



Bexar County Public Works Department Flood Control Program



LC-6 Prue Road &
LC-26 N Verde Road
Drainage Improvements

April 29, 2014

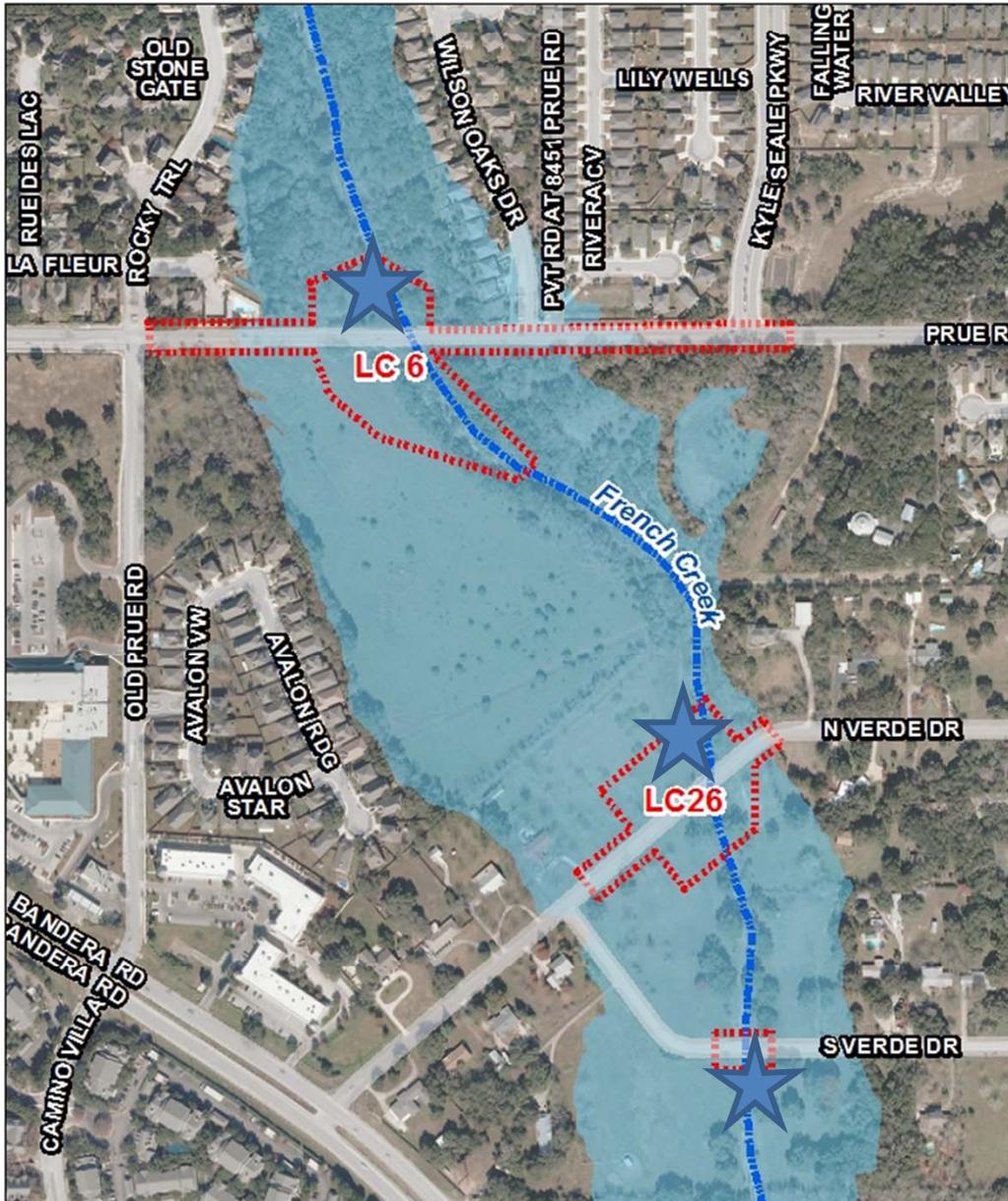


Prue Rd & N Verde Rd



Meeting Agenda

- Introductions
- Project Overviews
- LC-6 Prue Road Project Info
- LC-26 N Verde Road Project Info
- Questions



Project Overviews

Prue Road (LC-6)

