# HOW TOMORROW MOVES

# WINTER HAVEN TERMINAL DEVELOPMENT

Building The Next Generation of Intermodal Terminal Facilities

Presenters:

Keith A. Brinker - CSX Transportation, Inc.
W. Troy Neisz - AMEC Environment & Infrastructure, Inc.
D. Dale Dowling - Breedlove, Dennis & Associates, Inc.

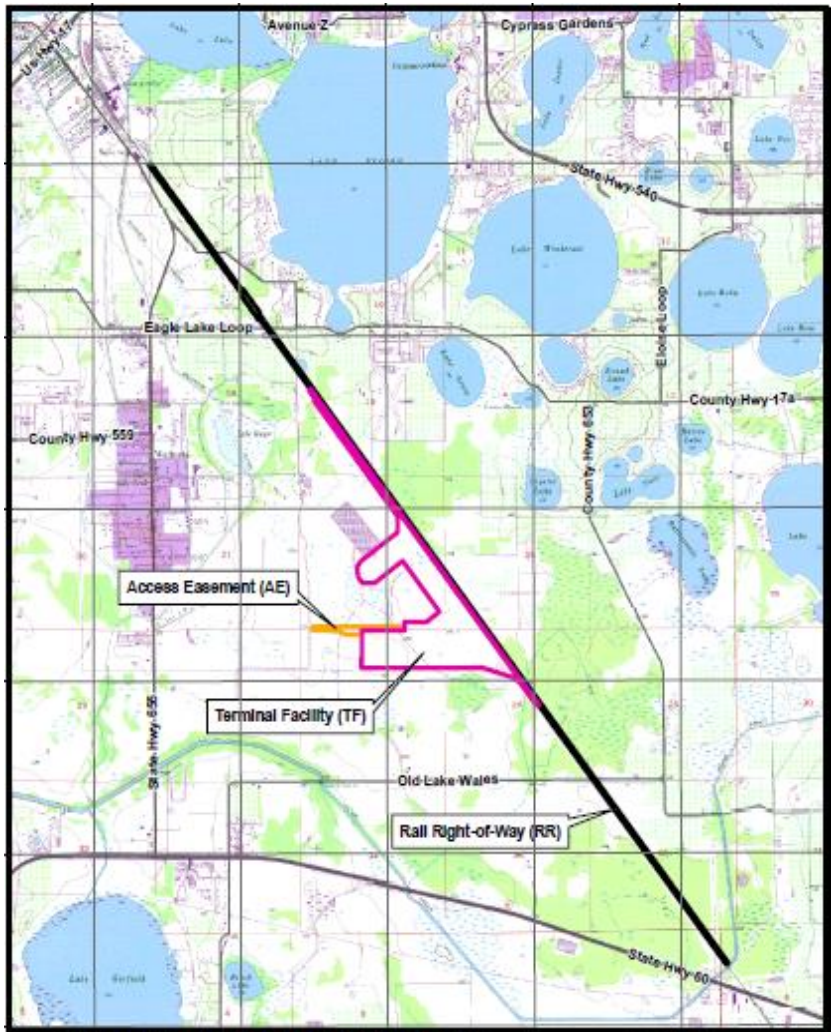
HOW TOMORROW MOVES

# Project Background

- 61 miles corridor for SunRail in Orlando
- map shows A-line (green) and S-line (red)
- A-line freight traffic to be redirected to S-line. However, numerous (20+) infrastructure improvement projects required to handle additional trains
- the A-line generally parallels Interstate 4 and US 17-92. S-line corridor parallels US 301
- relocation of Orlando CSX facility and automotive terminal to Winter Haven from A-line to accommodate SunRail Commuter Trains

