



# Navigating Challenges of Design/ Construction for DoD in Host Nations

## Moderator:

- Kevin Chafin, AIA, NCARB, LEED AP BD+C, GFT

## Speakers:

- Tim Williams, AIA, LEED AP BD+C, Senior Project Manager, RLF Architecture Engineering Interiors
- Rebecca Goetzke, BSCE, LEED AP, V.P., Program/Project Manager, A.I.C.E.
- Mitch Lambeth, PE, LEED AP, V.P., Senior Civil Engineer, GFT

March 5, 2026 | 11:30 a.m. – 12:30 p.m.

# THANK YOU EXHIBITING COMPANIES



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# Panel Members

# Kevin Chafin

**GFT**



## Fun Facts

Grew up in:

- West Virginia

Currently binge-watching:

- How to get to Heaven from Belfast

Proudest accomplishment:

- My Family

Biggest fear:

- Scope Creep



# Tim Williams



## Fun Facts

Grew up in:

- Alabama

Currently binge-watching:

- The Chosen

Proudest accomplishment:

- Working 37 years straight for RLF

Biggest fear:

- Public Speaking



# Rebecca Goetzke



## Fun Facts



Grew up in:

- Eldridge (guess where it is!)

Currently binge-watching:

- No time! My free time is spent in the gym, and doing what I love, presenting events!

Proudest accomplishment:

- Life, each and every day!

Biggest fear:

- Spiders...guess what I did because of a spider in my car!



# Mitch Lambeth

**GFT**

## Fun Facts



Grew up in:

- Kansas City

Currently binge-watching:

- Olympics

Proudest accomplishment:

- Family

Biggest fear:

- Retirement





# Objectives

- Participants will be able to identify significant challenges that must be overcome to successfully deliver design projects in international locations with local contractors
- Participants will be able to discuss requirements for success and share successful techniques regarding Host Nation regulatory coordination in design and construction
- Participants will be able to identify and optimize critical code compliance items from among differing sets of codes for consideration in the design process
- Participants will be able to identify innovative solutions to overcome technical and regulatory challenges in a complex Host Nation environment



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**Tim Williams**

# QUESTION:

Imagine having to transport munitions through a European public highway system at night because your rail line doesn't connect to your storage area.

Now imagine that same railhead sits next to public land, public rail lines, and active facilities, and population centers — with millions in potential exposure if something goes wrong...

That was Camp Darby's situation.

**Our mission was to eliminate that risk — inside a sovereign nation, inside a National Park, crossing a public canal — without compromising U.S. mission readiness, Italian law, environmental protection, or political stability.**

This isn't just a rail project. It's a case study in how international design delivery succeeds — or fails — based on how well you navigate complexity beyond the drawings and specifications.





# Geographic & Strategic Context

## Camp Darby – Livorno, Italy

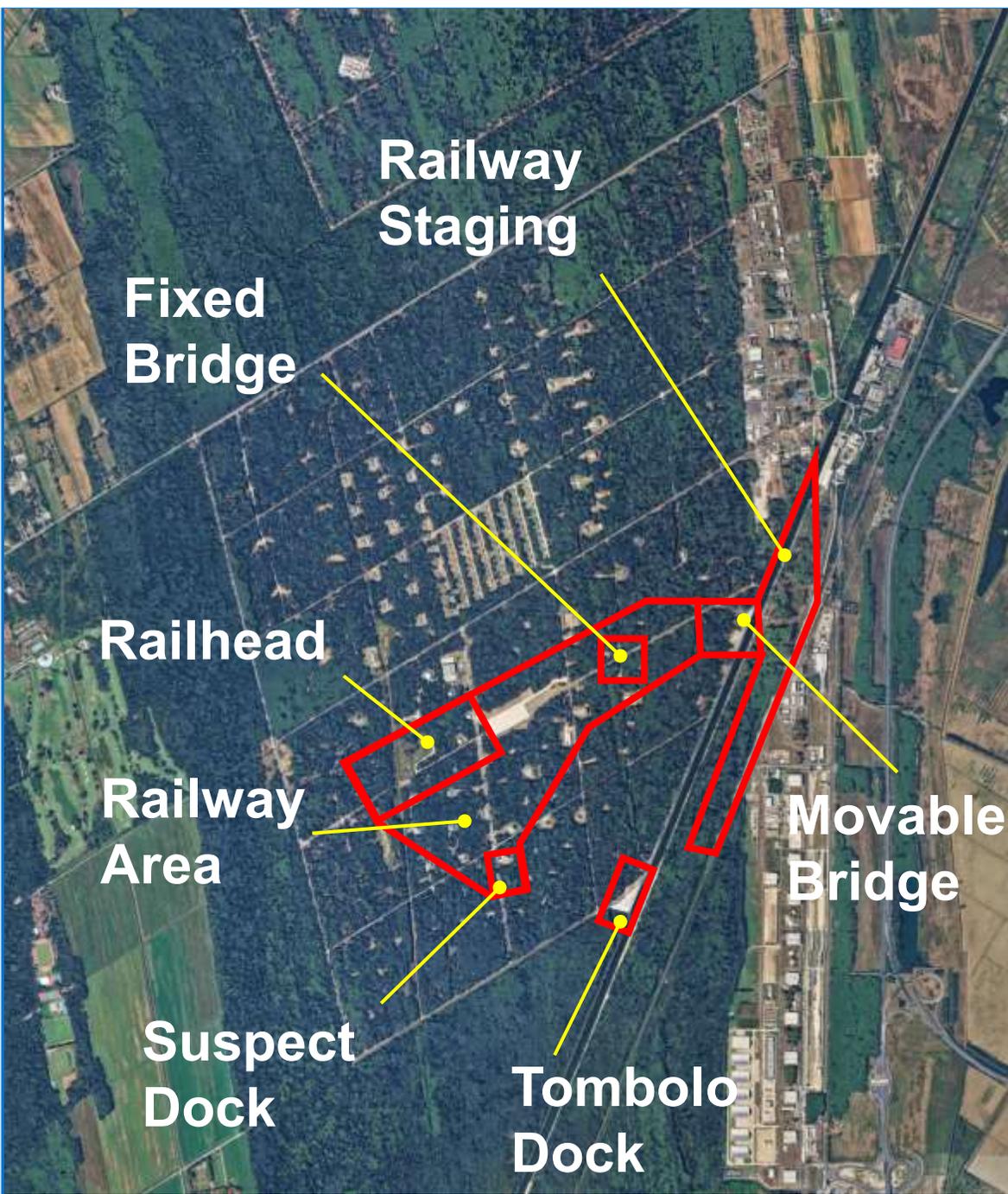
- Private Industry Engineers and Designers
- For A Navy Contracted Task Order
- On a U.S. Army Base
- Supporting an Air Force Mission
- Located within a European "Nature 2000" Park
- Bisected by Navicelli Canal Public Waterway)



