

Cabrales, John J.

To: Gillum, Galen L
Subject: RE: Prescott Tract

From: Gary Vickery <gvickery@tnpinc.com>
Sent: Tuesday, November 22, 2016 3:31 PM
To: Gillum, Galen L
Subject: Prescott Tract

Galen:

My team and I met with the COD drainage team this morning to discuss issues related to the flood study on the Prescott tract. The following is a summary of our discussion and conclusions:

- I gave the drainage team an overview of the property and the uses being considered for it.
- We showed an exhibit (attached) that shows the existing effective FEMA floodplain, along with the actual floodplain based on our topography and our modeling. This is depicted on the exhibit as a yellow line. The dark blue line beside the yellow line is the 500-year water surface elevation. There is also a light blue line on the exhibit, between the floodplain line and the creek that is the Environmentally Sensitive Area (ESA) limit.
- We believe that either by means of a Letter of Map Amendment (LOMA) or a Letter of Map Revisions based on fill (LOMR-F), the floodplain line can be officially moved to the yellow line without any construction or dirt work at all. This is a little complicated by the fact that the finger of floodplain that extends far into the site actually used to be there, and appears to have been filled in 2005, based on aerial photography. I believe that FEMA requires that fill used to elevate a property above the floodplain must be compacted and tested. I have talked to my geotechnical consultant, and we may be able to go out there and do some digging and testing to determine how consolidated the material is. We were told by Clark Rosendahl in the meeting that a number of years ago Kroger looked at that site, and backed away at least in part due to the nature of that fill material (broken concrete and poor fill). There is evidence of broken concrete and fill near the creek, which is what prompted me to search the aerial records.
- We also looked at what would happen if we wanted to reclaim more land near the railroad (in other words, move the floodplain line even closer to the creek, in the event that the DCTA facility needed to maximize exposure to the rail line. The grey line on the map shows approximately what cut would be needed to allow that fill. There are a number of things that the excavation would trigger though. A Conditional Letter of Map Revision (CLOMR) and LOMR approved by FEMA would be required, which involves additional modeling and documentation effort on our part, and significant FEMA review fees. In addition, a variance would be required from P&Z, and an Alternate ESA Plan (similar to an SUP) to be approved by City Council. The approximate line shown to depict the limits of cut and fill was developed by adhering to the city of Denton prohibition against any reduction in valley storage and without raising the water surface elevations. This line also ensures that we do not impact the riparian ESA.
- We had some concerns about how to meet the City requirement that the fully developed conditions hydrology be developed and used in the analysis, as this can be a very extensive analysis on a large watershed like this. However, Chad indicated that a consultant for the City has already done a fully developed conditions hydrology model for this stream, and we can use it for our analysis. Based on our discussion today, the floodplain based on fully developed conditions will likely fall between the yellow and blue lines on the exhibit.
- We have a Pre-Development meeting set with Planning for Dec. 7. However, unless we have some information about the proposed development, that meeting may not be of much value now. We need to determine whether or not the excavation and fill produces enough benefit to warrant the cost. That could well depend on the proposed use and the layout of the site with the fire station and the DCTA park and Ride.

Please feel free to share this information and the attached exhibit with others as you see fit. It may be best if we got together to talk about the exhibit and explain the above a little more fully. I will be happy to do that if you like.



Gary L. Vickery, P.E., CFM
Principal
gvickery@tnpinc.com

tnp | 1517 Centre Place Drive | Suite 320 | Denton, Texas 76205
940.383.4177 main | 940.205.4402 direct | 940.368.0757 mobile

