

AGENDA

CONSTRUCTION COMMITTEE

**UNIVERSITY OF SOUTHERN INDIANA
BOARD OF TRUSTEES**

June 7, 2000

- 1. REVIEW OF THE *BID ANALYSIS AND RECOMMENDATION* FOR STUDENT RESIDENTIAL BUILDING NO. 3 (Attachment A)**

- 2. PROGRESS REPORT ON THE CONSTRUCTION OF THE WELLNESS, FITNESS, RECREATIONAL FACILITY**

VEAZEY
PARROTT
DURKIN &
SHOULDERS



University of Southern Indiana
Residence Hall #3

ARCHITECTS
ENGINEERS
PLANNERS

Bid Analysis and Recommendation

Prepared By:

Veazey Parrott Durkin & Shoulders, Inc.

In Consultation With:

Ratio Architects, Inc.

Biagi, Chance, Cummins, London, Titzer, Inc.

Wilkie Structural Engineering, Inc.

June 1, 2000

VEAZEY
PARROTT
DURKIN &
SHOULDERS

June 1, 2000

Mr. Richard W. Schmidt
Vice-President for Business Affairs
And Treasurer
Wright Administration Building, Room 102A
8600 University Boulevard
Evansville, Indiana 47712

ARCHITECTS
ENGINEERS
PLANNERS

Re: **USI Student Housing Project**
Residence Hall #3 – Bid Analysis and Recommendation
VPDS Project No.: 9984.00

Michael R. Shoulders, AIA
Charles E. Parrott, AIA
Scott C. Veazey, AIA
Thomas H. Durkin, PE
George S. Link, AIA
William M. Brown, AIA
Martin L. Truesdell, AIA
Thomas D. Cullum, AIA
Del W. Stevens, AIA
Milagros Q. Stevens, AIA
Robert S. Finger, AIA
Sean M. Bright, AIA
Gregory M. Stephens, PE

Dear Mr. Schmidt:

It is my pleasure to inform you that the bids received on Tuesday, May 23, 2000 for General, Mechanical and Electrical construction are within the project budget which was established in February.

Veazey Parrott Durkin & Shoulders, along with other members of the design team, appreciate the opportunity to continue providing professional architectural and engineering services to the University of Southern Indiana. Following is the Bid Analysis and Recommendation of Award for construction contracts.

The team has reviewed all bids submitted, and find no serious irregularities in the low bidders' bid proposals. If you have any questions, please do not hesitate to contact me.

Sincerely,

VEAZEY PARROTT DURKIN & SHOULDERS, INC.



Sean M. Bright, AIA
Project Manager

pc. Stephen P. Helfrich, Director of the Physical Plant
Michael R. Shoulders, AIA, AICP – VPDS
Patrick Brunner, AIA – Ratio Architects
Dennis Verkamp, PE, LS – BCCLT
Ken Balczo, PE – Wilkie Structural Engineering

VEAZEY
PARROTT
DURKIN &
SHOULDERS

*University of Southern Indiana
Student Housing Project - Residence Hall #3
Bid Analysis and Recommendation
Page 2 - June 1, 2000*

DESCRIPTION OF CONTRACTS FOR CONSTRUCTION

General Construction

- Base Bid: Provides a three-story with a half basement, constructed of wood framing, brick veneer, aluminum windows and storefront framing and poured concrete floors. Site work consisting of grading, paving, curbing and storm drainage is included. Final construction will provide accommodations for 217 students.
- Alternate No.1 Provides build-out space for one-fourth of the basement.
- Alternate No.2 Provides build-out space for the remaining one-fourth of the basement.
- Alternate No.3 Provides side loading, single-hung windows in lieu of tilt-in windows. (Note: This alternate was established to provide the university with the option of matching the windows utilized in Residence Halls 1 & 2. The design teams feels the windows in this alternate provide greater security than those represented in the base bid.)
- Alternate No.4 Provides security card access devices for the doors serving the resident wing corridors.
- Alternate No.5 Provides power operated entry doors to one of the entry vestibules.
- Alternate No.6 Not applicable to General Construction
- Alternate No.7 Not applicable to General Construction