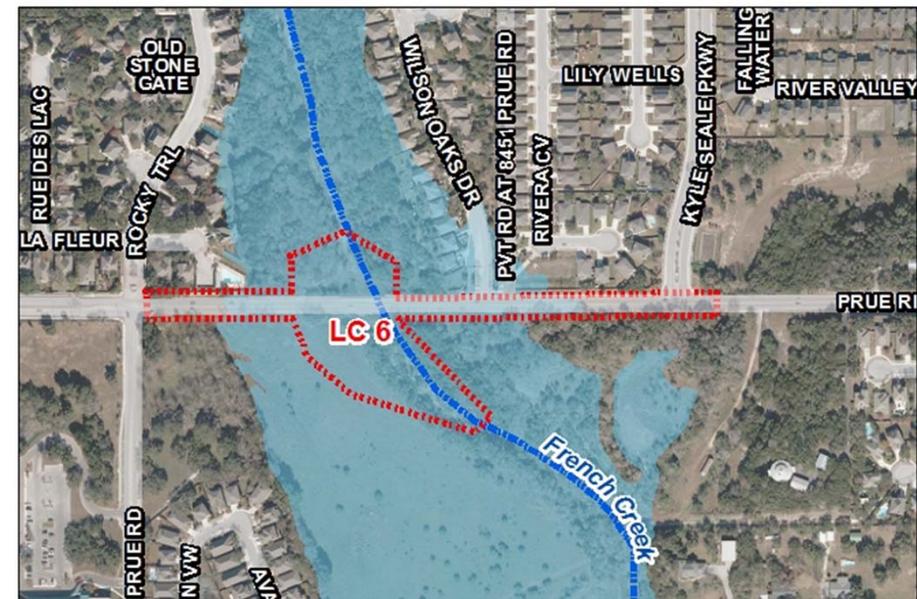
- Roadway bridge over French Creek to provide an un-flooded vehicular travel route
- Construction Schedule: May 2015 - May 2016
- Estimated Construction Cost: \$3.6M
- Consultant: Unitech Consulting Engineers, Inc.

N Verde Road (LC-26)

- Roadway bridge over French Creek to provide an un-flooded vehicular access to the Verde Hills Subdivision
- Construction: October 2014 - August 2015
- Estimated Construction Cost: \$1.9M
- Consultant: Atkins North America, Inc.

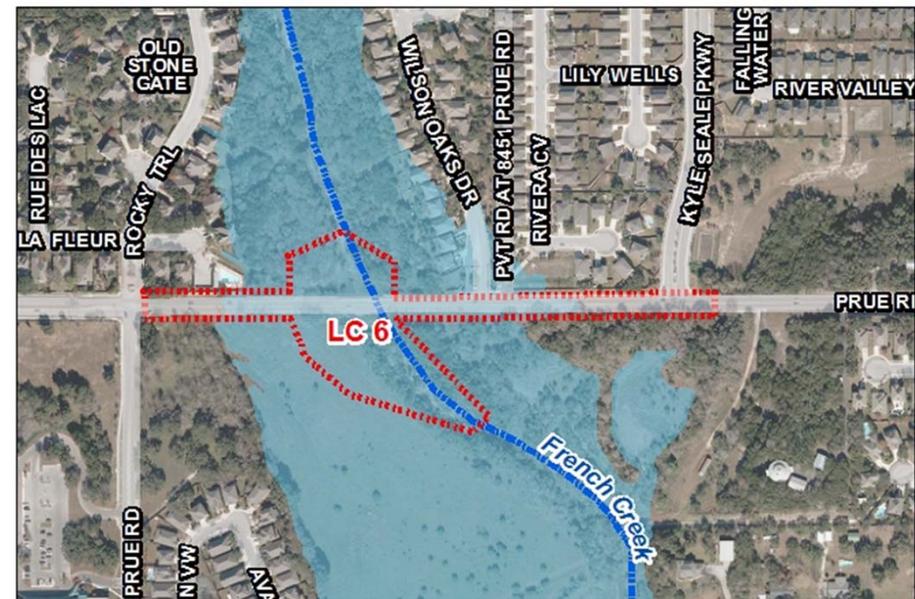
Prue Road (LC-6): Project Background

- Prue Rd is a high-traffic corridor which floods at French Creek during higher-intensity storm events. Flooding here poses a public hazard and necessitates a long detour.
- According to FEMA models and site topography, the bridge will be overtopped by floodwaters by more than 2 feet during the 100-year storm. Less than 6 inches of water can push cars off the roadway. Turn Around, Don't Drown!
- A new span bridge along with channel improvements will solve these problems and enhance safety.