# Geographic & Strategic Context

## Outside Contract Coordination and Construction:

- Requiring connection to the Italian National Railway (RFI)
- Requiring rerouting of High-Voltage Terna Power Lines
- Requiring Environmental Mitigation by Park Authorities
- Requiring approval by the Italian Waterway Authority





# Multi-Agency Stakeholders

## U.S. Design & Contract Structure

- Private Contractors:  
 RLF, TranSystems, Collins, AICE
- Contracted through NAVFAC Atlantic (U.S. Navy)
- Supporting U.S. Air Force mission on U.S. Army base

## Italian External Agencies

- RFI (Railway)
- Terna (Electric)
- Park Authority
- Navicelli Canal Authority



U.S. AIR FORCE



# Core Problem – Legacy Transportation Risk

## Rail system did NOT connect to Camp Darby

- Munitions offloaded and trucked via public highways
- Public exposure to safety and security risks
- Deficient waterfront dock facilities
- Environmental implications

### Solution required:

- New rail extension
- Canal crossing
- Secure rail yard deep within installation
- Waterfront dock upgrades
- Environmental mitigation and compensation



# Challenge 1 – RFI Rail Spur Construction

## **Rail spur constructed by Italian Railway (RFI)**

- Crossed public and private Italian property
- Outside U.S. contract control

### **Required:**

- Extensive coordination with RFI
- Alignment between U.S. Navy, Army, Air Force
- Design flexibility for external requirements



# Challenge 2 – Canal Crossing & Utility Conflicts

**Public canal access could not  
be restricted**

- Required movable rail bridge for security + access
- Site elevation adjustments required

## **Terna High-Voltage Lines Conflict**

- Required relocation by Italian Electric Company
- Outside project control
- Intensive interagency coordination





# Challenge 3 – Environmental Compliance (VINCA)

## Rail line through a protected European "Nature 2000" Park

- Environmental impact studies required
- Development of VINCA mitigation plan

### Park Authority Oversight

- Monitoring during construction
- Required field adjustments
- Third-party influence beyond design phase



