AGENDA ITEM 3

REGIONAL TRANSPORTATION COMMISSION (RTC)
REGIONAL ROAD IMPACT FEE (RRIF)
TECHNICAL ADVISORY COMMITTEE

Meeting Minutes

Thursday, September 24, 2020

Members Present:

Alex Velto, City of Reno

Brian Stewart, Regional Transportation Commission

Dan Doenges for Amy Cummings, Regional Transportation Commission

David Blaco, Sparks Planning Commission

Dwayne Smith, Washoe County

Jim Rundle, City of Sparks

Jon Ericson, City of Sparks

Kraig Knudsen, Private Sector

Larry Chesney, Washoe County Planning Commission

Mike Mischel, City of Reno

Mitchell Fink, Washoe County

Randy Walter, Private Sector

Ted Erkan, Private Sector

Members Absent:

John Krmpotic, Private Sector

Kurt Dietrich, City of Reno Public Works

Guests

Claudia Hanson

Jeremy Smith

RTC Staff:

Adam Spear	Amber Bowsmith
Dale Keller	Hannah Yue
Jelena Williams	Lee Anne Olivas
Xuan Wang	

The meeting was called to order at 8:35am. Roll call was taken to ensure there was a quorum.

Item 1: Approval of Agenda

The agenda was approved. It was determined Item 5 would be presented before Item 4 to better explain the coordination efforts between the RTC and TMRPA.

Item 2: Public Comment

None

Item 3: Approval of the August 27, 2020 Meeting Minutes

The August 27, 2020 Meeting Minutes were approved. Alex Velto, David Blaco, and Ted Erkan abstained.

Item 5: Regional Transportation Plan (RTP) and Travel Demand Model Methodology Presentation

Xuan Wang of the RTC provided a presentation (see Attachment A) on how the Travel Demand Model works and how trip lengths are calculated for RRIF analysis. Xuan Wang explained the model area and how it is separated into Traffic Analysis Zones (TAZs). TAZs contain land use, social economic data such as population, employment, and income levels. Based on the data, the model generates the number of trips for each zone and from one zone to another. The roadway network is laid over the TAZ and includes roadway attributes. Each TAZ is labeled with the service area they are in (north or south). The model determines the quickest route from each zone.

Only regional roads are included for RRIF calculations. Local roads and freeways are excluded. The regional distance is 8.8 miles. To get the total number of VMT, the regional distance is multiplied by the total number of trips for each zone. An important input to the model is the roadway network. RTC staff are currently in the process of prioritizing and evaluating the projects for the 2050 RTP. Another important input is the TAZ data from TMRPA.

Brian Stewart asked what the timeframe is for current projects and proposed new projects. Current projects are included in the 2040 RTP. Proposed New Projects are projects that have been recommended through corridor studies or from local agency and public input. Jon Ericson asked how freeway projects play into the model. Xuan stated freeway trips are excluded for RRIF calculations, but they are included in the model network.

A motion to receive the presentation was approved unanimously.

Item 4: TMRPA Development Model Presentation

Jeremy Smith of TMRPA provided a presentation (see Attachment B) on the TMRPA Land Use Model 2020. The purpose of the model is to collect data such as household size, job categories, and development tracking for TAZs. The model tracks existing and planned development to determine what future land use will be.

TMRPA performs the Consensus Forecast every years. The Consensus Forecast is the assessment of forecasted population and employment growth for 20 years. Four independent models are averaged together to determine the consensus forecast for employment and two independent models for employment. The draft forecast values is 603,369 for population and 398,908 for jobs. This equates to 126,221 new people, 50,488 new dwelling units, and 99,363 new jobs.

Spatial allocation of predicted growth is performed. A rule-based allocation model that uses an overall suitability score is used. Jeremy described how they ensure accurate accounting of potential units, the suitability analysis that is performed and how the location and type of employment is predicted. Upon complete of the analysis, data is attached to the appropriate TAZ.

Alex Velto asked where the household size multiplier comes from because it seemed a little high. Jeremy Smith stated it comes from the Census Bureau. There was discussion about putting together a team to discuss suitability factors. Jeremy Smith stated a portal would be available soon that includes a map viewer and dig in on the suitability factors. Jeremy Smith will coordinate a meeting and include a representative from each of the local jurisdictions. Brian Stewart asked where the base layers information comes from. The roads layer comes from Washoe County's GIS data. Sewer data is from the local Public Works departments and parcel information is from the Washoe County Assessor's office.

There was a motion to accept a presentation with TMRPA forwarding the data to the local jurisdictions and coordinating a meeting to review the suitability factors was approved unanimously

Item 6: Public Comment

None

Item 7: Member Items

- The next RRIF TAC meeting is scheduled for October 22, 2020 at 8:30am via teleconference. Agenda items include discussion of indexing, eligible improvements, and revenue. Lee Anne Olivas noted that typically the November and December meetings are combined because of the holidays so that's something to keep in mind for discussion of future items.

Item 8: Adjournment

There being no further business, the meeting adjourned at 9:33am.

