Future of the Inland Waterway

THE COAL INSTITUTE
SUMMER TRADE SEMINAR
JULY 17, 2017

JOHN HUNT JR., PE
CHIEF COMMERCIAL OFFICER

SCH Services, LLC

Company Overview

- SCH Services, LLC is a high-energy group of companies, narrowly focused on providing cost-efficient, high-value bulk material handling for customers, terminals, and producers
  - **Southern Coal Handling USA, LLC**
    - Terminal development and managing affiliate of SCH Services: specializes in the business development, construction, and management of our terminals
  - **Cornette Engineering Services USA, LLC**
    - Engineering affiliate of SCH Services: specializes in site development and engineering projects focused on bulk material handling and mine design
  - **Specialized Fuels, LLC**
    - Fuel sales affiliate of SCH Services: assists customers in the procurement of fuels and specializes in the entire logistical fuel procurement process, from sourcing to delivery
  - **SCH Terminal Services, LLC**
    - Operates terminals located on the inland river system. Each terminal is strategically located to provide logistical solutions for coal users by providing storage, blending and transloading services
      - **Calvert City Terminal, LLC**
      - **Four Rivers Terminal, LLC**

SCH Southern Coal Handling an SCH Services Company

CES Cornette Engineering Services an SCH Services Company

SCH Specialized Fuels, LLC

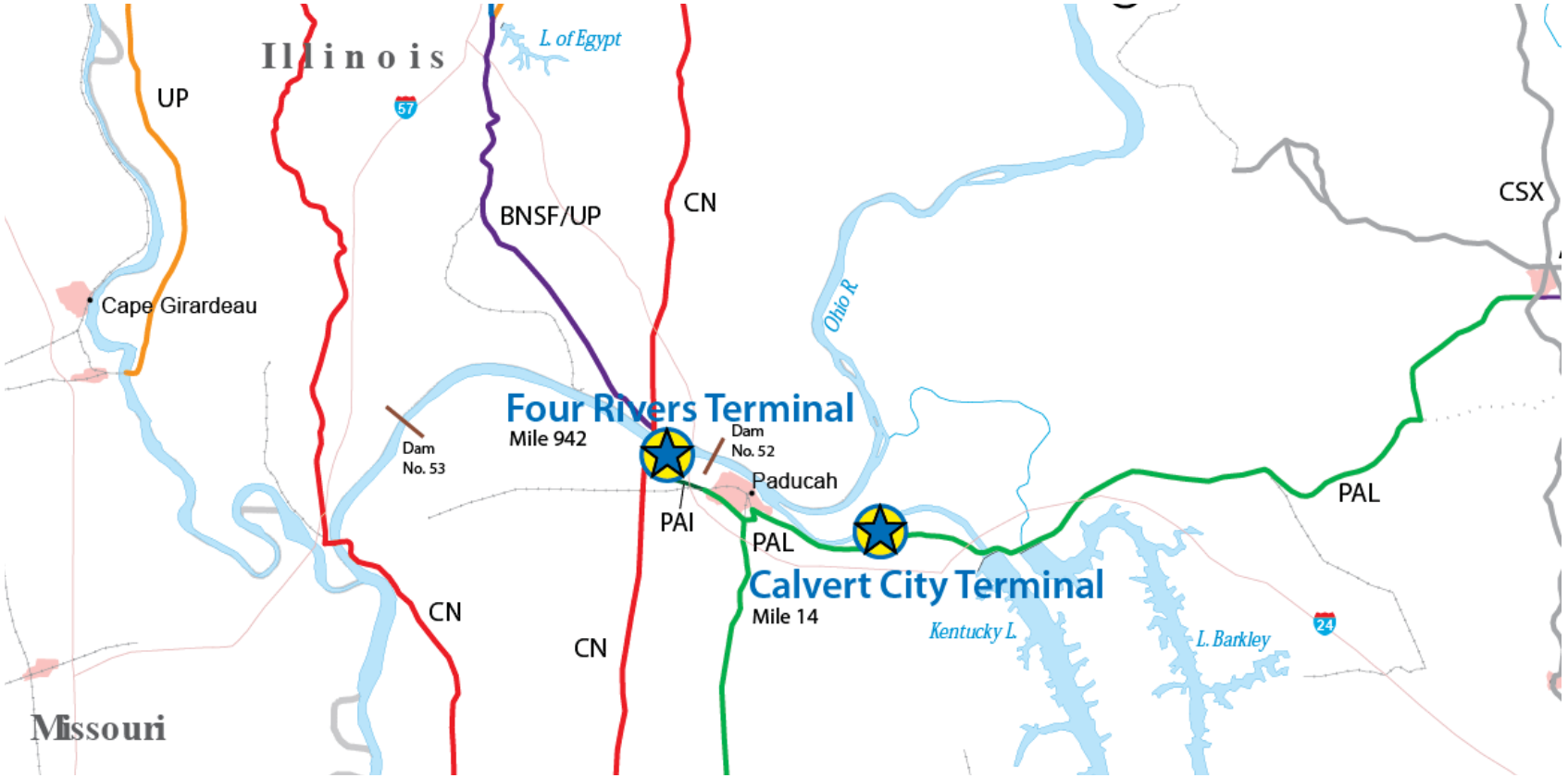
CCT Calvert City Terminal, LLC

FRT Four Rivers Terminal, LLC

SCH SCH Services, LLC

SCH Terminal Locations

