



Bexar County Public Works Department Flood Control Program



SC-27 Bulverde Rd. at Mud Creek Trib. A
Drainage Improvements

June 24, 2014



SC-27 Bulverde Rd at Mud Creek Trib A



Meeting Agenda

- Introductions
- Program Background
- Project Overview
- Other Considerations
- Construction Phasing/ Traffic Control
- Q&A



Bexar County Flood Control Program

- 10-year, \$500 Million Capital Improvement Program
- Currently in year 7 of 10, with numerous projects heading into construction phase.
- The Hill Country is known as Flash Flood Alley, with 1,000 ft. elevation drop across Bexar County.
- Flood Control program works with local municipalities and agencies to deliver projects that alleviate flooding across the region.
- Half of all flood deaths occur in vehicles.
- Turn Around Don't Drown®!





SC-27 Bulverde Rd at Mud Creek Trib A



Project Overview

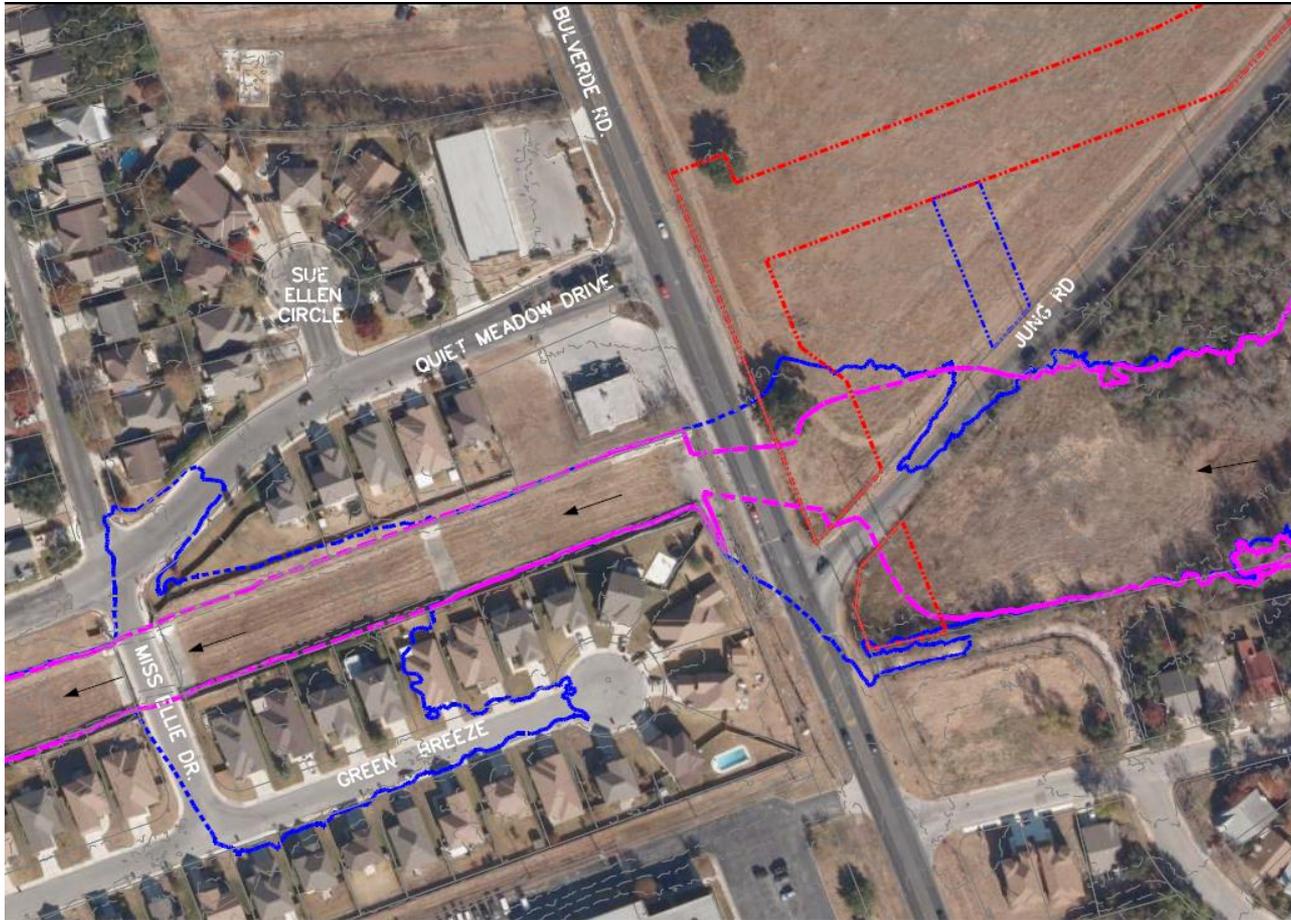
- Eliminating low water crossing on **Jung Rd.**, via Jung Rd. realignment (tie-in to Bulverde Rd. at Quiet Meadow Dr.)
- Eliminating low water crossing on **Bulverde Rd.**, between Jung Rd. and Quiet Meadow, adding multiple culverts crossing under Bulverde Rd.
- Enhancing culvert capacity on **Miss Ellie Dr.**, between Quiet Meadow and Green Breeze, reducing back water effect that causes flooding.
- Design Consultant: RJ Rivera Associates, Inc.
- Estimated Construction Schedule: March 2015 to May 2016
- Estimated Construction Cost: \$2.2 Million



