



Tim Keller, Mayor

# Greater Albuquerque Active Transportation Committee (GAATC) – AGENDA

June 13, 2022 | 4:00 – 6:00 PM



Meeting will be held virtually.

Due to current public health considerations, no in-person option will be provided this month.

Zoom meetings will be recorded and the chat will be saved for notetaking purposes.

\*6 mute/unmute | \*9 raise/lower hand

**Zoom Meeting Info:** <https://cabq.zoom.us/j/88461619655>

**Join by Phone:** +1 346 248 7799 (\*6 mute/unmute | \*9 raise/lower hand)

**Meeting ID:** 884 6161 9655

- **Welcome and Introductions**

[ ] Ryan Mast  
NE Quadrant

[ ] Dr. Naomi George  
SE Quadrant

[ ] Dan Jensen  
NW Quadrant

[ ] Nevarez Encinias  
SW Quadrant

[ ] Richard Meadows (chair)  
Pedestrians + Transit Users

[ ] Josiah Hooten  
Bicyclists

[ ] Vacant  
Represent individuals  
w/a Disability

[ ] Vacant  
Youth (Under 24)

[ ] Lanny Toning  
Older Adults (over 60)

- **Approval of June 13, 2022 Meeting Agenda**

- **Approval of May 9, 2022 Meeting Minutes**

- **Public Comments** (Public comment is limited to two (2) minutes per audience member)

- Please email comments to Valerie Hermanson (vhermanson@cabq.gov) prior to the meeting or use the virtual raise hand feature during the meeting.

- **Discussion / Action Items**

- Galbadon Rd NW & I-40 Trail safety concerns (motion at May 9, 2022 meeting to keep this item on the agenda until a resolution is completed)

- **Presentations**

- [Impact of Bus Rapid Transit Construction and Infrastructure on Traffic Safety: A Case Study From Albuquerque, New Mexico](#) - Esther Bia & Nick Ferenchak, PhD, PE, University of New Mexico, Department of Civil, Construction & Environmental Engineering
- **2022 Complete Streets Rehabilitation Overview** – Shanna Schultz, AICP, Albuquerque City Council, City of Albuquerque

**Next Meeting: Monday, July 11, 2022**



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## Greater Albuquerque Active Transportation Committee (GAATC) – AGENDA

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- **Staff Reports**

- Municipal Development (DMD)
  - Engineering
  - Vision Zero
- Council Services
- Parks and Recreation

- Planning
- ABQ RIDE
- Bernalillo County
- MRCOG
- NMDOT District 3

- **Public Comments** (Public comment is limited to two (2) minutes per audience member)

- **Adjourn**

DRAFT

**Next Meeting: Monday, July 11, 2022**



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## Greater Albuquerque Active Transportation Committee (GAATC) – Minutes

Monday, June 13, 2022 | 4:00 – 6:00 PM



### Committee Members Present

Richard Meadows (Chair)  
Ryan Mast

### Committee Members Absent

Nevarez Encinias  
Dr. Naomi George  
Josiah Hooten  
Dan Jensen  
Lanny Tanning

### Staff Members Present

Carrie Barkhurst (ABQ RIDE)  
Tim Brown (DMD)  
Andrew de Garmo (ABQ RIDE)  
Valerie Hermanson (DMD)  
Julie Luna (Bernalillo County)  
Jill Mosher (NMDOT)  
Whitney Phelan (Parks and Rec)  
Shanna Schultz (City Council)  
Bobby Sisneros (ABQ RIDE)  
Cheryl Somerfeldt, (Parks and Rec)  
Seth Tinkle (Planning)

### Visitors Present

Esther Bia (UNM)  
Dianne Cress (Bike ABQ)  
Sudhir Desai (T4B)  
Dr. Nick Ferenchak (UNM)  
Diego Garcia (T4B)  
Numair Latif (Santa Barbara / Martineztown Neighborhood Association)  
Steve Pilon (Bike ABQ)  
Ralph Wrons (Bike ABQ)

**Richard Meadows called the meeting to order at 4:06 PM**



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- **Approval of June Meeting Agenda**
  - No quorum to approve agenda
- **Approval of May Meeting Minutes**
  - No quorum to approve meeting minutes

### Public Comments (2-minute limit per audience member)

Steve Pilon (Bike ABQ): Noted a lack of bicycle parking at a lot of the bus stops while cleaning bus stops along Central Ave. Would like to point out that integrating biking with transit is important and this could be a good place to start by adding bike racks along Central and then all over town.

Richard Meadows: Agrees not everyone will want to bring their bike on the bus.

- **Discussion / Action Items**

#### Galbadon Rd NW at I-40 Trail safety concerns (Lanny Toning)

Julie Luna (BernCo): Sent email asking for information on the speed humps requested but did not receive a response. She will continue to reach out. Noted it's a good and worthwhile strategy to have this on the agenda each month, but there are no updates for this month's meeting.

- **Presentations**

- [Impact of Bus Rapid Transit Construction and Infrastructure on Traffic Safety: A Case Study From Albuquerque, New Mexico](#) - Esther Bia & Nick Ferenchak, University of New Mexico, Department of Civil, Construction & Environmental Engineering Staff Reports

Esther and Dr. Ferenchak completed a research analysis on Albuquerque's Bus Rapid Transit (BRT) system along Central Ave. Their paper was recently published and the presentation will follow the paper's outline.

- BRT shares characteristics of light rail and traditional bus transportation and it can also be a hybrid of the two.

#### 5 Characteristics of a full BRT:

1. A designated bus lane
2. The bus lane is a center-lane
3. Pre-boarding fare collection
4. Intersection treatments
5. Platform boarding

(Institute for Transportation and Development Policy, 2021)



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There are a lot of different types of BRT systems in the world and are fairly new but are not common in the United States. Study wanted to look into how BRT systems impact traffic safety in addition to other research that has already been done but that other research has been outside of the United States. And also, a good opportunity to look at an existing dangerous corridor, Central Ave. 18% of all pedestrian collisions in New Mexico occurred within a quarter-mile of the Central Avenue corridor in 2016.

- How we analyzed ART: Used GIS/Excel and divided Central Ave up into 11 segments based on land use, not length. Also studied parallel routes: Lomas, Lead, Coal, and Zuni as comparisons.

Identified four different collision categories:

- All modes, all severities
- All modes, fatal and serious injuries
- Pedestrians, all severities
- Pedestrians, fatal and serious injuries

Obtained vehicle volumes to see if how they changed before/after. Found there was a 28.6% decrease in vehicle volumes on Central Ave. from before and after. The control segments at the ends of the corridor (no construction) also saw decrease of 26.3% and 30.3%. This reduction in exposure may explain some of the decreases in collision counts.

- Results: Collision Counts with before, during, and after
  - Decrease overall in collisions of about 8.2%
  - Control segments saw an average decrease of 6.1%
  - ABQ as a whole saw an increase of 7.2%
  - Collisions were lowest on Central Ave. during construction
- Heat map of collisions showed the decreases in crashes, however, there was an outlier at San Mateo, where there was an increase.
- Results: Collision Counts. All modes Fatal or Seriously injured
  - 64.9% decrease on the ART segments
  - 5.7% decrease on the control segments
  - 5.9% decrease on alternatives
  - 18.4% decrease across the city
- Results: Collisions. All Pedestrian collisions
  - 9.3% increase on ART segments. However, all of ABQ had a 31.4% increase
    - Although increased, it did not increase as much as the rest of ABQ
  - Lomas to 10<sup>th</sup> had the greatest decrease
  - San Mateo to Louisiana was again an outlier
- Results: Collisions. Pedestrian Collisions Fatal and Serious Injury
  - 27.3% decrease on ART segments
  - 13.3% increase on control segments



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- 14.5% increase for the rest of ABQ
- Note fatal pedestrian collision counts were small
- Results: Collision Rates. All modes
  - Rates for all collisions on ART segments had an average increase of 32.6%
  - 20.9% increase for the control segments
- Results: Collision Rates. Fatal and Serious Injury Collision Rates for all Modes
  - 57.1% decrease on the ART segments
  - 28.6% increase on control segments
- Conclusions/Summary
  - A BRT system can improve traffic safety
  - 8.2% decrease in collision counts on ART segments
  - 7.2% increase across the city and an only 6.1% decrease on control segments
  - ART segments saw strong results for all fatal and serious counts (-64.9%), pedestrian fatal and serious counts (-27.3%), and all fatal and serious rates (-57.1%)
  - Pedestrian collision counts increased 31.4% across Albuquerque and increase 26.7% on control segments, however, they increased only 9.3% on ART segments
  - Pedestrian fatal and serious counts had a strong decrease (-27.3%) on ART segments while increasing 13.3% on control segments and increasing 14.5% across Albuquerque.
- Concluding thoughts
  - Think that roads that are narrower saw the most positive results
    - ART is traffic calming
  - Atrisco to Lomas, San Mateo to Louisiana, and Louisiana to Tramway had increases for collisions, pedestrian collisions, and fatal and serious pedestrian injuries
    - Widest roads
    - More research should be done to understand why this is happening on these segments
- In the future
  - Additional research should be done because there was not much data for the after period for when ART was operational, include bicyclists, and identify a way to analyze rates for pedestrians

