

FUEL FROM BIRDHOUSE



Project#s Engineering 12-623-56570-000000  
Construction 12-623-58910-000000

Rick Normandeau Thielsch 512-912-9941

Fax 1-512-912-9985

**THIELSCH**  
**ENGINEERING**

Cell 512-791  
9550

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**THIELSCH**  
**ENGINEERING**

Thomas J. Moos, P.E.  
Senior Engineer, API 653, CWI  
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Item #R3 - Presentation of the Region 2 & 3 Texas Recreation and Parks Society 2004 Innovations in Park Development Award for the Addison Circle Park project.

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Item #R4 - **PUBLIC HEARING** and second reading of an ordinance granting an electric utility franchise to TXU Electric Delivery Company.

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Item #R5 - Consideration of a Resolution rejecting the current fountain maintenance bids and approval to rebid the service in February 2005.

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Item #R6 - Approval of award of bid and consideration of a Resolution authorizing the City Manager to enter into a contract with Thielsch Engineering, Inc., for the construction of a new Bulk Fuel Storage and Dispensing System (Fuel Farm) at Addison Airport in the lump sum amount of \$3,975,000.00.

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Item #R7 - Consideration of an Ordinance amending Chapter 2, Article VI, Section 2-303 of the Code of Ordinances regarding the disposal of unclaimed or surplus property.

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### EXECUTIVE SESSION

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Item #ES1- Discussion of personnel regarding a performance evaluation for the City Manager, pursuant to Section 551.074 of the Texas Government Code.

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Adjourn Meeting

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Posted 5:00 p.m.  
January 21, 2005  
Carmen Moran  
City Secretary

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Approved  
1-25-05

DATE SUBMITTED: January 18, 2005  
FOR COUNCIL MEETING: January 25, 2005

**Council Agenda Item:** #RC

**SUMMARY:** This item is for the award of a bid to Thielsch Engineering, Inc. for the construction of a new Fuel Farm at Addison Airport.

**FINANCIAL IMPACT:** Council authorized a \$4.4 million bond issue in October 2004 that was to be allocated as \$2.4 million for the new Fuel Farm, and \$2.0 million for drainage improvements. Award of this bid will use the great majority of the \$4.4 million bond issue funds for the new fuel farm and the cleanup of the old fuel farm.

**BACKGROUND:**

In January 2004, the Town contracted with Washington Group International for the design of a new Fuel Farm. The preliminary construction cost estimate at that time (without the benefit of any plans or specs) was \$1.27 million.

In February 2004, another estimate was made that included fire rated tanks and a roof canopy, for an estimated construction cost of \$1.6 million. At that time, the cost of removal of the tanks at the old farm, soil remediation and closure of the site was estimated to be an additional \$306,500.

In July 2004, the construction cost estimate for the fuel farm was raised to \$1.932 million with the increase attributed to a 2-hour fire rated structure for the roof canopy, and the increased cost of steel for the fuel storage tanks. The estimate included a 10% contingency. Plans were about 40% complete. There was no change in the old fuel farm site closure cost estimate. At this point, construction and cleanup costs totaled \$2.238 million.

On September 1, 2004, a "95% Construction Estimate" was received for \$1.939 million that did not include any contingency. On September 30, 2004, we received an update of the "95% Construction Estimate" for an amount of \$2.69 million. This estimate included a contingency of \$350,900. At this point we were concerned with our budget, but figured that if the bids came in close to the Engineer's estimate without the contingency, and if we did not build the canopy (Engineer's estimate of \$355,500), we could receive a bid of about \$1.984 million and be within budget.

A plus B bids were received for the new Fuel Farm on November 30, 2004. A copy of the bid tabulation is attached. The A or AA part of the bid is the amount of money the contractor has bid to build the project. (We asked for a base bid [A] and an alternate bid [AA]). The B or BA part of the bid is the number of days the contractor thinks it will take him to build the project, multiplied by the time value of a day, which we set at \$3,000 per day. The low bidder bid 210 calendar days to build the project alternate that we recommend. The total (AA+BA) of \$4,515,000 that you see on the bid tab is not the cost of the project. The Total (AA+BA) column is the column we use only for the basis of

award under the A+B bidding system. The contract to be awarded will be for \$3,885,000.

The bid included a "base bid" which was the fuel farm without a fabric canopy roof, and an "alternate bid" which was the fuel farm with a fabric canopy roof. Thielsch Engineering was the low bidder with a \$3.685 million base bid and a \$3.885 million alternate bid. Since these bids were significantly higher than the Engineer's estimate, staff became concerned. The question to be answered was, was the bid too high or the Engineer's estimate too low?

Staff requested that Washington Group International (WGI) revisit their construction cost estimate to try to determine the true cost of construction of the new Fuel Farm. WGI performed an independent estimate (performed by the company's estimating group rather than the project manager) and estimated the construction cost, with fabric canopy, to be \$4.097 million. On this basis, Thielsch Engineering's bid is 5.18% below the revised Engineer's estimate, and earlier Engineer estimates were just too low.

Staff believes the alternate bid should be awarded that includes the fabric canopy roof. The roof will cost an additional \$200,000 but will provide the following benefits:

1. The roof will protect the tanks, meters, valves and electronic equipment from the sun and weather.
2. The roof will keep rainwater out of the tank containment area. This will minimize the operation of the valves to drain the containment areas into the oil water separator.
3. Aesthetically, the fuel farm will be much more pleasing to the eye. Drawings that show the look are attached.

WGI has checked the qualifications, experience and reputation of Thielsch Engineering, and based upon their review, recommends award.

Since this is an A+B bid there is the possibility and probability that the contractor will earn a bonus if he finishes sooner than the amount of days he has bid. Staff believes the maximum amount of bonus probable would be finishing 30 days earlier than bid, for a maximum bonus amount of \$90,000.

#### **RECOMMENDATION:**

Staff recommends that Council authorize the City Manager to enter into a contract with Thielsch Engineering for the construction of a new Bulk Fuel Storage and Dispensing System (Fuel Farm) in the lump sum amount of \$3,885,000.00, their alternate bid, which includes a fabric canopy roof. Staff further recommends Council authorize a total budget of \$3,975,000.00 for this project that includes \$90,000 for a possible incentive bonus.

## AIRPORT FUEL FARM COST SCENARIOS

CO SOLD		CO SOLD	
Available Funds	\$4,400,000.00	Available Funds	\$4,400,000.00
Lump Sum Base Bid without Canopy	\$3,685,000.00	Lump Sum Base Bid with Canopy Alternative (Canopy - \$200,000)	\$3,885,000.00
Contractor Incentive Bonus - Complete 30 Days Early	\$90,000.00	Contractor Incentive Bonus - Complete 30 Days Early	\$90,000.00
Old Site Closure	<u>\$306,500.00</u>	Old Site Closure	<u>\$306,500.00</u>
Funds Available For Master Drainage	\$318,500.00	Funds Available For Master Drainage Plan	\$118,500.00
Master Drainage Plan Cost Est.	<u>\$100,400.00</u>	Master Drainage Plan Cost Est.	<u>\$100,400.00</u>
Funds To Begin Drainage Work	<u><u>\$218,100.00</u></u>	Funds To Begin Drainage Work	<u><u>\$18,100.00</u></u>

FAX COVER SHEET



195 Frances Avenue, Cranston, RI 02910  
Tel. (401) 467-6454 Fax (401) 461-7259

To: Jim Pierce Date: 12-21-04  
Company: Town of Addison From: Richard Normandeau  
Fax: 972-450-2837 Job: \_\_\_\_\_

This is page one of a 2 page fax. If you do not receive all of the pages or if they are not clear, please call us at the above telephone number.

COMMENTS: Bulk Fuel Storage + Dispensing  
System Bid Schedule  
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*Please visit us on the web at [www.thielsch.com](http://www.thielsch.com)*

**THIELSCH ENGINEERING, INC.**

195 Frances Avenue  
Cranston, Rhode Island 02910  
Tel. (401) 467-6454  
Fax. (401) 461-6006

December 21, 2004

Mr. Jim Pierce  
Town of Addison  
Addison, TX

**SUBJECT: Explanation of Bulk Fuel Storage & Dispensing System Bid Schedule Summary**

Dear Mr. Pierce,

This letter intended to provide you with an explanation into how Thielsch Engineering developed our pricing for the three individual line items on the Bid Schedule summary form. In addition, as requested we have provided an average price for a 25,000 gallon AVGas tank with tank specific piping, catwalk, and shipping.

Our interpretation of the Division 1, General Conditions & Requirements within the submitted Bid Schedule summary that covered the cost associated with Project Management for the entire length of the project along with the overhead expenses related to maintaining a trailer on-site.

Our interpretation of the Division 5, Metals requirements within the submitted bid schedule summary was that this covered all costs associated with the tanks and the catwalk structures.

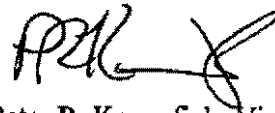
Our interpretation of the Division 10, Specialties requirements within the submitted bid schedule summary was that it covered the fire protection coating on the structural steel of the canopy as well as the fire suppression system.

The average cost for a specified 25,000 gallon AVGas tank along with the tank specific piping, catwalk, and shipping is \$79,000.00

Thielsch Engineering hopes that this information is helpful to you in making any decision on the awarding of this project.

Sincerely,

THIELSCH ENGINEERING, INC.



Peter R. Kennefick, Vice President  
Utility Engineering Services  
[Pkennefick@thielsch.com](mailto:Pkennefick@thielsch.com)





## Washington Group International

Integrated Engineering, Construction, and Management Solutions

December 20, 2004

MEMORANDUM FOR: Mr. Jim Pierce, P.E., Assistant Public Works Director  
Town of Addison  
16801 Westgrove Drive  
Addison, Texas 75001-9010

FROM: Samuel G. Lundgren, P.E., Project Manager  
Washington Group International, Inc.  
7800 Union Avenue, Suite 100  
Denver, CO 80237

SUBJECT: Independent Estimate and Low Bid Validation – Bulk Fuel Storage and Dispensing System for Addison Airport

Mr. Pierce:

In reference to the Bid Opening for the Bulk Fuel Storage and Dispensing System for Addison Airport, which occurred on November 30, 2004, as Bid Number 05-02, please find attached a detailed Independent Construction Estimate for this project based on current equipment, labor and materials costs. The attached Independent Estimate includes a basis of estimate document reflecting current cost of construction and the assumptions applied to this estimate.

Washington Group International has compared this Independent Estimate with the Bid Summary by Thielsch Engineering, the apparent low bidder. The low bid at \$3,885,000 is 5.18% lower than the Independent Estimate at \$4,097,308. Washington Group verifies that the bid price is valid, responsive and competitive for construction of this facility.

Respectfully submitted,

Samuel G. Lundgren, P.E.  
Project Manager  
Washington Group International, Inc.

3 Attachments:

1. Validation Comparison
2. Independent Estimate
3. Thielsch Bid Summary

Description: Bid Validation Comparison - Low Bid Compared to Independent Estimate

	Independent Est	Low Bid w/alt	% Variance
Division 1. General Conditions	\$321,976.00	\$ 300,000.00	-6.83%
Division 2. Site Construction	\$275,591.00	\$ 275,000.00	-0.21%
Division 3. Concrete	\$264,856.00	\$ 235,000.00	-11.27%
Division 5. Metals	\$1,158,754.00	\$ 1,150,000.00	-0.76%
Division 7. Thermal Protection	\$88,621.00	\$ 75,000.00	-15.37%
Division 10. Specialties	\$103,390.00	\$ 100,000.00	-3.28%
Division 13. Special Construction	\$549,605.00	\$ 550,000.00	0.07%
Division 13a. Fabric Canopy	\$143,762.00	\$ 125,000.00	-13.05%
Division 15. Mechanical	\$124,088.00	\$ 125,000.00	0.73%
Division 16. Electrical	\$1,066,665.00	\$ 950,000.00	-10.94%
<b>Total Estimated Lump Sum Bid</b>	<b>\$4,097,308.00</b>	<b>\$ 3,885,000.00</b>	<b>-5.18%</b>
Estimated time required for construction:	225 days	210 days	

*Atch #1*

**Description: WGI Independent Construction Estimate (Bid Validation)**

This bid is to construct a centrally located aviation bulk fuel storage and dispensing system with 15 individual bulk fuel storage tanks, with off-load and five Fixed Base Operator (FBO) metered dispensing systems, in a consolidated, environmentally protected site, including tanks and operating equipment, with suitable architectural considerations to blend into the site. The horizontal mounted cylindrical tanks will be either 25,000 gal or 15,000 gal capacity fuel storage tanks, double wall, 2-hour fire rated and ballistics protected tanks. Primary products to be dispensed are Low Lead AVGAS and Jet A Fuel, with one two-compartment tank of 10,000 gal & 15,000 gal, with dispensing equipment for LL, MoGas and Diesel. The equipment includes industry standard filtration systems with automatic shutdown and overflow protection devices. A 10,000gal oil/water separator will be installed and connected to the secondary containment dike area and off-load/dispensing ramps. Fuel storage area will have explosion proof electrical fixtures and control panel. A 1" water line will be required for emergency shower/eye wash unit and two 3/4" hose and reel unit. Telephone connections include intercom access, phone and fire alarm. Fuel storage tanks will be mounted in a concrete low wall secondary containment structure, with stretched fabric canopy and area lighting, storm drainage and utilities. Access/exit for the facility will be through an electrically operated gates, with new driveways, curb and gutter.

Division 1. General Conditions		\$321,976.00	
Subtotal		\$321,976.00	\$321,976.00
Division 2. Site Construction			
Site Clearing		\$26,600.00	
Earthwork		\$125,746.00	
Asphalt Pymt		\$30,809.00	
Landscape & Irrigation		\$24,754.00	
Concrete Pymt		\$27,255.00	
Chain Link Fence		\$40,427.00	
Subtotal		\$275,591.00	\$275,591.00
Division 3. Concrete			
Cast-in-Place		\$264,856.00	
Subtotal		\$264,856.00	\$264,856.00
Division 5. Metals			
Fuel Storage Tanks		\$673,339.00	
Canopy Structure		\$136,214.00	
Metal Stairs & Struct		\$239,530.00	
Pipe Stru & Tube Railings		\$93,903.00	
Gratings		\$15,768.00	
Subtotal		\$1,158,754.00	\$1,158,754.00
Division 7. Thermal Protection			
Fire Resistive Material		\$88,621.00	
Subtotal		\$88,621.00	\$88,621.00
Division 10. Specialties			
Telephone Specialties		\$8,065.00	
Lighting Protection		\$36,650.00	
Fire Protection & Devices		\$58,675.00	
Subtotal		\$103,390.00	\$103,390.00
Division 13. Special Construction			
O/W Sep & Connection		\$65,862.00	
Fuel System Pipe		\$87,055.00	
Fuel System Valves		\$99,727.00	
Accessories		\$102,550.00	
Pumps		\$123,792.00	
Filtration		\$70,619.00	
Subtotal		\$549,605.00	\$549,605.00

Division 13a. Stretched Fabric Canopy			
PVC Canopy		\$143,762.00	
Subtotal		\$143,762.00	\$143,762.00
Division 15. Mechanical			
Water Distribution		\$10,424.00	
Domestic Water Piping		\$18,564.00	
Water Specialties		\$12,700.00	
Drainage Specialties		\$18,359.00	
Storm Drainage Piping		\$54,058.00	
Emergency Plumbing		\$9,983.00	
Subtotal		\$124,088.00	\$124,088.00
Division 16. Electrical			
Wiring & Cables		\$102,699.00	
Boxes & Fittings		\$110,520.00	
Electrical Connections		\$96,957.00	
Motor Disconnect Switch		\$119,480.00	
Transformer		\$21,820.00	
Panel Boards		\$90,881.00	
Contactors & Push B		\$94,200.00	
MCC		\$75,371.00	
Emer Gen Connection		\$2,166.00	
Ext Lighting		\$129,460.00	
Voice Cabling		\$4,901.00	
Controls & Instrument		\$216,210.00	
Subtotal		\$1,066,665.00	\$1,066,665.00
<b>Total Estimated Lump Sum Bid</b>			<b>\$4,097,308.00</b>

Estimated time required for construction: 225 days

Submitted by: Arthur Cole, Sr. Estimator, WGI

Date: 12-20-04



# Washington Group International

Integrated Engineering, Construction, and Management Solutions

## WESTERN OPERATIONS CENTER

### ESTIMATE BASIS

<b>CLIENT:</b>	City of Addison	<b>PROJECT MANAGER:</b>	S. Lundgren
<b>PROJECT:</b>	Bulk Fuel Storage & Dispensing System	<b>ESTIMATOR:</b>	A. Cole
<b>LOCATION:</b>	Addison, Texas	<b>DATE:</b>	Dec. 20, 2004
<b>JOB NO.:</b>	27514-000	<b>REVISION NO:</b>	0

### 1.0 PURPOSE

This is a Class 3 estimate, based on semi-detailed information. This estimate has an accuracy range of minus 10% to minus 20% on the low side and plus 10% to plus 30% on the high side.

This estimate shows the costs for the construction of bulk fuel storage and dispensing system at Addison Airport located in Addison, Texas. The costs shown are based on the use of subcontracted labor, and are a check estimate of a subcontractor's cost to perform the work. No WGI home office engineering costs or any WGI G&A or fee is included

*↳ Gen'l Overhead & Administration (office)*

### 2.0 SCOPE

The work involves the demolition of existing paved surfaces, concrete, fencing, and foliage. The construction work includes the installation of fifteen horizontal bulk fuel storage tanks plus pumps, piping, metered fuel dispensing systems, and the associated electrical work and instrumentation.

The fuel storage and dispensing system will be installed on a new slab on grade with containment walls and covered with a plastic sheet roof supported by galvanized steel truss work and structural steel tube supports.

Site work will consist of an asphalt-paved access road, plus fencing, and landscaping.

### 3.0 COMPETITIVE ANALYSIS

Not applicable to this project.



# Washington Group International

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## WESTERN OPERATIONS CENTER

### ESTIMATE BASIS

#### 4.0 CONSTRUCTION APPROACH

The estimate is based on the use of fully contracted labor based on Davis Bacon wage rates.

The hourly craft wage rate includes:

- Direct hourly wages
- Fringe benefits
- All payroll taxes and insurances
- Contractor's general liability insurance
- Contractor's overheads & fee

#### 5.0 QUANTITY BASIS

02 – Improvements to Site

The quantities in this account were developed by the estimating group, based on MTO's from the drawings.

03 – Earthwork & Piling

The estimating group calculated earthwork quantities based on the size of the concrete slabs, sidewalks, and the length of underground pipe runs.

04 – Concrete

The concrete quantities and types are based on the drawings.

05 – Structural Steel

Structural steel quantities are based on MTO's taken from the drawings.

06-01 – Mechanical Equipment

The tank and equipment sizes and quantities are take from the drawings.

06-02 – Electrical Equipment

The electrical equipment (transformers, mcc's) is based on the drawings.

06-03 – Instrumentation Equipment

Field mounted instrumentation is based on the quantities taken from the drawings.

11 – Piping Bulks

Pipe sizes and quantities are taken from the drawings. The MTO was developed by the estimating group.

*Material Take Offs*



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## WESTERN OPERATIONS CENTER

### ESTIMATE BASIS

- |                                   |  |
|-----------------------------------|--|
| 12 – Electrical Bulks             | The wire sizes and length are taken from a wire schedule. Conduit sizes are taken from the drawings.         |
| 13 – Instrumentation Bulks        | These wiring and conduit quantities are taken from the drawings by the estimating group.                     |
| 14 – Painting / Coatings / Lining | Fireproofing is based on the steel truss supports.   |
| 15 – Insulation                   |  |
| 16 – Bldgs. & Architectural       | The plastic cover over the facility is taken from the drawings. No other buildings are in the scope of work. |

### 6.0 PRICING BASIS

- |                              |   |
|------------------------------|---|
| 02 – Improvements to Site    | These costs for landscaping, fencing, paving, and site drainage are based on historical data.   |
| 03 – Earthwork & Piling      | These costs are also based on historical data.  |
| 04 – Concrete                | Concrete costs are based on redi-mix concrete delivered to the jobsite. Structural steel (rebar & embedments) are based on current pricing and reflect the steel price increases in the spring of 2004. |
| 05 – Structural Steel        | Structural steel costs are taken from historical data and reflect price increases in the spring of 2004.  |
| 06-01 – Mechanical Equipment | Storage tank costs are based on the use of double wall units, fabricated to UL142 and UL-2085 standards. These costs are taken from a preliminary quotation from Modern Welding.                        |



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## WESTERN OPERATIONS CENTER

### ESTIMATE BASIS

	Pump costs are taken from historical data, and are based on carbon steel construction. Pump motor costs are based on explosion proof enclosures.
06-02 – Electrical Equipment	Electrical equipment costs are based on historical data.
06-03 – Instrumentation Equipment	These item costs are taken from historical data.
11 – Piping Bulks	Pipe costs are taken from historical data. Costs for fuel piping are based on using epoxy lined carbon steel pipe. Lining is based on standards on page 122 of specifications.
12 – Electrical Bulks	Electrical bulks are taken from historical data. Lighting fixtures and junction boxes in enclosure are priced as explosion proof.
13 – Instrumentation Bulks	Instrumentation bulks are added as a factor to the instrumentation account.
14 – Painting / Coatings / Linings	Steel fireproofing is in this account. This cost is taken from in house data. No separate painting costs are listed. Piping is shop painted. Structural steel is galvanized or coated with fireproofing.
15 – Insulation	
16 – Bldgs. & Architectural	The plastic covering over the tank area is based on plastic covering. This price is taken from published data.

### 7.0 CRAFT LABOR

Craft labor costs are based on using fully subcontracted labor. No retrofit factor is included. Because the work is located in Texas, it is assumed that weather will have minimal impact on craft productivity.





# **Washington Group International**

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## **WESTERN OPERATIONS CENTER**

### **ESTIMATE BASIS**

Labor costs are calculated on a 40 hour work week.

#### **8.0 SCHEDULE**

The estimate is based on a 5 month duration. This gives an average man loading of 25 men.

#### **9.0 MARKUPS and ESCALATION**

Insurance 1.33% Contractor's Cost  
Taxes 0% Sales and Use Tax on materials  
Bonds Included in contractor's wage rates  
Escalation None included  
G&A  
Warranty Reserve

#### **10.0 HOME OFFICE ENGINEERING**

None is included in this estimate.

#### **11.0 CONSTRUCTION INDIRECTS**

Construction indirects include the following items:

- Scaffolding & Temporary Facilities
- Clean up
- Survey & Layout
- Dust control
- Construction Management & Supervision
- Equipment rental
- Small Tools

#### **12.0 CONTINGENCY**

A contingency of 10% is included in the estimate. This reflects the information available for the estimate.

#### **13.0 FEE**



# Washington Group International

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## WESTERN OPERATIONS CENTER

### ESTIMATE BASIS

#### 14.0 INCLUSIONS

The labor, material, and indirect costs to construct a centrally located aviation storage and dispensing system.

#### 15.0 EXCLUSIONS

- Home office engineering
- WGI G & A or fee
- Offsite roads or Structures
- Any hazardous material clean up or remediation
- Rock excavation or dewatering
- Overhead power line removal or relocation

#### 16.0 ASSUMPTIONS & QUALIFICATIONS

- No piling is required
- There is room onsite for laydown areas, office trailers, and parking
- Airport activities will not interfere with construction activities
- Craft labor is available for this project
- No Department of Defense or other government security clearances are necessary to work on this site
- Work will done in a 40 hour work week with no shift differential or premium pay
- No sales tax the city of Addison, Texas is exempt from sales and use taxes

*Please note that the cost estimates provided herein are dependent upon the various underlying assumptions, inclusions, and exclusions utilized in developing them. Actual project costs will differ, and can be significantly affected by factors such as changes in the external environment, the manner in which the project is implemented, and other factors which impact the estimate basis or otherwise affect the project. Estimate accuracy ranges are only projections based upon cost estimating methods and are not a guarantee of actual project costs.*




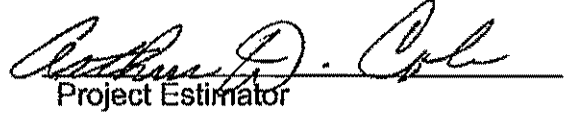
# Washington Group International

Integrated Engineering, Construction, and Management Solutions

## WESTERN OPERATIONS CENTER

### ESTIMATE BASIS

  
Project Manager

  
Project Estimator

## THIELSCH ENGINEERING BID SUMMARY

### Base Bid with Additive Alternative Breakout by CSI Format:

#### Project Description:

This Additive Alternative bid is to construct a centrally located aviation bulk fuel storage and dispensing system with 15 individual bulk fuel storage tanks, with off-load and five Fixed Base Operator (FBO) metered dispensing systems, in a consolidated, environmentally protected site, including tanks and operating equipment, with suitable architectural considerations to blend into the site. The horizontal mounted cylindrical tanks will be either 25,000 gal or 15,000 gal capacity fuel storage tanks, double wall, 2-hour fire rated and ballistic protected tanks. Primary products to be dispensed are Low Lead AVGAS and Jet A Fuel, with one two-compartment tank of 10,000 gal & 15,000 gal, with dispensing equipment for LL, MoGas and Diesel. The equipment includes industry standard filtration systems with automatic shutdown and overflow protection devices. A 10,000gal oil/water separator will be installed and connected to the secondary containment dike area and off-load/dispensing ramps. Fuel storage area will have explosion proof electrical fixtures and control panel. A 1" water line will be required for emergency shower/eye wash unit and two 3/4" hose and reel unit. Telephone connections include intercom access, phone and fire alarm. Fuel storage tanks will be mounted in a concrete low wall secondary containment structure, with storm drainage and utilities and a stretched fabric canopy mounted on a 2 hour rated steel structure, with rain gutters and downspouts, interior lighting and frame mounted area lighting. Access/exit for the facility will be through an electrically operated gates, with new driveways, curb and gutter.

#### Additive Alternate Bid Proposal for Bulk Fuel Storage and Dispensing System, Addison Airport

	Amount Bid
Division 1. General Conditions	\$300,000.00
Division 2. Site Construction	\$275,000.00
Division 3. Concrete	\$235,000.00
Division 5. Metals	\$1,150,000.00
Division 7. Thermal Protection	\$75,000.00
Division 10. Specialties	\$100,000.00
Division 13. Special Construction	\$550,000.00
Division 13a. Stretched Fabric Canopy	\$125,000.00
Division 15. Mechanical	\$125,000.00
Division 16. Electrical	\$950,000.00
<b>Total Lump Sum Bid with Additive Alternative (AA)</b>	<b>\$3,885,000.00</b>

**SECOND PART**

**BID SCHEDULE SUMMARY**

**Base Bid Breakout by CSI Format:**

**Project Description:**

This bid is to construct a centrally located aviation bulk fuel storage and dispensing system with 15 individual bulk fuel storage tanks, with off-load and five Fixed Base Operator (FBO) metered dispensing systems, in a consolidated, environmentally protected site, including tanks and operating equipment, with suitable architectural considerations to blend into the site. The horizontal mounted cylindrical tanks will be either 25,000 gal or 15,000 gal capacity fuel storage tanks, double wall, 2-hour fire rated and ballistics protected tanks. Primary products to be dispensed are Low Lead AVGAS and Jet A Fuel, with one two-compartment tank of 10,000 gal & 15,000 gal, with dispensing equipment for LL MoGas and Diesel. The equipment includes industry standard filtration systems with automatic shutdown and overflow protection devices. A 10,000gal oil/water separator will be installed and connected to the secondary containment dike area and off-load/dispensing ramps. Fuel storage area will have explosion proof electrical fixtures and control panel. A 1" water line will be required for emergency shower/eye wash unit and two 3/4" hoses and reel unit. Telephone connections include interroom access, phone and fire alarm. Fuel storage tanks will be mounted in a concrete low wall secondary containment structure, with area lighting, storm drainage and utilities. Access/exit for the facility will be through an electrically operated gates, with new driveways, curb and gutter. (A stretched fabric canopy is listed as an alternate bid item.)

**Bid Proposal for Bulk Fuel Storage and Dispensing System, Addison Airport**

**Amount Bid**

Division 1. General Conditions	\$300,000.00
Division 2. Site Construction	\$275,000.00
Division 3. Concrete	\$235,000.00
Division 5. Metals	\$1,150,000.00
Division 10. Specialties	\$100,000.00
Division 13. Special Construction	\$550,000.00
Division 15. Mechanical	\$125,000.00
Division 16. Electrical	\$950,000.00
<b>Total Lump Sum Base Bid (A)</b>	<b>\$3,685,000.00</b>

**Bulk Fuel Storage & Dispensing System Addison Airport**

**BID NO 05-02**

**Bid Opening: November 30, 2004**

**2:00 PM**

Bidder	Signed	Bid Bond	Addendum 1	Addendum 2	Addendum 3	Lump Sum Base Bid (A)	Calendar Days X \$3000 (B)	Total (A+B)	Lump Sum w/Alternative (AA)	Calendar Days w/Alternative X \$3000 (BA)	Total (AA+BA)
Thielsch Engineering	y	y	y	y	y	\$3,685,000.00	\$588,000.00	\$4,273,000.00	\$3,885,000.00	\$630,000.00	\$4,515,000.00
Talon/Kinley Joint Venture	y	y	y	y	y	\$4,226,000.00	\$840,000.00	\$5,066,000.00	\$4,822,000.00	\$960,000.00	\$5,782,000.00
AUI Contractors, L.P.	y	y	y	y	y	\$5,501,832.00	\$900,000.00	\$6,401,832.00	\$6,008,883.00	\$990,000.00	\$6,998,883.00

*Minok Suh*

Minok Suh, Purchasing Coordinator

*Corey Gayden*

Corey Gayden, Witness



## Washington Group International

Integrated Engineering, Construction, and Management Solutions

December 20, 2004

MEMORANDUM FOR: Mr. Jim Pierce, P.E., Assistant Public Works Director  
Town of Addison  
16801 Westgrove Drive  
Addison, Texas 75001-9010

FROM: Samuel G. Lundgren, P.E., Project Manager  
Washington Group International, Inc.  
7800 Union Avenue, Suite 100  
Denver, CO 80237

SUBJECT: Recommendation of Award – Bulk Fuel Storage and Dispensing System for Addison Airport

Mr. Pierce:

In reference to the Bid Opening for the Bulk Fuel Storage and Dispensing System for Addison Airport, which occurred on November 30, 2004, as Bid Number 05-02, recommend the Town of Addison award this project to Thielsch Engineering Inc., as the apparent low bidder. The bid tabulation by the Town of Addison Purchasing Department is attachment #1 and the bid evaluation spread sheet is attachment #2.

Thielsch Engineering Inc. is a nationally recognized Mechanical Engineering and Construction organization with specialized skills that match the construction requirements of this project. They are a privately held company, founded in 1984, with approximately 300 employees. Their DUNS number shows the firm to be a "Mechanical Consulting Engineer, Mechanical and Welding Contractor" in good standing and with annual sales of \$44,600,000. The US Business Directory shows them to be Steel Structural & Mechanical Fabricator (Contractor) with a very good credit rating. They are also listed in the Standard & Poor's Register of Corporations as a Mechanical Engineer and Contractor with annual sales of \$48,000,000.

As indicated by attachment #3, Thielsch Engineering is a fully qualified contractor for this project, with the personnel, technical knowledge and skills to complete the required construction, as proposed on their bid proposal form (attachment #4) and they are fully responsive in providing all required bid documents and certifications.

Respectfully submitted,

Samuel G. Lundgren, P.E.  
Project Manager  
Washington Group International, Inc.

