HIGH-CAPACITY TRANSIT (HCT) LOCAL TRANSIT ACCESS STUDY

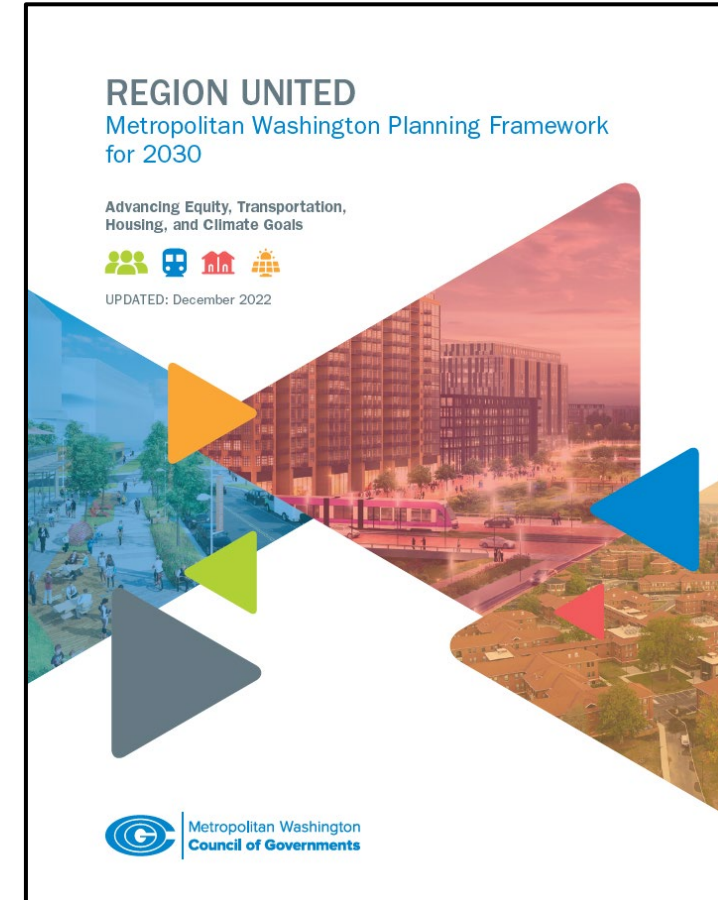## Update

Eric Randall
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Regional Public Transportation Subcommittee
October 24, 2023