### Discussion:

- Richard Meadows (Chair): When you say after construction – what year or time period?
  - Esther Bia: Before period: January 2014 – July 2016 / After: June 2018 – November 2019
- Ryan Mast: Thank you for the presentation. Wondering if there was any research or understanding between the number and severity of the collisions you reported and the speed limit that was posted in those areas.
  - Esther B: We did not analyze this specifically, but there would be an opportunity for further analysis.
  - Ryan M: This is more of a comment than a question. Recognize you're restricted in what you're studying for this research paper but would like to see a follow up on this and



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understand how the impacts have been long term after construction when it's fully navigable. And how the safety features built into the system impact safety over time as people learn how to travel on the corridor. There are opportunities for additional studies.

- Esther B: Part of a group with five other students and they're working on second publication that will have more data, but also Dr. Ferenchak may have interest in exploring this further. Esther will be graduating and unsure if she will continue with this research.
  
- Andrew de Garmo (ABQ RIDE): Wanted to respond on the speed limit. I think most of the speed limits stayed the same from the bridge potentially through west and east downtown. Atrisco to Lomas dropped used to be 35 mph – now it's 30 mph. I can't remember if we dropped the west downtown at Lomas to 10<sup>th</sup> Street – it may have been 30 mph before and now 25 mph now. Between Broadway – I-25 dropped from 30 mph to 25 mph, but I believe the rest of the corridor remained the same.
  - Richard M: What about Nob Hill where there was one lane each direction?
  - Andrew: Nob Hill is a little odd. The speed limit in one direction is lower than in the other. Eastbound is 30 mph until past of what most people think of as Nob Hill and westbound stays to 35 until the UNM area. This was the same way before construction.
  
- Steve Pilon: The correlation wouldn't be the speed limit drop and it would be the lane narrowing. The effective speed is lower now due to congestion from one lane from Girard to Carlisle. And probably Carlisle to San Mateo since it's one lane. That probably had the biggest impact. My question is about Lead/Coal alternative. That was one argument – that a lot of traffic would be diverted onto Lead/Coal. How big is the increase in traffic and collisions for Lead/Coal?
  - Dr. Nick Ferenchak: Lead/Coal/Zuni/Bridge were analyzed as parallel routes. Overall collisions went down 8% on the ART corridor down. The alternatives went up 8%. So some might say those are crashes we're moving off Central and onto the alternatives, however, the city as a whole went up about 7%. Are the alternatives tracking the rest of the city or is it a result of crashes being moved from Central Ave? We could not tease this out.
  - Richard: Traffic volumes dropped on Central Ave but alternative routes did not increase the same amount. Is that correct?
  - Dr. Ferenchak: We didn't gather vehicle volumes for all the alternatives. We only received vehicle volumes for all the segments of Central.
  
- Shanna Schultz: I have a comment and a question. Thinks it's cool you divided up the corridor based on land use. It would have been easy to divvy up the road as 1-mile segments but since this is a study about behavior and people behave differently on different segments of Central. And I think that is based on the adjoining land use. Kuddos for that. In the presentation, there was a table for pedestrian collisions fatal and serious injury and curious why the alternatives had "n/a"?
  - Esther B: Assumed that pedestrians would not walk that far out of their way to avoid construction and would walk around the construction on Central.



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- Andrew: It was really interesting to read through this paper. It would also be interesting to broaden the geographic scope similar to what Steve had mentioned. We had a rough start and then we built a lot of pin curb which may have changed behavior both related to the bus and operations. Also, drivers can no longer turn left but could do so legally at signalized intersections. It would be interesting to see how things changed over time. It will probably be a few more years until there is enough data.
  - Dr. Ferenchak: Our planned next steps are to get more years of crash data for when the buses are running. And then re-run this analysis. Another thing, as we were working through this, realized would like to do more analysis at mid-block segments and intersections. Especially around Louisiana because there are some interesting things going on mid-block versus at the intersection. Hopes to have more results in the next year or two.
- Richard M: Are you ready to put this out there for the general public's consumption? Thinks that ART got a lot of unfair PR. The media portrayed it as being very unsafe but of course, there were some collisions but they were not serious collisions or fatalities. It would be nice to let the public know this has improved the situation and it wasn't as bad as the media portrayed it.
  - Carrie Barkhurst: Thank you for completing the study. It seems very thorough. I think the simple take away is that it improved safety but there is a lot of nuance, which makes it more challenging to share on the news with sound bites. It would be interesting if we had historic data about travel speeds on the corridor and also it would be interesting to start collecting to see how travel speeds compared to the posted speed limits.
  - Dr. Ferenchak: That's another point for future work. We're running another project looking at Central Ave and hope to have actual speed data. Speed limits are a rough estimate for how fast people are driving. Hopefully we'll have some before/after data on real vehicle speeds. Results on that one soon too.
- Ryan Mast: This Committee is interested in the interventions included along the ART corridor and the effectiveness of them. For example, the HAWKs and you probably cannot determine the utilization of that but it would be interesting to know their effectiveness so they can be included in future designs.
  - Dr. Ferenchak: It's a good point. Currently we are working on a project looking at HAWK signals. San Pablo and Conchas and whether pedestrians are using them. How far are people willing to walk out of their way to use them? Maybe we'll be able to correlate vehicle speeds with those but there may not be a big impact on that. There was a road diet on Central and also look at that.
- Andrew: Curious about the heat map. It looks like San Mateo got a little better and Louisiana got worse.
  - Dr. Ferenchak: Provided a link to series of maps: [https://unmm-my.sharepoint.com/:w:/g/personal/ferenchak\\_unm\\_edu/EcLyPFJPeE9EgiTuxWZ34R8BKUUvsmPA0mKM3JFINaYBlw?e=ZSlugZ](https://unmm-my.sharepoint.com/:w:/g/personal/ferenchak_unm_edu/EcLyPFJPeE9EgiTuxWZ34R8BKUUvsmPA0mKM3JFINaYBlw?e=ZSlugZ)





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Yes, it looks like Louisiana got worse especially for pedestrians.

- Richard M: Andrew, do you have any theories as to why some of these intersections improved and some didn't?
- Andrew: There was an RSA at San Mateo and Central in particular and implemented as many recommendations we could. Not sure if those helped, but doesn't have any theories.

This is also going back to what Ryan was asking about with HAWK signals. There is a variety HAWK signal arrangements. Some cases you cross half and then you have to walk on the platform and in other places they are more aligned. All of them require a person to push the button when you're in the middle. It would be interesting to know if there is significant different in crash rates at those HAWK signal vs the new ones with minimal offset.

- Richard M: I think the zigzag is supposed to be better than straight across.
- Andrew: Heard mixed reviews.

- Link to full report peer reviewed report: [https://unmm-my.sharepoint.com/personal/ferenchak\\_unm\\_edu/layouts/15/onedrive.aspx?id=%2Fpersonal%2Fferenchak%5Funm%5Fedu%2FDocuments%2FResearch%2F4Published%2FPapers%2FBia%2DImpact%20of%20Bus%20Rapid%20Transit%20Construction%20and%20Infrastructur%20on%20Traffic%20Safety%2Epdf&parent=%2Fpersonal%2Fferenchak%5Funm%5Fedu%2FDocuments%2FResearch%2F4Published%2FPapers&ga=1](https://unmm-my.sharepoint.com/personal/ferenchak_unm_edu/layouts/15/onedrive.aspx?id=%2Fpersonal%2Fferenchak%5Funm%5Fedu%2FDocuments%2FResearch%2F4Published%2FPapers%2FBia%2DImpact%20of%20Bus%20Rapid%20Transit%20Construction%20and%20Infrastructur%20on%20Traffic%20Safety%2Epdf&parent=%2Fpersonal%2Fferenchak%5Funm%5Fedu%2FDocuments%2FResearch%2F4Published%2FPapers&ga=1)

- **2022 Complete Streets Rehabilitation Overview – Shanna Schultz, AICP City of Albuquerque**

Every year, the Department of Municipal Development (DMD) conducts routine maintenance on 15-25 roadways in the City. DMD puts together a list of roadways in need of repaving. It's important to note this is an iterative process and we will never be done because roadways will eventually need to be repaved again.

