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MOFFATT & NICHOL
NEWS
Vol 12 Issue 1



ELEGANT EXPANSION

Emraport Makes History at Port of Santos

IN 2012, the Port of Santos handled a reported 3 million TEUs, making it the busiest container port in Latin America—and Brazil's largest, handling nearly 70 percent of local trade and 25 percent of Brazil's foreign trade. With such high container traffic, developing Empresa Brasileira de Terminais Portuários (Emraport) at the Port of Santos became an imperative and, when it launched operations in July 2013, Emraport became one of the three largest private sector container terminals in Brazil.

(Image Courtesy: Emraport) Continued on Page 2

news
briefs

Welcome Aboard, James Beaver!



JAMES BEAVER has joined Moffatt & Nichol's London office as the Director of Marina Commercial Services for the firm's urban waterfronts and marinas practice. He brings 24 years of experience in marina consultancy, from development through commissioning. James'

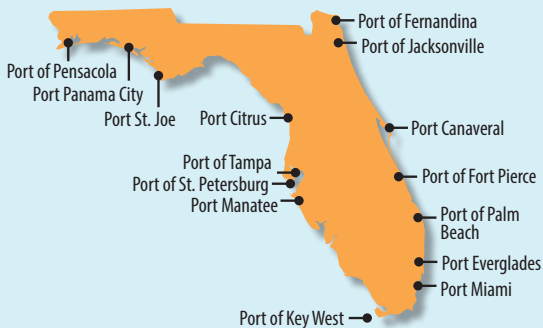
expertise will support clients seeking to develop premium marinas and related real estate in the fast-growing yachting and waterfront development market.

His professional credentials include serving as Chief Operating Officer and Operations Director at Camper & Nicholson's Marinas, and taking on senior management and director roles in the marina, hotel, and leisure sectors.

Recently, he was a leading member of the senior management team responsible for developing a 600-berth marina in Portland, Dorset, United Kingdom, which was the host venue for the sailing events for the London 2012 Olympic and Paralympic Games. James also played a managing role in the redevelopment and property construction at East Cowes Marina, on the Isle of Wight in the United Kingdom.

Around the globe, he has been involved in the commissioning of marinas in Turkey, Grenada, West Indies, Italy, and Greece. He has also played a significant role in establishing a joint venture to develop the marina sector in China and Asia, and headed the senior management team in the collaborations with Yas Marina in Abu Dhabi, home of the 2013 Formula 1® Etihad Airways Abu Dhabi Grand Prix.

FDOT TAKES NEW LOOK AT STATE SEAPORTS



THE FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) has selected Moffatt & Nichol to serve as Statewide Maritime Consultant, under a 5-year, \$5-million contract. In an effort to better coordinate development for Florida's 15 seaports and eight transportation districts, consulting services will address port operations, port security, maritime construction practices, and logistics and support project-specific planning, feasibility studies, and analyses.

Moffatt & Nichol **NEWS**

Emraport Makes History at Port of Santos

FOR MOFFATT & NICHOL, the project marks the start of a significant presence in Brazil, with the firm taking part in due diligence on behalf of major lenders involved in the project since 2007. This involved preparing profit margin assessments and evaluating operations, while ensuring that the design was technically sound and the budget reasonable. Moffatt & Nichol developed a design memorandum, prepared recommendations on how to make the facility a world-class modern container terminal, and suggested that the port operator be an equity partner in the project—all key contributions to the project. During construction, the firm was also responsible for monitoring activities and assisting with any challenges along the way.

Emraport will operate on 85-hectares in a sector of

Emraport will be able to turnover 1.2 million TEUs, which is anticipated to reach 2 million TEUs after the facility's second stage is fully operational

the Port of Santos known as the Left Margin (bordered by the city of Guarujá, next to the bulk Ilha Barnabé liquid terminal between the Diana and Sandi rivers). This location is extremely advantageous due to its connections to highway and rail links to Sao Paulo and access through Cônego Domênico Rangoni Highway (known as Piaçaguera-Guarujá Highway). Another key differential is the MRS Railroad, which runs through Emraport's lot, allowing rail cargo transport between Santos and São Paulo metropolitan industrial poles and inland destinations.

In this first stage of operations, Emraport will be able to turn over 1.2 million TEUs, which is anticipated to reach 2 million TEUs after the facility's second stage is fully operational. The implementation of

Emraport also gives way to countless benefits for the economy. It is predicted that the facility will create more than 1,000 direct jobs and 4,000 indirect jobs.