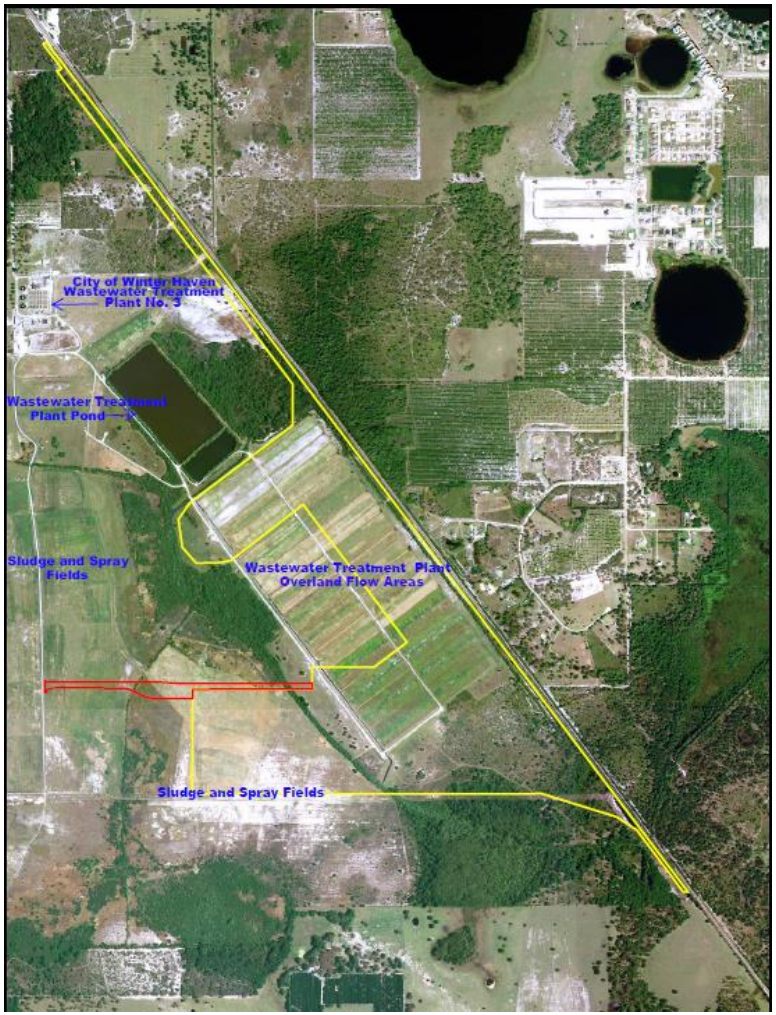

*Source: FDOT*

# Project Background




- CSX purchased 1,260 acres from the City of Winter Haven
- 318 acres for the terminal facility with over 56.85 acres of delineated wetlands within the project area
- 1.64 miles of newly constructed Pollard Road Extension with approximately two acres of wetland impacts
- numerous threatened & endangered species
- community outreach

# Project Background




CSX had to locate property that met several criteria:

- adjacent to mainline
- 300 acres or more
- necessary clearance for lead tracks
- highway access
- minimal environmental impacts

Adjacent neighbors had to be considered during site selection and the project design

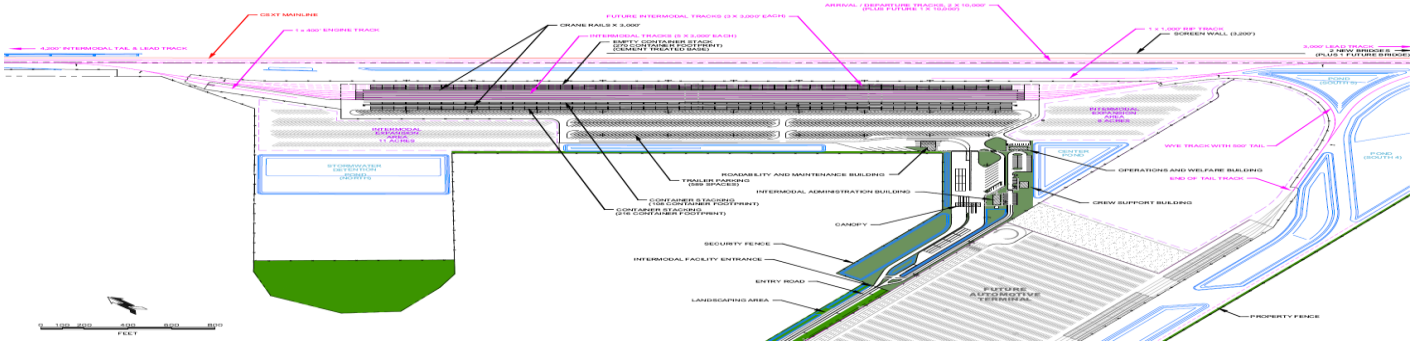
The selected property was land formerly used by City of Winter Haven Wastewater Treatment Facility as:

- sludge disposal
- spray fields
- effluent overland flow

# Winter Haven – Construction Details and Site Plan

## 12.5 miles of track and 15 #10 turnouts at Intermodal Terminal:

- 1.2M cubic yards of earth moved (project balanced)
- 2 - 10,000 feet arrival/departure tracks
- 5 - 3,000 feet processing tracks (room for 3 additional tracks for future capacity, if needed)
- 1 wye track, 1 car repair track, 1 engine ready track
- stormwater mgmt – 6 wet ponds, 12 dry ponds – connected to 1 outfall
- 446 wheeled parking spaces
- 1,272 container stacking capacity (4 high)
- 1,060 empty container stacking slots (4 high)
- administration, employee, and repair buildings (LEED silver certified)




# Green Initiatives and Sustainability

## Wide Span Cranes

**Three Hans Kuenz (Austria) electric wide span cranes (WSC) operate along the five - 3,000 feet process tracks:**

- total electric, zero emissions, rail mounted
- weigh 1M pounds, 263’ long, 79’ high, and 95’ wide
- generates power back to the terminal grid
- less noise over typical diesel equipment
- manufactured in Europe/Mexico, shipped to and assembled at site
- control system utilizes algorithms that minimize the required moves, and associated energy
- project design considered “bird/avian-safe” initiatives
- on-site simulator allows “realistic” training scenarios for operators
- designed to withstand 140 MPH wind-speeds. Once winds exceed 90 MPH, they are taken out of service and secured with tie-down system.

# Green Initiatives and Sustainability

## Pavement

- 30 acres of roller compacted concrete (RCC) - 9” to 16” thick
  - long life – less maintenance requirements than asphalt
  - reflective – reduces lighting needs
  - less energy to produce
  - reduces heat island effect
  - reusable & recyclable
- pervious pavers – POV parking
  - LEED credit
  - reduces stormwater treatment needs

# Green Initiatives and Sustainability

## Solar Power

- solar power panels on buildings – LEED credit
- solar panels feed excess electricity back into the terminal grid system
- solar powered hydraulic switches
- solar powered pedestrian crossing signs

# Green Initiatives and Sustainability

## Landscape & Irrigation

- zoysia grass
  - drought tolerant
  - less maintenance – grows slower, less mowing
  - minimizes chemical use
- trees and plants locally sourced to minimize need for irrigation and reduce fertilizer
- greywater irrigation
  - irrigation provided by stormwater management ponds
  - future infrastructure in place for City to reuse water once it becomes available

# Green Initiatives and Sustainability

## LED Lights

- first large scale application of all LED highmast light towers in North America
- all exterior fixtures LED
- lights glare resistant & lighting “cut-off” at the perimeter
- benefits
  - over 100,000 hours service life
  - up to 49% energy savings over convention lighting
  - 50% maintenance cost savings
- monitoring system
  - available remotely
  - can turn off individual lights
- engineered design for locations of mast and direction of beams to minimize light pollution to adjacent properties

40’ Entrance Road Fixture

70’ Highmast Tower

# Green Initiatives and Sustainability

## LEED Certified Buildings

- all four buildings (15,067 sf) are LEED silver certified
- construction methods are driven to use local material, reduce waste
- conserves energy, reduces water consumption, improves air quality

# Green Initiatives and Sustainability

## Stormwater Management – Retention Ponds

- over 60 acres of stormwater management ponds – six wet ponds, 12 dry ponds – all ponds on-site interconnected to one single permitted outfall location
- forebays at key locations to prevent sediment and potential petroleum impacts to the entire stormwater system
- littoral shelf – plantings within the pond to aid in the treatment of the runoff
- no sampling requirements



# Environmental Protection

## Locomotive Ready Track

- intended for locomotive storage and limited mobile fueling
- measures are taken to prevent spills from entering the stormwater system
- levels of protection
  - petroguard barrier under track
  - baffle system which will contain small amounts of oil within the inlet
  - sluice gate – gate can be closed in the event of a spill
  - forebay

