

NORTH COUNTY FIRE PROTECTION DISTRICT



Digital Submission Standards

Emergency Response Mapping and Occupancy Pre-Plans

The emergency response mapping system employed by the NCFPD is a GIS based system. To ensure that the district obtains all necessary emergency response and or occupancy pre-plan information for your project, a CD containing the required GIS information is required **prior** to release of your approved plans.

North County Fire has deemed the following developments as being required to meet this standard:

Residential Developments- five or more units
Multi-Family- two or more units
Commercial
Industrial
Office Buildings
Schools
Churches

This document provides the guidelines and recommended specifications for outside vendors, engineering and architectural firms to submit AutoCAD and compatible formatted files so that these files can be moved into a GIS environment as efficiently as possible. Most engineering and development companies work within an AutoCAD environment and therefore, it is a common practice to have them supply the files during the normal building process. However, these firms may not be familiar with the current GIS environment and may not be familiar with the requirements for GIS in general. Moreover, there is a tendency to supply the data in the same environment that they created it in which is typically so complex and convoluted that it takes more time to ferret through the maze of layers, symbol sets, and files than to just redo the work from scratch. This document covers four specific areas:

- .
Projection Information
- .
File Parameters
- .
Feature Element Parameters
- .

Required Layers / Features

Projection Information

There are two possible projection or drawing environments:

Ideally

1.
U.S. Foot Units
2.
California State Plane Coordinates, Zone VI, NAD83 Datum
3.
Reference monument with tie line
3rd order or better.

Otherwise...

1.
U.S. Foot Units
2.
Start at 0, 0 and proceed in a positive, Cartesian grid (World). For example, set drawing up on a standard 10,000 x 10,000 grid.
3.
Reference information of *at least two existing* points or features, separated onto a different layer. The reference points should be in opposite corners of the project area. This can take various forms. For example, two street intersections and their centerlines will usually work, or the original parcel boundaries that circumscribe the development.

File Parameters

1.
AutoCAD DWG or DXF file format, version 2000 – 2004.
2.
Submit an index or graphical legend:
 - a.
Layer Names and descriptions
 - b.
Blocks with description and insertion point
3.
System Variables
4.
UCS = World
5.
DVIEW Twist = 0, SNAP Angle = 0
- 6.

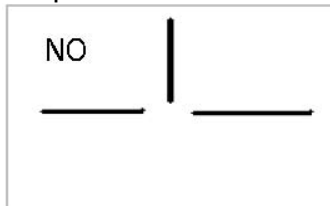
Base point = 0,0

7. No XREFS, Queries, or Cataloged Files, No Attached Images of any kind
8. No BIG Fonts or shape files (SHX)
9. No ARX or other Proxy Objects
10. Purge all unused Blocks, Layers, Styles, etc
11. Do an AUDIT before submittal
12. Do not put any objects in Paper Space
13. Test for 'UFOs' i.e. do a Zoom Extents; if the drawing disappears, you have a feature at the limits of the drawing that should be eliminated.

