

# Rail Operations Department - Overview





# MAX Presentation

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Rail Operations

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# System Summary

- Current system: 58.5 miles, 8 lines, 54 stations, 172 LRVs, approx. 400 employees
- 84,000+ weekday passengers
- Three Maintenance facilities (Elati, Mariposa/Navajo, and Rio Court)
- Operations Control Center
- Annual Operating Budget \$78 million





# System Map

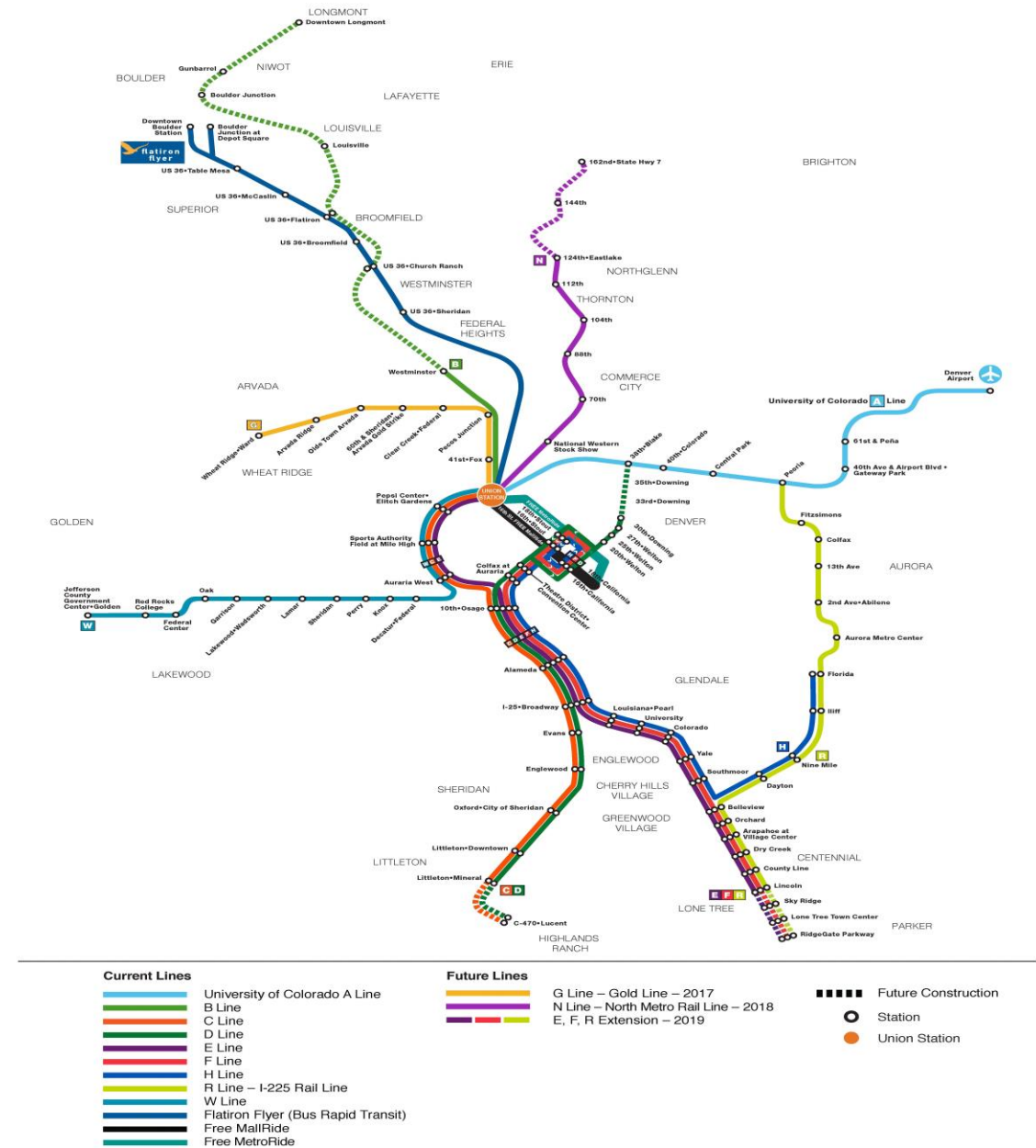
Denver Union Station – Opened 2014

## Light Rail Corridors:

- **Central** – 7.1 miles - Opened 1994
  - **Downtown Loop** – Opened 2018
- **Southwest (SW)** – 8.7 miles - Opened 2000
- **CPV** – 1.8 miles - Opened 2002
- **Southeast (SE)** – 19.1 miles - Opened 2006
- **West** – 12.1 miles - Opened 2013
- **I-225** – 10.5 miles – Opened 2017

## Light Rail Expansion:

- **SE Extension** – 2.3 miles – Opening Spring 2019
- **Central Extension** - .8 miles - TBD
- **SW Extension** – 2.5 miles - TBD





