

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

**Meeting Minutes**

**Thursday, August 22, 2013**

**Members Present:**

Amy Cummings, Regional Transportation Commission  
Art Sperber, City of Sparks Planning Commission  
Bill Gall, City of Reno Community Development  
Clara Lawson, Washoe County Public Works  
Jeff Hale, Regional Transportation Commission  
Jim Rundle, City of Sparks Community Development  
John Martini, City of Sparks Public Works  
Kraig Knudsen, Private Sector  
Paul Kelly, Washoe County Development Review  
Randy Walter, Private Sector  
Steve Bunnell, City of Reno Public Works  
Ted Erkan, Private Sector

**Members Absent:**

Doug Coffman, City of Reno Planning Commission  
Roger Edwards, Washoe County Planning Commission

**RTC Staff:**

Julie Masterpool  
Lee Anne Olivas  
Tom Taelour

Kristen Barnes  
Marchon Miller  
Xuan Wang

**Guests:**

Carl Savely

Jackie Schalberg

Jeremy Smith

Jess Traver

Perry DiLoreto

Siena Reid

The meeting was called to order at 2:04pm.

**Item 1: Approval of Agenda**

The agenda was approved unanimously.

**Item 2: Public Comment**

There was no response to the call for public comment.

**Item 3: Approval of the July 25, 2013 Meeting Minutes**

The July 25, 2013 Meeting Minutes were approved. Ted Erkan abstained because he did not attend the July meeting.

**Item 4: Traffic Demand Model – Presentation on Methodology for Average Trip Lengths**

Julie Masterpool introduced Xuan Wang from the RTC Planning Department and Jeremy Smith from the Truckee Meadows Regional Planning Agency (TMRPA). Julie explained that they would be giving a PowerPoint presentation (see Attachment A) on the methodology for determining average trip lengths to be used in the RRIF Program.

Jeremy Smith began the presentation by discussing the socio-economic data that is as the basis to the traffic forecast model and includes population, land use variables, and employment. Jeremy discussed each of the areas of data in detail including how traffic analysis zones (TAZ's) are overlaid with the land use variables and how standardized North American Industry Classification System (NAICS) codes are categorized and put into the RTC's categories. Population and employment are used to develop the number of vehicle trips on the road network. Jeremy

confirmed that when he assigns population and employment numbers to the TAZs, he does look at vacant parcels for future development potential.

Xuan Wang discussed how the model predicts trip lengths. She explained that attractions and production points are determined as well as distance. The model predicts the distance traveled between each TAZ using shortest path algorithms which is then weighted based on the number of trips between zones. The sum of all of the weighted distances is then divided by the total number of trips to determine the average trip length by service area. The model can exclude the distances traveled on the freeway and other non-regional roads. Xuan stated that the model is close to completion and is currently in the final stages of calibration.

Ted Erkan asked how the model is calibrated. Xuan responded that the model is calibrated using information from the 2005 Washoe County Travel Characteristics Survey and the Highway Performance Monitoring System (HPMS) data from NDOT. Amy Cummings stated that the next household survey will be done in 2015. She also added that a sub-model will be added to track visitor travel. Perry DiLoreto asked if the proposed process is a proven practice. Jeremy Smith responded that it is an industry standard. Amy stated that the RTC is looking at using cell phone data as a supplement to the data received by the household survey and that it would give the ability to better fine tune the data.

Julie Masterpool stated that the previous model used a total “home to work” trip length of 7.75 miles, including freeway travel. The average trip length used for the RRIF Program was reduced to 4.10 miles based on the percent of travel on the regional road network identified in the Travel Survey. We anticipate the new model will provide a comparable value.

Ted Erkan asked when forecasting destinations, how does the model deal with areas as they grow as job centers. Jeremy Smith replied that suitability factors are used to reflect the desirability of particular parcels to develop, i.e. empty parcels, topography, approved developments, etc. As parcels develop, the model is updated and new travel forecasts are generated.

The next Regional Planning Meeting is on September 5, 2013. Jeremy invited everyone to attend.

