BNSF Intermodal Evolution

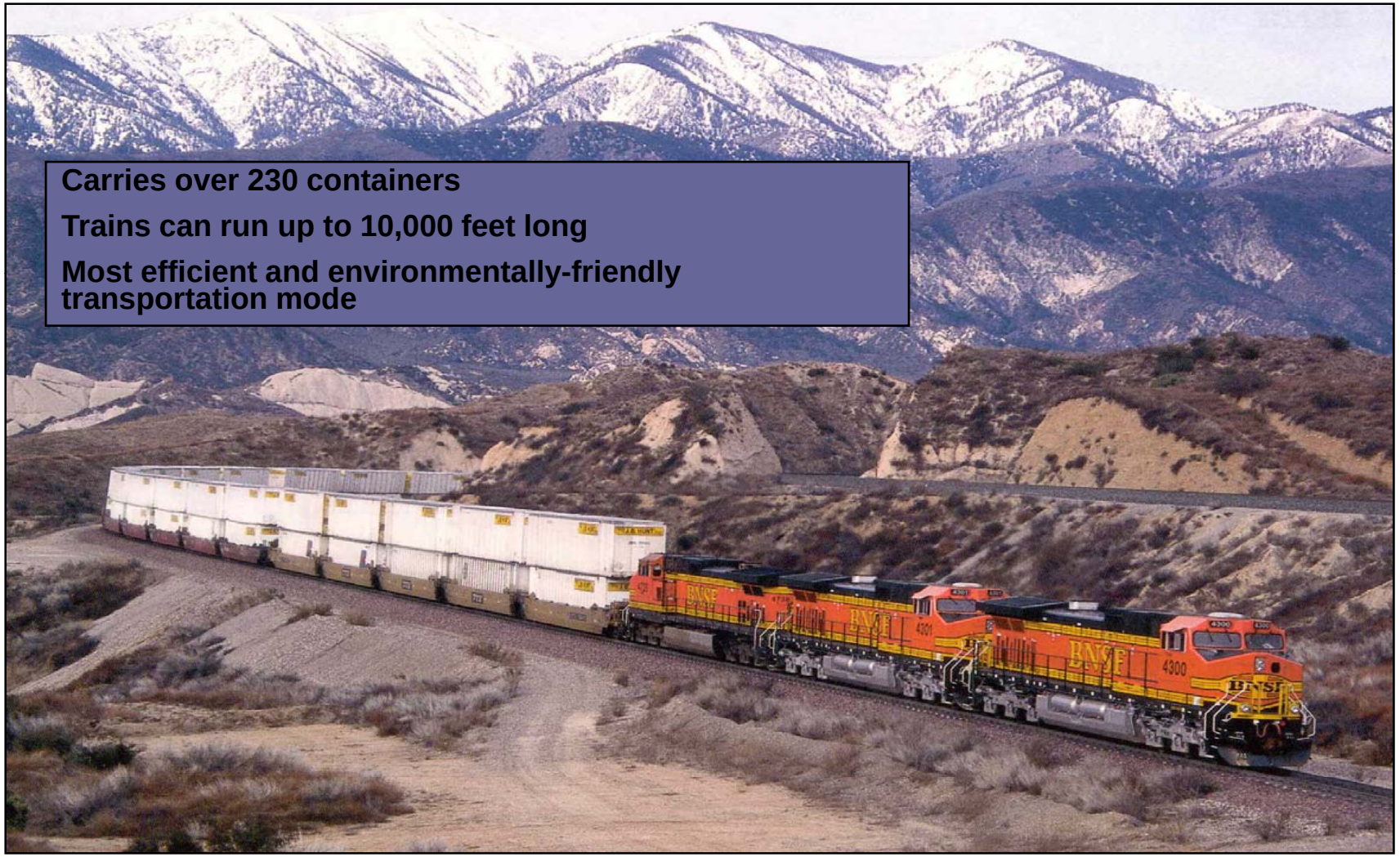
October 30, 2008

BNSF Intermodal Overview

- **Largest rail intermodal carrier in the world**
  - **10.1 million intermodal lifts in 2006 (peak year)**
  - **8.2 mil at 33 BNSF Intermodal Hub facilities**
  - **1.9 mil at 16 International On-Dock facilities**
- **Mix of business**
  - **Today 92% containers / 8% trailers**
  - **In 1998 62% containers / 38% trailers**
  - **In last 10 years, intermodal volume has grown 48%**
  - **98% of Containers move in double stack service**
  - **Most efficient and environmentally- friendly mode**