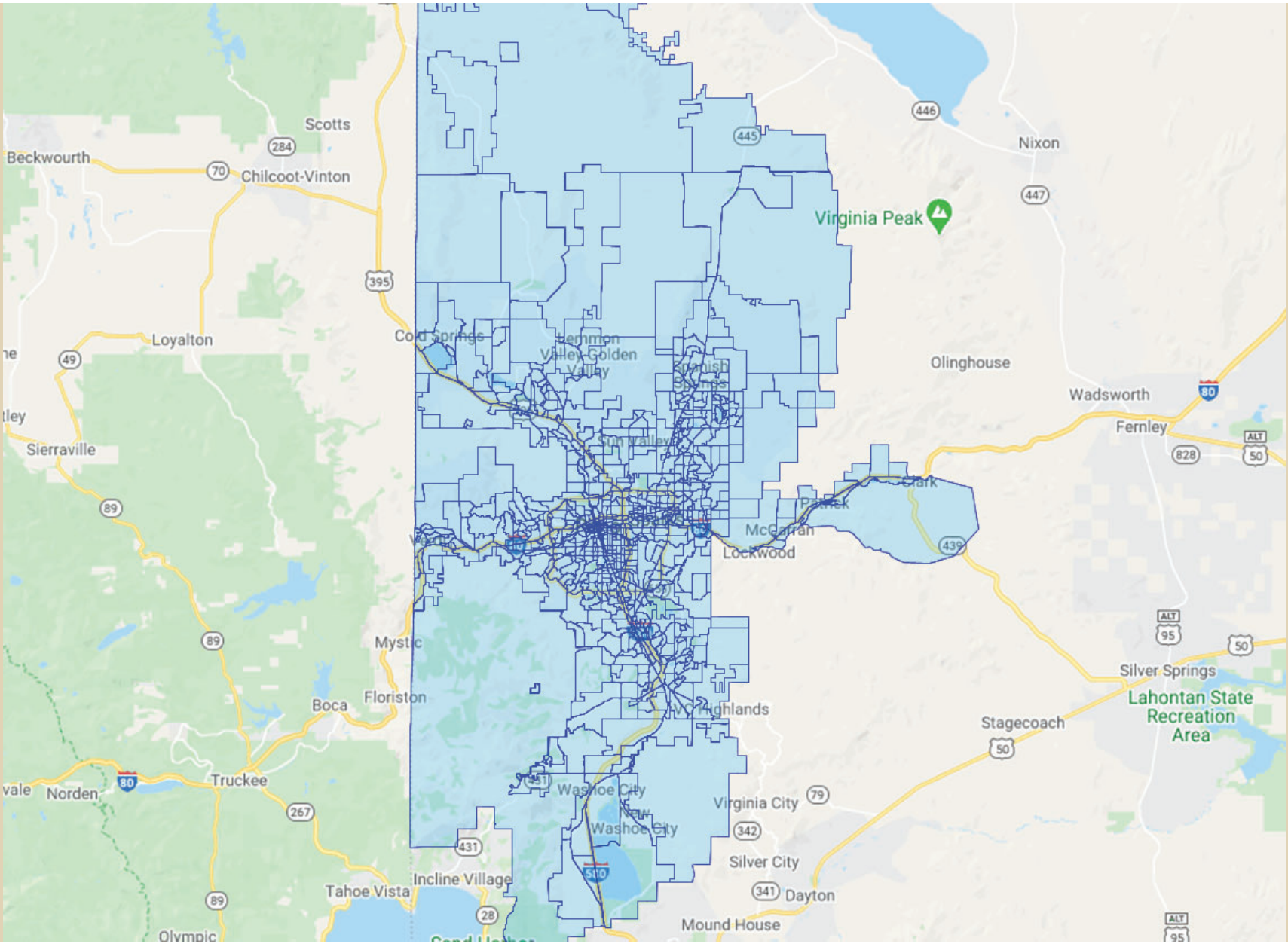
Respectfully Submitted,
Lee Anne Olivas

Regional Road Impact Fee (RRIF) Technical Advisory Committee

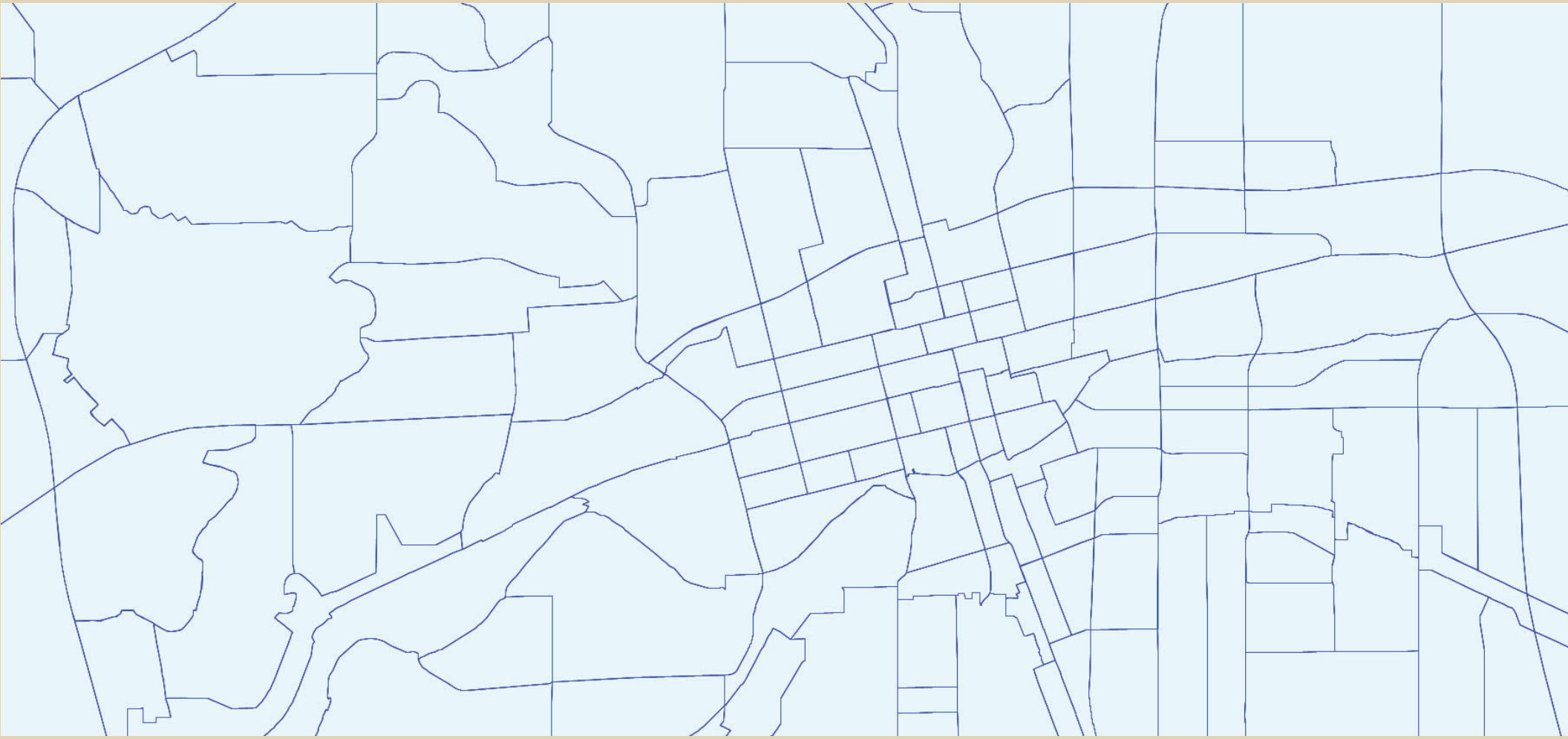
09/24/2020

Average Trip Lengths in the RTC Regional Travel Demand Model

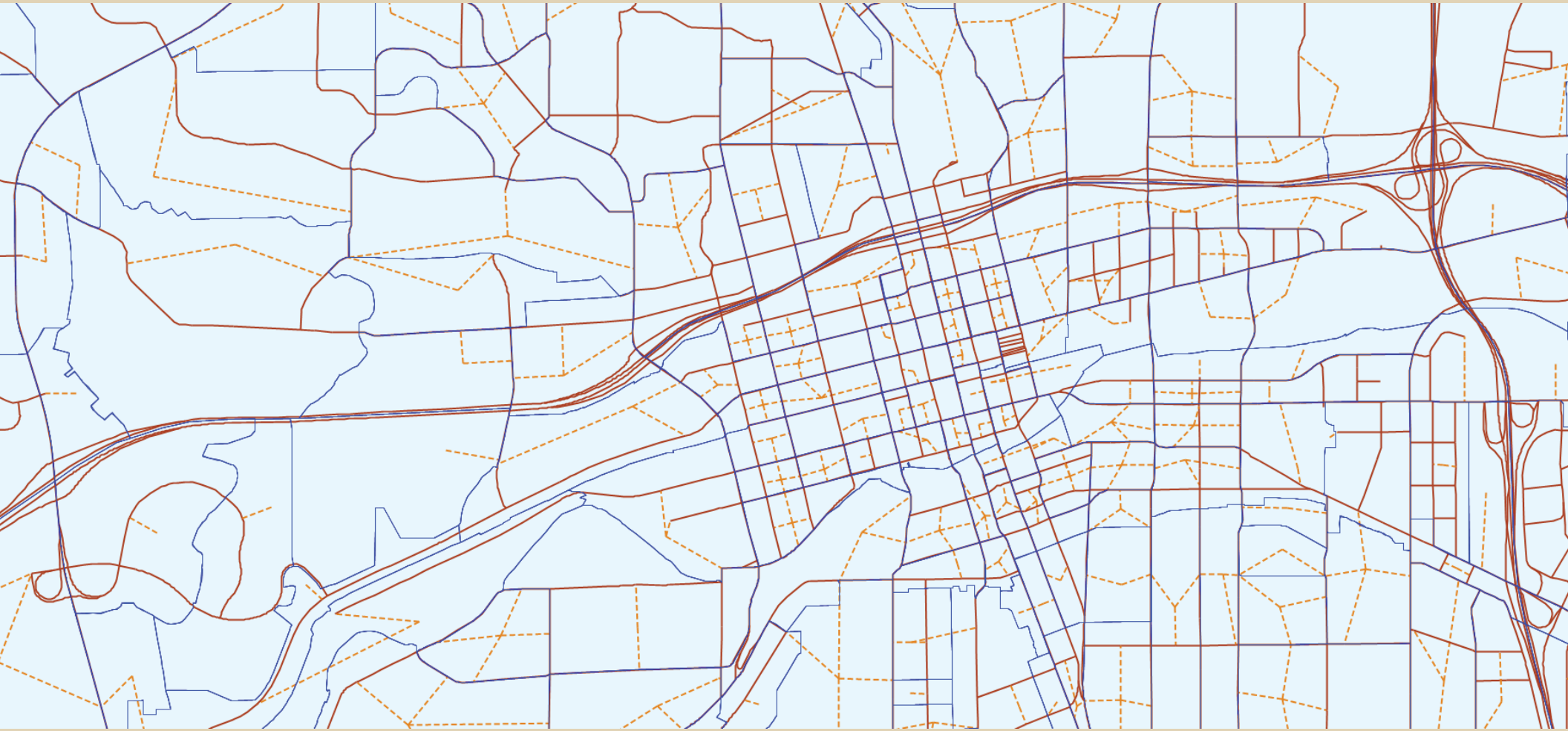
MODEL AREA


Scotts
Beckwourth
Chilcoot-Vinton
Loyalton
Sierraville
Cold Springs
Nixon
Virginia Peak
Olinghouse
Wadsworth
Fernley
Lockwood
Mystic
Floriston
Boca
Truckee
Norden
Incline Village
Tahoe Vista
Olympic
Silver Springs
Lahontan State Recreation Area
Stagecoach
Virginia City
Silver City
Dayton
Mound House
Washoe City

