

# Future of Light Rail Study



# UTA Draft Light Rail Plan Board of Trustees Presentation



November 30, 2022

Future of Light Rail Study



# Light Rail Draft Plan Presentation Agenda

- Background
- Key recommendations
- Benefits
- Funding and implementation phasing
- Next steps



A photograph of a light rail train on a city street. The train is white with red and blue accents. The destination sign above the front window reads "GRN-AIRPORT". The train is moving along a street with a green-painted bike lane in the foreground. A person is walking on the sidewalk to the left. In the background, there are trees and buildings. A dark blue banner with white text is overlaid on the center of the image.

# Study Background

# Purpose of Study

The UTA light rail network has served the community for over 20 years and is a backbone to the region's transportation service

Needs addressed:

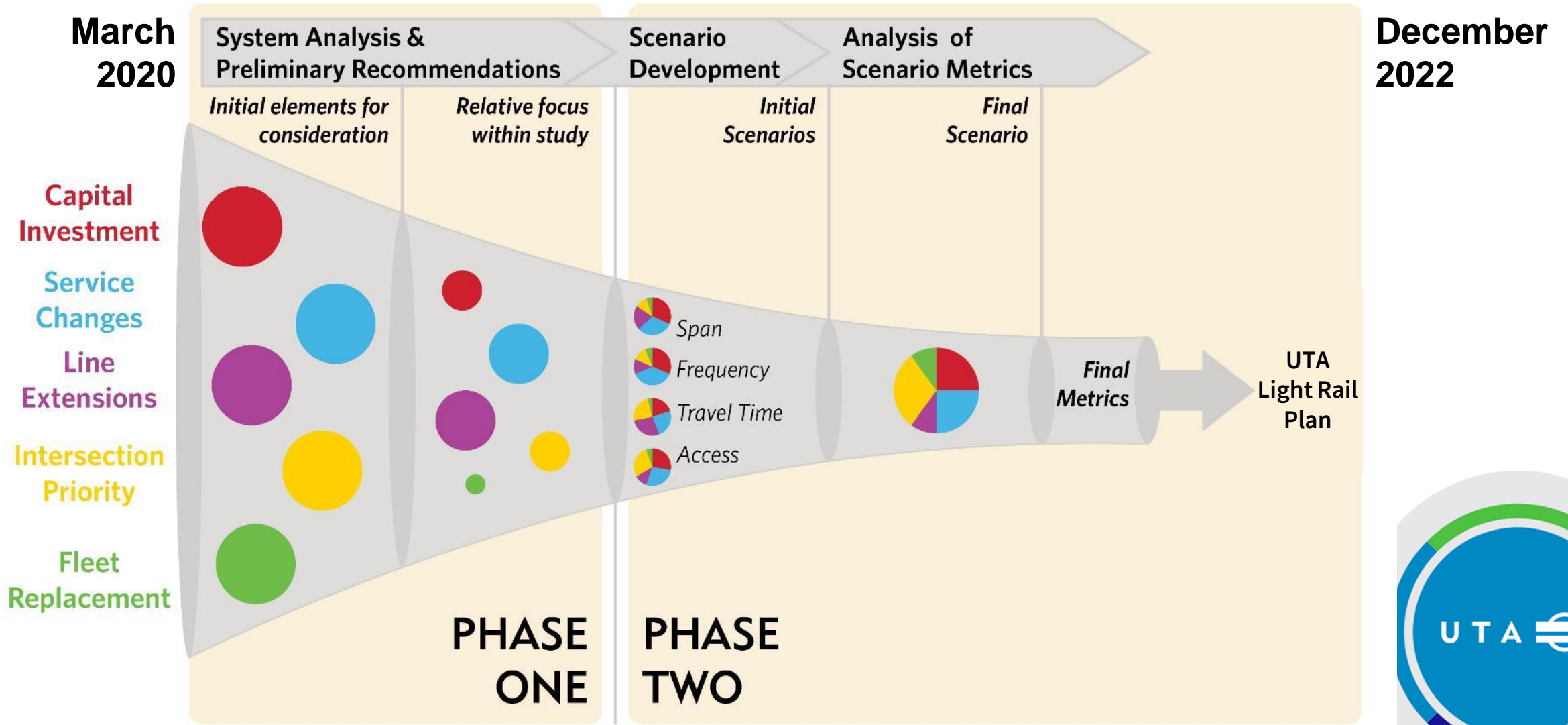
- Comprehensive analysis of the network
- Guidance for improvements in both the short and long term