# Environmental Protection

**Potential wildlife on the project:**

- gopher tortoises
- bald eagles
- eastern indigo snakes
- wood storks
- Florida scrub-jays
- sand skinks

**Plant species on the project:**

- scrub lupine
- Britton's beargrass
- Florida bonamia

**Permits obtained for the project:**

- Department of the Army, Corps of Engineers 404 Individual Permit
- Southwest Florida Water Management District Individual Permit
- Florida Fish and Wildlife Conservation Commission
- U.S. Fish and Wildlife Service
- Florida Department of Environmental Protection
- Florida Department of Health

# Environmental Protection

## Gopher Tortoise Voluntary Relocation


- Florida Fish and Wildlife Conservation Commission Take Permit for gopher tortoises on-site; CSX voluntarily relocated gopher tortoises
- relocation of approximately 45 gopher tortoises (five relocated to Russakis Ranch and 40 relocated to Nokuse Plantation); unearthed over 200 burrows

# Environmental Protection

## Protection/Management of Listed Species

Protection and management for bald eagle (2) nests, Florida scrub-jays, sand skinks, and eastern indigo snakes

# Environmental Protection

## Plant Rescue Conservation

Coordination with Bok Tower Gardens for the transplantation and conservation of protected plants
(scrub lupine, Britton's beargrass, and Florida bonamia)

# Environmental Protection

## Wetland Protection

Approximately 57 acres of jurisdictional wetlands were delineated on the project site

Commitment to wetland protection; mitigation for wetland impacts through purchase of credits from Peace River and Boran Mitigation Banks

