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Conceptual Design / Feasibility Cost Estimate Report

Report Date: November 10, 2011 Prepared for:

SHW Group

Arlington Public Schools

The Reed School

Additions and Interior Renovations Arlington, Virginia





COST ESTIMATE CLARIFYING NOTES, ASSUMPTIONS & EXCLUSIONS

We have incorporated construction costs for a single Contractor procurement via lump sum General Contract. It is assumed that at least 5 General Contractor bids will be received. It is assumed that the facility will be occupied during construction and the project will be phased accordingly. We include phased sequenced construction costs. We do not include relocation cost, or temporary modular classrooms for the current occupants.

<u>We include hard construction and soft construction costs</u>. The Soft construction costs are budgeted as 22.5% of the construction hard costs. Please refer to the main project summary for the outline of all budgeted items.

The Limits of Construction are those indicated on the documents provided.

We exclude all <u>HAZMAT abatement costs for</u> Lead Paint, Asbestos, PCB's or Mold. Any type of HAZMAT remediation cost is not included in our analysis.

Design Contingency accounts for the costs of yet unidentified scope requirements and engineering. A 15% Design Contingency has been included.

Construction Contingency accounts for the costs of change orders due to unforeseen conditions and / or owner generated changes. A <u>5% Construction Contingency has</u> been included.

Escalation accounts for the inflationary effects of elapsed time. Escalation costs have been included at an average of 4% per year commencing in third quarter of FY 2012.

All cost data is based on Open shop wage and burden rates.



SOFT COSTS INCLUDED IN OUR COSTS ANALYSIS

We are utilizing a 22.5 % Construction Soft Cost multiplier for the project budget. It is assumed that the Soft Cost multiplier will include the following items:

FURNITURE, FIXTURE & EQUIPMENT [FF&E]

Loose, unattached system furniture, traditional furniture, etc.

Special fixtures relevant to subject facility operations and uses

Communications equipment, such as servers, telephone sets, communications cables, instruments, & accessories

Vending equipment purchases and/or leases, etc.

Exterior equipment, such as exercise equipment, pay telephones.

MOVING & STORAGE COSTS

Contract and/or internal staff implemented moving costs.

Temporary storage and insurance.

Removal and disposal of furnishings of no salvage value.

TEMPORARY FACILITIES

Non-contractor temporary storage trailers.

Non-contractor temporary utilities.

REAL ESTATE

Land acquisitions, leases, easements and rights of way.

Real estate taxes.

Transfer taxes.

Recordation fees & taxes.

Brokerage commissions.

Settlement charges.

Legal fees.

MANAGEMENT *Indirect* Owner Mgt Expenses

Real estate necessary to house management & staff.

Utilities.

Insurance.

Furniture, fixture & equipment.

Project management salaries.

Communications, telephone, facsimile expenses, e-mail, etc.

Travel, parking, courier services, etc.

Security.

Office equipment & supplies.



COMMON OWNER SOFT CONSTRUCTION COSTS (continued)

Cable TV company fees State & local highway fees Mandatory completion bonds

Report: Project: Location: Documents Dated:	The Reed S	Feasibility Study Const Cost Estimate The Reed School Feasibility Study Arlington Public Schools Nov. 4, 2011		Prepared by: Downey & Scott, LLC 6799 Kennedy Road, Suite F Warrenton, Virginia 20187 Ph 540.347.5001 Fax 540.347.5021 www.downeyscott.com	Status: Client: Submissn: Run Date:	Concept D SHW Group Nov. 10, 20 See footer	011	PM: ct/gs/ah Chckd by: bd/sm Job no: 11094	
LOC REF	SYS#	UNIFORMAT SYSTEM		SPECIFICATION	QUANTITY	U/M	UNIT COST	EXTENSION	