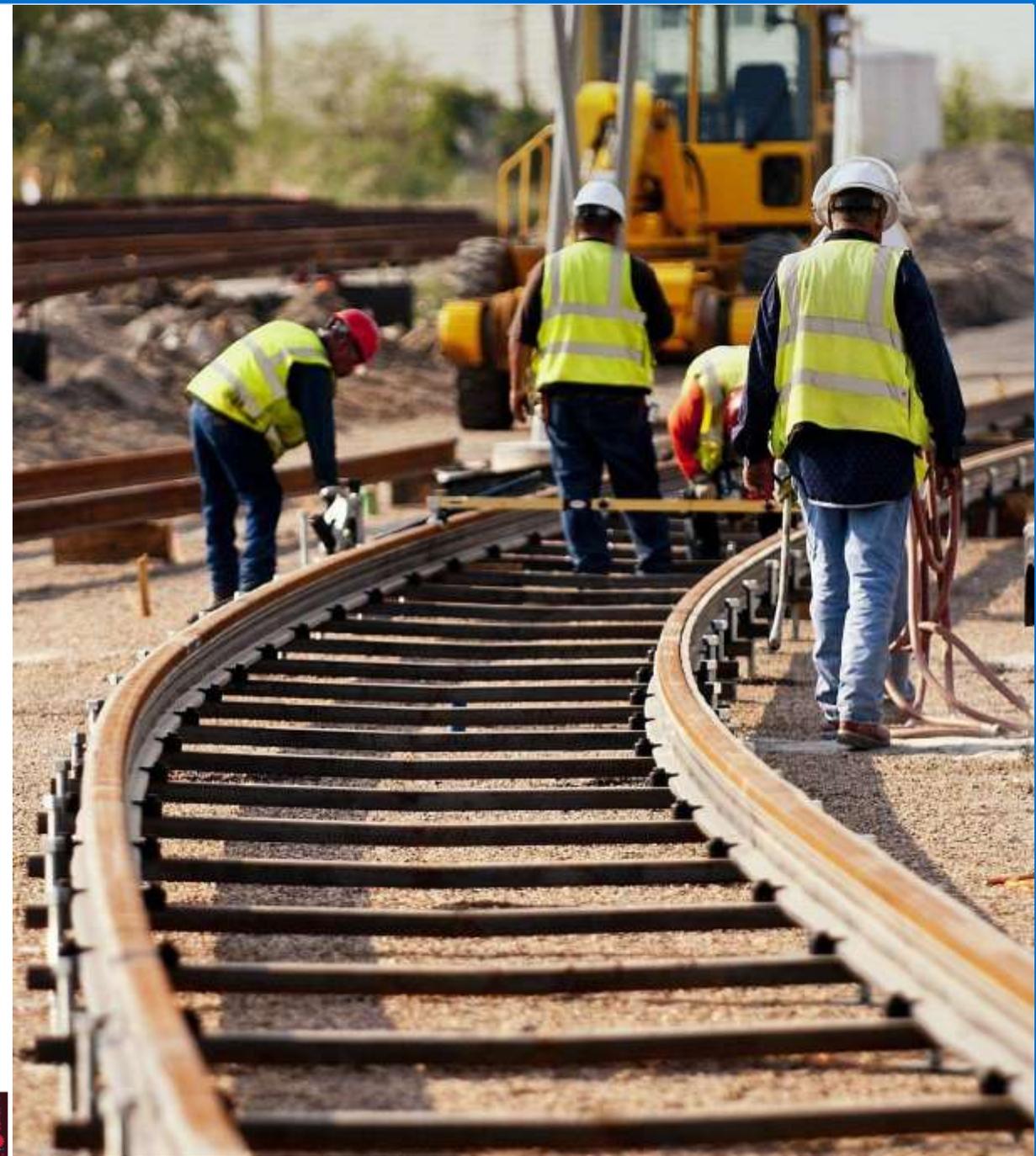
# Challenge 4 – Layered Construction Dependencies

Separate contracts required before  
main project completion:

- RFI rail spur
- Terna electrical relocation
- Environmental mitigation measures

Design documents required  
**flexibility**

- Respond to uncontrollable external timelines
- Continuous coordination across agencies





# Key Lessons for International Project Success

## Essential Host Nation Consultant

- Deep knowledge of local regulations & utilities
- Navigate evolving rules & agency expectations
- Protect U.S. interests through informed negotiation

## Unified U.S. Government + Design Team Approach

- Navigate political & bureaucratic pathways together
- Maintain flexibility through design, permitting, construction





