Uptown Pedestrian Study

Task #8 of Procurement No. 2013-02

MRCOG On-Call Professional Services

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Prepared by

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FINAL

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Executive Summary

This study was initiated by Councilor Diane Gibson, Albuquerque City Councilor from District 7. Councilor Gibson had received concerns about pedestrian safety in the Uptown area, especially across Indian School Road between the Target store and ABQ Uptown. A secondary location of concern is across Louisiana Boulevard between the offices on the west side of the street and the shops and restaurants on the east side, and a third location is across Uptown Boulevard west of Louisiana, between the City Place office building and the Total Wine/Pei Wei/Satellite Coffee area. This report documents a study of pedestrian facilities in the entire Uptown area around Louisiana Boulevard and Indian School Road in Albuquerque, New Mexico. The purpose of the study is to identity potential improvements that will promote pedestrian safety without creating a significant negative effect to vehicular flow through the area.

The need for pedestrian improvements was determined by comparing the existing conditions to various planning documents for the Uptown area. Existing conditions were gauged by collecting turning movement counts at the major intersections, compiling crash data, and performing field inventories at several different times in the study area. Planning documents reviewed were the Winrock Town Center Site Plan (April 2014), the Uptown Sector Development Plan (January 2009), and the Uptown District Pedestrian and Bicycle Study and Wayfinding Program (2008). Additionally, the existing pedestrian facilities were compared to the Americans with Disabilities Act Public Right-of-Way Accessibility Guidelines (PROWAG). The gaps in the existing pedestrian infrastructure were identified and are listed below, along with the recommendation in each situation.

<u>Uncontrolled Pedestrian Crossings</u>
Three locations have high numbers of pedestrians crossing with no signal or stop sign control of the conflicting vehicular movements (the Indian School Road, Louisiana Boulevard, and Uptown Boulevard locations mentioned above). Improvements should be considered at these locations.

Recommendation: Improve the uncontrolled crossing at Q Street-Target/Indian School by installing a raised median with a flush area for pedestrians to cross. Driveway access would be limited to rights-in and rights-out only. For a more extreme modification, the section of Indian School Road between Louisiana and Uptown Loop could be reduced to one driving lane and one bicycle lane in each direction, with an increased sidewalk area or on-street parallel parking, and a reduced speed limit.

Recommendation: Force pedestrians to cross Louisiana Boulevard at the Indian School or Americas Parkway signals by fencing the Louisiana Boulevard median.

Recommendation: Indicate where pedestrians should cross Uptown Boulevard with a signed and marked crosswalk, or with a raised median with a flush area for pedestrians to take refuge.

<u>Intersections</u>
Typically the raised medians are too far back behind the crosswalk to provide any refuge to pedestrians. Some of the older intersection corners have pork chop islands. Generally there are few driveways on Louisiana, but it may be possible to eliminate some or convert them to right-in/right-out only.

Recommendation at Louisiana Boulevard/Indian School Road: The pork chop islands and exclusive right-turn lanes should be removed from all corners where they exist now. Right-turning traffic should share the outside lane with through traffic. At this intersection and all intersections along and within the loop

roads, prohibiting right turns on red should be considered, on a case-by-case basis, in the interest of pedestrians. The wheelchair ramps at the corners of the intersection should be constructed directional to the crossing, and the crosswalk striping should be refreshed. On the northbound and southbound Louisiana Boulevard approaches the median should be modified to eliminate the inside left-turn lane, allowing a median refuge at the crosswalk for these long crossings.

Recommendation at Uptown Loop/Indian School Road: the intersection has exclusive right-turn lanes on the eastbound and southbound approaches that are recommended to be eliminated so that right-turning traffic shares the outside right-turn lane. This would create a slightly shorter crosswalk distance across the north, south, and west legs of the intersection. Where possible, the median noses at the intersection should be extended to provide refuge across the crosswalk. In the future, a pedestrian scramble phase could be implemented at the intersection if justified by pedestrian volumes.

Recommendation at Louisiana/Uptown Boulevard: the Louisiana median should be extended across Uptown Boulevard to provide right-in/right-out access only to the ABQ Uptown driveway to the east and right-in/right-out/left-in access only to Uptown Boulevard to the west. The Uptown Boulevard approach to Louisiana should be modified with a raised median or striping to define the permitted movements.

Recommendation at Louisiana Boulevard/Americas Parkway (north): the median should be modified to remove the inside left turn lane northbound. The remaining lane should be lengthened as much as possible across Uptown Boulevard. With the left-turn movement in one lane only, modifying the signal phasing to allow permitted left turns onto Americas Parkway (north) should be considered, in addition to the protected left-turn phase. With the modified, wider, median on the south leg of the Louisiana/ Americas Parkway (north) intersection, the crosswalk should be striped and oriented so that a pedestrian could take refuge in the median. Additionally, the crosswalk across the north leg of that intersection should be restriped to be more normal to the street centerline, requiring a shorter crossing distance.

Recommendation at Louisiana/Cutler: the unwarranted traffic signal at the Louisiana/Cutler intersection should be removed. Traffic on Louisiana should run free at Cutler, and westbound Cutler traffic should be controlled with a stop sign. The existing marked crosswalk across the north leg of the intersection should be eradicated. The intersection should be modified to right-in/right-out only access by constructing a raised median across Cutler along Louisiana. The Cutler Avenue approach could be modified with either a raised median or with striping to define the right-in/right-out only movement. Signing will also be required. By extending the raised median through Cutler, the left turn lanes at the signalized intersections to the north and south can both be extended to better accommodate left turn queues.

Sidewalks/Lighting

New sidewalks on the west side of Louisiana have been built at 6-foot or 10-foot width with landscaping but lack pedestrian-scale lighting. Older sidewalks are generally 6-feet wide with roadway lighting only and no pedestrian-scale lighting. A small stretch of sidewalk on the south side of Indian School Road east of Americas Parkway is just under 4-feet wide and should be considered for widening to a minimum of 6 feet. Finally, a few locations have clear accessibility shortfalls and should be considered for modifications.

Recommendation: The Sector Plan's goal of 10-foot sidewalks throughout the Uptown area is an ideal that should be required with new construction in the area, but the City should focus its efforts now on the location where the sidewalk is less than 6-feet wide.

Recommendation: Several pedestrian features in the study area do not meet current PROWAG, but may remain as-is unless affected by new construction. These include some sidewalk cross slopes at driveways, the minimum sidewalk width, the design of curb ramps, detectable warning surfaces, pedestrian push buttons, and countdown pedestrian heads. Two locations that should receive immediate attention are locations where the pedestrian push button appears out of reach by a person in a wheelchair. These locations are at the I-40 eastbound off-ramp approach to Louisiana, and at the northeast corner of the Uptown Loop/Indian School Road intersection.

Recommendation: Like the 10-foot sidewalks, the pedestrian-scale lighting recommended in the Sector Plan is an ideal that should be required with new development. However, because the existing street lights spill light over onto the adjacent sidewalks, installing additional pedestrian-scale lighting along the existing sidewalks is not considered a priority.

Encouraging traffic to use the loop road (Arvada Avenue – Uptown Loop – Americas Parkway)

There is a desire by the City to divert more local traffic off of Louisiana Boulevard and onto the loop road around Uptown, made up of Arvada Avenue, Uptown Loop, and Americas Parkway. However, the signals on the loop road are not interconnected. Regarding parking, the existing underground parking garage at ABQ Uptown is not well-marked and many people do not know it is there, how to get there, or if there are spaces available in it. Finally, the relatively new slip ramp from the loop road through Winrock Town Center to westbound I-40 is not signed at all and is underused.

Recommendation: The City should consider methods of encouraging drivers to turn off of Louisiana or Indian School and to use the loop road if they are accessing one of the businesses in Uptown. These methods may include interconnection and coordination of the traffic signals along the loop road; the installation of parking signs, destination guide signs, and advance signing for the westbound I-40 slip ramp; and renaming the loop road so that all of the roads have the same name. Informational parking brochures for the Uptown area may also be useful.

The recommendations above would have impacts on the traffic operations. Declines in level of service would likely occur in the peak hours where right turn movements are prohibited on red. If Indian School Road is narrowed to one lane in each direction between Louisiana and Uptown Loop, a decline in level of service is expected to occur in the Friday evening peak hour for the eastbound through movement at the Louisiana/Indian School intersection. However, adjustments in the signal timings may help mitigate these declines in level of service.

The level of service decreases in some of the peak periods would be offset by a number of benefits to pedestrians in the area, including

- Creating shorter crosswalk lengths across many of the intersection legs.
- Removing the conflict between crossing pedestrians and perpendicular right-turning vehicles, where the right turn on red movement is prohibited.
- Reducing the speed of right-turning vehicles where pork chop islands are removed.
- Adding wider raised median noses across some intersection legs if pedestrians need refuge
- On some roadways, creating fewer lanes for pedestrians to cross the street

A study team of MRCOG and City staff collaboratively prioritized the recommendations from this study, which are listed below. Unless otherwise noted, each of the bulleted items could serve as a stand-alone project and is not dependent on other improvements being made.

Highest Priority Improvements

- Completion of the accessible pedestrian route (widening sidewalks to the minimum width, resolving major ADA issues).
- Improving the mid-block crossing at Q Street-Target/Indian School by installing a raised median with a flush area for pedestrians to cross.
- Intersection modifications at Louisiana/ Cutler, including removing the signal.
- Intersection modifications at Louisiana/Uptown Blvd., including fencing the Louisiana median and median modifications on the south leg of the Louisiana/Americas Parkway (north) intersection.
- Advance directional signing for the I-40 westbound slip ramp.

Medium Priority Improvements

- Narrowing Indian School Road between Louisiana and Uptown Loop to one driving lane in each direction with bike lanes and on-street parking, and signing and marking the crosswalk there. This would be dependent on modifying the upstream intersections to include the appropriate lane drops, so just one lane would be feeding into this stretch of Indian School from both directions.
- Modifications at the Louisiana/Indian School intersection.
- Modifications at the Uptown Loop/Indian School Road intersection.
- Efforts to increase use of loop road – advance signing on Louisiana northbound and southbound, traffic signal coordination around west loop, parking brochures.
- Establishing the mid-block pedestrian crossing location of Uptown Boulevard west of Louisiana Boulevard, between the City Place and Total Wine/Pei Wei/Satellite parking lots, by signing and marking a crosswalk or by providing a flush pedestrian refuge in the median.

Low Priority Improvements

- Additional pedestrian-scale-lighting.
- Pedestrian scramble pavement markings, signing, and signal modifications at Uptown Loop/Indian School (when pedestrian volumes at that intersection justify this treatment).

I. INTRODUCTION

The Uptown Area around Louisiana Boulevard and Indian School Road in Albuquerque, New Mexico, is the focus of this task. The purpose of the study is to identity potential improvements that will promote pedestrian safety and improve vehicular flow through the area. The study area is shown in Figure 1 below.

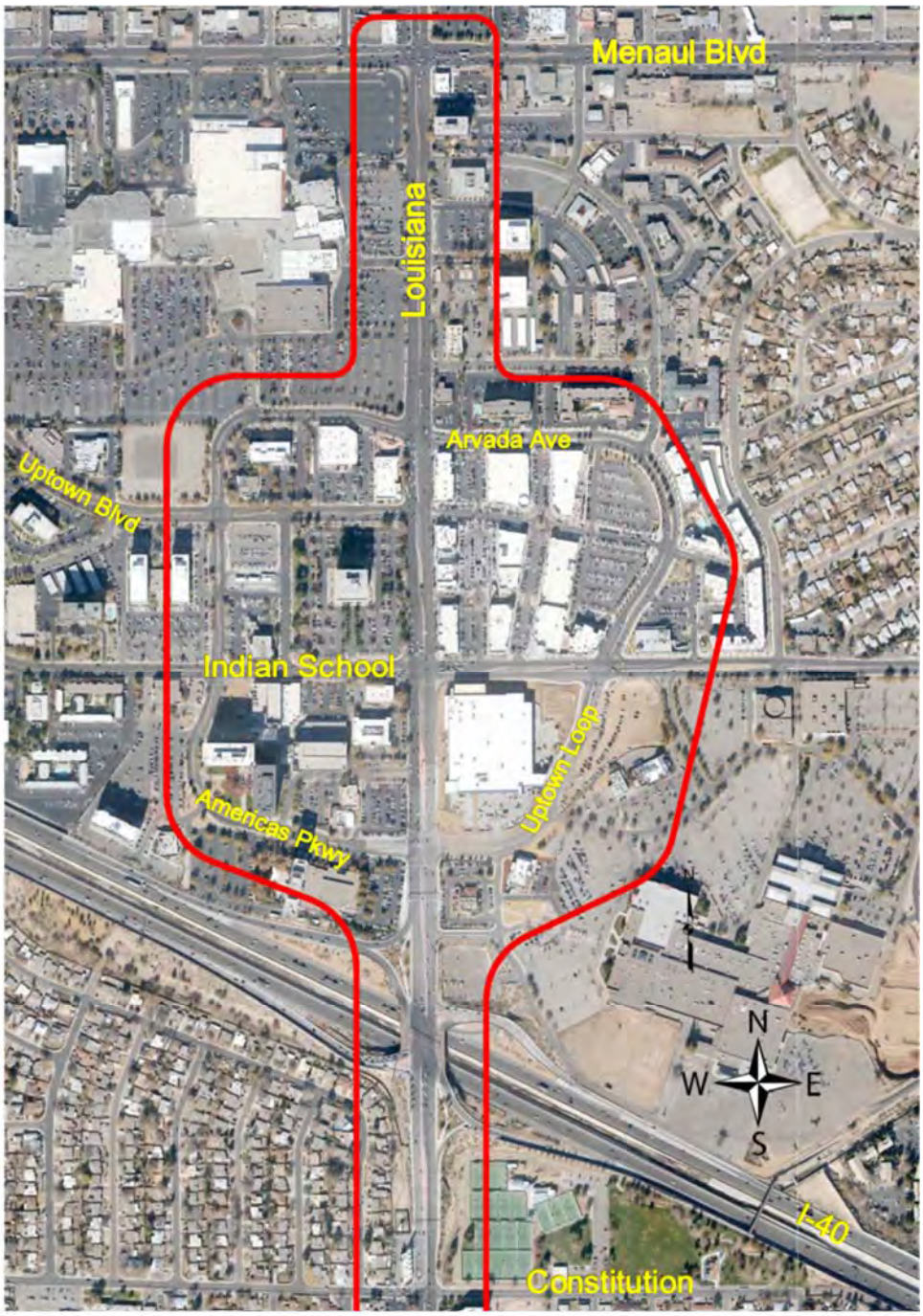

Figure 1. Uptown Study Area

II. DATA COLLECTION

A. Existing Vehicle Counts

Average weekday daily traffic volumes (AWDTs) were obtained from the Mid-Region Council of Governments (MRCOG) and are shown in Figure 2 below.

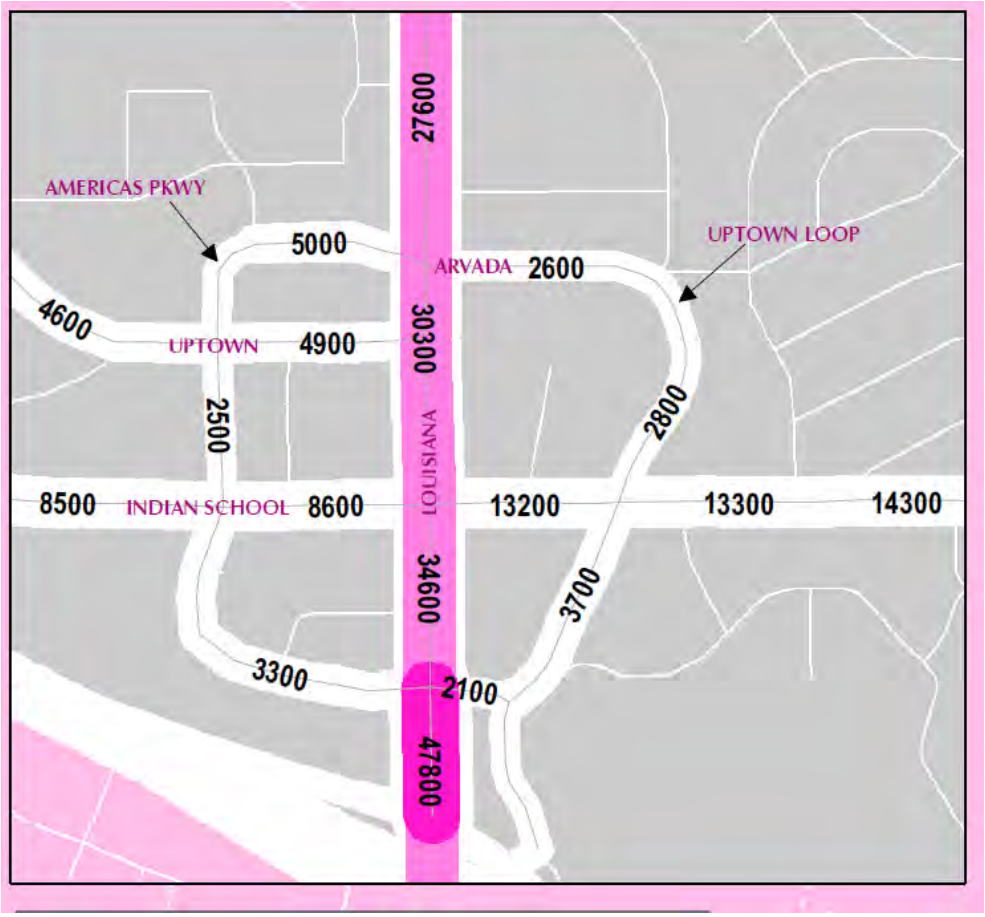

Figure 2. Year 2012 AWDTs in Study Area (vehicles per day)

B. Vehicle Turning Movement Counts

Vehicle turning movements were counted by consultant staff at these intersections:

- Louisiana Boulevard/Menaul Boulevard
- Louisiana Boulevard/East Coronado Center driveway
- Louisiana Boulevard/Cutler Avenue
- Louisiana Boulevard/Americas Parkway (north)-Arvada Avenue
- Louisiana Boulevard/Uptown Boulevard (unsignalized)
- Louisiana Boulevard/Indian School Road
- Louisiana Boulevard/Americas Parkway (south)-Uptown Loop
- Louisiana Boulevard/I-40 Ramps
- Louisiana Boulevard/Constitution Avenue
- Americas Parkway/Indian School Road
- Uptown Loop/Indian School Road

Weekday vehicle counts were performed on Wednesday, May 14, 2014 between the hours of 6:30 – 8:30 am, 11:00 am - 2:00 pm, and 3:30 - 6:30 pm. Friday evening counts were conducted between 4:00 – 8:00 pm on Friday, May 16, 2014. Figures 3 and 4 summarize the turning movement count data during the peak hours. The complete data are provided in Appendix A.

Using a video of the intersection of Q Street-Target/Indian School Road, recorded for the pedestrian observations discussed later in this report, side street vehicle turning movements were also counted at that location. The video recorded the period between Thursday, April 10, 2014 and Saturday, April 12, 2014.

C. Pedestrian Counts

Pedestrians were also counted at the same intersections during the times listed above. Figures 4 and 5 summarize the pedestrian counts during the peak hours on Friday evenings and on weekdays, respectively. The complete data are provided in Appendix A.

D. Pedestrian Observations

Pedestrians were observed and counted by MRCOG staff at the intersection of Q Street-Target/Indian School Road and across Louisiana Boulevard between Indian School Road and Uptown Boulevard. Both counts used video recordings.

