Cost Estimating Format for Large Projects Training Module

PARTICIPANT'S WORKBOOK

Federal Emergency Management Agency

Cost Estimating Format for Large Projects Training Module Participant's Workbook

UNIT 1 - INTRODUCTION Participant Notes

Cost Estimating Format for Large Projects Training Module

UNIT 1 - INTRODUCTION EXERCISE SCENARIOS

UNIT 1 - INTRODUCTION Exercise Scenarios

Read the following project descriptions. Determine if the CEF should be used for each project, and a give a reason for your decision. Assume that the event that caused the damage has been declared a disaster and that the Applicant is eligible.

Project 1

Three buildings on a high school campus sustained damage during an earthquake. The Applicant has prepared preliminary estimates of the damage as follows:

• Gymnasium: \$500,000

Multi-Purpose Room: \$30,000Classroom Building 1: \$150,000

Due to nature of the damage, the Applicant intends to hire one contractor to complete all of the work to repair the facilities.

Project 2

During a flood, several thousand cubic yards of mud, gravel, and rock are deposited on the roads, parking lots, and open areas of a county park and recreation center. The county has not yet begun work to restore the park to its pre-disaster condition. The preliminary estimate for removing the deposits, which will be done by contractors, is \$100,000.

Project 3

A flood has demolished a 400-foot long flood control structure that provides protection to an airport runway. Under FEMA's Flood Control Works policy, permanent restoration of the facility is not eligible. However, FEMA has agreed that proposed construction of an emergency earthen levee to provide protection up to the level of a 5-year flood would be eligible. The Applicant wants to get a grant estimate from FEMA before beginning the work.

Project 4

The city hall is damaged during a hurricane. The city has completed emergency repairs (replacing doors, boarding up windows, and repairing mechanical and electrical systems) at a cost of \$75,000 to keep the building functioning. However, the roof must be replaced due to major damage, and permanent repairs to windows, doors, and interiors must be completed. Additionally, the city is interested in installing hurricane shutters for hazard mitigation. Preliminary costs have not been developed for the work that must be completed.

Project 5

A school building is severely damaged during a tornado. The Applicant wants to restore the building before the new school year starts and has proceeded with an aggressive reconstruction schedule. Construction, which began 30 days ago, is expected to be complete in 90 days.

UNIT 2 – THE CEF SPREADSHEET Participant Notes

Cost Estimating Format for Large Projects Training Module

UNIT 2 – THE CEF SPREADSHEET

CEF Fact Sheet

| Date of Estimate: | |
|---------------------------|--|
| FEMA Region: | |
| Preparer(s): | |
| Applicant Name: | |
| Project Title: | |
| Damaged Facility: | |
| Declaration Number: | |
| Project Number: | |
| PA ID No.: | |
| Date of Inspection: | |
| Event Date(s) | |
| Work Category: | |
| Type of Work: | |
| (Enter New, Repair, etc.) | |
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| Scope: | |
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CEF Notes

| Damaged Facility: | | |
|-------------------|-------|--|
| Applicant Name: | | |
| Project Number: | | |
| Date of Estimate: | | |
| Preparer(s): | | |
| Part A Notes: | A.1 - | |
| | A.2 - | |
| Part B Notes: | B.1 - | |
| | B.2 - | |
| | | |
| Part C Notes: | C.1 - | |
| | C.2 - | |
| | C.3 - | |
| | C.4 - | |
| Part D Notes: | D.1 - | |
| | D.2 - | |
| | D.3 - | |
| Part E Notes: | E.1 - | |
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| Part F Notes: | F.1 - | |
| | F.2 - | |
| | | |
| Part G Notes: | G.1 - | |
| | | |
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| Part H Notes: | H.1 - | |
| | H.2 - | |
| | H.3 - | |
| Miscellaneous | | |
| Notes & | | |
| Comments: | | |
| Use mouse to | | |
| Activate Cursor: | | |
| | | |

CEF Part A Estimate

| Item No. | Item Description Title / Component Description | Div. # or Cost Code | Qty | Units | Unit Price | City Adj Factor | Total Cost |
|-------------|---|------------------------|--------|----------|--|--------------------|--|
| Comple | ted | | | | | | |
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| PART A | | | 'Base Costs' | for Construction | Work-In Trades | | | | |
| A.1 | Permanent Work (From Part A Estimate) | | | | | | | | \$ - |
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| A.2 | Non-Permanent Job Specific Work (From Part | A Estima | ate) | | | | | | \$ - |
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| PART B | | G | eneral Requi | rements and Ger | neral Conditions | | | | |
| B.1 | Conord Possiromente | | nge | | F=+== 0/ i | in Appropriate | Caluman | | |
| Б.1 | General Requirements Safety & Security - Airports, Ports & Govt. Owned Marinas | 4.0% | o High 6.0% | | Enter % | ПАрргорпак | Column | | - |
| | Temporary Services & Utilities | 0.0% | 1.0% | | | | | | |
| | Quality Control Submittals | 0.0% | 1.0% 5.0% | | | | | | _ |
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| B.2 | General Conditions (4.25%) | | | • | \$ - | \$ - | | | \$ - |
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| PART C | | | Constru | ection Cost Conti | ngencies | | | | |
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| C.1 | Design-Phase Scope Contingencies | 1 | o High | | Enter % | in Appropriate | e Column | | 4 |
| | Preliminary Engineering Analysis Working Drawings | 15.0% 2.0% | 20.0% 10.0% | | | | | | - |
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| C.2 | Facility on Brainet Constructshills. | | | | Enter % i | in Appropriate | e Column | | |
| C.2 | Facility or Project Constructability Facility or Project Type and Complexity | (See IG f | for Values) | | 2.1101 701 | | | | - |
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| C.3 | Access, Storage & Staging Contingencies | | nge o High | | Enter % i | in Appropriate | e Column | | |
| | Access Contingencies | 1.0% | 4.0% | | | | | | |
| | Storage Contingencies | 1.0% | 4.0% 4.0% | | | | | | _ |
| | Staging Contingencies | 1.0% | 4.0% | \$ - | \$ - | \$ - | \$ - | \$ - | s - |
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| C.4 | Economies of Scale | | 0.0% | 0% | 0% | 0% | 0% | 0% | - |
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| PART D | | | General Co | ntractor's Overhe | ead and Profit | | | | |
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| D.1 | GC's Home Office Overhead | | 7.7% | E | B | | | II | |
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| D.2 | GC's Insurance, Payment & Performance Bon | nds | 3.3% | <u> </u> | E | <u> </u> | 15 | E . | |
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| | | Construction pair/Retrofit | | | | Repair/Retrofit | _ | , | |
| D.3 | General Contractor's Profit | | | E | B | 100 | III | III. | |
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| PART F | Dian Daview Food | | Plar | in Reviev | and Construc | ion Permit | Cost | | | | | | | |
| F.1 | Plan Review Fees (List Individual Requirements Separately) | | | | | | | I | | | | | | |
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| F.2 | Construction Permit Fees | | | | | | | T | | | | | | |
| | (List Individual Requirements Separately) | | | | | | | | | | | | | |
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| PART G | | | Ar | nnlicant's | Reserve for C | hange Orde | ers | | | | | | | |
| G | Applicant's Reserve for Change Ord | lers | | 7.0% | | | ,,,, | | | | | | | |
| | - 11 | | | 1.070 | 100 | | | 100 | | 100 | | 100 | | |
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| H.1 | Applicant's Project Management - D A/E Design Contract Cost Above Average Complexity (Curve A) Average Complexity (Curve B) | RT A through | Applican | OTAL 1.0% 0.0% | \$ - st Manageme \$ - \$ - | s s s s s s | - | \$ | - | \$ \$ \$ | - | \$ \$ \$ \$ \$ | - | \$ - |
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| H.1 H.2 | Applicant's Project Management - D A/E Design Contract Cost Above Average Complexity (Curve A) Average Complexity (Curve B) Basic Construction Inspection Services | RT A through | Applican | OTAL 1.0% 0.0% 0.0% | \$ - \$ - Ct Manageme \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ | s s s s s s | - | \$ | - | \$ \$ \$ | - | \$ F | - | \$ - |
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| RT A 4.1 | Permanent Work (From Part A Estimate) | <u>"</u> ! | Base Costs" f | or Const | ruction v | vork-in i | rades | | | | | | | \$ | |
| ٦. ١ | Termanent Work (From Fart A Estimate) | | | | | | | | | | | | | φ | |
| 4.2 | Non-Permanent Job Specific Work (From Part | A Estim | ate) | | | | | | | | | | | \$ | |
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| RTB | | Ge | neral Require | ments a | nd Gene | eral Condi | itions | | | | | | | | |
| 3.1 | General Requirements | | ange to High | | | Ente | er % ir | n Appro | oriate | . Colu | mn | | | | |
| | Safety & Security - Airports, Ports & Govt. Owned Marinas | 4.0% | 6.0% | | | | J. 70 II | .,,,,,,,, | priate | 00.0 | | | | | |
| | Temporary Services & Utilities Quality Control | 0.0% | 1.0% | | | | | | | | | | | | |
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| 3.2 | General Conditions (4.25%) | | | | | | | | | | 1 | | | | |
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| RTC | | | Construc | tion Cos | t Conting | gencies | | | | | | | | | |
| | | | ange | | | | | | | | | | | | |
| 0.1 | Design-Phase Scope Contingencies | | to High | | | Ente | er % ir | n Appro | priate | Colu | mn | | | | |
| | Preliminary Engineering Analysis Working Drawings | 15.0% 2.0% | 20.0% 10.0% | | | | | | | | | | | | |
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| 0.2 | Facility or Project Constructability | | | Ī | | Ente | er % ir | n Appro | priate | Colu | mn | | | | |
| | Facility or Project Type and Complexity | (See IG | for Values) | | | | | | | | | | | | |
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| C.3 | Access, Storage & Staging Contingencies Access Contingencies | Low 1 | 4.0% | | | Ente | er % ir | n Appro | priate | Colu | mn | | | | |
| | Storage Contingencies | 1.0% | 4.0% | | | | | | | | | | | | |
| | Staging Contingencies | 1.0% | 4.0% | \$ | | \$ | | \$ | | s | | s | | • | |
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| 0.4 | Economies of Scale | | 0.0% | \$ | _ | \$ | _ | \$ | <u> </u> | \$ | _ | <u></u> | | \$ | |
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| D.1 | GC's Home Office Overhead | | 7.7% | | | | | | | | | | | • | |
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| 0.2 | GC's Insurance, Payment & Performance Bor | nds | 3.3% | | | E | | - | | | | | | _ | |
| | New C | Construction | 10.0% | \$ Select | a top box | \$ for the typ | e of proj | \$ ect, and ap | - oplicable | \$ bottom | boxes to | \$ apply the | factor. | \$ | |
| | Rep | pair/Retrofit | | II . | onstructi | ion 🔲 | | Repair/ | Retrofi | | | | | | |
| 0.3 | General Contractor's Profit | | | \$ | _ | \$ | | \$ | <u> </u> | \$ | _ | \$ | _ | \$ | |
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| PARTE | | | | Monthly | Escalation | 1 Facto | ors | | | | | | | |
| | | | Months | Factor | | | | | | | | | | |
| E | Cost Escalation Factor | | | | \$ | - | \$ - | \$ | - | \$ | - | \$ - | \$ | - |
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| | | FART A UIIO | ugii E 3 | OBIOTAL | Ф | - | Φ - | Þ | - | Þ | - | 3 - | Ф | - |
| PART F | | | | Plan Review | and Constr | uction I | Permit Cost | | | | | | | |
| F.1 | Plan Review Fees | | | | | | | | | | | | | |
| | (List Individual Requirements Separately) | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | \$ | - | \$ - | \$ | - | \$ | - | \$ - | \$ | - |
| F.2 | Construction Permit Fees | | | | i | | | | | | | | | |
| | (List Individual Requirements Separately) | | | | | | | | | | | | | |
| | | | | | | | | | | | | | - | |
| | | | | | \$ | _ | \$ - | \$ | - | \$ | - | \$ - | \$ | _ |
| | | | _ | | | | | | | | | - | | |
| | | | F | Part F Total | \$ | - | \$ - | \$ | - | \$ | - | \$ - | \$ | - |
| | | PART A thro | ugh F S | UBTOTAL | \$ | - | \$ - | \$ | - | \$ | - | \$ - | \$ | - |
| | | | | | | | | | | | | | | |
| PART G | | | | Applicant's | Reserve for | Chan | ge Orders | | | | | | | |
| G | Applicant's Reserve for Change | Orders | | 7.0% | | | \$ - | | | \$ | | \$ - | | |
| | | | | | \$ | - | \$ - | \$ | - | \$ | - | \$ - | \$ | - |
| | | PART A thro | ugh G S | UBTOTAL | \$ | - | \$ - | \$ | - | \$ | - | \$ - | \$ | - |
| | | | | | | | | | | | | | | |
| PART H | | | | icant's Projec | t Managen | nent ar | nd Design Co | osts | | | | | | |
| H.1 | Applicant's Project Managemen | t - Design Pha | se | 1.0% | 歷 | | 扈 | Į. | | 3 | | 3 | | |
| | | | | | | | | | | \$ | - | \$ - | \$ | - |
| | | | | | \$ | - | \$ - | \$ | - | Ψ | | | | |
| H.2 | A/E Design Contract Cost | | | | \$ | - | \$ - | \$ | - | J | | | | |
| H.2 | A/E Design Contract Cost Above Average Complexity (Curve A) | | | 0.0% | \$ | - | \$ - | \$ | - | \$ | - | \$ - | | |
| H.2 | Above Average Complexity (Curve A) Average Complexity (Curve B) | | | 0.0% | \$ | - | \$ - \$ - | \$ | <u>-</u> | \$ | - | \$ - | - | |
| H.2 | Above Average Complexity (Curve A) | | | | \$ | - | \$ - \$ - \$ - | \$ \$ | - | \$ | | | \$ | |
| | Above Average Complexity (Curve A) Average Complexity (Curve B) Basic Construction Inspection Services | tion Di- | | 0.0% 3.0% | \$ \$ \$ | - - | \$ - \$ - \$ - | \$ \$ \$ | - - - | \$ \$ | - | \$ - \$ - \$ - | \$ | - |
| H.2 | Above Average Complexity (Curve A) Average Complexity (Curve B) | tion Phase | | 0.0% | \$ \$ \$ \$ | - - | \$ - \$ - \$ - \$ - | \$ \$ \$ | - - - | \$ \$ | - | \$ - \$ - \$ - | | - |
| | Above Average Complexity (Curve A) Average Complexity (Curve B) Basic Construction Inspection Services | tion Phase | | 0.0% 3.0% 6.0% | \$ \$ \$ \$ | - - - - | \$ - \$ - \$ - \$ - | \$ \$ \$ \$ | - - - | \$ \$ \$ \$ | - | \$ - \$ - \$ - | \$ | |
| | Above Average Complexity (Curve A) Average Complexity (Curve B) Basic Construction Inspection Services | tion Phase | | 0.0% 3.0% | \$ \$ \$ \$ | - - - | \$ - \$ - \$ - \$ - | \$ \$ \$ | - - - | \$ \$ | - | \$ - \$ - \$ - | | |
| | Above Average Complexity (Curve A) Average Complexity (Curve B) Basic Construction Inspection Services | | F | 0.0% 3.0% 6.0% | \$ \$ \$ \$ | - - - - | \$ - \$ - \$ - \$ - | \$ \$ \$ \$ | | \$ \$ \$ \$ | | \$ - \$ - \$ - | \$ | - |
| | Above Average Complexity (Curve A) Average Complexity (Curve B) Basic Construction Inspection Services | tion Phase PART A thro | F | 0.0% 3.0% 6.0% | \$ \$ \$ \$ | | \$ - \$ - \$ - \$ - | \$ | | \$ \$ \$ \$ | - | \$ - \$ - \$ - \$ - | \$ | - |
| | Above Average Complexity (Curve A) Average Complexity (Curve B) Basic Construction Inspection Services | | F ugh H S | 0.0% 3.0% 6.0% Part H Total | \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ | - - - - | \$ - \$ - \$ - \$ - | \$ | | \$ \$ \$ \$ | - | \$ - \$ - \$ - \$ - | \$ | - |

Total Project Summary

| | | Com | pleted | Uncomplete | d | Total |
|--------|--|-----|----------|------------|----|-------|
| PART A | "Base Costs" for Construction Work In Trades | \$ | - | \$ - | \$ | - |
| | A.1 Permanent Work | \$ | - | \$ - | \$ | - |
| | A.2 Non-Permanent Job Specific Work (From Part A Estimate) | \$ | - | \$ - | \$ | - |
| | | | | | | |
| PART B | General Requirements and General Conditions | \$ | - | \$ - | Ψ | - |
| | B.1 General Requirements | \$ | - | \$ - | \$ | - |
| | B.2 General Conditions | \$ | - | \$ - | \$ | - |
| PART C | Construction Cost Contingencies (Design and Construction) | \$ | - | \$ - | \$ | - |
| | C.1 Standard Design-Phase Scope Contingencies | \$ | - | \$ - | \$ | - |
| | C.2 Facility or Project Constructability | \$ | - | \$ - | \$ | - |
| | C.3 Access, Storage, and Staging Contingencies | \$ | - | \$ - | \$ | - |
| | C.4 Economies of Scale in New Construction | \$ | - | \$ - | \$ | - |
| | | | | | | |
| PART D | General Contractor's Overhead and Profit | \$ | - | - | \$ | - |
| | D.1 General Contractor's Home Office Overhead Costs | \$ | - | \$ - | \$ | - |
| | D.2 General Contractor's Insurance, Payment, and Performance Bonds | \$ | - | \$ - | \$ | - |
| | D.3 Contractor's Profit | \$ | - | \$ - | \$ | - |
| PART E | Cost Escalation Allowance | \$ | - | \$ - | \$ | - |
| PART F | Plan Review and Construction Permit Costs | \$ | _ | \$ - | \$ | - |
| | F.1 Plan Review Fees | \$ | - | \$ - | \$ | - |
| | F.2 Construction Permit Fees | \$ | - | \$ - | \$ | - |
| PART G | Applicant's Reserve for Construction | \$ | - | \$ - | \$ | - |
| DARTH | Applicantly Drainet Management and Design Costs | • | | \$ - | • | |
| PART H | Applicant's Project Management and Design Costs | \$ | - | · | \$ | |
| | H.1 Applicant's Project Management - Design Phase | \$ | <u>-</u> | \$ - | \$ | - |
| | H.2 Architecture & Engineering Design Contract Costs | \$ | - | \$ - | Ψ | - |
| | H.3 Project Management - Construction Phase | \$ | - | \$ - | \$ | - |
| | Complete Project Total for Completed and Uncompleted Work | \$ | - | \$ - | \$ | - |
| | | | | | | |

UNIT 3 – DEVELOPING PART A Participant Notes

Cost Estimating Format for Large Projects Training Module

UNIT 3 – DEVELOPING PART A EXERCISE

Unit 3 Exercise

Johnstown School:

The exercise consists of a CEF Fact Sheet and Part A for the project in question.

