

Learn more about Langan's involvement with Kingdom Tower and other high rise projects that are shaping the world's skylines.

#### **SELECTED PROJECTS**

- Kingdom Tower, Jeddah, KSA
- Time Warner Center, New York, NY
- One Rincon Hill, San Francisco, CA
- Fontainebleau Resort & Spa, Miami Beach, FL
- Turnberry Place, Las Vegas, NV
- Four Seasons Hotel & Tower, Miami, FL
- Hearst Tower, New York, NY
- Turnberry Tower, Arlington, VA
- Fontainebleau Las Vegas, Las Vegas, NV
- Atlantis, Paradise Island, Bahamas
- St. Regis Museum Tower, San Francisco, CA
- Towers on Capitol Mall, Sacramento, CA



LANGAN ENGINEERING & ENVIRONMENTAL SERVICES, KINGDOM TOWER AND OTHER HIGH RISE EXPERIENCE



## **KINGDOM TOWER**

Location: Jeddah, KSA

Client: Kingdom Holding Co.

Architect: Adrian Smith + Gordon Gill Architecture

**Strategic Partner:** Thornton Tomasetti

Services: Site/Civil; Geotechnical; Transportation Planning

Rising 1,000 meters (3,280 feet) into the Arabian sky, the tower will eclipse the reigning tallest building by 173 meters (568 feet). The first phase of the Kingdom City comprises the Tower, a 65,000-square-meter retail mall, and a 3,000+ car underground garage. Langan's role has included the development and oversight of the site subsurface investigation, final design of the piles in collaboration with the design team, stormwater management and integration of the circulation and volume demands of the Tower and retail building into the traffic master plan for Jeddah's Kingdom City.



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## **TIME WARNER CENTER**

Location: New York, NY

**Client:** Related Retail Companies, LLP **Architect:** Skidmore, Owings and Merrill

Services: Geotechnical; Surveying

The \$1.8 billion, 2.7 million-square-foot, multi-use building houses the Time Warner World Headquarters; restaurant, retail, and office space; a 250-room luxury hotel, and a concert hall for the use of Jazz at Lincoln Center.



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#### **ONE RINCON HILL**

**Location:** San Francisco, CA **Client:** Urban West Associates

**Architect:** Solomon Cordwell Buenz

Services: Geotechnical; Earthquake/Seismic

Completed in 2008, this 60-story tower is the tallest residential building in California. The structure is supported on a mat foundation bearing on bedrock. During the construction of the below-grade parking, the 60-foot-deep excavation was retained by a soil-nail temporary shoring system, designed by Langan Treadwell Rollo. In addition, a Probabilistic Seismic Hazard Analysis (PSHA) and deterministic analysis was performed to develop site-specific spectra for three levels of earthquake shaking in accordance with 2007 California Building Code.



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## **FONTAINEBLEAU RESORT & SPA**

Location: Miami Beach, FL

**Client:** Fontainebleau Resorts, LLC

**Architect: NBWW and HKS** 

Completion: 2009

Services: Geotechnical; Environmental; Coastal Permitting; Asbestos

Langan completed a Phase I/Phase II Environmental Site Assessment (ESA), which identified chlorinated solvents in the soil and ground water as a result of discharges from a former dry-cleaning operation in the basement of the hotel. Langan also completed comprehensive asbestos surveys and monitored the abatement. In addition, Langan performed geotechnical engineering studies and comprehensive and innovative pile load testing programs, and inspected the installation of the piles.



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## **TURNBERRY PLACE**

Location: Las Vegas, NV
Client: Turnberry Associates

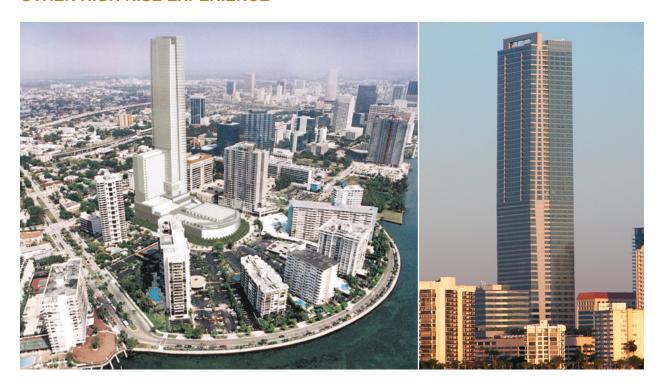
**Architect:** Robert M. Swedroe Architects-Planners

Services: Geotechnical

The five star Turnberry Place development in the heart of the Las Vegas Strip consists of four 40-story condominium towers and an expansive club facility. The size of the structures, the sequencing of construction, and depressed parking levels created specific geotechnical and construction challenges.



