



DUCKER WORLDWIDE

PENNSYLVANIA LOW SLOPE ROOFING ASSESSMENT

AUGUST 17, 2010

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Research Methodology

- Ducker completed over 50 interviews with roofing contractors and architects/specifiers
- In addition to the core interviews, over 80 price points were obtained to understand installed cost
- **Study participants include:**

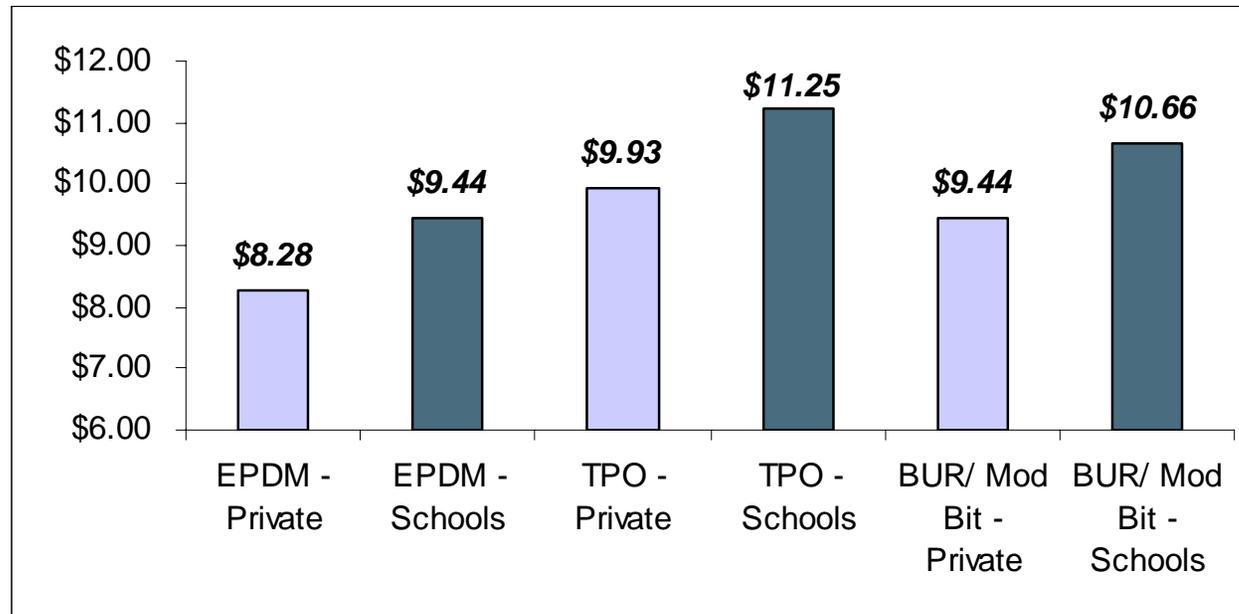
Respondent Type	Total Number of Interviews
Architects	31
Roofing Contractors	21
Total	52

- Carlisle was not revealed as the study sponsor

Total Installed Pricing for Reroofing Systems in PA

- Schools are consistently paying more for all roofing applications
 - For EPDM, schools pay 14% more than private
 - For TPO, schools pay 13% more than private
 - For Mod Bit, schools pay 13% more than private