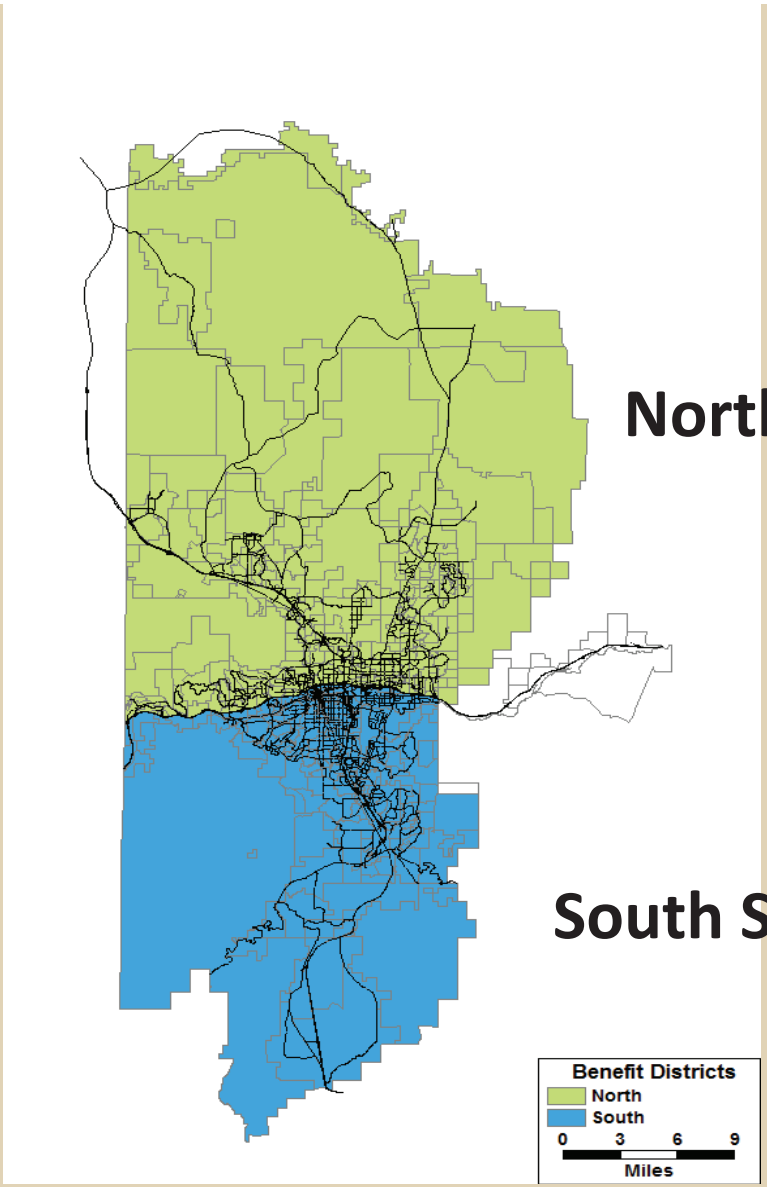
TAZ INPUT



NETWORK INPUT



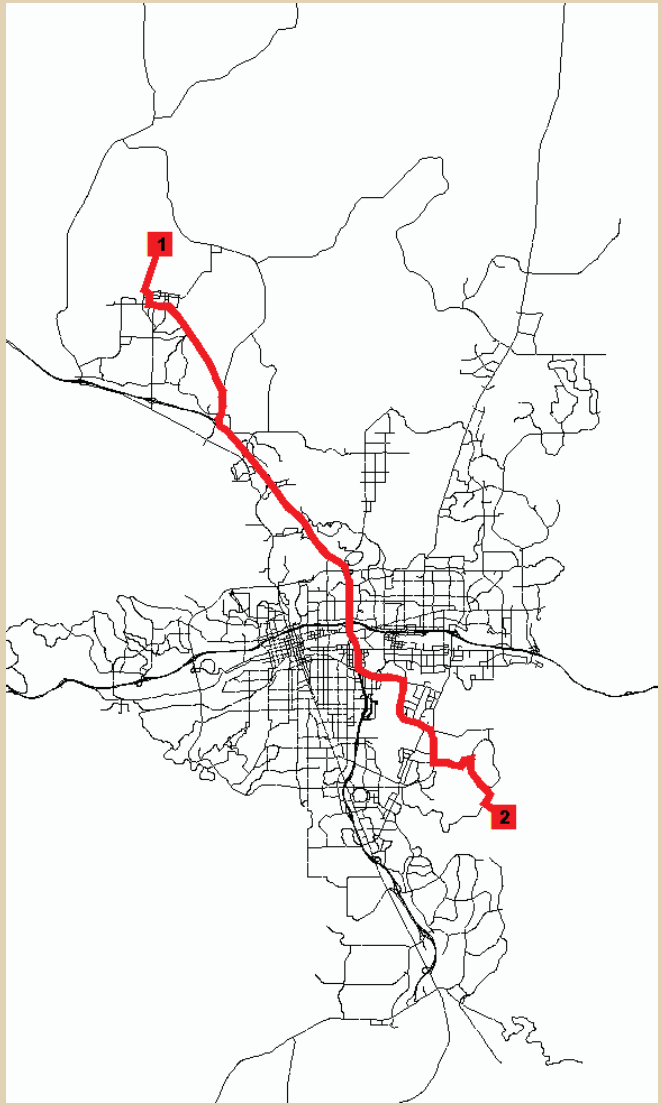
Service Areas



North Service Area

South Service Area

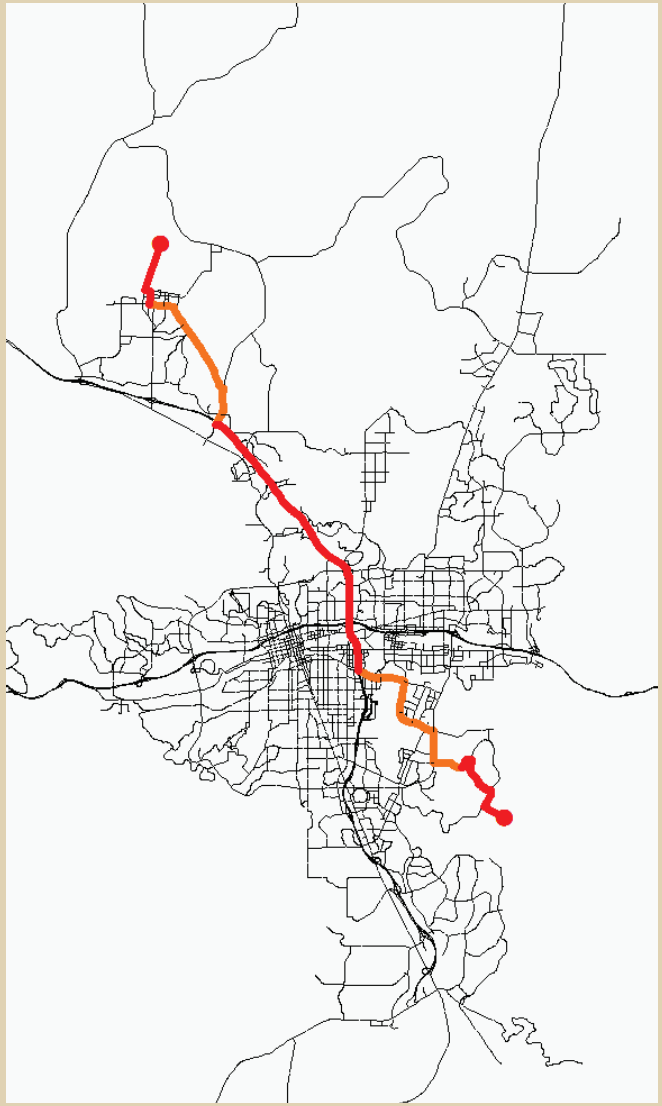
Trip Distance on All Roads



Model determines the quickest route between points 1 and 2

Total Distance 20.6 mi

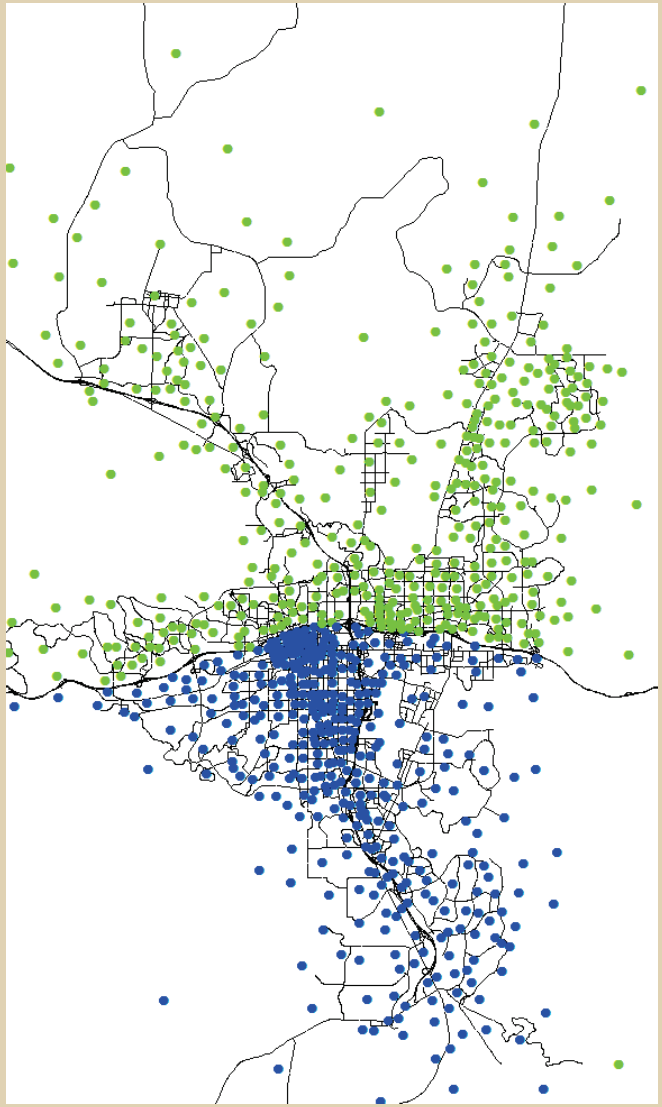
Trip Distance on Regional Roads



The ORANGE sections of the route are used for the regional road distance.