- Read the description below.
- Individually determine what problems, if any, exist with the CEF Part A Estimate.
- Participants should review only 2 pages the CEF Fact Sheet and the CEF Part A Estimate.
- Concentrate on the items included in the scope of work and the organization of Part A, not on possible differences of opinion regarding engineering or eligibility.
- Participants have 10 minutes to review the project.

Description:

Johnstown School on Learning Curve in Johnstown, CA was damaged by an earthquake on April 4, 1999. The disaster was declared and both the Applicant and facility are eligible. Most of the damage on the campus was to the main classroom building and was a direct result of the disaster. The project has been determined to be a large project and suitable for estimating using the CEF.

The main classroom building contains four large classrooms (A, B, C & D) divided by a central corridor. Each classroom has four large windows which were smashed by the earthquake. The exterior concrete walls and slab suffered extensive cracking and the concrete around and between the windows has spalled. The interior plaster wall finishes were also cracked. The scope of repair work includes: epoxy injection of concrete walls & slab; patching concrete spalls; repair/replacement windows; paint walls; patch and paint cracks in interior plaster walls and ceilings. The epoxy injection work has already been completed. The rest of the work is outstanding.

A Hazard Mitigation Proposal (HMP) was submitted to in fill the broken window in each classroom. The bays would be filled in with concrete and tied into the existing walls using dowels to increase the strength of the building. The HMP has already been reviewed and approved.

CEF Fact Sheet

Johnstown School District - Earthquake Damage Repair and Hazard Mitigation

| Date of Estimate: | September 10, 1999 | | | | | | | |
|---------------------------|--|--|--|--|--|--|--|--|
| FEMA Region: | IX | | | | | | | |
| Preparer (s): | FEMA | | | | | | | |
| Applicant Name: | Johnstown School District | | | | | | | |
| Project Title: | Earthquake Damage Repair and Hazard Mitigation | | | | | | | |
| Damaged Facility: | Johnstown School Main Classroom Bldg. (Classrooms A, B, C & D) | | | | | | | |
| Facility Location: | 4220 Learning Curve, Johnstown, California | | | | | | | |
| Declaration Number: | FEMA-1482-CA | | | | | | | |
| Project Number: | 3720 | | | | | | | |
| PA ID No.: | 037-12345 | | | | | | | |
| Date of Inspection: | August 21, 1999 | | | | | | | |
| Event Date(s): | April 4, 1999 | | | | | | | |
| Work Category: | E | | | | | | | |
| Type of Work: | REPAIR | | | | | | | |
| (Enter New, Repair, etc.) | НМР | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| Scope: | The scope of repair work includes: epoxy injection of concrete walls & slab; patching concrete spalls; repair/replacement windows; paint walls; patch and paint cracks in interior plaster walls and ceilings. The epoxy injection work has already been completed. The rest of the work is outstanding. | | | | | | | |
| | A Hazard Mitigation Proposal (HMP) was submitted to in fill the broken windows in each classroom. The bays would be filled in with concrete and tied into the existing walls using dowels to increase the strength of the building. The HMP has already been reviewed and approved. | | | | | | | |
| | | | | | | | | |

CEF Part A Estimate

Johnstown School District - Earthquake Damage Repair and Hazard Mitigation

| Item No. | Item Description Title / Component Description | Div. # or Cost Code | Qty. | Units | Unit Price | City Adj. Factor | Total Cost |
|-------------|---|------------------------|-----------|----------|------------------|---------------------|--------------------|
| Comple | eted | | | | | | |
| | Permanent | | | | | | |
| | | | | | | | \$0 |
| | Non-Removement | | Co | mplete | ed - Perman | ent Total | \$0 |
| | Non-Permanent | T | | | l | <u> </u> | |
| | | | Comple | eted - N | ∣ Non-Perman | ent Total | \$0 |
| Jncom | pleted | | Compi | | ton i omian | one rotal | |
| | Permanent | | | | | | |
| | STRUCTURAL REPAIRS | | | | | Π | |
| | Conc. Patch walls, incl. Chipping, cleaning, & grout | | 400.00 | SF | \$6.70 | 1.112 | \$2,980 |
| | 2.0 Site Work - Demolition | | | | | | |
| | Interior painting, walls, 2 coats, sand finish, spray | 099-224-0980 | 4,000.00 | SF | \$0.26 | 1.180 | \$1,227 |
| | Selective demolition | | 1.00 | LS | \$10,000.00 | 1.056 | \$10,560 |
| | Remove and reset windows | 020-754-5080 | 12.00 | EA | \$117.00 | 1.056 | \$1,483 |
| | Epoxy inject up to 0.25" wide | 037-330-0100 | 750.00 | LF | \$33.50 | 1.155 | \$29,019 |
| | Concrete (in-place, incl. forms, rebar, finish walls) | 033-130-4250 | 16.00 | CY | \$500.00 | 1.155 | \$9,240 |
| | Casement windows, incl. Frame, screen, trim | 086-120-0840 | 16.00 | EA | \$285.00 | 1.044 | \$4,76 |
| | Paint exterior perimeter walls (2 CT) | 099-124-0410 | 4,000.00 | SF | \$0.26 | 4.400 | \$(|
| | Interior painting, walls, 2 coats, sand finish, spray Drywall, nailed or screwed to studs 5/8", taped & finished | 099-224-0980 | 4,000.00 | SF | \$0.26 \$1.24 | 1.180 1.180 | \$1,227 \$5,853 |
| | TOTAL STRUCTURAL WORK | 092-008-0230 | 4,000.00 | 31 | \$1.24 | 1.100 | \$66,350 |
| | TOTAL OTROGRAM WORK | | | | | | ψ00,000 |
| | UPGRADES | | | | | | |
| | | | | | | | \$0 |
| | TOTAL UPGRADES | | | | | | \$(|
| | | | | | | | |
| | STRUCTURAL HAZARD MITIGATION (HMP) | | | | | | |
| | Install tension ties | 060-512-7038 | 320.00 | EA | \$18.25 | 1.091 | \$6,37 |
| | Drilling concrete (4" deep) | 050-515-0700 | 320.00 | | \$9.35 | 1.041 | \$3,115 |
| | Drilling (each additional Inch) | 050-515-0750 | 320.00 | EA | \$7.92 | 1.041 | \$2,638 |
| | Install bolts 15" long, 3/4" dia. | 060-512-0600 | 320.00 | EA | \$6.20 | 1.091 | \$2,16 |
| | TOTAL HMP | | | | | | \$0 \$14,289 |
| | TOTAL TIME | | | | | | ψ14,203 |
| | NON-STRUCTURAL WORK | | | | | | |
| | | | | | | | \$(|
| | TOTAL NON-STRUCTURAL WORK | | | | | | \$(|
| | | | | | | | |
| | | | Unco | mplete | ed - Perman | ent Total | \$80,639 |
| | Non-Permanent | | | | T | | |
| | Scaffolding rental | 015-255-4100 | 4.00 | EA | \$1,250.00 | 1.00 | \$5,000 |
| | | | - | | Non-Perman | | \$5,000 |
| | | TOTAL | PART A BA | SE CO | NSTRUCTION | ON COST | \$85,639 |

UNIT 4 – SELECTING CEF FACTORS Participant Notes

UNIT 5 – APPLYING THE CEF Participant Notes

Cost Estimating Format for Large Projects Training Module

UNIT 5 – APPLYING THE CEF EXERCISE

UNIT 5 – APPLYING THE CEF Exercise

The facility, a one-story elementary school building with an attached gymnasium/multipurpose room, was damaged during a tornado. The gymnasium must be replaced. The school building sustained major damage to doors, windows, the roof, and the interior.

For each of the attached, perform the following tasks.

- 1. Describe the source of line items to be used in Part A.
- 2. Indicate whether the line items in Part A should be adjusted for:
 - overhead and profit; and
 - geographic location.
- 3. Assess the general applicability of Factors B through H and determine which factors should be applied. It is not necessary to analyze the specific subfactors of Parts B and C.

Note any differences that would occur due to the type of work (repair, retrofit, and so on) being completed.

Scenario 1: No Work Completed

In Scenario 1, the Applicant has not started work to restore the facility, other than installation of security fencing and removal of scattered debris. The Applicant has retained an A&E firm to begin design work, and intends to contract the restoration work out. The Applicant does not have recent cost data that could be used to estimate the cost of the work.

| Source of data for Part A: |
|------------------------------|
| Adjustments to Part A: |
| • Overhead and profit? |
| • Geographic location? |
| Application of factors: |
| Part B: General Requirements |
| Part C: Contingencies |
| Part D: Overhead and Profit |
| Part E: Escalation |
| Part F: Fees |
| Part G: Applicant's Reserve |
| Part H: Project Management |

Scenario 2: A&E Report Available

In Scenario 2, the Applicant has not started work to restore the facility, other than installation of security fencing and removal of scattered debris. The Applicant has retained an A&E firm to handle the design work and provide engineering services during the bid process and construction. The firm has produced an A&E report with a construction cost estimate, and this report is available to the project formulation team.

The Applicant intends to contract the restoration work out but has not yet begun the process of soliciting bids.

Source of data for Part A:

Adjustments to Part A:

- Overhead and profit?
- Geographic location?

Application of factors:

Part B: General Requirements

Part C: Contingencies

Part D: Overhead and Profit

Part E: Escalation

Part F: Fees

Part G: Applicant's Reserve

Part H: Project Management

Scenario 3: Bid/Construction Contract Available

In Scenario 3, the Applicant has not started work to restore the facility; however, using appropriate procurement procedures, the Applicant has retained a contractor who will soon begin work. The bid documents, with the contractor's unit costs, are available to the project formulation team.

The Applicant had previously retained an A&E firm to handle the design work and provide engineering services during the bid process and construction.

Source of data for Part A:

Adjustments to Part A:

- Overhead and profit?
- Geographic location?

Application of factors:

Part B: General Requirements

Part C: Contingencies

Part D: Overhead and Profit

Part E: Escalation

Part F: Fees

Part G: Applicant's Reserve

Part H: Project Management

Scenario 4: Work Partially Completed

In Scenario 4, the Applicant has completed demolition of the damaged gymnasium building and has cleared the site. The Applicant was required to retain an environmental engineering firm to test for asbestos and to monitor air quality during demolition. The contractor who performed the demolition work is not the same contractor who has won the contract to restore the facility.

Assume that Scenario 4 is otherwise the same as Scenario 3. Describe how the CEF would be applied differently.

Source of data for Part A:

Adjustments to Part A:

- Overhead and profit?
- Geographic location?

Application of factors:

Part B: General Requirements

Part C: Contingencies

Part D: Overhead and Profit

Part E: Escalation

Part F: Fees

Part G: Applicant's Reserve

Part H: Project Management

UNIT 6 – PRACTICAL EXERCISE Participant Notes

Cost Estimating Format for Large Projects Training Module

UNIT 6 – PRACTICAL EXERCISE EXERCISE

Los Angeles County Medical Center, Administration Building (Category E)

Project Description

The Los Angeles County Medical Center, Administration Building at 999 First Street, Los Angeles, California (Region IX) was damaged as a result of an earthquake on April 1, 1999. The earthquake was declared as FEMA disaster FEMA-0000-DR-CA. The facility is owned and operated by Los Angeles County, an eligible Applicant, PA-ID Number 999-99999. The Medical Center functions as an intermediate care facility and the work is under project number 9999.

Constructed in 1928, the Administration Building is a 31,100 square foot one-story structure with a partial basement. The building sits on a hillside covered by wild grasses and shrubs and is removed from the rest of the buildings comprising the medical campus. The building had an occupancy permit at the time of the disaster. No significant pre-existing conditions were identified. The existing plans indicate that the building has not been significantly modified since its construction.

The building consists of reinforced concrete foundations, floors, perimeter walls, and cross walls with wood frame interior partitions and roof. Interior and exterior walls and ceilings include painted plaster or stucco finish. The roof consists of clay tile over 1'x 6' sheathing.

The Applicant has submitted an A&E report which includes a preliminary estimate of \$400,000 to restore the building to pre-disaster condition and function. The building replacement cost has been estimated at \$90 per square foot or approximately \$2.8 million. All functions have been relocated to adjacent buildings until building repairs are complete.

Damage Description

The damage was verified by FEMA based on a field inspection conducted on May 1, 1999. The major items of repair include:

- Cracking and spalling of basement walls and columns,
- Horizontal and diagonal cracks in reinforced concrete exterior walls,
- Cracks in the concrete walls and floor slab,
- Plaster cracking or spalling of approximately 25% of the wood framed walls and ceilings,
- Exterior stucco cracking or spalling,
- Split or splintered framing members in walls, floor framing, and ceiling panel system,
- Splitting and/or warping of wood framed roof and walls, and
- Displacement or damage of clay tile roofing.

Scope of Work

Detailed information of crack widths and lengths were reviewed in accordance with FEMA publication 306, 307 and 308. As a result of this review the eligible scope of work and repair methods include the following:

- Epoxy inject cracks in concrete columns (19 LF),
- Patching concrete spalls (4 SF),
- Epoxy inject cracks in concrete basement walls and floor slab (817 LF),

- Epoxy inject cracks in concrete exterior walls (257 LF),
- Demolish and replace 8" concrete wall (6.5 CY),
- Remove and replace floor beams (54 BF),
- Remove and replace 6" slab-on-grade (3 CY),
- Remove and replace 1' x 3' reinforced strip footing (13 CY),
- Remove and replace wood framed porch roof (14,700 CF),
- Remove and replace wood framed roof (2,455 SF),
- Remove and replace wood framed walls (1,225 SF),
- Patch and paint cracks in interior plaster walls (13,610 SF),
- Patch and paint cracks in interior plaster ceilings (7,775 SF),
- Remove and replace stucco over wood (200 SF),
- Reset/replace displaced or damaged clay roof tiles (3,110 SF),
- Replace casement windows (25 EA),
- Paint exterior (11,603 SF), and
- Paint interior walls (613 SF).

In addition to the repair scope of work, the following ADA upgrades in compliance with FEMA Policy (see page 23 of the IG) have been recommended based on:

- Construct new sidewalks and ramps (1,300 SF), and
- Modify existing ramps to code (1,300 SF).

The Applicant has requested a Hazard Mitigation Proposal (HMP) to tie the roof diaphragm to the perimeter walls. The Subgrantee has performed a cost-benefit analysis that complies with FEMA Policy Number 9526.1 regarding cost effectiveness. The hazard mitigation scope of work that passed the cost-benefit analysis includes:

- Drilling of 1" diameter holes through concrete perimeter walls (215 EA),
- Installation of tension ties (215 EA), and
- Installation of 3/4" diameter machine bolts and washers (215 EA).

The Applicant has completed minor repairs using force account labor in order. It has been determined by FEMA that the force account work was part of the permanent repair of the building. Documentation of the following costs has been submitted and reviewed by FEMA:

- Labor (20 hrs @ \$67.82/hr),
- Benefits (20 hrs @ \$37.46/hr),
- Materials (\$1,200), and
- Equipment (\$750).

Information relating to the calculation of the CEF factors

- The project is in the preliminary stages of the design phase. Quantities were estimated based on record drawings provided by the Applicant and verified during the site inspection.
- Based on the Applicant's design and construction timelines for eligible work, that were reviewed and concurred with by FEMA, it is estimated that there are 7 months of eligible

work until the completion date. This timeframe includes design (1.5 months), bid/award (1.5 months), and construction (4 months).

- Building complexity, interior work congestion, and the degree of difficulty of the repair work is considered moderate. Traffic and storage limitations at the site are minimal.
- The Applicant has provided local costs for plan check fees and building permits based on the approved scope of work. Construction permit fees are estimated at \$1,675 and plan review fees are estimated at \$1,325.
- The Applicant, state, or regional agency does not maintain average weighted unit price data (derived from contract history); therefore, the most current R. S. Means cost data publications are the recommended source of cost data to develop the CEF.
- The following City Cost Indices for Los Angeles County has been established by the PAO from 1999 R. S. Means data.

| Division | Category | Index |
|-------------|----------------------|-------|
| 2.0 | Sitework | 105.1 |
| 3.0 | Concrete | 115.2 |
| 4.0 | Masonry | 114.4 |
| 5.0 | Metals | 105.8 |
| 6.0 | Wood & Plastics | 108.5 |
| 7.0 | Thermal & Moisture | 116.3 |
| 8.0 | Doors & Windows | 103.7 |
| 9.0 | Finishes | 115.9 |
| 10.0 - 14.0 | Total Division 10–14 | 103.4 |
| 15.0 | Mechanical | 108.3 |
| 16.0 | Electrical | 116.6 |
| 1.0 - 16.0 | Weighted Average | 110.6 |

• The Applicant does not plan to solicit bids for the project before the CEF will be prepared. However, the Applicant plans to complete repairs using a general contractor.

