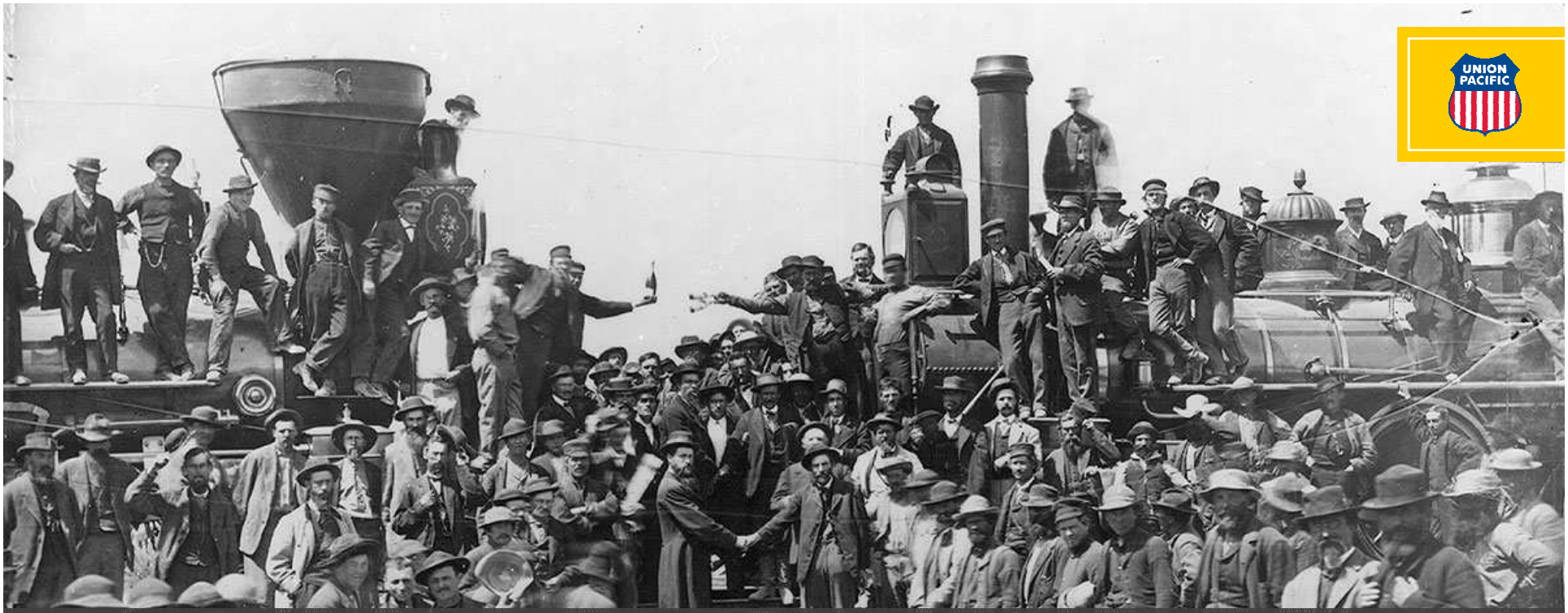
July 30, 2019

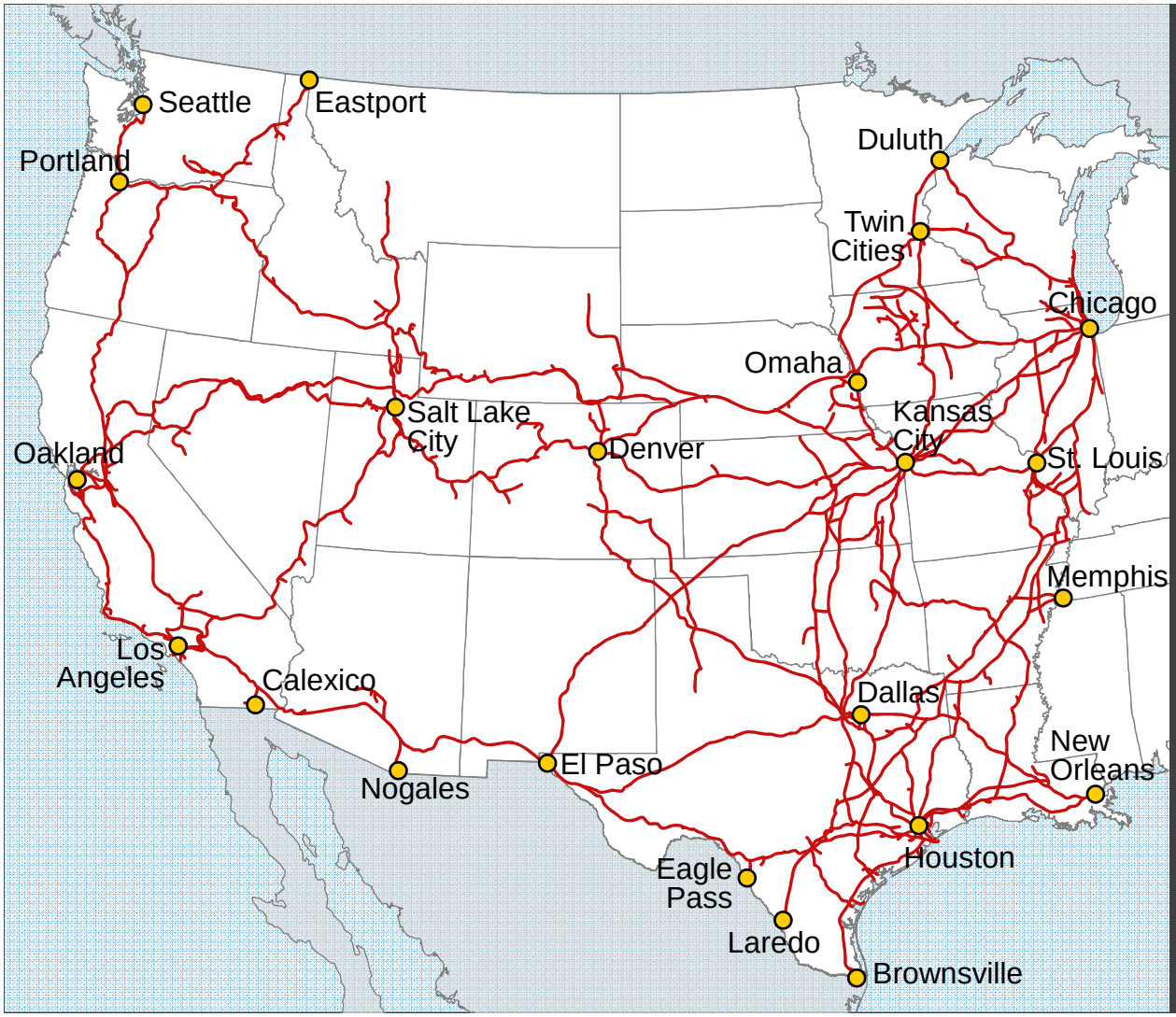
Union Pacific Public Projects TEMPO Overview

