

## Jersey Village City Council Meeting October 16, 2017

### Fred W. Ziehe public comments

Good evening. My name is Fred Ziehe and I live at 8409 Hawaii Ln and am a member of the JV Citizens' Flood Committee.

During the past several meetings, I have commented that water flows slowly down the By Pass and even in the wrong direction, back towards the Main WOB Channel. Our flood group has continued to pursue the reasons this occurs.

When water flows in WOB toward JV, there are only two ways for it to get downstream of JV. ....

- 1) Either flow through the Main WOB Channel or
- 2) Flow in the By Pass and then around JV.

This is why our flood committee was so insistent that Dannenbaum review the effectiveness of the By Pass. However, the JV City Council refused to include this element in DE's scope of study.

Our options for flood mitigation in JV are limited ..... so JV should have incorporated this critical component in DE's study.

In our effort to understand the behavior of the By Pass, members of our flood committee worked with a commercial drone company, Raptor Aerial Services, to prepare an elevation survey of the By Pass as it exists today. The survey was carried out in August, just days before Hurricane Harvey. We are still analyzing the results of the survey, but have already seen some interesting results.

It would really be better if I could present this information tonight using the projector, but the CM and Mayor have decided to not allow that. However, we will show some displays to the audience and would suggest the Council to come around and see it to get a better view.

Tonight I will just address a couple of high points. However, it is important to know that the drone survey confirms our concern about slow flow and the backwards flow of water in the By Pass during the early timeframe of a rain event..

This first display shows the area covered by the drone survey, which is outlined in red. The blue, green and yellow colors represent various elevation values in the By Pass. The darker blue is the deepest part of the By Pass and the green shows the higher areas. We also have cross sections and dip lines in the By Pass that specifically tell us the elevation values and show us the actual shape, or profile, of the channel.

This survey shows that the By Pass is generally flat throughout the first half of the channel and doesn't begin to dip more steeply, where water will begin to flow, until closer to the



Beltway. (This flatter profile is different than the original design of the By Pass.) The point at which the water actually begins to move downstream is referred to as the "Spill Point". On the display, this is where the darker blue colors begin.

This flat portion causes the water to simply pond in the first half of the channel and won't begin to flow down the By Pass until it gets to the Spill Point. As that water ponds, it will also likely prevent or slow down water trying to enter the By Pass.....and therefore causes more water to stay in the JV Main Channel.....which is exactly what we have witnessed.

Also, the entrance to the By Pass is ~ 4 feet higher than the Main Channel. As a result, water from the Main Channel WILL NOT even enter the By Pass until the water level exceeds this 4 feet. And then, water will not actually flow until it reaches the "Spill Point", nearly 2/3s of the way down the By Pass.

In short, it appears that the By Pass does not provide relief to JV during the early stages of a rain event. If the rains come like they did during the Tax Day Flood, the By Pass will not allow any significant water to move around JV until it's too late.....the Main Channel will already be getting close to flood levels.

We suspect that some of the flattening in the By Pass is due to sediment collecting in the channel since it was originally built in 2010. Initially, it may have had a steeper grade from west to east, but over time, it's gotten flatter. THIS SEDIMENT NEEDS TO BE REMOVED SO MORE WATER WILL FLOW INTO AND DOWN THE BY PASS DURING THE EARLIER TIMES OF THE RAIN EVENT. In addition, the slope on the front end of the By Pass needs to be made steeper to move the spill point further to the west so water will flow sooner and not collect in the channel.

We are still reviewing the cross sections and dip lines. We are looking to determine if the banks of the Main WOB channel are lower than the By Pass. If they are, the Main Channel will flood before the By Pass can ever be fully utilized. This then should be corrected.

