MICHAEL J. KELTY, PE, SE, SECB
PRINCIPAL

Experience Mr. Kelty has over 17 years of structural engineering experience including ten years as a Project Manager. He has extensive experience in structural analysis and the design of commercial, industrial, institutional, and power facilities, performing job site construction inspection and material testing and observation. He has broad experience in site surveys for residential and commercial projects. He is versed in asphalt pavement design ranging from parking lots to heavy road design, along with developing accompanying construction specifications. He also has experience in pressure vessel design and inspection, and possesses an awareness of industry procedures.

Education Bachelor of Science, Civil Engineering - Purdue University – 1991

Registrations Professional Engineer – Illinois, Puerto Rico, Minnesota, Florida
Structural Engineer – Illinois

REPRESENTATIVE COMMERCIAL EXPERIENCE

Walgreens

Ponce, Montehedria, Pinero, San Sebastian, Morovis, Rexville, Rio Hondo Carolina, Isabella, Coamo, Canton Mall, Plaza Tropical, Carolina, Cidra, Guaynabo, Arecibo, Fajardo, Anasco, Trujillo Alto, Puerto Rico Project Manager responsible for coordinating and reviewing all disciplines for Seventeen new 17,000 sq ft Walgreens stores in Puerto, Rico. Responsible for the structural design of the building for 145 mph winds and seismic zone 3 earthquake loads. Coordinated all architectural, structural, sprinkler, MEP, civil and permitting work required for the project. Responsible for direct contact with the Walgreen head architect and all correspondence between parties (including subcontractors).

Santurce, Puerto Rico Project Manager responsible for coordinating and reviewing all disciplines for a new 18,500 sq ft Walgreens stores with an overhead parking structure in Puerto, Rico. Responsible for the structural design of the building and foundations for 110 mph winds and seismic zone 3 earthquake loads. Coordinated all architectural, structural, sprinkler, MEP, civil and permitting work required for the project. Responsible for direct contact with the Walgreen head architect and all correspondence between parties (including subcontractors).

Rexville, Puerto Rico Project Engineer responsible for the structural design of various height and length site retaining walls for stores in Puerto, Rico. The retaining walls were design for seismic zone 3 earthquake loads and associated adjacent building surcharge loads. Responsible for direct contact with the Walgreen head architect and all correspondence between parties (including subcontractors).

Manau Cutlery

Chicago, IL Project Manager responsible for the conceptual design of a new two story warehouse/office building. Services included schematic building design to meet the client's work functions, preferences and budget. Provided coordination with City of Chicago permitting expeditor and client for qualification of permit requirements and acceptance.

Residential

Various Contractors/Builders Project Engineer responsible for various existing

structure residential inspections and preparations of required repairs to meet local jurisdiction permit requirements.

University of Illinois

Utilities Interconnection -Chicago, Illinois Provided structural engineering design services for east-west utilities interconnection project.

Professional Service Industries, Inc.

Hotel Parking Lot -Portsmouth, Ohio Engineer for the assessment and repairs to 60,000 SF asphalt pavement for a hotel parking lot. Project scope also included the design of new pavement for a semi - trailer parking area.

Site Survey -Chicago, Illinois Performed a site survey of a commercial store truck delivery route. Provided an existing grade elevation site plan and a construction drawing which showed existing asphalt demolition, asphalt replacement and regrading of the route.

Illinois Capital Development Board

Vandalia Prison -Vandalia, Illinois Provided job site construction support observing new asphalt pavement placement for a new parking lot. Duties ranged from verifying asphalt placement procedures; informing contractor of areas of pavement that required additional rolling to achieve the required compaction; ensuring construction procedures and materials adhered to specification requirements; and answering contractor questions.

Montgomery Ward

Distribution Center- Chicago, Illinois Surveyed existing conditions of a commercial parking lot along with obtaining elevations of an adjacent drainage ditch and culvert inverts, and provided an existing grade elevation site plan drawing.

Employee Parking Lot -Chicago, Illinois Performed a site evaluation of a severely deteriorated parking lot and provided , rehabilitation plans and details depicting new asphalt pavement, concrete curbs, parking lot lighting and foundations, pressure-sensitive entrance and exit gates, and realignment of existing manholes and catch basins.

REPRESENTATIVE POWER GENERATION EXPERIENCE

ComEd

Electric Junction and Joliet Peakers, Fast-Start Peaking Unit, Chicago ,Illinois Provided engineering, design and construction support. The civil/structural scope of work included developing a CAD-generated demolition drawing for the controls enclosure foundation walls, bus structure foundations, foundation pads, fence and fence post foundations, light pole foundations and an oil tank dike. Also performed a site survey and provided site grading, drainage, paving calculations and associated CAD-generated drawings. The project also included performing calculations to determine the required containment capacity and ensuring that the design was in compliance with EPA, NFPA, and City of Chicago requirements, and provided a CAD-generated design drawing for the new dike structure.

IES Utilities, Inc.

Red Cedar Cogeneration Station -Red Cedar, Iowa Provided structural engineering, design and construction support services for a 20 MW baseload electrical generation facility which provides electricity to the grid and 200,000 lb/hr of process steam to Penford Products Company.