Prior to this effort for a Complete Streets check, believes the way it would work, is that DMD would repave a street and put the striping back the way that it was even if there was room for improvements. Complete Streets was not prevalent at the time.

Then City Council codified this approach of rather than putting the street back the same way after a repaving, to look for opportunities for improvement (Complete Streets Ordinance: O-19-64). The Ordinance says that every year the Department shall provide a list of the roadways that will be rehabbed and their proposed restriping plan for each roadway.

There is an informal committee that gets together to review and discuss these striping plans and if there is room for Complete Streets improvements such as narrower driving lanes, bike lanes (if a roadway is proposed to have bike lanes), or adding in buffered bike lanes.

Only striping and signage is considered as part of this review – typically larger construction changes are outside the scope of this process. The committee does get into the conversation about more permanent infrastructure such as concrete bulb outs. However, the rehabilitation budget, as budgeted every year, is only for repaving/restriping. These bigger ideas cannot typically be accommodated as part of this process. But it is



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an opportunity to go back to City Councilors for these areas to see if they would like to fund these other improvements while the roadway is already under construction.

Here is a high level overview highlighting some of the projects from the 2022 Complete Streets process. This is not all inclusive, but sharing some really good improvements:

- Highlights

- 5.4 miles of new bike lanes
- 5.3 miles of new buffered bike lanes
- 2.7 miles of bike lanes expanded to meet or exceed current minimum width of 5 feet – there are some substandard bicycle facilities throughout ABQ and this can be an opportunity to bring them up to the minimum standard
- 4 miles of new bike routes
- 18.2 miles of narrowing the driving lane – narrower travel lanes encourage drivers to drive slower
- 11 miles where striped parking was added to narrow the road way
- 1 mile of road diet
- 79 intersections with new daylighting – anywhere there is an intersection or a crosswalk, making sure that any kind of on-street parking is pulled back from that intersection or crosswalk to create visibility not only for pedestrian crossing the street, but also drivers
- 48 new or refreshed high visibility crosswalks
- 3<sup>rd</sup> Street – Avenida Cesar Chavez to Central Ave
  - Reduces driving lanes from 12 feet to 10 feet
  - Adds 2-foot buffer to existing on-street parking – helps to prevent bicyclists from being doored
  - Adds sharrows
  - Adds back-in angled parking near downtown core – can help to slow down drivers
- San Francisco Rd – Wyoming Blvd to Ventura St
  - Reduced driving lanes from 20 feet each to 10 feet in each direction
  - Added 5-foot bike lane
  - Added striped buffer or an on-street parking lane, where appropriate
- Wyoming Blvd – Academy Dr to San Antonio Dr.
  - Reduced driving lanes from 11 feet to 10 feet
  - Increased bike lanes from 4 feet to 5 feet
  - Introduced a 1 foot bicycle buffer
- Claremont Ave – San Pedro Dr to Louisiana Blvd
  - Reduces driving lanes from 18 feet to 10 feet
  - Adds 10 foot on-street parking lanes to both sides of the street
  - Adds sharrows
  - Daylighting: removes parking near intersections and crosswalks
- Candelaria Rd – Juan Tabo Blvd to Tramway Blvd
  - Reduced the number of driving lanes from two in each direction to one in each direction where possible
    - Driving lanes are 10 -12 feet
  - Adds a 6-foot bike lane in each direction with a 2-foot buffer



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Overall, the committee reviewed 15 – 20 roadways, so this presentation only highlighted the ones with bigger changes to make an impact on safety. But the committee did do its due diligence on the other roadways as well.

### Discussion:

- Ryan Mast: Appreciates this effort to leverage maintenance to make improvements. Understands that there are limitations/constraints with the funding to other improvements outside of repaving/restriping. Curious if there's an opportunity to work with the Sustainability Office on their heat study to see where there are hotter locations and if there are opportunities to add trees? Maybe that could be a City Councilor ask for the funding to be able to implement that type of measure.
  - Shanna S: That's a great comment. We do engage with some departments outside of DMD. For example, ABQ RIDE is on the committee. The Sustainability Office has not been on the radar but great point that while we have the road closed and if there is an opportunity to implement other measures and if Sustainability or someone else has funding, it makes sense to pursue and coordinate. Will make note of this for next year.
- Richard M: To add on to Ryan's comment, it would be nice to have some of the ADA sidewalk projects happen at or near the same time as the restriping to see a more complete project taking place.
  - Shanna S: Great idea as well and while we already have the road closed. I think the City knows where the needs are and which sidewalks and intersections need ADA improvements. If the funding is there to do that, it makes sense to coordinate these activities.
- Steve Pilon: Great presentation and illustrates some of the progress that we're making. Can textured pavements or rumble strips be used? Stanley Atkinson was killed a few years ago in front of Sprouts near Lomas and San Mateo. At the time, we were promised that the engineering along Lomas would be addressed and it never happened. When it was repaved, the striping was put back the same way, which was disappointing.
  - Richard M: Tim, would you be able to address this?
  - Tim Brown: Not aware of this location and does not have additional information to address this comment. As far as Tim knows, this location is a principal arterial carrying between 20-30 thousand cars a day, so it is probably not an opportunity for road diet.
  - Richard: Curious about the lack of raised medians near the shopping center where the crash occurred. Does anyone else have thoughts about this location?
  - Shanna: Has been on this committee for several years and can't recall reviewing this particular roadway or if this project occurred before there was a committee taking a closer look regular maintenance program. Otherwise would defer to DMD on the appropriateness of reducing lanes or adding infrastructure/signage.
  - Steve: The issue is that people make the left (westbound turn) out of parking lot where Sprouts and the hardware store are located, which is where a driver killed him. He was in an unmarked crosswalk. At the time, the city said when Lomas was repaired, the issue would be addressed. Can you address textured pavement or buffer for the bike lanes and it's within the purview of this complete streets effort?
  - Shanna: We have some small physical improvements, but I don't think we have ever done rumble strips. I know we have implemented flex posts. Very small things like that may not be outside of the scope, but it depends on funding and I'm not sure that the funds used for the Complete Streets Repaving are eligible for other things like this. Tim, can you answer that?



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- Tim: Exactly, it's a question of available funds. While they seem inexpensive to implement, the second, third, or tenth time that they have to be replaced does add up. We are selective about where we put that type of infrastructure.
- Steve: Textured pavement is low maintenance and wakes people up in areas where they need to pay more attention. They do this in Holland to alert drivers to be aware.
- Ralph Wrons: Question about posted speed limits. In the example of San Francisco where the travel lanes were 20' wide, was there any effort to look at posted speed and what a more appropriate speed limit should be after the redesign or lane narrowing. It seems like there should be reduced speed limits warranted.
  - Shanna: Val or Tim please chime in if I'm not explaining this. I think that speed limits are determined by the roadway classification and while we might modify travel lane width or add a bike lane, it does not change the roadway classification. And it is probably codified that those classifications determine posted speed limits. That's my limited understanding of how we determine speed limits.
  - Tim: You're correct Shanna and this is a good starting point. We reserve the right to change speed limit depending on the roadway context and design. I think we all agree here that Albuquerque drivers tend to drive faster than average. And so, a lot of striping that we implement is meant to encourage people to drive a more appropriate speed within the context of the road. There is a board application for 10-foot lanes and we can and do implement that lane width on a 40-mph roadway, with a preference for 11 foot outside lanes to accommodate transit.

In the example of San Francisco, we are necking down the driving space to 20-foot-wide space. I suspect if we had done speed study before the narrowing, we would have seen excessive speed. The striping is there to get speeds closer to where we want them to be and push people away from the sides of the road to create more comfortable space on the sidewalk. We do not do a comprehensive review of speed limits as part of this Complete Streets effort. The design time is really compressed. The Streets Division pulls projects from a database, which has a rating for all the roads. There is a watch list and they review this list at the end of the construction season. During the construction season, the manager is completely tied up managing construction. As soon as that ends, they review the watch list, drive these roads, and select roads for repaving. Typically, the roads that are in the worst shape are selected. Then we have a consultant look at these roadways, review existing striping, review the bike plan, the high fatal and injury network, and determine which roads would be good candidates for a different type of striping. The consultants come up with the initial design, which is presented to the committee. The committee reviews all the roads and then once this process is complete, they are sent back to the Streets Division to work with contractors on implementation when construction season begins in March. It's a really quick timeline, so within this process there is not an opportunity to look at speed limits and whether what is posted is appropriate or not. Like Shanna said, we follow guidelines. If something seems out of place – you can reach out to 311. At this time, we don't have a comprehensive way to look at this city wide.

