



MOFFATT & NICHOL

NEWS

Vol 6 Issue 1

Goods

Movement into the 21st Century

Growth Spurs Innovation

WITH THE EXPLOSION OF GLOBAL COMMERCE OVER THE LAST DECADE, those who bring goods from ports to market face the challenge of moving an ever-increasing amount of cargo through constrained infrastructure to hinterland markets. Moffatt & Nichol focuses on innovative planning and design that opens bottlenecks and anticipates future growth...

M&N ACES Trench Project

THE ALAMEDA CORRIDOR-EAST CONSTRUCTION AUTHORITY recently selected Moffatt & Nichol, leading a consultant team, to provide engineering services for a 2.3-mile rail trench and four grade separations over the Union Pacific Railroad Alhambra Branch rail line in the City of San Gabriel. Initially, Moffatt & Nichol will provide preliminary engineering and analysis for the project.



Visualization of finished trench at Ramona Street and Mission Road

The authority's mission, to reduce congestion, improve safety, foster economic opportunity and reduce emissions, will get a big jump with the development of the trench, the largest project in the Alameda Corridor East (ACE) program.

To date, the authority has brought to completion "Jump Start" safety improvements at 39 crossings. Construction is complete for the first three grade separations, and underway or funded for the next seven of 20 planned grade separation projects. Funding is pending for the remaining 10 grade separations. The projects will improve safety, mobility and economic vitality while reducing emissions and noise pollution.

Much of the traffic congestion is caused by cargo being transported into and out of the ports of Los Angeles and Long Beach by truck and rail. These two Southern California ports together form the fifth busiest port complex in the world.

Despite the many benefits the trench will realize, the project is not without its challenges.

"With its close proximity to the historic San Gabriel Mission and tightly constrained right-of-way, the project presents a number of unique challenges and an exciting opportunity to demonstrate the full capabilities of the firm," comments Duane Kenagy, Moffatt & Nichol's Project Manager for the effort. "The San Gabriel project is an important project that will showcase the firm's continued strength in the areas of goods movement and transportation."

The project is expected to be funded from California's Trade Corridors Improvement Fund as well as federal, local and railroad sources. ■

Freight-Forward Planning in Virginia

WITH THE OPENING OF THE GLOBAL ECONOMY and the resulting growth in international trade, many North American port communities are looking for ways to capture containerized cargo growth and the economic benefits it brings, while reducing regional industrial sprawl and traffic congestion.



Concept drawing of a 20-million-square-foot facility with on-site ICTF

At the Port of Virginia, plans are underway to construct the new Craney Island Marine Terminal (CIMT) to accommodate increasing cargo traffic, and Moffatt & Nichol was asked to quantify the regional economic benefits of CIMT as part of the project's feasibility study. The study revealed that significant economic growth would come from the warehousing and goods distribution sector. The Port then asked Moffatt & Nichol to further quantify growth in this sector to underscore the necessity of advance planning.

The follow-on study indicated the need for up to 60 million square feet of additional distribution center space over the next 25 years and recommended that the Hampton Roads region consider developing an Intermodal Park—a regional facility where distribution centers would be co-located with related businesses such as trucking companies and logistics providers. The ideal location for this intermodal park would be an area 25 to 35 miles from the marine terminals in Norfolk Harbor with large tracts of available land and efficient access to major road and rail connections.

With data in hand, Isle of Wight County recognized that it was in the "sweet spot" for Intermodal Park development and engaged Moffatt & Nichol to conduct a site-specific study for a 3,000-acre location

"Our developments are expected to have benefits that accrue to the entire Commonwealth of Virginia..."

- Patrick Small, Isle of Wight County

adjacent to U.S. Route 460 and the Norfolk Southern mainline near the town of Windsor. Logistics trends, market opportunities, property attributes and transportation infrastructure were examined in great detail to develop an integrated site Master Plan. The study determined that there were no major show-stoppers in devel-

oping the site to accommodate up to 20 million square feet of industrial space. A phased site development plan will balance construction with anticipated growth in order to capture market share while avoiding overinvestment.