Mechanical Construction

- Base Bid: Provides HVAC, plumbing and fire protection for the three-story with a half basement facility. Site work consisting of sanitary sewer & lift station, gas main, domestic water, chilled water and fire protection mains is also included.
- Alternate No.1 Provides minimal mechanical facilities for one-fourth of the basement.
- Alternate No.2 Provides minimal mechanical facilities for the remaining one-fourth of the basement.
- Alternate No.3 Not applicable to Mechanical Construction
- Alternate No.4 Not applicable to Mechanical Construction
- Alternate No.5 Not applicable to Mechanical Construction
- Alternate No.6 Not applicable to Mechanical Construction
- Alternate No.7 Not applicable to Mechanical Construction

Electrical Construction

- Base Bid: Provides power, lighting and communications for the three-story with a half basement facility. Site work consisting of the main electrical service, communications extension and lighting is also included.
- Alternate No.1 Provides minimal electrical facilities for one-fourth of the basement.

VEAZEY
PARROTT
DURKIN &
SHOULDERS

*University of Southern Indiana
Student Housing Project – Residence Hall #3
Bid Analysis and Recommendation
Page 3 – June 1, 2000*

Alternate No.2 Provides minimal electrical facilities for the remaining one-fourth of the basement.

Alternate No.3 Not applicable to Electrical Construction

Alternate No.4 Provides power wiring to the card readers

Alternate No.5 Provides power wiring to the door openers

Alternate No.6 Provides conduit to the attic for individual communications jacks

Alternate No.7 Provides new front –end equipment for the fire alarm system in the Physical Plant.

BID ANALYSIS

General Construction:

Bids were received from four general contractors for each of the proposed bid items. Although there was a provision included in the bidding documents which allowed for a combined bid to be submitted, none were provided.

The four contractors who submitted bids, are in the opinion of VPDS, quality contractors who have performed numerous projects for VPDS. Additionally, there were no irregularities in the submission of general construction bids. Therefore, no reason exists for the design team to disqualify any of the bidders.

Document 00435, Subcontractor and Material List, was requested of and provided by the apparent low bidder. Review of that document indicates that all proposed subcontractors and materials should be acceptable. Final approval will take place in the shop drawing and submittal phase of the project.

Mechanical Construction:

Bids were received from seven mechanical contractors for each of the proposed bid items. Although there was a provision included in the bidding documents which allowed for a combined bid to be submitted, none were provided.

The seven contractors who submitted bids, are in the opinion of VPDS, quality contractors who have performed numerous projects for VPDS. Other than PPMI not obtaining the set of drawings and specifications from USI, there were no irregularities in the submission of mechanical bids. Therefore, no reason exists for the design team to disqualify any of the bidders.

Document 00435, Subcontractor and Material List, was requested of and provided by the apparent low bidder. Review of that document indicates that all proposed subcontractors and materials should be acceptable. Final approval will take place in the shop drawing and submittal phase of the project.

VEAZEY
PARROTT
DURKIN &
SHOULDERS

*University of Southern Indiana
Student Housing Project – Residence Hall #3
Bid Analysis and Recommendation
Page 4 – June 1, 2000*

Electrical Construction:

Bids were received from four electrical contractors for each of the proposed bid items.

The four contractors who submitted bids, are in the opinion of VPDS, quality contractors who have performed numerous projects for VPDS. Additionally, there were no serious irregularities in the submission of their bids. Therefore, no reason exists for the design team to disqualify any of the bidders. Two of the contractors submitted a "No Bid" for Alternate No.4 Security Card Devices. Review of this alternate indicates that there was sufficient information available to provide a price for the work. Therefore the "No Bids" should be considered a \$0 bid. Ralph Koressel of Premier Electric, the apparent low bidder, has since requested \$7,500 for that portion of the work. It is the recommendation of the design team to deny this request.

