Switchgear
<u>16400</u>	Electrical Service and Distribution
<u>16431</u>	Protective Device Studies
<u>16450</u>	Grounding
<u>16460</u>	Electric Motors
<u>16470</u>	Panelboards and Dry Type Transformers
<u>16480</u>	Low Voltage Motor Control Centers
<u>16481</u>	Raw Water Well Pump Control Panel
<u>16485</u>	Local Control Stations & Misc. Electrical Devices
<u>16500</u>	Lighting
<u>16611</u>	Uninterruptible Power System, Single Phase
<u>16720</u>	Fire Alarm System
<u>16760</u>	Plant Intercom System
<u>16950</u>	Electrical Tests

<u>SPECIFICATION</u>	<u>TITLE</u>
<u>DIVISION 17 INSTRUMENTATION</u>	
<u>17100</u>	Process Control and Instrumentation Systems
<u>17102</u>	In-Line Flow Measuring Systems
<u>17103</u>	Liquid Flow Detection Devices
<u>17106</u>	Level Measuring Systems
<u>17107</u>	Level Detection Switches
<u>17108</u>	Pressure Measuring System
<u>17109</u>	Pressure Detection Switches
<u>17112</u>	Process Analyzer Measuring Systems
<u>17200</u>	Control Panels
<u>17201</u>	Control Panel Instrumentation
<u>17300</u>	Controls and Instrumentation
<u>17510</u>	PLC – Based Control Systems Hardware
<u>17520</u>	PLC – Based Control Systems Software

Section 3 Description of Work

The work performed under the contract comprises the Construction Management and construction of a five million gallon per day Reverse Osmosis (RO) water treatment plant capable of future expansion to ten million gallons per day capacity as designed by Montgomery Watson Harza Engineers. The one hundred percent plans and specifications for this project dated 1/09/03 and signed by various representatives of the design Engineers are to be used for the construction of this project. This work consists of the complete project management and subcontracting for the furnishing of all equipment, materials, supplies, and manufactured articles including all labor, transportation and services necessary for the successful completion of this plant.

Included in the work is a production plant building and other appurtenant structures, seven (7) production well heads including pumps, controls, and appurtenant piping (wells not included), sand removal and cartridge filtration equipment, two (2) reverse osmosis treatment trains, a degasification and odor control system, clearwell, transfer pump station, chemical storage and pumping facilities, plant waste system including piping, pumps and appurtenances (excluding the deep injection well), scavenger system, brine disposal pond, sanitary sewer disposal facilities, two (2) 2.5 million gallon finished water storage tanks, high service pump station including pumps, finished water distribution piping to a connection point on Bayshore Rd., and an emergency power generation system.

The work is to be performed on the Owners site in North Lee County, Florida northeast of the intersection of Durrance Rd. and Old Bayshore Rd. (S23, T435, R25E)

a. Clarifications, Assumptions, and Qualifications

The existing contract between Kellogg Brown & Root Inc. as Construction Manager and the Lee County Board of Commissioners as Owner Dated January 2, 2002 takes precedence and supersedes any and all provisions in the specifications or other documents.

Subheadings are for ease of reference only.

Definitions

Owner: The Lee County Board of Commissioners, Lee County Florida

Construction Manager: Kellogg Brown & Root, Inc. (KBR)

Design Engineer: Montgomery Watson Harza and its assigns.

Permitting and Environmental Compliance

- A. The GMP assumes that all applicable permits from all regulatory agencies have been submitted for and approved for construction to commence by the Owner except the Building Permit and sub-contractor specialty permits.
- B. It is assumed that all environmental studies, permits and investigations have been performed and paid for by others and cleared with the appropriate authorities and that the Work may start immediately.
- C. No provision has been made for the removal, relocation, or protection of Gopher Tortoises or any other endangered species in the GMP. The owner will be responsible for any work required for the relocation, removal, or protection of Gopher Tortoises or any other endangered species encountered on the site during the course of construction.
- D. The GMP includes an allowance for the removal of all nuisance and exotic species as required by the ERP permit.

Responsibilities and Inspections

- A. The GMP does not include the cost of any special inspections required by the designers or Architect/Engineer, Owner or Governmental Agencies having jurisdiction over the work. All special inspections are to be paid for by the owner.
- B. The GMP includes coordination with the Owner's consultants and the Owner's other contractors, but it does not include supervising the work of the Owner's consultants or the Owner's other contractors.
- C. *The GMP does not include any cost for work necessitated by the actions or inaction's of Owner's consultants or the Owner's other contractors.*
- D. Monthly aerial and ground photographs are included in the GMP. No special models, special photography or renderings, other than monthly aerial and ground photography are included.
- E. This GMP includes Builder's Risk Insurance. The Construction Manager is responsible for all deductibles.
- F. The GMP includes the cost for Workers' Compensation Insurance and Employer's Liability Insurance.
- G. The GMP includes the cost of applicable Florida sales tax.
- H. At the Owner's discretion, the Owner may implement a direct tax savings purchase plan (DPO). The cost of implementing this plan is to be absorbed into the General Conditions cost as detailed in the GMP. The plan includes the processing of requisitions and vouchers from subcontractors to the Owner. The Owner will issue purchase orders to vendors and make payments to said vendors.

b. Exclusions

Items that have been excluded for this proposal are:

1. Inspections and Testing
2. Engineering, Architectural, and design consultant's fees
3. Telephone equipment and switch gear.

4. Art works and graphics
5. Geotechnical Reports
6. Clean-up, removal and disposal of any hazardous waste of any type or form from the site due to any and all previous activities conducted on the site.
7. Clean-up and disposal of any and all construction debris from the drilling of the production wells and the deep injection well on site.
8. Relocation or removal of any endangered species found on site.
9. This GMP excludes the construction of all wells of all types including raw water production, deep injection and all monitoring wells. It also excludes all pumps, equipment, instrumentation and any other required appurtenances contained in or required by any of the monitoring wells.

c. Clarifications

1. This is not a line item GMP.
2. This GMP is based upon the Construction Manager's fee being paid in twenty (20) equal monthly installments.
3. This GMP assumes that the costs for all required Bonds and Insurance shall be invoiced immediately after a Notice to Proceed is issued by the owner and shall be paid in full with no retainage held.
4. This GMP assumes that the construction contingency fund may be used to augment any shortfall in estimating of any item required for construction including General Conditions.
5. The GMP assumes that one set of CAD files will be provided free of charge by the Architect/Engineer to be used by the respective Subcontractors for their submittals.
6. This GMP assumes that the "Expedition" software package will be used for all required logs and document tracking and that "P 3" software will be used for all scheduling.

d. Allowance Schedules

1. Allowance for off-site pipeline on Durrance Rd. to Bayshore Rd.
2. Allowance for landscaping and irrigation
3. Allowance for Office Furniture/furnishings including lab supplies and equipment (computers and computer related equipment are included in other sections)

Allowance Schedule for Water Delivery line

Item	Quantity	UM	Unit Price	Amount
30" Ductile Iron Pipe (Installed and restored)	6280	ft.	126.27	792,975.60
Hot Tap w/ 30" X 24" reducer	1	ea.	23,000.00	23,000.00
Gate Valves	6	ea.	24,650.00	147,900.00
Relocation of Existing Utilities	1	L.S.	18,273.00	18,273.00
Fire Hydrants	5	ea.	2,837.00	14,185.00
Air release Valves	4	ea.	4,030.00	16,120.00
Jack and Bore	1	L.S.	112,300.00	112,300.00
Roadway Replacement	10000	Sq. yds	12.40	124,000.00
Additional Fittings	4	tons	7,770.00	31,080.00
Unsuitable Soils (remove and replace)	500	Cu Yds	40.00	20,000.00
Sub total				1,299,833.60
Sales Tax				32,923.38
Allowance Total				1,332,756.98

Landscaping and Irrigation Allowance

Item	Quantity	Unit	Unit Price	Total Cost
Irrigation Piping	1	L.S.		27,674.00
Cypress Mulch	50	Cu YD	34.16	1,708.00
Conocarpis Erecta	24	ea.	569.41	13,665.84
Nephrolepis Biserrata	236	ea.	9.11	2,149.96
Pittisporum Tobra	51	ea.	10.82	551.82
Ligustrum	6	ea.	740.24	4,441.44
Liriope	185	ea.	2.85	527.25
Fine Grade Labor	1	L.S.		300.00
Total Landscaping Allowance				51,018.31

