

# Using a Mobile Device to Collect and Retrieve Pre-Plan Information for Fire Emergencies



**Abstract:** The New Jersey Meadowlands Commission (NJMC) is a regional planning agency that promotes sharing information and resources with District municipalities and assists Meadowlands towns in managing municipal assets and emergency preparedness. The Emergency Response Information Systems (ERIS) is an interactive web based mapping system with a mobile pre-plan App. The mobile application enables emergency responders to record pre-plan information of buildings and critical facilities in their towns using a tablet or a smart phone. During an emergency they can retrieve the information using the same mobile device. The system also allows emergency responders to retrieve and inspect floor plans of buildings and critical facilities from their smart phones and submit wireless incident reports when the emergency is over.



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## 1. Capturing Pre-Planning Data

Building information is collected using a mobile device. The data is sent to the server where an authorized emergency official approves all submissions that are posted. Images of buildings can also be uploaded and posted.



FACP Panel



Knox Box



Standpipe System



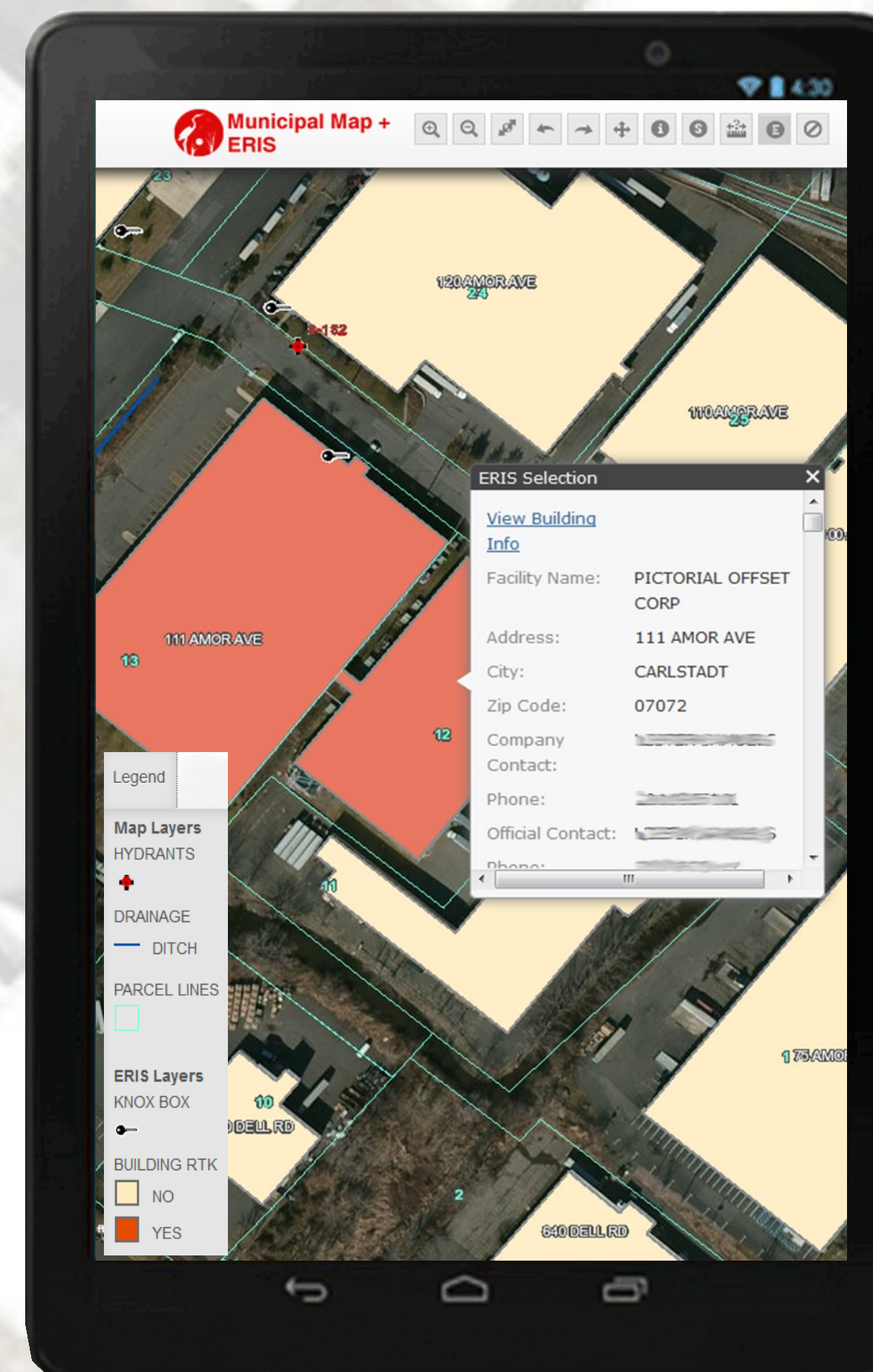
Roof Truss



Fire Hydrant

| Data Captured For Pre-Plan  |                                     |   |
|-----------------------------|-------------------------------------|---|
| <b>General Information</b>  | Occupancy Type                      | Smoke Control System                    |
| Property Address            | Roof Type                           | Location(s) served by Smoke Control     |
| Building Address            | PV Solar Energy System Present      | Location of Smoke System Controller     |
| Occupancy Name              | Knox Box Location                   | Fire Protection Notes                   |