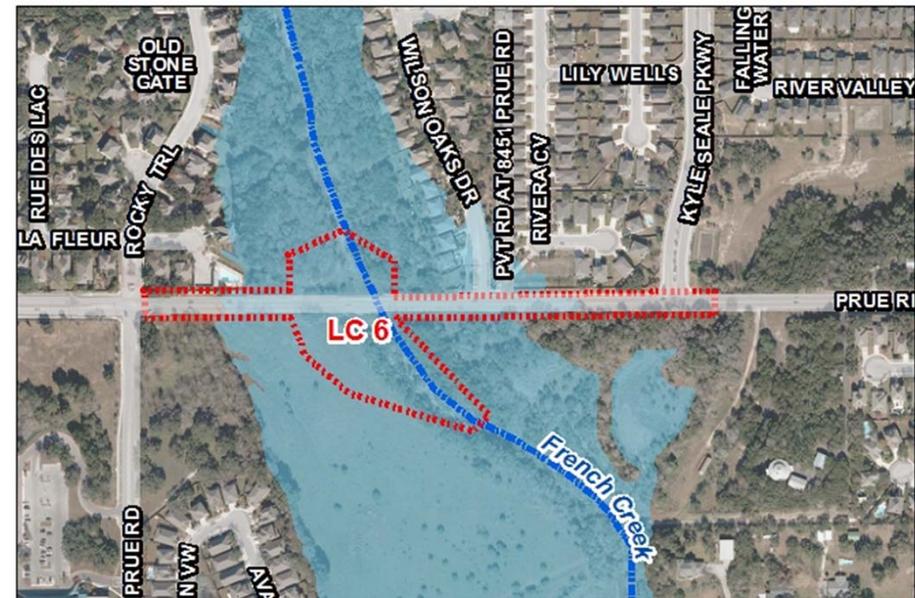
Prue Road (LC-6): Project Details

- Located along Prue Rd between Old Prue Rd and Kyle Seal Pkwy.
- Installation of a multi-span bridge to allow access over French Creek during 100-year (1% annual chance) storm event.
- Bridge will be built wide enough to accommodate up to 5 vehicular travel lanes in the future.
- Shared-use bike/pedestrian sidewalks will be installed along roadway.
- Project is a joint effort with the City of San Antonio Transportation & Capital Improvements (TCI) department. Vehicular acceleration and turn lanes will be installed on Prue Road to improve flow of traffic in vicinity.
- Channel improvements to improve stormwater conveyance.