4 Atch

**Bulk Fuel Storage & Dispensing System Addison Airport**

**BID NO 05-02**

**Bid Opening: November 30, 2004**

**2:00 PM**

Bidder	Signed	Bid Bond	Addendum 1	Addendum 2	Addendum 3	Lump Sum Base Bid (A)	Calendar Days X \$3000 (B)	Total (A+B)	Lump Sum w/Alternative (AA)	Calendar Days w/Alternative X \$3000 (BA)	Total (AA+BA)
Thielsch Engineering	y	y	y	y	y	\$3,685,000.00	\$588,000.00	\$4,273,000.00	\$3,885,000.00	\$630,000.00	\$4,515,000.00
Talon/Kinley Joint Venture	y	y	y	y	y	\$4,226,000.00	\$840,000.00	\$5,066,000.00	\$4,822,000.00	\$960,000.00	\$5,782,000.00
AUI Contractors, L.P.	y	y	y	y	y	\$5,501,832.00	\$900,000.00	\$6,401,832.00	\$6,008,883.00	\$990,000.00	\$6,998,883.00

*Minok Suh*

Minok Suh, Purchasing Coordinator

*Corey Gayden*

Corey Gayden, Witness

ATTACH 1



**Description: Engineer Estimate for Construction**

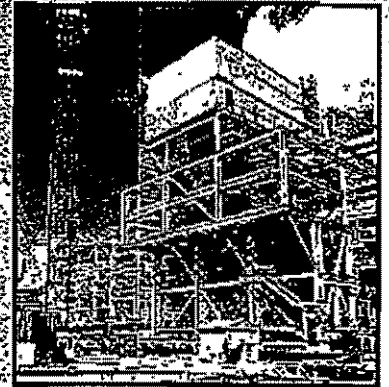
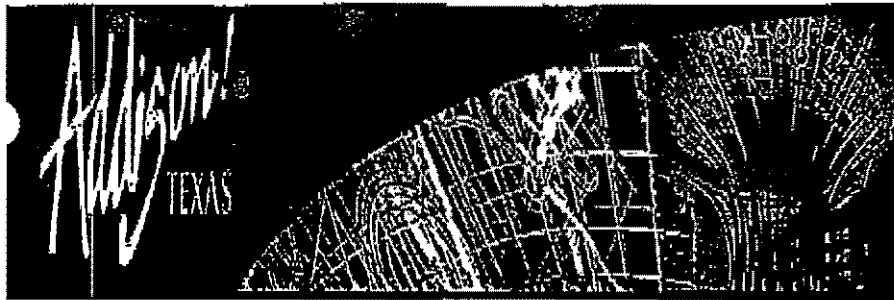
This bid is to construct a centrally located aviation bulk fuel storage and dispensing system with 15 individual bulk fuel storage tanks, with off-load and five Fixed Base Operator (FBO) metered dispensing systems, in a consolidated, environmentally protected site, including tanks and operating equipment, with suitable architectural considerations to blend into the site. The horizontal mounted cylindrical tanks will be either 25,000 gal or 15,000 gal capacity fuel storage tanks, double wall, 2-hour fire rated and ballistics protected tanks. Primary products to be dispensed are Low Lead AVGAS and Jet A Fuel, with one two-compartment tank of 10,000 gal & 15,000 gal, with dispensing equipment for LL MoGas and Diesel. The equipment includes industry standard filtration systems with automatic shutdown and overflow protection devices. A 10,000gal oil/water separator will be installed and connected to the secondary containment dike area and off-load/dispensing ramps. Fuel storage area will have explosion proof electrical fixtures and control panel. A 1" water line will be required for emergency shower/eye wash unit and two 3/4" hose and reel unit. Telephone connections include intercom access, phone and fire alarm. Fuel storage tanks will be mounted in a concrete low wall secondary containment structure, with stretched fabric canopy and area lighting, storm drainage and utilities. Access/exit for the facility will be through an electrically operated gates, with new driveways, curb and gutter.

	WGI Estimate	Low Bid w/o alt	2nd Low Bid	3rd Low Bid
Division 1. General Conditions	\$ 321,976.00	\$ 300,000.00	\$ 39,339.00	\$ 886,017.00
Division 2. Site Construction	\$ 275,691.00	\$ 275,000.00	\$ 476,850.00	\$ 596,315.00
Division 3. Concrete	\$ 264,856.00	\$ 235,000.00	\$ 186,275.00	\$ 115,000.00
Division 5. Metals	\$ 1,158,754.00	\$ 1,150,000.00	\$ 288,436.00	\$ 183,000.00
Division 10. Specialties	\$ 103,390.00	\$ 100,000.00	\$ 1,500.00	\$ 41,000.00
Division 13. Special Construction	\$ 549,605.00	\$ 550,000.00	\$ 2,589,689.00	\$ 2,690,000.00
Division 15. Mechanical	\$ 124,088.00	\$ 125,000.00	\$ 23,485.00	\$ 265,000.00
Division 16. Electrical	\$ 1,066,665.00	\$ 950,000.00	\$ 620,426.00	\$ 725,500.00
<b>Total Lump Sum Bid</b>	<b>\$ 3,864,925.00</b>	<b>\$ 3,685,000.00</b>	<b>\$4,226,000.00</b>	<b>\$ 5,501,832.00</b>
Estimated time required for construction: 225 days		196 days	280 days	300 days
Submitted by: Samuel G. Lundgren, PE. Project Manager	Date: 12-20-04			

**Description: Engineer Estimate for Construction**

This bid is to construct a centrally located aviation bulk fuel storage and dispensing system with 15 individual bulk fuel storage tanks, with off-load and five Fixed Base Operator (FBO) metered dispensing systems, in a consolidated, environmentally protected site, including tanks and operating equipment, with suitable architectural considerations to blend into the site. The horizontal mounted cylindrical tanks will be either 25,000 gal or 15,000 gal capacity fuel storage tanks, double wall, 2-hour fire rated and ballistics protected tanks. Primary products to be dispensed are Low Lead AVGAS and Jet A Fuel, with one two-compartment tank of 10,000 gal & 15,000 gal, with dispensing equipment for LL MoGas and Diesel. The equipment includes industry standard filtration systems with automatic shutdown and overflow protection devices. A 10,000gal oil/water separator will be installed and connected to the secondary containment dike area and off-load/dispensing ramps. Fuel storage area will have explosion proof electrical fixtures and control panel. A 1" water line will be required for emergency shower/eye wash unit and two 3/4" hose and reel unit. Telephone connections include intercom access, phone and fire alarm. Fuel storage tanks will be mounted in a concrete low wall secondary containment structure, with stretched fabric canopy and area lighting, storm drainage and utilities. Access/exit for the facility will be through an electrically operated gates, with new driveways, curb and gutter.

	WGI Estimate	Low Bid w/alt	2nd Low Bid w/alt	3rd Low Bid w/alt
Division 1. General Conditions	\$ 321,976.00	\$ 300,000.00	\$ 49,339.00	\$ 886,017.00
Division 2. Site Construction	\$ 275,591.00	\$ 275,000.00	\$ 476,850.00	\$ 596,315.00
Division 3. Concrete	\$ 264,856.00	\$ 235,000.00	\$ 186,275.00	\$ 115,000.00
Division 5. Metals	\$ 1,158,754.00	\$ 1,150,000.00	\$ 288,436.00	\$ 183,000.00
Division 7. Thermal Protection	\$ 88,621.00	\$ 75,000.00	\$ 177,420.00	\$ 27,000.00
Division 10. Specialties	\$ 103,390.00	\$ 100,000.00	\$ 1,500.00	\$ 41,000.00
Division 13. Special Construction	\$ 549,605.00	\$ 550,000.00	\$ 2,475,689.00	\$ 2,690,000.00
Division 13a. Fabric Canopy	\$ 143,762.00	\$ 125,000.00	\$ 470,580.00	\$ 450,000.00
Division 15. Mechanical	\$ 124,088.00	\$ 125,000.00	\$ 23,485.00	\$ 265,000.00
Division 16. Electrical	\$ 1,066,665.00	\$ 950,000.00	\$ 672,426.00	\$ 755,500.00
<b>Total Lump Sum Bid</b>	<b>\$ 4,097,308.00</b>	<b>\$ 3,885,000.00</b>	<b>\$4,822,000.00</b>	<b>\$ 6,008,832.00</b>
Estimated time required for construction: 225 days		210	320	330
Submitted by: Samuel G. Lundgren, PE. Project Manager	Date: 12-20-04			



# Thielsch Engineering

Professional Engineering  
& Consulting Services

Energy Design/Analysis

Project Management/  
Quality Control

Engineering Evaluation/  
Inspection

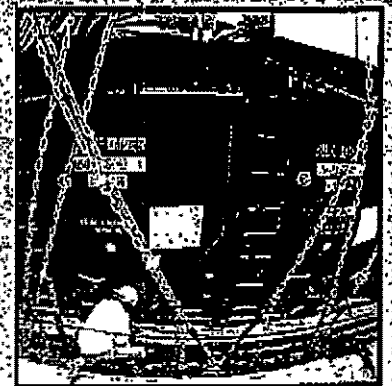
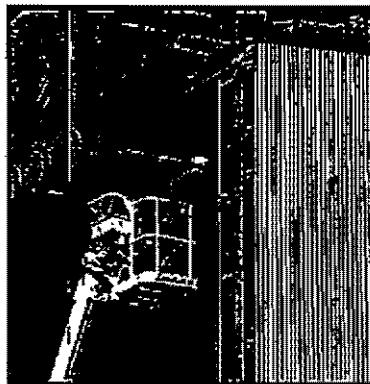
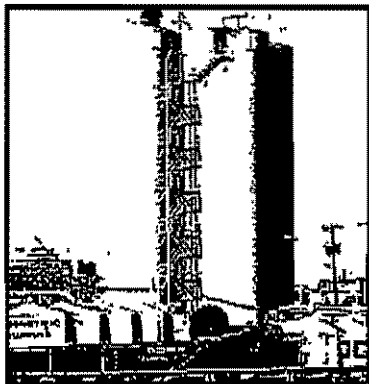
Condition Assessment

Failure Analysis

Maintenance/Construction

Accident Investigation  
& Reconstruction

Pressure Vessel Fabrication



195 Frances Avenue, Cranston, RI 02910 USA  
Tel. (401) 467-6454 • Fax (401) 467-2398  
[www.thielsch.com](http://www.thielsch.com)

**THIELSCH**  
**ENGINEERING**

## **THIELSCH ENGINEERING, INC.**

195 Frances Avenue  
Cranston, Rhode Island 02910  
Tel. (401) 467-6454  
Fax. (401) 461-6006

November 29, 2004

City of Addison Airport  
16051 Addison Road, Suite 220  
Addison, Texas 75001

**SUBJECT:** Bulk Fuel Storage and Dispensing System  
TEI Proposal No. 04-UES-3217

Dear Sir(s):

Thielsch Engineering is submitting our complete proposal for providing the services and information requested in your bid solicitation. We believe our proposal offers an exceptional range of experience and depth of resources necessary to meet the requirements of the Bulk Fuel Storage and Dispensing System project.

Thielsch Engineering opened our corporate office in Rhode Island in 1984 with fifteen employees, today we are a 300 person firm with six offices around the country. We are a financially stable and growth oriented company who provides professional, technical and maintenance services as documented in our corporate experience, as well as our personnel resumes. Our professional, technical, and management staff have the full understanding and "hands-on" experience in the design, construction, maintenance, and repair of Above Ground Storage Tanks and associated equipment. We are current holders of the "S", "U", and "PP" ASME Code Stamps and the "R" NBIC Stamp. Our project managers and engineers have a minimum of fifteen years of industry design and construction experience.

We have maintained an engineering/construction office in Austin, Texas since 1997, that has allowed us to manage both an engineering and maintenance contract for the City of Austin power plants. Thielsch has been a successful awardee of these multi-year contracts since 1995. This experience will be extremely valuable to the Addison Airport in providing efficient project management, ensuring system quality and reliability.

Our corporate philosophy is to assist our clients in designing and maintaining their equipment in a safe and reliable condition while allowing them to perform their intended functions. Thielsch Engineering has a well earned reputation for saving our clients millions of dollars by providing practical "hands-on" solutions to their problems.

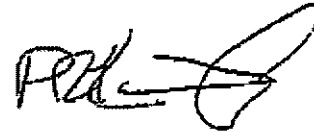
Thielsch Engineering also has the administrative and financial capabilities to effectively and efficiently manage a project such as the maintenance service agreement. Integral to the success of this project is the ability to identify and manage highly qualified subcontractors and vendors. Through our previous experience, we have identified and maintained solid working relationships with the highest quality suppliers. This includes our commitment to utilizing M/WBE subcontractors in order to meet or exceed the contract requirements. These relationships allow Thielsch Engineering to provide the required services, when they are needed, at competitive prices.

In addition to our established Austin area office, we are currently further expanding our facilities in the region. This will allow us to maintain a full-time presence and provide immediate response to specific needs and maintain constant communication to assure effective and efficient implementation of the contract.

We will work hard to develop and maintain a long standing relationship with the Addison Airport and look forward to the awarding of this contract.

Sincerely,

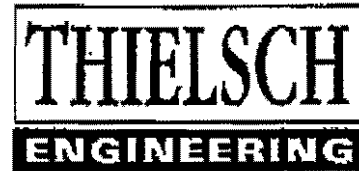
THIELSCH ENGINEERING, INC.



Peter R. Kennefick, Vice President  
Utility Engineering Services  
[Pkennefick@thielsch.com](mailto:Pkennefick@thielsch.com)

PK:cp

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*1984 - 2004 Twenty Years of Excellence!*

195 Francis Avenue, Cranston, RI 02910  
Tel: (401) 467-6454 Fax: (401) 467-2398

Please visit us at [www.thielsch.com](http://www.thielsch.com)

## PRIOR CORPORATE EXPERIENCE

The following is a brief listing of the project experience Thielsch Engineering, Inc. and the Austin based division has, which is consistent with the requirements of the Bulk Fuel Storage and Dispensing System.

- I. City of Austin - Decker Creek, Holly Street, Sand Hill Station, Town Lake Center, 721 Barton Springs Road, Austin, Texas 78704

Contact: Bob Logan (512) 322-6127

Description: Annual Maintenance Contract to support scheduled and forced outage projects. Projects range from emergency tube repair to complete superheat section replacement, pipe support modifications to heater alterations from our preheater basket removal to boiler feed pump repair and alignment. Emergency/forced outage situations include management and supply to five to eight qualified welders within eight hours of call from the City, available 24 hours a day, 365 days per year.

Outage capabilities included management and supplying of the following:

- (1) Project Manager
- (1) Clerk
- (1) I & C Technician
- (1) Electrical Technician
- (1) Supervisor
- (1) Foreman
- (4) Certified Welders/Boilermakers
- (9) Boilermakers

Total Price = 2.0 - 2.5 Million Annually

**II. BB&S Pressure Treating - P.O. Box 982, N. Kingston, Rhode Island 02852**

Contact: Joe Cassidy (401) 295-3200

Description: Provided management and craft labor support for the system design, specification, procurement, and installation of steam piping, heat exchanger and pump components and vessel alterations for their fast fixation process. In addition, all electrical hookups for actuators and sensors were performed by Thielsch Engineering employees. All work was performed under our ASME stamps in accordance with applicable codes. Thielsch Engineering handled all scaffolding, insulation and painting services necessary for this turnkey project.

Project capabilities included supplying the following:

- (1) Project Manager
- (1) Systems Engineer
- (1) Foreman
- (3) Certified Welders
- (2) Heat Treating Technicians
- (1) Structural Welders
- (1) Laborer
- (1) Electrician
- All material specification, procurement and handling, staging, insulation, jointing and authorized insurer interaction.

Total Price = \$185,000.00

**III. Thermax Corporation - 695 Dartmouth Street, Dartmouth, MA 02748**

Contact: Bob Bernert (508) 999-1232

Description: Designed and fabricated two 75,000 gallon double walled vaporizer units, used in the oil separation industry. These represent natural gas burner units, incorporated into a horizontal pressure vessel had overall dimensions of 13' diameter and 65' length. Thielsch Engineering provided all required vessel fabrication, component installation, control design and mounting as well as commissioning for Air Products, Inc. at their Texas facility.

Project capabilities included the following Thielsch Engineering personnel:

- (1) Project Manager/Design Engineer
- (8) Certified Welders
- (2) Pipe Fitter
- (2) Laborer
- (2) Instruments and Controls Technician
- All staging, welding equipment, pipe fitting tooling, hydrostatic testing equipment and expendables. Turned over report with complete "As Built Drawings".

Total Price = \$550,000.00

IV. Alhstrom Corporation - 2 Elm Street, Windsor Locks, CT 96096-2335

Contact: Eugene DeCarli: (860) 654-8547

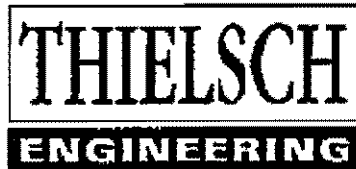
Description: Design and field fabrication ten 110' stainless steel pressure vessels used in the production of fine paper. This project involved locating, setting and erecting these pressure vessels. All sumps and piping connections to the vessels were made by Thielsch Engineering personnel.

Project capabilities included the following Thielsch Engineering personnel:

- (1) Design Engineer
- (10) Certified Welders
- (4) Pipe Fitters
- (2) Instruments and Controls Technician
- All staging, welding equipment, pipe fitting tooling, hydrostatic testing equipment and expendables. All work was conducted under Thielsch Engineering ASME Code Stamps.

Total Price = \$600,000.00





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Tel: (401) 467-6454 Fax: (401) 467-2399

Please visit us at [www.thielsch.com](http://www.thielsch.com)

## CORPORATE OVERVIEW

### *Corporate Information*

Name: Thielsch Engineering, Inc.  
 Address: 195 Frances Avenue, Cranston, Rhode Island 02910  
 Telephone: (401) 467-6454  
 Facsimile: (401) 461-6006

*Federal Identification*  
 05-0405629

### *Branch Offices*

Austin, Texas	Cleveland, Ohio
Sanford, Florida	North Yarmouth, ME

### *Affiliated Companies and Organizations*

ALCO Engineering  
 RISE Engineering  
 ESS Laboratory  
 195 Frances Avenue  
 Cranston, RI 02910

### *Business Entity*

Thielsch Engineering, Inc. is a wholly owned company

### *Officers of the Organization*

Thomas Lent, President  
 Peter Kennefick, Vice President Utility Engineering Division  
 Cary Franklin, Vice President Pulp & Paper Division  
 Vin Graziano, Vice President RISE Engineering  
 Trent Theroux, Director of Treasurer

***Other Key Personnel***

Rick Normandeau, Project Manager/Professional Engineer  
Roy Thomas, Project Manager  
Thomas Moos, Professional Engineer

***Typical Size and Limits of Project Capabilities***

Minimum Value of Service Costs - \$1,000.00  
Maximum Value of Service Costs - \$6 Million

***Personnel Staffing***

Rhode Island	248
Texas	12
Ohio	16
Florida	4
Maine	2
Massachusetts	5

299

***Financial Capabilities and Resources***

**Dunn & Bradstreet Index**

Thielsch Engineering, Inc.  
DUNS 10-617-9815  
D&B Rating: 1R3

**Surety Bond for Contract Performance**

Worcester Insurance  
Hollysville Corporation Bond Department  
355 Maple Avenue  
Hollysville, PA 19438

**Bonding Capacity**

\$3 Million per Project  
\$6 Million Total Aggregate

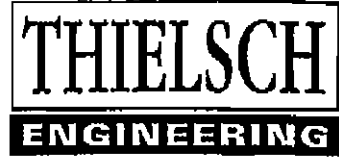
**Banking Reference**

Citizens Bank  
Providence, RI

**Insurance Agent**

Starkweather & Shepley  
Insurance Brokerage, Inc.  
60 Catamore Blvd.  
East Providence, RI 02914-1226  
Tel: (401) 435-3600

## Business Activities



Thielsch Engineering is a rapidly growing engineering and technical services company consisting of four business groups with over 300 employees and annual sales in excess of \$40 million. The corporate headquarters are located in Cranston, RI, with branch offices in Massachusetts, Ohio, Texas, Wisconsin, and Florida.

Thielsch provides a range of coordinated services on regional, national and international levels, in pursuit of its mission to increase the reliability, operating efficiency and safety of clients' facilities and sites.

The Engineering Services Group is recognized for its expertise and consists of the following integrated divisions:

The Professional Engineering Division performs analyses of pressure vessels, piping, gas and steam turbines, boilers, pumps, compressors and other machinery and structures to determine the cause and origin of failures. Finite element analyses, fracture mechanics, strain gaging, fatigue and vibration analyses, accident reconstruction, industrial hazard assessment, product liability evaluations and risk management with damage assessments, expert witness testimony, litigation support, arbitration determination, case preparation and management are provided for nearly every type of corporation, attorney, insurance underwriter and adjustment firm. The services are provided by qualified professionals in the fields of metallurgical, mechanical, corrosion, and structural engineering.

The Paper and Process Industries division establishes preventative maintenance programs for storage tanks, pressure vessels, piping systems, boilers, and rotating equipment at client facilities. Services include condition assessments, inspections, repairs, and rehabilitation. Programs are managed through PRIME software, developed by this division. Additional services include complete management of annual maintenance outages, process safety management programs and program evaluation, code reviews, protocol and procedure writing and development, specification preparation, and engineering design. Branch offices are located in Maine and Wisconsin.

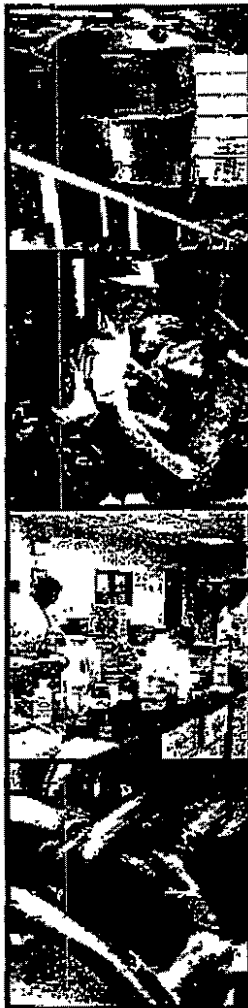
The Utility Engineering Services division performs condition assessments, engineering analyses, remaining life determinations, failure analyses, nondestructive examinations and repair services for power generating and industrial plants on a national and international level, specializing in critical and auxiliary boiler components, power piping, furnace scanning/evaluation and pipe stress analysis. Subdivisions consist of the Industrial Fabrication Services (IFS) department, which provides code welding, weld repair, heat treat and related services, and the Process Equipment Fabrication (PEF) department, which provides engineering design, pressure rating and pressure vessel fabrication services. Branch offices are located in Ohio and Texas.

The James Chemical Engineering division provides a broad range of chemical process-related services, including process optimization for capacity, efficiency, reliability and safety, project management services, preparation of invitations to bid, bid evaluations and negotiations with general contractors in conjunction with plant owners and accident investigation work.

At Thielsch Engineering we have five Laboratories which gives clients a full range of integrated laboratory and testing services, enhancing our ability to provide a rapid response for any project.

The ESS Laboratory is a modern facility equipped with state-of-the-art instrumentation which specializes in analytical testing for environmental management.

(cont.)



The **BAL Laboratory** is a state certified lab providing testing services in environmental and public health microbiology as well as water, mold, and food testing.

The **Materials Testing Laboratory** has full-service capabilities for testing materials in accordance with the American Society for Testing and Materials (ASTM), American National Standards Institute (ANSI), military specifications and others. It is also AZLA certified.

The **Nondestructive Testing Services Laboratory** has services that include field and site examinations as well as laboratory testing. Inspectors are qualified to meet the requirements of the American Society for Nondestructive Testing Practice SNT-TC-1A, as well as various other Codes and Standards such as the American Welding Society and military specifications.

The **Construction Testing Services Laboratory** provides diversified, single-source construction engineering services; efficient quality control and project management, along with field and laboratory testing of soil, concrete, and asphalt.

The **Water Service Group** provides system design, fabrication and installation, testing and maintenance to the water service industry.

**ALCO Engineering** provides instrument and control system support and maintenance services to water and wastewater treatment plants, including the design and installation of SCADA systems. ALCO offers instrument field calibrations/repair and system control design, construction, and service. ALCO maintains UL authority to produce UL-508 electrical control panels. The division provides expanded products to the water industry as the New England distributor of Mars Company water meter test stands and the operator of an independent water meter test laboratory. It also retains the exclusive rights for the worldwide sale of BIF parts. ALCO Engineering is also the manufacturer of pre-engineered power factor correction equipment, which provides energy efficiency benefit to commercial and industrial electricity consumers.

The **Water Management Services** division is a nationally recognized provider of consulting and meter sales and installation services to water utility authorities throughout the United States. WMS specializes in assisting utilities identify and recover lost revenues due to meter degradation. In addition, through full turnkey services in the sale, installation, testing and repair of all major brands of water meters, WMS enables its utility customers to generate incremental revenues. By employing test criteria that exceed AWWA standards, WMS can identify the true operational curves of its customers' meters.

The **Energy Group** provides a complete range of energy management services for commercial, industrial, institutional, and residential building owners and managers.

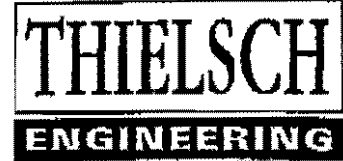
**RISE Engineering** provides engineering analyses, direct installations, construction management and financing for a broad spectrum of efficiency and indoor air quality technologies to all building sectors. RISE has achieved a national reputation for its operation of innovative demand-side management, load building, and customer retention programs on behalf of gas, electric, and water utilities. The RISE HVAC Technologies department provides solution-based planned maintenance, repairs, retrofits, replacement and installation of heating, ventilation, and air conditioning equipment (HVAC) and controls for industrial, commercial, institutional, and large multi-unit residential facilities.

**RISE Performance Contracting** performs turnkey operations with the capability to finance, design, build and operate self-funded energy and resource efficiency projects for industrial and institutional clients. RPC also provides direct digital control systems for building automation projects that can be networked with the existing systems via computer networks.

The coordination of the expertise in the four business groups provides major benefits to all clients of Thielsch Engineering in the operation of industrial and commercial plants and related facilities.

**THIELSCH**  
**ENGINEERING**  
1984 - 2004 Twenty Years of Excellence

## Engineering Services



Since 1984, Thielsch Engineering has provided a broad range of engineering services to chemical processing plants, refineries, fertilizer plants, power plants, pulp and paper mills, and other industrial facilities. The personnel performing these services have extensive hands-on experience. In total, our professional engineering staff has well over 200 years of experience providing the following engineering services:

- Failure analyses involving cause and origin determinations of catastrophic and leak-type failures of pressure vessels, heat exchangers, compressors, boilers, turbines, tanks, piping and other equipment and components
- Condition assessment and plant equipment and component integrity analyses, remaining life determinations, and fitness-for-purpose determinations
- Welding engineering and consultation on repairs of pressure vessels, heat exchangers, piping, and other equipment
- Supervision of weld repairs in the most expeditious manner and in accordance with applicable codes and standards, and the best metallurgical engineering considerations.
- Project and construction management
- Maintenance outage management
- Program development and implementation in accordance with Best Management Practices (BMP) regulations per EPA requirements and OSHA CRF 1910-119 requirements for Process Safety Management (PSM)
- Design analyses, stress analyses, and finite element analyses
- Pipe support walkdown inspection, analysis, adjustment, and maintenance
- Complete laboratory testing services including metallurgical, mechanical, analytical, environmental, chemical, corrosion, creep, and fatigue testing
- Nondestructive examination (RT, UT, PT, MT, VT) and certified welding inspection services
- Expert witness and litigation support services
- Risk management determinations of pressure vessels, heat exchangers, components, piping, tanks, and rotating equipment
- Computerized data management software programs for preventative maintenance, inspection, and engineering evaluations
- Seminar presentations on "Failures, Failure Prevention and Repairs of Pressure Vessels, Piping, Boilers and Rotating Machinery, and Remaining Life Considerations", covering periods of three to five days.

## Services Overview

---

### Solutions to Your Engineering Problems

Thielsch Engineering is a rapidly growing, privately held company, comprised of nearly 300 people, providing a broad range of engineering, laboratory, and fabrication/repair services. Thielsch corporate headquarters is located in Cranston, Rhode Island with branch operations in Florida, Maine, Ohio, Texas, and Wisconsin.

What makes Thielsch Engineering unique?

- We are a professional engineering company that provides a full complement of in-house engineering, analytical, laboratory, testing, field inspection and welding repairs, pressure vessel fabrication/repairs, and construction testing services.
- We serve clients ranging from medical device manufacturers, to pulp and paper mills, process chemical and pharmaceutical plants, oil refineries, petroleum pipelines and storage, public utilities--water and power generating, commercial office buildings, colleges and universities, and single family residences.
- We provide a wide range of coordinated engineering consulting services to insurance companies, attorneys, and the wide variety of clients mentioned above--both domestic and international.

Our engineering and technical personnel draw on nearly twenty years of the company's history, and over two hundred thousand assignments at customer sites around the world.

Our engineering, laboratory, water, and energy management groups offer a vast array of integrated turnkey services to a diversified grouping of clients. Our reputation is based on 24/7 response, and our eye is always on our customers' bottom line and the safety of their work environments.

### Overview of Services

#### Engineering Services:

- **Professional Engineering Division:** Performs metallurgical analyses, pressure vessel analyses, accident reconstruction, failure analyses/cause and origin investigation, litigation support, risk management, fatigue and vibration analyses, etc. All engineering reports (totaling over 12,000 to date) are reviewed, approved, and retained by this group. **Contact:** Ara Nalbandian, P.E., E-Mail: [nalbandiana@thielsch.com](mailto:nalbandiana@thielsch.com)
- **Paper and Process Industries:** Serves paper, pulp, and process industries on a national and international level. Manages preventive maintenance programs for storage tanks, pressure vessels, dryer cans, digesters, safety relief valves, boilers, and piping systems - along with maintenance outage management, mechanical integrity program implementation and database management, code reviews, risk management, condition assessments, and fitness-for-service evaluations. Branch operations are located in Maine and Wisconsin. **Contact:** Cary Franklin, E-Mail: [cfranklin@thielsch.com](mailto:cfranklin@thielsch.com)
- **Utility Engineering Services:** Serves power generating and industrial plants on a

national and international level. Manages preventive maintenance programs for storage tanks, pressure vessels, boilers, and piping systems – along with maintenance outage management, mechanical integrity program implementation and database management, code reviews, risk management, condition assessments, and fitness-for-service evaluations. Branch operations are located in Ohio and Texas. **Contact:** Peter Kennefick, E-Mail: [pkennefick@thielsch.com](mailto:pkennefick@thielsch.com)

• **James Chemical Engineering:** Process engineering group with particular expertise in ammonia, urea, methanol, fertilizer, and other natural gas based technologies. Provides traditional project management, process design, and energy optimization services. As part of the full-service Thielsch organization, JCE is uniquely positioned to assist potential purchasers of used equipment in making the right business decision. With over 30 years of experience, 200 plus clients, and a library of more than 300 engineering reports, JCE offers a high level of engineering depth to domestic and international clients. **Contact:** Steve Wilmes: E-Mail: [swilmes@thielsch.com](mailto:swilmes@thielsch.com)

• **Industrial Fabrication Services** (2 locations): IFS, located near Austin, Texas, provides code welding, weld repair, heat treat, and related services. **Contact:** IFS, TX: John Meyer, E-Mail: [jmeyer@thielsch.com](mailto:jmeyer@thielsch.com) IFS, located in Cranston, Rhode Island, provides engineering design, pressure rating services, and related services. **Contact:** IFS, RI: Bruce MacLure, E-Mail: [bmaclure@thielsch.com](mailto:bmaclure@thielsch.com) Services from IFS are available in the shops, totaling over 21,000 square feet, or in the field. Thielsch holds "U", "R", "S", and "PP" stamps.