Regional Distance 8.8 mi

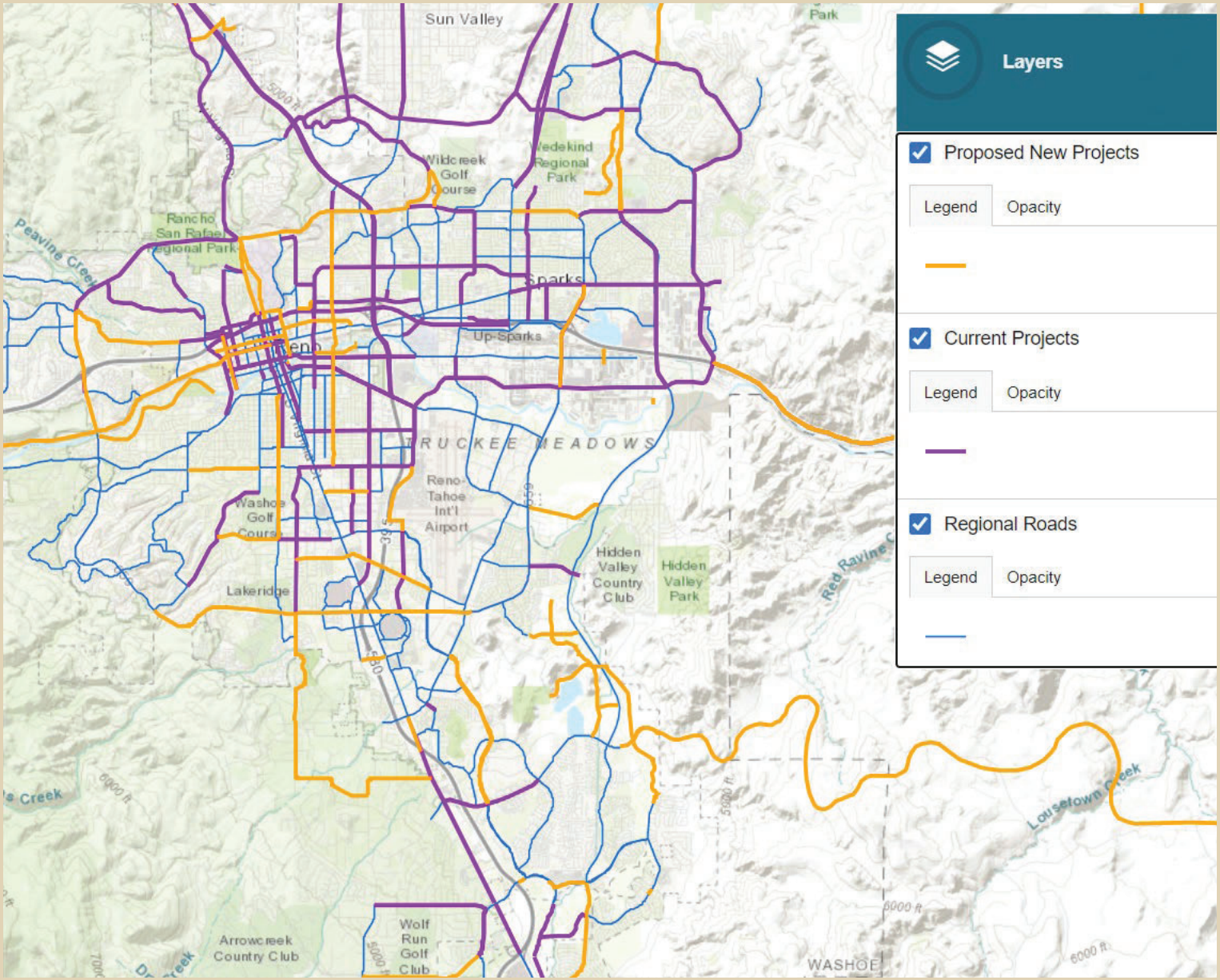
Trip Lengths in the Region



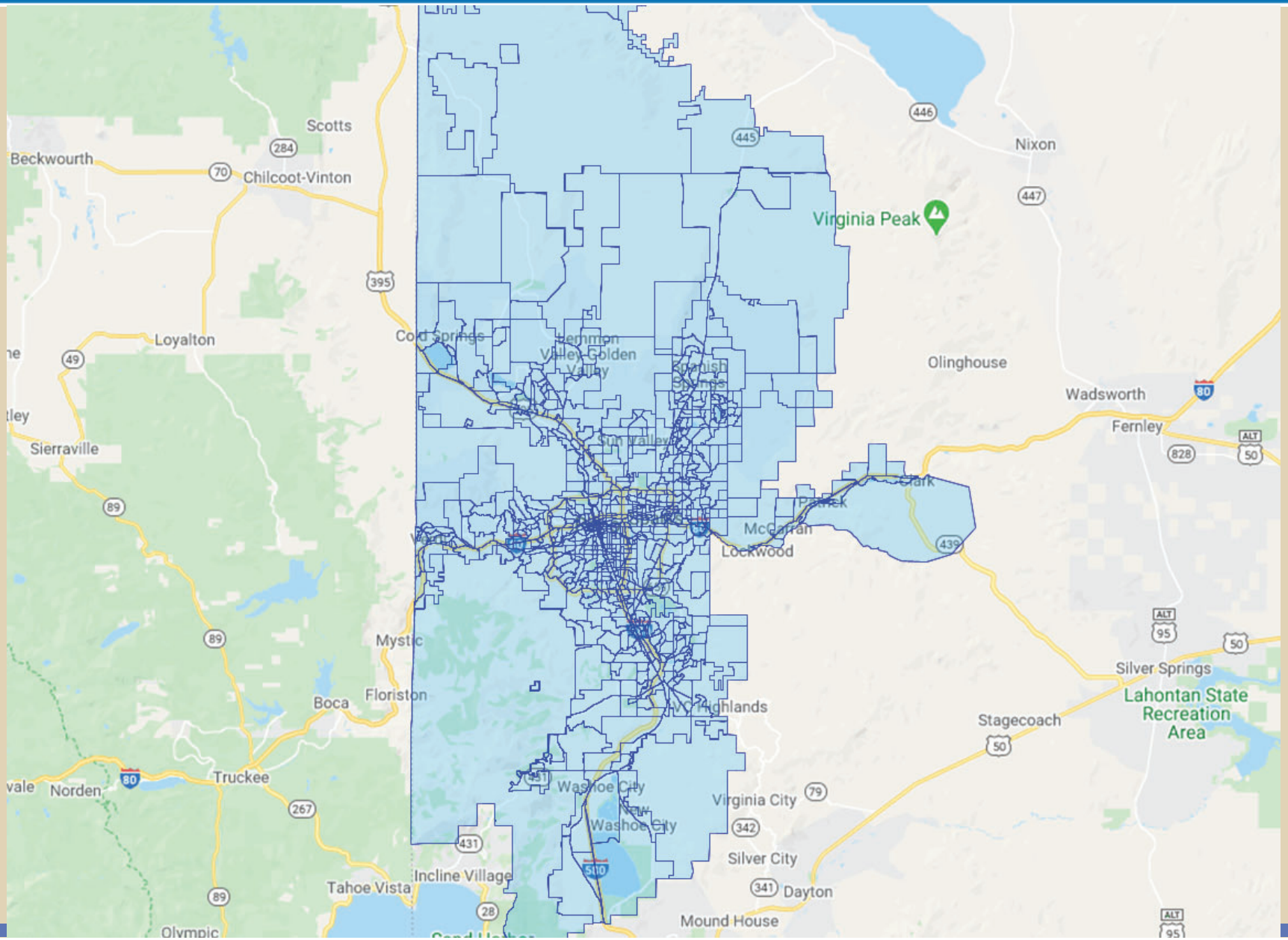
The process of calculating the distance between zones is repeated between every zone.