- Ralph W: Thank you for the detailed response, Tim. When you refer to the committee, is this the complete streets committee?
- Shanna: Yes, this is the complete streets committee
- Ralph: Do you look at before or after crash data or are you just looking at opportunities not driven by crash data?
- Shanna: We are looking at streets that are ready for maintenance.



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- Richard: That is a good idea if we had resources to look at before and after crash data to see if these changes in restriping have an impact. Richard represents GAATC on this committee and if another GAATC member would like to be on this committee next year, please let Richard know.
- Ryan: Thank you and will give it some thought. Thanks to Tim for explaining the process and that it's a quick turnaround. It might be worth exploring and not necessarily the committee, but there are non-profits and other philanthropic organizations that would be happy to support these types of projects. The City is in a good position because it is actively working to improve bike infrastructure and putting forward funding. All you would be asking them for are the other aspects of the complete street components. Happy to provide examples but the Sustainability Office may have some ideas.

### • Staff Reports

#### • Municipal Development (DMD) (Tim)

- Lead/Coal RSA occurred June 8 – 10. FHWA and their consultant are preparing the final report, which is expected in August. DMD will review the report and prepare a response.
- Today, June 13<sup>th</sup>, converted the traffic signal at Girard and Construction to an all-way stop to see how it functions. The goal is to improve safety for people who go through this intersection and also to reduce delay.
- Starting two different safety studies – Montgomery / Washington & Louisiana / Uptown. Very early stages. Have a new GIS tool that identifies all unsignalized intersections that are experiencing more crashes – beyond 10 crashes per year. These came out as the top two. Have consultant identifying intersection safety improvements.
- Striping on Chico east of Eubank is in bad shape – a restriping was completed previously and it is showing through. This will get a proper design and it will include a pedestrian crossing near the hardware store and incorporate bike lanes from Eubank to Morris. It will make a nice continuous bikeway and connect to other bike facilities in the area.
- Volcano Rd & 98<sup>th</sup> – not high crashes for bikes/peds, but motor vehicles. Moving forward with access control to reduce collisions.

Richard: Once the Lead/Coal RSA is complete, it would be great to provide a presentation at GAATC.

#### • Vision Zero (Val)

- Starting on May 25, the three speed safety cameras installed began to issue speeding citations in the amount of \$100. People who receive a citation can choose to complete four hours of community service in lieu of the \$100 payment. Last week, two additional mobile cameras were placed at Lead and Coal and one fixed on Unser near Tower Road. In the coming months we expect to scale up to a total of 10 speed safety cameras.

We are also continuing with our outreach efforts.

- Tomorrow we'll be at the Wells Parks Neighborhood Association meeting
- Thursday South Broadway Neighborhood Association meeting



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- Here is a link to the FAQs: <https://www.cabq.gov/automated-speed-enforcement-frequently-asked-questions/automated-speed-enforcement-frequently-asked-questions> which we recently updated and will keep up to date.
- Mayor Tim Keller's 2022 State of the City Address will be on Saturday, June 25 from 10 am to 2 pm at the Albuquerque Rail Yards. The event is free and all ages. I'll be tabling at the event for Vision Zero/DMD.  
Here's a link: <https://www.cabq.gov/sotc>
- 98<sup>th</sup> (Snow Vista Blvd) & Benavides: One of our DMD project managers requested feedback from this group related to active transportation at this intersection, Camino San Martin SW, and 86<sup>th</sup> Street SW. Their project is looking to add a roundabout at 98<sup>th</sup> and Benavides, shifting the Amole Arroyo Trail from the center median to the west so that trail users will not have to cross the street to remain on the trail, and also potentially closing the intersection at San Martin SW to motor vehicle traffic but allowing people walking/biking to continue to cross here. Truman Middle School is on the southeast corner of 98<sup>th</sup> and Benavides and a community center (which will be changing locations just northwest of here) at 98<sup>th</sup> and Camino San Martin. However, this community space could potentially be repurposed as another community facility.  
If GAATC or others has any thoughts, please let Val know and she can pass it on to the project manager. As this project gets farther along, we can bring a formal presentation to this committee.
  - Ralph W: BikeABQ can post in their newsletter for feedback. Or if there is going to be a public meeting to talk about this project, they can present to their membership.
  - Steve P: What could be done to improve the accessibility of Truman Middle School to this trail? Could there be an undercut. What's the philosophy at DMD for roundabouts and traffic circles? Is there consensus that they're superior to stop signs/traffic lights?
    - Tim: Can't speak to what the Engineering Division thinks of roundabouts but based on general conversations with the design engineers, they do like them. Also going to throw out some engineering minutia for a modern roundabout and traffic circle because they are different. A traffic circle is placed inside an existing intersection for traffic calming reasons and to slow people as they go through the intersection. The stop control will remain to slow people down. A modern roundabout is a bigger undertaking because a center island must be created and there is a lot of work done on the circulating lanes to make it work properly.
    - Steve: Rio Grande and Candelaria?
    - Tim: That would be a modern roundabout. Menaul and 12<sup>th</sup> and Indian School and Menaul are modern roundabouts. Based on the data and my experience with them, they are far superior to all way stops and traffic signals for traffic control of intersections. In most cases if you have a six-lane arterial they don't work as well, but one- and two-lane roundabouts work really well. Typically have lower delay, fewer crashes, and fewer fatal and injury crashes than a signal or an all way stop. From an engineering



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point of view they work well. There are still a lot of barriers with the public in the United States and particularly in Albuquerque in putting them in. DMD recommended installing one in the northwest corner of the city. It was presented at a public meeting and the public was adamantly against it and the proposal was dropped. The other major issue is right of way, which can be difficult to get to build a properly sized roundabout. At this particularly location, 98<sup>th</sup>/Snow Vista, because of the large existing median there is enough space to place a roundabout. The design that goes in here will work well.

- Numair Latif: This is a good segue. On Mountain and Edith, a roundabout was designed and funding was allocated but it was never built. The neighborhood is still hoping it will be built. Speed humps on Edith from Lomas to Indian School were requested to be extended to Menaul. Sharrows were also requested between Lomas and Menaul.
- Tim: Unsure if this is still planned. Recalls reviewing plans for this intersection but will have to look into it.
- Val: Off the top of my head cannot recall and will need to look into this and get back to Numair.
- Tim: We will follow up with other staff at the engineering division and have a response by the next meeting.

*Update on this project since GAATC Meeting on Mountain/Edith: This project is currently working toward 30% Design, with the 30% plans anticipated to be submitted in early July. We are still planning a roundabout at the intersection of Mountain Road and Edith Boulevard. The project only extends along Mountain Road from Broadway Boulevard to approximately Walter Street (for roadway transition into the roundabout). The only work proposed on Edith is the roadway transition into the roundabout, which is not anticipated to extend further north than the norther property limit of Work Force Solutions. No sharrows or speed humps along Edith are included in this project.*

- Shanna Schultz (City Council)
  - No other updates.
- Parks and Recreation (Whitney)
  - Starting the Copper Trail Landscaping this week or early next week. It will push the Los Altos Golf Course fence in a little bit. There will be some fences and light landscaping connecting Daniel Webster Park from Eubank.
  - Finished Ventana Ranch between Ventana Ranch Road and Rainbow. New asphalt trail.
  - Started design process that would connect to Rail Trail at Lomas then head north and spur heads toward Sawmill near Tiguex Park. Working with Consensus Planning.
  - Calabacillas Trail from the river to about CNM westside – approx. 5 miles of trail. As soon as through with initial update and alignments, will present to this committee.
  - There is a public meeting tomorrow at West Gate Community Center for the West Mesta Trail Plan. An open space project – working with Sites Southwest. Help to create



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more mountain biking and equestrian opportunities. Additional meeting at Taylor Ranch June 23 5:30 -7