Tyson Moeller
General Director Network Development



Union Pacific:
Building America for more than 150 Years

May 10, 1869



2018 Fast Facts

Operating Revenue: **$22.8 B**

Route Miles: **32,200 in 23 States**

Employees: **42,000**

Annual Payroll: **$4.3 B**

Customers: **10,000**

Locomotives: **8,300**

2018 Union Pacific in Texas

Miles of Track: **6,298**

Annual Payroll: **$652.6 M**

In-State Purchases: **$2.2 B**

Capital Investment: **$777 M**

Employees: **7,475**

U.S. Jobs Supported*: **67,275**

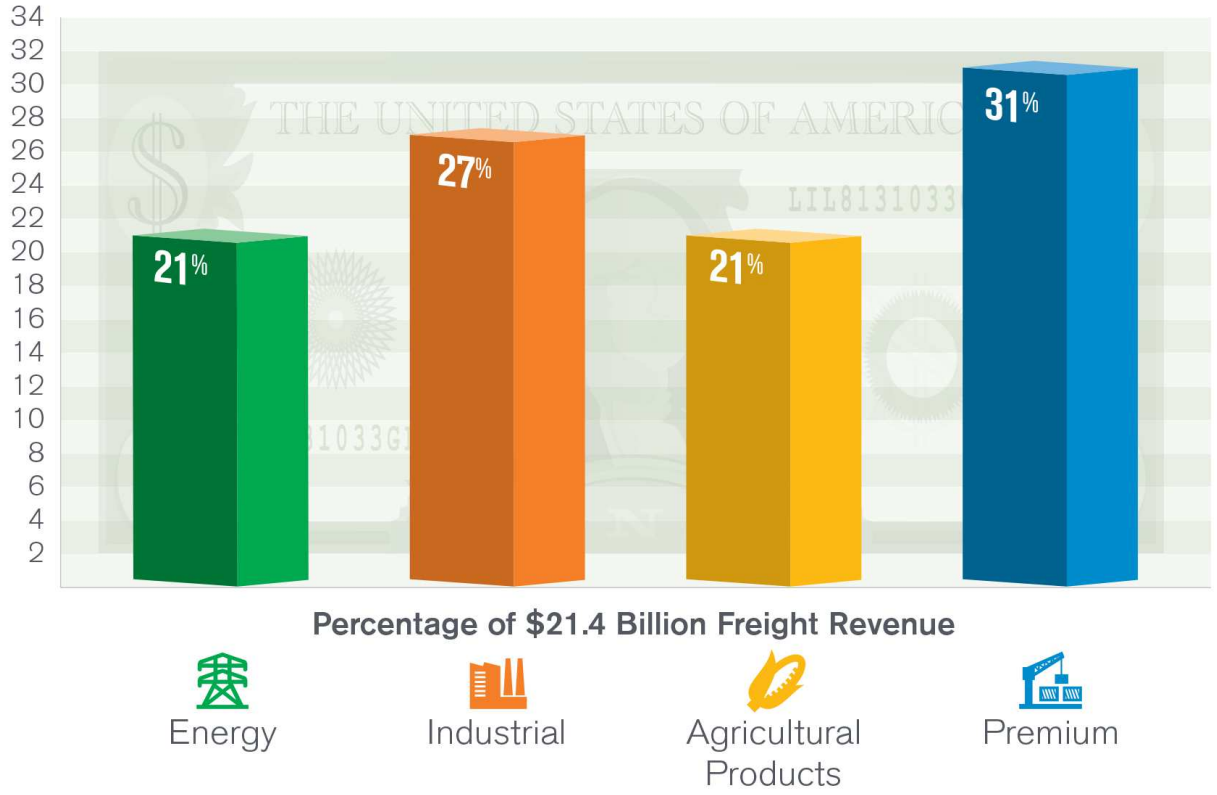
Community Giving: **$1.6 M**

Charitable Organizations: **346**

**Each American freight rail job supports 9 jobs elsewhere in the U.S. economy. (Association of American Railroads)*

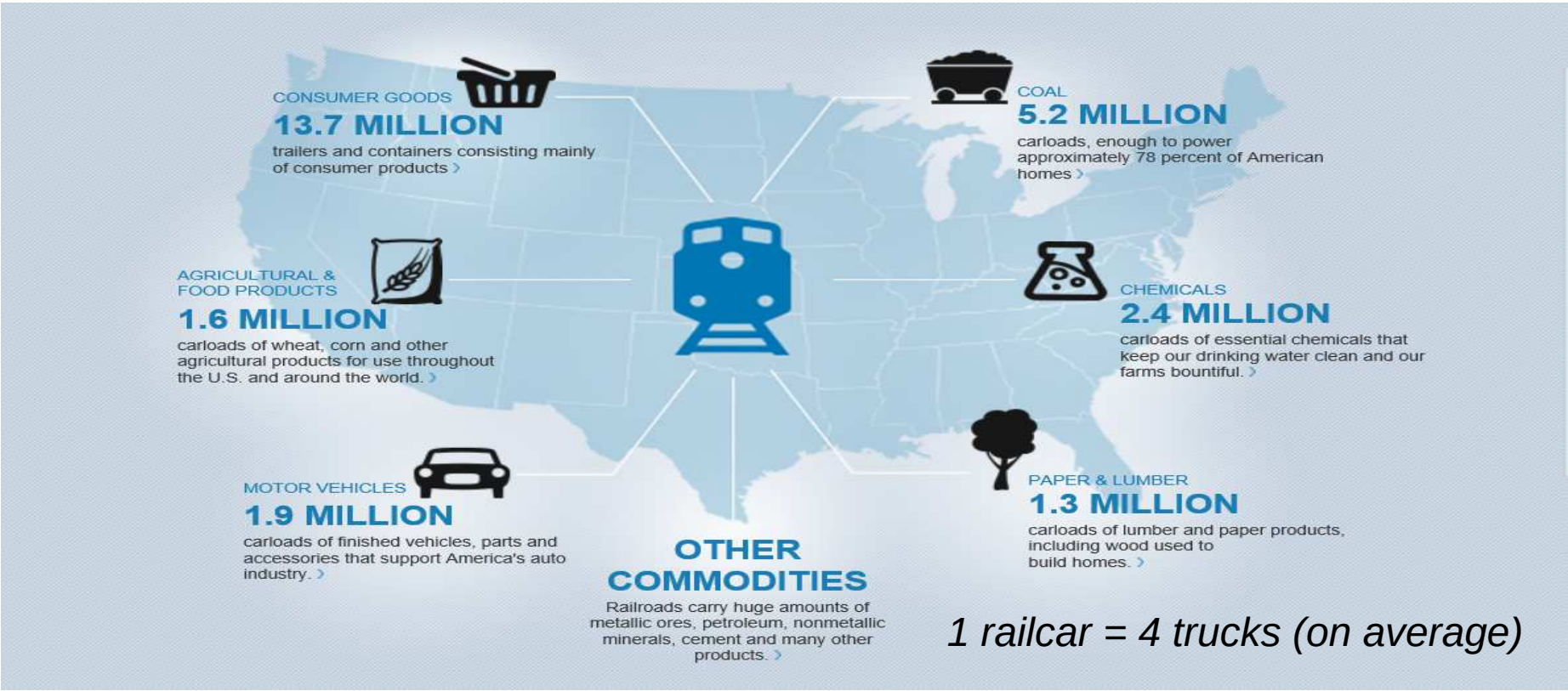
2018 Business Mix

by Freight Revenue $21.4 Billion



Rail Commodity Mix in the U.S.

