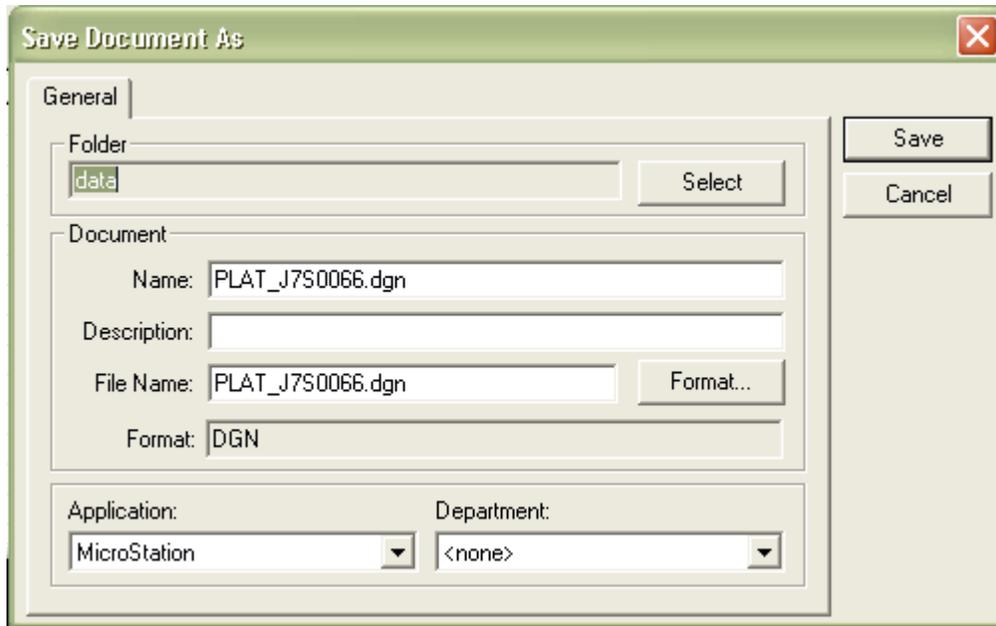


1. Open any empty dgn file within the data folder of your job.

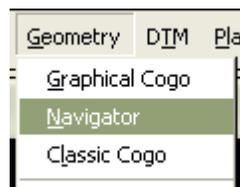
Now do a **FILE SAVE AS** and name it **PLAT_job#**.



2. Once you are in the newly created file open the **Project** and select a **User**.

3. Now we are going to visualize all the right-of-way, property and land corners we have picked up since the beginning of the project.

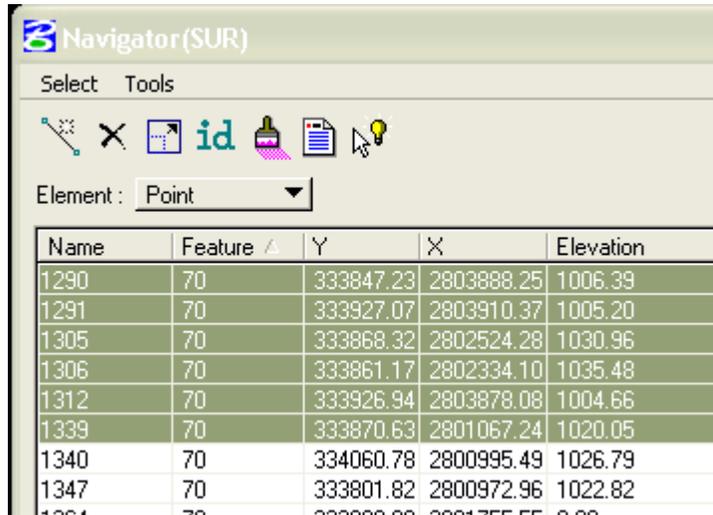
On the survey menu bar under **Geometry** select **Navigator**. *This will bring up the Coordinate Geometry dialog box and the Navigator dialog box.*



4. In the Coordinate Geometry dialog box make sure the visualization is set to **Permanent**



5. Now we need to select all of the **Feature** codes associated with right-of-way, property and land corners. Most of these will be in the 70 –79 range, so if double click in the **Feature** area of the Navigator dialog box it will be resorted based on feature code. You can select the points in a couple of ways: select the first one then hold down the shift key and select the last one, hold down the control key and select every one individually, use the mouse and select the first one and hold the left button down and scoll to the last one.



Then select visualize element tool. This will draw the elements into your file so you can start calculating the alignment and existing right-of-way. You may need to use the **fit veiw** tool to bring the elements into veiw.

Now that our points are where we can work with them we are ready to start creating our centerline and existing right-of-way chains.

6. We can use **Inverse** tool  and **COGO Key-in** to preform some calculation to see how well our points our fitting the old plans.

