



U.S. ARMY CORPS OF ENGINEERS



# DISASTER GUIDEBOOK



## TEMPORARY ROOFING

Standard Operating Procedures  
May 2012

# Temporary Roofing 2012

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**METL      Mission Essential Task List**

Temporary Roofing PRT Mission

The mission of the Temporary Roofing PRT is to provide recovery support within established time and quality standards to the Federal Emergency Management Agency (FEMA) and impacted state, providing temporary roofing technical, or direct federal assistance per FEMA criteria to residences, hospitals and other structures that are being used as shelters.

Mission Essential Task List (METL) Tasks

- Coordinate and execute all aspects of the Temporary Roofing response in the Area of Operations with Federal, State and local stakeholders.
- Provide a District managed PRT for cradle to grave response.
- Provide timely, accurate Essential Elements of Information (EEIs)
- Provide contract administration and quality assurance program for ACI contracts

Intergovernmental Operations

All aspects of Temporary Roofing planning and operations will include the entire Project Delivery Team (PDT) in accordance with the USACE Project Management Business Processes (PMBP) as described in ER 5-1-11.

**Temporary Roofing PRT Mission Execution Checklist**  
**More detailed information is provided throughout the guide**

| <b>Action</b>  | <b>Responsible Member(s)</b>                      |
|--|---|
| Conduct Preparedness Activities to ensure team readiness             | PRT members, Dist EM & CDR                        |
| Notify and Deploy PRT Management Cell to Area of Operations          | PRT members, Dist EM & CDR                        |
| Establish Federal, State and local counterparts in AO.               | PRT   |
| Request and receive mission funding from FEMA                        | AO  |
| Develop damage estimate by County, order FEMA plastic                | AO, MM, ESF#3, FEMA, State                        |
| Order Right of Entry Forms from SAJ                                  | MM  |
| Establish priority of recovery by county                             | AO, MM, ESF#3, FEMA, State                        |
| Coordinate & develop Master / Project Management Plan for Operations | AO, MM coordinate with ESF#3, FEMA and State POCs |
| Establish EEIs and reporting procedures                              | AO, MM, MS  |
| Identify and lease warehouse space to store blue roof plastic        | LM, RE, MM  |
| Notify ACI Contractor to mobilize, deploy and begin operations in AO | CS, KO, Res ENG                                   |
| Notify and Deploy PRT Support Cell to Area of Operations             | PRT   |
| Select, Prepare and Deploy QA Team Members to AO                     | Dist EM   |
| Establish Call in Centers, Operational ROOF BLU number               | MM, SAJ   |
| Establish, staff and operate ROE Collection Centers                  | MM, MS, QA, RE                                    |
| Coordinate news releases with District, state and FEMA               | AO, MM  |
| Perform QA of Assessments  | QA, QATL  |
| Begin and maintain production rates for ACI contractor               | Res ENG   |
| Daily ROE's to contractor  | QA, RES ENG                                       |
| Maintain PRT Battle Rhythm   | PRT   |
| Coordinate VOLAG activities (AmeriCorps, National Guard, etc.)       | AO, MM, MS  |
| Develop exit strategy with ESF#3, FEMA and State / redeployment plan | AO, MM  |
| Plan for transition to host district                                 | AO, MM  |
| Perform AAR and Update Temporary Roofing Guidebook/SOP               | PRT   |
|  |   |

## **1.0 OVERVIEW**

This Standard Operating Procedures (SOP), Disaster Guidebook has been prepared for use during the current Hurricane season for the Temporary Roofing Planning and Response Teams (PRTs). This SOP should be updated yearly to reflect lessons learned during the previous season, improvements in roofing procedures and changes to roofing policies. After review by the Proponent Division for Temporary Roofing, it should be finalized and distributed to the PRTs prior to the start of the next hurricane season.

### **1.1 MISSION STATEMENT**

The Temporary Roofing Planning and Response Team (PRT) provides recovery support within established time and quality standards to the Federal Emergency Management Agency (FEMA) and impacted States, providing temporary roofing technical assistance or direct federal assistance per FEMA policy/criteria to residences, hospitals and other structures that are being used as shelters.

### **1.2 PURPOSE**

The purpose of the Temporary Roofing program is to shelter in place people in residences that have damaged roofs and provide temporary roofing to other structures as directed by FEMA.

Provide Technical Assistance

1. Advice on program execution, scoping
2. Assess conditions and capabilities of local governments
3. Provide training for others

Provide Direct Federal Assistance

1. Complete management of the Temporary Roofing Mission
2. Logistical support to other response groups (VOLAGs, National Guard, etc.)
3. Establish call-in and ROE Collection centers

### **1.3 AUTHORITY**

Assistance is provided under the Stafford Act when State, regional and local resources have been exhausted or cannot respond. The State requests assistance in Temporary Roofing from FEMA. Under the National Response Framework at FEMA's direction, USACE may provide technical assistance or direct federal assistance in managing and contracting for the installation of blue-plastic sheeting onto qualifying structures (See Section 1.4).

## **1.4 QUALIFYING CRITERIA**

Qualifying criteria for eligibility are established by FEMA, either in a National Eligibility Policy or an Event Policy established by the local Federal Coordinating Officer (FCO) at the Joint Field Operations (JFO) office. A temporary roof is generally good for 30 days, and no warranties are provided or implied.

Residential facilities (single family) with sloped roofs covered with asphalt or fiberglass composite shingles and:

1. Less than 50% of the deck is damaged
2. Less than 50% of the rafters are damaged
3. The structure is structurally sound and can provide safe shelter once plastic sheeting is installed.
4. Structures with flat roofs do not qualify.
5. Currently, tile roofs (clay, slate or asbestos (transite) shingles do not qualify.
6. Metal roofs will be addressed in accordance with the National Roofing Policy or the Event Roofing Policy.
7. Federal facilities do not qualify for Temporary Roofing unless being used for Federal operations support.
8. Roofs with tree limbs or debris on the roof do not qualify. Debris must be removed by others for the roof to qualify.
9. The structure must be located in an area which has been designated or declared for Individual Assistance by FEMA.
10. Special situations may be submitted to the FEMA FCO for approval on a case-by-case basis.

## **1.5 REPAIRS**

Repairs by USACE contractors are primarily limited to the installation of plastic sheeting using wood furring strips nailed or screwed into the remaining roof surface. Contractors may include provisions for doing small roof repairs (100 square feet or less).

Additionally, temporary repairs to roof decks and rafters in damaged areas may be provided to ensure a safe working area and to support the plastic sheeting. Repairs will be made only after a signed Right of Entry (ROE) Form has been provided by the owner or his/her designated representative. There is no cost to the homeowner under this program.

Generally, the area to be covered with the plastic sheeting will be limited to the area of the damaged roof over the living area with enough coverage to prevent water from entering the living area. At the time of the event, there may be a FEMA National Roofing Policy in effect. If not, then the Action Officer will coordinate with the FCO on an Event Roofing Policy. Once the coverage policy is determined for an event, it is distributed to all parties involved; contractors, Corps Quality Assurance (QAs) inspectors and any auditors.

## **1.6 RESPONSE VS. RECOVERY**

Temporary Roofing is a recovery mission. When life support / sustainment supply has stabilized, the priority will transition to roofing i.e. – progress during the initial response will be based on availability of assets not committed to response activities.

## **1.7 ROTATION, ACTIVATION AND DEPLOYMENT**

Rotation: The rotation of PRTs is maintained on ENGLINK. Rotational assignments are maintained until the PRT is deployed or removed from rotation at the request of the Division Commander due to direct involvement in response to events within their own Area of Operations (AO). Internal PRTs are always the first option for deployment within the Division AO (St. Louis District for MVD, Jacksonville District for SAD & Little Rock District for SWD).

Activation: PRTs are placed on alert when there is imminent threat that an event could result in FEMA mission assignments. The target date for alerting a PRT Team is D-4. The number of PRTs activated is dependent on the magnitude of the event. The PRTs should plan on traveling within 12 hours of notification.

Deployment: External PRTs will be deployed at the request of the supported Division.

1. Pre-Declaration deployment involves the Management Cell (Action Officer, Mission Manager, one Mission Specialist (Operations), and one Resident Engineer).
2. Post-Declaration deployment involves the remainder of the team.
3. Teams will be staffed by their District for the entire mission; cradle to transition.
4. A three-day overlap is required for incoming and outgoing PRT members.

## 2.0 TEAM ROLES AND RESPONSIBILITIES

### 2.1 USACE TEMPORARY ROOFING PLANNING AND RESPONSE TEAMS (PRTs)

Temporary Roofing Teams are located in Jacksonville, Omaha, Nashville, Little Rock and the St. Louis Districts. The Northwestern Division is the lead division for the Temporary Roofing program.

### 2.2 TEAM STAFFING AND CERTIFICATION

Assigned PRTs will be staffed by their parent District / Division for cradle to transition of the temporary roofing mission. Individuals may be rotated within that period at the discretion of the parent organization. Normal deployment of PRT members is 45 days.

The deployment status of each team is listed on EngLINK. This is only a guideline as teams should be prepared to deploy within their USACE Division boundary / multiple teams may be deployed to handle a multi-state response.

Teams transitioning should plan an overlap of at least three full days with the outgoing team to ensure all facets of the mission are well understood. A left seat, right seat approach is recommended.

Temporary Roofing PRT

| <b>Title</b>                           | <b>Pre- Declaration<br/>Activation</b> | <b>Post Declaration<br/>Deployment</b> | <b>Total</b> |
|--|--|--|--------------|
| <b>Action Officer</b>                  | 1                                      | 0                                      | 1            |
| <b>Mission Manager</b>                 | 1                                      | 0                                      | 1            |
| <b>Mission Specialist - Operations</b> | 1                                      | 0                                      | 1            |
| <b>Resident Engineer</b>               | 1                                      | 1                                      | 2            |
| Mission Specialist - Staffing          | 0                                      | 1                                      | 1            |
| Mission Specialist - Reports           | 0                                      | 1                                      | 1            |
| QA Trainer                             | 0                                      | 1                                      | 1            |
| Contract Specialist                    | 0                                      | 1                                      | 1            |
| Realty Specialist                      | 0                                      | 1                                      | 1            |
| Material Control Specialist            | 0                                      | 2                                      | 2            |
| ROE Data Manager                       | 0                                      | 2                                      | 2            |
| QA Supervisor                          | 0                                      | 2                                      | 2            |
| Admin Assistant                        | 0                                      | 1                                      | 1            |
| ROE Collector                          | 0                                      | 4                                      | 4            |
| QA Team Leader                         | 0                                      | 4                                      | 4            |
| <b>TOTALS</b>                          | 4                                      | 21                                     | 25           |

Additional Personnel Requirements for Initial Ramp Up

| <b>Title</b>                | <b>Pre- Declaration<br/>Activation</b> | <b>Post Declaration<br/>Deployment</b> | <b>Total</b> |
|-----------------------------|--|--|--------------|
| ROE Collectors              | 0                                      | 20                                     | 20           |
| Quality Assurance Inspector | 0                                      | 80                                     | 80           |
| Data Entry Clerks           | 0                                      | 10                                     | 10           |
| ACE-IT Technician           | 0                                      | 1                                      | 1            |

TRAINING CERTIFICATION

1. Level 1. Encompasses the National Response Framework and Incident Command System Definitions, command and control and procedures. This is accomplished through individual training using on-line and Compact Disk (CD) support media. The training is provided and managed by the Readiness Support Center (RSC). The point of contact is Mr. Steve Diaz (251) 690-3165.
2. Level 2. Mission specific training which discusses the mission execution requirements and expectations. This is accomplished by individual training using on line and CD support media; however, actual field experience may be substituted for the Level 2 individual training. The criteria follows:
  - a. Deployed to support the Temporary Roofing Mission for three weeks or more in a PRT position.
  - b. No documented performance related issues or concerns.Note: Individual training requirements are in the EngLink Duty descriptions.
3. Readiness Definitions. Team Rating is determined as outlined below:

Key positions 100% filled with trained, deployable individuals to be Amber or Green:

Action Officer  
Mission Manager  
Mission Specialist – Operations  
Mission Specialist – Reports  
Mission Specialist - Staffing  
QA Trainer  
Material Control Specialist  
Contract Specialist  
Realty Specialist  
Resident Engineer  
QA Supervisor  
ROE Data Manager

## 2.3 TEAM POSITION ROLES AND RESPONSIBILITIES

### Action Officer:

The AO serves on the ESF #3 Management Team as an ESF #3 TL's staff member to interface with FEMA, state and other agency counterparts to develop/coordinate new and ongoing mission requirements.

The Roofing Action Officer (AO) will typically deploy with the ERT-A to the state EOC pre-dec. Prior to land fall the Action Officer will start coordinating with their FEMA and state counterparts for any potential roofing missions. They will also work with FEMA Logistics for the delivery of Plastic Sheeting. Prepares coordinated Master Plan with the Mission Manager.

The AO develops mission taskers based on FEMA's direction and transmits these taskers to the following USACE elements: Supported Division/District, Responding Organization, and Mission Manager. The AO handles all coordination for the roofing mission between the Mission Manager at the RFO and FEMA or state officials.

During Mission Transition and Closeout Phase coordinates team's release from FEMA and responding organization and ensures all mission files at the JFO are organized and provided to the ESF #3 ATL.

### Preparedness Phase:

- Coordinate with Home District EM & MM to establish team.
- Support and ensure that PRT receives training, is committed and prepared.
- Have documentation and other support items collected and ready to go.
  - SOP and sample Mission Execution Plan.

D-4 - Determine team status with home district EOC/EM.  
- Contact impacted district, initiate coordination.  
- Alert PRT  
- Make sure ACE-IT has been notified of any equipment and personnel needs.

D-3 - Receive deployment order and prepare.  
- Ensure Contract Specialist begins coordination with contract holding district

D-2 - PRT management cell deploys.  
- Touch base with PRT and ESF-3 TL  
- Ensure Contract Specialist continues coordination with ACI Contractors.  
- Ensure ROE forms from Jacksonville EM are ready to ship.  
- Develop communications, PAO, Call-in plans.

D-1 - Contact PRT Mission Manager at supported district  
- Mission Specialist – Operations develops ROE collection plan with Resident Engineer.

- Coordinate Staffing Plan with Mission Manager and TL.
  - Develop POC list of local organization/government.
- D-0
- Coordinate ROE process with Mission Manager and Impacted District (including Call-in Center).
  - Meet with FEMA
  - Define Qualifying Criteria
    - National or Event Standard
    - Use of a call-in center
    - Coordinate ROE locations (if they care)
    - Negotiate Last Day for ROE Collection (Standard is PD+30)
  - Meet with ESF #3 Team Leader and ATL to discuss expectations and SOP
- D+1
- Meet with the Corps PAO
  - Coordinate with Mission Manager
    - Define Reporting Criteria – Who briefs FEMA, RFO, and others.
    - What numbers and when to report for SITREPs, ESF TL, and FEMA.
    - What supplies to order and who will manage the VOLAGs.
  - Work with MM on Mission Execution Plan – Assess Damage – Create Assumptions
    - Identify Weaknesses/Risks
    - Elevate if Weaknesses/Risks are not addressed
- D+2
- Ensure that area is procured for plastic delivery
  - Order Plastic – Track Burn Rates for each contractor – make sure this is done
  - Meet with FEMA roofing leaders, Logistics Leader (plastic), DRC Leader, PAO leader, VOLAG Leader, People to get hotels (if needed).
  - Maintain POC list – visit regularly
- D+3+
- Coordinate with the PRT to ensure FEMA funding is sufficient to continue mission.
  - Work with MM on Close-out strategy.
  - Meet with MM on regular basis (air out ideas, concerns and help to prevent burn-out)
  - As schedule permits, go to RFO briefings, MM team meetings – stay plugged in.
  - Maintain contact lists for MM, ESF #3 TL, and ATLS, contractors, plastic sites, material handling personnel (cell #'s), State EOCs, Call-in Center, Call-in Center support staff, RFO, RFO staff, Reach Back to Home District, Reach Backs to Impacted District, FEMA FCO, PAO, DRC, FAC & JFO.

Mission Manager:

The Mission Manager (MM) serves as the project manager for the temporary roofing mission, acts as primary Roofing POC for the commander, impacted district, home district, PRT and resident engineers. The MM coordinates the execution of the roofing mission, throughout the life of the mission response. The MM prepares the coordinated Master Plan with the Action Officer.

The MM is responsible for scheduling, tracking of funds, mission execution, and reporting. The MM is responsible for managing all taskings under the mission to include contract execution, placement of temporary roofs, and quality assurance operations. Funds management, coordination, and reporting are key responsibilities of the MM. The MM is also responsible for development of the Temporary Roofing Mission Plan and close-out plan.

During Activation Phase, notifies the PRT members of deployment dates and locations. During Execution Phase continues to coordinate administration of the deployed PRT.

- D-4
  - Determine team status with home district EOC/EM.
  - Contact impacted district, initiate coordination.
  - Alert PRT
  - Make sure ACE-IT has been notified of any equipment and personnel needs.
  
- D-3
  - Receive deployment order and prepare.
  - Ensure Contract Specialist begins coordination with contract holding district (from home office).
  - Hand off District workload.
  
- D-2
  - PRT management cell deploys.
  - Touch base with impacted district
  - Contract specialist continues coordination and contract evaluation.
  - Coordinate team gear needs and pack gear/equipment.
  - Ensure ROE forms from Jacksonville EM are ready to ship
  - Develop communications, PAO, Call-in plans.
  
- D-1
  - Contact Action Officer at ERT-A.
  - Mission specialist develops ROE collection plan with Mission Specialist – Operations and Resident Engineer.
  - Develop staffing plan for mission.
  - Develop POC list of local organization/government.
  
- D-0
  - Refine right of entry plan.
  - Refine plastic drop sites based on damage area.
  - Refine staffing plan to account for available lodging in impacted area.

- Develop internal communication plan with impacted district, upward reporting, SITREPS (battle rhythm).
- Review QA training plan with Resident Engineer or QA Supervisor.
- Review database status and availability.

- D+1
- Assists in contract task order development.
  - Coordinate with Contract Specialist and impacted district Contracting Officer.
  - Coordinate execution of PAO plan, ROE collection plan, develops staffing plan.
  - Coordinates deployment of 2<sup>nd</sup> wave of PRT. This group includes Real Estate Specialist, QA Supervisors and ten (10) QA's
  - Identify admin person from one of the ten QAs or "reach back".
  - Coordinates "turn on" of call-in center with Jacksonville EOC and PAO.
  - Assess potential plastic staging sites.
  - Assess potential Resident Engineers' sites.
  - Coordinate with impacted district additional QA requirements. QAs may be obtained through EngLink Taskers or AE Contract.

- D+2 - In-process 2<sup>nd</sup> wave of PRT.

MA+0 See Critical Time Line in Section 3.

Mission Closeout- Planning for mission closeout starts when the ROE collection begins. The effort continues through completion of construction. The mission will be transferred to the supported district by the PRT when the supported district is able to take control. Transfer can occur prior to completion of mission.

Mission closeout responsibilities:

- Assists Resident Engineer in final pay estimates.
- Coordinates final database accounting
- Accounts for status of all personnel both still deployed and those already returned home. Updates ENGLink on personnel status.
- Accounts for all equipment assigned to roofing mission.
- Closeout all real estate leases and equipment rentals.
- Coordinate mission transfer to supported district.

Mission Specialist - Operations:

The Mission Specialist – Operations (MS-O) is responsible for the day to day operation of the roofing mission.

The MS-O tracks the locations of all ROE Collection Centers and makes recommendations for the opening and closing of ROE Collection Stations to the Mission Manager with input from the ROE Collection Coordinators. The MS-O also monitors the Mission Estimate to make sure production aligns with the mission completion date.

The MS-O tracks all of the costs of the roofing mission and makes sure that mission expenditures do not exceed the Mission Assignment and that contractors are not given work that exceeds the capacity of the task orders nor overall contract capacity.

The MS-O also has the responsibility to keep the roofing mission supplied in Plastic Sheeting. Monitoring on hand stocks and coordinating with the Action Officer for shipments.

- D-4 - Coordinate with Mission Manager on team status. Reports to home district EOC.
  - As directed by Mission Manager, contact team members and supported district for logistical and reporting information.
  