Project Benefits

- Allows for unflooded vehicular travel across Mud Creek Unnamed Tributary A during storm events up to the 100-year (1% annual chance) storm event.
- Allows emergency responders to safely travel across the Tributary during storm events, improving response times.
- Eliminates the need for barricades and lengthy detour routes during storm events.
- Alleviates water ponding on Bulverde Rd. and Jung Rd.
- Improves safety, sight distance and traffic flow at the Bulverde Rd. and Jung Rd. intersection.
- Removes eight (8) homes on Green Breeze out of the 100-yr floodplain.

Existing and Proposed Floodplain



LEGEND

- - - - - 100 YR ULT. PRE-PROJECT FLOODPLAIN
- 100 YR ULT. POST-PROJECT FLOODPLAIN
- DIRECTION OF FLOW
- - - - - PROPOSED RIGHT-OF-WAY ACQUISITIONS
- - - - - TEMPORARY CONSTRUCTION EASEMENT



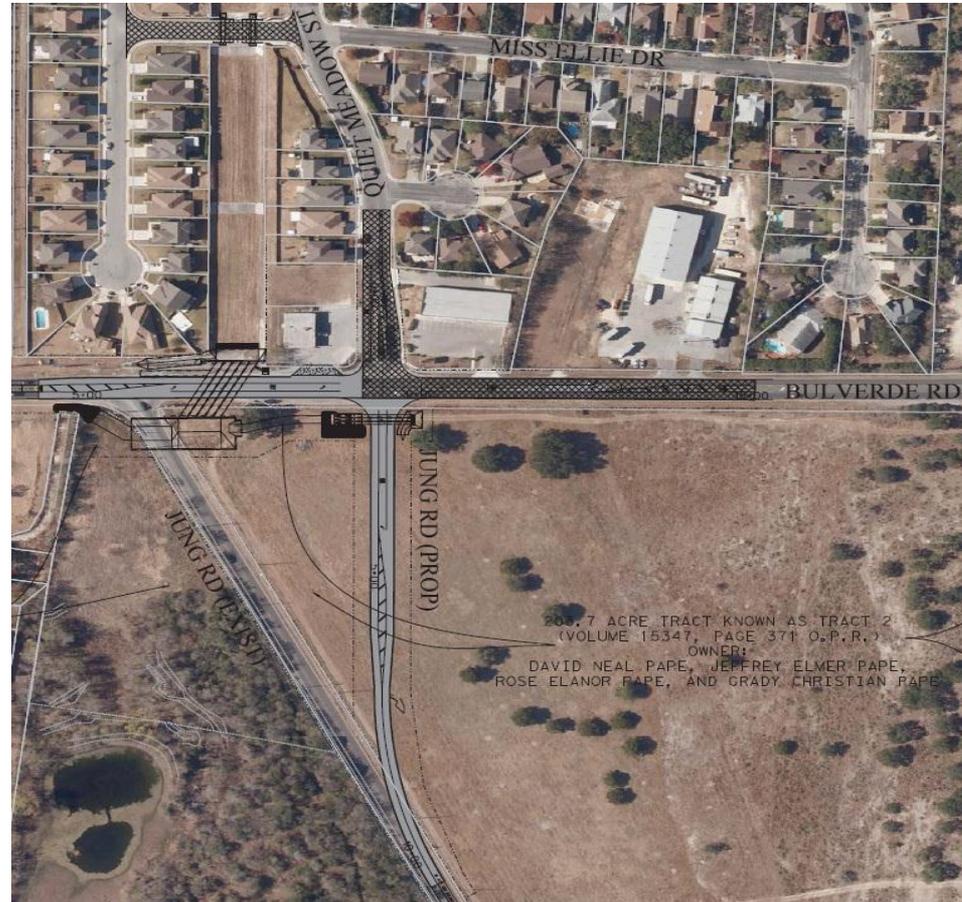
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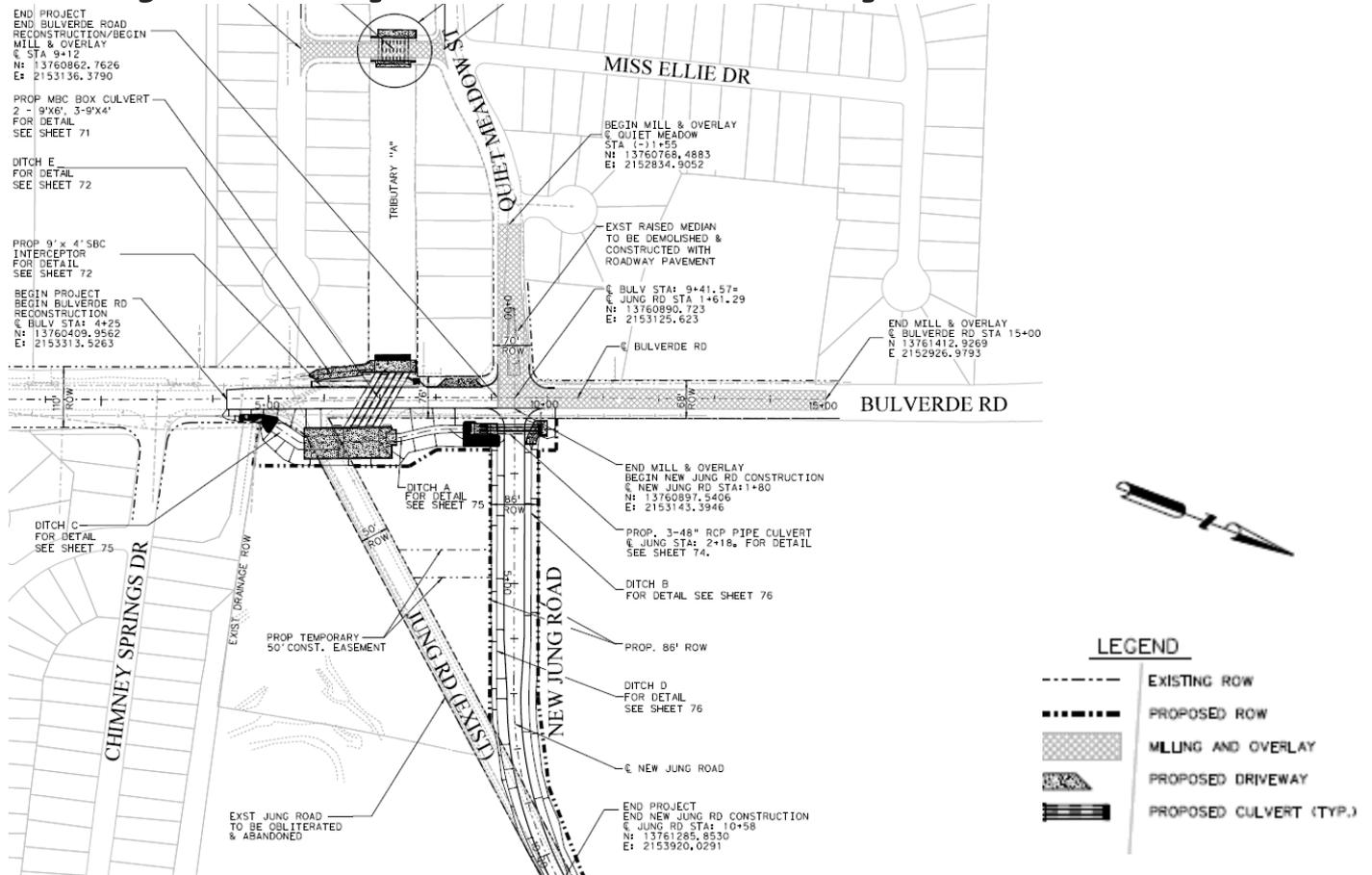
Existing low water crossings (LWC) at **Jung Rd. & Bulverde Rd.** regularly experience flooding during storm events. LWC at Jung Rd. will be removed from the 100-year floodplain via roadway realignment. LWC at Bulverde Rd. will be removed from the 100-year floodplain due to culvert improvements. Flood study shows that improvements will lower the water surface elevation by 2.47 ft. on Bulverde Rd. and water will no longer overtop it during a 100-year storm event. Less than 6" of water can sweep people off their feet and wash cars downstream, causing people to get trapped in their cars.



