

Rapid Struct Triage RST-1

Date/Time: _____

By: _____

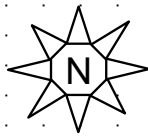
Page _____

of _____

CIRCLE ALL ITEMS OR INFORMATION THAT APPLY

NOTE: AFTERSHOCKS MAY CAUSE ADDITIONAL DAMAGE THAN NOTED.

| | | |
|-------------------|------------------------------|---------------------------------|
| Task Force: | Date/Time of Disaster: | See Form RST-2 for Instructions |
|-------------------|------------------------------|---------------------------------|



AREA MAP

| | | |
|--|---|---|
| STRUCT. ID: | <u>PROBABILITY of VIABLE VICTIMS</u> POTENTIAL NUMBER TRAPPED: HIGH MEDIUM LOW VICTIM ACCESS EFFORT: EASY MEDIUM DIFFICULT TYPE OF VOIDS: OPEN SEPARATED COMPACT <u>ASSESSMENT of RISK</u> PROBABIL. of FURTHER COLLAPSE: LOW MEDIUM HIGH NUMBER of FALLING HAZARDS: LOW MEDIUM HIGH VOID SUPPORT CONDITION: GOOD POOR UNKNOWN | <u>STRUCT. RATING</u> XP MP LP LR MR XR |
| OCCUPANCY: FLOOR AREA: No. STORIES: MATERIAL: CMU WOOD STEEL CIP CONC. URM TILT-UP PT CONC. PC CONC. OTHER: | | |

| | |
|--|---|
| COORD: PREV. SEARCHED? Y N UNKN | SLOW-GO: FIRE HAZMAT OTHER: NOTES: |
|--|---|

| | | |
|--|---|---|
| STRUCT. ID: | <u>PROBABILITY of VIABLE VICTIMS</u> POTENTIAL NUMBER TRAPPED: HIGH MEDIUM LOW VICTIM ACCESS EFFORT: EASY MEDIUM DIFFICULT TYPE OF VOIDS: OPEN SEPARATED COMPACT <u>ASSESSMENT of RISK</u> PROBABIL. of FURTHER COLLAPSE: LOW MEDIUM HIGH NUMBER of FALLING HAZARDS: LOW MEDIUM HIGH VOID SUPPORT CONDITION: GOOD POOR UNKNOWN | <u>STRUCT. RATING</u> XP MP LP LR MR XR |
| OCCUPANCY: FLOOR AREA: No. STORIES: MATERIAL: CMU WOOD STEEL CIP CONC. URM TILT-UP PT CONC. PC CONC. OTHER: | | |

| | |
|--|---|
| COORD: PREV. SEARCHED? Y N UNKN | SLOW-GO: FIRE HAZMAT OTHER: NOTES: |
|--|---|

| | | |
|--|---|---|
| STRUCT. ID: | <u>PROBABILITY of VIABLE VICTIMS</u> POTENTIAL NUMBER TRAPPED: HIGH MEDIUM LOW VICTIM ACCESS EFFORT: EASY MEDIUM DIFFICULT TYPE OF VOIDS: OPEN SEPARATED COMPACT <u>ASSESSMENT of RISK</u> PROBABIL. of FURTHER COLLAPSE: LOW MEDIUM HIGH NUMBER of FALLING HAZARDS: LOW MEDIUM HIGH VOID SUPPORT CONDITION: GOOD POOR UNKNOWN | <u>STRUCT. RATING</u> XP MP LP LR MR XR |
| OCCUPANCY: FLOOR AREA: No. STORIES: MATERIAL: CMU WOOD STEEL CIP CONC. URM TILT-UP PT CONC. PC CONC. OTHER: | | |

| | |
|--|---|
| COORD: PREV. SEARCHED? Y N UNKN | SLOW-GO: FIRE HAZMAT OTHER: NOTES: |
|--|---|

Rapid Struct Triage RST-2

Date/Time: _____

By: _____

Page _____

of _____

CIRCLE ALL INFORMATION OR ITEMS THAT APPLY.

NOTE: AFTERSHOCKS MAY CAUSE ADDITIONAL DAMAGE OTHER THAN NOTED

| | | |
|---|---|---|
| STRUCT. ID: _____ OCCUPANCY: _____ FLOOR AREA: _____ No. STORIES: _____ MATERIAL: CMU WOOD STEEL CIP CONC. URM TILT-UP PT CONC. PC CONC. OTHER: _____ | <p align="center"><u>PROBABILITY of VIABLE VICTIMS</u></p> POTENTIAL NUMBER TRAPPED: HIGH MEDIUM LOW VICTIM ACCESS EFFORT: EASY MEDIUM DIFFICULT TYPE of VOIDS: OPEN SEPARATED COMPACT <p align="center"><u>ASSESSMENT of RISK</u></p> PROBABIL. of FURTHER COLLAPSE: LOW MEDIUM HIGH NUMBER of FALLING HAZARDS: LOW MEDIUM HIGH VOID SUPPORT CONDITION: GOOD POOR UNKNOWN | <p align="center"><u>STRUCT. RATING</u></p> XP MP LP LR MR XR |
|---|---|---|

