

"GET DECIMATED LIDAR"

USING ARCMAP

The purpose of the "Get Decimated Lidar" program is to retrieve either NCFMP or QL2 Lidar in Bare Earth and Half, One, and Two foot increments for products produced by NCDOT.

TABLE OF CONTENTS

Getting Started	2
Creating Closed Polygons	2
Compressing A Design File	
Deactivating GeoPak	
Mapping network drive	5
Using ArcMap	6
First Time User Settings	8
Add Connection via Catalog	12
Running The "Get Decimated Lidar" Program	14
Combining Multiple ASCII files	19
Setting Active Level Attributes	21
Importing ASCII (.txt) Files Into Microstation	23

GETTING STARTED

It is beneficial to place the boundary (.dgn) file in an empty directory within the project file structure so there is no confusion once the ASCII (.txt) and (.dat) files are created. If more than one boundary exists such as in an Obscured Area file an ASCII (.txt) and (.dat) will be created for each and can be combined later (if needed) to import one file rather than multiple. The output location of the ASCII (.txt) and (.dat) file(s) <u>WILL BE</u> placed in the same location as the boundary (.dgn) file. Also, each boundary within the (.dgn) file must be a closed polygon in order for the "Extract DEM" program to intersect the NCFMP and/or QL2 Lidar data sets.

CREATING CLOSED POLYGONS

If the boundary is not a closed polygon it is necessary to create a closed polygon for each boundary within the (.dgn) file.

<u>NOTE:</u> If the boundary is already a closed polygon this step can be skipped and go directly to Using **ArcMap**.

Open the boundary (.dgn) file in Microstation. Select the **"Groups"** icon and then select **"Create Region"**



Once the *Create Region* dialog box opens select "Flood". The Fill Type should be "None", check on "Keep Original", and select "Ignore Interior Shapes".



The active attributes should be different than the boundary attributes as this procedure will create the closed polygon on the active level.



"Data" inside each element. You will notice the element will highlight.

At this point, "data" again to accept. This will create a closed polygon for the boundary. This needs to be done for each element within the boundary (.dgn) file.



IMPORTANT: Be sure to compress the design file before exiting and deactivate GeoPak.

COMPRESSING A DESIGN FILE

This can be done by selecting **"File"**, **"Compress"**, then **"Design"** in the upper left corner of the *Microstation Design File Window*.

File Edit Element	Settings Tools	<u>U</u> tilities	Wor <u>k</u> space	Applications	Window	NCDOT	Help
<u>N</u> ew						Ctrl+N	
😕 Open						Ctrl+O	
Close						Ctrl+W	2
_ 🔲 Save						Ctrl+S	
Y Save <u>A</u> s							
Compress							▶ <u>D</u> esign
Sa <u>v</u> e Settings						Ctrl+F	Options
C & Item Browser							

DEACTIVATING GEOPAK

In the top left portion of the Microstation Design File Select **"Applications"**, **"GEOPAK"**, then **"Deactivate GEOPAK"**.

le <u>E</u> dit El <u>e</u> ment <u>S</u> ettings <u>T</u> ools <u>U</u> tilities	Applications Window NCDOT H	elp
🖇 🔻 🕞 (none 🕶 🥂 PH Exist DTM NCFMP 🖵	GEOPAK	PAK
	Map ROAD	•
	SITE	•
	TM NCFMP LIDAR Elev SURVEY	•
. · · · · · · · · · · · · · · · · · · ·	89 🖸 🔄 🔐 🍞 DRAINAGE	•
	WATER SEWER	•
	LANDSCAPE	•
h d	Training	

MAPPING NETWORK DRIVE

In order to connect to the location of the *"Extract DEM"* tool, the user may need to connect to a network drive. In a windows explorer window select **"Tools"** then **"Map network drive..."**



Using the drop down arrow next to "Drive" and choose the letter you wish to associate the mapped folder to. In the space next to Folder: type <u>\\dot\DFSRoot01\Groups-PHCC\GeospatialData\lidar</u>. Check on "Reconnect at login" and select "Finish"

What net	work folder would you like to map?
Specify the	e drive letter for the connection and the folder that you want to connect to:
Drive:	Y:
Drive:	
Folder:	ot\DFSRoot01\Groups-PHCC\GeospatialData\lida
	Example: \\server\share
	Reconnect at logon
	Connect using different credentials
	Connect to a Web site that you can use to store your documents and pictures.

Once the network connection is made it will appear in the windows explorer window in order according to the letter chosen.



