Park and Ride Users Survey: Summary Report

Rio Metro Regional Transit District

This document provides the results of a survey of users of three ABQ Ride park and ride facilities conducted in March 2012. The objective of the survey was to understand how those facilities are utilized and to determine user points of origin and destination. In addition to describing transit usage patterns, the survey findings demonstrate the relationship between surrounding land contexts and the mode by which Albuquerque-area transit users access the stations. The report has implications for service expansion and the siting of future park and ride facilities.

July 2012

RIO METRO REGIONAL TRANSIT DISTRICT

MR COG Communities Working Together

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Introduction

In March 2012, the Rio Metro Regional Transit District, ABQ Ride, and the Mid-Region Council of Governments conducted a survey of users at three Albuquerque-area park and ride facilities: 1) **Northwest Transit Center** (NWTC) at Ellison Road and Coors Bypass; 2) **Central and Unser Transit Center** (CUTC); 3) **Uptown Transit Center** (Uptown TC). A small number of surveys were also collected at the Cottonwood Mall transit station, which is not a formal park and ride facility but serves as a collection point for Rapid Ride Blue Line passengers and other transit users in the northwest metro area. The survey was conducted over four days and resulted in the collection of more than 1,000 individual surveys across the morning peak and mid-day periods. This report presents the findings from each survey site.

Purpose

The park and ride survey was conducted as part of the Paseo del Norte High Capacity Transit Study (HCTS). The HCTS examines ways to connect residential areas in northwest Albuquerque and southern Rio Rancho with employment sites in the Journal Center/Jefferson St corridor and other activity centers east of the Rio Grande. Due to the land uses and design characteristics found across much of the Westside, it is particularly difficult to implement high frequency transit service in the HCTS study area.[1] Relatively low-density detached single-family housing is common, and subdivisions often feature minimal street networks and poor connectivity forcing pedestrians to make lengthy and circuitous trips to access arterial roads. As a consequence, a large portion of transit boardings in Albuquerque's Westside, including the HCTS study area, occur at park and ride facilities.

The NWTC is a major ABQ Ride park and ride facility with 305 spaces. Situated near NM 528 and Coors Blvd, the facility is directly accessible to a large number of residents in Rio Rancho and west Albuquerque as they travel to major activity centers and employment sites east of the Rio Grande. It acts as a collection point for nearly all transit service operating in the northwest metro area, including five commuter routes (92, 94, 96, 98, 551), two all-day local routes (155, 157), Rail Runner connection service (251), and the Rapid Ride Blue Line (790), which connects to downtown Albuquerque and the University of New Mexico (UNM).[2]

The CUTC is located in the southwest portion of the metropolitan area and serves a total of four routes: three all-day local routes (54, 66, 198) and the Rapid Ride Red Line (766), which connects to UNM, downtown Albuquerque, and the Uptown area. The CUTC is similar in some respects to the NWTC, but the area features very different demographic characteristics. Like the NWTC, the CUTC serves as a collection point in a largely residential area for travelers heading to downtown Albuquerque, UNM, and other destinations along Central Ave and east of the Rio Grande. There are a total of 180 parking spaces.

[1] For the purposes of this report, the Westside will refer to the portion of Bernalillo County and the City of Albuquerque west of the Rio Grande, as well as the City of Rio Rancho.

[2] The lone transit service in the area that does not connect to NWTC is commuter Route 162, a low-ridership commuter route that bypasses the NWTC by connecting the Ventana Ranch residential area and the CNM West campus with Montaño Plaza at Coors Blvd.

However, residents in the CUTC market area tend to be lower income than other portions of the Westside, and the CUTC generates fewer trips to UNM than the NWTC.

Located in northeast Albuquerque, the Uptown TC serves a total of seven routes: three commuter routes (6, 12, 34), three all-day local routes (3, 8, 157), and the Rapid Ride Red Line (766). Unlike the NWTC, the Uptown TC is a common transfer point and is a more frequent terminal point for transit trips due to its proximity to the Uptown Shopping Center and Coronado Mall. The Uptown TC features a smaller number of parking spaces (65) than the other major transit facilities included in the survey.

New transit service along Paseo del Norte or other arterials in the northwest portion of the metropolitan area would face the same constraints and challenges in serving riders as existing ABQ Ride service. That is to say, new service would also require centralized locations to collect riders from a wide market area and would rely on multi-modal trips in which individuals drive, walk, or bicycle from their point of origin to a local transit station or park and ride facility. As the HCTS examines high-speed transit options that may feature infrequent stops through neighborhoods with poor connectivity, service through the Westside is likely to be oriented, at least initially, around park and ride facilities.

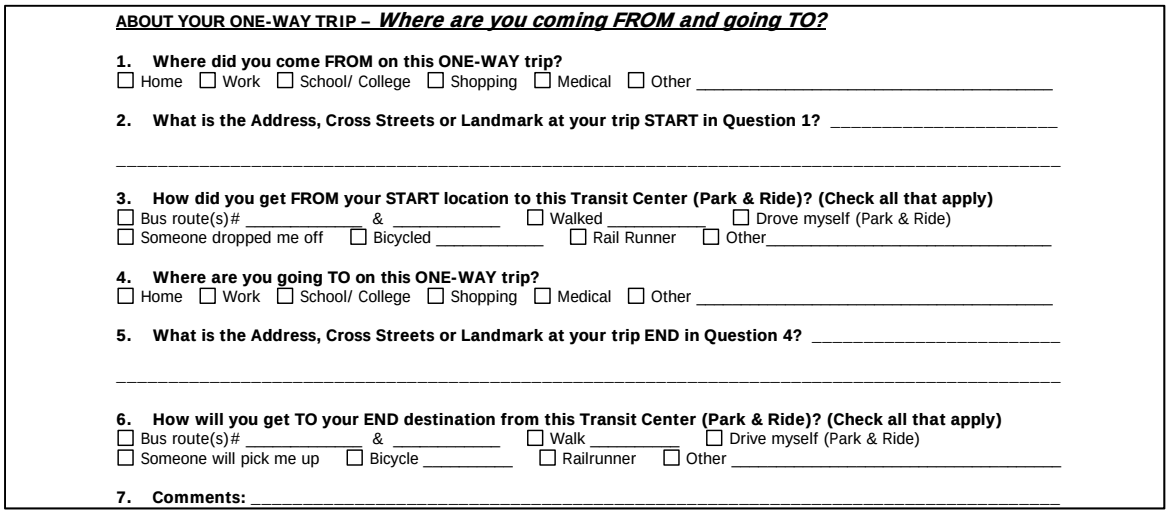
Developing a formal transit station involves a large investment and requires sound choices in the scale and location of new facilities. In a challenging market such as the Westside, it is important to understand how existing facilities are utilized before designing new service. The survey asked basic information related to traveler behavior and among existing park and ride users and sought the following information:

- Where are transit users coming from?
    - Purpose: Identify new and untapped markets to which service could be expanded.
- How far do transit users travel in order to reach a park and ride station?
    - Purpose: Identify the market area for a typical park and ride and determine appropriate spacing between stations.
- How do transit users get from their point of origin to the station?
    - Purpose: Determine type and quantity of alternative modes users to ensure that new stations provide adequate infrastructure for all potential users.

Methodology

A brief seven question survey was administered by staff from ABQ Ride and MRCOG along with surveyors contracted from a local staffing agency. Questions were read aloud to respondents and answers were recorded by the surveyor. The majority of survey respondents were captured while transit users were waiting for their bus to arrive. This meant that most users interviewed early in the day had departed from their place of residence. As the day progressed the place of origin became more varied. Survey respondents were not asked to describe their future travel, only the trip on which they were currently embarking. Although the surveys skewed towards respondents traveling from home to a destination (usually school, work, or shopping), it is fairly safe to assume that users would repeat a similar cycle on their return trip.

Figure 1: Questionnaire used for Park and Ride Survey



ABOUT YOUR ONE-WAY TRIP – *Where are you coming FROM and going TO?*

1. Where did you come FROM on this ONE-WAY trip?
☐ Home ☐ Work ☐ School/ College ☐ Shopping ☐ Medical ☐ Other _____

2. What is the Address, Cross Streets or Landmark at your trip START in Question 1? _____

_____

3. How did you get FROM your START location to this Transit Center (Park & Ride)? (Check all that apply)
☐ Bus route(s)# _____ & _____ ☐ Walked _____ ☐ Drove myself (Park & Ride)
☐ Someone dropped me off ☐ Bicycled _____ ☐ Rail Runner ☐ Other_____

4. Where are you going TO on this ONE-WAY trip?
☐ Home ☐ Work ☐ School/ College ☐ Shopping ☐ Medical ☐ Other _____

5. What is the Address, Cross Streets or Landmark at your trip END in Question 4? _____

_____

6. How will you get TO your END destination from this Transit Center (Park & Ride)? (Check all that apply)
☐ Bus route(s)# _____ & _____ ☐ Walk _____ ☐ Drive myself (Park & Ride)
☐ Someone will pick me up ☐ Bicycle _____ ☐ Railrunner ☐ Other _____

7. Comments: _____

Surveys were reviewed for clarity and a small number were eliminated due to unclear entries or responses. A small amount of editing and subjective revisions were required during the compilation of the survey results. While the majority of respondents provided two intersecting streets or an easily identifiable landmark to which cross streets could be assigned, some responses referred to a geographic area or community rather than actual streets (e.g., Westgate or Ventana Ranch). Other respondents simply provided a street name. In these cases major intersections at the center of the area in question were assigned. The instances in which one or both streets were assigned constituted only a small fraction of total surveys collected. The database was geocoded to spatially map out the origins and destinations of survey respondents. This allows visual analysis of transit user points of origin and destinations and allows clusters of users and potential market areas to emerge.