Furnishings, Lab Equipment Allowance Schedule

Source	Catalog #	Quantity	Unit Price	Ext. Price
Hach 2002 Catalog				
Odyssey DR/2500 Spectrophotometer	59000-00	1	\$2,195.00	\$2,195.00
Fisher 2002/03 Catalog				
AR25B Meter Kit w/pH Electrode	13-636-AR25B	1	\$1,665.00	\$1,665.00
Barnstead Organic Removal Cartridge	09-035-22	1	\$64.00	\$64.00
Barnstead Ultrapure Mixed-Bed Cartridge	09-034-14	1	\$84.00	\$84.00
Cartridge Wall Mount Brackets	09-035-50	2	\$25.00	\$50.00
5.0 ml Fixed Volume Reagent Dispenser	13-687-49M	2	\$91.00	\$182.00
Automatic Burets w/Storage Bottles	03-842-2B	6	\$144.06	\$864.36
Graduated Cylinders 50 ml (Case)	08-572C	1	\$205.60	\$205.60
Graduated Cylinders 100 ml (Case)	08-572D	1	\$157.76	\$157.76
Erlenmeyer Flasks 250 ml (Case)	10-090B	1	\$180.50	\$180.50
Griffin Beakers 250 ml (Case)	02-555-25B	1	\$227.50	\$227.50
Disposable Beakers 50 ml (Case)	01-291-10	1	\$142.22	\$142.22
Wide Mouth Sample Bottles 32 oz.(Case)	02-893-4E	1	\$122.00	\$122.00
Magnetic Stirrers	14-493-120S	2	\$147.79	\$295.58
Magnetic Stir Bar Kit	14-511-59	1	\$60.70	\$60.70
Micro 100 Turbidimeters	15-393-80	2	\$950.00	\$1,900.00
Thomas Scientific 03/04 Catalog				
Myron L Conductivity/TDS Ultra Meter 4P	3239A15	1	\$498.00	\$498.00
Myron L Conductivity/pH/TDS Ultra Meter 6P	3239A20	1	\$698.00	\$698.00
Stop Watch	8788T40	2	\$20.00	\$40.00
Millipore SDI Kits 47mm In Line Filter Holder		3	\$104.40	\$313.20
Millipore 0.45 micron 47mm Filters		3	\$82.00	\$246.00
Total (Less S&H)				\$10,191.42
Office Furnishings	Lump sum estimate			\$14,808.58
Total Allowance				\$25,000.00

Section 4 - GMP Cost Summary

In compliance with the Construction Managers Agreement between the Board of County Commissioners Lee County, Florida and Kellogg Brown & Root dated January 2, 2002, Kellogg Brown & Root, Inc. submits a Guaranteed Maximum Price of Twenty Four Million Dollars (\$24,000,000.00) for the North Lee County Water Treatment Plant, Lee County, Florida.

The GMP Cost is established as follows:

Guaranteed Maximum Price North Lee County Water Treatment Plant

rev. 5/30/03

<i>Item</i>	<i>Estimated Cost</i>
Sitework/Concrete/storm sewer / paving / fencing / sanitary sewer /yard piping /brine pond / scavenger system /Clearwell/ Miscellaneous Metals	5,200,000.00
Off-Site Water Line Allowance	1,332,756.98
Well heads and pumps	990,112.00
Water Storage Tanks	1,445,000.00
Metal Building and roof	134,750.00
Masonry / precast	154,457.00
Other Structures frame and roof	84,762.00
Plumbing	50,870.00
HVAC	96,627.00
Fire Sprinkler	18,589.00
Metal studs / Insulation / Drywall /Acoustic ceiling	92,079.00
Doors / Windows /Glazing	25,945.00

Overhead Doors		30,209.00
Signs / identifying Devices		25,300.00
Specialties (<i>sun shades</i> , toilet compartments, fire extenguishers, hardware, <i>lockers</i> , bath accessories,		49,403.00
Cabinets / Casework /Tops		8,672.00
Finishes / Floor coverings		17,286.00
Painting		35,298.00
R.O. Equipment / Chemical storage Equipment		3,208,000.00
Degassifier & Odor Control System		618,593.66
Electrical and Instrumentation		4,219,151.00
Exotic Species Removal	Allowance	115,250.00
Landscaping / Irrigation System	Allowance	51,018.00
Office Furnishings	Allowance	25,000.00
General Conditions (non labor items)		310,920.00
Sub-Total		18,340,048.64
Contingency 8%		1,477,149.20
Contractors Liability Insurance		95,494.00
P & P Bond		240,000.00
Builders Risk Insurance		236,000.00
Sub-Total		20,388,691.84
CM Fee (5%)		1,047,332.96

General Conditions (Labor)	1,996,975.20
Pre Construction Services	567,000.00
Guaranteed Maximum Price	\$ 24,000,000.00

General Conditions (non Labor)

The following is a breakdown of the estimated costs for non-construction related items for the project:

Temporary Office

					-
					-
0130.100	Office Trailer Rental	20	mos	1,400.00	28,000.00
0130.102	Owners Trailer	20	mos	800.00	16,000.00
0130.103	Trailer set-up/teardown	1	LS	3,500.00	3,500.00
0130.104	Office Furniture	1	LS	4,000.00	4,000.00
0130.110	Office Equipment	20	mos	300.00	6,000.00
0130.111	Office Supplies	20	mos	400.00	8,000.00
0130.112	Postage/Overnight	20	mos	600.00	12,000.00
0130.113	Computer Equipment	20	mos	450.00	9,000.00
0130.114	Computer Equipment	1	LS	4,000.00	4,000.00
0130.115	Software	1	LS	8,000.00	8,000.00
	Total Temp. Office				98,500.00

Temporary Const.

0131.130	Temp. Fencing	1	LS	3,500.00	3,500.00
0131.135	Temp. Parking	1	LS	4,000.00	4,000.00
0131.141	Pest/rodent control	20	mos	75.00	1,500.00
0131.150	Job signs	1	LS	1,000.00	1,000.00
0131.200	Fire Protection	1	LS	500.00	500.00
0131.175	Trailer compound deck & steps	1	LS	2,500.00	2,500.00
	Total Temp. Const.				13,000.00

Job Clean-Up

0140.105	Final Cleaning	17000	sq. ft.	0.45	7,650.00
0140.133	Dumpster	150	loads	225.00	33,750.00
0180.141	Jobsite office Cleaning	20	mos	250.00	5,000.00
	Total Job Clean-Up				46,400.00

Travel/ Subsistence

0151.100	Trips	16	week long		19,200.00
	Total Travel				19,200.00

Safety/Security

0152.500	Safety/First aid	20	mos	150.00	3,000.00
0152.700	Office/Trailer alarm	1	LS	1,500.00	1,500.00
0152.701	Office/Trailer alarm	20	mos	100.00	2,000.00
Total Safety/Security					6,500.00

Drawings/Specifications

0155.500	Construction drawings/specs	50	sets	375.00	18,750.00
Total Drawings/Specs					18,750.00

Testing and Special Inspections

0156.100	HVAC Test/Balance	1	LS	1,000.00	1,000.00
Total Testing/Inspections					1,000.00

Schedule/Photographs/Adminis- tration

0157.100	Construction Schedule	1	LS	1,500.00	1,500.00
0157.120	Progress photos	20	mos	200.00	4,000.00
0157.122	Camera/video equipment	1	LS	2,500.00	2,500.00
0157.133	Project Meetings	20	mos	50.00	1,000.00
0157.135	Reference Manuals	1	LS	1,500.00	1,500.00
Total Schedule/admin					10,500.00

Job Utilities

0158.100	Temp. Electric Service	20	mos	500.00	10,000.00
0158.110	Telephone Installation	1	LS	1,500.00	1,500.00
0158.112	Telephone Expense	20	mos	900.00	18,000.00
0158.114	Cell Phones	20	mos	400.00	8,000.00
0158.115	Owner/Engineer Phones	20	mos	150.00	3,000.00
0158.120	Drinking Water/Coffee	20	mos	100.00	2,000.00
0158.120	Permanent Utilities	8	mos	600.00	4,800.00
0160.000	Temp. Sanitation	20	mos	450.00	9,000.00
Total Utilities					56,300.00

Misc. Equipment

0179.129	Project Manager Vehicle	20	mos	728.00	14,560.00
0179.131	Superintendent Vehicle	20	mos	728.00	14,560.00
0179.501	Gas & Oil	20	mos	500.00	10,000.00
Total Equipment					39,120.00

Radios/Expendables

0180.143 Site Radios	1	LS	650.00	650.00	
0180.144 Radio Maintenance	20	mos	50.00	1,000.00	
					1,650.00

Total Radios

**Total Non-Labor General
Requirements**

\$ 310,920.00

General Conditions (labor)

The Following is a summary of the expected labor required for the supervision of the project:

General Conditions Labor

Job Personnel

		QTY	UM		Unit Cost	Total Cost
0100.100	Project Manager	20	mos	173.33 hrs / mo @ 172.00	29,812.76	596,255.20
0100.105	Asst. Project Manager	11	mos	173.33 hrs / mo @ 125.00	21,666.67	238,333.33
0100.111	Project Coordinator	20	mos	173.33 hrs / mo @ 99.00	17,160.00	343,200.00
0100.120	Project Superintendent	18	mos	173.33 hrs / mo @ 135.00	23,400.00	421,200.00
0100.122	Asst. Superintendent	11	mos	173.33 hrs / mo @ 97.00	16,813.33	184,946.67
0100.131	Secretary	18	mos	173.33 hrs / mo @ 50.00	8,666.67	156,000.00
0100.200	IT Specialist	10	days	8 hrs / day @ 140.00	1,120.00	11,200.00
0100.143	Scheduler/Controll	30	days	8 hrs / day @ 135.00	1,080.00	32,400.00
0100.400	Safety Inspector	15	days	8 hrs / day @ 112.00	896.00	13,440.00
Total Personnel Cost						1,996,975.20

Section 5 - Master Project Schedule

The Following Schedule is strictly to show milestone dates and potential expected completion of the project. A complete detailed schedule will be produced and available within 45 days of the final acceptance of the GMP.