Overall Project Layout



Project Layout - Roadway





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Existing undersized culverts crossing **Miss Ellie Dr.** result in a backwater effect causing flooding into the neighborhood on the southeast side of the channel on Green Breeze. Two additional culverts will allow the existing channel to effectively convey a 100-year (1%) storm event eliminating the potential for neighborhood flooding and keeping storm water from over topping the banks.





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Proposed culverts under Miss Ellie Dr. will be constructed maintaining similar design and size. Pavement improvements on this roadway is also part of the scope.





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Other Considerations

- Improvements, including roadside ditches along New Jung Rd. and Bulverde Rd. will become property of, and maintained by, the City of San Antonio.
- Utility relocations (CPS, SAWS, Telecoms) will be necessary to accommodate the improvements.
- Project will be constructed in phases and detours will be utilized when necessary. Motorists will be notified in advance of modifications to the construction and traffic phasing.

Construction Phasing (Bulverde Rd.)

– Phase I

- Improvements to **Bulverde Rd.** and **Quiet Meadow** intersection, including installation of new traffic signal.
- Construction of pavement sections for **new Jung Rd.** and temporary detour roadway.
 - Bulverde Rd. and Jung Rd. remain open during construction activities.
 - Existing traffic signal at Bulverde Rd. and existing Jung Rd. intersection will remain operational.
 - Duration is approximately 2 ½ months.

Construction Phasing (Bulverde Rd.)

– Phase II

- Construct **Bulverde Rd.** drainage improvements (bridge class culverts and other features).
 - Bulverde Road Closure (between existing Jung Rd. and Quiet Meadow) to allow for shorter construction duration and reduced project cost.
 - » Southbound traffic will detour through new Jung Rd. and temporary road installed in Phase I.
 - » Northbound will detour through existing Jung Rd following to temporary road.
 - » Westbound traffic only allowed for new Jung Rd.
 - » Existing Jung Rd. will remain open in both directions.
 - Construction duration is approximately 2 months.

Construction Phasing (Bulverde Rd.)

– Phase III

- Install temporary construction lanes to improve sections of Bulverde Rd.(east and west) while two way traffic is allowed.
- Open new Jung Rd. to normal traffic from Bulverde Rd.
- Existing Jung Rd. and temporary detour pavement demolition.
- Continue drainage improvements.
 - Construction duration is approximately 3 ½ months.



Construction Phasing (Miss Ellie Dr.)

– Phase I

- Install southbound portion of culvert and reconstruct lane installing barricades for southbound traffic control through one lane (12-ft wide).
- Install northbound portion (similar traffic control measures).