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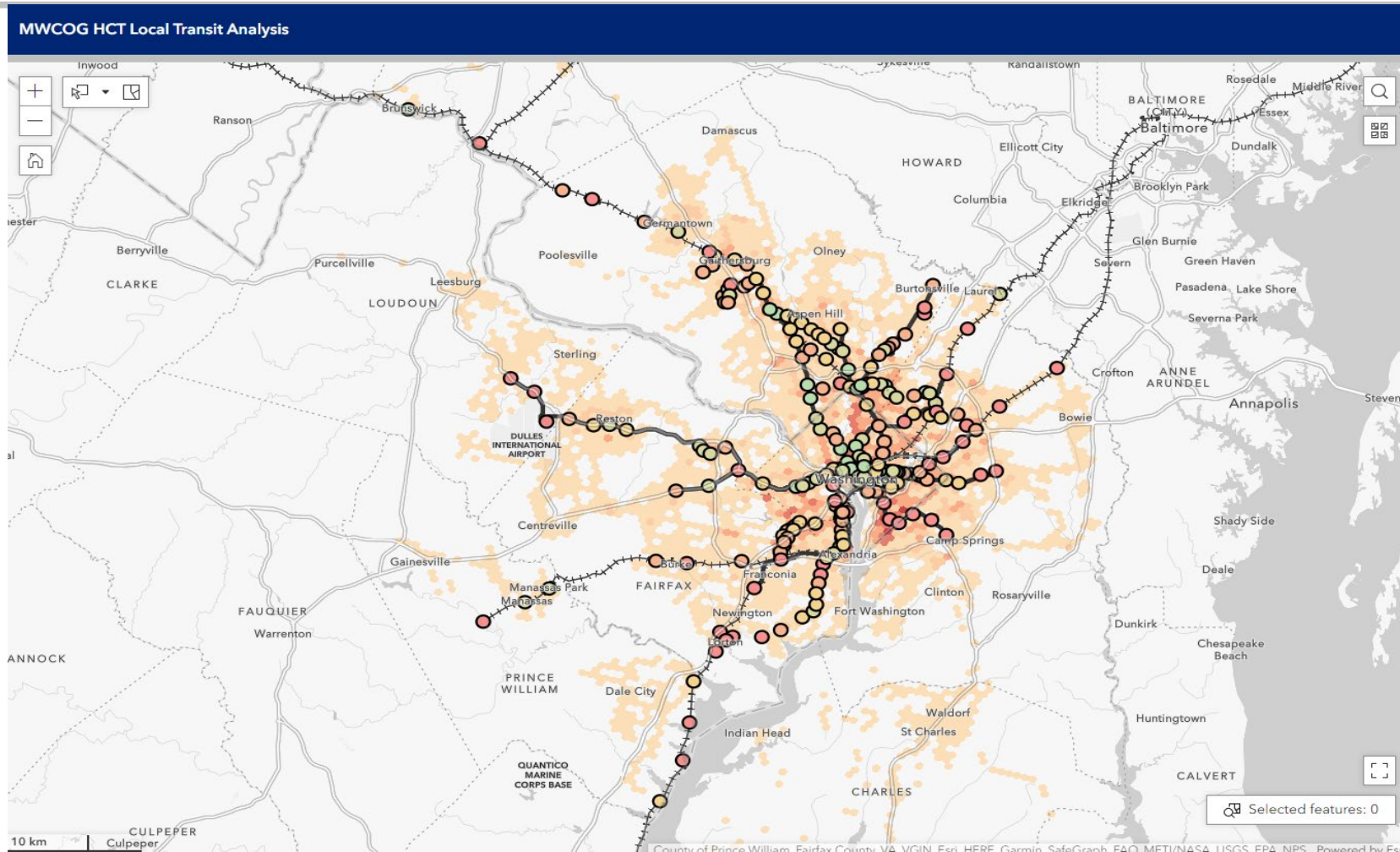# Study Objectives

- Build on previous TPB and COG work on High Capacity Transit (HCT) locations
  - part of the Region United framework
    https://www.mwcog.org/about-us/cog-board-and-priorities/2030-framework/

- Analyze local bus transit services to HCT stations and related access issues:
  - Operating agencies, HCT riders per station, bus trips per day, and major destinations served.
  - Connections to other HCT stations, to regional Activity Centers outside HCTs, and HCT stations in COG's Equity Emphasis Areas (EEAs).
  - Assess current and planned HCT station accessibility and any needs for improved bus access and improved pedestrian and non-motorized access.

REGION UNITED
Metropolitan Washington Planning Framework
for 2030

Advancing Equity, Transportation,
Housing, and Climate Goals

UPDATED: December 2022

Metropolitan Washington
Council of Governments

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Toolkit and Web Interface in Development

Web Interface: Layers and Indices in Development

- The High-Capacity Transit Station Accessibility layer includes the most robust classification/accessibility data (click on a station to view a pop-up with these fields)

- The HCT Station Classification and HCT Station Accessibility groups contain layers that quickly visualize these various attributes along a Low-High spectrum.