Perry DiLoreto asked if the CIP was based on actual model data or was it a wish list of projects. Amy Cummings responded that the primary reason the CIP shrunk was due to the requirement that the RTP had to be fiscally constrained. While there are other projects that could be included, the RTP addresses the most needed projects while making sure it is fiscally constrained. Julie Masterpool added that the previous CIP was based on a model that had higher population and employment numbers which logically required more capacity improvements on the road network than the new consensus forecast model. Perry DiLoreto also stated that there were projects completed by developers that the RTC did not have to build and therefore able to use bond money for other projects on the CIP. He asked what the methodology is for paying back the developers for the infrastructure they built.

Ted Erkan stated that he would like to see what tools are used to calibrate the model. Julie responded that the model and the methodology used to calibrate the model could be brought back to the group at a future meeting.

Randy Walter asked if it makes sense to use the home-work trip as the average. He thinks it's the highest trip, not the average. Julie stated that the new model will average all trips and TischlerBise will apply trip length weighting factors to represent the different land use categories in the RRIF fee calculations.

Julie Masterpool stated that she anticipates the model will be completed in the next few weeks and would provide the average trip length which would allow us to finish up the calculation of fees for the next meeting.

#### **Item 5: RRIF Program Follow-Up**

##### **a) RTC-5 Project List**

Julie Masterpool discussed the proposed list of RTC-5 projects that were presented to the RTC Board in December 2008. Randy Walter asked if there was a way to update the group with a summary of what's been spent to date. Kristen Barnes distributed copies of the Bond Funded Road Projects – Expenditures History for 2009-2013. There was discussion about

the funding for the SouthEast Connector Project, bonding, and fuel taxes. Julie Masterpool will provide a summary of the handouts that Kristen provided at the September meeting.

b) RRIF Share for Multi-Modal Projects

Julie discussed how multi-modal projects benefit both future and existing development. The RRIF proportionate share was based on the growth in VMT between 2014 and 2024 for each service area.

c) Regional Road Definition

Julie stated that current definition of a regional road includes arterials and collectors over 5000 ADT, industrial roads, and roads on a transit route. The regional road classification allows for rehabilitation money to be used for both maintenance and capacity projects. Julie stated the definition could be changed, but only for impact fee system purposes. Randy Walter stated that he believes 5000 ADT is a mistake based on the outstanding credits. Ted Erkan stated that definition should not be different for new development. Whatever is a regional road in the RTP should be regional road for the impact fee system and whoever is responsible for paying for it, should be ready to pay for it. John Martini suggested taking off all two lanes roads and only have four lanes plus on the CIP. Julie Masterpool stated that she would bring back options for the definition of a regional road to the September meeting. John Martini asked Julie to put a call out to the local agencies to see what additional projects that may need to be added to the CIP.

d) CIP Additions

TischlerBise has recommended that the CIP match the list of projects in the RTP and update the CIP on an interval timeframe (possibly annually) as determined by the group. Julie requested that before we finalize the RRIF CIP, we develop an updated congestion map via the new model to assist with identifying any new capacity projects needed in the next 10 years. This will provide the justification for any new additions.

**Item 6: Public Comment**

There was no response to the call for public comment.

### **Item 7: Member Items**

- Jeff Codega has resigned as a RRIF TAC member. The committee will need another private sector member. Julie stated that those interested should submit an application. The application is available on the RTC website.
- The next RRIF TAC meeting is scheduled for Thursday, September 26, 2013 at 2:00pm in the RTC Engineering Conference Room located at 1105 Terminal Way, Suite 108.
- The October RRIF TAC meeting date may need to be changed depending on TischlerBise's availability.
- The November and December RRIF TAC meetings will likely be combined because of how they fall on holidays. Julie Masterpool suggested December 5<sup>th</sup> or 12<sup>th</sup>. She asked the group to check their calendars to see what date would work the best.
- Fred Turnier is possibly looking at deferrals on impact fees. Julie Masterpool asked the group what they think. There was discussion about how communities in Northern California have deferred until the CFO, but ultimately the group didn't feel that it was something that work for our community.


### **Item 8: Adjournment**

There being no further business, the meeting adjourned at 3:57pm.