To check the distances between points select the **Inverse** tool , this will bring up the Inverse dialog box. For this example we will use **2545, 1358** and **2548** as our centerline control found in the field. Once we have these numbers in the Point List we can select the Inverse button in the dialog box. *Make sure the compute distance along Chain is unchecked!*



Once the inverse command has been executed the results will be shown in the **Command output window**.

```
<*      1      Inverse 2545 1358 2548

Inverse 2545 to 1358 S  89° 07' 14" E      Distance 1,399.59
Inverse 1358 to 2548 S  89° 06' 24" E      Distance 1,253.76
```

To check angle at points we can use **COGO Key-in**. You will need to type in **ang at 1358** (occupied point) **2545** (backsight point) **to 2548** (foresight point) then hit the **Enter** key.

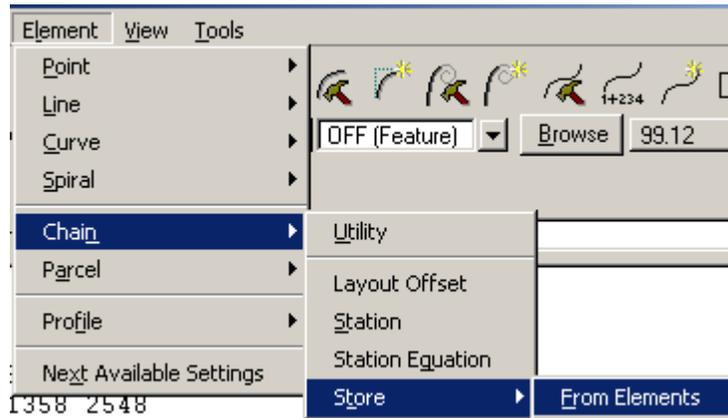
COGO Key-in:

Once the angle at command has been executed the results will be shown in the **Command output window**.

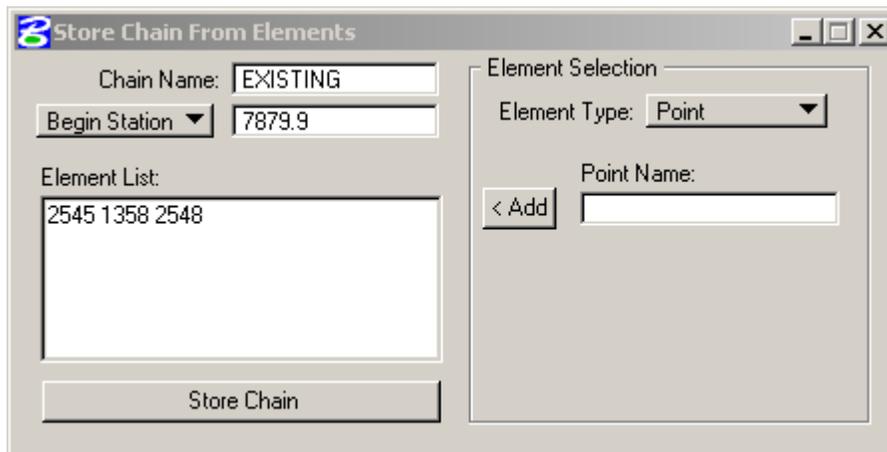
```
Angle at 1358 from 2545 to 2548 (CLOCKWISE) =      180° 00' 50"
```

*If additional points are needed along the existing centerline the **Traverse** and **Intersection** tools are great tools to aid in the process and will be covered later.*

7. Now that our centerline points check we need to create a existing centerline chain. The best tool for this is the **Element / Chain / Store / From Elements** tool.



Once selected the **Store Chain From Elements** dialog box will open.



First we need to name the chain. We will call this one **EXISTING**.

Then select the Station tab to **Begin Station** and enter in the station value at your beginning point (**7879.9**).

Now enter in the points that represent your chain (**2545 1358 2548**). Then select the **Store Chain** button to run the command.

8. Now we can check some of the points we found on the right-of-way by using the **Inverse** tool



again, but this time we will use the **Compute Distance along Chain** to find the station and offset of each point.



Keyin or select all of the right-of-way points.