– Phase II

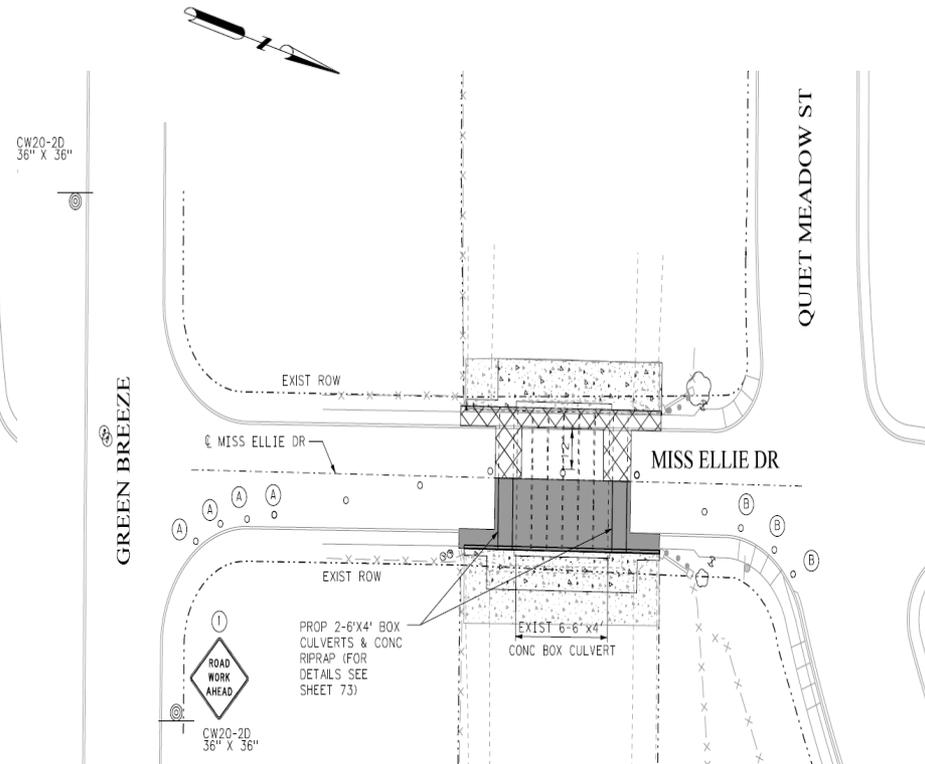
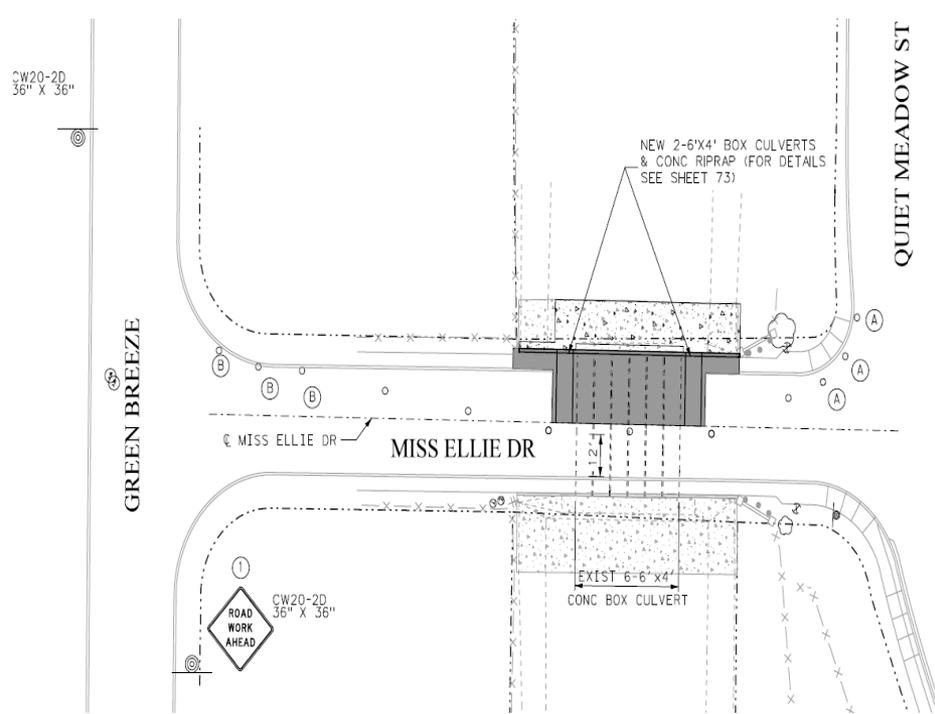
- Mill and overlay Miss Ellie Dr. between Green Breeze and Quiet Meadow intersections.
- Open to full two way traffic.
 - Construction duration is approximately 1 ½ months.



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Construction Phasing (Miss Ellie Dr.)





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- 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