- Alameda Drain Trail – starting at the end of the month.
- Planning (Seth)
  - Central ABQ Planning Area Assessment underway soon. Two kick off events:
    - In-person at Johnny Tapia Community Center on June 21: 6 – 7:30 pm
    - 2<sup>nd</sup> virtual event on June 22: 11:30 – 1 pmRegister: <https://forms.gle/nBKEPNYxqWNAi4q39>
  - Near Heights Planning Area Assessment – partial drafts posted for public comment this week and additional sections added as they are completed:
    - <https://cpa.abc-zone.com/near-heights-draft>
- ABQ RIDE (Carrie)
  - No updates.
- Bernalillo County (Julie)
  - No updates.
- NMDOT District 3 (Jill M.)
  - Read past meeting minutes and noticed there was a question about Montgomery and about a connection to the North Diversion Channel Trail (NDC) on the eastside of the interstate. This is part of the conceptual plans but this is a design build project. The design build team has the concept plan and they're looking for innovation, good operations, and hopefully to find cost savings. Does not know what it will look like other than what was proposed previously. The group will not be coming back to GAATC until we get to construction, but happy to answer any questions.
    - Steve P: Wanted to know if the city would close some of the curb cuts at Montgomery eastbound toward NDC. There are gas stations on both sides of streets and have access on both sides.
    - Jill: Project is looking at access management. Typically push for this on state roads as well. Recognize this their project and outside the area of influence for access control is a city facility. NMDOT pushing to consolidate as much access as possible but will not only be able to push them to the side roads.
  - Ongoing bridge rehab on Tramway for timber arches/pedestrian overpasses. All old timber decking will be replaced with a product similar to bridge at Candelaria.
  - Rio Bravo – will be replacing the bridge over the river. Not sure how much this pertains to GAATC.
  - I-25 northbound at the Dr. Martin Luther King Jr. Blvd off ramp removal. This will begin in next few weeks. The small ramp will be removed from Central to MLK. The frontage road will become a 3-lane facility.
  - Richard: Were there some conflicts at Montgomery and Tramway?
  - Jill: Paseo and Tramway – received a lot of complaints. In 2020, overlaid Tramway and narrowed the lane through the intersections to be able to stripe a dedicate bikeway.





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Biggest pushback is here. People are still driving how they want and signing/stripping will not solve all our problems. In what people perceived as acceleration lanes and in order to improve multimodal safety, they hatched them out. Also adding a signal head in the interim to help facilitate people merging. They are just starting design to completely redesign this intersection to bring everyone into a 90 degree angle. NMDOT working to break the stigma and be more multimodal friendly. One thing they have noticed are that free rights are not safe for other roadway users, so they are removing them in as many locations as possible, which is mostly Tramway and Paseo.

- Hoping to come back in next several months for what will happen at El Pueblo crossing with the railroad tracks at the farthest east crossing. The rail line is private. They are working with American Gypsum to do a track crossing upgrade. Still have all the limitations with BNSF to the west.

### Public Comment:

- Ralph: Attended a presentation at MRCOG this past Friday about the Lead/Coal RSA. Thinks this presentation with the set of recommendations/findings was really helpful to see. Hoping to see more on that effort.
  - Richard: We will be sure to have them come present to this group when they are ready.
- Ralph: Would like a copy of Shanna's presentation and/or for her to present this to the Bike ABQ board meeting.
  - Shanna: What would be the best way to get materials to the group?
  - Val: I include copies of presentations with the meeting minutes, which are posted on the GAATC site. Or Val can also share out with the group via email.
  - Shanna: Will share with Val and is also happy to do the presentation at other meetings.

**Meeting adjourned at 6:02 pm**

**Next Meeting: July 11, 4:00 pm – 6:00 pm**

**GREETINGS** *from*



# The Impact of Bus Rapid Transit Construction and Infrastructure on Traffic Safety: A Case Study from Albuquerque, New Mexico

Esther Bia

Nick Ferenchak, PhD, PE

Paper No. 21-00698

# Bus Rapid Transit (BRT)

## What?

○ BRT share characteristics of light rail and traditional bus transportation and can be seen as a hybrid of the two

### 5 Characteristics of a full BRT:

1. A designated bus lane
2. The bus lane is a center-lane
3. Pre-boarding fare collection
4. Intersection treatments
5. Platform boarding

(Institute for Transportation and Development Policy, 2021)



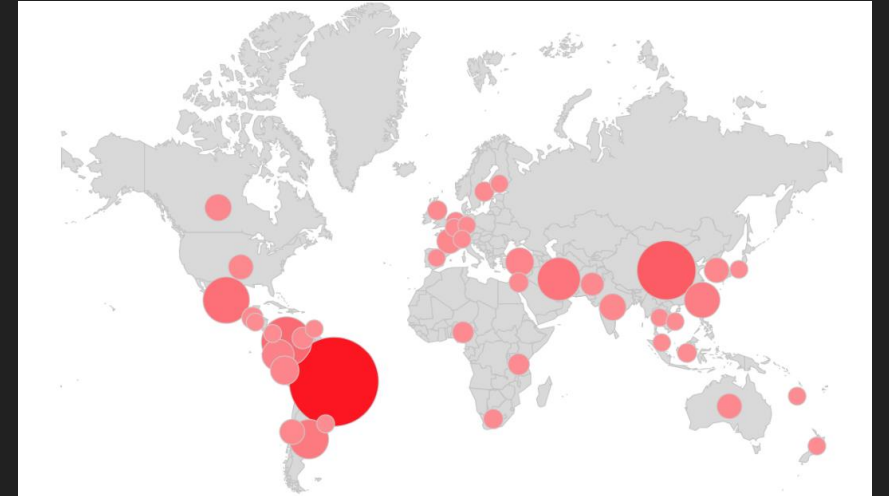
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www.alamy.com

# Albuquerque Rapid Transit (ART)

## Where are they?

- 414 BRT corridors in the world
- According to BRTDATA, there are 179 cities with BRT systems around the world.
  - 14 are in the U.S..
    - ART is one of the 14.



## When?

- The first installation of a full BRT system was in Curitiba City, Brazil in 1973
- Fairly new



# Why BRT?

- Lower Cost
  - Less invasive compared to light rail and subway
- Environmental
- Convenient
  - For passengers because it is quick
- Safety
  - Less vehicle and bus interactions
  - Reduced speeds
  - Restricted left-hand turns
- Or less safe?
  - Chaotic for road users
  - Risky pedestrian behaviors increase
  - BRT systems in Israel have identified that the decrease in traffic safety can be linked to low quality BRT configurations (Gitelman, 2017).

# Traffic Safety and BRT systems

- Overall, research supports the hypothesis that a full BRT system improves traffic safety.
  - Columbia had a 50% reduction in traffic related fatalities
- There is still a need for more empirical research to further understand these benefits (Vecino-Ortiz, 2015).
- Most research was performed outside of the U.S.
  - Since the U.S. generally has poor traffic safety compared to other countries with developed economies, performing an analysis in the U.S. is warranted.
- Central is dangerous
  - 18.7% of all pedestrian collisions in New Mexico occurred within a quarter-mile of the Central Avenue corridor in 2016.

# How we analyzed ART

## Central Segments

TABLE 1 Descriptions of Segments (\* signifies a control segment)

No.	Segment	Length (mile)	Land Use	Before		After		
				# Lanes/direction	Speed Limit (mph)	# Lanes/direction	Speed Limit (mph)	Center BRT Lanes
1	98th to Coors*	1.89	Lower Density Commercial	2	45 or 55	2	45 or 55	0
2	Coors to Atrisco	1.52	Higher Density Commercial	2	35 or 40	2	35 or 40	2
3	Atrisco to Lomas	1.28	Bridge and Old Town ABQ	3	30 or 35	2	30 or 35	2
4	Lomas to 10th	0.78	Higher Density Commercial/Residential	2	30	1	30	1
5	10th to 1st*	0.63	Downtown	1	25	1	20	0
6	1st to University	1.22	Higher Density Commercial/Residential	2	30	1	25 or 30	1 or 2
7	University to Girard	0.77	UNM	2	30	2	30	1
8	Girard to Carlisle	0.50	Higher Density Commercial	2	30	1	30	2
9	Carlisle to San Mateo	1.05	Medium Density Commercial	2 or 3	35	1	35	2
10	San Mateo to Louisiana	1.01	Medium Density Commercial	3	35	2	35	2
11	Louisiana to Tramway*	4.06	Lower Density Commercial	3	40	3	40	0

## Steps

- Distinguished time frames for Before, During, and After ART construction.
- Gathered the collision counts and vehicle volumes data
- Identified collision categories
  - All modes, all severities
  - All modes, fatal and serious injuries
  - Pedestrians, all severities
  - Pedestrians, fatal and serious injuries
- Organized the data in GIS and excel
- Ran join commands along Central to find the number of collisions and types in the segments.