Based on the results of Moffatt & Nichol's study, Isle of Wight County has initiated the phased development of 568 acres specifically designated for distribution centers and logistics services.

"Isle of Wight County has focused on developing industrial property to capitalize on growth at The Port of Virginia for the past eight years, and the studies Moffatt & Nichol has done validate the more than \$30 million we have spent and budgeted so far," says Patrick Small, Assistant County Administrator for Isle of Wight County. "Our developments are expected to have benefits that accrue to the entire Commonwealth of Virginia, and Moffatt & Nichol has the proven expertise to help ensure our success." ■





P5 East from Town Point CRMSRP Progress

Clearing the Nation's FREIGHT CORRIDORS

INTERMODAL TRANSPORTATION has become the established standard for moving goods efficiently and economically; however, bottlenecks and congestion in the nation's transportation networks can slow the smooth flow of intermodal cargo. Helping clients identify transportation corridor improvement projects that are significant to the national economy is often the first step that Moffatt & Nichol takes in moving these projects from concept to implementation.

The Heartland Corridor was conceived as a combination of intermodal transportation improvement projects designed to significantly improve mobility and increase freight capacity between the East Coast and markets in the Midwest. At the eastern terminus of the Heartland Corridor lies the burgeoning Port of Virginia, where APM/Maersk has recently opened the first privately funded marine terminal in the United States, and the Virginia Port Authority plans to open the first phase of its new marine terminal at Craney Island in 2017. Rail traffic from these two facilities is expected to exceed one million TEUs annually. In the early stages of planning, it became evident that the existing Commonwealth Railway shortline railroad, which connects the two terminals to the rest of the Heartland Corridor, would be inadequate to handle the increased traffic volume.

Moffatt & Nichol worked with the Virginia Port Authority and Commonwealth Railway to identify this bottleneck in the rail network, develop a solution to relocate the line to a rail-ready corridor in the medians of two adjacent highways, and include it as part of the Heartland Corridor. Packaging the Commonwealth Railway Relocation Project as part of the Heartland Corridor called attention to the project's importance in terms of the efficient movement of goods, and opened the door for federal and state funding.

"Moffatt & Nichol played an important role in the planning, justification and funding identification for the project," says Andy Chunko, Vice President of Port Operations for Commonwealth Railway. "Their assistance helped both us and The Port Authority in moving this project forward."

The firm's continued involvement as part of the design-build team has also helped expedite the project to move forward in anticipation of a completion deadline of December 31, 2009—just in time for the significant ramp-up of rail traffic from the APM/Maersk Terminal. ■



Heartland Corridor Map

"M&N played an important role in the planning, justification and funding identification for the project..."

- Andy Chunko, Commonwealth Railway

Green Gateway for SoCal Ports

WITH THE SHARED GOAL OF BUILDING GREENER AND MORE EFFICIENT PORT FACILITIES, ports and port industries are faced with balancing the need to move ever more cargo while reducing environmental impacts on surrounding communities. Today, the ports of Los Angeles and Long Beach in California comprise the busiest port complex in the United States. In anticipation of cargo volumes doubling within the next 20 years, BNSF Railway has recently announced additional improvements to its proposed near-port container handling facility, to be known as Southern California International Gateway (SCIG).

Moffatt & Nichol is BNSF's prime consultant for this landmark project, which consists of planning and detailed design of the SCIG facility. Project Manager Mike McCarthy believes that the SCIG project is a milestone in maximizing the benefits of rail to keep goods moving.

"All aspects of this project are being planned and designed to facilitate the efficient and environmentally friendly movement of containers between the ports and locations in the central and eastern portions of the county," comments McCarthy.

The proposed SCIG facility aims to improve the efficiency of cargo transfer from ports to customers and to utilize the latest, proven state-of-the-art and green technology. By increasing the use of the Alameda Corridor, millions of truck



1. Existing Site 2. Aerial Oblique Photo-Simulation of Site

miles annually will be eliminated from local freeways. In addition to improving air quality, reducing congestion will also improve traffic safety, a hot topic for the two ports in recent years.