Cranes along the waterfront at Emraport. (Image: Moffatt & Nichol)

PARTNERSHIP TO BENEFIT NORTH EUROPEAN TERMINAL PORTFOLIO

VERBRUGGE INTERNATIONAL N.V. is a leading owner and operator of bulk and breakbulk port terminals in the Netherlands. The company has recently entered into an agreement with iCON Infrastructure LLP, an independent investment firm focusing on the infrastructure sector throughout North America and Europe. The new partnership will stimulate opportunities for further growth and development, benefiting both companies and stakeholders.

Moffatt & Nichol's London team participated in the due diligence undertaken in anticipation of this partnership, providing technical and commercial guidance to iCON. Moffatt & Nichol completed a red flag review of the firms' three-year business plan and forecasts and prepared a Market Review written report, which analyzed the various commodities handled through the three Dutch terminals. The team undertook physical inspections of the assets, together with operational, safety and environmental reviews of the facilities.



(Image: Moffatt & Nichol)



BACK IN THE BIG EASY

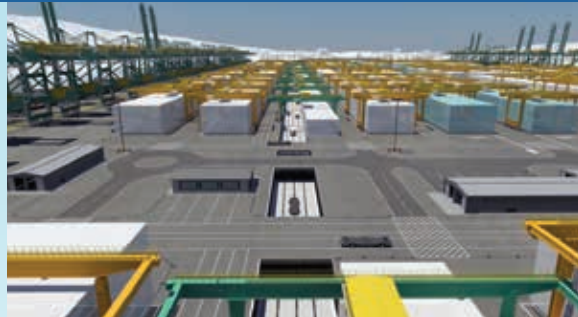
The office is located on the St. Charles street car line—the oldest continually operating street car in the world—and offers a unique mode of commuting transportation for our employees. (Image Courtesy: Stirling Properties)

L'ASSEZ LES BONS TEMPS ROULER!

Moffatt & Nichol returns to New Orleans with a new address at the Pan American Building in the heart of the city's downtown business district.

The office will further enhance Moffatt & Nichol's services to marine terminal clients and an expanded bulk market throughout the gulf region and along the arterial Mississippi River corridor, while supporting our Baton Rouge office, which has seen significant growth. The firm's work with clients on the Lower Mississippi River has provided impetus to grow the office and expand Moffatt & Nichol's services to support marine terminal and bulk handling facility operators in the region.

Through strategic recruitment and key internal transfers, our current Louisiana work force has grown to include coastal, civil, hydraulic, structural and mechanical engineers and is growing rapidly.



CHALLENGE SPURS VISION FOR TOMORROW'S PORT

WITH 56 SUBMISSIONS FROM 25 COUNTRIES, competition was steep for the Maritime and Port Authority of Singapore's Next Generation Container Port Challenge. The competition challenged the international port community to think beyond existing conventions and submit radical new proposals to plan, design, and operate a future container port.

Design guidelines for the competition required terminal throughput capacity of at least 20 million TEUs annually on a footprint not to exceed 1,000 meters by 2,500 meters, reflecting the dearth of available space modern ports face as they seek to expand and remain competitive.

A finalist among seven, the Moffatt & Nichol team's concept—a fully automated container transshipment

terminal—demonstrates that a large, predominantly transshipment container terminal can be fully automated and electrified, resulting in a highly productive facility that is both economically viable and environmentally sustainable. The Moffatt & Nichol team, which included Yagertec, NDI and NUS, received recognition for the quality, innovation and practicality of its proposal.

Judged by an international panel comprised of representatives from the Singapore government and the maritime industry and academic institutions, the competition awarded \$1 million to the winning design team; the overall winning proposal was submitted by National University of Singapore, Shanghai Maritime University and Shanghai Zhenhua Heavy Industries Company Limited.



Concept for fully electrified container yard envisions full automation. (Images: Moffatt & Nichol)

KERRY SIMPSON JOINS MARINE TERMINALS PRACTICE

MOFFATT & NICHOL welcomes back Kerry Simpson to the firm's Marine Terminals Practice after a 13-year hiatus, where he will enhance support for clients worldwide. Kerry offers a wealth of experience in the planning and design of new terminals and the reconfiguration of



existing terminals, both in the United States and overseas, including many terminals, with annual throughputs greater than 2 million TEUs.

Immediately prior to joining Moffatt & Nichol, Kerry served as the Vice President/Senior Manager Ports and Maritime for URS.

