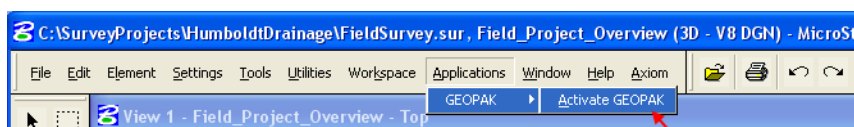


GEOPAK Sta Off Report

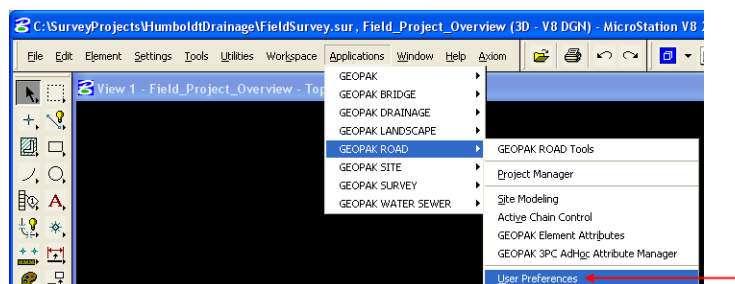
Design Manual
Chapter 40
Survey Information
Originally Issued: 01-12-09

Creating Station Offset Reports with GEOPAK

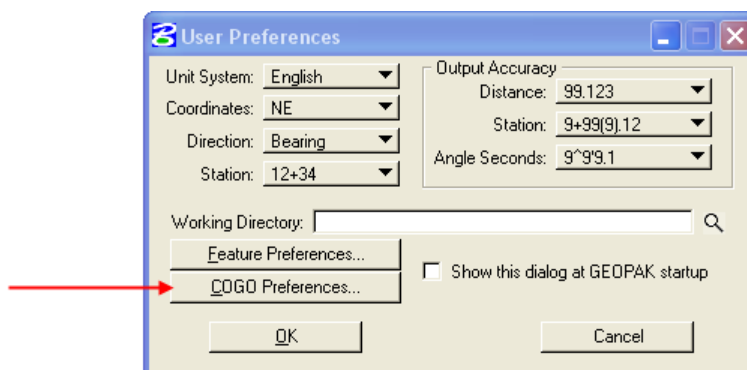
- 1) The first step is to activate GEOPAK by selecting *Applications>GEOPAK>Activate GEOPAK* from the main MicroStation toolbar.



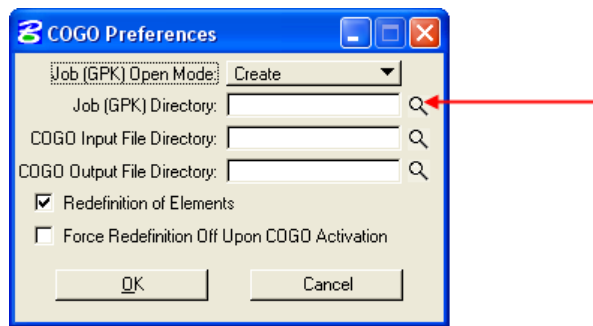
- 2) You must tell GEOPAK where the “.gpk” file containing the station and offset information is located. This is done by changing the user preferences. Select *Applications>GEOPAK Road>User Preferences*.



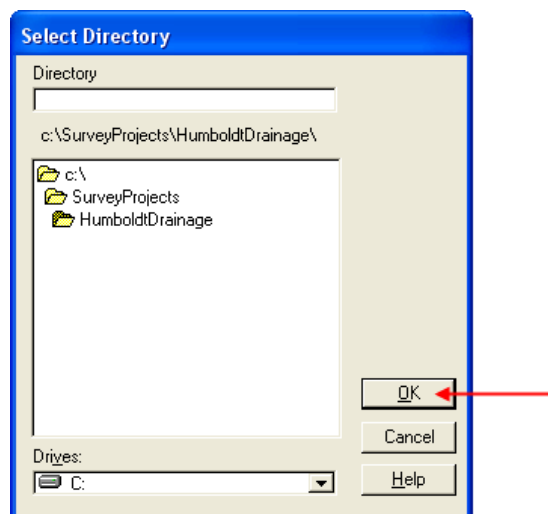
- 3) Select *COGO Preferences* on the User Preferences dialog box.