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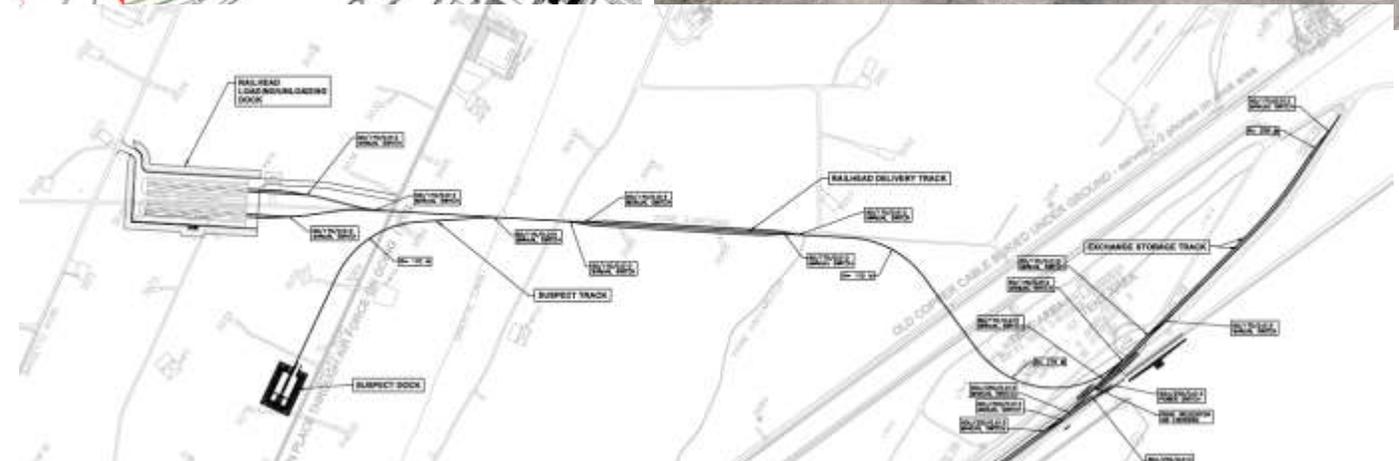
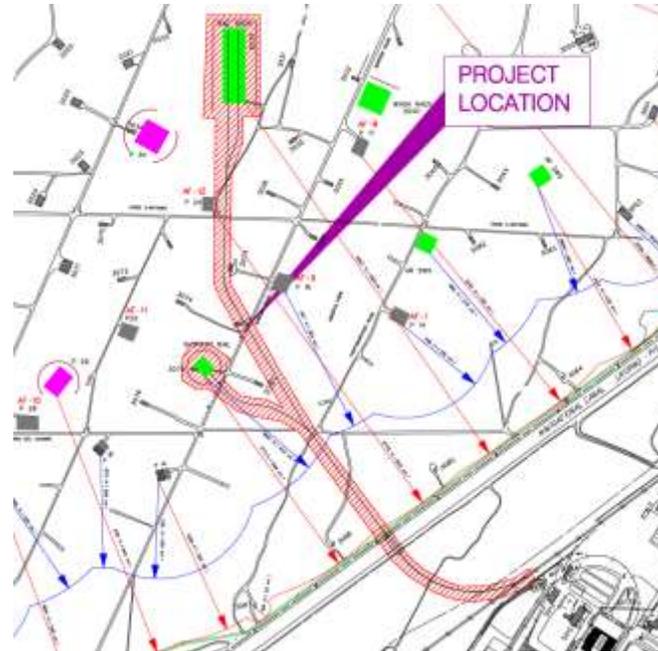


**Rebecca Goetzke**



# HN code compliance in design and construction

- ✓ Italian Mixed Commission process and importance of initial coordination with the Italian agencies in the planning stage of the design
- ✓ Early identification of HN code compliance requirements in the preliminary design process, i.e. rerouting of rail to existing road to reduce impact to Park
- ✓ Support of US Gov and HN federal agencies early on





# HN code compliance in design and construction

- ✓ Unprecedented land transfer actions and support and coordination from US Gov real estate and Italian Defense Ministry and real estate
- ✓ Identification of agencies involved, and frequent coordination including round table technical meetings during design



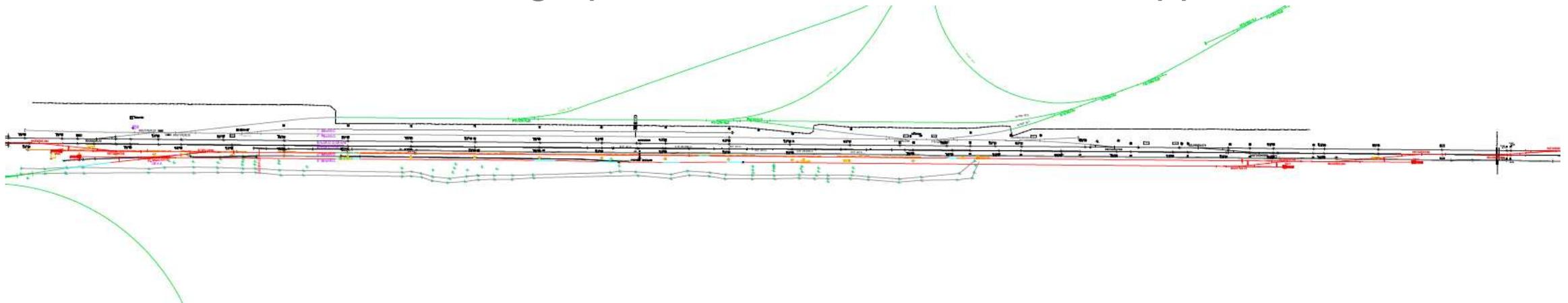


# Critical code compliance items – Italian Rail Authorities

The work that the RFI performed in support of this project includes:

- A. Construction of 2 new tracks (one right of way track and one delivery track, each of 750 m with an additional safety distance on both ends of each track);
- B. Installation of all required switches on RFI lines (electric and manual);
- C. Reprogramming of the entire management system including our switches.