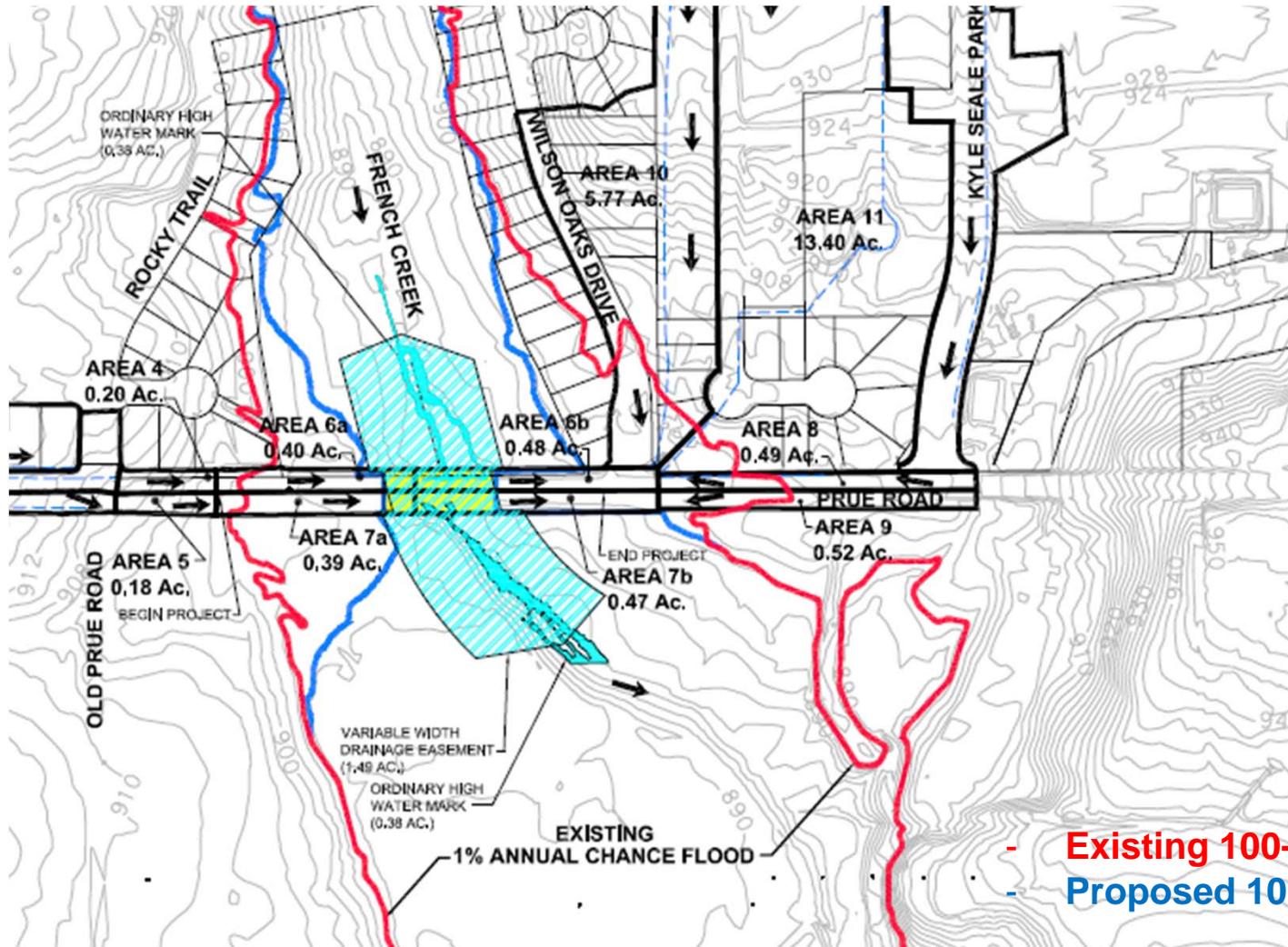
Prue Road (LC-6): Project Benefits

- Bridge will allow for un-flooded vehicular travel across French Creek during the 100-year (1% annual chance) storm event.
- Eliminates the need for barricades and lengthy detour routes during storm events.
- Enhances public safety by:
 - Eliminating existing low water crossing and reducing drowning risk.
 - Allowing emergency responders to travel across French Creek during storms, helping to improve emergency response times.
 - Lowering water surface and removing 6 residential houses from the FEMA floodplain, removing need for flood insurance.
 - Providing dedicated vehicular acceleration lanes and left turn lanes to reduce collisions.
 - Providing dedicated shared-use sidewalk across French Creek for pedestrian and cyclist safety.



Prue Road (LC-6): Floodplain Improvement

- Six houses north of Prue Road, east of French Creek, to be removed from FEMA 100-year floodplain.



Prue Road (LC-6): Project Site

- Looking west from intersection of Prue Rd & Wilson Oaks, at proposed bridge location



Prue Road (LC-6): Project Site

- Existing culvert structure along Prue Rd to be replaced with span bridge. An approximately 5-year to 25-year storm occurred here on May 25, 2013. Photo taken after worst part of storm had passed.

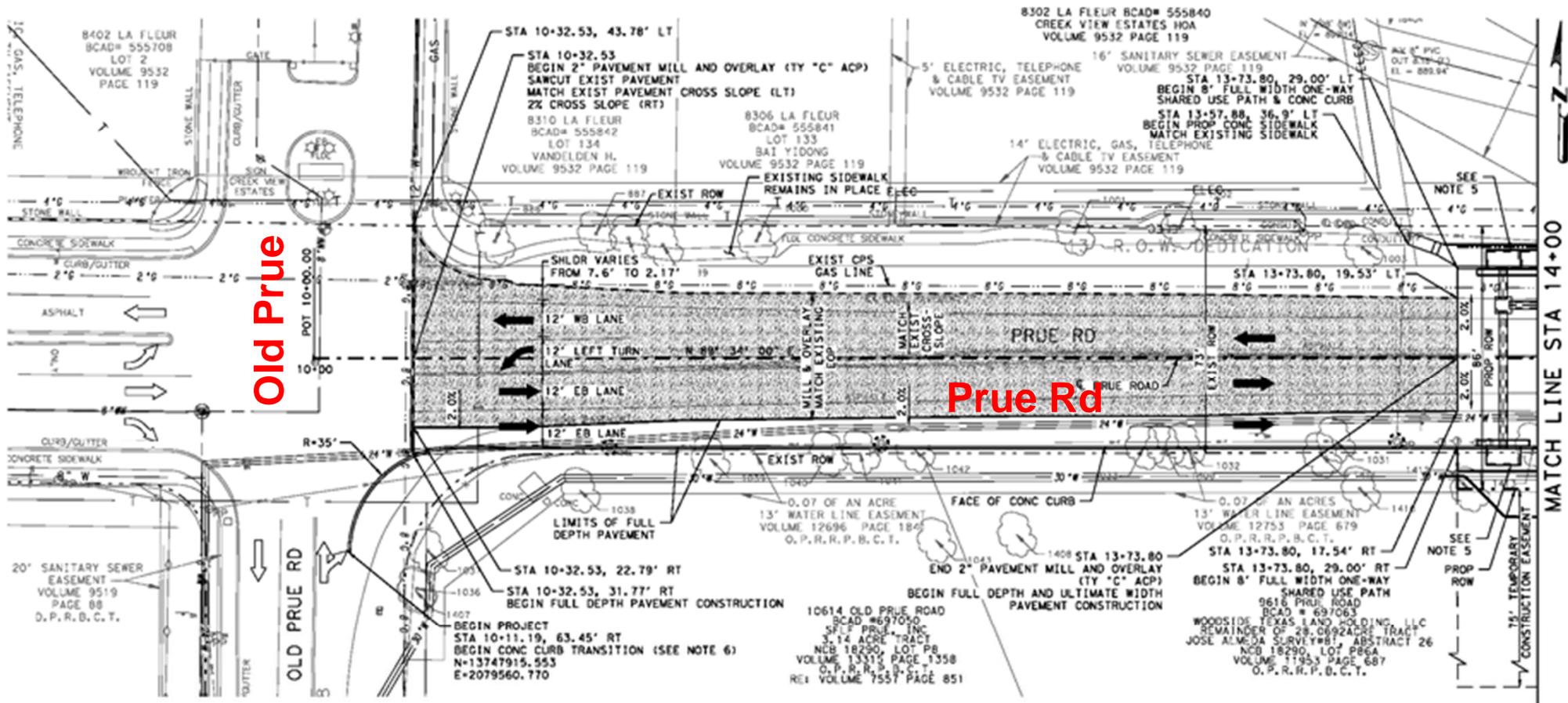




Prue Rd & N Verde Rd



Prue Road (LC-6): Project Layout (1 of 4)