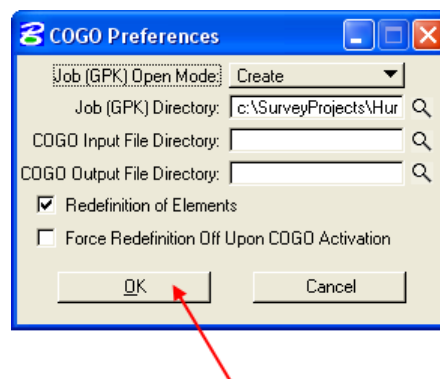
- 4) Click on the magnifying glass next to *Job (GPK) Directory*.



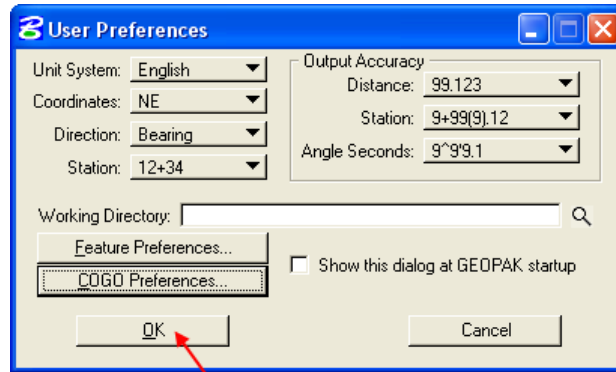
- 5) Select the directory where the “gpk” file is located, then press *OK*. If you are using GEOPAK Project Manager this should be set up within your project preferences. If you are not using Project Manager, but your “gpk” file is located in the same directory as the MicroStation file that you have open, you can leave the directory path blank and GEOPAK will list all of the “gpk” files in the open file’s directory.



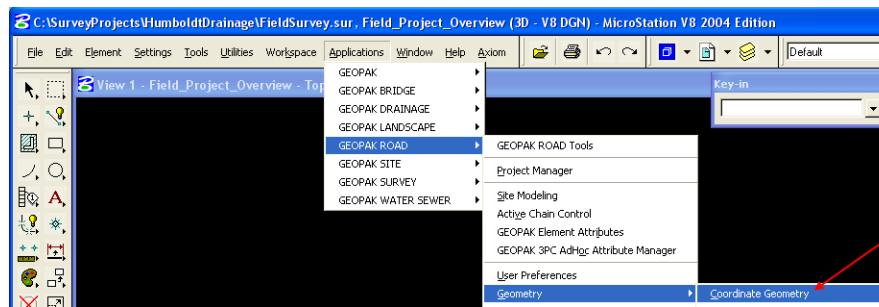
- 6) Press *OK* on the COGO Preferences dialog box.



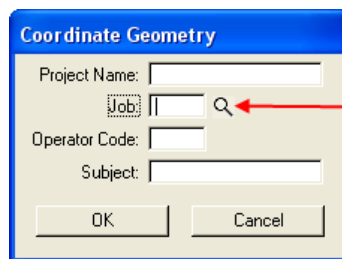
- 7) Press *OK* on the User Preference dialog box.



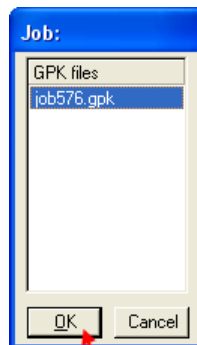
- 8) After GEOPAK has loaded, select *Applications>GEOPAK Road>Geometry>Coordinate Geometry* from the main Microstation toolbar.



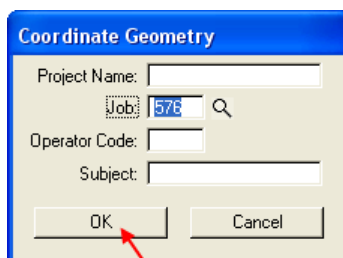
- 9) The first Coordinate Geometry (COGO) dialog box that appears allows you to select the “.gpk” file that contains all of the survey information for your project. Click on the magnifying glass to see a list of “.gpk” files available.