• **Process Equipment Fabrication:** Process Equipment Fabrication serves the power generation, chemical, and process industries with ASME pressure vessels, "S" stamped replacement parts, storage tanks, custom fabrications, and ASME and related products. **Contact:** Ed Guardado, E-Mail: [eguardado@thielsch.com](mailto:eguardado@thielsch.com)

• **Construction Services:** Provides traditional construction quality assurance support by laboratory analysis of construction materials, construction in process, and final work products. Performs condition assessments at any time during the life of the physical asset to determine true value and potential liabilities. Functions as an owner's advocate in terms of reviewing and providing input to project scopes, schedules, change orders, and claims. Finally, CTS performs R&D studies for clients looking for alternative material solutions as well as comparisons to new products for which there may be insufficient history. **Contact:** Jim McManus: E-Mail: [jmcmanus@thielsch.com](mailto:jmcmanus@thielsch.com)

#### **Laboratory Services:**

• **Environmental Laboratory-ESS** (Chemical/Analytical): Highly trained personnel utilize sophisticated analytical methods, in a state-of-the-art facility that covers over 17,000 square feet; ESS maintains a significant ongoing investment in the latest analytical instruments to keep pace with ever-changing detection limits and requirements. This laboratory provides accurate timely analysis for customers located throughout North America; special web-based access accounts allow customers to see their results on an around-the-clock, 24/7 basis. Over 100,000 tests per year are performed in the areas of trace metals, petroleum fingerprinting, volatile organics, priority pollutants, PCBs, pesticides, TCLP, etc. **Contact:** Laurel Stoddard, (T): 401-461-7181, (F): 401-461-4486, E-Mail: [lstoddard@thielsch.com](mailto:lstoddard@thielsch.com)

• **Metallurgical Laboratory** (Mechanical Testing): Full-service metallurgical evaluation laboratory generating over 1,000 lab reports per year. Performs metallography;

replication; scanning electron microscopy; energy dispersive spectroscopy; hardness and micro-hardness determinations; tensile, compression, and Charpy impact testing; fatigue, single and double shear, and stress rupture testing; corrosion testing; etc. Testing is performed to client specifications, ASTM standards and others. Services also include a complete machine shop, welder and welding procedure and performance qualifications, reverse engineering, and third party inspections. Technical staff has a combined metallurgical experience of over 150 years. **Contact:** John Goetz, P.E., E-Mail: [jgoetz@thielsch.com](mailto:jgoetz@thielsch.com)

- **Nondestructive Testing Services:** Provides in-laboratory and portable field inspections in the disciplines of radiography, magnetic particle (wet or dry), liquid penetrant, ultrasonics, videoboroscope, B-scan ultrasonics, and Certified Welding Inspections (CWI). Performs inspections of castings, welded fabrications, and electronic devices--as well as QA/QC services in the pharmaceutical industry. Nondestructive examinations are performed to the requirements of all major codes including the ASME Boiler and Pressure Vessel Code, American Petroleum Institute Codes, and American Welding Society Standards. Performed over 100,000 weld inspections for one pharmaceutical company alone. **Contact:** Arthur Haley, E-Mail: [ahaley@thielsch.com](mailto:ahaley@thielsch.com)

- **Construction Materials Testing:** Conducts soils, concrete, masonry and asphalt testing; material performance testing and analysis; thermal behavior and moisture migration; and construction inspection services. Other services include structural steel inspections; certified welding inspections; coring services, materials testing (polymeric, wood, etc.), roofing inspections, and moisture/mold investigations. **Contact:** Jim McManus, E-Mail: [jmcmamus@thielsch.com](mailto:jmcmamus@thielsch.com)

#### **Energy and Water Services:**

- **ALCO Engineering:** Serves the municipal and industrial water and wastewater industries across the country. Provides expertise in the areas of flow measurement and control--in flows from 0.1 to over 50,000 gallons per minute, through line sizes ranging from 1/4" tubing through 60" diameter pipes. Experience includes the specification, installation, calibration/testing, automated meter reading, and maintenance of a variety of flow meters--from the simplest turbine meters to the most sophisticated gas and liquid measuring devices; installations vary in scope from single meter installations, to projects requiring over 100,000 meters. Designs, fabricates, and installs complex chemical feed systems; manages preventive maintenance programs for metering systems, storage tanks, pressure vessels, boilers, and piping systems. **Contact:** Bill Billings, (T): 401-467-4448; (F) 401-785-4250; E-Mail: [bbillings@thielsch.com](mailto:bbillings@thielsch.com)

- **RISE Engineering:** Offers energy conservation solutions for customers - from the individual residence to the largest office complex, from the single apartment to the integrated paper mill. Provides engineering solutions designed to reduce energy consumption and minimize the cost of controlling temperature, humidity, and lighting within any enclosure. Over 125,000 buildings throughout New England have benefited from RISE's energy expertise. **Contact:** Vin Graziano, Toll Free: (800) 422-5365, (T): 401-784-3700, (F): 401-784-3710, E-Mail: [vgraziano@thielsch.com](mailto:vgraziano@thielsch.com)



SECTION 01000C

BID PROPOSAL FORM

FIRST PART

**BID PROPOSAL**

For

**BULK FUEL STORAGE AND DISPENSING SYSTEM**

Addison, Texas

Date: \_\_\_\_\_

Proposal of: THIELSCH ENGINEERING, INC.  
(Contractor)

Check appropriate business entity:

\_\_\_\_\_ A corporation organized and existing under the laws of the State of Texas

A corporation organized and existing under the laws of the State of P.I.  
(if a non-Texas corporation, please attach a copy of the corporation's  
Articles of incorporation)

\_\_\_\_\_ A partnership consisting of \_\_\_\_\_

\_\_\_\_\_ A sole proprietorship owned by \_\_\_\_\_, an individual.

**Do Not Remove Bid Proposal from Specification Book  
Specifications Book to be submitted in its Entirety**

To: The Town of Addison, Texas  
5350 Beltline Road  
Addison, Texas 75001

The undersigned bidder, pursuant to the foregoing advertisement for bids, has carefully examined this proposal, the contract documents, special provisions, general provisions, special specifications, the specifications and the plans, and will provide all necessary labor, superintendence, machinery, equipment, tools, materials, services and the other facilities and complete fully all the work as provided for in the specifications and contract documents; and binds himself upon formal acceptance of this proposal to execute a contract and bonds, according to the prescribed forms, for performing and completing the said work within the required time.

The bid for the construction of this project, complete and in operation has been submitted as a lump sum, with both a primary bid and an alternative bid item.

The work proposed to be done shall be accepted when fully completed and furnished in accordance with the plans and specifications, to the satisfaction of the Owner.

The undersigned certifies that the bid prices contained in the Proposal have been carefully checked and are submitted as correct and final.

The undersigned bidder hereby declares that he has visited the site of the work.

In the event of the award of a Contract to the Bidder, the Bidder will furnish Performance and Payment Bond for the full amount of the Contract, to secure proper compliance with the terms and provisions of the Contract, to insure and guarantee the work until final completion and acceptance, and to guarantee payment of all lawful claims for labor performed and materials furnished in the fulfillment of the Contract.

Receipt is acknowledged of the following Addenda:

Respectfully Submitted,

Thielsch Engineering, Inc.

(Name of Contractor)

By:



(Authorized Signature)

Vice President of Utility Engineering Services

(Title)

Address: 195 Frances Avenue, ...

City, State and Zip Code: Granston, RI 02910

Telephone and Fax Numbers: Tel: (401) 467-6454, Fax: (401) 461-6006

Seal if bidder is a corporation



**SECOND PART**

**BID SCHEDULE SUMMARY**

**Base Bid Breakout by CSI Format:**

**Project Description:**

This bid is to construct a centrally located aviation bulk fuel storage and dispensing system with 15 individual bulk fuel storage tanks, with off-load and five Fixed Base Operator (FBO) metered dispensing systems, in a consolidated, environmentally protected site, including tanks and operating equipment, with suitable architectural considerations to blend into the site. The horizontal mounted cylindrical tanks will be either 25,000 gal or 15,000 gal capacity fuel storage tanks, double wall, 2-hour fire rated and ballistics protected tanks. Primary products to be dispensed are Low Lead AVGAS and Jet A Fuel, with one two-compartment tank of 10,000 gal & 15,000 gal, with dispensing equipment for LL MoGas and Diesel. The equipment includes industry standard filtration systems with automatic shutdown and overflow protection devices. A 10,000gal oil/water separator will be installed and connected to the secondary containment dike area and off-load/dispensing ramps. Fuel storage area will have explosion proof electrical fixtures and control panel. A 1" water line will be required for emergency shower/eye wash unit and two 3/4" hose and reel unit. Telephone connections include interroom access, phone and fire alarm. Fuel storage tanks will be mounted in a concrete low wall secondary containment structure, with area lighting, storm drainage and utilities. Access/exit for the facility will be through an electrically operated gates, with new driveways, curb and gutter. (A stretched fabric canopy is listed as an alternate bid item)

**Bid Proposal for Bulk Fuel Storage and Dispensing System, Addison Airport**

**Amount Bid**

Division 1. General Conditions	\$300,000.00
Division 2. Site Construction	\$275,000.00
Division 3. Concrete	\$235,000.00
Division 5. Metals	\$1,150,000.00
Division 10. Specialties	\$100,000.00
Division 13. Special Construction	\$550,000.00
Division 15. Mechanical	\$125,000.00
Division 16. Electrical	\$950,000.00
<b>Total Lump Sum Base Bid (A)</b>	<b>\$3,685,000.00</b>

**Base Bid with Additive Alternative Breakout by CSI Format:  
Project Description:**

This Additive Alternative bid is to construct a centrally located aviation bulk fuel storage and dispensing system with 15 individual bulk fuel storage tanks, with off-load and five Fixed Base Operator (FBO) metered dispensing systems, in a consolidated, environmentally protected site, including tanks and operating equipment, with suitable architectural considerations to blend into the site. The horizontal mounted cylindrical tanks will be either 25,000 gal or 15,000 gal capacity fuel storage tanks, double wall, 2-hour fire rated and ballistics protected tanks. Primary products to be dispensed are Low Lead AVGAS and Jet A Fuel, with one two-compartment tank of 10,000 gal & 15,000 gal, with dispensing equipment for LL MoGas and Diesel. The equipment includes industry standard filtration systems with automatic shutdown and overflow protection devices. A 10,000gal oil/water separator will be installed and connected to the secondary containment dike area and off-load/dispensing ramps. Fuel storage area will have explosion proof electrical fixtures and control panel. A 1" water line will be required for emergency shower/eye wash unit and two 3/4" hose and reel unit. Telephone connections include intercom access, phone and fire alarm. Fuel storage tanks will be mounted in a concrete low wall secondary containment structure, with storm drainage and utilities and a stretched fabric canopy mounted on a 2 hour rated steel structure, with rain gutters and downspouts, interior lighting and frame mounted area lighting. Access/exit for the facility will be through an electrically operated gates, with new driveways, curb and gutter.

**Additive Alternate Bid Proposal for Bulk Fuel  
Storage and Dispensing System, Addison  
Airport**

	Amount Bid
Division 1. General Conditions	\$300,000.00
Division 2. Site Construction	\$275,000.00
Division 3. Concrete	\$235,000.00
Division 5. Metals	\$1,150,000.00
Division 7. Thermal Protection	\$75,000.00
Division 10. Specialties	\$100,000.00
Division 13. Special Construction	\$550,000.00
Division 13a. Stretched Fabric Canopy	\$125,000.00
Division 15. Mechanical	\$125,000.00
Division 16. Electrical	\$950,000.00
<b>Total Lump Sum Bid with Additive Alternative (AA)</b>	<b>\$3,885,000.00</b>

**SECOND PART (CONTINUED)**

**BULK FUEL STORAGE AND DISPENSING SYSTEM  
ADDISON AIRPORT**

<u>Bid Schedule and Description</u>	<u>Total Amount in Lump Sum</u>
Lump Sum Base Bid	(A) \$ <u>3,685,000.00</u>
\$3000/Day x <u>196</u> Days	(B) \$ <u>588,000.00</u>
Total of A + B	\$ <u>4,273,000.00</u>

Total Amount Bid for Lump Sum Base Bid (A) written in words:

Three Million Six Hundred Eighty Five Thousand

Total of calendar days x \$3000 (B) written in words:

Five Hundred Eighty Eight Thousand

.....

Lump Sum Base Bid with Additive Alternative	(AA) \$ <u>3,885,000.00</u>
\$3000/Day x <u>210</u> Days with Alternative	(BA) \$ <u>630,000.00</u>
Total of AA+ BA	\$ <u>4,515,000.00</u>

Total Amount Bid for Lump Sum Base Bid (AA) with Additive Alternative Bid Item written in words:

Three Million Eight Hundred Eighty Five Thousand

Total of calendar days x \$3000 (BA) with Additive Alternative Bid Item written in words:

Four Million Five Hundred Fifteen Thousand

Notes:

1. All item, labor, materials, equipment, facilities, incidentals and work required for construction of the project are to be provided and installed by the Contractor as part of the project and payment for the cost of such shall be included in the price bid for the construction of the project.

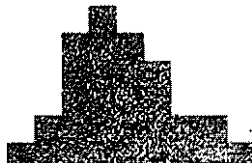
2. Prices must be shown in words and figure for each item listed in this proposal. In the event of discrepancy, the words shall control.

3. It is understood that the Bid Security shall be collected and retained by the Owner as liquidated damages in the event a contract is awarded by the Owner based on this proposal within ninety (90) calendar days after receiving bids and the undersigned fails to execute the contract and required bonds within seven (7) calendar days from the date the Contractor is notified and has received the conformed documents. After this period, if the contract has been executed and the required bonds have been submitted, the said Bid Surety shall be returned to the undersigned upon demand.

4. One contract will be awarded based on the Lump Sum Bid of the total value of A plus B or AA plus BA.

Bidder's Tax I.D. Number or Employer Number: 05-0405629

**DO NOT REMOVE BID PROPOSAL FROM SPECIFICATION BOOK  
SPECIFICATION BOOK TO BE SUBMITTED IN ITS' ENTIRETY**



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**Thielsch Engineering, Inc.**

195 Frances Ave  
Cranston, RI 02910-2211  
United States  
TELEPHONE: 401-467-6454

December 23, 2003

**LENGTH:** 442 words

Check availability of a D&B Business Information Report (Credit Report)

DUNS: 10-617-9815  
COMPANY TYPE: Corporation; Headquarters  
COUNTY: PROVIDENCE  
MSA: Providence-Fall River-Warwick, RI-MA - 6480

**YEAR STARTED:** 1984

**INCORPORATION:** February 10, 1984 - Rhode Island

\*\*\*\*\* **SALES** \*\*\*\*\*

Sales Revision Date: January 04, 2004  
Annual Sales: \$ 44,600,000  
1-Yr-Ago: N/A  
3-Yr-Ago: N/A  
Sales Growth: N/A  
Net Worth: N/A

\*\*\*\*\* **BUSINESS DESCRIPTION** \*\*\*\*\*

Metallurgical Mechanical Consulting Engineer Laboratory Services Mechanical & Welding Contractor Water & Energy Esco & DSM

**PRI-SIC:**

8711 Engineering services, nsk  
87119903 Consulting engineer



87110202 Mechanical engineering

**2ND-SIC:**

- 8734 Testing laboratories
- 87349907 Metallurgical testing laboratory
- 87349911 Water testing laboratory
- 1799 Special trade contractors, nec, nsk
- 17999932 Welding on site
- 8741 Management services, nsk
- 87419903 Industrial management

\*\*\*\*\*  
 \*\*\*\*\* **EXECUTIVES** \*\*\*\*\*  
 \*\*\*\*\*

- VICE PRESIDENT: Peter Kennefick, Vp Mngr Utlty Engrnrg  
Edward Altieri, Vp  
ARA Nalbandian, Vp
- SECRETARY: Helmut Thielsch, President-Secretary
- MANAGER: Owen Blanco, Project Manager  
Katherine Oruck, Human Resource Manager  
Rosemary Alteri, General Manager  
Peter Ferreira, Manager of I T Department  
James McManus, Manager  
Arthur Haley, Manager  
William Moclair, Manager Alco Engineering  
James Burrows, Mgr
- SALES: Scott Hoffman, Sales Manager
- OPERATIONS: Robert Moclair, Operations Manager  
Cameron Crawford, Operation Supervisor  
Don Kubacki, Operations Manager
- ENGINEERING: William Moclair, Manager Alco Engineering
- PURCHASING: Donna Cottingham, Purchasing Manager
- ACCOUNTING: Michael Tetreault, Accounting Manager
- CLUBS-LODGES-ORGANIZATIONS: Helmut Thielsch, President-Secretary
- PERSONNEL-BENEFITS: Maureen Gorman, Human Resources Manager  
David Nichols, Dir Hr  
Kathleen Orourke, Human RES Mgr
- FACILITIES-MAINTENANCE: Darren Gonsalves, Facil Mgr
- MANAGEMENT: Laurel Stoddard, Director Envrn Anlytcl Lb  
David Nichols, Dir Hr  
Cameron Crawford, Operation Supervisor
- SALES-MARKETING VP: William Santaniello, Vp of Sales
- FINANCE VP: Trent Theroux, Vp Finance
- GEOGRAPHIC MANAGEMENT: Tim Bullock, Regional Manager

\*\*\*\*\* EMPLOYEES  
\*\*\*\*\*

Employees At This Location:	200 - Actual
1-Yr-Ago:	240
3-Yr-Ago:	220
Employment Growth:	9%
Employee Total:	240


\*\*\*\*\* OTHER INFORMATION  
\*\*\*\*\*

PROPERTY: 125,000 Square Feet - Rents  
BANK: Sovereign Bank - 09-811-8185  
NUMBER OF ACCOUNTS: 10,000  
TRADESTYLE: Rise Engineering

**CONGRESSIONAL DISTRICT:** 2D Congressional District

**LANGUAGE:** ENGLISH

**LOAD-DATE:** September 24, 2004

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Cranston, RI 02910-2211  
United States  
TELEPHONE: 401-467-6454

December 23, 2003

**LENGTH:** 442 words

**DUNS: 10-617-9815**

\*\*\*\*\* **BUSINESS DESCRIPTION** \*\*\*\*\*

Metallurgical Mechanical Consulting Engineer Laboratory Services Mechanical & Welding Contractor Water & Energy Esco & DSM

\*\*\*\*\* **EXECUTIVES** \*\*\*\*\*

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Edward Altieri, Vp  
ARA Nalbandian, Vp
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David Nichols, Dir Hr  
Cameron Crawford, Operation Supervisor  
SALES-MARKETING VP: William Santaniello, Vp of Sales  
FINANCE VP: Trent Theroux, Vp Finance  
GEOGRAPHIC MANAGEMENT: Tim Bullock, Regional Manager

**CONGRESSIONAL DISTRICT:** 2D Congressional District

**LANGUAGE:** ENGLISH

**LOAD-DATE:** September 24, 2004

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**THIELSCH ENGINEERING INC**  
195 FRANCES AVE  
CRANSTON, RI 02910-2211 UNITED STATES  
TEL: 401-821-3722 FAX: 401-461-6006  
ABI-NO: 003792033

**COUNTY:** 44007 PROVIDENCE

**POPULATION:** 50,000 - 99,999 CC

**CARRIER-CODE:** C013

**PRI-SIC:** 344106 STEEL-STRUCTURAL (MANUFACTURERS)

**2ND-SIC:** 344304 FABRICATED PLATE WORK-BOILER SHOPS

**LOC-SALES:** 10,000,000 - 19,999,999 FF

**LOC-EMPLOYEES:** 300

**PAR-EMPLOYEES:** UNKNOWN

**BUSINESS-ORG:** FIRM

**EXECUTIVES:** TOM LENT, PRESIDENT  
TRENT SURUX, VP FINANCE  
CRAWFORD CAMERON, PURCHASING AGENT

**AD-SIZE:** BOLD LISTING

**CREDIT:** VERY GOOD

**LANGUAGE:** ENGLISH

**LOAD-DATE:** October 7, 2004 .

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Standard & Poor's Register of Corporations

August 12, 2004

**THIELSCH ENGINEERING INC.**

195 Frances Ave.  
Cranston, RI 02910-2211  
United States

**\*\*\*\*\* COMMUNICATIONS \*\*\*\*\***

**TELEPHONE:** 401-467-6454

**\*\*\*\*\* COMPANY INFORMATION \*\*\*\*\***

**FOUNDED:** 1984  
**LEGAL STATUS:** Private  
**EMPLOYEES:** 300

**\*\*\*\*\* EXECUTIVES \*\*\*\*\***

**OFFICERS:**  
Helmut Thielsch, Pres & Secy  
Nancy Hoffman, V-P  
Joel Robinson, Gen Coun  
Peter Ferreira, Info Tech Supvr

**\*\*\*\*\* DESCRIPTION \*\*\*\*\***

**INDUSTRY TYPE:**  
Services, Construction

**\*\*\*\*\* MARKET AND INDUSTRY \*\*\*\*\***

**PRIMARY NAICS:**  
238210 - Electrical Contractors  
**SECONDARY NAICS:**  
236220 - Commercial and Institutional Building Construction  
444190 - Other Building Material Dealers  
332811 - Metal Heat Treating  
541330 - Engineering Services

**PRODUCTS:** Consulting engr.; mech. contractor; metal heat treating; envi. & water testing lab.; welding on site; water purification equip., energy engineering & management; maintenance, equip. repair & inspection serv., environmental laboratory analysis serv.

**MARKETS:**  
National

**SALES:** 48,000,000 (U.S. Dollars)

**\*\*\*\*\* SERVICE FIRMS \*\*\*\*\***

**AUDITOR:** John W. Clegg & Co., North Kingstown, RI

**BANKER:** Sovereign Bank, Providence, RI

**COUNSEL:** Hinckley, Allen & Snyder LLP, Providence, RI

**LOAD-DATE:** August 12, 2004

Form: [All Guided Search Forms](#) > Company

Terms: [company\(thielsch engineering, Inc.\)](#) ([Edit Search](#))

View: Full

Date/Time: Friday, December 3, 2004 - 10:32 AM EST

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Thielsch Meeting -

12-16-04

Outing - design  
Oil Water separator ballast  
Dimensions missing  
415 K vs 950 K on tanks

56,000 lbs	75,000 gal tanks	(9)
40,000 lbs	15,000 gal tanks	(6)

504,000 lbs
<u>240,000 lbs</u>
744,000

\$ 300,000 material cost

Updated cost estimate

**Jim Pierce**

---

**From:** Lundgren, Samuel [Samuel.Lundgren@wgint.com]  
**Sent:** Tuesday, December 14, 2004 5:29 PM  
**To:** Jim Pierce  
**Cc:** Rood, Neil  
**Subject:** Value Engineer Recommendations For Fuel System at Addison Airport

Jim,

Per Neil's recommendation, I have been working with Thielsch Engineering and Burn & McDonnell to develop value engineering items that could reduce the cost of the new fuel system with minimum impact on the function or operation of the system. A preliminary list is attached for your information. Thielsch Engineering is reviewing all of these items for possible cost reduction and may have a few more items to add. It appears that we should be able to reduce the cost between \$300,000 and \$400,000, in an effort to bring this system back in line closer to the budget.

If most of these items meet your approval, I would recommend that we meet with Thielsch Engineering early next week to price these and any other cost reduction items, find a mutually acceptable cost for the system construction and produce a modified proposal from Thielsch Engineering, or a change order that would be acceptable to the Town of Addison for this project.

Thielsch Engineering indicated in previous discussions that between steel and fuel prices, this was a somewhat volatile pricing for the project; however, I feel that Thielsch Engineering is both responsive and they would like to work value engineering and execute this construction project. I also feel that we would not be more competitive in rebidding without major revision to the design.

Thank you for your patience with this effort.

Respectfully,

Samuel Lundgren, P.E.  
Program Manager  
Washington Group International, Inc.  
7800 E. Union Avenue, Suite 100  
Denver, CO 80237  
Phone (303) 843-3596, Fax (303) 843-3133, Cell (720) 530-7315  
<<Fuel System Value Engineering List 12-03-04.doc>>

12/15/2004

# Draft

## Bulk Fuel Storage and Dispensing System For Addison Airport Value Engineering Preliminary Recommendations

### Project Cost Reduction or Value Engineering Items:

1. Elect not to do the Alternate Bid Item (\$200,000) ?
2. 5000 gal oil/water sep and use a pre-cast concrete unit (-\$30,000)\* ?
3. Modify the cat walk to rest on the fuel tanks, with access by FBO (-\$15,000)\* - OK
4. Delete the MoGas/Diesel tank and pump (-\$75,000)\* No
5. Use electronic meters vs mechanical flow meters (-\$14,000)\* ?
6. Delete the meters on the off-load side (\$7200 per tank, total -\$100,000)\* - Check w fuelers
7. Delete the un-used pedestal from the canopy (-\$3,000) \* ?
8. Run all of the electrical cables in explosion proof conduit under the catwalk walkway and don't use duct bank (-\$90,000)\* ?
9. Go to 8' C/L fence, galvanized with wood slats (-\$12,000)\* No
10. Reduce tree plantings by 1/2 (-\$9,000)\* No
11. Horizontal versus vertical filter separators (\$1000 each, -\$14,000) \* OK check w fuelers
12. Pull canopy gutter drains (-\$4,000)\* No
13. Use Schedule 40 Stainless Steel Piping (-\$3,000)\* OK
  - \* Items would not impact the operation or priorities for the system
  - Total estimate of \* Items is \$369,000, to be verified by Thielsch Engineering with their estimator.
  - Low bid \$ 3,685,000 (without Alt) - \$369,000 = \$3,316,000, so far

### Other Items to be reviewed:

14. Eliminate concrete encasement under slab for duct bank (-\$15,000) OK
15. Remove the over the tank cat walk, leaving the on the tank walkway (-\$60,000) ?
16. Go to 8" concrete pavement to reduce reinforcement steel (-\$3,000) OK
17. Couple all Jet A tank sets to one pump/filter unit (one pump two tanks) (-\$80,000) No
18. Reduce or eliminate the sump separators and waste tanks. Pipe all the pressure relief and air eliminators thru SS piping back to the tanks (commonly done). Also, spec and "suction" type hand pump (using the hand sump/thief pump) to return product back into the tanks. (-\$9,000) No
19. Delete the intercom box at gate and just use PIN pad (truck use call box or cell phone) (-\$3000) ? OK
20. Reduce the tank sizes from 25,000 to 20,000. (\$5,000 per tank, -\$60,000 total, with smaller secondary structure) No
21. Drain ramps into secondary containment (-\$10,000) No
22. Go to single wall steel tanks (-\$210,000) No
23. Use one meter for both operation and just have a remote display on the transport side ✓ w fuelers
24. If possible unload transport trucks and load refuelers on the same side. No!
25. Coordinate with equipment supplier (fuel system) and end users for additional savings ideas

All items to be reviewed and "price verified" by Thielsch Engineering before commitment.

Recommendation:

- Consider a meeting next week (20-23 Dec) to work the numbers and obtain commitment from Thielsch Engineering.
- Prepared modification to plans reflecting the value engineering
- Take the modified project forward for approval

## **Jim Pierce**

---

**From:** Shanna Sims  
**Sent:** Tuesday, November 30, 2004 2:53 PM  
**To:** Jim Pierce  
**Subject:** Airport Fuel Farm Bid

Jim:

Here are some numbers for the airport fuel farm bid:

177 vendors notified of the bid  
39 vendors obtained plans (planholders)  
28 individuals attended pre-bid meeting (I did not include Town or airport staff in this number).

Let me know if there is any additional information that you need at this time.

Thanks.

Shanna

**Bulk Fuel Storage & Dispensing System Addison Airport**

**BID NO 05-02**

**Bid Opening: November 30, 2004**

**2:00 PM**

Bidder	Signed	Bid Bond	Addendum 1	Addendum 2	Addendum 3	Lump Sum Base Bid (A)	Calendar Days X \$3000 (B)	Total (A+B)	Lump Sum w/Alternative (AA)	Calendar Days w/Alternative X \$3000 (BA)	Total (AA+BA)
Thielsch Engineering	✓	✓	✓	✓	✓	3,685,000	196/588,000	4,273,000	3885,000	210/630,000	4,515,000
Talon/Kinley Joint Venture	✓	✓	✓	✓	✓	4,226,000	280/840,000	5,666,000	4,822,000	320/960,000	5,782,000
AUI Contractors, L.P.	✓	✓				5,501,832	300/900,000	6,401,832	6,008,883	320/990,000	6,998,883

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Minck Suh, Purchasing Coordinator

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Corey Gayden, Witness

# HP LaserJet 3200se



HP LASERJET 3200

DEC-10-2004 3:23PM

## Fax Call Report

Job	Date	Time	Type	Identification	Duration	Pages	Result
34	12/10/2004	3:21:14PM	Send	915129129985	2:07	4	OK

TOWN OF

**ADDISON**

**PUBLIC WORKS**

To: Rick Normandeau

From: Jim Pierce, P.E.

Company: Thielsohn ENR

Asst. Public Wks. Dir.

Phone: 972/450-2879

FAX: 972/450-2837

FAX #: 1-512-912-9985

jpierce@ci.addison.tx.us

Date: 12-10-04

16301 Westgrove

P.O. Box 9010

# of pages (including cover): 4

Addison, TX 75001-9010

Re: Addison Airport Fuel Farm

Original in mail  Per your request  FYI  Call me

Comments: Attached is our Engineer's Estimate for this project. It would be interesting to see the differences between yours & his. His estimate includes the canopy and a generous contingency.

We would be interested in your opinion of the plans & specs. Were there errors or omissions that created uncertainty?

We would also be interested in any ideas you have to reduce costs but still end up with a good product.

See you Thursday @ 3PM here.

Jim Pierce

TOWN OF

# ADDISON

# PUBLIC WORKS

To: Rick Normandeau

From: **Jim Pierce, P.E.**

Company: Thielsch Engr

Asst. Public Wks. Dir.

Phone: 972/450-2879

FAX #: 1-512-912-9985

FAX: 972/450-2837

jpierce@ci.addison.tx.us

Date: 12-10-04

16801 Westgrove

P.O.Box 9010

# of pages (including cover): 4

Addison, TX 75001-9010

Re: Addison Airport Fuel Farm

Original in mail

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FYI

Call me

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We would be interested in your opinion of the plans & specs. Were there errors or omissions that created uncertainty?

We would also be interested in any ideas you have to reduce costs but still end up with a good product.

See you Thursday @ 3 PM here.

Jim Pierce



**Description: Engineer Estimate for Construction**

This bid is to construct a centrally located aviation bulk fuel storage and dispensing system with 15 individual bulk fuel storage tanks, with off-load and five Fixed Base Operator (FBO) metered dispensing systems, in a consolidated, environmentally protected site, including tanks and operating equipment, with suitable architectural considerations to blend into the site. The horizontal mounted cylindrical tanks will be either 25,000 gal or 15,000 gal capacity fuel storage tanks, double wall, 2-hour fire rated and ballistics protected tanks. Primary products to be dispensed are Low Lead AVGAS and Jet A Fuel, with one two-compartment tank of 10,000 gal & 15,000 gal, with dispensing equipment for LL MoGas and Diesel. The equipment includes industry standard filtration systems with automatic shutdown and overflow protection devices. A 10,000gal oil/water separator will be installed and connected to the secondary containment dike area and off-load/dispensing ramps. Fuel storage area will have explosion proof electrical fixtures and control panel. A 1" water line will be required for emergency shower/eye wash unit and two 3/4" hose and reel unit. Telephone connections include intercom access, phone and fire alarm. Fuel storage tanks will be mounted in a concrete low wall secondary containment structure, with stretched fabric canopy and area lighting, storm drainage and utilities. Access/exit for the facility will be through an electrically operated gates, with new driveways, curb and gutter.