PROJECT CONSTRUCTION COST SUMMARY

Report: Project: Location: Documents Dated:	The Reed	Study Const Cost Estimate School Feasibility Study Public Schools 11	Prepared by: Downey & Scott, LLC 6799 Kennedy Road, Suite F Warrenton, Virginia 20187 Ph 540.347.5001 Fax 540.347.5021 www.downeyscott.com	Status: Client: Submissn: Run Date:	Concept I SHW Group Nov. 10, 2 See foote	011	PM: ct/gs/ah Chckd by: bd/sm Job no: 11094	
LOC REF	SYS#	UNIFORMAT SYSTEM	SPECIFICATION	QUANTITY	U/M	UNIT COST	EXTENSION	

ADDITIONS HVAC BASE BID & ALTERNATE COMPARASION SUMMARY

Cost per SF

Base Bid System - Stand Alone System

Carried forward

46.44 \$3,046,510

current dollars

Alternate System - Geothermal System

Carried forward

59.78

\$3,921,761

current dollars

Note: These costs include the HVAC cost, general conditions, and general contractor mark-ups Design contingency, construction contingency, escalation or soft cost are not included Report: Feasibility Study Const Cost Estimate
Project: The Reed School Feasibility Study

Prepared by: Downey & Scott, LLC

Status:

Concept Design

PM: ct/gs/ah

Report: Feasibility Study Const Cost Estimate
Project: The Reed School Feasibility Study
Location: Arlington Public Schools

Prepared by: Downey & Scott, LLC 6799 Kennedy Road, Suite F Status: Co Client: SH

Concept Design
SHW Group

PM: ct/gs/ah Chckd by: bd/sm

Report: Project: Location: Documents Dated:	Feasibility Study Const Cost Estimate The Reed School Feasibility Study Arlington Public Schools Nov. 4, 2011		Prepared by: Downey & Scott, LLC 6799 Kennedy Road, Suite F Warrenton, Virginia 20187 Ph 540.347.5001 Fax 540.347.5021 www.downeyscott.com	Status: Concept E Client: SHW Group Submissn: Nov. 10, 2 Run Date: See footer		011	PM: ct/gs/ah Chckd by: bd/sm Job no: 11094	
OC REF	SYS#	UNIFORMAT SYSTEM	SPECIFICATION	QUANTITY	U/M	UNIT COST	EXTENSION	
HREE STORY BUILDING	06.00	INTERIOR CONST	Masonry hoistway walls	1,672.00	SF	22.50	37,620.00	
HREE STORY BUILDING			Masonry partitions	65,600.00	GSF	4.10	268,960.00	
HREE STORY BUILDING			Mtl stud & GWB partitions, hi-impact	65,600.00	GSF	7.30	478,880.0	
HREE STORY BUILDING			Elev Cab finish allowance	1.00		500.00		
HREE STORY BUILDING			GWB ceilings/bulkheads	65,600.00	GSF	0.15	9,840.00	
HREE STORY BUILDING			Misc. batt insulation	65,600.00	GSF	0.45	29,520.00	
HREE STORY BUILDING			Sound transmission control insulation	65,600.00	GSF	0.19	12,464.0	
HREE STORY BUILDING			Interior glass at interior partition allowance	65,600.00	GSF	1.50	98,400.00	
HREE STORY BUILDING			Interior doors, single, incl jambs, trim & hardware	65,600.00	GSF	5.75	377,200.00	
HREE STORY BUILDING			Acoustic ceiling, avg	65,600.00	GSF	2.25	147,600.00	
HREE STORY BUILDING			Prem. ceilings: main corridors / mtg. rms, prem add	13,120.00	GSF	1.10	14,432.0	
HREE STORY BUILDING			Premium wall finish: main corridors & conf. rm	65,600.00	GSF	0.24	15,744.0	
HREE STORY BUILDING			Prem add for restroom/kitchen finishes	4,660.00	GSF	12.40	57,784.0	
HREE STORY BUILDING			CT floor, base, walls in restrooms	65,600.00	GSF	0.75	49,200.0	
HREE STORY ADDITION			CT wainscot hallways/restrooms	65,600.00	GSF	0.40	26,240.00	
HREE STORY BUILDING			Soft flooring/ vinly base	60,775.00	GSF	2.64	160,154.28	