- D-3 - Receive deployment order and prepare.
  - Coordinate with Contract Specialist on status of contract and contractor availability.
  - Hand off District Work load.
  
- D-2 - PRT management cell deploys.
  - Coordinate with Mission Manager and home district EOC on team gear and equipment needs.
  - Make initial contact with Jacksonville EOC regarding delivery of ROE forms.
  - Assist in development of communication plan, PAO and call-in center plan.
  
- D-1 - Develop ROE collection plan with Resident Engineer.
  - Assist in development of Mission Execution Plan.
  - Assist in development of POC list for teams and locals.
  
- D-0 - Assist in refinement of staffing plan based on damage area(s).
  - Review QA training plan with Mission Manager and Resident Engineer.
  - Review database status.

MA+0 See Critical Time Line in Section 3.

#### Mission Closeout-

Planning for mission closeout starts when the ROE collection begins. The effort continues through completion of construction. The mission will be transferred to the supported district by the PRT when the supported district is able to take control. Transfer can occur prior to completion of mission.

#### Mission closeout responsibilities:

- Assists Resident Engineer in final pay estimates.
- Coordinates final database accounting
- Accounts for status of all personnel both still deployed and those already returned home. Updates EngLink on personnel status.
- Accounts for all equipment assigned to roofing mission.
- Closeout all real estate leases and equipment rentals.
- Coordinate mission transfer to supported district.

#### Mission Specialist – Staffing:

The Mission Specialist – Staffing (MS-S) is responsible for the proper staffing of the roofing mission.

At the beginning of a mission the MS-S will track the status of all EngLink Taskers, so as to know when personnel will arrive, arrange for any training and recommend where in the mission each person should be assigned. The MS-S will also make sure lodging is secured for incoming personnel.

As the mission progresses and staffing requirements change the MS-S will make recommendations to the Mission Manager for possible reassignments or returning personnel home early if not needed for the mission.

The MS-S will work with the EngLink personnel (HR Team) for early returns, extensions to taskers and backfill for personnel whom are departing. The MS will be responsible for personnel accountability to include ensuring team members have an updated PDS in EngLink and tracking their location. The MS-S will also track any individual awards for the mission.

### Mission Specialist – Reports:

The Mission Specialist – Reports (MS-R) is responsible for the EngLink Roofing Database and any reporting either to the Mission Manager or upward reporting via the SitRep, for Essential Elements of Information (EEIs). The incumbent should be knowledgeable of the EEIs for the assigned mission found in the Temporary Roofing SOP. This includes knowing where and who to contact in obtaining the necessary information in order to prepare briefings and reports as required along with posting of the EEIs via EngLink. The Temporary Roofing MS-R needs to be sensitive to meeting extremely short time schedules as dictated by the scope and severity of the assigned mission. Be very familiar with computer automation including establishment and use of databases during the mission assignment.

The Roofing MS-R will be responsible for running all of the necessary daily reports, including daily progress numbers, ROE's given to each contractor, installed per contractor reports, payment reports, audit requests, etc. They will also be responsible for any additional reporting requests.

The MS-R will be responsible for daily maintenance of the EngLink database including running duplicate address reports, finding data entry mistakes, and working with the EngLink developer's to fix and software related problems.

### Contract Specialist:

Responsible for contracting actions associated with the temporary roofing mission. This includes all phases of ACI contracts from initial contract as a hurricane approaches to final closeout.

Some typical actions are receiving contractor bonds, conducting pre-construction meetings with the Resident Engineer, issuing task orders for the contracting officer, issuing notice to proceed, working with the Resident Engineers in enforcing all contract clauses, gives official direction to the contractor, resolves contractor issues or claims, issuing cure letters, termination letters, closing out of task orders and general contract administration.

D-4 Team alerted.

D-3 - Begins coordination with team members.  
- Reviews contract requirements.  
- Transfers work load to other district members.

D-2 - With Mission Manager identifies two ACI Contractors for state.  
- Gets ready to deploy to include equipment and personal items.  
- continue to review contract requirements and coordinate with potentially impacted district.  
- Determine the details on contracting actions between yourself and the impacted district.

- Works with Resident Engineer to contact contractors for pre-award coordination, i.e. make contractor aware of a potential task order and allow them the opportunity to begin preparation of submittals such as Safety and QC Plans as well as begin staging plans. This is prior to award and funding of any task orders so this is not a meeting to require the contractor to begin work (i.e. spend funds), only to give them a head's up to begin coordination.
- Develop any other mission contract actions in coordination with team members (material handling equipment, etc).

- D-1 - Draft Task Order.  
- Coordinate with PRT.  
- Develop any other mission contract actions in coordination with team members.

- D-0 - Continue to coordinate with PRT.

MA+0 See Critical Time Line in Section 3.

#### Resident Engineer:

The Roofing Resident Engineer is responsible for all aspects of the Temporary Roofing Mission in their area of operations. This includes, but is not limited to, ROE collection, roofing damage assessments QA during construction and final inspections of a contractors work. It also includes controlling the work flow to contractors, resolving any contractor conflicts, approving contractor pay estimates and assuring the contractor fully complies with and executes the contract requirements.

- contract administration,
- quality assurance
- Reports/documentation.
- Contractor compliance/execution with all aspects of contract

- D-4 - Team alerted.

- D-3 - Receive deployment order.  
- Get ready to deploy to supported District  
- Hand off any District work

- D-2 - Travel to supported District  
- Pre-award coordination. Ensure that the contractor is aware of a potential award and allow them the opportunity to begin preparation of submittals such as Safety and QC Plans as well as begin staging plans. This is prior to award and funding of any task orders so this is not a meeting to require the contractor to begin work (i.e. spend funds), only to give them a head's up to begin coordination.

- Work with supported Mission Specialist - Staffing for potential QA inspectors
- Coordinate with home district emergency management and contact QAS from home district to be on alert

D-1 - Work on staffing plan with MM.  
- Plan organization of RE office for ROE handling, database entry and coordination with Contractor.

D-0 - Continue work on Mission Planning

MA+0 See Critical Time Line in Section 3.

During Mission:

- Provide reports to Mission Manager on a daily basis.
- Participate on conference calls as required.
- Coordinates complaint resolution with Mission Manager.
- Supervises QA Supervisors, Team Leaders and inspectors and other personnel associated with the Resident Office.
- Verify and sign time sheets as required.
- Resolve personnel conflicts elevated above the QA Supervisor.
- Continually monitor staffing requirements and report to Mission Manager the need to acquire more QAs or to move QAs to another mission.

Realty Specialist:

The Roofing Realty Specialist has the responsibility for securing facilities/properties for the Temporary Roofing Mission. These may be any and all of the following: Office space for Resident Engineer Offices, warehouse or open storage hardstands for plastic sheeting and ROE Collection Centers. These may be temporary facilities for just a few days or longer term for the duration of the roofing mission. The real property may have a formal lease or have very informal agreements.

Once all facilities are secured, the Roofing Realty Specialist shall assist the Mission Specialist for Operations and the ROE Collection Coordinators in the collection of signed ROEs.

Material Control Specialist:

Responsible for receiving, issuing government furnished material (GFM) (plastic sheeting) and other mission materials to the prime contractors. This includes tracking, accountability, security and reporting to the Mission Manager for Operations the status of materials. Coordinate the material handling equipment requirements: such as a forklift, fuel, operator (if needed) and pallet jack. Be able to supervise the safe use of forklifts.

D-4 - Team alerted.

D-3 - MCS begins coordination with team members.  
- Coordinate with the impacted district and review potential government and other federal locations for staging of roofing materials.  
- Plan for a secured site large enough that can accommodate storage of at least 20 truckloads of plastic, traffic control, office space, off-loading and loading trucks. This can be a warehouse (around 10,000 sq ft) or open site (at least 2 acres) etc.

D-2 - Get ready to deploy to include equipment and personal items.  
- Continue to coordinate the GFM staging areas.

D-1 - Coordinate the GFM staging area with impacted district.

D-0 - Continue to coordinate with forward deployed team members.

D+1 - Get deployment order.  
- Coordinate with forward team members (Contract Specialist) and impacted district to finalize staging areas and contracts for loading requirements.  
- Coordinate with PRT regarding the ordering and delivery of initial plastic.

D+2 - Deploy forward.

D+3 - Coordinate with Mission Manager and FEMA logistics regarding GFM.  
- Finalize the staging areas with PRT.

D+4 - Start receiving and issuing GFM.

### ROE Data Manager:

The Roofing ROE Data Manager is responsible for the accurate input of content and maintenance of the Right of Entry database, included are daily reporting requirements and exception reports (for duplicate information). The Roofing ROE Data Manager will be responsible for daily maintenance of the EngLink database including running duplicate address reports, finding data entry mistakes, and working with the EngLink developer's to fix and software related problems.

The Roofing ROE Data Manager will be responsible for running all the necessary daily reports, including daily progress numbers, ROE's given to each contractor, installed per contractor reports, payment reports, audit requests, etc. They will also be responsible for any additional reporting requests.

The Roofing ROE Data Manager will be responsible for receiving installation reports from the prime contractors and matching the data with the EngLink database. They will be responsible for receiving the final QC reports from the prime contractors and matching the contractor's numbers with the government estimates. They will also be responsible for matching the contractor's payment request with the government's final inspection quantities and resolving any differences before proceeding with the payment.

### QA Trainer:

The Roofing QA Trainer is responsible for conducting the eight (8) hour Roofing QA Course given at the Recovery Field Office or at one of the Resident Engineer Offices. This includes acquiring a temporary classroom and receiving a property owner's permission to visit a damaged structure for a practical exercise. The QA Trainer must also work with the Readiness Support Center (RSC) to ensure training materials for the Roofing QAs are on hand.

### QA Supervisor:

The Roofing QA Supervisor (QA-S) is responsible for the management and work of up to seven (7) Roofing Quality Assurance Teams that are performing ROE assessments, QA during construction or ROE finals at the Resident Engineer Office/EFO. The QA-S assigns the work load to each Roofing QA Team and monitors the quality and quantity of each teams' work.

The Roofing QA Supervisor is also required to perform normal administrative supervisory functions as a Corps or Engineers supervisor.

QA Team Leader:

The Roofing QA Team Leader (QA-TL) is responsible for the management and work of up to seven (7) Roofing Quality Assurance Inspectors (QAs) who are performing ROE assessments and ROE finals. The QA-TL determines the QAs work schedule and reviews the ROE Assessments and ROE finals once completed.

When the Roofing QA-TL is not performing management duties, they will also complete ROE Assessments and ROE finals.

The Roofing QA-TL receives the assignments for the QA Team from the Roofing QA Supervisor. The incumbent will be required to maintain the daily production schedules that are established.

NOTE: Most QA-TLs will not deploy in this position but will be assigned these duties by the QA Supervisor or Resident Engineer

Quality Assurance Inspector:

The incumbent will be assigned to an emergency mission under a Roofing Quality Assurance Team Leader (Roofing QA-TL). Responsibilities will include representing the Resident Engineer as an on site inspector.

The Roofing QA will perform ROE Assessments and if in the scope of the mission, clearly show by drawings, the footprint of the structure, the damaged area of the roof and the area to be covered with dimensions of the materials to be installed. All math computations will be shown for easy verification of quantities to be installed. If necessary an ROE Worksheet will be attached to the ROE.

The Roofing QA will perform ROE Finals to verify from the ground that the contractor installed the amount of quantities of materials called for on the ROE and that the materials are properly installed in the locations called for on the ROE.

The Roofing QA may be assigned to perform Quality Assurance during construction duties to insure that Contractor Quality Controls (CQC) are working effectively, and that the end product complies with the quality established by the contract and an awareness of all instructions issued to the contractor, agreements reached with contractors and general working conditions.

The Roofing Inspector is responsible for ensuring full compliance of the EM 385-1-1 (Safety Manual) and the safety program in general by the contractor. The inspector advises personnel on safety requirements and makes necessary follow-up contact with contractors to ensure correction of violations. Takes appropriate action to correct any conditions that (1) appear to be potential accident hazards, (2) impair the safety of the worker or other individuals, or (3) might cause damage to Government or private property.

ROE Collection Coordinator:

The Roofing ROE Collection Coordinator oversees all aspects of the ROE collection function in a Resident Engineers/EFO's area of operation/responsibility. This includes locating ROE Collection Centers and Mobile Collection Centers, making sure these centers are properly staffed and open on time each day. Working with the Mission Specialist for Operations at the RFO makes recommendations for the closing or relocation of existing ROE Collection Centers based on sign up activity.

The Roofing ROE Collection Coordinator is also responsible for the accountability of all ROEs while under the control of the ROE Collection Centers and works with ROE Data Manager to ensure newly received signed ROEs are processed by data entry clerks.

ROE Collector:

The Roofing ROE Collector works at an ROE Collection Center or Mobile Collection Center where property owners sign up for a Temporary Roof. This includes verifying the accuracy of the information on an ROE to include ownership or responsibility for the property and the eligibility of the property based upon its use in accordance with either the National Coverage Policy for Temporary Roofing or the event policy in lieu of a national policy. They must understand the basic Corps process for doing assessments and having a Corps contractor install the roof to be able to answer any questions the applicant may have.

Data Entry Clerk:

The Roofing Data Entry Clerk is responsible for inputting all data collected from the ROE form through all stages of the mission at the Resident Engineer Office/EFO.

The Data Entry Clerk will input new ROE's into the EngLink database as they are received from the ROE collection centers, they will input estimated quantities once the Roofing QA has completed an estimate, and they will input final quantities once the ROE is ready to be processed for payment.

The Data Entry Clerk will be tasked with filing and tracking all physical ROE's when they are not in the field or being entered into the database. They shall be filed by ROE number and be grouped as "needs estimate", "with estimate", "final quantities", or "paid".

The Data Entry Clerk will be tasked with mapping all new ROE's that are received from the ROE collection centers. They will work with GIS personnel to ensure all ROE's are geo-coded correctly in EngLink, and that they are grouped into clustered packets to improve estimating efficiency. Any ROE's that are not geo-coded will be mapped separately using mapping software.

Roofing Administrative Assistant:

The Administrative Assistant is responsible for all types of administrative duties including typing, filing, photocopying, timekeeping, mail and message distribution, answering the phone, keeping track of employee's lodging and cell phones, etc. of approximately 250 people assigned to the Roofing Mission to include other federal agency personnel.

The Roofing Admin Assistant uses a variety of computer-based software programs to complete position responsibilities (Word, Excel, etc.). When needed organizes meetings and schedules conferences.

Subject Matter Expert (Designated by NWD):

The Temporary Roofing Subject Matter Expert (SME) deploys as a member of the Emergency Support Function (ESF) #3 Management Team or as a member of the National Roofing Strike Team to serve at various FEMA operational locations: the Emergency Response Team, Advance (ERT-A) at the state EOC; to the National Resource Coordination Center (NRCC); the Regional Response Coordination Center (RRCC); the Joint Field Operations Center (JFO); or the Recovery Field Office (RFO).

At the JFO, RRCC or NRCC serves as a member of the ESF #3 Team Leader's staff and assists in mission analysis, developing mission assignments, advising on potential obstacles and necessary state and local coordination and works with the PRT Action Officer or Mission Manager in resolving issues. Provides guidance based on the current Temporary Roofing SOP and experience from previous missions.

The SME serves as a member of the Command Staff at the RFO and assists in mission analysis, developing mission assignments, advising on potential obstacles and works with the PRT Action Officer or Mission Manager in resolving issues. Provides guidance based on the current Temporary Roofing SOP and experience from previous missions.

Preparedness Phase (Off Season)

- Assists lead division in maintaining Mission Guides, SOPs, and Advanced Contract Initiatives (ACI).
- Assists lead division and USACE Readiness Support Center (RSC) to develop annual training program.

Activation Phase

- Deploys as a member of the Emergency Support Function (ESF) #3 Management Team to serve at various FEMA operational locations: the Emergency Response

Team, Advance (ERT-A) at the state EOC; to the National Resource Coordination Center (NRCC); the Regional Response Coordination Center (RRCC); or the Joint Field Operations Center (JFO).

- Serve as a member of the ESF #3 Team Leaders staff and assist in mission analysis, developing mission assignments, advising on potential obstacles and necessary state and local coordination. Works with the PRT Action Officer or Mission Manager in resolving issues.
- Assist in developing the Mission Execution Plan that includes a Staffing Plan, ROE Collection Plan, Communications Plan, QA Training Plan, and Database Management Plan, and Transition/Close-Out Plan.
- Assist in changes to mission assignments, anticipate changes to execution plan. Work with the Action Officer and Mission Manager in resolving issues.

Subject Matter Specialist – Resident Engineer:

The Temporary Roofing Subject Matter Specialist (SMS) deploys to serve at various Corps of Engineers operational locations: the Recovery Field Office (RFO); or the Resident Engineer Office Emergency Field Office (EFO).

The primary duty of the Roofing SMS Resident Engineer is to provide guidance and assistance to the Resident Engineer(s) on the PRT in setting up roofing operations in accordance with the Temporary Roofing SOP and basic Corps of Engineers practices. Operations include: ROE Collection and handling, roof assessments, QA during construction, finalization of work, contractor payment procedures and general Resident Engineer office procedures.

Subject Matter Specialist – Database:

The Temporary Roofing Subject Matter Specialist (SMS) to serve at various Corps of Engineers operational locations: the Recovery Field Office (RFO); or the Resident Engineer Office Emergency Field Office (EFO).

The primary duty of the Roofing SMS Database is to provide guidance and assistance to the Mission Specialist for Reports and the ROE Data Managers on the PRT in setting up the EngLink Roofing Database for the mission in accordance with the Temporary Roofing SOP and basic Corps of Engineers practices. This includes ROE data entry, entry of assessment quantities, contractor pay estimates and various management reports.

## 2.4 EQUIPMENT NEEDS FOR PRT

The following items should be acquired and made available to the PRT for deployment. A 60 day supply of printer / multi function equipment ink cartridges and batteries would also need to be deployed with the team.

### Equipment for Roofing PRT

| Nomenclature                                | Number needed |
|---|---------------|
| Laptop Computer                             | 17            |
| Cell Phones                                 | 25            |
| Copier, Scanner, Printer, Fax multifunction | 3             |
| Global Positioning System (GPS)             | 4             |
| Digital Camera                              | 2             |
| Connectivity to CEEIS                       | 3             |

### 3.0 ESTABLISHING OPERATIONS AND TIMELINES

**Mission Assignment Scripts:** A mission assignment is a Work Order issued by FEMA to USACE directing completion of a specific task that is given in anticipation or response to a major disaster or emergency. Listed below, these scripts, entered on FEMA Form 90-129 provide authorization to expend funds in support of the emergency. Verbal mission assignments from FEMA should be documented and signed by USACE and FEMA representatives, and be followed by a written mission assignment.

#### 3.1 PRE DECLARATION MISSION

##### **Pre-Declaration Mission Assignment Script**

**Title: USACE ESF #6, Temporary Roofing (FOS) – Pre-Dec**

**Block II – Assistance Requested:**

Pre-position the management cell (four people) of the Temporary Roofing Planning and Response Team (PRT) and two Subject Matter Experts to provide event-specific planning and preparation for the temporary roofing mission as directed by FEMA.

**Block IV – Statement of Work:**

Prepare to implement the Advance Contracting Initiative or other contracting process that will permit the award and execution of contracts for temporary roofing. Coordinate with FEMA Logistics on stocks of plastic for roofing. If necessary, a subsequent MA will be issued for all Post-Declaration temporary roofing activities.

MA task orders will be issued for specific personnel requirements, location(s), dates, and duration of assignment(s).

All equipment and supply purchases must be coordinated with FEMA. Prior FEMA approval is necessary to ensure reimbursement.

**Total Cost Estimate: \$70K**

Deploy Temporary Roofing Planning and Response Team: Six personnel for 6 days.

*Note: The purpose of the task order is to direct specific activities within the scope of an existing MA. A task order form may be used if no additional funding is needed and the scope of the existing MA is not changed. If at a later time additional funding or completion date extensions are required, an amendment to the MA shall be issued to include the appropriate information. New requirements outside the scope of the original MA require the issuance of a new MA.*

### 3.2 POST DECLARATION MISSIONS

#### **Post Declaration Mission Assignment Script (FOS)**

**Title: USACE ESF #6, Temporary Roofing (FOS) – Post Dec**

**Block II – Assistance Requested:**

Pre-position the remaining 21 members of the Temporary Roofing Planning and Response Team (PRT) in addition to the management element and subject matter experts to provide event-specific planning and preparation for the temporary roofing mission as directed by FEMA.