Division 1. General Conditions		\$35,900.00
Division 2. Site Construction		
	Site Clearing	\$9,500.00
	Earthwork	\$8,750.00
	Water Distribution	\$8,750.00
	O/W Sep & Drainage	\$57,900.00
	Asphalt Pvmt	\$37,500.00
	Landscape & Irrigation	\$22,800.00
	Concrete Pvmt	\$46,800.00
	Chain Link Fence	\$26,500.00
Division 3. Concrete		
	Cast-in-Place	\$162,800.00
Division 5. Metals		
	Metal Stairs & Struct	\$26,800.00
	Pipe & Tube Railings	\$12,500.00
	Gratings	\$3,800.00
Division 7. Thermal Protection		
	Fire Resistive Material	\$48,500.00
Division 10, Specialties		
	Fire Protection	\$1,850.00
Division 13. Special Construction		
	Fuel System Pipe	\$27,900.00
	Fuel System Valves	\$42,400.00
	Accessories	\$74,600.00
	Pumps	\$42,100.00
	Filtration	\$40,500.00
	Lighting Protection	\$6,100.00
	Fabric Structures	\$355,500.00

218,500

43,100

187,000

Bulk Fuel Storage Dispensing System

Addison Airport, Addison, TX

95% Construction Estimate

Fuel Storage Tanks		\$415,200.00
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Fuel Dispenser	\$13,900.00
Electric Gates	\$32,400.00
<b>Division 15. Mechanical</b>	
Domestic Water Piping	\$2,550.00
Water Specialties	\$10,500.00
Drainage Specialties	\$22,800.00
Storm Drainage Piping	\$26,800.00
Emergency Plumbing	\$1,650.00
<b>Division 16. Electrical</b>	
Wiring & Cables	\$27,000.00
Boxes & Fittings	\$12,200.00
Electrical Connections	\$9,850.00
Motor Disconn Switch	\$28,500.00
Transformer	\$3,750.00
Panel Boards	\$5,800.00
Contactors & Push B	\$32,400.00
MCC	\$42,700.00
Emer Gen Connection	\$2,800.00
Ext Lighting	\$14,300.00
Voice Cabling	\$3,450.00
Fire Alarms	\$15,800.00
Controls & Instrument	\$42,600.00
Tel Entry & Controller	\$4,750.00
Contractor O,H & P	\$467,862.50
15% Contingency	\$350,896.88
<b>Total Estimated Lump Sum Bid</b>	<b>\$2,690,209.38</b>

64,300

250,650

Estimated time required for construction: 225 days

Submitted by:

Date:

# Draft

## Bulk Fuel Storage and Dispensing System For Addison Airport Value Engineering Preliminary Recommendations

### Project Cost Reduction or Value Engineering Items:

1. Elect not to do the Alternate Bid Item (\$200,000) ?
2. 5000 gal oil/water sep and use a pre-cast concrete unit (-\$30,000)\* ?
3. Modify the cat walk to rest on the fuel tanks, with access by FBO (-\$15,000)\* - OK
4. Delete the MoGas/Diesel tank and pump (-\$75,000)\* No
5. Use electronic meters vs mechanical flow meters (-\$14,000)\* ?
6. Delete the meters on the off-load side (\$7200 per tank, total -\$100,000)\* - Check w fuelers
7. Delete the un-used pedestal from the canopy (-\$3,000)\* ?
8. Run all of the electrical cables in explosion proof conduit under the catwalk walkway and don't use duct bank (-\$90,000)\* ?
9. Go to 8' C/L fence, galvanized with wood slats (-\$12,000)\* No
10. Reduce tree plantings by 1/2 (-\$9,000)\* No
11. Horizontal versus vertical filter separators (\$1000 each, -\$14,000)\* OK Check w fuelers
12. Pull canopy gutter drains (-\$4,000)\* No
13. Use Schedule 40 Stainless Steel Piping (-\$3,000)\* OK
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  - Low bid \$ 3,685,000 (without Alt) - \$369,000 = \$3,316,000, so far

### Other Items to be reviewed:

14. Eliminate concrete encasement under slab for duct bank (-\$15,000) OK
15. Remove the over the tank cat walk, leaving the on the tank walkway (-\$60,000) ?
16. Go to 8" concrete pavement to reduce reinforcement steel (-\$3,000) OK
17. Couple all Jet A tank sets to one pump/filter unit (one pump two tanks) (-\$80,000) No
18. Reduce or eliminate the sump separators and waste tanks. Pipe all the pressure relief and air eliminators thru SS piping back to the tanks (commonly done). Also, spec and "suction" type hand pump (using the hand sump/thief pump) to return product back into the tanks. (-\$9,000) No
19. Delete the intercom box at gate and just use PIN pad (truck use call box or cell phone) (-\$3000) ? OK
20. Reduce the tank sizes from 25,000 to 20,000. (\$5,000 per tank, -\$60,000 total, with smaller secondary structure) No
21. Drain ramps into secondary containment (-\$10,000) No
22. Go to single wall steel tanks (-\$210,000) No
23. Use one meter for both operation and just have a remote display on the transport side ✓ w fuelers
24. If possible unload transport trucks and load refuelers on the same side. No!
25. Coordinate with equipment supplier (fuel system) and end users for additional savings ideas

All items to be reviewed and "price verified" by Thielsch Engineering before commitment.

Recommendation:

- Consider a meeting next week (20-23 Dec) to work the numbers and obtain commitment from Thielsch Engineering.
- Prepared modification to plans reflecting the value engineering
- Take the modified project forward for approval

**Bulk Fuel Storage & Dispensing System Addison Airport**

**BID NO 05-02**

**Bid Opening: November 30, 2004**

**2:00 PM**

Bidder	Signed	Bid Bond	Addendum 1	Addendum 2	Addendum 3	Lump Sum Base Bid (A)	Calendar Days X \$3000 (B)	Total (A+B)	Lump Sum w/Alternative (AA)	Calendar Days w/Alternative X \$3000 (BA)	Total (AA+BA)
Thielsch Engineering	y	y	y	y	y	\$3,685,000.00	\$588,000.00	\$4,273,000.00	\$3,885,000.00	\$630,000.00	\$4,515,000.00
Talon/Kinley Joint Venture	y	y	y	y	y	\$4,226,000.00	\$840,000.00	\$5,066,000.00	\$4,822,000.00	\$960,000.00	\$5,782,000.00
AUI Contractors, L.P.	y	y	y	y	y	\$5,501,832.00	\$900,000.00	\$6,401,832.00	\$6,008,883.00	\$990,000.00	\$6,998,883.00

*Minok Suh*

Minok Suh, Purchasing Coordinator

*Corey Gayden*

Corey Gayden, Witness

**Jim Pierce**

---

**From:** Minok Suh  
**Sent:** Tuesday, November 23, 2004 1:10 PM  
**To:** 'Samuel.Lundgren@wgint.com'; Jim Pierce; Steve Chutchian; Jenny Nicewander  
**Cc:** 'Marshall Ryan'  
**Subject:** RE: [Maybe SPAM] RFI's for Airport Fuel System project

Minok Suh  
Purchasing Coordinator  
Town of Addison  
972-450-7091

-----Original Message-----

**From:** Marshall Ryan [mailto:mryan@ust-inc.com]  
**Sent:** Tuesday, November 23, 2004 11:54 AM  
**To:** Minok Suh  
**Subject:** [Maybe SPAM] RFI's for Airport Fuel System project

Minok,

Here are a few questions to be answered. Please forward to Sam Lundgren.

- ✓ 1) What is the final clarification on piping? Will stainless steel be an acceptable alternative to coated carbon steel?
- ✓ 2) What is the final clarification on American made only? Has that been waived - allowing non-American made products?
- 3) Will owner supply testing and flushing fuel, or will contractor have to supply that fuel?
- 4) Will the use of concrete deadmen (tank anti-flotation devices) be an acceptable alternative to the concrete pad under the Oil Water Separator. The deadmen will be designed by a Texas PE familiar with such anti-flotation devices.

Respectfully,

Marshall D. Ryan  
President  
Unified Services of Texas, Inc. (UST)  
2110 Greenbriar Drive  
Southlake, TX 76092  
Office (817) 481-9510 Ext. 109  
Facsimile (817) 488-1729  
Email: [mryan@ust-inc.com](mailto:mryan@ust-inc.com)

11/30/2004

**Addendum 2**  
**05-02 Bulk Fuel Storage & Dispensing System, Addison Airport**  
**Bid Open: Tuesday, November 30, 2004 at 2:00 PM**

**A. Attendee Sign-up from 11/15/04 Pre-Bid Conference attached.**

**B. Notification of Pending Design Change:** After discussion with the originally preferred fuel system pump manufacturer (Gorman-Rupp) there is a concern on using the specified self-priming centrifugal pump in this inverted "U" suction-piping configuration. Although these pumps have been used successfully in this arrangement previously, there have apparently been instances where unsatisfactory operation has occurred and Gorman-Rupp takes exception to the proposed application. Therefore, it appears that a positive displacement type pump with similar performance capabilities would be satisfactory, which will include changes in piping layout and accessories. Several plan sheets and specification sections will be modified to incorporate this design change into the contract document; however, in an effort to not delay the bid opening date, the instructions to bidders are to bid the contract documents as they are and as modified herein. Bidders shall document price proposals from suppliers on the pumps and pump related mechanical accessories. After bid opening and award, any related design change will be accomplished as the first change order, with documented pre-bid price proposals from suppliers used to develop the difference in cost to incorporate the design change into the contract documents.

Pumps to be used in bid are: Blackmer X4B-N for Jet A and XL4B for AvGas. Approved equals may potentially be substituted after contract award. Provide bulk air eliminator vessels, vertical configuration - 4-inch size for Jet A and 3-inch size for AvGas. Delete relaxation chambers for Jet A. Float control on bulk air eliminators shall be hydraulic type, with an air block feature and connecting tubing added to the water slug/flow control valve.

Also, Provide fusible link, spring-to-close, emergency shutoff valves (ball or butterfly) in tank fill and suction piping. Valves shall be same size as pipe installed in (4" and 3") and shall be installed in skid piping near grade, in or adjacent to vertical tank piping risers.

Finally, filter separator capacity for AvGas system should be increased to 200 gpm and floating suction size for Avgas tanks shall be increased to 4-inch from previous 3-inch. Provide reducer and maintain 3-inch tank suction nozzle. Jet A tank floating suction to remain at 4-inch size.

**C. Questions and Responses to Questions from Pre-Bid and Later Questions Submitted in Writing:**

1. Specification Section 07811 – Trowled or Sprayed Fire-Resistive Materials, Part 37  
Products: Add: Trowled materials must meet UL 1709 rating for exterior application.
  - Question, listed approved products do not list exterior application
  - Answer: Approved Materials include: Carbolite Pyrocrete 240Hy, or WR Grace Z-146, for exterior application.
  
2. General Specifications: Buy American Act does not apply to this project.



3. General Comment on Site Work, add the following: During demolition, excavation and pavement construction, contractor will be responsible for keeping mud and dirt from falling from construction vehicles on to Addison Road. When Addison Road is used as a haul road, it must be swept frequently (at least twice daily) to keep dirt, mud and debris under control.
4. General Specifications: Bid to include carbon steel piping as specified. Stainless steel piping may be considered as a substitution once the contract has been awarded. Stainless Steel Piping may be substituted for interior coated steel piping.
5. Questions from Holloway Welding & Piping.
  - Question: What is the specification and dimension for the flex joints located at all pumps?
  - Answer: Flexible connectors shall be inner stainless steel corrugated metal hose restrained by a double braided outer stainless steel cover, 150-lb. raised face flanges, 9-inch minimum length.
  - Question: Who are preferred manufactures of pipe, fittings for this project?
  - Answer: competitive sources– comply with paragraph 13061,1.01.F (p. 158).
  
  - Question: Will a Storm Water Runoff Prevention Plan be required by the State of Texas, DEQ, for this project?
  - Answer: No
  
  - Question: Who will approve the Traffic Control Plan?
  - Answer: Town of Addison. Use traffic plan on sheet 5.
  
  - Question: Butterfly Valves- other than the “limit switches” is there any other connection, electrical to the PLC system?
  - Answer: No
  
  - Question: Are there any Motor Operated Valves and where located on this project.
  - Answer: No
  
  - Question: May the contractor substitute SS pipe/fittings in place of C.S. A53 Internal coated pipe?
  - Answer: This may be considered after contract award. Bid shall be based on carbon steel piping as specified.
  
  - Question: There don't seem to be any “unions” in the small ¾” and 1” returns. Should we place some in the system?
  - Answer: Provide where necessary per paragraph 13061,3.02.G.
  
  - Question: What is and where are the specs for the floating suction w/foot valve assembly as shown?

- Answer: If foot valve cannot be obtained with floating suction arm, provide check valve in suction piping internal to tank. Also, provide anti-siphon valve on tank nozzle, a Claval or approved equal. If the anti-siphon valve can act as a check valve, then the check valve in suction piping is not required.
- Question: Where is the Specification for the 1" Anti Siphon Valve?
- Answer: Valve shall be OPW 199ASV or approved equal.
- Question: What is the length of Fuel hose, 4" for truck unload and for the 3" truck loading?
- Answer: Hose length shall be 10 feet for all hoses.
- Question: Is there a detail drawing of the 25,000 gal split MoGas/Diesel tank showing piping, valves, filters etc.
- Answer: It is the intent for the gasoline/diesel tank and dispensing system to be provided as a package from a single supplier. This includes all connected piping/valves/filters, etc.
- Question: Is there a detail of the flow switch and where is it specified?
- Answer: Switch shall be installed in accordance with manufacturer's recommendations. Switches are specified in Section 16901.
- Question: Is there a listing of location of tank nozzles for MoGas/Diesel?
- Answer: See response to question above regarding MoGas/Diesel tank.
- Question: Are the emergency vent, gauge hatch and normal vents on tanks the same manufactures shown for Mogas/Diesel tank specifications, pages 212?
- Answer: Yes, these are acceptable manufacturers.
- Question: Under specification 13067, Fuel System Accessories, the above items specifications are missing for Jet A/AvGas tanks.
- Answer: See Sections 13201 and 13204
- Question: Is the meter prover connection in AvGas system a 3" or 4"
- Answer: 3 inch
- Question: There is a detail for a "pipe support" shown on plan page 29; however, there is no support schedule shown and no specification for this item. Please clarify.
- Answer: Pipe supports are specified in Section 13061. Contractor to locate per specifications.
- Question: The specification for meters, page 183 is addressing the 4" Jet A meter. Is this the same spec for the AvGas meter?
- Answer: Yes

- Question: Specification 13201, nozzles for tanks do not match drawings
- Answer: Not all nozzles have been indicated on drawings but are covered in specifications.
  
- Question: No details or drawing for tank vents?
- Answer: This was not considered necessary – industry standard arrangement.
  
- Question: There is a 1” reclaim fuel bypass shown on Jet A tanks but not on AvGas tanks, is this correct?
- Answer: yes, sumped avgas will be discharged to waste tank.
  
- Question: The Drawings for AvGas, sheet 27, has a concentric reducer shown just prior to the refueling hose. Sheet 28 does not show this; please clarify.
- Answer: Reducer not required for AvGas.
  
- Question: Should there be a valve in the 2” vacuum truck line from the waste tank?
- Answer: Yes, provide ball valve (per specifications) adjacent to vacuum truck connection at transport truck unloading area.
  
- Question: On Sheets 15 and 33 the section Arrows XX and YY do not match the view. Please clarify.
- Answer: Section Y-Y is on the west side looking east and Section X-X is on the south side looking north.
  
- Question: Water detection probes are in Specification page 191; however there is no reference on plans; please clarify
- Answer: These probes are identified as an instrumentation bubble “MS” on Sheet 27 (attached to filter separators). They are also indicated on electrical plans.
  
- Question: There is no detail on plan sheet 29 for flow switch. Which detail applies?
- Answer: Switch shall be installed in accordance with manufacturer’s recommendations. Switches are specified in Section 16901.
  
- Question: Please clarify the number of concrete bollards
- Answer: Two concrete filled pipe bollards at the MoGas/Diesel Dispenser unit, two concrete filled pipe bollards at the electric entry gate, two concrete filled pipe bollards at the electric exit gate and two concrete filled pipe bollards at the new fire hydrant location.
  
- Question: Is the tank top maintenance platform in the alternate of base bid?
- Answer: The maintenance platform is a part of the tank package and is included in the base bid

## 6. Questions from BASSCO

- Question: May the use of a LCRII system instead of mechanical temperature compensation and presets for the meters be considered? The LCRII system will provide an internal pulser for your PLC systems and the presets, registration, and temperature compensation will be more reliable and not as bulky.
- Answer: Bid to include arrangement indicated and specified. This may be considered as a substitution once the contract has been awarded.
  
- Question: For the Gammon GTP-616B, the wording on the sump separator in the specs it states that the separator will pump the water to the waste tank. There is usually a minimal amount of water and the standard is to use a manual drain to get the water out of the separator and use the pump to pump the fuel back to the product tank. This may just be an error on the description. If needed it is possible to put two pumps on the separator?
- Answer: The single pump is to be capable of both pumping operations: pumping water/waste fuel to the waste tank and also pumping reclaimed fuel back to the storage tank. A manual drain is required also as indicated on Sheet 29, Detail 7.
  
- Question: The spec also calls for an explosion proof box and switch. The system we normally install comes with a spring-loaded dead-man handle to prevent the system from being left in the on position.
- Answer: The proposed arrangement is acceptable.
  
- Question: I have not found a manufacturer that can supply a floating suction with a foot valve on the bottom. Do you have a part #?
- Answer: If foot valve cannot be obtained with floating suction arm, provide check valve in suction piping internal to tank. Also, provide anti-siphon valve on tank nozzle, a Claval or approved equal. If the anti-siphon valve can also act as a check valve, then a check valve in suction piping is not required.
  
- Question: During the pre bid meeting we discussed using weld piping and fittings were possible on all piping 2" and over and giving the option due to maintenance issues of using Stainless pipe instead of coated. Is this acceptable?
- Answer: Bid to include piping as specified. Stainless steel piping may be considered as a substitution once the contract has been awarded.
  
- Question: There is a statement on page 155 section I on testing of the spec book that holds the contractor responsible for design problems. Please clarify?
- Answer: Not interpreted as described. Contractor will be responsible for installation, not design.

## 7. Additional Questions from Holloway Welding & Piping.

- Question: Storm Drainage Specification 02630 mentions Gutter Drains, which are shown on Sheet 6, with a total of 12. There are no details in plans for this item and no other specifications. Please clarify?
- Answer: Curb Inlet Details are on sheet 11.
  
- Question: On sheet 6 of the plans, there are several items shown with reference to another sheet – example “inlet Floor Valve Sheet 11. There is no detail for this item on sheet 11. Please clarify?
- Answer: Clow Mud Valve (Floor Valve) Detail is on sheet 14.
  
- Question: There are 2 hose reels called out in equipment summary and shown on sheet 6; however, no other details are given. Please clarify?
- Answer: The model number is given on the equipment summary and mounting is shown on sheet 15. The manual hose reel unit will hold 200’ of ¾ inch commercial grade water hose for area wash down purposes.
  
- Question: Cast iron floor drains are called out on sheet 6 and specification section 15155; however, there are no other details given for size, placement quantity, etc. Please clarify?
- Answer: Detail on sheet 14, one per FBO containment area, at the lowest point of the floor based on the 3% longitudinal and 5% transverse slope of the floor to the drain.
  
- Question: We need some additional information on construction of “cat walk” as shown on sheet 6 and 15. There is no detail for construction, support posts, ladders, stairs hand rails and openings
- Answer: The “cat walk” is listed as a performance specification for a specialized metal grate walkway and stair fabricator. The “cat walk” does not touch the storage tanks and may be integrated into the alternate bid item if desired and the alternate bid canopy structure uses a central column. Shop drawings of the proposed “catwalk” are required for approval, meeting the performance specification section 05511.
  
- Question: Please explain the tank-mounted walkway with 36” high handrails?
- Answer: The tank mounted walkway, as a part of the fuel storage tank package, is mounted on top of the tank, with handrails, to allow access to items on top of the tank. Access to the walkway is by the catwalk.
  
- Question: If there is no alternate bid item, how do you access the tank-mounted walkways?
- Answer: The “catwalk” is in the base bid.
  
- Question: How many new fire hydrants are there on this project?
- Answer: One new hydrant and valve shown on sheet 4 near the two large hangars and one existing hydrant to be relocated south of the new driveway, with a new valve.

- Question: On sheet 10 the Diesel/MoGas Dispenser is shown outside the secondary containment structure; however, on sheet 19 it is shown inside. Please clarify?
- Answer: The Diesel/MoGas Dispenser is mounted on the sidewalk as shown on sheet 10.
  
- Question: The "demolition plan" on sheet 3 is in what scale?
- Answer: The drawing is not to scale.
  
- Question: The step detail on sheet 15, what are the dimensions for this item and what materials?
- Answer: The galvanized steel step should be 24" wide, with a 12" step and a 6" rise. The step surface should be metal grating, with 2" x 2" galvanized angle iron supports as required, anchored to the low wall.
  
- Question: Welding will damage the internal coating in the steel fuel pipe. Must this be recoated, repair or "fixed" and down to what size pipe?
- Answer: Minimal damage will occur and it does not require "fixing". As specified, pipe larger than 2-inch shall be internally coated.

**End of Section and Addendum**



**Date: November 15, 2004**

**Time: 2 PM**

**Location: Addison Service Center  
16801 Westgrove Drive  
Addison, TX 75001**

**Subject: Pre-Bid Conference for the Bulk Fuel Storage and Dispensing System,  
Addison Airport**

**Meeting Agenda:**

1. Introduction of Project Engineer, Assistant Director of Public Works, Purchasing Coordinator, Airport Staff and Town of Addison Staff.
2. Construction Project Overview
3. Location and Site Considerations
  - a. Survey
  - b. Fencing and Security
  - c. Demolition
  - d. Traffic Control
  - e. Utilities
4. Civil and Structure Review
  - a. Secondary Containment
  - b. Oil/Water Separator
  - c. Storm Drainage
  - d. Emergency Equipment Items
  - e. Electric Operated Gates
5. Mechanical Review
  - a. Jet A & LL AvGas Tanks
  - b. MoGas/Diesel Tanks
  - c. Pumps, Filters and Strainers
  - d. Mechanical Operation
6. Electrical Review
  - a. Power
  - b. Controls
  - c. Lights
  - d. Fire Protection
7. Landscape Review
8. Alternate Bid Item
9. Review of Bid Package, Specifications and Bid Proposal Form
10. Contractor Questions, Issues or Concerns

*Permits*

~~*Security*~~

*Need a  
Projector  
and a Laptop*

Pre-Bid Conference for the Bulk Fuel Storage and Dispensing System, continued

11. Issue of Bid Addendum and Official Response to Questions
12. Construction Site Visit
13. Final Questions
14. Meeting Adjourns

**Contact information**

1. Project Engineer: Samuel Lundgren, P.E.  
Washington Group International, Inc.  
7800 E. Union Avenue, Suite 100  
Denver, CO 80237  
Phone (303) 843-3596, Fax (303) 843-3133, Cell (720) 530-7315
2. Town of Addison:  
Jim Pierce, P.E.  
Assistant Director of Public Works  
Addison Service Center  
16801 Westgrove Drive  
Addison, TX 75001  
Phone (972) 450-2879  
  
Minok Suh, Purchasing Coordinator  
Finance Building, Town of Addison  
5350 Belt Line Road  
Addison, TX 75001  
Phone (972) 450-7091
3. Addison Airport:  
Luis Elguezabal, CM  
Assistant Director  
16051 Addison Road, Suite 220  
Addison, TX 75001  
Phone (972) 392-4861



**Bulk Fuel Storage and Dispensing System, Addison Airport  
Qualified Bidders List:**

1. Unified Services of Texas, Inc. (UST)  
Attn: Marshall D. Ryan, President  
2110 Greenbriar Drive  
Southlake, TX 76092  
Office (817) 481-9510 Ext. 109
  
2. Argus Construction Service (DFW)  
Attn: Dan Frank, PM  
601 Northwest Jefferson, Suite 4  
Blue Springs, MO 64014  
Office 816-463-1238
  
3. Kinley Construction Company  
Attn: Larry Crisafulli, BD  
7301 East Commercial Blvd  
Arlington, TX 76001  
Office: 817- 461-2100 x-118
  
4. Schwob Building Company  
Attn: Scott Knepper, VP  
2349 Glenda Lane,  
Dallas, TX 75229  
Office: 972-243-7674
  
5. Sundt Construction, Inc  
2811 McKinney Ave. Ste. 350, LB 109  
Dallas TX 75204  
214-382-2680
  
6. Centex Construction Company  
3100 McKinnon St., 7th Fl.  
Dallas TX 75201  
214-468-4700



ADDISON

Addison!  
Airport

Date: November 15, 2004

Time: 2 PM

Bulk Fuel Storage and Dispensing System, Addison Airport  
Pre-Bid Conference Sign-up Sheet

Please Print Name	Firm/Organization	Phone #
1. TYLER HALL	DMT-TANK	505-563-4789
2. PAUL SUNDBY	DOUBLE CROWN	816-921-5032 ext 3069
3. RICK NORMANDEAU	THIELSCH ENG'G	512-912-9941
4. GARY HAYMAN	FABRITEL STRUCTURES	214-435-0624
5. Roger McKinley	Les Gray & Co.	972/272-1586
6. TERRY SQUILS	ERS INC	972-524-2946
7. WES RAMSEY	Moder Welding	817 626-2215
8. MICHAEL WARD	DALLAS PUMP	214-631-4664 x333
9. Josh Crisafulli	Kinley Construction	817-461-2100
10. Larry Crisafulli	Kinley Construction	817-461-2100
11. LES GRAY	LES GRAY & Co.	972/272-1586
12. Lou [unclear]	T.O.	214-415-7995
13. BAZZ HUBBS	WHITE TUCKER	214 357 1934
14. Phillip Brooks	BASSCO/Allied	214-358-2101
15. Keith Terrible	Automated Power	972-906-4300



ADDISON

Addison!  
Airport

Date: November 15, 2004

Time: 2 PM

Bulk Fuel Storage and Dispensing System, Addison Airport  
Pre-Bid Conference Sign-up Sheet

Please Print Name	Firm/Organization	Phone #
16. Bob Price	APD	972-986-4330
17. STUART Holloway	HWP	972-562-5033
18. Kevin Holloway	HWP	972-562-5033
19. Jim Pierce	Tornal Addison	972-450-2879
20. JENNIFER NICHOLSON	TOA	972-450-2860
21. JACK MEYER	TALON IND.	817-265-5511
22. ROW MIDDLETON	" "	"
23. Jerry Hamann	AUT Contractors	817-926-4377
24. DON G WERMER	MASTEN	214-748-6111
25. LUIS ELQUEZABAL	ADDISON AIRPORT	972-392-4850
26. LISA Pyles	ADS	972-392-4855
27. Dave Porter	ADS	972-392-4852
28. Richard Fortin	Schwob	972-243-7674
29. Mike Blankenship	UST	817-481-9510
30. Marshall Ryan	UST	817-481-9510



ADDISON

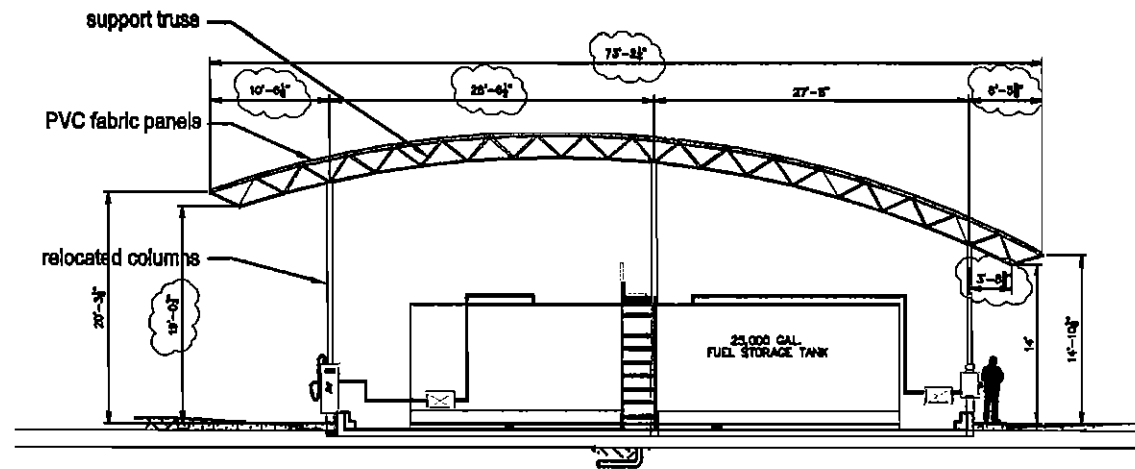
Addison!  
Airport

Date: November 15, 2004

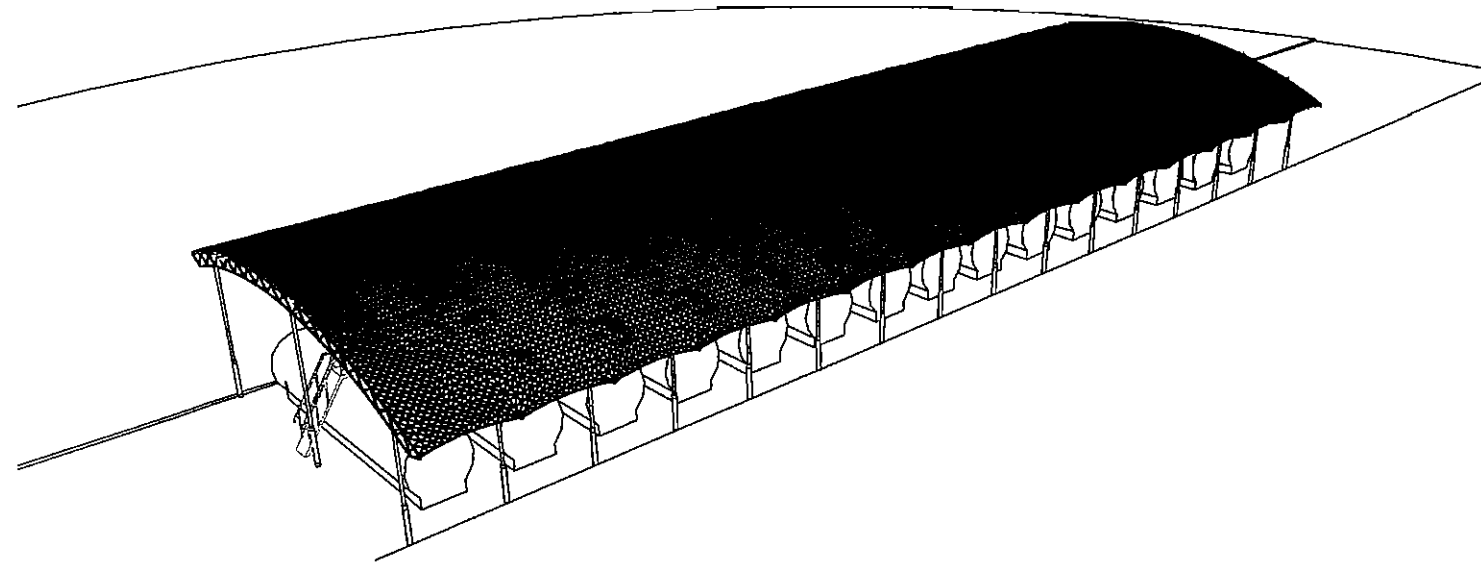
Time: 2 PM

Bulk Fuel Storage and Dispensing System, Addison Airport  
Pre-Bid Conference Sign-up Sheet

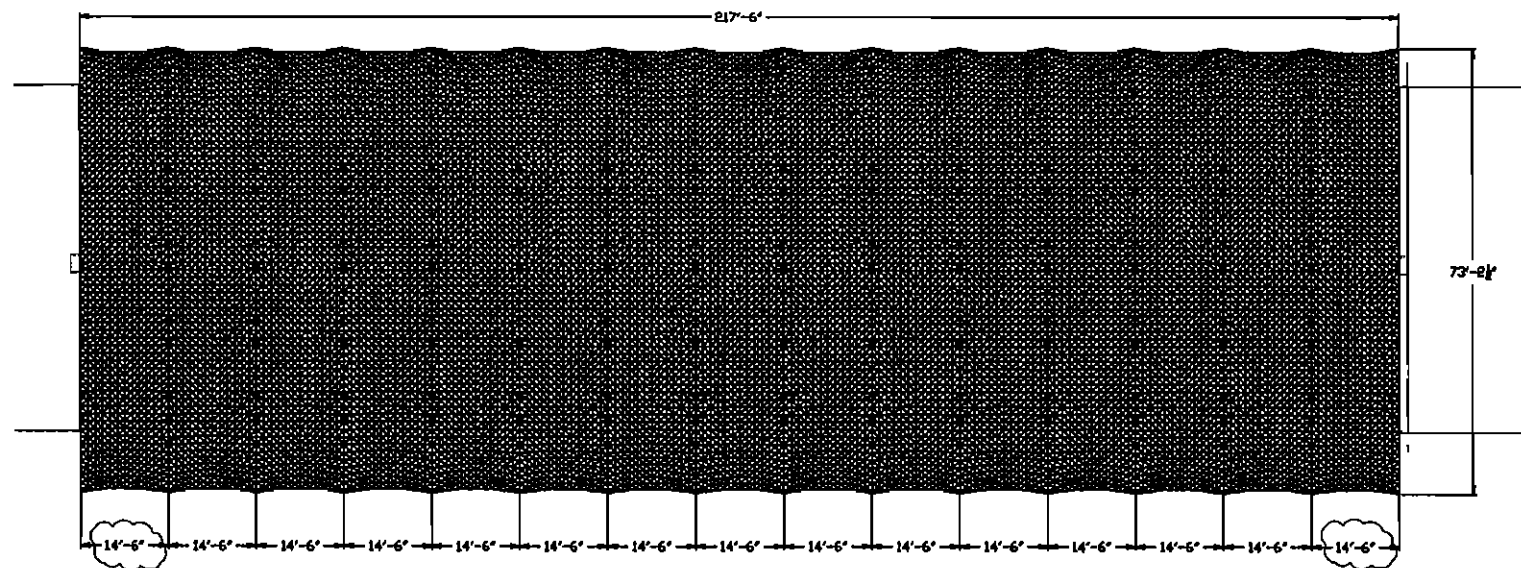
Please Print Name	Firm/Organization	Phone #
31. CLYDE WILLIAMSON	THE HILL COMPANY	817-429-1171 x210
32. PAT DALTON	System Elect.	972-670-4172
33. SAM HONDAREN	WGT Holloway Welding	303-843-3596 972 743 5343
34. Earl Holloway	& Piping Co., Allen	972-562 5033
35.		
36.		
37.		
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40.		
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45.		



