

CEF Fact Sheet

Union High School District - Building Repair

Date of Estimate:	October 1, 1998
FEMA Region:	III
Preparer(s):	Peter Phillip (FEMA)
Applicant Name:	Union High School District
Project Title:	Building Repair
Damaged Facility:	Gymnasium
Declaration Number:	FEMA-1234-DR-MD
Project Number:	3596
PA ID No.:	037-91154
Date of Inspection:	September 29, 1998
Event Date(s)	September 15, 1998
Work Category:	E
Type of Work: <i>(Enter New, Repair, etc.)</i>	Repair
	HMP
Scope:	<p>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.</p>

CEF Notes

Union High School District - Building Repair

Damaged Facility:	Gymnasium
Applicant Name:	Union High School District
Project Number:	3596
Date of Estimate:	October 1, 1998
Preparer(s):	Peter Phillip (FEMA)
Part A Notes:	<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>
Part B Notes:	<p>B.1 - General Requirement costs added for Submittals at 2%</p> <p>B.2 - Standard CEF factor used for General Conditions</p>
Part C Notes:	<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>
Part D Notes:	<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 & Performance Bond</p> <p>D.3 - Standard CEF factor used for GC's Profit</p>
Part E Notes:	E.1 - Design = 4 months, Bid/Award = 2 months, Construction = 4 months
Part F Notes:	<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>
Part G Notes:	G.1 - Standard CEF factor used for Change Orders
Part H Notes:	<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>
Miscellaneous Notes & Comments: <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
Completed							
Permanent							
					\$ -		\$ -
					\$ -		\$ -
					\$ -		\$ -
					\$ -		\$ -
					\$ -		\$ -
					\$ -		\$ -
					\$ -		\$ -
					\$ -		\$ -
Completed - Permanent Total							\$ -
Non-Permanent							
					\$ -		\$ -
					\$ -		\$ -
					\$ -		\$ -
					\$ -		\$ -
					\$ -		\$ -
					\$ -		\$ -
					\$ -		\$ -
					\$ -		\$ -
Completed - Non-Permanent Total							\$ -
Uncompleted							
Permanent							
	Repair						\$ -
	Structural						\$ -
1	Epoxy inection of wall cracks	37-330-010	678.00	LF	\$ 33.50	0.90	\$ 20,441.70
	Non-Structural						\$ -
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
	Hazard Mitigation				\$ -		\$ -
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
					\$ -		\$ -
Uncompleted - Permanent Total							\$ 91,791.34
Non-Permanent							
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
Uncompleted - Non-Permanent Total							\$ 20,360.00
TOTAL PART A BASE CONSTRUCTION COST							\$ 112,151.34

Union High School District - Building Repair

		Repair	HMP	\$ -	\$ -	\$ -	Total	
PART A "Base Costs" for Construction Work-In Trades								
A.1	Permanent Work (From Part A Estimate)						\$ -	
A.2	Non-Permanent Job Specific Work (From Part A Estimate)						\$ -	
Part A Total		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
PART B General Requirements and General Conditions								
B.1	General Requirements	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.2	General Conditions (4.25%)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Part B Total		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
PART A through B SUBTOTAL		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
PART C Construction Cost Contingencies								
C.1	Design-Phase Scope Contingencies	Range Low to High		Enter % in Appropriate Column				
	Preliminary Engineering Analysis	15.0%	20.0%					
	Working Drawings	2.0%	10.0%					
		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
C.2	Facility or Project Constructability	Enter % in Appropriate Column						
	Facility or Project Type and Complexity	(See IG for Values)						
		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
C.3	Access, Storage & Staging Contingencies	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%					
		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
C.4	Economies of Scale	0.0%		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		0%	0%	0%	0%	0%		
		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Part C Total		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
PART A through C SUBTOTAL		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
PART D General Contractor's Overhead and Profit								
D.1	GC's Home Office Overhead	7.7%		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
D.2	GC's Insurance, Payment & Performance Bonds	3.3%		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
D.3	General Contractor's Profit			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		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
PART A through D SUBTOTAL		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	