| | |
|--|---|
| COORD: _____ PREV. SEARCHED? Y N UNKN | SLOW-GO: FIRE HAZMAT OTHER: _____ NOTES: _____ |
|--|---|

| | | |
|---|---|---|
| STRUCT. ID: _____ OCCUPANCY: _____ FLOOR AREA: _____ No. STORIES: _____ MATERIAL: CMU WOOD STEEL CIP CONC. URM TILT-UP PT CONC. PC CONC. OTHER: _____ | <p align="center"><u>PROBABILITY of VIABLE VICTIMS</u></p> POTENTIAL NUMBER TRAPPED: HIGH MEDIUM LOW VICTIM ACCESS EFFORT: EASY MEDIUM DIFFICULT TYPE of VOIDS: OPEN SEPARATED COMPACT <p align="center"><u>ASSESSMENT of RISK</u></p> PROBABIL. of FURTHER COLLAPSE: LOW MEDIUM HIGH NUMBER of FALLING HAZARDS: LOW MEDIUM HIGH VOID SUPPORT CONDITION: GOOD POOR UNKNOWN | <p align="center"><u>STRUCT. RATING</u></p> XP MP LP LR MR XR |
|---|---|---|

| | |
|--|---|
| COORD: _____ PREV. SEARCHED? Y N UNKN | SLOW-GO: FIRE HAZMAT OTHER: _____ NOTES: _____ |
|--|---|

| | | |
|---|---|---|
| STRUCT. ID: _____ OCCUPANCY: _____ FLOOR AREA: _____ No. STORIES: _____ MATERIAL: CMU WOOD STEEL CIP CONC. URM TILT-UP PT CONC. PC CONC. OTHER: _____ | <p align="center"><u>PROBABILITY of VIABLE VICTIMS</u></p> POTENTIAL NUMBER TRAPPED: HIGH MEDIUM LOW VICTIM ACCESS EFFORT: EASY MEDIUM DIFFICULT TYPE of VOIDS: OPEN SEPARATED COMPACT <p align="center"><u>ASSESSMENT of RISK</u></p> PROBABIL. of FURTHER COLLAPSE: LOW MEDIUM HIGH NUMBER of FALLING HAZARDS: LOW MEDIUM HIGH VOID SUPPORT CONDITION: GOOD POOR UNKNOWN | <p align="center"><u>STRUCT. RATING</u></p> XP MP LP LR MR XR |
|---|---|---|

| | |
|--|---|
| COORD: _____ PREV. SEARCHED? Y N UNKN | SLOW-GO: FIRE HAZMAT OTHER: _____ NOTES: _____ |
|--|---|

| | | |
|---|---|---|
| STRUCT. ID: _____ OCCUPANCY: _____ FLOOR AREA: _____ No. STORIES: _____ MATERIAL: CMU WOOD STEEL CIP CONC. URM TILT-UP PT CONC. PC CONC. OTHER: _____ | <p align="center"><u>PROBABILITY of VIABLE VICTIMS</u></p> POTENTIAL NUMBER TRAPPED: HIGH MEDIUM LOW VICTIM ACCESS EFFORT: EASY MEDIUM DIFFICULT TYPE of VOIDS: OPEN SEPARATED COMPACT <p align="center"><u>ASSESSMENT of RISK</u></p> PROBABIL. of FURTHER COLLAPSE: LOW MEDIUM HIGH NUMBER of FALLING HAZARDS: LOW MEDIUM HIGH VOID SUPPORT CONDITION: GOOD POOR UNKNOWN | <p align="center"><u>STRUCT. RATING</u></p> XP MP LP LR MR XR |
|---|---|---|

| | |
|--|---|
| COORD: _____ PREV. SEARCHED? Y N UNKN | SLOW-GO: FIRE HAZMAT OTHER: _____ NOTES: _____ |
|--|---|

- Instructions for RST Forms** Note: XR is used to indicate High Risk, since HR indicates Human Remains. XP = High Probability
1. The purpose of RST- 1 & 2 is to aid in rapidly determining Probability of Viable Victims and Relative Risk for numbers of structures.
 2. The forms would be used when US&R forces need to respond to a large number of damaged structures following a sudden event.
 3. Each structure is given a Rating for Viable Victim Probability: LP = Low, MP = Medium, and XP = High Probability.
(Note: Input from Search Team Mgr & Rescue Team Ldr or Squad Officer should be sought in determining Victim Viability Rating.)
 4. Each structure is given a Rating for Risk: LR = Low, MR = Medium, and XR = High Risk.
 5. These ratings should be based on the criteria listed, and more than one structure may have the same rating.
 6. The ratings should be based on the best judgments of the team, and must be made very rapidly. This form is only a guide.
 7. Record GPS coordinates in the provided box. Specify format (always check with IST or Plans to determine proper format & datum).