Through his 23 years of experience in the port industry, Kerry has acquired extensive knowledge of terminal layout philosophies, operational modes, and all types of container handling equipment. He has worked with port authorities, shipping companies, terminal operators, railroad companies, equipment and system suppliers, and other consultants. We are excited to welcome Kerry to our Marine Terminals Practice; his talents will further establish Moffatt & Nichol as the go-to firm for marine terminal planning, analysis, and design.

Mysterious Islands

BOBBIING ON THE ANACOSTIA RIVER in Washington D.C. are floating green discs that serve more than an aesthetic purpose—they could help bring the river's troubled waters back to life by improving water quality and buffering habitats against pollution.

As part of the Capitol Riverfront redevelopment along the banks of the Anacostia River, Moffatt & Nichol was tasked with implementing a riverfront design plan for Diamond Teague Park that would serve the needs of both the community and the environment. The park is a gateway to D.C.'s southwest waterfront neighborhood and home to the Earth Conservation Corps headquarters.

Design of the park included a fixed pier to serve water taxis ferrying baseball fans to the nearby Nationals Stadium, an adjacent multipurpose dock for boat launches, and seven innovative floating wetlands. These wetlands



were designed to mimic nature's own filtering system, improving water quality and creating wildlife habitat.

Moffatt & Nichol designed the mooring and installation for the wetland islands and assisted with state agency approval as part of a pilot program to assess the artificial

wetland's impact on nutrient uptake, water quality, and habitat creation in an urban environment heavily degraded by years of industrial activity and development.

Members of the Moffatt & Nichol design team installed the wetland mooring system, assisted with assembly, and helped launch the 200-square-foot island. Installation challenges included keeping the island out of an active navigation channel and a safe distance from a busy public promenade, as well as providing stability during storm-water and coastal surge events.

Over the last three years, the pilot program has monitored and collected data from the island, looking to implement floating wetlands on a larger scale.

Floating wetlands at Diamond Teague Park on the Anacostia River. (Image: Moffatt & Nichol)

TAMPA'S RIVERWALK NEARS COMPLETION

NOW ALMOST A WRAP, Tampa, Florida's Riverwalk is in its final phase of construction, representing 40 years of planning and the shared vision of six Tampa mayors, statues of whom will adorn the new destination waterfront. When complete, the 2.4-mile-long, overwater esplanade will allow pedestrians to travel along the Hillsborough River and Garrison Channel, as the landscape transitions from city parks, museums, performing arts centers on to other attractions.

Moffatt & Nichol has been involved in the project since 2005, and has provided planning, permit support, and design services for the project's waterside components, which include overwater fixed pedestrian walkways, seawall improvements, and a transient boating facility.

THE 2.4-MILE-LONG, OVERWATER ESPLANADE WILL ALLOW PEDESTRIANS TO TRAVEL ALONG THE HILLSBOROUGH RIVER AND GARRISON CHANNEL

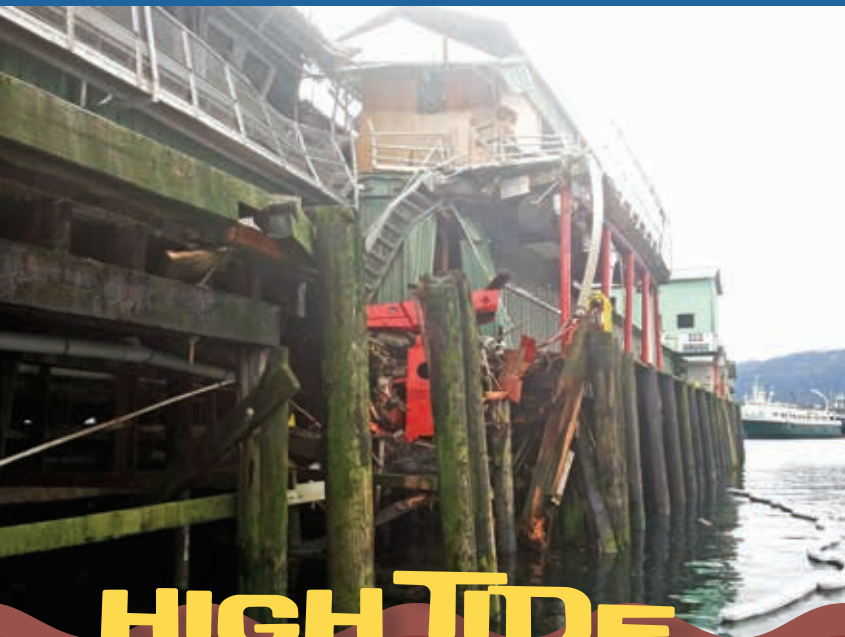
The predominant walkway structure comprises 25-foot-long precast segments supported on mono-pile foundations, creating a sleek structure which appears to float just above the water surface. A second structure type, using variable length precast deck panels and cast-in-place pile caps supported by micropiles, was used underneath the Brorein Street Bridge, which crosses the Hillsborough River and constrains the available work space. Seawall