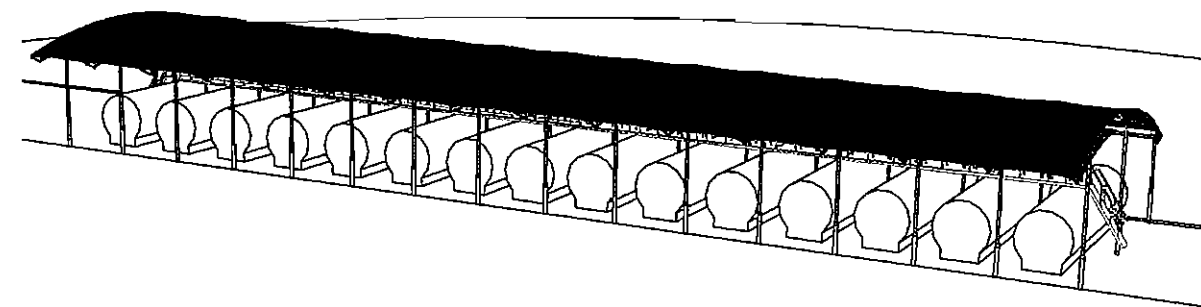
**1** Side View  
A1.0 scale: 1/16"=1'



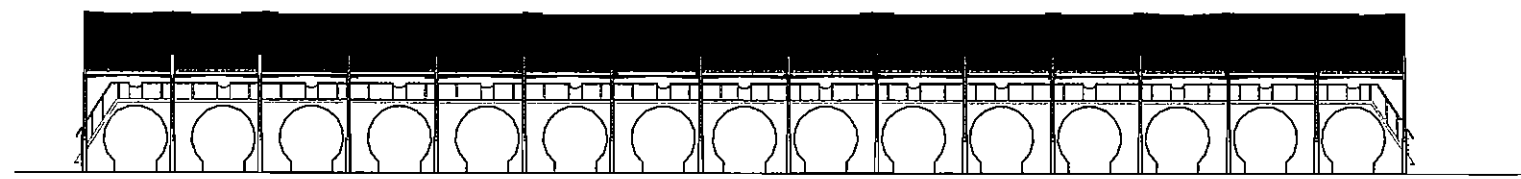
**2** Perspective View  
A1.0 scale: nts



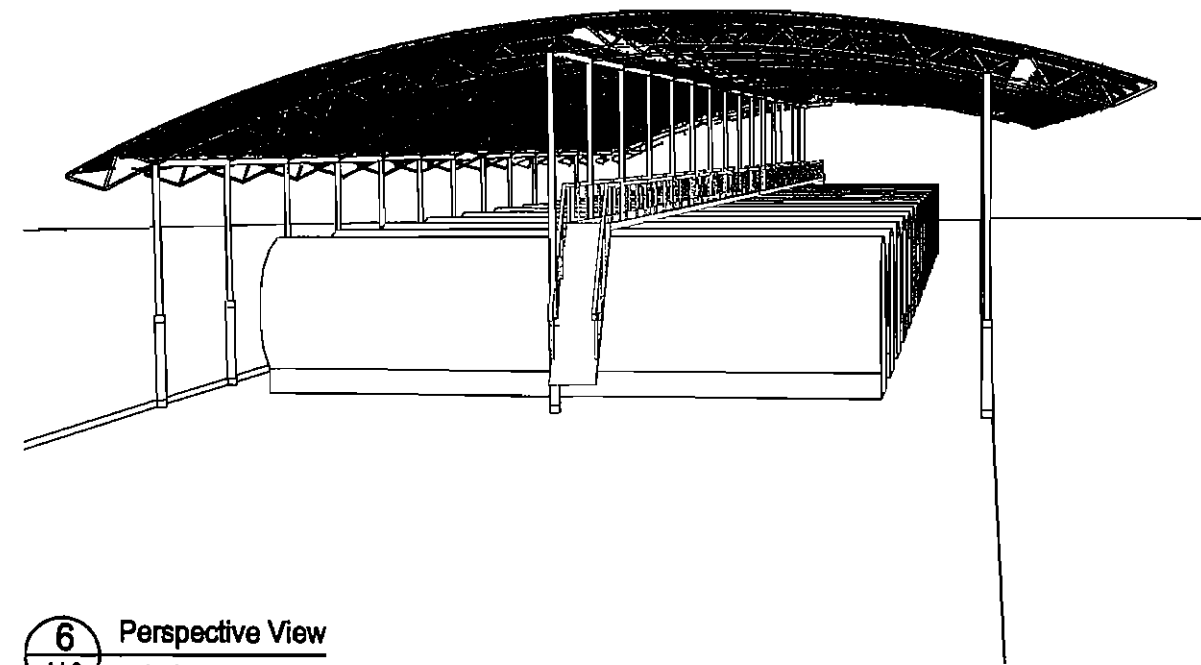
**3** Plan View  
A1.0 scale: 1"=30'



**4** Perspective View  
A1.0 scale: nts



**5** Front View  
A1.0 scale: nts



**6** Perspective View  
A1.0 scale: nts



Fabritec Structures  
350 Kalmus drive  
Costa Mesa, CA 92628  
Phone: 714.427.6980  
Fax: 714.427.6983  
www.fabritecstructures.com

THESE PLANS AND SPECIFICATIONS ARE THE PROPERTY OF FABRITEC STRUCTURES AND SHALL NOT BE REPRODUCED WITHOUT THEIR WRITTEN PERMISSION

PROJECT NAME

Addison Fuel Farm  
Fabric Canopy  
Option 1

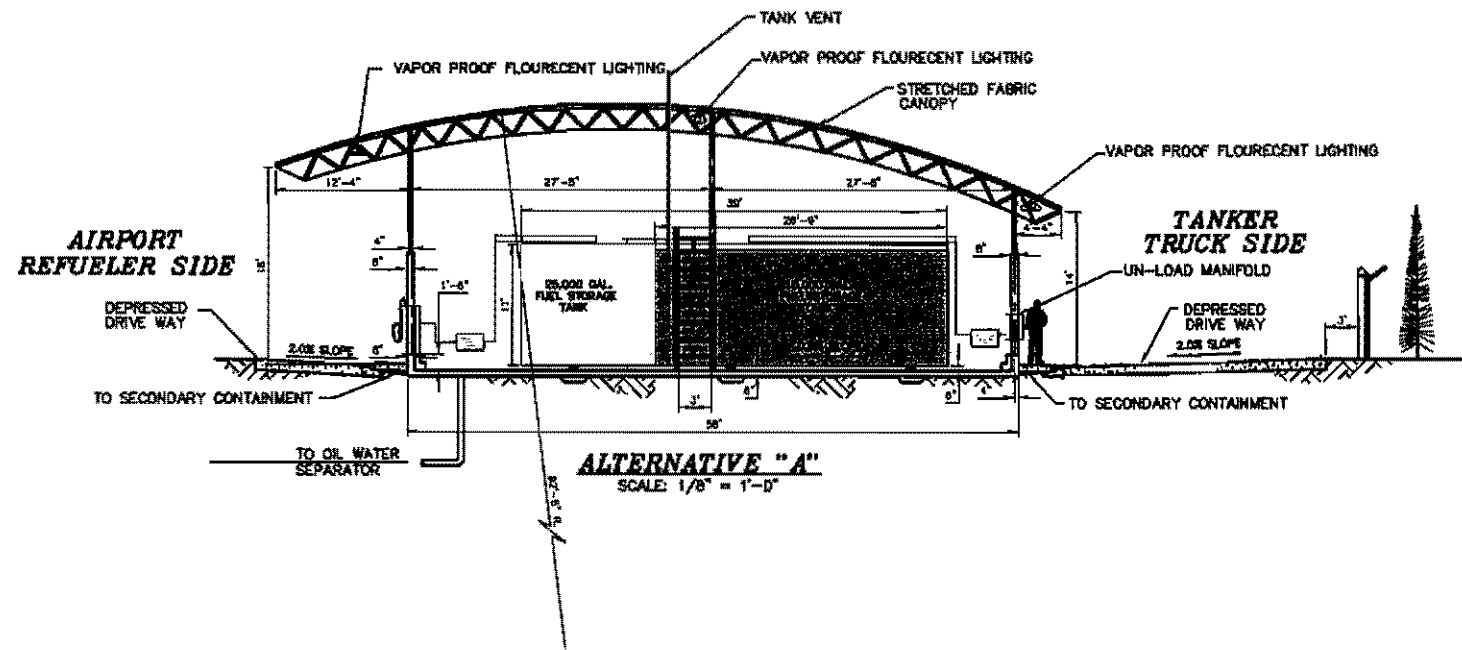
Proposal # AFF

CONTENTS  
plan, elevations &  
3D views

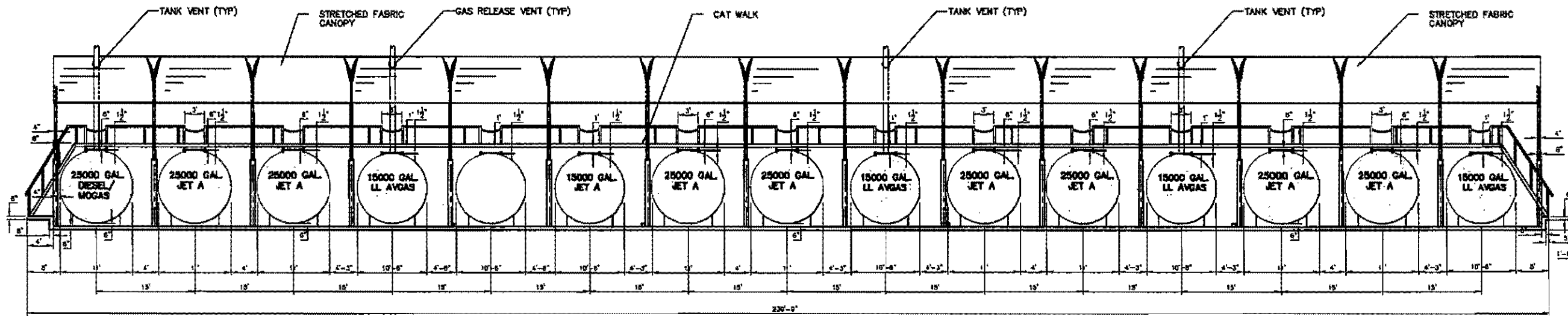
REVISIONS

NO.	DATE	DESCRIPTION
A	07/12/04	submitted for concept approval
DG		

A1.0



**ALTERNATIVE "A"**  
SCALE: 1/8" = 1'-0"



**EAST SECTION VIEW**  
SCALE: 1/8" = 1'-0"

PRELIMINARY STATE OF PLANS	
ADD - FUEL BLDG - cont - wing.dwg	DESCRIPTION
CADD FILE NO.	DATE
A.J.P. PROJ. NO.	
REV.	

ADDISON REGIONAL AIRPORT  
 ADDISON, TEXAS

Washington Group International  
 Project Engineers, Architects, Planners  
 10000 West Loop South, Suite 1000  
 Houston, Texas 77042

ADDISON FUEL FARM  
 FACILITY CONCEPT

DESIGNER: S.G.L. PROJ. LEAD: \_\_\_\_\_ APPROVED: \_\_\_\_\_  
 CADD TECH: S.A.M. CHECKED: \_\_\_\_\_

10.45  
11-12-04  
C

**Holloway Welding & Piping Company**

820 W. Forest Grove Road

Allen, TX 75002-8446

Phone (972) 562-5033

Fax (972) 562-5035 Fax (972) 562-2112

Email Address: hollowaywp@aol.com

**Facsimile Transmittal Sheet**

<b>TO:</b> Addison Airport	<b>FROM:</b> Earl Holloway
<b>COMPANY:</b>	<b>DATE:</b> 11-12-04
<b>PHONE#:</b>	<b>TOTAL PAGES (w/cover)</b> 2
<b>FAX#:</b> 972-450-7096	
<b>RE:</b> REF-05-02-0-2004/ms Bio No: 395955	

05-02 - Bulk Fuel Storage

Page 2 contains questions - Please respond asap.

Thanks.

## ① QUESTIONS - WHO / WHERE TO SEND?

11-11-04 ADDISON AIRPORT BULK FUEL STORAGE

↓ Q1 - WHERE IS SPEC. AND DIMENSIONS FOR THE FLEX JOINTS LOCATED AT ALL PUMPS?

Q2 - WHO ARE THE PROPOSED MANUFACTURERS OF PIPE/FITTINGS FOR THIS PROJECT?

Q3. WHAT PERMITS WILL BE REQUIRED FOR PROJECT?

Q4. WILL A STORM WATER PREVENTION PLAN BE REQUIRED WITH STATE OF TEXAS FOR THIS PROJECT?

Q5. WHO WILL APPROVE THE TRAFFIC CONTROL PLAN?

Q6. BUTTERFLY VALVES - OTHER THAN THE "LIMIT SWITCH" IS THERE ANY OTHER CONNECTION, ELECTRICAL, TO THE PLC SYSTEM?

Q7. ARE THERE ANY MOTOR OPERATED VALVES, AND WHERE LOCATED, ON THIS PROJECT?

Q8. REFERENCE THE MASTER DRAWING. THE BUTTERFLY VALVES SEEM TO HAVE O.C. W/ CAPS. IS THIS CORRECT? WHAT SIZE?

ANSWER FOUND ON PAGE 182 OF SPECS.

Q9. MAY THE CONTRACTOR SUBSTITUTE S.S. PIPE/FITTINGS IN PLACE OF C.S. 153 INTERNAL COATED?



②

## QUESTIONS FOR ADDISON FUEL STORAGE

Q 10 THERE DON'T SEEM TO BE ANY "UNIONS" IN THE SMALL 3/4" AND 1" RETURN LINES.

SHOULD WE PLACE SOME IN SYSTEM OURSELVES?

11-12-04

↓

Q 11 WHAT IS AND WHERE ARE THE SEALS FOR THE FLOATING SECTION w/ FOOT VALVES AS SHOWN IN THE JET A AND AV GAS TANKS?

Q 12 WHERE ARE THE SOLENOID VALVES LOCATED THAT ARE IN SPEC. 13065, PAGES 174, 170M\*9?

Q 13 WHERE IS SPECIFICATION FOR 1" ANTI SYPHON VALVES?

Q 14 WHAT IS THE LENGTH OF FUEL HOSE, 4" FOR TRUCK UNLOAD -  
SAME FOR TRUCK LOADING, BUT HOSE IS 3"

11-13-04

↓

Q 15 WHERE IS THE DETAILED DRAWING OF THE 25,000 GAL SALT NO GAS/DIESEL PIPING, VALVES, FILTERS, DISPENSERS, ETC? LIKE PAGE 29 OF 33 FOR JET-A/AV GAS -

Q 16 WHERE IS DETAIL OF FLOW SWITCH?  
LIKE OTHER DETAILS SHOWN ON PAGE 29 OF 33

(3)

## QUESTIONS - CONT

11-13-04

Q 17

WHERE ARE SACS FOR FLOW SORTER, AS  
CALLED OUT ON PAGE 27, OR 33, TYPICAL  
JET A, AVGAS, JUST DOWN STREAM  
OF MAIN FILTER/SEPARATORS.

Q 18

WHERE IS THE LISTING OF LOCATIONS OF  
ALL TANK NOZZLES FOR MO GAS/DIESEL  
25,000 GAL. TANK? LIKE LISTINGS ON  
SPEC PAGE 209, 208 FOR JET-A, AVGAS.

Q 19

ARE THE EMERGENCY VENT, GAGE HATCH, AND  
NORMAL VENTS ON JET A AND AVGAS  
TANKS THE SAME MANUFACTURERS AS  
THOSE SHOWN FOR MO GAS/DIESEL TANK, SPEC  
PAGE 212, 201, A, 3, 4, AND 5?

Q 20

UNDER SPEC 15067, FUEL SYSTEM ACCESSORIES,  
THE ABOVE ITEMS IN QUESTION A, SPECIFICATIONS  
ARE MISSING FOR JET-A, AVGAS SYSTEM.

Q 21

IS THE MOTOR PUMPING CONNECTION IN AVGAS  
SYSTEM 3", OR IS IT 4" AS IN JET A SYS?  
IF THIS IS A 3", THEN SPEC. PAGE 182,  
NEEDS TO BE UPDATED -

④

QUESTIONS, CONT.

11-13-04

Q 22

THERE IS A DETAIL FOR A "PIPE SUPPORT"

↓  
(WE HAVE  
4" 3" 2" 1"  
AND 3/4" PIPES)

SHOWN ON PLAN PAGE 29 OF 33. HOWEVER,  
THERE IS NO "SUPPORT SCHEDULE" SHOWN,  
AND ALSO NO "SPECIFICATIONS" FOR  
THE ITEM - PLEASE CLARIFY

Q 23. THE SPECIFICATION FOR "MOTORS" PAGE 125,  
PARAGRAPH 2.13 IS ADDRESSING THE 4"  
JET A MOTOR IS THIS THE SAME SPECIFICATION  
FOR THE AV GAS MOTOR, AND IS THAT  
MOTOR A 3" X 3" FLANGED CONNECTION?  
FURTHER, IS THE MECHANICAL FLOW RATE INDICATOR  
FOR AV GAS STILL 0-600 GPM?

Q 24 REFERRING TO SPECIFICATIONS 13201, FUEL STORAGE  
TANK PACKAGES, 2.02 I, PROVIDE THE FOLLOWING

(9 SHOWN ON 28 OF 33  
6 SHOWN ON 27 OF 33  
8 SHOWN ON IN  
SPEC. 13201)

NOZZLES FOR EACH, \*3 WASTE TANK -  
THESE SPECIFICATIONS FOR THE REQUIRED  
NOZZLES, DO NOT MATCH THE DRAWING  
SHOWN ON PLAN PAGE 27 OF 33, OR THAT  
TABLE - EITHER IN NUMBER OR SIZE OF CONNECTION  
PLEASE CLARIFY.

Q 25 THERE SEEM TO BE NO "DETAILS", "DRAWINGS" OR  
"SPECIFICATIONS" FOR TANK (ANY) VENTS.  
PLEASE CLARIFY.

(5)

QUESTIONS, CONT.

11-13-04 Q 26 WHERE ARE THE SPECIFICATIONS FOR THE  
↓ "ANTI SYNCHRON VALVES" CALLED OUT IN  
THE DETAILED DRAWINGS OF JET-A,  
AV GAS TANKS

Q 27 THERE IS A 1" RECUMS FUEL BYPASS  
SHOWN ON JET-A TANK, BUT NOT  
SHOWN ON AV GAS TANK, IS THIS  
CORRECT?

Q 28 WHAT ARE THE "SPECIFICATIONS"  
FOR THE <sup>DUAL/AV GAS</sup> FILL BOX SHOWN  
ON PLEN PAGE 28 OF 33? ALSO,  
~~THERE DOES NOT SEEM TO BE THREE "LINES" GOING  
INTO THIS TANK, BUT ON PLEN PAGE  
27 OF 33 ONLY 2 LINES GO TO  
FILL BOX - PLEASE CLARIFY.~~

Q 29 THE DRAWING FOR AV GAS, PAGE 27 OF 33  
HAS A QUENCHED REDUCER SHOWN JUST PRIOR  
TO THE ROTARY VALVE. THE DRAWING FOR  
SAME ON PAGE 28 OF 33 DOES NOT HAVE THIS  
PLEASE CLARIFY.

Q 30 SHOULD THERE BE A VALVE IN THE 2" VACUUM  
TRUCK LINE FROM WASTE TANK?

⑦

## QUESTIONS - CONT.

11-14-04

Q 35

ON DRAWING 15 OF 33, SECTION A CROSS  
FOR XX ARE POINT IN THE WRONG DIRECTION.  
OR, SECTION YY DETAIL IS REVERSED -  
SEE PAGE 6 OF 33 AS REVERSE. ANYWAY  
YOU LOOK AT THIS, SOMETHING IS WRONG -  
PLEASE CLARIFY

Q 36

WATER DETECTION PROBES ARE IN SPEC.  
ON PAGE 91. HOWEVER I CAN NOT FIND  
ANY REFERENCES TO THIS ITEM IN PLAN'S.  
PLEASE CLARIFY

Q 37

THERE IS NO "DETAIL" ON PLAN SHEET 21 OF 33  
FOR THE FLOW SWITCH. IS THIS ITEM  
INSTALLED SIMILAR TO DETAIL #1 AND/OR #5?  
ALSO, WHAT IS SPECIFICATION FOR THIS ITEM -

Q 38

NUMBER OF CONCRETE BOWARDS.  
PLAN PAGES 6 OF 33, 8 OF 33 AND 9 OF 33  
CLEARLY CALL OUT A TOTAL OF 6. HOWEVER  
I AM LOOKING AT PAGES 18 OF 33 AND 19 OF 33  
I BELIEVE THERE ARE SEVERAL MORE, APPROX  
10. IS THIS CORRECT? ALSO, WHAT ABOUT  
THE NEW FIRE HYDRANT. THAT ALSO LOOKS  
AS IF THERE ARE 4 BOWARDS AROUND IT TOO.  
SEE PAGE 7 OF 33 -



**LETTER OF TRANSMITTAL**

<b>TO:</b> <b>Mr. Jim Pierce, P.E.</b> <b>Assistant Director of Public Works</b> <b>Town of Addison</b> <b>16801 Westgrove Drive</b> <b>Addison, TX 75001-9010</b>	<b>DATE:</b> <b>Nov 1, 2004</b>	<b>JOB NO.</b> <b>27514.000</b>
	<b>ATTENTION:</b> <b>Jim Pierce</b>	
	<b>RE: Bid Documents</b> <b>Bulk Fuel Storage &amp; Dispensing System</b>	

WE ARE SENDING YOU  Attached  Under separate cover via \_\_\_\_\_ the following items

Shop Drawings  Prints  Documents  Samples  Specifications

Copy of Letter  Change Order  Disks

COPIES	DATE	NO.	DESCRIPTION
5	10-25-04		Half Size Plans (Bid Documents)
2	10-25-04		Project Specifications (Bid Documents)
2	11-01-04		Project Equipment Listing

THESE ARE TRANSMITTED as checked below:


- For Approval  Approved as Submitted  Resubmit \_\_\_\_\_ Copies for Approval
- For Your Use  Approved as Noted  Submit \_\_\_\_\_ Copies for Distribution
- As Requested  Returned for Corrections  Return \_\_\_\_\_ Corrected Prints
- For Review and Comment  For signatures
- For Bids Due \_\_\_\_\_  Prints Returned After Loan To Us

**Remarks:**

Jim  
 As requested and for your use.

Thanks again for your assistance.

Copy To: \_\_\_\_\_

Signed:   
 Samuel G. Lundgren, P.E. Project Manager

If enclosures are not as noted, kindly notify us at once

**Description: Engineer Estimate for Construction**

This bid is to construct a centrally located aviation bulk fuel storage and dispensing system with 15 individual bulk fuel storage tanks, with off-load and five Fixed Base Operator (FBO) metered dispensing systems, in a consolidated, environmentally protected site, including tanks and operating equipment, with suitable architectural considerations to blend into the site. The horizontal mounted cylindrical tanks will be either 25,000 gal or 15,000 gal capacity fuel storage tanks, double wall, 2-hour fire rated and ballistics protected tanks. Primary products to be dispensed are Low Lead AVGAS and Jet A Fuel, with one two-compartment tank of 10,000 gal & 15,000 gal, with dispensing equipment for LL MoGas and Diesel. The equipment includes industry standard filtration systems with automatic shutdown and overflow protection devices. A 10,000gal oil/water separator will be installed and connected to the secondary containment dike area and off-load/dispensing ramps. Fuel storage area will have explosion proof electrical fixtures and control panel. A 1" water line will be required for emergency shower/eye wash unit and two 3/4" hose and reel unit. Telephone connections include intercom access, phone and fire alarm. Fuel storage tanks will be mounted in a concrete low wall secondary containment structure, with stretched fabric canopy and area lighting, storm drainage and utilities. Access/exit for the facility will be through an electrically operated gates, with new driveways, curb and gutter.

With  
CANOPY

	WGI Estimate	Low Bid w/alt	2nd Bid w/alt	3rd Bid w/alt
<b>Division 1. General Conditions</b>	<b>\$35,900.00</b>			
	\$ 35,900.00	\$ 300,000.00	\$ 49,339.00	\$ 886,017.00
<b>Division 2. Site Construction</b>				
Site Clearing	\$9,500.00			
Earthwork	\$8,750.00			
Water Distribution	\$8,750.00			
O/W Sep & Drainage	\$57,900.00			
Asphalt Pvmnt	\$37,500.00			
Landscape & Irrigation	\$22,800.00			
Concrete Pvmnt	\$46,800.00			
Chain Link Fence	\$26,500.00			
	\$ 218,500.00	\$ 275,000.00	\$ 476,850.00	\$ 596,315.00
<b>Division 3. Concrete</b>				
Cast-in-Place	\$162,800.00			
	\$ 162,800.00	\$ 235,000.00	\$ 186,275.00	\$ 115,000.00
<b>Division 5. Metals</b>				
Metal Stairs & Struct	\$26,800.00			
Pipe & Tube Railings	\$12,500.00			
Gratings	\$3,800.00			
	\$ 43,100.00	\$ 1,150,000.00	\$ 288,436.00	\$ 183,000.00
<b>Division 7. Thermal Protection</b>				
Fire Resistive Material	\$48,500.00			
	\$ 48,500.00	\$ 75,000.00	\$ 177,420.00	\$ 27,000.00
<b>Division 10. Specialties</b>				
Fire Protection	\$1,850.00			
	\$ 1,850.00	\$ 100,000.00	\$ 1,500.00	\$ 41,000.00
<b>Division 13. Special Construction</b>				
Fuel System Pipe	\$27,900.00			
Fuel System Valves	\$42,400.00			
Accessories	\$74,600.00			
Pumps	\$42,100.00			
Filtration	\$40,500.00			

	Lighting Protection	\$6,100.00				
	Fabric Structures	\$355,500.00	\$ 125,000.00	\$ 470,580.00	\$ 450,000.00	
	Fuel Storage Tanks	\$415,200.00				
	Fuel Dispenser	\$13,900.00				
	Electric Gates	\$32,400.00				
		\$ 1,050,600.00	\$ 550,000.00	\$ 2,475,689.00	\$ 2,690,000.00	
<b>Division 15. Mechanical</b>						
	Domestic Water Piping	\$2,550.00				
	Water Specialties	\$10,500.00				
	Drainage Specialties	\$22,800.00				
	Storm Drainage Piping	\$26,800.00				
	Emergency Plumbing	\$1,650.00				
		\$ 64,300.00	\$ 125,000.00	\$ 23,485.00	\$ 265,000.00	
<b>Division 16. Electrical</b>						
	Wiring & Cables	\$27,000.00				
	Boxes & Fittings	\$12,200.00				
	Electrical Connections	\$9,850.00				
	Motor Disconn Switch	\$28,500.00				
	Transformer	\$3,750.00				
	Panel Boards	\$5,800.00				
	Contactors & Push B	\$32,400.00				
	MCC	\$42,700.00				
	Emer Gen Connection	\$2,800.00				
	Ext Lighting	\$14,300.00				
	Voice Cabling	\$3,450.00				
	Fire Alarms	\$15,800.00				
	Controls & Instrument	\$42,600.00				
	Tel Entry & Controller	\$4,750.00				
		\$ 245,900.00	\$ 950,000.00	\$ 672,426.00	\$ 755,500.00	
<b>Contractor O,H &amp; P</b>		\$467,862.50	\$ 467,863.00			
<b>15% Contingency</b>		\$350,896.88	\$ 350,897.00			
<b>Total Estimated Lump Sum Bid</b>						
		\$2,690,209.38	\$ 2,690,210.00	\$ 3,885,000.00	\$4,822,000.00	\$ 6,008,832.00
Estimated time required for construction: 225 days			210 days	320 days	330 days	
Submitted by:		Date:				



**Description: Engineer Estimate for Construction**

This bid is to construct a centrally located aviation bulk fuel storage and dispensing system with 15 individual bulk fuel storage tanks, with off-load and five Fixed Base Operator (FBO) metered dispensing systems, in a consolidated, environmentally protected site, including tanks and operating equipment, with suitable architectural considerations to blend into the site. The horizontal mounted cylindrical tanks will be either 25,000 gal or 15,000 gal capacity fuel storage tanks, double wall, 2-hour fire rated and ballistics protected tanks. Primary products to be dispensed are Low Lead AVGAS and Jet A Fuel, with one two-compartment tank of 10,000 gal & 15,000 gal, with dispensing equipment for LL MoGas and Diesel. The equipment includes industry standard filtration systems with automatic shutdown and overflow protection devices. A 10,000gal oil/water separator will be installed and connected to the secondary containment dike area and off-load/dispensing ramps. Fuel storage area will have explosion proof electrical fixtures and control panel. A 1" water line will be required for emergency shower/eye wash unit and two 3/4" hose and reel unit. Telephone connections include intercom access, phone and fire alarm. Fuel storage tanks will be mounted in a concrete low wall secondary containment structure, with stretched fabric canopy and area lighting, storm drainage and utilities. Access/exit for the facility will be through an electrically operated gates, with new driveways, curb and gutter.

*w/o canopy*

	WGI Estimate	Low Bid w/o alt	2nd Low Bid	3rd Low Bid
Division 1. General Conditions	\$35,900.00			
	\$ 35,900.00	\$ 300,000.00	\$ 39,339.00	\$ 886,017.00
Division 2. Site Construction				
Site Clearing	\$9,500.00			
Earthwork	\$8,750.00			
Water Distribution	\$8,750.00			
O/W Sep & Drainage	\$57,900.00			
Asphalt Pvmnt	\$37,500.00			
Landscape & Irrigation	\$22,800.00			
Concrete Pvmnt	\$46,800.00			
Chain Link Fence	\$26,500.00			
	\$ 218,500.00	\$ 275,000.00	\$ 476,850.00	\$ 596,315.00
Division 3. Concrete				
Cast-in-Place	\$162,800.00			
	\$ 162,800.00	\$ 235,000.00	\$ 186,275.00	\$ 115,000.00
Division 5. Metals				
Metal Stairs & Struct	\$26,800.00			
Pipe & Tube Railings	\$12,500.00			
Gratings	\$3,800.00			
	\$ 43,100.00	\$ 1,150,000.00	\$ 288,436.00	\$ 183,000.00
Division 7. Thermal Protection				
Fire Resistive Material	\$48,500.00			
	\$ 48,500.00			
Division 10. Specialties				
Fire Protection	\$1,850.00			
	\$ 1,850.00	\$ 100,000.00	\$ 1,500.00	\$ 41,000.00
Division 13. Special Construction				
Fuel System Pipe	\$27,900.00			
Fuel System Valves	\$42,400.00			
Accessories	\$74,600.00			
Pumps	\$42,100.00			
Filtration	\$40,500.00			

	Lighting Protection	\$6,100.00			
	Fabric Structures	\$355,500.00			
	Fuel Storage Tanks	\$415,200.00			
	Fuel Dispenser	\$13,900.00			
	Electric Gates	\$32,400.00			
		\$ 1,050,600.00	\$ 550,000.00	\$ 2,589,689.00	\$ 2,690,000.00
Division 15. Mechanical					
	Domestic Water Piping	\$2,550.00			
	Water Specialties	\$10,500.00			
	Drainage Specialties	\$22,800.00			
	Storm Drainage Piping	\$26,800.00			
	Emergency Plumbing	\$1,650.00			
		\$ 64,300.00	\$ 125,000.00	\$ 23,485.00	\$ 265,000.00
Division 16. Electrical					
	Wiring & Cables	\$27,000.00			
	Boxes & Fittings	\$12,200.00			
	Electrical Connections	\$9,850.00			
	Motor Disconn Switch	\$28,500.00			
	Transformer	\$3,750.00			
	Panel Boards	\$5,800.00			
	Contactors & Push B	\$32,400.00			
	MCC	\$42,700.00			
	Emer Gen Connection	\$2,800.00			
	Ext Lighting	\$14,300.00			
	Voice Cabling	\$3,450.00			
	Fire Alarms	\$15,800.00			
	Controls & Instrument	\$42,600.00			
	Tel Entry & Controller	\$4,750.00			
		\$ 245,900.00	\$ 950,000.00	\$ 620,426.00	\$ 725,500.00
Contractor O,H & P		\$467,862.50	\$ 467,863.00		
15% Contingency		\$350,896.88	\$ 350,897.00		
<b>Total Estimated Lump Sum Bid</b>					
		\$2,690,209.38	\$ 2,690,210.00	\$ 3,685,000.00	\$ 4,226,000.00
Estimated time required for construction: 225 days			196 days	280 days	300 days
Submitted by:			Date:		

**Description: Engineer Estimate for Construction**

This bid is to construct a centrally located aviation bulk fuel storage and dispensing system with 15 individual bulk fuel storage tanks, with off-load and five Fixed Base Operator (FBO) metered dispensing systems, in a consolidated, environmentally protected site, including tanks and operating equipment, with suitable architectural considerations to blend into the site. The horizontal mounted cylindrical tanks will be either 25,000 gal or 15,000 gal capacity fuel storage tanks, double wall, 2-hour fire rated and ballistics protected tanks. Primary products to be dispensed are Low Lead AVGAS and Jet A Fuel, with one two-compartment tank of 10,000 gal & 15,000 gal, with dispensing equipment for L.L. MoGas and Diesel. The equipment includes industry standard filtration systems with automatic shutdown and overflow protection devices. A 10,000gal oil/water separator will be installed and connected to the secondary containment dike area and off-load/dispensing ramps. Fuel storage area will have explosion proof electrical fixtures and control panel. A 1" water line will be required for emergency shower/eye wash unit and two 3/4" hose and reel unit. Telephone connections include intercom access, phone and fire alarm. Fuel storage tanks will be mounted in a concrete low wall secondary containment structure, with stretched fabric canopy and area lighting, storm drainage and utilities. Access/exit for the facility will be through an electrically operated gates, with new driveways, curb and gutter.

