

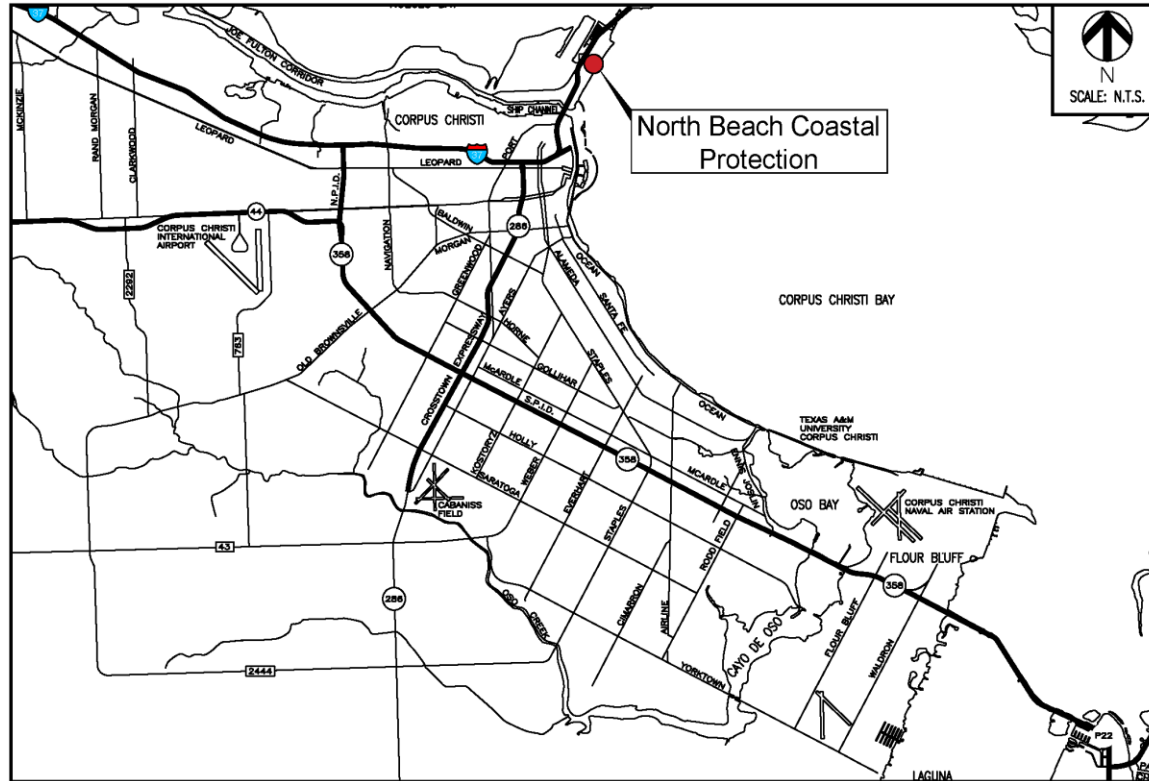
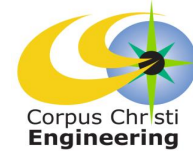
North Beach Coastal Protection (Bond 2018, Proposition A)