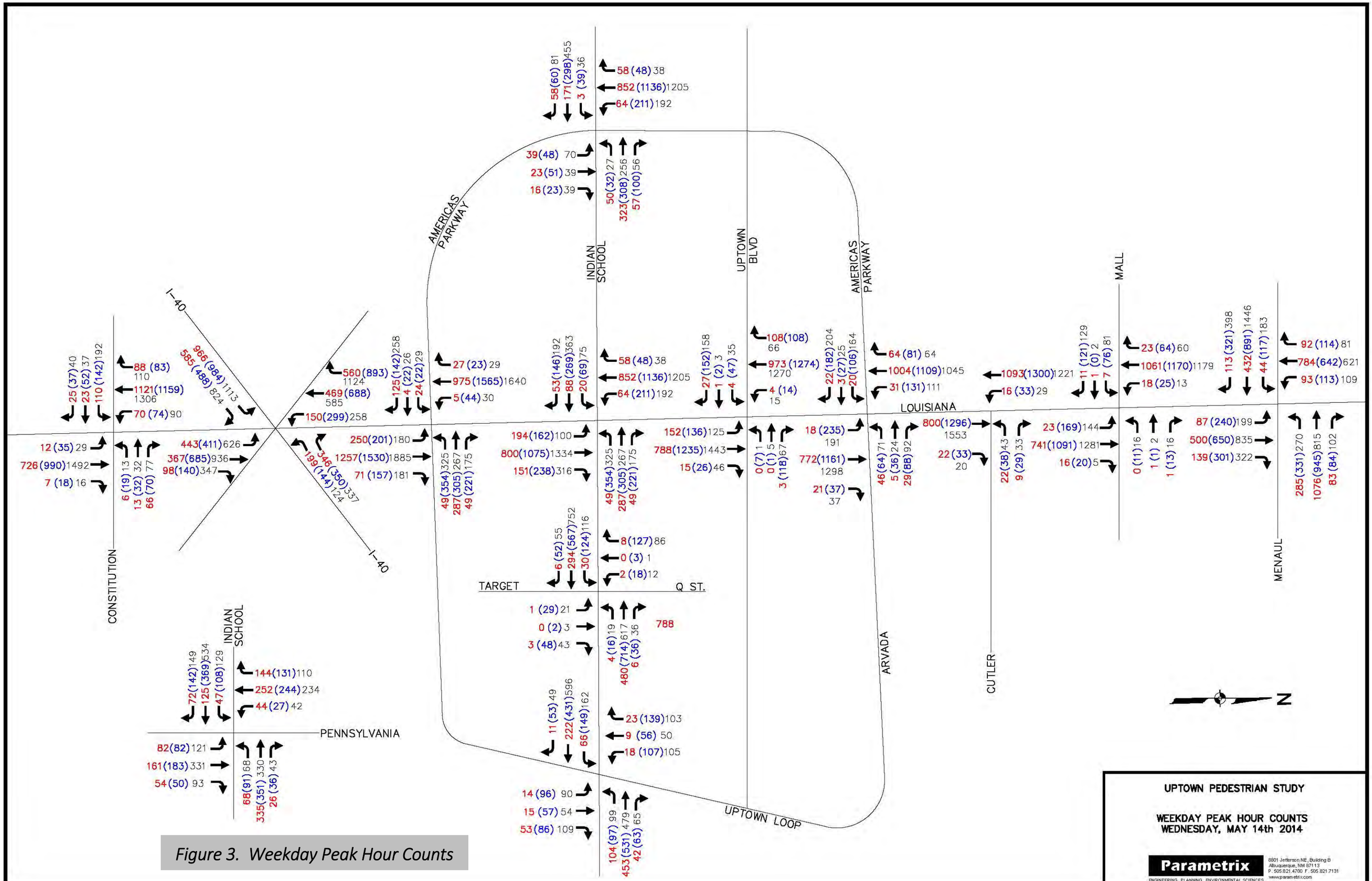

Figure 3. Weekday Peak Hour Counts

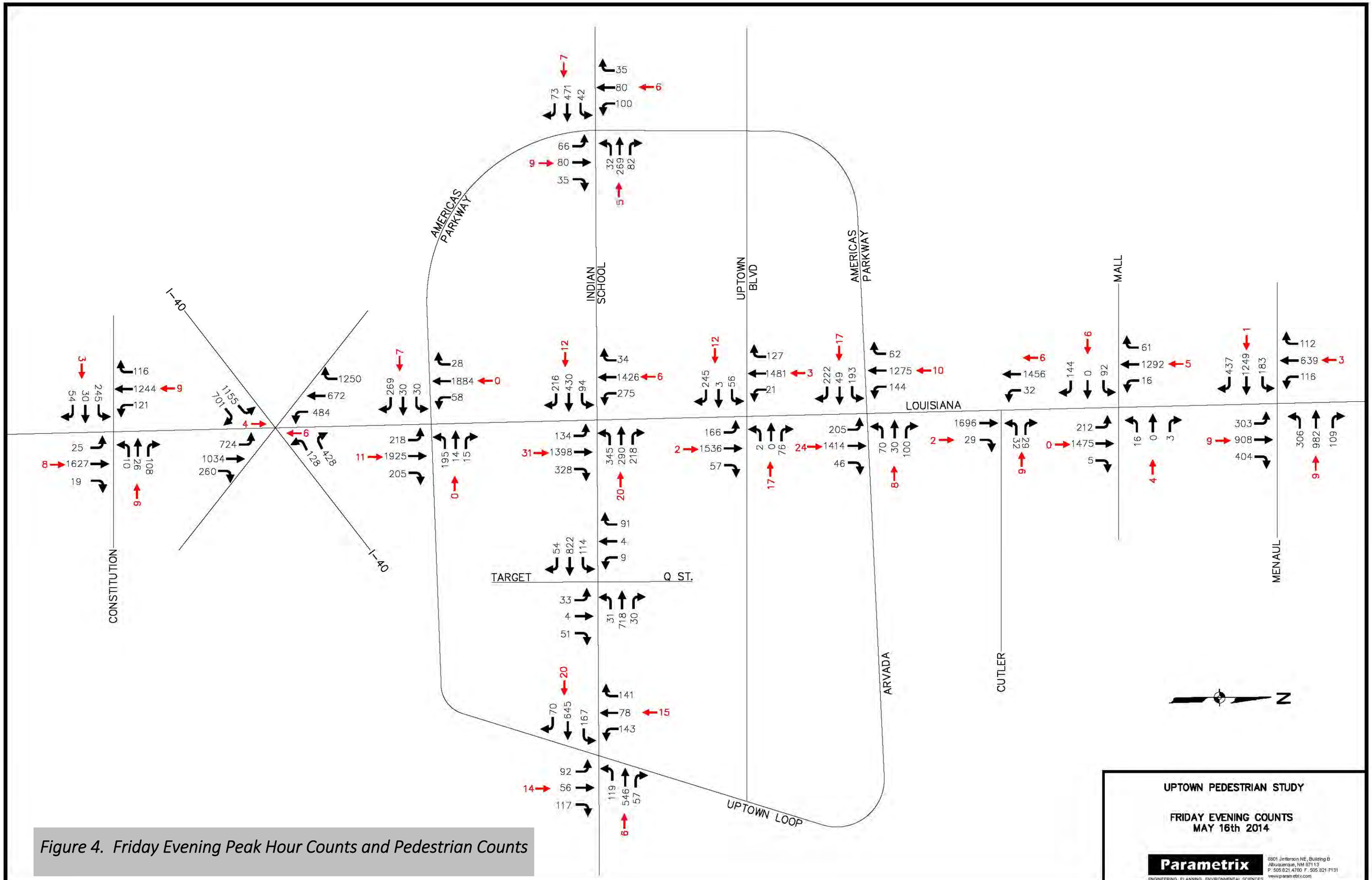

Figure 4. Friday Evening Peak Hour Counts and Pedestrian Counts

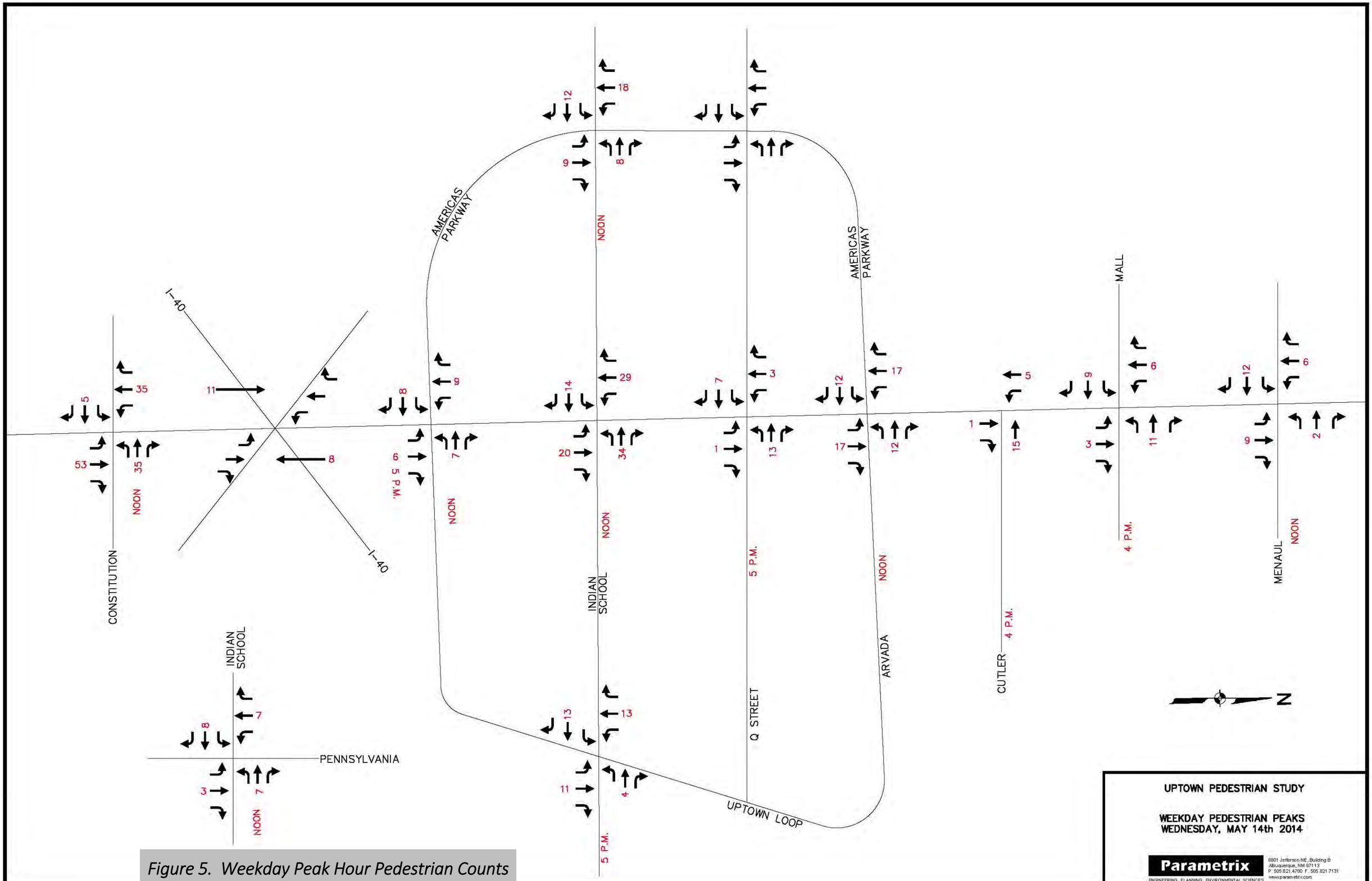

Figure 5. Weekday Peak Hour Pedestrian Counts

Q Street-Target/Indian School Road

A screen shot from the camera mounted at Q Street-Target/Indian School Road is shown in Figure 6. A driveway to the Target underground parking garage makes up the south leg of this intersection, and a main pedestrian entrance to Target lies in the southwest quadrant of the intersection. Target shoppers are often observed crossing Indian School Road at this uncontrolled intersection to visit the shops at ABQ Uptown. Additionally, the large underground Target parking lot is frequently used by ABQ Uptown shoppers because of its proximity "as the crow flies" to the ABQ Uptown shops.

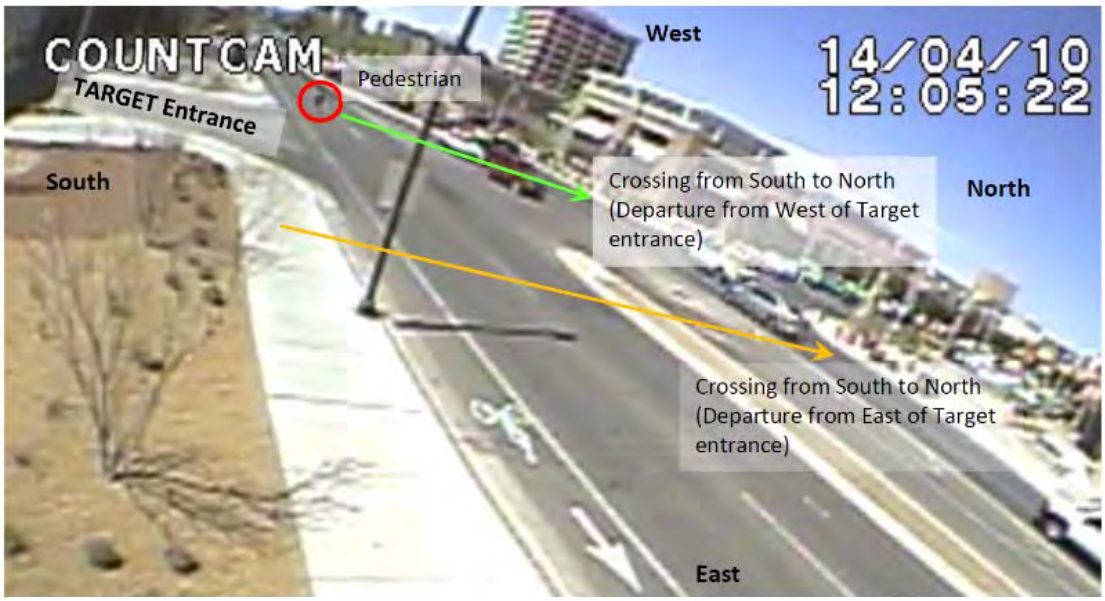

Figure 6. Video Camera Screenshot Looking West on Indian School Road at Q Street

The intersection was video-recorded from Thursday, April 10, 2014 to Saturday, April 12, 2014. The video was then reviewed and pedestrian movements counted for these time periods:

- Thursday from 6:30 – 9:30 am, 11 am – 2 pm, and 4 pm- 8 pm
- Friday from 4 pm – 8 pm

Table 1 shows a summary of the pedestrian counts at Q Street-Target/Indian School Road. The complete data are provided in Appendix B.

Table 1. Summary of Pedestrian Movements at Q Street-Target/Indian School Road

	Across West Leg	Across East Leg	Average Number of Crossings per Hour
Thursday April 10: 6:30-9:30 am	12	4	5
Thursday April 10: 11:00 am-2:00 pm	55	22	26
Thursday April 10: 4:00-8:00 pm	75	29	26
Friday April 11: 4:00-8:00 pm	93	41	34
Total Observed Crossings	235	96	23

Louisiana Boulevard/Uptown Boulevard

Pedestrian movements were also observed across Louisiana Boulevard north of Indian School Road and south of Uptown Boulevard, to assess the activity of pedestrians crossing mid-block in the area circled in Figure 7. The counts were near the uncontrolled area around the driveway to 2155 Louisiana (the City Place building) and the right-in, right-out driveway to ABQ Uptown. A screen shot from the camera is shown in Figure 8. Unfortunately, problems with the video recording limited the observation time to just over four hours. Data was collected on Thursday, April 10, 2014 from 6:30 to 9:30 am and for a short period just after 11:00 am, and then again on Friday, April 11, 2014 from 7:00 to 8:00 pm. During the four hours of observations seven pedestrians crossed Louisiana mid-block south of Uptown Boulevard, all of them in the Thursday morning period. Table 2 summarizes the pedestrian observations.

Figure 7. Area of Pedestrian Crossing Observations on Louisiana Blvd.

Figure 8. Video Camera Screen Shot Looking North on Louisiana Blvd from Indian School Rd

Table 2. Summary of Mid-Block Pedestrian Movements across Louisiana Boulevard North of Indian School

Day	Time	Crossing East to West	Crossing West to East
Thursday 04/10/14	8:27 am	1	
Thursday 04/10/14	8:40 am		1
Thursday 04/10/14	8:51 am	1	
Thursday 04/10/14	11:05 am	1	
Thursday 04/10/14	11:07 am	1	
Thursday 04/10/14	11:10 am	1	
Thursday 04/10/14	11:16 am	1	
Friday 04/11/14	7:00-8:00 pm	none	none

Uptown Boulevard Crossing Between Total Wine/Pei Wei/Satellite and City Place

As this study was concluding, a third location was identified by City and MRCOG staff, where a high number of pedestrians were crossing mid-block at an uncontrolled location. The crossing is occurring west of Louisiana Boulevard across Uptown Boulevard, between the City Place office building and the Total Wine/Pei Wei/Satellite shopping area. Staff from MRCOG counted pedestrian crossings at this location on Thursday, September 25, and Friday, September 26, 2014, in the area shown in the aerial photo in Figure 9.

Figure 9. Location of Mid-Block Pedestrian Crossings of Uptown Boulevard

The counts are summarized in Table 3.

Table 3. Summary of Pedestrian Movements at Uptown Boulevard West of Louisiana Boulevard

Uptown Ped Counts – Thursday, September 25, 2014					
Time	**Ped North**	**Ped South**	**Ped North Far Crossing**	**Ped South Far Crossing**	**Total**
6:30-7:00 AM	5	0	0	0	**5**
7:01-7:30 AM	1	0	1	1	**3**
7:31-8:00 AM	0	0	0	0	**0**
8:01-8:30 AM	4	0	1	0	**5**
8:31-9:00 AM	1	4	0	0	**5**
Three Hour Total: 18, Crossings per Hour: 6					
9:00-9:30 AM					
9:31-10:00 AM					
10:01-10:30 AM					

10:31-11:00 AM					
11:01-11:30 AM	1	2	0	2	**5**
11:31 AM-Noon	6	3	0	0	**9**
12:01-12:30 PM	1	5	0	1	**7**
12:31-1:00 PM	5	5	0	1	**11**
1:01-1:30 PM	2	4	0	0	**6**
1:31-2:00 PM	2	0	1	0	**3**

Three Hour Total: 41, Crossings per Hour: 13.7

2:01-2:30 PM					
2:31-3:00 PM					
3:01-3:30 PM					
3:31-4:00 PM					
4:01-4:30 PM	1	2	0	1	**4**
4:31-5:00 PM	3	2	2	0	**7**
5:01-5:30 PM	1	5	0	1	**7**
5:31-6:00 PM	1	3	1	0	**5**
6:01-6:30 PM	0	4	0	0	**4**
6:31-7:00 PM	1	4	0	0	**5**
7:01-7:30 PM	1	1	1	0	**3**
7:31-8:00 PM	2	1	0	0	**3**

Four Hour Total: 38, Crossings per Hour: 9.5

Uptown Ped Counts – Friday, September 26, 2014					
Time	**Ped North**	**Ped South**	**Ped North Far Crossing**	**Ped South Far Crossing**	**Total**
4:01-4:30 PM	3	3	1	1	**8**
4:31-5:00 PM	2	3	1	1	**7**
5:01-5:30 PM	5	1	0	1	**7**
5:31-6:00 PM	0	2	0	0	**2**
6:01-6:30 PM	3	6	0	0	**9**
6:31-7:00 PM	6	3	15	1	**25**
7:01-7:30 PM	2	1	0	1	**4**
7:31-8:00 PM	3	3	0	0	**6**

Four Hour Total: 68, Crossings per Hour: 17

Uptown Boulevard at this location had a daily traffic volume of about 4,900 vpd in 2013, and the speed limit is 30 mph. The road has two lanes in each direction, with a narrow raised median.

E. Crash Data

Crash data were provided for the study area for the six-year period of January 1, 2008 through December 31, 2013; they are included in Appendix C. Because pedestrians are the focus of this study, only the crashes involving pedestrians were extracted and considered. It should be noted that at the area of greatest concern, the informal pedestrian crossings between Target and Q Street, the Target store was not opened until the middle of 2013, and there were no pedestrian crashes at that location in 2013. The locations of the pedestrian crashes are shown on Figure 10. Each pedestrian crash in the study area is listed in Table 4.