# How we Analyzed ART

## Steps

- Identified alternative routes
- Found the rates of collisions in the segments (Collisions per Mile/Month/Vehicle)
- Adjusted
  - Took out bicyclists
  - Didn't use rates for all categories

## Overview

- Noted categories, control segments, and alternatives
- Organized the data and ran the analysis
- For counts then accounted for the volumes of vehicles to see the rates of collisions



# Results: Volumes

## Vehicle Volumes

- There was an average **decrease** of **28.6%** across Central Avenue from “before” to “after”
- Control segments at the ends of the corridor (no construction) also saw **decrease** of **26.3%** and **30.3%**
- This reduction in exposure may explain some of the decreases in collision counts\*

TABLE 2 Vehicle Volumes

No.	Segment	Volumes Before	Volumes After	Decrease	% Decrease
1	98th to Coors*	23,998	16,727	7,271	30.3%
2	Coors to Atrisco	28,758	21,661	7,097	24.7%
3	Atrisco to Lomas	33,962	28,018	5,944	17.5%
4	Lomas to 10th	15,765	10,802	4,963	31.5%
5	10th to 1st*	16,142	13,384	2,758	17.1%
6	1st to University	23,030	17,348	5,682	24.7%
7	University to Girard	28,762	18,385	10,377	36.1%
8	Girard to Carlisle	26,441	14,337	12,104	45.8%
9	Carlisle to San Mateo	22,079	15,549	6,530	29.6%
10	San Mateo to Louisiana	31,264	21,621	9,643	30.8%
11	Louisiana to Tramway*	29,476	21,715	7,761	26.3%
	<b>Average</b>	<b>25,425</b>	<b>18,141</b>	<b>7,284</b>	<b>28.6%</b>

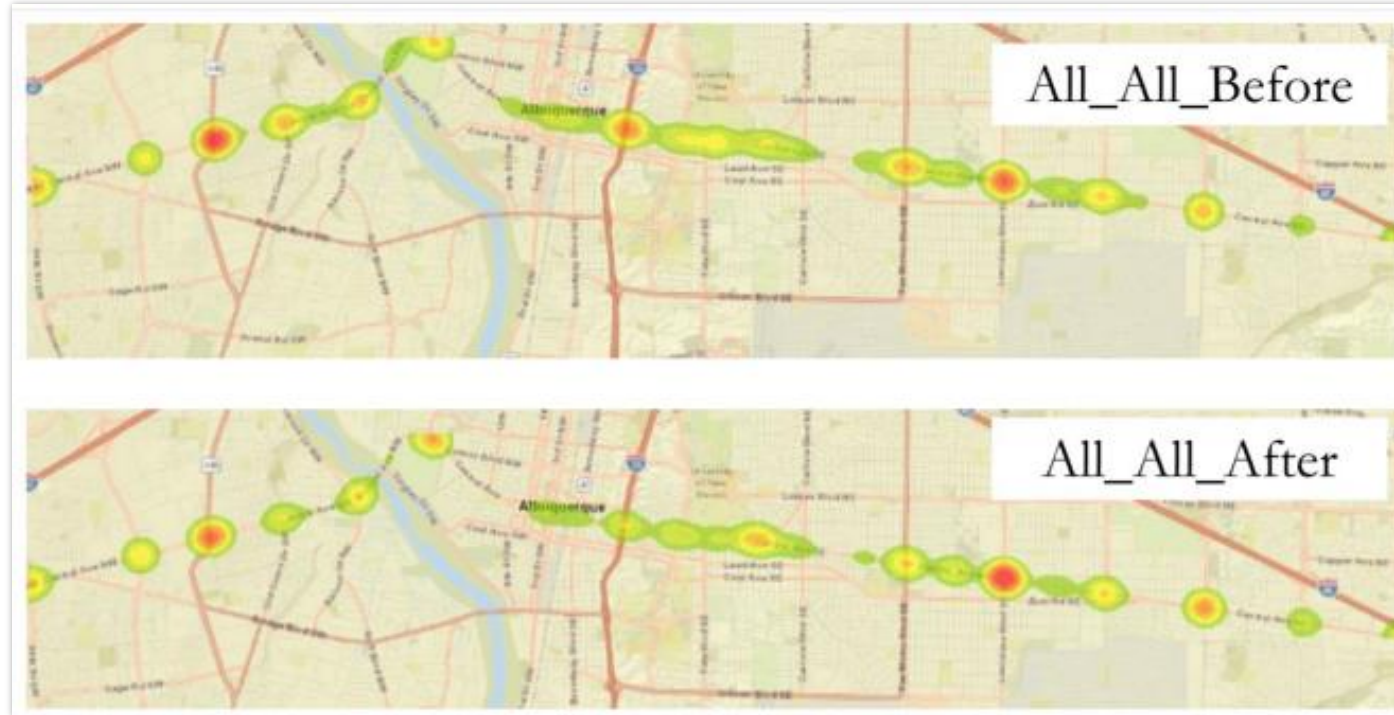
# Results: Collision Counts

## All Modes All Collisions

- Average **decrease** in all collisions of **8.2%** from before to after
- Control segments saw an average **decrease** of **6.1%**
- Alternative segments saw an increase of **8.8%**
- Albuquerque as a whole saw an increase of **7.2%**.
- Collisions were lowest on Central Avenue during construction.

Decrease  
Increase

All Collisions for All Modes (Collisions per Mile/Month)					
Segment	Count Before	Count During	Count After	Before to After Change	%Change
98th to Coors*	105.2	103.1	105.7	0.5	<b>0.50%</b>
Coors to Atrisco	147.7	117.4	109.4	-38.3	<b>-25.90%</b>
Atrisco to Lomas	100.9	80.8	102.7	1.8	<b>1.80%</b>
Lomas to 10th	46.1	26.4	25.1	-21.1	<b>-45.70%</b>
10th to 1st*	91.2	70.7	69.7	-21.5	<b>-23.60%</b>
1st to University	106.8	104.2	93.1	-13.7	<b>-12.80%</b>
University to Girard	140.3	131.6	136.3	-4	<b>-2.80%</b>
Girard to Carlisle	173.1	114.3	156.3	-16.8	<b>-9.70%</b>
Carlisle to San Mateo	100.5	83.4	91.8	-8.7	<b>-8.60%</b>
San Mateo to Louisiana	151	183.1	172.5	21.5	<b>14.20%</b>
Louisiana to Tramway*	83.6	84.2	87.3	3.7	<b>4.50%</b>
ART Average	120.8	105.1	110.9	-9.9	<b>-8.20%</b>
Control Average	93.3	86	87.6	-5.7	<b>-6.10%</b>
Alternatives	6.3	7.2	6.8	0.6	<b>8.80%</b>
All of ABQ	1378.1	1504.7	1477.8	99.7	<b>7.20%</b>



Heat Map

# Results: Collision Counts

## All Modes Fatal or Seriously Injured

- 64.9% decrease on the ART segments
- 5.7% decrease on the control segments
- 5.9% decrease on alternatives
- 18.4% decrease across the city

Fatal and Serious Injury Collisions for All Modes (Collisions per Mile/Month)

Segment	Count Before	Count During	Count After	Before to After Change	%Change
98th to Coors*	3.2	3.1	1.8	-1.5	-45.60%
Coors to Atrisco	4.9	3.3	2.2	-2.7	-55.10%
Atrisco to Lomas	3.3	0.7	2.6	-0.7	-20.50%
Lomas to 10th	1.2	0.6	0	-1.2	-100.00%
10th to 1st*	2.6	3.6	4.4	1.8	72.20%
1st to University	4	1.5	1.8	-2.1	-54.10%
University to Girard	3.3	1.8	0.7	-2.6	-78.50%
Girard to Carlisle	5.1	0.9	1.1	-4	-78.50%
Carlisle to San Mateo	3.1	1.7	0	-3.1	-100.00%
San Mateo to Louisiana	4.5	5	2.2	-2.3	-50.80%
Louisiana to Tramway*	4.6	4	4	-0.6	-13.90%
<b>ART Average</b>	<b>3.7</b>	<b>1.9</b>	<b>1.3</b>	<b>-2.4</b>	<b>-64.90%</b>
Control Average	3.5	3.6	3.4	-0.2	-5.70%
Alternatives	1.7	1.5	1.6	-0.1	-5.90%
All of ABQ	36.7	31.4	29.9	-6.8	-18.40%

Decrease  
Increase

# Results: Collisions

## All Pedestrian Collisions

- 9.3% increase on ART
- 31.4% for the rest of Albuquerque
- Lomas to 10th had the greatest decrease
- San Mateo to Louisiana was again an outlier

All Pedestrian Collisions (Collisions per Mile/Month)