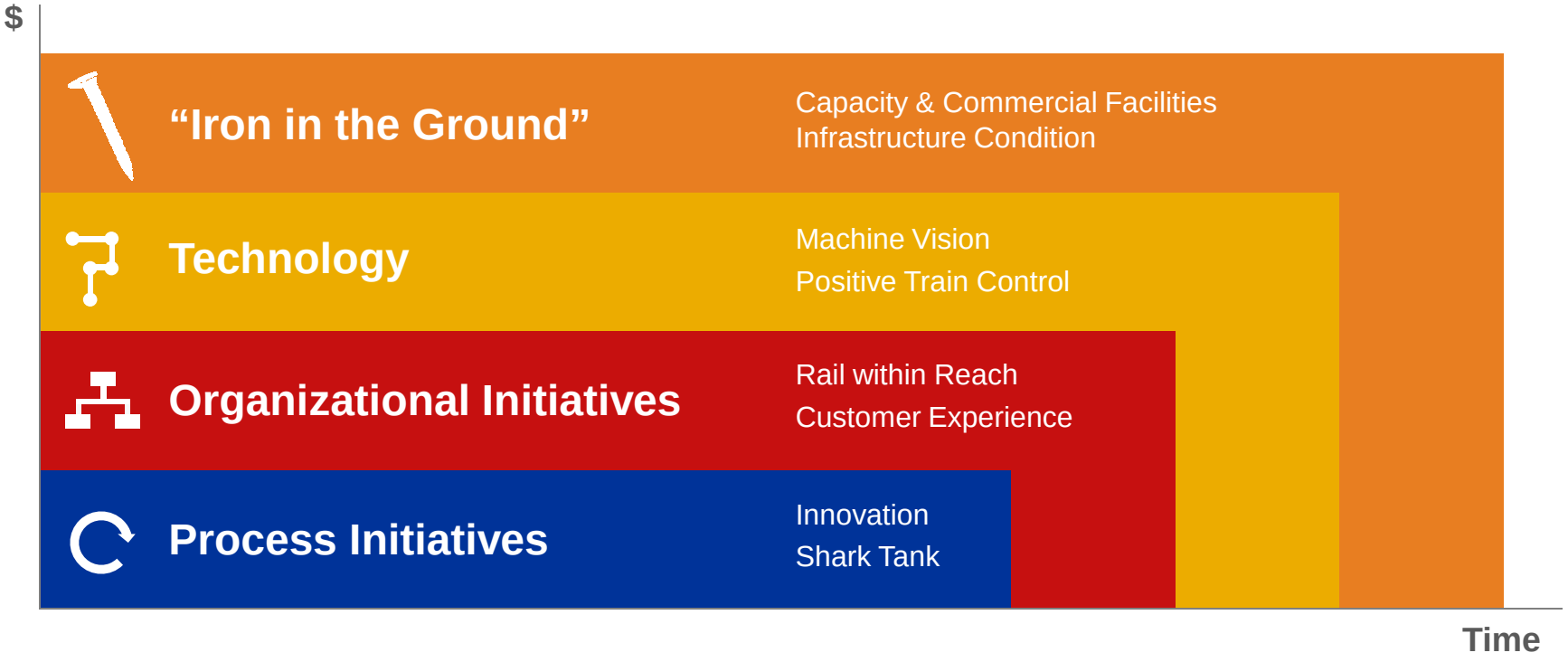
By rail carload



1 railcar = 4 trucks (on average)

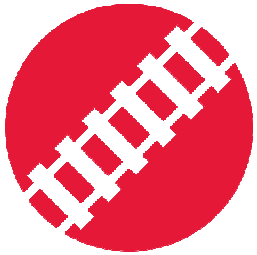
Source: AAR (2014 statistics)

Capacity is More than Capital



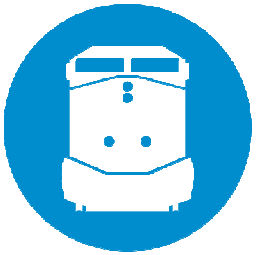
~$3.2 Billion 2019 Capital Plan

58%



$1,880 M
Infrastructure Replacement

11%

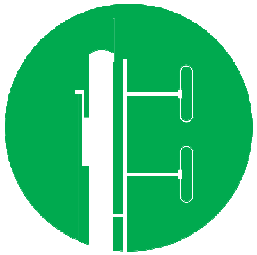


$345 M
Locomotives & Equipment

18%

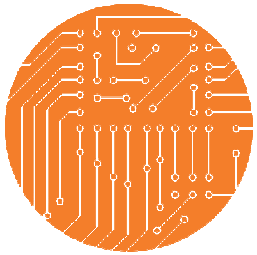
$585 M
Capacity & Commercial Facilities

4%



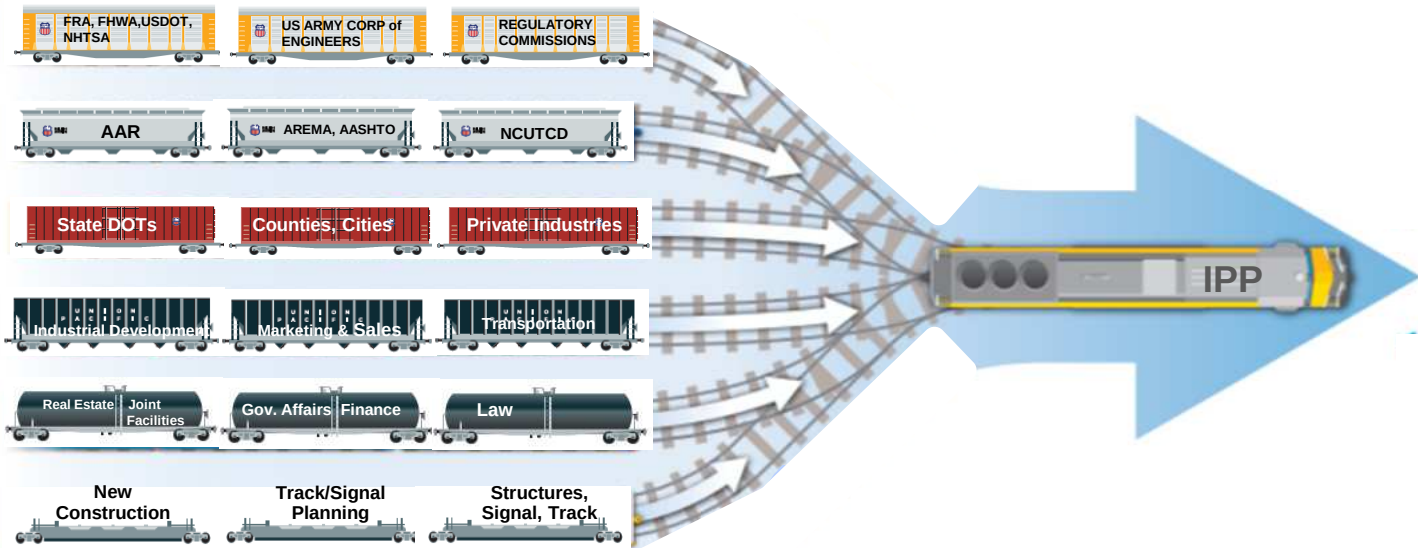
$115 M
Positive Train Control (PTC)

9%



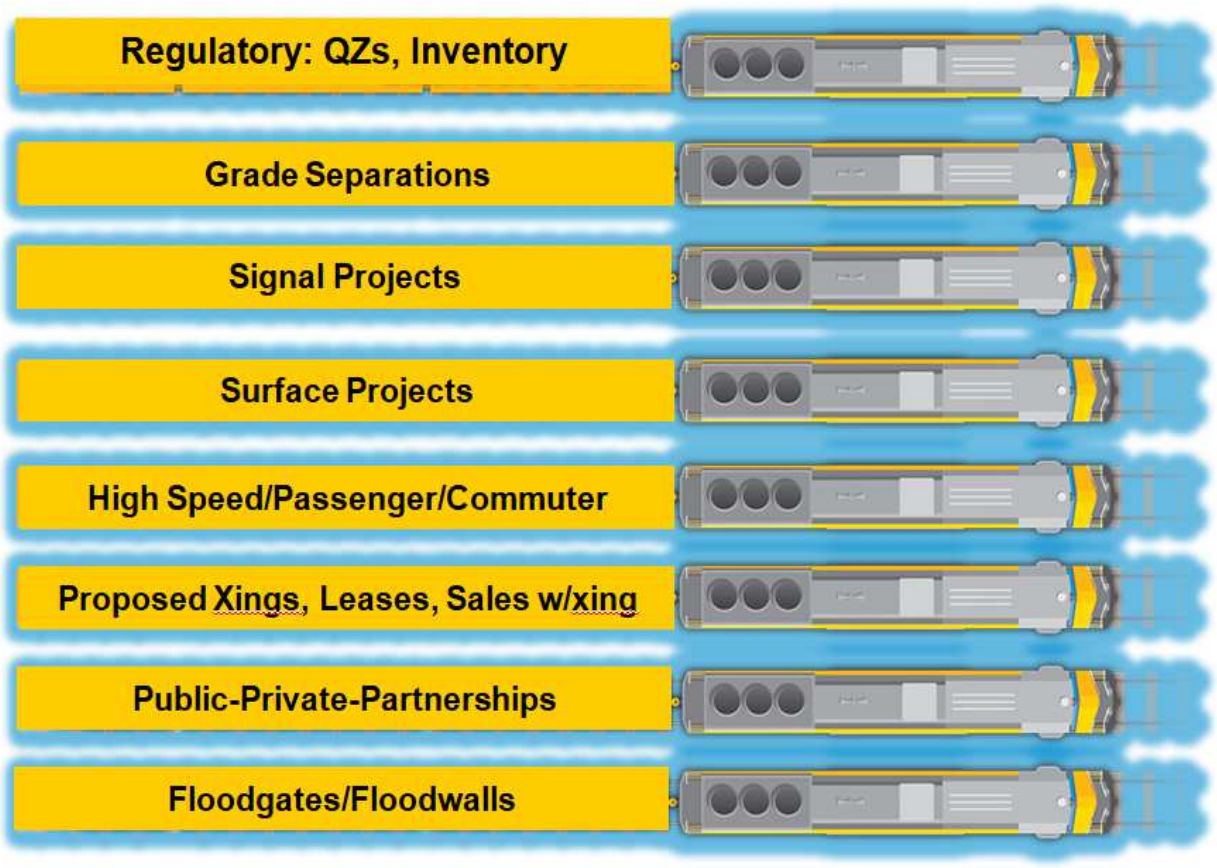
$300 M
Technology & Other

What are Industry & Public Projects?