# Community

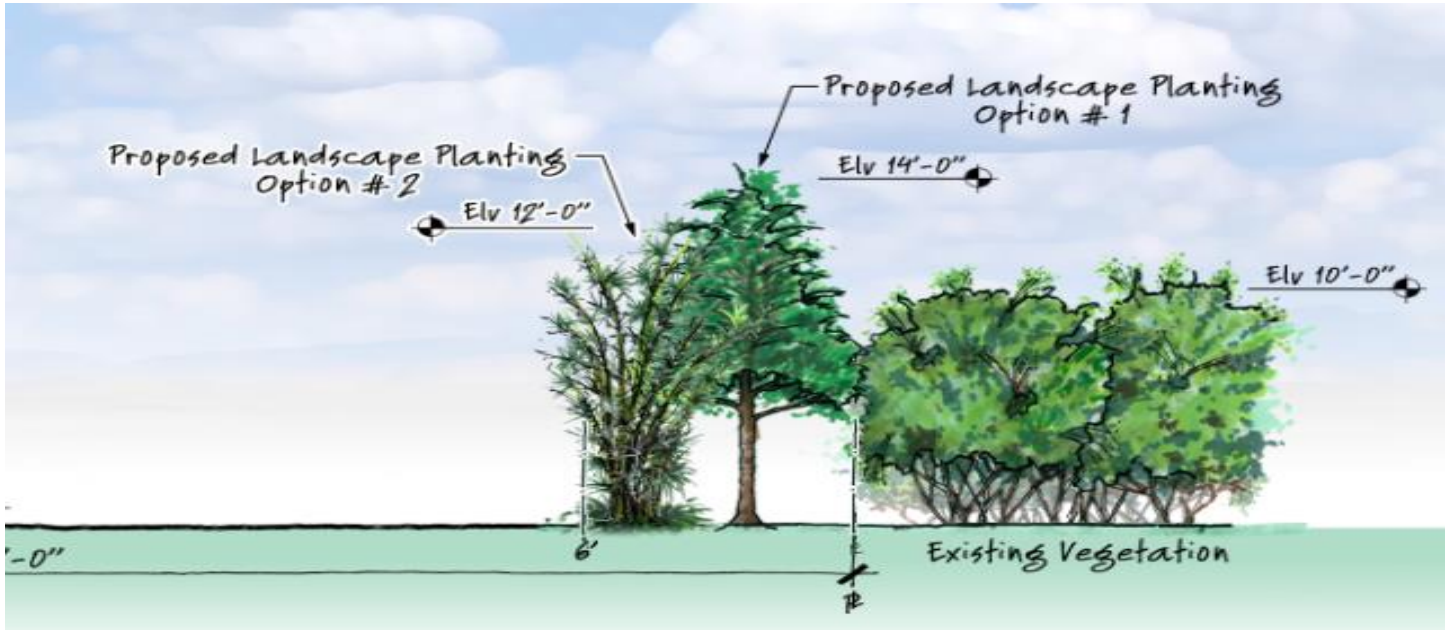
## Material Delivery

- most track materials delivered via rail
  - stick rail (18 cars)
  - steel & wood ties (25 cars of steel ties, 11 cars of wood ties)
  - subballast, ballast, & concrete materials: over 230,000 tons of stone delivered via rail
- nearly 9,000 trucks off the road! saved over 5,000 tons of carbon!
- steel ties – 100% recycled steel
- electronic tracking of trucks entering the property to assist with locations of drop-offs/pick-ups; reduces number of lifts.
- by limiting time that trucks are on property, this greatly reduces the idling time and carbon emissions

# Community

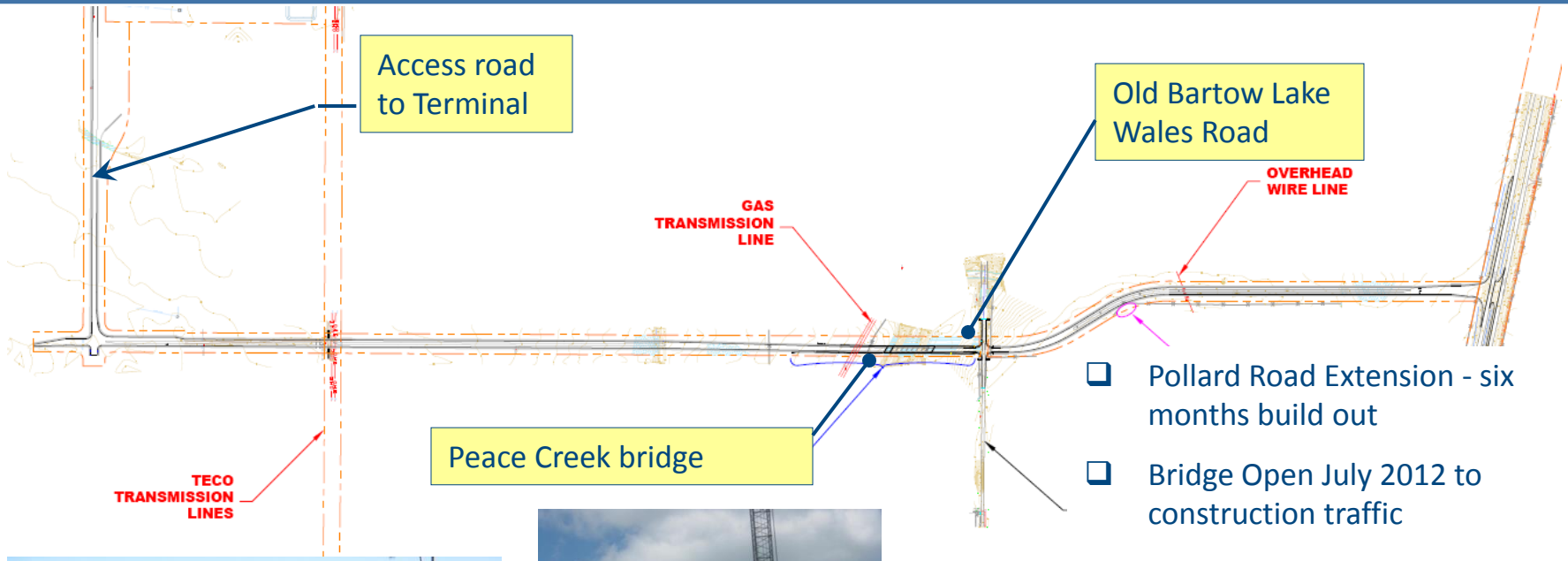
## Adjacent Neighbors

- original development agreement was to provide buffer (i.e., screen wall)
- worked with the City to agree on a landscaped buffer rather than a wall; more aesthetically pleasing