Coordination included RFI design review and authorization to construct, and coordination with their design portion and land transfer in support of construction.





# Critical code compliance items – Italian Electric Company

The existing overhead high voltage (HV) electric line on post belongs to the Italian Electric Company, TERNA. These lines only cross through the base, and are not directly connected to Camp Darby.

The applicable Ministerial Decree, DM 449, indicates the distances of respect between HV lines and a railway, and the Italian Safety Law (81/08 smi) required a safety distance of 5 m for future maintenance work, thus the existing overhead HV lines were required to be modified at the bridge/rail site by TERNA.

The solution was to go from an aboveground line to an underground line at the project site. Performance of the work was strictly coordinated with the bridge and rail construction in the vicinity of these lines. The project required modification to their lines, and was designed and constructed by TERNA.





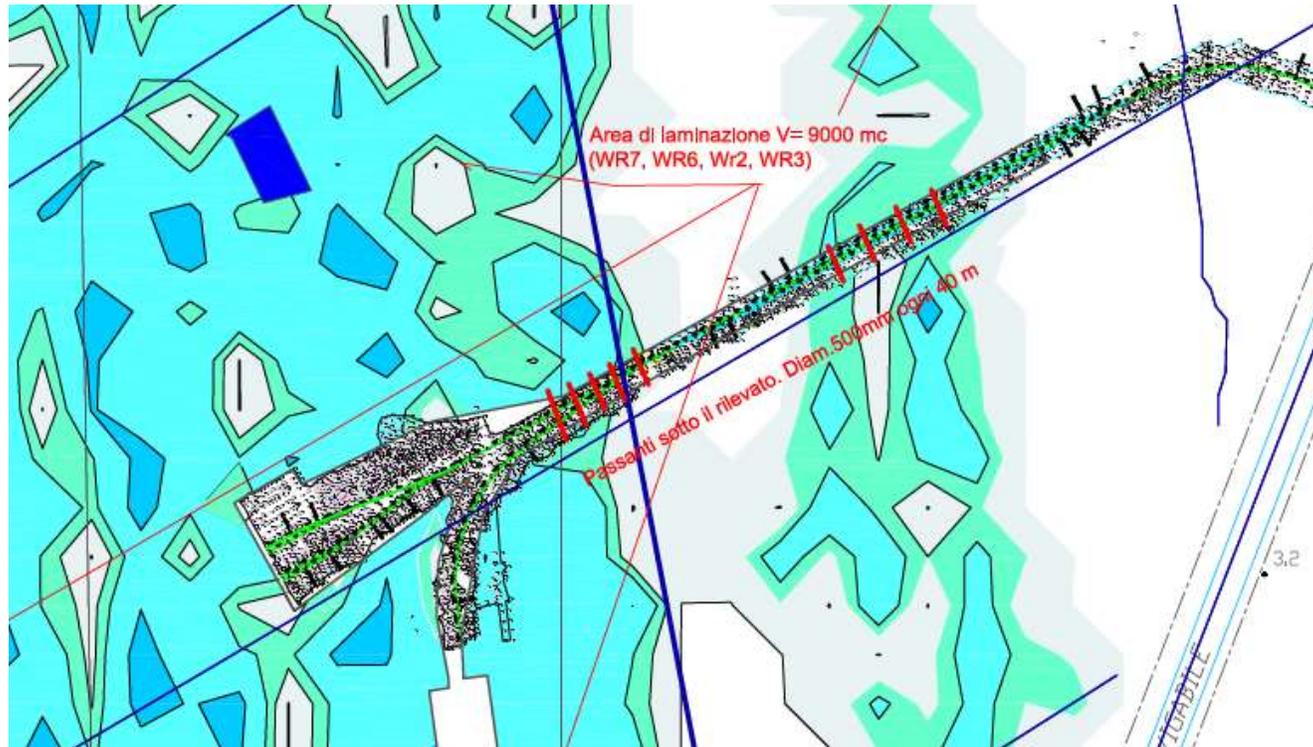
# Critical code compliance items – Canal Authorities

The Navicelli Canal Authorities (CDN) were coordinated with regarding land use (within a distance of 10 m from the canal edges), and therefore the bridge and dock footprints on the canal edges, the new motorized bridge location, as well as regarding sheet piling repair/replacement.





# Critical code compliance items - Environmental



The Mixed Commission required submittal of a preliminary VINCA (environmental impact analysis), preliminary hydrogeological study and preliminary landscape report to be coordinated with the appropriate agencies during the preliminary design process.

The preliminary hydrogeological study results resulted in the requirement that crossings under the railway were necessary in order to connect hydraulically the two depressed sides of the track, as well as creation of a retention basin. These measures were included in the design and considered in the various studies for the Italian agencies, in fact the environmental study mitigation results, used the hydrogeological crossings under the railway for the same purpose as the rodent crossings, as well as for the wetlands creation.