Document 00435, Subcontractor and Material List, was requested of and provided by the apparent low bidder. Review of that document indicates that all proposed subcontractors and materials should be acceptable. Final approval will take place in the shop drawing and submittal phase of the project.

Estimated Cost of Construction:

Veazey Parrott Durkin & Shoulders, in consultation with Ratio Architects, Biagi, Chance, Cummins, London, Titzer, Inc. and Wilkie Structural Engineering provided a Project Scope and Cost Options estimate dated January 31, 2000. The analysis provided for three different options.

Option #1 consisted of constructing a relatively identical facility to Resident Halls 1 & 2. The facility consisted of approximately 53,310 sq. ft. and was designed to house 180 residents. Total projected Construction Cost, including all site work while excluding the design and construction contingency was \$4,984,350. The total Project Cost was estimated to be \$5,737,246.

Option #2 consisted of constructing a slightly larger facility that Residence Halls 1 & 2. The facility consisted of approximately 58,610 sq. ft. and was designed to house 200 residents. Total projected Construction Cost, including all site work while excluding the design and construction contingency was \$5,381,850. The total Project Cost was estimated to be \$6,198,490.

Option #3 was the largest of the three options and consisted of approximately 63,950 sq. ft. and was designed to house 220 residents. Total projected Construction Cost, including all site work while excluding the design and construction contingency was \$5,782,350. The total Project Cost was estimated to be \$6,663,041.

VEAZEY
PARROTT
DURKIN &
SHOULDERS

*University of Southern Indiana
Student Housing Project – Residence Hall #3
Bid Analysis and Recommendation
Page 5 – June 1, 2000*

Comparison of Estimate and Bids/General Analysis of Bids:

The total project Construction Cost was established in February to be \$5,782,350 as represented in the description of Option #3. The University had hoped that the total Project Cost would not exceed \$6,200,000, although it was apparent that funding from other sources may be required to cover the various associated project costs not directly related to construction. Therefore, the following comparison indicates the success of the project to date.

	<u>Option #3-Est.</u>	<u>Project Base Bids</u>	<u>Net Difference</u>
Square Footage	63,950 SF	64,145 SF	195 SF
Beds	220	217	(3)
Bldg. & Site	\$5,782,350	\$5,373,241	(\$409,109)
Cost per SF	\$90.42/SF	\$83.76/SF	(\$6.65/SF)
Cost per Bed	\$26,283/Bed	\$24,761/Bed	(\$1,522/Bed)

Additionally, a design and construction contingency was allocated in the Option #3 estimate in the amount of \$289,118, which is 5% of the \$5,782,350 estimate. This contingency was provided to absorb any additional costs associated with the bidding climate, design/construction alternates and/or design/construction change orders.

As the design phase progressed, USI established additional items for inclusion in the bidding documents. The design team set these items apart from the Base Bid as alternates. Seven various alternates were established which would allow the university to choose from based on level of priority and available finances or fund them from separate accounts. The seven alternates total \$134,388. If all alternates are awarded, the design and construction contingency will be reduced to \$154,730.

Change orders for Residence Halls 1 & 2 totaled 2.8% of the contracts for construction. It stands to reason that this project should not have change orders in excess of that figure with respect to the building. By assuming the change orders will not exceed 2.8% of the base bid contracts for construction, the worst case scenario for change orders would be \$150,450. Thus leaving \$4,280 in the design and construction contingency.

Finally, the geotechnical and subsurface investigation performed by Alt & Witzig indicated that there will be rock encountered during the construction process in certain areas. A unit price was solicited with the submission of bids to cover conditions which differ from those shown in the report. If the conditions vary from the report, funds in excess of the \$4,280 remaining in the design and construction contingency, might be required.

