

## CEF Fact Sheet

Union High School District - Building Repair

<b>Date of Estimate:</b>	October 1, 1998
<b>FEMA Region:</b>	III
<b>Preparer(s):</b>	Peter Phillip (FEMA)
<b>Applicant Name:</b>	Union High School District
<b>Project Title:</b>	Building Repair
<b>Damaged Facility:</b>	Gymnasium
<b>Declaration Number:</b>	FEMA-1234-DR-MD
<b>Project Number:</b>	3596
<b>PA ID No.:</b>	037-91154
<b>Date of Inspection:</b>	September 29, 1998
<b>Event Date(s)</b>	September 15, 1998
<b>Work Category:</b>	E
<b>Type of Work:</b> <i>(Enter New, Repair, etc.)</i>	Repair
	HMP
<b>Scope:</b>	Seismic-induced ground movement damaged gymnasium, a 20,000 sf, one-story building constructed in 1958. Building consists of structural steel frame with concrete tilt-up walls on concrete pile foundation. Roof deck is lightweight gypsum concrete; floor is concrete slab. Structural damage: cracking of concrete tilt-up walls, columns, soffits, and beams. Non-structural damage: cracked plaster, broken ceiling tiles, damaged lights. Repairs: temporary relocation of contents, including ceiling heaters; epoxy injection of cracks in concrete; patch and paint exterior and interior walls; remove and replace ceiling tiles. Proposed Hazard Mitigation: installation of vertical strongbacks at exterior tilt-up walls and bracing anchors. See Part A for quantities.

## CEF Notes

Union High School District - Building Repair

<b>Damaged Facility:</b>	Gymnasium
<b>Applicant Name:</b>	Union High School District
<b>Project Number:</b>	3596
<b>Date of Estimate:</b>	October 1, 1998
<b>Preparer(s):</b>	Peter Phillip (FEMA)
<b>Part A Notes:</b>	<p>A.1 - Construction costs based on 1998 R.S. Means unit costs with appropriate city index for each CSI division</p> <p>A.2 - Construction costs based on 1998 R.S. Means unit costs with appropriate city index for each CSI division</p>
<b>Part B Notes:</b>	<p>B.1 - General Requirement costs added for Submittals at 2%</p> <p>B.2 - Standard CEF factor used for General Conditions</p>
<b>Part C Notes:</b>	<p>C.1 - Repair: Scope of new construction is well defined, 2% used for design scope contingency Haz. Mit: Scope of Hazard Mitigation is based on preliminary engineering, 10% used for design scope contingency.</p> <p>C.2 - No constructibility costs applicable to Repair or Haz. Mit.</p> <p>C.3 - Access and storage within building are limited for Repair and Haz. Mit., Staging costs added for interior</p> <p>C.4 - Project is too small for economies of scale factor</p>
<b>Part D Notes:</b>	<p>D.1 - Standard CEF factor used for GC's Home Office Overhead</p> <p>D.2 - Standard CEF factor used for GC's Insurance, Payment &amp; Performance Bond</p> <p>D.3 - Standard CEF factor used for GC's Profit</p>
<b>Part E Notes:</b>	E.1 - Design = 4 months, Bid/Award = 2 months, Construction = 4 months
<b>Part F Notes:</b>	<p>F.1 - Plan review costs are based on Montgomery County, MD requirements</p> <p>F.2 - Permit costs are based on Montgomery County, MD requirements</p>
<b>Part G Notes:</b>	G.1 - Standard CEF factor used for Change Orders
<b>Part H Notes:</b>	<p>H.1 - Standard CEF factor used for Project Management - Design Phase</p> <p>H.2 - Standard CEF factor used for A/E Design Contract Costs</p> <p>H.3 - Standard CEF factor used for Project Management - Construction Phase</p>
<b>Miscellaneous Notes &amp; Comments:</b> <i>Use mouse to Activate Cursor:</i>	