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LOC REF	SYS#	UNIFORMAT SYSTEM	SPECIFICATION	QUANTITY	U/M	UNIT COST	EXTENSION
THREE STORY BUILDING	9.20	PLUMBING	Water Closet	36.00	EA	464.50	16,722.00
THREE STORY BUILDING			Urinal	4.00	EA	385.22	1,540.88
THREE STORY BUILDING			Automatic Flush Valve	40.00		163.20	6,528.00
THREE STORY BUILDING			Lavatory, countertop mounted	40.00	EA	313.85	12,554.00
THREE STORY BUILDING			Classroom Sink	24.00	EA	485.10	11,642.40
THREE STORY BUILDING			Electric Water Cooler	3.00	EA	1,163.50	3,490.50
THREE STORY BUILDING			Janitor Sink	3.00	EA	733.54	2,200.62
THREE STORY BUILDING			Floor Drain	12.00		168.60	2,023.20
THREE STORY BUILDING			Roof Drain	30.00	EA	384.50	11,535.00
THREE STORY BUILDING			Wall Hydrant	6.00		252.94	1,517.64
THREE STORY BUILDING			Water Heater	2.00		4,822.00	9,644.00
THREE STORY BUILDING			Circulating Pump	1.00		725.00	725.00
THREE STORY BUILDING			Sewer Ejector Pump	1.00		12,500.00	12,500.00
THREE STORY BUILDING			Elevator Sump Pump, oil minder type	1.00	EA	6,550.00	6,550.00
THREE STORY BUILDING			Domestic Water Piping	65,600.00	GSF	2.69	176,464.00
THREE STORY BUILDING			DWV Piping	65,600.00	GSF	1.76	115,456.00
THREE STORY BUILDING			Storm Piping	65,600.00	GSF	1.48	97,088.00
THREE STORY BUILDING			Plumbing Insulation	65,600.00	GSF	0.81	53,136.00
THREE STORY BUILDING			Coordination Drawings	65,600.00	GSF	0.22	14,432.00
THREE STORY BUILDING							
THREE STORY BUILDING	9.30	FIRE SPRINKLER	Sprinkler	65,600.00		2.85	186,960.00
THREE STORY BUILDING			Fire Pump	1.00	LS	65,000.00	65,000.00
THREE STORY BUILDING							
THREE STORY BUILDING	10.00	ELECTRICAL	Switchboards	65,600.00		0.85	55,760.00
THREE STORY BUILDING			Panelboards	65,600.00		0.65	42,640.00
THREE STORY BUILDING			Bus Duct & Transformers	65,600.00		0.40	26,240.00
THREE STORY BUILDING			Generator/ATS - for building & fire pump	1.00		55,000.00	55,000.00
THREE STORY BUILDING			Light Fixtures - based on T8 fixtures	65,600.00		4.85	318,160.00
THREE STORY BUILDING			Light Switches Power Outlets	65,600.00 65,600.00		0.26	17,056.00 62.320.00
THREE STORY BUILDING			Safety Cabinets & Disconnects	65,600.00		0.95 0.50	62,320.00 32,800.00
THREE STORY BUILDING THREE STORY BUILDING			Power Feeders	65,600.00		2.50	164,000.00
THREE STORY BUILDING			Power Home Runs	65,600.00		2.20	144,320.00
THREE STORY BUILDING			Power Franches	65,600.00		0.85	55,760.00
THREE STORY BUILDING			Lighting Home Runs	65,600.00		1.15	75,440.00
THREE STORY BUILDING			Lighting Branches	65,600.00		1.05	68,880.00
THREE STORY BUILDING			Grounding/Lightning Protection	65,600.00		0.25	16.400.00
THREE STORY BUILDING			Clock System	65,600.00		0.45	29,520.00
THREE STORY BUILDING			Phone/Data System	65,600.00		2.90	190,240.00
THREE STORY BUILDING			Security System	65,600.00		0.94	61,664.00
THREE STORY BUILDING			P.A. & A.V. Systems P.A. & A.V. Systems			65.600.00 G	