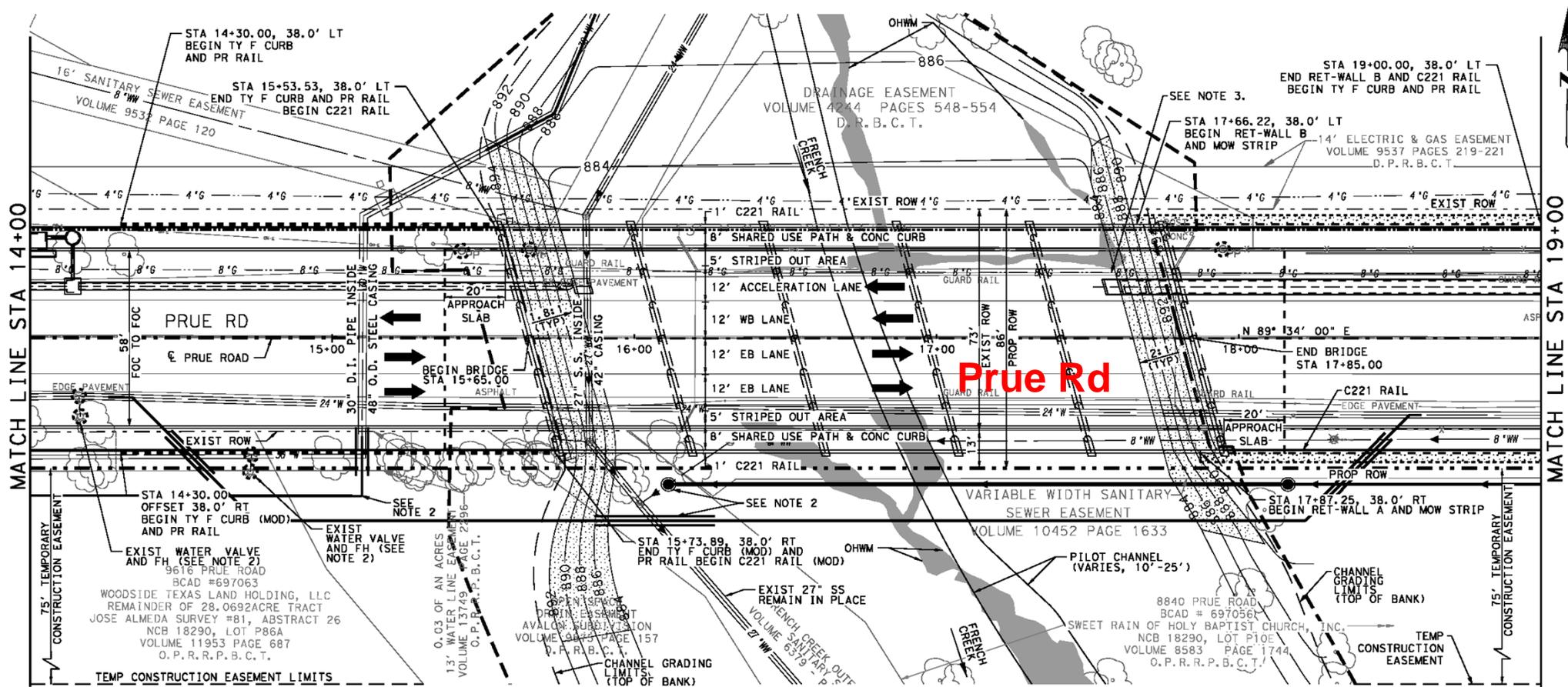




Prue Rd & N Verde Rd



Prue Road (LC-6): Project Layout (2 of 4)