The Project Substantial Completion date shall be 660 calendar days from the date of the official Notice to Proceed.

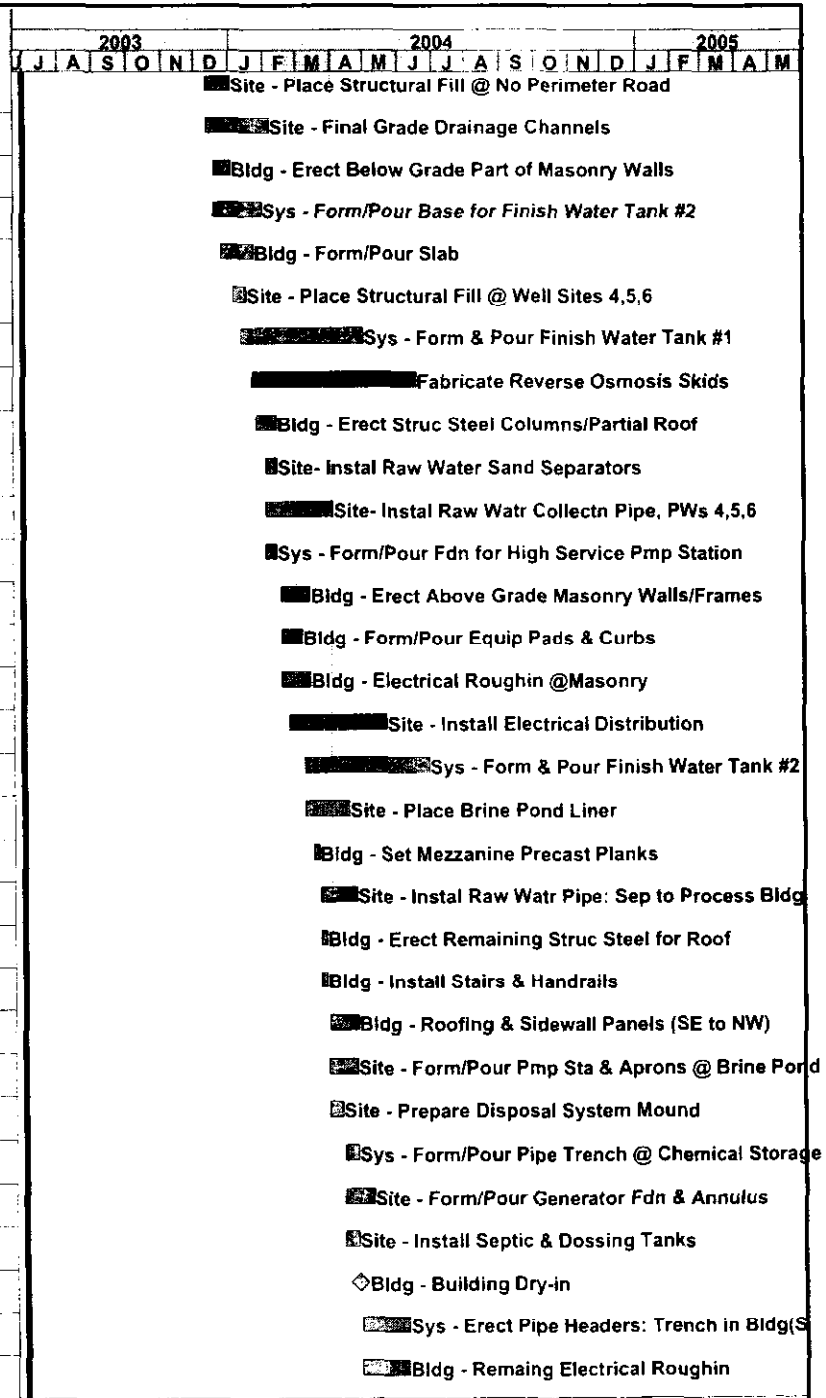
Activity ID	Activity Description	Orig Dur	Start	Finish	Predecessors
0005	Notice to Proceed	0	22JUL03*		
0010	KBR Mobilization	10	22JUL03*	04AUG03	0005*
0015	Building Permit	15	22JUL03*	11AUG03	0005*
2002	Site - Contractor Mobilization	20	29JUL03	25AUG03	0010*
2010	Site - Clear & Grub	45	04AUG03	06OCT03	2002*
1205	Recv Generator/Transformers/Switchgear Submittal	1	19AUG03	19AUG03	0005*
1005	Receive Finish Water Tank Shop Drawings	1	19AUG03	19AUG03	0005*
1405	Recv Degasifier System Submittal	1	19AUG03	19AUG03	0005*
1305	Recv Control System Submittal	1	19AUG03	19AUG03	0005*
1210	Approve Generator/Transformers/Swtchgr Submittal	20	20AUG03	17SEP03	1205*
1010	Finish Water Tank Shop Drawing Approval	20	20AUG03	17SEP03	1005*
1410	Approve Degasifier System Submittal	20	20AUG03	17SEP03	1405*
1310	Approve Control System Submittal	20	20AUG03	17SEP03	1305*
2525	Site - Fencing	40	02SEP03	27OCT03	2010*
1505	Recv Shop Drawings for Pumps	20	17SEP03	14OCT03	0005*
1510	Approve Shop Drawings for Pumps	40	17SEP03	11NOV03	1505*
1215	Fab/Deliver Generator/Transformers/Switchgear	195	18SEP03	23JUN04	1210*
1415	Fab/Deliver Degasifier System	80	18SEP03	13JAN04	1410*
1315	Fab/Deliver Control System	65	18SEP03	19DEC03	1310*
2015	Site - Place Structural Fill @ Bldg/Process Area	40	23SEP03	17NOV03	0015, 2010, 2010*
2405	Site- Instal Raw Watr Collectn Pipe, PWs 1,2,3,7	65	28OCT03	30JAN04	2015*
2205	Site - Prepare Water Management Areas	30	28OCT03	10DEC03	2015*
2520	Site - Install Motorized Gate	5	28OCT03	03NOV03	2525*
3005	Bldg - Form/Pour Fdns, Pipe Trenches, Sumps	30	04NOV03	17DEC03	2015*
3105	Bldg - U/G MEP Roughin	30	04NOV03	17DEC03	3005*
1515	Fab/Deliver Pumps	40	12NOV03	12JAN04	1510*
4305	Sys - Form/Pour Base for Finish Water Tank #1	30	18NOV03	02JAN04	2015*
2020	Site - Place Structural Fill @ So Perimeter Road	15	18NOV03	10DEC03	2015*
1105	Receive Reverse Osmosis Shop Drawings	1	20NOV03	20NOV03	0005*
1110	Reverse Osmosis Shop Drawing Approval	40	21NOV03	21JAN04	1105*
2105	Site - Place Fill & Pipe for Brine Pond Berm	75	11DEC03	26MAR04	2020*, 2205*

2003				2004				2005														
J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M
◆ Notice to Proceed																						
■ KBR Mobilization																						
■ Building Permit																						
■ Site - Contractor Mobilization																						
■ Site - Clear & Grub																						
Recv Generator/Transformers/Switchgear Submittal																						
Receive Finish Water Tank Shop Drawings																						
Recv Degasifier System Submittal																						
Recv Control System Submittal																						
■ Approve Generator/Transformers/Swtchgr Submittal																						
■ Finish Water Tank Shop Drawing Approval																						
■ Approve Degasifier System Submittal																						
■ Approve Control System Submittal																						
■ Site - Fencing																						
■ Recv Shop Drawings for Pumps																						
■ Approve Shop Drawings for Pumps																						
■ Fab/Deliver Generator/Transformers/Swtchgr																						
■ Fab/Deliver Degasifier System																						
■ Fab/Deliver Control System																						
■ Site - Place Structural Fill @ Bldg/Process Area																						
■ Site- Instal Raw Watr Collectn Pipe, PWs 1,2,3,7																						
■ Site - Prepare Water Management Areas																						
■ Site - Install Motorized Gate																						
■ Bldg - Form/Pour Fdns, Pipe Trenches, Sumps																						
■ Bldg - U/G MEP Roughin																						
■ Fab/Deliver Pumps																						
■ Sys - Form/Pour Base for Finish Water Tank #1																						
■ Site - Place Structural Fill @ So Perimeter Road																						
Receive Reverse Osmosis Shop Drawings																						
■ Reverse Osmosis Shop Drawing Approval																						
■ Site - Place Fill & Pipe for Brine Pond Berm																						