BNSF Intermodal Network

Typical BNSF Double-Stack Train



Traditional Intermodal terminal design and operation

- **All-wheeled operation, containers mounted on chassis directly from railcars**
- **Cranes are 40 to 60 ft. wide and span only one track**
- **Requires track pads adjacent to ramp track to load containers onto chassis**
- **No container stacking capabilities**
- **Requires many yard truck moves to spot chassis , remove loads to parking slots**
- **Cranes and trucks powered by diesel engines, producing undesirable emissions**
- **Inefficient use of land**

Traditional Intermodal crane design

BNSF changing paradigm in Intermodal Terminal operations with Electric Wide Span Cranes

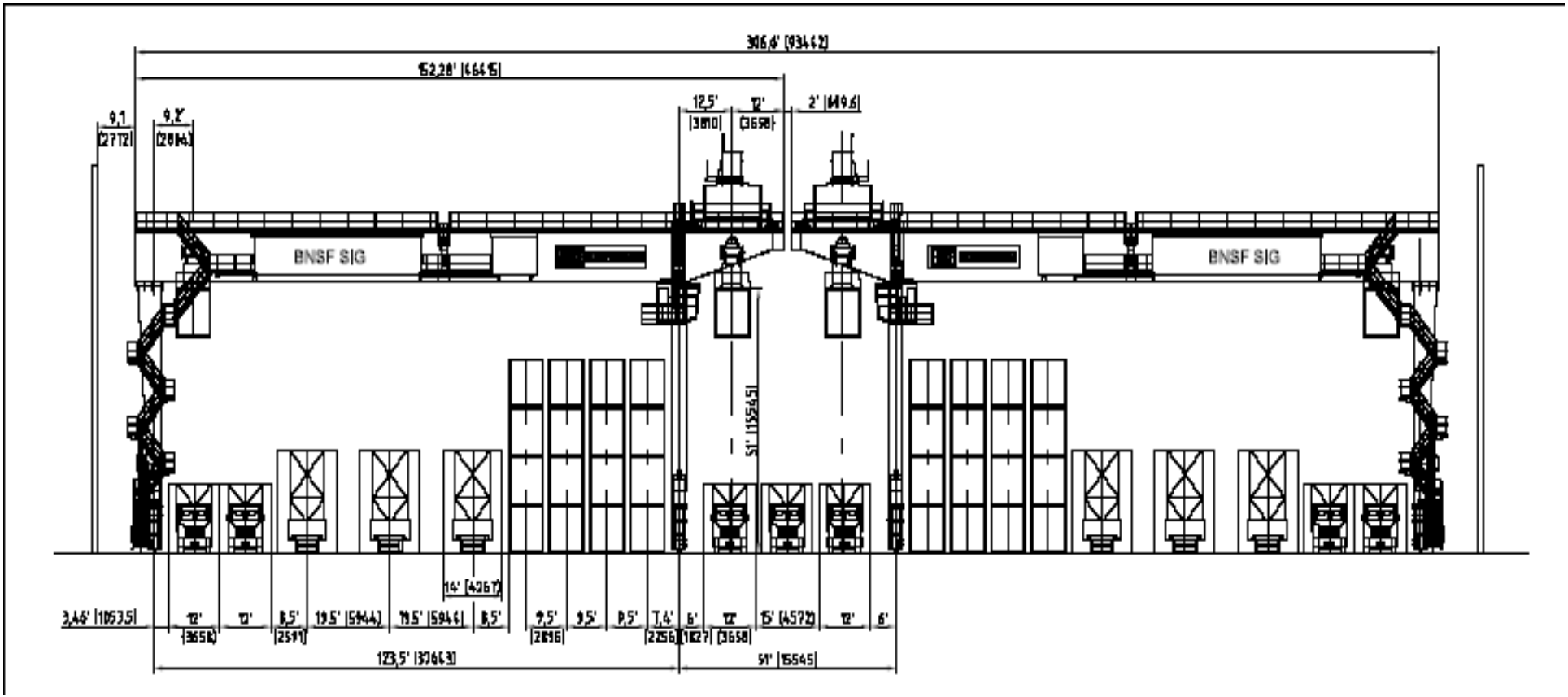
Why Wide Span Electric Cranes?