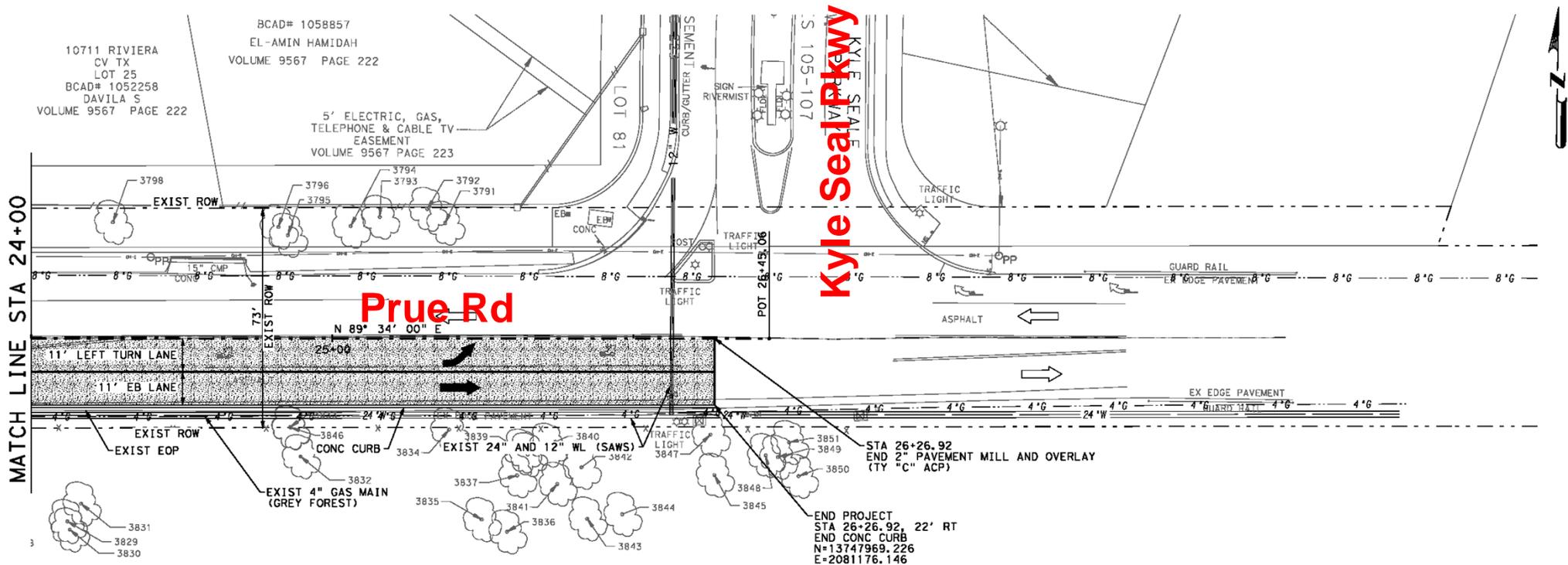




Prue Rd & N Verde Rd



Prue Road (LC-6): Project Layout (4 of 4)

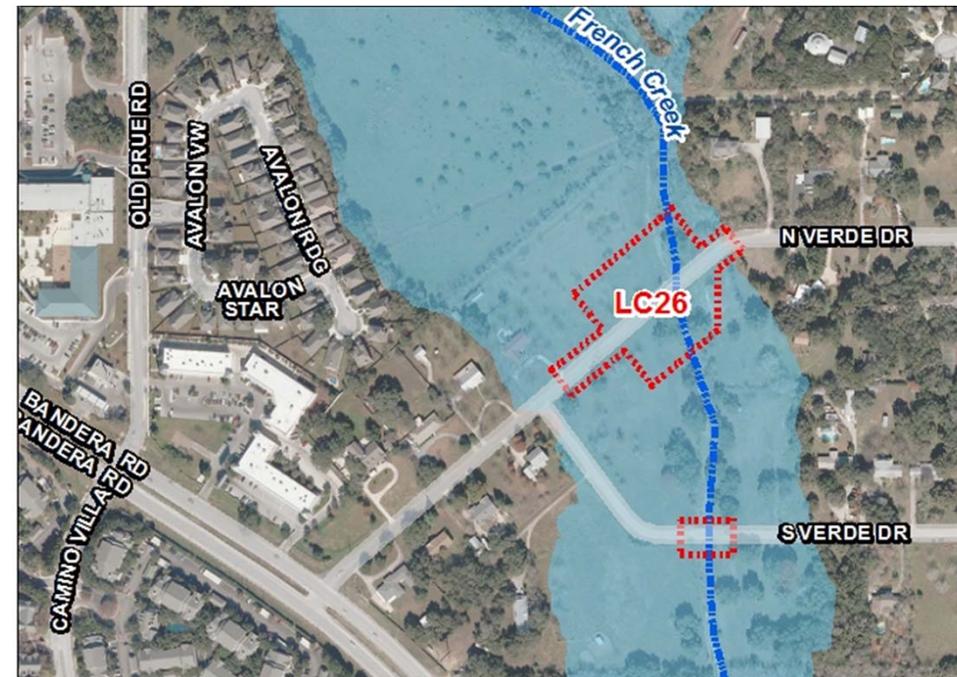


N Verde Rd (LC-26): Project Background

- According to the hydrological study based on FEMA computer models, the existing N Verde culvert bridge is inundated with water during a 1-year storm event for ultimate development.
- During the 2002 major storm event, significant flooding prompted the City of San Antonio to buy out several residences directly along the creek.
- Numerous calls were made to the 311 system in 2007 to report drainage problems within the channel.