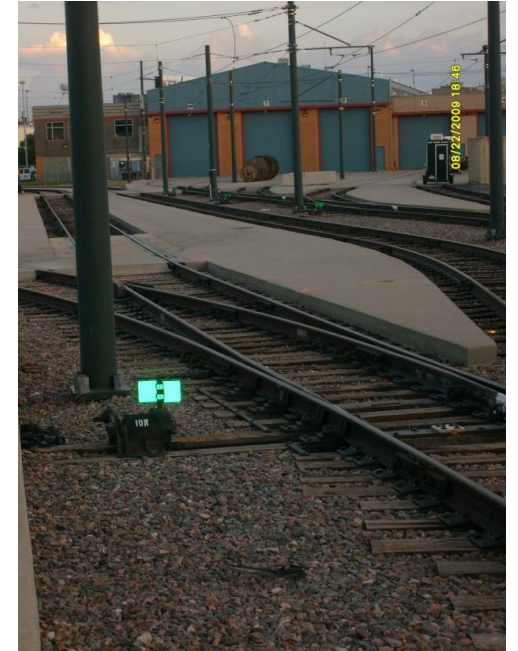
# Facilities



**Elati**



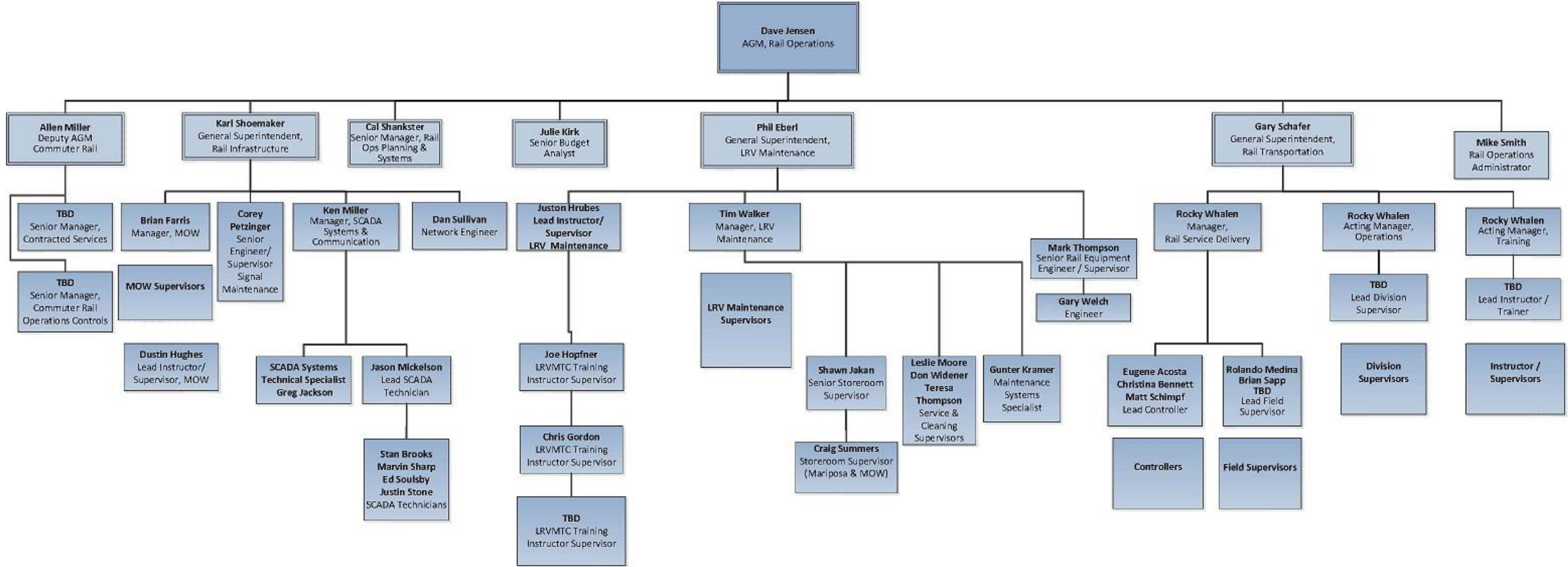
**Rio Court**



**Mariposa - Navajo**

# RTD Rail Operations Department

## 2019





**SD-100 – 49 vehicles**  
**LRV 101-149 – DC Propulsion**

**SD-160 – 123 vehicles**  
**LRV 201-323 – AC Propulsion**



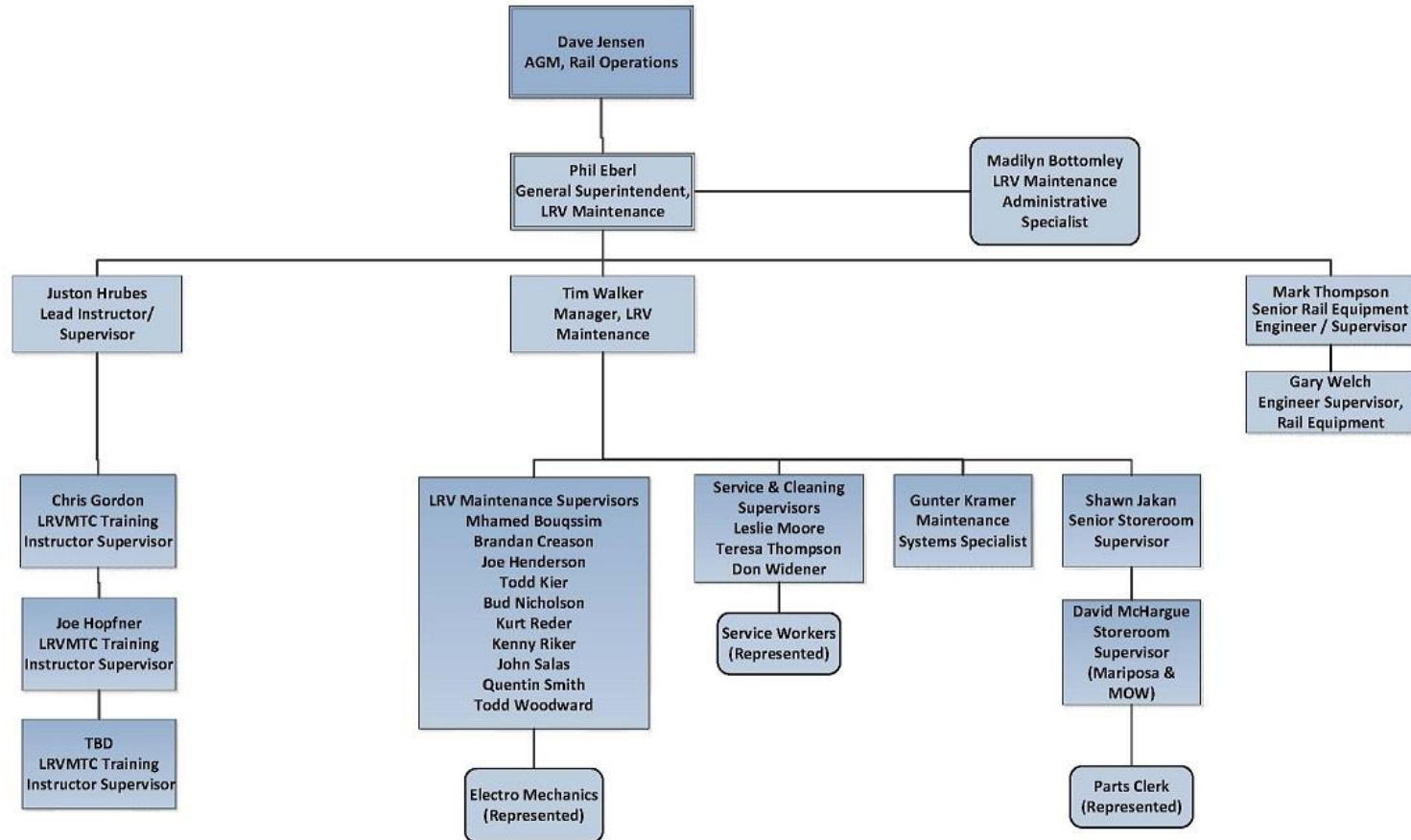
Currently receiving 29 new vehicles

# Rail Operations Goals

- Open Southeast Rail Extension for revenue service and North Metro stand-up ready by fall
- Receive all new light rail vehicles
- Plan expansion of Light Rail Operations and Staffing
  - Develop Light Rail Quality Control/Technical Support unit