Start Date	01JUL03	Plan
Finish Date	01APR05	Progress Bar
Data Date	01JUL03	Critical Activity
Run Date	24JUN03 19:14	

LC02
 Kellogg Brown & Root
 LCWTP Construction Schedule
 Preliminary - Early Start

Activity ID	Activity Description	Orig Dur	Start	Finish	Predecessors
2025	Site - Place Structural Fill @ No Perimeter Road	15	11DEC03	02JAN04	2020*
2210	Site - Final Grade Drainage Channels	40	11DEC03	06FEB04	2030, 2205*
3115	Bldg - Erect Below Grade Part of Masonry Walls	10	18DEC03	02JAN04	3005*
4310	Sys - Form/Pour Base for Finish Water Tank #2	30	18DEC03	30JAN04	4305*
3010	Bldg - Form/Pour Slab	20	26DEC03	23JAN04	3005*, 3105, 3115*, 3115
2030	Site - Place Structural Fill @ Well Sites 4,5,6	10	05JAN04	16JAN04	2025*
4320	Sys - Form & Pour Finish Water Tank #1	80	12JAN04	30APR04	1010, 2015, 4305*
1115	Fabricate Reverse Osmosis Skids	105	22JAN04	17JUN04	1110*
3015	Bldg - Erect Struc Steel Columns/Partial Roof	15	26JAN04	13FEB04	3010*
2410	Site- Instal Raw Water Sand Separators	10	02FEB04	13FEB04	2405*
2415	Site- Instal Raw Watr Collectn Pipe, PWs 4,5,6	45	02FEB04	02APR04	2405*, 2410
4315	Sys - Form/Pour Fdn for High Service Pmp Station	10	02FEB04	13FEB04	4310*
3020	Bldg - Erect Above Grade Masonry Walls/Frames	20	16FEB04	12MAR04	3015*
3090	Bldg - Form/Pour Equip Pads & Curbs	15	16FEB04	05MAR04	3010, 3015*
3030	Bldg - Electrical Roughin @Masonry	20	16FEB04	12MAR04	3020*
2305	Site - Install Electrical Distribution	65	23FEB04	21MAY04	2205, 2310*, 2405, 2415
4325	Sys - Form & Pour Finish Water Tank #2	80	08MAR04	28JUN04	2015, 4310, 4320*
2140	Site - Place Brine Pond Liner	30	08MAR04	16APR04	2105*
3075	Bldg - Set Mezzanine Precast Planks	5	15MAR04	19MAR04	3020*
2420	Site - Instal Raw Watr Pipe: Sep to Process Bldg	25	22MAR04	23APR04	2410, 3120*
3080	Bldg - Erect Remaining Struc Steel for Roof	5	22MAR04	26MAR04	3075*, 3090
3085	Bldg - Install Stairs & Handrails	5	22MAR04	26MAR04	3075*
3025	Bldg - Roofing & Sidewall Panels (SE to NW)	20	29MAR04	23APR04	3080*
2110	Site - Form/Pour Pmp Sta & Aprons @ Brine Pond	20	29MAR04	23APR04	2105*, 2140*
2275	Site - Prepare Disposal System Mound	10	29MAR04	09APR04	2030, 2105*
4105	Sys - Form/Pour Pipe Trench @ Chemical Storage	10	12APR04	23APR04	2015, 3025*
2310	Site - Form/Pour Generator Fdn & Annulus	20	12APR04	07MAY04	3025*
2280	Site - Install Septic & Dossing Tanks	10	12APR04	23APR04	2275*
3120	Bldg - Building Dry-in	0		23APR04	3025*
4905	Sys - Erect Pipe Headers: Trench in Bldg(S to N)	30	26APR04	07JUN04	2420*, 3120*
3095	Bldg - Remaing Electrical Roughin	30	26APR04	07JUN04	3120*, 3125



Item Code	Description	Quantity	UM	Lab. Unit	Mat. Unit	Eqp. Unit	Sub. Unit	Tot. Unit Cost	Total Cost
Bid Package 2-01									
Sitework - Clearing									
0210.000	Sitework - Site preparation								
	Erosion Control	1	LS					75,377.15	
	Clear and Grub	37	Acres			1,500.00		55,500.00	
	Haul Debris	37	Acres			2,500.00		92,500.00	
	Const. entrance / Trailer compound	1	LS					38,000.00	
	Fill Import	62.000	CY	0.48	8.00	2.00		649,760.00	
	Brine pond Liner	1	LS		115,000.00			115,000.00	
	Misc. Grading						52,000.00	52,000.00	
	Stockpile topsoil						63,000.00	63,000.00	
	***Total Sitework - Clearing								1,141,137.15
Site Drainage & Utilities									
0250.000	Site Drainage								
	12" Pipe	1.225	LF		42.00			51,450.00	
	Drainage Structures	1	LS				54,000.00	54,000.00	
	Grade ponds	1	LS			10,000.00		10,000.00	
	Pond Maintenance	1	LS			5,000.00		5,000.00	
	Fine Grading	1	LS					19,000.00	
	***Total Site Drainage								139,450.00
Fencing									
	Chain Link Fencing	5,100	LF				19.40	98,940.00	
	Gates / Misc	1	LS				6,240.00	6,240.00	
	***Total Fencing								105,180.00
Site Equipment									
	High Service & Clearwell Transfer Pumps	1	LS				540,000.00	540,000.00	
	Submersible Pump @ Brine Pond	1	LS				103,000.00	103,000.00	
	Vertical Sump Pumps Scavenger System	1	LS				77,000.00	77,000.00	
	Ammonia System	1	LS				82,000.00	82,000.00	
	Surge Tanks	1	LS				59,500.00	59,500.00	
	Sample Lines & Pumps	1	LS				8,500.00	8,500.00	

KBR

NLCWTP
Detailed estimate

Item Code	Description	Quantity	UM	Lab. Unit	Mat. Unit	Eqp. Unit	Sub. Unit	Tot. Unit Cost	Total Cost
	Total Site Equipment							870,000.00	870,000.00
Yard Piping									
0255.000	HDPE Piping								
	30" HDPE	2,100	LF				64.00	134,400.00	
	24" HDPE	55	LF				60.00	3,300.00	
	20" HDPE	160	LF				56.00	8,960.00	
	18" HDPE	680	LF				52.00	35,360.00	
	16" HDPE	1,240	LF				49.00	60,760.00	
	12" HDPE	4,040	LF				46.00	185,840.00	
	10" HDPE	200	LF				44.00	8,800.00	
	8" HDPE	200	LF				42.00	8,400.00	
	4" HDPE	40	LF				35.00	1,400.00	
	3" HDPE	80	LF				35.00	2,800.00	
	HDPE Fittings & Accessories	1	LS					108,000.00	
	Total HDPE Piping							558,020.00	558,020.00
	Ductile Iron Piping								
	30" DIP	940	LF				120.00	112,800.00	
	24" DIP	65	LF				108.00	7,020.00	
	18" DIP	20	LF				98.00	1,960.00	
	16" DIP	45	LF				80.00	3,600.00	
	12" DIP	20	LF				44.00	880.00	
	10" DIP	110	LF				38.00	4,180.00	
	8" DIP	260	LF				36.00	9,360.00	
	6" DIP	120	LF				28.00	3,360.00	
	4" DIP	40	LF				20.00	800.00	
	Fire Hydrants	2	EA				2,837.00	5,674.00	
	DIP Fittings and Accessories	1	LS					176,760.00	
	Total Ductile Iron Piping							326,394.00	326,394.00
	Polypropylene Piping	2,070	LF				33.00	68,310.00	
	Ammonia Feed Piping	1	LS				4,850.00	4,850.00	
	Small diameter piping	1	LS				11,000.00	11,000.00	
	Stainless Steel Wellhead Piping	7	ea				13,858.00	97,006.00	97,006.00
	***Total Yard Piping								981,420.00

Item Code	Description	Quantity	UM	Lab. Unit	Mat. Unit	Eqp. Unit	Sub. Unit	Tot. Unit Cost	Total Cost
Valves & Piping Accessories									
	Valves	1	LS						495,300.00
	Piping Accessories	1	LS						268,200.00
	Miscellaneous								130,000.00
	Total Valves and accessories								893,500.00
Scavenger System									
	Excavate, grade, backfill	1	LS				9,476.00		9,476.00
	Concrete Finishing	1	LS				657.00		657.00
	Concrete Formwork	1	LS				15,498.00		15,498.00
	Form Ties & Accessories	1	LS				728.00		728.00
	Reinforcing Steel	75	CWT	29.45	40.00		69.45		5,208.75
	Cast-in-place Concrete	70	CY				92.40		6,468.00
	Misc. Metals	1	LS				980.00		980.00
	Piping system complete	1	LS				68,980.00		68,980.00
	***Total Scavenger System								107,995.75
Brine Disposal Pond Structure									
	Excavate, grade, backfill	1	LS				6,250.00		6,250.00
	Concrete Finishing	1	LS				2,404.00		2,404.00
	Formwork	1	LS				32,600.00		32,600.00
	Form Accessories	1	LS				4,790.00		4,790.00
	Reinforcing Steel	352	CWT	29.45	40.00		69.45		24,430.43
	Cast-in-place concrete	178	CY				88.40		15,735.20
	*** Total Brine Disposal Pond Structure								86,209.63
Ammonia System Building Concrete									
	Excavation, grade, backfill	1	LS				1,097.00		1,097.00
	Concrete Finishing	1	LS				280.00		280.00
	Formwork	1	LS				1,165.00		1,165.00
	Reinforcing Steel	19	CWT	29.45	40.00		69.45		1,319.55
	Concrete	21	CY				88.40		1,856.40
	***Total Ammonia Bldg Concrete								5,717.95