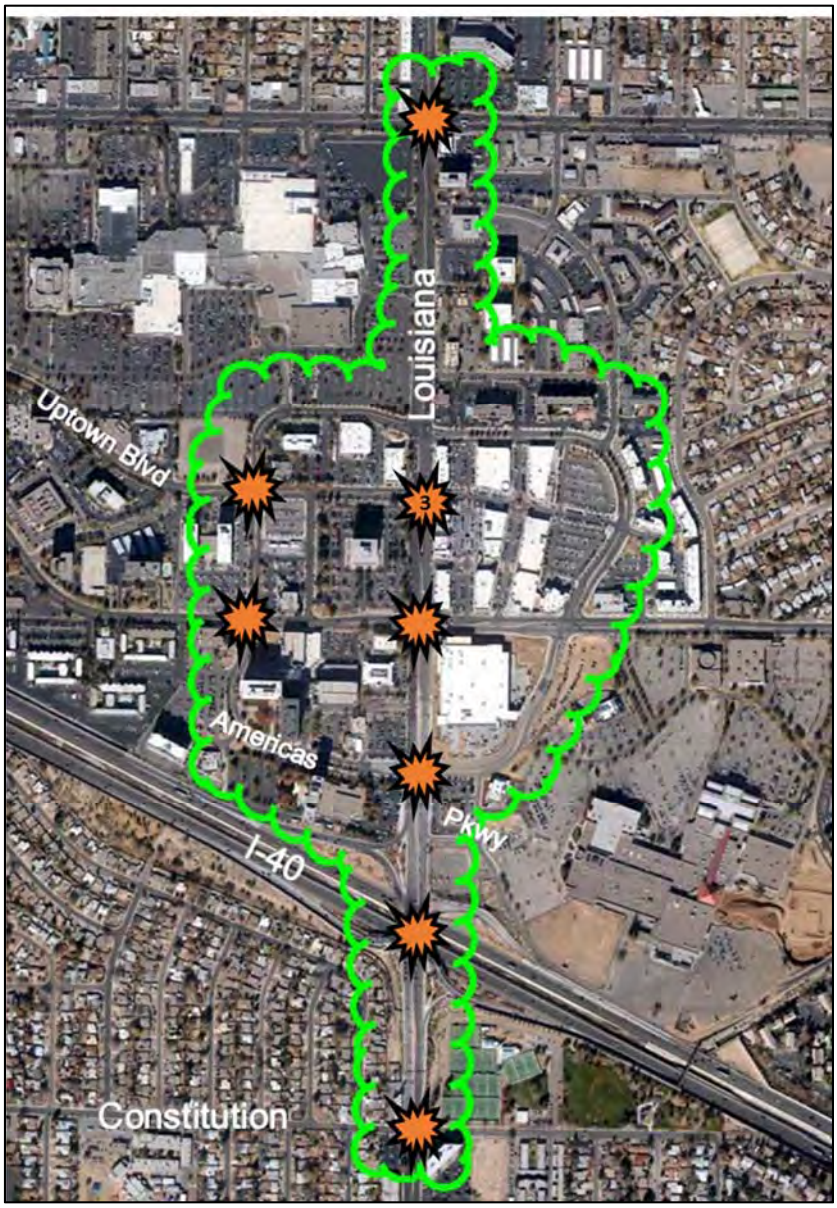

Figure 10. Locations of Pedestrian Crashes, 2008 - 2013

Table 4. Pedestrian Crashes in Study Area, 2008 - 2013

Closest Intersection	Description	Date, Time	Conditions	Contributing Factor
Americas Parkway/Indian School	Non-Intersection Injury On Curve	Monday, March 10, 2008, 8:02 pm	Daylight Clear	Pedestrian Error
Louisiana/Constitution	Non-Intersection Injury	Thursday, March 20, 2008, 1:04 pm	Daylight Clear	Pedestrian Error
Louisiana/Indian School	Non-Intersection Injury	Wednesday, October 26, 2011, 7:21 pm	Dark Raining	Driver Inattention
Louisiana/Menaul	At the Intersection Injury Hit-and-Run	Monday, July 12, 2010, 9:16 am	Daylight Clear	Driver Inattention
Louisiana/I-40 Ramps	Non-Intersection Property Damage Only On Curve	Friday, June 12, 2009, 9:05 am	Daylight Clear	Failure to Yield
Americas Parkway/ Uptown Blvd.	Non-Intersection Injury	Friday, February 13, 2009, 3:15 pm	Daylight Clear	Pedestrian Error
Louisiana/Uptown Blvd.	Non-Intersection Injury Hit-and-Run	Wednesday, March 12, 2008, 8:26 pm	Dawn Clear	Driver Inattention
Louisiana/Uptown Blvd.	Non-Intersection Injury Hit-and-Run	Thursday, May 13, 2010, 12:30 pm	Daylight Clear	Driver Inattention
Louisiana/Uptown Blvd.	100' south of the Intersection Injury	Thursday, January 10, 2013, 10:22 pm	Dark but lighted Clear	Pedestrian Error
Louisiana/Americas Parkway	At the Intersection No Damage or Injury	Wednesday, August 14, 2013, 4:18 pm	Daylight Clear	No reason provided

F. Existing Planning Documents

Several existing planning documents for the study area were reviewed. A summary of recommendations included in each is provided below, as pertaining to pedestrian, bicyclist, and vehicular mobility.

Winrock Town Center Site Plan

A draft of the Winrock Town Center Site Plan (April 2014) is shown in Figure 11. The center will include new and existing retail, multi-family residential, and restaurant developments. Plans for the site, located at the southeast quadrant of the Uptown area, include surface parking, parking garages, and underground parking structures.

Uptown Sector Development Plan

The Uptown Sector Development Plan (Sector Plan) was completed by the City of Albuquerque Planning Department in January 2009 and was amended in August 2011 to increase the maximum square footage for any one level of a building or for any single user or establishment. It is available to view online here[1].

The Sector Plan set goals specific to pedestrian and vehicle mobility in the study area. The goals from the Sector Plan to achieve a safe and enhanced pedestrian environment include:

- Facilitating pedestrian safety by allowing more mid-block signalized crossings of major streets and providing, wherever possible, areas of "safe haven" for pedestrians to use while crossing the streets in the Uptown area.
- Encouraging pedestrians to walk between sites in the Uptown area by requiring new construction and/or redevelopment to provide 10-foot wide walkways with enhanced landscaping and trees. Walkways may not always parallel the streets in Uptown, but should be located in the places people want to walk, and lighted with pedestrian-scale lighting.
- Building the Pedestrian Circulation System (PCS, shown in Figure 12). The PCS facilitates access to all parts of Uptown by connecting walkways to pedestrian plazas, parking structures and other areas of interest created to excite people who are walking in Uptown.
- The PCS should have improved signalized street crossings with raised or colored walkways and alternative ways for pedestrians to cross the wide boulevards in the Uptown area.

The goals from the Sector Plan for transportation include:

- Continuing to meet all objectives of the National Ambient Air Quality Standards (by minimizing congestion).
- Increasing and promoting the use of City transit as a means of transportation for both the people coming to enjoy the Uptown area and for people living in Uptown.
- Developing and promoting the operation of a free, full-time, Uptown Circulator for shoppers, visitors, customers, employees and residents. A circulator is a localized transportation system such as an Uptown trolley, sky shuttle, tram or a City transit circulator that will connect all of the Uptown area. Attractive circulator stops should be located to maximize safety and accessibility and may be used as a unifying element throughout the Uptown area.
- Connecting the Uptown circulators to City transit stops
- Parking structures should be connected not only to the streets in Uptown but to the PCS.

[1] If this report is being viewed electronically this hyperlink will take you to the document.

Figure 11. Winrock Town Center Site Plan (April 2014)

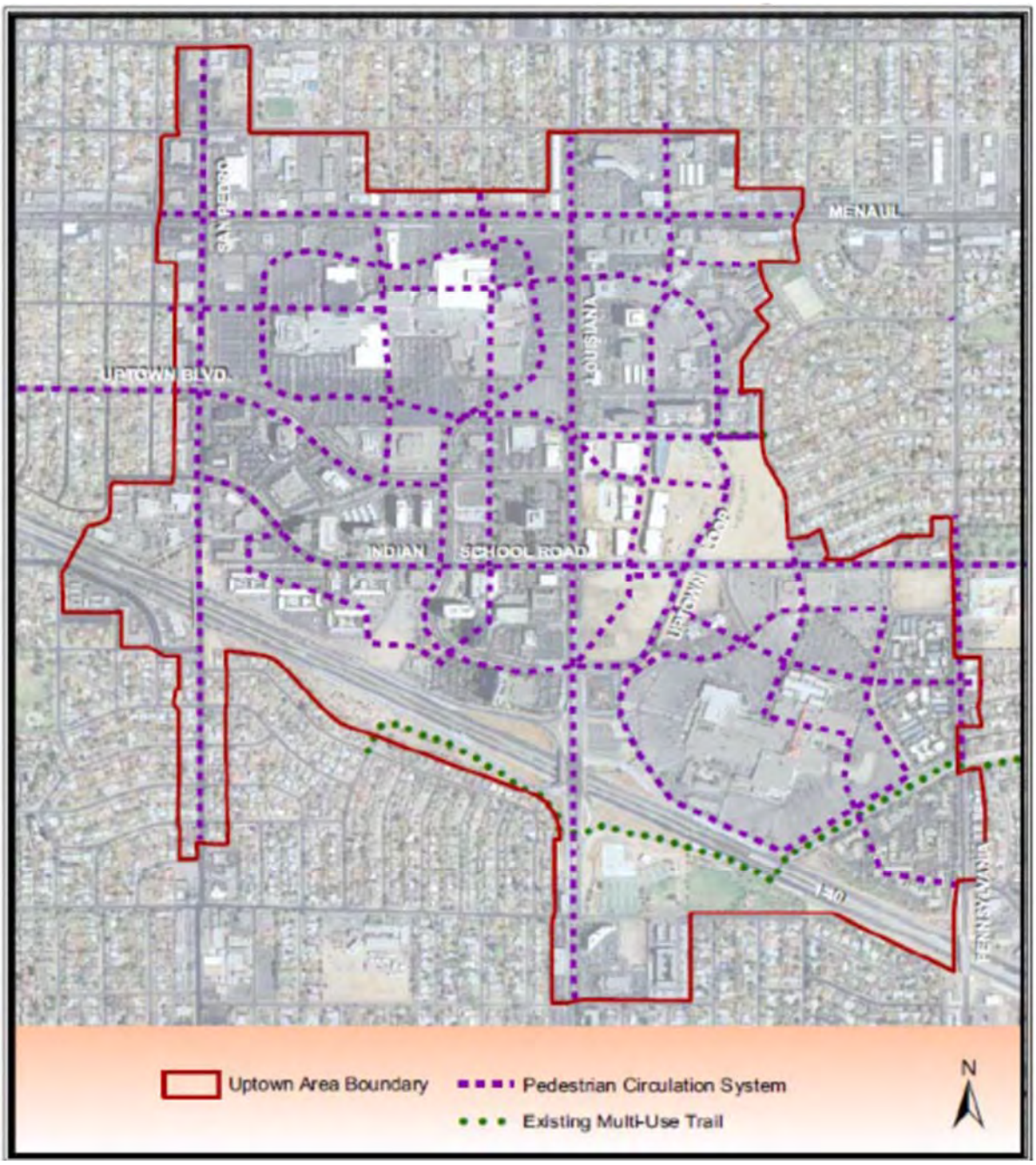

Figure 12. Pedestrian Circulation System (PCS) from the Uptown Sector Plan

Uptown District Pedestrian and Bicycle Study and Wayfinding Program (2008)

The Uptown District Pedestrian and Bicycle Study and Wayfinding Program (Ped/Bike Study) was also led by the City of Albuquerque Planning Department, and is considered a supplement to the Sector Plan. The Ped/Bike Study presents a draft master plan for pedestrian and bicyclists, shown in this report as Figure 13, and makes the following recommendations for the Uptown study area:

- Emphasis should be placed on developing a compact, mixed-use, urban center with a focus on alternative modes of transportation, such as bicycling, walking, and shuttle service that interconnects all properties within Uptown.
- The City should promote the live/work/play environment through improved pedestrian and bicycle facilities and locating parking structures to encourage a "park once and walk" environment.

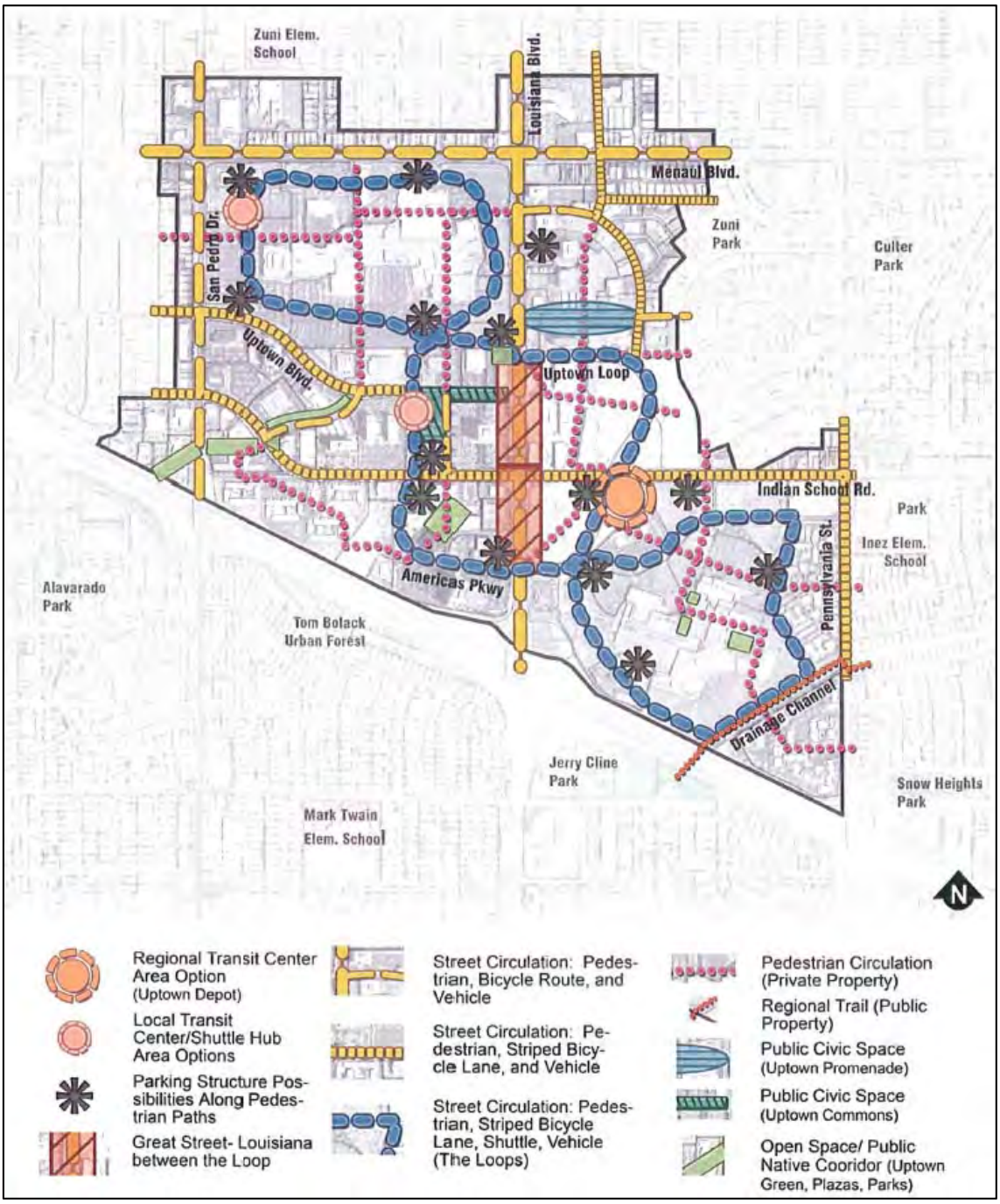

Figure 13. Uptown Pedestrian and Bicycle Master Plan Draft (from Ped/Bike Study, May 2008)

- The location and development of a parking structure system will greatly enhance the pedestrian system by allowing people to park and walk to their destinations. Parking structure locations should be rated based on:
  - Accessibility from and to major streets or the transportation network
  - Proximity to transit facilities
  - Visibility of the parking structure
  - Direct activation of major pedestrian street
  - Proximity to proposed and existing development/business
  - Support of pedestrian connectivity plan (park once and walk)
  - Proximity to existing parking structure
- An "Uptown Promenade" should be established on Cutler Avenue between Louisiana and Prospect. This would be a pedestrian link between the neighborhoods to the east and Louisiana Boulevard, the heart of the Uptown District, and the Loop Road transit system.
- The "Uptown Commons" should be designated on Uptown Boulevard between Americas Parkway and Louisiana. This would be a pedestrian-only space with no motor vehicles.
- A Loop Shuttle system should be established at 10-minute headways, to circulate around Winrock Town Center, ABQ Uptown, and Coronado Center.
- A new regional transit center (in addition to the existing local transit center) should be considered at the southeast quadrant of Uptown Loop/Indian School Road.
- The "Louisiana Mark" should be designated along Louisiana Boulevard between the north and south Americas Parkway loop. Buildings on the Louisiana Mark should orient toward the street and the number of vehicle access points should be reduced to create a safer pedestrian realm.
- Left turn lanes and dedicated right turn lanes should be reduced on the Louisiana Mark so they only occur at the Americas Parkway Loop Road and at Indian School Road. The Louisiana Mark should have a minimum 15-foot sidewalk, narrowed curb radii, pedestrian bridges, pedestrian scale lighting, in-ground crosswalk lighting, and pedestrian wayfinding signs.
- Indian School and Uptown Boulevard should be designated as "Passages." Their cross sections should consist of two driving lanes in each direction plus five-foot bike lanes, with mid-block crossings at select and controlled locations.
- Vehicular entrances to businesses should be located off the loop roads.
- The parking structure for the northeast quadrant of Uptown is proposed to be located just a block south of Menaul Boulevard. The two parking structures proposed closest to ABQ Uptown are at the Dave and Buster's and at the Target (where it is now), both of which require crossing Indian School Road. The other parking structure closest to ABQ Uptown is proposed at the southeast corner of Coronado Center, which requires crossing of Louisiana Boulevard at one of its widest points.
- The letter "U" is recommended for branding the Uptown Area, and for use on wayfinding signs.

G. Existing Conditions Inventory

An existing conditions field inventory was conducted by consultant staff to document the pedestrian facilities, signing, lighting, and traffic signal equipment in the study area. The surveys took place on a Tuesday at lunch time (May 6, 2014), during the afternoon vehicle peak on a Wednesday (June 11, 2014), and during the morning vehicle peak on a Thursday (June 12, 2014). Photos from the field inventory, which are referenced throughout this report, are included in Appendix D. Findings from these field

inventories are discussed throughout the next section of the report, in relation to how they meet the recommendations from the existing study documents.

III. DATA REVIEW

The following sections list the recommendations from the previous studies summarized above, along with a description of how these recommendations have or have not been incorporated into the existing pedestrian infrastructure. This review and comparison allows deficiencies and possible modifications to be identified. These are shown in boldface and underlined type in the paragraphs below.

Winrock Town Center Site Plan

The Winrock Town Center Site Plan does not offer specific goals or recommendations for pedestrian facilities. The redeveloped area, however, will include hundreds of parking spaces, restaurants, shopping, a movie theater, and a hotel, and it can be expected that as a result, the epicenter of Uptown will move farther east and south, and closer to the Uptown Loop/Indian School Road intersection. New pedestrian traffic patterns will emerge accordingly; in particular, many pedestrians would be expected to cross the Uptown Loop/Indian School Road intersection, especially between the southeast and northwest corners. Because of its skew and multiple turn lanes, **this intersection currently has long distances for pedestrians to cross without any median refuge**.

Uptown Sector Development Plan

The goals from the Sector Plan to achieve a safe and enhanced pedestrian environment are summarized in the text below.

- Goal: Facilitating pedestrian safety by allowing more mid-block signalized crossings of major streets and providing, wherever possible, areas of "safe haven" for pedestrians to use while crossing the streets in the Uptown Area.
    - The study area has no mid-block marked or signalized pedestrian crossings; however, two locations have high numbers of pedestrians crossing at uncontrolled locations, and improvements should be considered at these locations. The first is across Indian School between the north Target store entrance and the Q Street intersection to ABQ Uptown (Appendix D, Photos 7, 38, 153). The second is across Louisiana all along the stretch bounded by Indian School Road on the south and Uptown Boulevard on the north (Appendix D, Photos 9, 22).
    - While many signalized pedestrian crossings pass by raised medians, typically the raised medians are too far back behind the crosswalk to provide any refuge and should be considered for modification. This is generally because the median noses are pulled back to provide clearance for the left-turning vehicle. One location where a median refuge and even a pedestrian push button in the median can be found is the south median nose at the Louisiana/Americas Parkway (south) intersection (Appendix D, Photo 62).
- Goal: Encouraging pedestrians to walk between sites in the Uptown Area by requiring new construction and/or redevelopment to provide 10-foot wide walkways with enhanced landscaping and trees. Walkways may not always parallel the streets in Uptown, but should be located in the places people want to walk, and lighted with pedestrian-scale lighting.