Finally, coded entries were inputted into MRCOG's Transportation Accessibility Model to calculate the distance between the point of origin or destination and the transit center at which the respondent was interviewed. Distances are based on the roadway network, not straight line distances, or "as the crow flies," and are therefore effectively "rounded" to the nearest intersection. This allows a determination of the average distance respondents traveled to reach the transit center in question, which is valuable for the purpose of determining the average length people are willing to drive to park and rides and the average distance between the transit facility and their destination.

Analysis

Overall, more than 1000 surveys were collected. Analysis was conducted on the points of origin, destinations, as well as the access mode share, or means of getting to the park and ride station, for all users. Additional analysis was conducted for respondents who arrived at the station via private vehicle to determine traveler behavior and patterns within that subset of users. Origin and destination maps can be found at the end of this report. Figure 2 refers to the "n" value or number of entries in which the charts, tables, and graphs found later in the report are based.

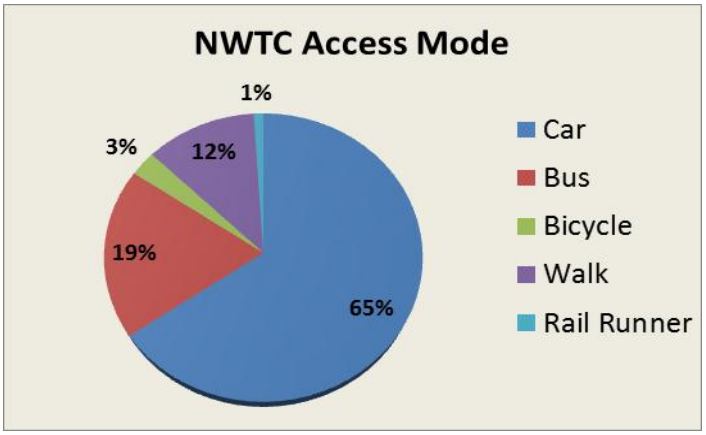
Figure 2: Survey respondents by means of arrival at transit center

Site	Vehicle Users	Transit Users	Total
Central & Unser TC	109	94	254
Cottonwood Mall	36	2	46
Northwest TC	257	75	393
Uptown TC	41	150	299

Northwest Transit Center

Although the NWTC is primarily a park and ride facility, the survey demonstrated a strong multi-modal aspect to the station. While 65% of users arrived by vehicle (49% drove alone and 16% were dropped off or were carpool passengers), 15% of NWTC users walked or bicycled to the station, and an additional 19% of respondents arrived via bus and used the facility as a transfer point.

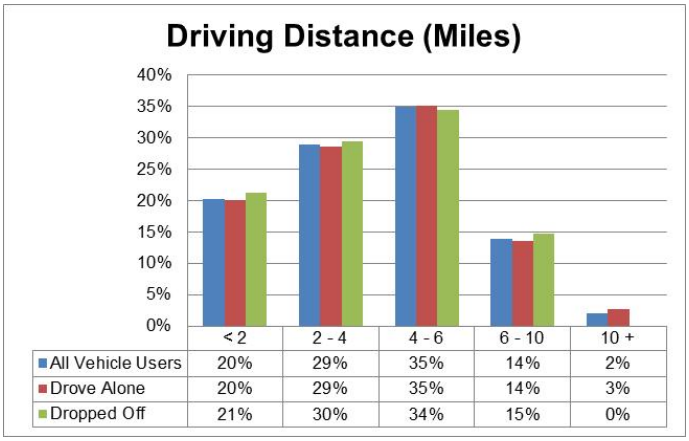
Figure 3: Means of arrival of respondents at Northwest Transit Center



Users who arrived by private vehicle at the NWTC (about 65% of all respondents) drove an average of 3.9 miles from their point of origin to the facility. However, some users were willing to travel as far as ten miles or more to reach the facility. About 84% of the trips were six miles or less. Despite the expectation that respondents who "drove alone" would be willing to travel farther than individuals

requiring a ride, the differences in the distances traveled were minimal (see Figure 4). On average, individuals who drove themselves were willing to drive themselves slightly longer distances (3.96 miles) than individuals who were dropped off (3.71 miles), and there are more instances of long-distance trips (over ten miles) to the park and ride facilities among individuals who drove themselves.

Figure 4: Driving distance from point of origin to the Northwest Transit Center



Traveler Type	Average Trip (Miles)	Range (Miles)
All Vehicle Users	3.90	0.3 - 12.9
Drove Alone	3.96	0.3 - 12.9
Dropped Off	3.71	0.8 - 9.1

Survey respondents were asked to identify the closest major intersection to their point of origin. A number of locations, mostly in Rio Rancho, emerged as key sources of transit users. These locations may present an opportunity for expanded or future transit service to capture riders before they arrive at the NWTC.

Figure 5: Major points of origin for Northwest Transit Center users

Intersection	Distance to NWTC (Miles)	Percent of NWTC Users
Unser / Southern	4.1	14%
Unser / McMahon	2.5	6%
NM 528 / Southern	2.9	4%
NM 528 / Northern	5.3	4%
Unser / Northern	6.3	4%
Unser / Paseo del Volcan	8.5	2%

The Unser and Southern area was the source of 14% of all NWTC users, making it the most common source of NWTC users by a substantial margin. About 25% of the individuals who began their trips at Unser and Southern arrived at the NWTC via bus and transferred, while the rest of the respondents drove. This is important to note because there is existing transit service to Unser and Southern. However, individuals who were already willing transit users felt compelled to drive more than four miles to the NWTC rather than board a bus closer to their point of origin. The likely reason for this preference is that service to Unser and Southern is relatively infrequent (Routes 155 and 551 provide service to the NWTC in the peak periods only) or inconsistent (Route 251 is aligned with the New Mexico Rail Runner Express to facilitate rail transfers and follows an irregular schedule).

Figure 6: Destinations of Northwest Transit Center Users

Location	% of Users	Location	% of Users
Univ. of New Mexico / UNMH	58%	VA Hospital (San Mateo/Gibson)	2%
Downtown Albuquerque	10%	Southern/Unser	2%
KAFB / Sandia National Labs	5%	JC / Jefferson St (South of PdN)	1%
Central New Mexico CC (CNM)	3%	JC / Jefferson St (North of PdN)	<1%
Uptown Center	2%	Other	15%

The University of New Mexico area is the most popular destination among NWTC users by a wide margin with 58% of all survey respondents making a trip to or from UNM. After UNM, the most common destinations were downtown Albuquerque (10%) and Kirtland Air Force Base/Sandia National Labs (5%). Trips to the Journal Center/Jefferson St. corridor comprised about 2% of trips originating at the NWTC.

Cottonwood Mall

Although the sample size at the Cottonwood Mall was only one-eighth the size of the NWTC (46 persons versus 393 at the NWTC), respondents demonstrated similar characteristics to those surveyed at the NWTC in that the majority of users drove to the facility in order to travel to UNM.[3] A total of 86% of Cottonwood Mall respondents arrived by vehicle (79% drove alone while 7% were dropped off), and 14% walked to the station. Overall, Cottonwood Mall respondents traveled shorter distances (an average of 3.25 miles), and a large number (33%) traveled less than one mile from their point of origin to Cottonwood Mall. However, several respondents drove more than ten miles from their point of origin; these users likely bypassed the slightly closer NWTC for the more abundant parking offered at Cottonwood Mall. The most common destination was the University of New Mexico area (80% of respondents) with downtown Albuquerque (11%) being the only other destination generating more than one response.

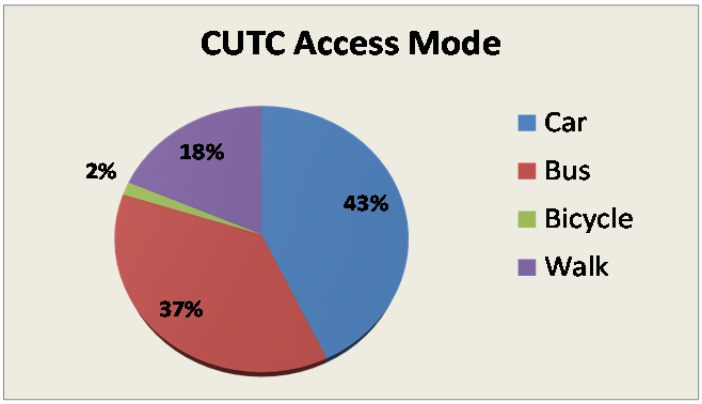
Despite the smaller sample size, one striking feature among respondents was the frequency with which Unser and Southern was cited as the point of origin. Seven out of 45 trips (16%) originated at Unser and Southern, while the rest of the points of origin were concentrated immediately adjacent to Cottonwood Mall or dispersed across northwest Albuquerque and Rio Rancho.