- **CCT** located on the **Tennessee River, 14 river miles** from the confluence of the **Ohio River**
- **FRT** located on the **Ohio River, 37 river miles** from the confluence of the **Mississippi River**



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Calvert City Terminal

Calvert City, Kentucky

Location

5044 Industrial Parkway
Calvert City, Kentucky 42029
Tennessee River Mile Marker 14.5

Capacity

12,000,000 tons annual throughput
4,000 tons hourly throughput
150-car double loop track
100 jumbo barge fleeting
Long- and short-term storage
Rail & barge loading & unloading

Access

Rail: BNSF, CN, CSX, NS, P&L, UP
River: Ohio, Tennessee, Mississippi

Calvert City Terminal (CCT) is a bulk material handling facility located at mile marker 14 of the Tennessee River. With its central location on the U.S. inland waterway system and direct connections to all major coal-carrying railroads, CCT serves as a vital link between western and Illinois Basin coal-producing regions and eastern coal consumers. The terminal has a yearly throughput capacity of 12 million tons, with the capability to unload coal and other bulk materials by barge and railcar (rotary or bottom dump), as well as load to both barge and railcar. CCT offers a unique value to its customers with its ability to loadout up to three-coal blends and store up to 3 million tons within its storage yard.

Design ☆ Build ☆ Operate

Actively Served by Six Railroads

Six Railroads Served CCT During One Week in July 2012

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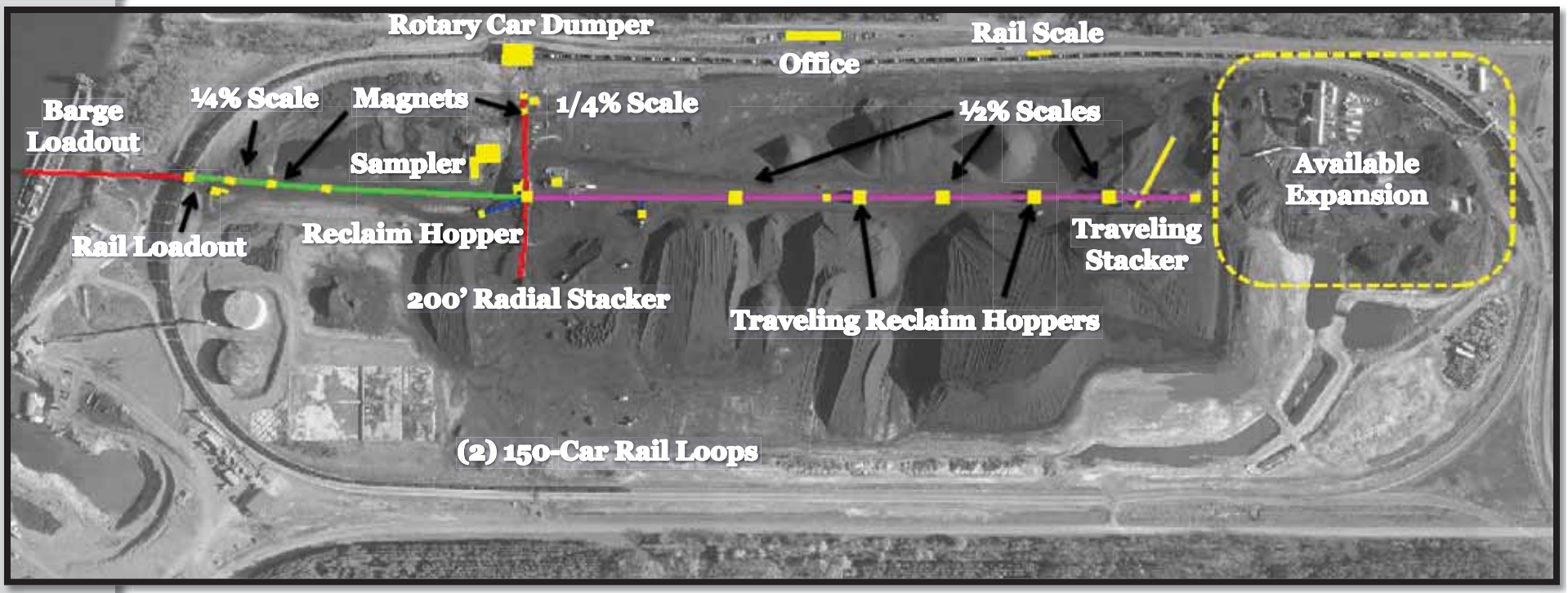
Calvert City Terminal Blending Design