  - New sidewalks on the east side of Louisiana have been built at a 10-foot width with landscaping, trees, and pedestrian-scale lighting (Appendix D, Photos 52, 92, 99).
  - New sidewalks on the west side of Louisiana have been built at 6-foot or 10-foot width with landscaping but lack pedestrian-scale lighting (Appendix D, Photos 172, 218, 254).
  - Older sidewalks are generally 6-feet wide with roadway lighting only and no pedestrian-scale lighting (Appendix D, Photos 129, 387, 388).
  - A small stretch of sidewalk on the south side of Indian School Road east of Americas Parkway looks to be just under 4-feet wide and should be considered for widening to a minimum of 6 feet (Appendix D, Photo 325).

- Goal: Building the Pedestrian Circulation System (PCS, shown in Figure 12). The PCS facilitates access to all parts of Uptown by connecting walkways to pedestrian plazas, parking structures and other areas of interest created to excite people who are walking in Uptown.
  - Where the PCS shows walkways in public right-of-way it is in place, with the exception of the sidewalk missing on the east side of Uptown Loop just south of Indian School and north of the BJ's restaurant (Appendix D, Photo 53). The lots next to this missing sidewalk have not yet been developed, and it is assumed that the sidewalk will be built with the development of the adjacent properties.
  - Throughout the study area there are places for pedestrians to sit, often in shade. One example is the area at the intersection of Prospect and Arvada (Appendix D, Photo 146).

- Goal: The PCS should have improved signalized street crossings with raised or colored walkways and alternative ways for pedestrians to cross the wide boulevards in the Uptown Area.
  - Most places have signalized street crossings. There are no raised crosswalks. Two crosswalks in the study area are colored: across the east leg at the Louisiana/Indian School intersection (Appendix D, Photo 93), and across the west leg of the Uptown Loop/Indian School intersection (Appendix D, Photo 105).
  - <u>A small number of locations have clear accessibility shortfalls and should be considered for modifications</u>. These include the pedestrian push button locations at the northeast quadrant of Uptown Loop/Indian School Road (Appendix D, Photo 47) and at the southwest quadrant of Louisiana/I-40 eastbound off-ramp (Appendix D, Photo 74).

The goals from the Sector Plan for transportation include:

- Goal: Continuing to meet all objectives of the National Ambient Air Quality Standards (by minimizing congestion).
  - Signals on Louisiana are interconnected and coordinated to promote progression and minimize stops and delay.
  - The signals on the loop road are not interconnected. If the loop road is the preferred route for motorists accessing Uptown businesses, interconnecting the traffic signals should be considered.

- Goal: Increasing and promoting the use of City Transit as a means of transportation for both the people coming to enjoy the Uptown Area and for people living in Uptown.
  - ABQ Ride has a transit center in Uptown and bus stops around the area. Routes 6, 8, 12, 34, 157, and 766 all travel through the Uptown area, as shown in Appendix E.

- Goal: Developing and promoting the operation of a free, full-time, Uptown circulator for shoppers, visitors, customers, employees and residents. A circulator is a localized transportation system such as an Uptown trolley, sky shuttle, tram or a City transit circulator that will connect all of the Uptown Area. Attractive circulator stops should be located to maximize safety, accessibility and may be used as a unifying element throughout the Uptown Area.
  - There is currently no Uptown circulator but there are bus stops.
- Goal: Connecting the Uptown circulators to City transit stops
  - There is currently no Uptown circulator.
- Goal: Parking structures should be connected not only to the streets in Uptown but to the PCS.
  - Parking structures for commercial uses are located underneath Target and underground at ABQ Uptown and are connected to the PCS. There are other parking structures in Uptown but they are geared toward commuters working in the high-rise buildings in those areas.

Uptown District Pedestrian and Bicycle Study and Wayfinding Program (2008)

The Uptown District Pedestrian and Bicycle Study and Wayfinding Program (Ped/Bike Study) was also led by the City of Albuquerque Planning Department, and is considered a supplement to the Sector Plan. The Ped/Bike Study makes the following recommendations for the Uptown study area:

- Emphasis should be placed on developing a compact, mixed-use, urban center with a focus on alternative modes of transportation such as bicycling, walking, and shuttle service, to interconnect all properties within Uptown.
  - This is occurring, although there is currently no shuttle service.
- The City should promote the live, work, and play environment through improved pedestrian and bicycle facilities and the location of parking structures that encourage a “park once and walk” environment.
  - This is occurring.
- The location and development of a parking structure system will greatly enhance the pedestrian system by allowing people to park and walk to their destinations.
  - The Uptown area has several aboveground and underground parking structures and surface lots, but no “parking structure system.”
- An “Uptown Promenade” should be established on Cutler Avenue between Louisiana and Prospect. This would be a pedestrian link between the neighborhoods to the east and Louisiana Boulevard, the heart of the Uptown District, and the Loop Road transit system.
  - This has not occurred, but it does not make a lot of sense. There is not much reason for pedestrians to use Cutler between Louisiana and Prospect.
- The “Uptown Commons” should be designated on Uptown Boulevard between Americas Parkway and Louisiana. This would be a pedestrian-only space with no motor vehicles.
  - This has not occurred but is not recommended as part of this study as it would be very detrimental to the businesses located north of Uptown Boulevard and west of Louisiana, which depend on Uptown for their access.

- A Loop Shuttle system should be established at 10-minute headways, to circulate around Winrock Mall, ABQ Uptown, and Coronado Center.
  - This has not been done.
- A new regional transit center (in addition to the existing local transit center) should be considered at the southeast quadrant of Uptown Loop/Indian School Road.
  - The Winrock Town Center master plan is not showing a transit center at that location nor anywhere else on their site plan. Additionally, staff from ABQ Ride have stated that they do not have plans to add a transit center at that location.
- The "Louisiana Mark" should be designated along Louisiana Boulevard between the north and south Americas Parkway loop. Buildings on the Louisiana Mark should orient toward the street and the number of vehicle access points should be reduced to create a safer pedestrian realm.
  - All of the buildings in ABQ Uptown that are adjacent to Louisiana were not oriented toward the street (Appendix D, Photos 92, 122, 126).
  - Generally there are few driveways on Louisiana, but it may be possible to eliminate some.
- Left turn lanes and dedicated right turn lanes should be reduced on the Louisiana Mark so they only occur at the Americas Parkway Loop Road and at Indian School Road. The Louisiana Mark should have a minimum 15-foot sidewalk, narrowed curb radii, pedestrian bridges, pedestrian scale lighting, in-ground crosswalk lighting, and pedestrian wayfinding signs.
  - There are many turn lanes on Louisiana – it should be considered whether some could be eliminated.
  - The sidewalk on Louisiana is not 15 feet wide; however, because most businesses do not face Louisiana, there is little reason for pedestrians to want to walk on that side of the building, and little need for a 15-foot sidewalk.
  - There is pedestrian-scale lighting on Louisiana on the west side of the road only.
  - Most of the new curb return radii are fairly small. Some of the older intersection corners still have pork chop islands and modifications at these corners should be considered.
  - There are no pedestrian bridges or in-ground crosswalk lighting; however, in-ground crosswalk lighting is falling out of favor with rectangular rapid flashing beacons (RRFBs) and pedestrian hybrid beacons/high-intensity activated crosswalk beacons (HAWK crossings) now being the preferred treatment.
- Indian School and Uptown Boulevard should be designated as "Passages." Their cross sections should consist of two driving lanes in each direction plus five-foot bike lanes, with mid-block crossings at select and controlled locations.
  - Indian School has bike lanes but Uptown Boulevard does not. The MRCOG Long-Range Bikeways System Map (April 2011) shows proposed bike lanes on Uptown Boulevard west of Americas Parkway only. Both roads have two driving lanes in each direction. Neither has controlled mid-block pedestrian crossings.
- Vehicular entrances to businesses should be located off the loop roads.
  - Generally this is the case, although Target just constructed one of its main driveways on Indian School which is not part of the loop road. ABQ Uptown has a main entrance (Q Street) on Indian School Road also. According to the Ped/Bike Study, Total Wine/Pei Wei/Satellite

should have its main driveway onto the Americas Parkway loop, but the buildings were already in place and situated so that this is not possible.

- The parking structure for the northeast quadrant of Uptown is proposed to be located just a block south of Menaul Boulevard. The two parking structures proposed closest to ABQ Uptown are at the Dave and Buster's and at the Target (where it is now), both of which require crossing Indian School Road. The other parking structure closest to ABQ Uptown is proposed at the southeast corner of Coronado Center, which requires crossing of Louisiana Boulevard at one of its widest points.
  - The parking structure for the northeast quadrant of Uptown has been located at a better location than what is shown in the Ped/Bike Study – it is underground in the center of ABQ Uptown. However, <u>the existing underground parking garage at ABQ Uptown is not well-marked and many people do not know it is there.</u>
  - The new Target parking garage is easy to access and see, and many people are using that for parking for ABQ Uptown; however, they are not walking over to the Q Street/Indian School intersection to cross Indian School, the path that was shown in the Ped/Bike Study.
  - Winrock Town Center will have ample surface parking, although not a structure located as shown in the Ped/Bike Study.
  - There is no parking structure at the southeast corner of Coronado Center, but there is ample surface parking in that corner of the mall's parking lot that is rarely used now.
- The letter "U" is recommended for branding the Uptown Area, and for use on wayfinding signs.
  - Other than on the cover of the Sector Plan document the letter "U" is not being used to brand the Uptown Area; in fact, the road through ABQ Uptown is "Q" Street.

IV. POTENTIAL IMPROVEMENTS FOR PEDESTRIAN SAFETY

By comparing the goals and recommendations from previous documents for the study area to what exists in the field now, gaps in the existing pedestrian infrastructure were identified and are listed below. This list was used as a starting point for determining potential improvements.

- Uncontrolled Pedestrian Crossing Improvements
  - Two locations have high numbers of pedestrians crossing at uncontrolled locations, and improvements should be considered at these locations.
- Intersection Improvements
  - Typically the raised medians are too far back behind the crosswalk to provide any refuge and should be considered for modification.
  - Most of the new curb return radii are fairly small. Some of the older intersection corners still have pork chop islands and modifications at these corners should be considered.
  - Generally there are few driveways on Louisiana, but it may be possible to eliminate some or convert them to right-in/right-out only.
- Sidewalk/Lighting Improvements
  - New sidewalks on the west side of Louisiana have been built at 6-foot or 10-foot width with landscaping but lack pedestrian-scale lighting.
  - Older sidewalks are generally 6-feet wide with roadway lighting only and no pedestrian-scale lighting

  - A small stretch of sidewalk on the south side of Indian School Road east of Americas Parkway looks to be just under 4-feet wide and should be considered for widening to a minimum of 6 feet.
  - A small number of locations have clear accessibility shortfalls and should be considered for modifications.

- Encouraging traffic to use the loop road
  - The signals on the loop road are not interconnected. If the loop road is the preferred route for motorists accessing Uptown businesses, interconnection should be considered.
  - The existing underground parking garage at ABQ Uptown is not well-marked and many people do not know it is there, how to get there, or if there are spaces available in it.
  - The relatively new slip ramp from the loop road through Winrock Town Center to westbound I-40 is not signed at all and is underused.

Recommendations to bridge these gaps are described in the sections below. Additionally, recommendations for other issues of concern in the Uptown study area were made for separate items outlined in the scope of work for this project.

A. Uncontrolled Pedestrian Crossing Improvements

Q Street/Indian School Road

As discussed earlier in this report, since the Target store was constructed in 2013, many shoppers are parking in its underground parking structure and crossing Indian School mid-block at Q Street to reach the stores at ABQ Uptown. Conversely, shoppers at ABQ Uptown may cross at the same location to pick up items at Target. The situation is exacerbated by the location of the Rapid Ride bus stop on eastbound Indian School Road just east of Louisiana Boulevard (Appendix D, Photos 100, 110).

Crash data from 2013 did not show any incidents at this location, but it is unknown if there were any pedestrian crashes at this location in 2014. Observations made by the study team suggest that there are generally sufficient gaps in traffic for pedestrians to make the crossing. A man in a motorized wheelchair was observed making the crossing at 5:25 pm on a Wednesday. Older pedestrians were also observed making the crossing without trouble.

The toolbox for pedestrian crossing treatments generally includes the options listed below. Each of these options is further explored in the following sections.

- Signalize the entire intersection, in this case the Q Street-Target/Indian School intersection, where pedestrians are crossing.
- Signalize the pedestrian movements using a pedestrian hybrid beacon (also known as a HAWK crossing).
- Sign and mark the crosswalk and supplement with flashers, such as a RRFBs.
- Sign and mark the crosswalk only.
- Force pedestrians to cross at an adjacent signalized intersection, in this case the Louisiana/Indian School intersection to the west or the Uptown Loop/Indian School intersection to the east.
- Provide pedestrian refuge but do not sign or mark the crossing – continue to allow pedestrians to cross on their own.

Signalizing the Q Street-Target/Indian School Intersection

The first option considered was to install a full traffic signal at the Q Street-Target/Indian School intersection. This would create a spacing of about 400 feet (center-to-center) to the adjacent signals at Louisiana and at Uptown Loop. Having three traffic signals in a span of 800 feet would be similar to the existing situation along Louisiana Boulevard with the signals at Arvada Avenue, Cutler Avenue, and the Coronado Center driveway – a situation that the City is trying to eliminate.

Also, traffic signals should be justified according to one of the nine warrants in the *Manual on Uniform Traffic Control Devices* (MUTCD). The nine traffic signal warrants, and their applicability to the Q Street-Target/Indian School intersection, are listed below.

Warrant 1, Eight-Hour Vehicular Volume. The Eight-Hour Warrant requires side street volumes of at least 100 vph for eight hours of each day. The side street volume at the intersection exceeded 100 vph for only two of the four peak hours of data collected.

Warrant 2, Four-Hour Vehicular Volume. The Four-Hour Warrant requires a side street volume of at least 80 vph for four hours of each day. As shown in Figure 14, this warrant is not met using the four peak hours of data collected at the intersection.

Warrant 3, Peak Hour. The Peak Hour Warrant is only to be applied in "unusual cases" such as office complexes, manufacturing plants, industrial complexes or high-occupancy vehicle facilities that attract or discharge large numbers of vehicles over a short time. This intersection does not meet that criterion.

Warrant 4, Pedestrian Volume. The Pedestrian Volume Warrant requires a minimum of 107 pedestrian crossings per hour for four hours of a day or 133 pedestrian crossings in the peak hour of the day. The pedestrian crossing volumes never reached either of these thresholds.

Warrant 5, School Crossing. There is not a school crossing at this intersection.

Warrant 6, Coordinated Signal System. The signal is not required for platooning on Indian School.

Warrant 7, Crash Experience. The crash experience warrant requires the eight-hour volume warrant to be met, which this intersection does not meet.

Warrant 8, Roadway Network. Q Street-Target would not be considered a "major route" and therefore would not meet this warrant.

Warrant 9, Intersection Near a Grade Crossing. There is not a railroad near this intersection.

Signalizing the Q Street-Target/Indian School intersection is not recommended.

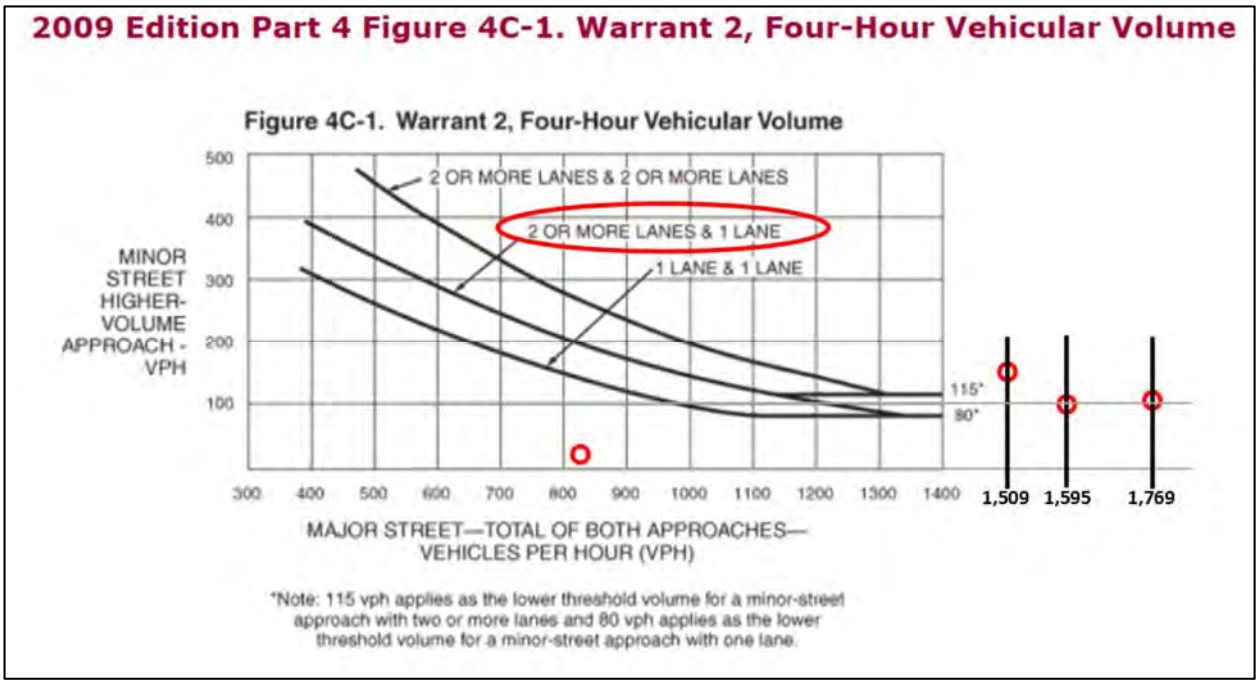

Figure 14. Four-Hour Vehicle Volume Warrant at Q Street-Target/Indian School

Install a Pedestrian Hybrid Beacon (HAWK) at the Crossing Location

A pedestrian hybrid beacon (also known as a HAWK [High-intensity Activated crossWalK] crossing, shown in Figure 15) is a special type of hybrid beacon used to warn and control traffic at an unsignalized location to assist pedestrians in crossing a street or highway at a marked crosswalk. A pedestrian hybrid beacon may be considered for installation to facilitate pedestrian crossings at a location that does not meet traffic signal warrants, or at a location that meets traffic signal warrants per the MUTCD but a decision is made to not install a traffic control signal.

Figure 15. Pedestrian Hybrid Beacon

The MUTCD (Chapter 4F) states that a pedestrian hybrid beacon (HAWK) should be considered if a traffic control signal is not justified under the MUTCD signal warrants and

- if gaps in traffic are not adequate to permit pedestrians to cross,
- or if the speed for vehicles approaching on the major street is too high for pedestrians to cross,
- or if pedestrian delay is excessive, the need for a pedestrian hybrid beacon should be considered on the basis of an engineering study that considers major-street volumes, speeds, widths, and gaps in conjunction with pedestrian volumes, walking speeds, and delay.

None of these holds true at the Indian School crossing at Q Street-Target– there are plenty of adequate gaps and pedestrians cross all the time without delay. They would most likely have more delay if the intersection were signalized and they had to wait for a green light.

Per the MUTCD, for a major street where the posted or statutory speed limit or the 85th-percentile speed is 35 mph or less, the need for a pedestrian hybrid beacon should be considered if the engineering study finds that the plotted point representing the vehicles per hour on the major street (total of both approaches) and the corresponding total of all pedestrians crossing the major street for one hour (any four consecutive 15-minute periods) of an average day falls above the applicable curve shown in Figure 16 for the length of the crosswalk (L=90'). The highest crossing volume observed in an hour was 26 pedestrians, which with the cross traffic volume of 1,600 vph places the point just above the threshold curve. However, because none of the other criteria is met – observations show that pedestrians are crossing now without delay – a pedestrian hybrid beacon is not recommended at this location.