Respectfully Submitted,

Lee Anne Olivas

# ATTACHMENT A

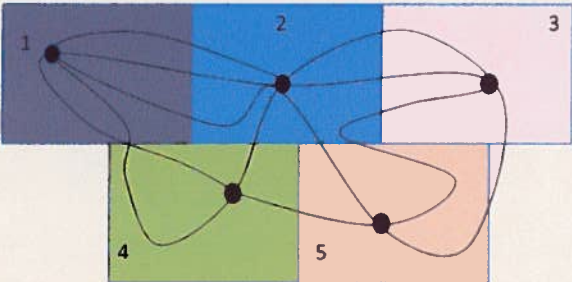



**Regional Road Impact Fee (RRIF)  
Technical Advisory Committee  
August 22, 2013**

**Calculating Average Trip Lengths Using the  
RTC Regional Travel Model**

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## Trip Lengths in Cinco City

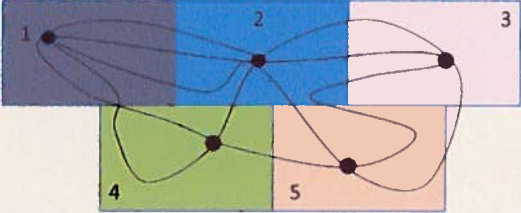


5 TAZs connected by regional roads – 3 TAZs in the North, 2 TAZs in the South

2

# ATTACHMENT A

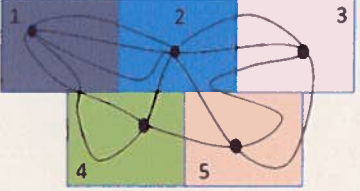
## Trip Lengths in Cinco City



Distance between zones are calculated from Centroid to Centroid. The Centroid represents the “loading point” of the zone – all trips in a travel demand model start from a TAZ Centroid.

3

## Trip Lengths in Cinco City



From – To distances are calculated based on a shortest path algorithm which seeks to minimize travel time for all travelers simultaneously across the network.

Intra-zonal distance is calculated as the average distance between 3 neighboring zones.

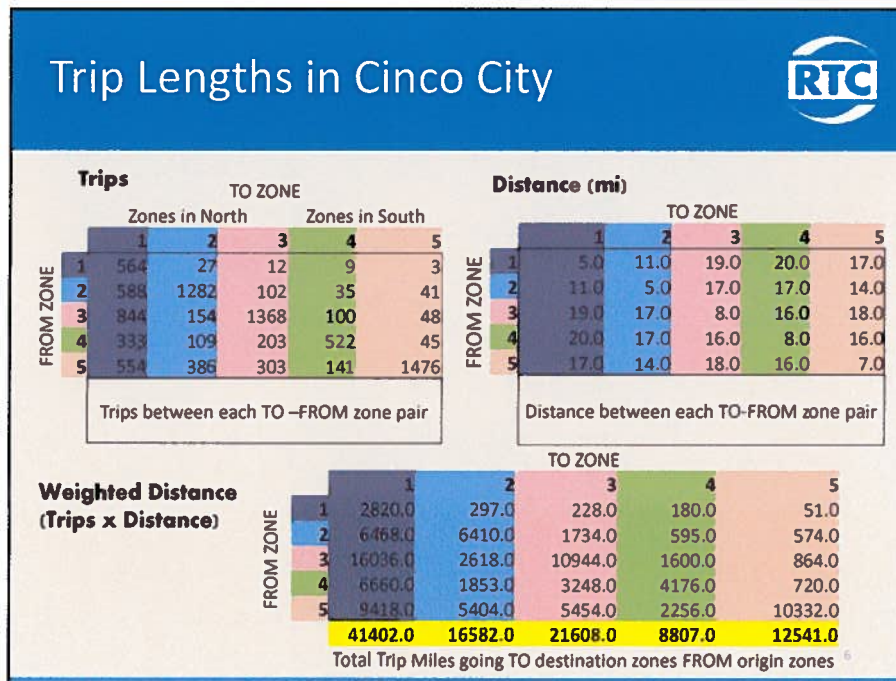
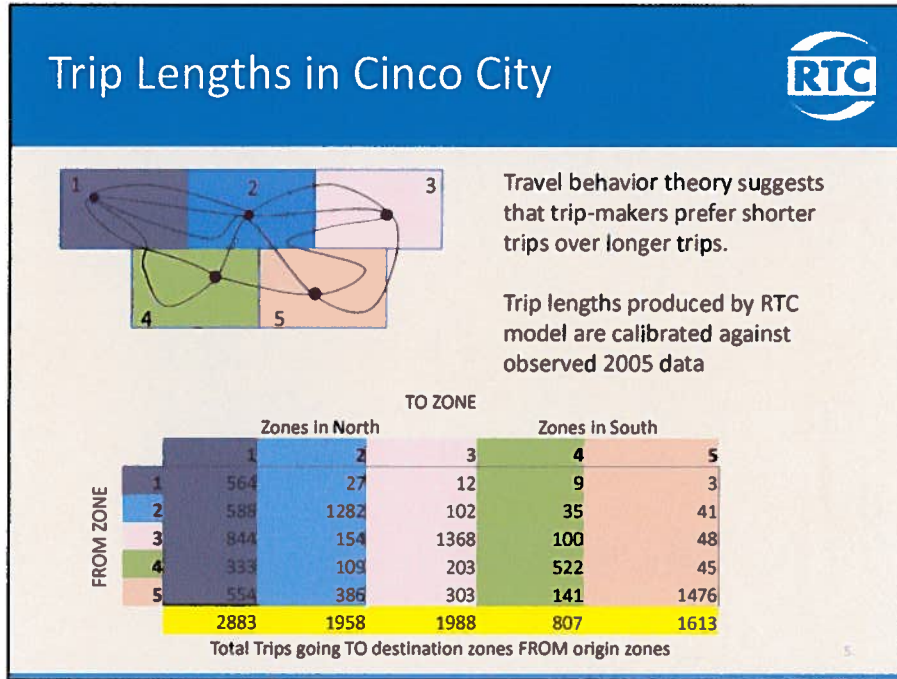
**Distance (mi)**

