UNIVERSITY OF HOUSTON
Campus Facilities Planning Committee
Request for Project Approval Form

I. Project Number:

2. Project Name: Temporary Air Quality Trailer and Scaffold Tower (03/20/2009 – 6/08/2009)

3. Committee Date: March 13, 2009

4. Requesting Department: Earth and Atmospheric Sciences

5. Contact Names & Phone Numbers: Dr. Barry Lefer x3-3250
Dr. Bernhard Rappenglück x3-1834

6. Description of Request:

The project addresses the desire to setup two temporary air quality measurement structures on the roof of the 18-story tall North Moody Tower residence hall at the University of Houston main campus. These structures are a temporary modular 20ftx8ftx7ft (LxWxH) sampling trailer on the southwest corner of the building and a temporary 21 ft high sampling tower on the northeast corner of the building. Temporary instrument structure will not be affixed to the roof deck but will be weighted down with sandbags on corners and bolted to Moody Tower balcony wall. These structures are only needed for the 6 weeks of the air quality study (15 April – 31 May, 2009) but after consulting with Moody Tower Residential and Student Life personnel, best time to set up these structures is over Spring Break (16-20 March 2009). ***See attached pages for more details concerning proposed tower and installation***

Background Information:

The air quality of Houston is impacted by strong anthropogenic emissions caused by considerable industrial releases and intensive traffic. Often these compounds are harmful to human health. The Houston metropolitan area frequently faces not only enhanced values of directly emitted pollutants that are of critical concern close to industrial facilities, but also photochemically produced secondary compounds such as ozone and organic particulate matter. To investigate Houston's air quality problems, researchers from the University of Houston (UH) Institute for Multidimensional Air Quality Studies (IMAQS) use sophisticated computational tools and state-of-art instrumentation to provide high quality information about Houston air quality. UH researchers from the fields of atmospheric chemistry and meteorology create and work with computer models, based on an understanding of specific weather and emissions that affect air pollution in Houston.

In the summer of 2006 UH researchers installed a 30 ft. sampling tower to determine the levels of atmospheric pollutants with the focus on understanding direct emissions, atmospheric diffusion and transport, and chemical transformations of these compounds throughout the Houston metropolitan region. This effort included measurement facilities at the UH-Main Campus in Houston and the UH-Coastal Reseach Center in La Marque, TX. The real power of these data comes from comparing IMAQS model predictions to atmospheric measurements, which enable the research team to analyze the validity of local emissions inventories and to identify the specific conditions and processes that generate unhealthy pollution levels.

In the Fall of 2006 the University of Houston hosted 30 visiting scientists from various universities and national laboratories including NOAA, UCLA, Penn State, University of New Hampshire, Portland State University, UC-Santa Barbara, Texas A&M, Colorado State, Pacific Northwest National Laboratory, Rice University, Georgia Tech, and Baylor University at the UH-Moody Tower Atmospheric Chemistry measurement facility as part of the 2006 Texas Air Quality Study (TexAQS-II). In order to accommodate these visiting scientists, the UH researchers constructed 3 measurement laboratories the balcony of the Moody Tower. Several important discoveries were made regarding the chemical and meteorological processes that negatively impact Houston's air quality. Several papers

describing these results have been accepted and await publication in various scientific journals in 2009.

In the Spring of 2009 (15 April – 31 May) the University of Houston will be hosting a follow to the TexAQS-II study call the "Study of Houston Atmospheric Radical Processes (SHARP). The SHARP campaign will be significantly larger in scope including more measurement instruments and more scientists than the 2006 project. In order to accommodate the additional instrumentation required to meet the project measurement goals, we would like to see approval to have a temporary laboratory trailer and a temporary 20 ft tall scaffold tower installed on the balcony of the north Moody Tower from 20 March to 08 June 2009.

