

# How to Use the Survey Information

Design Manual Chapter 40 Design Survey Specifications

Originally Issued: 09-30-11

The current topographic survey processes utilized in the Preliminary Survey Section allows the customers of these surveys to have all field information available to them within MicroStation and GEOPAK files.

(**NOTE:** All survey instructions and any other survey information not included in this document can be found in Chapter 40 of the Design Manual).

There are three different methods for using this information, depending on the need. Each of the methods builds on the previous one.

The first and easiest method for using the survey data is to view the information that is displayed on the used levels, as shown at the right.

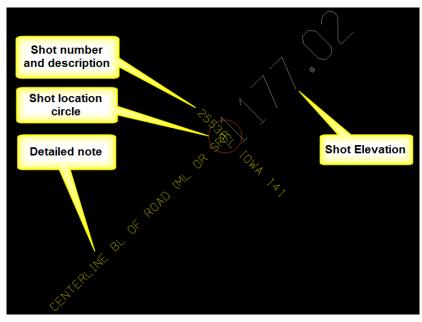
🥩 Level Display - View 1	
🔁 🖏 View Display	<b>v</b>
🌾 📴 🍃 (none) 🕶 🛯	evels 🔽 🖂 🗸
□=- <mark>14141035.sur, Field_DTM</mark> 	
Name	Used 🗸 🗠
phoSurveyDescript	•
phoSurveyNotes	•
phoSurveyPointName	•
phoSurveyPoints	•
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phoTxtElevationText	

As displayed at the right, these levels show:

- the circle representing the shot location,
- the description of the type of shot collected,
- the shot number, and
- a detailed note.

An elevation is also displayed if the shot was collected for the purpose of ground elevation.

The above listed information is the only information available in the MicroStation file without using the GEOPAK software.

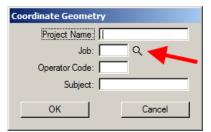


The second way to use and evaluate the survey information is to use GEOPAK COGO. The **Prelim Survey** ".gpk" file must be copied to the design directory that contains the other ".gpk" files.

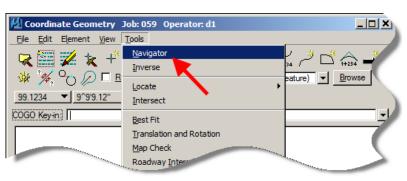
The Geopak program is initiated from the MicroStation tool bar menu as follows: **Applications > GEOPAK > Activate GEOPAK** from the MicroStation tool bar.

#### After Geopak is activated, the COGO program is started, as follows: Applications > GEOPAK > ROAD > Geometry > Coordinate Geometry

This will display the **Coordinate Geometry** dialog, as shown at the right. *Click* the "Browse" magnifying glass icon ( $^{\bigcirc}$ ) to select the appropriate Prelim survey "**.gpk**" file, (**Job**). Complete the other data entry fields, as necessary, and *click* the **OK** button.



This will display the **Coordinate Geometry** dialog. The COGO **Navigator** dialog can be accessed as shown by the arrow at the right.



The **Navigator** dialog should display a listing of points similar to that shown below. To display information about a point, select the point in the **Navigator** list and then select any of the data information tools, located by the red arrow below. This should display point information in the **Coordinate Geometry** list box, above.

₹×⊡ id	P.				
Element Point	<u>×</u>				
Name	Feature	Description	Select Northing	Easting	Elevation
*53	1067	CL KOWA 1418 CENTERLINE BL OF FIGAD (ML OF SH)	3420552.281	4591500-205	11100.796
25540	C67	CL 10WA 1410 CENTERLINE BL OF ROAD (ML OR SR)	3420552.912	4591450.774	1182.121
25541	C67	CL IDWA 1418 CENTERLINE BL OF ROAD (ML OR SR)	3420553.739	4591400.291	1183.468
20001	00	302 ELEV CHRILCENTERLINE BL OF ROAD (ML OR SR)	3420476,701	4552343.752	1165.185
20559	C0N158	TOP OF ABUTMENT FOOTINGS CONCRETE OR A/C SLAB	3429525.006	4592244.064	1154.017
20560	C0N158	TOP OF ABUTMENT FOOTINGS CONCRETE OR A/C SLAB	3420525.368	4592244.459	1154.034
20561	CON158	TOP OF ABUTMENT FOOTINGECONCRETE OR A/C SLAB	3420541.661	4592232.882	1153.970
20562	C0N158	TOP OF ABUTMENT FOOTING& CONCRETE OR A/C SLAB	3420560.492	4552219.020	1153.969
20563	C0N158	TOP OF ABUTMENT FOOTING& CONCRETE OR A/C SLAB	3429560.368	4592218.817	1154.000
20564	C0N158	TOP OF ABUTMENT FOOTINGS CONCRETE OR A/C SLAB	3420563.108	4592214 129	1153.977
300	CP	SET 1/2 IN IRON PINECONTROL POINT	3420523.550	4591746.198	1173.821
301	CP	SET 1/2 IN IRON PINI CONTROL POINT	3420568.790	4582095.203	1120.015
302	CP	SET 1/2 IN IRON PINE CONTROL POINT	3420476.701	4582343.752	1165.205
318	CP	OP318 SET 1/2IN IRON PINE CONTROL POINT	3420324.027	4582440.029	1163.687
319	CP	CP313 SET 1/2IN IRON PINE CONTROL POINT	3420456.977	4582303.074	1160.618
705	CP	PT705 CUT × ON CLECONTROL POINT	3420581.411	4589697.407	1249.892
706	CP	PC 706 FOUND X ON CLI CONTROL POINT	3420516.763	4593755.433	1160.838
322	CP322	SET HALF INCH IRON PINI CONTROL POINT	3420295.929	4582607.315	1165.247
323	CP323	SET HALF INCH IRON PIN CONTROL POINT	3420554.282	4552985.443	1164.459
25027	D102	SIDE DITCHI CENTERLINE DRAW OR STREAM (DOWN)	3420488.733	4552390.925	1162.666
25028	D102	SIDE DITCHI CENTERUNE DRAW OR STREAM (DOWN)	3420488.521	4592397,459	1162.624
25029	D102	SIDE DITCHI CENTERUNE DRAW OR STREAM (DOWN)	3420496.540	4592448.472	1162,210
25030	D102	SIDE DITCHECENTERUNE DRAW OR STREAM (DOWN)	3420486.032	4582501.577	1161.697
25031	D102	SIDE DITCHECENTERLINE DRAW OR STREAM (DOWN)	3420484.440	4592549.578	1161.450
25032	D102	SIDE DITCHI CENTERLINE DRAW OR STREAM (DOWN)	3420483.437	4582599.237	1161.570
25033	D102	SIDE DITCHI CENTERLINE DRAW OR STREAM (DOWN)	3429482.489	4532643 323	1161.346
25034	D102	SIDE DITCHI CENTERLINE DRAW OR STREAM (DOWN)	3429479.177	4592697.855	1160.875
25035	D102	SIDE DITCHI CENTERUNE DRAW OR STREAM (DOWN)	3420476.572	4592711.793	1160.705
25036	D102	SIDE DITCHI CENTERLINE DRAW OR STREAM (DOWN)	3420477.879	4552750.602	1160.443
25035	and the second se	SIDE DITCH CENTERLINE DRAW OR STREAM (DOWN) DRAW CENTERLINE DRAW OR STREAM (DOWN) DRAW CENTERLINE DRAW OR STREAM (DOWN) STREAM CENTERLINE DRAW OR STREAM (DOWN) STREAM CENTERLINE DRAW OR STREAM (DOWN)	3420477.879 3420480.981 3420480.686	4552331.255	1164.611
and the second s		DRAW CENTERUNE DRAW OR STREAM DOWN	100,488,686	4582327.946	1163.558
		SALTERUNE DRAW OR STREAM DOWNLINE		4592325.232	1162.665
		THE DRAW OR STREAM		100 000000000	ALC: NO.

The third way to use and evaluate the survey information is to utilize the **GEOPAK Survey Project** tool. By simply "hovering" the curser over any **Survey Point**, this tool will provide the most comprehensive amount of information about that point as simple *pop-up* information attached to the cursor.

To start GEOPAK Survey, (with GEOPAK already started), select:

#### Applications > GEOPAK > SURVEY > Survey

This will open the GEOPAK Survey tool bar, as shown above.

To open a GEOPAK Survey project, choose **Project > Open** from the **Survey** dialog toolbar, shown above. This will display the **Project Open** dialog, as shown at the right.

Browse to the appropriate **PrelimSurvey** folder and *select* the "**shortcut...**" for the "**.prj**" file, as shown at the right.

Accept any messages warning that the project is read only.

The **Survey** dialog should now show the Survey and Photogrammetry (SAP) number on the title bar, as shown at the right.

To eliminate clutter, the display of all "**phoSurvey...**" levels can now be turned off, except for the two levels listed below: phoSurveyPoints

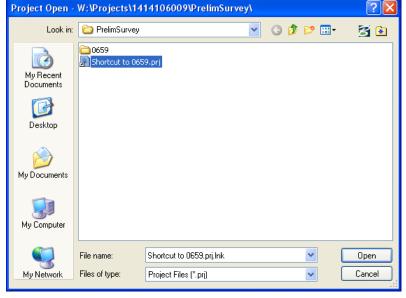
phoSurveyPointsNonDTM

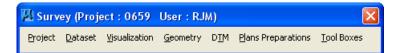
## *Select* the MicroStation **Element Selection** tool, as shown below.



By moving the MicroStation cursor over any of the survey shots, a complete list of information about that shot will be displayed, as shown at the right.

🖾 Survey (No Project)							
	<u>P</u> roject	<u>D</u> ataset	<u>Vi</u> sualization	<u>G</u> eometry	D <u>T</u> M	<u>Plans</u> Preparations	<u>T</u> ool Boxes







### **Chronology of Changes to Design Manual Section:**

040D-017 How to Use the Survey Information

9/30/2011 NEW New