- When required, CCT efficiently and accurately creates two- and three-way coal blends
- The configuration and equipment of the weighing and blending system at CCT is the gold standard on the inland waterway



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Calvert City Terminal Inventory Control

- The use of mobile equipment and movable hoppers in the loadout/blending process is both efficient and cost-effective
- Storage piles are always clearly separated and any pile can be reclaimed directly or in a blend upon a moment's notice

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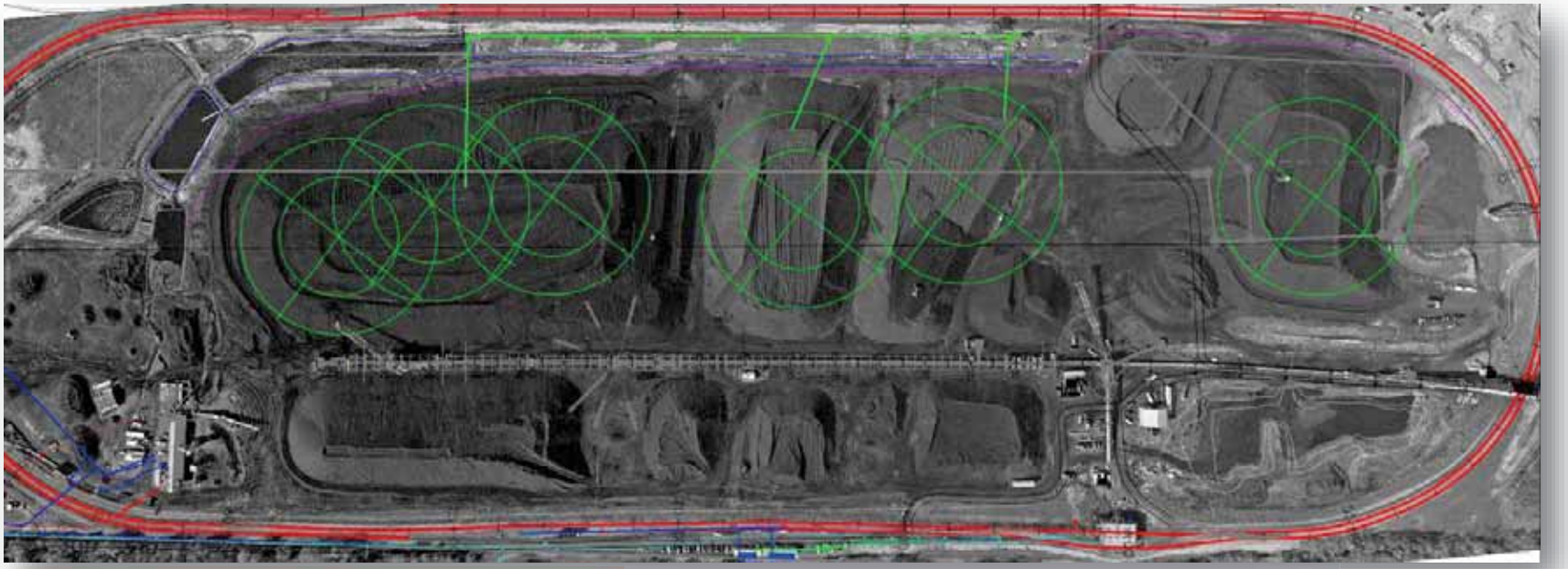
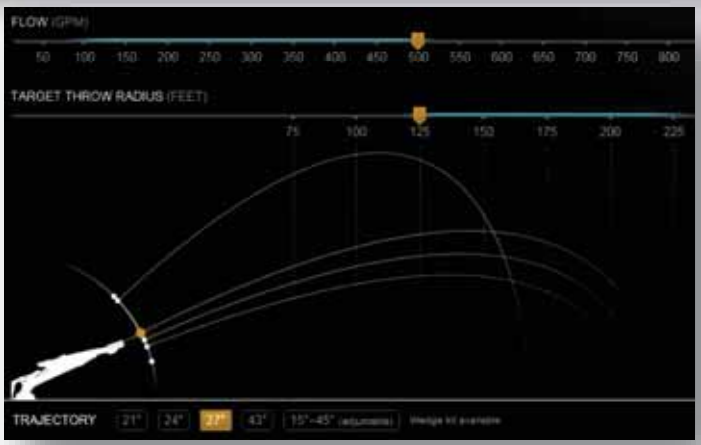
Innovative Stockpile Dust Control