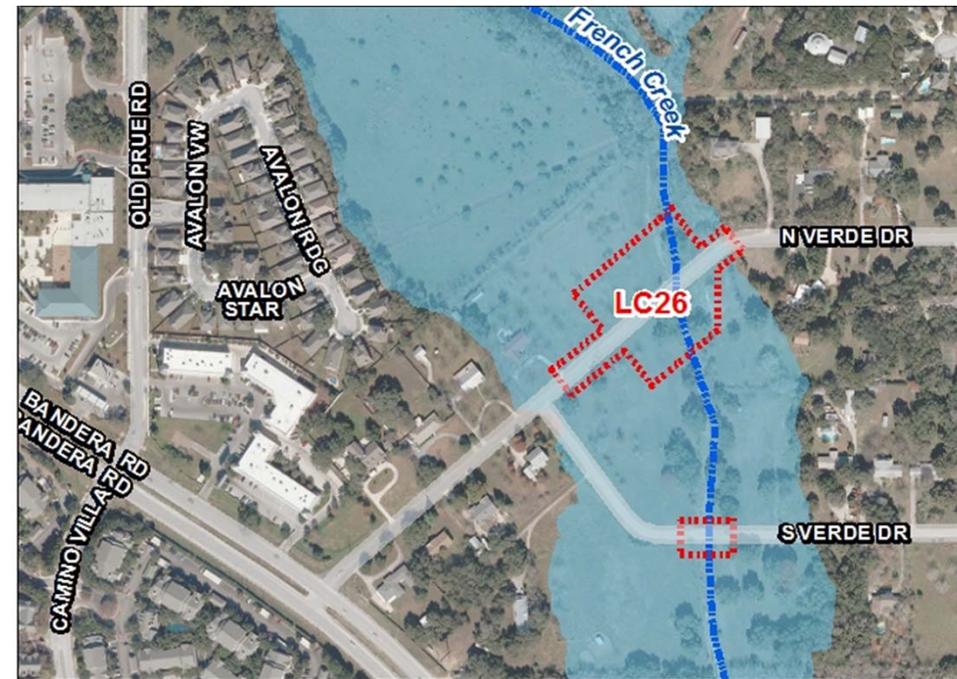
Storm Event Frequency	Depth of Water Over Existing Roadway (feet)	Intensity (Inches of rain per 24 hours)
1	2.67	3.85
2	3.24	4.44
5	3.77	5.36
10	4.17	6.00
25	4.76	7.50
100	6.16	10.00

Table 1 – N Verde Bridge Flooding (Ultimate Development)



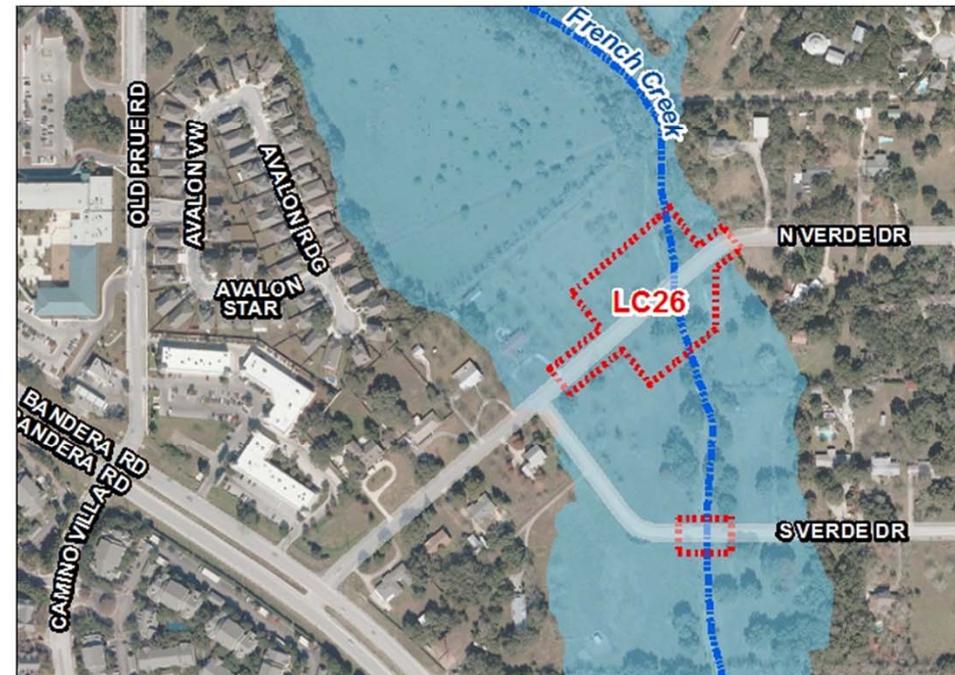
N Verde Rd (LC-26): Project Details

- Installation of a span bridge located along N Verde Rd, east of the S Verde Rd intersection.
- Span bridge will allow access over French Creek during 100-year (1% annual chance storm event).
- High Water Detection System (HWDS) will be installed at the existing low water crossing along S Verde Rd.
- Channel improvements to facilitate stormwater conveyance in the area.