REPRESENTATIVE INDUSTRIAL EXPERIENCE

Industrial Facility

Barceloneta, Puerto Rico Project engineer responsible for structural steel and foundation design for all aspects of a multileveled 460 ft long existing pipe rack

Engineering

replacement project for Abbott Labratories. The new pipe rack has an increased loading area of 50% over the existing and the new pipe rack design had to incorporate conditions resulting from the fact that all existing pipe would remain in place during erection of the new pipe rack. The pipe rack and associated pile foundations were designed for UBC Zone 3 seismic loads and 125 mph hurricane force wind loads. Developed a three-dimensional computer model of the steel structure using RISA-3D computer software. Responsibilities included development and accuracy of the design calculations and drawings for the project.

US Filter/HPD Products

Ghent, Kentucky Project engineer responsible for structural steel design for all aspects of 3 independent self supporting process skids. The three skids were designed for horizontal and vertical lifts loads along with associated seismic and winds loads from their final erection placements. Developed a three-dimensional computer model of the steel structure using RISA-3D computer software. Responsibilities included development and accuracy of the design drawings for the project.

Hudson, Colorado (Calpine Corporation) Project engineer responsible for structural steel and foundation design for a zero liquid discharge system at an existing power plant. Foundation designs (approximately 1400 cy. in total) consisted of large mat foundations for heavily loaded equipment, various independent equipment foundations, and pre-engineered building foundations. Structural steel designs included multiple elevated process piping racks, equipment support structures and interconnecting walkways between equipment. Developed three-dimensional computer models of the structural steel framing using RISA-3D computer software and three-dimensional computer models of foundations using PCA-MATS computer software. Responsibilities included development and accuracy of the design drawings for the project.

Western Australia Project engineer responsible for structural steel foundation design calculations for all aspects of this four -story, 1,300 SM. Developed a three-dimensional computer model of the steel structure using RISA-3D computer software. Responsibilities included development and accuracy of the design drawings for the project.

FMC Corporation -Guemes, Argentina Performed structural design of four process unit skids (12' x 12' x 40') for assembly in the United States and shipment to Argentina. The tower design included analysis for seismic loads (UBC Zone 3).

Occidental Chemical Corporation; Salt Cake Purification System -Castle Hayne, NC Senior engineer responsible for performing calculations for a mat foundation to support a 20,000 SF, 3-Bay, 90' tall tower. In addition, he prepared structural steel calculations to develop structural and architectural system design requirements to resist 120 mph hurricane force winds. Also performed a site survey of existing undeveloped plot, developed a site plan depicting new railroad tracks and car pullers, asphalt pavement and site drainage by means of a storm sewer system.

Westvaco Corporation -Charleston, South Carolina Performed calculations for the design of 120 tons of structural steel framing for a combined stripper, scrubber and incinerator system. The project required the structural system to be designed for both seismic and coastal hurricane wind forces.

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Scott Paper Company. - Mobile, Alabama Designed structural steel framing for this recycled water process system, including a 110' long pipe bridge and 40' high vessel towers. The structural system included 130 tons of steel and was designed for coastal hurricane wind forces.

UOP -Shreveport, Louisiana Designed the structural steel framing for this recycled water evaporator system.

Great Southern Paper Company -Cedar Springs, Georgia Designed the structural steel framing and foundations for a paper mill process system.

US Filter/HPD Products

Texas Brine Project -Baytown, Texas Project engineer responsible for providing engineering, design and construction support for this 25,000 SF project. Using structural engineering software developed a three-dimensional computer model of the steel structure. Performed or reviewed all structural steel calculations for load determination and member design and connection.

United States Gypsum Company

New Board Plant -Plaster City, California Lead project engineer responsible for providing engineering, design and construction support for a 500,000 SF expansion of an existing wallboard plant. The expansion was designed to resist 70 mph winds and seismic zone 4 forces ($120,000,000 construction cost). Responsible for the following activities:

- Civil mass grading, underground utilities, site drainage, final grading and paving and landscaping for a 240-acre site.
- Structural development of RISA-3D models, structural steel and reinforced concrete designs, equipment supports, bin designs and accuracy of the
- design drawings
- Architectural design and accuracy of all architectural aspects related to the buildings.

United States Gypsum Company

Site Modification -Baltimore, Maryland Responsible for design and layout of a modification to an existing road to allow room , for construction of a new concrete bunker. Existing 48 “diameter storm sewer line and associated manholes had to be relocated incorporating the addition of two new catch basins to allow for proper drainage of the newly constructed site.

Crushing and Screening -Screen Tower Alterations -Little ,Narrows, Nova Scotia Responsible for designing and modifying an existing steel structure to allow installation of a larger screen in place of the existing screen.