| Cross Street                | Basement                            | <b>Building Utilities</b>               |
| <b>Emergency Contact</b>    | Exposures                           | Electric Service main                   |
| Contact Name                | <b>Fire Protection Systems</b>      | Gas service main                        |
| Contact Address             | FACP Location                       | PV Solar System Disconnect Locations    |
| Company Name                | FACP Reset Code                     | Generator Location                      |
| <b>Hazards</b>              | Remote Annunciator Location         | Utilities powered by generator          |
| Hazards                     | Automatic Sprinkler System          | Utility Notes                           |
| <b>Building Information</b> | Sprinkler Locations                 | <b>Elevators</b>                        |
| Roof Trusses                | Sprinkler Control Valve Location(s) | Elevator Type                           |
| Floor Trusses               | Standpipe System                    | Number of elevator cars                 |
| Height                      | Riser/Valve Location(s)             | Location of machine rooms               |
| Height Units                | FDC Location                        | Elevator Contractor Contact Information |
| Area                        | Control Valve Location(s)           | Elevator Notes                          |
| Area Units                  | Building Fire Pump                  | <b>Special Occupancy Consideration</b>  |
| Construction                | Location of Fire Pump Controller    | Special Occupancy Considerations        |

ERIS is a web application using HTML5 and ESRI JavaScript API to display map information from MERI-GIS ArcGIS server. It is created with a responsive design to be easily displayed on desktop and mobile devices. MERI-GIS uses crowd source building information from emergency responders.