**CEF Part A Estimate**

Union High School District - Building Repair

Item No.	Item Description Title / Component Description	Div. # or Cost Code	Qty	Units	Unit Price	City Adj Factor	Total Cost
<b>Completed</b>							
<b>Permanent</b>							
					\$ -		\$ -
					\$ -		\$ -
					\$ -		\$ -
					\$ -		\$ -
					\$ -		\$ -
					\$ -		\$ -
					\$ -		\$ -
					\$ -		\$ -
<b>Completed - Permanent Total</b>							\$ -
<b>Non-Permanent</b>							
					\$ -		\$ -
					\$ -		\$ -
					\$ -		\$ -
					\$ -		\$ -
					\$ -		\$ -
					\$ -		\$ -
					\$ -		\$ -
					\$ -		\$ -
<b>Completed - Non-Permanent Total</b>							\$ -
<b>Uncompleted</b>							
<b>Permanent</b>							
	<b>Repair</b>						\$ -
	<b>Structural</b>						\$ -
1	Epoxy inection of wall cracks	37-330-010	678.00	LF	\$ 33.50	0.90	\$ 20,441.70
	<b>Non-Structural</b>						\$ -
2	Remove ceiling tiles	20-702-150	12,540.00	SF	\$ 0.95	0.82	\$ 9,768.66
3	Replace ceiling tiles	95-104-030	12,540.00	SF	\$ 1.07	0.82	\$ 11,002.60
4	Reroute electrical conduit	60-205-030	400.00	LF	\$ 5.05	0.93	\$ 1,878.60
5	Remove existing lights	20-708-242	60.00	EA	\$ 21.50	0.86	\$ 1,109.40
6	Replace existing lights	20-708-242	60.00	EA	\$ 21.50	0.86	\$ 1,109.40
7	Temporary relocation of contents	estimate		LS	\$ 10,000.00	1.00	\$ 10,000.00
8	Remove and rehang ceiling heaters	55-480-200	2.00	EA	\$ 108.00	0.90	\$ 194.40
9	Paint interior walls	99-224-080	15,320.00	SF	\$ 0.54	0.82	\$ 6,783.70
10	Paint exterior walls	99-224-124	15,320.00	SF	\$ 0.61	0.82	\$ 7,663.06
					\$ -		\$ -

**CEF Part A Estimate**

Union High School District - Building Repair

Item No.	Item Description Title / Component Description	Div. # or Cost Code	Qty	Units	Unit Price	City Adj Factor	Total Cost
	<b>Hazard Mitigation</b>				\$ -		\$ -
11	Vertical strongbacks at exterior tilt up walls	51-220-330	16,000.00	LB	\$ 1.30	0.97	\$ 20,176.00
12	Bracing anchors	50-520-060	192.00	EA	\$ 7.00	0.97	\$ 1,303.68
13	Paint strongbacks	099-120-0220 099-120-0230 099-120-0240	360.00	LF	\$ 1.22	0.82	\$ 360.14
					\$ -		\$ -
<b>Uncompleted - Permanent Total</b>							\$ 91,791.34
<b>Non-Permanent</b>							
14	Scaffolding rental	15-255-410	15.00	EA	\$ 1,250.00	1.00	\$ 18,750.00
15	Temporary fencing	15-304-020	8.05	LF	\$ 200.00	1.00	\$ 1,610.00
<b>Uncompleted - Non-Permanent Total</b>							\$ 20,360.00
<b>TOTAL PART A BASE CONSTRUCTION COST</b>							\$ 112,151.34

## Union High School District - Building Repair

		Repair	HMP	\$ -	\$ -	\$ -	Total	
<b>PART A</b> "Base Costs" for Construction Work-In Trades								
<b>A.1</b>	<b>Permanent Work (From Part A Estimate)</b>						\$ -	
<b>A.2</b>	<b>Non-Permanent Job Specific Work (From Part A Estimate)</b>						\$ -	
Part A Total		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
<b>PART B</b> General Requirements and General Conditions								
<b>B.1</b>	<b>General Requirements</b>	Range Low to High		Enter % in Appropriate Column				
	Safety & Security - Airports, Ports & Govt. Owned Marinas	4.0%	6.0%					
	Temporary Services & Utilities	0.0%	1.0%					
	Quality Control	0.0%	1.0%					
	Submittals	0.0%	5.0%					
		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
<b>B.2</b>	<b>General Conditions (4.25%)</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Part B Total		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
<b>PART A through B SUBTOTAL</b>		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
<b>PART C</b> Construction Cost Contingencies								
<b>C.1</b>	<b>Design-Phase Scope Contingencies</b>	Range Low to High		Enter % in Appropriate Column				
	Preliminary Engineering Analysis	15.0%	20.0%					
	Working Drawings	2.0%	10.0%					
		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
<b>C.2</b>	<b>Facility or Project Constructability</b>	Enter % in Appropriate Column						
	Facility or Project Type and Complexity	(See IG for Values)						
		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
<b>C.3</b>	<b>Access, Storage &amp; Staging Contingencies</b>	Range Low to High		Enter % in Appropriate Column				
	Access Contingencies	1.0%	4.0%					
	Storage Contingencies	1.0%	4.0%					
	Staging Contingencies	1.0%	4.0%					
		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
<b>C.4</b>	<b>Economies of Scale</b>	0.0%		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		0%	0%	0%	0%	0%		
		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Part C Total		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
<b>PART A through C SUBTOTAL</b>		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
<b>PART D</b> General Contractor's Overhead and Profit								
<b>D.1</b>	<b>GC's Home Office Overhead</b>	7.7%		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
<b>D.2</b>	<b>GC's Insurance, Payment &amp; Performance Bonds</b>	3.3%		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
<b>D.3</b>	<b>General Contractor's Profit</b>			Select a top box for the type of project, and applicable bottom boxes to apply the factor.				
	New Construction	10.0%		<input type="checkbox"/>				
	Repair/Retrofit	10.0%			<input type="checkbox"/>			
		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Part D Total		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
<b>PART A through D SUBTOTAL</b>		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	