## RTD Rail Operations Department LRV Maintenance 2019



# Electro-Mechanic Training



# Electro-Mechanics





# Electro-Mechanic Working on an LRV Midlife





# Service Workers



# Maintenance Support Specialist



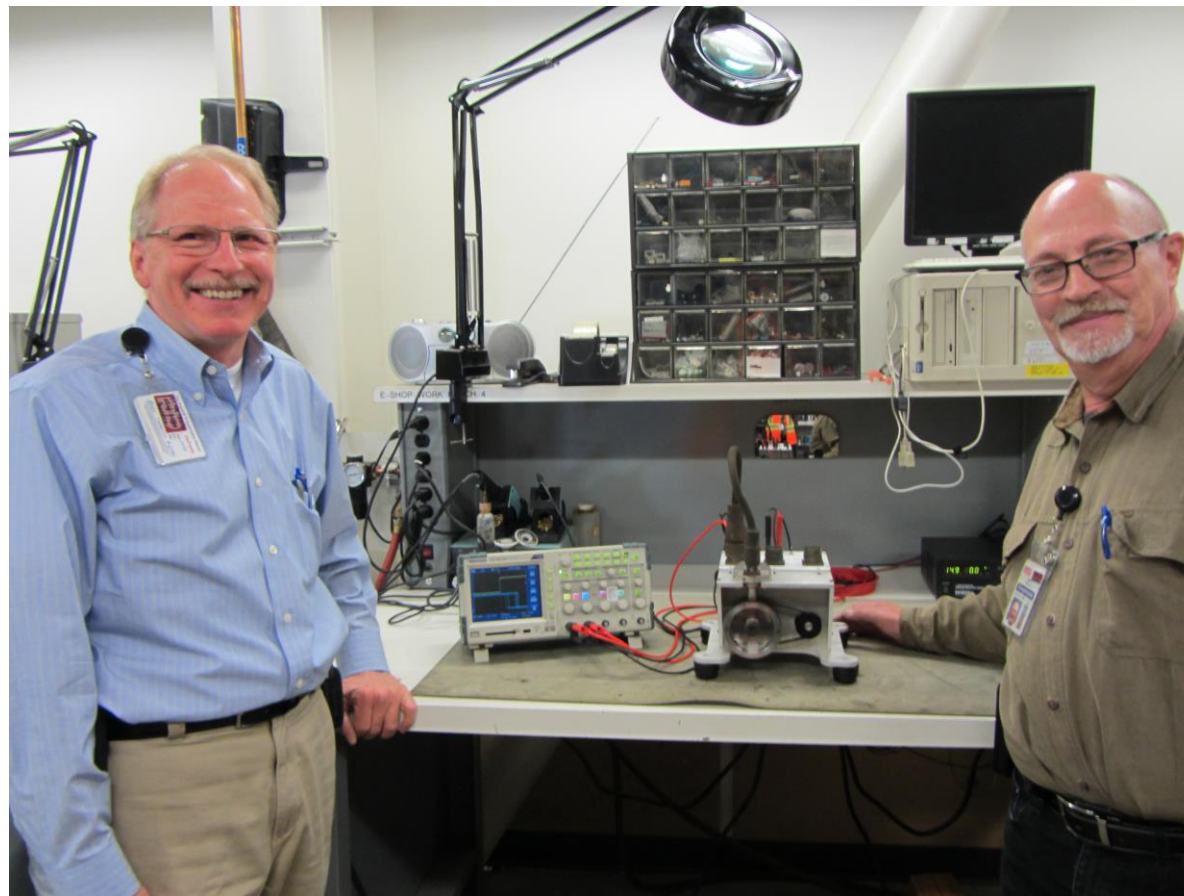


# Storeroom



Vertical Lift Module (VLM)