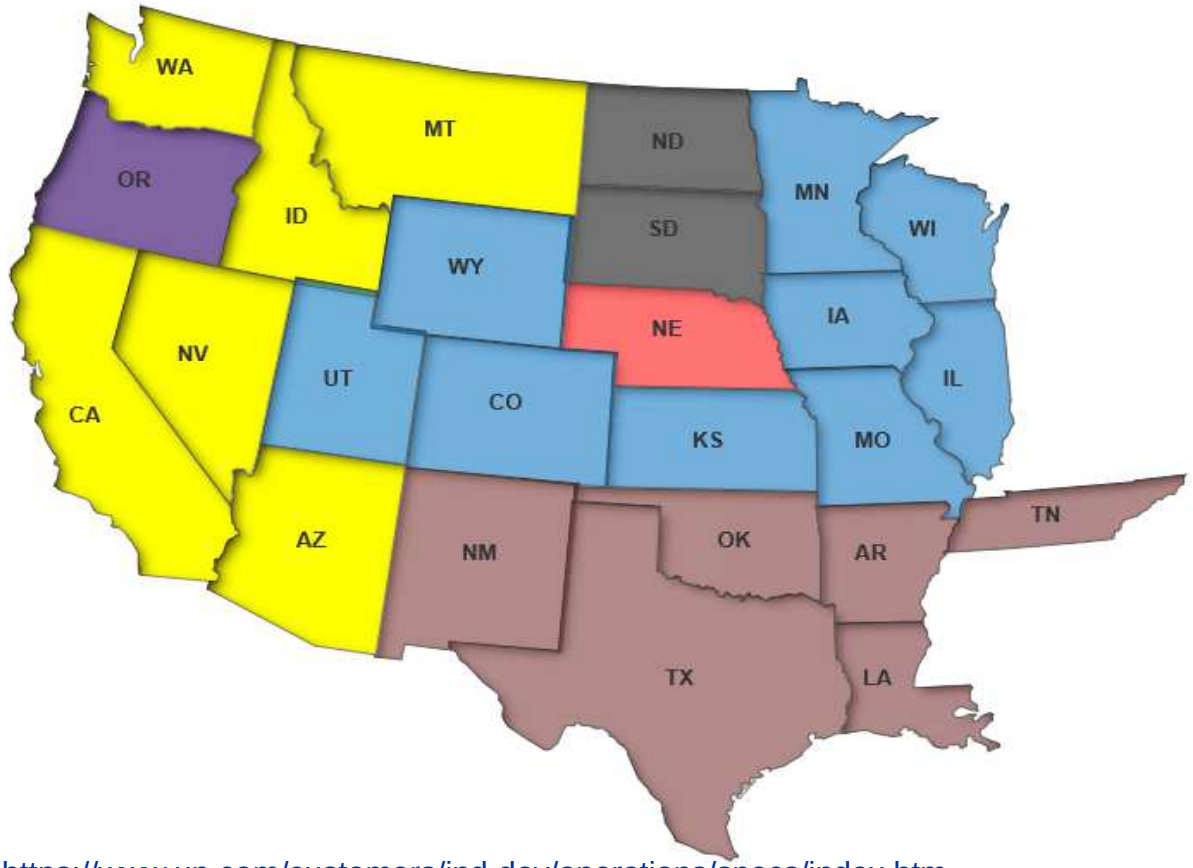
- Crossing Surface Upgrades
- Crossing Signal Upgrades
- Grade Separations
  - New
  - Demolitions
- Crossing Closures
- Crossing Inventory
- Quiet Zones
- Trails/Pedestrian Pathway
- New Crossing Requests
- Speed Increases
- PPP
- Levees
- UP Capacity
- PUC Hearings and Filings
- Expert Testimony
- National Representatives

2019 Public Projects



- 60 Quiet Zones YTD
- Over 10k Crossing Inventoried
- 548 Grade Separations
- 983 Signal Projects
- 598 Surface Projects
- 800 Agreements/Year
- 182 HSR/Commuter/Passenger
- Pedestrian/Recreational Trail
- PPP – Border Highway, etc
- Crossing Closures
- Review IPP 3rd Party Flagging Requests