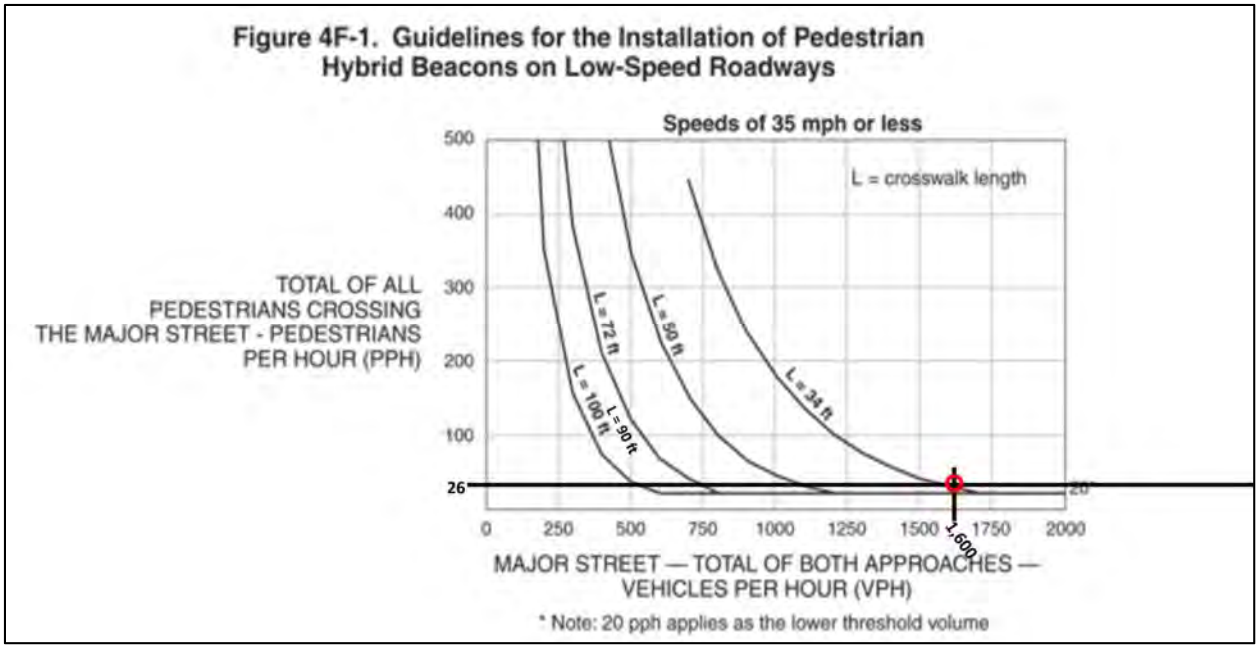

Figure 16. Pedestrian Hybrid Beacon Warrant

Sign and Mark the Crosswalk Only

One option for the crossing is to sign it with warning signs and stripe the pavement with a crosswalk. This would be considered a "marked crosswalk at an uncontrolled location." Extensive research has been done on the safety of this type of crossing, much of which has been documented in the Federal Highway Administration (FHWA) report "Safety Effects of Marked Versus Unmarked Crosswalks at Uncontrolled Locations" (September 2005), available here[2].

[2] If this report is being viewed electronically this hyperlink will take you to the document.

Research shows that the speed, traffic volume, and cross section of the cross street are all factors in whether or not it would be recommended to stripe a crosswalk at an uncontrolled location without additional enhancements such as traffic-calming treatments, traffic signals with pedestrian signals, speed-reducing measures, or "other substantial improvements," (presumably, not just signing). Figure 17 shows a table from the FHWA document. Given the speed, cross section, and daily traffic volume on Indian School near Q Street, the research suggests that it is possible that an increase in crashes may occur if a crosswalk is marked at this location in its current configuration, without other improvements. Accordingly, a marked crosswalk only is not recommended at this location.

It should be noted that if Indian School were to be decreased to a single lane in each direction, an idea that is discussed in more detail later in this report, the crossing may be considered a "candidate" site for a marked crosswalk.

Table 11. Recommendations for installing marked crosswalks and other needed pedestrian improvements at uncontrolled locations.*

Roadway Type (Number of Travel Lanes and Median Type)	Vehicle ADT ≤ 9,000			Vehicle ADT >9,000 to 12,000			Vehicle ADT >12,000–15,000			Vehicle ADT > 15,000		
	Speed Limit**											
	≤ 48.3 km/h (30 mi/h)	56.4 km/h (35 mi/h)	64.4 km/h (40 mi/h)	≤ 48.3 km/h (30 mi/h)	56.4 km/h (35 mi/h)	64.4 km/h (40 mi/h)	≤ 48.3 km/h (30 mi/h)	56.4 km/h (35 mi/h)	64.4 km/h (40 mi/h)	≤ 48.3 km/h (30 mi/h)	56.4 km/h (35 mi/h)	64.4 km/h (40 mi/h)
Two lanes	C	C	P	C	C	P	C	C	N	C	P	N
Three lanes	C	C	P	C	P	P	P	P	N	P	N	N
Multilane (four or more lanes) with raised median***	C	C	P	C	P	N	P	P	N	N	N	N
Multilane (four or more lanes) without raised median	C	P	N	P	P	N	N	N	N	N	N	N

* These guidelines include intersection and midblock locations with no traffic signals or stop signs on the approach to the crossing. They do not apply to school crossings. A two-way center turn lane is not considered a median. Crosswalks should not be installed at locations that could present an increased safety risk to pedestrians, such as where there is poor sight distance, complex or confusing designs, a substantial volume of heavy trucks, or other dangers, without first providing adequate design features and/or traffic control devices. Adding crosswalks alone will not make crossings safer, nor will they necessarily result in more vehicles stopping for pedestrians. Whether or not marked crosswalks are installed, it is important to consider other pedestrian facility enhancements (e.g., raised median, traffic signal, roadway narrowing, enhanced overhead lighting, traffic-calming measures, curb extensions), as needed, to improve the safety of the crossing. These are general recommendations; good engineering judgment should be used in individual cases for deciding where to install crosswalks.

** Where the speed limit exceeds 64.4 km/h (40 mi/h), marked crosswalks alone should not be used at unsignalized locations.

*** The raised median or crossing island must be at least 1.2 m (4 ft) wide and 1.8 m (6 ft) long to serve adequately as a refuge area for pedestrians, in accordance with MUTCD and American Association of State Highway and Transportation Officials (AASHTO) guidelines.

C = Candidate sites for marked crosswalks. Marked crosswalks must be installed carefully and selectively. Before installing new marked crosswalks, an engineering study is needed to determine whether the location is suitable for a marked crosswalk. For an engineering study, a site review may be sufficient at some locations, while a more indepth study of pedestrian volume, vehicle speed, sight distance, vehicle mix, and other factors may be needed at other sites. It is recommended that a minimum utilization of 20 pedestrian crossings per peak hour (or 15 or more elderly and/or child pedestrians) be confirmed at a location before placing a high priority on the installation of a marked crosswalk alone.

P = Possible increase in pedestrian crash risk may occur if crosswalks are added without other pedestrian facility enhancements. These locations should be closely monitored and enhanced with other pedestrian crossing improvements, if necessary, before adding a marked crosswalk.

N = Marked crosswalks alone are insufficient, since pedestrian crash risk may be increased by providing marked crosswalks alone. Consider using other treatments, such as traffic-calming treatments, traffic signals with pedestrian signals where warranted, or other substantial crossing improvement to improve crossing safety for pedestrians.

Figure 17. FHWA Recommendation for Installing a Marked Crosswalk across Indian School

Sign and Mark the Crosswalk and add a Rapid Rectangular Flashing Beacon (RRFB)

RRFBs, an example of which is shown in Figure 18, have "Interim Approval" by FHWA. In order to install one, a jurisdiction must submit a written request to the Office of Transportation Operations and must agree to comply with the technical conditions outlined by FHWA. RRFBs have been shown to effect a high compliance rate – the highest yielding levels reported for any crosswalk system that does not include a red indication - among drivers, at a very low cost relative to other more restrictive devices (full traffic signals, HAWK crossings). They may only be used to accompany school crossing or pedestrian crossing signs with a diagonal downward arrow, adjacent to a marked crosswalk.

FHWA's publication "Efficacy of Rectangular-Shaped Rapid Flash LED Beacons," available here[3], describes some of the research on RRFBs. Currently there are no warrants established for RRFBs by FHWA, and with the City's request to FHWA, they could be installed at this location in conjunction with warning signs and a marked crosswalk. However, currently pedestrians are crossing Indian School when they feel it is safe to do so in gaps of traffic, usually without causing drivers to have to yield or stop for them. Conversely, the purpose of the RRFB is to create a gap in traffic for pedestrians to cross by causing drivers to yield or stop for them. In other words, with the RRFBs pedestrians push the button to activate the flashers and expect drivers to stop for them (something out of their control), whereas in the current condition they would simply wait for a time when the road is clear to cross (within their control).

Figure 18 . Rapid Rectangular Flashing Beacon (RRFB)

Because there are adequate gaps in traffic for pedestrians to cross Indian School Road, a RRFB is not recommended at this location.

Force Pedestrians to Cross Indian School at the Existing Signals at Louisiana or Uptown Loop

In other locations, when the City has wanted to force pedestrians to use a pedestrian overpass, they have put up a fence in the median to prevent pedestrians from crossing streets mid-block. Dense and/or "hostile" landscaping has also been used by other cities in their medians to discourage jay-walking.

If the median break were to be closed at Q Street-Target, fencing the median along Indian School between Louisiana and Uptown Loop could be an option. However, currently pedestrians want to use this specific bee-line route between the parking garage driveway and Q Street and appear to be crossing without issue. It would be inconsistent with the goals in the planning documents to force pedestrians to walk 800 feet out of their way when the most direct route is desired and does not have an accident history.

It is not recommended to build a physical barrier in the median to force pedestrians to cross at one of the existing signalized intersections.

[3] If this report is being viewed electronically this hyperlink will take you to the document.

Provide a Median Pedestrian Refuge Only

The final option considered at this crossing location is to provide pedestrian refuge in the median but no other improvements (signing, marking, or beacons). Figure 19 shows an example of this treatment used in Albuquerque, at a trail crossing of Golf Course Road south of Paseo del Norte. Pedestrians would continue to cross on their own but would have space in the median to make the crossing in two steps. As was discussed earlier, this puts the responsibility on the pedestrian to ensure that there is a gap in traffic, and does not suggest that a driver will be stopping for him. The space would need to be narrow enough so that it is clearly not for vehicular use.

Figure 19. Flush Median for Pedestrian Refuge

In order to create this median refuge, it is recommended that the existing median break for vehicles in Indian School Road at Q Street-Target be closed. Traffic counts at this intersection show that only a minimal number of drivers are making left turns at the intersection, and very few drivers at all are traveling through north-south. Capacity analyses run for the recommendations are discussed later in this report, and show that the redistributed driveway volumes can be accommodated at the adjacent intersections. With the raised median as a refuge, pedestrians could cross Indian School one direction at a time, using the gaps in traffic created by the upstream traffic signals at Uptown Loop/Indian School and Louisiana/Indian School.

As a more extreme modification to enhance pedestrian safety at this crossing, Indian School Road between Louisiana and Uptown Loop could be modified so there is only one driving lane and one on-street bike lane in each direction. This is discussed in a later section of this report.

A flush median in Indian School Road at the Q Street-Target crossing is the recommendation for this location.

Louisiana Boulevard/Uptown Boulevard

A second location that experiences relatively high numbers of pedestrians crossing mid-block is along Louisiana Boulevard from Indian School Road to Uptown Boulevard. This location is slightly different than the crossing between Target and Q Street: whereas the Indian School crossings are fairly concentrated at those driveways, along Louisiana pedestrians cross mid-block at no particular location. They are generally traveling between the City Place building and other office buildings adjacent to Uptown Boulevard and the shops and restaurants in ABQ Uptown. This location is also different in that the cross section of Louisiana is much wider and it has a much higher daily traffic volume (30,000 to 35,000 vpd on Louisiana as compared to 13,000 on Indian School Road). Consequently, the treatment here will probably need to be different than what is recommended at Q Street-Target/Indian School Road.

The same toolbox of options was considered for this mid-block crossing location. The analyses are summarized in the sections below.

Signalizing the Intersection

The only full-access intersection on Louisiana between Indian School Road and Arvada Avenue is Uptown Boulevard. Because this intersection is less than 350 feet (center-to-center) from the signalized Arvada intersection, and this is the situation the City is trying to eliminate with the removal of the signal at Cutler (described later), signalizing Uptown Boulevard is not being considered. There are no other full-access intersections to signalize in this stretch.

Install a Pedestrian Hybrid Beacon (HAWK) at the Crossing Location

Per the MUTCD, a mid-block crossing should have pedestrian volumes of at least 20 per hour to justify a pedestrian hybrid beacon. While pedestrians are often observed jay-walking across Louisiana in this area, it is not at a rate of 20 per hour. Additionally, because a pedestrian hybrid beacon causes traffic on the main street to come to a full stop, adding one to this stretch of Louisiana, which already has closely-spaced signals, would be detrimental to the flow of traffic on the road.

A pedestrian hybrid beacon is not recommended at this location.

Sign and Mark the Crosswalk Only

Figure 20 shows the FHWA assessment for marking a crosswalk across Louisiana. Because of its wide cross section and high daily traffic volume, a marked crosswalk with warning signs only is not recommended at this location.

Table 11. Recommendations for installing marked crosswalks and other needed pedestrian improvements at uncontrolled locations.*

Roadway Type (Number of Travel Lanes and Median Type)	Vehicle ADT ≤ 9,000			Vehicle ADT >9,000 to 12,000			Vehicle ADT >12,000–15,000			Vehicle ADT > 15,000		
	Speed Limit**											
	≤ 48.3 km/h (30 mi/h)	56.4 km/h (35 mi/h)	64.4 km/h (40 mi/h)	≤ 48.3 km/h (30 mi/h)	56.4 km/h (35 mi/h)	64.4 km/h (40 mi/h)	≤ 48.3 km/h (30 mi/h)	56.4 km/h (35 mi/h)	64.4 km/h (40 mi/h)	≤ 48.3 km/h (30 mi/h)	56.4 km/h (35 mi/h)	64.4 km/h (40 mi/h)
Two lanes	C	C	P	C	C	P	C	C	N	C	P	N
Three lanes	C	C	P	C	P	P	P	P	N	P	N	N
Multilane (four or more lanes) with raised median***	C	C	P	C	P	N	P	P	N	N	N	N
Multilane (four or more lanes) without raised median	C	P	N	P	P	N	N	N	N	N	N	N

* These guidelines include intersection and midblock locations with no traffic signals or stop signs on the approach to the crossing. They do not apply to school crossings. A two-way center turn lane is not considered a median. Crosswalks should not be installed at locations that could present an increased safety risk to pedestrians, such as where there is poor sight distance, complex or confusing designs, a substantial volume of heavy trucks, or other dangers, without first providing adequate design features and/or traffic control devices. Adding crosswalks alone will not make crossings safer, nor will they necessarily result in more vehicles stopping for pedestrians. Whether or not marked crosswalks are installed, it is important to consider other pedestrian facility enhancements (e.g., raised median, traffic signal, roadway narrowing, enhanced overhead lighting, traffic-calming measures, curb extensions), as needed, to improve the safety of the crossing. These are general recommendations; good engineering judgment should be used in individual cases for deciding where to install crosswalks.

** Where the speed limit exceeds 64.4 km/h (40 mi/h), marked crosswalks alone should not be used at unsignalized locations.

*** The raised median or crossing island must be at least 1.2 m (4 ft) wide and 1.8 m (6 ft) long to serve adequately as a refuge area for pedestrians, in accordance with MUTCD and American Association of State Highway and Transportation Officials (AASHTO) guidelines.

C = Candidate sites for marked crosswalks. Marked crosswalks must be installed carefully and selectively. Before installing new marked crosswalks, an engineering study is needed to determine whether the location is suitable for a marked crosswalk. For an engineering study, a site review may be sufficient at some locations, while a more indepth study of pedestrian volume, vehicle speed, sight distance, vehicle mix, and other factors may be needed at other sites. It is recommended that a minimum utilization of 20 pedestrian crossings per peak hour (or 15 or more elderly and/or child pedestrians) be confirmed at a location before placing a high priority on the installation of a marked crosswalk alone.

P = Possible increase in pedestrian crash risk may occur if crosswalks are added without other pedestrian facility enhancements. These locations should be closely monitored and enhanced with other pedestrian crossing improvements, if necessary, before adding a marked crosswalk.

N = Marked crosswalks alone are insufficient, since pedestrian crash risk may be increased by providing marked crosswalks alone. Consider using other treatments, such as traffic-calming treatments, traffic signals with pedestrian signals where warranted, or other substantial crossing improvement to improve crossing safety for pedestrians.

Figure 20. FHWA Recommendation for Installing Marked Crosswalks Midblock at Louisiana

Sign and Mark the Crosswalk and add a Rapid Rectangular Flashing Beacon (RRFB)

As mentioned earlier, currently there are no warrants established for RRFBs by FHWA; however, some agencies (Boulder, CO; Virginia DOT) recommend that like a pedestrian hybrid beacon, an RRFB should not be installed unless pedestrian volumes are at least 20 per hour. Additionally, the six lane section across Louisiana would require an overhead installation of the RRFBs for visibility. For these reasons, the use of an RRFB is not recommended at this location.

Provide a Median Pedestrian Refuge Only

Another option considered at this crossing location is to provide pedestrian refuge in the median but no other improvements (signing, marking, or beacons). Pedestrians would continue to cross on their own but would have space in the median to make the crossing in two steps.

Unlike the Indian School Road at Q Street-Target crossing location, pedestrians are crossing Louisiana on paths all along the road. Consequently, one location for a flush median refuge cannot be selected.

A flush median in Louisiana between Indian School and Arvada Avenue is not recommended at this location.

Force Pedestrians to Cross Louisiana at the Existing Signals at Indian School or Arvada

The stretch of Louisiana between Indian School Road and Arvada Avenue is about 900 feet from crosswalk to crosswalk. At most, a pedestrian would have to walk 450 feet one-way to get to an existing signalized crosswalk. Because the other options in the toolbox are not feasible, forcing pedestrians to use one of the existing signalized crosswalks makes the most sense.

This option would involve erecting a fence and/or dense landscaping (Figure 21) all along the median between Indian School and Arvada Avenue. If turn lanes are eliminated at these intersections, as is discussed later, there will be a wider median and more room to install the fence and landscaping.

Figure 21. Fenced Median

Uptown Boulevard Crossing Between Total Wine/Pei Wei/Satellite and City Place

As this study was concluding, a third location was identified by City and MRCOG staff, where a high number of pedestrians were crossing mid-block at an uncontrolled location. The crossing is occurring west of Louisiana Boulevard across Uptown Boulevard, between the City Place office building and the Total Wine/Pei Wei/Satellite shopping area. Uptown Boulevard at this location had a daily traffic volume of about 4,900 vpd in 2013, and the speed limit is 30 mph. The road has two lanes in each direction, with a narrow raised median, but one of the recommendations from this study is to widen the median and narrow the road to have just one lane in the eastbound direction as it approaches Louisiana Boulevard.

The same toolbox of options was considered for this mid-block crossing location. The analyses are summarized in the sections below.

Signalizing the Intersection

This crossing is occurring near the City Place driveway intersection with Uptown Boulevard. It is unlikely that the driveway would warrant a full traffic signal; additionally, the close proximity of Louisiana Boulevard (about 250 feet) to the east makes this location a poor place for a traffic signal. It is not recommended to signalize this intersection as a way to accommodate pedestrian crossings.

Install a Pedestrian Hybrid Beacon (HAWK) at the Crossing Location

Per the MUTCD, a HAWK crossing should only be considered if gaps in traffic are not adequate to permit pedestrians to cross, or if vehicle speeds or excessive delay prevent pedestrians from crossing. Because of the low traffic volumes, this is not the case at this crossing, so the use of a HAWK is not recommended here.

Sign and Mark the Crosswalk Only

Figure 22 shows the FHWA assessment for marking a crosswalk across Uptown Boulevard. Because of its low daily traffic volume and low speed limit, this location may be a good candidate for marking a crosswalk. The purpose of a crosswalk here would be to direct the pedestrians to one location to cross, instead of having them cross all along Uptown Boulevard as was observed in the MRCOG videorecording. Following guidelines from the MUTCD for the installation of a pedestrian hybrid beacon, if a crosswalk is marked at this location, it should be at least 100 feet from the stop sign at Louisiana. The sketch in Figure 23 shows where a marked crosswalk could be placed, when accompanied by the appropriate warning signs.

