

**WELL SERVICE OPERATIONS FACILITIES**  
 Pape-Dawson provided the civil design for two well service operations facilities located on a 16.5- and 35-acre site in the Freeport Business Centre on Fischer Road. We conducted a drainage study because of an existing channel located downstream of the site, prepared an SW3P and obtained a site development permit for storm water quality from Bexar County. Services also included driveway and parking design, grading plan and water and sanitary sewer design.

**CIBOLO MAINTENANCE AND SUPPORT FACILITY**  
 As the civil engineer for this maintenance and support facility, Pape-Dawson conducted a Phase I Environmental Site Assessment of the 18.6-acre site located on Industrial Drive in Cibolo. The facility includes a vehicle service building, locker room, office building and impervious driving areas. Our civil site design included a topographic survey, platting, environmental permitting, mass grading plan, storm water drainage plan, SW3P, water and sanitary sewer design and pavement plans.

**MAINTENANCE FACILITY**  
 Pape-Dawson completed a Feasibility Study to review existing conditions of a 208-acre site located in the northwest quadrant of Loop 1604 and IH 37. We assessed zoning, platting, site development issues and utility availability for the site. We also completed the civil design for the construction of commercial/industrial buildings, connecting access roadways, driveways, fire lanes and parking lots. Services included environmental permitting, mass grading plan, storm water drainage plan, SW3P, water and sanitary sewer design, and pavement plans. Additional developments are planned for the site including a truck stop and apartments to support oilfield staff.

**WELL FRACKING FACILITY**  
 Pape-Dawson is providing the civil site design for a well fracking facility located on a 21-acre site at the intersection of Southton and Streich Roads. The project involves retrofitting an existing chemical distribution facility to serve as a sand drying and frack truck maintenance hub for South Texas. The site will include an office building, truck maintenance shop and sand drying/distribution facilities. Services include platting, permitting, tree protection plan, drainage plan, SW3P, grading plan, water and sanitary sewer design and pavement design.

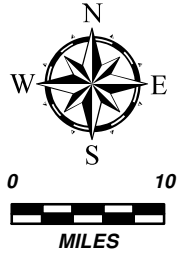
**COTULLA BUSINESS PARK**  
 The Cotulla Business Park will be a commercial development incorporating a single street with 17 commercial lots varying in size from 1 to 6 acres. Pape-Dawson is providing the civil site design for the development. Services include a hydraulic analysis for the development's water system, drainage and grading plans, water and sanitary sewer design and SW3P. We are also working with the City of Cotulla and LaSalle County to coordinate utilities and complete the platting process.

**CHEMICAL MIXING YARD**  
 Pape-Dawson completed a Feasibility Study to review existing conditions of a 170-acre undeveloped site located within the Elmendorf Extra Territorial Jurisdiction. The study addressed roadway and rail access, zoning, platting and site development issues based on Bexar County and City of Elmendorf Codes and Ordinances for industrial development, as well as utility availability. We are currently providing platting and full civil design services for this project.

**RAILROAD AVAILABILITY STUDIES**  
 Pape-Dawson is working with a local developer to evaluate potential industrial development sites to support the Eagle Ford Shale activity in South Texas. We are using our GIS capabilities to perform Site Suitability Analyses, to identify sites with close proximity to utility and railroad service.

**CATARINA MAINTENANCE FACILITY**  
 As the civil engineer for the 9.99± acre Catarina Maintenance Facility located near the intersection of Old Highway 83 South and Diamond H Ranch Road, Pape-Dawson provided a grading plan, storm water drainage plan, SW3P and water and sanitary sewer design for the facility. To obtain environmental permitting for the project, we completed a Phase I ESA performed in general accordance with ASTM E 1527-05. We also provided the design for a lift station, onsite wastewater treatment and spray irrigation of up to 5,000 gallons per day.

- LEGEND**
- Pape-Dawson Projects
  - Oil and Gas Wells (< 2 Years)
  - Natural Gas Pipeline
  - Refined Products Pipeline



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**EAGLE FORD SHALE REGIONAL MAP**  
**PAPE-DAWSON ENGINEERS - AREA PROJECTS**

Date: Feb 16, 2012 10:27:47 AM User: JDM279  
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