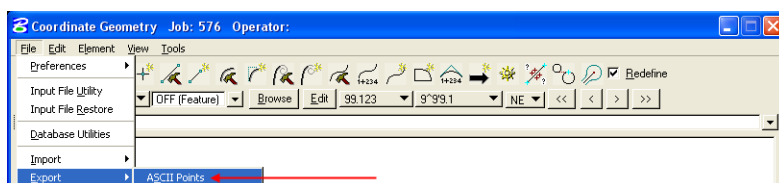
- 10) Select the “.gpk” file and then press the *OK* button.



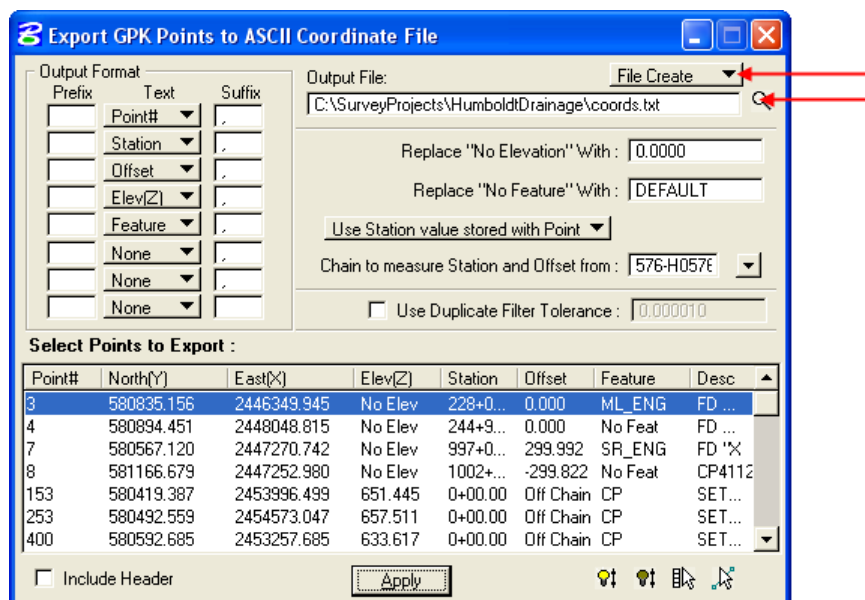
11) Press the *OK* button on the first COGO box.



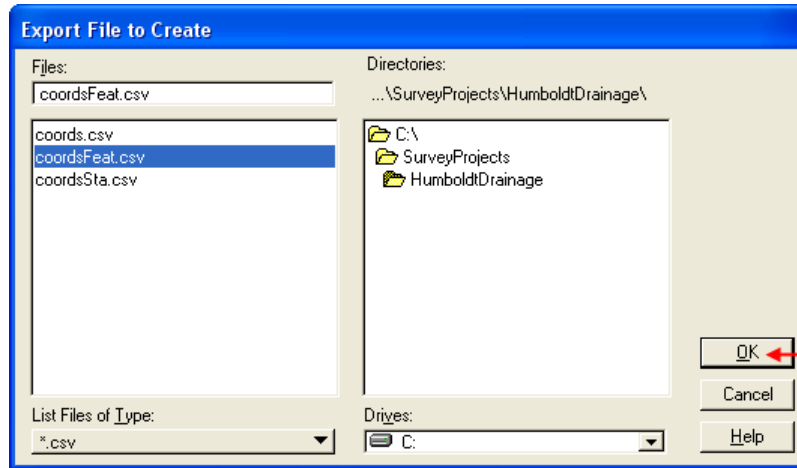
12) On the second COGO dialog box, choose *File>Export>ASCII Points*.