**Block IV – Statement of Work:**

Federal Operational Support - Prepare to implement the Advance Contracting Initiative or other contracting process that will permit the award and execution of contracts for temporary roofing. Coordinate with FEMA Logistics on stocks of plastic for roofing.

MA task orders will be issued for specific personnel requirements, location(s), dates, and duration of assignment(s).

All equipment and supply purchases must be coordinated with FEMA. Prior FEMA approval is necessary to ensure reimbursement.

**Total Cost Estimate: \$200K**

*Note: The purpose of the task order is to direct specific activities within the scope of an existing MA. A task order form may be used if no additional funding is needed and the scope of the existing MA is not changed. If at a later time additional funding or completion date extensions are required, an amendment to the MA shall be issued to include the appropriate information. New requirements outside the scope of the original MA require the issuance of a new MA.*

#### **Post Declaration Mission Assignment Script (DFA)**

**Title: USACE ESF #6, Temporary Roofing (DFA) – Post Dec**

**Block II – Assistance Requested:**

Deploy the Temporary Roofing Planning and Response Team (PRT) to provide temporary roofing support as directed by FEMA.

**Block IV – Statement of Work:**

Direct Federal Support - Implement the Advanced Contracting Initiative (ACI), other contracting processes, or other sources to provide temporary roofing as directed by FEMA. Coordinate the roofing activities of all other organizations (e.g., National Guard and voluntary organizations) performing portions of this roofing mission. These activities may include ordering supplies, equipment, materials, and logistics support necessary to provide temporary roofing to homes and other structures as per FEMA Policy. Real estate support is authorized for Rights of Entry. The leasing of facilities in support of the roofing mission is authorized.

MA task orders will be issued for specific personnel requirements, location(s), dates, and duration of assignment(s).

Leasing of Material Handling Equipment (MHE) and purchase of fuel for same is authorized. All other equipment and supply purchases must be coordinated with FEMA. Prior FEMA approval is necessary to ensure reimbursement.

Increasing Quality Assurance spot checks (finals) above 20% for any single contractor requires FEMA concurrence. State concurrence is also required if cost sharing is in effect.

**Total Cost Estimate: \$30M**

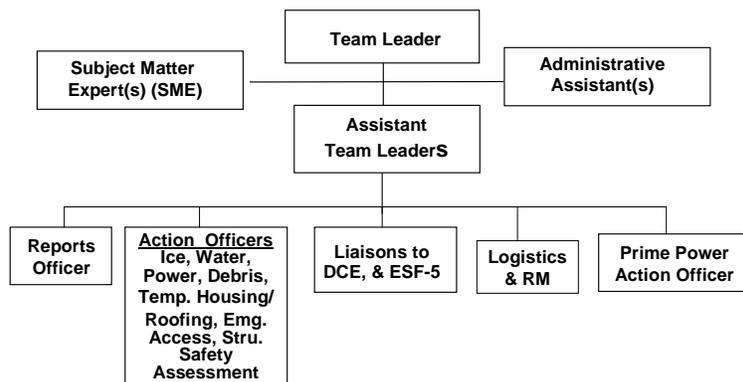
Provide for the deployment of the Temporary Roofing PRT, other roofing mission personnel, and temporary roofing for approximately 10,000 houses. Costs will vary based on geographical conditions, average square footage of houses, extent of structural damage, and regional ACI contract costs for the area.

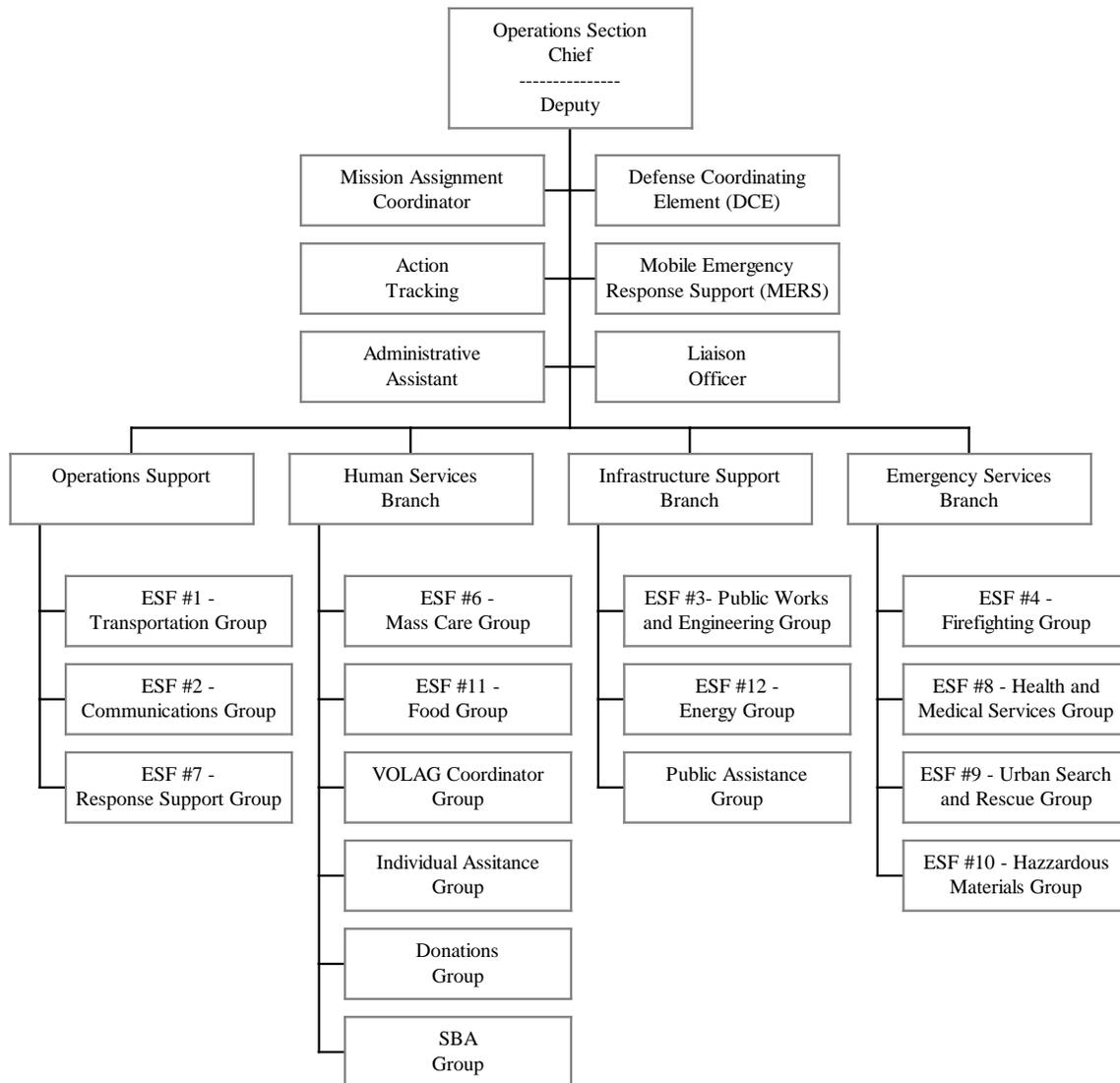
*Note: The purpose of the task order is to direct specific activities within the scope of an existing MA. A task order form may be used if no additional funding is needed and the scope of the existing MA is not changed. If at a later time additional funding or completion date extensions are required, an amendment to the MA shall be issued to include the appropriate information. New requirements outside the scope of the original MA require the issuance of a new MA.*

**3.3 JOINT FIELD OFFICE**

**Joint Field Office:** A temporary federal facility established locally to provide a central location for Federal, state, local and tribal executives for incident oversight, direction, and/or assistance to effectively coordinate protection, prevention, preparedness, response and recovery actions. The ESF#3 Action Officers work as staff officers, planning, managing and executing the mission for the USACE Team Leader and Assistant Team Leader at this location. The ESF#3 and JFO Structure Diagrams are as shown below:

ESF-3 at JFO

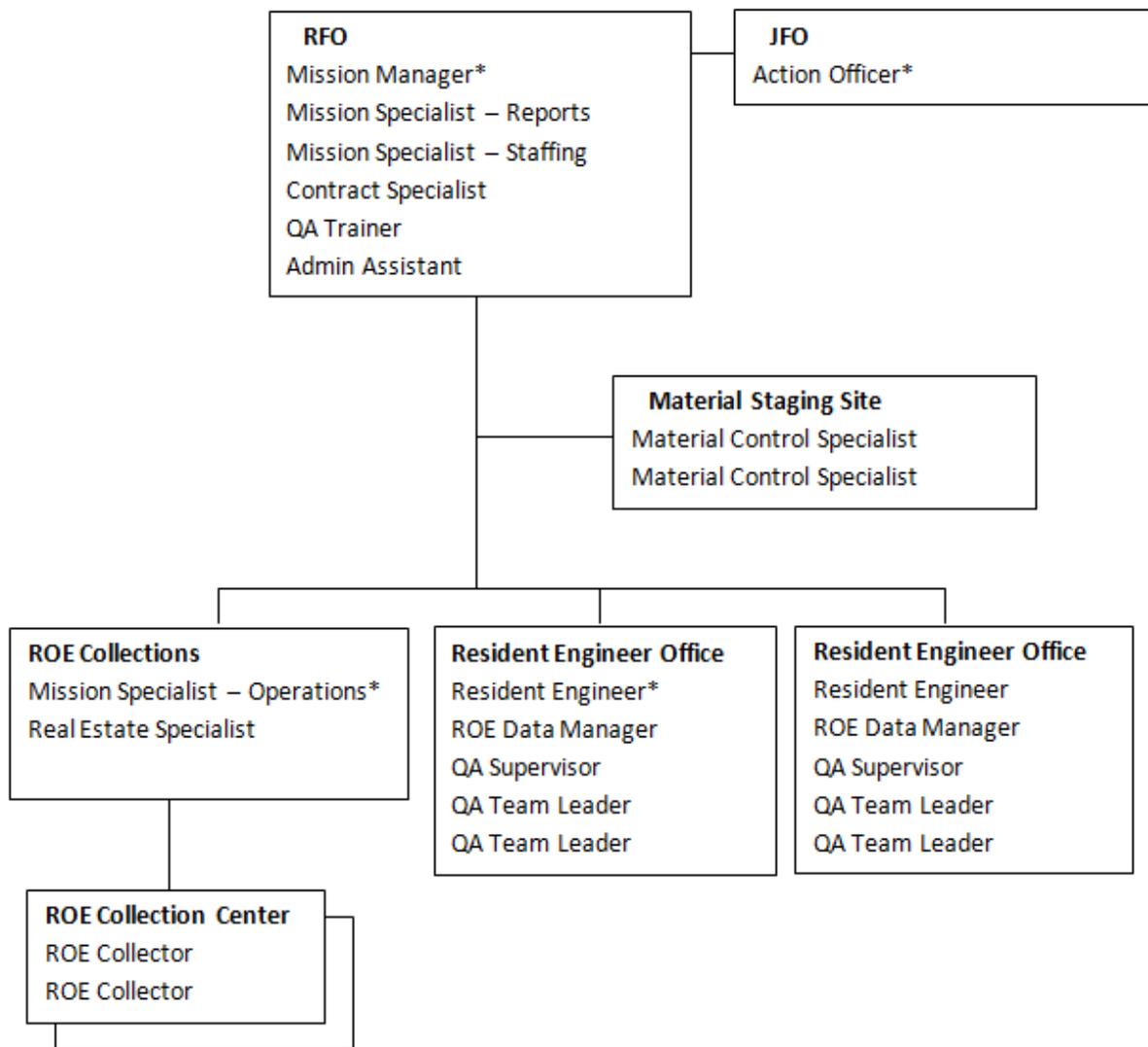




### 3.4 RECOVERY FIELD OFFICE

**Recovery Field Office:** A FEMA approved, USACE Temporary Office from which a responding organization, with the PRTs, conducts recovery and sometimes response missions. The office has high speed communications and is established in the geographic vicinity of the disaster and often near the JFO. The Mission Manager oversees the team, resolves issues, and coordinates with the Action Officer and/or the SME. The Mission Manager upward reports essential elements of information (EEI) from this location. Only eight people from the PRT work at the RFO: Mission Manager, Mission specialists (3), Roofing Contract Specialist, Realty Specialist, QA Trainer and the Admin Assistant. Shown below is the recommended mission structure with minimal personnel at the RFO.

#### TEMPORARY ROOFING PRT Structure 2012



### **3.5 MISSION PLAN/PROJECT MANAGEMENT PLAN**

The Mission Manager and Action Officer shall develop a Mission Plan / Project Management Plan for the execution of the mission. The plan shall be coordinated within the team and provide the plan for response. Additional documents shall be incorporated as developed as appendices to the plan. Areas to be addressed include the following:

- a. Situation. Assessment; Critical Assumptions, Organization
- b. Mission Statement. Tasks; criteria; issues
- c. Execution. Concept of Operations; Specific Tasks to Agencies
- d. Logistics and Administration. Concept of Support; Special Assistance; Personnel (PRT, ACI Contractor); Funding; Mission Locations
- e. Lead and Support Relationships and Communications.

### **3.6 RAPID RAMP UP OF MISSION**

The Rapid Ramp Up of the roofing mission requires the simultaneous start up of two ACI Contractors, one for each Resident Engineer Office. Additional ACI Contractors may be needed for the mission. The Multiple Contractor Chart in this section is based on a three day delay after the initiation of the first two ACI Contractors.

The key to the Rapid Ramp Up process is to have enough QA Inspectors performing Assessments to keep ahead of the ACI Contractors. The Notice to Proceed Requirements should all be met before issuing a Notice to Proceed to an ACI Contractor.

The other two elements to the Rapid Ramp Up process is having ten ROE Collection Centers located such that they will yield the most ROEs with minimal use of ROE Collectors. The other elements are data entry clerks located at the Resident Engineer Offices with computer access to the EngLink Database for the mission.

### 3.7 REQUIREMENTS FOR RAPID RAMP UP

#### **Manpower**

- Full Temporary Roofing PRT
- One SME at the RFO and one SME at the JFO
  
- 20 ROE Collectors
- 80 Roofing QAs
- 10 Data Entry Clerks (Must be Corps, and deploy with Laptop, Air Card, VPN, Keyboard, mouse, etc.)

#### **Equipment**

- Equipment from Omaha District EOC for 40 Roofing QAs
- 10 Laptops with air card, keyboard & mouse for Data Entry (This equipment should deploy with the Data Entry Clerks from the supporting districts.)

This is enough manpower and equipment to get two ACI Roofing Contractors to a mission production rate of 600 roofs. For higher production, more assets will be needed.

Note: The Rapid Ramp Up of the Temporary Roofing Mission is not dependent on an RFO or EFOs being in place. The mission is designed to be able to be initially run from any facility such as a hotel lobby.

### 3.8 NOTICE TO PROCEED REQUIREMENTS

All of these items must be in place prior to issuing a Notice to Proceed:

- At least 20 ROE Collectors on the ground.
- At least 5 Data Entry Clerks with CAC Cards and Laptops with connectivity to EngLink.
- Temporary or permanent Staging Area for Plastic Sheeting secured.
- Plastic Sheeting on order with FEMA logistics.
- QAs per the table below.

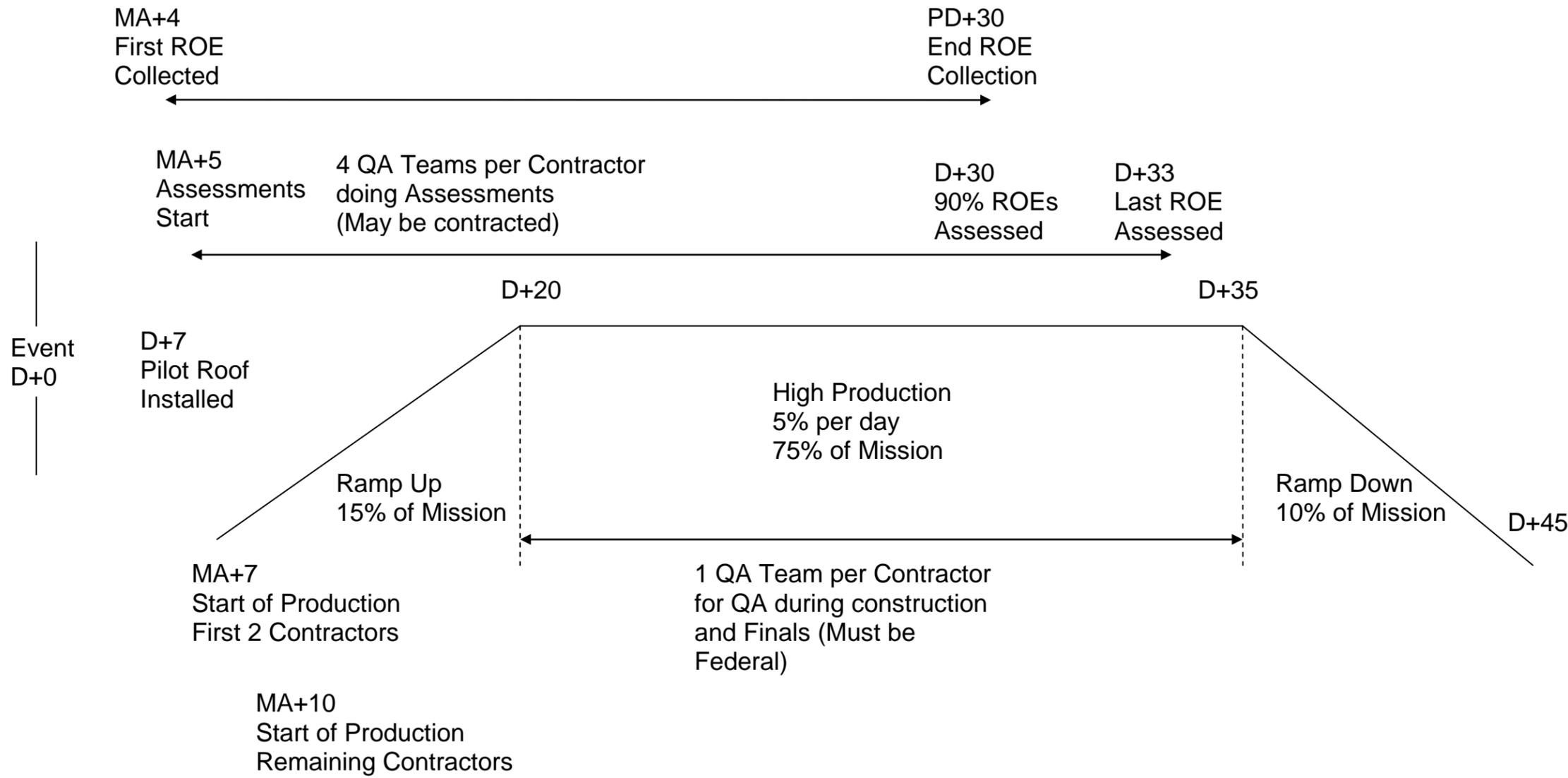
The table below is used to insure that Corps has enough QAs doing ROE Assessments to stay ahead of the contractors as they ramp up according to the ACI Contract schedule. All three criteria for QAs must be met before issuing a Notice to Proceed to two or more contractors in addition to the above criteria.

|               | QAs on the ground or arriving the same day as the NTP | QAs in route and will arrive in next 3 days | QAs in route and will arrive between 4-6 days | Total QAs |
|---------------|---|---|---|-----------|
| 2 Contractors | 20  | 30  | 30  | 80        |
| 3 Contractors | 60  | 45  | 15  | 120       |
| 4 Contractors | 70  | 60  | 30  | 160       |
| 5 Contractors | 80  | 75  | 45  | 200       |
| 6 Contractors | 90  | 90  | 60  | 240       |

Based on contractors 3-6 all starting 3 days after the first 2 contractors

NOTE: QAs may be contracted or non-federal employees.  
All of the QAs doing Assessments may be contracted.  
Only Federal Employees may do Spot Checks.