Table 11. Recommendations for installing marked crosswalks and other needed pedestrian improvements at uncontrolled locations.*

Roadway Type (Number of Travel Lanes and Median Type)	Vehicle ADT ≤ 9,000			Vehicle ADT >9,000 to 12,000			Vehicle ADT >12,000–15,000			Vehicle ADT > 15,000		
	Speed Limit**											
	≤ 48.3 km/h (30 mi/h)	56.4 km/h (35 mi/h)	64.4 km/h (40 mi/h)	≤ 48.3 km/h (30 mi/h)	56.4 km/h (35 mi/h)	64.4 km/h (40 mi/h)	≤ 48.3 km/h (30 mi/h)	56.4 km/h (35 mi/h)	64.4 km/h (40 mi/h)	≤ 48.3 km/h (30 mi/h)	56.4 km/h (35 mi/h)	64.4 km/h (40 mi/h)
Two lanes	C	C	P	C	C	P	C	C	N	C	P	N
Three lanes	C	C	P	C	P	P	P	P	N	P	N	N
Multilane (four or more lanes) with raised median***	C	C	P	C	P	N	P	P	N	N	N	N
Multilane (four or more lanes) without raised median	C	P	N	P	P	N	N	N	N	N	N	N

* These guidelines include intersection and midblock locations with no traffic signals or stop signs on the approach to the crossing. They do not apply to school crossings. A two-way center turn lane is not considered a median. Crosswalks should not be installed at locations that could present an increased safety risk to pedestrians, such as where there is poor sight distance, complex or confusing designs, a substantial volume of heavy trucks, or other dangers, without first providing adequate design features and/or traffic control devices. Adding crosswalks alone will not make crossings safer, nor will they necessarily result in more vehicles stopping for pedestrians. Whether or not marked crosswalks are installed, it is important to consider other pedestrian facility enhancements (e.g., raised median, traffic signal, roadway narrowing, enhanced overhead lighting, traffic-calming measures, curb extensions), as needed, to improve the safety of the crossing. These are general recommendations; good engineering judgment should be used in individual cases for deciding where to install crosswalks.

** Where the speed limit exceeds 64.4 km/h (40 mi/h), marked crosswalks alone should not be used at unsignalized locations.

*** The raised median or crossing island must be at least 1.2 m (4 ft) wide and 1.8 m (6 ft) long to serve adequately as a refuge area for pedestrians, in accordance with MUTCD and American Association of State Highway and Transportation Officials (AASHTO) guidelines.

C = Candidate sites for marked crosswalks. Marked crosswalks must be installed carefully and selectively. Before installing new marked crosswalks, an engineering study is needed to determine whether the location is suitable for a marked crosswalk. For an engineering study, a site review may be sufficient at some locations, while a more indepth study of pedestrian volume, vehicle speed, sight distance, vehicle mix, and other factors may be needed at other sites. It is recommended that a minimum utilization of 20 pedestrian crossings per peak hour (or 15 or more elderly and/or child pedestrians) be confirmed at a location before placing a high priority on the installation of a marked crosswalk alone.

P = Possible increase in pedestrian crash risk may occur if crosswalks are added without other pedestrian facility enhancements. These locations should be closely monitored and enhanced with other pedestrian crossing improvements, if necessary, before adding a marked crosswalk.

N = Marked crosswalks alone are insufficient, since pedestrian crash risk may be increased by providing marked crosswalks alone. Consider using other treatments, such as traffic-calming treatments, traffic signals with pedestrian signals where warranted, or other substantial crossing improvement to improve crossing safety for pedestrians.

Figure 22. FHWA Recommendation for Installing a Marked Crosswalk across Uptown Boulevard

Figure 23. Potential Crosswalk Location across Uptown Boulevard

Sign and Mark the Crosswalk and add a Rapid Rectangular Flashing Beacon (RRFB)

As mentioned earlier, currently there are no warrants established for RRFBs by FHWA; however, some agencies recommend that like a pedestrian hybrid beacon, an RRFB should not be installed unless there are inadequate gaps in traffic for pedestrians to cross. Because of the low volume of traffic at this location, that is not the case, so the use of an RRFB is not recommended at this location.

Provide a Median Pedestrian Refuge Only

Another option considered at this crossing location is to provide pedestrian refuge in the median but no other improvements (signing, marking, or beacons). Pedestrians would continue to cross on their own but would have space in the median to make the crossing in two steps. This is a second potential treatment option for the pedestrians crossing at this location.

Force Pedestrians to Cross Uptown Boulevard at the Stop Sign at Louisiana

The median break to allow eastbound traffic on Uptown Boulevard to enter the Total Wine/Pei Wei/Satellite parking lot is vital to that business, so it is not feasible to build a physical barrier across that area to force pedestrians to cross at the Louisiana Boulevard crosswalk.

B. Intersection Improvements

The comparison between the planning documents for Uptown and the field reviews revealed the gaps between the "desired" and "actual" pertaining to the intersection design in the study area. To summarize, they were:

- Typically the raised medians are too far back behind the crosswalk to provide any refuge and should be considered for modification.
- Most of the new curb return radii are fairly small, making the crossing lengths shorter. Some of the older intersection corners still have pork chop islands and modifications at these corners should be considered.
- Generally there are few driveways on Louisiana, but it may be possible to eliminate some or convert them to right-in/right-out only.

Each of the major intersections along and within the Uptown loop was studied to determine the modifications that could be made to improve pedestrian access across the streets without a substantial negative effect to vehicle traffic operations. The sections below summarize the findings.

Louisiana Boulevard/Indian School Road

The Louisiana Boulevard/Indian School Road intersection has "pork chop" islands - channelized right turn lanes that allow traffic to make higher-speed right turns - at all but the northeast corner. Right turns at pork chop islands are generally considered to be not as "friendly" to pedestrians as right turns made from lanes where traffic must first approach the cross street and stop perpendicularly. Also, corners with pork chop islands do not provide as much congregating area for pedestrians as corners without them. Pork chop islands do provide the benefit of a larger right-turn radius for large vehicles which might otherwise drive over the curb or have to pull into the adjacent lane to make a turn.

The recommendations at the Louisiana Boulevard/Indian School Road intersection, shown in Figure 25, are the following:

- The pork chop islands and exclusive right-turn lanes should be removed from all corners where they exist now. Right-turning traffic should share the outside lane with through traffic. The wheelchair ramps at the corners of the intersection should be constructed directional to the crossing, and the crosswalk striping should be refreshed.
- On the northbound and southbound Louisiana Boulevard approaches the median should be modified to eliminate the inside left-turn lane. This will allow a median refuge at the crosswalk for these long crossings.

Uptown Loop/Indian School and Q Street-Target/Indian School

The issue of the uncontrolled pedestrian crossings at Q Street-Target/Indian School was discussed earlier in this report. The recommendation for that intersection is to provide median refuge without signing or striping. This modification is shown schematically in Figure 26. It requires a large raised median along Indian School Road with a flush crossing area, and restriping/resigning the approaches to indicate that Q Street and the Target driveway are right-in/right-out only.

An alternative, more extreme, recommendation at this intersection would be to narrow the section of Indian School between Louisiana and Uptown Loop to one driving lane and one bicycle lane in each direction (Figure 27), with an increased sidewalk area or parallel on-street parking. A reduced speed limit on Indian School would also be part of this recommendation. This would not only decrease the number of driving lanes for pedestrians to cross, but may provide further reason for drivers to use the loop roads instead of Indian School. To drop the lanes coming into this cross section the outside lane at Louisiana/Indian School eastbound and at Uptown Loop/Indian School westbound would have to be restriped and resigned as right-turn only lanes. With this modification, the crosswalk would be a candidate site for marking and signing the crosswalk, in accordance with the FHWA table shown in Figure 17.

The Uptown Loop/Indian School Road intersection has exclusive right-turn lanes on the eastbound and southbound approaches that are recommended to be eliminated so that right-turning traffic shares the outside right-turn lane. This would create a slightly shorter crosswalk distance across the north, south, and west legs of the intersection. It should be noted that the Rapid Ride bus operates articulated buses that make an eastbound right turn at this intersection, and further analysis is recommended to determine the effects of modifying the southwest corner of the intersection on the bus movement. Also, where possible, the median noses at the intersection should be extended to provide refuge across the crosswalk.

Figure 26 also shows an option for striping a pedestrian scramble phase – a signal operation where during the signal cycle some of the time is dedicated to pedestrian movements only, and they are permitted to cross all directions, even diagonally, while all of the vehicle signals are red. This is a potential long-term recommendation to facilitate pedestrian crossing if, especially as the Winrock Town Center gets built out or if ABQ Uptown expands, pedestrian volumes justify a higher level of pedestrian accommodation.

Louisiana Boulevard/Uptown Boulevard

The Louisiana/Uptown Blvd. intersection is a large expanse of unmarked pavement (Appendix D, Photo 125). Additionally, many drivers on eastbound Uptown Boulevard prefer to use the signalized intersection at Louisiana/Americas Parkway (north) to make a left turn to go northbound rather than to try to make an unprotected left turn at Louisiana/Uptown Blvd.

The east leg of the intersection is signed right-out only. The southbound left-turn lane there is 50 feet long and marked only with a lane stripe. Northbound left-turning traffic onto downstream Americas Parkway often backs up across the Uptown Blvd. intersection, as shown in Figure 24. Also as shown in Figure 24, northbound left-turning traffic onto Americas Parkway tends to heavily use the outside turn lane; this is because most of this traffic wants to immediately take a right into the Coronado Center parking lot, and it is difficult to get into the right lane from the inside left turn lane.

Because of the raised median on the west leg of Americas Parkway (north), and the proximity of the driveway into the Total Wine-Pei Wei-Satellite shopping area to Louisiana Boulevard, northbound traffic on Louisiana Boulevard uses the unsignalized left turn onto Uptown Boulevard to access that shopping area. Other routes into that shopping area are too circuitous to be feasible.

Accordingly, the recommendations at the Louisiana Boulevard/Uptown Boulevard intersection, shown in Figure 28, are the following:

- The Louisiana Boulevard median should be extended across Uptown Boulevard to provide right-in/right-out access only to the ABQ Uptown driveway to the east and right-in/right-out/left-in access only to Uptown Boulevard to the west. The Uptown Boulevard approach to Louisiana should be modified with a raised median or striping to demarcate the permitted movements.
- At the Louisiana/Americas Parkway (north) intersection, the median should be modified to remove the inside left turn lane northbound. The remaining lane should be lengthened as much as possible across Uptown Boulevard. With the left-turn movement in one lane only, it should be considered to modify the signal phasing to allow permitted left turns onto Americas Parkway (north) in addition to the protected left-turn phase.
- With the modified, wider, median on the south leg of the Louisiana/Americas Parkway (north) intersection, the crosswalk should be striped and oriented so that a pedestrian could take refuge in the median. Additionally, the crosswalk across both the south and north legs of that intersection should be restriped to be more normal to the street centerline, requiring a shorter crossing distance. The crosswalk must be placed to ensure that a pedestrian crossing in the crosswalk to the near right of a right-turning driver is within that driver's sight distance.

Figure 24. Northbound Left-Turn Queue at Louisiana/Americas Parkway (North)

Louisiana Boulevard/Cutler Avenue Intersection

The Louisiana Boulevard/Cutler Avenue signal was installed years ago to accommodate traffic generated by the office buildings east of Louisiana across from Coronado Center. The adjacent traffic signals on Louisiana Boulevard are 300 feet to the south at Arvada Avenue and 450 feet north at the eastern Coronado Center driveway, and the offices on Cutler Avenue have access to both signals via parking lots as well as public streets. The City is consequently considering having the signal at the Louisiana Boulevard/Cutler Avenue intersection removed.

The MUTCD provides the following guidance on the removal of traffic signals: "*If changes in traffic patterns eliminate the need for a traffic control signal, consideration should be given to removing it and replacing it with appropriate alternative traffic control devices, if any are needed.*"

Changes in traffic patterns, specifically the installation of the signals along Louisiana Boulevard at Coronado Center and Arvada Avenue, have changed traffic patterns and have provided other ways of providing protected access to and from Cutler Avenue, eliminating the need for the signal there, as conditions there do not currently meet any of the MUTCD's traffic signal warrants. The nine traffic signal warrants, and their applicability to the Louisiana/Cutler intersection, are listed below.

Warrant 1, Eight-Hour Vehicular Volume. The Eight-Hour Warrant requires side street volumes of at least 100 vph for eight hours of each day. The side street volume on Cutler does not exceed 100 vph for even one hour of each day. Table 4 shows a summary of the peak hour traffic volumes at the intersection.

Warrant 2, Four-Hour Vehicular Volume. The Four-Hour Warrant requires side street volumes of at least 80 vph for four hours of each day. The side street volume on Cutler does not exceed 80 vph for even one hour of each day.

Warrant 3, Peak Hour. The Peak Hour Warrant requires side street volumes of at least 100 vph for the highest-volume hour each day. The side street volume on Cutler does not exceed 100 vph in the peak hour.

Warrant 4, Pedestrian Volume. The Pedestrian Volume Warrant requires a minimum of 107 pedestrian crossings per hour for four hours of a day or 133 pedestrian crossings in the peak hour of the day. The maximum number of pedestrians crossing Louisiana at Cutler was 15 in an hour.

Warrant 5, School Crossing. There is not a school crossing at this intersection.

Warrant 6, Coordinated Signal System. The Cutler signal is not required for platooning on Louisiana.

Warrant 7, Crash Experience. The crash experience warrant cannot be assessed as it evaluates the intersection's crashes in an unsignalized condition. Also, in addition to a disproportionate number of crashes, the crash experience warrant requires that the intersection meet the volumes in the eight-hour volume warrant, which it does not.

Warrant 8, Roadway Network. Cutler Avenue would not be considered a "major route" and therefore would not meet this warrant.

Warrant 9, Intersection Near a Grade Crossing. There is not a railroad near this intersection.

Table 5. Summary of Peak Hour Turning Movements at Louisiana/Cutler

	AM Weekday Peak Hour	Noon Weekday Peak Hour	PM Weekday Peak Hour	PM Friday Peak Hour
Westbound Left*	22	38	43	32
Westbound Right*	9	29	33	29
Northbound Through	800	1,296	1,553	1,696
Northbound Right	22	33	20	29
Southbound Left	16	33	29	32
Southbound Through	1,093	1,300	1,221	1,456

*Sum of westbound left and right turn movements should exceed 100 vph to consider signal warrant under the peak hour warrant

Regarding the removal of a traffic signal, the MUTCD states the following: "*If the engineering study indicates that the traffic control signal is no longer justified, and a decision is made to remove the signal, removal should be accomplished using the following steps:*

A. *Determine the appropriate traffic control to be used after removal of the signal.*
B. *Remove any sight-distance restrictions as necessary.*
C. *Inform the public of the removal study.*

D. Flash or cover the signal heads for a minimum of 90 days, and install the appropriate stop control or other traffic control devices.

E. Remove the signal if the engineering data collected during the removal study period confirms that the signal is no longer needed."

The data collected for this report and the analysis in this section can be considered a removal study. A stop sign on Cutler Avenue is the appropriate traffic control to be used after the signal is removed; additionally, prohibiting the left turn movements into and out of Louisiana should be considered. No sight distance restrictions exist at the intersection.

The recommendations for the Louisiana/Cutler intersection are shown in Figure 29. Figure 30 shows the alternate points of signalized access for Cutler Avenue. The recommendations consist of the following:

- The unwarranted traffic signal at the Louisiana/Cutler intersection should be removed per the procedure outlined in the MUTCD. Traffic on Louisiana should run free at Cutler, and westbound Cutler traffic should be controlled with a stop sign. The existing marked crosswalk across the north leg of the intersection should be eradicated.
- The intersection should be modified to right-in/right-out only access by constructing a raised median across Cutler along Louisiana. The Cutler Avenue approach could be modified with either a raised median or with striping to demarcate the right-in/right-out only movement. Signing will also be required.
- By extending the raised median through Cutler, the left turn lanes at the signalized intersections to the north and south can both be extended to better accommodate left turn queues.

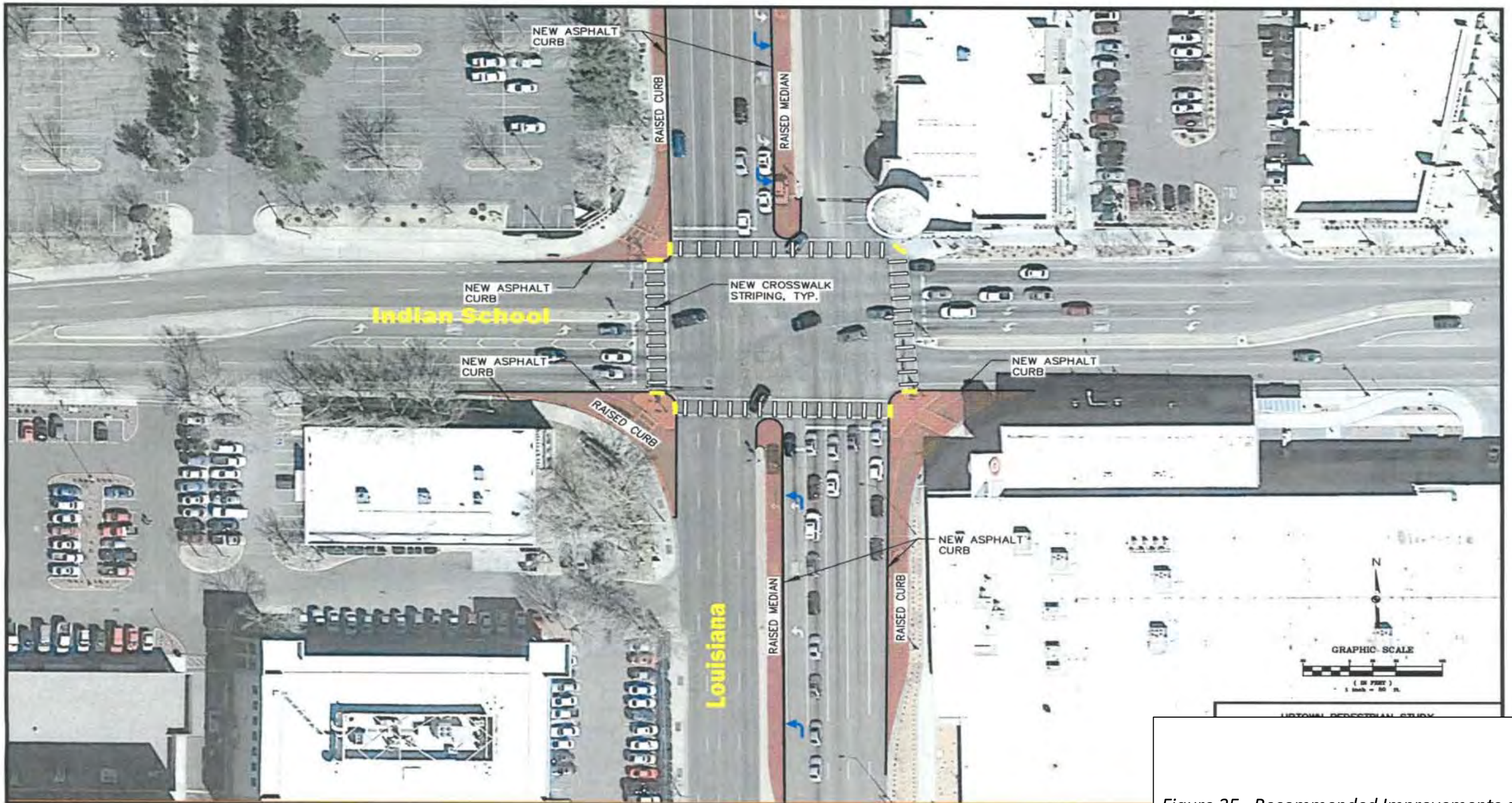

Figure 25. Recommended Improvements at Louisiana/Indian School

Figure 26. Recommended Improvements at Q Street-Target/Indian School and Uptown Loop/Indian School

Figure 27. Alternate Recommended Improvements at Q Street-Target/Indian School and Uptown Loop/Indian School