With the distance, and the trips between zones, the average trip length to the NORTH or to the SOUTH can be calculated.

2050 RTP Projects Network



2050 RTP TAZ Input



TMRPA Land Use Model 2020

Jeremy M. Smith

Director, TMRPA

9/24/2020 Regional Road Impact Fee Technical Advisory Committee

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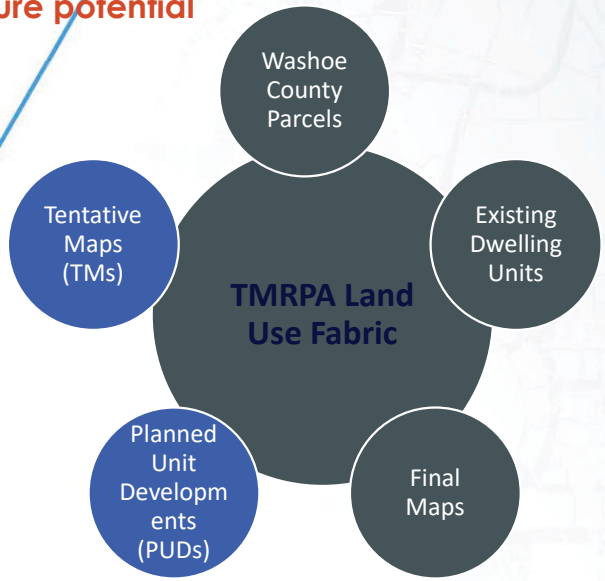
Tracking residential development present and future potential



Tracking employees by business location

Monthly Process for Updating Land Use Fabric

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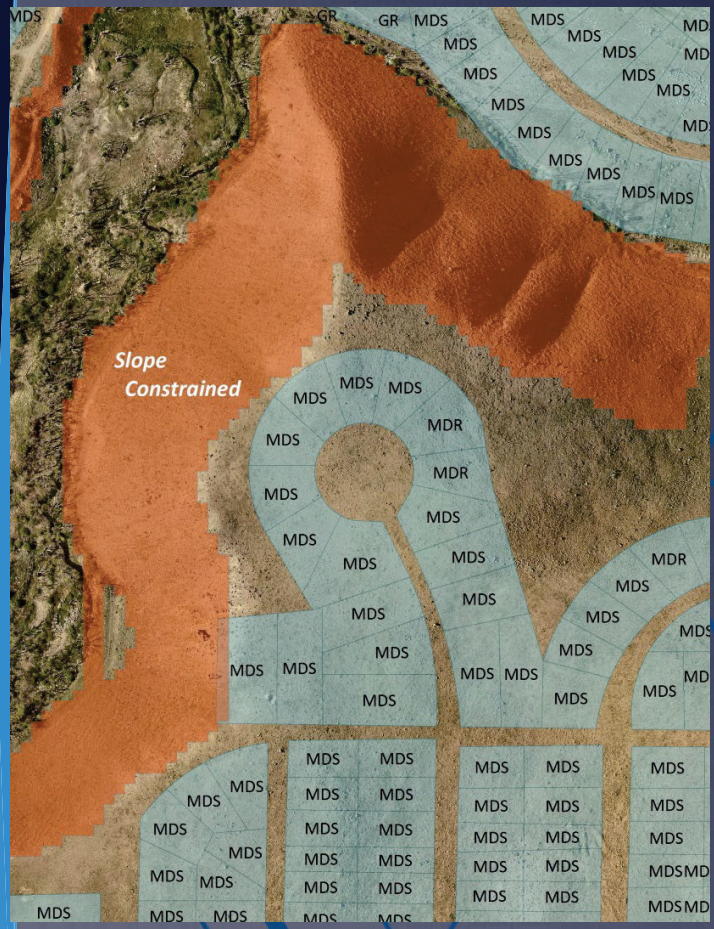
Parcel Data - Enhanced

TMRPA Land Use Fabric

- Identify existing land use and zoning designation
  - Is it already developed?
- Identify vacant parcels
  - Unconstrained areas are buildable (remove slopes, public land, water bodies, flood)
- Estimate capacity of that land
  - Future housing units based on zoning and development approvals
  - Future employment based on existing employment mix and zoning



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Washoe County Consensus Forecast

- Assessment of forecasted population and employment growth; performed every 2 years by TMRPA to inform planning efforts across the region.

- Sources
  - Nevada State Demographer
  - Truckee Meadows Water Authority
  - Woods and Poole
  - IHS – Global Insight

W&P ECONOMICS

NEVADA DEPARTMENT OF TAXATION

IHS

TRUCKEE MEADOWS WATER AUTHORITY
Quality. Delivered.