3.9 PRODUCTION PLAN



|    |                          |
|----|--------------------------|
| D  | Day of Event             |
| PD | Presidential Declaration |
| MA | Mission Assignment       |

|                  |
|------------------|
| <u>QA Team</u>   |
| 1 QA Team Leader |
| 7 QAs            |

Task Order/Notice to Proceed – Initial start of two contracts and QAs needed

| Day Task Order                       | Day 1 | Day 2 | Day 3 | Day 4 | Day 5 | Day 6 | Day 7 | Day 8 | Day 9 | Day 10 |
|--------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|
| Roofs<br>2 Contractors               |       |       |       | 2     | 10    | 40    | 80    | 120   | 240   | 600    |
| Daily ROE<br>Assessments<br>Required |       | 2     | 10    | 40    | 80    | 120   | 240   | 600   | 600   | 600    |
| QAs Required for<br>Assessments      |       | 16    | 24    | 32    | 40    | 50    | 60    | 64    | 64    | 64     |
| QAs Required for<br>Contractor QA    |       | 4     | 6     | 8     | 10    | 10    | 10    | 16    | 16    | 16     |
| Total<br>QAs                         |       | 20    | 30    | 40    | 50    | 60    | 70    | 80    | 80    | 80     |

NOTE: Once QAs arrive they are formed into 8 person teams consisting of 1 QA-Team Leader and 7 QAs.  
Each QA Team should be capable of performing either 75 Assessments or 75 Finals (10 per QA, 5 per QA-TL).  
To stay ahead of the contractors at least 80% of the QAs should be doing assessments.

QAs Needed for Multiple Contracts

|  | Day 1 | Day 2 | Day 3 | Day 4 | Day 5 | Day 6 | Day 7 | Day 8 | Day 9 | Day 10 | Day 11 | Day 12 |
|--|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|
| QAs Required for<br>3 Contractors<br>900 Roofs   |       | 20    | 30    | 40    | 60    | 75    | 90    | 105   | 110   | 115    | 120    | 120    |
| QAs Required for<br>4 Contractors<br>1,200 Roofs |       | 20    | 30    | 40    | 70    | 90    | 110   | 130   | 140   | 150    | 160    | 160    |
| QAs Required for<br>5 Contractors<br>1,500 Roofs |       | 20    | 30    | 40    | 80    | 105   | 130   | 155   | 170   | 185    | 200    | 200    |
| QAs Required for<br>6 Contractors<br>1,800 Roofs |       | 20    | 30    | 40    | 90    | 120   | 150   | 180   | 200   | 220    | 240    | 240    |

Chart is based on additional contractors all starting three days after the first two.

### **3.10 CRITICAL TIMELINE**

#### **D-4**

PRT Management Cell alerted

SMEs Alerted

Funding for Taskers transmitted

Travel & Lodging for PRT Management Cell and SMEs secured

Teams start planning for deployment

Team Members make plans for transferring work to others in their district

Notify ACE-IT of immediate equipment needs for deployment on D-2.

#### **D-3**

PRT/SMEs Warning Order issued

Supported District – UOC – SME Conference Call

##### Points to cover

PRT (Main Body) 15 people (MA+2)

80 QAs (20 on MA+3, 10 each day after) (10 Must be Corps)

20 ROE Collectors (MA+2)

10 Data Entry Clerks (Corps) (MA+3)

1 ACE-IT Technician (MA+3)

First 2 ACI Contracts

RSC Support Equipment for QAs and ROE Collection Centers

ACE-IT Equipment

Lodging Requirements

Teams continue to prepare for deployment.

Teams receive additional ACE-IT equipment for Management Cell

Contact SAJ for tentative shipment of ROEs

KO Makes initial contract with ACI Contractors

## **D-2**

### **PRT Management Cell deploys (4) SMEs Deploy (2)**

USACE identifies manpower requirements from Divisions/Districts for:

- 80 QAs
- 20 ROE Collectors
- 10 Data Entry Clerks (Corps)
- 1 ACE-IT Technician

KO continues communication with ACI Contractors

## **D-1**

PRT Management Cell/SMEs with IMAT, start planning Mission, begins coordination with FEMA and State.

- ROE Collection Plan
- Event POC List
- Identify locations for plastic sheeting staging
- Identify general locations for Resident Engineer Offices and ROE Collection Centers.
- Call-In-Center Plan includes 1-888-ROOFBLU

Main PRT prepares for movement (MA+2)

USACE identifies by name and district:

- 80 QAs (20 on MA+3, 10 each day after)
- 20 ROE Collectors (MA+2)
- 10 Data Entry Clerks (Corps) (MA+3)
- 1 ACE-IT Technician (MA+3)

## **D-0**

PRT Management Cell and SMEs work on Mission Plans as storm track is known and continue to coordinate with FEMA and State representatives.

## **D+1 to D+4**

PRT Management Cell & SMEs Perform the ground assessment of roof damage identify potential locations for ROE Collection Centers, Resident Engineer Offices, plastic sheeting storage and establish contracts at potential hotels for lodging. Coordinate with Supported District Real Estate.

**MA-0** Mission Assignment requires Presidential Declaration and the State's Request for Assistance before FEMA can issue a MA Tasking.

PRT Management Cell & SMEs work on Mission Plan.

Staging Site for Plastic Sheeting Secured

Forklift for staging area leased

Plastic Sheeting ordered through FEMA

Taskers for main PRT, 80 Roofing QAs, 20 ROE Collectors and 10 Data Entry Clerks, 1 ACE-IT Technician issued.

Funding for Taskers sent to Districts.

Travel arrangements made for above personnel

ACE-IT starts process for having required equipment in place by MA+3

Two ACI Contractors officially notified by KO, Pre-Cons scheduled.

## **MA+1**

PRT Management Cell & SMEs move to affected area. Refine ROE Collection Plan. Continue reconnoitering locations for ROE Collection Centers and Resident Engineer offices.

## **MA+2**

**Main PRT arrives**

**20 ROE Collectors arrive**

### **MA+3**

ROE Collector training

Locations for 10 ROE Collection Centers secured

QA Trainer determines location for QA Course and practical exercise

**First 20 QAs arrive**

**Data Entry Clerks arrive (5 per Resident Engineer Office, 10 Total)**

**ACE-IT Technician arrives**

ACE-IT Equipment for data entry into EngLink arrives.

RSC - QA Training Packets, QA equipment and Collection Center Banners arrive

### **MA+4**

ROE Collection Centers open (10)

First QAs receive 8 hour training block

**10 QAs arrive**

Data Entry networks set up at Resident Engineer Offices

EngLink Database activated

Data Entry starts (2 Hour training) Corps CAC card required

### **MA+5**

QAs start Government Assessments

**10 QAs arrive**

KO issues Notice to Proceed to Contractors provided all NTP requirements are met.

**MA+6**

Plastic Sheeting issued to ACI Contractors

**10 QAs arrive**

**MA+7**

First production Roofs installed (1 per contractor for total of 2)

**10 QAs arrive**

**MA+8**

Second day of production (5 roofs per contractor for total of 10)  
Contractors report previous day's installs electronically by ROE Number.

**10 QAs arrive**

**MA+9**

Third day of production (20 roofs per contractor for total of 40)

**10 QAs arrive** (Last of initial 80 QAs)

**D+20**

Full Production obtained

**PD+30**

ROE Collection ends

**D+33**

Last ROE Assessed

**D+34**

Last Work Orders given to contractors

**D+45**

Last roof installed

### 3.11 PLANNING FACTORS AND RULES OF THUMB

- Approximately \$3,000 per roof for cost estimating / funding, \$2,500 for contractor and \$500 for oversight.

Note Goal for oversight is under \$250 per roof, over \$300 per roof is considered excessive for mission.

- 1.5 rolls of 20'x100' blue plastic sheeting per roof.
- Trained contractor crews place complete 3 to 5 temporary roofs per day.
- 600 rolls of 20'x100' blue plastic sheeting per truckload, 28 rolls per pallet.
- After request for plastic from FEMA, allow 2 days for delivery. Initial push is 4 trucks per day for 5 days, a total of approximately 12,000 rolls.
- The damage is typically worst on the front right quadrant of the hurricane path.

### 3.12 INFORMATION SOURCES

Reference current USACE OPORD.

1. Damage estimates.
  - a. Overflights of area.
  - b. ENGLINK model; <https://englink.usace.army.mil> (877)936-4546
  - c. State and local EM offices
  - d. County population and households census information
2. Useful Websites
  - a. [www.fema.gov](http://www.fema.gov) for state maps with counties eligible for aid.
  - b. [www.nhc.noaa.gov](http://www.nhc.noaa.gov) for the National Hurricane Center
  - c. [www.intellicast.com/Tropical](http://www.intellicast.com/Tropical) for the Intellicast Tropical web page

### 3.13 EXIT STRATEGY

An exit strategy should be developed by the PRT with the State and FEMA by D+30 to address a point in the recovery when the State is able to handle the remaining workload either by contract or use of Volunteer Agencies. The PRT shall assist the state in ordering the required supplies if requested and develop a seamless transition of duties.

## 4.0 CONTRACTS

### 4.1 ACI CONTRACTS

The Corps of Engineers maintains a number of pre awarded Advanced Contracting Initiative (ACI) temporary roofing contracts. There are multiple ACI Contracts that cover coastal states from Texas to Maine. Plus there are individual ACI Contracts for Puerto Rico, the U.S. Virgin Islands, Hawaii and one that covers Guam and the Commonwealth of the Northern Marianas Islands (CNMI). American Samoa does not have an ACI Contract as the closest Plastic Sheeting is in Hawaii and by the time Plastic Sheeting would be delivered, an emergency contract could be awarded.

These contractors can begin mobilization within 24 hours of notification. If more capacity is needed than the ACI contracts a minimum of 10 days is required to award a task order under emergency contracting conditions.

During an emergency response the ACI Contracts are to be used first in reaching production goals. Local contracts may be used to supplement, but not replace the work being done by the ACI Contractors. The use of local contractors is to be well coordinated with FEMA as it may require that all Corps mission assignments also shift to local contractors and that missions performed by other agencies also shift to local contractors to be uniform across agencies involved in the federal response.

### 4.2 LOCAL CONTRACTS

For the first 60 days after a disaster ACI Contracts are to be used exclusively unless the need for production is such that it exceeds the production capacity of the ACI Contracts that are available for use. After 60 days use of local contractors that are geographically in the footprint of the Temporary Roofing Mission may be awarded.

### 4.3 PRODUCTION RATES AND CONSIDERATIONS

Refer to existing contracts terms and conditions.

| Days after Notice to Proceed | Single Contractor Production Rate | Multiple Contractors Simultaneous Start* |
|------------------------------|-----------------------------------|--|
| Day 4                        | 1 roofs / day                     | 5 roofs / day                            |
| Day 5                        | 5 roofs / day                     | 15 roofs / day                           |
| Day 6                        | 20 roofs / day                    | 55 roofs / day                           |
| Day 7                        | 40 roofs / day                    | 125 roofs / day                          |
| Day 8                        | 60 roofs / day                    | 200 roofs / day                          |
| Day 9                        | 120 roofs / day                   | 400 roofs / day                          |
| Day 10                       | 300 roofs / day                   | 600 roofs / day                          |

\*Note: Multiple Contractors production ramp up is based on availability of crews not contractors.

| <b>Event Size</b>           | <b>Roofs Damaged</b> | <b>Ramp Up to peak production</b> | <b>Peak Production (Per Contractor)*</b> |
|-----------------------------|----------------------|-----------------------------------|--|
| Small (< \$5 million)       | 3,000                | 9 Days                            | 120                                      |
| Medium (\$5 - \$25 million) | 3,000-15,000         | 10 Days                           | 300                                      |
| Large (>\$25 million)       | > 15,000             | 10 Days                           | 300                                      |

\* Peak production is a function of staffing (Quality Assurance Representatives, ROE Collection Centers), collecting enough qualifying ROE's to enable the contractor to meet peak production and the availability of FEMA supplied plastic. The 2009 CONUS and OCOUNS ACI Contracts call for a target production of 300 roofs per contractor.

1. General. Contractor crews can generally apply 3-5 Temporary Roofs each day. Variables include: travel time, roof pitch, size, height and weather.
2. Considerations / Impacts to Production
  - a. Right Of Entry collection and performing Assessments directly impact production
  - b. Staffing of ROE Collection Centers is to be done with ROE Collectors not QAs.
  - c. Contractor crews may be limited by availability of housing.
  - d. 20' x 100' rolls of blue plastic sheeting are preferred for the ACI contract. Odd sizes can be distributed to VOLAGs (if excess)
  - e. Assign distinct area boundaries to contractors / VOLAGs, etc. in the case of multiple contractors (county lines, major geographical features, etc...)
  - f. Quality Assurance Inspectors (QAs) are primarily assigned to do Assessments (80% or better). A smaller number of QAs will be used to work with contractors and perform Spot Checks.
  - g. QAs on Temporary Roofing Mission Taskers may not be used to assist Internal Review auditors or other auditing agencies. To perform an audit function the QA must first be moved to a regional activation Tasker.

#### **4.4 QUALITY CONTROL AND QUALITY ASSURANCE**

Quality Control is performed by the Contractor and consists of providing a quality product on time and to contractual requirements. Do's and don'ts for the contractor crews are as follows:

1. No entering of homes / foul play with homeowners belongings.
2. Refrain from allowing homeowners on the roof while contractor is present.

3. Do not apply a temporary roof to flat roofs. Apply roofs in accordance with the national policy on coverage or the event coverage policy that is in writing.
4. Tarps applied by homeowners will be removed as necessary to install the Plastic Sheeting. If the work is not completed by the end of the day, any tarps removed will be put back in place to protect the property from further damage during the night. Be aware of holes and soft spots.
5. Comply with EM 385-1-1 Safety requirements.
6. Police area around the house of all water bottles, trash, excess material and all other temporary roofing related trash.
7. Keep personnel on team hydrated, monitor personnel for heat exhaustion.

Assessments/Government Work Orders: Every property will be assessed using the Work Order form to insure that the property is eligible and within the scope of the roofing mission. Signed ROEs should not be used to perform Assessments and should remain at the Resident Engineer Office or Recovery Field Office should they be needed.

Assessments/Government Work Orders may be done by Corps QAs. Other, non-Corps sources for QAs include: Corps Retired Annuitant Program, Bureau of Reclamation, Bureau of Land Management, U.S. Forest Service or other Federal Agencies. The Corps may also use A&E Inspection Contracts to provide additional QAs.

Depending on local conditions a QA should be able to perform up to 10 Assessments per day.

Government Work Orders: The Assessment generates a Government Work Order (WO) that is given to the contractor. Signed ROEs are not to be given to contractors. The WO is the exact amount of coverage to be installed. Contractors may not vary from this amount. If a contractor QC determines that more or less coverage is needed they may request a change in the coverage prior to installation. The new amount of coverage will be agreed to prior to installation with no exceptions.

QA During Construction: To make QAs available to do assessments the number of QAs performing quality assurance during construction has been greatly reduced. To make up for this reduction any QA performing assessments may spot check a crew to insure they are following contract requirements. The use of dedicated QAs to perform trouble shooting and quality assurance of a contractor's quality control program should be limited to one QA Team per contractor.

Spot Checks: Corps QAs validate, not duplicate, the contractors QC Program. There is no contract requirement for joint final inspections or for a contractor's representative to be present at a spot check or a final inspection (if one is performed). Nor is there a contractual requirement for Corps to perform 100% inspection of a contractor's work. Corps inspectors should not delay any inspections should a contractor's representative fail to show at the time set by Corps. Spot checks must be done by federal QAs. Contracted QAs may not be used to inspect work done by another contractor.

Contractors are required to perform 100% Quality Control inspections prior to reporting their work has been completed, meets quality standards and is in accordance with the Work Order for that property.

Spot Checks in excess of 20%, is considered excessive and indicates that Corps is actually performing Quality Control instead of Quality Assurance and duplicating instead of validating the Contractor's Quality Control Program.

Spot Checks above 20% for any one contractor requires FEMA approval at the JFO. If there is cost sharing with the state, then state concurrence is also required. This may be stated in the Pre Scripted Mission Assignment from FEMA.

Joint QC/QA inspections are no longer done. Some of the reasons are:

- Costly – On a 25,000 roof mission the added cost is estimated at over \$3,000,000 with no significant value gained.
- Requires more manpower
- Not approved by FEMA
- Not approved by HQs USACE
- Extends the duration of the Roofing mission
- Duplicates the contractor's QC program
- Causes some contractors to stop their QC program

The minimum standard for spot checking a contractor's Quality Control Program is 10%. The maximum is 20%. Going above 20% for any single contractor requires FEMA concurrence and if state cost sharing is involved, state concurrence as well.

Percentage Equivalents

|         |       |
|---------|-------|
| 1 in 10 | 10.0% |
| 1 in 9  | 11.1% |
| 1 in 8  | 12.5% |
| 1 in 7  | 14.3% |
| 1 in 6  | 16.6% |
| 1 in 5  | 20.0% |

Generally one QA Team of eight members should be assigned to each contractor to perform Final Inspections. An eight member QA Team should be able to final inspect up to 60 roofs per day or about 20% of a contractor's 300 roof per day production.

Timeline for Spot Checks (Sample)

D+8    Roofs installed and QC'd by contractor

D+9 Contractor submits daily report for roofs installed and QC'd on D+8 in electronic format (Excel file).

Resident Engineer determines percentage of production to be checked from contractor's Report.

QA Supervisor determines properties to be inspected on D+10 and assigns properties to QA Team Leader.

D+10 QAs perform Spot Checks on selected properties from D+8 installations.

D+11 QA Team Leader compiles Summary Spot Check Report and gives to all interested parties i.e. Resident Engineer, Contractor, Auditors, etc.

#### Summary Spot Check Report (Sample)

On 30 September 2012 Spot Checks were performed on 40 of the 280 roofs installed by Shade Tree Roofers on 28 September 2012 (14.3%).

Of these 33 were deemed to meet quality standards and were installed in accordance with the Work Orders.

Six roofs failed for quality. ROE Numbers:

2343232

2346722

2349892

2342987

2340034

2340134

One roof, ROE 2346781 was not installed.

Note: A Memorandum for Record format may be used.

Equipment: Equipment needs for Quality Assurance representatives and Team Leaders as well as Resident Engineers / field personnel. QA representatives should have the following equipment to perform their duties.

1. Corps Safety Manual, ER 385-1-1, hard hat and safety shoes
2. Measuring tape 30' and reel type 100', clip board, pens, calculator
3. Insect repellent, raingear, flashlight, cell phone
4. Maps of the area.

## **5.0 Rights of Entry**

### **5.1 GENERAL**

**Definition:** The Right of Entry (ROE) is the legal instrument that grants permission for the Government and its agents (contractors) to enter onto the homeowner's property for temporary roof installation. In addition the ROE:

1. Is not an obligation that the government will install a temporary roof
2. Expresses no warranty, expressed or implied, for the installation of the temporary roof.
3. Includes hold harmless clause for government.
4. Is provided in Spanish for information purposes only; the English version is the official version.
5. Is required for each eligible structure at any given address, i.e. apartment complexes, etc.

**Eligibility:** Eligibility criteria are determined by FEMA. Criteria may be established in a national roofing policy. If there is no national roofing policy in effect, then the Action Officer (AO) working with the Federal Coordinating Officer (FCO) at the JFO will establish the eligibility criteria for the event in that state.

**Collection:** Collection of ROEs may be through Corps of Engineers Collection Centers, FEMA Disaster Recovery Centers, a Call-in Center, a QA while performing other duties in the field or by canvassing neighborhoods.

**Duration:** The ROE should be marked with a 60 day expiration period.

**Rights of Entry Forms:** Rights of Entry forms are requested by the PRT Mission Manager or other representative from the Jacksonville District. The POC is the District EM who can be reached at (904) 232-3626 or (904) 536-3833 (cell).

### **5.2 COLLECTION CENTER OPERATIONS**

The opening and closing of ROE Collection Centers shall be coordinated with Federal, State and local entities, as well as PAOs to ensure the widest dissemination in print and news media. Operating hours should be consistent through out the mission footprint.