CEF Fact Sheet

| Date of Estimate: | |
|---------------------------|--|
| FEMA Region: | |
| Preparer(s): | |
| Applicant Name: | |
| Project Title: | |
| Damaged Facility: | |
| Declaration Number: | |
| Project Number: | |
| PA ID No.: | |
| Date of Inspection: | |
| Event Date(s) | |
| Work Category: | |
| Type of Work: | |
| (Enter New, Repair, etc.) | |
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| Scope: | |
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CEF Notes

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| Damaged Facility: | | |
|--------------------|-----------------|--|
| Applicant Name: | | |
| Project Number: | | |
| Date of Estimate: | | |
| Preparer(s): | | |
| Part A Notes: | A.1 - | |
| | A.2 - | |
| Part B Notes: | B.1 - | |
| | B.2 - | |
| | | |
| Part C Notes: | C.1 - | |
| | C.2 - | |
| | C.3 - | |
| | C.4 - | |
| Part D Notes: | D.1 - | |
| | D.2 - | |
| | D.3 - | |
| Part E Notes: | E.1 - | |
| | | |
| | | |
| Part F Notes: | F.1 - | |
| | F.2 - | |
| D (0 N (| 0.4 | |
| Part G Notes: | G.1 - | |
| | | |
| Dort II Notoo | H.1 - | |
| Part H Notes: | п. 1 - H.2 - | |
| | | |
| Miscellaneous | H.3 - | |
| Notes & Comments: | | |
| inotes a Comments: | • | |
| Use mouse to | | |
| Activate Cursor: | | |
| | | |
| | | |

CEF Part A Estimate

| 140.00 | | | | | | | |
|-------------|--|------------------------|--------|----------|---|--------------------|--|
| Item No. | Item Description Title / Component Description | Div. # or Cost Code | Qty | Units | Unit Price | City Adj Factor | Total Cost |
| Comple | ted | | | | | | |
| | Permanent | | | | | | |
| | | | | | \$ - | | \$ - |
| | | | | | \$ - | | \$ - |
| | | | | | \$ - | | \$ - |
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| | | | Co | omplet | ed - Perman | ent Total | \$ - |
| | Non-Permanent | | | | | | |
| | | | | | \$ - | | \$ - |
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| | | | | | \$ - | | \$ - |
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| | | | Comple | eted - N | \$ - Non-Perman | ent Total | |
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CEF Part A Estimate

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| Item No. | Item Description Title / Component Description | Div. # or Cost Code | Qty | Units | Unit Price | City Adj Factor | Total Cost |
|-------------|--|------------------------|-----------|----------|-------------|--------------------|------------|
| 140. | Description | Cost Code | | | | 1 actor | |
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| | | | | \$ - | . \$ | - | \$ - | \$ | - | \$ - | | Total |
| PART A | | "B | lasa Costs" | for Construc | tion Wo | rk-In Trade | 26 | | | | | |
| A.1 | Permanent Work (From Part A Estimate) | | 00313 | ior construc | MOIT WO | IK-III ITAG | | | | | \$ | - |
| | | | | | | | | | | 1 | | |
| A.2 | Non-Permanent Job Specific Work (From I | Part A E | stimate) | | | | | | | | \$ | - |
| | | Pa | rt A Total | \$ - | \$ | | \$ - | \$ | | \$ - | \$ | |
| | | | it /t Total | Ψ | ļΨ | | ΙΨ | ĮΨ | | Ψ | V | |
| PART B | | Ge | neral Requi | rements and | General | Condition | s | | | | | |
| | | | nge | | | | | | | | | |
| B.1 | General Requirements Safety & Security - Airports, Ports & Govt. Owned Marina | 4.0% | 6.0% | | E | Enter % | in Appropr | iate Co | lumn | | - | |
| | Temporary Services & Utilities | 0.0% | 1.0% | | | | | | | | 1 | |
| | Quality Control | 0.0% | 1.0% | | | | | | | | | |
| | Submittals | 0.0% | 5.0% | \$ - | . \$ | | \$ - | \$ | _ | \$ - | \$ | |
| | | | | | 1 7 | | 1 7 | | | 1 7 | Ť | |
| B.2 | General Conditions (4.25%) | | | | | E | | | R . | | | |
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| | PART A through | nh R SIII | BTOTAL | e - | . \$ | | \$ - | \$ | | \$ - | \$ | |
| | FART A UII OUÇ | gii D 30 | BIOIAL | Φ - | . ф | | Φ - | Φ | | Φ - | φ | |
| PART C | | | Constru | ction Cost C | ontinger | ncies | | | | | | |
| | | Rai | nge | | | | | | | | | |
| C.1 | Design-Phase Scope Contingencies | Low to | o High | | E | Enter % | in Appropr | iate Co | lumn | 1 | - | |
| | Preliminary Engineering Analysis Working Drawings | 15.0% 2.0% | 20.0% 10.0% | | | | | | | | - | |
| | g | , | | \$ - | \$ | - | \$ - | \$ | - | \$ - | \$ | - |
| 0.0 | Facility or Brainst Constructshills | | | | | Entor % | in Appropr | iata Co | lumn | | | |
| C.2 | Facility or Project Constructability Facility or Project Type and Complexity | (See IG fo | or Values) | | - | | Пттрргорг | | iuiiiii | | 1 | |
| | | , | • | \$ - | . \$ | | \$ - | \$ | - | \$ - | \$ | - |
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| C.3 | Access, Storage & Staging Contingencies | | nge o High | | | Enter % | in Appropr | iate Co | lumn | | | |
| | Access Contingencies | 1.0% | 4.0% | | | | | | | | | |
| | Storage Contingencies Staging Contingencies | 1.0% | 4.0% 4.0% | | | | | | | | - | |
| | Staging Contingencies | 1.076 | 4.076 | \$ - | . \$ | - | \$ - | \$ | - | \$ - | \$ | |
| C.4 | Economies of Scale | | 0.0% | | · | | | | _ | | | |
| C.4 | Economies of Scale | | 0.0% | 0% | | 0% | 0% | | 0% | 0% | - | |
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| | | Pai | rt C Total | \$ - | \$ | | \$ - | \$ | | \$ - | \$ | |
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| | PART A throug | gh C SU | BTOTAL | \$ - | \$ | - | \$ - | \$ | - | \$ - | \$ | - |
| PART D | | (| General Cor | ntractor's Ove | erhead a | and Profit | | | | | | |
| | | | | | | | | | | | | |
| D.1 | GC's Home Office Overhead | | 7.7% | \$ - | • | <u> </u> | | 1 6 | R . | \$ - | • | |
| | | | | φ - | . ф | - | Φ - | Φ | | Φ - | \$ | |
| D.2 | GC's Insurance, Payment & Performance E | Bonds | 3.3% | | | 区 | | | Ri . | M | | |
| | New Co | onstruction | 10.0% | \$ - Select a top | box for th | e type of pro | ject, and appli | able botto | om boxes to | \$ - apply the factor. | \$ | - |
| | | air/Retrofit | | | uction | 9 | Repair/Re | rofit 📮 | | | | |
| D.3 | General Contractor's Profit | | | | - | 國 | | | Z. | | | |
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| PART E | | | | st Escalat | ion Fa | actors | | | | | | | | | |
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| E | Cost Escalation Factor | | 1 actor | \$ | - | \$ | - | \$ | - | \$ | - | \$ | | \$ | _ |
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| | PART A throu | gh E SU | IBTOTAL | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - |
| PART F | | | Plan Review | and Cons | structio | on Permit | Cost | | | | | | | | |
| F.1 | Plan Review Fees | | | | | | | | | | | | | | |
| | (List Individual Requirements Separately) | | | | | | | | | | | | | - | |
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| F.2 | Construction Permit Fees | | | | | 1 | | 1 | | ı | | 1 | | | |
| | (List Individual Requirements Separately) | | | | | | | | | | | | | - | |
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| | PART A throu | gh F SU | BTOTAL | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - |
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| PART G | | | Applicant's | Reserve | for Ch | ange Orde | ers | | | | | | | | |
| PART G | Applicant's Reserve for Change Orders | | Applicant's | E. | for Ch | 8 | ers | | | | | | | • | |
| | Applicant's Reserve for Change Orders | | | | for Ch | | ers - | \$ | - | \$ | - | \$ | - | \$ | - |
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| G PART H H.1 | PART A throu Applicant's Project Management - Design | Appl | 7.0% JBTOTAL icant's Proje | \$ \$ ct Manage | - | \$ s and Des | - | \$ \$ Sts | - | \$ | | \$ | - - | \$ | - |
| G PART H | PART A throu Applicant's Project Management - Design A/E Design Contract Cost | Appl Phase | 7.0% DBTOTAL icant's Proje 1.0% | \$ standarder | - ement | \$ and Des | - ign Cos | \$ \$ | | \$ | | \$ | - - | \$ | - |
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| G PART H H.1 | PART A throu Applicant's Project Management - Design A/E Design Contract Cost Above Average Complexity (Curve A) | Appl Phase | 7.0% DBTOTAL icant's Projections 1.0% | \$ \$ Standard Manager \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ | ement | s and Des | - ign Cos | \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ | | \$ | - | \$ \$ \$ \$ \$ \$ | - | \$ | - |
| G PART H H.1 | PART A throu Applicant's Project Management - Design A/E Design Contract Cost Above Average Complexity (Curve A) Average Complexity (Curve B) | Appli Phase | 7.0% JBTOTAL icant's Projection 1.0% 0.0% 0.0% | \$ st Manager \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ | - ement | \$ and Des | - ign Cos | \$ sts | - | \$ \$ | - | \$ | - | \$ | - |
| G PART H H.1 | PART A throu Applicant's Project Management - Design A/E Design Contract Cost Above Average Complexity (Curve A) Average Complexity (Curve B) | Appl Phase | 7.0% JBTOTAL icant's Projection 1.0% 0.0% 0.0% | \$ s tt Manage \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ | ement | s and Des | - ign Cos | \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ | | \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ | - | \$ \$ \$ \$ \$ \$ \$ \$ | - | \$ | - |
| PART H H.1 | Applicant's Project Management - Design A/E Design Contract Cost Above Average Complexity (Curve A) Average Complexity (Curve B) Basic Construction Inspection Services | Appl Phase | 7.0% JBTOTAL icant's Projection 1.0% 0.0% 0.0% 3.0% | \$ \$ Standard Manager \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ | ement | s and Des | - ign Cos | \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ | | \$ | - | \$ \$ \$ \$ \$ \$ | - | \$ | - |
| PART H H.1 | Applicant's Project Management - Design A/E Design Contract Cost Above Average Complexity (Curve A) Average Complexity (Curve B) Basic Construction Inspection Services | Appl Phase | 7.0% DBTOTAL icant's Projection 1.0% 0.0% 0.0% 3.0% 6.0% | \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ | | s and Dess | - ign Cos | \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ | - - - - | \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ | - | \$ \$ \$ \$ \$ \$ \$ \$ | | \$ | - |
| PART H H.1 | Applicant's Project Management - Design A/E Design Contract Cost Above Average Complexity (Curve A) Average Complexity (Curve B) Basic Construction Inspection Services Project Management - Construction Phase | Appl Phase | 7.0% DBTOTAL icant's Project 1.0% 0.0% 0.0% 3.0% 6.0% | s s s s s s s s s s s s s s s s s s s | ement | s and Des | - ign Cos | \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ | - - - - | \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ | - - - - | \$ \$ \$ \$ \$ \$ \$ \$ | - - - - - - - - - - - | \$ | - |
| PART H H.1 | Applicant's Project Management - Design A/E Design Contract Cost Above Average Complexity (Curve A) Average Complexity (Curve B) Basic Construction Inspection Services | Appl Phase | 7.0% DBTOTAL icant's Project 1.0% 0.0% 0.0% 3.0% 6.0% | s s s s s s s s s s s s s s s s s s s | ement | s and Dess | - ign Cos | \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ | - - - - | \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ | - - - - | \$ \$ \$ \$ \$ \$ \$ \$ | - - - - - - - - - - - | \$ | - |
| PART H H.1 | Applicant's Project Management - Design A/E Design Contract Cost Above Average Complexity (Curve A) Average Complexity (Curve B) Basic Construction Inspection Services Project Management - Construction Phase | Appl Phase Pa Pa Gh H SU | 7.0% DBTOTAL icant's Project 1.0% 0.0% 0.0% 3.0% 6.0% art H Total DBTOTAL | \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ | | s and Des | - control cont | \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ | | \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ | | \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ | | \$ | - |
| G PART H H.1 H.2 | Applicant's Project Management - Design A/E Design Contract Cost Above Average Complexity (Curve A) Average Complexity (Curve B) Basic Construction Inspection Services Project Management - Construction Phase | Appl Phase Pa Pa Gh H SU | 7.0% DBTOTAL icant's Project 1.0% 0.0% 0.0% 3.0% 6.0% | \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ | | s and Des | - control cont | \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ | | \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ | | \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ | | \$ | - |

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| TA | | "[| Base Costs" f | or Const | ruction V | Vork-In T | rades | | | | | | | | |
| .1 | Permanent Work (From Part A Estimate) | | | | | | | | | | | | | \$ | |
| | W D (110 K) W 1 K | | | | | | | | | | | | | | |
| .2 | Non-Permanent Job Specific Work (From Pa | irt A Esti | imate) | | | | | | | | | | | \$ | |
| | | P | art A Total | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - | \$ | |
| ТВ | | Ge | eneral Require | ments a | nd Gene | ral Cond | litions | | | | | | | | |
| | | | | | | rai Goria | | | | | | | | | |
| .1 | General Requirements | | ange to High | | | Ente | er % iı | 1 Appr | opriate | e Colu | ımn | | | | |
| | Safety & Security - Airports, Ports & Govt. Owned Marinas Temporary Services & Utilities | 4.0% 0.0% | 6.0% 1.0% | | | | | | | | | | | - | |
| | Quality Control | 0.0% | 1.0% | | | | | | | | | | | | |
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| .2 | General Conditions (4.25%) | | | | | | | <u> </u> | | E | l l | E. | 1 | | |
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| | TAKTA UIIO | ugii b o | OBIOTAL | Φ | | Ψ | | Φ | | Φ | | Ψ | | Ą | |
| TC | | | Construc | tion Cost | t Conting | gencies | | | | | | | | | |
| | | | ange | | | | ٠. | | | 0.1 | | | | | |
| .1 | Design-Phase Scope Contingencies Preliminary Engineering Analysis | 15.0% | 20.0% | | | Ente | er % II | n Appro | opriate | e Colu | ımn | | | - | |
| | Working Drawings | 2.0% | 10.0% | | | | | | | | | | | | |
| | | | | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - | \$ | |
| .2 | Facility or Project Constructability | | | Ī | | Ente | er % iı | n Appr | opriate | e Colu | ımn | | | | |
| | Facility or Project Type and Complexity | (See IG | for Values) | | | | | • | | | | • | | • | |
| | | | | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - | \$ | |
| | | | ange | | | | | | | | | | | | |
| .3 | Access, Storage & Staging Contingencies Access Contingencies | Low 1 | 4.0% | | | Ente | er % ii | n Appro | opriate | e Colu | ımn | | | | |
| | Storage Contingencies | 1.0% | 4.0% | | | | | | | | | | | | |
| | Staging Contingencies | 1.0% | 4.0% | \$ | | \$ | | \$ | | \$ | | s | | • | |
| | | | | Ф | - | Ф | - | Ф | - | Þ | | Þ | - | \$ | |
| .4 | Economies of Scale | | 0.0% | \$ | | <u> </u> | _ | <u></u> | _ | [C | l | [[] | | · · | |
| | | | | Ψ | | Ψ | | Ψ | | Ψ | | Ψ | | Ÿ | |
| | | Pa | art C Total | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - | \$ | |
| | PART A thro | ugh C S | UBTOTAL | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - | \$ | |
| | | | Canada Can | | O | al a sa al Du | -64 | | | | | | | | |
| TD | | | General Cont | lacions | Overnea | u anu Fi | OIIL | | | | | | | | |
| .1 | GC's Home Office Overhead | | 7.7% | B | | B | | 8 | | | | | | | |
| | | | | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - | \$ | |
| .2 | GC's Insurance, Payment & Performance Bo | onds | 3.3% | 8 | | 题 | | 8 | | | | | | | |
| | Now C | Construction | 10.0% | \$ Select | a top box | for the typ | e of pro | \$ ect, and a | - pplicable | \$ e bottom | - boxes to | \$ apply the | factor. | \$ | |
| | | pair/Retrofit | | | onstructi | _ | | Repair | | _ | | | | | |
| .3 | General Contractor's Profit | | | <u> </u> | | | | B | | <u>.</u> | | | | | |
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| | I ANT A UIIO | ~g ~ 0 | : AL | Ψ | - | Ψ | | Ψ | - | Ψ | - | Ψ | - | Ψ | |

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| | | | | \$ | - | \$ | - \$ | - | \$ | - | \$ - | | Total |
| PART E | | | Cost | Escalatio | n Facto | ors | | | | | | | |
| | | Months | Monthly Factor | | | | | | | | | | |
| Е | Cost Escalation Factor | | Factor | \$ | - | \$ | - \$ | _ | \$ | - | \$ - | \$ | - |
| | PART A thi | rawah E Ci | LIBTOTAL | • | . | \$ | - \$ | _ | \$ | | \$ - | \$ | |
| | PART A till | rougn E St | UBIUIAL | \$ | - | \$ | - \$ | - | \$ | - | \$ - | \$ | |
| PART F | | | Plan Review | and Consti | ruction F | Permit Cost | t | | | | | 1 | |
| F.1 | Plan Review Fees (List Individual Requirements Separately) | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | \$ | - | \$ | - \$ | _ | \$ | - | \$ - | \$ | - |
| F.2 | Construction Permit Fees | | | Ī | | | | | | | | | |
| | (List Individual Requirements Separately) | | | | | | | | | | | | |
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| | | P | art F Total | \$ | - | \$ | - \$ | - | \$ | - | \$ - | \$ | - |
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| | | | | * | | · | | | | | . • | | |
| PART G | | | Applicant's I | Reserve fo | r Chang | e Orders | | | | | | | |
| G | Applicant's Reserve for Change Orders | | 7.0% | \$ | - | \$ | - \$ | <u>u</u> - | \$ | | \$ - | \$ | - |
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Total Project Summary

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| PART A | "Base Costs" for Construction Work In Trades | \$ | - | \$ | - \$ | - |
| | A.1 Permanent Work | \$ | - | \$ | - \$ | - |
| | A.2 Non-Permanent Job Specific Work (From Part A Estimate) | \$ | - | \$ | - \$ | - |
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| PART B | General Requirements and General Conditions | \$ | - | \$ | - \$ | - |
| | B.1 General Requirements | \$ | - | \$ | - \$ | - |
| | B.2 General Conditions | \$ | - | \$ | - \$ | - |
| PART C | Construction Cost Contingencies (Design and Construction) | \$ | | \$ | - \$ | - |
| | C.1 Standard Design-Phase Scope Contingencies | \$ | - | \$ | - \$ | - |
| | C.2 Facility or Project Constructability | \$ | - | \$ | - \$ | - |
| | C.3 Access, Storage, and Staging Contingencies | \$ | - | \$ | - \$ | - |
| | C.4 Economies of Scale in New Construction | \$ | - | \$ | - \$ | - |
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| PART D | General Contractor's Overhead and Profit | \$ | - | \$ | - \$ | - |
| | D.1 General Contractor's Home Office Overhead Costs | \$ | - | \$ | - \$ | - |
| | D.2 General Contractor's Insurance, Payment, and Performance Bonds | \$ | - | \$ | - \$ | - |
| | D.3 Contractor's Profit | \$ | - | \$ | - \$ | - |
| PART E | Cost Escalation Allowance | \$ | | \$ | - \$ | - |
| PART F | Plan Review and Construction Permit Costs | \$ | | \$ | - \$ | _ |
| | F.1 Plan Review Fees | \$ | - | \$ | - \$ | - |
| | F.2 Construction Permit Fees | \$ | - | \$ | - \$ | - |
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| PART G | Applicant's Reserve for Construction | \$ | - | \$ | - \$ | - |
| PART H | Applicant's Project Management and Design Costs | \$ | | \$ | - \$ | - |
| | H.1 Applicant's Project Management - Design Phase | \$ | - | \$ | - \$ | - |
| | H.2 Architecture & Engineering Design Contract Costs | \$ | - | \$ | - \$ | - |
| | H.3 Project Management - Construction Phase | \$ | - | \$ | - \$ | - |
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| | Complete Project Total for Completed and Uncompleted Work | \$ | - | \$ | - \$ | - |
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FEDERAL EMERGENCY MANAGEMENT AGENCY

PROJECT WORKSHEET

O.M.B. No. 3067-0151 Expires April 30, 2001

PAPERWORK BURDEN DISCLOSURE NOTICE

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Cost Estimating Format for Large Projects Training Module

UNIT 1 - INTRODUCTION EXERCISE SOLUTIONS

UNIT 1 - INTRODUCTION Exercise Solutions

Read the following project descriptions. Determine if the CEF should be used for each project, and give a reason for your decision. Assume that the event that caused the damage has been declared a disaster and that the Applicant is eligible.