Scope Included LRT and Streetcar:

- Existing service
- Proposed expansions per 2019 MPO adopted RTPs if:
  - Shown as “funded” in RTP
  - There was not a separate study underway



# Development Process



# Engagement

Stakeholders were engaged throughout the study. A process was also in place to inform the public and solicit input at key points.

Engagement efforts included:

- Multiple workshops & presentations
- Online and in-person surveys
- UTA study webpage



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# Key Recommendations

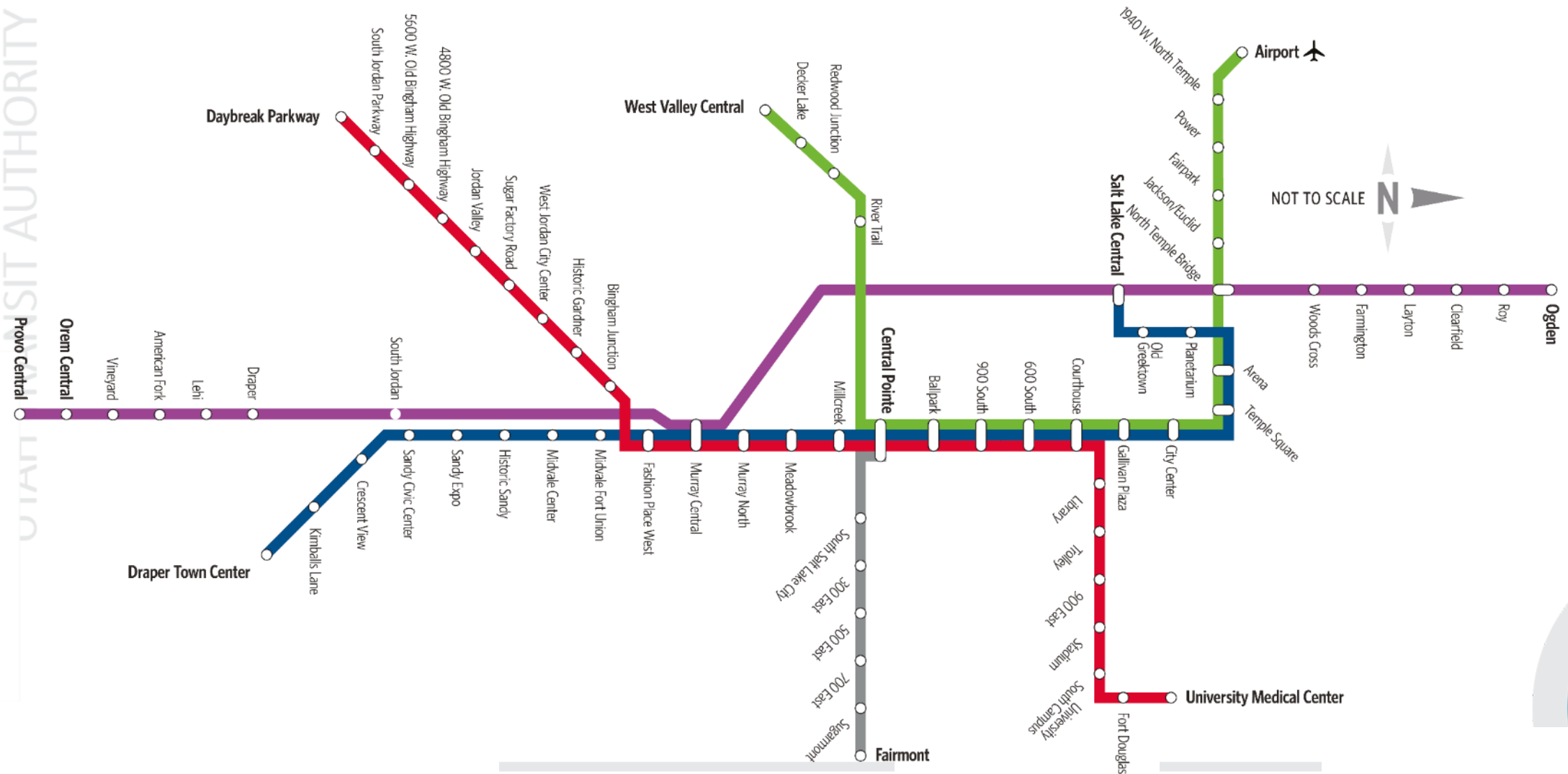
# Key Recommendations

1. Plan for possible **service expansion and reconfiguration**
2. Optimize **fleet efficiency**
3. Fund and schedule key **infrastructure renewal/improvement** projects
4. Collaborate with partners to **increase transit signal priority**
5. Enhance **span of service**



# 1. Expansion and Reconfiguration

## Current System



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# 1. Expansion and Reconfiguration Plan

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- Phase 1 (2023 – 32)**
  - S-Line extension to Highland
- Phase 2 (2033 – 42)**
  - Red Line reconfiguration
  - Orange Line U of U/SL Central via 400S
  - Orange Line extension to Research Park
  - Switch northern terminus of Green and Blue Lines
- Phase 3 (2043 – 50)**
  - Orange Line SL Central/Airport via North Temple



## 2. Fleet

- Replace original fleet with new low floor cars
  - Approaching end of useful life
  - Limited accessibility
  - 55mph speed constraint