- **Crane design improves overall capacity and efficiency**
- **Electricity most practical and most environmentally friendly power source**
- **WS design provides most practical utilization of land**
  - **Most container stacking slots**
  - **Provides more car spaces under crane, thus reduces railcar switching**
  - **All aspects of intermodal operation are performed under span of crane**
  - **Reduces or eliminates need for UTR's (yard trucks)**
  - **Provides means for "semi-automation"**

BNSF wide span evolution

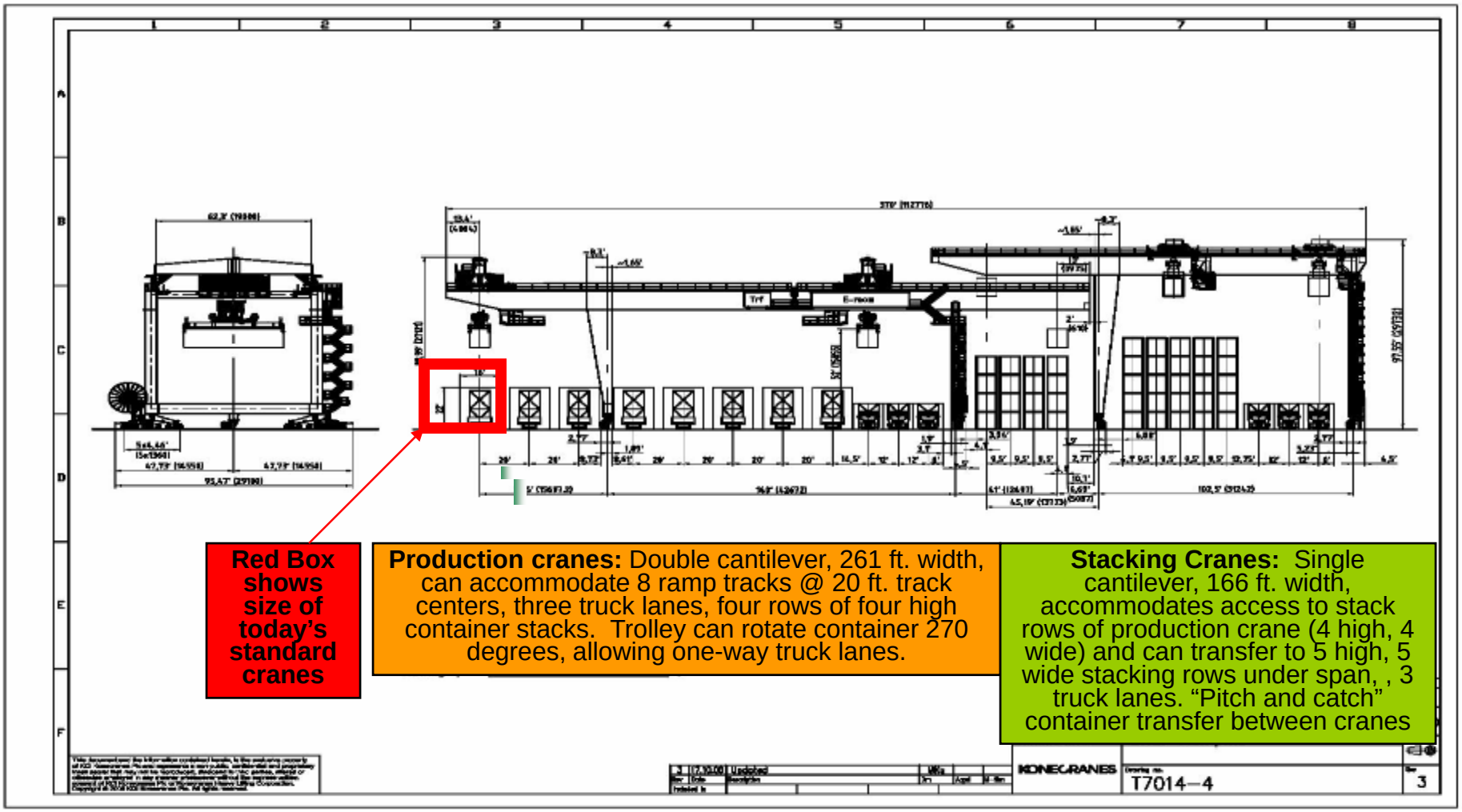
- **Four WS electric cranes installed at Seattle in November 2007**
  - **156 ft, accommodates three tracks, four container rows four high, three truck loading lanes**
- **Eight WS cranes being installed at Memphis**
  - **Five production cranes over rail tracks, 261 ft. span**
  - **Accommodates up to 8 tracks, 4 rows of container stacks, and 3 truck lanes**
  - **Three stacking cranes, 166 ft. wide**
  - **Accommodates 9 rows of container stacks, 3 truck lanes ,**
  - **“Pitch and Catch” transfer capability with production cranes**
- **Five WS production cranes slated for new Kansas City facility in 2010**
- **New facility at LA and conversion of existing facilities being planned**