VEAZEY
PARROTT
DURKIN &
SHOULDERS

*University of Southern Indiana
Student Housing Project – Residence Hall #3
Bid Analysis and Recommendation
Page 6 – June 1, 2000*

RECOMMENDATION OF AWARD

Veazey Parrott Durkin & Shoulders, in consultation with Ratio Architects, Biagi, Chance, Cummins, London, Titzer, Inc. and Wilkie Structural Engineering recommend that the contracts for the construction of Residence Hall #3 for the University of Southern Indiana be awarded as follows:

General Construction:	Lichtenberger Construction Co., Inc.
Base Bid	\$3,421,256.00
Mechanical Construction:	Goedde Plumbing & Heating Inc.
Base Bid	\$1,352,000.00
Electrical Construction:	Premier Electric
Base Bid	\$ 599,985.00


Additionally, since the bids received for the seven alternates are consistent with the required scope of work, the design team recommends all alternate bids be included in the contracts for construction, should the university's funding and needs dictate.

Alternate No. 1	\$ 21,968.00
Alternate No. 2	\$ 21,968.00
Alternate No. 3	\$ 16,639.00
Alternate No. 4	\$ 10,104.00
Alternate No. 5	\$ 12,659.00
Alternate No. 6	\$ 18,500.00
Alternate No. 7	\$ 32,550.00

It is also recommended that the university consider the costs of potential additional excavation due to rock when awarding the above alternates. Unit prices for rock and unsuitable soils were also received from the contractors. Since Lichtenberger's price appears to be substantially high, the university may wish to negotiate that portion of the bids before executing the contract for construction.

Finally, the design team requests that the University's legal council review and concur with the above Bid Analysis and Recommendation of Award before issuing contracts for construction.

PREPARED BY
VEAZEY PARROTT DURKIN & SHOULDERS, INC.



Sean M. Bright, AIA
Project Manager

EXHIBIT "B" - SUBCONTRACTOR AND MATERIAL LIST

I.3 SUBCONTRACTOR AND MATERIALS LIST

- A. Submitted By: Lichtenberger Construction, Inc.
- B. Authorized signature: _____
- C. Date submitted: May 30, 2000

<u>Section</u>	<u>Item</u>	<u>Subcontractor</u>	<u>Manufacturer</u>
02273	Modular Concrete Retaining Wall System	<u>General Cont.</u>	<u>Versa-Lok</u>
02282	Termite Control	<u>Comko</u>	<u>Dow</u>
02300	Earthwork	<u>General Cont.</u>	
02511	Hot-Mixed Asphalt Paving	<u>J.H. Rudolph</u>	
02513	Exterior Water Distribution System	<u>-</u>	<u>-</u>
02531	Exterior Sewer Piping System	<u>-</u>	<u>-</u>
02571	Cement Concrete Pavement	<u>General Cont.</u>	
02601	Chilled Water Lines	<u>-</u>	<u>-</u>
02630	Exterior Storm Drainage System	<u>General Cont.</u>	<u>M & W Concrete Pi</u>
02711	Natural Gas Piping System	<u>-</u>	<u>-</u>
02936	Seeding	<u>General Cont.</u>	
03300	Cast-in-Place Concrete	<u>General Cont.</u>	
04200	Unit Masonry	<u>N.M. Bunge</u>	<u>Miller Block</u>
05210	Structural Steel	<u>Structural Fab.</u>	<u>Structural Fab.</u>
05500	Metal Fabrications	<u>Structural Fab.</u> <u>Poe Steel</u>	<u>Structural Fab.</u> <u>Sharon</u>
05510	Metal Stairs	<u>Structural Fab.</u>	<u>Structural Fab.</u>
06100	Rough Carpentry	<u>General Cont.</u>	
06192	Metal Plate Connected Wood Trusses	<u>Kight Lumber</u>	<u>Hobgood</u>
06402	Interior Architectural Woodwork	<u>General Cont.</u>	<u>Kight Lumber</u>
07111	Composite Sheet Waterproofing	<u>General Cont.</u>	<u>Bituthean</u>
07210	Building Insulation	<u>Magnum Cont.</u>	<u>John Mans</u>
07242	Exterior Insulation and Finish System	<u>Magnum Cont.</u>	<u>Sonoborn</u>
07270	Firestopping (By each Prime Contractor)	<u>General Cont.</u>	<u>Hilti</u>
07310	Asphalt Shingles	<u>General Cont.</u>	<u>Tamko</u>