- Optimize fleet size
  - 3 car standard train
    - Consistent with existing UTA service standards for passenger space/comfort
  - Reduction in spare ratio
    - Maintains UTA spare ratio standard



# 3: Infrastructure

- Trunk line speed improvements
  - Increases Trunk Line max speed
  - Increase other curve speeds
- Service reliability improvements
  - Central Pointe Union interlocking turnback
  - 400W (Pioneer Park) Connector
  - Improves ability to handle special events and system failures
- Traction power upgrades
  - Critical for continued system reliability



# 4: Priority

Improve Transit Signal Priority across system

- Reduce delay through 19 critical intersections
- Speeds LRT trips while supporting efficient use of intersections by all users
- Requires UDOT and Salt Lake City coordination



# 5. Service

- Extend span of service across all lines
  - Add up to 2 hours of service/day by renegotiating for reduced freight window (where feasible)
- Possible late/early airport service
  - Requires additional study to assess demand



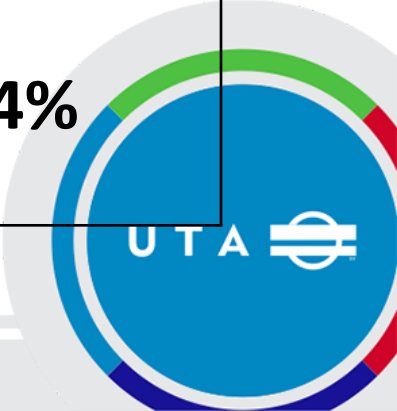


# Plan Benefits

# Reliability

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<b>Future Baseline (2050) vs. Light Rail Plan (2050) Simulated On-Time Performance</b>					
	<b>TRAX Train Line</b>				<b>Combined Average</b>
	<b>Blue Line</b>	<b>Red Line</b>	<b>Green Line</b>	<b>Orange Line</b>	
<b>Future Baseline (2050)</b>	<b>96.0%</b>	<b>89.1%</b>	<b>92.6%</b>		<b>92.5%</b>
<b>Light Rail Plan (2050)</b>	<b>95.0%</b>	<b>99.0%</b>	<b>93.5%</b>	<b>97.3%</b>	<b>96.4%</b>