BNSF, sharing the ports' goal of building green, has taken proactive steps in this direction by including the utilization of electric-powered cranes and a clean truck fleet under the direct

control of BNSF. Additional proposed site enhancements include a sound wall and an urban forest along the west side of the nearby Terminal Island Freeway.

Significant project components include working tracks, lead tracks and storage tracks, pavement and crane runways, grading and drainage design, gate design; and electrical service and lighting design. Structural project elements include the design of grade separation structures at the Pacific Coast Highway and at Sepulveda Boulevard as well as the expansion of an existing railroad bridge over the Dominguez Channel, service buildings, facilities, and operating systems. The Environmental Impact Report is now in development and construction will begin soon after it is approved.

BNSF has put its trust in the strong relationships Moffatt & Nichol has built through communication with local agencies and the community to design a goods movement facility that addresses BNSF's goal of a modern, efficient and environmentally sound facility to handle anticipated import/export container volumes in the foreseeable future. ■



1. Backfilling North End of Site 2. Chatham Yard ICTF 3. Double Stack Train

GPA Growth Drives ICTF

WITH CARGO THROUGHPUT DOUBLING OVER THE LAST FIVE YEARS, the port industry has seen Georgia's ports as the fastest growing in the nation. One facet of this growth is the continued use of intermodal transportation to transfer goods to and from port facilities—intermodal cargo containers today represent more than 20 percent of throughput at the terminal.

To help keep the cargo flowing, the Georgia Ports Authority retained Moffatt & Nichol to develop a goods movement strategy for its Garden City Terminal. The project is being completed under a professional services agreement with Moffatt & Nichol providing planning, design and construction management services for different projects.

The 2015 Plan for the Garden City Terminal provides for two independent intermodal container transfer facilities, or ICTFs, that will offer near-dock state-of-the-art rail facilities for two Class I railroads. The goal is to develop facilities to handle the growing intermodal cargo as well as increase the terminal's intermodal capacity to handle 25 percent of projected terminal throughput-at 6.5 million TEUs. The planning strategy identified alternatives and requirements to meet those goals.

At present, Norfolk-Southern Railroad serves the terminal at the James D. Mason ICTF and CSX Transportation operates on rails inside a container yard adjacent to

the container berths. It is the current CSX Transportation configuration that presents a challenge and limited GPA's ability to densify the yard and increase capacity, as the existing rails effectively divide the container yard in two. The planning strategy led to a decision to build a new ICTF at Chatham Yard to accommodate the CSX Transportation needs and to expand the James D. Mason ICTF in the future.

More than 13,000 feet of rail will be installed in the proposed Chatham Yard to provide three, separate, 2,000-foot-long working tracks connected to existing rail infrastructure that leads to the terminal. Additional work includes backfilling the north end of the site with more than 100,000 cubic yards of soil. Wick drains and surcharging will be employed to accelerate the consolidation of soft soils underlying the site. Additional project elements include asphalt paving, storm drainage, utility systems, a gate entry, and runways and infrastructure to support rubber-tired gantry cranes for container handling to and from the rails.

The Chatham Yard ICTF represents a significant milestone in the overall development of the Garden City Terminal and follows the 2015 Plan. With an estimated completion date by the end of 2008, the GPA will have the necessary infrastructure to move forward with other capital projects that in total represent a \$1.2 billion investment to meet the growing demand. ■

Faced with unprecedented growth, GPA planning strategy leads to Chatham Yard ICTF development.

Corporate office: 3780 Kilroy Airport Way, Suite 750, Long Beach, CA 90806
tel (562) 590-6500 fax (562) 590-6512 www.moffattnichol.com

For questions or comments regarding this newsletter, other services, or office locations please visit our website at www.moffattnichol.com

www.moffattnichol.com



On the Cover...

Corporate Office
3780 Kilroy Airport Way, Suite 750
Long Beach, CA 90806



PRESORTED
FIRST-CLASS MAIL
U.S. POSTAGE
PAID
Los Angeles, CA
Permit No. 33