

PROJECT DESCRIPTION: **Airbus Dual Bay Hangar Expansion** **C Series Final Assembly Line Building**

Morris-Shea Project Components:
DeWaal Drilled Displacement Pile
PZC-18 Sheet Pile



MORRIS-SHEA

Aircraft Assembly Buildings



PROJECT OVERVIEW:

Morris-Shea installed more than 2800 DeWaal Drilled Displacement Piles as deep foundation for the Airbus Dual Bay Hanger Expansion and C Series Final Assembly Line projects. Conventional augercast piles were initially specified for the Mobile, Alabama foundations, but the Morris-Shea team presented DeWaal piles as a Value Engineered Alternate. The DeWaal System proved to be successful in reducing project expense and expediting jobsite scheduling. In addition to deep foundation piles, Morris-Shea utilized PZC-18 sheet piling in their design and construction of parallel walls for tunnels and cofferdams for individual footings at the Airbus site.

DEWAAL PERFORMANCE:

- REDUCED MATERIAL EXPENSE
- HIGHER PRODUCTION RATES
- IMPROVED LOAD CAPACITY
- ELIMINATED SPOILS DISPOSAL



DEEP FOUNDATION INSTALLATION:

The DeWaal Pile System is a drilled, full displacement, cast-in-place concrete pile. It is installed by powerful, fixed mast drill rigs capable of applying high rotational torque and crowd forces to the unique DeWaal tool. Installation of this patented system was performed in a single-pass process that densified the soil, improved shaft friction and increased overall pile capacity. This field-proven pile eliminated the expense associated with waste removal in conventional augercast applications and met or exceeded load strength requirements. The DeWaal pile was ideal for installation in soil profiles found at the new Airbus A220 aircraft assembly building jobsite.



SITE TESTING:

Morris-Shea successfully drilled test piles in the silty and clayey sands at the Airbus jobsite that met or exceeded project-specific load criteria. In addition to a comprehensive static load testing program, Morris-Shea performed a supplementary site investigation with standard and seismic cone penetrometer technology (SCPT). This test further confirmed the outstanding performance offered by DeWaal piles. This wide range of testing assured the foundation's load specifications were met and Morris-Shea assumed the risk of guaranteed capacity for the DeWaal piles.

DEWAAL VS AUGERCAST:

The DeWaal Pile System provides uncommon load strength and minimizes the contamination and disposal concerns of spoils brought to the surface by conventional augercast installations. DeWaal piles are installed with purpose built equipment and exacting methods that ensure high quality deep foundations.

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