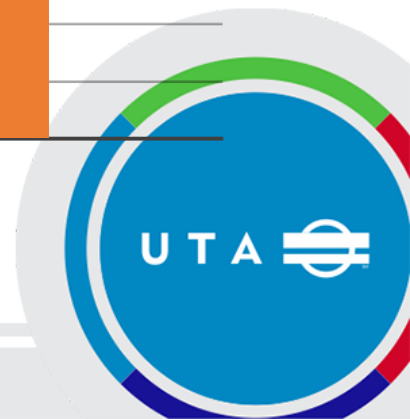
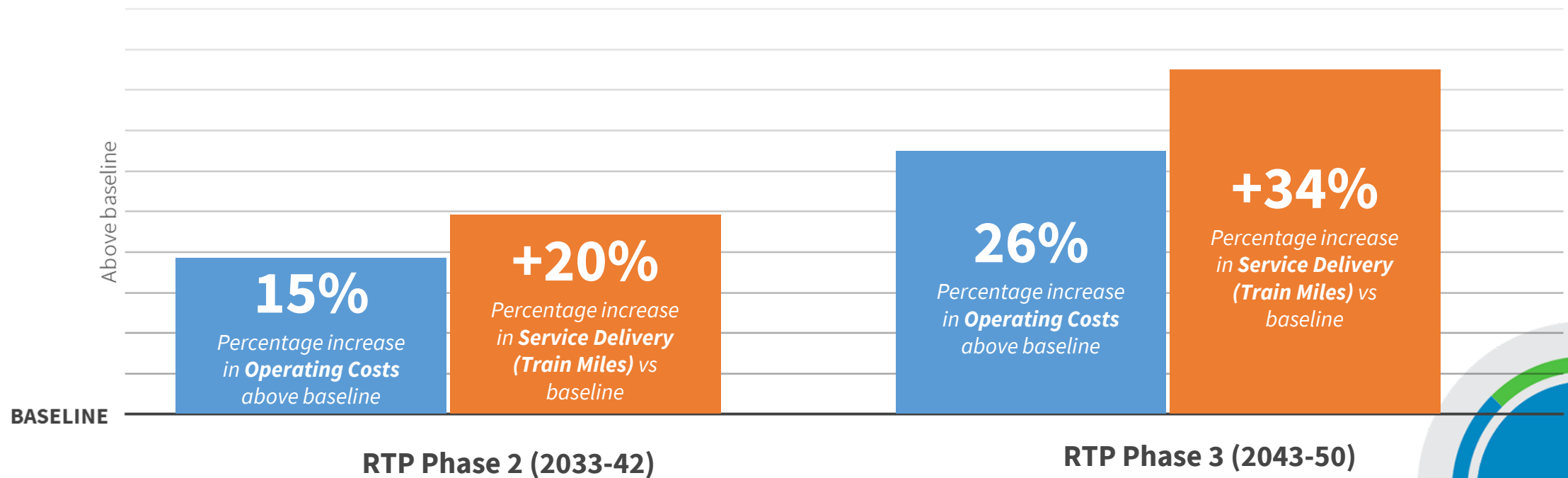
# Higher Ridership

Metric	Future Baseline (2050)	Increase from 2019	Light Rail Plan (2050)	Plan Change from Future Baseline	Plan Change from 2019
Daily Total TRAX Boardings	95,500	+63%	102,800	<b>+8%</b>	<b>+71%</b>
Daily Total Transit Boardings	232,800	+50%	237,600	<b>+2%</b>	<b>+52%</b>