N Verde Rd (LC-26): Project Benefits

- Bridge will allow for un-flooded vehicular travel across French Creek during the 100-year (1% annual chance) storm event.
- Enhances public safety by:
 - Eliminating one existing low water crossing and therefore reducing drowning risk.
 - Providing un-flooded access in and out of Verde Hills Subdivision for citizens and emergency responders.
 - Emergency responders will be able to assist citizens who may otherwise be stranded.
 - Providing visual queue for citizens to take alternate route over bridge due to the proposed S Verde high water detection system (HWDS).



N Verde Rd (LC-26): Project Site

- Looking east along N Verde at proposed bridge location



N Verde Rd (LC-26): Project Site

- Looking east along S Verde at location of proposed High Water Detection System (HWDS)

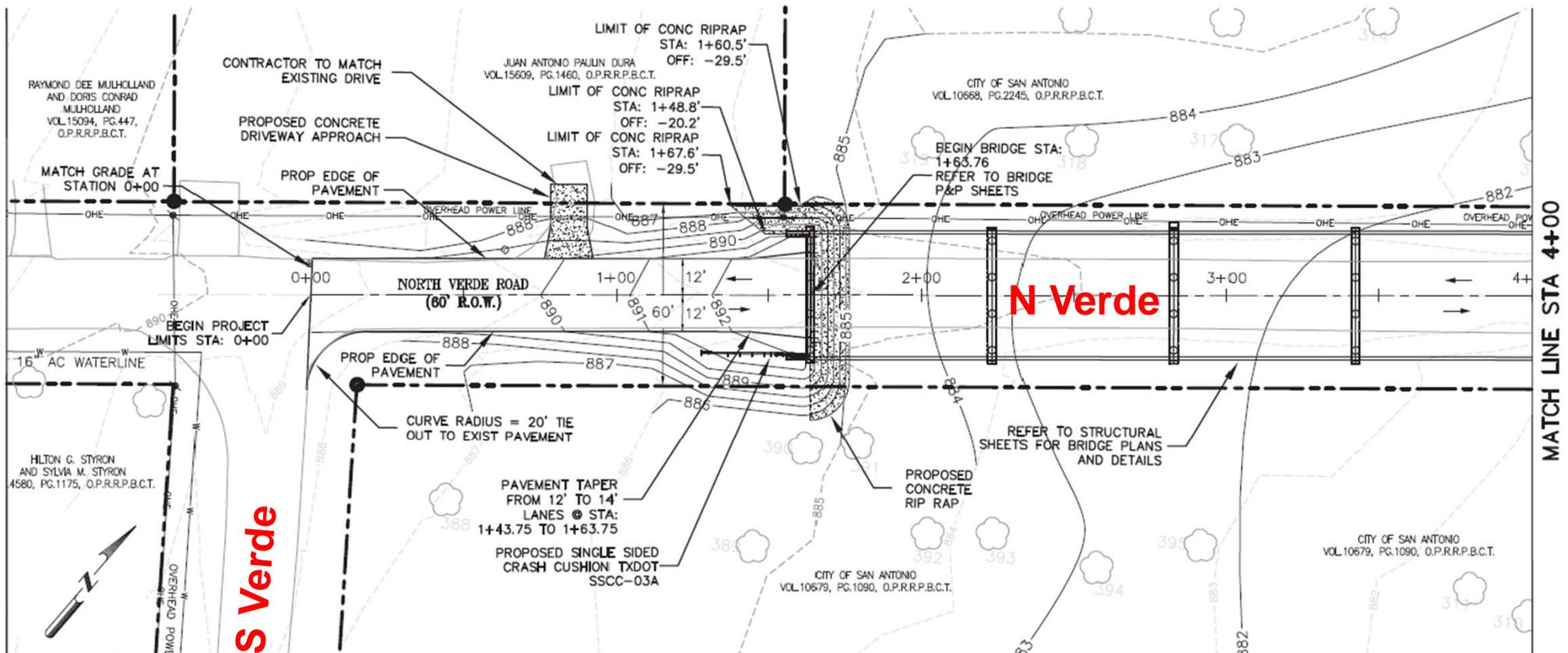


N Verde Rd (LC-26): Project Site

- An approximately 5-year to 25-year storm occurred at N Verde on May 25, 2013. Photos taken after the worst part of storm had passed showed debris located on top of the existing bridge structure. This indicates that water overtopped the bridge at a hazardous depth and velocity. A 100-year ultimate storm event poses significantly even greater risk.



N Verde Rd (LC-26): Project Layout (1/2)



N Verde Rd (LC-26): HWDS at S Verde LWC

- A High Water Detection System (HWDS), similar to the one shown below, will be installed at the low water crossing along S Verde to alert residents of flood waters ahead.





Prue Rd & N Verde Rd



- Next Steps:
 - Gather your feedback
 - Continue design coordination
 - Next community meeting prior to construction (Date TBA)
- Please fill out comment sheet
- Please visit www.bexarfloodcontrol.org for updates
- Questions