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Rail Unloading Flexibility

- CCT features a **unit train rotary** and **rapid discharge unloader**
- Gondola railcars can sometimes have economic benefits over Rapid Discharge railcars due to it's ability to hold over 8 additional tons per car

- Adding the **rapid discharge unloading** gives the customer uncommon flexibly on the inland water system
- Ability to accept both major railcar types gives customer greater flexibility

- **Combo car unit trains** can be unloaded utilizing either method without being uncoupled
- Improves unload time due to typical railcar issues:
  - Non-stripe aligned
  - Frozen coal
  - Hopper door

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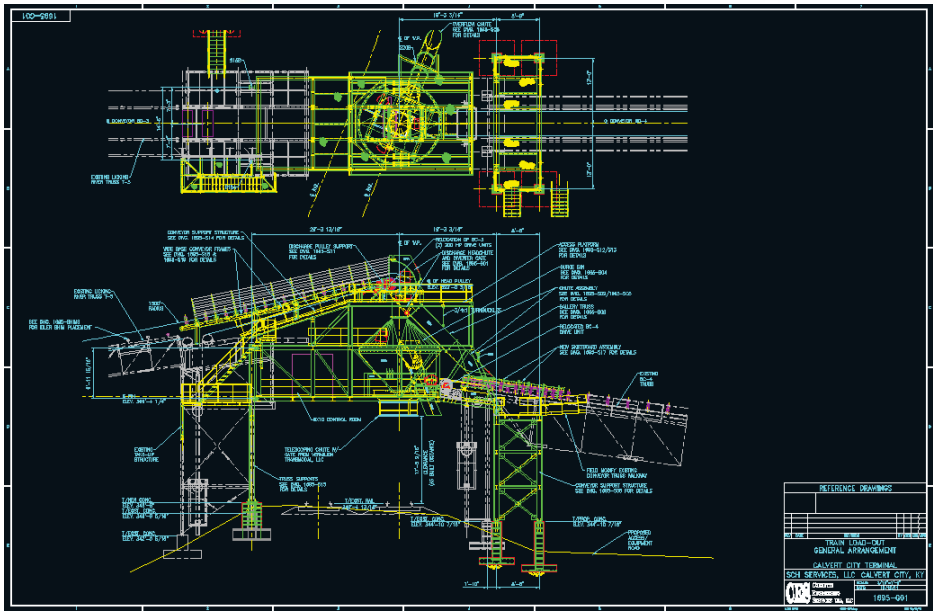
CCT Rail Loading Capabilities

- Capability to load 100-car unit trains in less than four hours
- Utilizes all capabilities of the terminal facility, including blending, sampling, and state certified scales
- Capability to load and unload trains simultaneously
- Up to three coal blend utilizing computer aided blending system with greater than 99% accuracy
- Blending from both yard and rail



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100 MILLION TONS

JUNE 2017

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Four Rivers Terminal

West Paducah, Kentucky

Location

7545 Noble Road
West Paducah, Kentucky 42086
Ohio River Mile Marker 943

Capacity

10,000,000 tons annual throughput
4,000 tons hourly throughput
150-car double loop track
100 jumbo barge fleeting
Short-term storage

Access

Rail: BNSF, CN, CSX, NS, P&L, UP
River: Ohio, Tennessee, Mississippi, Cumberland, Tenn-Tom

Four Rivers Terminal (FRT) is a rapid discharge, bulk material handling facility located on the Ohio River at mile marker 943. Primarily designed as a direct train-to-barge transfer terminal, FRT offers its customers an unparalled combination of access to major waterways and multiple Class I railroads. Considering just one low water dam separates the terminal from the Mississippi River, FRT presents a unique option for rail-bound tonnage destined for both southeastern customers and export through New Orleans. With a design capacity in excess of 10 million tons per year, Four Rivers Terminal boasts a double, 150-car rail loop coupled with a material handling system capable of transloading 4,000 tons per hour.

