```
<script>
 var dojoConfig = {paths: {js: location.pathname.replace(/\/[^/]+$/, "") + "/javascript"}};
</script>
```

Please note that the js prefix is configured by this dojoConfig variable. Your setup may vary.

```
require
(
 ["js/measurementEXT",
  "maybe lots of stuff here..."
  "dojo/domReady!"

],

function (measurementEXT, "maybe lots of stuff here...")
{

map.on('pan-end', lang.hitch(this, function(result)
{
 measureEXT.panEnd(result);
}));

map.on('load', lang.hitch(this, function(m)
{
 measureEXT = new measurementEXT(
 {map: m.map}, 'page-body-measure');

 document.getElementById("map-control-pa

}));

);
```

This code snippet indicates how the measureEXT is created. Should normally be in a main code module.

Add this to a map pan-end event.

The "page-body-measure" is a DIV reference that holds the measure dialog box. You need to show and hide this div on demand.

```
function getAppUrl()
{
 var loc = window.location;
 var retUrl = loc.protocol + "//" + loc.host + loc.pathname;
 return retUrl.replace("city-map.php","");
}
```

Change this value to match your site. This value is the home page of my map site. This function is located in the pentonWidgets.js file.

The measure tool icons and the direction rose are referenced in the measurementEXT.css file. Map pins are referenced from your image directory.

This image is used with the measure tools' area function.

This image is used with the measure tools' distance function.

This image is used with the measure tools' location function.

This image is used as indicator of the bearing compass directions.
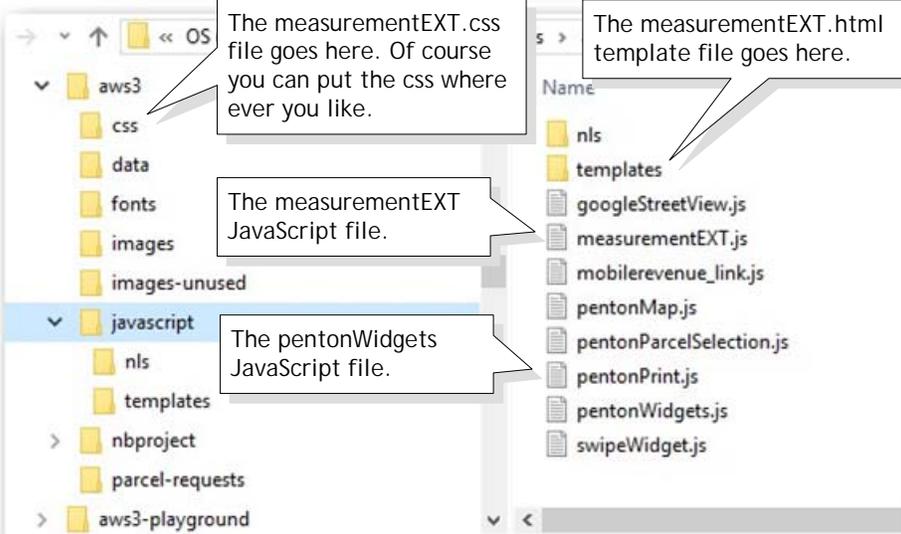
This image as a substitute for the measure tools' native pin marker.

This image is used as an indicator of the point of beginning with the distance function (first point).

```
case "panel-page-measure":
 measureEXT.startup();

/*set the default to be distance*/
 measureEXT.setTool("distance", true);

/*This is the widget*/
 measureEXT.show();
 break;
```

```
case "panel-page-measure":
 mapClickFunction = '';

 measureEXT.cleanUp();
 measureEXT.hide();

/*Deactivate each tool*/
 measureEXT.setTool("area", false);
 measureEXT.setTool("distance", false);
 measureEXT.setTool("location", false);
 break;
```

Code snippet indicating how the measure tool is opened.

Code snippet indicating how the measure tool is closed. Please note the cleanUp function that has been added.

The measurementEXT.css file goes here. Of course you can put the css where ever you like.

The measurementEXT JavaScript file.

The pentonWidgets JavaScript file.