Union Pacific's Industry & Public Projects Team



Chris Keckeisen
MN, WI, IL, IA, MO, KS, CO, WY, UT

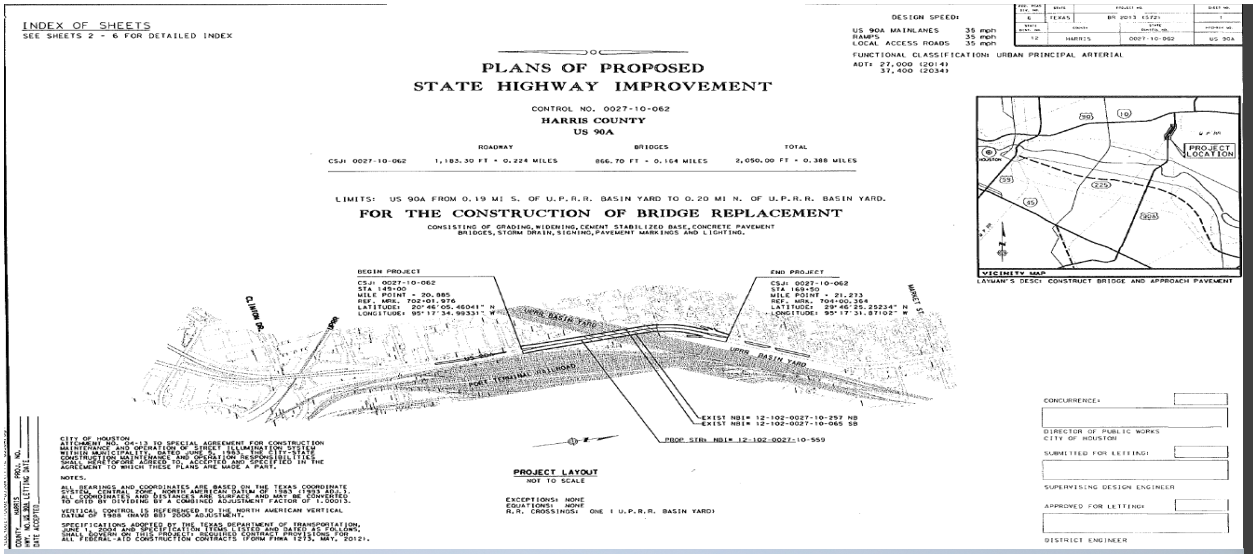
Doug Woods
NM, TX, OK, AR, TN, & LA

Peggy Ygbuhay
WA, ID, MT, NV, AZ, & CA

Melinda Dubay
Quiet Zones, Crossing Inventory, & Nebraska

Mary Schroll
High Speed Rail, Commuter, Passenger, AMTK, & OR

https://www.up.com/customers/ind-dev/operations/specs/index.htm



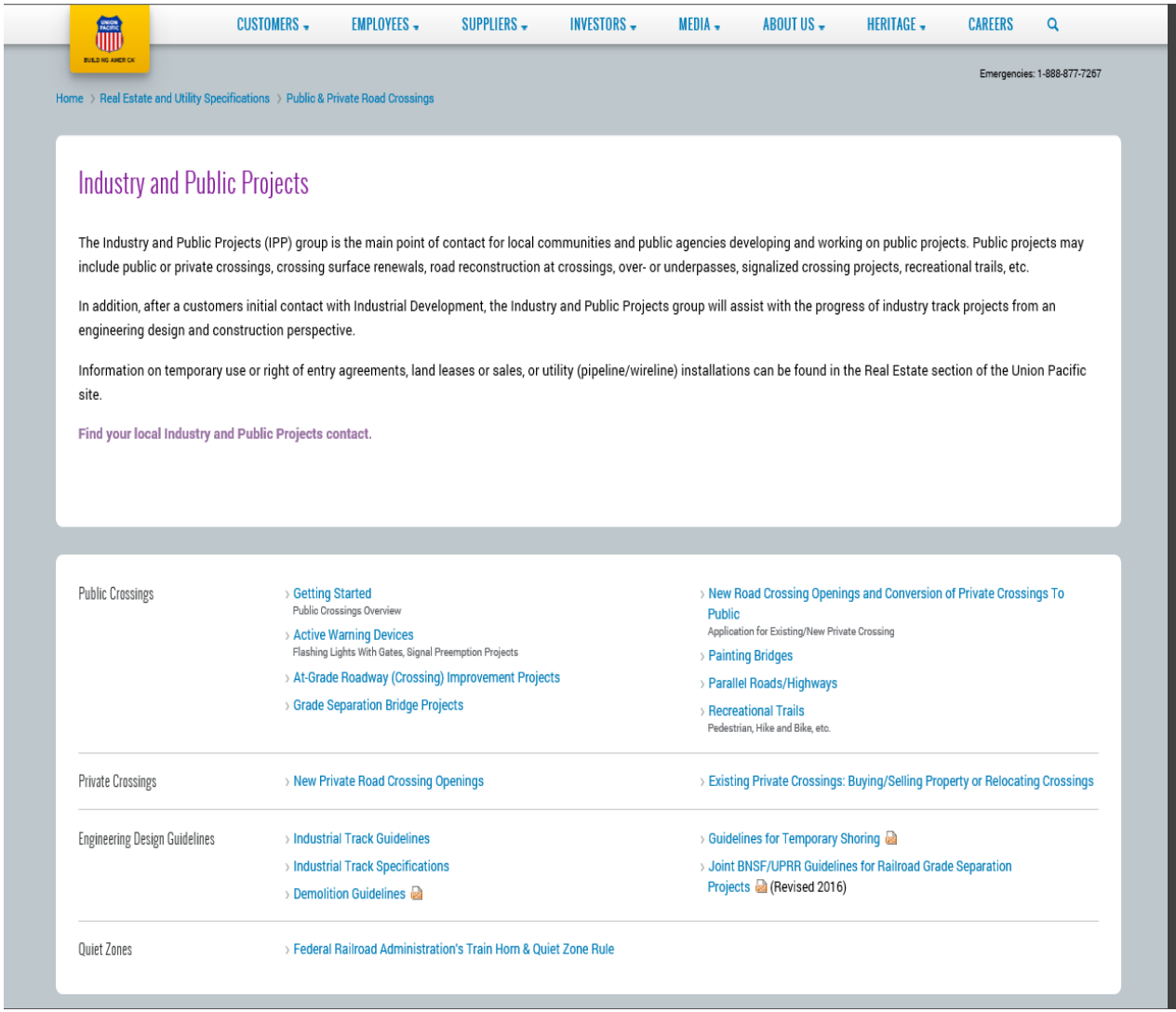
CONSULTANT SUPPORT

GENERAL

- ASI Administrative
- TAVLA Inventory

PUBLIC PROJECTS

- Benesch PP/CM/DR
- RailPros PP/CM/DR/PR/Flag
- Olsson PP/CM/DR
- CTC QZ/PR
- Arcadis QZ
- HDR CM



Existing Web Page

- Contacts
- How to start
- Crossing Improvements
- Grade Separations
- Joint RR Guidelines
  - Shoring
  - Grade Seps
- Bridge Painting
- Trails
- Quiet Zone Data

- Third Party Flagging
- Public Project Consultant Support
- UP Construction Support

- COMING SOON:
- Online contact center
- Fillable Form to start projects
- Contacted by UP consultant within one business day

Potential Project Pitfalls

CONTACT Railroad EARLY on in Project!!!

- Negative operation impact
- New At Grade Crossings
- New Trails
- Overpass that does not span operating ROW
- Underpass without clear RR benefit
- Design Build without 100% RR Design
- Signal Project average is 22 months
- Construction Sequencing & Method Plans
- Traffic Control Plans
- Utility Relocations
- Sign Board Relocations

Public Benefits from Rail Projects

What should the qualifications for public private project be?

- Potential Public Benefits
  - Improved capacity and mobility for vehicles
  - Reduced pavement and bridge repairs on roads
  - Avoided reconstruction/new construction costs on roads
  - Air quality improvements
  - Trucks off the roads
- Rail Benefits
  - Operational flexibility
  - Advances conceptual projects that also have public benefit
- Rail Project Considerations
  - Has to meet today's engineering standards
  - Takes years not months to develop
  - Takes millions not thousands of $'s

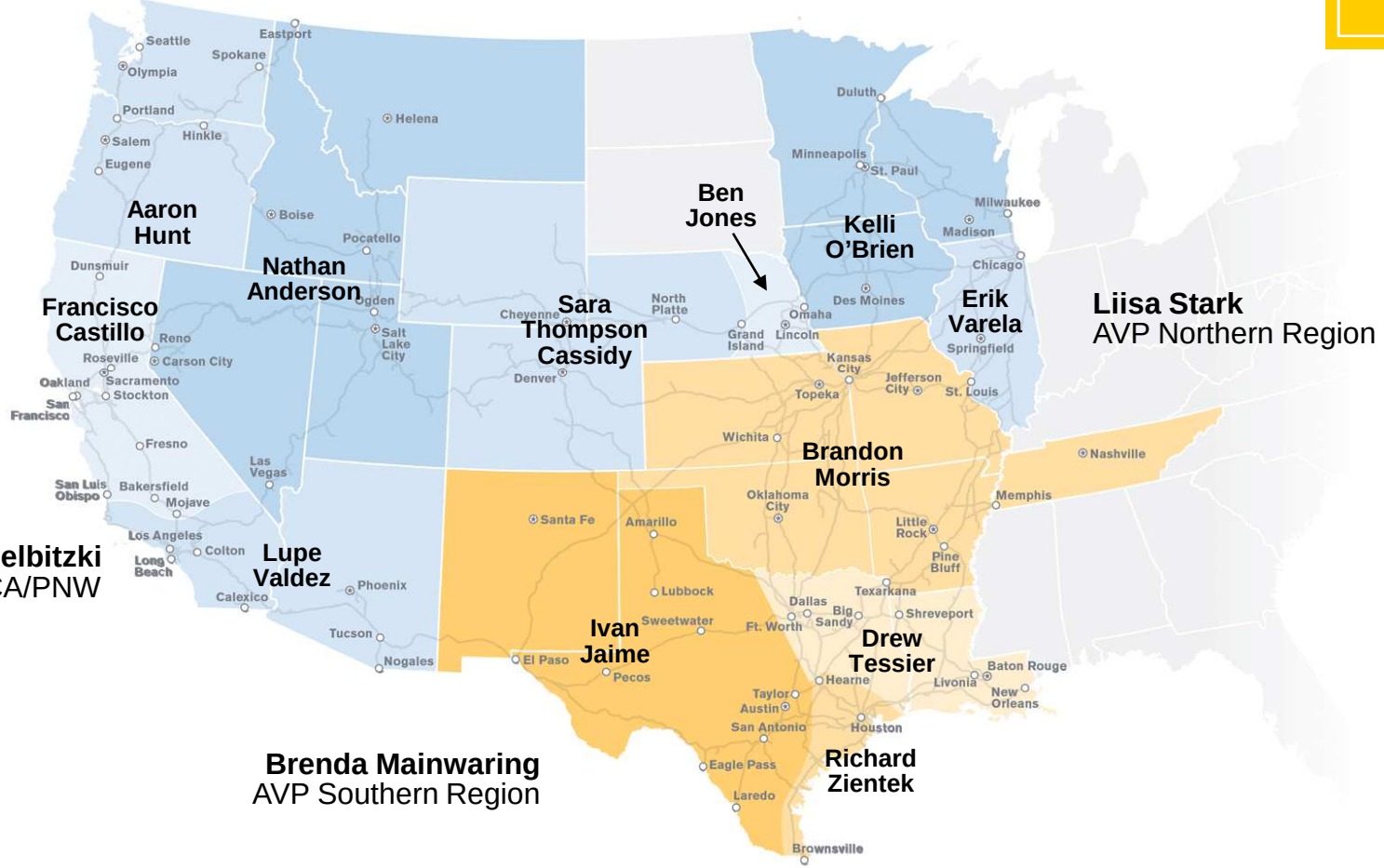
Added rail capacity diverts trucks from publicly funded highways.
This creates capacity for passenger vehicles, reduces emissions, and lowers taxpayer costs for road maintenance and repair.