The numbers and location of Collection Centers will depend on the event. Criteria to consider is population served, proximity to transportation systems, travel time for applicants, parking, restrooms and staffing. Placing of Collection Centers too close to each other is to be avoided and should be based on the Mission Plan developed at the beginning of the mission with FEMA and the state.

Closing of individual Centers should be considered when collected numbers of ROE's average less than 50 a day for 3 consecutive days and has the approval of FEMA. A banner, media notice, FEMA Incident Action Plan (or other internal coordination tools) should be used to advertise opening and closing of ROE Collection Centers.

The closing of all Collection Centers (cut off date for applications) is coordinated with the FCO at the JFO by the Action Officer. It may be determined by national policy or by event. The recommended standard is 30 days from Presidential Declaration.

ROE collection is the responsibility of the Temporary Roofing Mission PRT and/or their designated representatives to include contract hires, VOLAGs, National Guard and other Government Agencies. Roofing contractor personnel shall not be used.

The ROE initiates the homeowners request for a Temporary Roof and must be neat, legible and complete.

Signature Requirements – See Chart Below

| <b>Building Category</b>                              | <b>ROE Signers</b>  |
|---|---|
| Individual, Private                                   | Homeowner   |
| Private Mobile Home<br>(owns home & land)             | Homeowner   |
| Private Mobile Home<br>(owns home and leases<br>land) | Homeowner   |
| Rental Home / Mobile<br>Home                          | Landlord or tenant with apparent authority                              |
| Apartment   | Landlord or apartment manager with<br>apparent authority. Not a tenant. |
| Condominium   | Homeowner, Condo Association President<br>or manager, but not a tenant. |
| Other Structures                                      | Structure owner or authorized by FEMA<br>representative.                |

1. All people signing an ROE shall print their name below their signature.
2. If doubt exists as to the authority of the person authorizing entry (apparent authority). Write the individuals drivers license number on the ROE (front, bottom or side margin)

Processing – The chart below indicates how the ROE Form is processed. Once the ROE has been entered into the database the White, Green, Yellow and Pink copies are kept on file.

| <b>ROE Copies / Color</b>     | <b>Distribution</b> | <b>When Copy is given to recipient</b>                       | <b>Remarks</b>  |
|-------------------------------|---------------------|--|---|
| Copy 1<br>White<br>(Original) | USACE<br>Personnel  | USACE maintains  | Kept for USACE<br>Official File   |
| Copy 2 –<br>Green             | USACE<br>Personnel  | USACE maintains  | Kept for USACE<br>Official File   |
| Copy 3 –<br>Yellow            | USACE<br>Personnel  | USACE maintains  | Kept for USACE<br>Official File   |
| Copy 4 –<br>Pink              | USACE<br>Personnel  | USACE maintains  | Kept for USACE<br>Official File   |
| Copy 5 –<br>Gold              | Applicant           | At original sign up center<br>when completed by<br>applicant | Used by applicant to<br>have ROE record<br>and for cancellation<br>purposes |

Processing – The chart below indicates how the Work Order form is processed.

| <b>Work Order Copies / Color</b> | <b>Distribution</b> | <b>When Copy is given to recipient</b>        | <b>Remarks</b>                  |
|----------------------------------|---------------------|---|---------------------------------|
| Copy 1<br>White<br>(Original)    | USACE<br>Personnel  | USACE maintains                               | Kept for USACE<br>Official File |
| Copy 2 –<br>Green                | Contractor          | Given to Contractor<br>when work is assigned. | Submits with<br>payment invoice |

### 5.3 DISASTER RECOVERY CENTERS

Disaster Recovery Centers (DRCs) are operated by FEMA after an event to provide assistance to people affected by the hurricane. Depending on the event, FEMA may request that people be allowed to sign up at various DRCs.

The best scenario if FEMA requires this is to have a Corps of Engineers representative present to ensure that the applicant actually has roof damage (screening) and also has not previously signed up at a Collection Center (duplication). If it is not possible to have a Corps of Engineers' representative at the DRC, then strip maps to the nearest Collection Center should be provided with the operating hours of the Center and if known the last date that applications may be taken.

### 5.4 CALL IN CENTER

The purpose of a call in center is to assist people dislocated from their homes or the area in applying for a temporary roof and to assist homeowners with specific roofing program questions. Those eligible include personnel who: have evacuated the area, are not located near a Right of Entry Collection Center, do not have a reliable form of transportation / access to the center is an issue and those who have special needs (homebound, handicapped, etc...).

1. Set up and operation of the call in center may be authorized and funded by FEMA.
2. Staffing may be: volunteers, government or contract employees to answer incoming phone calls / faxes.
3. Required equipment includes tables, chairs, faxes, telephones, copy machine, scanner and general office supplies to support the proposed staff.

#### **Call in Center Operations** (1-888-ROOF-BLU) – 766-3258.

The Temporary Roofing PRT will coordinate the establishment of the 1-888-ROOF-BLU closely with FEMA, the impacted State and the District overseeing the toll free number effort to ensure the daily message is accurate and updated. SAJ Emergency Operations is the POC for changes to the ROOF BLU script – (904) -232-3626

The preprogrammed message on 1-888-ROOF-BLU should contain the following:

1. A simple overview of the program to include qualifying criteria, right of entry process and the fact that it is no cost to the homeowner.
2. The addresses and hours of operation of ROE Collection centers (By state for a multi state response).

3. Phone numbers if applicable.

Script will be revised according to mission requirements.

Hours of operation should be from 7am until 7 pm with an answering machine to give hours of operations / other after hour's alternatives for assistance during non operational hours.

**Call in Center Personnel.** The personnel answering the phones should have good communication skills as the primary duties will be:

1. Asking a series of pre-scripted questions of callers to determine eligibility and ensure consistent, accurate information is given to all callers.
2. Upon qualification, the individual will be provided information to the nearest Right of Entry Collection Center to complete the required ROE. If the individual does not qualify he/she will be provided the FEMA number for Public Assistance.
3. If the individual is unable to visit a Right of Entry Collection Center the operator will fill out the ROE Form over the phone. Once complete the applicant shall be given the ROE number for tracking purposes. The operator shall initial and date the bottom of the form. If the individual has fax capability the form can be faxed from the call in center. Completed ROE's will then be forwarded to the Temporary Roofing PRT Mission Manager via fax, courier or mail at his/her duty location.
4. Operators shall inform applicants of the process for cancellation of an ROE prior to the government installation of the temporary roof. This form may also be provided via fax. The applicant shall be informed to place the Request for Cancellation in a high visibility area of the house that can be seen by the contractor crew / government representative. As stated above, Requests for Cancellation shall be provided to the Mission Manager via fax, courier or phone.
5. Operators shall maintain a current list of ROE Collection Centers and hours of operation, A FEMA map of qualifying aid by county (available at [fema.gov](http://fema.gov)) telephone numbers of volunteer organizations for referral to non-qualifying structures or special needs cases as well as a list of FEMA Disaster Response Centers (DRC'S)
6. Internet access to provide electronic access to USACE information on the application process and forms should be available or known by the operators.

**Call in Center Processes.** The following processes shall be utilized to respond to applicants. The content should be coordinated between USACE, the State and FEMA.

1. Special Needs. Justification to expedite an application for the elderly, infirm or homebound. Additionally, a red marker should be used to draw

- a line across the top of the ROE by the operator to signify special needs (In addition to marking the appropriate “SN” designation on the ROE Form.
2. Non-Qualifying for Roof Repairs. The purpose of this process is to give homeowners a document that they can pass to their insurance company on why they were denied a temporary roof. “DSQ” and “BY” (Disqualified or Beyond Repair) annotations on the ROE Form are utilized for this,
  3. Homeowner Inquiry Process (Complaint). To be utilized for homeowners with complaints. Complaint would then be forwarded to PRT Mission Manager or Resident Engineer for follow-up and resolution. See Appendix A to the Temporary Roofing PRT Collection, Call in Centers and PAO SOP.
  4. Operator Script. Tailored to the declared area to ensure consistency of information and incorporate mission requirements. To be edited as required.
  5. Fax Cover Sheet. Should have Operation ROOF BLU on Title.
  6. Request for Cancellation Process. Process is listed on the back of the ROE Gold Copy.
  7. List of Phone Numbers for DRCs, County Distribution Points, Various Organizations – information that is widely requested.

**Filling Out the Right of Entry Form:** In the spaces or blocks enter the following:

1. **Project, Installation or Activity:** i.e. Hurricane Frances or Hurricane Jean.
2. **In the Blanks in Paragraph 1:** Time period should be 60 days for ROEs. (Note: This is NOT when the homeowner will receive a blue roof. It establishes the expiration of the Right-of-Entry agreement between the homeowner and the Government.)
3. **In the Blanks in Paragraph 5:** Enter the County the house is located in.
4. **Blank area above “Witness my hand and seal”:** Enter the Street Address where the home is located. Add, if possible, any additional data, subdivision, landmarks, etc, that might help follow-on teams locate the property.
5. **Witness my hand and seal:** date homeowner signs ROE.
6. **Blank area below “Witness my hand and seal”:** Location sketch and house plan sketch showing QA’s understanding of damage. (Note: If ROE is filled out at a Help Center or received by Phone a location map and condition sketch may not be possible until the assessment person or team actually visits the home site.)
7. **Owner/Agent Signature:** Homeowners Signature
8. **Print Name:** Homeowner’s Name
9. **Mailing Address:** Where the homeowner is receiving mail NOW. (Note: This must be a mailing address where the homeowner is available to receive mail in the immediate future. This may be the same address as

noted above in “Blank area above “Witness my hand and seal” or it may be different but enter it fully either way

10. **Phone:** Number where we can access homeowner NOW.

11. **Updated ROE Form. See Appendix G.**

## 5.5 ROE HELPFUL HINTS

- If the ROE is received at a Collection Center or via telephone, no further data is required on the form at this time. Provide the homeowner the Gold Copy (Help Center) or Fax a copy of the Gold ROE to the homeowner (Call In).
- If you are on site or if you have been provided the initial ROE from a Help Center it is now appropriate to complete “Estimated Quantity” section at the top of the ROE form. Note do not perform the estimate if the ROE is not signed by the homeowner. If you enter their property (other than to knock on the front door) without a signed ROE, you are trespassing. ROE’s should be signed by the property owner or someone with appropriate written authority to sign on their behalf. Signatures of tenants, neighbors or relatives are normally not acceptable unless there are special circumstances which would make it advisable to proceed with the repair. Accepting any signatures other than the property owner or someone with written authority to sign on their behalf should be coordinated with the Realty Specialist in advance. Before performing an initial estimate, the Government Representative must first determine if the structure qualifies for FEMA “Blue-Roof” assistance.
- Once qualified for Blue Roof assistance the Work Order quantity may be performed.
- After entering the ROE’s into the Database the Resident Office will collate the ROEs into geographic groups and issue the Yellow and Green copies to the contractor(s) as work orders to install roofs.

### Sample ROE Daily Report.

| 10-Nov-05       | FORREST | LAMAR | JONES | GREENE | STONE | GEORGE | COVINGTON | JEFF DAVIS | MARION | PERRY | LAWRENCE | JASPER | WALTHALL | OTHER | TOTAL     |     |
|-----------------|---------|-------|-------|--------|-------|--------|-----------|------------|--------|-------|----------|--------|----------|-------|-----------|-----|
| Thursday        |         |       |       |        |       |        |           |            |        |       |          |        |          |       | BY CENTER |     |
| WINN-DIXIE      | 33      |       | 1     |        |       | 1      | 1         | 1          |        |       |          |        |          |       | 3         | 40  |
| LOWE'S          | 6       | 21    | 1     | 1      |       |        |           | 3          |        |       |          |        |          |       | 2         | 34  |
| DRC, JONES      |         |       | 36    |        |       |        |           | 6          |        |       |          | 6      |          |       |           | 48  |
| DRC, JASPER     |         |       |       |        |       |        |           |            |        |       |          | 11     |          |       | 1         | 12  |
| DRC, MARION     |         |       |       |        |       |        |           |            | 2      | 19    |          |        |          |       | 1         | 22  |
| CALLCENTER      |         |       | 3     |        |       |        | 1         |            |        |       | 1        |        |          |       |           | 5   |
| WRITTEN/FIELD   | 4       | 4     | 3     | 4      |       |        |           |            |        |       |          |        | 6        |       |           | 21  |
| CLOSED CENTERS  |         |       |       |        |       |        |           |            |        |       |          |        |          |       |           | 0   |
| DRC, JEFF DAVIS | CLOSED  |       |       |        |       |        |           |            | CLOSED |       |          |        |          |       |           | 0   |
| DRC, COVINGTON  | CLOSED  |       |       |        |       |        |           |            | CLOSED |       |          |        |          |       |           | 0   |
| DRC, GEORGE     | CLOSED  |       |       |        |       |        |           |            | CLOSED |       |          |        |          |       |           | 0   |
| DRC, WIGGINS    | CLOSED  |       |       |        |       |        |           |            | CLOSED |       |          |        |          |       |           | 0   |
| DRC, LAWRENCE   | CLOSED  |       |       |        |       |        |           |            | CLOSED |       |          |        |          |       |           | 0   |
| DRC, LINCOLN    | CLOSED  |       |       |        |       |        |           |            | CLOSED |       |          |        |          |       |           | 0   |
| DRC, PURVIS     | CLOSED  |       |       |        |       |        |           |            | CLOSED |       |          |        |          |       |           | 0   |
| CORNER MKT      | CLOSED  |       |       |        |       |        |           |            | CLOSED |       |          |        |          |       |           | 0   |
| MT CARMEL       | CLOSED  |       |       |        |       |        |           |            | CLOSED |       |          |        |          |       |           | 0   |
| SMITH, RALEIGH  | CLOSED  |       |       |        |       |        |           |            | CLOSED |       |          |        |          |       |           | 0   |
| DRC, PIKE       | CLOSED  |       |       |        |       |        |           |            | CLOSED |       |          |        |          |       |           | 0   |
| DRC, WALTHALL   | CLOSED  |       |       |        |       |        |           |            | CLOSED |       |          |        |          |       |           | 0   |
| DRC, SIMPSON    | CLOSED  |       |       |        |       |        |           |            | CLOSED |       |          |        |          |       |           | 0   |
| CLARKE, GUITMAN | CLOSED  |       |       |        |       |        |           |            | CLOSED |       |          |        |          |       |           | 0   |
| PERRY           | CLOSED  |       |       |        |       |        |           |            | CLOSED |       |          |        |          |       |           | 0   |
| GREENE          | CLOSED  |       |       |        |       |        |           |            | CLOSED |       |          |        |          |       |           | 0   |
| DRC, WAYNE      | CLOSED  |       |       |        |       |        |           |            | CLOSED |       |          |        |          |       |           | 0   |
| TOTALS          | 43      | 25    | 44    | 5      | 1     | 2      | 10        | 2          | 19     | 1     | 0        | 17     | 6        | 7     |           | 0   |
|                 |         |       |       |        |       |        |           |            |        |       |          |        |          |       | TOTAL     | 182 |

## 6.0 MEDIA

### 6.1 PRESS ADVOCACY

Communications with the media should be coordinated with the PAO assigned to the response. This ensures a “One Voice” response and avoids misinformation to the public. All PRT members should be familiar with the response talking points as they regularly interface with and have first line contact with the public. Finally, if you are not comfortable talking to the media, refer them up the chain of command or to other members on the PRT.

Items to be developed to ensure continuity and accuracy of information given to the public shall be coordinated with FEMA and the State PIO prior to issuance and may include:

1. Fact Sheets
2. Q&A Sheets
3. Web Site Development
4. Media Notices / Releases
5. News Briefings

### 6.2 SAMPLE PRESS RELEASE

Sample Press Release for a Collection Center

GULFPORT, MISS ... Harrison County residents can now sign up for the Blue Roof Program at the Blue Roof Sign Up Station at the Harrison County Justice Center, 1620 23rd Avenue, Gulfport, from 8:00 a.m. to 6 p.m. Additional Harrison County Sign Up Stations will be opened in coordination with local EOCs in coming days, as well as centers in other coast counties. Residents or their agents need to file their request in their home county and not cross county boundaries seeking Blue Roof support. Disaster teams are working this week to set up Sign Up Stations in Jackson, Hancock, Harrison, and lower Pearl River counties. Additional counties will be added as the need is expressed by county officials. Additional Blue Roof Sign Up Stations locations will be posted on the Corps disaster web site at [ww.mvd.usace.army.mil](http://ww.mvd.usace.army.mil) and released through local media and EOC outlets. **Operation Blue Roof** is a priority mission managed by the U.S. Army Corps of Engineers for the Department of Homeland Security's Federal Emergency Management Agency (FEMA). The program provides assistance to storm victims in disaster areas through the installation of rolled plastic sheeting on damaged roofs, thereby helping to protect property and allowing residents to remain in their homes. Residents will need to complete a Right of Entry Form to allow Corps Federal roofing teams to assess their property and assign the work to a Blue Roof contractor.

Disaster experience has proven that it is more efficient for residents to come to a

servicing center rather than have limited disaster workers go door to door when only 10% of home owners will actually be in the home. Corps roofing team members will go to the property, do a damage and eligibility assessment, and give the roofing contractor a tasking order. Property owners should expect work within 14 days of the request. Corps roofing team members will have proper identification and uniforms. Citizens should not hesitate to ask persons approaching their property for proper identification.

### **6.3 TALKING POINTS**

Develop a Fact Sheet that covers the primary aspects of the Blue Roof program to ensure consistent information is being given to the public by team members. Topics should include:

1. Eligibility criteria for a temporary roof
2. The importance of the Right of Entry and ROE process
3. Location of ROE Collection Centers.
4. Order and coordination of work (by county)

## 7.0 UPWARD REPORTING

### 7.1 ESSENTIAL ELEMENTS OF INFORMATION (EEI)

**Data:** All data collected for a 24 hour period will be provided to the Mission Specialist – Reports by 1500 on the following day for use in daily SITREPS and Commander Briefings. Commanders Briefings may require additional information above EEI. Only EEI is to be reported in the SitRep (No graphs, charts, etc.). Definitions for consistency in reporting are as follows:

1. ROEs assessed. ROEs that have initial government assessments completed.
2. Cancelled. Any ROE that is no longer valid regardless of the reason (Out of Scope, owner cancelled, beyond repair, etc).
3. Valid ROE. An ROE that has been assessed and the property is approved for a Temporary Roof.
4. Spot Checks: A roof installed that was first inspected by a contractor's QC and spot checked by a government employee for quality and coverage of damaged area.

**Essential Elements of Information:** Update by 1500 each day, the progress made during the previous day or longer period. These are reported in the SitRep.

## SitRep

### C.05 Temporary Roofing Mission

#### C.050 Temporary Roofing Mission Overview

|                                  |               |
|----------------------------------|---------------|
| Mission assigned date            | Date from PRT |
| Current Estimate                 | # from PRT    |
| Current Funding                  | # from PRT    |
| ROE Collection to end on (PD+30) | Date from PRT |
| Last Roof Target Date (D+45)     | Date from PRT |

#### C.051 ROE Collection

|                             |                |
|-----------------------------|----------------|
| ROEs Collected previous day | # from ENGLink |
| Total ROEs collected        | # from ENGLink |
| Cancelled ROEs              | # from ENGLink |
| Valid ROEs                  | # from ENGLink |
| ROE Collection Centers      | # from PRT     |

**C.052 Assessments**

Assessments completed previous day # from ENGLink  
 Total Assessments Completed # from ENGLink  
 Assessments on track to be complete by D+33 PRT yes/no  
 Roofing QAs performing Assessments # from PRT

**C.053 Roof Installs**

Work Orders given to Contractors # from EngLINK  
 Roofs reported installed previous day (contractor reported) # from EngLINK  
 Total Roofs installed # from EngLINK

**C.054 Installation Spot Checks of contractors**

Spot checks last 24 hours # from ENGLink  
 Federal Roofing QAs performing Spot Checks # from PRT

| Spot checks by contractor | Number of installs | Number of checks | Percentage |
|---------------------------|--------------------|------------------|------------|
| Contractor name           | ENGLink            | PRT              | %          |
| Contractor name           | ENGLink            | PRT              | %          |
| Contractor name           | ENGLink            | PRT              | %          |

**C.055 Plastic Sheeting**

Rolls on hand previous report # from PRT  
 Rolls received # from PRT  
 Rolls issued # from PRT  
 Rolls currently on hand # from PRT

Estimate of additional rolls needed to complete mission # from PRT

**C.056 Staffing**

Total number of personnel assigned to Temporary Roofing Mission # from PRT  
 PRT/SMEs # from PRT  
 ROE Collectors # from PRT  
 Roofing QAs # from PRT  
 Data Entry # from PRT

**C.057 Temporary Roofing Comments**

Short comment (Short paragraph)

Note: Graphs, charts, etc. are not required.