The measurementEXT.html template file goes here.

```
→ ∨ ↑ 📁 << OS                                    s >
∨ 📁 aws3                                    Name
   📁 css                                    📁 nls
   📁 data                                   📁 templates
   📁 fonts                                  📄 googleStreetView.js
   📁 images                                 📄 measurementEXT.js
   📁 images-unused                          📄 mobilerevenue_link.js
∨ 📁 javascript                              📄 pentonMap.js
   📁 nls                                     📄 pentonParcelSelection.js
   📁 templates                              📄 pentonPrint.js
 > 📁 nbproject                              📄 pentonWidgets.js
   📁 parcel-requests                        📄 swipeWidget.js
 > 📁 aws3-playground          ∨   <
```

The "measurementEXT" tool is my extension of the ESRI JavaScript measure tool widget. This widget was designed with the JavaScript 3.27 API. The tool works with Edge, IE, FireFox, Safari, and Chrome browsers. A working site that includes this tool is located at

http://www.pentongis.com/aws3/city-map.php

**http://www.pentongis.com**

| measurementEXT Specification | | |
|---|---|---|
| Mark Penton | 1/3/2019 | Version 1.0 |

## Measure



| Segment | Length (ft) | Heading (deg) |
|---|---|---|
| Segment 1 | 201.20 | 183.93 |
| Segment 2 | 440.81 | 270.26 |
| Segment 3 | 232.24 | 0.97 |
| Segment 4 | 451.89 | 94.25 |
| Total Area | 2.22 Acres | |

Acres ▼

☑ Display labels   ☑ Print location labels

Export CSV    Print Report

## Measure

| Segment | Length | Heading (deg) |
|---|---|---|
| Segment 1 | 0.04 | 35.86 |
| Segment 2 | 0.05 | 131.63 |
| Segment 3 | 0.05 | 36.96 |
| Total Distance | 0.14 Miles | |

Miles ▼

☑ Display labels   ☑ Print location labels

Export CSV    Print Report
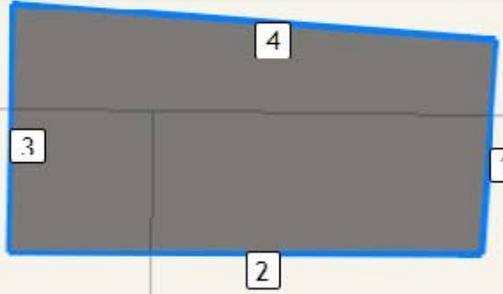
When performing an area measure each side is numbered as the polygon is drawn. Un-checking the 'Display labels' checkbox will hide the side labels. Units for displayed side length are in meters or feet depending on the selected area units.

When performing a distance measure each line segment is numbered as the lines are drawn. Un-checking the 'Display labels' checkbox will hide the segment labels. The green map pin is an indication of the point of beginning. Line length units are determined by the value selected from the units dropdown list.

- Click the Export CSV button to "download" a CSV file of the measure table contents. The coordinates of each map click, although not displayed in the measure results for area and distance, are included.

- Click the Print Report button to create a printable report containing a map and exported table data. With the Print location labels checked, the printed report will include the labels.

- The label positions are held if the map is panned while measuring. The label positions are NOT held if the map is zoomed while measuring.

## Measure

Degrees ▾

☑ Display labels  ☑ Print location labels

### Measurement Result

| Point | Longitude or X | Latitude or Y |
|-------|---------------|---------------|
| Point 1 | 1736811.45 | 234249.68 |
| Point 2 | 1737197.15 | 234222.12 |
| Point 3 | 1737037.75 | 234312.65 |
| Point 4 | 1736917.71 | 234450.40 |

| Export CSV | Print Report |
|------------|--------------|

4

3

1

2

When performing a location measure each point is numbered as the points are clicked. Un-checking the 'Display labels' checkbox will hide the point labels.

Pin markers are determined by the following code snippet contained in measurementEXT.js. Note the use of the getAppUrl function from pentonWidgets.js here.

```
//point symbol for distance/area functions
  this._pointSymbol.url = getAppUrl() + 'images/map-marker-ylw-circle-64.png';
  this._pointSymbol.height = 32;
  this._pointSymbol.width = 32;
  this._pointSymbol.xoffset = 0;
  this._pointSymbol.yoffset = 16;

 //point symbol for location function
  this._defaultPinURL = getAppUrl() + 'images/map-marker-ylw-circle-32.png';
```

Note that the larger image is being resized here with height and width properties..