Project 1

Three buildings on a high school campus sustained damage during an earthquake. The Applicant has prepared preliminary estimates of the damage as follows:

• Gymnasium: \$500,000

Multi-Purpose Room: \$30,000Classroom Building 1: \$150,000

Due to the nature of the damage, the Applicant intends to hire one contractor to complete all of the work to repair the facilities.

Solution: Because the Applicant intends to use one contractor to complete all work, all work to restore the school could be considered one project and the CEF applied to the project as a whole.

Project 2

During a flood, several thousand cubic yards of mud, gravel, and rock are deposited on the roads, parking lots, and open areas of a county park and recreation center. The county has not yet begun work to restore the park to its pre-disaster condition. The preliminary estimate for removing the deposits, which will be done by contractors, is \$100,000.

Solution: The CEF should not be used for debris removal activities, even though (in this case) the work is necessary to restore the facility to its pre-disaster condition.

Project 3

A flood has demolished a 400-foot long flood control structure that provides protection to an airport runway. Under FEMA's Flood Control Works policy, permanent restoration of the facility is not eligible. However, FEMA has agreed that proposed construction of an emergency earthen levee to provide protection up to the level of a 5-year flood would be eligible. The Applicant wants to get a grant estimate from FEMA before beginning the work.

Solution: The CEF should not be used for emergency work activities.

Project 4

The city hall is damaged during a hurricane. The city has completed emergency repairs (replacing doors, boarding up windows, and repairing mechanical and electrical systems) at a cost of \$75,000 to keep the building functioning. However, the roof must be replaced due to major damage, and permanent repairs to windows, doors, and interiors must be completed. Additionally, the city is interested in installing hurricane shutters for hazard mitigation. Preliminary costs have not been developed for the work that must be completed.

<u>Solution</u>: Even though some work on the building has been done, it is likely that the remaining work, regardless of whether the proposed mitigation measures are included, will be far more costly than the work that has been completed. Therefore, the CEF could be used for this facility. Before making the decision to use the CEF, however, the project team should renew the design and construction timeline to ensure that permanent work will take longer than four months to reach a state of being 90% complete (reference pages 36 and 38 of the IG).

Project 5

A school building is severely damaged during a tornado. The Applicant wants to restore the building before the new school year starts and has proceeded with an aggressive reconstruction schedule. Construction, which began 30 days ago, is expected to be complete in 90 days.

Solution: In terms of time, the project is less than 50 percent complete; however, the project is less than four months from completion. Therefore, the CEF should not be used.

Cost Estimating Format for Large Projects Training Module

UNIT 3 – DEVELOPING PART A EXERCISE SOLUTIONS

Unit 3

Exercise Solutions

Johnstown School:

The following is a list of text book solutions for the exercise.

- Epoxy injection work is listed as uncompleted instead of completed (as stated in the description and CEF Fact Sheet).
- Missing Item Numbers for all components.
- Missing Units for interior painting and drilling concrete.
- Inconsistent line items, e.g. drywall and window replacement items are included but not discussed in the scope.
- Duplicated line items for interior painting.
- The line items are not itemized by division (harder to check City Adj. Factor and for duplication).
- Missing Division Numbers for the selective demolition.
- *Poor description of selective demolition no details or quantities.*
- A Lump Sum item for selective demolition has been included.
- The concrete for the window in-fill is in repair not HMP.
- The City Adjustment Factor for exterior painting is missing and therefore the calculation is wrong

Cost Estimating Format for Large Projects Training Module

UNIT 5 – APPLYING THE CEF EXERCISE SOLUTIONS

Unit 5 Exercise Discussion and Solutions

Scenario 1: No Work Completed

In Scenario 1, the Applicant has not started work to restore the facility, other than installation of security fencing and removal of scattered debris. The Applicant has retained an A&E firm to begin design work, and intends to contract the restoration work out. The Applicant does not have recent cost data that could be used to estimate the cost of the work.

Source of data for Part A:

- Because the Applicant does not have recent cost data, the team should use R.S. Means cost data to develop the estimate.
- Work should be separated into repair (school building) and replacement (gymnasium).

Adjustments to Part A:

- Overhead and profit? Subcontractor overhead and profit should be included in Part A.
- Geographic location? Line items should be adjusted using the cost indexes from R.S. Means.

Application of factors:

Part B: General Requirements: Check unit costs first to review if safety and security, temporary services, quality control, submittals and general contractor's on-site project management are included in the Part A costs, then apply Part B factor if not already included.

Part C: Contingencies: Yes. Each part C factor should be reviewed for inclusion. The constructability factor, C.2, would not be applied to the non-complex gymnasium construction.

Part D: Overhead and Profit: Check unit costs first, then apply if appropriate and not already included. Overhead and Profit should already be included in "as-bid" costs, therefore the Part D factor should not be added. A&E cost estimates should be carefully reviewed to see if Overhead and Profit for the general contractor has been included.

Part E Escalation: Yes, after a review of the design and construction timeline has been completed and the months to the mid-point of uncompleted construction determined.

Part F: Fees: Yes, assuming they have not been waived.

Part G Applicant's Reserve: Yes, construction has not commenced, and approved change orders would be eligible.

Part H: Project Management: Yes, project management costs are eligible. If actual completed A&E costs are known, they can be included in Part A and the H.2 factor would <u>not</u> be used.

Scenario 2: A&E Report Available

In Scenario 2, the Applicant has not started work to restore the facility, other than installation of security fencing and removal of scattered debris. The Applicant has retained an A&E firm to handle the design work and provide engineering services during the bid process and construction. The firm has produced an A&E report with a construction cost estimate, and this report is available to the project formulation team.

The Applicant intends to contract the restoration work out but has not yet begun the process of soliciting bids.

Source of data for Part A:

The team should review the A&E cost estimate to ensure that all costs are necessary, reasonable, and tied to the eligible scope of work. If the estimate meets these criteria, line items from the estimate may be used. Otherwise, the team should use an appropriate source (such as Means).

The A&E costs should be evaluated for the inclusion of factors B-H. If the estimate is based on "as-bid" costs, the Part A, unfactored costs should be extracted. The unfactored or "stripped" costs should then be factored using the CEF as appropriate. Work should be separated into repair (school building) and replacement (gymnasium).

Adjustments to Part A:

- Overhead and profit? The team should ensure that the A&E line items include subcontractor overhead and profit.
- Geographic location? If the A&E firm based its estimate on local costs, an adjustment is not appropriate.

Application of factors:

The line items should be reviewed to see if any of the factors are accounted for in unit costs.

Part B: General Requirements: Check unit costs first to review if safety and security, temporary services, quality control, submittals and general contractor's on-site project management are included in the Part A costs, then apply Part B factor if not already included.

Part C: Contingencies: Yes. Each part C factor should be reviewed for inclusion. The constructability factor, C.2, would not be applied to the non-complex gymnasium construction.

Part D: Overhead and Profit: Check unit costs first, then apply if appropriate and not already included. Overhead and Profit should already be included in "as-bid" costs, therefore the Part D factor should not be added. A&E cost estimates should be carefully reviewed to see if Overhead and Profit for the general contractor has been included.

Part E: Escalation: Check unit costs first, then apply if appropriate and not already included.

Part F: Fees: Yes, assuming they have not been waived.

Part G Applicant's Reserve: Yes, construction has not commenced, and approved change orders would be eligible.

Part H: Project Management: Yes, H1 and H3 only. The cost of the A&E work should be known and can be included in Part A.

Scenario 3: Bid/Construction Contract Available

In Scenario 3, the Applicant has not started work to restore the facility; however, using appropriate procurement procedures, the Applicant has retained a contractor who will soon begin work. The bid documents, with the contractor's unit costs, are available to the project formulation team.

The Applicant had previously retained an A&E firm to handle the design work and provide engineering services during the bid process and construction.

Source of data for Part A:

The team should review the bid to ensure that all costs are necessary, reasonable, and tied to the eligible scope of work. If the estimate meets these criteria, unit costs from the bid may be used. Otherwise, the team should use an appropriate source (such as Means).

Work should be separated into repair (school building) and replacement (gymnasium).

Adjustments to Part A:

- Overhead and profit?

 No; the bid should include subcontractor overhead and profit.
- Geographic location?

 No; the bid should reflect the cost of completing work in this location.

Application of factors:

- The line items should be reviewed to see if any of the factors are accounted for in unit costs.
- Part B: General Requirements: No, the bid should already include the contractor's General Requirements.
- Part C: Contingencies: No, the bid should already include the contractor's Contingencies.
- Part D: Overhead and Profit: No, the bid should already include the contractor's Overhead and Profit.
- Part E: Escalation: No, the bid should already include the contractor's Escalation.
- Part F: Fees: Yes, assuming they have not been waived.
- Part G Applicant's Reserve: Yes, construction has not commenced, and approved change orders would be eligible.
- Part H: Project Management: Yes, H1 and H3 only. The cost of the A&E work should be known and can be included in Part A.

Scenario 4: Work Partially Completed

In Scenario 4, the Applicant has completed demolition of the damaged gymnasium building and has cleared the site. The Applicant was required to retain an environmental engineering firm to test for asbestos and to monitor air quality during demolition. The contractor who performed the demolition work is not the same contractor who has won the contract to restore the facility.

Assume that Scenario 4 is otherwise the same as Scenario 3. Describe how the CEF would be applied differently.

Source of data for Part A:

Work should be separated into completed and uncompleted work. The actual cost of demolition should be included in Part A for completed work.

Adjustments to Part A:

- Overhead and profit? For completed work, these costs should already be included;
- Geographic location? For completed work, these costs should already be included.

Application of factors:

- Part B: General Requirements: No, actual costs are available.
- Part C: Contingencies: No. There are no contingencies for actual costs.
- Part D: Overhead and Profit: No, actual costs are available.
- Part E: Escalation: No, actual costs are available.
- Part F: Fees: Yes, assuming they have not been waived and have not been included in Part A.
- Part G: Applicant's Reserve: No, actual costs are available.
- Part H: Project Management: H.1 and H.3 only. The cost of the environmental firm should be known and should be included in Part A.

Cost Estimating Format for Large Projects Training Module

UNIT 6 – PRACTICAL EXERCISE EXERCISE SOLUTIONS

CEF Fact Sheet

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| Date of Estimate: | |
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| FEMA Region: | |
| Preparer(s): | |
| Applicant Name: | |
| Project Title: | |
| Damaged Facility: | |
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| PA ID No.: | |
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CEF Notes

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| Applicant Name: | | |
| Project Number: | | |
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| Preparer(s): | | |
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| Part B Notes: | B.1 - | |
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CEF Part A Estimate