Design ☆ Build ☆ Operate


IRON ORE
Powder River Basin
Uinta Basin
Illinois Basin
Northern Appalachian Region
Central Appalachian Region
Four Rivers Terminal
Inland Waterways
Import and Export thru Mobile, AL and New Orleans, LA
SCH Services, LLC


Powder River Basin
Uinta Basin
Illinois Basin
Northern Appalachian Region
Central Appalachian Region
Four Rivers Terminal
CN
BNSF RAILWAY
P&L
CSX
NS
NORFOLK SOUTHERN
UNION PACIFIC
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First Barge Loaded December 2014

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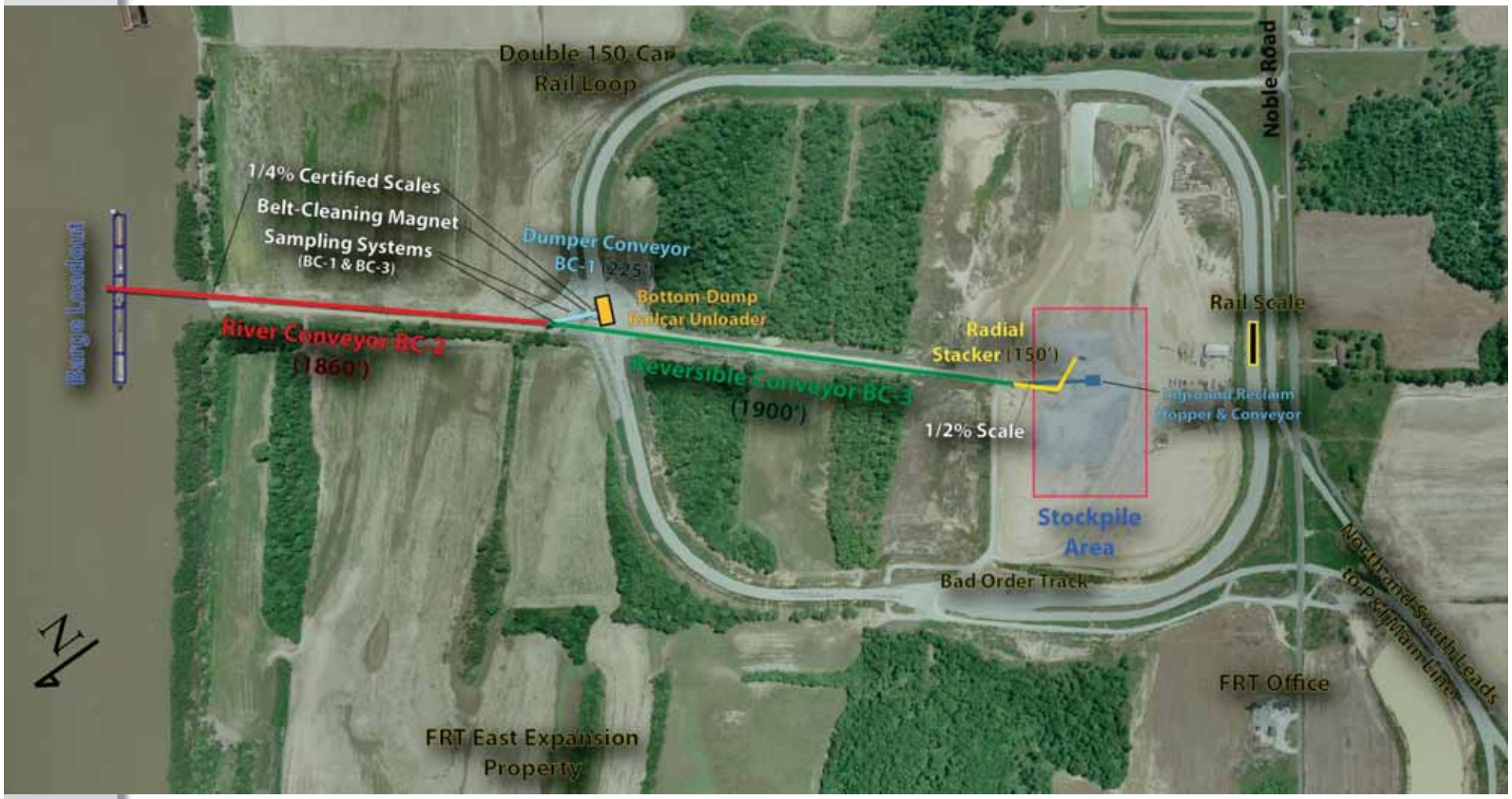
Four Rivers Terminal