Total Installed Cost per Square Foot

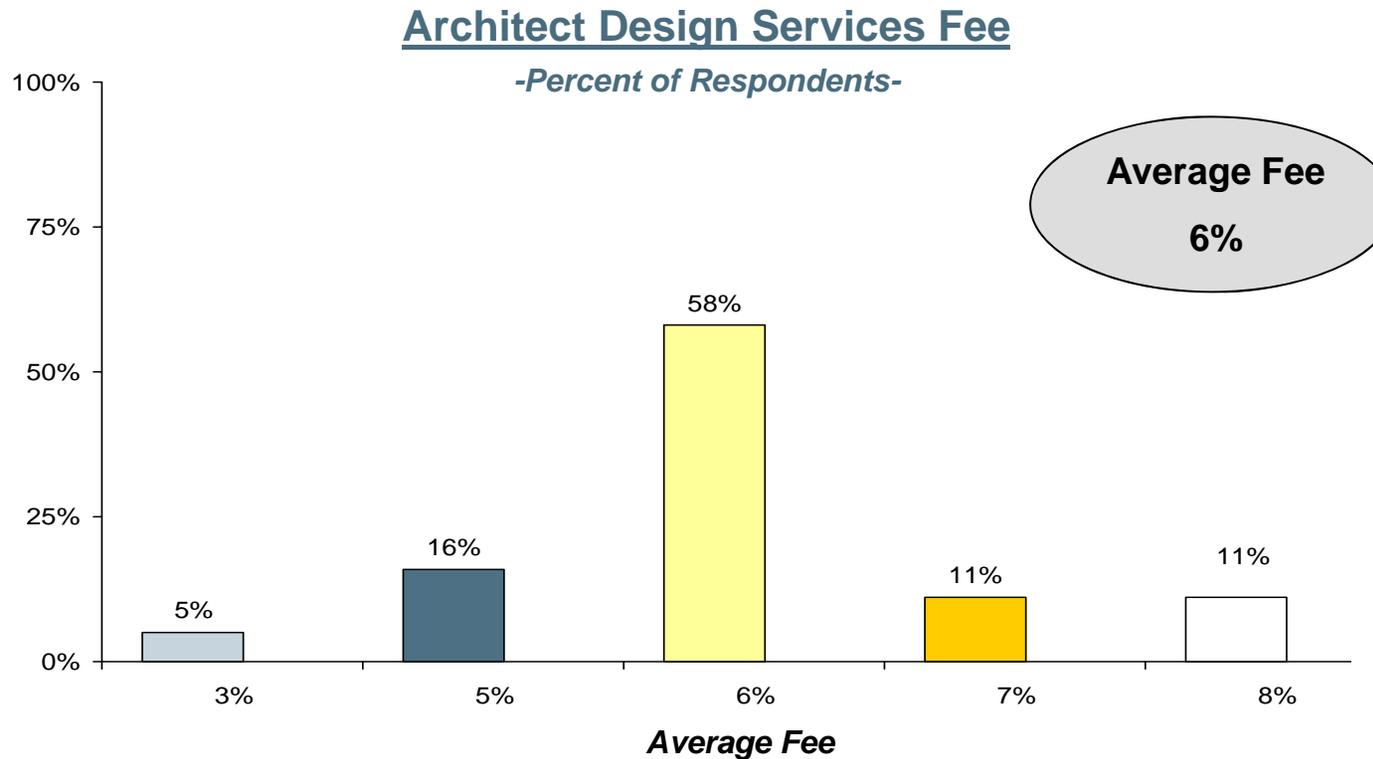


*Note: Each respondent provided pricing for several price points:
Private Sector: n=36 price points in total
Schools: n=52 price points in total*

**Q: Can you estimate the installed cost per square foot for each system that you are familiar with for private reroofing projects in PA?
For school reroofing projects in PA?**

Architect Fee Structure for School Reroofing Projects

- The average fee for design services for school reroofing projects is typically 6%, which confirms previous stated observations