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| Item No. | Item Description Title / Component Description | Div. # or Cost Code | Qty | Units | Unit Price | City Adj Factor | Total Cost |
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| PART A | | "B | lasa Costs" | for Construc | tion Wo | rk-In Trade | 26 | | | | | |
| A.1 | Permanent Work (From Part A Estimate) | | 00313 | ior construc | MOIT WO | IK-III ITAG | | | | | \$ | - |
| | | | | | | | | | | 1 | | |
| A.2 | Non-Permanent Job Specific Work (From I | Part A E | stimate) | | | | | | | | \$ | - |
| | | Pa | rt A Total | \$ - | \$ | | \$ - | \$ | | \$ - | \$ | |
| | | | it /t Total | Ψ | ļΨ | | ΙΨ | ĮΨ | | Ψ | V | |
| PART B | | Ge | neral Requi | rements and | General | Condition | s | | | | | |
| | | | nge | | | | | | | | | |
| B.1 | General Requirements Safety & Security - Airports, Ports & Govt. Owned Marina | 4.0% | 6.0% | | E | Enter % | in Appropr | iate Co | lumn | | - | |
| | Temporary Services & Utilities | 0.0% | 1.0% | | | | | | | | 1 | |
| | Quality Control | 0.0% | 1.0% | | | | | | | | | |
| | Submittals | 0.0% | 5.0% | \$ - | . \$ | | \$ - | \$ | _ | \$ - | \$ | |
| | | | | | 1 7 | | 1 7 | | | 1 7 | Ť | |
| B.2 | General Conditions (4.25%) | | | | | E | | | R . | | | |
| | | | | \$ - | . \$ | - | \$ - | \$ | - | \$ - | \$ | - |
| | | Pai | rt B Total | \$ - | . \$ | - | \$ - | \$ | - | \$ - | \$ | - |
| | PART A through | nh R SIII | BTOTAL | ¢ . | . \$ | | \$ - | \$ | | \$ - | \$ | |
| | FART A UII OU | gii D 30 | BIOIAL | Φ - | . ф | | Φ - | Φ | | Φ - | φ | |
| PART C | | | Constru | ction Cost C | ontinger | ncies | | | | | | |
| | | Rai | nge | | | | | | | | | |
| C.1 | Design-Phase Scope Contingencies | Low to | o High | | E | Enter % | in Appropr | iate Co | lumn | 1 | - | |
| | Preliminary Engineering Analysis Working Drawings | 15.0% 2.0% | 20.0% 10.0% | | | | | | | | - | |
| | g | , | | \$ - | \$ | - | \$ - | \$ | - | \$ - | \$ | - |
| 0.0 | Facility or Brainst Constructshills | | | | | Entor % | in Appropr | iata Co | lumn | | | |
| C.2 | Facility or Project Constructability Facility or Project Type and Complexity | (See IG fo | or Values) | | - | | Пттрргорг | | iuiiiii | | 1 | |
| | | , | • | \$ - | . \$ | | \$ - | \$ | - | \$ - | \$ | - |
| | | | | | | | | | | | | |
| C.3 | Access, Storage & Staging Contingencies | | nge o High | | | Enter % | in Appropr | iate Co | lumn | | | |
| | Access Contingencies | 1.0% | 4.0% | | | | | | | | | |
| | Storage Contingencies Staging Contingencies | 1.0% | 4.0% 4.0% | | | | | | | | - | |
| | Staging Contingencies | 1.076 | 4.076 | \$ - | . \$ | - | \$ - | \$ | - | \$ - | \$ | |
| C.4 | Economies of Scale | | 0.0% | | · | | | | _ | | | |
| C.4 | Economies of Scale | | 0.0% | 0% | | 0% | 0% | | 0% | 0% | - | |
| | | | | \$ - | \$ | - | \$ - | \$ | - | \$ - | \$ | - |
| | | Pai | rt C Total | \$ - | \$ | | \$ - | \$ | | \$ - | \$ | |
| | | | | | | | 1 7 | Ť | | 1 | Ť | |
| | PART A throug | gh C SU | BTOTAL | \$ - | \$ | - | \$ - | \$ | - | \$ - | \$ | - |
| PART D | | (| General Cor | ntractor's Ove | erhead a | and Profit | | | | | | |
| | | | | | | | | | | | | |
| D.1 | GC's Home Office Overhead | | 7.7% | \$ - | • | <u> </u> | | 1 6 | R . | \$ - | • | |
| | | | | φ - | . ф | - | Φ - | φ | | Φ - | \$ | |
| D.2 | GC's Insurance, Payment & Performance E | Bonds | 3.3% | | | 区 | | | Ri . | M | | |
| | New Co | onstruction | 10.0% | \$ - Select a top | box for th | e type of pro | ject, and appli | able botto | om boxes to | \$ - apply the factor. | \$ | - |
| | | air/Retrofit | | | uction | 9 | Repair/Re | rofit 📮 | | | | |
| D.3 | General Contractor's Profit | | | | - | 國 | | | Z. | | | |
| | | | | \$ - | . \$ | - | \$ - | \$ | - | \$ - | \$ | - |
| | | Pai | rt D Total | \$ - | \$ | - | \$ - | \$ | - | \$ - | \$ | - |
| | PART A throug | nh D SIII | BTOTAL | ¢ | \$ | | \$ - | \$ | | \$ - | \$ | |
| | FART A IIII OUÇ | ال ق تا الو | DIVIAL | φ - | Ф | | φ - | Ф | | φ - | Φ | |
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|---------------------------|---|-----------------------------|---|--|------------|--------------|--|--|------------------|--|------------------|--|---|----|-------|
| | | | | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - | | Γotal |
| | | | | · | | | | | | | | | | | |
| PART E | | | | st Escalat | ion Fa | actors | | | | | | | | | |
| | | Months | Monthly Factor | | | | | | | | | | | | |
| E | Cost Escalation Factor | | 1 actor | \$ | - | \$ | - | \$ | - | \$ | - | \$ | | \$ | _ |
| | | | | | | • | | 1 | | | | | | | |
| | PART A throu | gh E SU | IBTOTAL | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - |
| PART F | | | Plan Review | and Cons | structio | on Permit | Cost | | | | | | | | |
| F.1 | Plan Review Fees | | | | | | | | | | | | | | |
| | (List Individual Requirements Separately) | | | | | | | | | | | | | - | |
| | | | | | | | | | | | | | | | |
| | | | | \$ | | \$ | | \$ | | \$ | | \$ | - | \$ | |
| | | | | Ψ | - | Ψ | | Ψ | - | Ψ | | Ψ | | Ψ | |
| F.2 | Construction Permit Fees | | | | | 1 | | 1 | | ı | | 1 | | | |
| | (List Individual Requirements Separately) | | | | | | | | | | | | | - | |
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| | | Ps | art F Total | \$ | _ | \$ | | \$ | | \$ | | \$ | | \$ | |
| | | | iiti iotai | Ψ | | ĮΨ | | ĮΨ | | ĮΨ | | ĮΨ | | Ψ | |
| | PART A throu | gh F SU | BTOTAL | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| PART G | | | Applicant's | Reserve | for Ch | ange Orde | ers | | | | | | | | |
| PART G | Applicant's Reserve for Change Orders | | Applicant's | E. | for Ch | 8 | ers | | | | | | | • | |
| | Applicant's Reserve for Change Orders | | | | for Ch | | ers - | \$ | - | \$ | - | \$ | - | \$ | - |
| | Applicant's Reserve for Change Orders PART A throu | gh G SU | 7.0% | \$ | for Ch | 8 | ers - | | - | _ | - | _ | | \$ | - |
| | | gh G SU | 7.0% | \$ | for Ch | \$ | ers - | \$ | - | \$ | - | \$ | - | | - |
| | | | 7.0% | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - - | | - |
| G | | Appl | 7.0% IBTOTAL | \$ | - | \$ | - | \$ | - | \$ | | \$ | - | | - |
| G PART H | PART A throu | Appl | 7.0% JBTOTAL icant's Proje | \$ | - | \$ | - | \$ \$ | | \$ | | \$ | - | | - |
| G PART H H.1 | PART A throu Applicant's Project Management - Design | Appl | 7.0% JBTOTAL icant's Proje | \$ \$ ct Manage | - | \$ s and Des | - | \$ \$ Sts | - | \$ | | \$ | - - | \$ | - |
| G PART H | PART A throu Applicant's Project Management - Design A/E Design Contract Cost | Appl Phase | 7.0% DBTOTAL icant's Proje 1.0% | \$ standarder | - ement | \$ and Des | - ign Cos | \$ \$ | | \$ | | \$ | - - | \$ | - |
| G PART H H.1 | PART A throu Applicant's Project Management - Design | Appl | 7.0% JBTOTAL icant's Proje | \$ \$ ct Manage | - | \$ s and Des | - | \$ \$ Sts | - | \$ | - | \$ | - | \$ | - |
| G PART H H.1 | PART A throu Applicant's Project Management - Design A/E Design Contract Cost Above Average Complexity (Curve A) | Appl Phase | 7.0% DBTOTAL icant's Projections 1.0% | \$ \$ Standard Manager \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ | ement | s and Des | - ign Cos | \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ | | \$ | - | \$ \$ \$ \$ \$ \$ | - | \$ | - |
| G PART H H.1 | PART A throu Applicant's Project Management - Design A/E Design Contract Cost Above Average Complexity (Curve A) Average Complexity (Curve B) | Appli Phase | 7.0% JBTOTAL icant's Projection 1.0% 0.0% 0.0% | \$ st Manager \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ | - ement | \$ and Des | - ign Cos | \$ sts | - | \$ \$ | - | \$ | - | \$ | - |
| G PART H H.1 | PART A throu Applicant's Project Management - Design A/E Design Contract Cost Above Average Complexity (Curve A) Average Complexity (Curve B) | Appl Phase | 7.0% JBTOTAL icant's Projection 1.0% 0.0% 0.0% | \$ s tt Manage \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ | ement | s and Des | - ign Cos | \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ | | \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ | - | \$ \$ \$ \$ \$ \$ \$ \$ | - | \$ | - |
| PART H H.1 | Applicant's Project Management - Design A/E Design Contract Cost Above Average Complexity (Curve A) Average Complexity (Curve B) Basic Construction Inspection Services | Appl Phase | 7.0% JBTOTAL icant's Projection 1.0% 0.0% 0.0% 3.0% | \$ \$ Standard Manager \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ | ement | s and Des | - ign Cos | \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ | | \$ | - | \$ \$ \$ \$ \$ \$ | - | \$ | - |
| PART H H.1 | Applicant's Project Management - Design A/E Design Contract Cost Above Average Complexity (Curve A) Average Complexity (Curve B) Basic Construction Inspection Services | Appl Phase | 7.0% DBTOTAL icant's Projection 1.0% 0.0% 0.0% 3.0% 6.0% | \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ | | s and Dess | - ign Cos | \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ | - - - - | \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ | - | \$ \$ \$ \$ \$ \$ \$ \$ | | \$ | - |
| PART H H.1 | Applicant's Project Management - Design A/E Design Contract Cost Above Average Complexity (Curve A) Average Complexity (Curve B) Basic Construction Inspection Services Project Management - Construction Phase | Appl Phase | 7.0% DBTOTAL icant's Project 1.0% 0.0% 0.0% 3.0% 6.0% | s s s s s s s s s s s s s s s s s s s | ement | s and Des | - ign Cos | \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ | - - - - | \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ | - - - - | \$ \$ \$ \$ \$ \$ \$ \$ | - - - - - - - - - - - | \$ | - |
| PART H H.1 | Applicant's Project Management - Design A/E Design Contract Cost Above Average Complexity (Curve A) Average Complexity (Curve B) Basic Construction Inspection Services | Appl Phase | 7.0% DBTOTAL icant's Project 1.0% 0.0% 0.0% 3.0% 6.0% | s s s s s s s s s s s s s s s s s s s | ement | s and Dess | - ign Cos | \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ | - - - - | \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ | - - - - | \$ \$ \$ \$ \$ \$ \$ \$ | - - - - - - - - - - - | \$ | - |
| PART H H.1 | Applicant's Project Management - Design A/E Design Contract Cost Above Average Complexity (Curve A) Average Complexity (Curve B) Basic Construction Inspection Services Project Management - Construction Phase | Appl Phase Pa Pa Gh H SU | 7.0% DBTOTAL icant's Project 1.0% 0.0% 0.0% 3.0% 6.0% art H Total DBTOTAL | \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ | | s and Des | - control cont | \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ | | \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ | | \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ | | \$ | - |
| G PART H H.1 H.2 | Applicant's Project Management - Design A/E Design Contract Cost Above Average Complexity (Curve A) Average Complexity (Curve B) Basic Construction Inspection Services Project Management - Construction Phase | Appl Phase Pa Pa Gh H SU | 7.0% DBTOTAL icant's Project 1.0% 0.0% 0.0% 3.0% 6.0% | \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ | | s and Des | - control cont | \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ | | \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ | | \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ | | \$ | - |

| | | | | _ | | | | | | | | | | | |
|----|--|---------------|-----------------|--------------|-----------|---------------|----------|------------------|----------------|----------------|---------------|--------------|---------|-----|------|
| | | | | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - | То | otal |
| TA | | "[| Base Costs" f | or Const | ruction V | Vork-In T | rades | | | | | | | | |
| .1 | Permanent Work (From Part A Estimate) | | | | | | | | | | | | | \$ | |
| | W D (110 K) W 1 K | | | | | | | | | | | | | | |
| .2 | Non-Permanent Job Specific Work (From Pa | irt A Esti | imate) | | | | | | | | | | | \$ | |
| | | P | art A Total | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - | \$ | |
| ТВ | | Ge | eneral Require | ments a | nd Gene | ral Cond | litions | | | | | | | | |
| | | | | | | rai Goria | | | | | | | | | |
| .1 | General Requirements | | ange to High | | | Ente | er % iı | 1 Appr | opriate | e Colu | ımn | | | | |
| | Safety & Security - Airports, Ports & Govt. Owned Marinas Temporary Services & Utilities | 4.0% 0.0% | 6.0% 1.0% | | | | | | | | | | | - | |
| | Quality Control | 0.0% | 1.0% | | | | | | | | | | | | |
| | Submittals | 0.0% | 5.0% | | | | | | | | | | | | |
| | | | | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - | \$ | |
| .2 | General Conditions (4.25%) | | | | | | | <u> </u> | | E | l l | E. | 1 | | |
| | | | | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - | \$ | |
| | | P | art B Total | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - | \$ | |
| | PART A thro | uah R SI | LIRTOTAL | e | | \$ | | \$ | | \$ | | \$ | | \$ | |
| | TAKTA UIIO | ugii b o | OBIOTAL | Φ | | Ψ | | Φ | | Φ | | Ψ | | Ą | |
| TC | | | Construc | tion Cost | t Conting | gencies | | | | | | | | | |
| | | | ange | | | | ٠. | | | 0.1 | | | | | |
| .1 | Design-Phase Scope Contingencies Preliminary Engineering Analysis | 15.0% | 20.0% | | | Ente | er % II | n Appro | opriate | e Colu | ımn | | | - | |
| | Working Drawings | 2.0% | 10.0% | | | | | | | | | | | | |
| | | | | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - | \$ | |
| .2 | Facility or Project Constructability | | | Ī | | Ente | er % iı | n Appr | opriate | e Colu | ımn | | | | |
| | Facility or Project Type and Complexity | (See IG | for Values) | | | | | • | | | | • | | • | |
| | | | | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - | \$ | |
| | | | ange | | | | | | | | | | | | |
| .3 | Access, Storage & Staging Contingencies Access Contingencies | Low 1 | 4.0% | | | Ente | er % ii | n Appro | opriate | e Colu | ımn | | | | |
| | Storage Contingencies | 1.0% | 4.0% | | | | | | | | | | | | |
| | Staging Contingencies | 1.0% | 4.0% | \$ | | \$ | | \$ | | \$ | | s | | • | |
| | | | | Ф | - | Ф | - | Ф | - | Þ | | Þ | - | \$ | |
| .4 | Economies of Scale | | 0.0% | \$ | | <u> </u> | _ | <u></u> | _ | [C | l | [[] | | · · | |
| | | | | Ψ | | Ψ | | Ψ | | Ψ | | Ψ | | Ÿ | |
| | | Pa | art C Total | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - | \$ | |
| | PART A thro | ugh C S | UBTOTAL | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - | \$ | |
| | | | Canada Can | | O | al a sa al Du | -64 | | | | | | | | |
| TD | | | General Cont | lacions | Overnea | u anu Fi | OIIL | | | | | | | | |
| .1 | GC's Home Office Overhead | | 7.7% | B | | B | | 8 | | | | | | | |
| | | | | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - | \$ | |
| .2 | GC's Insurance, Payment & Performance Bo | onds | 3.3% | 8 | | 题 | | 8 | | | | | | | |
| | Now C | Construction | 10.0% | \$ Select | a top box | for the typ | e of pro | \$ ect, and a | - pplicable | \$ e bottom | - boxes to | \$ apply the | factor. | \$ | |
| | | pair/Retrofit | | | onstructi | _ | | Repair | | _ | | | | | |
| .3 | General Contractor's Profit | | | <u> </u> | | | | B | | <u>.</u> | | | | | |
| | | | | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - | \$ | |
| | | Pa | art D Total | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - | \$ | |
| | PART A thro | nap D Gi | LIBTOTAL | ¢ | _ | \$ | | \$ | | \$ | | \$ | _ | \$ | |
| | I ANT A UIIO | ~g ~ 0 | : AL | Ψ | - | Ψ | | Ψ | - | Ψ | - | Ψ | - | Ψ | |

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|------------|--|----------------|---|--|-----------|---------------------------------------|---|------------|--|---|------------------------------|----|-------|
| | | | | \$ | - | \$ | - \$ | - | \$ | - | \$ - | | Total |
| PART E | | | Cost | Escalatio | n Facto | ors | | | | | | | |
| | | Months | Monthly Factor | | | | | | | | | | |
| Е | Cost Escalation Factor | | Factor | \$ | - | \$ | - \$ | _ | \$ | - | \$ - | \$ | - |
| | PART A thi | rawah E Ci | LIBTOTAL | • | . | \$ | - \$ | _ | \$ | | \$ - | \$ | |
| | PART A till | rougn E St | UBIUIAL | \$ | - | \$ | - \$ | - | \$ | - | \$ - | \$ | |
| PART F | | | Plan Review | and Consti | ruction F | Permit Cost | t | | | | | 1 | |
| F.1 | Plan Review Fees (List Individual Requirements Separately) | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | \$ | - | \$ | - \$ | _ | \$ | - | \$ - | \$ | - |
| F.2 | Construction Permit Fees | | | Ī | | | | | | | | | |
| | (List Individual Requirements Separately) | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | \$ | - | \$ | - \$ | - | \$ | - | \$ - | \$ | - |
| | | P | art F Total | \$ | - | \$ | - \$ | - | \$ | - | \$ - | \$ | - |
| | PART A thi | rouah F Sl | UBTOTAL | \$ | - 1 | \$ | - \$ | _ | \$ | - | \$ - | \$ | |
| | | | | * | | · | | | | | . • | | |
| PART G | | | Applicant's I | Reserve fo | r Chang | e Orders | | | | | | | |
| G | Applicant's Reserve for Change Orders | | 7.0% | \$ | - | \$ | - \$ | <u>u</u> - | \$ | | \$ - | \$ | - |
| | DADT A 4h- | | UDTOTAL | • | _ | \$ | - \$ | | | | \$ - | | |
| | PART A thr | ougn & St | UBIUIAL | 1.5 | | | - 5 | - | \$ | - | \$ - | \$ | - |
| | | | | | | Ψ | | | | • | | | |
| PART H | | | icant's Projec | | ! | * | | | • | | | | |
| PART H | Applicant's Project Management - Design I | Appli | icant's Projec | t Manager | ment an | id Design (| Costs | | | | B | | |
| | Applicant's Project Management - Design I | Appli | | t Manager | ment an | * | | | \$ | | \$ - | \$ | - |
| | A/E Design Contract Cost | Appli Phase | 1.0% | t Manager | ment an | nd Design (| Costs | - | \$ | - | | \$ | - |
| H.1 | A/E Design Contract Cost Above Average Complexity (Curve A) | Appli | | t Manager | ment an | ad Design (| Costs | <u> </u> | _ | - | \$ - \$ - | \$ | - |
| H.1 | A/E Design Contract Cost | Appli Phase | 0.0% | t Manager \$ \$ \$ \$ | ment ar | d Design (| - \$ - \$ - \$ - \$ | | \$ \$ \$ \$ | | \$ - \$ - \$ - | | |
| H.1 H.2 | A/E Design Contract Cost Above Average Complexity (Curve A) Average Complexity (Curve B) Basic Construction Inspection Services | Appli Phase | 1.0% 0.0% 0.0% 3.0% | t Manager \$ \$ | ment an | d Design (| - \$ - \$ | - - | \$ \$ | - | \$ - \$ - | \$ | - |
| H.1 | A/E Design Contract Cost Above Average Complexity (Curve A) Average Complexity (Curve B) | Appli Phase | 0.0% 0.0% | t Manager \$ \$ \$ \$ | ment ar | d Design (| - \$ - \$ - \$ - \$ | | \$ \$ \$ \$ | | \$ - \$ - \$ - | | |
| H.1 H.2 | A/E Design Contract Cost Above Average Complexity (Curve A) Average Complexity (Curve B) Basic Construction Inspection Services | Appli Phase | 1.0% 0.0% 0.0% 3.0% 6.0% | \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ | | d Design (| - \$ - \$ - \$ - \$ - \$ | | \$ \$ \$ \$ \$ | - | \$ - \$ - \$ - \$ - | \$ | - |
| H.1 H.2 | A/E Design Contract Cost Above Average Complexity (Curve A) Average Complexity (Curve B) Basic Construction Inspection Services Project Management - Construction Phase | Appli Phase | 1.0% 0.0% 0.0% 3.0% 6.0% | \$ \$ \$ \$ \$ \$ \$ \$ \$ | ment an | s s s s s s s s s s s s s s s s s s s | - \$ - \$ - \$ - \$ - \$ | | \$ \$ \$ \$ | | \$ - \$ - \$ - \$ - | \$ | |
| H.1 H.2 | A/E Design Contract Cost Above Average Complexity (Curve A) Average Complexity (Curve B) Basic Construction Inspection Services | Appli Phase | 1.0% 0.0% 0.0% 3.0% 6.0% | \$ \$ \$ \$ \$ \$ \$ \$ \$ | | d Design (| - \$ - \$ - \$ - \$ - \$ | | \$ \$ \$ \$ \$ | - | \$ - \$ - \$ - \$ - | \$ | - |
| H.1 H.2 | A/E Design Contract Cost Above Average Complexity (Curve A) Average Complexity (Curve B) Basic Construction Inspection Services Project Management - Construction Phase | Appli Phase | 1.0% 0.0% 0.0% 3.0% 6.0% art H Total | \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ | | s s s s s s s s s s s s s s s s s s s | - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ | | \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ | - | \$ - \$ - \$ - \$ - | \$ | - |