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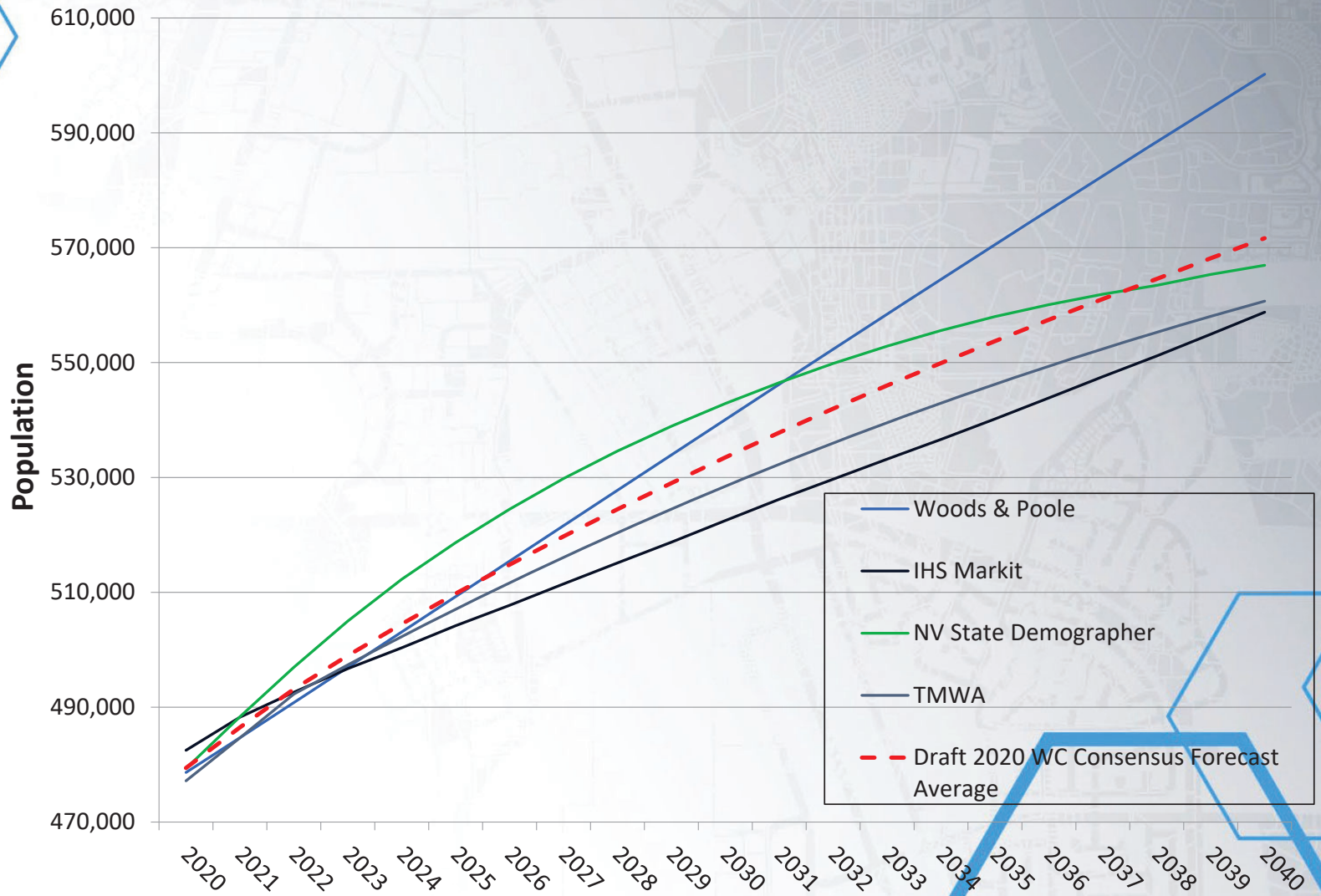
Draft 2020 Consensus Forecast - Population



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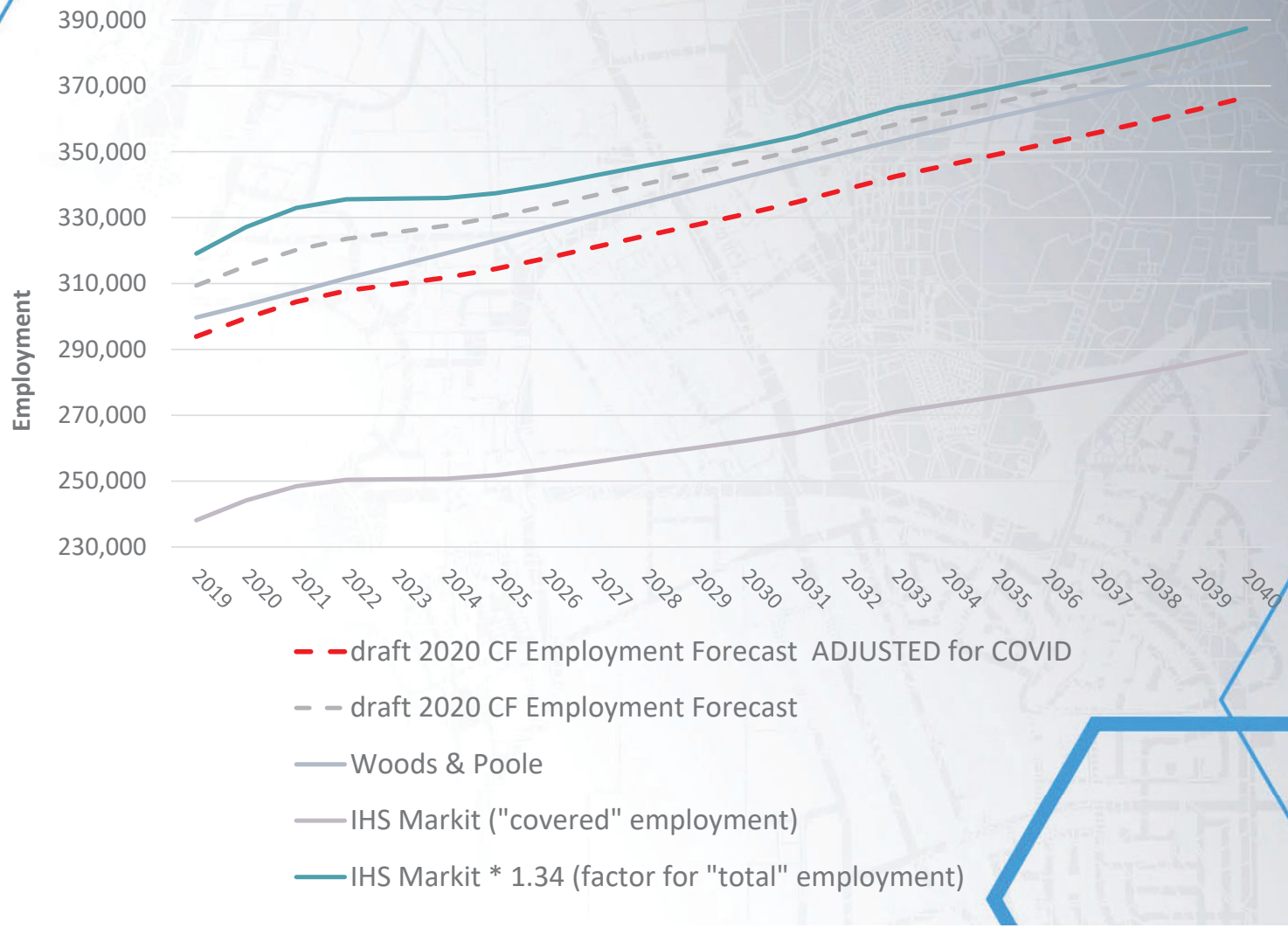
Draft 2020 Consensus Forecast - Employment



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Draft 2020 Consensus Forecast Values

	Population	Jobs
2020	477,148	299,545
2040	569,385	366,567
2050	603,369	398,908

	New People	New Dwelling Units	New Jobs
2040	92,237	36,895	67,022
2050	126,221	50,488	99,363

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Spatial Allocation of Predicted Growth

- Translate time series projections to spatial allocation of housing units and employment

- Rule-based allocation model that uses an overall suitability score
  - Parcel-based
  - Dual-mode suitability model
    - Population
    - Employment
  - Written in Python

- Model results can be aggregated to any geography
  - Traffic analysis zones
  - Wastewater treatment facility service areas
  - Etc.