Item Code	Description	Quantity	UM	Lab. Unit	Mat. Unit	Eqp. Unit	Sub. Unit	Tot. Unit Cost	Total Cost
Clearwell									
	Excavation, grade, backfill	1	LS				4,840.00		4,840.00
	Concrete Finishing	1	LS				8,760.00		8,760.00
	Formwork & Accessories	1	LS				49,600.00		49,600.00
	Reinforcing Steel	274	CWT	29.45	40.00		69.45		19,029.30
	Cast-in-place concrete	362	CY				88.40		32,000.80
	Metal Handrail	1	LS				16,700.00		16,700.00
	Stair Nosings	1	LS				800.00		800.00
	Coatings							54,000.00	54,000.00
	***Total Clearwell								185,730.10
Roads & Walks									
Asphalt Paving									
0260.000	Asphalt & Limerock Rds	16,200	SY				6.18		100,116.00
	Sub-base & Base	16,200	SY				8.10		131,220.00
	***Total Asphalt Paving								231,336.00
	***Total Roads & Walks								
Process Building Concrete									
	Excavation, Backfill, grade	1	LS				43,722.00		43,722.00
	Termite Treatment	12,954	SF				0.23		2,979.42
	Concrete Finish	1	LS				7,648.00		7,648.00
	Formwork & Accessories	1	LS				59,864.00		59,864.00
	Reinforcing Steel	888	CWT	29.45	40.00		69.45		61,671.60
	Footings Concrete	140	CY	17.00	68.40	3.00	88.40		12,376.00
	Trench & Wall Concrete	304	CY				88.40		26,873.60
	Slab on Grade	710	CY				88.40		62,764.00
	Columns & Footings	50	CY				88.40		4,420.00
	***Total Process Building Concrete								282,318.62
Structural Metals									

KBR

NLCWTP
Detailed estimate

Item Code	Description	Quantity	UM	Lab. Unit	Mat. Unit	Eqp. Unit	Sub. Unit	Tot. Unit Cost	Total Cost
0518.101	Steel Beams		***						
0518.102	I Beams	84	CWT	28.50	125.51	5.58		159.59	13,438.85
0518.121	Steel Columns		***						
0518.125	Structural Tubing	2	CWT	28.50	125.51	5.58		159.59	389.39
0518.181	Bracing		***						
0518.183	Channels	3	CWT	38.00	125.51	8.93		172.44	565.59
0518.381	Shop Paint		***						
0518.384	Inorganic Zinc	2.263	SQFT	0.08	0.25			0.33	749.40
0518.501	Anchor Bolts, 3/4"X18"	8	EACH	7.52	36.60			44.11	352.90
0518.501	Anchor Bolts, 3/4"X24"	116	EACH	7.52	48.79			56.31	6,531.99
0518.501	Anchor Bolts, 3/4"X15"	60	EACH	7.52	30.50			38.01	2,280.74
0518.600	Base Plate 12"X12"X3/8"	2	EACH	35.07	67.78			102.85	205.70
0518.600	Base Plate 15"X15"X3/4"	29	EACH	35.07	211.80			246.87	7,159.19
0518.600	Base Plate 12"X12"X3/4"	15	EACH	35.07	135.55			170.62	2,559.32
0518.610	Base Plate Grout	62	SQFT	4.73	6.65			11.37	708.47
0518.617	Wood Base Plate Template	46	EACH		4.43			4.43	203.78
0519.990	*Structural Steel Weight*	5	TONS						
0519.991	*No. of Base Plate*	46	EACH						
	***Total Structural Metals								35,145.33
	**Total Structural Metals								
Misc & Ornamental Metal									
Metal Fabrications									
0550.004	Ceiling Inserts	6	EACH	0.74	1.11			1.85	11.09
0550.011	Imbedded Curb Angle	793	LNFT	6.13	5.17			11.30	8,960.08
0550.100	Misc metals	1	LS				31,409.70	31,409.70	31,409.70
0551.000	1-1/2" Stl Str Hand Rail	53	LNFT	11.12	47.25			58.37	3,105.09
0551.002	1-1/2" Horiz Hand Rail	76	LNFT	11.12	44.30			55.41	4,211.41
0551.030	Str Steel Stairs	1,490	LBS	0.51	5.91	0.51		6.92	10,319.81
0552.001	Heavy Duty Steel Grating	3,715	SQFT	2.96	17.72			20.68	76,842.35
	***Total Metal Fabrications								134,859.52
	**Total Misc & Ornamental Metal								
Total Bid Package 2-01									5,200,000.04
Offsite Water Line									
	30" DIP	6,280					126.27	792,975.60	
	Hot Tap & Reducer	1	ea				23,000.00	23,000.00	

NLCWTP
Detailed estimate

Item Code	Description	Quantity	UM	Lab. Unit	Mat. Unit	Eqp. Unit	Sub. Unit	Tot. Unit Cost	Total Cost
	Gate valves	6	ea				24,650.00	147,900.00	
	Relocate existing Utilities	1	ea				18,273.00	18,273.00	
	Fire Hydrants	5	ea				2,837.00	14,185.00	
	Air release Valves	4	ea				4,030.00	16,120.00	
	Jack & Bore	1	ea				112,300.00	112,300.00	
	Roadway Replacement	10,000	SY				12.40	124,000.00	
	Additional Fittings	4	tons				7,770.00	31,080.00	
	Unsuitable Soils	500	CY				40.00	20,000.00	
	sales tax							32,923.38	
	***Total Offsite Water Line							1,332,756.98	1,332,756.98
Wellheads & Pumps									
	Grade, Place, & finish concrete	7	ea				16,000.00	112,000.00	
	Pumps installed & Disinfected	7	ea				62,587.43	438,112.01	
	Well head assembly	7	ea				7,500.00	52,500.00	
	Piping, Supports, Valves	7	ea				18,500.00	129,500.00	
	Control Panel/ Instrumentation	7	ea				44,000.00	308,000.00	1,040,112.00
	Total Wellheads and Pumps							1,040,112.01	1,040,112.01
	Value Engineering Deduction							(50,000.00)	990,112.01
Water Storage Tanks									
	Prestressed Concrete Tank	2	ea				742,500.00	1,485,000.00	
	Total Concrete Storage Tanks							1,485,000.00	1,485,000.00
	Value Engineering Deduction							(40,000.00)	1,445,000.00
Pre-Engineered Building									
1312.102	Frame & roof	7,838	SQFT				6.45	6.45	50,555.10
1312.103	Frame, Roof & Siding	7,252	SQFT				11.61	11.61	84,195.72
	***Total Pre-Engineered Buildings								134,750.82
									134,750.00

Item Code	Description	Quantity	UM	Lab. Unit	Mat. Unit	Eqp. Unit	Sub. Unit	Tot. Unit Cost	Total Cost
Masonry & Precast Concrete									
Architectural Precast Concrete									
0340.105	PC Hollow Core Plank	2,861	SQFT	0.21			9.68	9.89	28,298.47
	***Total Architectural Precast Concrete								28,298.47
	**Total Precast Concrete								
Masonry									
0400.001	Mortar	52	CUYD		99.67			99.67	5,185.73
0400.102	Fill Voids w/Concrete	96	CUYD	88.52	78.60	24.00		191.12	18,263.43
0400.104	Fill Voids w/Loose Fill Insul	99	CUYD	22.81	51.53			74.34	7,339.89
0400.004	Clean Block	21,805	SQFT	0.22	0.05			0.27	5,822.04
0402.350	Exterior Rowlock Sill	44	LNFT	3.10	1.95			5.05	222.16
0405.102	8X8X16 Conc Block	10,905	PCS	1.88	0.80			2.68	29,224.92
0405.112	8" Bond Beam Conc Block	818	PCS	2.02	1.40			3.42	2,796.23
0405.402	8X8X16 Split Face Block	4,649	PCS	2.02	1.65			3.67	17,060.36
0405.412	8" Bond Beam Split Face Block	366	PCS	3.07	6.88			9.96	3,645.16
0406.004	Bullnose Block	229	PCS	2.02	2.65			4.67	1,068.08
0411.012	Add for Raked Joint	4,530	SQFT	0.23				0.23	1,048.70
0415.101	Waterproofing on Masonry	1,212	SQFT	0.54	0.53			1.07	1,301.81
0415.202	2" Rigid Insulation	3,318	SQFT	0.32	1.20			1.52	5,045.02
0416.103	20 Mil Nervastral Flashing	333	LNFT	1.46	0.62			2.08	693.26
0416.104	24 Gauge Galv. Flashing	237	LNFT	2.93	1.36			4.29	1,016.82
0425.122	Re-Steel @ Masonry	95	CWT	23.82	39.87			63.69	6,077.45
0425.202	8" Ladder Reinf. Hot Dipped	9,899	LNFT		1.08			1.08	10,690.92
0430.101	Ext Scaffolding/Equipment	13,435	SQFT	0.34		0.11		0.45	6,083.28
0435.451	5' Angle Iron	138	EACH		25.84			25.84	3,573.67
0439.990	*Masonry Wall Area*	14,647	SQFT						
	***Total Masonry								126,158.93
	**Total Masonry & Precast								154,457.40
Other Structures Frame & Roof									
	Chemical Storage Area	2,921	SF	9.45	10.90			20.35	59,442.35
	High Service Pump Station	905	SF	9.50	10.90			20.40	18,462.00
	Ammonia System	336	SF	9.51	10.90			20.41	6,857.76
	***Total Other Structures								84,762.11
									84,762.00
Plumbing									
Pipe & Fittings									
1520.040	Copper Pipe, 1/2"	81	LNFT	6.79	1.65			8.44	683.86