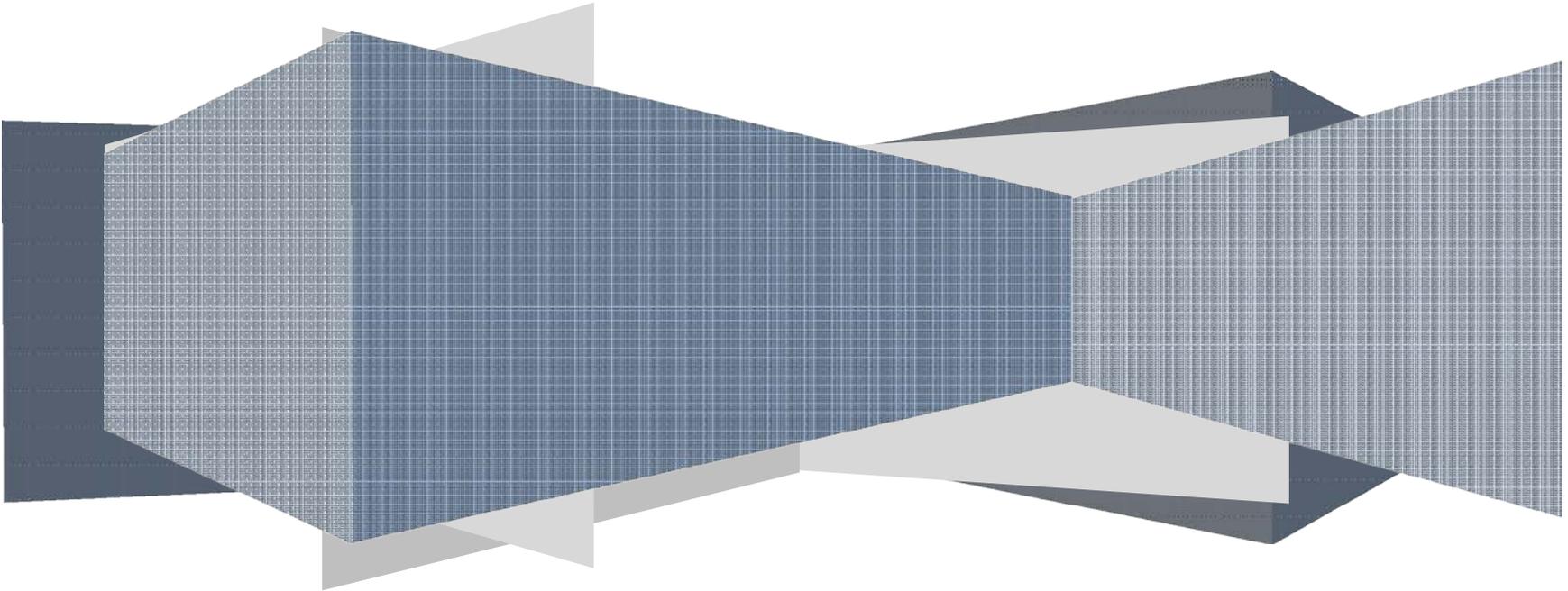
Note: 12 respondents refused or didn't know their fee

Q Typical fee structure for school reroofing projects:

Carlisle Construction Materials

Pennsylvania Roofing Study

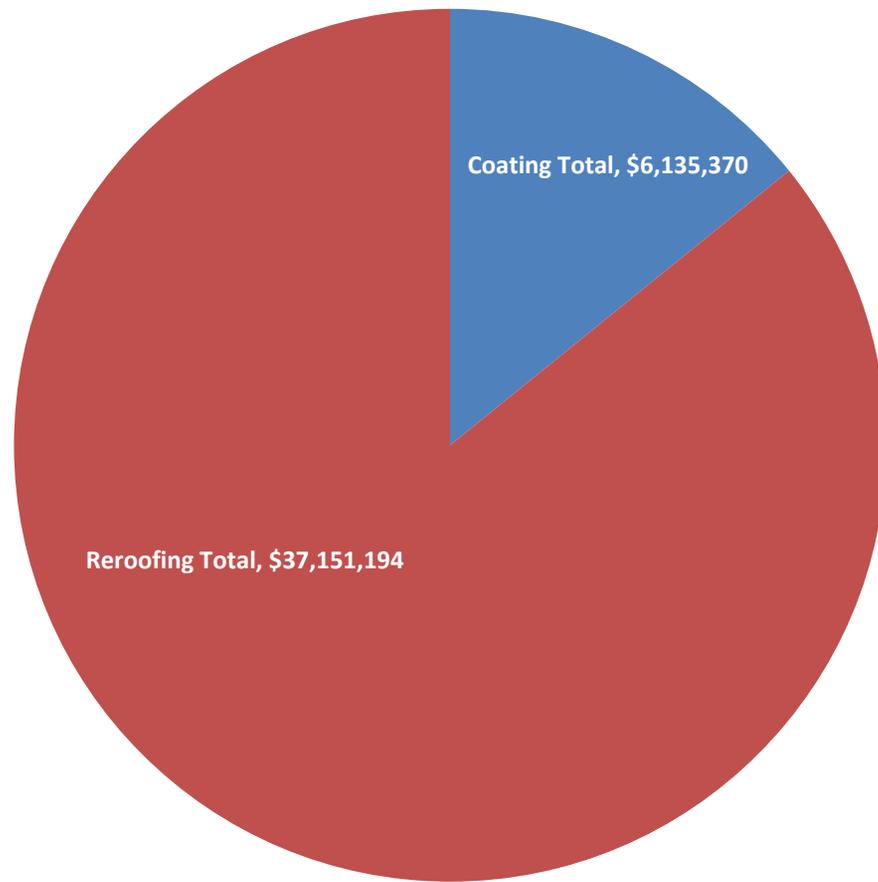
AEPA Purchasing Cooperatives



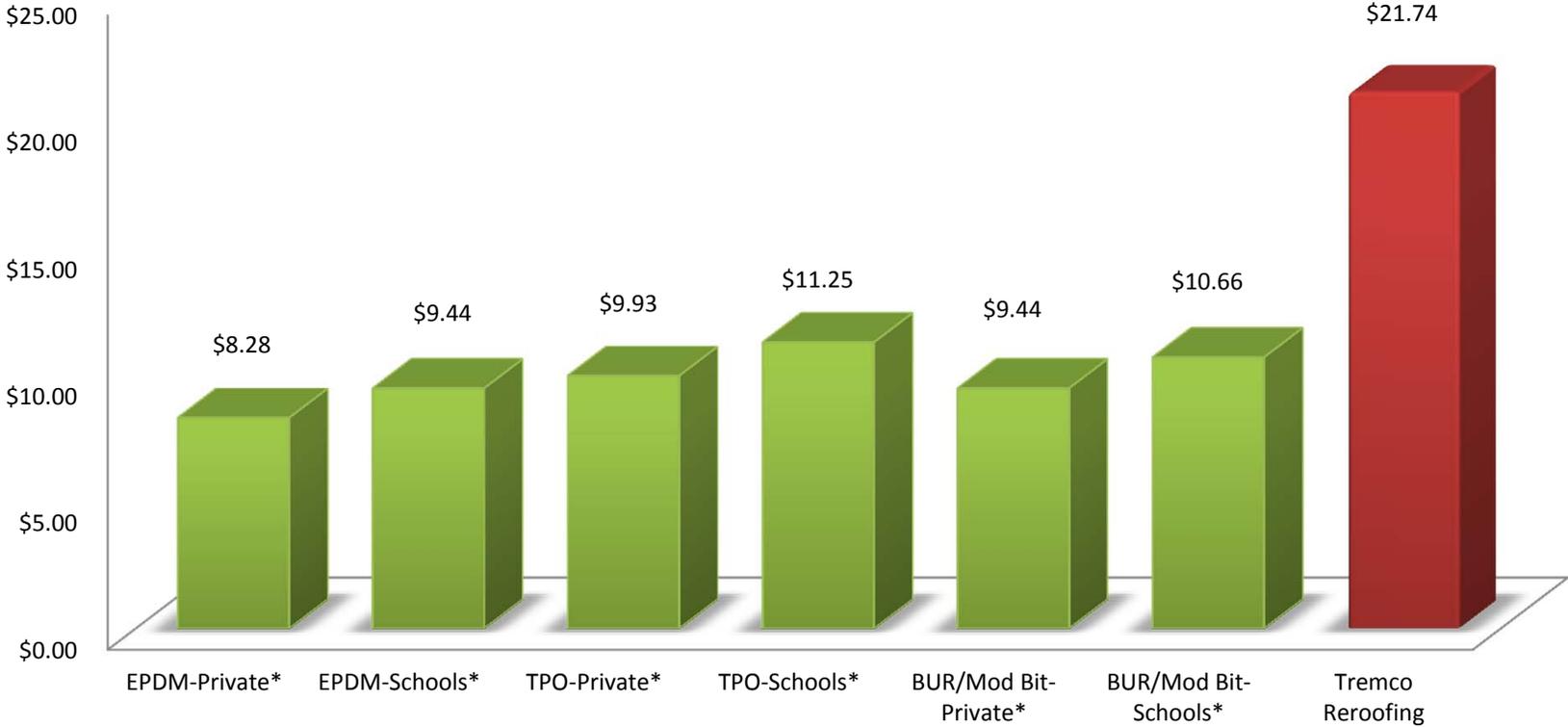
Analysis of Tremco Line Item Contracts 2005-2010