## Union High School District - Building Repair

		Repair	HMP	\$ -	\$ -	\$ -	Total
<b>PART E</b> Cost Escalation Factors							
<b>E</b>	<b>Cost Escalation Factor</b>	Months	Monthly Factor				
				\$ -	\$ -	\$ -	\$ -
<b>PART A through E SUBTOTAL</b>				\$ -	\$ -	\$ -	\$ -
<b>PART F</b> Plan Review and Construction Permit Cost							
<b>F.1</b>	<b>Plan Review Fees</b>						
	(List Individual Requirements Separately)						
				\$ -	\$ -	\$ -	\$ -
<b>F.2</b>	<b>Construction Permit Fees</b>						
	(List Individual Requirements Separately)						
				\$ -	\$ -	\$ -	\$ -
Part F Total				\$ -	\$ -	\$ -	\$ -
<b>PART A through F SUBTOTAL</b>				\$ -	\$ -	\$ -	\$ -
<b>PART G</b> Applicant's Reserve for Change Orders							
<b>G</b>	<b>Applicant's Reserve for Change Orders</b>	7.0%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
				\$ -	\$ -	\$ -	\$ -
<b>PART A through G SUBTOTAL</b>				\$ -	\$ -	\$ -	\$ -
<b>PART H</b> Applicant's Project Management and Design Costs							
<b>H.1</b>	<b>Applicant's Project Management - Design Phase</b>	1.0%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
				\$ -	\$ -	\$ -	\$ -
<b>H.2</b>	<b>A/E Design Contract Cost</b>						
	Above Average Complexity (Curve A)	<input type="checkbox"/>	0.0%	\$ -	\$ -	\$ -	\$ -
	Average Complexity (Curve B)	<input type="checkbox"/>	0.0%	\$ -	\$ -	\$ -	\$ -
	Basic Construction Inspection Services	<input type="checkbox"/>	3.0%	\$ -	\$ -	\$ -	\$ -
				\$ -	\$ -	\$ -	\$ -
<b>H.3</b>	<b>Project Management - Construction Phase</b>	6.0%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
				\$ -	\$ -	\$ -	\$ -
Part H Total				\$ -	\$ -	\$ -	\$ -
<b>PART A through H SUBTOTAL</b>				\$ -	\$ -	\$ -	\$ -
<b>TOTAL OF COMPLETED WORK</b>							<b>\$0</b>