Report: Project: Location: Documents Dated:	The Reed	ty Study Const Cost Estimate d School Feasibility Study n Public Schools 011	ool Feasibility Study 6799 Kennedy Road, Suite F		Concept SHW Group Nov. 10, 2 See foote	2011	PM: ct/gs/ah Chckd by: bd/sm Job no: 11094	
LOC REF	SYS#	UNIFORMAT SYSTEM	SPECIFICATION	QUANTITY	U/M	UNIT COST	EXTENSION	
SITEWORK SITEWORK SITEWORK SITEWORK	12.00	TRAFFIC CONTROLS	SITEWORK Temporary traffic control measures	1.0	0 LS	7.500.00	7.500.00	
SITEWORK			,,			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
SITEWORK SITEWORK	12.05	SITE DEMO CLR/GRUB	Misc site demo Remove trees	25.0	8 AC 0 EA	10,000.00 175.00	4,375.00	
SITEWORK			Remove curb and gutter	100.0		6.00		
SITEWORK SITEWORK			Remove sidewalks 4" thick Remove concrete pads 8" thick	1,200.0	0 SF 0 SF	1.50 4.35		
SITEWORK			Remove asphalt paving	1,783.3		6.85		
SITEWORK			Demo asphalt paving at VDOT ROW	,	Exclude		,	
SITEWORK SITEWORK			Remove portions of existing SWM piping Remove existing utilities		Exclude Exclude	d		
SITEWORK			Remove existing fence		Exclude			
SITEWORK			Remove contaminated soils	50.0	Exclude		500.00	
SITEWORK			Remove asphalt paving for new water/sewer lines Disposal of site elements	2,029.8	3 SY	10.00 25.00		
SITEWORK SITEWORK			Disposal of site elements	2,029.0	9 01	23.00	30,747.22	
SITEWORK	12.10	ENVIRONMENTAL	Siltation controls, temp seed	1.0	0 LS	13,000.00	13,000.00	
SITEWORK			Tree protection allowance		0 LS	1,400.00		
SITEWORK			Inst & rem gravel construction entrances		0 EA	4,850.00		
SITEWORK			Inlet protection	6.0	0 EA	350.00	2,100.00	
SITEWORK SITEWORK	12.20	EARTHWORK	Strip & store topsoil	1,142.1	3 CY	2.80	3.197.96	
SITEWORK	12.20	LAKITIWOKK	Re-spread topsoil	1,142.1		3.60		
SITEWORK			Mass Excavation of site area, cut to fill	2,037.0		8.00	, -	
SITEWORK			Export surplus	2,037.0	4 CY	24.00	48,888.89	
SITEWORK			Rough grading for building and site	138,650.0	0 SF	0.55	76,257.50	
SITEWORK			Finish grading bldg pads and pavements	6,743.3		1.00		
SITEWORK			Finish grading for sports fields	6,666.6		1.35		
SITEWORK			Infield mix	2,500.0		45.17		
SITEWORK			Spoil removal	2,500.0		25.00		
SITEWORK			Ext backfill	90.0	0 CY	30.00	2,700.00	
SITEWORK	12.25	PRIMARY WATER	6" wat ton at aviat	1.0	0 EA	4,000.00	4,000.00	
SITEWORK SITEWORK	12.20	FINIMAL WATER	6" wet tap at exist. 6" water main	80.0		4,000.00 52.00		
SITEWORK			Building domestic water line	40.0		40.00		
SITEWORK			Fire hydrant new		0 EA	3,500.00		
SITEWORK			Meter/tap fees			ees are Exclude		
SITEWORK			Temp road patch	26.6		20.00		
SITEWORK			Spoil removal	5.9	3 CY	25.00	148.15	
SITEWORK	10.00	OANIEA DV OEWED			. = 4	E05		
SITEWORK	12.30	SANITARY SEWER	Lateral tie into existing manhole 6" PVC	1.0 80.0	0 EA	500.00 30.00		
SITEWORK SITEWORK			Tap fees	80.0		30.00 s are Excluded	2,400.00	
SITEWORK			Temp road patch	26.6	•	20.00	533.33	
SITEWORK			Spoil removal		7 ST 3 CY	25.00		
SITEWORK			-1	3.0	-			