Hazards Evaluation Form HAZ-1

Date/Time: _____

By: _____

Page _____

of _____

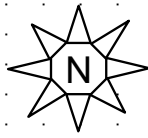
CIRCLE ALL INFORMATION AND DATA THAT APPLY

NOTE: AFTERSHOCKS MAY CAUSE ADDITIONAL DAMAGE OTHER THAN NOTE

| | |
|--|---|
| STRUCT. ID: _____ OCCUPANCY: _____ No. STORIES: _____ BASEMENTS: _____ | STRUCTURE MARKING: <input type="checkbox"/> DATE/TIME OF DISASTER: _____ <input type="checkbox"/> DATE/TIME OF EVAL: _____ |
| MATERIALS: CMU WOOD STEEL CIP CONC. URM TILT-UP PT CONC. PC CONC. OTHER: _____ | TYPE OF COLLAPSE: PANCAKE SOFT 1st FLOOR WALL FAILURE TORSION MIDDLE STORY OVERTURNING OTHER: _____ |
| LATERAL SYSTEM: SHEARWALL MOMENT FRAME BRACED FRAME OTHER: _____ | LOCATION OF VOIDS: BETWEEN FLOORS BASEMENT SHAFTS OTHER: _____ |
| ACCESS POINTS/STRATEGY: ▲ A _____ ▲ B _____ ▲ C _____ ▲ D _____ | VICTIM & OTHER INFORMATION: _____ _____ _____ |

| HAZARD <small>(On sketch)</small> | TYPE / DESCRIPTION | SEVERITY <small>(9 High, 1 Low)</small> | COMMENT |
|--------------------------------------|--------------------|--|---------|
| 1 | _____ | | _____ |
| 2 | _____ | | _____ |
| 3 | _____ | | _____ |
| 4 | _____ | | _____ |
| 5 | _____ | | _____ |
| 6 | _____ | | _____ |
| 7 | _____ | | _____ |
| 8 | _____ | | _____ |

SKETCH: **SIDE C**



SIDE E
SIDE C

SIDE A

Hazards Evaluation Form HAZ-2

Date/Time: _____

By: _____

Page _____

of _____

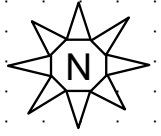
CIRCLE ALL INFORMATION OR ITEMS THAT APPLY

NOTE: AFTERSHOCKS MAY CAUSE ADDITIONAL DAMAGE OTHER THAN NOTE

STRUCT. ID: _____

SKETCH:

SIDE C



SIDE E

SIDE D

SIDE A

US&R Structure / Hazards Check List - HAZ-3

By: _____

This is only a Check List. Check all Appropriate Structure Hazards

STRUCTURE DESCRIPTION:

Bldg ID: _____

No. Stories: _____ No. Basements: _____

TYPE OF COLLAPSE:

| | | |
|---------|----------------|--------------|
| Pancake | Soft 1st Floor | Wall Failure |
| Torsion | Middle Story | Overturn |
| Other: | | |

From a SAFE Distance, CHECK:

- Alignment of Structure's Corners & Faces
- Alignment of Structure's Floors
- Condition of Openings
- Condition of Facing or Projecting Elements
- Presence of Precast Conc Facing or Brick/Stone Veneer
- Presence of other FALLING HAZARDS
- Presence of Rooftop Equipment, Towers, etc
- Presence of Distinctive Elements, Additions, Stairwells
- Any Alternate Energy Source - Generator, Solar Elec
- Presence of Tanks w/Explosive/Corrosive Material

Walk around Structure and CHECK:

- Continuity of Vertical load Path
- Continuity of Lateral Load Path
- Alignment & Condition of all Wall Piers
- Condition of Foundation & Adjacent Ground
- Presence of Flowing Liquids
- I.D Areas of Structure to be avoided
- I.D. Sections with potential for Brittle Failure
- I.D most PROBABLE Collapse Mode
- I.D All Exterior FALLING HAZARDS
- I.D All Ingress and Egress Locations

If you choose to enter the Structure:

- Make sure that at least one other Team Member remains outside and you maintain radio contact
- Notify TFL you are entering structure - Which Side
- Leave Easily Visable Trail as you explore interior **
- Check Each Closed Door for heat PRIOR to OPENING
- Inspect Ground Floor Level Before moving Upward
- Check Main Columns and Shear Walls-Cracks, Spalling
- Check Main Beam to Column Connections
- Check Stair wells for Damage and Access
- Check Condition of Floor System
- I.D. All Interior Collapse Hazards
- I.D All Interior Falling Hazards
- Locate Safe Havans and Escape Routes
- Report all Data to Outside Person before continuing
- Proceed Up/Down Only if Can Maintain Radio Contact
- Proceed to Upper Stories, Check each before Proceeding
- Proceed to Basement and Check Structure & Foundation

NOTES

1. ** Suggestions for Visable Trail are: Light Sticks, Paint Arrows on floor, Electronic Relay Devices

Hazards Mitigation Form MIT-1

Date/Time: _____

By: _____

Page _____

of _____

CIRCLE ALL INFORMATION OR ITEMS THAT APPLY

NOTE: AFTERSHOCKS MAY CAUSE ADDITIONAL DAMAGE OTHER THAN NOTE!

STRUCT. ID: _____

OCCUPANCY: _____

No. STORIES: _____ **BASEMENTS:** _____

MATERIALS:

| | | | |
|-----|---------|----------|-----------|
| CMU | WOOD | STEEL | CIP CONC. |
| URM | TILT-UP | PT CONC. | PC CONC. |

OTHER: _____

TYPE OF COLLAPSE:

| | | |
|---------|----------------|--------------|
| PANCAKE | SOFT 1st FLOOR | WALL FAILURE |
| TORSION | MIDDLE STORY | OVERTURNING |

OTHER: _____

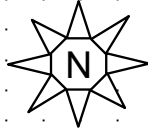
MITIGATION ABBREVIATIONS/SYMBOLS:

| | |
|---------------------------|---------------------------|
| A&B ← Avoid & Barricade | M-Exp ← Minimize Exposure |
| Remo ← Remove | Shld ← Shield |
| Mon ← Monitor | T ← Single Spot Shore |
| V-Sho ← Vertical Shore | TT ← Double Tee Shore |
| H-Sho ← Horizontal Shore | V-2 ← 2-post Vert. Shore |
| Rkr ← Raker Shore | V-3 ← 3-post Vert. Shore |
| DB ← Diagonal Brace | LP ← Laced Post |
| V-TB ← Vertical Tieback | C ← Cribbing |
| H-TB ← Horizontal Tieback | |

| HAZARD (From HAZ-1) | MIT METHOD (Use abbrev. & mark on sketch) | PRIORITY (1 High, 9 Low) | TIME REQ'D (Est. in hours) | COMMENT |
|------------------------|--|-----------------------------|-------------------------------|---------|
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |
| 6 | | | | |
| 7 | | | | |
| 8 | | | | |

SKETCH:

SIDE C



SIDE A

SIDE E

SIDE D

Hazards Mitigation Log MIT-Log

Date/Time: _____ By: _____ Page _____ of _____

Where required, circle all the information or items that apply.

NOTE: AFTERSHOCKS MAY CAUSE ADDITIONAL DAMAGE OTHER THAN NOTED.

STRUCT. ID: _____

| HAZARD (From HAZ-1) | MIT METHOD (From MIT-1) | DATE | TIME | COMMENT |
|------------------------|----------------------------|------|------|---------|
| ① | | | | |
| ② | | | | |
| ③ | | | | |
| ④ | | | | |
| ⑤ | | | | |
| ⑥ | | | | |
| ⑦ | | | | |
| ⑧ | | | | |

US&R Struct. Monitoring Form - MON-2

By: _____ Date: _____

Mon-2 Sh of _____

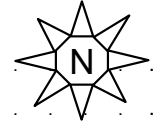
Monitoring Began _____

Monitoring Ended _____

ADDITIONAL INSTRUMENT SETUP LOCATIONS

Location _____ Job Name _____
 Description _____ IP Coordinates _____

SKETCH OF SITE (show structure, instrument, CPs):



CONTROL POINTS - at least three (see CP-LOG)

Name _____
 Location _____
 Description _____

MONITORING POINT # (MP _____)

Location _____
 Description _____
 ALERT displacement = _____
 ALARM displacement = _____

CONTROL POINTS - at least three (see CP-LOG)

Name _____
 Location _____
 Description _____

MONITORING POINT # (MP _____)

Location _____
 Description _____
 ALERT displacement = _____
 ALARM displacement = _____

CONTROL POINTS - at least three (see CP-LOG)

Name _____
 Location _____
 Description _____

MONITORING POINT # (MP _____)

Location _____
 Description _____
 ALERT displacement = _____
 ALARM displacement = _____

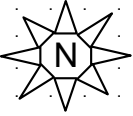
CONTROL POINTS - at least three (see CP-LOG)