NLCWTP
Detailed estimate

Item Code	Description	Quantity	UM	Lab. Unit	Mat. Unit	Eqp. Unit	Sub. Unit	Tot. Unit Cost	Total Cost
1520.042	Copper Pipe, 1"	76	LNFT	9.16	3.82			12.99	987.07
1520.043	Copper Pipe, 1-1/4"	44	LNFT	9.16	5.17			14.33	630.60
1520.044	Copper Pipe, 1-1/2"	200	LNFT	9.16	6.59			15.75	3,149.76
1520.045	Copper Pipe, 2"	582	LNFT	10.52	10.00			20.52	11,941.36
1520.047	Copper Pipe, 3"	121	LNFT	16.30	19.59			35.89	4,342.63
1520.050	Copper Pipe, 6"	24	LNFT	31.23	102.65			133.88	3,213.07
1520.080	Soil, WST & Vent, Cl. Pipe, 2"	170	LNFT	4.75	6.66			11.41	1,940.01
1520.081	Soil, WST & Vent, Cl. Pipe, 3"	159	LNFT	6.11	9.23			15.34	2,438.98
0520.082	Soil, WST & Vent, Cl. Pipe, 4"	138	LNFT	7.81	12.02			19.83	2,736.20
	***Total Pipe & Fittings								32,063.53
Plumbing Specialties									
1539.104	Floor Drain, 6"	5	EACH	96.98	137.25			234.23	1,171.14
	***Total Plumbing Specialties								1,171.14
Water Heaters									
1541.117	WTR. HTR., LT. COM, ELEC, 52 C	1	EACH	280.52	263.72			544.24	544.24
	Total Water Heaters								544.24
Plumbing Fixtures - Commercial									
1542.100	Water Closet	3	EACH	132.59	293.84			426.43	1,279.29
1542.101	Water Closet - Handicap	2	EACH	132.59	332.23			464.82	929.64
1542.103	Urinal - Handicap	1	EACH	251.43	476.93			728.36	728.36
1542.104	Lavatory	4	EACH	112.02	301.22			413.24	1,652.98
1542.105	Lavatory - Handicap	2	EACH	187.53	416.39			603.93	1,207.85
1542.108	Shower Receptor	2	EACH	208.24	373.57			581.81	1,163.63
1542.112	Emergency Shwr & Eyewash	6	EACH	135.77	764.86			900.64	5,403.83
1542.115	Janitors Sink	1	EACH	180.55	593.58			774.13	774.13
1542.116	Mop Sink	1	EACH	204.48	341.09			545.57	545.57
	***Total Plumbing Fixtures - Commercial								13,685.27
Excavation & Backfill									
1545.060	Excavation & Backfill	297	LNFT			2.23	9.23	11.47	3,405.40
	***Total Excavation & Backfill								3,405.40
	**Total Plumbing Systems & Equipment								50,869.58

Item Code	Description	Quantity	UM	Lab. Unit	Mat. Unit	Eqp. Unit	Sub. Unit	Tot. Unit Cost	Total Cost
HVAC									
HVAC Systems & Equipment									
Pipe & Fittings									
1561.471	Copper Pipe, 3/4"	135	LNFT	2.04	7.47			9.51	1,283.54
1561.475	Copper Pipe, 2"	135	LNFT	3.05	20.41			23.47	3,168.30
1561.499	Copper Fittings	1	LS				284.71	284.71	284.71
	***Total Pipe & Fittings								4,736.55
Pipe Insulation									
1583.100	Pipe Insulation	270	LF				5.69	5.69	1,537.38
	***Total Pipe Insulation								1,537.38
Cooling Equipment - Major									
1589.503	Air Cooled Cond'r, 15 Tons	1	EACH	204.48	8,324.00			8,528.48	8,528.48
1589.504	Air Cooled Cond'r, 20 Tons	1	EACH	204.48	15,045.00			15,249.48	15,249.48
	***Total Cooling Equipment - Major								23,777.96
Ductwork									
1591.640	Galvanized Ductwork-Rect.	2,958	LBS				4.25	4.25	12,571.50
1591.641	Galvanized Ductwork-Round	147	LBS				4.25	4.25	624.75
1591.666	Flexible Duct, 10"	150	LNFT	6.05	4.86			10.91	1,636.95
	***Total Ductwork								14,833.20
Duct Insulation									
1593.100	Duct Insulation	3,107	SF				3.99	3.99	12,384.50
	***Total Duct Insulation								12,384.50
Register, Grilles, & Diffusers									
1594.600	Air Outlet - Ceiling	26	EACH	23.77	42.82			66.59	1,731.36
1594.601	Air Outlet - Sidewall	11	EACH	27.15	38.10			65.25	717.76
	***Total Register, Grilles, & Diffusers								2,449.12
Controls & Instrumentation									
1597.000	Test and Balance 1997	15,000	SQFT				0.17	0.17	2,565.00
	***Total Controls & Instrumentation								2,565.00
Misc. Mechanical Systems & Equipment									
1598.000	HVAC Controls	1	LS				5,124.73	5,124.73	5,124.73
	***Total Misc. Mechanical Systems & Equipment								5,124.73

Item Code	Description	Quantity	UM	Lab. Unit	Mat. Unit	Eqp. Unit	Sub. Unit	Tot. Unit Cost	Total Cost
H.V.A.C. Systems & Equipment									
1599.152	Wall Prop Fan, 4000 CFM	1	EACH	67.89	701.37			769.26	769.26
1599.153	Wall Prop Fan, 8000 CFM	4	EACH	101.93	849.03			950.96	3,803.84
1599.161	Clg. MTP Fan, 188 CFM	1	EACH	30.55	194.91			225.46	225.46
1599.162	Clg. MTP Fan, 294 CFM	1	EACH	30.55	211.15			241.70	241.70
1599.165	Clg. MTP Fan, 856 CFM	1	EACH	33.94	494.65			528.59	528.59
1599.185	In-Line Centrif, 800 CFM	2	EACH	101.93	649.69			751.62	1,503.25
1599.186	In-Line Centrif, 2000 CFM (VAV)	7	EACH	239.04	1,108.37			1,347.41	9,431.86
1599.216	Air Handler, 4220 CFM	1	EACH	408.96	5,248.00			5,656.96	5,656.96
1599.220	Air Handler, 10312 CFM	1	EACH	678.87	6,379.00			7,057.87	7,057.87
	***Total H.V.A.C. Systems & Equipment								29,218.78
	**Total HVAC Systems & Equipment								96,627.22
Fire Sprinkler									
Fire Protection Systems & Equipment									
Pipe, Fittings & Valves									
1550.100	Fire Protection	4,345	SF				4.28	4.28	18,574.88
	***Total Pipe, Fittings, & Valves								18,574.88
	**Total Fire Protection Systems Equipment								18,589.00
Metal studs, Insulation, Drywall, Accoustic Ceiling									
Gypsum Drywall & Metal Studs									
0925.002	5/8" Gypsum Board	4,560	SQFT	0.38	0.35			0.73	3,340.51
0925.003	1/2" Moist. Resist. Gyp. Board	850	SQFT	0.33	0.38			0.72	607.69
0925.004	5/8" Firecode Gypsum Board	10,224	SQFT	0.40	0.35			0.76	7,723.06
0925.013	5/8" Firecode Gyp Bd. @ Ceilg.	64	SQFT	0.44	0.35			0.80	50.91
0925.048	3-5/8" Metal Stud (25 GA)	2,863	LNFT	6.85	0.25			7.10	20,334.23
0925.048	3-5/8" Metal Stud (25 GA)	350	LNFT	6.85	0.25			7.10	2,488.12
0925.048	3-5/8" Metal Stud (25 GA)	1,978	LNFT	7.08	0.25			7.33	14,498.67
0925.049	3-5/8" Stud Track (25 GA)	866	LNFT	0.76	0.24			1.00	865.48
0925.056	Resilient Channel	2,928	LNFT	0.64	0.28			0.92	2,687.26
0925.057	Hanger Wire	24	LNFT	0.25	0.64			0.88	21.20
0925.082	Screws For Gypsum Board	15,848	SQFT		0.03			0.03	475.43
0926.001	1-1/2" Channel	12	LNFT	0.25	0.35			0.60	7.23
0926.003	Gypsum Board Furring Channel	2,266	LNFT	1.02	0.19			1.21	2,743.57
0927.000	Perfatape & Joint Cement	15,633	SQFT	0.51	0.15			0.66	10,319.61
0927.001	Perfatape & Joint Cement Clg	32	SQFT	0.53	0.15			0.68	21.77
0929.991	*Drywall Partition Length*	743	LNFT						