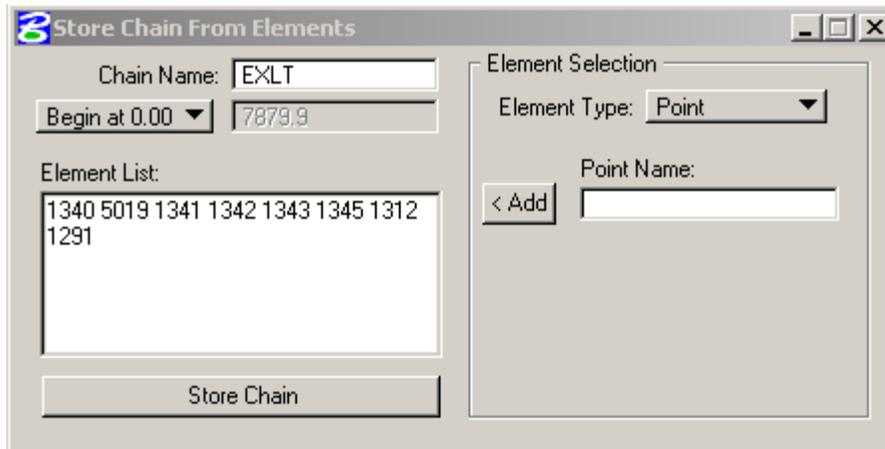
Check on the **Compute Distance along Chain**, select the **EXISTING** chain and then select the Inverse button.

Once the inverse command has been executed the results will be shown in the **Command output window**.

Point	X	Y	Station/Region	Offset	Distance
2545	2,800,935.45	333,932.64	78+79.70 1	0.00	820.94
1359	2,801,756.29	333,920.05	87+00.64 1	-0.00	820.94
2548	2,803,588.48	333,891.61	105+33.04 1	0.00	1,832.41
1340	2,800,995.49	334,060.78	79+37.76 1	-129.05	2,595.28
5019	2,801,069.56	333,990.60	80+12.91 1	-60.01	75.14
1341	2,801,114.56	333,990.24	80+57.90 1	-60.33	44.99
1342	2,801,154.30	334,004.36	80+97.42 1	-75.07	39.52
1343	2,801,454.42	333,999.98	83+97.57 1	-75.30	300.15
1344	2,801,600.49	333,982.75	85+43.89 1	-60.31	146.32
1345	2,801,791.77	333,960.06	87+35.50 1	-40.55	191.61
1312	2,803,878.08	333,926.94	***	Undefined	Undefined
1291	2,803,910.37	333,927.07	***	Undefined	Undefined
1347	2,800,972.96	333,801.82	79+19.21 1	130.24	Undefined
1339	2,801,067.24	333,870.63	80+12.42 1	59.98	93.21
5017	2,801,102.25	333,870.09	80+47.44 1	59.99	35.02
5018	2,801,152.04	333,854.32	80+97.46 1	74.99	50.02
1338	2,801,402.13	333,850.72	83+47.58 1	74.75	250.12
1364	2,801,755.55	333,880.08	87+00.51 1	39.97	352.93
1365	2,801,755.52	333,870.05	87+00.64 1	50.00	0.13
1306	2,802,334.10	333,861.17	92+79.28 1	50.00	578.64
2625	2,802,524.14	333,858.32	94+69.35 1	49.88	190.08
1305	2,802,524.28	333,868.32	94+69.34 1	39.88	0.01
1290	2,803,888.25	333,847.23	***	Undefined	Undefined

*If additional points are needed along the right-of-way, the **Locate On Element** is a great tool to aid in the process and will be covered later.*

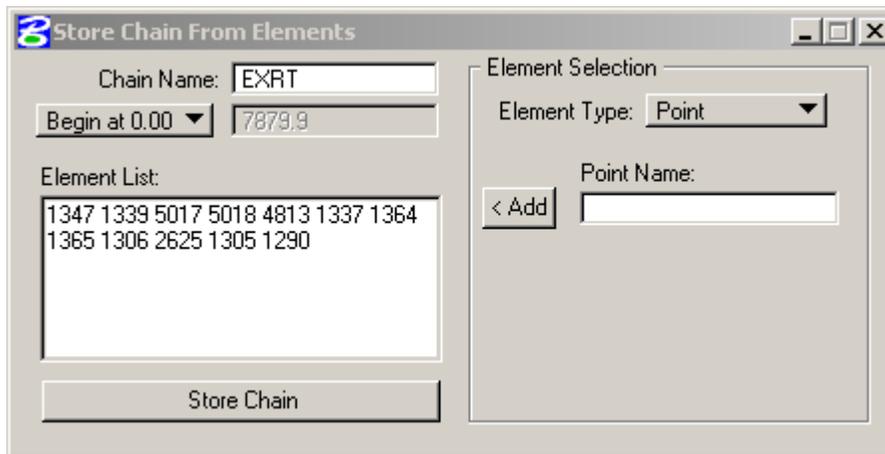
9. Now we need to create the existing right-of-way chains. The best tool for this is the **Element / Chain / Store / From Elements** tool.



For the left side name the chain **EXLT** for existing left.

Then select the Station tab to **Begin at 0.00**.

Now enter in the points that represent your chain. Then select the **Store Chain** button to run the command.



For the right side name the chain **EXRT** for existing right.

Then select the Station tab to **Begin at 0.00**.

Now enter in the points that represent your chain. Then select the **Store Chain** button to run the command.