7.	**Cost of Project:**	$24,000 for temporary laboratory installation, electrical connections and removal. $ 2,500 for temporary scaffold tower rental, installation, and removal. Please see attached quotes. Note that quotes include both installation and removal of these two temporary structures.
9.	**Source of Funding:**	Houston Advanced Research Center (H-100 Grant) Funds already at UH
10.	**Proposed Start Date:**	March 16, 2009

Figure 1. Photo of two of the three current Atmospheric Instrumentation buildings on roof of the Moody Tower. The proposed temporary laboratory will be identical similar in design and similar in size (20 ft long instead of 16 ft long) to existing structures, except temporary structure will not be bolted to the roof. Temporary instrument structure will be weighted down with sandbags on corners and bolted to Moody Tower balcony wall. Temporary instrument structure will also be connected to Moody Tower alarm system and have internal and external fire extinguishers.

North

West

South

East

Figure 2: Photos of Moody Tower from ground showing various views of existing Atmospheric Instrumentation Structures.

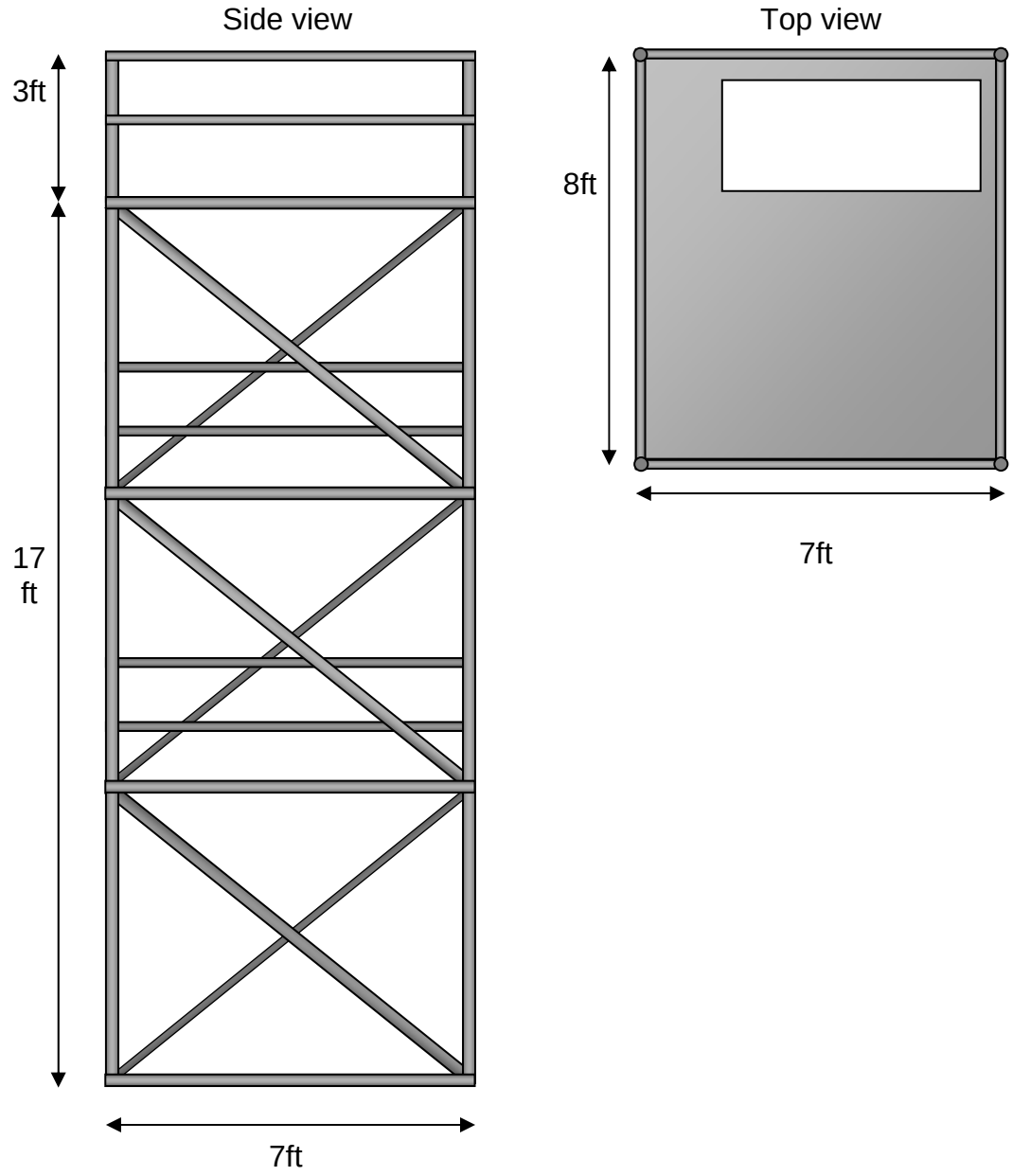

Figure 3. Drawing of temporary scaffold tower

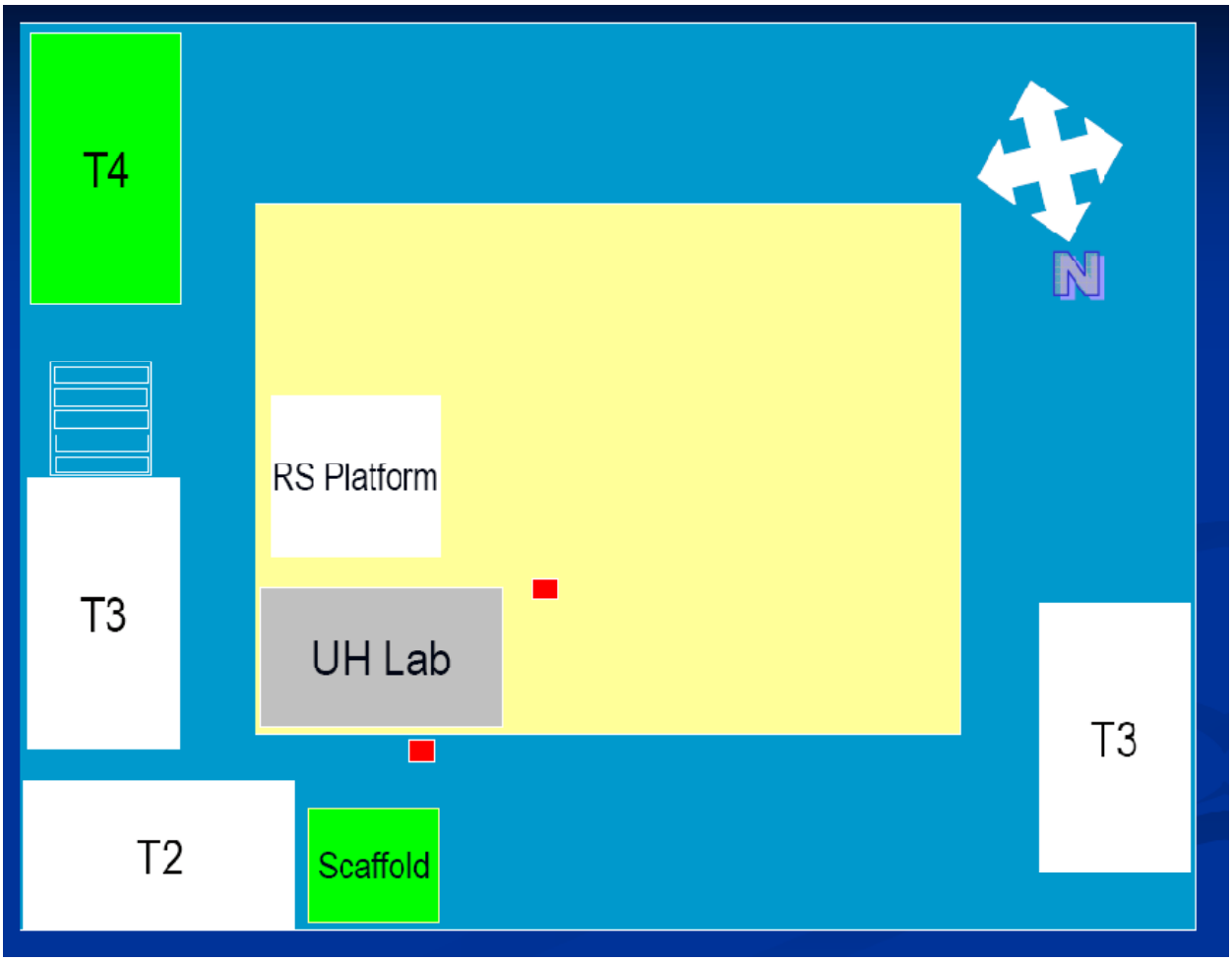