73 Contracts Obtained Directly From PA School Districts

Scope of Review-AEPA/Tremco Line Item Contracts



Total Installed Cost per Square Foot



*Ducker Survey Results



WEATHERPROOFING TECHNOLOGIES, INCORPORATED

						Contract # AEPA-005A-W500-PA	
						29-May-08	
TREMCO COMMERCIAL LINE ITEM PRICING							
STROUDSBURG AREA SCHOOL DISTRICT							
RAMSEY ELEMENTARY SCHOOL							
QUOTE #5005954							
Spec Number	WORK DESCRIPTION	UNIT	BID AMOUNT	QUANTITY	PROJECT AMOUNT		
D.1.3	Remove single-ply roof, membrane partially or fully adhered	SF	\$ 1.13	7928	\$	8,958.64	
B.1.1	Demolition of roof insulation, per inch of depth	SF	\$ 0.52	15856	\$	8,245.12	
D.1.1	Remove built-up roof, multi-ply aggregate, non-asbestos, one inch thick or less.	SF	\$ 0.93	7928	\$	7,373.04	
B.1.1	Demolition of roof insulation, per inch of depth	SF	\$ 0.52	15856	\$	8,245.12	
19.3	Sweep loose aggregate from roof membrane	SF	\$ 0.43	7928	\$	3,409.04	
B.1.5	Roof deck insulation, Isocyanurate in 4' x 4' or 4' x 8' sheets, 1" thick, R-6.6,mechanically fastened	SF	\$ 1.15	15856	\$	18,234.40	
B.1.16	Roof deck insulation, Isocyanurate (black facer only), tapered, 1/8" per foot slope, Type IV asphalt, per inch of depth	BF	\$ 1.15	23784	\$	27,351.60	
B.1.7	Roof deck insulation, fiberboard in 4' x 4' sheets, 1/2" thick, R-1.39, applied Type IV asphalt				\$	-	
	Cold applications	SF	\$ 1.08	7928	\$	8,562.24	
19.49	Built-up Roof, 3 plies Ply Trilaminate Sheet, cold process adhesive 20 year	SF	\$ 2.81	7928	\$	22,277.68	
D.1.21	Built-up roof, surface with cold asphaltic surfacing adhesive and gravel	SF	\$ 1.70	7928	\$	13,477.60	
D.1.37	Flashing membrane, CSPE with aluminum coating	SF	\$ 7.82	1500	\$	11,730.00	
K.1.5	Roof inspection services	DAY	\$ 650.00	6	\$	3,900.00	
5	Warranty 20 year option roofs under 10,000 sq ft minimum charge		\$ 2,200.00	1	\$	2,200.00	
L1.7	Other heavy equipment	Percent	15%	10000	\$	11,500.00	
					SUBTOTAL	\$ 155,464.48	
K1.20	Difficult access or fall restriction; surcharge	EA	15%		\$	23,319.67	
7	Multiplier for roofs less than 10,000 square feet		20%		\$	31,092.90	
					SUBTOTAL	\$ 209,877.05	
					PA 1.5% AEPA FEE	\$ 3,148.16	
					TOTAL PROJECT	\$ 213,025.20	
					COST		