# Engineering

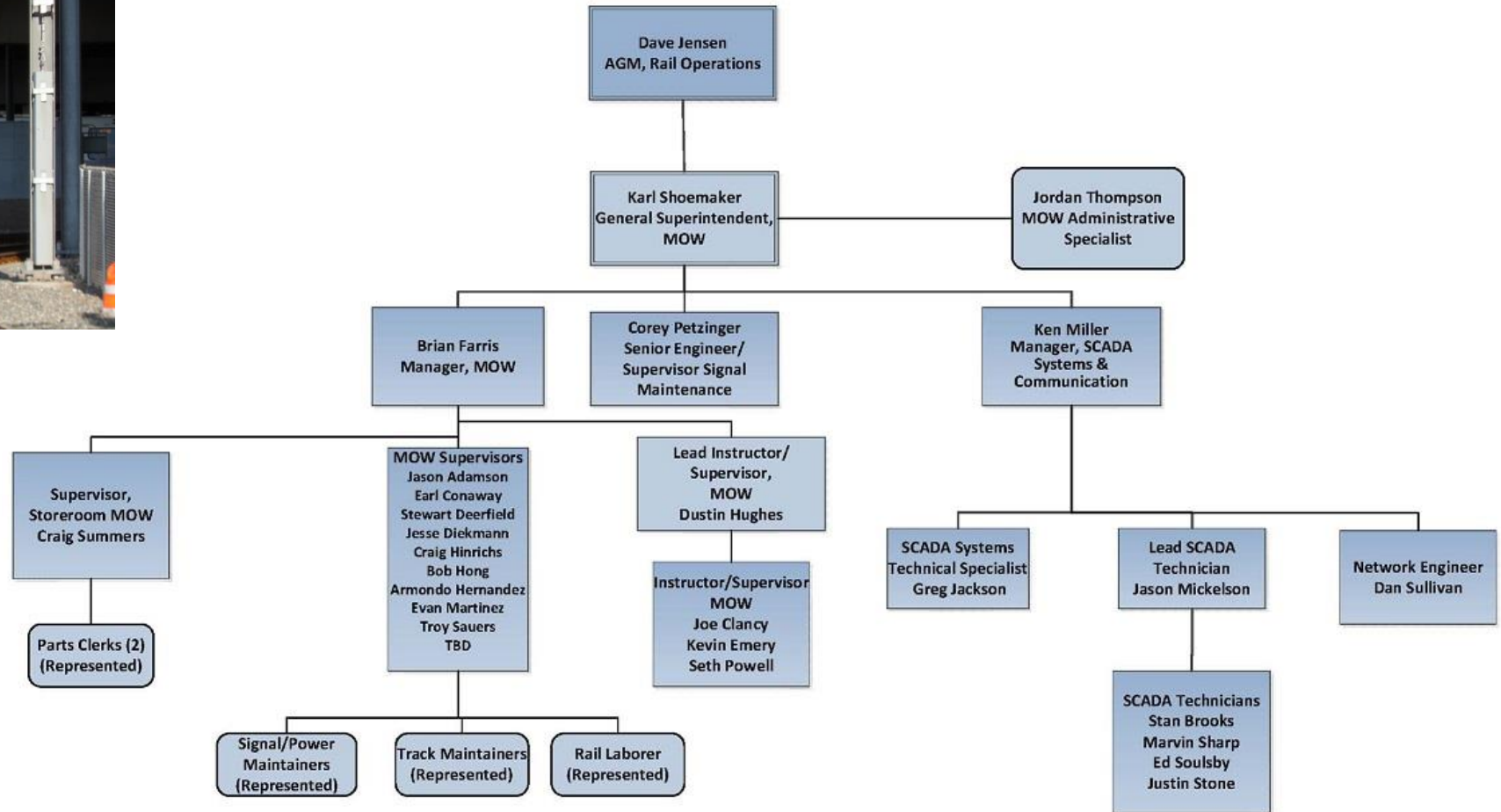


## Speed Sensor Testing

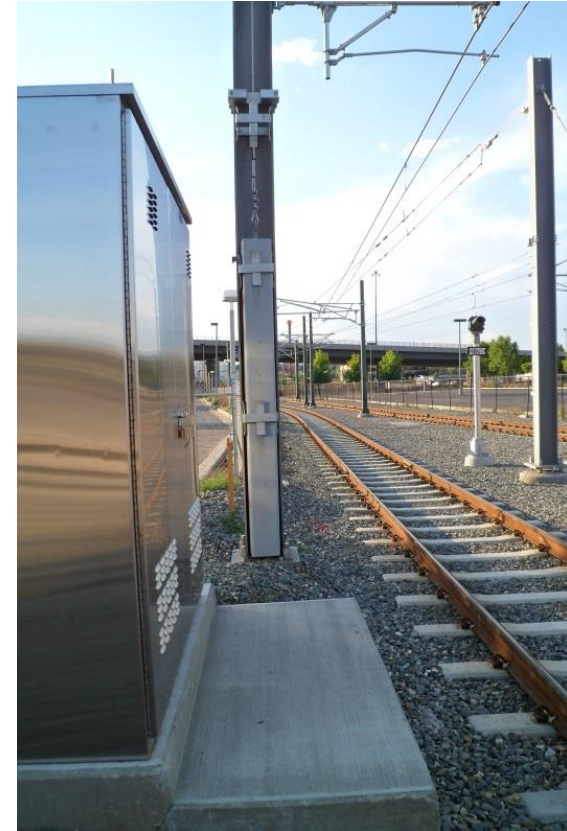




## RTD Rail Operations Department MOW 2019



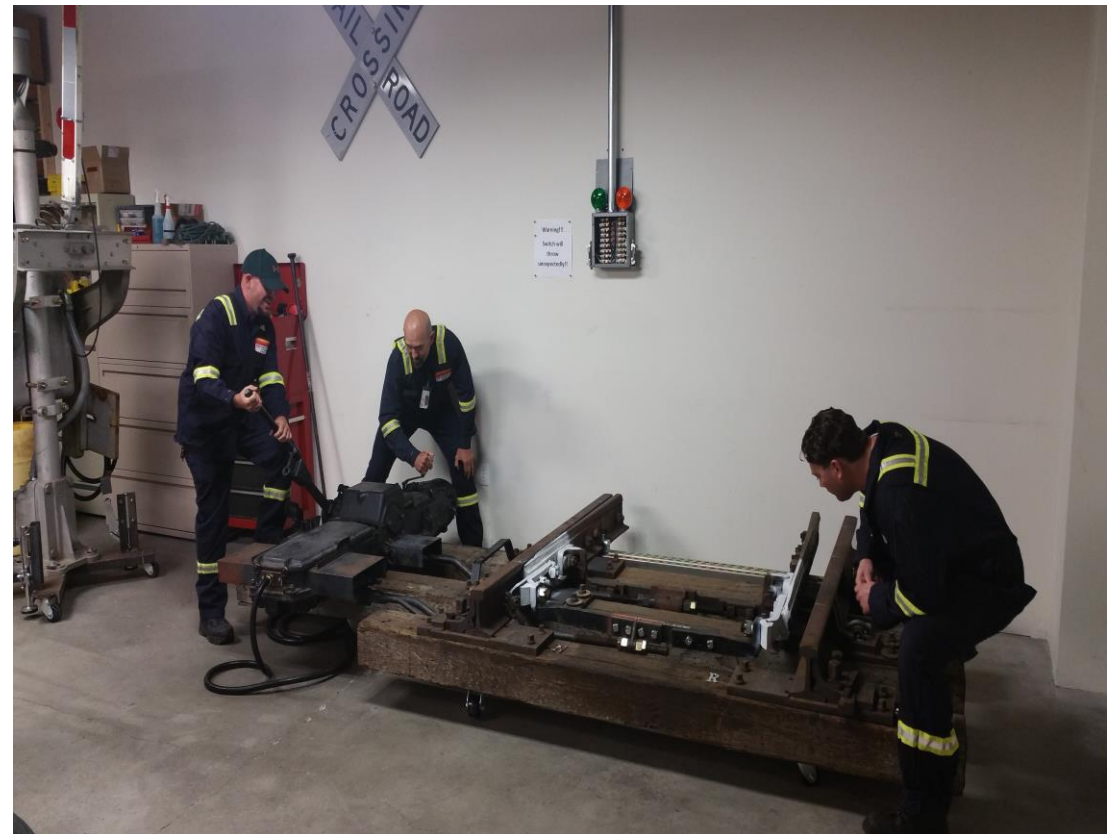
# Light Rail MOW-Infrastructure



Maintains the Infrastructure –  
 Track, Signals, Power, Overhead Lines, Crossing Gates, TPSS, Relay Cases,  
 Grade Crossings, Right-of-Way, and Stations