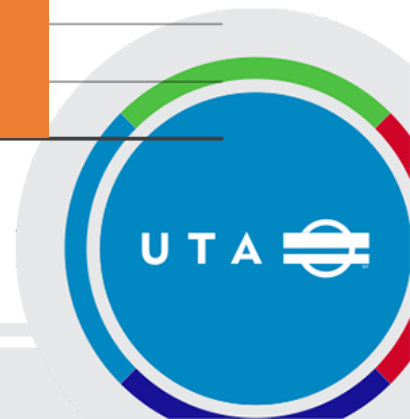
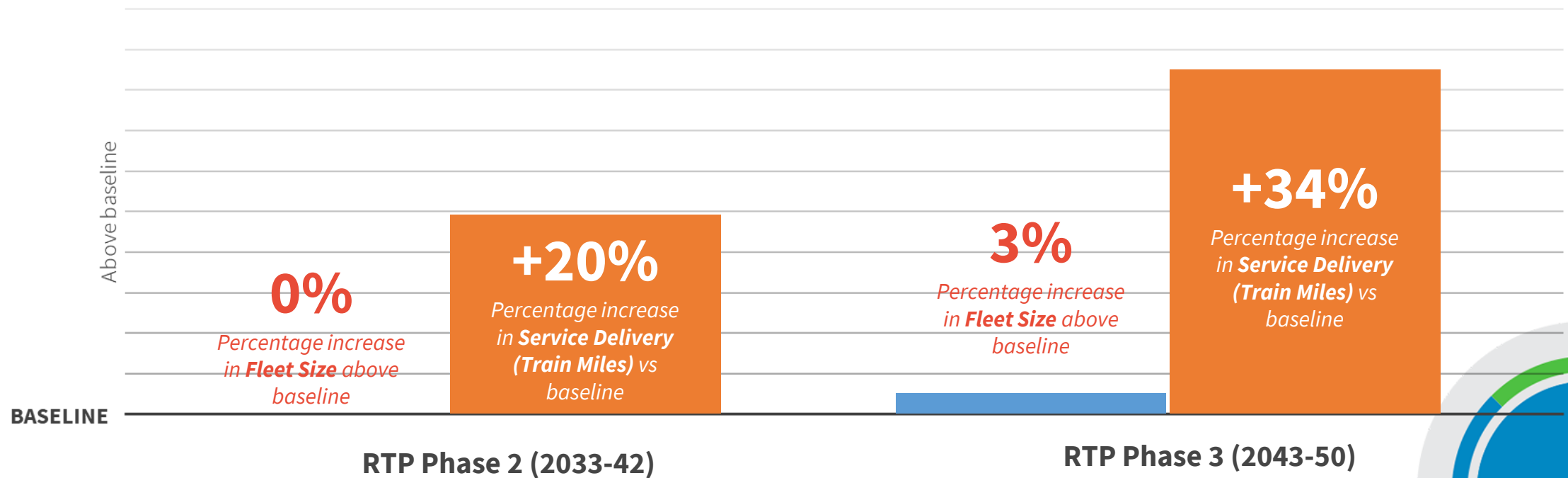
# Delivering Service More Efficiently

Operating costs for 2033 and for 2043 increase, but the region sees a **bigger increase in service delivered**



# Using the Fleet More Efficiently

The Plan for 2033 requires no new fleet and yet delivers **+20% more service**.  
The Plan for 2043 requires only 4 new cars (an increase of 3%) while providing **+34% more service**.