Central & Unser Transit Center

The CUTC is a major park and ride facility located near the intersection of two major principal arterials: Unser Blvd, one of the two continuous north-south facilities on the metropolitan Westside, and Central Ave, a river crossing facility that provides access to downtown Albuquerque, the University of New Mexico, and other retail and cultural destinations. The site contains 180 parking spaces. However, less than half (43%) of the users of the CUTC rely on a private vehicle to reach the transit center. In fact, nearly as many users of the CUTC (37%) arrived by bus and transferred as arrived by car.

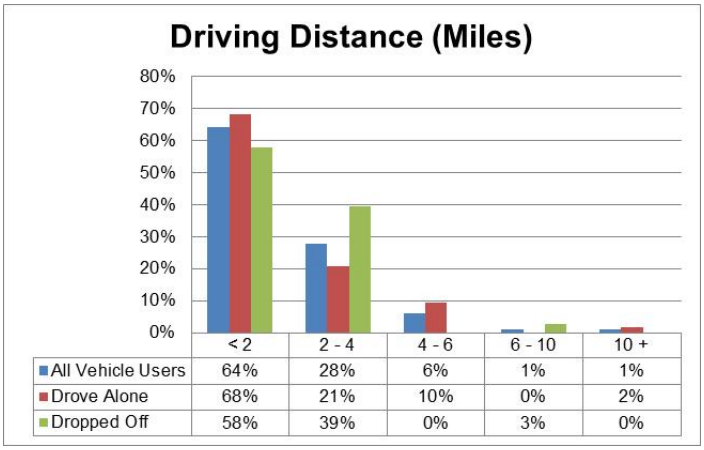
[3] The Cottonwood Mall sample size is smaller due to the shorter amount of time allocated for survey collection than at the NWTC. A 2011 boarding and alighting survey showed that the average number of daily users of the Cottonwood Mall station is about half that of NWTC, still a substantial number.

Figure 7: Means of arrival of respondents at the Central & Unser Transit Center



The most common form of transfer through the CUTC occurs between Routes 54 and 198, which serve the area south of Central Ave and west of Coors Blvd, and Routes 66 and 766, which provide service along Central Ave. About 40% of transit users rode either the 54 or 198 to or from the CUTC. More than half of the individuals who used the CUTC as a transfer point rode one of the Central Ave routes. The CUTC is also used heavily by pedestrians as nearly 20% of individuals arrived at the CUTC on foot.

Figure 9: Driving distance from point of origin to Central & Unser Transit Center



Traveler Type	Average Trip (Miles)	Range (Miles)
All Vehicle Users	2.10	0.2 - 13.1
Drove Alone	2.15	0.2 - 13.1
Dropped Off	2.01	0.2 - 8.5

The market area for the CUTC is considerably smaller than the Northwest Transit Center. The average vehicle trip for all users is slightly more than two miles and the majority of trips (64%) were less than two miles in length. Similar to the results from the NWTC, individuals who "drove alone" traveled slightly longer distances than those that were "dropped off," however the difference was nominal. Only 8% of vehicle trips to the CUTC were more than four miles in length.

Figure 10: Major points of origin for Central & Unser Transit Center users

Intersection	Distance to NWTC (Miles)	Percent of CUTC Users
Unser / Ladera	1.8	10%
98th / Sage	2.5	9%
Unser / Bridge	0.5	8%
Central / 98th	1.3	6%
Central / Coors	0.9	5%

The majority of points of origin for CUTC users are along or south of Central Ave and west of Coors Blvd. The most common points of origin are Unser Blvd and Bridge Blvd, Unser and Ladera Dr (which is the only common point of origin north of Central Ave), and 98th St and Sage Rd. There were a number of additional respondents whose points of origins were near Unser Blvd and Bridge Blvd but at less prominent intersections. If these additional respondents are factored in, the Unser and Bridge area was the most common point of origin among CUTC users. Remarkably, nearly one-third of the users who traveled from Unser Blvd and Ladera Dr walked 1.8 miles to the transit center. Given that the only service along Unser Blvd is a peak-period commuter route, there are few alternatives for individuals who live or work along Unser Blvd but do not have access to a vehicle. More than half of the trips beginning at 98th St and Sage Rd to the CUTC were accomplished by transit; the rest involved private vehicles.

Figure 11: Destinations of Northwest Transit Center Users

Location	% of Users	Location	% of Users
Univ. of New Mexico / UNMH	36%	Central/Louisiana	2%
Downtown Albuquerque	19%	JC / Jefferson St (South of PdN)	2%
Central New Mexico CC	5%	KAFB / Sandia Nat. Labs	1%
Central/Coors	4%	Uptown Center	1%
Central/San Mateo	4%	Other	25%

The most common destinations for CUTC users are the University of New Mexico and downtown Albuquerque, which combined attracted more than half of users. Few other locations attracted large numbers of CUTC users and destinations were widely dispersed along Central Ave, across the southwest mesa, and other destinations across the metropolitan area.

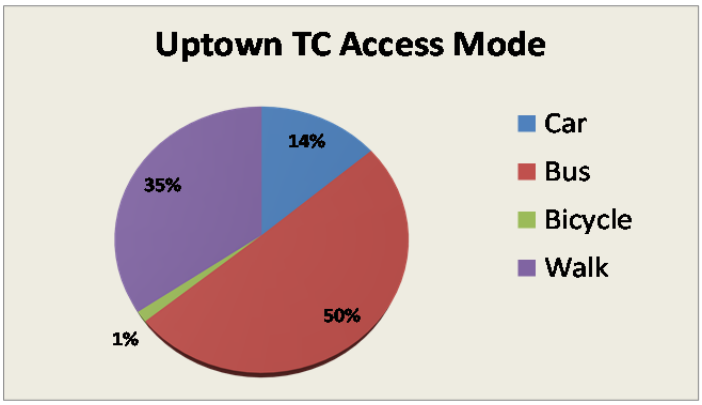
Uptown Transit Center

Uptown TC is a small transit center located on 1.5 acres with only 65 parking spaces. It is proximate to large levels of employment and regional shopping destinations in the Uptown Shopping Center, Coronado Mall, and adjacent office buildings. Uptown TC is an urban facility that accommodates a broader range of trips than the other transit centers. While the majority of surveys at other sites described home-to-work trips that are consistent with the suburban site and residential surroundings, Uptown TC features somewhat different usage patterns. Overall, 73% of Uptown TC users began their trip at home, compared to 92% at NWTC and 81% at CUTC.

At other transit centers the movement of users followed a clear periphery-to-core trajectory. In other words, transit center users were most likely to begin their trips in outlying residential areas and proceed to a transit center that was generally on the path toward major destinations such as downtown Albuquerque or the University of New Mexico. At the NWTC this meant that most points of origin were to the north and/or west of the park and ride facility. At the CUTC most points of origin were to the south and/or west of the facility. At the Uptown TC, a majority of points of origin were east and/or north of the facility, which also indicates movement from residential areas towards the urban core. However, the dispersion and pattern of origins and destinations was not nearly as clear and a number of users made reverse trips away from the core to more peripheral destinations in the metropolitan area.

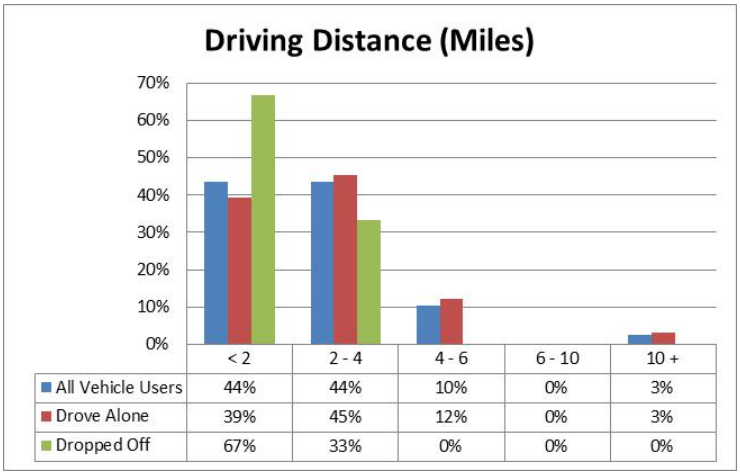
The dispersion of origin and destination points reflects the fact that Uptown TC is utilized in a very different manner than other park and ride facilities. There is much less parking capacity and it is a common transfer site (while other facilities demonstrated more transfers than had been expected, the Uptown TC features a greater number of users who arrive by bus than by private vehicle). Finally, the Uptown area is a destination in itself. There are more than 11,000 jobs located within ½-mile of the transit center, and Uptown Shopping Center and adjacent Coronado Mall are important regional shopping destinations. Uptown TC therefore facilitates trips with a wide range of purposes.

