

Data Mining Techniques: Creating Pre- and Post-Development Drawings and Hydrographs

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CLASS SUMMARY

This hands-on lab covers data mining techniques using Autodesk® AutoCAD® Map 3D and Autodesk® Storm and Sanitary Analysis software. We cover how to effectively use existing and created GIS layers to streamline creation of pre- and post-development drainage map drawings and to then import the data into Storm and Sanitary Analysis to create hydrographs. We examine technical workflows and provide useful tips for analyzing soils and pervious/impervious data.

KEY LEARNING OBJECTIVES

At the end of this class, you will be able to:

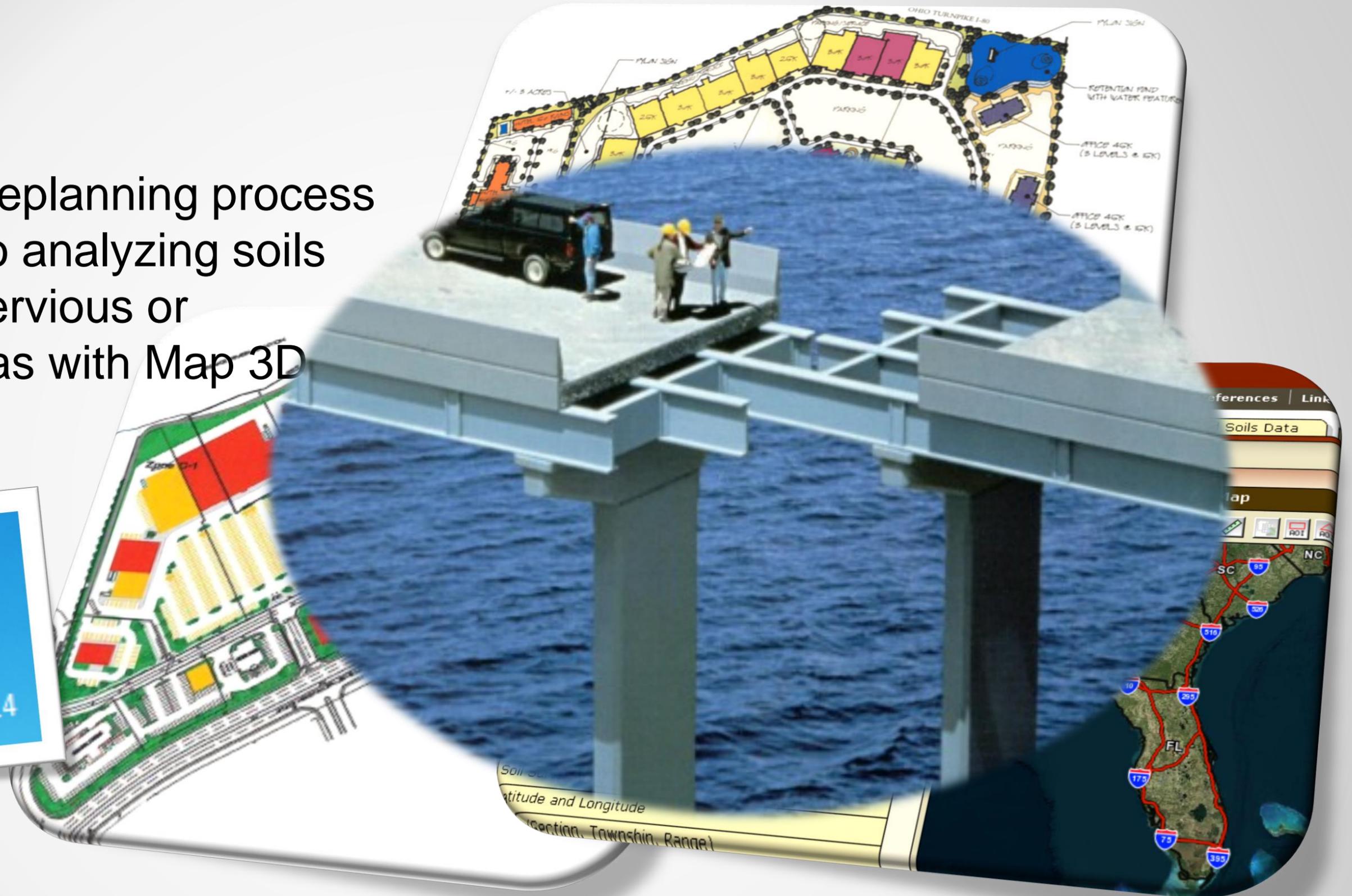
- Describe the preplanning process required prior to analyzing soils and their pervious or impervious state with Map 3D
- Attach data for impervious and pervious areas
- Analyze GIS layers in Map 3D
- Create catchment and sub basins using various methods

LECTURE



LECTURE

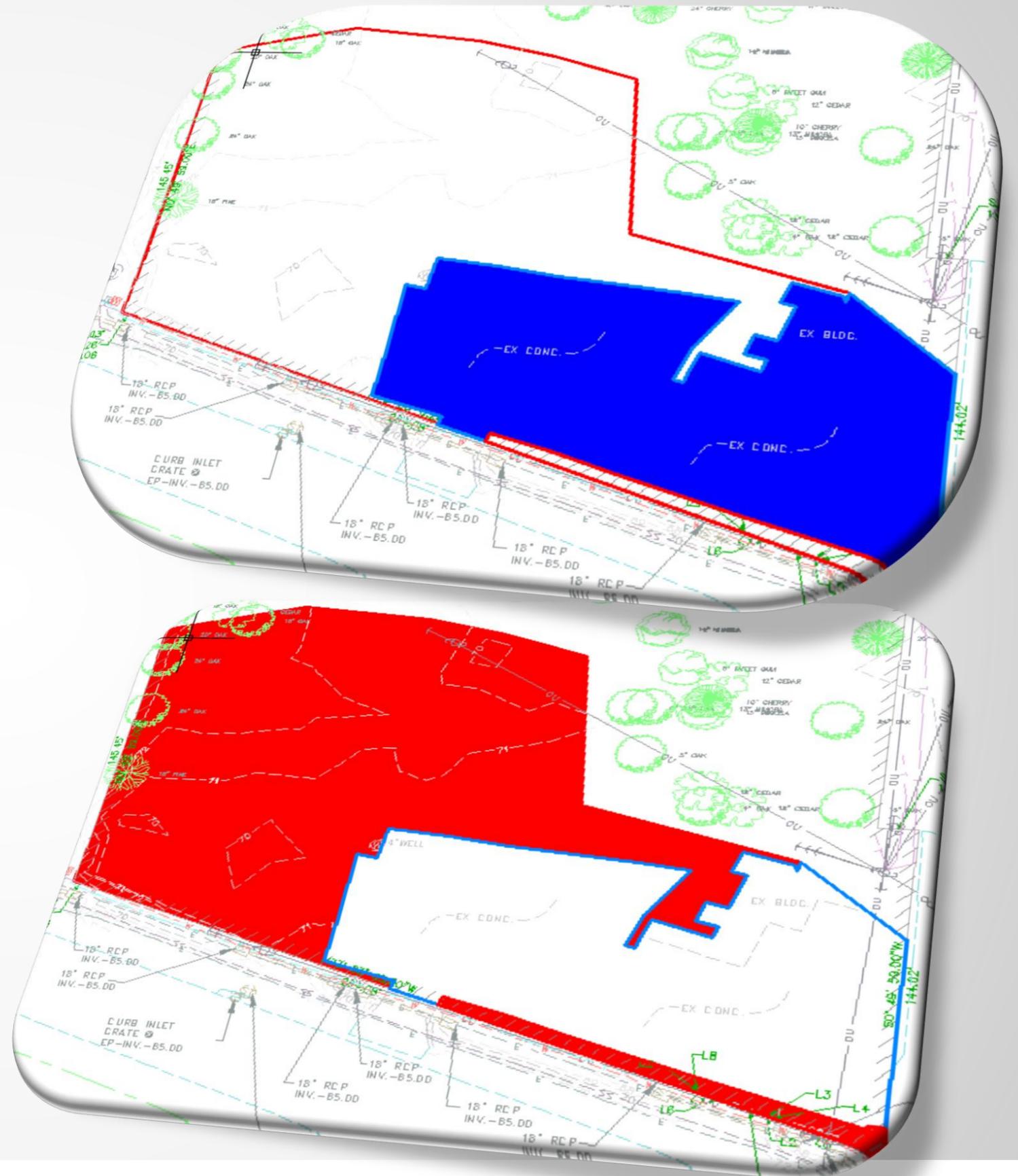
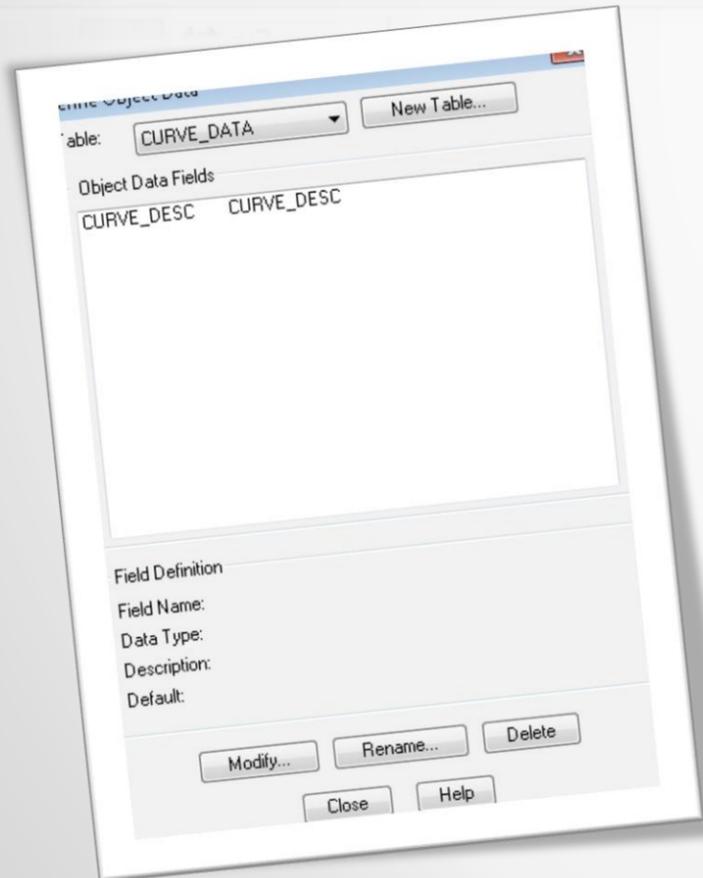
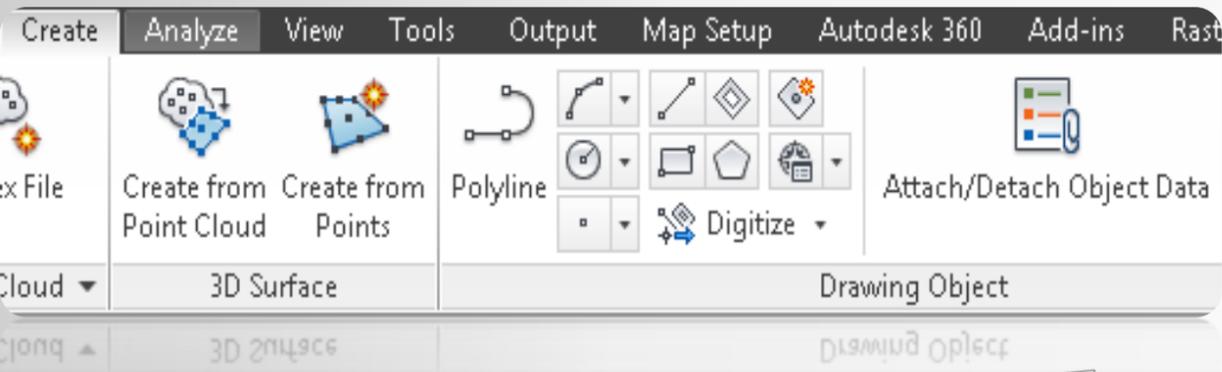
- Describe the preplanning process required prior to analyzing soils and the sites pervious or impervious areas with Map 3D Civil 3D.



*Image obtained from http://magicvalley.com/news/local/twin-falls/large-commercial-development-again-moving-toward-fruiton-in-twin-falls/article_884caf54-f97e-53b9-a00d-676acf636281.html / <http://www.bostonheights.org/News/Alnola/> <http://cheezburger.com/template/3417140> <http://shipontheside.com/>

LECTURE

- Attach data for impervious and pervious areas



LECTURE

- Attach data for impervious and pervious areas

The screenshot displays the AutoCAD Civil 3D 2014 software interface. The title bar indicates the file name is 'AU2013v4.dwg'. The command line shows the command '_QSAVE' being executed. The ribbon includes tabs for Home, Insert, Annotate, Modify, Analyze, View, Output, Manage, Help, Express Tools, Add-Ins, IMAGINiT, River, Trimble Link, and Vault. The Analyze ribbon is active, showing tools for Import Survey Data, Points, Surfaces, Parcel, Feature Line, Grading, Alignment, Profile, Corridor, Intersections, Assembly, Pipe Network, Profile View, Sample Lines, and Section Views. The Properties palette on the right shows the following settings:

General	
Color	ByLayer
Layer	0
Linetype	ByLayer
Linetype scale	1.0000
Lineweight	ByLayer
Transparency	ByLayer
Thickness	0.0000

3D Visualization	
Material	ByLayer
Shadow display	Casts and Rece...

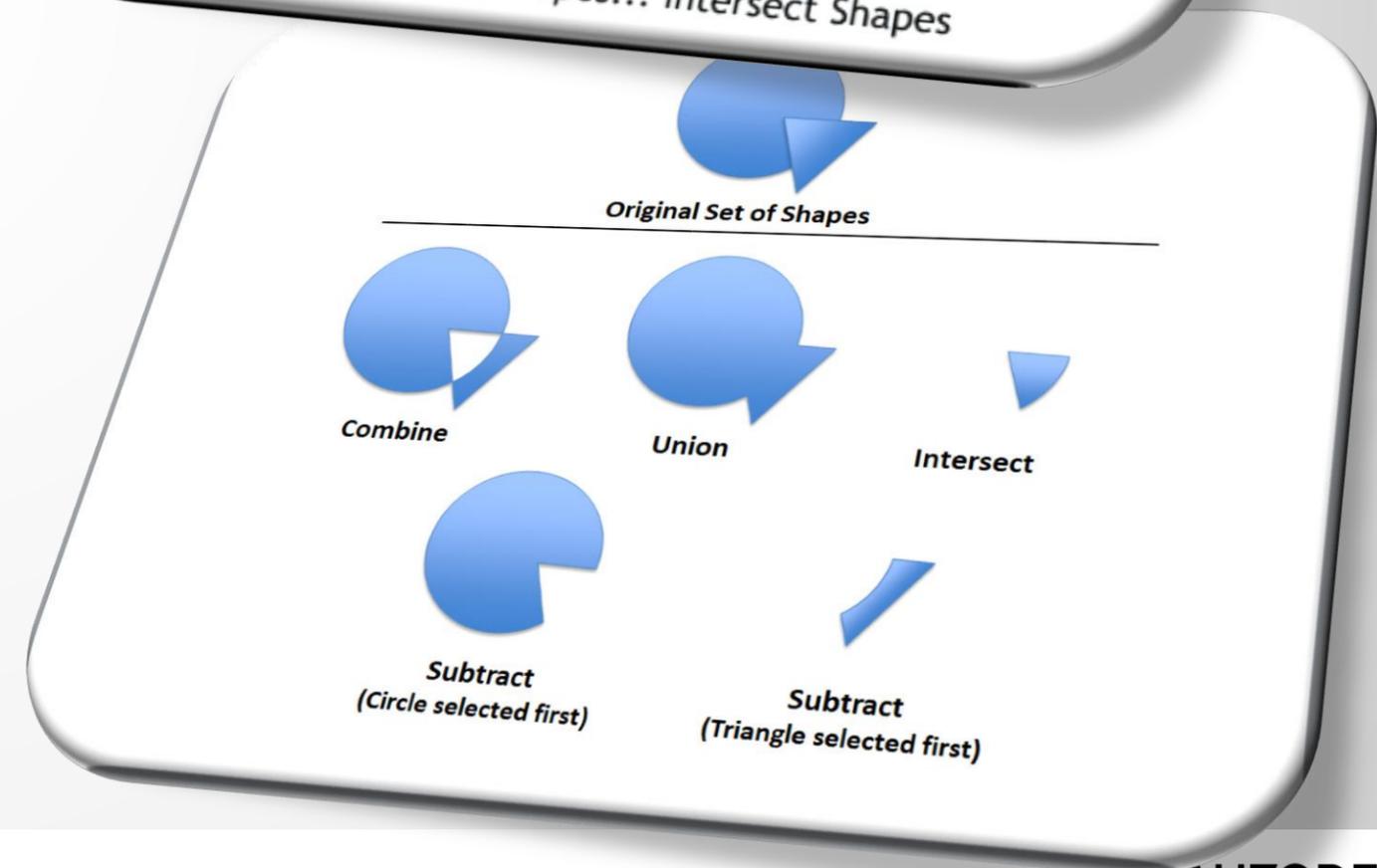
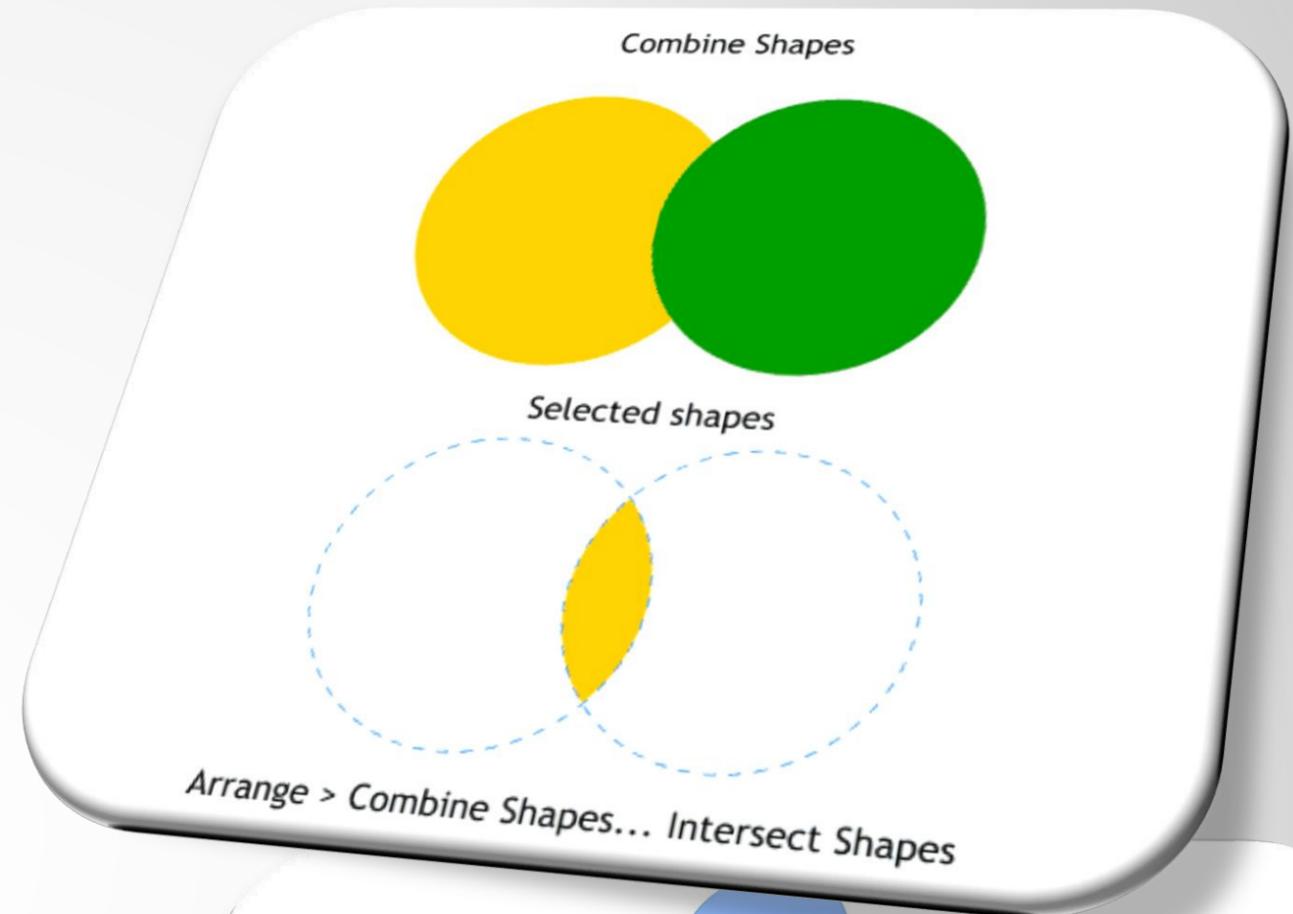
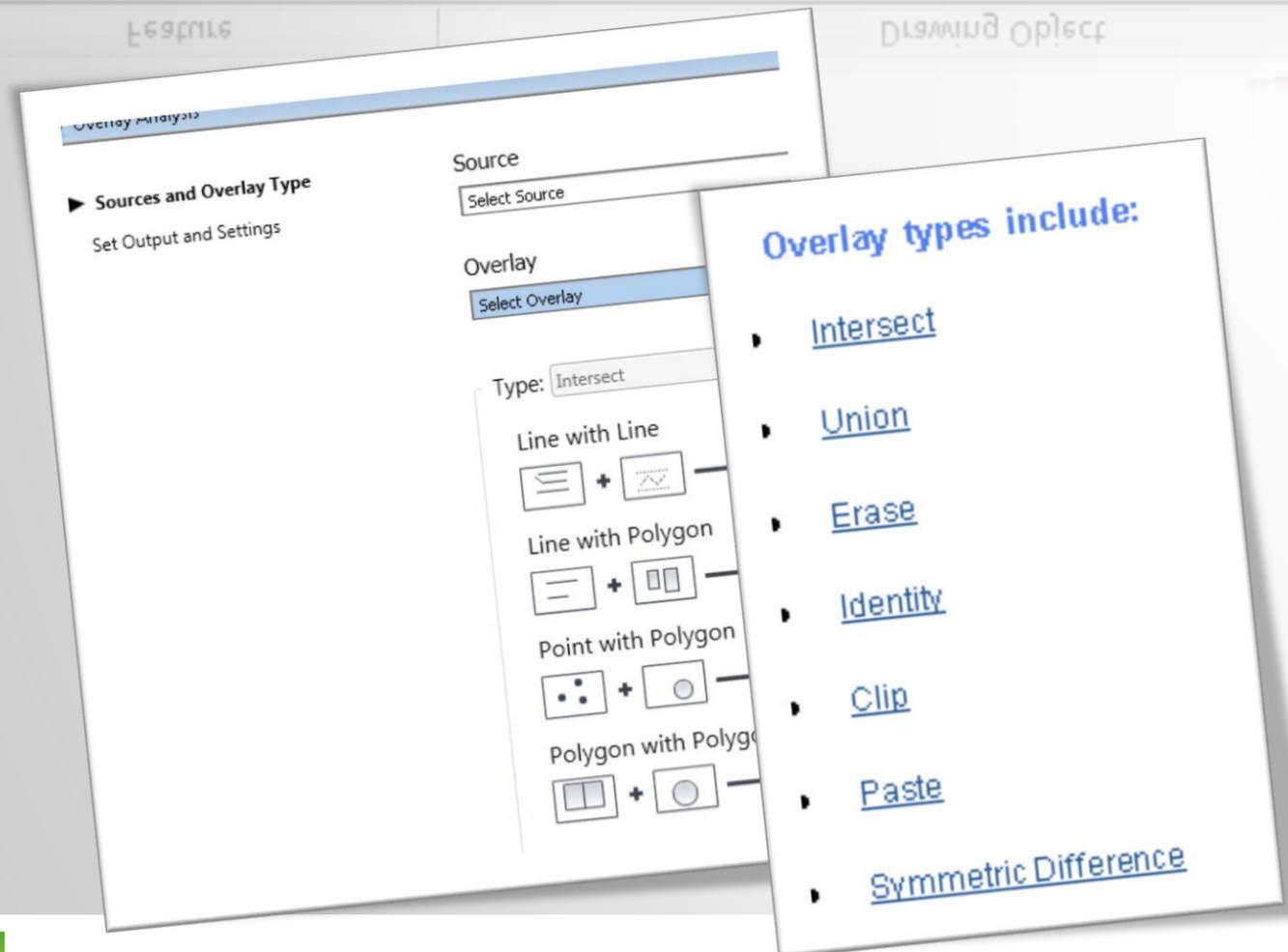
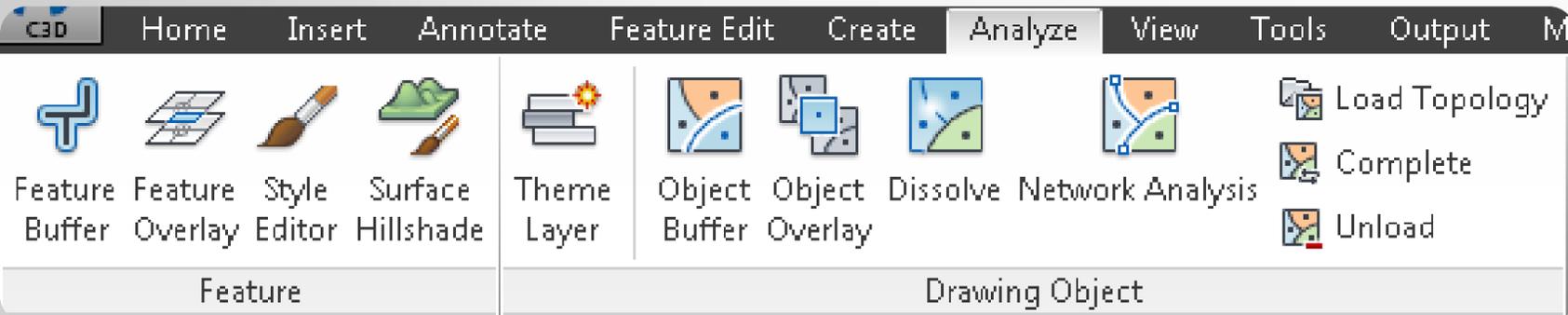
Plot style	
Plot style	ByColor
Plot style table	None
Plot table atta...	Model
Plot table type	Not available

View	
Center X	728854.0066
Center Y	1630490.9477
Center Z	0.0000

The main drawing area shows a 2D wireframe view of a site plan with various data points and lines. The Prospector palette on the left shows the active drawing view 'AU2013v4' with a tree structure containing Points, Point Groups, Point Clouds, Surfaces, and Alignments.

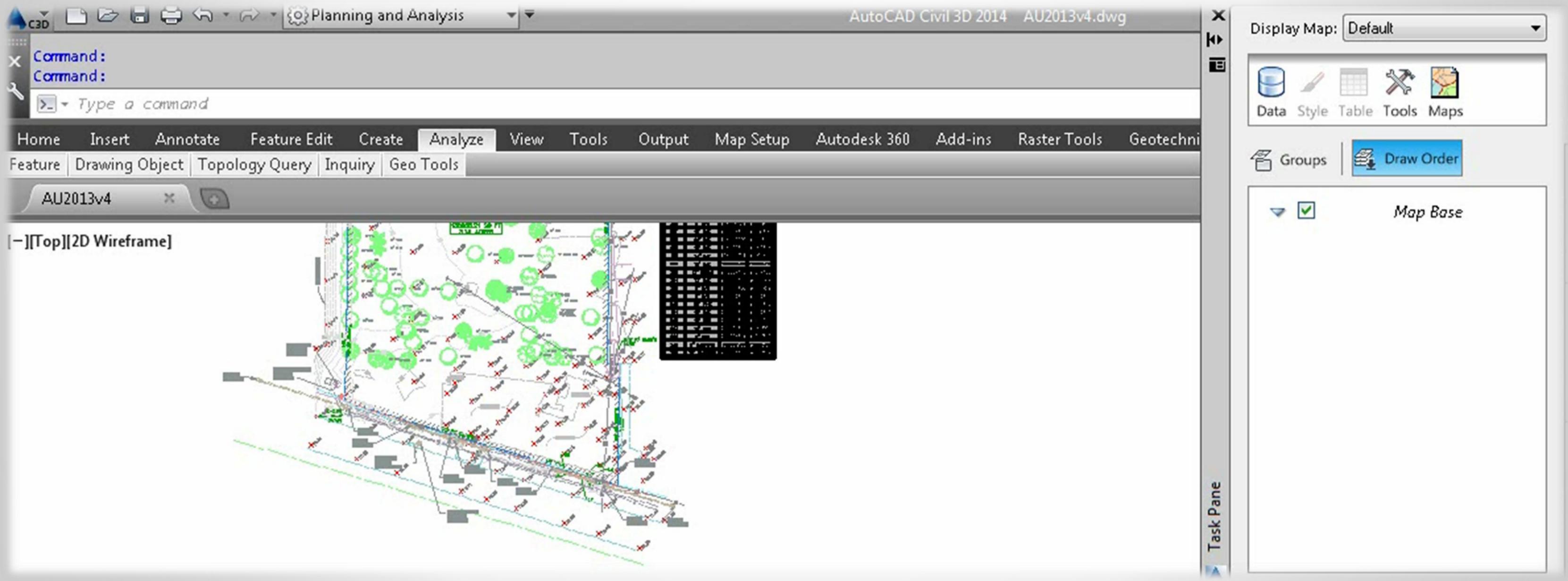
LECTURE

- Analyze GIS layers in Map 3D



LECTURE

- Analyze GIS layers in Map 3D



An aerial view of a city featuring a river, a multi-lane highway bridge with a rainbow-colored light strip along its edge, and a city skyline in the background. The scene is overlaid with a semi-transparent white banner.

DEMO

DEMO

Please pay attention to the screen,
I will demonstrate the next activity.....

Watch Demo



LETS REVIEW..



ACTIVITY

- Now **YOU** will work on this activity where **YOU** attach object data to your shapes as well as import these shapes for FDO import and analysis.



LETS REVIEW..



LECTURE



LECTURE

- Create catchment and sub basins using various methods

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- Create catchment and sub basins using various methods

The screenshot displays the AutoCAD Civil 3D 2014 software interface. The top ribbon includes tabs for Home, Insert, Annotate, Modify, Analyze, View, Output, Manage, Help, Express Tools, Add-Ins, IMAGINiT, River, Trimble Link, Vault, Solid Cut Surface, and Bridge Modeler. The main workspace shows a 2D wireframe view of a catchment area with a blue dashed line representing the boundary. The view is titled "[Top][2D Wireframe]". The Prospector panel on the left shows the project structure for AU2013v4, including Points, Point Groups, Point Clouds, Surfaces, Alignments, Sites, Catchments, and Pipe Networks. A table on the right side of the workspace lists tree data:

228	10" OAK	1630841.55	728054.153
231	24" OAK	1830888.41	728018.782
232	15" OAK	1830803.08	728085.118
233	12" CEDAR	1630882.08	728082.480
234	12" OAK	1630889.80	728103.032
236	8" OAK	1830873.10	728087.471
238	8" OAK	1830874.85	728084.228
240	20" PINE	1830838.50	728083.047
241	12" OAK	1830858.98	728094.506
242	18" PINE	1830838.98	728063.031
243	18" PINE	1830840.82	728051.045
244	8" OAK	1830843.27	728138.340
246	8" CAMPHOR	1830817.85	728201.542
245	10" CAMPHOR	1630824.39	728191.492

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LETS REVIEW..



KEY LEARNING OBJECTIVES

Did we....

- Describe the preplanning process required prior to analyzing soils and their pervious or impervious state with Map 3D
- Attach data for impervious and pervious areas
- Analyze GIS layers in Map 3D
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QUESTIONS