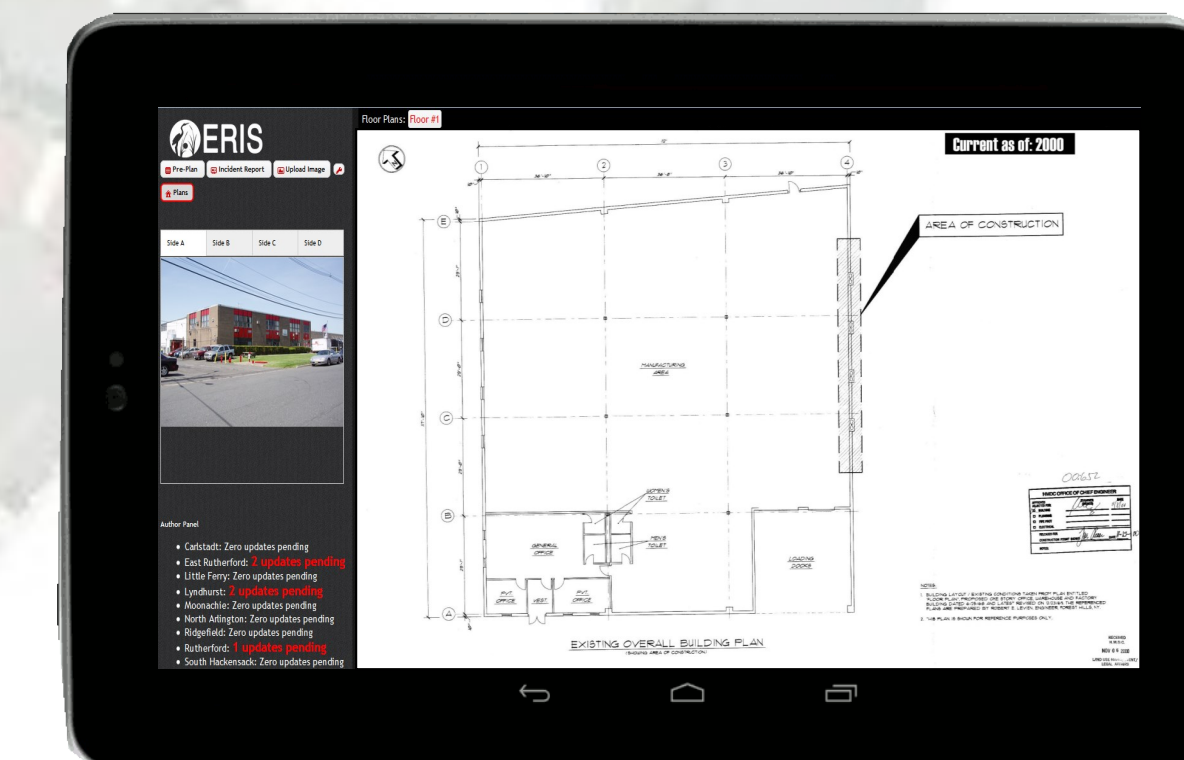
PHP is used to store information.



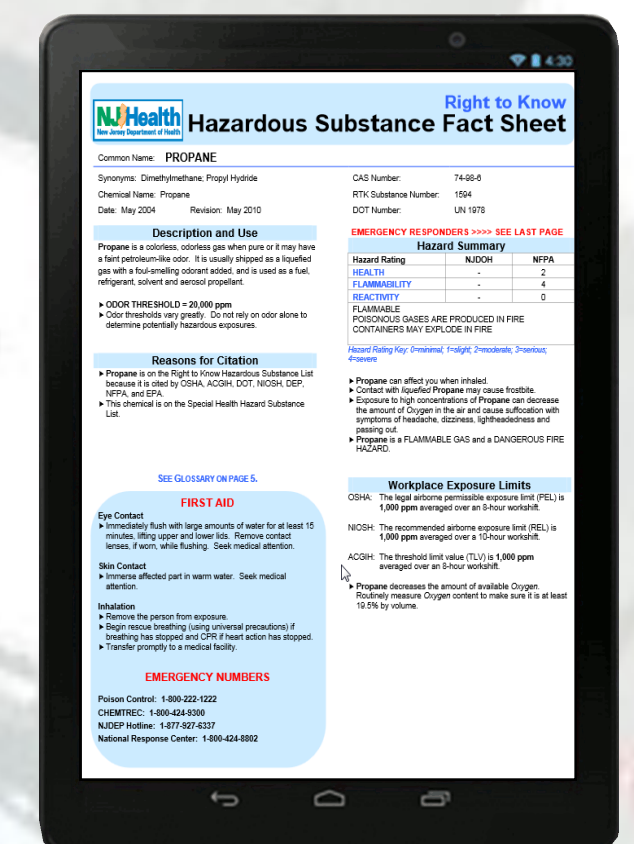
MERI's SQL Enterprise GIS Database

## 2. Accessing Pre-Planning Data

On the scene of a fire, emergency personnel can easily access pre-plan information previously posted. Officials can view fire hydrant location and strategic firefighting infrastructure associated with each building, floor plans, types of hazardous substances and the associated fact sheet.



Tablet showing building floor plan.



Tablet showing hazardous substance fact sheet.

## 3. Incident Report

Once the emergency is over, officials can submit an incident report via their smart phone or tablet, which populates an incident database accessible only to authorized emergency personnel.



| Incident Report       |
|-----------------------|
| Responder Name        |
| Responder Designation |
| Address               |
| Type of Incident      |
| Occupied              |
| Condition             |
| Condition Locations   |
| Actions Taken         |
| Notes                 |
| Location of Command   |

The aerials of American Dream shows an example of uploaded images.

