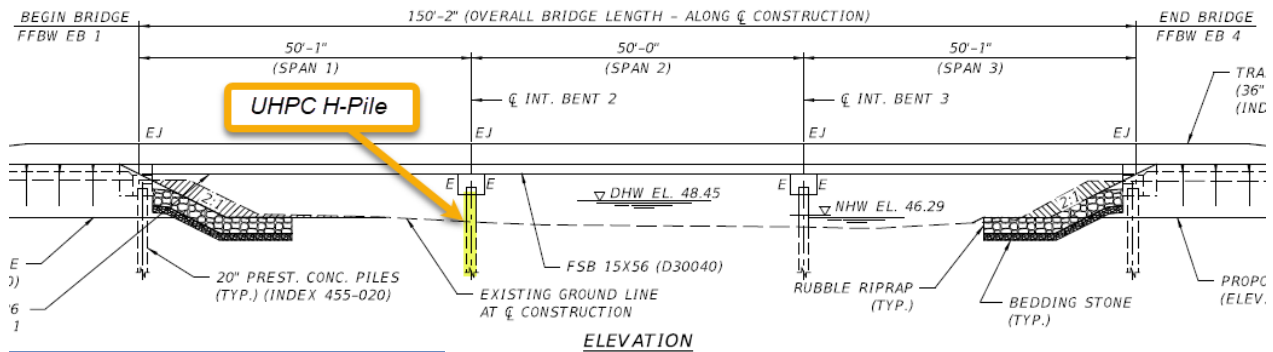


FDOT Transportation Innovation Initiative: UHPC – Design Innovation



Fast
Facts:
Ultra-High
Performance
Concrete



Project Location: FDOT District Two
Bronson
Levy County, Florida

Agency: Florida Department of Transportation

URL:
<http://www.fdot.gov/structures/innovation/UHPC.shtm>

Project Name: CR 339 over Waccasassa River
Bridge No. 344009
FPID: 211728-1

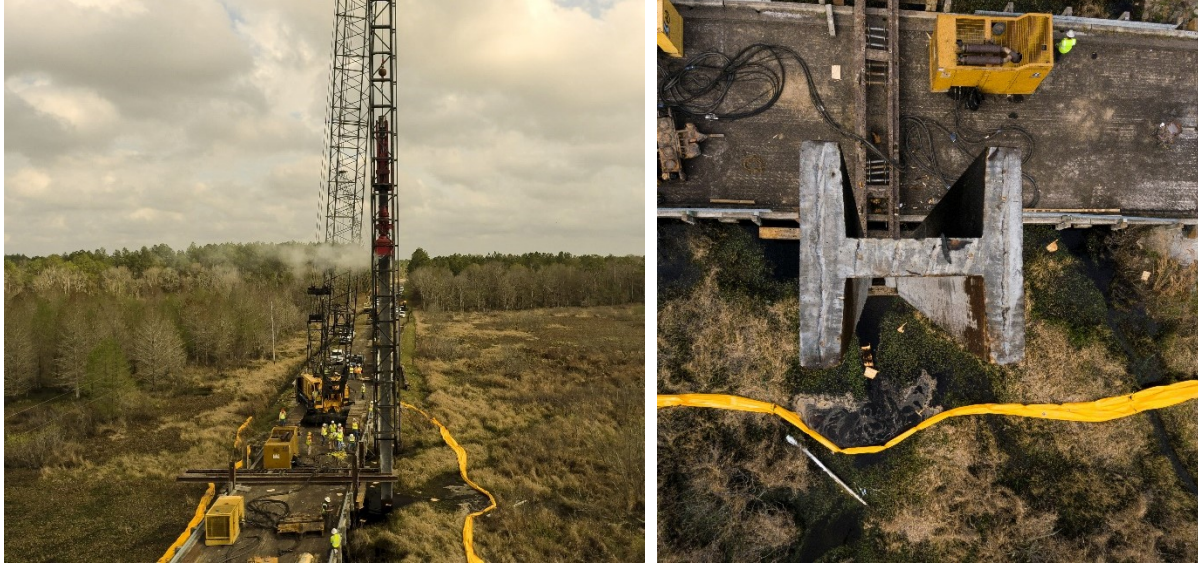
Project Description: Single UHPC H-Pile substitute for 20” Sq. PC-Pile on an intermediate bent of a three-span FSB bridge.

Project Purpose & Need: Demonstration of pile driving capacity of a 30” UHPC Prestressed H-pile, that could be used on future projects use as a substitute for conventional or corrosion-resistant square prestressed piles.

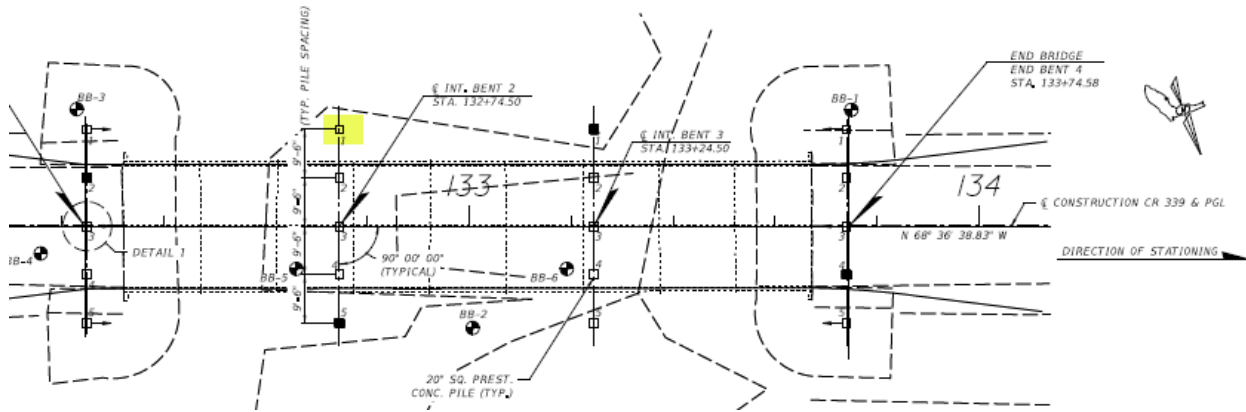
Overall Budget/Cost Estimate: Pile fabrication and materials donated by Dura-stress, Inc. & Cor-Tuf UHPC.

What was unique about this project? First UHPC H-pile used on a bridge in Florida.

Describe Traditional Approach: Square solid or voided prestressed concrete piles using Class V (Special) concrete.



Pile driving photos courtesy of Cor-Tuf UHPC



Plan View of Foundation Layout (Highlighted pile is substituted with UHPC H-pile).

Describe New Approach: 30"x30" H-pile fabricated with Cor-Tuf® UHPC.

Top Innovations Employed: Utilization of prestressed UHPC member with H-shape.

Primary Benefits Realized/Expected: Improved corrosion-resistant for longer maintenance-free service life; allows for thinner sections without pile damage during impact driving; reduces handling and shipping weight; increases pile surface area for potential greater pile skin friction resistance and short piles from UHPC connections.

Project Start Date/Substantial Completion Date: Pile Driving 02/13/2020

Affiliations:

PE Design:
Construction Contractor:
Precaster:

FDOT District Two
Leware Construction Company
Dura-stress, Inc.

Project Contacts:

Engineer of Record:
FDOT Project Manager:

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