Name _____
 Location _____
 Description _____

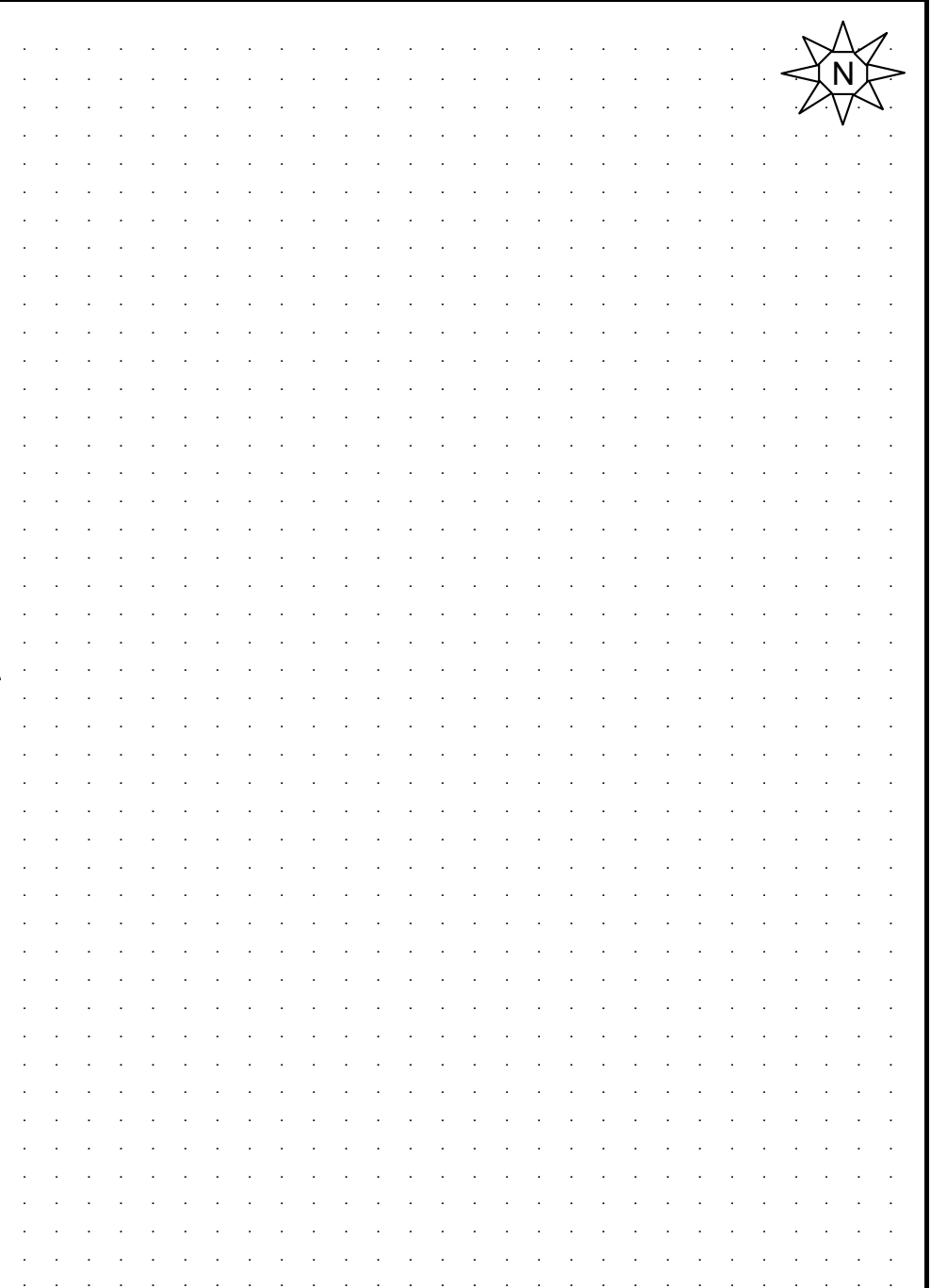
MONITORING POINT # (MP _____)

Location _____
 Description _____
 ALERT displacement = _____
 ALARM displacement = _____

Grid area for sketching the site. The grid consists of a series of small squares. A north arrow is located in the top right corner of this area.

| CONTROL POINT | READINGS* | | TIME | IP Loc. | Comments, notes, angles... | SITE PLAN SKETCH |
|---------------|-----------|--|------|---------|----------------------------|---|
| | | | | | |  |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

* NOTE: Total Station record X, Y, Z coordinates. Theodolite record Horizontal (HA) and Vertical (VA) Angle.

| POINT | READINGS* | | TIME | IP Loc. | Comments, notes, angle | SKETCH |
|-------|-----------|--|------|------------|------------------------|--|
| | | | | | |  |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

* NOTE: Total Station record X, Y, Z coordinates. Theodolite record Horizontal (HA) and Vertical (VA) Angle.

| | |
|-------------------------------|--------------------------------|
| STRUCTURE DESCRIPTION: | HAZARDS: |
| | Haz Mat situations |
| | Hanging or falling debris |
| Bldg I.D. | Heavy Equipme in area |
| | Other rescue personnel in area |

ENDING SHIFT SUMMARY:

.....

