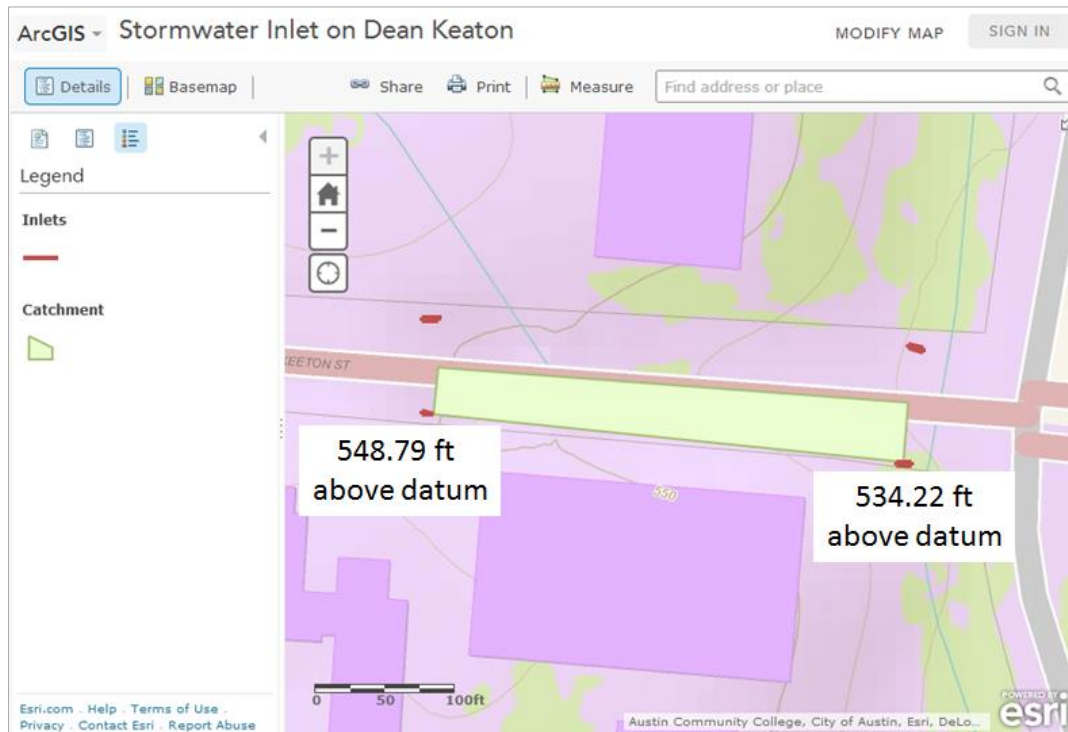


1. A web map of stormwater drainage to inlets on Dean Keaton is accessible at <http://bit.ly/1ICSoRl>



You can use attribute queries on the features in this map, and the measure tool at the top of the map to determine dimensions of length and area of pertinent features of this map. All map coordinates are in feet. The Catchment area shown in green drains to the stormwater inlet in red at the lower right corner of the Catchment, which is located at the intersection of Dean Keaton St and San Jacinto Blvd. Assume that the transverse slope is 1% from the road centreline to the gutter.

- Determine the area of the Catchment in acres
- Determine the length of flowpath from the centreline of the street to the gutter (ft)
- Determine the length of the flowpath along the gutter to the inlet (ft)
- Determine the slope of the gutter (ft/ft). The elevations shown in the diagram above were taken from a digital elevation model of the area.
- Determine the time of concentration of this catchment (min).
- Determine the runoff coefficient, C , and the rainfall intensity i , (in/hr) for a 25 year return period storm in Austin.
- Calculate the design runoff (cfs) at the stormwater inlet at 534.22 ft above datum using the Rational Method

2. Prepare a typed summary, one page in length of the National Flood Insurance Program (NFIP). Include in your summary:

(a) Briefly describe the impact of the Halloween Flood in Austin and the city’s policy response to that.

(b) Briefly describe the impact of Superstorm Sandy on New York City and the city’s policy response to that.

(c) When and why the NFIP was instituted by the federal government? What does the federal government do? What do local communities do?

(d) What is a Base Flood Elevation and a Flood Insurance Rate Map (FIRM)?

(e) The Biggert-Waters Flood Insurance Act of 2012 (BW12) has applied “full, risk-based premiums” to more than 1 million of the 6 million NFIP policy holders. What impact has this had on policy holders and on their communities? What measures are being considered to mitigate these effects?

(f) A web map showing the distribution of affected policy holders is shown at the address below. How many policy holders are affected in Travis County? In Texas? What county in the country has the largest number of affected policy holders?

<http://www.arcgis.com/home/webmap/viewer.html?webmap=e0208985e8e64d44bca999325254ff5b&extent=-106.6909,33.1708,-76.9399,43.9898> (Open this map using Internet Explorer and agree to the “Show all Content” question)