Figure 4. Moody Tower Layout. White boxes indicate existing atmospheric instrumentation structures. Grey box is internal laboratory space. RS Platform indicates remote sensing platform. Green boxes indicate locations of temporary atmospheric instrumentation structures which would be installed during week of 16-20 March and dismantled by June 8th, 2009.

Residentail Life & Housing
Maintenace

Geo-Science New Temporary Lab Quotation

Scope: To build and paint and disassemble a modular temporary lab in North Tower Roof South-East area

Cost Breakdown

Description		Cost
Material & Paint		$ 2,156.00
Labor Building		
	Days	6
	Workers	5
	Rate	$ 25.00
	Subtotal	**$ 6,000.00**
Painting		
	Days	1
	Workers	1
	Rate	$ 25.00
	Subtotal	**$ 200.00**
Disassembly and Removal		
	Days	2
	Workers	4
	Rate	$ 25.00
	Subtotal	**$ 1,600.00**
Total Cost		$ 9,956.00

Approve by: _____
Name Signature

Date: _____

Deprtment Business Administrator Signature _____

*** Quote for Installation and Removal of Temporary Atmospheric Instrument Trailer ***

JONMAR ELECTRIC

Contractors & Engineers

February 10, 2009

Mr. James Flynn
University of Houston
Department of Geosciences
312 Science & Research, Bldg 1
Houston, Texas 77204-5007

Re: Quote No. 13210 North Moody Tower – 18th Floor Temporary Building No. 5

Dear Mr. Flynn:

We have developed a budget estimate based on the following scope:

1. Install 125 amp 120/208 volt 3 phase 4 wire feeder from the existing distribution panel in the 18th floor penthouse to the temporary building at the southeast corner of the roof
2. Install a 125 amp 120/208 volt 3 phase panel inside the temporary building.
3. Install (21) 20 amp 120 volt duplex outlets in the lab area; each connected to a separate dedicated circuit from the new panel.
4. Install (2) 20 amp 120 volt GFCI weather proof quad outlets on the exterior wall of the temporary building; each connected to a separate dedicated circuit from the new panel.
5. Install (1) 20 amp 208 volt single phase receptacle below new panel
6. Install (3) 2/40 wrap-around fluorescent lighting fixtures
7. Install (1) light switch.
8. Install (1) emergency lighting unit with battery pack.
9. Install (1) fire alarm strobe and connect to existing fire alarm system.
10. Install (2) category 6 network cable

Our budget estimate for the above listed work is $9,977.00.

7700 Renwick Dr., Suite 6A • Houston, TX 77081 • Telephone (713) 668-1559 • Fax (713) 668-1791

P.O. Box 1771 • Bellaire, TX 77402-1771

Quote for Electrical and Alarm connections to Temporary Atmospheric Instrumentation Trailer

Layher.

More Possibilities. The Scaffolding System.