Questions?

https://www.up.com/real_estate/roadxing/industry/index.htm

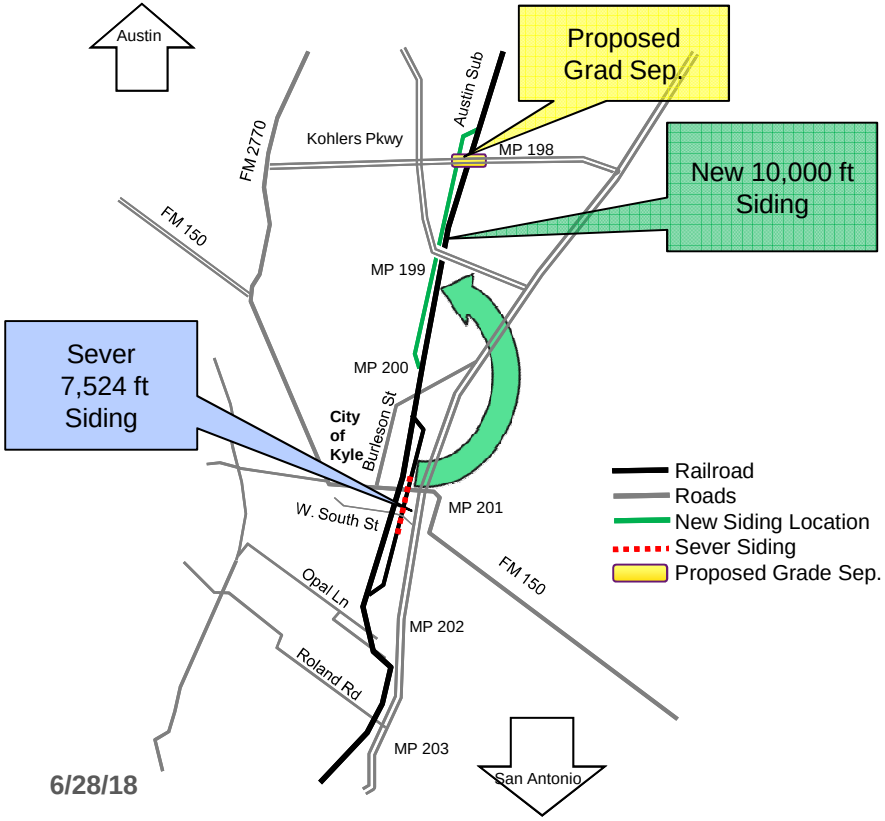
Public Affairs

https://www.up.com/aboutup/community/community_contacts/index.htm



City of Kyle Siding Relocation

Siding relocation and grade separation on Austin Sub



6/28/18

Status of Project:

- 2016 Reviewed various locations for 10,000 ft siding
- 2017 Identified location and developed 30% design
- 2018 UP completed 30% design of siding relocation
  - Phase 1 CAMPO approved $14 M funding for construction of siding relocation
  - Phase 2 City of Kyle proposed Kohlers Pkwy Grade Sep to CAMPO

Future Events:

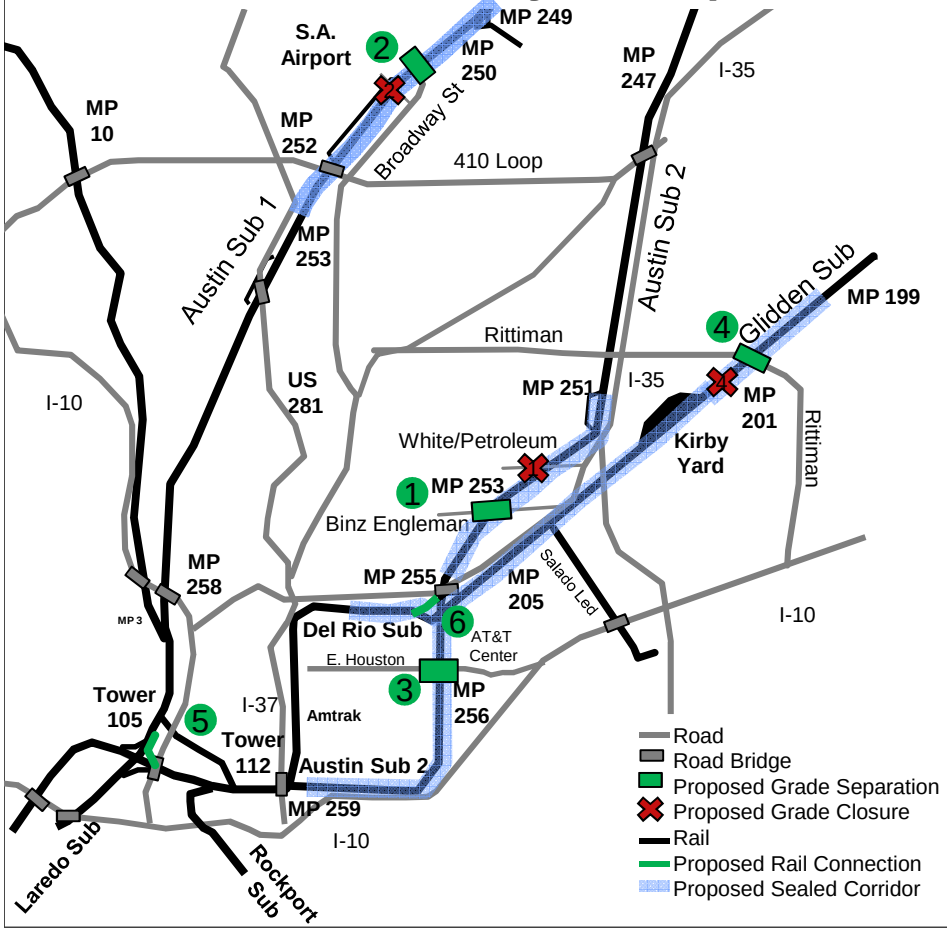
- 2019 CAMPO to add Kohlers grade sep to call of projects 3rd Qtr
  - City to complete 30% design for grade sep
  - UP complete 100% design for new siding (paid by City)
- 2020 CAMPO votes on projects by 3rd Qtr
  - Pending project is Phase 2 Kohlers Pkwy grade sep
- 2021 Letting of rail project
  - Rail project to be let by August 2021 to qualify for funding

Benefits:

- Facilitates vehicle flow through Kyle and Kohlers Pkwy which are seeing growth for residential and industrial use
- Eliminates Kohlers Pkwy (Tier 3) grade crossing

San Antonio – PPP Concepts

Vehicle and rail mobility concepts



MPO and City Consideration

1. Binz-Engleman Road grade separation DOT 415621U
   - Close White/Petroleum Road DOT415620M
2. Broadway Street grade separation (Tier 1) DOT432497K
   - Close McArthur View DOT432499Y
3. East Houston grade separation DOT 415625W
4. Rittiman grade separation (Tier 1) DOT764362W
   - Close off Fratt/Gibbs Sprawl Road DOT764363D
5. Wye connection from Del Rio to Austin Sub 1
6. Wye connection from Del Rio to Austin Sub 2