Seattle wide span cranes

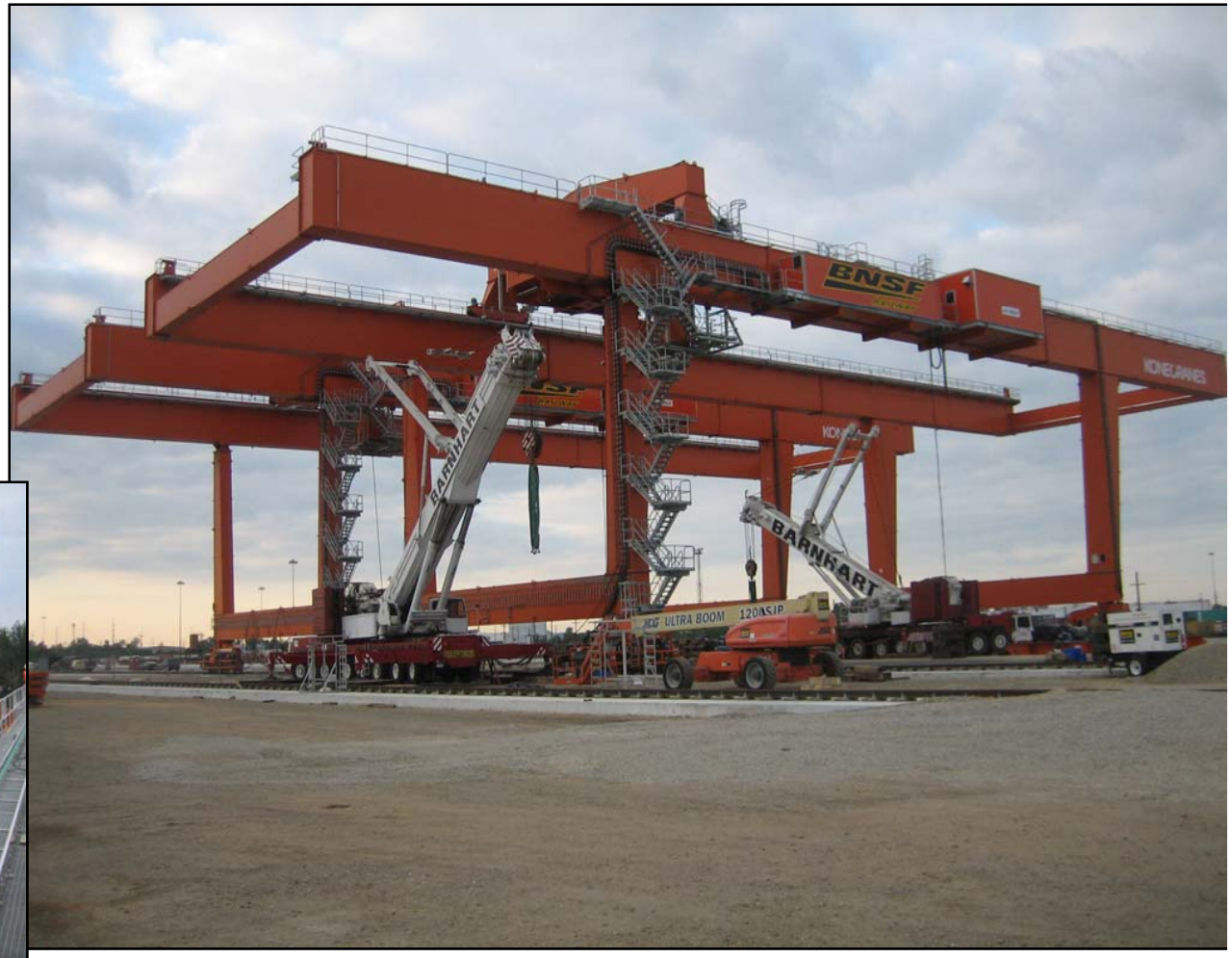


BNSF: Rising to the Future of Intermodal starting in Seattle

Memphis / KC crane configuration



Erection Process



First two Memphis cranes being erected

Other new technology: Auto gate and Virtual gate systems

- **Auto Gate Systems**
  - **Trucks arriving or departing terminal drive through a video camera portal**
  - **High resolution images of equipment are produced**
  - **OCR (Optical Character Recognition) computers “read” unit ID numbers automatically**
  - **Driver inputs remaining information at a kiosk**
  - **Improves turn time, velocity, security, and reduces truck idling**
- **Virtual Gate Systems**