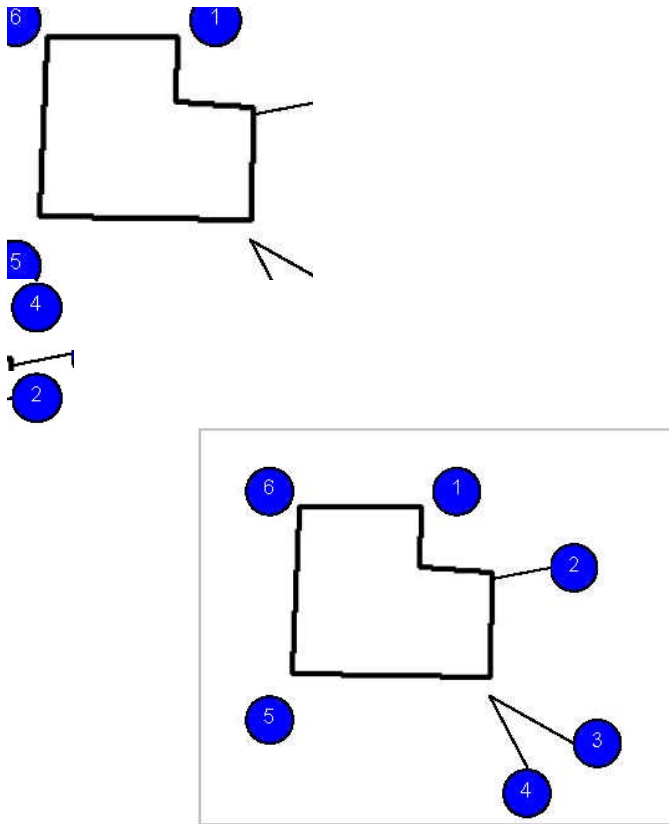
Feature Element Parameters

1. No Ellipses
2. No 3D Objects, Extruded features
3. All features should be coplanar, no vertical curves, all with ELEV set to 0
4. No Solids or hatching
5. No Dimension Objects or Leaders
6. Intersecting lines should meet at the same coordinate. For example, many survey-based documents use an iron pin (IP) at intersecting lots. When the IP is removed, it creates a whole as in the following figure:
7. Polygons.
 - a. Should be closed (use the Close Option)
 - b. Do not contain vertices that have the same coordinate:

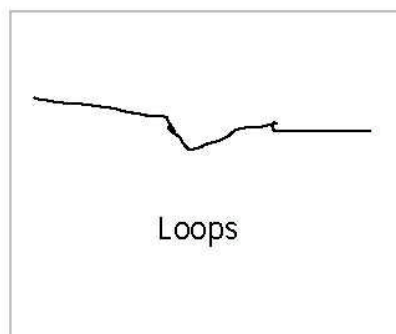
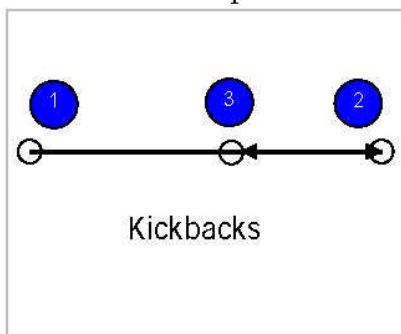
Required



8. Polylines should not have a thickness or custom line type. Test and eliminate any kickbacks or loops.
 - a. Sewer and Storm digitized in the direction of flow
 - b. Streets digitized in the direction of increasing address range
 - c. Use simple 2-point lines and true curves (no vertical curves)
9. Test and eliminate any zero-length lines, polylines LWPolylines. Test for, and eliminate 'null' text.
10. No Sketched line work
11. Blocks.
 - a. Insertion point should be the center point of the object
 - b. Unit-less values, all with the same scale factor
 - c. Do not use blocks that represent anything other than a point feature. For example, model homes and condominiums are polygon features that can be represented as a block inserted into a drawing many times.
 - d. As an alternative, blocks can be represented as simple point features provided that each point feature class is placed on its own layer. For example, all fire hydrants are points on a FHYP layer and all water valves are points on a WTRV layer.
12. Text.
 - a. Simple text strings or MTEXT (limited to 254 characters) only.
 - b. Do not use special characters or formatting options (e.g. %%d, %%u etc).



Polylines should not have a thickness or custom line type. Test at kickbacks or loops.



Required Layers/Features

Ideally, the vendors will WBLOCK the following layers from their own master for GIS. All linear features can be drawn as simple lines, true curves polylines.

Core Features	Structure Features
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· Parcels	· Building Footprint
· Street Centerlines	· Elevators
· R/W	· Stairwells
· Easements (Ingress/Egress)	· FD Connection - Standpipes
· Situs Address*	· FD Connection – Sprinkler System
· APN	· Fire Control Panels
· Street Name	· Roof Access
· Building Footprint	· Main Water Control
· Fire Hydrants	· Storm Drain Intakes

* Could be supplied by Cross Table by Lot #

Please do not provide ANY additional layer or features as they are not needed and will make the transfer of information more difficult and time consuming.

10/08