Total Project Summary

| | | Con | npleted | Uncor | mpleted | Total |
|--------|--|-----|---------|-------|---------|-------|
| PART A | "Base Costs" for Construction Work In Trades | \$ | - | \$ | - \$ | - |
| | A.1 Permanent Work | \$ | - | \$ | - \$ | - |
| | A.2 Non-Permanent Job Specific Work (From Part A Estimate) | \$ | - | \$ | - \$ | - |
| | | | | | | |
| PART B | General Requirements and General Conditions | \$ | - | \$ | - \$ | - |
| | B.1 General Requirements | \$ | - | \$ | - \$ | - |
| | B.2 General Conditions | \$ | - | \$ | - \$ | - |
| PART C | Construction Cost Contingencies (Design and Construction) | \$ | | \$ | - \$ | - |
| | C.1 Standard Design-Phase Scope Contingencies | \$ | - | \$ | - \$ | - |
| | C.2 Facility or Project Constructability | \$ | - | \$ | - \$ | - |
| | C.3 Access, Storage, and Staging Contingencies | \$ | - | \$ | - \$ | - |
| | C.4 Economies of Scale in New Construction | \$ | - | \$ | - \$ | - |
| | | | | | | |
| PART D | General Contractor's Overhead and Profit | \$ | - | \$ | - \$ | - |
| | D.1 General Contractor's Home Office Overhead Costs | \$ | - | \$ | - \$ | - |
| | D.2 General Contractor's Insurance, Payment, and Performance Bonds | \$ | - | \$ | - \$ | - |
| | D.3 Contractor's Profit | \$ | - | \$ | - \$ | - |
| PART E | Cost Escalation Allowance | \$ | | \$ | - \$ | - |
| PART F | Plan Review and Construction Permit Costs | \$ | | \$ | - \$ | _ |
| | F.1 Plan Review Fees | \$ | - | \$ | - \$ | - |
| | F.2 Construction Permit Fees | \$ | - | \$ | - \$ | - |
| | | | | | | |
| PART G | Applicant's Reserve for Construction | \$ | - | \$ | - \$ | - |
| PART H | Applicant's Project Management and Design Costs | \$ | | \$ | - \$ | - |
| | H.1 Applicant's Project Management - Design Phase | \$ | - | \$ | - \$ | - |
| | H.2 Architecture & Engineering Design Contract Costs | \$ | - | \$ | - \$ | - |
| | H.3 Project Management - Construction Phase | \$ | - | \$ | - \$ | - |
| | | | | | | |
| | Complete Project Total for Completed and Uncompleted Work | \$ | - | \$ | - \$ | - |
| | | | | | | |

FEDERAL EMERGENCY MANAGEMENT AGENCY

PROJECT WORKSHEET

O.M.B. No. 3067-0151 Expires April 30, 2001

PAPERWORK BURDEN DISCLOSURE NOTICE

Public reporting burden for this form is estimated to average 30 minutes. The burden estimate includes the time for reviewing instructions, searching existing data sources, gathering and maintaining the needed data, and completing and submitting the forms. You are not required to respond to this collection of information unless a valid OMB control number is displayed in the upper right corner of the forms. Send comments regarding the accuracy of the burden estimate and any suggestions for reducing the burden to: Information Collections Management, Federal Emergency Management Agency, 500 C Street, SW, Washington, DC 20472, Paperwork Reduction Project (3067-0151). **NOTE:** Do not send your completed form to this address.

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|----------|--------------|----------------|-------------------------|--------------------|--------|--------------------|--------------|-----------|
| DECLA | RATION NO | | PROJECT NO. | FIPS NO. | | DATE | CA | TEGORY |
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| DAMAC | SED FACILIT | Υ | 1 | - | | WORK COMPLE | TE AS OF: | |
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| SCOPE | OF WORK | | | | | | | |
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| Does th | e Scope of V | Work change | the pre-disaster condit | tions at the site? | | Yes | | |
| | | ons issues inc | | Yes No | | Mitigation proposa | l included? | Yes |
| | | overage on th | | ☐ Yes ☐ No | THEHIO | rangunon proposu | | 100 110 |
| 13 there | msurance c | overage on th | iis racinty. | PROJECT CO | ST | | | |
| ITEM | CODE | | NARRA | | | QUANTITY/UNIT | UNIT PRICE | COST |
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CEF Fact Sheet

| Data at East at | A 1.4. 4000 |
|---------------------------|--|
| Date of Estimate: | August 1, 1999 |
| FEMA Region: | IX |
| Preparer (s): | FEMA |
| Applicant Name: | Los Angeles County |
| Project Title: | Earthquake Damage Repair and Hazard Mitigation |
| Damaged Facility: | LA Medical Center - Administration Building |
| Facility Location: | 999 First Street, Los Angeles, California |
| Declaration Number: | FEMA-0000-DR-CA |
| Project Number: | 9999 |
| PA ID No.: | 999-99999 |
| Date of Inspection: | May 1, 1999 |
| Event Date(s): | April 1, 1999 |
| Work Category: | E |
| Type of Work: | REPAIR |
| (Enter New, Repair, etc.) | НМР |
| | UPGRADES |
| | |
| | |
| Scope: | The scope of repair work includes: epoxy injection of concrete columns, walls and floor slab; patching concrete spalls; partial demolition and replacement of concrete wall; repair/replacement of interior partition walls and floor beams; remove and replace 6" slabon-grade; remove & replace 1' x 3' reinforced strip footing; repair of damage to wood frame walls and roof; patch and paint cracks in interior plaster walls and ceilings; patch and paint cracks and spalls in stucco; reset dispalced clay roof tiles and remove /replace damaged tiles; replace casement windows; and painting of the interior and exterior walls. |
| | A Hazard Mitigation Proposal (HMP) was submitted to tie the roof diaphragm to the peremeter walls. The scope of work includes installation of tension ties to the roof system. In addition to the HMP scope of work, upgrades to the existing exterior ramps and sidewalks and the construction of new ramps and sidewalks has been recomended for ADA compliance. |

CEF Notes

| Damaged Facility: | | LA Medical Center - Administration Building |
|---|----------------|---|
| Applicant Name: | | Los Angeles County |
| Project Number: | | 9999 |
| Date of Estimate: | | August 1, 1999 |
| Preparer (s): | | FEMA |
| Part A Notes: | A.1 - | Construction costs based on 1999 R.S. Means unit costs with appropriate city index for CSI division of work and force account records submitted by the applicant. |
| | A.2 - | Construction costs based on 1999 R.S. Means unit costs with appropriate city index for CSI division of work. |
| Part B Notes: | | General Requirement costs added for Safety & Security (4%), Temporary Utilities and Services (1%), Quality Control (0.5%), and Submitals (2%) 4.25% - Standard CEF factor used for General Conditions |
| Part C Notes: | C.2 - C.3 - | 2% - Repair, Haz. Mit Scope of work is well defined, equivalent to working drawings stage 2% - Project complexity is minimal to moderate 0% - Access, storage, and staging are adequate for repair, upgrade, and HMP. 0% - Project is too small for economies of scale factor |
| Part D Notes: | D.1 - D.2 - | 7.7% - Standard CEF factor used for GC's Home Office Overhead 3.3% - Standard CEF factor used for GC's Insurance, Payment & Performance Bonds 10% - Standard CEF factor used for GC's Profit |
| Part E Notes: | | Cost Escalation Factor: Total duration = 7 months; Monthly factor 0.188% Design = 1.5 months; Bid/Award = 1.5 months 1/2 of Construction = 2 months |
| Part F Notes: | | Plan Review Fees are based on Los Angeles County requirements Construction Permit Fees are based on Los Angeles County requirements |
| Part G Notes: | G.1 - | 6.9% - Standard CEF factor used for Applicant's Reserve for Change Orders |
| Part H Notes: | H.2 - | 1% - Standard CEF factor used for Project Management - Design Phase 10.4% - Standard CEF factor used for A/E Design Contract Costs 6% - Standard CEF factor used for Project Management - Construction Phase |
| Miscellaneous Notes & Comments: Use mouse to Activate Cursor: | | Upgrades (ADA Compliance) are required due to local building requirements. A detailed scope of work for completeing ADA upgrades is included in Part A. A general contractor/subcontractor will be retained in order to complete repairs. Completed Force Account received factors H.1, H.2 and H.3 |

CEF Part A Estimate

| Item No. | Item Description Title / Component Description | Div. # or Cost Code | Qty. | Units | Unit Price | City Adj. Factor | Total Cost |
|-------------|--|------------------------|-----------|----------|-------------|---------------------|------------|
| Comple | eted | | | | | | |
| | Permanent | | | | | | |
| 1 | Labor without benefits | Force Account | 20.00 | HRS | \$67.82 | 1.000 | \$1,356 |
| 2 | Benefits | Force Account | 20.00 | HRS | \$37.46 | 1.000 | \$749 |
| 3 | Materials | Force Account | 1.00 | LS | \$1,200.00 | 1.000 | \$1,200 |
| 4 | Equipment | Force Account | 1.00 | LS | \$750.00 | 1.000 | \$750 |
| | | | Co | mplete | ed - Perman | ent Total | \$4,056 |
| | Non-Permanent | | | • | | | |
| | | | | | | | |
| | <u> </u> | | Comple | eted - N | lon-Perman | ent Total | \$0 |
| Jncom | pleted | | <u> </u> | | | l | |
| | Permanent | | | | | | |
| | STRUCTURAL REPAIRS | | | | | | |
| | 1.0 General Requirements | | | | | | |
| 5 | Conc. Patch walls, incl. Chipping, cleaning, & grout | 018-030-1030 | 4.00 | SF | \$14.50 | 1.106 | \$64 |
| | 2.0 Site Work - Demolition | 010 000 1000 | 1.00 | 0. | Ψ11.00 | 1.100 | ΨΟΙ |
| 6 | Selective demolition, wood frame, joists 2x8 | 020-714-4240 | 300.00 | LF | \$0.61 | 1.051 | \$192 |
| 7 | Selective demolition, floor sheating & flooring | 020-704-7200 | 3.00 | EA | \$72.50 | 1.051 | \$229 |
| 8 | Demo, conc., 8" walls, bar reinforced, over 6 CF | 020-704-1450 | 175.50 | CF | \$30.00 | 1.051 | \$5,534 |
| 9 | Conc. Removal, footings 1' x 2' | 020-754-1000 | 15.00 | LF | \$11.15 | 1.051 | \$176 |
| 10 | Demo, slab on grade, 6", bar rein., over 8 SF | 020-704-1250 | 162.00 | SF | \$15.85 | 1.051 | \$2,699 |
| 11 | Building Demo, incl. 20 mi haul, exclu. Dump fees, CF | 020-604-0700 | 14,700.00 | CF | \$0.25 | 1.051 | \$3,862 |
| 12 | Dump charges, typical urban city, fees only | 020-612-0100 | 59.00 | Т | \$55.00 | 1.051 | \$3,410 |
| 13 | Remove and reset windows | 020-734-5020 | 25.00 | EA | \$61.00 | 1.051 | \$1,603 |
| | 3.0 Concrete | | | | *** | | 7 7 |
| 14 | Epoxy inject up to 0.25" wide | 037-330-0100 | 1,093.00 | LF | \$22.00 | 1.152 | \$27,701 |
| 15 | Conc. In-place, incl. Forms, rebar, finish walls, 8", to 8' high | 033-172-4950 | 6.50 | CY | \$32.50 | 1.152 | \$243 |
| 16 | Conc. In-place, footings, strip, 1' x 3', reinforced | 033-130-3950 | 13.00 | CY | \$172.00 | 1.152 | \$2,576 |
| 17 | Conc., in place, slab on grade, 6 " thick | 033-130-4700 | 3.00 | CY | \$122.00 | 1.152 | \$422 |
| | 6.0 Woods and Plastics | | | | | | |
| 18 | Framing Joists, 2' x 8' | 061-114-2613 | 400.00 | LF | \$1.75 | 1.085 | \$760 |
| 19 | Framing, heavy mill timber beams, 4' x 8' | 061-304-0262 | 54.00 | BF | \$2.08 | 1.085 | \$122 |
| 20 | Framing, rafters to 4 12 pitch, 2' x 6' | 061-120-5000 | 1,090.00 | LF | \$1.32 | 1.085 | \$1,561 |
| 21 | Framing, roofs, facia boards 2' x 8' | 061-120-5880 | 195.00 | LF | \$2.42 | 1.085 | \$512 |
| 22 | Sheating, plywood on roof 1/2" pneumatic nailed | 061-154-0103 | 2,455.00 | SF | \$0.88 | 1.085 | \$2,344 |
| 23 | Framing walls, studs, 8' high, 2' x 4', pneumatic nailed | 061-128-5147 | 615.00 | LF | \$0.95 | 1.085 | \$634 |
| 24 | Sheating, plywood on walls, ext. CDX 1/2" pneumatic nailed | 061-154-0607 | 1,225.00 | SF | \$0.98 | 1.085 | \$1,303 |
| | 7.0 Thermal and Moisture Protection | | | | | | |
| 25 | Roof deck insulation, extruded polystyrene, 25 PSI, 4", R-20 | 072-203-1946 | 2,455.00 | SF | \$1.56 | 1.163 | \$4,454 |
| 26 | Prepared roll roofing, 3-plies glass fiber felt, lapped 19" mopped | 075-204-0400 | 25.00 | SQ | \$170.00 | 1.163 | \$4,943 |

CEF Part A Estimate

| Item No. | Item Description Title / Component Description | Div. # or Cost Code | Qty. | Units | Unit Price | City Adj. Factor | Total Cost |
|-------------|--|--|-----------|----------|-------------|---------------------|------------|
| | 8.0 Doors and Windows | | | | | | |
| 27 | Casement windows, incl. Frame, screen, trim | 086-120-8040 | 25.00 | EA | \$296.00 | 1.037 | \$7,674 |
| | 9.0 Finishes | | | | | | |
| 28 | Paint exterior perimeter walls (2 CT) | 099-124-0410 | 10,990.00 | SF | \$0.26 | 1.159 | \$3,312 |
| 29 | Stucco, 3 coats, 1" thick, float finish on wood frame | 092-304-0010 | 5.00 | SY | \$20.50 | 1.159 | \$119 |
| 30 | Ceilings, gypsum drywall, finished, screwed to joists, 1/2" | 092-604-0100 | 2,455.00 | SF | \$1.22 | 1.159 | \$3,471 |
| 31 | Drywall, nailed or screwed to studs 5/8", taped & finished | 092-608-0250 | 613.00 | SF | \$1.29 | 1.159 | \$917 |
| 32 | Exterior painting, stucco, rough, oil base, paint 2 coats, spray | 099-106-1600 | 613.00 | SF | \$0.34 | 1.159 | \$242 |
| 33 | Interior painting, walls, 2 coats, sand finish, spray | 099-224-0980 | 613.00 | SF | \$0.26 | 1.159 | \$185 |
| 34 | Interior painting, ceilings, 2 coats, sand finish, spray | 099-224-0980 099-224-1800 | 2,455.00 | SF | \$0.33 | 1.159 | \$939 |
| | TOTAL STRUCTURAL WORK | | | | | | \$82,200 |
| | | | | | | | |
| | UPGRADES | | | | | | |
| 35 | Construct new sidewalks and ramps | 025-128-0350 | 1,300.00 | SF | \$3.30 | 1.051 | \$4,509 |
| 36 | Adjust exterior ramps to code (50 %) | 025-128-0350 | 1,300.00 | SF | \$1.65 | 1.051 | \$2,254 |
| | TOTAL UPGRADES | | | | | | \$6,763 |
| | | | | | | | |
| | STRUCTURAL HAZARD MITIGATION (HMP) | | | | | | |
| 37 | Install tension ties | 060-512-7038 | 215.00 | EA | \$18.25 | 1.083 | \$4,249 |
| 38 | Drilling concrete (4" deep) | 050-515-0700 | 215.00 | EA | \$9.35 | 1.058 | \$2,127 |
| 39 | Drilling (each additional Inch) | 050-515-0750 | 215.00 | EA | \$7.92 | 1.058 | \$1,802 |
| 40 | Install bolts 15" long, 3/4" dia. | 060-512-0600 | 215.00 | EA | \$6.20 | 1.083 | \$1,444 |
| 41 | Install washers 3" x 3" x 3/16" | 060-512-5500 | 215.00 | EA | \$0.63 | 1.083 | \$147 |
| | TOTAL HMP | | | | | | \$9,768 |
| | | | | | | | |
| | NON-STRUCTURAL WORK | | | | | | |
| 42 | Backfill by hand, compaction in 6" layers, hand tamp | 022-204-0300 022-204-0010 | 32.00 | CY | \$34.45 | 1.051 | \$1,159 |
| 43 | Conc., in place, grade walls, 8 " thick, 8' high | 033-130-4200 | 21.00 | CY | \$320.00 | 1.152 | \$7,741 |
| 44 | Conc., in place, slab on grade, 6 " thick | 033-130-4700 | 11.00 | CY | \$122.00 | 1.152 | \$1,546 |
| 45 | Clay tile, spanish, 171 pcs per SQ, red | 073-202-0600 | 32.00 | SQ | \$535.00 | 1.163 | \$19,911 |
| 46 | Plaster, repair cracking and paint | 092-154-0010 099-224-0840 | 21,385.00 | SF | \$1.05 | 1.159 | \$26,024 |
| 47 | Stucco over wood, remove, replace, and paint | 020-732-0300 092-304-0010 099-106-1400 | 200.00 | SF | \$1.79 | 1.159 | \$415 |
| | TOTAL NON-STRUCTURAL WORK | | | | | | \$56,796 |
| | | | | | | | |
| | | • | Unco | mplete | ed - Perman | ent Total | \$155,527 |
| | Non-Permanent | | | | | | |
| 49 | Scaffolding rental | 015-255-4100 | 12.00 | EA | \$1,250.00 | 1.11 | \$16,590 |
| 49 | Temporary fencing | 015-304-0200 | 200.00 | LF | \$8.15 | 1.11 | \$1,803 |
| | | • | Uncomple | eted - N | lon-Perman | ent Total | \$18,393 |
| | | TOTAL | PART A BA | SE CO | NSTRUCTIO | ON COST | \$177,975 |