USING ARCMAP

First the user should open an instance of ArcMap either on their personal workstation or a vacant "shared" workstation.

This can be done one of 2 ways.

If the user has opened an instance of ArcMap recently it can be found by selecting the "Start" button in the lower left of the desktop then selecting "ArcMap"



If there's no option in the *recently opened* portion of the start window, once the user has selected the **"Start"** button, select **"All Programs"**, then navigate to and select **"ArcGIS"**. This will open more choices and the user should select **"ArcMap"**

WinZip 14.0 Image: Computer Image: Computer Comput	W Microsoft Word 2010 Image: ArcMap 10.1 Image: Microsoft Excel 2010 Image: Paint Image: Paint	Lee, Charles G Documents Pictures Music	Accessoria ArcGIS ArcGIS ArcCats g 10.1 ArcGlobe 10.1 ArcGlobe 10.1 ArcGiS for Desktop Help Desktop Tools Python 2.7	Lee, Charles G Documents Pictures
		Computer Control Panel Devices and Printers	ArcGIS Explorer ArcGIS Workflow Manager Avery Dennison Bentley Bentley Multi-Install Corpscon6 Docudesk	
All Programs Heip and support All Arograms Heip and support All Arograms	All Programs	Help and Support	Back	Help and Support

<u>NOTE:</u> Once the "Get Decimated Lidar" program is set to run, it cannot be minimized to work in the background while other tasks are continued. However, other programs may be opened in front of the ArcMap window to continue with other tasks.

Upon the opening of the ArcMap program, the following *ArcMap* - *Getting Started* window will appear. If so, select **"CANCEL"**

Existing Maps Recent Browse for more	Recent			
New Maps My Templates Templates 	Q	Q	Q	
Architectural Pac ISO (A) Page Siz North American (Traditional Layouts Industry	QAQCD5Charles	QAQCD4Charles	QAQCD3Charles	
USA World Browse for more			Q	
	QAQCTemplete	NCDOT Emergency Response (Aerial Imagery) – 2014 Post	i5714_overview	
<u> </u>				-
Charles_D5\QAQCD5Charles.m:	(d			
efault geodatabase for this map			What is 1	
C: \Users\cglee\Documents\ArcG	IS\Default.gdb			

Upon canceling the "ArcMap-Getting Started" window, the following "Add Data" window may also open: If so, select "Cancel"

AddIns Web Maps					
Default.gdb Toolbox.tbx					
Name:	[2	Add	

FIRST TIME USER SETTINGS

Once the user has opened an instance of ArcMap there are some settings that need to be changed **ESPECIALLY** if it's the first time opening the instance on a particular workstation for the use of this program.

First, the user should select "Geoprocessing" located along the top of the ArcMap window, then select "Geoprocessing Options"

File Edit View Bookmarks Insert Selection	Geoprocessing
□ □	Buffer Image: Search For Tools Merge Dissolve Search For Tools ArcToolbox Environments Results ModelBuilder Python Geoprocessing Options Geoprocessing Options

Once the user has completed making the same selections as in the following *Geoprocessing Options* illustration, select **"OK"**

General	
Overwrite the outputs of get	eoprocessing operations
Log geoprocessing operatio	ns to a log file
Background Processing	
Enable Notification	
Houndadon	Appear for how long (seconds)
	Stay up if Error occurs
Script Tool Editor/Debugger	400
Editor:	R
Debugger:	
ModelBuilder	
When connecting elements, available.	display valid parameters when more than one is
Results Management	
Keep results younger than:	2 Weeks
Display / Temporary Data	
	g operations to the display
Add results of geoprocessin	
Display / Temporary Data	

Next select the **"Customize"** option along the top of the *ArcMap window*, then select **"Extensions"**

💐 Untitled - ArcMap	
File Edit View Bookmarks Insert Selection Geoprocessing	Customize
:□ 🔁 🖬 🖨 🧏 🗃 🛍 × ୭ ୯ 🛧 :••	Extensions
LP360 - Active LAS Layer: Poin	Add-In Manager
Table Of Contents	Customize Mode
📉 🔍 🧶 🔁 🎦 🗉	Style Manager
😅 Layers	ArcMap Options

·····☑ 3D Analyst
ArcScan
Data Interoperability
Geostatistical Analyst
LP360 Standard (License not available:) Network Analyst
Schematics
Spatial Analyst
Task Assistant Manager
Tracking Analyst
Workflow Manager
Description:
3D Analyst 10.1
Copyright ©1999-2012 Esri Inc. All Rights Reserved
Provides tools for surface modeling and 3D visualization.

Check on "3D Analyst", then select "Close"

Once again select the **"Customize"** option along the top of the *ArcMap window*, then select **"ArcMap Options"**

ile Edit View Bookmarks Insert	Selection Geoprocessing	Customize W
🗅 🔁 🖶 😂 I 堟 🎒 💼 × I 🤊	(d)	Toolbars •
€ € 🕅 🙆 ;; ::: 🖛 🔿 🕅		Extensions
LP360 - Active LAS Layer:	▼ Poin	Add-In Manager
ble Of Contents	- Poin	Customize Mode
: 🔋 😔 🐥 I 🗃 🎦 I 🗉		Style Manager
E Layers		ArcMap Options

Once "ArcMap Options" has opened, there are several settings to be changed in the *ArcMap Options* window.

Select the "CAD" tab and check on "Examine all file extensions"

Select the **"General"** tab and make the same selections as in the following illustration. Then select **"Apply"** and **"OK"**

Select the "General'	' tab and make	the same	changes a	as in th	e following	illustration.
A	cMap Options				XI	

CAD Sharing	Dis	olay Cache	Data Interope	erability
General Data View	Layout Vie	w Metadat	a Tables	Raste
Startup				9.
Show splash screen				
Show Getting Started di	ialog			
✓ Immediately add data		Startup Script:		
Load last map on startu	ip	Map.Start		
General				
Make newly added layer	rs visible by	default		
Return to last used loca	ation when A	dd Data dialog fir	stused	
Show wizards when ava	ailable			
Make relative paths the	default for r	new map docume	ents	
Tools				
Default Layer for Identify to	ool:	<top-most layer<="" td=""><td>></td><td>-</td></top-most>	>	-
When the Hyperlink too content:	l is selected,	highlight feature		 able
When the Hyperlink too content:	l is selected, ve after crea	highlight feature		able
When the Hyperlink too content: Keep drawing tools activ	l is selected, ve after crea us Zoom/Par	highlight feature Iting graphic	es containing clicka	able
When the Hyperlink too content:	l is selected, ve after crea	highlight feature Iting graphic		able

Select the **"Sharing"** tab and make the same selections as in the following illustration. Then select **"Apply"** and **"OK"**

Genera Data View	Layout View Metadata	Tables Ra	aster
Sharing	Display Cache	Data Interoperabil	ity
Publishing			
Lets you change the locat	on where your map will be stage		
publishing to ArcGIS Server Server Connection in Cata	r. You can override this folder fr	om an ArcGIS	
Staging Path:			
and the second sec	ta\Local\Esri\Desktop10.1\Stagir	na 🧖	
Use Default			
Use Delaur			
Show warning when a	ache exceeds	500.0 M	в
Show file location who	en saving draft service definition	s	
		8 	
Packaging			
Lets you choose to suppor	t the ArcGIS Runtime when pac	aging.	
Enable ArcGIS Runtim	e Tools		
Lets you choose the locati	on to unpack packages for all Ar	rGIS Deskton	
applications.	on to anpath packages for an m	coro o contop	
Automatically select le	ocation		
C Use user specified loc	ation		
		e	
	ОК	Cancel Ap	ply

ADD CONNECTION VIA CATALOG

If the *Catalog window* is not open, select the "Windows" option along the top portion of the *ArcMap window* and select "Catalog"



Once the *Catalog window* has opened select the **"Add Connection"** option along the top of the window



Once the *Connect To Folder* window has opened navigate to the newly mapped network drive, ie; *lidar* (*dot\dfsroot01*) (Z:)

Highlight by selecting it then select "OK"



After the connection has been made to *"lidar (\\dot\dfsroot01) (Z:)"* expand by selecting the *"+"* next to the directory in the *Catalog* window. Then also select the *"+"* next to *"Decimated_LIDAR.tbx"*. This allows the user access to the *"Get Decimated Lidar"* program, double click to initiate.



RUNNING THE "GET DECIMATED LIDAR" PROGRAM

It is beneficial to place the boundary (.dgn) file in an empty directory so there is no confusion once the ASCII (.txt) files are created. If more than one boundary exists such as in an Obscured Area file an ASCII (.txt) will be created for each and can be combined later (if needed) to import one file rather than multiple. The output location of the ASCII (.txt) file(s) <u>WILL BE</u> placed in the same location as the boundary (.dgn) file. Also, each boundary within the (.dgn) file must be a closed polygon in order for the "Get Decimated Lidar" program to intersect the NCFMP and/or QL2 Lidar data sets.

SOME THINGS TO KEEP IN MIND:

- ✓ <u>REMINDER</u>: Once the "Get Lidar" program is set to run, it cannot be shrunk to work in the background while other tasks are continued. However, other programs may be opened in front of the ArcMap window to continue with other tasks. If the user has a large area it may be beneficial to run the program on a vacant shared workstation or set to run in the evening.
- ✓ The boundary *filename* <u>CAN NOT</u> contain any special characters, ie: the "&" symbol or "spaces".
- ✓ The directory structure of the boundary file location <u>CAN NOT</u> contain any special characters, ie: the "&" symbol or "spaces".



✓ When the "Get Lidar" program initiates it will extract QL2 Lidar first in the boundary area(s). If QL2 Lidar does not exist for that area it will then extract NCFMP Lidar. To initiate the *"Get Decimated Lidar"* program double click **"Get Decimated Lidar"** in the *Catalog* window.



Once the "Get Decimated Lidar" window has opened, an Input Microstation Source must be selected, this is the boundary (.dgn) file. This is done by selecting the "Browse" button.



	obscure_Demo	🔄 🧿 🕫 🖽 -	
Name A		→ Date modified →	- Type
Jobh dine		6/8/2015 10:45 AM	File folder
Places	bscured_areas.dgn	6/4/2015 8:49 AM	Bentley Mic
	,		
ctop			
rion			
aries			
aries			
aries			
aries J puter			
Juter			
			Ľ,
Juter	r2915e_obscured_areas.c		Open

Navigate to the location of the boundary (.dgn) file and select it, then "Open"

Next choose the *pull down* option for the *NCFMP Decimation Level*. This option should always be set to **Bare_Earth** if getting lidar for **Obscured Areas**.

Get Decimated LiDAR		_		
Input Microstation Source				
NCFMP Decimation Level				
Bare_Earth Bare_Earth Quarter_foot				
Half_foot One_foot Two_feet				
			×	
	OK Cancel	Environments S	how Help >>	

Next choose the *pull down* option for the *QL2 Decimation Level*. Typically this will be set to **Half_Foot** for Obscured Areas.

4	🛐 Get Decimated LiDAR	_		×	
•	Input Microstation Source			<u>~</u>	
	NCFMP Decimation Level				
	Bare_Earth QL2 Decimation Level		~		
	Half_foot Bare_Earth		~		
	Quarter_foot Half_foot				
	One_foot Two_feet				
				\sim	
	OK Cancel Environments.		Show Help	>>	

Then Select "OK" to initialize.

Once the "Get Decimated Lidar" program has completed, the user will notice a .txt file has been created for each polygon within the boundary (.dgn) and labeled Polygon_1, Polygon_2, Polygon_3, etc. and can be combined (see; **Combining Multiple ASCII Files**).



To exit the *"Get Decimated Lidar"* program, simply select **"Close"** on the Get Decimated Lidar window



To exit ArcMap, select "File" along the top of the ArcMap window and "Exit"

File	Edit Vie	w Bookmarks	Insert	Selectio
	New		Ctrl+	-N 🛃
6	Open		Ctrl+	0
	Save		Ctrl+	HS
	Save As Save A Cop	γ		
r	Share As			+
	Add Data			- 1
	Sign In ArcGIS Onli	ne		e
	Page and P Print Previe	rint Setup w		4
4	Print			3
	Export Map			[
	Analyze Ma	p		
1	Map Docum	ent Properties	6	
		s…\QAQCD5Chi s…\QAQCD4Chi		
	3 C:\Charle	s\QAQCD3Charle	es.mxd	
	4 S: \Photo	CG\QAQCTem	plete.mxd	ľ
	5 WCDO	T Emergency Re	sponse	e
	6 I:\Special	_P\i5714_over	view.mxd	
	7 S: \Photo	C\i5714_over	view.mxd	ť
	8 C:\GeoTe	ch_SOP\test.mx	d	5
	9 C: LiDAR	Get_LiDAR.mxd		
	Exit		Alt+F	5

When asked to save changes select "No"



COMBINING MULTIPLE ASCII FILES

If multiple ASCII files were created because of multiple boundaries within the boundary file, they can be imported into one file so as to reduce the amount of time of importing one file vs multiple files in Mircostation.

NOTE: If one ASCII file was created, these steps can be skipped and go directly to Importing ASCII (.txt) Files into Microstation.

In Windows Explorer hold the shift key down while right clicking on the directory that contains the ASCII (.txt) files and select **"Open command window here"**

Char	Open	
🍌 Char		
📕 d938	Open command <u>w</u> indow here	
🌗 Data		•
📕 Geo	🛄 Snagit	•
J INSI	💟 Scan for threats	
🔒 Lida	뗿 WinZip	•
J Micro	Shared Folder Synchronization	•
J MrSi	Restore previous versions	
MSO	Include in library Copy <u>a</u> s path	•
JI NCD		•
INCD		
J NCM	Cu <u>t</u> Copy	
I NCS	-	-
J Orth	Create <u>s</u> hortcut Delete	
🔰 Perfi		
鷆 plotv	Properties	
100	Properties ram Files	

An "MS DOSS" command window will appear.

NOTE: To obtain a command window when using **Windows 10**, navigate to the directory the .txt files reside, select the address bar at the top of the windows explorer so that the entire address is highlighted and type "**cmd**" then enter. Once the command window appears follow the directions as follows.

At the prompt type the following;

<u>.txt</u> Copy [space] *.txt [space] "name of file".txt <u>le: copy *.txt nameoffile.txt</u> Press **"Enter"**

Administrator: C:\Windows\system32\cmd.exe	
S:\Photo\CG_Lee\Extract_DEM_Demo\R2519e_obscure_Demo>copy *.txt dem.txt r2915e_obscured_areas_DEM_126_096_P1_10DEM.txt r2915e_obscured_areas_DEM_126_096_P3_10DEM.txt r2915e_obscured_areas_DEM_126_096_P4_10DEM.txt r2915e_obscured_areas_DEM_126_096_P5_10DEM.txt r2915e_obscured_areas_DEM_126_096_P5_10DEM.txt r2915e_obscured_areas_DEM_126_098_P6_10DEM.txt r2915e_obscured_areas_DEM_126_098_P6_10DEM.txt r2915e_obscured_areas_DEM_126_098_P7_10DEM.txt r2915e_obscured_areas_DEM_126_098_P7_10DEM.txt r2915e_obscured_areas_DEM_126_098_P7_10DEM.txt r2915e_obscured_areas_DEM_126_098_P7_10DEM.txt r2915e_obscured_areas_DEM_126_098_P7_10DEM.txt r2915e_obscured_areas_DEM_126_098_P7_10DEM.txt r2915e_obscured_areas_DEM_126_098_P7_10DEM.txt	

The "filename" (ie: dem.txt) will be saved in that directory.

Name	Date modified	Type *	Size
길 JobName.gdb	6/5/2015 10:53 AM	File folder	
🐺 r2915e_obscured_areas.dgn	6/4/2015 8:49 AM	Bentley MicroStatio	121 K
dem.dat	6/5/2015 11:51 AM	DAT File	111 K
r2915e_obscured_areas_DEM_126_096_P1_10DEM.dat	6/5/2015 10:43 AM	DAT File	11 K
r2915e_obscured_areas_DEM_126_096_P2_10DEM.dat	6/5/2015 10:44 AM	DAT File	11 K
r2915e_obscured_areas_DEM_126_096_P3_10DEM.dat	6/5/2015 10:46 AM	DAT File	6 K
r2915e_obscured_areas_DEM_126_096_P4_10DEM.dat	6/5/2015 10:48 AM	DAT File	11 K
r2915e_obscured_areas_DEM_126_096_P5_10DEM.dat	6/5/2015 10:49 AM	DAT File	50 k
r2915e_obscured_areas_DEM_126_096_P7_10DEM.dat	6/5/2015 10:52 AM	DAT File	41
r2915e_obscured_areas_DEM_126_098_P6_10DEM.dat	6/5/2015 10:50 AM	DAT File	14 8
r2915e_obscured_areas_DEM_126_098_P7_10DEM.dat	6/5/2015 10:53 AM	DAT File	7 K
🚰 dem.txt	6/5/2015 11:51 AM	Text Document	104 k
r2915e_obscured_areas_DEM_126_096_P1_10DEM.txt	6/5/2015 10:43 AM	Text Document	11 k
r2915e_obscured_areas_DEM_126_096_P2_10DEM.txt	6/5/2015 10:44 AM	Text Document	10 k
r2915e_obscured_areas_DEM_126_096_P3_10DEM.txt	6/5/2015 10:46 AM	Text Document	6 1
r2915e_obscured_areas_DEM_126_096_P4_10DEM.txt	6/5/2015 10:48 AM	Text Document	11 k
r2915e_obscured_areas_DEM_126_096_P5_10DEM.txt	6/5/2015 10:49 AM	Text Document	47 k
r2915e_obscured_areas_DEM_126_096_P7_10DEM.txt	6/5/2015 10:52 AM	Text Document	41
r2915e_obscured_areas_DEM_126_098_P6_10DEM.txt	6/5/2015 10:50 AM	Text Document	13 4
r2915e_obscured_areas_DEM_126_098_P7_10DEM.txt	6/5/2015 10:53 AM	Text Document	6 K

NOTE: Before Importing Coordinates be sure to set the Active Level attributes to the corresponding type of Lidar being imported.

NCFMP - PH Exist DTM NCFMP LIDAR Elevation Point (Level #16016)

QL2 - PH Exist DTM QL2 Lidar Elevation Point (Level #16306)

SETTING ACTIVE LEVEL ATTRIBUTES

Select the "Level Display" icon



In the Level Display window, select the "List Filter" icon and set to "Untitled"

🥩 Level Display - View 1						<u>- ×</u>
Uiew Display						
10 (none)						
r2915e obscured areas don						
Name	Number		=	llead		12 -
	2010	0				17
			0			
			0			
			0			
			0			
			0			
			0			
I Typical Text Asphalt at Bridge Appro	6/0		0			
	U I View Display ▼	Name Number Default 0 Typical Text Label CELL 675 Typical Text Grade Point CELL 673 Typical Text General CELL 672 Typical Text Centerline CELL 673 Typical Text Centerline CELL 671	Name Number Default 0 0 Typical Text Label CELL 675 0 Typical Text Grade Point CELL 673 0 Typical Text Grade Point CELL 672 0 Typical Text Centerline CELL 671 0	Name Number Image: Construct of the second	Name Number Used Default 0 0 • Typical Text Label CELL 675 0 • Typical Text Label CELL 674 • • Typical Text Iabel CELL 673 • • Typical Text Grade Point CELL 672 • • Typical Text Grade Detrot CELL 671 • •	Name Number Used Default 0 0 • Typical Text Label CELL 675 0 • Typical Text ID Circle CELL 674 0 • Typical Text Grade Point CELL 673 0 • Typical Text Centerline CELL 671 0 •

Select the Blank Area at the top of the *Level Name* window and type **"lidar"**, then press the **"Enter"** button on your keyboard. This will display only the levels that correspond to Lidar.

🚽 🖾 View Display 🔻					
🖗 📴 🎾 *Untitle 🕶 Levels	-1 🗔 -				
r2915e_obscured_areas.dgn					
ame 4	Number		=	Used	
	Number			Used	
ar				Used	
lame lar H Exist DTM Q.2 LIDAR Elevation H Exist DTM NCFMP LIDAR Elevat	16306	6		Used	

"Right Click" with your mouse on the appropriate Lidar Level and select "Set Active"

	/iew 1 isplay ▼] ntitle ▼ Levels ▼] 🛴	<u>-</u>				<u></u> [
r2915e_obscured_						
Name lidar		Number	E	=	Used	
PH Exist DTM QL2 LI	DAR Elevation Point	1/5306	6			
PH Exist DTM NCFMI					}	
	Jump To Active Level Create Display Set	el				
	Create Display Set All O <u>n</u> All O <u>ff</u>					

To return your Level Display window to show all levels, select the **"List Filter"** then **"None"**



IMPORTING ASCII (.TXT) FILES INTO MICROSTATION

Once the ASCII file(s) has been created it can be imported using the *Import Coordinates* tool in the *XYZ Text* toolbox.

Open the boundary file in *Microstation*. Select the **"Tools"** option along the top of the *Microstation* window, select **"Dimensions"**, select **"XYZ Text"**, then **"Open as** Toolbox".



Select "Import Coordinates"



In the Import Coordinates dialog box, select "Browse"

ame:		Browse	
Import:	Point Element		
Order:	XYZ		
View:	1		
Text:			
Cell:			

In the Open Import File dialog box, browse to the location of the .txt file. Select the ASCII file



Select "Process"

Filename: CFM	Browse	
Import:	Point Element	
Order:	XYZ	
View:	1	
Text:		
Cell:		
	Process	

The ASCII file will be imported into your design file with the attributes of the active level.

Repeat the steps above for each ASCII file created making sure the correct active level is set for the type of Lidar being imported.

NOTE: Extracted Lidar from both NCFMP and QL2 is in a gridded coordinate system and, if needed, would have to be converted to a localized coordinate system.