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Potential Future Units

- **Ensure accurate accounting of potential units**
  - **Directed Units** – known projects received directly from jurisdictions planning departments
  - **MU attenuated** – Mixed use unit potentials factored down based on a neighborhood analysis
  - **Atomic** – whenever data are available, we predict into individual lots
    - E.g. Final mapped, Bubble-mapped
  - **Large Parcels**
    - Blobs with DU/Acre – 80% efficiency
    - Phasing of units per year that are realizable
    - Topographic limiter (in development)

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Dwelling Unit Splits by Tier (Targets)

Regional Land Designation	Total Dwelling Unit Share (absent Tribal Lands and Tahoe Basin)(%)	5-Year Unit Growth (%)	10-Year Unit Growth (%)	20-Year Unit Growth (%)	Future Unit Potential Units (%)	Average (%)	Proposed Share (%)
MU Core	12.12	13.37	12.75	7.36	13.41	11.80	13
Tier 1	28.77	15.07	13.78	8.80	9.70	15.22	17
Tier 2	42.98	63.19	64.41	67.68	51.84	58.02	60
Tier 3	14.06	7.05	7.57	13.89	23.73	13.26	9
RA	2.08	1.33	1.49	2.28	1.33	1.70	1

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Suitability Analysis

- Suitability score controls timing of development in the model
- For residential, based on the spatial relationships of many factors to the location of housing development over the past 15 years
  - Single Family and multifamily distributions evaluated separately
  - Logistic regression used to predict development from 2000 to 2015 (using spatial variables like distance to major roads)
    - 75% prediction accuracy
    - Informs assignment of weighted suitability
  - For more information check the TMRPA Housing Study Appendix C

https://tmrpa.org/truckee-meadows-housing-study/

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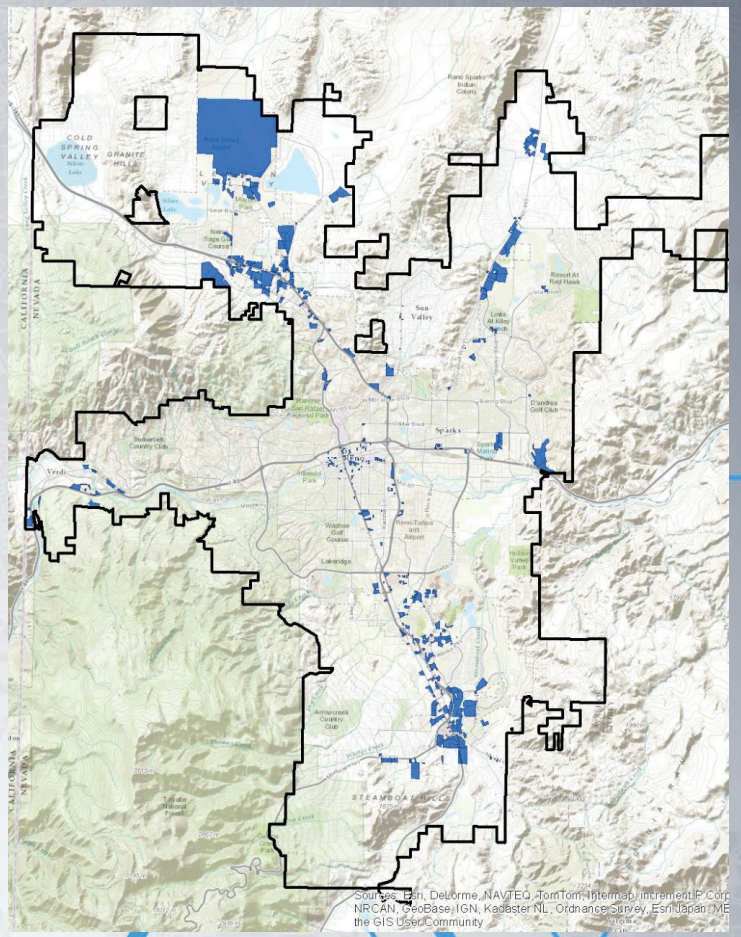
New employment footprint

- **Location and type of employment more difficult to predict**
  - Some employment grows in place (ca. 50%)
  - Other employment utilizes vacant land (ca. 50%)
    - Footprint of vacant land usage based on non-residential zoning



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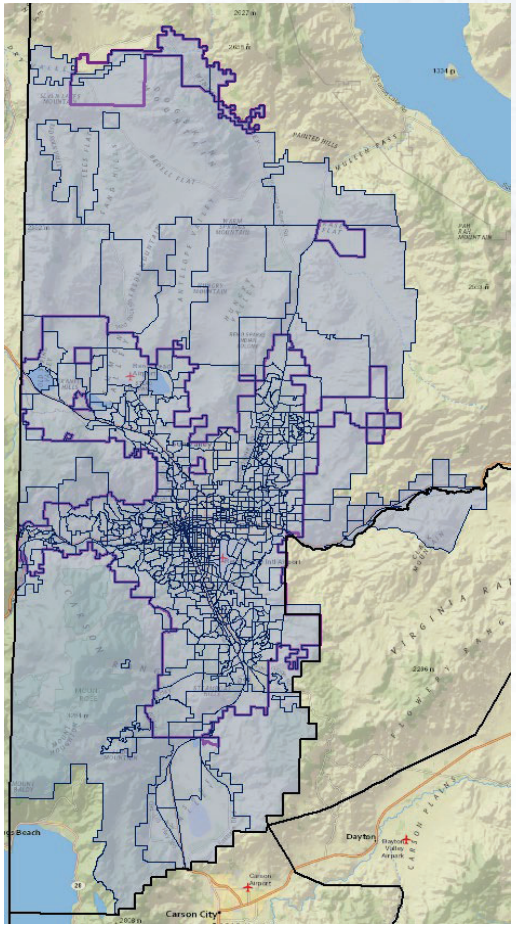
Conflate to TAZ



- **Upon completion, data are attached to appropriate TAZ and inherit all necessary fields**
  - E.g. household size distribution
  - Job categories
- **Model Years**
  - 2020 (delivered)
  - 2025
  - 2030
  - 2040
  - 2050
  - Full Build Out

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Questions?

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