# Measure Tool Report
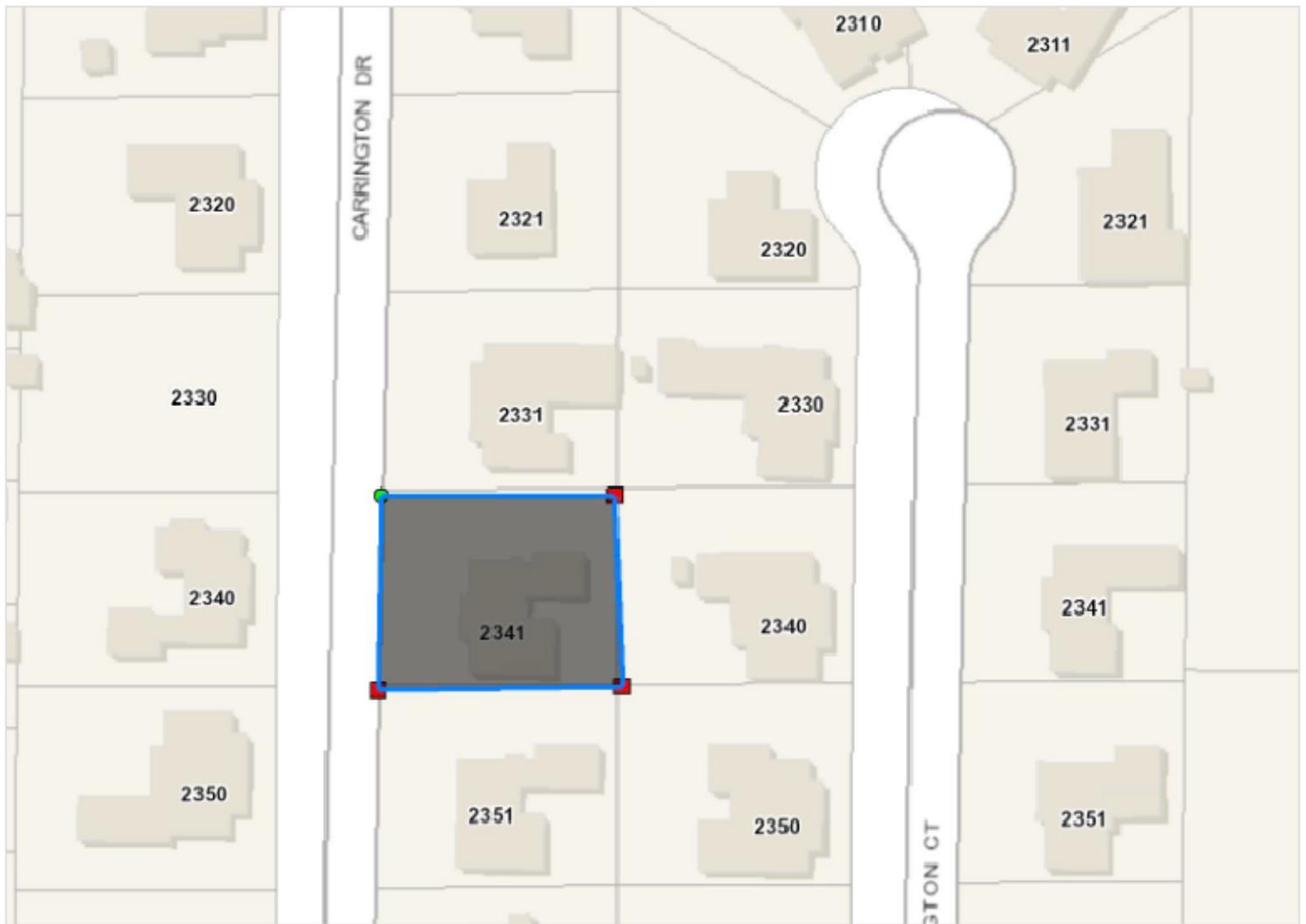


Point of beginning is symbolized by the green circle and all other points by red squares in a counter-clockwise order

| Point | Longitude (or X) Coordinate | Latitude (or Y) Coordinate | Distance (ft) | Heading (deg) |
|---|---|---|---|---|
| Point of Beginning | 1736175.8729 | 234525.1765 | | |
| 2 | 1736173.9059 | 234415.0238 | 110.17 | 181.02 |
| 3 | 1736311.5969 | 234416.9908 | 137.71 | 89.18 |
| 4 | 1736307.6629 | 234525.1765 | 108.26 | 357.92 |
| Point of Beginning | 1736175.8729 | 234525.1765 | 131.79 | 270.00 |

This is a report from using the area function of the measure tool. Reports for distance and location are similar.