

DIG SAFE SPECS FOR UTILITY COVERAGE DATA

DIGITAL MAPPING FILES (very efficient/excellent precision):

1. G.I.S. dataset formats that we can accept:

GIS FORMAT	EXTENSIONS
ESRI Arc/Info - Shape	<i>(.shp, *.shx, *.dbf, *.prj)</i>
*ESRI Arc/Info - Geodatabase	<i>(gdb folder with a single layer)</i>
AutoCAD	<i>(* .dwg, *.dxf)</i>
ESRI Arc/Info - Export	<i>(* .e00)</i>
ESRI Arc/Info - Generate	<i>(* .gen)</i>
Google Earth/Plus/Pro	<i>(* .kml, *.kmz)</i>
MapGuide	<i>(* .sdl, *.sdf)</i>
MapInfo	<i>(* .tab *.dat, *.map, *.id)</i>
MapInfo Interchange	<i>(* .mid, *.mif)</i>
Microstation	<i>(* .dgn, *.fc1, *.pos)</i>



2. Coordinate Systems/Datum/Projections that we can accept (all files must be in a recognized coordinate system)

PROJECTIONS / DATUM
Latitude/Longitude (NAD27, NAD83, *WGS84 (aka LL84)) <i>(*NOTE: All Google Earth files utilize LL84 - WGS84)</i>
Universal Transverse Mercator (UTM) (NAD27, NAD83, WGS84) <i>(Must provide the UTM Zone & Units with your data)</i>
U.S. State Planes (NAD27, NAD83) <i>(Must provide the Zone and Units with your data)</i>

- Many other coordinate systems/datum/projections can be accepted as well. Please call for more information.

***Preferred Format & Datum**

***IMPORTANT:** When sending your coverage(s), you must specify the following:

- 1) Coordinate System/Datum or Projection your coverage is in?** *(Including whether its feet, meters, or lat/long - you need not provide this info if your coverage is in MapInfo format, Google Earth format, or you provide the .prj file from an ESRI SHP file)*
- 2) Station code that your coverage corresponds to?**
- 3) Buffer/Corridor size?** Distance you want on each side of your **arcs/lines/polylines**, or the radius around **points**. With object oriented database G.I.S. systems like ESRI Arc/Info & MapInfo, you may specify the buffer size by adding a float field/column named **BufferFt** to the coverage and typing the buffer width *(must be in feet)* you want for each object. **Do not specify a buffer width for generalized areas such as polygons.** The typical minimum buffer size should be no less than 20 feet and should be specified based upon how accurate your coverage is versus where it is underground.
- 4) What you want done with the coverage?** Are we replacing your entire coverage with this one or adding to your existing coverage? Explain in detail.

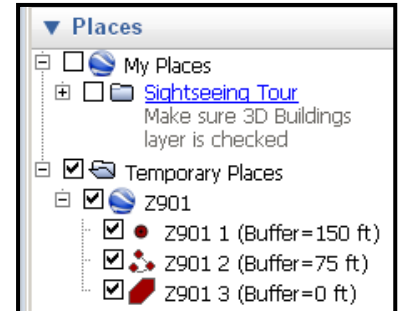
If any of the above formats are provided to us, we will attempt to translate them into a ESRI SHP format. However, we cannot guarantee that they can be translated.

We cannot accept data that has streets, towns, municipal boundaries, or text that is embedded unless it is a part of your underground plant. **ONLY PROVIDE US WITH ARCS, LINES/POLYLINES, POINTS AND POLYGONS THAT REPRESENT WHERE YOU WANT TO BE NOTIFIED.** Coverages should be cleaned of multi-parts, overlaps and self-intersecting geometry etc. before being submitted. We cannot guarantee them to work correctly with the system. Each station code should be in one file & on one layer ONLY.

GOOGLE EARTH KML/KMZ (efficient/very good precision):

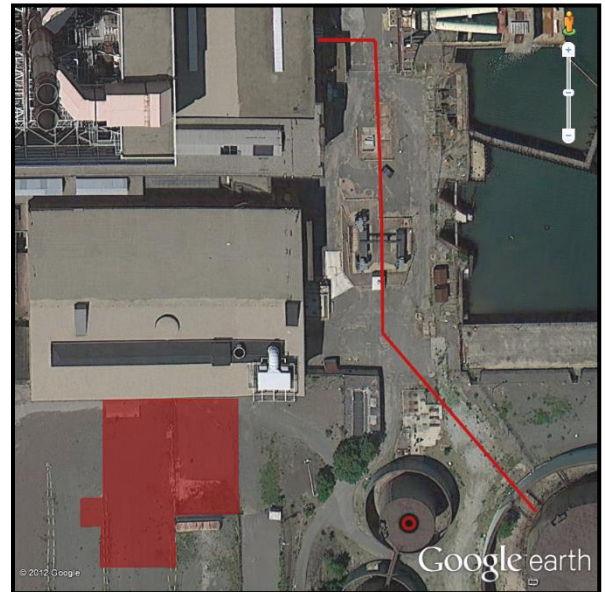
Available on the Internet at the One-Call Center's website:

- This method allows members that do not have a G.I.S. system to draw their coverages accurately with the free utility, Google Earth. One advantage is that you always have a visual copy of your coverage. It can also be used to make minor adjustments or verify the accuracy of coverages.
- This method does require a bit of reading on how to use it. You can find tutorials & read instructions on how to use Google Earth by searching the internet with keywords: [google earth user guide](#) A more specific video tutorial on how to create a coverage in Google Earth is available on the DIG SAFE website. You will need to call DIG SAFE to set up an online account to access online coverages for verification.
- You can draw Lines/Polylines (*aka Paths*), Points (*aka Placemarks*), & Polygons that depict your coverage area. Be sure to tag your object names with the following information in the 'Places' panel to the left of the map. It needs to be in this format (*see example*):



Station Code + <sp> + Unique Object Number + <sp> + (Buffer= + your buffer width in feet + <sp> + ft)

- You can select an object by left-clicking an object in the 'Places' panel and then right-clicking 'Properties,' or by right-clicking an object on the map. This will intern allow you to:
 - Delete an object: select an object in the 'Places' panel and then right-click 'Delete', or right-click select an object on the map and click 'Delete.'
- You can also edit existing objects by selecting it as outlined above. Then click and drag the 'Properties' dialog box out of the way so you can see the whole map. Now you can perform multiple operations:
 - Move a node/vertex: select the node/vertex you wish to move, then left-click and hold while moving it to the desired location.
 - Delete a node/vertex: select the node/vertex you wish to delete, then right-click on it to delete.
 - Add a node/vertex: select the node/vertex near the location you wish to add, then left-click to add. If you make a mistake, then right-click to delete it.
- Be aware that placing objects into multiple folders/subfolders can make translations unpredictable.



***IMPORTANT: When sending your coverage(s), you must specify the following:**

1) Station code that your coverage corresponds to? {should be contained within the name of your object; see example above for station code: Z901}

2) Buffer/Corridor size? {should be contained within the name of your object} Distance you want on each side of your lines/polylines, or the radius around points. Do not specify a buffer width for generalized areas such as polygons. The typical minimum buffer size should be no less than 20 feet and should be specified based upon how accurate your coverage is versus where it is underground.

3) What you want done with the coverage? Are we replacing your entire coverage with this one or adding to your existing coverage? Explain in detail.

ONLY PROVIDE US WITH ARCS, LINES/POLYLINES, POINTS AND POLYGONS THAT REPRESENT WHERE YOU WANT TO BE NOTIFIED.

Coverages should be cleaned of multi-parts, overlaps and self-intersecting geometry etc. before being submitted. We cannot guarantee them to work correctly with the system. Each station code should be in its own KML/KMZ file.

EXCEL GPS COORDINATES-XLS/XLSX (inefficient/good precision):

***ONLY Complete Station Code Replacements are acceptable for this format**

GPS Coordinates can be supplied to us if it meets the following criteria:

- Coordinates may only be used to specify the locations of point objects.
- Coordinates must be placed either in an Excel Spreadsheet or be delimited ASCII. Some other electronic databases formats are acceptable. Call for more details.
- Coordinates must be supplied in decimal degrees to at least the thousandths place. *<Degrees/Minutes/Seconds will not be accepted.>* **You must specify projection/datum your coordinates are in as well as if it is in U.S. feet or meters.**
- DO NOT USE Column Headings in your spreadsheet. They are represented based upon the column they are in as specified below.
- Columns {columns may be formatted as '**Number, with 15+ decimal places**' before being entered}
 - Column A: Longitude (or East/West coordinate)
 - Column B: Latitude (or North/South coordinate)
 - Column C: Buffer width (**specified in feet**) for each side of a line, or for points, the radius from the center
 - Column D: Address Description (see below for example)
- No directionals should be used, i.e. 86.542 W, 40.891 N. They should be in this format: **-86.542, 40.891** <or for State Plane, UTM etc.> **588334.34, 176895.96** *Note that the longitudes in the western hemisphere, and latitudes in the southern hemisphere, are denoted with negatives.

Example: Set of points with different buffer widths

	A	B	C	D
1	-71.4215	42.90306	200	51 Wentworth Ave, Londonderry, NH
2	-71.5542	42.71079	120	17 Clinton Drive, Hollis, NH
3	-71.5897	42.7443	105	4 Village Market Place, Hollis, NH
4	-71.5224	42.99571	90	18 Lamy Drive, Goffstown, NH
5	-71.4953	42.86342	180	454 Daniel Webster Hwy, Merrimack, NH

***IMPORTANT: When sending your coverage(s), you must specify the following:**

1) Projection or Datum your coverage is in? (Including whether it's feet, meters, or lat/long); if you fail to provide this, we will assume LL84

2) Station code that your coverage corresponds to?

3) Buffer/Corridor size? {should be contained within the spreadsheet} It is the radial distance you want around the points. The typical minimum buffer size should be no less than 20 feet and should be specified based upon how accurate your coverage is versus where it is underground.

4) Complete Replacements of your current coverage is all that will be accepted for this format. No additions/deletions are permissible.

No column headings should be used. No data other than Longitude, Latitude, Buffer Width and Address should be included in the spreadsheet itself.

ONLY PROVIDE US WITH POINTS THAT REPRESENT WHERE YOU WANT TO BE NOTIFIED WITH A BUFFER THAT IS LARGE ENOUGH TO COVER YOUR UNDERGROUND PLANT.

***Point Coverages:** points can all be in the same spreadsheet and the order does not matter.

Each station code should be in its own XLSX file. No duplicated points will be accepted.