Public Issues

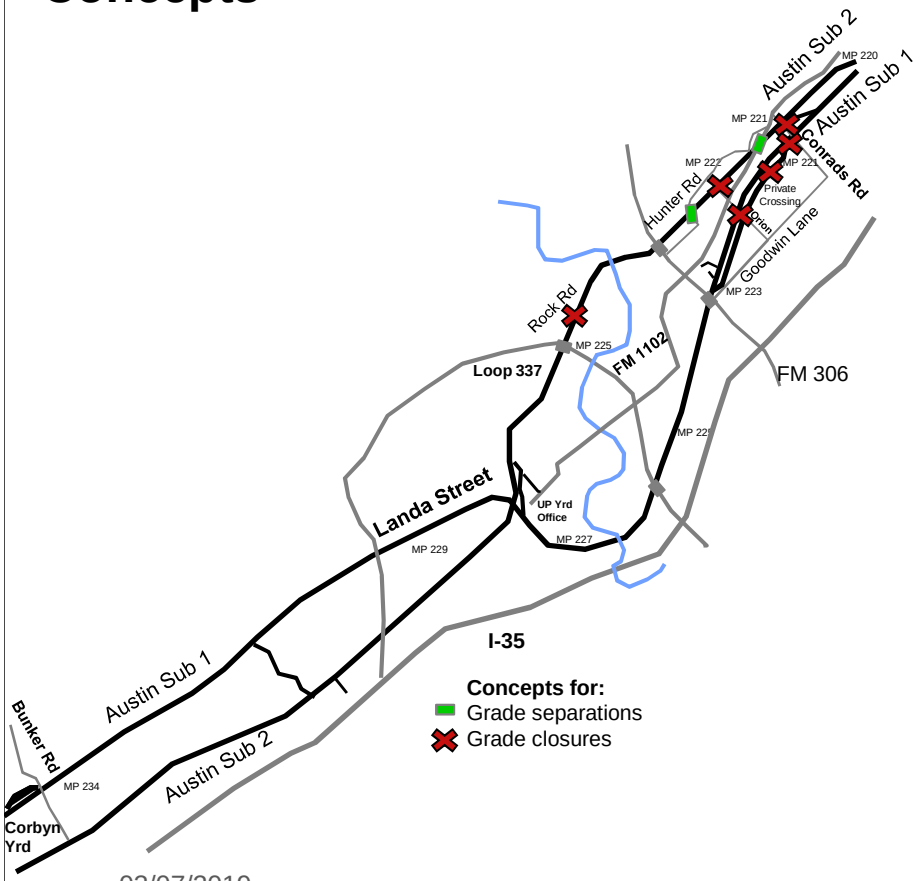
- Motorist delays
- Motorist safety

Benefits

- Improved air quality
- Improved mobility and safety for motorists and pedestrians
- Creates quiet zones in certain corridors

New Braunfels

Concepts



Grade Separation Concepts:

- FM 1102 (TxDOT San Antonio District)
- Hunter Road

Closure Concepts:

- Conrads Road (2 closures) – Austin Sub 2 tier 2
- Orion Road (2 closures)
- Rock Road (closure)

Benefits:

- Grade separations improve mobility benefits in area
- 3.9 acres at Corbyn $500 k

Dayton Hwy 90 Grade Separation

PPP – HGAC, Liberty County, TxDOT, UP

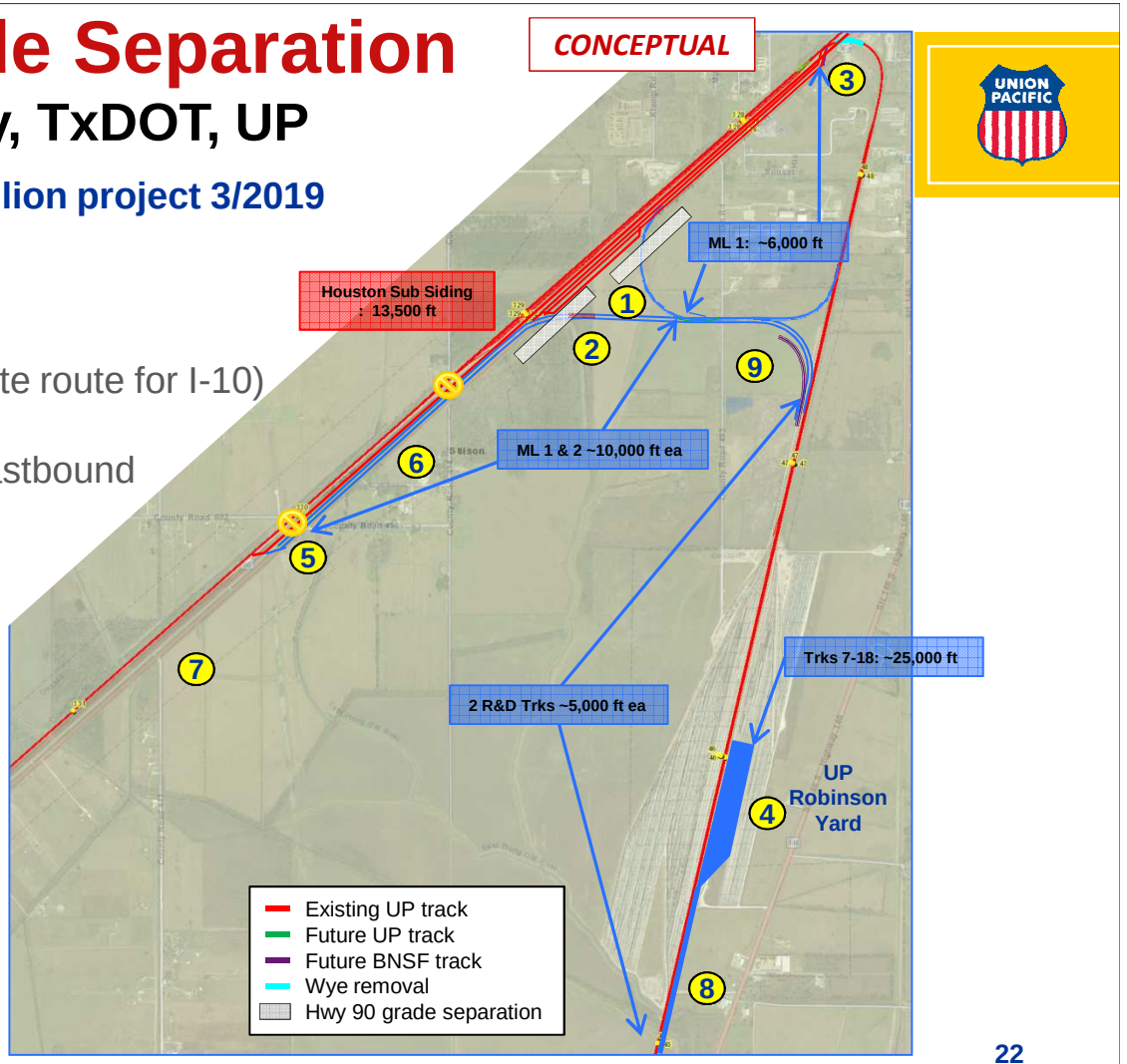
HGAC awarded $46 Million toward $300 Million project 3/2019

Benefits:

- Creates mobility for TxDOT Hwy 90 (alternate route for I-10)
- Eliminates Tier 1 grade crossing on Hwy 90
- Improves UP & BNSF capability to move Eastbound

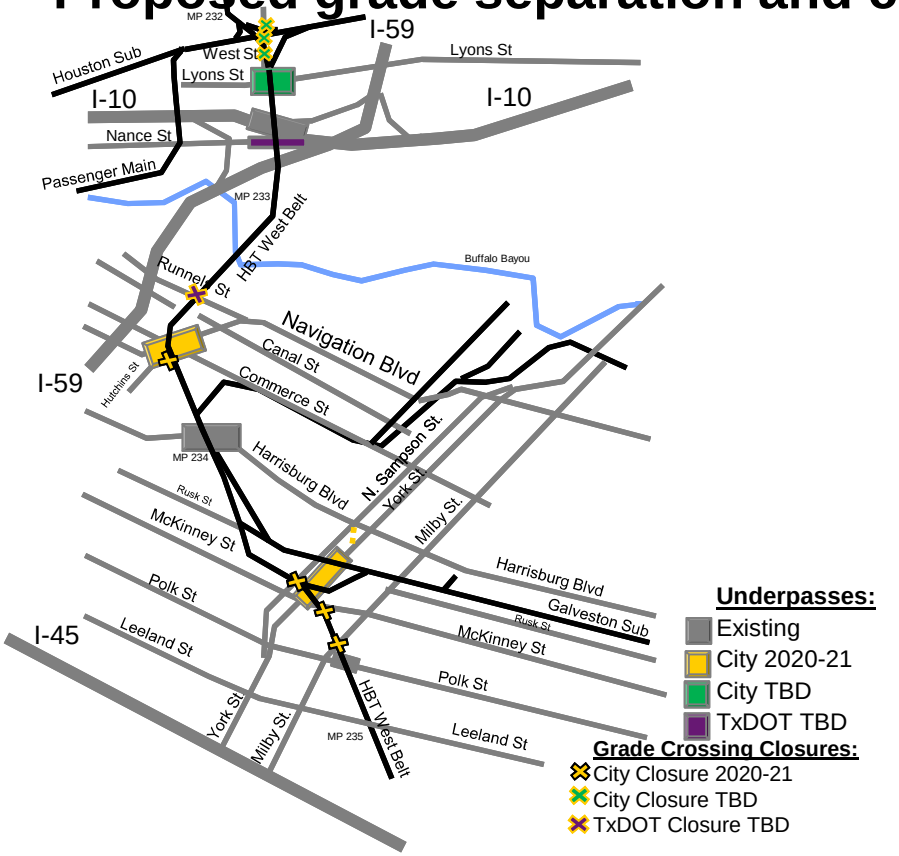
Next Steps:

TxDOT and County considering future engineering activities and possible ROW acquisition.



