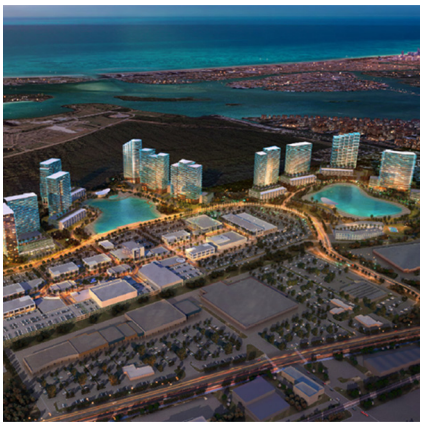
LANGAN

LANGAN QUALIFICATIONS FOR THE CORDISH COMPANIES



Technical Excellence Practical Experience Client Responsiveness

NEW JERSEY NEW YORK CONNECTICUT PENNSYLVANIA OHIO VIRGINIA GEORGIA FLORIDA TEXAS CALIFORNIA ARIZONA WEST VIRGINIA

ABU DHABI DUBAI GREECE LONDON QATAR TURKEY PANAMA

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AMERICAN DREAM MEADOWLANDS

http://www.langan.com/portfolio/american-dream-meadowlands/

Location: East Rutherford, NJ

Client: Triple Five Development

Services: Geotechnical, Site/Civil, Traditional Surveying, Natural Resources & Permitting, Environmental Planning, Environmental

OVERVIEW

American Dream is a unique and visually compelling mixed-use development site located on the Meadowlands Sports Complex in East Rutherford, New Jersey. The project incorporates exciting and participatory sports and entertainment venues, such as an indoor ski slope and skate park for the entire family. Langan is providing site/civil engineering, geotechnical engineering, surveying, environmental engineering, and permitting services to obtain entitlements for the new indoor amusement park and water park component of the project.

HUDSON YARDS REDEVELOPMENT

http://www.langan.com/portfolio/hudson-yards-redevelopment-2/

Location:	New York, NY
Client:	Hudson Yards, a Related Oxford Venture
Architect:	Kohn Pedersen Fox, Skidmore, Owings & Merrill, Diller Scofidio + Renfro, Ismael Leyva Architects, Rockwell Group
Partner:	Thornton Tomasetti, WSP
Services:	Geotechnical, Environmental, Site/Civil, Traffic & Transportation, Traditional Surveying, Terrestrial Scanning/BIM

OVERVIEW

This major New York City rezoning and redevelopment, under the joint guidance of The City of New York, the Metropolitan Transportation Authority (MTA), Hudson Yards Development Corporation (HYDC) and State of New York initiatives, is in the process of reinventing the Hudson Yards area in Midtown Manhattan. Once complete, the site will include more than 17,000,000 SF of commercial and residential developments and 14 acres of open park space, as well as a cultural venue, 750-person public school and 200-room luxury hotel.

Langan's extensive knowledge and understanding of the overall West Side redevelopment plans, MTA No. 7 subway line design, and Eleventh Avenue Viaduct reconstruction has been critical to private development and agencies alike. Interaction and close coordination with agencies such as the MTA, HYDC, New York City Economic Development Corporation (NYCEDC), New York City Department of Transportation (NYCDOT), New

FOUNDATIONS FOR EAST YARD PLATFORM COMPLETE

Hudson Yards creates real estate out of thin air - literally. Two †platforms† will bridge over 30 active train tracks and will support towers, mid-rises, and public open space. Langan was the geotechnical and environmental engineer for the east platform, which is supported by 380 high-capacity caissons that transfer loads from the platform and buildings into the underlying bedrock.

Langan played a key role in helping to move east platform construction forward. Our unconventional approach to caisson load tests and integration of geotechnical and environmental field work translated into signification foundation construction time and materials savings. The completion of the east platform is a milestone for the project and sets the stage for vertical development, which will ultimately help to reinvigorate Manhattan's Far West Side.