.....

.....

.....

PRIORITIES FOR NEW SHIFT:

.....

.....

.....

.....

| | |
|---------------------------|--------------------------------------|
| OPERATIONS: | NEW/ADDITIONAL FORCES |
| Monitoring devices | Aftershocks |
| Status of debris removal | Wind |
| Ongoing rescue operations | Rain (settlement due to undermining) |
| Victim removal | Possible secondary explosions |
| | New partial collapses |

| | |
|-----------------------------------|-----------------------------|
| MITIGATION STATUS REPORT: | EQUIPMENT AVAILABLE: |
| Changes to mitigation operations | Lost |
| Locations of shores to be checked | Broken |
| Areas requiring shoring | Used up |
| Monitoring devices | Needed |

MISCELLANEOUS:

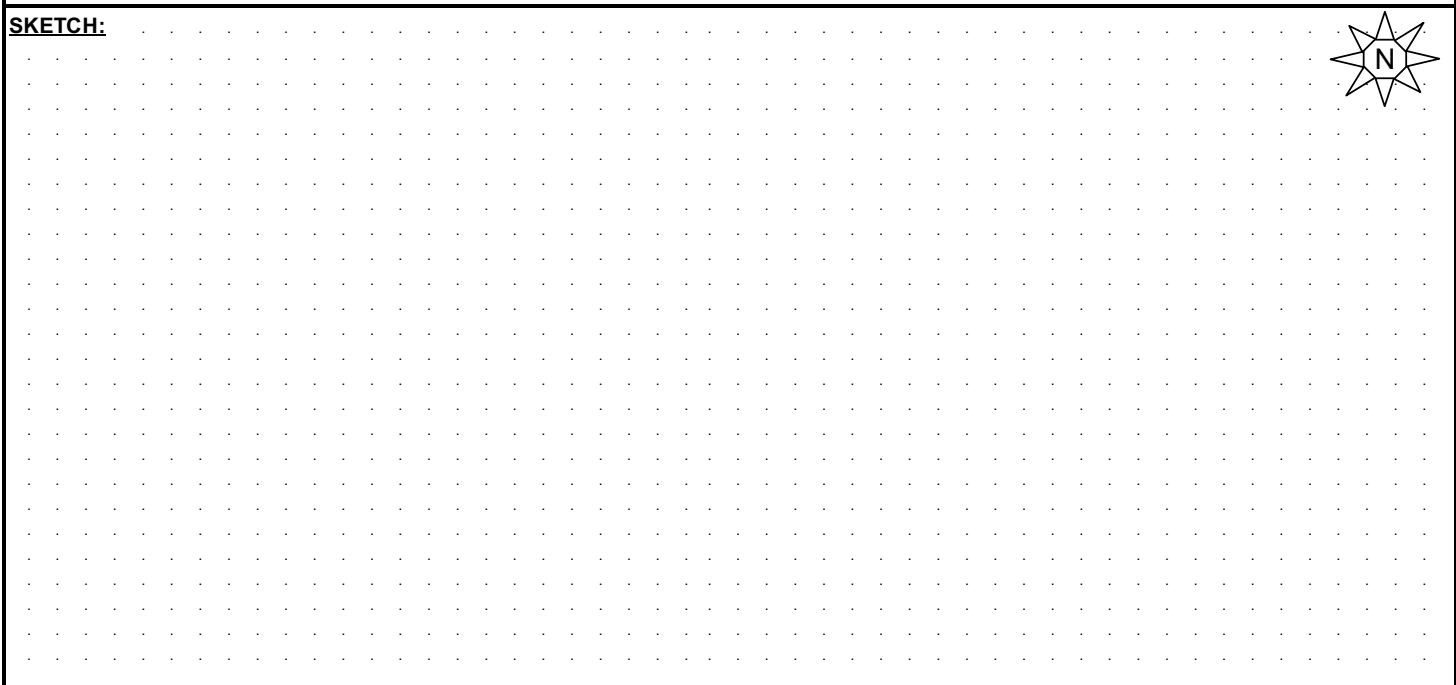
.....

.....

.....

.....

SKETCH:



A large grid for sketching, with a compass rose in the top right corner. The compass rose is a star-shaped symbol with the letter 'N' in the center, indicating North.