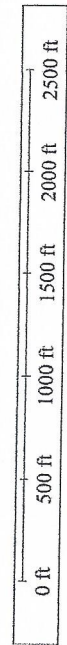
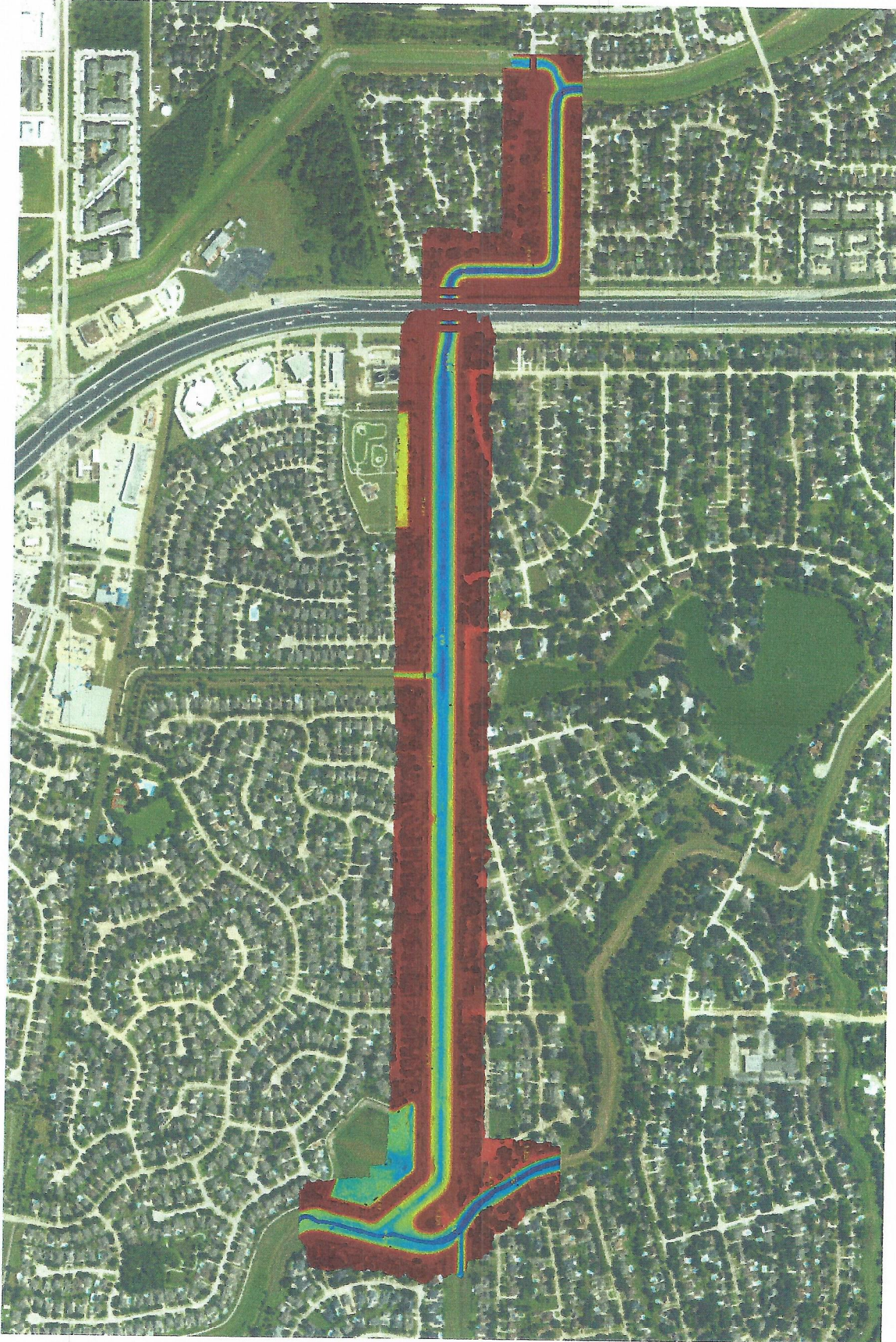
These are just a few of the results we have learned from this survey. We may learn more and will continue this effort and continue bringing these items to the attention of the general public and to City, County and State officials. We believe these are real actionable items to assist in mitigating flooding in JV.

Thank you for your time.



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Legend:  
87.5 ft - 103.03 ft

Project Information:  
Location: Jersey Village White Oak Bayou  
Aerial Drone Survey: Barton Aerial Services  
Pilot: Mike Allison  
Support: Coast Fred Zieho, Jim Pulliam, Tom  
Acquisition Date: 08-28-17