Segment	Count Before	Count During	Count After	Before to After	%Change
98th to Coors*	3.1	1.2	3.8	0.7	<b>24.4</b>
Coors to Atrisco	4.7	3.3	5.5	0.8	<b>17.4</b>
Atrisco to Lomas	1.5	2.1	1.7	0.2	<b>14.8</b>
Lomas to 10th	0.8	0	0	-0.8	<b>-100</b>
10th to 1st*	5.1	7.2	6.2	1.1	<b>20.6</b>
1st to University	2.1	2.2	3.2	1.1	<b>50.7</b>
University to Girard	6.7	3.5	3.6	-3.1	<b>-46.1</b>
Girard to Carlisle	5.8	3.6	4.4	-1.4	<b>-23.5</b>
Carlisle to San Mateo	4.6	6.5	4.2	-0.4	<b>-8.2</b>
San Mateo to Louisiana	8.3	11.3	14.9	6.6	<b>78.9</b>
Louisiana to Tramway*	5.2	6.3	7.1	1.9	<b>35.7</b>
ART Average	4.3	4.1	4.7	0.4	<b>9.30%</b>
Control Average	4.5	4.9	5.7	1.2	<b>26.70%</b>
Alternatives	na	na	na	na	<b>na</b>
All of ABQ	20.8	25.9	27.3	6.5	<b>31.40%</b>

Decrease  
Increase

# Results: Collisions

## Pedestrian Collisions Fatal and Serious Injury

- 27.3% decrease on ART
- 13.3% increase on control segments
- 14.5% increase for the rest of ABQ.
- Note fatal pedestrian collision counts were very small.
  - Why we see such large increases and decreases

**Fatal and Serious Injury Pedestrian Collisions (Collisions per Mile/ Month)**

Segment	Count Before	Count During	Count After	Before to After Change	%Change
98th to Coors*	1	0.7	1.5	0.4	<b>43.50%</b>
Coors to Atrisco	1.7	0.3	1.8	0.1	<b>7.60%</b>
Atrisco to Lomas	0.3	0.4	0.9	0.6	<b>244.40%</b>
Lomas to 10th	0.4	0	0	-0.4	<b>-100.00%</b>
10th to 1st*	1.5	2.2	1.8	0.2	<b>14.80%</b>
1st to University	1.3	0.4	0.5	-0.9	<b>-65.60%</b>
University to Girard	1.7	0	0.7	-1	<b>-56.90%</b>
Girard to Carlisle	1.3	0	1.1	-0.2	<b>-13.90%</b>
Carlisle to San Mateo	0.3	1.3	0	-0.3	<b>-100.00%</b>
San Mateo to Louisiana	1.6	1.8	1.7	0.1	<b>3.30%</b>
Louisiana to Tramway*	1.8	1.7	1.9	0.1	<b>4.80%</b>
<b>ART Average</b>	<b>1.1</b>	<b>0.5</b>	<b>0.8</b>	<b>-0.3</b>	<b>-27.30%</b>
<b>Control Average</b>	<b>1.5</b>	<b>1.5</b>	<b>1.7</b>	<b>0.2</b>	<b>13.30%</b>
Alternatives	na	na	na	na	na
<b>All of ABQ</b>	<b>6</b>	<b>6</b>	<b>6.8</b>	<b>0.9</b>	<b>14.50%</b>

Decrease  
Increase

# Overall Collision Results

- Total collision decreases were strongest on ART segments (compared to everything else)
- Pedestrian collisions increased throughout the city but the increase was the smallest on the ART segments
- In fatal and serious injury collisions on the ART corridor, decreases were strongest with a **64.9% decrease**
- While fatal and serious pedestrian injury collisions increased on control segments and across Albuquerque, they **decreased by 27.3% on the ART corridor**

# Results: Collision Rates

## Collision Rates – All Modes

- Rates for all collisions on ART segments had an average increase of 32.6%
- 20.9% increase for the control segments

**Collision Rates – All Modes (Collisions per Mile/Month/Vehicle)**

Segment	Rate Before	Rate After	Change	%Change
98th to Coors*	4.4	6.3	1.9	<b>44.20%</b>
Coors to Atrisco	5.1	5.1	-0.1	<b>-1.60%</b>
Atrisco to Lomas	3	3.7	0.7	<b>23.40%</b>
Lomas to 10th	2.9	2.3	-0.6	<b>-20.70%</b>
10th to 1st*	5.6	5.2	-0.4	<b>-7.80%</b>
1st to University	4.6	5.4	0.7	<b>15.70%</b>
University to Girard	4.9	7.4	2.5	<b>52.00%</b>
Girard to Carlisle	6.5	10.9	4.4	<b>66.50%</b>
Carlisle to San Mateo	4.6	5.9	1.4	<b>29.80%</b>
San Mateo to Louisiana	4.8	8	3.1	<b>65.10%</b>
Louisiana to Tramway*	2.8	4	1.2	<b>41.80%</b>
<b>ART Average</b>	<b>4.6</b>	<b>6.1</b>	<b>1.5</b>	<b>32.60%</b>
<b>Control Average</b>	<b>4.3</b>	<b>5.2</b>	<b>0.9</b>	<b>20.90%</b>

Decrease  
Increase



# Results: Collision Rates

## Fatal and Serious Injury Collision Rates for All Modes

- 57.1% decrease on the ART segments
- 28.6% increase on control segments

**Fatal and Serious Injury Collision Rates for All Modes (Collisions per Mile/Month/Vehicle)**

Segment	Rate Before	Rate After	Change	%Change
98 <sup>th</sup> to Coors*	1.4	1.1	-0.3	-22.00%
Coors to Atrisco	1.7	1	-0.7	-40.40%
Atrisco to Lomas	1	0.9	0	-3.60%
Lomas to 10 <sup>th</sup>	0.8	0	-0.8	-100.00%
10 <sup>th</sup> to 1 <sup>st</sup> *	1.6	3.3	1.7	107.70%
1 <sup>st</sup> to University	1.7	1.1	-0.7	-39.00%
University to Girard	1.2	0.4	-0.8	-66.30%
Girard to Carlisle	1.9	0.8	-1.2	-60.30%
Carlisle to San Mateo	1.4	0	-1.4	-100.00%
San Mateo to Louisiana	1.4	1	-0.4	-28.80%
Louisiana to Tramway*	1.6	1.8	0.3	16.90%
<b>ART Average</b>	<b>1.4</b>	<b>0.6</b>	<b>-0.8</b>	<b>-57.10%</b>
<b>Control Average</b>	<b>1.5</b>	<b>2.1</b>	<b>0.6</b>	<b>28.60%</b>

Decrease  
Increase

# Conclusions Summary

- A BRT system can improve traffic safety
- 8.2% decrease in collision counts on ART segments.
- 7.2% increase across the city and an only 6.1% decrease on control segments.
- **ART segments saw strong results for all fatal and serious counts (-64.9%), pedestrian fatal and serious counts (-27.3%), and all fatal and serious rates (-57.1%).**
- Pedestrian collision counts increased 31.4% across Albuquerque and increased 26.7% on control segments, they increased only 9.3% on ART segments.
- **Pedestrian fatal and serious counts had a strong decrease (-27.3%) on ART segments while increasing 13.3% on control segments and increasing 14.5% across Albuquerque.**

# Concluding Thoughts

- We think that the roads that are narrower saw the most positive results
  - ART is traffic calming
- Atrisco to Lomas, San Mateo to Louisiana, and Louisiana to Tramway had increases for collisions, pedestrian collisions, and fatal and serious pedestrian injuries.
  - widest roads
  - **More research should be done to understand why this is happening at these segments.**

# In the Future

- Additional research should be done because:
  - Not much data for the after period.
  - Include Bicyclists
  - Figure out how to analyze rates for pedestrians



Thank You!