| | Los Angeles County - Ea | ırthqı | uake D |)ar | nage | R | epaiı | r an | d H | aza | ard I | Viti | gatio | n | |
|--------|---|---------|-----------------|-------|-----------|---------|-----------|-------|----------|-------|---------|------|-------|-----|-------|
| | <u> </u> | | | | EPAIR | | IMP | | RADES | | | | _ | T . | Total |
| PART A | | "Base | e Costs" for | Con | struction | Worl | k-In Trad | des | | | | | | | |
| A.1 | Permanent Work (From Part A Estima | te) | | \$ | 4,056 | | | | | | | | | \$ | 4,056 |
| A.2 | Non-Permanent Job Specific Work (Fr | om Pa | art A Fst | ima | te) | | | | | | | | | \$ | |
| A.2 | Non Termanent dos opeomo Work (Fr | | | | | | | | | | | | | Ť | |
| | | Pa | rt A Total | \$ | 4,056 | \$ | - | \$ | - | \$ | - | \$ | - | \$ | 4,056 |
| PART E | | Gener | al Requirem | ents | and Ger | neral (| Conditio | ns | | | | | | | |
| B.1 | General Requirements | | ange | | | Ent | er % ir | λnn | roprio | oto C | olumr | | | | |
| В. І | Safety & Security - Airports, Ports & Govt. Owned N | 4.0% | to High 6.0% | | | | 21 70 II | ТАрр | порна | ile C | Olullii | | | 1 | |
| | Temporary Services & Utilities | 0.0% | 1.0% | | | | | | | | | | | | |
| | Quality Control Submittals | 0.0% | 5.0% 5.0% | | | | | | | | | | | 4 | |
| | Subtilitials | 0.076 | 3.0 /6 | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - |
| Б.0 | O (4.050/) | | | | | | _ | | | | | | _ | | |
| B.2 | General Conditions (4.25%) | | | \$ | S | \$ | 186 | \$ | <u>.</u> | s | [86] | s | [86] | \$ | |
| | | | | | | | | | | Ψ | | Ψ | | _ | |
| | | Pa | rt B Total | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - |
| | PART A through | B SU | BTOTAL | \$ | 4,056 | \$ | - | \$ | - | \$ | - | \$ | - | \$ | 4,056 |
| | - | | | | | | | | | | | | | | |
| PART (| | | Construction | on Co | ost Conti | ngeno | cies | | | | | | | | |
| C.1 | Design-Phase Scope Contingencies | | ange | | | Ent | er % ir | Λnn | roprio | to C | olumr | | | | |
| 0.1 | Preliminary Engineering Analysis | 15.0% | 20.0% | | | | SI /0 II | Арр | порна | ile C | Olullii | 1 | | 1 | |
| | Working Drawings | 2.0% | 10.0% | | | | | | | | | | | | |
| | | | | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - |
| C.2 | Facility or Project Constructability | | | ĺ | | Ente | er % ir | 1 Арр | ropria | ate C | olumr | ı | | | |
| | E | (See IG | for Values) | | | | | | | | | | | | |
| | | | | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - |
| | | R | ange | | | | | | | | | | | | |
| C.3 | Access, Storage & Staging Contingen | Low | to High | | | Ente | er % ir | Арр | ropria | ate C | olumr | 1 | | | |
| | Access Contingencies Storage Contingencies | 1.0% | 4.0% 4.0% | | | | | | | | | | | 1 | |
| | Staging Contingencies | 1.0% | 4.0% | | | | | | | | | | | | |
| | | | | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - | \$ | |
| C.4 | Economies of Scale | | 0.0% | ĺ | 嬔 | | 瑟 | Ū | 8 | | 8 | | 8 | | |
| | | | | | 0% | | 0% | |)% | | 0% | | 0% | | |
| | | | | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - | \$ | |
| | | Pa | rt C Total | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - |
| | PART A through | C SU | BTOTAL | \$ | 4,056 | \$ | - | \$ | - | \$ | - | \$ | - | \$ | 4,056 |
| | - | | | | 0 1 | | | | | | | | | | |
| PART [| | Ger | neral Contra | ctor | s Overne | ead ar | na Profit | | | | | | | | |
| D.1 | GC's Home Office Overhead | | 7.7% | | 瑟 | | | [| 3 | | 産 | | S. | | |
| | | | | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - | \$ | |
| D.2 | GC's Insurance, Payment & Performan | nce Bo | 3.3% | | 瑟 | | iii | Ī | 8 | | 能 | | 8 | | |
| | | | | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - |
| D.3 | General Contractor's Profit | | 10.0% | | | | 8 | | | | | | 8 | | |
| | | | | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - |
| | | Pa | rt D Total | \$ | - | \$ | - | \$ | _ | \$ | _ | \$ | - | \$ | _ |
| | | | | | | | | | | | | | | | |
| | PART A through | บ รบ | RIOTAL | \$ | 4,056 | \$ | - | \$ | - | \$ | - | \$ | - | \$ | 4,056 |

| | Los Angeles County - Earth | iqu | anc D | | EPAIR | | IMP | | RADES | | | viitig | allOII | | otal |
|----------|---|-------|------------------------------|---|--|----------------------------|----------|----------------------------|-------------|----------------------------|------------------|----------------------|----------------|----------|------|
| RT E | | | Cost E | scala | ation Fac | ctors | | | | | | | | | |
| | Mo | nth | WONTHI | | | | | | | | | | | | |
| _ | | s | У | | | | | | | ı | | | | | |
| E | Cost Escalation Factor | | | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - \$ | ; | - |
| | PART A through E | SUB | TOTAL | \$ | 4,056 | \$ | _ | \$ | | \$ | _ | \$ | - \$ | 6 | 4.0 |
| | | | | • | ., | | | | | | | 1 * | | | .,,- |
| RT F | | Plan | Review an | d Cor | nstruction | n Pern | nit Cost | | | | | | | | |
| .1 | Plan Review Fees | | | | | | | | | ı | | | | | |
| | (List Individual Requirements Separately) | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - \$ | ; | |
| .2 | Construction Permit Fees | | | | | | | | | | | | | | |
| | (List Individual Requirements Separately) | | | | | | | | | | | | | | |
| | (| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - \$ | <u>;</u> | |
| | | Part | t F Total | \$ | | \$ | | \$ | | \$ | | \$ | - \$ | | |
| | | | | | | | | | | T. | | | | | |
| | PART A through F | SUB | TOTAL | \$ | 4,056 | \$ | - | \$ | - | \$ | - | \$ | - \$ | 5 | 4,0 |
| DT (| | | -l'th-D- | | . (0) | | | | | | | | | | |
| RT(G | Applicant's Reserve for Change Orders | Арр | plicant's Re | | e for Cha | nge C | raers | | = | | | - | | | |
| | Applicant s reserve for onlinge orders | | 7.070 | \$ | _ | \$ | - | \$ | _ | \$ | _ | \$ | - \$ | 6 | |
| | | | | | | | | | | | | | | | |
| | PART A through G | SUB | TOTAL | \$ | 4,056 | \$ | - | \$ | - | \$ | - | \$ | - \$ | ; | 4,0 |
| | | | | _ | | | | | | | | | | | |
| | - | | | | | | | | | | | | | | |
| | | | 's Project N | /lana | | and D | esign (| | | | | | | | |
| | Applicant's Project Management - Design | | | /lana | v | | esign (| | E. | _ | a. | <u> </u> | | | |
| | | | | /lana | | | esign (| | 8 | \$ | 2 | \$ | - \$ | ; | |
| .1 | Applicant's Project Management - Design | | | /lana | v | | esign (| | - | _ | - | | |) | |
| .1 | | | | /lana | v | | esign (| | - | _ | - | | |) | |
| RT F | A/E Design Contract Cost Above Average Compexity (Curve A) Average Complexity (Curve B) | n Ph | 0.0% 0.0% | Manag | 41 | \$ | - | \$ \$ \$ | - | \$ \$ \$ | - | \$ \$ | - \$ |) | |
| .1 | A/E Design Contract Cost Above Average Compexity (Curve A) | n Ph | 0.0% | //anag | 41 - - 203 | \$ \$ \$ | - - | \$ \$ \$ \$ | - - | \$ \$ \$ \$ | - - - - | \$ \$ \$ | - \$ - - | | |
| .1 | A/E Design Contract Cost Above Average Compexity (Curve A) Average Complexity (Curve B) | n Ph | 0.0% 0.0% | Manag | 41 | \$ \$ \$ | - | \$ \$ \$ | - | \$ \$ \$ | - | \$ \$ | - \$ | | |
| .1 | A/E Design Contract Cost Above Average Compexity (Curve A) Average Complexity (Curve B) | Ph | 0.0% 0.0% | /ana | 41 - - 203 | \$ \$ \$ | - - | \$ \$ \$ \$ | - - | \$ \$ \$ \$ | - - - - | \$ \$ \$ | - \$ - - | | |
| .1 | A/E Design Contract Cost Above Average Compexity (Curve A) Average Complexity (Curve B) Basic Construction Inspection Services | Ph | 0.0% 0.0% 5.0% | /ana | 41 - - 203 203 | \$ \$ \$ \$ | - - | \$ \$ \$ \$ | - - | \$ \$ \$ \$ | - - - - | \$ \$ \$ | - \$ - - | • | |
| .1 | A/E Design Contract Cost Above Average Compexity (Curve A) Average Complexity (Curve B) Basic Construction Inspection Services Project Management - Construction Phase | n Ph | 1.0% 0.0% 0.0% 5.0% | ### ### ### ### ###################### | 41 - - 203 203 203 | \$ \$ \$ \$ | - | \$ \$ \$ \$ | - - | \$ \$ \$ \$ \$ | - - - - | \$ \$ \$ \$ | - \$ | 6 | |
| .1 | A/E Design Contract Cost Above Average Compexity (Curve A) Average Complexity (Curve B) Basic Construction Inspection Services Project Management - Construction Phase | n Ph | 0.0% 0.0% 5.0% | ### ### ### ### ###################### | 41 - - 203 203 | \$ \$ \$ \$ \$ | - | \$ \$ \$ | - - | \$ \$ \$ \$ | - - - - | \$ \$ \$ \$ | - \$ \$ | 6 | |
| .1 | A/E Design Contract Cost Above Average Compexity (Curve A) Average Complexity (Curve B) Basic Construction Inspection Services Project Management - Construction Phase | Ph Ph | 0.0% 0.0% 5.0% | Alamate S S S S S S S S S | 41 - - 203 203 203 | \$ \$ \$ \$ \$ | - | \$ \$ \$ \$ | - - - | \$ \$ \$ \$ \$ | - - - - | \$ \$ \$ \$ | - \$ | 6 | |
| .1 | A/E Design Contract Cost Above Average Compexity (Curve A) Average Complexity (Curve B) Basic Construction Inspection Services Project Management - Construction Phase | Ph Ph | 0.0% 0.0% 5.0% | Alamate S S S S S S S S S | 41 - 203 203 203 243 487 | \$ \$ \$ \$ \$ | | \$ \$ \$ \$ \$ | - - - | \$ \$ \$ \$ \$ | - | \$ \$ \$ \$ | - \$ | 6 | |

| | Los Angeles County - Eartl | hau | iake D | amage | Repai | r and H | azard N | /litiaatio | n | |
|------------|---------------------------------------|--------|-----------------|----------------|----------------|----------------|-----------|------------|----|---------|
| | | | | REPAIR | HMP | UPGRADES | | 5 | | Total |
| PART A | | "Base | Costs" for | Construction | Work-In Tra | des | | | | |
| A.1 | Permanent Work (From Part A Estimate) | | | \$ 138,996 | \$ 9,768 | \$ 6,763 | | | \$ | 155,527 |
| | | _ | | | | T | | 1 | | - |
| A.2 | Non-Permanent Job Specific Work (Fron | n Pa | rt A Est | \$ 18,393 | | | | | \$ | 18,393 |
| | | Par | t A Total | \$ 157,389 | \$ 9,768 | \$ 6,763 | \$ - | \$ - | \$ | 173,920 |
| | | | | | | | | | | |
| PART E | G | Senera | al Requirem | ents and Gen | neral Conditio | ns | | | | |
| B.1 | General Requirements | | ange to High | | Enter % in | n Appropria | to Column | | | |
| D.1 | | .0% | 6.0% | 4.00% | 4.00% | 4.00% | te Column | | | |
| | | .0% | 1.0% | 1.00% | 1.00% | 1.00% | | | | |
| | | .0% | 1.0% 5.0% | 0.50% 2.00% | 0.50% 2.00% | 0.50% 2.00% | | | | |
| | Substitution 5 | .0 70 | 0.070 | \$ 11,804 | \$ 733 | | \$ - | \$ - | \$ | 13,044 |
| | | | | _ | _ | _ | _ | _ | | |
| B.2 | General Conditions (4.25%) | | | \$ 6.689 | \$ 415 | \$ 287 | \$ - | \$ - | \$ | 7,392 |
| | | | | , ,,,,,,,, | | Ψ 201 | Ψ | | Ψ | 1,002 |
| | | Par | t B Total | \$ 18,493 | \$ 1,148 | \$ 795 | \$ - | \$ - | \$ | 20,436 |
| | PART A through B | SUE | BTOTAL | \$ 175,882 | \$ 10,916 | \$ 7,558 | \$ - | \$ - | \$ | 194,355 |
| | - | | | | | | | | | |
| PART (| | | Construction | n Cost Contir | ngencies | | | | | |
| 0.4 | Danium Blanca Commission and | | ange | | Γt 0/ :- | | 4- 0-1 | | | |
| C.1 | | ow t | 20.0% | | Enter % ir | n Appropria | te Column | | | |
| | | .0% | 10.0% | 2.00% | 2.00% | 2.00% | | | | |
| | | | | \$ 3,518 | \$ 218 | \$ 151 | \$ - | \$ - | \$ | 3,887 |
| C.2 | Facility or Project Constructability | | | | Enter % ir | n Appropria | te Column | l | | |
| | | ee IG | for Values) | | 2.00% | 2.00% | | | | |
| | | | | \$ 3,518 | \$ 218 | \$ 151 | \$ - | \$ - | \$ | 3,887 |
| | | De | ngo | | | | | | | |
| C.3 | Access, Storage & Staging Contingen L | ow t | ange to High | | Enter % ir | n Appropria | te Column | l | | |
| | Ÿ | .0% | 4.0% | | | | | | | |
| | ŭ ŭ | .0% | 4.0% 4.0% | | | | | | | |
| | | | | \$ - | \$ - | \$ - | \$ - | \$ - | \$ | - |
| C.4 | Economies of Scale | | 0.0% | I | . | . | 1 | B | | |
| | Economics of Coals | | 0.070 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ | - |
| | | Par | t C Total | \$ 7,035 | \$ 437 | \$ 302 | \$ - | s - | \$ | 7,774 |
| | | · ui | · O · rotai | Ψ 1,000 | Ψ 401 | Ψ 002 | Ψ | ΙΨ | Ψ | 1,77 |
| | PART A through C | SUE | BTOTAL | \$ 182,917 | \$ 11,353 | \$ 7,860 | \$ - | \$ - | \$ | 202,130 |
| PART [| | Gen | eral Contra | ctor's Overhe | ad and Profit | | | | | |
| | | | | | | | | | | |
| D.1 | GC's Home Office Overhead | | 7.7% | ₩ | ☑ | ☑ | | | | 45.504 |
| | | | | \$ 14,085 | \$ 874 | \$ 605 | \$ - | \$ - | \$ | 15,564 |
| D.2 | GC's Insurance, Payment & Performance | е Во | 3.3% | | V | • | E | | | |
| | | | | \$ 6,036 | \$ 375 | \$ 259 | \$ - | \$ - | \$ | 6,670 |
| D.3 | General Contractor's Profit | | 10.0% | 3 | V | V | 98 | 98 | | |
| | | | | \$ 18,292 | \$ 1,135 | \$ 786 | \$ - | \$ - | \$ | 20,213 |
| | | Par | t D Total | \$ 38,413 | \$ 2,384 | \$ 1,651 | \$ - | \$ - | \$ | 42,447 |
| | | | | | | | | | | |
| | PART A through D | SUE | BTOTAL | \$ 221,329 | \$ 13,737 | \$ 9,511 | \$ - | \$ - | \$ | 244,577 |
| | | | | l | | | | | l | |

