

HOUSTON FIRE DEPARTMENT

STRUCTURAL RISK ASSEMENT PLAN (NON ARFF)

TYPE OF DUTIES PERFORMED

1. STANDARD STRUCTURAL FIREFIGHTING DUTIES
2. INTERIOR FIREFIGHTING
3. HI RISE FIREFIGHTING
4. FIRE VICTIM RESCUE
5. FIRE SUPPRESSION
6. VERTICLE VENTILATION
7. HORIZONTAL VENTILATION
8. FORCIBLE ENTRY
9. OVERHAUL
10. BUILDING SYSTEM CONTROL
11. VEHICLE RESCUE
12. TECHNICAL RESCUE
13. HAZARDOUS MATERIALS CONTROL
14. EMERGENCY MEDICAL SERVICES

AREA AND SCOPE OF RESPONSE

1. THE AREA OF THE CITY OF HOUSTON IS 627 SQ. MILES
2. 1900S ERA WOODEN RESIDENTIAL
3. COMERCIAL HI RISE
4. RESIDENTIAL HI RISE
5. LARGE MEDCIAL COMPLEX
6. LARGE CHEMICAL REFINARY COMPLEX
7. 6 LARGE STADIUM VENUES
8. LARGE CHEMICAL AND REFINARY RAILROAD AND PORT SYSTEM
9. LARGE AMOUNT OF AIR TRAFFIC OVER NON ARFF AREAS
10. WILD LAND AREAS

ENVIRONMENT

1. AVERAGE HUMIDITY OVER 80 %
2. 100 DAYS IN EXCESS OF 90 DEGREES PER YEAR
3. AVERAGE 10 DAYS BELOW FREEZING PER YEAR
4. AVERAGE RAIN FALL OF 50 INCHES

ORGIZATIONAL EXPERIENCE

1. TOTAL EMERGENCY RESPONSE PER YEAR 335,967
2. TOTAL FIRE RESPONSE PER YEAR 43,000

The current protective ensemble has lowered the frequency of burn injuries and decreased the number of heat related injuries.

- The current bunker pants and coat as specified have an enhanced TPP and an advanced ergonomic design. The higher TPP and Lower THL numbers have lowered the thermal insult on firefighters during operations. This has been evaluated through laboratory testing, simulated live fire testing, long term wear testing and documented fire ground reporting.
- The current helmet design as specified has been evaluated to fit the most members correctly and has shown to lower the center of gravity allowing the firefighter to retain the helmet securely on the head (a fact in several HFD line of duty deaths).
- The current boots as specified have been evaluated to provide for the traction needed when operating on steep roofs, thermal protection and flexibility to allow climbing of ladders and climbing of hi rise stairs. The one piece Kevlar sock liner has increased cut resistance and may provide more CBRN protection.
- The current Kangaroo skin gloves as specified have provided advanced thermal protection and dexterity while the sleeve mate design provides additional protection from steam and hazardous materials.
- The current SCBA are in the process of being replaced with NFPA 1852 and NFPA 2013 standard units.
- The current Reed protective fire hood and the replacement sock hood as specified with a moisture barrier material as a layer have shown to be beneficial in the reduction of thermal injuries and are thought to be responsible for a cancer rate lower than the current national rates.
- HFD currently uses in mask communication and sees this as a very important safety benefit. Lack of communication is a factor mentioned in most firefighting line of duty death reports.

The current PPE as specified (attached) has a very low failure rate and has decreased injury rates for the HFD. The HFD has also shown to have cancer rates lower than the national rates for firefighters. This is believed to be largely due to the fact that the HFD gear specifications exceed NFPA 1971.