		WGI Estimate	Low Bidder w/o alt
Division 1. General Conditions		\$35,900.00	
		\$ 35,900.00	\$ 300,000.00
Division 2. Site Construction			
	Site Clearing	\$9,500.00	
	Earthwork	\$8,750.00	
	Water Distribution	\$8,750.00	
	O/W Sep & Drainage	\$57,900.00	
	Asphalt Pvmnt	\$37,500.00	
	Landscape & Irrigation	\$22,800.00	
	Concrete Pvmnt	\$46,800.00	
	Chain Link Fence	\$26,500.00	
		\$ 218,500.00	\$ 275,000.00
Division 3. Concrete			
	Cast-in-Place	\$162,800.00	
		\$ 162,800.00	\$ 235,000.00
Division 5. Metals			
	Metal Stairs & Struct	\$26,800.00	
	Pipe & Tube Railings	\$12,500.00	
	Gratings	\$3,800.00	
		\$ 43,100.00	\$ 1,150,000.00
Division 7. Thermal Protection			
	Fire Resistive Material	\$48,500.00	
		\$ 48,500.00	<del>75,000</del>
Division 10. Specialties			
	Fire Protection	\$1,850.00	
		\$ 1,850.00	\$ 100,000.00
Division 13. Special Construction			
	Fuel System Pipe	\$27,900.00	
	Fuel System Valves	\$42,400.00	
	Accessories	\$74,600.00	
	Pumps	\$42,100.00	
	Filtration	\$40,500.00	

*inc tanks*

Bulk Fuel Storage Dispensing System

Addison Airport, Addison, TX

*inc tanks*

Construction Estimate

	Lighting Protection	\$6,100.00		
	Fabric Structures	\$355,500.00		
	Fuel Storage Tanks	\$415,200.00		
	Fuel Dispenser	\$13,900.00		
	Electric Gates	\$32,400.00		
			\$ 1,050,600.00	\$ 550,000.00
<b>Division 15. Mechanical</b>				
	Domestic Water Piping	\$2,550.00		
	Water Specialties	\$10,500.00		
	Drainage Specialties	\$22,800.00		
	Storm Drainage Piping	\$26,800.00		
	Emergency Plumbing	\$1,650.00		
			\$ 64,300.00	\$ 125,000.00
<b>Division 16. Electrical</b>				
	Wiring & Cables	\$27,000.00		
	Boxes & Fittings	\$12,200.00		
	Electrical Connections	\$9,850.00		
	Motor Disconn Switch	\$28,500.00		
	Transformer	\$3,750.00		
	Panel Boards	\$5,800.00		
	Contactors & Push B	\$32,400.00		
	MCC	\$42,700.00		
	Emer Gen Connection	\$2,800.00		
	Ext Lighting	\$14,300.00		
	Voice Cabling	\$3,450.00		
	Fire Alarms	\$15,800.00		
	Controls & Instrument	\$42,600.00		
	Tel Entry & Controller	\$4,750.00		
			\$ 245,900.00	\$ 950,000.00
Contractor O,H & P		\$467,862.50	\$ 467,863.00	
15% Contingency		\$350,896.88	\$ 350,897.00	
<b>Total Estimated Lump Sum Bid</b>		<b>\$2,690,209.38</b>	<b>\$ 2,690,210.00</b>	<b>\$ 3,685,000.00</b>
Estimated time required for construction: 225 days				196 days
Submitted by:		Date:		

SECTION 01000C

BID PROPOSAL FORM

FIRST PART

BID PROPOSAL

For

BULK FUEL STORAGE AND DISPENSING SYSTEM

Addison, Texas

Date: \_\_\_\_\_

Proposal of: THIELSCH ENGINEERING, INC.  
(Contractor)

Check appropriate business entity:

\_\_\_\_\_ A corporation organized and existing under the laws of the State of Texas

A corporation organized and existing under the laws of the State of R.I.  
(if a non-Texas corporation, please attach a copy of the corporation's  
Articles of incorporation)

\_\_\_\_\_ A partnership consisting of \_\_\_\_\_.

\_\_\_\_\_ A sole proprietorship owned by \_\_\_\_\_, an individual.

Do Not Remove Bid Proposal from Specification Book  
Specifications Book to be submitted in its Entirety

To: The Town of Addison, Texas  
5350 Beltline Road  
Addison, Texas 75001

The undersigned bidder, pursuant to the foregoing advertisement for bids, has carefully examined this proposal, the contract documents, special provisions, general provisions, special specifications, the specifications and the plans, and will provide all necessary labor, superintendence, machinery, equipment, tools, materials, services and the other facilities and complete fully all the work as provided for in the specifications and contract documents; and binds himself upon formal acceptance of this proposal to execute a contract and bonds, according to the prescribed forms, for performing and completing the said work within the required time.

The bid for the construction of this project, complete and in operation has been submitted as a lump sum, with both a primary bid and an alternative bid item.

The work proposed to be done shall be accepted when fully completed and furnished in accordance with the plans and specifications, to the satisfaction of the Owner.

The undersigned certifies that the bid prices contained in the Proposal have been carefully checked and are submitted as correct and final.

The undersigned bidder hereby declares that he has visited the site of the work.

In the event of the award of a Contract to the Bidder, the Bidder will furnish Performance and Payment Bond for the full amount of the Contract, to secure proper compliance with the terms and provisions of the Contract, to insure and guarantee the work until final completion and acceptance, and to guarantee payment of all lawful claims for labor performed and materials furnished in the fulfillment of the Contract.

Receipt is acknowledged of the following Addenda:

Respectfully Submitted,

Thielsch Engineering, Inc.

(Name of Contractor)

By:



(Authorized Signature)

Vice President of Utility Engineering Services

(Title)

Address: 195 Frances Avenue

City, State and Zip Code: Cranston, RI 02910

Telephone and Fax Numbers: Tel: (401) 467-6454, Fax: (401) 461-6006

Seal if bidder is a corporation

**SECOND PART**

**BID SCHEDULE SUMMARY**

**Base Bid Breakout by CSI Format:**

**Project Description:**

This bid is to construct a centrally located aviation bulk fuel storage and dispensing system with 15 individual bulk fuel storage tanks, with off-load and five Fixed Base Operator (FBO) metered dispensing systems, in a consolidated, environmentally protected site, including tanks and operating equipment, with suitable architectural considerations to blend into the site. The horizontal mounted cylindrical tanks will be either 25,000 gal or 15,000 gal capacity fuel storage tanks, double wall, 2-hour fire rated and ballistics protected tanks. Primary products to be dispensed are Low Lead AVGAS and Jet A Fuel, with one two-compartment tank of 10,000 gal & 15,000 gal, with dispensing equipment for LL MoGas and Diesel. The equipment includes industry standard filtration systems with automatic shutdown and overflow protection devices. A 10,000gal oil/water separator will be installed and connected to the secondary containment dike area and off-load/dispensing ramps. Fuel storage area will have explosion proof electrical fixtures and control panel. A 1" water line will be required for emergency shower/eye wash unit and two 3/4" hose and reel unit. Telephone connections include interroom access, phone and fire alarm. Fuel storage tanks will be mounted in a concrete low wall secondary containment structure, with area lighting, storm drainage and utilities. Access/exit for the facility will be through an electrically operated gates, with new driveways, curb and gutter. (A stretched fabric canopy is listed as an alternate bid item.)

**Bid Proposal for Bulk Fuel Storage and Dispensing System, Addison Airport**

**Amount Bid**

Division 1. General Conditions	\$300,000.00
Division 2. Site Construction	\$275,000.00
Division 3. Concrete	\$235,000.00
Division 5. Metals	\$1,150,000.00
Division 10. Specialties	\$100,000.00
Division 13. Special Construction	\$550,000.00
Division 15. Mechanical	\$125,000.00
Division 16. Electrical	\$950,000.00
<b>Total Lump Sum Base Bid (A)</b>	<b>\$3,685,000.00</b>



**Base Bid with Additive Alternative Breakout by CSI Format:****Project Description:**

This Additive Alternative bid is to construct a centrally located aviation bulk fuel storage and dispensing system with 15 individual bulk fuel storage tanks, with off-load and five Fixed Base Operator (FBO) metered dispensing systems, in a consolidated, environmentally protected site, including tanks and operating equipment, with suitable architectural considerations to blend into the site. The horizontal mounted cylindrical tanks will be either 25,000 gal or 15,000 gal capacity fuel storage tanks, double wall, 2-hour fire rated and ballistics protected tanks. Primary products to be dispensed are Low Lead AVGAS and Jet A Fuel, with one two-compartment tank of 10,000 gal & 15,000 gal, with dispensing equipment for LL MoGas and Diesel. The equipment includes industry standard filtration systems with automatic shutdown and overflow protection devices. A 10,000gal oil/water separator will be installed and connected to the secondary containment dike area and off-load/dispensing ramps. Fuel storage area will have explosion proof electrical fixtures and control panel. A 1" water line will be required for emergency shower/eye wash unit and two 3/4" hose and reel unit. Telephone connections include intercom access, phone and fire alarm. Fuel storage tanks will be mounted in a concrete low wall secondary containment structure, with storm drainage and utilities and a stretched fabric canopy mounted on a 2 hour rated steel structure, with rain gutters and downspouts, interior lighting and frame mounted area lighting. Access/exit for the facility will be through an electrically operated gates, with new driveways, curb and gutter.

**Additive Alternate Bid Proposal for Bulk Fuel  
Storage and Dispensing System, Addison  
Airport**
**Amount Bid**

Division 1. General Conditions	\$300,000.00
Division 2. Site Construction	\$275,000.00
Division 3. Concrete	\$235,000.00
Division 5. Metals	\$1,150,000.00
Division 7. Thermal Protection	\$75,000.00
Division 10. Specialties	\$100,000.00
Division 13. Special Construction	\$550,000.00
Division 13a. Stretched Fabric Canopy	\$125,000.00
Division 15. Mechanical	\$125,000.00
Division 16. Electrical	\$950,000.00
<b>Total Lump Sum Bid with Additive Alternative (AA)</b>	<b>\$3,885,000.00</b>

**SECOND PART (CONTINUED)**

**BULK FUEL STORAGE AND DISPENSING SYSTEM  
ADDISON AIRPORT**

<u>Bid Schedule and Description</u>	<u>Total Amount in Lump Sum</u>
Lump Sum Base Bid	(A) \$ <u>3,685,000.00</u>
\$3000/Day x <u>196</u> Days	(B) \$ <u>588,000.00</u>
Total of A + B	\$ <u>4,273,000.00</u>

**Total Amount Bid for Lump Sum Base Bid (A) written in words:**

Three Million Six Hundred Eighty Five Thousand

**Total of calendar days x \$3000 (B) written in words:**

Five Hundred Eighty Eight Thousand

.....  
Lump Sum Base Bid with Additive Alternative (AA) \$ 3,885,000.00

\$3000/Day x 210 Days with Alternative (BA) \$ 630,000.00

Total of AA+ BA \$ 4,515,000.00

**Total Amount Bid for Lump Sum Base Bid (AA) with Additive Alternative Bid Item written in words:**

Three Million Eight Hundred Eighty Five Thousand

**Total of calendar days x \$3000 (BA) with Additive Alternative Bid Item written in words:**

Four Million Five Hundred Fifteen Thousand

Notes:

1. All item, labor, materials, equipment, facilities, incidentals and work required for construction of the project are to be provided and installed by the Contractor as part of the project and payment for the cost of such shall be included in the price bid for the construction of the project.

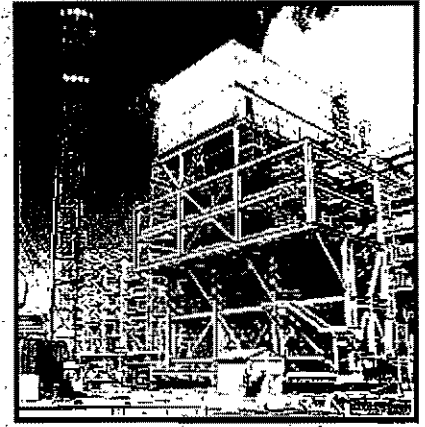
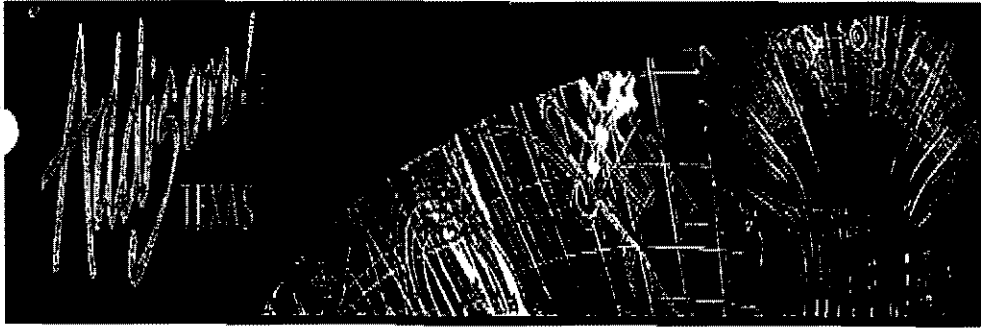
2. Prices must be shown in works and figure for each item listed in this proposal. In the event of discrepancy, the words shall control.

3. It is understood that the Bid Security shall be collected and retained by the Owner as liquidated damages in the event a contract is awarded by the Owner based on this proposal within ninety (90) calendar days after receiving bids and the undersigned fails to execute the contract and required bonds within seven (7) calendar days from the date the Contractor is notified and has received the conformed documents. After this period, if the contract has been executed and the required bonds have been submitted, the said Bid Surety shall be returned to the undersigned upon demand.

4. One contract will be awarded based on the Lump Sum Bid of the total value of A plus B or AA plus BA.

Bidder's Tax I.D. Number or Employer Number: 05-0405629

**DO NOT REMOVE BID PROPOSAL FROM SPECIFICATION BOOK  
SPECIFICATION BOOK TO BE SUBMITTED IN ITS' ENTIRETY**



# Thielsch

# Engineering

Professional Engineering  
& Consulting Services

Energy Design/Analysis

Project Management/  
Quality Control

Engineering Evaluation/  
Inspection

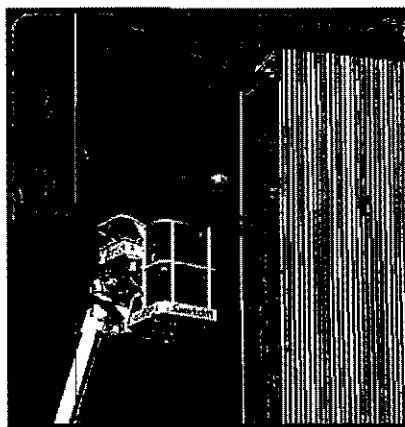
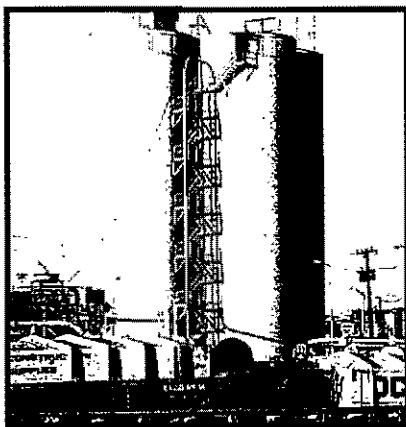
Condition Assessment

Failure Analysis

Maintenance/Construction

Accident Investigation  
& Reconstruction

Pressure Vessel Fabrication



195 Frances Avenue, Cranston, RI 02910 USA  
Tel. (401) 467-6454 • Fax (401) 467-2398  
[www.thielsch.com](http://www.thielsch.com)

**THIELSCH**  
**ENGINEERING**

# **THIELSCH ENGINEERING, INC.**

195 Frances Avenue  
Cranston, Rhode Island 02910  
Tel. (401) 467-6454  
Fax. (401) 461-6006

November 29, 2004

City of Addison Airport  
16051 Addison Road, Suite 220  
Addison, Texas 75001

SUBJECT: Bulk Fuel Storage and Dispensing System  
TEI Proposal No. 04-UES-3217

Dear Sir(s):

Thielsch Engineering is submitting our complete proposal for providing the services and information requested in your bid solicitation. We believe our proposal offers an exceptional range of experience and depth of resources necessary to meet the requirements of the Bulk Fuel Storage and Dispensing System project.

Thielsch Engineering opened our corporate office in Rhode Island in 1984 with fifteen employees, today we are a 300 person firm with six offices around the country. We are a financially stable and growth oriented company who provides professional, technical and maintenance services as documented in our corporate experience, as well as our personnel resumes. Our professional, technical, and management staff have the full understanding and "hands-on" experience in the design, construction, maintenance, and repair of Above Ground Storage Tanks and associated equipment. We are current holders of the "S", "U", and "PP" ASME Code Stamps and the "R" NBIC Stamp. Our project managers and engineers have a minimum of fifteen years of industry design and construction experience.

We have maintained an engineering/construction office in Austin, Texas since 1997, that has allowed us to manage both an engineering and maintenance contract for the City of Austin power plants. Thielsch has been a successful awardee of these multi-year contracts since 1995. This experience will be extremely valuable to the Addison Airport in providing efficient project management, ensuring system quality and reliability.

Our corporate philosophy is to assist our clients in designing and maintaining their equipment in a safe and reliable condition while allowing them to perform their intended functions. Thielsch Engineering has a well earned reputation for saving our clients millions of dollars by providing practical "hands-on" solutions to their problems.

Thielsch Engineering also has the administrative and financial capabilities to effectively and efficiently manage a project such as the maintenance service agreement. Integral to the success of this project is the ability to identify and manage highly qualified subcontractors and vendors. Through our previous experience, we have identified and maintained solid working relationships with the highest quality suppliers. This includes our commitment to utilizing M/WBE subcontractors in order to meet or exceed the contract requirements. These relationships allow Thielsch Engineering to provide the required services, when they are needed, at competitive prices.

In addition to our established Austin area office, we are currently further expanding our facilities in the region. This will allow us to maintain a full-time presence and provide immediate response to specific needs and maintain constant communication to assure effective and efficient implementation of the contract.

We will work hard to develop and maintain a long standing relationship with the Addison Airport and look forward to the awarding of this contract.

Sincerely,

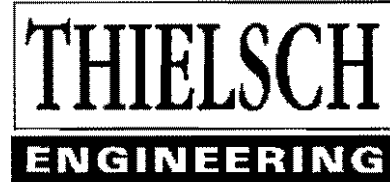
THIELSCH ENGINEERING, INC.

A handwritten signature in black ink, appearing to read 'Peter R. Kennefick', with a stylized flourish at the end.

Peter R. Kennefick, Vice President  
Utility Engineering Services  
[Pkennefick@thielsch.com](mailto:Pkennefick@thielsch.com)

PK:cp

J:\2004\Quotes\Austin\Addison\cover letter.217.wpd



*1984 - 2004 Twenty Years of Excellence!*

195 Frances Avenue, Cranston, RI 02910  
Tel: (401) 467-6454 Fax: (401) 467-2398

Please visit us at [www.thielsch.com](http://www.thielsch.com)

## **PRIOR CORPORATE EXPERIENCE**

The following is a brief listing of the project experience Thielsch Engineering, Inc. and the Austin based division has, which is consistent with the requirements of the Bulk Fuel Storage and Dispensing System.

- I. City of Austin - Decker Creek, Holly Street, Sand Hill Station, Town Lake Center, 721 Barton Springs Road, Austin, Texas 78704

Contact: Bob Logan (512) 322-6127

Description: Annual Maintenance Contract to support scheduled and forced outage projects. Projects range from emergency tube repair to complete superheat section replacement, pipe support modifications to heater alterations from our preheater basket removal to boiler feed pump repair and alignment. Emergency/forced outage situations include management and supply to five to eight qualified welders within eight hours of call from the City, available 24 hours a day, 365 days per year.

Outage capabilities included management and supplying of the following:

- (1) Project Manager
- (1) Clerk
- (1) I & C Technician
- (1) Electrical Technician
- (1) Supervisor
- (1) Foreman
- (4) Certified Welders/Boilermakers
- (9) Boilermakers

Total Price = 2.0 - 2.5 Million Annually

II. BB&S Pressure Treating - P.O. Box 982, N. Kingston, Rhode Island 02852

Contact: Joe Cassidy (401) 295-3200

Description: Provided management and craft labor support for the system design, specification, procurement, and installation of steam piping, heat exchanger and pump components and vessel alterations for their fast fixation process. In addition, all electrical hookups for actuators and sensors were performed by Thielsch Engineering employees. All work was performed under our ASME stamps in accordance with applicable codes. Thielsch Engineering handled all scaffolding, insulation and painting services necessary for this turnkey project.

Project capabilities included supplying the following:

- (1) Project Manager
- (1) Systems Engineer
- (1) Foreman
- (3) Certified Welders
- (2) Heat Treating Technicians
- (1) Structural Welders
- (1) Laborer
- (1) Electrician
- All material specification, procurement and handling, staging, insulation, jointing and authorized insurer interaction.

Total Price = \$185,000.00

III. Thermax Corporation - 695 Dartmouth Street, Dartmouth, MA 02748

Contact: Bob Bernert (508) 999-1232

Description: Designed and fabricated two 75,0000 gallon double walled vaporizer units, used in the oil separation industry. These represent natural gas burner units, incorporated into a horizontal pressure vessel had overall dimensions of 13' diameter and 65' length. Thielsch Engineering provided all required vessel fabrication, component installation, control design and mounting as well as commissioning for Air Products, Inc. at their Texas facility.



Project capabilities included the following Thielsch Engineering personnel:

- (1) Project Manager/Design Engineer
- (8) Certified Welders
- (2) Pipe Fitter
- (2) Laborer
- (2) Instruments and Controls Technician
- All staging, welding equipment, pipe fitting tooling, hydrostatic testing equipment and expendables. Turned over report with complete "As Built Drawings".

Total Price = \$550,000.00

IV. Alhstrom Corporation - 2 Elm Street, Windsor Locks, CT 96096-2335

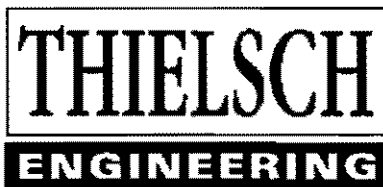
Contact: Eugene DeCarli: (860) 654-8547

Description: Design and field fabrication ten 110' stainless steel pressure vessels used in the production of fine paper. This project involved locating, setting and erecting these pressure vessels. All sumps and piping connections to the vessels were made by Thielsch Engineering personnel.

Project capabilities included the following Thielsch Engineering personnel:

- (1) Design Engineer
- (10) Certified Welders
- (4) Pipe Fitters
- (2) Instruments and Controls Technician
- All staging, welding equipment, pipe fitting tooling, hydrostatic testing equipment and expendables. All work was conducted under Thielsch Engineering ASME Code Stamps.

Total Price = \$600,000.00



*1984 - 2004 Twenty Years of Excellence!*

195 Frances Avenue, Cranston, RI 02910  
Tel: (401) 467-6454 Fax: (401) 467-2398

Please visit us at [www.thielsch.com](http://www.thielsch.com)

## CORPORATE OVERVIEW

### *Corporate Information*

Name: Thielsch Engineering, Inc.  
Address: 195 Frances Avenue, Cranston, Rhode Island 02910  
Telephone: (401) 467-6454  
Facsimile: (401) 461-6006

### *Federal Identification*

05-0405629

### *Branch Offices*

Austin, Texas	Cleveland, Ohio
Sanford, Florida	North Yarmouth, ME

### *Affiliated Companies and Organizations*

ALCO Engineering  
RISE Engineering  
ESS Laboratory  
195 Frances Avenue  
Cranston, RI 02910

### *Business Entity*

Thielsch Engineering, Inc. is a wholly owned company

### *Officers of the Organization*

Thomas Lent, President  
Peter Kennefick, Vice President Utility Engineering Division  
Cary Franklin, Vice President Pulp & Paper Division  
Vin Graziano, Vice President RISE Engineering  
Trent Theroux, Director of Treasurer

***Other Key Personnel***

Rick Normandeau, Project Manager/Professional Engineer  
Roy Thomas, Project Manager  
Thomas Moos, Professional Engineer

***Typical Size and Limits of Project Capabilities***

Minimum Value of Service Costs - \$1,000.00  
Maximum Value of Service Costs - \$6 Million

***Personnel Staffing***

Rhode Island .....	248
Texas .....	12
Ohio .....	16
Florida .....	4
Maine .....	2
Massachusetts .....	5

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***Financial Capabilities and Resources***

**Dunn & Bradstreet Index**

Thielsch Engineering, Inc.  
DUNS 10-617-9815  
D&B Rating: 1R3

**Surety Bond for Contract Performance**

Worcester Insurance  
Hollysville Corporation Bond Department  
355 Maple Avenue  
Hollysville, PA 19438

**Bonding Capacity**

\$3 Million per Project  
\$6 Million Total Aggregate

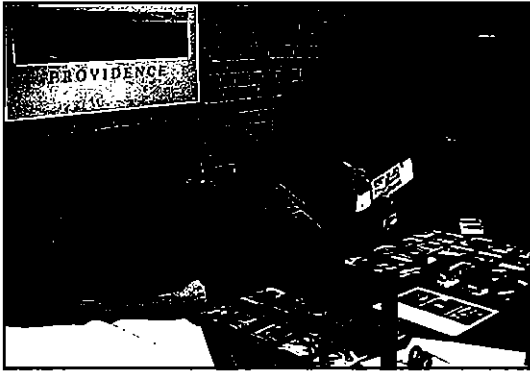
**Banking Reference**

Citizens Bank  
Providence, RI

**Insurance Agent**

Starkweather & Shepley  
Insurance Brokerage, Inc.  
60 Catamore Blvd.  
East Providence, RI 02914-1226  
Tel: (401) 435-3600

# Business Activities



Thielsch Engineering is a rapidly growing engineering and technical services company consisting of four business groups with over 300 employees and annual sales in excess of \$40 million. The corporate headquarters are located in Cranston, RI, with branch offices in Massachusetts, Ohio, Texas, Wisconsin, and Florida.

Thielsch provides a range of coordinated services on regional, national and international levels, in pursuit of its mission to increase the reliability, operating efficiency and safety of clients' facilities and sites.

**The Engineering Services Group is recognized for its expertise and consists of the following integrated divisions:**

The **Professional Engineering Division** performs analyses of pressure vessels, piping, gas and steam turbines, boilers, pumps, compressors and other machinery and structures to determine the cause and origin of failures. Finite element analyses, fracture mechanics, strain gaging, fatigue and vibration analyses, accident reconstruction, industrial hazard assessment, product liability evaluations and risk management with damage assessments, expert witness testimony, litigation support, arbitration determination, case preparation and management are provided for nearly every type of corporation, attorney, insurance underwriter and adjustment firm. The services are provided by qualified professionals in the fields of metallurgical, mechanical, corrosion, and structural engineering.

The **Paper and Process Industries** division establishes preventative maintenance programs for storage tanks, pressure vessels, piping systems, boilers, and rotating equipment at client facilities. Services include condition assessments, inspections, repairs, and rehabilitation. Programs are managed through PRIME software, developed by this division. Additional services include complete management of annual maintenance outages, process safety management programs and program evaluation, code reviews, protocol and procedure writing and development, specification preparation, and engineering design. Branch offices are located in Maine and Wisconsin.

The **Utility Engineering Services** division performs condition assessments, engineering analyses, remaining life determinations, failure analyses, nondestructive examinations and repair services for power generating and industrial plants on a national and international level, specializing in critical and auxiliary boiler components, power piping, furnace scanning/evaluation and pipe stress analysis. Subdivisions consist of the Industrial Fabrication Services (IFS) department, which provides code welding, weld repair, heat treat and related services, and the Process Equipment Fabrication (PEF) department, which provides engineering design, pressure rating and pressure vessel fabrication services. Branch offices are located in Ohio and Texas.

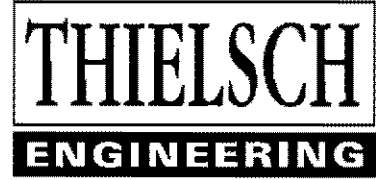
The **James Chemical Engineering** division provides a broad range of chemical process-related services, including process optimization for capacity, efficiency, reliability and safety, project management services, preparation of invitations to bid, bid evaluations and negotiations with general contractors in conjunction with plant owners and accident investigation work.

**At Thielsch Engineering we have five Laboratories which gives clients a full range of integrated laboratory and testing services, enhancing our ability to provide a rapid response for any project.**

The **ESS Laboratory** is a modern facility equipped with state-of-the-art instrumentation which specializes in analytical testing for environmental management.

(cont.)

# Engineering Services



Since 1984, Thielsch Engineering has provided a broad range of engineering services to chemical processing plants, refineries, fertilizer plants, power plants, pulp and paper mills, and other industrial facilities. The personnel performing these services have extensive hands-on experience. In total, our professional engineering staff has well over 200 years of experience providing the following engineering services:

- Failure analyses involving cause and origin determinations of catastrophic and leak-type failures of pressure vessels, heat exchangers, compressors, boilers, turbines, tanks, piping and other equipment and components
- Condition assessment and plant equipment and component integrity analyses, remaining life determinations, and fitness-for-purpose determinations
- Welding engineering and consultation on repairs of pressure vessels, heat exchangers, piping, and other equipment
- Supervision of weld repairs in the most expeditious manner and in accordance with applicable codes and standards, and the best metallurgical engineering considerations.
- Project and construction management
- Maintenance outage management
- Program development and implementation in accordance with Best Management Practices (BMP) regulations per EPA requirements and OSHA CRF 1910-119 requirements for Process Safety Management (PSM)
- Design analyses, stress analyses, and finite element analyses
- Pipe support walkdown inspection, analysis, adjustment, and maintenance
- Complete laboratory testing services including metallurgical, mechanical, analytical, environmental, chemical, corrosion, creep, and fatigue testing
- Nondestructive examination (RT, UT, PT, MT, VT) and certified welding inspection services
- Expert witness and litigation support services
- Risk management determinations of pressure vessels, heat exchangers, components, piping, tanks, and rotating equipment
- Computerized data management software programs for preventative maintenance, inspection, and engineering evaluations
- Seminar presentations on "Failures, Failure Prevention and Repairs of Pressure Vessels, Piping, Boilers and Rotating Machinery, and Remaining Life Considerations", covering periods of three to five days.