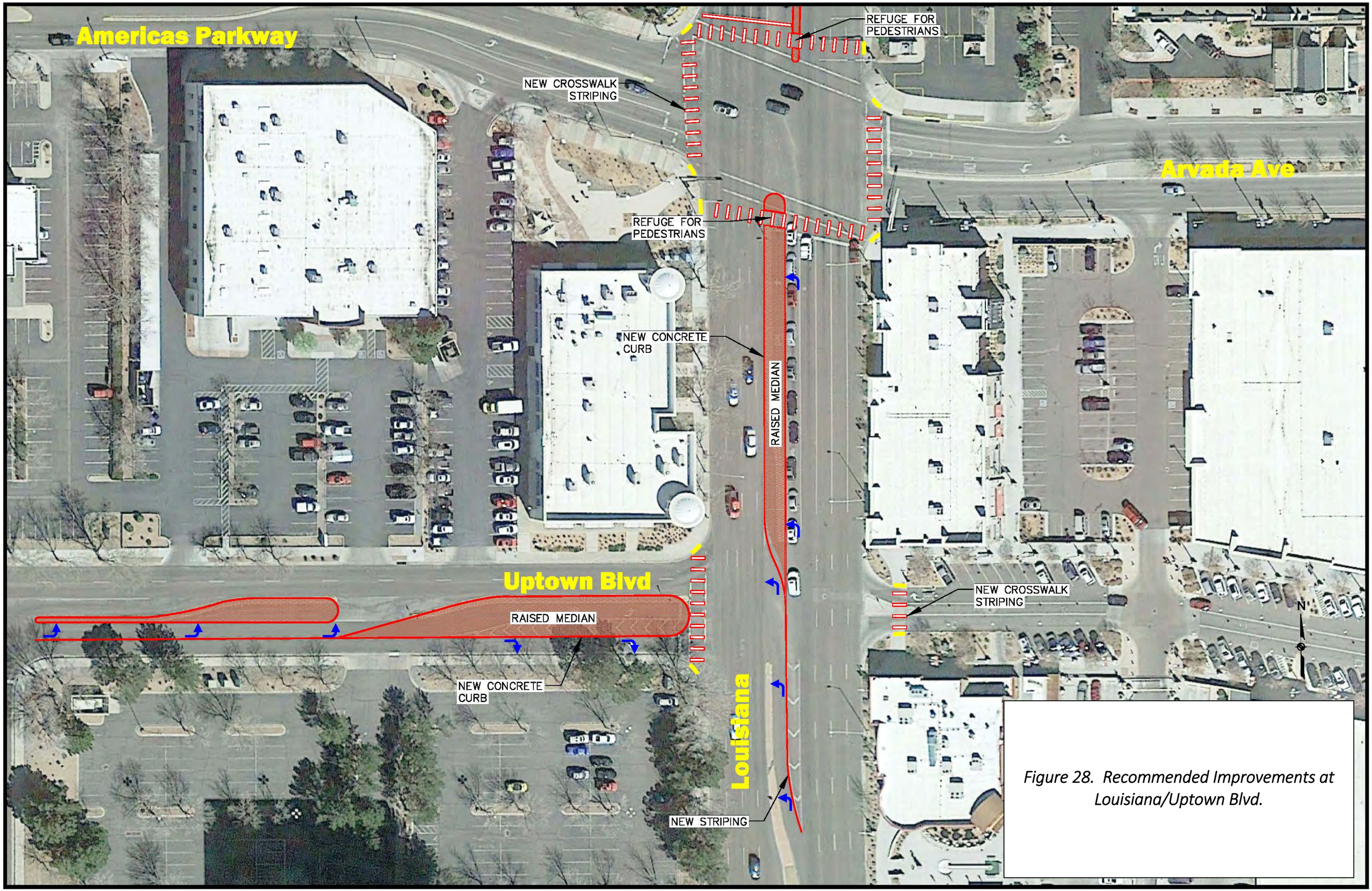

Figure 28. Recommended Improvements at Louisiana/Uptown Blvd.

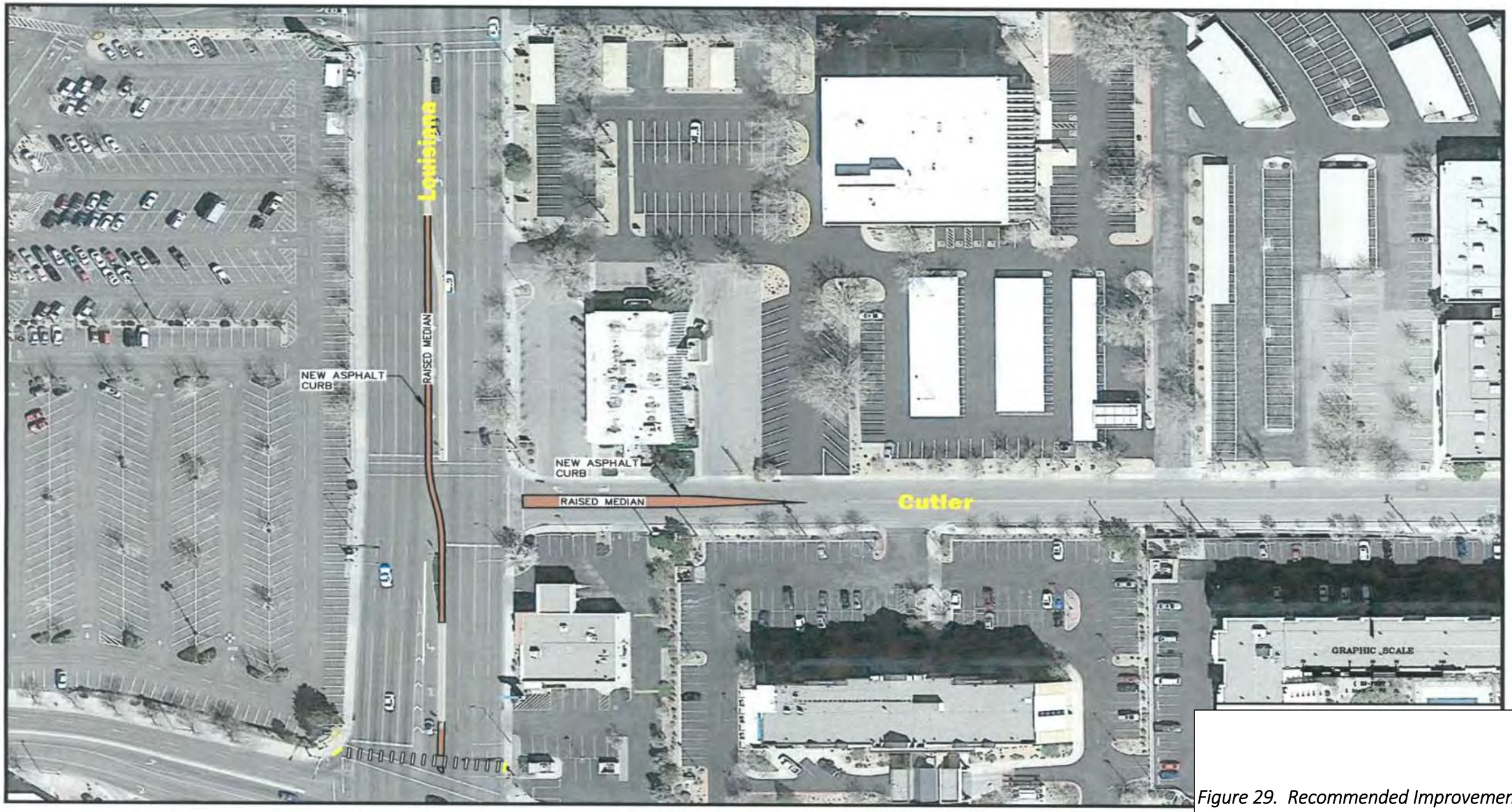

Figure 29. Recommended Improvements at the Louisiana/Cutler Intersection

Figure 30. Alternative Signalized Access for Cutler Avenue Traffic

C. Sidewalk/Lighting Improvements

The comparison between the planning documents for Uptown and the field reviews revealed several gaps between the "desired" and "actual" pertaining to the sidewalks and pedestrian-scale lighting in the study area. They were:

- New sidewalks on the west side of Louisiana have been built at a 6-foot or 10-foot width with landscaping but lack pedestrian-scale lighting.
- Older sidewalks in the study area are generally 6-feet wide with roadway lighting only and no pedestrian-scale lighting.
- A small stretch of sidewalk on the south side of Indian School Road east of Americas Parkway looks to be just under 4-feet wide and should be considered for widening to at least 6 feet.
- A small number of locations have clear accessibility shortfalls and should be considered for modifications.

The Sector Plan's goal of 10-foot sidewalks throughout the Uptown area is an ideal that should be required with new construction in the area, but it would be unreasonable to recommend that all existing 6-foot sidewalks be torn out and reconstructed or widened to 10 feet in the absence of other construction in the area. That being said, the City should focus its efforts on the locations where the sidewalk is less than 6-feet wide. The field review showed just one location with a continuous stretch of sidewalk less than 6-feet wide. Field measurements showed it to be about 3.5-feet wide exclusive of the curb. This section, which is about 240 feet long, is along eastbound Indian School adjacent to the Park Square shopping center, as shown in the screen shots in Figure 31. Information on the City's GIS viewer is not precise enough to show where the sidewalk falls in relation to the property line, so it is unclear whether widening the sidewalk in this area would require additional right-of-way or an easement. It does appear that the sidewalk could be widened to the south with some modification to the existing landscaping.

While they are not issues with sidewalk width there were other locations in the study area where improvements to accessibility should be considered. They are listed below.

- Sidewalk cross slope. Four older driveways on Louisiana have driveway slopes that make the sidewalk cross slope greater than the maximum 2% allowed to be considered part of the accessible route, per the Americans with Disabilities Act Public Right-of-Way Accessibility Guidelines (PROWAG). Photos of these locations are shown in Appendix D (Photos 128, 129, 138, 139). Photos of how a driveway has been retrofitted to provide an accessible route are shown in Appendix D Photos 75 and 382. It may be feasible to upgrade these driveways with easements.
- Sidewalk continuous width. NMDOT's interim policy for ADA pedestrian walkway and ramp design (IDD-2013-03, viewable here[4]) requires a continuous width of 4 feet on the access route. Prior to this policy, an accessible route could narrow down to a minimum of 3 feet around an obstacle, and this is the width that the sidewalk detours around hydrants and landscaping have been built to in the study area (Appendix D Photos 131, 324, 326, 421, 464, 497). It is not required or recommended to modify these detour widths at this time, but if construction occurs in the area, they should be widened to the new 4-foot standard, at a minimum.

[4] If this report is being viewed electronically this hyperlink will take you to the document.

Figure 31. Narrow Sidewalk Along Indian School Road (looking west)

- Curb ramp design. NMDOT's interim policy for ADA pedestrian walkway and ramp design also specifies requirements for new curb ramp slopes and turning spaces. All but the very newest curb ramps in the study area were constructed prior to this policy and do not meet this standard. It is not required or recommended to modify the curb ramps at this time, but if construction occurs in the area, they should be constructed to the new standard.
- Detectable warning surfaces. Detectable warning surfaces have been compared to stop signs for visually impaired pedestrians: they designate the boundary between the sidewalk and the street. Many of the older curb ramps in the study area were constructed prior to the requirement for detectable warning surfaces (Appendix D Photo 91 shows an example). In most cases, detectable warning surfaces can be added to locations where they are absent by adhering panels of truncated dome surfaces (NMDOT has several on its approved products list) to the existing concrete of the sidewalk.
- Pedestrian push buttons. PROWAG specifies a maximum 10-inch reach between the edge of the sidewalk and the pedestrian push button, as well as a 48-inch maximum height of a push button relative to the sidewalk. Most of the pushbuttons in the study area were built long before this standard was in place and do not have to meet these specifications, but most do. One location was observed that clearly does not meet the horizontal reach specification and is impossible to be used by a person in a wheelchair (at the I-40 eastbound off-ramp approach to Louisiana, shown in Appendix D Photo 74). Another location was observed that would be difficult to reach by a person in a wheelchair (Appendix D Photo 47). It is recommended that these two locations be modified for better accessibility. Other pedestrian push buttons in the study area are obsolete (Appendix D Photo 130, 221, 341, 468) but are not required or recommended for modification at this time.
- Pedestrian signals. The most recent revision of the MUTCD requires countdown pedestrian signal heads at all crosswalks where the pedestrian change interval exceeds 7 seconds (where the crossing width is at least 24.5 feet). Many of the existing pedestrian signals do not have countdown pedestrian heads but they are not required or recommended for modification at this time.

Lighting in the study area is present everywhere, but not consistent. Roadway lighting exists on all of the streets in the study area. The lights are either a cobra head or shoebox style. In contrast, pedestrian-scale lighting is only present along sidewalks on the east side of Louisiana within the loop. There is pedestrian-scale lighting along Louisiana north of Indian School and along both sides of Indian School between Louisiana and Uptown Loop. There is also pedestrian-scale lighting on the south and west sides of Uptown Loop and on the east side of Uptown Loop from Indian School to the apartments.

Like the 10-foot sidewalks, the pedestrian-scale lighting recommended in the Sector Plan is an ideal that should be required with new development. However, because the existing street lights spill light over onto the adjacent sidewalks, installing additional pedestrian-scale lighting along the existing sidewalks is not considered a priority.

D. Encouraging Traffic to Use Loop Road

One of the City's goals is to decrease the amount of local traffic using Louisiana to access businesses in the Uptown area, and instead increase the use of the underutilized loop road. The sections below discuss some possible options to accomplish this.

Destination Guide Signs

About two-thirds of the traffic coming to the Uptown area comes from I-40 and Louisiana from the south. There already exists across Louisiana just north of I-40 a monotube sign bridge that spans the entire road. The sign structure is used to mount regulatory lane use signs for southbound Louisiana, and is not being used for any signs for northbound traffic. One idea is to mount destination guide signs on this structure to direct northbound traffic immediately onto the loop road if they are destined for Coronado Center, ABQ Uptown, or Winrock Town Center (Figure 32). This recommendation also involves the conversion of the outside through lane on northbound Louisiana at Americas Parkway (south) into a right-turn only lane.

Likewise, destination guide signing could be used for drivers coming to Uptown from the north on Louisiana. While there is no overhead structure to mount signs on, with the modification of the median across Cutler Avenue there would be space available to mount a guide sign similar to what is shown in Figure 33, directing drivers to the ABQ Uptown and Winrock Town Center parking areas.

Figure 32. Overhead Destination Signs for Northbound Louisiana North of I-40

Figure 33. Destination Sign for Southbound Louisiana North of Arvada Avenue

Figure 34. Directional Signs for Westbound I-40 Slip Ramp

Another recommendation is to better sign the existing slip ramp from the Winrock Town Center parking lot to westbound I-40. This is a little-known ramp that is currently not signed at all, and if better used, could potentially remove substantial amounts of traffic from the Louisiana/Indian School and/or the Louisiana/Americas Parkway (south) intersections. Figure 34 shows four locations where interstate guide sign assemblies could be used to encourage the use of this ramp.

Figure 35. Dynamic Parking Sign Concept

Finally, the existing underground parking garage at ABQ Uptown is not well-marked. Through discussions with several shoppers who frequent that area, many did not know the parking structure was there or how many spaces it had in it. Better signing for the underground structure is recommended. Ideally, a dynamic parking sign (an example is shown in Figure 35) could be used to show how many spaces are available in the garage. This would prevent drivers from wandering through the garage when there are no spaces available, and would also alert drivers to open spaces at times when it may seem unlikely. A dynamic parking sign is feasible at this location because of the garage's single point of entry and exit.

Coordinate Signals on Loop Road

Currently, the signals on the loop road are not coordinated to each other. The signals along Americas Parkway west of Louisiana Boulevard run free of the operations of the other intersections. If the loop road is the preferred route for motorists accessing Uptown businesses, coordination should be considered. For instance, northbound left-turning traffic at Louisiana/Americas Parkway (south) should get the green when they arrive at the Indian School intersection, again when they arrive at the Uptown Boulevard intersection, and then get the green left-turn arrow into the Coronado Center entrance.

Renaming the Loop Road

Looking at the loop road around the Uptown area like a clock, starting at the top the loop is called Arvada Avenue from 12 to 1, Uptown Loop Road from 1 to 6, and Americas Parkway from 6 to 12. Some maps show the portion of the loop between 5 and 6 as "Winrock Loop," and in fact according to the City's GIS maps that portion of the loop appears to not be public right-of-way, but instead an access easement on Winrock Town Center property.

If the City is interested in pursuing just one name for the whole loop road, renaming the east half of the loop as "Americas Parkway" would probably have the least impact, as half of the loop already has that street name, including all of the businesses in the two 10-story buildings at 6501 and 6565 Americas Parkway, Japanese Kitchen and Buca di Beppo restaurants, and the Hilton Garden Inn. While renaming the streets that make up the east loop road would promote the road as a unifying link through the Uptown area, several businesses use the existing street names in their street addresses. Impacts would include changing printed documentation of these addresses:

- Trader Joe's – 2200 Uptown Loop
- Melting Pot restaurant – 2201 Uptown Loop
- Toni & Guy Hairdressing Academy – 2201 Uptown Loop

- ABQ Uptown Village Apartments – 2222 Uptown Loop (200 units)
- Hyatt Place – 6901 Arvada Avenue
- Homewood Suites – 7101 Arvada Avenue

Because the City's development process requires the property owners of the adjacent lots to be notified of a proposal to rename the road (as well as the post office and utilities), there would be an opportunity for these businesses to provide input on the costs to them. The City's process states that the street name shall only be changed if the public benefit of renaming the loop road would outweigh the resulting confusion and costs.

Informational Parking Brochure

Many cities have used informational brochures to instruct drivers on how to access certain high-traffic shopping areas. These brochures often show the locations of free and pay parking areas, bicycle parking, bus stops, and accessible parking. In addition to printed brochures, this information can easily be provided as a PDF link on a website.

The study team put together a concept for an informational brochure for parking and wayfinding in the Uptown area, shown in Figure 36. This could be provided as a link on the Coronado Center, ABQ Uptown, and Winrock Town Center websites. The concept plays up the use of the loop road as the "Q"uickest route to parking, using the letter "Q" to highlight the loop road and the slip ramp from Winrock to westbound I-40.

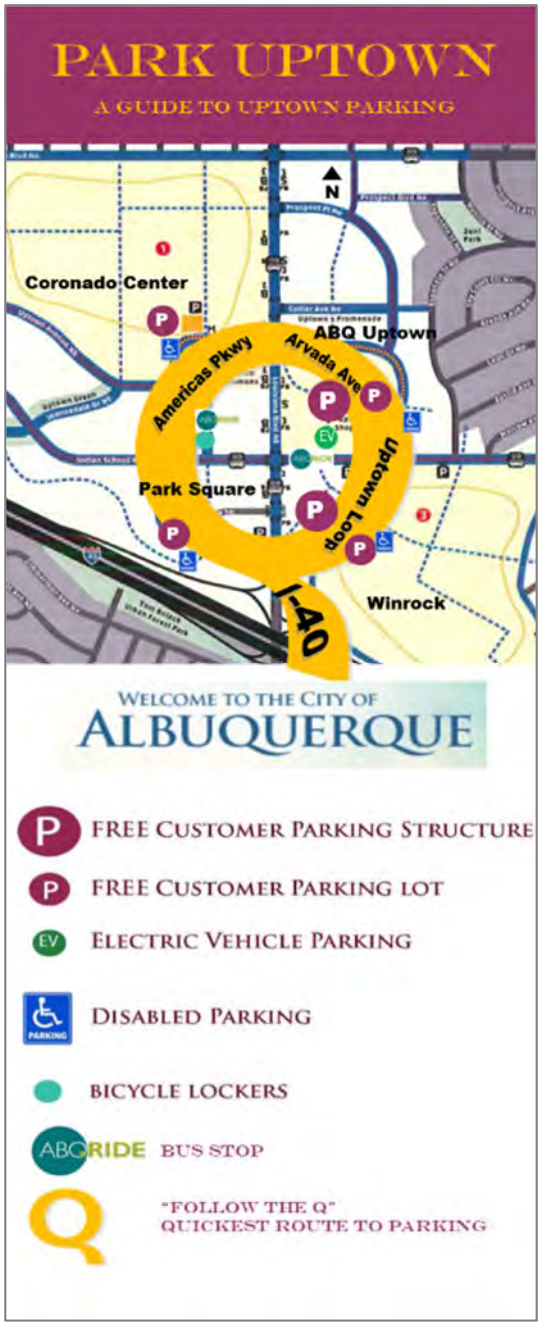

Figure 36. Informational Parking Brochure Concept

V. EFFECT ON TRAFFIC OPERATIONS

All of the geometric modifications suggested above will clearly have impacts on the traffic operations. To gain an idea of the effect the recommendations may have on traffic, the study area was modeled in the Synchro 8 capacity analysis software. The analyses used the year 2014 traffic and pedestrian counts presented earlier in this report and the existing traffic signal timing plans provided by the City of Albuquerque (Appendix F). The capacity analysis worksheets for these analyses are provided in Appendix G.

