**Lesson Plan Outline Geometry in Construction**

**Title:**

Dilations in the Coordinate Plane

**Objective(s):**

Students will perform a dilation and will discuss the relationships of parallel lines in the shape as well as its scale factor

**Learning Standard(s):**

[CCSS.MATH.CONTENT.HSG.SRT.A.1](http://www.corestandards.org/Math/Content/HSG/SRT/A/1/)

Verify experimentally the properties of dilations given by a center and a scale factor:

[CCSS.MATH.CONTENT.HSG.SRT.A.1.A](http://www.corestandards.org/Math/Content/HSG/SRT/A/1/a/)

A dilation takes a line not passing through the center of the dilation to a parallel line, and leaves a line passing through the center unchanged.

[CCSS.MATH.CONTENT.HSG.SRT.A.1.B](http://www.corestandards.org/Math/Content/HSG/SRT/A/1/b/)

The dilation of a line segment is longer or shorter in the ratio given by the scale factor.

**Activities:**

Students will perform dilations with various scale factors in the coordinate plane; students will discuss relationships of lines that are parallel, angle measures, and side length

Plot of Land; students will use overhead view of plot of land and will relate zooming in on picture to a dilation

**Materials:**

iPad with Geometry Pad App

Dilations W.S.

Transformations Review Packet