  - **Provides means to input gate transactions using cell phone or internet**
  - **Development to be completed by March 2009**

AGS Process:

Trucks pass through Portal with line scan digital cameras equipped with Optical Character Recognition, OCR

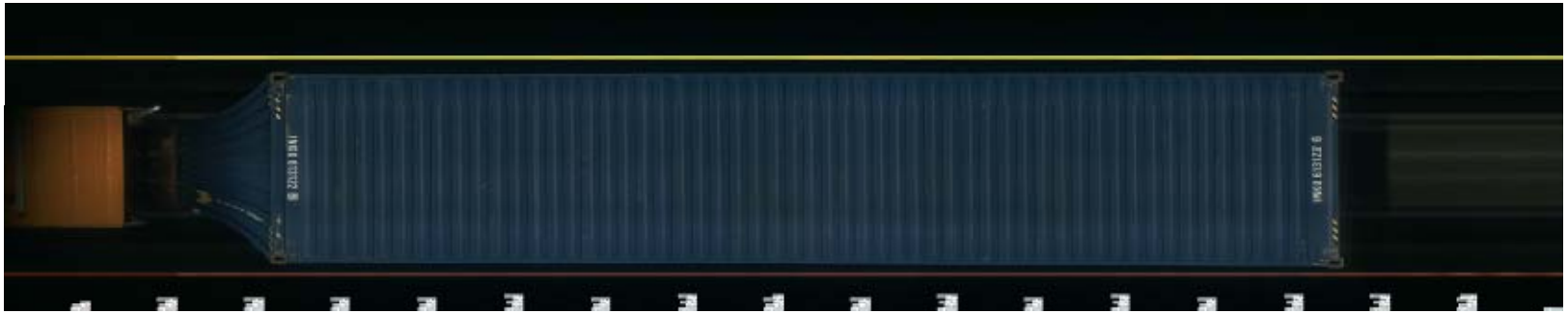
Trucks then proceed to kiosks to complete input for gate transaction.

Driver completes transaction at Kiosk

In-Gate Biometric ID (2 fingers) and inputs seal number

Out-gate: Uses bar code from ingate, inputs Pick-up number

Roof and rear views



Images provide views of roof, sides, front and rear of containers, chassis, tractors. Storage of equipment images for claim resolution for one year.

Example Images, side views

WIDE Range of Solutions...