# Critical code compliance items – Park Authorities

The Park authorities were heavily involved in the project environmental impact assessment preparation, the design preparation and the construction process, considering that the majority of the construction site is located within a protected European international park area.

The complete SINCA study considering the preliminary coordination was developed and submitted officially to the Park for approval during the design process.

The SINCA identified all measures to be implemented in order to mitigate the environmental impact of the project on the territory. The results of the preliminary study indicated that, at a minimum, tree replanting and wetlands creation were required as mitigation measures, as well as, rodent and reptile crossings under the railway and barriers to prevent their crossing on the tracks.

The Park authorities approved the SINCA mitigation measures, but considering the cumulative effect throughout the park area, requested an additional analysis and integration of compensation measures, with additional design and construction requirements, studies and monitoring to be performed during execution of all mitigation and compensation measures. The compensation measures study was submitted to the European Park Commission for approval, and is considered an exemplar study, used as an example on follow-on European studies done after this project.





# Critical code compliance items – Historic Preservation Agency



The project was approved by the Italian SBA (historic preservation agency) during the Mixed Commission approval process. A preliminary landscape plan was prepared and presented to the SBA on the basis of the 35% design for discussion during the technical roundtable with all Regional agencies involved. The complete study was then subsequently prepared, submitted and approved by the SBA.



## Critical code compliance accomplishments



- ✓ Coordination with Park authorities in a Nature 2000 European Park and unprecedented project approval process
- ✓ Unprecedented project approvals and collaboration with Italian rail agency and Italian electric company for work to be performed by them in support of the project



## Critical code compliance - lessons learned

- ✓ Importance of spelling out KTR requirements in the design package related to mitigation measures and prescriptive measures from the Italian agencies
- ✓ Importance of spelling out testing and final documentation required to be provided by the KTR in the design package, as per HN Laws
- ✓ Importance of complete review of design package for HN technical standards comparison, and EU/CE materials code compliance





## Critical code compliance – lessons learned

- ✓ Topo survey and geological-geotechnical by HN consultant
- ✓ Design Phase Safety plan required IAW Italian Law
- ✓ HN Environmental compliance requirements
- ✓ Structural code compliance considering HN
- ✓ Mechanical – electrical systems considering HN
- ✓ CE certification on EU materials





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**Mitch Lambeth**

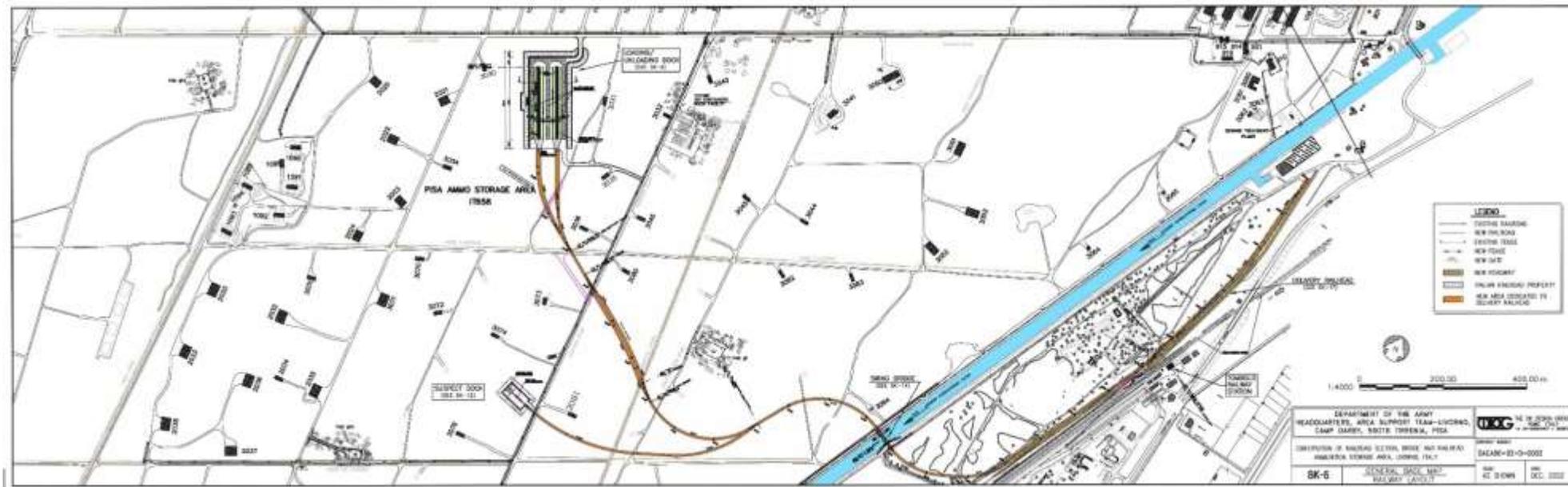


# Innovative Solutions

- Minimize Impact on Forest Area
- Minimize Impact on Navigational Canal
- Maintain Program Goal to Transfer Munitions Directly from Italian Rail System to Ammunition Storage Area