		TO ZONE				
		1	2	3	4	5
FROM ZONE	1	5.0	11.0	19.0	20.0	17.0
	2	11.0	5.0	17.0	17.0	14.0
	3	19.0	17.0	8.0	16.0	18.0
	4	20.0	17.0	16.0	8.0	16.0
	5	17.0	14.0	18.0	16.0	7.0

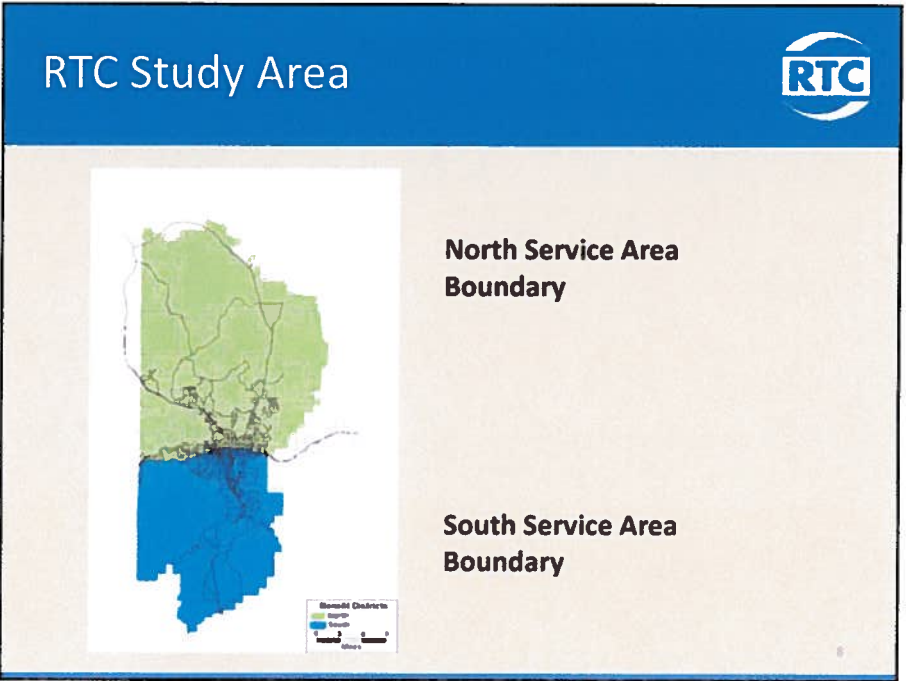
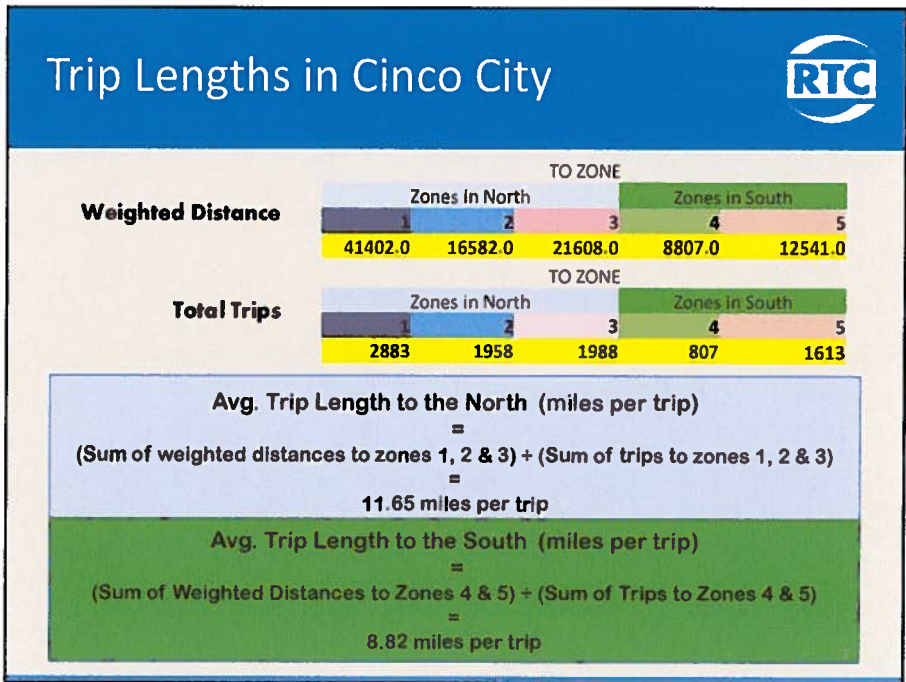
4



# ATTACHMENT A




# ATTACHMENT A



# ATTACHMENT A

## Trip Distance on Regional Roads



When calculating distances between TO-FROM zones, the RTC Model's assignment algorithm seeks to minimize travel time for all travelers on the system (equilibrium condition).


As you can see from the path, most of the trip is spent on the interstate system.

Model determines the quickest route between points 1 and 2

Total Distance    20.6 mi

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## Trip Distance on Regional Roads



The **ORANGE** sections of the route are the regional segments as coded into the network by RTC.

The trip starts and ends on local streets

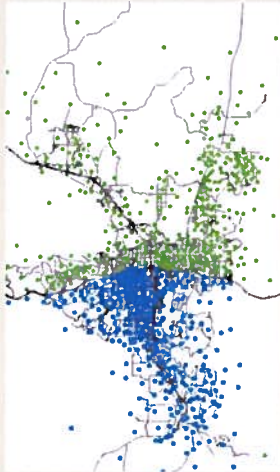
The middle portion of the trip is on the interstate

Regional Distance    8.8 mi

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## ATTACHMENT A

### Expanding the Example from Cinco City to RTC



The process of calculating the portion of the distance between zones on REGIONAL ROADS is repeated between every zone.

With the REGIONAL ROAD distance from each zone to every other zone, and the trips between zones, the average trip length to the NORTH or to the SOUTH can be calculated as seen in Cinco City.

Paths traveled by many people count more than paths traveled by few people (weighted distances are used)

Different average for North and South fee areas

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### So What is the Average Trip Length?

- RTC Model is still being calibrated and validated for 2005 so the Average Trip Lengths cannot yet be determined.
- Once model validation is complete, a report detailing the calibration efforts and the validation statistics will be available.

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