TURNBERRY OCEAN CLUB

http://www.langan.com/portfolio/turnberry-ocean-club/

Location:	Sunny Isles Beach, FL
Client:	Turnberry Associates
Architect:	Carlos Zapata Studio , Robert M. Swedroe Architects & Planners
Partner:	DeSimone Consulting Engineers
Services:	Geotechnical, Environmental

OVERVIEW

Turnberry Ocean Club is a 54-story tower over a subterranean parking level situated on a 100,000-SF ocean-front site. The club offers 154 luxury residences with various amenities including multiple pools, private beach access, spa, indoor/outdoor fitness center, and indoor/outdoor dining areas. Langan provided geotechnical and environmental engineering services for the project. Challenges included high-tower foundation pressures, variable subsurface conditions, deep excavation, and high groundwater level and permeable conditions.

SOL' MIA

http://www.langan.com/portfolio/sole-mia/

Location: North Miami, FL
Client: Oleta Partners, LLC
Architect: EDSA
Services: Site/Civil, Geotechnical, Environmental

OVERVIEW

SoL' Mia is a joint venture between long-time Langan clients Turnberry Associates and LeFrak. This 183-acre master-planned, mixed-use community is set on one of the largest remaining parcels of undeveloped land in South Florida.

The key challenging component of the project is that it is a former municipal waste landfill, which was closed in the 1980s. Langan's team of civil, environmental and geotechnical engineers are drawing upon local and national experience and expertise related to land development on former landfills.

HARD ROCK STADIUM & ADDITIONS

http://www.langan.com/portfolio/hard-rock-stadium-expansion/

Location:	Miami Gardens, FL
Client:	Miami Dolphins Limited
Architect:	HOK, Arquitectonica
Partner:	Hunt Construction Group, Stiles Construction, Bliss & Nyitray, Thornton Tomasetti
Services:	Geotechnical, Site/Civil

OVERVIEW

Langan was the geotechnical engineer for the original stadium construction and all subsequent additions, including the most recent canopy structure. For this recent addition, Langan also provided site/civil engineering and permitting services for the improvements at the stadium, which is home of the Miami Dolphins. Geotechnical services have included subsurface investigations, foundation designs, and construction oversight during the original surcharge site-improvement program, footing subgrade preparation, and installation of high-capacity deep foundations for support of the state-of-the-art, open-air canopy. The site/civil scope involved redesigning site drainage to address flooding in parking lots and designing the proposed roof drainage conveyance system. Other tasks included designing improvements associated with the reconfiguration of internal access road and planned amenities surrounding the stadium.

FOUR SEASONS HOTEL & TOWER

http://www.langan.com/portfolio/four-seasons-hotel-tower/

Location: Miami, FL
Client: Millennium Partners
Architect: Handel Architects, LLP
Services: Geotechnical

OVERVIEW

At 70 stories, the Four Seasons Hotel & Tower is the tallest building in Florida. The mixed-use development includes a hotel, office, condominium, and retail space, with an adjoining 20-story podium and a seven-story parking garage. Langan performed extensive subsurface investigations to identify the relevant soil, rock, and groundwater conditions. Soil/structure interaction analysis was performed to evaluate potential building settlements.

AWARDS

FICE Engineering Excellence Award

METLIFE STADIUM

http://www.langan.com/portfolio/metlife-stadium/

Location: East Rutherford, NJ
Architect: 360 Architects, Ewing Cole
Partner: Skanska USA, Thornton Tomasetti
Services: Site/Civil, Geotechnical, Environmental, Traditional Surveying, Natural Resources & Permitting, Traffic & Transportation, Landscape Architecture

OVERVIEW

Home to the New York Giants and Jets, MetLife Stadium is an 82,000-seat, open-air stadium constructed within the Meadowlands Sports Complex. The project was challenged by poor subsurface conditions, numerous existing site utilities, proximity to the existing stadium and racetrack, and the need to construct the proposed stadium while operating the existing Giants Stadium and utility infrastructure that serves the Meadowlands Sports Complex. The expertise of several Langan disciplines was called upon to facilitate design and construction of the stadium and maintain the project schedule. Langan provided geotechnical, site/civil, environmental, traffic engineering, surveying, permitting, and landscape architecture services for MetLife Stadium - working with the owners, design-build contractor, and a diverse team of architects and designers.