# MOW Training



# Signal & Power Maintainer





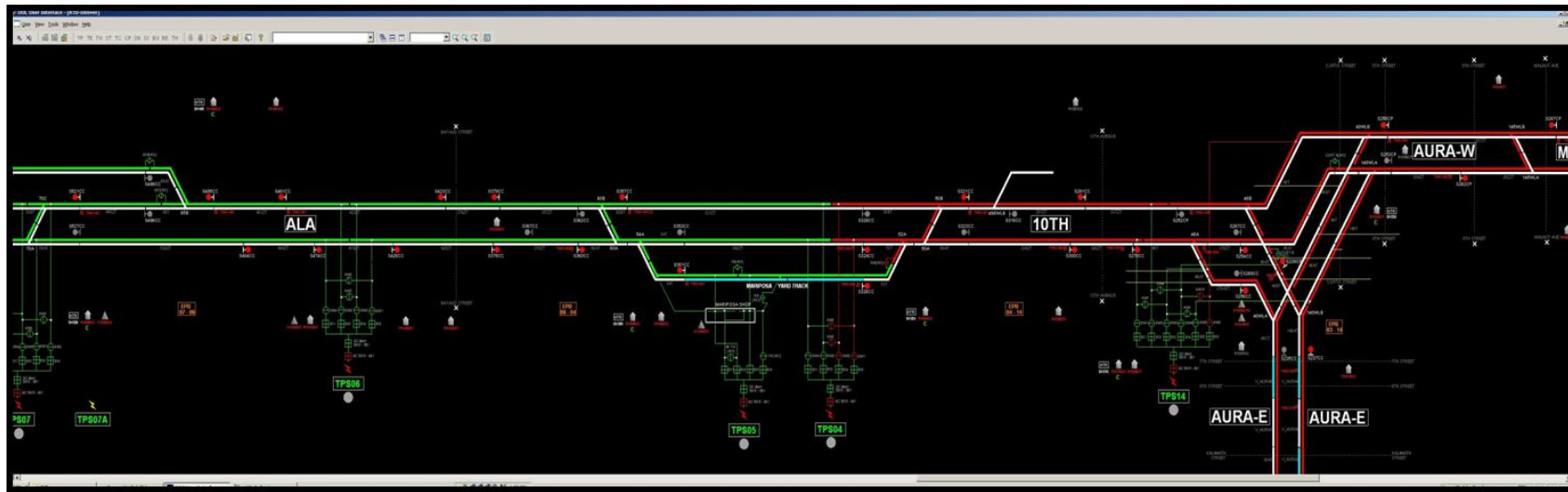
# Track Maintainer



# Rail Laborer



# Light Rail Infrastructure: SCADA (Supervisory Control and Data Acquisition)





# SCADA Technician

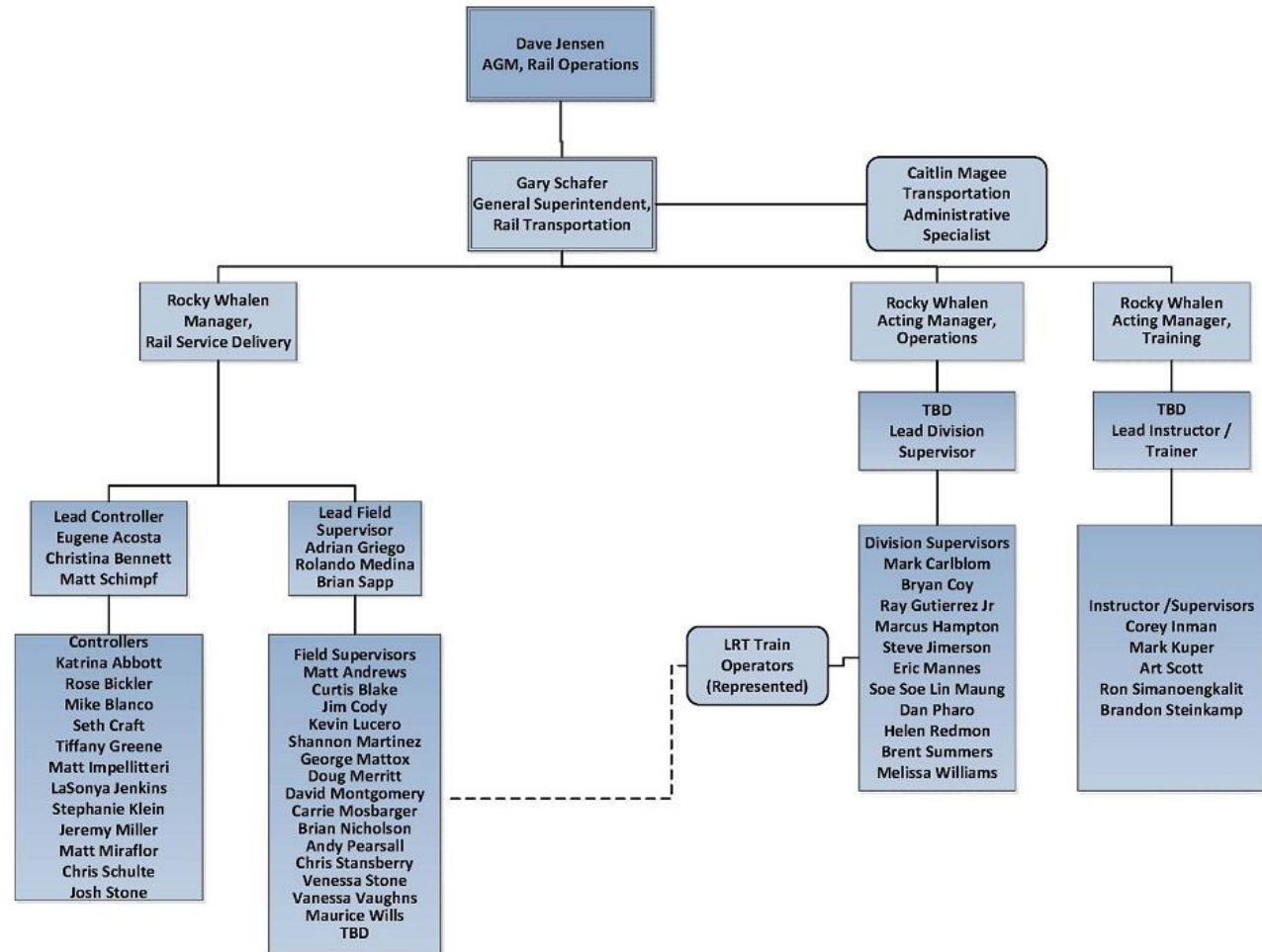


Maintains the digital “spine” that monitors and control field devices.





