HARRIS COUNTY
ENGINEERING DEPARTMENT

Office of the County Engineer
John R. Blount, P.E.
Aug. 26, 2019
Following Hurricane Harvey

Assessing the Damage

72 hours: All 900+ traffic signals were inspected and in safe condition.

Approx. 100 days: 1.2 million cubic yards of storm debris were hauled from impacted properties by county crews and contractors by Dec. 14, 2017.

2 weeks: All road washouts and damaged bridges were repaired to safe working conditions.

5 days: 13,556 lane miles and 836 bridges were inspected for damage.

6 days: All 180+ Harris County operated buildings were assessed for damage, and all damaged structures were already repaired or in proposal process for repairs.

Unincorporated Harris County

- 505,000 structures visually inspected
- 4,300 in-home residential inspections
- 31,951 post-Harvey flood recovery permits were issued to houses in the unincorporated area of Harris County that flooded.
- 195 temporary housing unit permits were issued.
- The Permits Office is still processing 125 homes that were deemed substantially damaged and may need to elevate.
Home Buyouts

- **Sept. 26, 2017**: Harris County Commissioners Court authorized $20 million for the buyout of homes that met certain criteria:
  - substantially damaged with flood insurance
  - no longer had reliable public road access
  - were not completely repaired

- The first home was purchased 2 months after Hurricane Harvey, only 30 days after Commissioners Court approved the buyout program.
- The first home was demolished on **Nov. 10, 2017**.
- **Sept. 11, 2018**: Harris County Commissioners Court authorized the Real Property Division to seek reimbursement from the US Department of Homeland Security – Federal Emergency Management Agency for costs the County incurred in real estate purchases related to the $20 million Harris County Engineering Department buyout program.

- Total purchased with **County Engineer Emergency Program** - 48 homes and 26 vacant lots at a cost of $11.4 million
- There are 21 pending purchases of vacant lots.

- Summary of ongoing Flood Control District home buyouts related to Hurricane Harvey:
  - homes in process of purchasing - 385
  - homes purchased - 388
Harris County Facilities

The following facilities were extremely damaged during Hurricane Harvey but have been mitigated, repaired, and are now open.

- Annex 11 Courthouse (Clay Road)
- Thomas Glazier Senior Center
- Annex 17 Cypresswood Courthouse
- Juvenile Justice Center
- Barbara Bush Library
- Pearl Fincher Museum
- Katherine Tyra Library
- Kingwood Library
- Glen Check Educational Center
- Westside Service

Criminal Justice Center

- Project 1: Currently reconstructing Levels 2-20 paint, carpet, and tile replacement (upper floor water damage due to pipe leakage associated with Hurricane Harvey)

- Project 2: Currently preparing construction documents for basement, Level 1, Level 2, exterior flood proofing

- Project 3: Construction underway, existing elevator repairs/modernization

- Jury Assembly: Notice to Proceed has been issued and construction to begin in September
Recovery and Resiliency Division

- The Harris County Engineering Department, with direction from the Commissioners Court, established the Recovery and Resiliency Division (RRD) in 2018.
- The RRD Division oversees engineering projects dedicated to the reduction of flood risk following Hurricane Harvey.
- It is one of eight divisions within the Harris County Engineering Department, which executes the planning, study, design and construction of various infrastructure, parks and other architectural and maintenance projects in accordance with engineering design standards and specifications.

105 subdivisions identified with unexpected structural flooding

13 grant applications submitted (6 CDBG-DR, 7 HMGP) – 3x CDBG-DR approved and awaiting funding

47 community engagement meetings since Jan. 8, 2019

95 planning-level studies initiated, 61 of those complete (64 percent)

27 consultants selected for detailed study & design of projects

HCED-RRD Community Engagement Meeting

HCED-RRD field scoping
In an effort to reduce flooding associated with new developments, several regulations changes have occurred since Hurricane Harvey.

- **The Regulations of Harris County, Texas for Floodplain Management were first revised on Jan. 1, 2018, putting Harris County’s requirement as the highest in the nation.**
  
  This update further increased the elevation requirement or all new structures inside a mapped floodplain to 24 inches above the 500-year flood elevation. Also, new structures are no longer allowed to elevate using fill, and open foundations are now required. This will make further elevating the structure less costly in the future, if necessary.

- **The Floodplain Management Regulations were revised again in July 2019 to require floodplain fill mitigation for any fill brought in to the 500-year floodplain.**
  
  Floodplain fill mitigation was previously only required in the 100-year floodplain. This will further help reduce flooding impacts for developments constructed in the floodplains.

- **The Regulations of Harris County, Texas for the Approval and Acceptance of Infrastructure have also been revised since Hurricane Harvey.**
  
  All new houses inside planned subdivisions must now be elevated to at least the 500-year elevation. Also, storm sewer and detention requirements were increased based off the new NOAA Atlas 14 data.