<u>Section</u>	<u>Item</u>	<u>Subcontractor</u>	<u>Manufacturer</u>
07531	EPDM Single-Ply Membrane Roofing	<u>Midwest Roofing</u>	<u>Firestone</u>
07620	Sheet Metal Flashing and Trim	<u>General Cont.</u>	<u>American Roofing</u>
07901	Joint Sealants	<u>General Cont.</u>	<u>Tremco</u>
08110	Steel Doors and Frames	<u>Architecural Sales</u>	<u>Timely-Steelcraft</u>
08211	Flush Wood Doors	<u>Architectural Sales</u>	<u>Mohawk</u>
08305	Access Doors	<u>General Cont.</u>	<u>Nystrom</u>
08410	Aluminum Entrances and Storefronts	<u>Evansville Glass</u>	<u>Kawneer</u>
08520	Aluminum Windows	<u>Evansville Glass</u>	<u>Aluma-Tech</u>
08710	Door Hardware	<u>Architectural Sales</u>	<u>Best</u>
08800	Glazing	<u>Evansville Glass</u>	<u>Louisville Glass</u>
08830	Mirrored Glass	<u>Evansville Glass</u>	<u>A.C.I.</u>
09255	Gypsum Board Assemblies	<u>Magnum Const.</u>	<u>U.S.G.</u>
09310	Ceramic Tile	<u>Memmer Tile</u>	<u>Crossville & Americ Olear</u>
09652	Sheet Vinyl Floor Coverings	<u>Fred Martin</u>	<u>Mannington</u>
09653	Resilient Wall Base and Accessories	<u>Fred Martin</u>	<u>Ropper</u>
09680	Carpet	<u>Fred Martin</u>	<u>Demensions</u>
09690	Carpet Tile	<u>Fred Martin</u>	<u>Demensions</u>
09900	Painting	<u>Allied Painting</u>	<u>MAB</u>
10100	Visual Display Boards	<u>Wison Partenheimer</u>	<u>Greensteel</u>
10155	Toilet Compartments	<u>Multi</u>	<u>Saneymetal</u>
10200	Louvers and Vents	<u>-</u>	<u>-</u>
10265	Impact-Resistant Wall Protection	<u>I.P.C.</u>	<u>I.P.C.</u>
10522	Fire Protection Specialties	<u>M & S Fire</u>	<u>J & L Indust.</u>
10550	Postal Specialties	<u>Donlev</u>	<u>Auth-Florence</u>
10800	Toilet and Bath Accessories	<u>Donlev</u>	<u>Bobrick</u>
11132	Projection Screens	<u>Architectural Sales</u>	<u>Draper</u>
11310	Sewage Lift Station	<u>-</u>	<u>-</u>
12356	Kitchen Casework	<u>Indiana Wholesale</u>	<u>Kitchen Kompact</u>