## SitRep (Sample)

### C.05 Temporary Roofing Mission

#### C.050 Temporary Roofing Mission Overview

|                                  |                   |
|----------------------------------|-------------------|
| Mission assigned date            | 1 August 2012     |
| Current Estimate                 | 25,000            |
| Current Funding                  | 75,200,000        |
| ROE Collection to end on (PD+30) | 31 August 2012    |
| Last Roof Target Date (D+45)     | 15 September 2012 |

#### C.051 ROE Collection

|                             |        |
|-----------------------------|--------|
| ROEs Collected previous day | 865    |
| Total ROEs collected        | 18,679 |
| Cancelled ROEs              | 2,008  |
| Valid ROEs                  | 16,671 |
| ROE Collection Centers      | 24     |

#### C.052 Assessments

|   |        |
|---|--------|
| Assessments completed previous day          | 1,287  |
| Total Assessments Completed                 | 12,022 |
| Assessments on track to be complete by D+33 | No     |
| Roofing QAs performing Assessments          | 140    |

#### C.053 Roof Installs

|   |        |
|---|--------|
| Work Orders given to Contractors                            | 10,350 |
| Roofs reported installed previous day (contractor reported) | 1,020  |
| Total Roofs installed                                       | 8,708  |

#### C.054 Installation Spot Checks of contractors

|  |     |
|--|-----|
| Spot checks last 24 hours                  | 168 |
| Federal Roofing QAs performing Spot Checks | 18  |

| Spot checks by contractor | Number of installs | Number of checks | Percentage |
|---------------------------|--------------------|------------------|------------|
| Contractor name           | 2,756              | 489              | 20%        |
| Contractor name           | 2,902              | 460              | 16%        |
| Contractor name           | 3,050              | 360              | 12%        |

**C.055 Plastic Sheetting**

|                               |       |
|-------------------------------|-------|
| Rolls on hand previous report | 7,084 |
| Rolls received                | 676   |
| Rolls issued                  | 1,556 |
| Rolls currently on hand       | 6,204 |

Estimate of additional rolls needed to complete mission 14,000

**C.056 Staffing**

|   |     |
|---|-----|
| Total number of personnel assigned to Temporary Roofing Mission | 247 |
| PRT/SMEs  | 27  |
| ROE Collectors  | 50  |
| Roofing QAs   | 158 |
| Data Entry  | 12  |

**C.057 Temporary Roofing Comments**

Shortage of Roofing QAs to perform Assessments will push Assessment completion to D+37.  
This will push estimated mission completion date to 19 September (D+49).

## 8.0 SPECIFICATIONS

### 8.1 PLASTIC SHEETING

#### FEMA Blue Plastic Sheeting Specification

Extruded plastic laminate sheeting manufactured to the following specifications:

| Property   | Specification  | Reference                    |
|--|--|------------------------------|
| Thickness  | 10 mil   | ASTM D5199-01                |
| Sheet Size   | 20' x 100'   |                              |
| Reinforcement  | Polyester 1,000 Denier, 3/8" on center, minimum of 75° offset angle, between ply's |                              |
| Color  | Blue   | Pantone<br>2945c to 3005c    |
| Logo on Both Sides                                   | "FEMA" size 14" x 9" and "NOT FOR RESALE" in minimum 1" tall font                  |                              |
| Tensile Grab Strength:                               | 50/50 lbf  | ASTM D7004-03                |
| Elongation at Break                                  | 550%   | ASTM D7004-03                |
| Trapezoid Tear:                                      | 20/20 lbf  | ASTM D4533-04                |
| Mullen Burst   | 90 psi   | ASTM D751-06                 |
| Tensile Grab   | 90%  | ASTM D751/570                |
| Dimension Stability                                  | <5%  | ASTM D1204-08                |
| Oxidative Induction Time                             | 20 min   | ASTM D3895-07                |
| Flame Retardant                                      | Class A  | ASTM E84-09a                 |
| Seam Strength<br>(Shear Strength)<br>(Peel Strength) | 80% of TD Tensile<br>10 ppi  | ASTM D751-06<br>ASTM D751-06 |
| Ultraviolet Resistance                               | 80% after 200 hr   | ASTM D7238-06                |
| Multi-Axial Tensile Test                             | 3000 psi   | ASTM D5617                   |
| Multi-Axial % Deflection                             | 20%  | ASTM D5617-04                |

Pallet Configuration:

- 40" X 48" hardwood pallet, 4 way
- Wrapped with 3 turns of shrink wrap, insert 8 ½" X 11" signs printed with "FEMA – NOT FOR RESALE", in as large as font as practicable, on all four sides of each pallet
- Product not to hang over sides of pallet
- Every two rows and final row to be strapped to pallet
- Pallet will be no more than 2000 lbs and not over 88" in height

## 8.2 TARPS

Self Help Tarps are used for small areas of roof damage and are distributed by FEMA, states or local governments. For planning purposes there are 2400 20'x25' tarps per truckload. If FEMA runs out of Tarps they may direct the Corps of Engineers to order tarps for an event.

### **USACE Tarp Specification**

- Size 20' x 25'
- Woven polyethylene 8' x 8' (10' x 10' or 14' x 14' acceptable), 800 Denier
- Thickness 5-6 mil
- Ultraviolet (UV) Treated
- Fire Retardant Treated
- Non-corrosive grommets at corners and minimum of 3' on center on edge
- Hems folded over
- Corners reinforced
- Color – medium blue
- For use for tie down, package with 2 - 100' lengths of 550 pound test parachute cord
- Boxes of Tarps to be palletized on standard size pallets

## 8.3 PROVIDERS OF PLASTIC SHEETING AND TARPS

Plastic Sheeting – FEMA Logistics

Tarps – Vendors: Home Depot, Loews, local manufacturers, Protective Plastics, Austin Canvas, Tarps & Tie Downs, Zamzow Mfg, Detroit Tarpaulin, Noble Sales, Midwest Canvas, Hagemeyer, Mer Wil Industries, Odin International, Executive Hardware, All Poly, Do it Best, LDF Industries, Coastal Canvas, Cypress International, Tool-Price.

## **9.0 LOGISTICS**

Requisition, storage and distribution of FEMA blue plastic sheeting is a critical Temporary Roofing PRT function.

### **9.1 REQUISITION**

Plastic Sheeting is ordered by the Action Officer (AO) from FEMA Logistics at the Joint Field Office (JFO) on an Action Request Form, FEMA Form 90-136. To order Plastic Sheeting, the AO must have the following information to relay to FEMA:

1. Drop Point location by street address.
2. Name and 24-hour phone number of the person who will receive the Plastic Sheeting.
3. Assurances that there will be a forklift with operator at the drop point at time of delivery. Note: For interior work a propane-fueled forklift must be used.

Once Plastic Sheeting is ordered, FEMA may take up to 48 hours to deliver the first truck load. The initial push will be 4 trucks per day for 5 days for approximately 12,000 rolls of Plastic Sheeting. Utilizing the general estimating rule of 1.5 rolls per house, this should be enough Plastic Sheeting to cover at least 8,000 homes.

The Real Estate Specialist and the Material Control Specialist will locate a securable storage area (at least 50,000 sq-ft with suitable hard stand, trafficability, loading docks, accessibility, etc...) for lease as a distribution point for the contractors. Location will be coordinated with Resident Engineers. Recommend a warehouse be used as opposed to open storage. On open sites, FEMA may allow trailers to be left on site to provide protection from the weather. The use of Federal property is preferred, but other property may be used. The use of military properties with controlled access is not recommended.

### **9.2 STORAGE**

In addition to computer support the Warehouse operations requires a 4-in-1 machine (print, scan, copy, and fax) to perform its operations along with a 2-ton forklift. The amount of forklifts required is a function of the magnitude of the event. Since plastic may be delivered and issued at various times, recommend that the forklift operators be USACE employees that may also do other duties.

1. Each pallet contains 28 rolls of 20x100 foot rolls and weights up to 2000 lbs
2. Pallets are 40"L x 48"W x 88"H for planning purposes

Warehouse should be covered and have two way traffic.

### **9.3 DISTRIBUTION**

Contractors will request and be distributed blue plastic sheeting based upon the production rate and Plastic Sheeting availability.

## 10.0 FUNDING

### 10.1 FUNDS REQUEST

When it becomes clear that the scripted Post Declaration funds are not sufficient, the Action Officer should submit, through the ESF#3 Team Leader, an Action Request Form, FEMA Form 90-136, Nov 04, for additional funds. The request should include a detailed justification (e.g. change in damage estimate).

### 10.2 COST SHARE

Cost share requirements are determined by FEMA and are often waived for a set period of time. If cost sharing is involved, the state may pass the cost share onto the counties or parishes.

### 10.3 OTHER

The PRT may help develop funding requirements for other organizations (VOLAG) for acquisition of supplies and materials.

### 10.4 WORK BREAKDOWN STRUCTURE

Standard breakout for tracking of mission costs

#### SAMPLE

| <b>HURRICANE PAM</b>                  |       |              |                        |               |
|---------------------------------------|-------|--------------|------------------------|---------------|
|                                       |       |              |                        |               |
| <b>FUNDING</b>                        |       |              |                        |               |
|                                       |       |              |                        |               |
|                                       |       |              | Total<br>Authorization | Obligated     |
| Preposition Management of Roofing PRT |       |              | \$15,000               | \$14,325      |
| Activate & Deploy Roofing PRT         |       |              | \$224,548              | \$213,141     |
| Perform Roofing<br>Mission            |       |              | \$130,000,000          | \$122,845,904 |
|                                       |       |              | Total                  | \$123,073,370 |
| <b>ROOFS INSTALLED</b>                |       |              |                        |               |
|                                       |       |              |                        |               |
| By Contractors                        |       | 43,036       |                        |               |
| By VOLAGS                             |       | 375          |                        |               |
|                                       | Total | 43,411       |                        |               |
| <b>EXPENSES</b>                       |       |              |                        |               |
|                                       |       |              |                        |               |
| <u>Roofing Contractors</u>            |       |              |                        |               |
| LBJ Roofing                           |       | \$19,890,125 |                        |               |

|  |                       |                        |              |               |  |
|--|-----------------------|------------------------|--------------|---------------|--|
|  | Bedford Inc.          |                        | \$19,950,375 |               |  |
|  | Kennedy Group         |                        | \$18,323,348 |               |  |
|  | West Roofers          |                        | \$17,008,745 |               |  |
|  | Sea Coast Inc.        |                        | \$13,687,448 |               |  |
|  |                       |                        |              |               |  |
|  |                       | Total                  | \$88,860,041 |               |  |
|  |                       |                        |              |               |  |
| <u>Corps Management &amp; Administrative</u> |                       |                        |              |               |  |
|  |                       |                        |              |               |  |
|  | Real Estate Leases    |                        |              |               |  |
|  | ROE Stations          |                        | \$15,000     |               |  |
|  | Warehouses            |                        | \$60,000     |               |  |
|  | Resident Engineer     |                        | \$25,000     |               |  |
|  |                       | Total                  | \$100,000    |               |  |
|  |                       |                        |              |               |  |
|  | Contracted Labor      |                        |              |               |  |
|  | A&E QA Support        |                        | \$6,878,000  |               |  |
|  | Admin Support         |                        | \$3,012,000  |               |  |
|  | Other                 |                        | \$820,200    |               |  |
|  |                       | Total                  | \$10,710,200 |               |  |
|  |                       |                        |              |               |  |
|  | Non-Corps Govt. Labor |                        | \$3,645,000  |               |  |
|  | Corps Labor           |                        | \$15,014,373 |               |  |
|  |                       | Total                  | \$18,659,373 |               |  |
|  |                       |                        |              |               |  |
|  | Other Indirect Costs  |                        | \$4,516,290  |               |  |
|  |                       |                        |              |               |  |
|  | Total Mgt & Admin     |                        | \$33,985,863 |               |  |
|  |                       |                        |              |               |  |
|  |                       | Grand Total<br>Mission |              | \$122,845,904 |  |

## 11.0 VOLUNTEER GROUPS

Volunteer Groups (VOLAGs) such as AmeriCorps, the Christian Contractors Association, etc...are a component to mission execution. They provide a low cost response and may be used for properties in outlying areas or for high priority properties.

### 11.1 COORDINATION

Initial coordination is with the Action Officer at the JFO. Once contact is made control shifts to the Mission Manager at the RFO. The state VOLAG Coordinator must authorize the use of each VOLAG on the temporary roofing mission. The best scenario is to assign a very qualified QA to work with each VOLAG and utilize the VOLAG as a mini-contractor to best utilizes their services.

### 11.2 SUPPLIES AND EQUIPMENT FOR VOLAGS

**Supplies for VOLAGs:** An ARF, FEMA Form 90-136 may need to be developed to provide plastic sheeting be shipped directly from FEMA stocks to a VOLAG storage yard. FEMA may direct USACE to provided limited quantities of plastic sheeting from a USACE storage site.

USACE does not provide furring strips nor nails for VOLAGs. If a VOLAG can not furnish furring strips and nails, FEMA may direct GSA to provide these to the VOLAG.

**Equipment for VOLAGs:** Many VOLAGs will bring with them their own equipment and vehicles. If equipment is needed, it is provided by FEMA and not by USACE. FEMA may authorize GSA to purchase equipment for a VOLAG. This is coordinated through the Action Officer at the JFO. The list below was utilized during the 2004 season in Florida:

#### Equipment per Crew (5 Man)

- 2 Extension Ladders (16' or 18')
- 1 Step Ladder (7')
- 2 Tape Measures (16' or 20')
- 5 Hammers (20-22oz) (Straight Claw) (Smooth Face)
- 5 Utility Knives
- 5 Nail Pouch Belts with hammer loop
- 1 x 2 Pressure Treated Wood Furring Strips on 6' centers
- 8d hot dipped galvanized common Steel Nails for use as fasteners
- #10 screws, galvanized steel, 2-1/2 inches long
- 2 inch Roofing Tape, adhesive with polypropylene liner or aluminum foil faced 2" tape

Additional Equipment per Team (20 Man)

- 1 Extension Ladder (20')
- 1 Cross Cut Hand Saw (24" to 30")
- 1 7¼" Circular Saw
- 1 50' Extension Cord w/ground

### **11.3 EMPLOYMENT STRATEGY**

Utilize VOLAGs away from contracted work crews as it may be perceived as they are taking work away from the contractors. As stated above they may be used for properties in outlying areas or for high priority properties.

#### Points for VOLAGs

- Limited to homes and mass care facilities.
- FEMA provides (if needed) equipment, nails, furring strips.
- Corps provides one QA per VOLAG for Technical Assistance and for accountability of all properties roofed.
- ROEs will be completed for each property by the QA.
- A VOLAG will not roof a property assigned to a Corps contractor.
- Once completed the VOLAG will spray paint the blue plastic with "VOLAG" to indicate that a VOLAG installed the roof and not a contractor.

Corps of Engineers  
TEMPORARY ROOFING  
FACTSHEET ON USE OF VOLAGS  
(2009 FEMA Volunteer Agency Liaison Workshop)

Tarps verses Plastic Sheeting:

- Self Help Tarps are given out along with other various commodities at Points of Distribution (PODs).
- Plastic Sheeting is installed by:
  - Corps ACI Contractors
  - Volunteer Groups
  - National Guard/Reserve Assets
  - Local government & private contractors

Corps Process for Temporary Roofing:

- ROE Collection
- Assessment of Damage
- Installation of temporary roof
- Inspection of installation

Potential use of VOLAGs on Temporary Roofing Mission:

- Assistance in the collection of ROEs at Collection Centers (Unskilled)
- Helping home owners install Tarps (Semi-skilled)
- Removing debris from roofs (Semi-skilled)
- Installing roofs in outlying areas (Skilled)
- Installing roofs for special needs (Skilled)
- Quick response

## **12.0 INTERNAL REVIEW**

The Internal Review function serves USACE commanders, business line managers, and support office managers with professional advice on audit, risk management, business process, and management control issues. Auditors perform audits and reviews as requested by commanders, business line managers, and support office managers. Additionally, auditors perform reviews required by regulation and law.

A commander may request that Internal Review auditors monitor a mission from the start to prevent contractual problems before they happen and to make sure USACE and contractors are abiding by the contracts.

NOTE: Frequently auditors request the support of Quality Assurance Inspectors (QAs) that are assigned to the Mission Assignment for Roofing. The use of QAs to support auditors requires the reassignment of the QAs to the Regional Activation Mission Assignment, thus removing them from the Temporary Roofing Mission Assignment.

### **13.0 ETHICS**

An employee shall not solicit or accept any gift or other item of monetary value from any person or entity seeking official action from doing business with, or conducting activities regulated by the employee's agency or whose interests may be substantially affected by the performance or nonperformance of the employee's duties. Should an employee have questions he/she should ask immediately through the chain of command.

1. Legally Controlling Authority is 5 CFR Part 2635, Standards of Conduct for employees of the Executive Branch.
2. Illegal activity could lead to loss of job, loss of reputation and jail time
3. Don't do it, you will be caught.