## PETER KENNEFICK

Mr. Peter Kennefick is Vice President of one of the Field Engineering Services Divisions at Thielsch Engineering. He is responsible for all of the operations of this Division, including the branches in Austin, Texas, and Aurora, Ohio, and the fabrication, welding and heat treating facility in the Cranston, RI industrial complex of Thielsch Engineering.

Mr. Kennefick has participated in project teams and served as project manager on numerous national and international field projects performing condition assessment evaluations, remaining-life determinations, and fitness-for-purpose evaluations. These include evaluation of power and process piping, pressure vessels, storage tanks, boiler components, reactor vessels, heat exchangers, rotating machinery and other equipment in power plants, paper mills, chemical plants and other industrial plants. He has extensive experience with the welding, inspection, heat treatment, and other requirements of the various major Codes issued by the ASME, AWS, API, NBIC, ASTM and others.

His assignments include metallurgical and mechanical engineering evaluations and failure analyses of various types of equipment including pressure vessels, turbines, compressors, tanks, piping, valves, controls, and other components in power plants, chemical plants, refineries, pulp and paper mills and other industrial plants. He has also been involved with the evaluation of equipment failures in manufacturing plants such as production machinery, hydraulic presses, cranes, etc. He has evaluated and reviewed piping systems and equipment in power plants, chemical plants, and other industrial plants to determine the adequacy for the service conditions with respect to design, materials, fabrication, welding and other fitness-for-purpose considerations.

On various failure analysis projects, he provides recommendations, where applicable, for the removal of samples and sections for laboratory cause-and-origin determinations and/or the repair of the equipment or component that had failed. He then follows through with all stages of the laboratory examinations and testing and the preparation of the report. The repair methods represent welding or brazing, section replacement or various mechanical methods such as bolting, metal stitching, banding, etc.

He is involved in the repair and maintenance of components and systems subject to a variety of types of deterioration. He has participated as project supervisor in various field repair welding and heat treating projects including turbines, headers, fans, piping, pulverizers, deaerators, and other plant equipment.

He has field and laboratory experience in nondestructive examinations and metallurgical evaluations including inspections by magnetic particle, liquid penetrant, ultrasonic and radiographic examination techniques as well as metallurgical replication techniques using both mechanical and electrolytic methods.

As a licensed first engineer, Mr. Kennefick gained extensive experience with electro-mechanical control systems and general maintenance of all shipboard power plant components. He has supervised engineering teams and multi-national technical personnel to optimize ship performance. He has performed quality control functions to assure quality standards were maintained during shipyard overhauls.

Mr. Kennefick is a graduate of Massachusetts Maritime Academy, where he received a Bachelor of Science Degree in Mechanical Engineering.

Mr. Kennefick holds a US Coast Guard First Assistant Engineer Unlimited Motor and Steam License.

## Eduardo V. Guardado

Eduardo Guardado is a Mechanical Design and QA Engineer in the Process Equipment Fabrication group at Thielsch Engineering. In his role as Mechanical Design Engineer, his responsibilities include all aspects of mechanical design, customer and fabrication drawings, material specification, and mechanical integrity reviews. As QA Engineer, his responsibilities include reviewing engineering designs for compliance to the applicable codes and customer specifications; review and disposition of Non-Conformance Reports (NCR's); review and acceptance of inspection reports; review and acceptance of NDE reports; and instruction, auditing, and compliance to the company QC Manual. Mr. Guardado also has knowledge of the design, manufacturing, repair, testing, and analysis of horizontal decanter and vertical basket centrifuges, horizontal leaf, filter dryers, mixer dryers, centrifugal discharge, and helical pressure filters.

Some of the projects Mr. Guardado has been involved with at Thielsch include the design and development of an automated "Nutsche" style pressure filter, design of a tubular pressure filter for Mott Corporation, and design of containment vessels in Hastelloy C-22 for Bristol Myers-Squibb. He also supports the Industrial Fabrication Services group and Paper and Process Industry division of Thielsch by performing design calculations, mechanical integrity reviews, and recommending repair options for industrial and process equipment. Prior to working for Thielsch, he designed and supported fabrication and mechanical assembly, developed factory acceptance test protocol, and assisted in the installation of a .5m<sup>2</sup> filter dryer for Biopure.

Mr. Guardado is experienced with ASME Code Section II Parts A, B, C & D, Section V, Section VIII Division 1 and 2, and Section IX. He has extensive knowledge of the NBIC regulations for repairs and alterations to pressure vessels. In addition, he has extensive experience developing general arrangement and fabrication drawings and design calculations which conform to Section VIII Division 1 of the ASME Code. Ed performs this type of work for various vessels that are fabricated from diverse metals including Carbon and Low Alloy Steels, Austenitic Stainless Steels, Duplex Steels, and exotic materials (Hastelloy, Monel, Inconel, Titanium, and Nickel Alloys).

Mr. Guardado also has extensive experience in developing manufacturing process plans and fixtures. He understands and utilizes fundamental welding and machining practices. Ed is capable of developing and maintaining welding procedure specifications (WPS') and welder performance qualifications (WPQ's) with respect to Section IX of the ASME Code.

Eduardo Guardado brings vast experience and knowledge to executing his role as QA Engineer. He has written, maintained, and presented QC Manuals for acceptance by the National Board for the purpose of attaining "U" and "R" stamp certifications for the fabrication and repair of pressure vessels under Section VIII of the ASME Code. He is skilled in developing work instructions, factory acceptance tests (FAT), and inspection procedures for both ASME and ISO Quality programs. He has collaborated with both customers and third-party inspection groups in developing GMP testing procedures for the validation and acceptance of process equipment for the chemical, fine chemical, and pharmaceutical industries.

Mr. Guardado has over ten years of experience interpreting and applying Codes and Standards as issued by the American Society of Mechanical Engineers (ASME), the American Society for Testing and Materials (ASTM), the National Boiler Inspection Code (NBIC), the American Petroleum Institute (API), as well as the American Welding Society (AWS).

Ed holds a Bachelor of Science degree in Industrial and Manufacturing Engineering (with a Minor in Mechanical Engineering) from San Diego State University. He is a standing member of Epsilon Pi Tau, an honors fraternity.

**STEVEN WILMES**

Mr. Steven Wilmes is Manager of the James Chemical Engineering Division at Thielsch Engineering. He is responsible for all aspects of the operations of this Division which is primarily concerned with chemical process engineering and design projects.

Mr. Wilmes has provided a wide range of chemical process consulting and design engineering services for a variety of clients located throughout the world. His experiences include a broad range of different process facilities including: Ammonia, Urea, Methanol, Nitric Acid, Ammonium Nitrate, Formaldehyde, UF-85, Vinyl Chloride Monomer, Syngas Preparation, and Wastewater treatment. He has worked onsite for clients in Argentina, Bangladesh, Indonesia, United Arab Emirates, and the United States as well as providing home office support or supervisory services for projects in Pakistan, Malaysia, Venezuela and elsewhere.

His project assignments include the determination of recommendations for plant, equipment and process modifications to improve efficiency, capacity, safety, cost-effectiveness and operational reliability. This has included detailed item-by-item reviews of process and offsite equipment. Steve Wilmes has worked closely with the operating, maintenance and engineering personnel at the plants or home office, to solve problems and suggest process improvements.

Mr. Wilmes' extensive experiences also include the preparation and reviews of PFDs and PIDs for new facilities as well as modifications to existing plants to provide for improved or expanded operations. He has experience in the design and specification of reformers, heat exchangers, various catalytic reactor vessels, separators, and other pressure vessels as well as refrigeration systems, scrubbers, and compressors.

Steve Wilmes has been and continues to be involved in new process plant development. This includes the preparation of economic feasibility studies, plant life studies, and technical invitations to bid on world-scale plants. He has also worked with plant owners during the bid evaluation and negotiation processes for LSTK contracts and assisted in the preparation of preliminary environmental permitting.

He has been involved in accident investigation projects and has provided advisory services with claims in the multimillion dollar range. He has worked closely with metallurgical and other engineering experts to identify the cause and origin of equipment failures including explosions, fires, and equipment failures related to process upsets. He has provided also recommendations for changes to plant operations to reduce or eliminate the risk of further problems.

On many chemical process plant projects, the process engineering activities of this Division are closely coordinated or performed in combination with other engineering personnel at Thielsch Engineering including engineers specialized in the metallurgical, corrosion, mechanical and structural engineering fields. On some projects, the combination of this expertise has provided the most cost-effective solution to our clients.

Mr. Wilmes is a graduate of Rensselaer Polytechnic Institute, where he received a Bachelor of Science Degree in Chemical Engineering. He is a member of the American Institute of Chemical Engineers.

Steven Wilmes has also authored a number of articles on methanol and ethanol production and plant operations.



**THOMAS J. MOOS, P.E.**

Thomas Moos, P.E. is a Senior Engineer in the Utility Engineering Services Department at Thielsch Engineering, Inc. He is located in our Austin, Texas office.

Mr. Moos has participated in project teams and served as project manager on numerous national and international field projects performing condition assessment evaluations, remaining-life determinations, and fitness-for-purpose evaluations. These include evaluation of power piping, boilers, pressure vessels, storage tanks, reactor vessels, and other equipment in power plants, paper mills, chemical plants and other requirements of the various major Codes issued by the ASME, AWS, API, NBIC, ASTM and others.

His assignments include mechanical and metallurgical engineering evaluations and failure analyses of various types of equipment including pressure vessels, tanks, piping, valves in power plants, chemical plants, hydroelectric dams and mines, pulp and paper mills and other industrial plants. He has evaluated and reviewed piping systems and equipment in power plants, chemical plants, and other industrial plants to determine the adequacy for the service conditions with respect to design, materials, fabrication, welding and other fitness-for-purpose considerations.

He has field and laboratory experience in nondestructive examinations and metallurgical evaluations. This includes inspections by the magnetic particle, liquid penetrant and ultrasonic examination techniques as well as metallurgical replication techniques using both mechanical and electrolytic preparation methods.

Mr. Moos was previously employed as an Applications Engineer in the high precision, microelectronic industry and as an Engineering Intern with James Chemical Engineering. His responsibilities with JCE included assisting with the operational work for an Ammonia/Urea complex in Bangladesh and a Methanol plant in Indonesia.

Mr. Moos received a Bachelor of Science Degree in Chemical Engineering from the University of Rhode Island. He is a registered Professional Engineer in the State of Rhode Island.

Mr. Moos is an AWS Certified Welding Inspector and an API 53 Certified Tank Inspector.

**ROY B. THOMAS**

Mr. Thomas is a Project Manager for Thielsch Engineering. His responsibilities include the supervision of general plant maintenance. He has extensive experience in power plant maintenance including positions as boilermaker, foreman, general foreman, journeyman, pipesetter and certified welder.

Mr. Thomas has seven years of experience with the City of Austin's overall maintenance procedures. While implementing the current maintenance contract he was responsible for supervising the erection, alteration, repair and maintenance of boilers and related equipment. He has interfaced with the City of Austin's Engineering Projects Coordinator in order to alleviate and/or prevent any contractual problems. He has worked with the City of Austin's Plant Managers and Plant Maintenance Superintendents while providing estimates and scheduling for various projects. His responsibilities have included soliciting subcontractors and awarding projects, all purchasing and accounting, as well as all field operations including manpower loading for each project.

Previous employment includes the responsibility for the overhaul and repair of various sized utility and recovery units including superheat, reheat, economizer and waterwall surface revisions, fuel burning equipment repairs, replacement of casing and refractories. He was a lead superintendent responsible for the replacement of generating bank tubes on a recovery unit including renewal of associated casing refractory insulation. He was responsible for the rebuild of an industrial unit which had suffered extensive damage. The work included demolition and installation of pressure parts, structural steel, setting ducts, fuel burning equipment, etc.

He has been responsible for all levels of plant maintenance. From general plant maintenance and boiler maintenance including scaffolding furnace, waterwall tube repairs, duct repairs, piping, setting, insulating and lagging. Miscellaneous boiler repairs, pulverized coal burner rework, bottom ash piping, rebuilding Riley MH style boiler, installing new superheater in 2 GE industrial boilers and replacing hangers and supports on large diameter steam piping.

**1. ARCHITECT - ENGINEER QUALIFICATIONS**  
**PART I - CONTRACT-SPECIFIC QUALIFICATIONS**

**A. CONTRACT INFORMATION**

1. TITLE AND LOCATION *(City and State)*

**Construction Administration Inspection Services, Denver, Colorado**

2. PUBLIC NOTICE DATE

July 30, 2004

3. SOLICITATION OR PROJECT NUMBER

NDR040064

**B. ARCHITECT-ENGINEER POINT OF CONTACT**

4. NAME AND TITLE

**Thomas F. Lavery Vice President**

5. NAME OF FIRM

**Thielsch Engineering, Inc., Cranston, Rhode Island**

6. TELEPHONE NUMBER

(401) 467-6454

7. FAX NUMBER

(401) 467-2398

8. E-MAIL ADDRESS

tlavery@thielsch.com

**C. PROPOSED PROJECT TEAM**

*(Complete this section for the prime contractor and all key subcontractors.)*

<i>(Check)</i>			
PRIME	J-V	PARTNER	SUBCON-TRACTOR
9. FIRM NAME	10. ADDRESS	11. ROLE IN THIS CONTRACT	
a.	+		
<b>Thielsch Engineering, Inc.</b>			
195 Frances Avenue Cranston, RI 02910 401/467-6454 (Phone) 401/467-2398 (Fax)			
a.	+		
302 Tradesmens Park Suite 500 Hutto, TX 78634			
		<input checked="" type="checkbox"/>	CHECK IF BRANCH OFFICE
b.	+		
8800 Carmichael Drive Chesterland, OH 44026			
		<input checked="" type="checkbox"/>	CHECK IF BRANCH OFFICE
c.	+		
d.			
e.			

**D. ORGANIZATIONAL CHART OF PROPOSED TEAM**

*(Attached)*

**E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT**

*(Complete one Section E for each key person.)*

<b>12. NAME</b> <b>James McManus, CSI</b>	<b>13. ROLE ON THIS CONTRACT</b> <b>Project Manager</b>	<b>14. Years Experience</b> a. Total <b>27 years</b> b. Current Firm <b>3 years</b>
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**15. FIRM NAME AND LOCATION (City and State)**  
**Thielsch Engineering, Inc., Cranston, Rhode Island**

**16. EDUCATION (Degree and Specialization)**  
**Associate General Studies - Central Texas College**

**17. CURRENT PROFESSIONAL REGISTRATION (State and Discipline)**  
**Construction Specifications Institute (CSI) - VA**

**18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)**  
25 years experience in the construction industry, field project management throughout the Pacific Rim, Southeast Asia, Saudi Arabia, the Federal Republic of Germany, Central America, and many locations within the United States. Duties included but not limited to project controls, project scheduling, resource constraining, writing quality assurance / control programs, maintain records of field data collection, man-hours, equipment, and materials cost, prepare technical reports based on field investigations, laboratory testing, and engineering recommendations.

Safety management, quality assurance / control, and training programs related to construction activities in support of USACE projects in accordance with Engineer Manual 385-1-1, Engineer Pamphlet 715-1-2.

**19. RELEVANT PROJECTS**

<b>(1) TITLE AND LOCATION (City and State)</b> Project Manager, Thielsch Engineering, Cranston, RI	<b>(2) YEAR COMPLETED</b> PROFESSIONAL SERVICES CONSTRUCTION (if applicable) 2003
<b>(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE</b> <input checked="" type="checkbox"/> Check if project performed with current firm Conducted visual inspection to record existing condition of all rooms and areas for MIT STATA Center. Conducted visual and thermal imaging scan of completed units. Borescopic inspection of identified areas. Thielsch microbiologist performed direct microscopic examinations.  Size: approx. 1.6 million square feet Cost: \$68,000	

<b>(1) TITLE AND LOCATION (City and State)</b> Project Superintendent, USACE, Pacific Rim	<b>(2) YEAR COMPLETED</b> PROFESSIONAL SERVICES CONSTRUCTION (if applicable) 2001
<b>(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE</b> <input type="checkbox"/> Check if project performed with current firm Assist Project Managers in formulating construction schedule and maintaining construction schedule throughout the project from start to finish. Supervised employees, subcontractors and vendors to ensure both quality control and project compliance. Scheduling all inspections with government agencies and private agencies as required. Resolve problems as they arise regarding plans or specifications, conflicts with the architect, engineer, clients and subcontractors and documentation of all corrections, changes and requests. Assist Project Manager with bidding, subcontract scope of work, pricing of owner and subcontractor change orders and verification of costs. Maintain and submit, As Builts   Change Orders   Incident Reports   Photographs   RFI's   Daily Reports   Safety Meetings   Telephone Correspondence  Training Facility Kingdom of Cambodia, Multi Purpose Community Center Kawjalen Atoll, Marshall Islands, Warehouse Addition, Kuniea Tunnel Complex, Hawaii, Various road network upgrades, rebuilds, new construction, Nicaragua, Construction Survey of Route 1, Honduras, Central America, Government Facility Upgrades, Federal Republic of Germany  Size: Management of 45 personnel Cost: \$150,000 to \$1,000,000	



**E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT**

*(Complete one Section E for each key person.)*

12. NAME

**James McManus, CSI**

13. ROLE ON THIS CONTRACT

**Project Manager**

14. Years Experience

a. Total

b. Current Firm

**27 years**

**3 years**

(1) TITLE AND LOCATION *(City and State)*

Facility Manager- USFK South Korea

(2) YEAR COMPLETED

PROFESSIONAL SERVICES CONSTRUCTION *(if applicable)*  
1989

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

Check if project performed with current firm

Provide labor-distribution planning and scheduling for the Maintenance workforce as well as overseeing all activities of the Maintenance Team. Supervised 25 Maintenance employees including enforcing company policies and procedures, ensuring effective time management, quality, and quantity of work and results. Set and managed performance standards. Ensured maintenance personnel receive on-the-job technical, OSHA and safety training, as well as general employee training and development.

(1) TITLE AND LOCATION *(City and State)*

Project Manager; Greenfield Bridge (Massachusetts Bridge No. G-4-5/G-12-4, located on Route 2 over Falls River in Gill-Greenfield, MA

(2) YEAR COMPLETED

PROFESSIONAL SERVICES CONSTRUCTION *(if applicable)*  
2004

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

Check if project performed with current firm

Acquire technical information regarding the condition of the structure to develop repair and maintenance recommendations for prolonged use of structure.

Cost: \$12,000

(1) TITLE AND LOCATION *(City and State)*

Construction Inspector - Saudi Arabia

(2) YEAR COMPLETED

PROFESSIONAL SERVICES CONSTRUCTION *(if applicable)*  
2002

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

Check if project performed with current firm

Provided construction input to initial and finalized engineering designs in the areas of civil, structural, mechanical, and electrical. Including spec/drawing reviews for construct ability, construction sequencing, and quality assurance inspections.

Size: approx. 10 new construction projects

Cost: \$350,000 to \$1,000,000

**E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT**

*(Complete one Section E for each key person.)*

<p>12. NAME <b>Brian Johnson</b></p> <p>15. FIRM NAME AND LOCATION (City and State) <b>Thielsch Engineering, Inc., Cranston, Rhode Island</b></p> <p>16. EDUCATION (Degree and Specialization) <b>BS, Marine Engineering, Maine Maritime Academy</b></p>	<p>13. ROLE ON THIS CONTRACT <b>Water Resources Manager</b></p>	<p>14. Years Experience</p> <table border="0"> <tr> <td>a. Total</td> <td>b. Current Firm</td> </tr> <tr> <td align="center"><b>8</b></td> <td align="center"><b>2</b></td> </tr> </table> <p>17. CURRENT PROFESSIONAL REGISTRATION (State and Discipline)</p>	a. Total	b. Current Firm	<b>8</b>	<b>2</b>
a. Total	b. Current Firm					
<b>8</b>	<b>2</b>					

18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)

Brian T. Johnson has years of experience in engineering design, manufacture, installation, commissioning, and operation of control systems. He has worked extensively in the design, troubleshooting, calibration, and modernization of process control platforms. He has experience with a broad range of equipment manufactured by Siemens, Allen Bradley, General Electric, and Cuttler Hammer.

He has been heavily involved in the installation and commissioning of process control and electro-mechanical systems. His work has included on-site installation of equipment in both new water and wastewater plants and retrofits in existing units. He has overseen the commissioning of a wide range of systems and has been involved in the writing of operational procedures and the training of operators.

Mr. Johnson has provided engineering services for water supply and wastewater utilities. He is an expert on water resource issues.

**19. RELEVANT PROJECTS**

<p>(1) TITLE AND LOCATION (City and State) <b>Process Engineers, Filter Plant Control, Providence, RI</b></p> <p>(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <b>Design and build of Instrumentation and Control on skid mount modular system for Class 1, Div. 1 locations. The filtration process packaged solution implemented VSD, PLC, Process Feedback Instruments, and Atmospheric Controls.</b></p> <p>Role: Project Manager/Design Leader</p> <p>Cost: \$200,000</p>	<p>(2) YEAR COMPLETED</p> <table border="0"> <tr> <td>PROFESSIONAL SERVICES</td> <td>CONSTRUCTION (if applicable)</td> </tr> <tr> <td align="center">2003</td> <td align="center">2003</td> </tr> </table> <p><input checked="" type="checkbox"/> Check if project performed with current firm</p>	PROFESSIONAL SERVICES	CONSTRUCTION (if applicable)	2003	2003
PROFESSIONAL SERVICES	CONSTRUCTION (if applicable)				
2003	2003				

<p>(1) TITLE AND LOCATION (City and State) <b>Prudence Island WTP, Prudence Island, RI</b></p> <p>(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <b>Design and build of Instrumentation and Controls for ground water pumping station to elevate storage tank using wireless telemetry.</b></p> <p>Role: Project Manager/Design Leader</p> <p>Cost: \$20,000</p>	<p>(2) YEAR COMPLETED</p> <table border="0"> <tr> <td>PROFESSIONAL SERVICES</td> <td>CONSTRUCTION (if applicable)</td> </tr> <tr> <td align="center">2002</td> <td align="center">2003</td> </tr> </table> <p><input checked="" type="checkbox"/> Check if project performed with current firm</p>	PROFESSIONAL SERVICES	CONSTRUCTION (if applicable)	2002	2003
PROFESSIONAL SERVICES	CONSTRUCTION (if applicable)				
2002	2003				

<p>(1) TITLE AND LOCATION (City and State) <b>Walnut Hill WTF (MWRA), Clinton, MA</b></p> <p>(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <b>Design and build Instrumentation &amp; Controls for reservoir water distribution. Control and Data Acquisition for Wachusett Day integration with Cosgrove Intake Facility. Separate chlorine monitoring facility controlling chlorine treatment at dam.</b></p> <p>Role: Project Manager/Load Systems Engineer</p> <p>Cost: \$500,000</p>	<p>(2) YEAR COMPLETED</p> <table border="0"> <tr> <td>PROFESSIONAL SERVICES</td> <td>CONSTRUCTION (if applicable)</td> </tr> <tr> <td align="center">2003</td> <td align="center">2002</td> </tr> </table> <p><input checked="" type="checkbox"/> Check if project performed with current firm</p>	PROFESSIONAL SERVICES	CONSTRUCTION (if applicable)	2003	2002
PROFESSIONAL SERVICES	CONSTRUCTION (if applicable)				
2003	2002				



**E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT**

*(Complete one Section E for each key person.)*

12. NAME	13. ROLE ON THIS CONTRACT	14. Years Experience	
		a. Total	b. Current Firm
<b>Brian Johnson</b>	<b>Water Resources Manager</b>	<b>8</b>	<b>2</b>

(1) TITLE AND LOCATION <i>(City and State)</i>	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION <i>(if applicable)</i>
Aier 100,000 gallon elevated storage, Great Barrington, MA	2004	2004

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE  Check if project performed with current firm  
 Design and build remote solar powered RTU with wireless telemetry controls for well pump control.  
 Role: Project Manager  
 Cost: \$200,000

(1) TITLE AND LOCATION <i>(City and State)</i>	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION <i>(if applicable)</i>
705 SRA, Portsmouth, New Hampshire	2001	2001

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE  Check if project performed with current firm  
 Overhaul, retro-fit, repair of mechanical, electrical and instrumentation associated with compressed gases on Los Angeles class submarine.  
 Role: Project Desk Manager  
 Cost: approximately \$26,000,000

**E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT**

*(Complete one Section E for each key person.)*

<p>12. NAME <b>Cary Franklin</b></p> <p>15. FIRM NAME AND LOCATION (City and State) <b>Thielsch Engineering, Inc., Cranston, Rhode Island</b></p> <p>16. EDUCATION (Degree and Specialization) <b>BSCHE, Tennessee Technological University</b></p> <p>18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.) Project Engineering, and Construction Management; achieved levels of increasing responsibility in terms of personnel, operating budgets, and physical assets. Major project conception, design, construction, and operating experience--both domestic (27 states) and international (12 foreign countries). Solid background in strategic planning, business development, safety, process safety management, environmental, and transportation issues.</p> <p><b>Organizations: AICHE, TAPPI, PIMA</b></p>	<p>13. ROLE ON THIS CONTRACT <b>Construction Management &amp; Administration</b></p>	<p>14. Years Experience a. Total <b>30</b> b. Current Firm <b>2</b></p> <p>17. CURRENT PROFESSIONAL REGISTRATION (State and Discipline) <b>EIT—Tennessee and Texas</b></p>
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**19. RELEVANT PROJECTS**

	(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED
A	Project Director, Engineering Evaluations of Tanks, Palatka, FL	PROFESSIONAL SERVICES CONSTRUCTION (if applicable) 2004
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE	<input checked="" type="checkbox"/> Check if project performed with current firm
	Oversees engineers who have onsite responsibility for all inspections and engineering evaluations of over 1,000 tanks and pressure vessels. The engineers are responsible for the supervision of mill crews in the inspection and repair of digesters, including preparation of R-Stamp material for presentation to National Board Inspectors. They provide all monitoring of condition of tanks and vessels. The Project Director reviews all future repair recommendations and capital replacement recommendations and justifications with engineers.	
	Size: 40 acres Cost: \$550,000	
B	(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED
	Project Manager, Olin Chemicals, McIntosh, AL	PROFESSIONAL SERVICES CONSTRUCTION (if applicable) 1984-1986
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE	<input type="checkbox"/> Check if project performed with current firm
	Stabilized and capped two hazardous waste ponds previously used in the manufacture of chlorine and caustic soda.	
	Size: 30,000 cubic yards Cost: \$3,000,000	
C	(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED
	Manager of Engineering, Olin Chemicals, Lake Charles, LA	PROFESSIONAL SERVICES CONSTRUCTION (if applicable) 1987-1990
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE	<input type="checkbox"/> Check if project performed with current firm
	Managed construction of a state of the art, fully permitted hazardous waste landfill for chemical waste.	
	Size: 0.5 acres Cost: \$8,000,000	
D	(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED





**E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT**

*(Complete one Section E for each key person.)*

12. NAME

**Cary Franklin**

13. ROLE ON THIS CONTRACT

**Construction Management  
& Administration**

14. Years Experience

a. Total  
**30**

b. Current Firm  
**2**

Engineering Director, Georgia-Pacific, Taylorsville, MS

PROFESSIONAL SERVICES  
1994-1996

CONSTRUCTION *(if applicable)*

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

Check if project performed with current firm

Directed construction of new 4,000 square feet office building and a new 3,000 square feet maintenance shop to service large Georgia-Pacific chemical complex in Taylorsville, MS.

Size: 12,000 square feet

Cost: \$6,000,000

(1) TITLE AND LOCATION *(City and State)*

Engineering Manager, Olin Chemicals, Charleston, TN

(2) YEAR COMPLETED

PROFESSIONAL SERVICES  
1978-1989

CONSTRUCTION *(if applicable)*

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

Check if project performed with current firm

Oversee multiple small projects (60 to 200 per year), averaging \$100,000 each. Supported engineering projects at nine sites: Niagara Falls, NY; McIntosh, AL; Augusta, GA; Charleston, TN; Lake Charles, LA; Lake City, MO; Joliet, IL; Shreveport, LA; and Beaumont, TX. Developed capital estimates and project schedules, obtained funding approval, managed detailed engineering phase, selected construction contractors, managed schedules for construction. Facilitated startup and commissioning efforts.

**E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT**

*(Complete one Section E for each key person.)*

12. NAME <b>Peter Kennefick</b>	13. ROLE ON THIS CONTRACT <b>Senior Engineer</b>	14. Years Experience a. Total            b. Current Firm <b>16                    10</b>
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15. FIRM NAME AND LOCATION (City and State)  
**Thielsch Engineering, Inc., Cranston, Rhode Island**

16. EDUCATION (Degree and Specialization)  
**Massachusetts Maritime Academy – BS in Mechanical Engineering  
U.S.C.G. First Assistant Engineer Unlimited Motor and Steam License**

17. CURRENT PROFESSIONAL REGISTRATION (State and Discipline)

18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)  
Mr. Kennefick has participated in project teams and served as project manager on numerous national and international field projects performing condition assessment evaluations, remaining-life determinations, and fitness-for-purpose evaluations. These include evaluation of power and process piping, pressure vessels, storage tanks, boiler components, reactor vessels, heat exchangers, rotating machinery and other equipment in power plants, paper mills, chemical plants, and other industrial plants.  
  
He has extensive experience with welding, inspection, heat treatment, and other requirements of the various major Codes issued by the ASME, AWS, API, NBIC, ASTM, and others.

**19. RELEVANT PROJECTS**

(1) TITLE AND LOCATION (City and State) <b>City of Austin – Austin, Texas</b>	(2) YEAR COMPLETED PROFESSIONAL SERVICES    CONSTRUCTION (if applicable) <b>1996 – Present</b>
--	--

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE  Check if project performed with current firm  
**Scope: Professional engineering services for the identification and analysis of flaws in power plant components and annual maintenance contracts.**

**Cost: Yearly contracts, long-term open-ended not to exceed \$1,600,000.00 per year**

Thielsch Engineering has provided engineering consulting services to the City of Austin for over 13 years. Currently, Thielsch is responsible for the identification of necessary engineering examinations, analysis, inspection, laboratory testing and examinations, fatigue analysis, interpretations, providing reports and recommendations with regard to boilers and components, piping systems, and rotating equipment.

Thielsch has also been retained to provide support during scheduled and forced outages ranging from emergency tube repair to complete Superheater section replacement and pipe support modifications to heater alterations. Thielsch has provided management teams as well as professional engineers, welders, and laborers to ensure the safe operation of the power plants.

(1) TITLE AND LOCATION (City and State) <b>W. B. Tuttle Station, Unit No. 2 -- San Antonio, Texas City Public Service of San Antonio</b>	(2) YEAR COMPLETED PROFESSIONAL SERVICES    CONSTRUCTION (if applicable) <b>1999</b>
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(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE  Check if project performed with current firm  
**Scope: Failure analysis – nondestructive examination procedure development and implementation**

**Cost: \$44,000.00**

Thielsch Engineering provided a third party review of a waterwall tube failure that occurred at the Tuttle Station in the Spring of 1999. The laboratory analysis of the failed tube determined that the failure was the result of corrosion grooving that was aligned along the heat-affected zone of the electric-resistance-welded seamed tubing.

Thielsch Engineering was requested to develop an inspection procedure to assess the condition of the remaining boiler waterwall tubing within the unit. Thielsch modified an existing ultrasonic immersion probe scan used for waterwall tubing inspections and calibrated it to locate straight line grooving along the inside diameter of the tubes.



**E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT**

*(Complete one Section E for each key person.)*

<b>12. NAME</b>	<b>13. ROLE ON THIS CONTRACT</b>	<b>14. Years Experience</b>	
<b>Peter Kennefick</b>	<b>Senior Engineer</b>	a. Total <b>16</b>	b. Current Firm <b>10</b>

A step-by-step protocol report concerning this project was submitted to City Public Service with recommendations for the extension of the life of the boiler. Thielsch was also retained by counsel to provide expert witness testimony.

**(1) TITLE AND LOCATION (City and State)**

Niles Generating Station – Niles, Ohio  
Reliant Energy

**(2) YEAR COMPLETED**

PROFESSIONAL SERVICES	CONSTRUCTION (if applicable)
2003	

**(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE**

Check if project performed with current firm

Scope: Flaw Analysis – Repair development and implementation.