Figure 12: Means of arrival of respondents at Uptown Transit Center



One-half of Uptown TC users arrived at the facility by public transit and either transferred to another route or terminated their trip at or near the Uptown Shopping Center. Only 14% of respondents arrived by private vehicle while 35% arrived on foot. This is due in part to the smaller number of parking spaces available, but is more reflective of the station's location and its surrounding uses. On average, an all-day fixed route bus arrives every six or seven minutes at the Uptown TC. Only one of the four all-day routes (Route 766) terminates at the facility; the rest are through routes that serve destinations across east Albuquerque, and in the case of Route 157, connects to the northwest portion of the metropolitan area.

Figure 13: Driving distance from point of origin to Uptown Transit Center[4]



Traveler Type	Average Trip (Miles)	Range (Miles)
All Vehicle Users	6.55	0.3 - 18.9
Adjusted Average	2.53	0.3 - 5.6

There was a much smaller sample of vehicle users at the Uptown TC than other sites, but the general pattern was for short-distance vehicle trips to the transit center. The average trip length was 2.53 miles and nearly 90% of trips were less than four miles in length. The average trip length value excludes two outliers – travelers from the East Mountain area – so as not to distort the data. Aside from the East Mountain commuters, no vehicle trips to the Uptown TC were greater than six miles in length.

The East Mountain commuters represent a small portion of Uptown TC users and may be nothing more than a footnote. However, these users present an intriguing case study in the value of park and ride facilities, and perhaps more pointedly, the impacts of finite parking and parking fees on traveler behavior. For long-distance commuters from the east, the Uptown TC is presumably the most convenient park and ride facility for access to UNM. These users demonstrate a willingness to drive 15-20 miles and are clearly not interested in utilizing transit to reduce their fuel consumption. Yet these same individuals are willing to utilize public transit when there is a certain kind of financial incentive to do so (i.e., free parking).

Figure 14: Major points of origin for Uptown Transit Center users

Intersection	Distance to Uptown TC (Miles)	Percent of Uptown TC Users
Uptown area	---	47%
Central / Louisiana	2.0	7%
Menaul / Juan Tabo	3.6	6%
Menaul / Eubank	2.6	3%
Menaul / Wyoming	1.6	3%

[4] The adjusted average excludes a small number of long-distance trips taken from the East Mountains area to the Uptown TC. Due to the relatively small sample size these outliers greatly distort the data. If the outliers are included the average trip length is 6.55 miles; without the outliers the average is 2.53 miles. The median trip length with or without the outliers is 2.47 miles.

Nearly half of all respondents began their trip within a one-half mile radius of the transit facility. This number includes all nearby residents and those departing from Uptown area shopping or work sites. The survey also indicates clusters of origin points around transit routes that connect to the Uptown TC, including Menaul Blvd and Louisiana Blvd. In the case of Menaul Blvd, 24% of respondents indicated their point of origin was somewhere along the corridor, with most arriving via transit or on foot.

Figure 15: Destinations of Uptown Transit Center Users

Location	% of Users	Location	% of Users
Univ. of New Mexico / UNMH	25%	KAFB / Sandia Nat. Labs	3%
Downtown Albuquerque	9%	Cottonwood Mall	2%
Central New Mexico CC	6%	Other	52%
JC / Jefferson St (South of PdN)	3%		

In general Uptown TC user destinations were less concentrated than at other sites. Similar to the NWTC and CUTC, the most common destinations for Uptown TC users were the UNM area and downtown Albuquerque. Unlike other facilities, the area around the transit center attracts a large number of visitors and it was difficult to determine if the Uptown Shopping Center was the actual destination for survey respondents rather than a means of getting someplace else. The percentage of users for whom the Uptown area was the destination is likely higher than the number of users who traveled to UNM via the Uptown TC, but this suggestion could not be confirmed by the survey.

Summary & Conclusions

The three transit centers included in this study represent different station typologies that serve a range of markets. In particular, the study sheds light on the relationships between surrounding land uses, mode access, trip length, and the size and capacity of the facility. The results indicate how existing park and ride stations are utilized and how that usage varies based on the location and context. The survey informs the types of park and ride facilities that should be pursued, given the surrounding conditions and land uses.

ABQ Ride Station Typologies

- **Northwest TC** – Suburban commuter-oriented transit center
- **Central and Unser TC** – Suburban multi-modal transit center
- **Uptown TC** – Urban mixed-use transit center

Both the NWTC TC and the CUTC are located in transition zones between residential and commercial areas. The NWTC attracts travelers from a wide area of low to mid-density suburban housing, most of whom arrive by private vehicle. The facility features large parking capacity that is almost completely utilized and caters to commuters and students making long-distance trips to downtown Albuquerque, the University of New Mexico, and other activity centers east of the Rio Grande. Although NWTC is proximate to large numbers of jobs at the Cottonwood Mall, there are other transit facilities that serve

those employment and retail sites and there seems to be little interaction between the transit center and surrounding activities.[5]

The CUTC is similar in its setting and surrounding land uses to the NWTC, however users arrive by a larger variety of modes and the transit center that accommodates a range of trip types. The CUTC is closer to destinations than the NWTC, meaning average trip lengths are shorter and users are drawn from a smaller market area. The facility also draws from lower-income communities with less access to vehicles, and users are more likely to travel to the transit center by bus or as a pedestrian. The CUTC has a lower parking capacity than the NWTC and a lower parking utilization rate.

Uptown TC is in the heart of a mixed-use center with large amounts of adjacent office space and dining and shopping opportunities. There are large numbers of jobs and residents nearby, and the facility enjoys relatively good access for all modes. Uptown TC provides a limited amount of parking, not all of which is utilized. The survey confirms that the majority of users arrive by foot or via transit and travel to a wide range of destinations. Uptown TC therefore operates as more of an urban transfer center than a park and ride facility.

Figure 16: Transit Centers Comparison Table

Category	Northwest TC	Central & Unser TC	Uptown TC
Station Typology	Suburban Commuter-Oriented Center	Suburban Intermodal Center	Urban Mixed-Use Center
Gross Acreage	5.7	4.7	1.7
Parking Lot Area (Acres)	2.8	1.9	1.0
Parking Spaces	366	180	65
Parking Usage Rate	Extremely High	Moderate	Moderate
Population within 1 Mile (1/2 Mile)	10,061 (2,161)	14,006 (1,390)	13,717 (2,060)
Housing Units within 1 Mile (1/2 Mile)	4,677 (969)	4,896 (666)	7,172 (1,481)
Employment within 1 Mile (1/2 Mile)	14,129 (2,161)	4,895 (1,390)	16,035 (2,060)
Total Bus Connections (Commuter Routes)	9 (5)	4 (0)	7 (3)
Average Driving Distance to Transit Center	3.9 Miles	2.1 Miles	2.5 Miles
Average Distance Traveled to Transit Center	4.4 Miles	3.0 Miles	2.7 Miles
Average Distance to Destination	11.9 Miles	5.6 Miles	3.5 Miles
Users Traveling to UNM	58%	36%	25%
Users Traveling to Downtown ABQ	10%	19%	9%
Surrounding Land Use	Transition between residential (north and west) and commercial (east)	Transition between residential (south and west) and commercial (east)	Mixed-use activity center with office, retail, and multifamily housing nearby
Access Mode - Vehicle	65%	43%	14%
Access Mode - Transit	19%	37%	50%
Access Mode - Pedestrian	12%	18%	35%
Access Mode - Bicycle	3%	2%	1%

[5] One exception may be Cibola High School where a number of students arrive by public transit or pass through the facility on their way to school. By contrast, very few survey respondents indicated Cottonwood Mall as their destination.

Other Observations

- Existing literature indicates that suburban park and ride facilities should be placed at least five miles apart, meaning that an individual who resides exactly in between two facilities would have to travel at least 2.5 miles to the nearest park and ride.[6] At the NWTC, vehicle users drove about four miles on average from their place of residence to the transit center. The large catchment area and the long distances and high percentage of NWTC users who arrived by private vehicle indicate that additional park and ride facilities could be located in the northwest portion of the metropolitan area without saturating the market. The most logical site for an additional park and ride is Southern Blvd and Unser Blvd, which was the source of a large number of NWTC and Cottonwood Mall transit users.

- The average CUTC and Uptown TC vehicle users each drove slightly more than two miles to reach the facility. These averages speak to the wider transit service in the respective station areas than at the NWTC and the lesser need to travel to a designated transit facility in order to encounter service.

- Station spacing can be greater in more auto-oriented communities whose residents are more willing to drive greater distances to reach a park and ride.

- Parking capacity must be greater at commuter-oriented transit centers that facilitate long-distance trips.
- Parking capacity does not need to be as great in mixed-use areas or places that attract a range of user modes.