**2022 COMPLETE  
STREETS  
IMPROVEMENTS**

# ANNUAL REVIEW OF ROADWAY MAINTENANCE PROJECTS

- Every year, the Department of Municipal Development (DMD) conducts routine maintenance on 15-25 roadways in the City
- Per the Complete Streets Ordinance, O-19-64, DMD submits a memo to the City Council outlining the roadways to be repaved and their proposed striping configuration
- These changes are discussed to ensure the new striping is as Complete Streets friendly as is feasible
- *Only* striping and signage is considered as a part of this review – typically larger construction changes are outside the scope of this process



# **2022 IMPROVEMENT HIGHLIGHTS**

# HIGHLIGHTS

- 5.4 miles of new bike lanes
- **5.3 miles of new buffered bike lanes**
- 2.7 miles of bikes lanes expanded to meet or exceed the current minimum width of 5 feet
- **4 miles of new bike routes**
- 18.2 miles of narrowing a driving lane
- **11 miles where striped parking was added to narrow the road way**
- One mile of road diet
- **79 intersections with new daylighting**
- 48 new or refreshed high visibility crosswalks



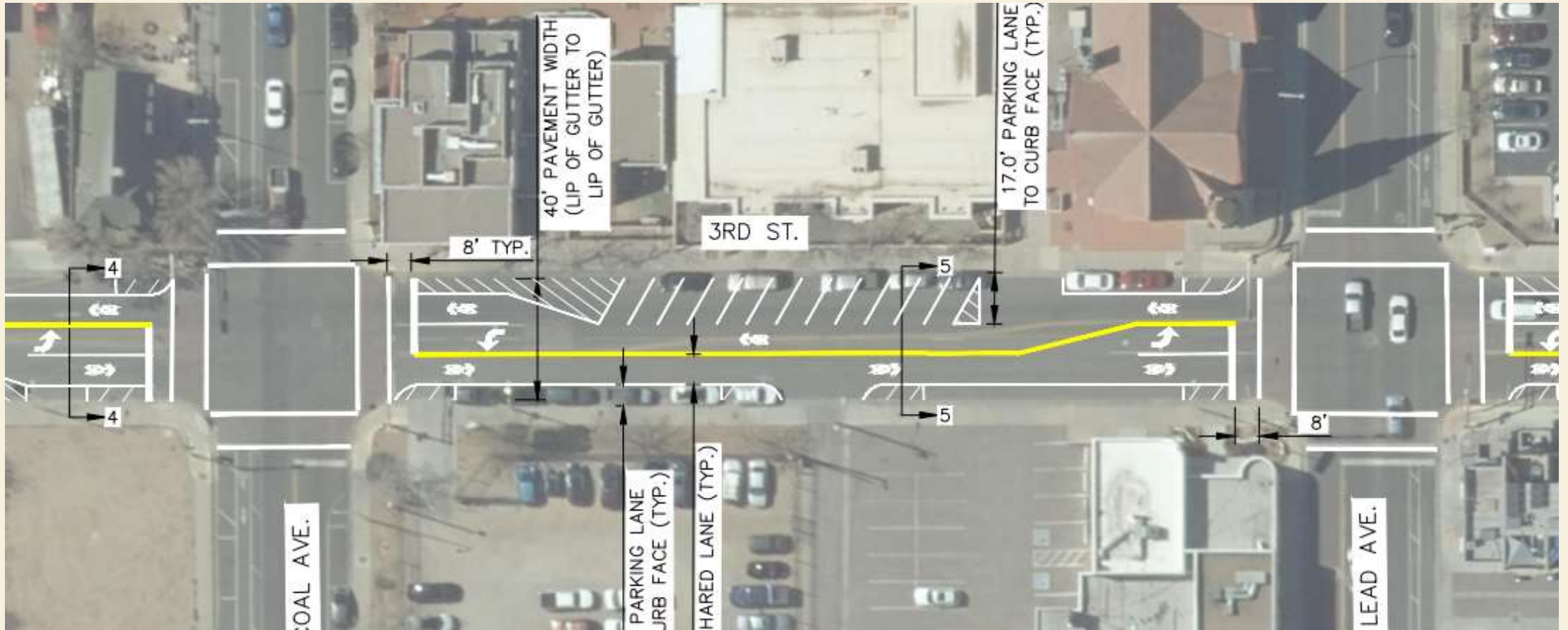
# **3<sup>RD</sup> STREET – AVENIDA CESAR CHAVEZ TO CENTRAL AVE**

- Reduces driving lanes from 12 feet to 10 feet
- Adds a 2 foot buffer to existing on-street parking
- Adds sharrows
- Adds in back-in angled parking near the downtown core

# 3<sup>RD</sup> STREET – AVENIDA CESAR CHAVEZ TO CENTRAL AVE



# 3<sup>RD</sup> STREET – AVENIDA CESAR CHAVEZ TO CENTRAL AVE



# SAN FRANCISCO RD – WYOMING BLVD TO VENTURA ST

- Reduced driving lanes from ~20 feet each to 10 feet each
- Added in a 5 foot bike lane
- Added in a striped buffer **or** an on-street parking lane, where appropriate

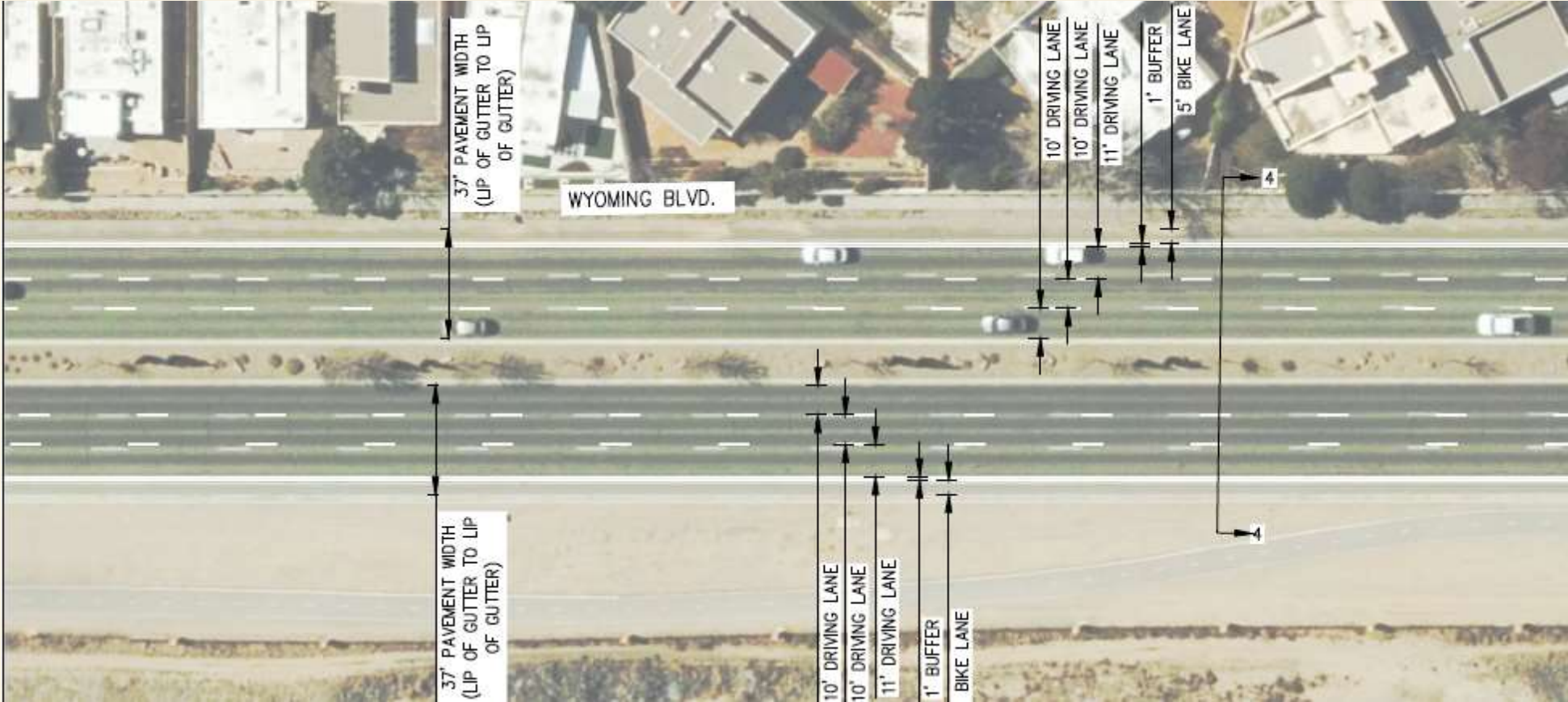
# SAN FRANCISCO RD – WYOMING BLVD TO VENTURA ST



# WYOMING BLVD – ACADEMY DR TO SAN ANTONIO DR

- Reduced driving lanes from 11 feet to 10 feet
- Increased bike lanes from 4 feet to 5 feet
- Introduced a 1 foot bicycle buffer

# WYOMING BLVD – ACADEMY DR TO SAN ANTONIO DR



# **CLAREMONT AVE – SAN PEDRO DR TO LOUISIANA BLVD**

- Reduces driving lanes from 18 feet to 10 feet
- Adds 10 foot on-street parking lanes to both sides of the street
- Adds sharrows
- Removes parking near intersections and crosswalks



# CLAREMONT AVE – SAN PEDRO DR TO LOUISIANA BLVD



# CANDELARIA RD. - JUAN TABO BLVD TO TRAMWAY BLVD

A road  
diet!

- Reduced the number of driving lanes from **two** in each direction to **one** in each direction where possible
  - Driving lanes are 10-12 feet
- Adds a 6-foot bike lane in each direction with a 2-foot buffer

# CANDELARIA RD. - JUAN TABO BLVD TO TRAMWAY BLVD



**THANK YOU!**