LEASE AGREEMENT WITH OPTION TO PURCHASE

HOUSTON Branch	4847 Timber Creek Drive, Houston, Texas 77017 Telephone (713) 947-1444 Fax (713) 947-1441
ALABAMA Branch	8495 Moffett Road, Semmes, Alabama 36575 Telephone (251) 649-7696 Fax (251) 649-7793
MARYLAND Branch	2800 Eastern Blvd. Bldg AP3 Suite 203, Middle River, MD 21220 Telephone (410) 686-6482 Fax (410) 686-6483
FLORIDA Contact	Central Florida Telephone (352) 286-3087 Fax (407) 386-8112

Customer	**University of Houston**	Date	**12/19/2008**	First Payment Due	**01/01/09**
Contact	**Barry Lefer**	Purchase Order			
Prepared By	**Darren Kincaid**	Lease No.		Rental Payment Amount	**$238.73**
Phone	**713-947-1444 x106**	Quote Number	**4600035**		
Project		Transaction Type (Rental or RTO)		**RTO**	
List Price	**$7,939.10**	Purchase Option Discount		20%	
Purchase Option Net Price	**$6,351.28**	Four Week Rental Rate		3%	
Down Pmt or Rental Credit		Credit Rate (Only Applicable on RTO)		80%	
Total Amount Financed	**$6,351.28**	Total Weight		**2860.49 Lbs.**	

APPENDIX "A"

Article No.	Description	Quantity	List Price	Ext List Price	Discounted Price	Weight	Total Weight
1752000	GUARDRAIL INTERNAL BL	4	124.10	496.40	397.12	27.56	110.23
2602000	BASE COLLAR AR	4	13.10	52.40	41.92	3.55	14.20
2603200	STANDARD W/CRIMPED SPIGOT 6' 6" AR	14	45.60	638.40	510.72	22.42	313.89
2604100	STANDARD VERT. W/O SPIGOT 3' 3" AR	5	27.80	139.00	111.20	10.14	50.71
2604150	STANDARD VERT. W/O SPIGOT 4' 11" AR	4	39.60	158.40	126.72	15.04	60.14
2607109	LEDGER HORIZ. 3' 7"	14	25.50	357.00	285.60	9.48	132.72
2607157	LEDGER HORIZ. 5' 2" AR	16	31.20	499.20	399.36	13.01	208.11
2607207	LEDGER HORIZ. 6' 9" AR	2	36.50	73.00	58.40	16.98	33.95
2607257	LEDGER HORIZ. 8' 5" AR	25	41.60	1,040.00	832.00	21.38	534.62
2620109	BAY BRACE DIAG. 3' 7" X 6' 6"	4	43.60	174.40	139.52	15.43	61.73
2620157	BAY BRACE DIAG. 5' 2" X 6' 6"	5	44.90	224.50	179.60	16.98	84.88
2620257	BAY BRACE DIAG. 8' 5" X 6' 6"	4	50.20	200.80	160.64	20.94	83.77
2625157	BRIDGING LEDGER TUBE 5' 2" AR	6	65.90	395.40	316.32	21.38	128.31
2631109	CONSOLE SIDE BR. 3' 7" RD.TUBE 1.09	4	77.70	310.80	248.64	26.46	105.82
2633257	STAIR UNIT ALUM. 8' 5" BAY2.57M RD	3	477.90	1,433.70	1,146.96	51.15	153.44
2637000	GUARDRAIL ADAPTOR AR	6	16.50	99.00	79.20	1.54	9.26
2638257	GUARDRAIL EXTERNAL 8' 5"	2	128.10	256.20	204.96	39.90	79.81
3848257	DECK FILLER STEEL 8'5""	3	71.70	215.10	172.08	34.17	102.51
3861257	DECK STEEL T4R 8'5"(2.57x0.32M)	13	80.60	1,047.80	838.24	42.33	550.27
4000000	LOCKING PIN	14	1.00	14.00	11.20	0.22	3.09
4001060	BASE PLATE ADJ. 2'	4	18.40	73.60	58.88	7.94	31.75
4702022	CLAMP SWIVEL	1	15.50	15.50	12.40	3.31	3.31
4706022	SPIGOT W/HALF CLAMP WS22	1	24.50	24.50	19.60	3.99	3.99

AXIS INDUSTRIAL SERVICES, LLC

10511 FM 1492
Alvin, Texas 77511
281-331-5800 Office
281-331-5801 Fax

February 18, 2009

University Of Houston
4800 Calhoun Drive
Houston, Texas

Attention: James Flynn

Reference: Labor Services Only

Gentlemen:

AXIS Industrial Services, LLC is pleased to submit our "Separated Fixed Price" to furnish all labor, materials, equipment, and supervision to erect and dismantle scaffolds for above referenced scope of work. Scaffolds will be built to OSHA specifications. We present our proposal along with the qualifications herein. We trust that our proposal is inclusive of your requirements. This proposal complies with all specifications without exception.