Item Code	Description	Quantity	UM	Lab. Unit	Mat. Unit	Eqp. Unit	Sub. Unit	Tot. Unit Cost	Total Cost	
**Total Gypsum Drywall & Metal Studs									66,184.72	
Insulation										
0720.063	8" Batt Insulation	15,132	SQFT	0.40	0.89			1.28	19,391.66	
***Total Insulation									19,391.66	
**Total Insulation										
Acoustical Ceilings										
0950.000	Hanging Rods	752	LNFT	0.25	0.02			0.27	203.40	
0950.002	Int-Loc Grid System Main T	596	LNFT	0.26	0.32			0.58	346.85	
0950.003	Int-Loc Grid 2X4 Cross T	1,242	LNFT	0.26	0.29			0.55	677.34	
0950.004	Int-Loc Grid 2X2 Cross T	647	LNFT	0.26	0.29			0.55	356.42	
0950.005	Int-Loc Grid Wall Angle	203	LNFT	0.47	0.21			0.67	137.12	
0950.056	24X24X3/4 F/R Nat. Fissure Tile	2,586	SQFT	0.49	1.37			1.85	4,790.31	
***Total Acoustical Ceilings									6,511.43	
**Total Metal Studs, Drywall, Acoustical									92,079.00	
Doors, Windows, Glazing										
Metal Doors & Frames										
Hollow Metal Doors & Frames										
0801.000	Hollow Metal Doors	***								
0801.051	3072 1-3/4" 18 GA B-Label	19	EACH	49.48	257.02			306.50	5,823.43	
0801.051	3072 1-3/4" 18 GA B-Label	6	EACH	49.48	337.21			386.69	2,320.12	
0801.051	3072 1-3/4" 18 GA B-Label	1	EACH	49.48	265.20			314.68	314.68	
0801.170	Hollow Metal Transom Panel	***								
0801.211	6034 1-3/4" 18 Gauge B-Label	3	EACH	38.06	239.09			277.15	831.44	
0802.020	6072 16 GA HM Frame	1	EACH	35.34	86.53			121.87	121.87	
0802.020	6099 16 GA HM Frame	3	EACH	35.34	162.42			197.76	593.28	
0802.020	3072 16 GA HM Frame	6	EACH	35.34	108.52			143.86	863.14	
0802.020	3072 16 GA HM Frame	1	EACH	35.34	85.11			120.45	120.45	
0802.020	3072 16 GA HM Frame	11	EACH	35.34	73.76			109.10	1,200.14	
***Total Hollow Metal Doors & Frames									12,188.55	
Metal Windows										
0851.120	Operable Window	44	SQFT				28.47	28.47	1,266.67	
0851.130	Custom Window	176	SQFT				22.78	22.78	4,008.75	
***Total Metal Windows									5,275.43	
Glass & Glazing										
Glass/Mirrors										

Item Code	Description	Quantity	UM	Lab. Unit	Mat. Unit	Eqp. Unit	Sub. Unit	Tot. Unit Cost	Total Cost
0880.001	1/4" Tempered Glass	50	SQF	1	7.75	11.07		18.83	938.08
	***Total Glass/Mirrors								938.08
Entrances & Storefronts									
0885.215	Pair Alum Glass Dr Auto Open	1	EACH				7,543.21	7,543.21	7,543.21
	***Total Entrances & Storefronts								7,543.21
	**Total Doors, Windows, Glazing								25,945.26
Overhead Doors									
Coiling Doors									
0833.006	Roll-Up Door - Insulated Alum.	672	SQFT	2.13	42.82			44.95	30,208.95
	***Total Coiling Doors								30,208.95
	**Total Overhead Doors								30,208.95
Signs, Identifying Devices									
Identifying Devices									
1040.000	Door Name or Number Plate	25	LS	7.91	11.07			18.99	474.63
1040.025	Exterior Signage	125	EACH		147.66			147.66	18,457.13
1040.026	Interior Signage	23	EACH		73.83			73.83	1,698.07
1042.000	Building Plaques	1	EACH	98.89	2,214.86			2,313.75	2,313.75
1044.000	Building Letters	34	EACH	13.19	56.11			69.30	2,356.03
	***Total Identifying Devices								25,299.60
Specialties									
Hardware									
Finish Hardware									
0871.109	Hotel Room Entry Lock - (Mort.)	5	EACH	17.59	304.99			322.58	1,612.90
0871.110	Passage Latch Bolt - (Mort.)	9	EACH	17.59	224.26			241.86	2,176.70
0871.114	Office Lockset - Mortised	18	EACH	11.73	278.08			289.81	5,216.62
0871.122	4-1/2"X4-1/2" Hinges (N.R.P.)	74	EACH		5.69			5.69	420.69
0871.126	Closer-H'HD.Hinge Side w/Hold	31	EACH	20.11	225.86			245.96	7,624.86
0871.132	Exit Device - Exp. Bar (CNCD.Rod	5	EACH	93.83	840.41			934.24	4,671.19
0871.141	Flush Bolts 0 T & BTM. (Concl'd)	7	EACH	28.15	9.29			37.44	262.07
0871.167	Door Astragal	8	EACH	17.59	36.91			54.51	436.06
0871.171	Door Stop - Wall Bumper Type	1	EACH		2.01			2.01	2.01
0871.172	Door Stop - Floor Bumper Type	6	EACH		3.15			3.15	18.87
0871.174	Door Coordinators	8	EACH	17.59	110.74			128.34	1,026.69
0871.176	Threshold - Saddle Type	29	EACH	17.59	6.73			24.33	705.47
0871.178	Automatic Door Bottom	31	EACH	25.59	36.91			62.50	1,937.65

Item Code	Description	Quantity	UM	Lab. Unit	Mat. Unit	Eqp. Unit	Sub. Unit	Tot. Unit Cost	Total Cost
***Total Finish Hardware								26,111.78	
Compartments & Cubicles									
1018.100	FLR MTD PL/LAM Toilet Compmnt	4	EACH	56.51	782.58			839.09	3,356.36
***Total Compartments & Cubicles								3,356.36	
Lockers									
1050.001	Lockers, Single Tier - 60/70"H	12	EACH	15.82	162.42			178.25	2,138.94
***Total Lockers								2,138.94	
Fire Extinguishers, Cabinets, & Access.									
1052.004	Fire Extinguisher - 9.5 LB ABC	6	EACH	16.48	55.37			71.85	431.12
1052.005	Fire Extinguisher - 20 LB ABC	3	EACH	19.78	101.15			120.92	362.77
1052.006	Fire Extinguisher - 10 LB Drychem	1	EACH	16.48	55.37			71.85	71.85
***Total Fire Extinguishers, Cabinets, & Access.								865.74	
Partitions									
1060.310	Operable Partitions	1	EACH				3,985.90	3,985.90	3,985.90
***Total Partitions								3,985.90	
Sun Control Devices (Exterior)									
1070.100	Exterior Sun Control Devices	1	EACH				13,467.00	13,467.00	13,467.00
***Total Sun Control Devices (Exterior)								13,467.00	
Toilet & Bath Accessories									
1080.104	36" Grab Bar	6	EACH	22.25	49.61			71.86	431.18
1080.122	90 Degree Angle Grab Bar	2	EACH	49.44	111.33			160.78	321.56
1080.153	Recess Double Roll TPH	5	EACH	10.99	50.35			61.34	306.69
1080.171	Recessed SNV	1	EACH	37.67	578.82			616.49	616.49
1080.173	Recessed SND	2	EACH	16.48	112.22			128.70	257.40
1080.204	54" PTD/Waste Combo	5	EACH	32.96	354.38			387.34	1,936.70
1080.400	Liquid Soap Dispenser	5	EACH	26.37	103.36			129.73	648.65
1080.600	Shower Curtain Rod	2	EACH	26.37	44.30			70.67	141.34
1080.602	Folding Shower Seat	2	EACH	32.96	295.31			328.28	656.55
1080.607	Robe Hook	4	EACH	8.24	17.72			25.96	103.84
1080.609	Mop Rack	1	EACH	16.48	84.17			100.65	100.65
1080.641	24" Towel Bar	2	EACH	16.48	33.96			50.44	100.89
1081.100	2472 Framed Mirror	2	EACH	16.48	334.59			351.07	702.15
1081.300	2430 Framed Mirror w/Shelf	5	EACH	16.48	323.37			339.85	1,699.25
***Total Toilet & Bath Accessories								8,023.33	
**Total Specialties									49,403.00