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Web Interface: Alexandria / South Fairfax Close-up
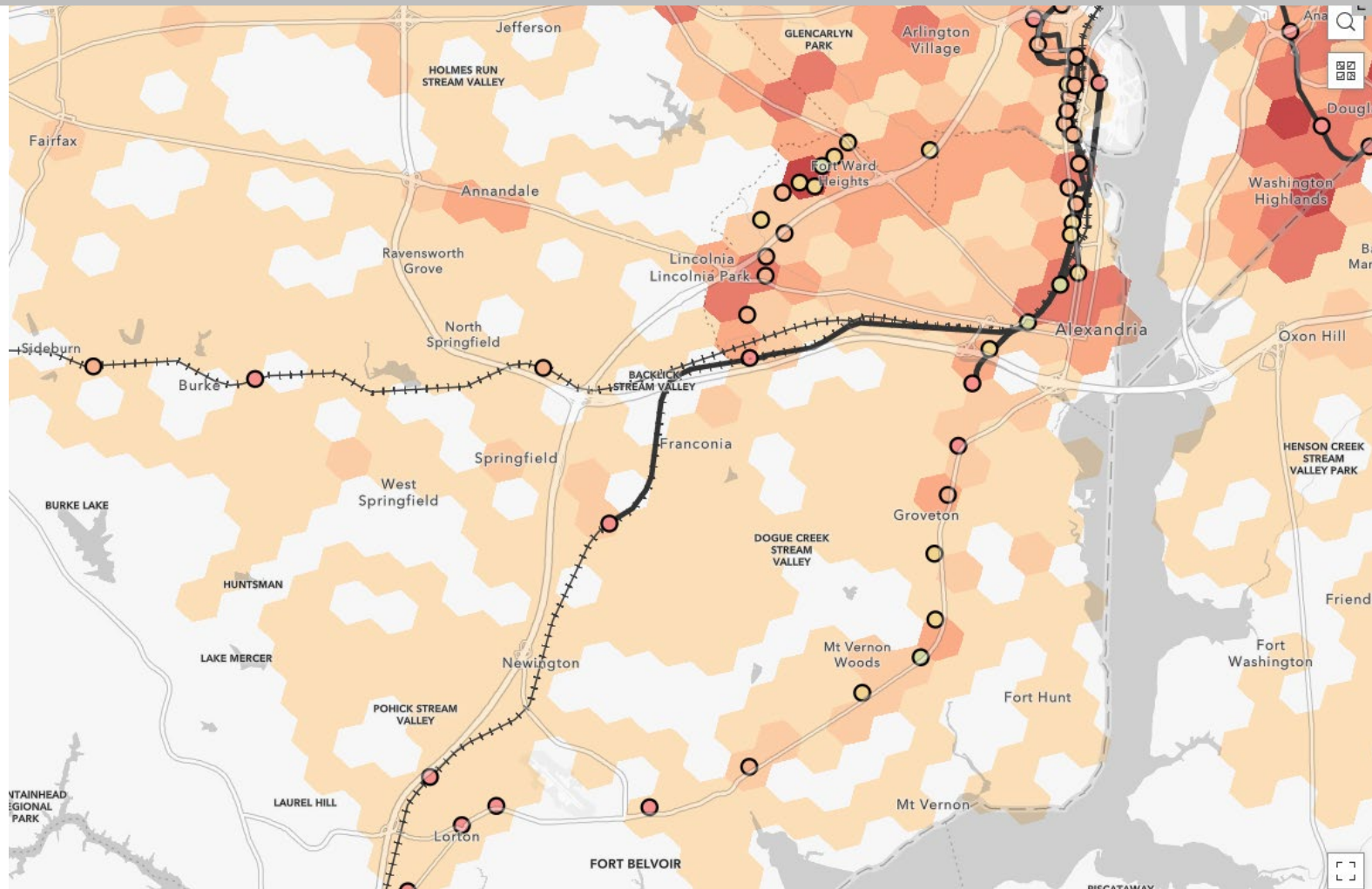
Enhanced Network Analyses

How well are people connected to HCT?

How well does HCT serve points of interest?

Quantifying Access

- 30-minute accessibility determination for each regional hex by mode:
  - Walking
  - Bicycling
  - Transit
  - Driving*

Mode	Speed (mph)	Buffer (mi)
Walking	2.2	1.1
Bicycling	7.5	3.7
Transit	10	5.0

* Select stations; additional experimentation needed to develop speeds/buffer

Foursquare ITP

A Deeper Understanding of Access

- Indices measure networked accessibility relative to a geometric buffer:
  - Residents
    - Existing and forecast
  - Jobs
    - Existing and forecast
  - Points of interest