	Report: Project: Location: Documents Dated:	The Reed School Feasibility Study 6799 Ken Arlington Public Schools Warrent d: Nov. 4, 2011 Ph 540.347.5		Prepared by: Downey & Scott, LLC 6799 Kennedy Road, Suite F Warrenton, Virginia 20187 Ph 540.347.5001 Fax 540.347.5021 www.downeyscott.com	Status: Client: Submissn: Run Date:	Concept I SHW Group Nov. 10, 2 See foote	011	PM: ct/gs/ah Chckd by: bd/sm Job no: 11094
	LOC REF	SYS#	UNIFORMAT SYSTEM	SPECIFICATION	QUANTITY	U/M	UNIT COST	EXTENSION
	SITEWORK SITEWORK SITEWORK SITEWORK	12.35	STORM WATER MGT	Underground detention 15" RCP Storm structures BMP impact allowance		00 LF 00 EA 00 LS	7.00 42.00 2,500.00 107,000.00 25.00	24,150.00 15,000.00 107,000.00
	SITEWORK SITEWORK SITEWORK SITEWORK SITEWORK			Roof drain piping Mods & conn to existing Spoil removal	1.0	00 LS 11 CY	5,000.00 25.00	5,000.00 10,152.78
	SITEWORK SITEWORK SITEWORK	12.40	SITE ELECTRIC	Primary Transformer fee & set by Va Power Site power and circuits Site pole lighting, allowance Ductbank and service cable into building	1,200.0 16.0 150.0	00 LF 00 EA	es are Excluded 15.00 3,250.00 235.00	18,000.00 52,000.00
	SITEWORK SITEWORK	12.45	PRIMARY TELEPHONE	Assume brought to meter by utility company		Exclude	d	
	SITEWORK SITEWORK	12.50	PRIMARY GAS	Assume brought to meter by utility company		Exclude	d	
	SITEWORK SITEWORK	12.55	CABLE TV	Assume brought to meter by utility company		Exclude	t	
	SITEWORK SITEWORK SITEWORK SITEWORK SITEWORK SITEWORK	12.60	PAVING	Asphalt Pavement parking lot Asphalt Pavement ROW patching Permeable Pavement Asphalt sport court Lot signage/symbols	555.5 1,344.4	33 SY 56 SY	35.00 80.00 63.00 29.00 1,250.00	7,466.67 35,000.00 38,988.89
		12.61	SITE CONCRETE	4" sidewalks/pads	7,140.0	00 SF	5.50	39,270.00
8.00 EA	675.00 SITEWORKE 4018-008 SITEWORK SITEWORK SITEWORK			Patch existing sidewalks Curb & gutter	500.0 1,135.0	00 SF 00 LF	8.00 14.30	16,230.50
	SITEWORK SITEWORK	12.65	LANDSCAPING	Sod General seeding	1,500.0 4,000.0		3.50 0.85	•
	SITEWORK SITEWORK SITEWORK SITEWORK			Play area mulch Landscape allowance		96 CY 90 LS	43.75 75,000.00	•

Report: Feasibility Study Const Cost Estimate
Project: The Reed School Feasibility Study

Prepared by: Downey & Scott, LLC 6799 Kennedy Road, Suite F Status: Client: Concept Design
SHW Group