- ABQ Ride park and ride facilities are also important transfer centers. Even suburban sites accommodate a surprising number of transfers and transit-to-transit trips.

- At an urban transit center such as Uptown TC, the number of individuals who arrive by transit may exceed those who arrive by private vehicle.

- Bicycle users constitute a small percentage of transit facility users. The location with the greatest bicycle mode access was the NWTC at 3% of all users.

- Pedestrian connectivity is important for the simple reason that, no matter how auto-oriented the area around a transit center may seem, there are more pedestrians utilizing the facility than one would anticipate. Better connectivity may lead to even greater pedestrian usage around transit facilities.

- The University of New Mexico is the most common destination for users of all three facilities. High UNM-related ridership is a function of several variables. First, UNM staff, students, and faculty may ride all ABQ Ride buses free. Second, numerous ABQ Ride routes connect to UNM, including all three Rapid Ride lines. Third, UNM attracts a large number of travelers who do not have access to their own vehicle. And finally, UNM is one of the only locations in the Albuquerque metropolitan area where parking demand exceeds supply. While all four factors

[6] Fafhri, Ardeshir, et al. "Integrated Knowledge-Based Geographic Information System for Determining Optimal Location of Park-and-Ride Facilities," *Journal of Urban Planning and Development*, March 2002, p. 20

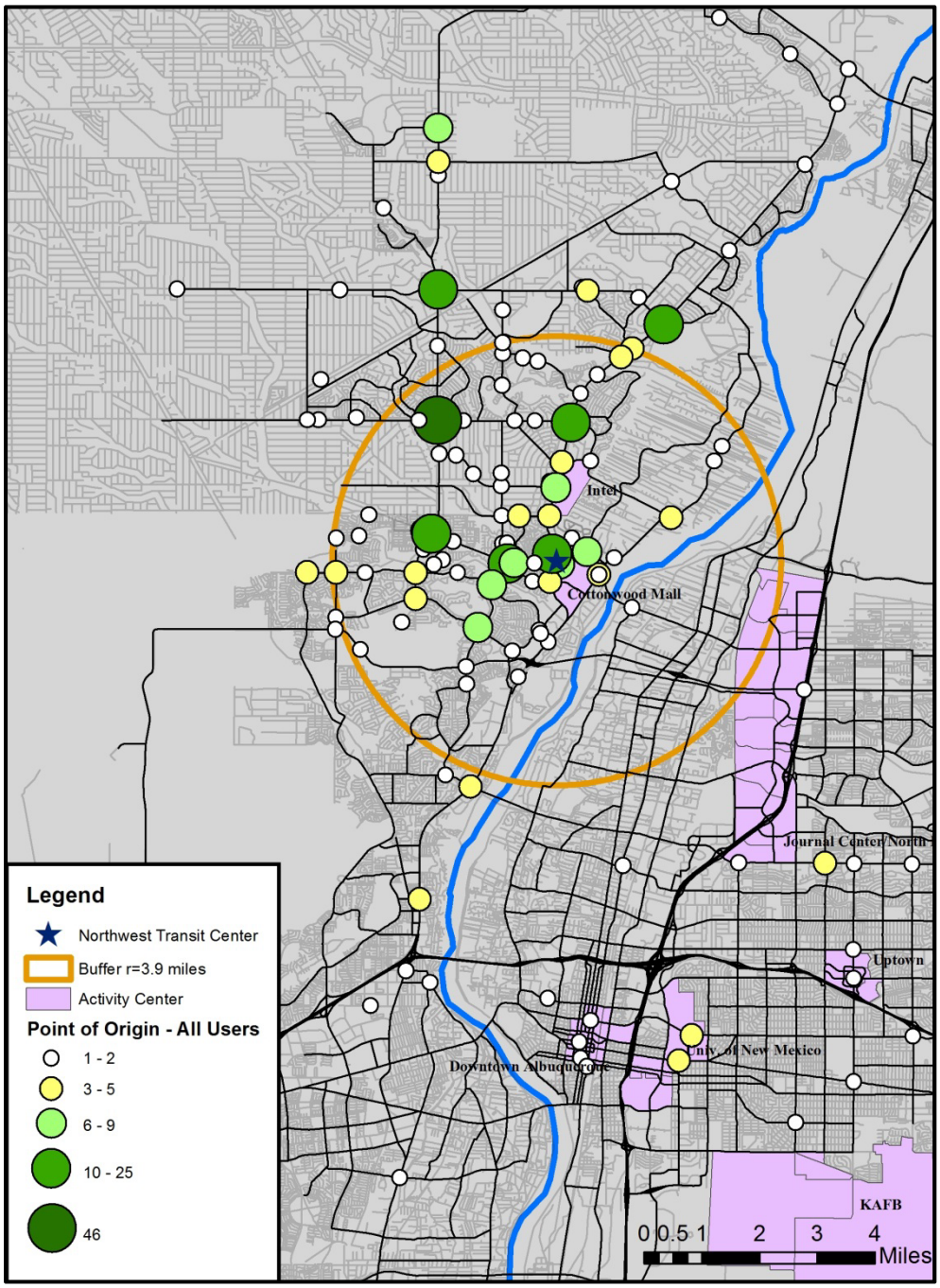
play a role in UNM-related trips originating at park and ride facilities, the shortage of easily-accessible parking and the costs associated with parking near UNM play an obvious role in the decision to travel to UNM via public transit. The great distances some survey respondents were willing to drive to reach the free parking at a transit center attests to the influential role of parking in the selection of one's travel mode.

Notes on Transit Center User Maps

The proceeding maps illustrate the points of origin and destinations for survey respondents. It is important to keep in mind that the majority of respondents were interviewed prior to boarding at the transit centers and beginning their transit trip. As this report demonstrates, the transit centers are utilized by a surprisingly large number of pedestrians and individuals making transfers to a second bus line. Origin and destination maps for "all users" are therefore distributed across the region. The easiest way to isolate the users who treat each transit center as a park and ride facility is to focus on the respondents who began their trip in a private vehicle (respondents who "drove alone" or were "dropped off"); hence some of the maps focus on "vehicle users." A small number of respondents were interviewed as they alighted and before they departed from each facility. For this reason, some points of origin actually represent the individual respondent's destination in their journey from home (e.g., a small number of points of origin in Map 1 are located at UNM).

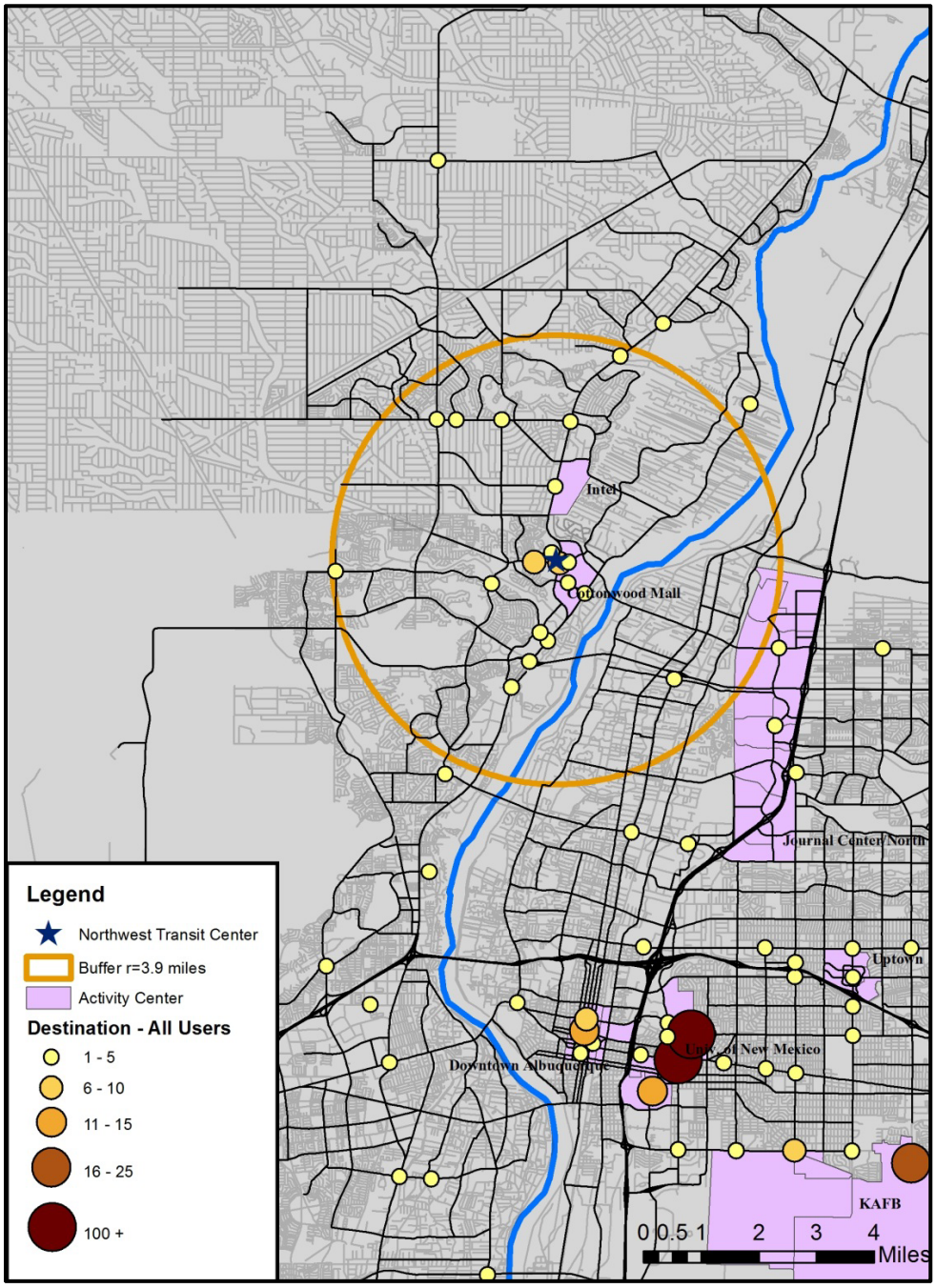
Appendix A: Origin and Destination Maps

Map 1 - Northwest Transit Center: *All User* Points of Origin[7]