## Union High School District - Building Repair

		Repair	HMP	\$ -	\$ -	\$ -	Total
<b>PART A</b>		"Base Costs" for Construction Work-In Trades					
<b>A.1</b>	<b>Permanent Work (From Part A Estimate)</b>	\$ 69,952	\$ 21,840				\$ 91,792
<b>A.2</b>	<b>Non-Permanent Job Specific Work (From Part A Estimate)</b>	\$ 20,360					\$ 20,360
<b>Part A Total</b>		\$ 90,312	\$ 21,840	\$ -	\$ -	\$ -	\$ 112,152
<b>PART B</b>		General Requirements and General Conditions					
<b>B.1</b>	<b>General Requirements</b>	Range Low to High		Enter % in Appropriate Column			
	Safety & Security - Airports, Ports & Govt. Owned Marinas	4.0%	6.0%				
	Temporary Services & Utilities	0.0%	1.0%				
	Quality Control	0.0%	1.0%				
	Submittals	0.0%	5.0%	2.00%	2.00%		
		\$ 1,806	\$ 437	\$ -	\$ -	\$ -	\$ 2,243
<b>B.2</b>	<b>General Conditions (4.25%)</b>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		\$ 3,838	\$ 928	\$ -	\$ -	\$ -	\$ 4,766
<b>Part B Total</b>		\$ 5,645	\$ 1,365	\$ -	\$ -	\$ -	\$ 7,010
<b>PART A through B SUBTOTAL</b>		\$ 95,957	\$ 23,205	\$ -	\$ -	\$ -	\$ 119,162
<b>PART C</b>		Construction Cost Contingencies					
<b>C.1</b>	<b>Design-Phase Scope Contingencies</b>	Range Low to High		Enter % in Appropriate Column			
	Preliminary Engineering Analysis	15.0%	20.0%				
	Working Drawings	2.0%	10.0%	2.00%	10.00%		
		\$ 1,919	\$ 2,321	\$ -	\$ -	\$ -	\$ 4,240
<b>C.2</b>	<b>Facility or Project Constructability</b>	Enter % in Appropriate Column					
	Facility or Project Type and Complexity	(See IG for Values)					
		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>C.3</b>	<b>Access, Storage &amp; Staging Contingencies</b>	Range Low to High		Enter % in Appropriate Column			
	Access Contingencies	1.0%	4.0%				
	Storage Contingencies	1.0%	4.0%				
	Staging Contingencies	1.0%	4.0%	1.00%	1.00%		
		\$ 960	\$ 232	\$ -	\$ -	\$ -	\$ 1,192
<b>C.4</b>	<b>Economies of Scale</b>	0.0%		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Part C Total</b>		\$ 2,879	\$ 2,553	\$ -	\$ -	\$ -	\$ 5,431
<b>PART A through C SUBTOTAL</b>		\$ 98,835	\$ 25,758	\$ -	\$ -	\$ -	\$ 124,593
<b>PART D</b>		General Contractor's Overhead and Profit					
<b>D.1</b>	<b>GC's Home Office Overhead</b>	7.7%		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		\$ 7,610	\$ 1,983	\$ -	\$ -	\$ -	\$ 9,594
<b>D.2</b>	<b>GC's Insurance, Payment &amp; Performance Bonds</b>	3.3%		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		\$ 3,262	\$ 850	\$ -	\$ -	\$ -	\$ 4,112
<b>D.3</b>	<b>General Contractor's Profit</b>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		\$ 10,971	\$ 2,859	\$ -	\$ -	\$ -	\$ 13,830
<b>Part D Total</b>		\$ 21,843	\$ 5,692	\$ -	\$ -	\$ -	\$ 27,535
<b>PART A through D SUBTOTAL</b>		\$ 120,678	\$ 31,450	\$ -	\$ -	\$ -	\$ 152,128

