



INNOVATIVE GANGED HEAVY-DUTY BRIDGE OVERHANG SYSTEM

Titusville, Florida

2 Minute Read Time

IMPROVING ACCESS TO AMERICA'S CENTER OF SPACE TRAVEL

Orion Marine Construction, Inc. was awarded the \$125-million-dollar NASA Causeway Bridge Replacement Project in Titusville, Florida. The NASA Causeway Bridge provides the primary roadway access to the Kennedy Space Center, Space X, and Blue Origin. The final bridge layout will be twin 4,025' (1,230 m) long, high-level spans over the Intercoastal Waterway, replacing the twin bascule bridges built in 1964.

EFCO has worked with Orion Marine Construction, Inc. (OMC, Inc) in Florida for years, and EFCO worked with the Orion team early in the bid process to provide the lowest in-place concrete costs for the entire project. The OMC, Inc. project team has been fantastic to work with and welcomed EFCO to be part of the team during the entire process.

WATER-BASED DOUBLE BULLNOSE FOOTERS

EFCO provided complete engineering and design services for the water-based double bullnose footers being constructed from seal slabs hung from the precast piles. EFCO's design allowed the footer formwork to act as both the concrete formwork and a fully accessible coffer cell making the interconnected cells able to form a water-tight wall.

CONSTRUCTION OF COLUMNS WITH FILLET CORNERS

Along with the footers, EFCO was also asked to provide **PLATE GIRDER®** formwork for the 12' x 6' (3600 mm x 1800 mm) columns with fillet corners and rustication. With variable heights up to 60' (18.3 m) tall, the single stem cap formwork on the top of the columns measured 11' tall x 54' long x 6' wide (3.4 m tall x 16.5 m long x 1.8 m wide). ▶



EFCO provided complete engineering and design services for the water-based double bullnose footers being constructed from seal slabs hung from the precast piles.



An average EFCO PLATE GIRDER® panel weighs 18 lb/ft² (0.86 kN/m²) and withstands up to 1400 lb/ft² (67 kPa) pour pressure.

HIGH TENSILE & LOAD CAPACITY FORMWORK BRACE

Along with the substructure formwork, EFCO has a full complement of the superstructure products we provided on the project. For bracing of the precast Florida I-Beams (FIB), EFCO has designed a high tensile and compressive load capacity formwork brace that can be utilized to minimize the number of bracing points required. Additionally, the brace eliminates the insertion of tensile rods and 4" x 4" (100 mm x 100 mm) multi-axis bracing points. ▶

EFCO's beam brace system adjusts to multiple beam sizes and bay widths. It also handles much higher tensile and compressive strengths than other methods, minimizing the amount of required equipment, decreasing installation time, and increasing efficiency.



EFCO's HEAVY-DUTY BRIDGE OVERHANG system offers efficiency and safety in forming bridge overhangs which often are over traffic or water.

MARCH 14 | 2023



BRIDGES & HIGHWAYS | 2



WHY TRUST ANYONE ELSE?

1800 NE Broadway Avenue, Des Moines, IA 50313 | (515) 266-1141

www.EFCOFORMS.COM

LIKE • FOLLOW • SUBSCRIBE



HD BRIDGE OVERHANG GANG FORMWORK SYSTEM

EFCO supplied around 1,400 LF (425 LM) of the **HEAVY-DUTY BRIDGE OVERHANG** gang formwork system. This innovative technology utilizes shoes fixed to the web of the standard FIB precast beam to support the overhang gangs at a 20' (6 m) span. The HD BRIDGE OVERHANG System is designed for efficiency and safety, with a single crane pick allowing for easy lifting and transporting of materials. Workers remain safely above the gang while

completing set-up and dismantling operations. The team set up both sides of 312 LF (95.1 LM) in a single ten-hour day.

THANK YOU, ORION MARINE CONSTRUCTION, FOR CHOOSING EFCO!

EFCO is very appreciative and proud to work with a legacy customer like Orion Marine Construction, Inc once again. Orion is a talented group building an excellent addition to Florida's East Coast transportation corridor.



Assemble the HEAVY-DUTY BRIDGE OVERHANG system on the ground and maneuver it into place in large sections with a crane and EFCO's C-Caddy. Using this system, you can achieve up to 24' (7200 mm) gang sizes using EFCO's standard 24' (7200 mm) long lightweight, galvanized steel E-BEAMS®.

EFCO EQUIPMENT

HD BRIDGE OVERHANG, *PLATE GIRDER*®, *E-BEAM*

ORION MARINE CONSTRUCTION TEAM

Cory Donoghue Sr. Project Manager
Mike Sheffer Project Manager
Grant Garner Project Engineer
Edson Corredor Project Engineer
Franki Vallejo Concrete Superintendent

EFCO FORMWORK SPECIALISTS-ORLANDO

James Cannan Sr. Territory Manager
Frank Bonventre Sr. Field Supervisor
Aaron Tang Engineer

CONTACT OUR ORLANDO OFFICE TODAY

1001 Gills Drive
Orlando, FL 32824-8041
Phone: (407) 888-3331

EFCO ONLINE

Fast | Easy | Secure

Efficiently manage your project from start to finish