[7] The orange buffer line around the transit centers indicates the average driving distance among users who arrived by private vehicle.

Map 2 - Northwest Transit Center: *All User* Destinations



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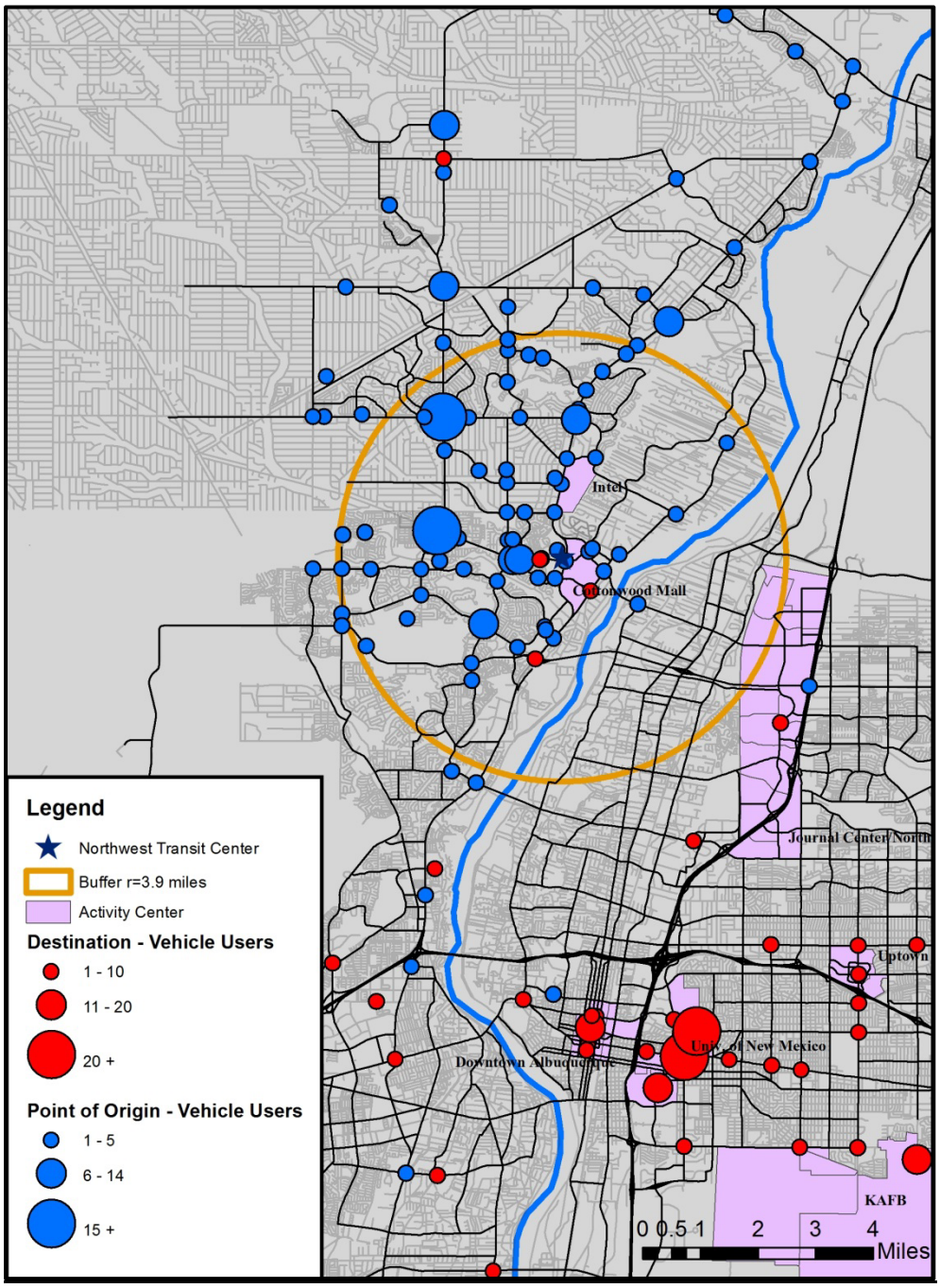
Map 3 - Northwest Transit Center: *Vehicle User* Origins & Destinations