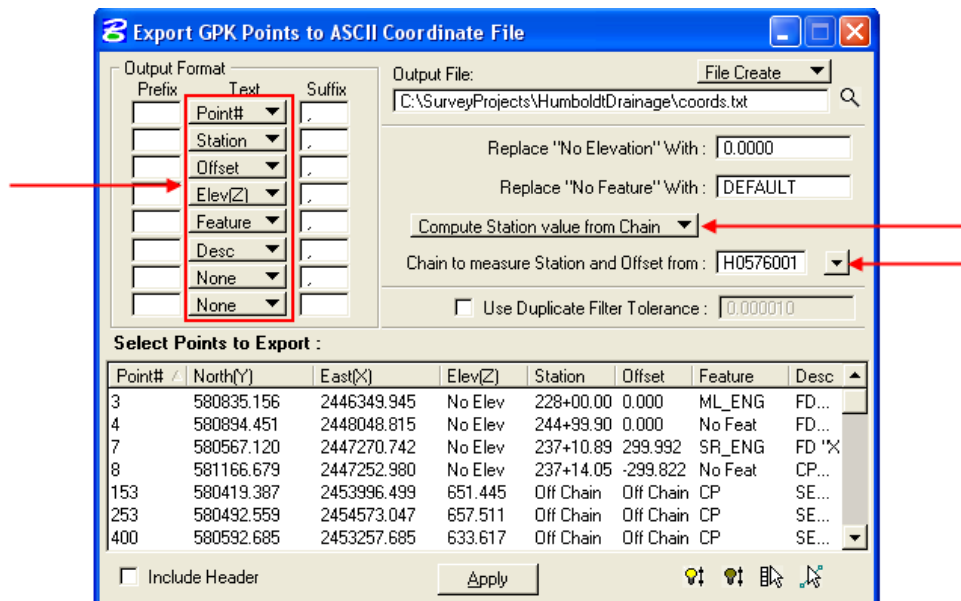
13) The Export GPK Points to ASCII Coordinate File is where the actual station offset report is created. The first thing is to make sure that the drop down in the upper right hand corner is set to *File Create*. Next, click on the *magnifying glass*.



- 14) Select the directory where you want the file created and type in what you would like to name the file. Press the *OK* button.



- 15) Under *Output Format* you can then select what attributes of each point you would like to see and also the order that they appear in. Change the station drop down to Compute Station value from Chain. Select the chain (horizontal alignment) that you would like the stationing and offsets based from.



- 16) You can sort the points and information below by clicking on any of the headings to sort by that type. To sort by the feature code, click on the *Feature* heading. Highlight the features by clicking on one point and then holding down the *Shift* or *Ctrl* keys on your keyboard to select numerous points in a row or separated. Once you have all of the points highlighted that you would like in the station offset report, hit the *Apply* button.

Export GPK Points to ASCII Coordinate File

Output Format: Prefix Text Suffix

Output File: File Create
C:\SurveyProjects\HumboldtDrainage\coords.txt

Replace "No Elevation" With: 0.0000

Replace "No Feature" With: DEFAULT

Compute Station value from Chain

Chain to measure Station and Offset from: H0576001

☐ Use Duplicate Filter Tolerance: 0.000010

Select Points to Export :

Point#	North(Y)	East(X)	Elev(Z)	Station	Offset	Feature	Desc
4279	581013.428	2446849.686	635.507	233+05.66	-160.732	BB	...
5290	580947.786	2446984.280	635.127	234+37.88	-90.435	BBB	L...
5291	580946.859	2446957.090	634.942	234+10.67	-90.457	BBB	L...
5292	580945.969	2446930.295	634.921	233+83.86	-90.502	BBB	L...
5304	580912.995	2446931.660	633.442	233+84.08	-57.501	BBB	L...
5306	580914.848	2446985.588	633.641	234+38.04	-57.471	BBB	L...
5334	580929.565	2446931.202	622.623	233+84.20	-74.077	BBL	DI...

☐ Include Header

Apply

- 17) Your station offset report is now created. Because the extension used in the example above was "txt", the output is in an ASCII text format. You can open these files with Microsoft Word, Notepad, WordPad or PFE32. Because the points box was sorted by the Feature the "txt" file will also be sorted by the Feature.

coordsFeat.txt - Notepad

File Edit Format View Help

```

5292,233+83.86,-90.502,634.921,BBB,LOW CONCRETE SLAB BBB,
5304,233+84.08,-57.501,633.442,BBB,LOW CONCRETE SLAB BBB,
5291,234+10.67,-90.457,634.942,BBB,LOW CONCRETE SLAB BBB,
5290,234+37.88,-90.435,635.127,BBB,LOW CONCRETE SLAB BBB,
5306,234+38.04,-57.471,633.641,BBB,LOW CONCRETE SLAB BBB,
5337,234+02.21,-73.690,622.188,BBL,DIRT BBL,
5344,234+37.46,-73.338,622.422,BBL,DIRT BBL,
5343,234+29.10,-73.727,622.684,BBL,DIRT BBL,
5342,234+23.70,-73.884,622.958,BBL,DIRT BBL,
5334,233+84.20,-74.077,622.623,BBL,DIRT AT ABUTMENT BBL,
5341,234+18.97,-73.520,623.438,BBL,DIRT BBL,
5335,233+92.53,-73.583,623.287,BBL,DIRT BBL,
5336,233+99.18,-74.488,623.858,BBL,DIRT BBL,
5340,234+09.70,-73.209,622.692,BBL,DIRT BBL,
5338,234+04.81,-73.736,622.233,BBL,DIRT BBL,
4158,234+38.86,-74.125,635.672,BCL,ON CL @ END BR FLOOR BCL,
4160,234+01.97,-73.987,635.536,BCL,ON CL DECK OVER PIER BCL,
4159,234+20.26,-73.956,635.587,BCL,ON CL DECK OVER PIER BCL,
4161,233+83.14,-74.005,635.479,BCL,ON CL DECK OVER PIER BCL,
4191,234+68.15,-24.511,635.882,BD,BRIDGE DECK BD,
4185,233+82.86,-24.177,635.444,BD,BRIDGE DECK BD,
4184,233+82.68,-38.783,635.252,BD,BRIDGE DECK BD,
4182,233+53.94,-38.983,635.102,BD,BRIDGE DECK BD,
4183,233+53.74,-24.452,635.318,BD,BRIDGE DECK BD,
4188,234+44.54,-38.648,635.572,BD,BRIDGE DECK BD,
4190,234+68.39,-38.772,635.672,BD,BRIDGE DECK BD,
4187,234+11.43,-24.380,635.563,BD,BRIDGE DECK BD,
4186,234+11.51,-38.659,635.377,BD,BRIDGE DECK BD,
4189,234+44.86,-24.448,635.745,BD,BRIDGE DECK BD,
5296,233+75.88,-92.041,635.345,BRG,EDGE BRIDGE BRG,
5294,234+44.43,-90.488,635.365,BRG,EDGE BRIDGE BRG,
5420,234+44.75,-57.337,635.048,BRG,EDGE BRIDGE BRG,

```

- 18) Sorting by the feature is often the best way to select points to highlight for your report. After you get the points highlighted, you can sort by other columns and then create the report with the information sorted by different information than what you used to highlight them. In the example below the same points are highlight by sorting by the Feature. After highlighting click on the *Station* heading and then press the *Apply* button.

Export GPK Points to ASCII Coordinate File

Output Format:

Prefix	Text	Suffix
	Point#	.
	Station	.
	Offset	.
	Elev(Z)	.
	Feature	.
	Desc	.
	None	.
	None	.

Output File:

Replace "No Elevation" With:

Replace "No Feature" With:

Compute Station value from Chain:

Chain to measure Station and Offset from:

☐ Use Duplicate Filter Tolerance:

Select Points to Export :

Point#	North(Y)	East(X)	Elev(Z)	Station	Offset	Feature	Desc
4521	580895.848	2446885.638	635.187	233+37.48	-41.969	BL	DI...
4490	580826.791	2446888.124	635.019	233+37.56	27.132	BRG	BRG
4286	580961.097	2446883.517	634.171	233+37.64	-107.253	TIL	6" ...
5132	580961.202	2446883.579	634.247	233+37.71	-107.355	BL	BA...
4465	580895.772	2446886.014	635.580	233+37.86	-41.880	BRG	O...
4475	580894.196	2446886.092	635.079	233+37.88	-40.303	BRG	BRG
4179	580894.269	2446886.394	635.075	233+38.18	-40.365	BL	BL

☐ Include Header

Apply

- 19) The points shown in the "txt" file below are the same as above but sorted by Stationing.

coords.txt - Notepad

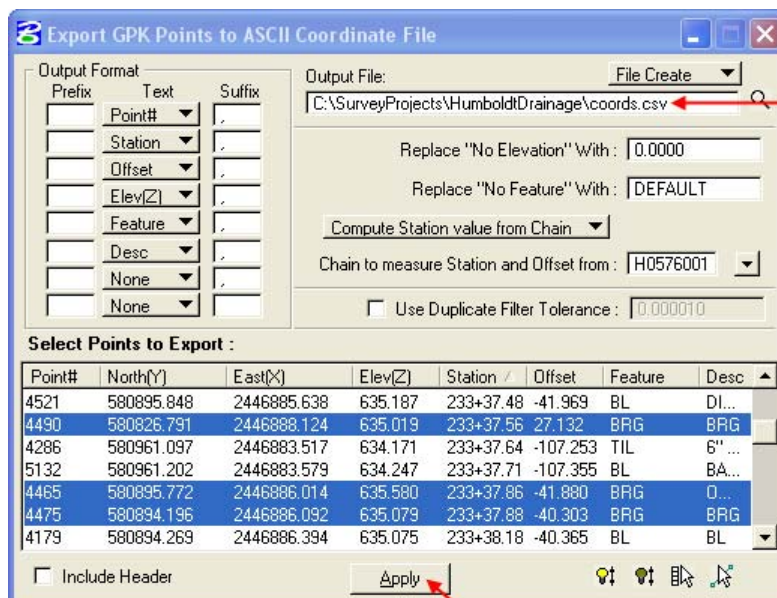
File Edit Format View Help

```

4478, 233+07.22, 31.566, 635.565, BRG, WING BRG,
4494, 233+07.22, 31.528, 635.540, BRG, WING BRG,
4493, 233+07.44, 30.606, 635.271, BRG, BRG,
4492, 233+21.99, 28.572, 635.165, BRG, BRG,
4477, 233+28.97, -42.510, 635.544, BRG, WING BRG,
4476, 233+28.99, -41.702, 635.245, BRG, WING BRG,
4464, 233+29.01, -42.542, 635.553, BRG, WING BRG,
4491, 233+33.14, 27.525, 635.139, BRG, BRG,
4479, 233+37.25, 28.932, 635.518, BRG, OUTSIDE EDGE OF BRG,
4490, 233+37.56, 27.132, 635.019, BRG, BRG,
4465, 233+37.86, -41.880, 635.580, BRG, OUTSIDE EDGE OF BRG,
4475, 233+37.88, -40.303, 635.079, BRG, BRG,
4489, 233+41.92, 27.070, 635.030, BRG, BRG,
4480, 233+42.51, 28.793, 635.627, BRG, OUTSIDE EDGE OF BRG,
4466, 233+43.12, -41.410, 635.509, BRG, OUTSIDE EDGE OF BRG,
4474, 233+45.76, -39.486, 635.040, BRG, BRG,
4488, 233+46.11, 27.018, 635.222, BRG, BRG,
4481, 233+46.15, 28.715, 635.251, BRG, OUTSIDE EDGE OF BRG,
4549, 233+53.31, 27.103, 635.361, BRG, BEGIN_BRIDGE FLOOR BRG,
4487, 233+53.33, 27.032, 635.361, BRG, BEGIN_BRIDGE FLOOR BRG,
4544, 233+53.45, -38.883, 635.084, BRG, BEGIN_BRIDGE FLOOR BRG,
4473, 233+53.53, -38.962, 635.085, BRG, BEGIN_BRIDGE FLOOR BRG,
4183, 233+53.74, -24.452, 635.318, BD, BRIDGE DECK BD,
4182, 233+53.94, -38.983, 635.102, BD, BRIDGE DECK BD,
4723, 233+56.23, 28.455, 633.760, BRG, ABUTMENT/BRG SEAT,
4721, 233+56.23, -40.401, 633.514, BRG, ABUTMENT/BRG SEAT,
4467, 233+57.71, -40.352, 637.855, BRG, OUTSIDE EDGE OF BRG,
4123, 233+67.92, -49.252, 633.244, BRG, WING BRG,
4132, 233+68.00, -99.248, 633.237, BRG, WING BRG,
4124, 233+68.56, -48.710, 633.191, BRG, WING BRG,
4115, 233+68.56, -48.659, 632.883, BRG, WING BRG,
4133, 233+68.61, -99.756, 633.225, BRG, WING BRG,
4125, 233+68.67, -99.739, 633.246, BRG, WING BRG,
4126, 233+75.70, -92.178, 635.271, BRG, OUTSIDE EDGE OF BRG,
4116, 233+75.88, -55.994, 635.250, BRG, OUTSIDE EDGE OF BRG,
5296, 233+75.88, -92.041, 635.345, BRG, EDGE BRIDGE BRG,
5418, 233+76.01, -55.956, 635.443, BRG, EDGE BRIDGE BRG,
5295, 233+77.32, -90.554, 635.352, BRG, EDGE BRIDGE BRG,

```

- 20) If you would rather look at the station offset report in Microsoft Excel, you can change the file extension to “csv” then press the *Apply* button.



- 21) This will create a comma delineated file that can be opened easily in Excel. This is the same points sorted by Feature.

The screenshot shows a Microsoft Excel spreadsheet titled 'coordsFeat.csv'. The spreadsheet displays a list of points with columns for Point#, North(Y), East(X), Elev(Z), Station / Offset, Feature, and Desc. The points are sorted by Feature.

Point#	North(Y)	East(X)	Elev(Z)	Station / Offset	Feature	Desc
4521	580895.848	2446885.638	635.187	233+37.48 -41.969	BL	DI...
4490	580826.791	2446888.124	635.019	233+37.56 27.132	BRG	BRG
4286	580961.097	2446883.517	634.171	233+37.64 -107.253	TIL	6"...
5132	580961.202	2446883.579	634.247	233+37.71 -107.355	BL	BA...
4465	580895.772	2446886.014	635.580	233+37.86 -41.880	BRG	D...
4475	580894.196	2446886.092	635.079	233+37.88 -40.303	BRG	BRG
4179	580894.269	2446886.394	635.075	233+38.18 -40.365	BL	BL

22) These are the same points sorted by Station in Excel.

	A	B	C	D	E	F	G	H	I
1	4494	233+07.22	31.528	635.54	BRG	WING BRG			
2	4478	233+07.22	31.566	635.565	BRG	WING BRG			
3	4493	233+07.44	30.606	635.271	BRG	BRG			
4	4492	233+21.99	28.572	635.165	BRG	BRG			
5	4477	233+28.97	-42.51	635.544	BRG	WING BRG			
6	4476	233+28.99	-41.702	635.245	BRG	WING BRG			
7	4464	233+29.01	-42.542	635.553	BRG	WING BRG			
8	4491	233+33.14	27.525	635.139	BRG	BRG			
9	4479	233+37.25	28.932	635.518	BRG	OUTSIDE EDGE OF BRG			
10	4490	233+37.56	27.132	635.019	BRG	BRG			
11	4465	233+37.86	-41.88	635.58	BRG	OUTSIDE EDGE OF BRG			
12	4475	233+37.88	-40.303	635.079	BRG	BRG			
13	4489	233+41.92	27.07	635.03	BRG	BRG			
14	4480	233+42.51	28.793	635.627	BRG	OUTSIDE EDGE OF BRG			
15	4466	233+43.12	-41.41	635.509	BRG	OUTSIDE EDGE OF BRG			
16	4474	233+45.76	-39.486	635.04	BRG	BRG			
17	4488	233+46.11	27.018	635.222	BRG	BRG			
18	4481	233+46.15	28.715	635.251	BRG	OUTSIDE EDGE OF BRG			
19	4549	233+53.31	27.103	635.361	BRG	BEGIN BRIDGE FLOOR BRG			
20	4487	233+53.33	27.032	635.361	BRG	BEGIN BRIDGE FLOOR BRG			
21	4544	233+53.45	-38.883	635.084	BRG	BEGIN BRIDGE FLOOR BRG			
22	4473	233+53.53	-38.962	635.085	BRG	BEGIN BRIDGE FLOOR BRG			
23	4183	233+53.74	-24.452	635.318	BD	BRIDGE DECK BD			
24	4182	233+53.94	-38.983	635.102	BD	BRIDGE DECK BD			
25	4721	233+56.23	-40.401	633.514	BRG	ABUTMENT/BRG SEAT			
26	4723	233+56.23	28.455	633.76	BRG	ABUTMENT/BRG SEAT			
27	4467	233+57.71	-40.352	637.855	BRG	OUTSIDE EDGE OF BRG			
28	4123	233+67.92	-49.252	633.244	BRG	WING BRG			
29	4132	233+68.00	-99.248	633.237	BRG	WING BRG			

23) To find definitions of the feature codes used by the Preliminary Survey crews, click on the links below:

[Feature Codes and Descriptions Only](#)

[Feature Code Use Categories](#)

[Feature Codes and Full Descriptions](#)