Council Presentation
September 17, 2019

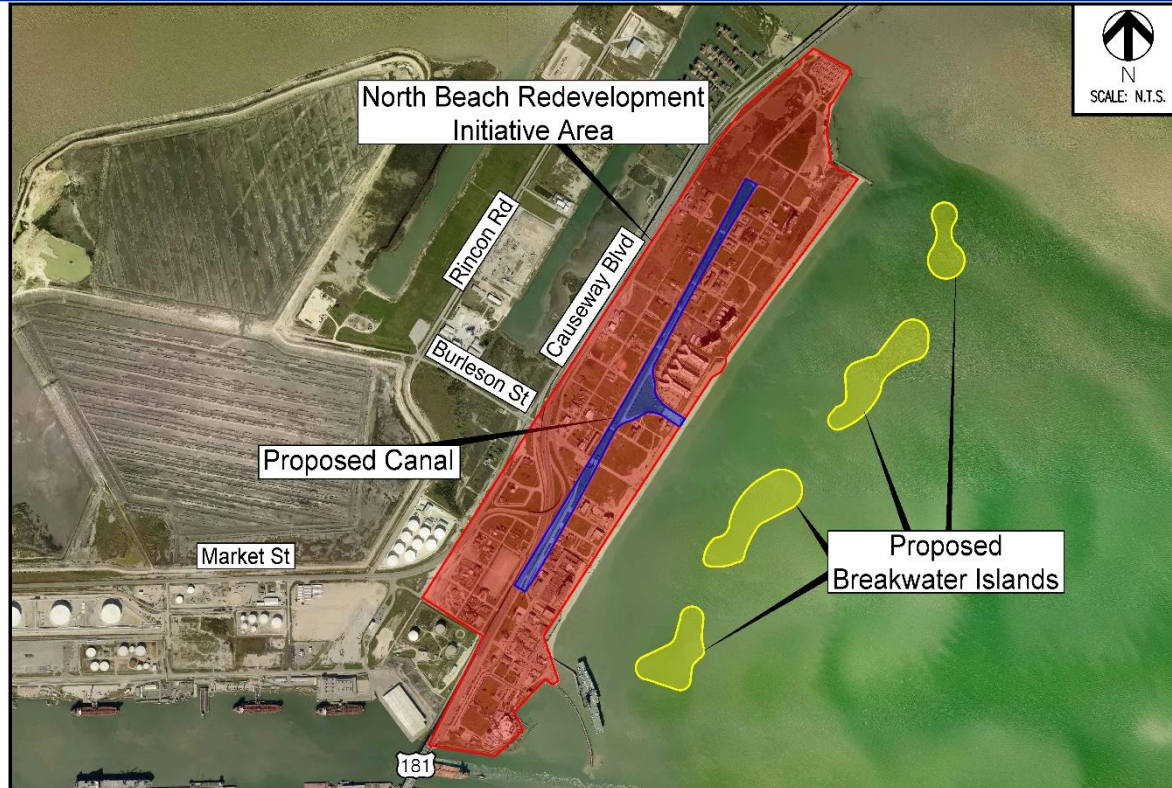
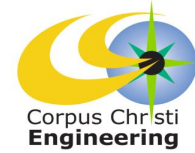


Project Location



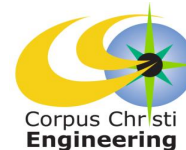


Project Location





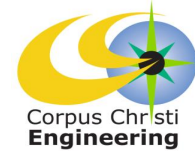
Project Scope



- Coastal engineering, modeling and alternative analysis that reflect current conditions of the project site including:
 - ✓ Analysis of water elevations
 - ✓ Wind generated waves
 - ✓ Passing vessel pressure effects
 - ✓ Tidal flows and circulation
 - ✓ Resulting tide, wind and storm impacts on project area
- Preliminary design including:
 - ✓ Basis of Design technical memorandum
 - ✓ Preliminary design level drawings compliant with design criteria
- Regulatory coordination including:
 - ✓ Coordination with the USACE
 - ✓ All supporting documentation for USACE coordination
- Design coordination with Lloyd Engineering, a firm that the Rachel Foundation hired to complete the geotechnical investigations for the proposed breakwater structure

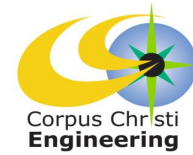


Project Schedule



| 2019 | | | | | 2020 | | | | | |
|--------|---|---|---|---|------|---|---|---|---|---|
| A | S | O | N | D | J | F | M | A | M | J |
| Design | | | | | | | | | | |

Projected Schedule reflects City Council Award in August 2019 with anticipated preliminary design and permitting phase completion in June of 2020



Questions?