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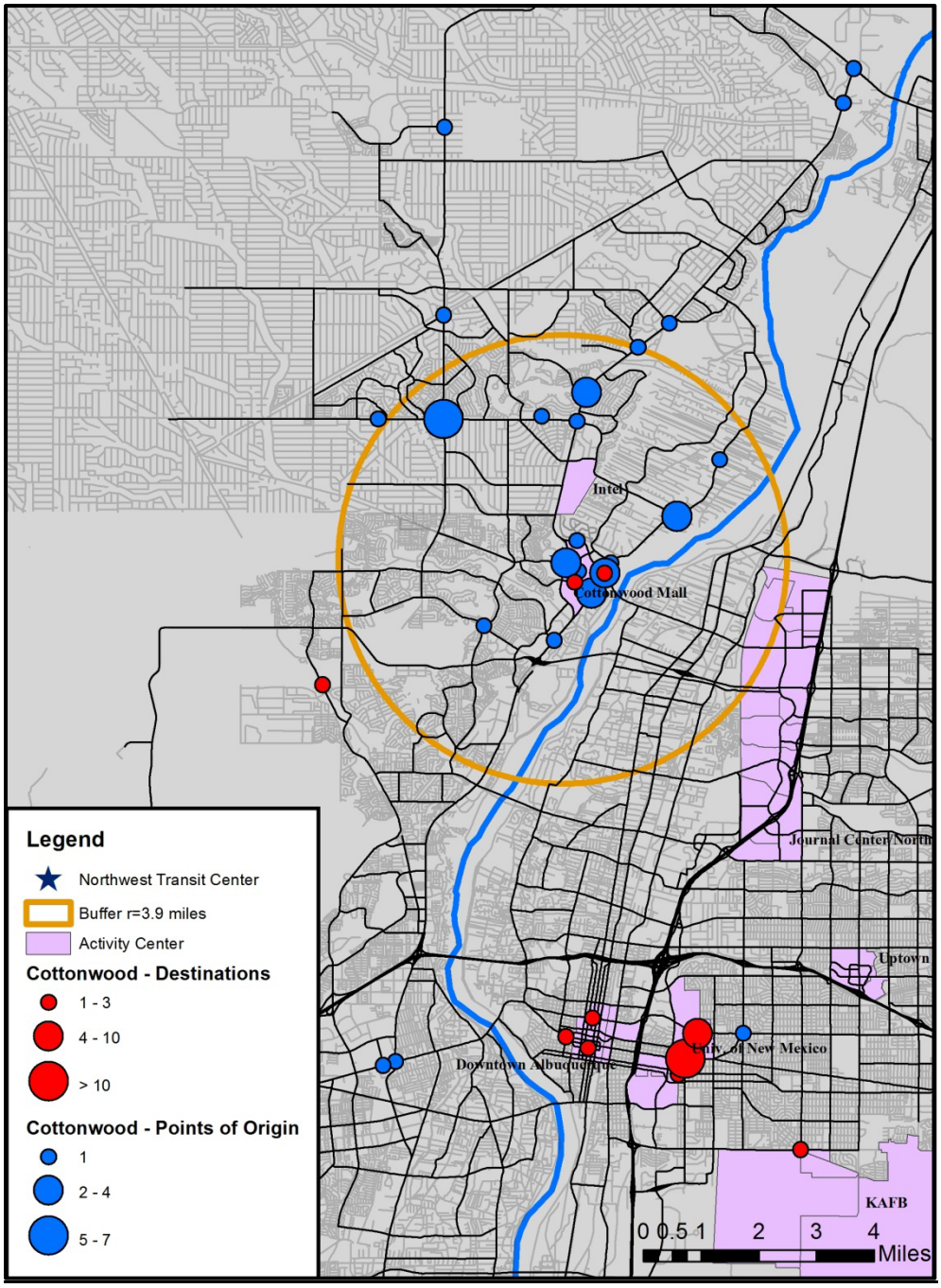
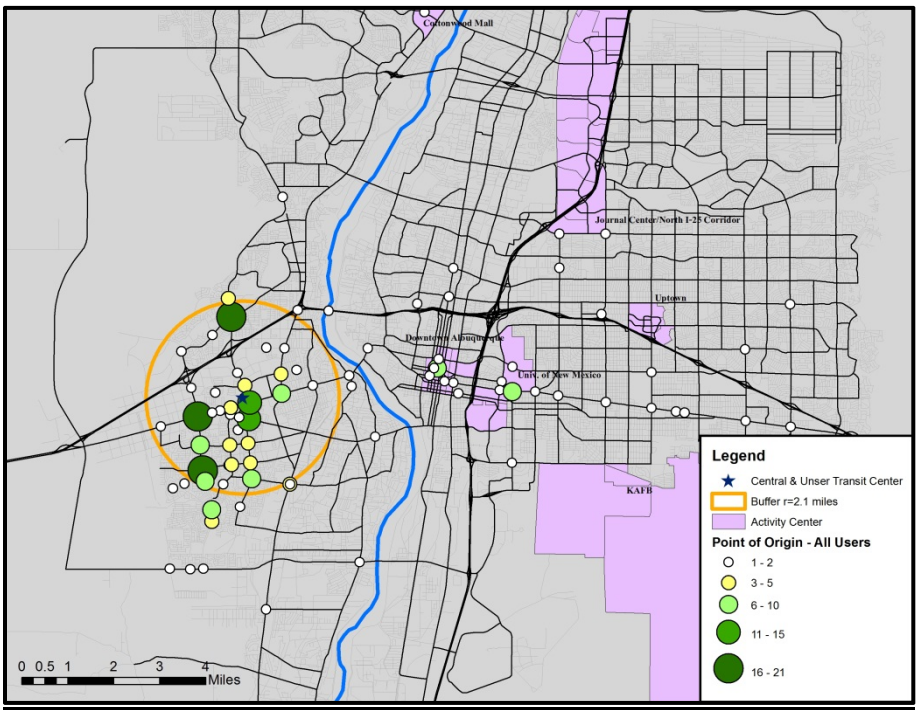
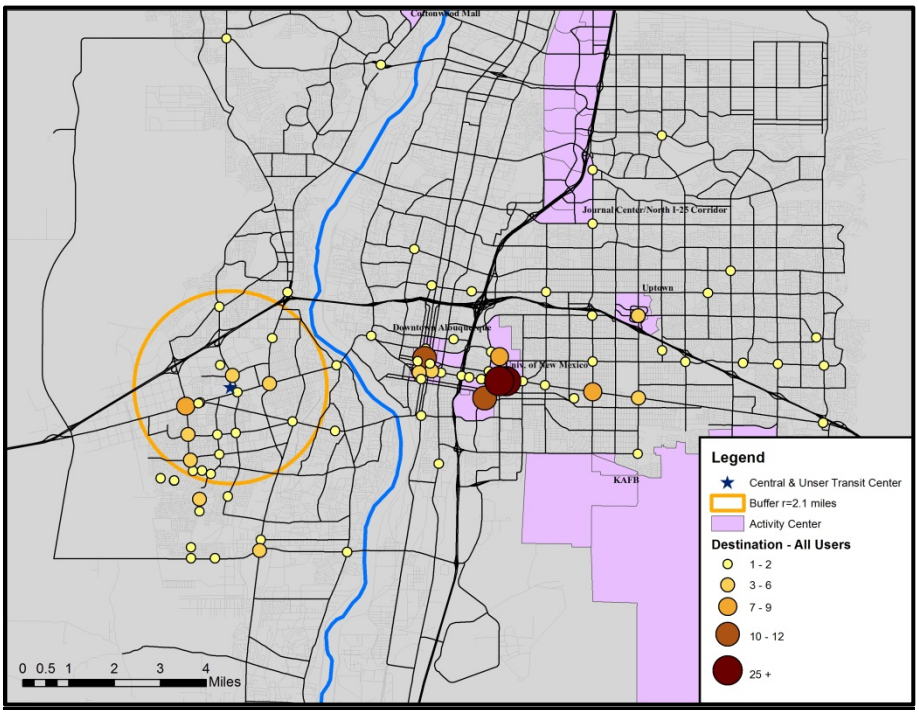
Map 4 - Cottonwood Mall: *All User* Origins and Destinations



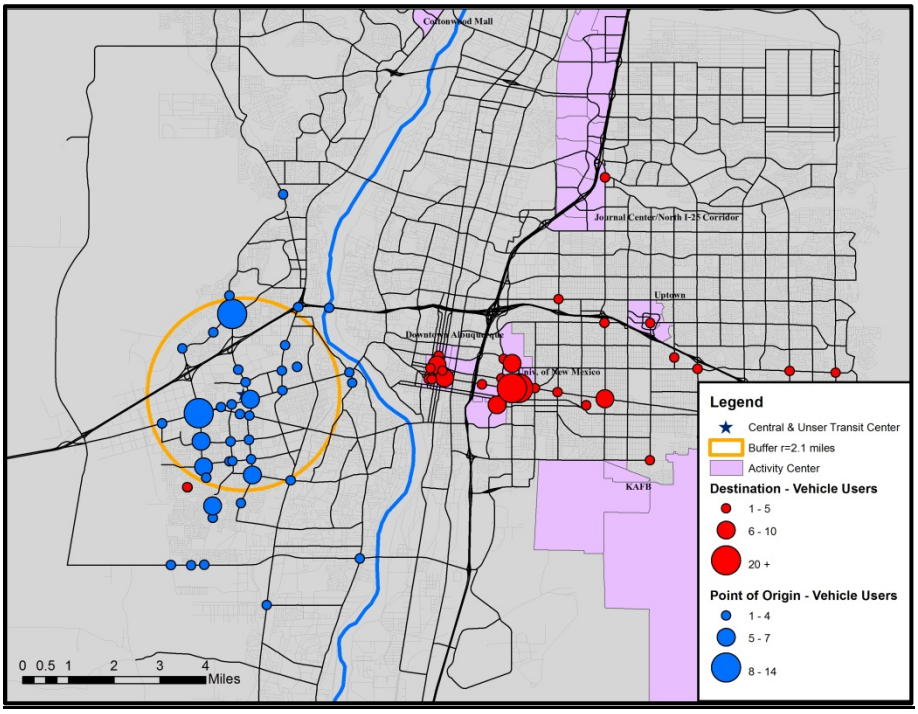
Map 5 - Central & Unser Transit Center: *All User* Points of Origin



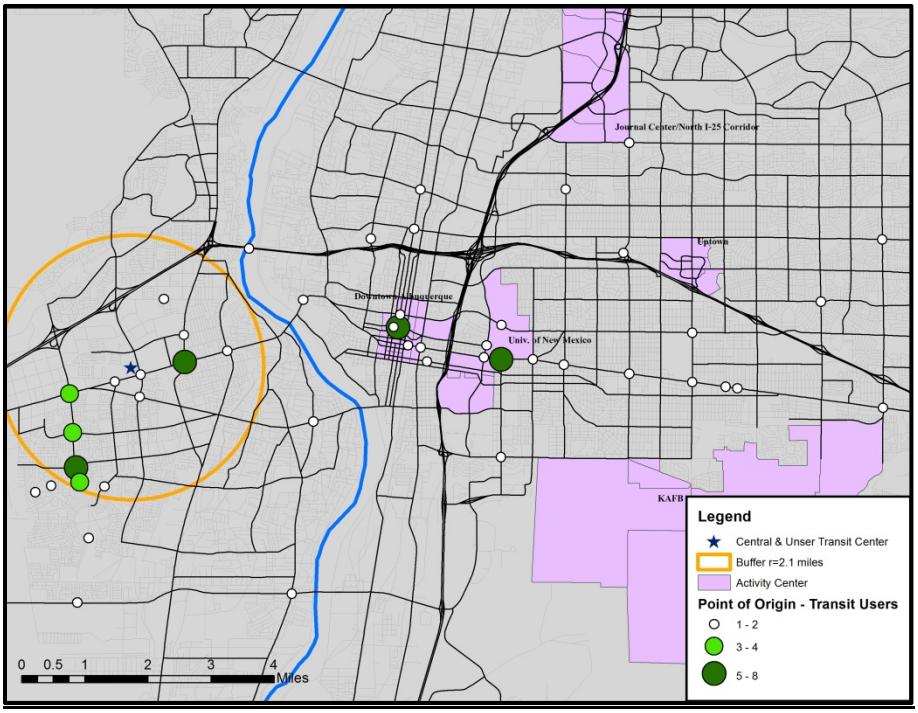
Map 6 - Central & Unser Transit Center: *All User* Destinations