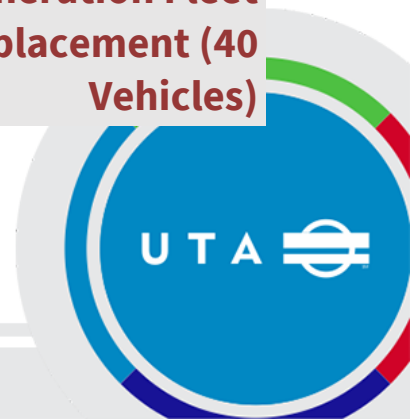
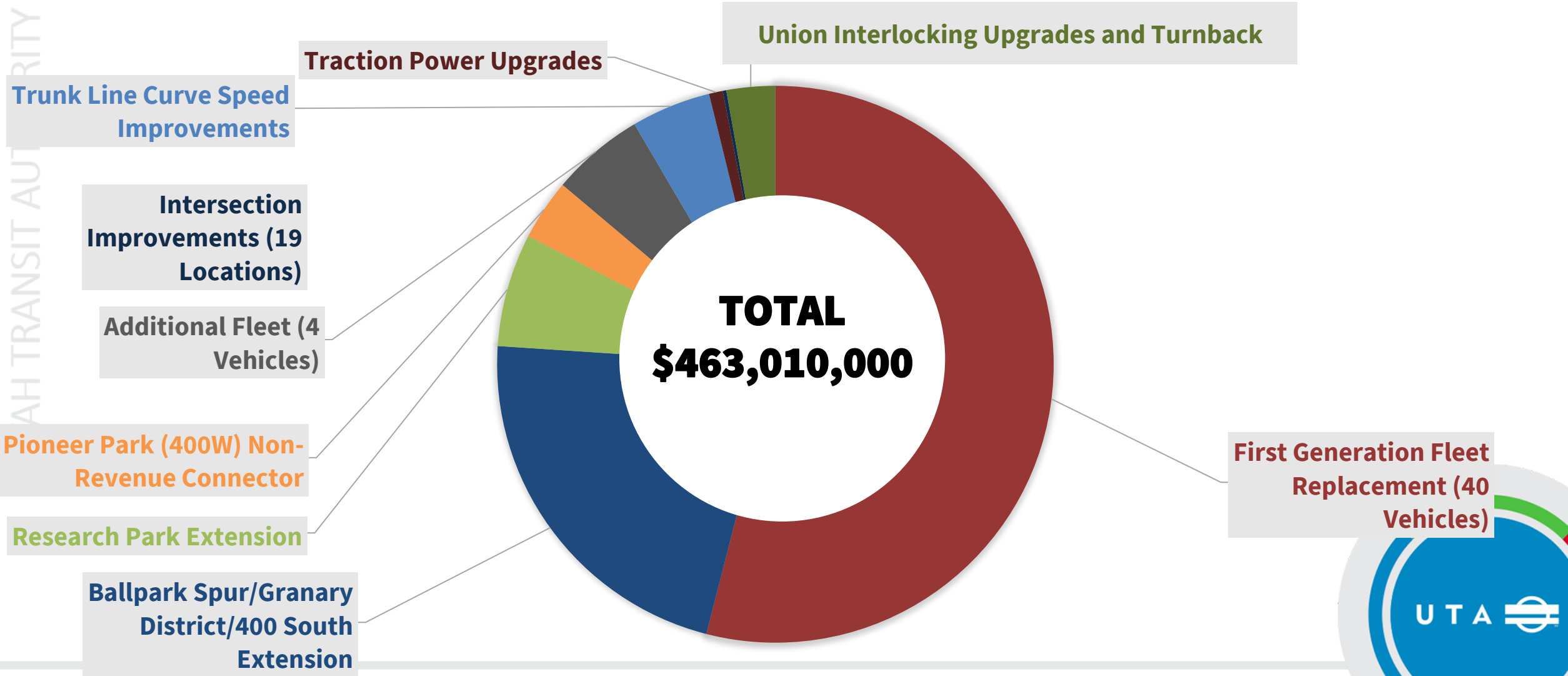


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# Plan Funding and Implementation