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## **FOUR SEASONS HOTEL & TOWER**

Location: Miami, FL

**Client:** Millennium Partners

Architect: Handel Architects, LLP

Services: Geotechnical

At 67 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.



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## **HEARST TOWER**

Location: New York, NY

**Client:** Tishman Speyer Properties

**Architect:** Foster and Partners, London

Awards: LEED Gold

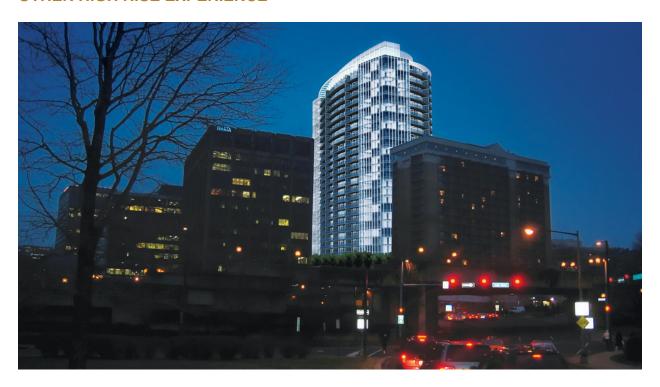
Services: Site/Civil; Geotechnical; Environmental; Surveying & 3D Scanning/BIM

The \$500 million Hearst Tower is located at 959 Eighth Avenue, just south of Columbus Circle in Manhattan. New construction includes the preservation of the six-story landmark Hearst Building facade and a 42-story environmentally friendly steel and glass

tower to house the Hearst Corporation Headquarters.



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## **TURNBERRY TOWER**

Location: Arlington, VA

**Client:** Turnberry Associates

**Architect: BBG-BBGM** 

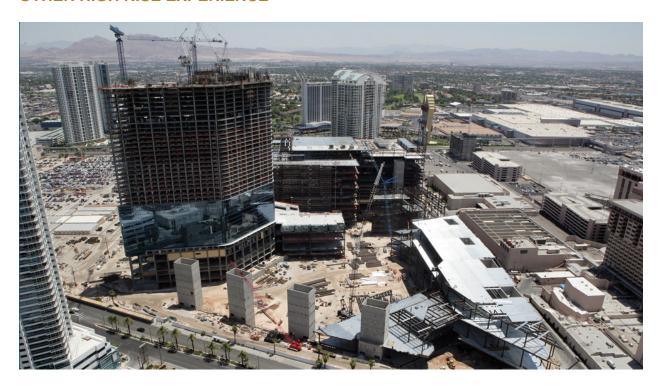
Strategic Partner: SK&A Structural Engineers

Awards: LEED Certified (projected)
Services: Geotechnical: Environmental

Turnberry Tower is a 247-unit, high-end luxury condominium. The 25-story tower, soaring nearly 400 feet above the Potomac River, is the tallest condo building in the Washington, DC metropolitan region. The \$250 million project, which is approximately 920,000 SF, also includes a six-level below grade parking garage.

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# **FONTAINEBLEAU LAS VEGAS**

Location: Las Vegas, NV

**Client:** Fontainebleau Resorts, LLC

Architect: Carlos Zapata Studios; Paul Steelman Design Group; Bergman Walls

Associates

Completion: 2010 (Est.)

Services: Geotechnical; Permitting

At 67 stories, Fontainebleau is the tallest building in Las Vegas. The development

includes a hotel, casino, convention center, and 11-story parking garage.



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## **ATLANTIS**

Location: Paradise Island, Bahamas

**Client:** Kerzner International Development

Architect: WATG; HKS; EDSA

**Completion: 2007** 

Services: Geotechnical

This mega resort included two 22-story hotel towers, a water park, Mayan-style temple,

pools, amusement park amenities, and various support structures.



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## ST. REGIS MUSEUM TOWER

Location: San Francisco, CA Client: CC California, LLC

Architect: Skidmore, Owings & Merrill, LLP

Strategic Partner: Tishman Construction Corporation of California

Services: Geotechnical

Langan Treadwell Rollo performed a geotechnical investigation at the St. Regis Museum Tower site, a 42-story hotel and residential building supported on a mat

foundation bearing on dense sand.



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## **TOWERS ON CAPITOL MALL**

Location: Sacramento, CA
Client: Saca Development

**Architect:** Mulvanny G2 Architects

Services: Geotechnical

Langan Treadwell Rollo performed a geotechnical investigation and provided geotechnical consulting services during the design of the foundation system for the proposed Towers on Capitol Mall Project. The project consisted of two, 50-story hotel-resort and residential condominium towers with common retail and resort uses on the lower floors.