repairs have been designed to support the pedestrian walkways that meander along the river's edge, while a Moffatt & Nichol-designed transient boating facility will allow visiting boaters to dock and explore the Riverwalk. Architectural enhancements include shade structures, seating, and other amenities.



Construction at Tampa's Riverwalk moves to final phases. (Image: Moffatt & Nichol)

In 2012, the City of Tampa received a \$10.9 million TIGER grant award, allowing the city to complete the Riverwalk's two remaining segments. Moffatt & Nichol will provide construction support services for the Kennedy Riverwalk segment (the last but the longest) and repairs to the Hillsborough River seawall through 2014, with project completion anticipated for summer 2015.



HIGH TIDE AT OCEAN BEAUTY

"OMAGOSH, the ferry just crashed into Ocean Beauty!" exclaimed a startled tourist, who had been filming the M/V Matanuska's cautiously slow entry into quaint Petersburg Harbor in Southeast Alaska on a deceptively calm May day in 2012.

The video captured the Matanuska Ferry's crash with the Ocean Beauty Pier, an event more correctly identified as an allision, during which a moving vessel strikes a stationary object.

The allision was deemed the result of two extreme conditions: the largest tide of the year in an area known for its large tidal range, and the treacherous nature of the Wrangell Narrows, where the harbor is located. The 70-year-old timber pier, which serves as home to an important regional fish processing facility, sustained considerable damage to its buildings and

foundation. The damage included crushed concrete slab and timbers, timbers split at their bolts or pins, noticeably tilted piles, and broken utility lines.

Anxious to prevent further loss from a potential collapse, Ocean Beauty Seafoods reached out to Moffatt & Nichol to investigate the pier's condition and determine the best course for returning it quickly and safely to operation.

While localized damage was readily apparent, global damage that may have been caused by the vessel impact—overall stress to or weakening of the structure, for example—was more difficult to ascertain. Moffatt & Nichol turned to experienced dock and plant workers who had been at the location for several years to gather anecdotal observations of the pier's characteristics and daily operations.

Experienced engineer-divers were able to use this input and the findings of a site damage assessment and underwater inspection to separate the damage resulting from the age of the wharf and the damage resulting from the ferry allision, all despite a lack of formal baseline documentation. The verdict? The structure had suffered little global damage and only a portion of the wharf required replacement.

...an outside-the-box approach to emergency repair, resulted in yet another satisfied client...

After meeting with the owner, insurance agents, and the State of Alaska Marine Highway System, Moffatt & Nichol devised an expedited and prioritized repair methodology that allowed the fish processing facility to reopen as soon as possible, permitting more than 100 employees to return to work. Moffatt & Nichol then designed a new steel wharf section, crane hoist, and lift to re-

place damaged structures. To accelerate the project, Moffatt & Nichol assisted Ocean Beauty in identifying qualified marine construction contractors available and interested in working in

this remote area. On-site inspections were completed before the onset of winter 2012 to allow the pier to officially reopen the following season.

Moffatt & Nichol's quick response, priority attention and local knowledge, combined with an outside-the-box approach to emergency repair, resulted in yet another satisfied client, and a truly unique project experience.

The video may be seen at <http://youtu.be/oLW0i49LuvM>.

The 408-foot-long M/V Matanuska left a deep impression on Ocean Beauty Pier and its two-story fish processing building. (Image Courtesy: Seth Perry)

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To learn more about Moffatt & Nichol please visit our website at: www.moffattnichol.com

- ▶ Join us at this leading container transport and trade forum June 24-26.
- ▶ Our Senior Port Planner Ashebir Jacob, P.E. will speak on the Port of Long Beach Middle Harbor Container Terminal, one of the world's most technologically advanced and greenest facilities.
- ▶ Meet our experts and learn more about our services at Booth K28.

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