Union High School District - Building Repair

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

Union High School District - Building Repair

		Repair	HMP	\$ -	\$ -	\$ -	Total
PART A		"Base Costs" for Construction Work-In Trades					
A.1	Permanent Work (From Part A Estimate)	\$ 69,952	\$ 21,840				\$ 91,792
A.2	Non-Permanent Job Specific Work (From Part A Estimate)	\$ 20,360					\$ 20,360
Part A Total		\$ 90,312	\$ 21,840	\$ -	\$ -	\$ -	\$ 112,152
PART B		General Requirements and General Conditions					
B.1	General Requirements	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.2	General Conditions (4.25%)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		\$ 3,838	\$ 928	\$ -	\$ -	\$ -	\$ 4,766
Part B Total		\$ 5,645	\$ 1,365	\$ -	\$ -	\$ -	\$ 7,010
PART A through B SUBTOTAL		\$ 95,957	\$ 23,205	\$ -	\$ -	\$ -	\$ 119,162
PART C		Construction Cost Contingencies					
C.1	Design-Phase Scope Contingencies	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
C.2	Facility or Project Constructability	Enter % in Appropriate Column					
	Facility or Project Type and Complexity	(See IG for Values)					
		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
C.3	Access, Storage & Staging Contingencies	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
C.4	Economies of Scale	0.0%		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Part C Total		\$ 2,879	\$ 2,553	\$ -	\$ -	\$ -	\$ 5,431
PART A through C SUBTOTAL		\$ 98,835	\$ 25,758	\$ -	\$ -	\$ -	\$ 124,593
PART D		General Contractor's Overhead and Profit					
D.1	GC's Home Office Overhead	7.7%	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		\$ 7,610	\$ 1,983	\$ -	\$ -	\$ -	\$ 9,594
D.2	GC's Insurance, Payment & Performance Bonds	3.3%	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		\$ 3,262	\$ 850	\$ -	\$ -	\$ -	\$ 4,112
D.3	General Contractor's Profit		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	New Construction	10.0%	Select a top box for the type of project, and applicable bottom boxes to apply the factor.				
	Repair/Retrofit	10.0%	New Construction	<input type="checkbox"/>	Repair/Retrofit	<input type="checkbox"/>	
		\$ 10,971	\$ 2,859	\$ -	\$ -	\$ -	\$ 13,830
Part D Total		\$ 21,843	\$ 5,692	\$ -	\$ -	\$ -	\$ 27,535
PART A through D SUBTOTAL		\$ 120,678	\$ 31,450	\$ -	\$ -	\$ -	\$ 152,128

Union High School District - Building Repair

		Repair	HMP	\$ -	\$ -	\$ -	Total		
PART E Cost Escalation Factors									
E	Cost Escalation Factor	Months	Monthly Factor						
		8	0.188%	\$ 1,815	\$ 473	\$ -	\$ -	\$ -	\$ 2,288
PART A through E SUBTOTAL				\$ 122,493	\$ 31,923	\$ -	\$ -	\$ -	\$ 154,416
PART F Plan Review and Construction Permit Cost									
F.1	Plan Review Fees	Montgomery County Public Works	\$ 1,341	\$ 315					
				\$ 1,341	\$ 315	\$ -	\$ -	\$ -	\$ 1,656
F.2	Construction Permit Fees	Montgomery County Building Construction Permit Fee	\$ 2,682	\$ 631					
				\$ 2,682	\$ 631	\$ -	\$ -	\$ -	\$ 3,313
Part F Total				\$ 4,023	\$ 946	\$ -	\$ -	\$ -	\$ 4,969
PART A through F SUBTOTAL				\$ 126,516	\$ 32,869	\$ -	\$ -	\$ -	\$ 159,385
PART G Applicant's Reserve for Change Orders									
G	Applicant's Reserve for Change Orders	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
PART A through G SUBTOTAL				\$ 135,372	\$ 35,170	\$ -	\$ -	\$ -	\$ 170,542
PART H Applicant's Project Management and Design Costs									
H.1	Applicant's Project Management - Design Phase	1.0%	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
				\$ 1,354	\$ 352	\$ -	\$ -	\$ -	\$ 1,705
H.2	A/E Design Contract Cost	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	\$ -	\$ -
H.3	Project Management - Construction Phase	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
PART A through H SUBTOTAL				\$ 156,033	\$ 40,538	\$ -	\$ -	\$ -	\$ 196,570
TOTAL OF UNCOMPLETED WORK								\$196,570	

Total Project Summary

Union High School District - Building Repair

		Completed	Uncompleted	Total
PART A	"Base Costs" for Construction Work In Trades	\$ -	\$ 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
PART B	General Requirements and General Conditions	\$ -	\$ 7,010	\$ 7,010
	B.1 General Requirements	\$ -	\$ 2,243	\$ 2,243
	B.2 General Conditions	\$ -	\$ 4,766	\$ 4,766
PART C	Construction Cost Contingencies (Design and Construction)	\$ -	\$ 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	\$ -	\$ -	\$ -
PART D	General Contractor's Overhead and Profit	\$ -	\$ 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
PART E	Cost Escalation Allowance	\$ -	\$ 2,288	\$ 2,288
PART F	Plan Review and Construction Permit Costs	\$ -	\$ 4,969	\$ 4,969
	F.1 Plan Review Fees	\$ -	\$ 1,656	\$ 1,656
	F.2 Construction Permit Fees	\$ -	\$ 3,313	\$ 3,313
PART G	Applicant's Reserve for Construction	\$ -	\$ 11,157	\$ 11,157
PART H	Applicant's Project Management and Design Costs	\$ -	\$ 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
Complete Project Total for Completed and Uncompleted Work		\$ -	\$ 196,570	\$ 196,570