Foursquare ITP
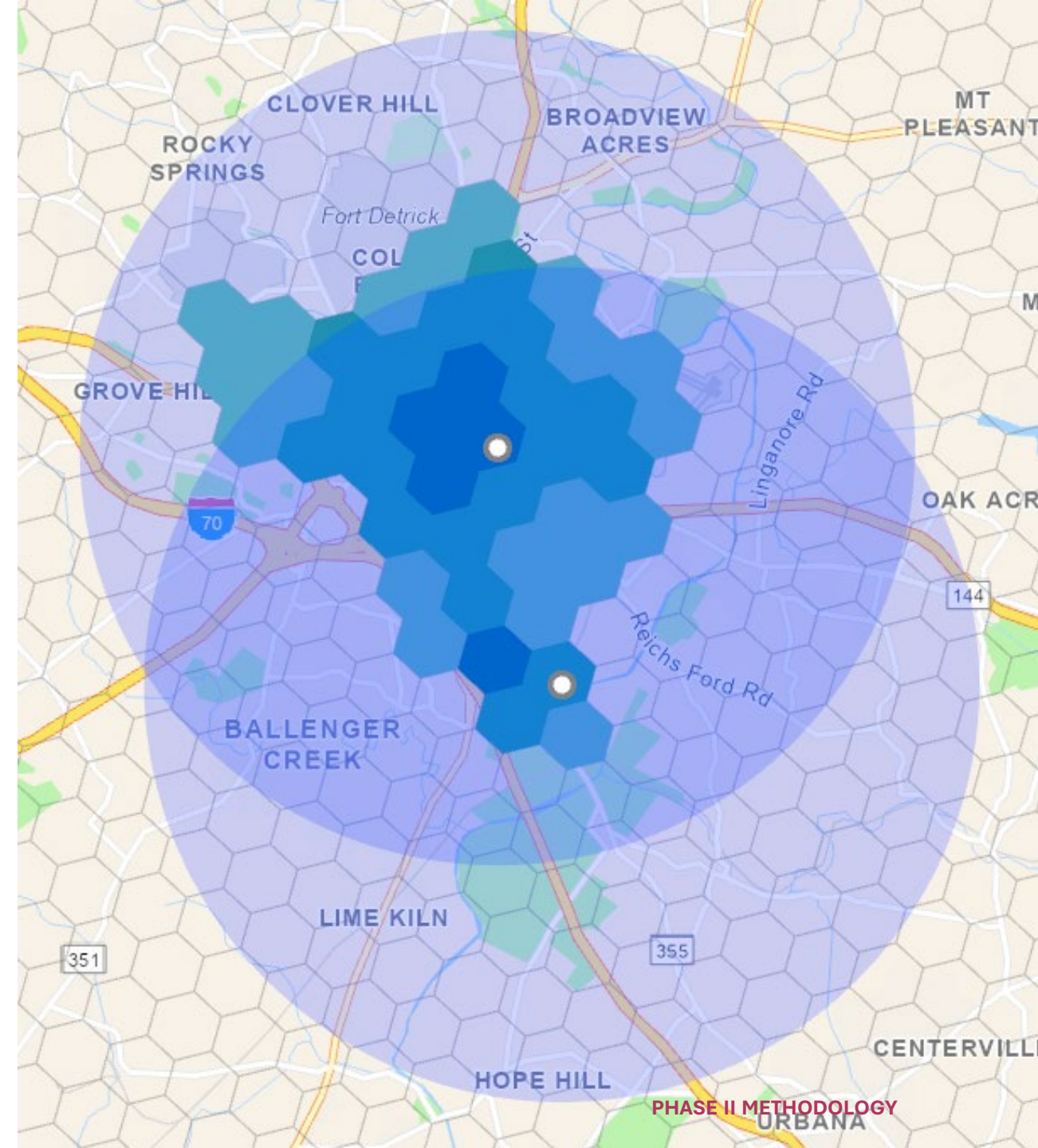
Data

Existing Demographics

- American Community Survey and Longitudinal Employer-Household Dynamics Survey:
  - Population
  - Employment
  - Transit Potential
  - Disabled Population
  - Youth Population
  - Senior Population
  - Zero-car Population
  - Low-income Population
  - Non-white Population