**APPENDIX A**  
**GLOSSARY OF TERMS**

## APPENDIX A – Glossary of Terms

| <b>Acronym</b> | <b>Description</b>  |
|----------------|---|
| AAR            | After Action Report   |
| ACI            | Advanced Contracting Initiative   |
| AO             | Action Officer or Area of Operations  |
| AOR            | Area of Response  |
| ARF            | Action Request Form   |
| ASTM           | American Society for Testing Materials                                      |
| ATL            | Assistant Team Leader   |
| CDX            | Exterior construction plywood   |
| CEEIS          | Corps of Engineers Enterprise Infrastructure Services                       |
| CFR            | Code of Federal Regulations   |
| CO             | Commanding Officer  |
| CONUS          | Continental United States   |
| CS             | Contracting Specialist  |
| D-/+           | Day before or after disaster  |
| DAC            | Department of Army Civilian   |
| DCE            | Defense Coordinating Element  |
| DCO            | Defense Coordinating Officer  |
| DHS            | Director of Homeland Security   |
| DRC            | Disaster Recovery Center  |
| DSC            | Disaster Service Center   |
| DSR            | Damage Survey Report  |
| DTOS           | Deployable Tactical Operations System                                       |
| EEI            | Essential Elements of Information   |
| EFO            | Emergency Field Office  |
| EM             | Emergency Management (Corps) or Engineering Manual (Corps)                  |
| EngLink        | <a href="https://englink.usace.army.mil">https://englink.usace.army.mil</a> |
| EOC            | Emergency Operations Center   |
| ER             | Engineer Regulation - Corps   |
| ERT            | Emergency Response Team   |
| ERT-A          | Emergency Response Team - Advance   |
| ESF            | Emergency Support Function  |
| FAC            | Family Assistance Center (FEMA)   |
| FAD            | Funding Acquisition Regulation  |
| FAQ            | Frequently Asked Questions  |
| FAR            | Federal Acquisition Regulation  |
| FCO            | Federal Coordinating Officer (FEMA)   |
| FEMA           | Federal Emergency Management Agency   |
| FEST           | Forward Engineer Support Team   |
| FEST-A         | Forward Engineer Support Team - Advance                                     |
| FEST-M         | Forward Engineer Support Team - Main  |
| FOSA           | Federal Operations Staging Area   |

|        |   |
|--------|---|
| FRAGO  | Change or amendment to a previous operational order |
| GFM    | Government Furnished Material                       |
| GIS    | Geographic Information Systems                      |
| GPS    | Global Positioning System                           |
| HQ     | Headquarters  |
| ICS    | Incident Command System                             |
| IM     | Information Management                              |
| JFO    | Joint Field Office                                  |
| JIC    | Joint Information Office                            |
| LM     | Logistics Management                                |
| LNO    | Liaison Officer                                     |
| METL   | Mission Essential Task List                         |
| MHE    | Material Handling Equipment                         |
| MM     | Mission Manager                                     |
| MOB    | Mobilization Centers (FEMA)                         |
| MS     | Mission Specialist                                  |
| NIMS   | National Incident Management System                 |
| NRCC   | National Response Coordinating Center               |
| OCONUS | Outside of Continental United States                |
| OPORD  | Operational Order                                   |
| PA     | Public Affairs                                      |
| PAO    | Public Affairs Officer                              |
| PDT    | Project Delivery Team                               |
| PMBP   | Project Management Business Process                 |
| POC    | Point of Contact                                    |
| PRT    | Planning and Response Team                          |
| QA     | Quality Assurance Specialist                        |
| RE     | Resident Engineer                                   |
| RFO    | Recovery Field Office                               |
| ROE    | Right of Entry                                      |
| RTR    | Rapid Temporary Repair                              |
| SBA    | Small Business Administration                       |
| SFO    | Support for Others                                  |
| SITREP | Situation Report                                    |
| SME    | Subject Matter Expert                               |
| SMS    | Subject Matter Specialist                           |
| SOP    | Standard Operating Procedure                        |
| TL     | ESF #3 Team Leader                                  |
| UOC    | USACE Operations Center                             |
| USACE  | U.S. Army Corps of Engineers                        |
| VOAD   | Volunteer Organization Active in Disaster           |
| VOLAG  | Volunteer Agency                                    |

**APPENDIX B**  
**RIGHT OF ENTRY**

## APPENDIX B – Right of Entry Form

|  |   |  |
|--|---|--|
| GPS Coord. _____   | Use ballpoint or roller ball pens:  | ROE No. _____  |
| <p style="text-align: center;"><b>ESTIMATED QUANTITY</b></p> Temporary Roofing Cover: _____ SF<br>2" X 4" X _____ LF<br>Plywood: _____ SF<br>_____     | <p style="text-align: center;"><b>FINAL QUANTITY</b></p> Temporary Roofing Cover: _____ SF<br>2" X 4" X _____ LF<br>Plywood: _____ SF<br>_____  | <p style="text-align: center;"><b>SITUATION CODES (circle as appropriate)</b></p> DSO Disqualified      WC Work Complete<br>OS Out of Scope      DO Done by Others<br>BR Beyond Repair      SN Special Needs |
| <p>QA Inspector _____<br/> <small>Print Name/Date</small></p> <p style="text-align: center;"><b>SKETCH</b></p><br><br><br><br><br><br><br><br><br><br> | <p style="text-align: center;"><b>Print and sign name(s)</b></p> <b>Final QA Inspector:</b><br>_____<br><small>Print Name/Signature/Date</small><br><b>Final Contractor Rep:</b><br>_____<br><small>Print Name/Signature</small><br><b>Prime Contractor:</b><br>_____ |  |
| <b>NOTES</b>   |   |  |

**RIGHT-OF-ENTRY FOR TEMPORARY ROOFING/REPAIRS**

Incident or Disaster \_\_\_\_\_

The undersigned, hereinafter called the Owner, hereby grants the UNITED STATES OF AMERICA (the "Government"), and its independent contractors, a **right-of-entry (ROE)** upon the real estate described as follows (the "Property") located in \_\_\_\_\_ County/Municipality, and described as: [Address] \_\_\_\_\_

1. **Time Period:** The ROE shall expire **60 days after** this form is signed, unless sooner cancelled.
2. **Inspection/Repairs Authorized:** The ROE is authorized to allow inspection and/or temporary repairs to the Property, including but not limited to temporary roofing. Owner consents that the Government, its employees, agents, contractors and/or representatives shall, in their sole discretion, determine the extent of the roof damaged and temporary roof coverage required at the time of installation.
3. **Disclosure of Roofing Policies:** By signing this ROE, Owner acknowledges that the following policies shall apply concerning the installation of temporary roofing on Owner's property:
  - a. Temporary roofing installation provides temporary repair for severely damaged roofs. The roofing material may not provide a watertight seal and does not guarantee a habitable structure. Leaking is possible during additional rain events. Leaking of the temporary roof after installation is considered maintenance and is the sole responsibility of the homeowner.
  - b. The life of the temporary roof is dependent on weather conditions and may be as little as 30 days. Temporary roofing may be installed with multiple wood furring strips with multiple nails to the existing roof in order to secure it, which will harm shingles and roofing beneath. Removal of the temporary roof is the responsibility of the homeowner, and will result in leaking after the nails are removed.
  - c. The temporary roofing material becomes the property of the homeowner after installation.
4. **Cancellation:** Owner may cancel this ROE only by obtaining the signature of an authorized Government or contractor representative using the procedure shown on the reverse of this form. Phone-in and verbal cancellations will not be accepted.
5. **Waiver of Liability:** The Owner acknowledges that the Government's decisions on when, where, and how to provide disaster relief to Owner's property are discretionary functions. Owner recognizes that 42 USC § 5148 states: "The Federal Government shall not be liable for any claim based upon the exercise or performance of or the failure to exercise or perform a discretionary function or duty on the part of a Federal agency or an employee of the Federal Government in carrying out the provisions of this chapter." **Owner further releases and agrees to hold and save harmless the Government, its employees, agents, contractors and/or representatives from any and all liability, damage, or loss whatsoever that may be occasioned by or through negligent acts or omissions of the Government, its employees, agents, contractors and/or representatives in inspecting and/or performing temporary repairs to the Property.**
6. **Miscellaneous:** The right-of-entry includes the right of ingress and egress on other lands of the Owner not described above, provided such ingress and egress is necessary and not otherwise conveniently available to the Government. All tools, equipment, and other property taken upon or placed upon the property by the Government shall remain the property of the Government and may be removed by the Government at any time within a reasonable period after the expiration of this ROE.
7. **Privacy Act Statement:** Owner acknowledges receipt of the Privacy Act statement shown on the reverse of this form and consents to release of the information contained herein in accordance with the purposes therein stated.

**By signing this document, I certify that I am the owner of this property and/or that I am authorized to sign this right of entry (ROE) on behalf of the owner:**

|   |  |
|---|--|
| Owner/Agent Signature (Date)                          | Mailing Address of Signer  |
| Print Name (if Agent, <i>also</i> print Owner's name) | Phone Number of Signer (if Agent, <i>also</i> include Owner's phone) |

ENG Form 1528 (Revised April 2005)



## **APPENDIX C**

### **Operation Blue Roof Frequently Asked Questions**

## **APPENDIX C – Operation Blue Roof Frequently Asked Questions**

### **Q. What is the first step in the process for a homeowner or landlord?**

A. To get the Operation Blue Roof process started, the first thing a person has to do is go to a location where Right of Entry forms are available. Corps staff will help you fill out this simple one-page form.

### **Q. Why is a Right of Entry needed?**

A. A Right of Entry (ROE) is a legal requirement that allows Corps workers to access your property and assess damage to your home. The ROE allows contract crews to work on your roof. You will receive a copy of the ROE when applying.

### **Q: Where does a homeowner go to sign a Right of Entry?**

A: A Designated Sign Up Center, 1-888-ROOFBLU if available or approaching a government authorized representative in a disaster area.

### **Q: Once an ROE is signed, when will the roof be repaired?**

A: We are working as fast as possible to fix roofs. We know that with every rainstorm, a home and property are exposed to more damage. That said, we can't give or identify a specific day or time when a crew will come to work on a house. Workers can't be on roofs when it is very windy, raining, or there is thunder and lightning. They also cannot work at night. We will work to our maximum ability, but we recognize worker safety standards.

### **Q: How does the Corps decide which roofs get repaired first?**

A: Areas with the highest concentration of damage will likely be attended to the most quickly. We will reach every person who has signed a ROE form. We simply can't predict when we will reach any particular home.

**Q: If someone has medical emergency, can that repair be prioritized?**

A: We will make your home a priority within a particular work zone. That means that when our crews come to your neighborhood, your home will be one of the first to be worked on. However, we can't tell exactly when a crew will come to your neighborhood.

**Q: One house among many others was not repaired, even though an ROE was signed – what has happened?**

A: Once a contractor has been given a Work Order, the contractor then has 10 days to install the Temporary Roof.

**Q: If the Army Corps of Engineers sent a crew to fix a roof, and then another hurricane blew the blue plastic off, what can be done?**

A: The Corps will fix the roof again if another ROE is signed.

**Q. Where can a Right of Entry be found for a person who is out of town?**

A. If a person has evacuated or is otherwise out of town, they or their agent (e.g. friend or neighbor) can arrange with our team to complete the form on your behalf. The property to be repaired must be a primary residence or an occupied rental property.

**Q. If a home is being rented, can a tenant sign a right of entry form?**

A. Yes, the tenant may sign the form. The tenant should bring a letter from the landlord. The letter should say the tenant has permission to sign for the landlord.

**Q. Will the work be charged to my insurance?**

A. The work is free, so insurance does not enter into the equation.

**Q. Can I call and find out the status of my request?**

A. No, once the ROE is given to the contractor, we no longer track that information.

**APPENDIX D**

**INDIVIDUAL READINESS ITEMS**

### **APPENDIX D – INDIVIDUAL READINESS ITEMS**

General list of items for deployment. Additional items may be included based on previous experience.

| Checklist Items  | Health and Hygiene Considerations                    |
|--|--|
| 2 Week Supply of Clothes<br>Red Shirts and/or White Shirts | 30 – 60 day supply of medications (non refrigerated) |
| 2 Day supply of food (no preparation involved)             | Imodium / Antacid                                    |
| 2 Large Trash bags or laundry bags                         | Pain Reliever  |
| Hard Hat & Steel-Toed Boots                                | Insect Repellant                                     |
| Government Credit Card<br>\$500 - \$1000 cash              | Eye Drops  |
| Drivers License  | Glasses / Contacts                                   |
| Durable Power of Attorney                                  | Sun Screen / Chap Stick                              |
| Executed Will  | First Aid Kit  |
| Bills While Away   | Wet Ones   |
| Mail / Newspapers While Away                               | Shot Record  |
| Arrange for care of Pets while away.                       | Small cooler   |
| Notification to Family / Friend                            |  |
| Flashlight with extra batteries                            |  |
|  |  |
|  |  |

**APPENDIX E**  
**ROE Screening**

## APPENDIX E – ROE Screening

### Screening Questions

Do you own the home or do you rent?

Is the property primarily used as a residence and not for commercial activities?

If the property is rented is the lease for 30 days or longer?

Is the property a time-share?

Is the property a Condominium?

Are you living there now?

Will you be living there after the repairs are made?

Have you seen the actual damage?

Is water getting into the house from the roof when it rains?

Is over half (50%) of the roof deck still in place?

Is any debris on the roof?

Is any debris preventing access to the building?

Do you leave dogs outside during the day when you are away from the property?

Is the house a single or two-story house?

Can the entire roof be seen from the ground?

If necessary, would someone would be available to meet with a government representative to discuss the repairs prior to initiating any work?

## **Questions and Answers**

### **Q. What is the first step in the process for a homeowner or landlord?**

A. To get the Operation Blue Roof process started, the first thing a person has to do is go to a location where Right of Entry forms are available. Corps staff will help you fill out this simple one-page form.

### **Q. Why is a Right of Entry needed?**

A. A Right of Entry (ROE) is a legal requirement that allows Corps workers to access your property and assess damage to your home. The ROE allows contract crews to work on your roof. The ROE will also be used by the Corps to make sure the work has been completed properly. You will receive a copy of the ROE when the job is finished, or with an explanation of the reason why your home is not eligible, if the Corps worker decides that a roof repair is not appropriate for your house.

### **Q: Where does a homeowner go to sign a Right of Entry?**

A: A Designated Sign Up Center, 1-888-ROOFBLU if available or approaching a government authorized representative in a disaster area.

### **Q: Once an ROE is signed, when will the roof be repaired?**

A: We are working as fast as possible to fix roofs. We know that with every rainstorm, a home and property are exposed to more damage. That said, we can't give identify a specific day or time when a crew will come to work on a house. Workers can't be on roofs when it is very windy, raining, or there is thunder and lightning. They also cannot work at night. We will work to our maximum ability, but we recognize worker safety standards.

### **Q: How does the Corps decide which roofs get repaired first?**

A: Areas with the highest concentration of damage will likely be attended to the most quickly. We are not working on a 'first-come, first-served' basis. That would slow the process for everyone. We will reach every person who has signed a ROE form. We simply can't predict when we will reach any particular home.

**Q: If someone has medical emergency, can that repair be prioritized?**

A: We will make your home a priority within a particular work zone. That means that when our crews come to your neighborhood, your home will be one of the first to be worked on. However, we can't tell exactly when a crew will come to your neighborhood.

**Q: One house among many others was not repaired, even though an ROE was signed – what has happened?**

A: Crews are given a bundle of ROEs and sent to fulfill those jobs. If an ROE was not in that bundle, for whatever reason, the crew could not have fixed the house. While we are not working in a first-come, first-serve pattern, it may be that an ROE was not yet in the package that was given to the contractor on that occasion.

**Q: If the Army Corps of Engineers sent a crew to fix a roof, and then another hurricane blew the blue plastic off, what can be done?**

A: The Corps will fix the roof again if another ROE is signed.

**Q. Where can a Right of Entry be found for a person who is out of town?**

A. If a person has evacuated or is otherwise out of town, they or their agent (e.g. friend or neighbor) can arrange with our team to complete the form on your behalf. The property to be repaired must be a primary residence or an occupied rental property.

**Q. If a home is being rented, can a tenant sign a right of entry form?**

A. Yes, the tenant may sign the form. The tenant should bring a letter from the landlord. The letter should say the tenant has permission to sign for the landlord.

**Q. Will the work be charged to my insurance?**

A. The work is free, so insurance does not enter into the equation.

**Q. Can I call and find out the status of my request?**

A. No, once the ROE is given to the contractor, we no longer track that information.

**APPENDIX F**

**SAFETY**

## APPENDIX E – SAFETY

### RAPID TEMPORARY REPAIRS QUALITY ASSURANCE CHECKLIST

NOTE: Contractors are required to comply with requirements of EM 385-1-1 during emergency response operations. Where applicable, the attached OSHA Interim Fall Protection Compliance Guidelines for Residential Construction may be used to provide fall protection. The following are a few of the contract Safety and Occupational Health requirements which Quality Assurance personnel are expected to ensure the contractors are meeting.

1. Safety meetings for all workers shall be conducted weekly. (1.B.03)
2. Hard hats are required except when working on the roof. (5.D)
3. An adequate supply of drinking water shall be provided in all places of employment. Cool water shall be provided during hot weather. (2.B)
4. Portable ladders used as temporary access shall extend 3-ft (0.9m) above the upper landing surface. (21.D.02)
5. Ladders shall be secured by top, bottom, and intermediate fastenings as required to hold them rigidly in place and to support the loads that will be imposed upon them. (21.D.08)
6. Home made ladders are acceptable as long as they comply with ANSI A14.1 thru A14.4 as applicable (21.D.01). Minimum requirements would include:
  1. 2x4 rungs
  2. 2x4 supports for rungs
  3. Minimum 2 nails per rung
  4. 2x4 rails
  5. Rail splices
  6. Uniform rungs at 12” apart.
  7. 16” rung width
7. Before starting work, existing conditions shall be determined by inspection or a test. Such conditions shall include, but not be limited to, location and voltage of energized lines and equipment, condition of poles, and the location of circuits and equipment including power and communications lines and fire alarm circuits. (11.H.02)
8. Portable metal or conductive ladders shall not be used near energized lines or equipment. (11.H.09)

- 9 . Ladders shall not be used to access the roof within 10 feet of the service drop.  
(11.E.01.a)
10. GFCI s shall be used for circuits providing electricity to portable electrical power and hand tools.(11.C.05)
11. Slide guards shall be provided as a minimum at eave level for fall protection in accordance with the OSHA residential roofing standard. (Slide guards are 2x6 on edge nailed to a 2x4 nailed to the roof)
- 12 . If the residential standard can't be applied or extreme fall hazards exist, fall protection systems such as full body harness, retractable life lines attached to cable line shall be provided. (21.A.15)
13. Ladders shall be used at such a pitch that the horizontal distance from the top support to the foot of the ladder will not be greater than one-fourth the vertical distance between the points. (21.D.08)
14. Contractors shall wear appropriate footwear to prevent slips and trips. (5.A.08)
15. Caution the contractor on the hazards faced when attempting to conduct temporary roofing during windy/stormy conditions. (06.J.01)

RECOMMENDATION: To facilitate safe access and perform work on residential and commercial roofs, a slope / pitch indicator, available at most hardware stores (<\$10), allows the Government / Contractor to ascertain and verify the pitch and therefore determine which safety standard applies.

The OSHA Interim Residential Standard is attached for your consideration.

The United States Department of Labor  
**Occupational Safety and Health Administration**

**Interim Fall Protection Standard  
December 1999**

- I. PURPOSE.
- A. This Instruction is a plain language re-write of OSHA Instruction STD 3.1, the Agency's interim enforcement policy on fall protection for certain residential construction activities.
  - B. Fall protection requirements for residential construction are set out in 29 CFR 1926.501(b)(13). In general, that provision requires conventional fall protection for work at or over six feet. However, OSHA Instruction STD 3.1 modifies those requirements. It permits employers engaged in certain residential construction activities to use alternative procedures routinely instead of conventional fall protection. No showing of infeasibility of conventional fall protection is needed before using these procedures. A fall protection plan is required but it does not have to be written nor does it have to be specific to the jobsite. Different alternative procedures are specified for different activities.
- II. SCOPE. This Instruction applies OSHA-Wide.
- III. CANCELLATION. OSHA Instruction STD 3.1, Interim Fall Protection Compliance Guidelines for Residential Construction, dated December 8, 1995, is cancelled.
- IV. REFERENCE. 29 CFR Part 1926 Subpart M.
- V. ACTION INFORMATION.
- A. Responsible Office. Directorate of Construction.
  - B. Action Offices. National, Regional, and Area Offices
  - C. Information Offices. State Plan Offices, Consultation Project Managers
- VI. FEDERAL PROGRAM CHANGE. This Notice describes a Federal OSHA program change for which State adoption is not required.
- VII. BACKGROUND. On December 8, 1995 OSHA published an interim fall protection compliance policy for fall protection for certain residential construction activities, pending further rulemaking on Subpart M. This Notice is a plain language re-write of that policy; it does not make substantive changes to the policy. The Agency will solicit public comment on fall protection issues in residential construction in an

Advance Notice of Proposed Rulemaking on Subpart M. After analyzing those comments, we will re-evaluate this policy.

VIII. AVAILABILITY OF ALTERNATIVE PROCEDURES. Alternative procedures are available to employers who are (1) engaged in residential construction, and (2) doing one of the listed activities.

A. Definition of "residential construction."

1. For purposes of this instruction, an employer is engaged in residential construction where the working environment, materials, methods and procedures are essentially the same as those used in building a typical single-family home or townhouse.
2. Residential construction is characterized by:
  - Materials: Wood framing (not steel or concrete); wooden floor joists and roof structures.
  - Methods: Traditional wood frame construction techniques.
3. In addition, the construction of a discrete part of a large commercial building (not the entire building), such as a wood frame, shingled entranceway to a mall, may fit within the definition of residential construction. Such discrete parts of a commercial building would qualify as residential construction where the characteristics listed above are present.

B. Listed Activities and Alternative Procedures.

There are four groups of residential construction activities for which alternative fall protection plans are available. Each group has its own set of alternative procedures and will be discussed in Sections IX through XII. The groups are:

1. GROUP 1. Installation of floor joists, floor sheathing, and roof sheathing; erecting exterior walls; setting and bracing roof trusses and rafters.
2. GROUP 2. Working on concrete and block foundation walls and related formwork.
3. GROUP 3. This group consists of the following activities **when performed in attics and on roofs**: installing drywall, insulation, HVAC systems, electrical systems (including alarms, telephone lines, and cable TV), plumbing and carpentry.

4. GROUP 4. Roofing work (removal, repair, or installation of weatherproofing roofing materials such as shingles, tile and tar paper).