Situation Name: _____
Rigging Task: _____
Weather Conditions: _____

Date and Time of Lift: _____
Task Force Name: _____
Task Force Leader: _____

Load Description: _____
 Load Weight: _____
 Block Weight: _____
 Rigging Weight: _____
 Jib Weight: _____
 Jib Ball Weight: _____
 Hoist Line Weight: _____
 Other Weight: _____
Total Weight: _____

Crane Operator: _____
Crane Make & Model: _____
Crane Serial No: _____
Boom Length: _____
Jib Length: _____
Jib Position: Stowed Retracted Offset at _____
Size of Counterweights Installed: _____
Front Outrigger Installed: Yes No

Lift will be On: On Main Block On Jib

Setup On: Crawlers Outriggers Tires
 Extended Retracted Other

Max. Intended Working Radius
 Over Rear: _____
 Over Side: _____
 Over Front: _____

Boom Angle:
 Over Rear: _____
 Over Side: _____
 Over Front: _____

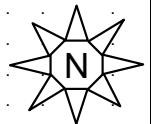
Rated Capacity:
 Over Rear: _____
 Over Side: _____
 Over Front: _____

Percent of Capacity :
 (Total Load / Rated Capacity)
 Over Rear: _____
 Over Side: _____
 Over Front: _____

Hazards: Electrical Fire Underground Other _____

Are Crane Mats, Blocking Req'd: _____

SKETCH:



Grid area for sketching the crane setup.

US&R Shoring Check List - SHOR-1

By: _____

This is only a Check List. Check all Appropriate Structure Hazards

| | | | | | | | | | | |
|---|--|--------------|----------------|--------------|---------|--------------|----------|--------------|--|--|
| <p>STRUCTURE DESCRIPTION:</p> <p>Bldg ID: _____</p> <p>No. Stories: _____ No. Basements: _____</p> | <p>TYPE OF COLLAPSE:</p> <table style="width:100%; border: none;"> <tr> <td style="width:33%;">Pancake</td> <td style="width:33%;">Soft 1st Floor</td> <td style="width:33%;">Wall Failure</td> </tr> <tr> <td>Torsion</td> <td>Middle Story</td> <td>Overturn</td> </tr> <tr> <td colspan="3">Other: _____</td> </tr> </table> | Pancake | Soft 1st Floor | Wall Failure | Torsion | Middle Story | Overturn | Other: _____ | | |
| Pancake | Soft 1st Floor | Wall Failure | | | | | | | | |
| Torsion | Middle Story | Overturn | | | | | | | | |
| Other: _____ | | | | | | | | | | |
| <p>SHORING SIZE-UP</p> <p>I.D. Damage, Hazards & Potential Victim Locations:</p> <ul style="list-style-type: none"> <input type="checkbox"/> What caused collapse? <input type="checkbox"/> Potential for Aftershocks? <input type="checkbox"/> Is structure leaning and/or openings racked? <input type="checkbox"/> Are floors sloped? Is floor hinged or free? <input type="checkbox"/> Is there a V or A collapse w/ ladder effect? <input type="checkbox"/> Best method to mitigate hazards & damage? <input type="checkbox"/> Avoid, Remove, Limit Access <input type="checkbox"/> | <p>SHORING INSPECTION</p> <p>Inspect shores every 12 hours (Shift Change), and/or following any known loading change such as: Aftershocks, High Winds, Secondary Explosion, Load Shift and/or Change.</p> <p>Check for proper construction of shore</p> <ul style="list-style-type: none"> <input type="checkbox"/> Check to see if posts are straight, plumb, and have full bearing on header and wedges <input type="checkbox"/> Are connections tight and wedges snug? <input type="checkbox"/> Is header in full contact with supported structure? <input type="checkbox"/> Has sole deflected due to soft soil or support? <input type="checkbox"/> Are all components of shoring system in place? | | | | | | | | | |
| <p>If Shoring is to be built, determine the following:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Type & Placement relative to Hazards and Victims <input type="checkbox"/> Type of structure: Concrete, Wood, URM, PC Conc. <input type="checkbox"/> What supports the shoring; Slab on Ground, Soil, Basement Slab, or upper Story <input type="checkbox"/> Condition of supported Structure: Cracked Solid Slab, Beamless Slab, Beams supporting slabs or joist; Wood or Steel joist or trusses <input type="checkbox"/> Support beams that support slabs or joists <input type="checkbox"/> Check sagging beams/girders, or beams with damaged connections <input type="checkbox"/> For wood structures, to support joists, place shores perpendicular to joist and align posts under joist. <input type="checkbox"/> Consider Sloped Floor Shores or Cribbing for limited height conditions. | <p>Check for signs of overload.</p> <ul style="list-style-type: none"> <input type="checkbox"/> Cupping of wedges and crushing of sole. <input type="checkbox"/> Crushing of header at post. <input type="checkbox"/> Splitting of header at end of overhang. <input type="checkbox"/> <p>Actions to be taken if signs of overload are observed.</p> <ul style="list-style-type: none"> <input type="checkbox"/> Add additional shoring. <input type="checkbox"/> Have structure re-evaluated by a StS to see if it is responding differently than expected <input type="checkbox"/> Check assumptions of original shoring design. <input type="checkbox"/> | | | | | | | | | |
| <p>Prepare the area to be shored:</p> <ul style="list-style-type: none"> <input type="checkbox"/> May need to remove debris and floor coverings. <input type="checkbox"/> If soil supported, use 18"x18" foot under post location <input type="checkbox"/> Consider temporary shores to reduce risk (T or Dbl-T). <input type="checkbox"/> Prefab. shoring as much as possible to reduce risk. <input type="checkbox"/> Add bracing after wedges are tightened. | | | | | | | | | | |