Points of Interest



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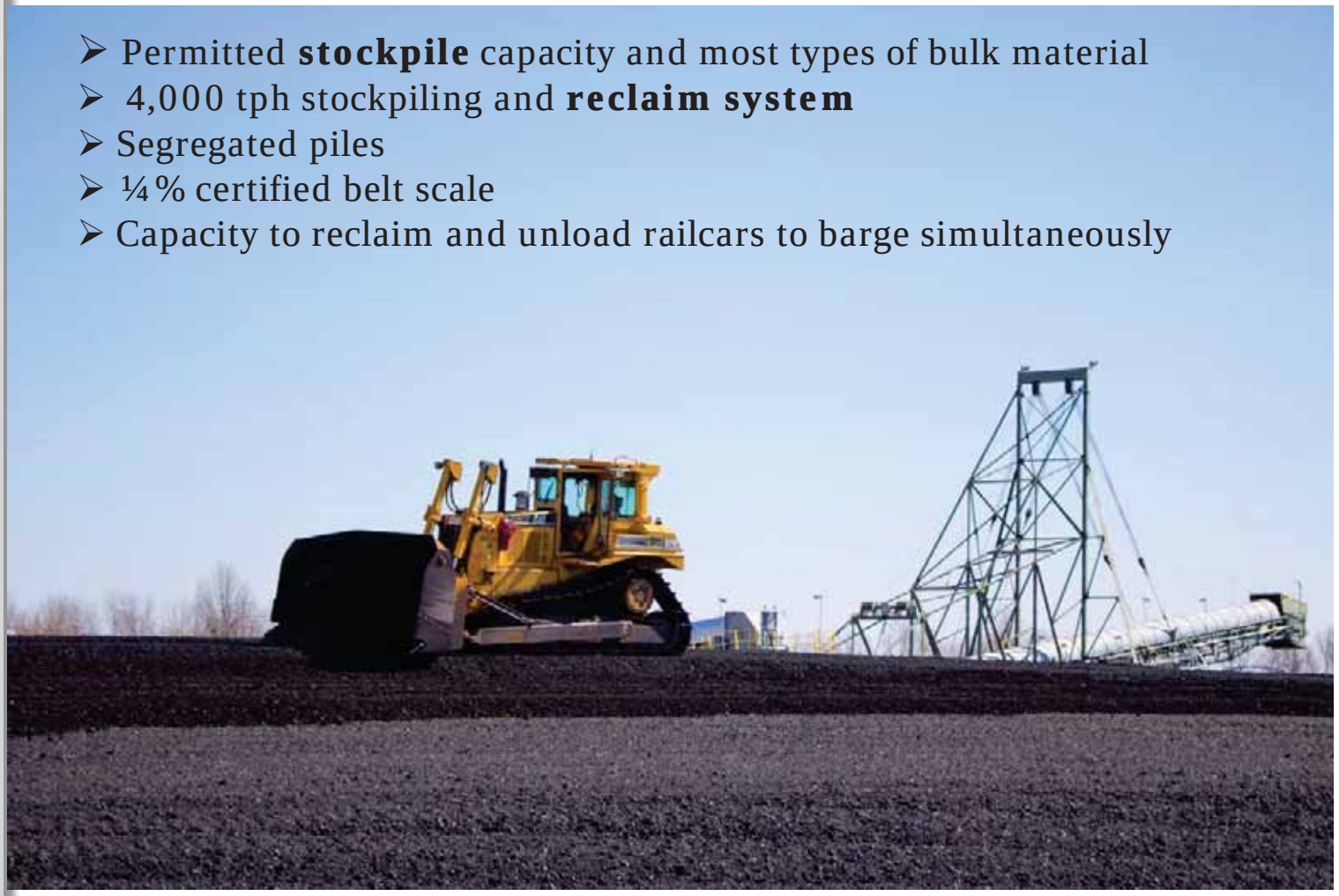
Four Rivers Terminal
Phase II Expansion

- Permitted **stockpile** capacity and most types of bulk material
- 4,000 tph stockpiling and **reclaim system**
- Segregated piles
- ¼% certified belt scale
- Capacity to reclaim and unload railcars to barge simultaneously