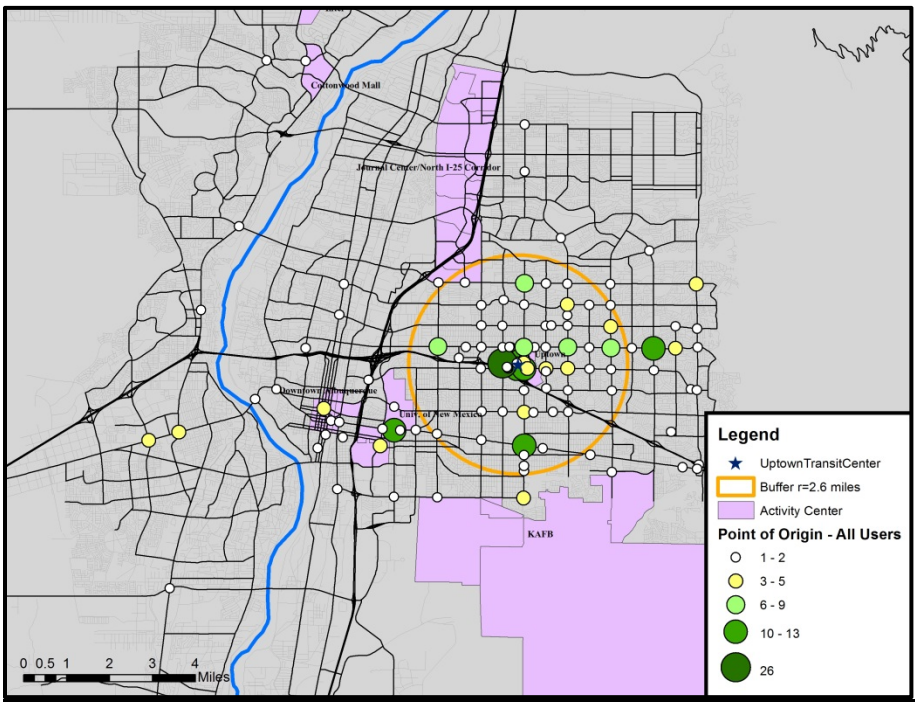
Map 7 - Central & Unser Transit Center: *Vehicle User* Origins and Destinations



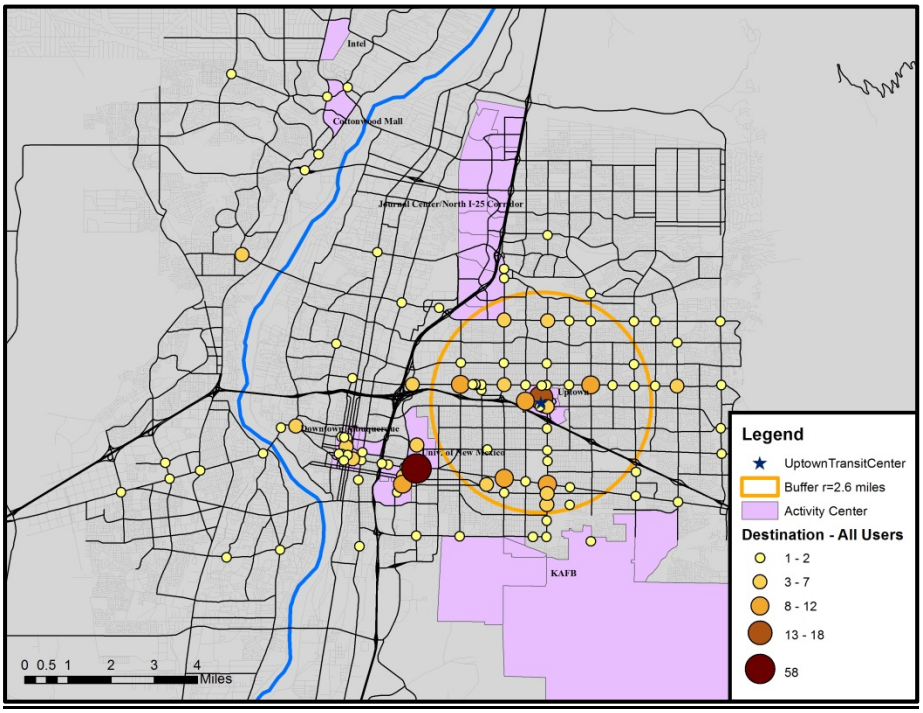
Map 8 - Central & Unser Transit Center: *Transit User* Origins and Destinations



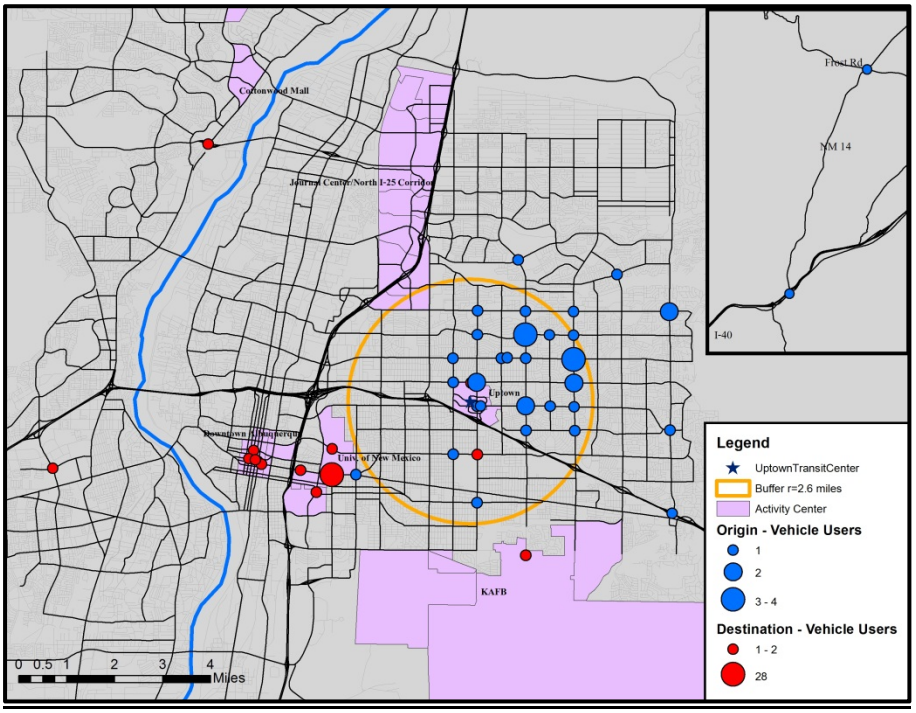
Map 9 - Uptown Transit Center: *All User* Points of Origin



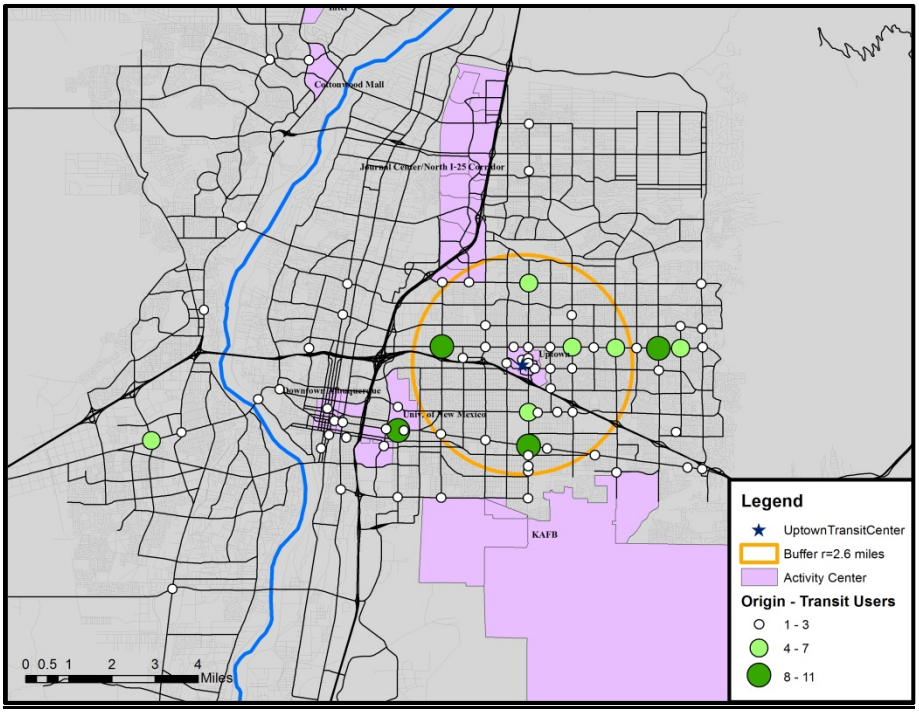
Map 10 - Uptown Transit Center: *All User* Destinations



Map 11 - Uptown Transit Center: *Vehicle User* Origins and Destinations



Map 12 - Uptown Transit Center: *Transit User* Origins and Destinations



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