Cost: \$85,000.00

During an emergency outage in January of 2001, cracking was observed within the tube bores of the Superheater Outlet header within Unit No. 1. Thielsch was contacted to consult on the affects that this cracking would have on the continued operation of the component.

Thielsch performed a videoboreoscopic inspection of 100% of the internal surfaces of the header. This inspection revealed significant ligament cracking between the tube bores. Based on the operating conditions of the header and taking the age and material specifications into consideration, Thielsch made the appropriate recommendations and stated a reinspection should be performed no later than 2003. The follow-up examination in 2003 revealed that the majority of cracking had progressed beyond the critical crack size.

Thielsch Engineering developed and supervised an in-place, low-stress weld repair procedure of the mid-section ligaments of the Superheater Outlet header. This was completed in the Fall of 2003 and the header was returned to full operation at its original design conditions.

**(1) TITLE AND LOCATION (City and State)**

Newington Station, Unit No. 1 – Newington, New Hampshire  
Public Service of New Hampshire

**(2) YEAR COMPLETED**

PROFESSIONAL SERVICES	CONSTRUCTION (if applicable)
2000	

**(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE**

Check if project performed with current firm

Scope: Nondestructive examination and engineering evaluation of selected areas of waterwall tubing

Cost: \$150,000.00

Provided failure analysis of various waterwall tube failures within the Unit No. 1 Boiler. As a result of the analysis, specific nondestructive examination techniques were developed to identify conditions of corrosion fatigue and under deposit corrosion within the tubing. Thielsch performed the furnace waterwall tubing examinations that revealed widespread deterioration.



**E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT**

*(Complete one Section I for each key person.)*

12. NAME <b>Joseph Conlon</b>	13. ROLE ON THIS CONTRACT <b>Construction Management &amp; Administration</b>	14. Years Experience a. Total <b>18</b> b. Current Firm <b>1</b>
15. FIRM NAME AND LOCATION (City and State) <b>Thielsch Engineering, Inc., Cranston, Rhode Island</b>		
16. EDUCATION (Degree and Specialization) <b>BS, Rhode Island College</b>	17. CURRENT PROFESSIONAL REGISTRATION (State and Discipline) <b>RI, Certified Building Official</b>	
18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.) <b>Construction Management and Owners Representation. Building Official for the Town of Foster. Facility Director for Scituate School Department.</b>		

**19. RELEVANT PROJECTS**

a	(1) TITLE AND LOCATION (City and State) <b>RISE Engineering-Project Manager, Newport Naval Station, Newport, Rhode Island</b>	(2) YEAR COMPLETED <b>2003-2004</b>
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm <b>The Project Manager oversees the installers, procures materials for the project, is responsible for maintaining budgetary controls, provides weekly financial and project reports to the Owner. Responsible for all pre and post Utility inspections to insure quality controls. The Project Manager is responsible for providing all project close out certificates and warranty information.</b> <b>Cost: \$1,365,244</b>	
b	(1) TITLE AND LOCATION (City and State) <b>RISE Engineering Project Manager, Cape Cod Regional Technical High School, Harwich, MA</b>	(2) YEAR COMPLETED <b>2004</b>
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input type="checkbox"/> Check if project performed with current firm <b>The Project Manager procures all the materials and multiple subcontractors for the project. Complete installation of all interior and exterior lighting in a 300,000 square foot regional technical High School</b> <b>Cost: \$534,000</b>	
c	(1) TITLE AND LOCATION (City and State) <b>RISE Engineering Project Manager, Multiple Large Commercial Projects in Massachusetts and Rhode Island</b>	(2) YEAR COMPLETED <b>2003</b>
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input type="checkbox"/> Check if project performed with current firm <b>Projects ranging in size from \$10,000 and up. Project scopes can range from simple retrofits of existing systems to complete redesign and installation of new lighting fixtures, VFD's, and motors</b>	
d	(1) TITLE AND LOCATION (City and State) <b>Strategic Building Solutions LLC- Owners Representative, Hampshire College, Amherst, MA</b>	(2) YEAR COMPLETED <b>2003</b>
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input type="checkbox"/> Check if project performed with current firm <b>Worked with a colleague to manage a 4 year, 5 million dollar differed maintenance budget for the college. Upgrades to HVAC equipment, roofs, grounds, small additions to multiple buildings.</b> <b>Cost: \$5,000,000</b>	



**E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT**

*(Complete one Section E for each key person.)*

12. NAME

**Joseph Conlon**

13. ROLE ON THIS CONTRACT

**Construction Management  
& Administration**

14. Years Experience

a. Total	b. Current Firm
<b>18</b>	<b>1</b>

(1) TITLE AND LOCATION *(City and State)*

Strategic Building Solutions LLC- Owners Representative,  
Wheaton College, Norton, MA

(2) YEAR COMPLETED

PROFESSIONAL SERVICES	CONSTRUCTION <i>(If applicable)</i>
2000-2003	

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE  
with current firm

Check if project performed

Wheaton College Arts Renovation Project

- Managed this 3 phase, renovation to the Arts program, including budget management, quality control, commissioning and close out.
- This project included an 18,000 square foot two story addition and complete upgrade to Meneely Hall, as well as a complete renovation to Walsh Music and Fine Arts Building and Theater.
- Created a schedule and plan for temporary and permanent relocation of all faculty and staff that would allow Wheaton to continue the Art program during this 3 phase, 4 semester project with little interruption. Plan is now used as a company standard for all capital projects.
- Maintained constant communication with project team manager to report progress, identify issues, and allocate resources.

Cost: \$18,000,000

**F. EXAMPLE PROJECTS** Which Best Illustrate Proposed Team's Qualifications For This Contract

20. EXAMPLE PROJECT KEY NUMBER

**1**

*(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)*

21. TITLE AND LOCATION *(City and State)*

**Nondestructive Examination and  
Metallurgical Evaluation Superheater Tubes,  
Austin, Texas**

22. YEAR COMPLETED

PROFESSIONAL SERVICES  
**2002**

CONSTRUCTION *(If applicable)*

**23. PROJECT OWNER'S INFORMATION**

a. PROJECT OWNER

City of Austin Energy, Austin, Texas  
Springs Road, Austin, TX 78704

b. POINT OF CONTACT (POC) NAME

Evangelos Polykrates

c. POC TELEPHONE NO.

512-322-6230

Role: Peter Kennefick, Project Manager, Thielsch Engineering

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

Detailed nondestructive examinations and engineering evaluations were performed on selected areas of the Superheater tubing in Unit No. 4 at the Holly Street Station of Austin Energy during February 2002. The components inspected included the horizontal assemblies upstream of the Superheater Outlet header. The nondestructive examination techniques included visual examinations, ultrasonic wall and oxide scale thickness measurements, and the removal of replication foil impressions. The results of the evaluation found the tubing in adequate condition, with normal operational wear. Immediate repair actions were not required.

The visual examination of the Superheater tubing indicated heavy build-up of fireside scale. Because of this heavy scaling of the tubing, the original hand surface preparation was abandoned for sandblasting. With the areas for inspection cleaned down to gray metal, the visual examination revealed evidence of tube metal wear, bending, and tube distortion throughout the pendent. The level of distortion was far less than that observed in Unit No. 3 at the Holly Street Station.

The ultrasonic wall thickness measurements recorded on the top and bottom of the tubing in select pendants revealed one isolated location of wall loss. All other thickness values recorded were consistent with the original specifications.

The oxide scale thickness measurements were taken on the inside diameter (ID) of the ASME Specification SA-213 Grade T-11 and T-22 tubing covering "Seamless Ferritic and Austenitic Alloy Steel Boiler, Superheater and Heat Exchanger Tubes". The middle assemblies fabricated from T-11 chromium-molybdenum alloy steel tubing revealed a moderate scale build-up with levels up to 25 mils. The upper T-22 chromium-molybdenum alloy steel tubing assemblies showed the greatest scale loading, with oxide thickness values of up to 27 mils. These levels in Superheater tubing with 195,000 hours of operation are not excessive and indicate that proper heat distribution and steam purity measures have been in place.

Tube failures attributed to overheating have occurred in these locations in the past; however, the results of the field examinations did not evidence apparent damage.

This project shows Thielsch's expertise in the inspection and servicing of electric utility boilers.

Cost: \$1,600,000

**25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT**

	(1) FIRM NAME	(2) FIRM LOCATION (City and State)	(3) ROLE
a.	Thielsch Engineering	Cranston, RI	Project Management
b.	Thielsch Engineering	Hutto, TX	Utility Inspection

(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)

21. TITLE AND LOCATION (City and State)

**Increase Energy Efficiency at Newport Naval Station, Newport, Rhode Island**

PROFESSIONAL SERVICES  
**2004**

22. YEAR COMPLETED

CONSTRUCTION (if applicable)

**23. PROJECT OWNER'S INFORMATION**

a. PROJECT OWNER

**United States Navy**

b. POINT OF CONTACT (POC) NAME

**James Carlson**

c. POC TELEPHONE NO.

**401-841-7672**

Role: **Joseph Conlon, Project Manager**

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (Include scope, size, and cost)

Thielsch Engineering, Inc. was retained by Newport Naval Station to provide turn-key procurement and installation services for the Newport Navy Base Energy Conservation Project located in Newport, RI.

We provided overall project management for improving energy efficiency at NSN-Newport. The process consisted of prepared bid documents for subcontracted work and evaluated subcontracted proposals. We installed new lighting throughout NSN and replaced all drives, motors and control systems. This Project Manager monitored the subcontractor performance through-out two year program. Quality assurance was provided overall.

**Project Scope:**

1. Performed audits and inspections of over 40 buildings on the Newport site to identify potential energy conservation measures as they relate to HVAC systems, primarily as they relate to controls. Researched building operation hours and actual utility usage for the surveyed buildings.
2. Developed savings spreadsheets for all buildings and put together pricing to implement recommended changes to the buildings operation. Verified savings estimates were realistic by comparing them to the overall building usage. From this we could define the payback for each project.
3. Based on the Navy's payback criteria, we initiated recommendations to retrofit and replace controls with newer technologies including programmable thermostats in warehouse areas, occupancy controlled thermostats in living quarters, to DDC control in education and consumer use buildings. Also recommended was some re-commissioning of HVAC systems, and a compresses air leak survey/repairs in the central boiler plant.
4. Initiated and performed all documentation required for submittal to the local electric utility to obtain rebates and incentive approvals for some ECM's. Others only produced steam savings and were not eligible for electric utilities incentives. Completed documentation showed eligible incentives of over \$40,000 from Narragansett Electric towards the installed costs associated with the implementation of the energy efficiency controls projects. These rebates were assigned to and paid directly to our client, Combined Energies, by Narragansett Electric.
5. Performed complete turn-key implementation of \$290,000 retrofit project including engineering, procurement of materials, installation labor by our in-house Thielsch employed licensed electricians and mechanics using prevailing wages, subcontractor oversight, and professional project management on-site by James Synott, P.E., which included all reporting functions to Combined Energies and Navy personnel.
6. Provided as-built documentation showing all wiring required, materials used, programming parameters, and room schedules as applicable.

**Client Benefits:**

- Significantly reduced electrical and steam consumption through the implemented ECM's.
- Provided documentation to the utility resulting in over \$40,000 in incentives.
- Worked with the Navy's preferred subcontractors for a portion of the work.

Cost: \$1, 314, 500

21. TITLE AND LOCATION (City and State)

**Increase Energy Efficiency at Newport Naval Station, Newport, Rhode Island**

22. YEAR COMPLETED

PROFESSIONAL SERVICES  
**2004**

CONSTRUCTION (If applicable)

**25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT**

	(1) FIRM NAME	(2) FIRM LOCATION (City and State)	(3) ROLE
a.	Thielsch Engineering	Cranston, RI	Prime Contractor, Project Management and Quality Assurance
b.	(1) FIRM NAME	(2) FIRM LOCATION (City and State)	(3) ROLE



**F. EXAMPLE PROJECTS** Which Best Illustrate Proposed Team's Qualifications For This Contract

20. EXAMPLE PROJECT KEY NUMBER

**1**

*(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)*

21. TITLE AND LOCATION (City and State)

**Pressure Vessel and Tank Engineering Services, Palatka, GA**

22. YEAR COMPLETED

PROFESSIONAL SERVICES  
**2004**

CONSTRUCTION (If applicable)

**23. PROJECT OWNER'S INFORMATION**

a. PROJECT OWNER

**Georgia-Pacific Corporation**

b. POINT OF CONTACT (POC) NAME

**Ken Bass**

c. POC TELEPHONE NO.

**386-329-0906**

Role **Cary Franklin, Project Director**

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (Include scope, size, and cost)

Thielsch Engineering's mission is to deliver value-added, integrated services to our customers. We are dedicated to reducing operating costs and increasing profitability by extending the operating life of capital equipment and improving reliability and safety of our client facilities.

The Georgia Pacific Pulp and Paper mill located in Palatka, Florida is a perfect example of how we combine our expertise and engineering skills to ensure a smooth running operation. The mill produces towel, tissue, and kraft up to 1,600 tons per day. We provide engineering support and guidance on all of the pressure vessel and tank inspections within the facility.

The primary focus is to maintain the integrity of the equipment through inspections and engineering analysis. In addition, we are responsible for the inspection, engineering analysis, and repair recommendations on the 13 batch digesters within the facility. Supervision of the repairs is also a part of this function. We meet and satisfy all of the Georgia Pacific Corporation's requirements for repairs critical to the equipment.

The end results of the evaluations performed are to provide a 5-10 year plan for repairs and capital replacement of major pieces of equipment when necessary. All recommendations made are made in the most cost effective manner for the mill.

Cost: \$360,000

**25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT**

	(1) FIRM NAME	(2) FIRM LOCATION (City and State)	(3) ROLE
a.	Thielsch Engineering	Cranston, RI	Project Management and Inspection Services
b.	(1) FIRM NAME	(2) FIRM LOCATION (City and State)	(3) ROLE

(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)

21. TITLE AND LOCATION (City and State)

**MIT Stata Center, Cambridge, MA**

22. YEAR COMPLETED

PROFESSIONAL SERVICES  
**2004**

CONSTRUCTION (If applicable)

**23. PROJECT OWNER'S INFORMATION**

a. PROJECT OWNER

**Skanska USA Building Inc./MIT  
c/o MIT Strata Center Project**

b. POINT OF CONTACT (POC) NAME

Paul Hewins

c. POC TELEPHONE NO.

617-258-7244

Role: James McManus, Project Manager

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (Include scope, size, and cost)

**Construction Inspection Support Services**

Thielsch Engineering, Inc. (TEI) was retained by Skanska USA on behalf of MIT to provide inspection support services for the MIT Stata Center Project located in Cambridge, MA.

**Inspection:**

1. Conducted a visual inspection to record the existing condition of all rooms and areas in the project. This included a review of the engineering drawings to document locations of findings. Borescope inspection of areas identified was completed. The existing condition of the structure was completed to determine areas most likely to retain moisture.
2. Conducted a thermal imaging scan of completed units to identify any moisture trapped behind the gypsum board walls, suspended floors or ceiling. The thermal imaging of any wet condition was documented and digital photos of the condition were also provided.
3. TEI obtained samples from the surface of building materials at random locations to determine if building materials exposed to the weather for extended periods of time exhibited any level of mold growth. A microbiologist in our biological laboratory performed direct microscopic examination of the surface samples to identify the presence of mold.
4. A TEI engineer and TEI thermal imaging technician developed a matrix to identify locations where air samples were collected. This matrix was based on surface sample data as well as thermal imaging data collected.
5. The microbiologist collected mold colony quantitation air samples from locations identified in previous tasks and an outside air sample for baseline purposes. Air samples were examined after a five day incubation period by a TEI microbiologist to determine mold colony quantitation of the sample. Mold concentration samples were compared to baseline samples to determine if high levels of mold were present.
6. Areas were identified where a further investigation was conducted to determine the extent of mold damage. This was based on mold colony quantitation of air born mold spores and the material condition.
7. Inspection findings were reported regularly to the Project Manager or Project Superintendent upon completion of each inspection.

**Testing:**

All on-site and in-house testing were performed in accordance with Thielsch Engineering Testing Procedures and the American Society for Testing Materials (ASTM) procedures where applicable. All laboratory analyses were supervised by the Director of the Microbiological Laboratory.

**Engineering Reports:**

- A. Interim engineering reports were prepared documenting the results of the inspection. These included recommendations concerning immediate remediation, overall condition assessment, suitability for continued use, as well as recommendations concerning reinspection intervals.
- B. A final engineering report was prepared documenting the overall condition assessment, suitability for continued use and corrective actions taken to remediate problems identified throughout construction.

21. TITLE AND LOCATION (City and State)

**MIT Stata Center, Cambridge, MA**

22. YEAR COMPLETED

PROFESSIONAL SERVICES  
**2004**

CONSTRUCTION (If applicable)

**Key Findings:**

- Moisture intrusion and mold were identified in several areas during construction.
- Areas that required remediation were identified and discussed with contractor (Skanska).
- Skanska completed mold remediation in all identified areas.
- Mold-free dormitory (Strata Center) was delivered to MIT.

**Value of Contract:** \$68,000

**Project Size:** 1.6 million square feet

**Subcontractors:** none

**Client Benefit:**

Delivered mold-free dormitory to MIT

**25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT**

	(1) FIRM NAME	(2) FIRM LOCATION (City and State)	(3) ROLE
a.	Thielsch Engineering	Cranston, RI	Project Management and Inspection
b.	(1) FIRM NAME	(2) FIRM LOCATION (City and State)	(3) ROLE

*(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)*

21. TITLE AND LOCATION (City and State)

**Picillo Pig Farm Superfund Site, Coventry, RI**

22. YEAR COMPLETED

PROFESSIONAL SERVICES  
**2003**

CONSTRUCTION (If applicable)

**23. PROJECT OWNER'S INFORMATION**

a. PROJECT OWNER

**Environmental Science Services, Inc.**

b. POINT OF CONTACT (POC) NAME

**Shannon Daigle**

c. POC TELEPHONE NO.

**401-330-1254**

Role: **Brian Johnson, Project Manager**

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (Include scope, size, and cost)

The following summarizes Thielsch Engineering's (TEI) completed scope of work for providing a power quality, instrumentation and control assessment for the Picillo Pig Farm Superfund Site located in Coventry, RI. The work was completed under subcontract to Environmental Science Services, Inc. (ESS; now called ESS Group).

**Power Quality Survey**

1. TEI interviewed the operators and engineers to provide insight into existing operations, points of concern, and anomalies.
2. Conducted a visual inspection of the existing layout and conditions of power distribution circuits in the project. Identified current energy saving practices. Identified current sources of load throughout the facility.
3. Conducted power quality recordings at various points throughout the system. These instantaneous snapshots of power were compared with operational parameters in order to provide a baseline for future analysis.
4. Researched service history to determine component failure rates.
5. Inspection findings were reported to the ESS Project Manager upon completion of each inspection.

**I & C Analysis**

1. TEI interviewed the operators and engineers to provide insight into existing operations, points of concern, and anomalies.
2. Conducted a visual inspection of the existing layout and conditions of system architecture, PID loops, instrumentation, PLC Hardware, wiring circuits, and terminations. Identified current irregularities as compared to OEM recommendations, active O&M drawings, and ISA practices.
3. Reviewed SCADA and PLC ladder logic for compatibility with current plant operating structure, optimum operating structure and client's specifications.
4. Identified instrumentation and control changes to meet client needs for optimum plant operation.
5. TEI Field Service Engineers/Techs executed changes in the field working directly with original control package vendors, OEMs, and client.

**Engineering Report**

1. A final engineering report was prepared documenting the overall condition assessment, suitability of the system for continued use and corrective actions taken to remediate problems identified.

**Key Findings**

- Four flow transmitters for vapor recovery were installed incorrectly.
- Alterations to algorithms in the PLC were implemented to remedy the flow transmitter installations.
- High level of phase imbalance on source voltage. High voltage sags during high demand period for motor start-up.

21. TITLE AND LOCATION (City and State)

**Piccillo Pig Farm Superfund Site, Coventry, RI**

22. YEAR COMPLETED

PROFESSIONAL SERVICES

CONSTRUCTION (If applicable)

**2003**

- A calibration and maintenance program for instruments had yet to be implemented. Sixty percent of instruments and the overall process are dependent on flow (e.g., groundwater or soil vapor flows).

**System Components:** 1 SCADA, 1 Master PLC, 12 RTUs, 2 OEM Controls, 54 Instruments

**Client Benefit:** Groundwater and soil vapor extraction systems were upgraded to perform more reliably and cost effectively.

Cost: \$37,000

**25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT**

	(1) FIRM NAME	(2) FIRM LOCATION (City and State)	(3) ROLE
<b>a.</b>	Thielsch Engineering	Cranston, RI	Project Management and Implementation
<b>b.</b>	(1) FIRM NAME	(2) FIRM LOCATION (City and State)	(3) ROLE

## H. ADDITIONAL INFORMATION

30. PROVIDE ANY ADDITIONAL INFORMATION REQUESTED BY THE AGENCY. ATTACH ADDITIONAL SHEETS AS NEEDED.

### Professional Capabilities

**Thielsch Engineering** is a rapidly growing engineering and technical services company consisting of five business groups with over 200 employees and annual sales in excess of \$40 million. The corporate headquarters are located in Cranston, RI, with branch offices in Ohio, Texas, Wisconsin, and Florida.

Thielsch provides a range of coordinated services on regional, national and international levels, in pursuit of its mission to increase the reliability, operating efficiency and safety of clients' facilities and sites.

### Construction Engineering and Testing Group

Continuing to provide superior customer service is the primary characteristic that makes the **Construction Testing Services (CTS)** group of Thielsch Engineering one of the most respected construction-related service providers in the United States. We listen to our clients' needs and collectively develop solutions that save both time and money while maintaining outstanding quality.

Our goal is to provide leadership and support to the building design and construction industry through a variety of channels, including the following:

- Guiding our clients through the network of information on the latest products, processes, materials, and equipment to establish ease of access to the facts our clients' need.
- Developing quality assurance programs based on clearly defined quality management procedures.
- Serving as "Trusted Advisors" and inspectors through specialized consulting services.

CTS promote innovation in construction materials and processes with facilities for the following:

- Construction Quality Assurance Programs
- Structural testing of construction related materials
- Evaluation of performance in construction products and processes
- Evaluation and testing programs for bridges, buildings, and industrial facilities.

The Construction Services group evaluates building materials as well as methods of construction. CTS are able to respond to a wide range of construction-related activities because of the following core services we offer:

- Construction Management and Field Engineering Services
- Petrography - Hardened Concrete Microscopy
- Material Performance Testing and Analysis
- Thermal Behavior, Moisture, and Mold Migration in Buildings.

### Engineering Services Group

The **Engineering Services Group** is recognized for its expertise and consists of the following integrated divisions:

The **Professional Engineering Division (PED)** performs analyses of pressure vessels, piping, gas and steam turbines, boilers, pumps, compressors and other machinery and structures to determine the cause and origin of failures. Finite element analyses, fracture mechanics, strain gaging, fatigue and vibration analyses, accident reconstruction, industrial hazard assessment, product liability evaluations and risk management with damage assessments, expert witness testimony, litigation support, arbitration determination, case preparation and management are provided for nearly every type of corporation, attorney, insurance underwriter and adjustment firm. The services are provided by qualified professionals in the fields of metallurgical, mechanical, corrosion, and structural engineering.

The **Paper and Process Industries (PPI)** division establishes preventative maintenance programs for storage tanks, pressure vessels, piping systems, boilers, and rotating equipment at client facilities. Services include condition assessments, inspections, repairs, and rehabilitation. Programs are managed through PRIME software, developed by this division. Additional services include complete management of annual maintenance outages, process safety management programs and program evaluation, code reviews, protocol and procedure writing and development, specification preparation, and engineering design. Branch offices are located in Maine and Wisconsin.

## H. ADDITIONAL INFORMATION

### 30. PROVIDE ANY ADDITIONAL INFORMATION REQUESTED BY THE AGENCY. ATTACH ADDITIONAL SHEETS AS NEEDED.

The **Utility Engineering Services (UES)** division performs condition assessments, engineering analyses, remaining life determinations, failure analyses, nondestructive examinations and repair services for power generating and industrial plants on a national and international level, specializing in critical and auxiliary boiler components, power piping, furnace scanning/evaluation and pipe stress analysis. Subdivisions consist of the Industrial Fabrication Services (IFS) department, which provides code welding, weld repair, heat treat and related services, and the Process Equipment Fabrication (PEF) department, which provides engineering design, pressure rating and pressure vessel fabrication services. Branch offices are located in Ohio and Texas.

The **James Chemical Engineering (JCE)** division provides a broad range of chemical process-related services, including process optimization for capacity, efficiency, reliability and safety, project management services, preparation of invitations to bid, bid evaluations and negotiations with general contractors in conjunction with plant owners and accident investigation work.

#### Testing Services Group

The **Testing Services Group** operates one of the best-equipped commercial testing laboratory facilities in New England, providing integrated services to our clients. Within this group, testing services utilize modern equipment for a diverse range of applications:

The **Nondestructive Testing (NDE)** department performs both in-laboratory and portable field inspections in radiography, magnetic particle, ultrasonics, liquid penetrant, hydrostatic testing and fiber optics and performs Certified Welding Inspections (CWI) on a local and worldwide basis in support of the other divisions within this group.

The **Materials Testing Laboratory** performs metallurgical and mechanical testing of materials; chemical analysis; failure analysis; reverse engineering; material characterization; materials engineering services; product testing; and welding procedure and performance qualifications. Our analytical equipment includes SEM, EDS, OES, and digital microscopy. Our material testing capabilities include a complete machine shop for sample preparation, hardness and microhardness, tension, compression, impact, corrosion, fatigue, creep, and stress rupture.

The **ESS Laboratory**, an environmental analytical department, performs analytical testing of groundwater, soils, wastewater, sludge and air in conformance with a broad range of analytical methods approved by the EPA and other state and federal agencies. ESS Laboratory is certified by the US Army Corps of Engineers and the US Navy.

**BAL Laboratory** is a state-certified laboratory providing testing services in the areas of environmental and public health microbiology, including both conventional and unique, state-of-the-art approaches for monitoring and assessing microbial contamination problems.

#### Water Services Group

The **Water Service Group** provides system design, fabrication and installation, testing and maintenance to the water service industry.

**ALCO Engineering** provides instrument and control system support and maintenance services to water and wastewater treatment plants, including the design and installation of SCADA systems. ALCO offers instrument field calibrations/repair and system control design, construction, and service. ALCO maintains UL authority to produce UL-508 electrical control panels. The division provides expanded products to the water industry as the New England distributor of Mars Company water meter test stands and the operator of an independent water meter test laboratory. It also retains the exclusive rights for the worldwide sale of BIF parts. ALCO Engineering is also the manufacturer of pre-engineered power factor correction equipment, which provides energy efficiency benefit to commercial and industrial electricity consumers.

The **Water Management Services (WMS)** division is a nationally recognized provider of consulting and meter sales and installation services to water utility authorities throughout the United States. WMS specializes in assisting utilities identify and recover lost revenues due to meter degradation. In addition, through full turnkey services in the sale, installation, testing and repair of all major brands of water meters, WMS enables its utility customers to generate incremental revenues. By employing test criteria that exceed AWWA standards, WMS can identify the true operational curves of its customers' meters.

**H. ADDITIONAL INFORMATION**

**30. PROVIDE ANY ADDITIONAL INFORMATION REQUESTED BY THE AGENCY. ATTACH ADDITIONAL SHEETS AS NEEDED.**

**Energy Group**

The **Energy Group** provides a complete range of energy management services for commercial, industrial, institutional, and residential building owners and managers.

**RISE Engineering** provides engineering analyses, direct installations, construction management and financing for a broad spectrum of efficiency and indoor air quality technologies to all building sectors. RISE has achieved a national reputation for its operation of innovative demand-side management, load building, and customer retention programs on behalf of gas, electric, and water utilities. The RISE HVAC Technologies department provides solution-based planned maintenance, repairs, retrofits, replacement and installation of heating, ventilation, and air conditioning equipment (HVAC) and controls for industrial, commercial, institutional, and large multi-unit residential facilities.

**RISE Performance Contracting (RPC)** performs turnkey operations with the capability to finance, design, build and operate self-funded energy and resource efficiency projects for industrial and institutional clients. RPC also provides direct digital control systems for building automation projects that can be networked with the existing systems via computer networks.

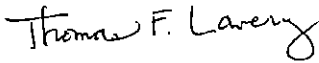
The coordination of the expertise in the five business groups provides major benefits to all clients of Thielsch Engineering in the operation of industrial and commercial plants and related facilities.

**I. AUTHORIZED REPRESENTATIVE**

*The foregoing is a statement of facts.*

31. SIGNATURE

32. DATE: August 27, 2004



33. NAME AND TITLE

Thomas F. Lavery, Vice President



# Architect-Engineer Qualifications

1. SOLICITATION NUMBER (If any)  
NDR040064

## PART II - GENERAL QUALIFICATIONS

(If a firm has branch offices, complete for each specific branch office seeking work.)

2a. FIRM (OR BRANCH OFFICE) NAME <b>Thielsch Engineering, Inc.</b> <b>195 Frances Ave, Cranston, RI 02910</b>		3. YEAR ESTABLISHED 1984
6a. POINT OF CONTACT NAME AND TITLE Thomas F. Lavery, Vice President		4. DUNS NUMBER 10-617-9815
6b. TELEPHONE NO. (401) 467-6454	6c. E-MAIL ADDRESS tlavery@thielsch.com	5. OWNERSHIP TYPE a. TYPE Corporation b. SMALL BUSINESS STATUS Woman-owned business - not certified
7. NAME OF FIRM (If block 2a is a branch office) N/A		8b. YEAR ESTABLISHED N/A
8a. FORMER FIRM NAMES (If any) N/A		8c. DUNS NO. N/A

### 9. EMPLOYEES BY DISCIPLINE

a. Function Code	b. Discipline	c. No. of Employees	
		(1) Firm	(2) Branch
02	Administrative	63	
10	Chemical Engineer	4	
11	Chemists	5	
12	Civil Engineer	2	
14	Computer Programmer / Information Systems Engineer	1	
16	Construction Manager	1	
18	Cost Engineer / Estimator	2	
21	Electrical Engineer	1	
24	Environmental Scientist	3	
42	Mechanical Engineer	15	
48	Project Manager	6	
53	Scheduler	2	
58	Technician/Analyst	24	
62	Water Resources Engineer	1	
<b>Other Employees</b>		<b>96</b>	
<b>Total</b>		<b>226</b>	

### 10. PROFILE OF OFFICE'S EXPERIENCE & ANNUAL AVERAGE REVENUE FOR LAST 5 YEARS

a. Profile Code	b. Experience	e. Revenue Index No.
A12	Automation; Controls; Instrumentation	2
B02	Bridges	2
C15	Construction Management	2
C18	Cost Estimating; Cost Engineering & Analysis; Parametric Costing; Forecasting	2
D04	Design-Build - Preparation of Requests for Proposals	1
E07	Energy Conservation; New Energy Sources	7
E13	Environmental Testing & Analysis	6
H04	Heating, Ventilating; Air Conditioning	6
I01	Industrial Buildings; Manufacturing Plants	7
L05	Lighting (Interior; Display; Theater, etc)	7
M03	Metallurgy / Nondestructive Testing	7
P13	Power Generation, Transmission Distribution	7
R06	Rehabilitation (Buildings; Structures; Facilities)	1
T02	Testing & Inspection services	8

### 11. ANNUAL AVERAGE PROFESSIONAL SERVICES REVENUES OF FIRM FOR LAST 3 YEARS

(Insert revenue index number shown at right)

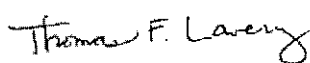
a. Federal Work	4
b. Non-Federal Work	9
c. Total Work	9

### PROFESSIONAL SERVICES REVENUE INDEX NUMBER

- |   |   |
|---|---|
| 1. Less than 100,000                    | 6. \$2 million to less than \$5 million   |
| 2. \$100,000 to less than \$250,000     | 7. \$5 million to less than \$10 million  |
| 3. \$250 to less than \$500,000         | 8. \$10 million to less than \$25 million |
| 4. \$500,000 to less than \$1 million   | 9. \$25 million to less than \$50 million |
| 5. \$1 million to less than \$2 million | 10. \$50 million or greater               |

### ED REPRESENTATIVE

is a statement of facts.

a. SIGNATURE 	b. DATE: August 27, 2004
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C. NAME AND TITLE: Thomas F. Lavery, Vice President