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FRT Properties

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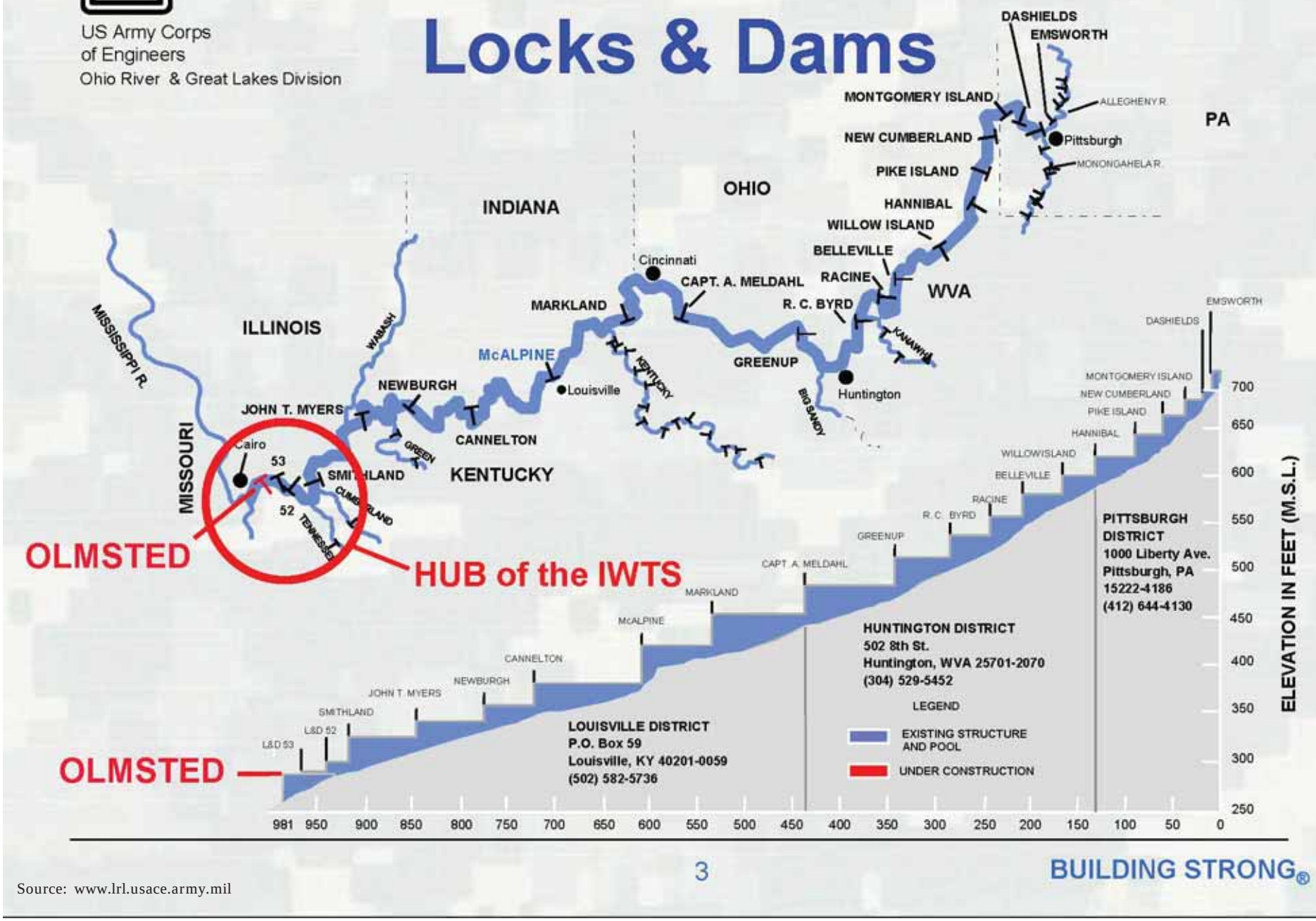
Four Rivers Terminal Port Concept

Olmsted Lock and Dam

Source: www.lrl.usace.army.mil

Ohio River Main Stem Locks & Dams

US Army Corps
of Engineers
Ohio River & Great Lakes Division



BUILDING STRONG®

Source: www.lrl.usace.army.mil

Olmsted Importance

L&D 52/53 = 91M tons/yr

Original (600') Chamber - 1928
Temporary (1,200-ft) Chamber - 1969

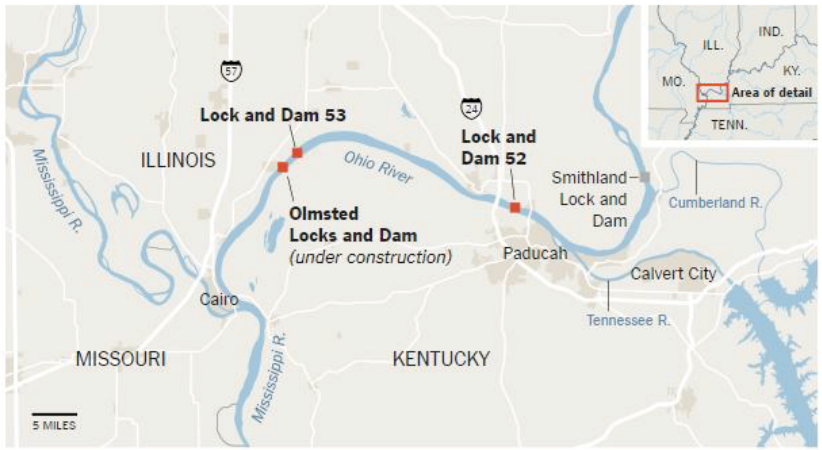
Original (600') Chamber - 1929
Temporary (1,200-ft) Chamber - 1980