US&R Tunnel / Hazards Evaluation Form T-HAZ-1

By: _____

Need to re-evaluate following Aftershocks or Secondary Collapse

STRUCTURE DESCRIPTION:

Tunnel Name: _____

Struct. Number: _____

Begin Station: _____

End Station: _____

Other I D Information

LINER TYPE: (Circle type that applies)

UR = Unlined Rock CIPNR = Cast-in-place, no Reinf.

CIPR = CIP Conc, Reinf. SG = Shotcrete/Gunite

PCLS = Precast Conc. Liner Segments URM

SCB = Steel Columns & Beams, Jack Arches TIMBER

VICTIM & OTHER INFORMATION:

LOCATION OF BEST ACCESS & SAR STRATEGY:

OVERALL MARKING:

Date/Time of Eval:

Date/Time of Disaster:

Low Hazard

Medium Hazard

High Hazard

TUNNEL COMPONENT HAZARD MARK DEFINITIONS

L = Low Hazard
X = High Hazard

M = Medium Hazard
N = Not Applicable/No Hazard

COMPONENT EVALUATION:

Upper Plenum

Underside of Roof _____

Top of Ceiling Slab _____

Right Wall _____

Left Wall _____

Miscellaneous

Safety Walks _____

Railings _____

Utility Support _____

Other _____

Lower Plenum

Underside of Roadway Slab _____

Bott. of Plenum Slab _____

Right Wall _____

Left Wall _____

Portals

TF Entry End _____

TF Exit End _____

Other:

Roadway

Underside of Ceil/Roof Slab _____

Top of Roadway Slab _____

Right Wall _____

Left Wall _____

SKETCH:

Grid area for sketching with a north arrow in the top right corner.

US&R Rapid Bridge Assessment Form RBA-1

By: _____

Need to Re-Assess following Aftershock or Additional Flooding

BRIDGE DESCRIPTION:
 Bridge Name & Roadway: _____
 City - County - Vicinity: _____
 Length Ft: Width: Abutment Ht. High Low
 GPS Coordinates: _____

TASK FORCE BRIDGE ASSESSMENT MARKING:
 Date/Time of Eval: _____
 Date/Type of Disaster: _____
 NO Task Force Restrictions TF Pass w/Restrictions
 Task Force Passage PROHIBITED

INTERNAL SUPPORTS - Number of Spans: Height:
 Support Type: (circle type) Bents Columns Piers
 Foundation Type: Deep (Pile) Shallow (Spread)

HAZARD MARK DEFINITIONS
 L = Low Hazard M = Medium Hazard
 X = High Hazard N = Not Applicable/No Hazard

BRIDGE TYPE: (Circle type that applies)
 Simple Span Multri-Span Truss Arch Culvert
 Movable: Swing Vert. Lift Draw/Bascule

COMPONENT EVALUATION: Mark all L, M, X, or N

| | | | |
|-----------------------|-------|---------------------|-------|
| <u>Foundation</u> | | <u>Geotechnical</u> | |
| Abutments | _____ | Liquefaction | _____ |
| Interior Supports | _____ | Faulting | _____ |
| Wing Walls | _____ | Scour | _____ |
| Explain: | _____ | Landslide | _____ |
| | | <u>Other:</u> | _____ |
| <u>Approaches</u> | | | _____ |
| Roadway Settlement | _____ | | _____ |
| Horizontal Offset | _____ | | _____ |
| Bridge Seat Bearing | _____ | | _____ |
| Type of Bearing | _____ | | _____ |
| <u>Superstructure</u> | | | _____ |
| Beam/Girder/Truss | _____ | | _____ |
| Slab/Deck | _____ | | _____ |
| Expansion Joint | _____ | | _____ |
| Other | _____ | | _____ |

BRIDGE MATERIAL: (Circle all types that apply)
 Wood Beam Wood Arch Wood Truss Other _____
 Steel Stringer Steel Girder Steel truss
 CIP Conc Slab CIP Conc Beam CIP Conc Arch
 Precast Tee PC Girder PC Slab/Box Posten

OTHER INFO: _____

SKETCH: