



What We Do

Allegan County GIS
www.allegancounty.org/gis

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Part I

Brand

Chapter 1

Awards

1.1 The GIS Champion Award

1.1.1 GIS Champion Award Code

```
\documentclass[landscape]{article}
\usepackage{wallpaper}
\usepackage{niceframe}
\usepackage{xcolor}
\usepackage{ulem}
\usepackage{graphicx}
\usepackage{geometry}
\geometry{tmargin=.75cm,bmargin=.25cm,lmargin=.8cm,rmargin=.2cm}
\usepackage{multicol}
\setlength{\columnseprule}{0.4pt}
\columnwidth=0.3\textwidth

\begin{document}

%\TileWallPaper{4cm}{2cm}{CoLogo133x200.png}

\centering
\scalebox{3}{\color{green!30!black!60}}
\begin{minipage}{.33\textwidth}
\font\border=umrandb
\generalframe
{\border \char113} % up left
{\border \char109} % up
{\border \char112} % up right
{\border \char108} % left
{\border \char110} % right
```

```

{\border \char114} % lower left
{\border \char111} % bottom
{\border \char115} % lower right
{\centering

\includegraphics[height=1.25cm]{GIS_Logo_better.jpg}
%\end{minipage}
\vspace{-8mm}

\curlyframe[.9\columnwidth]{

\textcolor{red!10!black!90}
{\small Allegan County GIS Services}\\
\textcolor{green!10!black!90}{
\tiny recognizes}

\\
\uline{\textcolor{black}
{Ian Hanes}}
\\
\smallskip
\tiny Chief Equalization Technician
\smallskip

\textcolor{green!10!black!90}
{
\tiny as a
}
\smallskip
\tiny
\\
\textcolor{black}{\large \textsc{GIS Champion}}
\\
\vspace{1mm}
\textcolor{green!10!black!90}
{
\tiny for outstanding dedication and service to the community
\\while using GIS technology on this day
\itshape June 29, 2018
}
\vspace{3mm}

{\color{blue!40!black}
\scalebox{.6}{

\begin{tabular}{ccc}

```



```
\cline{1-1}
%\cline{2-2}
\cline{3-3}
%\cline{4-4}
%\cline{5-5}
\\
Neil Besteman & & Bryan May \\
GIS Manager & & GIS Analyst \\
\end{tabular}
}}}}
\end{minipage}

}
\end{document}
```


Part II

Methods

Chapter 2

Documentation

2.1 About Documentation

2.1.1 How This Book Works

Project General Notes:

- Book folder can be renamed and moved.
- This project is coded with relative paths from processing folder down.

Project file structure:

J:\LIS\GIS_Doc\mybsBook\build

pdf docs created by the underlying .tex docs and copied here manually.

J:\LIS\GIS_Doc\Book\source

images that appear in \GIS_Documentation.tex.

J:\LIS\GIS_Doc\Book\processing

the Tex workspace.

\GIS_Documentation.tex

top level of documentation of type "book" in L^AT_EX. Where book properties and book parts are managed and chapters are imported.

\archive

archive copies of entire processing folder.

\brandPart

L^AT_EX "book part" about the brand.

`\methodsPart`

L^AT_EX "book part" about the methods.

`\servicePart`

L^AT_EX "book part" about services.

`\build`

folder for temp docs when `GIS_Documentation.tex` is compiled.

*** Note: each level from here down has a build folder for temp Latex files like this.**

Service Book Part Detail

relative path:

```
\processing\servicePart
```

absolute path:

```
J:\LIS\GIS_Doc\Book\processing\servicePart
```

```
\toolsChapter.tex
```

intermediate level of "book" in \LaTeX . Where (service part, tool) chapter properties are managed and sections are imported.

toolsChapter

relative path:

```
\processing\servicePart\toolsChapter
```

absolute path:

```
J:\LIS\GIS_Doc\Book\processing\servicePart\toolsChapter
```

\LaTeX file \QGISSection.tex

intermed level of "book" in \LaTeX . Where book section properties are managed and subsections are imported.

2.2 Document Storage Concepts

2.2.1 GIS File Standard

Folders inside the project folder

- archive
- build
- delivered
- documentation
- processing
- source

2.3 Team Concept

2.3.1 Paired Programming

some point about pp

Part III

Service

Chapter 3

Tools

3.1 QGIS Tools

3.1.1 Using COGO Tools in QGIS

Set up the Azimuth and Distance Plugin
(**Azd Plugin**).

In the Plugins drop down(1), under the topography group select the **Azd Plugin(2)**(see fig.).

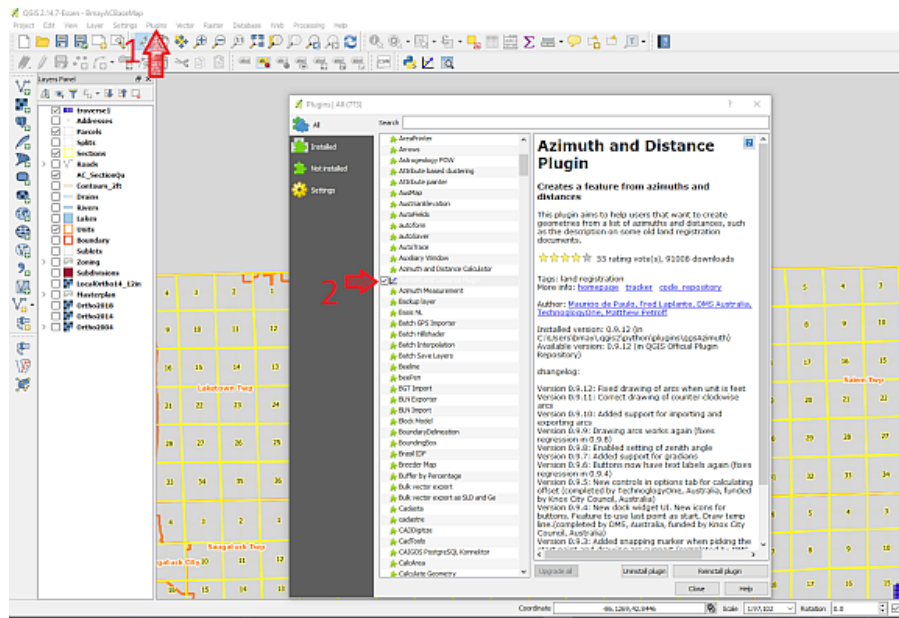


Figure 3.1: launch plugin

Note here which layer is active (see fig.).

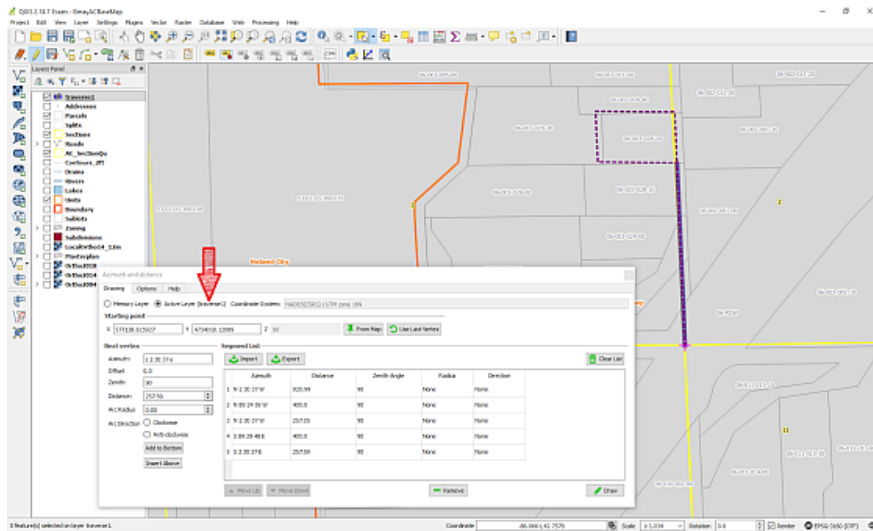


Figure 3.2: check active layer

If necessary, left click the layer *traverse 1* in Layer Panel to activate it(see fig.).

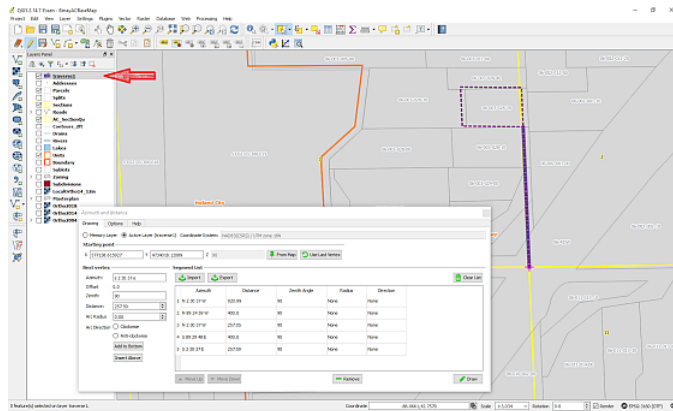


Figure 3.3: activate layer

Configure Options On Options Tab: Select Boundary, Bearing, Feet, and Degree radio buttons.

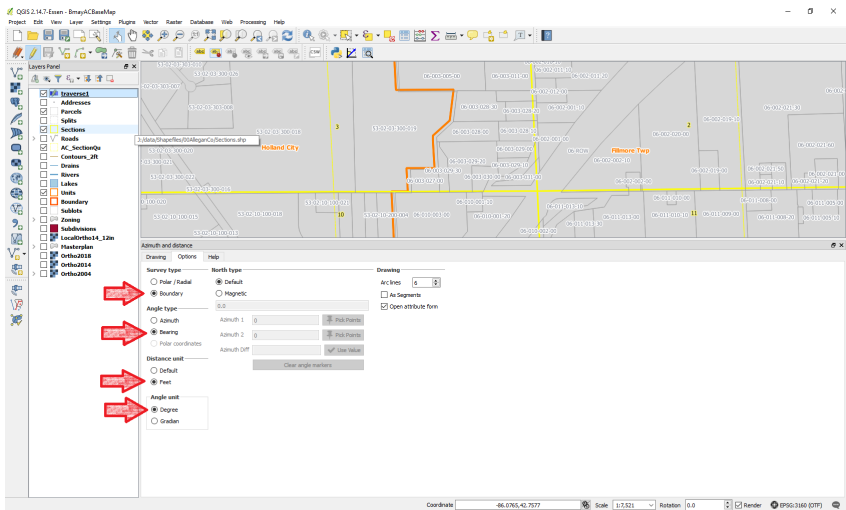


Figure 3.4: Plugin Options

Using the tool Boundary descriptions are entered into the Drawing Tab. Azimuth (bearing) and Distance are the important boxes (Set Offset = 0 and Zenith = 90 and ignore)(see below).

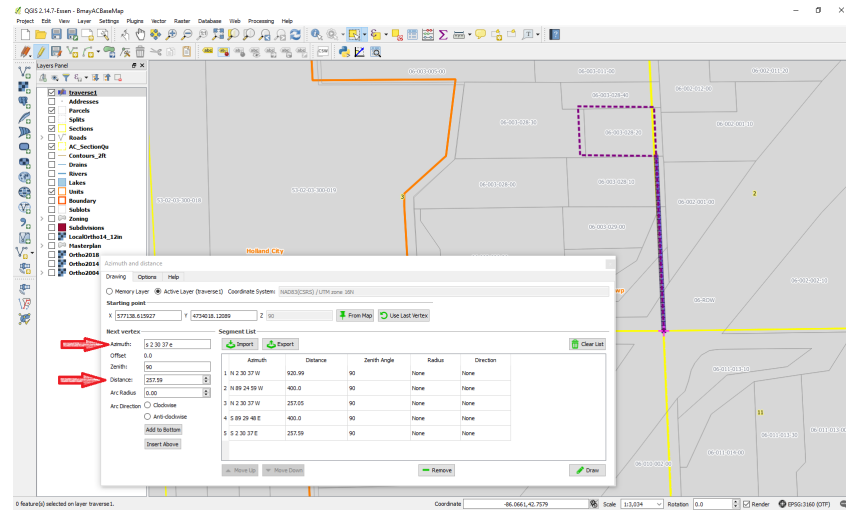


Figure 3.5: Entering Bounds

Configure editing environment

Use Settings Dropdown and Snapping Options to enable snapping to Sections, Quarter Sections, and or Parcels if desired (see fig.).

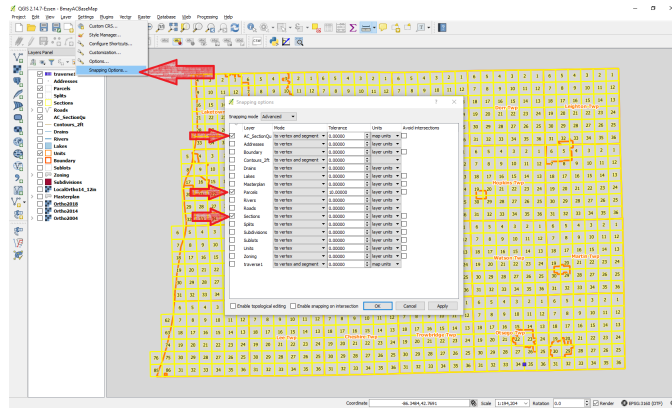


Figure 3.6: Configure editing environment

Locate Point of Commencement

To get to the Point of Commencement,

Use **any combination** of the following methods:

- Using Reference Layer
- Using Measuring Tool
- Search by Parcel Number (Search Layers Plugin)
- Draw COGO lines (Azd Plugin)(as described earlier)

Using Reference Layer Use reference layers; Units, AC_SectionsQu, Sections, and Parcels. Toggle layers on and off in Layers Panel and zoom in and out with mouse wheel.

Using Measuring Tool Use the measuring tool, make sure to set units to feet. To exit current measurement right click (see fig.).

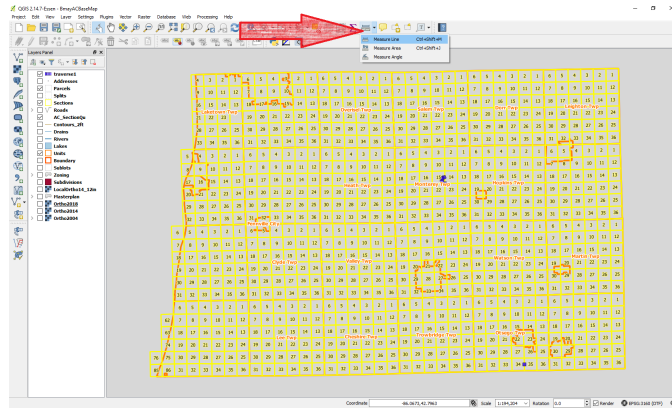


Figure 3.7: Measuring Tool

Search by Parcel Number (Search Layers Plugin.)

To Launch Search Layers Plugin:
In Plugins dropdown:
Enable the **Search Layers** Plugin. (see fig.)

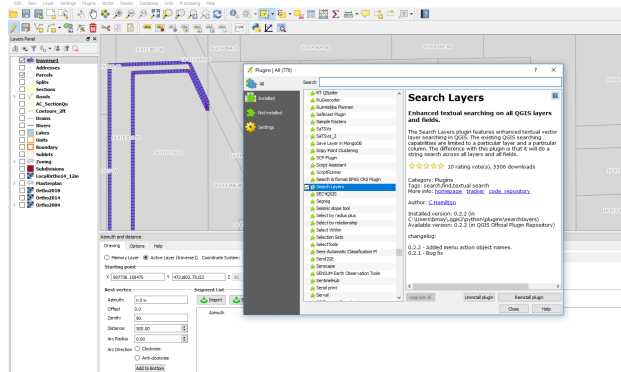


Figure 3.8: Search Layers Plugin

Enter parcel number (with dashes), Set layers, and set search field.(see fig.)

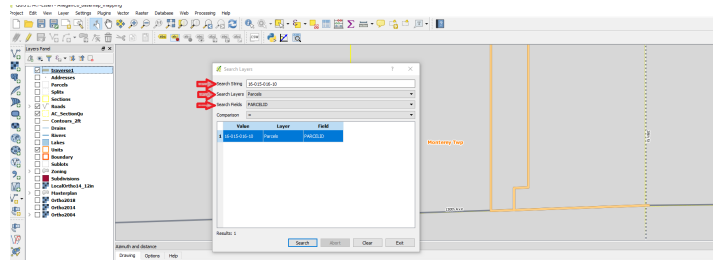


Figure 3.9: Search Layers Setup

3.2 L^AT_EX Packages

3.2.1 float Package

BLAH
(BLAH).

3.2.2 graphicx Package

BLAH
(BLAH).

3.2.3 import Package

BLAH
(BLAH).

3.2.4 url Package

BLAH
(BLAH).

3.2.5 wrapfig Package

BLAH
(BLAH).

3.3 L^AT_EX Templates

3.3.1 L^AT_EX Section Template

```
\documentclass[class=book , crop=false]{standalone}

\usepackage[subpreambles=false]{standalone}

\input{../../preamble}

\begin{document}

\section{SECTION NAME HERE}

\subimport{RELATIVE PATH TO NEW Section/}{NEW SUBSECTION Subsection.tex}

%eg.
%\subimport{latexTemplatesSection/}{subsectionTemplateSubsection.tex}
% etc...
```

```
\end{document}
```

3.3.2 L^AT_EX Subsection Template

```
\documentclass[class=report , crop=false, multi={itemize, figure}, float=false]{standalone}

\input{../../../preamble}

%\graphicspath{{img/}{Section/img/}{Chapter/Section/img/}{Part/Chapter/Section/img/}}

\title{ % create title page
\HRule % Horizontal Line added
\\[.4cm] % space
\begin{figure}[H] % included image
\begin{center} % centered horizontally
\includegraphics[scale=.45]{GIS_Logo_better.jpg}
\end{center}
\end{figure}
\Huge \bfseries TITLE GOES HERE % Title text
\HRule \\[.4cm] % Horizontal Line added
} % closing brace for title

\author{\Large Allegan County GIS \\ \Large www.allegancounty.org/gis} % defines author

\begin{document}% Document Begins

\ifstandalone
%\frontmatter % turns off chapter numbering and uses roman numerals for page numbers
\maketitle % creates title page and blank page after title page
\tableofcontents % creates TOC and blank page
\clearpage
%\mainmatter % turns on chapter numbering, resets page numbering and uses arabic numerals
\fi

\subsection{BLAH}
\medskip
\subsubsection{\Large BLAH \\ \small(BLAH).}

\medskip
\large BLAH \\ \Large BLAH \textbf{ {BLAH}(see fig.)}.
\begin{figure}[H] % included image
\centering
\includegraphics[scale=.30]{1.png}
```



```
\caption{BLAH}  
\end{figure}  
\clearpage  
  
\large BLAH (see fig.).  
\begin{figure}[H] % included image  
\centering  
\includegraphics[scale=.26]{2.png}  
\caption{BLAH}  
\end{figure}  
  
\end{document}
```