# Innovative Solutions



- Original Concept Design Developed in Early 2000's
- Bridge Design included Encroachment on Width of Navigational Canal
- Transfer Storage Tracks on Opposite Side of Canal from Italian Railway
- Path to Railhead Through Forest



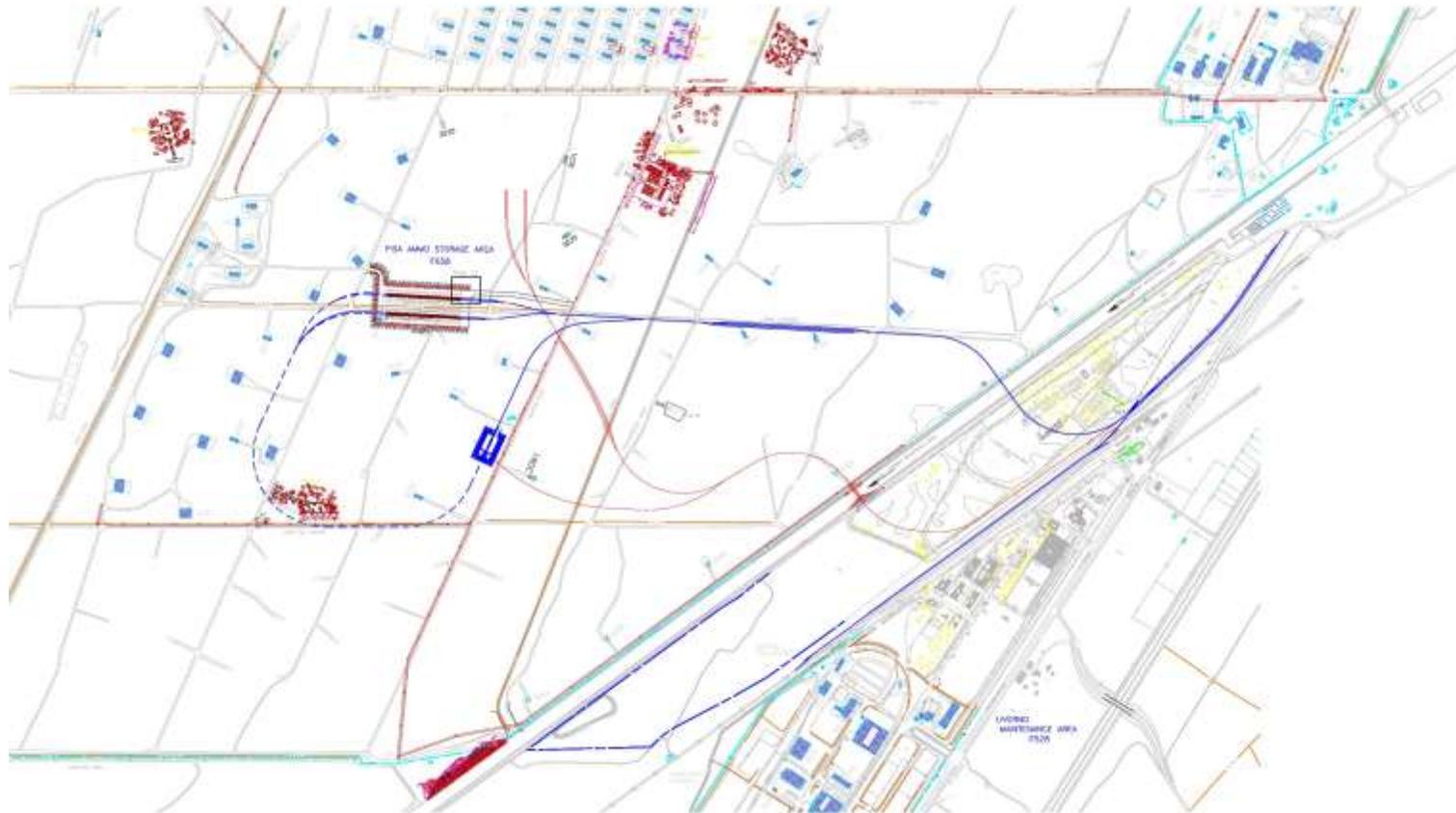
# Innovative Solutions



- Truss Swing Bridge Designed to Completely Span Navigational Canal
- No Encroachment on Canal when Bridge in Stowed Position