### RTD Rail Operations Department Transportation 2019



# Transportation - Controllers





# Field Supervisors





# Division Supervisors and CSR



# Train Operator



# Transportation Training

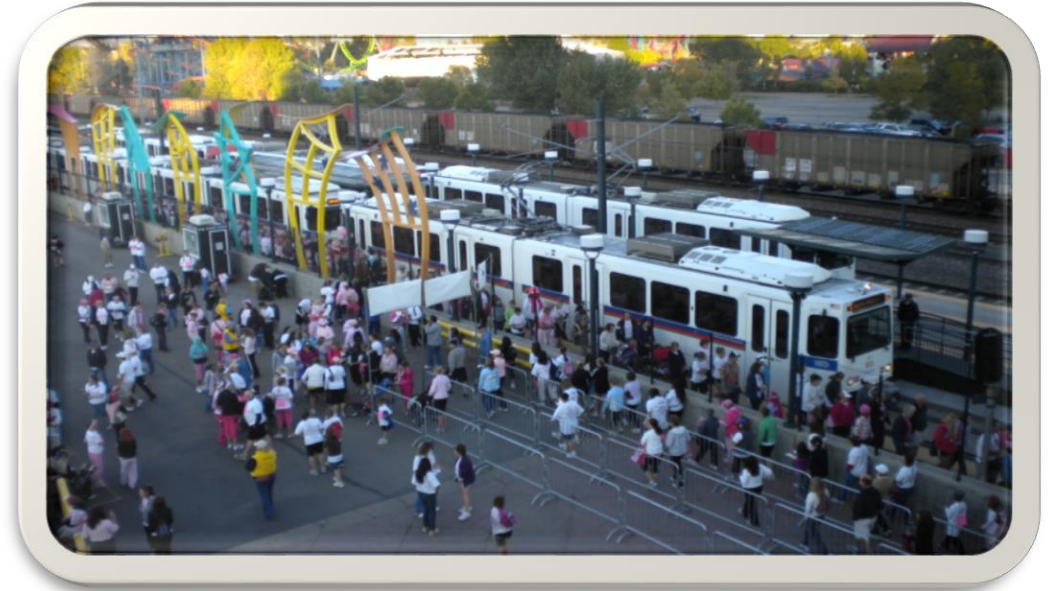
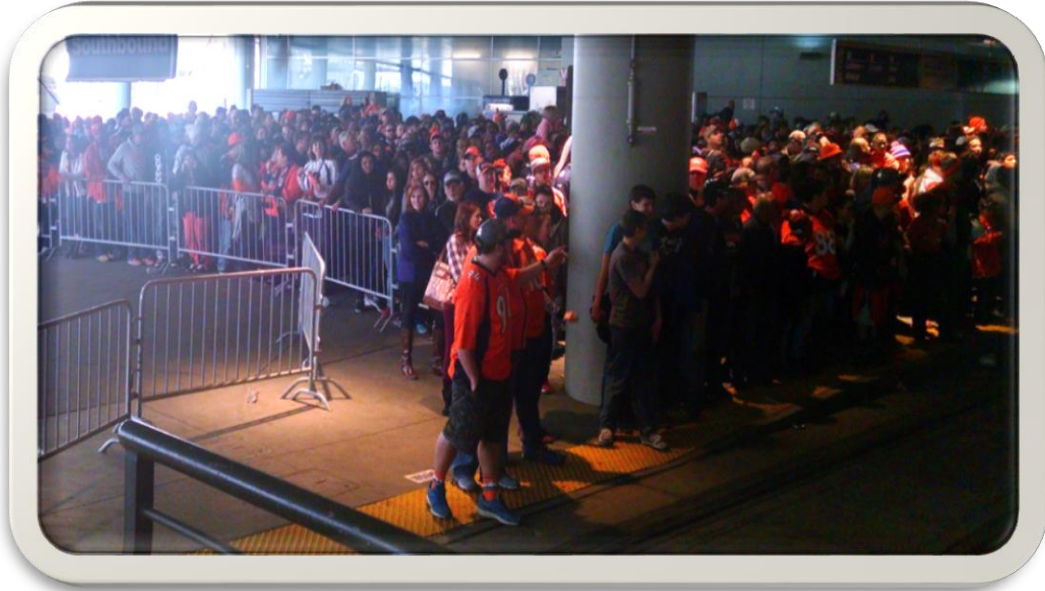