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New Board Plant -Rainer, Oregon Lead project engineer responsible for providing engineering, design and construction support for a new grass roots 500,000 SF wallboard plant designed to resist 120 mph winds and seismic zone 3 forces ($120,000,000 construction cost). Responsible for the following activities:

- Civil- mass grading, underground utilities, site drainage, final grading and paving and landscaping for a 240-acre site
- Structural- development of RISA-3D models, structural steel and reinforced concrete designs, equipment supports, bin designs and accuracy of the
- design drawings
- Architectural design

Synthetic Gypsum -New Orleans, Louisiana Performed and checked structural steel and concrete calculations to design a 1,500 SF building extension that was required for conversion to syntactic gypsum of the existing plant.

New Board Plant –A1Iiquippa, Pennsylvania Lead project engineer responsible for providing engineering, design and construction support for a new grass roots 500,000 SF wallboard plant designed to resist 90 mph winds ($120,000,000 construction cost). Responsible for the following activities:

- Civil mass grading, underground utilities, site drainage, final grading and paving and landscaping for a 240-acre site.
- Structural development of RISA-3D models, structural steel and reinforced concrete designs, equipment supports, bin designs and verification of the accuracy of the design drawings.
- Architectural design

New Board Plant -Bridgeport, Alabama Lead project engineer responsible for providing engineering, design and construction support for a new grass roots 500,000 SF wallboard plant designed to resist 90 mph winds ($120,000,000 construction cost). Responsible for the following activities:

- Civil- mass grading, underground utilities, site drainage, final grading and paving and landscaping for a 240-acre site.
- Structural development of RISA-3D models, structural steel and reinforced concrete designs, equipment supports, bin designs and verification of the accuracy of the design drawings.
- Architectural design

Various Small Projects Project Engineer responsible for the project management, structural design, and correspondents with USG for various small projects request by USG plant personnel.

Crown Cork & Seal Company

Two-Piece Can Line -Roodekop, South Africa Lead structural engineer responsible for providing all structural engineering for a new 1,200-can-per -minute aluminum can line. The scope of work included design of all process and utility equipment foundations, design of maintenance/access and support platforms for all overhead can conveying systems, and procurement assistance for concrete anchors and fiberglass grating.

Crown Cork &

Two-Piece Can Line -Amman, Jordan Lead structural engineer responsible for

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Seal Company

providing all structural engineering for a new 1,200 can-per-minute aluminum can line. The scope of work included design of all process and utility equipment foundations, design of maintenance/access and support platforms for all overhead can conveying systems. Designed reinforcing for primary and secondary roof trusses to support up to 50 psf of additional process piping loads.

Midwest Decorating Center -Aurora, Illinois Lead structural engineer for conversion of an existing 105,000 SF warehouse to a light manufacturing facility. The scope of work included: performing all structural engineering associated with the administrative area modifications, two-story graphics area, apparatus room; evaluation of existing structural elements including foundations for additional loading; developing details for infill of existing dock area; designing mezzanine floors around the body blank and lithograph line equipment; designing bridge crane system located above the Crabtree press; evaluating existing slab on grade for coil storage and forklift loading and design modifications as required; designing foundation for lithograph; developing appropriate technical specification sections; and reviewing vendor submittals.

Two-Piece Can Line -Hanoi, Vietnam Lead discipline engineer responsible for providing all structural engineering for a new 1,200-can-per-minute aluminum can line. The scope of work included design of all process and utility equipment foundations, design of maintenance/access and support platforms, and procurement assistance.

Various Small Projects Project Engineer responsible for the project management, structural design, and correspondents with Crown Cork & Seal for various small projects request by Crown Cork & Seal plant personnel.

Constar International

Facility Addition for Plastic Bottle Manufacturing -West Chicago, Illinois Provided structural engineering design for a two story addition to an existing 180,000 SF manufacturing plant. Responsibilities included providing construction specifications and drawings for the demolition of the existing building; design of foundations and steel supports for a new area to house production equipment, as well as all other utility equipment such as chillers, dehumidifiers, pumps and cooling towers. The roof design provided support for the piping and electrical ducts.

Mobil Oil Corporation Joliet Refinery Joliet, IL

Sulfur Stack Analysis Analyzed an existing 250' varying diameter steel stack, including; reviewing inspection reports; design of ring girder and reinforcing corset; modifications to rain shield; and performing field survey documenting stack deflection.

Coke Haul Road -Joliet, Illinois Responsible for surveying for a proposed coke haul road to determine existing grade elevations; provided data for cut and fill; and designed asphalt pavement for heavy trucks and equipment. Existing grade elevation drawings were developed in addition to construction drawings indicating the new road layout and design.

Mobil Oil Corporation

Truck Unloading Rack -Green Bay, Wisconsin Performed engineering design services for a 150' pipe rack supporting piping to the truck unloading terminal.

Terminal Tank Farm -Green Bay, Wisconsin Surveyed existing tank farm and provided grade elevation site plan drawing along with dike containment capacities.

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UNO-VEN **Tank Farm -Lemont, Illinois** Performed a site survey of existing grade elevations including tank base elevations, culvert inverts, and drainage ditch elevations. Dike containment calculations were compared to the required containment capacity. Existing grade drawings were developed along with construction drawings depicting rehabilitation of dikes to obtain the elevations required for adequate containment.