PM: ct/gs/ah Chckd by: bd/sm

Report: Project: Location: Documents Dated:	The Reed	y Study Const Cost Estimate School Feasibility Study Public Schools 111	Prepared by: Downey & Scott, LLC 6799 Kennedy Road, Sulte F Warrenton, Virginia 20187 Ph 540.347.5001 Fax 540.347.5021 www.downeyscott.com	Status: Client: Submissn: Run Date:	Concept I SHW Group Nov. 10, 2 See foote	Ct 011 Jo	M: ct/gs/ah nckd by: bd/sm b no: 11094
LOC REF	SYS#	UNIFORMAT SYSTEM	SPECIFICATION	QUANTITY	U/M	UNIT COST	EXTENSION
		HVAC ALTERNATE					
	00.00	MEQUANICAL LIVAC Constant Alare Contest	HVAC Equipment Piping & Valves	05 000 00	005	40.50	4 000 400 0
ADDITION HVAC BASE	09.00	MECHANICAL HVAC - Stand Alone System	Ductwork	65,600.00		16.50	1,082,400.00
ADDITION HVAC BASE		Note: Average cost between 4-pipe system, water	Air Outlets	65,600.00		5.50	360,800.00
ADDITION HVAC BASE		source heat pump systems, and variable refrigerant	Ductwork Accessories	65,600.00		6.75	442,800.00
ADDITION HVAC BASE		flow system.	Insulation	65,600.00		0.59	38,704.00
ADDITION HVAC BASE			Temperature Controls	65,600.00		0.72	47,232.00
ADDITION HVAC BASE			Air & Water Balance	65,600.00		2.15	141,040.00
ADDITION HVAC BASE			Coordination Drawings	65,600.00		4.10	268,960.00
ADDITION HVAC BASE			Systems Operation & Testing	65,600.00		0.45	29,520.00
ADDITION HVAC BASE				65,600.00	GSF	0.22	14,432.00
ADDITION HVAC BASE			Subtotal	65,600.00	GSF	0.25	16,400.00
ADDITION HVAC BASE			General Conditions				
ADDITION HVAC BASE	11.00	MARK-UPS	Subtotal				2,442,288.00
ADDITION HVAC BASE			GC OH @ 5% plus Profit @ 5%	12.00%			293,074.56
ADDITION HVAC BASE			Subtotal				2,735,362.56
ADDITION HVAC BASE			Bonds & insurance	10.00%			273,536.26
ADDITION HVAC BASE			Subtotal				3,008,898.82
ADDITION HVAC BASE				1.25%			37,611.24
ADDITION HVAC BASE				65,600.00	GSF	\$46.44	3,046,510.05
ADDITION HVAC ALT	09.00	MECHANICAL HVAC - Geothermal	HVAC Equipment	65.600.00	GSF	13.75	902,000.00
ADDITION HVAC ALT		- 20	Piping & Valves	65,600.00		4.20	275,520.00
ADDITION HVAC ALT			Geothermal Bore, 77 bores at 600' depth	46,200.00		22.50	1,039,500.00
ADDITION HVAC ALT			Ductwork	65,600.00		5.85	383,760.00
ADDITION HVAC ALT			Air Outlets	65,600.00		0.59	38,704.0
ADDITION HVAC ALT			Ductwork Accessories	65,600.00		0.72	47,232.0
ADDITION HVAC ALT			Insulation	65,600.00		1.95	127,920.0
ADDITION HVAC ALT			Temperature Controls	65,600.00		4.10	268,960.0
ADDITION HVAC ALT			Air & Water Balance	65,600.00		0.45	29.520.00
ADDITION HVAC ALT			Coordination Drawings	65,600.00		0.22	14,432.00
ADDITION HVAC ALT			Systems Operation & Testing	65,600.00		0.25	16,400.00
ADDITION HVAC ALT			-, operation a rooming	35,530.00	-0.	5.20	. 5, .00.00
ADDITION HVAC ALT	11.00	MARK-UPS	Subtotal				3,143,948.00
ADDITION HVAC ALT			General Conditions	12.00%			377,273.76
ADDITION HVAC ALT			Subtotal	12.0070			3,521,221.76
ADDITION HVAC ALT			GC OH @ 5% plus Profit @ 5%	10.00%			352,122.18
DDON IIVAO ALI			Subtotal	10.0070			3,873,343.94
ADDITION HVAC ALT							
ADDITION HVAC ALT ADDITION HVAC ALT			Bonds & insurance	1.25%			48,416.80