## Union High School District - Building Repair

		Repair	HMP	\$ -	\$ -	\$ -	Total		
<b>PART E</b> Cost Escalation Factors									
<b>E</b>	<b>Cost Escalation Factor</b>	Months	Monthly Factor						
		8	0.188%	\$ 1,815	\$ 473	\$ -	\$ -	\$ -	\$ 2,288
<b>PART A through E SUBTOTAL</b>				\$ 122,493	\$ 31,923	\$ -	\$ -	\$ -	\$ 154,416
<b>PART F</b> Plan Review and Construction Permit Cost									
<b>F.1</b>	<b>Plan Review Fees</b>	Montgomery County Public Works	\$ 1,341	\$ 315					
				\$ 1,341	\$ 315	\$ -	\$ -	\$ -	\$ 1,656
<b>F.2</b>	<b>Construction Permit Fees</b>	Montgomery County Building Construction Permit Fee	\$ 2,682	\$ 631					
				\$ 2,682	\$ 631	\$ -	\$ -	\$ -	\$ 3,313
Part F Total				\$ 4,023	\$ 946	\$ -	\$ -	\$ -	\$ 4,969
<b>PART A through F SUBTOTAL</b>				\$ 126,516	\$ 32,869	\$ -	\$ -	\$ -	\$ 159,385
<b>PART G</b> Applicant's Reserve for Change Orders									
<b>G</b>	<b>Applicant's Reserve for Change Orders</b>	7.0%	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
				\$ 8,856	\$ 2,301	\$ -	\$ -	\$ -	\$ 11,157
<b>PART A through G SUBTOTAL</b>				\$ 135,372	\$ 35,170	\$ -	\$ -	\$ -	\$ 170,542
<b>PART H</b> Applicant's Project Management and Design Costs									
<b>H.1</b>	<b>Applicant's Project Management - Design Phase</b>	1.0%	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
				\$ 1,354	\$ 352	\$ -	\$ -	\$ -	\$ 1,705
<b>H.2</b>	<b>A/E Design Contract Cost</b>	Above Average Complexity (Curve A)	<input type="checkbox"/>	10.5%	\$ -	\$ -	\$ -	\$ -	\$ -
		Average Complexity (Curve B)	<input checked="" type="checkbox"/>	8.3%	\$ 11,185	\$ 2,906	\$ -	\$ -	\$ -
		Basic Construction Inspection Services	<input type="checkbox"/>	3.0%	\$ -	\$ -	\$ -	\$ -	\$ -
						\$ 11,185	\$ 2,906	\$ -	\$ -
<b>H.3</b>	<b>Project Management - Construction Phase</b>	6.0%	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
				\$ 8,122	\$ 2,110	\$ -	\$ -	\$ -	\$ 10,233
Part H Total				\$ 20,661	\$ 5,368	\$ -	\$ -	\$ -	\$ 26,029
<b>PART A through H SUBTOTAL</b>				\$ 156,033	\$ 40,538	\$ -	\$ -	\$ -	\$ 196,570
<b>TOTAL OF UNCOMPLETED WORK</b>								<b>\$196,570</b>	



## Total Project Summary

Union High School District - Building Repair

		Completed	Uncompleted	Total
<b>PART A</b>	<b>"Base Costs" for Construction Work In Trades</b>	\$ -	\$ 112,152	\$ 112,152
	A.1 Permanent Work	\$ -	\$ 91,792	\$ 91,792
	A.2 Non-Permanent Job Specific Work (From Part A Estimate)	\$ -	\$ 20,360	\$ 20,360
<b>PART B</b>	<b>General Requirements and General Conditions</b>	\$ -	\$ 7,010	\$ 7,010
	B.1 General Requirements	\$ -	\$ 2,243	\$ 2,243
	B.2 General Conditions	\$ -	\$ 4,766	\$ 4,766
<b>PART C</b>	<b>Construction Cost Contingencies (Design and Construction)</b>	\$ -	\$ 5,431	\$ 5,431
	C.1 Standard Design-Phase Scope Contingencies	\$ -	\$ 4,240	\$ 4,240
	C.2 Facility or Project Constructability	\$ -	\$ -	\$ -
	C.3 Access, Storage, and Staging Contingencies	\$ -	\$ 1,192	\$ 1,192
	C.4 Economies of Scale in New Construction	\$ -	\$ -	\$ -
<b>PART D</b>	<b>General Contractor's Overhead and Profit</b>	\$ -	\$ 27,535	\$ 27,535
	D.1 General Contractor's Home Office Overhead Costs	\$ -	\$ 9,594	\$ 9,594
	D.2 General Contractor's Insurance, Payment, and Performance	\$ -	\$ 4,112	\$ 4,112
	D.3 Contractor's Profit	\$ -	\$ 13,830	\$ 13,830
<b>PART E</b>	<b>Cost Escalation Allowance</b>	\$ -	\$ 2,288	\$ 2,288
<b>PART F</b>	<b>Plan Review and Construction Permit Costs</b>	\$ -	\$ 4,969	\$ 4,969
	F.1 Plan Review Fees	\$ -	\$ 1,656	\$ 1,656
	F.2 Construction Permit Fees	\$ -	\$ 3,313	\$ 3,313
<b>PART G</b>	<b>Applicant's Reserve for Construction</b>	\$ -	\$ 11,157	\$ 11,157
<b>PART H</b>	<b>Applicant's Project Management and Design Costs</b>	\$ -	\$ 26,029	\$ 26,029
	H.1 Applicant's Project Management - Design Phase	\$ -	\$ 1,705	\$ 1,705
	H.2 Architecture & Engineering Design Contract Costs	\$ -	\$ 14,091	\$ 14,091
	H.3 Project Management - Construction Phase	\$ -	\$ 10,233	\$ 10,233
<b>Complete Project Total for Completed and Uncompleted Work</b>		<b>\$ -</b>	<b>\$ 196,570</b>	<b>\$ 196,570</b>