# Training Simulator



# Light Rail Transportation



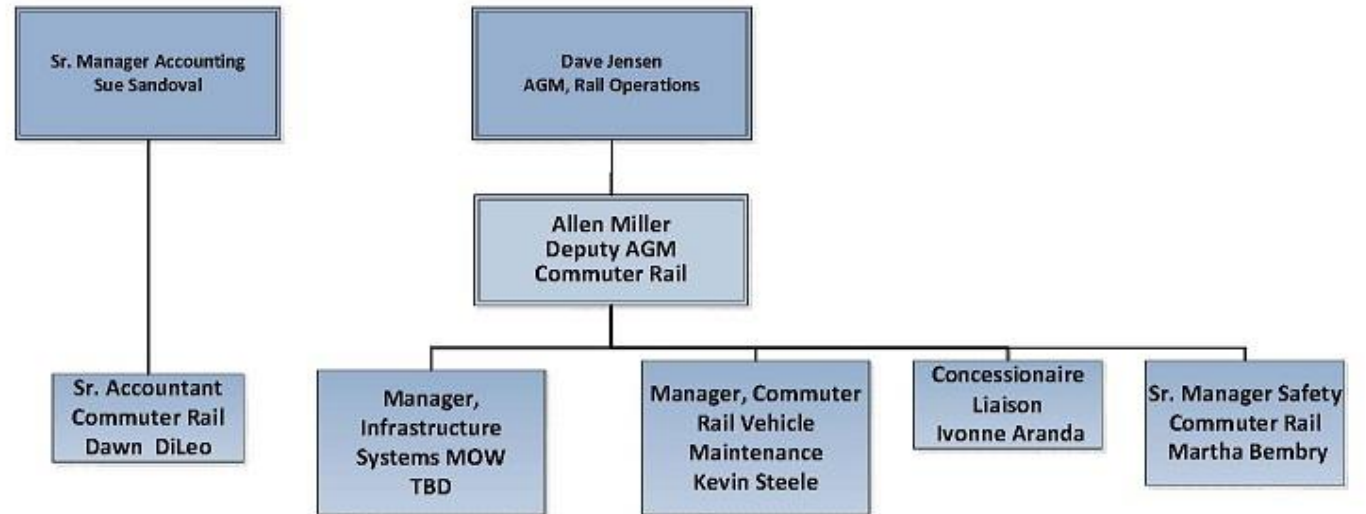
## Delivers Special Service

Rockies and Broncos games, Parade of Lights, Special Events, Concerts, and New Years Eve Firework Displays

# Commuter Rail



## RTD Rail Operations Department Commuter Rail 2019







# Commuter Rail vs. Light Rail

# Commuter Rail System Summary

- Current system: 29 miles, 2 lines, 9 stations, 66 vehicles, 6 RTD oversight employees
- 19,000+ weekday passengers
- Commuter Rail Maintenance Facility
- Operations Control Center



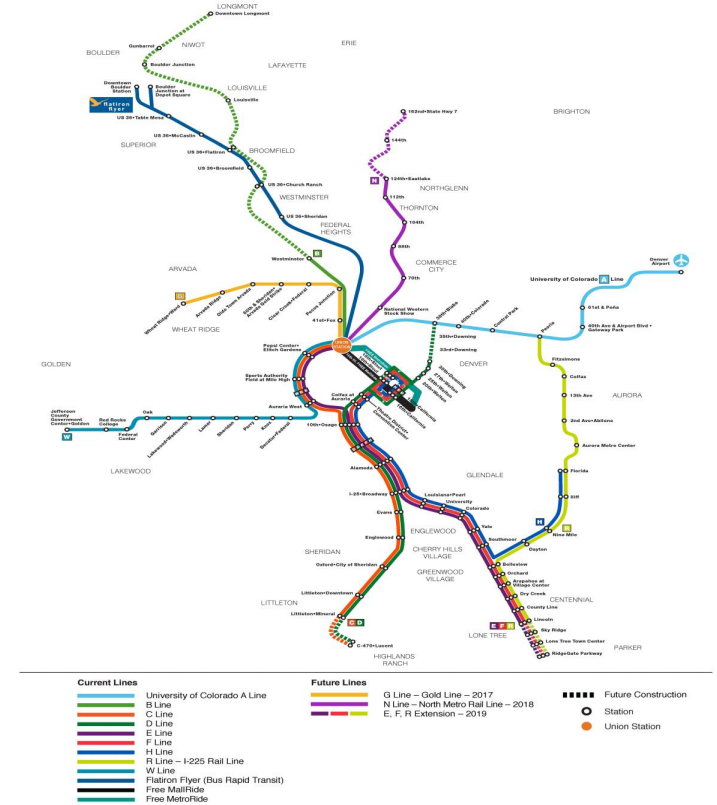
# System Map

## Commuter Rail Corridors:

- **East** – 22.8 miles – Opened 2016
- **Northwest first segment** – 6.2 miles – Opened 2016

## Commuter Rail Expansion:

- **Gold** – 11.2 miles – April 2019
- **North First Segment (124<sup>th</sup>)** – 12.5 total miles – TBD
- **North Second Segment (162<sup>nd</sup>)** – 6 miles - TBD
- **Northwest last segment** – 34.8 miles - TBD





# Commuter Rail



**Commuter Rail  
Maintenance Facility**

## DTO is Contracted Services



# Questions?