Forecast Demographics

- COG Cooperative Forecast (2030)
  - Population
  - Employment
  - Transit Potential

Foursquare ITP

Points of Interest Index

Counting and binning POIs by category for each hex facilitates a matching index:

- Churches
- Dentists
- Doctors
- Pharmacy
- Primary Schools
- Local Government Offices
- Schools
- Supermarkets
- Hospitals
- Universities

- Drugstores
- Libraries
- Secondary Schools
- Post Offices
- Mosques
- Synagogues
- Courthouses
- Hindu Temples
- City Halls

Foursquare
ITP

Typology Assignment

Overview

- Station typologies provide a means of contextualizing index scores, and ensure toolkit recommendations reflect station contexts

- Considerations include:
  - ☐ Regional connectivity (i.e., existing transit service levels)
  - ☐ Surrounding land use (i.e., Activity Center designation)
  - ☐ Forecast growth

Toolkit Development

Overview

- Provide a framework for practitioners to evaluate station amenities
  - Integrate renderings with Phase II web application

- Recommend improvements based on station typology and accessibility scores

- Build on existing work in this space

Example: MBTA Mobility Hub Prioritization

Mobility hubs typologized by anchor services/amenities

Rapid Transit Classifications:

- Core
- Neighborhood
- Regional

Example: LA Metro Mobility Hub Typologies

Mobility Hub Amenities	Bicycle Connections			Vehicle Connections			Bus Infrastructure		Information–Signange			Support Services				Active Uses		Pedestrian Connections	
	2.1. Bike Share	2.2. Bike Parking	2.3. Bicycling Facilities	3.1. Ride Share/Pick up-Drop off	3.2. Car Share	3.3. EV Charging Stations	4.1. Bus Layover Zone	4.2. Bus Shelters	5.1. Wayfinding	5.2. Real-time Information	5.3. Wi-Fi / Smartphone Connectivity	6.1. Ambassadors	6.2. Waiting Area	6.3. Safety and Security	6.4. Sustainable Approach	7.1. Retail	7.2. Public Space	8.1. To the Mobility Hub	8.2. At the Mobility Hub
(N) Neighborhood	●	●	■	■	○	○	■	○	●	○	○	■	○	○	○	■	■	○	○
(C) Central	●	●	○	●	●	●	○	●	●	●	●	○	○	●	●	○	●	●	●
(R) Regional	●	●	●	●	●	●	●	●	●	●	●	●	○	●	●	●	●	●	●

Legend: Vital: ● Recommended: ○ Optional: ■

# Example: CATS Bus Priority Study

Three levels of mobility hubs:

- Enhanced Stop Pair
- Mobility Plaza
- Mobility Center
  - ☐ Type A
  - ☐ Type B
  - ☐ Type C

Stop Amenity	Standard Bus Stop (Level 0)			Mobility Hubs		
	Type A	Type B	Type C	Enhance Stop Pair (Level 1)	Mobility Plaza (Level 2)	Mobility Center (Level 3, Types A, B, C)
5'X10' Or 5'X15' Shelter			●	●	●	●
Bench		●	●	●	●	●
Simme Seats		●	●			
Trash Receptor	●	●	●	●	●	●
Bicycle Rack			●	●	●	●
Scooter & E-Bike Storage					●	●
Bus Stop Marker: Signpost With Sign	●	●	●			
Bus Stop Marker: Pylon				●	●	●
Sidewalk Wayfinding				●	●	
Boarding & Alighting Area	●	●	●	●	●	●
Crosswalk Improvements			●	●	●	●[1]
Operator Restroom						●
Bus & Sidewalk Bulb				●	●	
Bus Bay						●
Offboard Fare Payment						●
Public Wifi				●	●	●
Microtransit Pickup/Dropoff Area						●
Lighting	●	●	●	●	●	●
Information Kiosks					●	●

Foursquare ITP

Example: Tri-Met High-Capacity Transit Strategy

Four HCT Station types:

- Central City
- Town Center
- Neighborhood Center
- Regional Center
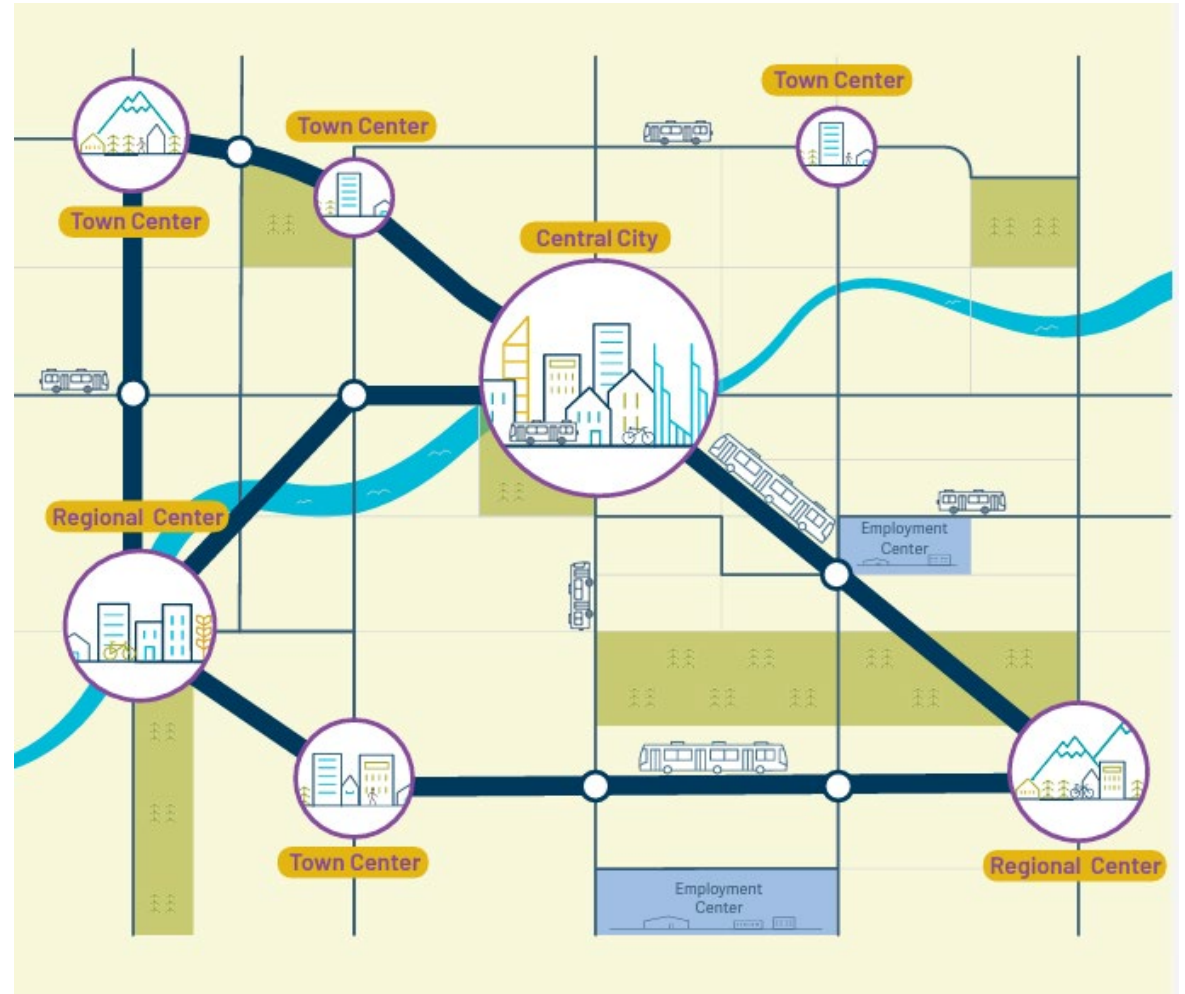
Next Steps

- Upcoming item for the November RPTS meeting with actual demo and discussion
  - TPB staff still reviewing draft
  - ICF and Foursquare ITP still adding and refining information
  - Hope to send out link to web tool for review in advance of meeting
- Goal is a common regional tool that can be used to identify and build support for improved local transit connections and station access improvements at HCT locations

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