BROWARD COUNTY CONVENTION CENTER EXPANSION

http://www.langan.com/portfolio/broward-county-convention-center-expansion/

Location:	Fort Lauderdale, FL
Client:	Broward County Convention Center
Architect:	Scharf & Associates
Partner:	DeRose & Slopey Consulting Engineers
Services:	Geotechnical

OVERVIEW

This project consisted of a 3-level, 150,000-SF expansion to the existing 450,000-SF Broward County Convention Center, located inside Port Everglades, in downtown Fort Lauderdale. Langan provided subsurface investigations, geotechnical engineering, and construction-phase foundation and site preparation inspections. Because of its location within a filled-in former coastal marsh/swamp, this project presented complex geotechnical challenges. Langan recommended high-capacity augercast piles for support of the building superstructure, and preloading/surcharging to allow the use of a grade supported floor slab, for an efficient and economical foundation system.

THE WESTIN DIPLOMAT RESORT & SPA

http://www.langan.com/portfolio/westin-diplomat-resort-spa/

Location: Hollywood, FL
Client: Diplomat Properties, LP
Architect: Nichols Brosch Sandoval & Associates
Partner: DeSimone Consulting Engineers
Services: Geotechnical

OVERVIEW

To date, the Diplomat project is the largest private project ever constructed in Florida. It consists of 40-story twin hotel towers, an eight-story convention center, a retail village, multi-level parking garage, mechanical plant, and a pedestrian bridge, which connects the two properties over Collins Avenue.

MEDITERRANEAN VILLAGE

http://www.langan.com/portfolio/mediterranean-village/

Location: Coral Gables, FL
Client: Key Realty Advisors
Architect: RTKL
Services: Site/Civil, Geotechnical, Environmental

OVERVIEW

Langan provided site/civil, geotechnical, and pre-demolition hazardous materials services for this new mixed-use development located within three city blocks in Coral Gables, Florida. The project program consists of five high rise towers, an eight level podium and several townhome structures. The development also includes retail, hospitality, office and residential uses.

1000 MUSEUM

http://www.langan.com/portfolio/1000-museum/

Location: Miami, FL
Client: 1000 Biscayne Tower, LLC
Architect: Zaha Hadid Architects
Services: Geotechnical, Environmental

OVERVIEW

1000 Museum will be the first high-rise building in the Western Hemisphere designed by Pritzker Award winner Zaha Hadid. This ultra-luxury residential building will rise 62-stories and ultimately stand out amongst its neighbors at 710- feet-tall. The project fronts historic U.S. Highway 1 in the heart of Downtown Miami. Former uses of the site included a gas station and a pawn shop. Langan provided geotechnical and environmental services in support of the project.

ONE TAMPA CITY CENTER

http://www.langan.com/portfolio/one-tampa-city-center/

Location: Tampa, FL
Client: GTE Corporation
Services: Geotechnical

OVERVIEW

Langan provided geotechnical services for the 40-story office tower, including subsurface investigation, mat foundation analysis, and inspection of the 30-foot-deep excavation and backfill. During the site preparation work, the overburdening fine sand and the underlying plastic clay were excavated. The fine sand was used as backfill after mixing it with portland cement in order to increase its compressive strength, as well as to facilitate compaction. The 40-story tower is supported on an 8-foot thick mat bearing on the cement-modified soil backfill. Uniform settlements of less than a 1/2 inch were measured after construction.

AWARDS

Engineering News Record, †A Significant Achievement† Award
American Council of Engineering Companies, Engineering Excellence Award