HBT West Belt Grade Separation

Proposed grade separation and closures



HBT $1.25 M commitment for PE & Design to be applied to 5% cost share for grade separation (HBT paid ~$415 k to date)

Project:

- 2012 Feasibility study identified grade separation and closures
- 14 Grade crossing closure opportunities (5 underpass structures):
  - York Street – 2 structures (~7,500 ft rail corridor)
    - CE granted Mid 2017 – estimated construction 2020 at ~$36 M cost
    - 5 Closures – York (2), Milby (tier 2), Mckinney and Sampson
  - Navigation/Commerce (~8,400 ft rail corridor)
    - CE pending - estimated construction 2021 at ~$38 M cost
    - 2 Closures – Commerce and Hutchins
  - Nance Street (~13,000 ft rail corridor)
    - TxDOT EIS needed and is part of I-45 relocation – estimated construction and cost TBD
    - 2 Closures – Nance and Runnels (will city allow closure of Runnels)
  - Lyons Street (~13,500 ft rail corridor)
    - CE granted Dec. 2017 – estimated construction TBD at ~$29 M cost (low probability)
    - 4 Closures – Lyons and West (3)

Benefits:

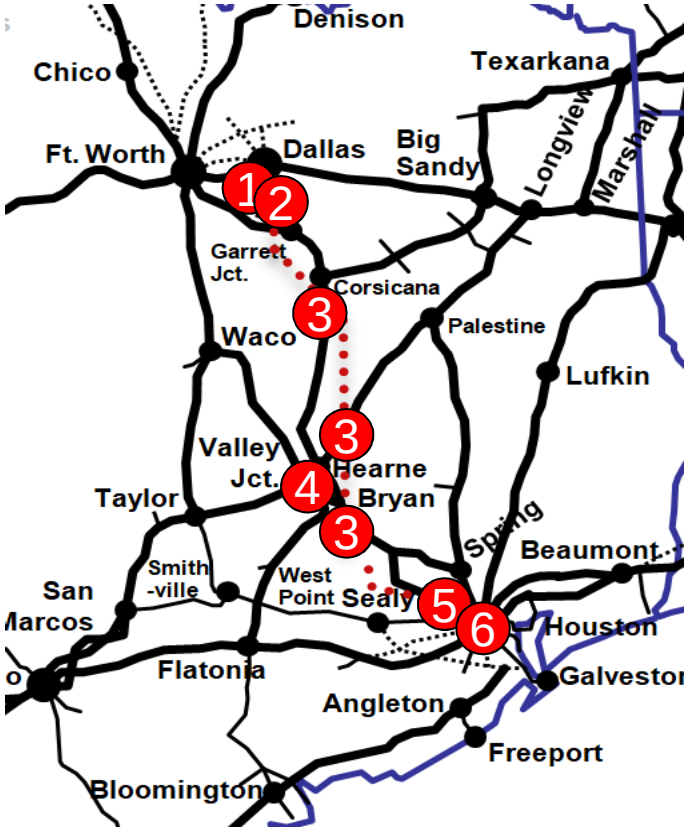
- Facilitates mobility in downtown area
- Offers a sealed rail corridor

Recommendation:

- Cancel MOU and request credit of $415 on future grade separation

Texas Central

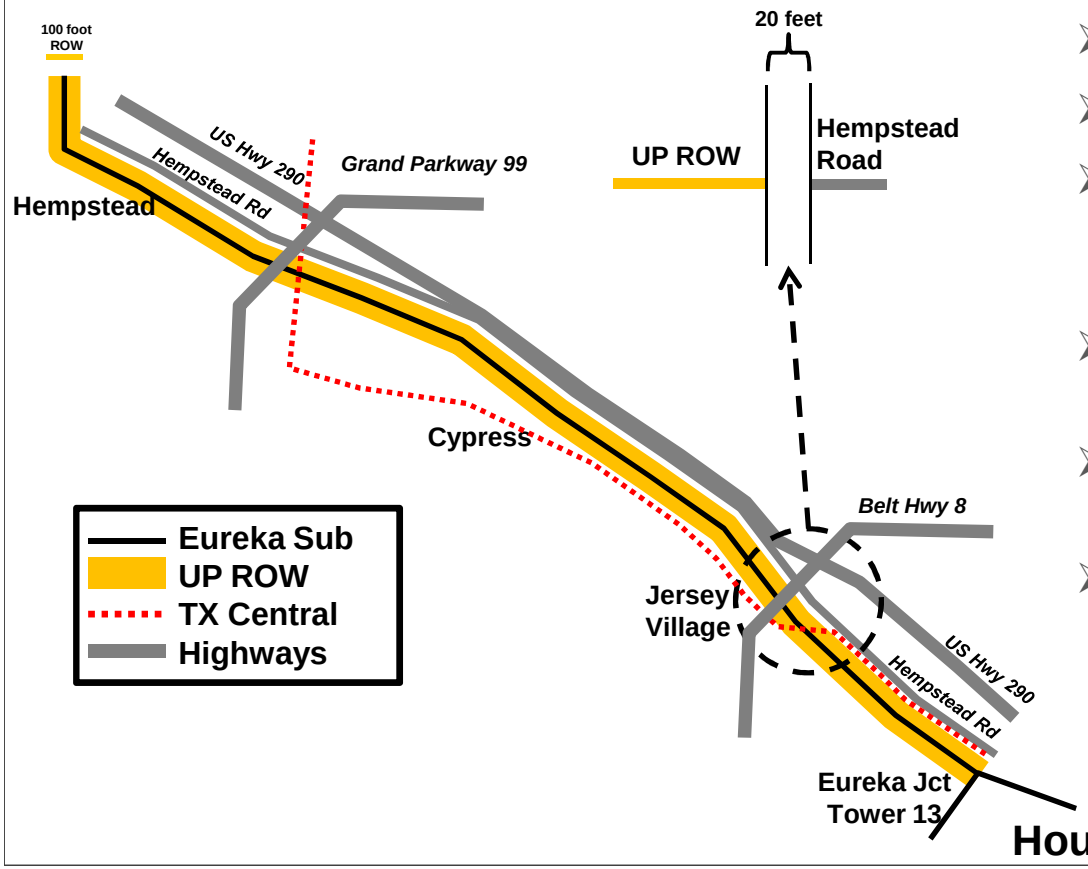
Potential UP conflicts and areas of negotiation



1. Dallas Station Location – Adjacent to Cadiz Yard
2. Ennis / DFW (BNSF) Sub – Protect access to Prime Point and other Industrial development
3. Various Overhead Crossings
4. Bryan / College Station Alignment
5. **Parallel to the Eureka Sub into Houston. Includes several potential pinch points. Opportunity for crossing closures and grade separations**
6. Houston Station Location – N. West Houston

TCR Potential Conflict Location 5

Eureka Sub from MP 1.5 to MP 21 – 2017 EIS Alignment



- TCR has no other options in this area
- Tight Highway - Rail Corridor
- 35 Grade Crossings
  - Three Tier 1 crossings
  - Potential for closures or improved safety
- 20 ft of City ROW from edge of UP ROW to Hempstead Road
- UP maintains ~100 ft ROW on Eureka Sub through this area
- Many potential Pinch Points in this urban area