Two scenarios were considered. The first scenario analyzed the existing geometric and signal timing conditions. The second scenario analyzed the proposed geometric improvements (including the alternative of narrowing Indian School to one driving lane in each direction between Louisiana and Uptown Loop) still using the existing signal timing plans. Also, in the second scenario, right turns were

prohibited on red at the intersections along and within the loop road. Where left turns were modified from dual to single, the left-turn remained protected only, although it may be possible to increase capacity of the movement by allowing left turns on a permitted phase. Where turns were prohibited in the recommended scenario, their volumes were redistributed to other intersections. The table below summarize the changes at each intersection that would affect capacity along with the pedestrian benefits of the proposed modifications.

Table 6. Summary of Modifications Affecting Traffic Capacity and Pedestrian Benefits

Intersection	Proposed Modification Affecting Traffic Capacity	Benefit of Modifications to Pedestrians
Louisiana Boulevard/Americas Parkway (south)	o Conversion of outside through lane northbound to exclusive right-turn lane o Green right-turn arrow overlap at exclusive right-turn lanes o No right turns on red	o Conflict between crossing pedestrians and perpendicular right-turning vehicles eliminated
Louisiana Boulevard/Indian School Road	o Removal of second left turn lane northbound and southbound o Removal of right-turn only lane northbound and southbound o Removal of pork chop islands northbound, southbound, and eastbound o Conversion of outside through lane eastbound to exclusive right-turn lane o Green right-turn arrow overlap at exclusive right-turn lane o No right turns on red	o Shorter crosswalk lengths across all four legs o Speed of right-turning vehicles is decreased with removal of pork chop islands o Wider, raised median noses on Louisiana if pedestrians need refuge o Conflict between crossing pedestrians and perpendicular right-turning vehicles eliminated o Allowing only one lane to enter eastbound Indian School east of Louisiana creates fewer lanes for pedestrians to cross between Target and Q Street
Louisiana Boulevard/Uptown Boulevard	o Change of access to right-in/right-out/left-in only at Uptown Boulevard o Change of access to right-in/right-out only at the ABQ Uptown driveway	o One less driving lane for pedestrians to cross over the west leg of the intersection o Wider, raised median nose on Uptown Boulevard, if pedestrians need refuge

Louisiana Boulevard/Americas Parkway-Arvada Avenue	o Removal of second left-turn lane northbound o Normalization of crosswalks over north and south legs of the intersection o No right turns on red	o Shorter crosswalk lengths across north and south legs o Wider, raised median noses on Louisiana if pedestrians need refuge o Conflict between crossing pedestrians and perpendicular right-turning vehicles eliminated
Louisiana Boulevard/Cutler Avenue	o Removal of unwarranted traffic signal o Change of access to right-in/right-out only at Cutler	o Wider, raised median nose across Cutler if pedestrians need refuge
Q Street-Target Driveway/Indian School Road (if two driving lanes in each direction)	o Change of access to right-in/right out only at Q Street o Change of access to right-in/right out only at Target Driveway o Raised median between eastbound and westbound traffic	o Pedestrians only have to be sure that one direction of traffic is clear at a time, and can wait in a raised median area between crossing the eastbound and westbound directions
Q Street-Target Driveway/Indian School Road (if one driving lane in each direction)	o One through driving lane only on Indian School in each direction o Raised median between eastbound and westbound traffic o Change of access to right-in/right out only at Q Street o Change of access to right-in/right out only at Target Driveway	o Fewer driving lanes for pedestrians to cross between Target and Q Street o Pedestrians only have to be sure that one direction of traffic is clear at a time, and can wait in a raised median area between crossing the eastbound and westbound directions
Uptown Loop/Indian School Road	o Removal of right-turn only lane eastbound and southbound o Conversion of outside through lane westbound to exclusive right-turn lane o No right turns on red	o Shorter crosswalk lengths across north, south, and west legs o Allowing only one lane to enter westbound Indian School west of Uptown Loop creates fewer lanes for pedestrians to cross between Target and Q Street

Figures 37 through 40 show the expected level of service for each intersection movement within the study area for the AM, noon, PM, and Friday PM peak hours. The levels of service at the Louisiana/ Constitution, Louisiana/I-40, and Pennsylvania/Indian School intersections are not shown as no lane modifications are being proposed for those intersections as part of this study. In the figures, where levels of service are circled it appears there will be a degradation of more than one level of service with the recommended modifications.

Generally, the largest declines in level of service were at the right turn movements, which in the analysis were prohibited from making turns on red. Prohibiting right turns on red as a pedestrian safety measure may not make sense everywhere – drivers are unlikely to obey the sign if they see few pedestrians crossing and no reason not to make the right turn.

Other locations where the level of service degraded more than one level were the through movements at the southbound Louisiana approach to Indian School in the AM and noon peaks and at the southbound Louisiana approach to Americas Parkway-Arvada in the noon peak. These declines were a result of the decrease in capacity from the opposing left turn lane (in both cases one of the two left turn lanes was removed). Because these are actuated traffic signals, the timing adapts to this change by providing more green time to the opposing single left turn lane, which results in less green time and a worse level of service for the conflicting through movement. As mentioned above, it may be possible to allow permitted turns at these single left-turn lanes to increase the capacity for both the left turn lanes and the opposing through movement.

In the Friday PM peak hour there is a decline of two levels of service at the eastbound Indian School through movement at Louisiana, where the second through lane is dropped as a right-turn only lane. Adjustments in the signal timing may be able to mitigate that level of service. Alternatively, a level of service “F” in the Friday evening peak may be an acceptable trade-off for the resulting pedestrian improvements.

Earlier in this report a pedestrian scramble phase was suggested as a higher level modification to improve pedestrian access at the Uptown Loop/Indian School intersection if volumes justified such a measure in the future. A large increase in delay would be expected for vehicles under this type of signal operation, and would have to be weighed carefully with the benefit to pedestrians prior to being implemented.

Figure 37. Current Year AM Peak Hour Movement Level of Service – Existing Conditions (left) and With Recommendations (right)

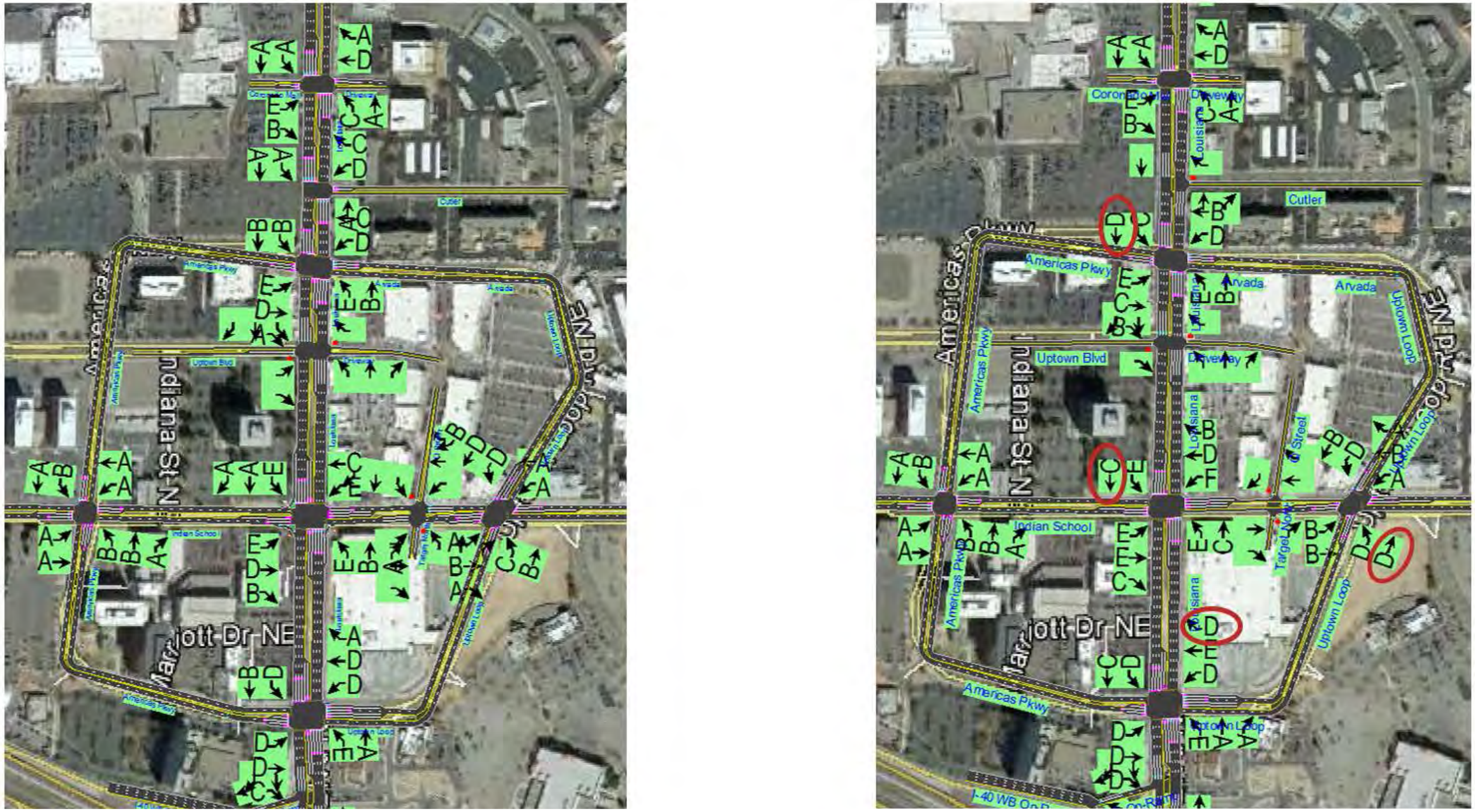

Figure 38. Current Year Noon Peak Hour Movement Level of Service – Existing Conditions (left) and With Recommendations (right)

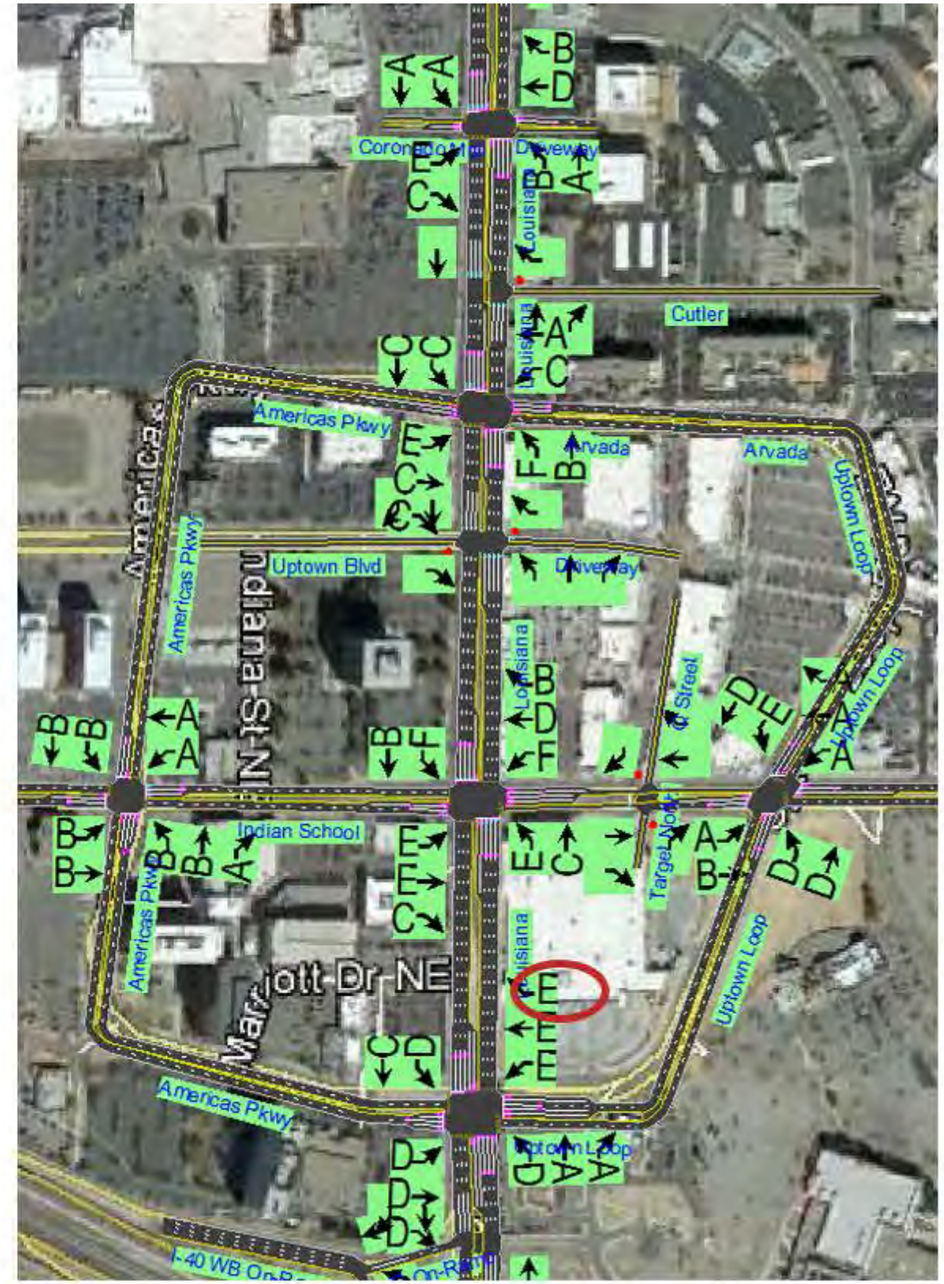

Figure 39. Current Year PM Peak Hour Movement Level of Service – Existing Conditions (left) and With Recommendations (right)

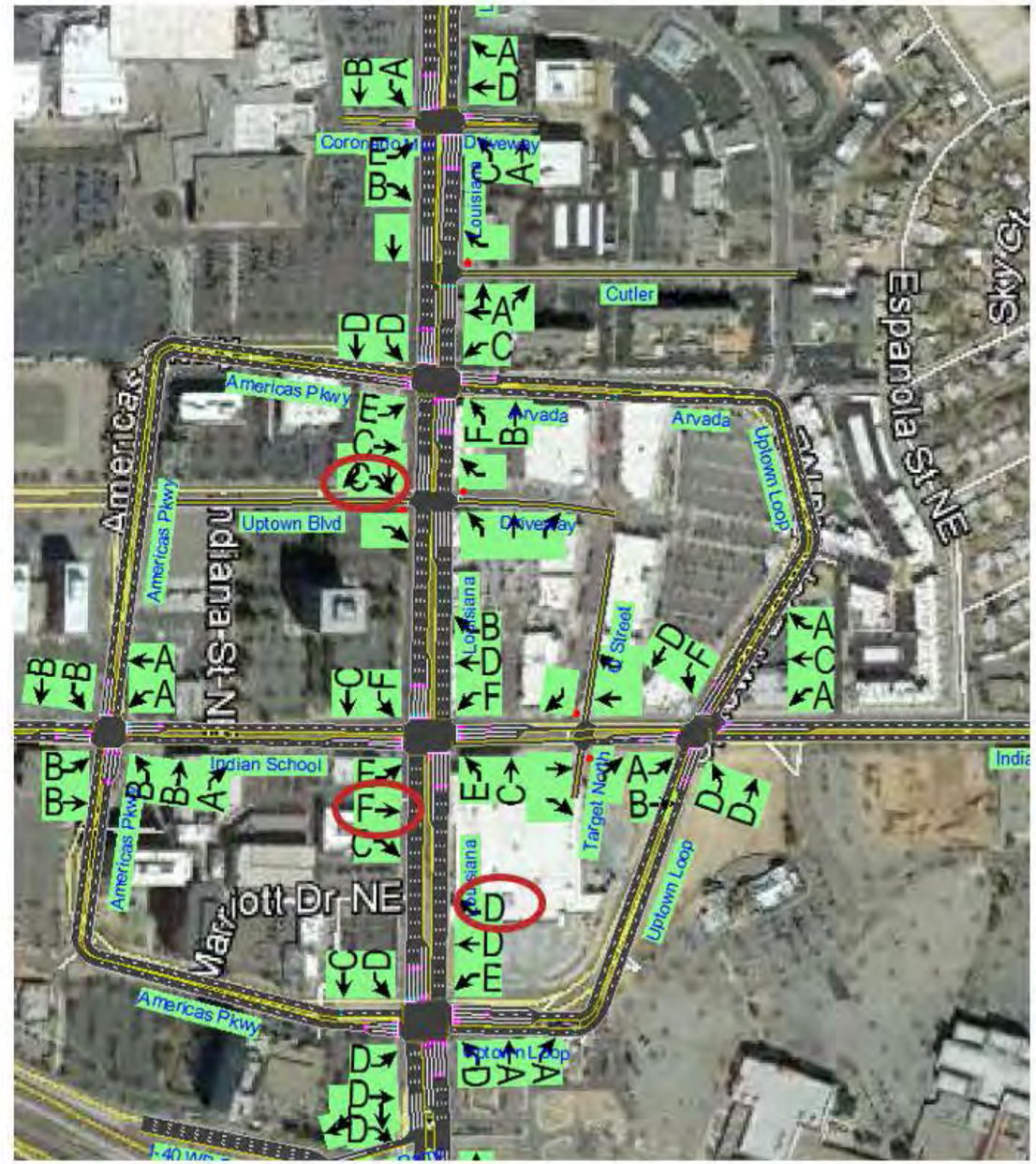

Figure 40. Current Year Friday PM Peak Hour Movement Level of Service – Existing Conditions (left) and With Recommendations (right)

VI. PRIORITIES AND COST ESTIMATES

Updates on this study were provided to MRCOG and City staff at two mileposts – the first was after the data collection effort, on June 18, 2014, and the second was after a draft list of recommendations had been compiled, on July 30, 2014. The discussions at these meetings, particularly the second meeting, involved prioritizing the recommendations from this study. A summary of these priorities is listed below along with a rough probably construction cost. Unless otherwise noted, each of the bulleted items could serve as a stand-alone project and is not dependent on other improvements being made. Appendix H contains the cost breakdowns.

A. Highest Priority Improvements

- Completion of the accessible pedestrian route (widening sidewalks to the minimum width, resolving major ADA issues). Est. under $50,000.
- Improving the uncontrolled crossing at Q Street-Target/Indian School by installing a raised median with a flush area for pedestrians to cross. Est. $300,000.
- Intersection modifications at Louisiana/Cutler, including removing the signal. Est. $200,000.
- Intersection modifications at Louisiana/Uptown Blvd., including fencing the Louisiana median and median modifications on the south leg of the Louisiana/Americas Parkway (north) intersection. Est. $325,000.
- Improved signing for the I-40 westbound slip ramp. Est. under $5,000.

B. Medium Priority Improvements

- Efforts to increase use of loop road – advance signing on Louisiana northbound and southbound, traffic signal coordination around west loop, parking brochures.
- Narrowing Indian School Road between Louisiana and Uptown Loop to one driving lane in each direction with bike lanes and on-street parking, and signing and marking the crosswalk there. This would be dependent on modifying the upstream intersections to include the appropriate lane drops, so just one lane would be feeding into this stretch of Indian School from both directions, and improvements to the loop road to promote traffic flow and coordination.
- Modifications at the Louisiana/Indian School intersection.
- Modifications at the Uptown Loop/Indian School Road intersection.
- Establishing the mid-block pedestrian crossing location of Uptown Boulevard west of Louisiana Boulevard, between the City Place and Total Wine/Pei Wei/Satellite parking lots, by signing and marking a crosswalk or by providing a flush pedestrian refuge in the median.

C. Low Priority Improvements

- Additional pedestrian-scale lighting in the Uptown area.
- Pedestrian scramble pavement markings, signing, and signal modifications at Uptown Loop/Indian School (when pedestrian volumes grow substantially enough to merit this treatment).