EXHIBIT "B" - SUBCONTRACTOR AND MATERIAL LIST

<u>Section</u>	<u>Item</u>	<u>Subcontractor</u>	<u>Manufacturer</u>
13931	Fire Protection Piping Systems	_____	_____
	Piping	_____	_____
	Valves	_____	_____
	Siamese Connections	_____	_____
	Water Flow Switch	_____	_____
	Sprinkler Heads	_____	_____
14240	Hydraulic Elevators	<u>Schindler</u>	<u>Schindler</u>
<u>DIVISION 15</u>			
	Plumbing	_____	_____
	Insulation	_____	_____
	HVAC	_____	_____
	Sheet Metal	_____	_____
	Temperature Controls	_____	_____
	Balancing	_____	_____
	Floor Drains	_____	_____
	Wall Hydrants	_____	_____
	Hose Bibbs	_____	_____
	TRV	_____	_____
	Domestic Water Heater	_____	_____
	Sump Pump	_____	_____
	Plumbing Fixtures	_____	_____
	WC	_____	_____
	UR	_____	_____
	Lav	_____	_____
	Sink	_____	_____
	Bathtub	_____	_____
	Shower	_____	_____
	Mop Basin	_____	_____

<u>Section</u>	<u>Item</u>	<u>Subcontractor</u>	<u>Manufacturer</u>
	EWC	_____	_____
	Boiler	_____	_____
	Air Handling Units	_____	_____
	Fan Coil Units	_____	_____
	Exhaust Fans	_____	_____
	Pumps	_____	_____
	Fire Dampers	_____	_____
	Sound Lining	_____	_____

DIVISION 16

	Electrical	_____	_____
	Devices	_____	_____
	Disconnect Switches	_____	_____
	Motor Control Centers	_____	_____
	Switchboards	_____	_____
	Panelboards	_____	_____
	Light Fixtures	_____	_____
	Voice Data	_____	_____
	Fire Alarm System	_____	_____

PART 2 PRODUCTS

(Not Applicable)

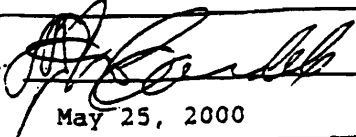
PART 3 EXECUTION

(Not Applicable)

END OF DOCUMENT 00435

1.3 SUBCONTRACTOR AND MATERIALS LIST

A. Submitted By: Goedde Plumbing & Heating, Inc.

B. Authorized signature:  Stephen R. Goedde

C. Date submitted: May 25, 2000

<u>Section</u>	<u>Item</u>	<u>Subcontractor</u>	<u>Manufacturer</u>
02273	Modular Concrete Retaining Wall System	_____	_____
02282	Termite Control	_____	_____
02300	Earthwork	_____	_____
02511	Hot-Mixed Asphalt Paving	_____	_____
02513	Exterior Water Distribution System	<u>Phoenix</u>	_____
0253 D	Exterior Sewer Piping System	<u>Phoenix</u>	_____
02571	Cement Concrete Pavement	_____	_____
02601	Chilled Water Lines	<u>Phoenix</u>	_____
02630	Exterior Storm Drainage System	_____	_____
02711	Natural Gas Piping System	<u>Phoenix</u>	_____
02936	Seeding	_____	_____
03300	Cast-in-Place Concrete	_____	_____
04200	Unit Masonry	_____	_____
05210	Structural Steel	_____	_____
05500	Metal Fabrications	_____	_____
05510	Metal Stairs	_____	_____
06100	Rough Carpentry	_____	_____
06192	Metal Plate Connected Wood Trusses	_____	_____
06402	Interior Architectural Woodwork	_____	_____
07111	Composite Sheet Waterproofing	_____	_____
07210	Building Insulation	_____	_____
07242	Exterior Insulation and Finish System	_____	_____
07270	Firestopping (By each Prime Contractor)	<u>Thermal Systems</u>	<u>3M</u>
07310	Asphalt Shingles	_____	_____