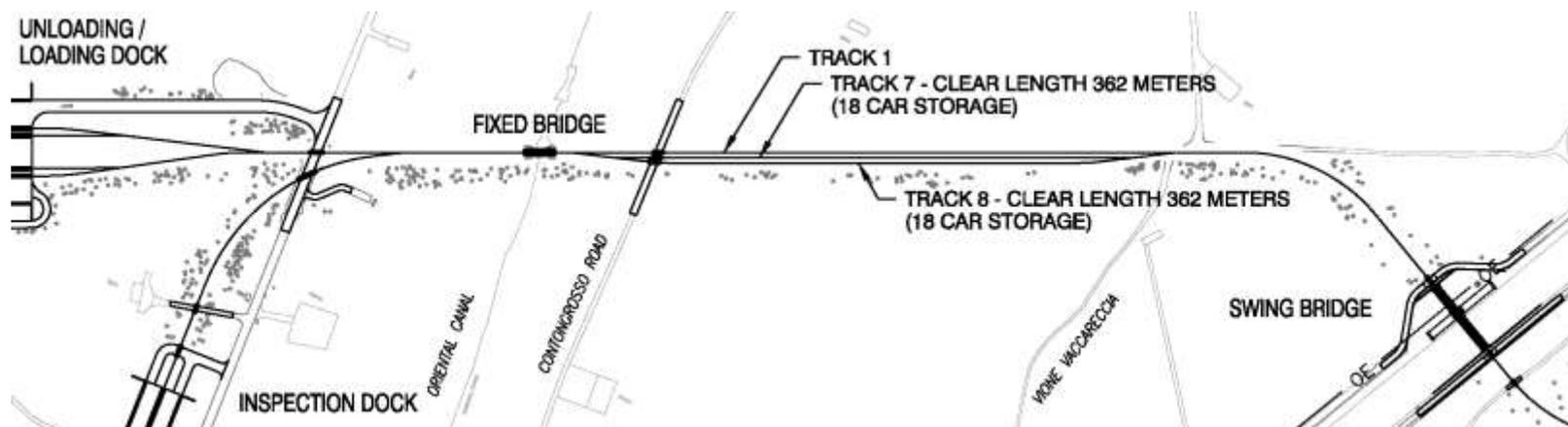
# Innovative Solutions



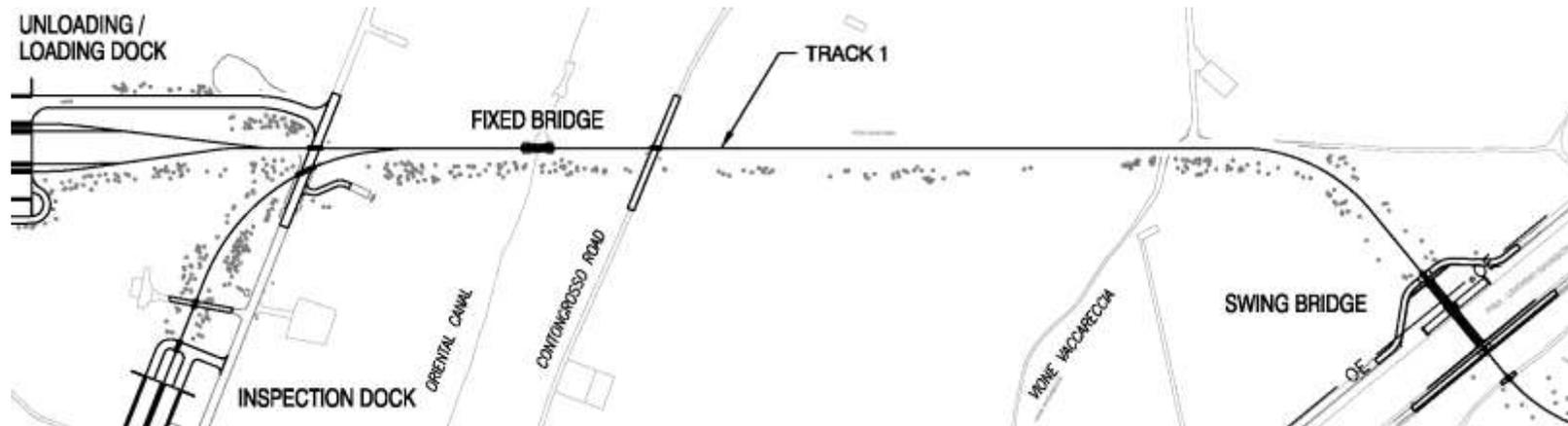
- Move Transfer Storage Tracks to Same Side of Canal as Italian Railroad
- Locate Track to Railhead within Existing Fire Break



# Innovative Solutions



**TOTAL OPERATION TIME: 4 HRS 40 MIN; CANAL CLOSED 3 HRS**



**TOTAL OPERATION TIME: 3 HRS 51 MIN; CANAL CLOSED 3 HRS 51 MIN.**

- Value Engineering to Prove Operations without Support Tracks Near Railhead
- Elimination of Support Tracks Reduced Impact on Adjacent Forest

# Mission Success



QUESTIONS?

ANSWERS!



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