Item Code	Description	Quantity	UM	Lab. Unit	Mat. Unit	Eqp. Unit	Sub. Unit	Tot. Unit Cost	Total Cost
Cabinets, Casework, Tops									
Manufactured Cabs. & Casework									
1230.002	30" L/P Counter Top w/4" Splash	5	LNFT	4.20	40.10			44.30	221.50
1230.033	36" H Base w/DR. & Dwr. (No Top)	5	LNFT	4.20	80.00			84.20	421.00
1230.033	36" H Base w/DR. & Dwr. (No Top)	25	LNFT	4.20	80.00			84.20	2,105.00
1230.052	36" H Wall Cabinet w/Doors	12	LNFT	4.20	60.40			64.60	775.20
1230.052	36" H Wall Cabinet w/Doors	7	LNFT	4.20	60.40			64.60	452.20
1230.071	Chemical Resistant Tops	75	SQFT	1.60	59.75			61.35	4,601.25
1230.072	Sink Cut-Out For Chem-Res. Top	4	EACH		24.00			24.00	96.00
	***Total Manufactured Cabs. & Casework								8,672.15
									8,672.15
Finishes, Floor Coverings									
Ceramic Tile									
0931.000	Ceramic Tile FLR Thin Set	427	SQFT	1.46	4.00			5.46	2,332.17
0931.002	Ceramic Tile Base (Thin-Set)	190	LNFT	2.17	4.34			6.51	1,235.82
0931.003	Thin Set Ceramic Tile W/C	850	SQFT	1.46	2.66			4.12	3,500.24
	***Total Ceramic Tile								7,068.23
Marble									
0935.250	Cultured Marble Vanity Counter	57	LNFT				14.24	14.24	816.52
0936.070	Marble Threshold	2	EACH	23.13	17.72		17.50	58.35	116.70
	***Total Marble								933.22
Flooring									
Resilient Flooring & Base									
0965.021	4" Vinyl Base	1,358	LNFT	1.04	0.41			1.45	1,974.34
0967.000	Sheet Vinyl Floor 125"	1,690	SQFT	1.15	2.22			3.36	5,680.53
	***Total Resilient Flooring & Base								7,654.87
Carpeting									
0968.000	Carpet & Pad Allowance	53	SQYD	3.96	26.58			30.53	1,630.49
	***Total Carpeting								1,630.49
	**Total Finishes and Floor Coverings								17,286.82
Painting & Wall Covering									
Painting									
0990.008	Paint Exterior Door	8	SIDE	19.66	22.15			41.81	334.47
0990.031	Paint Interior Door	44	SIDE	17.84	22.15			39.99	1,759.47

Item Code	Description	Quantity	UM	Lab. Unit	Mat. Unit	Eq. Unit	Sub. Unit	Tot. Unit Cost	Total Cost
0990.050	Paint Int Metal 2 Coats	11	SQS	24.70	31.01			55.71	612.23
0990.052	Paint Metal 3 Coats	72	SQS	37.05	48.73			85.78	6,199.15
0990.061	Paint Plaster - GYP BD 3 CTS	114	SQS	33.22	33.96			67.18	7,690.64
0990.071	Enamel Plast - GYP BD 3 CTS	72	SQS	38.53	33.96			72.49	5,205.04
0990.081	Paint Mas-Conc 3 CTS	123	SQS	45.87	33.96			82.83	10,169.04
0991.011	Field Paint		***						
0991.014	Inorganic Zinc	149	SQFT	0.10	0.25			0.35	51.86
0991.017	Type C Paint	1,057	SQFT	0.10	0.30			0.39	413.48
	***Total Painting								35,298.00
	**Total Painting & Wall Covering								
Special Finishes									
Special Finishes									
0999.106	*Wall Finish Area*	21,758	SQFT						
	***Total Special Finishes								35,298.00
R.O Equipment Chemical Storage Equipment									
	First Stage Feed Pumps & VFDs	1	LS					402,000.00	402,000.00
	ANSI Pumps	1	LS					150,000.00	150,000.00
	Chemical Metering & Drum Pumps	1	LS					195,750.00	195,750.00
	Process & Chemical Piping, Valves & Accessories	1	LS					651,150.00	651,150.00
	Diaphrag pumps & Air Compress	1	LS					83,000.00	83,000.00
	Chemical Storage Tanks	1	LS					291,500.00	291,500.00
	Leak Detection System	1	LS					77,000.00	77,000.00
	Mixers & Start-up Chemicals	1	LS					16,600.00	16,600.00
	Sand Separators	1	LS					105,000.00	105,000.00
	Cartridge Filters	1	LS					152,000.00	152,000.00
	RO Equipment							1,084,000.00	1,084,000.00
	***Total RO & Chemical Feed Equipment							3,208,000.00	3,208,000.00
Degassifier & Odor Control System									
	Degassifier & Odor Control Equipment	1	LS					738,877.00	738,877.00
	Value Engineering Deduction							(120,000.00)	618,877.00

NLCWTP
Detailed estimate

Item Code	Description	Quantity	UM	Lab. Unit	Mat. Unit	Eqp. Unit	Sub. Unit	Tot. Unit Cost	Total Cost
Electrical Systems & Equipment									
Conduit, Fittings, & Accessories									
Electrical Systems									
Direct Job Expense									
	AS-Built Drawings	1	LS					15,000.00	15,000.00
	General Fuel	11,000	Gal		1.50			1.50	16,500.00
	Temporary Power	1	LS					24,700.00	24,700.00
	Equipment Rental	1	LS					22,624.00	22,624.00
	Office Trailer	20	mos			500.00		500.00	10,000.00
	Storage Trailer	20	mos			200.00		200.00	4,000.00
	Permit	1						5,000.00	5,000.00
	***Total Direct Job Expense								97,824.00
Controls, Instrumentation And Metering									
	***Total Controls, Instrumentatio	1	LS						1,063,220.00
Switchgear									
	***Total Switchgear	1	LS						360,314.00
Generator And A.T.S.									
	***Total Generator and A.T.S.	1	LS						936,427.00
Systems									
	UPS							36,466.00	
	CCTV							19,600.00	
	Fire Alarm							18,490.00	
	Security							21,640.00	
	Lightning Protection							16,412.00	
	***Total Systems								112,608.00
Light Fixtures									
	***Total Light Fixtures								41,344.00
Conduit, Fittings, Cable Tray and Boxes									
	***Total Conduit, Fittings, Cable Tray and Boxes								557,639.00
Wire and Terminations									
	***Total Wire and Terminations								730,595.00

Item Code	Description	Quantity	UM	Lab. Unit	Mat. Unit	Eqp. Unit	Sub. Unit	Tot. Unit Cost	Total Cost
Miscellaneous									
	Wiring Devices							42,640.00	
	Trenching and Backfilling							147,650.00	
	Concrete Work							68,790.00	
	Grounding							40,860.00	
	Expendable Tools							48,650.00	
	Miscellaneous Metals							48,590.00	
	***Total Miscellaneous								397,180.00
	**Total Electrical Systems								
	Value Engineering Deduction							(78,000.00)	4,219,151.00
Exotic Species Removal									
	Exotic Species Removal & Disposal	43	acres					2,680.00	115,240.00
									115,250.00
Lawns & Planting									
Landscaping									
	Irrigation System	1	LS				27,674.00	27,674.00	
	Cypress Mulch	50	CY				34.16	1,708.00	
	Conocarpis Erecta	24	ea				569.41	13,665.84	
	Nephrolepis Biserrata	236	ea				9.11	2,149.96	
	Pittsporum Tobra	51	ea				10.82	551.82	
	Ligustrum	6	ea				740.24	4,441.44	
	Liriope	185	ea				2.85	527.25	
	Fine Grade Labor	1	LS				300.00	300.00	
0280.001	***Total Landscaping							51,018.31	51,018.31
	**Total Lawns & Planting								51,018.31
Office Furnishings									
	Lab Equipment	1	LS					10,191.42	
	Furniture	1	LS					14,808.58	
	***Total Furnishings							25,000.00	25,000.00
General Conditions									

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NLCWTP
Detailed estimate

Item Code	Description	Quantity	UM	Lab. Unit	Mat. Unit	Eqp. Unit	Sub. Unit	Tot. Unit Cost	Total Cost	
	see attached							310,920.00	310,920.00	310,920.00
	Total									18,340,333.34