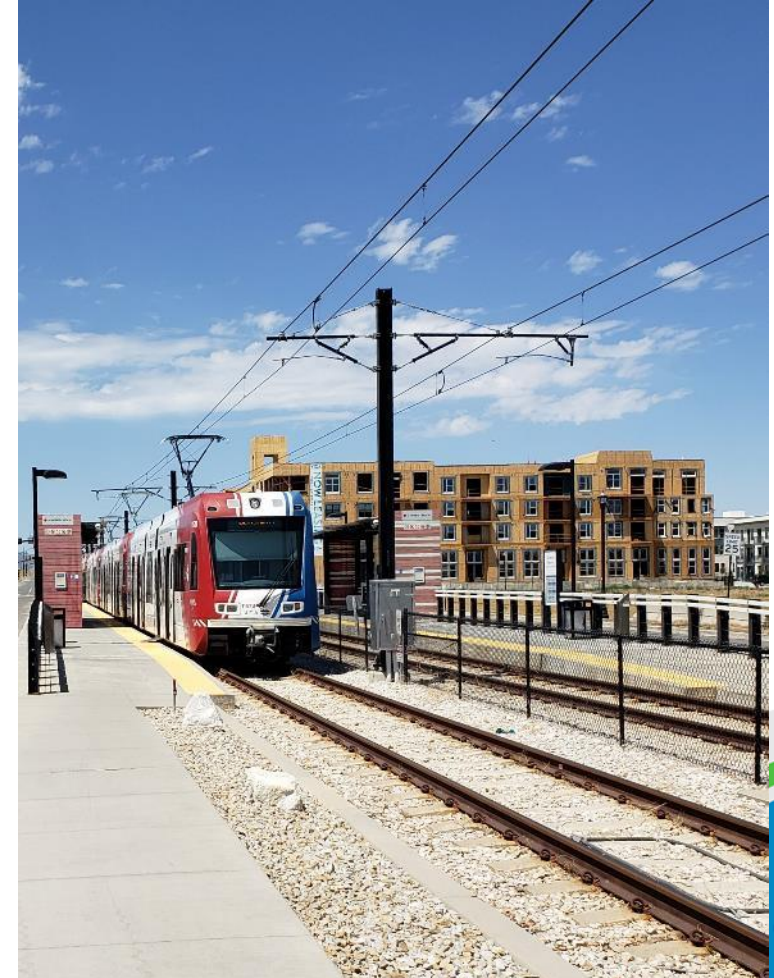
# Capital Cost Estimates - RTP Phases 2 and 3

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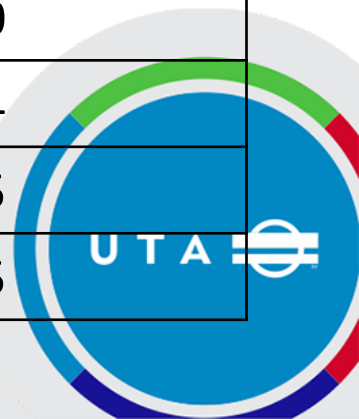
# Funding Opportunities

- State and local funding
- FTA funding
  - RAISE Grants
  - Capital Investment Grants (Section 5309)
  - Surface Transportation Block Grants
  - Grant Program for Rail Vehicle Replacement
- Value capture strategies
  - Tax Increment Financing
  - Station joint development (public/private partnerships)



# Recommended Plan Implementation Phasing

Improvement	Near Term UTA Actions	Possible Implementation Timeframe
Intersection Transit Priority Improvements	Engage Salt Lake City, UDOT	2023-24
Trunk Line Speed Improvements	Initiate Design	2024-26
Start Service Earlier, End Later	Initiate Freight Rail Negotiations	2026-27
Operate Late Night/Early Morning Airport Service	Requires Further Demand Study and Analysis of Regional ROI	2026-27
Service Reliability Improvements – Union Turnback	Initiate Design	2027-28
Replace First Generation Fleet	Complete Specification, RFP	2027-30
Research Park TRAX Extension	Proceed with TechLink Study, Refine Concepts, Station Locations, Service Strategy, Funding	2033-34
Granary District TRAX Expansion		2035-45
Service Reliability Improvements – 400W Connector		2035-45





# Next Steps

# Next Steps

- Finalize plan document
- Plan dissemination:
  - TechLink data handoff to inform study
  - Recommended capital improvements to UTA Cap Dev team
  - Fleet plan assumptions
  - Continue discussions with UDOT and SLC on TSP improvements
- Incorporation of recommendations into Regional Transportation Plans



A red, white, and blue light rail train is shown on a city street. The train has "GRN-AIRPORT" written on its front and "UTA" on its side. A person is walking on the sidewalk to the left of the train. The background includes trees and buildings.

**Thank You! Questions?**