PRICING BREAKOUT:

Erection Labor ($): $625.00
Demo Labor ($): $350.00

Total Fixed Price. **$975.00**

DURATIONS/SCHEDULE:

We estimate it will take approximately one (1) working day to complete scaffold erection, weather permitting.
Erection: 1 shift (includes scaffold erection)
Demolition: 1 shift (includes scaffold dismantle and ready for shipment)

We appreciate this opportunity to submit our proposal. Please feel free to contact our office if additional information is needed or if any questions arise.

Sincerely,

John Burke

John Burke
Construction Manager

Page 1 of 2 – Quote for Installation and Demolition of Temporary Scaffold Tower

SAFETY INFORMATION:

Current EMR- 0.79

WORK WEEK:

The prices quoted are based on a ten (10) hour day, four (4) day workweek, Monday through Thursday, exclusive of AXIS Industrial Services LLC holidays.

CLARAFICATIONS:

1c) **Taxes will be added to our invoices in absence of direct pay authorization, exemption certificate or other tax-exempt conditions which may apply to this work. By Texas state law scaffold labor is subject to sales tax, therefore taxes shall be added to invoice in absence of exemption certificate.**

2c) Working ten hour days.

3c) Any call outs after scaffold acceptance by customer will billed on a cost plus basis. The price quoted is for scaffold erection and dismantle **ONLY** of those scaffolds listed in proposal above. Any scaffold revisions and/or modifications along with or in addition to any stand-by time, will be billed on a time sheet at the rate of $30.45 straight time or $40.96 premium time per man-hour regardless of classification

4c) Based on a continuous flow of work from commencement to completion for only the scaffolds listed in proposal above, and is exclusive of any remobilization cost.

5c) **Does not include premium time**.

6c) Proposal price includes rental for the first 28 days starting from date of delivery. Minimum rental period is twenty eight (28) days. This initial twenty eight day rental period is included in quoted price. Rental beyond initial period will be billed on a monthly basis at the rates of $16.24 quoted above.

7c) Replacement value of rental scaffold equipment is $3,458.61

8c) Proposal price is exclusive of any safety netting, fire blanket, mechanical safety devices (yo-yo's), or tarps that may be required.

9c) In the event OWNER schedules Contractor's employees for work but subsequently does not require their services or due to inclement weather, OWNER will be billed a show-up time equal to two (2) hours per employee for each employee who reports to work. Show-up time shall not be billed for employees if OWNER has advised AXIS representative that their services will not be required within eight hours of the scheduled starting time. Show-up time will be charged at Straight Time or Overtime billing rates based upon what the employee is entitled to at that time.

10c) All materials to be furnished to Axis by University of Houston and shall be located for Axis at point of scaffold erection.

PAYMENT:

Billing will be 60% of total quote upon completion of scaffold erection and 40% of total quote upon scaffold demolition. Payment is due net thirty (30) days

ESCALATION:

This proposal is firm for acceptance for Thirty (30) days, after then it is subject to escalation. If this proposal is accepted prior to expiration date, the quoted prices are firm for the work to be completed by your work schedule exclusive of premium time.

CONTRACTUAL TERMS:

This proposal is offered contingent upon review and acceptance of customer's contractual terms and conditions by AXIS Industrial Services LLC authorized representatives. Customer acceptance of this proposal includes all information expressed herein, unless modified and acknowledged in writing by customer and AXIS Industrial Services, LLC.

CONTACT INFORMATION:

Thank you for the opportunity to do business with your company. In evaluation of our proposal, should you have any questions or need additional information, please contact me at the number below.

John Burke,
Construction Manager
(832)-623-9423 Cell (281)-331-5800 office
jburke@axisindsvcs.com