| | Los Angeles County - Ea | arthqu | uake D | amag | e F | Repail | r and | l Ha | zard | l Mit | igatio | n | |
|----------------------|---|---------------------|--|--|---|--|---|---|--|--|----------|----|--|
| | Ç | · | | REPAIR | _ | НМР | UPGRA | | | | | | Total |
| PART E | | | Cost E | scalation F | actor | s | | | | | | | |
| | | Month | WONTH | | | | | | | | | | |
| _ | | S | У | | 1. | | 1. | | | | | | |
| Е | Cost Escalation Factor | 5 | 0.188% | \$ 2,08 | 0 \$ | 129 | \$ | 89 | \$ - | \$ | - | \$ | 2,299 |
| | PART A through | h E SUI | BTOTAL | \$ 223,41 | 0 \$ | 13,866 | \$ 9, | ,600 | \$ - | \$ | - | \$ | 246,876 |
| | | | | | | | | | | | | | |
| PART F | | | | | | | | | | | | | |
| F.1 | Plan Review Fees Los Angeles County requirements | | | \$ 1,20 | 0 \$ | 75 | \$ | 50 | | | | | |
| | Los Angeles County requirements | | | Ψ 1,20 | 0 \$ | 7.5 | Ψ | 30 | | | | 1 | |
| | | | | | | | | | | | | | |
| | | | | \$ 1,20 | 0 \$ | 75 | \$ | 50 | \$ - | \$ | - | \$ | 1,325 |
| F.2 | Construction Permit Fees | | | | | | | | | | | | |
| | Los Angeles County requirements | | | \$ 1,50 | 0 \$ | 100 | \$ | 75 | | | | | |
| | | | | | | | | | | | | | |
| | | | | \$ 1,50 | 0 \$ | 100 | \$ | 75 | \$ - | . \$ | | \$ | 1,675 |
| | | D | C T-4-1 | | | | <u> </u> | · I | | - 1- | | | |
| | | Pa | rt F Total | \$ 2,70 | 0 \$ | 175 | \$ | 125 | \$ - | . \$ | - | \$ | 3,000 |
| | PART A throug | h F SU | BTOTAL | \$ 226,11 | 0 \$ | 14,041 | \$ 9, | ,725 | \$ - | \$ | - | \$ | 249,876 |
| | | | | | | | | | | | | | |
| PART (| | | | | | | | | | | | | |
| | | A | pplicant's Re | eserve for C | hange | Orders | | | | | | | |
| G | Applicant's Reserve for Change Orde | | oplicant's Re 6.9% | > | | V | > | | Ø | | | | |
| G | | | | | | | _ | 670 | \$ - | . \$ | 8 | \$ | 17,214 |
| G | Applicant's Reserve for Change Orde | ers | 6.9% | \$ 15,57 | 7 \$ | 967 | \$ | | \$ - | | - | | |
| G | | ers | 6.9% | \$ 15,57 | 7 \$ | 967 | \$ | | | · \$ | - | \$ | 17,214 267,090 |
| G PART I | Applicant's Reserve for Change Order PART A through | ers h G SUI | 6.9% | \$ 15,57 \$ 241,68 | 7 \$ | 967 15,008 | \$ 10, | | \$ - | | - | | |
| | Applicant's Reserve for Change Order PART A through | h G SUI | 6.9% BTOTAL It's Project I | \$ 15,57 \$ 241,68 | 7 \$ | 967 15,008 | \$ 10, | | \$ - | | - | | |
| PART I | Applicant's Reserve for Change Order PART A through | h G SUI | 6.9% BTOTAL It's Project I | \$ 15,57 \$ 241,68 Manageme | 7 \$ | 967 15,008 Design C | \$ 10, | ,395 | \$ - | | - | | |
| PART F | Applicant's Reserve for Change Order PART A through Applicant's Project Management - De | h G SUI | 6.9% BTOTAL It's Project I | \$ 15,57 \$ 241,68 Manageme | 7 \$ | 967 15,008 Design C | \$ 10, | ,395 | \$ - \$ - | \$ | - | \$ | 267,090 |
| PART I | Applicant's Reserve for Change Order PART A through Applicant's Project Management - De | h G SUI Applican | 6.9% BTOTAL It's Project I 1.0% | \$ 15,57 \$ 241,68 Manageme \$ 2,41 | 7 \$ 7 \$ | 967 15,008 Design C | \$ 10, | 104 | \$ - \$ - \$ - | - \$ | - | \$ | 267,090 |
| PART F | Applicant's Reserve for Change Order PART A through Applicant's Project Management - De | h G SUI | 6.9% BTOTAL It's Project I | \$ 15,57 \$ 241,68 Manageme | 7 \$ 7 \$ | 967 15,008 Design C | \$ 10, | 104 | \$ - \$ - | · \$ | | \$ | 267,090 |
| PART F | Applicant's Reserve for Change Order PART A through Applicant's Project Management - De A/E Design Contract Cost Above Average Compexity (Curve A) | Applican | 6.9% BTOTAL It's Project I 1.0% | \$ 15,57 \$ 241,68 \$ 241,68 \$ 2,41 \$ 2,41 \$ - \$ 18,00 \$ 7,25 | 7 \$ \$ \$ 7 \$ \$ \$ 7 \$ \$ \$ \$ 7 \$ \$ \$ \$ 7 \$ | 967 15,008 Design C 150 - 1,118 450 | \$ 10, costs \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ | 104 | \$ - \$ - \$ - \$ - \$ - | \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ | - | \$ | 267,090 |
| PART F | Applicant's Reserve for Change Order PART A through Applicant's Project Management - De A/E Design Contract Cost Above Average Compexity (Curve A) Average Complexity (Curve B) | Applican | 6.9% BTOTAL It's Project I 1.0% 9.5% 7.4% | \$ 15,57 \$ 241,68 Managemee \$ 2,41 \$ - \$ 18,00 | 7 \$ \$ 7 \$ \$ 7 \$ \$ 7 \$ \$ 7 \$ \$ 7 \$ \$ 7 \$ \$ 7 \$ \$ 7 \$ \$ 7 \$ \$ 7 \$ \$ 7 \$ \$ 7 \$ \$ 7 \$ \$ 7 \$ | 967 15,008 Design C 150 - 1,118 | \$ 10, costs \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ | .395 104 - 774 312 | \$ - \$ - \$ - \$ - | - \$ - \$ - \$ | - | \$ | 267,090 |
| PART F | Applicant's Reserve for Change Order PART A through Applicant's Project Management - De A/E Design Contract Cost Above Average Compexity (Curve A) Average Complexity (Curve B) | Applican | 6.9% BTOTAL It's Project I 1.0% 9.5% 7.4% | \$ 15,57 \$ 241,68 \$ 241,68 \$ 2,41 \$ 2,41 \$ - \$ 18,00 \$ 7,25 | 7 \$ \$ \$ 7 \$ \$ \$ 7 \$ \$ \$ \$ 7 \$ \$ \$ \$ 7 \$ | 967 15,008 Design C 150 - 1,118 450 | \$ 10, costs \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ | 104 | \$ - \$ - \$ - \$ - \$ - | \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ | - | \$ | 267,090 |
| PART I H.1 H.2 | Applicant's Reserve for Change Order PART A through Applicant's Project Management - De A/E Design Contract Cost Above Average Compexity (Curve A) Average Complexity (Curve B) Basic Construction Inspection Services | Applican | 6.9% BTOTAL at's Project I 1.0% 9.5% 7.4% 3.0% | \$ 15,57 \$ 241,68 Anageme \$ 2,41 \$ - \$ 18,00 \$ 7,28 \$ 25,28 | 7 \$ \$ 7 \$ \$ 0 \$ \$ 0 \$ \$ 0 \$ \$ 1 \$ \$ 0 \$ \$ | 967 15,008 Design C 150 - 1,118 450 1,568 | \$ 10, Costs \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ 1, | .395 1 104 - 774 312 086 | \$ - \$ - \$ - \$ - \$ - | \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ | - | \$ | 267,090 |
| PART I H.1 H.2 | Applicant's Reserve for Change Order PART A through Applicant's Project Management - De A/E Design Contract Cost Above Average Compexity (Curve A) Average Complexity (Curve B) Basic Construction Inspection Services | Applican sign Pl | 6.9% BTOTAL Its Project N 1.0% 9.5% 7.4% 3.0% 6.0% | \$ 15,57 \$ 241,68 \$ 241,68 \$ 241,68 \$ 2,41 \$ - \$ 18,00 \$ 7,26 \$ 25,25 \$ 14,50 | 7 \$ 7 \$ 7 \$ 7 \$ 7 \$ 7 \$ 7 \$ 7 \$ 7 \$ 7 \$ | 967 15,008 Design C 150 150 - 1,118 450 1,568 | \$ 10, costs \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ | 104 - 774 312 086 624 | \$ - \$ - \$ - \$ - \$ - \$ - \$ - | \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ | - | \$ | 267,090 2,671 27,904 16,025 |
| PART I H.1 H.2 | Applicant's Reserve for Change Order PART A through Applicant's Project Management - De A/E Design Contract Cost Above Average Compexity (Curve A) Average Complexity (Curve B) Basic Construction Inspection Services | Applican sign Pl | 6.9% BTOTAL at's Project I 1.0% 9.5% 7.4% 3.0% | \$ 15,57 \$ 241,68 \$ 241,68 \$ 241,68 \$ 2,41 \$ - \$ 18,00 \$ 7,26 \$ 25,25 \$ 14,50 | 7 \$ 7 \$ 7 \$ 7 \$ 7 \$ 7 \$ 7 \$ 7 \$ 7 \$ 7 \$ | 967 15,008 Design C 150 150 - 1,118 450 1,568 | \$ 10, costs \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ | 104 - 774 312 ,086 | \$ - \$ - \$ - \$ - \$ - \$ - \$ - | \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ | | \$ | 267,090 |
| PART I H.1 H.2 | Applicant's Reserve for Change Order PART A through Applicant's Project Management - De A/E Design Contract Cost Above Average Compexity (Curve A) Average Complexity (Curve B) Basic Construction Inspection Services | Applican Plase Page | 9.5% 9.5% 7.4% 3.0% | \$ 15,57 \$ 241,68 Manageme \$ 2,41 \$ - \$ 18,00 \$ 7,28 \$ 25,28 \$ 14,50 \$ 42,16 | 7 \$ 7 \$ 7 \$ 8 \$ 11 \$ 8 \$ | 967 15,008 Design C 150 150 - 1,118 450 1,568 | \$ 10, Costs \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ | - 104 104 | \$ - \$ - \$ - \$ - \$ - \$ - \$ - | \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ | | \$ | 267,090 2,671 27,904 16,025 |
| PART I H.1 H.2 | Applicant's Reserve for Change Order PART A through Applicant's Project Management - De A/E Design Contract Cost Above Average Compexity (Curve A) Average Complexity (Curve B) Basic Construction Inspection Services Project Management - Construction F | Applican sign Pl | 9.5% 7.4% 3.0% | \$ 15,57 \$ 241,68 \$ 241,68 \$ 241,68 \$ 2,41 \$ - \$ 18,00 \$ 7,26 \$ 25,26 \$ 14,50 \$ 42,16 \$ 283,85 | 7 \$ 7 \$ 7 \$ 7 \$ 8 \$ 7 \$ 8 \$ 8 \$ 8 \$ | 967 15,008 Design C 150 150 - 1,118 450 1,568 0 2,619 17,627 | \$ 10, Costs \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ | - 104 104 | \$ - \$ - \$ - \$ - \$ - \$ - | \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ | | \$ | 267,090 2,671 27,904 16,025 46,600 |
| PART I H.1 H.2 | Applicant's Reserve for Change Order PART A through Applicant's Project Management - De A/E Design Contract Cost Above Average Compexity (Curve A) Average Complexity (Curve B) Basic Construction Inspection Services Project Management - Construction F | Applican sign Pl | 9.5% 7.4% 3.0% | \$ 15,57 \$ 241,68 \$ 241,68 \$ 241,68 \$ 2,41 \$ - \$ 18,00 \$ 7,26 \$ 25,26 \$ 14,50 \$ 42,16 \$ 283,85 | 7 \$ 7 \$ 7 \$ 7 \$ 8 \$ 7 \$ 8 \$ 8 \$ 8 \$ | 967 15,008 Design C 150 150 - 1,118 450 1,568 0 2,619 17,627 | \$ 10, Costs \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ | - 104 104 | \$ - \$ - \$ - \$ - \$ - \$ - | \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ | | \$ | 267,090 2,671 27,904 16,025 46,600 |

Total Project Summary

| | | Cor | npleted | Und | completed | Total |
|--------|--|-----|---------|-----|-----------|---------------|
| PART A | "Base Costs" for Construction Work In Trades | \$ | 4,056 | \$ | 173,920 | \$ 177,975 |
| | A.1 Permanent Work | \$ | 4,056 | \$ | 155,527 | \$ 159,583 |
| | A.2 Non-Permanent Job Specific Work (From Part A Estimate) | \$ | - | \$ | 18,393 | \$ 18,393 |
| PART B | General Requirements and General Conditions | \$ | - | \$ | 20,436 | \$ 20,436 |
| | B.1 General Requirements | \$ | - | \$ | 13,044 | \$ 13,044 |
| | B.2 General Conditions | \$ | - | \$ | 7,392 | \$ 7,392 |
| PART C | Construction Cost Contingencies (Design and Construction) | \$ | - | \$ | 7,774 | \$ 7,774 |
| | C.1 Standard Design-Phase Scope Contingencies | \$ | - | \$ | 3,887 | \$ 3,887 |
| | C.2 Facility or Project Constructability | \$ | - | \$ | 3,887 | \$ 3,887 |
| | C.3 Access, Storage, and Staging Contingencies | \$ | - | \$ | - | \$ - |
| | C.4 Economies of Scale in New Construction | \$ | - | \$ | - | \$ - |
| PART D | General Contractor's Overhead and Profit | \$ | - | \$ | 42,447 | \$ 42,447 |
| | D.1 General Contractor's Home Office Overhead Costs | \$ | - | \$ | 15,564 | \$ 15,564 |
| | D.2 General Contractor's Insurance, Payment, and Performance Bonds | \$ | - | \$ | 6,670 | \$ 6,670 |
| | D.3 Contractor's Profit | \$ | - | \$ | 20,213 | \$ 20,213 |
| PART E | Cost Escalation Allowance | \$ | - | \$ | 2,299 | \$ 2,299 |
| PART F | Plan Review and Construction Permit Costs | \$ | - | \$ | 3,000 | \$ 3,000 |
| | F.1 Plan Review Fees | \$ | - | \$ | 1,325 | \$ 1,325 |
| | F.2 Construction Permit Fees | \$ | - | \$ | 1,675 | \$ 1,675 |
| PART G | Applicant's Reserve for Construction | \$ | - | \$ | 17,214 | \$ 17,214 |
| PART H | Applicant's Project Management and Design Costs | \$ | 487 | \$ | 46,600 | \$ 47,087 |
| | H.1 Applicant's Project Management - Design Phase | \$ | 41 | \$ | 2,671 | \$ 2,711 |
| | H.2 Architecture & Engineering Design Contract Costs | \$ | 203 | \$ | 27,904 | \$ 28,107 |
| | H.3 Project Management - Construction Phase | \$ | 243 | \$ | 16,025 | \$ 16,269 |
| | Complete Project Total for Completed and Uncompleted Work | \$ | 4,542 | \$ | 313,691 | \$ 318,233 |

FEDERAL EMERGENCY MANAGEMENT AGENCY

PROJECT WORKSHEET

O.M.B. No. 3067-0151 Expires April 30, 2001

PAPERWORK BURDEN DISCLOSURE NOTICE

Public reporting burden for this form is estimated to average 30 minutes. The burden estimate includes the time for reviewing instructions, searching existing data sources, gathering and maintaining the needed data, and completing and submitting the forms. You are not required to respond to this collection of information unless a valid OMB control number is displayed in the upper right corner of the forms. Send comments regarding the accuracy of the burden estimate and any suggestions for reducing the burden to: Information Collections Management, Federal Emergency Management Agency, 500 C Street, SW, Washington, DC 20472, Paperwork Reduction Project (3067-0151). **NOTE:** Do not send your completed form to this address.

| DECLA | ECLARATION NO. PROJECT NO. FIPS NO. | | | | | DATE | | ATEGORY |
|----------------------------|-------------------------------------|------------------|--|---|--------------------------|--------------------------------------|-------------------------|---|
| EENAA | 0000 -DR- | CΛ | 9999 | 999-99999 | | August 1, 19 | 99 E | |
| l | | CA | | | | MODIC COM | DI ETE AC OF: | |
| _ | SED FACILIT deles Medica | | | | | WORK COM | PLETE AS OF: | |
| Los Angeles Medical Center | | | | | | 5/1/99 | : 10 | 0 % |
| APPLIC | ANT | | | COUNTY | | | <u> </u> | |
| Los Ang | geles County | , | | Los Angeles Cou | nty | | | |
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| LOCAT | | Angeles Cal | ifa wa i a | | | | ATITUDE / | LONGITUDE |
| 999 FIIS | si Sireet, Los | Angeles, Cal | IIOITIIA | | | / | / | / |
| DAMAG | E DESCRIP | TION AND DI | MENSIONS | | | • | | 1 |
| | | | | | | | | nd columns; horizontal and |
| | | | | | | | | approximately 25% of the |
| | | | amed roof and walls; dis | | | | walls, floor framing, | and ceiling panel system; |
| op9 | a | g ccca | amou roo. and mano, and | olacomon or aamago | or orally unit | o . o o g . | | |
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| | | | | | | | | |
| | OF WORK | | . (4015) | | | | | II (04=1=) |
| | | | | | | | | alls (817 LF); epoxy inject 4 BF); remove and replace |
| 6" slab- | on-grade (3) | CY): remove a | and replace 1' x 3' reinfor | place o concrete wall ced strip footing (13 C) | (6.5 C i), (): remov | , remove and rep re and replace w | ood framed porch r | of (14,700 SF) |
| remove | and replace | wood framed | roof (2,455 SF); remove | and replace wood fran | ned walls | (1,225 SF); pato | ch and paint cracks | in interior plaster walls |
| (13,610 | SF); patch a | and paint crac | ks in interior plaster ceilir | gs (7,775 SF); remove | and repl | lace stucco over | wood (200 SF); res | et/replace displaced or |
| damage | ed clay roof ti | iles (3,110 SF |); replace casement wind | lows (25 EA); paint ext | erior (11, | ,603 SF); paint in | terior (613 SF); con | struct new sidewalks and |
| | | | ramps to code (1,300 SI of 3/4" diameter machine b | | | | | |
| terision | 1163 (213 LA | j, ilistaliation | or /4 diameter machine i | olis and washers (213 | LA), and | a restore electric | ai aila piailibilig sei | vice to trie building. |
| | | | | | | | | |
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| | | | | | | | | |
| Does th | e Scope of V | Work change t | he pre-disaster condition | is at the site? | Ш | Yes 🛛 1 | No | |
| Special | Consideration | ons issues inc | luded? | Yes 🛛 No | Hazard | Mitigation prop | osal included? | Yes 🗌 No |
| Is there | insurance co | overage on th | is facility? | Yes 🛛 No | | | | |
| | | | <u> </u> | PROJECT CO | ST | | | |
| ITEM | CODE | | NARRATI | | | QUANTITY/UN | IT UNIT PRICE | COST |
| 1 | 9999 | See attache | d CEF spreadsheet for it | emized unit price estin | nate | 1/LS | \$318,233 | \$318,233.00 |
| · | **** | | <u> </u> | 5111.254 S p. 1.1.1. | 10.10 | / | T, | *************************************** |
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| | | | | | | , | TOTAL 0007 | #040 000 00 |
| | | | | | | | TOTAL COST | \$318,233.00 |
| PREPA | RED BY: Jo | hn Smith | | | | | | |