# Community

## Pollard Road Dedicated to the City of Winter Haven

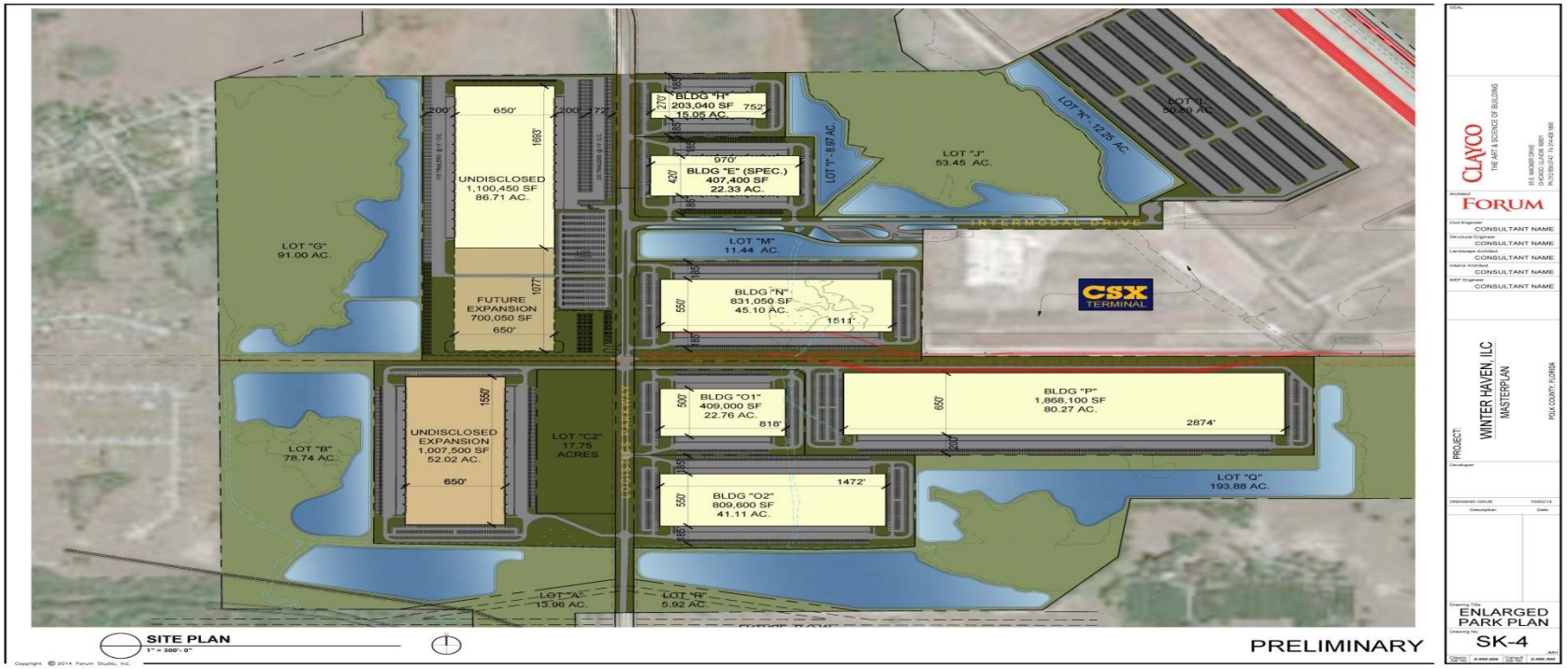



- Pollard Road Extension - six months build out
- Bridge Open July 2012 to construction traffic

# Community

## Winter Haven Integrated Logistics Center

Nearly 7.5 million square feet of intermodal rail-oriented warehouse, commercial, and office space ideally located to complement the existing Evansville Western Rail Terminal Facility in Winter Haven, Florida




# Conclusion

Before (February 2012)

After (December 2013)

40 companies logged over 300,000 man-hours without a single OSHA incident!!

CFILC became operational in April 2014.

<u>Next Generation of Intermodal Terminals</u>

Incorporate multiple innovative systems enhancing and improving service performance and operational reliability, while providing added protection to the environment and surrounding community!

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