Source: www.lrl.usace.army.mil

Decades of Bottlenecks

Bottlenecks on the River

More traffic passes Locks and Dams 52 and 53, located near the mouth of the Ohio River, than any other spot on the inland waterways. Built in the 1920s and now showing their age, both locks will be replaced by the Olmsted Locks and Dam, which is decades behind schedule and billions over budget.



Most-used locks and dams of the inland navigation system

SITE	LOCATION	RIVER	2015 TONNAGE IN MILLIONS
Lock and Dam 52	Brookport, Ill.	OHIO	80.8
Lock and Dam 53	Grand Chain, Ill.	OHIO	72.3
Soo Locks	Sault Ste. Marie, Mich.	ST. MARYS	69.6
Newburgh Lock and Dam	Newburgh, Ind.	OHIO	69.1
Smithland Lock and Dam	Hamletsburg, Ill.	OHIO	63.7
McAlpine Locks and Dam	Louisville, Ky.	OHIO	62.0
Cannelton Locks and Dam	Cannelton, Ind.	OHIO	61.8
Lock and Dam 27	Granite City, Ill.	MISSISSIPPI	60.3
John T. Myers Locks and Dam	Mt. Vernon, Ind.	OHIO	56.5
Melvin Price Locks and Dam	East Alton, Ill.	MISSISSIPPI	53.7

Source: U.S. Army Corps of Engineers

By The New York Times

- L&D 52/53 built in 1929
- Past delays required up to 5 days or more to travel 100 miles between L&D 52/53

- Olmstead L&D budget approved in 1988 for $775MM
  - Recent estimated cost of the project are now near $3 billion

- Previous timetable put Olmsted opening in 2022
- Opening has been **accelerated** due to approved funding and optimal river conditions
- According to the USACE the new operational opening is **SUMMER 2018 and $300MM under re-estimated cost**

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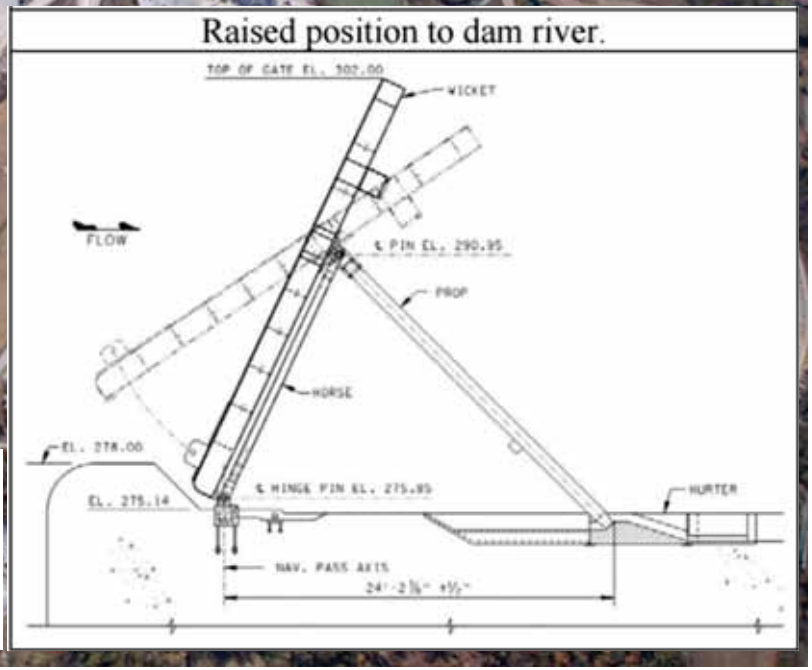
Olmsted Built for the Future

- Fourfold increase in efficiency and reliability with twin 1,200 foot locks
  - Lock passage time improved to 1 hour compared with minimum 5 hours currently
- Wickets will be down majority of time allowing traffic to pass with no locking or delay



- Will maintain required navigable depth upstream to Smithland L&D
- This will give **FRT** an additional 10' of river depth
- Ability to load maximum draft competitive with STL harbor

Thank you!