C. Questions.

- Do any of these plans have to be written and site specific? No.
- Does the employer have to determine that conventional fall protection is infeasible before being permitted to use an alternative procedure? No.

IX. ALTERNATIVE PROCEDURES FOR GROUP 1: INSTALLATION OF FLOOR JOISTS, FLOOR SHEATHING, AND ROOF SHEATHING; ERECTING EXTERIOR WALLS; SETTING AND BRACING ROOF TRUSSES AND RAFTERS.

The alternative measures for this group are set out in Appendix E to Subpart M. Appendix E requires the employer to implement a Fall Protection Plan. Such a plan must lay out the safest procedures to be followed at the work site to prevent falls.

Although the plan need not be in writing, it must be communicated to all employees on site who might be subject to fall hazards.

NOTE: Height Limitation: The Appendix E plan may only be used on structures up to three and a half stories or 48 feet (including basement, two finished levels, attic). The 48' measure is from the base of the building, at the lowest ground level (including any excavation), to the point of greatest height. The following are the required elements of the Plan:

- A. General Requirements For Group 1 Activities. Training, Implementation/ Supervision By Designated Individuals, Controlled Access Zones, Plan Administration (required for all Group 1 activities).

0. Training

Each employee performing work in Group 1 activities must be trained in the requirements of the Plan. The employer must ensure that the employees (1) understand the procedures and follow the instructions of the crew supervisor or foreman; (2) are able to recognize unsafe/hazardous conditions and are to report them to the employer; (3) can recognize when compliance with the Plan would create a greater hazard and are instructed to inform the Competent Person before proceeding when that occurs. Training and retraining violations shall be cited under 29 CFR 1926.503(a) and 1926.503(c). Subsection 1926.503 (b) may not be cited for residential construction.

NOTE: Any concerns raised by employees at any time during construction must be addressed (determined to be valid or not) before work proceeds.

1. Implementation/Supervision.

a. Competent Person.

The employer must designate a Competent Person, who will be charged with implementing the Plan. The Competent Person must continually monitor compliance with the Plan, including the provision of training and the proper use of Controlled Access Zones.

b. Qualified Person.

The employer must designate a qualified person to approve any changes to the Plan.

c. Crew Supervisor/Foreman.

The employer must designate a crew supervisor or foreman and charge him or her with the responsibility of immediately correcting any unsafe practice or condition.

2. Controlled Access Zones.

For purposes of this Instruction, a Controlled Access Zone (CAZ) restricts access to a clearly designated area where a Group One activity (installation of floor joists, floor sheathing, roof sheathing; erecting exterior walls; setting and bracing roof trusses and rafters) is taking place. The CAZ must meet the following requirements:

a. Boundaries.

The competent person shall determine the boundaries of the CAZ and clearly mark them with signs, wires, tapes, ropes or chains.

b. Monitor.

The crew supervisor/foreman shall monitor the workers in the CAZ to ensure that they do not engage in unsafe practices.

c. Restricted Access.

Access to the CAZ must be restricted to authorized entrants. An authorized entrant is a worker who has received the training described above. The competent person must identify each entrant as an authorized entrant after the employee has successfully completed the training.

d. Final Check.

Before work begins in the CAZ, the competent person must ensure that all protective measures in the Plan have been implemented.

3. Plan Administration.

a. Employer Enforcement.

The employer is required to enforce the Plan. The crew supervisor/foreman, as well as individuals in the Safety and Personnel Department, must have the right to issue disciplinary warnings to employees, up to and including termination, for failure to follow the requirements of the Plan. Unsafe practices or conditions must be corrected immediately.

b. Changes To The Plan.

-- **Designation of qualified person:** the employer must designate a qualified person to approve changes to the Plan.

-- **Approval required:** changes to the Plan may not be made unless approved by the qualified person.

-- **Plan Review:** the qualified person must review the Plan as the job progresses to determine if additional practices, procedures or training need to be implemented. The employer shall notify and, if necessary, train workers in the new procedures.

c. Accident Investigations/Plan Review.

All accidents resulting in injury to workers shall be reported and investigated. To help prevent further accidents, the investigation must be documented so that the cause and means of prevention can be identified. In the event of a fall or other serious incident, the Plan shall be reviewed to determine if additional practices, procedures, or training need to be implemented.

B. Additional Requirements For Specific Group (1) Activities.

0. Installing Roof Trusses and Erecting Rafters.

. Walls Up To 8 Feet.

Interior scaffolds must be installed along the interior wall, below the area where the trusses/rafters will be located.

This can often be accomplished with "sawhorse" scaffolds constructed of 46 inch sawhorses and 2 x 10 planks.

a. Walls Over 8 Feet.

If using scaffolds and ladders throughout the process would create a greater hazard, the following general requirements and specific procedures apply.

(1). Walls over 8 feet. General requirements.

(a) Falling Objects/Restricted Access.

Once truss/rafter installation begins, workers not involved in that activity shall not stand or walk below or adjacent to the roof opening or exterior walls in any area where they could be struck by falling objects.

(b) Bracing.

Trusses/rafters must be adequately braced before any worker may use them as a support.

(c) Designated, Trained Workers.

The employer must designate the trained workers who will work on the top plate, and those who will work on the peak.

(d) Restricted Duties.

Top plate workers shall have no other duties during truss/rafter erection.

(2) Procedures for working on the top plate.

(a) Installing The First Two Trusses.

The first two trusses/rafters must be set from ladders. The ladders must lean on side walls at points where the walls can support the load imposed by the ladder and worker. After the first two trusses/rafters have been set, a worker will climb a ladder onto the interior top plate to secure their peaks.

(b) Remain On The Top Plate.

Workers will remain on the top plate and use the previously stabilized trusses/rafters as support while the other trusses/rafters are erected.

(3) Procedures for working at the peak.

(a) When Workers May Work On Peaks/Ridge Beam.

Workers detaching trusses from cranes or securing trusses at the peaks may be positioned at the peak of the trusses/rafters. Workers may be stationed on the top of the ridge beam where that is the only feasible way to secure rafters to the ridge beam.

(b) Stable Work Position

Workers at the peak, in the web of trusses, or on top of the ridge beam shall work from a stable position. They must either sit on a ridge seat (or the equivalent) or position themselves in previously stabilized trusses/rafters and lean into, and reach through, the trusses/rafters.

(c) Limited Fall Hazard Exposure.

Workers must not remain on or in the peak/ridge any longer than necessary to complete the task safely.

1. Roof Sheathing Operations. The competent person must determine when the roof system is stable enough to support a conventional fall protection system anchorage. The following provisions apply until the roof system can be used as an anchorage point; at that time personal fall arrest systems must be used.

- . Qualified Workers.

- . Only qualified workers shall install roof sheathing.

- a. Secure Footing/Weather.

- a. The employer must ensure that workers remove slip hazards before walking on sheathing. Such measures include removing mud from shoes or boots. When wet weather is present, roof sheathing shall be suspended unless safe footing can be assured. If winds exceed 40 miles per hour, sheathing operations are to be suspended, unless wind breakers are erected.

- b. Staging of Materials.

- b. To minimize exposure to fall hazards, materials must be staged so that workers on the roof have quick and safe access to them.

- c. Falling Objects/Restricted Access.

- c. Workers not involved in roof sheathing shall not stand or walk below or adjacent to the roof opening or exterior walls where they could be struck by falling objects. The competent person shall clearly designate the restricted area before placement of the first piece of sheathing. The competent person may order a brief halt to the sheathing work to allow other workers to pass through the restricted area, as long as suspending work does not create a greater hazard.

- d. Slide Guards.

- d. -- **Bottom Row:** The bottom row of roof sheathing may be installed by workers standing in truss webs and leaning over the sheathing. After the bottom row is installed, a slide guard of at least four (4) inches nominal in height shall be securely attached to the roof. It must extend across the full width of the roof.

-- **Slide Guard Intervals: Roof Pitch Up To (and including) 9 in 12:** Additional slide guards are required at 13 foot intervals as successive rows of sheathing are installed.

-- **Slide Guard Intervals: Roof Pitch Over 9 in 12:** Additional slide guards are required at four foot intervals.

NOTE: These slideguard requirements, which come from Appendix E, differ from those for Group 4 Activities (roofing work).

## 2. Installation of Floor Joists and Floor Sheathing.

- . Designated, Trained Workers.  
The employer must designate the trained workers who will do this work.
- a. Staging of Materials.  
To minimize exposure to fall hazards, materials must be staged so that workers have quick and safe access to them.
- b. Restricted Access.  
While this work is taking place, workers not directly assisting in it shall not be permitted within six (6) feet of the leading edge.
- c. Installation Process: Floor Joists/Trusses.  
The first floor joist or truss must be rolled into position and secured by workers on the ground, ladders, or sawhorse scaffolds. Successive joists/trusses must be rolled into place. They are then to be secured from a platform. The platform is to be built from a sheet of plywood laid over the previously secured floor joists or trusses.
- d. Installation Process: Floor Sheathing.  
The first row of floor sheathing must be installed by workers on the ground, ladders, or sawhorse scaffolds. After the first row of sheathing has been installed, workers shall work from the established deck.

## 3. Erection of Exterior Walls.

- . Designated, Trained Workers.  
The employer must designate the trained workers who will do this work.

- a. **Warning Line.**  
A painted warning line six (6) feet from the perimeter will be clearly marked before any wall erection activities take place.  
  
NOTE: As discussed above, this work must be done within a CAZ. A crew supervisor/foreman is required to monitor this work and warn anyone who approaches the unprotected edge. The warning line does not replace the monitor; it is an additional safety measure.
- b. **Staging of Materials.**  
To minimize exposure to fall hazards, materials must be staged so that workers have quick and safe access to them.
- c. **Limit Fall Hazard Exposure.**  
Workers constructing exterior walls shall complete as much cutting of materials and other preparatory work as possible away from the edge of the deck.

**NOTE: Wall openings (more than six feet above the lower level), floor holes and roof holes:** As soon as sheathing has been installed around a floor hole, roof hole, or wall opening that is not going to be sheathed (such as a hole for a doorway, stairwell or skylight), it must be covered, or protected by a guardrail.

X. **ALTERNATIVE PROCEDURES FOR GROUP 2: WORKING ON CONCRETE AND BLOCK FOUNDATION WALLS AND RELATED FORMWORK.**

This Instruction specifies the alternative procedures for protecting employees working from the top surface of block foundation walls, concrete foundation walls, and related form work. These procedures are:

- A. **Trained Workers Only.**  
Only trained workers shall be allowed to work on the top of the foundation wall/form work, and only as necessary to complete the construction of the wall.
- B. **Adequate Support.**  
All formwork shall be adequately supported before any worker may work on top of the form work.
- C. **Bad Weather.**  
When adverse weather (such as high winds, rain, snow, or sleet) creates a hazardous condition, operations shall be suspended until the hazardous condition no longer exists.

- D. Staging of Materials/Equipment.  
Materials and equipment for the work shall be conveniently located to the workers on the top of the foundation/formwork.
- E. Impalement Hazards.  
Materials and other objects which could pose impalement hazards shall be kept out of the area below where workers are working or shall be properly guarded.

XI. ALTERNATIVE PROCEDURES FOR GROUP 3: THIS GROUP CONSISTS OF THE FOLLOWING ACTIVITIES **WHEN PERFORMED IN ATTICS AND ON ROOFS**: INSTALLING DRYWALL, INSULATION, HVAC SYSTEMS, ELECTRICAL SYSTEMS (INCLUDING ALARMS, TELEPHONE LINES, AND CABLE TV), PLUMBING AND CARPENTRY.

This Instruction specifies the procedures for this group. They are:

- A. Trained Workers Only.  
Only trained workers shall be allowed to work in attics and on roofs, and only as necessary to complete the construction of the system being installed.
- B. Staging of Materials.  
Materials and equipment for the work shall be located conveniently close to the workers.
- C. Impalement Hazards.  
Materials and other objects which could pose impalement hazards shall be kept out of the area below where workers are working, or properly guarded.
- D. Restricted Access.  
While attic or roof work is in progress, workers not involved in such work shall not stand or walk below or adjacent to any openings in the ceiling where they could be struck by falling objects.
- E. Bad Weather.  
When adverse weather (such as high winds, rain, snow, or sleet) creates a hazardous condition, operations shall be suspended until the hazardous condition no longer exists.

NOTE: The provisions of this Instruction do not apply to interior finishing work when done outside of attics or roofs areas. Subpart M applies to such work with respect to stairways, stairway openings, walkways, floor or window openings, floor holes or other elevated openings or open sides.

XII. ALTERNATIVE PROCEDURES FOR GROUP 4: ROOFING WORK (REMOVAL, REPAIR, OR INSTALLATION OF WEATHERPROOFING ROOFING MATERIALS SUCH AS SHINGLES, TILE AND TAR PAPER).

Restriction on Application for Roofing Work. The alternative procedures in this Instruction may only be used for this work where: (a) the roof slope is 8 in 12 or less, **and** (b) the fall distance, measured from the eave to the ground level, is 25 feet or less.

A. General Requirements.

0. Trained Workers Only.

Only workers who have been trained to be proficient in the alternative methods of fall protection shall be allowed onto the roof. In addition, each affected employee shall be trained to ensure specific awareness of the fall hazards associated with work on roofs with rake edges ("rake edges" are inclined roof edges, such as those on the gable end of a building).

1. Slip Hazards

The roof surfaces shall be inspected for slipping hazards. The employer shall either eliminate any such hazards or take effective measures to have workers avoid them. The employer shall have workers wear appropriate footwear to reduce the potential for slipping.

2. Bad Weather.

When adverse weather (such as high winds, rain, snow, or sleet) creates a hazardous condition, roofing operations shall be suspended until the hazardous condition no longer exists.

3. Roof holes/openings.

The employer shall have any damaged portions of the roof deck repaired as soon as practicable. Any holes (including skylight openings) or other areas where employees would not have safe footing shall be covered or surrounded by guardrails that comply with the requirements of 1926.502.

4. Ladders/Scaffolds.

If ladders or scaffolds are used, they shall be erected and maintained in accordance with the requirements of Subparts X and L of OSHA's construction standards. In addition, employees shall be trained in accordance with the requirements of Subparts X & L.

5. Access To Roof.

Employers shall not allow workers to ascend or descend the roof's

slope within 6 feet of the rake edge except where that limitation would prevent the performance of work.

6. Location of Materials.  
Supplies and materials shall not be stored within 6 feet of the rake edge, or three feet where tile roof systems are being installed.
7. Impalement Hazards.  
The area below the eaves and rakes shall be kept clear of materials and other objects which could pose impalement or other hazards, or properly guarded.

B. Safety Monitors and Slide Guards (for roofs with an eave height of up to and including 25 feet).

0. Roof Slope (Any Roof Type): Up to 4 in 12. The employer must use either a safety monitoring system that complies with 1926.502, or roofing slide guards. If slide guards are used, they must be built and installed in accordance with the requirements set out below.
  1. Roof Slope (Except Tile or Metal Roofs): Over 4 in 12 (and up to 8 in 12): Slide guards are required.
  2. Roof Slope (Tile or Metal Roofs): Up to (and including) 8 in 12: The safety monitoring system may be used instead of slide guards.
  3. Roof Slope (Any Roof Type): Over 8 in 12: Alternatives to the requirements of the standards are not available.
  4. Eave Height Over 25 feet (Any Slope, Any Roof Type): Alternatives to the requirements of the standards are not available.

C. Slide Guards: Requirements for Materials, Configuration and Installation.

0. Roof Slope: 6 in 12 or less:
  - . Material. All slide guards must be constructed of 2"x 6" (nominal) stock.
  - a. Installation. No more than three rows of roofing material (installed across the lower eave) shall be applied before installing the slide guards. The roof jacks (or similar supports) shall be installed using nails long enough to withstand an employee sliding into the guard.
  - b. Configuration. The face of the slide guard must be perpendicular (about 90 degrees) to the surface of the roof. There must be continuous slide guards along the eave.

1. Roof Slope: Over 6 in 12 (up to and including 8 in 12):
  - . Material: 2"x 6" stock.
  - a. Installation: Continuous slide guards shall be installed along the eave, as described above. Additional slide guards shall be installed below each work area at intervals not to exceed eight feet. They shall be installed using the following procedure: the employee, while standing on the slide guard below, secures the roof jacks for the next slide guard with nails and then installs the planks. The employee then climbs up to the new slide guard to continue the roofing work. This sequence is repeated as work proceeds up the roof.
  - b. Configuration: The continuous slide guards at the eave must be at about 90 degrees to the roof surface, as described above. The additional slide guards need not be continuous -- but they must be long enough to protect the work area. They do not have to be at 90 degrees to the roof surface.
  - c. Removal: Once the roofing material is installed to the ridge, the employee is to climb down to the next lower slide guard and remove the upper slide guard. The employee repeats this process down the roof until all the slide guards are removed. Only when the roofing job is completed may the slide guards at the eave be removed.

### XIII. CITATION POLICY.

If an employer (engaged in residential construction) does not provide conventional fall protection, the compliance officer must determine if STD 3-0.1a provides alternative procedures for the activity in question. If alternative procedures are available, the compliance officer must determine if they have been implemented. If there is a deficiency in the implementation of the alternative procedures, the fall hazard shall be cited as a violation of 1926.501(b)(13). No other provision may be cited for a fall hazard addressed by 1926.501(b)(13). Deficiencies in training required by 1926.20 may also be cited where appropriate.

## SAFETY AND OCCUPATIONAL HEALTH INFORMATION EXCHANGE BULLETIN

### HEAT-RELATED ILLNESSES

Have you ever suffered a heat-related illness? I have and can tell you for a fact it is no picnic. My case occurred when I was 25 years old and doing roof work in Southeast Georgia. I really had no idea what was happening to me except that I became very nauseous and almost passed out. (This tends to be somewhat dangerous when you're standing on a two-story roof.) Luckily, I had a friend working with me who kept me from falling off the roof. I felt the after affects of heat exhaustion for days. The truth is a heat related illness could happen to anyone who doesn't take simple precautions.

#### **What causes heat-related illness?**

A heat related illness such as heat cramps, heat exhaustion or the most serious, excessive sweating and a depletion of necessary body chemicals cause heatstroke. Sweating is the body's way of cooling itself. However, profuse sweating can deplete the body's water supply along with necessary chemicals found in the body.

#### **Signs, symptoms and first aid.**

**Heat cramps** - are caused primarily by excessive loss of salt from the body. Symptoms include muscle cramps of the abdomen, legs or arms. First aid includes moving the victim to a shaded area and loosen clothing. Have the victim drink lots of water (at least one quart). It will not hurt to add a small amount of salt to the water. Recommend the victim take the rest of the day off to go to the hotel and rest. If symptoms continue, seek medical treatment.

**Heat exhaustion** - is caused by excessive salt depletion and dehydration. Symptoms include profuse sweating, headache, tingling sensation in the extremities, weakness, and loss of appetite, dizziness, nausea, cramps, chills, and rapid breathing. First aid includes loosening or removing clothing, elevate legs, pour water on victim, have victim drink water, fan victim and seek medical treatment.

**Heatstroke** - is a medical emergency. Symptoms usually are patterned after heat exhaustion however; the skin may be hot and dry. Victim can suddenly lose consciousness and have seizures. First aid includes moving victim to the shade, immersing in water (add ice to water if possible), and elevating feet. 911 should be called immediately and person should be sent to hospital for further treatment.

### **What can you do to protect yourself?**

Use common sense when protecting yourself from heat-related illnesses.

1. Stay in the shade as much as your job will allow.
2. Drink plenty of water. If possible, keep a cooler of ice water in your vehicle. A person working outside on construction related work should drink 12-15 quarts of water per day. (Dark colored urine is an indicator that you are not drinking enough water.) Alcohol and soft drinks are not a substitute for water.
3. Keep your body in balance by eating regular meals and getting 6-8 hours of sleep per night.
4. Use sunscreen to keep from getting sunburned. (Sunburned skin will inhibit sweating and may cause the body to overheat.)

Although a person should be able to identify heat related problems in themselves, quite often it is another person that notices the problem. Because of this, I recommend you use a buddy system to keep an eye on each other. If you have any of the warning signs mentioned above, please take them serious get yourself treated.