US NATIONAL GRID – WHICH COORDINATE SPECIFIES A STRUCTURE?

Purpose:

1) To clarify & specify the selection of a single US National Grid (USNG) coordinate that will represent the Geo-address of structure in internally or externally published fire department documentation.
2) To specify what USNG coordinate shall be placed in any signage or marking.

Scope: Fire Department pre-planning and fire inspection operations in advance of incident operations.

Summary: 1) The USNG coordinate selected shall be on Side "A" (Alpha) in the close proximity to the primary entrance. As is standard for fire rescue operations, the USNG coordinate shall be limited to 8-digits; a precision of 10 meters square (33 feet square). Example: **15S VB 3349 6268**

2) If signage is to be created with USNG coordinates, the coordinate used shall always be accurate to the location where the sign is installed. In this manner, any user of a USNG gridded map and/or GPS receiver shall be able to correlate their position exactly to the sign or curb marking.

In the curb marking scenario for selected facilities, the marked coordinate may also be the coordinate selected on Side "A" to represent the entire structure in pre-plan and inspection documentation ONLY if that coordinate is within 33 feet (10 meters) of the curb location. In many cases this is possible. In cases where it is not, the locations will be specified by different coordinates.

Discussion:

The Side "A" (Alpha) designator is determined by the Authority Having Jurisdiction (AHJ) for the documentation being created. The pre-plan team and/or fire inspector conducts a thorough survey of the structure to include all entrances and then decides which is the "primary" entrance. Use of that primary entrance will allow for expedited access by responders. It is for this reason that the USNG coordinate specified for the structure should be at this location. Note that the responders may not be from the first due stations in times of disaster and thus the time saved by use of the pre-determined best access point is obvious. Thus, use of center of mass of the structure coordinates or property centroid coordinates will only serve to cause user delay upon arrival as personnel would perhaps have to circumnavigate around the those coordinates to find the best entrance.

It should be noted that pre-plan and fire inspection documentation may easily use additional USNG coordinates to specify hazards, utilities, special conditions, etc.

With respect to signage, the sign must be for the present location of the sign. In this manner any map reader or GPS user will validate their position with the sign's listed coordinates. If the sign must be remote to the desired end location, then "ACCESS TO" verbiage or arrows, with distances or some other means shall be used to ensure that the reader knows that the USNG coordinate on the sign is not the location of the sign.

Rev 0, 7/31/2011, A. Studt, Lieutenant, Cape Canaveral Fire Rescue

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Example1: 190 Jackson Avenue, Cape Canaveral, Florida

Illustration 1: Side "A" coordinate = 17R NM 3875 4015

Example 2: 404 Harrison Avenue, Cape Canaveral, FL

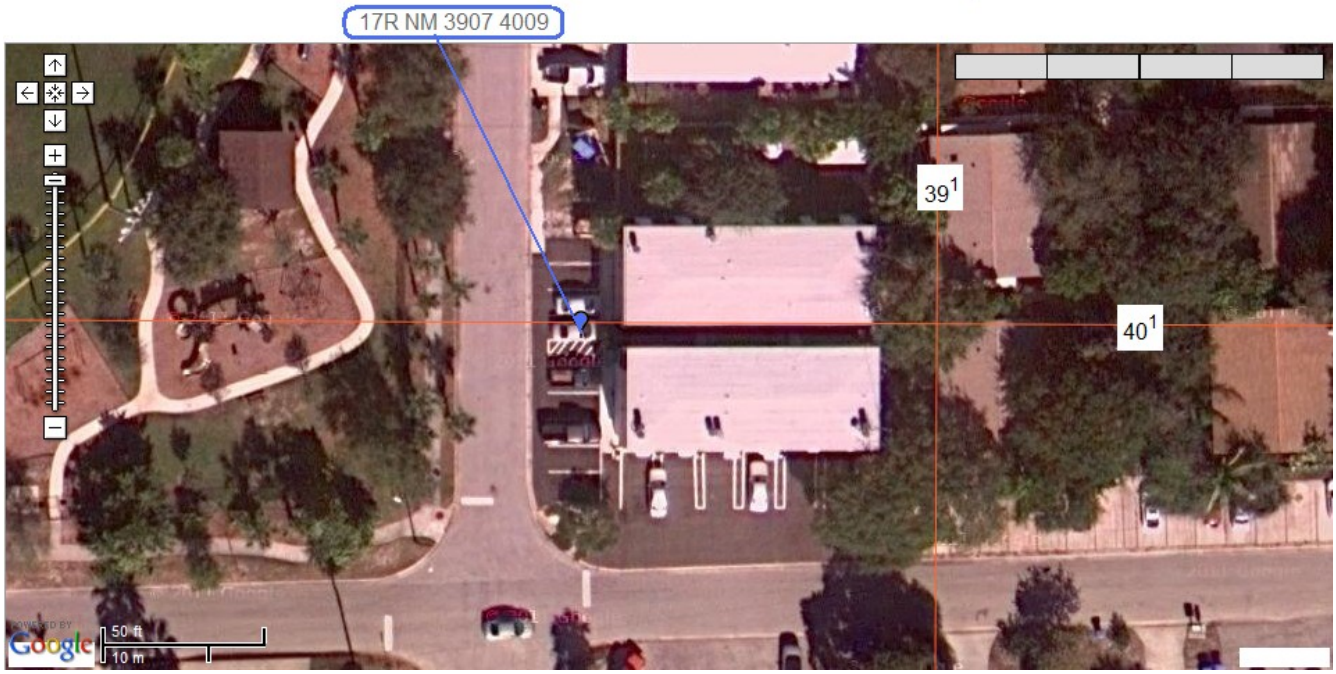

Illustration 2: Side "A" coordinate = 17R NM 3907 4009

Note that there is no access to the interior from Harrison Ave (the east-west street).