EXHIBIT "B" - SUBCONTRACTOR AND MATERIAL LIST

<u>Section</u>	<u>Item</u>	<u>Subcontractor</u>	<u>Manufacturer</u>
07531	EPDM Single-Ply Membrane Roofing	_____	_____
07620	Sheet Metal Flashing and Trim	_____	_____
07901	Joint Sealants	_____	_____
08110	Steel Doors and Frames	_____	_____
08211	Flush Wood Doors	_____	_____
08305	Access Doors	_____	_____
08410	Aluminum Entrances and Storefronts	_____	_____
08520	Aluminum Windows	_____	_____
08710	Door Hardware	_____	_____
08800	Glazing	_____	_____
08830	Mirrored Glass	_____	_____
09255	Gypsum Board Assemblies	_____	_____
09310	Ceramic Tile	_____	_____
09652	Sheet Vinyl Floor Coverings	_____	_____
09653	Resilient Wall Base and Accessories	_____	_____
09680	Carpet	_____	_____
09690	Carpet Tile	_____	_____
09900	Painting	_____	_____
10100	Visual Display Boards	_____	_____
10155	Toilet Compartments	_____	_____
10200	Louvers and Vents	_____	_____
10265	Impact-Resistant Wall Protection	_____	_____
10522	Fire Protection Specialties	_____	_____
10550	Postal Specialties	_____	_____
10800	Toilet and Bath Accessories	_____	_____
11132	Projection Screens	_____	_____
11310	Sewage Lift Station	<u>Phoenix</u>	<u>Meyers</u>
12356	Kitchen Casework	_____	_____

EXHIBIT "B" - SUBCONTRACTOR AND MATERIAL LIST

<u>Section</u>	<u>Item</u>	<u>Subcontractor</u>	<u>Manufacturer</u>
13931	Fire Protection Piping Systems	<u>Fire Inspections</u>	
	Piping	"	<u>Allied</u>
	Valves	"	<u>Victaulic</u>
	Siamese Connections	"	<u>Potter</u>
	Water Flow Switch	"	<u>Potter</u>
	Sprinkler Heads	"	<u>Star</u>
14240	Hydraulic Elevators		
<u>DIVISION 15</u>			
	Plumbing	<u>Goedde Plb. & Htg, Inc.</u>	
	Insulation	<u>Ohio Valley</u>	<u>see bottom Page 5</u>
	HVAC	<u>Goedde Plb. & Htg, Inc.</u>	
	Sheet Metal	<u>Midwest</u>	
	Temperature Controls	<u>Shekell</u>	<u>Honeywell</u>
	Balancing	<u>Flo-Tech</u>	
	Floor Drains		<u>Zurn</u>
	Wall Hydrants		<u>N/A</u>
	Hose Bibbs		<u>Zurn</u>
	TRV		<u>Symmons</u>
	Domestic Water Heater		<u>A.O. Smith</u>
	Sump Pump		<u>N/A</u>
	Plumbing Fixtures		<u>see below</u>
	WC		<u>Eljer</u>
	UR		<u>Eljer</u>
	Lav		<u>Eljer</u>
	Sink		<u>Just</u>
	Bathtub		<u>Aquarius</u>
	Shower		<u>Aquarius</u>
	Mop Basin		<u>Mustee</u>

EXHIBIT "B" - SUBCONTRACTOR AND MATERIAL LIST

<u>Section</u>	<u>Item</u>	<u>Subcontractor</u>	<u>Manufacturer</u>
	EWC	_____	Oasis
	Boiler	_____	Peerless
	Air Handling Units	_____	Trane
	Fan Coil Units	_____	International
	Exhaust Fans	Midwest	Jenn-FAn
	Pumps	_____	Taco
	Fire Dampers	Midwest	Cisco
	Sound Lining	Midwest	Johns-Manville

DIVISION 16

Electrical	_____	_____
Devices	_____	_____
Disconnect Switches	_____	_____
Motor Control Centers	_____	_____
Switchboards	_____	_____
Panelboards	_____	_____
Light Fixtures	_____	_____
Voice Data	_____	_____
Fire Alarm System	_____	_____

PART 2 PRODUCTS

(Not Applicable)

Insulation Manufacturer:

F/G Pipe Johns-Manville

PART 3 EXECUTION

(Not Applicable)

Elastomeric Pipe Armstrong

F/G Wrap Certainteed

END OF DOCUMENT 00435